III. E

Memorandum
Planning & Development Services Division

To: **Planning and Public Works Committee**

From: John Boyer, Senior Planner

Date: April 14, 2014

RE: **T.S.P. 43-2014 Verizon Wireless (132 Woodcliff Place Drive):** A request to obtain approval to amend a Telecommunications Siting Permit to accommodate three (3) additional antennas on an existing lattice tower zoned R2 (PEU)on a 0.41 acre tract of land located on the west side of Wildhorse Springs Drive, approximately 250 feet north of Wildhorse Springs Court (18T410128).

Summary

Danielle Holsworth on behalf of Verizon Wireless (applicant) has submitted a request for a Telecommunications Siting Permit (TSP) for the above referenced property located within the Wildhorse Springs subdivision. The proposed TSP is to accommodate three (3) new antennas and accessory cables on an existing 127 foot tall lattice tower. The antennas are planned to be located on an existing antenna platform of the tower located 118 feet above the surrounding grade. No antennas are planned for removal with this application (only additions).

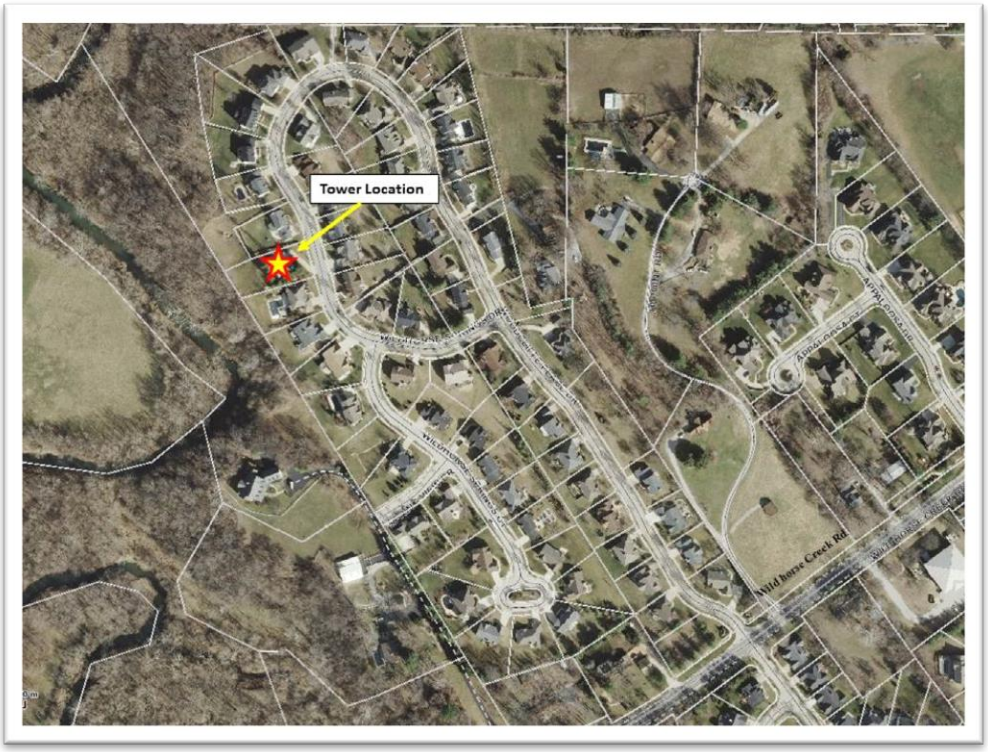


Figure 1: Aerial Photo

History

The tower was originally approved via a Conditional Use Permit by application P.Z. 08-92 in October 1992. Subsequent amendments to this tower occurred with the following applications (along with descriptions of work);

- July 20, 2000
  - Co-Location of additional antennas to the existing tower.
- T.S.P. 13-2009
  - Additional equipment and antenna to existing tower.
- T.S.P. 16-2009
  - Changing-out existing equipment.
- T.S.P. 18-2010
  - Additional antennas and equipment.

Discussion

City of Chesterfield Ordinance #2391, which governs telecommunications and facilities siting, permits applications for equipment upgrades to be submitted for sites that currently hold a Telecommunications Siting Permit (TSP) without the need for a Public Hearing. As discussed in the History Section, existing TSP's do exist on this site. Staff has reviewed this application against City of Chesterfield Ordinance #2391 and the planned improvement is considered a co-location and not a substantial modification and no height increase; therefore, no public hearing was required.

After receiving a recommendation from the Planning and Public Works Committee, this request may be forwarded to the City Council for review. Attached please find a copy of the construction plans, site photograph and supporting documents.

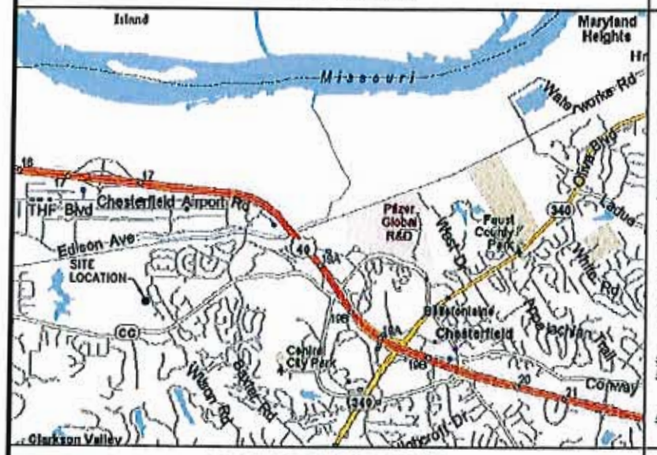
Respectfully submitted,

John Boyer
Senior Planner

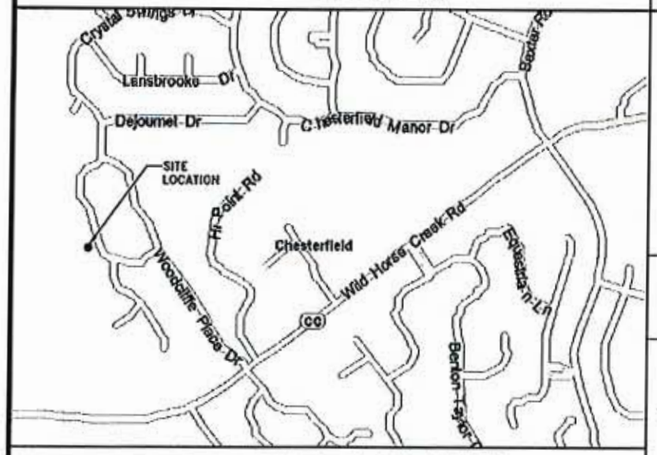
cc. Aimee Nassif, Planning and Development Services Director


The Grounds Guys

AREA MAP



VICINITY MAP



DRIVING DIRECTIONS

FROM VERIZON WIRELESS – ST. LOUIS
1710 DR. MARTIN LUTHER KING DRIVE, ST. LOUIS, MISSOURI 63106

GO WEST ON DR. MARTIN LUTHER KING DRIVE (0.1 MI) TO N. 18TH ST.
GO SOUTH ON N. 18TH ST. (0.4 MI) TO PINE ST.
GO WEST ON PINE ST. (0.2 MI) TO I-64/US-40.
GO WEST ON I-64/US-40 (19.7 MI) TO CHESTERFIELD PKWY.
GO SOUTH ON CHESTERFIELD PKWY (0.1 MI) TO WILD HORSE CREEK RD.
GO WEST ON WILD HORSE CREEK RD. (1.3 MI) TO WOODCLIFFE PLACE DR.
GO NORTH ON WOODCLIFFE PLACE DR. (0.5 MI) TO SITE ON THE RIGHT.

CONTRACTOR INFORMATION

PROJECT INFORMATION

CELL SITE NAME:	STLC CHESTERFIELD	AWS
CELL SITE ADDRESS:	132 WOODCLIFFE PLACE DR. CHESTERFIELD, MISSOURI 63005	
LESSOR NAME /TOWER OWNER NAME & ADDRESS:	CROWN CASTLE 1001CRAIG ROAD, SUITE 460 ST. LOUIS, MISSOURI 63146 CROWN CASTLE # 816929	
LESSOR/TOWER OWNER CONTACT:	PETE FAULHABER (314)-432-3158	
TOWER INFORMATION:		
LATITUDE:	38° 39' 29.4" N	
LONGITUDE:	-90° 35' 31.6" W	
GROUND ELEV:	662'-0" AMSL	
OVERALL STRUCTURE HT:	127'-0" AGL	
TOWER HT:	120'-0" AGL	
ANTENNA CL:	123'-0" AGL	
APPLICANT NAME & ADDRESS:	VERIZON WIRELESS 10740 NALL AVENUE OVERLAND PARK, KANSAS 66211	
APPLICANT CONTACT:	MANAGER - NETWORK REAL ESTATE (913) 344-2800	

CONSULTING TEAM

ENGINEER: SSC, INC.
721 EMERSON ROAD, SUITE 475
SAINT LOUIS, MISSOURI 63141
PHONE: (314) 993-1010
FAX: (913) 438-7777

M.L. OWENS - LEAD ENGINEER

T.M. SUPER - LEAD ELECTRICAL

T. WEISHAAR - PROJECT MANAGER

B.M. MILLER - LEAD DESIGNER

VERIZON WIRELESS DEPARTMENTAL APPROVALS

	INITIALS	DATE
STEVEN FALLON RF ENGINEER	SF	07/03/13
SCOTT YOUNG OPERATIONS MANAGER	SY	07/05/13
TIM MAULDIN CONSTRUCTION ENGINEER	TM	07/15/13
CONSTRUCTION MANAGER		
BRENDA CLEMONS MARION CRABLE REAL ESTATE MANAGER	BC MC	07/03/13 07/22/13

LESSOR/LICENSOR APPROVAL

Van Powell — Digitally signed by Van Powell DN: cn=Van Powell, o=Crown Castle, ou=Network Operations, email=van.powell@crowncastle.com, c=US Date: 2014.01.17 23:46:09 -06'00'

	INITIALS	DATE
LESSOR/LICENSOR		

LESSOR/LICENSOR: PLEASE CHECK THE APPROPRIATE BOX BELOW

☐ NO CHANGES ☐ CHANGES NEEDED. SEE COMMENTS ON PLANS

DRAWING INDEX

SHEET NUMBER	SHEET DESCRIPTION	REVISION	RESPONSIBLE ENGINEER
T01	TITLE SHEET	0	SC/E
A01	SITE PLAN	0	SC
A02	TOWER ELEVATION	0	SC
A03	ANTENNA KEYS	0	SC
A04	PROPOSED RRU DIAGRAM & PARTS LIST	0	SC
A05	ANTENNA LAYOUT & ENTRY PORT DETAILS	0	SC
A06	DETAILS	0	SC
A07	DETAILS	0	SC
A08	DETAILS	0	E
GN01	GENERAL NOTES	0	SC/E

STATE OF MISSOURI ★ MICHAEL L. OWENS NUMBER PE-29058 ★ PROFESSIONAL ENGINEER

STATE OF MISSOURI ★ SHELTON KEISLING NUMBER E-27323 ★ PROFESSIONAL ENGINEER

VERIZON WIRELESS PROJECT: V20130882244

PROJECT DESCRIPTION:
TO MODIFY ANTENNA CONFIGURATION ON TOWER.

verizon wireless

SITE NAME:

STLC CHESTERFIELD

LOCATION NUMBER:

126994

RECEIVED
City of Chesterfield
MAR 25 2014
Department of Public Services

PLANS PREPARED FOR:
verizon wireless

PLANS PREPARED BY:
SSC
721 Emerson Road, Suite 475
St. Louis, Missouri 63141
Phone: 314-993-1010
Fax: 314-993-1038

ENGINEERING LICENSE:
STATE OF MISSOURI
PE CERTIFICATE OF AUTHORIZATION #001640

ENGINEER		PE #	DISCIPLINE
MLO	MICHAEL L. OWENS	E-29058	STRUCTURAL/CIVIL
KV	KEVIN VANHAELE	E-21561	STRUCTURAL/CIVIL
REJ	ROBERT E. JESSEN	E-28974	STRUCTURAL/CIVIL
TMS	TERRANCE M. SUPER	E-18521	ELECTRICAL
SOK	SHELTON D. KEISLING	E-27323	ELECTRICAL
DEK	DAVE E. KASPER	E-18063	ELECTRICAL

DRAWING NOTICE:
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SUBMITTALS

DESCRIPTION	DATE	BY	REV
ISSUED FOR REVIEW	06/20/13	BMR	A
REVISED PER CLIENT COMMENTS	09/18/13	DSH	B
REVISED PER CLIENT COMMENTS	11/13/13	DSH	C
REVISED PER CLIENT COMMENTS	12/18/13	DSH	D
REVISED PER CLIENT COMMENTS	01/10/14	DSH	E
ISSUED FOR CONSTRUCTION	01/14/14	DSH	0

