

Microwave Path Data Sheet

Page 1 of 10

COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147
(858)232-4372 www.comsearch.com

PCN Date: 09/23/2010

Job Number: 100923COMSSL01

New Path

RCN Number: 10092300

Administrative Information

CA-SFO0583A CA
City/County /Alameda
Status / License Basis Engineering Proposal / PRIMARY OPERATION
Call Sign
Licensee Code CLESP3
Licensee Name Clearwire Spectrum Holdings III, LL
Radio Service / Station Class MG -- Microwave Industrial/Business Pool

CA-SFO0303C CA

Fremont/Alameda
Status / License Basis Engineering Proposal / PRIMARY OPERATION
Call Sign
Licensee Code CLESP3
Licensee Name Clearwire Spectrum Holdings III, LL
Radio Service / Station Class FXO -- Fixed

Site Information

Latitude (NAD 83)	37 °29' 57.8" N	37 °31' 50.4" N
Longitude (NAD 83)	121 °52' 21.3" W	121 °56' 14.4" W
Ground Elevation (m/ft-AMSL)	789.90 / 2591.5	62.50 / 205.1
Antenna Structure Registration #		
Path Azimuth (°)	301.254	121.214
Path Length (km / miles)	6.695 / 4.160	

Transmit Antenna

77083A	77083A
Manufacturer ANDREW CORPORATION	ANDREW CORPORATION
Model VHLP2-11A	VHLP2-11A
Gain(dBi) / Beamwidth(°) / Tilt(°) 34.4 / 3.30 / -6.29	34.4 / 3.30 / 6.25
Centerline (m / ft - AGL) 19.81 / 65.0	11.58 / 38.0

Receive Antenna

Same As Transmit

Manufacturer
Model
Gain (dBi) / Beamwidth (°)
Centerline (m / ft - AGL)

Diversity Receive Antenna

Manufacturer
Model
Gain (dBi) / Beamwidth (°)
Centerline (m / ft - AGL)

Radio Information

TEM016	TEM016
Manufacturer DRAGONWAVE INC	DRAGONWAVE INC
Model 11HD40HFC277V02	11HD40HFC277V02
Model Description HORIZON DUO	HORIZON DUO
Emission Designator / Modulation 36M7D7W 256 QAM	36M7D7W 256 QAM
Loading 1 CH DIG 277000.000	1 CH DIG 277000.000
Stability (%) 0.001	0.001
Nominal Coordinated Maximum	Nominal Coordinated Maximum
Power (dBm) 15.5	15.5
Received Level (dBm) -45.7	-45.7
EIRP (dBm) 49.9	49.9
Fixed Loss: Tx / Common (dB) 0.0 / 0.0	0.0 / 0.0
Free Space Loss (dB) 130.0	

Transmit Frequencies (MHz)	11545.0000V(9)	11625.0000V(11)	11055.0000V(9)	11135.0000V(11)
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Microwave Path Data Sheet

Page 2 of 10

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19700 Janelia Farm Boulevard, Ashburn, VA, 20147
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PCN Date: 09/23/2010

Job Number 100923COMSSL01

New Path

RCN Number: 10092300

Administrative Information

CA-SFO0583A CA
City/County /Alameda
Status / License Basis Engineering Proposal / PRIMARY OPERATION
Call Sign
Licensee Code CLESP3
Licensee Name Clearwire Spectrum Holdings III, LL
Radio Service / Station Class MG -- Microwave Industrial/Business Pool

CA-SFO0381A CA

Newark/Alameda
Status / License Basis Engineering Proposal / PRIMARY OPERATION
Call Sign WQLY744
Licensee Code CLESP3
Licensee Name Clearwire Spectrum Holdings III, LL
Radio Service / Station Class FXO -- Fixed

Site Information

Latitude (NAD 83)	37 °29' 57.8" N	37 °31' 19.6" N
Longitude (NAD 83)	121 °52' 21.3" W	121 °59' 27.6" W
Ground Elevation (m/ft-AMSL)	789.90 / 2591.5	10.00 / 32.8
Antenna Structure Registration #		
Path Azimuth (°)	283.579	103.507
Path Length (km / miles)		10.769 / 6.692

