

Village of South Lebanon 99 N. High Street, South Lebanon, Ohio 45065 513-494-2296 fax: 513-494-1656 www.southlebanonohio.org

#### **MEMORANDUM**

To:

Mayor & Village Council

CC:

Bruce McGary, Village Solicitor

From:

Jerry Haddix, Village Administrator

Date:

October 14, 2015

Subject:

Warren County Water Dept. Radio Tower

The Warren County Water & Sewer Department is requesting to install an 80' tower at the Sod Farm Wellfield on the east side of State Route 48 between Mason-Morrow-Millgrove Road and the River. Also, they are requesting the Village to waive any and all application and/or review fees.. The sole purpose of this tower is to transmit data from the well via a point-to-point connection to the County's tower located in Zoar within the Village.

- 1. This tower will only be used for this exclusive use. Any future co-location of antennas on this tower would require approval from the Village Council;
- 2. The tower fall zone would be completely on Warren County property; and
- 3. No residential structures are in the vicinity. The proposed 80' tower would be transmitting a low power, high frequency signal to a point 200" on the County's Zoar tower.

#### Recommendation:

Request a motion to waive all fees associated with said tower construction and approve a special use permit for said tower erection per the attached documents provided by the Warren County Water & Sewer Department.



# WARREN COUNTY WATER & SEWER DEPARTMENT

CHRIS G. BRAUSCH, P.E. COUNTY SANITARY ENGINEER

October 12, 2015

Jerry Haddix Village Administrator Village of South Lebanon 99 N. High Street South Lebanon, Ohio 45065

Re: Permit to Install Radio Tower on Warren County Sod Farm Well Field

Dear Mr. Haddix:

Please consider this letter as support for the attached Zoning Application for the installation of a single radio tower monopole for the sole purpose of communicating water and sewer data from the well field to the wireless Warren County Network antenna located off St Rt 22 & 3 near Zoar.

Per the list of items in your email date 10/12/2015 (copy attached, Attachment No.1) we submit the following:

- 1. The proposed tower will support and is intended for only one point-to-point communication connection from the Sod Farm Well field to the Warren County Telecom Zoar Radio Tower (see Attachment No.2). We intend this tower to be for this singular use only and would prefer that no other use be permitted. Any other use or co-location sought in the future shall only be by permit and authorization from the South Lebanon Village Council.
- 2.The proposed tower location is situated such as to provide for fallzone protection for the State Route 48 thoroughfare. The entire fallzone is on Warren County property and outside the State Route 48 ODOT Thoroughfare Right of Way (see Attachment No.3). As detailed in an earlier submittal, the proposed monopole tower will extend 80 feet above the ground elevation at the base (proposed El. 629). One antenna and reflector are proposed for this communications link (see Attachment No.4).

We respectfully request waiver of application and other fees associated with South Lebanon approval of this application and issuance of the Zoning Permit. This is an intergovernmental issue and we are not using this installation for generation of any revenues, only internal data transmissions.

Our contractor is prepared to order this equipment but lead times for construction of the tower pieces is eight weeks. We are attempting to get this radio tower constructed before the end of the year when our SCADA Controls Manager is retiring. Timing on your approval is very important. We apologize for not getting this application to you in a more timely fashion.

If you have any questions about this issue please contact me at the numbers or address included herein.

Alling, P.E.

Sincerely,

David A. Walling, P.E.

Deputy Sanitary Engineer

ec:

Chris G. Brausch, P.E.