SITE NAME: STLC CHESTERFIELD

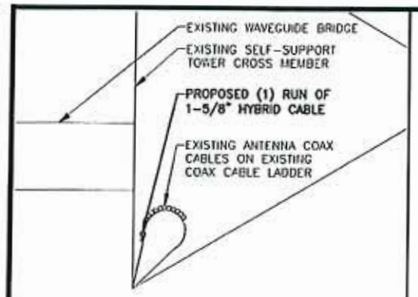
LOCATION NUMBER: 126994

SITE ADDRESS: 132 WOODCLIFFE PLACE DR. CHESTERFIELD, MISSOURI 63005

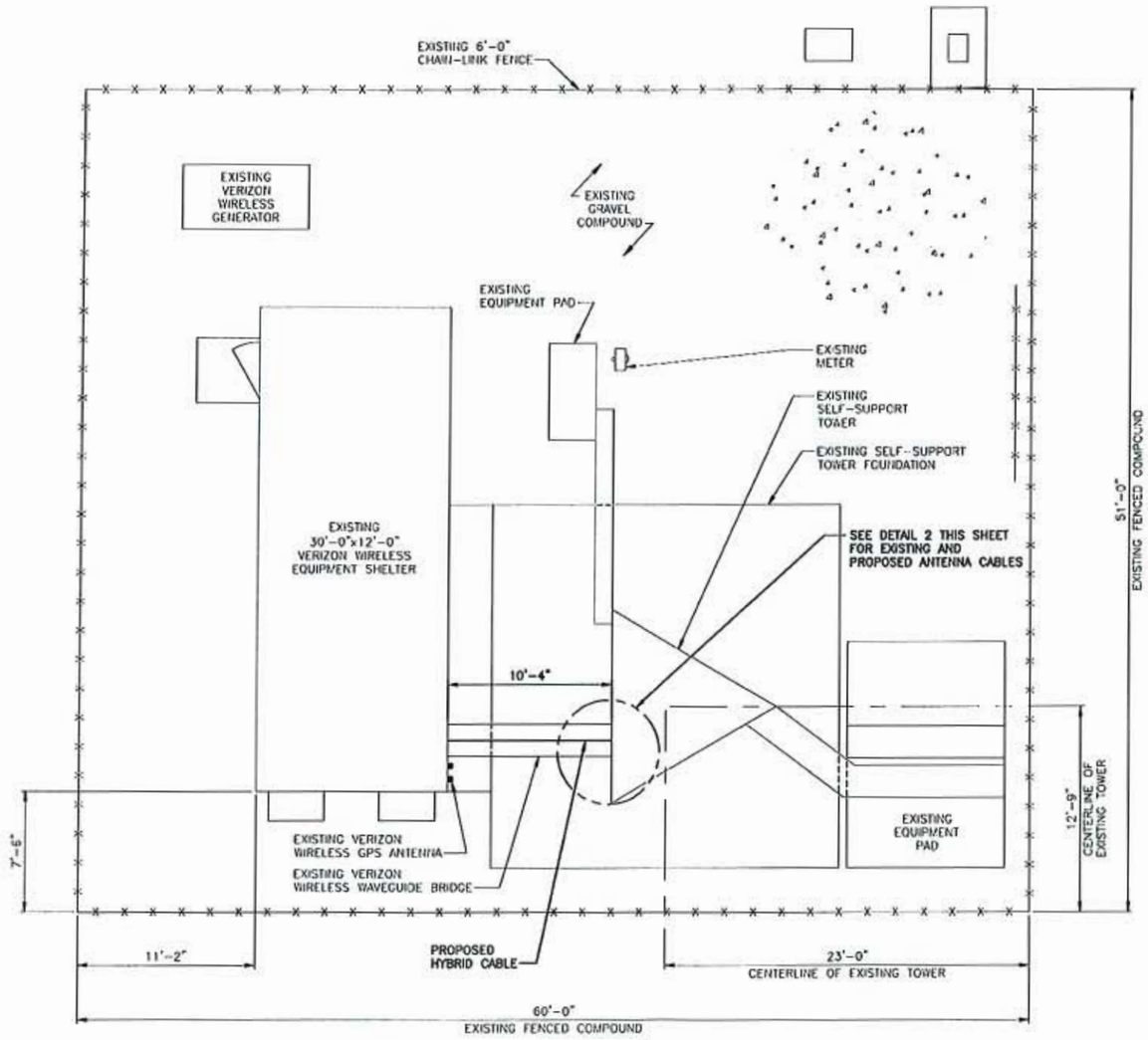
SHEET DESCRIPTION: TITLE SHEET

SSC #:

SHEET NUMBER: T01

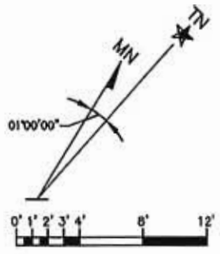


EXISTING & PROPOSED CABLES | 2



CALL BEFORE YOU DIG – DRILL – BLAST
1-800-344-7483
(TOLL FREE)
MISSOURI ONE CALL SYSTEM, INC.

THE UTILITIES AS SHOWN ON THIS SET OF DRAWINGS WERE DEVELOPED FROM THE INFORMATION AVAILABLE. THE INFORMATION PROVIDED IS NOT IMPLIED NOR INTENDED TO BE THE COMPLETE INVENTORY OF UTILITIES IN THIS AREA. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF ALL UTILITIES (WHETHER SHOWN OR NOT) AND PROTECT SAID UTILITIES FROM ANY DAMAGE CAUSED BY CONTRACTOR'S ACTIVITIES.



SITE PLAN | 1

STATE OF MISSOURI
MICHAEL L. OWENS
NUMBER PE-29058
PROFESSIONAL ENGINEER
V15/14

PLANS PREPARED FOR:
verizon wireless

PLANS PREPARED BY:
SSC
721 Emerson Road, Suite 475
St. Louis, Missouri 63141
Phone: 314-993-1010
Fax: 314-993-1036

ENGINEERING LICENSE:
STATE OF MISSOURI
PE CERTIFICATE OF AUTHORIZATION #001640

ENGINEER		PE #	DISCIPLINE	
MLO	MICHAEL L. OWENS	E-29058	STRUCTURAL/CIVIL	SC
KV	KEVIN VANMAELE	E-31561	STRUCTURAL/CIVIL	SC
REJ	ROBERT E. JENSEN	E-30974	STRUCTURAL/CIVIL	SC
TMS	TERRANCE M. SUPER	E-18531	ELECTRICAL	E
SOK	SHELTON D. KISSLING	E-27329	ELECTRICAL	E
DEK	DAVE E. KASPER	E-18063	ELECTRICAL	E

DRAWING NOTICE:

SUBMITTALS

DESCRIPTION	DATE	BY	REV
ISSUED FOR REVIEW	08/20/13	BWI	A
REVISED PER CLIENT COMMENTS	09/18/13	DSH	B
REVISED PER CLIENT COMMENTS	11/13/13	DSH	C
REVISED PER CLIENT COMMENTS	12/18/13	DSH	D
REVISED PER CLIENT COMMENTS	01/10/14	DSH	E
ISSUED FOR CONSTRUCTION	01/14/14	DSH	0

SITE NAME:
STLC CHESTERFIELD

LOCATION NUMBER:
126994

SITE ADDRESS:
132 WOODCLIFFE PLACE DR.
CHESTERFIELD, MISSOURI
63005

SHEET DESCRIPTION:
SITE PLAN

SSC #:

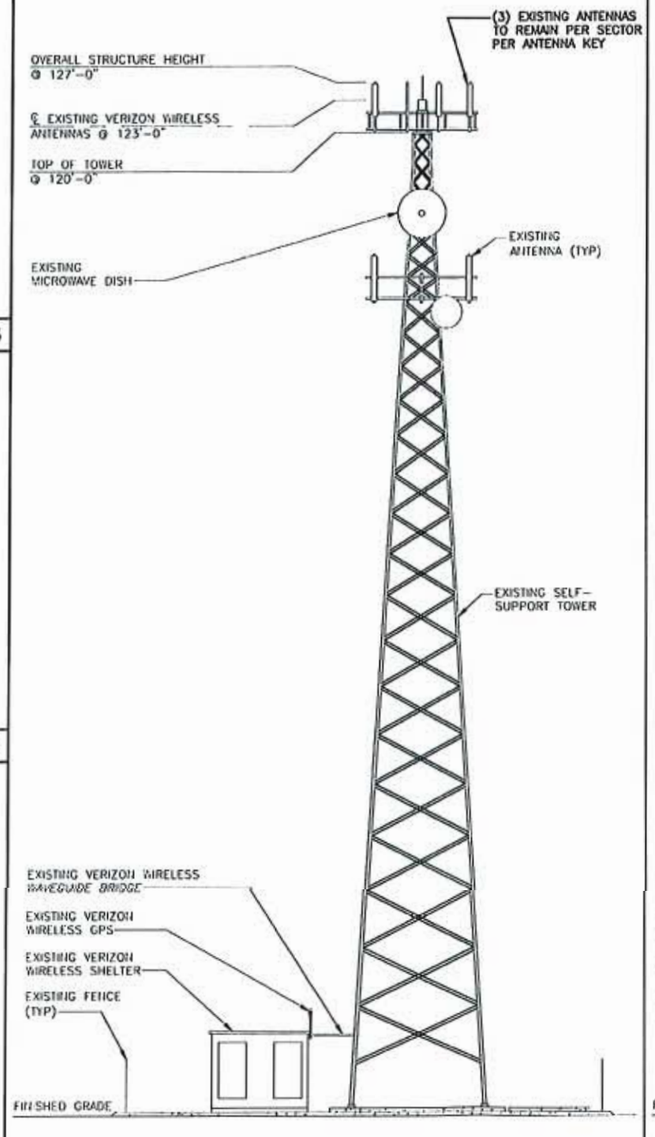
SHEET NUMBER:
A01

PHOTO OF EXISTING TOWER ELEVATION | 3

PHOTO OF EXISTING ANTENNAS | 4

NOTE:
EXISTING AND PROPOSED VERIZON WIRELESS *ANTENNA COAX CABLES* ARE ROUTED ON THE SOUTH-EAST FACE INSIDE OF SELF-SUPPORT TOWER

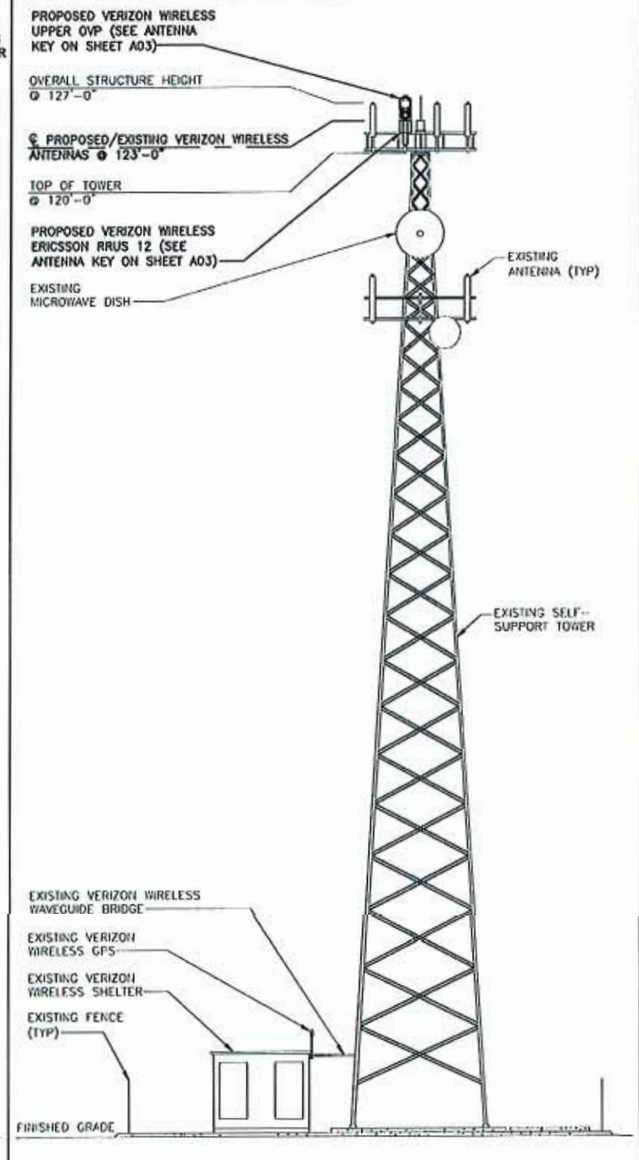
PHOTO OF EXISTING COAX PORT | 5



EXISTING TOWER ELEVATION | 2

STRUCTURAL TOWER ANALYSIS HAS BEEN PERFORMED BY CROWN CASTLE, DATED 09/06/13. CONTRACTOR SHALL OBTAIN A COPY OF THIS REPORT AND SHALL FOLLOW ALL REPORT RECOMMENDATIONS.