Transmit Antenna

70709A	70709A
Manufacturer ANDREW CORPORATION	ANDREW CORPORATION
Model VHLP800-11C	VHLP800-11C
Gain(dBi) / Beamwidth(°) / Tilt(°) 37.4 / 2.10 / -4.13	37.4 / 2.10 / 4.06
Centerline (m / ft - AGL) 19.81 / 65.0	28.96 / 95.0

Receive Antenna

Same As Transmit

Manufacturer
Model
Gain (dBi) / Beamwidth (°)
Centerline (m / ft - AGL)

Diversity Receive Antenna

Manufacturer
Model
Gain (dBi) / Beamwidth (°)
Centerline (m / ft - AGL)

Radio Information

TEM028	TEM028
Manufacturer DRAGONWAVE INC	DRAGONWAVE INC
Model 11HD40HFC212V02	11HD40HFC212V02
Model Description HORIZON DUO	HORIZON DUO
Emission Designator / Modulation 34M4D7W 128 QAM	34M4D7W 128 QAM
Loading 1 CH DIG 212000.000	1 CH DIG 212000.000
Stability (%) 0.001	0.001
Nominal Coordinated Maximum	Nominal Coordinated Maximum
Power (dBm) 16.0	16.0
Received Level (dBm) -43.3	-43.3
EIRP (dBm) 53.4	53.4
Fixed Loss: Tx / Common (dB) 0.0 / 0.0	0.0 / 0.0
Free Space Loss (dB)	134.1

Transmit Frequencies (MHz)	11345.0000H(4)	11425.0000H(6)	10855.0000H(4)	10935.0000H(6)
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Microwave Path Data Sheet

Page 3 of 10

COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147
(858)232-4372 www.comsearch.com

PCN Date: 09/23/2010

Job Number 100923COMSSL01

New Path

RCN Number: 10092300

Administrative Information

CA-SJC0097A CA
City/County Palo Alto/Santa Clara
Status / License Basis Engineering Proposal / PRIMARY OPERATION
Call Sign
Licensee Code CLESP3
Licensee Name Clearwire Spectrum Holdings III, LL
Radio Service / Station Class MG -- Microwave Industrial/Business Pool

CA-SFO0394A CA

Redwood City/San Mateo
Engineering Proposal / PRIMARY OPERATION
CLESP3
Clearwire Spectrum Holdings III, LL
FXO -- Fixed

Site Information

Latitude (NAD 83)	37 °26' 55.3" N	37 °28' 46.6" N
Longitude (NAD 83)	122 °9' 32.5" W	122 °15' 16.9" W
Ground Elevation (m/ft-AMSL)	15.50 / 50.9	32.20 / 105.6
Antenna Structure Registration #		
Path Azimuth (°)	292.098	112.040
Path Length (km / miles)	9.133 / 5.675	

Transmit Antenna

79011R	79011R
MANUFACTURER RADIO WAVES, INC	RADIO WAVES, INC
Model HP3-11	HP3-11
Gain(dBi) / Beamwidth(°) / Tilt(°) 37.6 / 2.20 / -0.28	37.6 / 2.20 / 0.22
Centerline (m / ft - AGL) 82.30 / 270.0	25.91 / 85.0

Receive Antenna

Same As Transmit

Manufacturer
Model
Gain (dBi) / Beamwidth (°)
Centerline (m / ft - AGL)

Diversity Receive Antenna

Manufacturer
Model
Gain (dBi) / Beamwidth (°)
Centerline (m / ft - AGL)

Radio Information

TEMP02	TEMP02
DRAGONWAVE INC	DRAGONWAVE INC
11HD40HFC181V02	11HD40HFC181V02
HORIZON DUO	HORIZON DUO
Emission Designator / Modulation 35M8D7W 64 QAM	35M8D7W 64 QAM
Loading 1 CH DIG 181000.000	1 CH DIG 181000.000
Stability (%) 0.001	0.001
Nominal Coordinated Maximum	Nominal Coordinated Maximum
Power (dBm) 16.5	16.5
Received Level (dBm) -42.6	-42.6
EIRP (dBm) 53.3	53.3
Fixed Loss: Tx / Common (dB) 0.0 / 0.8	0.0 / 0.8
Free Space Loss (dB) 132.7	