File

# SOUTH LEBANON SPECIAL USE ZONING APPLICATION

This is to certify that: Applicant's Name WARREN COUNTY WATER & SEWER DEPARTMENT Street Address \_\_\_\_409 Justice Drive City Lebanon State OH Zip 45036 Phone 513-925-1377 Fax 513-925-2995 Has made application on \_\_\_\_\_\_10-06-2015 \_\_\_\_\_\_ to the Village of South Lebanon for a Special Use Zoning Permit. Further, it is certified that the use listed below, and as shown on the plat and plans submitted herewith, conforms to the applicable provisions of the Village of South Lebanon Zoning Ordinance No. 2001-13. Project Information: Owners Name (if different from above) Warren County Board of County Commissioners Street Address (if different from above) \_\_\_\_\_871 St Rt 48 City South Lebanon State OH Zip 45065 Phone 513-925-1250 Fax 513-925-2999 Zone \_\_\_\_\_ Lot No. \_\_\_\_ Section \_\_\_\_ Range \_\_\_\_\_ Parcel \_\_12011760010 Zoning Certificate Type Permitted Use ( )
Temporary Use ( )
Flood Plain Yes No Variance ( ) PUD ( )
Conditional Use ( ) Substantially Similar Use ( ) Flood Certificate Elevation SPECIAL NOTES ON CERTIFICATE: \_\_\_\_\_ Signed \_\_\_\_\_ Fee \_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_ A building permit must be obtained from the Warren County Building Department

prior to commencing work.

#### Walling, Dave

From:

Jerry Haddix [jhaddix@southlebanonohio.org]

Sent:

Monday, October 12, 2015 12:35 PM

To: Cc:

Walling, Dave Brausch, Chris G.

Subject:

Radio tower

Dave,

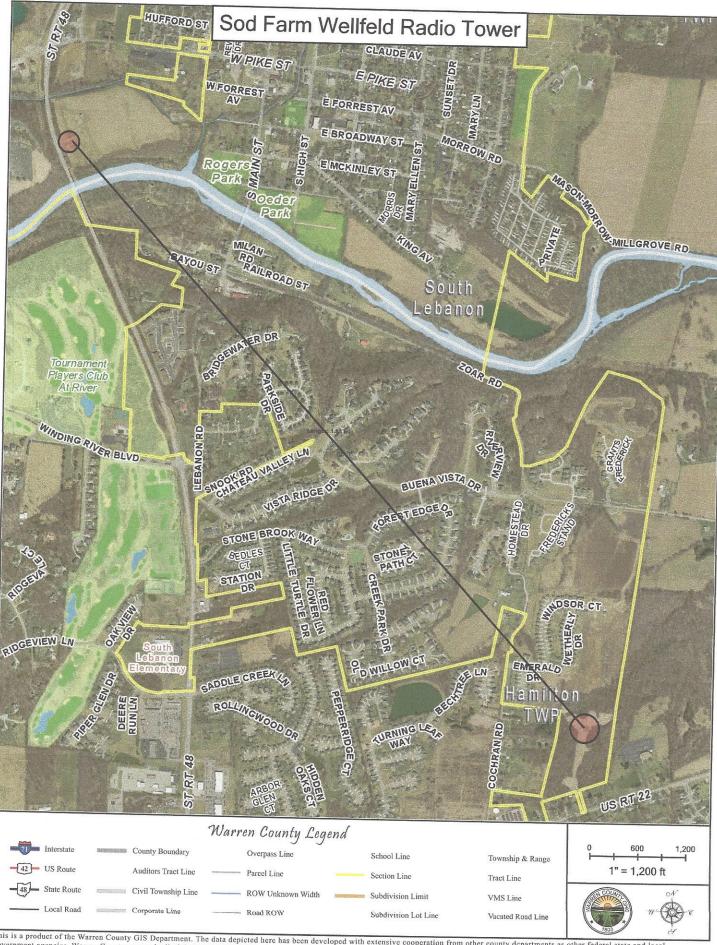
Per our conversation today re: the proposed radio tower the Sod Farm Wellfield, here is a list of items that should be included in a letter to the Village:

- Tower is solely for a point-to-point communication connection from the wellfield to the County's radio antenna in the Zoar area:
- Fallzone is all within Warren County property;
- No other cellphone transmitters or devices will be co-located on tower without being approved by the Village;
- Request to waive any and all Village permit fees relating to this tower;
- Reason(s) why time is of the essence.

