

Microwave Path Data Sheet

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COMSEARCH

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

PCN Date: 10/21/2010

Job Number: 101021COMSSL04

New Path

RCN Number: 10102132

Administrative Information

CA-SJC0200A 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-SFO0444A CA

San Jose/Santa Clara
Engineering Proposal / PRIMARY OPERATION
WQLY845
CLESP3
Clearwire Spectrum Holdings III, LL
FXO -- Fixed

Site Information

Latitude (NAD 83)	37 °13' 56.6" N	37 °17' 12.0" N
Longitude (NAD 83)	121 °53' 0.0" W	121 °47' 47.5" W
Ground Elevation (m/ft-AMSL)	73.50 / 241.1	201.10 / 659.8
Antenna Structure Registration #		
Path Azimuth (°)	51.938	231.991
Path Length (km / miles)	9.777 / 6.075	

Transmit Antenna

77083A	77083A
Manufacturer ANDREW CORPORATION	ANDREW CORPORATION
Model VHLP2-11A	VHLP2-11A
Gain(dBi) / Beamwidth(°) / Tilt(°) 34.4 / 3.30 / 0.52	34.4 / 3.30 / -0.59
Centerline (m / ft - AGL) 44.50 / 146.0	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

TEMP02	TEMP02
Manufacturer DRAGONWAVE INC	DRAGONWAVE INC
Model 11HD40HFC181V02	11HD40HFC181V02
Model Description 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) -48.0	-48.0
EIRP (dBm) 50.9	50.9
Fixed Loss: Tx / Common (dB) 0.0 / 0.0	0.0 / 0.0
Free Space Loss (dB) 133.3	

Transmit Frequencies (MHz)	11265.0000V(2)	11385.0000V(5)	10775.0000V(2)	10895.0000V(5)
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Microwave Path Data Sheet

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

PCN Date: 10/21/2010

Job Number 101021COMSSL04

New Path

RCN Number: 10102132

Administrative Information

CA-SFO0554E CA
City/County /San Mateo
Status / License Basis Engineering Proposal / PRIMARY OPERATION
Call Sign WQLY522
Licensee Code CLESP3
Licensee Name Clearwire Spectrum Holdings III, LL
Radio Service / Station Class MG -- Microwave Industrial/Business Pool

CA-SFO0304A CA

San Bruno/San Mateo
Engineering Proposal / PRIMARY OPERATION
WQLY331
CLESP3
Clearwire Spectrum Holdings III, LL
FXO -- Fixed

Site Information

Latitude (NAD 83)	37 ° 41' 14.5" N	37 ° 37' 41.5" N
Longitude (NAD 83)	122 ° 26' 5.4" W	122 ° 25' 30.7" W
Ground Elevation (m/ft-AMSL)	380.10 / 1247.0	34.90 / 114.5
Antenna Structure Registration #	1205149	
Path Azimuth (°)	172.617	352.623
Path Length (km / miles)	6.622 / 4.115	

Transmit Antenna

77083A	77083A
Manufacturer ANDREW CORPORATION	ANDREW CORPORATION
Model VHLP2-11A	VHLP2-11A
Gain(dBi) / Beamwidth(°) / Tilt(°) 34.4 / 3.30 / -3.12	34.4 / 3.30 / 3.08
Centerline (m / ft - AGL) 41.15 / 135.0	27.58 / 90.5

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) -45.6	-45.6
EIRP (dBm) 49.9	49.9
Fixed Loss: Tx / Common (dB) 0.0 / 0.0	0.0 / 0.0
Free Space Loss (dB) 129.9	

Transmit Frequencies (MHz)	11465.0000H(7)	11545.0000H(9)	10975.0000H(7)	11055.0000H(9)
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COMSEARCH

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

PCN Date: 10/21/2010

Job Number 101021COMSSL04

New Path

RCN Number: 10102132

Administrative Information

CA-SFO0206A CA
City/County San Ramon/Contra Costa
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-SFO0565A CA

/Contra Costa
Engineering Proposal / PRIMARY OPERATION
WQLY441
CLESP3
Clearwire Spectrum Holdings III, LL
FXO -- Fixed

Site Information

Latitude (NAD 83)	37 ° 45' 56.3" N	37 ° 44' 20.0" N
Longitude (NAD 83)	121 ° 57' 46.9" W	121 ° 59' 42.5" W
Ground Elevation (m/ft-AMSL)	140.70 / 461.6	562.40 / 1845.1
Antenna Structure Registration #		1222544
Path Azimuth (°)	223.635	43.615
Path Length (km / miles)	4.102 / 2.549	

Transmit Antenna

77083A	77083A
Manufacturer ANDREW CORPORATION	ANDREW CORPORATION
Model VHLP2-11A	VHLP2-11A
Gain(dBi) / Beamwidth(°) / Tilt(°) 34.4 / 3.30 / 6.69	34.4 / 3.30 / -6.71
Centerline (m / ft - AGL) 21.95 / 72.0	81.99 / 269.0

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) -41.4	-41.4
EIRP (dBm) 49.9	49.9
Fixed Loss: Tx / Common (dB) 0.0 / 0.0	0.0 / 0.0
Free Space Loss (dB) 125.7	

Transmit Frequencies (MHz)	11015.0000V(8)	11095.0000V(10)	11505.0000V(8)	11585.0000V(10)
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COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147
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PCN Date: 10/21/2010

Job Number 101021COMSSL04

New Path

RCN Number: 10102132

Administrative Information

CA-SFO0419C CA
City/County San Jose/Santa Clara
Status / License Basis Engineering Proposal / PRIMARY OPERATION
Call Sign WQML749
Licensee Code CLESP3
Licensee Name Clearwire Spectrum Holdings III, LL
Radio Service / Station Class MG -- Microwave Industrial/Business Pool

CA-SJC0032C CA

Santa Clara/Santa Clara
Engineering Proposal / PRIMARY OPERATION
WQKU523
CLESP3
Clearwire Spectrum Holdings III, LL
FXO -- Fixed

Site Information

Latitude (NAD 83)	37 °22' 39.9" N	37 °23' 13.1" N
Longitude (NAD 83)	121 °52' 52.1" W	121 °58' 0.9" W
Ground Elevation (m/ft-AMSL)	23.30 / 76.4	7.01 / 23.0
Antenna Structure Registration #		
Path Azimuth (°)	277.699	97.647
Path Length (km / miles)	7.665 / 4.763	

Transmit Antenna

Manufacturer	RB1160	RB1160
Model	RADIO WAVES, INC	RADIO WAVES, INC
Gain(dBi) / Beamwidth(°) / Tilt(°)	HP2-18	HP2-18
Centerline (m / ft – AGL)	38.6 / 2.00 / 0.16	38.6 / 2.00 / -0.21
	15.24 / 50.0	56.69 / 186.0

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	TEMQ59	TEMQ59
Model	DRAGONWAVE INC	DRAGONWAVE INC
Model Description	18HD50HFC171V02	18HD50HFC171V02
Emission Designator / Modulation	HORIZON DUO	HORIZON DUO
Loading	45M8D7W 32 QAM	45M8D7W 32 QAM
Stability (%)	1 CH DIG 171000.000	1 CH DIG 171000.000
	0.001	0.001
	Nominal Coordinated Maximum	Nominal Coordinated Maximum
Power (dBm)	20.0	20.0
Received Level (dBm)	-38.4	-38.4
EIRP (dBm)	58.6	58.6
Fixed Loss: Tx / Common (dB)	0.0 / 0.0	0.0 / 0.0
Free Space Loss (dB)		135.6

Transmit Frequencies (MHz)	19575.0000V(6)	19675.0000V(8)	18015.0000V(6)	18115.0000V(8)
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COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147
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PCN Date: 10/21/2010

Job Number 101021COMSSL04

New Path

RCN Number: 10102132

Administrative Information

CA-SFO0004D CA
City/County Hayward/Alameda
Status / License Basis Engineering Proposal / PRIMARY OPERATION
Call Sign WQLX848
Licensee Code CLESP3
Licensee Name Clearwire Spectrum Holdings III, LL
Radio Service / Station Class MG -- Microwave Industrial/Business Pool

CA-SFO0331A CA

City/County Fremont/Alameda
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 °39' 19.3" N	37 °34' 34.8" N
Longitude (NAD 83)	122 °3' 25.5" W	122 °2' 46.3" W
Ground Elevation (m/ft-AMSL)	153.60 / 503.9	10.70 / 35.1
Antenna Structure Registration #		
Path Azimuth (°)	173.742	353.748
Path Length (km / miles)	8.824 / 5.483	

