



City of Duluth
Planning Division

411 West First Street • Room 208 • Duluth, Minnesota 55802-1197
218-730-5580 • Fax: 218-730-5904 • www.duluthmn.gov

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MEMORANDUM

DATE: September 16, 2014
TO: Planning Commissioners
FROM: Steven Robertson, Senior Planner
SUBJECT: Additional Information on PL 14-121 (SUP for Cell Tower in Chester Park)

After the public hearing was closed for PL 14-121 at the September 9, 2014, regular Planning Commission meeting, the Planning Commission tabled the item for further consideration. City staff heard that the Planning Commissioners wanted more information on the 1) opinion of the Parks Commission, and 2) additional information on the regulations related to reducing potential risks to RF emissions.

Parks and Recreation Commission

At their September 10, 2014, regular meeting, the Parks Commission voted to support the proposed cell tower at the former ski jump site.

The applicant has revised his construction drawings to reflect the Park and Recreation Commission's vote. Please note that two antenna bays are being shown on the revised plan (height of 63 and 71 feet), versus the four antenna bays that were in the construction drawings initially submitted (height of 47, 55, 63, and 71 feet). The applicant has also included additional pictures that would show the visual impact of the monopole from different directions. Finally, staff had included the applicant's checklist "To Determine Whether a Facility is Categorically Excluded".

Information on Radio Frequency

Staff have included information with this memo from the FCC website, "Human Exposure to Radio Frequency Fields: Guidelines for Cellular and PCS Sites" and "Federal Communications Commission Fact Sheet, April 23, 1996". Please note that the Telecommunications Act of 1996 preempts state and local government regulation of the placement, construction, and modification of personal wireless services facilities on the basis of the environmental effects of radio frequency emissions to the extent that such facilities comply with the FCC's regulations concerning such emissions.

Additional Communication From the Public

In addition to what was included in the original staff report, and handed out at the night of the meeting, additional emails/letters have been forwarded to city staff for review by the Planning Commission. They are included in with this memo.

Included in original staff report: Steven Balliette (8/25/14), Steven and Ann Holtz (8/29/14), Steve and Ann Holtz (8/31/14), Steve and Ann Holtz (8/31/14), Betty Christensen (9/1/14), Karl Hodil (9/1/14), and Jane Hovland (9/2/14).

Handed out before the September 9, 2014 meeting: Daniel Proctor (typed letter 8/31/14), Susan Harney (9/4/14), Steve and Ann Holtz (9/4/14), Steve and Ann Holtz (9/6/14), Robyn Roslak and Patrick Contardo (9/7/14), Steve and Ann Holtz (9/8/14), Patrick Contardo (9/8/14), and Jim Gearn (9/9/14).

H.A.

Additional Communication included with this memo: John Munger (9/9/14), John Pastor (9/10/14), Steve and Ann Holtz (9/10/14), Susan Harney (9/12/14), Steve and Ann Holtz (9/12/14), Steve and Ann Holtz (9/10/14 8:05 AM and 9:43 AM), Steve and Ann Holtz (9/15/14), and Steve and Ann Holtz (9/16/14 6:35 AM and 6:46 PM). Also included letter to the editor, Duluth News Tribune (9/15/14)

Clarifications on Migratory Bird Flight Path and Consultant Review

Included with this staff report is a copy of the map showing the Migratory Bird Flight Path. New cell towers below this line (such as this proposal) are limited to no more than 75 feet in height. This area is defined as:

The zone of jurisdictional land located from the Lake Superior and Saint Louis River shorelines to no less than two miles inland or where Skyline Parkway runs parallel to the shoreline, an area from the shoreline to Skyline Parkway or two miles inland, whichever is greater.

The Planning Division uses a consultant (Robert Naumann, from the Center for Municipal Services) to review applications for compliance with our code, and other applicable rules and regulations. His staff memo was included in the previous staff report. With the exceptions noted (generally temporary relief), he had recommend approval of the Special Use Permit.

Staff Recommendation:

Staff recommend approval of the Special Use Permit, per the staff report submitted for the September 9, 2014, Planning Commission meeting. Two additional conditions:

- Tower constructed at the old Chester Park Ski Jump (current location of the temporary facility), and
- Applicant to do post-construction testing of the new facility to document that the site is in compliance with the FCC requirements.

Sprint



SITE NAME: DULUTH CHESTER PARK SKI JUMP RELO
SITE NUMBER: MS25XC156 (OLD MS03NP156)
SITE ADDRESS: 1805 EAST SKYLINE PARKWAY
 DULUTH, MN 55805
SITE TYPE: 75'-0" STEALTH MONOPOLE
 (AT EXISTING TEMP. POLE LOCATION)



PROJECT NO: 13.01993
 DRAWN BY: JMM
 CHECKED BY: JLO

SHEET NO:	TITLE SHEET & PROJECT DATA
T-1	TITLE SHEET & PROJECT DATA
A-1	OVERALL SITE PLAN
A-2	ENLARGED SITE PLAN
A-3	PROPOSED TOWER ELEV. & ANTENNA LAYOUTS
A-4	ANTENNA DETAILS & ANTENNA SCHEDULES
A-5	RRU DETAILS
S-1	SECTIONS & DETAILS
G-1	GROUNDING PLAN & NOTES
G-2	GROUNDING DETAILS

REV	DATE	DESCRIPTION
1	09/16/14	ISSUED FOR RFP
2	07/24/14	ISSUED FOR CONSTRUCTION
3	07/29/14	REVISED TOWER/COMP. LOCATION
4	07/29/14	REVISED TOWER/COMP. LOCATION
5	10/15/13	ISSUED FOR REVIEW

THE DESIGNER ASSUMES THE CORRECT RECORD INFORMATION HAS BEEN PROVIDED AND THAT THE USER HAS OBTAINED ALL NECESSARY PERMITS FROM THE LOCAL JURISDICTION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE LOCAL JURISDICTION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE LOCAL JURISDICTION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE LOCAL JURISDICTION.

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MS03NP156
 DULUTH CHESTER PARK
 SKI JUMP RELO
 1805 EAST SKYLINE PKWY
 DULUTH, MN 55805

SHEET TITLE
 TITLE SHEET &
 PROJECT DATA

SHEET NUMBER
 T-1

APPLICABLE CODES:
 ALL WORK SHALL COMPLY WITH THE FOLLOWING APPLICABLE CODES:
 IBC 2006 (2007) MINNESOTA STATE BUILDING CODE
 IBC 2006 (2007) MINNESOTA STATE ELECTRICAL CODE
 IBC 2006 (2007) MINNESOTA STATE MECHANICAL CODE
 IBC 2006 (2007) MINNESOTA STATE PLUMBING CODE
 IBC 2006 (2007) MINNESOTA STATE FIRE AND SAFETY CODE
 IBC 2006 (2007) MINNESOTA STATE ENERGY CODE
 IBC 2006 (2007) MINNESOTA STATE CODE WITH AMENDMENTS
 NEC 2008 ELECTRICAL CODE
 IN THE EVENT OF CONFLICT, THE MOST RESTRICTIVE CODE SHALL PREVAIL

PROJECT DESCRIPTION

- INSTALL 75' STEALTH MONOPOLE
- INSTALL (3) SPRINT NETWORK VISION ANTENNAS
- INSTALL (3) SPRINT LEGACY CDMA ANTENNAS
- INSTALL (1) MMB5-BBU CABINET
- INSTALL (1) MMB5-BATTERY CABINET
- INSTALL LEGACY CDMA EQUIPMENT CABINETS
- INSTALL (6) RRU'S AT GROUND LEVEL
- INSTALL JUMPERS
- INSTALL (1) GROUND MOUNTED GPS ANTENNA
- INSTALL HYBRID CABLES
- INSTALL COAX
- INSTALL FIBER AND AVX (ND) EQUIPMENT AT CELL SITE

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

DRIVING DIRECTIONS FROM NEAREST MAJOR AIRPORT

FROM DULUTH INTERNATIONAL AIRPORT:

- HEAD WEST ON AIRPORT ROAD (GRANDEN DRIVE TOWARD HANES ROAD (GO 1.5 MILES)
- TURN RIGHT ONTO RICE LAKE ROAD (GO 1.5 MILES)
- TURN LEFT ONTO WEST ARROWHEAD ROAD (GO 1.5 MILES)
- TURN RIGHT ONTO KENNEDY AVENUE (GO 1.2 MILES)
- TURN LEFT ONTO NORTH CHESTER PARKWAY (GO 325 FEET TO SITE)
- PAVE END LEFT ONTO NORTH CHESTER PARKWAY (GO 325 FEET TO SITE)

SITE INFORMATION

SITE ADDRESS:
 1805 EAST SKYLINE PARKWAY
 DULUTH, MN 55805

PROPERTY OWNER:
 208 CITY HALL
 DULUTH, MN 55805

POWER COMPANY:
 MINNESOTA POWER

TELCO COMPANY:
 CENTURION

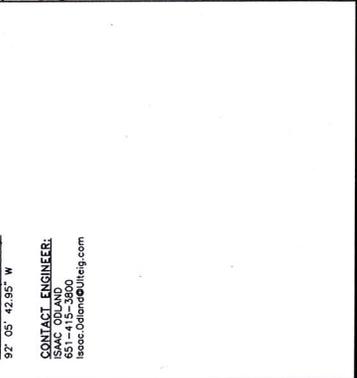
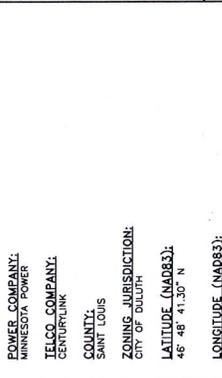
COUNTY:
 SAINT LOUIS

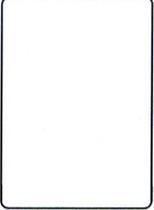
ZONING JURISDICTION:
 CITY OF DULUTH

LATITUDE (NAD83):
 46° 48' 41.30" N

LONGITUDE (NAD83):
 92° 05' 42.95" W

CONTACT ENGINEER:
 ISAAC ODLAND
 651-415-3800
 isaac.odland@ulteig.com





PROJECT NO:	13.01.953	
DRAWN BY:	JMM	
CHECKED BY:	UD	
REV	DATE	DESCRIPTION
3	06/16/14	REVISED PER CITY
2	07/29/14	ISSUED FOR CONSTRUCTION
1	07/09/14	REVISED TOWER/CDMP LOCATION
0	07/02/14	REVISED TOWER/CDMP LOCATION
A	10/15/13	ISSUED FOR REVIEW

THE SIGNED DRAWING IS THE CORRECT RECORD OF THE PROJECT. ANY CHANGES TO THE PROJECT MUST BE APPROVED BY THE DESIGNER. THE DESIGNER IS NOT RESPONSIBLE FOR THE CONSTRUCTION OF THE PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR THE PROTECTION OF ALL UTILITIES AND STRUCTURES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES AND STRUCTURES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES AND STRUCTURES.

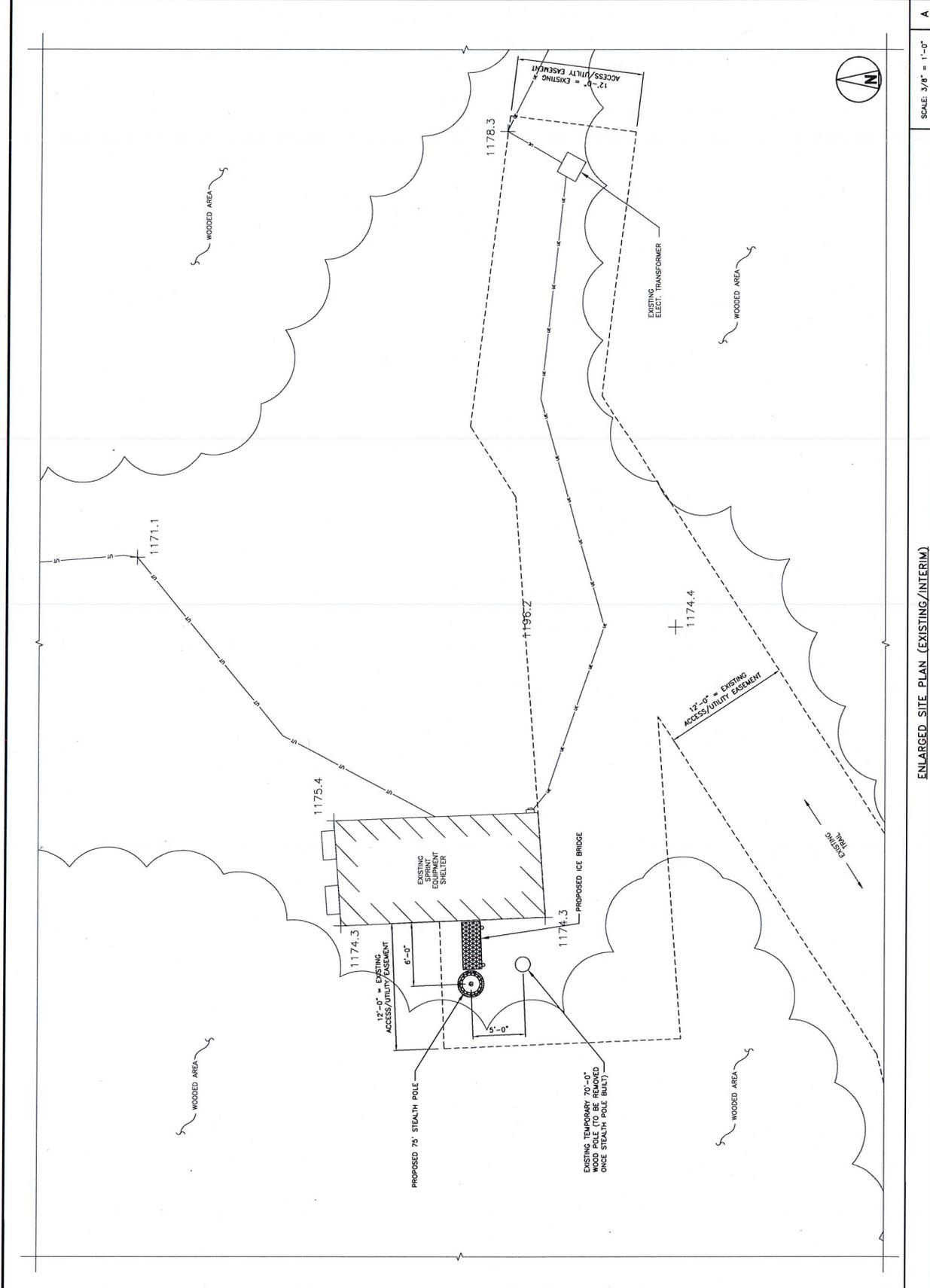
DATE: 09-15-14
 LSC: No. 47885
 ISAAC ODLAND

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MSO3NP156
 DULUTH CHESTER PARK
 SKI JUMP RELO
 1805 EAST SKYLINE PKWY
 DULUTH, MN 55805

SHEET TITLE
 ENLARGED SITE PLAN

SHEET NUMBER
 A-2



SCALE: 3/8" = 1'-0"

ENLARGED SITE PLAN (EXISTING/INTERIM)

A



Ulteig
 3001 Leighton Avenue N.
 St. Paul, Minnesota 55108
 Phone: 612-763-1100
 Fax: 612-763-1101
 Email: info@ulteig.com
 Web: www.ulteig.com

PROJECT NO: 13.01933
 DRAWN BY: JMM
 CHECKED BY: UO

NO	DATE	DESCRIPTION
1	08/14/14	ISSUED PER CITY
2	09/17/14	ISSUED FOR
3	09/17/14	ISSUED FOR
4	07/02/14	ISSUED FOR
5	07/02/14	ISSUED FOR
6	10/15/13	ISSUED FOR

