

MARIN EMERGENCY RADIO AUTHORITY

c/o Novato Fire Protection District

95 Rowland Way, Novato, CA 94945

PHONE: (415) 878-2690 FAX: (415) 878-2660

WWW.MERAONLINE.ORG

DATE: October 24, 2018

TO: MERA Governing Board

FROM: Ernest Klock, Operations Officer

SUBJECT: AGENDA ITEM C-2: NextGen Project Motorola Contract Change Order 5
Tiburon and Mill Valley Equipment, M3 Core, PA Functionality

Recommended Action: Recommend approval of Motorola Contract Change Order 5 in the amount of \$0 for the inclusion of Tiburon and Mill Valley equipment, M3 Core, and PA Functionality into the MERA Next Gen System project to the Board of Supervisors.

This Contract Change Order number five (CCO#5) covers three items associated with the design of the Next Gen System and provides for a change in components not specified in the Motorola contract. The total cost for CCO#5 is \$0, however, the value of this work is estimated to be \$4,634,821.61. As with all sites under the NextGen project, MERA will have to fund the civil improvements resulting in some cost associated with acceptance of this CCO. The engineer's estimates are still being developed, however, it is estimated that the civil improvements for both Mill Valley and Tiburon are between \$400,000 and \$700,000 – which includes the base construction amount and staff time for construction management.

A detailed description of the services, equipment, and associated costs are included in the attached CCO#5 for the MERA Next Generation Radio System (Nextgen System). Attachments in CCO#5 provide supporting documentation including post-warranty services (System Upgrade Agreement II - SUAII) scope and cost. Decisions on these items should be made prior to completing the NextGen System design, or additional costs may be incurred. All of the foregoing items were presented to the Operations Working group at the September 5, 2018 meeting and the members present indicated support for the recommendation to proceed with the CCO. These items were also presented to the September 12, 2018 joint meeting of the Next Gen Project Oversight Committee and Finance Committee and a verbal report given to the subsequent Executive Board meeting. These items were further discussed at the September 26, 2018 Governing Board meeting.

Item 1 – Tiburon and Mill Valley Additional Equipment and SUAII - \$0

Addition of equipment, design, and SUAII services is proposed at no cost for the Tiburon and Mill Valley sites. These sites were not contemplated in Motorola's proposal and the resultant contract; however, coverage requirements were specified in the request for proposals for the NextGen System. These two additional sites were found to be necessary to provide contract coverage during early system design leading up to FCC licensing Motorola provided a letter dated February 13, 2018 describing their commitment around this item and the scope of CCO#5 is commensurate with that commitment.

Item 2 – Upgrade the Radio Core from M2 to M3 - \$0

Upgrade of the radio core from M2 to M3 is proposed with no loss in features or functionality and at no cost. The M3 core will provide future capability for connection to a backup Master Site without major hardware changes and will ensure the NextGen System radio core is consistent with surrounding Bay Area radio systems.

Item 3 – Addition of PA Functionality to Woodacre and San Rafael Dispatch - \$0

Addition of PA functionality to the Woodacre and San Rafael dispatch centers is proposed at no cost. One Conventional Channel Gateway (CCGW) will be added at each dispatch center. Installation and configuration of the CCGWs are included in this CCO#5.

Summary

If approved, CCO#5 will provide added redundancy and security for the NextGen System as well as to ensure that the system coverage requirements are met. This CCO scope includes all equipment, services, design, warranty and post-warranty services (SUAI) necessary to implement the items described for a total cost of \$0 after discounts. Decision and/or addition of these items at a later date could expose MERA to additional costs as the design is approaching 50% and now is a good time to change directions.

Attachment 1 – February 13, 2018 Commitment Letter from Motorola

Attachment 2 – Motorola Contract Change Order #5

Motorola Solutions, Inc.
10680 Treena Street, #200
San Diego, CA 92131
U.S.A.

February 13, 2018

Ernest Klock
Assistant Director
Department of Public Works
County of Marin
3501 Civic Center Drive, Suite 304
San Rafael, Ca 94903

RE: Mill Valley & Tiburon Additional Sites

CC: Dave Jeffries

Dear Mr. Klock:

Motorola Solutions, Inc. (“Motorola”) has agreed to include certain equipment and services at two additional sites (Mill Valley & Tiburon) to the System Design at no additional cost to MERA. This addition will be considered as part of the original contract and will allow MERA to conform to the RPC requirements while providing coverage consistent with the contract requirements.

The additional equipment and services will be fully described in a no cost Change Order that will be prepared and executed upon completion of the CDR. In addition, Motorola will agree that the additional equipment at the two additional sites will be covered by the proposed 15 year SUA II and maintenance services at no additional cost.

We thank you for the opportunity to do business with the County of Marin. Please contact your Project Manager, Kourosh Mostashari at 415-265-2155, or your Account Manager, Rodney Hughes at 805-390-7782 with any additional questions.

Sincerely,

MOTOROLA SOLUTIONS, INC.



Micah Applewhite
MSSSI Vice President

Change Order No. 005

Date: 08/13/18

Project Name: MERA Next Generation Radio System

Customer Name: Marin County

Customer Project Mgr: Ernest Klock

The purpose of this Change Order is to:

Capture the following changes:

1. Addition of Tiburon and Mill Valley Water Tank sites, including all required radio and microwave hardware, engineering and installation services, and SUA II post-warranty services
2. Upgrade the radio system core to M3
3. Item #28 - Addition of PA functionality to Woodacre and San Rafael dispatch centers

Contract # 31701399

Contract Date: 03/07/17

In accordance with the terms and conditions of the contract identified above between Marin County and Motorola Solutions, Inc., the following changes are approved:

Contract Price Adjustments

Original Contract Value:	\$ 34,337,451.06
Previous Change Order amounts for Change Order numbers <input type="text" value="0"/> through <input type="text" value="4"/>	\$ 2,777,880.00
This Change Order:	\$ 0.00
Existing Contract Credit:	\$ 0.00
Net Contract Impact of this Change Order:	\$ 0.00
New Contract Value:	\$ 37,115,331.06

Completion Date Adjustments

Original Completion Date:	3/27/2019
Current Completion Date prior to this Change Order:	3/27/2019
New Completion Date:	3/27/2019

Changes in Equipment: *(additions, deletions or modifications)* **Include attachments if needed**

Please refer to the attached equipment list

Changes in Services: *(additions, deletions or modifications)* **Include attachments if needed**

- Addition of Tiburon and Mill Valley Water Tank sites, including all required radio and microwave hardware and services**

As per Motorola’s commitment in November of 2017, two additional sites – namely Mill Valley Water Tank and Tiburon – will be considered as part of the original contract and will allow MERA to conform to the RPC requirements while providing coverage consistent with the contract requirements. For a detailed list of services, please refer to Section 5 of the Motorola’s Next Generation Radio Contract for Marin County. For detailed list of post-warranty services, please refer to Section 12 of Motorola’s Next Generation Radio Contract for Marin County
- Upgrade the Radio Core to M3**

