EXHIBIT A



Insite RE, Inc. 1s660 Midwest Road Suite 140 Oakbrook Terrace, IL 60181

June 27, 2017

Via electronic transmittal schatzm@naperville.il.us wilder@naperville.il.us

Mr. Doug A. Krieger Naperville City Manager 400 S. Eagle Street Naperville, IL 60540

RE: Verizon Small Cell license agreement for city light pole located at 1125 E. Gartner Road

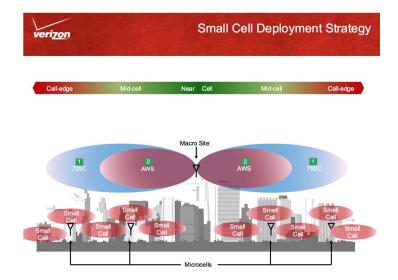
Dear Mr. Krieger,

Chicago SMSA L.P., aka Verizon Wireless ("Applicant") requests to address the city council regarding a license agreement on a city owned light pole referenced above for the installation of a Verizon Small Cell. Small cells in the ROW are not new to Naperville. The city currently has small cell license agreements in place with both Verizon and AT&T and has issued permits to both carriers to collocate on existing ComED wood poles for small cell placement.

The City Council recently approved seven (7) similar Verizon Small Cell license agreements at the August 16th, 2016 meeting as well as an 8th at the May 16th meeting for a light pole located at 485 Diehl Road. The 1125 Gartner Road site has been reviewed and approved by the city building and zoning departments. Once the agreement is approved, the permit will be issued.

As I explained in our last proposals, Small Cell technology is new, but one Verizon is embracing. Small Cells are meant to complement the existing Macro sites, not replace them. Due to the low height and small amount of equipment, they are meant to cover a much smaller area. They are placed in precise locations to address current or anticipated capacity coverage issues. That means during certain times of the day when the wireless traffic is so high, the small cells will help take the load off the existing Macro site sector in the area. See link below with a short, but great video clip explaining the benefit to Naperville as well as the map below to help illustrate the concept:

https://www.youtube.com/watch?v=VQYQAaeyzFs&feature=youtu.be



Verizon is proposing a license agreement with the following terms:

- 5-year term with 4/5 year renewals.
- Annual payments of \$3,275 increasing 3% after 2 years.
- 180 day-notice right to terminate for either party.
- City has 60-day notice right to terminate if the site is needed for city services.
- \$4,775 upfront payment due within 90 days of full execution.
- \$7,500 escrow deposit to guarantee maintenance and removal of sites.
- Verizon is required to provide an independent 3rd party radio frequency study for each site to show the site is FCC compliant.

We have been working very hard with the city staff to review and design these sites over the last year. We've had several staff meetings reviewing each site and changing them to meet their design criteria. Right now, Verizon does not know how many more they will need, but they are certain this new technology is a creative way to meet the demand for seamless wireless coverage in Naperville. Nobody wants more "towers" in or near residential. This will help avoid that necessity.

We look forward to discussing this proposal and thank you for providing Verizon the opportunity to address the City Council.

Sincerely,
Ray Shinkle
Ray Shinkle
Insite RE, Inc.
Authorized agent for Verizon Wireless





verizon

DT NAPERVILLE 1 SC 3

View from Southeast looking Northwest



BEFORE AFTER

CONSULTANT TEAM

PROJECT CONSULTANT: TERRA CONSULTING GROUP, LTD. 600 BUSSE HIGHWAY PARK RIDGE. IL 60068

(847) 698-6400

STRUCTURAL:

HUTTER TRANKINA ENGINEERING 32 W 273 ARMY TRAIL RD, SUITE 100 WAYNE. IL 60184

(630) 513-6711

SURVEY: MERIDIAN SURVEYING, LLC

N8774 FIRELANE 1 MENASHA, WI 54952 (920) 993-0881

POLE DESIGN: VALMONT INDUSTRIES, INC.

20805 EATON AVE. FARMINGTON, MI 55024

(651) 463-8990

CABINET FOUNDATION DESIGN:

HUBBELL POWER SYSTEMS, INC.
TION CHANCE CIVIL & UTILITY HELICAL

PRODUCTS 210 N. ALLEN ST. CENTRALIA, MO 65240 PROJECT TYPE

PROPOSED VERIZON WIRELESS SMALL CELL ANTENNA ON PROPOSED LIGHT POLE AND PROPOSED SMALL CELL EQUIPMNET ADJACENT TO POLE. EQUIPMENT ON POLE TO BE PAINTED TO MATCH POLE. POWER TO BE DELIVERED VIA UNDERGROUND. FIBER TO BE DELIVERED VIA UNDERGROUND (BY OTHERS).

SITE COORDINATES:

LATITUDE: 41° 45' 46.65" N (1A CERTIFICATION) LONGITUDE: 88° 07' 33.26" W (1A CERTIFICATION)

ELEVATION: ±726' (1A CERTIFICATION)

APPROVALS					
	Λ	DDE	\sim	/ A I	C

REAL ESTATE:	
RF:	

OPERATIONS:

EQUIPMENT ENGINEERING: _





CHICAGO SMSA

limited partnership

CHICAGO SMSA LIMITED PARTNERSHIP d/b/a VERIZON WIRELESS 1515 WOODFIELD ROAD, SUITE 1400 SCHAUMBURG, ILLINOIS 60173 PHONE: (847) 619-5397 FAX: (847) 706-7415

LOCATION NUMBER: 383984

SITE NAME: DT NAPERVILLE 1 SC 3

1125 E. GARTNER RD. NAPERVILLE, IL 60540

PROJECT INFORMATION

 PROJECT #:
 20151233053

 APPLICATION #:
 T.B.D.

 UTILITIES:
 POWER: CITY

ITIES: POWER: CITY OF NAPERVILLE
MARCOS VALENCIA
(630) 420-6653

117003

CITY OF NAPERVILLE

UNINHABITED

NCIA BILL SCHENK (630) 536-3123

POLE #:
JURISDICTION:
OCCUPANCY:

ZONING: CONSTRUCTION TYPE:

PROPERTY OWNER:

APPLICANT: CHICAGO SMSA

limited partnership d/b/a Verizon Wireless 1515 WOODFIELD ROAD SCHAUMBURG, IL 60173

CONSTRUCTION MANAGER

JASON EISELEIN (847) 706-7118

CO-LOCATION ON MUNICPAL POLE

REAL ESTATE MANAGER: KATHY COGSWELL (847) 619-4270

	SHEET	DRAWING INDEX	REVISION
	T-1	TITLE SHEET	А
	LP-1	AERIAL LOCATION & EXHIBIT PHOTO	B
D	C-1	SITE PLAN	
6- 13-17	C-2	TRAFFIC CONTROL PLAN	\ <u> </u>
	ANT-T	EXISTING SITE ELEVATIONS	\sim_{A}
\wedge	ANT-2	PROPOSED SITE ELEVATIONS	\searrow \parallel
_ ∠D	ANT-3	PROPOSED ANTENNA CONFIGURATION	D)
)6- 13-17	ANT-4	ANTENNA DETAILS CABINET & RADIO UNIT DETAILS	
	ANT-5A	METER PEDESTAL DETAILS	_B
	ANT-6	CABLE DIAGRAMS AND INFORMATION	A
\triangle	E-1	ELECTRICAL ROUTING PLAN	
6-13-17	E-2	FIBER ROUTING PLAN	D
		UTILITY ROUTING DETAILS	
	E-4	GROUNDING PLAN & DETAILS	A
	S-1	STRUCTURAL DETAILS FULL SCALE PRINT IS ON 22"x34" MEDIA	С
	SP-1	SPECIFICATIONS	Α
		ATTACHMENTS	
	1-3	VALMONT POLE SPECIFICATIONS	С
	4	LIGHTING FOUNDATION	С
	5	CHARLES CABINET FOUNDATION	С
	L-1	SURVEY	С

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SMSA
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	REVISIONS			$\overline{}$
Ŏ.	DESCRIPTION	DATE	B	
∢	ISSUED FOR REVIEW	02/09/17	MPC	-
В	REVISED WITH AC/DC CONVERTER DETAIL	03/01/17	MPC	
O	UPDATED PER UTILITY COORDINATION	03/28/17	LRB	
۵	REVISED PER CITY COMMENTS	06/13/17	MPC	

LOC# 383984 DT NAPERVILLE_{_} 1_SC_3

1125 E. GARTNER RD. NAPERVILLE, IL 60540

 DRAWN BY:
 MPC

 CHECKED BY:
 TAZ

 DATE:
 02/09/17

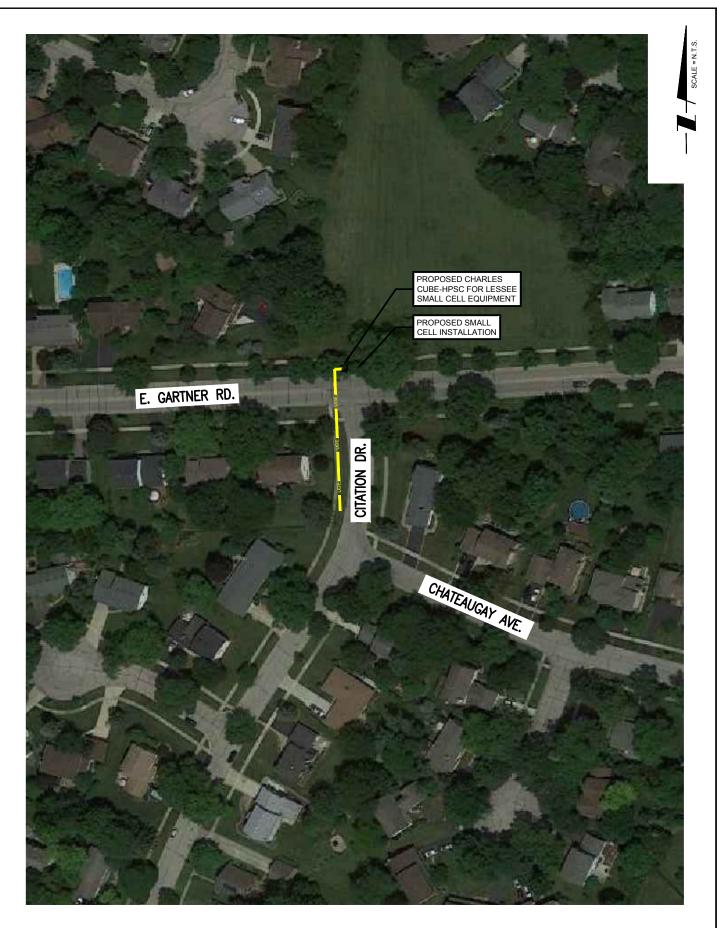
 PROJECT #:
 88-053

SHEET TITLE
TITLE SHEET

CHEET NUMBER

T-1









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	ВУ	MPC	MPC	LRB	MPC		
	м_						
	DATE	02/09/17	03/01/17	03/28/17	06/13/17		
		0	0	0	0		
REVISIONS	DESCRIPTION	ISSUED FOR REVIEW	REVISED WITH AC/DC CONVERTER DETAIL	UPDATED PER UTILITY COORDINATION	REVISED PER CITY COMMENTS		
	Ŏ.	⋖	В	C	۵		

LOC# 383984 DT NAPERVILLE_ 1_SC_3

1125 E. GARTNER RD. NAPERVILLE, IL 60540

10 " = 10"====,	12 000 10
DRAWN BY:	MPC
CHECKED BY:	TAZ
DATE:	02/09/17
PROJECT #:	88-053

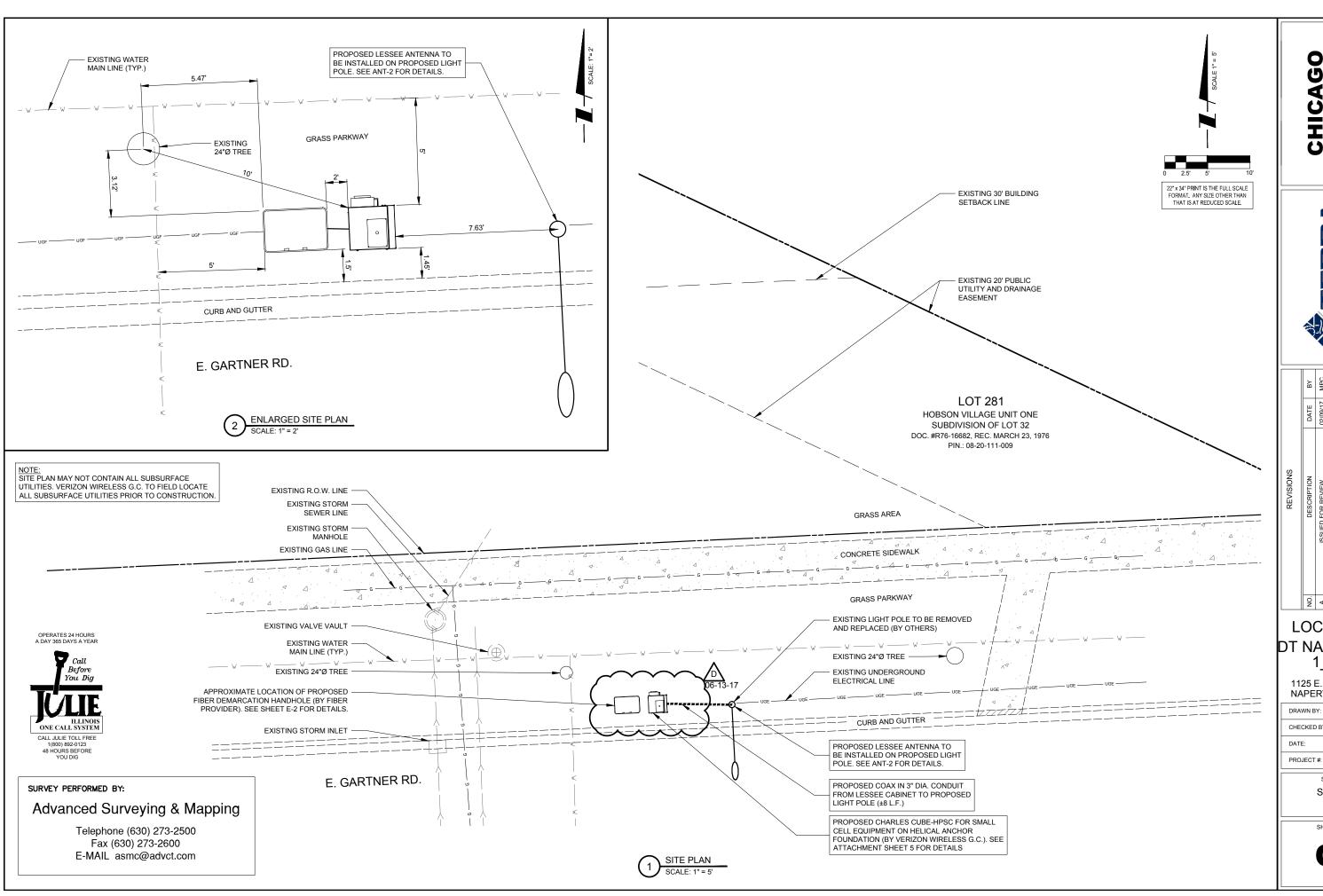
SHEET TITLE

AERIAL LOCATION & EXHIBIT PHOTO

SHEET NUMB

LP-1





CHICAGO SMSA limited partnership



	ВУ	MPC	MPC	LRB	MPC		
	DATE	02/09/17	03/01/17	03/28/17	06/13/17		
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	NO.	⋖	В	O	۵		

LOC# 383984 DT NAPERVILLE_ 1_SC_3

1125 E. GARTNER RD. NAPERVILLE, IL 60540

DRAWN BY:	MPC
CHECKED BY:	TAZ
DATE:	02/09/17
PROJECT #:	88-053

SHEET TITLE
SITE PLAN

SHEET NUMBER

C-'

Figure 6H-18. Lane Closure on a Minor Street (TA-18)

Note: See Tables 6H-2 and 6H-3

for the meaning of the

symbols and/or letter

Work vehicle (optional)

Buffer space (optional)

50 to 100 ft

Typical Application 18

Truck-mounted attenuator (optional)

codes used in this figure.