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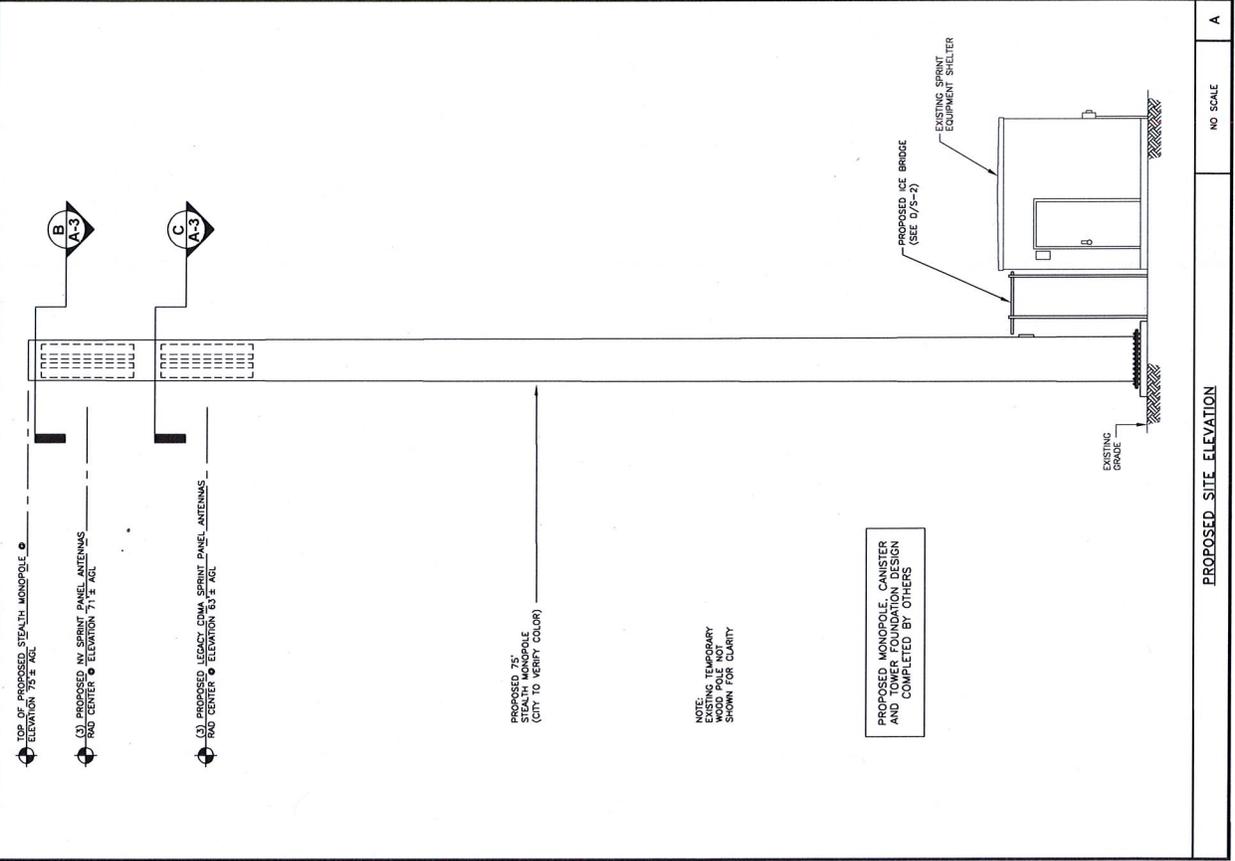
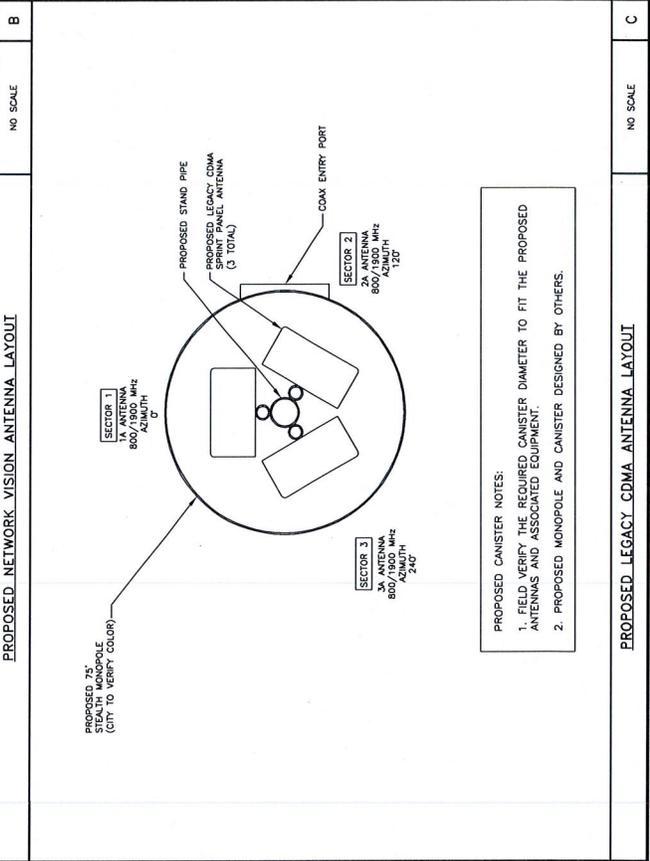
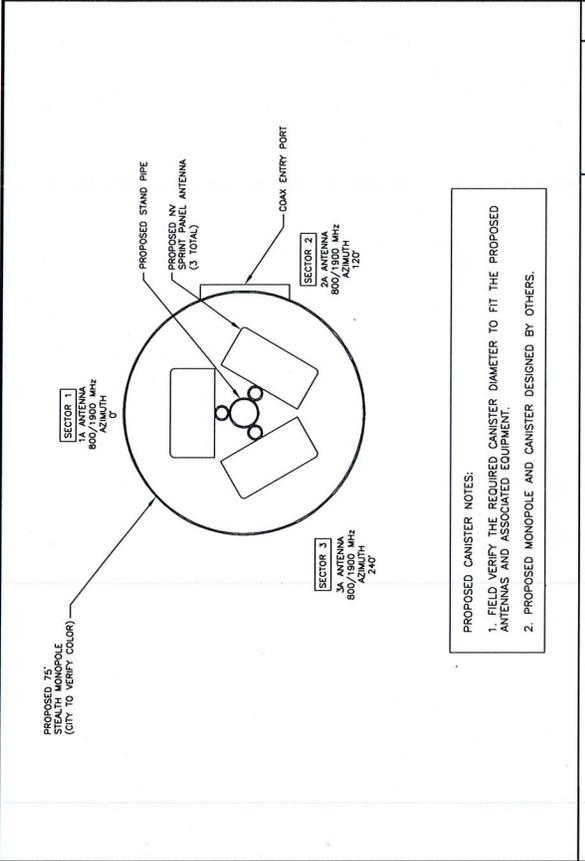
STATE OF MINNESOTA
 DATE 09-18-14 LIC. NO. 27985
 ISAAC ODLAND

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MS03NP156
 DULUTH CHESTER PARK
 SKI JUMP RELO
 1805 EAST SKYLINE PKWY
 DULUTH, MN 55805

SHEET TITLE
 PROPOSED TOWER ELEV.
 & ANTENNA LAYOUTS

SHEET NUMBER
 A-3





PROJECT NO: 13.01593
 DRAWN BY: JMM
 CHECKED BY: JUD

3	07/16/14	REVISED PER CITY
2	07/27/14	ISSUED FOR CONSTRUCTION
1	07/29/14	REVISE TOWER/COMP. LOCATION
0	07/29/14	REVISE TOWER/COMP. LOCATION
A	10/15/13	ISSUED FOR REVIEW
REV	DATE	DESCRIPTION

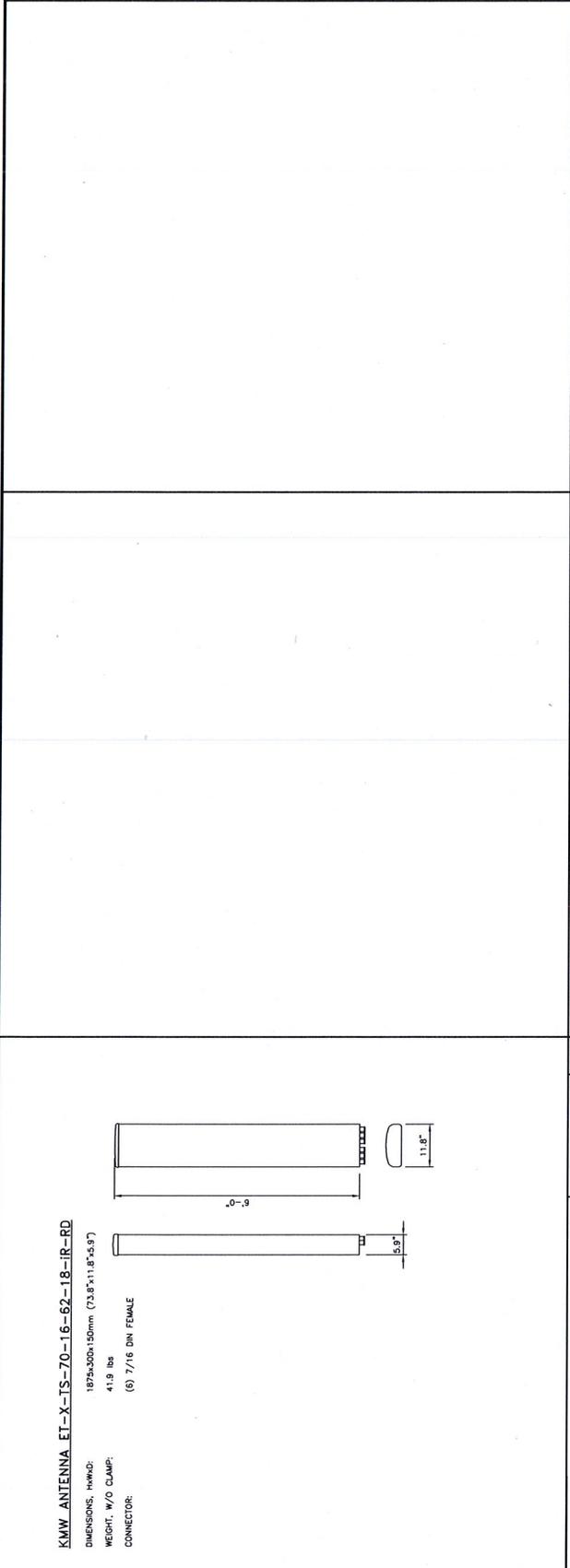
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 DATE: 09-18-14 LIC. NO. 27985
 ISAC OJLAND

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MS03NP156
 DULUTH CHESTER PARK
 SKI JUMP RELO
 1805 EAST SKYLINE PKWY
 DULUTH, MN 55805

SHEET TITLE
 ANTENNA DETAILS

SHEET NUMBER
 A-4



PROPOSED ANTENNA SPECIFICATIONS

SECTOR	ANTENNA NUMBER	ANTENNA MANUFACTURER	ANTENNA MODEL	NUMBER OF HYBRID CABLES	RAD CENTER AZIMUTH	RAD CENTER ELEVATION	MECH D-TILT	ELECT D-TILT	EFF D-TILT	RRU MODEL	RRU FILTER	HYBRID CABLE LENGTH	JUMPER SIZE	JUMPER LENGTH	RET CABLE LENGTH	RET CABLE MANUFACTURER	RET CABLE MODEL NUMBER
1A	800/1900 MHz	KMW	ET-X-TS-70-16-62-18-IR-RD	SAMSUNG HFC 1 (PER SECTOR)	0°	71°	0/0	0/0	4/2	RRH-C2A & RRH-P4	(1) 800 MHz FILTER	-	1/2"	-	-	COMMSCOPE	ATCB-B01-003
2A	800/1900 MHz	KMW	ET-X-TS-70-16-62-18-IR-RD	SAMSUNG HFC 1 (PER SECTOR)	120°	71°	0/0	0/0	8/4	RRH-C2A & RRH-P4	(1) 800 MHz FILTER	-	1/2"	-	-	COMMSCOPE	ATCB-B01-003
3A	800/1900 MHz	KMW	ET-X-TS-70-16-62-18-IR-RD	SAMSUNG HFC 1 (PER SECTOR)	240°	71°	0/0	0/0	0/0	RRH-C2A & RRH-P4	(1) 800 MHz FILTER	-	1/2"	-	-	COMMSCOPE	ATCB-B01-003
-	GPS	PCTEL	GPS-TMG-HR-28NCM	1	-	-	-	-	-	-	-	-	1/2" (PCTEL JUM-400)	10'	-	-	-

PROPOSED ANTENNA SCHEDULE (NETWORK VISION)

SECTOR	ANTENNA MANUFACTURER	ANTENNA MODEL	RAD CENTER AZIMUTH	RAD CENTER ELEVATION	MECH D-TILT	ELECT D-TILT	EFF D-TILT	RRU MODEL	RRU FILTER	HYBRID CABLE LENGTH	JUMPER SIZE	JUMPER LENGTH	RET CABLE LENGTH	RET CABLE MANUFACTURER	RET CABLE MODEL NUMBER
1A	KMW	ET-X-TS-70-16-62-18-IR-RD	0°	63°	0/0	0/0	4/2	RRH-C2A & RRH-P4	(1) 800 MHz FILTER	-	1/2"	-	-	COMMSCOPE	ATCB-B01-003
2A	KMW	ET-X-TS-70-16-62-18-IR-RD	120°	63°	0/0	0/0	8/4	RRH-C2A & RRH-P4	(1) 800 MHz FILTER	-	1/2"	-	-	COMMSCOPE	ATCB-B01-003
3A	KMW	ET-X-TS-70-16-62-18-IR-RD	240°	63°	0/0	0/0	0/0	RRH-C2A & RRH-P4	(1) 800 MHz FILTER	-	1/2"	-	-	COMMSCOPE	ATCB-B01-003

PROPOSED ANTENNA SCHEDULE (LEGACY CDMA)

SECTOR	ANTENNA MANUFACTURER	ANTENNA MODEL	RAD CENTER AZIMUTH	RAD CENTER ELEVATION	MECH D-TILT	ELECT D-TILT	EFF D-TILT	RRU MODEL	RRU FILTER	HYBRID CABLE LENGTH	JUMPER SIZE	JUMPER LENGTH	RET CABLE LENGTH	RET CABLE MANUFACTURER	RET CABLE MODEL NUMBER
1A	KMW	ET-X-TS-70-16-62-18-IR-RD	0°	63°	0/0	0/0	4/2	RRH-C2A & RRH-P4	(1) 800 MHz FILTER	-	1/2"	-	-	COMMSCOPE	ATCB-B01-003
2A	KMW	ET-X-TS-70-16-62-18-IR-RD	120°	63°	0/0	0/0	8/4	RRH-C2A & RRH-P4	(1) 800 MHz FILTER	-	1/2"	-	-	COMMSCOPE	ATCB-B01-003
3A	KMW	ET-X-TS-70-16-62-18-IR-RD	240°	63°	0/0	0/0	0/0	RRH-C2A & RRH-P4	(1) 800 MHz FILTER	-	1/2"	-	-	COMMSCOPE	ATCB-B01-003

ANTENNA SCHEDULES



PROJECT NO:	13.01993	
DRAWN BY:	JMM	
CHECKED BY:	LD	
REV	DATE	DESCRIPTION
3	06/16/14	REVISED PER CITY
2	07/27/14	ISSUED FOR CONSTRUCTION
1	07/29/14	REVISED TO MEET LOCATION
0	07/29/14	REVISED TO MEET LOCATION
A	10/15/13	ISSUED FOR REVIEW

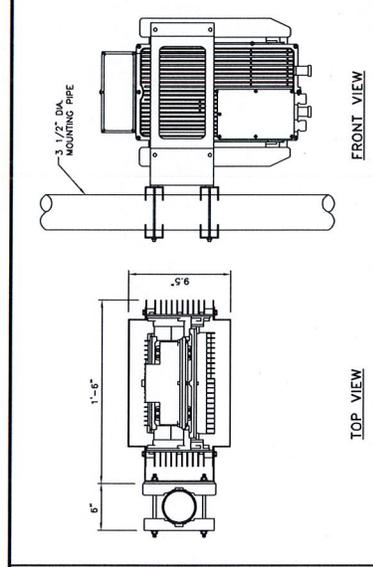
THE SOLE DRAWING IS THE CORRECT RECORD. I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION AND CONTRACT DOCUMENTS HAVE BEEN PREPARED BY ME OR UNDER MY CLOSE PERSONAL SUPERVISION AND THAT I AM A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF MINNESOTA. License No. 47985. DATE: 09-18-14. ISAAC OJLAND

