APPENDIX A
SCOPE OF WORK

1   GENERAL INFORMATION

1.1   Scope of the Project

1.1.1   Project Description

The purpose of the project is to replace the existing Computer Aided Dispatching System, Records Management System (Law Enforcement and Fire) and Mobile Data System in use at multiple PSAPs and agencies throughout the State of Delaware with a Commercial Off The Shelf (COTS) solution.

Currently there are nine PSAPs throughout the State operating on various platforms. The goal is to have a single vendor provide a system that is (or can be) used by all agencies.

In order to reduce the amount of hardware and maintenance, it is anticipated that there may be some consolidation of equipment to allow for some of the smaller agencies to operate remotely off of a main server. The current environment is described in Section 1.1.2, and an outline for the Future Architecture is described in Section 1.1.3. The specific architecture will be proposed by the vendor.

The replacement project shall include the delivery and installation of new hardware, software and system documentation for the agencies identified, along with training and other implementation services including data conversion.

The scope of the project shall include the following, as specified in this RFP:

A. Computer Aided Dispatch (CAD) System

B. Law Enforcement Records Management System (LERMS)

C. Fire Records Management System (FRMS)

D. Mobile Data Computer Systems (MDCS)

E. All associated interfaces and sub-modules

F. Required Computer Hardware

G. Required Implementation Services

H. Required interfaces necessary to maintain support and functionality of existing applications during the implementation of the new systems to minimize disruption to Public Safety and EMS services.

I. Required training

1.1.2   Current Operations

There are nine PSAPs throughout the State of Delaware. The major PSAPs include New Castle County, Kent County and Sussex County where PSAPs are co-located with the State Police. In addition, there are a number of smaller PSAPs which include the Wilmington Police Department, Newark Police Department, the University of Delaware, Dover Police Department, Rehoboth Police Department and Seaford Police Department. The State has a total population of approximately 900,000, with a land area of nearly 2,000

square miles. Call statistics for the New Castle, Kent and Sussex PSAPs are available at http://e911.delaware.gov/.

There are several different vendors providing CAD and Records services to the State. New World Systems provides CAD and RMS for the State Police as well as Kent County, Dover, Newark PD, Wilmington, the University of Delaware and Seaford. TriTech provides CAD and RMS for Sussex County. Northrop Grumman/PRC provides the CAD and RMS at New Castle County. In general, the servers are at end of life, and no longer provide the system reliability required for CAD. In addition, functionality and ease of use are not equal to newer systems.

The Delaware Criminal Justice Information System (DELJIS) provides a Statewide Records Management System that is used by the Delaware State Police, as well as a Statewide incident and accident reporting system. DELJIS is the central state agency responsible for providing efficient and reliable development and operation of the hardware, software, network and database which comprise the Criminal Justice Information System (CJIS). Additional information on DELJIS can be obtained at http://deljis.delaware.gov/default.shtml.

Since multiple vendors and products are in use, the ability to share and exchange information is limited. Multiple interfaces are required, and each interface is vendor specific. A common standards based (NIEM conformant) methodology to share information between systems (i.e. CAD and RMS) as well as between agencies is required.

1.1.3   Future Architecture

Given the size of the New Castle, Kent and Sussex County operations, it is expected that each of these sites will house a stand-alone system that can failover to one of the alternate sites in case of disaster. The smaller agencies operating in Sussex County include the Rehoboth and Seaford Police Departments, which would likely operate off of the main system in Sussex County. Similarly for Kent County, the City of Dover could operate off of the main system in Kent (backing each other up as failover sites). New Castle, the largest of the sites, could operate as a standalone site (along with the co-located State Police). Due to the size of the agencies in New Castle, a fourth site could provide services for Wilmington, Newark and the University of Delaware. Each of the prime sites should be able to operate in a stand-alone mode as well as a connected mode, with redundant fiber connectivity (provided by the State) to each of the alternate sites. Connectivity between the major County/State Police sites and the smaller sites within the County would also be provided by the State's backhaul network.

Alternate architectures for the system will be considered. If the vendor offers an alternative architecture, the proposal must explain in detail why that architecture is of benefit to the State.

1.2   Proposal Organization and Format

Proposals should be organized and presented in the order and by the number assigned in the RFP. Each response should be preceded by the section number and language of the RFP and any applicable addenda. Proposals must be organized with the following headings and subheadings. Each heading and subheading should be separated by tabs or otherwise clearly marked. The RFP sections which should be submitted or responded to are:

- Cover letter

- Response to general requirements (See Appendix A, Section 2 of this RFP)

- Organizational qualifications

- Staff qualifications and Facilities

- References

- Response to technical requirements (See Appendix A, Section 3 of this RFP)

- Cost (See Appendix B of this RFP)

- Implementation Plan

- Required forms (See Section VII of this RFP)

1.3   Required Response Format

A paragraph-by-paragraph response of the technical specifications shall be provided indicating compliance with every described requirement, specification and function included in this RFP. Offerors shall review all of the requirements in the RFP and respond to each paragraph therein using the following responses:

A. Fully Compliant – The system currently provides the feature or function as described. If there are contradictory fully compliant responses (two more requirements that, taken on their own independently, are compliant, but if either is implemented, the other cannot be) the vendor shall clearly identify these.

B. Partially Compliant – The system provides some portion of the feature or function as described. The Vendor is required to specifically identify those portions of the requirement to which their system is non-compliant.

C. Will Comply with Modification – The system does not currently meet the requirement, but the vendor will provide this capability via a system modification. The pricing for each modification must be included in the proposed price and clearly and specifically identified in the pricing forms. The modification must be installed and available prior to training and acceptance testing.

D. Will Comply in a Future Release – The requested feature or function is not

currently provided by the system, but has been specified for inclusion in a future release of the proposed system and will be provided at no additional charge to the State as a function of a valid system support agreement. The Vendor shall identify the date the feature will be released. The vendor will be contractually bound to deliver the feature by the release date.

E. Substitution – The system provides the same capability as the requirement but does so in a different manner. The vendor shall explain in detail how the substitution meets the requirement. It shall be assumed if the substitution response is used that the requirement must and will be fully met.

F. Exception – The system does not meet the requirement.

In paragraphs that primarily describe existing conditions or contain other topics for which the above described responses are not appropriate, Vendors will use the following responses:

A. Understood – This response will be used to acknowledge that a descriptive paragraph has been read and is understood.

B. Accept – This response will be used when terms or conditions are described. The response of accept indicates that the Vendor will accept the item as described.

C. Alternative Offered – This response will be used when terms or conditions are described. The response of "Alternative Offered" indicates that the Vendor will not accept the item as described, but will offer an alternative approach to meeting the condition as described. The vendor will describe in detail the alternative approach that is being offered.

D. Do Not Accept – This response will be used when terms or conditions are described. The response of "Do Not Accept" indicates that the vendor will not accept the term or condition described in the paragraph and does not offer any alternative.

2   GENERAL PROPOSAL REQUIREMENTS

2.1   Organization Capabilities

Describe the firm's experience and capabilities in providing similar services to those required. Be specific and identify projects of similar size and scope if not greater providing dates and results.

2.2   Staff Qualifications

Provide resumes describing the educational and work experiences for each of the key staff who would be assigned to the project. Specifically identify a project manager for this project.

2.3   Proposer References

Proposals must include a list of at least five organizations, including points of contact (name, address, and telephone number), which can be used as references for previous similar project work performed.

The Offeror must be able to reference at least 5 sites of comparable size and structure utilizing the software that is being proposed.

The references should be dispatch centers of a size comparable to the State PSAPs capable of handling the volume of traffic for the State of Delaware or larger.

All of the reference sites must be operational.

Selected organizations may be contacted to determine the quality of work performed and personnel assigned to the project.

3   TECHNICAL REQUIREMENTS

3.1   CAD Hardware and System Software

3.1.1   System Environment

A.   The system shall support the following systems or environments:

    1.   The live operational CAD systems with redundancy or fault tolerance for CAD.

    2.   A CAD training environment,

    3.   A CAD test environment.

    4.   An off-site redundant CAD server environment,

    5.   A data warehouse for CAD information,

    6.   The mobile data system host and all interfaces.

B.   The operational environment will support real-time system operations. The data warehouse environment will be used to support all standard and ad hoc query and reporting needs. The separation of the two environments is to facilitate the necessary response times in the CAD operational environment.

3.1.2   Hardware

A.   The computer system shall be the manufacturer's most recent delivered model. Equipment at the middle or near the end of its life cycle will not be acceptable.

B.   The system shall be directly expandable by adding hardware.

C.   The Vendor shall describe the scalability and expandability, indicating the related costs of the system in terms of processors, main computer memory, disk drives, peripheral devices, and connectivity.

D.   Vendors are required to provide all necessary racks, tables, stands, or other required mounting facilities for the systems, consoles, and communications.

E.   Vendors are required to provide information on projected rack power and heat generation (Volt-Amps and BTUs per hour) for each rack.

3.1.3 System Availability

A. The system shall be configured to provide system availability of 99.99% for the operational CAD environment when measured on a 24-hour per day, seven days a week basis for 365 days including system maintenance and upgrades.

B. The Vendor shall explain in detail how it proposes to achieve this requirement.

3.1.4 System Sizing

Each system shall be sized according to the information provided below.

A. 128 workstations on the operational CAD system,

B. 48 workstations in the training environment, but the training environment must be accessible from any active workstation on the system.

C. 1.2 million telephone calls per year

D. 15% of daily activity during peak hour loading

E. 5% growth rate per year.

F. Ten years of historic information to be converted.

G. 38 administrative workstations.

H. 300 limited access workstations

I. Retention of all CAD incidents and unit data online for a minimum of 36 months in an operational environment

J. Retention of CAD information for a minimum of ten years in a CAD data warehouse environment

3.1.5 System Response Time

A. With the transaction volume at peak load, the system shall support all CAD activities with a sub-second response time of all operational transactions for greater than 95 percent of all operational transactions. This includes address verification and map display of an entered address on the Map Display.

B. While at peak load, no transaction may ever exceed a two second response time.

C. System back up shall not impact system response time.

D. The running of reports or external queries shall not impact response time.

E. Latency of networks and systems outside of the scope of this project will not be included when assessing response time.

F. Response time is defined as the time between the depression of the last keystroke or pointing device activation (e.g., click) and the appearance on the workstation of the last character of the initial response (e.g., first page, pop-up window, etc.) and availability for user interaction.

G. Vendors shall describe how their solution meets the above response time and how they intend to measure response time if different than described herein.

H. The State reserves the right to review and approve the methods used to measure response time.

3.1.6 Virtual Machines

The State will consider proposals that are fully functional with virtual machines. Consideration will be given to vendors that have installed comparably configured systems operating in a virtual environment. The vendor should describe the advantages and disadvantages of operating the system in a virtual environment along with their recommended environment.

3.1.7 Workstations

3.1.7.1 CAD Operational Workstations

A. The client workstations for the Communications Center and the Training Center shall include five (5) 21" monitors.

B. The vendor shall propose the following CAD operational workstations:

- Dover – 7 dispatch / call taker positions.

- Kent Co. – 18 dispatch / call taker positions

- Seaford – 4 dispatch / call taker positions. Sussex – 18 dispatch / call taker positions.

- Rehoboth – 4 dispatch / call taker positions.

- Univ. of Delaware – 7 dispatch / call taker positions.

- Newark – 7 dispatch / call taker positions.

- Wilmington – 15 dispatch / call taker positions.

- New Castle – 48 dispatch / call taker position.

3.1.7.2 CAD Training Workstations

A. The system shall support the following training workstations:

- Dover – 2 training workstations.

- Kent Co. – 24 training workstations.

- Seaford – 2 training workstations.

- Rehoboth – 2 training workstations.

- Univ. of Delaware – 8 training workstations.

- Newark – 2 training workstations.

- New Castle – 3 training workstations.

3.1.7.3 CAD ADMINISTRATIVE WORKSTATIONS

A. The system shall support the following administration workstations:

- Dover – 4 administration workstations.

- Kent Co. – 6 administration workstations.

- Seaford – 1 administration workstations.

- Rehoboth – 3 administration workstations.

- Univ. of Delaware – 3 administration workstations.

- Newark – 3 administration workstations.

- New Castle – 6 administration workstations.

- DSHS GIS – 1 administration workstation.

3.1.8 Printer Requirements

The proposal shall include minimum printer specifications for the system.

3.1.9 Storage Systems

A. The vendor shall propose Storage Area Networks sized to support each system.

B. The SANs shall also be configured to support the required levels of system availability described in the RFP.

C. The Vendor shall provide any external array chassis required for the SANs.

D. Any software required for the SANs shall be specified and provided by the Vendor.

3.1.10 System Backup and Restoration Capability

A. The Vendor shall provide the necessary equipment (hardware and software) to allow for required backups and/or restoration of system applications and user information.

B. The Vendor will fully explain how the backups and restoration are accomplished and what effects these operations have on the production environment.

C. Solutions that require the system to be removed from service or placed into a degraded mode of operation for routine backups will not be acceptable.

D. Vendors will indicate the amount of automation available for the routine backups, the amount of time that routine or daily backups will require, and the amount of user intervention that will be required to accomplish this daily systems maintenance activity.

E. The Vendor shall explain any additional routine software maintenance that is required to keep the system optimized.

3.1.11 Backup Facility

A. The Vendor shall configure servers locally to act as a backup CAD server. Secondarily a server at a remote location will be configured as a near real time backup. The remote location will be on the State's WAN.

B. Proposals shall include recommended backup procedures and LAN/WAN connectivity requirements.

C. The vendor shall explain in detail the failover scenario to the remote backup facility.

3.1.12 Software and Upgrades

A. All software applications supplied shall be of the latest production version in current release unless otherwise specifically requested and authorized by the State.

B. The provision of "BETA" or other "work-in-progress" software applications is not acceptable unless specifically requested and authorized by the State.

C. The Vendor shall provide the necessary methodology to allow operating system and/or application software upgrades to be easily loaded onto the system.

D. Vendors shall describe how they propose to provide software upgrades.

3.1.13 Disaster Recovery

The vendor is requested to provide a detailed explanation of their best practice disaster recovery recommendations for this system.

3.2   CAD APPLICATION SOFTWARE FUNCTIONS

A. With the exception of some supervisory functions, it is expected that all functions can be made available to all workstations, provided the operator has been assigned the proper security authorization. However, for convenience, the functions shown in the following subsections are listed under the primary user of the function.

B. It is expected that the functions describe shall be applicable to each and all of the systems procured regardless of the nature of the implementation (multi-PSAP, single PSAP, multi-agency, etc.).

3.2.1   Commercial Off-The-Shelf System

It is the intention of the State to purchase primarily "off-the-shelf' or basic CAD software functionality, requiring the minimum amount of modifications in order to support necessary functions and interfaces.

3.2.2   Tailored System

The selected Vendor must tailor the CAD systems to fit the requirements of the various agencies and centers across the State. This will be accomplished through either minor customization of the CAD system software or, primarily, through adjustments in:
   A. File layout,

   B. Configuration tables,

   C. Screen presentation formats, and

   D. Field sizes.

The costs associated with any required customizations shall be included in the proposal. The State will not reimburse the selected Vendor for any system tailoring/customization efforts beyond the amounts specified in the Vendor's response to this RFP and resulting contract.

3.2.3   General Functional Requirements

The software shall be capable of supporting incident intake, resource recommendations, dispatching, unit status, and management reporting for Law Enforcement, Fire, and EMS, and provide the following functions and features:

3.2.3.1 Functional Workstation Types

The vendor's system shall accommodate the following types of CAD functional workstations. The vendor shall explain any exceptions or additional types that are proposed.

3.2.3.1.1 Full CAD Workstations

These workstations will be utilized for dispatching, call taking and dispatch supervision. These workstations may also be deployed in the test and training environments, backup sites, partner PSAPs and/or remote dispatch locations

The vendor shall list any application software that is known to conflict or negatively impact the CAD application software if installed on the full CAD Workstations.

3.2.3.1.2 CAD Administrative Workstations

These workstations will be used to perform administrative functions in CAD such as performing file maintenance. They will also be using the ad hoc query tool in CAD to create reports. They will not be heavy users of the operational component of CAD but they will have access to the CAD systems.

3.2.3.1.3 Limited Access CAD Workstations

A. These terminals will be located at remote locations such as fire departments or police departments. They will be interactive with the CAD to perform specific functions such as system rostering, or querying the system for call times.

B. These workstations shall include a status display to show the status of calls and units.

C. The display of units and calls as described immediately above shall be limited by the security of the operator.

D. These workstations shall have access to the CAD map to view the location of incidents and units.

E. The display of units and calls on the map as described immediately above shall be limited by the security of the operator.

F. It is anticipated that the user interface for these workstations will be browser based

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and that they will be able to connect to the CAD systems via internet over a Virtual Private Network

3.2.3.1.4 System Administration Workstations

These workstations will have full access and administrative rights to the CAD systems for all administration.

3.2.3.2 Basic Features

3.2.3.2.1 Multiple Configurations

   A. The software shall support dedicated call taker positions.

   B. The software shall support dedicated dispatcher positions.

   C. The software shall support combined call taker and dispatcher positions

   D. The software shall support the capability to easily convert any position from one format (call taker, dispatcher, combined) to another.

   E. The system shall support dedicated CAD supervisory positions with all of the functionality of call taker and dispatcher positions and added supervisor only functionality.

3.2.3.2.2 Multiple Jurisdictions

The software must support multiple jurisdictions such that the CAD systems provide each supported agency's management the greatest degree of control possible over the operational aspects of the CAD as it applies to their agency. This includes:

   A. Support for identical unit IDs for different jurisdictions

   B. Closest unit response in jurisdictions with automatic aid agreements

   C. The ability to use a single incident numbering system for all incidents for all agencies.

   D. The ability to use sequential incident numbers for each jurisdiction

   E. The ability to utilize separate incident numbers if units from different jurisdictions respond on the same incident if required.

   F. Support recommendations across multiple jurisdictions where appropriate.

G. Permit agency specific call handling rules and support these via CAD processes (i.e. one agency will hold certain types of calls for the district unit while another agency will dispatch that type of call to any available unit)

H. Support for different response complements for the same call type in different jurisdictions.

I. Support for different SOPs by agency.

J. Support for different shift times and durations for different agencies

K. The proposer shall describe any additional multi-jurisdictional capabilities provided by their system not specifically identified in this section

3.2.3.2.3 Multiple Agency Types

The CAD systems shall be capable of supporting multiple agency types including:

A. Law Enforcement Departments

B. Sheriff's Departments

C. Fire Departments
 1. Career (in House)

 2. Combination (staffed in house units and response from home)

 3. Fully volunteer /Paid on Call

D. Emergency Medical Services. Operating in any of the configurations listed for Fire Departments
 1. Career (in House)

 2. Combination (staffed in house units and response from home)

 3. Fully volunteer /Paid on Call

3.2.3.2.4 Multiple Recommendation Capabilities

As detailed later in this document the CAD systems shall have the capability to recommend units to respond to a call for service using multiple approaches including:

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B. Shortest travel time based upon AVL or in the case of fire units station location.

C. Shortest travel time for fire units shall have the capability to assess time penalties to volunteer or other unstaffed resources and use these time penalties in calculating the unit to recommend

D. Shortest travel distance based upon AVL or in the case of fire units, station location

E. Geographic based response

F. Multiple equipment / Unit capabilities

G. Multiple operator or assigned personnel capabilities

H. Pre-defined mutual aide agreements

3.2.3.2.5 Multiple PSAPs

The CAD systems must be capable of being able to support single PSAPs and multiple PSAP configurations.

3.2.3.2.6 Windows

A. All CAD workstations shall have multiple windows available.

B. Standard Windows type functionality is desired for all CAD applications (e.g., dialog boxes, point-and-click, and drag-and-drop).

C. Switching from one window to another shall not affect any information entered in any displayed window.

D. Nothing shall be able to cover critical information windows at particular workstations such as pending incidents at dispatch workstation.

E. The ability to "dock" (position windows and then lock the position) windows and the docked position of windows shall be agency configurable.

3.2.3.2.7 Function keys

A. In addition to the windows standard functionality (dialog boxes, etc.), the CAD applications shall make use of programmable function keys for all frequent operations.

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B. These function keys shall be programmable by the system administrator.

C. The Vendor shall explain the operation of all function keys provided and the degree
to which they are system administrator programmable.

3.2.3.2.8 Command Line

A. The CAD application must provide a command line mode with multiple command
lines.

B. The commands utilized in the command line shall be able to be aliased. (i.e. the
command in the proposer's system that designates arrival on scene is AR, but can
be aliased to also be OS).

C. The system administrator at each agency shall have the ability to create or define
alias commands.

D. Different PSAPs utilizing the same CAD shall have the capability to define different
sets of aliases.

E. The system should provide the capability to define a set of commands that are
multiple commands executed by the entry of a single command.

F. All functions that are capable of being performed via other functionality shall be
accommodated via the command line. Standard windows menu processing (alt key
and then a letter) is not sufficient.

G. Proposals shall list the set of system functions accessible via the command line
mode and explain the operation of the command line mode in the CAD systems.

3.2.3.2.9 Windows Functionality

A. Along with command line and function key capabilities the CAD Systems shall
support interaction with the system via all other "normal" windows functionality such
as drag-and-drop, pop-up menus, drop-down menus, cut and paste, undo, etc.,

B. Menus or drop down dialog boxes may be provided to select the various functions
that are available in the CAD applications program.

C. Comprehensive security shall control what functions are available to each user.

D. Only those functions that are allowed by security shall be displayed, except when

using Windows drop-down dialog boxes, where the features not available shall be grayed out.

E. The Vendor shall explain how the menus work in relation to provided security features.

3.2.3.2.10 Special Accommodation

A. The CAD graphical user interface shall support varying screen resolutions and font/icon sizes.

B. The system shall also support special keyboards for visually impaired users.

C. The vendor shall describe how their system accommodates communicators with visual impairment and color blindness.

3.2.3.2.11 Table Driven

A. The software design shall make extensive use of table driven parameters, allowing easy modification by the system administrator without the requirement for programmer support.

B. These modifications shall be able to be made while the system is active without any impact upon CAD operations or without having to restart system for changes to take effect.

3.2.3.2.12 Printing

Any information displayed on a CAD workstation shall be able to be printed on a designated shared printer, a locally attached printer, or "routed" (sent) to other workstations or printers at any time.

3.2.3.2.13 System Backup

A. Backup of the CAD files and user data/information shall be able to be accomplished without taking CAD out of service and with minimal impact upon CAD operations.

B. Vendors shall explain the backup methodology used and the degree of automation as well as the anticipated duration of a routine backup. Acceptance testing will include maximum loading during the backup procedure.

3.2.3.2.14 Training Component

A. In addition to the test environment, the CAD Systems must support a training component, which will allow new personnel to be trained on the system without

impacting the production of the "live" environment or stored information.

B. The training environment shall exactly replicate the functions of the live CAD operation.

C. Vendors shall explain how this functionality is provided and if the system incorporates the ability to create "training scripts" for CAD simulations.

D. Self-guided tutorials are highly desired by the State.

3.2.3.2.15 Test Environment

A. In addition to the training environment, the system shall support a test environment where new files or configurations can be loaded and tested prior to placing in a live environment.

B. The test environment shall replicate the live CAD operational environment.

C. Once files have been tested in the test environment these files shall be easily loaded from the test environment to the live environment without having to re-key them.

3.2.3.2.16 Remote Access

A. A remote access facility shall allow personnel with the proper security level to access the CAD Systems and obtain current and historical information relating to incidents and unit status,

B. A remote access facility shall allow personnel with the proper security level to access the CAD Systems and perform system maintenance, diagnosis, or repair as required.

C. An audit trail of remote access activity including the login, logout, account, transactions and IP address shall be captured to the system log file.

3.2.3.2.17 Utility Programs

A. A library of utility programs shall be supplied to maintain the CAD systems resource, configuration, and information files.

B. These programs shall be accessed through menus or similar operation and shall be security controlled.

C. Integrated "help" functionality for these configuration routines is highly desired.

D. These utility programs will support manual, scheduled and batchable changes to the system resources, configuration and information files.

3.2.3.2.18 Delayed Entry

A. The system shall allow with proper security, the delayed entry of incidents, with a capability of entering actual time, not current computer time, into all time fields.

B. Any entry of information subsequent to the entry of the original incident shall include the date, time, and ID of the person entering the information, and that the information was manually entered.

C. Vendors shall identify how this is accomplished and any restrictions such as timeline sequence that has to be followed.

3.2.3.2.19 Address Structure

A. The system at a minimum shall support all address formats as described in USPS Publication 28.

B. The vendor shall indicate that they have reviewed USPS Publication 28.

C. The vendor shall specifically identify any address formats included in USPS Publication 28 that their system CANNOT support.

D. In addition to the formats identified in USPS Publication 28 the CAD Systems shall at a minimum accommodate a three tiered address structure that includes:

1. The street address (i.e. 200 S. Main St.),

2. A building name or number (i.e. 200 S Main St, Building 3 or 200 S. Main St., Wilson Hall) within the address,

3. A unit number within the building (i.e. 200 S. Main St, Building 3, Suite 205).

E. The address structure will accommodate multiple buildings at a single street address such as a business park or apartment complex with a single street address
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F. It is desired that the above referenced address structure also include a fourth tier that would include the floor number of the suite. (i.e. 200 S Main St., Building 3, 2nd Floor, room 205).

G. The CAD Systems shall have the ability to validate an address to the "lowest" level of the address.

H. The CAD Systems shall have the ability to recognize street types and directions as street name. (i.e. "Old HY 31", "St Peters Rd" "West Rd".

I. The system shall permit the inclusion of the community (municipality) name or code in the address during validation.

3.2.3.2.20 Automatic Database Queries

A. CAD shall have the ability to automatically run a database query upon entry of agency-specified data (i.e., vehicle tag number, person name, etc.).

B. The returns from all queries that are automatically generated shall be included in the incident record.

C. The system shall be capable of automatically querying DELJIS and NCIC.

D. The system shall have the capability to automatically cascade additional queries based upon a prior return. (i.e. if a plate is entered and vehicle registration is returned the system will automatically query the owner's information for warrants)

E. The system shall provide capability to identify certain responses such as hits and visually and audibly alert the user upon query hit.

F. Vendors shall explain to what extent their system differentiates between hits and near-hits. (A near hit is a hit response that is not the individual that was queried such as same name and DOB, but is obviously not the person queried.)

G. The agency's local system administrator shall be able to define the alerting mechanism.

H. The CAD systems shall be capable of automatically querying the Records Management System (RMS) databases for information based upon the calls address or an entered name.

3.2.3.3 System History Log

The CAD systems shall maintain a searchable history log file that records all CAD transactions including both operational and system / file maintenance transactions.

3.2.4   Log On/Log Off Control

3.2.4.1 Log On Required

A. Each workstation operator shall log on before being recognized by the system.

B. The logon identification of the operator shall be validated by the system(s) before that operator can perform system functions.

C. An operator shall have the capability to be logged into multiple CAD systems from a single workstation.

D. The logon identification (including the workstation ID) will become part of the CAD incident record for all incidents created or dispatched by that operator.

3.2.4.2 Single Sign On

The logon process shall incorporate a "single sign on" to enable logons to multiple authorized systems.

3.2.4.3 Log Off

A. CAD shall have the ability to quickly log off an operator and log on a new operator, without the need to exit from CAD or re-start the program. This will facilitate shift change and relief for breaks.

B. CAD shall prohibit a dispatcher from logging off if the dispatcher is the only dispatcher controlling or viewing specific units or dispatch areas. (i.e. if the dispatcher is the only dispatcher viewing or controlling a set of units or area of the coverage area the system will prohibit log off)

C. The time and date, along with the ID of the operator logging off and the ID of the operator logging on, shall be recorded in a system history log file.

D. The system shall provide tools for searching the system history files to easily locate information such as users, date and time ranges, terminal, etc.

3.2.4.4 CAD Screen Layouts

A. The CAD systems shall provide the capability to include different screen layouts between Police, Fire, EMS, and admin users based on agency policies.

B. Screen layouts shall be configured by user logon and the function they are to perform. (e.g. an individual's screen configuration will be different if they are logging on to perform fire dispatch functions than if they are logging in to perform law

enforcement dispatch than if they are logging on to perform call taking functions)

C. At logon, CAD will present the user with the previously configured screen layout for the function they are to be performing.

3.2.5   Incident Receipt/Call Taking Functions

3.2.5.1 Incident Creation

Upon receipt of a call for service, the application software shall allow for the capture, validation, display and maintenance of all of the following incident information:

3.2.5.1.1 Incident Type

A. The incident type must be table defined.

B. The system shall be site configurable such that the system can utilize an incident type code with an accompanying translation table that translates the type code into a plain speech entry.

C. The software must provide an online help function for valid incident types codes and translations.

D. If the operator enters an incorrect or a partial incident type, the system shall display a list of valid incident types.

E. The user shall be able to select the correct incident type from that list.

F. The selected incident type must then be filled in by the system in the call for service screen.

G. Once the incident type has been validated, the system shall also automatically display any related procedures or instructions related to this incident type.

H. Changes to Incident type table values will maintain a reference to previous values for historical reporting. (i.e. 57D8 Explosion Large Fuel/Fire Load Vehicle changes to 57D9 and 57D9 Explosion Mobile Home, House Trailer, Portable Office changes to 57D10) the Incident history should show a 57D8 as a 57D9.

I. The software must support up to 25 digit incident types using alpha and/or/combined numeric characters.

3.2.5.1.2 Incident Location

The system must capture, display and process the incident location as follows:

A. Incident location including street address, building number, apartment/suite/lot number, directional, street type and community (municipality).

B. There must be sufficient room for free format locations (e.g., behind the red barn).

C. All incident locations entered into the system must be validated against the system's geofile

D. Following verification the system will display:

   1. Cross streets,

   2. Response areas,

   3. Map page and coordinates,

   4. Legal street names,

   5. Municipality

   6. Responsible agencies (Police, Fire and EMS)

   7. Zip code,

   8. X, Y coordinates (lat and long)

E. If the caller's location and the incident location are different they shall be displayed as separate icons on the associated Integrated Map Display.

F. In the event a location cannot be properly validated against the geofile, the system must allow for the manual processing of the incident and notify the dispatcher or supervisor of the special address.

G. The system shall produce a report of all incident entries that did not validate.

H. All E9-1-1 ANI/ALI information including comment fields must be captured.

I. All original E9-1-1 ANI/ALI information shall be saved and made part of the incident record even if the user changes the original E9-1-1 ANI/ALI information (e.g., the incident is not at the caller's location), or a rebid occurs on a wireless 9-1-1 call.

The entry of locations shall be non-restrictive and allow entry of:

J. Street addresses as described in Section 3.2.3.2.19.

K. Common place names.

L. Alias names, including spelled or abbreviated directionals.

M. Intersections.

N. Landmarks.

O. Mile posts/markers and direction (i.e., MP#163 northbound), including decimals.

P. On and off ramp exit / entrance numbers, direction of travel and distance to/from (e.g., Northbound Rt. 1, two miles from exit #162).

Q. Under / Over pass names,

R. Direction of travel and proximity (e.g., Northbound I-95, one mile south of Rt. 1 overpass).

S. Coordinate address (Latitude and Longitude)

T. Military building numbers

3.2.5.1.3 Incident location / Call Creation via the IMD

The system shall provide the capability to initiate the creation of a call via a map function. Ideally the process would allow the operator to initiate the call by right clicking on the location of the call on the map, and from the right click drop down selecting "create call here". Following the right click the system would open the call creation window with the address filled in and verified with the cursor placed in the call type field. The vendor is requested to describe the capability of their system to meet this scenario.

3.2.5.1.4 Other Information

The system shall also capture, display and maintain the following information. Ideally the information will be maintained in separate fields defined for that purpose. Storing the information in a comment or notes field is not compliant.

A. Incident priority (table-defined based on entered incident type).

B. The software shall allow the call taker to override the table-defined priority value and

enter a different priority level.

C. All priority overrides shall be recorded in the incident history and available for reporting.

D. Indication if the event is "in-progress", has "just occurred", or "previously occurred." The default shall be set by the incident type, but modifiable by the dispatcher or call taker.

E. Caller's name.

F. Caller's address.

G. Caller's telephone number (ten digits plus extension or special instructions).

H. Victim's name.

I. Victim's address.

J. Victim's telephone number (ten digits).

K. Call narrative/comments.

L. Suspect(s) description(s).

M. Vehicle(s) description(s).

N. Type of area (residential, commercial, etc.).

O. Identify source of call origination [i.e., ("T") telephone, (9) 9-1-1 system, ("R") Radio, etc.).

P. A flag to identify that the caller does not want to be contacted.

Q. A flag to identify a child caller.

R. A flag to identify a caller who has requested anonymity that will conceal the caller's identity unless retrieved by an authorized person.

3.2.5.1.5 Processing

A. The software shall allow the call taker to capture the caller's information in any order determined by the local administrator.

B. The call taker shall be able to move around the input screen by tabbing, by point and click device, arrow keys, or by a next line key

C. The vendor shall identify and describe any ability for the operator to rapidly navigate to a particular field. For example, (ctrl) M might be locally –defined to take the operator to a comments field.

D. The call entry screen shall be consistent for all user types (call taker, dispatcher, supervisor, etc.). This includes the operation of function key and menus.

E. Once a call has a validated incident type and address, the call must be available to dispatch.

F. After a call has been made available for dispatch, it must continue to be available for additional data entry and updates.

3.2.5.2 User Definable Layout/Fields

A. The layout of the call entry screen shall be user definable.

B. The system manager shall be able to locate, add, delete, and/or modify any entry fields on the screen.

C. If this is not possible, the Vendor shall discuss any limitation to the customization of the entry screen.

D. If the call entry screen is not customizable, Vendors shall include the screen in the documentation for the system.

3.2.5.3 Multiple Incident Processing

A. The CAD systems shall provide the capability for a workstation to process multiple incidents.

B. If a call is in progress when another call is received, the call taker shall be able to retrieve a new call entry screen for the second call without losing the information already entered for the first call.

C. Other authorized persons at other workstations shall be able to retrieve and complete a saved call.

D. The system shall notify that call taker/dispatcher that the original call(s) still require processing. Vendors shall describe the method in which their system supports this capability.

E. Call takers will not be allowed to log out before all call entry screens are cleared.

3.2.5.4 E9-1-1 Interface

A. The CAD systems shall be capable of interfacing to the various E 9-1-1 systems deployed at the various centers across the state.