Although the next generation radio contract calls out for an M2 core and there is no difference in radio functionality between the M2 and M3 cores, in order to make the MERA radio core consistent with the surrounding bay area radio systems, Motorola will provide MERA with an M3 core for the next generation radio system at no cost. The M3 core will provide in the future capability to connect to a backup Master Site without major hardware changes. Motorola calls this function DSR (Dynamic System Resiliency). In addition, the M3 is capable of multi-zone which allows connecting to other zones in the future
- Item #28 - Addition of PA functionality to Woodacre and San Rafael dispatch centers**

PA functionality will be added to the Woodacre and San Rafael dispatch by adding one CCGW at each dispatch center. Installation and configuration of the CCGWs are included in this Change Order

Schedule Changes: *(describe change or N/A)*

The project schedule will be finalized upon CDR approvals and is contingent upon CEQA and site construction timelines

Pricing Changes: <i>(describe change or N/A)</i>
Please refer to the attached price summary sheet

Customer Responsibilities: <i>(describe change or N/A)</i>
As Mill Valley Water Tank and Tiburon sites are treated as part of the original contract, please refer to Section 5 of the Motorola's Next Generation Radio Contract for Marin County for the details of Marin County's responsibilities

Payment Schedule for this Change Order: <i>(describe new payment terms applicable to this change order)</i>
N/A

Unless amended above, all other terms and conditions of the Contract shall remain in full force. If there are any inconsistencies between the provisions of this Change Order and the provisions of the Contract, the provisions of this Change Order will prevail.

IN WITNESS WHEREOF the parties have executed this Change Order as of the last date signed below.

Motorola Solutions, Inc.	Customer
By: _____	By: _____
Printed Name: KENT MARTIN	Printed Name: _____
Title: Regional Services Manager	Title: _____
Date: August 13, 2018	Date: _____
Reviewed by: Kourosh Mostashari	Date: August 13, 2018
_____	_____
Motorola Solutions Project Manager	

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Addition of Tiburon and Mill Valley Water Tank RF Sites - LMR Equipment

