

AGREEMENT  
between

The County of San Mateo

-and-

Versaterm Inc.

for the supply of  
a Computer System for the Public Safety Agencies  
as described herein.

Agreement # \_\_\_\_\_

This Agreement, made in duplicate this \_\_\_ day of \_\_\_\_\_, 2018

**B E T W E E N:**

Versaterm Inc., a corporation duly incorporated under the laws of Canada having its office located at 2300 Carling Avenue, Ottawa, Ontario, Canada, K2B 7G1

(hereinafter referred to as “**Versaterm**”)

**AND:**

The County of San Mateo, a political subdivision of the state of California having its office located at 400 County Center, Suite PSC100, Redwood City, California, USA, 94063

(hereinafter referred to as the “County”)

**WHEREAS** the County wishes to acquire a Computer System including software, training, support, maintenance and related services for the County of San Mateo’s Office of Public Safety Communications (hereinafter referred to as “PSC”);

**AND WHEREAS** Versaterm has represented that it has the capability and is authorized to provide Application Software and has the capability and is willing to supply and install the software and provide training to the PSC instructors in the operation of same and to provide support and maintenance for the software to meet the needs of the County.

**NOW THEREFORE** in consideration of the mutual covenant herein contained, the County and Versaterm agree as follows:

## 1. DEFINITIONS

In addition to definitions set forth in various other parts of this Agreement, the following defined words, when used herein, shall have the following meanings for purposes of this Agreement.

- 1.1 "Agreement" means this agreement, all exhibits attached hereto, all documents incorporated by reference herein or therein and all instruments supplemental and/or amendments hereto or thereto.
- 1.2 "Application Software" means Versaterm's proprietary programs, including both object code and source code, as described by the Versaterm provided documentation, any subsequent release notes and other pertinent documentation (attached hereto in Exhibit B.3) which:
  - i. are known and marketed collectively under the name VERSADEX;
  - ii. are listed on a component-by-component basis under the heading of "Application Software" in Exhibit A to this Agreement; and
  - iii. which Versaterm has covenanted to license to the County under a perpetual license to use pursuant to the terms of this Agreement and as set forth in the Application Software License Agreement (Exhibit D).

Application Software excludes any Open Source Software Components.

- 1.3 "Business Days" for the purposes of this Agreement shall mean weekdays, Monday through Friday, excluding holidays recognized by the County.
- 1.4 "Computer System" or "System" includes all aspects of Application Software and Services to be provided by Versaterm to the County pursuant to this Agreement, as identified in the Price List and Payment Schedule (Exhibit A) running on the Hardware and Third Party Software identified in the Price List and Payment Schedule (Exhibit A) and/or List of County Provided Equipment and Software (Exhibit F).
- 1.5 "Final Acceptance" means the date on which County has issued a Certificate of Acceptance or Versaterm has submitted a written notification that a default acceptance has occurred, per the procedures defined in Acceptance Test Plan (Exhibit B.6).
- 1.6 "Open Source Software Components" means software programs, libraries or distributables (commonly known as "public", "open source" or "free" software), made publicly available by the copyright holders (collectively, "Open Source Software Components").

- 1.7 "Open Source Software Component Licenses" are those licenses applicable to the particular Open Source Software Components, either supplied by Versaterm or the County, that may be part of the System.
- 1.8 "Hardware" means the aggregation of electronic information processing equipment that is not software.
- 1.9 "Production Use" means the use of one or more functional application components to collect and manage real police information for the purpose of serving actual police needs; this is in contrast to "testing mode", where real police information may be used, but only for the purpose of evaluation and testing.
- 1.10 "Ready For Use (RFU)" is the point in time when Versaterm declares that the Computer System is ready to be used for production purposes. Ready For Use is attained once the Application Software is installed, interfaces have been demonstrated, sample data has been converted and Versaterm has delivered the training identified in the Training Course Outlines (Exhibit B.2) according to the Statement of Work (Exhibit B).
- 1.11 "Services" mean those services to be provided by Versaterm to the County including, but not limited to, project management, re-engineering/implementation, training, conversion and installation as listed in the Price List and Payment Schedule (Exhibit A) and described in the Statement of Work (Exhibit B).
- 1.12 "Third Party Software" or "3rd Party Software" means the proprietary software of third party vendors that is supplied by Versaterm. These software programs may include, but are not limited to, operating systems, end-user reporting tools, programming language, radio middleware, database management system and related software.

## 2. CONTRACT DOCUMENTS

- 2.1 This Agreement shall consist of the following documents, their precedence being in the order of presentation described below, excepting changes thereto which shall be deemed to supersede that which was changed, provided same is documented in accordance with Subsection 2.4:
  - 2.1.1 This document setting forth Sections 1 through 30, inclusive, as the main body of this Agreement (also known to the parties as the "Head Agreement") as duly executed by both parties, and reflecting any subsequent mutually endorsed changes to or extensions of this document.
  - 2.1.2 The attached Exhibits forming part of the Agreement:

Exhibit A

Price List and Payment Schedule



Exhibit B	Statement of Work
Exhibit B.1	Project Implementation Schedule
Exhibit B.2	Training Course Outlines
Exhibit B.3	Documentation
Exhibit B.4	Interface Control Document
Exhibit B.5	Customization and Enhancements Control Document
Exhibit B.6	Acceptance Test Plan
Exhibit C	Change Control Log
Exhibit D	Application Software License Agreement
Exhibit E	Application Software Support Agreement
Exhibit F	List of County Provided Equipment and Software

- 2.1.3 The documents referenced in this Article 2, contain the terms and conditions of the Agreement between the parties. These documents are incorporated by reference and are an integral part of this Agreement. In interpreting this Agreement and resolving any ambiguities or inconsistencies, the order of precedence is identified in Subsections 2.1.1 and 2.1.2 recognizing the Change Control Log (Exhibit C) will take precedence over all contract documents. The County's RFP, if applicable, Versaterm's proposal and other written communications between the parties shall be viewed in descending order from most current to oldest date to interpret the terms of this Agreement.
- 2.2 This Agreement constitutes the entire agreement between the parties with respect to the subject matter and shall supersede all previous communications, negotiations and other agreements whether written or oral in relation thereto unless the same are expressly incorporated into this Agreement by reference either at the time of execution, or subsequently, as a result of a contract change. Any contract changes must be executed in writing and signed by both parties.
- 2.3 Each party shall notify the other of any error, omission, ambiguity, discrepancy or inconsistency that the respective party may find in any of the documents comprising this Agreement. Neither party shall be entitled to take advantage of any known error, omission, ambiguity, discrepancy or inconsistency and, without limitation, neither party shall be permitted to use any such error, omission, ambiguity, discrepancy or inconsistency as the basis of a claim for additional payment or extension of time. Upon discovery of such error, omission, ambiguity, discrepancy or inconsistency in this Agreement, the parties shall take such measures as are required to overcome the problem and, if necessary, shall negotiate necessary amendments to cure or correct same.
- 2.4 It is not uncommon for changes to be identified and mutually agreed to as necessary during the term of an agreement, such as this Agreement. This may involve changes to hardware, software, functionality, training, etc. with an associated additional cost, or it may entail changes to schedules, sequences, staff, etc. that do not involve changes to costs. In either event, such changes must be documented in writing. Changes without financial impact will be documented in the form of project

status reports. All changes with financial impact or that result in any amendment to the terms of this Agreement will follow the Change Control Process set forth in Exhibit C.

### 3. TERM

- 3.1 This Agreement shall be effective and commence on November 6, 2018, and shall continue through completion and FINAL ACCEPTANCE (Exhibit B.6) by the County of the entire scope of the contract, for a period of five years. Included in this Agreement is the Support Agreement (Exhibit E) which includes language as to 'term' but is not limited to the following:
- A. The initial Support Period will commence at the end of the warranty period and continue for a period of one year. The Support Period will end automatically upon termination of the License, if that event occurs.
  - B. Within or after the sixty (60) day period prior to the expiration of the Support Period, Versaterm, or it designated reseller, may send the County an invoice for a renewal support fee ("Support Fee").
- 3.2 Furthermore, included in this purchase is the cost of support for a period of four years after the warranty period. Year One is the warranty period and Year two starts the reoccurring support, up to and inclusive of Year five. The Support Agreement is renewed each year in order to reflect current operational practice, in the event changes occurred within said year.

### 4. PRICE AND PAYMENT TERMS

- 4.1 In consideration of Versaterm installing and supplying the described Application Software and Services in accordance with this Agreement, the County agrees to pay Versaterm the dollar amount identified as the Total Agreement Price in the Price List and Payment Schedule (Exhibit A) under the terms and conditions as set out in sub-sections 4.2 to 4.6 below and according to the Price List and Payment Schedule (Exhibit A). In no event shall the Total Agreement Price exceed \$3,578,629.
- 4.2 This Total Agreement Price is calculated assuming there is no sales or use taxes or tariffs payable. In the event that additional sales or use taxes or tariffs are payable as determined by an authorized taxing authority, the County is responsible to remit the appropriate (if any) sales or use tax or tariff (state, local or federal) due. If the County claims exemption from such taxation, upon execution of this Agreement, Versaterm requires evidence of such tax exemption from the County.
- 4.3 Invoices submitted to the County shall be due thirty (30) calendar days after the invoice date (electronic delivery accepted). If the County wants to dispute an invoice, it must notify Versaterm in writing within fifteen (15) calendar days of receiving the invoice. Unless disputed, accounts not paid within 30 calendar days of invoice date shall bear interest at the rate of the lesser of 1.5% per

month (the equivalent of 18% per annum, compounded annually) or the highest interest rate permitted by law.

- 4.4 Risk of loss of Versaterm supplied Hardware and Third Party Software, as identified in the Price List and Payment Schedule (Exhibit A), shall transfer to the County upon installation at the County's site. The right to use Versaterm supplied Application Software and Third Party Software license(s) and title to the Versaterm supplied Hardware shall transfer upon acceptance of the components by the County, as identified in the Acceptance Testing Exhibit D. Title to Application Software shall remain with Versaterm, subject to the rights conferred to the County under and pursuant to the Application Software License Agreement (Exhibit D). Versaterm supplied Third Party Software license(s) are subject to each supplier's respective end user agreement and are restricted for use solely with Versaterm Application Software.
- 4.5 Unless otherwise provided in this Agreement, all items to be delivered and services to be performed by Versaterm under the Agreement are included in the consideration referred to at sub-section 4.1.

## 5. CONTRACT DELIVERABLES

- 5.1 Versaterm shall supply the current release of the Application Software for the specific application products identified in the Price List and Payment Schedule (Exhibit A) and as described in the Documentation Plan (Exhibit B.3), the Interface Control Document (Exhibit B.4) and as modified in the Customization and Enhancement Control Document (Exhibit B.5) and under the Change Control Log (Exhibit C).
- 5.2 Versaterm shall supply and maintain a detailed Project Implementation Schedule (Exhibit B.1) that describes the tasks and scheduled completion dates for all of the activities involved with the project; these shall also include activities that are the responsibility of the County. Versaterm will provide written project status reports, as appropriate, detailing current status of project, milestones achieved and documented project implementation schedule changes. The responsibilities of the parties to perform to meet such schedules are outlined in Section 6, Section 7 and under Section 8 (Acceptance) below and in the Statement of Work (Exhibit B) and Project Implementation Schedule (Exhibit B.1).
- 5.3 Versaterm shall supply the expertise and services and project management called for by this Agreement and identified specifically in the Price List and Payment Schedule (Exhibit A), the Statement of Work (Exhibit B) and Project Implementation Schedule (Exhibit B.1) to effect the proper preparation, installation, conversion, training and placing into Production Use the Computer System for the County, as called for in the Statement of Work (Exhibit B).
- 5.4 Versaterm shall provide the appropriate documentation in electronic form for Application Software and overall system operation to enable the assigned County staff to continue to operate the Application Software and to allow a third party with experience in the specific operating system,

relational database management system and other Third Party Software environment to support the Application Software.

- 5.5 Versaterm shall provide a training version of the database that the County can use to conduct their own training courses for new staff.
- 5.6 Versaterm shall provide the source code for the Application Software, including all updates to the source code as developed during the term of this Agreement and during the term of the Application Software Support Agreement (Exhibit E). Such source code and updates shall be provided to the County's project authority designated pursuant to Subsection 7.2 of this Agreement and its use governed by the Application Software License Agreement terms (Exhibit D).
- 5.7 Versaterm shall supply Third Party Software and Hardware identified in the Price List and Payment Schedule (Exhibit A).
- 5.8 Versaterm shall provide the conversion services identified in the Price List and Payment Schedule (Exhibit A), Statement of Work (Exhibit B) and Interface Control Document (Exhibit B.4) to process and load information from previous data processing systems of the County into the new Versadex system being provided, so that such information continues to be useful in the new system.

## 6. RESPONSIBILITIES OF VERSATERM

- 6.1 Versaterm shall assign a competent project manager to this project. The project manager shall be Lana Richards, unless the parties mutually agree to change this individual, which consent shall not be unreasonably withheld. The project manager shall prepare work plans and schedules, keep all active parties aware, in writing, of progress, changes, issues, etc. and convene meetings when necessary and convenient for the parties to resolve issues and confirm achievements. Only Versaterm staff who are fully trained and qualified and who have met the Versaterm's police security standards shall be assigned to this project.
- 6.2 All Versaterm personnel requiring access to any County secure facility shall furnish ID and fingerprints to allow the County to complete a local and national fingerprint check.

All personnel Versaterm employs pursuant to this Agreement shall be subject to background and security checks and screening (collectively "Background Screening") at Versaterm's sole cost and expense as set forth in this paragraph. The Background Screening provided by Versaterm shall comply with all applicable laws, rules and regulations. The Background Screening shall include, as a minimum, criminal record checks, local police record checks, and credit checks. Any additional Background Screening required by the County may be at additional cost.

- 6.3 Versaterm shall hold all data received from the County confidential and shall take all necessary steps to prevent disclosure thereof and to protect the data from use for any purpose other than for the benefit of the County.

The obligation of confidentiality shall not apply to the data, information or materials or portions thereof furnished to Versaterm or its representatives which:

- i. are generally available to the public other than as a result of disclosure by Versaterm or its representatives;
  - ii. become available to Versaterm on a non-confidential basis from a source other than the County which source is not prohibited from disclosing such information by a legal, contractual or fiduciary duty to the County;
  - iii. is independently developed by Versaterm without the use of the County's information
  - iv. is information received by Versaterm which is approved in writing by the County for release or disclosure; or
  - v. is legally required to be disclosed by Versaterm in whole or in part provided that Versaterm gives prompt notice of such requirement to the County so that the County may seek a protective order or other appropriate remedy and provided that if such protective order or other remedy is not obtained prior to the time disclosure is legally required, Versaterm or its representatives will disclose, unless otherwise required, only that portion of the confidential data which Versaterm or its representatives are advised by opinion of counsel is legally required to be disclosed.
- 6.4 Versaterm shall supply the goods and services identified in Section 5 of this Agreement in accordance with the terms hereof.
- 6.5 Versaterm will provide guidance and assistance in specifying the Hardware and third party software to be purchased by the County as identified in List of County Provided Equipment and Software (Exhibit F).

## 7. RESPONSIBILITIES OF THE COUNTY

- 7.1 The County is obligated to provide access, when requested by Versaterm, to its premises, staff and authorities, as required in the Statement of Work (Exhibit B), provided Versaterm staff meet the security requirements noted in Subsections 6.1 and 6.2.
- 7.2 The County shall designate a project authority from PSC who shall have the experience, knowledge and authority to make decisions with Versaterm's project manager and carry out those responsibilities attributed to the County and reflected in the Project Implementation Schedule (Exhibit B.1) and Statement of Work (Exhibit B).
- 7.3 The County will execute the Versaterm Application Software License Agreement (Exhibit D) prior to any use of the Application Software.

- 7.4 Versaterm will not supply software and/or documentation on any storage media to County. Versaterm will provide Versadex software, electronically; either remotely through the Internet or Versaterm staff will install the software directly onto the County's Hardware.

## 8. ACCEPTANCE

The acceptance process shall be conducted formally and in writing between the parties pursuant to the Statement of Work (Exhibit B), Project Implementation Schedule (Exhibit B.1) and Acceptance Test Plan (Exhibit B.6); written notification of either acceptance or exception must be made by the County within 10 Business Days of receipt of notice, from Versaterm, that the Computer System is ready for acceptance testing; absence of such written notification of acceptance or exception from the County within that acceptance period shall be construed as acceptance. Specific details of each test and the process for testing is defined within Acceptance Test Plan (Exhibit B.6).

## 9. TIMELY PERFORMANCE

- 9.1 Versaterm's performance shall commence upon execution of this Agreement by the County, and shall be diligently undertaken and completed in a prompt and timely manner in accordance with the Project Implementation Schedule (Exhibit B.1). Versaterm shall be solely responsible for the timely performance of itself and its subcontractors. Delays by one party in completing any of its responsibilities may affect the timely performance of the other party's obligations under the Project Implementation Schedule, resulting in a reasonable extension of time for performance at the non-delaying party's discretion. If a delay by the County results in additional Versaterm expenses for travel, warehousing equipment, restocking charges, project management or other services, Versaterm may request reimbursement for such direct expenses and services based on Versaterm's then current published rates. If a delay by the County results in a substantial delay of a milestone payment, Versaterm may request an interim payment for work incurred to date. Both parties shall act in good faith to notify each other of any anticipated delays and expenses in order to minimize or eliminate such expenses and payments. Any request for extension of time shall include documentation regarding the effect on the overall project.
- 9.2 Schedule delays may be caused by Acts of God, strike, civil insurrection or accidents; if so initiated, such schedule delay shall be accommodated without impact or liability on either party.

## 10. WARRANTIES AND LIMITATIONS

- 10.1 Versaterm represents and warrants to the County that, for a period of one year commencing on the date the Application Software is Ready For Use (RFU) in accordance with this Agreement (the "Warranty Period"): (i) the media on which the Application Software is delivered to the County is free of defects and virus free; and (ii) the Application Software performs in all material respects in accordance with this Agreement. In the event that County notifies Versaterm in writing during the

Warranty Period of any problem relating to the foregoing warranties, Versaterm shall respond to such notification and take corrective measures as is provided in Application Software Support Agreement (Exhibit E).

- 10.2 Third Party Software components are warranted solely by the individual Third Party Software suppliers, said warranty is reflected in each supplier's respective standard warranty agreement. To the extent a Third Party Software component is supplied by Versaterm, Versaterm shall arrange to convey to County all rights in such standard warranty agreements. Versaterm shall use commercially reasonable efforts to provide a work-around solution to any identified Third Party Software defects until they can be corrected by the Third Party Software supplier.
- 10.3 Versaterm further represents and warrants that it has the right to pass title to all supplied components of the Application Software, including, without limitation, any software provided by Versaterm, and the right to use each component shall pass to the County free of all liens, security interest, claims, claims of copyright infringement, interest, adverse copyright and other intellectual property interests, and encumbrances upon payment by the County of that portion of the purchase price attributable to that component, subject to the express provisions of this Agreement.
- 10.4 Notwithstanding anything else in this Agreement, the Open Source software Components are subject only to the Open Source Software Components Licenses and are not sublicensed by Versaterm, and any warranties and limitation of liabilities for such Open Source Software Components are contained therein. County acknowledges and agrees that County is solely responsible and liable to review such licenses. Such Open Source Software Component Licenses also appear with the license, copying, help, and/or readme files of the Open Source Software Components.
- 10.5 **THE FOREGOING WARRANTIES ARE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, WRITTEN OR ORAL, ARISING BY LAW OR CUSTOM, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR ANY IMPLIED OBLIGATIONS UNDER THE UN CONVENTION ON CONTRACTS FOR THE INTERNATIONAL SALE OF GOODS, AND ANY AND ALL IMPLEMENTING LEGISLATIONS, ALL OF WHICH IS HEREBY DISCLAIMED.** There are no other warranties, expressed or implied, beyond the warranties set forth in this Agreement.
- 10.6 **IT IS EXPRESSLY AGREED THAT VERSATERM'S LIABILITY SHALL NOT BE EXTENDED TO ANY INDIRECT, SPECIAL, PUNITIVE, INCIDENTAL OR CONSEQUENTIAL DAMAGES RELATED TO THIS AGREEMENT, WHETHER FORESEEABLE OR NOT, INCLUDING BUT NOT LIMITED TO LOST PROFITS, LOSS OF DATA, OR RESULTING FROM COUNTY'S USE OR INABILITY TO USE THE COMPUTER SYSTEM ARISING FROM ANY CAUSE OR ACTION WHATSOEVER, INCLUDING CONTRACT, WARRANTY, STRICT LIABILITY OR NEGLIGENCE. EXCEPT AS OTHERWISE PROVIDED HEREIN, UNDER NO CIRCUMSTANCES SHALL VERSATERM'S LIABILITY TO COUNTY WITH RESPECT TO ANY AND ALL CLAIMS ARISING FROM PERFORMANCE OR NONPERFORMANCE OF OBLIGATIONS SET FORTH UNDER THIS AGREEMENT OR ANY SUBJECT MATTER OF THIS AGREEMENT, IN TORT,**

**INCLUDING ANY NEGLIGENCE, IN CONTRACT OR OTHERWISE, EXCEED THE AMOUNTS PAID BY COUNTY TO VERSATERM UNDER THIS AGREEMENT FOR THE APPLICATION SOFTWARE AND/OR SERVICE, AS THE CASE MAY BE, GIVING RISE TO SUCH CLAIM. THE OPEN SOURCE SOFTWARE COMPONENTS ARE PROVIDED SUBJECT TO THE LIMITATION OF LIABILITY PROVISIONS CONTAINED WITHIN THE APPLICABLE OPEN SOURCE SOFTWARE COMPONENT LICENSE AND VERSATERM ASSUMES NO LIABILITY WITH RESPECT THERETO.**

## 11. MAINTENANCE AND INITIAL SUPPORT

- 11.1 Following the Warranty Period, Versaterm shall provide to the County the support and services as set forth in the Application Software Support Agreement (Exhibit E), provided County first pays the consideration required for such support.
- 11.2 Subsequent to the expiration of the support provided as part of this Agreement and the Application Software Support Agreement, renewal of the Application Software Support Agreement shall be offered to the County at the prevailing commercial rates for such service as charged to other clients of Versaterm at that time and in accordance with the renewal terms set forth in the Application Software Support Agreement (Exhibit E). Additional charges may be incurred if the continuity of support status is interrupted at any time.

## 12. LICENSE of APPLICATION SOFTWARE

The terms governing the use of the Application Software are set forth in the Application Software License Agreement (Exhibit D), which County shall execute and deliver to Versaterm prior to any use of the Application Software.

## 13. PERSONNEL ASSIGNED

Personnel assigned by Versaterm to the County's project shall be properly trained and qualified to complete their assignments. Their resumes and security clearance status shall be provided, if requested, to the County prior to their commencing work on the County's premises. The County shall have the right to interview the staff assigned by Versaterm, but shall have to bear all associated time, travel and living costs involved to conduct the interview. The County may request any staff members assigned by Versaterm be replaced on the project should the County find same unsuitable; Versaterm shall comply with such request provided that the basis of the request is legal (i.e. not breaching any applicable law) and not unreasonable. The County may assign a third party to assist with the project implementation, at the County's cost.

## 14. NOTICES



Any formal notice or communication given or required to be given under this Agreement, (other than routine operational communications) shall be in writing and will be served either in person or by registered mail, certified mail, or courier services that provide proof of delivery and package tracking capability, in each case with postage or shipping fees prepaid, to the other party at the address stated below or at the latest changed address given by the party to be notified as hereinafter specified. Notices will be considered effective on the day of actual delivery. Alternatively, written notices sent by electronic mail to the other party and then acknowledged back by electronic mail by the other party shall be deemed to have been given when the acknowledgment of receipt is received by the sender.

To County:

**COUNTY OF SAN MATEO**  
Attn: Dan Belville  
400 County Center, Suite PSC100  
Redwood City, California, USA  
94063

dbelville@smcgov.org

To Versaterm:

**VERSATERM INC.**  
Attn: Warren Loomis  
2300 Carling Avenue  
Ottawa, Ontario, Canada  
K2B 7G1

wloomis@versaterm.com

## 15. TERMINATION AND SURVIVAL

15.1 This Agreement shall terminate at the end of the Term (Section 3) unless terminated earlier under the terms of this Section 15. The following terms shall survive any termination of this Agreement:

- i. Sections 6.2, 10.4, 10.5, 10.6, 15 ("Termination and Survival"), 19 ("Dispute Resolution"), and 21 ("Assignment") of this Agreement;
- ii. Price List and Payment Schedule (Exhibit A);
- iii. Application Software License Agreement (Exhibit D), which shall survive in accordance with the terms therein; and
- iv. Application Software Support Agreement (Exhibit E), which shall survive in accordance with the terms therein.

Any dispute existing as of the termination shall be resolved by the dispute resolution procedures described in Section 19 below.

15.2 **Termination for Cause.** If Versaterm should be adjudged bankrupt or should make a general assignment for the benefit of its creditors, or if a receiver should be appointed on account of its insolvency, the County may terminate this Agreement for cause. If Versaterm persistently or repeatedly refuses or fails to perform except in cases for which an extension of time is provided, to provide enough properly skilled workers or proper materials, or persistently disregards applicable laws, or does not proceed with work or otherwise violates any material provision of this Agreement, then the County may terminate this Agreement for such cause. Prior to termination of this Agreement, the County shall give Versaterm thirty (30) calendar days written notice. Upon receipt

of such termination notice, Versaterm shall be allowed thirty (30) calendar days to cure any such deficiencies, or provide an acceptable plan to cure.

- 15.3 **Termination without Cause.** County may terminate this Agreement or a portion of the product and services referenced in the Attachments and Exhibits based upon the unavailability of Federal, State, or County funds by providing written notice to Contractor as soon as is reasonably possible after County learns of said unavailability of outside funding. This Agreement may be terminated by Contractor or by the County at any time without a requirement of good cause upon thirty (30) calendar days' advance written notice to the other party.

In the event of termination without cause, and subject to availability of funding, Contractor shall be entitled to receive payment for product and services provided prior to termination of the Agreement. Such payment shall be that prorated portion of the full payment determined by comparing the product and services actually completed to the product and services required by the Agreement. Versaterm shall within sixty (60) days after the date of termination, file an invoice for said payment. The County shall pay such invoice within thirty (30) days of receipt, to the extent that the work and amount is not disputed.

Any disputes regarding the work completion percentage and/or the compensation due shall be settled in accordance with Section 19, Dispute Resolution. Compensation shall in no event exceed the Total Agreement Price.

- 15.4 In the case of termination by the County as defined in sub-sections 15.2 and 15.3 above, the County shall at its option receive title for Hardware paid for by the County and a license for Versaterm Application Software and Third Party Software paid for under this Agreement.

## 16. INDEMNITY

For purposes of the services performed by Versaterm under this Agreement, Versaterm agrees to defend, indemnify and hold harmless the County, its employees and its agents from any damage, loss, liability, claim and cause of action arising out of injury, loss or damage to real property or tangible personal property, or arising from personal injury or death, where such damage, loss, liability, claim and cause of action is caused or incurred in whole or in part as a result of the negligence or other actionable fault of Versaterm, its affiliates, subsidiaries, employees, agents and assigns. Versaterm's maximum liability to the County for damages, losses, liabilities, claims, and causes of action shall not exceed, if the claim is covered by insurance, the limits of such insurance, or, if the claim is not covered by such insurance, the license fees for the purchased Application Software Licenses (see Exhibit A) with the exception of damages, losses, liabilities, claims, and causes of action arising out of gross negligence, willful misconduct or infringement of copyright or patent rights for which there shall be no limitation on the amount of damages recoverable. Versaterm's obligations are contingent upon the County giving Versaterm prompt written notice of

any such claim or loss or damage and the County shall fully cooperate with Versaterm in the defense and all related settlement negotiations.

## 17. INSURANCE

- 17.1 **General Requirements.** Contractor shall not commence work or be required to commence work under this Agreement unless and until all insurance required under this Section has been obtained and such insurance has been approved by County's Risk Management, and Contractor shall use diligence to obtain such insurance and to obtain such approval. Contractor shall furnish County with certificates of insurance evidencing the required coverage, and there shall be a specific contractual liability endorsement extending Contractor's coverage to include the contractual liability assumed by Contractor pursuant to this Agreement. These certificates shall specify or be endorsed to provide that thirty (30) days' notice must be given, in writing, to County of any cancellation of the policy.

Contractor shall provide written notice to the County of any pending change in the limits of liability or modification of the policy.

- 17.2 **Workers' Compensation and Employer's Liability Insurance.** Contractor shall have in effect during the entire term of this Agreement workers' compensation and employer's liability insurance providing full statutory coverage. In signing this Agreement, Contractor certifies, as required by Section 1861 of the California Labor Code, that (a) it is aware of the provisions of Section 3700 of the California Labor Code, which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of the Labor Code, and (b) it will comply with such provisions before commencing the performance of work under this Agreement.

- 17.3 **Liability Insurance.** Contractor shall take out and maintain during the term of this Agreement such bodily injury liability and property damage liability insurance as shall protect Contractor and all of its employees and/or officers while performing work covered by this Agreement from any and all claims for damages for bodily injury, including accidental death, as well as any and all claims for property damage which may arise from Contractor's operations under this Agreement, whether such operations be by Contractor, any subcontractor, anyone directly or indirectly employed by either of them, or an agent of either of them. Such insurance shall be combined single limit bodily injury and property damage for each occurrence and shall not be less than the amounts specified below:

17.3.1	Comprehensive General Liability	\$1,000,000
17.3.2	Non-owned Motor Vehicle Liability Insurance	\$1,000,000
17.3.3	Technology Error and Omissions Liability	\$1,000,000

County and its officers, agents, employees, and servants shall be named as additional insured on any such policies of insurance, which shall also contain a provision that (a) the insurance afforded thereby to County and its officers, agents, employees, and servants shall be primary insurance to the full limits of liability of the policy and (b) if the County or its officers, agents, employees, and servants have other insurance against the loss covered by such a policy, such other insurance shall be excess insurance only.

In the event of the breach of any provision of this Section, or in the event any notice is received which indicates any required insurance coverage will be diminished or canceled, County, at its option, may, notwithstanding any other provision of this Agreement to the contrary, immediately declare a material breach of this Agreement and suspend all further work and payment pursuant to this Agreement.

## 18. PAYMENT OF PERMITS/LICENSES

Contractor bears responsibility to obtain any license, permit, or approval required from any agency for work/services to be performed under this Agreement at Contractor's own expense prior to commencement of said work/services. Failure to do so will result in forfeit of any right to compensation under this Agreement.

## 19. DISPUTE RESOLUTION

- 19.1 The County and Versaterm agree that disputes relative to the project and this Agreement should first be addressed by negotiations between the parties. If direct negotiations fail to resolve the dispute, the parties shall agree to mediation. The parties shall agree on a mediator and shall split the cost of meditation equally. If mediation is unsuccessful, either party is then free to file an action in San Mateo Superior Court.
- 19.2 This Section 19 shall not restrict or prejudice either party's right to seek injunctive relief in a court of competent jurisdiction or right to enforce any arbitrator decisions made in accordance with this Section 19 in a court of competent jurisdiction

## 20. CONTROLLING LAW; VENUE

The validity of this Agreement and of its terms, the rights and duties of the parties under this Agreement, the interpretation of this Agreement, the performance of this Agreement, and any other dispute of any nature arising out of this Agreement shall be governed by the laws of the State of California without regard to its choice of law or conflict of law rules. Any dispute arising out of this Agreement shall be venued either in the San Mateo County Superior Court or in the United States District Court for the Northern District of California.

## 21. ASSIGNMENT

This Agreement shall be binding upon the successors and assigns of both parties, provided, however, that no assignment, delegation or other transfer (except to a third party acquiring all or substantially all of Versaterm's assets or by merger of Versaterm with a third party) shall be made by either party without the prior written approval of the other party, which approval shall not be unreasonably withheld. Any such assignment or subcontract without the other party's written consent shall give the non-offending party the right to automatically and immediately terminate this Agreement without penalty or advance notice.

## 22. SEVERABILITY

Any provision of this Agreement or part thereof found to be illegal or unenforceable shall be deemed severed and the balance of this Agreement shall remain in full force and effect.

## 23. WAIVER

The failure of a party to enforce a provision, exercise a right or pursue a default of this Agreement shall not be considered a waiver. The express waiver of a provision is to be effective only in the specific instance, and as to the specific purpose, for which it was given. Unless stated otherwise, all remedies provided for in this Agreement are to be cumulative and in addition to, and not in lieu of, any other remedies available to either party at law, in equity or otherwise.

## 24. COMPLIANCE WITH LAWS

All services to be performed by Contractor pursuant to this Agreement shall be performed in accordance with all applicable Federal, State, County, and municipal laws, ordinances, and regulations, including but not limited to the Health Insurance Portability and Accountability Act of 1996 (HIPAA) and the Federal Regulations promulgated thereunder, as amended (if applicable), the Business Associate requirements set forth in Attachment H (if attached), the Americans with Disabilities Act of 1990, as amended, and Section 504 of the Rehabilitation Act of 1973, which prohibits discrimination on the basis of disability in programs and activities receiving any Federal or County financial assistance. Such services shall also be performed in accordance with all applicable ordinances and regulations, including but not limited to appropriate licensure, certification regulations, provisions pertaining to confidentiality of records, and applicable quality assurance regulations. In the event of a conflict between the terms of this Agreement and any applicable State, Federal, County, or municipal law or regulation, the requirements of the applicable law or regulation will take precedence over the requirements set forth in this Agreement.

Contractor will timely and accurately complete, sign, and submit all necessary documentation of compliance.

## 25. NON-DISCRIMINATION AND OTHER REQUIREMENTS

- 25.1 **General Non-Discrimination.** No person shall be denied any services provided pursuant to this Agreement (except as limited by the scope of services) on the grounds of race, color, national origin, ancestry, age, disability (physical or mental), sex, sexual orientation, gender identity, marital or domestic partner status, religion, political beliefs or affiliation, familial or parental status (including pregnancy), medical condition (cancer-related), military service, or genetic information.
- 25.2 **Equal Employment Opportunity.** Versaterm shall ensure equal employment opportunity based on objective standards of recruitment, classification, selection, promotion, compensation, performance evaluation, and management relations for all employees under this Agreement. Versaterm's equal employment policies shall be made available to County upon request.
- 25.3 **Section 504 of the Rehabilitation Act of 1973.** Versaterm shall comply with Section 504 of the Rehabilitation Act of 1973, as amended, which provides that no otherwise qualified individual with a disability shall, solely by reason of a disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination in the performance of any services under this Agreement. This Section applies only to contractors who are providing services to members of the public under this Agreement.
- 25.4 **Compliance with County's Equal Benefits Ordinance.** Versaterm shall comply with all laws relating to the provision of benefits to its employees and their spouses or domestic partners, including, but not limited to, such laws prohibiting discrimination in the provision of such benefits on the basis that the spouse or domestic partner of Versaterm's employee is of the same or opposite sex as the employee.
- 25.5 **Discrimination Against Individuals with Disabilities.** The non-discrimination requirements of 41 C.F.R. 60-741.5(a) are incorporated into this Agreement as if fully set forth here, and Versaterm and any subcontractor shall abide by the requirements of 41 C.F.R. 60-741.5(a). This regulation prohibits discrimination against qualified individuals on the basis of disability and requires affirmative action by covered prime contractors and subcontractors to employ and advance in employment qualified individuals with disabilities.
- 25.6 **History of Discrimination.** Versaterm certifies that no finding of discrimination has been issued in the past 365 days against Versaterm by the Equal Employment Opportunity Commission, the California Department of Fair Employment and Housing, or any other investigative entity. If any finding(s) of discrimination have been issued against Versaterm within the past 365 days by the Equal Employment Opportunity Commission, the California Department of Fair Employment and Housing, or other investigative entity, Versaterm shall provide County with a written explanation of the outcome(s) or remedy for the discrimination prior to execution of this Agreement. Failure to comply with this Section shall constitute a material breach of this Agreement and subjects the Agreement to immediate termination at the sole option of the County.

- 25.7 **Reporting; Violation of Non-Discrimination Provisions.** Versaterm shall report to the County Manager the filing in any court or with any administrative agency of any complaint or allegation of discrimination on any of the bases prohibited by this Section of the Agreement or the Section titled "Compliance with Laws". Such duty shall include reporting of the filing of any and all charges with the Equal Employment Opportunity Commission, the California Department of Fair Employment and Housing, or any other entity charged with the investigation or adjudication of allegations covered by this subsection within 30 days of such filing, provided that within such 30 days such entity has not notified Versaterm that such charges are dismissed or otherwise unfounded. Such notification shall include a general description of the circumstances involved and a general description of the kind of discrimination alleged (for example, gender-, sexual orientation-, religion-, or race-based discrimination).
- 25.8 Violation of the non-discrimination provisions of this Agreement shall be considered a breach of this Agreement and subjects Versaterm to penalties, to be determined by the County Manager, including but not limited to the following:
- i. termination of this Agreement;
  - ii. disqualification of Versaterm from being considered for or being awarded a County contract for a period of up to 3 years;
  - iii. liquidated damages of \$2,500 per violation.

To effectuate the provisions of this Section, the County Manager shall have the authority to offset all or any portion of the amount described in this Section against amounts due to Versaterm under this Agreement or any other agreement between Versaterm and County.

- 25.9 **Compliance with Living Wage Ordinance.** As required by Chapter 2.88 of the San Mateo County Ordinance Code, Contractor certifies all contractor(s) and subcontractor(s) obligated under this contract shall fully comply with the provisions of the County of San Mateo Living Wage Ordinance, including, but not limited to, paying all Covered Employees the current Living Wage and providing notice to all Covered Employees and Subcontractors as required under the Ordinance.

## 26. COMPLIANCE WITH COUNTY EMPLOYEE JURY SERVICE ORDINANCE

Contractor shall comply with Chapter 2.85 of the County's Ordinance Code, which states that Contractor shall have and adhere to a written policy providing that its employees, to the extent they are full-time employees and live in San Mateo County, shall receive from the Contractor, on an annual basis, no fewer than five days of regular pay for jury service in San Mateo County, with jury pay being provided only for each day of actual jury service. The policy may provide that such employees deposit any fees received for such jury service with Contractor or that the Contractor may deduct from an employee's regular pay the fees received for jury service in San Mateo County. By signing this Agreement, Contractor certifies that it has and adheres to a policy consistent with Chapter 2.85. For purposes of this Section, if Contractor has no employees in San Mateo County, it is sufficient for Contractor to provide the following written statement to County: "For purposes of

San Mateo County's jury service ordinance, Contractor certifies that it has no full-time employees who live in San Mateo County. To the extent that it hires any such employees during the term of its Agreement with San Mateo County, Contractor shall adopt a policy that complies with Chapter 2.85 of the County's Ordinance Code." The requirements of Chapter 2.85 do not apply if this Agreement's total value listed in the Section titled "Payments", is less than one-hundred thousand dollars (\$100,000), but Contractor acknowledges that Chapter 2.85's requirements will apply if this Agreement is amended such that its total value meets or exceeds that threshold amount.

## 27. RETENTION OF RECORDS; RIGHT TO MONITOR AND AUDIT

- 27.1 Versaterm shall maintain all required records relating to services provided under this Agreement for three (3) years after County makes final payment and all other pending matters are closed, and Versaterm shall be subject to the examination and/or audit by County, a Federal grantor agency, and the State of California.
- 27.2 Versaterm shall comply with all program and fiscal reporting requirements set forth by applicable Federal, State, and local agencies and as required by County.
- 27.3 Versaterm agrees, upon reasonable notice, to provide to County, to any Federal or State department having monitoring or review authority, to County's authorized representative, and/or to any of their respective audit agencies access to and the right to examine all records and documents necessary to determine compliance with relevant Federal, State, and local statutes, rules, and regulations, to determine compliance with this Agreement, and to evaluate the quality, appropriateness, and timeliness of services performed.

## 28. RELATIONSHIP OF PARTIES

Versaterm agrees and understands that the work/services performed under this Agreement are performed as an independent contractor and not as an employee of County and that neither Versaterm nor its employees acquire any of the rights, privileges, powers, or advantages of County employees.

## 29. ELECTRONIC SIGNATURE

Both County and Versaterm wish to permit this Agreement and future documents relating to this Agreement to be digitally signed in accordance with California law and County's Electronic Signature Administrative Memo. Any party to this Agreement may revoke such agreement to permit electronic signatures at any time in relation to all future documents by providing notice pursuant to this Agreement.



### 30. ENTIRE AGREEMENT

Except for written amendments to this Agreement, change orders (as per Exhibit C) or maintenance and support agreements that may be entered into by the parties at a later date, this Agreement and its Exhibits and Annexes constitute the entire agreement between the parties with respect to the Computer System.

### 31. COUNTERPARTS

This Agreement may be executed in counterparts and delivered to each of the parties by facsimile. Facsimile or photocopy signatures are deemed as legally enforceable as the original. Each such counterpart is deemed an original instrument, but all such counterparts taken together constitute one and the same agreement. The parties stipulate that a photocopy of an executed original will be admissible in evidence for all purposes in any proceeding as between the parties.

**IN WITNESS WHEREOF** the parties hereto have caused these presents to be executed as of the day and year first above written.

**VERSATERM INC.**

**County of San Mateo**

Signature: T Rosales

Signature: \_\_\_\_\_

Tern Rosales  
Name

\_\_\_\_\_  
Name

Secretary - Treasurer  
Title

\_\_\_\_\_  
Title

October 30, 2018  
Date

\_\_\_\_\_  
Date

Signature: Allan Wilson

Signature: \_\_\_\_\_

Allan Wilson  
Name

\_\_\_\_\_  
Name

CTO  
Title

\_\_\_\_\_  
Title

October 30, 2018  
Date

\_\_\_\_\_  
Date

# Exhibit A

## Price List and Payment Schedule

## Exhibit A Price List and Payment Schedule

Company Name: VERSATERM INC

Item	Description	System Category (e.g., CAD/Mobile/BI)	Quantity	Initial Unit Price	Recurring Cost Year 2
CORE CAD Application Software					
vCAD Police/Fire/EMS Licenses:		CAD	1	\$ 645,858	
Multi-Jurisdiction/Multi-Discipline (Police, Fire, EMS) Support		CAD			
vBrowser Status Screen (Web Monitor/Dashboard)		CAD			
RemoteCAD Application		CAD			
AVL Support		CAD			
AVRR Support (Vehicle Routing Recommendation) Proximity Dispatching		CAD			
CAD to 3rd Party Police RMS Base License (Call-For-Service NIEM XML IEPD)		CAD			
CAD to 3rd Party Fire RMS Base License(Call-for-Service NIEM XML IEPD)		CAD			
Versadex Message Controller (VMC)		CAD			
Versadex Crime Analysis Package (VCAP)		BI			
Versadex Data Mart (VDM)		BI			
VGI (Versadex GIS Interface)		Streets			
Onsite Upgrades		Maintenance/Support			
24x7 Full Emergency Support		Maintenance/Support			
CAD Call Taker / Dispatcher Licenses,					
Production CT/Dispatcher Licenses (incl MapViewer) 30 concurrent users		CAD User License			
Training CT/Dispatcher Licenses (incl MapViewer) No/Charge for Training Licenses		CAD User License			
Configuration/Test CT/Dispatcher Licenses (incl MapViewer) No/Charge for Test Licenses		CAD User License			
Remote CAD Access User Licenses (RemoteCAD / vBrowser Status Screen)					
Production 50 concurrent user licenses		CAD User License			
Training No/Charge for Training Licenses		CAD User License			
Configuration/Test No/Charge for Dev/Test Licenses		CAD User License			
*vCAD Police/Fire/EMS Year1 Support/Maintenance incl in above License Cost		Maintenance/Support	1		
vCAD Police/Fire/EMS Year 2 Support/Maintenance		Maintenance/Support	1	\$	134,759

Item	Description	System Category (e.g., CAD/Mobile/BI)	Quantity	Initial Unit Price	Recurring Cost Year 2
<b>Mobile Licenses:</b>			1	\$ 267,496	
Police MDT Licenses - Production	100 concurrent users	Mobile User License			
Police MDT Licenses - Training	No/Charge for Training Licenses	Mobile User License			
Police MDT Licenses - Configuration/Test	No/Charge for Dev/Test Licenses	Mobile User License			
Fire/EMS MDT Licenses - Production	46 concurrent users	Mobile User License			
Fire/EMS MDT Licenses - Training	No/Charge for Training Licenses	Mobile User License			
Fire/EMS MDT Licenses - Configuration/Test	No/Charge for Dev/Test Licenses	Mobile User License			
Fire vMobile Licenses - Production	201 concurrent users	Mobile User License			
Fire vMobile Licenses - Training	No/Charge for Training Licenses	Mobile User License			
Fire vMobile Licenses - Configuration/Test	No/Charge for Dev/Test Licenses	Mobile User License			
<b>*Mobile Year1 Support/Maintenance incl in above License Cost</b>		Maintenance/Support			
<b>Mobile Year 2 Support/Maintenance</b>		Maintenance/Support	1	\$	46,124
<b>Interface Licenses Total:</b>			1	\$ 741,916	
E-911 Intrado VIPER		Interfaces		\$11,817	\$2,600
Priority Dispatch ProQA		Interfaces		\$32,029	\$4,550
Police SunRidge Query Interface (from CAD/Mobiles)		Interfaces		\$59,969	\$8,925
Fire Department RMS CAD Call for Service Publish		Interfaces		\$23,452	\$2,125
Radio Paging - M25 Tone Encoder		Interfaces		\$21,733	\$4,000
Station Alerting Interfaces,		Interfaces		incl	incl
Zetron Model 25 (backup)		Interfaces		incl	incl
Zetron Model 6/26		Interfaces		\$15,217	\$2,600
FireDispatch.com		Interfaces		\$29,208	\$4,300
Zetron Paging (Model 2200 TAP Support)		Interfaces		\$16,708	\$2,500
SMTP Paging		Interfaces		\$42,333	\$4,000
Motorola MCC7500, U)		Interfaces		\$103,293	\$13,240
MCC7500 PTT, ERTT		Interfaces		incl	incl

Item	Description	System Category (e.g., CAD/Mobile/BI)	Quantity	Initial Unit Price	Recurring Cost	
					Year	2
MCC7500 Call Alert		Interfaces		incl		incl
MKM 7000 Console Alias Manager CAM - Alias Update		Interfaces		incl		incl
MCC7500 Aux I/O		Interfaces		incl		incl
Cimarron Cplus III ANI Decoder (PTT, ERTT)		Interfaces		\$23,717		\$2,600
ReddiNet (Hospital Status)		Interfaces		\$0		\$5,400
ePCR/MEDS		Interfaces		\$31,383		\$3,400
PulsePoint		Interfaces		\$0		\$0
Tablet Command		Interfaces		\$39,515		\$5,460
CalCOP		Interfaces		\$44,846		\$5,950
NCRIC / Palentir		Interfaces		\$7,300		\$0
sRIMS		Interfaces		\$18,825		\$7,500
County Message Switch, CLETS/NCIC		Interfaces		\$57,058		\$6,700
County Message Switch, ATIMS/AWS		Interfaces		\$13,505		\$1,020
FirstWatch		Interfaces		\$7,300		\$0
IAmResponding		Interfaces		not included		not included
Omega FireView		Interfaces		\$7,300		\$0
FireDispatch.com		Interfaces		\$7,300		\$0
ASAP		interfaces		\$34,293		\$3,040
CryWolf		Interfaces		\$10,950		Incl
Axon		Interfaces		\$16,034		\$1,785
ShotSpotter		Interfaces		\$22,423		\$2,975
Eventied		Interfaces		\$31,407		\$4,760
Deccan LiveMum		Interfaces		\$13,000		\$2,600
<b>*Interface Year1 Support/Maintenance incl in above Interface Licenses</b>		Maintenance/Support				
<b>Interface Year 2 Support/Maintenance</b>		Maintenance/Support	1		\$	106,111
<b>Enhancements &amp; Modifications Total:</b>			1	\$	70,323	
CECD1 Display alarm level on Status Screen		Enhancement		included		\$0
CECD2 Modify a Fire Unit's role once dispatched		Enhancement		\$8,500		\$1,700
CECD3 Modify Global Risk Level without Super security		Enhancement		\$3,400		\$680
CECD4 Notify when the last unit clears		Enhancement		\$8,500		\$1,700

Item	Description	System Category (e.g., CAD/Mobile/BI)	Quantity	Initial Unit Price	Recurring Cost	
					Year	2
CECD5 Ability to view all related fire units		Enhancement		\$3,400		\$680
CECD6 Recommend home units before non-home units		Enhancement		included		\$0
CECD7 Filter dispatcher's map by status monitor area		Enhancement		included		\$0
CECD8 Indicator for Fire units not in current coverage		Enhancement		\$8,500		\$1,700
CECD9 Flag Fire and EMS units as Available On-Scene		Enhancement		included		\$0
CECD10 Fire and EMS Alarm Level Balancing		Enhancement		included		\$0
CECD11 Advise when times are not met		Enhancement		\$17,000		\$3,400
CECD12 Recommend ER units to higher priority call		Enhancement		included		\$0
CECD13 Initiate a station/post move from the MDT		Enhancement		included		\$0
CECD14 Sign off Fire and EMS units from the MDT		Enhancement		included		\$0
CECD15 EMS TR – hospital, # patients and priority code		Enhancement		included		\$0
CECD16 Fire/EMS terminology		Enhancement		included		\$0
CECD17 Special Service Company Remarks		Enhancement		\$8,500		\$1,700
CECD18 Strike teams / task forces		Enhancement		included		\$0
CECD19 Specify the same type code for EMS and Fire		Enhancement		included		\$0
<b>*Enhancement Year1 Support/Maintenance incl in above</b>		Maintenance/Support				
<b>Enhancement Year 2 Support/Maintenance</b>		Maintenance/Support	1		\$	12,022
<b>Implementation Services</b>		One Time Cost	1	\$		634,325
Project Management		Services				
Application Software Installation		Services				
Re-Engineering / Configuration Support		Services				
Technical System Administration Training		Services				
CAD CallTaker/Dispatcher Train-the-Trainer Training		Services				
CAD Administrator Training		Services				
Police MDT Train-the-Trainer Training		Services				
Fire/EMS MDT Train-the-Trainer Training		Services				
Fire vMobile Train-the-Trainer Training		Services				
Mobile Administrator Training		Services				
Mapping/VGI (Street Update) Training		Services				
Versadex Crime Analysis Training		Services				

Item	Description	System Category (e.g., CAD/Mobile/BI)	Quantity	Initial Unit Price	Recurring Cost	
					Year	2
Go-Live Onsite Support		Services				
Close Support Following Go Live		Services				
TOTAL CORE (Application Software, Interfaces, Implementation Services)				\$	2,359,918	\$ 299,017



Versaterm Inc. County of San Mateo  
CAD/MDT Agreement

Recurring Costs Summary Form					
Item	Recurring Cost Year 2	Recurring Cost Year 3	Recurring Cost Year 4	Recurring Cost Year 5	TOTAL Recurring Cost Year 2 - 5
<b>CORE</b>					
System Software Maintenance	\$ -	\$ -	\$ -	\$ -	\$ -
CAD Application Software Maintenance	\$ 134,759	\$ 140,149	\$ 145,755	\$ 151,586	\$ 572,249
Mobile Application Software Maintenance	\$ 46,124	\$ 47,969	\$ 49,888	\$ 51,883	\$ 195,864
Interface Software Maintenance	\$ 106,111	\$ 110,356	\$ 114,770	\$ 119,361	\$ 450,597
Application Enhancement Maintenance	\$ 12,022	\$ 12,503	\$ 13,003	\$ 13,524	\$ 51,053
<b>Total Annual Recurring Costs</b>	<b>\$ 286,994</b>	<b>\$ 298,474</b>	<b>\$ 310,413</b>	<b>\$ 322,829</b>	<b>\$ 1,218,711</b>

**Total Agreement Price**

(Total Core costs and annual recurring costs)

\$ 3,578,629

Versaterm Inc. County of San Mateo  
CAD/MDT Agreement

Payment Schedule	Percentage	Payment
<b>Core Costs</b>		
SOW Task #4 Initial Setup and Configuration (Implementaiton Environment)	10%	\$ 235,992
SOW Task #8 Implementation Session #2	10%	\$ 235,992
SOW Task #10 Implementation Session #4	10%	\$ 235,992
SOW Task #11 Build CAD/MDT Production Environment	5%	\$ 117,996
SOW Task #13 Integration Testing	10%	\$ 235,992
SOW Task #14 Functional Acceptance Testing	10%	\$ 235,992
SOW Task #17 & 18 Train the Trainer Training	10%	\$ 235,992
SOW Task #23 CAD/MDT Production Cutover	20%	\$ 471,984
SOW Task #25 Final System Acceptance	15%	\$ 353,988
<b>Total Core Costs</b>	<b>100%</b>	<b>\$ 2,359,918</b>
<b>Recurring Costs</b>		
1st anniversary of Final acceptance	100%	\$ 286,994
2nd anniversary of Final acceptance	100%	\$ 298,474
3rd anniversary of Final acceptance	100%	\$ 310,413
4th anniversary of Final acceptance	100%	\$ 322,829
<b>Total Recurring Costs</b>		<b>\$ 1,218,710</b>

# Exhibit B

## Statement of Work

## Contents

1.	General Information .....	- 3 -
	Services Overview .....	- 3 -
2.	Statement of Work Tasks.....	- 6 -
Task 1	Execute Contract.....	- 6 -
Task 2	Project Kickoff .....	- 7 -
Task 3	Build the Implementation Environment .....	- 9 -
Task 4	Functional Workspace .....	- 10 -
Task 5	Initial Setup and Configuration (Implementation Environment) .....	- 11 -
Task 6	Implementation Session #1.....	- 12 -
Task 7	Update the Project Schedule .....	- 13 -
Task 8	Implementation Session #2.....	- 14 -
Task 9	Software Enhancement Development .....	- 15 -
Task 10	Implementation Session #3.....	- 16 -
Task 11	Implementation Session #4.....	- 17 -
Task 12	Build CAD/MDT Production Environment .....	- 18 -
Task 13	CAD/MDT Interfaces.....	- 20 -
Task 14	Integration Testing .....	- 21 -
Task 15	Functional Acceptance Testing.....	- 22 -
Task 16	System Performance Testing.....	- 23 -
Task 17	Training Facilities .....	- 25 -
Task 18	CAD 'Train the Trainer' (T2T) Training .....	- 26 -
Task 19	MDT, vMobile and Remote CAD Train the Trainer (T2T) Training.....	- 27 -
Task 20	VGI and Street Conversion Interface Training.....	- 28 -
Task 21	Ready for Use (RFU) .....	- 29 -
Task 22	End User Training .....	- 30 -
Task 23	Final System Administration Training .....	- 31 -
Task 24	CAD/MDT Production Cutover.....	- 32 -
Task 25	Response Time and Reliability Testing.....	- 33 -
Task 26	Final System Acceptance .....	- 34 -

## 1. General Information

This Exhibit contains the umbrella Statement of Work (SOW) defining the principal activities and responsibilities of all parties for the implementation of an integrated Computer Aided Dispatch (CAD), Mobile CAD (MDT), vMobile and Remote CAD solution. Versaterm was selected to provide a solution to support the County of San Mateo (hereinafter called the "County") law enforcement, fire and EMS dispatch and mobile operations.

### SOW Schedules

The Statement of Work contains the following exhibits:

Schedule name	Description
Exhibit B.1 - Project Implementation Schedule	Project implementation plan (MS Project) identifying tasks and responsibilities along for all parties.
Exhibit B.2 - Training Course Outlines	Preliminary Training Plan
Exhibit B.3 - Documentation	Preliminary Documentation Plan
Exhibit B.4 - Interface Control Document (ICD)	The Interface Control Documents
Exhibit B.5 – Customization and Enhancements Control Document (CECD)	Enhancements and Customizations
Exhibit B.6 – Acceptance Test Plan	Preliminary Test Plan

This Statement of Work (SOW) tasks outlined in the following pages and in B.1, may not always start and end in a sequential manner, but may overlap by mutual agreement. The Project Managers may also adjust task order by mutual agreement through issuance of a formal contract change order.

This SOW is contingent upon both Versaterm and the County fulfilling their respective responsibilities as defined in the Contract and within this document.

### Services Overview

The Versaterm Project Manager (PM) performs the following duties during the term of the Project Schedule: develops and provides project status reports and project plan updates; schedules and conducts regular team conference calls; provides guidance on managing expectations; manages internal Versaterm resources during interface development and implementation; manages internal Versaterm resources to provide implementation assistance which includes fielding questions from the County team. The Versaterm Project Manager is not just available to the County team at designated points in time as outlined in this SOW. Instead Versaterm strives to make the Project Manager available on a daily (workday) basis in order to provide continuity during all phases of the project including post-implementation, where the Versaterm Project Manager becomes the Account Manager. This approach allows the same Versaterm resource to work with the County staff to ensure continual evolution and usage of the Versaterm product. This is accomplished by maintaining communications with the County's designated staff.

The Versaterm Implementation Team will take the same approach as Project Manager. The Versaterm Project Manager and Implementation Team are not just available to the County team at designated points in time, but too be available on a daily (workday) basis. Implementation services are performed both on and offsite. These services include:

- preparing the agenda for each of the four (4) onsite implementation sessions
- developing the scenarios (to demonstrate CAD and MDT System functionality) for each onsite implementation session
- conducting in-depth presentations of the System during onsite implementation sessions

- d. conducting hands-on training for the implementation team members during onsite implementation sessions
- e. providing trip reports which are made available for internal review by all Versaterm staff
- f. identifying re-engineering points and configuration choices
- g. assisting in the review of existing processes and presenting Versaterm System options
- h. participating in interface-related activities (which can include design review and/or development and testing)
- i. participating in (any) conversion-related activities (if any)
- j. verifying the team's progress in System configuration and table population
- k. fielding questions regarding System functionality, choices and new processes via phone, email and web casts
- l. developing training material and conducting train-the-trainer training
- m. participating in regular team conference calls as required during project implementation process
- n. providing onsite support for the production cutover
- o. providing front-line support during post-cutover System Acceptance period.

#### **General Project Management Responsibilities**

Project management occurs throughout the project and is involved in every task. The following responsibilities are to be maintained up to the completion of the project.

#### **Versaterm Responsibilities:**

- a. Maintain project communications with the County's Project Manager.
- b. Manage the efforts of the Versaterm staff and coordinate Versaterm activities with the County's Project Manager.
- c. Provide regular phone conversations between the Versaterm Project Manager and the County Project Manager until such time as both parties develop a mutually agreeable level of communication.
- d. Conduct regular (e.g. weekly or as required) telephone status report conversations with the County's Project Manager.
- e. Participate in weekly reviews with the implementation team. Participation can be waived by mutual agreement.
- f. Provide timely responses, to issues raised by the County's Project Manager.
- g. Resolve deviations from the project schedule.
- h. Coordinate and oversee the installation of all licensed Versaterm Application Software.
- i. Monitor the project to ensure that support resources are available as scheduled.
- j. Prepare and submit to the County's Project Manager, no later than the first business day of each month, a status report that includes: the accomplishments of the previous month, activities planned for the current month, current risks, an update to the Project Schedule as well as a refresh of the Action Item Log.

#### **County Responsibilities:**

- a. Maintain project communications with Versaterm's Project Manager.
- b. Manage the efforts of the County staff and coordinate County activities with the Versaterm Project Manager.

- c. Through the Project Manager, the County's Executive Steering Committee must ensure that their personnel have expertise to carry out their respective tasks and responsibilities.
- d. The County Project Manager will oversee the activities of County Staff and ensure response time to soft and hard deadlines.
- e. The Project Manager will participate in the regular (e.g. weekly or as required) status meetings with the Versaterm Project Manager.
- f. Provide timely responses, to issues raised by the Versaterm Project Manager.
- g. Manage all County-provided third-party vendors and associated systems.
- h. Provide Versaterm VPN remote access and on-site access to County server equipment, including to all development and system "root" accounts on all servers running Versaterm applications.

## **2. Statement of Work Tasks**

Each task includes the following: Title, Objective, Task Description, Responsibilities and Completion Criteria. The same tasks are outlined in Exhibit B.1 whereas the following provides a description of major tasks and/or milestones.

### **Task 1            Execute Contract**

#### **Objective(s):**

This task represents the start of the project in that the contract is formally executed and the purchase order is issued.

#### **Completion Criteria**

This task is considered successfully completed when:

- a. The contract, inclusive of all completed Exhibits and Attachments has been signed by authorized parties from Versaterm and the County (Board of Supervisors).
- b. The Purchase Order has been issued.



## **Task 2            Project Kickoff**

### **Objective(s):**

- Review roles and primary responsibilities of key participants;
- Establish an organizational chart and reporting structure for the County's Project Team
- Establish procedures for decision-making authority of each level in the County's team, up to and including the County's Executive Steering Committee.
- Establish a clear expectation of communication;
- Establish a project Action Item Log process;
- Review overall project scope and objectives;
- Finalize the project schedule (noting that the Project Schedule is fluid during this phase of the project;
- Confirm hardware requirements and timeline for ordering, delivery and installation dates;
- Review resource and scheduling requirements for the implementation sessions. (The County implementation team will play a significant role in guiding this project through to full System implementation. Resource availability is typically the primary pacing factor for such projects. In addition to a full-time Project Manager, the County will establish an Implementation Team that is representative of the operational areas that will be affected by this project implementation).

### **Task Description:**

The project will be initiated with a remote Project Kickoff meeting between the County Project Implementation Team and Versaterm Project Manager.

### **Responsibilities:**

Versaterm:

- a. Introduce project team members.
- b. Work with the County's Project Manager to schedule, facilitate and develop an agenda for the Project Kickoff meeting.
- c. Collaborate with County personnel in designing and approving an Action Item Log format to be used in conjunction with the project schedule. The purpose of the log is to identify outstanding issues, provide continual status updates, identify responsible parties assigned and soft or hard deadlines for each item.
- d. Update the Project Schedule to reflect the mutually agreed initial planning tasks.
- e. Provide access for each of the County's Implementation Team members to the Versaterm vConnect website.
- f. Provide access for the County's designated Implementation Lead to Versaterm vConnect website, specifically the documentation area
- g. Collaborate with the County for review and confirmation of the final server hardware specifications, SAN infrastructure specifications, server operating-system software requirements and functional network connectivity requirements.
- h. Produce a finalized Visio diagram for the agreed upon hardware architecture.
- i. Collaborate with the County Project Manager in designing the Versaterm monthly status report that includes: the accomplishments of the previous month, activities planned for the current month and current risks.

County:

- a. Ensure all members of the Project Team who have been designated for the phase of the project are notified well in advance of the scheduled Kick-off Meeting.
- b. Ensure that all appropriate County personnel attend and actively participate in the Project Kickoff meeting.
- c. Provide Versaterm with a list of project team member names, positions, phone numbers and email addresses.
- d. Collaborate with Versaterm in designing and approving an Action Item Log format to be used in conjunction with the project schedule. The purpose of the log is to identify outstanding issues, provide continual status updates, identify responsible parties assigned and soft or hard deadlines for each item.
- e. Establish an internal process for the overall areas of responsibility of the County ie., policy/procedure development, operational change, etc, and ensure each sub-working group does the same;
- f. Collaborate with Versaterm for review and confirmation of the final server hardware specifications, SAN infrastructure specifications, server operating-system software requirements and functional network connectivity requirements.

**Completion Criteria:**

This task is considered successfully completed when:

- a. The Project Kickoff meeting has been held with Versaterm representative(s) in conference call attendance; and
- b. Versaterm has delivered an updated Project Schedule, an Action Item Log, the implementation documentation for all purchased applications and a Visio diagram for the proposed hardware architecture; and
- c. All stated objectives for this task have been achieved.

### **Task 3            Build the Implementation Environment**

**Objective:**        Build the implementation environment.

**Task Description:**

Build the implementation environment using the servers designated as implementation / test.

**Responsibilities:**

Versaterm:

- a. Provide VMWare images containing the CAD applications and databases.
- b. Provide disk space requirements for the VMWare images.
- c. Assist the County in installing the VMWare images and sizing the disk space.
- d. Provide details on required ports / services that must be opened or configured.

County:

- a. Purchase hardware for the implementation / test server cluster.
- b. Responsible for the physical installation, configuration of the implementation / test server hardware, storage, racking and ensuring basic power-up.
- c. Responsible for installation and configuration of all County purchased hardware and software required to provide backup and restoration capabilities for the application and database VMWare images.
- d. Provide remote VPN access capability to the implementation / test servers and provide, as required, any ancillary information/components (accounts, passwords, certificates, fobs, tokens, etc.) that the County deems necessary to ensure the remote access is secure. At least two user accounts are required. This must be complete at least one month prior to the first implementation session.
- e. Ensure all server ports / services are opened or configured as per Versaterm's requirements.
- f. Install the implementation / test VMWare images provided by Versaterm.
- g. Modify the IP addresses and host names of the VMWare images and disk sizes according to specifications provided by Versaterm.
- h. Confirm completion of required background checks for Versaterm project team members.

**Completion Criteria:**

This task is considered successfully completed when:

- The implementation / test server cluster has been installed and configured; and
- The VMWare images have been installed on the implementation / test server cluster and are accessible by Versaterm staff via VPN access; and
- The VMWare images have been assigned appropriate IP addresses, host names and the disks have been sized as per the specifications; and
- Backup and restoration facilities are in place; and
- VPN access has been provided to Versaterm; and
- The required ports/services have been opened/configured.

#### **Task 4 Functional Workspace**

**Objective:** Equip a facility that will be available to the Implementation Team throughout the implementation period.

**Task Description:**

The County will provide a workspace that will accommodate all implementation team members during the implementation sessions. This space must remain operational to the implementation team members for the duration of the project for configuration and testing assignments. The workspace must be equipped with two computer projectors, a computer workstation for the instructor, and a computer workstation for each implementation team participant. The minimum effectiveness is space for five Team Members.

**Responsibilities:**

Versaterm:

- a. Provide the County with the desktop, network requirements and projection requirements for the workspace facilities.
- b. Identify the number of workstations required for minimum effectiveness.

County shall:

- a. Provide a suitable workspace facility, including desktop workstations with two monitors each of the Implementation Team Members, a desktop workstation for the instructor and projection facilities.
- b. Ensure the workstations meet the minimum specifications as set forth in "Exhibit F - List of County Provided Equipment and Software".
- c. Provide network access from each workstation to the Versaterm application servers.

**Completion Criteria:**

This task is considered successfully completed when:

- a. The workspace is available and fully functional as described above.

**Task 5 Initial Setup and Configuration (Implementation Environment)**

**Objective:** Configure the CAD/MDT server Application Software within the implementation / test VMWare images and install the CAD/MDT client Application Software.

**Task Description:**

Configure the CAD/MDT server Application Software within the implementation / test VMWare images and install the CAD/MDT desktop Application Software within the designated Implementation Team workspace and on each of the team's workstations.

**Responsibilities:**

Versaterm:

- a. Configure the Versaterm server Application Software within the implementation / test VMWare images.
- b. Load mutually agreed upon initial tables such as 'User Identification Numbers'.
- c. Load the street files, if available.
- d. Configure the initial CAD and MDT mapviewer.
- e. Create one operating-system printer and instruct the County on how to create additional printers.
- f. Provide the County with the CAD desktop Application Software and MDT Application Software for installation on the classroom workstations and the implementation team's workstations.

County:

- a. Assist Versaterm as needed.
- b. Provide GIS shapefiles and map packages as required to create the Master Street Index file and initial map configuration.
- c. Work with Versaterm to identify the initial tables to be loaded such as 'User Identification Numbers'.
- d. Create required operating-system printer definitions.
- e. Create user accounts required by the County's Implementation Team to access the Versaterm application suites.
- f. Install and configure the CAD and MDT client Application Software on designated workspace and implementation team workstations.

**Completion Criteria:**

This task is considered successfully completed when:

- a. The Versaterm server Application Software is configured within the implementation / test VMWare images; and
- b. The CAD/MDT desktop Application Software installed on the workspace and Implementation Team's workstations and is fully functional; and

## **Task 6 Implementation Session #1**

**Objective:** Provide instruction to the County on configuration choices.

### **Task Description:**

Versaterm will conduct an on-site Implementation Session with the County Implementation Team to review CAD configuration options. Versaterm shall conduct in-depth demonstrations of the CAD and MDT applications, identifying functionality supported, re-engineering points and configuration choices. Versaterm will also provide the training necessary to: enter the data in the core CAD/MDT database tables (incident type codes, status codes, unit/apparatus definitions, fire stations, etc.); review available configuration parameters to meet the County's operational needs of the CAD/MDT System; review CAD commands and identify custom command names; and develop status windows for display of desired incident and unit/apparatus information (pending call queues, active unit display, etc.).