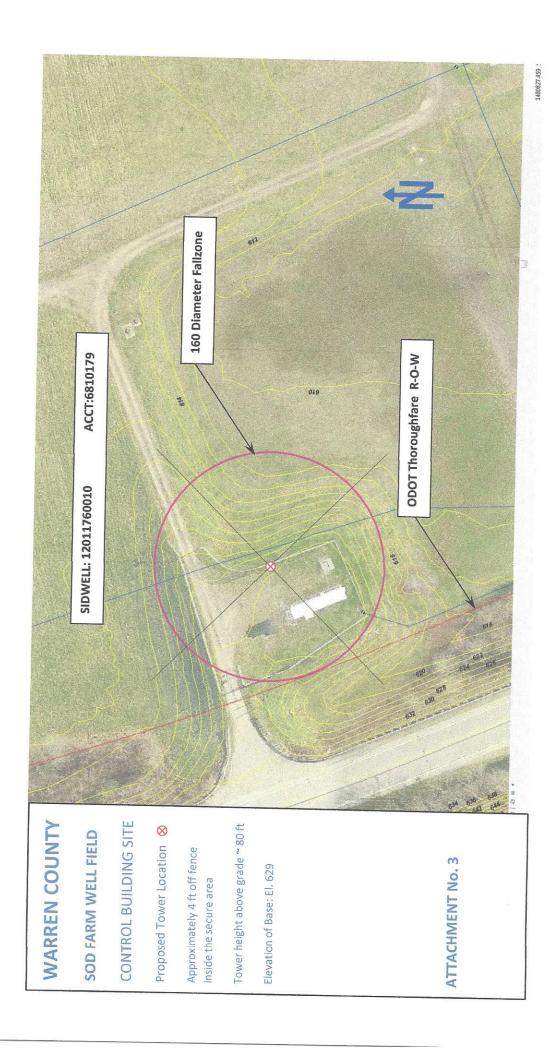
Let me know if you have any questions. Thanks.

Jerry Haddix Village Administrator Village of South Lebanon 99 N. High Street South Lebanon, Ohio 45065 (513) 494-2296 (513) 494-1656 Fax (513) 494-4147 Cell www.southlebanonohio.org

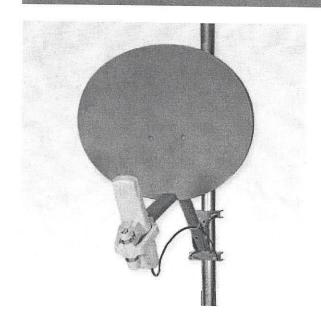




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# **PTP 100**

The Cambium Networks PTP 100 Series of Point-to-Point wireless Ethernet bridges provide a low-cost-of-entry solution for deployment, expansion and extension of broadband communications networks. The PTP 100 Series also offers the scalability of simple, affordable software key- based license upgrades for additional performance and capacity as networks grow.

An organization can begin with a system that delivers 2 Mbps of aggregate throughput at one of the lowest initial costs in the industry. When upgrades are needed, the user simply purchases software license keys that allow incremental over-the-air upgrades to 4 Mbps and to 7 Mbps aggregate data rates. Licenses that deliver up to 14 Mbps are also available.

Cambium Networks provides exceptional wireless broadband connectivity solutions. With more than 3 million modules deployed in thousands of networks around the world, Cambium solutions are proven to provide cost effective, reliable data, voice and video connectivity.