B. The E9-1-1 controller will provide ANI/ALI information to the CAD system.

3.2.5.4.1 Automatic Fill

The corresponding ANI/ALI information shall, upon issuing a command, or upon call answer as determined by local administration, fill in the CAD call screen with the following information, at a minimum:

A. Location of calling telephone (address for landline, X, Y and tower site address for wireless.)

B. Apartment, suite number, and other location information

C. The telephone numbers; both main and pilot.

D. The subscriber's name.

E. Comments from the ALI screen.

F. Emergency Service Number (ESN)

G. English Language Translation (ELT) of ESN

3.2.5.4.2 Processing

A. If the location of the telephone is the desired emergency location, a single keystroke shall accept the location and validate it within the CAD geofile.

B. If the ALI location is not the incident location, the workstation user shall be able to

input the correct location.

C. ANI/ALI data shall be displayed on the CAD workstation before the call taker speaks to the caller.

D. Caller location shall be displayed as an icon on the Integrated Map Display.

3.2.5.4.3 ReBids

The vendor shall explain how the system handles rebids of 9-1-1 data.

3.2.5.4.4 Placing 9-1-1 or Other Calls on Hold

A. The system shall provide the capability for the call taker to put a 9-1-1 or other call on hold to process another call as described in Section 3.2.5.

B. The fact that the call is on hold shall be displayed to all call taker workstations including a telephone line identifier.

C. Any call taker will be able to pick up the call and have the partially completed call entry screen displayed on their workstation.

D. Vendors shall explain how their systems accomplish this

.

3.2.5.4.5 Retention of 9-1-1 Information

A. The E9-1-1 information shall be retained in the call for service history.

B. If there are multiple 9-1-1 calls for a single incident, the CAD system shall provide the capability to capture and retain information from all calls associated with an incident.

3.2.5.5 Ten-Digit Calls for Service

The System shall provide a mechanism for entering calls for service received on the Communication Centers' administrative telephone systems. The proposal shall include a procedure for entering a ten-digit call for service.

3.2.5.6 Location Validation/Geofile Look-ups

Upon entry of the incident location, the CAD application software shall provide a look-up to the geographic database (geofile) to validate the location of the incident. This process shall facilitate validation of the incident's location.

A. The system must assist the user in validating partial, incomplete, or inaccurate

locations.

B. The CAD shall utilize a "soundex", "metaphone", and/or other appropriate look-up aids for street names, intersections, commonplace names, landmarks, or street or highway route numbers. (Windows type ahead is not soundex nor a metaphone).

C. The CAD system may also, in addition to soundex, utilize other appropriate look-up aids such as type ahead.

   1. If type ahead is utilized, the system shall only display as possible matches those streets on which the numeric address that has been entered is a valid address. (e.g., if the initial entry is 175 S. MA -- the type ahead drop down would not show S. Main St, unless 175 was a valid address on S. Main St.)

D. A list of possibilities shall be displayed when a partial spelling or misspelling of a street name is entered.

E. The system must allow the user to cancel out of the soundex, metaphone function without making a selection.

F. The location/geofile must support multiple "aliases" for"

   1. Street names,

   2. Intersections,

   3. Commonplace names,

   4. Landmarks, and

   5. Street or highway route numbers.

G. If CAD is unable to provide an exact location match, a list of all potential matches based on available look-up aids shall be displayed to the user.

H. The call taker shall be able to select the correct location from the displayed list, scroll forward or backward for other potential locations,

I. The call taker must also have the ability to restart the location look-up with a new location.

J. Proposals shall describe the tools available in the system for assisting users to validate addresses and other locations. Soundex, metaphone, use of the Integrated

Map Display and other techniques are especially desirable.

K. Once a location is validated the system shall assign an X, Y coordinate value to the location.

L. Once the address is validated, the system must identify using the X, Y coordinate:

1. The appropriate Police Fire and EMS district, sector, reporting area,

2. Agency of jurisdiction, and

3. The name of the community, development and subdivision.

4. Two user defined fields.

5. Any other geographic boundaries containing the address.

M. Cross-streets on both sides of an address shall be displayed. Vendors shall describe how dead-ends or other locations without two cross streets are displayed.

N. The incident location shall be displayed in the center of the associated Integrated Map Display zoomed to a readable level automatically after the address is validated. Vendors shall describe how the map display will function with both densely and less-densely addressed areas.

O. All information returned for validated locations shall become a part of the incident record and displayed/available to subsequent system users reviewing the incident record.

P. If the validated address is for a multi-unit location the system must prompt the call taker to request additional information regarding the building, apartment, suite or lot number.

Q. If the validated address is also a common place the call taker shall be so advised.

R. All geographically sensitive hazards, dispatch policies, and other system functions shall stem from validated locations.

S. The operator shall be able to complete the location look-up immediately upon entry, or at any time during the incident entry process.

T. The system shall allow for a street name to be entered without a block range and/or

city and return all possible ranges with city and location to be used to query the caller as to which is the correct choice.

U. The CAD application shall provide a feature to perform location validations / geofile lookups exclusive of the incident creation process.

3.2.5.7 Common Place Names

A. The CAD application shall allow the user to enter a location as a common place, or business name (i.e., XZY Complex).

B. The system shall permit the entry and inclusion of a community (municipality) code with the common place name to expedite the validation.

C. The CAD shall automatically connect the common place name with an exact address.

D. If more than one location has the same common place name (i.e., McDonalds), the CAD shall display a list of all locations with the same name with additional identifying information.

E. The user shall be able to select the correct location from that list by using the keyboard or a point-and-click device.

F. If the operator enters a street address that is associated with a common place the system shall notify the operator that the entered address is a common place.

G. If the operator enters a common place that is a multi-unit address, the operator shall be instructed by the system to request additional information regarding the building, suite or apartment number. (i.e. entry of XYZ Office Park, the system shall advise the operator to ask for additional information about building, floor or suite and then allow field level entry of this information.)

H. If the common place is a multi-unit structure with common places names associated with the subunits, the system shall display a list of additional common-places that the operator may choose from. (i.e. XYZ Shopping Mall, the system shall display other common place names within the mall such as the names of the stores)

I. The ability to alias common place names shall exist in the system.

3.2.5.8 Alias Street Names

A. The CAD shall provide an alias-street name capability to accommodate multiple

street names or abbreviations for the same street (i.e., Main St.).

B. If the user enters an alias street name, the CAD shall automatically translate the alias name to the correct street name.

C. If several variations of the same name exist, the CAD shall display a list of all possible street name variations.

D. The user shall be able to select the correct location from that list by using the keyboard or a point-and-click device.

E. The system shall permit the use of alias names when entering intersections.

3.2.5.9 Intersections

A. The CAD shall provide the capability to enter and use intersections as a location.

B. If an intersection contains a jurisdictional or other boundary, the system shall alert the call taker of this fact.

C. If an intersection contains a jurisdictional or other boundary the call taker shall be capable of including clarifying information that ensures the call is routed to the appropriate dispatcher.

D. This feature must allow for multiple intersections of the same streets.

E. If multiple intersections with the same streets occur, the system shall display them in a pick list with additional clarifying information such as block number or municipality.

F. The call taker shall be able to enter partial street names on both intersecting streets.

G. The operator shall be able to enter alias street names into the intersections and the system shall convert the alias names to the correct street names.

H. The system shall permit a street to intersect itself.

I. The system shall permit the intersecting streets to be entered in either order.

For the sake of determining prior calls or potential duplicate calls the system shall treat the intersection as a single location regardless of the order in which the streets are entered.

J. The CAD shall permit the operator to enter the name of one street and the system will display a pick list of all other streets that intersect.

> It is desired that the operator be provided the ability to sort the list of intersecting streets in geographical order (N to S and S to N or E to W and W to E).

K. It is desired that the operator be provided the ability to sort the list of intersecting streets in alphabetical order.

L. If in the list, the street is intersected by the same street multiple times, each instance of the intersection shall be displayed in the geographically sorted pick list.

M. The system shall accommodate intersections where more than two streets meet.

3.2.5.10 Mile Markers & Other Limited Access Highway Locations

A. The CAD system must provide an optimized method for locating incidents along Limited Access Highways.

B. These locations shall include:

1. Mile markers including decimals

2. Exits

3. Distance and direction (2 miles north of ….)

4. Common place names

C. Vendors shall describe the methods employed by their systems for entering these types of locations.

3.2.5.11 Wireless 9-1-1

A. For Phase 1 wireless calls, the system shall identify the tower ID and coordinate data.

B. For Phase 1 wireless calls the system shall identify the directional tower face and orientation in degrees.

C. For Phase 1 wireless calls, the system shall identify the street address and community of the tower site.

D. For Phase 1 wireless calls, the system shall display the tower sector cone on the map.

E. For Phase 2 wireless calls, the system shall display and capture the coordinate data provided

F. For Phase 2 wireless calls the system shall convert the coordinate data to a valid street address and record this information.

G. The vendor shall explain in detail the method used to convert the Phase 2 wireless coordinate data to a valid street address.

3.2.5.12 Bodies of Water

A. The system shall have the capability to search for locations on rivers, lakes, bays and the ocean.

B. The system shall be able to identify locations based on bearing and distance from a known location, (XYZ bay, 800 yards South of Pier 100)

C. The system shall have the capability to convert latitude and longitude to other coordinate systems "on the fly."

D. GPS or other coordinate functionality allowed elsewhere in the system shall be available as much as possible on bodies of water.

3.2.5.13 Railroads and Trails

A. The system shall have the capability to search for locations on railroads and trails. These locations shall include mile or kilometer markers, crossings, and common place names.

B. The system shall be able to identify and validate the intersection of railroads or trails and streets as a valid location for dispatch. (creating a common place to identify the location is not acceptable)

3.2.5.14 Dual Dispatch Responsibility

There are a number of communications centers within the State that share dispatch responsibility based upon the agency type that is being dispatched. (i.e. in City XYZ the police maintain their own dispatch center but Fire and EMS are handled from another center) To assist the call takers in managing this process the system shall:

A. Provide the capability to identify to the call taker that based upon the type of call and the location that the call should be transferred. (I.e. a police call in City XYZ) should

be transferred)

B. Provide the capability to identify to the call taker that based upon the type of call and the location that the call should be both entered and transferred. (i.e. a call type that would require both a police and fire response where one center is responsible for dispatching fire and another agency is responsible for dispatching the police response)

C. Provide the capability to identify to the call taker those calls that belong entirely within the answering dispatch center.

D. These jurisdictional areas will be defined in the GIS supporting the CAD systems. The vendor shall explain how their system will accommodate these requirements.

E. The vendor shall also review Section 3.4.1. interfaces for CAD to CAD sharing requirements and the possibility to transfer some data directly to other CAD systems.

3.2.5.15 Location / Premise Information

3.2.5.15.1 Location / Premise Information Processing

The term "location / premise information" is used to identify any information that might be associated with a location or premise. It includes all items but is not limited to Section 3.2.5.15.2

A. The CAD system shall provide the capability to associate or attach location / premise information to each level of the address structure described in Section 3.2.3.2.19.

B. The CAD system shall also provide the capability to associate premise / location information to:

   1. Street Segments,

   2. Neighborhoods and Subdivisions,

   3. Jurisdictions

   4. Any other geographic feature or polygon (i.e. waterway, site defined boundary, governmental boundary, etc.)

C. During incident processing, CAD shall alert operators of any existing premise / location information and display the information with minimal user effort (i.e., mouse

click on site file alert icon).

D. At any time during the life of an active incident, the users shall be able to quickly display the advisory information for that particular incident.

E. The CAD system shall provide the capability to easily distinguish the type of premise information available without having to display the information.

F. The CAD system shall have the ability to purge/delete any premise information that has not been updated for a site configured period of time.

G. Before a purge / delete occurs, the system shall notify the system administrator 30 days in advance to check if the information should be updated or deleted. Vendors shall also discuss the ability of alerting the agency owner of the information (since it is a multi-agency system) instead of the system administrator before the information is purged.

H. A utility for updating/purging site files shall also be provided. The local agencies will develop policies for updating site files.

I. The CAD shall provide access to site files and pre-fire surveys for addresses and businesses for jurisdictions not linking locally-maintained information to the CAD. Vendors shall discuss any ability for local authorities to load and maintain their own information.

J. If the incident being processed is located at a multiple unit location (shopping mall, apartment complex, mobile home park), the system will provide the operator the option to display premise / location information for:

1. The individual unit

2. All individual units

3. The floor (if the CAD system can accommodate the floor)

4. All floors

5. The building

6. All buildings at the address

7. The address.

K. The system shall provide the capability to attach or hyperlink PDF and JPEG formatted files to the location / premise information and display these file types.

3.2.5.15.2 Location / Premise Information Types

The software shall also perform necessary look-ups to determine, at a minimum, if any of the following conditions exist at the validated incident location or if any of the conditions identified in Section 3.2.5.15 apply (e.g. does the street segment on which the location occurs have information attached to it, etc.). The system shall provide the ability to have the following information displayed for Law Enforcement, Fire, or EMS incidents, or any combination thereof. The system shall track, in the system history log file, whether the user viewed the identified information and the date and time it was viewed.

A. Location information. This information will be used for displaying special instructions relating to a location.

B. When entering any location specific information, the system shall require the entry of an expiration date for the information.

1. The system shall permit the entry of "never" as a valid expiration date.

2. The system shall include a report that will identify and list all location specific information that will expire within a user specified time range.

C. After Hours Contact Information – Provide after hours contact (e.g., key holder, owner / contact person's name, key codes, etc.) information for any business, apartment complex, business malls, and residential communities.

D. Emergency contacts for the location (business or residential). Information shall be retrievable by both address and business name

E. Medical information relating to individuals associated with the location.

F. Fire protection systems

G. Hazardous locations.

1. The CAD application will provide for location validation against supplemental files containing locations that have been deemed hazardous to public safety personnel.

2. At a minimum, the system shall support the identification of the specific page in the Emergency Response Guidebook.

3. This subsystem will allow the entry of dangerous persons, hazardous materials,

or other conditions that may be prevalent at the locations.

4. The system shall support scanned raster images of MSDS sheets and other forms containing hazardous materials information.

5. The system will also allow for a proximity search around a location for hazards. The proximity will be associated with the type of call and the type of hazard.

6. When entering hazards, the operator will have the capability to define the hazard proximity.

7. The Vendor shall discuss the system's ability to provide both hazardous locations support and proximity searches for locations

H. Prior incidents history (at least the last ten incidents, within the 36 months of online storage, at the location regardless of incident or call type).

I. Standard Operating Procedures (SOPs) for calls at a specific address, or on specific street segment, or within a geographic boundary.

J. The detailed information in the SOP shall be displayed in a separate area or window on the CAD screen, allowing the incident to be displayed at the same time as the SOP.

K. The system shall capture a snapshot of the location / premise information associated with a location at the time of dispatch.

L. Information contained in the State's Special Needs Registry.

3.2.5.15.3 Citizen Submission

The State is interested in any aspects of the system that would, via the internet, allow citizens to report special conditions about a specific location. This might include special needs during an evacuation, specific medical conditions, or any other location specific information that would impact the safety of the resident or might require special consideration when a response to that location is made. Specific comments as to security, verification and validation of submitted information is requested of the vendor.

3.2.5.15.4 Special Needs Registry

The State has recently initiated an online registry for individuals who have special needs. The system shall be required to interface to this registry www.de911assist.**delaware**.gov/ .

A. The information included in the special needs registry will be attributed to the State's

GIS. The vendor shall be required to import the data from the State GIS into the CAD system' location / premise information.

B. The special Need Registry will also permit inclusion of a phone number. The CAD shall be capable of alerting to this phone number as described in Section 3.2.5.16

3.2.5.16 Telephone Number as a Reference

A. Given the increasing number of calls that are received from cellular telephones, the system shall have the capability to utilize the telephone number as a reference in the same way and address or location is used to identify and alert dispatch personnel.

B. The system shall permit the creation of alerts attached to telephone numbers similar to those associated with addresses in Section 3.2.5.15 and subordinate subsections.

C. The system shall also provide the capability to utilize the telephone number of the caller when identifying prior calls for service. If prior calls were received from the calling telephone number, the call taker and dispatcher shall be notified in a fashion similar to that if a prior call had been received at an address.

D. The system shall provide the capability to link a single set of alerts to multiple phone numbers.

E. The system shall have the capability to cross reference multiple phone numbers.

F. The vendor shall describe in detail how they will satisfy the requirements of this section, and specifically identify any deficiencies in the capabilities of the system to meet these requirements.

3.2.5.17 Urgent Incidents

A. The CAD applications software shall allow the call taker to pass an urgent but incomplete call for service (containing only basic incident type and validated incident location information) on for immediate dispatch, while the remainder of the incident intake information is being solicited.

B. As the call taker is obtaining further information through caller interrogation, the updated information will be sent to the dispatcher(s) who is/are handling the incident.

C. All information added to the incident shall contain the time, date, and operator ID.

3.2.5.18 Incident Routing

A. CAD shall automatically route a new incident to the appropriate dispatcher(s) based on:

1. The incident type

2. The jurisdiction(s) responsible for the incident location.

3. The location of the incident

B. The system shall support the routing of certain incident types to a teleservice unit queue for retrieval outside of the dispatch center.

Upon routing the call to the teleservice unit queue, the call shall be marked as routed and removed from all pending queues except for the queue of the teleservice unit.

C. The call taker shall be able to override the normal call routing by entering the desired dispatcher position ID.

D. The call taker's screen shall provide a display of dispatchers who are logged onto the CAD system, their areas of responsibility, and the number and type incidents assigned to facilitate the expedient manual routing of incidents.

E. The system shall support "default supervisory position routing" of particular user-defined incident types to a designated supervisory position.

F. The system shall support the routing of specified agency identified call types to both a dispatcher and supervisor.

G. If the call will require handling by multiple dispatchers, the call will be routed to each. Examples of this are calls requiring a multi-agency type response (i.e. Police and Fire) or calls for which the response compliment is controlled by different dispatchers.

H. The system shall assign a (Radio) talk group to each incident. The CAD administrator shall be able to enter and change the available talk groups for assignment by CAD for incidents. The assignment of talk groups shall be determined by single or multiple unit responses, incident type, and/or geographic location.

3.2.5.19 Duplicate Event Detection

A. After the location is verified, the CAD system shall check all active, pending and recently closed incidents in the response area for potential duplicates.

B. The detection shall take into consideration:

   1. Proximity,

   2. Time, and

   3. Type of call

   4. Phone Number

C. It is desired that the proximity for identifying a duplicate call be based on the type of call (i.e. a domestic violence call would have a much smaller proximity search than a smoke in the area call) and density of the area (i.e. a traffic crash call in a rural portion of the State would have a larger proximity search than a traffic crash in an urban area of the State.)

D. The proximity search shall be based upon a radius from the reported location of the incident. (a block face search is not acceptable)

E. The type of call shall not require an exact match since different callers might report an occurrence as a different type of incident.

F. If any potential duplicates are found, the system shall display sufficient information about each for the call taker to make the proper determination.

G. The call taker shall then be able to easily cancel the event if it is a duplicate, proceed with the incident processing, or append the additional information to the "duplicated" incident record.

H. The CAD application will maintain canceled "duplicate" incidents within historical system files.

I. A procedure will be available in the CAD system to merge incident information from duplicate incidents to the master incident record.

J. A record of the canceled duplicate incident shall be maintained in the master incident record.

3.2.5.20 Adding Information

A. The CAD shall allow a call taker or dispatcher to add information to an active incident at any time.

B. All information entered will be transferred "almost instantaneously" to all call takers/dispatchers working the call and will contain the ID number of the person entering the information, along with the date and time of entry.

C. The system shall alert users of new information added to the open incident (i.e., colored text, reverse video, etc.).

D. All information shall be retained in the incident history record.

E. Additional information may be added to completed incidents at any time through other CAD application functions.

F. Information contained in completed incidents shall only be modifiable by the addition of comment information and then only by persons with a specific security level.

G. Vendors will explain in detail the method in which their respective systems handle this requirement.

3.2.5.21 Non-Dispatched "Advised" Incidents

A. The CAD shall provide the ability to record information from citizens about particular situations or incidents that do not require the dispatching of any public safety resources.

B. These incidents will be recorded and shall be retrievable from the system/incident history files for later access and information analysis.

3.2.5.22 Assignment of Incident Numbers

A. CAD shall assign a unique event/incident number to every call entered into the system.

B. The format of the incident number shall be agency configurable.

3.2.5.23 Priority Dispatch Corporation Status

Some agencies that are a part of this process use Emergency Medical Dispatch and Emergency Fire Dispatch from Priority Dispatch Corporation. The State will **not** consider any vendor that is not described by PDC to be at the certified status level for paramount .

Additionally, vendors that are certified at the platinum level with the Paramount version of the Priority Dispatch products will receive additional consideration.

3.2.5.24 Scheduled Activities

A. The system shall provide the capability to enter calls for service information and to schedule the time at which the call for service becomes active

B. The system shall provide the capability to display all scheduled activity on any workstation and to sort or filter the display based on:

    1. Scheduled time of activation

    2. Location of the call (geographic boundary)

    3. Type of call or activity

    4. Operator entering the call

C. Authorized personnel shall have the capability to change or delete any scheduled activity.

3.2.6 Dispatch Functions

3.2.6.1 Unit/Resource Setup

3.2.6.1.1 Unit Number and Type

A. Each unit shall be assigned a unit number and unit type.

B. The unit number must be up to ten (10) characters.

C. The unit type shall indicate the type of vehicle and its capabilities.

D. The system administrator shall be able to add, delete, and modify unit numbers and types as required.

E. Unit numbers need not be unique when in different agencies/jurisdictions.

F. The system shall support the capability for units from certain agencies to utilize the same radio / unit ID regardless of the location or area that they are responsible. For example the unit is called on the radio as 1C5 regardless of the shift or geographic coverage area the unit is assigned to.

1. The system must be capable of displaying all units' permanent identifiers in all recommendations and displays.

3.2.6.2 Fire Unit/Crew Capabilities

A. In addition to unit identification and type, the system must support several levels of unit/crew capabilities. The dispatcher shall be able to recommend units based on the unit or crew's special capabilities.

B. These special capabilities shall be in addition to the unit type. Examples of these capabilities include vehicle extrication capability on a ladder truck, a paramedic on an engine, hazardous materials specialists on EMS units, etc.

C. The system shall be capable of recommending tenders (tankers) based upon their capacity.

D. The system must also take into consideration the number of personnel currently staffed on the unit.

E. System supervisors and other authorized users must be able to modify these capabilities as required, without adversely impacting the system (e.g., without having to shut down or restart the system.).

F. The unit crew capabilities must be easily modified.

G. Multiple Fire unit types.

   1. Units may have more than one type.

   2. The system will recommend them based on the appropriate type. As an example, a "quint" may be recommended as either a pumper or a ladder truck.

   3. The system shall be able to specify which type is utilized first if a recommendation requires several of the unit's type. (i.e. the call requires both a pumper and a ladder, the system shall be able to specify that the quint shall be used as a ladder first)

H. Fire unit staffing.

   1. The system shall allow the dynamic entry of personnel staffing specific units/apparatus.

   2. The system shall allow the staffing module to be accessed from the field by authorized users to dynamically reflect changing assignments.

3.2.6.3 Selecting Pending Incidents

A. The CAD application shall sort the displayed pending incidents in order of priority and by elapsed time (time since entry.)

B. The colors for each priority shall be definable by the system administrator.

C. The system shall provide an agency configurable capability to provide to the dispatcher an audible and visible alert that an incident has been added to the pending queue.

D. The volume, pitch, and duration of the audible alert shall be definable by the system administrator and based on the priority of the incident.

E. Vendors shall fully describe the method for alerting the dispatcher that a new call has been placed on the pending incident queue.

F. The dispatcher shall be able to:

   1. Select the highest priority incident from the pending incident display with a single keystroke and/or by selecting the incident using a point-and-click device.

   2. Select incidents from the pending queue in any order.

   3. Place an incident back in the pending queue after reviewing it.

   4. Select another pending incident from the screen.

G. If more than one pending incident is open at the same time, each incident will be located in a separate window and the dispatcher will be able to toggle back and forth from each of the open incidents.

H. Vendors shall describe the maximum number of pending/active incidents that can be opened at any one time and how the system accomplishes this process.

3.2.6.4 Dispatch Screen

The CAD software shall provide the following basic functions/information when a call for service is retrieved for dispatch:

A. All calls for service information obtained during incident intake.

B. Geofile information, to include:

1. The high and low closest cross streets

2. Jurisdiction, and district, precinct and troop areas

3. Fire response area

4. EMS response area

5. Grid (reporting area)

6. Development name

7. Map page and coordinate

8. Latitude and Longitude with the ability to switch between different geographic coordinate systems.

C. The above response zones/areas shall be automatically computed by the CAD system for verified locations and displayed as part of the incident record.

D. Coordinate based location of the call, preferably latitude and longitude.

E. This information shall be easily available for review by dispatchers, call takers, and supervisors working the call.

F. Premise / Location information. This information will be used for displaying hazards, hazardous materials, or special instructions relating to a location as described in Section 3.2.5.15.

G. Telephone Number information. This information will be used for displaying hazards, hazardous materials, or special instructions relating to a location as described in Section 3.2.5.15

H. Notes shall be able to be associated with various geographic locations: grids, street segments, intersections, or specific addresses as described in Section 3.2.5.15.

I. Notes shall be able to be associated with the telephone numbers as described in Section 3.2.5.15.

J. Information regarding hazardous locations in proximity to the incident location shall be flagged.

K. Prior call for service history (at least the last ten incidents, within the previous 36 months at the location regardless of incident or call type). For example, if officers are responding to an incident, the CAD system shall inform them that a "false alarm" recently occurred there or that loud music was reported on the previous shift so that they are aware of the situation before and during their response to the incident.

L. Prior call for service history (at least the last ten incidents, within the previous 36 months of online storage, from the telephone number regardless of incident or call type). For example, if officers are responding to an incident, the CAD system shall inform them that a "false alarm" recently was reported by that phone number or that loud music was reported on the previous shift so that they are aware of the situation before and during their response to the incident.

M. Duplicate event detection. The application software must detect and notify the dispatcher of the potential of a duplicate incident as previously described.

N. Emergency location contacts.

O. Incident type advisory or procedural information. Each CAD incident type may have multiple advisory or procedures displayed. These instructions may be used to advise dispatch and/or field personnel on how that specific incident type is to be handled.

P. The detail information shall be displayed in a separate area or window on the screen, allowing the incident to be displayed at the same time as the advisory.

Q. Whenever an incident location has emergency contacts, an indicator will be displayed to the user advising of the existence of the emergency contact information.

3.2.6.5 Unit Recommendation

CAD shall automatically provide the dispatcher with a recommended set of units suggested for dispatch. The recommendation will be composed of a specific unit identifier(s). Creating the list of recommended units for dispatch consists of two processes. The first identifies the number and type of units to recommend and the second identifies the specific units matching the type and number that will be recommended.

A. The recommendation of specific units shall be based upon:

1. Shortest travel time

2. Shortest Travel Distance

3.   Other fixed geographical based plans (geographic response plans)

4.   Pre-defined automatic mutual aide

B.   The response plans as constructed shall be system activated based on the time of day and day of week. (it shall be noted that the activation times will be jurisdictionally dependent)

Number and Types of Units to Be Recommended

C.   The number and type of units to be recommended shall be based upon:

1.   The incident type

2.   Geographic sub area

3.   Jurisdiction

4.   Specific addresses or location types

5.   Time of day

6.   Day of week

7.   Resource plan in place

D.   The recommendation shall include specifically the number and type of units that shall be recommended based upon the incident type.

E.   The CAD system will allow the recommendation of different numbers and types of resources for the same incident type when the incidents are located in different geographic sub-areas (i.e., geographically sensitive dispatch policies).

F.   The CAD system will allow the recommendation of different numbers and types of resources for the same incident type when the incidents are located in different jurisdictions (multi-jurisdictional control).

G.   Each agency shall be able to determine the number and type of units that will respond to call types within their jurisdiction.

H.   The CAD system shall allow for each agency to vary the recommendation of the numbers and types of units based upon the time of day and day of week.

I. The CAD system shall allow for a systematic change in the numbers and types of units that are recommended based on a degraded or upgraded response plan.

J. The CAD system must facilitate the inclusion of resources required to respond to specific call types as discussed in Section 3.2.5.1.

K. The CAD system shall allow the recommendation of different numbers and types of resources for the same incident type when the incident is located at a specific address (i.e. school, chemical plant, hospital, etc.)

L. The CAD system shall support the use of unit type substitutions in identifying the number and types of units to recommend. (i.e. (1 engine) or (1 ladder and 1 rescue)

3.2.6.5.1 Specific Units to Be Recommended

A. Law Enforcement unit recommendations shall be based on:

1. The type of call

2. Jurisdiction of call

3. Unit staffing

4. Unit types

5. Unit status

B. Law Enforcement recommendations, dependent on call type may include units assigned to other calls.

C. Fire/EMS unit recommendations shall take into account

1. Unit types

2. Assigned personnel quantity

3. Assigned personnel capabilities

4. Unit equipment capability

D. The vendor shall describe any tools available to assist in developing the recommendations.

It is highly desirable that some form of graphic or flow chart is available to assist the users in developing the response recommendations.

3.2.6.5.2 Unit Recommendation Based on Estimated Shortest Travel Time

In this approach the system will identify the specific units based upon the estimated shortest travel time over the street network.

A. For mobile units such as police and fire/EMS units away from their station the system shall utilize an AVL system to identify the units' positions.

B. For quartered fire/EMS units the system shall utilize the known location of their station to identify the units' positions.

C. The vendor shall explain in detail the GIS requirements for their system to make recommendations based on estimated shortest travel time.

D. The vendor shall explain the source of their recommendation algorithm (proprietary, ESRI Network Analyst, etc.).

E. The vendor shall explain their system's ability to assess time penalties to non-staffed (volunteer or paid on-call) fire houses for the process of calculating shortest travel time recommendations

   1. The vendor shall explain the ability to change these time penalties by time of day and day of week.

F. The vendor shall explain the ability of their system to override the time penalty if the station or unit is put into service.

G. The vendor shall explain their system's ability to assess time for routes that will travel through congested areas during times of congestion (Rush hour)

H. It is desired that the system be capable of accessing real time traffic data from DelDOT and including this information as a part of the fastest path routing algorithm and recommendation. The vendor shall describe any experience they have in acquiring real time data such as this and utilizing it in unit recommendations.

3.2.6.5.3 Unit Recommendation Based on Calculated Shortest Travel Distance

In this approach the system will identify the specific units based upon the calculated shortest travel distance over the street network.

A. For mobile units such as police and fire/EMS units away from their stations the system shall utilize an AVL system to identify the units' positions.

B. For quartered fire/EMS units the system shall utilize the known location of their station to identify the units' positions.

C. The vendor shall explain in detail the GIS requirements for their system to make recommendations based on calculated shortest travel distance.

D. The vendor shall explain the source of their recommendation algorithm.

E. The vendor shall explain their system's ability to assess time penalties to non-staffed (volunteer) fire houses for the process of calculating unit recommendations

 1. The vendor shall explain the ability to change these time penalties by time of day and day of week.

F. The vendor shall explain the ability of their system to override the time penalty if the station or unit is put into service.

3.2.6.5.4 Unit Recommendation Based on Fixed Response Plan

A. The system shall utilize the incident geographic location to determine the reporting district and sector and/or unit / station run order to determine the order in which to recommend specific units to respond.

B. The system will utilize real-time unit status to determine unit availability. All unit recommendations shall correspond to the current, real-time status of all resources.

C. With limited exceptions, the software shall never recommend a unit that is on another assignment or otherwise unavailable for dispatch. The application shall facilitate the definition and recommendation of second, third, etc., level units in the event a primary recommended response unit(s) is in an unavailable status.

 1. The software will allow the recommendation of out of service Law Enforcement units for specific call types.

D. Law Enforcement unit recommendation shall be based on district/sector plans. The application shall support multiple district/sector plans.

 1. The Vendor shall indicate how many different district/sector plans may be entered by the user agency.

It is highly desirable that the response plans are variable by time of day, day of week and jurisdiction.

E.   Fire unit recommendations will accommodate multiple alarm levels. Vendors shall indicate how many alarm levels are supported.

F.   Fire unit recommendations shall be based on a planning algorithm used by the CAD system. The Vendor shall indicate how many different response plans the CAD system will accommodate.

G.   The CAD system will provide for temporary change of quarters of Fire/ EMS units. The dispatch recommendation will be based on the "move to" coverage or incident scene locations.

H.   The unit recommendation of Fire / EMS units will show the station number and/or pager tone codes associated with each unit.

I.   The CAD applications will support "tactical locations" that will modify the normal response based upon the location of the incident. These "tactical locations" and the resulting response recommendations will be user defined.

J.   The CAD system will allow for "cross-staffed" support for recommendations of Fire units. If a "cross-staffed" unit is recommended, the "other" unit is automatically removed from service. Once the unit returns to quarters from its assignment, all cross-staffed units are automatically marked available. The system shall support multiple "cross staffed" units.

K.   The CAD system shall provide the capability to "load balance" between units. This would be required to two similar units that are located in the same facility for Fire or EMS, or two patrol units may be assigned to the same beat for police. The vendor shall explain in detail how their system would provide workload equalization between these units.

L.   Target Hazard Dispatch.

   1.   The CAD system administrator shall be able to identify certain occupancies such as hospitals, nursing homes, high rises, chemical storage plants, etc. as target hazards.

   2.   The system must support an unlimited number of different target hazards.

   3.   Each hazard shall allow for an upgraded response depending on the type of hazard. Each hazard occupancy shall be identified by both address and business/building name.

M.   The system will provide for a "degraded modes" of dispatch activity.

1. In situations of large thunderstorms, heavy snowfall, peak brush fire season, and other major events, the number and type of recommended units will be reduced based on the system being placed in degraded mode.

2. The reduction in resource recommendations will be table-driven.

3. One or more degraded modes are desired. Vendors shall describe their system's method for handling this requirement.

N. The CAD system must be able to send a snap shot of the current location of incidents and units (as displayed on the system's Integrated Map Display) to supervisors equipped with Mobile Data Computers capable of accepting and displaying the information.

O. Substituting Units.

1. When the system is searching for a unit of a particular type (example: an ambulance) and locates a unit of another type (example: a medic unit), the system shall be able to add the medic unit to the recommendation, but continue searching for the ambulance.