### **Responsibilities:**

Versaterm:

- a. Publish an agenda no later than two weeks in advance, stating specific objectives to be accomplished.
- b. Provide electronic copy of implementation guides for CAD and MDT prior to this session.
- c. Instruct the Implementation Team, including the CAD/MDT System Administrator, on how to complete data entry of the CAD/MDT database tables.
- d. Instruct the Implementation Team on the configuration options for System functionality.
- e. Discuss interface points.
- f. Discuss the impact with mobile workstations.
- g. Provide initial hands-on training.
- h. Review with the County Street Index (GIS) data and issues.
- i. Review Project Plan and timelines and make adjustments as necessary.
- j. Provide a report at the end of the implementation session that includes a list of tasks and key decisions to be completed by the County.
- k. Provide initial system administration training so the County has an understanding of what server processes should be running, how to start/stop various server processes, etc.

County:

- a. Assign appropriate personnel, including the CAD/MDT implementation team members as identified in the Project Kickoff session to attend the week long CAD/MDT implementation session.
- b. Provide classroom facilities as described in Statement of Work Task 4.
- c. Provide each member of the Implementation Team a hard copy of the CAD implementation guides.
- d. Review the list of tasks and key decisions provided by Versaterm.

### **Completion Criteria:**

This task is considered successfully completed when:

- a. The hands-on training is complete, providing the County's Implementation Team the ability to navigate and begin the CAD/MDT configuration; and
- b. All issues have been documented in the Action Item log.
- c. The list of tasks and key decisions have been provided and the County's Implementation Team has received the required training to complete the tasks.

**Task 7            Update the Project Schedule**

**Objective:**        Update the Project Schedule

**Task Description:**

Once Implementation Session I is complete, the project schedule will be adjusted to reflect any new requirements and/or resources.

**Responsibilities:**

Versaterm:

- a. Review with County personnel the identified implementation tasks, priorities, inter-dependencies, required resources and other requirements needed to update the project schedule.
- b. Prepare an updated project schedule and deliver it to the County Project Manager.
- c. Review the project schedule with County Project Manager and make changes and/or corrections that are mutually agreed upon.

County:

- a. Work with Versaterm to update the project schedule.
- b. Ensure when the schedule is adjusted, and adjustments impact any critical path towards cut-over, that adjustment will be directed to the PSC Director who will examine the data and make any recommendations, as appropriate.,
- c. Review the approved project schedule.

**Completion Criteria:**

This task is considered successfully completed when:

- a. Versaterm and the County have mutually agreed to the updated project schedule.

## **Task 8 Implementation Session #2**

**Objective:** Provide instruction to the County on configuration procedures

### **Task Description:**

Versaterm will conduct an on-site implementation session with the County Implementation Team to further review CAD configuration options illustrating various choices. During the on-site session, Versaterm shall conduct in-depth demonstrations of the CAD application, focusing on geofile and address related functionality. Versaterm will provide the knowledge necessary to: enter address records (hazards, alarms, premise, contacts, etc); define fire stations, apparatus and run card assignments; and adjust MapViewer and Status Screen configurations.

### **Responsibilities:**

Versaterm:

- a. Review the CAD/MDT application and the configuration progress to-date;
- b. Publish an agenda no later than two weeks in advance, stating specific objectives to be accomplished.
- c. Review GIS (Street Index) in relation to address related records and response areas;
- d. Demonstrate and explain coverage area setup;
- e. Demonstrate and explain police patrol districts and response recommendations;
- f. Demonstrate and explain Fire and EMS response recommendation algorithms;
- g. Demonstrate and explain entering address related records;
- h. Review MapViewer setup options and demonstrate configuration choices;
- i. Demonstrate Status Screen configuration options;
- j. Review project plan and status of various implementation tasks; and document any issues and assignments made with target completion dates.
- k. Provide a report at the end of the implementation session that includes a list of tasks and key decisions to be completed by the County.
- l. Document issues.

County:

- a. Assigns appropriate personnel to attend the CAD/MDT implementation session. All Implementation Team members and other specialty personnel are required to attend this session.
- b. Responsible for entering address related records (hazards, contacts, etc), stations, configuring response recommendations for Police, Fire and EMS and other assigned configuration tasks.
- c. Adjust MapViewer and Status Screen configurations as required.
- d. Review the list of tasks and key decisions provided by Versaterm.

### **Completion Criteria:**

This task is considered successfully completed when:

- a. The Implementation Session #2 is completed; and
- b. The list of tasks and key decisions have been provided and the County's Implementation Team has received the required training to complete the tasks; and
- c. All issues have been documented in the Action Item Log.



## **Task 9 Software Enhancement Development**

**Objective:** Complete software enhancements in accordance with the Customization and Enhancements Control Document (CECD).

### **Task Description:**

As documented in the Customization and Enhancements Control Document (CECD), Versaterm will develop the necessary CAD/MDC software enhancements.

### **Responsibilities:**

Versaterm:

- a. Create the Versadex Application Software enhancements in accordance with the Customization and Enhancements Control Document (CECD); working collaboratively with the County in the design process per the Customization and Enhancements Control Document (CECD).
- b. Unit test the functionality of each enhancement.
- c. Conduct regression testing of any test failures.
- d. Install the application software enhancements on the test/implementation servers.

County:

- a. Provide timely responses to Versaterm questions that may arise during the enhancement development.
- b. Assist with the initial functional testing and provide input and feedback to Versaterm as necessary.

### **Completion Criteria:**

This task is considered successfully completed when:

- a. Versaterm has created and installed the Application Software enhancements in the Implementation environment and customizations and enhancement function as designed.

### **Task 10 Implementation Session #3**

**Objective:** Provide instruction to the County on configuration procedures.

**Task Description:**

Versaterm will conduct an on-site implementation session with the County Implementation Team to further review CAD/MDT configuration options illustrating various choices. During the on-site session, Versaterm shall conduct in-depth demonstrations of the advanced CAD functions of the Police, Fire and EMS MDT applications. Versaterm will explain the various configuration options related to AVL. Versaterm will also train on the installation of the MDT applications.

Versaterm shall:

- a. Publish an agenda no later than two weeks in advance, stating specific objectives to be accomplished.
- b. Review the CAD/MDT application and the configuration progress to-date, identifying remaining tasks;
- c. Review additional advanced CAD/MDT functionality and choices;
- d. Review configuration options relating to interfaces.
- e. Conduct in-depth demonstration of the Mobile Data Terminal (MDT) and CAD/MDT integration;
- f. Review mobile data configuration & choices including AVL;
- g. Review interface points and illustrate NCIC interface;
- h. Review outstanding implementation issues, answer questions and demonstrate CAD/MDT System as required.
- i. Review project plan and status of various implementation tasks, and document assignments made, target completion dates, and any issues yet to be resolved.
- j. Provide a report at the end of the implementation session that includes a list of tasks and key decisions to be completed by the County.

County shall:

- a. Assign appropriate personnel to attend the CAD/MDT Implementation Session. All Implementation Team members and other specialty personnel are required to attend this session.
- b. Review the list of tasks and key decisions provided by Versaterm.
- c. Continue configuration of the CAD/MDT applications.

**Completion Criteria:**

This task is considered successfully completed when:

- a. The Implementation Session #3 is completed; and
- b. All issues have been documented in the Action Item Log; and
- c. The list of tasks and key decisions have been provided and the County's Implementation Team has received the required training to complete the tasks.

## **Task 11 Implementation Session #4**

**Objective:** Perform a final review of CAD/MDT configuration options.

### **Task Description:**

Versaterm will conduct a final on-site implementation session with the County Implementation Team to further review CAD/MDT configuration options illustrating various choices. Versaterm will also demonstrate the functions of the Remote CAD and Browser Status Screen.

#### **Versaterm:**

- a. Publish an agenda no later than two weeks in advance, stating specific objectives to be accomplished.
- b. Demonstrate the functions of the Remote CAD and Browser Status Screen;
- c. Review the CAD/MDT application and the configuration progress to-date, identifying remaining tasks;
- d. Review and illustrate interfaces developed to-date.
- e. Review outstanding implementation issues, answer questions and demonstrate CAD/MDT System as required.
- f. Review target go-live date, training schedule and material required to prepare training courses.
- g. Review project plan and status of various implementation tasks, and document assignments made, target completion dates, and any issues yet to be resolved.
- h. Provide a report at the end of the implementation session that includes a list of tasks and key decisions to be completed by the County.

#### **County:**

- a. Assign appropriate personnel to attend the CAD/MDT Implementation Session. All Implementation Team members and other specialty personnel are required to attend this session.
- b. Review the list of tasks and key decisions provided by Versaterm.

### **Completion Criteria:**

This task is considered successfully completed when:

- a. The session is completed and issues have been documented in the Action Item Log; and
- b. The list of tasks and key decisions have been provided and the County's Implementation Team has received the required training to complete the tasks.

**Task 12          Build CAD/MDT Production Environment**

**Objective:**      Build CAD/MDT Production environment.

**Task Description:**

Build the CAD/MDT production environment, including the backup disaster recovery (DR), and migrate all configuration data from the implementation environment to production environment.

**Responsibilities:**

Versaterm:

- a. Provide the County with instructions and guidance on cloning the implementation / test VMWare images for the production environment.
- b. Provide disk space requirements for the production VMWare images.
- c. Configure the Versaterm server Application Software within the production VMWare images.
- d. Migrate configuration data from implementation / test environment to the production environment.
- e. Enable vSphere replication between the primary and secondary site (for the CAD application production virtual server images).
- f. Configure and enable database replication between the primary and the secondary sites.
- g. Setup server scripts, and other as required, to manually promote and bring up the CAD at the secondary site as the primary (master).
- h. Test the CAD at the secondary site as the primary and ensuring activation and operation.

County:

- a. Purchase hardware for the production environment.
- b. Physical installation and configuration of the production server hardware, racking and ensuring basic power-up.
- c. Clone the implementation / test VMWare images to create the production environment VMWare images on the production environment.
- d. Modify the IP addresses and host names of the production VMWare images and re-size production VMWare disks according to the specifications provided by Versaterm.
- e. Provide Versaterm with at least two remote VPN accounts capable of accessing all servers within the production environment with the appropriate ports open and shall provide as required any ancillary information/components (accounts, passwords, certificates, fobs, tokens, etc.) that the County deems necessary to ensure the remote access is secure.
- f. Installation and configuration of the Ethernet infrastructure (i.e. switches, cables) required for support of the CAD and VMC applications.
- g. Installation and configuration the required CAD SAN components and fiber channel fabric.
- h. Installation and configuration of the hardware and software required to provide adequate backup and restoration capabilities for the application databases, Versaterm Application Software suites, operating system and third-party software suites as required.
- i. Create any user accounts required by the County's technical staff to access the production servers.
- j. Creation of required operating-system printer definitions.
- k. Configure the CAD/MDT client Application Software to communicate to the production environment and test the communication and functionality.
- l. Assist Versaterm as necessary.

**Completion Criteria:**

This task is considered successfully completed when:

- a. The CAD/MDT Application Software and third-party software is installed and tested on the County's production servers and workstations.

**Task 13 CAD/MDT Interfaces**

**Objective:** Develop, install and test all CAD/MDT interfaces.

**Task Description:**

All CAD/MDT interfaces identified in the Interface Control Document will be developed, installed and tested in the implementation / test environment and then moved to the production environment.

**Responsibilities:**

Versaterm shall:

- a. Design, develop, transfer, install, and tailor all Application Software required for the CAD/MDT interfaces resulting in their operating in accordance with the Interface Control Document.
- b. Test the functionality of each interface in accordance with the Interface Control Document and provide the County with verification of functionality.

County shall:

- a. Provide the necessary and up to date third-party technical interface documentation as required by Versaterm to complete the interfaces.
- b. Provide all required liaison support with other agencies and County vendors required to support the installation of the interfaces.
- c. Verify the functionality of the interface(s).

**Completion Criteria:**

This task is considered successfully completed when:

- a. Versaterm provides written notification that each interface is installed and tested in accordance with the Interface Control Documents.

#### **Task 14            Integration Testing**

**Objective:**        The primary objectives of the interface integration tests are:

- a. to demonstrate all interfaces specified in the Interface Control Documents ("ICD"), Exhibit B.4 are functional and ready for functional acceptance testing.
- b. for County staff to gain the knowledge necessary to perform acceptance testing for each interface.

**Task Description:**

Demonstrate all interfaces to ensure that each interface meets or exceeds the functionality and performance indicated in the Interface Control Documents.

**Responsibilities:**

Versaterm:

- a. Demonstrate each interface and, with the assistance of the County Implementation Team, test to ensure that each interface meets or exceeds the functionality and performance measurements specified in the Interface Control Document.
- b. Identify in writing each discrepancy between operational functionality and the Interface Control Document.
- c. Review, correct and document any discrepancies identified by the County between operational functionality and the Interface Control Document.
- d. Provide training on setup, configuration and administrating the interfaces.
- e. Provide training on use of the interfaces.

County:

- a. Assign personnel to conduct interface testing with Versaterm.
- b. Work with Versaterm to identify the type of correction needed to ensure that each interface conforms to Interface Control Document.

**Completion Criteria:**

This task is considered successfully completed when:

- a. All interface discrepancies have been documented and resolved.
- b. The County employees are trained and are able to fully use the operation functionality provided by each interface.

## **Task 15            Functional Acceptance Testing**

**Objective:**        The primary objectives of the functional acceptance tests are to verify that the CAD/MDC applications and the supported interfaces meet the functional requirements as documented in the Interface Control Documents (ICDs), documented in the Customization and Enhancements Control Document (CECD) and any other documents included in this Agreement.

### **Task Description:**

County project personnel shall conduct functional testing of the CAD/MDT applications and related interfaces to ensure that the functionality specified has been attained. Functionality shall be examined, as defined in Exhibit B.6 - Acceptance Test Plan.

### **Responsibilities:**

Versaterm:

- a. Review and correct any functional discrepancies between the CAD/MDT subsystem functionality and the Interface Control Document and the Versaterm proposal.

County:

- a. Develop final version of functional test plan.
- b. Conduct functional tests.
- c. Document each discrepancy between the CAD/MDT functionality and the Interface Control Document and the Versaterm proposal.
- d. Work with Versaterm to identify the type of correction needed to ensure that the subsystem conforms to the testing criteria.

### **Completion Criteria:**

This task is considered successfully completed when:

- a. CAD/MDT has been accepted and approved as operating in accordance with Versaterm's proposal and the Interface Control Documents (ICDs); and
- b. Versaterm has corrected all functional discrepancies between the CAD/MDT subsystem functionality and the Interface Control Document and the Versaterm proposal; or the County and Versaterm have mutually agreed upon, in writing, to use a workaround or wait until a future Application Software patch is released.



## **Task 16            System Performance Testing**

**Objective:**        The purpose of the Performance Test is to ensure that the System operates to an acceptable performance level under a defined peak load before the CAD is cut-over to production use.

The County will determine the level of testing required so they may verify that the System components meet operate to acceptable performance levels. Versaterm will support the County's performance test as required.

### **Task Description:**

County Project personnel shall conduct system performance testing of the CAD/MDC applications to ensure that the hardware and software operate to acceptable performance levels under a defined peak load before the CAD System is cut over to production use. Performance shall be examined, as defined in Exhibit B.6 Acceptance Test Plan.

### **Responsibilities:**

Versaterm:

- a. Work with the County to determine a mutually acceptable load generation methodology and performance monitoring approach employed during the test.
- b. Work with the County to identify the type of correction needed (e.g. hardware or software adjustment) in the event the system fails to meet the mutually agreeable performance metric as detailed in Exhibit B.6.
- c. Make appropriate application changes or modifications required to resolve any mutually agreed upon software related performance issues.
- d. Work with the County to identify specific network / server platform (operating system & database) tuning and configuration changes required to improve or resolve performance issues

County:

- a. Evaluate and decide upon a third party testing tool to be used to simulate production load.
- b. Responsible for all aspects of preparing, executing and reporting the load tests.
- c. Work with Versaterm to determine a mutually acceptable load generation methodology and performance monitoring approach.
- d. Work with Versaterm to identify the type of correction needed in the event the system fails to meet the performance metric.
- e. Perform specific network / server platform (operating system & database) tuning and configuration changes identified to improve application or platform performance issues.

### **Completion Criteria:**

This task is considered successfully completed when:

- a. The Performance Testing is complete, and both parties have reviewed the results; and
- b. The Performance Testing achieves the level of performance as detailed in Exhibit B.6; or
- c. At its discretion, the County may choose to reduce or eliminate one or more of its system performance requirements.
- d. Should the load test fail to achieve the mutually agreeable level of performance:
  1. Versaterm and the County will mutually agree upon the determination of the cause(s) for failure; and
  2. Should Versaterm and the County agree that the cause is the Application Software, Versaterm will take corrective actions necessary to achieve the mutually agreeable level of performance and will retest until such time the parties agree that the Application Software is no longer the cause. Versaterm will participate in collaborative discussions

on how to reach the performance metric, even if the agreed upon cause(s) exclude the Application Software. Task completion will not be withheld for non Application Software related issues.

**Task 17          Training Facilities**

**Objective:**      Provide training facilities that will be use for CAD and MDT 'train-the-trainer' (T2T) training and end-user training.

**Task Description:**

The County will provide facilities to accommodate CAD and MDT T2T and end-user training. The facility must include two (2) projectors, a computer workstation (for the instructor), and a computer workstation for each student. The facility for MDT training must include one (1) projector, a computer workstation for the instructor, and a computer workstation for each student.

**Responsibilities:**

Versaterm:

- a. Provide the County with the desktop, network and projection requirements for the classroom facilities.
- b. Recommend the number of workstations required.

County shall:

- a. Provide a suitable facility for CAD training, including equipment described in the task description above.
- b. Provide a suitable facility for MDT training, including equipment described in the task description above.
- c. Ensure workstations meet the minimum specifications as set forth in "Exhibit F - List of County Provided Equipment and Software".
- d. Provide the appropriate network access for each of the workstations to the Versaterm application servers.

**Completion Criteria:**

This task is considered successfully completed when:

- a. The facilities are available and the required number of workstations have been installed and properly configured.

**Task 18            CAD ‘Train the Trainer’ (T2T) Training**

**Objective:**        Conduct T2T training.

**Task Description:**

A full-scale training program will be developed, scheduled and conducted on-site in the production environment to thoroughly train County personnel on the use of the CAD. A sample course outline has been provided in Exhibit B.2 Training Course Outlines.

Versaterm will provide an Instructor for one session of the Train-the-Trainer course. It is recommended that class size be limited to no more than 10 students (trainers), so that adequate instructor-to-student ratio is provided to ensure understanding is met; each student should have their own workstation.

The CAD Call-Taker/Dispatcher Train-the-Trainer is a three (3) day course. The CAD Supervisor and CAD System Administrator courses are one (1) day courses.

The training material used will be based on Versaterm’s generic scenario-based training material. The generic training material is a starting point, that will then be significantly customized to the County configurations. For example, in consultation with the Implementation Team, the material will be adapted to use addresses, common place names, officer call signs, incident type codes, etc., that are familiar to the County. In addition, any identified policy or process flow information will be embedded in the training material.

**Responsibilities:**

Versaterm:

- a. Provide a qualified instructor;
- b. Prepare a re-settable training database using County-provided scenarios;
- c. Deliver soft-copy training material
- d. Conduct T2T sessions; and provide training on re-setting and administering the training database.

County:

- a. Assist in adapting County specific training scenarios including local data and site-specific policy and/or process flow information.
- b. Produce training material in hard copy format for each participant;
- c. Ensure that all appropriate County personnel attend and actively participate in the Project Kickoff meeting.

**Completion Criteria:**

This task is considered successfully completed when:

- a. The scheduled training has been provided according to the terms and conditions of the agreement.
- b. County personnel who attended the classes can administer the training database and complete the training assignments/scenarios.

**Task 19 MDT, vMobile and Remote CAD Train the Trainer (T2T) Training**

**Objective:** Conduct T2T training.

**Task Description:**

A full-scale training program will be developed, scheduled and conducted in the Production environment to thoroughly train County training personnel on the use of the MDT, vMobile and Remote CAD applications. A sample course outline has been provided in Exhibit B.2 Training Course Outlines. There will be a one (1) day course for Fire & EMS and a one (1) day course for Police.

**Responsibilities:**

Versaterm:

- a. Deliver appropriate training material in soft copy;
- b. Conduct T2T sessions.

County s:

- a. Produce the training material in hard copy format for each participant;

**Completion Criteria:**

This task is considered successfully completed when:

- a. The scheduled training has been providing according to the terms and conditions of the agreement; and
- b. County personnel who attended the classes can administer the training database and complete the training assignments/scenarios.

## **Task 20            VGI and Street Conversion Interface Training**

**Objective:**        Train County personnel on the use of the Versaterm GIS Interface tool (VGI) and the Street Conversion Interface.

### **Task Description:**

Remotely provide VGI and Street Conversion Interface training to the County implementation team members responsible for maintaining the CAD GIS source data. This training will be done via WEB conferencing. The training will provide a review of the GIS file requirements and provide instruction on how to use the VGI tool. The training will also review the Street Conversion Interface, an overview of the Versaterm GIS structure and provide instructions on loading files produced by the VGI tool into the CAD database.

### **Responsibilities:**

Versaterm:

- a. Remotely provide the VGI installation Application Software and guide County personnel through the installation and configuration of the VGI tool.
- b. Deliver VGI and Street Conversion Interface training documentation to the County.
- c. Provide a remote VGI and Street Conversion Interface training session via WEB conference.
- d. Provide requirements for the workstation needed to support the VGI Application Software.

County:

- a. Provide a windows workstation for installing/running the VGI Application Software that meets Versaterm specifications.
- b. Install the VGI Application Software with support from Versaterm.
- c. Provide the updated ESRI shape files as per Versaterm requirements.
- d. Ensure the availability of the dedicated County GIS personnel and CAD application authority to attend the training session.

### **Completion Criteria:**

This task is considered successfully completed when:

- a. County GIS and CAD application personnel have received training and can successfully generate GIS data from the VGI and load the files produced by the VGI into the CAD database.

**Task 21          Ready for Use (RFU)**

**Objective:**      The CAD and MDT Systems are ready for use and end user training can proceed.

**Task Description:**

This task identifies a specific milestone where Versaterm has delivered all training, interfaces and Application Software necessary for the County to proceed with end user training.

**Responsibilities:**

Versaterm:

- a. Confirm that all CAD application functionality and performance, including interfaces, have been properly completed and implemented such that there are no defects or discrepancies that could cause a delay end-user training and/or a failure to properly perform a production cutover (Statement of Work – Task 23);

County:

- a. Review all project documentation and installed Systems to determine if the County can successfully proceed with end user training and the subsequent tasks associated with the production cutover.

**Completion Criteria:**

This task is considered successfully completed when:

- a. This task shall be complete when Versaterm and County mutually agree the System is ready for end user training and production use.

**Task 22            End User Training**

**Objective:**        Conduct CAD and MDT end user training.

**Task Description:**        The County will deliver CAD and MDT end user training. The training will take place over 6-week consecutive period.

**Responsibilities:**

Versaterm:

- a. Provide remote support as needed during end user training period.

County:

- a. Train additional trainers as necessary to staff the end user training sessions.
- b. Schedule and organize the user's training schedule.
- c. Assign users to mandatory training classes.
- d. Assign qualified trainers for each training session.
- e. Prepare required training documentation and material for each user attending a training session.
- f. Ensure attendance compliance for students and Trainers.
- g. Deliver / present the CAD and MDT course materials to the end users.

**Completion Criteria:**

This task is considered successfully completed when:

- a. End user training sessions have completed successfully.
- b. Users have been trained to be able to successfully complete the training assignments/scenarios and are able to fully use the System.



**Task 23          Final System Administration Training**

**Objective:**      Train County personnel on administering the CAD/MDT

**Task Description:**

Versaterm shall provide training on administering the CAD/MDT to the County's designated administrator(s). The purpose of this training is to equip the administrator(s) with the ability to monitor the System for performance and to perform initial troubleshooting steps. System administration training will occur on-site during the CAD production cutover period.

**Responsibilities:**

Versaterm:

- a. Supply designated System administration personnel with the materials necessary for training.
- b. Provide an overview of the System layout, CAD and MDT System components, log files and configuration files.
- c. Review scheduled operating system tasks ('cron' jobs).
- d. Review the process for remote updates for desktops.
- e. Describe steps involved in troubleshooting CAD and MDT problems.
- f. Provide an overview of UNIX performance monitoring tools.

County:

- a. Ensure the availability of the designated County CAD technical System personnel (CAD server, application and desktop).

**Completion Criteria:**

This task is considered successfully completed when:

- a. Designated County personnel can provide the above mentioned administration functions.

**Task 24            CAD/MDT Production Cutover**

**Objective:**        Place CAD/MDT into production operation.

**Task Description:**

Versaterm will provide written notification that the CAD and MDT Systems as operational and ready for production operation and assist the County in placing the subsystems into production use. Versaterm representative(s) will be on-site for this period.

**Responsibilities:**

Versaterm:

- a. Notify the County staff that the CAD and MDT applications are ready for production use.
- b. Assist the County staff in placing CAD and MDT into a production status.
- c. Monitor the initial operation of CAD and MDT and answer any operational questions raised by the County.
- d. Provide at least one representative on-site to support System cutover for up to three days after the cutover.
- e. Assist the users in utilizing the CAD/MDT and the computer operations staff in supporting the subsystem.

County:

- a. Provide onsite trained personnel to be the first line of support.
- b. Provide onsite trained CAD technical personnel to support the CAD VMWare server environment, the local network environment, CAD desktop workstations environments and MDT mobile workstation environments.

**Completion Criteria:**

This task is considered successfully completed when:

- CAD and MDT Systems are placed into production; and
- Versaterm has completed its on-site assistance.

## **Task 25            Response Time and Reliability Testing**

**Objective:**        The reliability and response time tests are to ensure that the System continues to operate in a reliable manner and at the expected performance level once the CAD is cut-over to Production Use.

Complete Performance & Reliability Test.

### **Task Description:**

The County shall conduct response time and reliability tests as outlined in Exhibit B.6 - Acceptance Test Plan to ensure that the System continues to operate reliably without any critical defects for thirty (30) consecutive calendar days of production use. A critical defect is defined as:

- Impacts at least 25% of the user base of the production System.
- Severely affects the County (e.g., critical business processes are disabled). Alternatively, severely impacts business operations due to the accumulated impact on multiple users.
- Includes, but is not limited to, problems that cause continuous or near-continuous interruption of service (e.g., the System “hangs” or “crashes”), the loss of use of one or more critical functions (including interfaces), file system corruption, or data loss.
- Has no stable workaround available.
- May require manual mode operation.
- Requires the County to contact the Versaterm support telephone number.

### **Responsibilities:**

Versaterm:

- a. Support County personnel during the 30-day test period as required.
- b. Review any performance and/or reliability reports submitted by the County and work with the County to identify the type of correction needed.

County:

- a. Operate the System in production use.
- b. Conduct System response time (performance) tests.
- c. Conduct System reliability tests.
- d. Document and report performance and/or reliability issues and work with Versaterm to identify the type of correction needed.

### **Completion Criteria:**

This task is considered successfully completed when:

- a. The CAD System has been functioning for 30 days without any critical defects.

**Task 26          Final System Acceptance**

**Objective:**      Declare System acceptance.

**Task Description:**

This task is a milestone to indicate that the System has been formally and finally accepted by the County as specified in the Exhibit B - Acceptance Test Plan. At this point the System warranty and support period commences.

**Responsibilities:**

Versaterm:

- a. Participate in a discussion with County personnel to identify remaining action items, open or incomplete tasks, next steps and any pertinent maintenance responsibilities.
- b. Work with the County to create a sustainment team.
- c. Work with the County for a post-acceptance communication plan and workflow for future contacts.
- d. Identify dates for completing remaining tasks.

County shall:

- a. Participate in a discussion with Versaterm personnel to identify remaining action items, open or incomplete tasks, next steps and any pertinent maintenance responsibilities.
- b. Create a sustainment team in collaboration with Versaterm.
- c. Identify dates for completing remaining tasks.

**Completion Criteria:**

This task is considered successfully completed when:

- a. Reliability acceptance tests have been completed successfully.
- b. Dates, mutually agreed upon by the County and Versaterm have been identified for resolving outstanding issues.
- c. The County has created a sustainment team
- d. Procedures for the Versaterm/County post-implementation relationship have been established.

# Exhibit B.1

## Project Implementation Schedule



## Exhibit B.1 - Project Implementation Schedule

ID	Task Name	Duration	Resource Names	Start	2017									
					January					June				
					7/1	9/23	12/16	3/10	6/2	8/25	11/17	2/9	5/3	
1	1 Execute Contract - SOW Task #1	0 days		Tue 11/6/18										
2	2 Project Kickoff - SOW Task #2	4 days		Tue 11/13/18										
3	2.1 Finalize CAD/MDT Implementation Team	1 day	SMC	Tue 11/13/18										
4	2.2 Update the project schedule	1 day	VTM,SMC	Wed 11/14/18										
5	2.3 Confirm GIS requirements	1 day	VTM,SMC	Thu 11/15/18										
6	2.4 Finalize server hardware, SAN, network connectivity requirements	1 day	VTM,SMC	Fri 11/16/18										
7	3 Project Management	250 days		Wed 11/14/18										
8	3.1 Project Configuration/Testing Period	250 days		Wed 11/14/18										
9	3.2 Project Meeting (coincides with Config Workshop #1)	1 day	VTM,SMC	Mon 3/4/19										
10	3.3 Project Meeting 2 (coincides with Config Workshop #2)	1 day	VTM,SMC	Mon 4/8/19										
11	3.4 Project Meeting 3 (coincides with Config Workshop #3)	1 day	VTM,SMC	Mon 5/13/19										
12	3.5 Project Meeting 4 (coincides with Config Workshop #4)	1 day	VTM,SMC	Mon 6/17/19										
13	4 Build the Implementation Environment - SOW Task #3	53 days		Tue 11/6/18										
14	4.1 Set Up Server Plant	47 days		Tue 11/6/18										
15	4.1.1 Purchase Hardware	40 days	SMC	Tue 11/6/18										
16	4.1.2 Finalize/Review Server Locations and Networking	1 day	SMC	Thu 1/10/19										
17	4.1.3 Install Servers	4 days	SMC	Fri 1/11/19										
18	4.1.4 Install VMWare Vsphere	2 days	SMC	Thu 1/17/19										
19	4.2 Prepare CAD Configuration System/Environment	6 days		Fri 1/18/19										
20	4.2.1 Provide VM Images for CAD Imp (for Configuration)	0 days	VTM	Fri 1/18/19										
21	4.2.2 Mount VM Images in Vmware environment	2 days	SMC	Mon 1/21/19										
22	4.2.3 Configure Imp Vmware images	2 days	VTM	Wed 1/23/19										
23	4.2.4 Perform Server and Connectivity Testing	1 day	VTM,SMC	Fri 1/25/19										
24	4.2.5 Configure VPN access for Versaterm remote support	1 day	SMC	Mon 1/28/19										
25	5 Prepare a Classroom Facility - SOW Task #4	17 days		Mon 1/21/19										
26	5.1 Build a classroom facility	15 days	SMC	Mon 1/21/19										
27	5.2 Ensure workstations meet minimum specifications	1 day	SMC	Mon 2/11/19										
28	5.3 Provide appropriate network access	1 day	SMC	Tue 2/12/19										
29	6 Initial Setup and Configuration (Implementation Environment) - SOW Task #5	17.5 days		Mon 1/28/19										
30	6.1 Configure CAD Implementation System w. Sample CAD Database	4 days	VTM	Mon 1/28/19										
31	6.2 Install & Test Versaterm Message Controller (VMC)	2 days	VTM	Fri 2/1/19										
32	6.3 Load Officer Numbers & Other Local Tables	2 days	VTM	Tue 2/5/19										
33	6.4 Provide GIS Shapefiles and map packages	0.5 days	SMC	Thu 2/7/19										
34	6.5 Load GIS/Street Data	1 day	VTM	Thu 2/7/19										
35	6.6 Configure and test backups	0.5 days	SMC	Fri 2/8/19										
36	6.7 Prepare CAD Lab (Install GUI Client, etc.)	2 days	SMC	Wed 2/13/19										
37	6.8 Test CAD and Mobile Application & Connectivity	2 days	SMC	Fri 2/15/19										
38	6.9 Create operating system printer definitions	0.5 days	SMC,VTM	Tue 2/19/19										
39	6.10 Test CAD Printing	1 day	SMC	Tue 2/19/19										
40	7 Initial System Administration Training	9 days	VTM,SMC	Wed 2/20/19										
41	7.1 Configure Admin Menu & Scripts	1 day	VTM	Wed 2/20/19										
42	7.2 Deliver Initial System Admin Training	1 day	VTM,SMC	Mon 3/4/19										
43	8 CAD & MDT Implementation/Configuration	92 days		Wed 2/20/19										



## Exhibit B.1 - Project Implementation Schedule

ID	Task Name	Duration	Resource Names	Start	2017									
					January								June	
					7/1	9/23	12/16	3/10	6/2	8/25	11/17	2/9	5/3	
44	8.1 Configuration Support	88 days	VTM[20%]	Wed 2/20/19										VTM[20%]
45	8.2 Ensure CAD Access For Project Team	1 day	SMC	Wed 2/20/19										SMC
46	8.3 Implementation Session #1 (VTM onsite) - SOW Task #6	4 days	VTM,SMC	Mon 3/4/19										VTM,SMC
47	8.4 Update the Project Schedule - SOW Task #7	0.5 days	VTM,SMC	Fri 3/8/19										VTM,SMC
48	8.5 Develop Tables & Procedures	65.5 days		Mon 3/11/19										
49	8.5.1 Define Commands, Call Type Table, Unit Status, Busy Codes, Help, etc.	30 days	SMC[50%]	Mon 3/11/19										SMC[50%]
50	8.5.2 Enter Hazards, Contacts and Itineraries	60 days	SMC[50%]	Mon 3/18/19										SMC[50%]
51	8.5.3 Review Policies/Procedures	30 days	SMC[50%]	Mon 3/11/19										SMC[50%]
52	8.6 Build Misc Files (Notepad)	45 days	SMC[50%]	Mon 3/11/19										SMC[50%]
53	8.7 Define CAD Desktop Layout	15 days	SMC[20%]	Fri 3/8/19										SMC[20%]
54	8.8 Mobile Dispatch Terminal (MDT)	25 days		Mon 3/18/19										
55	8.8.1 Review MDT Functions	15 days	SMC[50%]	Mon 3/18/19										SMC[50%]
56	8.8.2 Review MDT Policies and Procedures	20 days	SMC[50%]	Mon 3/25/19										SMC[50%]
57	8.9 Implementation Session #2 (VTM onsite) - SOW Task #8	4 days	VTM	Mon 4/8/19										VTM
58	8.10 Configure Desks, Users, Security Profiles	5 days	SMC[50%]	Fri 4/12/19										SMC[50%]
59	8.11 Configure Coverage and Dispatch Recommendations	3 days	SMC[50%]	Fri 4/19/19										SMC[50%]
60	8.12 Configure Other Tables	30 days	SMC[50%]	Wed 4/24/19										SMC[50%]
61	8.13 Define Default System Configuration Parameters	2 days	SMC[50%]	Wed 6/5/19										SMC[50%]
62	8.14 Update Policies/Procedures	15 days	SMC[50%]	Fri 6/7/19										SMC[50%]
63	8.15 Install and Configure Web Server (for Browser Status Screen)	2 days	VTM	Fri 5/17/19										VTM
64	8.16 Implementation Session #3 (VTM onsite) - SOW Task #10	4 days	VTM,SMC	Mon 5/13/19										VTM,SMC
65	8.17 Mobile data configuration	19 days		Tue 5/21/19										
66	8.17.1 Review configuration options and MDT layout	2 days	SMC	Tue 5/21/19										SMC
67	8.17.2 Define Radio/Modem IDs for authentication	12 days	SMC	Thu 5/23/19										SMC
68	8.17.3 Configure & Test Mobile Data Support	5 days	SMC[50%]	Mon 6/10/19										SMC[50%]
69	8.18 Implementation Session #4 (VTM onsite) - SOW Task #11	4 days	VTM,SMC	Mon 6/17/19										VTM,SMC
70	8.19 Review Production Environment	4 days	VTM,SMC	Mon 6/17/19										VTM,SMC
71	8.20 CAD Configuration Workshops Complete	0 days		Fri 6/21/19										6/21
72	8.21 Build CAD/MDT Production Environment - SOW Task #12	64.5 days		Mon 3/18/19										
73	8.21.1 Purchase and install production hardware	40 days	SMC	Mon 3/18/19										SMC
74	8.21.2 Clone Imp VMs to Produce Production and Training VMs	2 days	VTM	Fri 5/17/19										VTM
75	8.21.3 Configure Production and Training Vmware images	5 days	VTM	Tue 5/21/19										VTM
76	8.21.4 Configure DR environment	1 day	VTM	Tue 5/28/19										VTM
77	8.21.5 Final GIS/Street Load	0.5 days	VTM	Wed 5/29/19										VTM
78	8.21.6 Install & Test System Processes (CRON, Boot Scripts, etc.)	0.5 days	VTM	Thu 5/30/19										VTM
79	8.21.7 Test Server Boot Processes	1 day	VTM,SMC	Thu 5/30/19										VTM,SMC
80	8.21.8 Test and checkout Training and Production environments	10 days	SMC	Fri 5/31/19										SMC
81	9 Software Enhancement Development - SOW Task #9	70 days		Fri 3/8/19										
82	9.1 Develop enhancements	60 days	VTM	Fri 3/8/19										VTM
83	9.2 Install and Unit Test enhancements	5 days	VTM	Fri 5/31/19										VTM
84	9.3 Checkout enhancements	5 days	SMC	Fri 6/7/19										SMC
85	10 CAD/MDT Interfaces - SOW Task #13	103.5 days		Tue 1/29/19										
86	10.1 Group 1	57 days		Tue 1/29/19										



## Exhibit B.1 - Project Implementation Schedule

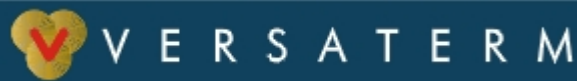
ID	Task Name	Duration	Resource Names	Start	2017									
					January					June				
					7/1	9/23	12/16	3/10	6/2	8/25	11/17	2/9	5/3	
87	<b>10.1.1 PulsePoint</b>	<b>6.5 days</b>		<b>Tue 1/29/19</b>										
88	10.1.1.1 Provide BSS schema	0.5 days	VTM	Tue 1/29/19										
89	10.1.1.2 Create Views and connect PulsePoint	5 days	VTM,SMC	Tue 1/29/19										
90	10.1.1.3 Test & Refinement	1 day	VTM,SMC	Tue 2/5/19										
91	<b>10.1.2 FireDispatch.com</b>	<b>6.5 days</b>		<b>Wed 2/6/19</b>										
92	10.1.2.1 Provide BSS schema	0.5 days	VTM	Wed 2/6/19										
93	10.1.2.2 Create Views and connect FireDispatch.com	5 days	VTM,SMC	Thu 2/7/19										
94	10.1.2.3 Test & Refinement	1 day	VTM,SMC	Thu 2/14/19										
95	<b>10.1.3 ProQA</b>	<b>4.5 days</b>		<b>Fri 2/15/19</b>										
96	10.1.3.1 Configure CAD to launch ProQA	0.5 days	VTM	Fri 2/15/19										
97	10.1.3.2 Configure CAD/ProQA call types	2 days	SMC	Fri 2/15/19										
98	10.1.3.3 Test & Checkout	2 days	VTM,SMC	Tue 2/19/19										
99	<b>10.1.4 Axon</b>	<b>3.5 days</b>		<b>Thu 2/21/19</b>										
100	10.1.4.1 Develop/Finalize Specifications	0.5 days	VTM	Thu 2/21/19										
101	10.1.4.2 Develop interface	2 days	VTM,SMC	Fri 2/22/19										
102	10.1.4.3 Install, test & Refinement	1 day	VTM,SMC	Tue 2/26/19										
103	<b>10.1.5 TabletCommand</b>	<b>4 days</b>		<b>Wed 2/27/19</b>										
104	10.1.5.1 Develop/Finalize Specifications	1 day	VTM	Wed 2/27/19										
105	10.1.5.2 Install/Configure interface	2 days	VTM	Thu 2/28/19										
106	10.1.5.3 Install, test & Refinement	1 day	VTM,SMC	Mon 3/4/19										
107	<b>10.1.6 Tritech/Omega FireView</b>	<b>6.5 days</b>		<b>Tue 3/5/19</b>										
108	10.1.6.1 Provide CAD schema	0.5 days	VTM	Tue 3/5/19										
109	10.1.6.2 Create Views and connect FireView	5 days	VTM,SMC	Tue 3/5/19										
110	10.1.6.3 Test & Refinement	1 day	VTM,SMC	Tue 3/12/19										
111	<b>10.1.7 911 Interface</b>	<b>7 days</b>		<b>Wed 3/13/19</b>										
112	10.1.7.1 Develop/Finalize Specifications	2 days	VTM	Wed 3/13/19										
113	10.1.7.2 Configure 911 Interface	4 days	VTM[50%]	Fri 3/15/19										
114	10.1.7.3 Install, Test & Refinement	1 day	VTM,SMC	Thu 3/21/19										
115	<b>10.1.8 FirstWatch</b>	<b>6.5 days</b>		<b>Fri 3/22/19</b>										
116	10.1.8.1 Provide BSS schema	0.5 days	VTM	Fri 3/22/19										
117	10.1.8.2 Create Views and connect FirstWatch	5 days	VTM,SMC	Mon 3/25/19										
118	10.1.8.3 Test & Refinement	1 day	VTM,SMC	Mon 4/1/19										
119	<b>10.1.9 CryWolf</b>	<b>5.5 days</b>		<b>Tue 4/2/19</b>										
120	10.1.9.1 Configure CAD to export calls and import Alarm Subscribers	0.5 days	VTM	Tue 4/2/19										
121	10.1.9.2 Configure Crywolf to import/export CAD data	4 days	SMC	Tue 4/2/19										
122	10.1.9.3 Install, test & Refinement	1 day	VTM,SMC	Mon 4/8/19										
123	<b>10.1.10 NCRIC / Palentir</b>	<b>6.5 days</b>		<b>Tue 4/9/19</b>										
124	10.1.10.1 Provide CAD schema	0.5 days	VTM	Tue 4/9/19										
125	10.1.10.2 Create Views and connect Palentir	5 days	VTM,SMC	Wed 4/10/19										
126	10.1.10.3 Test & Refinement	1 day	VTM,SMC	Wed 4/17/19										
127	<b>10.1.11 IamResponding</b>	<b>3 days</b>		<b>Tue 4/9/19</b>										
128	10.1.11.1 Install and configure interface	2 days	VTM	Tue 4/9/19										
129	10.1.11.2 Test & Refinement	1 day	VTM,SMC	Thu 4/11/19										





## Exhibit B.1 - Project Implementation Schedule

ID	Task Name	Duration	Resource Names	Start	2017									
					January					June				
					7/1	9/23	12/16	3/10	6/2	8/25	11/17	2/9	5/3	
130	<b>10.2 Group 2</b>	<b>68 days</b>		<b>Tue 1/29/19</b>										
131	<b>10.2.1 ReddiNet Interface</b>	<b>13 days</b>		<b>Tue 1/29/19</b>										
132	10.2.1.1 Develop/Finalize Specifications	2 days	VTM,SMC	Tue 1/29/19										
133	10.2.1.2 Develop interface and CAD enhancements	10 days	VTM	Thu 1/31/19										
134	10.2.1.3 Install, test & Refinement	1 day	VTM	Thu 2/14/19										
135	<b>10.2.2 ePCR/MEDS</b>	<b>13 days</b>		<b>Fri 2/15/19</b>										
136	10.2.2.1 Develop/Finalize Specifications	2 days	VTM,SMC	Fri 2/15/19										
137	10.2.2.2 Develop interface and CAD enhancements	10 days	VTM	Tue 2/19/19										
138	10.2.2.3 Install, test & Refinement	1 day	VTM	Tue 3/5/19										
139	<b>10.2.3 SRIMS</b>	<b>6.5 days</b>		<b>Wed 3/6/19</b>										
140	10.2.3.1 Provide CAD schema	0.5 days	VTM	Wed 3/6/19										
141	10.2.3.2 Create Views and connect SRIMS	5 days	VTM,SMC	Wed 3/6/19										
142	10.2.3.3 Test & Refinement	1 day	VTM,SMC	Wed 3/13/19										
143	<b>10.2.4 SunRidge RMS</b>	<b>7 days</b>		<b>Thu 3/14/19</b>										
144	10.2.4.1 Develop/Finalize Specifications	1 day	VTM,SMC	Thu 3/14/19										
145	10.2.4.2 Develop interface to request Case Number and performs queries (RiCO)	5 days	VTM	Fri 3/15/19										
146	10.2.4.3 Install, test & Refinement	1 day	VTM	Fri 3/22/19										
147	<b>10.2.5 Message switch (NCIC/CLETS, AWS, ATIMS)</b>	<b>12 days</b>		<b>Mon 3/25/19</b>										
148	10.2.5.1 Develop/Finalize Specifications	1 day	VTM,SMC	Mon 3/25/19										
149	10.2.5.2 Develop interface	10 days	VTM	Tue 3/26/19										
150	10.2.5.3 Install, test & Refinement	1 day	VTM	Tue 4/9/19										
151	<b>10.2.6 CALCop</b>	<b>6.5 days</b>		<b>Wed 4/10/19</b>										
152	10.2.6.1 Develop/Finalize Specifications	0.5 days	VTM,SMC	Wed 4/10/19										
153	10.2.6.2 Develop web service push	5 days	VTM	Thu 4/11/19										
154	10.2.6.3 Install, test & Refinement	1 day	VTM	Thu 4/18/19										
155	<b>10.2.7 ShotSpotter (??)</b>	<b>5 days</b>		<b>Fri 4/19/19</b>										
156	10.2.7.1 Develop interface	5 days	VTM	Fri 4/19/19										
157	<b>10.2.8 Eventied (??)</b>	<b>5 days</b>		<b>Fri 4/26/19</b>										
158	10.2.8.1 Develop interface	5 days	VTM	Fri 4/26/19										
159	<b>10.3 Group 3</b>	<b>68.5 days</b>		<b>Tue 1/29/19</b>										
160	<b>10.3.1 Motorola MCC7500</b>	<b>6.5 days</b>		<b>Tue 1/29/19</b>										
161	10.3.1.1 Develop/Finalize Specifications	0.5 days	VTM	Tue 1/29/19										
162	10.3.1.2 Develop interface	5 days	VTM	Tue 1/29/19										
163	10.3.1.3 Install, test & Refinement	1 day	VTM,SMC	Tue 2/5/19										
164	<b>10.3.2 Cimarron Cplus II ANI Decoder</b>	<b>6.5 days</b>		<b>Wed 2/6/19</b>										
165	10.3.2.1 Develop/Finalize Specifications	0.5 days	VTM	Wed 2/6/19										
166	10.3.2.2 Develop interface	5 days	VTM	Thu 2/7/19										
167	10.3.2.3 Install, test & Refinement	1 day	VTM,SMC	Thu 2/14/19										
168	<b>10.3.3 Paging Interface (SMTP &amp; 2200)</b>	<b>9.5 days</b>		<b>Fri 2/15/19</b>										
169	10.3.3.1 Develop/Finalize Specifications	0.5 days	VTM	Fri 2/15/19										
170	10.3.3.2 Configure SMTP	1 day	VTM,SMC	Fri 2/15/19										
171	10.3.3.3 Develop CAD enhancements for pager_provider	2 days	VTM	Mon 2/18/19										
172	10.3.3.4 Develop 2200 interface	5 days	VTM	Wed 2/20/19										



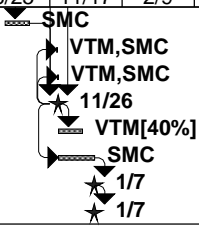
## Exhibit B.1 - Project Implementation Schedule

ID	Task Name	Duration	Resource Names	Start	2017									
					January		February		March		April		May	
					7/1	9/23	12/16	3/10	6/2	8/25	11/17	2/9	5/3	
173	10.3.3.5 Install, test & Refinement	1 day	VTM,SMC	Wed 2/27/19										
174	<b>10.3.4 Radio Paging Zetron M25 Tone Encoder</b>	<b>6.5 days</b>		<b>Thu 2/28/19</b>										
175	10.3.4.1 Develop/Finalize Specifications	0.5 days	VTM	Thu 2/28/19										
176	10.3.4.2 Develop interface	5 days	VTM	Fri 3/1/19										
177	10.3.4.3 Install, test & Refinement	1 day	VTM,SMC	Fri 3/8/19										
178	<b>10.3.5 Station Alerting (M25 &amp; FSA)</b>	<b>8.5 days</b>		<b>Mon 3/11/19</b>										
179	10.3.5.1 Develop/Finalize Specifications	0.5 days	VTM	Mon 3/11/19										
180	10.3.5.2 Develop interface (M25)	2 days	VTM	Mon 3/11/19										
181	10.3.5.3 Develop interface (FSA)	5 days	VTM	Wed 3/13/19										
182	10.3.5.4 Install, test & Refinement	1 day	VTM,SMC	Wed 3/20/19										
183	<b>10.3.6 Fire RMS</b>	<b>12 days</b>		<b>Thu 3/21/19</b>										
184	10.3.6.1 Develop/Finalize Specifications	1 day	VTM	Thu 3/21/19										
185	10.3.6.2 Develop Interface	10 days	VTM	Fri 3/22/19										
186	10.3.6.3 Install, test & Refinement	1 day	VTM,SMC	Fri 4/5/19										
187	<b>10.3.7 Deccan</b>	<b>19 days</b>		<b>Mon 4/8/19</b>										
188	10.3.7.1 Develop/Finalize Specifications	2 days	VTM	Mon 4/8/19										
189	10.3.7.2 Develop/Install/Configure interface	15 days	VTM	Wed 4/10/19										
190	10.3.7.3 Install, test & Refinement	2 days	VTM,SMC	Wed 5/1/19										
191	10.4 Install, Configure and Test interfaces in Production environment	5 days	VTM	Fri 6/14/19										
192	<b>11 Integration Testing - SOW Task #14</b>	<b>5 days</b>	<b>VTM,SMC</b>	<b>Fri 6/21/19</b>										
193	<b>12 Functional Acceptance Testing - SOW Task #15</b>	<b>25 days</b>		<b>Fri 6/28/19</b>										
194	12.1 Define Acceptance Tests	5 days	SMC	Fri 6/28/19										
195	12.2 Conduct Functional Acceptance Testing	20 days	SMC	Fri 7/5/19										
196	12.3 Functional Tests Complete	0 days		Fri 8/2/19										
197	<b>13 System Performance Testing - SOW Task #16</b>	<b>16 days</b>		<b>Fri 8/2/19</b>										
198	13.1 Prepare simulation scripts and load tests	5 days	VTM	Fri 8/2/19										
199	13.2 Run scripts	10 days	SMC	Fri 8/9/19										
200	13.3 Analyze results	1 day	VTM,SMC	Fri 8/23/19										
201	<b>14 Training Preparation and Train the Trainer Session</b>	<b>53.5 days</b>		<b>Fri 6/21/19</b>										
202	<b>14.1 Prepare Training Facilities - SOW Task #17</b>	<b>10 days</b>	<b>SMC</b>	<b>Fri 6/21/19</b>										
203	14.2 Develop Training Scenarios	15 days	SMC[50%]	Fri 6/21/19										
204	14.3 Deliver Training Scenarios to VersaTerm	1 day	SMC	Fri 7/12/19										
205	14.4 Prepare Training Courses for CAD & Mobile	10 days	VTM,SMC	Mon 7/15/19										
206	<b>14.5 CAD Train the Trainer Training - SOW Task #18</b>	<b>5 days</b>	<b>VTM,SMC</b>	<b>Mon 8/26/19</b>										
207	<b>14.6 MDT, vMobile and Remote CAD Train the Trainer Training - SOW Task #19</b>	<b>2 days</b>	<b>VTM,SMC</b>	<b>Mon 9/2/19</b>										
208	<b>14.7 VGI and Street Conversion Interface Training - SOW Task #20</b>	<b>0.5 days</b>	<b>VTM,SMC</b>	<b>Wed 9/4/19</b>										
209	<b>15 Ready for Use (RFU) - SOW Task #21</b>	<b>0 days</b>		<b>Wed 9/4/19</b>										
210	<b>16 End User Training - SOW Task #22</b>	<b>58 days</b>		<b>Thu 9/5/19</b>										
211	16.1 Training Preparation	23 days	SMC[50%]	Thu 9/5/19										
212	16.2 Train CAD End Users	30 days	VTM	Tue 10/15/19										
213	16.3 Train MDT Users	30 days	SMC	Tue 10/15/19										
214	<b>17 Production Preparation</b>	<b>59 days</b>		<b>Thu 9/5/19</b>										
215	17.1 Prepare PC Desktops	15 days	SMC	Thu 9/5/19										



# Exhibit B.1 - Project Implementation Schedule

ID	Task Name	Duration	Resource Names	Start	2017											
					January				June							
					7/1	9/23	12/16	3/10	6/2	8/25	11/17	2/9	5/3			
216	17.2 Prepare Mobile Data Computers	20 days	SMC	Thu 9/26/19												
217	17.3 Final System Administration Training - SOW Task 23	0.5 days	VTM,SMC	Mon 11/25/19												
218	17.4 Final Conversion	1 day	VTM,SMC	Tue 11/26/19												
219	18 CAD/MDT Production Cutover - SOW Task #24	0 days		Tue 11/26/19												
220	19 Close Support Period	20 days	VTM[40%]	Wed 11/27/19												
221	20 Response Time and Reliability Testing - SOW Task #25	30 days	SMC	Wed 11/27/19												
222	21 Final System Acceptance - SOW Task #26	0 days		Tue 1/7/20												
223	22 CAD/MDT Warranty Begins	0 days		Tue 1/7/20												



# Exhibit B.2

## Training Course Outlines

## TRAINING COURSE OUTLINES

This Exhibit describes the training courses to be delivered to the County (train-the-trainers) by Versaterm and a sample of the courses the County may then replicate to all users. Each training class may contain multiple courses. The definition of a “course” is in-depth training of either a functional area or set of areas within the System.

The following courses are outlines only, and may be modified or tailored as necessary. The course codes identified for each class are documented under Course Outlines and are indicated in the table below, detailing the recommended course offerings per group.

### Versaterm Delivered Training

The following training classes will be delivered by Versaterm to the County trainers with the exception of the Supervisor and Administrator courses, which will be delivered by Versaterm directly to the end-user.

<u>Group</u>	<u>Total # of Students</u>	<u>Course Codes</u>
CAD Trainers	10	DP,MDT_P, MDT_EF
Police MDT Trainers	20	MDT_P
EMS and Fire MDT Trainers	20	MDT_EF
CAD Supervisors and Administrators	4	DP,MDT_P,MDT_EF,CAD_SUP_ADMIN
Police, EMS and Fire MDT Administrators	4	MDT_ADMIN
Remote CAD Trainers	2	RCAD
MAP Administration and VGI	2	MAP

### Course Outlines

*For each course listed below, a course code is identified in parenthesis.  
The course code may be used when identifying the makeup of a course.*

## **Call-Taker/Dispatcher Training (DP)**

**Course Duration:** Up to 3 days

**Intended Audience:**

Communication center call-taker, dispatcher and supervisory personnel who will be responsible for taking emergency calls for assistance and dispatching required emergency response units.

### **Course Approach:**

In order to achieve the objectives below, Versaterm will prepare various CAD scenarios that will exercise the functions described.

These scenarios will be based on “typical” cases that will have been provided by the County, prior to training.

The County will provide a classroom with 10 desktop workstation positions, one for each student.

### **Course Objectives:**

The CAD call-taker/dispatch operators will:

- Know how to sign on and sign off units
- Know how to add, dispatch and clear calls
- Know how to add calls via E-911, alarm number
- Know how to maintain unit activity information (both case-related, and when not on a case)
- Know how to retrieve calls (by number, by date or from the active or dispatch queues)
- Know how to move calls between queues
- Know how to view history at a particular address
- Know how to retrieve hazard, alarm, itinerary and contact records on an address
- Know how to obtain a hardcopy (printout) of a call
- Know how to navigate the status screen
- Know how to navigate the mapviewer
- Know how to set and stop unit timers
- Know how to query against NCIC
- Know how to use the vMail facility
- Know how to use the Notepad facility to view lists
- Know how to use the on-line help facility
- Know how to add calls retro-actively

## **Supervisor and Administrator Training (CAD\_SUP\_ADMIN)**

**Course Duration:** 1 day

**Intended Audience:**

Users who are responsible to maintain table codes, security, user access, run reports, etc.

### **Course Approach:**

Since this course will involve a subset of the individuals from the previous call-taker/dispatcher course, the information covered in this course will focus on supervisor/administrator specific items.

Maximum of 1 person per workstation.

### **Course Objectives:**

The Supervisor and Administrator will:

- Understand the implications and parameters in specific CAD tables (call types, busy codes, setting up police, EMS and fire responses and response modifiers, etc.)
- Know how to create and maintain users and their security privileges and password
- Know how to add and maintain Notepad and Topic entries
- Know how to add calls retro-actively
- Know how to use the mail system, and how to define mail groups
- Know how to manage the various queue types
- Know how to reconfigure a given user's beat/zone responsibility and status screen layout
- Know how to set up the shift duty table
- Know how to setup a status screen
- Know how to maintain the street index (GEO code) file including common place names and alias street names
- Know how to maintain address information (hazard records, alarm records, itinerary records, night list records, etc.)

## **MAP Administration & VGI (MAP)**

**Duration:** Up to 1.5 days

**Intended Audience:**

Users who are responsible for maintaining maps on the desktops and laptops as well as GIS (or non GIS personnel) who are responsible for providing street data for the CAD.

### **Course Approach:**

This course is conducted via webcast.

Due to the material to be covered, this course will be topic-based, as opposed to scenario-based. Some functions will be demonstrated, while others will be executed by the student himself/herself.

The students for this course are expected to have some technical computer aptitudes and familiarity with Windows.

Maximum of 1 person per workstation.

### **Course Objectives:**

The students will:

- Create custom views (based on event location, specific X,Y coordinate, current viewing area, etc.)
- Create custom themes (based on map packages required for specific user groups, such as law enforcement, EMS or fire dispatchers)
- Set 'info bar' display properties
- Define and setup icons for the dynamic layers (queued calls, active calls)
- Setting display properties for the tracking layer (AVL)
- Learn to configure and use the VGI tool to produce street load files for the CAD



## **Police Mobile Data Computer Instructor Training (MDT\_P)**

**Course Duration:** Up to 1 day

**Intended Audience:**

General audience of users who will use the police mobile workstation on a day-to-day basis.  
Supervisors and/or administrators are expected to attend this course.

**Course Approach:**

Versaterm will prepare scenarios based on sample data provided beforehand by the County. This approach has the advantage of making the training more effective, since familiar and realistic situations are used.

This course will permit hands on and “refreshers” as necessary (i.e., much of it is iterative and practice sessions).

Maximum of 1 student per laptop computer.

**Course Objectives:**

The student will:

- Know how to sign on and sign off
- Know how to receive a dispatch
- Know how to change status
- Know how to perform an on-view (self initiated)
- Know how to perform NCIC queries for persons, vehicles and property
- Know how to query addresses
- Know how to query CAD for unit status and pending queue
- Know how to lock/unlock the MDT
- Know how to send messages to CAD and to other MDTs
- Know how to review logs

## **EMS and Fire Mobile Data Computer Instructor Training (MDT\_EF)**

**Course Duration:** Up to 1 day

**Intended Audience:**

General audience of users who will use the EMS or fire mobile workstation on a day-to-day basis. Supervisors and/or administrators are expected to attend this course

**Course Approach:**

Versaterm will prepare scenarios based on sample data provided beforehand by the County. This approach has the advantage of making the training more effective, since familiar and realistic situations are used.

This course will permit hands on and “refreshers” as necessary (i.e., much of it is iterative and practice sessions).

Maximum of 1 student per laptop computer.

**Course Objectives:**

The student will:

- Know how to sign on and sign off
- Know how to receive a dispatch
- Know how to change status
- Know how to query addresses
- Know how to query CAD for unit status and pending queue
- Know how to lock/unlock the MDT
- Know how to send messages to CAD and to other MDTs
- Know how to review logs

## **MDT Administrator Training (MDT\_ADMIN)**

**Course Duration:** Up to 1 day

**Intended Audience:**

Administrators responsible for setting up and maintaining the police, EMS and fire MDT software on the mobiles as well as troubleshooting MDT traffic.

### **Course Approach:**

The trainer will “walk through” the various system and programming components of the MDT. Emphasis will be placed on the hardware & software configuration as well as the various components (mobile workstations, Message Controller, etc.) which comprise the Mobile Workstation infrastructure.

One *installed* MDT is required.

### **Course Objectives:**

The students will:

- Know how to install/upgrade and configure software on the MDT
- Know how to adjust configuration parameters
- Know how to monitor MDT traffic, review logs, etc.
- Understand components in the MDT architecture
- Know how to use the MDT designer to configure the layout of the MDT

## **Remote CAD and Browser Status Screen Instructor Training (RCAD)**

**Course Duration:** .5 days

**Intended Audience:**

General audience of users who will be using Remote CAD and Browser Status Screen to monitor CAD calls and activity.

### **Course Approach:**

Versaterm will prepare scenarios based on sample data provided beforehand by the County. This approach has the advantage of making the training more effective, since familiar and realistic situations are used.

This course will permit hands on and “refreshers” as necessary (i.e., much of it is iterative and practice sessions).

Maximum of 1 student per workstation.

### **Course Objectives:**

The student will:

- Know how to view a unit status listing
- Know how to view a listing and details of active and pending incidents
- Know how to query activity logs
- Know how to maintain address related records

# Exhibit B.3

# Documentation

The following is a list of documentation that will be provided by Versaterm during the CAD/MDC implementation project.

Document	Milestone
Technical Documentation	
Versaterm System Administration Guide	Production Server Build
Versadex Message Controller Administration Manual (VMC)	Workshop3
User Guides	
Versadex Police CAD Commands <sup>i</sup>	Workshop1
Versadex EMS and Fire CAD Commands <sup>i</sup>	Workshop1
CAD Quick Reference Cards (QRC)	Workshop4
MapView User Guide	Workshop1
Reports Overview Administrator Guide	Workshop4
Police Mobile Data Computer (MDC) Field Guide	Workshop3
EMS and Fire Mobile Data Computer (MDC) Field Guide	Workshop3
Police CAD Training <sup>ii</sup>	Workshop4
EMS and Fire CAD Training <sup>ii</sup>	Workshop4
Versadex Browser Based Status Screen User Guide	Workshop4
System Administration/Configuration Guides	
Status Screen Configuration Utility Guide	Workshop1
Versadex MapViewer Administration Guide	Workshop1
AVL/GPS Implementation Guide	Workshop3
CAD Implementation Guide	Project kick-off
Versaterm GIS Interface User/Administration Guide	VGI training

<sup>i</sup> Versaterm's generic command booklets will be provided and the further customized based on the specific command codes/help the County chooses to use.

<sup>ii</sup> The training material that will be used will be based on Versaterm's generic scenario-based training materials, however, they will be significantly customized for the County using addresses, place names, officer numbers, etc. that are familiar to the County. They will also be adapted to include any identified policy or process flow information.

# Exhibit B.4

## Interface Control Document (ICD)

## Contents

1.	Introduction .....	2
2.	Eventide NexLog (audio logger) .....	3
3.	Zetron M25 Tone Encoder – Radio .....	5
4.	PulsePoint.....	8
5.	FireDispatch.com.....	10
6.	Paging Interface .....	12
7.	Priority Dispatch - ProQA .....	15
8.	FirstWatch.....	17
9.	Cimarron CPlus III ANI Decoder Interface .....	19
10.	sRIMS .....	22
11.	E911 (ANI/ALI) .....	31
12.	Palantir.....	35
13.	ASAP (Automated Secure Alarm Protocol) .....	37
14.	CryWolf (Permit Alarms System Interface).....	43
15.	Tablet Command .....	52
16.	ShotSpotter .....	63
17.	IamResponding .....	71
18.	CalCOP (California Common Operating Picture).....	72
19.	ePCR/MEDS.....	77
20.	MCC7500 Voice Radio Interface .....	80
21.	AXON Evidence.com .....	85
22.	Fire Station Alerting .....	90
23.	Live Move Up Module (LiveMUM) – Deccan.....	93
24.	Fire RMS Call-For-Service Data Transfer .....	99
25.	Sunridge (RIMS) – Law Enforcement RMS .....	103
26.	ReddiNet.....	123
27.	Message Switch (NCIC/CLETS, AWS, ATIMS) .....	127
28.	Omega Fireview .....	149
29.	Geographical Information System (GIS) Interface .....	151

## 1. Introduction

The purpose of the Interface Control Document (ICD) is to clarify interface deliverables and to document the responsibilities between Versaterm and the Customer. The ICD should be deemed as specifications for all interfaces and conversions that are not part of the standard Versadex CAD (Computer Aided Dispatch System). For each conversion or interface, the Customer and Versaterm responsibilities are documented.



## 2. Eventide NexLog (audio logger)

This interface provides a one-way metadata transfer from the Versaterm CAD system to the Eventide NexLog audio logger system. The CAD system submits user and incident number metadata to the NexLog system. The incident number received by NexLog becomes associated to call recordings where NexLog users can display or search call recordings based on CAD incident numbers.

### Process Flow

When a user signs on to the CAD desktop application, the CAD application server submits the logged-on user's metadata to the NexLog system, provided the desk position is associated with recorder channel(s). The metadata is also submitted when a user signs off from CAD. The purpose of submitting the CAD user metadata is to have the user logged on or off the NexLog activity table for recorder channel tagging purposes. User metadata sent from CAD includes desk identification, recorder channel(s) associated to the desk, the desk IP address as well as the first and last name of the user.

Sign-on transactions are submitted as AGENT\_LOGIN, whereas sign-off transactions are submitted as AGENT\_LOGOUT to the NexLog system.

The format of the user transactions is as follows, where the agent action represents AGENT\_LOGIN or AGENT\_LOGOUT:

<AgentAction:AgentId:ChannelNo:ClientAddress:Field1:Value1:Field2:Value2>

Sample transaction from CAD to NexLog:

<AGENT\_LOGIN:CT1:12:192.1.1.41:FirstName:JOHN:LastName:SMITH>\n

Additionally, when an E911 call for service is created from a position that is associated to a recorder channel(s), the incident metadata is submitted to the NexLog system. Incident metadata includes the recorder channel(s) associated to the CAD position and the incident number. Incident transactions are submitted as ATTACH to the NexLog system.

The format for the ATTACH transaction(s) is as follows:

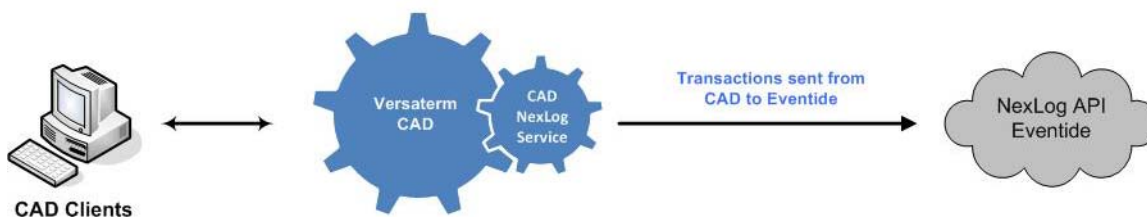
<ATTACH:ChannelNumber:Field1:Value1>

Sample transaction:

<ATTACH:43:CALLNUMBER: SM18000000545>\n

CAD transactions are only submitted to NexLog for CAD desk position that are associated to one or more recorder channels. That is, if a given CAD position is not associated to any recorder channel, CAD does not send any transactions, for that CAD position to the NexLog system.

For any transaction sent to NexLog from a CAD position that is associated to more than one recorder channel, separate transactions are sent for each recorder channel associated to that CAD desk position.



### Communication

The CAD NexLog service daemon, installed on the CAD application server, is responsible for communicating with the Eventide system. Communication between CAD and the Eventide NexLog API is provided via TCP/IP protocol. Upon startup of the CAD server daemon, a list of all actively signed on CAD positions, with an associated recorder channel, is submitted to the NexLog system for recorder synchronization purposes.

Data transmissions (command formatting and flow control) are provided as identified in the Eventide document titled "Communications Division NexLog API Manual - Models NexLog740, NexLog 840 – NexLog Recorder Software v2.8" (file name: MediaWorks User Manual.pdf).

### **Configuration**

A configuration file exists on the CAD application server to map each CAD desk position to the corresponding recorder channel(s). Each CAD desk position can have one or more associated recorder channel(s).

### **Business Continuity/Interface Availability**

This interface can be made available on all servers (production, implementation/test and disaster recovery) provided connectivity between CAD application server and the NexLog API is available. The interface can be enabled/disabled by configuring the appropriate CAD interface configuration parameter on CAD application server.

### **Interface Testing**

These tests are intended to ensure the interface is functional as designed. The following are descriptions of the tests to be performed for the specified interface functionality during the functional acceptance test period.

#### **Functional and Completeness Test**

This specific test is to ensure when CAD users sign on/off or when a call is added to CAD, the corresponding transaction is published from CAD to the NexLog API.

