

**Council Meeting: April 26, 2011**

SUBJECT: Award of Contract for the Upgrade of the 911 Computer Aided Dispatch (CAD) and Report Management System (RMS) (F1004-105) and Authorization to Enter Into Cost Sharing Agreement with the Town of Los Gatos

BACKGROUND

Approval is requested for the award of a contract in the amount of \$416,121, excluding taxes, to Tiburon, Inc. to upgrade the 911 Computer Aided Dispatch (CAD) and Report Management System (RMS). Approval is also requested to enter into a reimbursement agreement with the Town of Los Gatos (approved by their Town Council on April 18, 2011), which promotes resource sharing and reduces the City's purchase cost by \$70,000, to a net of \$346,121.

DISCUSSION

The 911 CAD/RMS systems are a critical component required by the Department of Public Safety to effectively serve the emergency needs of the community. The system is used by the dispatchers to accept, track and monitor emergency calls and when required, dispatch public safety personnel to respond to citizen and business requests for assistance. The City purchased the Tiburon system in 1998, and has upgraded the software twice since that time, but the technology architecture is functionally obsolete. Full system replacement is scheduled for FY 2012/2013.

In 2010, Tiburon announced a system end of life for the version currently installed and will no longer provide maintenance and support starting in 2014. Their latest system (on a new application platform) called IQ Response, is being offered to the City of Sunnyvale at a substantially reduced price as an upgrade for early adopters.

The Departments of Public Safety and Information Technology have conducted in-depth research and analysis from both a functional and technical perspective and have concluded that accepting the vendor offer enables the City to save more than \$1 million over the cost of purchasing a new system at retail pricing in 2013. Additionally, the upgrade significantly enhances communications between Public Safety Dispatchers and Officers in the field by enabling immediate transference of call for service information upon input into the system. Overall operational support provided by Information Technology will also be improved due to the systems' use of a technology architecture already deployed and used by the City's other applications.

Tiburon's early adopter offer strategically positions the City to accomplish the following:

- Move to a current technology platform which decreases maintenance and support costs by nearly \$50,000 annually.
- Use a technology architecture with redundant and failover capability.
- Substantial cost avoidance by not paying retail price to migrate to a new system which would otherwise be required in three years.
- Leverage advancement in communication infrastructure (ECOMM), and interoperability requirements among county agencies to make it technically possible to host multiple agency dispatch operations and to consolidate resources from various public safety dispatch centers.

The Town of Los Gatos has been working with Sunnyvale staff to incorporate their participation into our system through the multi-agency bullet point described above. This joint effort is reflected in the contract with Tiburon with the Los Gatos share for software and professional services being \$70,000. Sunnyvale will be reimbursed these funds through the attached draft cost sharing agreement with the Town of Los Gatos, approved by their Town Council on April 18, 2011. In the event that a partnership is not formed with Los Gatos, the contract amount with Tiburon will be reduced by \$70,000. The opportunity exists in the future to add on other agencies to the cost/resource sharing arrangement.

Section 2.08.070(b)(3) of the Sunnyvale Municipal Code exempts from competitive bidding those situations where the solicitation of bids would for any reason be impractical, unavailing or impossible. In this instance, the requested system is an upgrade to the City's existing system and the technology and interfaces used in Tiburon's IQ Response system is proprietary and only available through Tiburon.

FISCAL IMPACT

Retail price of the software upgrade is estimated to be \$1.6 million. Tiburon is offering an early adopted discount of approximately \$1.2 million, reducing system cost to \$416,121. Los Gatos will reimburse Sunnyvale \$70,000, for a net fiscal impact of \$346,121.

New servers and disk storage, estimated to cost \$400,000, will be separately bid. Staff will request Council approval for those contracts once the bid process has been completed. The cost for servers and storage will also be shared by the Town of Los Gatos.

A separate annual maintenance and support contract will be issued under the City Manager's contract award authority, which the City's estimated share will be \$72,000 per year reduced from the current amount of \$113,758.

Funds for this purchase are available in the Information Technology hardware and software equipment replacement accounts.

PUBLIC CONTACT

Public contact was made by posting the Council agenda on the City's official-notice bulletin board outside City Hall, at the Sunnyvale Senior Center, Community Center and Department of Public Safety; and by making the agenda and report available at the Sunnyvale Public Library, the Office of the City Clerk and on the City's Web site.

RECOMMENDATION

It is recommended that Council:

1. Award a contract, in substantially the same form as the attached draft and in the amount of \$416,121, excluding taxes, to Tiburon, Inc. for the upgrade of the 911 Computer Aided Dispatch (CAD) and Report Management System; and
2. Authorize the City Manager to enter into Cost Sharing Agreement with the Town of Los Gatos for the purchase and maintenance costs related to items described in this report.