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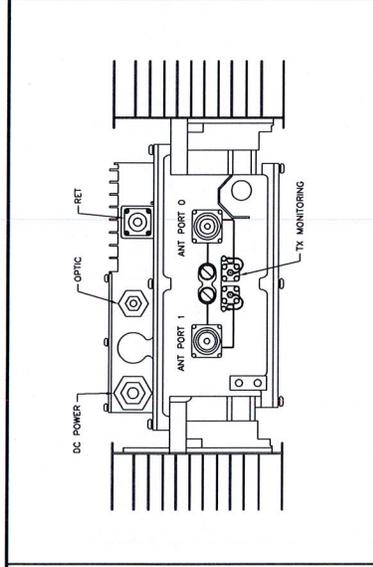
MSO3NP156
DULUTH CHESTER PARK
SKI JUMP RELO
1805 EAST SKYLINE PKWY
DULUTH, MN 55805

SHEET TITLE
RRU DETAILS

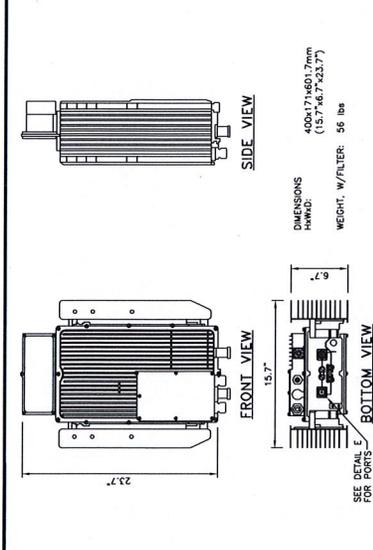
SHEET NUMBER
A-5



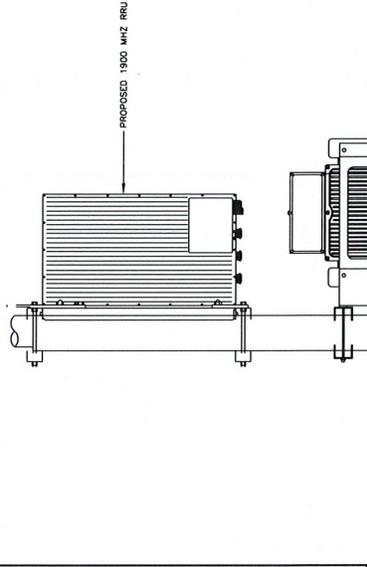
800 MHz RRU POLE MOUNT INSTALLATION DETAIL NO SCALE C



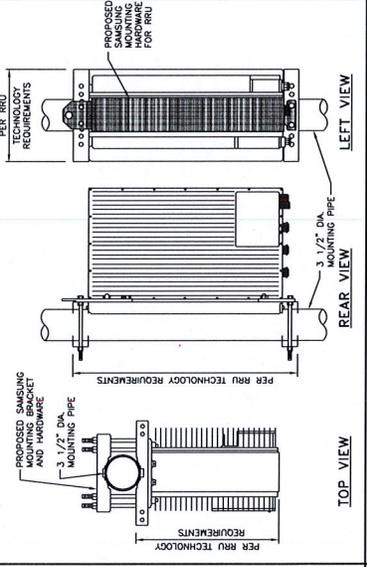
800 MHz RRU BOTTOM VIEW NO SCALE B



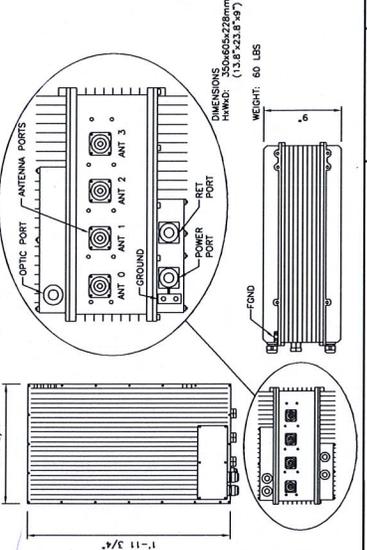
800 MHz RRU MECHANICAL SPECIFICATIONS NO SCALE A



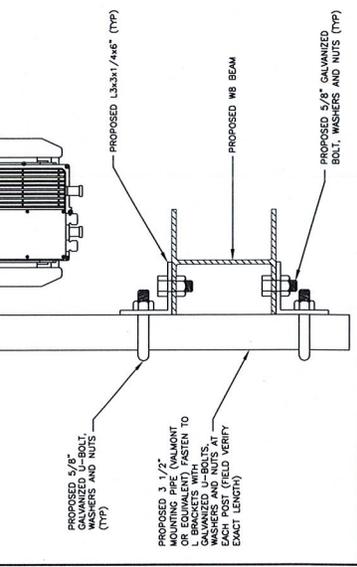
1900 MHz RRU POLE MOUNT INSTALLATION DETAIL NO SCALE E



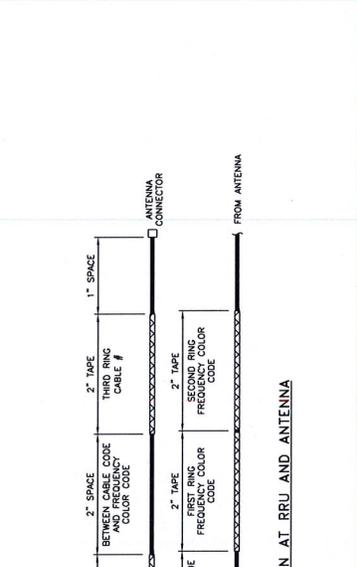
1900 MHz RRU MECHANICAL SPECIFICATIONS NO SCALE D



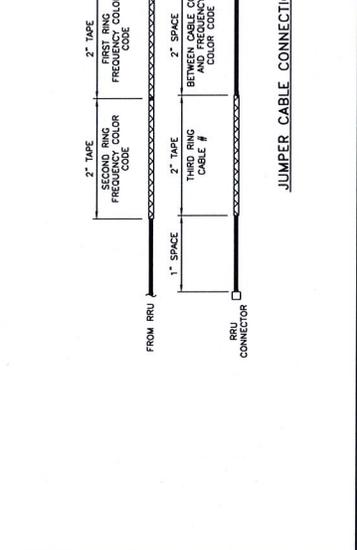
1900 MHz RRU MECHANICAL SPECIFICATIONS NO SCALE D



JUMPER CABLE CONNECTION AT RRU AND ANTENNA NO SCALE F



JUMPER CABLE CONNECTION AT RRU AND ANTENNA NO SCALE F



JUMPER CABLE CONNECTION AT RRU AND ANTENNA NO SCALE F



PROJECT NO: 13.01593
 DRAWN BY: JMM
 CHECKED BY: JMO

REV	DATE	DESCRIPTION
1	06/16/14	REVISED PER CITY
2	07/29/14	ISSUED FOR CONSTRUCTION
3	07/29/14	REVISE TOWER/COMP. LOCATION
4	07/29/14	REVISE TOWER/COMP. LOCATION
5	10/15/13	ISSUED FOR REVIEW

THE ABOVE DRAWING IS THE CORRECT RECORD DRAWING. I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, AND CONTRACT DOCUMENTS COMPLY WITH ALL CITY, STATE, FEDERAL, AND PROFESSIONAL ENGINEERING REQUIREMENTS AND THAT I AM A duly LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 DATE: 09-15-14 UIC: 45528
 PER: P. A. DAVIS JR.

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MSO3NP156
 DULUTH CHESTER PARK
 SKI JUMP RELO
 1805 EAST SKYLINE PKWY
 DULUTH, MN 55805

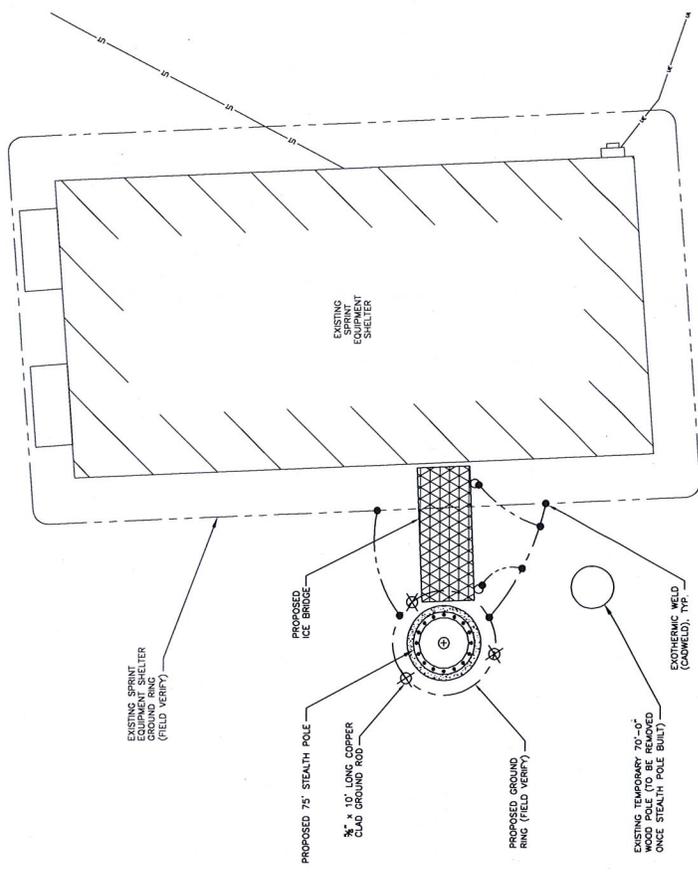
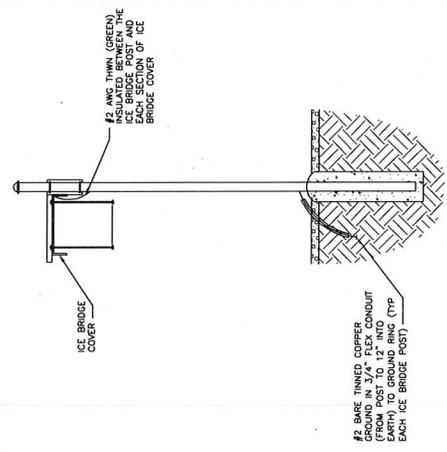
SHEET TITLE
 GROUNDING PLAN & NOTES

SHEET NUMBER
 G-1

GROUNDING NOTES

- CONTRACTOR SHALL COORDINATE INSTALLATION OF GROUND RODS AND GROUND RING WITH FOUNDATION AND UNDERGROUND CONDUIT INSTALLATION.
- CONTRACTOR SHALL HAND DIG AND LOCATE TOWER GROUND RING.
- CONTRACTOR SHALL BOND NEW SPRINT GROUND RING TO TOWER GROUND RING IN TWO PLACES.
- CONTRACTOR SHALL MOUNT MASTER ISOLATED GROUND BAR (MIGB) TO FRAME OF EQUIPMENT PLATFORM CHANNEL. NEAR (2) ICE BRIDGE/CABLE TRAY CONNECTION. ROUTE #2 AWG BOW FROM GROUND RING TO MIGB.
- CONTRACTOR SHALL MOUNT COAX ISOLATED GROUND BAR (CIGB) ON THE TOWER STRUCTURE NEAR GRADE LEVEL AND NEAR COAX ANTENNA CABLES. SEE CIGB DIAGRAM FOR ADDITIONAL COAX ISOLATED GROUND BARS AT ANTENNA LEVEL TO BE MOUNTED BY THE CONTRACTOR.
- GROUND SERVICE DISCONNECTING MEANS PER NEC.
- GROUND EQUIPMENT ON PLATFORM PER SPRINT AND MANUFACTURER'S RECOMMENDATIONS.
- COAX GROUND CONNECTION AT TOWER BASE TO BE MADE ON VERTICAL PORTION OF THE CABLE ABOVE THE 90° BEND TO THE ICE BRIDGE/CABLE TRAY.
- COAX GROUND CONNECTION AT TOWER BASE TO BE MADE ON VERTICAL PORTION OF THE CABLE ABOVE THE 90° BEND TO THE ICE BRIDGE/CABLE TRAY.
- ALL GROUND WIRES SHALL BE STRAIGHT, DOWNWARD BATH TO GROUND, WITH GRADUAL BENDS TO CHANGE DIRECTION, IF NECESSARY. GROUND WIRES SHALL NOT BE LOOPED OR SHARPLY BENT.
- REMOVES SHALL NOT BE BACKFILLED UNTIL ALL SPECIFIED TESTS HAVE BEEN PERFORMED AND UNTIL THE GROUNDING SYSTEM CONFORMS TO THE REQUIREMENTS OF THE DRAWINGS AND SPRINT SPECIFICATIONS.
- SPACING BETWEEN GROUND RODS SHALL BE A MAXIMUM OF 10' ON CENTER.
- WELD GROUND TO FOUR CORNERS AT EQUIPMENT PLATFORM.
- THE CONTRACTOR SHALL VERIFY THAT THE SYSTEM IS EFFECTIVELY GROUNDED, MEETS NEC ARTICLE 250 REQUIREMENTS, IS ACCEPTABLE TO THE LOCAL UTILITY AND THE LOCAL AUTHORITY HAVING JURISDICTION AND MEETS SPRINT ELECTRICAL AND GROUNDING SPECIFICATIONS.
- ALL EXTERIOR (OUTDOOR) AND UNDERGROUND (BELOW GRADE) CONNECTIONS SHALL BE IN ACCORDANCE WITH SPRINT ELECTRICAL AND GROUNDING SPECIFICATIONS.
- ALL INTERIOR GROUNDING AND BONDING CONNECTIONS (WITHIN BUILDINGS) SHALL BE IN ACCORDANCE WITH SPRINT ELECTRICAL AND GROUNDING SPECIFICATIONS.
- REFER TO DRAWINGS FOR GROUND SYSTEM REQUIREMENTS, WHERE SHOWN ON DRAWINGS, CABLE SHALL BE AS FOLLOWS:
 a. SOLID OUTDOOR GROUND RING, ALL EQUIPMENT ON POLES, TOWERS, CABLE TRAY: #2 SOLID TINNED (BARE)
 b. FENCE GROUNDING CONNECTIONS: #2 SOLID TINNED (BARE)
 c. FENCE GATE JUMPERS: #1/0 WELDING CABLE

GROUNDING NOTES



GROUNDING PLAN

SCALE: 1/2"=1'-0"

ICE BRIDGE GROUNDING

NO SCALE



PROJECT NO:	13.01953
DRAWN BY:	JMA
CHECKED BY:	LUD

REV	DATE	DESCRIPTION
3	06/15/14	REVISED PER CPT
2	07/17/14	REVISED FOR INTERFERENCE
1	07/08/14	REVISED FOR CONDUIT LOCATIONS
0	07/02/14	REVISED FOR CONDUIT LOCATIONS
A	10/15/13	ISSUED FOR REVIEW