#### **Operational Tests**

This test ensures after system reboots, the interface is available and able to communicate with the NexLog API.

#### **Performance Tests**

The performance test consists of ensuring that user sign on, sign off and creating E911 call for service within CAD are published to the NexLog API within two seconds. Excluded from any measurement is network time (e.g. network between CAD and NexLog API) and external system processing times from the NexLog API service.

#### **Exception Testing**

The exception testing consists of disconnecting the network between CAD and NexLog API and ensuring CAD is able to resume communications once connectivity is re-established.

### **Responsibilities**

#### **County Responsibilities**

- a. Coordinate with Eventide technical staff to assist in the interface development and testing.
- b. Provide the communication link between the NexLog API and the CAD application server for TCP/IP protocol.
- c. Provide a test facility for the interface.
- d. Configure the necessary CAD configuration files (mapping CAD desk to recorder channel(s)).
- e. Test the interface.

#### **Versaterm Responsibilities**

- a. Develop, install and test the CAD daemon to NexLog API interface.
- b. Perform integration tests on the interface.
- c. Provide assistance in the testing process.

### **3. Zetron M25 Tone Encoder – Radio**

This interface provides the ability to send automatic radio page notifications to units and/or groups based on call type and area/jurisdiction. The interface also provides the ability to manually send radio page notifications from the CAD command line.

This interface leverages the Zetron M25 system to deliver the radio pages to end-user devices.

#### **Business Flow Overview**

The radio paging interface leverages the Versaterm paging interface where CAD call types can be configured so that CAD automatically pages units and/or call-out groups upon dispatch. For this particular interface installation, the pager numbers associated to units and/or call-out groups will be configured with the radio tone codes as defined in the Zetron M25 system. The pager number fields that are used to store the radio tone codes can accept up to 50 alpha-numeric characters.

CAD contains a configuration parameter by call type to indicate whether automatic radio paging is enabled upon dispatch. Additionally, the CAD is enhanced with an auto-page configuration parameter by apparatus. This indicates if the unit should automatically receive a radio page at dispatch for the call types where radio paging is enabled. This enhancement provides the flexibility to configure certain apparatus to be automatically paged while others are configured to not be automatically paged.

The CAD agency/jurisdiction table is enhanced to include a new paging field to store the pager tone code(s) that will be automatically alerted any time a call from that jurisdiction is dispatched or any unit from that jurisdiction is dispatched. This applies to all dispatches for every alarm level.

This interface will also automatically send a radio page to the radio page associated with the station of any dispatched apparatus should the station alerting (FSA or M26) for the apparatus's station fail.

When a radio page is required, CAD will identify all radio tones to submit, filter out any duplicates, and send them for queuing, to the appropriate VMC plugin corresponding to each tone's encoder. The VMC-plugin, developed for the Zetron M25 system, will then formulate the transaction and send it to the appropriate Zetron M25 encoder.

#### **Configuration**

Paging configuration, including how to create call-out groups and assign paging tone codes to apparatus and groups, is identified in the "Versaterm CAD Paging Administrator / User Guide".

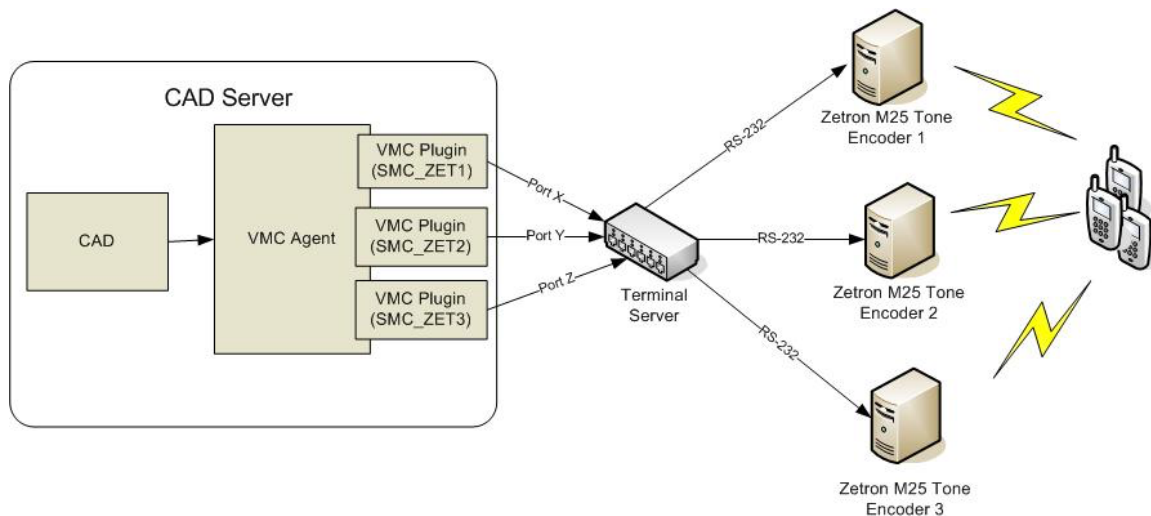
To support multiple Zetron M25 tone encoders, the Versaterm CAD is enhanced with the ability to indicate the corresponding tone encoder (paging provider) that is associated with the radio tone codes assigned to apparatus and call-out groups and jurisdiction.

Given this interface leverages the Versaterm Paging interface, the CAD is enhanced to include an additional paging group field for apparatus, stations and personnel. This provides the flexibility to assign both a radio pager and a pager (Zetron 2200 or SMTP) to apparatus, stations and personnel.

#### **Communication**

Communication from the VMC to the Zetron M25 Tone Encoders is provided via RS-232 serial communication links. The RS-232 (serial communication) cable links the Zetron M25 encoders to a terminal server, assuming all encoders are at the same physical location. The terminal server provides the VMC server with network access to the serial device.

The following diagram illustrates the connectivity points between the CAD system and each Zetron M25 Encoder:



Data transmissions (message formatting and flow control) are provided as identified in the Zetron "Model 25 Programmable Encoder Product Manual " (file name: Model25Manual.pdf).

### **Business Continuity/Interface Availability**

This interface can be available on all servers (production, implementation/test and disaster recovery) provided a terminal server is available for connectivity between VMC application server and the Zetron M25 Tone Encoder system. The interface can be enabled/disabled by configuring the appropriate interface configuration parameter in the interface section of the local server resource or similar configuration file.

### **Interface Testing**

These tests are intended to ensure the interface is functioning as designed. The following are descriptions of the tests to be performed for the specified interface functionality during the functional acceptance test period.

#### **Functional and Completeness Test**

This specific test is to ensure that when a call is dispatched, the tone page(s) are sent and delivered to the correct end-user devices.

#### **Operational Tests**

This test ensures after system reboots, the interface is available and able to communicate with Zetron M25.

#### **Performance Tests**

The performance test consists of dispatching a unit and measuring the number of seconds between the time the CAD command is issued until it reaches the Zetron M25. The time lapse should not exceed 2 seconds. Time delays introduced by the Zetron system and the network are not included in any time measurements.

#### **Exception Testing**

The exception test consists of disconnecting the link between the VMC and the Zetron M25 and confirming that error messages are delivered immediately to the CAD dispatcher when a page is requested. Further tests confirm that, after reconnecting the link, the communication resumes.

## **Responsibilities**

### County Responsibilities

- a. Acquire and configure the necessary terminal server(s).
- b. Provide the communication link between the Zetron M25 encoders and the terminal server(s).
- c. Configure Zetron M25 as required with the radio tone codes.
- d. Provide a test facility for the interface.
- e. Configure the necessary CAD tables (apparatus, call out groups, call types, etc.).
- f. Test the radio paging interface.

### Versaterm Responsibilities

- a. Enhance the apparatus table with an auto-page field to indicate if the unit should be automatically alerted on dispatch.
- b. Enhance the CAD jurisdiction configuration screen with a field to capture the radio tone (paging number) and encoder (pager provider) associated with the jurisdiction.
- c. Enhance the CAD paging interface to automatically send jurisdiction radio pages based on the call and unit's jurisdiction dispatched to the call.
- d. Enhance the CAD paging configuration screens to include a pager provider field to identify which Zetron tone encoder is associated with each pager (radio tone) code.
- e. Develop, install and test the interface for Zetron M25.
- f. Provide assistance and guidance through the County acceptance tests.

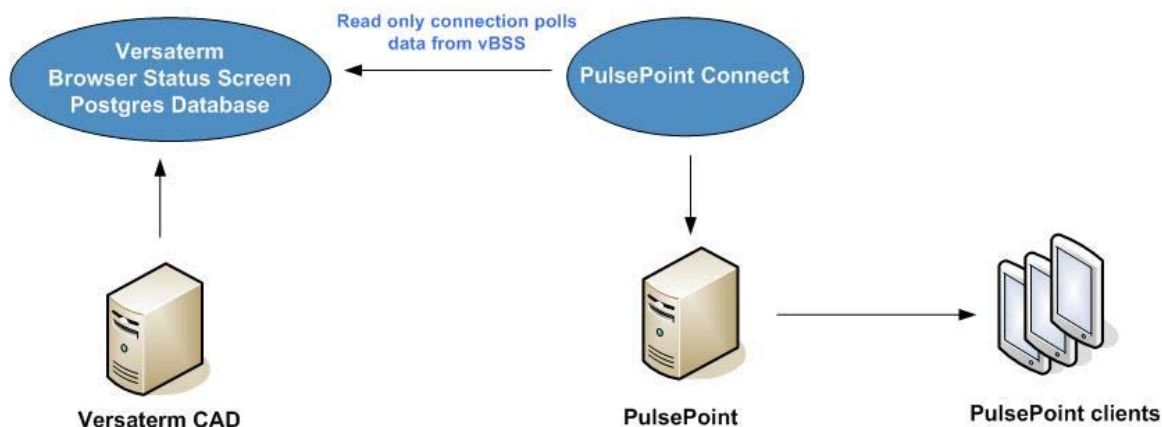
## 4. PulsePoint

This interface provides up-to-date EMS call and unit status information to the PulsePoint server making it available to end users accessing the PulsePoint application.

### Process Flow

The vCAD publishes all active call and unit status information to the Versaterm Browser Status Screen (vBSS) Postgres database in real time. This interface uses a read-only connection established from the PulsePoint Connect application to the BSS Postgres database allowing the PulsePoint to pull active CAD data from BSS into the PulsePoint server. The PulsePoint application is configured to pull CAD data from a designated Postgres database view in BSS at no less than 5-second intervals.

In order to limit the incident information accessed by PulsePoint, the County, with assistance from Versaterm, will create scripts to create database views on the BSS Postgres database. The scripts for the database views will reside in a site-specific folder, as designated by Versaterm, on the CAD application server. During application upgrades, Versaterm will copy the view scripts from the current servers to the new servers and will run them on the new database to re-create the views. It is however, the County's responsibility to maintain the views should any modifications be required (e.g. adding additional filters, column changes, etc.)



### Communication

The communication between PulsePoint Connect application and the BSS Postgres database will be through an ODBC connection.

### Business Continuity/Interface Availability

This interface is available from the production server and from the implementation/test server by configuring PulsePoint connection to the implementation/test BSS database. This interface can also be available from the disaster recovery server, providing PulsePoint and BSS are available and able to communicate with each other in the disaster recovery environment.

## **Interface Testing**

Interface testing is intended to ensure the interface is completely functional as designed. Below are descriptions of the tests to be performed for the specified interface functionality during the functional acceptance test period.

### **Functional and Completeness Test**

This test ensures that the BSS database is populated with active call and unit status information.

### **Operational Tests**

This test ensures the PulsePoint Connect application is able to reconnect to the BSS database and pull data after system reboots. The BSS server will be shutdown/re-started and ensure BSS services are started as well as communications between PulsePoint to the BSS database is established.

### **Performance Tests**

The performance tests will consist of ensuring that updates to active calls and unit status changes performed within CAD are published to the BSS database within 2 seconds. Excluded from any measurement is network time (e.g. network between CAD and BSS).

### **Exception Testing**

The exception testing consists of disconnecting the PulsePoint connectivity to the BSS database and after reconnecting, ensure PulsePoint is able to re-establish its connection to BSS.

## **Responsibilities**

### **County Responsibilities**

- Provide network connectivity between PulsePoint and the BSS database.
- Coordinate with PulsePoint technical authorities to assist in the interface development and testing.
- With Versaterm's assistance, create any required database views on the BSS Postgres database.
- Maintain any required database views on the BSS Postgres database.
- Setup and maintain Postgres client authentication file to control/limit ODBC access.
- Test the interface.

### **Versaterm Responsibilities**

- Provide the County with the BSS database schema.
- Assist the County with initial database view creation.
- Copy database view scripts to new CAD application server during CAD upgrades
- Execute database view scripts after each CAD upgrade.
- Provide assistance and guidance in the development and testing process.

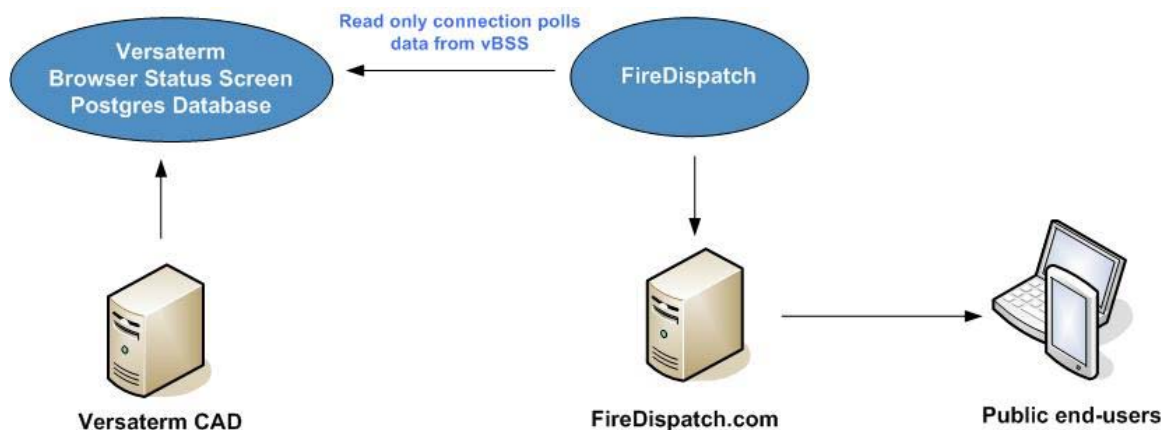
## 5. FireDispatch.com

This interface provides real-time Fire incidents and unit status information to the FireDispatch.com server making it available to the public end-users accessing FireDispatch.com.

### Process Flow

The vCAD publishes active call and unit status information to the Versaterm Browser Status Screen (vBSS) Postgres database in real time. This interface uses a read-only connection established from the FireDispatch server to the BSS Postgres database allowing FireDispatch to pull active CAD data from BSS into the FireDispatch server. The FireDispatch application is configured to pull CAD data from a designated Postgres database view in BSS at no less than five (5) second intervals.

In order to limit the Fire incident information accessed by FireDispatch, the County, with assistance from Versaterm, will create scripts to create database views on the BSS Postgres database. The scripts for the database views will reside in a site-specific folder, as designated by Versaterm, on the CAD application server. During application upgrades, Versaterm will copy the view scripts from the current servers to the new servers and will run them on the new database to re-create the views. It is however, the County's responsibility to maintain the views should any modifications be required (e.g. adding additional filters, column changes, etc.)



### Communication

The communication between FireDispatch.com and the BSS Postgres database will be through an ODBC connection.

### Business Continuity/Interface Availability

This interface is available from the production server and from the implementation/test server by configuring the FireDispatch.com connection to the implementation/test BSS database. This interface can also be available from the disaster recovery server, providing FireDispatch and BSS are available and able to communicate with each other in the disaster recovery environment.

### Interface Testing

Interface testing is intended to ensure the interface is completely functional as designed. Below are descriptions of the tests to be performed for the specified interface functionality during the functional acceptance test period.

### Functional and Completeness Test



This test ensures that the BSS database is populated with active call and unit status information.

### **Operational Tests**

This test ensures the FireDispatch application is able to reconnect to the BSS database and pull data after system reboots. The BSS server will be shutdown/re-started and ensure BSS services are started as well as communications between FireDispatch to the BSS database is established.

### **Performance Tests**

The performance tests will consist of ensuring that updates to active calls and unit status changes performed within CAD are published to the BSS database within two (2) seconds. Excluded from any measurement is network time (e.g. network between CAD and BSS).

### **Exception Testing**

The exception testing consists of disconnecting the FireDispatch connectivity to the BSS database and after reconnecting, ensure FireDispatch is able to re-establish its connection to BSS.

## **Responsibilities**

### **County Responsibilities**

- Provide network connectivity between FireDispatch.com and the BSS database.
- Coordinate with FireDispatch technical staff to assist in the interface development and testing.
- With Versaterm's assistance, create any required database views on the BSS Postgres database.
- Maintain any required database views on the BSS Postgres database.
- Setup and maintain Postgres client authentication file to control/limit ODBC access.
- Test the interface.

### **Versaterm Responsibilities**

- Provide the County with the BSS database schema.
- Assist the County with initial database view creation.
- Copy database view scripts to new CAD application server during CAD upgrades
- Execute database view scripts after each CAD upgrade.
- Provide assistance and guidance in the development and testing process.

## 6. Paging Interface

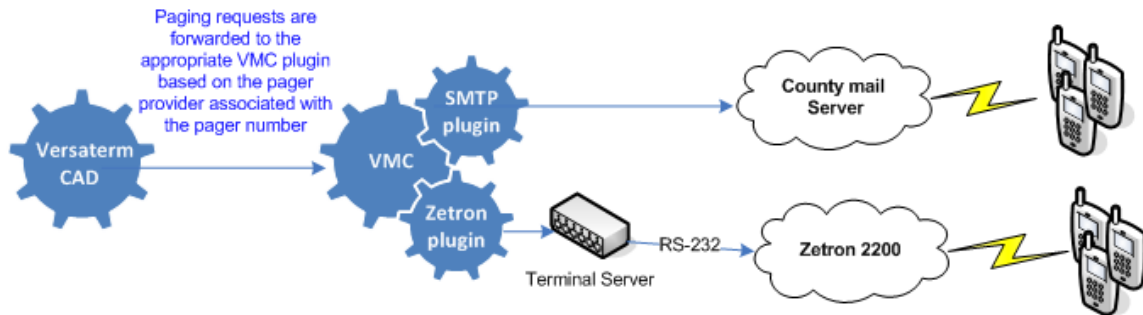
This interface provides the ability to send automatic paging notifications to users and/or groups based on call type and geographical area. The interface also provides the ability to manually send paging notifications from the CAD command line.

This interface leverages both the Zetron 2200 system and the County's Mail server to deliver the pages to the end devices.

The Versaterm CAD is enhanced with the ability to indicate the paging provider (Zetron 2200 or SMTP) that is associated with the pager numbers that are assigned to individuals, apparatus, stations, including any pager numbers or individuals that are assigned to groups.

### Business Flow Overview

When a page transaction is activated, the Versaterm CAD will formulate the page transaction and submit it to the appropriate VMC (Versaterm Message Controller) plugin (either the Zetron 2200 VMC plugin or the SMTP VMC plugin) where it will be queued for processing. The VMC-plugin will formulate the paging transaction and send it to either the Zetron 2200 console or to the County's Mail server.



### Configuration

Pager IDs can be associated to Fire and EMS personnel, police officers, fire and EMS apparatus, fire stations/EMS posts and call-out groups. Fire/EMS personnel, police officers, fire and EMS apparatus, fire stations/EMS posts can be paged automatically on dispatch based on call type. Call-out groups can also be paged automatically on dispatch based on call type (and optionally by area). Full paging configuration details, including how to create call out-groups and assign paging codes to apparatus and groups, are identified in the "Versaterm CAD Paging Administrator / User Guide" (Version 7.4 Edition 1.0 or higher).

### Communication

Communication from the VMC to the Zetron 2200 console is provided via a RS-232 serial communication link. The RS-232 (serial communication) cable links the Zetron 2200 console to a terminal server. The terminal server provides the VMC server with network access to the serial device. Data transmissions (message formatting and flow control) are provided as identified in the Zetron document titled "TELOCATOR ALPHANUMERIC PROTOCOL" (file name: tap\_v1p8.pdf).

Communication from the VMC to the County Mail server is provided via TCP/IP protocol.

### **Business Continuity/Interface Availability**

This interface can be made available on all servers (production, implementation/test and disaster recovery) provided connectivity between VMC application server and the Zetron 2200 console and/or County's Mail server is available. The interface can be enabled/disabled by configuring the appropriate interface configuration parameter in the interface section of the local server resource or similar configuration file.

### **Interface Testing**

These tests are intended to ensure the interface is functional as designed. The following are descriptions of the tests to be performed for the specified interface functionality during the functional acceptance test period.

#### **Functional and Completeness Test**

This specific test is to ensure when a call is dispatched or a manual page is triggered, the page(s) are sent and delivered to the correct recipients via the appropriate paging system.

#### **Operational Tests**

This test ensures after system reboots, the interface is available and able to communicate with Zetron 2200 console and the County's Mail Exchange server.

#### **Performance Tests**

The performance test consists of dispatching a device and measuring the number of seconds between the time the command is issued until it reaches the Zetron 2200 console or the Mail server, to ensure it does not exceed two (2) seconds. Time delays introduced by the Zetron or the Mail system and the network are not included in any time measurements.

#### **Exception Testing**

The exception test consists of disconnecting the link between the VMC and the Zetron 2200 / Mail server and confirming that error messages are delivered immediately to the CAD dispatcher when a page is requested. Further tests confirm that, after reconnecting the link, the communication resumes.

### **Responsibilities**

#### **County Responsibilities**

- a. Acquire and configure the necessary terminal server to facilitate the Zetron 2200 communications.
- b. Provide the communication link between the Zetron 2200 and the terminal server.
- c. Provide the communication link between the County Mail server and the VMC server.
- d. Configure the Zetron 2200 console as required.
- e. Configure County Mail server as required with the paging/email addresses.
- f. Provide a test facility for the interface.
- g. Configure the necessary CAD tables (apparatus, call out groups, call types, etc.).
- h. Test the paging interface.

#### **Versaterm Responsibilities**

- a. Enhance the CAD paging configuration screens to include a pager provider field to identify which paging system is associated with each pager number.

- b. Develop, install and test the Zetron 2200 interface.
- c. Develop, install and test the SMTP interface to County Mail server.
- d. Provide assistance and guidance through the County acceptance tests.

## 7. Priority Dispatch - ProQA

This interface consists of a two-way data exchange between the vCAD and ProQA Emergency Medical Dispatch (EMD). Although the County initially plans to only integrate the CAD with EMD ProQA, this interface also supports Fire and Police integration. Information on the ProQA application itself can be found at the following WEB link: <http://www.prioritydispatch.net>.

### Functional Overview

This interface first delivers initial CAD incident data to ProQA when invoking a ProQA session. This data is imported into ProQA to help triage the set of questions to be asked of the caller by the call taker. The call taker then continues triaging the call in ProQA asking further questions until the ProQA software has sufficient information to make an emergency response recommendation. At each ProQA send point the data is returned to CAD where CAD updates it's incident notes with the ProQA comments.

The latest supported version of the ProQA application is 5.1. Future upgrades of ProQA software may require CAD changes and need to be coordinated with Versaterm.

The Versaterm CAD is Platinum level certified by Priority Dispatch for all three disciplines (Police, Fire and Medical).

### User Interface

The minimum information required to create an incident, prior to launching ProQA, is the location and the call type.

Call type codes are configurable in vCAD to automatically launch ProQA or not. That is, a call type code (e.g. MED) can be configured to automatically launch ProQA once an incident of that type is created. Similarly, other type codes (e.g. TA2, etc.) can be configured not to automatically launch ProQA upon incident creation, leaving it up to the call taker to launch ProQA manually if required.

Once the incident is created, it is routed immediately to the dispatcher responsible for the incident area and it is available for dispatch. Meanwhile, the call taker proceeds with the ProQA EMS interrogation. The dispatcher and any dispatched units are notified of any additional information gathered by the call taker, via ProQA, at each ProQA send point. Additionally, the CAD type code is automatically changed to the corresponding EMD determinant type code when recommended by ProQA.

Closing the ProQA case is at the discretion of the call taker pursuant to policy. Additional information gathered in ProQA after determinant selection may result in additional updates being pushed to the dispatcher and embedded in the CAD record when triggered at ProQA's decision points.

Note that call takers and dispatchers run more than one folder tab/command line within their CAD session in order to have access to CAD while ProQA is engaged.

### Interface Testing

These tests are intended to ensure the interface is accurate and complete with respect to integration between the CAD and ProQA software. The following tests are descriptions of the tests to be performed for the specific interface during the functional acceptance test period.

#### Functional and Completeness Test

This test ensures the initial CAD incident data elements (incident number, address, optional phone number and optional caller name) are transferred to ProQA and that ProQA is successfully invoked. Additionally, this test ensures the appropriate CAD incident updates take place and that a desk message containing the reconfiguration recommendation is delivered to the controlling CAD dispatch position(s).

### **Operational Tests**

These tests ensure that CAD is able to invoke and re-connect to ProQA after reboots. A number of different CAD incident types will be used during these tests (e.g. call types that invoke ProQA and others that do not). These tests ensure that the appropriate incident type updates are made in CAD based on the information returned from ProQA.

### **Performance Tests**

The performance tests consist of ensuring the transfer of data to the ProQA software occurs within 2 seconds. This time is defined as the time taken to make an initiation request and pass the appropriate data to ProQA. This time excludes the time taken for ProQA to actually start if it is not already a running Windows application and/or the time it takes for ProQA to display the CAD data in ProQA.

This test also ensures that updating a CAD incident with data returned from ProQA occurs within 2 seconds. This time is defined as the time taken to update the CAD incident and deliver a desk message once CAD successfully receives the data transfer from the ProQA software.

Excluded from any measurement is desktop processing time (e.g. desktop anti-virus scanning tools between CAD and ProQA).

### **Exception Tests**

The exception testing consists of attempting to invoke ProQA when it is already engaged with another CAD incident, ensuring a prompt is displayed in CAD indicating another active call is already in progress.

## **Responsibilities**

### **Customer Responsibilities**

- Purchase, install and configure the ProQA software on the CAD dispatch console workstations.
- Ensure call type codes in CAD and ProQA match.
- Test the ProQA software and the CAD integration.

### **Versaterm Responsibilities**

- Install and configure CAD with ProQA interface components.

Provide assistance and guidance with integration testing between the CAD and ProQA software.

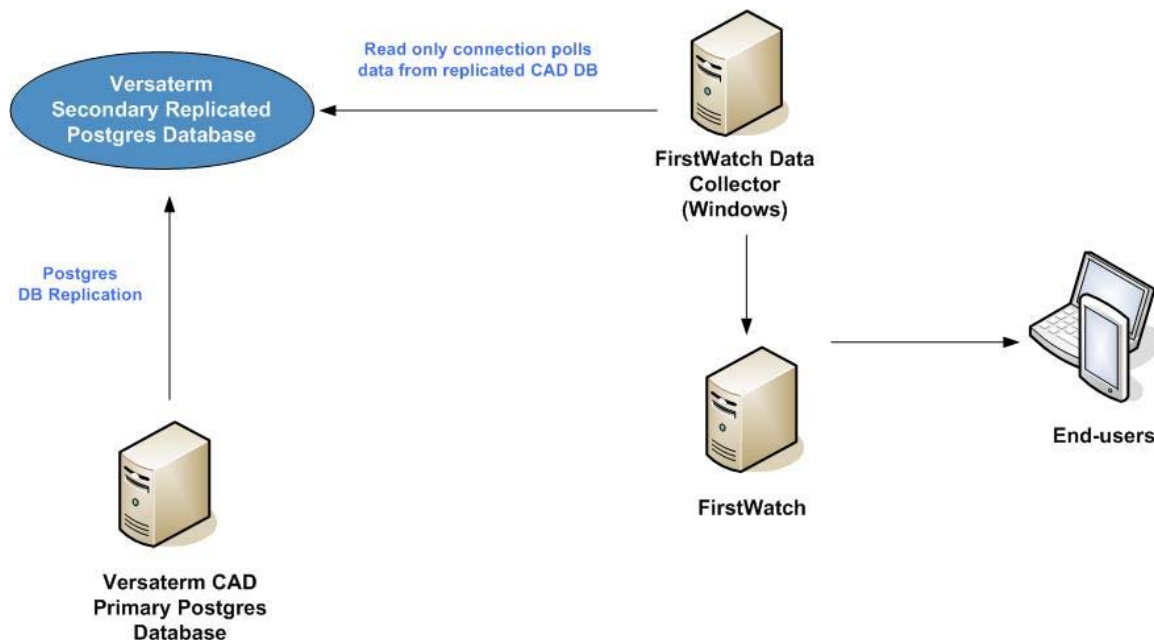
## 8. FirstWatch

This interface provides real-time EMS incident and unit status information to the FirstWatch server making it available to end users accessing FirstWatch application.

### Process Flow

The Versaterm CAD primary database is replicated in real-time to secondary replicated database, which is primarily used for reporting and analytics. This interface uses a read-only connection established from the FirstWatch data collector application to the replicated database allowing FirstWatch data collector to pull CAD incident data from the replicated database and securely transmit the information to the FirstWatch server. The FirstWatch data collector application is configured to pull CAD data from a designated database view at no less than sixty (60) second intervals.

In order to limit the EMS incident information accessed by FirstWatch, the County, with assistance from Versaterm, will create scripts to create the database view(s) on the primary database server. Those view(s) are then automatically replicated to the replicated database where FirstWatch data collectors accesses the database view(s) to read data. The database view(s) provide specific column(s) expected by FirstWatch as well as any data field mapping, if needed, between FirstWatch and CAD (e.g. mapping vCAD unit status codes to FirstWatch status codes). The scripts for the database views will reside in a site-specific folder, as designated by Versaterm, on the CAD application server. During application upgrades, Versaterm will copy the view script(s) from the current servers to the new servers and will run them on the new database to re-create the views. It is however, the County's responsibility to maintain the views should any modifications be required (e.g. adding additional FirstWatch filters, column changes, etc.)



### Communication

The communication between FirstWatch data collector application and the replicated Postgres database is through an ODBC connection.

### **Business Continuity/Interface Availability**

This interface is available from the production server by connecting FirstWatch to the replicated database. Similarly, it is available from the implementation/test server by configuring FirstWatch connection to the implementation/test CAD primary database. This interface is not available in a disaster situation where the primary and secondary replicated databases are no longer available.

### **Interface Testing**

Interface testing is intended to ensure the interface is completely functional as designed. Below are descriptions of the tests to be performed for the specified interface functionality during the functional acceptance test period.

#### **Functional and Completeness Test**

This test ensures that the replicated database is populated with call and unit status information.

#### **Operational Tests**

This test ensures the FirstWatch data collector application is able to reconnect to the replicated database and pull data after system reboots. The replicated database server will be shutdown/re-started and ensure database services are started as well as communications between FirstWatch data collector to the replicated database is established.

#### **Performance Tests**

The performance tests will consist of ensuring that updates to calls and unit status changes performed within CAD are published to the replicated database within two (2) seconds. Excluded from any measurement is network time (e.g. network between CAD and replicated DB).

#### **Exception Testing**

The exception testing consists of disconnecting the FirstWatch data collector connectivity to the replicated database and after reconnecting, ensure FirstWatch data collector is able to re-establish its connection to the replicated database.

### **Responsibilities**

#### **County Responsibilities**

- Provide network connectivity between FireDispatch.com and the replicated database.
- Coordinate with FirstWatch technical staff to assist in the interface development and testing.
- With Versaterm's assistance, create any required database views on the CAD database.
- Maintain any required database views on the CAD database.
- Setup and maintain Postgres client authentication file to control/limit ODBC access.
- Test the interface.

#### **Versaterm Responsibilities**

- Provide the County with the CAD database schema.
- Assist the County with initial database view creation.
- Copy database view scripts to new CAD application server during CAD upgrades
- Execute database view scripts after each CAD upgrade.
- Provide assistance and guidance in the development and testing process.



## 9. Cimarron CPlus III ANI Decoder Interface

The Cimarron CPlus III interface provides receipt and processing of Push-To-Talk (PTT) and Emergency key (ERTT) transactions. This interface includes two decoders.

### Business Flow Overview

This interface displays radio identifier, unit and officer information on the CAD Status Screen whenever an officer keys (i.e. presses the push-to-talk button) their portable or vehicle mobile radio (PTT). This interface also displays an emergency warning message to all CAD Status Screens when an officer presses the Emergency key/button on their radio (ERTT).

The radio identifier received from the Cimarron CPlus III will be validated against County tables in the CAD database to retrieve the appropriate officer and/or unit ID information. This information will then be reflected on CAD status screen marquees as configured by the mapping of radio talk groups/channels to coverage areas (positions).

The PTT information (unit/officer and radio identification) will be displayed on the CAD status screen marquee, at only those dispatch consoles configured for the talk group or coverage area mapping, that particular unit/officer is assigned.

ERTT unit/officer and identification will be displayed on the CAD status screen marquee at all dispatch consoles (i.e. wherever the status screen is displayed).

To distinguish the PTT received between a portable radio and a Mobile radio, CAD prefixes an indicator of '(P)' for portables radios and '(U)' for vehicle mobile radios on the status screen marquee.

### Configuration

To configure the PTT/ERTT interface, the CAD Administrator enters the portable radio identification into the CAD 'Portable Radio' table. The radio identification number entered in the CAD "lid" field (up to 32 characters) maps to the CAD portable radio number (up to 6 alphanumeric). The portable radio may be optionally assigned permanently to an officer – recorded in the 'Officer Identification Number' table (this may be overridden at sign-on or during the shift). The CAD Administrator maps vehicle mobile radios ID to the vehicle ID in the 'Vehicle ID' table within CAD. Optionally, the mobile radio ID can be updated / overridden at MDT sign-on. See the "Versaterm CAD / Radio Configuration User/Administrator Guide" for full configuration details (Version 7.5 Edition 1.0 or higher).

Two Cimarron CPlus III decoders are used and configured with identical output formats of "Cimarron Standard Classic". The only difference in configuration between the two decoders are their channel numbers. That is, the primary decoder channel is set to "01" and the secondary decoder channel is set to "02".

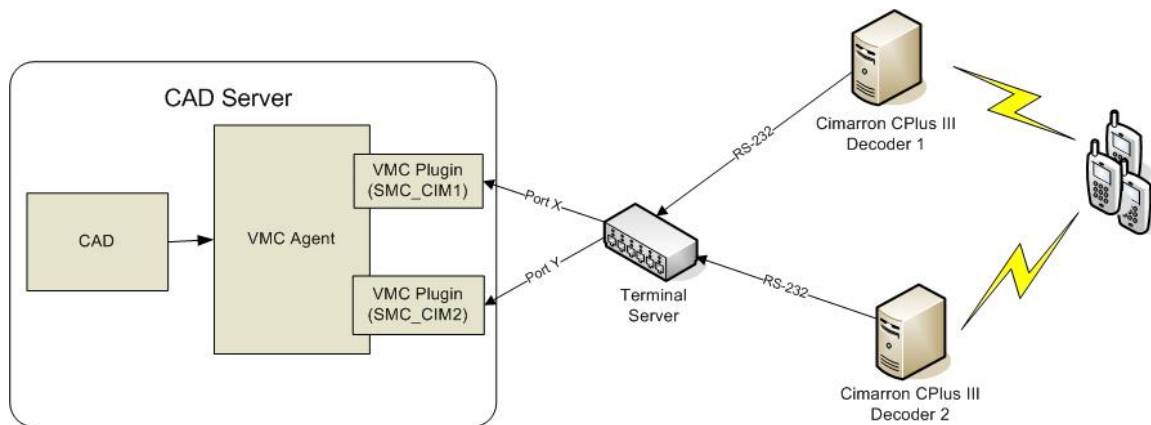
This interface supports two message types:

1. "EMERGY"
2. "ANI ID"

### Communication

Communication from the VMC to the Cimarron CPlus III is provided via RS-232 serial communication links. The RS-232 (serial communication) cables link each Cimarron CPlus decoder to a terminal server on separate ports. The terminal server provides the VMC server with network access to the serial device.

The following diagram illustrates the connectivity points between the CAD system and the Cimarron CPlus III decoders:



### **Business Continuity/Interface Availability**

This interface can be made available on all servers (production, implementation/test and disaster recovery) provided connectivity between VMC application server and the Cimarron CPlus III is available. The interface can be enabled/disabled by configuring the appropriate interface configuration parameter in the interface section of the local server resource or similar configuration file.

### **Interface Testing**

These tests are intended to ensure the interface is completely functional as designed. Below are descriptions of the tests to be performed for the specified interface functionality during the functional acceptance test period.

#### **Functional and Completeness Test**

This test ensures that whenever a portable or vehicle mobile radio is keyed or an emergency key is pressed, the appropriate information is displayed on the CAD status screen marquee. For PTT, only CAD status screens covering the officer/unit's radio will be signaled. For ERTT, all CAD status screens will be signaled.

#### **Operational Tests**

This test ensures after system reboots, the interface is available and able to communicate with Cimarron CPlus III.

#### **Performance Tests**

This performance test consists of keying a portable and vehicle mobile radio and having the applicable information displayed on the appropriate CAD Status Screen marquee within two seconds from the time the transaction is received from the Cimarron Plus. A second test will consist of pressing the Emergency key on a portable and vehicle mobile radio and having the applicable emergency information display on all CAD status screens within two seconds from the time the transaction is received from the Cimarron. This test will exclude the time it may take to deliver the PTT/ERTT from the radio to the Cimarron as that delivery mechanism is outside of Versaterm's control.

#### **Exception Testing**

The exception test consists of disconnecting the network link between the VMC Server and the Cimarron CPlus and, after reconnecting it, ensuring that communication resumes.

## **Responsibilities**

### County Responsibilities

- a. Acquire and configure the necessary terminal server(s).
- b. Configure network access to permit the VMC system connection to the two Cimarron CPlus III devices.
- c. Provide a test facility for the interface.
- d. Configure the necessary CAD tables (portable\_id, vehicle\_id, officer\_number and handle)
- e. Test the PTT/ERTT interface components.

### Versaterm Responsibilities

- a. Develop, install and test the Cimarron CPlus III interface.
- b. Provide assistance and guidance through the County acceptance tests.

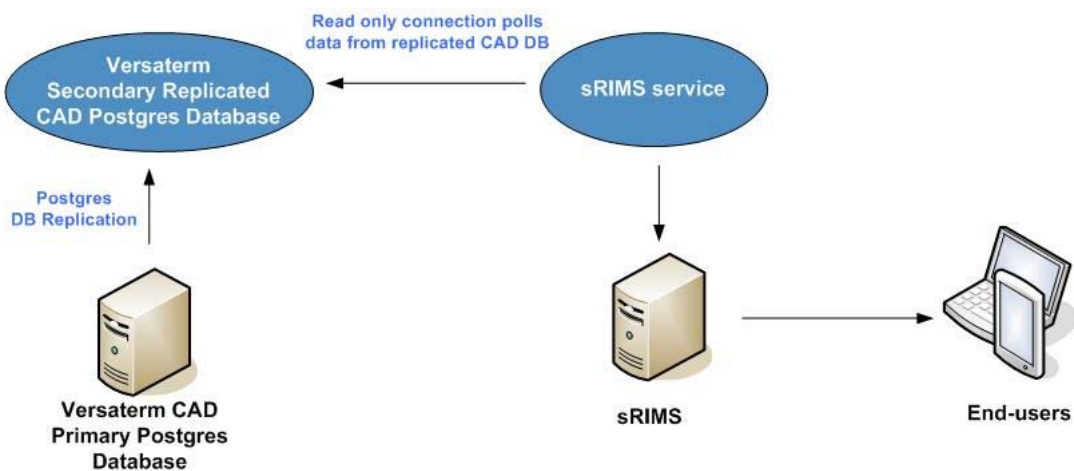
## 10. sRIMS

This interface provides real-time police incident and unit status information to the sRIMS server making it available to end users accessing sRIMS status monitoring web application.

### Process Flow

The Versaterm CAD primary database is replicated in real-time to the secondary replicated database, which is primarily used for reporting and analytics. This interface uses a read-only connection established from the sRIMS application to the replicated database allowing sRIMS to pull active CAD incident data from the replicated database into the sRIMS server. The sRIMS application is configured to pull CAD data from a designated database view at no less than five (5) second intervals.

In order to limit the police incident information accessed by sRIMS, the County, with assistance from Versaterm, will create scripts to create the database view(s) on the primary database server. Those view(s) are then automatically replicated to the replicated database where sRIMS accesses the database view(s) to read data. The database view(s) provide specific column(s) expected by sRIMS as well as any required data field mapping between sRIMS and CAD (e.g. mapping vCAD jurisdiction to sRIMS agency ID). The scripts for the database views will reside in a site-specific folder, as designated by Versaterm, on the CAD application server. During application upgrades, Versaterm will copy the view script(s) from the current servers to the new servers and will run them on the new database to re-create the views. It is however, the County's responsibility to maintain the views should any modifications be required (e.g. adding additional sRIMS filters, column changes, etc.)



### Communication

The communication between sRIMS application and the replicated Postgres database is through an ODBC connection.

### Data Field Mapping

This section describes the data field mapping between Versaterm CAD and sRIMS. The below data mapping will be used when creating database views for sRIMS to access.

INCIDENT View field mapping: This view provides sRIMS with incident information, prime unit as well as status times for that unit.

sRIMS field	Data field type	Description	Comments	Versaterm field	Versaterm Comments/Attributes
AGCODE				Not used	
PAGCODE	Varchar(4)	Agency Code	This would be a calculated field to translate the Versaterm agency code to the sRIMS agency code. See #1 below for an example.	cc_data.jurisdiction	This Versaterm jurisdiction field is 2 character in length and will be mapped, in the database view, to the corresponding sRIMS agency code.
INCNUM	Varchar(13 )	Incident Number with a preceding 'x'		Cc_data.jur + cc_data.occ_year + cc_data.occ_num	The column concatenation as well as hardcoded preceding 'x' character will be handled in the database view.  Versaterm incident number format: JJYYNNNNNNNNNN  Where JJ is jurisdiction (2 characters) such as DC for Daly City. YY is 2 character year number and NNN is unique incident number up to 10 characters
TIME	Varchar(8)	Create time of incident in the format of: hh:mm:ss		Cc_data.orig_time_queued	The time when the call was saved and queued.
CITY	Varchar(3)	City code		cc_data.municipality	Note that this field is the Versaterm municipality code which is 4 character in length. The County will

					need to configure municipality codes in vCAD to be 3 characters or less.
OSTIME	DateTime	Onscene date time		cc_summary.at_scene_time	Time of first unit on scene
TYPE	Varchar(6)	Incident type code		Cc_data.case_type	Up to 6 character in length incident type code.
PRI	Varchar(2)	Incident priority	Calculated field. Traffic stop = '3' else use priority	Cc_data.priority	1 character length, priority of the call.  Mapping for traffic stop to priority 3 can be configured in CAD call type table.
LOCATION	Varchr(39)	Incident location with city code		Cc_data.apartment_ + "-" + cc_data.address + cc_data.municipality	The column concatenation of apartment, location and municipality (city) code will be handled in the database view. If an apartment value exists, it will be prefixed to the location with a dash.  The Versaterm address field accepts up to 79 character in length. Should the concatenated location field exceed the sRIMS limit of 39 characters, the location will be truncated.
STATUS	Varchar(1)	Incident Status	Calculated field. Value 'A' when not dispatched otherwise 'P'.	Cc_summary.current_status	1 character length, current status of the call.  Note that values in Versaterm CAD are Q)ueued, A)ctive, C)leared or R)eccurring. Mapping of "A" or "P" for sRIMS will be handled in the view.
PLACE	Varchar(1)	Unknown / Not used	Static value " (empty field, not null)	Hardcoded	Static value " (empty field, not null) will be used in the view.
BEAT	Varchar(4)	Beat ID		cc_data.zone	Up to 6 character in length incident zone (beat) ID. Beat numbers

					configured by County exceeding 4 characters will be truncated in the sRIMS view.
PU	Varchar(6)	Primary unit ID		Dc_data.unit_id and dc_data.prime_or_backup	Up to 6 character in length unit id.  Primary unit is based on the prime_or_backup (1 character) column using P)rime or B)ackup. single character codes.
DATEX	Varchar(1)	Incident entry date	Formatted as: YYYY-MM-DD	Cc_data.orig_time_queued	The time when the call was saved and queued.
D1	Varchar(1)	Unknown / Not used	Static value " (empty field, not null)	Hardcoded	Static value " (empty field, not null) will be used in the view.
AGENCYCONFIDENTIAL	Varchar(1)	Agency confidential flag.	Static value 'N'	Hardcoded	Static value 'N' will be used in the view.
CASEN	Varchar(1)	Unknown / Not used	Static value " (empty field, not null)	Hardcoded	Static value " (empty field, not null) will be used in the view.
CMT1	Varchar(1)	Unknown / Not used	Static value " (empty field, not null)	Hardcoded	Static value " (empty field, not null) will be used in the view.
CNAME	Varchar(1)	Unknown / Not used	Static value " (empty field, not null)	Hardcoded	Static value " (empty field, not null) will be used in the view.
CADRS	Varchar(1)	Unknown / Not used	Static value " (empty field, not null)	Hardcoded	Static value " (empty field, not null) will be used in the view.
CAPT	Varchar(1)	Unknown / Not used	Static value " (empty field, not null)	Hardcoded	Static value " (empty field, not null) will be used in the view.
CPHONE	Varchar(1)	Unknown / Not used	Static value " (empty field, not null)	Hardcoded	Static value " (empty field, not null) will be used in the view.

LOG View: This view provides incident activity logging. The segment logging information in Versaterm CAD is recorded in database tables (of\_data, cc\_remarks and change\_log). Note that a combination of these tables must be used to accommodate the sRIMS fields for this view. Details are listed in each "Versaterm comments/attributes" column.

sRIMS field	Field Type	Description	Comments	Versaterm field	Versaterm Comments/Attributes
INCNUM	Varchar(13)	Incident Number with a preceding 'x'		Cc_data.jur + cc_data.occ_year + cc_data.occ_num	The column concatenation as well as hardcoded preceding 'x' character will be handled in the database view.  Versaterm incident number format: JJYYNNNNNNNNNN  Where JJ is jurisdiction (2 characters) such as DC for Daly City. YY is 2 character year number and NNN is unique incident number up to 10 characters
DATEX	DateTime	Segment date/time		Of_data.activity_time or Cc_remarks.last_update or Change_log.last_update	To build this sRIMS column, a combination of of_data, cc_remarks and change_log tables will to be used in the view to formulate the activity date.
TIME	DateTime	Segment date/time		Of_data.activity_time or Cc_remarks.last_update or Change_log.last_update	Combination of of_data, cc_remarks and change_log tables will to be used in the view to formulate the activity time.
UNIT	Varchar(6)	Unit id associated with segment		Of_data.unit_id or Cc_remarks.desk_id or Change_log.desk_id	Unit ID or CAD Desk ID for the segment activity.
TEXT	Varchar(1000)	Segment text		Of_data.remarks or Cc_remarks.remarks or Change_log.field_changed + Change_log.before_image	Note the 'field_changed' column is a number code. Each field changed numeric code will have to mapped to its translation in the view.



FLDHELP View: This view provides call type code and translation for each code.

sRIMS field	Field Type	Description	Comments	Versaterm field	Versaterm Comments/Attributes
VALUEX	Varchar(6)	Incident type		Case_type.code	Up to 6 character in length incident type code.
TypeDescription	Varchar(30)	Incident description		Case_type.translation	50 character in length for the call type description.
FLDNAME	Varchar(5)	Field type	Static value 'MTYPE'	Hardcoded	Static value 'MTYPE'

{ This view is a UNIQUE query from the incident table }

UNIT View: This view is to provide unit information regardless if a given unit is on a call or not.

sRIMS field	Field Type	Description	Comments	Versaterm field	Versaterm Comments/Attributes
ID	Varchar(6)	Unit id		un_data.unit_id	Up to 6 character in length unit id.
AGENCY	Varchar(4)	Agency Code	This would be a calculated field to translate the Versaterm agency code to the sRIMS agency code. See #1 below for an example.	un_data.unit_jurs	This Versaterm jurisdiction field is 2 character in length and will be mapped, in the database view, to the corresponding sRIMS agency code.
INCNUM	Varchar(13)	Incident Number with a preceding 'x'		Cc_data.jur + cc_data.occ_year + cc_data.occ_num	The column concatenation, jurisdiction mapping as well as hardcoded preceding 'x' character will be handled in the database view.  Versaterm incident number format: JJYYNNNNNNNNNN  Where JJ is jurisdiction (2 characters) such as DC for Daly City. YY is 2 character year number and NNN is

					unique incident number up to 10 characters
BEATS	Varchar(4)	Beat unit is responsible for		Un_data.zone1	Default primary zone (beat) the unit is responsible for.
STATUS	Varchar(6)	Unit status	Calculated field. See Note #2	Un_data.unit_status	Mapping for this field will be handled in the view.
AVAIL	Varchar(1)	Unit available	Value of 'T' or 'F'	Un_data.unit_status	T/F mapping of each unit status will be handled in view. Similar to Note#2
STIME	Varchar(8)	Last update time	Formatted as: HH:MM:SS	Un_data.status_time	Status update time
INCTYPE	Varchar(6)	Incident type code		Un_data.case_type	Case type code of the incident the unit is on.
UCMT	Varchar(36)	Units location		Un_data.address or un_data.unit_location	Depending on unit's status, if unit is on a call or change location respectively.
OFCRNUM1	Varchar(6)	Officer id		Un_data.officer_no1	Up to 6 character long officer id code.

Note #1

```

CASE SUBSTRING(IncidentNumber, 1, 3)
  WHEN 'SOS' THEN 'SMSO'
  WHEN 'TRA' THEN 'TRA1'
  WHEN 'EPA' THEN 'EPA1'
  WHEN 'BRD' THEN 'BRD1'
  WHEN 'LMA' THEN 'LMA1'
  WHEN 'DCY' THEN 'DCY1'
  WHEN 'SPL' THEN 'GTF1'
  ELSE 'Unk'
END AS PAGCODE,

```

Note #2

CASE Status

WHEN 'N' THEN '10-8'

WHEN 'D' THEN 'DISP'

WHEN 'A' THEN 'DISP'

WHEN 'E' THEN 'ENRT'

WHEN 'O' THEN 'ONSCEN'

END AS STATUS,

### **Business Continuity/Interface Availability**

This interface is available from the production server by connecting sRIMS to the replicated database. Similarly, it is available from the implementation/test server by configuring sRIMS connection to the implementation/test CAD primary database. This interface is not available in a disaster situation where the primary and secondary replicated databases are no longer available.

### **Interface Testing**

These tests are intended to ensure the interface functions as designed. The following are descriptions of the tests to be performed for the specified interface functionality during the functional acceptance test period.

#### **Functional and Completeness Test**

This test ensures that the replicated database is populated with call and unit status information.

#### **Operational Tests**

This test ensures the sRIMS application is able to reconnect to the replicated database and pull data after system reboots. The replicated database server will be shutdown/re-started and ensure database services are started as well as communications between sRIMS to the replicated database is established.

#### **Performance Tests**

The performance tests will consist of ensuring that updates to calls and unit status changes performed in CAD are published to the replicated database within two (2) seconds. Excluded from any measurement is network time (e.g. network between CAD and replicated DB).

#### **Exception Testing**

The exception testing consists of disconnecting the sRIMS connectivity to the replicated database and after reconnecting, ensure sRIMS is able to re-establish its connection to replicated.

### **Responsibilities**

#### **County Responsibilities**

- Provide network connectivity between sRIMS and the replicated database.
- Coordinate with sRIMS technical staff to assist in the interface development and testing.
- With Versaterm's assistance, create any required database views on the CAD database.
- Maintain any required database views on the replicated Postgres database.
- Setup and maintain Postgres client authentication file to control/limit ODBC access.
- Test the interface.

#### **Versaterm Responsibilities**

- Provide the County with the CAD database schema.
- Assist the County with initial database view creation.
- Copy database view scripts to new CAD application server during CAD upgrades
- Execute database view scripts after each CAD upgrade.
- Provide assistance and guidance in the development and testing process.

## 11. E911 (ANI/ALI)

The 9-1-1 interface provides ANI/ALI information from the West - Viper system to the Versaterm CAD (vCAD). This interface minimizes the number of keystrokes required to create and populate call-for-service data, provides accurate call-back info and expedites the call-taker's call entry when entering such calls for service.

### User Interface

Upon answering a 9-1-1 telephone call on the Viper System, the call-taker selects the "add by 911" hot-key (e.g. function key) or button on the vCAD window to display the position-related ANI/ALI information within their vCAD window/folder. The vCAD system will display the most recent ANI/ALI information received and present the call-taker with a number of possible options to create a call, dismiss the call etc. An illustration of the data and choices are depicted below:

The screenshot shows a software window titled "Select E911 Call" with a menu bar (File, Edit, Call Related, Unit, Query, Utilities, Configuration, Windows) and a toolbar (Add Call, E911, Alarm, Retrieve, Queued Calls, Active Calls, Query, Logs, Unit Status). The window displays the following information:

SEQ# 88616 Tue, Jun-26-18 20:42

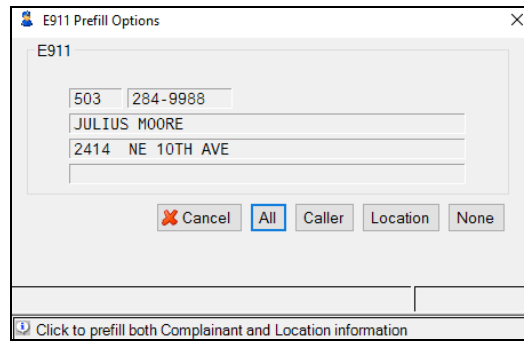
E911

(503) 284-9988 RESD  
JULIUS, MOORE  
2414 NE 10TH AVE  
PORTLAND

POLICE	(503) -944-3388
FIRE	(503) -487-3394
EMS	(503) -899-3321
	( )
	( )

Buttons: Police (selected), Fire, Back, Print, Transfer, Dismiss, Update, Copy.

In selecting either the Police or Fire/EMS option, the vCAD supports a site configuration option to either select 'All' where ANI/ALI data will then populate the call mask/form immediately with all ALI data, or the user can select 'Caller', 'Location' or 'None' so they can manually enter information (e.g. name, address, telephone number) into the call form. If the System is configured to pop-up these options, the dialog box will look as illustrated in the 'E911 Prefill Options' snapshot.



Once the data is transferred into the call mask, the address is geo-verified after the user <tabs> through the address fields.

## Cellular Call processing in vCAD

### Wireless Phase II Call Processing

When a Phase II cellular 9-1-1 call is received, the vCAD converts the latitude/longitude (lat/long) using the x-y projection provided by the GIS Interface. By doing this, the interface then attempts to identify the closest known address/intersection. If an exact match is not found, vCAD will display a list of alternate locations for the call-taker to select from. The call-taker also has the option to override the recommended selection and type in a descriptive 'dispatchable' location.

### Rebidding

The vCAD is capable of receiving re-bidding. Re-bids are received as new ANI/ALI feeds. The call taker may choose to create a new call from a rebid ANI/ALI feed. The new call is not automatically linked to the original call however the user has the option to manually link the call to the original call if desired. That being said, the new incoming 911 rebid ANI/ALI can be automatically linked to the call for service that was generated from the original ANI/ALI feed should the 911 telephone company provide rules as to how to match the rebid ANI/ALI information to an original ANI/ALI feed.

If a call is not answered, the 9-1-1 call is automatically dismissed after a configurable number of seconds. The vCAD administrator may configure the number of seconds within the vCAD System parameters (under the Supervisor module).

In the County's implementation of the West VIPER 9-1-1 system, the CAD system will receive two simultaneous and identical ANI/ALI records for each 911-telephone call. Similarly, multiple ANI/ALI records could be received for WPH2 or 911 rebids. The call-taker is not required to action the additional ANI/ALI record(s) as they will automatically be dismissed after the configurable number of seconds. However, prior to the duplicate ANI/ALI record(s) automatically being dismissed, they will continue to be available and displayed within the call-taker's CAD window/folder should they select the "add by 911" hot-key or button. A log of each ANI/ALI record is captured and available from the Query 911 feature.

## Special Processing

Versaterm is not responsible for the quality of data received from the 9-1-1 provider. The data is expected in a fixed field format following rigid conventions. If data is not received in a consistent matter and cannot be parsed programmatically, the call-taker must correct the information. For example, a name is typically received in the following format:

**surname, first middle (SMITH, JOHN M)**

However, if the 9-1-1 directory listing contains deviations from the above (e.g. “SMITH, JOHN & SHIRLEY”), the E-911 Interface would assume “JOHN” as the first name and “&” as the second name. It will be the call-taker’s responsibility to *correct* the field(s), once pre-filled on the call form.

### ANI/ALI Data Stream Format

In the County’s implementation of the West VIPER 9-1-1 system, the CAD system will receive two simultaneous and identical ANI/ALI records for each 911-telephone call.

Below is an example of data stream as per the “VIPER CAD Out.pdf” document provided by the County.

**Table 54: Example of Connect Message**

Component	Description	Comments	Value	Length
STX		Start of text	0x02	1
Type		“1”, “2”, or “9”	0x31, 0x32 or 0x39	1
Position		(00-99) or (01-99)	0x30–0x39, 0x30–0x39	2
Beginning of ALI record (following trunk number field from database)				
ALI	Phone No.	(NPA) XXX-YYYY	0x20 to 0x7F	14
	Class	BUSN	0x20 to 0x7F	4
	Date	MM/DD	0x20 to 0x7F	5
	Time	HH:MM	0x20 to 0x7F	5
	Name	Intrado Inc.	0x20 to 0x7F	50
	House No.	101	0x20 to 0x7F	10
	Direction	W	0x20 to 0x7F	3
	Street Name	Albemarle Road	0x20 to 0x7F	30
	ESN	123	0x20 to 0x7F	3
	SP	Space	0x20	1
	Location	Near Oak Lawn Cemetery	0x20 to 0x7F	20
	State	NC	0x20 to 0x7F	2
	City	Asheboro	0x20 to 0x7F	30
	Free Field	Telecommunication	0x20 to 0x7F	25
	PSAP	12	0x20 to 0x7F	2
	**** End of All Fields ****			
ETX		End of Text	0x03	1
BCC		Block Check Character		1

### Communication

Communication is provided via two RS-232 serial communication links. The RS-232 (serial communication) cables link West Viper server to a terminal server on different serial ports. The terminal server provides a seamless failover capability by providing network access to the serial device. The “ports” then appear as serial lines to the vCAD server 9-1-1 interface.

### **Business Continuity/Interface Availability**

This interface is available from the production environment while the interface may be available to the disaster recovery environment provided a terminal (DigiPort) server is available and is connected to the 911 system (via serial connection).

### **Interface Testing**

These tests are intended to ensure the interface functions as designed. The following descriptions of tests are to be performed for this specific interface during the Functional Acceptance process.

#### **Functional and Completeness Test**

This test ensures that whenever the call-taker answers an E9-1-1 line, and presses the appropriate vCAD function key/button, the 9-1-1 ANI/ALI information is displayed. The test will also confirm the 9-1-1 data populates into the appropriate complaint fields and that Phase II wireless x-y coordinates are provided for the map display. The test will confirm that the original 9-1-1 data is stored with the call and in the 9-1-1 log for later retrieval.

#### **Operational Tests**

This test ensures the interface is available after system reboots or failover. The operator will fail over the system and confirm that 9-1-1 data is received by vCAD.

#### **Performance Tests**

The performance test consists of answering a 9-1-1 call, pressing the E9-1-1 function key/button and having the corresponding ANI/ALI data displayed. The time from pressing the E9-1-1 function key until the ANI/ALI data is displayed is not to exceed one (1) second.

#### **Exception Testing**

The exception test consists of unplugging interface and, after plugging it back in, ensuring that it re-connects and functions.

### **Responsibilities**

#### **County Responsibilities**

- a. Acquire and install the necessary hardware/equipment including the terminal server to connect the Intrado Viper server to the vCAD servers.
- b. The County will provide and install any necessary connectivity from the West Viper system to the vCAD server location(s).
- c. Provide specifications for the ANI/ALI data stream.

#### **Versaterm Responsibilities**

- a. Provide necessary hardware specifications, including those for the terminal server.
- b. Install and check out E9-1-1 interface, ensuring that 9-1-1 ALI information is stored correctly in the vCAD database.
- c. Test and ensure that 9-1-1 ANI/ALI spill details are available for pre-fill into the vCAD call-for-service form/mask.



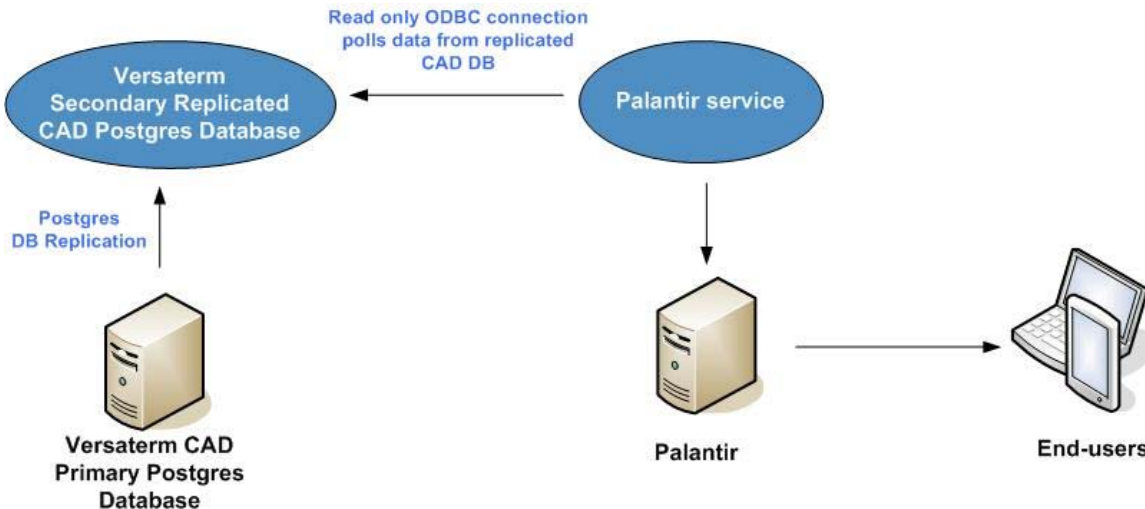
## 12. Palantir

This interface provides real-time incident and unit status information to the Palantir system making it available to end users accessing Palantir applications.

### Process Flow

The Versaterm CAD primary database is replicated in real-time to the secondary replicated database, which is primarily used for reporting and analytics. This interface uses a read-only connection established from the Palantir application to the replicated database allowing Palantir to pull active CAD incident data from the replicated database into the Palantir server. The Palantir application is configured to pull CAD data from a designated database view at no less than sixty (60) second intervals.

In order to limit the incident information accessed by Palantir, the County, with assistance from Versaterm, will create scripts to create the database view(s) on the primary database server. Those view(s) are then automatically replicated to the replicated database where Palantir accesses the database view(s) to read data. The database view(s) provide specific column(s) expected by Palantir as well as any required data field mapping between Palantir and CAD (e.g. mapping vCAD unit status codes to Palantir status codes). The scripts for the database views will reside in a site-specific folder, as designated by Versaterm, on the CAD application server. During application upgrades, Versaterm will copy the view script(s) from the current servers to the new servers and will run them on the new database to re-create the views. It is however, the County's responsibility to maintain the views should any modifications be required (e.g. adding additional Palantir filters, column changes, etc.)



### Communication

The communication between Palantir and the replicated Postgres database is through an ODBC connection.

### **Business Continuity/Interface Availability**

This interface is available from the production server by connecting Palantir to the replicated database. Similarly, it is available from the implementation/test server by configuring Palantir connection to the implementation/test CAD primary database. This interface is not available in a disaster situation where the primary and secondary replicated databases are no longer available.

### **Interface Testing**

These tests are intended to ensure the interface functions as designed. The following are descriptions of the tests to be performed for the specified interface functionality during the functional acceptance test period.

#### **Functional and Completeness Test**

This test ensures that the replicated database is populated with call and unit status information.

#### **Operational Tests**

This test ensures the Palantir service is able to reconnect to the replicated database and pull data after system reboots. The replicated database server will be shutdown/re-started and ensure database services are started as well as communications between Palantir to the replicated database is established.

#### **Performance Tests**

The performance tests will consist of ensuring that updates to calls and unit status changes performed in CAD are published to the replicated database within two (2) seconds. Excluded from any measurement is network time (e.g. network between CAD and replicated DB).

#### **Exception Testing**

The exception testing consists of disconnecting the Palantir connectivity to the replicated database and after reconnecting, ensure Palantir is able to re-establish its connection to the replicated database.

### **Responsibilities**

#### **County Responsibilities**

- Provide network connectivity between Palantir service and the replicated database.
- Coordinate with Palantir technical staff to assist in the interface development and testing.
- With Versaterm's assistance, create any required database views on the CAD database.
- Maintain any required database views on the CAD database.
- Setup and maintain Postgres client authentication file to control/limit ODBC access.
- Test the interface.

#### **Versaterm Responsibilities**

- Provide the County with the CAD database schema.
- Assist the County with initial database view creation.
- Copy database view scripts to new CAD application server during CAD upgrades
- Execute database view scripts after each CAD upgrade.
- Provide assistance and guidance in the development and testing process.

### 13. ASAP (Automated Secure Alarm Protocol)

The objective of this interface is to reduce processing and response times for alarm-related calls-for-service incidents within CAD. The Versaterm CAD interface to ASAP provides the following functionality:

- Automatically creates an alarm call when a notification of an alarm event is received from an alarm monitoring company.
- Provides the ability to receive additional information for an alarm call from the alarm monitoring company (e.g., cancellation requests or updates concerning key-holder information).
- Notifies the alarm monitoring company when a unit has been dispatched.
- Notifies the alarm monitoring company when the first unit arrives on scene.
- Notifies the alarm monitoring company when the call has been closed.
- Provides the ability for the dispatchers to send or request additional information from the alarm company.

#### Functional Overview

The request to create an alarm call is initiated by the alarm monitoring company. Event details such as location, type of alarm and contact information is transferred from the alarm monitoring company, via NLETS, to the CAD system. If the request contains a valid location and call type, the CAD system will accept the request and automatically create an alarm call and route it to the appropriate dispatcher based on location.

If the request contains an invalid call type or the location cannot be validated, the CAD system will reject the request.

The following diagram illustrates the data flow for this interface:



Once the alarm call is created in the CAD system, the 'view external call' command can be used to view the original information that was received from the alarm monitoring company.

Various bi-direction updates may be exchanged between the alarm company and the CAD system regarding the alarm call. Updates received from the alarm monitoring company could include requests for cancellation or updates concerning key-holder information. Updates received from the alarm monitoring company are added to the alarm call as an additional remark and the responsible dispatcher is notified via a desk message containing the details of the updates. Additionally, an indicator is displayed on the dispatcher's status screen to indicate an additional remark has been added.

The CAD system automatically notifies the alarm monitoring company when the alarm call is initially dispatched, when the first unit arrives at scene, and when the alarm call is cleared.

Additionally, the dispatcher can manually send a message to the alarm monitoring company to request additional information such as an estimated time of arrival for the key-holder.

The following transactions are supported in this interface.

Transaction	Details
Address Verification	The address verification transaction is initiated by the alarm monitoring company prior to requesting the creation of alarm call to verify if an address is valid. The Versaterm CAD system will return either an ACCEPT status if there is an exact match within the system for the requested location or a REJECT status if an exact match is not found.
New Alarm Call	<p>The new alarm call transaction is initiated by the alarm monitoring company. CAD calls are automatically generated with the information received from the alarm monitoring company populated into the call type, address, caller, and remark fields.</p> <p>The CAD system is configured to automatically reject new alarm call requests if the time stamp of the message exceeds 60 seconds (configurable).</p>
Alarm Call Update	<p>The alarm call update transaction can be initiated either from the CAD system or the alarm monitoring company.</p> <p>Transactions initiated by the alarm monitoring company are acknowledge by the CAD system with either an ACCEPT or a REJECT response. REJECT responses are provided if:</p> <ul style="list-style-type: none"> <li>• An associated CAD call has not been created in the system</li> <li>• The associated CAD call has been closed</li> </ul>
Unit Dispatched	The unit dispatched transaction is initiated by the CAD system when the first unit is dispatched to an alarm call initiated by the alarm monitoring system.
Unit Onscene	Unit onscene transaction is initiated by the CAD system when the first unit arrives on scene to an alarm call initiated by the alarm monitoring system.
Call Cleared	<p>Call cleared transaction is initiated by the CAD system when the alarm call initiated by the alarm monitoring system is cleared within CAD. The call cleared transaction includes the following information:</p> <ul style="list-style-type: none"> <li>• Cleared by code and translation</li> <li>• Final call type code and translation</li> </ul>

### Data Field Mapping

The following represents the mapping of the Versaterm data fields to the data elements provided by the ASAP interface.