SPECIFICATIONS	
PRODUCT	
MODEL NUMBER	2.4 GHz - 2400BHDD, 2400BH20DD 5.1 GHz - 5202BHG, 5202BH20G 5.2 GHz - 5200BHG, 5200BH20G 5.4 GHz - 5400BH02G, 5400BHG, 5400BH20G 5.8 GHz - 5700BH02G, 5700BHG, 5700BH20G
SPECTRUM	
CHANNEL SPACING	2.4 GHz - Configurable on 2.5 MHz increments 5 GHz - Configurable on 5 MHz increments
FREQUENCY RANGE	2.4 GHz - 2415 - 2457.5 MHz 5.1 GHz - 5150 - 5350 MHz 5.2 GHz - 5250 - 5350 MHz 5.4 GHz - 5470 - 5725 MHz 5.8 GHz - 5725 - 5850 MHz 5.9 GHz - 5850 - 6050 MHz
CHANNEL WIDTH	20 MHz
INTERFACE	
ETHERNET INTERFACE	10/100 Base T, half/full duplex. Rate auto negotiated (802.3 compliant)
PROTOCOLS USED	IPV4, UDP, TCP, ICMP, Telnet, HTTP, FTP, SNMP, PPPoE
NETWORK MANAGEMENT	HTTP, TELNET, FTP, SNMPv2c
PERFORMANCE	
MAXIMUM AGGREGATE THROUGHPUT	PTP110 - 2 Mbps PTP120 - 7 Mbps PTP130 - 14 Mbps
LATENCY	5 - 7 msec
VLAN	802.1Q with 802.1p Priority
MODULATION TYPE	2-level and 4-level Frequency Shift Keying (FSK)
CARRIER TO INTERFERENCE RATIO (C/I)	~3dB @ 2 level FSK, ~10dB @ 4 Level FSK
ACCESS METHOD	Time Division Duplexing/Time Division Multiple Access (TDD/TDMA)

SPECIFICATIONS	· ·
LINK BUDGET	
ANTENNA BEAM WIDTH	3 dB antenna beam width 60 degrees, Azimuth and Elevation
ANTENNA GAIN	2.4 GHz - 8 dBi 5 GHz - 7 dBi
EIRP	2.4 GHz - Up to 33 dBm 5 GHz - Up to 30 dBm
SENSITIVITY (dBm typical)	-86 dBm @ 2 Level FSK, -79 dBm @ 4 Level FSK
PHYSICAL	
CONNECTORIZED ANTENNA OPTION	5.4 GHz, 5.7 GHz
MEAN TIME BETWEEN FAILURE	> 40 years
TEMPERATURE	-40° F to +131° F (-40° C to +55° C)
WEIGHT	1 lb (.45 kg)
WIND SURVIVAL	118 miles/hr (190 km/hr)
DIMENSIONS (HxWxD)	30 x 9 x 9 cm (11.75" x 3" x 3")
MAXIMUM POWER CONSUMPTION	8 W
INPUT VOLTAGE	24 - 30 VDC
SECURITY	
ENCRYPTION	DES, AES Optional FIPS 197 Certified – 5.1 and 5.9 GHz are DES only
CERTIFICATIONS	
CE	2.4 GHz - EN 300 328 5.4 GHz - EN 301 893 5.8 GHz - EN 302 502
INDUSTRY CANADA CERT	2.4 GHz - 109W-2400 5.2 GHz - 109W-5200 5.4 GHz - 109W-5400 5.8 GHz - 109W-5700G
FCC ID	2.4 GHz - ABZ89FC5808 5.2 GHz - ABZ89FC3789 5.4 GHz - ABZ89FT7623 5.8 GHz - ABZ89FT7630





### **Corporate Mission Statement:**

"We are committed to providing electrical construction services that strive to exceed customer expectations, maintain a safe work environment, and earn a reasonable profit."