Transmit Frequencies (MHz)

10775.0000H(2)	10855.0000H(4)	11265.0000H(2)	11345.0000H(4)
11055.0000V(9)	11135.0000V(11)	11545.0000V(9)	11625.0000V(11)

Microwave Path Data Sheet

Page 4 of 10

COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147
(858)232-4372 www.comsearch.com

PCN Date: 09/23/2010

Job Number 100923COMSSL01

New Path

RCN Number: 10092300

Administrative Information

CA-SFO8551A CA
City/County San Francisco/San Francisco
Status / License Basis Engineering Proposal / PRIMARY OPERATION
Call Sign
Licensee Code CLESP3
Licensee Name Clearwire Spectrum Holdings III, LL
Radio Service / Station Class MG -- Microwave Industrial/Business Pool

CA-SFO0591A CA

San Francisco/San Francisco
Engineering Proposal / PRIMARY OPERATION
WQML676
CLESP3
Clearwire Spectrum Holdings III, LL
FXO -- Fixed

Site Information

Latitude (NAD 83)	37 ° 45' 18.5" N	37 ° 46' 49.5" N
Longitude (NAD 83)	122 ° 27' 10.5" W	122 ° 25' 11.6" W
Ground Elevation (m/ft-AMSL)	251.10 / 823.8	22.90 / 75.1
Antenna Structure Registration #		
Path Azimuth (°)	46.036	226.057
Path Length (km / miles)	4.042 / 2.512	

Transmit Antenna

RB1160	RB1160
RADIO WAVES, INC	RADIO WAVES, INC
HP2-18	HP2-18
Gain(dBi) / Beamwidth(°) / Tilt(°) 38.6 / 2.00 / -4.60	38.6 / 2.00 / 4.57
Centerline (m / ft - AGL) 115.21 / 378.0	19.20 / 63.0

Receive Antenna

Same As Transmit

Manufacturer
Model
Gain (dBi) / Beamwidth (°)
Centerline (m / ft - AGL)

Diversity Receive Antenna

Manufacturer
Model
Gain (dBi) / Beamwidth (°)
Centerline (m / ft - AGL)

Radio Information

TEMR07	TEMR07
DRAGONWAVE INC	DRAGONWAVE INC
18HC50HFC364V03	18HC50HFC364V03
Horizon Compact	Horizon Compact
Emission Designator / Modulation 47M1D7W 256 QAM	47M1D7W 256 QAM
Loading 1 CH DIG 364000.000	1 CH DIG 364000.000
Stability (%) 0.001	0.001
Nominal Coordinated Maximum	Nominal Coordinated Maximum
Power (dBm) 14.6	14.6
Received Level (dBm) -38.2	-38.2
EIRP (dBm) 53.2	53.2
Fixed Loss: Tx / Common (dB) 0.0 / 0.0	0.0 / 0.0
Free Space Loss (dB) 130.0	

Transmit Frequencies (MHz) 18115.0000H(8)

19675.0000H(8)

Microwave Path Data Sheet

Page 5 of 10

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19700 Janelia Farm Boulevard, Ashburn, VA, 20147
(858)232-4372 www.comsearch.com

PCN Date: 09/23/2010

Job Number 100923COMSSL01

New Path

RCN Number: 10092300

Administrative Information

CA-SJC0384A CA
City/County San Jose/Santa Clara
Status / License Basis Engineering Proposal / PRIMARY OPERATION
Call Sign
Licensee Code CLESP3
Licensee Name Clearwire Spectrum Holdings III, LL
Radio Service / Station Class MG -- Microwave Industrial/Business Pool

CA-SJC0276A CA

San Jose/Santa Clara
Engineering Proposal / PRIMARY OPERATION
CLESP3
Clearwire Spectrum Holdings III, LL
FXO -- Fixed