Notes for Figure 6H-18—Typical Application 18 Lane Closure on a Minor Street

Standard:

Page 668

1. This TTC shall be used only for low-speed facilities having low traffic volumes.

Option:

2. Where the work space is short, where road users can see the roadway beyond, and where volume is low, vehicular traffic may be self-regulating.

Standard:

3. Where vehicular traffic cannot effectively self-regulate, one or two flaggers shall be used as illustrated in Figure 6H-10.

Option:

- 4. Flashing warning lights and/or flags may be used to call attention to the advance warning signs.
- 5. A truck-mounted attenuator may be used on the work vehicle and the shadow vehicle.

NOTE: ADDITIONAL SIGNAGE TO BE PLACED AT INTERSECTION OF CITATION DR. AND E. GARTNER RD.

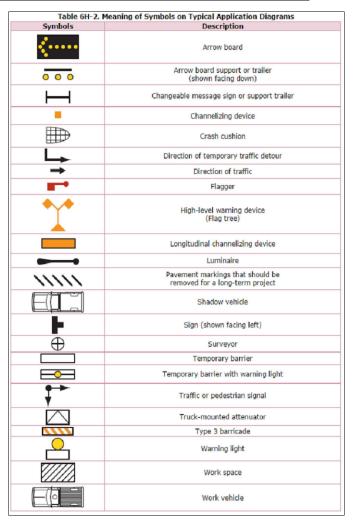


Table 6H-3. Meaning Applica	g of Lette ation Diag		n Typical
Road Type	Distance	Between	Signs**
Roau Type	Α	В	C
Urban (low speed)*	100 feet	100 feet	100 feet
Urban (high speed)*	350 feet	350 feet	350 feet
Rural		500 feet	
Expressway / Freeway	1,000 feet	1,500 feet	2,640 feet

LANE CLOSURE DETAILS

REFERENCED FROM PAGES 668-669 OF MANUAL ON UNIFORM TRAFFIC CONTROL DEVISES FOR STREETS AND HIGHWAYS 2009 EDITION

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						 	_
	В	MPC	MPC	LRB	MPC		
	DATE	02/09/17	03/01/17	03/28/17	06/13/17		
REVISIONS	DESCRIPTION	ISSUED FOR REVIEW	REVISED WITH AC/DC CONVERTER DETAIL	UPDATED PER UTILITY COORDINATION	REVISED PER CITY COMMENTS		
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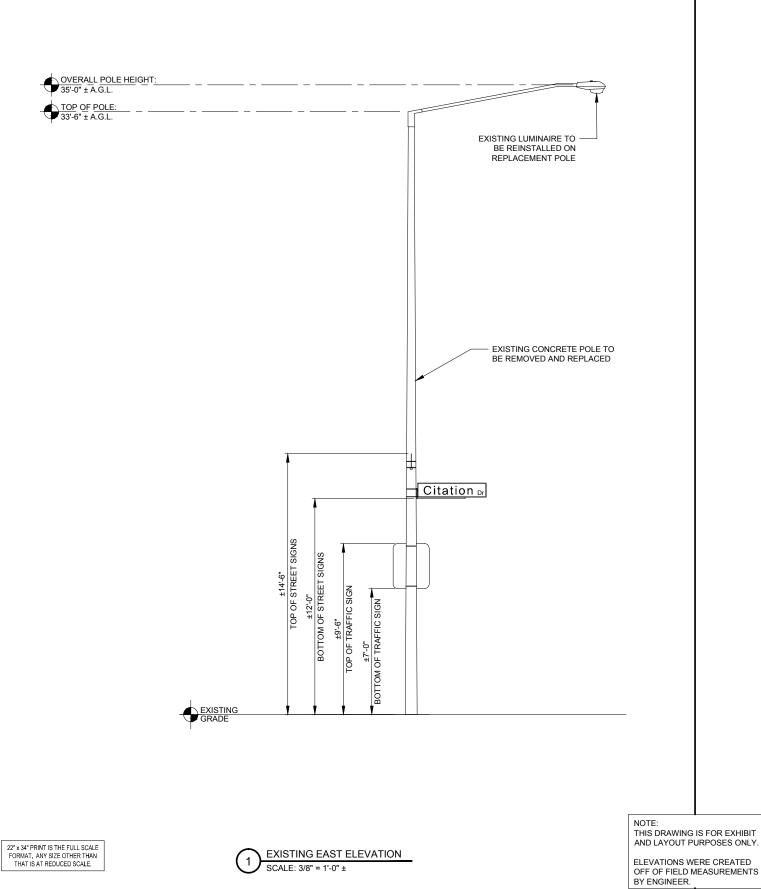
LOC# 383984 DT NAPERVILLE 1_SC_3

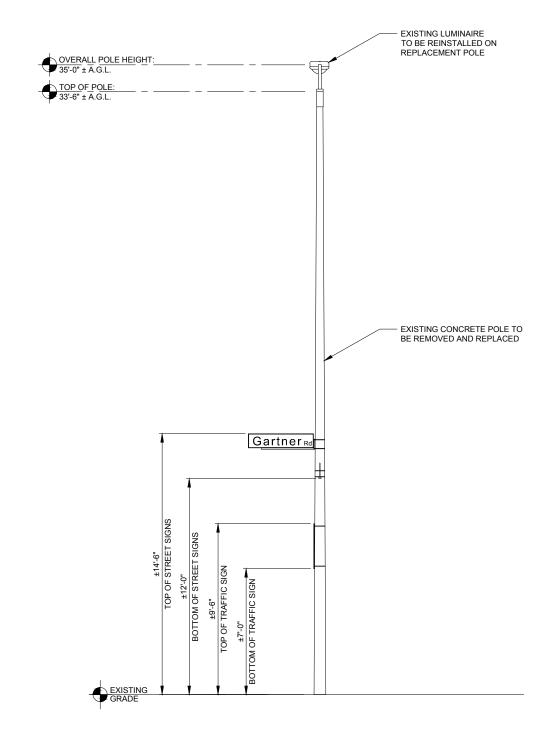
> 1125 E. GARTNER RD. NAPERVILLE, IL 60540

DRAWN BY: CHECKED BY: TAZ DATE: 02/09/17 PROJECT #: 88-053

SHEET TITLE

TRAFFIC CONTROL PLAN LANE CLOSURE DETAILS





EXISTING NORTH ELEVATION 2 EXISTING NUK III
SCALE: 3/8" = 1'-0" ±

22* x 34" PRINT IS THE FULL SCALE FORMAT. ANY SIZE OTHER THAN THAT IS AT REDUCED SCALE.

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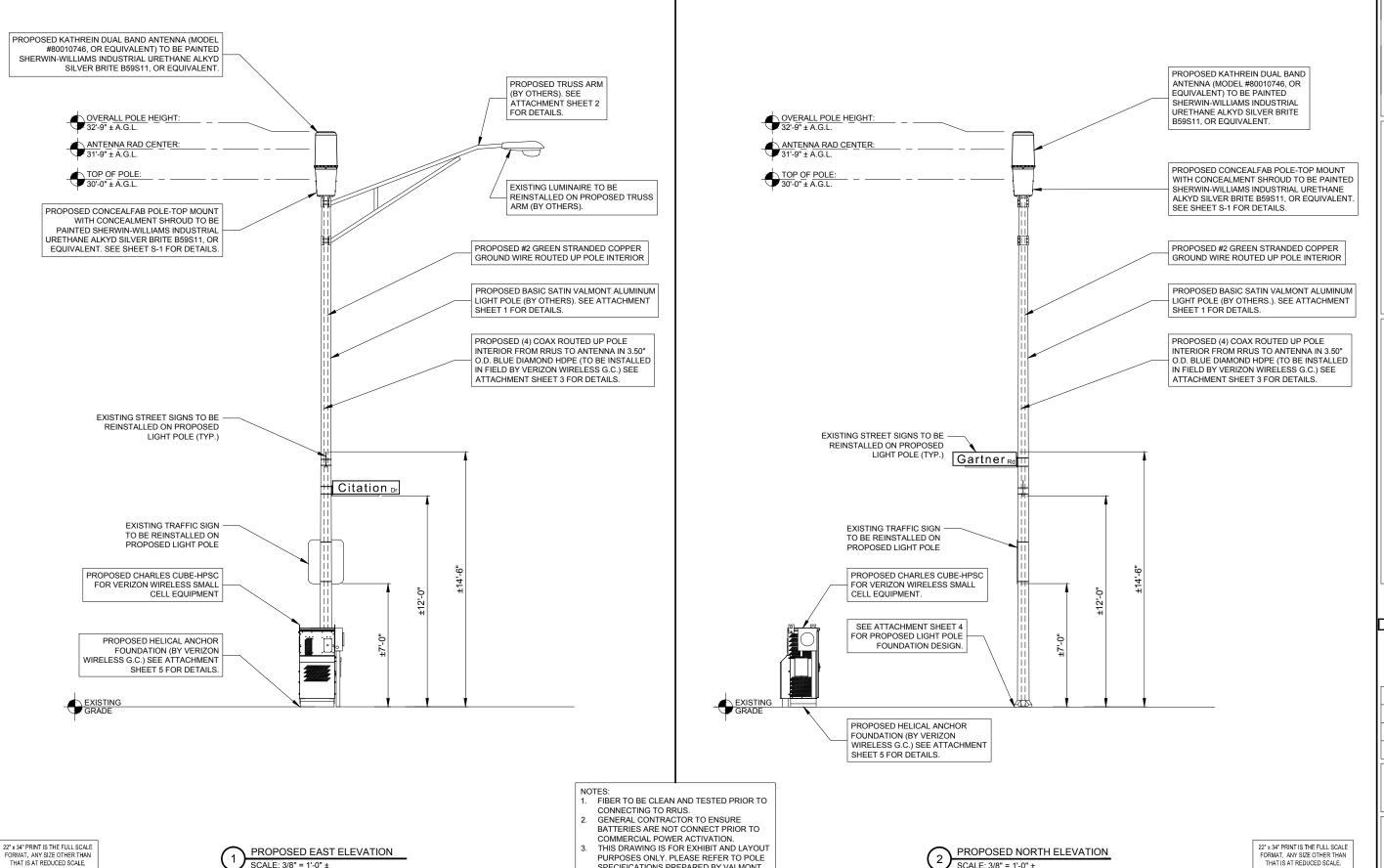
	REVISIONS		
Š	DESCRIPTION	DATE	ВУ
∢	ISSUED FOR REVIEW	02/09/17	MPC
В	REVISED WITH AC/DC CONVERTER DETAIL	03/01/17	MPC
C	UPDATED PER UTILITY COORDINATION	03/28/17	LRB
О	REVISED PER CITY COMMENTS	06/13/17	MPC

LOC# 383984 DT NAPERVILLE_ 1_SC_3

1125 E. GARTNER RD. NAPERVILLE, IL 60540

DRAWN BY: TAZ DATE: 02/09/17 PROJECT #: 88-053

EXISTING SITE ELEVATIONS



SPECIFICATIONS PREPARED BY VALMONT

INDUSTRIES, INC. (POLE).

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	REVISIONS			
Ŏ.	DESCRIPTION	DATE	ВУ	_
⋖	ISSUED FOR REVIEW	02/09/17	MPC	_
В	REVISED WITH AC/DC CONVERTER DETAIL	03/01/17	MPC	_
ပ	UPDATED PER UTILITY COORDINATION	03/28/17	LRB	_
۵	REVISED PER CITY COMMENTS	06/13/17	MPC	_
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LOC# 383984 DT NAPERVILLE_ 1_SC_3

> 1125 E. GARTNER RD. NAPERVILLE, IL 60540

DRAWN BY:	MPC
CHECKED BY:	TAZ
DATE:	02/09/1
PROJECT #:	88-050

PROPOSED SITE **ELEVATIONS**

SHEET NUMBER

RF EMISSIONS REPOR	T REQUIRED							
YES	NO							
DATE OF REPORT:								
NOTE:								
G.C. TO INSTALL ANTENNA USING CENTERLINE FROM SHEET ANT-2				EQUIPMENT CH	HANGE REC	QUEST FORM - I	ECR	
	Name Location Number	38	83984	RF Engineer Market	C	hicago-HH	Cell ID Address	
	Date of Request	2/1	4/2017 	Carriers	7	'00 & AWS	Structure Type	
	Sector	Power Required	Antenna Manufacturer	Antenna Model	Centerline	Azimuth	Mechanical Tilt	
	Alpha	40 W	Kathrein	840-10510 D	32	30	0	
	7 15110	10 77	radiioiii	040-10310 06-13-	17		J	
	Data	NI/A	NI/A	N/A	80010746		0	
	Beta	N/A	N/A	N/A	60010746		0	

	Manufacturer	Component Model	Location	Count	Length	Action	
Passive							
Components							
							L
Соах							l
COUX	Commscope	1/2"	Without Splitters	4	(24)	install	┝
Fiber	Generic	1/2"	Pole	2	3	Install	
Power	Generic	1/2"	Pole	2	3	Install	
GPS	Generic	1/2"	Pole	N/A	N/A	Install	l

N/A

Carrier - LTE/AWS	Power Required	Equipment Manufacturer	Equipment Model	CWDM?	Equipment Cabinet Needed?	Comments	Radios Location From Ground
700	40 W	Ericsson	RRUS11 B13	No	Battery Only if Possible	Radio(s) and Charles 207 Battery Cabinet on Pole	8'
2100	40 W	Ericsson	RRUS12 B4	-	-	-	-

Telco Solution Dark Fiber

N/A

Gamma

N/A

PROPOSED ANTENNA CONFIGURATION N.T.S.