Site Type	SUB SYS	BLOCK	APC	QTY	NOMENCLATURE	DESCRIPTION
Master Site	Tiburon	MASTER	877	2	UA00153AA	ADD: ASTRO 25 FDMA SITE LICENSE
Master Site	Tiburon	MASTER	877	2	UA00159AA	ADD: P25 PHASE 2 TDMA TRNG OP SITE LIC
Master Site	Tiburon	MASTER	877	2	UA00160AA	ADD: PHASE 2 DYNAMIC TG ASGNMT SITE LIC
Master Site	Tiburon	MASTER	877	26	UA00161AA	ADD: P25 PHASE 2 TDMA SW BASE RADIO LIC
Master Site	Tiburon	MASTER	877	12	UA00162AA	ADD: PHASE 2 DYNAMIC CH BASE RADIO LIC
RF Site	Tiburon	GTR8000	112	1	SQM01SUM7054	GTR 8000 EXPANDABLE SITE SUBSYSTEM
RF Site	Tiburon	GTR8000	595	1	CA00717AA	ADD: ASTRO SYSTEM RELEASE 7.17
RF Site	Tiburon	GTR8000	112	1	CA00855AA	ADD: 700/800 MHZ
RF Site	Tiburon	GTR8000	595	4	CA01842AA	ADD: P25 TDMA SOFTWARE
RF Site	Tiburon	GTR8000	595	4	CA01902AA	ADD: P25 DYNAMIC CHANNEL SOFTWARE
RF Site	Tiburon	GTR8000	112	1	X305AC	ADD: QTY (5) GTR 8000 BASE RADIOS
RF Site	Tiburon	GTR8000	595	5	CA01193AA	ADD: IP BASED MULTISITE BASE RADIO SOFTWARE
RF Site	Tiburon	GTR8000	147	2	CA01706AA	ADD: ADD: GGM 8000 GATEWAY
RF Site	Tiburon	GTR8000	112	1	CA00862AA	ADD: SITE & CABINET RMC W/CAPABILITY OF 7-24 BRS
RF Site	Tiburon	GTR8000	112	1	CA01943AA	ADD:2ND BRANCH DIVERSITY
RF Site	Tiburon	GTR8000	112	1	CA00879AA	ADD: PRIMARY 6 PORT CAVITY COMBINER
RF Site	Tiburon	GTR8000	112	1	CA00882AA	ADD: 700 MHZ TX FILTER W/PMU
RF Site	Tiburon	GTR8000	112	2	CA01536AA	ADD: GPB 8000 REFERENCE DISTRIBUTION MODULE
RF Site	Tiburon	GTR8000	595	2	CA01537AA	ADD: REFERENCE DISTRIBUTION SOFTWARE
RF Site	Tiburon	GTR8000	112	1	X882AH	ADD: 7.5 FT OPEN RACK, 48RU
RF Site	Tiburon	GTR8000	112	1	CA02686AA	ADD: AC DC POWER DISTRIBUTION
RF Site	Tiburon	GTR8000	112	5	CA01953AA	ADD: POWER EFFICIENCY PACKAGE
RF Site	Tiburon	GTR8000	112	1	CA03111AA	ADD: CEC COMPLIANCE
RF Site	Tiburon	GTR8000	906	2	DS0900382702	GPS TIMING ANTENNA/RECEIVER W/ ADDTL FILTERING
RF Site	Tiburon	GTR8000	906	2	DSS5834AAU8	MOUNTING KIT FOR 110033-03. GPS TIMING ANTENNA
RF Site	Tiburon	GTR8000	207	2	DSX2L1M1DC48IG	SPD, HPD GPS DATA LINE, 48VDC, HARD WIRE WITH ISOLATED GROUNDING
RF Site	Tiburon	GTR8000	351	2	DS30C87465CO1	125FT OUTDOOR UV PROTECTED CABLE 6 PR, 22AWG DB15 CABLE
RF Site	Tiburon	GTR8000	112	1	SQM01SUM7054	GTR 8000 EXPANDABLE SITE SUBSYSTEM
RF Site	Tiburon	GTR8000	595	1	CA00717AA	ADD: ASTRO SYSTEM RELEASE 7.17
RF Site	Tiburon	GTR8000	112	1	CA00855AA	ADD: 700/800 MHZ
RF Site	Tiburon	GTR8000	595	4	CA01842AA	ADD: P25 TDMA SOFTWARE
RF Site	Tiburon	GTR8000	595	2	CA01902AA	ADD: P25 DYNAMIC CHANNEL SOFTWARE
RF Site	Tiburon	GTR8000	112	1	X304AE	ADD: QTY (4) GTR 8000 BASE RADIOS
RF Site	Tiburon	GTR8000	595	4	CA01193AA	ADD: IP BASED MULTISITE BASE RADIO SOFTWARE
RF Site	Tiburon	GTR8000	112	1	CA00877AA	ADD: CABINET RMC FOR EXPANSION RACK
RF Site	Tiburon	GTR8000	112	1	CA00880AA	ADD: EXPANSION 6 PORT CAVITY COMBINER
RF Site	Tiburon	GTR8000	112	1	CA01058AA	ADD: 700/800 PHASING HARNESS
RF Site	Tiburon	GTR8000	112	2	CA00885AA	ADD: HIGH AVAILABILITY XHUB
RF Site	Tiburon	GTR8000	112	1	X882AH	ADD: 7.5 FT OPEN RACK, 48RU
RF Site	Tiburon	GTR8000	112	1	CA02686AA	ADD: AC DC POWER DISTRIBUTION
RF Site	Tiburon	GTR8000	112	4	CA01953AA	ADD: POWER EFFICIENCY PACKAGE
RF Site	Tiburon	GTR8000	112	1	CA03111AA	ADD: CEC COMPLIANCE
RF Site	Tiburon	GTR8000	112	1	SQM01SUM7054	GTR 8000 EXPANDABLE SITE SUBSYSTEM
RF Site	Tiburon	GTR8000	595	1	CA00717AA	ADD: ASTRO SYSTEM RELEASE 7.17
RF Site	Tiburon	GTR8000	112	1	CA00855AA	ADD: 700/800 MHZ
RF Site	Tiburon	GTR8000	595	4	CA01842AA	ADD: P25 TDMA SOFTWARE
RF Site	Tiburon	GTR8000	112	1	X304AE	ADD: QTY (4) GTR 8000 BASE RADIOS
RF Site	Tiburon	GTR8000	595	4	CA01193AA	ADD: IP BASED MULTISITE BASE RADIO SOFTWARE
RF Site	Tiburon	GTR8000	112	1	CA00877AA	ADD: CABINET RMC FOR EXPANSION RACK
RF Site	Tiburon	GTR8000	112	1	CA00879AA	ADD: PRIMARY 6 PORT CAVITY COMBINER
RF Site	Tiburon	GTR8000	112	2	CA00885AA	ADD: HIGH AVAILABILITY XHUB
RF Site	Tiburon	GTR8000	112	1	X882AH	ADD: 7.5 FT OPEN RACK, 48RU