Site Information

Latitude (NAD 83)	37 °21' 54.9" N	37 °19' 49.6" N
Longitude (NAD 83)	121 °49' 41.4" W	121 °53' 18.4" W
Ground Elevation (m/ft-AMSL)	45.90 / 150.6	29.70 / 97.4
Antenna Structure Registration #		
Path Azimuth (°)	234.141	54.105
Path Length (km / miles)	6.591 / 4.096	

Transmit Antenna

87066A	87066A
Manufacturer ANDREW CORPORATION	ANDREW CORPORATION
Model VHLP2.5-23A	VHLP2.5-23A
Gain(dBi) / Beamwidth(°) / Tilt(°) 43.0 / 1.20 / 0.54	43.0 / 1.20 / -0.58
Centerline (m / ft - AGL) 10.67 / 35.0	91.44 / 300.0

Receive Antenna

Same As Transmit

Manufacturer
Model
Gain (dBi) / Beamwidth (°)
Centerline (m / ft - AGL)

Diversity Receive Antenna

Manufacturer
Model
Gain (dBi) / Beamwidth (°)
Centerline (m / ft - AGL)

Radio Information

TEMM57	TEMM57
Manufacturer DRAGONWAVE INC	DRAGONWAVE INC
Model 23HC50HFC215V02	23HC50HFC215V02
Model Description Horizon Compact	Horizon Compact
Emission Designator / Modulation 45M8D7W 64 QAM	45M8D7W 64 QAM
Loading 1 CH DIG 215000.000	1 CH DIG 215000.000
Stability (%) 0.001	0.001
Nominal Coordinated Maximum	Nominal Coordinated Maximum
Power (dBm) 22.5	22.5
Received Level (dBm) -27.2	-27.2
EIRP (dBm) 65.5	65.5
Fixed Loss: Tx / Common (dB) 0.0 / 0.0	0.0 / 0.0
Free Space Loss (dB) 135.7	

Transmit Frequencies (MHz) 23575.0000H(12)

22375.0000H(12)

Microwave Path Data Sheet

Page 6 of 10

COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147
(858)232-4372 www.comsearch.com

PCN Date: 09/23/2010

Job Number 100923COMSSL01

New Path

RCN Number: 10092300

Administrative Information

CA-SJC0402B CA
City/County San Jose/Santa Clara
Status / License Basis Engineering Proposal / PRIMARY OPERATION
Call Sign
Licensee Code CLESP3
Licensee Name Clearwire Spectrum Holdings III, LL
Radio Service / Station Class MG -- Microwave Industrial/Business Pool

CA-SJC0173C CA

San Jose/Santa Clara
Engineering Proposal / PRIMARY OPERATION
CLESP3
Clearwire Spectrum Holdings III, LL
FXO -- Fixed

Site Information

Latitude (NAD 83)	37 °20' 2.0" N	37 °22' 20.2" N
Longitude (NAD 83)	121 °53' 45.9" W	121 °55' 32.2" W
Ground Elevation (m/ft-AMSL)	26.50 / 86.9	12.40 / 40.7
Antenna Structure Registration #		
Path Azimuth (°)	328.458	148.440
Path Length (km / miles)	5.000 / 3.107	

Transmit Antenna

RB2999
Manufacturer RADIO WAVES, INC
Model HP4-23
Gain(dBi) / Beamwidth(°) / Tilt(°) 46.2 / 0.80 / -0.28
Centerline (m / ft - AGL) 39.62 / 130.0

87066A
ANDREW CORPORATION
VHLP2.5-23A
43.0 / 1.20 / 0.25
30.48 / 100.0

Receive Antenna

Same As Transmit

Manufacturer
Model
Gain (dBi) / Beamwidth (°)
Centerline (m / ft - AGL)

Diversity Receive Antenna

Manufacturer
Model
Gain (dBi) / Beamwidth (°)
Centerline (m / ft - AGL)

Radio Information

TEMQ48
Manufacturer DRAGONWAVE INC
Model 23HD50HFC322V02
Model Description HORIZON DUO
Emission Designator / Modulation 45M8D7W 256 QAM
Loading 1 CH DIG 322000.000
Stability (%) 0.001
Nominal Coordinated Maximum
Power (dBm) 9.0
Received Level (dBm) -35.1
EIRP (dBm) 55.2
Fixed Loss: Tx / Common (dB) 0.0 / 0.0
Free Space Loss (dB) 133.3