Transmit Antenna

Manufacturer	87059A	87059A
Model	ANDREW CORPORATION	ANDREW CORPORATION
Gain(dBi) / Beamwidth(°) / Tilt(°)	VHLP2.5-18	VHLP2.5-18
Centerline (m / ft - AGL)	41.0 / 1.50 / -1.28	41.0 / 1.50 / 1.22
	58.22 / 191.0	9.14 / 30.0

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	TEMO90	TEMO90
Model	DRAGONWAVE INC	DRAGONWAVE INC
Model Description	18HD50HFC215V02	18HD50HFC215V02
Emission Designator / Modulation	HORIZON DUO	HORIZON DUO
Loading	45M8D7W 64 QAM	45M8D7W 64 QAM
Stability (%)	1 CH DIG 215000.000	1 CH DIG 215000.000
	0.001	0.001
	Nominal Coordinated Maximum	Nominal Coordinated Maximum
Power (dBm)	18.5	18.5
Received Level (dBm)	-36.3	-36.3
EIRP (dBm)	59.5	59.5
Fixed Loss: Tx / Common (dB)	0.0 / 0.0	0.0 / 0.0
Free Space Loss (dB)		136.8

Transmit Frequencies (MHz)	19575.0000H(6)	19675.0000H(8)	18015.0000H(6)	18115.0000H(8)
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COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147
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PCN Date: 10/21/2010

Job Number 101021COMSSL04

New Path

RCN Number: 10102132

Administrative Information

CA-SFO0433C CA
City/County Cupertino/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-SJC0111A CA

San Jose/Santa Clara
Engineering Proposal / PRIMARY OPERATION
WQLY509
CLESP3
Clearwire Spectrum Holdings III, LL
FXO -- Fixed

Site Information

Latitude (NAD 83)	37 °17' 58.4" N	37 °19' 20.5" N
Longitude (NAD 83)	122 °3' 42.9" W	121 °59' 48.9" W
Ground Elevation (m/ft-AMSL)	250.20 / 820.9	50.60 / 166.0
Antenna Structure Registration #		
Path Azimuth (°)	66.267	246.306
Path Length (km / miles)	6.293 / 3.911	

Transmit Antenna

87204A	87204A
ANDREW CORPORATION	ANDREW CORPORATION
VHLP2-18B	VHLP2-18B
Gain(dBi) / Beamwidth(°) / Tilt(°) 38.9 / 2.10 / -1.87	38.9 / 2.10 / 1.83
Centerline (m / ft - AGL) 32.61 / 107.0	28.65 / 94.0

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

TEM090	TEM090
DRAGONWAVE INC	DRAGONWAVE INC
18HD50HFC215V02	18HD50HFC215V02
HORIZON DUO	HORIZON DUO
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) 18.5	18.5
Received Level (dBm) -37.6	-37.6
EIRP (dBm) 57.4	57.4
Fixed Loss: Tx / Common (dB) 0.0 / 0.0	0.0 / 0.0
Free Space Loss (dB) 133.9	

Transmit Frequencies (MHz)	19575.0000V(6)	19675.0000V(8)	18015.0000V(6)	18115.0000V(8)
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Microwave Path Data Sheet

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COMSEARCH

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

PCN Date: 10/21/2010

Job Number 101021COMSSL04

New Path

RCN Number: 10102132

Administrative Information

CA-SFO0325G CA
City/County Millbrae/San Mateo
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-SFO0299A CA

San Bruno/San Mateo
Engineering Proposal / PRIMARY OPERATION
WQLY408
CLESP3
Clearwire Spectrum Holdings III, LL
FXO -- Fixed

Site Information

Latitude (NAD 83)	37 °35' 35.8" N	37 °38' 15.2" N
Longitude (NAD 83)	122 °24' 55.5" W	122 °24' 42.3" W
Ground Elevation (m/ft-AMSL)	165.80 / 544.0	6.30 / 20.7
Antenna Structure Registration #		
Path Azimuth (°)	3.768	183.770
Path Length (km / miles)	4.925 / 3.060	

Transmit Antenna

RB1160	RB1160
Manufacturer RADIO WAVES, INC	RADIO WAVES, INC
Model HP2-18	HP2-18
Gain(dBi) / Beamwidth(°) / Tilt(°) 38.6 / 2.00 / -1.65	38.6 / 2.00 / 1.62
Centerline (m / ft - AGL) 8.84 / 29.0	28.02 / 91.9

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

TEM032	TEM032
Manufacturer DRAGONWAVE INC	DRAGONWAVE INC
Model 18HD50HFC271V02	18HD50HFC271V02
Model Description 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) -37.6	-37.6
EIRP (dBm) 55.6	55.6
Fixed Loss: Tx / Common (dB) 0.0 / 0.0	0.0 / 0.0
Free Space Loss (dB) 131.8	

Transmit Frequencies (MHz)

19375.0000V(2)	19475.0000V(4)	17815.0000V(2)	17915.0000V(4)
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Microwave Path Data Sheet

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COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147
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PCN Date: 10/21/2010

Job Number 101021COMSSL04

New Path

RCN Number: 10102132

Administrative Information

CA-SFO0601A CA
City/County Pleasanton/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-SFO0582A CA

Hayward/Alameda
Engineering Proposal / PRIMARY OPERATION
WQML650
CLESP3
Clearwire Spectrum Holdings III, LL
FXO -- Fixed

Site Information

Latitude (NAD 83)	37 °38' 58.9" N	37 °39' 34.0" N
Longitude (NAD 83)	121 °52' 55.2" W	121 °55' 59.5" W
Ground Elevation (m/ft-AMSL)	101.30 / 332.3	453.50 / 1487.9
Antenna Structure Registration #		1015996
Path Azimuth (°)	283.487	103.455
Path Length (km / miles)	4.645 / 2.886	

Transmit Antenna

87204A	87204A
Manufacturer ANDREW CORPORATION	ANDREW CORPORATION
Model VHLP2-18B	VHLP2-18B
Gain(dBi) / Beamwidth(°) / Tilt(°) 38.9 / 2.10 / 4.96	38.9 / 2.10 / -4.99
Centerline (m / ft - AGL) 15.24 / 50.0	67.06 / 220.0

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

TEMR29	TEMR29
Manufacturer DRAGONWAVE INC	DRAGONWAVE INC
Model 18HD50HFC364V02	18HD50HFC364V02
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) -37.9	-37.9
EIRP (dBm) 54.4	54.4
Fixed Loss: Tx / Common (dB) 0.0 / 0.0	0.0 / 0.0
Free Space Loss (dB) 131.2	

Transmit Frequencies (MHz)

17765.0000V(1)	17865.0000V(3)	19325.0000V(1)	19425.0000V(3)
18015.0000V(6)	18115.0000V(8)	19575.0000V(6)	19675.0000V(8)

Microwave Path Data Sheet

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COMSEARCH

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

PCN Date: 10/21/2010

Job Number 101021COMSSL04

New Path

RCN Number: 10102132

Administrative Information

CA-SFO0848I CA
City/County Emeryville/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-SFO0141B CA

City/County Oakland/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 °50' 38.4" N	37 °48' 24.8" N
Longitude (NAD 83)	122 °17' 47.4" W	122 °18' 22.3" W
Ground Elevation (m/ft-AMSL)	3.90 / 12.8	3.70 / 12.1
Antenna Structure Registration #		
Path Azimuth (°)	191.709	11.703
Path Length (km / miles)	4.207 / 2.614	

Transmit Antenna

87204A	87204A
Manufacturer ANDREW CORPORATION	ANDREW CORPORATION
Model VHLP2-18B	VHLP2-18B
Gain(dBi) / Beamwidth(°) / Tilt(°) 38.9 / 2.10 / -0.02	38.9 / 2.10 / -0.01
Centerline (m / ft - AGL) 45.72 / 150.0	45.72 / 150.0

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

TEM085	TEM085
Manufacturer DRAGONWAVE INC	DRAGONWAVE INC
Model 18HD50HFC322V02	18HD50HFC322V02
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) 15.0	15.0
Received Level (dBm) -37.6	-37.6
EIRP (dBm) 53.9	53.9
Fixed Loss: Tx / Common (dB) 0.0 / 0.0	0.0 / 0.0
Free Space Loss (dB) 130.4	

Transmit Frequencies (MHz)	18015.0000V(6)	18115.0000V(8)	19575.0000V(6)	19675.0000V(8)
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COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147
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PCN Date: 10/21/2010

Job Number 101021COMSSL04

New Path

RCN Number: 10102132

Administrative Information

CA-SFO0998B CA
City/County 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 MG -- Microwave Industrial/Business Pool

CA-SFO0369D CA

Fremont/Alameda
Engineering Proposal / PRIMARY OPERATION
WQLY733
CLESP3
Clearwire Spectrum Holdings III, LL
FXO -- Fixed

