

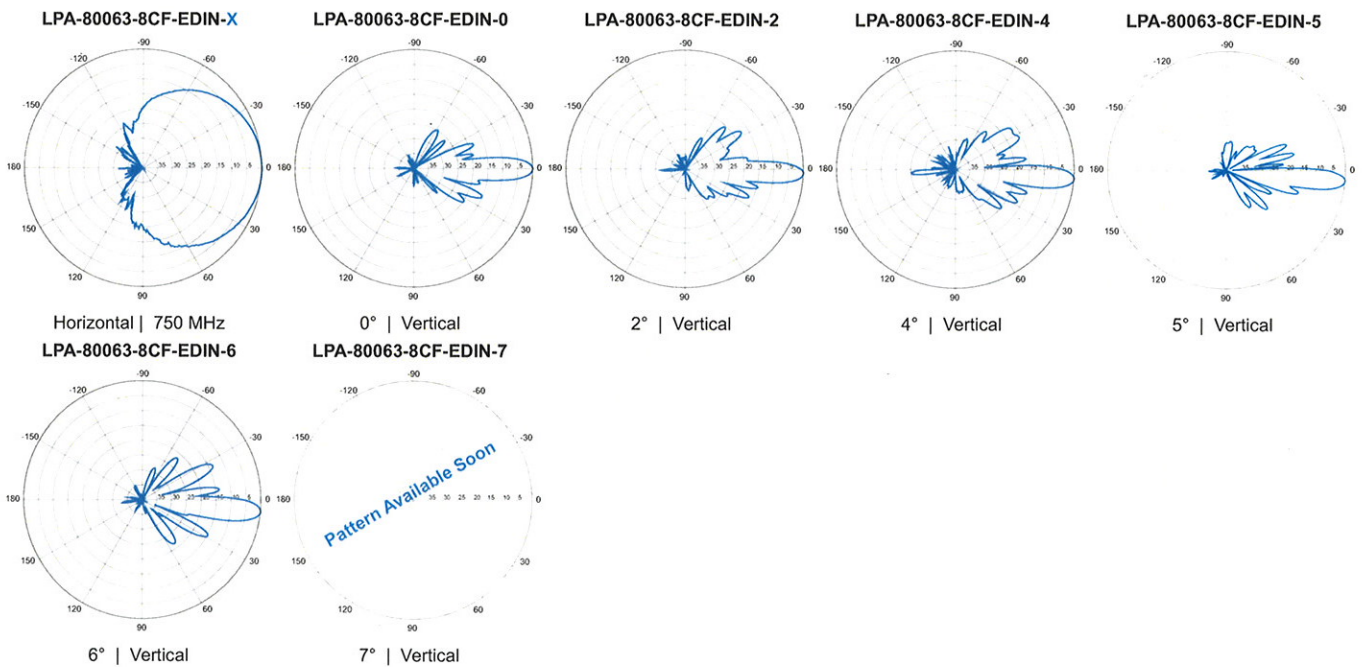
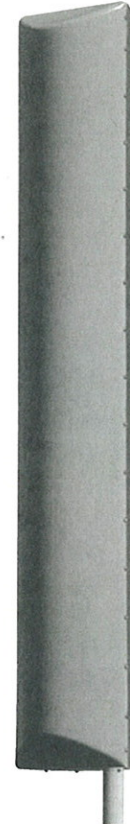
LPA-80063-8CF-EDIN-X

V-Pol | Log Periodic | 63° | 16.0 dBd

Replace "X" with desired electrical downtilt.

Antenna is also available with NE connector(s).
Replace "EDIN" with "NE" in the model number when ordering.

Electrical Characteristics		
Frequency bands	806-960 MHz	
Polarization	Vertical	
Horizontal beamwidth	63°	
Vertical beamwidth	7°	
Gain	16.0 dBd (18.1 dBi)	
Electrical downtilt (X)	0, 2, 4, 5, 6, 7	
Impedance	50Ω	
VSWR	≤1.4:1	
Upper sidelobe suppression (0°)	-19.5 dB	
Null fill	5% (-26.02 dB)	
Input power	500 W	
Lightning protection	Direct Ground	
Connector(s)	1 Port / EDIN or NE / Female / Center (Back)	
Mechanical Characteristics		
Dimensions Length x Width x Depth	2405 x 385 x 332 mm 94.7 x 15.2 x 13.1 in	
Depth of antenna with z-bracket	372 mm 14.6 in	
Weight without mounting brackets	17.2 kg 38 lbs	
Survival wind speed	> 201 km/hr > 125 mph	
Wind area	Front: 0.93 m ² Side: 0.80 m ² Front: 10.0 ft ² Side: 8.6 ft ²	
Wind load @ 161 km/hr (100 mph)	Front: 1341 N Side: 1386 N Front: 302 lbf Side: 312 lbf	
Mounting Options		
Part Number	Fits Pipe Diameter	Weight
3-Point Mounting & Downtilt Bracket Kit (0-17°)	21700000	50-102 mm 2.0-4.0 in 11 kg 25 lbs
Lock-Down Brace	If the lock-down brace is used, the maximum diameter of the mounting pipe is 88.9 mm or 3.5 in.	



Quoted performance parameters are provided to offer typical or range values only and may vary as a result of normal manufacturing and operational conditions. Extreme operational conditions and/or stress on structural supports is beyond our control. Such conditions may result in damage to this product. Improvements to product may be made without notice.

Mechanical specifications

Length	2400 mm	94.5 in
Width	545 mm	21.3 in
Depth	350 mm	13.7 in
Depth with z-bracket	390 mm	15.4 in
Weight ⁴⁾	18.6 kg	41.0 lbs
Wind Area Fore/Aft ⁶⁾	1.30 m ²	14.0 ft ²
Wind Area Side ⁶⁾	0.86 m ²	9.3 ft ²
Max Wind Survivability ⁶⁾	>201 km/hr	>125 mph
Wind Load @ 100 mph (161 km/hr) ⁶⁾		
Fore/Aft	1667 N	374 lbf
Side	1186 N	267 lbf

Antenna consisting of aluminum alloy with brass feedlines covered by a gray, UV safe fiberglass radome. Aluminum reflector. RoHS compliant.

Mounting & Downtilting

Mounting hardware attaches to pipe diameter Ø50-102 mm; Ø2.0-4.0 in. If the lock-down brace is used, the maximum diameter is Ø88.9 mm (3.5 in).

Mounting & Downtilt Bracket Kit 21700000

Electrical specifications

Frequency Range	806-941 MHz
Impedance	50Ω
Connector ³⁾	NE or E-DIN Female 1 port / Center
VSWR ¹⁾	≤ 1.35:1
Polarization	Vertical
Gain ¹⁾	19 dBd
Power Rating ²⁾	500 W
Half Power Angle ¹⁾	
Horizontal Beamwidth	40°
Vertical Beamwidth	7°
Electrical downtilt ⁵⁾	1.25°
Null fill ¹⁾	5%
Lightning protection	Direct ground

1) Typical values.

2) Power rating limited by connector only.

3) NE indicates an elongated N connector.
E-DIN indicates an elongated DIN connector.