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1125 E. Gartner Rd. Utility Pole/Tower

> Variable Tilt 0

> > 0

0

0

0

0

See Layout Tab

0

			_				
	ВУ	MPC	MPC	LRB	MPC		
	DATE	02/09/17	03/01/17	03/28/17	06/13/17		
REVISIONS	DESCRIPTION	ISSUED FOR REVIEW	REVISED WITH AC/DC CONVERTER DETAIL	UPDATED PER UTILITY COORDINATION	REVISED PER CITY COMMENTS		
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LOC# 383984 DT NAPERVILLE_ 1_SC_3

NOT APPLICABLE

1125 E. GARTNER RD. NAPERVILLE, IL 60540

TAZ DATE: 02/09/17 PROJECT #:

PROPOSED ANTENNA CONFIGURATION

ANT-3

4-Port Omni Antenna R1 Y1 Frequency Range 698-960 1695-2690 **Dual Polarization** Х Х **HPBW** 360° 360°

Fixed Electr. DT

KATHREIN

4-Port Omni 698-960/1695-2690 360°/360° 6/9dBi 2°/2°T with GPS

Type No.		8001074	15	80010746		
Radome Colour		Brown			Grey	
Low band			R	1		
			698-	-960		
Frequency range	MHz	698 - 824	824 -	894	880 - 960	
Polarization	0	+45, -45	+45,	-45	+45, -45	
Gain	dBi	2 x 5.0	2 x 6.0		2 x 6.5	
Horizontal Pattern:						
Half-power beam width	۰	360	(with 1-8 d	B nulls, typi	cal)	
Vertical Pattern:						
Half-power beam width	0	42	37	.5	34	
Electrical tilt	0		2, fi	xed		
Impedance	Ω		5	0		
VSWR		< 1.5	< 1	.6	< 1.5	
Isolation Intrasystem Intersystem	dB		> 26, t > 28 (R			
Intermodulation IM3	dBc	< -150 (2 x 43 dBm carrier)				
Max. power per input	W	250 (a	t 50 °C amb	ient temper	rature)	





80010745, 80010746 Page 1 of 3

Kathrein USA Greenway Plaza II, 2400 Lakeside Blvd., Suite 650, Richardson TX 75082 Phone: 214.238.8800 Fax: 214.238.8801 Email: info@kathrein.com

4-Port Omni Antenna

KATHREIN

High band				YI						
		1695-2690								
Frequency range	MHz	1695 - 1880	1850 - 1990	1920 - 2180	2200 - 2490	2490 - 2690				
Polarization	0	+45, -45	+45, -45	+45, -45	+45, -45	+45, -45				
Gain	dBi	2 x 9	2 x 9	2 x 9	2 x 9	2 x 9.5				
Horizontal Pattern:										
Half-power beam width	۰	360 (with 6-16 dB nulls, typical)								
Vertical Pattern:										
Half-power beam width	۰	18.4	17.5	16.5	14.5	13.5				
Electrical tilt	0			2, fixed						
Impedance	Ω			50 Ω						
VSWR		< 1	.55	<.	1.6	< 1.55				
Isolation Intrasystem Intersystem	dB	> 25, typ. 28 > 40 (Y1 // R1)								
Intermodulation IM3	dBc		<-150 (2 x 43 dBm carrier)							
Max. power per input	W		200 (at							

GPS specifications		
Frequency range	MHz	1575.42 ± 3
LNA gain	dB	27 typical
Pre-amp filtering	dB	-30 at ± 100 MHz
Polarization		Right-hand circular
H-plane beam width		Omni
E-plane half-power beam width	0	105
Connector		N female
DC power	Vdc	+3-5.5, 18-25 mA Through N output connector
Temperature range	°C	-35 to +70

Mechanical speci	fication	s	
nput		4 x 7-16 connector female	_
Connector position	ı	Bottom	
Veight	kg lb	18.1 39.9	٠.
Vind load at Rated Wind Speed: 150 km/h)	N lbf	138 32	Subject to alteration.
Max. wind elocity	km/h mph	242 150	ect to
Mechanical interfa	ce	Hex nut (requires a 1½" wrench) Torque setting; 122 Nm 90 lbf·ft	936.5139 Sub
acking size	mm inches	755 x 480 x 480 29.7 / 18.9 /18.9	936.4
leight / diameter	mm	626 / 407	_

Page 2 of 3 80010745, 80010746

Kathrein USA Greenway Plaza II, 2400 Lakeside Blvd., Suite 650, Richardson TX 75082 Phone: 214.238.8800 Fax: 214.238.8801 Email: info@kathrein.com

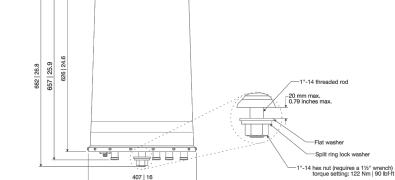
Accessories **General Information**

KATHREIN

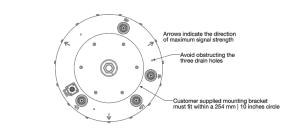
---Split ring lock washer

Designed to be mounted on top of a utility pole using a custom mounting bracket supplied by the customer.

353 | 13.9



All dimensions in mm | inches

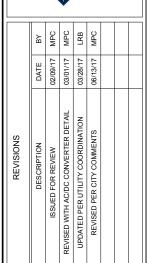


Kathrein USA Greenway Plaza II, 2400 Lakeside Blvd., Suite 650, Richardson TX 75082 Phone: 214.238.8800 Fax: 214.238.8801 Email: info@kathrein.com



limited partnership

CHICAGO SMSA



LOC# 383984 DT NAPERVILLE_ 1_SC_3

1125 E. GARTNER RD. NAPERVILLE, IL 60540

DRAWN BY:	MPC
CHECKED BY:	TAZ
DATE:	02/09/17

ANTENNA DETAILS

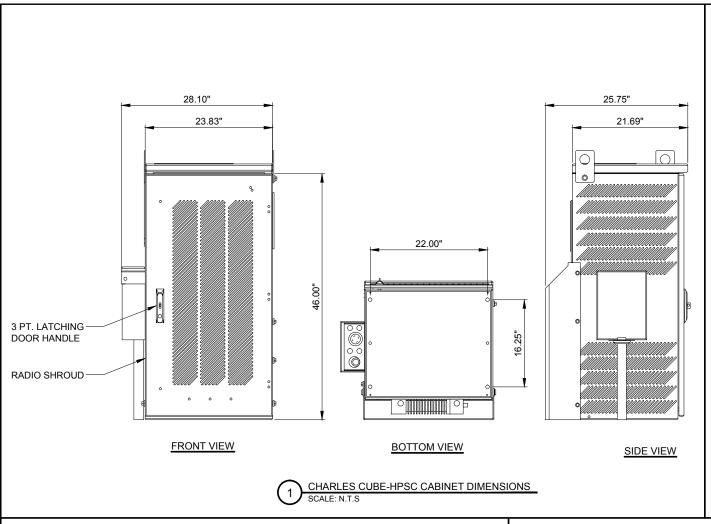
88-053

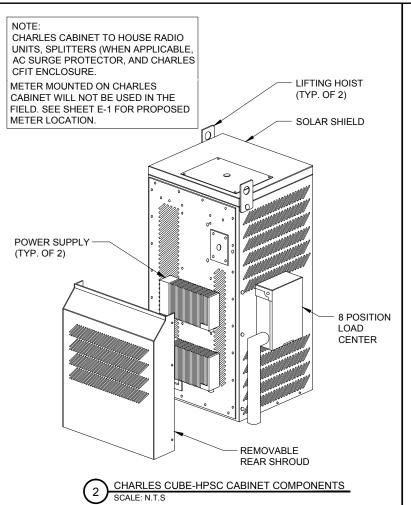
PROJECT #:

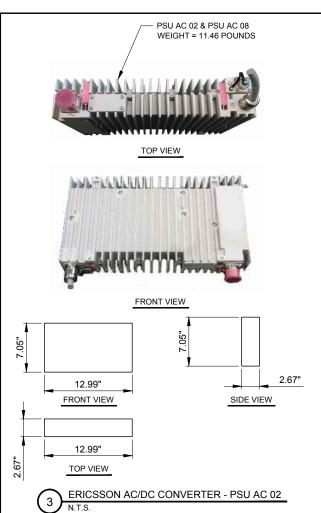
ANTENNA SPECIFICATIONS SHEET 2 ANTEN PAGE 2

ANTENNA SPECIFICATIONS SHEET 3 ANTEN PAGE 3

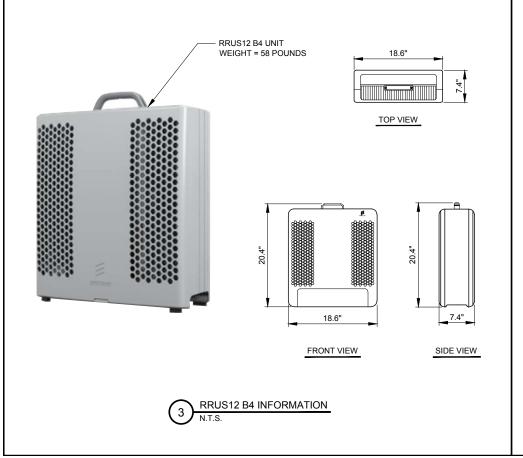
ANTENNA SPECIFICATIONS SHEET 1 ANTEN

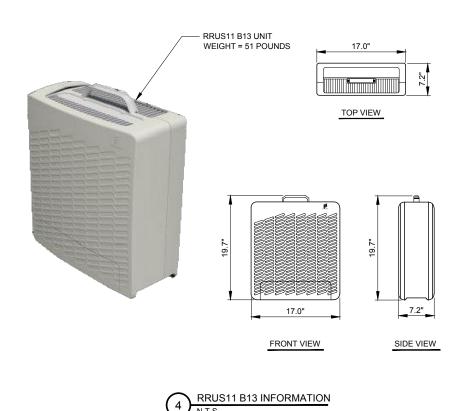


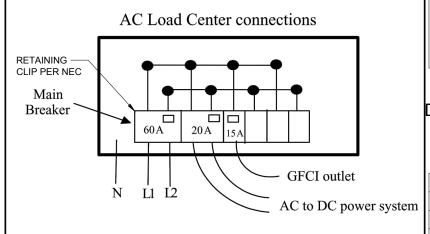




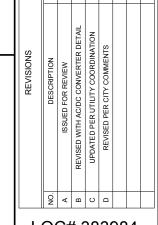








CHARLES CUBE-HPSC LOAD CENTER CONNECTIONS N.T.S.



LOC# 383984 DT NAPERVILLE_ 1_SC_3

1125 E. GARTNER RD. NAPERVILLE, IL 60540

	DRAWN BY:	MPC
ı l	CHECKED BY:	TAZ
_	DATE:	02/09/17
	PROJECT #:	88-053

SHEET TITLE

CABINET & RADIO UNIT DETAILS

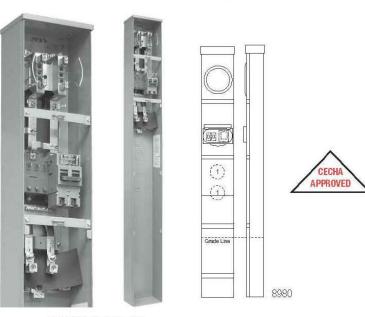
SHEET NUMBER

ANT-5

24 100-200 AMP METER MAIN PEDESTAL

Meter Main Pedestal

100-200 Amp | 4 Terminal | Ringless



NU8980-O-200-KK

100-200 Amp — 4 Terminal — Ringless — Underground Service

0.1-11-11-1		Connectors CU/AL		n	Main Breaker		Dimensions			Knockouts	
Catalog Number	Hub	Line Load	Bypass	10K	22K	D"	M _n	H"	1		
NU8980-0-KK	Blank	#6-350	CB*	Hom	-	-	6	9	79	21/2	
NU8980-0-KK-LP	Blank	#6-350	CB*	Hom	2-2	_	6	9	70	21/2	
NU8980-0-SF100-KK	Blank	#6-350	#6-1/0	Hom	Q2100	Q2100H	6	9	79	21/2	
NU8980-0-SF100-KK-LP	Blank	#6-350	#6-1/0	Hom	Q2100	Q2100H	6	9	70	21/2	
NU8980-0-200-KK	Blank	#6-350	1/0-300	Hom	UQFP	UQFPH	6	9	79	21/2	
NU8980-0-200-KK-LP	Blank	#6-350	1/0-300	Hom	UQFP	UQFPH	6	9	70	21/2	

Notes

- * Field Installed Circuit Breaker Required.
- Series Wired Main: For series wired main order wire kit K4714 and UQFPH-M type circuit breaker.
- Branch Circuit Breakers: Branch interior accepts most manufacturers' small frame plug-in type circuit breakers (Milbank, GE, Siemens, Cutler-Hammer).
- SF: SF in catalog number has small frame plug-in type circuit breaker installed on middle stabs of 4-circuit interior. Only two single pole space available.
- Fifth Terminal: For field-installed 5th terminal order kit 5T8K2. Mounts in 9 o'clock position only.
- Extension Kit: Available for low profile (-LP) units only. Order kit K4694.



Utility requirements for this equipment may vary.

Defore ordering or installing equipment in this catalog.

METER PEDESTAL INFORMATION

CHICAGO SMSA Iimited partnership



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		ВУ	MPC	MPC	LRB	MPC		
		DATE	02/09/17	03/01/17	03/28/17	06/13/17		
	REVISIONS	DESCRIPTION	ISSUED FOR REVIEW	REVISED WITH AC/DC CONVERTER DETAIL	UPDATED PER UTILITY COORDINATION	REVISED PER CITY COMMENTS		
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LOC# 383984 DT NAPERVILLE_ 1_SC_3

1125 E. GARTNER RD. NAPERVILLE, IL 60540

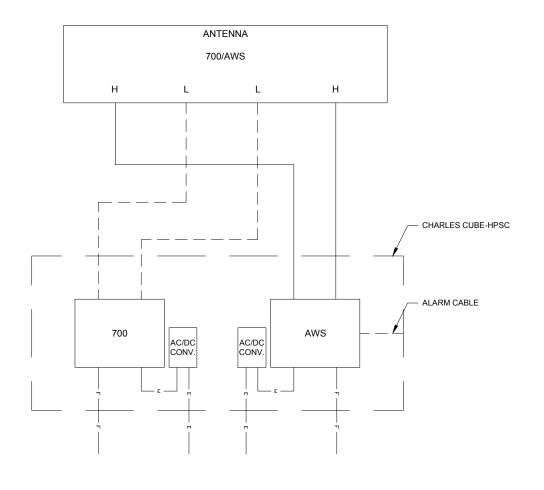
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DATE:	02/09/17
PROJECT #:	88-053

SHEET TITLE

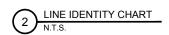
METER PEDESTAL DETAILS

SHEET NUMBER

ANT-5A



SECTOR	ALPHA	ALPHA	ALPHA	ALPHA	LTE RRUS	LTE RRUS	AWS RRUS	AWS RRUS
TAG COLOR	GREEN	GREEN	GREEN	GREEN	BLACK	BLACK	BLACK	BLACK
TECHNOLOGY	LTE	LTE	AWS	AWS	LTE	LTE	AWS	AWS
LINE IDENTITY	RXTX0	RXTX1	RXTX0	RXTX1	RXTX0	RXTX1	RXTX0	RXTX1





OMNI ANTENNA



AWS RRUS



LTE RRUS

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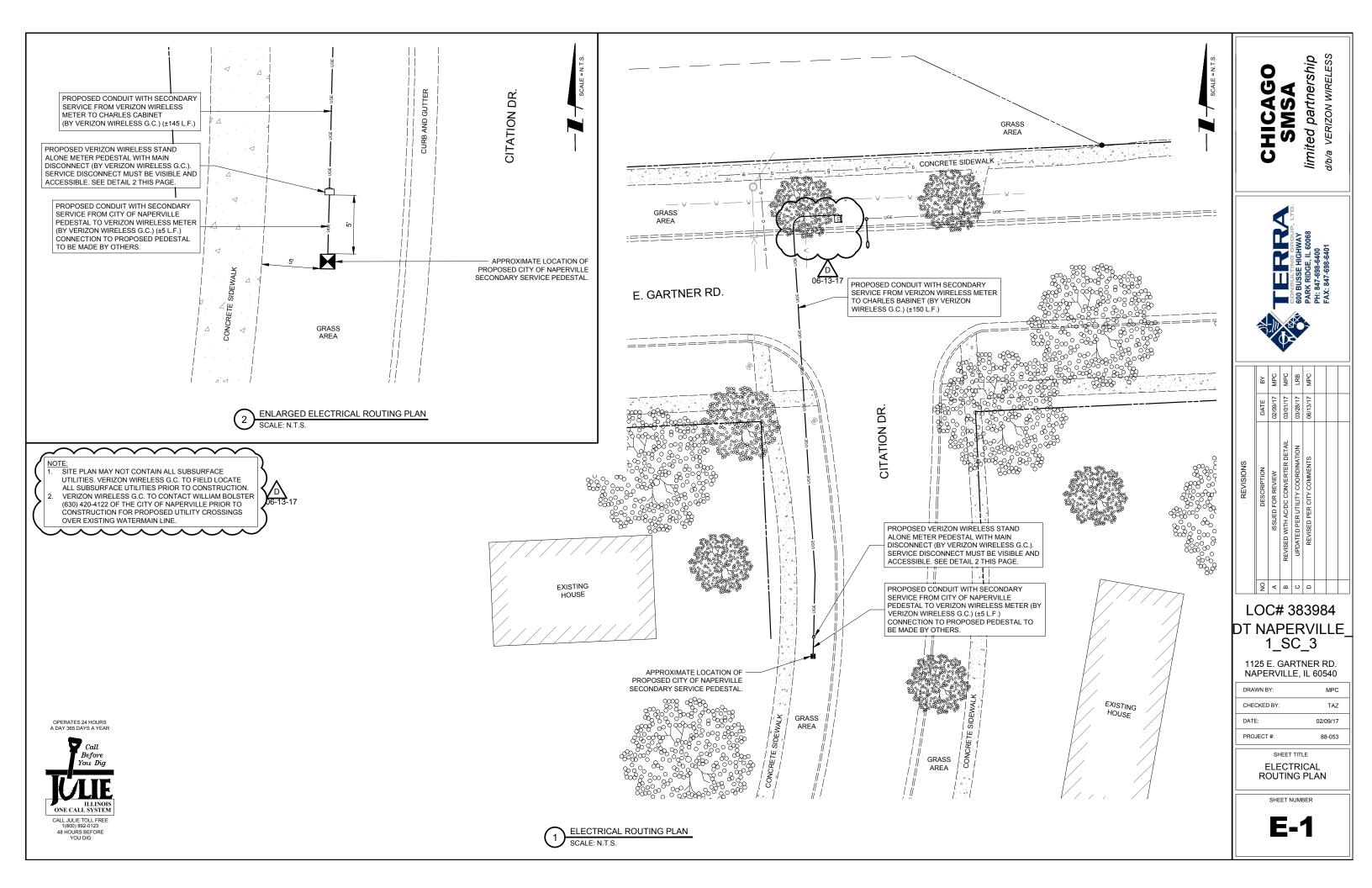
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PROJECT #:	88-053