Site Information

Latitude (NAD 83)	37 °33' 6.2" N	37 °32' 31.5" N
Longitude (NAD 83)	122 °0' 20.4" W	121 °58' 23.5" W
Ground Elevation (m/ft-AMSL)	15.70 / 51.5	17.20 / 56.4
Antenna Structure Registration #		
Path Azimuth (°)	110.436	290.456
Path Length (km / miles)		3.063 / 1.903

Transmit Antenna

87204A	87204A
ANDREW CORPORATION	ANDREW CORPORATION
VHLP2-18B	VHLP2-18B
38.9 / 2.10 / 0.30	38.9 / 2.10 / -0.32
11.89 / 39.0	26.82 / 88.0

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

TEM085	TEM085
DRAGONWAVE INC	DRAGONWAVE INC
18HD50HFC322V02	18HD50HFC322V02
HORIZON DUO	HORIZON DUO
45M8D7W 256 QAM	45M8D7W 256 QAM
1 CH DIG 322000.000	1 CH DIG 322000.000
0.001	0.001
Nominal Coordinated Maximum	Nominal Coordinated Maximum
14.0	14.0
-35.8	-35.8
52.9	52.9
0.0 / 0.0	0.0 / 0.0
	127.6

Transmit Frequencies (MHz)	19375.0000V(2)	19475.0000V(4)	17815.0000V(2)	17915.0000V(4)
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Microwave Path Data Sheet

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COMSEARCH

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

PCN Date: 10/21/2010

Job Number 101021COMSSL04

New Path

RCN Number: 10102132

Administrative Information

CA-SFO0585A CA
City/County Castro Valley/Alameda
Status / License Basis Engineering Proposal / PRIMARY OPERATION
Call Sign WQLY407
Licensee Code CLESP3
Licensee Name Clearwire Spectrum Holdings III, LL
Radio Service / Station Class MG -- Microwave Industrial/Business Pool

CA-SFO0263A CA

San Leandro/Alameda
Engineering Proposal / PRIMARY OPERATION
WQLY403
CLESP3
Clearwire Spectrum Holdings III, LL
FXO -- Fixed

Site Information

Latitude (NAD 83)	37 ° 41' 34.8" N	37 ° 42' 12.3" N
Longitude (NAD 83)	122 ° 5' 38.4" W	122 ° 8' 26.6" W
Ground Elevation (m/ft-AMSL)	87.10 / 285.8	12.80 / 42.0
Antenna Structure Registration #		
Path Azimuth (°)	285.688	105.659
Path Length (km / miles)	4.280 / 2.659	

Transmit Antenna

87204A	87204A
Manufacturer ANDREW CORPORATION	ANDREW CORPORATION
Model VHLP2-18B	VHLP2-18B
Gain(dBi) / Beamwidth(°) / Tilt(°) 38.9 / 2.10 / -0.78	38.9 / 2.10 / 0.76
Centerline (m / ft - AGL) 22.25 / 73.0	39.01 / 128.0

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

TEM085	TEM085
Manufacturer DRAGONWAVE INC	DRAGONWAVE INC
Model 18HD50HFC322V02	18HD50HFC322V02
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
Power (dBm) 17.5	17.5
Received Level (dBm) -35.2	-35.2
EIRP (dBm) 56.4	56.4
Fixed Loss: Tx / Common (dB) 0.0 / 0.0	0.0 / 0.0
Free Space Loss (dB) 130.5	

Transmit Frequencies (MHz)

18015.0000H(6)	18115.0000H(8)	19575.0000H(6)	19675.0000H(8)
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Microwave Path Data Sheet

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COMSEARCH

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

PCN Date: 10/21/2010

Job Number 101021COMSSL04

New Path

RCN Number: 10102132

Administrative Information

CA-SFO0561A CA
City/County Oakland/Alameda
Status / License Basis Engineering Proposal / PRIMARY OPERATION
Call Sign WQLY422
Licensee Code CLESP3
Licensee Name Clearwire Spectrum Holdings III, LL
Radio Service / Station Class MG -- Microwave Industrial/Business Pool

CA-SFO0873A CA

City/County Oakland/Alameda
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 ° 45' 8.3" N	37 ° 45' 40.7" N
Longitude (NAD 83)	122 ° 11' 21.6" W	122 ° 11' 41.7" W
Ground Elevation (m/ft-AMSL)	4.10 / 13.5	6.00 / 19.7
Antenna Structure Registration #		
Path Azimuth (°)	333.780	153.776
Path Length (km / miles)	1.114 / 0.692	

Transmit Antenna

80014A	80014A
Manufacturer ANDREW CORPORATION	ANDREW CORPORATION
Model VHLP1-23A	VHLP1-23A
Gain(dBi) / Beamwidth(°) / Tilt(°) 35.3 / 3.00 / -0.39	35.3 / 3.00 / 0.38
Centerline (m / ft - AGL) 20.73 / 68.0	11.28 / 37.0

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

TEM020	TEM020
Manufacturer DRAGONWAVE INC	DRAGONWAVE INC
Model 23HD50SFC371V02	23HD50SFC371V02
Model Description HORIZON DUO	HORIZON DUO
Emission Designator / Modulation 49M2D7W 256 QAM	49M2D7W 256 QAM
Loading 1 CH DIG 371000.000	1 CH DIG 371000.000
Stability (%) 0.001	0.001
Nominal Coordinated Maximum	Nominal Coordinated Maximum
Power (dBm) 5.5	5.5
Received Level (dBm) -44.2	-44.2
EIRP (dBm) 40.8	40.8
Fixed Loss: Tx / Common (dB) 0.0 / 0.0	0.0 / 0.0
Free Space Loss (dB) 120.3	

Transmit Frequencies (MHz)	23325.0000V(7)	23425.0000V(9)	22125.0000V(7)	22225.0000V(9)
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Microwave Path Data Sheet

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COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147
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PCN Date: 10/21/2010

Job Number 101021COMSSL04

New Path

RCN Number: 10102132

Administrative Information

CA-SJC0386B 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-SJC0227C CA

San Jose/Santa Clara
Engineering Proposal / PRIMARY OPERATION
WQLY592
CLESP3
Clearwire Spectrum Holdings III, LL
FXO -- Fixed

Site Information

Latitude (NAD 83)	37 °21' 1.5" N	37 °21' 35.4" N
Longitude (NAD 83)	121 °48' 47.3" W	121 °50' 21.4" W
Ground Elevation (m/ft-AMSL)	48.40 / 158.8	33.00 / 108.3
Antenna Structure Registration #		
Path Azimuth (°)	294.297	114.281
Path Length (km / miles)	2.541 / 1.579	

Transmit Antenna

RD1150	RD1150
MANUFACTURER RADIO WAVES, INC	RADIO WAVES, INC
Model HP2-23	HP2-23
Gain(dBi) / Beamwidth(°) / Tilt(°) 40.2 / 1.70 / 0.11	40.2 / 1.70 / -0.13
Centerline (m / ft - AGL) 12.19 / 40.0	32.92 / 108.0

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

TEMQ55	TEMQ55
DRAGONWAVE INC	DRAGONWAVE INC
Model 23HD50SFC215V02	23HD50SFC215V02
Model Description HORIZON DUO	HORIZON DUO
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) 8.5	8.5
Received Level (dBm) -38.6	-38.6
EIRP (dBm) 48.7	48.7
Fixed Loss: Tx / Common (dB) 0.0 / 0.0	0.0 / 0.0
Free Space Loss (dB) 127.5	

Transmit Frequencies (MHz)	23325.0000V(7)	23425.0000V(9)	22125.0000V(7)	22225.0000V(9)
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Microwave Path Data Sheet

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COMSEARCH

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

PCN Date: 10/21/2010

Job Number 101021COMSSL04

New Path

RCN Number: 10102132

Administrative Information

CA-SJC0116B CA
City/County Mountain View/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-SJC0076C CA

City/County Mountain View/Santa Clara
Status / License Basis Engineering Proposal / PRIMARY OPERATION
Call Sign WQKU514
Licensee Code CLESP3
Licensee Name Clearwire Spectrum Holdings III, LL
Radio Service / Station Class FXO -- Fixed

Site Information

Latitude (NAD 83)	37 °24' 19.6" N	37 °25' 36.4" N
Longitude (NAD 83)	122 °4' 7.9" W	122 °4' 19.7" W
Ground Elevation (m/ft-AMSL)	13.30 / 43.6	1.98 / 6.5
Antenna Structure Registration #		
Path Azimuth (°)	353.014	173.012
Path Length (km / miles)	2.385 / 1.482	