2. The search shall progress from the incident going out until a full complement of resources, as defined by the dispatch policy for that incident type, priority, and location (see other modifiers in this section), is found.

3. If the most desirable unit is not found, then the next desirable unit shall be recommended.

4. This capability shall be user definable for any unit types based on the call type.

P. The CAD system must be able to recommend units based on the skill level of the individuals assigned to the unit. For example, if a SWAT, Spanish-speaking individual is required, the system shall be able to find and recommend the closest available unit matching the requirement. A fire-relevant example is the requirement to identify available personnel that are certified for confined space entry.

1. The CAD system must provide an entry screen for requesting specific skills as well as properly process requirements that are automatically generated based on the incident type.

Q. The system shall have the capability to recommend the "balance of an alarm" which would recommend only those units needed to complete the next alarm level's recommended compliment.

3.2.6.5.5 Dynamic Recommendations

A. Until each dispatched unit has arrived on scene the CAD system shall monitor all units that become available and if a unit that has become available is a better "fit" than one of the dispatched units the system shall alert the dispatcher. Better fit could mean that it could be closer, from the same jurisdiction or a better equipment match.

B. The vendor shall describe their capabilities in this area.

3.2.6.6 Dispatching Units

The dispatcher shall have the capability to accept the system-provided unit recommendations with a single keystroke or action of a point and click device, or override the recommended units and replace them with one or more other units.

A. The dispatcher shall have the capability to select a unit that is on a lower priority incident.

1. A single keystroke shall remove the unit from the previous incident (preempt) and assign it to the new incident.

2. If the preempted unit is the last unit assigned to an incident, the incident shall be automatically placed in the pending incident queue and held (stacked) for that unit.

3. When the unit clears the incident to which it was assigned, the unit will be recommended to the incident from which it was preempted.

4. If a different unit is assigned to the incident in the pending queue, the incident will no longer be stacked (held) for that unit and the system will not automatically recommend it when the unit becomes available again for dispatch.

5. All times associated with assignment and re-assignment shall be kept in the incident history file.

B. CAD will assign a primary unit based on incident response policy.

C. The dispatcher shall have the ability to change the primary unit at the time of dispatch or at any time during the handling of the incident. The primary unit is the unit who is responsible for completing any required departmental reports.

D. The CAD system shall provide the ability to stack, or assign low priority incidents to a busy unit.

1. These incidents shall be time stamped, and displayed in the pending incident display, with an indication that the incident has been stacked to a unit.

2. When the unit clears from one incident, the applications software will provide an indication that the unit is now available for a "stacked" or preempted incident.

3. The CAD shall time stamp when the unit is en route to the new incident.

E. Upon acceptance of a unit dispatch recommendation or input of a dispatcher's own unit recommendation, the applications software shall automatically and dynamically update the status of all affected units throughout the CAD system.

F. All CAD workstations must be updated with the new status information automatically and instantaneously.

1. At this point, units equipped with Mobile Data Computers through the MDCS functionality will automatically be notified of their assignment, status update, call information, other units assigned to the call, and location and hazard information.

G. The system shall provide the ability to automatically transmit incident information such as address of incident, development name, high and low cross streets, map page and coordinate, and call type alphanumeric paging or text messaging based on the type of incident, geographic location of incident, unit availability.

1. The data sent to the alphanumeric pagers shall be formatted so that it can either be sent to the mail drop area as a notification or to the page area as a dispatch message to respond.

2. Additionally, the CAD will have the ability to transmit specific information from the incident to specified alphanumeric pagers.

H. The CAD system must support and be able to recommend roaming units (i.e., units that are assigned to more than one patrol district).

3.2.6.7 Notifications

A. Upon selection of recommended units and the execution of the dispatch function the dispatched units shall be notified.

B. The CAD system shall provide the capability to notify different units in different manners. The specifics of the different approaches to notification are addressed elsewhere in the RFP, however, the following types of notification shall be provided automatically by the CAD system:

   1. Mobile Data Digital Dispatch

   2. Toning via the radio system

   3. Alpha-numeric paging

   4. Fire Station Alerting Systems

   5. Text Messaging to cellular phones

   6. Email notification

   7. CAD's messaging system

C. The vendor shall explain any other methods of notification that their system provides

.

D. Notifications for "interested parties", being non-dispatched units, or location contacts must be supported. This can be used to alert the transport destination like a Jail or a Hospital of incoming transports, or health agencies of an incident type occurring.

3.2.6.8 Be-On-the Lookout (BOLO)

A. The CAD system shall provide an efficient method for tracking BOLO notifications.

B. The system shall make BOLO information accessible for a system-wide

C. BOLOs shall be active a specific number of days or until cleared.

D. Any time a license plate is entered into the system the CAD shall automatically check the BOLO information.

3.2.6.9 Fire Unit Move-Ups

The proposal shall include Fire apparatus Move-Up software that will interface CAD and the Integrated Map Display.

3.2.6.10 Rip and Run Reports

A. The CAD system shall provide the ability to send Fire rip and run reports containing incident location and summaries to remote Fire stations with apparatus assigned/dispatched to a specific incident.

B. Rip and run printouts shall include hydrant information.

C. Vendors shall provide the capability to disseminate rip and run reports via e-mail.

D. Vendors shall discuss other connectivity options, such as remote printers, fax, etc.

3.2.6.11 Adding Units to Incidents

3.2.6.11.1 Adding Units by Recommendation

A. The dispatcher shall be able to add additional units to an incident by having the system recommend these additional units.

B. The dispatcher will specify the type of unit(s) needed, and the system shall recommend the additional units in the same way as an initial dispatch. (Example: Command requests an additional Brush Truck. The dispatcher enters a command for recommendation of a Brush Truck. The system searches the available units for the next Brush Truck and returns a recommendation to the dispatcher in the same screen format as the original recommendation.)

3.2.6.11.2 Adding Units by Call Type or Alarm Level

A. The dispatcher shall be able to request the system to recommend additional units for an active incident by providing the system with a different call type or by changing the alarm level on the call.

B. The system shall recommend the additional units in the same way as an initial dispatch. The unit recommendation shall take into account the units already assigned to the call and only recommend the additional required units. For example, if a second alarm is called only the additional units required to satisfy the second alarm would be recommended by the system.

C. The system shall allow another set of run orders by alarm level.

3.2.6.11.3 Add Units by Personnel Capabilities

A. The dispatcher shall be able to add additional units with specific capabilities to an incident by having the system recommend these additional units.

B. The dispatcher will specify the personnel capabilities needed, and the system shall recommend the additional units in the same way as an initial dispatch. (Example: Command requests an additional ALS provider. The dispatcher enters a command for recommendation of an ALS provider. The system searches the available units for the next ALS provider and returns a recommendation to the dispatcher in the

same screen format as the original recommendation.)

3.2.6.12 Incident and Unit Status Maintenance

A. The applications software shall dynamically and interactively track the status of all resources that are defined within the CAD system.

B. A unit icon shall appear on the Integrated Map Display showing the last known location of each unit.

C. The unit icon shall be repositioned to the new location each time the unit's location is changed.

D. When AVL information is available, the unit's location will be automatically updated via the AVL system.

E. The color of the icon shall correspond with the unit's status.

F. For MDC equipped vehicles, the system will allow them to digitally update their status by using their onboard mobile data computers. This capability shall be configurable by agency.

G. The system will track those status updates as if they were entered by system operators and indicates the MDC as the initiator.

H. The software shall provide an indication as to whether a Police unit is a single or two-person unit. Two-person units with one fully-qualified responder (such as training units) shall be configurable. .

   The unit icon displayed on the map shall indicate this also.

I. The application shall track the following minimum incident and unit status conditions for Law Enforcement units assigned to an incident:

   1. Incident Received

   2. Assigned / Dispatched

   3. Acknowledged

   4. En route

5. In Area

6. Staged

7. On scene

8. On scene at secondary location

9. Transporting

10. Arrive transporting location

11. Available (Clear)

12. Out of Service

13. Delayed

J. The Out of Service status shall be supported by secondary locally defined table identifying the reason for the out-of service condition.

K. The Delayed status shall be supported by secondary locally defined table identifying the reason for the delay.

.

L. The application shall track the following minimum incident and unit status conditions for Fire/EMS units assigned to an incident:

1. Incident Received

2. Assigned / Dispatched

3. Acknowledged

4. En route

5. On scene

6. In area

7. Staged

8. Available on radio

9. Available In-District

10. Available In-Quarters

11. Out of Service

12. Transporting (Hot) including the name of hospital

13. Transporting (Cold) including the name of the hospital

14. Arrival

15. At Hospital

16. At Patient

17. Delayed in Quarters

18. Delayed in service

M. The Out of Service status shall be supported by secondary locally defined table identifying the reason for the out-of service condition.

N. The Delayed statuses shall be supported by secondary locally defined table identifying the reason for the delay.

O. In the event the FD activates an Incident Command System, the CAD system shall facilitate the capture of certain stages and associated times of a Fire incident, such as:

1. Initiate Command.

2. Transfer Command.

P. Recorded times (e.g., dispatched, arrived, etc.) shall be maintained in military (24-hour clock) format.

Q. The applications software shall capture hour, minutes, and seconds (HH:MM:SS).

All unit status changes shall be automatically time stamped and become part of the incident for service history.

R. The clock time and date used by CAD must be able to be reset while CAD is operational, and without the need to have users log off, or to re-boot the system.

S. The Vendor shall discuss how its system handles semi-annual time changes and the effects that these time changes have upon open incident times and later statistical analysis.

3.2.6.12.1 Incident Milestones Maintenance

Certain incident milestones shall be tracked by the system. A command executed by the dispatcher shall mark the occurrence and the time of the milestone on the incident record. Unit based milestones, such as first unit arrival, shall be automatically captured when the unit status command is executed. FD / EMS milestones include:

A. Receipt of call

B. Incident entered for dispatch

C. First dispatch of incident

D. First unit arrived at the scene

E. First engine arrived at the scene

F. First transport unit arrived on the scene

G. First medical arrived on the scene

H. Patient contact made

I. Trauma alert

J. Water on the fire

K. Fire declared under control

L. Patients extricated from a vehicle

M. First shock delivered

N. Mayday initiated

O. Coroner called

P. Air transport requested

Q. Primary search initiated

R. Primary search completed

S. Secondary search initiated

T. Secondary search completed

U. Notifications conducted (entered for each notification)

V. Evacuation declared

W. All clear announced after search is completed.

X. Last unit cleared incident.

3.2.6.12.2 Unit Status Timers

A. The CAD applications software shall provide unit status timers in minutes and seconds that will advise the dispatcher if a unit has exceeded the preset amount of time in a status condition.

B. The applications software shall provide an initial check-back after a preset time interval passes between when a unit first arrives "on-scene" to when the software shall first prompt the dispatcher to check on the unit's condition.

C. Vendors shall explain any ability to include mobile computer transactions and/or two-way radio channel affiliation as part of the checking.

D. This time interval shall be defined based upon incident type and jurisdiction and established by the system administrator.

E. The application shall provide secondary check-back times which shall be the defined time periods, after the initial check-back, that the software will continue to

prompt the dispatcher to check on a unit's condition.

F. When a defined check-back period has expired, the system shall visually and audibly alert the dispatcher assigned to the unit to make contact with it.

G. If the dispatcher cannot make contact with the unit, the dispatcher shall be prompted to notify field supervisory personnel.

H. Once contact is made with a unit whose check-back timer has expired, and the unit advises that its status is fine, the dispatcher must be provided with an appropriate means to cancel the check-back alert and reset the unit's check-back timer.

I. This process shall continue, utilizing the table-defined check-back time interval, until a unit clears from the incident.

J. The system shall monitor units dispatched to a call. If the units have not been marked en route to the call in a Department pre-defined time, the system shall make a visible and audible notification to the dispatcher and appropriate supervisor that the unit is overdue.

K. The system shall provide welfare check timers that can be assigned to units that are not on calls for service. It could also be considered a timer set based upon the status of available.

L. The system shall provide the capability to set welfare times on fire and EMS units that are "on the air" meaning away from their stations but not assigned to call.

M. The welfare check timer will behave as described above.

.

3.2.6.12.3 Updating Unit Status

A. Dispatchers shall be capable of updating unit status through:

1. Keyboard input of appropriate unit identifiers and a single function key

2. A pointing device

3. Via command line entry.

B. The applications software shall allow dispatchers to update a unit's status while performing any call taking or dispatching function within the CAD system, by providing easy accessibility to an interactive command line at all times.

C. This command line shall allow multiple units to have the same status updated simultaneously.

D. Updating unit status must be accomplished without losing the incident information displayed on the screen.

E. If the cursor is repositioned to perform the command, it must be automatically returned to the correct screen and cursor position where the user left off, without losing any information.

F. The software shall provide dispatchers with the capability to clear any number of, or all units, with a single command.

3.2.6.13 Estimated Time of Arrival

A. If AVL is in use, the system shall calculate an estimated time of arrival for each unit based on the non-emergency travel time from the time dispatched.

B. If the unit exceeds this time by an agency customizable percentage of the travel time, the dispatcher shall be provided an audible and visual alert.

C. This estimate shall also be available for display to the call takers to assist them while talking to the calling party.

3.2.6.14 Situation Found

The CAD system shall provide a separate field in the incident record that will record the situation found upon arrival. Which will be used to differentiate the incident type of the call as dispatched and the incident type of the call for service as found upon arrival.

3.2.6.15 Updating Incidents

A. The applications software shall allow both call takers and dispatchers to review an active incident and update the incident with corrections or additions.

B. All corrections or additions must contain the time, date, operator ID and workstation ID.

C. When a call taker forwards updated information to the appropriate dispatcher, the dispatcher shall be visually/aurally alerted by the system to the presence of the update.

D. In addition, there will be a clear indication of which information is new.

E. Law Enforcement calls shall be available to the Fire Department and EMS to investigate the details of the call, especially if they are also responding.

F. Law Enforcement shall be able to view Fire and EMS call details if necessary.

G. However, the default situation is for Law Enforcement to only view Law Enforcement calls and for Fire Department dispatchers to only view Fire calls and EMS dispatchers to view only EMS calls if configured by the local system administrator.

H. It shall not be necessary to transfer the entire incident to accomplish the transfer of the updated information.

I. The software must allow units to be added as assisting units to an incident after it has been dispatched.

J. If another agency response, such as adding Fire units to a Law Enforcement incident, is required, the CAD shall automatically copy the active incident and route the new incident to the appropriate dispatcher.

K. The Vendor shall discuss their system's ability to add additional public safety agency resources to an active incident.

L. Fire dispatchers must be able to escalate Fire alarm levels.

M. The CAD will make additional unit recommendations based on the new alarm level.

N. Dispatchers must be able to "preview" the next alarm level assignments for an active incident.

O. Units equipped with Mobile Data Computers (MDC) shall be able to update the incident record by adding comments, changing its location, etc.

3.2.6.16 Releasing and Reassigning Units

A. The software shall allow units to be reassigned from one incident to another or to be easily "exchanged" on two active incidents.

B. The previous incident shall be returned to the pending queue if the reassigned unit is the last or only unit on the incident.

C. The Vendor shall discuss how these functions are accomplished by the proposed system.

3.2.6.17 Incident Completion

A. CAD shall allow users to clear either single units or all units on an incident with a single command, function key, or point and click device action.

B. The dispatcher shall be able to add comments upon clearing the incident or to a closed incident.

C. If the last unit on an incident is cleared, CAD shall require one or more disposition code if the user agency requires a disposition code for the incident type.

D. The software shall provide for the capture of a user-maintainable incident disposition code, an indicator that a report is or is not required, and incident completion comments.

E. Disposition codes shall be selectable from a validated list of potential disposition codes.

F. The CAD system administrator shall be able to modify, add, and delete valid disposition codes.

G. The system shall provide the agency configurable capability for a Mobile Data Computer (MDC) equipped unit, to be able to indicate the final incident disposition and transmit it digitally to the CAD system if it is the last unit clearing an incident..

H. The system shall provide the agency configurable capability to track and use this disposition as if it was entered by a system operator, including tracking the time, device ID, and person ID of the person entering the disposition and clearing the call.

I. Immediately upon the closure of an incident all data including the incident history, unit history and all comments shall also be written to the CAD system's Data Warehouse.

3.2.6.18 Reopening an Incident

The system shall provide the capability to reopen a closed incident. The vendor shall discuss the capabilities of the system in this area specifically identifying:

A. Under what circumstances an incident may be reopened

B. How information related to the reopened incident is captured

C. The impact on data already transferred to other systems

3.2.6.19 Field Initiated activity

A. The system shall provide an easy method for the dispatcher to record and recreate a call for service based on field initiated activity such as a traffic stop or subject stop.

B. It is highly desired that if the unit making the traffic or subject stop is GPS / AVL equipped that the CAD system utilize the GPS position to provide the location information. Ideally the dispatcher will only need to enter the unit making the stop and the plate info provided, and the CAD system will identify the location based upon GPS /AVL information provided.

C. The vendor shall describe how the location information is captured, displayed and stored (coordinate or address).

D. If the proposed system records the location information as an address, then the vendor shall explain the algorithm used to convert the coordinate data to the address (nearest point, nearest intersection, interpolated on nearest centerline segment, etc.)

3.2.6.20 Status Monitoring

A. All status monitors as described in this section shall be customizable by each dispatch agency.

B. If limiting the data displayed on the status monitors is accomplished via some form of filtering unwanted information, the vendor shall explain in detail the safeguards the system has in place to ensure that all units and all incidents are displayed on at least one dispatch position's status monitor.

3.2.6.20.1 Pending Incidents

A. In a separate window, the software shall display the incidents waiting to be dispatched (pending) queue. The dispatcher shall be able to quickly select the desired incident to dispatch.

B. The pending incident queue display shall present all waiting calls for that dispatch position for service in priority order, and within each priority, elapsed time since incident receipt.

C. Displayed information shall include, at a minimum:

    1. Incident priority.

2. Incident type.

3. Location.

4. Appropriate response areas (i.e., Police district, Fire response zone).

5. An indicator of whether the incident is near the boundary of the communication center's dispatch area (user option).

6. Time of incident receipt or elapsed time since incident receipt (user option).

7. Brief incident summary comment.

3.2.6.20.2 Unit Status

A. The software shall facilitate the operation of a unit status display monitor.

B. This monitor displays the interactive status of all units controlled by an individual dispatcher.

C. The status display shall be a separate monitor/window controlled by the dispatcher's interactive workstation.

D. The status monitor will have the ability to display one or more dispatch groups and one or more agencies at the dispatcher's discretion.

E. The unit status display shall present the current status of all active units. Status information shall include, at a minimum:

1. Unit identifier

2. Current status

3. Assigned incident ID (if assigned to an incident)

4. Assigned incident type

5. Talk group incident assigned

6. Location of assigned incident or location of the unit if not assigned to an incident (e.g., at Fire Station #1)

    7. Time in status or elapsed time (user option)

    8. Brief comment

    9. Agency configurable ability to list the unit's staffing (names)

F. The grouping of displayed units shall be user maintainable. This will allow the dispatcher to organize the status display by station, type of unit, geographic coverage area, etc.

G. A single workstation must be capable of displaying any Police/Fire/EMS units.

H. The dispatcher shall be able to sort the unit status display by unit number, unit type, incident number, battalion, and/or availability.

I. It is highly desired that the system provide the capability for the unit status monitors to have the ability to display multiple columns of units and their associated information.

3.2.6.20.3 Active Incident Status

A separate portion of the display or a window shall display a summary of all active incidents.

A. The active incident status display shall include, at a minimum:

    1. Time incident received or elapsed time (user option)

    2. Incident number

    3. Priority

    4. Incident type

    5. Incident type description

    6. Talk group incident assigned

    7. Location

    8. Units assigned

    9. Status times associated with each unit

  B. The dispatcher shall be able to quickly select any incident from the display for updating.

  C. The dispatcher shall be able to scroll the active incident display, if there are more incidents than can be displayed at one time.

3.2.6.20.4 Recently Closed Incident Monitor

A separate portion of the display or a window shall display a summary of the last (user configurable number or time limit) incidents that have been closed.

  A. The closed incident status display shall include, at a minimum:

    1. Time incident received

    2. Time the incident was closed

    3. Incident number

    4. Priority

    5. Incident type

    6. Incident type description

    7. Talk group incident assigned

    8. Location

    9. Units assigned

    10. Cleared times associated with each unit

3.2.6.21 Changing Duty Roster and Shift Changes

  A. The CAD shall provide an ability to quickly change the duty of a single unit, including on or off duty, area of coverage, personnel assigned, and whether recommended for dispatch.

  B. The CAD shall also provide the ability to build a shift roster.

C. The rostering must occur by individual agency.

D. The capability to build the roster at least one week prior to the shift must exist for all Law Enforcement/Fire/EMS personnel.

E. The system must support a method to delete the previous shift personnel from the roster at a scheduled time each day to be set by the CAD administrator.

F. The scheduled time must vary by agency.

G. The shift roster shall be maintained in the system for later access and analysis. Rosters shall be available online for 36 months and available for archive to other media.

H. CAD shall alert supervisor personnel if units don't "roster on."

3.2.6.22 Incident History

A. Once an incident is closed (all units cleared) and incident data is transmitted to the CAD Data Warehouse, the software shall maintain the incident's details within the incident history files of the system.

B. The incident history shall include all information generated as part of the call intake, dispatch, and unit status tracking process specific to each incident.

C. The incident history file shall allow for the online inquiry and display of closed incidents.

D. Incident history recall shall be by:

   1. Incident number

   2. Date and time or range of date and time

   3. Address

   4. Telephone number of caller

   5. Grid

   6. Map page

      7. Unit

      8. Station, battalion, etc.

E. Security shall control which users have the ability to access closed incidents and which users have the ability to update or modify closed incidents.

F. Incident history must be stored in a commercial, industrial strength relational database management system.

G. A set of standard reports must be provided that can routinely generate tables, statistics, maps, and charts that are typically required to manage a communications center.

H. Tools shall be available for easily creating ad hoc reports.

I. Vendors shall list the standard reports contained in the system, and the ad hoc report generation capabilities of the system.

3.2.6.23 Unit History

A. The CAD system shall capture non-incident and incident related unit history in a unit history file.

B. The unit history shall include all statuses identified in Section 3.2.6.12.

C. The unit history file shall allow for the online inquiry and display of unit activity. Information contained in this file may also be printed on any printer within the Communications Centers or other workstations that have access to the CAD system environment.

D. The unit history information shall also be stored in a commercial, industrial-strength relational database management system.

E. Standard and ad hoc reporting capabilities that access unit history information must be provided.

F. The Vendor shall list the standard reports contained in the system, and the ad hoc report generation capabilities of the system.

G. The Vendor shall list the standard reports contained in the system, and the ad hoc report generation capabilities of the system.

3.2.6.24 Transferring Incidents

There are times when control of an entire incident and all units assigned to the incident needs to be transferred to another dispatch group or position. The CAD system shall provide this functionality, using a single, abbreviated command.

3.2.6.25 Transferring Dispatch Position Responsibilities

CAD shall provide the ability to transfer an entire dispatch group or position responsibilities and all associated units and incidents to another dispatch group or position.

3.2.6.26 Tow/Wrecker Rotation List

The CAD system shall contain a rotation function that will distribute the tows/wrecking jobs to wrecker companies on an equitable basis within jurisdictions and within areas within jurisdictions.

    A. The dispatcher shall be able to query the system as to the next tow company to be called for each tow area.

    B. Upon use of a tow company, the system shall move to the next company for the next tow in that area.

    C. The system shall also allow a tow company to be placed on suspension from the tow rotation and be automatically reinstated at a particular date and time.

    D. If the tow company is unavailable, the dispatcher shall be able to by-pass that company and retrieve the next company from the list.

    E. The system shall keep a record of reasons why a tow company was chosen or skipped.

    F. The system shall be able to put a tow company back at the top of the list if the company is canceled before getting to the scene.

    G. The system shall allow the dispatcher to select any tow company and not rotate them if the selection is due to the owner's request of that tow company.

    H. When a tow company is used, the towed vehicle log entry screen shall be automatically displayed.

    I. The dispatcher shall be able to enter multiple towed vehicles for the selected tow company.

J. If the tow is associated to an incident, the tow entry shall be associated to the incident in CAD.

3.2.7 Communications Supervision

Functionality required for the Communications Supervisors includes all of those shown above as required under Incident Receipt and Dispatching plus:

A. Capability to monitor any workstation on the CAD system.

B. Capability to disable any remote access workstation:

    1. By workstation identifier

    2. By IP address

    3. By operator logged on

C. Capability to disable any mobile data computer:

    1. By workstation identifier

    2. By IP address

    3. By operator logged on

D. Ability to interactively determine the workload and response times for dispatchers and call takers.

E. Capability of making changes to CAD system support files based upon applicable security.

F. Ability to display at least the ten most recent incidents occurring throughout the center's area of responsibility.

G. Capability of studying current system loading and system resource utilization.

H. Ability to accept automatic notifications of "user-defined serious" nature incidents.

I. The shift supervisor shall automatically be alerted to any of the following calls:

    1. Calls taking longer than a user-defined amount of time to enter

    2. Unit needs assistance calls

3. Incidents pending longer than a user-defined amount before dispatch

4. Other incidents of interest defined by call type

3.2.8 Integrated Map Display (IMD)

A. The CAD system must have a seamlessly integrated computerized map, based upon the State provided GIS.

B. The map and map display must be configurable for each PSAP, installation and agency.

C. Under normal operations, the maps displayed by default at each center shall be the maps covering the area for which the center is responsible and agency specified buffers extending beyond the coverage area.

1. The system shall provide the capability to display a map of other areas in the State upon user command.

2. It is highly desired that if the dispatcher wants to display areas beyond the coverage of the State provided map that the system has the capability to utilize and display internet maps such as Google or Bing.

D. The IMD must support the automatic display of units as derived from the AVL system.

E. The IMD will be displayed at each operator position.

F. A map-centric IMD, in which the GIS/Map is fully integrated with the CAD system, is preferred by the State. However, mapping component systems, in which a separate IMD application is linked to the CAD system, may be proposed.

G. The geofile supporting the CAD system must utilize the State's existing GIS.

H. The geofile may undergo processing to be "formatted" for use by either CAD or the IMD.

I. The map data must be easily imported/loaded from an ESRI geodatabase format.

J. A tool shall be provided that allows for easy importing updates to the map data.

K. The IMD system shall have the ability to display any type of spatially referenced

data.

L. The IMD shall refresh the screen within two seconds when new or updated data is received.

M. Pan and zoom – the system must provide a mechanism for panning and zooming around the area covered by the IMD.

N. Default zoom scales – the IMD shall provide a default set of zoom scales.

O. As users zoom in and out of these zoom scales, different (appropriate) information is displayed on the map. For example, when viewing the entire dispatch area, only major roads and freeways are displayed. However, when zooming into a neighborhood, building footprints, individual address numbers, street curbs, and other detailed information is displayed.

P. The system administrator must be able to modify the default geographic layers that are displayed at each zoom scale.

Q. The system must utilize advanced spatial analysis techniques to:

  1. Assign the closest appropriate unit with jurisdictional/area responsibility

  2. Calculate the shortest and quickest path (via streets and roadways, not straight-line calculations) for dispatched vehicles

  3. The path information or route shall be sent in text and/or graphic display to station printers, MDCs, and be available to dispatchers.

R. Display floor plans and site detail information for incidents.

S. Zoom and pan around the jurisdiction by use of mouse drag on slide bar or mouse click on appropriate directional icons.

T. Center on an address or location when the dispatcher selects the associated event.

U. Center on a specific unit if that unit or personnel assigned to that unit's portable emergency call button is activated.

V. Center on a specific event location when the dispatcher recalls the associated event from the CAD status monitor.

W. Display different layers of graphic information such as Law Enforcement, Fire and EMS jurisdictional boundaries and response zones, hydrant locations, unit locations, driveways, building locations, building footprints, etc.

X. Spatially aggregate incident information.

Y. The digital map must be able to display all or selected sets of validated locations entered into the CAD system.

Z. The map shall be able to display all boundary layers

AA.　　　The system must support a practically unlimited number of boundary types. Each boundary type shall be treated as a unique geographic layer.

BB.　　　Typical boundary file layers shall include:

　　1. Response areas

　　2. Jurisdictional (county, city, etc.)

　　3. Statistical (census tracts, census blocks, etc.)

　　4. Administrative (public areas, parks, etc.)

　　5. Commercial (mall, zoo, etc.)

　　6. Gated communities

　　7. Zip Code

CC.　　　Point Locations - The system must support a practically unlimited number of point layers. Each point location type shall be treated as a unique geographic layer. Examples are:

　　　　Landmarks: - Common names, building numbers, and landmarks, etc.

DD.　　　Fire hydrants - The hydrants shall be assigned specific X-Y coordinates that are linked to the closest street address. The file must also support detailed hydrant data, including hydrant/main size, flow, status, etc.

EE. The map must be able to display Iconic symbols:

　　1. Units and stations – The system must support multiple icons representing

marked and unmarked law Enforcement cars, ambulances, fire apparatus, fire hydrants, fire stations, schools, etc.

2. These icons shall be proportionately sized to match the map size. When the map is displaying the entire dispatch area, all vehicles shall be clearly displayed.

3. Each icon shall display the unit identification number, either within, immediately above, or immediately below the icon.

4. All structural icons must display the facility name (i.e., Fire Station 2, Avery Elementary, etc.) within, immediately above, or immediately below the icon.

FF. Incidents – The system must support multiple icons representing Law Enforcement, Fire, and EMS incidents.

GG.   Ideally, different icons will be used to display more specific information about the nature of the incident (i.e., gun for armed robbery, burning car for vehicle fire, a building with flames representing a structure fire, etc. if desired by the system administrator).

HH.   The system shall display the associated call's incident number along with the icon.

Vehicle clustering – The system must provide a "cluster" icon for multiple Law Enforcement and/or Fire and/or EMS vehicles at one site. Each icon must uniquely represent the presence at the site of multiple vehicles, and, by mouse click, cause a window to pop up which will display data about all vehicles represented by the icon.

A. Incident clustering - The system must provide a "cluster" icon for multiple incidents at one site. Ideally, different icons will represent multiple events and, by mouse click, cause a window to pop up which will display data about each incident represented by the icon.

3.2.9 DELJIS/NCIC Access

A. All authorized CAD Workstations shall have the capability of accessing the Transaction Information for the Management of Enforcement System (DELJIS)/NCIC via the CAD computer and performing all authorized DELJIS/NCIC functions.

B. The CAD system shall automatically send a query to DELJIS/NCIC for registration and wants and warrants checks when a license plate and/or person's name is entered.

C. Access to DELJIS/NCIC functionality must be controlled by sufficient security.

3.2.10 Hospital Recommendations

CAD shall recommend appropriate receiving hospitals for EMS transports. CAD shall recommend hospitals based on facility specializations, unit position, and transport route time. CAD shall facilitate the input of diverting hospitals to eliminate such hospitals from being recommended.

3.2.11 Transport Mileage

The system shall include a utility that provides actual mileage traveled by mobile units during specific operations (i.e., patient/inmate transports). The proposal shall explain how this function is accomplished and how Dispatch and field users will use it. The transport mileage shall be in tenth of a mile increments.

3.2.12 Contact Management Database

The system shall provide a contact management database that includes a telephone directory for personnel and agencies. Information stored in this directory shall include the name, agency, multiple telephone numbers, and types of telephone number (home, work, pager, cellular, email, websites, etc.). The system operator shall be able to retrieve the telephone information by complete or partial name or agency. Contact database access shall be available to MDC-equipped field units via the MDCS.

3.2.13 Geofile Requirements

3.2.13.1 Existing GIS Environment

The existing GIS environment is SQL based, ArcGIS 10.x SDE.. It is required that CAD vendors utilize this environment for the GIS component of their geofile.

3.2.13.2 Coordinate Based Geofile

The CAD system must support coordinate-based operations, as the State requires that the CAD system use advanced Geographic Information System (GIS) and spatial analysis techniques. State GIS data is referenced to NAD83 state plane Delaware meters. The agencies in the State will implement an Automatic Vehicle Location (AVL) system that is based on a Global Positioning Satellite (GPS) system that would be fully integrated with the CAD system.

3.2.13.3 Availability of GIS Tools

The proposal shall include all GIS tools necessary to create and maintain the spatial data infrastructure necessary to support the CAD system as described, and maintain additional data not maintained by the State's GIS staff. The ability to utilize the GIS tools must be controlled by role based security.

The CAD system's geofile processing module shall provide the capability to establish and maintain at a minimum:

    A. Response Zones

    B. Police Areas

    C. Street Networks (including center lines as well as all impedance data) including:

        1. Directionals (one-way)

        2. Speed limit

        3. Likely travel speed

        4. Road closings

        5. Overpass / underpass

    D. Railroads and Trails

    E. Law Enforcement Jurisdictions

    F. Fire Jurisdictions

    G. EMS Jurisdictions

    H. Waterways and other hydrographic data

    I. Point or Polygons identifying special locations

    J. Other geographical layers using typical mapping/GIS tools.

    K. The Vendor shall initially set up and create the required geographic information using data provided by the State, data available to the Vendor, and the geofile processing tools of the CAD system. However, once installed, the geofile shall be capable of being updated by accessing source GIS data without requiring assistance from the selected Vendor and without overwriting additional data unique to this application. The intent is for the system to access the SQL Spatial database source already maintained by the State's GIS Department.

3.2.13.4 Geofile Management System Requirements

The Geofile management system shall support the following (at a minimum):

3.2.13.4.1 Point within Polygon

The CAD system must support the capability to identify the location of a point (call for service or other police activity) and all relevant polygons within which it is contained. These will include at a minimum:

    A. Local Police, Fire and EMS jurisdictions and contact information

    B. Police Patrol Zone

    C. Fire Box Alarm Zone

    D. EMS Response Zone

    E. Municipality jurisdiction

3.2.13.4.2 Cross Street Identification

The CAD system's Geofile structure shall support the return of both cross streets when an address is given which fits into a valid address range.

3.2.13.4.3 Unit with Shortest Travel Time

The CAD system must be able to satisfy dispatch recommendations based upon the unit with the least travel time based upon the position of the units when the call for service is selected for recommendation and dispatch. This recommendation shall use the street network and all impedance data available.