RF Site	Tiburon	GTR8000	112	1	CA02686AA	ADD: AC DC POWER DISTRIBUTION
RF Site	Tiburon	GTR8000	112	4	CA01953AA	ADD: POWER EFFICIENCY PACKAGE
RF Site	Tiburon	GTR8000	112	1	CA03111AA	ADD: CEC COMPLIANCE
RF Site	Tiburon	RACK	509	1	TRN7343	SEVEN AND A HALF FOOT RACK
RF Site	Tiburon	CCGW	147	1	SQM01SUM0205	GGM 8000 GATEWAY
RF Site	Tiburon	CCGW	147	1	CA01619AA	ADD: DC POWER
RF Site	Tiburon	CCGW	147	1	CA02086AA	ADD: HIGH DENSITY ENH CONV GATEWAY
RF Site	Tiburon	NFM	469	1	F4544	SITE MANAGER ADVANCED
RF Site	Tiburon	NFM	382	1	F2463	RTU_PER_DEVICE_SW_LICENSES
RF Site	Tiburon	NFM	382	1	V839	RTU_SW_LIC_PER_NFM-RTU_I-O
RF Site	Tiburon	NFM	382	13	VA00312	RTU_SW_LIC_PER_GTR8000_MS_BR
RF Site	Tiburon	NFM	382	1	VA00300	RTU_SW_LIC_PER_RFDS
RF Site	Tiburon	RFDS	351	1	DS43783I01C48	CONTROL MONITORING UNIT, 796-824MHZ,DUAL DIVERSITY,ETHERNET,48VDC
RF Site	Tiburon	RFDS	351	1	DS43783I01T	TTA, 796-824MHZ, SINGLE / DUAL NETWORK, TEST PORT
RF Site	Tiburon	TX ANTENNA 1	351	1	DSS4145WBPALDFD6	ENCLOSED DIPOLE, 11.5 DBD, ADJ BEAMWID, LOW PIM, PIP, 6DT, 746-960 MHZ
RF Site	Tiburon	TX ANT TO SURGE 1	351	1	DDN1078	78EZDM-M DIN MALE MOT CONNECTOR (MOTOROLA SPECIFIC)
RF Site	Tiburon	TX ANT TO SURGE 1	351	1	DS245174	245174COLD SHRNK FOR USE WITH 7/8" TO 3/8" AND 1/2" N OR DIN TYPE CONN
RF Site	Tiburon	TX ANT TO SURGE 1	908	200	DSAVA550	AVAS-50, COAXIAL CABLE, CORRUGATED COPPER,7/8 IN, BLACK PE JACKET
RF Site	Tiburon	TX ANT TO SURGE 1	351	5	DSSG7806B2A	SG78-06B2A GROUNDING KIT FOR 7/8 IN COAXIAL CABLE
RF Site	Tiburon	TX ANT TO SURGE 1	351	1	DSL55GRIP	L55GRIP 7/8" SUPPORT HOIST GRIP
RF Site	Tiburon	TX ANT TO SURGE 1	351	1	DDN1077	7-16IN DIN FEMALE CONNECTOR EZ-FIT FOR 7/8IN CABLE (MOTOROLA SPECIFIC)
RF Site	Tiburon	SURGE 1	207	1	DSTSDFM8F	RF SPD, 698-2700MHZ DC BLOCK HIGH PWR, DIN FEM/MALE BI-DIR W/ BRACKET
RF Site	Tiburon	SURGE 1	207	1	DSGSAKITD	GROUND STRAP KIT - DIN
RF Site	Tiburon	SURGE TO ESS 1	351	25	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
RF Site	Tiburon	SURGE TO ESS 1	351	2	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2 IN CABLE
RF Site	Tiburon	TX ANTENNA 2	351	1	DSS4145WBPALDFD6	ENCLOSED DIPOLE, 11.5 DBD, ADJ BEAMWID, LOW PIM, PIP, 6DT, 746-960 MHZ
RF Site	Tiburon	TX ANT TO SURGE 2	351	1	DDN1078	78EZDM-M DIN MALE MOT CONNECTOR (MOTOROLA SPECIFIC)
RF Site	Tiburon	TX ANT TO SURGE 2	351	1	DS245174	245174COLD SHRNK FOR USE WITH 7/8" TO 3/8" AND 1/2" N OR DIN TYPE CONN
RF Site	Tiburon	TX ANT TO SURGE 2	908	200	DSAVA550	AVAS-50, COAXIAL CABLE, CORRUGATED COPPER,7/8 IN, BLACK PE JACKET
RF Site	Tiburon	TX ANT TO SURGE 2	351	5	DSSG7806B2A	SG78-06B2A GROUNDING KIT FOR 7/8 IN COAXIAL CABLE
RF Site	Tiburon	TX ANT TO SURGE 2	351	1	DSL55GRIP	L55GRIP 7/8" SUPPORT HOIST GRIP
RF Site	Tiburon	TX ANT TO SURGE 2	351	1	DDN1077	7-16IN DIN FEMALE CONNECTOR EZ-FIT FOR 7/8IN CABLE (MOTOROLA SPECIFIC)
RF Site	Tiburon	SURGE 2	207	1	DSTSDFM8F	RF SPD, 698-2700MHZ DC BLOCK HIGH PWR, DIN FEM/MALE BI-DIR W/ BRACKET
RF Site	Tiburon	SURGE 2	207	1	DSGSAKITD	GROUND STRAP KIT - DIN
RF Site	Tiburon	SURGE TO ESS 2	351	25	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
RF Site	Tiburon	SURGE TO ESS 2	351	2	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2 IN CABLE
RF Site	Tiburon	RX ANTENNA 1	351	1	DSCC80708T3	OMNI CORPORATE COLLINER 8DBD 746-870MHZ 3 DEG DT PIM & 25KW PIP RATED
RF Site	Tiburon	ANT TO TTA 1	351	1	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2 IN CABLE
RF Site	Tiburon	ANT TO TTA 1	351	1	DS245174	245174COLD SHRNK FOR USE WITH 7/8" TO 3/8" AND 1/2" N OR DIN TYPE CONN
RF Site	Tiburon	ANT TO TTA 1	351	15	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
RF Site	Tiburon	ANT TO TTA 1	351	1	DDN1088	L4TDM-PSA TYPE N MALE PS FOR 1/2 IN CABLE
RF Site	Tiburon	ANT TO TTA 1	207	1	DS245171	COLD SHRINK KIT 7/8" TO 1/2" & 3/8"
RF Site	Tiburon	TTA TO SURGE 1	351	200	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
RF Site	Tiburon	TTA TO SURGE 1	351	1	DDN1088	L4TDM-PSA TYPE N MALE PS FOR 1/2 IN CABLE