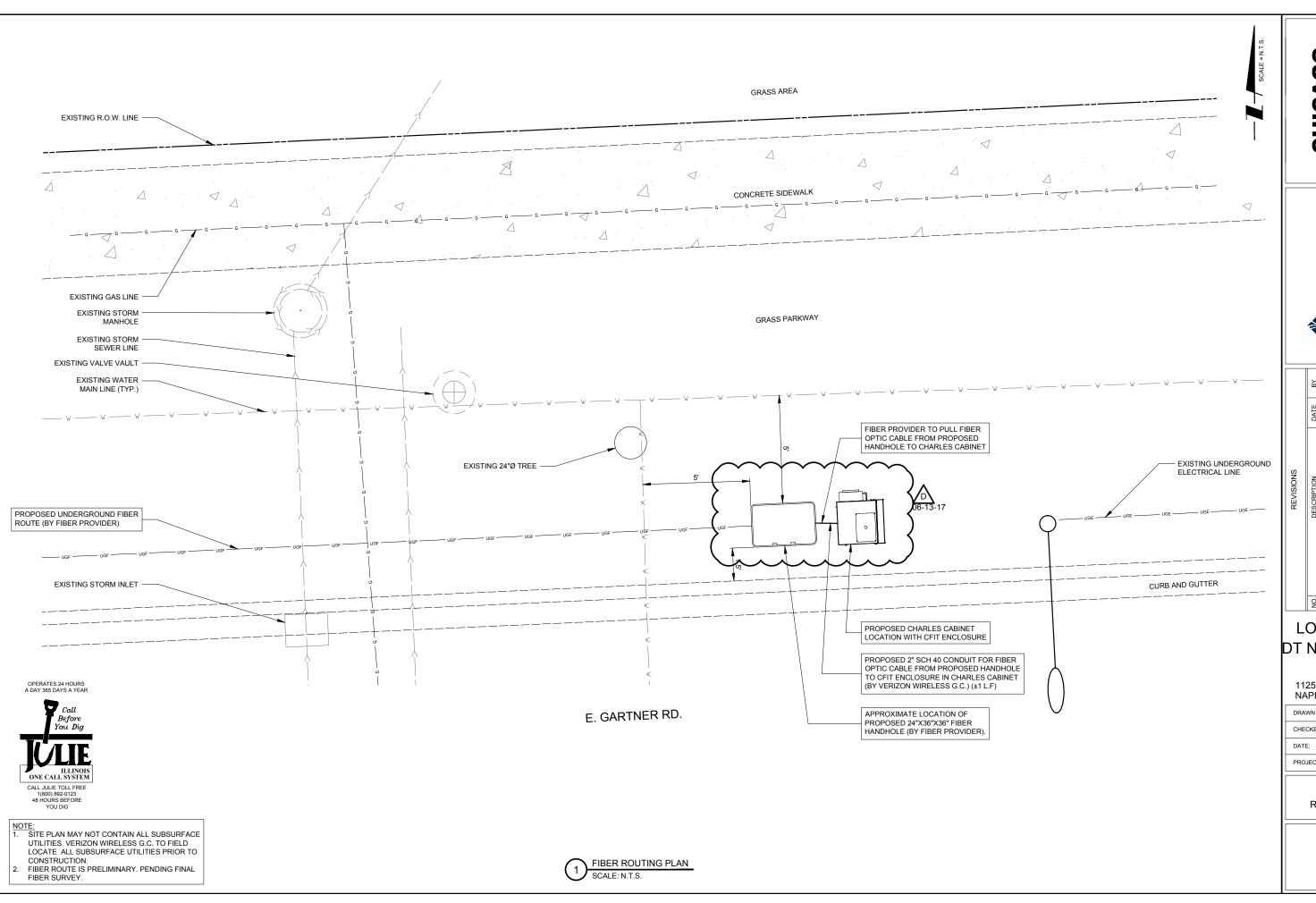
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CABLE DIAGRAMS
AND INFORMATION

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ANT-6







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١	DATE:	02/09/1
١	PROJECT #:	88-05

FIBER ROUTING PLAN

SHEET NUMBER

E-2

UTILITY NOTES:

WORK INCLUDES:
THESE NOTES AND ACCOMPANYING DRAWINGS COMPLEMENT THE PROVISIONS AND INSTALLATIONS BY THE ELECTRICAL CONTRACTOR, OF ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO INSTALL THE ELECTRICAL WORK COMPLETE IN CONNECTION WITH THIS VERIZON WIRELESS SITE AND SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:

- THE PROVISIONS, INSTALLATION, AND CONNECTION OF A GROUNDING ELECTRODE SYSTEM COMPLETE WITH SECONDARY GROUNDING, AND CONNECTIONS TO THE INCOMING ELECTRICAL DISTRIBUTION EQUIPMENT.
- 2. THE PROVISION AND INSTALLATION OF AN OVERHEAD ELECTRICAL SERVICE OR UNDERGROUND ELECTRICAL SERVICE AND ALL ASSOCIATED WIRE AND CONDUIT AS REQUIRED AND/OR INDICATED ON PLANS
- 3. THE PROVISION, INSTALLATION OF CONDUIT AND CONNECTIONS FOR LOCAL FIBER SERVICE
- 4. THE FURNISHING AND INSTALLATION OF THE ELECTRICAL SERVICE ENTRANCE CONDUCTORS, CONDUITS, METER SOCKET, AND CONNECTIONS TO THE SERVICE
- 5. TWO INCH (2") AND THREE INCH (3") DIAMETER PVC CONDUITS SCHEDULE 40.
- 6. ALL PVC CONDUITS SHOULD BE LEFT WITH NYLON PULL CORD FOR FUTURE USE.
- 7. EXCAVATION, TRENCHING, AND BACKFILLING FOR CONDUIT(S), CABLE(S), AND EXTERNAL GROUNDING SYSTEM

CODES, PERMITS, AND FEES:

RACEWAYS AND WIRING:

- 1. ALL REQUIRED PERMITS, LICENSES, INSPECTIONS AND APPROVALS SHALL BE SECURED AND ALL FEES FOR SAME PAID BY CONTRACTOR.

 2. THE INSTALLATION SHALL COMPLY WITH ALL APPLICABLE CODES: STATE,
- LOCAL AND NATIONAL, AND THE DESIGN, PERFORMANCE CHARACTERISTICS AND METHODS OF CONSTRUCTION OF ALL ITEMS AND EQUIPMENT SHALL BE IN ACCORDANCE WITH THE LATEST ISSUE OF THE VARIOUS APPLICABLE STANDARD SPECIFICATIONS OF THE FOLLOWING AUTHORITIES:

NATIONAL ELECTRIC CODE AMERICAN NATIONAL STANDARDS INSTITUTE AMERICAN MATIONAL SHADARDS INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS
AMERICAN SOCIETY FOR TESTING MATERIALS
NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION I.E.E.E. A.S.T.M. NFMA UNDERWRITERS LABORATORIES, INC.
NATIONAL FIRE PROTECTION ASSOCIATION U.L. N.F.P.A.

- 1. WIRING OF EVERY KIND MUST BE INSTALLED IN CONDUIT, UNLESS NOTED OTHERWISE, OR AS APPROVED BY THE ENGINEER.

 2. UNLESS OTHERWISE SPECIFIED. ALL WIRING SHALL BE COPPER (CU) TYPE
- THWN, SIZED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.
- 3. RACEWAYS SHALL BE GALVANIZED STEEL, SIZED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, UNLESS OTHERWISE NOTED. ALL RACEWAYS SHALL BE APPROVED FOR THE INSTALLATION.

 4. PULL OR JUNCTION BOXES SHALL BE PROVIDED AS REQUIRED TO FACILITATE
- INSTALLATION OF RACEWAYS AND WIRING. PROVIDE JUNCTION AND PULLBOXES FOR CONDUIT RUNS WITH MORE THAN (360) DEGREES OF BENDS.
- 5. PROVIDE A COMPLETE RACEWAY AND WIRING INSTALLATION, PERMANENTLY AND EFFECTIVELY GROUNDED IN ACCORDANCE WITH ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE AND LOCAL CODES.
- 6. ALL STEEL CONDUIT SHALL BE BONDED AT BOTH ENDS WITH GROUNDING BUSHING.

GENERAL NOTES

SEE DETAILS AND SCHEDULES ON DRAWINGS AND SPECIFICATIONS FOR MEANING OF ABBREVIATIONS AND ADDITIONAL REQUIREMENTS AND INFORMATION. CHECK ARCHITECTURAL, STRUCTURAL AND OTHER MECHANICAL AND ELECTRICAL DRAWINGS FOR SCALE, SPACE LIMITATIONS, COORDINATION, AND ADDITIONAL INFORMATION, ETC. REPORT ANY DISCREPANCIES, CONFLICTS, ETC. TO ENGINEER BEFORE SUBMITTING BID ALL EQUIPMENT FURNISHED BY OTHERS (FBO) SHALL BE PROVIDED WITH PROPER MOTOR STARTERS, DISCONNECTS, CONTROLS, ETC. BY THE ELECTRICAL CONTRACTOR UNLESS SPECIFICALLY NOTED OTHERWISE. THE ELECTRICAL CONTRACTOR SHALL INSTALL AND COMPLETELY WIRE ALL ASSOCIATED EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S WIRE DIAGRAMS AND AS REQUIRED FOR A COMPLETE OPERATING INSTALLATION. ELECTRICAL CONTRACTOR SHALL VERIFY AND COORDINATE ELECTRICAL CHARACTERISTICS AND REQUIREMENTS OF (FBO) EQUIPMENT PRIOR TO ROUGH-IN OF CONDUIT AND WIRING TO AVOID CONFLICTS

COORDINATION WITH UTILITY COMPANY:

THE ELECTRICAL CONTRACTOR SHALL COORDINATE COMPLETE ELECTRICAL SERVICE WITH LOCAL UTILITY COMPANY FOR A COMPLETE OPERATIONS SYSTEM, INCLUDING TRANSFORMER CONNECTIONS, CONCRETE TRANSFORMER PADS, IF REQUIRED, METER SOCKETS, PRIMARY CABLE RACEWAY REQUIREMENTS, SECONDARY SERVICE, ETC PRIOR TO SUBMITTING BID TO INCLUDE ALL LABOR AND MATERIALS. THE ELECTRICAL CONTRACTOR SHALL INCLUDE IN THE BID ANY OPTIONAL OR EXCESS FACILITY CHARGES ASSOCIATED WITH PROVIDING ELECTRICAL SERVICE FROM LOCAL UTILITY COMPANY. VERIFY BEFORE BIDDING TO INCLUDE ALL COSTS. THE ELECTRICAL CONTRACTOR SHALL VERIFY THE AVAILABLE FAULT CURRENT WITH THE LOCAL UTILITY COMPANY PRIOR TO SUBMITTING BID. ADJUST A.I.C. RATINGS OF ALL OVER CURRENT PROTECTION DEVICES IN DISTRIBUTION EQUIPMENT AS REQUIRED TO COORDINATE WITH AVAILABLE FAULT CURRENT FROM LOCAL UTILITY COMPANY, ALL GROUNDING RODS PROVIDED BY THE POWER OR TELEPHONE UTILITY COMPANIES MUST BE TIED INTO THE MAIN EXTERNAL GROUND RING.

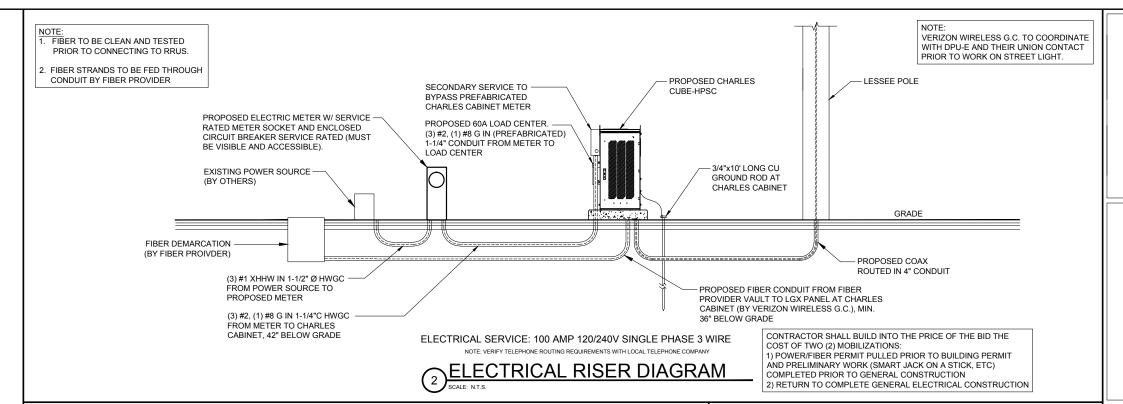
UTILITY CONTACTS:

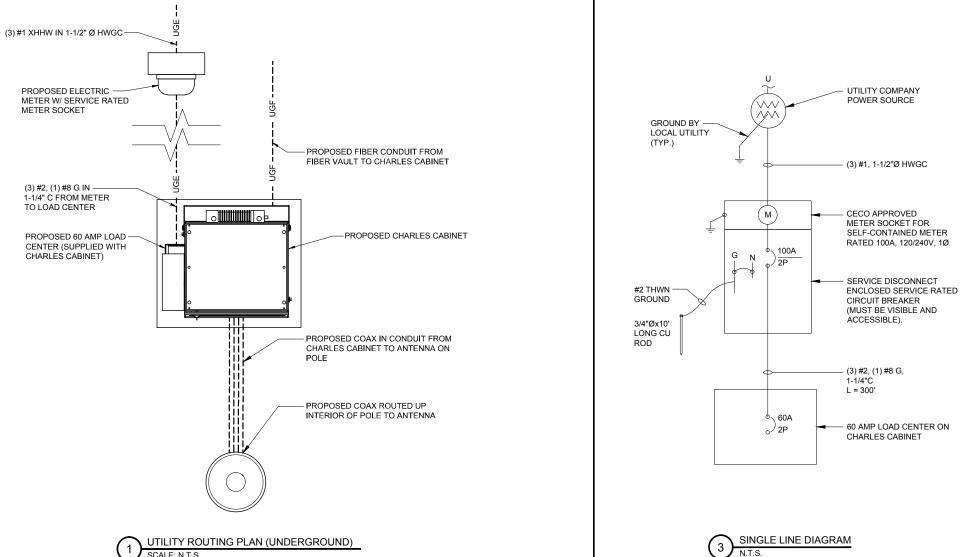
POWER: CITY OF NAPERVILLE MARCOS VALENCIA (630) 420-6653

FIBER: WOW **BILL SCHENK** (630) 536-3123

ELECTRICAL CONTRACTOR SHALL COORDINATE WITH POWER COMPANY FOR ENTRY INTO FENCED AREA BY EITHER MAILING A KEY TO A SLAVE LOCKED CHAIN AT THE FENCE GATE OR CALLING AND LEAVING A COMBINATION