3.2.13.4.4 Unit Routing

The CAD system and MDC system shall support the ability to identify the correct / fastest routing from a unit's location at the time of inquiry to another fixed point (call for service or other activity) at any given point in time. The system shall be capable of transmitting this data to the mobile data device of the units recommended.

3.2.13.4.5 Spatial Searches

The CAD system must support the utilization of spatial searches for identifying hazards, duplicate calls, etc.

3.2.13.4.6 Hyperlinking or Cross-referencing

The system shall support the hyperlinking or cross referencing of any unique geo-spatial item (point, street segment, polygon, etc.) to a specific file or files (drawings, text data file,

etc.)

3.2.13.4.7 Layer variation based on time of day / day of week

The CAD system shall support the automatic (or with minimum keystrokes) the changing of certain polygon layers based upon the time of day or the day of week.

3.2.13.5 Parcel Level Addresses

A. The Geofile of the CAD system shall support point level GIS information in the Geofile.

B. The CAD system must be able to use this information for address validation and to determine an incident's location.

C. This information is only available for selected locations. The proposer shall delineate any issues lacking a complete data set would cause.

3.2.13.6 Building Footprints

A. The Geofile shall support the storage of building footprints and other images (pictures of specific buildings) that are associated with specific addresses.

B. This information is only available for selected addresses. The proposer shall delineate any issues lacking a complete data set would cause.

C. The vendor shall specify the types of files its software can link to.

3.2.13.7 Assigning X, Y Coordinates to Validated Addresses/Locations

Once an incident location is entered into the CAD system, the location verification step shall add the coordinates of the incident's location to the incident record and display an incident icon on the integrated map display.

3.2.13.8 Duplicate Incident Detection

A. During incident entry process, the CAD system shall make a duplicate incident check based upon the location and/or coordinates of the incident.

B. If, during incident initiation, a potential duplicate incident in the area is found, the user shall be notified via a prompt and shown a list of the potential duplicate(s).

C. The CAD system must have a parameter (modifiable by the system administrator) specifying the distance in number of feet or similar function, from the location of the incident for duplicate incident detection.

3.2.13.9 Street Closures

A. The system shall provide the ability to easily close streets from a call taker/dispatcher or supervisor workstation.

B. The street closure shall immediately propagate to all other system users.

C. All geographic activity such as routing or recommendations shall immediately use the street closure as a factor in the system's algorithms.

3.2.13.10 Geofile Validation

Given the extreme importance of the geographic data supporting the CAD system the following requirements are in place:

A. The vendor will be required to supply each center with a CAD map analysis tool that will accurately identify any errors in the GIS basemap that will interfere with proper identification of the required units and with proper identification of the correct response districts.

B. The vendor will be required to work with the client to conduct an analysis of the GIS database and agree upon a course of remedial action.

C. The vendor will be required to work with the client to analyze the results of any remedial action taken to correct database errors and agree that such errors appear to have been corrected.

D. A formal "Go-Live" authorization will not be provided by the client until these steps have been taken and the results agreed upon by both the client and the vendor.

E. The vendor shall discuss any ability to report updates or other changes from the CAD environment to the State's GIS department.

3.2.13.11 GIS Licensing

The vendor shall identify any ESRI or client or server licensing requirements with the deployment of their solution.

3.2.13.12 Necessary GIS Data

The vendor shall supply a list of the GIS data necessary for the systems' operation, broken down by critical and enhanced data.

3.2.14 Automatic Vehicle Location

The CAD system shall include an Automatic Vehicle Location (AVL) Component. The AVL shall include:

    A. The ability to receive coordinate information from the mobile units and display this information on the IMD in near real time mode.

    B. The capability to filter unit display on the IMD to only those units that dispatcher is controlling.

    C. The ability to record historical data and provide "playback" capability.

    D. The capability to filter the playback to a single or specified group of units.

    E. The ability to configure and administer the AVL component.

    F. The ability to interface with other AVL systems, such as those used by private ambulance fleets or aeromedical providers.

3.2.15 Management Information System Reporting

    A. This section includes the general records management and management information system requirements of the CAD system for support of Law Enforcement, Fire and EMS operations. The following functional requirements for the compilation of necessary information to produce specified reports, tables, charts, graphs, and maps shall apply to all CAD subsystems and modules. That is, the same mechanisms described in this section shall be accessible to each module and subsystem in the CAD. Unless otherwise noted, these requirements shall apply equally to Law Enforcement, Fire and EMS activities.

    B. The intent of the CAD Management Information System shall be the compilation of data and statistical information regarding agency activities for decision support and administrative decision-making process.

    C. Vendor shall indicate the method utilized by, and where appropriate, provide sample outputs of how their CAD meets the requirements specified in the following subsections.

3.2.15.1 Data Storage Location

    A. Generally, all reports that will be discussed in this section will be created using data that is stored in the data warehouse portion of the CAD System as described throughout the RFP. This is done to ensure that reporting operations will not interfere with the operational characteristics of the CAD System.

    B. The vendor shall describe their proposed system's capabilities to utilize a warehouse type environment for the reporting components of the CAD system.

3.2.15.2 Report Generation

The CAD system shall include a set of report generation tools that provide the following minimum capabilities:

3.2.15.2.1 Report Printing and Display

    A. The CAD shall be capable of generating reports for both screen display and printing.

    B. All reports shall be capable of screen display and printing.

    C. The system shall be capable of efficiently exporting report data to a variety of file formats, including, but not limited to Microsoft Office Suite, Open Office and PDF.

    D. Any limitations shall be fully explained in the response to this RFP.

3.2.15.3 Menu Selectable

Reports in the CAD shall be menu selectable for content and generation parameters.

3.2.15.4 Command Mode

The report generator of the CAD shall also include a command mode providing for the generation of a report using selectable parameters from any system files or information not shown as menu selections including narrative, thus providing the capability of performing a data mining function.

3.2.15.5 Graphical Constraint Selection

The system shall include reporting based on graphical constraint entry. For example, the user shall be able to graphically choose an area (by choosing the area on a map display) and display CAD statistics for that area (Community Reports).

3.2.15.6 Inclusion of Agency Information

The report generator of the CAD shall allow for including Agency-specific information on reports, charts, graphs, and maps produced by the system. Such information includes, but is not limited to, report header data and text, Department Logos, etc.

3.2.15.7 Data Availability to Other Systems

    A. The report generator of the CAD shall have the capability of making CAD data available for other systems and PC applications, using the Microsoft DDE, OLE, ODBC, ASCII, or comparable standards for dynamic data exchange. Examples of

the types of software that would access the system's databases through DDE, ODBC, or other available techniques include Microsoft Access, Excel, FoxPro, Seagate Crystal Reports, etc.

B. Vendor shall fully explain any limitations and available functionality for meeting this requirement in its system.

3.2.15.7.1 Plain Text Search Capabilities

A. The CAD shall include a mechanism for completing plain-text searches. The system shall include the ability to search narrative information and all other fields for the occurrences of user specified words or partial words.

B. It shall be possible to retrieve or find all narrative information that contains combination of two or more words/phrases (e.g., find all occurrences of "red" and "Honda").

3.2.15.7.2 Report Narrative and Title

The CAD shall include a suitable mechanism for the entry of a unique report narrative and report title for each report. Although a default narrative and title shall be available, the State desires the capability of overwriting these defaults prior to the printing of any report.

3.2.15.8 Predefined Reports and Minimum Reporting Capabilities

The CAD shall provide a number of pre-defined reports, custom tailored to meet the needs of the local agency.

3.2.15.8.1 CAD Statistics

The system shall include the ability to produce counts and statistical information to be tracked and maintained on-line. The system shall maintain counts of CAD activity.

3.2.15.9 Comprehensive Reporting Tools

The CAD shall include comprehensive reporting tools in each module whereby personnel can create "pre-defined" reports. The available reports shall be robust, flexible, and easily initiated.

3.2.15.9.1 Automatic / Scheduled Initiation

The system shall provide the capability for all reports to be scheduled for automatic initiation by time of day, day of week, etc., and directed to any printer(s) accessible through the local agency's network.

3.2.15.9.2 Selection Criteria

It shall be easy to change selection criteria and parameters such as starting date and time, ending date and time, subset of data to be extracted and aggregated, etc.

3.2.15.9.3 Statistics and List Generation

The reports shall include summarizing and sub-total statistics, as well as list generation.

3.2.15.9.4 Advanced Reporting Functions

    A. The State is particularly interested in trend analysis, data aggregation, and other more advanced reporting functions.

    B. Vendor shall describe any of these advanced features that are available within its system.

3.2.15.9.5 Graphical Output Requirements

In addition to tabular reports, the system shall include the ability to either directly generate maps, charts and graphs or to generate maps, charts and graphs through easily invoked PC applications such as Microsoft Excel.

3.2.15.9.6 Sample Administrative Reports

Vendor shall identify the type of standard (pre-defined) reports available in the system and include sample administrative reports for review/evaluation by the State.

3.2.15.10 Exception Reports

    A. The CAD reporting system shall allow the setting of user thresholds for given activity identifiers.

    B. A daily, weekly, and monthly report governing exceptions that exceed the thresholds will be produced for each predefined (by the system administrator) department/division in each system. The purpose of these reports is to notify administrative personnel of occurrences within their departments/divisions and the earmarking of trends that would otherwise go unnoticed.

    C. Thresholds may be based on calculated results such as response time or time from call pick up to dispatch.

3.2.15.11 Web-Based Reports

The system shall also include Web-based reports. The Web-based reports shall be menu driven, available to all authorized users and once requested on-line, they shall be available for printing.

3.2.15.12 Maps

A. The CAD system shall include an easy-to-use map-generation function that is accessible from all relevant system modules.

B. System users shall be able to extract desired data, reformat it as necessary, and produce a map customized (tailored) without having to depend on programming or technical personnel or Vendor assistance.

C. Ideally, certain maps will be menu selectable with "step-by-step" instructions available to "walk the user" through the production of the map.

D. At a minimum, the system shall support either the direct production or, through an easily invoked (e.g., seamless) third-party mapping tool, the creation of the following general types of maps and geographic analysis

3.2.15.12.1   Thematic Maps

Thematic maps are maps of geographic boundaries (e.g., response zones, Police districts, neighborhood watch areas, fire box alarm zones, company areas, etc.) that cover the entire agency or geographic subset and that are color-coded or differentially shaded to reflect the data contained within each boundary. For example, a map showing the average response time in each Police district in an agency.

3.2.15.12.2   Automatic Pin Maps

Pin maps are maps displaying, through icons or other symbols, the location of specific occurrences in the center's area of responsibility or geographic sub-area. For example, a map showing the location of all fire dispatches that occurred in the agency during the last two months.

3.2.15.13 Spatial Data Aggregation

The system shall provide the ability to aggregate extracted information into more meaningful statistics. For example, generate crime rates by district statistics by aggregating individual crimes occurring in each district.

3.2.15.14 Trend analysis/forecasting

The system shall provide the ability to extract recent historical incident occurrences and to trend and pattern statistics and, when possible, to forecast future activity.

3.2.15.15 Cry Wolf

The system shall provide the capability to generate data files and reports to be provided to Cry Wolf to assist in the tracking and billing of false alarms.

3.2.16 CAD Data Conversion

The selected vendor will be required to convert and import data from systems provided by two different CAD vendors (Northrup Grumman and New World Systems). The conversion will include:

- Incident History

- Unit History / Activity

- Location alerts / Information

The state will extract and provide the data in a format designated by the selected vendor.

3.2.17 Personnel and Training Records Management

The State has a requirement for a subsystem to manage the training history and training requirements of center personnel. Ideally the system would provide the basic capabilities such as identifying training and certification requirements and then monitoring the status of center personnel against these requirements. The vendor shall outline the capabilities of their system in this area.

3.2.18 On-line Documents

3.2.18.1 System Documentation

A. The system shall provide all system documentation online so that any operator can retrieve information on the system operation, such as command syntax or field definitions.

B. This online documentation must be searchable based on topic or keyword search.

C. Information that references other sections of the documentation shall be linked so the operator can jump to the related area without having to perform another search

3.2.18.2 User Documentation

A. The system shall allow additional documentation to be added by each of the centers.

B. This documentation may include procedure manuals, notification lists, or user manuals for other systems.

C. The system shall provide the agency with the flexibility to allow searching of the user documentation and linked references similar to the system documentation.

D. If this requirement is met with the provision of a third party "help" system-authoring

tool, the specific tool shall be named in the proposal.

3.2.19 System Messaging

3.2.19.1 Operational Messaging

A. The system shall be capable of messaging between:

    1. Operator positions within this PSAP

    2. Operator positions in another PSAP supported by this CAD system

    3. Mobile units on the MDCS included with this proposal

    4. Administrative workstations attached to this CAD System

    5. Remotely or Web Connected CAD workstations.

    6. Operator positions at other PSAPs via the CAD to CAD interface

B. These messages may be single line or multiple lines.

C. The sender of the message shall be able to send the message to:

    1. A particular person

    2. A single position or workstation

    3. A role (i.e. dispatcher controlling sector 1 or dispatcher controlling this unit, etc.)

    4. A user classification (i.e., all dispatchers)

    5. User defined groups

    6. Groups of classifications, or all system users

D. The system shall provide a directory of persons, positions and groups available to be messaged.

E. The sender shall have the capability to request a read receipt if the message is to only one user.

The system shall not permit the user to request a read receipt if the message is to be routed to multiple positions or units.

F. The recipient of the message shall be provided with an audible and visible alert when the message is received.

G. The audible and visible alerts shall be user definable.

H. The system shall provide the capability to allow a recipient to:

  1. Save the message

  2. Reply to the message with minimal key strokes

  3. Forward the message to recipients as described above

  4. Direct the message to a printer

  5. Add the message to an incident

I. The content of the message will include:

  1. The sender's identification

  2. The sender's computer ID

  3. The date and time sent

  4. The message itself

J. Transmission and receipt of a message shall be logged to the system history log file.

K. The content of the message shall be logged to the system history log file.

L. If a message is routed to a specific individual or position and the individual or position is not logged on the system the sender shall be notified and given the option to queue the message for future delivery.

3.2.19.2 Administrative Messaging

A. The system shall be capable of processing administrative messages. Administrative messages are not as time sensitive as the operational messages, but may also be

several lines long.

B. Senders shall be able to send messages to:

1. A particular person

2. A single position or workstation

3. A role (i.e. dispatcher controlling sector 1 or dispatcher controlling this unit, etc.)

4. A user classification (i.e., all dispatchers)

5. User defined groups

6. Groups of classifications

7. All system users

C. Messages shall be accepted regardless of whether the recipient is logged onto the system at the time they are sent. An interface to the agencies' E-mail server may be utilized to fulfill this requirement, but operators must be able to access their electronic mail from any system computer.

D. It is desirable for the administrative messaging capability to interface with the agencies' E-mail server using SMTP compliant mail / message exchange, so that system operators may send messages to other staff members.

E. The system shall allow for administrative messages to be sent to station rip and run printers and administrative printers by individual printer and groups such as battalion / dispatch group / etc.

3.2.19.3 Messaging Gateway

The State would like to provide operational messaging from users of the CAD systems and users of other CAD systems in use in the State. The vendor shall provide a description of how this might be accomplished using their proposed system.

3.2.20 Remote Access

3.2.20.1 Police Stations

Each of the Police Stations serving the various agencies across the State shall be provided access to the system through a browser based user interface. The CAD systems shall be able to support access for up to 300 concurrent remote CAD workstations. This access will

be achieved through leased-line LAN/WAN or via the internet with a VPN. The computers in the stations shall function primarily as administrative workstations or limited access workstations as described in Section 3.2.3.1of this RFP. CAD security shall limit access to the system and provide access only to those functions that have been authorized. The authorized functions shall be user definable by the system administrators and include functions such as displaying incident information, displaying maps, staffing Law Enforcement units, or sending operational messages.

3.2.20.2 Fire / EMS Stations

Each of the Fire and EMS Stations serving the various agencies across the State shall be provided access to the system through a browser based user interface. The CAD systems shall be able to support access for up to 300 concurrent remote CAD workstations. This access will be achieved through leased-line LAN/WAN or via the internet with a VPN. The computers in the stations shall function primarily as administrative workstations or limited access workstations as described in Section 3.2.3.1 of this RFP. CAD security shall limit access to the system and provide access only to those functions that have been authorized. The authorized functions shall be user definable by the system administrators and include functions such as displaying incident information, displaying maps, staffing Fire/ EMS units, or sending operational messages.

3.2.20.3 Administrative Offices

Access to the system shall be provided for Law Enforcement, Fire and EMS administrative offices. This access will be achieved through the State's existing LAN/WAN, leased services or the internet with a VPN connection. If possible, the application to access the system shall run on the existing personal computers located in these offices and utilize a browser interface. CAD security shall limit access to the system and provide access only to those functions that have been authorized. The authorized functions shall be user definable by the system administrator and include functions such as displaying current incident information, current staffing information, or a snapshot of the status monitors.

3.2.20.4 Dynamic Locations

There are situations that arise that will require members of management from the agencies supported by CAD system to access the system via their laptops from non-defined locations. The system shall provide the capability for personnel to access the CAD system via the internet with the use of a Virtual Private Network. Once connected, these laptops or workstations shall have capabilities similar to those identified in Section 3.2.3.1. The vendor shall explain how the systems can provide this capability.

3.3   MOBILE DATA COMPUTER SYSTEM (MDCS) REQUIREMENTS

3.3.1 Overview

A. Police, EMS and Fire agencies have identified the potential benefits that a mobile data solution can provide. This section provides the identified needs and requirements for mobile computing, along with the associated interfaces and system functionality. The requirements include providing public safety personnel deployed

in the field with access to national, state, and local crime databases and other relevant Law Enforcement, Fire, and Emergency Medical databases, real-time messaging, office automation, and other support for routine daily functions.

B. The vendor will not be responsible for providing any mobile data computer hardware (including mobile devices, modems, networks, etc.) that is required for the system. Mobile data, operating system software, databases and associated services included in the response to this RFP shall be separately priced.

3.3.2 Law Enforcement Agencies

A. The goal of the MDCS for the Law Enforcement Agencies is to provide officers with additional information in the field, to improve officer efficiency, and to increase the safety of the environment that officers work in. Access to State (DELJIS) and federal (NCIC) databases, as well as the ability to query other local databases for wants, warrants and stolen vehicles, along with the ability to interface with CAD and provide coordinate location data for AVL are all critical functions. This will enable police officers to complete functions in the field that are currently only available to them in the office.   Access to this additional information will allow police officers to become more independent, more efficient, and improve the safety and effectiveness of officers in the field.

B. In addition to the benefits described above, direct access to information by officers in the field will also result in a significant reduction in voice radio traffic, reducing workload on dispatchers and teletype operators. Electronic messaging between officers, deputies, supervisors and dispatchers will increase the level of communications that takes place. The reduced voice traffic improves the efficiency of the operation, as well as allows more critical communications to take place in a timely manner.

C. The MDCS shall also include software tools that allow field personnel to track their time and self-initiated activities. Tools shall be provided to field supervisors to help them monitor, enhance, and summarize their staff's activities and to measure productivity.

D. Although the primary device utilized to access the mobile data system will be mobile data computers, the vendor is requested to provide information regarding the use of smart phone devices.

3.3.3 Fire and EMS Departments

A. The goal of implementing the MDCS in the Fire and EMS Agencies is to make personnel more efficient by extending specific computer capabilities into the field. Mobile Data Computers will provide the ability to enhance communications between dispatch personnel and units enroute or on the scene of an incident. MDCs will also enable the units to maintain electronic copies of standard operating procedures,

hazardous materials databases, building layouts, and maps of the area all stored locally on the computer. The system shall provide the capability to automatically track the location of apparatus via the Automated Vehicle Location System, and enable personnel responding to calls for service to update their status using digital rather than voice communications.

B. As with the Police Department, the same management reports and tools as described above shall be available.

3.3.4 Mobile Device Quantity Pricing

The vendor shall provide quantity pricing and pricing break points for the mobile data clients. (For example the vendor will provide the per unit price for 100 – 150, 151- 250, etc.)

3.3.5 Functional Requirements

The MDCS shall meet the following functional requirements:

3.3.5.1 Scalable Functionality

The mobile data environment across the State can be very mixed, and the level of bandwidth provided can vary widely. The vendors shall explain in detail how their MDCS provides the ability to scale the functionality of the MDCS based upon the bandwidth available.

3.3.5.2 Windows Functionality

The system shall support the use of:
A. Cut / copy / paste

B. Keyboard functions

C. Custom toolbars / macro support

D. Windows-style GUI

E. Drop down menu pick lists for all fields that support a predefined set of user entries

F. Data shall be capable of being imported or exported from other applications such as Microsoft Word or Excel.

   1. The Vendor shall describe how the system meets this requirement and any exceptions or clarifications that may be required as a result of host system limitations.

G. Function keys can be added, deleted, reassigned, and configured by each local

system administrator.

H. The application shall support use of a touchscreen for quick and direct access to functions.

I. Buttons and icons will be sized for effective use with a touchscreen display.

.

J. A common user interface methodology shall be supported across different user interface screens. Each functional screen shall have, to the greatest extent possible, the same look and feel as the other functional screens provided.

3.3.5.3 Data Validation

A. The MDCS shall validate entered data.

B. The system shall not allow the input of incorrect data (i.e., date of February 30, marking en route twice, etc.).

C. The MDCS shall include edit rules to assist in the capture of accurate data.

3.3.5.4 Field Reference Materials

The MDCS shall provide reference document with hypertext access to field personnel. Typical field reference materials include:

A. Departmental policy manuals and Standard Operating Procedures (SOPs)

B. State and local statutes

C. Phone numbers (reverse look-up)

D. Contact Information

E. Hazardous Materials

F. Preplans

G. Maps, building layouts, malls, apartment complexes, etc.

3.3.5.5 Application Requirements

A. The client application shall run continuously even when operating other applications

in order to facilitate real-time wireless data network monitoring.

B. The client application shall be able to be selected by a function key / pointing device when operating in any other mode.

C. The system shall be designed to support the transfer and display of images (i.e. attachment of a digital picture, receipt of a mugshot or photograph, transmit fingerprints or accident scene diagrams) with appropriate data collection device and application.

D. The system shall facilitate field units to prepare / access incident reports, premise inspections, etc., on hand-held portable devices.

E. The applications shall support text-based searches of the data local to the MDC.

F. Mobile and portable mobile data system functionality shall be provided.

G. Provide the ability to print from the vehicle to a remote printer.

H. The system shall support a portable PDA type of device for undercover, bike, or other non-vehicle based users.

I. The system shall provide an emergency button function that will automatically send the unit identification and location along with a high priority message indicating that assistance is needed. This message shall be configurable to be sent to the dispatcher and all units or units in a given area.

J. All applications shall require the use of a user ID and password to gain access to the application. A single login is desired using existing user name and password accounts (cached locally). The login shall provide access to all authorized systems based on the user's security and appropriate permissions.

K. User privileges and system access shall be controlled from the host server, and can be enabled or disabled based on the user's needs.

L. The database for all mobile data information shall be ODBC compliant.

3.3.5.6 Alerts

A. All audible alerts shall allow for unique configurable sounds for each functional module and type of alert.

B. All audible alerts shall be able to be muted and subsequently restored as needed.

3.3.5.7 Encryption

The data exchanged over the air and stored on the MDC shall satisfy Department of Justice and State security requirements, including a minimum of 128-bit end-to-end encryption.

3.3.5.8 Screen Illumination

A. The client application shall be designed to operate in a reduced light condition that allows information to be readable but does not illuminate the user or the vehicle.

B. The display shall also be able to be readable in sunlight conditions.

C. Users shall be able to easily adjust screen brightness for specific conditions.

D. The Vendor shall provide a remote management solution to permit 802.11 access points to provide critical operating system updates, virus definitions, and software upgrades without the need of physically touching each device.

E. This solution shall be able to provide the MDCS administrator the ability to manage these updates remotely and record successful transactions.

3.3.5.9 Automatic Vehicle Location

A. Integrated GPS AVL shall provide accurate positional data for all field units. Transmitted data shall include vehicle-tracking information for maintenance purposes.

B. Personnel with appropriate security or role shall be able to see (through AVL system) where their units are located and to be able to ascertain their statuses.

C. The MDCs shall have in-vehicle mapping, showing unit location and call location.

3.3.5.10 Queries

A. The application shall support all current DELJIS transactions available to mobile devices.

B. The system shall support all NCIC 2000 requirements

C. The system shall provide the capability to easily move information in query returns to the DELJIS Law Enforcement Investigating Support System (LEISS).

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D. The vendor shall discuss how the system would support moving or importing query return data into fields into the LEISS.

E. To the greatest degree possible, all displayable response data received by the client application from an interfaced MDCS shall be parsed into fields and presented to the user in a formatted display such that it is in an organized and easy to read format.

F. The vendor shall discuss how CAD system information provided to the MDCS can be moved or imported into the LEISS.

3.3.5.11 Operator License Scanning

A. The system shall support the reading of both magnetic stripe and bar coded driver's licenses.

B. Data captured from the scanning of a driver's license shall be automatically inserted into forms in the mobile application such as DelJIS Queries.

C. Data captured from the scanning of a driver's license shall be automatically inserted into forms in the LEISS application that will be operating on the MDC.

3.3.6 Specific Operational Requirements

This section contains the detailed specifications for the MDCS.

3.3.6.1 Message Switch

A. The MDCS shall support the interconnection of existing computer systems with the MDCS for the purpose of enabling mobile user transactions. This functionality is based upon standard network architecture, and it is envisioned that it will be provided using a component that will be referred to in this document as a Message Switch. Regardless of the name of the device, the requirements in this section cover the anticipated functionality. The requirements contained herein are specific to the Message Switch. However, the Vendor shall be aware that if any requirements as stated in the other sections expand upon the required capacity, functionality, or general operation of the Message Switch, they shall be incorporated.

B. Vendor shall be aware that any costs associated with computer hardware, operating system software, databases, and associated services included in its Proposal shall be separately priced.

3.3.6.1.1 Message Switch Interfaces

A. The Vendor shall provide an interface or interfaces to the CAD system that shall support communications with field users for dispatch, unit status reporting, messaging, unit GPS location reporting, and CAD inquiry transactions.

B. The Vendor shall provide an interface or interfaces to the RMS that shall support communications with field users for RMS inquiry transactions and field report upload.

C. The CAD system shall interface to DELJIS, the National Crime Information Center (NCIC), and the National Law Enforcement Telecommunications System (NLETS).

D. This interface shall be a computer application to computer application interface using the State's latest approved data communications technology, equipment, and interface protocols.

E. The Vendor shall provide an interface to the e-mail system (configurable by a system administrator to allow/disallow users) that shall support mobile user e-mail transactions.

F. This interface shall support e-mail exchange over the agency LAN with e-mail systems as well as between mobile users.

G. E-mail shall be capable of being allowed at all times and limited on e-mail size rather than network speed. If larger than 10 kB (for example), e-mail would only be downloaded if high-speed network is available. CAD shall always have bandwidth priority.

H. The Vendor shall provide an interface to the Intranet (configurable by a system administrator to allow/disallow users) that shall support mobile user browser access to Intranet server resources using a provided mobile client web browser. Intranet traffic shall be capable of being allowed at all times, with CAD being given bandwidth priority. Accessing the Intranet shall not suspend any other mobile application communications but shall allow concurrent communications.

3.3.6.1.2 Message Switch Redundancy (Separately Priced Option)

The Message Switch shall be offered in a redundant configuration providing automatic fault / failure detection and switchover. The redundant configuration shall be offered as an option.

3.3.6.1.3 Message Switch General Transaction Logging

A. The Message Switch shall log all message transactions in a database with an

ODBC compliant interface.

B. A minimum of ninety (90) days of transactions shall be maintained online.

C. The Message Switch message log entries shall include the date, time, message type, and mobile unit source or destination ID in addition to the message body or content.

D. To save storage space, file attachments need not be logged, but a record of the transaction shall be logged including the date, time, message type, mobile unit source or destination ID, and an indication of the file transferred.

3.3.6.2 Security

The system must meet CIJIS Security Policy requirements for Advanced Authentication. Advanced Authentication is the term describing added security functionality, in addition to the typical user identification and authentication of login ID and password, such as: biometric systems, public key infrastructure (PKI), smart cards, software tokens, hardware tokens, or "Risk-based Authentication" that includes a software token element comprised of a number of factors, such as network information, user information, positive device identification (i.e. device forensics, user challenge/response questions.

3.3.6.2.1 Screen Blanking

A user-controlled screen blank-out mechanism shall be included in the MDCS. This feature shall be easily invoked and turned off.

3.3.6.2.2 Login

The MDCS shall meet the security requirements of the State and a public safety system. The National Crime Information Center (NCIC 2000) requires that each user accessing their system and databases be certified and have a unique user ID and encrypted password. All data exchanged over the wireless system shall be encrypted "end-to-end" with at least 128-bit encryption excluding any of the encryption schemes found to be vulnerable by industry standard groups. Must meet FIPS Publication 140-2 for "Security Requirements for Cryptographic Modules." Standard data processing security measures shall be implemented in the MDCS including password complexity shall be configurable by the system administrator and a tool shall be provided for verification of password:

A. Password blanking on input

B. System lockout after a specified number of failed login attempts, with automatic notification to the System Administrator which will include date, time, and MDC number. The system administrator will control the number of failed log in attempts prior to lockout.

C. Ability for users to change their passwords

D. The MDCS shall be able to force users to change their passwords at a prescribed time interval (within a maximum of 90 calendar days). The system administrator will control this feature, including the time interval.

E. Provide a time-out and/or lock-out capability to minimize the problem of sensitive information being captured by a criminal who commandeers a Police or Fire vehicle and MDC.

F. Minimum password length of eight (8) characters

G. Not be a dictionary word or proper name

H. Not be the same as the User ID

I. Not to be identical to the previous ten (10) passwords

J. Due to specific requirements for EMS, Fire and Police, different login screens may be required for the different departments.

K. A single login will log users into all other systems requiring login functions.

3.3.6.3 Scanning and Bar Coding

In order to increase officer efficiency, the MDCS shall support the following scanning and optional bar coding capabilities. It shall be noted that different hardware scanning devices are required for the different types of scanning capabilities described below.

3.3.6.3.1 Magnetic Strip Reader

The Magnetic Strip Reader shall provide the ability to load driver's license information into appropriate data entry screens by scanning the magnetic strip included on the driver's license. The information shall be parsed and automatically populate citation and field reports as appropriate.

3.3.6.3.2 Fingerprint Scanning

The Fingerprint Scanning shall provide the appropriate fingerprint scanning hardware and applications in the vehicle to provide the following capabilities:

A. Scan (capture) fingerprints in the field.

B. Load the captured fingerprints into the currently open form(s).

C. Transmit the form(s) along with the scanned fingerprints to a central application / database.

3.3.6.3.3 Bar Code Scanning (Separately Priced option)

The bar code scanning shall provide the ability to read information into appropriate data entry screens by scanning the bar code label. The information shall be capable of being parsed to automatically populate reports as appropriate.

3.3.6.4 Digital Images

The application shall facilitate the capture of digital images from vehicles equipped with digital cameras. The captured images shall be able to be associated with the currently open forms. The MDCS shall provide the capability of sending digital images to a distribution list.

3.3.6.5 Switching Between MDCS Applications

The MDCS shall allow users to easily and quickly switch back and forth between system applications. MDCS users shall be able to switch between entering data into reports and forms, to handling emergency events, to retrieving query responses, to initiating messages, to updating their status, to reviewing messages, etc., without losing any information that has been entered into the system.

3.3.6.6 Network Time Server Synchronization

A. Date and time on the MDCS units is critical to a number of processes. For example, vehicle status updates, report status changes, message sent and message received time stamps, etc., shall all be synchronized between the various MDCS units in the system for the date and time stamping to be useful. It is necessary for the MDCS to synchronize the date and time on all system MDCS units. The MDCS servers and/or message switch will obtain the current date and time from a universal time source (netclock, WWVA, etc.). The current date and time shall then be used to synchronize all of the MDCS units logged onto the system.

B. Each MDCS unit's system clock shall be updated based on the time source date and time. The synchronization shall occur upon successful login and, thereafter, once per locally-specified time interval (e.g., every five minutes).

3.3.6.7 Time Tracking Functions

The MDCS system shall provide a time tracking form including the following data entry fields and pass the entered information to the CAD / RMS systems:

A. Validated activity code

B. Narrative description of the activity and remarks

C. Location / address of the activity

D. Case / citation numbers associated with the activity

E. Beginning odometer reading

F. Ending odometer reading

G. Total time worked (hours: minutes)

H. Total leave / lost time (hours: minutes)

I. Total overtime worked (hours: minutes) and reason for overtime

J. The beginning and ending date and time for each activity shall be time stamped automatically by the system. In case the computer-generated time stamps are wrong (i.e., the officer forgot to enter his / her activity into the computer and is documenting it after the fact), an additional set of beginning and ending date and time fields will be available for users to correct the system-generated time stamps.

3.3.6.8 Context Sensitive Help

A. The MDCS system shall include a context sensitive help system. The help screens shall be context sensitive and available by mouse or keyboard command.

B. The help program shall contain a search engine, hypertext links, hierarchical contents, and the ability to move back and forth through previously viewed help windows.

C. A help system shall be local to the device to reduce bandwidth utilization.

D. Updates to the help system shall be accomplished via the network at a low priority or while in the vicinity of a high-speed access point.

3.3.6.9 Queries

A. The Client Application shall provide formatted data entry screens for each type of CAD, RMS, and DELJIS inquiry type required by this RFP.

B. The message switch shall provide the capability to perform cascading queries, where the results of a response may be used to initiate another query.

C. Query responses shall be subject to the security of the user, and shall only provide information available to the user.

D. The MDCS will support the following law enforcement query capabilities compatible with NCIC 2000 and data mining functions.

3.3.6.9.1 Vehicles

A. The system shall provide vehicle queries based on:

   1. Tag, state, year (Would also like the capability to query local databases for partial tag data.)

   2. Vehicle Identification Number (VIN)

   3. Decal number, state and year

B. The system shall provide a multiple tag query that retrieves owner information for a series of vehicles. Based on::

   1. Tag, Year, State

   2. VIN

C. The system shall provide the capability to query on Boat registration number.

D. Ownership. The system shall retrieve all cars owned by an individual based on:

   1. Name, age / date of birth, gender, race

   2. Driver's license number and State

E. The MDCS shall automatically check the returned owner in DELJIS, NCIC, DMV. A mechanism, however, shall be provided to only check if the vehicle is wanted or to obtain the registration information without checking the vehicle's owner against the indicated databases.