RF Site	Tiburon	TTA TO SURGE 1	207	1	DS245171	COLD SHRINK KIT 7/8" TO 1/2" & 3/8"
RF Site	Tiburon	TTA TO SURGE 1	351	1	DDN1089	L4TNF-PSA TYPE N FEMALE PS FOR 1/2 IN CABLE
RF Site	Tiburon	TTA TO SURGE 1	351	5	DSSG1206B2A	SG12-06B2A 1/2IN SURE GROUND GROUNDING KIT
RF Site	Tiburon	TTA TO SURGE 1	351	1	DSL45GRIP	L4SGRIP SUPPORT HOIST GRIP 1/2" LDF
RF Site	Tiburon	TTA TO SURGE 1	207	1	DS1090501WA	RF SPD, 700-1000MHZ BROADBAND 15 VDC PASS NM ANT, NF EQUIP PIP, ASIG
RF Site	Tiburon	SURGE TO BCU 1	351	25	L1702	FSJ4-50B CABLE: 1/2" SUPERFLEX POLY JKT PER FOOT
RF Site	Tiburon	SURGE TO BCU 1	351	2	DDN9682	F4PNMV2-HC 1/2" TYPE N MALE PLATED CONNECTOR
RF Site	Tiburon	RX ANTENNA 2	351	1	DSCC80708T3	OMNI CORPORATE COLLINER 8DBD 746-870MHZ 3 DEG DT PIM & 25KW PIP RATED
RF Site	Tiburon	ANT TO TTA 2	351	1	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2 IN CABLE
RF Site	Tiburon	ANT TO TTA 2	351	1	DS245174	245174COLD SHRINK FOR USE WITH 7/8" TO 3/8" AND 1/2" N OR DIN TYPE CONN
RF Site	Tiburon	ANT TO TTA 2	351	15	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
RF Site	Tiburon	ANT TO TTA 2	351	1	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN CABLE
RF Site	Tiburon	ANT TO TTA 2	207	1	DS245171	COLD SHRINK KIT 7/8" TO 1/2" & 3/8"
RF Site	Tiburon	TTA TO SURGE 2	351	200	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
RF Site	Tiburon	TTA TO SURGE 2	351	1	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN CABLE
RF Site	Tiburon	TTA TO SURGE 2	207	1	DS245171	COLD SHRINK KIT 7/8" TO 1/2" & 3/8"
RF Site	Tiburon	TTA TO SURGE 2	351	1	DDN1089	L4TNF-PSA TYPE N FEMALE PS FOR 1/2 IN CABLE
RF Site	Tiburon	TTA TO SURGE 2	351	5	DSSG1206B2A	SG12-06B2A 1/2IN SURE GROUND GROUNDING KIT
RF Site	Tiburon	TTA TO SURGE 2	351	1	DSL45GRIP	L4SGRIP SUPPORT HOIST GRIP 1/2" LDF
RF Site	Tiburon	SURGE	207	1	DS1090501WA	RF SPD, 700-1000MHZ BROADBAND 15 VDC PASS NM ANT, NF EQUIP PIP, ASIG
RF Site	Tiburon	SURGE TO BCU 2	351	25	L1702	FSJ4-50B CABLE: 1/2" SUPERFLEX POLY JKT PER FOOT
RF Site	Tiburon	SURGE TO BCU 2	351	2	DDN9682	F4PNMV2-HC 1/2" TYPE N MALE PLATED CONNECTOR
RF Site	Tiburon	TTA TEST TO SURGE	351	200	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
RF Site	Tiburon	TTA TEST TO SURGE	351	1	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN CABLE
RF Site	Tiburon	TTA TEST TO SURGE	207	1	DS245171	COLD SHRINK KIT 7/8" TO 1/2" & 3/8"
RF Site	Tiburon	TTA TEST TO SURGE	351	1	DDN1089	L4TNF-PSA TYPE N FEMALE PS FOR 1/2 IN CABLE
RF Site	Tiburon	TTA TEST TO SURGE	351	5	DSSG1206B2A	SG12-06B2A 1/2IN SURE GROUND GROUNDING KIT
RF Site	Tiburon	TTA TEST TO SURGE	351	1	DSL45GRIP	L4SGRIP SUPPORT HOIST GRIP 1/2" LDF
RF Site	Tiburon	SURGE	207	1	DS1090501WA	RF SPD, 700-1000MHZ BROADBAND 15 VDC PASS NM ANT, NF EQUIP PIP, ASIG
RF Site	Tiburon	SURGE TO BCU TEST	351	25	L1702	FSJ4-50B CABLE: 1/2" SUPERFLEX POLY JKT PER FOOT
RF Site	Tiburon	SURGE TO BCU TEST	351	2	DDN9682	F4PNMV2-HC 1/2" TYPE N MALE PLATED CONNECTOR
RF Site	Tiburon	DC POWER	0	1	DSTPS208400002	FP216 -48/500 3 DC32 R12 4T2 4BW7, SP2 TRILOGY WITH RELAY RACK AND BATT BREAKERS/CABLES
RF Site	Tiburon	DC POWER	207	2	DS241119105	RECTIFIER, FLATPACK2 48/3000 HE
RF Site	Tiburon	DC POWER	207	5	DS236408	BLIND PANEL FP2 HE BLACK G1
RF Site	Tiburon	DC POWER	207	1	DS265504	ESI SERIES INVERTER, 48VDC INPUT, 120VAC OUTPUT, 2KVA/1600W
RF Site	Tiburon	DC POWER	207	1	DS502660	BREAKER 50A 1P AUX 5/16 BULLET
RF Site	Tiburon	DC POWER	207	1	DS298137	SNMP CARD FOR DELTA INVERTERS
RF Site	Tiburon	DC POWER	207	12	DSNSB210FT	BATTERY, 12V, HT 210AH RED NORTHSTAR
RF Site	Tiburon	DC POWER	0	4	DS505056	NYLON BATTERY STRAP 8 FT CAM BUCKLE FOR SEISMIC APPLICATIONS
RF Site	Tiburon	DC POWER	207	2	DS230700	KIT: BATTERY MONITOR 10M G1, BATTERY MONITOR CAN BUS NODE
RF Site	Tiburon	DC POWER	207	2	DS083E27487500	3A CIRCUIT BREAKER, SINGLE POLE, ONE PANEL POSITION
RF Site	Tiburon	DC POWER	207	1	DS0831061408	CIRCUIT BREAKER 5A SINGLE POLE
RF Site	Tiburon	DC POWER	207	4	DS0831061708	CIRCUIT BREAKER 20A SINGLE POLE
RF Site	Tiburon	DC POWER	207	6	DS502660	BREAKER 50A 1P AUX 5/16 BULLET
RF Site	Tiburon	DC POWER	0	1	DS321630	BREAKER 125A Kit, 2P, E-TRIP, 5/16 BULLET
RF Site	Tiburon	APM	351	1	DSAPM7487K248	ADVANCED POWER MONITOR, 740-870 MHZ, 36-60V DC (INC SINGLE COUPLER)
RF Site	Tiburon	APM	351	1	DSSP7496440DF1R1U	ANT LINE COUPLER 740-960MHZ 40DB 4-PORTS SUIT APM748 AND APM8796
RF Site	Mill Valley	GTR8000	112	1	SQM01SUM7054	GTR 8000 EXPANDABLE SITE SUBSYSTEM
RF Site	Mill Valley	GTR8000	595	1	CA00717AA	ADD: ASTRO SYSTEM RELEASE 7.17
RF Site	Mill Valley	GTR8000	112	1	CA00855AA	ADD: 700/800 MHZ
RF Site	Mill Valley	GTR8000	595	4	CA01842AA	ADD: P25 TDMA SOFTWARE
RF Site	Mill Valley	GTR8000	595	4	CA01902AA	ADD: P25 DYNAMIC CHANNEL SOFTWARE
RF Site	Mill Valley	GTR8000	112	1	X305AC	ADD: QTY (5) GTR 8000 BASE RADIOS
RF Site	Mill Valley	GTR8000	595	5	CA01193AA	ADD: IP BASED MULTISITE BASE RADIO SOFTWARE
RF Site	Mill Valley	GTR8000	147	2	CA01706AA	ADD: ADD: GGM 8000 GATEWAY
RF Site	Mill Valley	GTR8000	112	1	CA00862AA	ADD: SITE & CABINET RMC W/CAPABILITY OF 7-24 BRS
RF Site	Mill Valley	GTR8000	112	1	CA01943AA	ADD:2ND BRANCH DIVERSITY
RF Site	Mill Valley	GTR8000	112	1	CA00879AA	ADD: PRIMARY 6 PORT CAVITY COMBINER
RF Site	Mill Valley	GTR8000	112	1	CA00882AA	ADD: 700 MHZ TX FILTER W/PMU
RF Site	Mill Valley	GTR8000	112	2	CA01536AA	ADD: GPB 8000 REFERENCE DISTRIBUTION MODULE
RF Site	Mill Valley	GTR8000	595	2	CA01537AA	ADD: REFERENCE DISTRIBUTION SOFTWARE
RF Site	Mill Valley	GTR8000	112	1	X882AH	ADD: 7.5 FT OPEN RACK, 48RU
RF Site	Mill Valley	GTR8000	112	1	CA02686AA	ADD: AC DC POWER DISTRIBUTION
RF Site	Mill Valley	GTR8000	112	5	CA01953AA	ADD: POWER EFFICIENCY PACKAGE
RF Site	Mill Valley	GTR8000	112	1	CA03111AA	ADD: CEC COMPLIANCE
RF Site	Mill Valley	GTR8000	906	2	DS0900382702	GPS TIMING ANTENNA/RECEIVER W/ ADDTL FILTERING
RF Site	Mill Valley	GTR8000	906	2	DSS58534AAU8	MOUNTING KIT FOR 110033-03, GPS TIMING ANTENNA
RF Site	Mill Valley	GTR8000	207	2	DSX2L1M1DC48IG	SPD, HPD GPS DATA LINE, 48VDC, HARD WIRE WITH ISOLATED GROUNDING
RF Site	Mill Valley	GTR8000	351	2	DS30C87465CO1	125FT OUTDOOR UV PROTECTED CABLE 6 PR, 22AWG DB15 CABLE
RF Site	Mill Valley	GTR8000	112	1	SQM01SUM7054	GTR 8000 EXPANDABLE SITE SUBSYSTEM
RF Site	Mill Valley	GTR8000	595	1	CA00717AA	ADD: ASTRO SYSTEM RELEASE 7.17
RF Site	Mill Valley	GTR8000	112	1	CA00855AA	ADD: 700/800 MHZ
RF Site	Mill Valley	GTR8000	595	4	CA01842AA	ADD: P25 TDMA SOFTWARE
RF Site	Mill Valley	GTR8000	595	2	CA01902AA	ADD: P25 DYNAMIC CHANNEL SOFTWARE
RF Site	Mill Valley	GTR8000	112	1	X304AE	ADD: QTY (4) GTR 8000 BASE RADIOS
RF Site	Mill Valley	GTR8000	595	4	CA01193AA	ADD: IP BASED MULTISITE BASE RADIO SOFTWARE
RF Site	Mill Valley	GTR8000	112	1	CA00877AA	ADD: CABINET RMC FOR EXPANSION RACK
RF Site	Mill Valley	GTR8000	112	1	CA00880AA	ADD: EXPANSION 6 PORT CAVITY COMBINER
RF Site	Mill Valley	GTR8000	112	1	CA01058AA	ADD: 700/800 PHASING HARNESS
RF Site	Mill Valley	GTR8000	112	2	CA00885AA	ADD: HIGH AVAILABILITY XHUB
RF Site	Mill Valley	GTR8000	112	1	X882AH	ADD: 7.5 FT OPEN RACK, 48RU
RF Site	Mill Valley	GTR8000	112	1	CA02686AA	ADD: AC DC POWER DISTRIBUTION
RF Site	Mill Valley	GTR8000	112	4	CA01953AA	ADD: POWER EFFICIENCY PACKAGE
RF Site	Mill Valley	GTR8000	112	1	CA03111AA	ADD: CEC COMPLIANCE
RF Site	Mill Valley	GTR8000	112	1	SQM01SUM7054	GTR 8000 EXPANDABLE SITE SUBSYSTEM
RF Site	Mill Valley	GTR8000	595	1	CA00717AA	ADD: ASTRO SYSTEM RELEASE 7.17
RF Site	Mill Valley	GTR8000	112	1	CA00855AA	ADD: 700/800 MHZ
RF Site	Mill Valley	GTR8000	595	4	CA01842AA	ADD: P25 TDMA SOFTWARE
RF Site	Mill Valley	GTR8000	112	1	X304AE	ADD: QTY (4) GTR 8000 BASE RADIOS
RF Site	Mill Valley	GTR8000	595	4	CA01193AA	ADD: IP BASED MULTISITE BASE RADIO SOFTWARE