Versaterm	ASAP Class Name	ASAP Property Name
Call Type	Alarm Event	Alarm Event Type
	Location Augmentation	Property Type Text
	Alarm Event	Alarm Audible Indicator
Location	Service Address	Street Number
	Service Address	Street Pre Direction
	Service Address	Street Name

Versaterm	ASAP Class Name	ASAP Property Name
	Service Address	Street Category
Initial Remarks	Alarm Event	Alarm Event Type Text
	Service Address	Site Name
	Contact	Full Telephone Number
	Alarm Confirmation	Call to Premise Text
Caller	Monitoring Station	Organization ID
	Monitoring Station	Organization Name
	Contact	Full Telephone Number
Additional Remark	Service Address	Building Description
	Service Address	Building Usage Text
	Service Address	Site Name
	Location Augmentation	General Directions
	Location Augmentation	Site Information
Additional Remark	Service Coordinates	Datum
	Service Coordinates	Latitude
	Service Coordinates	Longitude
Additional Remark	Alarm Permit	Alarm Permit Number
	Alarm Event	Alarm Audible Indicator
	Alarm Confirmation	Alarm Confirmation
	Alarm Permit	Building Sensor Details
	Alarm Confirmation	Call to Premise Text
Additional Remark	Name	First, middle, last
	Contact	Full Telephone Number
Additional Remark	PSAP	Organization Name
	PSAP	Organization ID
	Contact	Full Telephone Number

### Configuration

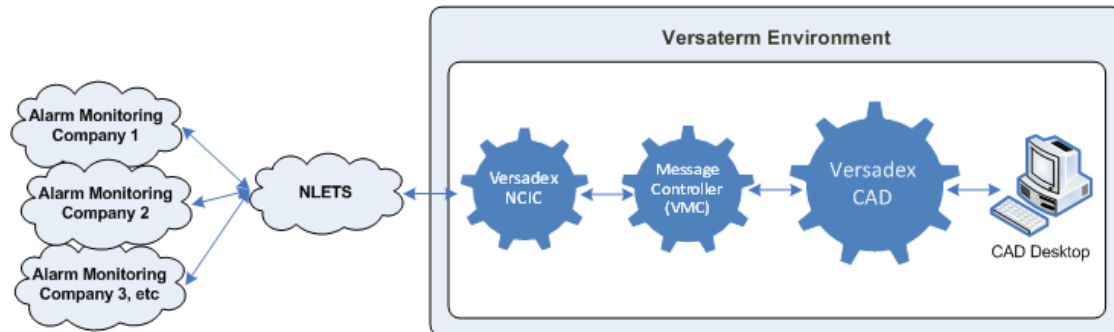
The ASAP interface leverages the Versaterm CAD-to-CAD interface configuration and architecture and through the Versaterm NCIC interface. Each participating alarm company must be defined as an external agency within the CAD sharing configuration screen. Further, an external ID and ORI is assigned by the state allowing the ASAP interface access to the NCIC state interface. The external ID and ORI are configured in the EID table within the NCIC supervisor facility.

See the “Versadex Automated Secure Alarm Protocol (ASAP) Interface” document for full configuration details (Version 7.3 Edition 1.0 or higher)

## Communication

Communication between the CAD system and the alarm monitoring companies is provided, via NLETS, through the Versaterm NCIC interface. The Versaterm Message Controller (VMC) and NCIC gateway provide the communication between the alarm monitoring companies and the Versaterm CAD, via the state interface / NLETS.

The following diagram illustrates the connectivity points from the Versadex CAD system to the alarm monitoring systems.



### **Business Continuity/Interface Availability**

This interface is available from the production and implementation/test environment. This interface is also available from the disaster recovery server, providing CAD and NCIC services are available and reachable by the state interface / NLETS.

### **Interface Testing**

These tests are intended to ensure the interface is completely functional as designed. The following are descriptions of the tests to be performed for the specified interface functionality during the Functional Acceptance process.

### **Functional and Completeness Test**

The following tests are designed to ensure the interface functions as designed:

- Requests sent by the alarm monitoring companies are received in CAD and processed accordingly.
- Incident creation and update transactions from an alarm monitoring company and ensuring the incident is created and/or updated within CAD.
- Dispatching a unit and setting the unit to at scene status, and ensuring the transactions are transferred to the alarm monitoring company.
- Updating and clearing alarm calls within the CAD system and ensuring the transactions are transferred to the alarm monitoring company.

### **Operational Tests**

This test ensures that the interface continues to operate after system reboots.

### **Performance Tests**

The performance tests are measured from the time the interface receives a transaction request until the transaction is processed within CAD. Add or update call transactions are processed in CAD within two seconds. Excluded from any measurement are network time (e.g. network between alarm company and CAD/NCIC) and external alarm company system processing.

### **Exception Testing**

The exception testing consists of disconnecting the network between NLETS and the CAD/NCIC and ensuring the interface is able to resume communications once connectivity is re-established.

### **Responsibilities**

#### **County Responsibilities.**

- Coordinate with alarm company and state NLETS technical staff to assist in the interface development and testing.
- Configure network access to allow communications between the NCIC and state NLETS interface.
- Provide a test facility for this interface.
- Test the interface.

#### **Versaterm Responsibilities**

- Install and configure the ASAP interface.
- Perform integration tests on the interface.

- Provide assistance and guidance through the County acceptance tests.



## 14. CryWolf (Permit Alarms System Interface)

This interface provides a two-way data transfer between Versaterm CAD and the various CryWolf systems that operates at stakeholder agencies. The 'CryWolf' system allows license holders to integrate with their CAD and/or RMS to automate false alarm processing. CryWolf tracks registered and unregistered alarm systems with alarm owners and alarm companies, and provide citizens and businesses secure 24/7 online access to account information via an agency dedicated website. The CryWolf system automatically generates notices, creates invoices, and calculates fees in accordance with your alarm ordinance. Additionally, the CryWolf system integrates alarm incidents, billing, and accounts receivable information, providing a comprehensive variety of financial management and statistical tracking reports depending on the level of service the subscriber subscribes to.

There are two touch points for this interface:

- 1) Alarm permits import into CAD
- 2) Transfer alarm-related calls-for-service to the CryWolf alarm system (for management and billing purposes)

### Alarm Permits Import

Police agencies who are stakeholders of the new system, may already use the CryWolf system or; some may anticipate its use. The workflow for this interface allows each CryWolf alarm system to input alarm permit files daily. The County is responsible for placing these files on the County FTP server. There will be a separate folder on the FTP server for each agency's CryWolf input. Each morning at user pre-defined times (e.g. 0330 for CryWolf system #1, 0400 for CryWolf system #2, etc.), a scheduled task (cron) on the CAD system will transfer, using SFTP, the CryWolf alarm permit data files from the FTP server to the CAD application server. The scheduled task will also invoke the Versaterm alarm upload process.

The alarm upload process consists of an alarm upload program provided by Versaterm. This program will upload permitted alarm data including alarm subscriber along with optional alarm company and alarm contact information into the Versaterm CAD.

The alarm upload program uses alarm permit input files provided by CryWolf to update tables in the CAD database. The following table lists the required input files, the CAD table that each file updates, and the type of information managed by each.

Input file	CAD table	Type of information
alarm_co	alarm_company	Contains information about alarm companies, including address and contacts. Leave this file blank if the alarm companies will be maintained from within CAD and not from the interface.
alarm_sub	al_data	Contains information about alarm subscribers
con_phone	con_phone	Contains subscriber contact information

The input files must be in ASCII pipe-delimited ( | ) format. The input files must follow the layout specified in the "Alarm Permits Input File Layout" section defined below.

### Transfer Alarm-Related Calls for Service

The transfer consists of unloading police calls-for-service with an initial call type identifying it as alarm. Scheduled tasks (cron) on the CAD application server are executed once per day for each CryWolf system (e.g. 0530 for CryWolf system #1, 545 for CryWolf system #2, etc). When each cron task is executed, all alarm-related calls for service for the corresponding jurisdiction(s), for the previous day, are unloaded into a pipe delimited ( | ) ASCII data file, as specified in the appropriate file layout (described below). A configuration file exists to define the jurisdictions and the incident type codes (e.g. call types of ALRMA, ALRMB, etc.) that correspond with each CryWolf system.

The unload file(s) are then transferred, using SFTP, to the designated folder(s) on the County FTP server. The County is responsibility for transferring the extract files for each CryWolf system on the FTP server to the corresponding CryWolf system.

### Process Flow

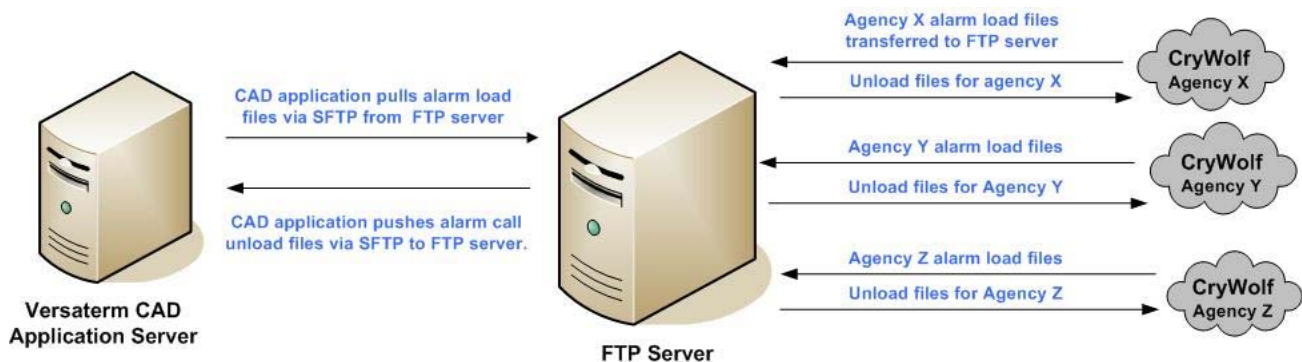
When the alarm upload program runs, it checks the CAD directory for the necessary input files. If any files are missing, or there are any problems with the upload, the upload program aborts and an alarm program exception report is generated. The file naming convention for the exception file is exception.yyyymmdd.

If all three input files are available, the alarm upload program updates the CAD alarm tables. The alarm company table is updated first. The existing content of the alarm company table is deleted and replaced by data from the alarm company input file. If the alarm company file is blank, the contents of the alarm company table are not deleted. If a certain number of records are rejected, the upload program logs an error to alarm\_upd.log and reverts to the original alarm company table content. Data records are rejected if they are missing mandatory information.

The al\_data table is updated using the alarm\_sub file which consist of alarm subscriber information. This file must have a transaction flag at the beginning of each record. The valid transaction flags are:

- "A" to add the subscriber record
- "D" to delete the subscriber record as well as its contacts
- "M" to modify the subscriber record

Alarm calls are extracted into a file in a designated folder on CAD application server, where it is then transferred to the County FTP server daily.



### Communication

The communication between CAD application server and the County FTP server is provided via password less SFTP, using server rsa public keys.

### File Layouts

The alarm data files created by Versaterm CAD are described in the following sections.

#### Alarm Permits Input File Layout

The following tables describe the file layout required for each input file. All input files must be supplied in pipe (|) delimited ASCII format. Each CryWolf system's alarm input file name is specified in the corresponding alarm upload configuration file on the CAD application server.

**alarm\_co** file layout:

Field name	Data type	Mandatory /Optional <sup>1</sup>	Description
company_code	Alpha(3)	M	Company code
company_type	Alpha(1)	M	Company type code <sup>2</sup> (for example, A – alarm installer)
company_name	Alpha(40)	M	Alarm company business name
Address	Alpha(40)	M	Company business address
Zip	Alpha(10)	O	Company address zip code
area_code	Alpha(3)	NA	Company location area code (*This field is no longer used*)
phone_area_code	Alpha(3)	O	Company phone area code
Telephone	Alpha(8)	O	Company phone number
fax_area	Alpha(3)	O	Company fax area code
fax_phone	Alpha(8)	O	Company fax number
contact_type1	Alpha(1)	O	Contact type code of first company contact <sup>3</sup> (for example, M – manager)
contact1	Alpha(30)	O	Name of first company contact
phone_type1	Alpha(2)	O	Phone type code of first company contact <sup>4</sup> (for example, P – pager)
area_code1	Alpha(3)	O	Phone area code of first company contact
phone1	Alpha(8)	O	Phone number of first company contact
extension1	Alpha(6)	O	Extension number of first company contact
contact_type2	Alpha(1)	O	Contact type of second company contact <sup>3</sup> (for example, M – manager)
contact2	Alpha(30)	O	Name of second company contact
phone_type2	Alpha(2)	O	Phone type code of second company contact <sup>4</sup> (for example, P – pager)
area_code2	Alpha(3)	O	Phone area code of second company contact
phone2	Alpha(8)	O	Phone number of second company contact
extension2	Alpha(6)	O	Extension number of second company contact
contact_type3	Alpha(1)	O	Contact type code of third company contact <sup>3</sup> (for example, M – manager)
contact3	Alpha(30)	O	Name of third company contact
phone_type3	Alpha(2)	O	Phone type code of third company contact <sup>4</sup> (for example, P – pager)
area_code3	Alpha(3)	O	Phone area code of third company contact
phone3	Alpha(8)	O	Phone number of third company contact
extension3	Alpha(6)	O	Extension number of second company contact
City	Alpha(15)	O	City for company business address
Province/State	Alpha(4)	O	Province or State for company business address

Notes:

<sup>1</sup> If you cannot provide information for an optional field, leave the field position blank to maintain the fixed number of fields within each record. You must specify a value for a mandatory field.

<sup>2</sup> Must match a value in company\_type table in CAD database.

<sup>3</sup> Must match a value in contact\_type table in CAD database.

<sup>4</sup> Must match a value in phone\_type table in CAD database.

Sample record:

003|A|BL ALARM MONITORING CO.|123 KING ST|K1K0C8|613|613|8313482|613| 2231434|M|JOHN  
BRUCE|C|613|5890129|26|M|DALE LENNER|C|613|5789273|27|G|ROB  
MITCHELL|C|613|2382398|28|OTTAWA|ON|

**alarm\_sub** file layout:

Field Name	Field Type	Mandatory/ Optional <sup>1</sup>	Description
Transaction	Alpha(1)	M	Type of transaction (A for add, M for modify, or D for delete)
Jurisdiction	Alpha(2)	M	Jurisdiction (leave blank spaces if not multi-jurisdictional)
alarm_num	Alpha(10)	M	Permit number
company_code	Alpha(3)	M	Related alarm company code
alarm_type	Alpha(1)	O	Alarm type code <sup>2</sup> (for example, A – audible security)
alarm_case_type	Alpha(6)	M	Related alarm case type <sup>3</sup>
work_hours	Alpha(75)	O	If the subscriber is a business, the hours it is open
location_type	Alpha(2)	O	Location type code <sup>4</sup> (for example, RS – residence)
assoc_company	Alpha(3)	O	Associated alarm company code (for example, installer)
Location	Alpha(75)	M	Location alarm is installed
Apartment	Alpha(10)	O	Apartment/unit number alarm is installed
municipality	Alpha(10)	M	Municipality code for location
mail_addr	Alpha(75)	O	Mailing address
City	Alpha(15)	O	City
Province	Alpha(4)	O	Province
postal_code	Alpha(7)	O	Postal code
County	Alpha(2)	O	County code for location
District	Alpha(2)	O	District code for location
Zone	Alpha(3)	O	Police zone/beat for location
Grid	Alpha(6)	O	Grid or quadrant for location
X_coord	Integer	O	X coordinate (long)
Y_coord	Integer	O	Y coordinate (long)
Remarks	Alpha(300)	O	Associated remarks for a permitted alarm
comp_name	Alpha(40)	O	Alarm owner surname
comp_first	Alpha(20)	O	Owner first name
comp_middle	Alpha(20)	O	Owner middle name
comp_phone_type	Alpha(2)	O	Owner phone type code <sup>5</sup> (for example, P – pager)
comp_area_code	Alpha(3)	O	Owner phone number area code
comp_telephone	Alpha(8)	O	Owner phone number
comp_bus_ptype	Alpha(2)	O	Owner business phone type code <sup>5</sup> (for example, P – pager)
comp_bus_area	Alpha(3)	O	Owner business phone number area code
comp_bus_tele	Alpha(8)	O	Owner business phone number
comp_bus_ext	Alpha(6)	O	Owner business phone number extension

Field Name	Field Type	Mandatory/ Optional <sup>1</sup>	Description
comp_bus2_ptype	Alpha(2)	O	Owner business phone type code <sup>5</sup> (for example, P – pager)
comp_bus2_area	Alpha(3)	O	Owner business phone number area code
comp_bus2_tele	Alpha(8)	O	Owner business phone number
comp_bus2_ext	Alpha(6)	O	Owner business phone number extension
comp_fax_area	Alpha(3)	O	Owner fax/business phone number area code
comp_fax_phone	Alpha(8)	O	Owner fax/business phone number
penalty_status	Alpha(6)	O	Current alarm penalty status (agency use)
downgrade_priority	Smallint	O	Current downgraded dispatch priority
downgrade_date	Date	O	Date dispatch priority downgraded (mm/dd/yyyy)
until_date	Date	O	Date downgrade period ends (mm/dd/yyyy)
permit_expiry_date	Date	O	Date alarm permit expires (mm/dd/yyyy)
permit_review_date	Date	O	Date alarm permit is to be renewed (mm/dd/yyyy)
last_update	Date	O	Date record was last updated
op_code	Alpha(6)	O	Operator code of last person to update record
op_jurs	Alpha(2)	M	Jurisdiction of person who last updated record
cad_owner	Alpha(1)	M	Ownership of the alarm (Police, Fire or Both)
cad_access	Alpha(1)	M	Users from which system can access alarm (Police, Fire or Both)
Dispatch	Alpha(1)	O	Dispatch flag (Should a dispatch occur for this subscriber?)

Notes:

<sup>1</sup> If you cannot provide information for an optional field, leave the field position blank to maintain the fixed number of fields within each record. You must specify a value for a mandatory field.

<sup>2</sup> Must match a value in alarm\_type table in CAD database.

<sup>3</sup> Must match a value in case\_type table in CAD database.

<sup>4</sup> Must match a value in location\_type table in CAD database.

<sup>5</sup> Must match a value in phone\_type table in CAD database.

Sample record:

A|PP|1289234970|003|A|3401|MONDAY THROUGH FRIDAY 9AM-5PM, SATURDAY & SUNDAY 9AM-2PM|IN|BB|601 DUNDAS ST|14A|1|1298 RIVER DRIVE|OTTAWA| ONTARIO|K2K0T6|12|15|976|987|8|9|THIS LOCATION HAS MULTIPLE ENTRY POINTS. THE SECURITY GUARD IS TO PERFORM UNSCHEDULED INSPECTIONS BUT HAS A PAGER THAT ALERTS HIM IF SOMEONE TRIES TO CONTACT HIM|KELLY|BOB|L|  
P|613|4442387|P|613|4192837|125|P|613|8272834|122|613|7623784|SUSPEND|9|01/12/2002|02/12/2002|03/12/2002|03/01/2002|01/01/2002|888B|SL|P|B|Y|

con\_phone file layout:

Field name	Field type	Mandatory/ Optional <sup>1</sup>	Description
alarm_number	Alpha(10)	M	Permit number
alarm_company	Alpha(3)	M	Related alarm company code
Jurisdiction	Alpha(2)	M	Jurisdiction (Blank if site is not multi-jurisdictional)
contact_type	Alpha(1)	O	Contact type code <sup>2</sup> (for example, M – manager)

contact_name	Alpha(30)	O	Contact name
phone1_type	Alpha(2)	O	Contact phone1 type code <sup>3</sup> (for example W – Work)
phone1_area_code	Alpha(3)	O	Contact phone 1 area code
phone1	Alpha(8)	O	Contact phone 1 phone number
phone1_ext	Alpha(6)	O	Contact phone 1 extension number
phone2_type	Alpha(2)	O	Contact phone 2 type code <sup>3</sup> (for example H – Home)
phone2_area_code	Alpha(3)	O	Contact phone 2 area code
phone2	Alpha(8)	O	Contact phone 2 phone number
phone3_type	Alpha(2)	O	Contact phone 3 type code (for example C – Cell)
phone3_area_code	Alpha(3)	O	Contact phone 3 area code
phone3	Alpha(8)	O	Contact phone 3 phone number

Notes:

<sup>1</sup> If you cannot provide information for an optional field, leave the field position blank to maintain the fixed number of fields within each record. You must specify a value for a mandatory field.

<sup>2</sup> Must match a value in contact\_type table in CAD database.

<sup>3</sup> Must match a value in phone\_type table in CAD database.

Sample record:

1237198302|003|PP|M|JEFF RUSH|C|613|8762973|126|613|984991

**Alarm Calls for Service File Layout**

Each CryWolf system's alarm output file name is specified in the corresponding alarm extract configuration file on the CAD application server.

The following describes the alarm-related CFS file layout.

Field Name	Field Type	Description
jurisdiction	Alpha(2)	Agency/jurisdiction
rin	Alpha(15)	Call internal ID number
occ_num	Integer	Call number
occ_date	Date/Time	Call date/time
date_added	Date	Date call added
queued_type	Alpha(1)	Queue type
time_queued	Date/Time	Date/Time call queued
case_type	Alpha(6)	Initial call type
place_name	Alpha(50)	Call address place name
address	Alpha(75)	Call address
apt_no	Alpha(10)	Address apartment/suite number

Field Name	Field Type	Description
ring_code	Alpha(10)	Address/building ring code
phone_type	Alpha(2)	Phone type code (cell, pager, etc.)
area_code	Alpha(3)	Telephone area code
telephone	Alpha(8)	Telephone number
company_code	Alpha(3)	Alarm company code
alarm_no	Alpha(10)	Alarm number
priority	Integer	Call priority
zone	Alpha(6)	Call zone (patrol zone)
grid	Alpha(6)	GIS Grid
municipality	Alpha(10)	City/municipality code
county	Alpha(2)	County code
district	Alpha(2)	GIS District
x_coordinate	Integer	X coordinate
y_coordinate	Integer	Y coordinate
how_received	Alpha(1)	Call received code
comp_name	Alpha(40)	Caller last name
comp_first	Alpha(20)	Caller first name
comp_middle	Alpha(20)	Caller middle name
comp_phone_type	Alpha(2)	Caller telephone type code
comp_area_code	Alpha(3)	Caller telephone area code
comp_telephone	Alpha(8)	Caller telephone number
comp_address	Alpha(75)	Caller address
comp_apt_no	Alpha(10)	Caller address apartment/suite number
comp_bus_ptype	Alpha(2)	Caller business phone type code
comp_bus_area	Alpha(3)	Caller business telephone area code
comp_bus_tele	Alpha(8)	Caller business telephone number
comp_bus_ext	Alpha(6)	Caller business telephone extension
last_update_date	Date/Time	Date/time call last updated
final_case_type	Alpha(6)	Final call type
time_received	Date/Time	Date/time call received
dispatch_time	Date/Time	Date/time call Dispatched



Field Name	Field Type	Description
enroute_time	Date/Time	Date/time first unit En Route
at_scene_time	Date/Time	Date/time first unit At Scene
clear_time	Date/Time	Date/time call cleared
call_taker_desk	Alpha(6)	Call taker position
call_taker_id	Alpha(6)	Call taker ID
report_flag	Alpha(1)	Offense report required (Y/N)
reporting_officer	Alpha(6)	1 <sup>st</sup> reporting officer ID
reporting_officer2	Alpha(6)	2 <sup>nd</sup> reporting officer ID
case_status	Alpha(1)	Call status
cc_relation	Alpha(1)	Related call indicator
cleared_by	Alpha(79)	How cleared dispo code
cleared_desk_id	Alpha(6)	Clearance desk position
cleared_op_code	Alpha(6)	Clearance operator ID
clear_remarks	Alpha(124)	Clearance remarks
total_dispatches	Integer	Number of dispatched units
total_entities	Integer	Number of related entities
total_supplements	Integer	Number of supplemental
total_followups	Integer	Number of follow ups
initial_remarks	Alpha(355)	Initial call remarks

The name of the extract file will be in the following format: **alarm\_cc.YYYYMMDD** where:

- alarm\_cc is a prefix indicating an alarm extract file
- YYYY represents a 4 digit year
- MM represents a 2 digit month
- DD represents a 2 digit day

The date in the file name will indicate the date the extract was performed. For example, a file extracted on Jan-26-2018 will be named 'alarm\_cc.20180126' and will consist of alarm data for Jan-25-2018 (the previous day).

### **Business Continuity/Interface Availability**

This interface is available from the production server. This interface is also available from the implementation/test server by configuring CryWolf to the test folder on FTP server for transferring alarm files and monitoring for call files, where test files are sent from the implementation/test CAD application server. This interface can also be available from the disaster recovery server, providing the CAD DR application is able to communicate with the FTP server.

### **Interface Testing**

These tests are intended to ensure the interface is functional and complete as designed. The following tests are descriptions of the tests to be performed for the specific interface during the functional acceptance test period.



### **Functional and Completeness Test**

This test ensures that the CAD application server submits and receives the alarm data files from the County FTP server.

### **Operational Tests**

This test ensures the CAD application server is able to communicate with the FTP server via SFTP after system reboots. The CAD application server will be shutdown/re-started and ensure CAD services are started as well as the SFTP file transfers to/from FTP server is available.

### **Performance Tests**

There is no performance tests associated with this interface. The extracted CAD files are transferred to the County FTP server daily and processed as received.

### **Exception Testing**

The exception testing consists of disconnecting the networks between CAD application server and the FTP server, after reconnecting, ensure CAD application server is able to resume file transfers to the FTP server via SFTP.

## **Responsibilities**

### **County Responsibilities**

- Provide a list of call-type codes that will identify that the call is alarm related.
- Provide network connectivity between the FTP server and the CAD application server.
- Coordinate with CryWolf technical staff to assist in the interface installation, configuration and testing.
- Install and maintain the County FTP server for SFTP transfer.
- Assist Versaterm with server rsa public key installation on FTP server after each upgrade.
- Test the interface.

### **Versaterm Responsibilities**

- Develop, install and configure the interface.
- Install and configure Versaterm SFTP script to transfer alarm data files between FTP server and CAD application server.
- With County assistance copy CAD server public key to FTP server, for password less SFTP transfers from CAD server after each CAD application server upgrade.
- Provide assistance and guidance in the development and testing process.

## 15. Tablet Command

This interface provides a one-way transfer of Fire incident and unit information from the Versaterm CAD to the Tablet Command system.

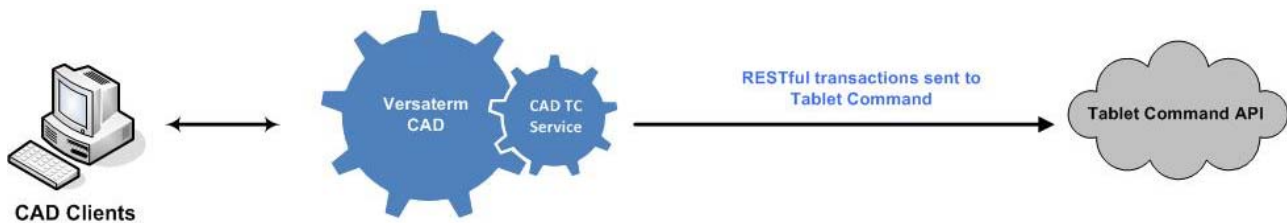
### Process Flow

The vCAD publishes all Fire active incident and unit status information to the Tablet Command in real time. This interface uses RESTful transactions to the Tablet Command API service. Transactions are initiated from CAD when incidents are added, updated and closed as well as units dispatched, unit status changes, remarks added and special services dispatched.

A Tablet Command configuration file exists on the CAD application server to map each county CAD jurisdiction code to a corresponding fire department identification number (FDID). The interface will include the FDID that corresponds to the CAD incident's jurisdiction within the transactions.

Upon sending transactions from CAD to the Tablet Command API, an HTTP status code is returned to the CAD system indicating success or otherwise. Any request sent from CAD that does not return a success status code from the Tablet Command API is resent from CAD with 5-second intervals, for up to (5) five retry attempts.

The interface submits heartbeat transactions to the Tablet Command API at 1-minute intervals.



### Communication

Tablet Command API services are exposed to the CAD application server to facilitate the requests from CAD. Web API requests made to Tablet Command API are handled immediately (synchronously).

The communication between CAD and Tablet Command is via RESTful API using HTTPS protocol. The responses conform to JSON format as defined in the Tablet Command documentation titled "TABLET COMMAND API" (file name: Tablet Command API Documentation.pdf)

### Authentication

For each environment (e.g. implementation/test and production environments) a unique API user credentials are provided by Tablet Command in order to access the corresponding Tablet Command API service page for that environment,

### Web Service Definition

The RESTful transactions initiated from CAD conform to JSON standards as defined in the Tablet Command documentation titled "TABLET COMMAND API" (file name: Tablet Command API Documentation.pdf)

### Data Field Mapping

The following data field mapping between the Versaterm CAD and Tablet Command illustrates which Versaterm data elements will be populated within the various transactions.

### Incident

TC Key	TC Description	TC Example	TC Note	Versaterm CAD data field	Versaterm Notes/Attributes
AgencyID	Unique FDID number per agency Example: "07090"	07090	This number is provided by State or Federal government and is unique to the agency. A CAD can serve one or multiple agencies. Multiple agencies can be submitted via one interface or one API key. Please contact Tablet Command support, if you do not have an FDID number.	FDID number based on agency jurisdiction.	CAD configuration file to map each agency jurisdiction to agency's FDID, based on incident jurisdiction,
IncidentNumber	Incident Number	2839291	Incident number unique to the incident.	CI_data.rin	CAD Record identification number Format: JJYYNNNNNNNNNN Where JJ is jurisdiction such as SM for San Mateo, YY is the year and NNN is unique incident number



TransactionID	Agency-based unique transaction number assigned for the inbound transaction.	919292	This number should be unique to the transaction. For example, you could take unixtimestamp+incremental_id. This field is required by Tablet Command API, but is used only for logging and troubleshooting purposes.		CAD generated alpha numeric serial number.
EntryDateTime	Date and time call was created in dispatch (CAD) system.	2013-05-27T15:53:51-0700	Incident time is calculated using this value. Formatted with ISO 8601	cl_data.occ_time	Time when the call was saved
StreetName	Name of Street		CAD Systems that do not support components address information should leverage the StreetName to upload their address line information.	Cl_seen_at.address or cl_data.address	In addition to location where the call occurred on, an incident response location can be recorded. If a response location is specified, then the cl_seen_at table is used (e.g. cl_seen_at.address). Otherwise, if no response location is present, cl_data.address is sent.
CityOrLocality		San Francisco		cl_seen_at.municipality or cl_data.municipality	CAD municipality code translation.
Longitude	GPS Longitude of the incident location.	-122.4183	Strongly preferred to send GPS lat / long. If GPS longitude and latitude are not provided, Tablet Command app will do a street lookup from address provided.	Longitude	Incident Longitude
Latitude	GPS Latitude of the incident location.	37.7750	Strongly preferred to send GPS lat / long. If GPS longitude and latitude are not provided, Tablet Command app will do a street lookup from address provided.	Latitude	Incident Latitude
X	X value for State Plane coord	6143341		cl_seen_at.x_coordinate or cl_data.x_coordinate	Incident X coordinate based on StatePlane coordinates.
Y	Y value for State Plane coord	1957575		cl_seen_at.y_coordinate or cl_data.y_coordinate	Incident Y coordinate based on StatePlane coordinates.
StatePlane	State Plane name		NAD_1983_StatePlane_California_III_FIPS_0403_Feet	Hardcoded	"NAD_1983_StatePlane_California_III_FIPS_0403_Feet"
Unit	array list of units	see unit data dictionary below	see Unit data dictionary below		

Comment	array list of comments and/or notes	see comment data dictionary below	see comment data dictionary below		
CrossStreet1	Closest cross street to incident address.	Main Street	Presented to the user at the incident overview screen.	Address_history.cros s_street	Combined cross street 1 and 2.  Example: "NE street 1 & street 2"
CrossStreet2	2nd closest cross street to incident location.	Someother Street	Presented to the user at the incident overview screen.		Unavailable
ClosedDateTime	Time the incident was closed or archived.	2013-05-27T15:53:51-0700	We use closed date/time to indicate that that incident was closed and does not need to be displayed anymore. In case your cad system does not provide a closed date time, please set this field to a timestamp that's in the future, that's as far (long) as you want the incident to remain open (for example 30 minutes).	cl_data.clear_time	
AgencyIncident CallTypeDescription	Agency description of the incident type.		This is displayed to the user and should be identical to what the user or dispatcher sees for type of call.	cl_data.call_type	Translation of the CAD call type code.
TBMap	Thomas Brothers Map Page in format "261J6" (map page + grid coordinates).	261J6		cl_seen_at.district or cl_data.district	

FireMap	FireMap is the local agencies unique agency map page.	1234	This can be used with an agency configurable base URL to open a custom URL scheme within iOS. An example, would be providing a map page file number that can be looked up in another PDF management application e.g. GoodReader.	cl_seen_at.response_no or cl_data.response_no	
DistrictNumber	District number can be utilized to send a District Number with the incident.	4242	Text or numbers	cl_seen_at.district or cl_data.district	
StreetNumber	Number related to physical address on the street.	321			Sending entire address in single 'StreetName' field above.
Predirectional		N			Sending entire address in single 'StreetName' field above.
StreetSuffix					Sending entire address in single 'StreetName' field above.
Postdirectional					Sending entire address in single 'StreetName' field above.
Suite	Suite or apartment of building	321		cl_seen_at.aprt_no or cl_data.aprt_no	Apartment number of incident location, if available.
CallReceivedDate Time					Already being sent as 'EntryDateTime' field above.

CommandName	Command name of the incident if provided by CAD.	Main Street Command			Unavailable.
TacticalChannel	Tactical channel assigned if provided by the CAD.	TAC1		cl_data.tactical_channel	
CommandChannel	Command radio channel assignment if provided by the CAD.	CMD4			Unavailable
LocationComment	Common name of the location	Rialto Tower			cl_seen_at.place_name or cl_data.place_name
Building	Building number of a large apartment complex	B	This can be letters or numbers		Unavailable
Floor	Floor number of a large apartment complex	12	This can be letters or numbers		Unavailable

## Units

TC Key	TC Description	TC Example	TC Note	Versaterm CAD data field	Versaterm Notes/Attributes
UnitDispatchNumber	Identification number or key value associated with a dispatched unit.		This number should remain the same for all updates for this unit. If the unit clears the incident and is subsequently dispatched again <u>to the same incident</u> a new number should be assigned.	app_stat.app_id	Used as key in Tablet Command.



UnitID	This is the unit identification number of the resource assigned to the incident. For Example: "E1" or "PM255" would be Engine 1 or Paramedic 255.	E1		app_stat.app_id	Unit identification number.
TimeArrived	Arrival time of the unit.	2013-07-01T13:19:04-0700		fdp_data.at_scene_time	
TimeCleared	Time the unit cleared the incident.	2013-07-01T13:19:04-0700		Fdp_data.inservice_time or fdp_data.returning_time	The greater value is sent. For example, if returning time is past the in service time, the returning time is sent to TC.
TimeDispatched	Time the unit is dispatched or assigned to the incident.	2013-07-01T13:19:04-0700		fdp_data.dispatch_time	
TimeEnroute	Time unit is responding to the incident.	2013-07-01T13:19:04-0700		fdp_data.enroute_time	
TimeStaged	Time the unit is staged for the incident.	2013-07-01T13:19:04-0700	This may not be provided by the CAD.	Status_times.status_time	Based on staging status code configured in CAD.
TimePatient	Time the unit calls At Patient.	2013-07-01T13:19:04-0700	This may not be provided by the CAD.		Unavailable
TimeTransporting	Time the unit starts a transport.	2013-07-01T13:19:04		Fdp_data.transport_time	

		-0700			
TimeAtHospital	Time the unit arrives at an ED.	2013-07-01T13:19:04-0700			Unavailable
Personnel	Array of assigned personnel.		Count and order will be respected by Tablet Command. If two personnel are sent, the unit count will be updated to 2 from its default value.  The order in which the personnel are sent in the array is the order in which Tablet Command will display the personnel. E.g. if Captain, Engineer, and Firefighter are sent in that order of personnel then Tablet Command will respect that.		

#### Personnel

TC Key	TC Description	TC Example	TC Note	Versaterm CAD data field	Versaterm Notes/Attributes
PersonnelID	Personnel ID associated with person assigned.	1234		App_personnel.personnel_no	ID of responder
PersonnelRank	Rank which person is assigned to unit.	Firefighter	This is how the user will be displayed on the unit when the unit is inspected.		Unavailable
PersonnelName	Name of person assigned to unit.	Smith, John		App_personnel.translation	Name of responder.
PersonnelWorkCod	Work code of person	TradeOn	Optional		Unavailable

e	assigned to this unit.				
PersonnelNote	Note that may come from staffing software or other.	Replacing James	Optional		Unavailable

#### Dispatch Notes or Comments

TC Key	TC Description	TC Example	TC Note	Versaterm CAD data field	Versaterm Notes/Attributes
<b>Comment</b>	Note by dispatcher or CAD	Multiple callers...		Cl_remarks.remarks	Comments added in CAD.
<b>CommentSource</b>	Type of note or comment. Options are: Dispatcher, Caution, Unit, Other.	Unit		Hardcoded	"Remarks" or "Special Services"
<b>CommentDateTime</b>	Time the comment was entered.	2013-07-01T13:19:04-0700		cl_remarks.last_update_date	Date of comment added to CAD.

### **Business Continuity/Interface Availability**

This interface is available from the production server and from the implementation/test server. This interface can also be available from the disaster recovery server, providing the CAD application server and Tablet Command API are available and able to communicate with each other in the disaster recovery environment.

### **Interface Testing**

Interface testing is intended to ensure the interface is completely functional as designed. Below are descriptions of the tests to be performed for the specified interface functionality during the functional acceptance test period.

#### **Functional and Completeness Test**

Requests initiated from the CAD application server are sent to the Tablet Command API.

Adding a Fire incident and the incident creation transaction is sent to the Tablet Command API.

Adding remarks, dispatching units, changing unit status from CAD, and ensuring updates are sent to the Tablet Command API

#### **Operational Tests**

CAD is able to communicate with the Tablet Command API service after system reboots.

#### **Performance Tests**

- Ensuring updates to active calls and unit status changes performed within CAD are published to the Tablet Command API within 2 seconds. Excluded from any measurement is network time (e.g. network between CAD and Tablet Command API) and external system processing times from the Tablet Command API service.

#### **Exception Testing**

The exception testing consists of disconnecting the network between CAD/VMC and Tablet Command API and ensuring CAD/VMC is able to resume communications once connectivity is re-established.

### **Responsibilities**

#### **County Responsibilities**

- Coordinate with Tablet Command technical staff to assist in the interface development and testing.
- Configure network access to allow communications between the CAD and Tablet Command API.
- Provide a test facility for this interface.
- Test the interface.

#### **Versaterm Responsibilities**

- Develop, install and configure the interface.
- Provide assistance in the testing process.

## 16. ShotSpotter

This interface provides a one-way data transfer from ShotSpotter to Versaterm CAD. Gunshot detection and location data is provided from ShotSpotter to the CAD to automatically create and update incidents within the CAD system.

### Functional Overview

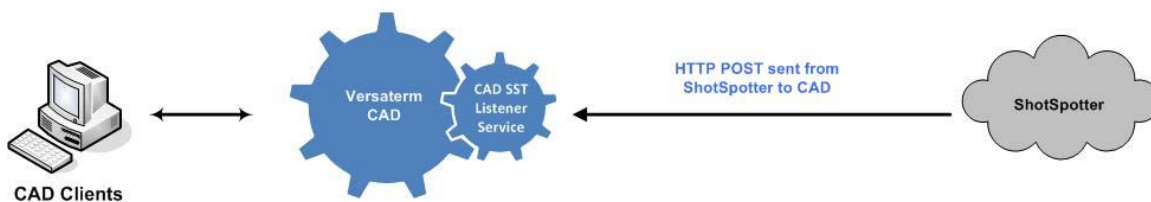
The request to generate a CAD incident is initiated by the ShotSpotter system. Incident details such as location, description of the call and remarks provided by ShotSpotter, are transferred from the ShotSpotter system, via HTTP POST, to the CAD system. The CAD system accepts the request, should the request contain a valid exact match location within CAD. CAD then automatically creates an incident using the validated location. Once the add (IALRT04) request from ShotSpotter is received by CAD and a CAD incident is automatically created, the incident is routed to the appropriate dispatcher based on the geo-validation of the location at call creation.

When a request contains an invalid physical location that cannot be validated within CAD, the CAD system will generate an incident using incident latitude and longitude data followed by the provided physical location. Additionally, if a physical location is not provided by ShotSpotter, the CAD incident is created using the latitude and longitude data only. All ShotSpotter originating incidents are generated in CAD using a predefined call type of "SHOT".

Update (IUPDT04) requests from ShotSpotter are also accepted by the CAD system. Location updates to a previously created incident are reflected in the incident. Additional details are logged to the incident in the form of remarks.

Heartbeat (STATUS1) transactions are also supported between the ShotSpotter service and the CAD. The heartbeat transactions received from ShotSpotter are logged in designated CAD application server logs.

The following diagram illustrates the data flow from ShotSpotter to the CAD system:



### Communication

The communication between CAD and ShotSpotter is provided via web services using HTTP protocol.

### Web Service Definition

The web service transactions conform to SOAP standards as defined in the ShotSpotter documentation titled “SST Notification Engine API 2.8” (file name: SST-NE-API-RefenceV0.3.pdf)

A listening service is exposed on the Versaterm CAD to accept requests from the ShotSpotter system. HTTP requests made from ShotSpotter are handled immediately (synchronously).

This interface supports the following ShotSpotter requests:

ShotSpotter API name	Description	Notes
IALRT04	Initial incident notification	<id/> element uniquely defines the incident
IUPDT04	Incident update	Update to previously published incident <id/>
STATUS1	Heartbeat	

### Data Field Mapping

The following data field mapping between the Versaterm CAD and ShotSpotter illustrates which Versaterm data elements will be populated within CAD. The XML file layout is defined by the “IALRT04\_273corrV2.xsd” file provided by ShotSpotter.

#### IALRT04

ShotSpotter element name	Description	Enumeration	Sample	Versaterm CAD data field	Versaterm Notes/Attributes
id	SST incident ID		“0001234”	ext_cad_to_cad.ext_rin	External agency record ID
latitude	Incident latitude		“51.513845”	Converted to Cc_data.y_coordinate	
longitude	Incident longitude		“-0.098351”	Converted Cc_data.x_coordinate	

address	Incident reverse address lookup		"123 Main Street"	Cc_data.address	
address-sub-unit	Indoor incident room		"Conference Room A"	Cc_data.address	added as additional location information.
address-sub-unit-level	Indoor incident floor		"Second floor"	Cc_data.address	added as additional location information.
description	Reviewer center situational awareness notes		"Shooter moving SE at 30mp"		Added as initial remarks to the CAD incident
rounds	Number of rounds fired		1		Added as remarks to the CAD incident, prefixed with element name. Example: "ROUNDS:1"
shooter-speed	Speed of a moving shooter		30		Added as remarks to the CAD incident, prefixed with element name. Example: "SHOOTER-SPEED:1"
shooter-direction	True north azimuth direction of a moving shooter		45		Not added provided the shooter-direction-short-text (below) is added.
shooter-direction-short-text	Eight point compass direction of a moving shooter		"NE"		Added as remarks to the CAD incident, prefixed with element name. Example: "SHOOTER-DIRECTION:NE"
num-shooters	Assessment of				Added as remarks to the CAD incident, prefixed with element name. Example: "NUM-SHOOTER(S):1"

beat	Most granular geographic policing area		111AAA		Added as remarks to the CAD incident, prefixed with element name. Example: "BEAT:111AAA"
district	Least granular geographic policing area		222BBB		Added as remarks to the CAD incident, prefixed with element name. Example: "DISTRICT:222BBB"
source	Coverage area name		SouthCentral		Added as remarks to the CAD incident, prefixed with element name. Example: "SOURCE:SOUTHCENTRAL"
time	Local time of incident		"2015-11-05 01:30:59"		Added as remarks to the CAD incident, prefixed with element name. Example: "TIME:2015-11-05 01:30:59"
gmt-offset	Local time offset from GMT		"-08"		
incident-type		0 – unclassified 1 – Single gunshot 2 – Multiple gunshots 7 – System test 19 – Possible gunshot	2		Added as remarks to the CAD incident, prefixed with element name. Example: "INCIDENT-TYPE:2"



incident-workflow-status		UNR – Unreviewed REV – Reviewed			Added as remarks to the CAD incident, prefixed with element name.  Example: “INCIDENT-WORKFLOW-STATUS:UNR”
uri-count	Size of sensor detail collection		3		Added as remarks to the CAD incident, prefixed with element name.  Example: “URL-COUNT:3”
url-root	URL root to be applied to all URL elements		“https://sst.net/Test Zone/”		Root URL used for each sensor detail URL collection received.
uris	Sensor detail collection				

URIS: sensor detail collection array received when the “uri\_detail” is available in the the IALRT04 transaction payload.

Uri\_detail collection defined as below:

uri-detail	Sensor detail				
mime	Sensor audio media type available		“audio/mpeg”		Each record received is added as a CAD media attachment.
sensor	Complex type: name, distance, distance-unit		name=“sensorABC” distance=520 distance-unit=“feet”		Each element: name, dispatch and distance unit is concatenated and added as CAD media record description text of up to 50 characters.
url	Sensor audio location appended to url-root		“2015-09/2015-09-09/ABC.mp3”		Added as a CAD media attachment.
audio-image	Sensor audio waveform image complex type: mime, png-url		mime=image/png png-url=2015-09/2015-09-09/123.png”		Added as a CAD media attachment.
comment	Additional information		“*** TEST INCIDENT **”		Added as remarks to the CAD incident prefixed with element name.  Example: “URL-COMMENT:***TEST INCIDENT**”

#### IUPDT04

The IUPDT04 document has a similar schema to IALRT04, with the exception that the root element <name/> has a value of “IUPDT04”. The IUPDT04 transaction refers to ShotSpotter incident ID (<id/>) previously published using IALRT04.

Location updates received from ShotSpotter are applied to CAD call incident discrete location database field. Location changes are logged to call history. Other updates received from ShotSpotter such as rounds, shooter-speed, etc. are added as additional remarks to the CAD incident including the timestamp of when the data was received from ShotSpotter.

## STATUS1

This transaction is logged to the CAD application server for heartbeat activity logging. No data mapping to Versaterm fields are performed for this transaction.

ShotSpotter element name	Description	Sample
zone	zone name	Metropolis 1
last incident per event type	Collection of last incidents in each selected category	
LastSingleGunshot	Last incident sent of type SingleGunshot	1808
status time	Timestamp indicating when status packet was created	2015-03-20T11:45:59.5100000

### **Business Continuity/Interface Availability**

This interface is available from the production and implementation/test environment. This interface is also available from the disaster recovery server, providing CAD listening services are available and accessible by ShotSpotter from the disaster recovery environment.

### **Interface Testing**

The following tests are intended to ensure the interface is completely functional as designed and will be performed during the Functional Acceptance process.

### **Functional and Completeness Testing**

- ShotSpotter requests are received in CAD and processed accordingly.
- ShotSpotter sending an add call request to CAD and an incident is created within CAD.
- Calls originated by ShotSpotter, that have supplemental information are updated in the CAD incident.

### **Operational Tests**

This test ensures that ShotSpotter is able to communicate with the CAD listening service after system reboots.

### **Performance Tests**

The performance tests are measured from the time an add or update request is received in CAD from ShotSpotter and the transaction is processed in the CAD. Add or update calls from ShotSpotter will be processed in CAD in less than five (5) seconds. Excluded from any measurement are network time (e.g. network between ShotSpotter and CAD) and external system processing times from the ShotSpotter system.

### **Exception Testing**

The exception testing consists of disconnecting the network between ShotSpotter and CAD and ensuring ShotSpotter is able to resume communications once connectivity is re-established.

### **Responsibilities**

#### **County Responsibilities**

- Provide Versaterm with an updated ShotSpotter SOAP web-service specification, if applicable.
- Coordinate with ShotSpotter technical staff to assist in the interface development and testing.
- Configure network access to allow web service communications between the CAD and ShotSpotter.
- Provide a test facility for this interface.
- Test the interface.

#### **Versaterm Responsibilities**

- Develop, install and configure the SOAP web-service listening service in CAD.
- Perform integration tests on the interface.
- Provide assistance and guidance through the County acceptance tests.

## **17. lamResponding**

lamResponding interface will not be part of this project.

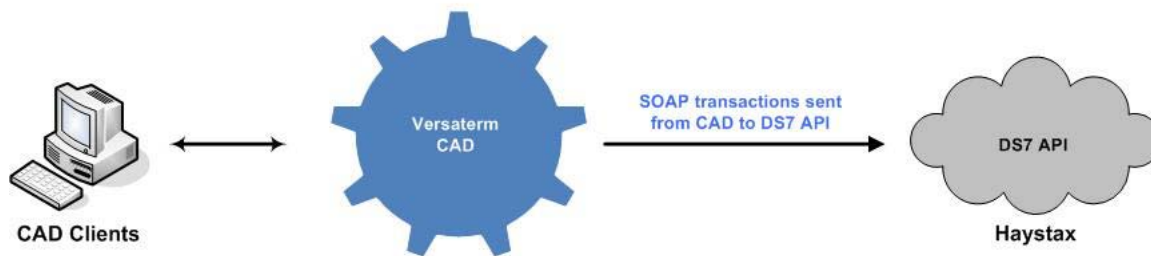
## 18. CalCOP (California Common Operating Picture)

This interface provides a real-time one-way data transfer from the Versaterm CAD to the Haystax Technology's Public Safety Cloud (DS7), referred to as CalCOP in the County. Incident and dispatched unit information are submitted to CalCOP making it available to end users accessing Haystax applications such as Feed Monitor and Watchboard.

### Process Flow

The vCAD publishes all active incident and unit information to the Haystax DS7 (Digital Sandbox 7) API service. This interface uses standard SOAP web-service protocol for submitting transactions to the DS7 API. Transactions are initiated from the CAD system when incidents are created, updates such as incident location, call type or priority, incident closed as well as units dispatched or unit status changes when available. Each transaction initiated from the CAD system always submits the incident details to the DS7 API including the incident number, call type, call type description, incident location, priority, unit ID and status of each unit dispatched.

Upon sending transactions from CAD to the DS7 API, a SOAP status code is returned to the CAD system indicating success or otherwise. Any request sent from CAD that does not return a successful status code from DSP7 is discarded and logged as a failed transaction in the designated CAD application logs.



### Communication

The communication between the Versaterm CAD and the Haystax Technology DSP7 API is provided via web services using HTTP protocol.

### Web Service Definition

The following data field mapping between the vCAD and DS7 API illustrates which Versaterm data elements are used when building a CAD request transaction. The web service transactions conform to SOAP standards as defined in the DSP7 documentation titled "Haystax Technology – Connecting Data Feeds into DS7" (file name: Connecting Data Feeds to DS7.docx").

DS7 Data field	Description	Sample	Versaterm CAD data field	Versaterm Notes/Attributes
Title	Call Type	OTHER PUBLIC NUISANCE	call_type	Translation of the CAD call type code.
Body	Description of the incident.  (It does not need line breaks beyond   but they have been added here for clarity).	CallType: Police CallNumber: C7243423 ReportingDistrict: N Priority: 7 AssignedUnit: NODD Officer: SMITH, JUAN, [1234]  CallEntered: 12/18/2013 10:40:47 AM CallDispatched: 12/18/2013 10:41:00 AM Onscene: 12/18/2013 10:41:00 AM Location: 2825 MAIN ST  City: SPRINGFIELD Narrative: CHECKING PERMITS		Defined in below data field mapping table
Latitude	Latitude	34.0189713748508	Longitude	CAD Incident Longitude
Longitude	Longitude	-84.7634224261802	Latitude	CAD Incident Latitude
Publication Date	Transaction date	12/18/2013 10:41:39 AM		Web service submit date and time.
SourceID	Source ID	C7243423	rin	CAD record identification number  Format: JJYYNNNNNNNNNN  Where JJ is jurisdiction such as SM for San Mateo, YY is the year and NNN is unique incident number

### **Data Field Mapping**

The following data field mapping between the Versaterm CAD and DS7 API data fields illustrates which Versaterm data elements are used when building a transaction to submit to DS7. The XML file layout is defined by the “FeedItem.wsdl” file provided by Haystax Technology.



DS7 Data field	Description	Versaterm CAD data field	Versaterm Notes/Attributes
Call Type	Police/Fire/EMS call indicator	Service type	"POLICE", "FIRE" or "EMS" text string based on CAD incident service type
Call Number	CAD call number for reference	rin	CAD record identification number Format: JJYYNNNNNNNNNN Where JJ is jurisdiction such as SM for San Mateo, YY is the year and NNN is unique incident number
Nature of Call	Literal description of the type of call (alarm, theft, assault, etc.)	Case_type	CAD incident call type code
Reporting District	Code for reporting district, area, beat.	Zone	CAD incident zone field
Priority	Call priority code (1, 2, high, medium, etc.)	Priority	CAD incident priority field (1 through 9)
Assigned UNIT	UNIT ID/Officer ID	Unit_id	ID of the unit dispatched to the incident
Date/Time Call entered	Dispatch/call taker entry date/time	Time_queued	Date and time of when incident was saved and queued within CAD
Date/Time call dispatched	Dispatched date/time	Dispatch_time	Date and time of the first unit dispatched to the incident
Onscene date/time	Date/time officer acknowledged on scene	At_scene_time	Date and time of the first unit on scene to the incident
Date/Time call closed	Date/time when call was cleared from dispatch	Clear_time	Date and time of when the incident was cleared
Location	Location of call – either full string or parsed out	Address	Full address string of the incident location
Map coordinates	LONG/LAT		Defined in above web service request table mapping.

### **Business Continuity/Interface Availability**

This interface is available from the production and implementation/test environment. This interface can also be available from the disaster recovery server, providing the CAD application server is able to access the DS7 API from the disaster recovery environment.

### **Interface Testing**

The following tests are intended to ensure the interface is completely functional as designed and will be performed during the Functional Acceptance process.

### **Functional and Completeness Testing**

- CAD calls created initiates a transaction to the DS7 API accordingly.
- Dispatching units submits a transaction to the DS7 API.
- Clearing calls submits another transaction to DS7 API.

### **Operational Tests**

This test ensures that CAD is able to communicate with the DS7 API service after system reboots.

### **Performance Tests**

The performance tests are measured from the time an add or update is applied in CAD and the transaction is sent to the DS7 API. Add or update calls transactions processed in CAD are sent to DS7 within five (5) seconds. Excluded from any measurement are network time (e.g. network between CAD and DS7 API) and external system processing times by the DS7 API.

### **Exception Testing**

The exception testing consists of disconnecting the network between CAD and DS7 API service and ensuring CAD is able to resume communications once connectivity is re-established.

### **Responsibilities**

#### **County Responsibilities**

- Provide Versaterm with an updated DS7 SOAP web-service specification, if applicable.
- Coordinate with Haystax technical staff to assist in the interface development and testing.
- Configure network access to allow web service communications between the CAD system and the DS7 API.
- Provide a test facility for this interface.
- Test the interface.

#### **Versaterm Responsibilities**

- Develop, install and configure the SOAP web-service listening service in CAD.
- Perform integration tests on the interface.
- Provide assistance and guidance through the County acceptance tests.

## 19. ePCR/MEDS

This interface consists of transferring all EMS call-for-service data from vCAD to AMR's ePCR/MEDS application.

### Business Flow Overview

The Versaterm CAD contains a configuration parameter, by call type, to indicate when a call should be transferred to MEDS (on call initiation or on call close). Configuration parameters exist by unit status code to indicate if a call should be transferred as units are placed in a pre-determined status. Based on these configurations, calls-for-service will be transferred, as appropriate, and re-sent (e.g. entire call) whenever any subsequent changes or updates are performed. A change or update may include a change of information (e.g. address) or any additional details (remarks, dispatches, etc.).

To initiate the transfer to MEDS, the CAD system writes an entry into the gateway transfer queue. A special daemon monitors the queue and processes each entry. Upon processing each entry, CAD creates an XML file in a gateway transfer folder on the CAD server and initiates a web service request to MEDS transferring the incident. If the web service is successful, the XML file is removed from the transfer folder. If the web service fails due to connectivity issues, the XML file will remain in the transfer folder and the system will attempt to re-transfer the incident the next time the gateway daemon is invoked to process entries. If the webservice fails due to a SOAP error, the XML file is moved to a failed folder and a CAD message is sent to the comm center supervisor.

EMS calls transferred to MEDS are determined by the jurisdiction of the call. That is, the call must belong to the EMS jurisdiction to enable the transfer. Should an EMS unit be dispatched to a Fire call, the call is not transferred. Additionally, if there is a related Fire call to the EMS call, both the EMS and Fire CFS data will be sent to MEDS as separate transactions.

Although the destination system will be required to assist in testing/verifying, no changes will be required to the destination system. The interface will handle data translations as it relates to mismatch field types. However, the interface will not handle code data-value mapping and as a result will require the County to configure vCAD with the same code values used in the destination system, where possible, to avoid data-value mapping (e.g. same call type codes).

### Communication

Communication between vCAD and MEDS will be performed via web-services conforming to SOAP protocol. The MEDS "UploadCADDataService" web service operation is used when CAD initiates incident transfer requests to MEDS as defined by the "amr\_service.wsdl" file provided by AMR.

A gateway queue utility is available to view, add and remove incidents manually to the queue.

### Configuration

The Versaterm CAD supports a special configuration setting to indicate when CFS data is to be transferred to the MEDS. The transfer ("Transfer to RMS" flag) can be configured to transfer the call immediately upon call creation, on close of the call (note that cancelling a call is a close call event) or based on specific unit status codes. Once the call is transferred, subsequent updates to the address or call type of an active or pending call will cause CAD to resend the entire call. Once the call is cleared, any subsequent updates (changes, add remarks, status changes, etc.) to the call will cause it to resend the entire call.

During interface development, the two alphanumeric EMS jurisdiction code will be configured to transfer incidents transfer to MEDS.

## Data Field Mapping

**NPR\_Master**

The following data field mapping between the Versaterm CAD and MEDS illustrates which Versaterm data elements will be populated within the destination system. The XML file layout is defined by the “CAD.xsd” file provided by AMR.

SMC CAD Field	MEDS Field Name	MEDS Field Definition	Data Type	Size	Order	Nullable	Versaterm CAD field	Versaterm Attributes/Comments
INCN -EMS - LOCI	Additional_Location	Incident additional location information.	Varchar (Text)	50	26	Yes	Derived from cl_data.address Or cl_seen_at.address	Additional location information stored in the address field. Anything after the “[” symbol is location remarks in Versaterm CAD.  in addition to location where the call occurred on, If an incident response location is present the cl_seen_at table is used (e.g. cl_seen_at.address), which represents the location where the units responded to. Otherwise, if no response location is present, cl_data.address is sent.
INCN -EMS - LOCN	Address	Incident address.	Varchar (Text)	80	22	Yes	Cl_seen_at.address or cl_data.address	Address field can be up to 75 characters in length.  In addition to location where the call occurred on, If an incident response location is present the cl_seen_at table is used (e.g. cl_seen_at.address), which represents the location where the units responded to. Otherwise, if no response location is present, cl_data.address is sent.
INCN-EMS-CLASS-TYPE	Agency_Type	Incident agency type.	Varchar (Text)	30	5	Yes	Hardcoded	Fixed text “E”
	ANI_Number	Reference number to the ANI/ALI record.	Varchar (Text)	50	63	Yes		Unavailable
INCN -EMS - LOCN - APT	Apartment	Incident apartment number.	Varchar (Text)	50	23	Yes	cl_seen_at.aprt_no or cl_data.aprt_no	
Fixed text	CADID	An identifier for the source CAD of the record.	Varchar (Text)	50	2	No	cad_config.production_train	Based on CAD system type of production or test, a fixed text of “SMACAD” or “SMCTEST” is sent respectively.  Prod = SMACAD  Test = SMCTEST

INCN -EMS - PHON	Call_Back_Phone	Phone number where the communication center can call back the caller.	Varchar (Text)	50	37	Yes	CI_data.area_code + CI_data.telephone	Format: AAA-NNN-NNNN  Where AAA is area code and NNN is phone number.
	Call_Cleared_Performed_By	Name of the employee entering the time when the call was cleared.	Varchar (Text)	50	76	Yes	Change_log.updated_by	The translation of user name clearing the call will be clipped into 50 characters. Note that Versaterm name translation can be up to 79 characters in length
	Call_Closing_Performed_By	Name of the employee closing the call.	Varchar (Text)	50	57	Yes	Change_log.updated_by	Same as above.
INCN -EMS - DSPO	Call_Disposition	Incident call disposition.	Varchar (Text)	50	64	Yes	CI_data.cleared_by	Versaterm cleared by field is 1 character in length. The values configured by SMC in the CAD cleared by table must match MEDS values or MEDS system must configure the values to match the Versaterm CAD.
derived field	Call_Status	Status of the call (Open, Pending, Active, Closed...).	Varchar (Text)	50	68	Yes	CI_data.call_status	1 character field.  Note that values in Versterm CAD are Q)ueued, A)ctive, C)leared or R)eccurring.
INCN -EMS - CMOP	Call_Taker_Code	Identification code of the employee taking call.	Varchar (Text)	50	35	Yes	CI_data.call_taker_id	6 character field.
	Call_Taking_Performed_By	Name of the employee taking the call.	Varchar (Text)	50	56	Yes	CI_data.call_taker_id	The translation of call_taker_id will be clipped into 50 characters. Note that Versaterm name translation can be up to 79 characters in length
INCN -EMS - ADDR	Caller_Address	Address of the location where the caller is calling from.	Varchar (Text)	80	41	Yes	CI_data.comp_address	
	Caller_Apartment	Apartment number where the caller is calling from.	Varchar (Text)	50	42	Yes	CI_data.Comp_apartment_no	

	Caller_City	City where the caller is calling from.	Varchar (Text)	50	43	Yes		Unavailable
	Caller_Code	Incident initiator code.	Varchar (Text)	50	11	Yes		Unavailable
	Caller_County	County where the caller is calling from.	Varchar (Text)	50	46	Yes		Unavailable
	Caller_Location_Name	Name of the location where the caller is calling from.	Varchar (Text)	50	40	Yes	Cl_data.comp_address	
	Caller_Location_Phone	Phone number of the location where the caller is calling from.	Varchar (Text)	50	47	Yes	Cl_data.comp_area_code + Cl_data.comp_telephone	Format: AAA-NNN-NNNN Where AAA is area code and NNN is phone number.
INCN -EMS - NAM	Caller_Name	Name of the caller requesting transport.	Varchar (Text)	50	39	Yes	cl_data.comp_name + cl_data.comp_first + cl_data.comp_middle	Format: Last Name, First Name Middle-Name. Name will be clipped into 50 characters. Note that Versaterm Last Name field is up to 40 characters in length while First and Middle names are 20 characters in length (each).
	Caller_State	Sate where the caller is calling from.	Varchar (Text)	50	44	Yes		Unavailable
	Caller_Type	Type of facility initiating the call (i.e. Snf, hosp, rn, scene, med office).	Varchar (Text)	50	38	Yes		Unavailable
	Caller_Zip_Code	Zip code where the caller is calling from.	Varchar (Text)	50	45	Yes		Unavailable
	Cancel_Code	Incident cancellation code.	Varchar (Text)	50	65	Yes		Unavailable
	Cancel_Reason	Incident cancellation reason.	Varchar (Text)	50	66	Yes		Unavailable

derived from INCN -EMS - LOCN - CITY	City	Incident city.	Varchar (Text)	50	24	Yes	(cl_seen_at.municipality or cl_data.municipality)	The translation will be clipped into 50 characters. Note that Versaterm municipality code translation can be up to 79 characters in length
INCN -EMS - LOCN - CITY	City_Code	Incident city code.	Varchar (Text)	50	83	Yes	cl_seen_at.municipality or cl_data.municipality	CHAR (4). Note that this field is the Versaterm municipality code which is 4 character in length.
Fixed text, "San Mateo"	County	Incident county.	Varchar (Text)	50	28	Yes	Hardcoded	Fixed text, "San Mateo"
INCN-EMS- CASE1	County_Run_Numb er	The run number created by the county CAD.	Varchar (Text)	50	88	Yes	Cl_data.jur + cl_data.occ_year + cl_data.occ_num	Format: JJYY-NNNNNNNNNN  Where JJ is jurisdiction such as DC for Daly City. NNN is unique incident number
INCN -EMS - XSTD	Cross_Street	Incident cross street.	Varchar (Text)	80	33	Yes	Address_history.cross_street	40 character in length.
	Delay_Reason	Reason the call was delayed.	Varchar (Text)	50	71	Yes		Unavailable
	Delayed_Performed _By	Name of the employee entering the delay reason.	Varchar (Text)	50	75	Yes		Unavailable
	Disposition_Perform ed_By	Name of the employee that assigned a disposition for the call.	Varchar (Text)	50	58	Yes	Change_log.updated_by	
	Division	Incident division.	Varchar (Text)	50	8	Yes		Unavailable
INCN -EMS - CPRI	Final_Priority_Code	Final incident priority number.	Varchar (Text)	50	17	Yes	Cl_data.priority	Note Versaterm supports only 1 priority code field. The Versaterm priority code is numeric 1-9, where 1 is highest priority.
	Final_Priority_Descr iption	Final incident priority description.	Varchar (Text)	50	18	Yes		Unavailable
	Incident_Type	Type of incident.	Varchar (Text)	50	10	Yes		Versaterm cl_data.call_type provided in the "Pt_Condition_Code" MEDS field below.



INCN -EMS - ERZ	Incident_Zone	Incident zone.	Varchar (Text)	50	7	Yes	cl_seen_at.ems_zone or cl_data.ems_zone	6 characters in length
	Init_By_Description	Incident initiator description.	Varchar (Text)	50	12	Yes		Unavailable
	Initial_Priority_Description	Initial incident priority description.	Varchar (Text)	50	16	Yes		Unavailable
INCN -EMS - IPRI	Initial_Priority_Number	Initial incident priority number.	Varchar (Text)	50	15	Yes		Unavailable
INCN-EMS-INCEN(1:3)	Jurisdiction	Incident address jurisdiction.	Varchar (Text)	30	6	Yes	Cl_data.jur	2 character length
INCN -EMS - Y - COORD	Latitude	Incident latitude.	Varchar (Text)	50	31	Yes	Calculated from cl_data.y_coordinate	
	Level_Of_Service_Requested	Level of services requested by the caller	Varchar (Text)	50	89	Yes		Unavailable
	Location_Code	Incident location code.	Varchar (Text)	50	19	Yes		Unavailable
	Location_Name	Incident location name.	Varchar (Text)	50	20	Yes		Unavailable
	Location_Phone	Incident location phone number.	Varchar (Text)	50	21	Yes		Unavailable
	Location_Type	Incident location type.	Varchar (Text)	50	29	Yes		Unavailable
INCN -EMS - X - COORD	Longitude	Incident longitude.	Varchar (Text)	50	30	Yes	Calculated from cl_data.x_coordinate	
Fixed number, 0	Lost_Call	Identifier for lost calls due to insufficient resources resulting in loss of revenue.	Bit (Yes/No)	1	87	No	Hardcoded	Fixed number '0'
INCN -EMS - MAP	Map_Info	Incident map information.	Varchar (Text)	50	32	Yes	Cl_data.grid	Versaterm grid can be used for this map page field, which is 6 character in length.