# TRANSMITTAL LETTER

T	0: <u>W</u> a	rren County \	Nater & Sewer			Date: 09/21/15
		S Justice Drive				No.: 1015-5007
	Lek	oanon, OH 45	036			
Attentio	n: Da	ve Walling			Customo	. No.:
Jo	b: Wa	rren County N	Misc Electrical Work		Custome	r No.:
Locatio	n: <u>W</u> a	rren County,	ОН			
WE ARE S	ENDING	i:				
Attached     Attached	d Herewi	th	☐ Under Sepa	-1-0	_	
■ Submitta	als		☐ Prints	rate Cover	☐ Letter ☐ Chang	
☐ Shop Dr	awings		☐ Specification	าร	☐ Samp	
	REV.					
COPIES	NO.	DATE		D	ESCRIPTION	
1			Submittal:		20010111014	
			Sod Farm N	/lonopole		
		02				
				- Inc.		
PEM/	ARKS:					
IXEM/	anno.					
TD 411	_					
TRANSMITT						
☐ Preliminar ☐ For Appro		<u> </u>	Approved - as Submitted	Resubmit C	Copies for Approval	☐ U.S. Mail
☐ As Reque			Approved - as Noted Returned for Corrections	Resubmit C	Copies for Distribution	☐ Ground ☐ Overnight
		es, With Approva	I OR Comments By ASAP	☐ For Files and Dis	stribution	☐ Faxed ☑ E-mailed
DISTRIBUTIO			,	<del></del>		☐ Hand Delivered
	RINTS					
		Job file: 10			Best rega	rds,
					Becky	Helmrich
		ACCES 1				



# Project Submittal for LEE Job # 1015-5007

# Warren County Misc Electrical Work

Warren County, OH

Submittal # Description Spec Section	Sod Farm Monopole
opec dection	
Submittal Date	09/21/15
REVIEWED	New Submittal
Date_09/21/15	Submitted Per Plans & Specs
By Sean Mondello	Submitted "As Equal"
LAKE ERIE ELECTRIC, INC.	Critical Path
Review, approval, verification of materials and equipment required, field dimensions, adjacent construction work, and coordination of information is in accordance with the requirements of the Work and Contract Documents.	

10	ASSI	ASSY BILL OF MATERIALS: DEPROMA	4A
PART NO.	ΥTĢ	ITEM DESCRIPTION	DWG NO.
DEP80MA-1		SHELL 9.00"X12.75"X25,71'	N/A
T80MA-2		SHELL 11.95"X16.09"X28.38'	N/A
DEP80MA-3	-	SHELL 15.22"X22.23"X48.00'	N/A
C10000600	I	PLATE CAP .25X10"OD TAP POLE	N/A
J51AW	т	J-BOLT ASSY 3/8 X 5-3/8 W/WASH	N/A
210074G	H	BOLT 5/8X1 HCS G5 HDG	N/A
110146	17	HEX NUT 5/8 (11 UNC) 2H GALV	N/A
VL5279	2	PLATE COVER 12GX5X7"	N/A
ACWS	1	SIGN ANTI-CLIMB WARNING ASSY	N/A
210508	4	BOLT 3/8-16X1" SELF TAPPING SS	N/A
DWG-0106	1	SPLICE JACKING INSTRUCTIONS	DWG-0106
ROHN-TAG	1	STANDARD ROHN TAG	N/A
		REFERENCE DRAWINGS	
PART NO.	ΔTA	ITEM DESCRIPTION	DWG NO.
DEPDESIGN-01-A1	1	POLE DESIGN STANDARD-DIRECT EMBED	DEPDESIGN-01-A1-1
A070084	1	POLE DESIGN ANTENNA INDEX-BROADBAND	A070084

SECTION NO.		
	LENGTH, FT.	25.71
DEDBOMA.1	GALV. WT., LBS	622
בר מסוים	MIN SPLICE, IN.	19
	MAX SPLICE, IN.	22
	LENGTH, FT.	28.38
TROMA.2	GALV, WT., LBS	862
7-01-00	MIN SPLICE, IN.	25
	MAX SPLICE, IN.	28
	LENGTH, FT.	48,00
CONTRACT	GALV. WT., LBS	1963
DELOGISTS.	MIN SPLICE, IN.	N/A
	MAX SPLICE, IN.	N/A