FOR CONTINUATION AND CONNECTION OF ELECTRIC AND TELEPHONE SERVICE COORDINATE WITH ELECTRIC AND PHONE COMPANY





limited partnership CHICAGO SMSA



	REVISIONS		
Ŏ.	DESCRIPTION	DATE	ВУ
∢	ISSUED FOR REVIEW	02/09/17	MPC
В	REVISED WITH AC/DC CONVERTER DETAIL	03/01/17	MPC
O	UPDATED PER UTILITY COORDINATION	03/28/17	LRB
۵	REVISED PER CITY COMMENTS	06/13/17	MPC

LOC# 383984 DT NAPERVILLE 1 SC 3

1125 E. GARTNER RD. NAPERVILLE, IL 60540

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DATE:	02/09/1
PROJECT #:	88-05
	CHECKED BY: DATE:

SHEET TITLE UTILITY **ROUTING DETAILS**

SHEET NUMBER

GROUNDING ELECTRODE SYSTEM NOTES:

- 1. ALL GROUNDING CONNECTIONS SHALL BE MADE BY THE EXOTHERMIC PROCESS CONNECTIONS SHALL INCLUDE ALL CABLE TO CABLE, SPLICES, ETC. ALL CABLE TO GROUND RODS, GROUND RODS SPLICES AND LIGHTNING PROTECTION SYSTEM AS INDICATED. GROUND FOUNDATION ONLY AS INDICATED BY PM. ALL MATERIALS USED (MOLDS, WELDING, METAL, TOOLS, ETC.) SHALL BE BY EXOTHERMIC PROCESS AND INSTALLED PER MANUFACTURERS RECOMMENDATIONS AND PROCEDURES. GROUND CONDUCTOR SHALL HAVE A MINIMUM 24" BENDING RADIUS.
- 2. ALL EXOTHERMIC CONNECTIONS ON GALVANIZED SURFACES SHALL BE CLEANED THOROUGHLY AND COLORED TO MATCH SURFACE WITH (2) TWO COATS OF SHERWIN-WILLIAMS GALVITE (WHITE) PAINT B50W3 (OR EQUAL) OR SHERWIN- WILLIAMS SILVERBRITE (ALUMINUM) 559S11 (OR EQUAL).
- 3. ALL ELECTRICAL & MECHANICAL GROUND CONNECTIONS SHALL HAVE ANTI-OXIDANT COMPOUND APPLIED TO CONNECTION

LEGEND						
SYMBOL	DESCRIPTION					
\otimes	5/8" DIAMETER x 10'-0" LONG COPPER CLAD GROUND ROD (HARGER-5810)					
0	5/8" DIAMETER X 10'-0" LONG COPPER CLAD GROUND ROD WITH INSPECTION WELL					
	#2 AWG TNND SOLID BARE COPPER WIRE MINIMUM 42" BELOW GRADE (HARGER-L2)					
UE	UNDERGROUND ELECTRICAL					
UT	UNDERGROUND TELEPHONE					
F	UNDERGROUND FIBER					
	EXOTHERMIC WELD					
—-ОЕ	OVERHEAD ELECTRICAL SERVICE					
—тот—	OVERHEAD TELEPHONE SERVICE					

- 6. UTILITY COMPANY COORDINATION: ELECTRICAL CONTRACTOR SHALL CONFIRM THAT ALL WORK IS IN ACCORDANCE WITH THE RULES OF THE LOCAL UTILITY COMPANY BEFORE SUBMITTING THE BID. THE CONTRACTOR SHALL CHECK WITH THE UTILITY COMPANIES SUPPLYING SERVICE TO THIS PROJECT AND SHALL DETERMINE FROM THEM ALL EQUIPMENT AND CHARGES WHICH THEY WILL REQUIRE AND SHALL INCLUDE THE COST IN THE BID.
- 7. GROUND TEST: GROUND TESTS SHALL BE PERFORMED AS REQUIRED BY LESSEE STANDARD PROCEDURES. GROUND GRID RESISTANCE SHALL NOT EXCEED 5 OHMS.
- 8. CONTRACTOR SHALL SUBMIT THE GROUND RESISTANCE TEST REPORT AS FOLLOWS:
- 1. ONE (1) COPY TO OWNER REPRESENTATIVE
- 2. ONE (1) COPY TO ENGINEER
 3. ONE (1) COPY TO KEEP INSIDE EQUIPMENT ENCLOSURE

TYPICAL KEYED GROUNDING NOTES \wedge

#2 GREEN STRANDED COPPER CONDUCTOR 42" BELOW GRADE (TYPICAL) MINIMUM 24" BENDING RADIUS

2 ENCLOSURE GROUND (TYP.) IN 1/2" DIAMETER SCHEDULE 40 PVC CONDUIT

#2 AWG TNND SOLID COPPER CONDUCTOR 42" BELOW GRADE (SEE DETAIL, SHEET E-3)

£ ELECTRIC METER AND ELECTRIC SERVICE GROUNDING, COORDINATE ALTERNATE WITH PM

5/8" DIAMETER X 8'-0" LONG COPPER CLAD GROUND ROD (HARGER-5810)

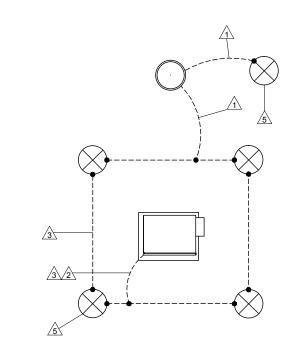
WITH EXOTHERMIC CONNECTION

A DAY 365 DAYS A YEAR



NOTE:

RELECTRICAL CONTRACTOR TO INSTALL GROUND ROD AS BEST FIT. IN SOME INSTANCES, SITE CONDITIONS MAY DICTATE GROUND ROD PLACEMENT. DETAIL IS FOR SCHEMATIC PURPOSES ONLY.







Type GT
THROUGH CABLE TO



TEE OF HORIZONTAL RUN AND TAP CABLES.



Type HS

HORIZONTAL CABLE TAP TO
HORIZONTAL STEEL SURFACE
OR PIPE. CABLE OFF SURFACE



THROUGH VERTICAL CABLE TO VERTICAL STEEL SURFACE OR TO THE SIDE OF EITHER HORIZONTAL OR VERTICAL PIPE



CROSS OF HORIZONTAL CABLES. LAPPED AND NOT



HORIZONTAL CABLE TAP TO VERTICAL STEEL SURFACE OR THE SIDE OF HORIZONTAL PIPE



Type VS

CABLE TAP DOWN AT 45° TO
VERTICAL STEEL SURFACE OR SIDE
OF HORIZONTAL OR VERTICAL PIPE.



THROUGH CABLE TO SIDE OF GROUND ROD

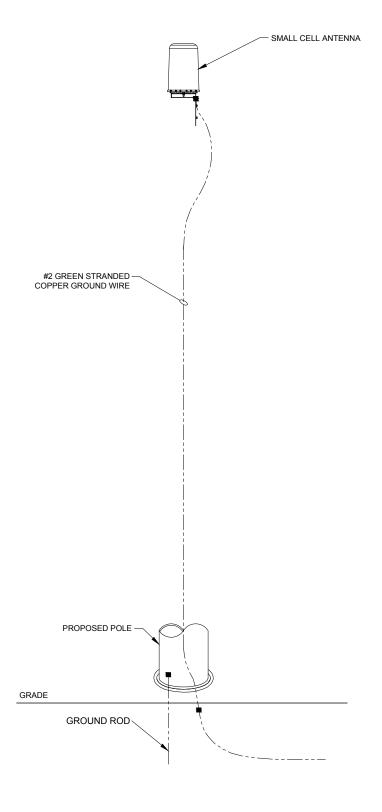


CABLE TAP TO TOP OF GROUND ROD



THROUGH AND TAP CABLES TO GROUND ROD





TYPICAL GROUNDING SCHEMATIC

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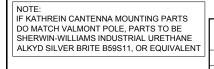
1125 E. GARTNER RD. NAPERVILLE, IL 60540

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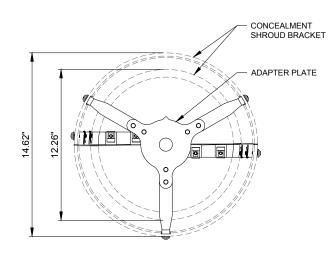
SHEET TITLE
GROUNDING PLAN
AND DETAILS

SHEET NUMBER

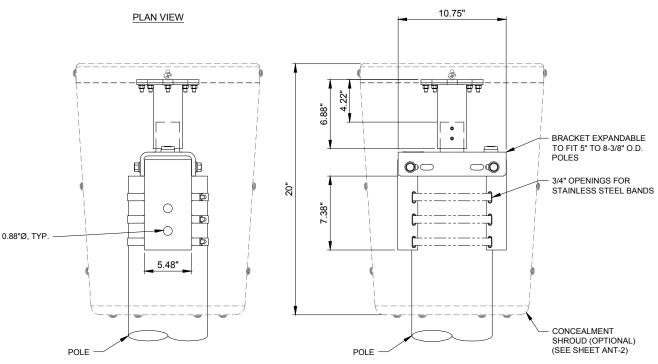
E-4



KATHREIN CANTENNA SLEEVE MOUNT PART INDEX						
POLE COLOR	BROWN	BLACK	SILVER	GALVANIZED	GRAY	
PART NUMBER	002769-A	002706-A	002770-A	002948-A	003005-A	
UNIVERSAL POLE-TOP MOUNTING BRACKET						
POLE COLOR	BROWN	BLACK	SILVER	GALVANIZED	GRAY	
PART NUMBER	002609-A	002767-A	002768-A	002946-A	003007-A	
POLE-TOP CABLE CONCEALMENT SHROUD						
POLE COLOR	BROWN	BLACK	SILVER	GALVANIZED	GRAY	
PART NUMBER	002774-A	002555-A	002775-A	002950-A	003008-A	



SPECIFICATIONS				
SPECIFICATION	MEASUREMENT			
BRACKET HEIGHT	12-3/4" (324 mm)			
BRACKET WIDTH (CLAMP)	6.65" (169 mm)			
BRACKET LENGTH	10-3/4" (273 mm)			
BRACKET WEIGHT	22 LBS (10 kg)			
HEIGHT WITH SHROUD	20" (508 mm)			
SHROUD DIAMETER	14-3/8'"' (365 mm)			
WEIGHT OF SHROUD	6.0 LBS (2.7 kg)			



SIDE ELEVATION FRONT ELEVATION

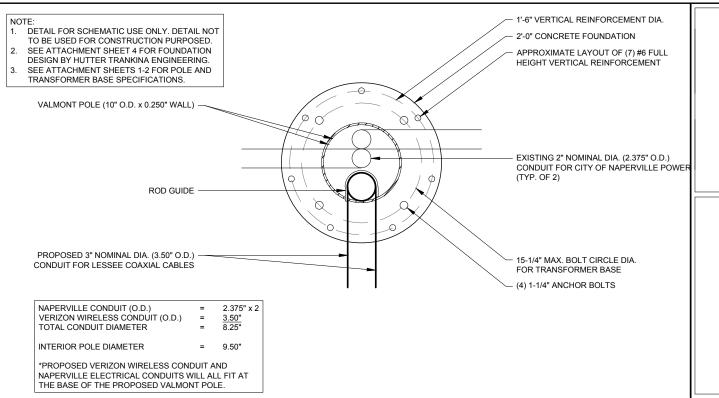
ANTENNA MOUNTING DETAILS - UNIVERSAL POLE-TOP MOUNT SCALE: N.T.S.

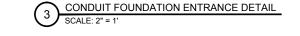
NOTE:
G.C. TO COORDINATE WITH MANUFACTURER
PRIOR TO ORDERING PARTS

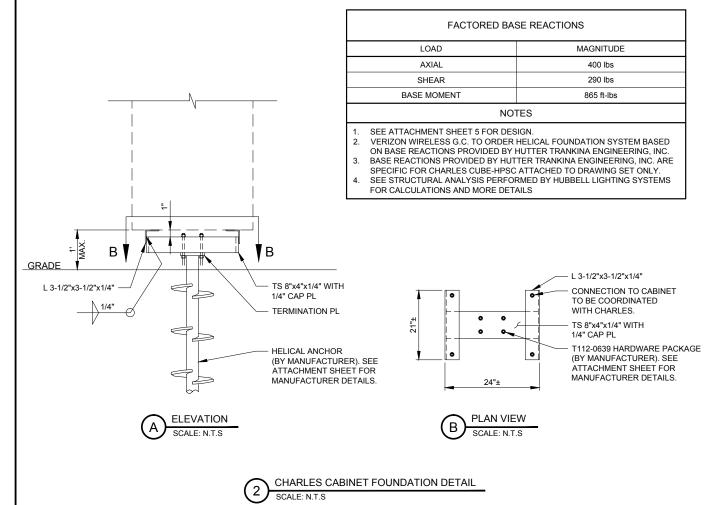
MANUFACTURER - CONCEALFAB

DESCRIPTION - UNIVERSAL POLE-TOP

MOUNTING SYSTEM







CHICAGO SMSA limited partnership



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SHEET TITLE
STRUCTURAL
DETAILS

SHEET NUMBER

S-1

GENERAL

THE CONSTRUCTION DOCUMENT DRAWINGS ARE INTERRELATED. WHEN PERFORMING THE WORK, EACH CONTRACTOR MUST REFER TO ALL DRAWINGS. COORDINATION IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.

DIVISION 1: GENERAL REQUIRMENTS

SECTION 01700 - PROJECT CLOSEOUT

PART 1 - GENERAL

- A. OBTAIN AND SUBMIT RELEASES ENABLING THE OWNER UNRESTRICTED USE OF THE WORK AND ACCESS TO SERVICES AND UTILITIES; INCLUDE OCCUPANCY PERMITS, OPERATING CERTIFICATES AND SIMILAR RELEASED.
- B. SUBMIT RECORD DRAWINGS, DAMAGE OR SETTLEMENT SURVEY, PROPERTY SURVEY, AND SIMILAR FINAL RECORD INFORMATION.
- C. COMPLETE FINAL CLEAN UP REQUIREMENTS, INCLUDING TOUCH-UP PAINTING. TOUCH UP AND OTHERWISE REPAIR AND RESTORE MARRED EXPOSED FINISHES.

- COMPLETE THE FOLLOWING CLEANING OPERATIONS BEFORE REQUESTING INSPECTION FOR CERTIFICATION OF COMPLETION.
 A CLEAN THE PROJECT SITE, YARD AND GROUNDS, IN AREAS DISTURBED BY CONSTRUCTION ACTIVITIES, INCLIDING LANDSCAPE DEVELOPMENT AREAS, OF RUBBISH, WASTE MATERIALS, LITTER AND FOREIGN SUBSTANCES. SWEEP PAREAS BROOM CLEAN, REMOWE PETRO-CHEMICAL SPILLS, STAINS AND OTHER FOREIGN DEPOSITS. RAKE GROUNDS THAT ARE NETHER PLANTED NOR PAYED, TO A SMOOTH EVEN—TEXTURED SUBFRACE.

 B. REMOYE TOOLS, CONSTRUCTION EQUIPMENT, MACHINERY AND SURPLUS MATERIAL FROM THE SITE.
- FROM THE SITE.

 C. REMOVE SNOW AND ICE TO PROVIDE SAFE ACCESS TO THE SITE AND EQUIPMENT
- ENCLOSUNE.

 DEVELOPMENT OF EXTERIOR HARD-SURFACED FINISHES TO A DIRT-FREE CONDITION, FREE OF STAINS, FILMS AND SIMILAR FOREIGN SUBSTANCES. AVOID DISTURBING NATURAL WEATHERING OF EXTERIOR SURFACES.
- E. REMOVE DEBRIS FROM LIMITED ACCESS SPACES, INCLUDING HANDHOLES, MANHOLES,
- E. REMOVE DEBRIS FROM LIMITED ACCESS SPACES, INCLUDING HANDHOLES, MANHOLE AND SIMLAR SPACES.