							This information will be loaded into CAD using the County GIS files.
Fixed number, 1	Master_Incident_ID	Incident record reference.	Int (Number)	4	3	No	<p>Site_Config.rms_jurisdiction + cl_data.occ_year + cl_date.occ_num</p> <p>Format: XXYYNNNNNNNNNN Where XX is a numeric EMS RMS jurisdiction, configured within Versaterm CAD for each CAD EMS jurisdiction. YY is the year and NNN is the incident number</p> <p>Versaterm EMS CAD jurisdiction, will be mapped to numeric RMS jurisdiction for EMS, where it will be used as the master incident ID.</p>
INCN-EMS- INCN	Master_Incident_Number	CAD generated identifier for the event.	Varchar (Text)	50	4	Yes	<p>Cl_data.jur + cl_data.occ_year + cl_date.occ_num</p> <p>Format: JJYY-NNNNNNNNNN Where JJ is jurisdiction such as DC for Daly City. NNN is unique incident number</p>
INCN -EMS - SRC	Method_Of_Call_Received	Method of how call was received in the communication center. (ie...phone, fax, CAD to CAD, aniali).	Varchar (Text)	50	34	Yes	<p>cl_data.how_received</p> <p>The translation will be clipped into 50 characters. Note that Versaterm how_cleared code translation can be up to 79 characters in length</p>
	Notify	Name of the person requesting the transport.	Varchar (Text)	50	80	Yes	Unavailable
INCN -EMS - CTYP	Pt_Condition_Code	Patient condition code (Problem or Nature Of Call).	Varchar (Text)	50	13	Yes	Cl_data.call_type
INCN -EMS - TDSC	Pt_Condition_Description	Patient condition description (Problem or Nature Of Call).	Varchar (Text)	50	14	Yes	Case_type.translation

	Pt_Contact_Performed_By	Name of the employee confirming the time when the unit has made physical contact with the patient.	Varchar (Text)	50	74	Yes		Unavailable
Fixed number, 1	Rec_ID	A unique, auto-generated numeric identifier.	Int (Number)	4	1	No	Hardcoded	Fixed number, 1
	Reference_Number	Kaiser Reference Number	Varchar (Text)	50	78	Yes		Unavailable
	Response_Area	Incident response area.	Varchar (Text)	50	9	Yes	Cl_data.ems_zone	
INCN-EMS-DOC	Response_Date	Date and time of the response to the incident.	DateTime	8	82	Yes	Cl_data.dispatch_time	Derived from first dispatch record
INCN -EMS - STA - LEVEL	SSL	System status level.	Int (Number)	4	77	Yes		Unavailable
Fixed text, 'CA'	State	Incident state.	Varchar (Text)	50	25	Yes	Hardcoded	Fixed text, 'CA'
	Time_Appointment	Date and time when the patient has the appointment at the facility.	DateTime	8	86	Yes		Unavailable
	Time_Call_Canceled	Time stamp of when the call was canceled.	DateTime	8	67	Yes		Unavailable
INCN -EMS - TICL	Time_Call_Closed	Time stamp of when the call was closed.	DateTime	8	52	Yes	Cl_data.clear_time	Time call was cleared.
INCN -EMS - TICE	Time_Call_Received	Time stamp of when the call was ready to be dispatched.	DateTime	8	50	Yes	Cl_data.time_queued	Time when call was saved and queued.
	Time_Call_Taking_	Time stamp of	DateTime	8	51	Yes	cl_data.time_queued	Time when call was saved and queued.

	Complete	when call taking was completed.	me					
	Time_First_Call_Cleared	Time stamp of when the first unit cleared the call.	DateTime	8	72	Yes		Unavailable
	Time_First_Keystroke	Time stamp of first keystroke of call taking.	DateTime	8	49	Yes		Unavailable
INCN -EMS - TIFO	Time_First_Unit_Arrived	Time stamp of when the first unit arrived at scene.	DateTime	8	55	Yes	CI_Data.at_scene_time	
INCN -EMS - TIFD	Time_First_Unit_Assigned	Time stamp of when the first unit was dispatched.	DateTime	8	53	Yes	CI_Data.dispatch_time	
INCN -EMS - TIER	Time_First_Unit_Enroute	Time stamp of when the first unit was enroute.	DateTime	8	54	Yes	CI_data.enroute_time	
	Time_Phone_Pickup	Time stamp of when call was answered.	DateTime	8	48	Yes		Unavailable
	Time_Pickup_Promised	Date and time when a transport is scheduled.	DateTime	8	84	Yes		Unavailable
	Time_Pickup_Requested	Date and time when a transport is requested.	DateTime	8	85	Yes		Unavailable
	Track_Number	Kaiser Tracking Number	Varchar (Text)	50	79	Yes		Unavailable
INCN - ZIPCODE	Zip_Code	Incident zip code.	Varchar (Text)	50	27	Yes	Address_history.zip	



NPR_Vehicles								
SMC CAD Field	MEDS Field Name	MEDS Field Definition	Data Type	Size	Order	Null able	Versaterm CAD field	Versaterm Attributes/Comments
	Available_Performed_By	Name of the employee entering the time stamp when the unit becomes available.	Varchar (Text)	50	20	Yes		Unavailable
	Business_Clock_Started	Calculated field, time used to start the clock based on AMR's business standards.	DateTime	8	52	Yes		Unavailable
	Business_Unit	Calculated field, the name of the business unit that the revenue of the call belongs to.	Varchar (Text)	50	48	Yes		Unavailable
Fixed text	CADID	An identifier for the source CAD of the record.	Varchar (Text)	10	2	No	cad_config.production_train	Based on CAD configuration of production or test system type, a fixed text of "SMACAD" or "SMCTEST" is sent respectively. Prod = SMACAD Test = SMCTEST
	Call_Disposition	Unit calls disposition.	Varchar (Text)	50	27	Yes		Unavailable
	Call_Outcome	Calculated field, defines the call outcome (T = Transport, D = Dry run, C = cancel ).	Varchar (Text)	50	32	Yes		Unavailable
	Call_Type	Calculated field, defines type of call (System, Non-System, ...etc).	Varchar (Text)	50	33	Yes		Unavailable
	Cancel_Reason	Reason why the unit was canceled.	Varchar (Text)	50	21	Yes		Unavailable
	Cancel_Type	Unit cancellation type.	Varchar (Text)	50	30	Yes		Unavailable

calculated	Chute_Time	Calculated field, the time, in seconds, that took the crews to get Enroute from the time they were dispatched.	Int (Number)	4	40	Yes		Unavailable
	Contract_Name	Calculated field, the name of the contract (usually the name of the county).	Varchar (Text)	50	53	Yes		Unavailable
	Delay_Reason	Reason why the unit was delayed.	Varchar (Text)	50	22	Yes		Unavailable
	Dispatcher_ID	The employee ID number (JDE #).	Varchar (Text)	50	18	Yes		Unavailable
	Dispatcher_Name	Name of the employee dispatching the unit.	Varchar (Text)	50	19	Yes		Unavailable
	Drop_Time	Calculated field, how long, in seconds, was the unit at the hospital.	Int (Number)	4	41	Yes		Unavailable
	Late	Calculated field based on AMR's vehicles response time standard.	Bit (Yes/No)	1	36	Yes		Unavailable
	Late_Contract	Calculated field, if the unit was late or not based on the 911 contract's standard.	Bit (Yes/No)	1	46	Yes		Unavailable
	Latitude_At_Assign_Time	Latitude of the unit at the time it was dispatched.	Varchar (Text)	15	25	Yes		Unavailable
	Location_At_Assign_Time	Location of the unit at the time it was dispatched.	Varchar (Text)	80	23	Yes		Unavailable
	Longitude_At_Assign_Time	Longitude of the unit at the time it was dispatched.	Varchar (Text)	15	24	Yes		Unavailable
	LOS	Calculated field, defines the unit type responding to	Varchar	50	35	Yes		Unavailable

		the incident (ALS, BLS, CCT,...etc).	(Text)					
Fixed number, 1	Master_Incident_ID	Incident record reference.	Int (Number)	4	3	No	Site_Config.rms_jurisdiction + cl_data.occ_year + cl_date.occ_num	<p>Format: XXYYNNNNNNNNNN</p> <p>Where XX is a numeric EMS RMS jurisdiction, configured within Versaterm CAD for each CAD EMS jurisdiction. YY is the year and NNN is the incident number</p> <p>Versaterm EMS CAD jurisdiction, will be mapped to numeric RMS jurisdiction for EMS, where it will be used as the master incident ID.</p>
	Number_Of_Victims_Seen	Number of patients at the scene.	Int (Number)	4	26	Yes		Unavailable
calculated	On_SceneTime	Calculated field, how long, in seconds, was the unit at the scene.	Int (Number)	4	43	Yes		Unavailable
	Processed	Calculated field, flags if the calculations are completed or being performed on the record.	Bit (Yes/No)	1	54	Yes		Unavailable
derived	Rec_ID	A unique, auto-generated numeric identifier.	Int (Number)	4	1	No	counter field based on number of records	<p>Counter field based on each unit dispatched.</p> <p>I.e. if 2 units have been dispatched, there will be two unit records, first with 1 and second with 2. When processing fire units, the id starts at 1000. i.e. 2 fire units, first will be 1001, and second will contain 1002.</p>



	Response_Type	Calculated field, defines type of response based on AMR's business standard (Emergent, Non-Emergent,Scheduled,...etc)	Varchar (Text)	50	34	Yes		Unavailable
	Response_Type_Contract	Calculated field, defines type of response based on the 911 contract's standard (Emergent, Non-Emergent,Scheduled,...etc)	Varchar (Text)	50	47	Yes		Unavailable
INCN-EMS-CASE1	Run_Number	The number assigned to that run.	Varchar (Text)	30	6	Yes	Cl_data.jur + cl_data.occ_year + cl_data.occ_num	Format: JJYY-NNNNNNNNNN Where JJ is jurisdiction such as DC for Daly City. NNN is unique incident number
	Staged_Performed_By	Name of the employee staging the unit to the call.	Varchar (Text)	50	73	Yes		Unavailable
	Task_Time	Calculated field, how long, in seconds, it took the unit to complete the task, from the time they got Enroute to the time they were clear.	Int (Number)	4	42	Yes		Unavailable
INCN -EMS - TIFD	Time_Assigned	Time stamp when the unit was assignd to a call.	DateTime	8	8	Yes	fdp_data.dispatch_time	
INCN -EMS - TIFO	Time_At_Scene	Time stamp when the unit arrived at scene.	DateTime	8	10	Yes	fdp_data.at_scene_time	
NCN -EMS - TIAH	Time_Available_At_Scene	Time stamp when unit was available at scene.	DateTime	8	28	Yes	Status_times.status_time	County to identify available at scene code so it can be mapped to send or not.
NCN -EMS - TICL	Time_Call_Cleared	Time stamp when the unit was cleared at the hospital.	DateTime	8	51	Yes	fdp_data.inservice_time	
	Time_Clock_Started	Calculated field, time used to start the clock based on the 911 contract's standards.	DateTime	8	44	Yes		Unavailable
INCN -EMS -	Time_Enroute	Time stamp when the crew	DateT	8	9	Yes	Fdp_data.enroute_time	

TIER		is enroute to a call.	ime					
	Time_Staged	Time stamp when the unit arrived at the staging area waiting for approval to proceed to the scene.	DateT ime	8	11	Yes		Unavailable
	Time_Status_Changed	Time stamp when unit status was changed.	DateT ime	8	31	Yes		Unavailable
INCN-EMS-UNIT	Unit_Number	Identifier of the responding unit.	Varch ar (Text)	10	5	Yes	fdp_data.app_id	
	Vehicle_ID	Vehicle information reference.	Varch ar (Text)	10	7	Yes		Unavailable
	Vehicle_Jurisdiction	Jurisdiction of where the unit belongs to.	Varch ar (Text)	50	49	Yes	fdp_data.jurisdiction	
derived, same as Rec_ID	Vehicle_Rec_ID	Vehicle record reference.	Int (Num ber)	4	4	No	Counter field	Counter field based on number of records added.
	VRT_911	Calculated field, vehicle's response time in seconds based on the 911 contract's standards.	Int (Num ber)	4	38	Yes		Unavailable
	VRT_KPI	Calculated field, vehicle's response time in seconds based on AMR's business standards.	Int (Num ber)	4	39	Yes		Unavailable
	VRT_Private	Calculated field, vehicle's response time in seconds based on private contracts contract standards.	Int (Num ber)	4	37	Yes		Unavailable

NPR_Crews								
CAD Field	Field Name	Field Definition	Data Type	Size	Order	Null able	Versaterm CAD fields	Versaterm Attributes/Comments
Fixed text	CADID	An identifier for the source CAD of the record.	Varchar (Text)	10	2	No	cad_config.production_train	Based on CAD configuration of production or test system type, a fixed text of "SMACAD" or "SMCTEST" is sent respectively.  Prod = SMACAD Test = SMCTEST
	Crew1_ID	ID of crew.	Varchar (Text)	50	6	Yes	aa_personnel.personnel_no	CHAR(8)  Personnel ID number at time of in-service. Only available if transfer to MEDS on call close.  Versaterm CAD accepts more than 3 crew members. This field will be entered based on first crew member found sorted by ID.
	Crew1_Name	Name of crew.	Varchar (Text)	50	9	Yes	Officer_number.translation	The translation will be clipped into 50 characters. Note that Versaterm personnel name translation can be up to 79 characters in length.
	Crew2_ID	ID of crew.	Varchar (Text)	50	7	Yes	aa_personnel.personnel_no	CHAR(8)  Personnel ID number at time of in-service.  This field will be entered based on second crew member found sorted by ID.
	Crew2_Name	Name of crew.	Varchar (Text)	50	10	Yes	Officer_number.translation	The translation will be clipped into 50 characters. Note that Versaterm personnel name translation

								can be up to 79 characters in length.
	Crew3_ID	ID of crew.	Varchar (Text)	50	8	Yes	aa_personnel.personnel_no	CHAR(8)  Personnel ID number at time of in-service.  This field will be entered based on third crew member found sorted by ID.
	Crew3_Name	Name of crew.	Varchar (Text)	50	11	Yes	Officer_number.translation	The translation will be clipped into 50 characters. Note that Versaterm personnel name translation can be up to 79 characters in length.
Fixed number, 1	Master_Incident_ID	Incident record reference.	Int (Number)	4	3	Yes	Site_Config.rms_jurisdiction + cl_data.occ_year + cl_data.occ_num	Format: XXYYNNNNNNNNNN  Where XX is a numeric EMS RMS jurisdiction, configured within Versaterm CAD for each CAD EMS jurisdiction. YY is the year and NNN is the incident number  Versaterm EMS CAD jurisdiction, will be mapped to numeric RMS jurisdiction for EMS, where it will be used as the master incident ID.
derived, same as Rec_ID	Rec_ID	A unique, auto-generated numeric identifier.	Int (Number)	4	1	No	Counter field	Counter field based on number of records added.
	Run_Number	Vehicle's run number reference.	Varchar (Text)	50	4	Yes	Cl_data.jur + cl_data.occ_year + cl_data.occ_num	Format: JJYY- NNNNNNNNNN  Where JJ is jurisdiction such as DC for Daly City. NNN is unique incident number
	Vehicle_ID	Vehicle record reference.	Varchar	50	5	Yes		Unavailable

(Text)

**NPR\_Transports**

CAD Field	Field Name	Field Definition	Data Type	Size	Order	Null able	Versaterm CAD fields	Versaterm Attributes/Comments
	Arrived_Destination_Performed_By	Name of the employee entering the time when unit arrived at the destination (usually hospital).	Varchar (Text)	50	31	Yes		Unavailable
	Authorization_Number	Patient billing authorization number	Varchar (Text)	50	47	Yes		Unavailable
Fixed text	CADID	An identifier for the source CAD of the record.	Varchar (Text)	10	2	No	cad_config.production_train	Based on CAD configuration of production or test system type, a fixed text of "SMACAD" or "SMCTEST" is sent respectively.  Prod = SMACAD Test = SMCTEST
	Delayed_Availability_Performed_By	Name of the employee entering the time when the unit's availability was delayed.	Varchar (Text)	50	32	Yes		Unavailable
	Depart_Scene_Performed_By	Name of the employee entering the time when unit departed the scene.	Varchar (Text)	50	30	Yes		Unavailable
	From_Address	Transport pickup address.	Varchar (Text)	80	36	Yes		Unavailable
	From_Address2	Transport pickup address 2.	Varchar (Text)	80	46	Yes		Unavailable
	From_Apartment	Transport pickup apartment number.	Varchar (Text)	50	37	Yes		Unavailable
	From_City	Transport pickup city.	Varchar (Text)	50	38	Yes		Unavailable
	From_County	Transport pickup county.	Varchar (Text)	50	41	Yes	Hardcoded	Fixed text, "San Mateo"?
	From_Latitude	Transport pickup latitude.	Varchar (Text)	50	44	Yes		Unavailable
	From_Location_Code	Transport pickup location code.	Varchar (Text)	50	34	Yes		Unavailable

	From_Location_Name	Transport pickup location name.	Varchar (Text)	50	35	Yes		Unavailable
	From_Location_Type	Transport pickup location type.	Varchar (Text)	50	42	Yes		Unavailable
	From_Longitude	Transport pickup longitude.	Varchar (Text)	50	43	Yes		Unavailable
	From_Map_Page	Transport pickup map page info.	Varchar (Text)	50	45	Yes		Unavailable
	From_State	Transport pickup state.	Varchar (Text)	50	39	Yes		Unavailable
	From_Zip_Code	Transport pickup zip code.	Varchar (Text)	50	40	Yes		Unavailable
Fixed number, 1	Master_Incident_ID	Incident record reference.	Int (Number)	4	3	No	Site_Config.rms_jurisdiction + cl_data.occ_year + cl_date.occ_num	Format: XXYYNNNNNNNNNN  Where XX is a numeric EMS RMS jurisdiction, configured within Versaterm CAD for each CAD EMS jurisdiction. YY is the year and NNN is the incident number  Versaterm EMS CAD jurisdiction, will be mapped to numeric RMS jurisdiction for EMS, where it will be used as the master incident ID.
	Pat_DOB	Patient's date of birth	DateTime	8	48	Yes		Unavailable
	Patient_Info_ID	Patient record reference.	Int (Number)	4	8	Yes		Unavailable
	Pt_First_Name	Patient's first name.	Varchar (Text)	50	5	Yes		Unavailable
	Pt_Last_Name	Patient's last name.	Varchar (Text)	50	6	Yes		Unavailable
	Pt_Mid_Name	Patient's middle initial.	Varchar	50	7	Yes		Unavailable

			(Text)					
	Rec_ID	A unique, auto-generated numeric identifier.	Int (Number)	4	1	No	Hardcoded	Fixed number, 1
INCN -EMS - TIFC	Time_Arrived_Destination	Time stamp when unit arrived at the destination (usually hospital).	DateTime	8	23	Yes	fdp_data.transport_complete	
	Time_Cleared_Destination	Time stamp when the unit has cleared at the hospital.	DateTime	8	25	Yes	fdp_data.inservice_time	
	Time_Delayed_Availability	Time stamp when unit's availability was delayed.	DateTime	8	24	Yes		Unavailable
INCN -EMS - TIFT	Time_Depart_Scene	Time stamp when unit departed the scene transporting patient.	DateTime	8	22	Yes	fdp_data.transport_time	
	To_Address	Transport destination address.	Varchar (Text)	80	11	Yes		Unavailable
	To_Apartment	Transport destination apartment number.	Varchar (Text)	50	12	Yes		Unavailable
	To_City	Transport destination city.	Varchar (Text)	50	13	Yes		Unavailable
	To_County	Transport destination county.	Varchar (Text)	50	17	Yes		Unavailable
	To_Latitude	Transport destination latitude.	Varchar (Text)	50	20	Yes		Unavailable
	To_Location_Code	Transport destination location code.	Varchar (Text)	50	9	Yes		Unavailable
	To_Location_Name	Transport destination location name.	Varchar (Text)	50	10	Yes		Unavailable
	To_Location_Type	Transport destination location type.	Varchar (Text)	50	18	Yes		Unavailable
	To_Longitude	Transport destination longitude.	Varchar (Text)	50	19	Yes		Unavailable
	To_Map_Page	Transport destination map page info.	Varchar (Text)	50	21	Yes		Unavailable
	To_Phone_Number	Transport destination phone	Varchar	50	16	Yes		Unavailable



		number.	(Text)					
	To_State	Transport destination state.	Varchar (Text)	50	14	Yes		Unavailable
	To_Zip_Code	Transport destination zip code.	Varchar (Text)	50	15	Yes		Unavailable
	Transport_Mode	Mode of transport (Ground, Air,... etc)	Varchar (Text)	50	33	Yes		Unavailable
derived, same as Rec_ID	Vehicle_Rec_ID	Vehicle record reference.	Int (Number)	4	4	No	Counter field	Counter field based on number of records added.

### **Business Continuity/Interface Availability**

This interface can be made available, or not, from the implementation/test, production and disaster recovery servers. The interface may be “turned off” with the appropriate configuration changes.

### **Interface Testing**

Interface testing is intended to ensure the interface is completely functional as designed. The following are descriptions of the tests to be performed for this specific interface during the Functional Acceptance process. Prior to go-live, the County will provide a test MEDS environment to support development and test activities.

#### **Functional and Completeness Test**

This test will ensure that calls are routed to the MEDS system. Further, this test will ensure that by configuring the “Transfer to RMS” flag, calls-for-service are sent (and re-sent) appropriately.

The test will use two call types. 1) transfer to RMS flag set to “on Call Initiation”. 2 transfer to RMS “on Call Close”. Calls will be created using the test call types configured in the CAD for all jurisdictions to ensure that only calls for the EMS jurisdiction are transferred. Additionally, the transfer can be initiated from the command line. The user will confirm that calls are transferred to the MEDS system as required and on the appropriate intervals.

Upon closing a call, the call will be updated and this test will verify that the updated data is transferred to the MEDS.

#### **Operational Tests**

This test ensures after system reboots, the interface is able to transfer new EMS incident to MEDS.

#### **Performance Tests**

The performance test consists of initiating the transfer, either manually or automatically, ensuring the data is transferred. The time from initiating the transfer to the destination is not to exceed 3 minutes. However, delays caused by the destination system in processing the data are not counted in the calculation.

#### **Exception Testing**

The exception tests consist of disconnecting the interface between CAD and MEDS listening service (e.g. disconnect network between CAD and MEDS) and after reconnecting, ensure CAD can reach the MEDS listening service and calls that are queued in CAD while the interface is disconnected are sent.

### **Responsibilities**

#### **County Responsibilities**

- a. Facilitate and/or configure a test environment to support testing activity.
- b. Provide Versaterm with an updated MEDS SOAP web-service fields specification (data field WSDL).
- c. Configure network access to allow web service communications between the CAD and MEDS.
- d. Coordinate with AMR technical staff to assist in the MEDS interface development and testing.
- e. Review and document any differences in the data being transferred to the end points (e.g. format of incident number, changes to coded values, etc.) and inform the end users of any differences.
- f. Test the interface.

#### **Versaterm Responsibilities**

- a. Develop, install and configure the SOAP web-service requests.
- b. Install and configure the necessary gateways to transfer the incidents to MEDS via web-service.
- c. Perform integration tests on the interface.
- d. Provide assistance and guidance through the County acceptance tests.

## 20. MCC7500 Voice Radio Interface

The voice radio interface contains multiple interface touch points:

- Receipt and processing of PTT/ERTT;
- Radio alerting;
- Console Alias Manager (CAM); and
- AUX I/O

The voice radio interface connects the Versaterm CAD to the Motorola MCC7500 system.

The interface does not support the following touch points as they are no longer required by the County:

- Status messages
- UNS (GPS)
- Text Messaging

### Business Flow Overview

#### Push to Talk (PTT/ERTT)

This interface displays radio identifier, unit and officer information on the CAD Status Screen whenever an officer keys (i.e. presses the Push-To-Talk button) their portable or vehicle mobile radio (PTT). This interface also displays an emergency warning message to all CAD Status Screens when an officer presses the Emergency key/button on their radio (ERTT).

The radio identifier received from the MCC7500 will be validated against County maintained tables in the CAD database to retrieve the appropriate Officer and/or Unit ID information. This information will then be reflected on CAD Status Screen marquees as configured by the mapping of radio talk groups/channels to coverage areas (positions).

The PTT information (unit/officer and radio identification) information will be displayed on the CAD status screen marquee, at only those dispatch consoles configured for the talk group or coverage area mapping, that particular unit/officer is assigned.

ERTT unit/officer and identification will be displayed on the CAD status screen marquee at all dispatch consoles (i.e. wherever the status screen is displayed).

To distinguish the PTT received between a portable radio and an in-car radio, CAD prefixes an indicator of '(P)' for portables radios and '(U)' for in car radios on the Status Screen marquee.

#### Radio Alerting

The radio alerting interface permits the CAD to send alerts.

Automatic radio alerts can be configured by call type so the CAD administrator can configure which call types should send out radio alerts upon dispatch. In this manner, the County can define that a Fire call type alerts, via radio, whereas a police or EMS call type does not.

Additionally, CAD supports groups that can be alerted via radios. This permits the County to configure call types to alert user groups. However, "group IDs" are not sent to the MCC7500 but the Versaterm interface will send individual commands (1 for each radio in the group).

Additionally, radio alerts can be triggered from the command line by specifying the <alert> command followed by <unit number>, <officer id> or <radio id>. If a unit ID is specified, then all radios, assigned to that unit are alerted (i.e. officer portable radio(s) and the in-vehicle radio). The same will apply to Fire and EMS units – requiring that Fire and EMS personnel be identified to each unit. If an officer/personnel ID is used, then only the portable radio is alerted.

When a radio alert is required, the Versaterm CAD formulates and addresses the transaction and submits it to the VMC (Versaterm Message Controller) where it is queued for processing. Once processed, the VMC-plugin formulates the gateway transaction and sends it, via an ASCII encoded TCP/IP message, to the Versaterm MCC7500 radio interface module (MC75PTT), located on an MCC7500 Motorola console PC. Versaterm MC75PTT module then sends the alert message to the MCC7500 API. The MC75PTT can also be installed on a secondary MCC7500 console, for redundancy. Should the primary console fail (down), the secondary MC75PTT will connect to VMC and process transactions.

### **MKM 7000 Console Alias Manager (CAM)**

This interface publishes police, fire and EMS unit and officer identifications and corresponding radio associations to the Motorola CAM server to manage local aliases within the CAM. Providing this information to the CAM allows for meaningful aliases to be displayed on the radio consoles.

A transaction is sent to the CAM any time a unit or officer is signed on or off CAD with a corresponding radio identifier. Transactions are also initiated any time the radio identifier for a unit or officer is modified. The transaction includes <unit> for mobile radios and <unit>:<officer ID> for portable radios.

When the interface is started, a full list of units, officers and radio id associations is published to the CAM server. From CAD, a function exists to allow supervisors to manually initiate a full re-sync transfer the CAM server.

When a CAM transaction is required, the Versaterm CAD formulates and addresses the transaction and submits it to the VMC (Versaterm Message Controller) where it is queued for processing. Once processed, the VMC-plugin submits the transaction to the CAM service using a RESTful web service call.

The current Versaterm CAM interface publishes unit identifications to the CAM. The interface is enhanced with the ability to also publish the officer ID associated with portable radios.

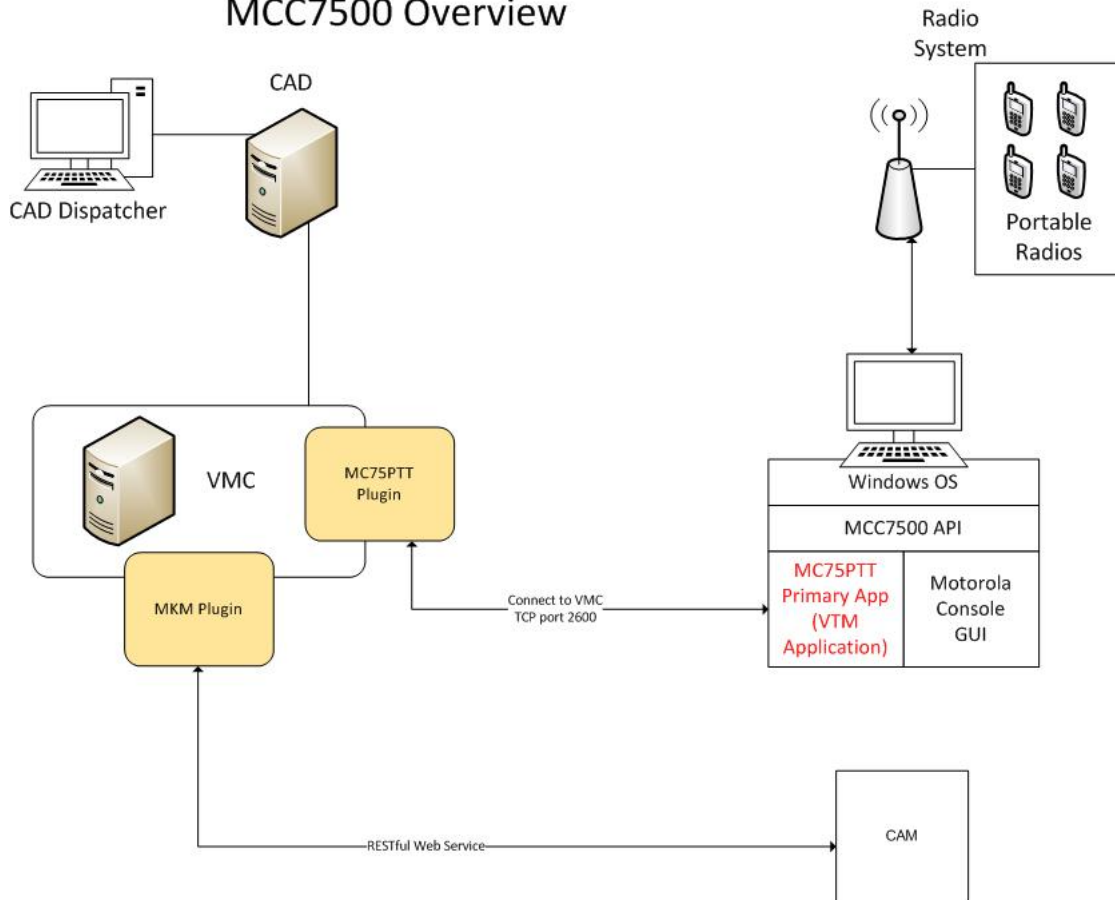
### **AUX I/O**

This interface receives auxiliary relay codes and their statuses from the MCC7500 console and sends a pre-configured CAD message to pre-determined destination list.

The Versaterm CAD is enhanced with a mapping table to allow the County to pre-configure a corresponding message and a message handle for each relay code and status ("ON" or "OFF"). For example, CAD can be configured so that whenever an "ON" status for a particular auxiliary code is received, a pre-configured message is sent to particular message handle (e.g. turn on weather channel for national weather alerts). A message handle can comprise single or multiple destinations.

When an AUX I/O transaction is initiated, the MCC7500 console sends the AUX I/O relay code to the Versaterm radio interface module (MC75PTT) residing on the MCC7500 Motorola console PC. The MC75PTT module then sends the transaction to the VMC (Versaterm Message Controller) where it is queued for processing. Once processed, the VMC-plugin formulates the transaction and sends it to CAD for processing and delivering the pre-defined CAD message to the appropriate message handle based on the AUX I/O relay code received.

## MCC7500 Overview



### Configuration

To configure the PTT/ERTT interface, the CAD Administrator enters the portable radio identification into the CAD 'Portable Radio' table. The radio identification number entered in the CAD "lid" field (up to 32 characters) maps to the CAD portable radio number (up to 6 alphanumeric). The portable radio may be optionally assigned permanently to an officer – recorded in the 'Officer Identification Number' table (this may be overridden at sign-on or during the shift). The CAD Administrator maps vehicle mobile radios ID to the vehicle ID in the 'Vehicle ID' table within CAD. Optionally, the mobile radio ID can be updated / overridden at MDT sign-on. See the "Versaterm CAD / Radio Configuration User/Administrator Guide" for full configuration details (Version 7.5 Edition 1.0 or higher).

### Communication

Communication from the VMC to the Versaterm MCC7500 radio interface module (MC75PTT), residing on the MCC7500 console, is provided via a TCP/IP communication link. This communication is used for PTT/ERTT, radio alerting and AUX I/O.

Communication between the VMC and the CAM server is provided via RESTFUL web services.

Data transmissions (message formatting and flow control) are provided as identified in the Motorola MCC7500 SDK.

### **Business Continuity/Interface Availability**

This interface can be made available on all servers (production, implementation/test and disaster recovery) provided connectivity between VMC application server and the MCC7500 console as well as CAM is available. The interface can be enabled/disabled by configuring the appropriate interface configuration parameter in the interface section of the local server resource or similar configuration file.

### **Interface Testing**

These tests are intended to ensure the interface is completely functional as designed. Below are descriptions of the tests to be performed for the specified interface functionality during the functional acceptance test period.

#### **Functional and Completeness Test**

This specific test is to ensure when a call is dispatched or a manual alert is triggered, the alert(s) are sent and delivered to the correct recipients.

Another test includes pressing the PTT and ERTT buttons from the portable or from in car radio and ensuring the Unit/Officer information is displayed on the status screen marquee. For PTT transactions the information is displayed on status screen marquee of the dispatch consoles responsible for that particular area of the Unit/Officer. For ERTT transactions, the information is displayed at all dispatch consoles with a status screen displayed.

Test for CAM consists of signing on unit and officer portables on CAD and confirming the corresponding alias is displayed on the radio console as expected.

Further test consists of initiating an AUX I/O transaction to CAD and ensuring the appropriate CAD message is delivered as expected.

#### **Operational Tests**

This test ensures after system reboots, the interface is available and able to communicate with MCC7500 console and CAM.

#### **Performance Tests**

The performance test consists of dispatching a device and measuring the number of seconds between the time the command is issued until it reaches the MCC7500 console, to ensure it does not exceed two (2) seconds. Further test includes sending an AUX I/O relay code and measuring the number of seconds between VMC receiving the code and dispatcher receiving the corresponding pre-configured message for that AUX I/O code on CAD.

Similar test for CAM consists of signing on a unit radio or officer portable on CAD and measuring the number of seconds between the time the radio is signed on in CAD until it reaches the reaches CAM, to ensure it does not exceed two (2) seconds.

Time delays introduced by the CAM, MCC7500 console and the network are not included in any time measurements.

#### **Exception Testing**

The exception test consists of disconnecting the link between the VMC and the MCC7500 console and confirming that error messages are delivered immediately to the CAD dispatcher when an alert is requested. Further tests confirm that, after reconnecting the link, the communication resumes.

### **Responsibilities**

#### **County Responsibilities**

- a. Configure network access to permit the VMC system to connect to the MCC7500 console.
- b. Configure network access to permit the VMC system to connect to the CAM.
- c. Provide a test facility for the interface.
- d. Configure the CAD tables (portable\_id, vehicle\_id, officer\_number and message handles, etc) as required
- e. Test the interface.

Versaterm Responsibilities

- a. Develop, install and test the MCC7500 interface, including CAM and AUX I/O.
- b. Enhance the Versaterm CAM interface with the ability to submit officer ID in addition to unit id for portable radios.
- c. Provide assistance and guidance through the County acceptance tests.



## 21. AXON Evidence.com

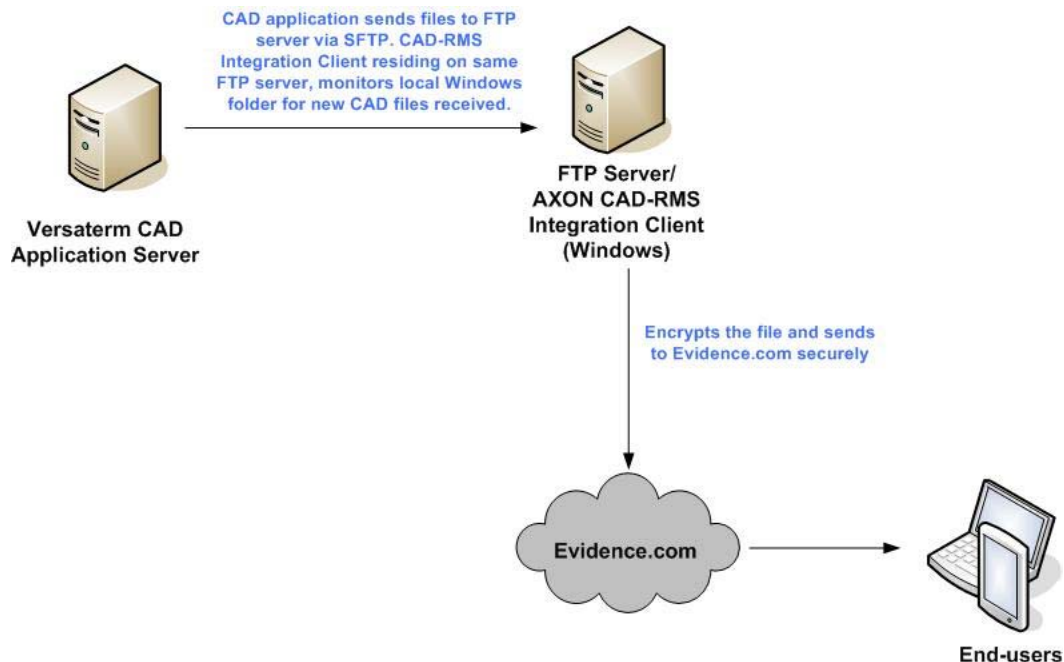
This interface provides dispatch information to AXON Evidence.com. The metadata information sent to AXON from CAD is then applied to video-evidence files in Evidence.com.

### Process Flow

Calls in where Law Enforcement Units are dispatched to an incident are required in order for this interface to function as designed. The interface from the Versaterm CAD extracts metadata of the dispatched unit(s) for transfer to Evidence.com. The extracts are initiated by a scheduled job in the CAD application server at 24-hour intervals. The application searches for cleared incidents in the past 96 hours. Separate record(s) are extracted for each officer dispatched to the incident. The data extracted is then written to a designated shared folder on the CAD application server, in a comma separated value formatted text file. The extract files are transferred via SFTP to a designated transfer folder on County FTP server, ready for AXON to ingest.

The CAD-RMS Integration Client, provided by AXON, is installed on the FTP server and monitors the designated transfer folder for new text files submitted from CAD.

The following diagram illustrates the process of the CAD data file transfers to Evidence.com:



### Communication

The communication between AXON's CAD-RMS Integration Client application and the CAD application server is provided via password less SFTP, using server rsa public keys.

### Data Field Mapping

The data files created by Versaterm CAD conform to AXON's file specifications as defined in the document titled "Evidence.com CAD-RMS Integration Service Guide" (file name: "AXON – Evidence.com CAD-RMS Integration Service Guide Rev D.pdf").

The following table describes the order and the fields in the data files that is generated from the CAD system:

AXON Field Name	AXON Description	Required or Optional by AXON	Versaterm Field Name	Versaterm Comments
Event ID	The unique ID of the event. The data in the column may reflect INCIDENT#, CADIncidentNumber, or a similar field.	Required	Cc_data.jur + cc_data.occ_year + cc_data.occ_num	Format: JJYY- NNNNNNNNNN  Where JJ is jurisdiction such as DC for Daly City. NNN is unique incident number
Officer Badge ID	The unique badge ID assigned to the officer. This ID must exactly match the officer badge ID assigned to the Axon camera in Evidence.com. If badge IDs differ between systems, this must be resolved during the implementation process.	Required	Dc_data.officer_no Or dc_data.officer_no2	For two officer units, a separate row is generated using officer_no2 database field
Officer Dispatched DateTime	The start time of the officer event. Used to define the beginning of the time range that the start time of the officer's video evidence file must be within. Dispatched times must be in ISO 8610-compliant format, either using UTC or timezone offset. <ul style="list-style-type: none"> <li>UTC format example — 2015-11-13T21:35:42Z</li> <li>Timezone offset format example — 2015-11-13T21:35:42-08:00</li> </ul> The difference between the dispatched and cleared times must to be greater than 0 (zero) but less than 8 hours.	Required	dc.data.dispatch_time	Date and time of officer dispatched.
Officer Cleared DateTime	The end time of the officer event. Used to define the end of the time range that the start time of the officer's video evidence file must be within. Cleared times must be in ISO 8610-compliant format, either using UTC or timezone offset. <ul style="list-style-type: none"> <li>UTC format example — 2015-11-13T21:35:42Z</li> <li>Timezone offset format example — 2015-11-13T21:35:42-</li> </ul>	Required	Dc_data.inservice_time	Date and time of officer going inservice.

	08:00			
Report Number	The RMS ID of the report about the CAD event. If no RMS ID is available, this field can be empty.	Optional		Unavailable
Title	A title for the event.	Optional		Unavailable
Tag	Text labels that apply to the event. If you include more than one Tag field, the heading should be "Tag" for each of them.	Optional		Unavailable
Category	The CAD event type code of the event. Evidence.com uses the event type provided in this column to determine which retention category is assigned to matching video evidence files.	Optional	Cc_summary.final_case_type	CAD's incident final case type code
Category2	Incident clearance code	Optional	Cc_summary.cleared_by	CAD's cleared by code (1 character in length)
Street	Street address or intersection of the event. This information should be recognizable by Bing Maps; otherwise, locationbased Evidence.com features will be unavailable for videoevidence files matched to the event.	Optional	Cc_seen_at.address or cc_data.address	In addition to the location where the call occurred on, if an incident response location is present the cc_seen_at table is used (e.g. c_seen_at.address), representing the location where the units responded to. Otherwise, if no response location is present, cc_data table is used.
City	The full name of the city in which the event occurred.	Optional	cc_seen_at.municipality or cc_data.municipality	Translation of the municipality code is sent.
State	State in which the event occurred.	Optional	Hardcoded	"CA"
ZIP Code	The postal code within which the event occurred.	Optional	Addres_history.zip	

Sample CAD data extract file:

event\_id,officer\_badge\_id,officer\_dispatched\_datetime,officer\_cleared\_datetime,report\_number,title,tag,  
,category,category2,street,city,state,zip\_code

SM18-10100,A1234, 2018-09-09T16:12:53-0800,2018-09-09T16:15:47-0800,,,,TSTOP,C,696 JOANNE  
DR,SMC,CA,94402

SM18-10100,A2345, 2018-09-09T16:13:25-0800,2018-09-09T16:16:42-0800,,,,TSTOP,C,696 JOANNE  
DR,SMC,CA,94402

### **Business Continuity/Interface Availability**

This interface is available from the production server. This interface is also available from the implementation/test server by configuring the CAD-RMS Integration Client to monitor a separate folder on the FTP server, where the test files are sent from the implementation/test CAD application server. This interface can also be available from the disaster recovery server, providing the CAD DR application is able to submit CAD text files via password less SFTP, to the FTP server.

### **Interface Testing**

These tests are intended to ensure the interface is complete as designed. The following are descriptions of the tests to be performed for the specified interface functionality during the functional acceptance test period.

#### **Functional and Completeness Test**

This test ensures that the CAD application server submits the CAD data files to the FTP server.

#### **Operational Tests**

This test ensures the CAD application server is able to send files to the FTP server via SFTP after system reboots. The CAD application server will be shutdown/re-started and ensure CAD services are started as well as the SFTP file transfers to FTP server is available.

#### **Performance Tests**

There is no performance tests associated with this interface. The extracted CAD files are transferred to the County FTP server daily and processed as received.

#### **Exception Testing**

The exception testing consists of disconnecting the network between CAD application server and the FTP server, after reconnecting, ensure CAD application server is able to resume file transfers to the FTP server via SFTP.

### **Responsibilities**

#### **County Responsibilities**

- Provide an FTP server, meeting AXON's minimum server requirement, for the CAD-RMS Integration Client.
- Provide network connectivity between the FTP server and the CAD application server.
- Coordinate with AXON technical staff to assist in the interface development and testing.
- Install and maintain the CAD-RMS Integration Client on the same FTP machine.
- Assist Versaterm with server rsa public key installation on FTP server after each upgrade.
- Test the interface.

#### **Versaterm Responsibilities**

- Develop, install and configure the CAD data extracts for AXON interface.

- Install and configure Versaterm SFTP script to send CAD data files to FTP server where AXON client monitors.
- Copy CAD server public key to FTP server, for password less SFTP transfers from CAD server after each CAD application server upgrade.
- Provide assistance and guidance in the development and testing process.

## 22. Fire Station Alerting

This interface consists of a two-way communication between the Fire Station Alerting systems and the Versaterm CAD. This interface will provide for:

- Automatically send alerting code assigned to station when dispatching apparatus in that station.
- Manually activate tones in stations via CAD command
- Sending and receiving status changes of apparatus in the station.

There are three Fire Station Alerting systems used by the County:

1. FireDispatch.com FSA (TCP/IP)
2. Zetron M26/M6 (serial)
3. Zetron M25 (serial) – only used as a backup system to the above two primary systems.

The Versaterm CAD is enhanced with the ability to indicate the corresponding alerting provider (FSA or M26) that is associated to each station. The Zetron M25 Tone Encoding system is used in the event either primary system fails. That is, when a station alerting systems fails (e.g. FSA IP or M26), CAD will attempt to send a radio page using the Zetron M25 interface. When the M25 is activated, it will send a radio tone assigned to a station of the dispatched unit(s). See the “Zetron M25” interface control document for details on the Zetron M25 interface.

## Business Flow Overview

### Outgoing transactions (from CAD to FSA and M26)

Outgoing transactions consist of changing the alert state (tone) of a station or unit and changing the state of a unit (status changes). Setting the station alerting PA state to “On” or “Off” is disabled in CAD as this feature is not used by the County.

When an outgoing transaction is required, the Versaterm CAD formulates and addresses the transaction and submits it to the VMC (Versaterm Message Controller) where it is queued for processing. Once processed, the corresponding VMC-plugin (SMC\_FSA or SMC\_M26), developed for the two (2) different station alerting systems, formulates the gateway transaction and sends it to the appropriate system. For a transaction destined to FSA, an ASCII encoded TCP/IP message is formulated and sent to the FireDispatch.com FSA server. For transactions destined to Zetron M26, a message is formulated following Zetron M26 protocol and sent over to Zetron M26 system.

### Incoming transactions (from FSA and M26 to CAD)

Incoming transactions consist of Station Status notifications (tone received), Unit Status notifications (tone received, status changes), Audio Device status notifications and failure message when either alerting systems are un-reachable due to failure (down).

Incoming transactions are received by the VMC from FSA or M26 systems. Each alerting system (FSA or M26) submits transactions to VMC and their corresponding VMC-plugin (SMC\_FSA or SMC\_M26) where it is queued for processing. Once processed, the transaction is sent to the CAD application.

## Configuration

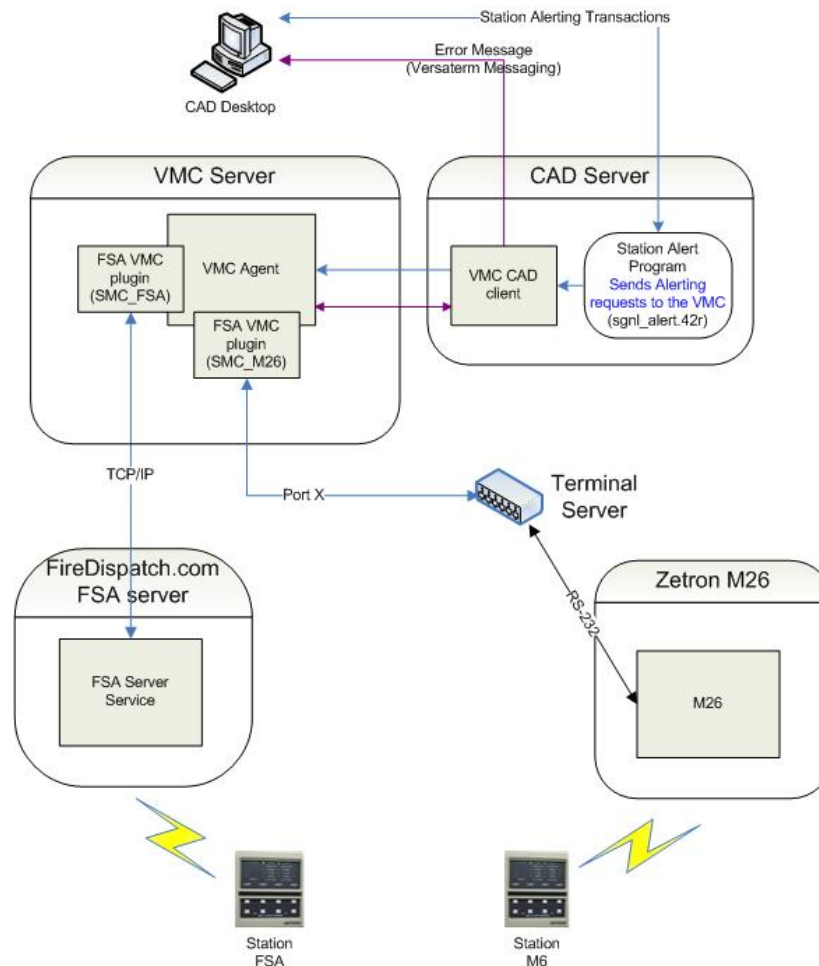
Station Alerting configuration, including entering alerting codes by station or by call type and mapping of status codes between CAD and alerting system, is identified in the “Versaterm CAD Station Alerting / User Guide Version 7.5”.

## Communication

Communication between the Versaterm Message Controller (VMC) and FSA will be via TCP/IP. Versaterm will develop a program to communicate to the FSA system adhering to the FireDispatch.com FSA specifications contained in the document titled "CAD Interface Specification" (file name: FDCI\_CAD\_Interface.pdf).

The Zetron M26 alerting system communication to the VMC is provided via RS-232 serial communication link. The RS-232 (serial communication) cable links the Zetron M26 system to a terminal server. The terminal server provides the VMC server with network access to the serial device.

The following diagram illustrates connectivity points between the CAD system and each station alerting system:



## Business Continuity/Interface Availability

This interface can be available on all servers (production, implementation/test and disaster recovery) provided communication can be established to each alerting system. For example, a terminal server is available for connectivity between VMC application server and the Zetron M26 system. The interface can be enabled/disabled by configuring the appropriate interface configuration parameter in the interface section of the local server resource or similar configuration file.

## **Interface Testing**

These tests are intended to ensure the interface is functional as designed. The following are descriptions of the tests to be performed for the specified interface functionality during the Functional Acceptance Test period.

### **Functional and Completeness Test**

This test ensures that whenever a dispatch is sent to a single apparatus, within a station, the correct system is alerted, (e.g. FSA or M26), according to the apparatus configuration.

Additional tests include changing a unit status from CAD and MDT and ensuring the status is reflected on the station alerting system.

### **Operational Tests**

This test ensures after system reboots, the interface is available and able to communicate with both station alerting systems, FSA and Zetron M26.

### **Performance Tests**

The performance test consists of dispatching a unit and measuring the number of seconds between the time the command is issued until it reaches the alerting system. The time lapse should not exceed two seconds. Time delays introduced by the alerting systems and the network are not included in any time measurements.

### **Exception Testing**

The exception test consists of disconnecting the network link between the VMC and the station alerting system (FSA and Zetron M26) and confirming that error messages are delivered immediately to the CAD dispatcher when a station alert is requested. During the disconnect, ensure the M25 system is signaled as a backup system to the FSA and M26. Further tests confirm that, after reconnecting the link(s), the communication resumes.

## **Responsibilities**

### **County Responsibilities**

- a. Acquire and configure the necessary terminal server(s).
- b. Provide the communication link between the Zetron M26 and the terminal server(s).
- c. Configure network access between the FSA and the CAD/VMC server.
- d. Provide a test facility for the interface.
- e. Simulate FSA and M26 failure for M25 failover testing.
- f. Configure the necessary CAD tables (tones, station alert codes, etc.).
- g. Test the station alerting interface.

### **Versaterm Responsibilities**

- d. Enhance the CAD fire station configuration screens to include an alert provider field to identify which alerting system is associated with each fire station.
- e. Develop, install and test the interface for the FireDispatch.com FSA system.
- f. Install and test the interface for the Zetron M26 system.
- g. Provide assistance and guidance through the County acceptance tests.



## 23. Live Move Up Module (LiveMUM) – Deccan

This interface provides a two-way data transfer between Deccan's LiveMUM system and the Versaterm CAD system. Fire and EMS incident and unit information are transferred from CAD to the LiveMUM system. Unit relocation transactions are received in Versaterm CAD from the LiveMUM system whenever a unit move is necessary.

### Business Flow Overview

This interface synchronizes EMS and Fire incident data, unit status information and unit locations from the vCAD system to the LiveMUM system. Transactions are initiated from CAD to LiveMUM any time an incident is added, updated or closed, a unit is dispatched, a unit status or location is updated or when a unit transport or move is initiated.

Unit relocation (station/post moves) transactions received in CAD from the LiveMUM system are automatically applied within CAD.

### Process Flow

When a transaction is initiated from the Versaterm CAD, CAD formulates the request and submits it to the appropriate VMC (Versaterm Message Controller) plugin responsible for LiveMUM communication, where it is queued for processing. The LiveMUM VMC-plugin then formulates the corresponding LiveMUM transaction and submits it to LiveMUM system for processing.

On startup of the LiveMUM VMC-plugin, it initiates a TCP/IP connection to the LiveMUM server. Once a successful connection is established between the VMC-plugin and the LiveMUM system, the VMC requests a current list of all logged on Fire and EMS units, their status and incidents from CAD. The units list received by VMC is then sent to the LiveMUM system for synchronization purposes. After completion of the synchronization, LiveMUM transactions can be initiated from CAD.

To ensure connectivity at all times, two-way heartbeats are exchanged between the Versaterm CAD and the LiveMUM system whenever the interface is idle. Heartbeats are initiated from the VMC at ten (10) second intervals. LiveMUM heartbeats or any transaction received by the VMC from LiveMUM, resets the VMC heartbeat timer. Should the heartbeat timer expire due to no transaction received in VMC from LiveMUM, the VMC disconnects its connection to the LiveMUM primary server and attempts to reconnect. That is, when 10 seconds elapses since the last message received from LiveMUM, VMC attempts to re-connect to the primary LiveMUM system. When re-connection to the primary LiveMUM system fails, the VMC-plugin attempts to connect to the secondary (backup) LiveMUM server. Whether the connection to the secondary (backup) LiveMUM system is successful or not, a notification message is initiated from the VMC and sent to all signed on CAD supervisor positions. The notification message indicates whether the CAD connection to the LiveMUM backup system is successfully established or it has failed (disconnected). Any transactions initiated from CAD to the LiveMUM system while the connection is not established are discarded by the VMC.

The LiveMUM server also has heartbeat mechanism in place where it sends transactions to CAD in order to monitor CAD connectivity.



### Supported Transactions

The following table describes the LiveMUM transactions and how they are initiated from Versaterm CAD:

LiveMUM Message Type	Description	Initiated by Versaterm CAD
Event	Event information update	After creating a CAD incident. When a CAD incident is updated.
Unit	Unit information update	When successful connection is established on CAD interface startup. When unit information is updated.
AVL	Unit AVL (only) update	When a unit's AVL location is updated.
Polling	Polling messages	When heartbeat transactions are sent from CAD to LiveMUM.
User sign on/off	TBD for passing CAD login credentials to LiveMUM	Not supported (based on LiveMUM specification, not yet implemented).

The following table describes the LiveMUM transaction that is initiated from LiveMUM system to the Versaterm CAD:

LiveMUM Message Type	Description	Received by Versaterm CAD
Relocation	Message to trigger unit relocation in CAD	CAD automatically applies the unit relocation (unit move) within CAD.  CAD system message is logged indicating the unit move and user id received from LiveMUM.
Polling	Polling messages	When heartbeat transactions are sent from LiveMUM to CAD.

### Data Field Mapping

The following table describes the Versaterm CAD data elements that are sent to LiveMUM. Data transmissions (message formatting) are provided as identified in the Deccan document titled "LiveMUM Interface Control Document– February 2<sup>nd</sup>, 2018" (file name: LiveMUM Interface Control Document – New Vendor.docx).

### Event

LiveMUM XML field name	Description	Versaterm CAD data field	Versaterm Notes/Attributes
<CAD sequenceNumber>	Unique identifier for each message that is sent to the LiveMUM server. This sequence number can be reset for each restart of the interface.	Generated sequence number.	Each message formulated from VMC includes a generated sequential number stamped as <CAD sequenceNumber> XML element. The <CAD sequenceNumber> is reset after each LiveMUM VMC-plugin interface restart.
Root element	The event message root tag inside the XML message	Hardcoded	<event>
<EventNumber>	Unique Event Identifier	Cl_data.rin	Format: JJYYNNNNNNNNNN Where JJ is jurisdiction such as SM for San Mateo. YY is year and NNN is unique incident number. Example: SM18000000545
<Location>	Street Address	Cl_seen_at.address or cl_data.address	Address field can be up to 75 characters in length.  In addition to location where the call occurred on, If an incident response location is present the cl_seen_at table is used (e.g. cl_seen_at.address), which represents the location where the units responded to. Otherwise, if no response location is present, cl_data.address is sent.
<EventType>	Primary Event Type Code	Cl_data.call_type	Translation of the Versaterm call type code (e.g. "Structure Fire".
<EventSubType>	Secondary Event Type Code		Unavailable
<EventPriority>	Priority of Event	Cl_data.priority	Priority of the incident 1 through 9.
<AlarmLevel>	Event Alarm Level (priority)	Cl_data.alarm_level	Incident alarm level. Value is null for incidents not yet dispatched.
<UnitList>	List of units assigned to event, delimited by <ID> tag		List if units dispatched. Details are in unit data field mapping section. Value is null value for incidents not yet dispatched.
<Agency>	Agency ID of Event origin	Cl_data.jurisdiction	Jurisdiction code of the incident – 2 characters in length.
<OpenEvent>	Boolean; False when event is closed	Hardcoded	"T" (True) for active incidents and "F" (False) when event is cleared.
<YCoord>	Y Coordinate (Decimal Degrees preferred)	Incident latitude	Decimal degree of the incident Y coordinate
<XCoord>	X Coordinate (Decimal Degrees preferred)	Incident longitude	Decimal degree of the incident X coordinate

## Unit

LiveMUM XML field name	Description	Versaterm CAD data field	Versaterm Notes/Attributes
<CAD sequenceNumber>	Unique identifier for each message that is sent to the LiveMUM server. This sequence number can be reset for each restart of the interface.	Generated sequence number.	Each message formulated from VMC includes a generated sequential number stamped as <CAD sequenceNumber> XML element. The <CAD sequenceNumber> is reset after each LiveMUM VMC-plugin interface restart.
Root element	The event message root tag inside the XML message	Hardcoded	<unit>
<ID>	Unique Unit ID	App_stat.app_id	Unit ID
<Agency>	Agency ID of Event origin	App_stat.jurisdiction	Jurisdiction code of the unit – 2 characters in length.
<Status>	Unit's current status	App_stat.app_status	Unit status
<CurrentStation>	Unit's current station	App_stat.stn	Unit's current station
<PermanentStation>	Unit's permanent (home) station	App_stat.orig_stn	Unit's home station
<HospitalDestination>	Hospital that a patient is being transported to, usually represented with a two number code	CAD hospital code	CAD hospital code the patient is being transported to.
<EventNumber>	Unique Event number of assigned event (If Applicable)	App_stat.rin	Format: JJYYNNNNNNNNNN Where JJ is jurisdiction such as SM for San Mateo. YY is year and NNN is unique incident number. Example: SM18000000545
<EventType>	Assigned Event Type (if applicable)	App_stat.call_type	Translation of the Versaterm call type code (e.g. "Structure Fire").
<EventSubType>	Assigned Event SubType (If applicable)		Unavailable
<AlarmLevel>	Assigned Event Alarm Level (if applicable)	App_stat.alarm_lvl	Alarm level of incident when unit was dispatched
<YCoord>	Y Coordinate (Decimal Degrees preferred)	Unit latitude	Decimal degree of the unit's Y coordinate
<XCoord>	X Coordinate (Decimal Degrees preferred)	Unit longitude	Decimal degree of the unit's X coordinate

## AVL

LiveMUM XML field name	Description	Versaterm CAD data field	Versaterm Notes/Attributes
<CAD sequenceNumber>	Unique identifier for each message that is sent to the LiveMUM server. This sequence number can be reset for each restart of the interface.	Generated sequence number.	Each message formulated from VMC includes a generated sequential number stamped as <CAD sequenceNumber> XML element. The <CAD sequenceNumber> is reset after each LiveMUM VMC-plugin interface restart.
Root element	The event message root tag inside the XML message	Hardcoded	<avl>
<ID>	Unique Unit ID	MDT unit ID	Unit ID
<YCoord>	Y Coordinate (Decimal Degrees preferred)	MDT GPS latitude	Decimal degree of the unit's Y coordinate
<XCoord>	X Coordinate (Decimal Degrees preferred)	MDT GPS longitude	Decimal degree of the unit's X coordinate

## Polling

LiveMUM XML field name	Description	Versaterm CAD data field	Versaterm Notes/Attributes
<CAD sequenceNumber>	Unique identifier for each message that is sent to the LiveMUM server. This sequence number can be reset for each restart of the interface.	Generated sequence number.	Each message formulated from VMC includes a generated sequential number stamped as <CAD sequenceNumber> XML element. The <CAD sequenceNumber> is reset after each LiveMUM VMC-plugin interface restart.
Root element	The event message root tag inside the XML message	Hardcoded	<polling>
<Date>	Current Date	Date	Current date of when the transaction was sent from CAD to LiveMUM
<Time>	Current Time	Time	Current time of when the transaction was sent from CAD to LiveMUM

## **Communication**

Communication between the VMC and the Deccan LiveMUM system is provided via TCP/IP protocol. The communication protocol and flow control are provided as identified in the Deccan document titled "LiveMUM Interface Control Document– February 2<sup>nd</sup>, 2018" (file name: LiveMUM Interface Control Document – New Vendor.docx).

## **Business Continuity/Interface Availability**

This interface can be made available on all servers (production, implementation/test and disaster recovery) provided connectivity between VMC application server and the LiveMUM server is available. The interface can be enabled/disabled by configuring the appropriate VMC-plugin interface configuration parameter in the VMC agent of the local server.

## **Interface Testing**

These tests are intended to ensure the interface is functional as designed. The following are descriptions of the tests to be performed for the specified interface functionality during the functional acceptance test period.

### **Functional and Completeness Testing**

This specific test is to ensure when a call is added and dispatched a transaction is triggered to the VMC-plugin, which is then sent and delivered to the LiveMUM system.

### **Operational Tests**

This test ensures after system reboots, the interface is available and able to communicate with LiveMUM system.

### **Performance Tests**

The performance test consists of adding and incident and dispatching units and measuring the number of seconds between the time the command is issued until it reaches the LiveMUM system, to ensure it does not exceed two (2) seconds. Time delays introduced by the LiveMUM and the network are not included in any time measurements.

### **Exception Testing**

The exception test consists of disconnecting the link between the VMC and the LiveMUM server and confirming that error message is delivered to all signed on CAD supervisor positions. Further tests confirm that, after reconnecting the link, the communication resumes.

## **Responsibilities**

### **County Responsibilities**

- a. Coordinate with Deccan technical staff to assist in the interface development and testing.
- b. Provide the communication link between the LiveMUM system and the VMC system for TCP/IP protocol.
- c. Provide a test facility for the interface.
- d. Test the interface.

### **Versaterm Responsibilities**

- a. Develop, install and test the LiveMUM VMC-plugin interface.
- b. Perform integration tests on the interface.
- c. Provide assistance in the testing process.

## 24. Fire RMS Call-For-Service Data Transfer

The Interfaces transfers fire call-for-service (CFS) data from CAD to the various fire RMS systems.

The CAD data transfer is performed via two methods, data file transfer and remote database connection.

The following fire RMS systems use data file transfer method, where CFS data files are transferred from the CAD system to a County FTP server making it available for consumption by the below fire RMS systems:

- FireHouse RMS; and
- Zoll RescueNet RMS; and
- ImageTrend RMS; and
- Emergency Reporting RMS.

The following fire RMS system use a remote database connection to retrieve fire CFS data from CAD.

- FirstOnScene RMS

Each fire agency has its own implementation of a fire RMS system provided by one of the vendors listed above.

### **Business Flow Overview**

The vCAD contains a configuration parameter, by call type, to indicate when a call should be transferred to the destination RMS (on call initiation or on call close). Additionally, configuration parameters exist, by unit status code, to indicate if a call should be transferred as units are placed in a pre-determined status. Based on these configurations, calls-for-service will be transferred, as appropriate, and re-sent (i.e. entire call) whenever any subsequent changes or updates are performed to the CAD call. A change or update may include a change of information (e.g. address) or any additional details (remarks, dispatches, etc.).

The destination RMS is determined by a combination of the jurisdiction of the incident and the jurisdiction of the unit(s) dispatched to the incident. For example, if the incident belongs to San Mateo (SM) and units from Redwood City (RC) and Menlo Park (MP) are dispatched, the incident is transferred to all three agencies: SM, RC, and MP.

### **Data File Transfer Method**

To initiate a data file transfer to the RMS, the CAD system writes an entry into the RMS gateway queue. A special daemon monitors the queue and processes each entry. Upon processing each entry, CAD creates a NIEM formatted XML file in a gateway transfer folder on the CAD server. A server script, invoked by a scheduled CRON entry, transfers the XML files from the gateway folder, via SFTP to folders(s) on the County FTP. The County FTP server is configured with a unique folder for each fire agency (each unit RMS system). If the transfer is successful, the XML file is removed from the transfer folder. If the transfer fails, the XML file will remain in the transfer folder and the system will attempt to re-transfer the incident the next time the gateway daemon is invoked to process entries.

County-developed programs/scripts will monitor the shared folders for incoming XML files, transfer the files to the appropriate destination system, read the contents, transform the data if necessary and load into the destination system.

### **Remote Database Connection (ODBC) Method.**

The Versaterm CAD primary database is replicated in real-time to secondary replicated database, which is primarily used for reporting and analytics. This interface uses a read-only connection established from the

FirstOnScene system to the replicated database allowing FirstOnScene to pull CAD incident and unit data from the replicated database and securely transmit the information to the FirstOnScene server. The FirstOnScene data collector is configured to pull CAD data from a designated database view at no less than sixty (60) second intervals.

In order to limit the fire incident information accessed by FirstOnScene, the County, with assistance from Versaterm, will create scripts to create the database view(s) on the primary database server. Those view(s) are then automatically replicated to the replicated database where FirstOnScene accesses the database view(s) to read data. The database view(s) provide specific column(s) expected by FirstOnScene as well as any data field mapping, if needed, between FirstOnScene and CAD (e.g. mapping vCAD unit status codes to FirstOnScene status codes). The scripts for the database views will reside in a site-specific folder, as designated by Versaterm, on the CAD application server. During application upgrades, Versaterm will copy the view script(s) from the current servers to the new servers and will run them on the new database to re-create the views. It is however, the County's responsibility to maintain the views should any modifications be required (e.g. adding additional FirstOnScene filters, column changes, etc.)

### **Communication**

The communication protocol connecting the CAD system to the County FTP server is SFTP, used for all RMS system that use a NIEM XML file based transfers to RMS.

The FirstOnScene communication uses a remote ODBC database connection.

### **Configuration**

The Versaterm CAD supports a special configuration setting to indicate when CFS data is to be transferred to the RMS. The transfer ("Transfer to RMS" flag) can be configured to transfer the call immediately upon call creation, on close of the call (note that cancelling a call is a close call event) or based on specific unit status codes. Once the call is transferred, subsequent updates to the address or call type of an active or pending call will cause CAD to resend the entire call. Once the call is cleared, any subsequent updates (changes, add remarks, status changes, etc.) to the call will cause it to resend the entire call.

During interface development, the two alphanumeric jurisdiction codes, for each agency, will be configured to transfer incidents to the corresponding receiving agency.

### **Data Field Mapping**

The County will develop the data field mapping between the Versaterm CAD and the destination systems to determine which Versaterm data elements will be populated within the destination systems.

### **Business Continuity/Interface Availability**

This interface can be made available, or not, from the development/training, production and disaster recovery servers. The interface may be "turned off" with the appropriate configuration changes.

### **Interface Testing**

Interface testing is intended to ensure the interface is completely functional as designed. The following are descriptions of the tests to be performed for this specific interface during the Functional Acceptance process. Prior to go-live, the County will provide a test RMS environment to support development and test activities.

#### **Functional and Completeness Test**

This test will ensure that calls are routed to the correct destination. Further, this test will ensure that by configuring the "Transfer to RMS" flag, calls-for-service are sent (and re-sent) appropriately.

The test will use two call types.

1) Transfer to RMS flag set to "on Call Initiation".



2)Transfer to RMS “on Call Close”.

Calls will be created using the test call types configured in the CAD for all jurisdictions. Additionally, the transfer can be initiated from the command line. The user will confirm that calls are transferred to the appropriate destination system as required and on the appropriate intervals.

Upon closing a call, the calls will be updated and this test will verify that the updated data is transferred to the appropriate RMS.

### **Operational Tests**

This test ensures after system reboots, the interface is able to transfer new CAD incident to RMS.

### **Performance Tests**

The performance test consists of initiating the transfer, either manually or automatically, ensuring the data is transferred. The time from initiating the transfer to the destination is not to exceed 3 minutes. However, delays caused by the destination system in processing the data are not counted in the calculation.

### **Exception Testing**

The exception tests consist of disconnecting the interface between CAD and FTP server (e.g. disconnect network between CAD and County FTP server) and after reconnecting, ensure CAD can reach the FTP server and calls that are queued in CAD while the interface is disconnected are sent.

Further tests consist of disconnecting the interface between FirstOnScene and the replicated database and after reconnecting, ensure FirstOnScene is able to re-establish its connection to the replicated database.

## **Responsibilities**

### **County Responsibilities**

- a. Facilitate and/or configure test environments to support testing activity.
- b. Create directories on the FTP server to receive the incoming NIEM XML files.
- c. Provide networking access to allow SFTP communications between the County FTP server and CAD.
- d. Provide network connectivity between FirstOnScene and the replicated database.
- e. Define the field mapping between Versaterm CAD NIEM call-for-service file and the destination systems.
- f. Develop programs/scripts to monitor for incoming NIEM call-for-service XML files on the FTP server and transform/load the data into the appropriate destination systems.
- g. Coordinate with various agencies' technical staff to assist in the interface development and testing.
- h. Review and document any differences in the data being transferred to the end points (e.g. format of incident number, changes to coded values, etc.) and inform the end users of any differences.
- i. Modify the destination systems as required with the ability to receive and process multiple XML files for the same call-for-service (i.e. CAD updates to an already transferred CFS will result in a subsequent XML file to be transferred).
- j. With Versaterm's assistance, create any required database views on the CAD database.
- k. Maintain any required database views on the CAD database.
- l. Setup and maintain Postgres client authentication file to control/limit ODBC access.