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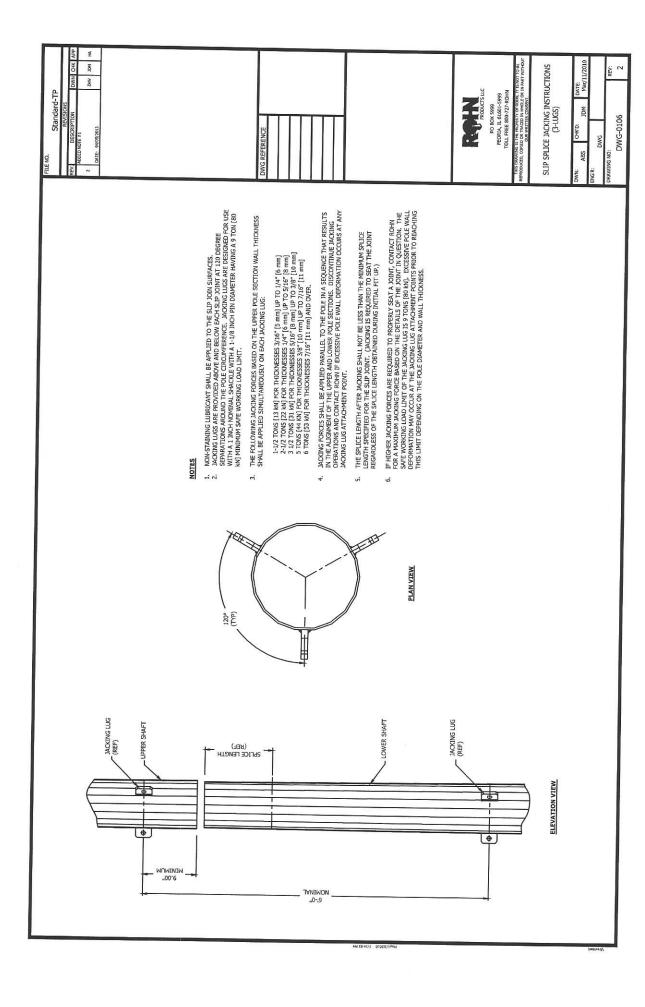
MAXIMUM REACTIONS	RE	ACTIONS	
DOWNLOAD, KIPS	п	5.2	
OTM, FT-KIPS =	ш	241.2	
SHEAR, KIPS =	11	6,3	

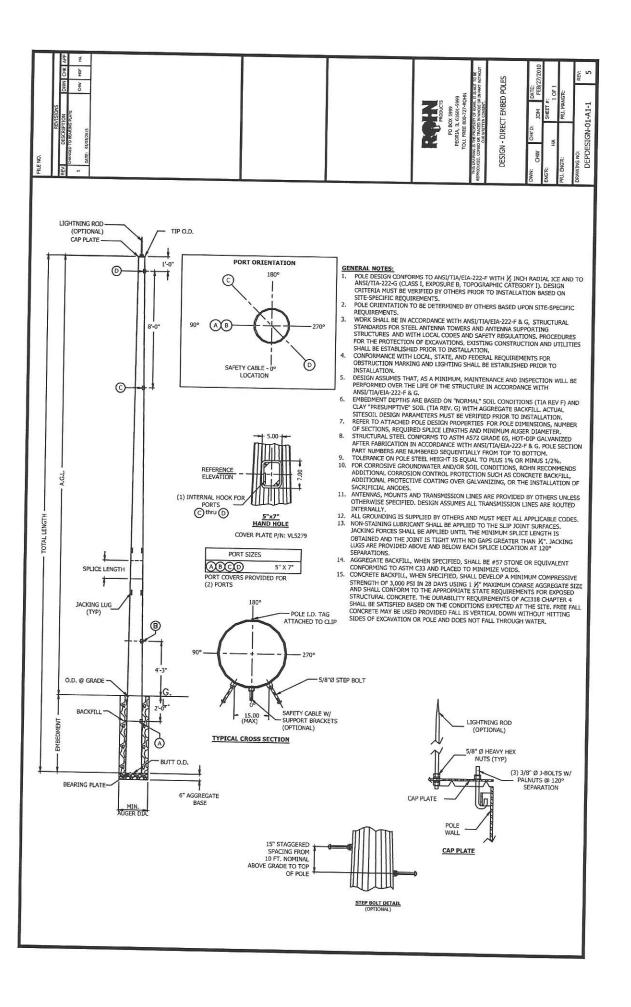
EMBEDMENT	MEN	ı
DEPTH :	,	18,-0,
AUGER DIAMETER =		3,-0.