RF Site	Mill Valley	GTR8000	112	1	CA00877AA	ADD: CABINET RMC FOR EXPANSION RACK
RF Site	Mill Valley	GTR8000	112	1	CA00879AA	ADD: PRIMARY 6 PORT CAVITY COMBINER
RF Site	Mill Valley	GTR8000	112	2	CA00885AA	ADD: HIGH AVAILABILITY XHUB
RF Site	Mill Valley	GTR8000	112	1	X882AH	ADD: 7.5 FT OPEN RACK, 48RU
RF Site	Mill Valley	GTR8000	112	1	CA02686AA	ADD: AC DC POWER DISTRIBUTION
RF Site	Mill Valley	GTR8000	112	4	CA01953AA	ADD: POWER EFFICIENCY PACKAGE
RF Site	Mill Valley	GTR8000	112	1	CA03111AA	ADD: CEC COMPLIANCE
RF Site	Mill Valley	RACK	509	1	TRN7343	SEVEN AND A HALF FOOT RACK
RF Site	Mill Valley	CCGW	147	1	SQM01SUM0205	GGM 8000 GATEWAY
RF Site	Mill Valley	CCGW	147	1	CA01619AA	ADD: DC POWER
RF Site	Mill Valley	CCGW	147	1	CA02086AA	ADD: HIGH DENSITY ENH CONV GATEWAY
RF Site	Mill Valley	NFM	469	1	F4544	SITE MANAGER ADVANCED
RF Site	Mill Valley	NFM	382	1	F2463	RTU_PER_DEVICE_SW_LICENSES
RF Site	Mill Valley	NFM	382	1	V839	RTU_SW_LIC_PER_NFM-RTU_I-O
RF Site	Mill Valley	NFM	382	13	VA00312	RTU_SW_LIC_PER_GTR8000_MS_BR
RF Site	Mill Valley	NFM	382	1	VA00300	RTU_SW_LIC_PER_RFDS
RF Site	Mill Valley	RFDS	351	1	DS43783I01C48	CONTROL MONITORING UNIT, 796-824MHZ,DUAL DIVERSITY,ETHERNET,48VDC
RF Site	Mill Valley	RFDS	351	1	DS43783I01T	TTA, 796-824MHZ, SINGLE / DUAL NETWORK, TEST PORT
RF Site	Mill Valley	TX ANTENNA 1	0	1	DSSC476HF1LDFD10	COLLINEAR OMNI ANTENNA, 6 DBD LOW PIM, 10 DEG DT, HD, 746-869 MHZ
RF Site	Mill Valley	TX ANT TO SURGE 1	351	1	DDN1078	78E2DM-M DIN MALE MOT CONNECTOR (MOTOROLA SPECIFIC)
RF Site	Mill Valley	TX ANT TO SURGE 1	351	1	DS245174	245174COLD SHRINK FOR USE WITH 7/8" TO 3/8" AND 1/2" N OR DIN TYPE CONN
RF Site	Mill Valley	TX ANT TO SURGE 1	908	200	DSAVA550	AVA5-50, COAXIAL CABLE, CORRUGATED COPPER,7/8 IN, BLACK PE JACKET
RF Site	Mill Valley	TX ANT TO SURGE 1	351	5	DSSG7806B2A	SG78-06B2A GROUNDING KIT FOR 7/8 IN COAXIAL CABLE
RF Site	Mill Valley	TX ANT TO SURGE 1	351	1	DSL55GRIP	L55GRIP 7/8" SUPPORT HOIST GRIP
RF Site	Mill Valley	TX ANT TO SURGE 1	351	1	DDN1077	7-16IN DIN FEMALE CONNECTOR EZ-FIT FOR 7/8IN CABLE (MOTOROLA SPECIFIC)
RF Site	Mill Valley	SURGE 1	207	1	DSTSXFMBF	RF SPD, 698-2700MHZ DC BLOCK HIGH PWR, DIN FEM/MALE BI-DIR W/ BRACKET
RF Site	Mill Valley	SURGE 1	207	1	DSGSAKITD	GROUND STRAP KIT - DIN
RF Site	Mill Valley	SURGE TO ESS 1	351	25	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
RF Site	Mill Valley	SURGE TO ESS 1	351	2	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2 IN CABLE
RF Site	Mill Valley	TX ANTENNA 2	0	1	DSSC476HF1LDFD10	COLLINEAR OMNI ANTENNA, 6 DBD LOW PIM, 10 DEG DT, HD, 746-869 MHZ
RF Site	Mill Valley	TX ANT TO SURGE 2	351	1	DDN1078	78E2DM-M DIN MALE MOT CONNECTOR (MOTOROLA SPECIFIC)
RF Site	Mill Valley	TX ANT TO SURGE 2	351	1	DS245174	245174COLD SHRINK FOR USE WITH 7/8" TO 3/8" AND 1/2" N OR DIN TYPE CONN
RF Site	Mill Valley	TX ANT TO SURGE 2	908	200	DSAVA550	AVA5-50, COAXIAL CABLE, CORRUGATED COPPER,7/8 IN, BLACK PE JACKET
RF Site	Mill Valley	TX ANT TO SURGE 2	351	5	DSSG7806B2A	SG78-06B2A GROUNDING KIT FOR 7/8 IN COAXIAL CABLE
RF Site	Mill Valley	TX ANT TO SURGE 2	351	1	DSL55GRIP	L55GRIP 7/8" SUPPORT HOIST GRIP
RF Site	Mill Valley	TX ANT TO SURGE 2	351	1	DDN1077	7-16IN DIN FEMALE CONNECTOR EZ-FIT FOR 7/8IN CABLE (MOTOROLA SPECIFIC)
RF Site	Mill Valley	SURGE 2	207	1	DSTSXFMBF	RF SPD, 698-2700MHZ DC BLOCK HIGH PWR, DIN FEM/MALE BI-DIR W/ BRACKET
RF Site	Mill Valley	SURGE 2	207	1	DSGSAKITD	GROUND STRAP KIT - DIN
RF Site	Mill Valley	SURGE TO ESS 2	351	25	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
RF Site	Mill Valley	SURGE TO ESS 2	351	2	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2 IN CABLE
RF Site	Mill Valley	RX ANTENNA 1	351	1	DSCC80708T5	OMNI, CORP COLLINEAR, 8 DBD, 746-870MHZ, 5DEG DT, PIM & 25KW PIP RATED
RF Site	Mill Valley	ANT TO TTA 1	351	1	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2 IN CABLE
RF Site	Mill Valley	ANT TO TTA 1	351	1	DS245174	245174COLD SHRINK FOR USE WITH 7/8" TO 3/8" AND 1/2" N OR DIN TYPE CONN
RF Site	Mill Valley	ANT TO TTA 1	351	15	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
RF Site	Mill Valley	ANT TO TTA 1	351	1	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN CABLE
RF Site	Mill Valley	ANT TO TTA 1	207	1	DS245171	COLD SHRINK KIT 7/8" TO 1/2" & 3/8"