- m. Test the interface.

Versaterm Responsibilities

- a. Provide Versaterm's NIEM schema file and CAD database schema.
- b. Install and configure the necessary gateways to transfer the NIEM XML files to the FTP servers.
- c. Assist the County with initial database view creation.
- d. Copy database view scripts to new CAD application server during CAD upgrades
- e. Perform integration tests on the interface.
- f. Provide assistance and guidance through the County acceptance tests.
- g. Provide documentation, assistance and guidance as the County works on field mapping definition between Versaterm CAD NIEM call-for-service file and the destination systems.

## 25. Sunridge (RIMS) – Law Enforcement RMS

This interface provides the following transactions from the Versaterm CAD and Mobile Data Terminal (vMDT) to Sunridge (RIMS).

- Case number request
- RIMS person, vehicle and location queries

Multiple Sunridge systems exist for various agencies.

This interface does not support call for service transfers from Versaterm CAD to the Sunridge system.

### Functional Overview

The CAD/MDT users have the ability to perform person and vehicle queries through the appropriate form or, in some instances, may generate a query from another action (e.g. enter caller name and press a query button). The following illustrates a sample MDT query form which will be configured with individual RIMS checkboxes for each of the various agencies using Sunridge.

The screenshot shows a 'Query Person' window with a blue title bar. The window contains several input fields and checkboxes. At the top, there are four buttons: 'Send and Close' (green checkmark), 'Reset' (blue square), 'Pin Form' (green pin), and 'Exit' (red X). Below these are fields for 'Surname', 'G1', 'G2', 'DOB', 'Age', 'Sex', 'Race', 'DL', and 'State'. There are also checkboxes for 'Records', 'NCIC/State Warrant', and 'DRL'. A 'Remarks' field is at the bottom, followed by a label 'Person's surname.'.

The person, vehicle and location query forms trigger automatic RIMS queries to the various County agencies using Sunridge. Individual checkboxes are available for each RIMS system from the query forms. A single query request initiated by a user submits individual query transactions to each Sunridge system(s) that has the corresponding checkbox selected on the associated query forms. The form can be configured to default the checkbox statuses.

Users can also initiate a RIMS location query from the police incident details screen by invoking the “query incident location” function. Location queries initiated from the CAD/MDT incident screen are submitted to all the supported Sunridge systems.

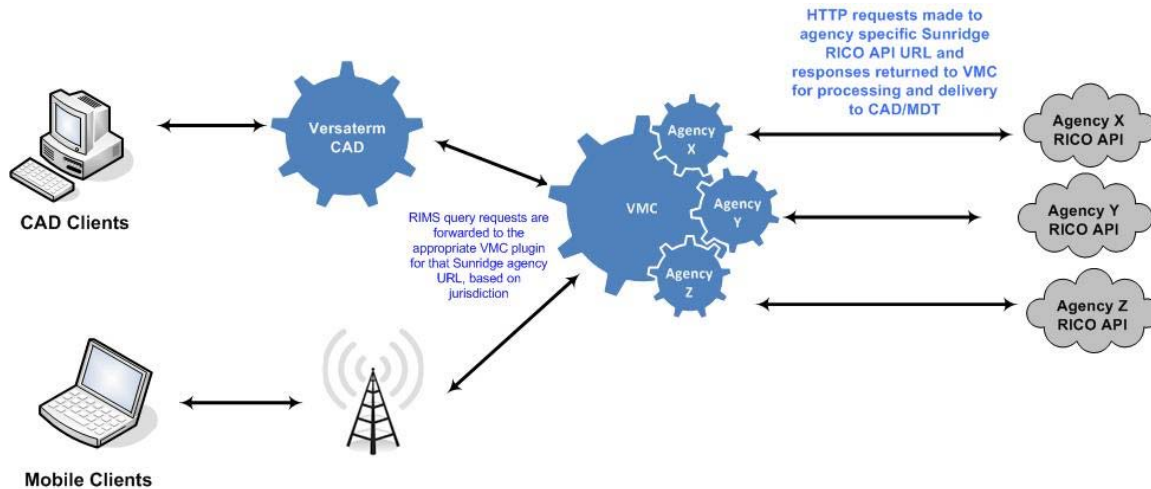
After initiating a query request to Sunridge, the responses returned from Sunridge will be processed and delivered to the originating user in a pre-defined format. Query responses of “no match” are returned from Sunridge with standard HTTP 404 code for “not found”. No response is delivered to the originating user when CAD receives 404 “not found” response from Sunridge system. Querying multiple Sunridge systems could result in multiple responses returned for a single query transaction.

A ‘request case number’ form is configured in CAD and optionally in the MDT to provide the ability for users to request a case number from the Sunridge systems. The ‘request case number’ form contains a jurisdiction field allowing the user to specify the corresponding agency requesting the case number. If an invalid jurisdiction is entered on this form, the request is not sent to Sunridge and an error message is displayed to the requesting user. Based on the valid jurisdiction specified, the case number request is routed to the appropriate Sunridge system.

A single CAD jurisdiction cannot be associated to multiple Sunridge systems, whereas multiple CAD jurisdictions can be associated to a single Sunridge system.

## Process Flow

When CAD/MDT users initiate transaction(s) to Sunridge, the requesting transaction is generated from CAD and sent to the appropriate RIMS plugin(s) in the Versaterm Message Controller (VMC). Once VMC receives a query destined to Sunridge, VMC generates the request and submits it to the corresponding RICO API URL. Upon receiving response(s) from Sunridge, VMC forwards the response(s) to the originating CAD/MDT user.



## Communication

The communication between CAD and RICO API is via Web API using HTTP protocol. The responses conform to JSON format as defined in the Sunridge documentation titled "RICO API version 3.0" (file name: API Reference Document.pdf).

A unique RICO API URL and user credentials are provided for each Sunridge system. A VMC plugin with a corresponding URL and credentials is configured for each Sunridge system.

## Authentication

The RICO API leverages JWT (JSON WebToken) for authentication. The method to obtain JWT is documented in the RICO specification document titled "RICO API version 3.0" (file name: API Reference Document.pdf).

## Web Service Definition

Sunridge RICO API services are exposed to the CAD/VMC to facilitate query requests. Web API requests made to Sunridge are handled immediately (synchronously). All request parameters are optional unless marked as required.

This interface supports the following RIMS query requests:

Query Name	RICO API Name(s) used
RIMS lookup tables	GetFldHelp
Person query	SearchPerson GetAlphaHistory GetAlphaMugshots GetAlphaMugshotsByID GetIncident
Vehicle query	SearchVehicle
Location query	LocationHistory GetIncident
Generate case number request	AssignCaseNumber

### RIMS Lookup Tables

When retrieving records through the RICO API, code values are often returned and descriptions for those values are not included. The GetFldHelp query provides a list of all coded values with corresponding descriptions to interpret the values provided in the person and query responses.

On startup of this interface service on the Versaterm CAD server, a request is made to the RIMS GetFldHelp RICO API for each RIMS system to retrieve a list of RIMS lookup. The lookup tables are then used to translate data field codes returned from person and vehicle queries and include the translations in the responses provided back to the users.

Versaterm will store the RIMS lookup tables for the duration of the server service running on CAD. That is, once the interface is stopped on the Versaterm CAD server, the lookups are no longer stored on CAD. On interface startup, the lookups are retrieved again stored again.

Restarting the interface service on the Versaterm CAD will trigger a new lookup table request to the RICO API in order to refresh the RIMS lookup tables stored in Versaterm for this interface.

The following lists the service, request and response parameters used by this interface to retrieve RIMS lookup tables:

#### RICO API Service:

Method	URL
GET	/api/v3/OFR/GetFldHelp

#### Request Parameters:

Parameter	Description	Parameter Type	Data Type
Fldname	The table name containing lookup values.	Query	String

#### Response Parameters:

Name	Type	Description
VALUEX	String	The value of the record.
TEXT	String	The description of the corresponding value.

### Person Query

The following lists the service, request and response parameters used by this interface to support person queries from CAD and MDT.

#### RICO API Services:

Method	URL
GET	/api/v3/People/SearchPerson
	/api/v3/People/GetAlphaHistory
	/api/v3/People/GetAlphaMugshots
	/api/v3/People/GetAlphaMugshotbyID
	/api/v3/Incidents/GetIncident

#### Request Parameters:

**SearchPerson:** The following search parameters as defined in the query column below are available for users to enter from the Versaterm query person form:

Parameter	Description	Parameter Type	Data Type	Query
ID	Alpha ID	Query	Integer	Yes
NAME	Name	Query	String	Yes
DOB	Date of Birth (MM/DD/YYYY)	Query	String	Yes
PHONE	Phone Number	Query	String	Yes
DL	Driver's License	Query	String	Yes
DLST	Driver's License state	Query	String	Yes
INCNUM	Incident number. If specified, a list of all people associated with the incident will be returned.	Query	String	Yes

**GetAlphaHistory:** Upon receiving a person query response, the following request is used to get a list of prior incident history for a particular person, by ID. This request is initiated when user clicks on a person to request an exact person query:

Parameter	Description	Parameter Type	Data Type
ID	Alpha ID	Query	Integer

**GetAlphaMugshots:** Upon receiving a person query response, the following request is used to get a list of mugshots for a particular person, by ID. This request is initiated when user clicks on a person to request an exact person query:

Parameter	Description	Parameter Type	Data Type
ID	Alpha ID	Query	Integer

**GetAlphaMugshotbyID:** Upon receiving the list of available mugshots for a person, the following request parameter is used when requesting mugshot image file. This request is initiated when user clicks on a mugshot request from the exact person match response.

Parameter	Description	Parameter Type	Data Type
ID	Mugshot record ID (referenced as "FAKE_KEY" in the <b>GetAlphaMugshots</b> response).	Query	Integer

#### Response parameters:

The SearchPerson query may return one or more person matches. The following sections describe the interface behavior for a multiple person response as well as a single person (exact match) response.

**SearchPerson (multiple person response):** When receiving multiple person returns from the SearchPerson API, for a given person query, the response delivered to users will be formatted with hyperlinks, based on ID (Alpha ID), to allow the user to select a particular person to request further details. That is, each name returned in the multi response that has an ID (Alpha ID) will be formatted as a hyperlink allowing users to click and auto-submit an exact match request to the RICO API using the person ID number from the hyperlink.

The following RICO API response fields as defined in displayed column below, will be formatted and delivered to the CAD/MDT users for multi response list returns:

Name	Type	Description	Displayed
ID	Integer	Alpha ID.	Yes
NAME	String	Name.	Yes
DOB	DateTime	Date of Birth.	Yes
ADDRESS	String	Address.	Yes
APT	String	Apt or Suite.	Yes
CITY	String	City	Yes
LICENSE	String	Driver's License Number	Yes
DRST	String	Driver's License State	Yes

Once a particular person hyperlink is clicked by the user (person query drilldown), the Versaterm interface submits three subsequent requests to the RICO API. The first request is made to the SearchPerson API by specifying the person ID in order to receive the person details. A second request is made to the GetAlphaHistory API, using the same person ID (Alpha ID), where the returned list of prior incidents from RIMS is embedded as hyperlinks into the person query drilldown response. A third request is made to the GetAlphaMugshots API, using the same person ID (Alpha ID), where the returned list of mugshots is embedded into the person query drilldown return. Each prior incident and mugshot is displayed to the user as hyperlinks allowing users to click and auto-request the incident details or mugshot image file from RIMS. The request to retrieve incident details is sent to Sunridge using the GetIncident API by using incident number (INCNUM) from the hyperlink as a query parameter. The request for the mugshot image files is sent to the GetMugshotByID API, where the binary image file is returned and processed by the interface. After the binary image is processed in CAD, the mugshot image is then displayed to the user via native web browser.

**SearchPerson (exact match):** When receiving a single exact match, the response formatting is performed by the Versaterm interface based on the RICO API response fields designated as displayed in the table below:

Name	Type	Description	Displayed
name	String	Name.	Yes
lasT_NAME	String	Last Name.	Yes
firsT_NAME	String	First Name.	Yes
middleI_NAME	String	Middle Name.	Yes
snm	String	SNM.	No
id	Integer	Alpha ID.	Yes
war	String	Warrant flag ("T"=True).	Only if True
address	String	Address.	Yes

apt	String	Apartment or Suite #.	Yes
phone	String	Phone number.	Yes
sex	String	Sex.	Yes
race	String	Race. Lookup Table: MRAC	Yes
f	Integer	Feet portion of height.	Yes
inches	Integer	Inches portion of height.	Yes
weight	Integer	Weight in pounds.	Yes
hair	String	Hair. Lookup Table: MHAIR	Yes
eyes	String	Eyes. Lookup Table: MEYES	Yes
dob	DateTime	Date of Birth.	Yes
cmt	String	Comment.	Yes
toT_INCHES	Integer	Height in total inches.	No
cii	String	CII Number.	Yes
license	String	Driver's License number.	Yes
drst	String	Driver's License state.	Yes
city	String	Address city.	Yes
st	String	Address state.	Yes
zip	String	Address zip.	Yes
lic	String	Vehicle license plate.	Yes
lst	String	Vehicle license plate state.	Yes
sparE1	String	Not in Use.	No
ofcrsafety	String	Officer Safety.	Only if it has a value
lastupdate	String	Not in Use.	No
bname	String	Business name.	Yes
baddress	String	Business address.	Yes
bcity	String	Business city.	Yes
bst	String	Business state.	Yes
bzip	String	Business zip.	Yes
bphone	String	Business phone.	Yes
scars	String	Scars.	Yes
tattoo	String	Tattoos.	Yes
speech	String	Speech. Lookup Table:	Yes
hairstyle	String	Hairstyle. Lookup Table:	Yes
glasses	String	Glasses ("T"=True).	Only if True
complexn	String	Complexion. Lookup Table:	Yes
build	String	Build. Lookup Table:	Yes
facehair	String	Facial Hair. Lookup Table:	Yes
clothes	String	Clothes.	No
aliD1	Integer	Alias ID #1.	Yes
aliD2	Integer	Alias ID #2.	Yes
AliD3	Integer	Alias ID #3.	Yes
arrestid	Integer	Arrest ID.	Yes
mugbook	String	Mug Book.	Yes
fbin	String	FBI Number.	Yes
ssn	String	Social Security Number.	Yes
nextofkin	String	Name of Next of Kin #1.	Yes
kinadr	String	Address of Next of Kin #1.	Yes
kinphone	String	Phone number of Next of Kin #1.	Yes
groupflags	String	Group flags.	No
finterprnt	String	Fingerprint code.	No
havephoto	String	Not in Use.	No
other	String	Other.	No
kiN2	String	Name of Next of Kin #2.	Yes



kinadrS2	String	Address of Next of Kin #2.	Yes
kinphonE2	String	Phone number of Next of Kin #2.	Yes
kinrel	String	Relationship of Next of Kin #1.	Yes
kinrL2	String	Relationship of Next of Kin #2.	Yes
ethnicity	String	Ethnicity. Lookup Table:	Yes
occupation	String	Occupation.	Yes
citizen	String	Citizen ("T"=True).	Only if True
undocalien	String	Undocumented alien ("T"=True).	Only if True
birthplace	String	Birthplace.	Yes
sdxname	String	Soundex of Name.	No
knownoff	String	Known offender ("T"=True).	Only if True
sexoff	String	Sex offender ("T"=True).	Only if True
narcoff	String	Narcotics offender ("T"=True).	Only if True
parolee	String	Parolee ("T"=True).	Only if True
onprobatn	String	Probation ("T"=True).	Only if True
arsonist	String	Arsonist ("T"=True).	Only if True
gangconn	String	Gang connection ("T"=True).	Only if True
bolo	String	BOLO ("T"=True).	Only if True
missing	String	Missing ("T"=True).	Only if True
protorder	String	Protection Order ("T"=True).	Only if True
dlclass	String	Driver' License class.	Yes
cellphone	String	Cell phone number.	Yes
addressS2	String	Address #2.	Yes
apT2	String	Apt/suite #2.	Yes
citY2	String	City #2.	Yes
sT2	String	State #2.	Yes
zip2	String	Zip #2.	Yes
phonE2	String	Phone #2.	Yes
mailingadrs	String	Mailing address.	Yes
mailingapt	String	Mailing address apartment or suite.	Yes
mailingcity	String	Mailing address city.	Yes
mailingst	String	Mailing address state.	Yes
mailingzip	String	Mailing address zip.	Yes
email	String	Email address.	Yes
pager	String	Pager number.	No
pagercode	String	Pager code.	No
fax	String	Fax number.	No
frequents	String	Locations person frequents.	Yes
spousename	String	Name of spouse.	Yes
otherrels	String	Other relatives.	Yes
convictedfelon	String	Convicted felon ("T"=True).	Only if True
deceased	String	Deceased ("T"=True).	Only if True
protectedperson	Integer	Alpha ID of protected person.	Yes
protectedagainst	Integer	Alpha ID of person protected against.	Yes
dateofdeath	DateTime	Date of death.	Yes
dnacollected	String	DNA collected ("T"=True).	Only if True
kinceL1	String	Cell phone of Kin #1.	Yes
KinceL2	String	Cell phone of Kin #2.	Yes
agE1	String	Age of person.	Yes
agE2	String	Second age of person (range).	No
ageasofdata	DateTime	Age as of date.	No

notes	String	Notes.	Yes
altarrestid	String	Alternate Arrest ID.	Yes
correctionsnum	String	Corrections number.	No
language	String	Language. Lookup Table:	No
schoolid	String	School ID.	No
ccw	String	CCW ("T"=True).	Yes
vehmake	String	Vehicle Make.	Yes
vehmodel	String	Vehicle Model.	Yes
kincity	String	City of Kin #1.	Yes
kincitY2	String	City of Kin #2.	Yes
kiknphonea	String	First phone number of Kin #1.	Yes
kinphonE2A	String	First phone number of Kin #2.	Yes
occupationN2	String	Occupation #2.	Yes
bnamE2	String	Business #2 name.	Yes
baddresS2	String	Business #2 address.	Yes
bcitY2	String	Business #2 city.	Yes
bsT2	String	Business #2 state.	Yes
bziP2	String	Business #2 zip.	Yes
bextension	String	Business #1 extension.	Yes
bextensionN2	String	Business #2 extension.	Yes
otherid	String	Other ID.	No
otheridkind	String	Other ID Kind.	No
icecode	String	ICE code.	No
donotmatch	String	Exclude from matching when running duplicate name search ("T"=True).	Only if True
tresspass	String	Tresspasser ("T"=True).	Only if True
gangoff	String	Gang offender ("T"=True).	Only if True
prcs	String	PRCS ("T"=True).	Only if True
warranthold	String	Warrant Hold ("T"=True).	Only if True
country	String	Country code.	No
citizenship	String	Country code of citizenship.	No
smT1	String	Scars, Marks, Tatoos #1.	Yes
smT2	String	Scars, Marks, Tatoos #2.	Yes
smT3	String	Scars, Marks, Tatoos #3.	Yes
shoesize	String	Shoe size.	Yes
unemployed	String	Unemployed ("T"=True).	Only if True
aliasofid	String	If this record is an alias of another alpha record, ID of Alpha record is given here.	Yes
nametype	String	Name type.	No
firearmdenied	String	Firearm denied ("T"=True).	Only if True
coordcheck	String	Has the address of this record been geocoded? ("X"=True).	Only if True
dlclasS2	String	Class of DL #2.	Yes
xcoord	Float	Address Longitude.	Yes
ycoord	Float	Address Latitude.	Yes
county	String	County.	No
casen	Integer	Case number.	Yes
retrievedrecord	string	For use by OFR.	No
ofrsec	string	For use by OFR.	No

**GetAlphaHistory:** The following response fields designated as displayed in the table below, will be formatted and delivered to the CAD/MDT users for person query incident history:

Name	Type	Description	Displayed
CASEN	Integer	Case Number	Yes
IDATE	DateTime		Yes
FINUM	Integer		Yes
ICODE	String		Yes
ITEXT	String		Yes
CITATION	String		Yes
INCNUM	Integer		Yes
AGCODE	Integer		Yes
ID	Integer		No
FAKE_KEY			No

**GetAlphaMugshots:** The following response fields designated as displayed in the table below, will be formatted and delivered to the CAD/MDT users for mugshot requests:

Name	Type	Description	Displayed
ID	Integer	Alpha ID.	No
PICNO	Integer	Picture number.	Yes
DATETAKEN	DateTime	Date picture was taken.	Yes
CMT	String	Comment	Yes
CASEN	Integer	Associated case number.	Yes
AGCODE	String	Agency Code.	Yes
MUGCAT	String	Mugshot Category. Lookup Table: MRAC	Yes
FAKE_KEY	Integer	The index of the mugshot record.	No

**GetAlphaMugshotByID:** The response is returned as a binary file of the mugshot image.

#### GetIncident (Person and location query drilldowns)

When a particular incident hyperlink is clicked by the user (person or location query drilldown), the Versaterm interface submits a single Get Incident request to Sunridge using the incident number (INCNUM) embedded in the hyperlink. The request is sent to the corresponding RICO API URL where the query response originated from.

The return formatting performed by the Versaterm interface will be based on the RICO API GetIncident response fields as defined in the 'displayed' column in below table:

Name	Type	Description	Displayed
incnum	Long Integer	Incident Number.	No
type	String	Incident Type. <b>Lookup Table: MTYPE</b>	Yes
location	String	Address of the incident location.	Yes
place	String	Place name of the incident location.	Yes
num	String	Number portion of the location.	No

street	String	Street portion of the location.	No
stid	Integer	Street ID.	No
status	String	Incident status. <b>"A"= _Active, "C"=Closed</b>	No
name	String	RP Name.	Yes
cadrs	String	RP Address.	Yes
capt	String	RP Apartment/Suite.	Yes
cphone	String	RP Phone.	Yes
cross_ST	String	Location cross street.	Yes
grid	String	Location grid.	
sra	String	Location area.	
disp	String	Incident dispatcher.	
datex	DateTime	Date of Incident.	Yes
time	String	Time of Incident (HH:MM:SS).	Yes
d1	String	First Incident disposition. <b>Lookup Table: INCDISPO</b>	Yes
cmT1	String	Incident comment.	Yes
iM_CONTACT	String	Requests contact. <b>"X"=Yes</b>	Yes
s	String	Incident Source. "T"=Telephone, "9"=911, "O"=Officer	No
assunits	String	List of assigned units (Comma separated).	Yes
colR1	String	Vehicle color #1.	Yes
colR2	String	Vehicle color #2.	Yes
year	Integer	Vehicle year.	Yes
make	String	Vehicle make.	Yes
model	String	Vehicle model.	Yes
license	String	Vehicle license.	Yes
st	String	Location state.	Yes
pri	Integer	Incident priority (1,2,3).	No
nunits	Integer	Number of units.	No
pu	String	Primary Unit.	No
acase	String	Formatted associated Case #.	Yes
apt	String	Location apartment or suite #.	Yes
city	String	Location city. <b>Lookup Table: MCITY</b>	Yes
locinfo	String		Yes
rpId	Integer	Alpha ID of the reporting party.	
hist	String	History ( <b>"T"=True</b> ).	Yes
wpn	String	Weapon.	Yes

d2	String	Second Incident disposition. <b>Lookup Table: INCDISPO</b>	No
d3	String	Third Incident disposition. <b>Lookup Table: INCDISPO</b>	No
kind	String		No
premrec	Integer	ID of the associated Premise Record.	No
firezone	String	Fire Zone.	No
emszone	String	EMS Zone.	No
beat	String	Beat.	No
agencytype	String	Agency type (" <b>F</b> "=Fire, " <b>P</b> "=Police, " <b>E</b> "=EMS).	No
resptype	String	Response type.	No
xcoord	Float	Incident location latitude.	No
ycoord	Float	Incident location longitude.	No
agencies	String	Agencies.	No
pagcode	String	Agency code of responsible law agency.	No
fagcode	String	Agency code of responsible fire agency.	No
eagcode	String	Agency code of responsible EMS agency.	No
map	String	Map page.	No
almlevel	Integer	Alarm level.	No
ccity	String	City of RP address.	Yes
calltaker	String	Call taker.	No
agrecs	String	Agency records	No
casen	Integer	Associated Case number.	Yes
dob	String	Date of Birth of attached person.	Yes
name	String	Name of attached person.	Yes
drlic	String	Driver's License number of attached person.	Yes
drst	String	Driver's License State of attached person.	Yes
sex	String	Sex of attached person.	Yes
warflag	String	Warrant flag (" <b>T</b> "=True).	Yes
protectionflag	String	Protection flag (" <b>T</b> "=True).	Yes
ofcrsafety	String	Officer safety information.	Yes
havehazard	String	Is there Hazard information (" <b>T</b> "=True)?	Yes
stolenveh	String	Is attached vehicle stolen (" <b>T</b> "=True)?	Yes
race	String	Attached person race.	Yes
ssn	String	Attached person Social	Yes

		Security Number.	
namE2	String	2nd attached person name.	Yes
drliC2	String	Driver's License number of second attached person.	Yes
drsT2	String	Driver's License_ State of second attached person.	Yes
racE2	String	Second attached person race.	Yes
seX2	String	Sex of second attached person.	Yes
doB2	String	Date of Birth of second attached person.	Yes
ssN2	String	Social Security Number of second attached person.	Yes
namE3	String	3rd attached person name.	Yes
drliC3	String	Driver's License number of third attached person.	Yes
drsT3	String	Driver's License State of third attached person.	Yes
racE3	String	Third attached person race.	Yes
seX3	String	Sex of third attached person.	Yes
doB3	String	Date of Birth of third attached person.	Yes
ssN3	String	Social Security Number of third attached person.	Yes
licenseE2	String	License of second attached vehicle.	Yes
sT2	String	State of second attached vehicle.	Yes
makeE2	String	Make of second attached vehicle.	Yes
modelL2	String	Model of second attached vehicle.	Yes
colR12	String	Color 1 of second attached vehicle.	Yes
colR22	String	Color 2 of second attached vehicle.	Yes
yeaR2	String	Year of second attached vehicle.	Yes
lictypE2	String	License type of second attached vehicle.	Yes
includeinbulletin	String	Include incident in bulletin ("T"=True)?	No
includeinmediabulletin	String	Include incident in media bulletin ("T"=True)?	No
rcvtime	String	Time incident was received (HH:MM:SS).	Yes
disptime	String	Time incident was dispatched (HH:MM:SS).	Yes
enrttime	String	Time first unit was enroute (HH:MM:SS).	Yes
ostime	String	Time first unit was on scene (HH:MM:SS).	Yes

cleartime	String	Time first unit was cleared (HH:MM:SS).	Yes
callconfidence	Integer	E911 lat/lon confidence.	No
calluncertainty	Integer	E911 lat/lon uncertainty.	No
vehofcrsafety	String	Vehicle officer safety information.	Yes
iD1	Integer	Alpha ID of first attached person.	Yes
iD2	Integer	Alpha ID of second attached person.	Yes
iD3	Integer	Alpha ID of third attached person.	Yes
vehicleiD1	Integer	Vehicle ID of first attached vehicle.	Yes
vehicleiD2	Integer	Vehicle ID of second attached vehicle.	Yes
towdistrict	String	Tow district.	Yes
associnC1	String	Associated incident #1.	Yes
associnC2	String	Associated incident #2.	Yes
associnC3	String	Associated incident #3.	Yes
speccirc	String	Special circumstance #1. <b>Lookup Table: SPECCIRCI</b>	Yes
holdforunit	String	Unit ID of unit to hold incident.	No
havesthazard	String	Incident has street hazard ("T"=True)?	Yes
premofofcrsafety	String	Incident premise has officer safety ("T"=True)?	Yes
aglist	String	List of responding agencies. Each value is separated by a € character.	No
verifynames	String	Are names verified ("T"=True)?	No
bulletindate	String	Date of bulletin.	No
agencyconfidential	String	Is incident agency confidential ("T"=True)?	Yes
speccirC2	String	Special circumstance #2. <b>Lookup Table: SPECCIRCI</b>	Yes
speccirC3	String	Special circumstance #3. <b>Lookup Table: SPECCIRCI</b>	Yes
includeinliveincs	String	Include incident in CitizenRIMS ("T"=True)?	No
alertid	Integer	Alert ID.	No
alertactive	String		No
premhazard	String	Hazard associated with corresponding premise record.	Yes
totalonscenetime	Integer	Total on scene time.	No
havelocpersons	String	("T"=True)?	No
regional_AGENCY1	String	Regional Agency #1.	No

regional_AGENCY2	String	Regional Agency #2.	No
regional_AGENCY3	String	Regional Agency #3.	No
regional_AGENCY4	String	Regional Agency #4.	No
regional_INCNUM1	String	Incident number from regional agency #1.	No
regional_INCNUM2	String	Incident number from regional agency #2.	No
regional_INCNUM3	String	Incident number from regional agency #3.	No
regional_INCNUM4	String	Incident number from regional agency #4.	No
dlstatus	String	Driver's license status.	Yes
sealed	String	Is incident sealed ("T"=True)?	Yes
regional_AGENCY5	String	Regional Agency #5.	No
regional_AGENCY6	String	Regional Agency #6.	No
regional_INCNUM5	String	Incident number from regional agency #5.	No
regional_INCNUM6	String	Incident number from regional agency #6.	No
regional_CASENUM1	String	Case number from regional agency #1.	No
regional_CASENUM2	String	Case number from regional agency #2.	No
regional_CASENUM3	String	Case number from regional agency #3.	No
regional_CASENUM4	String	Case number from regional agency #4.	No
regional_CASENUM5	String	Case number from regional agency #5.	No
regional_CASENUM6	String	Case number from regional agency #6.	No
regional_REQUESTE DUNITS1	String	Requested Units from regional agency #1.	No
regional_REQUESTE DUNITS2	String	Requested Units from regional agency #2.	No
regional_REQUESTE DUNITS3	String	Requested Units from regional agency #3.	No
regional_REQUESTE DUNITS4	String	Requested Units from regional agency #4.	No
regional_REQUESTE DUNITS5	String	Requested Units from regional agency #5.	No
regional_REQUESTE DUNITS6	String	Requested Units from regional agency #6.	No
regional_LASTREQUE STED1	String	Last Requested Units from regional agency #1.	No
regional_LASTREQUESTED2	String	Last Requested Units from regional agency #2.	No
regional_LASTREQUESTED3	String	Last Requested Units from regional agency #3.	No
regional_LASTREQUESTED4	String	Last Requested Units from regional agency #4.	No



regional_LASTREQUESTED5	String	Last Requested Units from regional agency #5.	No
regional_LASTREQUESTED6	String	Last Requested Units from regional agency #6.	No
dlstatus	String	Driver's license status.	Yes
sealed	String	Is incident sealed ("T"=True)?	Yes
regional_AGENCY5	String	Regional Agency #5.	No
regional_AGENCY6	String	Regional Agency #6.	No
cst	String	RP location State.	No
rploc	String	RP Location.	Yes
coordcheck	String	Was Lat/Lon coordinates checked ("T"=True)?	No
coordsource	String	Source of Lat/Lon.	No
coorddate	DateTime	Date and time Lat/Lon was populated.	No
dayofweek	String	Day of incident ("MO", "TU", "WE", etc.).	Yes
associnC4	Long	Associated incident #4.	No
associnC5	Long	Associated incident #5.	No
associnC6	Long	Associated incident #6.	No
typeinit	String	Initial Incident type. <b>Lookup Table: MTYPE</b>	Yes
casenf	String	Formatted associated Case number.	Yes

### Vehicle query

The following lists the service, request and response parameters used by this interface to support vehicle queries from CAD and MDT.

#### RICO API Service:

Method	URL
GET	/api/v3/Vehicles/SearchVehicle

#### SearchVehicle Request Parameters:

The following search parameters as defined in the query column below are available for users to enter from the Versaterm query vehicle form:

Parameter	Description	Parameter Type	Data Type	Query
ID	Vehicle ID	Query	Integer	Yes
LICENSE	License	Query	String	Yes
LICENSEST	License State	Query	String	Yes
LICTYPE	License Type	Query	String	Yes
MAKE	Vehicle Make	Query	String	Yes
MODEL	Vehicle Model	Query	String	Yes
COLOR	Vehicle Color	Query	String	Yes
VIN	Vehicle Identification Number	Query	String	Yes

#### SearchVehicle Response Parameters:

When receiving multiple vehicle returns from the RICO API for a given vehicle query, the response delivered to users will be formatted with hyperlinks, based on ID (vehicle ID), for further vehicle query drilldowns. That is, each vehicle returned in the response, with an ID (vehicle ID), will be formatted as a hyperlink allowing users to click and auto-submit an exact match request to the RICO API using the vehicle ID number from the hyperlink.

The following RICO API response fields will be formatted and delivered to the CAD/MDT users for multi vehicle response list returns:

Name	Type	Description	Displayed
COLR1	String	Color #1.	Yes
COLR2	String	Color #2.	Yes
MAKE	String	Vehicle Make.	Yes
MODEL	String	Vehicle Model.	Yes
YEAR	Integer	Year.	Yes
LRY	Integer	License Year.	Yes
LICENSE	String	License plate.	Yes
ST	String	License state.	Yes
VIN	String	VIN.	Yes
VEHSTAT	String	Vehicle Status. <b>Lookup Table:</b>	Yes
VTTYPE	String	Vehicle Type. <b>Lookup Table:</b>	Yes
BODY	String	Vehicle Body. <b>Lookup Table:</b>	Yes
DATESTOL	String	Date Stolen (MM/DD/YYYY).	Yes
DATEREC	String	Date Recovered (MM/DD/YYYY).	Yes

ID	Integer	Alpha ID of associated person.	Yes
DETAILS	String	Vehicle details.	Yes
STOLEN	String	Stolen ("T"=True).	Only if True
VEHICLEID	Integer	Vehicle ID.	Yes

### Vehicle Query Drilldown

Once a particular vehicle hyperlink is clicked by the user (vehicle query drilldown), Versaterm submits a single request to the SearchVehicle RICO API. The request is made by specifying the vehicle ID in order to receive exact match details of the vehicle.

The return formatting performed by Versaterm will be based on the RICO API response fields as defined in displayed column in below table:

Name	Type	Description	Displayed
vehicleid	Integer	Vehicle ID.	No
casen	Integer	Case number.	Yes
vtype	String	Vehicle type. <b>Lookup Table:</b>	Yes
make	String	Vehicle make.	Yes
model	String	Vehicle model.	Yes
year	Integer	Year.	Yes
body	String	Vehicle body. <b>Lookup Table:</b>	Yes
colR1	String	Color #1. <b>Lookup Table:</b>	Yes
colR2	String	Color #2. <b>Lookup Table:</b>	Yes
license	String	Vehicle license.	Yes
st	String	License state.	Yes
makemod	String	Make and model.	Yes
lyr	Integer	License year.	Yes
lbkc			No
lltc			No
details	String	Details.	Yes
suspect	String	Suspect.	Yes
suS_NAME	String	Suspect name.	Yes
id	Integer	ID of associated alpha record.	Yes
vin	String	VIN.	Yes
stolen	String	Stolen ("T"=True).	Only if TRUE
vehstat	String	Vehicle status. <b>Lookup Table:</b>	Yes
reccode	String	Vehicle recovery code. <b>Lookup Table:</b>	Yes

### Location query

The following lists the service, request and response parameters used by this interface to support location queries from CAD and MDT.

#### RICO API Service:

Method	URL
GET	/api/v3/Incidents/LocationHistory
	/api/v3/Incidents/GetIncident

### LocationHistory Request Parameters:

The following search parameters as defined in the query column below are available for users to enter from generic Versaterm CAD address query screen:

Parameter	Description	Parameter Type	Data Type	Query
LOCATION	The address of a location	Query	String	Yes
CITY	The city of a location	Query	String	Yes
APT	Apartment or Suite of a location	Query	String	Yes

### LocationHistory Response Parameters:

When receiving a single or multiple location query returns from the RICO API for a given address query, the response delivered to users will be formatted with hyperlinks, based on the incident number returned (INCNUM), for further prior incident drilldowns at that location. That is, each incident number returned in the response, with an incident ID (INCNUM), will be formatted as a hyperlink allowing users to click and auto-submit an incident request to the GetIncident RICO API with the incident ID number from the hyperlink.

The following RICO API response fields will be formatted and delivered to the CAD/MDT users for a single or multiple location query response list returns:

Name	Type	Description	Displayed
INCNUM	Long Integer	Incident Number	Yes
DATEX	String	Date of Incident (MM/DD/YYYY).	Yes
TYPE	String	Incident Type. <b>Lookup Table: MTYPE</b>	Yes
TypeDesc	String	Incident Type Description	Yes
WPN	String	Weapon.	Yes
DI	String	Disposition. <b>Lookup Table: INCDISPO</b>	Yes
DispoDesc	String	Description of Disposition.	Yes

GetIncident API response parameters displayed to users are same as above defined parameters under person query section.

### Generate case number request

When CAD users request a case number from RIMS, Versaterm uses the following RICO API services and their parameters.

### RICO API Service:

Method	URL
GET	/api/v3/Cases/AssignCaseNumber

### AssignCaseNumber Request Parameters:

The following case number parameters as defined in the query column below will be available to users when requesting a case number from RIMS:

Parameter	Description	Parameter Type	Data Type	Query
REVISEDINC TYPE	Revised Incident Type. Used when the associated Incident record will be updated with a new Incident Type. <b>Lookup Table: MTYPE</b>	Query	String	Yes
LOCATION	Address to be added to case.	Query	String	Yes
APT	Apartment or Suite to be added to case.	Query	String	No
PLACE	Place name to be added to case. Example: Taco Bell	Query	String	No
CITY	City to be added to case. Lookup Table: MCITY	Query	String	No
SRA	Area to be added to case.	Query	String	No
BEAT	Beat to be added to case.	Query	String	No
DISPATCHER	Dispatcher's ID to be added to the case.	Query	String	Yes
OFFICERID	Primary Officer's ID to be added to the case	Query	String	Yes
UNITID	Unit ID of Primary Unit from the associated incident. If Case is generated from an incident, only the primary Unit ID needs to be specified. The case will be created from incident data.	Query	String	No
INCDATE	Incident Date in MM/DD/YYYY format. If omitted and an associated incident does not apply, the current date is used.	Query	String	No
INCTIME	Incident Time in HH:MM:SS format. If omitted and an associated incident does not apply, the current time is used.	Query	String	No
PSC	"Y" if Case request is from PSC, "N" if Case request is not from PSC.	Query	String	No

#### AssignCaseNumber Response Parameters:

When a case number response is received, the below RICO API response fields designated as displayed below will be formatted and delivered to the requesting user.

Name	Type	Description	Displayed
result	String	Success or Failure	Yes
message	String	Description of result. For a successful transaction, message will include formatted case number. Possible failure messages include: Case Number XXX is already assigned, Unit is not assigned to an Incident, Could not determine Officer Number.	Yes
key	integer	The non-formatted case number generated.	Yes

### **Business Continuity/Interface Availability**

This interface is available from the production and implementation/test environment. This interface is also available from the disaster recovery server, providing the RICO API listening services are available and reachable by CAD/VMC from the disaster recovery environment.

### **Interface Testing**

These tests are intended to ensure the interface functions as designed. The following are descriptions of the tests to be performed for the specified interface functionality during the functional acceptance test period.

#### **Functional and Completeness Test**

This test ensures the requests initiated from CAD/MDT are sent to Sunridge RICO API and responses are returned to users as appropriate.

A test consists of running a person, vehicle and location query requests from CAD/MDT, ensure the responses are returned accordingly to the originating user.

Another test consists of requesting a case number from Sunridge via CAD, then ensuring the returned case number from Sunridge is sent to the user.

#### **Operational Tests**

This test ensures that CAD is able to communicate with RICO API service after system reboots.

#### **Performance Tests**

The performance tests are measured from the time the user processes the integrated (or non-integrated) query until the time the query transaction is delivered to the destination RICO API service. Versaterm will not require more than two seconds in processing the query transaction. Excluded from any measurement are network time (e.g. network between CAD/VMC and RICO API) and external system processing times from the Sunridge listening service.

#### **Exception Testing**

The exception testing consists of disconnecting the network between CAD/VMC and RICO API and ensuring CAD/VMC is able to resume communications once connectivity is re-established.

### **Responsibilities**

#### **County Responsibilities**

- Provide Versaterm with the required RICO API response specification.
- Coordinate with Sunridge technical staff to assist in the interface development and testing.
- Configure network access to allow web service communications between the CAD/VMC and RICO API.
- Provide a test facility for this interface.
- Test the interface.

#### **Versaterm Responsibilities**

- Develop the CAD/MDT queries.
- Develop, install and configure CADVMC interface to RICO API.
- Provide assistance in the testing process.

## 26. ReddiNet

This interface receives real-time hospital status from ReddiNet and provides dispatchers with notifications and access to real-time hospital status information from within vCAD. This interface also provides status information for non-hospital entities such as helicopters and various EMS agencies (e.g. public health officer, health department, etc.).

### Functional Overview

The interface maintains a notepad entry (information file) which contains details for each record received from ReddiNet (hospital and non-hospital). The notepad entry contains the code, name and status fields as received from the ReddiNet system for each record received. For hospital records that are not open, status remarks are displayed; otherwise, the hospital is listed as open. For non-hospital records (e.g. helicopter and EMS agencies) that are not open, status remarks are displayed; otherwise, the facility is listed as available. The notepad entry can be viewed by CAD and mobile users to see the current status received from ReddiNet. The order in which the facilities are displayed in the notepad entry are hospitals displayed first and the non-hospital records are displayed in same order as received from ReddiNet.

Additionally, CAD is enhanced with a hospital maintenance facility to record hospital information in discrete database fields. The fields include hospital code, name, address, status and status remark field. The status field is a dropdown lookup field containing 'Open' and 'Other' as options. The status remark text field is used to store the various elevated statuses received from ReddiNet for a given hospital. Upon receiving hospital status updates from ReddiNet, the CAD interface concatenates the various remarks, if provided, and updates the status remark text field in CAD. The hospital record also contains an external ID field that is used to map incoming hospital records from ReddiNet to the CAD hospital record. The County CAD administrator must pre-enter the hospitals into the hospital maintenance facility in order to enable this interface to auto-update the corresponding hospital statuses based on the information received by ReddiNet. The hospital record should only contain hospital facilities and not the non-hospital entities such as helicopters and the various EMS agencies.

A notification is sent to the EMS and Fire dispatchers when a hospital status is changed by this interface to a status other than open. This does not apply to non-hospital records (e.g. other facilities such as helicopters and EMS agencies). Additionally, when a CAD or MDT user initiates an EMS or Fire patient transport to a hospital that is in a status other than open, a notification is sent to the user who initiated the transport. The system however does not prevent the user from transporting to a non-open hospital.

### Process Overview

The Versaterm CAD initiates web service requests to ReddiNet at 1-minute intervals to request the list of current statuses. The CAD then updates the notepad entry for all hospital and non-hospital records as well as updates the status/remarks in the corresponding hospital records in CAD for the hospital records. As mentioned above, hospitals must be pre-loaded into the CAD hospital maintenance facility in order to enable this interface to update the status based on the information received from ReddiNet.



For each facility that has an elevated level (other than open), the ReddiNet interface returns an array of status values and remarks (status\_items). A status value of greater than one (>1) indicates an elevated level for the

facility. For each facility with an elevated level, the status of the corresponding hospital in CAD is set to “Other” and the remarks are set to the status remark(s). If the hospital is not in an elevated level, the hospital record’s status in CAD is set to “Open”. That is, when a value of greater than one (>1) is received from ReddiNet for a particular facility’s status item (status\_item.value), CAD sets the corresponding hospital record in CAD to not open and the corresponding remarks (e.g. ED for SF: ED saturation, and increased acuity). Each elevated status remark is listed in the ReddiNet status sub item payload (status\_subitem), which is only provided by ReddiNet whenever a status item of greater than one (>1) is present.

The CAD also updates the notepad entry with a listing of all hospital and non-hospital entities received from ReddiNet along with their status. The list will be sorted to display the hospitals first (alphabetically) followed by the others such as helicopters and EMS agencies. A record is determined to be a hospital if there is a corresponding entry in the hospital maintenance facility.

The following screenshot is a sample CAD notepad entry displaying the ReddiNet status information.

```
Hospital Statuses
-----
SMEMS (SAN FRANCISCO GENERAL) - Open
SFG (SAN FRANCISCO GENERAL) - Open
KSS (KAISER PERMANENTE - SOUTH SAN FRANCISCO) - ED for SF: ED saturation, and increased acuity.
KPRC (KAISER PERMANENTE - REDWOOD CITY) - Open

San Mateo County EMS Agency
-----
On-Call:
EMS On Call/MHOAC: First on Call EMS 1: Nancy Lapolla Cell: 650-474-9964, 805-896-2314 Cap Code: 6181

Public Health Officer On Call MD/RN: PHN on first call on Friday 5:00 - 9:00 PM, Saturday 8:30 AM -4:30 PM and
Sunday 8:30 AM - 4:30 PM. PHN on call is Nancy Sorrell Cell #1 (415 )290-1384, Cell #2 (650) 399-6199. Dr. David
Chang is on first call at other times. Cell #1 (650) 776-9596.

OES On Call: Contact OES Duty officer through PSC Dispatch at 650-363-4963

EMS Agency (during business hours): 650-573-2009 (During normal business hours: 8AM-5PM Mon-Fri, not including
holidays.)

Health System Duty Officer: 24/7 Phone: 650-670-0094

Health Department DOC: n/a

Office Of Emergency Services: n/a

911 Dispatch - San Mateo County Public Safety
-----
On-Call:
PSC Dispatch Supervisor: EMS Dispatch: 650-363-4981 / Supervisor 650-363-4905....24/7

Stanford Life Flight
-----
Available

CALSTAR - San Mateo
-----
Available
```

## Communication

The communication between CAD and ReddiNet is provided via web-services conforming to SOAP standards. CAD initiates the HTTPS requests to ReddiNet and processes the responses.

## Web Service Definition

ReddiNet exposes web service to receive hospital query requests from the CAD. Web service requests made to ReddiNet are handled immediately (synchronously).



The details of the transaction, including field definitions and “header” details are provided in web service description language (WSDL) format available at <https://www.reddinet.net/status/status.aspx?WSDL> and the “ReddiNet Diversion Status Web Service Interface Specification (ReddiNet Status\_ws.pdf)” document dated September 16, 2009.

## **Business Continuity/Interface Availability**

This interface is available from the production and implementation/test environment. This interface is also available from the disaster recovery server, providing ReddiNet listening services are available and reachable from the disaster recovery environment.

## **Interface Testing**

These tests are intended to ensure the interface is complete as designed. The following are descriptions of the tests to be performed for the specified interface functionality during the functional acceptance test period.

### **Functional and Completeness Test**

This test ensures the hospital statuses are updated in CAD and notifications are sent to users as appropriate.

A test consists of modifying a hospital status record in ReddiNet and ensuring CAD is updated accordingly.

Another test consists of placing an EMS unit on a patient transport to a hospital that is in a status other than open, then ensuring a notification is sent to the user.

### **Operational Tests**

This test ensures that CAD is able to communicate with ReddiNet service after system reboots.

### **Performance Tests**

The performance tests are measured from the time a hospital status is updated in ReddiNet and is reflected in the CAD. Status changes in ReddiNet will be reflected in CAD in less than one (1) minute. Excluded from any measurement are network time (e.g. network between ReddiNet and CAD) and external system processing times from the ReddiNet listening service.

### **Exception Testing**

The exception testing consists of disconnecting the network between ReddiNet and CAD and ensuring CAD is able to resume communications once connectivity is re-established.

## **Responsibilities**

### **Customer Responsibilities**

- Provide Versaterm with an updated ReddiNet SOAP web-service specification, if applicable.
- Provide Versaterm with the required license key from ReddiNet to access the service.
- Provide Versaterm with the required server certificate from ReddiNet for HTTPS access, if applicable.
- Liaise with ReddiNet technical authorities to assist in the interface development and testing.
- Configure network access to allow web service communications between the CAD and ReddiNet.
- Provide a test facility for this interface.
- Test the interface.

Versaterm Responsibilities

- Develop a hospital maintenance facility to maintain hospital records in CAD.
- Develop a process to populate a notepad entry to display the current status of hospital and non-hospital records returned from ReddiNet.
- Develop, install and configure the SOAP web-service requests.
- Enhance CAD to send notifications when a hospital status other than open is detected and when an EMS unit is placed on patient transport to that particular hospital.
- Provide assistance in the testing process.

## 27. Message Switch (NCIC/CLETS, AWS, ATIMS)

This interface will provide a query and maintenance transaction interface from Versaterm CAD and a query interface from the Versaterm Mobile Data Terminal (MDT) module. The NCIC/CLETS, AWS (Alameda County Warrants) and ATIMS (San Mateo County local CJIS) transactions are delivered to the County Message Switch and processed appropriately.

Queries performed by the Versaterm CAD/MDT will be performed through the Versaterm NCIC interface using CLETS mnemonic pooling. AWS queries will use routing ID pooling when available. In addition to queries, users also have administrative messaging capabilities for NCIC, CLETS, and Message Switch. The County Message Switch acts as a portal to AWS and ATIMS systems as well as the national NCIC and CLETS systems. This County level portal is referred to as the Message Switch. Transactions destined for the Message Switch will be formatted to the corresponding Message Switch format and submitted through Message Switch portal.

### Business Flow Overview

The user enters the query through the appropriate form or, in some instances, may generate a query from another action (e.g. enter caller name and press a query button). The query transaction(s) are constructed to contain the details for only those fields and/or checkboxes specified by the user on the query form. The following illustrates a sample Versaterm MDT query form:

The screenshot shows a 'Query Person' form with the following fields and controls:

- Buttons: Send and Close (green checkmark), Reset (green square), Pin Form (green pin), Exit (red X).
- Fields: Surname (text box), G1 (text box), G2 (text box), DOB (text box), Age (text box), Sex (dropdown), Race (dropdown), DL (text box), State (dropdown with 'CA' selected), Records (checkbox checked), NCIC/State Warrant (checkbox checked), DRL (checkbox), Remarks (text box).
- Footer: Person's surname.

The Versaterm NCIC interface will receive the transaction(s) and forward the NCIC/CLETS/AWS/ATIMS queries to the Message Switch as appropriate. Responses returned from the various systems will be delivered as is (i.e. not reformatted) to the originator (see Communications and Processing, below).

### Configuration Overview

Query and maintenance transactions can be created and altered, by the County, via the Versaterm NCIC Site Configurable Transaction (SCT) facility – a form painter that defines the external query transactions. The SCT allows agencies to modify and create Message Switch transactions. An overview of the SCT facility is contained below.

### Overview of Forms/Transactions

There are two types of transactions supported:

- 1) Application form or integrated queries configured within the CAD/MDT applications; and
- 2) Invoked through the Versaterm NCIC subsystem.

### **Application Form and/or Integrated Queries**

The application form and/or integrated queries refer to the MDT forms that are configured for the installation and the integrated queries built within the CAD System (e.g. after entering the caller name, a query button is available to run the name search against the external systems). An integrated query is also available where, as a by-product of entering tagged information in the remarks of a call (e.g. suspect vehicle), CAD generates a query from the entered details.

The queries that are invoked are not hardcoded but leverage the queries defined in the Versaterm SCT.

### **NCIC Subsystem**

The NCIC subsystem provides access to the forms/transactions defined within the SCT. That is, any form can be invoked from a CAD workstation (providing user has security privileges) and the query may be performed. This permits the agency to define other queries that are not integrated and make them available to the CAD users. Note that these forms are not available to the Versaterm MDT. That is, the MDT application does not have the facility to access and display the forms from within the NCIC subsystem.

Additionally, CAD users have the ability to run free form transaction from the NCIC subsystem free form mask.

### **Supported Message Switch Transactions**

The following section lists the Message Switch transactions/forms provided by Versaterm. Additional forms may be created by the County using the NCIC SCT facility described in the “Versaterm NCIC Site Configurable Transaction (SCT) Facility Overview” section of this ICD.

#### **1. Query transactions**

The following query transactions will be available from CAD workstations and a subset, as identified below, will be available on the MDT module.

#### **AWS Transactions:**

<b>Inquiry Name</b>	<b>Transaction</b>	<b>From CAD</b>	<b>From MDT</b>
Person Name	LEWI\NAME	Yes	Yes
Operator License Number	LEWI\OLN	Yes	Yes
Social Security Number	LEWI\SSN	Yes	No
Person File Number	LEWI\PFN	Yes	No
CII Number	LEWI\CII	Yes	No
FBI Number	LEWI\FBI	Yes	No
Warrant Number	LEWI\WAR	Yes	No
FCN Number	LEWI\FCN	Yes	No
Vehicle License Number Inquiry	LEVI\VLN	Yes	Yes

Vehicle ID Number (VIN) Inquiry	LEVI\VLN	Yes	Yes
AWS Administrative Message (MAID)	AID	Yes	No
Request AWS Warrant Verification (MREQV)	LEWX\REQV	Yes	No
AWS Warrant Worksheet (AWSWKS)	LEWS\INQ	Yes	Yes
AWS Warrant List (AWSLIST)	LEWM\RESP LEWM\ASGN	Yes	No

**ATIMS Transactions:**

<b>Inquiry Name</b>	<b>Transaction</b>	<b>From CAD</b>	<b>From MDT</b>
Name	.NAMS.LAS/last.FIR/first.MID/middle.DOB/dob. SEX/sex.SFX/suffix.AGE/age	Yes	Yes
OLN	.NAMS.OLN/license	Yes	Yes
SSN	.NAMS.SSN/social security number	Yes	No
SMC	.NAMS.SMC/idnumber	Yes	No
CII	.NAMS.CII/CII number	Yes	No
FBI	.NAMS.FBI/FBI number	Yes	No
SMT	Scars, marks, tattoos query	Yes	Yes
DCC	Display custody chronology	Yes	Yes

**NCIC/CLETS Transactions:**

<b>Description</b>	<b>Transaction</b>	<b>From CAD</b>	<b>From MDT</b>
Administrative Message CLETS/NCIC/Message Switch	TO	Yes	No
Occupational License (Dealer) plate inquiry	DEALER	Yes	Yes
CLETS/NCIC Hit Confirmation Request	YQ	Yes	No
CLETS/NCIC Hit Confirmation Response	YR	Yes	No
DMV International Registration Plan (IRP) (apportioned license)		Yes	Yes
QUERY NLETS BOAT REGISTRATION	BQ	Yes	Yes
QUERY NLETS DRIVERS LICENSE (ID and STATUS)	DQ	Yes	Yes
QUERY INTERPOL WANTED PERSON-FULL	FPQ	Yes	No
QUERY NLETS CRIMINAL HISTORY (SID)	FQ	Yes	No
QUERY MENTAL HEALTH FIREARMS PROHIBITION (NAME)	FQA	Yes	No
QUERY MENTAL HEALTH FIREARMS PROHIBITION (NUMBER)	FQN	Yes	No
QUERY MENTAL HEALTH FIREARMS PROHIBITION (RECORD)	FQP	Yes	No
QUERY INTERPOL STOLEN TRAVEL DOCUMENT-FULL	FTQ	Yes	No
QUERY INTERPOL STOLEN VEHICLE-FULL	FVQ	Yes	No
QUERY NLETS AIRCRAFT REGISTRATION SYSTEM	GQ	Yes	No
QUERY NLETS LESC IMMIGRATION ALIEN	IAQ	Yes	No
QUERY INTERPOL WANTED PERSON	IPQ	Yes	No

QUERY NLETS CRIMINAL HISTORY (NAME)	IQ	Yes	No
QUERY INTERPOL STOLEN TRAVEL DOCUMENT	ITQ	Yes	No
QUERY INTERPOL STOLEN VEHICLE	IVQ	Yes	No
QUERY NLETS AIRCRAFT TRACKING SYSTEM	JQ	Yes	No
QUERY NLETS DRIVERS LICENSE (HISTORY)	KQ	Yes	No
QUERY LOJACK	LJ	Yes	Yes
QUERY NLETS HAZARDOUS MATERIALS	MQ	Yes	Yes
QUERY NLETS NICB - ALL FILES	NAQ	Yes	No
QUERY NLETS NICB - IMPORT/EXPORT FILES ONLY	NIQ	Yes	No
QUERY ARTICLE	QA	Yes	Yes
QUERY PAWN/BUY ARTICLE (BY NAME)	QAN	Yes	No
QUERY ARSON REGISTRANT RECORDS	QAR	Yes	No
QUERY BOAT RECORDS	QB	Yes	Yes
QUERY CORRECTIONS PAROLE RECORDS	QCA	Yes	No
QUERY SUPERVISED RELEASES (BY FCN)	QCF	Yes	No
QUERY CAREER CRIMINAL RECORDS	QCR	Yes	No
QUERY CALIFORNIA DMV DRIVERS LICENSE FILE	QDL	Yes	Yes
QUERY FEDERAL PROBATION RECORDS	QFR	Yes	No
QUERY GUN	QG	Yes	Yes
QUERY GANG GROUP REFERENCE CAPABILITY	QGGRP	Yes	No
QUERY HISTORICAL GUN	QGH	Yes	Yes
QUERY GUN WITH MAILED RESPONSE	QGM	Yes	No
QUERY CJIS CRIMINAL HISTORY (NAME)	QHA	Yes	No
QUERY CJIS CRIMINAL HISTORY (LAST CYCLE)	QHC	Yes	No
QUERY CJIS CRIMINAL HISTORY (NUMBER)	QHN	Yes	No

QUERY CJIS CRIMINAL HISTORY (DESCRIPTION)	QHP	Yes	No
QUERY CJIS CRIMINAL HISTORY (TRANSCRIPT - MAILED)	QHT	Yes	No
QUERY CJIS CRIMINAL HISTORY (TRANSCRIPT - ONLINE)	QHY	Yes	No
QUERY CALIFORNIA DMV INTERNATIONAL REGISTRATION PLAN	QIRP	Yes	No
QUERY MISSING PERSON	QM	Yes	Yes
QUERY NCIC ORI ENTRIES	QO	Yes	No
QUERY OREGON DRIVERS LICENSE (BY PERSON DETAILS)	QODLP	Yes	No
QUERY OREGON DRIVERS LICENSE (BY DRIVERS LICENSE)	QODLR	Yes	No
QUERY CALIFORNIA DMV OCCUPATIONAL LICENSES FILE	QOL	Yes	No
QUERY OREGON VEHICLE REGISTRATION (BY PLATE)	QORP	Yes	No
QUERY OREGON VEHICLE REGISTRATION (BY VIN)	QORV	Yes	No
QUERY OREGON VEHICLE RECORDS	QOV	Yes	No



QUERY OREGON WANTED PERSON	QOW	Yes	No
QUERY NCIC PROTECTION ORDERS	QPO	Yes	No
QUERY COUNT PROBATION RECORDS	QPR	Yes	No
QUERY CALIFORNIA DMV PARKING/TOLL VIOLATIONS	QPT	Yes	Yes
QUERY CALIFORNIA DMV REGISTERED OWNER FILE	QRO	Yes	Yes
QUERY RESTRAINING ORDERS (RESTRAINED PERSONS ONLY)	QRP	Yes	No
QUERY RESTRAINING ORDERS	QRR	Yes	No
QUERY RESTRAINING ORDERS (HISTORICAL)	QRRH	Yes	No
QUERY RESTRAINING ORDERS (ABBREVIATED)	QRRK	Yes	No
QUERY SECURITIES	QS	Yes	Yes
QUERY VCIN/SEX & ARSON REGISTRY	QSA	Yes	No
QUERY UNIDENTIFIED PERSON	QU	Yes	No
QUERY VEHICLE/PART RECORDS	QV	Yes	Yes
QUERY SUPERVISED RELEASES (FULL)	QVC	Yes	Yes
QUERY SUPERVISED RELEASES (ABBREVIATED)	QVCK	Yes	No
QUERY WANTED PERSON	QW	Yes	Yes
QUERY WANTED PERSON (ABBREVIATED)	QWA	Yes	No
QUERY YOUTH AUTHORITY RECORDS	QYA	Yes	No
QUERY APPS GUN SERIAL	QYG	Yes	No
QUERY APPS ID NUMBER	QYN	Yes	No
QUERY APPS PERSONAL DATA RECORDS	QYP	Yes	Yes
QUERY NCIC NIC NUMBER	RNIC	Yes	No
QUERY NLETS VEHICLE REGISTRATION	RQ	Yes	Yes

QUERY NCIC GUN	RQG	Yes	No
QUERY NCIC (III) CRIMINAL HISTORY (NAME)	RQH	Yes	No
QUERY NCIC MISSING PERSON	RQM	Yes	No
QUERY NCIC (III) CRIMINAL HISTORY (NUMBER)	RQR	Yes	No
QUERY NCIC UNIDENTIFIED PERSON	RQU	Yes	No
QUERY NCIC VEHICLE RECORDS	RQV	Yes	No
QUERY NCIC WANTED PERSON	RQW	Yes	No
ARTICLE/BRAND/CATEGORY (ABC) QUERY	SPQ	Yes	No
QUERY NLETS SNOWMOBILE REGISTRATION	SQ	Yes	No
QUERY NLETS ORION DATABASE	TQ	Yes	No
QUERY CANADIAN VEH REGISTRATION (NLETS)	XQ	Yes	No

## 2. Maintenance transactions

The following maintenance transactions will be available from the CAD module.  
The Versaterm CAD NCIC maintenance subsystem is enhanced with the ability to specify an ORI. This provides users with the flexibility to enter the originating agency for maintenance transactions. The ORI is defaulted to the user's ORI.

### AWS Maintenance Transactions

Description	Transaction
AWS Warrant Status Change (M3066)	LEWS\UPD

### CLETS/NCIC Maintenance Transactions

Description	Transaction
-------------	-------------

CLEAR ARTICLE	CA
CLEAR BOAT RECORDS (SINGLE/BASE)	CB
CLEAR BOAT RECORDS (ASSOCIATE)	CBA
CLEAR GUN	CG
CANCEL GANG GROUP REFERENCE CAPABILITY	CGG
CLEAR SECURITIES	CS
CLEAR VEHICLE RECORDS (SINGLE/BASE)	CV
CLEAR VEHICLE RECORDS (SINGLE/BASE)	CVA
CLEAR WANTED PERSON	CW

DVROS - VIOLATION MESSAGE - ADDITIONAL COMMENT	DCVM
DVROS - VIOLATION MESSAGE ENTRY	DEVM
DVROS - VIOLATION MESSAGE MODIFY	DMVM
ENTER ARTICLE	EA
ENTER BOAT (STOLEN)	EB
ENTER BOAT PART (STOLEN)	EBP
ENTER BOAT (PAWNED)	EBPW
ENTER BOAT (REPOSSESSED)	EBR
ENTER BOAT (LOST)	EBRL
ENTER BOAT (STORED/IMPOUNDED)	EBS
ENTER CAREER CRIMINAL (SRF) RECORD	ECR
ENTER FEDERAL PROBATION (SRF) RECORD	EFR
ENTER GUN	EG
ENTER GANG GROUP REFERENCE CAPABILITY	EGG
ENTER GUN VIOLENCE RESTRAINING ORDER	EGVO
ENTER MISSING PERSON	EM
ENTER MISSING PERSON IDENTIFIERS	EMID
ENTER MISSING SUSPECT	EMS
ENTER MISSING VEHICLE	EMV
ENTER PAWN/BUY ARTICLE	EP
ENTER NON-SERIALIZED PAWN/BUY ARTICLE	EPN
ENTER COUNTY PROBATION (SRF) RECORD	EPR
ENTER RESTRAINING ORDER RECORD	ERO
ENTER SECURITIES	ES
ENTER WANTED PERSON (TEMPORARY)	ETR
ENTER UNIDENTIFIED PERSON IDENTIFIERS	EUID

ENTER UNIDENTIFIED PERSON	EUP
ENTER VEHICLE (STOLEN)	EV
ENTER VEHICLE (FELONY)	EVF
ENTER VEHICLE PLATE (FELONY)	EVFL
ENTER VEHICLE PLATE (LOST/STOLEN)	EVL
ENTER VEHICLE PLATE (EVIDENCE/FOUND)	EVLE
ENTER VEHICLE (MISSING PERSON)	EVM
ENTER VEHICLE (PAWNED)	EVP
ENTER VEHICLE PART(EVIDENCE/FOUND)	EVPF
ENTER VEHICLE PART	EVPR
ENTER VEHICLE (REPOSSESSED)	EVR
ENTER VEHICLE (LOST)	EVRL
ENTER VEHICLE (STORED)	EVS
ENTER VEHICLE (IMPOUNDED)	EVSH

ENTER WANTED PERSON	EWR
LOCATE ARTICLE	LA
LOCATE BOAT RECORDS (SINGLE/BASE)	LB
LOCATE BOAT RECORDS (ASSOCIATE)	LBA
ENTER CONTACT-MESSAGE (SRF)	LCA
LOCATE GUN	LG
LOCATE MISSING PERSON	LMP
LOCATE SECURITIES	LS
LOCATE VEHICLE RECORDS (SINGLE/BASE)	LV
LOCATE VEHICLE RECORDS (ASSOCIATE)	LVA
LOCATE WANTED PERSON	LW
MODIFY ARTICLE	MA
MODIFY BOAT RECORDS (SINGLE/BASE)	MB
MODIFY BOAT RECORDS (ASSOCIATE)	MBA
MODIFY CAREER CRIMINAL (SRF) RECORD	MCR
MODIFY CAREER CRIMINAL (SRF) RECORD (ADDITIONAL)	MCRA
MODIFY FEDERAL PROBATION (SRF) RECORD	MFR
MODIFY FEDERAL PROBATION (SRF) RECORD (ADDITIONAL)	MFRA
MODIFY GUN	MG
MODIFY GUN (Additional)	MGA
MODIFY GANG GROUP REFERENCE CAPABILITY	MGG
MODIFY MISSING PERSON IDENTIFIERS	MMID
MODIFY MISSING PERSON	MMP
MODIFY MISSING PERSON DESCRIPTION	MMPD

MODIFY MISSING SUSPECT	MMS
MODIFY MISSING SUSPECT DESCRIPTION	MMSD
MODIFY MISSING VEHICLE	MMV
MODIFY NCIC ORI RECORDS	MO
MODIFY COUNTY PROBATION (SRF) RECORD	MPR
MODIFY COUNTY PROBATION (SRF) RECORD (ADDITIONAL)	MPRA
MODIFY RESTRAINING ORDER RECORD	MRO

MODIFY RESTRAINING ORDER RECORD (ADDITIONAL)	MROA
MODIFY RESTRAINING ORDER RECORD (ADDITIONAL)	MROB
MODIFY RESTRAINING ORDER RECORD (ANIMAL)	MROC
MODIFY SECURITIES	MS
MODIFY UNIDENTIFIED PERSON IDENTIFIERS	MUID
MODIFY UNIDENTIFIED PERSON	MUP
MODIFY UNIDENTIFIED PERSON DESCRIPTION	MUPD
MODIFY VEHICLE RECORDS (SINGLE/BASE)	MV
MODIFY VEHICLE RECORDS (ASSOCIATE)	MVA
MODIFY WANTED PERSON (BASIC)	MWR
MODIFY WANTED PERSON (ADDITIONAL)	MWRA
MODIFY WANTED PERSON (CONTINUED)	MWRB
LOCATE NCIC BOAT RECORDS (SINGLE/BASE)	RLB
LOCATE NCIC BOAT PART RECORDS (ADD-ON)	RLBP
LOCATE NCIC BOAT TRAILER RECORDS (ADD-ON)	RLBT
LOCATE NCIC FELONY VEHICLE RECORD	RLF
LOCATE NCIC LICENSE PLATE RECORD	RLL
LOCATE NCIC MISSING PERSON	RLM
LOCATE NCIC VEHICLE/BOAT PART RECORDS (SINGLE/BASE)	RLP
LOCATE NCIC VEHICLE PART RECORDS (ADD-ON)	RLPS
LOCATE NCIC VEHICLE RECORDS (SINGLE/BASE)	RLV
LOCATE NCIC VEHICLE RECORDS (ADD-ON)	RLVS



ENTER PROOF OF SERVICE RECORD	SRO
CANCEL ARTICLE	XA
CANCEL BOAT RECORDS (SINGLE/BASE)	XB
CANCEL BOAT RECORDS (ASSOCIATE)	XBA
CANCEL GUN	XG
CANCEL MISSING PERSON	XMP
CANCEL MISSING SUSPECT	XMS
CANCEL MISSING VEHICLE	XMV
CANCEL RESTRAINING ORDER RECORDS	XRO
CANCEL SECURITIES	XS
CANCEL UNIDENTIFIED PERSON	XUP
CANCEL VEHICLE RECORDS (SINGLE/BASE)	XV
CANCEL VEHICLE RECORDS (ASSOCIATE)	XVA
CANCEL SUPERVISED RELEASE (SRF) RECORD	XVC
CANCEL WANTED PERSON	XW

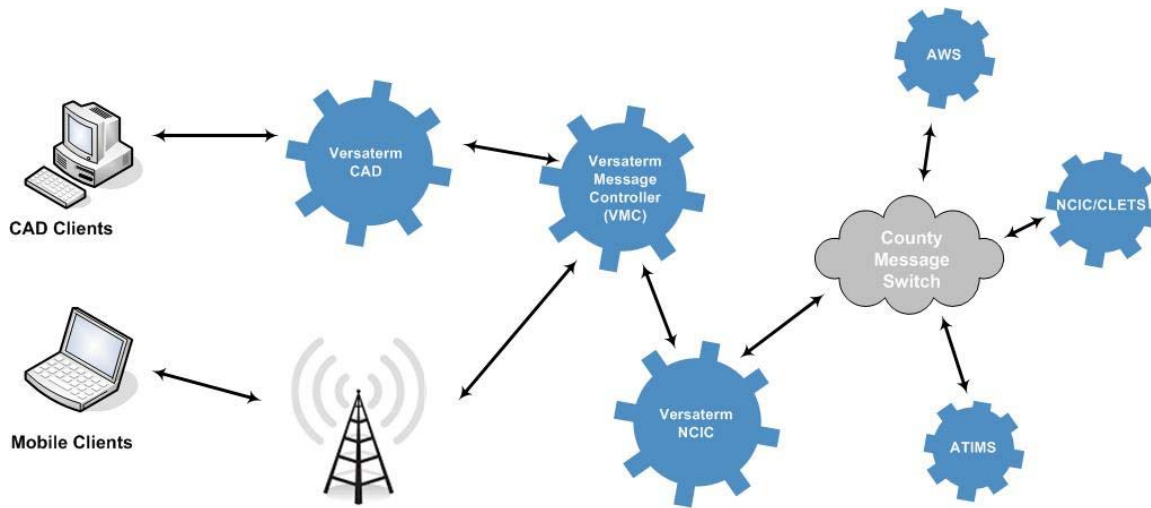
Note that the MDT does not use the native SCT forms. That is, the MDT application forms are configured as part of the MDT configuration and although the resulting query transactions conform to the transaction layouts configured within the SCT, changes to the SCT defined transactions are not automatically updated within the MDT application. Further, although the County is able to design any Message Switch transaction, for example, which are then available within the NCIC subsystem, these new “masks” are not available to the MDT product (i.e. it does not have a NCIC subsystem as does the CAD) - the MDT cannot download new masks developed in the SCT.