Transmit Antenna

80014A	80014A
Manufacturer ANDREW CORPORATION	ANDREW CORPORATION
Model VHLP1-23A	VHLP1-23A
Gain(dBi) / Beamwidth(°) / Tilt(°) 35.3 / 3.00 / -0.32	35.3 / 3.00 / 0.31
Centerline (m / ft - AGL) 24.08 / 79.0	22.25 / 73.0

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

TEMQ55	TEMQ55
Manufacturer DRAGONWAVE INC	DRAGONWAVE INC
Model 23HD50SFC215V02	23HD50SFC215V02
Model Description HORIZON DUO	HORIZON DUO
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) 8.5	8.5
Received Level (dBm) -47.8	-47.8
EIRP (dBm) 43.8	43.8
Fixed Loss: Tx / Common (dB) 0.0 / 0.0	0.0 / 0.0
Free Space Loss (dB) 126.9	

Transmit Frequencies (MHz)	23025.0000H(1)	23175.0000H(4)	21825.0000H(1)	21975.0000H(4)
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Microwave Path Data Sheet

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PCN Date: 10/21/2010

Job Number 101021COMSSL04

New Path

RCN Number: 10102132

Administrative Information

CA-SJC0116B CA
City/County Mountain View/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-SJC0118A CA

City/County Mountain View/Santa Clara
Status / License Basis Engineering Proposal / PRIMARY OPERATION
Call Sign WQMM317
Licensee Code CLESP3
Licensee Name Clearwire Spectrum Holdings III, LL
Radio Service / Station Class FXO -- Fixed

Site Information

Latitude (NAD 83)	37 °24' 19.6" N	37 °23' 50.4" N
Longitude (NAD 83)	122 °4' 7.9" W	122 °3' 4.6" W
Ground Elevation (m/ft-AMSL)	13.30 / 43.6	16.80 / 55.1
Antenna Structure Registration #		1017312
Path Azimuth (°)	120.032	300.043
Path Length (km / miles)		1.798 / 1.117

Transmit Antenna

80014A	80014A
Manufacturer ANDREW CORPORATION	ANDREW CORPORATION
Model VHLP1-23A	VHLP1-23A
Gain(dBi) / Beamwidth(°) / Tilt(°) 35.3 / 3.00 / 0.04	35.3 / 3.00 / -0.05
Centerline (m / ft - AGL) 24.08 / 79.0	21.95 / 72.0

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

TEMQ55	TEMQ55
Manufacturer DRAGONWAVE INC	DRAGONWAVE INC
Model 23HD50SFC215V02	23HD50SFC215V02
Model Description HORIZON DUO	HORIZON DUO
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) 8.5	8.5
Received Level (dBm) -45.4	-45.4
EIRP (dBm) 43.8	43.8
Fixed Loss: Tx / Common (dB) 0.0 / 0.0	0.0 / 0.0
Free Space Loss (dB) 124.5	

Transmit Frequencies (MHz)	23075.0000V(2)	23225.0000V(5)	21875.0000V(2)	22025.0000V(5)
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Microwave Path Data Sheet

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COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147
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PCN Date: 10/21/2010

Job Number 101021COMSSL04

New Path

RCN Number: 10102132

Administrative Information

CA-SFO0004D CA
City/County Hayward/Alameda
Status / License Basis Engineering Proposal / PRIMARY OPERATION
Call Sign WQLX848
Licensee Code CLESP3
Licensee Name Clearwire Spectrum Holdings III, LL
Radio Service / Station Class MG -- Microwave Industrial/Business Pool

CA-SFO1016C CA

City/County Hayward/Alameda
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 °39' 19.3" N	37 °37' 54.2" N
Longitude (NAD 83)	122 °3' 25.5" W	122 °4' 2.5" W
Ground Elevation (m/ft-AMSL)	153.60 / 503.9	6.60 / 21.7
Antenna Structure Registration #		
Path Azimuth (°)	199.075	19.069
Path Length (km / miles)	2.776 / 1.725	

Transmit Antenna

80014A	80014A
Manufacturer ANDREW CORPORATION	ANDREW CORPORATION
Model VHLP1-23A	VHLP1-23A
Gain(dBi) / Beamwidth(°) / Tilt(°) 35.3 / 3.00 / -4.00	35.3 / 3.00 / 3.98
Centerline (m / ft - AGL) 58.22 / 191.0	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

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) 16.5	16.5
Received Level (dBm) -41.1	-41.1
EIRP (dBm) 51.8	51.8
Fixed Loss: Tx / Common (dB) 0.0 / 0.0	0.0 / 0.0
Free Space Loss (dB) 128.2	

Transmit Frequencies (MHz)	23075.0000H(2)	23225.0000H(5)	21875.0000H(2)	22025.0000H(5)
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Microwave Path Data Sheet

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COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147
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PCN Date: 10/21/2010

Job Number 101021COMSSL04

New Path

RCN Number: 10102132

Administrative Information

CA-SFO0312B CA
City/County Union City/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-SFO0314A CA

City/County Union City/Alameda
Status / License Basis Engineering Proposal / PRIMARY OPERATION
Call Sign WQLY322
Licensee Code CLESP3
Licensee Name Clearwire Spectrum Holdings III, LL
Radio Service / Station Class FXO -- Fixed

Site Information

Latitude (NAD 83)	37 °36' 27.5" N	37 °36' 28.6" N
Longitude (NAD 83)	122 °4' 17.6" W	122 °2' 24.2" W
Ground Elevation (m/ft-AMSL)	5.90 / 19.4	15.30 / 50.2
Antenna Structure Registration #		
Path Azimuth (°)	89.292	269.311
Path Length (km / miles)	2.782 / 1.728	

Transmit Antenna

87205A	80014A
Manufacturer ANDREW CORPORATION	ANDREW CORPORATION
Model VHLP2-23B	VHLP1-23A
Gain(dBi) / Beamwidth(°) / Tilt(°) 40.5 / 1.70 / 0.18	35.3 / 3.00 / -0.20
Centerline (m / ft - AGL) 45.72 / 150.0	45.72 / 150.0

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) 14.0	14.0
Received Level (dBm) -38.4	-38.4
EIRP (dBm) 54.5	49.3
Fixed Loss: Tx / Common (dB) 0.0 / 0.0	0.0 / 0.0
Free Space Loss (dB) 128.2	

Transmit Frequencies (MHz)	22125.0000H(7)	22225.0000H(9)	23325.0000H(7)	23425.0000H(9)
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Microwave Path Data Sheet
COMSEARCH

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

PCN Date: 10/21/2010
Job Number 101021COMSSL04

New Path
RCN Number: 10102132

Administrative Information	CA-SFO0314A CA	CA-SFO0986C CA
City/County	Union City/Alameda	Union City/Alameda
Status / License Basis	Engineering Proposal / PRIMARY OPERATION	Engineering Proposal / PRIMARY OPERATION
Call Sign	WQLY322	
Licensee Code	CLESP3	CLESP3
Licensee Name	Clearwire Spectrum Holdings III, LL	Clearwire Spectrum Holdings III, LL
Radio Service / Station Class	MG -- Microwave Industrial/Business Pool	FXO -- Fixed

Site Information		
Latitude (NAD 83)	37 °36' 28.6" N	37 °35' 35.5" N
Longitude (NAD 83)	122 °2' 24.2" W	122 °2' 6.0" W
Ground Elevation (m/ft-AMSL)	15.30 / 50.2	12.60 / 41.3
Antenna Structure Registration #		
Path Azimuth (°)	164.745	344.748
Path Length (km / miles)	1.697 / 1.054	

Transmit Antenna	80014A	80014A
Manufacturer	ANDREW CORPORATION	ANDREW CORPORATION
Model	VHLP1-23A	VHLP1-23A
Gain(dBi) / Beamwidth(°) / Tilt(°)	35.3 / 3.00 / -0.10	35.3 / 3.00 / 0.09
Centerline (m / ft - AGL)	45.72 / 150.0	45.72 / 150.0

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)	11.0	11.0
Received Level (dBm)	-42.3	-42.3
EIRP (dBm)	46.3	46.3
Fixed Loss: Tx / Common (dB)	0.0 / 0.0	0.0 / 0.0
Free Space Loss (dB)		123.9

Transmit Frequencies (MHz)	23325.0000H(7)	23425.0000H(9)	22125.0000H(7) 22225.0000H(9)
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Microwave Path Data Sheet

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COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147
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PCN Date: 10/21/2010

Job Number 101021COMSSL04

New Path

RCN Number: 10102132

Administrative Information

CA-SFO0168A CA
City/County Alameda/Alameda
Status / License Basis Engineering Proposal / PRIMARY OPERATION
Call Sign WQLY341
Licensee Code CLESP3
Licensee Name Clearwire Spectrum Holdings III, LL
Radio Service / Station Class MG -- Microwave Industrial/Business Pool