RF Site	Mill Valley	TTA TO SURGE 1	351	200	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
RF Site	Mill Valley	TTA TO SURGE 1	351	1	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN CABLE
RF Site	Mill Valley	TTA TO SURGE 1	207	1	DS245171	COLD SHRINK KIT 7/8" TO 1/2" & 3/8"
RF Site	Mill Valley	TTA TO SURGE 1	351	1	DDN1089	L4TNF-PSA TYPE N FEMALE PS FOR 1/2 IN CABLE
RF Site	Mill Valley	TTA TO SURGE 1	351	5	DSSG1206B2A	SG12-06B2A 1/2IN SURE GROUND GROUNDING KIT
RF Site	Mill Valley	TTA TO SURGE 1	351	1	DSL45GRIP	L45GRIP SUPPORT HOIST GRIP 1/2" LDF
RF Site	Mill Valley	TTA TO SURGE 1	207	1	DS1090501WA	RF SPD, 700-1000MHZ BROADBAND 15 VDC PASS NM ANT, NF EQUIP PIP, ASIG
RF Site	Mill Valley	SURGE TO BCU 1	351	25	L1702	FSI4-50B CABLE: 1/2" SUPERFLEX POLY JKT PER FOOT
RF Site	Mill Valley	SURGE TO BCU 1	351	2	DDN9682	F4PNMV2-HC 1/2" TYPE N MALE PLATED CONNECTOR
RF Site	Mill Valley	RX ANTENNA 2	351	1	DSCC80708T5	OMNI, CORP COLLINEAR, 8 DBD, 746-870MHZ, 5DEG DT, PIM & 25KW PIP RATED
RF Site	Mill Valley	ANT TO TTA 2	351	1	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2 IN CABLE
RF Site	Mill Valley	ANT TO TTA 2	351	1	DS245174	245174COLD SHRINK FOR USE WITH 7/8" TO 3/8" AND 1/2" N OR DIN TYPE CONN
RF Site	Mill Valley	ANT TO TTA 2	351	15	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
RF Site	Mill Valley	ANT TO TTA 2	351	1	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN CABLE
RF Site	Mill Valley	ANT TO TTA 2	207	1	DS245171	COLD SHRINK KIT 7/8" TO 1/2" & 3/8"
RF Site	Mill Valley	TTA TO SURGE 2	351	200	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
RF Site	Mill Valley	TTA TO SURGE 2	351	1	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN CABLE
RF Site	Mill Valley	TTA TO SURGE 2	207	1	DS245171	COLD SHRINK KIT 7/8" TO 1/2" & 3/8"
RF Site	Mill Valley	TTA TO SURGE 2	351	1	DDN1089	L4TNF-PSA TYPE N FEMALE PS FOR 1/2 IN CABLE
RF Site	Mill Valley	TTA TO SURGE 2	351	5	DSSG1206B2A	SG12-06B2A 1/2IN SURE GROUND GROUNDING KIT
RF Site	Mill Valley	TTA TO SURGE 2	351	1	DSL45GRIP	L45GRIP SUPPORT HOIST GRIP 1/2" LDF
RF Site	Mill Valley	TTA TO SURGE 2	207	1	DS1090501WA	RF SPD, 700-1000MHZ BROADBAND 15 VDC PASS NM ANT, NF EQUIP PIP, ASIG
RF Site	Mill Valley	SURGE TO BCU 2	351	25	L1702	FSI4-50B CABLE: 1/2" SUPERFLEX POLY JKT PER FOOT
RF Site	Mill Valley	SURGE TO BCU 2	351	2	DDN9682	F4PNMV2-HC 1/2" TYPE N MALE PLATED CONNECTOR
RF Site	Mill Valley	TTA TEST TO SURGE	351	200	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
RF Site	Mill Valley	TTA TEST TO SURGE	351	1	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN CABLE
RF Site	Mill Valley	TTA TEST TO SURGE	207	1	DS245171	COLD SHRINK KIT 7/8" TO 1/2" & 3/8"
RF Site	Mill Valley	TTA TEST TO SURGE	351	1	DDN1089	L4TNF-PSA TYPE N FEMALE PS FOR 1/2 IN CABLE
RF Site	Mill Valley	TTA TEST TO SURGE	351	5	DSSG1206B2A	SG12-06B2A 1/2IN SURE GROUND GROUNDING KIT
RF Site	Mill Valley	TTA TEST TO SURGE	351	1	DSL45GRIP	L45GRIP SUPPORT HOIST GRIP 1/2" LDF
RF Site	Mill Valley	SURGE	207	1	DS1090501WA	RF SPD, 700-1000MHZ BROADBAND 15 VDC PASS NM ANT, NF EQUIP PIP, ASIG
RF Site	Mill Valley	SURGE TO BCU TEST	351	25	L1702	FSI4-50B CABLE: 1/2" SUPERFLEX POLY JKT PER FOOT
RF Site	Mill Valley	SURGE TO BCU TEST	351	2	DDN9682	F4PNMV2-HC 1/2" TYPE N MALE PLATED CONNECTOR
RF Site	Mill Valley	DC POWER	0	1	DSTPS2084400002	FP216-48/500 3 DC32 R12 4T2 4BW7, SP2 TRILOGY WITH RELAY RACK AND BATT BREAKERS/CABLES
RF Site	Mill Valley	DC POWER	207	2	DS241119105	RECTIFIER, FLATPACK2 48/3000 HE
RF Site	Mill Valley	DC POWER	207	5	DS236408	BLIND PANEL FP2 HE BLACK G1
RF Site	Mill Valley	DC POWER	207	12	DSNSB210FT	BATTERY, 12V, HT 210AH RED NORTHSTAR
RF Site	Mill Valley	DC POWER	0	6	DSS05056	NYLON BATTERY STRAP 8 FT CAM BUCKLE FOR SEISMIC APPLICATIONS
RF Site	Mill Valley	DC POWER	207	3	DS230700	KIT: BATTERY MONITOR 10M G1, BATTERY MONITOR CAN BUS NODE
RF Site	Mill Valley	DC POWER	207	2	DS083E27487500	3A BIRCUIT BREAKER, SINGLE POLE, ONE PANEL POSITION
RF Site	Mill Valley	DC POWER	207	2	DS0831061708	CIRCUIT BREAKER 20A SINGLE POLE
RF Site	Mill Valley	DC POWER	207	6	DSS02660	BREAKER 50A 1P AUX 5/16 BULLET
RF Site	Mill Valley	APM	351	1	DSAPM7487K248	ADVANCED POWER MONITOR, 740-870 MHZ, 36-60V DC (INC SINGLE COUPLER)
RF Site	Mill Valley	APM	351	1	DSSP74964440DF1RU	ANT LINE COUPLER 740-960MHZ 40DB 4-PORTS SUIT APM748 AND APM8796