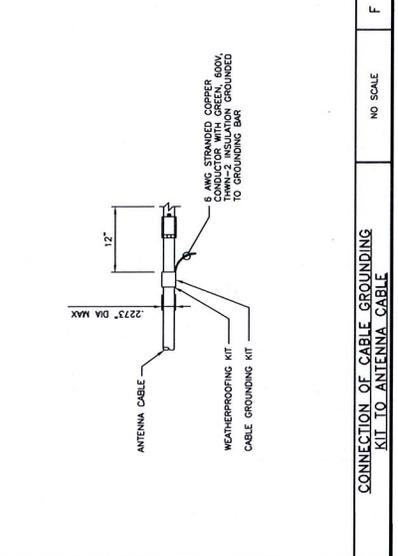
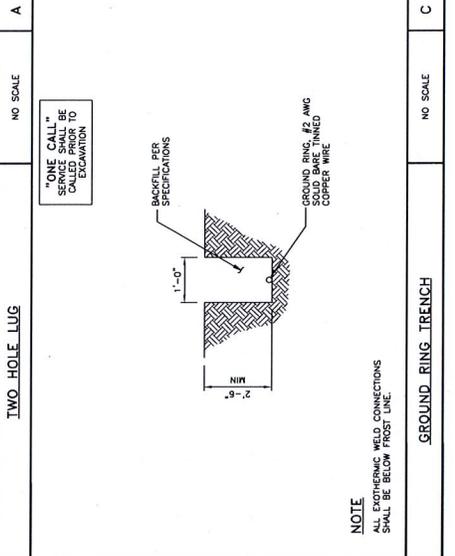
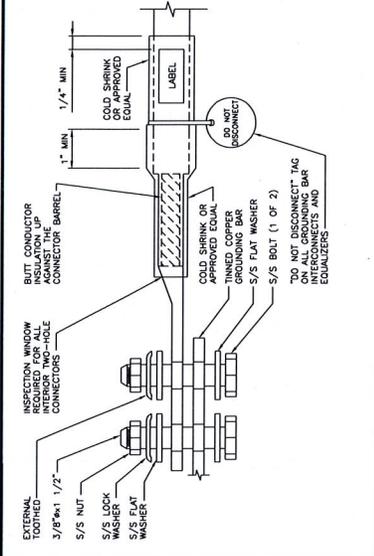
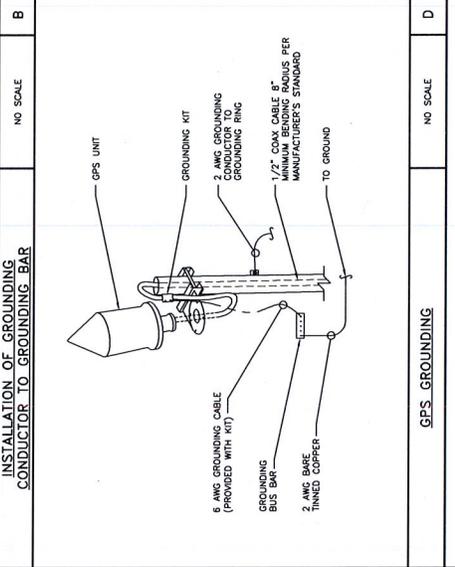
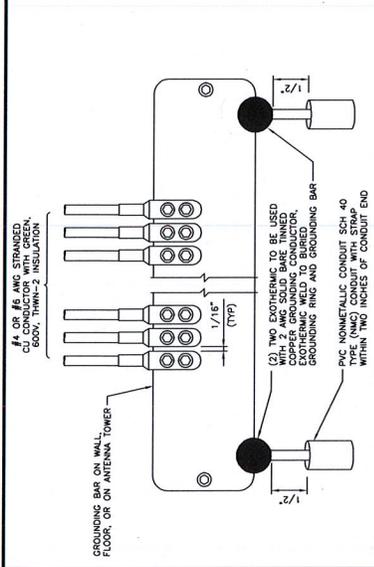
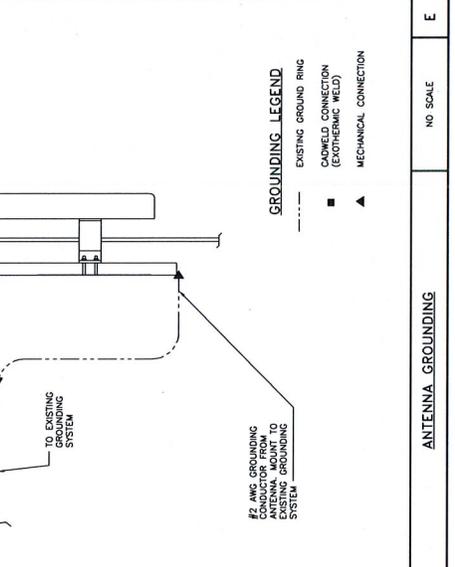
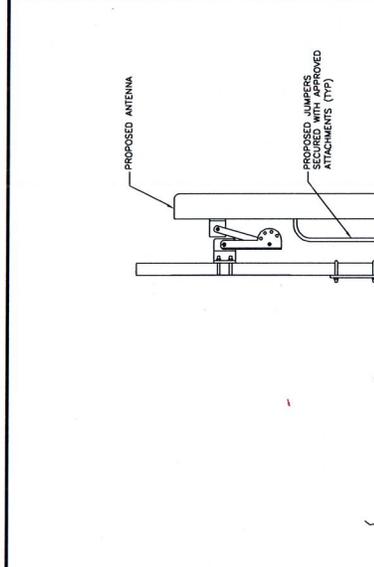
THE SHEET, DRAWING, OR THE CORRECT RECORD DOCUMENT, NOT THE ORIGINAL DISK/DRAWING, IS THE AUTHORITY FOR THE PROJECT. ANY CHANGES TO THE PROJECT SHALL BE MADE BY THE PROJECT PROFESSIONAL ENGINEER UNDER THE JURY OF THE STATE OF MINNESOTA.

DATE: 09-15-14 LEC: W-46528
 DRAWN BY: *Ferry A. Davis Jr.*
 PROJECT: PERRY A. DAVIS JR.

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

MS03NP156
 DULUTH CHESTER PARK
 SKI JUMP RELO
 1805 EAST SKYLINE PKWY
 DULUTH, MN 55805

SHEET TITLE
GROUNDING DETAILS
 SHEET NUMBER
G-2



A	B	C	D	E	F	G	H
NO SCALE	NO SCALE	NO SCALE	NO SCALE	NO SCALE	NO SCALE	NO SCALE	NO SCALE
TWO HOLE LUG		GPS GROUNDING		ANTENNA GROUNDING		GROUND ROD	
CONNECTION OF CABLE GROUNDING KIT TO ANTENNA CABLE		C-TAP CONNECTION		INSTALLATION OF GROUNDING CONDUCTOR TO GROUNDING BAR		GROUNDING DETAILS	

Sprint @ Chester Park – Existing temp location



Photo 1 – Standing at Chester Park Dr/East Skyline Pkwy looking West (tower cannot be seen)

Photo 2 - Standing at East Skyline Pkwy/Chester Pkwy looking NW (tower cannot be seen)

Photo 3 – Standing at playground looking South (tower cannot be seen)

Photo 4 – Standing at main bldg at base of hill looking South (tower cannot be seen)

Photo 5 – Standing at Kenwood Ave, just North of Hovland Lane looking East (tower cannot be seen)

Photo 6 – Standing on West side of Park looking East (tower cannot be seen)

Photo 7 – Standing near East side of ski hill looking East (tower cannot be seen)

Photo 8 – Standing on trail heading East, looking East (tower can barely be seen thru trees, see arrow on photo)

Photo 9 – Standing approx 30ft from tower, showing existing shelter that has been there since 2000 and 70ft temp wood pole that was put up in August 2014



Photo 1 – Standing at Chester Park Dr/East Skyline Pkwy looking West (tower cannot be seen)



Photo 2 - Standing at East Skyline Pkwy/Chester Pkwy looking NW (tower cannot be seen)



Photo 3 – Standing at playground looking South (tower cannot be seen)



Photo 4 – Standing at main bldg at base of hill looking South (tower cannot be seen)



Photo 5 – Standing at Kenwood Ave, just North of Hovland Lane looking East (tower cannot be seen)



Photo 6 – Standing on West side of Park looking East (tower cannot be seen)



Photo 7 – Standing near East side of ski hill looking East (tower cannot be seen)



Photo 8 – Standing on trail heading East, looking East (tower can barely be seen thru trees, see arrow on photo)

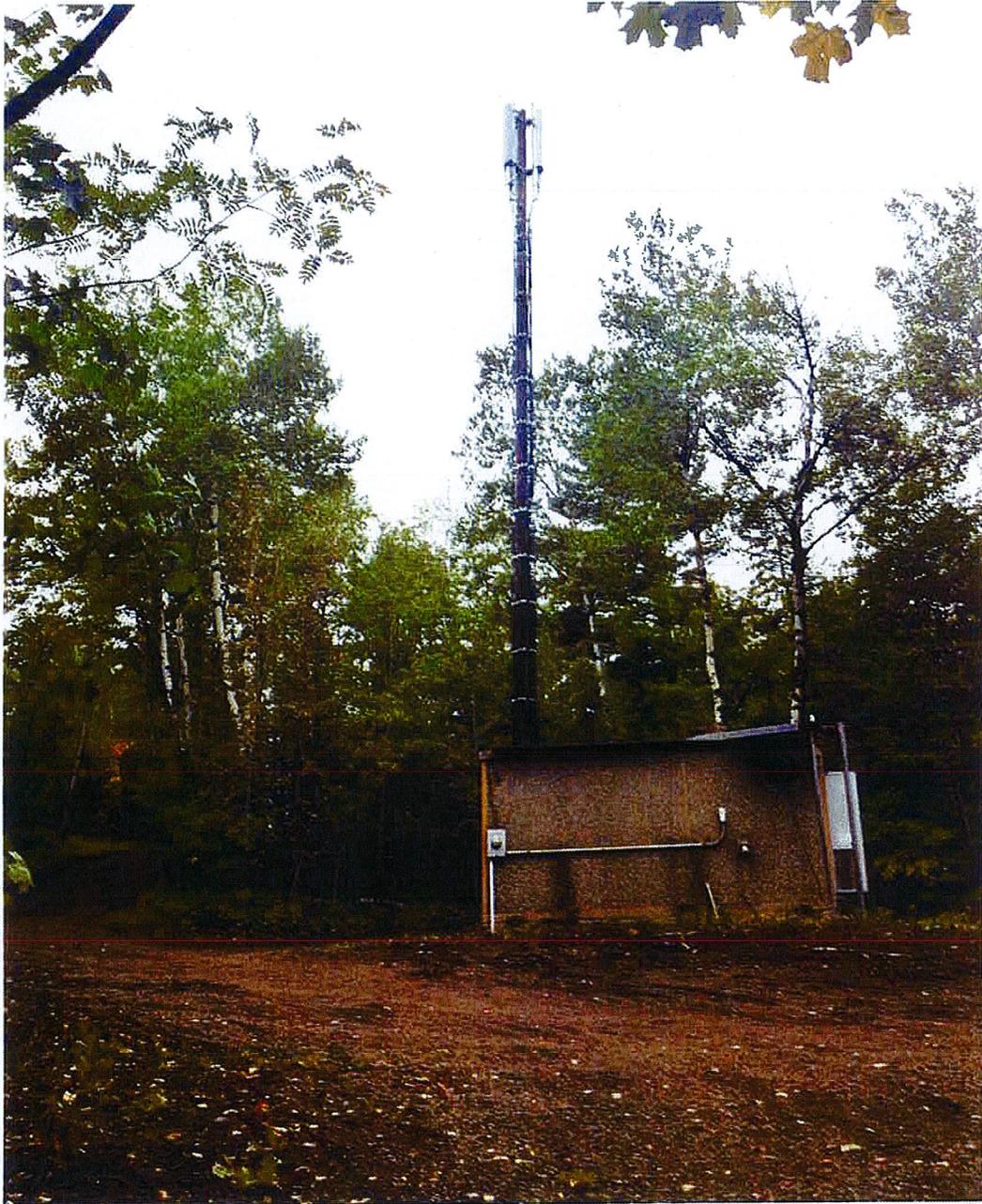


Photo 9 – Standing approx 30ft from tower, showing existing shelter that has been there since 2000 and 70ft temp wood pole that was put up in August 2014

FCC/LSGAC

Local Official's Guide to RF

**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: SPRINT PCS
2. Facility Operator's Mailing Address: 6391 SPRINT PLAZA OVERLAND PARK KS 66251
3. Facility Operator's Contact Name/Title: JASON HALL PROJECT MGR
4. Facility Operator's Office Telephone: 763 315 5859
5. Facility Operator's Fax: 763 315 5860
6. Facility Name: DULUTH CHESTER PARK BOWL SKI JUMP REG MS25 XC156
7. Facility Address: 1305 EAST SKYLINE PARKWAY
8. Facility City/Community: DULUTH
9. Facility State and Zip Code: MN 55805
10. Latitude: 46° 48' 41.30 N
11. Longitude: 92° 05' 42.95 W

continue
→

Optional Local Government Checklist (page 2)

EVALUATION OF CATEGORICAL EXCLUSION

12. Licensed Radio Service (see attached Table 1): CL - CELLULAR BLOCK A

13. Structure Type (free-standing or building/roof-mounted): FREE STANDING

14. Antenna Type [omnidirectional or directional (includes sectored)]: DIRECTIONAL 0-120-240

15. Height above ground of the lowest point of the antenna (in meters): 18.75

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 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"



April 23, 1996

FEDERAL COMMUNICATIONS COMMISSION

FACT SHEET

Information provided by the Wireless Telecommunications Bureau

NEW NATIONAL WIRELESS TOWER SITING POLICIES

The Telecommunications Act of 1996 contains important provisions concerning the placement of towers and other facilities for use in providing personal wireless services. Most state and local communities have worked closely with cellular and other wireless service providers on such placement plans, but this new law establishes new responsibilities for communities and for the Federal Communications Commission (FCC). The rapid expansion in the wireless industry makes these issues even more important.

This fact sheet is intended to explain the new provisions and to help state and local governments as they deal with the complex issues of facilities siting in their local communities. At the end of this fact sheet, you will find names of contacts for additional information about this area and other issues before the FCC.

Section 704 of the Telecommunications Act of 1996 (the "1996 Act") governs federal, state and local government oversight of siting of "personal wireless service" facilities. The 1996 Act establishes a comprehensive framework for the exercise of jurisdiction by state and local zoning authorities over the construction, modification and placement of facilities such as towers for cellular, personal communications service (PCS), and specialized mobile radio (SMR) transmitters:

- The new law preserves local zoning authority, but clarifies when the exercise of local zoning authority may be preempted by the FCC.
- Section 704 prohibits any action that would discriminate between different providers of personal wireless services, such as cellular, wide-area SMR and broadband PCS. It also prohibits any action that would ban altogether the construction, modification or placement of these kinds of facilities in a particular area.
- The law also specifies procedures which must be followed for acting on a request to place these kinds of facilities, and provides for review in the courts or the FCC of any decision by a zoning authority that is inconsistent with Section 704.

- Finally, Section 704 requires the federal government to take steps to help licensees in spectrum-based services, such as PCS and cellular, get access to preferred sites for their facilities. Federal agencies and departments will work directly with licensees to make federal property available for this purpose, and the FCC is directed to work with the states to find ways for states to accommodate licensees who wish to erect towers on state property, or use state easements and rights-of-way.

The attachments to this fact sheet seek to provide information concerning tower siting for personal wireless communications services. They include a summary of the provisions of Section 704 of the 1996 Act, the actual text of Section 704, and a technical information summary that describes the cellular, wide-area SMR and broadband PCS technologies that underlie the majority of requests for new tower sites.

Questions about the Telecommunications Act of 1996 generally may be addressed to Sheryl Wilkerson in the FCC's Office of Legislative and Intergovernmental Affairs, 202-418-1902 (e-mail: swilkers@fcc.gov). Questions about tower siting, licensing issues or technical matters may be addressed to Steve Markendorff, Deputy Chief, Commercial Wireless Division in the Wireless Telecommunications Bureau, 202-418-0620, (e-mail: smarkend@fcc.gov).

This Fact Sheet is available on our fax-on-demand system. The telephone number for fax-on demand is 202-418-2830. The Fact Sheet may also be found on the World Wide Web at <http://www.fcc.gov/wtb/wirehome.html>.

SUMMARY OF SECTION 704 OF THE TELECOMMUNICATIONS ACT OF 1996

The following is a summary of key provisions. The text of Section 704 is reproduced in its entirety as an attachment to this summary.

1. Local Zoning Authority Preserved

Section 704(a) of the 1996 Act amends Section 332(c) of the Communications Act ("Mobile Services") by adding a new paragraph (7). It preserves the authority of state and local governments over decisions regarding the placement, construction, and modification of personal wireless service facilities, except as provided in the new paragraph (7).

2. Exceptions

a. States and Localities May Not Take Discriminatory or Prohibiting Actions

Section 704(a) of the 1996 Act states that the regulation of the placement, construction, and modification of personal wireless service facilities by any State or local government or instrumentality thereof shall not unreasonably discriminate among providers of functionally equivalent services and shall not prohibit or have the effect of prohibiting the provision of personal wireless services. 47 U.S.C. §332(c)(7)(B)(i).