CA-SFO0803A CA

City/County Oakland/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 ° 47' 22.4" N	37 ° 47' 54.3" N
Longitude (NAD 83)	122 ° 16' 31.5" W	122 ° 17' 0.3" W
Ground Elevation (m/ft-AMSL)	2.30 / 7.5	3.50 / 11.5
Antenna Structure Registration #		
Path Azimuth (°)	324.384	144.379
Path Length (km / miles)	1.210 / 0.752	

Transmit Antenna

80014A	80014A
Manufacturer ANDREW CORPORATION	ANDREW CORPORATION
Model VHLP1-23A	VHLP1-23A
Gain(dBi) / Beamwidth(°) / Tilt(°) 35.3 / 3.00 / 0.54	35.3 / 3.00 / -0.55
Centerline (m / ft - AGL) 20.12 / 66.0	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

TEMQ16	TEMQ16
Manufacturer DRAGONWAVE INC	DRAGONWAVE INC
Model 23HD50SFC322V02	23HD50SFC322V02
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) 6.5	6.5
Received Level (dBm) -43.9	-43.9
EIRP (dBm) 41.8	41.8
Fixed Loss: Tx / Common (dB) 0.0 / 0.0	0.0 / 0.0
Free Space Loss (dB) 121.0	

Transmit Frequencies (MHz)	23075.0000V(2)	23225.0000V(5)	21875.0000V(2)	22025.0000V(5)
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Microwave Path Data Sheet

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COMSEARCH

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

PCN Date: 10/21/2010

Job Number 101021COMSSL04

New Path

RCN Number: 10102132

Administrative Information

CA-SFO0353A CA
City/County Foster City/San Mateo
Status / License Basis Engineering Proposal / PRIMARY OPERATION
Call Sign WQML899
Licensee Code CLESP3
Licensee Name Clearwire Spectrum Holdings III, LL
Radio Service / Station Class MG -- Microwave Industrial/Business Pool

CA-SFO0373E CA

Foster City/San Mateo
Engineering Proposal / PRIMARY OPERATION
WQML832
CLESP3
Clearwire Spectrum Holdings III, LL
FXO -- Fixed

Site Information

Latitude (NAD 83)	37 °33' 18.0" N	37 °32' 11.7" N
Longitude (NAD 83)	122 °15' 31.5" W	122 °15' 47.3" W
Ground Elevation (m/ft-AMSL)	0.00 / 0.0	2.40 / 7.9
Antenna Structure Registration #		1272142
Path Azimuth (°)	190.745	10.743
Path Length (km / miles)		2.080 / 1.293

Transmit Antenna

87205A	80014A
Manufacturer ANDREW CORPORATION	ANDREW CORPORATION
Model VHLP2-23B	VHLP1-23A
Gain(dBi) / Beamwidth(°) / Tilt(°) 40.5 / 1.70 / -0.01	35.3 / 3.00 / -0.01
Centerline (m / ft - AGL) 34.44 / 113.0	32.00 / 105.0

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

TEMQ55	TEMQ55
Manufacturer DRAGONWAVE INC	DRAGONWAVE INC
Model 23HD50SFC215V02	23HD50SFC215V02
Model Description HORIZON DUO	HORIZON DUO
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) 8.5	8.5
Received Level (dBm) -41.4	-41.4
EIRP (dBm) 49.0	43.8
Fixed Loss: Tx / Common (dB) 0.0 / 0.0	0.0 / 0.0
Free Space Loss (dB) 125.7	

Transmit Frequencies (MHz)	23325.0000V(7)	23425.0000V(9)	22125.0000V(7)	22225.0000V(9)
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Microwave Path Data Sheet

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COMSEARCH

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

PCN Date: 10/21/2010

Job Number 101021COMSSL04

New Path

RCN Number: 10102132

Administrative Information

CA-SFO0351B CA
City/County 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 MG -- Microwave Industrial/Business Pool

CA-SFO0363A CA

Fremont/Alameda
Engineering Proposal / PRIMARY OPERATION
WQML893
CLESP3
Clearwire Spectrum Holdings III, LL
FXO -- Fixed

Site Information

Latitude (NAD 83)	37 °33' 43.9" N	37 °32' 22.9" N
Longitude (NAD 83)	121 °57' 33.8" W	121 °57' 46.8" W
Ground Elevation (m/ft-AMSL)	22.90 / 75.1	16.00 / 52.5
Antenna Structure Registration #		
Path Azimuth (°)	187.283	7.281
Path Length (km / miles)	2.518 / 1.564	

Transmit Antenna

80014A	87205A
ANDREW CORPORATION	ANDREW CORPORATION
VHLP1-23A	VHLP2-23B
Gain(dBi) / Beamwidth(°) / Tilt(°) 35.3 / 3.00 / -0.17	40.5 / 1.70 / 0.15
Centerline (m / ft - AGL) 45.72 / 150.0	45.72 / 150.0

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) -34.6	-34.6
EIRP (dBm) 52.3	57.5
Fixed Loss: Tx / Common (dB) 0.0 / 0.0	0.0 / 0.0
Free Space Loss (dB) 127.4	

Transmit Frequencies (MHz)	23325.0000V(7)	23425.0000V(9)	22125.0000V(7)	22225.0000V(9)
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Microwave Path Data Sheet

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COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147
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PCN Date: 10/21/2010

Job Number 101021COMSSL04

New Path

RCN Number: 10102132

Administrative Information

CA-SFO0384A CA
City/County Fremont/Alameda
Status / License Basis Engineering Proposal / PRIMARY OPERATION
Call Sign WQMM938
Licensee Code CLESP3
Licensee Name Clearwire Spectrum Holdings III, LL
Radio Service / Station Class MG -- Microwave Industrial/Business Pool

CA-SFO0376A CA

City/County Fremont/Alameda
Status / License Basis Engineering Proposal / PRIMARY OPERATION
Call Sign WQML913
Licensee Code CLESP3
Licensee Name Clearwire Spectrum Holdings III, LL
Radio Service / Station Class FXO -- Fixed

Site Information

Latitude (NAD 83)	37 °30' 46.8" N	37 °31' 27.5" N
Longitude (NAD 83)	121 °56' 45.6" W	121 °56' 49.6" W
Ground Elevation (m/ft-AMSL)	9.80 / 32.2	18.50 / 60.7
Antenna Structure Registration #		
Path Azimuth (°)	355.524	175.524
Path Length (km / miles)		1.259 / 0.782

Transmit Antenna

80014A	80014A
Manufacturer ANDREW CORPORATION	ANDREW CORPORATION
Model VHLP1-23A	VHLP1-23A
Gain(dBi) / Beamwidth(°) / Tilt(°) 35.3 / 3.00 / 0.39	35.3 / 3.00 / -0.40
Centerline (m / ft - AGL) 45.72 / 150.0	45.72 / 150.0

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) 13.0	13.0
Received Level (dBm) -37.8	-37.8
EIRP (dBm) 48.3	48.3
Fixed Loss: Tx / Common (dB) 0.0 / 0.0	0.0 / 0.0
Free Space Loss (dB) 121.4	

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

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COMSEARCH

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

PCN Date: 10/21/2010

Job Number 101021COMSSL04

New Path

RCN Number: 10102132

Administrative Information

CA-SFO0448C CA
City/County Campbell/Santa Clara
Status / License Basis Engineering Proposal / PRIMARY OPERATION
Call Sign WQMN265
Licensee Code CLESP3
Licensee Name Clearwire Spectrum Holdings III, LL
Radio Service / Station Class MG -- Microwave Industrial/Business Pool

CA-SJC0162A CA

San Jose/Santa Clara
Engineering Proposal / PRIMARY OPERATION
WQLY659
CLESP3
Clearwire Spectrum Holdings III, LL
FXO -- Fixed

Site Information

Latitude (NAD 83)	37 °16' 46.7" N	37 °15' 7.5" N
Longitude (NAD 83)	121 °56' 13.9" W	121 °56' 47.3" W
Ground Elevation (m/ft-AMSL)	63.30 / 207.7	86.10 / 282.5
Antenna Structure Registration #		
Path Azimuth (°)	195.064	15.058
Path Length (km / miles)	3.167 / 1.968	

Transmit Antenna

87205A	87205A
Manufacturer ANDREW CORPORATION	ANDREW CORPORATION
Model VHLP2-23B	VHLP2-23B
Gain(dBi) / Beamwidth(°) / Tilt(°) 40.5 / 1.70 / 0.39	40.5 / 1.70 / -0.41
Centerline (m / ft - AGL) 28.04 / 92.0	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