3.3.6.9.2 Persons Query

A. The system shall provide persons queries based on:

   1. Name, age / date of birth, gender, and race

   2. Driver's license number and State

B. The query shall go to DELJIS, NCIC, and the LE RMS and , retrieve data on all vehicles owned by an individual based on:

    1. Name, age / date of birth, gender, and race

    2. Driver's license number and state

C. The system shall provide the capability to retrieve data on articles owned by an individual based on:

    1. Article type and serial number

    2. Owner applied number

D. The query shall go to DELJIS, NCIC, and the LE RMS and the article query shall return the current owner of the article and its status (stolen, recovered, etc.).

E. A query shall return involvement history for a person based on:

    1. Name, social security number, age / date of birth, gender, and race

    2. Driver's license number and state

    3. Query returns a list of involvements in LERMS related to the specified person. Query goes to LERMS database.   The query returns, for example, a list of cases in which the specified individual was involved and the nature of that involvement (victim, suspect, etc.).

3.3.6.9.3 Articles Query

A. The system shall provide a Gun query based on serial number. The system shall query to go to DELJIS and NCIC.

B. The system shall provide an Article query based on article type and serial number. The system shall query DELJIS, NCIC, and the LERMS.

C. The gun or article query shall return a list of involvements in the LERMS related to the gun or article.

3.3.6.9.4 Address Information

Items in this section shall also be available to Fire and EMS personnel.

A. Premise History. A query generated against the CAD database detailing recent dispatch activity occurring in a specific address / location.

1. At least ten of the most recent, high priority CAD events occurring at the premise will be displayed on the MDCS unit. For example, if an armed domestic violence call is followed by ten, more recent, minor calls (e.g., false alarms); the armed domestic violence call will be one of the ten CAD events displayed on the MDC.

2. The State will specify the exact format and content of the report.

B. Hazard / Alert Query. A query generated against the CAD database that returns all the hazards / alerts at or near a location / address.

C. The each agency will specify the radius to be searched in fractional miles. The system will return all of the hazards / alerts within the specified search radius.

D. The hazard / alert information will be sorted by priority and return up to ten hazards / alerts at a time.

E. The following information will be displayed: hazard / alert type, location, date, and contact information.

3.3.6.9.5 BOLO Queries

Any query that is run will specifically query the BOLO file for matches. The system shall also permit direct queries to the BOLO files.

3.3.6.9.6 CAD System Queries

MDCS units shall have access to the CAD database. Responding units need information to perform their duties. The State will specify the exact format, field contents, and default field values for the queries.

The queries described below are provided "on demand." That is, the MDCS display shall only update the information when the query is re-initiated. Selected queries (i.e. Units on duty) will be required to refresh automatically for a configurable period of time.

The Successful Vendor shall provide the following CAD queries consistent with the specified design:

A. Units on duty - a list of all units currently on duty and their status, location, and nature code (if assigned to call), sorted by District.

B. Pending calls for service - available only to a subset of designated users, this query will list all calls for service that have not yet been assigned, with their priority, nature code, and location.

C. Calls currently being worked - available only to a subset of designated users, list all active calls for service that have been assigned, with their priority, nature code, current status, and location. Query shall default to listing all active calls within the user's agency or sector. However, the system will allow users to retrieve all active calls in the jurisdiction. These events need to be automatic, event driven updates for Fire and EMS, and not polled. Availability shall be configurable individually by user department. Fire and EMS does not generally restrict view by sector, etc.

D. Unit history - available only to a subset of designated users, a report detailing the specified unit's activity from designated start time until designated end time.

E. Call for service summary - a report containing summary information for a call for service. The State will specify the exact content and format of the report. The report can be obtained by entering a specific incident number, an address / location, or an involved person's name.

F. Calls for service detailed report - a report available only to a subset of designated users that displays all of the information including comments and units associated with a specific CAD event.

G. Responses containing officer safety information shall have both visual and aural alerts that are clearly distinct from normal system responses and alerts

3.3.6.9.7 Hazardous Material Query

A. The MDCS shall provide a query to return hazardous material information and hazard mitigation procedures based on the latest edition of the North American Emergency Response Guidebook. The query shall go to a national Hazardous Material database set up to provide this information.

B. The ability to receive CHEMTREC information directly on the mobile computer is desired, either via routing of faxed information or by a link to CHEMTREC, which will be accessible from authorized MDCS units.

3.3.6.9.8 Query Prioritization

A. The random nature of public safety events can result in a number of query responses being returned to an MDCS unit simultaneously or nearly at the same time. There will be a priority code assigned to each type of query. The MDCS shall use this priority to queue the most "important" query responses to the user first, with other, less important responses being routed to the user after the more important responses are reviewed.

B. The prioritization process shall take all pending actions (messages, e-mail, dispatch assignments, query responses, etc.) into account. All of these events shall have a

priority code assigned to them and the code shall be used to route the events to the user in a logical fashion.

3.3.6.10 Messaging

The MDCS shall include a real-time message system that provides the following functions:

A. Message data shall be encrypted (minimum 128 bit encryption) and compacted.

B. Messaging shall not be limited to a specific agency (ability to message to personnel in other agencies)

C. Group assignments described below shall be dynamic. The MDCS system shall coordinate with CAD to find all units currently belonging to a group. For example, a list of Police vehicles in a specific zone or sector shall be an actual representation of the currently assigned units in the zone or sector, rather than a predefined assignment of vehicles to zones and sectors.

D. Free format message entry / edit screen

E. Ability to send / reply / forward a message from an MDCS unit to one or more MDCS units. The MDCS shall provide each recipient with the message owner's login ID name and vehicle / unit number. The unit selection shall be from a drop down list of zones and currently logged in units for each zone. Reply messages shall automatically be sent to the unit(s) initiating the message.

F. Ability to send / reply / forward a message to predefined groups of MDCS units. The MDCS shall provide each recipient with the message owner's login ID name and vehicle / unit number.

G. Ability to send / reply / forward a message from an MDCS unit to one or more CAD operators either by name or workstation ID. CAD message recipients shall be provided with the message owner's login ID name and vehicle / unit number.

H. Ability for CAD users to send / reply / forward messages to one or more MDCS units. The MDCS shall provide each message recipient with the message owner's CAD position number and login name.

I. Alerts MDCS users that they have a message pending

J. Messages shall be sent to currently logged-in units / users. The MDCS will gather information on which units and users are currently logged in to the system. This information shall be presented to the MDCS user in a drop-down list or similar method for selection of message recipients.

K. All messages shall be logged, including who sent the message, the date and time the message was sent, the message content, and if the message was successfully delivered. Such logs shall be maintained online for no less than 90 days, and allow for off-loading to CD, tape, or other storage media for permanent retention. The log shall be searchable by date-time range, specific user(s), partial / complete message contents, or a combination of these factors.

L. Shall provide the capability to send and receive messages to mobile units and CAD from any Intranet-enabled personal computer. Requires a valid user ID and password.

M. When a unit receives a positive hit confirmation from a vehicle, person, or other specified query, a configurable message shall be sent to the dispatcher and all units or units in a given area.

N. The system shall have a message prioritization and organization to arrange messages according to importance, time / date, or local grouping.

O. The system shall have an inbox where messages are stored; messages are not deleted when new messages come in.

P. Users shall have access to the State Intranet and mobile messaging, but access to the World Wide Web or Internet mail will be configurable by user to limit access to selected sites for authorized resources only.

3.3.6.11 Dispatching Functions

The MDCS shall be fully integrated with the CAD system. By integrating the MDCS with the CAD system, public safety personnel shall be able to more efficiently perform many dispatch-related functions directly in the field without relying on voice communications. Dispatched calls shall automatically be logged in the activity report.

MDCS dispatch functions fall into the following broad categories:

A. Silent dispatch - A vehicle's MDC shall be a full participant in the dispatch process. When a dispatcher assigns a unit equipped with an MDC and logged into CAD, all relevant information regarding the event and the assignment shall appear on the MDC.   Software shall automatically update calls if selected fields have been updated. New messages shall provide a configurable audible and visible notification to the user.

B. Call acknowledgement

C. Enroute

   D. Self-initiated dispatch - an MDC-equipped unit happens upon an event and dispatches / assigns itself to the event. The unit shall inform CAD that it is responding to the event by sending CAD a digital message specifying the event location, nature code, and other relevant information.

   E. Self Assignment even if not dispatched to the call. The ability for a unit to assign itself to a pending call or active call.

   F. Tracking status - MDC-equipped vehicles shall use digital messages to inform CAD of changes in their status (e.g., en route, on scene, available, etc.).

   G. Updating emergency event records - the CAD system shall maintain an activity log on all events related to emergency incidents (e.g., comments from the scene and witnesses, unit activity, etc.). MDC-equipped vehicles shall use digital messages to update CAD's Call for Service (CFS) activity log records.

   H. Accessing information from CAD - queries shall be available to MDC-equipped vehicles to access emergency incident and apparatus related information from CAD. It is desirable to be able to double click the incident to pull up additional details, and to use function keys such as Forward and Backward to quickly progress through the information.

3.3.6.11.1 Silent Dispatch

The CAD system shall automatically send event information to dispatched MDCS units. This type of dispatch is referred to as silent since the information is not necessarily broadcast over the radio. The silent dispatch may be supplemented by voice communications as determined by the department's SOP.

   A. Silent dispatch messages shall receive a very high priority on MDC-equipped units. MDCS users receiving a silent dispatch shall be notified via a unique visible and audible alarm that they have a pending dispatch message.

   B. Users shall be able to easily switch from any application they are running on the MDC to view and respond to the dispatch message without losing any data.

   C. Silent dispatch messages shall contain all of the relevant information about the event, including:

      1. Call taker's name and CAD position ID

      2. CAD position ID and login name of dispatcher assigning unit to the call

      3. Other units assigned to the call

4. Location

5. Nature code

6. Priority

7. Involved individuals and vehicles

8. Phone number

9. Comments

10. Pre-plan information (slide and/or tactical information) and any operating procedures associated with the specific event or location

11. Premise information that includes business name, owner information, alarm company name, after-hours contact information, and other relevant premise information

12. Hazards associated with the event and its location

3.3.6.11.2 Self-Initiated Dispatch

A. A form shall be available in MDC-equipped units that allow them to initiate an event (e.g., an officer spots a drunk and disorderly individual and dispatches him or herself to handle the situation).

B. All self-initiated dispatch events shall be routed to the pending call area of controlling dispatchers.

C. The controlling dispatchers shall be prompted to assign backup units and follow other SOPs as contained in the CAD system.

D. If the officer did not announce the self-initiated dispatch over the radio, the controlling dispatcher shall have the ability to send the information to a group of units, in addition to the ability to announce it.

The following minimum data entry fields shall be included in the form:

E. The event nature code (e.g., accident, disorderly individual, traffic stop, etc.) with a default priority that may be overridden by the controlling dispatcher.

F. Location of the event (shall be automatically filled in for AVL-equipped vehicles). The user shall be able to override the AVL-provided location in the event that the self-initiated dispatch is not located at the current location of the vehicle.

G. Narrative description

3.3.6.11.3 Self Assignment

The MDCS shall provide the capability for units to review pending calls for service and under specific rules assign themselves to a selected call. The vendor shall explain how their system would permit this and what rules can be put into place regulate this function.

3.3.6.11.4 Status Tracking

A. The MDCS shall provide an easy-to-use mechanism for field units to update their status digitally. Soft or hardware buttons shall be easily used by a person in a moving vehicle with gloves on.

B. The CAD statuses for the EMS, Fire and Police Departments shall be supported by the MDCS. In all cases, the statuses available on the MDCS shall be consistent with the statuses available in the CAD system as specified in Section 3.2.6.12.

C. Vendor shall be responsible for ensuring that all MDCS statuses are also available in the CAD system.

D. The MDCS shall clearly inform users whether their status update was completed successfully, accept all status updates from CAD, and display system times for each status change.

E. The MDCS shall notify all units assigned to a call of the changed status of any other units assigned to the call.

3.3.6.11.5 Police Statuses

The following statuses shall be available to Police users in the field using a mobile computer. Additional status messages shall be configurable by a system administrator for system-wide use.

A. Out of service with indication of type, including data fields for entering the reason to be validated against a locally-maintained table and location. The location shall be validated against the geographic reference file.

B. Off-duty

C. On-duty (unit / officer becomes available for their shift) with an indication of type and a data entry field for indicating the officer's current location. The location shall be

validated against the geographic reference file or obtained from AVL.

D. Send a backup unit - unit is requesting that a backup unit be assigned to the activity currently being handled by the unit.

E. Busy, but available for dispatch

F. Busy and not available for dispatch

G. In service and available for calls

H. En route / dispatch message received

I. Arrived / on scene - arrived on scene of dispatched event

J. Officer needs help - initiates an emergency message. A system administrator definable emergency message alert with tone will be broadcast to the CAD dispatcher. AVL provides the location of the unit.

K. Available / call completed

L. Transport begun, including a drop down list of type (e.g., prisoner, juvenile, etc.), a validated entry field for the destination, and an entry field for the transporting vehicle's starting odometer reading (starting mileage).

M. Transport (e.g., prisoner, juvenile, etc.) completed, pre-filled with the destination entered above and an entry field for the transporting vehicle's ending odometer reading (ending mileage).

3.3.6.11.6 Fire / EMS Statuses

The following statuses shall be available to Fire / EMS users in the field using a mobile computer. Additional status messages shall be configurable by a system administrator for system-wide use.

A. Responding

B. Arrival

C. Staged

D. Primary search completed

E. Secondary search completed

F. Water on fire

G. Fire under control

H. Patient transferred over

I. Available on the air

J. Loss stopped

K. At Patient Side (APS)

L. Transporting to hospital, including a field for entering the destination hospital and priority of the transport.

M. Arrival at hospital. The hospital name pre-filled from the above entry.

N. In service

O. In quarters

P. Out of service, not available for dispatch

3.3.6.11.7 Updating Emergency Event Records

The MDCS system shall provide a data entry form to enable field personnel to update CAD's Incident record. The following data entry fields shall be included on the form:

A. Narrative description / comment - a descriptive field containing up to 250 characters

B. Incident number - defaults to the incident to which the unit is currently assigned (silent dispatch or self-initiated event)

C. If the unit is not currently assigned to a call, the MDCS shall provide the last Incident number to which the unit was assigned as the default value.

D. The user may override the default Incident number in case the update is for a different call for service.

3.3.6.12 Messages

3.3.6.12.1 Message Receipt

It is important that the user always receive messages sent to the mobile data computer in a timely manner. As a result, if the mobile computer shall be configured to go into a "sleep" mode after a period of non-use (assuming that the user or unit remains logged on), the computer (and/or modem) shall be configured to "wake up" upon receipt of an incoming message and display the message to the operator. This shall occur automatically without any operator intervention.

3.3.6.12.2 Reception Alerts and Indicators

The client application shall provide a visible and audible indication upon message receipt. All visual indications shall include a counter showing the number of messages that have not been viewed (in queue counter). Message receipt shall be associated with an audible alert, which is sounded upon receipt of each message.

3.3.6.12.3 Date and Time Stamping

All messages received shall have a method whereby the operator can determine the time and date associated with message reception.

3.3.6.12.4 Individual Message Processing

All messages sent and received shall be individually viewable and able to be saved or deleted on an individual basis. All messages, regardless of type, shall be able to be deleted as a group.

3.3.6.12.5 Message Progress Indicators

Any messages sent over an interface or link shall clearly indicate success or failure to the operator. If an interface or link goes down, a notice shall be provided to the operator showing that the link is down.

3.3.6.13 Automatic Vehicle location and Global Positioning System

The Global Positioning System (GPS) shall provide vehicle location information.

3.3.6.13.1 Automatic Vehicle Location (AVL)

Proposals shall include an AVL system capable of tracking approximately 500 mobile units.

3.3.6.13.2 Required AVL Functions

    A. AVL coordinates shall be provided to CAD by the MDCS at a specified time interval for each logged-in MDC.

    B. The system administrator for the MDCS shall be able to modify the time interval and

other AVL coordinate transmittal criteria.

C. Each AVL transmission shall include a time stamp.

D. The frequency of AVL updates shall be tied to vehicle speed so that more frequent updates occur as the vehicle travels at a faster rate of speed.

3.3.6.13.3 MDCS Tactical Map Display

A. The MDCS shall include a Tactical Map Display that is consistent with the CAD map display.

B. The MDCS tactical map shall display the location of pending and active incidents.

C. Users can limit the MDCS map to only display a subset of pending and active incidents (e.g., only Fire calls).

D. The MDCS tactical map shall also display the location of all "logged-in" units based on their AVL coordinates.

E. Users can limit the MDCS map to only display a subset of "logged-in" units (e.g., only Police units).

F. The tactical map shall use a rule-based approach for displaying information. It shall also have a feature where a user may "de-clutter" the display with the press of a button, changing the amount of information displayed.

G. There shall be several levels of "de-clutter" that a user can cycle through and get back to default level display.

H. For example, at a particular zoom level only the major roads and highways shall be displayed, while at a different, more detailed zoom level, all local and collector streets will be added to the display.

I. Standard pan and zoom functions shall be provided with a preset default zoom level determined by the agency, and shall be modifiable by the local system administrator.

The AVL map display in MDC-equipped vehicles shall show:

J. The vehicle location at all times. The display shall normally be centered on the vehicle's location.

K. All units assigned to the call to which the vehicle is currently assigned.

L. The call location to which the vehicle is assigned.

M. It is highly desired that the capability be provided that permits the in vehicle map to switch from the State provided map to an internet based map such as Google or Bing if the vehicle leaves the coverage are of the in-vehicle map.

3.3.6.13.4 Travel Route Analysis

A. The MDCS shall provide the capability to locate an address / location and describe the travel route from the unit's present location to that address / location.

B. The MDCS shall include audible and visual real time turn by turn navigation capabilities.

C. The travel route analysis shall include analysis of impedance of route (speed of route). This shall be used to provide most efficient route in relative real time.

D. It shall also provide for temporary road closure, barriers, etc. These shall be highest impedance value (unable to travel).

E. In addition shall be able to take into account temporary reduced speeds on a route due to construction or other temporary conditions.

3.3.6.13.5 Capture and Replay of AVL Information

A. The AVL server shall capture AVL information, organized by vehicle.

B. Tools shall be provided in the MDCS system to extract this information by one or more units or by groups of units.

C. Authorized individuals will be able to view this information on the AVL server by "playing back" (with a feature for varying the speed of playback) the track taken by the selected vehicles overlaid on top of a geographic map.

D. The AVL server shall provide an icon, unit ID label, and the date and time when the vehicle was at its displayed location.

E. The system shall also provide standard mapping functions such as pan, zoom, annotate, and print for the AVL track display.

3.3.6.14 Intranet (Configurable)

MDC users shall be able to access the State and local Intranet applications.

3.3.6.15 Text to Voice

The MDC application shall provide the capability, controllable by the user, to read message responses, such as a license plate query, aloud to the user. This feature shall be easily enabled or disabled by the operator via function key or icon.

3.3.6.16 Voice Recognition

It is desired to have the user be able to initiate a limited number of commands through verbal communications. These commands shall initiate transactions, such as running a license plate query, without any physical operator intervention. The Vendor shall describe the capabilities provided by the system, including requirements for wired or wireless microphones to be either worn by the user or mounted in the vehicle.

3.4   CAD INTERFACES

Vendors shall address in written form each numbered section and sub-section of this RFP. If the Vendor takes exception to a specific paragraph, they shall fully describe their exception in the appropriate section of the proposal.

3.4.1 E9-1-1

A. The CAD systems shall integrate with the existing Positron Customer Premise Equipment.

B. The CAD system must be able to determine through the 9-1-1 interface which communicator has a particular 9-1-1 call.

C. The CAD system must automatically populate the CAD incident screen of the communicator handling the call with the associated ANI/ALI information of that call.

D. Upon automatic population, the address shall be located in the caller location field of the CAD call entry form.

E. If the caller location is the location of the call, the system will provide the communicator the ability to copy the caller's location to the location of the call field on the CAD call entry form with a single keystroke or click.

F. If the caller location is not the location of the call, the system will provide the communicator the ability to move the cursor to the location of the call field on the CAD call entry form with a single keystroke or click.

G. Once the ANI/ALI information has been associated with the call's incident record, any other communicator (call taker, dispatcher, supervisor, etc.) monitoring the call will also be able to view the call's ANI/ALI information.

H. The system shall also center and zoom the IMD to the caller's location and place an icon on the map to indicate the caller's location.

I. It shall be a site option if the system shall continue to display the caller's location if different from the location of the call.

J. The system shall be capable of capturing and retaining the off hook (answer) time of calls.

3.4.1.1 Wireless Calls

A. For Phase 1 calls, the system shall place an icon on the map indicating the tower location.

B. The icon required above shall include a representation of the heading and approximate coverage "cone" of the tower face that received the call.

C. The vendor shall explain in detail where the proposed system places the tower location and heading in the call record.

D. For phase 2 calls the system shall place an icon on the map indicating the location of the 9-1-1 caller based upon the coordinate data received.

E. The system shall provide the capability to translate the 9-1-1 coordinate data into a street address and record this address in the location of caller field in the CAD call entry form.

F. The vendor shall explain in detail the methodology utilized by the system to translate the coordinate data into a street address.

G. The vendor shall explain in detail how their system and interface will process the rebidding of wireless calls.

3.4.1.2 Next Generation 9-1-1

The vendor shall explain in detail the capabilities of their system to support the emerging standard for Next Generation 9-1-1.

3.4.1.3 Internet Protocol Based 9-1-1 Systems

The vendor shall detail their experience with interfacing to IP-based 9-1-1 systems and implementing CAD systems that will support multiple remote PSAPs utilizing this type of 9-1-1 system.

3.4.2 Caller Identification

The vendor shall explain in detail the capabilities of the system to support the acceptance of Caller ID information from the telephone system and if the vendor provides any lookup capabilities based upon the information received. The ability to locally flag calling numbers – whether delivered via ALI or caller ID – is desired.

3.4.3 Alarm Interface (APCO/CSAA 2.1.1.1-2008)

The CAD system shall adhere to the APCO/CSAA 2.101.1-2008 External Alarm Interface Exchange American National Standard, and include the following features at a minimum:

A. The CAD system shall be capable of receiving alarm notifications and updates related to the alarm notification from alarm monitoring companies.

B. The CAD System shall use the alarm notification data to create a call for service event without call taker involvement if the address is valid and minimum required fields have been provided.

C. The CAD system shall spawn a copy of the call for service event to other agencies if applicable.

D. Updates from the alarm company shall be processed as an update to the call for service and be shown to the telecommunicator responsible for dispatch operations with an audible and visual indication that a new update has been received.

E. The CAD system shall send the appropriate response messages to each message received from the alarm company and enable CAD system users to send update messages to the alarm company operator when additional information is required.

F. The CAD system shall automatically send an update message to the alarm company during the progression of the event including when the primary agency has been dispatched, when the primary agency has arrived on scene, and when the call for service has been closed including any disposition information reported by the primary agency that responded.

3.4.4 Mobile Data Computer System

The CAD system shall be integrated with the Mobile Data Computer System (MDCS) and

the integration shall provide the following capabilities.

 A. Silent/digital dispatch – the ability to transmit incident information to assigned units through the mobile data system without having to utilize voice communications.

 B. Status updates – units in the field will be able to directly update their status by activating icons/function keys without having to utilize voice communications.

 C. The time source for the MDCS shall be synchronized with the rest of the system so all times are consistent throughout.

 D. Messaging – the CAD system will provide a mechanism for sending and receiving messages from mobile units as described elsewhere in this RFP.

 E. All messages will be tracked (time stamped) in a reportable format.

 F. All messages will have the receiving and transmitting parties identified and recorded.

3.4.4.1 Support for remote CAD

Authorized users will be able to perform a subset of CAD functions on their mobile units including:

 A. Supervisors will be able to query the CAD system to obtain information such as the status of one or more units, list of active calls, list of pending calls, etc.

 B. Units assigned to a call will be able to query and update CAD by performing functions such as obtaining detailed call information, adding a comment/record to a call for service,

 C. Units assigned to a call will be able to query and update CAD, retrieving location and status of all units assigned to the call, etc.

3.4.5 Delaware Justice Information (DELJIS)

The systems shall include an interface that will facilitate the exchange of data between the CAD systems and the DELJIS.

 A. The CAD and mobile data computer systems must both interface to the DELJIS.

 B. The DELJIS interface shall be compliant with NCIC 2000

3.4.5.1 Seamless Access To DELJIS

The DELJIS interface shall support a seamless access mode. In this mode data entered i
either the CAD and MDCS will automatically (seamlessly) be formatted to fit standard DEL
queries, routed to DELJIS through this interface, and a notification of a response returned t
specified location on the originating workstations.

3.4.5.1.1 Seamless Query Generation

Seamless queries to DELJIS shall automatically be generated during certain system
related actions. The State expects that the CAD system and MDCS will support seamless
queries in at least the following system related actions:

    A. Traffic stop entry

    B. Officer initiated event data entry

3.4.5.2 Seamless Query Data Fields

Only a specific set of data entry fields will be associated with this capability. The State will
work with the selected Vendor to identify all of the fields that will be sent to DELJIS during
a seamless query. At least the following data fields shall be included in, and generate
seamless queries to DELJIS:

    A. Name(s) and Date of Birth(s)

    B. Driver's License Number

    C. Vehicle tags

3.4.5.3 DELJIS Data Entry Screens

The DELJIS interface shall support a data entry screen mode. In this mode users activate
a set of preformatted, fill-in-the-blank type data entry screens for frequently used DELJIS
queries and functions. This type of access is required to support routine person, vehicle
and property checks that may not be associated with CAD/MCDS actions.

3.4.5.3.1 Minimum Supported Functions

At a minimum the following queries and functions will be supported in fill-in-the-blank type
data entry screens:

    A. Driver's License Query

    B. Vehicle Tag Query

    C. Person Query

D. Gun Query

E. Property Query

F. Vendors shall indicate the functions and queries supported by their interface through fill-in-the-blank type data entry screens.

3.4.5.3.2 Entry Screen Maintenance

The DELJIS interface shall provide a means for creating new screens as needed. The State prefers to be able to accomplish the screen maintenance/update without having to rely on the selected Vendor's programming or consulting assistance. Vendors shall indicate how their DELJIS screens are maintained.

3.4.5.4 Command Line Data Entry

The DELJIS interface shall support a command line mode for generating DELJIS queries. Users access this function by entering a valid command followed by the appropriate values. This functionality must be provided for a select number of frequently used DELJIS queries. Vendors shall indicate the DELJIS functions and queries supported by their interface through a command line format.

3.4.5.5 DELJIS Emulation

The DELJIS interface shall support a DELJIS emulation mode. In this mode, users shall be able to perform all authorized DELJIS functions by directly entering DELJIS commands into a separate emulation window on the workstations.

3.4.5.6 Secure Access

A. The System will ensure through user security (login ID and password) and associated privileges that only authorized users and/or workstations are able to complete DELJIS transactions.

B. Vendors will indicate what controls exist within the DELJIS interface to prevent criminal history and other confidential information from being accessed by workstations other than those that are authorized and under the operation of authorized users.

3.4.5.7 Transaction Logging

A. The DELJIS interface will adhere to all State and Federal mandates and auditing requirements.

B. The DELJIS interface must provide for automated logging and retrieval of all criminal justice inquiries consistent with State and NCIC regulations and policies.

C. All DELJIS interface transaction will be logged in the system's transaction log regardless of whether they were initiated seamlessly, via fill-in-the-blank type forms, or through a command line.

D. The transaction log for DELJIS queries and responses shall contain at least a 180 days of historical transactions.

3.4.5.8 Cascading Queries

A. The DELJIS interface shall provide the capability to provide cascading queries. Cascading queries are seamlessly generated queries that are based on data returned from a previous query. An example would be the ability to perform a warrant query utilizing the registered owner's name that was provided by a vehicle registration query.

B. The vendor shall describe the capabilities of the system to provide cascading queries as describe above and shall identify what queries will be provided.

3.4.6 Federated Query Capability

It is desired that the system have the capability to perform federated queries. Federated Queries are defined as a single query that will be processed against multiple systems and return multiple returns. An example of this would be a single name search that would query the DMV, DELJIS and local RMS systems. Federated queries shall be generated on both seamless queries and manual queries as described above.

3.4.7 Fire Station Alerting

A. The system shall interface to existing Zetron 25 encoders for fire station alerting.

B. The system shall interface to existing Centracom Gold Elite consoles for fire station alerting.

3.4.8 Fire Station Faxing

The State is interested in the potential of utilizing a fax system to support the automatic delivery of "rip and run reports" to specific volunteer staffed fire stations. The vendor shall describe the capability of the system to support this function.

3.4.9 Multimodal Notification

The system must have the capability to deliver notifications utilizing a number of different modes. The system shall provide:

    A. The ability to interface with multiple paging venues

    B. The ability to automatically page resources based on incident type and/or location

    C. The ability to manually browse/search staff lists and page personnel by selecting one or more individuals/groups off the list.

        1. The ability to group pages by defined department (certain level call automatically pages a group)

        2. The ability to page all units on duty

        3. The ability to page groups

        4. The ability to page individuals

        5. The ability to page crew members

    D. The ability to send email and SMS text messages to one or more selected individuals/groups in a fashion similar to that described for paging.

    E. The ability to send SMS text messages to one or more selected individuals/groups in a fashion similar to that described for paging.

3.4.10 AVL

The CAD system shall be able to accept, utilize and display automatic vehicle location (AVL) information provided by the AVL system.

3.4.10.1 Real-Time Display of Vehicle Locations

Through the AVL interface, the CAD system must be able to provide real-time display of vehicle locations on the associated Integrated Map Display.

3.4.10.2 Modifiable Parameters

The CAD system must be able to interact with the AVL system through this interface to establish system parameters such as frequency of location transmittal by AVL equipped vehicles.

3.4.10.3 Display of Unit Identifiers

The CAD system must be able to accept and utilize unit ID information provided through the AVL interface for spatial display and for dispatch purposes. That is, the unit IDs provided by the optional AVL system must be displayable on the CAD system's IMD and used for unit recommendations.

3.4.10.4 Recording and Playback of AVL Information

A. The AVL system and interface shall provide the capability to capture and record the AVL data received.

B. The system shall provide the capability to replay the AVL data that has been captured and recorded.

C. The system shall have the ability to specify both a single unit and multiple units to be displayed during the replay of recorded AVL data.

D. The system shall provide the capability to "turn on" and "turn off" AVL data recording.

E. The system shall be able to select both a single unit and multiple units to "turn on" and "turn off" AVL data capture and recording.

3.4.11 Priority Dispatch Corporation Products

A. Different centers in the State use different combinations of the EPD, EFD and EMD products supplied by Priority Dispatch Corporation. The vendor shall explain **IN DETAIL** how their system integrates to the PDC products particularly in a multi-discipline call (a call requiring at least two different agency types such as both fire and EMD). **A detailed functional description is required.**

B. It is possible that within a single CAD system (multi-PSAP) different policies will be in place as to the use of the Priority Dispatch products (use of EFD on calls in one jurisdiction but not using it on calls in a different jurisdiction). **The vendor shall explain in detail the ability of their system to accommodate this situation.**

3.4.12 Delaware Department of Transportation (DelTrac)

The system will be required to provide data to the Delaware Department of Transportation Traffic Management Center. The information provided will be real time updates regarding traffic accidents and other incidents affecting traffic flow that have been reported to the communications center using the systems. The proposal shall describe how this information will be used by the proposed system.

3.4.13 CAD to CAD

A. There are a number of jurisdictions that share dispatch responsibility with other centers. These are primarily situations in which the one center is responsible for dispatch of Fire and Emergency Medical Services and another dispatches for the law enforcement. There are also a number of different PSAP scenarios as to the receipt of landline calls, cellular telephone calls and VOIP calls. Currently these situations are handled in a number of different ways that vary from transferring the calls, passing along information, to the installation of a workstation from one CAD in a remote dispatch center to allow the center to see the CAD calls. To better handle these situations, the State would like to capitalize on the many sets of Information Exchange Package Documentation (IEPD) that have already been developed to permit the standardized exchange of information between CAD systems. This section identifies the scenarios that would be expedited by the development of standards based CAD to CAD interfaces.

B. In addition, there is the possibility that not all centers in the State will choose to deploy the new CAD system. If this situation occurs, the vendor will be required to interface to an alien CAD system (not the vendor's system).

C. For pricing purposes, the vendor shall assume that the other CAD is capable of exchanging information using the same IEPDs as models. The exchanges will be two way, such that the each CAD must be capable of receiving information as well as pushing it.

D. For each of the following sections the vendor shall address not only the capabilities of the system and their company in providing the information exchange, but also their <u>experience</u> in providing the exchange.

E. The vendor is asked to provide a list of agencies at which they have implemented information exchanges based on the NIEM model. If the vendor cannot identify exchanges based on the NIEM model, they can identify other locations they have implemented CAD to CAD information exchanges.

3.4.13.1 Call Data Transfer to an Alien System

In this scenario, a call is received at one PSAP where the data is collected and entered into the vendor's local CAD system, but the dispatch shall occur from another dispatch center using an alien CAD system. Ideally the following shall occur.

A. The information is entered into the CAD system

B. The information is passed to the correct agency's CAD system

C. Some form acknowledgement received or the person making the original entry

notified

D. The call information and the transfer is recorded in the CAD system

E. The call is closed

3.4.13.2 Call Data Transfer from an Alien System

In this scenario, a call is received at a PSAP not using the vendor's CAD where the data is collected and entered into the non-vendor's CAD system, but the dispatch shall occur from another dispatch center using the vendor's CAD system. Ideally the following shall occur.

A. The initiating PSAP enters the information into their system and the interface transmits the data to the correct PSAP.

B. The call information is received from the initiating PSAP,

C. The receiving CAD sends an acknowledgment to the initiating CAD,

D. The call information is placed in the initiate incident form and validated,

E. The call is processed as any other CAD call for service.

3.4.13.3 Joint Calls

In this scenario, a call is received at one PSAP where the data is collected and entered into the local CAD system. The call for service requires a dual agency type response (police and EMS for example). In this case the call must be entered into the local CAD system and processed, the information transferred to the CAD system of the second agency where it will be processed. Additionally, there is benefit in both dispatch centers being able receive status updates of all units regardless of agency that are responding to the call for service. The process shall be the same regardless of the vendors' of the CAD systems involved.