TEMQ48
DRAGONWAVE INC
23HD50HFC322V02
HORIZON DUO
45M8D7W 256 QAM
1 CH DIG 322000.000
0.001
Nominal Coordinated Maximum
9.0
-35.1
52.0
0.0 / 0.0

Transmit Frequencies (MHz)	23425.0000H(9)	23525.0000H(11)	22225.0000H(9)	22325.0000H(11)
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Microwave Path Data Sheet

Page 7 of 10

COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147
(858)232-4372 www.comsearch.com

PCN Date: 09/23/2010

Job Number 100923COMSSL01

New Path

RCN Number: 10092300

Administrative Information

CA-SJC0047A CA
City/County Sunnyvale/Santa Clara
Status / License Basis Engineering Proposal / PRIMARY OPERATION
Call Sign WQLY438
Licensee Code CLESP3
Licensee Name Clearwire Spectrum Holdings III, LL
Radio Service / Station Class MG -- Microwave Industrial/Business Pool

CA-SJC0274A CA

Santa Clara/Santa Clara
Engineering Proposal / PRIMARY OPERATION
WQMD455
CLESP3
Clearwire Spectrum Holdings III, LL
FXO -- Fixed

Site Information

Latitude (NAD 83)	37 °24' 30.1" N	37 °23' 16.4" N
Longitude (NAD 83)	122 °1' 28.8" W	121 °58' 25.9" W
Ground Elevation (m/ft-AMSL)	3.60 / 11.8	9.90 / 32.5
Antenna Structure Registration #	1016420	
Path Azimuth (°)	116.782	296.812
Path Length (km / miles)	5.040 / 3.132	

Transmit Antenna

RB2999	87066A
RADIO WAVES, INC	ANDREW CORPORATION
HP4-23	VHLP2.5-23A
Gain(dBi) / Beamwidth(°) / Tilt(°) 46.2 / 0.80 / 0.23	43.0 / 1.20 / -0.26
Centerline (m / ft - AGL) 22.86 / 75.0	38.10 / 125.0

Receive Antenna

Same As Transmit

Manufacturer
Model
Gain (dBi) / Beamwidth (°)
Centerline (m / ft - AGL)

Diversity Receive Antenna

Manufacturer
Model
Gain (dBi) / Beamwidth (°)
Centerline (m / ft - AGL)

Radio Information

TEMQ47	TEMQ47
DRAGONWAVE INC	DRAGONWAVE INC
23HD50HFC271V02	23HD50HFC271V02
HORIZON DUO	HORIZON DUO
Emission Designator / Modulation 47M8D7W 128 QAM	47M8D7W 128 QAM
Loading 1 CH DIG 271000.000	1 CH DIG 271000.000
Stability (%) 0.001	0.001
Nominal Coordinated Maximum	Nominal Coordinated Maximum
Power (dBm) 17.0	17.0
Received Level (dBm) -27.2	-27.2
EIRP (dBm) 63.2	60.0
Fixed Loss: Tx / Common (dB) 0.0 / 0.0	0.0 / 0.0
Free Space Loss (dB) 133.4	

Transmit Frequencies (MHz)	21925.0000H(3)	22025.0000H(5)	23125.0000H(3)	23225.0000H(5)
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Microwave Path Data Sheet

Page 8 of 10

COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147
(858)232-4372 www.comsearch.com

PCN Date: 09/23/2010

Job Number 100923COMSSL01

New Path

RCN Number: 10092300

Administrative Information

CA-SJC0198A CA
City/County Milpitas/Santa Clara
Status / License Basis Engineering Proposal / PRIMARY OPERATION
Call Sign WQMA289
Licensee Code CLESP3
Licensee Name Clearwire Spectrum Holdings III, LL
Radio Service / Station Class MG -- Microwave Industrial/Business Pool