TEMQ55	TEMQ55
Manufacturer DRAGONWAVE INC	DRAGONWAVE INC
Model 23HD50SFC215V02	23HD50SFC215V02
Model Description HORIZON DUO	HORIZON DUO
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) 8.5	8.5
Received Level (dBm) -39.9	-39.9
EIRP (dBm) 49.0	49.0
Fixed Loss: Tx / Common (dB) 0.0 / 0.0	0.0 / 0.0
Free Space Loss (dB) 129.4	

Transmit Frequencies (MHz)	22175.0000H(8)	22325.0000H(11)	23375.0000H(8)	23525.0000H(11)
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Microwave Path Data Sheet

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COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147
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PCN Date: 10/21/2010

Job Number 101021COMSSL04

New Path

RCN Number: 10102132

Administrative Information

CA-SFO0498B CA
City/County Dublin/Alameda
Status / License Basis Engineering Proposal / PRIMARY OPERATION
Call Sign WQLY500
Licensee Code CLESP3
Licensee Name Clearwire Spectrum Holdings III, LL
Radio Service / Station Class MG -- Microwave Industrial/Business Pool

CA-SFO0479D CA

City/County Pleasanton/Alameda
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 ° 42' 11.5" N	37 ° 41' 45.0" N
Longitude (NAD 83)	121 ° 53' 49.7" W	121 ° 55' 27.0" W
Ground Elevation (m/ft-AMSL)	102.10 / 335.0	102.30 / 335.6
Antenna Structure Registration #		
Path Azimuth (°)	251.088	71.072
Path Length (km / miles)	2.520 / 1.566	

Transmit Antenna

80014A	80014A
Manufacturer ANDREW CORPORATION	ANDREW CORPORATION
Model VHLP1-23A	VHLP1-23A
Gain(dBi) / Beamwidth(°) / Tilt(°) 35.3 / 3.00 / -0.18	35.3 / 3.00 / 0.17
Centerline (m / ft - AGL) 31.67 / 103.9	23.77 / 78.0

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) 10.0	10.0
Received Level (dBm) -46.8	-46.8
EIRP (dBm) 45.3	45.3
Fixed Loss: Tx / Common (dB) 0.0 / 0.0	0.0 / 0.0
Free Space Loss (dB) 127.4	

Transmit Frequencies (MHz)	21875.0000V(2)	22025.0000V(5)	23075.0000V(2)	23225.0000V(5)
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Microwave Path Data Sheet

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COMSEARCH

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

PCN Date: 10/21/2010

Job Number 101021COMSSL04

New Path

RCN Number: 10102132

Administrative Information

CA-SFO0867B CA
City/County Oakland/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-SFO0202A CA

Oakland/Alameda
Engineering Proposal / PRIMARY OPERATION
WQLY336
CLESP3
Clearwire Spectrum Holdings III, LL
FXO -- Fixed

Site Information

Latitude (NAD 83)	37 ° 46' 22.3" N	37 ° 46' 2.5" N
Longitude (NAD 83)	122 ° 13' 23.4" W	122 ° 12' 44.7" W
Ground Elevation (m/ft-AMSL)	8.30 / 27.2	5.50 / 18.0
Antenna Structure Registration #		
Path Azimuth (°)	122.800	302.806
Path Length (km / miles)	1.127 / 0.700	

Transmit Antenna

80014A	80014A
ANDREW CORPORATION	ANDREW CORPORATION
VHLP1-23A	VHLP1-23A
Gain(dBi) / Beamwidth(°) / Tilt(°) 35.3 / 3.00 / 0.68	35.3 / 3.00 / -0.68
Centerline (m / ft - AGL) 9.14 / 30.0	25.30 / 83.0

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

TEM020	TEM020
DRAGONWAVE INC	DRAGONWAVE INC
23HD50SFC371V02	23HD50SFC371V02
HORIZON DUO	HORIZON DUO
Emission Designator / Modulation 49M2D7W 256 QAM	49M2D7W 256 QAM
Loading 1 CH DIG 371000.000	1 CH DIG 371000.000
Stability (%) 0.001	0.001
Nominal Coordinated Maximum	Nominal Coordinated Maximum
Power (dBm) 5.0	5.0
Received Level (dBm) -44.8	-44.8
EIRP (dBm) 40.3	40.3
Fixed Loss: Tx / Common (dB) 0.0 / 0.0	0.0 / 0.0
Free Space Loss (dB) 120.4	

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

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COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147
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PCN Date: 10/21/2010

Job Number 101021COMSSL04

New Path

RCN Number: 10102132

Administrative Information

CA-SFO0981A CA
City/County Hayward/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-SFO0004D CA

City/County Hayward/Alameda
Status / License Basis Engineering Proposal / PRIMARY OPERATION
Call Sign WQLX848
Licensee Code CLESP3
Licensee Name Clearwire Spectrum Holdings III, LL
Radio Service / Station Class FXO -- Fixed

Site Information

Latitude (NAD 83)	37 °37' 48.9" N	37 °39' 19.3" N
Longitude (NAD 83)	122 °4' 33.7" W	122 °3' 25.5" W
Ground Elevation (m/ft-AMSL)	7.30 / 24.0	153.60 / 503.9
Antenna Structure Registration #		
Path Azimuth (°)	30.954	210.965
Path Length (km / miles)	3.250 / 2.020	

Transmit Antenna

87205A	87205A
Manufacturer ANDREW CORPORATION	ANDREW CORPORATION
Model VHLP2-23B	VHLP2-23B
Gain(dBi) / Beamwidth(°) / Tilt(°) 40.5 / 1.70 / 3.47	40.5 / 1.70 / -3.49
Centerline (m / ft - AGL) 7.01 / 23.0	58.22 / 191.0

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) 13.0	13.0
Received Level (dBm) -35.6	-35.6
EIRP (dBm) 53.5	53.5
Fixed Loss: Tx / Common (dB) 0.0 / 0.0	0.0 / 0.0
Free Space Loss (dB) 129.6	

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

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COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147
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PCN Date: 10/21/2010

Job Number 101021COMSSL04

New Path

RCN Number: 10102132

Administrative Information

CA-SFO0996A CA
City/County 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 MG -- Microwave Industrial/Business Pool

CA-SFO0369D CA

City/County Fremont/Alameda
Status / License Basis Engineering Proposal / PRIMARY OPERATION
Call Sign WQLY733
Licensee Code CLESP3
Licensee Name Clearwire Spectrum Holdings III, LL
Radio Service / Station Class FXO -- Fixed

Site Information

Latitude (NAD 83)	37 °33' 42.4" N	37 °32' 31.5" N
Longitude (NAD 83)	121 °59' 28.4" W	121 °58' 23.5" W
Ground Elevation (m/ft-AMSL)	18.80 / 61.7	17.20 / 56.4
Antenna Structure Registration #		
Path Azimuth (°)	143.911	323.922
Path Length (km / miles)	2.705 / 1.681	

Transmit Antenna

80014A	80014A
Manufacturer ANDREW CORPORATION	ANDREW CORPORATION
Model VHLP1-23A	VHLP1-23A
Gain(dBi) / Beamwidth(°) / Tilt(°) 35.3 / 3.00 / 0.31	35.3 / 3.00 / -0.32
Centerline (m / ft - AGL) 10.36 / 34.0	26.82 / 88.0

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) -39.9	-39.9
EIRP (dBm) 52.8	52.8
Fixed Loss: Tx / Common (dB) 0.0 / 0.0	0.0 / 0.0
Free Space Loss (dB) 128.0	

Transmit Frequencies (MHz)	21925.0000V(3)	22075.0000V(6)	23125.0000V(3)	23275.0000V(6)
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Microwave Path Data Sheet

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COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147
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PCN Date: 10/21/2010

Job Number 101021COMSSL04

New Path

RCN Number: 10102132

Administrative Information

CA-SJC0410D 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-SJC0207A CA

San Jose/Santa Clara
Engineering Proposal / PRIMARY OPERATION
WQMM230
CLESP3
Clearwire Spectrum Holdings III, LL
FXO -- Fixed

Site Information

Latitude (NAD 83)	37 °15' 42.0" N	37 °15' 11.2" N
Longitude (NAD 83)	121 °52' 28.7" W	121 °52' 40.8" W
Ground Elevation (m/ft-AMSL)	52.80 / 173.2	57.60 / 189.0
Antenna Structure Registration #		
Path Azimuth (°)	197.434	17.432
Path Length (km / miles)	0.995 / 0.618	