Review: Any person that is adversely affected by a state or local government's action or failure to act that is inconsistent with Section 332(c)(7) may seek expedited review in the courts. 47 U.S.C. §332(c)(7)(B)(v).

b. Procedures for Ruling on Requests to Place, Construct or Modify Personal Wireless Service Facilities

Section 704(a) also requires a State or local government to act upon a request for authorization to place, construct, or modify personal wireless service facilities within a reasonable time. Any decision to deny a request must be made in writing and be supported by substantial evidence contained in a written record. 47 U.S.C. §332(c)(7)(B)(ii), (iii).

c. Regulations Based On Environmental Effects of RF Emissions Preempted

Section 704(a) of the 1996 Act expressly preempts state and local government regulation of the placement, construction, and modification of personal wireless service facilities on the basis of the environmental effects of radio frequency emissions to the extent that such facilities comply with the FCC's regulations concerning such emissions. 47 U.S.C. §332(c)(7)(B)(iv).

Review: Parties may seek relief from the FCC if they are adversely affected by a state or local government's final action or failure to act that is inconsistent with this provision. 47 U.S.C. § 332(c)(7)(B)(v).

3. Federal Guidelines Concerning RF Emissions

Section 704(b) requires the FCC to prescribe and make effective new rules regarding the environmental effects of radio frequency emissions, which are under consideration in ET Docket 93-62, within 180 days of enactment of the 1996 Act.

NOTE: The pendency of this proceeding before the FCC does not affect the rules which currently are in effect governing the environmental effects of radio frequency emissions. Section 704(b) gives preemptive effect to these existing rules. See related attachments to the Fact Sheet.

4. Use of Federal or State Government Property

a. Federal Property

Section 704(c) of the 1996 Act requires the President (or his designee) to prescribe procedures by which the federal government may make available on a fair, reasonable and nondiscriminatory basis, property, rights-of-way and easements under their control, for the placement of new spectrum-based telecommunications services.

b. State Property

With respect to facilities siting on state property, Section 704(c) of the 1996 Act requires the FCC to provide technical support to States to encourage them to make property, rights-of-way and easements under their jurisdiction available for the placement of new spectrum-based telecommunications services.

NOTE: Information concerning technical support for tower siting which the FCC is making available to state and local governments is attached to the Fact Sheet.

5. Definitions

"Personal wireless services" include commercial mobile services, unlicensed wireless services, and common carrier wireless exchange access services. 47 U.S.C. §332(c)(7)(C)(i).

"Commercial mobile services" are defined in Section 332 of the Communications Act and the FCC's rules, and include cellular telephone services regulated under Part 22 of the FCC's rules, SMR services regulated under Part 90 of the FCC's rules, and PCS regulated under Part 24 of the FCC's rules. 47 C.F.R. §20.9.

"Unlicensed wireless services" are defined as the offering of telecommunications services using duly authorized devices which do not require individual licenses; direct-to-home satellite services are excluded from this definition. 47 U.S.C. §332(c)(7)(C)(iii).

COMPLETE TEXT OF SEC. 704 OF THE TELECOMMUNICATIONS ACT OF 1996

SEC. 704. FACILITIES SITING; RADIO FREQUENCY EMISSION STANDARDS.

(a) NATIONAL WIRELESS TELECOMMUNICATIONS SITING POLICY- Section 332(c) (47 U.S.C. 332(c)) is amended by adding at the end the following new paragraph:

(7) PRESERVATION OF LOCAL ZONING AUTHORITY-

(A) GENERAL AUTHORITY- Except as provided in this paragraph, nothing in this Act shall limit or affect the authority of a State or local government or instrumentality thereof over decisions regarding the placement, construction, and modification of personal wireless service facilities.

(B) LIMITATIONS-

(i) The regulation of the placement, construction, and modification of personal wireless service facilities by any State or local government or instrumentality thereof--

(I) shall not unreasonably discriminate among providers of functionally equivalent services; and

(II) shall not prohibit or have the effect of prohibiting the provision of personal wireless services.

(ii) A State or local government or instrumentality thereof shall act on any request for authorization to place, construct, or modify personal wireless service facilities within a reasonable period of time after the request is duly filed with such government or instrumentality, taking into account the nature and scope of such request.

(iii) Any decision by a State or local government or place,

construct, or modify personal wireless service facilities shall be in writing and supported by substantial evidence contained in a written record.

(iv) No State or local government or instrumentality thereof may regulate the placement, construction, and modification of personal wireless service facilities on the basis of the environmental effects of radio frequency emissions to the extent that such facilities comply with the Commission's regulations concerning such emissions.

(v) Any person adversely affected by any final action or failure to act by a State or local government or any instrumentality thereof that is inconsistent with this subparagraph may, within 30 days after such action or failure to act, commence an action in any

court of competent jurisdiction. The court shall hear and decide such action on an expedited basis. Any person adversely affected by an act or failure to act by a State or local government or any instrumentality thereof that is inconsistent with clause (iv) may petition the Commission for relief.

(C) DEFINITIONS- For purposes of this paragraph--

(i) the term 'personal wireless services' means commercial mobile services, unlicensed wireless services, and common carrier wireless exchange access services;

(ii) the term 'personal wireless service facilities' means facilities for the provision of personal wireless services; and

(iii) the term 'unlicensed wireless service' means the offering of telecommunications services using duly authorized devices which do not require individual licenses, but does not mean the provision of direct-to-home satellite services (as defined in section 303(v)).'

(b) RADIO FREQUENCY EMISSIONS- Within 180 days after the enactment of this Act, the Commission shall complete action in ET Docket 93-62 to prescribe and make effective rules regarding the environmental effects of radio frequency emissions.

(c) AVAILABILITY OF PROPERTY- Within 180 days of the enactment of this Act, the President or his designee shall prescribe procedures by which Federal departments and agencies may make available on a fair, nondiscriminatory basis, property, rights-of-way, and easements under their control for the placement of new telecommunications services that are dependent, in whole or in part, upon the utilization of Federal spectrum rights for the transmission or reception of such services. These procedures may establish a presumption that requests for the use of property, rights-of-way, and easements by duly authorized providers should be granted absent unavoidable direct conflict with the department or agency's mission, or the current or planned use of the property, rights-of-way, and easements in question. Reasonable fees may be charged to providers of such telecommunications services for use of property, rights-of-way, and easements. The Commission shall provide technical support to States to encourage them to make property, rights-of-way, and easements under their jurisdiction available for such purposes.

TECHNICAL INFORMATION CONCERNING CELLULAR, SPECIALIZED MOBILE RADIO AND PERSONAL COMMUNICATIONS SERVICES

April 1996

Cellular Information

The FCC established rules and procedures for licensing cellular systems in the United States and its Possessions and Territories. These rules designated 306 Metropolitan Statistical Areas and 428 Rural Service Areas for a total of 734 cellular markets and spectrum was allocated to license 2 systems in each market. Cellular is allocated spectrum in the 824-849 and 869-894 MHz ranges. Cellular licensees are generally required to license only the tower locations that make up their outer service contour. Licensees desiring to add or modify any tower locations that are within an already approved and licensed service area do not have to submit an application for that location to be added to their cellular license, although they may need FCC approval if the antenna would constitute a major environmental action (See question 2, below) or would exceed the criteria specified in Part 17 of the FCC's Rules ("Construction, Marking and Lighting of Antenna Structures"). Part 17 includes criteria for determining when construction or placement of a tower would require prior notification to the Federal Aviation Administration (FAA). (See question 3, below.)

A cellular system operates by dividing a large geographical service area into cells and assigning the same frequencies to multiple, non-adjacent cells. This is known in the industry as frequency reuse. As a subscriber travels across the service area the call is transferred (handed-off) from one cell to another without noticeable interruption. All the cells in a cellular system are connected to a Mobile Telephone Switching Office (MTSO) by landline or microwave links. The MTSO controls the switching between the Public Switched Telephone Network (PSTN) and the cell site for all wireline-to-mobile and mobile-to-wireline calls.

Specialized Mobile Radio (SMR) Information

Specialized Mobile Radio (SMR) service licensees provide land mobile communications on a commercial (*i.e.*, for profit) or private basis. A traditional SMR system consists of one or more base station transmitters, one or more antennas and end user radio equipment which often consists of a mobile radio unit either provided by the end user or obtained from the SMR operator. The base station receives either telephone transmissions from end users or low power signals from end user mobile radios.

SMR systems operate in two distinct frequency ranges: 806-821/851-866 MHz (800 MHz) and 896-901/935-940 MHz (900 MHz). 800 MHz SMR services have been licensed by the FCC on a site-by-site basis, so that the SMR provider must approach the FCC and receive a license for each and every tower/base site. In the future the FCC will license this band on a wide-area market approach. 900 MHz SMR was originally licensed in 46 Designated Filing Areas (DFAs) comprised of only the top 50 markets in the country. The Commission is in the process of auctioning the remainder of the United States and its Possessions and Territories in the Rand McNally defined 51 Major Trading Areas.

PCS Information

Broadband PCS systems are very similar to the cellular systems but operate in a higher frequency band, in the 1850-1990 MHz range. One other difference is that the FCC used different market areas for licensing purposes. The FCC used the Rand McNally definitions for 51 Major Trading Areas (MTAs) and 493 Basic Trading Areas (BTAs). PCS was allocated spectrum for six Broadband PCS systems and 26 Narrowband systems. The six Broadband PCS systems will be licensed as follows: two Broadband PCS licenses will be issued for each of the 51 MTAs and four for each of the 493 BTAs. The 26 Narrowband systems will be licensed as follows: eleven Narrowband PCS licenses will be issued for nationwide systems, six for each of five regional areas, seven for each of the 51 MTAs and two for each of the 493 BTAs.

PCS licensees are issued a blanket license for their entire market area and are not required to submit applications to license individual cell sites unless construction of the facility would be a major environmental action or would require FAA notification. Major environmental actions are defined by the National Environmental Policy Act of 1969 that is discussed in question 2, below. Therefore, the FCC has no technical information on file concerning PCS base stations.

Frequently asked questions concerning tower siting for personal wireless services.

1. Do local zoning authorities have any authority to deny a request for tower siting?

Answer: Yes. The Telecommunications Act of 1996 specifically leaves in place the authority that local zoning authorities have over the placement of personal wireless facilities. It does prohibit the denial of facilities siting based on RF emissions if the licensee has complied with the FCC's regulations concerning RF emissions. It also requires that denials be based on a reasoned approach, and prohibits discrimination and outright bans on construction, placement and modification of personal wireless facilities.

2. What requirements do personal wireless communications licensees have to determine whether a site is in a flood plain? A historical sites must also comply with the National Environmental Policy Act of 1969 (NEPA), as well as other mandatory federal environmental statutes. The FCC's rules that implement the federal environmental statutory provisions are contained in sections 1.1301-1.1319. The FCC's environmental rules place the responsibility on each applicant to investigate all the potential environmental effects, and disclose any significant effects on the environment in an Environmental Assessment (EA), as outlined in section 1.1311, prior to constructing a tower. The applicant is required to consult section 1.1307 to determine if its proposed antenna structure will fall under any of the listed categories that may significantly affect the environment. If it does, the applicant must provide an EA prior to proceeding with the tower construction and, under section 1.1312, must await FCC approval before commencing any such construction even if FCC approval is not otherwise required for such construction. The FCC places all proposals that may significantly impact the environment on public notice for a period of 30 days, seeking any public comments on the proposed structures.

The categories set forth in section 1.1307 include:

Wilderness Area
Wildlife Preserve
Endangered Species
Historical Site
Indian Religious Site
Flood Plain
Wetlands
High Intensity White Lights in Residential Neighborhoods
Excessive Radiofrequency Radiation Exposure

3. Are there any FCC regulations that govern where towers can or cannot be placed?

Answer: The FCC mandates that personal wireless companies build out their systems so that adequate service is provided to the public. In addition, all antenna structures used for communications must be approved by the FCC in accordance with Part 17 of the FCC Rules. The FCC must determine if there is a reasonable possibility that the structure may constitute a menace to air navigation. The tower height and its proximity to an airport or flight path will be considered when making this determination. If such a determination is made the FCC will specify appropriate painting and lighting requirements. Thus, the FCC does not mandate where towers must be placed, but it may prohibit the placement of a tower in a particular location without adequate lighting and marking.

4. Does the FCC maintain any records on tower sites throughout the United States? How does the public get this information (if any)?

Answer: The FCC maintains a general tower database on the following structures: (1) any towers over 200 feet, (2) any towers over 20 feet on an existing structure (such as a building, water tower, etc.) and (3) towers that are close to airports that may cause potential hazards to air navigation. The FCC's licensing databases contain some base site information for Cellular and SMR systems. The general tower database and the Cellular and SMR data that may be on file with the FCC is available in three places:

(1) Cellular licensing information is available in the Public Reference Room of the Wireless Telecommunications Bureau's Commercial Wireless Division. The Public Reference Room is located on the fifth floor of 2025 M Street, NW, Washington, DC 20554, telephone (202)418-1350. On-line database searches of cellular licensing information along with queries of the FCC's general tower database can also be accomplished at the Public Reference Room.

(2) People who would like to obtain general tower information through an on-line public access database should call or write Interactive Systems, Inc., 1601 North Kent St., Suite 1103, Arlington, VA 22209, telephone 703-812-8270.

(3) The FCC does not duplicate these records, but has contracted with International Transcription Service, Inc. to provide this service. Requests for copies of information should be addressed to International Transcription Service, Inc. (ITS, Inc.), 2100 M St., NW, Suite 140, Washington, DC 20037, telephone 202-857-3800.

5. Why do Cellular and PCS providers require so many tower sites?

Answer: Low powered transmitters are an inherent characteristic of Cellular Radio and Broadband PCS. As these systems mature and more subscribers are added, the effective radiated power of the cell site transmitters is reduced so frequencies can be reused at closer intervals thereby increasing subscriber capacity. There are over 30 million mobile/portable cellular units and more than 22 thousand cell sites operating within the United States and its Possessions and Territories. PCS is just beginning to be offered around the country. Due to the fact that Broadband PCS is located in a higher frequency range, PCS operators will require more tower sites as they build their systems to provide coverage in their service areas as compared to existing Cellular carriers. Therefore, due to the nature of frequency reuse and the consumer demand for services, Cellular and PCS providers must build numerous base sites.

6. Can Cellular, SMR and PCS providers share tower structures?

Answer: Yes, it is technologically possible for these entities to share tower structures. However, there are limits to how many base station transmitters a single tower can hold and different tower structures have different limits. Moreover, these providers are competitors in a more and more competitive marketplace and may not be willing to share tower space with each other. Local zoning authorities may wish to retain a consulting engineer to evaluate the proposals submitted by wireless communications licensees. The consulting engineer may be able to determine if there is some flexibility as to the geographic location of the tower.

7. Is the Federal government helping to find ways to accommodate multiple licensees of personal wireless services?

Answer: Yes. The FCC has designated Steve Markendorff, Chief, Broadband Branch, Commercial Wireless Division, Wireless Telecommunications Bureau, FCC to ask and respond to questions concerning tower siting issues. His telephone number is 202-418-0620. Also, President Clinton issued an Executive Memorandum on August 10, 1995 directing the Administrator of General Services (GSA), in coordination with other Government departments and agencies, to develop procedures to facilitate appropriate access to Federal property for the siting of mobile services antennas. GSA recently released "Government-Wide Procedures for Placing Commercial Antennas," 61 Fed Reg 14,100 (March 29, 1996). For further information contact James Herbert, Office of Property Acquisition and Realty Services, Public Building Service, General Services Administration, 18th & F Streets, NW, Washington, DC 20405, telephone 202-501-0376.

8. Have any studies been completed on potential hazards of locating a tower/base site close to residential communities?

Answer: In connection with its responsibilities under NEPA, the FCC considers the potential effects of radiofrequency (RF) emissions from FCC-regulated transmitters on human health and safety. Since the FCC is not the expert agency in this area, it uses standards and guidelines developed by those with the appropriate expertise. For example, in the absence of a uniform federal standard on RF exposure, the FCC has relied since 1985 on the RF exposure guidelines issued in 1982 by the American National Standards Institute (ANSI C95.1-1982). In 1991, the Institute of Electrical and Electronic Engineers (IEEE) issued guidelines designed to replace the RF ANSI exposure guidelines. These guidelines (ANSI/IEEE C95.1-1992) were adopted by ANSI. The Telecommunications Act of 1996 mandates that the FCC complete its proceeding in ET Docket 93-62, in which it is considering updating the RF exposure guidelines, no later than early August 1996. Copies of this proceeding can be obtained from the International Transcription Service, Inc. (ITS), telephone 202-857-3800. Presently, RF emission requirements are contained in Section 1.1307(b) of the FCC's rules, 47 C.F.R. §1.1307(b), for all services. PCS has service specific RF emission provisions in Section 24.52 of the FCC's rules, 47 C.F.R. § 24.52.