EXISTING TOWER INFORMATION IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. SSC HAS NOT PERFORMED TOWER CALCULATIONS FOR THE EXISTING STRUCTURE & TAKES NO RESPONSIBILITY FOR THE STRUCTURAL INTEGRITY OF THE EXISTING TOWER, TOWER FOUNDATION, OR ANTENNA MOUNTS. IT IS UNDERSTOOD BY SSC THAT A STRUCTURAL ANALYSIS IS TO BE PERFORMED BY OTHERS & SHALL BE NOTIFIED IMMEDIATELY IF THIS IS NOT THE CASE.



PROPOSED TOWER ELEVATION | 1

STATE OF MISSOURI
MICHAEL L. OWENS
NUMBER PE-29058
PROFESSIONAL ENGINEER
5/5/14

PLANS PREPARED FOR:
verizon wireless

PLANS PREPARED BY:
721 Emerson Road, Suite 475
St. Louis, Missouri 63141
Phone: 314-993-1010
Fax: 314-993-1036
SSC

ENGINEERING LICENSE:
STATE OF MISSOURI
PE CERTIFICATE OF AUTHORIZATION #000840

ENGINEER	PE #.	DISCIPLINE
MLO MICHAEL L. OWENS	E-29058	STRUCTURAL/CIVIL SC
KV KEVIN VANAKEE	E-31561	STRUCTURAL/CIVIL SC
REJ ROBERT E. JENSEN	E-30974	STRUCTURAL/CIVIL SC
TVB TERRANCE M. SUPER	E-18531	ELECTRICAL E
SDK SHELTON D. KEISLING	E-27321	ELECTRICAL E
DEK DAVE E. KASPER	E-18363	ELECTRICAL E

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SUBMITTALS

DESCRIPTION	DATE	BY	REV
ISSUED FOR REVIEW	09/20/13	BKM	A
REVISED PER CLIENT COMMENTS	09/18/13	DSH	B
REVISED PER CLIENT COMMENTS	11/13/13	DSH	C
REVISED PER CLIENT COMMENTS	12/18/13	DSH	D
REVISED PER CLIENT COMMENTS	01/10/14	DSH	E
ISSUED FOR CONSTRUCTION	01/14/14	DSH	0

SITE NAME:
STLC CHESTERFIELD

LOCATION NUMBER:
126994

SITE ADDRESS:
132 WOODCLIFFE PLACE DR.
CHESTERFIELD, MISSOURI
63005

SHEET DESCRIPTION:
TOWER ELEVATIONS

SSC #.

SHEET NUMBER:
A02

EXISTING ANTENNA KEY

	Position	Status	Antenna Centerline (ft AGL)	Antenna Make / Model	Antenna Count	Height (in)	Width (in)	Depth (in)	Weight (lbs)	Azimuth (true north)	Azimuth (magnetic north)	Mech Downtilt	Electrical Downtilt	Coax Make/Model	Coax Count	Coax Size	Coax Length
Mainline Cable & Distribution																	
Alpha Sector	A	Remain	123	DB PRODUCTS/D6844H80-XY	1	48	6.5	8.5	10	0	-	8	0	ANDREW/AVA5-50	1	7/8"	175'
	B	Remain	123	ANTEL/BXA-70063-6CF-EDIN	1	47.4	11.2	5	9.9	0	-	0	0	ANDREW/AVA5-50	2	7/8"	175'
	C	Empty	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	D	Remain	123	DB PRODUCTS/D6844H80-XY	1	48	6.5	8.5	10	0	-	8	-	ANDREW/AVA5-50	1	7/8"	175'
Beta Sector	E	Remain	123	CELWAVE/PD10197	1	46	7	4.5	10	120	-	0	0	ANDREW/AVA5-50	1	7/8"	175'
	F	Remain	123	ANTEL/BXA-70063-6CF-EDIN	1	47.4	11.2	5	9.9	120	-	0	0	ANDREW/AVA5-50	2	7/8"	175'
	G	Empty	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	H	Remain	123	CELWAVE/PD10197	1	46	7	4.5	10	120	-	0	0	ANDREW/AVA5-50	1	7/8"	175'
Gamma Sector	I	Remain	123	ANTEL/LPD-79016/4	1	47.3	5.1	25.2	35.3	240	-	0	0	ANDREW/AVA5-50	1	7/8"	175'
	J	Remain	123	ANTEL/BXA-70063-6CF-EDIN	1	47.4	11.2	5	9.9	240	-	0	0	ANDREW/AVA5-50	2	7/8"	175'
	K	Empty	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L	Remain	123	ANTEL/LPD-79016/4	1	47.3	5.1	25.2	35.3	240	-	0	0	ANDREW/AVA5-50	1	7/8"	175'
				Total Antennas	9									Total Coax	12		

PROPOSED ANTENNA KEY

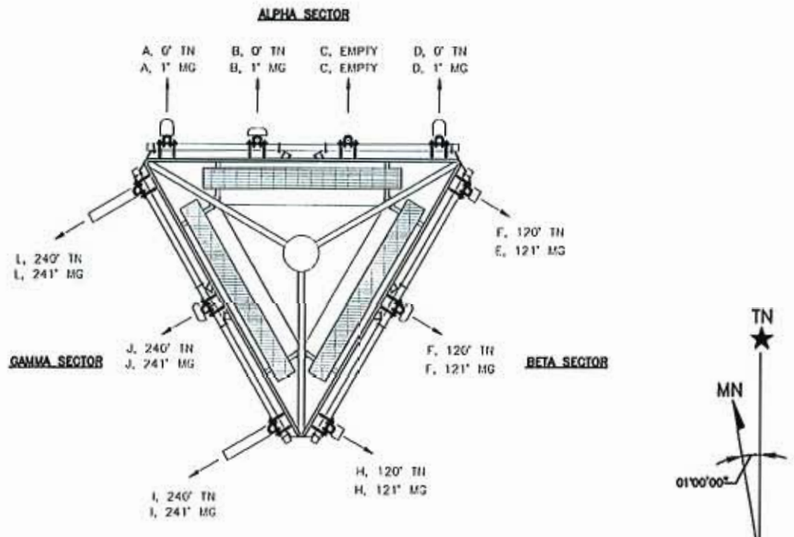
	Position	Status	Antenna Centerline (ft AGL)	Antenna Make / Model	Antenna Count	Height (in)	Width (in)	Depth (in)	Weight (lbs)	Azimuth (true north)	Azimuth (magnetic north)	Mech Downtilt	Electrical Downtilt	Coax Make/Model	Coax Count	Coax Size	Coax Length	RRU Make/Model	RRU Count	Distribution Box Make/Model	Raycap Count	Hybrid Cable Make/Model	Hybrid Cable Count	Hybrid Cable Size	Hybrid Cable Length	Jumper Count	RF Jumper Count
Mainline Cable & Distribution																		-	-	DB-B1-6C-12AB-0Z	1	HBI58-1-13U6-50F18	1	1 5/8"	190'	-	-
Alpha Sector	A	Remain	123	DB PRODUCTS/D6844H80-XY	1	48	6.5	8.5	10	0	1	8	0	ANDREW/AVA5-50	1	7/8"	175'	-	-	-	-	-	-	-	-	-	-
	B	Remain	123	ANTEL BXA-70063-4CF-EDIN	1	47.4	11.2	5	9.9	0	1	0	0	ANDREW/AVA5-50	2	7/8"	175'	-	-	-	-	-	-	-	-	-	-
	C	Proposed	123	ANTEL/BXA-171063-12CF-EDIN	1	72.4	6.1	4.1	15	0	1	0	0	-	-	-	-	ERICSSON LTE AWS RRU12	1	-	-	H8F058-6BJ151-10F1	-	5/8"	10'	1	1
	D	Remain	123	DB PRODUCTS/D6844H80-XY	1	48	6.5	8.5	10	0	1	8	0	ANDREW/AVA5-50	1	7/8"	175'	-	-	-	-	-	-	-	-	-	-
Beta Sector	E	Remain	123	CELWAVE/PD10197	1	46	7	4.5	10	120	121	0	0	ANDREW/AVA5-50	1	7/8"	175'	-	-	-	-	-	-	-	-	-	-
	F	Remain	123	ANTEL BXA-70063-4CF-EDIN	1	47.4	11.2	5	9.9	120	121	0	0	ANDREW/AVA5-50	2	7/8"	175'	-	-	-	-	-	-	-	-	-	-
	G	Proposed	123	ANTEL/BXA-171063-12CF-EDIN	1	72.4	6.1	4.1	15	120	121	0	0	-	-	-	-	ERICSSON LTE AWS RRU12	1	-	-	H8F058-6BJ151-10F1	-	5/8"	10'	1	1
	H	Remain	123	CELWAVE/PD10197	1	46	7	4.5	10	120	121	0	0	ANDREW/AVA5-50	1	7/8"	175'	-	-	-	-	-	-	-	-	-	-
Gamma Sector	I	Remain	123	ANTEL/LPD-79016/4	1	47.3	5.1	25.2	35.3	240	241	0	0	ANDREW/AVA5-50	1	7/8"	175'	-	-	-	-	-	-	-	-	-	-
	J	Remain	123	ANTEL BXA-70063-4CF-EDIN	1	47.4	11.2	5	9.9	240	241	0	0	ANDREW/AVA5-50	2	7/8"	175'	-	-	-	-	-	-	-	-	-	-
	K	Proposed	123	ANTEL/BXA-171063-12CF-EDIN	1	72.4	6.1	4.1	15	240	241	0	0	-	-	-	-	ERICSSON LTE AWS RRU12	1	-	-	H8F058-6BJ151-10F1	-	5/8"	10'	1	1
	L	Remain	123	ANTEL/LPD-79016/4	1	47.3	5.1	25.2	35.3	240	241	0	0	ANDREW/AVA5-50	1	7/8"	175'	-	-	-	-	-	-	-	-	-	-
				Antenna Total	12									Coax Total	12			RRU Total	3	Distro Box Total	1	Hybrid Cable Total	1		Jumper Total	3	6

ONLY EQUIPMENT LOCATED AT ANTENNA SECTORS IS LISTED ABOVE. MAIN HYBRID CABLE LENGTH(S) ARE MEASURED FROM THE EXTERIOR SIDE OF THE EXISTING VERIZON WIRELESS EQUIPMENT XXXXXXX, ROUTED AS SHOWN IN THE DRAWINGS, TO TERMINATION AT ANTENNA SECTOR MAIN UPPER OVP BOX.

CONTRACTOR SHALL OBTAIN A COPY OF VERIZON WIRELESS ENGINEERING SITE DATA FORM FOR ANTENNA INFORMATION.

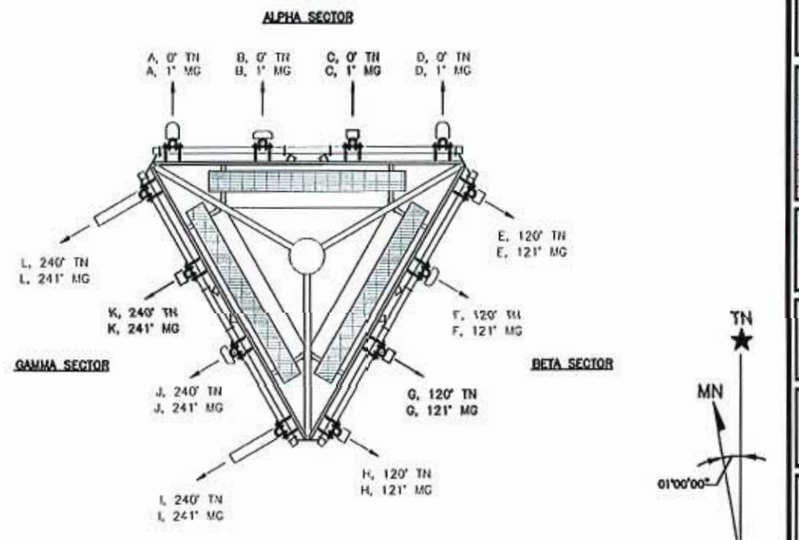
ANTENNA KEYS

1



EXISTING ANTENNA PLAN

3



PROPOSED ANTENNA PLAN

2

STATE OF MISSOURI
MICHAEL L. OWENS
NUMBER PE-29058
PROFESSIONAL ENGINEER
11/15/19

PLANS PREPARED FOR:

verizon wireless

PLANS PREPARED BY:

721 Emerson Road, Suite 475
St. Louis, Missouri 63141
Phone: 314-993-1010
Fax: 314-993-1036
SSC

ENGINEERING LICENSE:

STATE OF MISSOURI
PE CERTIFICATE OF AUTHORIZATION #001843

ENGINEER		PE #	DISCIPLINE	
MLO	MICHAEL L. OWENS	E-29058	STRUCTURAL/CIVIL	SC
KV	KEVIN VANVAELE	E-31561	STRUCTURAL/CIVIL	SC
REJ	ROBERT E. JENSEN	E-30874	STRUCTURAL/CIVIL	SC
TMS	TERRANCE M. SUPER	E-18521	ELECTRICAL	E
SDK	SHELTON D. KRISLOV	E-27323	ELECTRICAL	E
DEK	DAVE E. KASPER	E-18053	ELECTRICAL	E

DRAWING NOTICE:

SUBMITTALS

DESCRIPTION	DATE	BY	REV
ISSUED FOR REVIEW	06/20/13	BAM	A
REVISED PER CLIENT COMMENTS	09/18/13	DSH	B
REVISED PER CLIENT COMMENTS	11/13/13	DSH	C
REVISED PER CLIENT COMMENTS	12/18/13	DSH	D
REVISED PER CLIENT COMMENTS	01/10/14	DSH	E
ISSUED FOR CONSTRUCTION	01/14/14	DSH	0

SITE NAME:

STLC CHESTERFIELD

LOCATION NUMBER:

126994

SITE ADDRESS:

132 WOODCLIFFE PLACE DR.
CHESTERFIELD, MISSOURI
63005

SHEET DESCRIPTION:

ANTENNA KEYS

SSC #:

SHEET NUMBER:

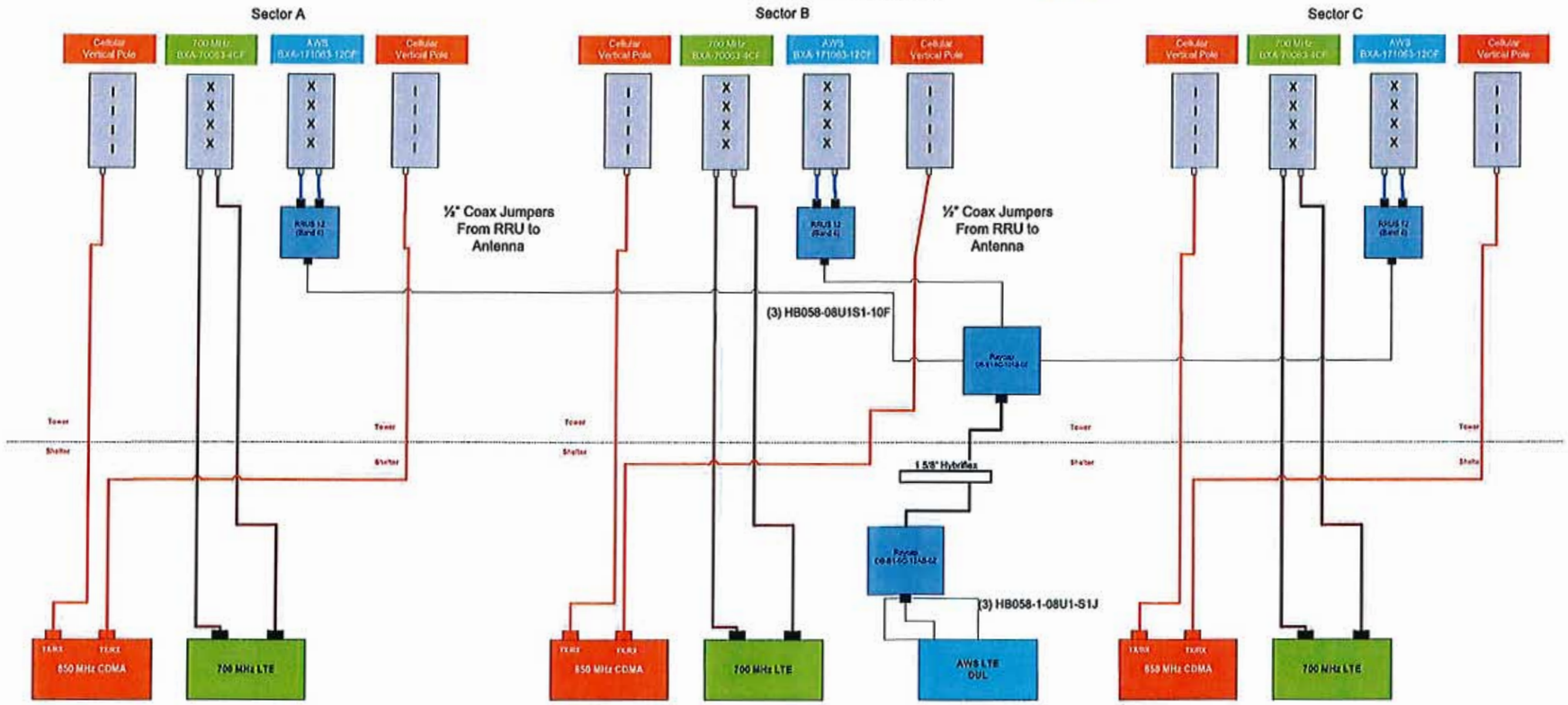
A03

AWS RRU Option

Tower
AWS LTE with RRU / Existing 700 LTE/ Existing PCS CDMA & EVDO

Verizon Guidelines
Note: Not allowed per Verizon

Lower 700MHz + Upper 700MHz
Cell A + AWS (D E F Blocks)
AWS + PCS1
Cell A + Lower 700MHz



RF PARTS LIST

MARKET: STLC
CELL#: 273
CELL NAME: CHESTERFIELD

ADD AND BUY THE FOLLOWING PARTS BELOW:
- (1) LTE AWS DUS 41
- (3) E/// LTE AWS RRUS 12 (BAND 4)
- (1) RFS 1-5/8" HYBRIFLEX CABLE HB158-1-13U8-S6F18
- (3) RFS 5/8" HYBRIFLEX CABLE HB058-08U1S1-10F1 (LENGTH = 10 FT), 3 ON THE TOWER
- EQUIPMENT ENGINEERING TO DETERMINE LENGTH OF HYBRID CABLE FROM RAYCAP IN SHELTER TO AWS DUS41
- (2) RAYCAP DISTRIBUTION UNIT/BASE DB-B1-6C-12AB-0Z, 1 IN THE SHELTER, 1 ON THE TOWER
- (6) 10 FT 1/2" RF JUMPERS FROM RRU TO ANTENNAS FOR AWS.
- (3) AWS ANTENNAS ANTEL BXA-171063-12CF-EDIN-2
- CONNECTORS AND ADDITIONAL ANCILLARY CABLING KITS AS NEEDED
- POWER SUPPLY AND FIBER TRAY TO BE SPECIFIED BY EQUIPMENT ENGINEERING

PROPOSED RRU DIAGRAM & PARTS LIST | 1

STATE OF MISSOURI
MICHAEL L. OWENS
NUMBER PE-2006B
PROFESSIONAL ENGINEER
V15714

PLANS PREPARED FOR:
verizon wireless

PLANS PREPARED BY:

721 Emerson Road, Suite 475
St. Louis, Missouri 63141
Phone: 314-993-1010
Fax: 314-993-1036
SSC

ENGINEERING LICENSE:
STATE OF MISSOURI
PE CERTIFICATE OF AUTHORIZATION #001640

ENGINEER		PE #	DISCIPLINE	
MLO	MICHAEL L OWENS	E-20056	STRUCTURAL/CIVIL	SC
KV	KEVIN VANVAELE	E-21561	STRUCTURAL/CIVIL	SC
REJ	ROBERT E. JENSEN	E-22374	STRUCTURAL/CIVIL	SC
TMS	TERRANCE M. SUPER	E-18531	ELECTRICAL	E
SDK	SHELTON D. KRISLOV	E-27329	ELECTRICAL	E
DEK	DAVE E KASPER	E-18063	ELECTRICAL	E

DRAWING NOTICE:

SUBMITTALS

DESCRIPTION	DATE	BY	REV
ISSUED FOR REVIEW	06/20/13	BWM	A
REVISED PER CLIENT COMMENTS	09/18/13	DSH	B
REVISED PER CLIENT COMMENTS	11/13/13	DSH	C
REVISED PER CLIENT COMMENTS	12/18/13	DSH	D
REVISED PER CLIENT COMMENTS	01/10/14	DSH	E
ISSUED FOR CONSTRUCTION	01/14/14	DSH	0

SITE NAME:
STLC CHESTERFIELD

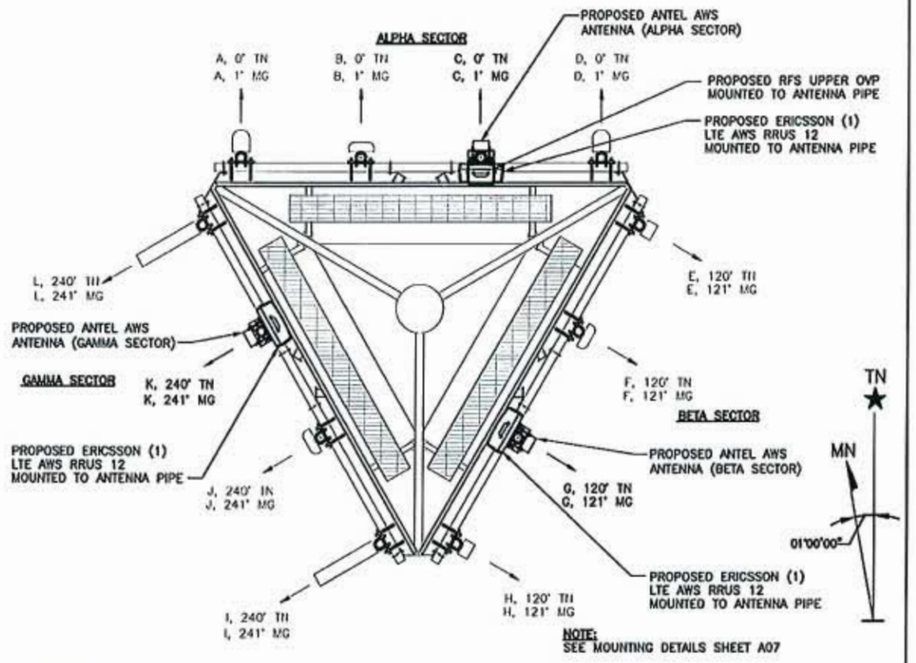
LOCATION NUMBER:
126994

SITE ADDRESS:
132 WOODCLIFFE PLACE DR.
CHESTERFIELD, MISSOURI
63005

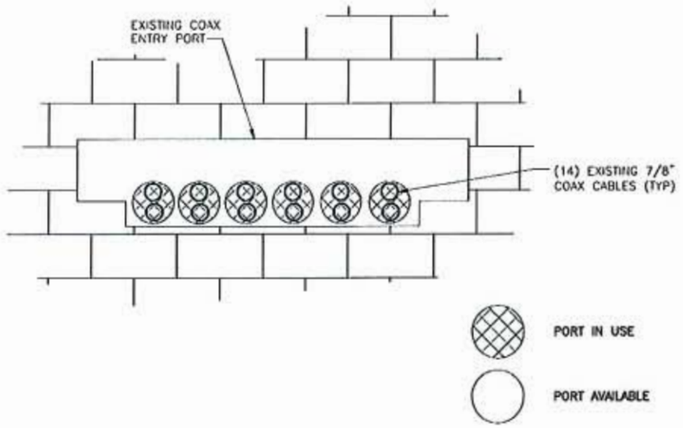
SHEET DESCRIPTION:
PROPOSED RRU DIAGRAM & PARTS LIST

SSC #:

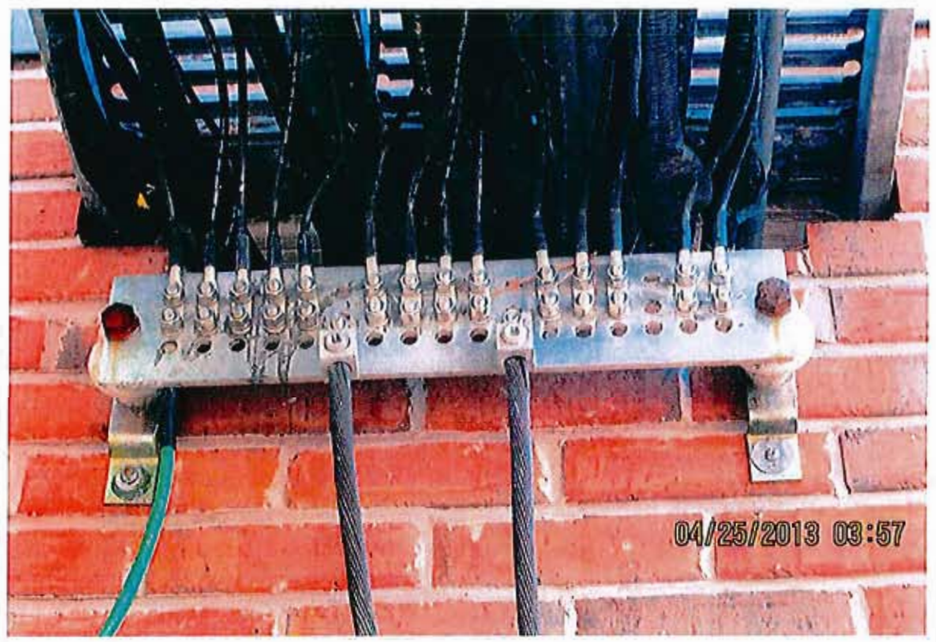
SHEET NUMBER:
A04



ERICSSON RRUS 12 & UPPER OVP LAYOUT (N.T.S.) | 3

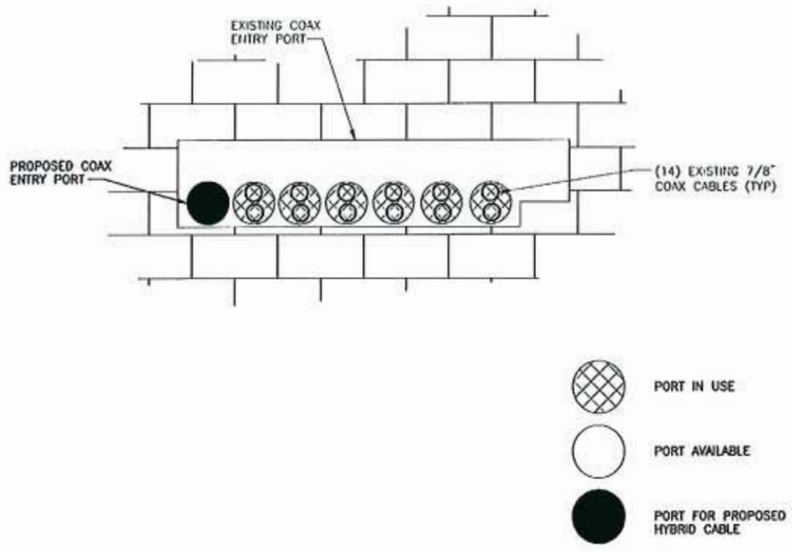


EXISTING COAX ENTRY PORT | 1



EXISTING COAX ENTRY PORT | 4

NOTE:
CONTRACTOR SHALL GET ENTRY PORT LOCATION APPROVAL BY VERIZON WIRELESS CONSTRUCTION ENGINEER



PROPOSED COAX ENTRY PORT | 2

STATE OF MISSOURI
MICHAEL L. OWENS
NUMBER PE-29058
PROFESSIONAL ENGINEER
1/15/14

PLANS PREPARED FOR:
verizon wireless

PLANS PREPARED BY:
721 Emerson Road, Suite 475
St. Louis, Missouri 63141
Phone: 314-993-1010
Fax: 314-993-1036
SSC

ENGINEERING LICENSE:
STATE OF MISSOURI
PE CERTIFICATE OF AUTHORIZATION #001640

ENGINEER		PE #	DISCIPLINE
MLO	MICHAEL L. OWENS	E-29058	STRUCTURAL/CIVIL SC
KV	KEVIN VAUVAELE	E-31561	STRUCTURAL/CIVIL SC
REJ	ROBERT E. JENSEN	E-20374	STRUCTURAL/CIVIL SC
TMS	TERRANCE M. SUPER	E-18521	ELECTRICAL E
SDK	SHELTON D. KEISLING	E-27323	ELECTRICAL E
DEK	DAVE E. KASPER	E-18063	ELECTRICAL E

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SUBMITTALS

DESCRIPTION	DATE	BY	REV
ISSUED FOR REVIEW	08/20/13	BWJ	A
REVISED PER CLIENT COMMENTS	09/18/13	DSH	B
REVISED PER CLIENT COMMENTS	11/13/13	DSH	C
REVISED PER CLIENT COMMENTS	12/18/13	DSH	D
REVISED PER CLIENT COMMENTS	01/10/14	DSH	E
ISSUED FOR CONSTRUCTION	01/14/14	DSH	0

SITE NAME:
STLC CHESTERFIELD

LOCATION NUMBER:
126994

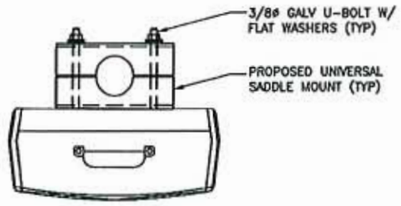
SITE ADDRESS:
132 WOODCLIFFE PLACE DR.
CHESTERFIELD, MISSOURI
63005

SHEET DESCRIPTION:
ANTENNA LAYOUT & ENTRY PORT DETAILS

SSC #:

SHEET NUMBER:
A05

NOTE:
CONTRACTOR SHALL INSTALL RRUS 12 WITH MOUNTING INSTRUCTIONS PER MANUFACTURER'S SPECIFICATION



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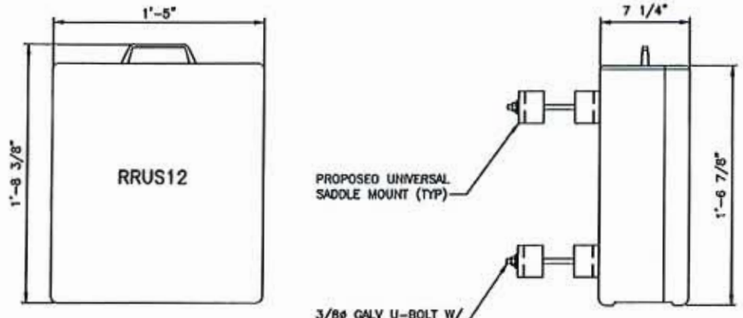
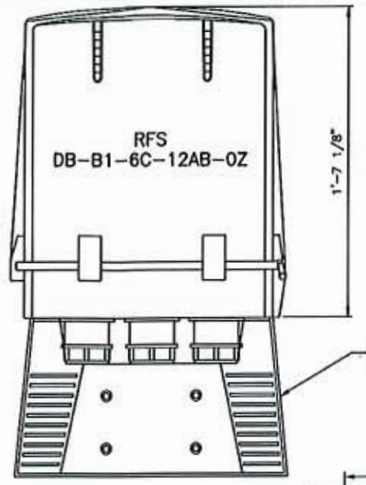


FRONT SIDE

ERICSSON RRUS 12 DETAILS | 3



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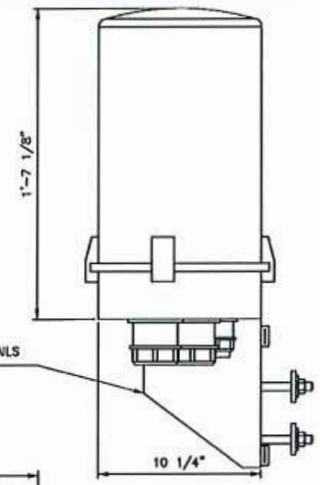
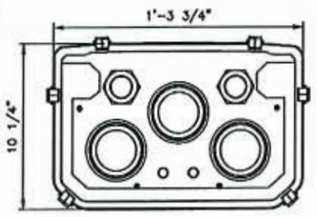


RIGHTSIDE



BOTTOM

UPPER OVP DETAILS | 1

INSTALLING HYBRID CABLE–POWER (IN)

To assist in ease of wiring, proceed by wiring in the following order:
1st: OVP #1 and OVP #4
2nd: OVP #2 and OVP #5
3rd: OVP #3 and OVP #6

Circuit Number	Color		
	-48V	Return	
1	Yellow/Black Stripe	Black	
2	Red/Black Stripe	Blue	
3	Brown/Red Stripe	Red	
4	Purple/Red Stripe	Yellow	
5	Black/White Stripe	Orange	
6	Grey/Red Stripe	Purple	

INSTALLING HYBRID CABLE–POWER (OUT) TO OVP

To assist in ease of wiring, proceed by wiring in the following order:
1st: OVP #1 and OVP #4
2nd: OVP #2 and OVP #5
3rd: OVP #3 and OVP #6

Torque: 40 in-lbs (10-6 AWG)

Circuit Number	Color		
	-48V	Return	
1	Yellow/Black Stripe	Black	
2	Red/Black Stripe	Blue	
3	Brown/Red Stripe	Red	
4	Purple/Red Stripe	Yellow	
5	Black/White Stripe	Orange	
6	Grey/Red Stripe	Purple	

INSTALLING HYBRID CABLE–POWER (OUT) TO SECTORS

To assist in ease of wiring, proceed by wiring in the following order:
1st: OVP #1 and OVP #4
2nd: OVP #2 and OVP #5
3rd: OVP #3 and OVP #6

Torque: 40 in-lbs (10-6 AWG)

Sector	Circuit Number	Color		
		-48V	Return	
Alpha	1	Yellow/Black Stripe	Black	
	2	Red/Black Stripe	Blue	
Beta	3	Yellow/Black Stripe	Black	
	4	Red/Black Stripe	Blue	
Gamma	5	Yellow/Black Stripe	Black	
	6	Red/Black Stripe	Blue	

INSTALLING HYBRID JUMPERR (OUT) TO RRH'S

To assist in ease of wiring, proceed by wiring in the following order:
1st: OVP #1 and OVP #4
2nd: OVP #2 and OVP #5
3rd: OVP #3 and OVP #6

Torque: 40 in-lbs (10-6 AWG)

Sector	Circuit Number	Color		
		-48V	Return	
Alpha	1	Red	Black	
	2	Red	Black	
Beta	3	Red	Black	
	4	Red	Black	
Gamma	5	Red	Black	
	6	Red	Black	

WIRING DIAGRAM | 2

STATE OF MISSOURI
MICHAEL L. OWENS
NUMBER PE-29058
PROFESSIONAL ENGINEER
1/15/14

PLANS PREPARED FOR:
verizon wireless

PLANS PREPARED BY:

721 Emerson Road, Suite 475
St. Louis, Missouri 63141
Phone: 314-993-1010
Fax: 314-993-1036
SSC

ENGINEERING LICENSE:
STATE OF MISSOURI
PE CERTIFICATE OF AUTHORIZATION #001640

ENGINEER		P.E.#	DISCIPLINE
MLO	MICHAEL L. OWENS	E-29058	STRUCTURAL/CIVIL SC
KV	KEVIN VANAMELE	E-26581	STRUCTURAL/CIVIL SC
REJ	ROBERT E. JENSEN	E-28374	STRUCTURAL/CIVIL SC
TVS	TERRANCE M. SUPER	E-18521	ELECTRICAL E
SDK	SHELTON D. KERSHNER	E-27203	ELECTRICAL E
DEK	DAVID E. KASPER	E-18063	ELECTRICAL E

DRAWING NOTICE:

SUBMITTALS

DESCRIPTION	DATE	BY	REV
ISSUED FOR REVIEW	06/20/13	BMM	A
REVISED PER CLIENT COMMENTS	09/18/13	DSH	B
REVISED PER CLIENT COMMENTS	11/13/13	DSH	C
REVISED PER CLIENT COMMENTS	12/18/13	DSH	D
REVISED PER CLIENT COMMENTS	01/10/14	DSH	E
ISSUED FOR CONSTRUCTION	01/14/14	DSH	0