A. The information is entered into the initiating CAD system and processed normally for the portion of the call being dispatched by the originating PSAP's center.

B. Also, the information is passed to the other agency's CAD system.

C. Some form acknowledgement received, or the person making the original entry notified,

D. The call is processed as another call for service at each center.

E. As units responding to the call change status the information associated with the status change is passed between the CAD systems.

3.4.13.4 Assistance Request

In this case assistance from an agency in one dispatch center is requested by an agency serviced by a different center is requested. If the request is denied no other action takes place, however, if the request is granted, then the processing will be similar to a joint call. Ideally the following will occur:

A. The requesting agency will generate a request for assistance identifying the type or nature of the request.

B. The interface will push the request to the CAD or CADs that manages the unit(s) of the requested assistance.

C. The receiving agency will either grant or decline the request.

D. If the request is granted, the requesting agency will forward the call information as if the call being processed were a joint call as described above.

3.4.13.5 Boundary Call

In this scenario, the CAD system determines that a call for service is within a pre-defined distance to a boundary of an agency serviced by another CAD system. When a call occurs within this boundary area, the CAD system, via the CADS to CAD interface, will send a message to the other agency's CAD system so advising them. In that this is an information only transaction, no other action is required.

3.4.13.6 Notification of Call in Jurisdiction

Similar to the boundary call scenario, the notification of a call in jurisdiction will occur. A dispatch center dispatches an agency to a location that is shared. An example of this would be an EMS call dispatched to a location where the police department is not dispatched by the same center. In this scenario, the CAD system, via the interface, will send a message to the second dispatch center notifying them that EMS has been dispatched to a location within their jurisdiction. In that this is an information only transaction, no other action is required. These situations may be set up locally to act as Joint Calls.

3.4.13.7 Be On the Look Outs (BOLO)

When any agency issues a BOLO, the CAD system via the interface shall send the BOLO

information to any CAD system on the interface.

3.4.14 RMS Systems

As stated earlier in the RFP, there may be a number of agency RMS systems that the CAD system will share data with. The vendor shall explain the capabilities of their system to satisfy the requirements identified below. If the vendor has an alternative approach they shall include it in the explanation.

3.4.14.1 Query Capability

Given that there may be different Records Management Systems supporting the agencies the centers dispatch for, the State is interested in any tools included with the CAD system to facilitate the building of queries to the different RMS systems. The vendors shall explain in detail their capabilities in this area.

3.4.14.2 Data Transfer

To provide an efficient method to provide CAD information to multiple RMS including Law Enforcement, Fire and Emergency Medical Reporting systems the following approach shall be taken. The CAD system shall provide the following capabilities:

A. The system shall provide the capability to write CAD call for service information to a database or file outside of the CAD System.

B. The system shall provide the capability to write the call for service information multiple times over the life of the call.

C. The system shall provide the capability that the system administrator can define the triggers for the CAD system to write the call for service information.

D. Call for service data for all Law Enforcement calls that will generate a report will be transferred to DELJIS while the call is still open. The system shall provide the capability where the system administrator can define the triggers for the CAD system to transfer the Call for Service information.

3.4.15 Smart Phones

A. The vendor shall describe in detail any capabilities of the system to support the transmission of CAD call for service information to Smart Phone devices as a basic function of the dispatch process.

B. The vendor shall describe any capabilities of the system to engage in two-way communications with Smart Phone devices as a part of the CAD dispatch process.

C. Software or other means to facilitate such communication shall be specific to the

smart phone application, as opposed to simply allowing a smart phone's browser to access secure web pages designed for use by regular computers.

3.4.16 First Watch

The vendor shall describe in detail any capabilities of the system to support an interface to "First Watch" and the functions the interface provides.

3.4.17 Iamresponding.com

The vendor shall describe in detail any capabilities of the system to support an interface to Iamresponding.com and the functions the interface provides.

3.4.18 Logging Recorder Interfaces

The selected vendor will be required to provide interfaces to logging recorders provided by:

- MERCOM,
- EXACOM, and
- NICE

The vendor shall describe the functionality provided by the interfaces.

3.5   MDCS INTERFACES

3.5.1   CAD

The MDCS shall interface to the CAD system to provide:

A. Silent/digital dispatch – the ability to transmit incident information to assigned units through the mobile data system without having to utilize voice (RF) communications.

B. Status updates – units in the field will be able to directly update their status by activating icons/function keys without having to utilize voice communications.

C. Messaging – the CAD system will provide a mechanism for sending and receiving messages from mobile units as described elsewhere in this RFP.

D. All messages will be tracked (time stamped) in reportable format.

E. All messages will have the receiving and transmitting parties identified and recorded.

F. Support for remote CAD functions – authorized users will be able to perform a

subset of CAD functions on their mobile units for example:

1. Supervisors will be able to query the CAD system to obtain information such as the status of one or more units, list of active calls, list of pending calls, etc.

2. Units assigned to a call will be able to query and update CAD by performing functions such as obtaining detailed call information, adding a comment/record to a call for service, retrieving location and status of all units assigned to the call, etc.

3.5.2 DELJIS

The MDCS shall be interfaced to the DELJIS system to provide the capabilities identified in Section 3.4.5.

3.5.3 Field Based Reporting Systems Law Enforcement

Law Enforcement agencies throughout the State utilize LEISS as their Field Based Reporting System. The State desires to enhance the capability of these systems by expediting the entry of CAD information, driver's license scanned information and query returns into the Field Reporting Systems.

A. The vendor shall list their experience interfacing to Field Reporting Systems at the client level.

B. The vendor shall discuss how they could provide the movement of CAD information to Field Reporting System.

C. The vendor shall discuss how they could provide the movement of scanned Driver's License information to Field Reporting System.

D. The vendor shall discuss how they could provide the movement of query return information to Field Reporting System.

3.5.4 Field Based Reporting Systems Non-Law Enforcement

Agencies throughout the State utilize Field Based Reporting Systems provided by a number of different vendors, and the State desires to enhance the capability of these systems by expediting the entry of CAD information, driver's license scanned information and query returns into the Filed Reporting Systems.

A. The vendor shall list their experience interfacing to Field Reporting Systems provided by other vendors.

B. The vendor shall discuss how they could provide the movement of CAD information

to Field Reporting Systems provided by other vendors.

3.6   Law Enforcement RMS Introduction

The Records Management System being solicited during this procurement will support Law Enforcement agencies across the State of Delaware. The system must be integrated with the CAD system being. The State recognizes that there are a variety of different system configurations capable of meeting these requirements. The State is not averse to considering a hosted solution with the state acting as host. The vendor is requested to provide the configuration that they feel most cost effectively meets the requirements identified in this document.

Regardless of the configuration, the solution MUST provide the individual agencies with a high degree of control of the system utilized by their agency. This will include security constructs, workflow process and the degree to which information will be shared with other agencies.

Regardless of the configuration the system must be capable of interfacing with the Delaware Justice Information System (DelJIS). DelJIS is an internally developed series of systems that support the Justice Systems of the State. Most critical to the RMS implementation will be the Law Enforcement Investigative Support System (LEISS). LEISS is a client/server PC based system which provides electronic capture of incident data and prints a completed incident report. In essence LEISS is and will continue to be the Field Based Reporting component of any RMS that will be deployed. All report data will first be captured by / in the LEISS and transmitted to DelJIS. DelJIS then delivers the reports to the RMS's on a regular schedule. There are no changes to this approach anticipated.

In that DelJIS and LEISS were developed by state personnel, the state is capable and willing to work with the selected vendor to define mutually agreeable interface content and architecture.

Throughout this section of the document the requirements reference a single system. Depending on the configuration, the vendor shall respond as though each of the responses would be applied to each and every configured system deployed.

3.7   RMS General Requirements

3.7.1   System Availability

A. The hardware and software components of the back-office system(s) are required to remain fully operational and available at a rate of 99.99%at each installation.

B. The hardware and software components of the system in the field must remain fully operational and available at a rate of 99.99% at each installation.

C. System availability will be expressed as a percentage of the maximum expected availability over a given period. The system must be available 7 days per week, 24 hours per day.

D. The system will be considered available for use only when all functions (i.e., creating, editing, or searching, etc.) and interfaces necessary for the processing and

management of information are operating completely and correctly.

E. The system is required to include off-site redundant servers that will be updated in real time and will provide catastrophic backup capabilities in case the main server location becomes inoperable.

F. The system will be required to automatically switch between the servers (e.g., the automated ability to switch between the active and redundant servers and that the system shall not operate differently regardless of the server the system is running on.)

G. If the vendor chooses to install the testing and training system on the redundant server, it shall not in any way interfere with the failover.

H. The vendor shall be required to explain in detail the approach that will be used to maintain synchronization between the database on the operational server and the backup system.

3.7.2   System Response Time

A. In measuring response time the vendor will not be held accountable for network latency, but preference shall be given to vendors whose solution most efficiently utilizes the existing network and mobile data infrastructures.

B. The computer system (hardware, software, and all components) shall be required to support all RMS activities with a transaction response time no greater than three (3) seconds. Notwithstanding, 95 percent of all transactions shall be completed within one (1) seconds.

C. Response time is defined as the time between the depression of the last keystroke or pointing device activation (e.g., click) and the appearance on the workstation / terminal of the last character of the initial response (e.g., first page, pop-up window, etc.) The vendor shall be required to describe how their solution meets the above response time and how they intend to measure response time if different than described herein. The State reserves the right to review and approve the methods used to measure response time.

D. The system, under no circumstances shall experience degradation in response time. Any function that might result in system degradation must be specifically noted.

E. Response times shall be achievable during all other system activities (e.g., report generation, system backup, etc.)

F.   The vendor shall be required to state the minimum response times that are guaranteed for field user transactions.

G.   Vendors shall be required to describe how their solution meets the above response time and how they intend to measure response time if different than described herein.

3.7.3   User Interface /Client Application

A.   The vendor shall be required to specify if the Graphical user interface deployed with their Records system is browser-based.

B.   The vendor shall be required to specify the architecture of the application residing on the workstation.

C.   The vendor shall be required to specify the process required to modify or upgrade any portion of the application or any required services operating on the workstation.

3.7.4   System backup and restoration

The system shall be required to support standard backup processes or provide the ability to backup and restore system files. The backup processes shall be required to be as automated as possible and shall occur with minimal or no impact on the operation of the system. The vendor shall be required to explain how this process occurs in the system.

3.7.5   Disaster Recovery

A.   The vendor shall describe the services and support provided by their firm to assist the State in disaster recovery. For the purpose of this paragraph, the vendor shall assume that the State has properly maintained system backups, but has lost utilization of and access to system servers.

B.   The vendor shall be requested to provide a detailed explanation of their best practice disaster recovery recommendations for these systems.

3.7.6   Remote Access

A.   Remote diagnostic connectivity shall be required. The vendor shall discuss what security measures (hardware and software) will be in place to protect this external access to the systems environment. Access shall be blocked until authorization is granted by authorized personnel.

B.   Remote diagnostic connectivity authorization shall be easy to control by administratively authorized users.

3.7.7 System Status Reporting

The system shall provide the capability to send messages to the applications or interactive user (or to a system operator) regarding the status of operation and any errors that may have occurred. The vendor shall be required to explain in detail how their system provides this capability.

3.7.8 Security

A. The system shall provide CJIS compliant Advanced Authentication for user authentication via a remote directory service.

B. The system shall support SSL communication.

C. The system shall provide support for industry standard IIS or web server hardening.

D. The RMS system and associated mobile applications shall be encrypted from end-to-end with CJIS compliant encryption. Provided system data security measures shall be compliant with applicable state and federal security standards. State the type of encryption that will be provided.

E. The vendor shall provide specific information regarding the available security functions and features that are integrated or available within each system of the configuration.

F. The preferred methodology includes various "security profiles" that would be attributed to individual users or groups based on personnel classifications (i.e., dispatcher, call taker, record clerk, officer, supervisor, system administrator, etc.), allowing access to the various modules, applications, functions, and / or features of the system environment. The system administrators shall have the ability to assign functionality / commands as well as users to security groups.

G. Individuals' security profile configuration shall include the ability to limit / grant access at a transaction level (e.g., differentiate between running a person or a vehicle.)

H. The system shall provide user access / permissions at application / subsystem level.

I. The system shall provide user access / permissions at module level.

J. The system shall provide user access / permissions at screen / transaction level.

K. The system must provide user access / permissions at record level.

L. Appropriate safeguards shall be provided to ensure that only authorized terminals / workstations and authorized users are allowed access to the system environment and stored information.

M. The system shall provide the ability to restrict access to view.

N. The system shall provide the ability to restrict access to inquiry.

O. The system shall provide the ability to restrict access to add / create.

P. The system shall provide the ability to restrict access to modify / edit.

Q. The system shall provide the ability to restrict access to delete.

R. The system shall provide the ability to restrict access to print.

S. The system shall provide the ability to restrict access to send (e.g., e-mail).

T. The system shall provide the ability to assign security access by user ID.

U. The system shall provide workstation / terminal level security.

V. The system shall provide the capability to lock or flag an entire report or booking record as confidential and limit access to specific users or groups of users.

W. The system shall provide the ability to flag specific data elements as confidential information for security purposes.

X. The system shall provide the ability to automatically log-off individual workstations based on group profile after period of inactivity, definable by system administrators.

Y. The system shall provide the ability to disable automatic log-off for secured workstations (e.g., dispatch center).

Z. The system shall provide the ability to provide a system generated warning message prior to disabling device or user, and extend or reset automatic sign-off timer.

AA.   The system shall provide the ability for supervisors and administrators to manually "sign-off" remote workstations.

BB.   The system shall provide the ability to remotely disable RMS applications on workstations to reduce ability to attempt unauthorized access in the case of a lost or stolen computer.

CC.   The system shall provide the ability to "lock out" a user after an agency-defined number of attempted logons.

DD.   If the system "locks out" a user, the system administrator shall be immediately notified via email.

EE.   The system shall provide the capability such that if a user has been "locked out" they will be able to reset the password using a series of challenge questions or other advance authentication methods.

FF. The system shall provide the ability to create security groups that contain users that share the same security profile.

GG.   The system shall provide the ability to globally restrict access to the operating system.

HH.   The system shall permit full application functionality without requiring the user to have administrative rights to the local PC.

II. The system shall provide the ability to prevent display, viewing and printing of passwords.

JJ. The system shall provide security that combines workstation level security with User ID and Password security such that certain users can override certain workstation security parameters, and other users are limited to the workstations that they may use. This combination can be used to control the level of system access granted by the local system administrator and the State security policy.

KK.   The system shall provide the ability to require the user to change individual password at sign-on.

LL. The system shall provide the ability for the local systems administrator to reset passwords.

MM.   The system shall provide the ability, based on local system policy, to either

mask or show passwords when typed and encrypt passwords when stored and sent.

NN.   The system shall provide the ability to track user sign-on / off times indefinitely for time reporting purposes.

OO.   The system shall provide the ability to create a set of password rules that restrict the use of common passwords, easy to guess passwords, and other common utilities such as password aging, and limiting reuse of passwords.

PP.   System must provide a minimum of 128-bit encryption or more as required by the State and FBI CJIS requirements. This requirement applies equally to mobile applications.

QQ.   The local administrator shall be able to configure multiple security levels on a field-by-field basis for the database.

RR.   Information stored in the database shall be searchable by any field, however only data administratively authorized for viewing by the users security level will be displayed.

SS.   The RMS shall provide the capability to selectively encrypt certain tables to the extent that neither the system administrator nor the ad hoc reporting tool may access the data contained therein.

3.7.9 Single Sign-On

A. Each workstation operator shall log on before being recognized by the system.

B. The logon identification of the operator shall be validated by the system(s) before that operator can perform system functions.

C. The logon identification (including the workstation ID) will become part of the RMS record for all transactions performed by that operator.

D. The logon process shall incorporate a "single sign on" to enable logons to multiple authorized systems and interfaces, unless restricted by individual system security.

E. If the system is not able to provide "single sign-on" as described above the vendor shall describe the number of sign-ons required to access all applications in the system.

F. The System Administrator and other authorized individuals shall have the capability

to configure sign-on messages for subsequent shifts and specific individuals. This screen could include recent BOLO's, pass along information or assignments for the specific officer logging in. Upon configuration the system would build the specific messages.

G. The system shall provide the capability for the delivery of personalized log on messages personalized to the individual user.

H. The vendor shall be required to discuss in detail the capabilities of the system to incorporate Microsoft Active Directory and Advanced Authentication approaches into the system.

3.8   RMS Application Requirements

3.8.1   Relational Cross Referencing

Throughout this document terminology is used requiring entities (e.g. persons, vehicles, incidents, property items, locations, etc.) to be relationally cross referenced to other entities. This requires that each entity is directly linked to the other entity via relational database capabilities. It is important to understand that the requirement is for the establishment of a direct link between the entities. A relationship that is lined via a third entity is not acceptable. By example a vehicle record that has a direct link to a location would satisfy the requirement, while a vehicle that is linked to a location via the incident record is not relationally cross referenced in that to retrieve the second entity the first must process an interim entity.

In many instances these relational links shall be established by the system. In others the requirement may be to provide the capability to link two entities manually.

3.8.2   Multi-Agency

A. The Records Management System(s) (RMS) must be capable of supporting the records and reporting requirements of the all of the Law Enforcement Agencies in the State of Delaware that will be dispatched by the CAD system.

B. The RMS shall provide the capability for any agency utilizing the system to tailor the system by changing system parameters to meet their specific requirements.

C. The RMS shall provide the capability for each agency to optionally define a unique set of code / validation tables.

D. The RMS shall provide the capability for each agency utilizing the system to define a unique set of security constructs.

E. The RMS shall include the capability to support groups within an agency utilizing different workflow constructs.

F. The RMS shall provide the capability for each agency utilizing the system to define a unique set of system workflow parameters.

3.8.3 System Administration

A. The system administrators (agency and IT personnel) will be trained by the successful vendor. Each department's system administrators shall have the authority to make adjustments to the system installed at each location as required by staffing changes, changes in policy and state and federal requirements.

B. The system shall allow each system administrator to create additional tables or databases.

C. The system shall allow each system administrator to create additional data fields within exiting tables.

D. The system shall allow each system administrator to create or modify graphical user interface formats.

E.   The system shall provide the capability for each system administrator to easily change fields and field labels as requirements change.

F. The software design shall make extensive use of table driven parameters, allowing easy modification by each system administrator without the requirement for programmer support.

G. It shall be possible to modify table driven parameters when the system is active.

H. The system shall have the capability to support multiple system administrators of various privilege levels at each installation.

I.   The vendor shall provide recommended qualifications for the System administrators.

J. System modifications made by system administrators shall be logged. At a minimum, this log shall include administrator user ID, date / time of modification, modification made, and original table value (before the modification was made).

K. The System Administrator shall have the capability to maintain a geographic database, which includes agency-defined criteria (e.g., X / Y/ Z coordinates, intersections, aliases, commonplace names, etc.) and latitude and longitude.

L. The system administrators shall have the capability to create and maintain support data files used in the operations.

3.8.4 Data Entry

A. The RMS application shall incorporate a "single point of data entry" to ensure that information that has more than one use shall be entered only once and then distributed to applicable subsystems and transactions on an automatic basis. This includes information transferred from the CAD system, DelJIS and other interfaced ancillary systems. The vendor shall identify the various data entry methodologies.

B. The "single point of data entry" will apply within individual modules.

C. The "single point of data entry" will apply across all modules.

D. In order to ensure data integrity and maximize search capabilities, each data field within the RMS shall be capable of validation against a pre-defined table. The vendor shall describe the system validation capabilities.

E. The system must allow unlimited text narrative to be entered for all reports or databases in the system.

F. All free-text data, including narratives and supplements, must be stored as text in the database. All text must be able to be extracted using industry-standard reporting tools and not vendor-specific proprietary tools.

G. The system shall provide full word processing capabilities (or a link to a variety of commercially available word processing applications) for the entry of narrative information, witness statements, etc.

H. Full word processing capabilities must include a spelling checker.

I. Entry of narrative text must include the ability to utilize previously agency created shared word processing templates.

J. The system shall provide the capability such that if a template is used, the template shall not overwrite or replace any existing narrative information.

K. The system shall permit an unlimited number of narratives to be entered for any entity or record.

L. The system shall further provide either a standard naming convention for narratives

or the ability for the operator to utilize a procedurally defined naming entry for each narrative.

M. The system shall provide a method for automatically numbering supplemental reports as they are entered and associated with the original incident report.

3.8.5 Information Retrieval / Search Capability

As mentioned earlier, the system being will support agencies across the state. As it relates to information retrieval and searches, each search or other retrieval action shall have the capability to be executed, at user direction and within the bounds of each agency's security constructs parameters, against a single system, a single installation or across the state. Each entity in the return shall identify the entering agency and location of the data returned.

A. An RMS user shall be able to retrieve data easily without regard to the subsystem involved, including data stored on interfaced systems.

B. The software shall provide the ability to search any and all data on the system as well as any combination of the data. The result of this search shall be a list display of records matching the search criteria.

C. The system shall provide the capability to search using "wild card" characters as well as other partial search capabilities

D. The system shall utilize forms-based searches whereby the user will "fill in the blanks" on forms comparable to the data entry forms of the system and the return include only those entities that match the fields on the completed search entry form.

E. The system shall include methods to limit the number of records that are returned from a search.

F. It is desired that the system provide the ability to run searches on the returns of a previous search.

G. The capability shall exist to select a specific record from the list and "drill down" to successively greater levels of detail.

H. The system shall provide the capability for individual users to build save searches and queries.

I. Search capability shall include cross table or cross database searches.

J. The system shall provide a searchable narrative section for each module / screen. The vendor shall explain how their system provides this type of functionality and any limitations it may have. Ideally the narrative will be full text indexed searchable.

K. The system shall provide the capability such that a user may create and save a search, and be notified immediately if new records (i.e. vehicles, people, property, places, etc.) matching the requested search criteria are entered into the system.

L. The system shall have the ability to search within all attached documents and associated metadata when performing an advanced "text string" search.

3.8.6 RMS Standard Output Reports and Ad hoc Reporting

A. The same security parameters that are applied to the users' profiles will be required to remain in place across all reporting capabilities. This means that if a user does not have permissions to see specific data online, it shall not appear in any reports that they would run.

B. The system shall include a set of standard RMS reports. The vendor shall be required to provide a list and description of these reports that includes how data is grouped, and totaled.

C. The vendor shall provide samples of the reports described above.

D. The vendor shall discuss the types of reports that can be generated and the process to prepare and configure new reports.

E. The system shall provide an efficient utility for initiating these reports.

F. The system shall provide the capability of the reports to be configured and scheduled to run automatically.

G. The system shall include an ad hoc reporting tool capable of producing reports for any time or date range including the current day using any / all data fields within the system.

H. The reporting tool shall be capable of efficiently exporting report data to the current versions of Microsoft Word®, Access® and Excel®. The data exported shall retain formats and data types upon export.

I. The reporting tool shall have the capability of making RMS data available for other systems and PC applications.   The vendor shall be required to identify the

applications to which the system can export data.

J. The reporting tool shall be capable of exporting any report to PDF format.

K. Reports shall be menu selectable for content and generation parameters.

L. The reporting tool shall allow tracking of activity by type, location, and temporal factors.

M. The reporting tool shall include agency specific information on reports, charts, graphs, and maps produced by the system. Such information includes, but is not limited to, report header data and text, participating agency seal, department logos, etc.

N. The reporting tool shall be capable of generating reports for both screen display and printing. All non-graphics reports shall be capable of screen display and printing.

O. The reporting tool shall also include a plain-text search mechanism.

P. The reporting tool shall provide basic administrative reports summarizing significant activities and occurrences handled by the participating agencies.

Q. The reporting tool shall include comprehensive reporting tools in each module whereby personnel at each agency can create "pre-defined" reports that can be automatically initiated by time of day, day of week, etc., and directed to any printer(s) on the RMS network and directed to specific email addresses as a PDF attachment.

R. Each agency will be granted direct database connection (via read-only ODBC or other) to all RMS data tables for creation of reports and queries using third party reporting tool (e.g. Crystal Reports) or web-based queries that are external to the vendor provided tools and utilities.

S. The reporting tool shall provide functionality such as trend analysis, data aggregation, and other more advanced reporting functions.

T. The reporting tool shall allow the setting of agency thresholds for given activity identifiers. A daily, weekly, and monthly report governing exceptions for agency defined activity that exceed the thresholds will be produced for each predefined (by the system administrator) agency or station area. The thresholds must be variable from 0 to 9,999. Any report of an activity set to a zero threshold will appear on the exception report.

U. Agencies shall have the ability to create a standard incident report that includes all data associated with a specific incident, and is formatted in an easy-to-read, professional style from any workstation.

V. The system shall provide the capability for users to print full reports containing all information including narratives.

W. The system shall provide the capability for users to print "media" reports containing a subset of the information contained in the full report.

X. The reporting tool shall be capable of printing chronological incident and / or incident report listing.

Y. The reporting tool shall be capable of querying and printing incident details.

Z. The reporting tool shall be capable of printing audit report of changes to records.

AA. The reporting tool shall be capable of restricting user actions by warning of the number of records found.

BB. The reporting tool shall be capable of restricting user actions by using prompts to continue / refine / alter the query.

CC. The reporting tool shall be capable of restricting user actions by displaying a single page of data at a time.

DD. The RMS shall provide statistics for state and national mandated reports including Delaware modified NIBRS.

3.8.7 Map Based Reports

A. The RMS system must include an easy-to-use map-generation function that is accessible from all relevant system modules that permits users to extract desired data, reformat it as necessary, and produce a map customized (tailored) to the producing agency without having to depend on programming or technical personnel or Contractor assistance. Ideally, certain maps will be menu selectable with "step-by-step" instructions available to "walk the user" through the production of the map.

B. The map generation function (see directly above) shall allow the user to select a specific map layer(s) to include or limit the display on the report.

C. The system shall support either the direct production or, through an easily invoked (e.g., seamless) third-party mapping tool, the creation of thematic maps.

D. The system shall support either the direct production or, through an easily invoked (e.g., seamless) third-party mapping tool, the creation of automatic pin maps.

E. The system shall support either the direct production or, through an easily invoked (e.g., seamless) third-party mapping tool, the creation of density of incidence maps.

F. The system shall support the selection, extract and formatting of crime and location information so that it can be passed and displayed in any industry standard Geographic Information System (GIS).

G. The system shall include reporting based on graphical constraint entry. For example, the user shall be able to graphically choose an area within the map display and display RMS statistics for that area (Community Reports). The graphical constraint could be an existing map polygon or a user-defined area created at the time of report generation.

3.8.8 Record Sealing and Expunction

For the purpose of this section Expunction means the removal of information without the ability to restore that information and Record sealing means either the hiding of information such that no one can see the information with the ability to "unhide" the information or the deletion of case information but with the ability to restore the case information to the system.

A. The system must provide the capability to delete all references to specified information from the various RMS databases as required by court orders. This shall be agency specific and not cross installation or statewide.

B. The system shall produce a report indicating the deleted information for return to the court.

C. The vendor shall be required to outline in detail the process required in their system to expunge information.

D. The system must provide the capability to seal all references to a case or series of cases from the various RMS databases as required by court orders.

E. The system shall produce a report indicating the sealed case information for return to the court.

F. The vendor shall outline in detail the process required in their system to seal cases and to restore sealed case information.

G. The system must provide the capability to purge case information based upon a specified retention schedule associated with case type.

H. The retention schedule as described above shall be based upon the State of Delaware General Records Retention Schedule as implemented by each agency.

I. The vendor shall be required to explain in detail the process required to purge case information based upon a retention schedule.

J. The system shall provide the capability when purging information to, at user discretion, purge information automatically or require a user review and approval before information is purged.

K. No sealed case information shall appear on system generated reports, queries or reports generated by any third party product.

L. Expungement also includes the removal of images, documents and attachments related to the person as so directed.

3.8.9 Redaction

The vendor shall describe any capabilities of their system to automate the process of redacting information from system fields as well as textual data when an output report or summary is printed.

3.8.10 Intelligent Forms

A.   The system shall have intelligent form capability such that the system will modify the order of form presentation during data entry based upon previously entered information.

B. The system shall have intelligent form capability such that the system will modify the mandatory / optional nature of fields based upon previously entered information.

C. The system shall have intelligent form capability such that the system will include intelligent validation table selection (only valid entries are selectable based on previously entered data, such as only permitting MO information relating to burglaries if the incident is a burglary).

D. The system administrator shall be able to define the structure of the intelligent form

process such that they will define the required mandatory fields, the drop downs to be utilized and the order and selection of forms displayed.

E. The intelligent form shall minimize manual entry of data by populating the person's information from a driver license swipe, vehicle information from a DMV return and offense location from GPS.

3.8.11 Imaging / Attachments

A. The RMS will provide a mechanism for linking data files to people, vehicles, property items, incidents, warrants, and arrests records. These linked data files shall include: photographs, 9-1-1 audio files, other audio files, video files, scanned documents, PDFs, etc.

B. The RMS shall provide a module / subsystem for storing images and linking them to related records in the database. This shall include at a minimum, association with people, vehicles, property items, incidents, warrants, and arrests.

C. The RMS shall allow for the attachment, embedding, and / or linking of images and / or documents that are captured with digital cameras, scanners, or other methods.

D. The RMS shall adhere to and enforce statutory and State retention standards all case / incident images and attachments.

3.8.12 Selective Notification

A. The requirements of this section shall apply to all systems state wide.

B. The RMS shall provide the capability of "selective notification" to set flags on specific records or record types that shall cause the automatic generation of notices to individual(s), roles and workstation if a record of either a certain type is created (i.e., a warrant is created or recalled) or if a specific individual is queried or updated (i.e., a notification to an investigator if a specific individual is contacted).

C. The RMS shall have the capability of blind notification such that the individual creating or otherwise involved with the record is not notified.

D. The RMS shall have the capability of open notifications such that the individual creating or touching the record would be notified.

E. The vendor shall be required explain the methods of notification provided by their system.

3.8.13 Audit Trail

A. The software shall produce an audit trail of all activity on each of the systems. This audit trail will log the operator ID, date, and time for all transactions and / or data entered into or data taken out of the RMS system. The audit must include inquiries and views as well as adds changes or deletes.

B. Each system shall provide the ability to generate / print audit trail of all system transactions based on User ID / personnel information.

C. Each system shall provide the ability to log date, time and user ID associated with File maintenance transactions (e.g., create, read, add, update, delete transactions).

D. Each system shall provide the ability to log date, time, and user ID, individual requesting and the reason for printing associated with any report sent to a printer.

E. Each system shall provide the ability to log date, time, and user ID associated with unsuccessful sign-on attempts.

F. Each system shall provide the ability to generate / print an audit trail of all system transactions based on Workstation ID.

G. Each system shall provide the ability to generate / print an audit trail of all system transactions based on Role.

H. Each system shall provide the ability to generate / print an audit trail of all system transactions based on Date and time and type of transaction.

3.8.14 Address Verification

A. All address and location data entry fields will be validated against the system's geofile or associated GIS. Validated addresses / locations will be assigned a coordinate data which will be stored in the record.

B. The RMS system shall be able to use the same map data or geofile as the CAD system. It will be acceptable to have a copy of the geofile data resident on the RMS servers, but it will be a copy and not a separate version.

3.8.15 RMS Functional Requirements

As described elsewhere in this document all searches described in this section shall have the capability to be directed against a single agency, a single multi-agency installation, or against all systems installed state wide. If a search extends beyond the boundaries of a single agency, the security policies of the agency that had entered the data will apply.

3.8.16 Name Subsystem – Master Name Index

This module shall serve as the repository of the names of all subjects and entities encountered during the course of official law enforcement activities such as victims, suspects, witnesses, reporting parties, associates, business names, persons arrested and cited, registered sex offenders, registered probationers, etc. (master name table or similar functionality).

A. The system shall provide the capability to separate juvenile records from adult records electronically.

B. The system shall provide an easy way to consolidate multiple name records if, after entry, it is determined that multiple names are in the system for the same individual.

C. The system shall provide an easy way to separate a single name record into multiple name records if it is determined that a single MNI actually contains data on two different people.

D. The system shall provide the ability to maintain multiple sets of personal information on a person entered, as well as the time frames for the information. This shall include at a minimum:

   1. Physical description (height, weight, hair color, etc.),

   2. Date of birth

   3. Numeric identifiers (social security, driver's license, FBI, SID, arrest, etc.),

   4. Address information,

   5. Employment information,

   6. Multiple telephone numbers

   7. Other contact methods (email)

E. The system shall provide the capability to link the person record with an unlimited number of photographs as well as permit the agency to specify a table-based reference to the type of photograph (i.e., the photograph may be a mugshot, it may be a photo of specific scars, marks, tattoos, etc.). In many situations, these photographs may reside on different systems and the RMS shall provide a link to the photographs. The vendor shall provide details about how this functionality will

be accomplished.

F. The system shall allow the user to annotate any photographs that are attached to the MNI.

G. The MNI shall be relationally cross referenced to the Master Location Index Subsystem.

H. The MNI shall be relationally cross referenced to the Master Vehicle Index Subsystem.

I. The MNI shall be relationally cross referenced to the Master Property Index Subsystem.

J. The MNI shall be relationally cross referenced to all other system modules that include information on persons.

K. The MNI shall be relationally cross referenced to other records in the MNI table (other persons).

L. This subsystem shall be the collection point for all information concerning a person or name, regardless of how many records are in the system for that person in the RMS.

M. This "master name table" shall be automatically updated by internal transactions from other applicable RMS subsystems.

N. The RMS shall include a quick search feature using a soundex or other cross lingual or multi-key metaphone algorithm.

O. The RMS shall include a quick search feature where any parameter or group of parameters may be entered for any data field within the system. For example, display a brief list all records where Mr. John Doe was involved as a victim. The response shall display only those incidents where John Doe was a victim, regardless of the number of incidents where he was involved as a suspect, witness, complainant, etc.

P. The subsystem shall be capable of searching for a word or phrase within narrative information and producing a list of incidents where the word or phrase exists.

Q. The subsystem shall have the ability to cross-reference a name to other information concerning an individual.   At a minimum, the following shall be supported:

addresses, aliases, date of birth(s), physical description, social security number(s), and pertinent offenses. It shall provide information using numbers relating to various reports including incident, case, casualty, accidents, citations, arrest and booking, field interview, driver's license, vehicle, and others.