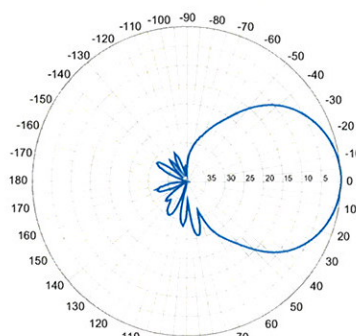
4) Antenna weight does not include brackets.

5) Add'l downtilts may be available. Check website for details.

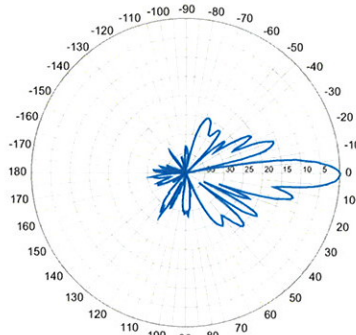
6) Values reflect installation with all three brackets utilized.

Improvements to mechanical and/or electrical performance of the antenna may be made without notice.

Radiation-pattern⁶⁾



Horizontal

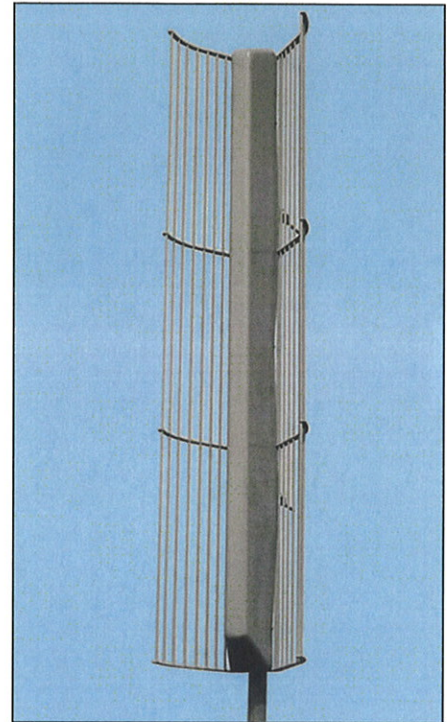


Vertical

Radiation patterns for all antennas are measured with the antenna mounted on a fiberglass pole.

Mounting on a metal pole will typically improve the front-to-back ratio.

LPA-4019
When ordering replace "___" with connector type.



Featuring our Exclusive
3T Technology™
Antenna Design:

- True log-periodic design allows for superior front-to-side characteristics to minimize sector overlap.
- Unique feedline design eliminates the need for conventional solder joints in the signal path.
- A non-collinear system with access to every radiating element for broad bandwidth and superior performance.
- Air as insulation for virtually no internal signal loss.

Warranty:

This antenna is under a five-year limited warranty for repair or replacement.

Revision Date: 09/10/09

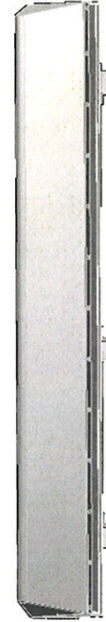
806-941 MHz

LPA-80080-6CF-EDIN-X

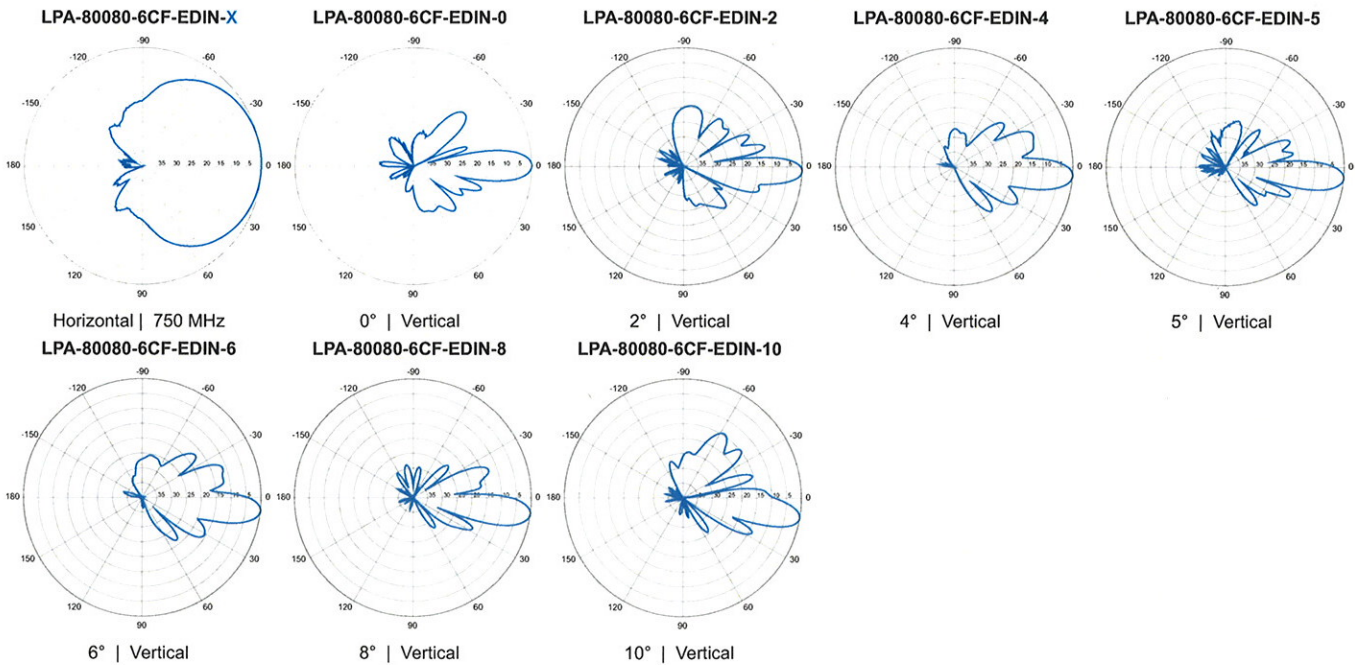
V-Pol | Log Periodic | 80° | 14.0 dBd

Replace "X" with desired electrical downtilt.

Antenna is also available with NE connector(s). Replace "EDIN" with "NE" in the model number when ordering.



Electrical Characteristics		
Frequency bands	806-960 MHz	
Polarization	Vertical	
Horizontal beamwidth	80°	
Vertical beamwidth	10°	
Gain	14.0 dBd (16.1 dBi)	
Electrical downtilt (X)	0, 2, 4, 5, 6, 8, 10	
Impedance	50Ω	
VSWR	≤1.4:1	
Upper sidelobe suppression (0°)	-22.6 dB	
Null fill	10% (-20.0 dB)	
Input power	500 W	
Lightning protection	Direct Ground	
Connector(s)	1 Port / EDIN or NE / Female / Center (Back)	
Mechanical Characteristics		
Dimensions Length x Width x Depth	1800 x 140 x 335 mm 70.9 x 5.5 x 13.2 in	
Depth of antenna with z-bracket	375 mm 14.8 in	
Weight without mounting brackets	9.5 kg 21.0 lbs	
Survival wind speed	> 201 km/hr > 125 mph	
Wind area	Front: 0.25 m ² Side: 0.61 m ² Front: 2.7 ft ² Side: 6.6 ft ²	
Wind load @ 161 km/hr (100 mph)	Front: 415 N Side: 878 N Front: 93 lbf Side: 198 lbf	
Mounting Options		
Part Number	Fits Pipe Diameter	Weight
3-Point Mounting & Downtilt Bracket Kit (0-20°)	21700000	50-102 mm 2.0-4.0 in 11 kg 25 lbs
Lock-Down Brace	If the lock-down brace is used, the maximum diameter of the mounting pipe is 88.9 mm or 3.5 in.	