Reviewed by:

Grace Leung, Director of Finance
Prepared by: Peter Gonda, Purchasing Officer

Reviewed by:

Cuong Nguyen, Director of Information Technology

Reviewed by:

Don Johnson, Director of Public Safety

Approved by:

Gary M. Luebbers
City Manager

Attachments

- A. Tiburon Enhancement Proposal, Statement of Work and Reference Agreement (2000 Agreement for Extended Service)
- B. Draft Purchase Order
- C. Draft Cost Sharing Agreement

April 15, 2011

Sunnyvale Department of Public Safety
Attention: Cpt. Jeffrey Hunter
650 West Olive Avenue
Sunnyvale, California 94086

Subject: Enhancement Proposal EP-(24579) –IQResponse Suite Products

Reference Agreement: Agreement for Extended Services between City of Sunnyvale and Tiburon, Inc., dated April 20, 2000

Dear Cpt. Hunter:

Tiburon, Inc. is pleased to present Sunnyvale Department of Public Safety (hereinafter, “Client”) with this Enhancement Proposal for Tiburon’s IQResponse Suite products as set forth herein (hereinafter, referred to as the “Proposal”).

Scope Description and Responsibilities

The attached Exhibit 1, Statement of Work (the “SOW”) describes the project tasks, responsibilities of each party and defined completion criteria for the work to be completed hereunder. The SOW is hereby incorporated into this Proposal by this reference.

The Tiburon Applications which are being licensed hereunder are listed in the attached Exhibit 2, Tiburon Applications and Fees (the “Exhibit 2”), which is incorporated herein by this reference.

At the time of go-live, Client shall receive a GA version of the commercial off the shelf Tiburon Applications, which will function as a baseline system. No customization or modification to the Tiburon Applications from the then-current released version is included in this Proposal. No carry-forward of existing Client Tiburon software customization or modification is included in this Proposal. The Products being provided hereunder are commercial off-the shelf consumer products designed to operate as delivered to Client. Features and functionality provided in the product will not be customized, modified, altered, added or changed by Tiburon at the Client’s request.

A change in licensing applies with this Proposal. All existing Tiburon products licensed quantities (including site license where such was issued) owned by Client are converted to the fixed number of licenses of the replacement Tiburon IQResponse products specified herein.

Client understands and acknowledges that this Proposal delivers a new application platform with functionality, features, and workflows which are entirely separate and distinct from Client’s existing Tiburon installed applications. Accordingly, Client accepts the Tiburon Applications and will not require functionality or feature gaps based on comparison to Client’s existing Tiburon installed applications; Client’s internal workflows are subject to change to adapt to the Tiburon Applications.

Tiburon has provided Client with a significant incentive (discount) for the privilege of using Client’s site for purposes of early adopter validation, referenceability, and demonstration.

Additionally, the ancillary modules and interfaces to third party products included with this Proposal will be delivered to Client on a schedule of Tiburon's discretion based on Tiburon's internal development schedules. As a result, Client hereby understands that as an early adopter, not all modules and/or interfaces will be ready for implementation at the time of cutover and that Tiburon may have to deliver certain modules and/or interfaces at a later date through a phased approach at Tiburon's discretion.

Accordingly, Client agrees to:

- Participate in an early adopter installation of the Tiburon Applications;
- Participate in an early adopter Support Services implementation methodology;
- Work in a flexible manner with Tiburon, including schedule changes as needed by Tiburon; and
- Act as a reference and demonstration site for prospective Tiburon clients, during and after the delivery of this Proposal. By agreeing to be a reference and demonstration site, Client is not necessarily endorsing the Tiburon Applications.

Price Description

- 1) Proposal firm fixed price: \$416,121, see breakdown below:
 - Sunnyvale Firm Fixed Price: \$346,121
 - City of Los Gatos Firm Fixed Price: \$70,000
- 2) As a result of this Proposal, upon completion of Task 7 "Cutover" in the attached SOW, the Tiburon Annual Maintenance Fee will be: \$108,000 (\$72,000 of which is attributed to the Sunnyvale site, and \$36,000 to Los Gatos), payable by Client. The on-going Annual Maintenance Fee for Client and each Add-On Agency will increase by five percent (5%) annually from the prior year's Annual Maintenance Fee.
- 3) In the event an Add-On Agency, such as City of Los Gatos, ceases to continue to pay for the Tiburon Annual Maintenance Fee associated with such Add-On Agency, then notwithstanding anything to the contrary, the licenses for the non-renewing Add-On Agency shall immediately and without notice terminate and the overall Tiburon Annual Maintenance Fee shall be reduced by the amount attributed to the non-renewing Add-On Agency. In the event an Add-On Agency, such as City of Los Gatos, ceases to continue to pay for the Tiburon Annual Maintenance Fee associated with such Add-On Agency, then notwithstanding anything to the contrary, the licenses for the non-renewing Add-On Agency shall immediately and without notice terminate and the overall Tiburon Annual Maintenance Fee shall be reduced by the amount attributed to the non-renewing Add-On Agency.
- 4) In the event Client desires to remove an Add-On Agency from maintenance and support services, Client shall provide Tiburon with written notice of such intent no less than 60 days prior to the end of the then current annual maintenance term, otherwise such notice shall have no effect until the following renewal period. Neither Client nor Add-On Agency is entitled to reimbursement of any unused maintenance services if maintenance is terminated during a maintenance period. Should such Add-On Agency desire to reinstate maintenance, Client shall be responsible for the annual maintenance fees for the then-current term, all back maintenance from the date of cancellation to reinstatement as well as a reinstatement fee for services to perform an assessment of the System at Tiburon's then current hourly rate.