Transmit Antenna

99141R	99141R
MANUFACTURER RADIO WAVES, INC	RADIO WAVES, INC
MODEL HPCPE-23	HPCPE-23
GAIN(dBi) / Beamwidth(°) / Tilt(°) 34.4 / 2.90 / 0.66	34.4 / 2.90 / -0.67
CENTERLINE (m / ft - AGL) 15.24 / 50.0	21.95 / 72.0

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

TEMQ16	TEMQ16
DRAGONWAVE INC	DRAGONWAVE INC
23HD50SFC322V02	23HD50SFC322V02
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) 7.5	7.5
Received Level (dBm) -43.0	-43.0
EIRP (dBm) 41.9	41.9
Fixed Loss: Tx / Common (dB) 0.0 / 0.0	0.0 / 0.0
Free Space Loss (dB) 119.3	

Transmit Frequencies (MHz)	21875.0000V(2)	22025.0000V(5)	23075.0000V(2)	23225.0000V(5)
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Microwave Path Data Sheet

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COMSEARCH

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PCN Date: 10/21/2010

Job Number 101021COMSSL04

New Path

RCN Number: 10102132

Administrative Information

CA-SJC0471B 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-SFO0432C CA

San Jose/Santa Clara
Engineering Proposal / PRIMARY OPERATION
WQLY752
CLESP3
Clearwire Spectrum Holdings III, LL
FXO -- Fixed

Site Information

Latitude (NAD 83)	37 °18' 31.5" N	37 °19' 2.8" N
Longitude (NAD 83)	121 °57' 58.8" W	121 °56' 51.1" W
Ground Elevation (m/ft-AMSL)	49.70 / 163.1	44.10 / 144.7
Antenna Structure Registration #		
Path Azimuth (°)	59.930	239.942
Path Length (km / miles)	1.926 / 1.197	

Transmit Antenna

99141R	99141R
Manufacturer RADIO WAVES, INC	RADIO WAVES, INC
Model HPCPE-23	HPCPE-23
Gain(dBi) / Beamwidth(°) / Tilt(°) 34.4 / 2.90 / 1.07	34.4 / 2.90 / -1.08
Centerline (m / ft - AGL) 7.62 / 25.0	49.38 / 162.0

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

TEMQ55	TEMQ55
Manufacturer DRAGONWAVE INC	DRAGONWAVE INC
Model 23HD50SFC215V02	23HD50SFC215V02
Model Description HORIZON DUO	HORIZON DUO
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) 8.5	8.5
Received Level (dBm) -47.7	-47.7
EIRP (dBm) 42.9	42.9
Fixed Loss: Tx / Common (dB) 0.0 / 0.0	0.0 / 0.0
Free Space Loss (dB) 125.0	

Transmit Frequencies (MHz)	21825.0000V(1)	21975.0000V(4)	23025.0000V(1)	23175.0000V(4)
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Microwave Path Data Sheet

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COMSEARCH

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

PCN Date: 10/21/2010

Job Number 101021COMSSL04

New Path

RCN Number: 10102132

Administrative Information

CA-SFO0148C CA
City/County Oakland/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-SFO0141B CA

City/County Oakland/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 ° 48' 1.1" N	37 ° 48' 24.8" N
Longitude (NAD 83)	122 ° 16' 29.9" W	122 ° 18' 22.3" W
Ground Elevation (m/ft-AMSL)	10.60 / 34.8	3.70 / 12.1
Antenna Structure Registration #		
Path Azimuth (°)	284.892	104.873
Path Length (km / miles)	2.845 / 1.768	

Transmit Antenna

80014A	80014A
Manufacturer ANDREW CORPORATION	ANDREW CORPORATION
Model VHLP1-23A	VHLP1-23A
Gain(dBi) / Beamwidth(°) / Tilt(°) 35.3 / 3.00 / 0.05	35.3 / 3.00 / -0.07
Centerline (m / ft - AGL) 18.90 / 62.0	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

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) 12.0	12.0
Received Level (dBm) -45.8	-45.8
EIRP (dBm) 47.3	47.3
Fixed Loss: Tx / Common (dB) 0.0 / 0.0	0.0 / 0.0
Free Space Loss (dB) 128.4	

Transmit Frequencies (MHz)	23125.0000V(3)	23275.0000V(6)	21925.0000V(3)	22075.0000V(6)
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Microwave Path Data Sheet

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COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147

(858)232-4372 www.comsearch.com

PCN Date: 10/21/2010

Job Number 101021COMSSL04

Prev Job Num: 100713COMSSL01

RCN Number: 10102132

Administrative Information

CA-SFO0363A CA
 City/County Fremont/Alameda
 Status / License Basis Engineering Proposal / PRIMARY OPERATION
 Call Sign WQML893
 Licensee Code CLESP3
 Licensee Name Clearwire Spectrum Holdings III, LL
 Radio Service / Station Class MG -- Microwave Industrial/Business Pool

CA-SFO1000A CA

Fremont/Alameda
 Engineering Proposal / PRIMARY OPERATION
 CLESP3
 Clearwire Spectrum Holdings III, LL
 FXO -- Fixed

Site Information

Latitude (NAD 83)	37 °32' 22.9" N	37 °31' 50.7" N
Longitude (NAD 83)	121 °57' 46.8" W	121 °58' 14.6" W
Ground Elevation (m/ft-AMSL)	16.00 / 52.5	10.00 / 32.8
Antenna Structure Registration #		
Path Azimuth (°)	214.512	34.507
Path Length (km / miles)	1.205 / 0.749	

Transmit Antenna

80014A
 Manufacturer ANDREW CORPORATION
 Model VHLP1-23A
 Gain(dBi) / Beamwidth(°) / Tilt(°) 35.3 / 3.00 / -0.62
 Centerline (m / ft - AGL) 33.22 / 109.0

80014A
 ANDREW CORPORATION
 VHLP1-23A
 35.3 / 3.00 / 0.61
 26.21 / 86.0

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
 Manufacturer DRAGONWAVE INC
 Model 23HD50HFC364V02
 Model Description HORIZON DUO
 Emission Designator / Modulation 47M1D7W 256 QAM
 Loading 1 CH DIG 364000.000
 Stability (%) 0.001
 Nominal Coordinated Maximum
 Power (dBm) 10.0
 Received Level (dBm) -40.4
 EIRP (dBm) 45.3
 Fixed Loss: Tx / Common (dB) 0.0 / 0.0
 Free Space Loss (dB) 121.0

TEMR36
 DRAGONWAVE INC
 23HD50HFC364V02
 HORIZON DUO
47M1D7W 256 QAM
 1 CH DIG 364000.000
 0.001
 Nominal Coordinated Maximum
10.0
-40.4
45.3
 0.0 / 0.0

Transmit Frequencies (MHz)	21925.0000V(3)	22075.0000V(6)	23125.0000V(3)	23275.0000V(6)
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Microwave Path Data Sheet

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COMSEARCH

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

PCN Date: 10/21/2010

Job Number 101021COMSSL04

New Path

RCN Number: 10102132

Administrative Information

CA-SFO1000A CA
City/County 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 MG -- Microwave Industrial/Business Pool

CA-SFO0374B CA

City/County Fremont/Alameda
Status / License Basis Engineering Proposal / PRIMARY OPERATION
Call Sign WQML538
Licensee Code CLESP3
Licensee Name Clearwire Spectrum Holdings III, LL
Radio Service / Station Class FXO -- Fixed

Site Information

Latitude (NAD 83)	37 °31' 50.7" N	37 °31' 52.0" N
Longitude (NAD 83)	121 °58' 14.6" W	121 °57' 46.4" W
Ground Elevation (m/ft-AMSL)	10.00 / 32.8	15.60 / 51.2
Antenna Structure Registration #		
Path Azimuth (°)	86.685	266.689
Path Length (km / miles)	0.694 / 0.431	

Transmit Antenna

80014A	80014A
Manufacturer ANDREW CORPORATION	ANDREW CORPORATION
Model VHLP1-23A	VHLP1-23A
Gain(dBi) / Beamwidth(°) / Tilt(°) 35.3 / 3.00 / -0.35	35.3 / 3.00 / 0.34
Centerline (m / ft - AGL) 26.21 / 86.0	16.46 / 54.0

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

TEM020	TEM020
Manufacturer DRAGONWAVE INC	DRAGONWAVE INC
Model 23HD50SFC371V02	23HD50SFC371V02
Model Description HORIZON DUO	HORIZON DUO
Emission Designator / Modulation 49M2D7W 256 QAM	49M2D7W 256 QAM
Loading 1 CH DIG 371000.000	1 CH DIG 371000.000
Stability (%) 0.001	0.001
Nominal Coordinated Maximum	Nominal Coordinated Maximum
Power (dBm) 5.0	5.0
Received Level (dBm) -40.6	-40.6
EIRP (dBm) 40.3	40.3
Fixed Loss: Tx / Common (dB) 0.0 / 0.0	0.0 / 0.0
Free Space Loss (dB) 116.2	