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Vertically Polarized, Log Periodic 63° / 18.5 dBi

LPA-185063/12CF

When ordering replace "___" with connector type.

Mechanical specifications

Length	1806 mm	71.1 in
Width	167 mm	6.6 in
Depth	148 mm	5.8 in
Depth with t-bracket	176 mm	6.9 in
4) Weight	6.1 kg	13.5 lbs
Wind Area		
Fore/Aft	0.30 m ²	3.3 ft ²
Side	0.27 m ²	2.9 ft ²
Rated Wind Velocity (Safety factor 2.0)	>224 km/hr >139 mph	
Wind Load @ 100 mph (161 km/hr)		
Fore/Aft	479 N	107.6 lbs
Side	434 N	97.6 lbs

Antenna consisting of aluminum alloy with brass feedlines covered by a UV safe fiberglass radome.

Mounting and Downtilting

Mounting brackets attach to a pipe diameter of Ø50-102 mm (2.0-4.0 in).

Mounting bracket kit #26799997
Downtilt bracket kit #26799999

The downtilt bracket kit includes the mounting bracket kit.

Electrical specifications

Frequency Range	1850-1990 MHz
Impedance	50Ω
3) Connector(s)	NE or E-DIN 1 port / center
1) VSWR	≤ 1.4:1
Polarization	Vertical
1) Gain	18.5 dBi
2) Power Rating	250 W
1) Half Power Angle	
H-Plane	63°
E-Plane	5°
1) Electrical Downtilt	0°
1) Null Fill	10%
Lightning Protection	Direct Ground

1) Typical values.

2) Power rating limited by connector only.

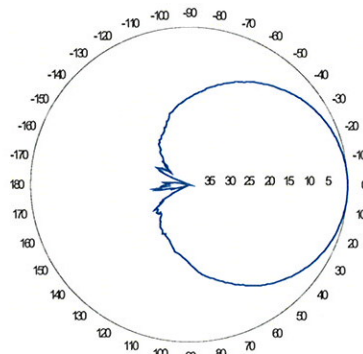
3) NE indicates an elongated N connector.

E-DIN indicates an elongated DIN connector.

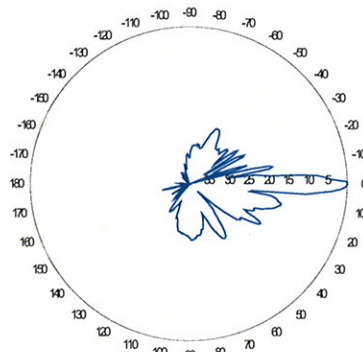
4) The antenna weight listed above does not include the bracket weight.

Improvements to mechanical and/or electrical performance of the antenna may be made without notice.

Radiation pattern¹⁾



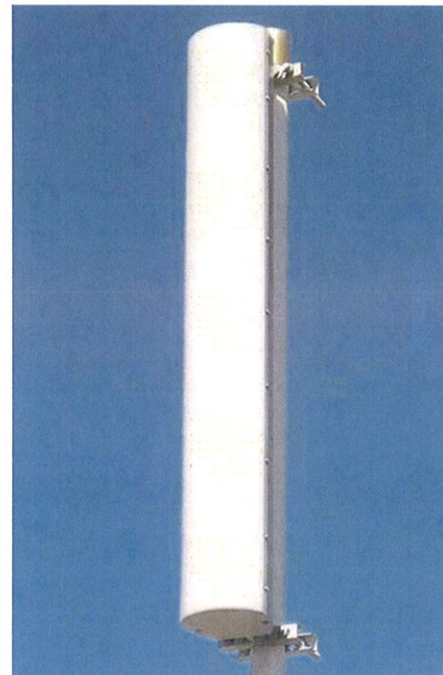
Horizontal



Vertical

Radiation patterns for all antennas are measured with the antenna mounted on a fiberglass pole.

Mounting on a metal pole will typically improve the Front-to-Back ratio.



Amphenol Antel's Exclusive 3T (True Transmission Line Technology) Antenna Design:

- True log-periodic design allows for superior front-to-side characteristics to minimize sector overlap.
- Unique feedline design eliminates the need for conventional solder joints in the signal path.
- A non-collinear system with access to every radiating element for broad bandwidth and superior performance.
- Air as insulation for virtually no internal signal loss.

This Amphenol Antel antenna is under a five-year limited warranty for repair or replacement.

Antenna available with center-fed connector only.

CF Denotes a Center-Fed Connector.

1850-1990 MHz

Amphenol Antel, Inc.
The Antenna Technology Company

Revision Date: 712/07

Slant $\pm 45^\circ$ Dual Polarized FET Panel 63° / 14.5 dBd 696-900 MHz

Mechanical specifications

Length	1804 mm	71.0 in
Width	285 mm	11.2 in
Depth	114 mm	4.5 in
Depth with z-bracket	154 mm	6.1 in
Weight ⁴⁾	7.9 kg	17.0 lbs
Wind Area Fore/Aft	0.51 m ²	5.5 ft ²
Wind Area Side	0.21 m ²	2.2 ft ²
Max Wind Survivability	>201 km/hr	>125 mph
Wind Load @ 100 mph (161 km/hr)		
Fore/Aft	753 N	169 lbf
Side	351 N	79 lbf

Antenna consisting of aluminum alloy with brass feedlines covered by a UV safe fiberglass radome.

Mounting & Downtilting

Mounting hardware attaches to pipe diameter $\varnothing 50$ -160 mm; $\varnothing 2.0$ -6.3 in

Mounting Bracket Kit	36210002
Downtilt Bracket Kit	36114003

Electrical specifications

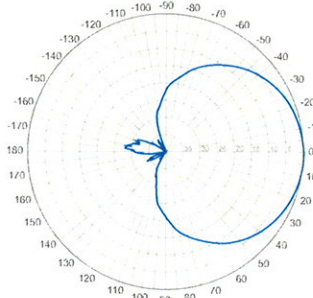
Frequency Range	696-900 MHz
Impedance	50 Ω
Connector ³⁾	NE or E-DIN Female 2 ports / Center
VSWR ¹⁾	$\leq 1.35:1$
Polarization	Slant $\pm 45^\circ$
Isolation Between Ports ¹⁾	< -25 dB
Gain ¹⁾	14.5 dBd 16.5 dBi
Power Rating ²⁾	500 W
Half Power Angle ¹⁾	
Horizontal Beamwidth	63 $^\circ$
Vertical Beamwidth	11 $^\circ$
Electrical downtilt ⁵⁾	0 $^\circ$
Null fill ¹⁾	5%
Lightning protection	Direct ground

Patented Dipole Design: U.S. Patent No. 6,608,600 B2

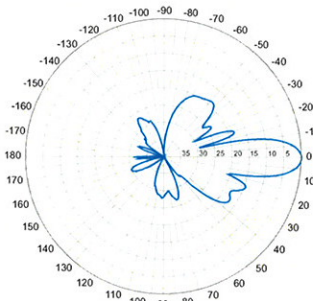
- 1) Typical values.
- 2) Power rating limited by connector only.
- 3) NE indicates an elongated N connector. E-DIN indicates an elongated DIN connector.
- 4) Antenna weight does not include brackets.
- 5) Add'l downtilts may be available. Check website for details.