R. The MNI module shall provide protection against the potential of either entering a duplicate name or permitting the inadvertent entry of an alias for an individual. This shall include, at a minimum, the automatic query of the master name table by a series of user-defined criteria (such as name, DOB, SSN, etc.) and then the display of all potential matches. The vendor shall describe in detail their approach to validation.

S. Upon the display of all potential matches the system shall provide an easy method of selecting the potential match including a photograph.

T. If the person being entered is previously in the system, the operator shall only have to change those fields in the record that are either unique to this entry or different from the previous entry. There shall not be a requirement to reenter the information.

U. The RMS must provide a mechanism for identifying potential duplicate master name files. The vendor shall be required to explain in detail what capabilities their system provides in this area.

V. It is desired that the duplicate name detection mechanism is based on multiple parameters and fuzzy logic.

W. The RMS shall provide a mechanism for easily creating mug shot lineups.

X. The system shall provide the capability to randomize or manually reorder photos that are used in a photo lineup.

Y. The system shall provide the capability to add photo's that are not stored in the RMS by permitting the operator to browse to the file wanted and add it to the lineup.

3.8.17 Master Vehicle Index (MVI) Subsystem

A. The RMS shall contain a master vehicle database that tracks vehicle information entered into the system in a central database and index.

B. The master vehicle database shall provide links to detailed information about vehicles stored in the system. For example, users shall not only be able to identify a list of all vehicles involved in an accident but also to obtain detailed information about each vehicle and property directly from the displayed list.

C. Vehicle records shall provide access to associated photographs.

D. At a minimum, the Master Vehicle subsystem shall have the capability to track the following vehicles (airplanes, automobiles, boats, motorcycles, RVs, and trailers).

E. The Master Vehicle subsystem shall have the capability of updating external systems (NCIC) with information related to items recovered or stolen.

F. The MVI shall be relationally cross referenced to the Master Location Index Subsystem.

G. The MVI shall be relationally cross referenced to the Master Name Index Subsystem.

H. The MVI shall be relationally cross referenced to the Master Property Index Subsystem.

I. The MVI shall be relationally cross referenced to all other system modules that include information on property or vehicles.

3.8.18 Master Property Index (MPI) Subsystem

A. The RMS shall contain a master property that tracks property information entered into the system in a central database and index.

B. The master property database shall provide links to detailed information about property stored in the system. For example, users shall not only be able to identify a list of all items involved or stolen during a specific incident, but also to obtain detailed information about each item directly from the displayed list.

C. Property records shall provide access to associated photographs.

D. At a minimum, the Master Property subsystem shall have the capability to track the following property (bicycles, clothing, drugs, electronics, financial and other documents, jewelry, firearms, tools, and small machinery).

E. The Master Property subsystem shall include the Ability to track the quantity and value of items entered in to the MPI.

F. The Master Property subsystem shall have the capability of updating external systems (NCIC) with information related to items recovered or stolen.

G. The MPI shall be relationally cross referenced to the Master Location Index Subsystem.

H. The MPI shall be relationally cross referenced to the Master Name Index Subsystem.

I. The MPI shall be relationally cross referenced to the Master Vehicle Index Subsystem.

J. The MPI shall be relationally cross referenced to all other system modules that include information on property.

3.8.19 Location Subsystem – Master Location Index

A. All locations entered into the system (except those that are out of the GIS coverage area) shall be validated against a geofile built from the existing State GIS and other data provided by the local COG or other sources.

B. RMS modules shall contain a master location database that collects geographically oriented information in a central database and index. The master location database shall be shared with the CAD System.

C. The master location database shall include common place names.

D. The master location subsystem shall include information about linkage to location photographs and archived documents (scanned documents).

E. The MLI shall be relationally cross referenced to the Master Name Index Subsystem.

F. The MLI shall be relationally cross referenced to the Master Property and Vehicle Index Subsystem.

G. The MLI shall be relationally cross referenced to all other system modules that include information on locations or addresses.

H. The master location database shall keep a running history of events / incidents at a given location. Selected information that is related to a location (such as persons with warrants, arson suspects, arrestee, and suspects) would be referenced through this database.

I. The location database shall provide links to detailed information about geographically oriented data stored in the system. For example, users shall not only be able to identify a list of all incidents occurring at a specific location, but also to obtain detailed information about each incident directly from the displayed list.

J. The master location subsystem shall include information about commonplace names.

K. The master location subsystem shall include information about business names.

L. The master location subsystem shall include information about alarms (permits and activations).

M. The master location subsystem shall include information about persons (dangerous persons, patients, victims, etc.) associated with a location.

N. The master location subsystem shall include information about premises history (repeat calls to the same location).

O. The RMS system shall provide the capability to capture and index location information including hazardous incident or conditions reported.

P. The RMS system shall provide location information including hazardous situations present to system operators and to other system including the CAD.

Q. The RMS system shall provide location information including activity at the location, including citations, inspections, incidents, reported offenses, etc. to system operators and to other system including the CAD.

R. Location data can be directly entered into the Master Location Subsystem.

S. Location information will be entered into this subsystem as a part of the normal data entry process and will require no special effort.

T. The system shall include a standard report identifying all locations that were not validated and overridden including the location or address and the ID of the individual performing the override.

3.8.20 Incident Management and Reporting

The incident subsystem shall collect, store, and process key information relating to dispatched incidents / crimes.

A. The system shall support the import of incident report information from DelJIS.

B. The system must be integrated with the CAD system such that all CAD calls for service that are disposed will be transferred to this module.

C. The system shall have the capability to reconcile CAD calls for service that were disposed indicating that a report had been made and the reports that have been imported from DelJIS.

D. The system shall provide a list of all non-reconciled calls for service (calls closed indicating a report had been made but the data imported from DelJIS does not contain the report)

E. The system shall include an aging report of unreconciled calls for service.

F. The RMS system shall lock the report once it has been approved and imported and only allow modifications through the completion of supplemental forms / reports.

G. The system administrator and other authorized users shall have the ability to unlock locked reports to make changes. All occurrences of reports being unlocked shall be noted in the audit file.

H. A drawing or diagramming tool shall be supported for creating, storing, and manipulating crime scene diagrams. The diagrams shall be linked to the incident reports and directly accessible from them.

I. The RMS shall include techniques such as the correlation of local offense codes by means of a conversion table to automatically provide for NIBRS reporting.

J. This module shall be relationally cross referenced to the MNI, MLI, MVI and MPI.

K. The incident module shall, at a minimum, record containing boundaries (district, beat, sector, Police Reporting Area, etc.) based on validated location or determined from the geofile as related to the incident. The system shall at least 4 levels of boundary aggregation.

L. The incident module shall, at a minimum, collect and manage involved persons information (victims(s), complainant, witness(es), suspect(s), arrestee(s) as related to the incident.

M. The incident module shall, at a minimum, collect and manage offense information as

related to the incident.

N. The incident module shall, at a minimum, collect and manage property and vehicle information as related to the incident.

O. The incident module shall, at a minimum, collect and manage case details (Location (including X-Y coordinate determined from the geofile or GIS), Status (open, closed, cleared arrest, etc.), Times (report date and time, occurred date and time, date case closed, etc.), Case / report number, Incident number, type of case, UCR, NIBR classification) as related to the incident, or other information.

P. The incident subsystem shall provide access to all of the original data entered into or captured by the CAD system, including all location data and rebids. However, the RMS shall not be able to change any CAD information.

Q. The system shall provide the ability for different location / address fields between the location dispatched to and the actual location of the incident as recorded in the RMS.

R. The RMS screen shall alert the user if supplements are available for the incident record.

S. The incident subsystem shall have the capability to mark or flag any incident as a significant incident. The significant incident flag shall include a drop down menu that is defined by each agency.

3.8.21 Arrest Records

The RMS along with the LEISS shall provide the capability to capture and retain information regarding individuals arrested by the participating agencies.

A. This subsystem shall allow the storage of comprehensive arrested person demographic information.

B. This subsystem shall allow the capture of information related to criminal charges, and warrants.

C. This subsystem shall allow the capture of arrest information, including date and time, arrest location, arresting officer, charges and number assignment.

D. The location or address of the arrest must be geoverified.

E. Information captured in this module must be referentially cross referenced with all

other system modules including person, vehicles and location such that:

1. Persons arrested together are automatically linked as associates

2. Persons arrested and any vehicle involved are automatically linked as involved.

3. Vehicles and persons shall be automatically linked to the arrest location and if a master location does not exist for the arrest location one will automatically be created.

4. All information captured shall be linked to the crime report(s) for which the arrest(s) was made.

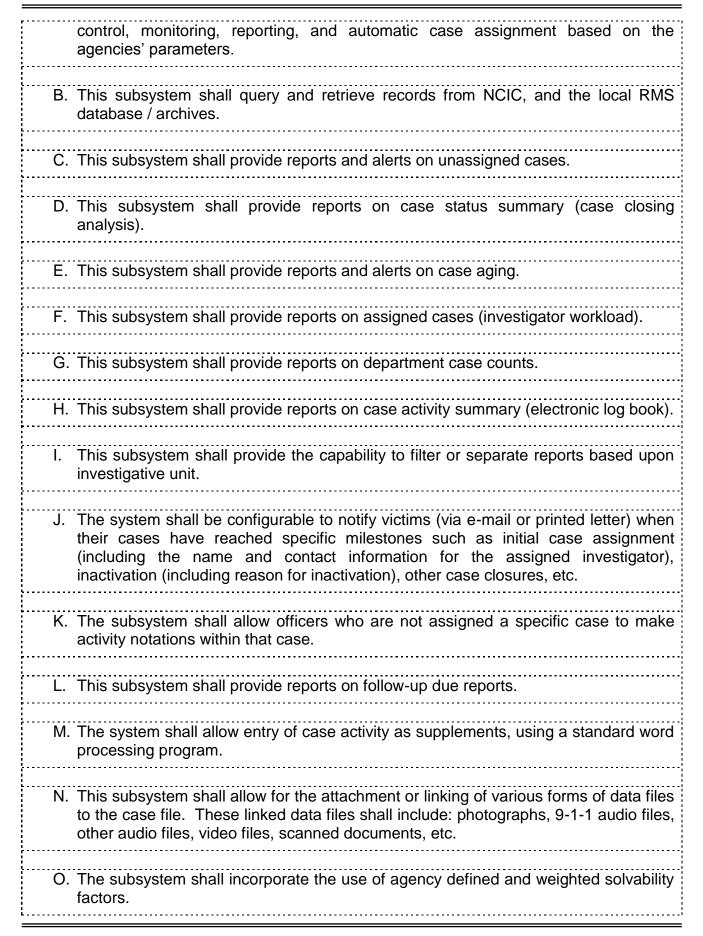## 3.8.22 Property and Evidence Management / Property Room

This module shall be used to capture and maintain information and records regarding property and evidence identified on incident reports.

A. Information pertaining to any property item shall include storage location, identifying number (if any), next action to be taken, date to be taken, present status, etc.

B. The storage locations shall be table defined and selected from a drop down list upon entry of a property item.

C. The system shall allow inquiries to be made by case number, tag, tag and item, serial number, owner applied number, partial serial number, and / or description.

D. The system shall have the ability to alert the Property Officer prior to the time that the statute of limitations is exceeded for disposal of the property, and shall provide the ability to create lists of property to be sold or disposed of and generate receipts accordingly.

E. The system shall be capable of printing a property room inventory list on demand. This list may be displayed on the workstation or printed on any printer on the network.

F. The property and evidence subsystem shall maintain "chain-of-custody" of all criminal offense evidence as it is moved between the property room and various other locations such as labs, prosecutor's office, courts, etc.

G. The system shall provide tools to expedite the inventory of the property rooms and storage facilities. The vendor shall identify these tools.

H. This module shall be relationally cross referenced to the MNI, MLI, MVI and MPI.

I. The RMS shall be designed so that specific property reports are entered into the property and evidence table (i.e., stolen property reports, lost property reports, found property or recovered property reports, contraband property reports, evidence items, etc.).

J. Information contained in this module shall be able to be related to other information in the entire RMS in order to determine crime trends, assist in the recovery of stolen property, etc.

K. All property and evidence shall be entered into the RMS only once and carried throughout the RMS system wherever the data fields occur.

L. All categories of property shall be cross-referenced so that entry of property records results in automatic checks of all other related tables.

M. This module shall use bar coding technologies to identify all property and evidence maintained in the RMS system and stored in the property room or other remote facilities.

N. Bar code readers shall be portable to facilitate efficient use and allow for capture and storage of bar code information in the property room or other locations within the various agencies' facilities.

O. Entry of information related to searchable (serial number, owner applied number, etc.) property that is recovered, found, or submitted as evidence shall initiate an automatic query to the NCIC stolen property databases. Therefore, it is desired that the data fields use the NCIC coding for validation of all property data entered.

P. The system shall automatically generate inquiries to the NCIC stolen property database on at a regular interval for all serialized and OAN property items as long as the items are in the custody of the property room.

Q. This module shall provide information pertaining to a particular item of property or evidence such as date, time, location of the property event, officer(s) involved, description of the property, the quantity and value (estimated or known) of the property, serial numbers, category or article codes, brand names, etc.

3.8.23 Criminal Investigations and Case Management

A. The RMS shall provide the capability for effective investigative case management,

control, monitoring, reporting, and automatic case assignment based on the agencies' parameters.

B. This subsystem shall query and retrieve records from NCIC, and the local RMS database / archives.

C. This subsystem shall provide reports and alerts on unassigned cases.

D. This subsystem shall provide reports on case status summary (case closing analysis).

E. This subsystem shall provide reports and alerts on case aging.

F. This subsystem shall provide reports on assigned cases (investigator workload).

G. This subsystem shall provide reports on department case counts.

H. This subsystem shall provide reports on case activity summary (electronic log book).

I. This subsystem shall provide the capability to filter or separate reports based upon investigative unit.

J. The system shall be configurable to notify victims (via e-mail or printed letter) when their cases have reached specific milestones such as initial case assignment (including the name and contact information for the assigned investigator), inactivation (including reason for inactivation), other case closures, etc.

K. The subsystem shall allow officers who are not assigned a specific case to make activity notations within that case.

L. This subsystem shall provide reports on follow-up due reports.

M. The system shall allow entry of case activity as supplements, using a standard word processing program.

N. This subsystem shall allow for the attachment or linking of various forms of data files to the case file. These linked data files shall include: photographs, 9-1-1 audio files, other audio files, video files, scanned documents, etc.

O. The subsystem shall incorporate the use of agency defined and weighted solvability factors.

P. The subsystem will provide and generate agency defined solvability based case closure letters.

Q. This module shall allow the use of digital cameras for the recording of crime scenes or other picture evidence.

R. The system shall link investigative case activity to original and supplemental criminal offense / incident reports in the system. The case will be composed of the original offense / incident report, all supplements, property / evidence records, and other miscellaneous files and data.

S. The individual records and data that comprise the case must be easily identifiable from the case number and the case number must be easily identifiable from the individual records and data comprising the case.

T. This module shall be controlled by separate security features that allow only certain individuals access to the display, entry, and modification of the information.

U. This module shall be relationally cross referenced to the MNI, MLI, MVI and MPI.

V. The system shall include notification of investigative supervisors of the existence of new cases pending assignment.

W. The system shall support the use of automatic case routing based upon the type of case, the jurisdiction of the case, and other geographic attributes such as the reporting district, beat, etc.

X. The subsystem shall provide an on-line means to assign cases, monitor investigative progress, and initiate dispositions.

Y. The system shall provide for an online investigative case journal.

Z. The system shall provide tickler notification to supervisory personnel based upon a case's time in a particular status.

AA.   The system shall provide tickler notification to investigative personnel relating to other system activities such as lack of service activity on a warrant or time in status of property items.

BB.   This subsystem shall show related suspects / offenders and related case numbers.

CC.   This subsystem shall permit the recording of case or enforcement activity against different grants.

3.8.24 Field Interviews

A. This subsystem shall permit the import and storage of information from Field Interview (FI) cards.

B. The field interview system shall interact with the locations, master name, master vehicle systems, and the gang activity systems.

C. Information from the FI subsystem shall be available to the crime analysis system in order to establish relationships between reported offenses and field interviews.

D. This subsystem shall be maintained on-line for access by investigative and crime analyst personnel in aligning suspects with criminal occurrences.

E. The system shall automatically populate the appropriate data fields if the subject person's information has been previously entered.

F. The system shall automatically populate the appropriate data fields, if a vehicle involved in the FI has been previously entered into the MVI.

G. Any master entities (people, vehicle, location, property) that are included in a single FI shall systematically be relationally linked.

H. The officer shall have the ability to "update" the data fields with new / updated information regarding the person or vehicle. The previous information shall be retained by the system and displayed when queried.

I. The system shall provide the capability to purge FI information including entities associated only with the FI after certain aging criteria have been met. The vendor shall be required to discuss in detail the capabilities provided by the system in this area.

J. This module shall be relationally cross referenced to the MNI, MLI, MVI and MPI.

3.8.25 Citations

The RMS shall include a Citations module for importing, storing and retrieving citations issued by the each Law Enforcement agency

A. The citation system shall include an interface to the State's E-Ticket system.

B. The citation module must include an audit trail that includes an indicator that all citations issued with the electronic citation system have been successfully transferred to the RMS.

C. The citation system must contain a component that maintains accountability of the paper documents that are issued to officers and other members of the agencies and information based both upon citation numbers as well as personnel.

D. The system must provide the ability to track citations received by the agency. The system shall have the ability to easily enter the starting and ending numbers of citations as they are received by the agency.

E. The system shall provide the ability to track the distribution of citations to personnel. The system shall have the capability to track the starting and ending numbers of summons books as they are issued to individual officers.

F. The system shall provide the capability to reconcile to the level of the individual citation number all citations that have been received by the agency. The system shall provide the capability to track gaps in the numbers of citations that have been issued.

G. The system must be capable of capturing data on the various summons forms. The captured data must include, but not be limited to:

   1. Citation Number

   2. Operator's Information (name, address, etc.)

   3. License Plate

   4. Violation(s) – multiple violations on a single citation

   5. Validated Location

   6. Date and Time of violation

   7. Officer Issuing Summons

H. This subsystem shall track both written and warning citations.

I. The system shall provide agency configurable capability to integrate citations with the MNI, MLI, MVI and MPI.

J. The citation module must have an analytical component that includes reporting and mapping. The mapping capabilities shall include time based, thematic and density of incidence maps.

3.8.26 Juvenile Records

A. This subsystem shall provide for the recording of pertinent information on juveniles including detailed descriptive data, associates, and case histories.

B. This subsystem shall provide for name inquiries as well as an ability to retrieve case records by date, offense, offense location, physical descriptors, and disposition.

C. Strict system security procedures shall be incorporated into this module to separate juvenile data from the normal flow and data access. Access to juvenile records shall be tightly controlled.

D. This module shall be relationally cross referenced to the MNI, MLI, MVI and MPI.

3.8.27 Accident / Traffic Records

A. This subsystem shall be able to import all the information) reported on the Delaware traffic accident form from DelJIS and incorporate it into this module as well as all others that apply such as persons, vehicles, locations, etc.

B. This module shall be relationally cross referenced to the MNI, MLI, MVI and MPI.

C. The subsystem shall use selected data from the accident reports and moving citations to develop various statistical reports and correlation reports by types of accidents, locations, day, time, conditions, etc.

D. Reports shall be designed that provide trends in traffic activity that can be used for comparative analyses, such as high traffic accident locations, high violations, other causative factors, time of day correlation, and weather factors.

E. The Accident Traffic Records module shall provide the capability to select, extract and export traffic and citation data in standard formats such as Excel and Access. Upon export, the data types in the RMS shall be retained in the recipient files.

F. The system shall provide the capability to calculate various statistics such as the traffic enforcement indexes (citations issued + DUI Arrests made) / (injury accidents

+ fatal accidents)

G. This subsystem shall allow for presentations of information in a map-based format. The mapping capabilities shall include time based, thematic and density of incidence maps.

3.8.28 Crime Analysis

A. This module shall provide an export to Crime View.

B. This subsystem shall produce crime analysis log (summary of all crime incidents being processed).

C. This subsystem shall produce crime specific summary reports (analysis of specific crimes, including vehicles, and the MO of suspects, etc.).

D. This subsystem shall produce pattern analysis (analysis of developing crime patterns used to spot new or changing crime patterns). The vendor shall be required to explain in detail how the analysis is conducted.

E. This subsystem shall produce a patrol briefing report.

F. This subsystem shall produce time summary reports (crime analysis by time of day and day of week).

G. The RMS shall have the capability to perform ad hoc queries and export the result in a standard file format to other applications (Microsoft Word®, Microsoft Excel®, etc.). Upon export, the data types in the RMS shall be retained in the recipient files.

H. The vendor shall specify if the Crime Analysis component utilizes a separate database or utilizes the same database as the RMS.

I. The vendor shall be required to specify any advanced statistical analysis capabilities of the subsystem such as, mean, standard deviation, median, sample variance, analysis of variance, skewing, etc.

J. This subsystem shall have the ability to present information in textual or color-coded graphical formats (tables, charts and graphs).

K. The system shall incorporate crime mapping capabilities to include at a minimum: incident pin mapping, thematic mapping, hot spot maps and the ability to perform analysis based upon user defined and ad hoc geographic boundaries.).

L. The vendor shall be required to identify any spatial analysis tools incorporated into the subsystem.

M. This subsystem shall produce daily reports (crime and arrest activity district).

N. The Crime Analysis system shall provide the capability to select, extract and format data to export to external systems using standard formats.

3.8.29 Wanted Persons

A. The RMS shall include a module that provides for capture and processing of records of wanted persons and warrants.

B. Information tracked on wanted persons shall include: court number, want / warrant type, want / warrant disposition, assigned agency / officer, dates issued / received / served / returned.

C. The RMS shall provide a tickler system associated with the attempts to serve module to notify investigative personnel when no attempts to serve the warrant have been made within specific time frames (due diligence).

D. The RMS shall issue an alert any time a wanted person's name is entered into the system.

E. The RMS shall have the capability to provide a report of outstanding warrants based upon user defined geographic information (i.e., street address range reporting district, station, area).

F. This module shall be relationally cross referenced to the MNI, MLI, MPI and MVI.

3.8.30 Known Offenders

A. This module shall process and store data pertaining to known offenders, such as sex offenders, narcotics offenders, and applicable parolees.

B. System shall be able to import information on known offenders from data files provided by other criminal justice agencies such as the parole board or probation department. System shall be able to easily refresh and update the information as new data files are provided by the outside agencies.

C. Information available shall include the subject's physical description, residence (past and present), traits, MOs, associates, convictions, involvement in incidents handled

by Law enforcement, case dispositions, and present status.

D. Pertinent information shall be obtained from arrest reports, booking reports, crime reports, citations, wants and warrants, criminal histories, traffic reports, registrations and license applications, disposition reports, etc.

E. This subsystem shall produce an on-line rap sheet that shows the complete criminal history of an individual.

F. The RMS shall query this module automatically when a name associated to a hazardous location search is initiated or when a name inquiry is initiated.

G. This module shall be relationally cross referenced to the MNI, MLI, MPI and MVI.

3.8.31 Criminal Intelligence Information

A. The Criminal Intelligence Information Module shall be segregated from the remainder of the RMS to satisfy the requirements of 28 CFR part 23.

B. This reporting module shall process and display selected data that may be used to list and display names of individuals arrested for committing crimes or being involved in criminal acts.

C. This module shall provide a high level of security and allow only designated individuals access to this information.

D. Tables and / or records associated with this module shall have the ability to be encrypted, as well as limited access to only specific workstations.

E. This subsystem shall allow tracking of information regarding person, locations, vehicles, etc., which may be of an interest to law enforcement.

F. This module shall allow the input of information in various forms such as scanned images, digital photos, scanned documents, etc.

G. This module shall be relationally cross referenced to the MNI, MLI, MVI and MPI but the references shall only be visible from the Intelligence module.

H. This module will be interfaced to the Delaware Information and Analysis Center (**DIAC**).

I. This module shall provide the data to export or transmit data to regional organized

crime centers and other regional intelligence centers.

3.8.32 Gang Activity

A. The system shall include a module to track gang activity and gang information.

B. The Gang Activity Module shall be segregated from the remainder of the RMS to satisfy the requirements of 28 CFR part 23.

C. The module shall capture information as to group meetings.

D. The module shall capture information as to gang members and associates.

E. The module shall capture information as to gang events.

F. The module shall capture information as to gang locations.

G. The module shall provide the ability to associate any/all information contained within this module with information contained in other RMS modules for the purpose of developing patterns and associations.

H. The module shall be able to accept information from the FBR based Gang information Cards. Update of the system shall only occur after a member of the gang unit has reviewed and approved the information.

3.8.33 Web Self-Reporting

A. The system shall be required to support the entry, inquiry and printing of crime report information over the Internet by citizens.

B. The system shall be configurable to allow the system administrator to specify what crime types shall be permissible to enter via the Web reporting component.

C. The system shall be configurable to allow agency personnel to specify mandatory fields in the web reporting module.

D. The system must allow the review and approval process to be customizable for web reported crimes.

E. The system shall be required to perform checks on the information entered to ensure that the crime being reported is permitted to be reported on-line (i.e. tally of items to ensure that the loss is below a user configured amount or no suspect

> information can be entered, etc.)

3.8.34 Fleet Management

A. This module shall track law enforcement vehicle usage, maintenance activities and schedules, operation and maintenance costs, and work order completion / scheduling.

3.8.35 Equipment Maintenance System

A. This subsystem shall be used to assist the various divisions within the agencies in managing the inspection and maintenance of equipment other than vehicles.

B. The system shall track downtime as well as maintenance costs.

C. The outputs shall include a report, which may be selected by equipment ID number, type of equipment, type of activity, date range, etc.

3.8.36 Inventory Subsystem

A. This module shall provide basic inventory capabilities that serve the agency's' needs for the accounting of equipment and supplies in inventory or assigned to personnel.

B. The system shall support agency defined categories of equipment and supplies to be tracked such as uniform items, protective equipment, weapons and radio equipment.

C. At a minimum, data entry fields shall be provided for Personnel Identifier, Type of Equipment, Make, Model, Year purchased, Year for replacement, Vendor information.

D. Fixed assets such as office furniture, equipment, and other items of capital equipment shall be recorded and tracked within this system.

E. Inventory of equipment assigned to Departmental vehicles shall be recorded within this system.

F. The system shall provide extensive use of bar coding technologies.

3.8.37 Personnel and Training

A. This subsystem shall be available from both the CAD and RMS and shall provide for the maintenance of current employee and applicant information.

B. This subsystem shall include the employee's demographic information.

C. This subsystem shall include the employee's address.

D. This subsystem shall include the employee's telephone numbers.

E. This subsystem shall include the employee's emergency contact information.

F. This subsystem shall include employment information and history.

G. This subsystem shall include the employee's ID / badge number.

H. This subsystem shall include the employee's special skills.

I. This subsystem shall include the employee's training information including certifications and recertification requirement dates.

J. The system shall at a minimum, be able to generate a list of personnel who are nearing their recertification dates and a reminder letter / message / email notifying affected individuals and their supervisors. It is highly preferred that the system provide an automatic tickler function to provide this notification.

3.8.38 Automobile Impound Tracking

A. This subsystem shall track information related to the impounding of vehicles and shall interact with arrest, offense, and accident information in the RMS system.

B. The system shall maintain an inventory of all vehicles that have been impounded and their location which shall either be displayed on the terminal / workstation or printed on any printer within the RMS environment.

C. The subsystem shall provide the capability to capture and maintain information regarding the inventory of the vehicle such as items identified, items removed, officer(s) and / or person performing the inventory, etc.

D. When vehicle queries are performed (either manually or automatically) the information in this subsystem shall be included.

E. The automobile impound system shall automatically query DelJIS / NCIC for wanted and stolen information on entered vehicles.

F. The system shall also generate reports / forms regarding impounded vehicle status, owner notifications, and vehicles ready for sell / auction, etc.

G. The system shall have the ability to generate receipt for monies received for the release of impounded vehicles.

H. This module shall be relationally cross referenced to the MVI.

3.8.39 Licensing, Permits, and Registrations

A. This subsystem shall expedite, facilitate and track the creation of licenses and permits issued by an Agency and any required registrations.

B. The system shall provide the capability to tailor the capabilities, information gathered and process based upon agency defined parameters and the type of permit, license or registration.

C. The names, address, vehicle, and other detailed personal information shall be captured for individuals / locations registering or applying for permits / licenses and included in the MNI, MLI, MVI and MPI as applicable.

D. The files shall be accessible to CAD (e.g., generate a premise alarm when a call for service occurs at a location where a potentially dangerous permit / license is issued), crime analysts, and criminal investigations.

E. Relevant entries into the master databases (name, property, vehicle, and location) shall be automatically accomplished by the system.

F. The system shall permit the capture, inclusion and printing of photographs and finger prints on licenses.

G. The system shall provide for the capture, receipt and accounting of monies associated with the issuance of licenses, permits and registrations. The amount shall vary based upon the type of permit, license or registration and the activity being processed.

H. The vendor shall create / modify specific forms and data entry screens to allow entering, storing, retrieving, and manipulating multiple types of types of permits, licenses, and registrations such as Alarms, Parolee, Restraining orders, Sex Offenders, Protective orders, Peddlers / solicitors,)

I.   This module shall be relationally cross referenced to the MNI, MLI, MVI and MPI

J.   The vendor shall discuss the capabilities of their system to manage false alarm tracking, notification and billing as a function of the alarm permitting function in accordance with Delaware statutes and local ordinances.

3.8.40 Alarm Registration and False Alarm Tracking

In addition to the described multi-purpose Licensing, Permits, and Registrations requirements described in Section 3.8.39, the system shall support the following specific requirements regarding the registration and tracking of false alarms. The false alarm system shall be supported by the CAD and RMS Systems.

A.   The system shall support a text based export for use by third party false alarm reporting system

B.   The system shall provide the capability to create alarm permits and share this information with the CAD System.

C.   The system shall provide the capability to track expiration dates for alarm permits and generate renewal letters to the alarm holders.

D.   The system shall be capable of receiving information from either the CAD or the FBR indicating whether an alarm call was false (as defined by the City) and record the fact.

E.   The system shall have the capability to record and tally the number of false alarms.

F.   The system shall have an agency definable fee schedule based on the number of false alarms tallied over a time period.

G.   The system shall provide a billing and receivables module for the billing of alarm fees and the receipt of fees.

H.   The system shall provide the capability for the alarm registration process to occur over the internet.

3.8.41 Sex Offender Registration

In addition to the described multi-purpose Licensing, Permits, and Registrations requirements described in Section 3.8.39 the system shall support the following specific requirements regarding the registration and tracking of sex offenders that are required to register.

A. The system shall include a sexual offender registration module that supports both registration and verification of registrants in compliance with Delaware Law.

B. The system must support different levels of registrants.

C. The system shall be relationally referenced to the MNI, MLI, MVI and the incident subsystems.

D. The information in the system shall be capable of being exported to other systems.

E. All information entered into the module shall be verified against the master indices in the system including specifically and automatic inquiry into the MNI, MLI and MVI as information is entered.

F. Information in this system shall be capable of being provided to the CAD in an automated manner.

G. The system shall include the capability to create geographic based reports for distribution to field personnel to verify address and residency information. The verification process shall be supported by the FBR.

H. The system shall support the inclusion of multiple digital images of registrants including facial photos, scars, marks and tattoos.

3.8.42 Pawn Shop

The state is in the process of deploying a pawn shop system acquired from the Maryland State Police (RAPID). Once acquired and deployed, the new RMS will be required to interface to this system.

3.8.43 Cleary Reports

The system shall be capable of generating all reports necessary to satisfy the Campus Security Act reporting requirements (Cleary Reports).

3.9   Fire Records Management System Functions

3.9.1   National Fire Incident Reporting System (NFIRS)

A. The Fire Incident module of the RMS shall collect, store, and process key information relating to dispatched incidents and fires. In most cases, the basic information shall be collected at dispatch time through CAD, and then supplemented by the entry of the various fire incidents and supplemental reports. The incident

subsystem shall serve as a base for many of the other functions and automatically update all applicable subsystems.

B. Information from the incident subsystem must provide, at a minimum, automatic inputs to the National Fire Incident Reporting System (NFIRS) Version 5.   The RMS shall support the most current production version of the reporting requirements as promulgated by the State of Delaware. Offerors will indicate their respective systems' ability to facilitate these reporting production requirements.

3.9.2 Integration with MDCS

Currently firefighters complete their reports upon returning to their home fire stations and this will probably continue in the near future. However, access to NFIRS and Fire Inspection data in the field is a high priority. As such, the NFIRS module included in the FRMS shall be compatible with the mobile data computer system (MDCS) and allow for the collection of information directly in the field.

3.9.3 Inventory Tracking

This module will provide basic inventory capabilities.

3.9.3.1 Database Requirements

At a minimum, the FRMS shall track the following equipment and supplies allocated to various divisions, apparatus, and firefighters within the fire departments:

A. Uniforms/clothing.

B. Turnout gear.

C. SCBA equipment (including the latest measurements).

D. Boots.

E. Radio equipment.

F. Office supplies (pens, paper, etc.).

G. Station supplies (stoves, tables, chairs, etc.).

3.9.3.2 Fixed Assets

The FRMS must inventory and track fixed assets such as office furniture, equipment, and other items of capital equipment within the departments.

3.9.3.3 Vehicle/Apparatus Equipment

The FRMS must be able to inventory and track equipment assigned to departmental vehicles and apparatus.

3.9.3.4 Required Data Entry Fields

At a minimum, the inventory module of the FRMS must provide data entry fields for:

A. Make.

B. Model.

C. Year purchased.

D. Anticipated replacement year.

E. Vendor information.

3.9.4 Personnel Subsystem

The FRMS shall include a personnel module that provides for the maintenance of current personnel information.

3.9.4.1 Database Requirements

At a minimum, this module shall track the following information for each member:

A. Personal data.

B. Contact phone numbers (pager, home, mobile, office).

C. Start date.

D. Promotions and promotions dates.

E. Training data.

F. Special skills information (e.g., advanced life support paramedic, driver, etc.).

G. Complete history.

H. Current assignment.

I. Certifications.

J. Physical fitness.

K. Injuries/illness.

3.9.4.2 Tracking of Medical Conditions

The FRMS must include a personnel module that tracks in a confidential manner the medical conditions and hazardous exposures of personnel.