# GENERAL NOTES

- 1. REPER TO DRAWING DEPDESIGN-01-41-1 FOR ASSENBLY DETAILS AND GENERAL NOTES.
  2. SECTION PIN IS STAWPED AT THE BOTTOM OF EACH POLE SECTION. SUFFIX
  (A-A, ETC). MAY BE ADDED TO SECTION PART NUMBERS WHEN MULTIPLE SECTIONS
  WITH THE SAME PART MANDERS ARE SUPPLIED WITH A SHIPMENT. SECTIONS WITH
  LIKE SUFFIXES SHALL BE INSTITUED TO DISCHED PROPER FIT AT SLIP SPLICES.
  3. SYSTEM BOUTS OR QUARRING ARE TO BE ORDERED SERVANTELY.
  1 IF CORROCOTE IS ORDERED, (1) CAN OF PIN: KITAGO "CORROCOTE TOUCH UP" & (1) PAINT
  BRUSH PIN: LYDAUT IS TO BE ADDED TO ORDER.
  5. AGREGATE BACKTILL, SHALL BE 475 STONE OR EQUINALENT CONFORMING TO ASTM CGS
  AND FRACED TO MINMIZE VOIDS.

		NTHOUT	OLE	E: 04/07/10			REV:
PRODUCTS	9999 601-5999 727-ROHN	JF ROHN, TT IS NO WHOLE OR IN PART OMSENT.	T EMBED P	JDM DATE:	SHEET #: 1 OF 1	PRJ. MANG'R:	
	PO BOX 5999 PEORIA, IL 61601-5999 TOLL FREE 800-727-ROHN	THIS DAWING IS THE PROPERTY OF ROHIL IT IS NOT TO RE REPRODUCED, COFIED OR TRACED IN WHOLE OR IN PART WITHOUT OUR WRITTEN COMSENT.	DEP80MA 80' DIRECT EMBED POLE	DWN: CHW CHK'D: JE	ENG'R: HA	PRJ. ENG'R: PR	DEPROMING NO: DEPROMA







### Broadband Rohn Products

Antenna Index

	Dish A	ntenna		
	E	Sway limit		
Diameter	w/ Radome	w/o Radome	5.8 Ghz	
(1) 2 ft.	3 ft <sup>2</sup>	6 ft <sup>2</sup>	4°	
(1) 3 ft.	7 ft <sup>2</sup>	13 ft <sup>2</sup>	30	
(1) 4 ft.	11 ft <sup>2</sup>	22 ft <sup>2</sup>	2°	
(2) 2 ft. B-to-B	5 ft <sup>2</sup>	8 ft <sup>2</sup>	4°	
(2) 3 ft. B-to-B	11 ft <sup>2</sup>	18 ft <sup>2</sup>	30	
(2) 4 ft. B-to-B	19 ft <sup>2</sup>	34 ft <sup>2</sup>	2.0	

Flat Panel Antenna					
Dimension	EPA	Sway limit			
1 ft square w/ mount	2 ft <sup>2</sup>	·4°			
2 ft square w/ mount	5 ft <sup>2</sup>				
3 ft square w/ mount	$11 \text{ ft}^2$	2°			

#### NOTE:

- 1. EPA values for flat panel antennas are based upon force coefficients (drag factors) of 1.2.
- 2. Sway limits for dishes are based on an allowable 10dB degradation in radio frequency signal level for 5.8 Ghz.
- 3. Sway limits for flat panel antennas are based on manufacturers published beam widths.
- 4. Sway limits are determined under a 50 mph Fastest-Mile wind speed.
- 5. Specific antenna models may have other sway limitations specified by the manufacturer.

Designed By:	Mar	Checked By:	HA	Approved By:	44
Date:	7/3//07	Date:	7/3/107	Date:	-7/3//07
03/01/2007					A070084R1