 F. REMOVE LABELS THAT ARE NOT PERMANENT LABELS.
 G. TOUCH-UP AND OTHERWISE REPAIR AND RESTORE MARRED EXPOSED FINISHES AND SURFACES. REPLACE FINISHES AND SURFACES THAT CAN NOT BE SATISFACTORILY REPAIRED OR RESTORED, OR THAT SHOW EVIDENCE OF REPAIR OR RESTORATION. DO NOT PAINT OVER "UL" AND SIMILAR LABELS, INCLUDING ELECTRICAL NAME PLATES.

 H. LEAVE THE PROJECT CLEAN AND READY FOR OCCUPANCY.

 I. DUST-OFF ALL EQUIPMENT, INCLUDING BATTERY PACKS, WITHIN EQUIPMENT ENCLOSURE.

- 2. REMOVAL OF PROTECTION: REMOVE TEMPORARY PROTECTION AND FACILITIES INSTALLED DURING CONSTRUCTION TO PROTECT PREVIOUSLY COMPLETED INSTALLATIONS DURING THE REMAINDER OF THE CONSTRUCTION PERIOD.

DIVISION 2: SITE WORK

SECTION 02200 - EARTHWORK AND DRAINAGE

PART 1 - GENERAL

- WORK INCLUDED: SEE SITE PLAN.
- DESCRIPTIONS
 IF APPLICABLE, ACCESS DRIVE W/ TURNAROUND AREA, LEASE AREA, AND UNDERGROUND UTILITY EASEMENTS ARE TO BE CONSTRUCTED TO PROVIDE A WELL DRANDE, EASILY WAINTAINED, EVEN SURFACE FOR MATERIAL AND EQUIPMENT DELIVERIES AND MAINTENANCE PERSONNEL ACCESS.

- APPLY SOIL STERILIZER IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS (AS NEEDED).
 APPLY AND MAINTAIN GRASS SEED AS RECOMMENDED BY THE SEED PRODUCER (IF REQUIRED).
 PLACE AND MAINTAIN VEGETATION LANDSCAPING, IF INCLUDED WITHIN THE CONTRACT, AS RECOMMENDED BY NURSERY INDUSTRY STANDARDS.

- A. CONFIRM SURVEY STAKES AND SET ELEVATION STAKES PRIOR TO ANY CONSTRUCTION.
- IF APPLICABLE, COMPLETELY GRUB THE ACCESS DRIVE W/ TURNAROUND, UNDERGROUND UTILITY EASEMENTS, AND LEASE AREA PRIOR TO FOUNDATION CONSTRUCTION, PLACEMENT OF BACKFILL AND SUB-BASE MATERIAL.
- CONSTRUCT TEMPORARY CONSTRUCTION AREA ALONG ACCESS DRIVE
- BRING THE LEASE AREA AND ACCESS DRIVE W/ TURNAROUND TO BASE COURSE ELEVATION PRIOR TO INSTALLING FOUNDATION.
- APPLY SOIL STERILIZER PRIOR TO PLACING BASE MATERIALS.
- GRADE, SEED, FERTILIZE, AND MULCH ALL AREAS DISTURBED BY CONSTRUCTION (INCLUDING UNDERGROUND UTILITY EASEMENTS) IMMEDIATELY AFTER BRINGING LEASE AREA AND ACCESS DRIVE W/ TURNAROUND TO BASE COURSE ELEVATION, WATER TO ENSURE GROWTH.
- G. REMOVE GRAVEL FROM TEMPORARY CONSTRUCTION ZONE TO AN AUTHORIZED AREA OR AS DIRECTED BY PROJECT MANAGER.
- AFTER APPLICATIONS OF FINAL SURFACES, APPLY SOIL STERILIZER TO STONE SURFACES.

- - IF LANDSCAPING IS APPLICABLE TO THE CONTRACT, SUBMIT TWO COPIES OF THE LANDSCAPE PLAN UNDER NURSERY LETTERHEAD. IF A LANDSCAPE ALLOWANCE WAS INCLUDED IN THE CONTRACT, PROVIDE AN ITEMIZED LISTING OF PROPOSED COSTS ON NURSERY LETTERHEAD (REFER TO PLANS FOR LANDSCAPING REQUIREMENTS).
- MANUFACTURER'S DESCRIPTION OF PRODUCT AND WARRANTY STATEMENT ON SOIL STERILIZED.
- MANUFACTURER'S DESCRIPTION OF PRODUCT ON GRASS SEED AND FERTILIZER LANDSCAPING WARRANTY STATEMENT.

- A. IN ADDITION TO THE WARRANTY ON ALL CONSTRUCTION COVERED IN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL REPAIR ALL DAMAGE AND RESTORE, AREA AS CLOSE TO ORIGINAL CONDITION AS POSSIBLE AT SITE AND SURROUNDINGS.
- B. SOIL STERILIZATION APPLICATION TO GUARANTEE VEGETATION FREE ROAD AND SITE AREAS FOR ONE YEAR FROM DATE OF FINAL INSPECTION.
- DISTURBED AREAS WILL REFLECT GROWTH OF NEW GRASS COVER PRIOR TO
- D. LANDSCAPING, IF INCLUDED WITHIN THE SCOPE OF THE CONTRACT, WILL BE GUARANTEED FOR ONE YEAR FROM DATE OF FINAL INSPECTION.

PART 2 - PRODUCTS

MATERIALS

A. SOIL STERILIZER SHALL BE EPA-REGISTERED, PRE-EMERGENCE LIQUID:

PHASAR CORPORATION P.O. BOX 5123 DEARBORN, MI 48128 (313) 563-8000

EPA REGISTERED

FRAMAR INDUSTRIAL PRODUCTS 1435 MORRIS AVE. UNION, NJ 07083

- B. ROAD AND SITE MATERIALS SHALL CONFORM TO IDOT SPECIFICATIONS FILL MATERIAL (UNLESS OTHERWISE NOTED) ACCEPTABLE SELECT FILL SHALL BE IN ACCORDANCE WITH STATE DEPARTMENT OF HIGHWAY AND TRANSPORTATION STANDARD SPECIFICATIONS..
- C. SOIL STABILIZER FABRIC SHALL BE MIRAFI 500X.

PART 3 - EXECUTION

1. INSPECTIONS

PREPARATION

- A. CLEAR TREES, BRUSH AND DEBRIS FROM LEASE AREA, ACCESS DRIVE W/ TURN-AROUND AND UNDER GROUND UTILITY EASEMENTS AS REQUIRED FOR CONSTRUCTION.
- PRIOR TO OTHER EXCAVATION AND CONSTRUCTION, GRUB ORGANIC MATERIAL TO A MINIMUM OF SIX INCHES (6") BELOW GRADE. UNLESS OTHERWISE INSTRUCTED BY LESSE, TRANSPORT ALL REMOVED TREES, BRUSH AND DEBRIS FROM THE PROPERTY TO AN AUTHORIZED LANDFILL.
- PRIOR TO PLACEMENT OF FILL OR BASE MATERIALS, ROLL THE SOIL. WHERE UNSTABLE SOIL CONDITIONS ARE ENCOUNTERED, LINE THE AREAS WITH STABILIZER MAT PRIOR TO PLACEMENT OF FILL OR BASE MATERIAL.
- INSTALLATION A. GRADE OR FILL THE LEASE AREA AND ACCESS DRIVE W/ TURNAROUND AS REQUIRED IN ORDER THAT UPON DISTRIBUTION OF SPOILS, RESULTING FROM EXCAVATIONS, THE RESULTING GRADE WILL CORRESPOND WITH SAID SUB-BASE COURSE. ELEVATIONS ARE TO BE CALCULATED FROM BENCHMARK, FINISHED GRADES, OR INDICATED SLOPES.
 - CLEAR EXCESS SPOILS, IF ANY, FROM JOB SITE AND <u>DO NOT</u> SPREAD BEYOND THE LIMITS OF PROJECT AREA UNLESS AUTHORIZED BY PROJECT MANAGER AND AGREED TO BY LANDOWNER.
 - BRING THE ACCESS DRIVE W/ TURNAROUND TO BASE COURSE ELEVATION TO FACILITATE CONSTRUCTION AND OBSERVATION DURING CONSTRUCTION OF THE SITE.
 - AVOID CREATING DEPRESSIONS WHERE WATER MAY POND.
 - THE CONTRACT SHALL INCLUDE GRADING, BANKING, AND DITCHING, UNLESS
 - OTHERWISE INDICATED. WHEN IMPROVING AN EXISTING ACCESS DRIVE, GRADE THE EXISTING DRIVE TO REMOVE ANY ORGANIC MATTER AND SMOOTH THE SURFACE BEFORE PLACING FILL OR STONE.
 - PLACE FILL OR STONE IN SIX INCH (6") MAXIMUM LIFTS, AND COMPACT BEFORE PLACING NEXT LIFT.
 - THE TOP SURFACE COURSE, SHALL EXTEND A MINIMUM OF ONE FOOT (1') BEYOND THE SITE FENCE (UNLESS OTHERWISE NOTED) AND SHALL COVER THE AREA AS INDICATED.
 - APPLY RIPRAP TO THE SIDE SLOPES OF ALL FENCED SITE AREAS, PARKING AREAS, AND ALL OTHER SLOPES GREATER THAN $2{:}1.$
 - APPLY RIPRAP TO THE SIDES OF DITCHES OR DRAINAGE SWALES.
 - RIPRAP ENTIRE DITCH FOR SIX FEET (6') IN ALL DIRECTIONS AT CULVERT
 - APPLY SEED, FERTILIZER, AND STRAW COVER TO ALL OTHER DISTURBED AREAS, DITCHES, AND DRAINAGE SWALES, NOT OTHERWISE RIPRAPPED. UNDER NO CIRCUMSTANCES WILL DITCHES, SWALES, OR CULVERTS BE PLACED SO THAT THEY DIRECT WATER TOWARDS, OR PERMIT STANDING WATER MMEDIATELY ADJACENT TO SHELTER OR EQUIPMENT. IF DESIONS OR ELEVATIONS ARE IN CONFLICT WITH THIS, ADVISE CONSTRUCTION MANAGER IMMEDIATELY.
 - IN DITCHES WITH SLOPES GREATER THAN 10%, MOUND DIVERSIONARY HEADWALLS IN THE DITCH AT CULVERT ENTRANCES. POSITION THE HEADWALL AT AN ANGLE NO GREATER THAT 60^ OFF THE DITCH LINE. RIPRAP THE UPSTREAM SIDE OF THE HEADWALL AS WELL AS THE DITCH FOR SIX FEET (6') ABOVE THE CULVERT ENTRANCE.
 - APPLY SEED AND FERTILIZER TO SURFACE CONDITIONS WHICH WILL ENCOURAGE ROOTING. RAKE AREAS TO BE SEEDED TO EVEN THE SURFACE AND LOOSEN THE SOIL.
 - SOW SEED IN TWO DIRECTIONS IN TWICE THE QUANTITY RECOMMENDED BY THE SEED PRODUCER.
 - ENSURE GROWTH OF SEEDED AND LANDSCAPED AREAS, BY WATERING, UP TO THE POINT OF RELEASE FROM THE CONTRACT. CONTINUE TO REWORK THE BARE AREAS UNTIL COMPLETE COVERAGE IS OBTAINED.
- 4. FIELD QUALITY CONTROL

COMPACT SOILS TO MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D-1557. AREAS OF SETTLEMENT WILL BE EXCAVATED AND REFILLED AT CONTRACTOR'S EXPENSE. INDICATE PERCENTAGE OF COMPACTION ACHIEVED ON AS-BUILT DRAWINGS.

- PROTECT SEEDED AREAS FROM EROSION BY SPREADING STRAW TO A UNIFORM LOOSE DEPTH OF 1-2 INCHES, STAKE AND TIE DOWN AS REQUIRED. USE OF FEOSION CONTROL MESH OR MULCH NET WILL BE AN ACCEPTABLE ALTERNATE.
- ALL TREES PLACED IN CONJUNCTION WITH A LANDSCAPE CONTRACT WILL BE WRAPPED, TIED WITH HOSE PROTECTED WIRE, AND SECURED TO 2" X 2" X 4"-O" WOODEN STAKES EXTENDING TWO-FEET INTO THE GROUND ON FOUR SIDES OF THE TREE.
- PROTECT ALL EXPOSED AREAS AGAINST WASHOUTS AND SOIL EROSION. PLACE STRAW BALES AT THE INLET APPROACH TO ALL NEW OR EXISTING CULVERTS. WHERE THE SITE OR ROAD AREAS HAVE BEEN ELEVATED IMMEDIATELY ADJACENT TO THE RAIL LINE, STAKE EROSION CONTROL FABRIC FULL LENGTH IN THE SWALE TO PREVENT CONTAMINATION OF THE RAIL BALLAST. ALL EROSION CONTROL METHODS SHALL CONFORM TO APPLICABLE BUILDING CODE FROUIEFMENTS.

DIVISION 16: ELECTRICAL

SECTION 16050 - BASIC ELECTRICAL MATERIALS AND METHODS

- CONTRACTOR SHALL REVIEW THE CONTRACT DOCUMENTS PRIOR TO ORDERING THE ELECTRICAL EQUIPMENT AND STARTING THE ACTUAL CONSTRUCTION. CONTRACTOR SHALL ISSUE A WRITTEN NOTICE OF ALL FINDINGS TO THE ARCHITECT LISTING ANY DISCREPANCIES OF CONTRACTOR INFORMATION.
- ELECTRICAL PLANS, DETAILS AND DIAGRAMS ARE DIAGRAMMATIC ONLY. VERIFY EXACT LOCATIONS AND MOUNTING HEIGHTS OF ELECTRICAL EQUIPMENT WITH OWNER PRIOR TO INSTALLATION.
- 3. EACH CONDUCTOR OF EVERY SYSTEM SHALL BE PERMANENTLY TAGGED IN EACH PANELBOARD, PULLBOX, JUNCTION BOX, SWITCH BOX, ETC. THE TYPE OF TAGGING METHODS SHALL BE IN COMPLANCE WITH OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (O.S.H.A.).

- 4. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND IN GOOD WORKING CONDITION WHEN INSTALLED AND SHALL BE OF THE BEST GRADE AND OF THE SAME MANUFACTURER THROUGHOUT FOR EACH CLASS OR GROUP OF EQUIPMENT. MATERIALS SHALL BE LISTED "J" WHERE APPLICABLE. MATERIALS SHALL MEET WITH APPROVAL OF ALL GOVERNING BODIES HAVING JURISDICTION. MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH APPLICABLE STANDARDS ESTABLISHED BY ANSI, NEMA, NBFU AND "UL" LISTED.
- 5. ALL CONDUIT SHALL HAVE A PULL CORD.
- 6. PROVIDE PROJECT MANAGER WITH ONE SET OF COMPLETE ELECTRICAL "AS INSTALLED" DRAWINGS AT THE COMPLETION OF THE JOB, SHOWING ACTUAL DIMENSIONS, ROUTINGS, AND CIRCUITS.
- ALL CIRCUIT BREAKERS, FUSES AND ELECTRICAL EQUIPMENT SHALL HAVE AN INTERRUPTING SHORT CIRCUIT CURRENT TO WHICH THEY MAY BE SUBJECTED, AND A MINIMUM OF 10,000 A.I.C.
- 8. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE GROUNDED AS REQUIRED BY UBC, NEC AND ALL APPLICABLE CODES.
- PATCH, REPAIR AND PAINT ANY AREA THAT HAS BEEN DAMAGED IN THE COURSE OF THE ELECTRICAL WORK.
- PLASTIC PLATES FOR ALL SWITCHES, RECEPTACLES, TELEPHONE AND BLANKED OUTLETS SHALL HAVE ENGRAVED LETTERING WHERE INDICATED ON THE DRAWINGS. WEATHERPROFOR RECEPTACLES SHALL HAVE SIERRA #WPD-8 LIFT COVERPLATES.