Improvements to mechanical and/or electrical performance of the antenna may be made without notice.

Radiation-pattern¹⁾
750 MHz

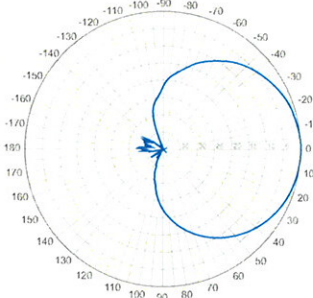


Horizontal

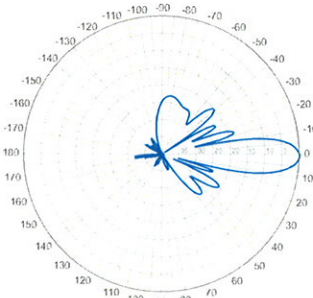


Vertical

850 MHz



Horizontal

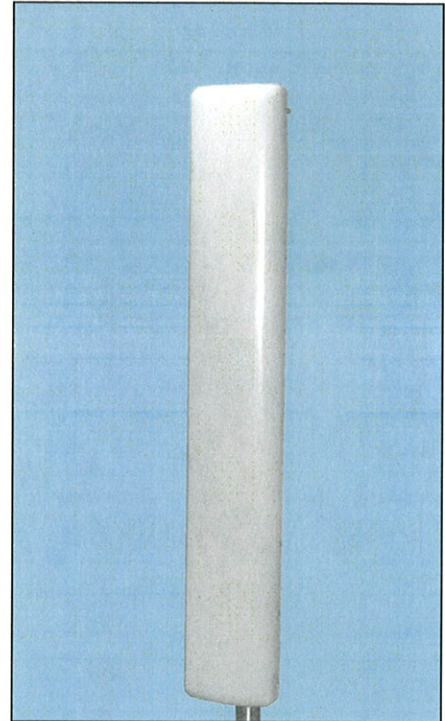


Vertical

696-900 MHz

BXA-70063/6CF

When ordering replace "___" with connector type.



Featuring our Exclusive
3T Technology™
Antenna Design:

- Watercut brass feedline assembly for consistent performance.
- Unique feedline design eliminates the need for conventional solder joints in the signal path.
- A non-collinear system with access to every radiating element for broad bandwidth and superior performance.
- Air as insulation for virtually no internal signal loss.

Warranty:

This antenna is under a five-year limited warranty for repair or replacement.

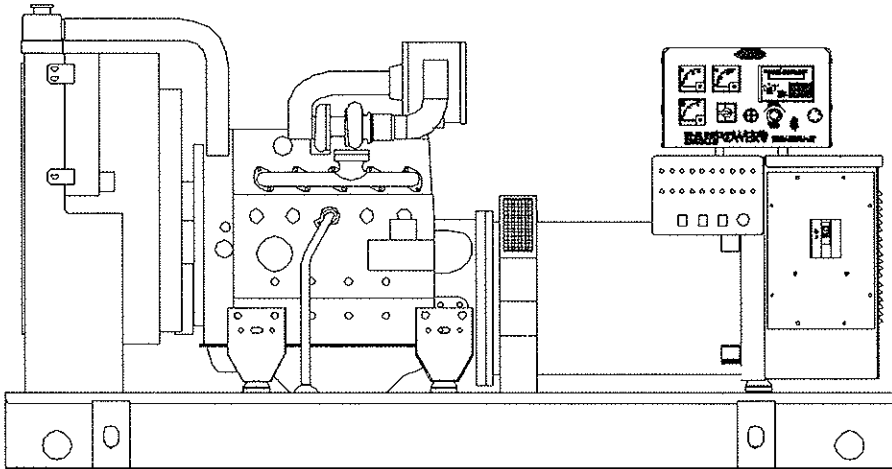
Revision Date: 01/08/09

SD060

Liquid Cooled Diesel Engine Generator Sets

Standby Power Rating
60KW 60 Hz

Prime Power Rating
48KW 60 Hz



Power Matched
DEERE 3.0 DTA ENGINE
Turbocharged / Aftercooled

VERIZON WIRELESS
60 kW Diesel Models:
04812-3 120/240 1ø Open Set
04813-3 120/208 1ø Acoustic Enclosed
04864-3 120/208 3ø Open Set
04865-3 120/208 3ø Acoustic Enclosed

FEATURES

- **INNOVATIVE DESIGN & PROTOTYPE TESTING** are key components of GENERAC'S success in "IMPROVING POWER BY DESIGN." But it doesn't stop there. Total commitment to component testing, reliability testing, environmental testing, destruction and life testing, plus testing to applicable CSA, NEMA, EGSA, and other standards, allows you to choose GENERAC POWER SYSTEMS with the confidence that these systems will provide superior performance.
- **TEST CRITERIA:**
 - ✓ PROTOTYPE TESTED
 - ✓ SYSTEM TORSIONAL TESTED
 - ✓ ELECTRO-MAGNETIC INTERFERENCE
 - ✓ NEMA MG1-22 EVALUATION
 - ✓ MOTOR STARTING ABILITY
 - ✓ SHORT CIRCUIT TESTING
 - ✓ UL 2200
- **SOLID-STATE, FREQUENCY COMPENSATED VOLTAGE REGULATION.** This state-of-the-art power maximizing regulation system is standard on all Generac models. It provides optimized
- FAST RESPONSE to changing load conditions and MAXIMUM MOTOR STARTING CAPABILITY by electronically torque-matching the surge loads to the engine.
- **SINGLE SOURCE SERVICE RESPONSE** from Generac's dealer network provides parts and service know-how for the entire unit, from the engine to the smallest electronic component. You are never on your own when you own an GENERAC POWER SYSTEM.
- **ECONOMICAL DIESEL POWER.** Low cost operation due to modern diesel engine technology. Better fuel utilization plus lower cost per gallon provide real savings.
- **LONGER ENGINE LIFE.** Generac heavy-duty diesels provide long and reliable operating life.
- **GENERAC TRANSFER SWITCHES, SWITCHGEAR AND ACCESSORIES.** Long life and reliability is synonymous with GENERAC POWER SYSTEMS. One reason for this confidence is that the GENERAC product line includes its own transfer systems, accessories, switchgear and controls for total system compatibility.

GENERAC®
POWER SYSTEMS, INC.

APPLICATION & ENGINEERING DATA

SD060

GENERATOR SPECIFICATIONS

TYPE	Four-pole, revolving field
ROTOR INSULATION	Class H
STATOR INSULATION	Class H
TOTAL HARMONIC DISTORTION	<3%
TELEPHONE INTERFERENCE FACTOR (TIF)	<50
ALTERNATOR	Self-ventilated and drip-proof
BEARINGS (PRE-LUBED & SEALED)	1
COUPLING	Direct, Flexible Disc
LOAD CAPACITY (STANDBY)	100%
LOAD CAPACITY (PRIME)	110%

NOTE: Emergency loading in compliance with NFPA 99, NFPA 110, paragraph 5-13.2.6. Generator rating and performance in accordance with ISO8528-5, BS5514, SAE J1349, ISO3046 and DIN6271 standards.