3.9.4.3 Restricted Access

Access to most of the information in this subsystem must be controlled by security, and some information, such as medical conditions and exposure, can only be viewed on a need to know basis.

3.9.4.4 Logging Requirements

Any access to this confidential information, including merely viewing it must automatically be tracked and logged by the FRMS. Tracking will include the ID of the individual, the date and time, the workstation ID and the record ID, any actions (read, write, delete) taken, and the results of the action.

3.9.4.5 CAD System Integration

The CAD system shall be able to access selected data stored in the FRMS personnel subsystem for searches to locate persons with specific skills or capabilities and to obtain contact information of personnel (e.g., emergency contact person, home telephone numbers, pagers, mobile telephone numbers, etc.).

3.9.5 Training Subsystem

Since training is provided in various ways to personnel, the training subsystem of the FRMS shall be flexible enough to facilitate the unique requirements of training completed at stations, academies, other fire departments, and other facilities.

3.9.5.1 Database Requirements

At a minimum, the following data items shall be tracked for each firefighter:

A. Name.

B. Department ID.

C. Current Certifications.

D. Date of certification attainment.

E. Certification renewal date.

F. Re-certification requirements.

G. Current level within the department (firefighter, chief, etc.).

H. Training Classes taken along with instructor, scores, etc.

I. Test types taken and scores.

3.9.5.2 Notifications/Alerts

The FRMS shall provide a "tickler" function that alerts the proper personnel of expiring training certifications.

3.9.5.3 Certification Levels

The FRMS shall allow for the identification of certification levels by listing all classes, etc., required to gain each certification level. The system shall provide a means of determining which classes each person requires to reach the next certification level.

3.9.5.4 Scheduling Training

The FRMS shall include the capability for scheduling the training necessary for specific individuals to obtain and/or maintain their required certifications. The system shall also be able to recommend the training necessary for an individual to obtain their next promotion or higher-level certification.

3.9.5.5 Tracking Training History

The FRMS shall track the following types of training for all personnel:

    A. Complete training history from start of employment to retirement.

    B. Training required/tied to promotions.

    C. Required training for certifications (e.g., EMT, Diver, etc.).

3.9.6   Fire Inspection and Prevention Module

The FRMS shall include a Fire Inspection and Prevention module that assists in scheduling inspections, tracking and resolving violations, follow-up inspections and other programs as specified below.

3.9.6.1 Premise Information

The FRMS shall store and manage premise information including, but not limited to:

    A. Structure description.

    B. Fire protection system.

    C. Fire detection systems.

    D. Fire suppression systems.

    E. Fire inspection schedule.

3.9.6.2 Building Characteristics

The FRMS shall store and manage building characteristics information including, but not limited to:

    A. Building dimensions.

    B. Floor characteristics and construction materials.

    C. Wall characteristics and construction materials.

    D. Door characteristics and construction materials.

    E. Roof characteristics and construction materials.

    F. Building entrances and exit locations.

    G. Basement information.

    H. Stairs characteristics and construction materials.

    I. Escalators.

    J. Crawlspaces.

    K. Utility and mechanical rooms.

3.9.6.3 Fire Protection Features

The FRMS shall store and manage information regarding fire protection features of inspected premises including, but not limited to:

    A. Extinguishing systems.

    B. Alarms.

    C. Detectors.

    D. Sprinkler.

    E. Standpipe information.

    F. Utility shutoff location.

    G. Fire alarm control panel location.

3.9.6.4 Contact Information

The FRMS shall store and manage premise contact information including, but not limited to:

    A. Building/business owner.

    B. Fire/emergency contact information.

3.9.6.5 Fire Inspection Details

The FRMS shall store and manage fire inspection details including, but not limited to:

    A. Complete record of each inspection conducted.

    B. Outcome determination of each inspection.

3.9.6.6 Violation Records

The FRMS shall store and manage violation records resulting from an inspection including, but not limited to:

    A. Violation details.

    B. Required follow-up action.

    C. Any associated dates with the violation (e.g., re-inspection date, etc.).

3.9.6.7 STORAGE TANK DETAILS

The FRMS shall store and manage storage tank information including, but not limited to:

    A. Above ground storage tank details.

    B. Underground storage tank details.

    C. Tank manufacturer.

    D. Tank make and model.

    E. Tank contents.

    F. Tank capacity.

    G. Tank construction.

    H. Tank installation details.

    I. Tank removal details.

3.9.6.8 Hazard Information

The FRMS shall store and manage hazard information including, but not limited to:

    A. Identity and description of any hazard that exist at the location.

    B. Location and storage of any hazardous materials.

    C. Description of any hazardous materials stored at the location.

3.9.6.9 Permit Information

The FRMS shall store and manage permit information including, but not limited to:

    A. Identification of any issued permits.

    B. Expiration dates.

    C. Reason for issuing any permits.

    D. Free form comments for recording special instructions or conditions.

3.9.6.10 Integration with the CAD System

Information entered into the fire inspection and prevention module of the FRMS shall be either available or automatically transferred to the CAD system to allow CAD to display premise information and any hazards upon location verification.   Proposers shall indicate the level of integration between their CAD system and this module.

3.9.6.11 Integration with MDCS

IT is desired that access to information stored in the fire inspection and prevention module be provided to field units through their Mobile Data Computers.

3.9.6.12 Inspection Scheduling

The FRMS shall include a Fire Inspection and Prevention module that is able to assist the fire departments to schedule inspections and related tasks. Inspections, surveys, and permit renewals may be scheduled by date, by location, or by type of occupancy. For example, certain businesses may be scheduled for inspection once every six months. In

this case, a monthly report may be requested from the FRMS that provides the names of businesses to be inspected for a particular month (by station and/or district). In addition, inspections may be set up by address. The system shall be able to provide a list of businesses that have not been inspected during a given time interval.

3.9.6.13 Turnaround Documents

The FRMS shall include a Fire Inspections and Prevention module that can produce building survey and fire inspection "turnaround" documents. The "turnaround" document shall include basic information about the premise, the current occupants, and the results of past inspections and violations. The documents may be printed by due date range, specific due date, or by occupancy data. The inspector must be able to record the details of the inspection on this report. Later, the marked-up report will be used as the input document to update the system.

3.9.6.14 Use of Portable Devices

The State desires that the system support completing inspections and generating violation notices and reports on site by using hand held portable devices.   Proposers shall describe their capabilities for supporting field-based inspections using mobile data computers. If this capability is available and included in the proposal, it shall be a separately priced item.

3.9.7   Investigations

The FRMS shall include an investigation module that will allow departments to conduct and track their fire investigations activities in an automated manner. This module will permanently record, and assist the departments in organizing its fire investigation activities.

3.9.7.1 Integration with CAD

The fire investigation module of the FRMS shall be fully integrated with the CAD system. Data shall be imported from the CAD system to form the base information for the fire investigations case. Additional data shall be added as required. It shall be possible to overwrite/update the information supplied by CAD without impacting the original CAD information.

3.9.7.2 Use of LERMS to Conduct Fire Investigations

Most Fire investigations, for example Arson, are actually conducted as criminal investigations. As such, it may be more appropriate for Fire Investigators to use the Criminal Investigation Module of the Law Enforcement Police Records Management System (LERMS) to complete their investigations. If this option is, there must be a mechanism for updating the original Fire Incident report with the results of the investigation. It is imperative that the Police version and the Fire version of the incident be consistent. Proposers shall describe the mechanism that they will use to insure that the Fire and Police version of the incident are consistent.

3.9.7.3 Use of FRMS to Conduct Fire Investigations

In the event that a FRMS module is used to complete the investigation, the module shall provide the ability to assign incidents to investigators and track the progress of the investigation. Proposers shall provide a complete detailed explanation of their Fire investigation module.

3.9.7.4 Storage of Associated Digital Images

The fire investigations module, whether it is located within the LERMS or FRMS, shall incorporate the ability to capture, store, link, or embed images, and/or documents that are captured using digital cameras, scanner, or video recorders.

3.9.8 Personnel Scheduling

The FRMS shall include a personnel-scheduling module that facilitates scheduling the different agencies' personnel within various shift configurations.

3.9.8.1 Database Requirements

The module shall track at least the following data for each member:

   A. Name.

   B. Personnel ID.

   C. Shift Start and end times.

   D. Days and hours worked.

   E. Days off (Vacations, sick, etc.).

   F. Workweek cycle (e.g., four-day, five-day, etc.).

   G. Default station/position assignment.

   H. Actual station/position assignment.

3.9.8.2 SCHEDULE CREATION

The Scheduling module shall generate monthly schedules by section/station. At a minimum, the scheduling module shall be able to prepare a schedule that is at least 31 days long.

3.9.8.3 Schedule Tracking

The scheduling module shall maintain an historical record of which personnel worked which positions. The State desires that the historical shift scheduling records go back at least 13 months. Proposers shall indicate how long the FRMS maintains individual work history records and the mechanisms available for determining who worked when and at what location.

3.9.8.4 CAD Integration

The schedule for the current day shall be made available to the CAD system or loaded into the CAD system automatically. Routine scheduling reassignments (e.g., someone calls in sick and needs to be replaced, a firefighter is transferred temporarily to a different position/location, etc.) shall be reflected both in the CAD system's duty roster and in the historical individual work history record. Both the scheduling module and the CAD system shall be able to provide a "real-time" roster of on duty personnel that is available to authorized FRMS and CAD users and indicates who is on duty and their current location/assignment.

3.9.9 Fleet Management Module

The FRMS shall include a separately priced optional fleet management module.

3.9.9.1 Database Requirements

At a minimum, this module must track and report on the following:

A. Vehicle usage.

B. Maintenance activities and schedules.

C. Fuel and oil consumption.

D. Repair costs.

E. Amount of downtime.

F. Preventive maintenance schedules.

G. Completion and scheduling of work orders.

3.9.9.2 Reporting Requirements

Reports and charts shall be available that allow the completion of comparative analyses on a variety of cost items (for example, compare the relative costs (over time) of two different vehicles of the same type).

3.9.10 Equipment Maintenance Subsystem

The FRMS shall include an equipment maintenance module that would assist the fire departments in managing the inspection and maintenance of all non-mobile equipment items.

3.9.10.1   Database Requirements

The applications shall support tracking and scheduling of maintenance for at least the following types of items:

A. Hydrants.

B. Hoses.

C. Breathing apparatus.

D. Ropes and other rescue equipment.

E. Other equipment.

3.9.10.2 Inventory Control

At a minimum, this module shall provide for inventory control of the items specified above in Section 3.9.10.

3.9.10.3 Reporting Requirements

Comprehensive reports shall be available in this module. Proposers shall describe the types and flexibility of the reports.

3.9.10.4 CAD Integration

Relevant information, such as hydrant testing results, hydrant locations, flow characteristics, etc. shall be available to the CAD system.

3.9.10.5 MDCS Integration

Relevant information, such as hydrant testing results, hydrant locations, flow characteristics, etc. shall be available to firefighters directly in the field through the mobile data computer system.

3.10 RMS Data Conversion

The selected vendor will be required to perform a data conversion from both New World Systems and Northrup Grumman Records Management Systems. The selected vendor will provided the opportunity to scope and price the data conversions after selection and prior to contract signature.

4   Implementation

In Section 1.2 of the proposal, the Vendor is required to submit a detailed implementation plan. The Vendor shall provide a detailed implementation plan to satisfy all requirements of system implementation, coinciding with the project schedule to describe how the Vendor shall deliver, install, and meet acceptance tests according to the schedule. A system cutover plan shall provide for continuous operation of the District's existing Communications Center functions.

The plan shall include at a minimum the following sections:

4.1   Project Schedule

The project schedule shall be provided in Gantt chart format depicting the start and stop dates for all tasks, with major project events and milestones from contract execution to final system acceptance. The schedule shall include tasks, predecessors, resources, task duration, task responsibilities, level of effort required of District staff and milestones. The schedule shall include at a minimum the following tasks:

A. Notice to Proceed (start of project)

B. Project Kick-off

C. Detailed system design.

D. Ordering of all equipment and software.

E. Performance of staging and testing.

F. Delivery of all equipment and software.

G. Integration of data network services.

H. Performance of site modifications.

I.   Data Conversion Plan/Preliminary Analysis

J.   Install Host system components.

K. Install Client components (as required).

L.   Installing all circuit connections.

M. Establishing all interfaces.

N. Data Conversion

O. Performance of integration testing and optimization.

P. Deliver system documentation.

Q. Training.

R. System acceptance testing.

S. Ninety-day stability test.

T. Final system acceptance.

U. Warranty period.

4.2   Project Management Plan

The project management plan shall identify at a minimum the processes and tools that will be employed by the Project Manager to address:

     A. Schedule Management.

     B. Project Scope Management.

     C. Project Status Reporting.

     D. Project Change Management.

     E. Project Risk Management.

     F. Performance of site modifications.

     G. Data Conversion Plan/Preliminary Analysis

4.3   Preliminary System Cutover Plan

The Proposer shall describe a cutover plan in the RFP response. This plan shall include a chronological chart (Gantt-type format) with the tasks to be accomplished and the time for achievement of each task shown. A smooth operational transition from the old system to the new system is key. The Vendor shall be required to implement the plan as part of the written procurement contract.

The Vendor shall provide a detailed cutover plan 30 days prior to equipment installation. The plan shall be approved by the District before commencement of installation.

The detailed cutover plan shall include a narrative description of the sequential cutover steps and a clear delineation of which tasks are the responsibility of the Vendor, which tasks are the responsibility of the District, and which tasks are the responsibility of others.

The existing systems shall remain operational during the cutover phase. The Vendor shall provide an implementation plan that will ensure that no current function is negatively impacted or impaired during system cutover to the new system.

It is acceptable for the Vendor to provide a Cutover Plan that was utilized on a similar project.

5   Acceptance Testing

This section of the RFP describes the acceptance testing procedure that will occur before the system is accepted. The vendor shall indicate their understanding and agreement or disagreement to the requirements in this section.

5.1   Functional Acceptance Test

The functional acceptance test will be conducted to verify that the installed system provides the functional capabilities described in the Vendor's proposal, the contract, any change orders and any other defined requirements document.

A. The Vendor will be expected to demonstrate to the State that every function and option operates as described in the Vendor's proposal.

B. Should any failures be identified during the test, the Vendor will have a reasonable opportunity to correct the deficiencies, after which a retest will be scheduled.

C. The State, at its sole discretion, may require a retest of the failed functions, or may elect to require the Vendor to conduct a complete retest.

D. This process will continue until all functions have passed or it becomes obvious that the system under test will not support one or more functions that it was designed to accomplish

E. At this point, the State may negotiate a settlement with the Vendor, or may take other steps as deemed appropriate.

F. System training will not begin until the Functional Test has been passed.

G. Throughput testing will not begin until the Functional Test has been passed.

5.2   Throughput Acceptance Test

The Vendor must conduct and pass system throughput performance tests for the system. The throughput test must exercise every component of the system. These tests will verify that the installed system will meet the contracted throughput capability and provide the expected operational processing speed.

A. The throughput level to be tested will be based on the peak number of transactions experienced by the State, combined with the selected Vendor's claim for system throughput capability.

B. The Vendor will be required to execute and provide a standard benchmark test based on peak load characteristics with a transaction rate corresponding to the

system loading information.

C. Administrative workstations shall not adversely affect transaction response time and will be included in the testing.

D. System Back-up shall not adversely affect transaction response time and will be included in the testing.

E. System failover shall not adversely affect transaction response time and will be included in the testing.

F. For the purpose of the throughput test response time is defined as the time between the depression of the last keystroke or pointing device activation (e.g., click) and the appearance on the workstation/terminal of the last character of the initial response (e.g., first page, pop-up window, etc.).

G. Vendors shall describe how they intend to measure response time if different than described herein.

H. The State reserves the right to review and approve the methods used to measure response time.

I. Should any failures be identified during the performance test, the Vendor will have a reasonable opportunity to correct the deficiencies, after which a retest may be scheduled.

J. The State, at its discretion, may require a retest of the failed functions or may elect to require a complete retest.

K. This process will continue until all functions have passed or the system fails to provide the throughout required by the State. At this point, the State may negotiate a settlement with the Vendor or take other steps as deemed appropriate.

L. Vendors shall provide details in the proposal(s) on how acceptance tests will be conducted.

M. System throughput testing will last for a minimum of three hours and involve sufficient transactions to validate the capabilities of the systems.

N. All subsystems, including DelJIS/NCIC, messaging, etc., will be exercised during this test; however, delays as a result of external systems will not be a cause for failure.

O. System cutover will not occur until Throughput testing has been passed.

5.3   Reliability Acceptance Test

The State will test the installed systems to ensure that they meet the system reliability requirements agreed to by the Vendor.

A. The reliability test will last a minimum of 90 days.

B. During the reliability testing period the system will be utilized as designed. The vendor will agree that use of the system during the reliability testing period will not constitute productive use of the system.

C. During this period all system downtime will be recorded and tracked. If the total recorded system down time reaches a level that precludes completion of the test period within the contracted reliability parameters the test will be terminated and the vendor will be notified.

D. The definition of system downtime will be negotiated and finalized prior to contract signing.

E. If the test has been terminated it will be the State's sole option to continuing to use the system.

F. The vendor will be provided an opportunity to make system modifications so long as those modifications do not interfere with the use of the system by the State, and the test will be restarted.

G. The vendor shall have two opportunities to restart the test.

H. If the system fails to pass the reliability test as described above, the State may negotiate a settlement with the Vendor, or may take other steps as deemed appropriate.

5.4   Integrated Mapping Acceptance Test

The Vendor shall perform acceptance tests to verify the accuracy of the Mapping Systems.

Each Vendor shall provide details in his proposal(s) on how map testing will be conducted. Final system testing procedures will be mutually agreed upon prior to system testing.

6   Training

6.1   General

Training on all system functions will be provided by the Vendor prior to commencement of the reliability test period. Training will include sufficient information and experience to familiarize communications, public safety, technical support, and maintenance personnel with system features and operations for their particular assignments. Training will include, at a minimum, hardware operation, operating system maintenance utilities, and application software features. All training (unless otherwise negotiated) will take place within the State. In no case will ad-hoc or demonstration-only training be considered adequate to fulfill the training requirement for any operational level position.

6.2   Training Materials

All training will be performed using document-based training materials provided by the Vendor. Such documentation, at a minimum, will include hardware user manuals, software operational texts, and tutorial examples. Any and all instructional materials, media presentation devices, presentation media, and course instructors will be provided by the Vendor.

6.2.1   Permission to Reproduce

A. The State intends to conduct all subsequent line-level training internally, so it is necessary for the Vendor to grant the State permission to reproduce any and all training materials for purposes of training agency and State personnel.

B. All training materials should be made available to the State in electronic format.

6.2.2   Permission to Video Record

The State intends to conduct all subsequent line-level training internally. It shall be necessary for the Vendor to grant the State permission to video record any and all training sessions for the for purposes of training agency and State personnel.

6.3   Experience of Vendor Trainers

The Vendor shall submit a resume, a list of training classes presented, and prior client references that have been trained by each of the Vendor's proposed training personnel. The State shall interview the Vendor's training team, and shall mutually agree on the training package and the qualifications of the training personnel prior to the development and execution of the training program.

6.4   Training Plan

The Vendor's proposal shall include a training plan that specifically identifies:
A. The specific classes to be conducted,

    B. The content of each class

    C. The prerequisites for each class

    D. The duration of each class,

    E. The number of times each class will be offered,

    F. The maximum number of students permitted in each class

6.5 Training Requirements

Training tasks shall include, but not be limited to:

    A. Applications software features and integration with other applications.

    B. Ad-hoc report generation and data query.

    C. Database maintenance and tuning/optimization.

    D. Entering and maintaining users in the system.

    E. System parameter definition and table configuration.

    F. User definition and maintenance.

    G. Security definition and management.

    H. System Operation Recovery.

    I. Backup creation and maintenance.

    J. Installation and re-location of workstations.

    K. Operation and maintenance of printing devices.

    L. First level troubleshooting and diagnostics.

6.6 Scheduling

All training courses shall be scheduled and approved by the State at least 60 days prior to the start of training advance.

6.7   Training Utilities

In addition to formalized training programs, the Vendor shall list any electronic utilities that provide an on-line or off-line training environment. The nature of these utilities shall be presented, along with the content of such courses. These utilities should simulate operational scenarios using live parametric data wherever possible.

6.8   Administrative On-Site Training

The Vendor shall conduct separate comprehensive classroom system administration training for the systems. Sessions for the administrative personnel will occur before the new system is placed in service.

The following topics shall be addressed:

    A. Security concepts.

    B. System features.

    C. User definition and maintenance.

    D. Creating, storing and running ad-hoc reports.

    E. Interface troubleshooting and maintenance.

    F. Configuring and maintaining system files, tables and parameters.

    G. Database administration and tuning.

    H. Set up and maintain a test or training database.

    I.   Monitor functions and reports.

    J. Backup procedures.

    K. Failure mode procedures.

    L. New user/workstation setup.

    M. Geo-file maintenance.

    N. Backup and restoration of system/files.

O. Routine hardware and system maintenance procedures.

P. Map modifications.

Q. System/network diagnosis and troubleshooting.

6.9 On-Site CAD System User Training

The Vendor shall provide separate operational training for end users of the CAD systems as well as other designated staff personnel. Training shall include system orientation and familiarization that includes discussion and equipment demonstration. The Proposal shall include the number of classes and the schedule, both of which shall be subject to the State approval.

At a minimum, the following training will be provided:

A. Call takers:

1. Enhanced 9-1-1 ANI/ALI information display and input.

2. Incident creation codes/procedures.

3. Incident status display.

4. Routing recommendation and override.

5. Informational query.

6. Position routing.

7. Integrated map display.

B. Dispatchers:

1. Incident status display and select.

2. Unit status display, recommendation, and override.

3. Status update.

4. Informational query.

     5. Position routing.

     6. Integrated map display.

C. Communications Center Supervisors:

     1. All of the above call taker and dispatcher functions.

     2. Operational parameter maintenance.

     3. Supervisory monitor and override functions.

     4. Failure mode recognition and corrections.

6.10 Train the Trainer

6.10.1 CAD Train the Trainer

The State intends to conduct all future training for new CAD system users. The Vendor shall provide at least one class specifically geared to training trainers to train others in the use of the CAD system. The vendor shall provide specifics of this class including what will be covered in this class and how it is differentiated from the CAD end-user classes.

6.10.2 MDCS Train the Trainer Classes

The State and supported agencies intend to conduct all end user training for end users of the mobile data system. The Vendor shall provide at least one class specifically geared to training trainers to train others in the use of the MDC system. The vendor shall provide specifics of this class including what will be covered in this class and how it will be presented. It is expected that at least the following topics will be covered:

A. Silent dispatch.

B. Activity reporting functions.

C. Data analysis reporting functions.

D. Records retrieval.

E. SOP access.

F. Status update.

    G. Messaging.

    H. Premise data retrieval.

    I. MDC operation.

6.10.3 RMS Train the Trainer Classes

The State and supported agencies intend to conduct all end user training for end users of the Records Management Systems. The Vendor shall include with the proposal a list of the Train the Trainer classes that will be conducted to support the systems being proposed. The vendor shall provide specifics of each class including what will be covered in this class and how it will be presented. :

6.11 Minimum Personnel Training Requirements

The Vendor shall provide for the following minimum numbers of personnel/position training requirements upon system implementation:

CAD/ RMS / MDCS Training

# of Personnel	Position Description
141	CAD dispatcher/call takers
28	CAD dispatcher supervisors
27	CAD System administrators
28	CAD Dispatch Trainers
23	CAD report analysts
15	Geofile maintenance
28	Police, Fire and EMS clerical staff
18	MDCS Trainers
12	LERMS Trainers
13	Fire RMS Trainers
13	LERMS System Administrators
11	Fire RMS System Administrators

7   Warranty and System Maintenance

7.1   General

The following requirements apply to equipment, software, and services that are provided by the Vendor, or fall within any contracted scope of work. Vendors shall provide a copy of provisions and terms of the proposed warranty in compliance with applicable state and local codes. A description of available warranty options shall be included in the proposal. The Vendor shall be the single point of contact for all warranty claims.

7.2   Hardware and Equipment Warranty

The application of this section is contingent upon the provision of hardware by the vendor as opposed to being procured directly by the State

A. The Vendor shall warrant that all equipment/services within its scope of work shall conform to the proposed specifications and/or all warranties as stated in the Uniform Commercial Code and be free from all defects in material, workmanship, and title.

B. The Vendor shall warrant that all equipment and installation conforms to the specifications provided within this RFP, or the manufacturer's published specifications, whichever is most stringent, and that it shall be free from defects in materials, functionality, and workmanship for a period of at least one year **from the date of final system acceptance**.

C. Interim periods between the manufacturer's standard warranty and the date of acceptance will be the Vendor's responsibility.

D. Vendors shall warrant and guarantee further that the equipment furnished hereunder is of good workmanship and materials and that the same is properly designed, operable, and equipped for the proposed use by the State, and is in strict conformity with the detailed RFP except as agreed upon within the contract documents.

7.3   Software Warranty

A. The Vendor shall warrant that all Vendor-furnished software is fully operational, efficient, and free from defect for a period of one year **from the date of final system acceptance**.

B. The Vendor will be responsible for correcting all malfunctioning software in a timely manner, at no additional cost to the State, for the life of the system, as long as a maintenance agreement is in force.

7.4   Additional Equipment Warranty

Warranty on any additional system hardware or software purchased after acceptance of the initial system will be for not less than 12 months after the date the hardware or software

is accepted and placed in service.

7.5 Warranty Repairs

A. Warranty repairs on all furnished equipment and systems shall be made at no cost for parts or labor for a period of one year from the date of final system acceptance.

B. The Vendor shall be responsible for any shipping costs incurred to send components to manufacturers for repair or replacement.

C. The State reserves the right to closely monitor and observe warranty repair service.

D. During the warranty period, the Vendor shall maintain adequate staff and spare parts inventory, both located within the State area, to ensure prompt warranty service.

E. Response during the warranty period shall be the same as that listed for "Maintenance."

F. The Vendor shall describe in the proposal how system and equipment maintenance and repair will be handled during the warranty period.

    1. During the warranty period, the Vendor will respond to all repair calls or notices of system malfunction at no additional cost to the State.

    2. Warranty service on the CAD system shall be on a 24-hour per day, 365-day per year basis.

    3. Warranty service on the RMS system shall be on a 9 hours by 5 days per week basis.

    4. The Vendor will have qualified technicians available to respond to major system malfunctions within two (2) hours and to minor system malfunctions within eight (8) hours (one business day) during the warranty period.

        a) A major system malfunction is defined as one in which the entire system is out of service or in which system functionality is degraded to the point that the system is not substantially providing the level usage required.

        b) A minor system malfunction is defined as one in which some system features are inoperative, not rendering the entire system unusable or significantly degraded.

        c) The State reserves the right to decide whether a system malfunction is

~~classified as major or minor.~~

G. Acceptance of the work of the Vendor upon completion of the project shall not preclude the State from requiring strict compliance with the contract, in that the Vendor shall complete or correct upon discovery any faulty, incomplete, or incorrect work not discovered at the time of acceptance.

   The one-year limit specified above shall not void or limit this requirement for little used features or functions

H. Any subVendor costs for first-year warranty of any system hardware or software component covered under the above warranty requirements shall be included within the basic system proposal price.

   The State shall pay no maintenance costs to any vendor or subVendor prior to the end of the warranty period.

7.6   Maintenance

7.6.1   System Maintenance, Repair, and Service Facilities

A. The Vendor shall be responsible for preventative and remedial maintenance of the system for a period of one year following final acceptance of the system by the State.

B. Maintenance shall include parts and labor.

C. Each Vendor shall state in its system proposal the name, location, and capabilities of the service facility(ies), which will provide any of the installation, service and maintenance.

D. Vendors shall also include:

   1. a description of the service facilities,

   2. the size and qualifications of its staff, and

   3. the number of years the service provider has been in business.

E. Vendors shall also include a list of customers (with names and telephone numbers) who operate systems of similar size and complexity for whom installation and maintenance services are performed.

F. This information is required to demonstrate to the State that local service facilities

~~are capable of installing, optimizing, and maintaining the proposed system.~~

7.6.2   Preventative Maintenance and Spare Parts

A. The proposal shall define a preventative maintenance program that ensures, to the extent possible, failure free operation. The system availability shall be in accordance with other sections of this document.

B. A sufficient supply of spare parts shall be maintained to allow immediate restoration of operation of the system infrastructure.

C. In the event that these parts are consumed, replacement stock shall be available via emergency request and airfreight within 24 hours of the equipment failure.

D. Vendors shall recommend a list of essential spare parts to be maintained by the State to ensure rapid restoration of systems operations in the event of component failure.

E. In addition to parts, proposals shall include a list of recommended test equipment required to maintain the proposed system. An itemized price list shall be provided for both the recommended parts inventory and the recommended test equipment.

F. Stocking of spare parts shall remain the responsibility of the local maintenance provider.

G. Maintenance shall include keeping all software up to date. At the end of the first year of warranty/maintenance service, all software shall be of the latest version, release, and service release.

H. Any penalties incurred during the warranty period will be based on the rates for the first year of maintenance following the warranty period, and will be deducted from the first year of maintenance, or billed to the Vendor if no maintenance agreement is purchased.

7.7   Follow-On Maintenance Following Warranty Period

The Vendor shall include in his proposal a price for the follow-on maintenance described herein. The proposal price shall be for a five-year maintenance period starting 12 months after final system acceptance.

7.7.1   Hardware

A. The Vendor will be required to provide system and equipment maintenance support to the State during and after expiration of the warranty period.

B.   The State will require a response time of no more than two hours for a "Major" failure of the system and no more than 8 hours (1 business day) for a "Minor" failure of the system.

C.   The Vendor shall provide the following minimum information about its various maintenance plans for each of the following system components:

  1. Servers, workstations and associated peripherals.

  2. Storage and backup subsystems.

  3. Printers.

  4. All ancillary equipment required for efficient system operation.

D.   The Vendor shall describe the scope of maintenance coverage and types of programs available to the State, and include all cost information in the proposal.

E.   The Vendor shall specify the Preventive Maintenance (PM) schedule and estimate the amount of non-scheduled maintenance (system down-time) for each component of the proposed system.

F.   Maintenance will be performed according to the plan selected by the State.

G.   The Vendor shall specify the minimum and maximum time required to respond to calls for non-scheduled maintenance 24 hours per day, seven days per week, and the location(s) from which such maintenance will be provided.

H.   The Vendor shall describe the policy for expediting repair of equipment that has been inoperative for eight hours, 24 hours, and longer than 24 hours.

7.7.2   Maintenance of Vendor Furnished Software

The State requires that the Vendor maintain all Vendor-furnished software in a reliable operating condition, and incorporate the latest software changes applicable to the installed system.

A.   The Vendor will describe the nature of his software maintenance coverage and program for maintaining reliable, efficient, and current software.

B.   The maintenance contract pricing shall include providing and installing any system software patches, upgrades, enhancements, etc., developed by the software manufacturer during the maintenance contract period.

7.8   Down Time Credits

A. If any component of the system malfunctions, resulting in total loss of system operation or significantly degraded functionality, the Vendor will provide a credit to the State proportional to the amount of down time experienced:

B. Down time credits will be computed in increments of one hour, based on maintenance charges in effect at the time, and will be deducted from the next regularly scheduled maintenance payment.

C. Down time and response time credits will not be duplicated for the same hour, and will not apply during the warranty period.

7.9   Continuation of Maintenance

A. In the event that the manufacture and sale of any component of the system is discontinued by the original equipment manufacturer, the Vendor will agree to provide continuous maintenance coverage, if desired by the State, for up to five years from the date the State is notified of the cessation of manufacture of the equipment.

B. Maintenance contract payments for additional years will be made by the State on a monthly basis.

7.10 Service Under Warranty

A. If it becomes necessary for the State to contract with another vendor for warranty repairs, due to inability or failure of the Vendor to perform such repairs, the Vendor shall reimburse the State for all invoices for labor, materials required, and the shipping/handling costs thereof, to perform such repairs, within 30 days from presentation of such State invoices.

B. This shall only occur after the Vendor has been given written notice, reasonable time, and fair opportunity to respond and correct the problem.

C. The cost limitation for such repairs will not exceed the parts and labor replacement price of the repair.

APPENDIX B
Pricing Forms

The pricing forms are in a separate spreadsheet file called SHS-12-004-CADRMSMDSU Pricing Worksheet.xls

This screenshot is a sample of what the pricing spreadsheet looks like:

Catalog (Part/Model Number)	Description	RFP Section Number	Quantity / Hrs.	Unit Price / Hrly Rate	Extended Price
	Computer Aided Dispatch Application Software				
	Base CAD System	3.2			$0.00
	Redundant System	3.1.1, 3.1.11			$0.00
	Training System	3.1.1, 3.1.7.2			$0.00
	Test System	3.1.1			$0.00
	Off-site Redundant System	3.1.11			$0.00
	CAD Data Warehouse	3.1.1			$0.00
	Client Licenses	3.1.7.1			$0.00
	CAD Operational Workstations	3.1.7.1, 3.2.3.1.1			$0.00
	CAD Training Workstations	3.1.7.2			$0.00
	CAD Administrative Workstations	3.1.7.3, 3.2.3.1.2			$0.00
	System Administrative Workstations	3.2.3.1.4			$0.00
	Limited Access Workstations	3.2.3.1.3			$0.00
	Other Items -- Itemize Below (insert rows as needed)				
					$0.00
					$0.00
	CAD Application Subtotal				**$0.00**
	Law Enforcement Records Management System Software (LERMS)				
	Law Enforcement RMS Software	3.6, 3.7			$0.00
	Ad Hoc Reporting	3.8.6			$0.00
	Map Based Reports	3.8.7			$0.00
	Arrest Reports	3.8.21			$0.00
	Property & Evidence / Property Room Management	3.8.22			$0.00
	Criminal Investigations and Case Management	3.8.23			$0.00
	Field Interviews	3.8.24			$0.00
	Citations	3.8.25			$0.00
	Juvenile Records	3.8.26			$0.00
	Accident/Traffic Records	3.8.27			$0.00
	Crime Analysis	3.8.28			$0.00
	Wanted Persons	3.8.29			$0.00
	Known Offenders	3.8.30			$0.00

System Pricing | Maintenance Pricing