SECTION 16400 - SERVICE AND DISTRIBUTION

- WIRE AND CABLE CONDUCTORS SHALL BE COPPER, 600V. TYPE THHN OR THWN, WITH A MIN. SIZE OF #12 AWG, COLOR CODED. ALL RECTIFIER DROPS SHALL BE STRANDED TO ACCEPT CRIMP CONNECTORS.
- ALL CHEMICAL GROUND RODS SHALL BE "UL" APPROVED.
- METER SOCKET AMPERES, VOLTAGE, NUMBER OF PHASES SHALL BE AS NO ON THE DRAWINGS. MANUFACTURED BY MILBANK OR APPROVED EQUAL, AND SHALL BE UTILITY COMPANY APPROVED.
- A. RIGID CONDUIT SHALL BE U.L. LABEL GALVANIZED ZINC COATED WITH
 GALVANIZED ZINC INTERIOR AND SHALL BE USED WHEN INSTALLED IN OR
 UNDER CONCRETE SLABS, IN CONTACT WITH THE EARTH, UNDER PUBLIC
 ROADWAYS, IN MASONRY WALLS OR EXPOSED ON BUILDING EXTERIOR,
 RIGID CONDUIT IN CONTACT WITH EARTH SHALL BE 1/2 LAPPED WRAPPED
 WITH HUNTS WRAP PROCESS NO. 3.
- B. FLEXIBLE METALLIC CONDUIT SHALL HAVE U.L. LISTED LABEL AND MAY BE USED WHERE PERMITTED BY CODE. FITTINGS SHALL BE "JAKE" OR "SQUEZZE" TYPE. ALL FLEXIBLE CONDUITS SHALL HAVE FILL LENGTH CONDUIN WIPE.
- C. AT A MINIMUM DEPTH OF 42" BELOW GRADE. IT IS REQUIRED AND WILL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO NOTIFY JULLIE. AT 1-800-892-0123 OR OTHER SUCH NOTIFYING AGENCY FORTY-EIGHT (48) HOURS PRIOR TO DIGGING.
- CONTRACTOR TO COORDINATE WITH UTILITY COMPANY FOR CONNECTION OF TEMPORARY AND PERMANENT POWER TO THE SITE. THE TEMPORARY POWER AND ALL HOOKUP COSTS ARE TO BE PAID BY THE CONTRACTOR
- ALL ELECTRICAL EQUIPMENT SHALL BE LABELED WITH PERMANENT ENGRAVED PLASTIC LABELS WITH WHITE ON BLUE BACKGROUND LETTERING (MINIMUM LETTER HEIGHT SHALL BE ONE FORTH INCH (1/4"). NAMEPLATE SHALL BE FASTENED WITH STAINLESS STEEL SCREWS, NOT ADHESIVE.
- UPON COMPLETION OF WORK, CONDUCT CONTINUITY, SHORT CIRCUIT, AND FALL POTENTIAL GROUNDING TESTS BY AN INDEPENDENT TESTING SERVICE ENGAGED BY THE CONTRACTOR SHALL BE SUBMITTED FOR APPROVAL. SUBMIT TEST REPORTS TO PROJECT MANAGER. CLEAN PREMISES OF ALL DEBRIS RESULTING FROM WORK AND LEAVE WORK IN A COMPLETE AND UNDAMAGED CONDITION.
- - SURFACE PREPARATION:
 ALL CONNECTIONS SHALL BE MADE TO BARE METAL. ALL PAINTED
 SURFACES SHALL BE FIELD INSPECTED AND MODIFIED TO ENSURE
 PROPER CONTACT. NO WASHERS ARE ALLOWED BETWEEN THE ITEMS
 BEING GROUNDED. ALL CONNECTIONS ARE TO HAVE A NON-OXIDIZING
 AGENT APPLIED PRIOR TO INSTALLATION.
 - GROUND BAR PREPARATION:
 ALL COPPER GROUND BARS SHALL BE CLEANED, POLISHED AND A
 NON-OXIDIZING AGENT APPUED. NO FINGERPRINTS OR DISCOLORED
 COPPER WILL BE PERMITTED.

ALL GROUNDING CONDUCTORS SHALL RUN THROUGH PVC SLEEVES
WHEREVER CONDUCTORS RUN THROUGH WALLS, FLOORS OR CEILINGS.
IF CONDUCTORS MUST RUN THROUGH EMT, BOTH ENDS OF CONDUIT SHALL
BE GROUNDED. SEAL BOTH ENDS OF CONDUIT WITH SILICONE CAULK.

- B. GROUND BARS
 - ALL GROUND BARS SHALL BE ONE FORTH INCH (1/4") THICK TINNED COPPER PLATE AND OF SIZE INDICATED ON DRAWINGS.
- ALL CONNECTIONS TO THE GROUND BAR SHALL OBSERVE THE FOLLOWING SEQUENCE:

 - BOLT-HEAD 2-HOLE LUG TINNED COPPER BUSS BAR
 - STAR WASHER NUT
- C. EXTERNAL CONNECTIONS
- ALL BURIED GROUNDING CONNECTIONS SHALL BE MADE BY THE EXOTHERMIC WELD PROCESS. CONNECTIONS SHALL INCLUDE ALL CABLE TO CABLE, SPLICES, TEE'S, GROSSES, ETC. ALL CABLE TO GROUND RODS, GROUND ROD SPLICES AND LIGHTNING PROTECTION SYSTEMS ARE TO BE AS INDICATED. ALL MATERIALS USED (MOLDS, WELDING METAL, TOOLS, ETC.) SHALL BE BY "ULTRAWELD" AND INSTALLED PER MANUFACTURER'S RECOMMENDED PROCEDURES.
- ALL ABOVE GRADE GROUNDING AND BONDING CONDUCTORS SHALL BE CONNECTED BY TWO HOLE CRIMP TYPE (COMPRESSION) CONNECTIONS (EXCEPT FOR THE ACEG AND GROUND ROD) MECHANICAL CONNECTIONS, FITTINGS OR CONNECTIONS THAT DEPEND SOLELY ON SOLDER SHALL NOT BE USED. ALL CABLE TO CABLE CONNECTIONS SHALL BE HIGH PRESSURE DOUBLE CRIMP TYPE CONNECTIONS. CONNECTIONS TO STRUCTURAL STEEL SHALL BE EXOTHERMIC WELDS.

ALL GROUND RODS SHALL BE 5/8-INCH DIAMETER X 10'-0" LONG "COPPERWELD" OR APPROVED EQUAL, OF THE NUMBER AND LOCATIONS INDICATED, GROUND RODS SHALL BE DRIVEN FULL LENGTH VERTICAL IN UNDISTURBED EARTH. 5.

E. GROUND CONDUCTORS

- F. LUGS
 - LUGS SHALL BE 2-HOLE, LONG BARREL, STRAND COPPER UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS. LUGS SHALL BE THOMAS AND BETTS SERIES #548_ DE OR EQUIVALENT

535 MCM DLO 262 MCM DLO #1/0 DLO #4/0 THWN AND BARE #2/0 THWN

 WHEN THE DIRECTION OF THE CONDUCTOR MUST CHANGE, IT SHALL BE DONE GRADUALLY. THE CURVATURE OF THE TURN SHALL BE DONE IN ACCORDANCE WITH THE FOLLOWING CHART

RADIUS TO INSIDE EDGE

NO. 6 AWG TO NO. 4 AWG NO. 2 AWG TO NO. 1/O AWG NO. 2/O AWG TO 4/O MCM 250 MCM TO 750 MCM

G. GROUND RING

GROUNDING CONDUCTOR SIZE

- THE EXTERNAL GROUND RING BETWEEN THE UTILITY POLE ANCHORS SHALL BE MINIMUM NO. 2 A.W.G. SOLID TINNED BARE COPPER CONDUCTOR IN DIRECT CONTACTWITH THE EARTH AT THE DEPTH INDICATED ON THE DRAWINGS. CONDUCTOR BENDS SHALL HAVE A MINIMUM BENDING RADIUS OF EIGHT INCHES (8").
- ALL EXTERNAL GROUND RINGS ARE TO BE JOINED TOGETHER AND ALL CONNECTIONS MUST BE ELECTROTHERMICALLY WELDED. NO LUGS OR ACCEPTEDCLAMPS WILL BE.
- - - GROUND TESTS SHALL BE PERFORMED AS INDICATED ON DRAWINGS.
 A BIDDLE GROUND OHMER OR THE METHOD OF USING TWO AUXILLARY
 GROUND RODS (AS DESCRIBED IN I.E.E.E. STANDARDS NO. 81—1983,
 PART 1) MAY BE USED. THE I.E.E.E. METHOD REQUIRES THE USE OF AN
 A.C. TEST CURRENT. THE AUXILLARY TEST RODS MUST BE SUFFICIENTLY
 FAR AWAY FROM THE ROD UNDER TEST SO THAT THE REGIONS IN WHICH
 THEIR RESISTANCE IS LOCALIZED DO NOT OVERLAP. THE TEST POINT
 WILL BE THE GROUND ROD AND WILL CONSIST OF THE THREE POINT
 FALL OF POTENTIAL MEGGER TEST METHOD, USING THE BIDDLE NULL—
 BALANCE EARTH TESTER (MEGGER #250220—2 OR EQUIVALENT)
 - CONTRACTOR TO CONDUCT GROUND RESISTANCE TEST IN THE FORMAT AS FOLLOWS:
- 10. GROUNDING RESISTANCE TEST REPORT

UPON COMPLETION OF THE TESTING FOR EACH SITE, A TEST REPORT SHOWING RESISTANCE IN OHMS WITH AUXILIARY POTENTIAL ELECTRODES AT 5 FEET AND 10 FEET INTERVALS UNTIL THE AVERAGE RESISTANCE STARTS INCREASING AND ALSO NOTE THAT 10–15 PHOTOS MUST BE TAKEN TO PROOF ENTIRE EXTERNAL GROUND RING SYSTEM BEFORE BACKFILL. TWO (2) SETS OF TEST DOCUMENTS ARE OF THE INDEPENDENT TESTING SERVICE TO BE BOUND AND SUBMITTED WITHIN ONE (1) WEEK OF WORK COMPLETION.

SECTION 16503 - POLES, POSTS, AND STANDARDS (SINGLE MAST AND SELF SUPPORTING TOWERS)

- A. LIGHTNING ROD AND EXTENSION PIPE INCLUDING ALL APPURTENANCES, TO BE FURNISHED BY OWNER, IF REQUIRED.
- PROVIDE TEMPORARY LIGHTING FOR TOWER AS PER FAA REGULATIONS DURING CONSTRUCTION, IF REQUIRED.

GROUND TOWER WITH A MINIMUM OF #2 AWG TINNED SOLID BARE COPPER CONDUCTOR CADWELDED TO TOWER BASE PLATE. TWO (2) GROUNDING LEADS PER TOWER BASE PLATE. NO EXOTHERMIC WELDS SHALL BE ATTACHED DIRECTLY TO THE MONOPOLE TOWER SHAFT.

SECTION 16745 - TELECOMMUNICATIONS WIRING COMPONENTS

- (COAXIAL ANTENNA CABLE) A. ALL MATERIALS, PRODUCTS OR PROCEDURES INCORPORATED INTO WORK SHALL BE NEW AND OF STANDARD COMMERCIAL QUALITY.
- B. CERTAIN MATERIALS AND PRODUCTS WILL BE SUPPLIED BY THE OWNER (REFER TO GENERAL CONDITIONS FOR THE LIST OF OWNER FURNISHED EQUIPMENT, MATERIALS AND SUPPLIES FOR THESE ITEMS). THE CONTRACTOR IS RESPONSIBLE FOR PICKUP AND DELIVERY OF ALL SUCH MATERIALS
- C. ALL OTHER MATERIALS AND PRODUCTS SPECIFIED IN THE CONTRACT DOCUMENTS SHALL BE SUPPLIED BY THE CONTRACTOR.
- A. COAXIAL CABLE:
 - INSTALL COAXIAL CABLE AND TERMINATIONS BETWEEN ANTENNAS AND EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS WITH COAXIAL CABLES SUPPORTED AT NO MORE THAN 3'-0' O.C. WEATHERPROOF ALL CONNECTORS BETWEEN THE ANTENNA AND EQUIPMENT PER MANUFACTURERS' REQUIREMENTS. TERMINATE ALL COAXIAL CABLE THREE FEET (3') IN EXCESS OF EQUIPMENT LOCATION UNLESS OTHERWISE STATED.
- ALL COAX RUN LENGTHS GREATER THAN 175 FEET SHALL BE 1-5/8", ALL COAX. RUN LENGTH BETWEEN 101 FEET AND 174 FEET SHALL BE 1-1/4", AND IN LENGTH LESS THAN OR EQUAL TO 100 FEET SHALL BE 7/8".
- 3. ANTENNA AND COAXIAL CABLE GROUNDING
- A. ALL COAXIAL CABLE GROUNDING KITS ARE TO BE INSTALLED ON STRAIGHT RUNS OF COAXIAL CABLE (NOT WITHIN BENDS)
- A. TO PROVIDE EASY IDENTIFICATION AND UNIFORM MARKING OF ANTENNA CABLING, PLASTIC TAGS SHALL BE USED AT THE FOLLOWING LOCATIONS: FIRST LOCATION IS AT THE END OF THE COAX NEAREST
- THE ANTENNA (WHERE THE COAXAL CABLE AND JUMPER ARE CONNECTED).
 SECOND LOCATION IS INSIDE THE EQUIPMENT SHELTER NEAR THE WAVEGUIDE ENTRY PORT.
- B. USE ANDREW CABLE TIES (PT.# 27290) TO SECURE IDENTIFICATION TAGS. TESTING

LESSEE SHALL PROVIDE AN INDEPENDENT TESTING AGENCY TO PERFORM THE COAXIAL SWEEP TEST & REPORT. THE CONTRACTOR IS TO PROVIDE ONE CLIMBER / QUALIFIED PERSONNEL TO ASSIST IN ANY REPAIRS

AND WEATHERPROOFING ONCE THE TEST IS COMPLETE. THE CONTRACTOR IS TO PROVIDE LESSEE WITH A MINIMUM OF 48 HOURS NOTICE PRIOR TO THE TIME OF THE SWEEP TEST.