EXCITATION SYSTEM

<input type="checkbox"/> BRUSHLESS	Magnetically coupled DC current ✓
	Eight-pole exciter w/ battery-driven field boost ✓
	Mounted outboard of main bearing ✓
<input type="checkbox"/> PERMANENT MAGNET EXCITER	Eighteen pole exciter ✓
	Magnetically coupled DC current ✓
	Mounted outboard of main bearing ✓
REGULATION	Solid-state ✓
	±1% regulation ✓

GENERATOR FEATURES

- Four pole, revolving field generator, directly connected to the engine shaft through a heavy-duty, flexible disc for permanent alignment.
- Generator meets the temperature rise standards for class "F" insulation as defined by NEMA MG1-32.6, while the insulation system meets the requirements for the higher class "H" rating.
- All prototype models have passed a three-phase symmetrical short circuit test to assure system protection and reliability.
- All prototype models are tested for motor starting ability by measuring the instantaneous voltage dip with a waveform data acquisition system.
- All models utilize an advanced wire harness design for reliable interconnection within the circuitry.
- Magnetic circuit, including amortisseur windings, tooth and skewed stator design, provides a minimal level of waveform distortion and an electromagnetic interference level which meets accepted requirements for standard AM radio, TV, and marine radio telephone applications.
- Voltage waveform deviation, total harmonic content of the AC waveform, and T.I.F. (Telephone Influence Factor) have been evaluated to acceptable standards in accordance with NEMA MG1-32.
- Alternator is self-ventilated and drip-proof constructed.
- Fully life-tested protective systems, including "field circuit and thermal overload protection" and optional main-line circuit breakers capable of handling full output capacity.
- System Torsional acceptability confirmed during Prototype Testing.

ENGINE SPECIFICATIONS

MAKE	GENERAC/DEERE
MODEL	5030HF270
CYLINDERS	5
DISPLACEMENT	3.0 Liter (186 cu.in.)
BORE	108 mm (4.25 in.)
STROKE	130 mm (5.12 in.)
COMPRESSION RATIO	18:1
INTAKE AIR	Turbocharged/Aftercooled
NUMBER OF MAIN BEARINGS	5
CONNECTING RODS	5-Drop Forged Steel
CYLINDER HEAD	Cast Iron
PISTONS	5-Aluminum Alloy
CRANKSHAFT	Die Forged, Induction Hardened Steel

VALVE TRAIN

LIFTER TYPE	Solid
INTAKE VALVE MATERIAL	Heat Resistant Steel
EXHAUST VALVE MATERIAL	Heat Resistant Steel
HARDENED VALVE SEATS	Replaceable

ENGINE GOVERNOR

<input type="checkbox"/> ELECTRONIC	Standard
FREQUENCY REGULATION, NO-LOAD TO FULL LOAD ...	0.5%
STEADY STATE REGULATION	±0.33%

LUBRICATION SYSTEM

TYPE OF OIL PUMP	Gear
OIL FILTER	Full flow, Cartridge
CRANKCASE CAPACITY	11 Liters (11.7 qts.)

COOLING SYSTEM

TYPE OF SYSTEM	Pressurized, Closed Recovery
WATER PUMP	Pre-Lubed, Self-Sealing
TYPE OF FAN	Pusher
NUMBER OF FAN BLADES	6
DIAMETER OF FAN	560 mm (22 in.)
COOLANT HEATER	120V, 1800 W

FUEL SYSTEM

FUEL	#2D Fuel (Min Cetane #40)
	(Fuel should conform to ASTM Spec.)
FUEL FILTER	5 Micron
FUEL INJECTION PUMP	Bosch, Unit type cam driven
FUEL PUMP	Mechanical
INJECTORS	Multi-Hole, Nozzle Type
ENGINE TYPE	Direct Injection
FUEL LINE (Supply)	6.35 mm (0.25 in.)
FUEL RETURN LINE	6.35 mm (0.25 in.)

ELECTRICAL SYSTEM

BATTERY CHARGE ALTERNATOR	20 Amps at 12 V
STARTER MOTOR	12 V
RECOMMENDED BATTERY	12 Volt, 90 A.H., 27F
GROUND POLARITY	Negative

Rating definitions - Standby: Applicable for supplying emergency power for the duration of the utility power outage. No overload capability is available for this rating. (All ratings in accordance with BS5514, ISO3046 and DIN6271). Prime (Unlimited Running Time): Applicable for supplying electric power in lieu of commercially purchased power. Prime power is the maximum power available at variable load. A 10% overload capacity is available for 1 hour in 12 hours. (All ratings in accordance with BS5514, ISO3046, ISO8528 and DIN6271).

SD060

OPERATING DATA

	STANDBY		PRIME	
	SD060		SD060	
GENERATOR OUTPUT VOLTAGE/KW-60Hz 120/240V, 1-phase, 1.0 pf 120/208V, 3-phase, 0.8 pf	<u>Rated AMP</u>		<u>Rated AMP</u>	
NOTE: Consult your Generac dealer for additional voltages.	60	250	48	200
	60	208	48	166
MOTOR STARTING KVA Maximum at 35% instantaneous voltage dip with optional alternator; 60 Hz	<u>120/208/240V</u> 164		<u>120/208/240V</u> 164	
FUEL Fuel consumption—60 Hz	Load			
	gal./hr.	<u>100%</u>	<u>80%</u>	<u>100%</u>
	liters/hr.	4.8	3.8	4.1
Fuel pump lift		18.2	14.4	15.5
		36"		36"
COOLING Coolant capacity	System - lit. (US gal.)	17.0 (4.5)		17.0 (4.5)
	Engine - lit. (US gal.)	10.4 (2.75)		10.4 (2.75)
Coolant flow/min.	60 Hz - lit. (US gal.)	106 (28)		106 (28)
Heat rejection to coolant 60 Hz full load	BTU/hr.	120,500		96,500
Inlet air to radiator	60 Hz - m ³ /min. (cfm)	212 (7,500)		212 (7,500)
Max. air temperature to radiator	°C (°F)	60 (140)		60 (140)
Max. ambient temperature	°C (°F)	48.9 (120)		48.9 (120)
COMBUSTION AIR REQUIREMENTS Flow at rated power	60 Hz - cfm	209		168
EXHAUST Exhaust flow at rated output	60 Hz - m ³ /min. (cfm)	18 (533)		15.3 (450)
Max recommended back pressure	"Hg	1.5		1.5
Exhaust temperature 60 Hz (full load)	°C (°F)	524 (975)		459 (858)
Exhaust outlet size		3.0" O.D.		3.0" O.D.
ENGINE Rated RPM	60 Hz	1800		1800
HP at rated KW	60 Hz	96		80
Piston speed	60 Hz - ft./min.	1230		1230
BMEP	60 Hz - psi	227		189
DERATION FACTORS Temperature				
	5% for every 10°C above - °C	25		25
	2.77% for every 10°F above - °F	77		77
Altitude				
	1.1% for every 100 m above - m	1067		1067
	3.5% for every 1000 ft. above - ft.	3500		3500