CA-SJC0031A CA

City/County Milpitas/Santa Clara
Status / License Basis Engineering Proposal / PRIMARY OPERATION
Licensee Code CLESP3
Licensee Name Clearwire Spectrum Holdings III, LL
Radio Service / Station Class FXO -- Fixed

Site Information

Latitude (NAD 83)	37 °26' 5.4" N	37 °25' 21.6" N
Longitude (NAD 83)	121 °53' 31.1" W	121 °55' 8.8" W
Ground Elevation (m/ft-AMSL)	9.40 / 30.8	6.90 / 22.6
Antenna Structure Registration #		
Path Azimuth (°)	240.665	60.649
Path Length (km / miles)	2.756 / 1.712	

Transmit Antenna

Manufacturer	RD1150	RD1150
Model	RADIO WAVES, INC	RADIO WAVES, INC
Gain(dBi) / Beamwidth(°) / Tilt(°)	HP2-23	HP2-23
Centerline (m / ft - AGL)	40.2 / 1.70 / 0.26	40.2 / 1.70 / -0.27
	25.91 / 85.0	41.15 / 135.0

Receive Antenna

Same As Transmit

Manufacturer
Model
Gain (dBi) / Beamwidth (°)
Centerline (m / ft - AGL)

Diversity Receive Antenna

Manufacturer
Model
Gain (dBi) / Beamwidth (°)
Centerline (m / ft - AGL)

Radio Information

Manufacturer	TEMU72	TEMU72
Model	DRAGONWAVE INC	DRAGONWAVE INC
Model Description	23HA50HFC322V01	23HA50HFC322V01
Emission Designator / Modulation	Horizon Duo-Adj Channel	Horizon Duo-Adj Channel
Loading	45M8D7W 256 QAM	45M8D7W 256 QAM
Stability (%)	1 CH DIG 322000.000	1 CH DIG 322000.000
	0.001	0.001
	Nominal Coordinated Maximum	Nominal Coordinated Maximum
Power (dBm)	12.0	12.0
Received Level (dBm)	-35.8	-35.8
EIRP (dBm)	52.2	52.2
Fixed Loss: Tx / Common (dB)	0.0 / 0.0	0.0 / 0.0
Free Space Loss (dB)		128.2

Transmit Frequencies (MHz)	23525.0000V(11)	23575.0000V(12)	22325.0000V(11)	22375.0000V(12)
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Microwave Path Data Sheet

Page 9 of 10

COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147
(858)232-4372 www.comsearch.com

PCN Date: 09/23/2010

Job Number 100923COMSSL01

New Path

RCN Number: 10092300

Administrative Information

CA-SFO0126A CA
City/County Oakland/Alameda
Status / License Basis Engineering Proposal / PRIMARY OPERATION
Call Sign WQLY415
Licensee Code CLESP3
Licensee Name Clearwire Spectrum Holdings III, LL
Radio Service / Station Class MG -- Microwave Industrial/Business Pool

CA-SFO0135A CA

City/County Oakland/Alameda
Status / License Basis Engineering Proposal / PRIMARY OPERATION
Call Sign WQLY382
Licensee Code CLESP3
Licensee Name Clearwire Spectrum Holdings III, LL
Radio Service / Station Class FXO -- Fixed

Site Information

Latitude (NAD 83)	37 ° 50' 2.0" N	37 ° 48' 57.6" N
Longitude (NAD 83)	122 ° 15' 50.4" W	122 ° 17' 0.7" W
Ground Elevation (m/ft-AMSL)	31.70 / 104.0	3.80 / 12.5
Antenna Structure Registration #		
Path Azimuth (°)	220.895	40.883
Path Length (km / miles)	2.626 / 1.632	

Transmit Antenna

87205A	80014A
Manufacturer ANDREW CORPORATION	ANDREW CORPORATION
Model VHLP2-23B	VHLP1-23A
Gain(dBi) / Beamwidth(°) / Tilt(°) 40.5 / 1.70 / -0.50	35.3 / 3.00 / 0.48
Centerline (m / ft - AGL) 21.95 / 72.0	27.43 / 90.0