## Communications and Processing

The Message Controller (VMC) and NCIC interface will provide the communications from the CAD desktops and MDT clients to the County Message Switch.

Queries destined to the AWS and ATIMS systems are also submitted through the County Message Switch adhering to the specifications by those specific interfaces (e.g. AWS, ATIMS). The ATIMS specifications are contained in the document titled “San Mateo County Message Switch Remote CAD Interface Specification” (file name: TCP IP Interface.pdf). The AWS specifications are contained in the document titled “ALAMEDA COUNTY AWS Computer-to-Computer (C2C) Technical Specifications” (file name: AWS C2C Specs.pdf).

The following diagram illustrates the connectivity points for the CAD and MDT clients to the County Message Switch:



## Communication Protocol

Communication with the County Message Switch is TCP/IP as specified by the San Mateo County Message Switch document. The County Message Switch specifications are contained in the document titled “San Mateo County Message Switch Remote CAD Interface Specification” (file name: TCP IP Interface.pdf).

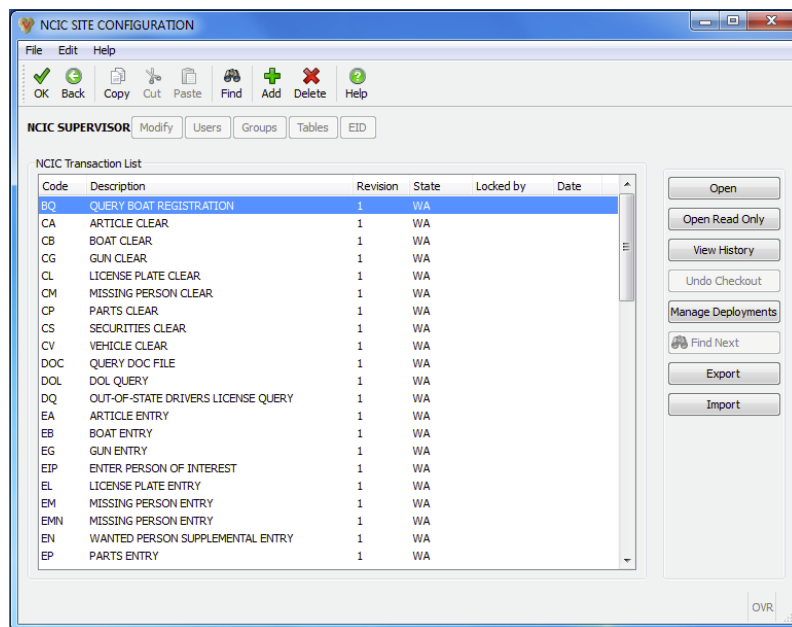
## Versaterm NCIC Site Configurable Transaction (SCT) Facility Overview

The Versaterm interface to national and state databases is the Versaterm NCIC subsystem. The Versaterm NCIC subsystem must be configured to recognize every transaction where the NCIC subsystem has been identified as the medium by which the transaction is to be passed to an external system. In order to facilitate as flexible a means as possible for such configuration, an integral part of the Versaterm NCIC subsystem is its Site Configurable Transaction (SCT) Facility that is more informally referred to as the form-painter. While the SCT certainly provides for the definition of forms that are associated with each transaction, it also provides for the definition of field and/or transaction level rules and, of equal importance, it provides for definition of destination-format strings which govern how transactions will be assembled from the individual field details provided by a user. It's due to the Versaterm NCIC subsystem's leveraging of these SCT rules and destination-format strings that every transaction to be handled by the subsystem needs to be defined using the SCT. The benefit of this approach is that any NCIC-like transaction can actually be supported within the NCIC subsystem (e.g. CLETS message) – it does not have to be configured in an integrated fashion within the Versaterm application. Further, the agency is capable to adjust the transactions as the external system requirements change.

The remainder of this section provides high-level insight into how the SCT is used to define transactions that can be made available for use with the Versaterm NCIC subsystem.

### **SCT Facility Transaction Definition**

Transactions are maintained using Versaterm's Site Configurable Transaction (SCT) facility. When first invoked, a list of already defined transactions is presented.



From this list, existing transactions can be modified/deleted (i.e. the highlighted entry in the list representing the transaction currently in focus) or new transactions can be created (i.e. the “Add” button).

The screenshot shows the 'RMS - NCIC Supervisor' application window. The 'Transaction Profile' section includes fields for Code, Version (2), Status (D), Description (QUERY BOAT REGISTRATION), Type (QRY), and Security (Y). The 'Destination List' shows 'NLETS' and 'STATE'. The 'Destination Details' section shows 'Destination Code' (NLETS), 'Interface' (STATE), and a checked 'Send by default' option. A large text area contains the transaction code: 'BQ.(ORI).(ST).TXTREG/[REG].[BHN]/[BHN].[NAM]/[NAM].[DOB]/[DOB]'. On the right, there are buttons for 'Modify Form', 'Preview', 'Save/Commit', and 'Deploy'. At the bottom, a status bar indicates 'Transaction code - example QV for query stolen vehicle' and 'OVR'.

When defining new transactions, or modifying existing ones, in addition to defining a transaction code, version, type, etc., the ability to define individual fields that comprise the transaction is also required. To facilitate this, the “Modify Form” button will open a window, similar to as illustrated below, which will permit transaction fields and labels to be defined:

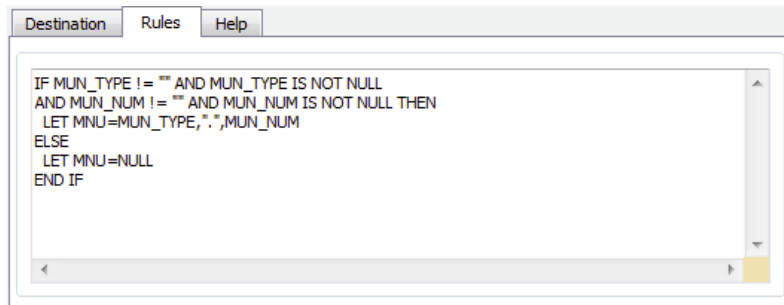
The screenshot shows the 'Form painter' window for editing a form. The 'Form Workspace' on the left displays a form layout with fields for 'COMMENT', 'BQ', 'NLETS BOAT REGISTRATION QUERY', 'State', 'Registration #', 'Hull #', 'Name', and 'DOB'. The 'Properties' panel on the right shows settings for the selected field: Tag (REG), Tab Order (2), Screen Length (6), Maximum Length (8), Default Value, Description (Boat registration number), Color (Reverse Blue), and various checkboxes for 'Include', 'Input Picture', 'Send Picture', 'No Entry', 'Invisible', 'Mandatory', 'Case Sensitive', 'Numeric', and 'Period Allowed'. A 'Rules' section is also visible at the bottom right. The status bar at the bottom indicates 'Field width on screen', 'Field changes have been saved', and 'OVR'.

When a field is defined (as shown above), characteristics such as length, default value, field-level rules, permitted values, picture clauses, lookup-table, etc. can be specified. A field tag-value unique to the transaction must also be specified. This tag-value becomes the name by which the field will be referenced when form level rules and/or destination-formats for the transaction are defined. In addition

to fields, the screen painting form also allows for the (optional) definition of labels to make the form readable to the user.

### **Form-Level Rules**

With the transaction defined, form-level rules and/or destination-formats can be defined. Form-level rules are rules that are applied after the entire form has been specified as opposed to after when an individual field has been entered. Form-level rules can be defined by clicking the “Rules” tab and are useful for performing multi-field edits, specifying which destination-formats are to be used and constructing fields that can be used when populating a destination-format. A sample form-level rules definition might be:



```
IF MUN_TYPE != "" AND MUN_TYPE IS NOT NULL
AND MUN_NUM != "" AND MUN_NUM IS NOT NULL THEN
  LET MNU=MUN_TYPE, "-",MUN_NUM
ELSE
  LET MNU=NULL
END IF
```

In this case, it is assumed a form has been defined that among others has fields with tag-values of MNU\_TYPE and MNU\_NUM (i.e. individual fields that when combined would form the NCIC miscellaneous-number - MNU field). If both the MNU\_TYPE and MNU\_NUM fields above were assigned values when the transaction was being entered then the above rule stipulates that a new variable, MNU, will be assigned the value of the MNU\_TYPE field entered on the transaction form, followed by a hyphen (“-”), followed by the value of the MNU\_NUM field entered on the transaction form. The resulting MNU variable can then be used later on within the rules section or even used in a destination-format definition.

### **Destination-Formats**

To specify destination-formats, the “Destinations” tab is clicked on the NCIC Transaction screen. This causes a screen similar to the following to appear:

The screenshot shows the 'RMS - NCIC Supervisor' application window. The 'Transaction Profile' section includes fields for Code (QVEH), Version (2), Status (A), Description (MULTI-QUERY ON VEHICLE), Type (QRY), and Security (Y). The 'Destination' tab is active, showing a 'Destination List' with 'WACIC' and 'STATE'. The 'Destination Details' section shows 'Destination Code' (WACIC), 'Interface' (STATE), and a checked 'Send by default' box. A large text area contains the destination format: 'QV.(ORI).LIC/[LIC].LIS/[LIS].VIN/[VIN].VMA/[VMA]'. The status bar at the bottom reads 'Transaction description or title - example Query Stolen Vehicle' and 'OVR'.

The multiple destination capability provides flexibility in dealing situations where a single transaction may be sent to multiple systems.

The following window shows a destination-format that has been defined for a transaction:

This is a close-up of the 'Destination Details' window. It shows the 'Destination Code' (WACIC), 'Interface' (STATE), and a checked 'Send by default' box. The main text area displays the destination format: 'QV.(ORI).LIC/[LIC].LIS/[LIS].VIN/[VIN].VMA/[VMA]'. The text area has a blue background and a scroll bar on the right.

The destination-format generally conforms to rules that tend to be specific to the state and county level messages-switches that the transaction must navigate.

When specifying a destination-format, it is usually comprised from a combination of hard-coded literals (e.g. see LIC, VIN, etc., outside of brackets/braces above) and/or variables. These variables come from SCT defined constants (e.g. see ORI embedded within brackets above), from form fields as identified by their tag-value (e.g. see VIN, LIS, LIC, etc., embedded within braces above) and/or from variable names assigned values within the form-level rules section (no example provide above). There is nothing that prevents a hard-coded literal from being the same as a variable name. The destination-format parser distinguishes the appropriate context based on whether or not the value is embedded inside brackets/braces; values inside brackets/braces are variables and values outside brackets/braces are hard-coded literals.

## **Business Continuity/Interface Availability**

This interface is available for all servers (production, implementation/test and disaster recovery) provided connectivity to Message Switch is available. The interface may be “turned off” with the appropriate configuration changes.

## **Interface Testing**

These tests are intended to ensure the Message Switch interface is accurate and complete in submitting query transactions and delivering responses. The following are descriptions of the tests to be performed for the specific interface during the Functional Acceptance test period.

### **Functional and Completeness Test**

For each query/maintenance transaction, the County will verify the corresponding transaction is generated. The queries include those integrated within the CAD and MDT and those available within the NCIC subsystem.

### **Operational Tests**

This test verifies the transaction response. Each response is compared to existing transaction responses from the County’s Message Switch systems.

### **Performance Tests**

The performance tests are measured from the time the user processes the transaction until the time the transaction is delivered to the destination County Message Switch system. Given the importance of this interface, Versaterm will not require more than two seconds in processing the transaction. Excluded from any measurement is network time (e.g. network between NCIC and Message Switch) or external system processing time.

### **Exception Testing**

This test includes shutting down the connectivity (i.e. pulling the plug) and ensuring that Versaterm will queue transactions and forward them once connectivity is re-established. A further test should be conducted where Versaterm is shutdown and ensuring that, once connectivity is re-established, that messages queued by the external systems, if any, are delivered to their proper destination.

## **Responsibilities**

### **County Responsibilities**

- f. Configure County Message Switch (including AWS, ATIMS) test environments to support testing activity.
- g. Provide networking support including router and firewall configurations to support the interconnectivity between County Message Switch and the Versaterm server environments, including disaster recovery server.
- h. Coordinate with County technical authorities to assist in the interface development and testing.
- i. The County will test the interface.

### **Versaterm Responsibilities**

- a. Develop the AWS and ATIMS query capabilities from the Versaterm NCIC.
- b. Enhanced the CAD NCIC maintenance facility with the ability to specify an ORI.
- c. Configure test facilities as appropriate. That is, the Message Switch test environment uses same port but a different TCP/IP address for the test connection.

- d. Configure the initial set of query and maintenance transactions identified in this ICD.
- e. Configure the MDT environment with the forms/transactions.
- f. Perform the initial functional testing of the interface.
- g. Provide assistance and guidance through the County Acceptance tests.
- h. Install and test the NCIC Audit Archive.



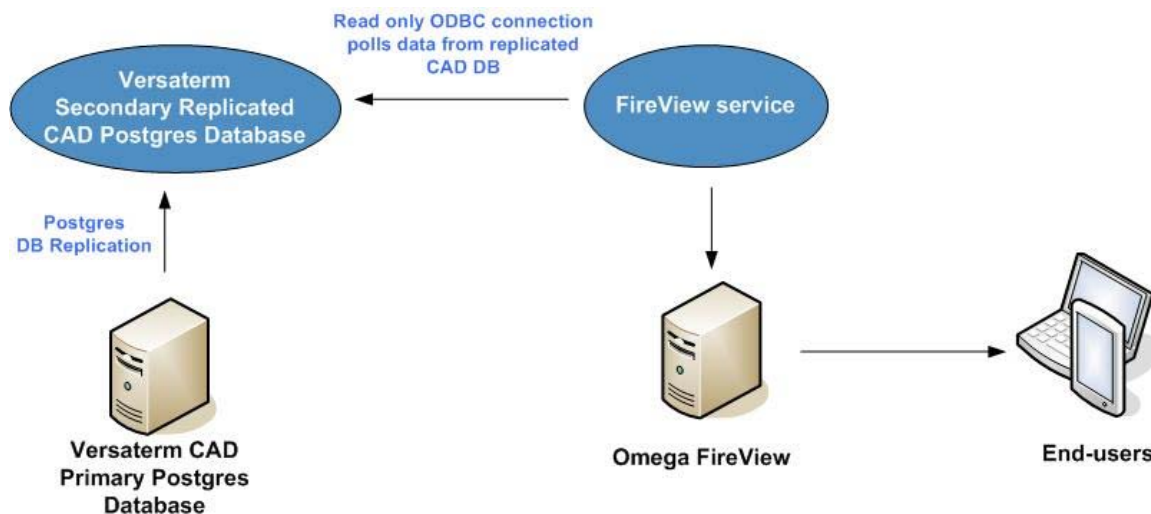
## 28. Omega Fireview

This interface provides real-time Fire incident and unit status information to the Omega FireView system making San Mateo County system information available to end users accessing FireView applications.

### Process Flow

The Versaterm CAD primary database is replicated in real-time to the secondary replicated database, which is primarily used for reporting and analytics. This interface uses a read-only connection established from the FireView system to the replicated database allowing FireView to pull active CAD incident data from the replicated database into the Omega FireView server. The FireView application is configured to pull CAD data from a designated database view at no less than sixty (60) second intervals.

In order to limit the incident information accessed by FireView, the County, with assistance from Versaterm, will create scripts to create the database view(s) on the primary database server. Those view(s) are then automatically replicated to the replicated database where FireView accesses the database view(s) to read data. The database view(s) provide specific column(s) expected by FireView as well as any required data field mapping between FireView and CAD (e.g. mapping vCAD unit status codes to FireView status codes). The scripts for the database views will reside in a site-specific folder, as designated by Versaterm, on the CAD application server. During application upgrades, Versaterm will copy the view script(s) from the current servers to the new servers and will run them on the new database to re-create the views. It is however, the County's responsibility to maintain the views should any modifications be required (e.g. adding additional FireView filters, column changes, etc.)



### Communication

The communication between Omega FireView and the replicated Postgres database is through an ODBC connection.

### Business Continuity/Interface Availability

This interface is available from the production server by connecting FireView to the replicated database. Similarly, it is available from the implementation/test server by configuring FireView connection to the implementation/test CAD primary database. This interface is not available in a disaster situation where the primary and secondary replicated databases are no longer available.

## **Interface Testing**

These tests are intended to ensure the interface functions as designed. The following are descriptions of the tests to be performed for the specified interface functionality during the functional acceptance test period.

### **Functional and Completeness Test**

This test ensures that the replicated database is populated with call and unit status information.

### **Operational Tests**

This test ensures the FireView service is able to reconnect to the replicated database and pull data after system reboots. The replicated database server will be shutdown/re-started and ensure database services are started as well as communications between FireView to the replicated database is established.

### **Performance Tests**

The performance tests will consist of ensuring that updates to calls and unit status changes performed in CAD are published to the replicated database within two (2) seconds. Excluded from any measurement is network time (e.g. network between CAD and replicated DB).

### **Exception Testing**

The exception testing consists of disconnecting the FireView connectivity to the replicated database and after reconnecting, ensure FireView is able to re-establish its connection to the replicated database.

## **Responsibilities**

### **County Responsibilities**

- Provide network connectivity between Omega FireView service and the replicated database.
- Coordinate with Omega FireView technical staff to assist in the interface development and testing.
- With Versaterm's assistance, create any required database views on the CAD database.
- Maintain any required database views on the CAD database.
- Setup and maintain Postgres client authentication file to control/limit ODBC access.
- Test the interface.

### **Versaterm Responsibilities**

- Provide the County with the CAD database schema.
- Assist the County with initial database view creation.
- Copy database view scripts to new CAD application server during CAD upgrades
- Execute database view scripts after each CAD upgrade.
- Provide assistance and guidance in the development and testing process.

## 29. Geographic Information System (GIS) Interface

This Interface leverages Versaterm's Geographic Information System (GIS) Interface (VGI), a suite of MS Windows based tools, scripts and programs to generate GIS data files. When completed, the GIS data resides in a set of street index validation tables in the application's database where it is used for address verification, geo-coding and other spatial-related function and analysis.

The VGI creates the GIS data files by extracting the required information from ESRI formatted shape files provided by the County.

### A. Process overview

Using the ESRI formatted shape files, the VGI will permit the County to map attributes from the various shape file (layers) to the System's street index data elements. The VGI program then verifies the data with logical edits and subsequently produces the ASCII file representation of the geo-spatial data for loading into the System using the System's administration street index facility.

The expected result of this process is a comprehensive street index in the System for address verification, geo-coding and other spatial-related function and analysis. This Interface may be used whenever updates are required to the System's street index files.

For interim updates that may be required should the source GIS not be up-to-date, the System's street index maintenance facility permits a User, with appropriate security permissions, to update the street index data. All changes are identified as "locally changed". Prior to loading a VGI produced dataset, the locally changed records are unloaded to an ASCII file(s). The System administrator may view the file(s) on the server and edit them, as appropriate, or simply append them to the VGI load files where, upon the subsequent load, the street load edits and rules will be applied and duplicates and/or overlaps are rejected. An exception report is produced identifying any rejected records.

The VGI is a .Net application leveraging ESRI's ArcGIS API. As such, the County's GIS administrator must have ArcMap 10.2 / 10.3 / 10.4 / 10.5 / 10.6 installed in order to use the application.

### A. VGI Source Information

Details of the VGI file requirements can be found in the Documentation titled "Versaterm GIS Interface - File Specifications". The following identifies the file Specifications contained in Versaterm's GIS Interface - File Specifications Documentation along with the additional details/files of this GIS Interface.

The data source for the VGI consists of ESRI formatted GIS shape files to be supplied by the County. At a minimum, the County will supply a street centerline layer and a patrol zone layer.

The VGI Interface will convert the following from the County ESRI Formatted GIS shape files (requirements described below):

- a. Street names
- b. Street ranges (including cross-streets)
- c. Intersections
- d. Address points

The following information can optionally be converted as well (load file format described below):

- a. Common place names
- b. Street alias names

## B. Interface Shape File Requirements

This Interface accepts a street network layer, boundary layer(s) (e.g. zones/beats, census tracts) and an address layer. The geometry type for the street network layer must be 'polyline', the geometry type for the boundary layer(s) must be 'polygon' and the geometry type for the address layer must be 'point'. These layers are used to map fields from the ESRI formatted shape files to the fields required by the System.

### 1) Street network layer

The geometry type for this layer must be 'polyline'.

The street network layer must contain the street network for the entire region. This includes (but not limited to):

- a) Interstates & highways
- b) Major roads
- c) Municipal roads
- d) Local roads

If multiple layers (shape files) are currently used to represent the above layers, the County must combine/merge them into a single shape file for the purpose of this Interface. Note, in order to combine layers, the County will need to use common attribute definition.

The purpose of the streets layer is to extract the address block ranges from each street segment and to generate intersections. Line segments must be split at the intersection for an intersection to be created. Intersections are not created if two lines overlay one another. Address block ranges will be created for the left and right side of each street segment. Each address range must contain either an even pair or an odd pair of numbers. Mixed ranges are not valid ranges.

The fields below are captured from the street centerline layer. Note, the data types listed identify what is defined in the System and may be different from those provided. If there is a difference, the attributes provided will be cast (converted) to the System's data type (the "Char" data type accepts alphanumeric values). The following provides a sample Specification and will be confirmed throughout the Interface development/testing process:

	Field Name	Data Type	Mandatory/Optional
1	Street Name <sup>1</sup>	Char(40)	M
2	Street Direction Prefix	Char(2)	O
3	Street Direction Suffix	Char(2)	O
4	Street Type	Char(4)	O
5	Left Municipality <sup>2</sup>	Char(6)	M/O
6	Right Municipality <sup>2</sup>	Char(6)	M/O
7	Left Address Start	Numeric(6)	M
8	Left Address End	Numeric(6)	M
9	Right Address Start	Numeric(6)	M
10	Right Address End	Numeric(6)	M
11	Leading Zero <sup>3</sup>	Char(1)	O
12	Ring Code <sup>4</sup>	Char(10)	O
13	Remarks <sup>5</sup>	Char(40)	O

	Field Name	Data Type	Mandatory/Optional
14	Unique ID <sup>6</sup>	Char(20)	O
15	Zip/Postal Code	Char(10)	O
16	Census Tract	Char(10)	O
17	Local Field 1	Char(10)	O
18	Local Field 2	Char(10)	O
19	Street Alias Name <sup>7</sup>	Char(40)	O

- <sup>1</sup> The System requires a 'full street name' that includes direction, name, and type (e.g., N MAIN ST). If the street network shape file contains a full street name field, it can be used or, alternatively, fields can be mapped to the direction, name, and type fields and the full street name is generated. If the street name, street type, and street direction is provided individually, then the maximum size of the full street name cannot exceed 40 characters.
- <sup>2</sup> The System must be able to uniquely identify an address/street. In the System, the municipality code is required to identify unique street names/addresses. If an address is duplicated (e.g., multiple 101 Church St.) within the street network layer, the County must set the municipality code (uniquely) for the addresses, ranges and intersections. If at all possible, the municipality code should be part of the underlying GIS information (i.e., a municipality field in the street network layer or a municipality polygon layer) but it can be based on a constant value.
- <sup>3</sup> The leading zero field needs to be populated with a value of "0" for street segments that contain street numbers with leading zeros. Otherwise it should remain blank.
- <sup>4</sup> The ring code option allows Users to extract ring codes from the street network layer. These are usually gated community entry codes that are stored on the map.
- <sup>5</sup> The remarks field can contain any additional information required by the County. It may also contain 100 Block information.
- <sup>6</sup> The unique ID must be a unique number within the GIS data set. If this does not exist then the feature ID is used.
- <sup>7</sup> The street alias name can be extracted from the street network layer. However, most agencies manage this information using an external flat file or spreadsheet. See text file requirements at the end of this ICD document.

There are several fields, not identified above, that are automatically generated including X-Y coordinates and cross street data.

## 2) Boundary layer

The geometry type for this layer must be 'polygon'.

The boundary layer must accurately represent the response *areas* and meaningful spatial information for the County coverage. Under normal circumstances, the boundary layer should cover the same area as the street network layer but it is recognized the street network may in fact contain streets beyond the geographic coverage of the County (e.g. for address validation). The boundary layer may be provided in a single shape file (polygon layer) or in multiple shape files (e.g. one for zone, one for grid, etc.) – the VGI tool will project across multiple layers. The following provides a sample Specification and will be confirmed throughout the Interface development/testing process:

	Field Name	Data Type	Mandatory/Optional
1	Municipality <sup>1</sup>	Char(6)	M/O

2	County	Char(2)	O
3	Jurisdiction (Police / Fire / EMS) <sup>2</sup>	Char(2)	M/O
4	District (Police / Fire / EMS)	Char(4)	O
5	Zone/Beat (Police / Fire / EMS) <sup>3</sup>	Char(6)	M
6	Grid/Atom (Police / Fire / EMS)	Char(6)	O
7	Census Tract	Char(10)	O
8	Zip/Postal Code	Char(10)	O
9	Local Field 1	Char(10)	O
10	Local Field 2	Char(10)	O

<sup>1</sup> The municipality information must be supplied in the street network or boundary layer or as a constant value. The System must be able to uniquely identify an address/street. The municipality code is required to identify unique street names/addresses so if an address is duplicated (e.g. "MAIN ST") within the street network layer, you must set the municipality code (uniquely) for the addresses, ranges and intersections. As a benefit, using it to distinguish the "location/area" of the address may assist the call-taker essentially prompting the caller for "more information."

<sup>2</sup> The jurisdiction value is mandatory for multi-jurisdictional sites.

<sup>3</sup> Zone fields are used for dispatch recommendation. Additionally, Fire station and EMS post order information is linked to the street files using the zone codes.

### 3) Address layer

The geometry type for this layer must be 'point'.

The following provides a sample Specification and will be confirmed throughout the Interface development/testing process:

	Field Name	Data Type	Mandatory/Optional
1	House (civic) Number <sup>1</sup>	Char(11)	M
2	Street Name <sup>2</sup>	Char(40)	M
3	Street Direction Prefix	Char(2)	O
4	Street Direction Suffix	Char(2)	O
5	Street Type	Char(4)	O
6	Civic Number Suffix <sup>3</sup>	Char(1)	O
7	Civic Number Fraction <sup>4</sup>	Char(3)	O
8	Leading Zero <sup>5</sup>	Char(1)	O
9	Unit Number	Char(6)	O
10	Unique ID	Char(20)	O
11	Ring Code	Char(10)	O
12	Place Name <sup>6</sup>	Char(40)	O

- <sup>1</sup> The civic number cannot contain a leading zero.
- <sup>2</sup> Like the street name for the street network layer, a full street name field can be generated from the direction, name, type, and suffix fields.
- <sup>3</sup> The civic number suffix is a single character at the end of the civic number (e.g., 200A). It can be provided in its own column or as part of the civic number.
- <sup>4</sup> The civic number fraction can be one of the following: 1/4, 1/2, 3/4, or .5 . It can be provided in its own column or as part of the civic number.
- <sup>5</sup> The leading zero will be populated with a value of "0" if the corresponding civic number should have a prefix "0" value. Otherwise it will remain blank.
- <sup>6</sup> The place names can be extracted from the address layer. When extracting place names from the address layer, an address can only be linked to one place name. When loading place names from a text file, there can be multiple place names at an address. See text file requirements at the end of this document.

The County must ensure that common naming conventions are used between the street network and address shape files. In addition, all address points must have a street segment with matching low and high address values. The following are examples of address records that would be rejected during the VGI extract:

Address: '2300 CARLING AV'

Range: '2200-2298 CARLING AV' & '2302-2398 CARLING AV'

This record will be rejected as it does not fall within a valid range record

Address: '100 MCINLEY BLVD'

Street Name: 'MC INLEY BLVD'

This record will be rejected as it does not match with an existing street name record — note the space after 'MC '.

## C. Custom Intersection layer

There are many cases where, from a public safety perspective, additional intersections may be required (for example, bridges, railroad tracks, etc.). Although these "intersections" are not truly intersections from a GIS point of view, they are locations where an emergency incident may occur and that can be required in a System report. If this type of information is required, then additional layers of the geometry type of polyline or point may be included to generate additional intersection records.

Custom intersections can be provided in one of the following formats:

### 1) Custom Intersections using line layers

Multiple line layers can be used to create intersections with the street layer by overlaying the custom intersection line layers with the street layer. An example of this is providing a river layer to overlay the street layer to generate intersections where the rivers cross the street network. The only value required in the custom intersection line layer is the name to be used with the intersecting street. The geometry type must be polyline.

	Field Name	Data Type	Mandatory/Optional
1	Intersecting Name	Char(40)	M

## 2) Custom Intersections using point layer

A single point layer can be used to create custom intersections with specific geo-spatial information. The shape file must contain both intersecting street names.

	Field Name	Data Type	Mandatory/Optional
1	Street Name <sup>1</sup>	Char(40)	M
2	Street Direction Prefix	Char(2)	O
3	Street Direction Suffix	Char(2)	O
4	Street Type	Char(4)	O
5	Street Name <sup>1</sup>	Char(40)	M
6	Street Direction Prefix	Char(2)	O
7	Street Direction Suffix	Char(2)	O
8	Street Type	Char(4)	O
9	Municipality <sup>2</sup>	Char(6)	M/O
10	Remarks	Char(40)	O
11	County (Police / Fire / EMS) <sup>3</sup>	Char(2)	O
12	Jurisdiction (Police / Fire / EMS) <sup>3</sup>	Char(2)	M/O
13	District (Police / Fire / EMS) <sup>3</sup>	Char(4)	O
14	Zone/Beat (Police / Fire / EMS) <sup>3</sup>	Char(6)	M/O
15	Grid/Atom (Police / Fire / EMS) <sup>3</sup>	Char(6)	O

<sup>1</sup> The System requires a 'full street name' that includes direction, name, and type (e.g., N MAIN ST). If the street network shape file contains a full street name field it can be used or alternatively, fields can be mapped to the direction, name, and type fields and the full street name will be generated. If the street name, street type and street direction are provided individually then the maximum size of the full street name cannot exceed 40 characters.

<sup>2</sup> The municipality information must be supplied if the municipality for the streets is being extracted from the street layer.

<sup>3</sup> The VGI Interface can be Configured to read response information from the custom intersection layer or to extract response information from boundary layers. If response information is provided as a part of the custom intersection layer, then the zone (beat) field is mandatory and the jurisdiction field is mandatory for multi jurisdiction sites.

## D. Interface Load File Requirements

### 1) Common Place Names (Landmarks)

The System's street conversion programs have the functionality to load common place names into the System's database. After the initial load, the common place name file can be maintained through the street maintenance utility on the System or re-loaded into the System's database from a text file. The format of the text file accepted by the conversion programs is:



	Field Name	Type	*	Description
1	Jurisdiction	Char(2) +	M	Jurisdiction (blank if not multi-jurisdictional) – Mandatory if site is multi-jurisdictional
2	House (civic) Number	Char(11)	M	The street address number
3	Full Street Name	Char(40)	M	Full street name (includes street type, name and direction)
4	Unit Number	Char(5)	O	Unit or apartment #
5	Municipality	Char(6)	M	Municipality
6	Place Name	Char(30)	M	The place name (i.e. BURGER KING)
7	Primary Place Flag	Char(1)	M	Primary (Y) / Alias (A) / blank
8	Effective From Date	Date	O	Used to identify historical place names (MM-DD-YYYY)
9	Effective To Date	Date	O	Used to identify historical place names (MM-DD-YYYY)
10	Address Prefix	Char(3)	O	Civic number prefix ( currently only 0-zero is supported)

### Example:

PP|2300|W MAIN ST|A1|1|STARBUCKS|Y|||

Notes: The address file is NOT required prior to this file.

In the System, it is possible to have multiple place names linked to the same address. The field “primary” is used to specify place names that are primary place names, alias place names and non-primary place names. For example, for field 6 (primary) provide a “Y” if the place name is the primary place name (CARLINGWOOD MALL – 123 MAIN ST). Provide an “A” if the place name is an alias or short form (CM). Provide a blank or null if the place name is a non-primary place at the same address (SEARS – a store in CARLINGWOOD MALL). If SEARS has its own civic address (i.e 123 MAIN ST - UNIT 2) this should be the prime at 123 MAIN ST – UNIT 2.

The “Effective from date” and “effective to date” fields can be used to specify the period of time during which the place name or a place name alias will be effective.

The System does not support place names that begin with numeric data (for example, 24 HOUR FITNESS). In order to use this type of place names, the space between the number and the first word of the name must be removed. For example, “24 HOUR FITNESS” should be entered as “24HOUR FITNESS”. “7-11” can be entered as “711”, “7'11” or “7ELEVEN”. Place names cannot begin with the word “BLOCK”. Additionally the following characters are not allowed in place names: “&”, “.”, “-”.

Every address record in the System's database is assigned a jurisdiction value. During the place name load process, the conversion script will check if the address of the place name already exists on the System. If it does, the place name will be linked to this address and will be assigned the jurisdiction of the address record. If the address record does not exist, a new one will be created using the address and jurisdiction data provided in the place name file. In the example below, “PP” is the jurisdiction code assigned to the place name. Any emergency incident/location entered using this place name and address will be assigned the “PP” jurisdiction:

PP|2300|W MAIN ST|A1|1|STARBUCKS|Y|||

## 2) Street Alias Names

The System's street conversion programs have the functionality to load the alias street name file into the System's database. After the initial load the alias street name file can be maintained through the street maintenance utility on the System or re-loaded into the System's database from a text file. The format of the text file accepted by the conversion programs is:

	Field Name	Type	*	Description
1	Full Street Name	Char(40)	M	Full street name (includes street type, name and direction)
2	Municipality	Char(6)	M	Municipality
3	Alias Full Street Name	Char(40)	M	Name as entered (i.e. N MCLEAN ST)
4	Alias Low	Numeric	O	Low value for the range/block face
5	Alias High	Numeric	O	High value for the range/block face

### Example:

MAIN ST E|1|HWY 61|200|244|

## 3) Street Types

The System's street index supports normalized street types where agencies can normalize street types to a consistent entry format and value. This normalization will also occur when the VGI produced ASCII files are loaded into the System. Examples include normalizing street types of "Boulevard", "BL", "BLVD" to "BV". This System's street type table must be populated, through the System administrator facility, with those street types used by the County and RPA. As a best practice, the County and RPA may consider those street types used by the CAD system(s) as a baseline.

## E. VGI Output

Once the VGI generate process is completed, up to four ASCII files are generated: **street names**, **ranges**, **intersections** and **addresses**. These files contain the geo-spatial information required by the System.

The **street names** file contains every unique street that appears on the street network shape file. A unique street is a combination of the full street name and the municipality. A full street name includes direction, name, and type (i.e., W FOSTER ST).

The **ranges** file contains a record for each block (segment) in the street network shape file. Each record will contain data corresponding to the block – street name, municipality, address values, zone, X-Y coordinates, etc.

The **intersections** file contains a record for each intersection in the streets layer. Each record will contain data corresponding to the intersection – street names, municipalities, zone, X-Y coordinates, etc. An intersection record is created whenever two streets actually intersect (i.e., intersecting polylines). There are many cases where, from a public safety perspective, additional intersections may be required (e.g. bridges, railroad tracks, etc.). Although these "intersections" are not truly intersections from a GIS point of view, they are locations where an incident may occur and the location may be required for a subsequent report. If this type of information is required, then additional layers, of the geometry type of polyline, may be included to identify the rivers and railroad track features. If provided, the intersections will be generated by spatially joining with the street network layer.

The **address** file contains a record for each address point (or parcel) in the parcel network shape file. Each record will contain a street name, municipality, address number, zone, X-Y coordinates, etc.

As part of this process, a file geo-data base (GDB) is created containing a **feature class** (layer) for the ranges, intersections and errors. These layers are added to the main ArcMap window and provide a visual representation of the street data that is loaded into the System. The errors layer will contain any street that has invalid or missing data.

## F. Error Correction Process

In addition to the error layer, an **error log** file is generated which contains the record identifier of each street and an error description. The file may be viewed using Windows Notepad or other text file editor. The record identifier may be used to view the source segment on either the feature class or street network layer.

The County will be able to correct errors prior to loading into the System. It is recommended that detected errors be corrected on the base (County) GIS data files.

Sample errors may include:

- a) Street name missing or invalid
- b) Municipality missing or invalid
- c) Range low/high values wrong side (odd/even on same side of street)
- d) Overlapping ranges – e.g. range of 2-28 when 24-30 already exists
- e) Duplicate ranges – range 2-28 & 2-28
- f) Empty geometry – shape field is empty
- g) Empty geometry – length of polyline is 0

## G. Interface Testing

The VGI functional testing performed ensures that the County ESRI formatted shape file(s) can be successfully processed by the VGI, producing the necessary ASCII data files that can be subsequently loaded into the System.

These tests are expected to be incremental where the County may provide the VGI produced ASCII files for verification to the System prior to a full end-to-end test and quality assurance testing.

## H. Quality Assurance Testing

Upon completion of the Interface testing, Versaterm and the County shall use the VGI produced data files to run a complete GIS validation and load into the System.

Once the GIS data is loaded and resides in the System's database (street index), the County will conduct quality assurance tests on the data by performing numerous location data entry trials on the System's desktop module.

## I. Responsibilities

### 1) County Responsibilities

- a) Provide a Windows 10 or 7 desktop PC (minimum 3GHz, 2 GB RAM, 150GB HDD) with ESRI ArcView 10.2 / 10.3 / 10.4 / 10.5 / 10.6 for VGI installation.
- b) Install the VGI software as instructed by Versaterm.
- c) Provide regional GIS information in a single projection in ESRI formatted shape files, merging the shape files from the various agencies into single files for each type, and removing overlapping GIS data.
- d) Provide the GIS shape files to Versaterm for check-out and testing as required.

- e) Verify quality and completeness of the data.
- f) Correct VGI identified data errors.
- g) Perform quality assurance testing within the System.
- h) Provide a list of street type abbreviations and Configure the System with those abbreviations.
- i) Provide the landmark file in the format specified by Versaterm.
- j) Provide the street alias file in the format specified by Versaterm.

## **2) Versaterm Responsibilities**

- a) Provide the VGI software and related Documentation.
- b) Provide the County with instructions and support on the VGI installation.
- c) Provide the County with the required VGI training and support.
- d) Perform initial street conversion load into System's database.
- e) Assist in resolving issues arising from the County's quality assurance testing.

# Exhibit B.5

## Customization and Enhancements Control Document (CECD)

This Exhibit lists the customizations/enhancements to be made to the core Versaterm products (CAD, MDT).

## Table of Contents

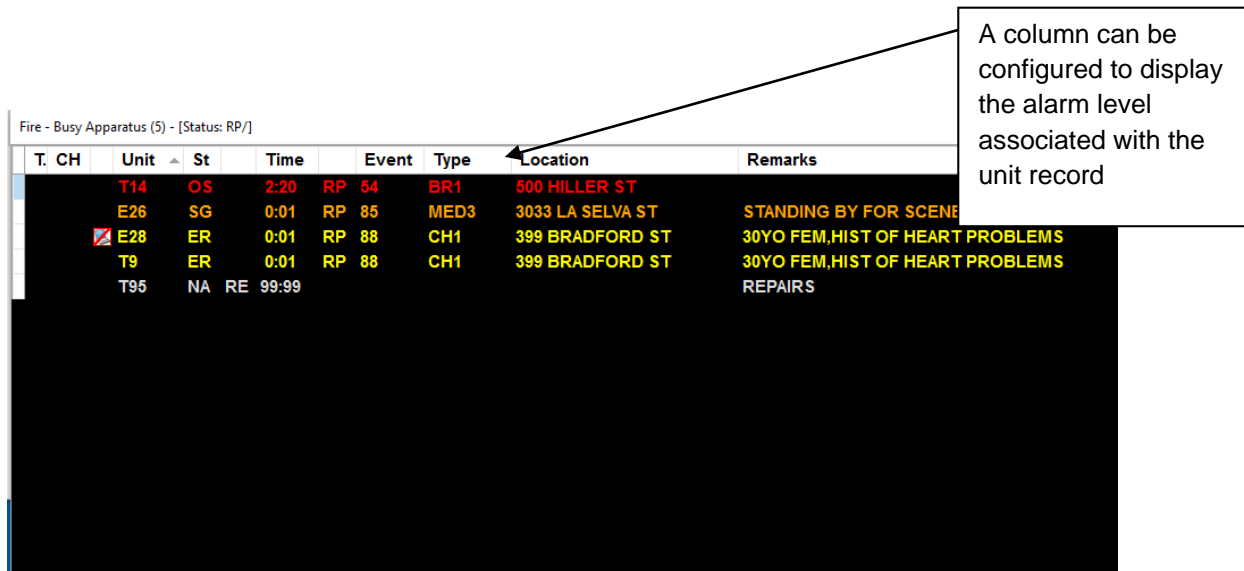
Table of Contents .....	2
Customizations.....	3
1. Ability to display alarm level on the CAD Status Screen .....	4
2. Ability to modify a Fire Unit's role once dispatched to an incident.....	5
3. Ability to modify the Global Risk Level without requiring supervisor security .....	6
4. Notify the dispatcher when the last unit from another class clears from a combined incident and no units from the dispatcher's class have arrived .....	7
5. Ability to view all related (cross-staffed) fire units.....	8
6. Recommend home units before non-home units at the same station .....	9
7. Ability to filter the dispatcher's map by status monitor area.....	10
8. Indicator on the Fire Unit Recommendation screen for units not in current coverage.....	11
9. Ability to flag Fire and EMS units as Available On-Scene .....	12
10. Enhancements to support Fire and EMS Alarm Level Balancing .....	13
11. Advise dispatcher and responding unit when times are not met .....	14
12. Ability to recommend EnRoute units to a higher priority call .....	15
13. Ability to initiate a station/post move from the MDT.....	16
14. Ability to sign off Fire and EMS units from the MDT .....	17
15. EMS Transport – ability to record hospital, number of patients and priority code .....	18
16. Fire/EMS terminology.....	19
17. Special Service Company Remarks .....	20
18. Strike teams / task forces.....	21
19. Ability to specify the same type code for EMS and Fire .....	22

## **Customizations**

This section describes each enhancement that Versaterm has identified to be added to the Computer Aided Dispatch (CAD) System. Where possible, sample screen shots from Versaterm CAD version 7.5 have been included. Version 7.6 will be the version implemented for San Mateo County. Illustrations and screen contents are subject to change during development.

## 1. Ability to display alarm level on the CAD Status Screen

The CAD status screens for both Fire and EMS have been modified with the ability to display the alarm level for each dispatched unit. The Status Screens can be configured to sort data by any combinations of fields. This provides the ability to group apparatus by the alarm level they were dispatched on and allows the dispatcher to quickly distinguish the alarm level 2 units from the alarm level 1 units, for example.



Fire - Busy Apparatus (5) - [Status: RP/]

T. CH	Unit ▲	St	Time	Event	Type	Location	Remarks
	T14	OS	2:20	RP 54	BR1	500 HILLER ST	
	E26	SG	0:01	RP 85	MED3	3033 LA SELVA ST	STANDING BY FOR SCENE
	<input checked="" type="checkbox"/> E28	ER	0:01	RP 88	CH1	399 BRADFORD ST	30YO FEM,HIST OF HEART PROBLEMS
	T9	ER	0:01	RP 88	CH1	399 BRADFORD ST	30YO FEM,HIST OF HEART PROBLEMS
	T95	NA RE	99:99				REPAIRS



## **2. Ability to modify a Fire Unit's role once dispatched to an incident**

A new command "ROLE" has been added to provide dispatchers the ability to modify the role or "reason for recommendation" of an apparatus after it has been dispatched to an incident. For example, if the unit was recommended for its engine attribute but once arrived on-scene, was acting as the rescue, the dispatcher can update the role of the unit from the command line. This results in an extra engine being recommended when the dispatcher balances the call or requests the next alarm level.

The ROLE command accepts apparatus ID as a parameter along with the ability to specify the apparatus types and capabilities. The format of the ROLE command will be similar to:

ROLE <unit ID> T=<apparatus type> C=<capability>

For example, entering "ROLE E1 T=R C=A" would update E1's apparatus type role to "R- Rescue" and its capability to "A- ALS" for the incident they are currently dispatched to. Another example would be if Q1 was recommended for an incident for their Engine type and RIC capability, entering "ROLE Q1 T=R" would update Q1's apparatus type role to "R- Rescue" and leave the RIC capability role. The Versaterm CAD supports the ability for a unit to satisfy multiple unit capability requirements for a single incident and as such, the ROLE command accepts multiple C= parameters. Additionally, specifying C= without a value will set the capability role for the specified apparatus to blank.

The command requires the unit specified to be dispatched to an incident and will update the "reason for recommendation" for that incident only. That is, the command does not update the apparatus types or capabilities for the unit and does not how the unit is recommended for any other incident. An entry is written to the call log to record the modification.

### **3. Ability to modify the Global Risk Level without requiring supervisor security**

Global risk levels are used in the Versaterm CAD to alter the dispatch response plans for various situations such as high burn season or a catastrophic event.

Previously, a user required supervisor security rights to modify the risk level. This enhancement includes a new “Modify Global Risk Level” security setting to provide call takers and dispatchers the ability to modify the global risk level without supervisor permissions. Additionally, a new command is added to modify the Police or Fire/EMS global risk level directly from the command line.

Additionally, the CAD is enhanced to display the current risk level on the “blank” CAD working screen. The “blank” CAD working screen is displayed when a call or other screen is not in view. Previously, a user had to access the Supervisor Facility to see what the current risk level was.

#### **4. Notify the dispatcher when the last unit from another class clears from a combined incident and no units from the dispatcher's class have arrived**

The CAD has been enhanced to notify the dispatcher when the last unit from another class clears from a combined incident if unit(s) from the dispatcher's class have not arrived. This feature provides a dispatcher with an indicator that they may be able to clear their units from the incident prior to their arrival. For example, police, fire and EMS respond to a medical call. If the ambulance and Fire Department handle the situation before the police arrive, the police dispatcher will receive a message and can advise the police unit assigned, where they can opt to cancel their response from the incident. The message is only sent if a unit dispatched from one class does not arrive prior to unit(s) from other class(es) clearing the same incident. Configuration parameters have been added to determine who should receive the notification message – the dispatcher, the responding unit(s) or both.

## **5. Ability to view all related (cross-staffed) fire units.**

The Versaterm CAD supports relating apparatus together which provides the ability to place remaining related apparatus out of service when one of the related apparatus is dispatched. This feature is typically used for cross-staffed apparatus where there is only enough crew to operate one of the apparatus at a time.

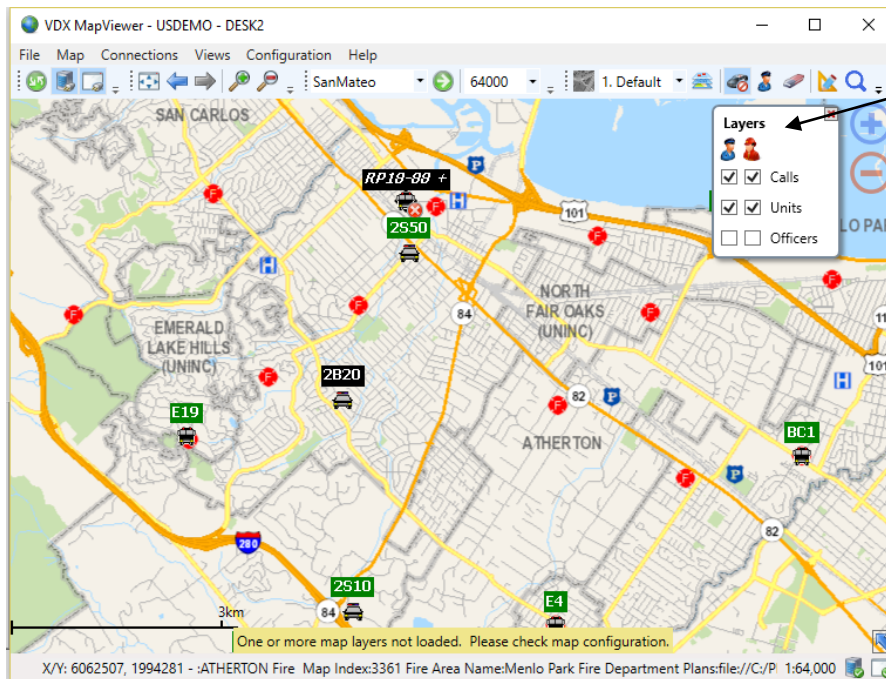
It is sometimes required to un-relate apparatus (e.g. additional crew is available). At the beginning of a dispatcher's shift (or periodically throughout their shift), they are responsible to review the units that are currently related to identify and confirm if any un-related units should be related again. To facilitate this task, the Versaterm CAD is enhanced with a function to view a list of all related apparatus.

## **6. Recommend home units before non-home units at the same station**

The unit recommendation algorithm is enhanced to consider the unit's home station when determining a unit recommendation. That is, the system will always recommend the home unit before recommending a moved-up unit assuming the latter is the same unit type, and differing capabilities are not a factor. For example, if searching for an engine from Station 2 and both E2 (home unit) and E1 (moved-up unit) are available at Station 2, the system will recommend E2 first as it is the home unit for station 2, and E1 does not have capabilities different from E2 that are required as part of the recommendation.

## 7. Ability to filter the dispatcher's map by status monitor area

Previously, the Versaterm CAD MapViewer had the ability to display unit/call icons for all services or filter the icons by either Police or Fire & EMS. This enhancement adds another option to filter the display to only show icons for units/calls that correspond to the units/calls that are displayed on the status monitor. This provides the ability to display unit/call icons for just Fire or just EMS, for example. In order to have the option to filter by status monitor area, the user must have an active status monitor.



A new option is added to filter the unit/call icons by status monitor area

## 8. Indicator on the Fire Unit Recommendation screen for units not in current coverage

The fire unit recommendation screen is enhanced with an indicator, such as displaying the station ID in reverse video, for each recommended unit that is not in the dispatcher's current coverage assignment. This indicator advises the dispatcher that they need to select multiple channels on the radio system when they voice dispatch. Units entered manually on this screen (i.e. not recommended by the system) will not display an indicator if they are not in the dispatcher's current coverage assignment.

The screenshot shows the 'Fire Dispatch - RP18-90' interface. At the top, it displays 'STATE HIGHWAY 84 / STATE HIGHWAY 35' and 'Zone: WOF17 4057'. Below this, it shows '1758-14532 STATE HIGHWAY 84' and 'GRASS FIRE'. A risk level is indicated as 'Risk: 7-GRASS FIRE - WILDLAND TARGET HAZARD'. The 'Alarm Level' is set to 1, 'Response Number' is WOF17, 'EMS Response Number' is 4R, and 'Modifier' is GF. The 'Apparatus / Station' section lists several units: E58 (FS58(E)), VFIR21 (FMA(K)), E7 (FS07(E)), E8 (FS08(E)), WT8 (FS08(WT)), and BC2. Each unit has a corresponding input field for a response number. Below this, the 'Special Services' section has dropdown menus for each unit. At the bottom, there is a 'Paging Groups' section with a list of numbers (58, 07, 08, 19, 04, 12, 18, 10, 03, 06, 09, 11, 05, 01, 16, 17, 15, 13, 27, 14) and a 'Dispatch Remarks' field. A 'Channel' field is also present. At the very bottom, there is a legend with three items: 'Available but not at station' (represented by a black square), 'Recommended by AVL' (represented by a green circle), and 'Recommended using Station Coordinates' (represented by a red square). There are also 'OK' and 'Cancel' buttons.

Apparatus / Station	Response Number
E58 (FS58(E))	
VFIR21 (FMA(K))	
E7 (FS07(E))	
E8 (FS08(E))	
WT8 (FS08(WT))	
BC2	

Special Services

Special Services	Special Services	Special Services	Special Services	Special Services

✖ Paging Groups (Paging Group Lists)

58 07 08 19 04 12 18 10 03 06 09 11 05 01 16 17 15 13 27 14

Dispatch Remarks

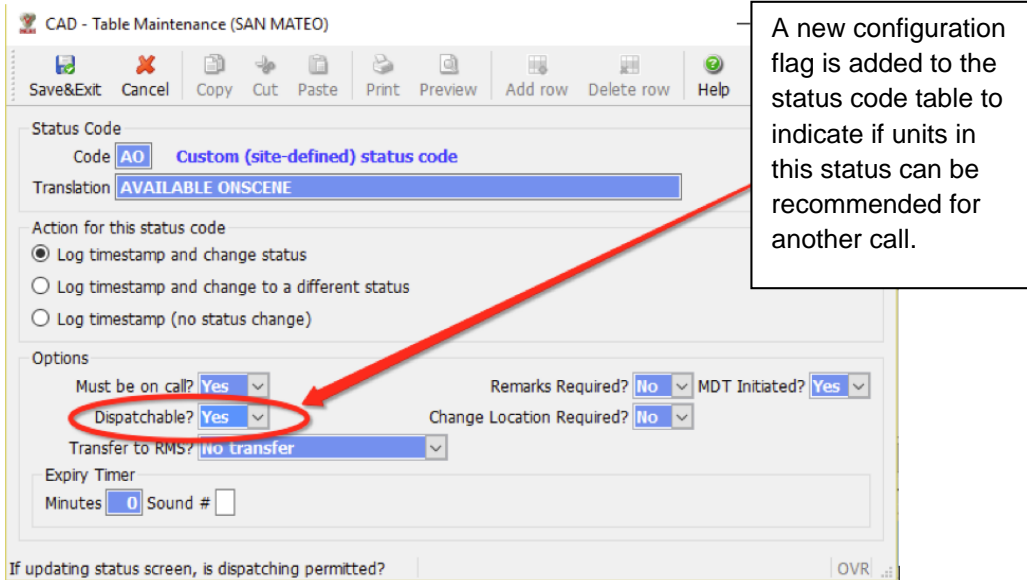
Channel

Available but not at station Recommended by AVL Recommended using Station Coordinates OK Cancel

The fire dispatch recommendation screen will be enhanced with an indicator for units that are not in the dispatcher's current coverage

## 9. Ability to flag Fire and EMS units as Available On-Scene

Previously in the Versaterm CAD, Fire and EMS units were only recommended for dispatch to an incident if they were in an Available in Quarters, Available on Air or Return to Station/Post status. This enhancement adds a configuration option on the Fire/EMS status code table to indicate if units in the specified status can be recommended for another call.



The screenshot shows the 'CAD - Table Maintenance (SAN MATEO)' window. The 'Status Code' section displays 'Code AO' and 'Translation AVAILABLE ONSCENE'. Under 'Action for this status code', the first option is selected. The 'Options' section includes several dropdown menus: 'Must be on call?' (Yes), 'Dispatchable?' (Yes, circled in red), 'Transfer to RMS?' (no transfer), 'Remarks Required?' (No), 'Change Location Required?' (No), and 'MDT Initiated?' (Yes). A red arrow points from a text box to the 'Dispatchable?' dropdown.

A new configuration flag is added to the status code table to indicate if units in this status can be recommended for another call.



## **10. Enhancements to support Fire and EMS Alarm Level Balancing**

Previously, the Versaterm CAD included the balance logic for the first alarm only. Subsequent alarm levels recommended a static number of resources whether or not the total number of resources by unit type in previous alarm levels matched published configurations. This algorithm was the same for both Fire and EMS classes.

The Versaterm CAD is enhanced to support a configuration option by call type indicating whether the balance logic should apply to the first alarm only, to all alarm levels, or to no alarm levels. In the County's configuration, all EMS call types could be set to 'no alarm levels' whereas all fire call types could be set to 'all alarm levels'.

The Versaterm CAD is enhanced to support a configuration option by call type indicating if the balance logic should apply to the first alarm only, to all alarm levels, or to no alarm levels. In the County's configuration, all EMS call types could be set to 'no alarm levels' whereas all fire call types could be set to 'all alarm levels'.

## **11. Advise dispatcher and responding unit when times are not met**

The Versaterm CAD is enhanced to notify the dispatcher and the first qualified arriving unit if that unit does not arrive on-scene within a configurable number of minutes (from call dispatch to on-scene). This modification applies to all disciplines (Fire, Law, EMS).

The algorithm to calculate whether the response time has been met is based on a number of factors including call type, discipline, area and unit type / capabilities. In order to accommodate this, the call type table (defined by discipline) is modified with response time settings by coverage area. A coverage area is a pre-defined grouping of zones that is configured by the County Administrator. For example, a call type may be configured to have a response time of less than 13 minutes in the urban/suburban areas, less than 20 minutes in the rural areas and less than 30 minutes in remote areas. Additionally, the unit type and capability tables are enhanced with configuration options indicating which unit types and/or capabilities qualify in the calculation to determine if the response time has been met.

The calculation of the response time begins when the call is first dispatched until the first qualified unit arrives on-scene.

The purpose of the notification is to make the dispatcher and responding unit aware that the response times were not met and provides them with the opportunity to add remarks to the call to indicate any possible reasons why (e.g. traffic, weather, etc.). The notification message serves as a notify only and does not force the dispatcher or unit to enter remarks and does not prevent the call from being cleared.

## **12. Ability to recommend EnRoute units to a higher priority call**

Previously, the Versaterm CAD supported a Yes/No configuration option by call type to indicate if units dispatched to a call of that type could be recommended by the system for dispatch to another call. This configuration option applied only to Police call types.

The CAD call type table is enhanced to expand this configuration option to Fire and EMS call types. Additionally, the configuration option is modified to allow for the following options:

- Yes, units can be recommended for another call
- Yes, however units can only be recommended for a higher priority call
- No, units cannot be recommended for another call

An additional configuration option is also added to indicate when a unit can be recommended for another call and will include the following options:

- Only if unit has not yet arrived on-scene
- Regardless of status

For Police dispatch recommendations, the system will recommend in-service units before dispatching units regardless of the configuration option settings. That is, these configuration options will only take effect when no in-service units matching the response recommendation configurations are available.

For Fire and EMS dispatch recommendations, the system will recommend in-service units from the same station/post before dispatched units (for run card recommendations). For AVL recommendations, the system will recommend the closest/fastest unit regardless of unit status.

### **13. Ability to initiate a station/post move from the MDT**

This enhancement provides Fire and EMS mobile users with the ability to initiate a station/post move from the MDT. The MDT move function will accept a status (moving to post, at post, etc.) and a station/post ID.

#### **14. Ability to sign off Fire and EMS units from the MDT**

Currently, in the Versaterm CAD, there is a flag on the Fire and EMS unit record to indicate if the unit is "In Service" or not. Once the mobile user signs on to the MDT, if they are not flagged as "In Service", they must click on "At Post" to place themselves "In Service" (and specify their current station/post as per CECD #12).

The Fire and EMS MDT signoff screens are enhanced with an "Out of Service" flag to allow the mobile user to indicate that they should be placed out of service, in addition to signing off the MDT.

## **15. EMS Transport – ability to record hospital, number of patients and priority code**

The ability to record hospital, number of patients and priority code is a requirement for the ePCR interface, general reporting and accurate CAD documentation.

In order to satisfy this requirement, the CAD transport command and the MDT transport function are enhanced with the ability to record the destination hospital, number of patients transported and transport priority code. The CAD transport command accepts the information in a predefined format and the MDT transport form is configured with discrete fields to capture the required information.

The hospital destination, number of patients transported and transport priority code are logged in discrete CAD database fields tied to the transport transaction, so the information can be viewed in CAD, the ePCR interface and available for reporting.

Should the dispatcher or mobile user issue a transport command for a unit that is already on a transport, the system will change the original information with the new information. The original information is logged with the call history.

## **16. Fire/EMS terminology**

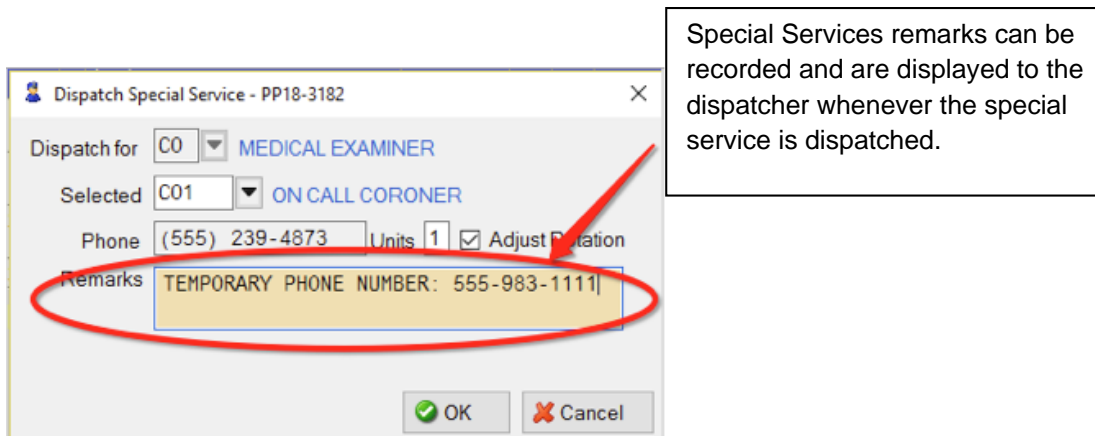
By design, the CAD separates Police data from Fire & EMS data (for CJIS reasons). Throughout the CAD application, various drop-down menus exist to select either Police or Fire and EMS data. Previously, the majority of the dropdown menus list Police and Fire as options and selecting the Fire option displays both Fire and EMS data. This enhancement includes modification of the Fire terminology to also include EMS (e.g. EMS&Fire).

## 17. Special Service Company Remarks

The SMC current CAD supports the ability to assign dispatch warnings and fatal warnings to any unit. Both warning types serve to provide additional information related to the unit itself or its personnel e.g. Temporary contact information, change in oncall rotation, appropriate unit to assign, etc. Dispatch warnings present the information to the dispatcher and allow the unit to be dispatched to an incident. Fatal warnings present the information to the dispatcher but prevent the unit from being dispatched e.g. PR5A – On vacation until 9/15, use PR5B.

In the Versaterm CAD, rather than logging on units for these special unit type, special services will be used to initiate and record the dispatch. Each special service can be configured with companies that are configured with a phone number (rather than having to look up that information in the notepad/info file).

The Versaterm CAD special service companies are enhanced with a remark field that can be modified by the dispatcher. The remark field could be used to store override the default information such as a temporary phone number. A new security setting is also added to provide dispatchers with the ability to modify this new remark field without requiring full modify special service security.



The screenshot shows a dialog box titled "Dispatch Special Service - PP18-3182". It contains the following fields and controls:

- Dispatch for:** A dropdown menu showing "C0" and the text "MEDICAL EXAMINER".
- Selected:** A dropdown menu showing "C01" and the text "ON CALL CORONER".
- Phone:** A text field containing "(555) 239-4873".
- Units:** A text field containing "1".
- Adjust Rotation:** A checkbox that is checked.
- Remarks:** A text field containing "TEMPORARY PHONE NUMBER: 555-983-1111". This field is circled in red.
- Buttons:** "OK" and "Cancel" buttons at the bottom.

A red arrow points from a callout box to the "Remarks" field. The callout box contains the text: "Special Services remarks can be recorded and are displayed to the dispatcher whenever the special service is dispatched."



## **18. Strike teams / task forces**

The Versaterm CAD is enhanced with the ability to create and maintain “Teams”. Teams can be made up of one or more units of the same discipline. Dispatchers can assign valid units (i.e. already signed on to CAD) or temporary units (i.e. not yet signed on) to a team. If a temporary unit is specified, the system will temporarily sign on that unit to CAD. Once the temporary unit is removed from the team or the team is deleted, the temporary units are signed off by the system.

A team, as whole, can be dispatched to an incident. In this scenario, all units assigned to the team are automatically dispatched to the incident and displayed on the status screen. The team is displayed on the status screen, itemizing each unit assigned to it and their status. The dispatcher can also change the status of all units by specifying the team code in the status commands. This will change the status remarks of all units regardless of individual unit statuses.

## **19. Ability to specify the same type code for EMS and Fire**

Previously in the Versaterm CAD, call type codes were required to be unique between EMS and Fire. That is, the system could not be configured with the same code for both EMS and Fire. Both services required unique type codes.

This enhancement provides the ability to configure the same type code for EMS and Fire and Police. For instance, for a combined incident involving EMS, Fire and Police, the call type for all three calls could be entered as 'MED'.

# Exhibit B.6

## Acceptance Test Plan

## Table of Contents

1.0	Interface Integration Test Plan .....	4
1.1	Test Objectives .....	4
1.2	Test Strategy .....	4
1.3	Testing Roles / Resources .....	4
1.4	Test Schedule .....	5
1.5	Dependencies .....	5
1.6	Test Environment .....	5
1.7	Problem Tracking and Reporting .....	5
1.8	Issue Resolution .....	5
1.9	Acceptance .....	5
2.0	Functional Acceptance Test Plan .....	6
2.1	Test Objectives .....	6
2.2	Test Strategy .....	6
2.3	Testing Roles / Resources .....	6
2.4	Test Schedule .....	7
2.5	Dependencies .....	7
2.6	Test Environment .....	7
2.7	Problem Tracking and Reporting .....	8
2.8	Issue Resolution .....	8
2.9	Completion Criteria .....	8
3.0	System Performance Tests .....	9
3.1	Test Objectives .....	9
3.2	Test Strategy .....	9
3.3	Entry Criteria .....	9
3.3.1	Testing tool .....	9
3.3.2	Expected Performance Metrics .....	10
3.3.3	Defined Background Load .....	10
3.4	Testing Roles / Resources .....	10

3.5	Test Schedule.....	10
3.6	Dependencies .....	10
3.7	Test Environment .....	10
3.8	Problem Tracking and Reporting .....	11
3.9	Issue Resolution.....	11
3.10	Completion Criteria .....	11
4.0	Final Acceptance (Response and Reliability) Tests .....	12
4.1	Test Objectives .....	12
4.2	Test Strategy .....	12
4.2.1	Response Time Testing.....	12
4.2.2	Reliability Testing .....	13
4.3	Testing Roles / Resources .....	14
4.4	Test Schedule.....	14
4.5	Dependencies .....	14
4.6	Test Environment .....	14
4.7	Problem Tracking and Reporting .....	14
4.8	Issue Resolution.....	14
4.9	Completion Criteria .....	15

This Exhibit describes the testing parameters which will be used per the Statement of Work to conduct interface integration, functional acceptance and final response and reliability testing on the Computer-Aided Dispatch System (CAD) and Mobile Dispatch Computer (MDC) products delivered by Versaterm.

Versaterm shall provide reasonable and appropriate support, assistance, and consultation in order to facilitate the acceptance testing.

## 1.0 Interface Integration Test Plan

### 1.1 Test Objectives

The primary objectives of the interface integration tests are:

- a. to demonstrate all interfaces specified in the Interface Control Documents ("ICD"), Exhibit B.4 are functional and ready for functional acceptance testing.
- b. for County staff to gain the knowledge necessary to perform acceptance testing for each interface.