STANDARD ENGINE & SAFETY FEATURES

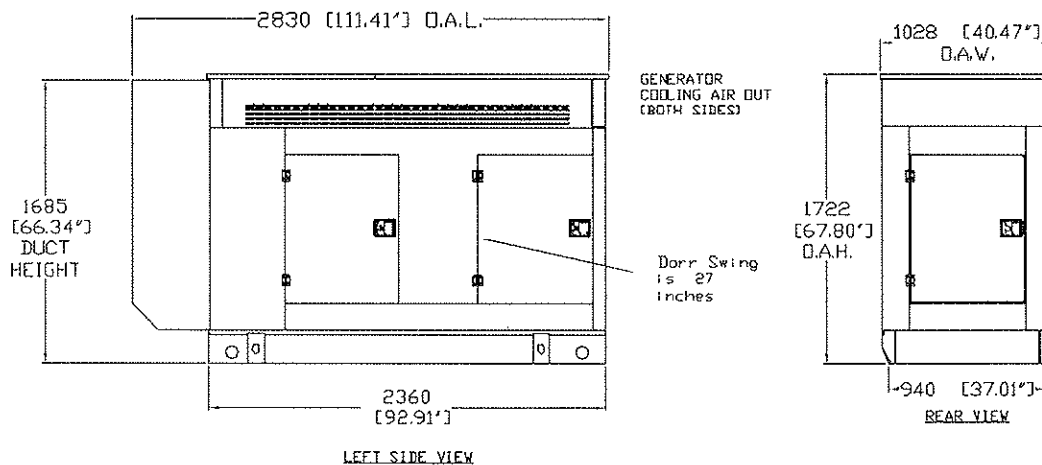
SD060

- High Coolant Temperature Automatic Shutdown
- Low Coolant Level Automatic Shutdown
- Low Oil Pressure Automatic Shutdown
- Overspeed Automatic Shutdown (Solid-state)
- Crank Limiter (Solid-state)
- Oil Drain Extension
- Radiator Drain Extension
- Factory-Installed Cool Flow Radiator
- Closed Coolant Recovery System
- UV/Ozone Resistant Hoses
- Rubber-Booted Engine Electrical Connections
- Secondary Fuel Filter
- Fuel Shutdown Solenoid
- Batteries 2 - 12 Volt 90 AH
- Stainless Steel Flexible Exhaust Connection
- Battery Charge Alternator
- Battery Cables
- Composite Battery Box
- Vibration Isolation of Unit to Mounting Base
- 24 Volt, Solenoid-Activated Starter Motor
- Air Cleaner
- Air Cleaner Service Indicator
- Fan Guard (CSA Compliant)
- CSA Guarding
- Critical Grade Muffler (Shipped Loose With Open Unit)
- High Temperature Exhaust Wrap
- Alternator Tropicalization
 - Resists Moisture, Fungus and Abrasives
 - In Addition to Standard Class H Epoxy Impregnation Coating
- Upsized Alternator For Increased Motor Starting
- Propylene Glycol 50/50 Mix Antifreeze
- Oil (19.0 Quarts)
- Coolant Expansion and Recovery Tank
- Extended Factory Test (2.5 Hr.)
 - Stepped Loads
 - Frame Temperature Test
- Specification Sheet Does Not Reflect Any Verizon Wireless Corporate Authorized Variances.
- "E" Control Console -- Digital/Analog Hybrid
 - Communication Software for Remote Access
 - Analog Reading AC Volts
 - Analog Reading AC Amps
 - Analog Frequency
 - Emergency Stop Button
- Audible Alarm
- 11 Gauge Control Panel Enclosure
- Programmable Engine Control (See Bulletin #0161310SBY For Details)
- 20 Light Annunciator Generator Alarms
- 8 Form C Dry Contact Output Relays
- 120 Volt Coolant Heater 1800 Watt with 3 Wire Connection Cord
- Mainline Circuit Breaker
 - 200 Amp & 100 Amp -- 120/240 Single Phase
 - 200 Amp & 50 Amp -- 120/208 Three Phase
- Flexible Fuel Lines
- Fuel Pressure Loss Protection System
- UL2200 Listed
- Basetank
 - 48 Hr. Runtime at 100% Load
 - Double Wall
 - 125% Engine Fluid Containment and Alarms of all Generator Liquids
 - Fuel Level Sender and Visible Level Gauge
 - Rupture Basin Alarm
 - Emergency Vents
 - Check Valve (inlet and return)
 - FM Fusible Link (165°F) Shutoff
 - UL 142 Listed
 - Southern California limitation of 52 gallons
- Consult State and Local Codes for Specific Requirements in your area.
- Five Year Extended Warranty
- Enclosure Options
 - Open Generator Set w/ Duct Adapter
 - Weather Protective Sound Attenuated Enclosure w/ Enclosed Critical Grade Muffler and Flex Exhaust
- 24V Duel-Rate 10 Amp Battery Charger With 120V 3 Wire Connection Cord

Distributed by:

Design and specifications subject to change without notice. Dimensions shown are approximate. Contact your Generac dealer for certified drawings. DO NOT USE THESE DIMENSIONS FOR INSTALLATION PURPOSES.

See Installation Drawing # E3700 For Details

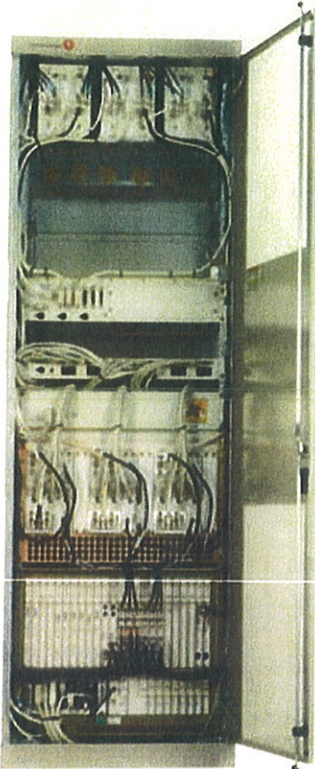


GENERAC POWER SYSTEMS, INC. • P.O. BOX 8 • WAUKESHA, WI 53187

262/544-4811 • FAX 262/544-4851

Lucent CDMA Modular Cell 4.0B Indoor

For CDMA Networks



Lucent CDMA Modular Cell 4.0B is a high capacity base station equipped with the state-of-the-art technologies developed by Bell Labs. The product brings you outstanding carrier density and immediate OPEX savings. This indoor product can support up to 8 carriers/3 sectors per frame. It is twice the density of Modular Cell 4.0 (indoor). Modular Cell 4.0B offers full spectrum coverage in a single frame, dramatically simplifying growth patterns. As the leader in spread spectrum technology, Lucent Technologies continues to introduce innovations to the market: Multi-Carrier Radio (15MHz), Block Filters/Wideband Filters, and 40W Power Amplifier Modules are the latest assets integrated in the base station.

Features

The Modcell 4.0B indoor version offers a small footprint with exceptional carrier density in a standard ETSI cabinet.