SITE NAME:
STLC CHESTERFIELD

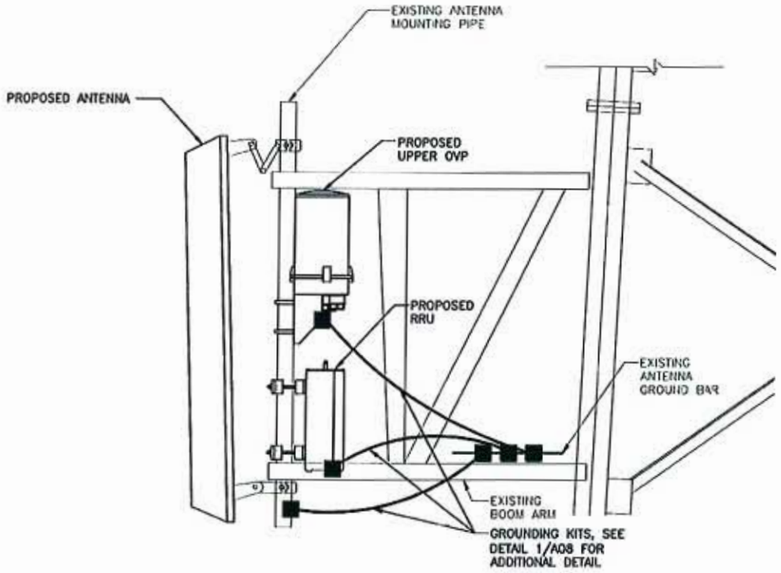
LOCATION NUMBER:
126994

SITE ADDRESS:
132 WOODCLIFFE PLACE DR.
CHESTERFIELD, MISSOURI
63005

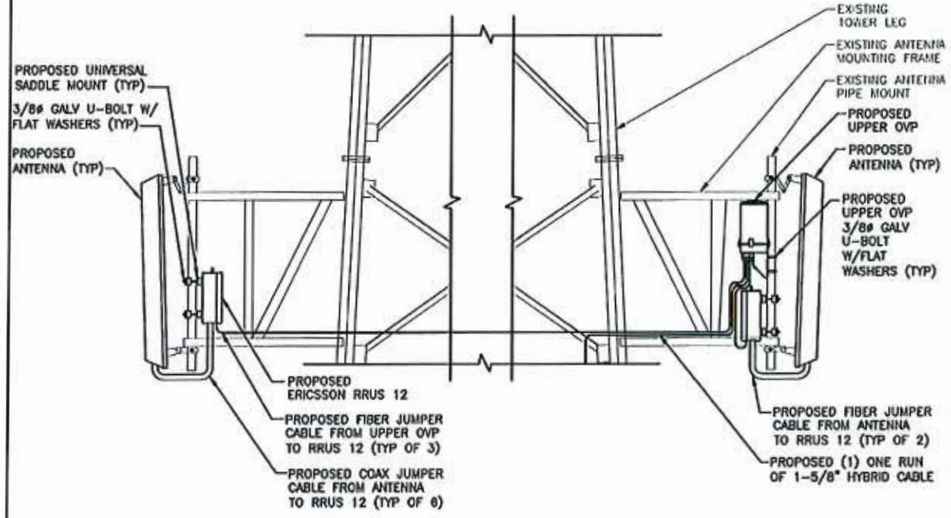
SHEET DESCRIPTION:
DETAILS

SSC #:

SHEET NUMBER:
A06



RRU & UPPER OVP GROUNDING | 3

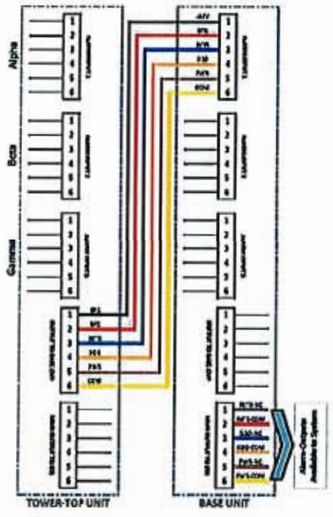


ERICSSON RRUS12 & UPPER OVP MOUNT | 1

13.10 Tower Top Wiring Diagram.
These instructions are for interconnecting the alarms for the current Raycap products.

Input	Color
1	Black
2	Red
3	Blue
4	Orange
5	Brown
6	Yellow

Instructions for connecting this unit to the following legacy units are found in the appendix:
RAYDC-3315-PF-48



ALARM WIRING DIAGRAM | 4

VOLTAGE MONITOR OPERATION

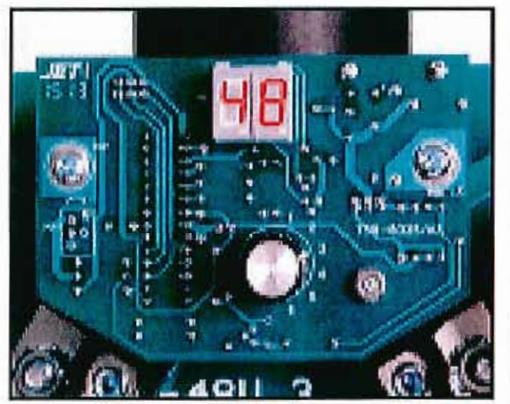
1. ONCE CABLING IS COMPLETE AND POWER IS SUPPLIED TO THE UNIT, THE VOLTAGE CAN BE VERIFIED FOR EACH DC CIRCUIT.

2. TO MONITOR EACH INDIVIDUAL CIRCUIT. TURN THE SELECTOR KNOB TO CORRESPONDING CIRCUIT INDICATED NEXT TO THE DIAL.

NOTE:
THE VOLTAGE MONITOR FUNCTION INCLUDES AN AUTOMATIC SLEEP MODE THE " TURNS--OFF" THE LED DIGITS AFTER 2 MINUTES.

1. TO " TURN--ON" THE DIGITS TO THE LED DISPLAY TURN THE SELECTOR KNOB TO ANY POWERED DC CIRCUIT.

2. WHEN COMPLETE, PLACE THE VOLTAGE MONITOR DIAL BACK TO THE DC CIRCUIT 1 POSITION.



VOLTAGE MONITOR OPERATION DETAIL AND NOTES | 2

STATE OF MISSOURI
MICHAEL L. OWENS
NUMBER PE-29058
PROFESSIONAL ENGINEER
V15714

PLANS PREPARED FOR:
verizon wireless

PLANS PREPARED BY:
SSC
721 Emerson Road, Suite 475
St. Louis, Missouri 63141
Phone: 314-993-1010
Fax: 314-993-1036

ENGINEERING LICENSE:
STATE OF MISSOURI
PE CERTIFICATE OF AUTHORIZATION #001840

ENGINEER		PE #	DISCIPLINE	
MLO	MICHAEL L. OWENS	E-29058	STRUCTURAL/CIVIL	SC
KV	KEVIN VANWAELE	E-31561	STRUCTURAL/CIVIL	SC
REJ	ROBERT B. JENSEN	E-29374	STRUCTURAL/CIVIL	SC
TMS	TERRANCE M. SUPER	E-30531	ELECTRICAL	E
SDK	SHELTON D. KENSLING	E-27323	ELECTRICAL	E
DEK	DAVID E. KASPER	E-31063	ELECTRICAL	E

DRAWING NOTICE:

SUBMITTALS

DESCRIPTION	DATE	BY	REV
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REVISED PER CLIENT COMMENTS	11/13/13	DSH	C
REVISED PER CLIENT COMMENTS	12/18/13	DSH	D
REVISED PER CLIENT COMMENTS	01/10/14	DSH	E
ISSUED FOR CONSTRUCTION	01/14/14	DSH	0

SITE NAME:
STLC CHESTERFIELD

LOCATION NUMBER:
126994

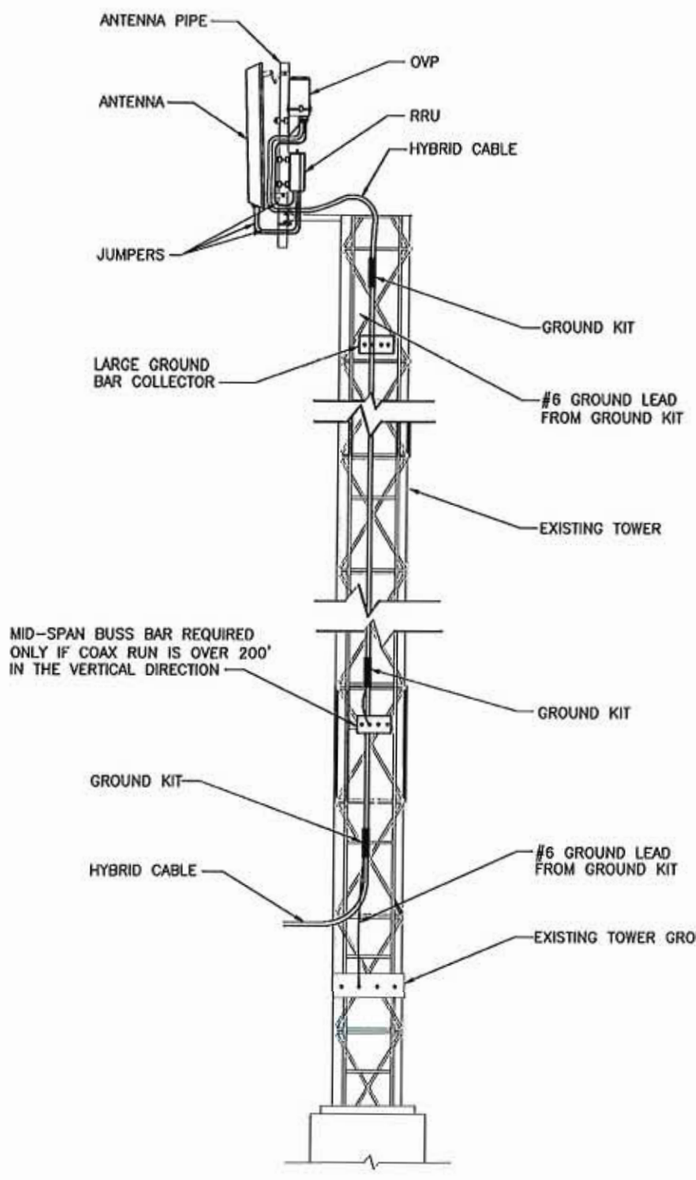
SITE ADDRESS:
132 WOODCLIFFE PLACE DR.
CHESTERFIELD, MISSOURI
63005

SHEET DESCRIPTION:
DETAILS

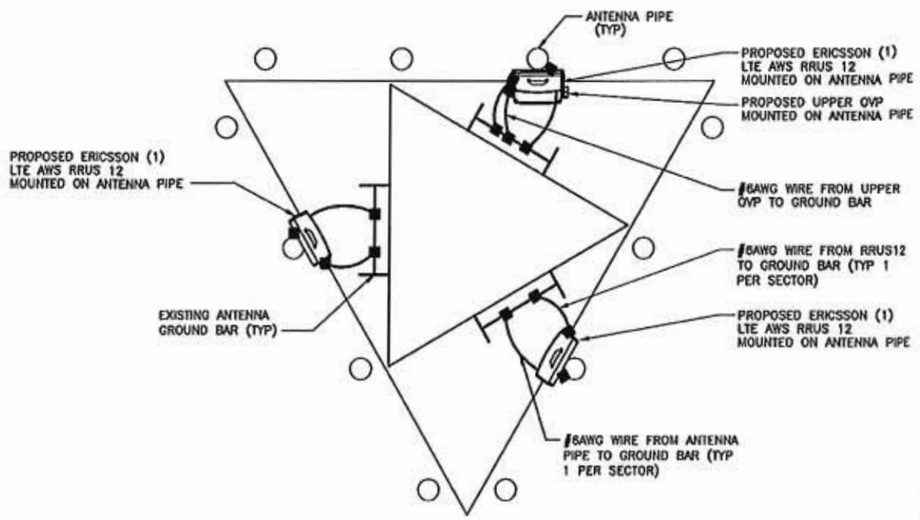
SSC #:

SHEET NUMBER:
A07

ONE SECTOR SHOWN FOR CLARITY



GROUNDING RISER | 4



ANTENNA GROUNDING PLAN | 1

RRH GROUNDING

1. ALL BASE STATION SPD PROTECTION MUST BE BONDED FROM MAIN SPD GROUND LUG VIA A MINIMUM 6AWG WIRE TO THE CELL SITE MASTER GROUND BAR (MGB) EITHER INTERNAL OR EXTERNAL TO SHELTER CABINET.

2. ALL TOWER SPD PROTECTION MUST BE BONDED FROM THE MAIN SPD GROUND LUG VIA A MINIMUM 6AWG WIRE TO THE TOWER MASTER GROUND BAR (MGB) EITHER INTERNAL OR EXTERNAL TO SHELTER OR CABINET.

3. ALL ROOFTOP BUILDING SPD PROTECTION MUST BE BONDED FROM THE MAIN SPD GROUND LUG VIA A MINIMUM 6 AWG WIRE TO THE CELL SITE MASTER GROUND BAR (MGB) EITHER INTERNAL OR EXTERNAL TO SHELTER OR CABINET.