### 1.2 Test Strategy

A high level end-to-end test will be performed for each interface defined in the ICDs. The actual test will be conducted by County personnel with Versaterm directing and assisting the process remotely (via phone) as required.

For each interface, Versaterm will provide training on the use of the interface and where applicable, will train on the setup, configuration and administration of the interface.

The acceptance process shall be conducted formally and in-writing between the parties pursuant to the Statement of Work (Exhibit B) and the Project Implementation Schedule (Exhibit B.1).

Note: interface integration testing, "presented" by Versaterm (using County resources) and observed by the County, differs from the actual functional acceptance testing. Functional acceptance testing is scripted / conducted by the County after the completion of the interface integration testing, and consists of exercising each application feature and function in great detail. The functional acceptance testing is more fully described in the functional acceptance test plan (see Section 2.0, in this Exhibit).

### 1.3 Testing Roles / Resources

Versaterm will direct the actual testing and provide instruction/training on the use and administration of the interfaces. The following County resources will be required:

- a. System administrator(s) who are (or will be) interface specialists and ideally should:
  - i. have been involved in the development of each interface
  - ii. be familiar with the new interface infrastructure
  - iii. be capable of trouble shooting points of failure
  - iv. be familiar with the server platform including the operating system.
- b. Implementation team member(s) who are familiar with the Versaterm CAD application. The Implementation Team members will need to understand the interface trigger points within CAD, and understand the operational functions and features each interface provides.
- c. Network specialists may be required to ensure network connectivity between the various systems.
- d. For certain interfaces, other resources may be required to confirm the expected end result (e.g. calls have been transferred to the RMS, etc).

#### **1.4 Test Schedule**

Interface Integration Testing will begin according to the Statement of Work (Exhibit B) and the Project Implementation Schedule (Exhibit B.1). The testing will be conducted as per the timeline identified in the Project Implementation Schedule (Exhibit B.1).

#### **1.5 Dependencies**

Interface integration testing has the following dependencies:

- a. The core configuration of the CAD/MDC applications have been completed as required.
- b. Production server has been fully setup and configured.
- c. Interface development has been completed and code modules updated on the production server.
- d. For each interface that involves another application/system (e.g. Fire RMS, Zetron, etc), either a test/development system must be available that Versaterm can connect to or a plan must be in place to disable existing production interface for the duration of the testing.

#### **1.6 Test Environment**

Interface integration tests will be conducted on the production server environment.

#### **1.7 Problem Tracking and Reporting**

Discrepancies identified in the ICD's as compared to the interface functionality tested will be documented by the County and provided to Versaterm. Versaterm shall correct any problem that prevents interface integration testing from being conducted and shall then request, in-writing, the County repeat the failed integration test; or provide a mutually agreeable solution to the described problem such as a future application software patch correction or workaround within ten (10) business days of receipt of discrepancy documented, and relayed to Versaterm staff. Minor problems that will not prevent interface integration testing from being conducted (such as spelling mistakes, etc) will not constitute a failed integration test.

#### **1.8 Issue Resolution**

If the County and Versaterm teams disagree on the design or functionality of an interface and cannot resolve their differences, then the issue(s) will be referred to the dispute resolution processes outlined in the Agreement.

#### **1.9 Acceptance**

The interface integration testing is considered complete when:

- a. The interfaces and other Versaterm licensed software, as described in the ICD, are verified by the County to be operational and meets documented functionality.
- b. County employees are trained and are able to fully use the operational functionality provided by each interface.
- c. The County shall confirm, in-writing, of either acceptance, rejection or conditional acceptance of the interface integration tests for each interface within five (5) business days of completing all interface integration tests; absence of such written notification of acceptance or exception from the County within that acceptance period shall be construed as acceptance.

## 2.0 Functional Acceptance Test Plan

### 2.1 Test Objectives

The primary objectives of the functional acceptance tests are to verify that the CAD/MDC applications and the supported interfaces meet the functional requirements as described in the Versaterm RFP Response, documented in the Interface Control Documents (ICDs), documented in the Customization and Enhancements Control Document (CECD) and any other documents included in this Agreement.

### 2.2 Test Strategy

The County will conduct the functionality tests to confirm the CAD/MDC applications and the interfaces meet or exceed, where applicable, functionality described in the Versaterm's RFP response and the ICDs (Exhibit B.4) and the CECD (Exhibit B.5).

- a. In the event there is a perceived or actual conflict between the documents, the ICDs and the CECD take precedence over the Versaterm's RFP response, or document that is mutually agreed upon by both parties, and that is included in this Agreement.
- b. The application functionality will be conducted on the production servers, however, the core functionality needs to be confirmed as working on the Disaster Recovery Servers.
- c. Each interface will be tested as documented in the corresponding ICD. Although the majority of the testing will be conducted on the production server, this may include testing the interface from the Disaster Recovery Servers as indicated in the ICD.
- d. Should the County require detailed functional test plan, the County is responsible for preparing detailed functional test plan and scripts identifying the specific functionality to be tested. A copy of the test plan and scripts must be provided to Versaterm prior to the acceptance testing period.
- e. The County is also responsible for creating any data files required for the testing.
- f. Conduct specific tests is primarily the responsibility of the County, with Versaterm providing telephone/ web-based monitoring and demonstrations, as requested by the County to clarify specific components/functions.
- g. The acceptance process shall be conducted formally and in-writing between the parties pursuant to the Agreement and Statement of Work (Exhibit B).
- h. Minor exceptions that are documented by both parties shall not be considered grounds for non-acceptance. Minor exceptions are classified as defects that do not prevent the County from production use of the system or the production use of any available function. Examples of minor exceptions may include cosmetic errors (field literal location, spelling, etc.), edit errors that may not catch all possible errors but does not prevent the County from entering valid information; documentation errors or documentation where the County has deemed inadequate for efficient and effective education. Such minor exceptions will be corrected by Versaterm, which may be in a future release, but are deemed insufficient cause to delay functional acceptance.

### 2.3 Testing Roles / Resources

The following County resources will be required for the functional acceptance testing:

- 1) System administrator(s) who are (or will be):



- a) interface specialists for each of the interfaces described in the ICDs
- b) familiar with the interface infrastructure
- c) capable of trouble shooting points of failure
- d) familiar with the production server platform and operating system
- 2) Implementation team member(s) who are familiar with the Versaterm CAD/MDC applications and supported CAD/MDC functionality and who are also familiar with the County operation and environment.
- 3) Network specialists may be required to ensure network connectivity between the various systems.
- 4) Server support specialists may be required should any problems arise with the operating system/environment.
- 5) For certain interface testing, other resources may be required to confirm the expected end result (e.g. calls have been transferred to the RMS, etc).
- 6) Testers who will execute the functional acceptance test scripts.
- 7) A testing lead who will coordinate the functional acceptance tests, monitor their execution and report/track their results.

## 2.4 Test Schedule

Functional acceptance testing will begin according to the Project Implementation Schedule and Statement of Work.

The duration of the functional acceptance testing is 20 business days and per the timeline as identified in the Project Implementation Schedule. Testing will begin after Versaterm has provided written notice declaring the System is ready for functional acceptance testing. The County must acknowledge no later than 10 business days after receipt of written notification from Versaterm; absence of such written acknowledgement from the County within this specified time frame shall be construed as acceptance, commencing the functional acceptance test.

The functional acceptance testing must be completed before Ready for Use (RFU) status can be declared.

The functional acceptance testing must be completed prior to the 'Train the Trainer' and end user training can commence.

## 2.5 Dependencies

- 1) Functional acceptance testing has the following dependencies:
  - a) The core configuration of the CAD/MDC applications has been completed as required.
  - b) Production server environment has been fully setup and configured.
  - c) Interface development has been completed and code modules updated on the production server.
  - d) Interface integration testing has been completed.
  - e) Versaterm has declared the Versaterm System is ready for acceptance testing and the County has accepted the System as being ready for testing.
  - f) For each interface that involves another application/system (e.g. Fire RMS etc), either a test/development system must be available that Versaterm can connect to or a plan must be in place to disable existing production interface for the duration of the testing.

## 2.6 Test Environment

The functional acceptance tests will be conducted primarily on the production server environment.

## **2.7 Problem Tracking and Reporting**

During this test period and up to five (5) business days after the scheduled functional acceptance tests, the County will document and report any problems found to Versaterm's Project Manager (VPM). The VPM is responsible for maintaining a spreadsheet documenting all reported problems and status and/or disposition of each reported problem.

Versaterm shall either :

- a. correct the confirmed problems (that prevent an acceptance test from being completed by the County) and shall then request, in-writing, that the County repeat the failed acceptance test; thus extending the test period or;
- b. reach a mutually agreeable solution to the confirmed problem such as a future Application Software patch correction or a workaround.

within 10 business days of receipt of documented problems.

The County shall repeat the test within 10 business days of receipt of the request to repeat the failed acceptance test, and shall advise Versaterm, in-writing, of the result. Failure by the County to respond within 15 business days with either notice that the test and results are complete or that the County is requesting an extension to perform additional tests, shall be deemed as 'Acceptance' by the County, prompting Versaterm to submit a written notification that default acceptance has occurred.

## **2.8 Issue Resolution**

If the County and Versaterm teams disagree on the design or functionality of an feature and cannot resolve their differences, then the issue(s) will be referred to the dispute resolution processes outlined in the attached Agreement.

## **2.9 Completion Criteria**

The functional acceptance testing is considered complete when:

1. The CAD, MDC and interfaces have been accepted and approved as operating in accordance with the Versaterm RFP proposal, the ICDs and the CECD). All functional discrepancies between the CAD, MDC, interface functionality and the above noted specification documents have been addressed by the County and Versaterm, who mutually agree upon the use of an application fix or a documentation update.
2. Either the County has certified, in-writing, that the CAD/MDC application and applicable interfaces have been accepted including confirmation that 'functional acceptance' has been achieved; or Versaterm has submitted a written notification that a default acceptance has occurred.

## 3.0 System Performance Tests

### 3.1 Test Objectives

The purpose of the Performance Test is to ensure that the System operates to an acceptable performance level under a defined peak load before the CAD is cut-over to production use.

The County will determine the level of testing required so they may verify, to the County's satisfaction, that the System components meet its response and performance specifications. Versaterm will support the County's performance test as required.

### 3.2 Test Strategy

The Performance Testing will include testing individual functions as well as workflows.

1. The application will be tested in a simulated production environment using a 3<sup>rd</sup> party testing tool, of the County's choice, to generate a series of automated transactions to represent the maximum workload anticipated for the System (e.g. 5% growth over the next five (5) years).
2. Prior to initiating any performance testing, the County and Versaterm will mutually agree upon the series of individual functions and transactions that will be used during the Performance Testing as acceptance criteria. The expected System Response Times for the selected transactions and whether they are executed manually or automatically via the third party performance testing tools will be documented in-writing by the County and reviewed and approved by Versaterm. Measurement of response times is to be measured from operator action (e.g. when the enter key is pressed) until visual response or operation completion.
3. If the expected performance times are not achieved, the County and Versaterm will work together to determine whether the cause is the hardware, operating system, network or application software. If both parties agree that the cause is the application software, Versaterm will effect changes needed to meet expected response times and the testing will be repeated. If the County and Versaterm disagree on the likely cause of a performance issue and cannot resolve their differences, then the issue(s) will be referred to the dispute resolution processes outlined in the Agreement.
4. Additionally, Versaterm will participate in collaborative discussions on how to reach the performance metric even if the agreed upon cause(s) exclude the application software, however; task completion will not be withheld for non-Application software-related issues.
5. When measuring system performance thresholds, no backups will be processed. The response times under load will be measured from two (2) CAD workstations, which meet the recommended workstation requirements as defined in the Agreement.

### 3.3 Entry Criteria

At least 30 calendar days prior to the start of this test period, the County, with Versaterm's input, will have decided upon a 3<sup>rd</sup> party testing tool and have created a test plan/scripts including a defined background load to be used during the testing.

#### 1. Testing tool

The County will be responsible for the selection, provision and configuration of any 3<sup>rd</sup> party testing tool that will be used to create a simulated load environment.

## **2. Expected Performance Metrics**

The County will work with Versaterm to define as acceptance criteria a specific set of System functions and transactions and establish expected System Response Times for them.

## **3. Defined Background Load**

The County will define a list of “commonly used” system transactions and their volumes that will operate in the background during the Performance Test. The list will be reviewed and approved by Versaterm prior to the start of the Acceptance Test. Additionally, the County and Versaterm must agree on the Acceptance Criteria used for any Browse (ad-hoc search) transactions (or reports that are included in the list.

### **3.4 Testing Roles / Resources**

The following County resources will be required for the System Performance testing:

- a. Prior to the actual testing, technical resources will be required to research and evaluate automated testing tools.
- b. Prior to the actual testing, application specialists will be required to create a test plan as defined.
- c. Application specialists will be required to perform and time the actual tests.
- d. Network specialists may be required to troubleshoot network delays.
- e. Server specialists may be required to troubleshoot hardware/operating system delays.

### **3.5 Test Schedule**

The duration for the System Performance testing is 10 business days following the Functional Acceptance testing and as per the timeline as identified in the Project Implementation Schedule.

- a. The System Performance Testing must be completed before Ready for use (RFU) can be declared.
- b. The System Performance Testing must be completed prior to the ‘Train the Trainer’ and end user training can commence.

### **3.6 Dependencies**

System Performance testing has the following dependencies:

- a. Successful completion of the Functional Acceptance Test.
- b. The specific details and testing methods have been mutually agreed upon by the parties.

### **3.7 Test Environment**

The load testing environment will consist of the production Versadex CAD system and the Versaterm supplied 3<sup>rd</sup> Party Software and County supplied hardware and 3<sup>rd</sup> Party software, and the automated testing tool.

### **3.8 Problem Tracking and Reporting**

During this test period, the County will report any performance problems found, in-writing, to Versaterm's Project Manager who will maintain a spreadsheet containing all reported problems and current status of each.

For delays caused by the application software, Versaterm shall within ten (10) business days of receipt of written notification of problems either :

- a. Correct the confirmed problems that prevent an acceptance test from being completed by the County and shall then request, in-writing, that the County repeat the failed acceptance test; thus extending the test period or
- b. Reach a mutually agreeable solution to the confirmed problem such as a future software patch correction or a workaround.

The County shall repeat the failed acceptance test within 10 business days of receipt of this written request and shall advise Versaterm, in-writing, of the result. Failure by the County to respond within 15 business days with either notice (that the test is complete or that an extension to perform the re-test has been requested) shall be deemed to be Acceptance and Versaterm shall submit a written notification that a default acceptance has occurred.

### **3.9 Issue Resolution**

If the County and Versaterm teams disagree on the likely cause of a performance issue and cannot resolve their differences, then the issue(s) will be referred to the dispute resolution processes outlined in the Agreement.

### **3.10 Completion Criteria**

The System Performance Testing is considered complete when:

1. Both Parties have reviewed and agreed upon the performance metrics to use in the Performance Test.
2. All documented performance discrepancies have either been corrected to the County's satisfaction or the County and Versaterm have mutually agreed upon, in-writing, to use a workaround or wait until a future Application Software fix is released, as a patch, Update, or Upgrade.

## 4.0 Final Acceptance (Response and Reliability) Tests

### 4.1 Test Objectives

The reliability and response time tests are to ensure that the System continues to operate in a reliable manner and at the expected performance level once the CAD is cut-over to Production Use.

### 4.2 Test Strategy

The acceptance process shall be conducted formally and in-writing pursuant to the Agreement and the Statement of Work (Exhibit B).

#### 1. Response Time Testing

The approach taken will be to measure the performance of the CAD Sytem, using a series of identified transactions from one CAD workstation while the system is under normal and reasonable workload within the Production Use environment. Delays caused by the network, where measurable, will not be included in the response time tests but will be addressed separately if identified. System backups will not be processed when measuring system performance thresholds.

Response times will be measured from CAD workstations that meet the recommended workstation requirements as defined Versaterm's proposal response or any other document that is mutually agreed upon. For this purpose, 'measurement' is defined as an operator action (e.g. when the enter key is pressed) until visual response or operation is completed.

Running a Versaterm CAD session (i.e. signed on as a dispatcher), the County will conduct tests and confirm that the time does not exceed defined thresholds. The following transactions will be executed:

Transaction #1	Display "Add Call" form. Measured from the time the 'add call' function key is pressed until the form is displayed.	1 second
Transaction #2	Display call in queue - measured from when "GO" is pressed on completed call screen and the call is displayed in the pending queue.	2 seconds
Transaction #3	Validate address (from time last character entered to display of district/beat/grid or invalid location form or display of matching street list). From time user tabs out of location field until successful geocoding occurs Assumes full street name is entered or 2 full street names are entered for intersections.	2 seconds
Transaction #4	Status change for single unit (enroute, onscene) - measured from when "GO" is pressed and unit status results are displayed on unit status.	1 second
Transaction #5	Retrieve Call using call number as a parameter. - measured from when call number is entered and "GO" pressed until call is displayed.	2 seconds
Transaction #6	Display the recommended response units for the incident, measured from when user enters DP (Dispatch Recommendation) command to when the	2 seconds

		recommended units are displayed on the dispatcher screen. Assumes non-AVRR dispatch recommendation of 10 units or under.	
	Transaction #7	Display the recommended response units for the incident, measured from when user enters the DP (Dispatch Recommendation) command to when the recommended units are displayed on the dispatcher screen. Assumes AVRR dispatch recommendation of 6 units or less	4 seconds

The County will document and notify Versaterm if performance times are not achieved. Versaterm will effect changes needed to meet expected response times and testing will be repeated.

## 2. Reliability Testing

The CAD System will maintain an availability level of 99.99% for a consecutive thirty (30) days. If System availability has not met this required level, the test period will be extended beyond the original 30 days, until this level of reliability has been demonstrated for a consecutive thirty (30) days.

## 3. Reliability / Downtime Definition and Calculations

Versaterm and the County will work together to categorize problem or defect severity.

The System is considered inoperable or “down” if all (Police ,Fire ,EMS) workstations are simultaneously unable to perform Application Software functions.

Conditions that do not constitute “down” status include:

- Individual workstation failures, such as a Windows operating systems or network failure
- Functional problems that do not prevent productive use
- Network problems , external agency applications, operator error or hardware (not supplied by Versaterm) is identified to be the cause of errors.

Application Software problems will be documented by the County and reported to Versaterm. The problem will be fixed prior to the successful completion (of this task) as stated in the Statement of Work.

Downtime shall begin at the time that the defect has been reported to the designated Versaterm contact person by phone, using the mutually agreed upon protocol for reporting. Downtime shall end at the time that the defect has been repaired or a mutually agreeable workaround has been implemented, and the System has been restored to an operational status.

Mutually agreed upon scheduled system maintenance or unavailability for the purposes of Application Software updates, performance tuning, and other processes typical in a production environment is not considered down status.

The System will not be considered “down” if network, external agency, operator or Hardware (not supplied by Versaterm) is mutually determined to be the cause of errors.

Should downtime be attributed to any 3<sup>rd</sup> party product supported, both parties will first assist each other in identifying the root cause. Should the problem be attributable directly to the Versaterm CAD system interaction with a Versaterm-supplied 3<sup>rd</sup> party product (e.g.4Js Genero), then the downtime “clock” will continue to run, accumulating time until the defect is repaired or a mutually agreeable workaround has been implemented, and the System has been restored to an operational status.

Should the problem be attributable directly to the Versaterm CAD system interaction with a non-Versaterm-supplied the 3<sup>rd</sup> party product, then the downtime “clock” will be stopped and reset at the point of when the error was reported to Versaterm.

Availability Level = Total Downtime / 30 days (or minute equivalent)

99.99% Availability over 30 days translates into less than 7 minutes of downtime status

In the event the down-time limits are exceeded within the test period, the County will document and notify Versaterm that the System has failed the reliability test. Versaterm will have the right to make corrections, if deemed necessary, and will advise the County, in-writing, of the effective re-start date for the reliability test. Versaterm will have the right to designate a date within the previous reliability period as the re-start date for the test.

#### **4.3 Testing Roles / Resources**

The following County resources will be required for the Final Acceptance testing:

- a. CAD/MDC users will be required to periodically perform and time the response tests.
- b. Application support personnel will be required to report any application issues.

#### **4.4 Test Schedule**

The duration for the final acceptance (response and reliability) testing is 30 calendar days and as per the timeline as identified in the Project Implementation Schedule (Exhibit B.1).

#### **4.5 Dependencies**

Final acceptance testing has the following dependencies:

- CAD and MDCs must be in Production Use.

#### **4.6 Test Environment**

The environment will consist of the production Versaterm CAD System and the Versaterm supplied 3<sup>rd</sup> Party Software and County supplied Hardware and 3<sup>rd</sup> Party Software.

#### **4.7 Problem Tracking and Reporting**

During this test period, the County will report any application or performance problems found, in-writing, to Versaterm’s project manager who will maintain a spreadsheet containing all reported problems and current status of each. For major application problems (e.g. a down System), the County will first report the issue by phone to Versaterm and then follow up with a written report sent to Versaterm’s project manager.

#### **4.8 Issue Resolution**

If the County and Versaterm teams disagree on the severity/definition of an outage or on the likely cause of a performance issue and cannot resolve their differences, then the issue(s) will be referred to the dispute resolution processes outlined in the Agreement.



#### **4.9 Completion Criteria**

The final acceptance testing is considered complete when:

- a. All response time tests successfully meet the listed response times.
- b. The CAD System has maintained an availability level of 99.99% for a consecutive 30 days. If System availability has not met this required level, the test period will be extended beyond the original 30 days, until this level of reliability has been demonstrated for a consecutive thirty (30) days.
- c. Either the County has confirmed, in-writing, that the CAD/MDT application and applicable interfaces have been accepted confirming that 'Performance and Reliability acceptance' has been achieved; or Versaterm has submitted a written notification that a default acceptance has occurred as the 30 day test period has elapsed without any reported problems.

# Exhibit C

## Change Control Log

This exhibit contains the log of any change made to the Agreement. It is understood by both parties that documenting changes in project status reports including, but not limited to, changes in schedule and staffing and agreed to by both parties do not require inclusion into the Change Control Log. Any financial impact must be documented in this Exhibit.

# Exhibit D

# Application Software License Agreement

**APPLICATION SOFTWARE LICENSE AGREEMENT  
FOR VERSATERM LICENSED VERSADEX PRODUCTS**

This License Agreement is made in consideration of the covenants, representations and warranties set forth herein and other good and valuable consideration,

**B E T W E E N:**

Versaterm Inc., a corporation duly incorporated under the laws of Canada having its office located at 2300 Carling Avenue, Ottawa, Ontario, Canada

(hereinafter referred to as "Versaterm")

**AND:**

The County of San Mateo, a political subdivision of the state of California having its office located at 400 County Centre, Suite PSC100, Redwood City, California, USA, 94063

(hereinafter referred to as the "County")

## 1. DESCRIPTION OF LICENSED PROGRAM MATERIALS

Versaterm owns the collection of computer programs and materials known as VERSADEX more particularly described in Annex A attached hereto and hereinafter collectively referred to as the "Licensed Program".

The Licensed Program and the manuals, listings and other documentation and media supplied by Versaterm relating thereto are hereinafter collectively referred to as the "Licensed Program Materials".

## 2. LICENSE

Subject to the terms and conditions of this License Agreement and payment of the applicable license fee, Versaterm hereby grants to the County, and the County hereby accepts, a non-exclusive license (the "License") to:

- a. use the Licensed Program Materials in source machine readable form on the server environment designated in Annex B attached hereto and in conjunction therewith to store the Licensed Program Materials in, transmit them through, or display them on units associated with such server environment;
- b. utilize the Licensed Program Materials in print and/or electronic form in support of the use of the Licensed Program; and
- c. copy or translate the Licensed Program Materials in machine readable form into any machine readable or printed form to provide sufficient copies to support the County's use of the Licensed Program as authorized under this License Agreement.

The License is non-exclusive and extends only to use in conjunction with County of San Mateo's Public Safety operations. The Licensed Program Materials may only be used on the configuration of machines and at the location designated in Annex B unless the County obtains Versaterm's written consent, except as otherwise provided herein. The County cannot exceed the maximum number of workstations, simultaneous users and/or supported users, as the case may be, designated in Annex A without Versaterm's written consent, which consent may be subject to payment of additional license fees.

The County shall not use, print, copy, translate or display the Licensed Program Materials in whole or part unless expressly authorized in this License Agreement.

Apart from the rights enumerated in this License Agreement, the License does not include a grant to the County of any right to use, nor any ownership right, title or other interest, in or relating to the Licensed Program Materials, nor in any copy of any part of the Licensed Program Materials.

## 3. TERM AND TERMINATION OF LICENSE

The License shall be perpetual unless terminated as provided herein. Versaterm may terminate the License or this License Agreement upon written notice if the County fails to comply with any of the terms and conditions of this License Agreement. Upon termination for any reason, the County shall immediately cease all use of the Licensed Program Materials except as otherwise specifically provided herein.

In the event of termination by either party, the terminating party in its sole discretion may terminate one or more License rights divisibly without terminating other License rights.

#### 4. THIRD PARTY SOFTWARE / FREE SOFTWARE COMPONENTS

The County acknowledges that the License does not include any right to use nor any interest in third party software ("Third Party Software") that may include, but is not limited to, operating systems, end-user reporting tools, programming language, radio middleware, database management systems and related software.

The County also acknowledges that the License does not include any right to use nor any interest in "Free Software Components", that may include, but is not limited to, software programs, libraries, or distributables (commonly known as "public", "open source" or "free" software), made publicly available by the copyright holders (collectively, "Free Software Components").

Notwithstanding anything else in this Agreement, the Third Party Software and the Free Software Components are subject only to those licenses applicable to the particular Third Party Software and/or Free Software Component and any warranties and limitations of liability for such Third Party Software and Free Software Components are contained therein. County acknowledges and agrees that County is solely responsible and liable to review such licenses. Such licenses may appear within the license, copying, help and/or readme files of the Third Party Software and/or Free Software Components.

#### 5. TEMPORARY LICENSE TRANSFER

The County is authorized to use the Licensed Program Materials on:

- a. a back-up configuration of machines when the designated configuration of machines is temporarily inoperable until operable status is restored and processing on the back-up configuration of machines is completed; or
- b. another machine for compilation of the Licensed Program Materials if the designated configuration of machines does not provide the configuration required for compilation.

#### 6. PERMISSION TO MODIFY

The County may modify the Licensed Program Materials provided in source machine readable form, or extend it into other program material to form an up-dated work for the County's own use; provided that, within one hundred twenty (120) days of the date of termination of the License, the

Licensed Program Materials shall be completely removed from the up-dated work and dealt with under this License Agreement as if permission to modify or extend had never been granted. Any portion of the Licensed Program Materials included in such an up-dated work will continue to be subject to all terms and conditions of this License Agreement; and provided further that any such modifications may affect the rights and obligations of County and Versaterm under the Application Software Support Agreement (Exhibit E), as provided therein.

## 7. PROTECTION AND SECURITY OF LICENSED PROGRAM MATERIALS

The County will take appropriate action, by instruction, License Agreement or otherwise, with any persons permitted access to the Licensed Program Materials so as to ensure that the County satisfies its obligations under this License Agreement.

All copies of the Licensed Program Materials (excluding the Third Party Software and the Free Software Components) provided by Versaterm or made by the County including translations or compilations or partial copies within modifications, derivative works and up-dated works are the property and information of Versaterm and may not be distributed or disclosed by the County to any person, including other licensees of the Licensed Program, without Versaterm's prior written consent. The County will reproduce and include the copyright notice on any such copies made by the County in accordance with Versaterm's copyright instructions.

The County will maintain records of the number and location of all copies of the Licensed Program Materials and notify Versaterm in writing if the original or any copy of the Licensed Program Materials will be kept at a location other than that of the configuration of machines designated in this License Agreement.

The County will ensure, prior to disposing of any media, that any Licensed Program Materials contained thereon have been erased or otherwise destroyed.

The County will not provide or otherwise make available any Licensed Program Materials in any form without Versaterm's prior written consent except to County employees, Versaterm employees, or to other persons during the period such other persons are on the County's premises, for purposes specifically related to the County's authorized use of the Licensed Program Materials. It is further agreed that the County, its employees and agents, will not disclose the information to third parties without Versaterm's prior written consent with the sole exception that the County is permitted to demonstrate the Licensed Program to other Public Safety personnel who are potential licensees of the Licensed Program.

## 8. INFRINGEMENT REMEDIES

- 8.1 Subject to Sections 8.3 and 8.4, in the event of a claim that County's authorized use of the Licensed Program Materials infringes upon any copyright, patent or other intellectual property right of any third party under the laws of Canada or the United States, Versaterm agrees that it will defend and indemnify the County from and against all damages and costs awarded in a final judgment (from which no further appeal is taken or possible) against County in such proceeding, provided that:



- a. the County notifies Versaterm in writing within 30 days of the claim;
  - b. Versaterm has sole control of the defense and all related settlement negotiations; and
  - c. the County provides Versaterm with the assistance, information, and authority necessary to perform Versaterm's obligations under this section.
- 8.2 Subject to Sections 8.3 and 8.4, but without limiting Versaterm's obligations under Section 8.1, in the event of a claim that the County's authorized use of the Licensed Program Materials infringes upon any copyright, patent or other intellectual property right of any third party under the laws of the United States or Canada, and such claim is sustained in a final judgment from which no further appeal is taken or possible, and such final judgment includes an injunction prohibiting the County from continued use of the Licensed Program Materials or portions thereof, then Versaterm shall, at its option and expense, either:
  - a. procure for the County the right to continue the use of the Licensed Program Materials;  
or
  - b. replace or modify the Licensed Program Materials to make its use non-infringing, or
  - c. direct the County to cease use of the Licensed Program Materials or of the specific portion(s) thereof that resulted in the final judgment.
- 8.3 If Versaterm directs the County to cease use of the Licensed Program Materials or of specific portion(s) thereof, then the County, to the exclusion of all other remedies available to the County (except as set forth in Section 8.1), may terminate the License for that portion of the Licensed Program Materials which Versaterm directed the County to cease use and Versaterm shall pay the County (and/or credit against any amounts owed, or becoming owed, to Versaterm by the County) a declining percentage of the license fee paid by the County for that portion of the Licensed Program Materials namely, 100% of the license fee during the first year of the term of this License Agreement; 80%, 60%, 40% and 20% of the license fee in the second, third, fourth and fifth years, respectively, of the term of this License Agreement; and 0% thereafter.
- 8.4 Notwithstanding Sections 8.1 and 8.2, Versaterm shall have no obligation for any claim based upon:
  - a. use of other than a current unaltered release of the Licensed Program if such infringement would have been avoided by the use of a current unaltered release of the Licensed Program; or
  - b. the combination, operation, or use of any Licensed Program Materials furnished hereunder with non-Versaterm programs or data if such infringement would have been avoided by the combination, operation or use of the Licensed Program Materials with other programs or data.

This Section 8 states the entire obligation of Versaterm with respect to any claim that the Licensed Program Materials infringe upon any copyright, patent or other intellectual property right of any third party.

## 9. DISCLAIMER ON USE

The Automatic Vehicle Routing Recommendation component ("AVRR Component"), if licensed at any time under this Agreement, is intended for use as one factor in determining the best vehicle routing for the County, but is not intended to be used as the sole source for determining routing and which vehicles to deploy to address any emergency situation. The AVRR Component is heavily dependent on the quality of the source mapping information inputted by or on behalf of County and Versaterm will have no responsibility or liability for any routing errors and/or delays and resultant damage or loss arising as a result of the mapping data or for any damages or loss caused by any decision made or action taken in reliance on the AVRR Component.

## 10. DISCLAIMER OF ALL OTHER WARRANTIES AND REPRESENTATIONS

The express warranties and express representations set forth in this License Agreement are in lieu of, and **VERSATERM DISCLAIMS, ANY AND ALL OTHER WARRANTIES, CONDITIONS, OR REPRESENTATIONS (EXPRESS OR IMPLIED, ORAL OR WRITTEN), WITH RESPECT TO THE LICENSED PROGRAM MATERIALS OR ANY PART THEREOF, INCLUDING ANY AND ALL IMPLIED WARRANTIES OR CONDITIONS OF TITLE, NON-INFRINGEMENT, MERCHANTABILITY, OR FITNESS OR SUITABILITY FOR ANY PURPOSE (WHETHER OR NOT VERSATERM KNOWS, HAS REASON TO KNOW, HAS BEEN ADVISED, OR IS OTHERWISE IN FACT AWARE OF ANY SUCH PURPOSE), WHETHER ALLEGED TO ARISE BY LAW, BY REASON OF CUSTOM OR USAGE IN THE TRADE, OR BY COURSE OF DEALING. IN ADDITION, VERSATERM EXPRESSLY DISCLAIMS ANY WARRANTY OR REPRESENTATION TO ANY PERSON OTHER THAN THE COUNTY WITH RESPECT TO THE LICENSED PROGRAM MATERIALS OR ANY PART THEREOF.**

## 11. EXCLUSION OF INCIDENTAL AND CONSEQUENTIAL DAMAGES

Independent of, severable from, and to be enforced independently of any other enforceable or unenforceable provision of this License Agreement, **NOTWITHSTANDING ANY OTHER PROVISION HEREIN, VERSATERM WILL NOT BE LIABLE TO THE COUNTY (NOR TO ANY PERSON CLAIMING RIGHTS DERIVED FROM THE COUNTY'S RIGHTS) FOR INCIDENTAL, CONSEQUENTIAL, SPECIAL, PUNITIVE OR EXEMPLARY DAMAGES OF ANY KIND - INCLUDING LOST PROFITS, LOSS OF BUSINESS OR OTHER ECONOMIC DAMAGE, AND FURTHER INCLUDING INJURY TO PROPERTY (BUT SPECIFICALLY EXCLUDING THE INFRINGEMENT REMEDIES SET FORTH IN SECTION 8) - AS A RESULT OF BREACH OF ANY WARRANTY OR OTHER TERM OF THIS LICENSE AGREEMENT, REGARDLESS IF VERSATERM WAS ADVISED, HAD OTHER REASON TO KNOW, OR IN FACT KNEW OF THE POSSIBILITY THEREOF.**

## 12. MAXIMUM AGGREGATE LIABILITY

Independent of, severable from, and to be enforced independently of any other enforceable or unenforceable provision of this License Agreement, **NOTWITHSTANDING ANY OTHER PROVISION HEREIN, EXCEPT AS DESCRIBED IN SUBSECTION 8.1, IN NO EVENT SHALL VERSATERM'S**

**AGGREGATE LIABILITY TO COUNTY (INCLUDING LIABILITY TO ANY PERSON OR PERSONS WHOSE CLAIM OR CLAIMS ARE BASED ON OR DERIVED FROM A RIGHT OR RIGHTS CLAIMED BY COUNTY), WITH RESPECT TO ANY AND ALL CLAIMS AT ANY AND ALL TIMES ARISING FROM, OR RELATED TO, THE SUBJECT MATTER OF THIS LICENSE AGREEMENT, IN CONTRACT, TORT, OR OTHERWISE, EXCEED THE LICENSE FEE PAID BY THE COUNTY FOR THE SPECIFIC PROGRAM(S). THE THIRD PARTY SOFTWARE AND THE FREE SOFTWARE COMPONENTS ARE PROVIDED SUBJECT TO THE LIMITATION OF LIABILITY PROVISIONS CONTAINED WITHIN THE APPLICABLE LICENSE AGREEMENT AND VERSATERM ASSUMES NO LIABILITY WITH RESPECT THERETO.**

### 13. GENERAL

- 13.1 This License Agreement shall be binding upon the successors and assigns of both parties, provided, however, that no assignment, delegation or other transfer (except to a third party acquiring all or substantially all of Versaterm's assets or by merger of Versaterm with a third party) shall be made by either party without the prior written approval of the other party, which approval shall not be unreasonably withheld.
- 13.2 Every notice required or contemplated by this License Agreement to be given by either party shall be in writing and delivered to the party for whom it is intended, at the address specified in this License Agreement. Either party may change its address for notice by giving notice to the other party of the change.
- 13.3 No modification or amendment of this License Agreement will be valid or binding unless reduced to writing and duly executed by the party or parties to be bound.
- 13.4 Neither party is responsible for failure to fulfill its obligations under this Agreement due to causes beyond its control. However, this clause does not extend to payment obligations.
- 13.5 No action, regardless of form, arising out of this License Agreement may be brought by either party more than five (5) years after the cause of action has arisen for breach of provisions of the section entitled "PROTECTION AND SECURITY OF THE LICENSED PROGRAM MATERIALS" or more than one (1) year after the cause of action has arisen for a breach of any other provision of this License Agreement.
- 13.6 The License Agreement shall be governed by, construed and enforced in accordance with the laws of the state of California.
- 13.7 Pursuant to Article 6 of the United Nations convention on contracts for the international sale of goods ("UN Convention"), the parties agree that the UN Convention shall not apply to this License Agreement.
- 13.8 The failure of either party at any time to require performance by the other party of any provision of this License Agreement shall in no way affect the right of such party to require performance of that provision. Any waiver by either party of any breach of any provision of this License Agreement shall not be construed as a waiver of any continuing or succeeding breach of such provision, a waiver of the provision itself or a waiver of any right under this License Agreement.
- 13.9 Any provision of this License Agreement or part thereof found to be illegal or unenforceable shall be deemed severed and the balance of this License Agreement shall remain in full force and effect.

- 13.10 This License Agreement may be executed in separate counterparts, each of which so executed and delivered shall constitute an original, but all such counterparts shall together constitute one and the same instrument. Any such counterpart may comprise one or more duplicates or duplicate signature pages, any of which may be executed by less than all of the parties provided that each party executes at least one such duplicate or duplicate signature page. The parties stipulate that a photocopy of an executed original will be admissible in evidence for all purposes in any proceeding as between the parties.
- 13.11 This License Agreement including all annexes attached hereto, all documents incorporated by reference herein and all instruments supplemental hereto or in amendment or confirmation hereof or thereof, constitutes the entire agreement between the parties concerning the subject matter hereof. No prior or contemporaneous representations, inducements, promises, proposals, or agreements, oral or otherwise, between the parties, with reference thereto, will be of any force or affect except as may be expressly set forth herein or therein.
- 13.12 The following Annexes attached hereto are incorporated into this License Agreement by reference and deemed to be a part hereof:
- a. Annex A - List of Licensed Program(s)
  - b. Annex B - Server Environment
- 13.13 Each person signing below represents that he or she has read this License Agreement; understands its terms; is duly authorized to execute this License Agreement on behalf of the party indicated below by his or her name; and agrees on behalf of such party that such party will be bound by those terms.

Executed the dates written below, to be effective as of NOVEMBER 6 of 2018.

**VERSATERM INC.**

**County of San Mateo**

Signature: T Rosales

Signature: \_\_\_\_\_

T ROSALES  
Name

\_\_\_\_\_  
Name

SECRETARY-TREASURER  
Title

\_\_\_\_\_  
Title

October 30, 2018  
Date

\_\_\_\_\_  
Date

Signature: ama V

Signature: \_\_\_\_\_

Allan Wilson  
Name

CTO  
Title

October 30, 2018  
Date

\_\_\_\_\_  
Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

## APPLICATION SOFTWARE LICENSE AGREEMENT

### Annex A – List of Licensed Program(s)

#### 1. DEFINITIONS

In this Exhibit,

1.1 “Concurrent User(s)” means the unique combination of one login on one display device with no more than five processes running or, in the case of mobile devices, the number of concurrent users running the Application Software at any one time.

1.2 “Site” means it may be used across the entire County site.

1.3 “Install(s)” means the installation of the software on a designated PC, server or device.

#### 2. Licenses

<u>Licensed Program</u>	<u>License Description</u>
<b>CAD</b>	
vCAD Base	Site
Multi-Agency/Jurisdiction Base	Site
Multi-Jurisdictional Agencies	2 EMS, 11 Fire, 4 Police
vBrowser Status Screen (Web Monitor/Dashboard)	Site
REmoveCAD Application	Site
AVL Integration	Site
vCAD AVL Layer	Site
AVRR Base	Site
AVRR Position License	30 installs
CAD to RMS Gateway Base License	Site
CAD to RMS Gateway CAD Positions	30
Versadex Message Controller (VMC)	Site
VGI (Versadex GIS Interface)	1 install
Versadex Data Mart (VDM)	Site
vCAD w/MapViewer	30 concurrent users
RemoteCAD User Licenses	50 concurrent users
Legacy Browser Status Screen	Site
vBrowser Status Screen	50 concurrent users
<b>Mobile</b>	
VMC RF Integration	Site
MDT CAD Link Base	Site
MDT NCIC I/F Integration	Site
MDT Mapping Base Integration	Site
MDT AVL Integration	Site

Police MDT Client	100 installs
RF Link	100 installs
MDT CAD Link	100 installs
MDT NCIC I/F Link	100 installs
MDT AVL	100 installs
MDT Mapping	100 installs

Fire/EMS MDT Client	46 installs
RF Link	46 installs
MDT CAD Link	46 installs
MDT AVL	46 installs
MDT Mapping	46 installs

Fire vMobile	201 installs
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### Interfaces

E911 Intrado VIPER	Site
Priority Dispatch ProQA	Site
Police SunRidge Query Interface	Site
Fire Department RMS CAD Call for Service Publish	Site
Radio Paging – M25 Tone Encoder	Site
Station Alerting – Zetron Model 25 (backup	Site
Station Alerting – Zetron Model 6/26	Site
Station Alerting – FireDispatch.com	Site
Zetron Paging (Model 2200)	Site
SMTP Paging	Site
Motorola MCC7500 PTT, ERTT	Site
Motorola MCC7500 Call Alert	Site
MKM 7000 Consol Alias Manager	Site
MCC7500 Aux I/O	Site
Cimarron Cplus III ANI Decoder (PTT, ERTT)	Site
ReddiNet	Site
ePCR/MEDS	Site
PulsePoint	Site
Table Command	Site
CalCOP	Site
NCRIC / Palentir	Site
sRIMS	Site
County Message Switch	Site
FirstWatch	Site
Omega FireView	Site
FireDispatch.com	Site
ASAP	Site
CryWolf	Site
Axon	Site
ShotSpotter	Site
EventTied	Site
Deccan LiveMum	Site

## **APPLICATION SOFTWARE LICENSE AGREEMENT**

### **Annex B – Server Environment**

The Licensed Program will reside in a virtualized configuration using VMware technology. The VMware appliances will be managed across multiple hardware servers. The hardware configuration includes two clusters of servers at the primary location (test and production) as well as a cluster of servers at a secondary location for disaster recovery purposes.

The County is licensed to install the Licensed Program on any existing or replacement hardware equipment owned, operated or leased by the County, whether at the County's facilities or at a facility within the



# Exhibit E

## Application Software Support Agreement

**APPLICATION SOFTWARE SUPPORT AGREEMENT  
FOR VERSATERM LICENSED VERSADEX PRODUCTS**

This Support Agreement is made in consideration of the covenants, representations and warranties set forth herein and other good and valuable consideration,

**B E T W E E N:**

Versaterm Inc., a corporation duly incorporated under the laws of Canada having its office located at 2300 Carling Avenue, Ottawa, Ontario, Canada

(hereinafter referred to as "Versaterm")

**AND:**

The County of San Mateo, a political subdivision of the state of California having its office located at 400 County Centre, Suite PSC100, Redwood City, California, USA, 94063

(hereinafter referred to as the "County")

## 1. DEFINITIONS

In this Support Agreement,

- 1.1 "Application Software License Agreement" means the Application Software License Agreement between Versaterm and the County concerning the license of the Product.
- 1.2 "Critical Priority Error" means complete system failure where the Product is not available for use.
- 1.3 "High Priority Error" means a serious problem that materially affects the operational use of the Product.
- 1.4 "License" means the license in respect of the Product granted by Versaterm pursuant to the Application Software License Agreement.
- 1.5 "Product" means the computer programs and documentation provided by Versaterm and which the County is authorized under the Application Software License Agreement to use in the course of their normal operations, including Product Update(s) and Product Upgrade(s) used by the County.
- 1.6 "Product Update" means a change or new release of the Product then in use by the County designed to correct Problem(s).
- 1.7 "Product Upgrade" means a change or new release of the Product then in use by the County containing new functions, features and enhancements that have become part of the standard system and which are made available to Versaterm customers who have a current support agreement in place for such Products.
- 1.8 "Problem" means defective Product distribution media and/or failure of the Product to function substantially in accordance with the documentation but does not include compatibility problems on hardware components and other systems software components or new releases that Versaterm has not supplied and/or has not pronounced "acceptable" or "supported".
- 1.9 "Support" means services which are provided by Versaterm to the County, as described herein, regarding Problem(s) encountered with standard, unmodified Product, and with Versaterm's modifications to or interfaces with the Products, and which are necessary to:
  - i. resolve Problems and provide temporary "work around" solutions, if necessary;
  - ii. assist with data manipulation, duplication or restoration where data has been affected by defects under paragraph (i) immediately above but not by hardware defects or operator error or misuse of any of the software or hardware;
  - iii. periodically review all Products to identify and resolve Problems on a preventative basis; and
  - iv. provide, in a timely manner, all Product Updates and Product Upgrades.
- 1.10 "Support Agreement" means this maintenance and support service agreement, all annexes attached hereto, all documents incorporated by reference herein and all instruments supplemental hereto or in amendment or confirmation hereof.

- 1.11 "Support Authority" means the County's designated employee (or employees) authorized to approve additional, separately billable time & materials support work, beyond that included within this Support Agreement.
- 1.12 "Support Contact" means County's designated employee, a consultant providing services directly to the County or another designated County representative with whom Versaterm will communicate when providing Support. The Support Contact must be knowledgeable about how the Product is being used and the language in which it is written and be competent to do system administration of the operating system under which it is being used.
- 1.13 "Support Period" has the meaning set forth in Section 4.

Other terms are defined in the Sections in which they are used.

## 2. VERSATERM SUPPORT OBLIGATIONS

- 2.1 **Product Support.** During the Support Period, Versaterm may make Support available through newsletter(s), access to Versaterm's website, and direct contact with the County. Such Support may consist of the periodic review of current outstanding questions and usage issues, new and upcoming releases of Product Update(s) and Product Upgrade(s) and the periodic review of potential environment changes that could impact the use of the Product.
- 2.2 **Regular Telephone Support.** During the Support Period, Versaterm will make Support available by telephone to the Support Contact at substantially all times from 7:30 a.m. (Eastern time) until 5:30 p.m. (County local time) each day except Saturdays, Sundays, and legal holidays in the jurisdiction of the County. To the extent possible by telephone, email and remote communication, Versaterm will attempt to identify and provide a workaround for the Problem and will use reasonable efforts to provide a final solution for the Problem, if that applies. Versaterm will normally respond to a telephone request for High Priority Error or Critical Priority Error Support within thirty (30) minutes of receipt of the call.
- 2.3 **7x24 Emergency Telephone Support.** Versaterm will provide 7x24 Telephone Support that extends Support for problems identified as High Priority Error and Critical Priority Error to include all hours not already provided for within Regular Telephone Support.

7x24 Telephone Support allows the County's internal support staff that are technically capable and who first troubleshoot the problem, to authorize Versaterm to provide 7x24 Telephone Support.

- 2.4 **On-Site Emergency Support.** During the Support Period, in the extreme event of a complete system failure (Critical Priority Error) and a determination that telephone and/or remote support cannot identify the Problem or provide a workaround, then a Versaterm representative will be dispatched to the County's site within a reasonable period of time. Such period of time will depend, among other things, upon the proximity of the County and the availability of transport. The County shall reimburse Versaterm for reasonable travel and living expenses incurred as a result of any such declared Emergency site visit.

- 2.5 **Termination of Corrective Action.** Versaterm may, but need not, terminate its corrective efforts under this Section 2 at any time if, in its business judgment:
- a. the County fails to perform its obligations under this Support Agreement; or
  - b. the County is not using the then current unmodified version of the Product or other versions of the Product then supported by Versaterm; or
  - c. Versaterm and/or the County is not able to reproduce the Problem in the applicable operating environment and verify that the Problem is in fact in the Product and not elsewhere; or
  - d. the Problem is not material; or
  - e. further corrective efforts are not appropriate because the Problem has been identified and is caused by an external factor (e.g. bug in system software such as database management system, MS Windows, etc.) not within Versaterm's control; or
  - f. Versaterm has declared the problem as probably being caused by something external to the supplied software, such as aberrations within the client's network (LAN and/or WAN and/or related network equipment) or hardware. Versaterm will terminate work on this problem unless the County authorizes further diagnosis effort that may be billable separately under this Support Agreement when and if the suspected external problem source is confirmed. If confirmed as being caused by an external source, then such work will be billed on a time and materials basis at the then prevailing hourly rates for support (whether within or outside normal support hours) and can be authorized by FAX or E-mail by the designated Support Authority or other as designated in writing to Versaterm as having that authority.
- 2.6 During the Support Period, Versaterm will offer copies of Product Update(s) and/or Product Upgrade(s), if any, to the County at no additional charge.
- 2.7 Product Update(s) and Product Upgrade(s) are provided subject to and in accordance with the license rights, restrictions, terms, covenants, conditions, warranties, limitations, exclusions and other provisions set forth in the Application Software License Agreement.
- 2.8 **Third Party Software Support.** For the Third Party Software that Versaterm collects support for, Versaterm agrees to remit, on behalf of the County, the appropriate amounts to the Third Party, thereby ensuring the corresponding Third Party support agreement does not lapse. Versaterm also agrees to provide first line support for those Third Party Software products that Versaterm has supplied and collects support amounts on. During the Support Period, Versaterm will ensure that the Product is available on a supported version of the operating system, database management system and programming language. That is, if a supplier of the aforementioned Third Party Software discontinues the version currently in production use by the County, Versaterm will make available a version of the Product, with equivalent functionality. In the event that the County upgrades the operating system, Versaterm shall provide necessary assistance, which may be at additional cost, for the migration to the upgraded operating system.
- 2.9 **Open Source Software Components Support.** For the Open Source Software Components provided by Versaterm, Versaterm will provide first line support for those Open Source Software Components.

During the Support Period, Versaterm will ensure that the Product functions on the Open Source Software Components and if the supplier of the aforementioned Open Source Software Component discontinues the version currently in production use by the County, Versaterm will make available a version of the Product with equivalent functionality.

- 2.10 **Integration Support.** Versaterm is responsible for maintaining compliance with all state and federal requirements and data standards related to the integrations that are implemented as part of the Agreement using the regular Product Update schedule. If a change is requested outside of the normal cycle, additional costs may apply. Versaterm is responsible for supporting the integrations that are licensed from Versaterm. If external factors necessitate a change to an integration, additional costs may apply.
- 2.11 **Server Migration.** Versaterm will typically provide all professional services relating to the migration of the System in a virtualized environment at no additional charge, assuming a environment similar to that proposed by Versaterm or an environment certified as a Versaterm standard.
- 2.12 **Database Support.** Versaterm shall support the database (e.g. Informix), if supplied by Versaterm, in the production, development and disaster recovery environments, if applicable. Such support shall include: installation, configuration, tuning, space management, monitoring, and opening and managing support tickets with the applicable Third Party Software vendor..
- 2.13 Versaterm reserves the right to alter its support policies and procedures in future years to adapt to changes in technologies and circumstances. Versaterm will provide notice of any change in support policies and procedures at least 6 months before the renewal of any support period.

### 3. COUNTY SUPPORT OBLIGATIONS

By notice to Versaterm, the County shall designate Support Contact(s) to provide routine end user support for the County personnel concerning the Product. The Support Contact(s) will be adequately trained to fulfill the duties identified.

- 3.1 By notice to Versaterm, the County is obligated to identify the Support Authority. The County may designate substitutes for such individual from time to time by notice to Versaterm.
- 3.2 The County is responsible to have staff, trained in accordance with Versaterm's training material, on-site to assist Versaterm's remote staff to diagnose and correct or circumvent reported software problems; Versaterm's support staff shall request and guide the County's staff to execute physical tasks and actions on-site in support of Versaterm's remote diagnostic and corrective or circumventive activities.
- 3.3 The County shall take appropriate steps to educate its end users about the appropriate process for reporting problems, including the need to contact internal support rather than Versaterm.
- 3.4 As a matter of policy, Versaterm will ordinarily still attempt to respond promptly and courteously to Support requests from any end user, but it shall always have the right to require the caller to work through the designated Support Contact(s) instead of directly with Versaterm.
- 3.5 County agrees:

- a. to limit use of Support to occasions when the Product fails to function as described in the documentation or the County requires clarification of the documentation,
- b. to furnish descriptions of Problem(s) in the form reasonably requested by Versaterm's Support representatives,
- c. to reproduce the Problem and/or assist Versaterm's efforts to reproduce the Problem in the applicable operating environment,
- d. to create adequate backups of any Versaterm software and/or documentation,
- e. to provide remote access to the County's server environment, with appropriate "access rights", to enable Versaterm's Support representatives to remotely analyze and diagnose reported Problem(s),
- f. to ensure Product Updates are installed in the production environment in a timely manner. Versaterm reserves the right to charge a per call fee at its then prevailing rate to County for Regular and 7x24 Support calls in regards to an issue where County has been supplied with a Product Update but has not implemented said Product Update due to internal procedural requirements or processes. County's Support Contact will be informed in advance of any charge, and
- g. to install any Product Upgrade at its own expense. Unless paid for in the Support Fee, Versaterm will, *at the request and expense of the County*, install any such Product Update or Product Upgrade in which event the County shall pay Versaterm its then prevailing per diem rates plus travel and living expenses.

#### 4. SUPPORT PERIOD

- 4.1 The initial Support Period will commence on {include date or milestone from Head Agreement} and continue for a period of one year. The Support Period will end automatically upon termination of the License, if that event occurs.
- 4.2 Within or after the sixty (60) day period prior to the expiration of the Support Period, Versaterm, or its designated reseller, may send the County an invoice for a renewal support fee ("Support Fee"). The sending of any such invoice will constitute an irrevocable offer to extend the Support Period for the period and fees set forth in the invoice, which may be accepted by the County in its sole discretion as hereinafter set forth.
- 4.3 The County's payment of a Support Fee in response to an invoice by its due date, that is, by the (i) the expiration date of the Support Period, or (ii) thirty (30) days after the date of Versaterm's invoice, whichever is later, will extend the Support Period for:
  - i. one year from its previous expiration date, or

- ii. if the invoice specifies that the invoice is for a prorated Support Fee to cover an interim period (e.g., to adjust subsequent expirations dates of the Support Period), then until the new expiration date indicated in the invoice.
- 4.4 The County's failure to pay a Support Fee, in response to an invoice from Versaterm, shall constitute the County's election to allow the Support Period to expire without further notice from Versaterm.
- 4.5 If the Support Period is allowed to expire, Versaterm may condition any subsequent reinstatement of the Support Period on payment by the County of an additional fee set by Versaterm in its sole discretion but not to exceed Versaterm's then-current license fee for the Product. Such reinstatement will be effective as of its date and will not be retroactive.

## 5. SUPPORT FEE AND PAYMENT TERMS

- 5.1 The Support Fee for the initial Support Period is set out in the attached Annex A. Payment is due prior to the commencement of the Support Period.
- 5.2 In addition to all other amounts required by this Support Agreement, the County shall pay or reimburse Versaterm for all federal, state, provincial and local sales, excise, use or similar taxes based on payments to be made hereunder. The County will not be required to pay or reimburse Versaterm for taxes based upon the net worth, capital, net income, or franchise of Versaterm, nor taxes imposed upon Versaterm solely by reason of Versaterm's doing business in or being incorporated in the jurisdiction imposing such taxes.
- 5.3 Any payment required hereunder that is made late (including unpaid portions of incomplete payments) will bear interest, compounded monthly, from the date due until the date paid, at the lesser of eighteen percent (18%) per annum or the highest interest rate permitted to be charged of the County by applicable law.
  - a. Any payment received more than ten (10) days after becoming due will be deemed late for purposes of this Support Agreement.
  - b. Any interest charged or paid in excess of the maximum rate permitted by applicable law will be deemed the result of mistake and will be credited or refunded to the County, together with interest as set forth above from the date charged until the date credited or refunded.
  - c. The County shall reimburse Versaterm for all costs reasonably incurred in collecting late payments, including, but not limited to, attorney's fees.

## 6. DISCLAIMER OF ALL OTHER WARRANTIES AND REPRESENTATIONS

The express warranties and representations set forth in this Support Agreement or otherwise agreed to in writing by Versaterm and the County in connection with the provision of support are in lieu of, and **VERSATERM DISCLAIMS, ANY AND ALL OTHER WARRANTIES, CONDITIONS, OR REPRESENTATIONS (EXPRESS OR IMPLIED, ORAL OR WRITTEN), WITH RESPECT TO THE PRODUCT AND SUPPORT OR ANY**



PART THEREOF, INCLUDING ANY AND ALL IMPLIED WARRANTIES OR CONDITIONS OF TITLE, NON-INFRINGEMENT, MERCHANTABILITY, OR FITNESS OR SUITABILITY FOR ANY PURPOSE (WHETHER OR NOT VERSATERM KNOWS, HAS REASON TO KNOW, HAS BEEN ADVISED, OR IS OTHERWISE IN FACT AWARE OF ANY SUCH PURPOSE), WHETHER ALLEGED TO ARISE BY LAW, BY REASON OF CUSTOM OR USAGE IN THE TRADE, OR BY COURSE OF DEALING. IN ADDITION, VERSATERM EXPRESSLY DISCLAIMS ANY WARRANTY OR REPRESENTATION TO ANY PERSON OTHER THAN COUNTY WITH RESPECT TO THE PRODUCT OR SUPPORT OR ANY PART THEREOF.

## 7. EXCLUSION OF INCIDENTAL AND CONSEQUENTIAL DAMAGES

Independent of, severable from, and to be enforced independently of any other enforceable or unenforceable provision of this Support Agreement, **NOTWITHSTANDING ANY OTHER PROVISION HEREIN, VERSATERM WILL NOT BE LIABLE TO THE COUNTY (NOR TO ANY PERSON CLAIMING RIGHTS DERIVED FROM THE COUNTY'S RIGHTS) FOR INCIDENTAL, CONSEQUENTIAL, SPECIAL, PUNITIVE OR EXEMPLARY DAMAGES OF ANY KIND - INCLUDING LOST PROFITS, LOSS OF BUSINESS, LOSS OF DATA, OR OTHER ECONOMIC DAMAGE, AND FURTHER INCLUDING INJURY TO PROPERTY OR PERSONS - AS A RESULT OF BREACH OF ANY WARRANTY OR OTHER TERM OF THIS SUPPORT AGREEMENT, REGARDLESS IF VERSATERM WAS ADVISED, HAD OTHER REASON TO KNOW, OR IN FACT KNEW OF THE POSSIBILITY THEREOF.**

## 8. MAXIMUM AGGREGATE LIABILITY

Independent of, severable from, and to be enforced independently of any other enforceable or unenforceable provision of this Support Agreement, **NOTWITHSTANDING ANY OTHER PROVISION HEREIN, IN NO EVENT SHALL VERSATERM'S AGGREGATE LIABILITY TO COUNTY (INCLUDING LIABILITY TO ANY PERSON OR PERSONS WHOSE CLAIM OR CLAIMS ARE BASED ON OR DERIVED FROM A RIGHT OR RIGHTS CLAIMED BY COUNTY), WITH RESPECT TO ANY AND ALL CLAIMS AT ANY AND ALL TIMES ARISING FROM, OR RELATED TO, THE SUBJECT MATTER OF THIS SUPPORT AGREEMENT, IN CONTRACT, TORT, OR OTHERWISE, EXCEED THE MOST RECENT SUPPORT FEE PAID BY THE COUNTY TO VERSATERM.**

## 9. CONFIDENTIALITY

Versaterm shall hold all data received from the County confidential and shall use all reasonable efforts to prevent disclosure thereof and to protect the data from use for any purpose other than for the benefit of the County.

The obligation of confidentiality shall not apply to the data, information or materials or portions thereof furnished to Versaterm or its representatives which:

- i. are generally available to the public other than as a result of disclosure by Versaterm or its representatives;
- ii. become available to Versaterm on a non-confidential basis from a source other than the County which source is not prohibited from disclosing such information by a legal, contractual or fiduciary duty to the County;
- iii. is independently developed by Versaterm without the use of the County's information;
- iv. is information received by Versaterm which is approved in writing by the County for release or disclosure; or
- v. is legally required to be disclosed by Versaterm in whole or in part provided that Versaterm gives prompt notice of such requirement to the County so that the County may seek a protective order or other appropriate remedy and provided that if such protective order or other remedy is not obtained prior to the time disclosure is legally required, Versaterm or its representatives will disclose, unless otherwise required, only that portion of the confidential data which Versaterm or its representatives are advised by opinion of counsel is legally required to be disclosed.

## 10. NOTICE

Every notice required or contemplated by this Support Agreement to be given by either party shall be in writing and delivered to the party for whom it is intended, at the address specified in this Support Agreement. Either party may change its address for notice by giving notice to the other party of the change.

## 11. GENERAL

- 11.1 This Support Agreement shall be binding upon the successors and assigns of both parties, provided, however, that no assignment, delegation or other transfer (except to a third party acquiring all or substantially all of Versaterm's assets or by merger of Versaterm with a third party) shall be made by either party without the prior written approval of the other party, which approval shall not be unreasonably withheld.
- 11.2 No modification or amendment of this Support Agreement will be valid or binding unless reduced to writing and duly executed by the party or parties to be bound.
- 11.3 Neither party is responsible for failure to fulfill its obligations under this Support Agreement due to causes beyond its control. However, this clause does not extend to payment obligations.
- 11.4 No action, regardless of form, arising out of this Support Agreement may be brought by either party more than one (1) year after the cause of action has arisen.
- 11.5 The Support Agreement shall be governed by, construed and enforced in accordance with the laws of the state of California.

- 11.6 PURSUANT TO ARTICLE 6 OF THE UNITED NATIONS CONVENTION ON CONTRACTS FOR THE INTERNATIONAL SALE OF GOODS ("UN CONVENTION"), THE PARTIES AGREE THAT THE UN CONVENTION AND ANY AND ALL IMPLEMENTING LEGISLATION THEREOF, SHALL NOT APPLY TO THIS SUPPORT AGREEMENT.
- 11.7 The failure of either party at any time to require performance by the other party of any provision of this Support Agreement shall in no way affect the right of such party to require performance of that provision. Any waiver by either party of any breach of any provision of this Support Agreement shall not be construed as a waiver of any continuing or succeeding breach of such provision, a waiver of the provision itself or a waiver of any right under this Support Agreement.
- 11.8 This Support Agreement may be executed in separate counterparts, each of which so executed and delivered shall constitute an original, but all such counterparts shall together constitute one and the same instrument. Any such counterpart may comprise one or more duplicates or duplicate signature pages, any of which may be executed by less than all of the parties provided that each party executes at least one such duplicate or duplicate signature page. The parties stipulate that a photocopy of an executed original will be admissible in evidence for all purposes in any proceeding as between the parties.
- 11.9 This Support Agreement including all annexes attached hereto, all documents incorporated by reference herein or in amendment or confirmation hereof, constitutes the entire agreement between the parties concerning the subject matter hereof. No prior or contemporaneous representations, inducements, promises, proposals, or agreements, oral or otherwise, between the parties, with reference thereto, will be of any force or affect except as may be expressly set forth herein and therein. The following are incorporated into this Support Agreement by reference and deemed to be a part hereof:
- a. Annex A attached hereto - Initial Support Fee
  - b. Application Software License Agreement between the parties concerning the Product
- 11.10 Any provision of this Support Agreement or part thereof found to be illegal or unenforceable shall be deemed severed, and the balance of the Support Agreement shall remain in full force and effect.

Each person signing below represents that he or she has read this Support Agreement; understands its terms; is duly authorized to execute this Support Agreement on behalf of the party indicated below by his or her name; and agrees on behalf of such party that such party will be bound by those terms.

Executed the dates written below, to be effective as of NOVEMBER 6 of 2018.

**VERSATERM INC.**

Signature: \_\_\_\_\_

T ROSALES

Name

SECRETARY - TREASURER

Title

October 30, 2018

Date

**County of San Mateo**

Signature: \_\_\_\_\_

Name

Title

Date

Signature: \_\_\_\_\_

Allan Wilson

Name

CTO

Title

October 30, 2018

Date

Signature: \_\_\_\_\_

Name

Title

Date

**APPLICATION SOFTWARE SUPPORT AGREEMENT**

**Annex A – Initial Support Fee**

The Initial Support Fee shall be \$287,516.

# Exhibit F

## List of County Provided Equipment and Software

## Table of Contents

1	System Servers.....	3
2	Additional Equipment .....	3
3	Software .....	5

## 1 System Servers

The County will purchase, install, configure, and test equipment that is acceptable to and certified by Versaterm to host the Versaterm System. The equipment will include servers and disk storage for the production environment, the development/training environment and the disaster recovery environment. It will also include vCenter and backup servers for the production and disaster recovery environments.

## 2 Additional Equipment

The County will provide the following:

1. Server racks/enclosures
2. UPS-protected power distribution systems
3. HVAC systems
4. Networking cabling
5. LAN/WAN switches & routers
6. Reliable, redundant TCP/IP network complete with a stretched VLAN with same IP range between primary and secondary sites for the Versaterm VMs, as per VMware replication requirements.
7. Storage system
8. 3 DigiPort DS16 servers
9. Enterprise data backup system, one at each site.
10. CAD desktops and mobile workstations
11. Training / configuration workstations

The following provides the recommended (with minimums as appropriate) workstation configurations:

CAD Desktop Workstation	HP / Dell / IBM or equivalent	<ol style="list-style-type: none"><li>1. Intel or AMD 2.5 GHz dual core processor</li><li>2. Memory<ul style="list-style-type: none"><li>○ Windows 7:<ul style="list-style-type: none"><li>▪ 4 GB (minimum)</li><li>▪ 6 GB (recommended)</li></ul></li><li>○ Windows 8/8.1<ul style="list-style-type: none"><li>▪ 6 GB (minimum)</li><li>▪ 8 GB (recommended)</li></ul></li><li>○ Windows 10<ul style="list-style-type: none"><li>▪ 8 GB (minimum)</li><li>▪ 10 GB (recommended)</li></ul></li></ul></li><li>3. 50 GB (available) HDD</li><li>4. NIC<ul style="list-style-type: none"><li>○ 100 Mbit or faster</li></ul></li></ol>
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		<p>5. Display:</p> <ul style="list-style-type: none"> <li>○ 1024x768+ resolution display monitor (quantity: 2 min, 3 recommended)</li> <li>○ 24bit color depth with 96 dpi</li> </ul> <p>6. Video card:</p> <ul style="list-style-type: none"> <li>○ 64 MB RAM minimum</li> <li>○ 256 MB RAM recommended</li> <li>○ Accelerated graphics card driver</li> <li>○ Latest video card driver</li> </ul> <p>7. Microsoft Windows 7 or 8/8.1 or 10</p> <p>8. Required software:</p> <ul style="list-style-type: none"> <li>○ Microsoft Internet Explorer</li> <li>○ Adobe reader</li> <li>○ .Net 4.6 framework</li> <li>○ Media player (optional)</li> </ul>
Mobile Computers	Panasonic, Motorola or equivalent	<p>1. CPU</p> <ul style="list-style-type: none"> <li>○ I3 or 2.2 GHz minimum</li> <li>○ I5 or /I7 or 2.5 GHz recommended</li> </ul> <p>2. 3GB RAM (minimum), 8 GB RAM (recommended)</p> <p>3. Display</p> <ul style="list-style-type: none"> <li>○ 1024x768 recommended</li> <li>○ 24-bit color depth</li> </ul> <p>4. Video card:</p> <ul style="list-style-type: none"> <li>○ 64 MB minimum</li> <li>○ 256 MB recommended</li> <li>○ Accelerated graphics card</li> <li>○ Latest video card driver</li> </ul> <p>5. 13" daylight-readable LCD (minimum) with (preferable) touchscreen</p> <p>6. HDD</p> <ul style="list-style-type: none"> <li>○ 40 GB (available) minimum</li> <li>○ 80 GB (available) recommended</li> </ul> <p>7. Microsoft Windows 7 SP1 or 8/8.1 or 10</p> <p>8. Required software:</p> <ul style="list-style-type: none"> <li>○ Microsoft Internet Explorer 9.0</li> <li>○ .Net 4.5 framework</li> </ul>

vMobile	Android or iOS	<ol style="list-style-type: none"> <li>1. Operation System requirements <ul style="list-style-type: none"> <li>o Android: version 6.0 or greater</li> <li>o iOS: version 11.0 or greater</li> </ul> </li> <li>2. Additional requirements <ul style="list-style-type: none"> <li>o VPN software to allow secure communication between the devices and the VMC server.</li> <li>o Mobile Device Management software for deploying application and updates.</li> </ul> </li> </ol>
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### 3 Software

The County will provide the following:

Quantity	Description
13	<b>VMware vSphere Enterprise 1 CPU</b> - VMWare Operating System
2	<b>VMware vCenter Server</b>
2	<b>VMWare vSphere Replication</b>
17	<b>RedHat 7.5</b> – Linux Operating System for Servers (Versaterm installed)
TBD by county	<b>Business Intelligence (BI) Tools</b>