- Indoor Single Frame Configuration
- 1-8 carriers per frame at 3 sectors (will support up to 11 carriers with Auxiliary Amplifier Frame)
- Dual Band: one cell to the ECP & mobile
- Close Loop Gain Control
- Timing and Controller Redundancy
- Integrated Power option
- Support CDMA2000™1X, and EV-DO Rev.0, with future support to EV-DO Rev. A
- IP Backhaul and Ethernet Backhaul capable
- 6-Sector option ready
- Intelligent Antenna option ready

Benefits

- Optimized for highest carrier density, smooth growth in one frame
- Conserves indoor footprint, reducing hardware and floor space requirements
- Minimizes configuration complexity
- Software-Only Carrier Add at certain carrier counts
- Flexible channel growth planning
- Designed to use existing power supply
- Grow CDMA carriers on only 2 antennas/sector
- Multi-Carrier Radio (15MHz), Block Filters/Wideband Filters, and 40W Power Amplifier Modules



Technical Specifications

Description	Specification
1. Configurations	
a. Sectors	3, 4 and 6
b. Carriers	1–8 per frame at 3 sectors (up to 11 with Auxiliary Amplifier Frame)
2. CDMA Channel Card Capacity	12 slots; CMU IVB capable
3. T1, E1 Facilities	Maximum of 20 per cabinet when equipped with URC-II's
4. User Alarms	7 Power Alarms, 25 User Alarms
5. GPS Antenna	Yes
6. Air Interface Standards	T1A/E1A 95-A plus TSB-74; T1A/E1A 95-B for 850 MHz; CDMA 2000
7. Frequency Bands	850MHz/1900 MHz; 300 to 2100 MHz capable
8. Vocoder	8 Kbps; 8 Kbps EVRC; 13 Kbps; SMV-ready
9. Environmental Cabinet Housing	Standard ETSI cabinet; UL50 compliant; zero rear clearance
10. Cabinet Access	Front Access
11. Operating Temperature Range	Range: -5 to +40°C (continuous)
12. Dimensions	600 mm W x 600 mm D x 1880 mm H (23.6 x 23.6 x 74) inches
13. Estimated Installed Weight	365 kg (785 lbs.) DC [8 carriers in one cabinet]
14. Power Options	Integrated Power, AC 120/240 Volt Input, -48V or +24 V DC Conversion Non-integrated Power requires either + 24 VDC Input or - 48 VDC Input
15. Power Consumption	
a. 3 Carrier/3 Sectors	2167 W
b. 6 Carrier/3 Sectors	5449 W
c. 11 Carrier/3 Sectors	10026 W
16. RF Power (at J4)	25 W per carrier (850) FCC Rated short-term average 20 W per carrier (850) FCC Rated long-term average 20 W per carrier (1900) FCC Rated short-term average 16 W per carrier (1900) FCC Rated long-term average
17. Minimal Antenna Configuration	2 antennas/sector
18. Filter	Block and Wide Band Dual Duplex
19. Growth Frame	PCS AUX Frame, Dual Band Growth Frame
20. Operational Accessories	Integrated Power
21. Channel Elements	Channel pooling across sectors or carriers

To learn more about our comprehensive portfolio, please contact your Lucent Technologies Sales Representative or visit our web site at <http://www.lucent.com>.

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MOB-Mod4B-i 0106



Site Search Summary
Voluntown Facility
Voluntown, Connecticut

Section 16-50j-74(j) of the Regulations of Connecticut State Agencies requires the submission of a statement that describes “the narrowing process by which other possible sites were considered and eliminated.” In accordance with this requirement, descriptions of the general site search process, the identification of the applicable search area and the alternative locations considered for development of the proposed telecommunications facility in the Town of Voluntown provided below.

Site Search Process

To initiate its site selection process in an area where a coverage or capacity problem has been identified, Cellco first establishes a “site search ring” or “site search area.” In any search ring or search area, Cellco seeks to avoid the unnecessary proliferation of towers and to reduce the potential adverse environmental effects of the cell site, while at the same time maximizing the quality of service provided from a particular facility. These objectives are achieved by initially locating existing towers and other sufficiently tall structures within and near the site search area. If any are found, they are evaluated to determine whether they are capable of supporting Cellco’s telecommunications equipment at a location and elevation that satisfies its technical requirements.

Cellco maintains two (2) telecommunications facilities within approximately four (4) miles of either proposed Voluntown Facilities. Neither of these existing facilities, however, can provide the service needed in the identified problem areas, along portions of Routes 138, 165 and 49, as well as local roads in the easterly portions of Voluntown. (See Attachment 7).

Existing Telecommunication Facilities

	<u>Owner</u> <u>(Cellco Site Name)</u>	<u>Facility</u> <u>Height and Type</u>	<u>Location</u>	<u>Cellco</u> <u>Antenna Height</u>
1.	SBA (Bailey Pond)	180’ Monopole	497 Ekonk Road Voluntown, CT	153’
2.	Sprint (Griswold)	180’ Monopole	1439 Voluntown Road Griswold, CT	157’

If existing towers or structures are not available or technically feasible, other locations are investigated where the construction of a new tower is required to provide adequate elevation to satisfy Cellco’s requirements. The list of available locations may be further reduced if, after preliminary negotiations, the property owners withdraw a site from further consideration. From among the remaining locations, the proposed sites are selected by eliminating those that have

greater potential for adverse environmental effects and fewer benefits to the public (*i.e.*, those requiring taller towers, possibly with lights; those with substantial adverse environmental impacts, or in densely populated residential areas; and those with limited ability to share space with other public or private telecommunications entities). It should be noted that in any given site search, the weight afforded to factors considered in the selection process will vary depending upon the availability and nature of sites within the search area.

Identification of the Voluntown Search Area

The purpose of the proposed Voluntown Facility is to provide reliable PCS, cellular and eventually LTE coverage to significant coverage gaps that have been identified along portions of Routes 138 and 165, and local roads in easterly portions of Voluntown as well as significant portions of the Pachaug State Forest. These coverage gaps were identified using baseline drive data and Cellco's best server propagation modeling tool. This tool is fine-tuned regularly through the use of base-line drive data.