Receive Antenna

Same As Transmit

Manufacturer
Model
Gain (dBi) / Beamwidth (°)
Centerline (m / ft - AGL)

Diversity Receive Antenna

Manufacturer
Model
Gain (dBi) / Beamwidth (°)
Centerline (m / ft - AGL)

Radio Information

TEMQ48	TEMQ48
Manufacturer DRAGONWAVE INC	DRAGONWAVE INC
Model 23HD50HFC322V02	23HD50HFC322V02
Model Description HORIZON DUO	HORIZON DUO
Emission Designator / Modulation 45M8D7W 256 QAM	45M8D7W 256 QAM
Loading 1 CH DIG 322000.000	1 CH DIG 322000.000
Stability (%) 0.001	0.001
Nominal Coordinated Maximum	Nominal Coordinated Maximum
Power (dBm) 17.5	17.5
Received Level (dBm) -34.4	-34.4
EIRP (dBm) 58.0	52.8
Fixed Loss: Tx / Common (dB) 0.0 / 0.0	0.0 / 0.0
Free Space Loss (dB) 127.7	

Transmit Frequencies (MHz)	23375.0000H(8)	23475.0000H(10)	22175.0000H(8)	22275.0000H(10)
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Microwave Path Data Sheet

Page 10 of 10

COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147
(858)232-4372 www.comsearch.com

PCN Date: 09/23/2010

Job Number 100923COMSSL01

New Path

RCN Number: 10092300

Administrative Information

CA-SFO0135A CA
City/County Oakland/Alameda
Status / License Basis Engineering Proposal / PRIMARY OPERATION
Call Sign WQLY382
Licensee Code CLESP3
Licensee Name Clearwire Spectrum Holdings III, LL
Radio Service / Station Class MG -- Microwave Industrial/Business Pool

CA-SFO0006A CA

City/County Oakland/Alameda
Status / License Basis Engineering Proposal / PRIMARY OPERATION
Call Sign WQLX773
Licensee Code CLESP3
Licensee Name Clearwire Spectrum Holdings III, LL
Radio Service / Station Class FXO -- Fixed

Site Information

Latitude (NAD 83)	37 ° 48' 57.6" N	37 ° 48' 31.5" N
Longitude (NAD 83)	122 ° 17' 0.7" W	122 ° 15' 50.2" W
Ground Elevation (m/ft-AMSL)	3.80 / 12.5	4.20 / 13.8
Antenna Structure Registration #		
Path Azimuth (°)	115.010	295.022
Path Length (km / miles)	1.903 / 1.182	

Transmit Antenna

80014A	80014A
Manufacturer ANDREW CORPORATION	ANDREW CORPORATION
Model VHLP1-23A	VHLP1-23A
Gain(dBi) / Beamwidth(°) / Tilt(°) 35.3 / 3.00 / 1.93	35.3 / 3.00 / -1.94
Centerline (m / ft - AGL) 27.43 / 90.0	91.44 / 300.0

Receive Antenna

Same As Transmit

Manufacturer
Model
Gain (dBi) / Beamwidth (°)
Centerline (m / ft - AGL)

Diversity Receive Antenna

Manufacturer
Model
Gain (dBi) / Beamwidth (°)
Centerline (m / ft - AGL)

Radio Information

TEMR36	TEMR36
Manufacturer DRAGONWAVE INC	DRAGONWAVE INC
Model 23HD50HFC364V02	23HD50HFC364V02
Model Description HORIZON DUO	HORIZON DUO
Emission Designator / Modulation 47M1D7W 256 QAM	47M1D7W 256 QAM
Loading 1 CH DIG 364000.000	1 CH DIG 364000.000
Stability (%) 0.001	0.001
Nominal Coordinated Maximum	Nominal Coordinated Maximum
Power (dBm) 15.5	15.5
Received Level (dBm) -38.8	-38.8
EIRP (dBm) 50.8	50.8
Fixed Loss: Tx / Common (dB) 0.0 / 0.0	0.0 / 0.0
Free Space Loss (dB) 124.9	

Transmit Frequencies (MHz)	23175.0000V(4)	23275.0000V(6)	21975.0000V(4)	22075.0000V(6)
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