4. ALL SURGE PROTECTION GROUND CABLES MUST BE GREEN IN COLOR AND A MINIMUM 6 AWG OR GREATER.

5. ALL GROUND CABLES LUGS ATTACHED TO MGB MUST BE CRIMP STYLE DUAL HOLE LUGS FASTENED THROUGH BOTH HOLES.

6. ALL GROUND CABLE CONNECTIONS FROM CAL TO LUG MUST INCLUDE CLEAR HEAT SHRINK OVER THE CRIMP.

GROUNDING NOTES | 2

STATE OF MISSOURI
SHELTON D. KEISLING
NUMBER E-27223
PROFESSIONAL ENGINEER

PLANS PREPARED FOR:
verizon wireless

PLANS PREPARED BY:

721 Emerson Road, Suite 475
St. Louis, Missouri 63141
Phone: 314-993-1010
Fax: 314-993-1036
SSC

ENGINEERING LICENSE:
STATE OF MISSOURI
PE CERTIFICATE OF AUTHORIZATION #001640

ENGINEER		PE #	DISCIPLINE
MJO	MICHAEL L. OWENS	E-29058	STRUCTURAL/CIVIL SC
KV	KEVIN VANWAKEE	E-31561	STRUCTURAL/CIVIL SC
REJ	ROBERT E. JENSEN	E-30374	STRUCTURAL/CIVIL SC
TVB	TERRANCE M. BUPER	E-18521	ELECTRICAL E
SDK	SHELTON D. KEISLING	E-27223	ELECTRICAL E
DEK	DAVE E. KASPER	E-18583	ELECTRICAL E

DRAWING NOTICE:

SUBMITTALS

DESCRIPTION	DATE	BY	REV
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REVISED PER CLIENT COMMENTS	12/18/13	DSH	D
REVISED PER CLIENT COMMENTS	01/10/14	DSH	E
ISSUED FOR CONSTRUCTION	01/14/14	DSH	0

SITE NAME:
STLC CHESTERFIELD

LOCATION NUMBER:
126994

SITE ADDRESS:
132 WOODCLIFFE PLACE DR.
CHESTERFIELD, MISSOURI
63005

SHEET DESCRIPTION:
DETAILS

SSC #:

SHEET NUMBER:
A08

EQUIPMENT FURNISHED AND/OR INSTALLED BY:		
DESCRIPTION	FURNISHED	INSTALLED
ANCHOR BOLTS	VERIZON WIRELESS	CONTRACTOR
ANTENNA MOUNTS	CONTRACTOR	CONTRACTOR
ANTENNAS	VERIZON WIRELESS	CONTRACTOR
CABLE LADDER	CONTRACTOR	CONTRACTOR
COAX	VERIZON WIRELESS	CONTRACTOR
CONNECTORS	CONTRACTOR	CONTRACTOR
ENTRY PORT BOOTS	CONTRACTOR	CONTRACTOR
GPS ANTENNA	VERIZON WIRELESS	CONTRACTOR
GROUND KITS	CONTRACTOR	CONTRACTOR
HANGER KITS	CONTRACTOR	CONTRACTOR
ICE BRIDGE MATERIAL	CONTRACTOR	CONTRACTOR
JUMPERS	CONTRACTOR	CONTRACTOR
SHELTER/EQUIPMENT	VERIZON WIRELESS	CONTRACTOR
TOWER	VERIZON WIRELESS	CONTRACTOR
TOWER BUS BARS	CONTRACTOR	CONTRACTOR
DIPLEXER	VERIZON WIRELESS	CONTRACTOR
TMA	VERIZON WIRELESS	CONTRACTOR
RRUS 12	VERIZON WIRELESS	CONTRACTOR
UPPER OVP	VERIZON WIRELESS	CONTRACTOR
DIPLEXER CONNECTOR	CONTRACTOR	CONTRACTOR
TMA CONNECTOR	CONTRACTOR	CONTRACTOR
RRUS 12 CONNECTOR	CONTRACTOR	CONTRACTOR
UPPER OVP CONNECTOR	CONTRACTOR	CONTRACTOR
TOE TAGS	VERIZON WIRELESS	CONTRACTOR

CONTRACTOR SHALL OBTAIN A COPY OF VERIZON WIRELESS ENGINEERING SITE DATA FORM FOR ANTENNA INFORMATION.

1. ANTENNAS SHALL BE DESIGNATED FROM RIGHT TO LEFT, FACING THE ASSEMBLY FROM THE GROUND. LEFT TO RIGHT FACING THE BACK OF THE ANTENNA.
2. THE OUTER MOST ANTENNAS ON EACH FACE SHALL BE DESIGNATED AS THE RECEIVE ANTENNAS. THE INNER ANTENNAS SHALL BE DESIGNATED AS THE TRANSMIT ANTENNAS.
3. EACH TRANSMISSION LINE SHALL BE LABELED WITH BRASS "TOE TAGS", GRAINGER PART NUMBER 1F035-8, STAMPED WITH 1/4" LETTERS/NUMBERS STAMPS, GRAINGER PART NUMBER 3W639. THE LABELS SHALL BE ATTACHED WITH A SEMIPERMANENT METHOD (I.E. BLACK UV RESISTANT CABLE TIES). THE TAGS SHALL BE PLACED SO AS NOT TO COME IN CONTACT WITH THE CONNECTOR ON THE LINE AND THE METAL OF THE TOWER. LINES SHALL BE LABELED AT THE TOP, BOTTOM AT ENTRY PORT.
4. EACH LINE SHALL ALSO BE LABELED AT THE LIGHTNING/SURGE PROTECTOR MOUNTING PLATE WITH A PRINTABLE LABEL MAKER TO INDICATE LINE NUMBER AND FUNCTION, THE SAME AS THE TOE TAG.
5. THE TAG LABELING SHALL BE AS DESIGNATED IN THE ANTENNA KEY. USE A-ALPHA, B-BETA, G-GAMMA, ON SHEET E02.
6. IN TWO-ANTENNA CONFIGURATION WHERE ONE ANTENNA WILL BE DUPLEXED, THE DUPLEXED ANTENNA SHALL BE LABELED AS RECEIVE.
7. CONTRACTOR SHALL FIELD VERIFY THE EXACT TMA'S (IF THEY ARE REQUIRED) PER THE OPERATIONS MANAGER.
8. COAXIAL FEEDER LENGTHS INDICATED ABOVE ARE APPROXIMATE. CONTRACTOR TO VERIFY ACTUAL LENGTH BEFORE ORDERING.
9. CONTRACTOR SHALL INSTALL PLATFORM OR MOUNTING BRACKETS AND HARDWARE FOR ALL ANTENNAS AND SHALL BE PER THE TOWER MANUFACTURERS STANDARD DETAILS OR APPROVED EQUAL.
10. CONTRACTOR TO FURNISH AND INSTALL AN EXIT PORT (IF ONE IS NOT EXISTING) IN ACCORDANCE WITH THE TOWER MANUFACTURER'S SPECIFICATIONS AND UPON THE TOWER OWNER'S APPROVAL. (TYP. AT PLATFORM AND AT BOTTOM) (FOR MONOPOLE TOWERS ONLY).
11. CONTRACTOR SHALL SUPPLY AND INSTALL INTERMITTENT COAX TINNED GALVANIZED GROUND BARS AT 75' INTERVALS STARTING FROM THE ANTENNA CENTERLINE DOWN (ON SELF SUPPORT AND GUYED TOWERS WHERE APPLICABLE).

SYMBOLS

PLAN SYMBOLS

- CONDUIT RUN ABOVEGROUND
- CONDUIT RUN UNDERGROUND
- CONDUIT CAP
- NEUTRAL CONDUCTOR / HASH MARKS INDICATE NUMBER OF WIRES IN CONDUIT / GROUND CONDUCTOR
- DISCONNECT SWITCH
- $3 LIGHT SWITCH (3) INDICATES (3) WAY SWITCH
- LIGHT FIXTURE (TYPE ON DRAWING)
- LIGHT FIXTURE (TYPE ON DRAWING)
- RECEPTACLE GFCI = GROUND FAULT CIRCUIT INTERRUPTER WP = WEATHERPROOF COVER

GROUNDING PLAN SYMBOLS

- GROUNDING CONDUCTOR ABOVE GROUND
- GROUNDING CONDUCTOR UNDER GROUND
- GND BUS / GND COND — GROUND BUS WITH COMPRESSION CONNECTION
- CADWELD
- MECHANICAL CONNECTION
- GROUND ROD
- GROUND INSPECTION / TESTWELL

SCHEMATIC SYMBOLS

- GROUND
- TRANSFORMER
- BREAKER (SIZE AS NOTED)
- METER
- FUSED DISCONNECT SWITCH (SIZED AS NOTED)
- NON-FUSED DISCONNECT SWITCH (SIZED AS NOTED)
- DUPLEX RECEPTACLE (120V)
- GENERATOR RECEPTACLE (240V, 1ø)
- ENCLOSURES

GENERAL NOTES

1. THE CONTRACTOR SHALL SUPERVISE AND DIRECT ALL WORK USING HIS BEST SKILL AND ATTENTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, PROCEDURES AND SEQUENCES FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
2. THE CONTRACTOR SHALL VISIT THE JOB SITE TO REVIEW THE SCOPE OF WORK AND EXISTING CONDITIONS INCLUDING, BUT NOT LIMITED TO ELECTRICAL SERVICE AND OVERALL COORDINATION.
3. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO SUBMITTING HIS BID. ANY DISCREPANCIES, CONFLICTS OR OMISSIONS, ETC. SHALL BE REPORTED TO VERIZON WIRELESS BEFORE PROCEEDING WITH THE WORK.
4. THE CONTRACTOR SHALL PROTECT ALL AREAS FROM DAMAGE WHICH MAY OCCUR DURING CONSTRUCTION. ANY DAMAGE TO NEW AND EXISTING CONSTRUCTION, STRUCTURE, OR EQUIPMENT SHALL BE IMMEDIATELY REPAIRED OR REPLACED TO THE SATISFACTION OF VERIZON WIRELESS, AT THE EXPENSE OF THE CONTRACTOR.
5. THE CONTRACTOR SHALL SAFEGUARD THE OWNER'S PROPERTY DURING CONSTRUCTION AND SHALL REPLACE ANY DAMAGED PROPERTY OF THE OWNER TO ORIGINAL CONDITION.
6. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING UTILITIES WHETHER SHOWN HEREON OR NOT, AND TO PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL BEAR ALL EXPENSES FOR REPAIR OR REPLACEMENT OF UTILITIES OR OTHER PROPERTY DAMAGED IN CONJUNCTION WITH THE EXECUTION OF WORK.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE SECURITY OF THE SITE WHILE THE JOB IS IN PROGRESS AND UNTIL THE JOB IS COMPLETE.
8. ALL CONSTRUCTION WORK SHALL CONFORM TO THE U.B.C., I.B.C., OR B.O.C.A. AND ALL APPLICABLE LOCAL REGULATIONS, ORDINANCES, STATUTES & CODES.
9. VERIZON WIRELESS SHALL OBTAIN THE CONSTRUCTION PERMIT. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ADDITIONAL PERMITS, LICENSES AND INSPECTIONS NECESSARY FOR PERFORMANCE OF THE WORK AND INCLUDE THOSE IN THE COST OF THE WORK TO THE OWNER.
10. CITY APPROVED PLANS SHALL BE KEPT IN A PLAN BOX AND SHALL NOT BE USED BY WORKMEN. ALL CONSTRUCTION SETS SHALL REFLECT SAME INFORMATION. THE CONTRACTOR SHALL ALSO MAINTAIN IN GOOD CONDITION ONE COMPLETE SET OF PLANS WITH ALL REVISIONS, ADDENDA AND CHANGE ORDERS ON THE PREMISES AT ALL TIMES. THESE ARE TO BE UNDER THE CARE OF JOB SUPERINTENDENT.
11. PROVIDE A PORTABLE FIRE EXTINGUISHER WITH A RATING OF NOT LESS THAN 2-A OR 2-A:10-B:C WITHIN 75 FEET OF TRAVEL DISTANCE TO ALL PORTIONS OF THE BUILD OUT AREA DURING CONSTRUCTION.
12. ANY CONNECTION FEES FOR ELECTRICAL SERVICE SHALL BE PAID BY THE CONTRACTOR.
13. BUILDING CODE: (IBC 2012)
[INTERNATIONAL BUILDING CODE (IBC), 2012 AS PUBLISHED BY THE INTERNATIONAL CODE COUNCIL (ICC) AND AS ADOPTED BY LOCAL BUILDING AUTHORITY]
14. ELECTRICAL CODE: (NEC 2011)
[NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 70 -- 2011, NATIONAL ELECTRICAL CODE, AS ADOPTED BY LOCAL BUILDING AUTHORITY]
15. CABLING NOTE - FOLLOW HYBRIFLEX MANUFACTURER'S RECOMMENDATIONS FOR HOISTING CABLE. VERIZON HAS REPORTED THAT HOIST GRIPS MUST BE USED EVERY 200' OF CABLE.
16. GROUNDING NOTE -- ANY INSTALLED GROUNDING MUST ACHIEVE A RATING OF 5 OHMS OR LESS.

DESCRIPTION OF PROPOSED SITE USE
THE CONSTRUCTION OF THIS COMMUNICATION TOWER SITE IS FOR THE TRANSMISSION AND RECEPTION OF CALLS FOR A NEW WIRELESS TELEPHONE SYSTEM. NO FLAMMABLE PRODUCTS OR CHEMICALS WILL BE USED OR STORED INSIDE THE SHELTER.