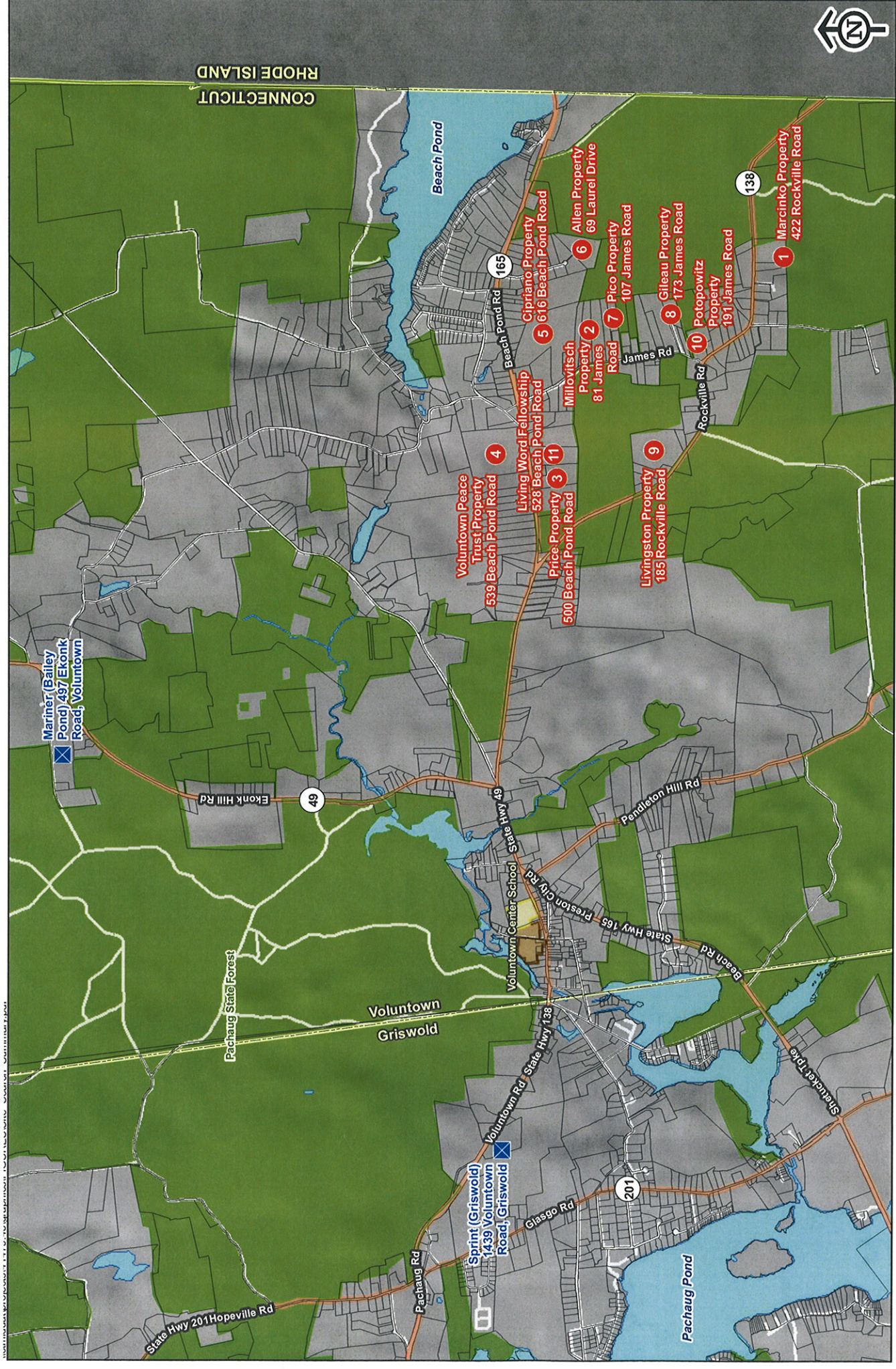
Cellco issued its Voluntown search area in May of 2009. (See attached Search Area Map). As a matter of practice, Cellco's initial site search effort focuses on municipal or other quasi-public properties that might be available and appropriate locations for a telecommunications facility. If no public properties are available, Cellco investigates private land within or near the designated search area.

Sites Investigated in the Voluntown Area

In addition to the existing and approved communications facilities listed above, Cellco identified and investigated eleven (11) sites in Voluntown. The sites investigated include:

1. Marcinko Property (Site 1) – 422 Rockville Road, Voluntown, Connecticut. Cellco investigated and ultimately signed a lease for the use of a portion of this 11.2 acre parcel at 422 Rockville Road in Voluntown. The proposed cell site area maintains a ground elevation of approximately 480 feet AMSL. Cellco can satisfy its coverage objectives in the area from this location with antennas located at 160 feet above ground level.
2. Millovitsch Property (Site 2) – 81 James Road, Voluntown, Connecticut. Cellco investigated and ultimately signed a lease for the use of a portion of this 9.5 acre parcel at 81 James Road. The proposed cell site area maintains a ground elevation of approximately 442 feet AMSL. Cellco can satisfy its coverage objectives from this location with antennas located 160 feet above ground level.
3. Price Property – 500 Beach Pond Road, Voluntown, Connecticut. This property maintains extensive wetland areas that significantly limit the area where a cell site might be developed. Concern for wetland impacts is the reason this site was rejected.

4. Voluntown Peace Trust Property – 539 Beach Pond Road, Voluntown, Connecticut. The property owner did not respond to correspondence and telephone calls from Cellco’s real estate representatives.
5. Cipriano Property – 616 Beach Pond Road, Voluntown, Connecticut. The property owner did not respond to correspondence and telephone calls from Cellco’s real estate representatives.
6. Allen Property – 69 Laurel Drive, Voluntown, Connecticut. This property maintains extensive wetland areas that significantly limit the area where a cell site might be developed. Upland areas on this parcel were either unsuitable or not accessible. Concern for wetland impacts is the reason why this site was rejected.
7. Pico Property – 107 James Road, Voluntown, Connecticut. This site was rejected due to extensive wetland areas located on the property and the property owner’s unwillingness to lease land to Cellco for a tower site.
8. Gileau Property – 173 James Road, Voluntown, Connecticut. This site was rejected due to extensive wetland areas located on the property.
9. Livingston Property – 185 Rockville Road, Voluntown, Connecticut. Like many others in this area, this parcel contained significant wetland areas along its eastern and northerly property boundaries creating the potential for impacts associated with any tower development. Extensive clearing would also be required for road and utility access.
10. Potopowitz Property – 191 James Road, Voluntown, Connecticut. The property owner did not respond to correspondence and telephone calls from Cellco’s real estate representatives.
11. Living Word Fellowship – 528 Beach Pond Road, Voluntown, Connecticut. This site maintains extensive wetland areas that significantly limit the area where a cell site could be developed. Upland areas on this parcel were either unsuitable or not accessible.



Vanasse Hangen Brustlin, Inc.
Site Search Summary Map
Proposed Verizon Wireless Telecommunications Facility
Voluntown Facility
Voluntown, Connecticut

2,000 1,000 0 2,000 Feet

Legend

- 1 Sites Investigated
- Existing Telecommunication Facility
- Assessor Parcel Boundary
- Open Water
- Municipal and Private Open Space
- School
- State Forest/Park

Map Labels:
 Mariner (Bailey Pond) 497 Ekonk Road, Voluntown
 Pachaug State Forest
 Voluntown Griswold
 Sprint (Griswold) 1439 Voluntown Road, Griswold
 State Hwy 201 Hopeville Rd
 Pachaug Rd
 Glasgo Rd
 Voluntown Center School - State Hwy 49
 Preston City Rd
 Pendleton Hill Rd
 State Hwy 165
 Beach Rd
 State Hwy 138
 Stricker Pike
 Beach Pond
 Pachaug Pond
 Beach Pond Rd
 165
 49
 201
 138
 Living Word Fellowship 528 Beach Pond Road
 Millovitsch Property 81 James Road
 Price Property 3 500 Beach Pond Road
 Voluntown Peace Trust Property 539 Beach Pond Road
 Livingston Property 185 Rockville Road
 Allen Property 69 Laurel Drive
 Pico Property 107 James Road
 Gileau Property 173 James Road
 Potopowitz Property 191 James Road
 Marcinko Property 422 Rockville Road
 1