Additional information concerning RF emission hazards can be obtained through a variety of sources:

- (1) Information concerning RF hazards can be obtained on the World Wide Web at <http://www.fcc.gov/oet/faqs>. RF safety questions are answered and further RF documents and information are contained under the Cellular Telephony Section.
- (2) OET Bulletins 56 and 65 concerning effects and potential RF hazards can be requested through the Radiofrequency Safety Program at 202-418-2464. Additionally, any specific questions concerning RF hazards can be answered by contacting the FCC at this phone number.

The FCC maintains a Communications and Crisis Management Center which is staffed 24 hours a day, seven days a week. In the event of an emergency, such as a radiofrequency hazard threatening public safety or health, you may call 202-632-6975. The watch officer who answers at that number can contact our compliance personnel in your area and dispatch them within a matter of hours.



Human Exposure to Radio Frequency Fields: Guidelines for Cellular and PCS Sites

Background

Primary antennas for transmitting wireless telephone service, including cellular and Personal Communications Service (PCS), are usually located outdoors on towers, water tanks and other elevated structures like rooftops and sides of buildings. The combination of antenna towers and associated electronic equipment is referred to as a "cellular or PCS cell site" or "base station." Cellular or PCS cell site towers are typically 50-200 feet high. Antennas are usually arranged in groups of three, with one antenna in each group used to transmit signals to mobile units, and the other two antennas used to receive signals from mobile units.

At a cell site, the total radio frequency (RF) power that can be transmitted from each transmitting antenna depends on the number of radio channels (transmitters) that have been authorized by the Federal Communications Commission (FCC) and the power of each transmitter. Although the FCC permits an effective radiated power (ERP) of up to 500 watts per channel (depending on the tower height), the majority of cellular or PCS cell sites in urban and suburban areas operate at an ERP of 100 watts per channel or less.

An ERP of 100 watts corresponds to an actual radiated power of 5-10 watts, depending on the type of antenna used. In urban areas, cell sites commonly emit an ERP of 10 watts per channel or less. For PCS cell sites, even lower ERPs are typical. As with all forms of electromagnetic energy, the power density from a cellular or PCS transmitter rapidly decreases as distance from the antenna increases.

Consequently, normal ground-level exposure is much less than the exposure that might be encountered if one were very close to the antenna and in its main transmitted beam. Measurements made near typical cellular and PCS cell sites have shown that ground-level power densities are well below the exposure limits recommended by RF/microwave safety standards used by the FCC.

Guidelines

In 1996, the FCC adopted updated guidelines for evaluating human exposure to RF fields from fixed transmitting antennas such as those used for cellular and PCS cell sites. The FCC's guidelines are identical to those recommended by the National Council on Radiation Protection and Measurements (NCRP), a non-profit corporation chartered by Congress to develop information and recommendations concerning radiation protection. The FCC's guidelines also resemble the 1992 guidelines recommended by the Institute of Electrical and Electronics Engineers (IEEE), a non-profit technical and professional engineering society, and endorsed by the American National Standards Institute (ANSI), a nonprofit, privately-funded membership organization that coordinates development of voluntary national standards in the United States.

In the case of cellular and PCS cell site transmitters, the FCC's RF exposure guidelines recommend a maximum permissible exposure level to the general public of approximately 580 microwatts per square centimeter. This limit is many times greater than RF levels typically found near the base of cellular or



PCS cell site towers or in the vicinity of other, lower-powered cell site transmitters. Calculations corresponding to a "worst-case" situation (all transmitters operating simultaneously and continuously at the maximum licensed power) show that, in order to be exposed to RF levels near the FCC's guidelines, an individual would essentially have to remain in the main transmitting beam and within a few feet of the antenna for several minutes or longer. Thus, the possibility that a member of the general public could be exposed to RF levels in excess of the FCC guidelines is extremely remote.

When cellular and PCS antennas are mounted on rooftops, RF emissions could exceed higher than desirable guideline levels on the rooftop itself, even though rooftop antennas usually operate at lower power levels than free-standing power antennas. Such levels might become an issue for maintenance or other personnel working on the rooftop. Exposures exceeding the guidelines levels, however, are only likely to be encountered very close to, and directly in front of, the antennas. In such cases, precautions such as time limits can avoid exposure in excess of the guidelines. Individuals living or working within the building are not at risk.

For More Information

For more information on RF exposure, you can visit the FCC's RF Safety website at www.fcc.gov/encyclopedia/radio-frequency-safety. For information about other communications issues, visit the FCC's Consumer website at www.fcc.gov/consumers, or contact the FCC's Consumer Center by calling 1-888-CALL-FCC (1-888-225-5322) voice or 1-888-TELL-FCC (1-888-835-5322) TTY; faxing 1-866-418-0232; or writing to:

Federal Communications Commission
Consumer and Governmental Affairs Bureau
Consumer Inquiries and Complaints Division
445 12th Street, S.W.
Washington, DC 20554

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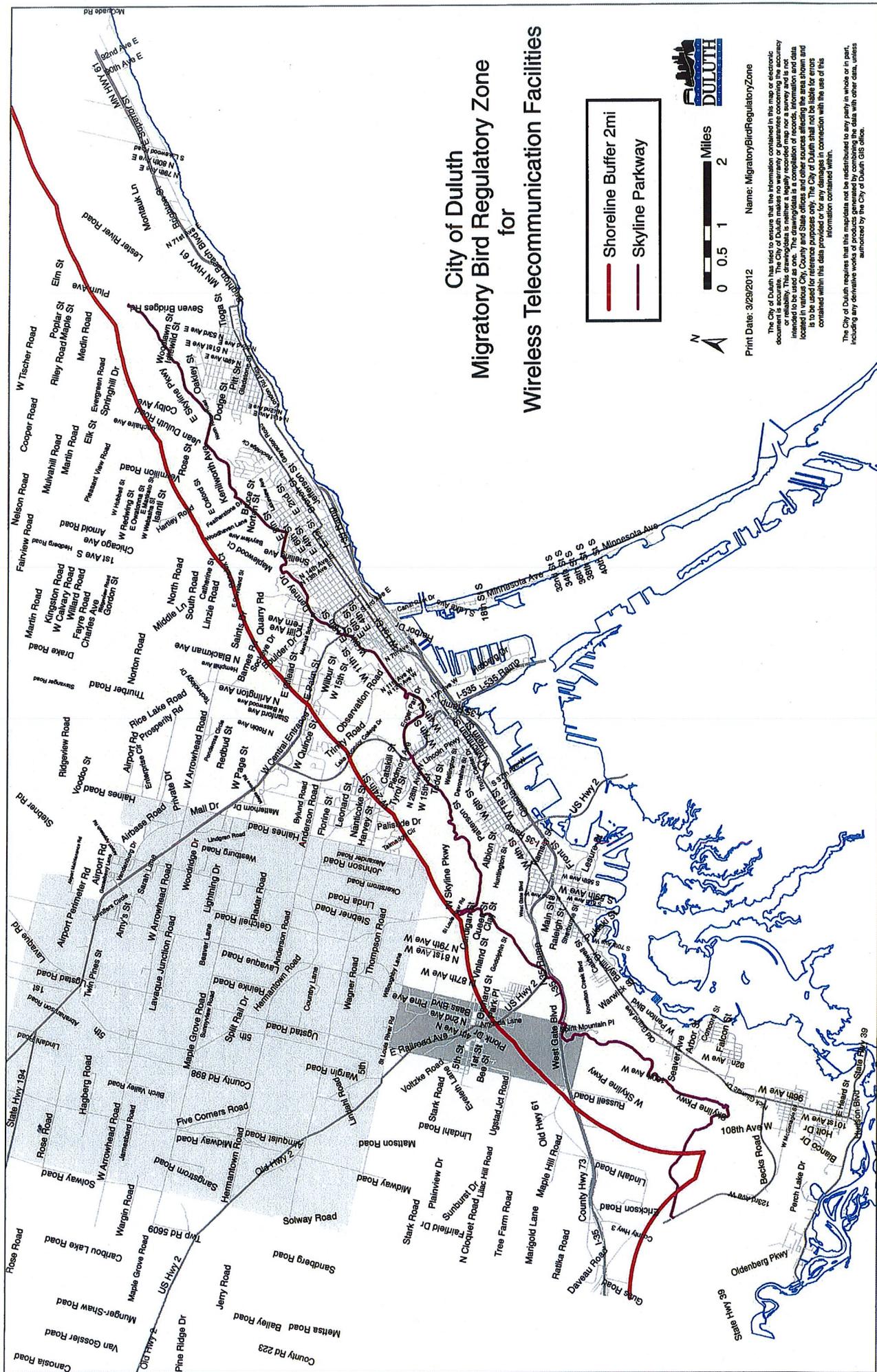
For this or any other consumer publication in an accessible format (electronic ASCII text, Braille, large print or audio), please write or call us at the address or phone number below, or send an email to FCC504@fcc.gov.

This document is for consumer education purposes only and is not intended to affect any proceedings or cases involving this subject matter or related issues.

Last Reviewed 4/4/13



City of Duluth Migratory Bird Regulatory Zone for Wireless Telecommunication Facilities



Print Date: 3/29/2012 Name: MigratoryBirdRegulatoryZone

The City of Duluth has used to ensure that the information contained in this map or electronic document is accurate. The City of Duluth makes no warranty or guarantee concerning the accuracy or completeness of the information shown on this map. The drawing data is a compilation of records, information and data located in various City, County and State offices and other sources affecting the area shown and is to be used for reference purposes only. The City of Duluth shall not be liable for errors contained within this data provided or for any damages in connection with the use of this information contained herein.

The City of Duluth requires that this map/data not be redistributed to any party in whole or in part, including any derivative works or products, without the prior written consent of the City of Duluth. GIS Data.

Steven Robertson

Subject: FW: Thank-you and Munger letter is missing ?...

From: Ann Holtz [mailto:amhduluth@gmail.com]

Sent: Tuesday, September 16, 2014 9:40 AM

To: Steven Robertson

Subject: Re: Thank-you and Munger letter is missing ?...

Steven the following is Mr. John Munger's letter opposing the CP proposed Cell Mono Tower which is missing from the Public Record as you requested:

From: John Munger <munger@loppet.org>

Date: September 9, 2014 4:58:44 PM CDT

To: srobertson@duluthmn.org

Subject: comment on cell phone tower in Chester Park

Dear Mr. Robertson:

I wanted to write to express my dismay at the planned cell phone tower in Chester Park.

I am a past Duluth resident and frequent Duluth visitor. I have two children and love Duluth and Chester Park. I am also the executive director of the Loppet Foundation in Minneapolis - an organization that works with the Minneapolis Park & Recreation Board to encourage year-round outdoor activity - especially among inner-city youth. Our organization has worked with thousands of underserved youth - giving them a passion for year-round outdoor activities like skiing, mountain biking and trail running.

I recently learned of the City's plans to erect a large tower in Chester Park. To me this is not a good idea. Chester Park has inspired generations of Duluth youth to year-round outdoor activity. People go to the park to get away from the constant barrage of video games, email, television, and, indeed, phone calls that inundate us in our daily lives. Kids are constantly receiving the message that technology and gadgets are more important than nature and the outdoors. The result? An obesity epidemic. Hypertension. Diabetes. And long term health problems that affect learning and job readiness and that have huge costs for society.

In that context, planting a cell phone tower right in the middle of Chester Park seems short sighted. I am sure the City stands to gain in the short run. But the cumulative effect of decisions like this far outweighs the meager benefits in the long run.

I would request that you reconsider your plan to allow a private cell phone tower in the middle of this beautiful public space.

Respectfully,

John Munger

Steven Robertson

From: John Pastor <jpastor@d.umn.edu>
Sent: Wednesday, September 10, 2014 8:28 AM
To: Barb Russ; Emily Larson; Howie Hanson; Jay Fosle; Jennifer Julsrud; Joel Sipress; Linda Krug; Sharla Gardner; Zack Filipovich; Steven Robertson; Kathy Bergen; Mary Dragich; Ann Holtz
Subject: Chester Park Cell Phone Tower

Dear Colleagues,

I am a resident whose home is adjacent to Chester Park across Skyline Parkway. I am disturbed about how the whole issue of whether or not to build a new cell phone tower in the park has been handled with little forethought or public involvement. I was not able to make it to the meeting last night, but am writing now to express my concern.

I see no reason to build a new tower site with all its infrastructure in a different location in the park than where the current tower is. I walked over there the other day and was dismayed to see that in the process of taking down the ski jump it seems that a road to the proposed new site has already been bulldozed. Frankly, the place is a muddy mess. It seems as if a decision had already been made behind closed doors and that the public hearings may be a sham. I hope that isn't the case, but that is the impression which is being given by the city.

If a cell tower is to be built in the park (and that has by no means been demonstrated to my satisfaction) then it should be placed in the location of the tower which was at the ski lift. There should also be serious and well-considered restrictions on how the cell tower can be accessed for maintenance.

The park belongs to the people, not to the phone company.

Best regards,

John Pastor

1612 East Skyline Parkway
Duluth MN 55805
218-728-5066 (not a cell phone number)

Steven Robertson

From: Ann Holtz <amhduluth@gmail.com>
Sent: Wednesday, September 10, 2014 10:12 AM
To: Barb Russ; Emily Larson; Howie Hanson; Jay Fosle; Jennifer Julsrud; Joel Sipress; Linda Krug; Sharla Gardner; Zack Filipovich; Steven Robertson; David Montgomery; Don Ness; Kathy Bergen; Judy Gibbs
Subject: HELP! Plea and Position on proposed Cell Mono Tower

Dear Members of City Council, Park Commissioners, Planning Commissioners, and All Concerned:

Please hear the many years of desperation in our pleas to attempt to give you an understanding of the complexities of our reality living in the City of Duluth, how important our beloved Chester Public Park is to us and where we stand with the proposed Cell Mono Tower in Chester Public Park.

As Residents of the City of Duluth, we have had it. We have had it with the City of Duluth being run as if it were a private club that we taxpayers are not included in. This is unacceptable.

As Taxpayers we have had it when The Park Dept. ignores Residents' pleas for help yet holds secret meetings to accommodate special interest groups. There has been no communication from the Park Dept. to Chester Park Residents concerning the proposed Cell Mono Tower and the Special Use Permit. The Park Dept. does not answer questions or show any desire to engage or respond to Residents. We have had it with no notice or barely any notice of important Park meetings. Anything and everything that happens in our Public Chester Park impacts our quality of life in our Chester Park homes. Some examples are: the disruption of overflow traffic from Park special events like the Fall Fest and Summer concerts. The noise disguised as music from summer concerts disrupts our home life from both Chester Park and Bayfront Park. There are times the music is so loud inside our homes we are kept from simply being able to watch TV. And if the noise is so loud one can't watch TV, one can't sleep either. Sleep is a basic Human need, a Human right. We did not have this noise problem when we bought our house in Chester Park. This ongoing disruption is unacceptable.

As Taxpayers we have had it with the City of Duluth, and The Park Dept. We have had it with our neighborhood streets being inadequately plowed and having to walk to work in severely cold temperatures. Cross country ski trails are freshly groomed with our tax dollars before our neighborhood streets are plowed. **This is unacceptable. [The state DNR contribution is a very small percentage.]**

As Taxpayers we have had it with The City and the Park Dept. when the water pressure in Chester Park is so poor that we can not draw a glass of water if the washing machine is running yet the Park Dept. is wasting our hard earned tax dollars on a controversial master plan that we do not want and ignores our beloved Chester Park's basic needs. And proposes snow making with potable water, the same water I need to fill my glass, for cross country skiing [Ski race teams request]. The

City and the Park Dept. could not be more out of touch with residents basic needs and human rights. This is unacceptable.

While some fifty thousand of our hard earned tax dollars are used to groom cross country ski trails annually, we can not get the Park Dept. to adequately mow Chester Public Park trails for foot travel which is the largest user group in Chester Park. This is unacceptable.