ABBREVIATIONS

AGL	ABOVE GRADE LINE	ELEV	ELEVATOR, ELEVATION	REQ'D	REQUIRED
AMP	AMPERE	EQ	EQUAL	SF	SQUARE FEET
ARCH	ARCHITECT	EQUIP	EQUIPMENT	SHT	SHEET
BLDG	BUILDING	EXIST	EXISTING	SIM	SIMILAR
CL	CENTER LINE	FND	FOUNDATION	SPECS	SPECIFICATIONS
CONC	CONCRETE	FTG	FOOTING	SSC, INC.	SELECTIVE SITE CONSULTANTS, INC.
CONST	CONSTRUCTION	GA	GAUGE	STD	STANDARD
CONTR	CONTRACTOR	GALV	GALVANIZED	STL	STEEL
DET	DETAIL	GND	GROUND	STRUCT	STRUCTURAL
DIA	DIAMETER	HT	HEIGHT	SW	SWITCH
DIAG	DIAGONAL	LF	LINEAL FEET	TOC	TOP OF CONCRETE
DIM	DIMENSION	MIN	MINIMUM	TC	TOP OF CURB
DN	DOWN	MISC	MISCELLANEOUS	TOP	TOP OF PAVING
DWG	DRAWING	NTS	NOT TO SCALE	TOS	TOP OF STEEL
EA	EACH	OC	ON CENTER	TYP	TYPICAL
ELEC	ELECTRICAL	PL	PLATE	UNO	UNLESS NOTED OTHERWISE

A / – — DETAIL NUMBER
DRAWING NUMBER ON WHICH SECTION OR DETAIL APPEARS. (–) INDICATES REFERENCED FROM SAME DRAWING

1 / – — SECTION NUMBER
DRAWING NUMBER ON WHICH SECTION OR DETAIL APPEARS. (–) INDICATES REFERENCED FROM SAME DRAWING

STATE OF MISSOURI MICHAEL L OWENS NUMBER PE-29058 PROFESSIONAL ENGINEER 1/15/14

STATE OF MISSOURI SHELTON NEISLING NUMBER E-27323 PROFESSIONAL ENGINEER 1/15/14

PLANS PREPARED FOR:
verizon wireless

PLANS PREPARED BY:
721 Emerson Road, Suite 475
St. Louis, Missouri 63141
Phone: 314-993-1010
Fax: 314-993-1036
SSC

ENGINEERING LICENSE:
STATE OF MISSOURI
PE CERTIFICATE OF AUTHORIZATION #001640

ENGINEER		PE#	DISCIPLINE	
MLO	MICHAEL L OWENS	E-29058	STRUCTURAL/CIVIL	SC
KV	KEVIN VANWAGLE	E-31581	STRUCTURAL/CIVIL	SC
REJ	ROBERT E JENSEN	E-29374	STRUCTURAL/CIVIL	SC
TMS	TERRANCE M SUPER	E-18531	ELECTRICAL	E
SON	SHELTON D NEISLING	E-27323	ELECTRICAL	E
DEK	DAVID E KASPER	E-18093	ELECTRICAL	E

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SUBMITTALS

DESCRIPTION	DATE	BY	REV
ISSUED FOR REVIEW	06/20/13	BMM	A
REVISED PER CLIENT COMMENTS	09/18/13	DSH	B
REVISED PER CLIENT COMMENTS	11/13/13	DSH	C
REVISED PER CLIENT COMMENTS	12/18/13	DSH	D
REVISED PER CLIENT COMMENTS	01/10/14	DSH	E
ISSUED FOR CONSTRUCTION	01/14/14	DSH	0

SITE NAME:
STLC CHESTERFIELD

LOCATION NUMBER:
126994

SITE ADDRESS:
132 WOODCLIFFE PLACE DR.
CHESTERFIELD, MISSOURI
63005

SHEET DESCRIPTION:
GENERAL NOTES

SSC #:

SHEET NUMBER:
GN01

Federal Communications Commission - Local and State Government Advisory Committee
(June 2000)

A Local Government Official's Guide to Transmitting Antenna RF Emission Safety: Rules, Procedures, and Practical Guidance

Over the past two years, the Federal Communications Commission (FCC) and its Local and State Government Advisory Committee (LSGAC) have been working together to prepare a voluntary guide to assist state and local governments in devising efficient procedures for ensuring that the antenna facilities located in their communities comply with the FCC's limits for human exposure to radiofrequency (RF) electromagnetic fields. The attached guide is the product of this joint effort.

We encourage state and local government officials to consult this guide when addressing issues of facilities siting within their communities. This guide contains basic information, in a form accessible to officials and citizens alike, that will alleviate misunderstandings in the complex area of RF emissions safety. This guide is not intended to replace OET Bulletin 65, which contains detailed technical information regarding RF issues, and should continue to be used and consulted for complex sites. The guide contains information, tables, and a model checklist to assist state and local officials in identifying sites that do not raise concerns regarding compliance with the Commission's RF exposure limits. In many cases, the model checklist offers a quick and effective way for state and local officials to establish that particular RF facilities are unlikely to exceed specific federal guidelines that protect the public from the environmental effects of RF emissions. Thus, we believe this guide will facilitate federal, state, and local governments working together to protect the public while bringing advanced and innovative communications services to consumers as rapidly as possible. We hope and expect that use of this guide will benefit state and local governments, service providers, and, most importantly, the American public.

We wish all of you good luck in your facilities siting endeavors.

William E. Kennard, Chairman
Federal Communications Commission

Kenneth S. Fellman, Chair
Local and State Government
Advisory Committee

Danielle L. Holsworth

Federal Communications Commission - Local and State Government Advisory Committee (June 2000)

A Local Government Official's Guide to Transmitting Antenna RF Emission Safety: Rules, Procedures, and Practical Guidance

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APPENDIX A

Optional Checklist for Local Government To Determine Whether a Facility is Categorically Excluded

Purpose: The FCC has determined that many wireless facilities are unlikely to cause human exposures in excess of RF exposure guidelines. Operators of those facilities are exempt from routinely having to determine their compliance. These facilities are termed "categorically excluded." Section 1.1307(b)(1) of the Commission's rules defines those categorically excluded facilities. This checklist will assist state and local government agencies in identifying those wireless facilities that are categorically excluded, and thus are highly unlikely to cause exposure in excess of the FCC's guidelines. Provision of the information identified on this checklist may also assist FCC staff in evaluating any inquiry regarding a facility's compliance with the RF exposure guidelines.

BACKGROUND INFORMATION

1. Facility Operator's Legal Name: Verizon Wireless (VAW) LLC d/b/a Verizon Wireless
2. Facility Operator's Mailing Address: 10740 Nall Ave., Overland Park, KS 66211
3. Facility Operator's Contact Name/Title: Manager-Network Real Estate
4. Facility Operator's Office Telephone: 913-344-2800
5. Facility Operator's Fax: _____
6. Facility Name: STLC Chesterfield
7. Facility Address: 132 Woodcliffe Place Dr., Chesterfield, MO 63005
8. Facility City/Community: City of Chesterfield
9. Facility State and Zip Code: Missouri, 63005
10. Latitude: 38 39 29.4 N
11. Longitude: -90 35 31.6 W

continue →

Optional Local Government Checklist (page 2)

EVALUATION OF CATEGORICAL EXCLUSION

12. Licensed Radio Service (see attached Table 1): Cellular Radiotelephone Service
13. Structure Type (free-standing or building/roof-mounted): Free Standing
14. Antenna Type [omnidirectional or directional (includes sectored)]: Directional
15. Height above ground of the lowest point of the antenna (in feet): 118'
16. ☒ Check if all of the following are true:
    (a) This facility will be operated in the Multipoint Distribution Service, Paging and Radiotelephone Service, Cellular Radiotelephone Service, Narrowband or Broadband Personal Communications Service, Private Land Mobile Radio Services Paging Operations, Private Land Mobile Radio Service Specialized Mobile Radio, Local Multipoint Distribution Service, or service regulated under Part 74, Subpart I (see question 12).
    (b) This facility will not be mounted on a building (see question 13).
    (c) The lowest point of the antenna will be at least 32.8 feet (10 meters) above the ground (see question 15).

If box 16 is checked, this facility is categorically excluded and is unlikely to cause exposure in excess of the FCC's guidelines. The remainder of the checklist need not be completed. If box 16 is not checked, continue to question 17.

17. Enter the power threshold for categorical exclusion for this service from the attached Table 1 in watts ERP or EIRP* (note: EIRP = (1.64) X ERP): _____
18. Enter the total number of channels if this will be an omnidirectional antenna, or the maximum number of channels in any sector if this will be a sectored antenna:
19. Enter the ERP or EIRP per channel (using the same units as in question 17): _____
20. Multiply answer 18 by answer 19: _____
21. Is the answer to question 20 less than or equal to the value from question 17 (yes or no)?

If the answer to question 21 is YES, this facility is categorically excluded. It is unlikely to cause exposure in excess of the FCC's guidelines.

If the answer to question 21 is NO, this facility is not categorically excluded. Further investigation may be appropriate to verify whether the facility may cause exposure in excess of the FCC's guidelines.

*"ERP" means "effective radiated power" and "EIRP" means "effective isotropic radiated power

TABLE 1: TRANSMITTERS, FACILITIES AND OPERATIONS SUBJECT TO ROUTINE ENVIRONMENTAL EVALUATION

SERVICE (TITLE 47 CFR RULE PART)	EVALUATION REQUIRED IF:
Experimental Radio Services (part 5)	power > 100 W ERP (164 W EIRP)
Multipoint Distribution Service (subpart K of part 21)	non-building-mounted antennas: height above ground level to lowest point of antenna < 10 m and power > 1640 W EIRP building-mounted antennas: power > 1640 W EIRP
Paging and Radiotelephone Service (subpart E of part 22)	non-building-mounted antennas: height above ground level to lowest point of antenna < 10 m and power > 1000 W ERP (1640 W EIRP) building-mounted antennas: power > 1000 W ERP (1640 W EIRP)
Cellular Radiotelephone Service (subpart H of part 22)	non-building-mounted antennas: height above ground level to lowest point of antenna < 10 m and total power of all channels > 1000 W ERP (1640 W EIRP) building-mounted antennas: total power of all channels > 1000 W ERP (1640 W EIRP)

TABLE 1 (cont.)

SERVICE (TITLE 47 CFR RULE PART)	EVALUATION REQUIRED IF:
Personal Communications Services (part 24)	(1) Narrowband PCS (subpart D): non-building-mounted antennas: height above ground level to lowest point of antenna < 10 m and total power of all channels > 1000 W ERP (1640 W EIRP) building-mounted antennas: total power of all channels > 1000 W ERP (1640 W EIRP) (2) Broadband PCS (subpart E): non-building-mounted antennas: height above ground level to lowest point of antenna < 10 m and total power of all channels > 2000 W ERP (3280 W EIRP) building-mounted antennas: total power of all channels > 2000 W ERP (3280 W EIRP)
Satellite Communications (part 25)	all included
General Wireless Communications Service (part 26)	total power of all channels > 1640 W EIRP
Wireless Communications Service (part 27)	total power of all channels > 1640 W EIRP
Radio Broadcast Services (part 73)	all included

TABLE 1 (cont.)

SERVICE (TITLE 47 CFR RULE PART)	EVALUATION REQUIRED IF:
Experimental, auxiliary, and special broadcast and other program distributional services (part 74)	subparts A, G, L: power > 100 W ERP subpart I: non-building-mounted antennas: height above ground level to lowest point of antenna < 10 m and power > 1640 W EIRP building-mounted antennas: power > 1640 W EIRP
Stations in the Maritime Services (part 80)	ship earth stations only
Private Land Mobile Radio Services Paging Operations (part 90)	non-building-mounted antennas: height above ground level to lowest point of antenna < 10 m and power > 1000 W ERP (1640 W EIRP) building-mounted antennas: power > 1000 W ERP (1640 W EIRP)
Private Land Mobile Radio Services Specialized Mobile Radio (part 90)	non-building-mounted antennas: height above ground level to lowest point of antenna < 10 m and total power of all channels > 1000 W ERP (1640 W EIRP) building-mounted antennas: total power of all channels > 1000 W ERP (1640 W EIRP)

TABLE 1 (cont.)

SERVICE (TITLE 47 CFR RULE PART)	EVALUATION REQUIRED IF:
Amateur Radio Service (part 97)	transmitter output power > levels specified in § 97.13(c)(1) of this chapter
Local Multipoint Distribution Service (subpart L of part 101)	non-building-mounted antennas: height above ground level to lowest point of antenna < 10 m and power > 1640 W EIRP building-mounted antennas: power > 1640 W EIRP LMDS licensees are required to attach a label to subscriber transceiver antennas that: (1) provides adequate notice regarding potential radiofrequency safety hazards, *e.g.*, information regarding the safe minimum separation distance required between users and transceiver antennas; and (2) references the applicable FCC-adopted limits for radiofrequency exposure specified in § 1.1310 of this chapter.

-end-