Addition of Tiburon and Mill Valley Water Tank RF Sites - Microwave Equipment

Item	Part Number	Description	BIG ROCK	MILL VALLEY	TIBURON	SAN PEDRO	WOLFBACK RIDGE
1.00 9500 MPR Microwave Switching Shelf (MSS)							
1.01	3EM22715AH	9500 MPR Shelf Kit w/Alarm FAN Evo-HSv3	1	1	1	1	1
1.02	3EM24105AA	Fan Alarm Cable - 25 foot	1	1	1	1	1
1.03	3DB19017AB	Ethernet Access Module (v2) w/8 GbE port	4	2	4	4	4
1.04	3DB18163AB	MSS Slot Cover - Blank Plate 1/2H	2	4	2	2	2
1.05	3DB23386AEAB	9500 MPR R8.0 uSD Card for CorEvo-10G ICS02	2	2	2	1	2
1.06	3DB18788BA	CorEvo-10G	2	2	2	1	2
1.07	3DB18970BMBB	9500 MPR R8.0 SW Electronic Delivery Kit ICS02	1	1	1	1	1
2 9500 MPR Microwave Packet Transceiver (MPT)							
2.00	3EM24238AA	MPT-HL Shelf Kit Single T-R	1		2	1	
2.01	3EM24238AB	MPT-HL Shelf Kit Dual T-R		1			
2.02	3DB76050AA	MPT-HLC XCVR 11 GHz (10700 - 11700)		2			2
2.03	3DB76050EA	MPT-HLC XCVR 11 GHz HP TX HIGH (TX 11200 - 11700, RX 10700 - 11700)	1		2	1	
3 9500 MPR RTUs - per ODU/RF Transceiver/ Upgrade							
3.00	3EM23068ADAA	RTU 160Mbps TRX Capacity	1	2	2	1	2
3.01	3MU00086AAAA	9500 MPR MSP Ring RTU	1	1	1	1	1
4 9500 MPR Microwave Packet Transceiver Accessories							
4.00	3EM23465AA	6/11 GHz Hot Standby 1:10 Coupler Diplexer Bracket		1			1
4.01	3EM23465AC	6/11 GHz 1+0 (Non-Standby) Diplexer Bracket	1		2	1	
4.02	3EM24188BA	11 GHz Hot Standby 1:10 Coupler Diplexer Clamp and Isolator Kits		1			1
4.03	3EM24188BC	11 GHz 1+0 (Non-Standby) Diplexer Clamp and Isolator Kits	1		2	1	
4.04	3EM24081AA	RF Diplexer Filter 10700-11700, 30 MHz	1	1	2	1	1
4.05	1AB077940017	Diplexer to Transition Cable Assy 304.8mm 12 Inch	1	1	1	1	1
4.06	1AB077940018	Diplexer to Transition Cable Assy 381mm 15 Inch	1		1	1	
4.07	3EM23511AF	Diplexer Transition Assy A2 (11 GHz) Position Initial Kit	1	1	1		1
4.08	3EM23511AG	Diplexer Transition Assy A3 (11 GHz) Position Add-On Kit			1	1	
4.09	3DH04122HN	Flange Adapter CPR-90 1PORT, 11Ghz	1	1	2	1	1
4.10	3EM23141AC	SFP Copper Cable, 1.5 M	1		1	1	
4.11	3EM23141AG	SFP Copper Cable, 2.0 M	1	2	1	1	2
5 Racks and Accessories							
5.00	3EM13317AB	Power Distribution Panel w/Fuse Alarm	1	1	1	1	1
5.01	694-9000-006	Standard Rack, 7 ft tall, 19 inch wide	1	1	1	1	1
6.00 Antenna/Waveguide							
6.00	10039985	SC3-W100AC - 3ft Hi Perf, CPR90G, Single Pol Ant., Includes Radome, NO struts	0	1	1	1	1
6.01	10045242	SU4-107DC1S1T - 4' Hi Perf, CPR90G, Single Pol, Slim Line Ant., Includes Radome (Teflon), 1 strut			1		
6.02	409082880	UHX6-107-P3A/K - 6' Hi Perf, CPR90G, Dual Pol Ant., Includes Radome (Teglar), 1 inboard strut	1				
6.03	1AF28451AAAA	Tieback Steel - Bulk Angle 4" X 4" X ¼" x 20' (ANG414)	1	1	2	2	2
6.04	10031053	Kit Sway Bar 8-12ft Refl (SMA-SK-60-3000A)					
6.05	815487-001	Standard Elliptical Waveguide E105 (10.0 - 11.7 GHz)	66	138	233	45	57
6.06	399503-101	Connector, Tunable (C90-105TG)	1	1	2	1	1
6.07	399503-103	Connector, Non-Tunable (top) (C90-105FG)	1	1	2	1	1
6.08	916533-108	Hoisting Grip (HOIST1-105L) - Lace-up (E105,E78)	1	1	2	1	1
6.09	921234-108	Grounding Kit - 60in wire, E105 (GKIT-60-105)	3	3	6	3	3
6.10	920981-007	Hanger Kit for E105, 7/8in coax (CLAMP-105) (10 pack, bolt-on)	5	5	8	4	4
6.11	ANGLE-CLPI)	Angle Member Adapter Kit, 3/8in Stainless Steel (ANGLE-CLPI) (10 pack)	1	1	1	1	1
6.12	CEIL12-5I	Ceiling Adapter Kit, 12in (CEIL12-5I, 514608-003) (5 pack) - waveguide only	1	1	2	1	1
6.13	915006-W	Hardware Kit, HDWK3/8-16X1, 3/8" - 16 x 1" bolt (915006) - 10 each lock washers, hex nuts & fillister head screws	5	5	8	4	4
6.14	400130	Pressure Window (WPW-090EP) - mates to CPR90G	1	1	2	1	1
6.15	400124	2ft Twistflex (TF090-CC1-024I) - CPR90G/CPR90G	1	1	2	1	1
6.16	915665	4in Boot with 1 Hole for E105 (BOOT4-105)	1	1	2	1	1
6.17	10042194	APD20-D-35XH0R00S1 120v, 3-5psi, Lo psi alm, 10 day purge, < 7800' 6-12GHz	1	1	1	1	1
6.18	20040835	Dehydrator Wall Shelf for APD20 (20040835)	1	1	1	1	1
6.19	920204-W	Gas Distribution Manifold, 4 Port, 0-15PSIG (920204)	1	1	1	1	1
6.20	409081635	UNIV ADJ LEG MT- UP TO 10 3/4 LEG (Ant. Pipe Mount)	1	1	2	2	2
6.00							

M3 Core Equipment List

SHIP TO	SUB SYS	BLOCK	QTY	NOMENCLATURE	DESCRIPTION
Master Site	EOF	MASTER	1	SQM01SUM0273	MASTER SITE CONFIGURATION
Master Site	EOF	MASTER	1	CA02832AB	ADD: M3 REDUNDANT ZONE (1-150 SITES)-1ST ZONE
Master Site	EOF	MASTER	1	CA03118AA	ADD: M3 - 1ST ZONE REDUNDANT HW

Addition of PA Functionality at Woodacre and San Rafael Dispatch

System	Site	SysSeg	Item Num	Total Qty	Nomenclature	Description
PA FUNCTIONALITY	WOODACRE AND SAN RAFAEL DISPATCH	CCGW	12a	2	CA01619AA CREDIT	ADD: DC POWER
PA FUNCTIONALITY	WOODACRE AND SAN RAFAEL DISPATCH	CCGW	12b	2	CA02086AA CREDIT	ADD: HIGH DENSITY ENH CONV GATEWAY

	Equipment Total	Services	Warranty and Post-Warranty Services
1. Addition of Mill Valley Water Tank and Tiburon Sites to the System Design	\$ 2,367,875.50	\$ 1,181,849.50	\$ 944,311.50
2. Upgrade Radio System Core to M3	\$ 114,000.00	\$ -	\$ -
3. Item #28 - Addition of PA Functionality to Woodacre and San Rafael Dispatch Centers	\$ 21,498.00	\$ 5,287.11	\$ -
TOTAL	\$ 2,503,373.50	\$ 1,187,136.61	\$ 944,311.50

	List Price	After Discount
Equipment	\$ 2,503,373.50	0.00
Services	\$ 1,187,136.61	0.00
Warranty and Post-Warranty Services	\$ 944,311.50	0.00
Total	\$ 4,634,821.61	0.00
	System Discount	N/A
	Final Price	0.00