We Taxpayers have had it in winter when we go to our beloved Park to simply walk, and renew and wear off the very stress and pressure we are addressing in this letter and, we are told "No you can not walk on the trails you have paid to be groomed". We Taxpayers have had it when our own City Council proposes an ordinance to target Duluth's finest citizens with large fees for walking in the snow in their Public Park that they have paid out of their own pockets to be groomed. This is unacceptable.

We Residents have had it with the Phone Co. destroying our Public Chester Park. There is no appropriate Chester Park access to accommodate the proposed Cell Mono Tower site or for the existing Phone Company site. Every time the Phone Company enters Chester Park they damage Park land, and Park trails which the City and the Park Dept. then neglect. We do not want the phone company or the proposed Cell Monotower trespassing in our Public Park. We do not want one more day, one more trail or park land damaged, one more phone company tire rut left in our sacred Chester Park ground, damage then keeps taxpayers from using large areas of our park because of continuing longstanding and ongoing damage to park land, park trails, and the park access road by both the phone company and the City and Park Departments neglect of. The Park Dept. refuses to address Chester Public Park runoff from converging, inadequately maintained trails that washed out Chester Parkway and contributed to the flooding of our Belmont Neighborhood homes in the 2012 flood. This private property damage and neglect are unacceptable.

We residents are sick to death of dealing with the problems the City and the phone company, and the Park Dept. create. **Everything that happens in our Public Park impacts us in our homes.** When the Park Dept and the Phone Co. simply leave the Chester Parkway gate unsecured which allows people to drive into the Park to steal firewood which then becomes backyard bonfires that pollute and risk our neighborhoods, and bring park neglect right to our homes. Those fires made with stolen wood from an unlocked Park gate keep us from even being able to take our dog out into our yard to relieve itself because of the toxic smoke. There is still more complexity from the Park Dept's lack of maintenance and responsibility over this one simple issue. The Chester Parkway gate is left unsecured more than it is secured and the people who steal park wood now spot the neighbors wood pile and now steal wood from the neighbors wood pile. What I am saying is that when the City and the Park Dept. fail to secure a gate that neglect then causes theft from the park that directly leads to theft from a private residence and also contributes to problematic bonfires, all of which impact residents in their homes. We residents are also left to struggle with the gate, to close it and wrap the heavy chain around it in an attempt to create the appearance of security. Everything that happens in our Public Park impacts us in our homes on a daily basis. In the end it is always the taxpayer who is left alone to shovel up the muck from the ridiculous agendas the City, and the Park Dept. impose on residents. This is unacceptable.

We Taxpayers have had it with these ridiculous problems and issues the City and the Park Dept. create that threaten our Public Chester Park and fill up our days. Then when problems are neglected and left to repeat, the City's neglect now wastes our time and our lives and our tax dollars.

As I write this minute in order to desperately protect and preserve our Public Chester Park, we are living without a much needed appliance and are unable to do what we need to do to take care of ourselves and replace that appliance, because of the time it takes in the present to address these years and backlog of unresolved ongoing problems: Residents doing the actual Park maintenance, letter writing, attending meetings, paying taxes etc.. At the same time, the five college kids in the rental next door are repeatedly urinating and vomiting off their deck, right next to the front of our house. I get to see this alcohol induced spectacular from inside my home. The agency in charge of this rental, Shiprock Management, representative Blake, has accosted me on the phone for reporting problems. To get through this very day we have to choose between urine and vomit or radiation, what is the priority problem of the day? Do we attempt to preserve our beloved Chester Park or our sanity? Everything that happens in our Public Chester Park impacts the quality of our daily lives, in our homes, every minute of every day. **We would be willing to frankly discuss problems and suggest resolutions with any interested Park Commissioner or City Council Member.**

We residents and taxpayers will not accept under any terms the proposed Cell Mono Tower within the Boundaries of Chester Park that can and will have unknown future technology and infrastructure imposed on our fragile Chester Park because of this single decision for The Special Use Permit, along with its requested easement to split Chester Park in two, from Kenwood Ave. to Chester Parkway, and in light of the years of damage the phone company has done to park land, park trails, and the access road which the Park Dept and the City has continually failed to repair and maintain, the violent trespass of said project and phone company inflict on our Public Chester Park and Park Users, we urge that this project and Special Use Permit be denied within the boundaries of Chester Public Park.

These issues and comments are in addition to previously raised concerns and we wish them to be part of the public record.

Thank you for your considerations with such important matters that will gravely impact the future of our beloved Chester Public Park.

Sincerely,

Steve & Ann Holtz
1511 Belmont Rd.
Chester Park
Dulluth MN 55805



Steven Robertson

From: Harney Susan <sboxford@yahoo.com>
Sent: Friday, September 12, 2014 11:46 AM
To: Steven Robertson; Zack Filipovich; Linda Krug; Joel Sipress; Jennifer Julsrud; Howie Hanson; Emily Larson; Barb Russ; Kyle Deming; Jennifer Moses; Sharla Gardner; Jay Fosle
Cc: Don Ness; Kathy Bergen; David Montgomery; eriktorch@gmail.com; eriktorch@gmail.com; jewellf@stlouiscountymn.gov; michael.schraepfer@gmail.com; tom.todobrillante@gmail.com; trailrunners@gmail.com; amanda@accessnorth.net; arthur.johnston@isd709.org; edwinkinghall@gmail.com; ericv@chartermi.net; joelb@superiorchoice.com; johnsonsand@aol.com; JC@lhminsurance.com; tdodge@dsgw.com; boylep@stlouiscountymn.gov
Subject: Proposed Cell Mono Tower in Chester Park.

To All Concerned:

I grew up in this neighborhood and have resided as an adult since 1973. I might have lived near Chester Park longer than many residents and have always used it, as did my parents, siblings, son and grandchildren.

I thank the Planning Commission for tabling the Special Use Permit for a cell phone mono tower in Chester Park, but I was stunned by the Parks Commission's unanimous support of this structure! I expect them to be the guardians/caretakers of our parks. Some vegetation around the base is like putting lipstick on a pig - it's still a pig! Our parks are special and should remain so. Even the temporary site is an aberration and no "mono tower" fits in this small park's setting....ANYWHERE!

A reinforcement of the ski jump with the protective fencing required by a mono tower would have resulted in more acceptance of the status quo of the tower attached to the jump. Many people were blissfully unaware of its presence. The historical significance and beautification of the skyline view of the structure was ignored for some reason.

The City's lack of communication with area residents and City Council is appalling. Councilors were not well informed about the controversial tower. We elect people to do what we believe is right, and yet, the stealth of notification postings has left most area residents in the dark. Perhaps the DNT's article will shed light.

If UMD and St Scholastica need better reception, Sprint can pay them to contain a tower somewhere on their vast properties. The idea of using what is supposed to be a recreational/nature location for such an unattractive commercial purpose isn't fitting for Outside Magazine's best city in which to live.

And, all of this doesn't address the potential safety effects, which is another reason to rethink this.

Sue Harney
1518 E Skyline Pkwy
Duluth MN

Steven Robertson

From: Ann Holtz <amhduluth@gmail.com>
Sent: Friday, September 12, 2014 8:05 AM
To: Steven Robertson
Subject: Fwd: Diligence and Due Process ? And Request.

To: Steven Robertson

Please forward the enclosed e-mail to the Planning Commissioners.
Please make the enclosed e-mail a part of the Public Record.
Please advise us when those two requests have been completed.

Thank-you,
Steve & Ann Holtz
1511 Belmont Rd.
Duluth MN 55805

----- Forwarded message -----

From: Ann Holtz <amhduluth@gmail.com>

Date: Fri, Sep 12, 2014 at 8:01 AM

Subject: Diligence and Due Process ? And Request.

To: Erik Torch <eriktorch@gmail.com>, Frank Jewell <jewelf@stlouiscountymn.gov>, Michael Schraepfer <michael.schraepfer@gmail.com>, Tom Albright <tom.todobrillante@gmail.com>, Andy Holak <trailrunners@gmail.com>, Amanda Crosby <amanda@accessnorth.net>, Art Johnston <arthur.johnston@isd709.org>, Edwin Hall <edwinkinghall@gmail.com>, Emily Larson <elarson@duluthmn.gov>, Eric Viken <ericv@chartermi.net>, Joel Braun <joelb@superiorchoice.com>, John Schmidt <johnsand@aol.com>, Jon Welles <JC@lhminsurance.com>, Patrick Boyle <boylep@stlouiscountymn.gov>, Tiersa Dodge <tdodge@dsgw.com>
Cc: Barb Russ <bruss@duluthmn.gov>, Howie Hanson <hhanson@duluthmn.gov>, Jay Fosle <jfosle@duluthmn.gov>, Jennifer Julsrud <jjulsrud@duluthmn.gov>, Joel Sipress <jsipress@duluthmn.gov>, Linda Krug <lkrug@duluthmn.gov>, Sharla Gardner <sgardner@duluthmn.gov>, Zack Filipovich <zfilipovich@duluthmn.gov>

To The Honorable Duluth Parks and Recreation Commissioners:



On September 10, 2014 Park Commissioners failed to use due process and diligence when Commissioners let The Phone Company and Representatives of the Duluth Planning Commission trick Commissioners into selecting a site within Chester Park for the Proposed Cell Mono Tower. The Duluth Planning Commission made no such request at the September 9, 2014 meeting. Park Commissioners failed both Chester Public Park and Chester Park Residents and Taxpayers. We Residents and Taxpayers will NOT accept the Special Use Permit for the proposed Cell Mono Tower in Chester Park. We Residents and Taxpayers knew nothing about this Special Use Permit and proposed Cell Mono Tower until approximately eleven days before the Planning Commission meeting on September 9, 2014.

We Residents and Taxpayers were at the Duluth Planning Commission Meeting on September 9, 2014 and the Planning Commissioners made NO SUCH REQUEST that the Park Commissioners choose a site within Chester Park for the proposed Cell Mono Tower.

Over the past several years when addressing Chester Park problems with Bergen, Gibbs, and Storm, about the Phone Company we Residents were told that the Phone Company was abandoning the site in Chester Park. The Park Dept. did not in any way inform Residents of Chester Park about the proposed Cell Mono Tower. We are outraged by this negligence and want accountability.

We would like to share our minutes from the Planning Commissioner's Meeting from September 9, 2014 and suggest alternative sites, and make a recommendation.

Synopsis of Attendees' First Hand Account of Planning Commissioners comments:

The Planning Commissioners ran a good, ethically effective meeting with due process and diligence. Planning Commissioners asked relevant, responsible questions.

Why is this Cell Mono Tower project in this final stage and such a mess?

Sharla Gardner spoke saying City Council did not understand what they were approving for the proposed Special Use Permit for the proposed Cell Mono Tower in Chester Park. The Council approved one thing and the Planning Commission turned that approval into something else. Sharla actually used the term "BAIT AND SWITCH".

Planning Commissioners:

No we don't want cell mono tower in Chester Park, but if we deny this permit the phone company could fast track an appeal and we will get the same mess back.

What did Park Dept do for community outreach to see how the community felt about a cell tower in park before it got to this final stage?

Planning Commissioners would like some feedback from Park Dept.

Planning Commissioners didn't feel it was appropriate use of the park land.

What are alternative sites?

Planning Commissioners:

Timothy Meyer - Remove cell facilities from the park

Drew Digby - has concerns about the proposal - table it for now, or deny permit

Terry Guggenbuehl - No cell towers in parks - deny permit

Garner Moffat - tower might be OK in some areas but is concerned about one in Chester

Marc Beeman - Against cell in park, but should get an expert opinion

Zandra Zwiebel - No cell in Chester Park - deny permit

Patricia Mullins - (missed reply)

A vote of the planning commission was called to deny the permit and seconded, then was retracted when Digby suggested it would be better to table it instead in order to retain control by the Planning Commission, otherwise the ruling could be appealed to the City Council. It was then tabled and it was suggested to arrange to have the permit discussed by the Park Commission to get their opinion.

We left the council chambers after the cell discussion was ended, approximately 8:15-8:30.

If the City puts the proposed Cell Mono Tower in Chester Park, the way city law is written, Chester Park will be a designated site for other such technology as well as having the infrastructure installed that is going to tear up the Park from Kenwood to Chester Parkway.

We would like to suggest three alternate locations in order of priority:

1. The big rock above the quarry on the other side of Kenwood from Chester Park.
2. The grassy field next to Aftenrow.
3. Remove the Chester Park gravel pit off of Kenwood from within the Chester Public Park Boundary, eliminate gravel pit, place the proposed Cell Mono Tower site there and reforest the rest of the land.

We Residents and Taxpayers of Chester Park will not accept the proposed Special Use Permit within the boundaries of Chester Public Park under any terms.

We request the Park Commission to retract, null and void, whatever is necessary to undo the September 10, 2014 motion for a suggested site for the proposed Cell Mono Tower within the Chester Public Park Boundaries. Please advise what that process would be.

Thank you for your consideration with such important matters that will gravely impact the future of our beloved Chester Public Park.

Sincerely,
Steve & Ann Holtz
1511 Belmont Rd.
Duluth MN 55805



Chester Park

Steven Robertson

From: Ann Holtz <amhduluth@gmail.com>
Sent: Friday, September 12, 2014 9:43 AM
To: Steven Robertson
Subject: Fwd: Diligence and Due Process ? And Request.

To: Steven Robertson

Please forward this correction to the Planning Commissioners and along with the previous e-mail we have requested, make part of the public record as such and confirm.

Thank-you,
Steve & Ann Holtz
1511 Belmont Rd.
Duluth MN 55805

----- Forwarded message -----

From: **Ann Holtz** <amhduluth@gmail.com>
Date: Fri, Sep 12, 2014 at 9:38 AM
Subject: Re: Diligence and Due Process ? And Request.
To: KARL HODIL <karlhodil@msn.com>
Cc: Erik Torch <eriktorch@gmail.com>, Frank Jewell <jewellf@stlouiscountymn.gov>, Michael Schraepfer <michael.schraepfer@gmail.com>, Tom Albright <tom.todobrillante@gmail.com>, Andy Holak <trailrunners@gmail.com>, Amanda Crosby <amanda@accessnorth.net>, Art Johnston <arthur.johnston@isd709.org>, Edwin Hall <edwinkinghall@gmail.com>, Emily Larson <elarson@duluthmn.gov>, Eric Viken <ericv@chartermi.net>, Joel Braun <joelb@superiorchoice.com>, John Schmidt <johnsands@aol.com>, Jon Welles <jc@lhminsurance.com>, Patrick Boyle <boylep@stlouiscountymn.gov>, Tiersa Dodge <tdodge@dsgw.com>, Barb Russ <bruss@duluthmn.gov>, Howie Hanson <hhanson@duluthmn.gov>, Jay Fosle <jfosle@duluthmn.gov>, Jennifer Julsrud <jjulsrud@duluthmn.gov>, Joel Sipress <jsipress@duluthmn.gov>, Linda Krug <lkrug@duluthmn.gov>, Sharla Gardner <sgardner@duluthmn.gov>, Zack Filipovich <zfilipovich@duluthmn.gov>

Thank-you Karl, & Peggy,

To The Honorable Duluth Parks and Recreation Commissioners:

We stand corrected and want to be accurate and factual.

Ann & Steve Holtz

On Fri, Sep 12, 2014 at 9:35 AM, KARL HODIL <karlhodil@msn.com> wrote:
Ann - Great job of summarizing the Planning and Park Commission Meetings.

Honorable Commissioners, and others - As an attendee at both meetings, I assisted with Ann and Steve's account of the meetings and can corroborate most of their other observations and statements, with one clarification. I believe that the individual who grossly miscommunicated the Planning Commission conclusions and wishes to the Parks Commission is not a member of the Planning Commission, but instead is a member of the Planning DEPARTMENT. If he also happens to be a member of the Commission, he certainly did

not accurately represent them.

Karl Hodil, and Peggy Rae Hodil

Date: Fri, 12 Sep 2014 08:01:27 -0500

Subject: Diligence and Due Process ? And Request.