partnership AGO SA NEC SE limited , 0

VERIZON WIRELESS



N A B O D

LOC# 383984 DT NAPERVILLE 1_SC_3

1125 E. GARTNER RD. NAPERVILLE, IL 60540

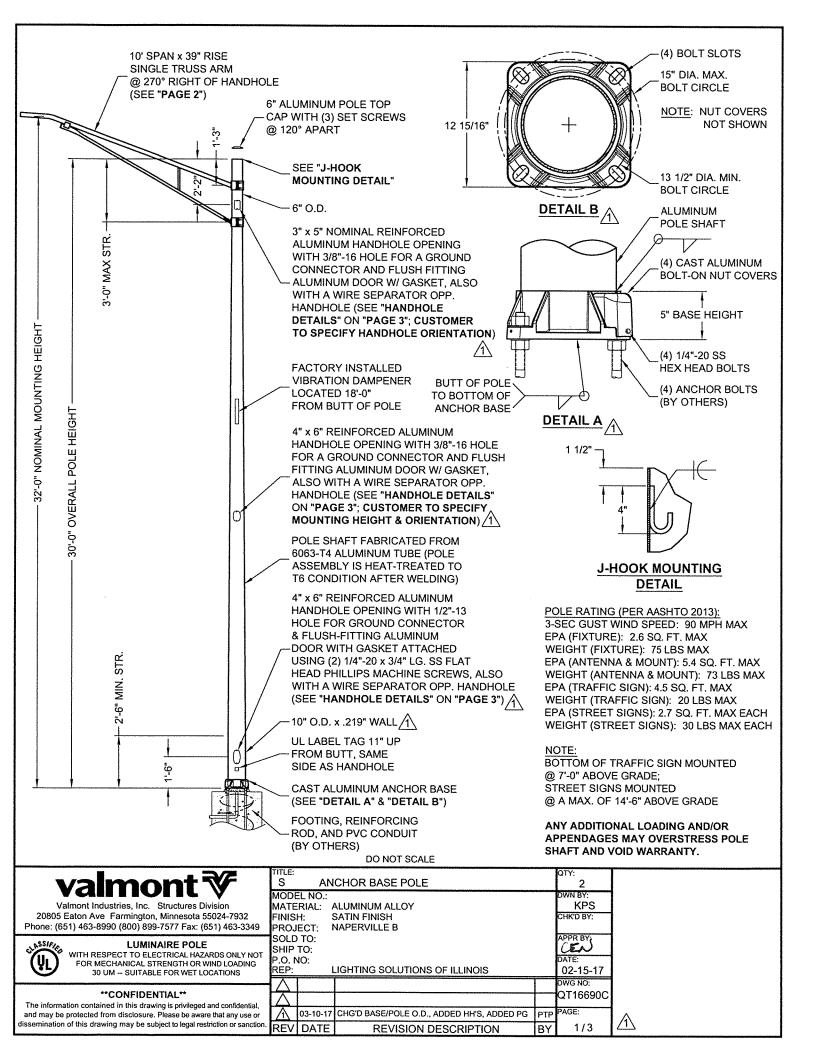
CHECKED BY: TAZ 02/09/17

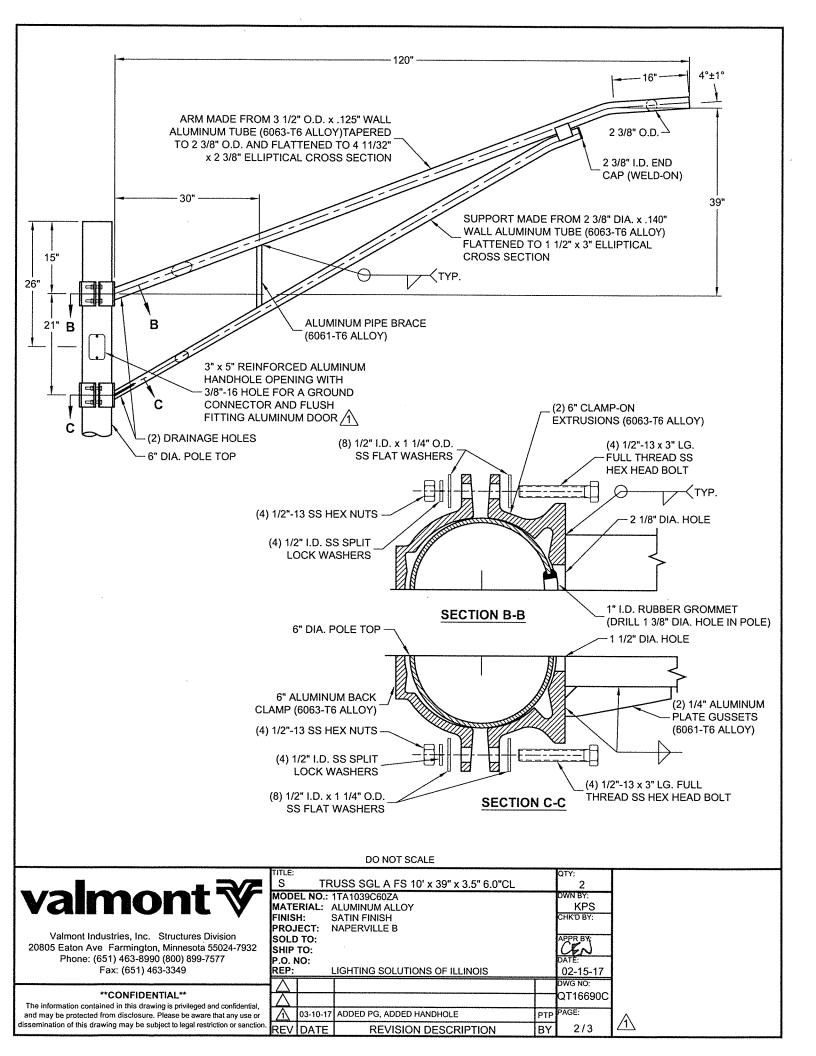
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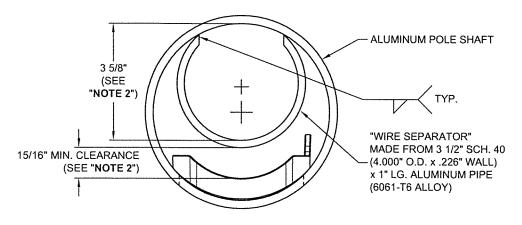
SPECIFICATIONS

88-053

SHEET NUMBER SP-1



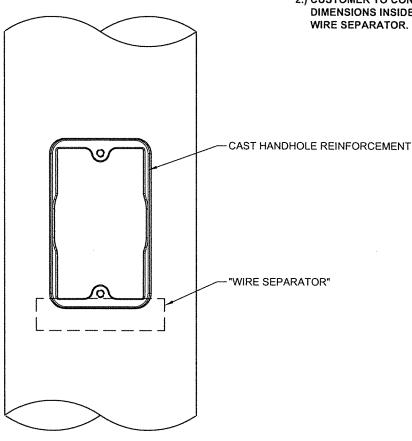




TOP VIEW

NOTES:

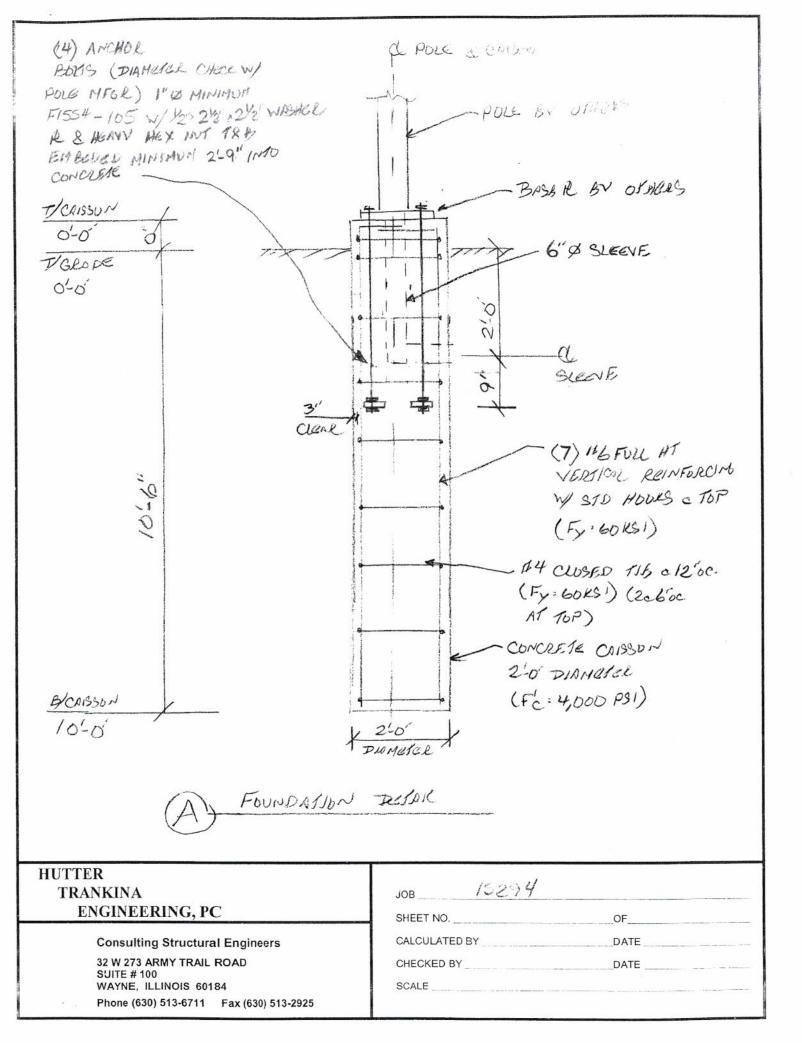
- 1.) WORST CASE SCENARIO, AT POLE TOP, OF HANDHOLE REINFORCEMENT & WIRE SEPARATOR SHOWN.
- 2.) CUSTOMER TO CONFIRM WIRE CLEARANCE DIMENSIONS INSIDE & OUTSIDE OF WIRE SEPARATOR.

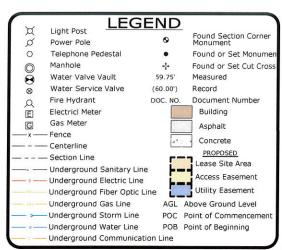


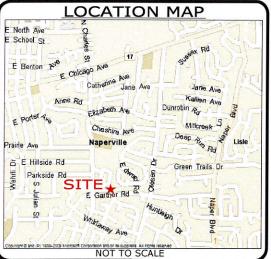
FRONT VIEW

DO NOT SCALE

HANDHOLE DETAILS S MODEL NO.: PTP MATERIAL: ALUMINUM ALLOY FINISH: HK'D BY: PROJECT: NAPERVILLE B Valmont Industries, Inc. Structures Division SOLD TO: 20805 Eaton Ave Farmington, Minnesota 55024-7932 SHIP TO: Phone: (651) 463-8990 (800) 899-7577 P.O. NO: REP: Fax: (651) 463-3349 LIGHTING SOLUTIONS OF ILLINOIS 03-10-17 DWG NO: **CONFIDENTIAL** QT16690C The information contained in this drawing is privileged and confidential, AGE: and may be protected from disclosure. Please be aware that any use or dissemination of this drawing may be subject to legal restriction or sanction. 3/3 REV DATE REVISION DESCRIPTION BY







SURVEY NOTES

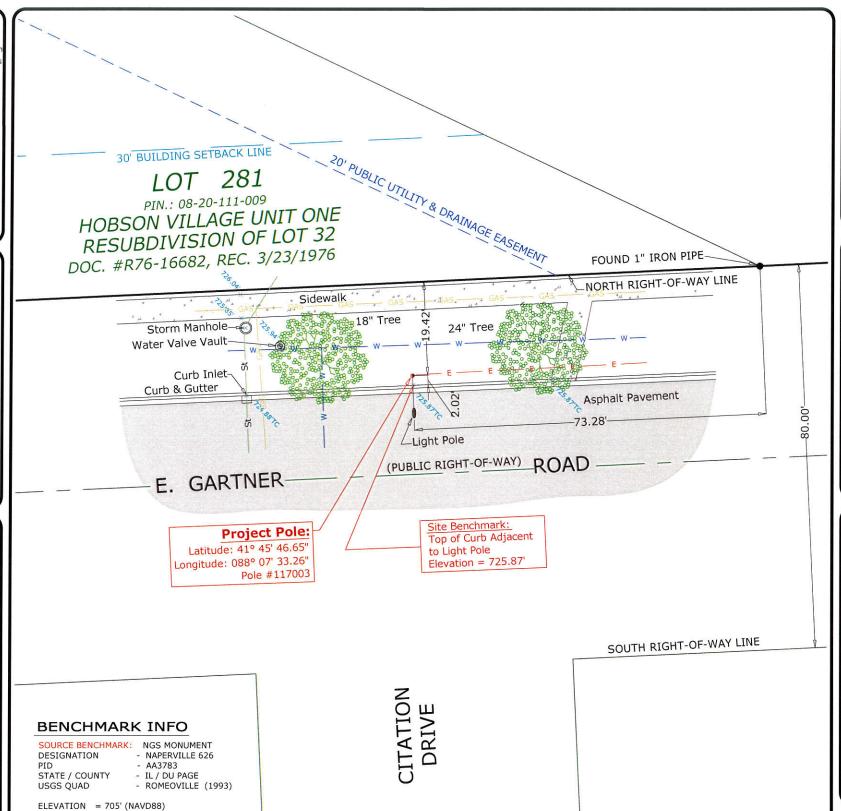
EASEMENTS AND SETBACKS SHOWN HEREON ARE BASED UPON THE RECORDED SUBDIVISION PLAT UNLESS NOTED OTHERWISE

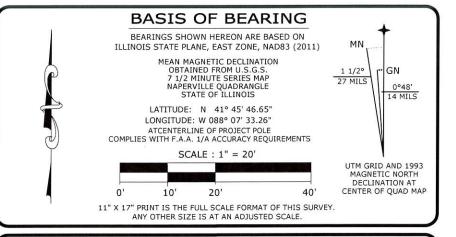
THE SURVEYOR EXPRESSES NO OPINION AS TO THE ACCURACY OF ANY UNDERGROUND UTILITIES WHEN NOT READILY VISIBLE FROM THE SURFACE. IT IS RECOMMENDED THAT THE APPROPRIATE GOVERNMENTAL AGENCY, MUNICIPALITY AND/OR UTILITY COMPANY BE CONTACTED FOR VERIFICATION.

THE PERMANENT PARCEL INDEX NUMBER FOR THE PROPERTY NORTH OF AND ADJACENT TO THE PROJECT POLE SHOWN HEREON IS 08-20-111-009.

A CURRENT TITLE REPORT WAS NOT FURNISHED TO US FOR OUR USE IN PREPARING THIS SURVEY. THEREFORE THERE MAY BE ADDITIONAL EASEMENTS AND/OR SERVITUDES EFFECTING THIS PROPERTY WHICH ARE NOT SHOWN ON THIS SURVEY

MAPPING





LEGAL DESCRIPTION

THAT PART OF THE PUBLIC RIGHT-OF-WAY, 73 FEET MORE OR LESS WEST OF THE EAST CORNER AND 19 FEET MORE OR LESS SOUTH OF THE SOUTH LINE OF LOT 281 IN HOBSON VILLAGE UNIT ONE RESUBDIVISION OF LOT 32 OF HOBSON VILLAGE UNIT ONE, BEING A SUBDIVISION OF PART OF THE EAST HALF OF SECTION 19 AND PART OF THE WEST HALF OF SECTION 20, TOWNSHIP 38 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN LISLE TOWNSHIP, ACCORDING TO THE PLAT THEREOF RECORDED MARCH 23, 1976 AS INSTRUMENT NUMBER R76-16682, IN THE RECORDER'S OFFICE OF DU PAGE COUNTY, ILLINOIS.

SURVEYOR'S CERTIFICATE

STATE OF ILLINOIS
COUNTY OF KANE

I, CHARLES S. MARSHALL, AN ILLINOIS PROFESSIONAL LAND SURVEYOR, DO HEREBY CERTIFY THAT THE PLAT SHOWN HEREON, BEING COMPLETED IN THE FIELD ON 1/26/2017 IS A CORRECT REPRESENTATION OF A SURVEY PERFORMED AT AND UNDER MY DIRECTION.

THIS SURVEY MEETS THE MINIMUM TECHNICAL STANDARDS FOR LAND BOUNDARY SURVEYS SET FORTH BY ILLINOIS STATE LAW.

ALL DIMENSIONS ARE IN FEET AND DECIMAL PARTS THEREOF.

GIVEN UNDER MY HAND AND SEAL
THIS 2ND DAY OF FEBRUARY, A.D. 2017.

CHARLES S. MARSHALL

ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 035-3377

LICENSE EXPIRES 11/30/2018

F. LES S. MARSHAP ATE ON P. ON

NO.DATEREVISION1.1/26/2017FIELD SURVEY COMPLETED2.1/27/2017ISSUED PRELIMINARY SURVEY3.12/2/2017FINAL SURVEY COMPLETED

SMALL CELL - SITE SURVEY

ASVICE

ASM Consultants, Inc.
16 E Wilson St, Batavia IL 60510
Tel (630) 879-0200 Fax (630) 454-3774
advanced@advct.com
Professional Design Firm #184-006014 expires 4/30/2017

Chicago SMSA

CHICAGO SMSA LIMITED PARTNERSHIP d/b/a VERIZON WIRELESS 1515 WOODFIELD ROAD, SUITE 1400 SCHAUMBURG, ILLINOIS 60173 PHONE: 847—619—5397 FAX: 847—706—7415



TERRA
Consulting Group, LTD.
600 Busse Highway

Consulting Group, LTD. 600 Busse Highway Park Ridge, IL 60068 (847) 698-6400

JOB No.: 88-053

E DESIGNATION INFORMATION:

DT NAPERVILLE _1_SC_3

Location No.: 383984
Project No.: 20151233053
E GARTNER RD & CITATION DR
NAPERVILLE, IL 60540

DRAWN BY: PS CHECKED BY: CSM

PROJECT NO. 720562

<u>L-1</u>