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

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COMSEARCH

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

PCN Date: 10/21/2010

Job Number 101021COMSSL04

New Path

RCN Number: 10102132

Administrative Information

CA-SJC0068A 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-SJC0097A CA

Palo Alto/Santa Clara
Engineering Proposal / PRIMARY OPERATION
WQKU516
CLESP3
Clearwire Spectrum Holdings III, LL
FXO -- Fixed

Site Information

Latitude (NAD 83)	37 °25' 34.8" N	37 °26' 56.0" N
Longitude (NAD 83)	122 °8' 27.8" W	122 °9' 33.0" W
Ground Elevation (m/ft-AMSL)	7.78 / 25.5	14.00 / 45.9
Antenna Structure Registration #		
Path Azimuth (°)	327.375	147.364
Path Length (km / miles)	2.973 / 1.847	

Transmit Antenna

RD1150	RD1150
MANUFACTURER RADIO WAVES, INC	RADIO WAVES, INC
Model HP2-23	HP2-23
Gain(dBi) / Beamwidth(°) / Tilt(°) 40.2 / 1.70 / 1.31	40.2 / 1.70 / -1.33
Centerline (m / ft - AGL) 19.81 / 65.0	82.30 / 270.0

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
DRAGONWAVE INC	DRAGONWAVE INC
23HD50HFC364V02	23HD50HFC364V02
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) 10.5	10.5
Received Level (dBm) -37.9	-37.9
EIRP (dBm) 50.7	50.7
Fixed Loss: Tx / Common (dB) 0.0 / 0.0	0.0 / 0.0
Free Space Loss (dB) 128.8	

Transmit Frequencies (MHz)	21825.0000V(1)	21975.0000V(4)	23025.0000V(1)	23175.0000V(4)
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Microwave Path Data Sheet

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COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147
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PCN Date: 10/21/2010

Job Number 101021COMSSL04

New Path

RCN Number: 10102132

Administrative Information

CA-SFO0588A CA
City/County Redwood City/San Mateo
Status / License Basis Engineering Proposal / PRIMARY OPERATION
Call Sign WQLY518
Licensee Code CLESP3
Licensee Name Clearwire Spectrum Holdings III, LL
Radio Service / Station Class MG -- Microwave Industrial/Business Pool

CA-SFO0395E CA

Redwood City/San Mateo
Engineering Proposal / PRIMARY OPERATION
WQLY745
CLESP3
Clearwire Spectrum Holdings III, LL
FXO -- Fixed

Site Information

Latitude (NAD 83)	37 °29' 13.6" N	37 °28' 52.4" N
Longitude (NAD 83)	122 °12' 45.3" W	122 °13' 40.4" W
Ground Elevation (m/ft-AMSL)	4.80 / 15.7	5.40 / 17.7
Antenna Structure Registration #		
Path Azimuth (°)	244.232	64.223
Path Length (km / miles)	1.503 / 0.934	

Transmit Antenna

Manufacturer	99141R	99141R
Model	RADIO WAVES, INC	RADIO WAVES, INC
	HPCPE-23	HPCPE-23
Gain(dBi) / Beamwidth(°) / Tilt(°)	34.4 / 2.90 / 0.02	34.4 / 2.90 / -0.03
Centerline (m / ft - AGL)	22.86 / 75.0	22.86 / 75.0

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	TEMQ16	TEMQ16
Model	DRAGONWAVE INC	DRAGONWAVE INC
Model Description	23HD50SFC322V02	23HD50SFC322V02
Emission Designator / Modulation	HORIZON DUO	HORIZON DUO
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)	7.5	7.5
Received Level (dBm)	-46.6	-46.6
EIRP (dBm)	41.9	41.9
Fixed Loss: Tx / Common (dB)	0.0 / 0.0	0.0 / 0.0
Free Space Loss (dB)		122.9

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

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COMSEARCH

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

PCN Date: 10/21/2010

Job Number 101021COMSSL04

New Path

RCN Number: 10102132

Administrative Information

CA-SFO0453D CA
City/County San Jose/Santa Clara
Status / License Basis Engineering Proposal / PRIMARY OPERATION
Call Sign WQLY737
Licensee Code CLESP3
Licensee Name Clearwire Spectrum Holdings III, LL
Radio Service / Station Class MG -- Microwave Industrial/Business Pool

CA-SJC0225B CA

San Jose/Santa Clara
Engineering Proposal / PRIMARY OPERATION
WQLY575
CLESP3
Clearwire Spectrum Holdings III, LL
FXO -- Fixed

Site Information

Latitude (NAD 83)	37 °16' 34.2" N	37 °16' 2.0" N
Longitude (NAD 83)	121 °49' 34.5" W	121 °50' 0.2" W
Ground Elevation (m/ft-AMSL)	87.90 / 288.4	50.60 / 166.0
Antenna Structure Registration #		
Path Azimuth (°)	212.534	32.529
Path Length (km / miles)	1.177 / 0.732	

Transmit Antenna

RD1150	RD1150
RADIO WAVES, INC	RADIO WAVES, INC
HP2-23	HP2-23
Gain(dBi) / Beamwidth(°) / Tilt(°) 40.2 / 1.70 / -1.92	40.2 / 1.70 / 1.91
Centerline (m / ft - AGL) 14.33 / 47.0	12.19 / 40.0

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

TEMQ16	TEMQ16
DRAGONWAVE INC	DRAGONWAVE INC
23HD50SFC322V02	23HD50SFC322V02
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) 7.5	7.5
Received Level (dBm) -32.9	-32.9
EIRP (dBm) 47.7	47.7
Fixed Loss: Tx / Common (dB) 0.0 / 0.0	0.0 / 0.0
Free Space Loss (dB) 120.8	

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

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COMSEARCH

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

PCN Date: 10/21/2010
Job Number 101021COMSSL04

Prev Job Num: 100427COMSSL01
RCN Number: 10102132

Administrative Information

CA-SFO0601A CA
City/County Pleasanton/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-SFO0482A CA

Pleasanton/Alameda
Engineering Proposal / PRIMARY OPERATION
WQLY508
CLESP3
Clearwire Spectrum Holdings III, LL
FXO -- Fixed

Site Information

Latitude (NAD 83)	37 ° <u>38</u> ' <u>58.9</u> " N	37 ° <u>39</u> ' <u>39.3</u> " N
Longitude (NAD 83)	121 ° <u>52</u> ' <u>55.2</u> " W	121 ° <u>53</u> ' <u>2.2</u> " W
Ground Elevation (m/ft-AMSL)	<u>101.30</u> / <u>332.3</u>	<u>102.50</u> / <u>336.3</u>
Antenna Structure Registration #		
Path Azimuth (°)	<u>352.157</u>	<u>172.156</u>
Path Length (km / miles)	1.257 / 0.781	

Transmit Antenna

Manufacturer	<u>RD1151</u>	<u>RD1151</u>
Model	<u>RADIO WAVES, INC</u>	<u>RADIO WAVES, INC</u>
	<u>HP1-23</u>	<u>HP1-23</u>
Gain(dBi) / Beamwidth(°) / Tilt(°)	<u>34.0</u> / <u>3.44</u> / <u>0.49</u>	<u>34.0</u> / <u>3.44</u> / <u>-0.49</u>
Centerline (m / ft – AGL)	<u>13.00</u> / <u>42.7</u>	<u>22.56</u> / <u>74.0</u>

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	<u>TEMO20</u>	<u>TEMO20</u>
Model	DRAGONWAVE INC	DRAGONWAVE INC
Model Description	<u>23HD50SFC371V02</u>	<u>23HD50SFC371V02</u>
Emission Designator / Modulation	HORIZON DUO	HORIZON DUO
Loading	49M2D7W 256 QAM	49M2D7W 256 QAM
Stability (%)	1 CH DIG 371000.000	1 CH DIG 371000.000
	0.001	0.001
	Nominal Coordinated Maximum	Nominal Coordinated Maximum
Power (dBm)	<u>5.5</u>	<u>5.5</u>
Received Level (dBm)	<u>-47.8</u>	<u>-47.8</u>
EIRP (dBm)	<u>39.5</u>	<u>39.5</u>
Fixed Loss: Tx / Common (dB)	0.0 / 0.0	0.0 / 0.0
Free Space Loss (dB)		<u>121.3</u>

Transmit Frequencies (MHz)	<u>23325.0000V(7)</u>	<u>23425.0000V(9)</u>	<u>22125.0000V(7)</u>	<u>22225.0000V(9)</u>
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