From: amhduluth@gmail.com

To: eriktorch@gmail.com; jewellf@stlouiscountymn.gov; michael.schraepfer@gmail.com;

tom.todoblillante@gmail.com; trailrunners@gmail.com; amanda@accessnorth.net;

arthur.johnston@isd709.org; edwinkinghall@gmail.com; elaron@duluthmn.gov; ericv@chartermi.net;

joelb@superiorchoice.com; johnonsand@aol.com; JC@lhminsurance.com; boylep@stlouiscountymn.gov;

tdodge@dsgw.com

CC: bruss@duluthmn.gov; hhanson@duluthmn.gov; jfosle@duluthmn.gov; jjulsrud@duluthmn.gov;

jsipress@duluthmn.gov; lkrug@duluthmn.gov; sgardner@duluthmn.gov; zfipovich@duluthmn.gov

To The Honorable Duluth Parks and Recreation Commissioners:



On September 10, 2014 Park Commissioners failed to use due process and diligence when Commissioners let The Phone Company and **Representatives of the Duluth Planning Commission** trick Commissioners into selecting a site within Chester Park for the Proposed Cell Mono Tower. The Duluth Planning Commission made no such request at the September 9, 2014 meeting. Park Commissioners failed both Chester Public Park and Chester Park Residents and Taxpayers. We Residents and Taxpayers will NOT accept the Special Use Permit for the proposed Cell Mono Tower in Chester Park. We Residents and Taxpayers knew nothing about this Special Use Permit and proposed Cell Mono Tower until approximately eleven days before the Planning Commission meeting on September 9, 2014.

We Residents and Taxpayers were at the Duluth Planning Commission Meeting on September 9, 2014 and the Planning Commissioners made NO SUCH REQUEST that the Park Commissioners choose a site within Chester Park for the proposed Cell Mono Tower.

Over the past several years when addressing Chester Park problems with Bergen, Gibbs, and Storm, about the Phone Company we Residents were told that the Phone Company was abandoning the site in Chester Park. The Park Dept. did not in any way inform Residents of Chester Park about the proposed Cell Mono Tower. We are outraged by this negligence and want accountability.

We would like to share our minutes from the Planning Commissioner's Meeting from September 9, 2014 and suggest alternative sites, and make a recommendation.

Synopsis of Attendees' First Hand Account of Planning Commissioners comments:

The Planning Commissioners ran a good, ethically effective meeting with due process and diligence. Planning Commissioners asked relevant, responsible questions.

Why is this Cell Mono Tower project in this final stage and such a mess?

Sharla Gardner spoke saying City Council did not understand what they were approving for the proposed Special Use Permit for the proposed Cell Mono Tower in Chester Park. The Council approved one thing and the Planning Commission turned that approval into something else. Sharla actually used the term "BAIT AND SWITCH".

Planning Commissioners:

No we don't want cell mono tower in Chester Park, but if we deny this permit the phone company could fast track an appeal and we will get the same mess back.

What did Park Dept do for community outreach to see how the community felt about a cell tower in park before it got to this final stage?

Planning Commissioners would like some feedback from Park Dept.

Planning Commissioners didn't feel it was appropriate use of the park land.

What are alternative sites?

Planning Commissioners:

Timothy Meyer - Remove cell facilities from the park

Drew Digby - has concerns about the proposal - table it for now, or deny permit

Terry Guggenbuehl - No cell towers in parks - deny permit

Garner Moffat - tower might be OK in some areas but is concerned about one in Chester

Marc Beeman - Against cell in park, but should get an expert opinion

Zandra Zwiebel - No cell in Chester Park - deny permit

Patricia Mullins - (missed reply)

A vote of the planning commission was called to deny the permit and seconded, then was retracted when Digby suggested it would be better to table it instead in order to retain control by the Planning Commission, otherwise the ruling could be appealed to the City Council. It was then tabled and it was suggested to arrange to have the permit discussed by the Park Commission to get their opinion.

We left the council chambers after the cell discussion was ended, approximately 8:15-8:30.

If the City puts the proposed Cell Mono Tower in Chester Park, the way city law is written, Chester Park will be a designated site for other such technology as well as having the infrastructure installed that is going to tear up the Park from Kenwood to Chester Parkway.

We would like to suggest three alternate locations in order of priority:

1. The big rock above the quarry on the other side of Kenwood from Chester Park.

2. The grassy field next to Aftenrow.

3. Remove the Chester Park gravel pit off of Kenwood from within the Chester Public Park

Boundary, eliminate gravel pit, place the proposed Cell Mono Tower site there and reforest the rest of the land.

We Residents and Taxpayers of Chester Park will not accept the proposed Special Use Permit within the boundaries of Chester Public Park under any terms.

We request the Park Commission to retract, null and void, whatever is necessary to undo the September 10, 2014 motion for a suggested site for the proposed Cell Mono Tower within the Chester Public Park Boundaries. Please advise what that process would be.

Thank you for your consideration with such important matters that will gravely impact the future of our beloved Chester Public Park.

Sincerely,
Steve & Ann Holtz
1511 Belmont Rd.
Duluth MN 55805



Chester Park

Steven Robertson

From: Ann Holtz <amhduluth@gmail.com>
Sent: Monday, September 15, 2014 9:48 AM
To: Steven Robertson; Barb Russ; Emily Larson; Howie Hanson; Jay Fosle; Jennifer Julsrud; Joel Sipress; Linda Krug; Sharla Gardner; Zack Filipovich; Amanda Crosby; Andy Holak; Art Johnston; Edwin Hall; Eric Viken; Erik Torch; Frank Jewell; Joel Braun; John Schmidt; Jon Welles; Michael Schraepfer; Patrick Boyle; Tiersa Dodge; Tom Albright
Subject: Opposition from Mr. J. Allert

To: The Honorable Duluth City Council
The Honorable Duluth Parks and Recreation Commissioners
Steven Robertson: please forward to The Honorable Planning Commissioners and make part of the public record.

Mr. Jim Allert a past Duluth resident, currently living in Knife River, MN, jim_allert@yahoo.com, has given Steve Holtz his permission to share his comments opposing the proposed Mono Cell Tower for Chester Park inside of the Park boundaries. Please make Mr. Allert's comments which follow part of the public record.

Steve,

Great article in the DNT yesterday about you and Ann giving testimony against the cell tower. Ice chucks falling off the tower after big storms might be another concern. I am not sure 20x20 area will protect everyone below. These things just do not belong in parks.

Anyway, Sprint is my long distance carrier, but I intend to cancel my service after hearing this.

Thanks for standing up for it.

-Jim
Steve,

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Anyway, Sprint is my long distance carrier, but I intend to cancel my service after hearing this.

Thanks for standing up for it.

-Jim
jim_allert@yahoo.com

PS My favorite desecration is the tower on Palisade head



Steven Robertson

From: Ann Holtz <amhduluth@gmail.com>
Sent: Tuesday, September 16, 2014 6:35 AM
To: Erik Torch; Frank Jewell; Michael Schraepfer; Tom Albright; Andy Holak; Amanda Crosby; Art Johnston; Edwin Hall; Emily Larson; Eric Viken; Joel Braun; John Schmidt; Jon Welles; Patrick Boyle; Tiersa Dodge; Steven Robertson; David Montgomery
Cc: Barb Russ; Howie Hanson; Jay Fosle; Jennifer Julsrud; Joel Sipress; Linda Krug; Sharla Gardner; Zack Filipovich
Subject: Re: Diligence and Due Process ? And Request.

To: The Honorable Duluth Parks and Recreation Commissioners
Steven Robertson please forward the attached forward of letter/e-mail to Parks and Recreation Commissioners to Planning Commissioners and make part of the Public Record
David Montgomery

This is our Second Request to Duluth Parks and Recreation Commissioners to advise us on our request to null and void the motion for a designated location for the proposed Cell Mono Tower within the boundaries of Chester Park. There was no Public notice that this was going to be added to the agenda at the Park Commissioners meeting Sept. 10, 2014 and it was introduced after the meeting had started and Commissioners were discussing the 4th item on the Agenda.

We were at the Planning Commissioners meeting on Sept 9, 2014 and the Planning Commissioners asked for feedback from the Park Commissioners about how the Park Dept. had informed and gotten feedback from the General Public about the Public's feeling about placing the proposed Cell Mono Tower in Chester Park. The Planning Commissioners did NOT request the Park Commissioners make such a decision as to "designate a location for the new proposed Cell Mono Tower in Chester Park", this request was made by a Mr. Chuck from possibly the Planning Dept. and Mr. Chuck's request was a misrepresentation of what the Planning Commissioners requested.

Mr. Edwin Hall literally said to the Commissioners without Diligence and Due Process, "Who has a motion to keep the [new] tower in its current location?"

At the Sept.10, 2014 Duluth Parks and Recreation Commissioners's meeting there was a complete lack of Diligence and Due Process as well as Mr. Chuck misrepresenting the Planning Commissioners request to the Park Commissioners, and no public notice that the Cell Tower was to be on the agenda until after the meeting started.

Please advise how to null and void the motion by the Park Commissioners for a designated location for the new Cell Mono Tower within the boundaries of Chester Park because:
NO Public notice given
Misrepresentation of Planning Commissioners request by the Planning Dept.
Lack of Diligence and Due Process calling for motion

Thank you for your consideration with such important matters that will gravely impact the future of our beloved Chester Public Park.

Sincerely,
Steve & Ann Holtz

1511 Belmont Rd.
Duluth MN 55805

On Fri, Sep 12, 2014 at 8:01 AM, Ann Holtz <amhduluth@gmail.com> wrote:
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Sincerely,
Steve & Ann Holtz
1511 Belmont Rd.
Duluth MN 55805



Chester Park

Steven Robertson

From: Ann Holtz <amhduluth@gmail.com>
Sent: Tuesday, September 16, 2014 6:46 PM
To: Steven Robertson
Cc: Barb Russ; Emily Larson; Howie Hanson; Jay Fosle; Jennifer Julsrud; Joel Sipress; Linda Krug; Sharla Gardner; Zack Filipovich
Subject: Letter to Planning Commissioners

To: City of Duluth Planning Commission

Subject: Special Use Permit for New 75 Foot Tall Monopole Cell Tower at 1805 Skyline Parkway (Chester Creek Park) by Sprint PCS (PL 14-121)

My name is Steve Holtz and I have been a resident of Chester Park for more than ten years.

I use Chester Park almost daily, all year round, in any weather.

I urge the Planning Commission to DENY the Special Use Permit for the new 75 foot cell mono tower within Chester Park.

I want to discuss the impact this installation may have on the health of the citizens that use Chester Park.

High frequency electromagnetic radiation enters the human body and the cells of the human body and has been shown to interfere with melatonin production. Melatonin is a strong antioxidant that clears the body of free radicals while we sleep and it also helps us to sleep. Free radical build-up in the body is a precursor to cancer. So, when exposed to high frequency electromagnetic radiation we have reduced melatonin levels: we do not sleep well (which reduces our immune response); and we have increased levels of free radicals. This leads to possible a link between high frequency electromagnetic radiation and increased rates of leukemia and brain cancer. The interaction of radio frequency radiation with the human body is so complex the science remains inconclusive. We are at the beginning of a grand experiment, and I do not want that experiment carried out in Chester Park.

The energy from a radio transmitter decreases at the rate of the inverse of the square across distance. For example, if you halve your distance to an antennae (moving closer to it) you will receive, not twice the radiation, but the radiation squared. The following are entirely contrived numbers designed just to show the exponential nature of the energy: Suppose at your home is 1000 yards from the tower and the energy from the antennae is measured at level 4 and you start to walk toward the cell tower into Chester Park. When the distance between you and the antennae is 500 yards the energy level is now $4 * 4 = 16$. As you continue your walk toward the tower and you get to 250 yards to the antennae (half again the distance), the energy is now $16 * 16 = 256$. When you get 125 yards away, the energy is $256 * 256 = 65,536$. It is important to recognize how the energy increases exponentially as you approach the tower.

When an electromagnetic radio frequency waveform hits tree branches and tree leaves most of the wave's energy will be absorbed and some of the wave's energy will be reflected and refracted. This means the energy bounces off the surfaces of objects or passes through the objects and goes in directions that are not useful for communication. For example, visible light is also electromagnetic radiation, it is just in a different frequency band. We are able to see the objects around us because light reflects off of those objects and refracts through them. The cell mono tower structure will have antennae that are down in the tree tops. Thus, some of their

energy will reflect and refract off of and through tree branches and leaves. Unlike visible light, microwaves will go through branches, just like they go into and through our bodies.

This reflection and refraction will reduce the amount of energy that makes it any receiver. The communicating ability is reduced. In order to increase the communication capability the operator of the antenna could increase the power output to try to have enough strength in the remaining signal that makes it between the tree branches and leaves. The Federal Communications Commission (FCC) does no monitoring of the radio frequency energy output from antenna installations. The industry "self-monitors" its radio frequency energy output and has been found in different cases to be non-compliant.

Does the City of Duluth have the resources and expertise to determine the level of radio frequency energy that exists on the Chester Park trails that we walk every day? And to test these levels on a regular basis to provide adequate public safety?

The precautionary principle states that when something is a potential hazard, then you should do something to reduce its potential impact. This principle should be applied in circumstances where there is inconclusive evidence of something, like the link between microwave electromagnetic radiation and incidence of cancer.

Our City parks should be places that we go to get healthier, free from stress, getting exercise. This cell installation stresses me every time I enter Chester Park and it should stress you every time you and your children enter Chester Park.

I submit that because this high frequency electromagnetic radiation actually enters our bodies, it is a form of trespass. Because it is potentially harmful to our health, it is a violent form of trespass. City of Duluth Parks should not be promoting this violation of, this trespass on its citizens.

The citizens of Duluth, and their children, should be free from increased high frequency electromagnetic radiation within the boundaries of Chester Park.

I also want to discuss the impact this installation will have on the environment of Chester Park.

Every time the phone company or its representatives enter Chester Park they do damage. This damage is left to fester forever, as far as I can tell, as neither the phone company nor the City of Duluth has fixed any of the damage caused by their trespass in the over ten years that I have lived in the Chester Park neighborhood. I would call this another form of violent trespass. It violates the public space in Chester Park and damages the landscape and its inhabitants. And it is trespass because it enters my space as a citizen of Duluth trying to find peace and relaxation in MY public park system.

Chester Park should be free from being repeatedly damaged and trespassed on by a commercial venture that has no interest or concern with their trespass or the violation and damage it causes to the citizens of this fine City that use Chester Park on a daily basis.

For all of the above reasons, altering the Special Use Permit to require the installation to occur at the site of the Big Chester ski jump is NOT acceptable. The mental and physical health of the citizens of Duluth, who own Chester Park, require this installation to occur outside of Chester Park boundaries.

I expect the City of Duluth Planning Commission to DENY this application for a Special Use Permit to build a new 75 foot cell mono tower within Chester Park boundaries.

Thank you for your time and consideration on this important matter. Please protect Chester Park.

Please forward this to the Planning Commissioners and make this a part of the public record.

Respectfully,

Steve Holtz
1511 Belmont Road
Duluth, MN 55805

Reader's view: Cellphone tower doesn't belong at Chester Park

By Sue Harney from Duluth on Sep 15, 2014 at 10:46 p.m.

I applauded the Duluth Planning Commission for tabling the special use permit for a cellphone monotower in Chester Park. But I was stunned by the Parks Commission's unanimous support of this structure ("Chester tower plan raises a ruckus," Sept. 11).

I expect the Parks Commission to be the guardians and caretakers of our parks. Some vegetation around the base would be like putting lipstick on a pig – it's still a pig! Our parks are special and should remain so. Even the temporary site is an aberration, and no monotower fits in this small park's setting – anywhere.

A reinforcement of the ski jump with the protective fencing required by a monotower would have resulted in more acceptance of the status quo of the tower attached to the jump. Many people were blissfully unaware of its presence. The historical significance and beautification of the skyline view of the structure was ignored for some reason.

The city's lack of communication with area residents and City Council has been appalling. Councilors were not well-informed about the controversial tower. We elect people to do what we believe is right, and yet the stealth of notification postings has left most area residents in the dark. Perhaps the News Tribune's article will shed light.

If the University of Minnesota Duluth and College of St. Scholastica need better reception, Sprint can pay them to contain a tower somewhere on their vast properties. The idea of using what is supposed to be a recreational and nature

location for such an unattractive commercial purpose isn't fitting for Outside Magazine's best outdoors city in which to live.

And all of this doesn't address the potential safety effects, which are another reason to rethink this.

Sue Harney

Duluth