- 5) One (1) Year Warranty is not included.
- 6) Training and Documentation is included.
- 7) Travel and on-site time is included.
- 8) Data Conversion is included as part of this Proposal as set forth in the SOW.
- 9) All data, including but not limited to geo-data, shall be owned by Client. As owner of such data, it is Client's responsibility to ensure the integrity, accuracy and completeness of such data. Tiburon shall have no liability of any kind related to any error, loss of, issue, defect, or cause of action arising out of or related to such data.
- 10) Hardware is not included with this Proposal and all hardware to be used with the Tiburon Applications must meet Tiburon's minimum hardware specifications. For all hardware procured by Tiburon on behalf of Client shall be paid for by Client 100% upon delivery thereof.
- 11) The Tiburon Applications being provided hereunder are not subject to Tiburon's VMP program and all references to VMP in the Reference Agreement are hereby removed. In lieu of the VMP program, Tiburon will provide Client with software updates so long as Client is a current active maintenance customer.
- 12) It is the intent of Client to add additional agencies, which may include but not be limited to Santa Clara County and the surrounding counties, as well as their respective agencies located therein (the "Add-On Agencies") to Client's system, in accordance with a new SOW in substantial conformity to the SOW attached hereto. Client hereby expressly consents to the addition of mutually agreed upon Add-On Agencies to Client's system. Client understands the Add-On Agencies will not have their own instance of the Tiburon Applications, but rather be accessing the Tiburon Applications through Client's system exclusively. It shall be Client's responsibility to work with and ensure any and all Add-On Agencies possess at least the minimum required system environment as required by Tiburon, which shall include but not be limited to adequate communication lines, architecture, backbone, hardware, mapping and network stability. Client shall be exclusively responsible to ensure geo-file data meets the needs of all Add-On Agencies prior to the addition of any Add-On Agency. In the event any Add-On Agency encounters any issues including those with their system environment, Client shall communicate directly with such Add-On Agency and resolve the matter accordingly.
- 13) Client may request additional Add-On Agencies to be added to the Client's system at the then current applicable maintenance rates. Additionally, each Add-On Agency will pay twenty percent (20%) of the server license fee initially paid by Client, for example, assuming Client initially paid \$100 for the server license fee, Add-On Agency #1 would then pay \$20, additional Add-On Agency #2 would also pay \$20, and so on. At the time Client wishes to add an Add-On Agency, Tiburon will work with Client and the Add-On Agency to create a mutually agreed upon schedule for such work.
- 14) Client understands and agrees Client is solely responsible for the prompt payment of annual maintenance and support fees for the Tiburon Applications. Client understands that Client is the only authorized entity to contact Tiburon and request services, all Add-On Agencies must route their requests through Client. Client further understands and agrees that support for the Tiburon

Applications will only be provided so long as Client is a current active maintenance customer of Tiburon's. Therefore, if for any reason Client is not a current active maintenance customer of Tiburon's, Tiburon will not be able to provide maintenance and support to any Add-On Agency.

- 15) The Proposal firm fixed price, above, includes the additional agency, Los Gatos. Tiburon will work with Client and Los Gatos to develop a statement of work and project schedule for the integration of Los Gatos into the Client system.
- 16) This Proposal does not include any taxes levied by a government agency. Taxes, if applicable are the sole responsibility of the Client.

Effective Date and Payment Schedule

- 1) The parties agree to work with one another in good faith to complete the project. The project schedule attached hereto as Exhibit 3(the "Project Schedule") is for general purposes only and may be subject to change at the discretion of Tiburon as maybe necessary for development and resource purposes.
- 2) Payment Schedule:
 - 15% Upon Tiburon receipt of the signed acceptance of this Proposal.
 - 5% Upon completion of Task 1 "Planning and Tiburon Application Configuration Review" as set forth in the SOW.
 - 5% Upon completion of Task 2 "Hardware, Software Installation & Tiburon Application Configuration Training" as set forth in the SOW.
 - 15% Upon completion of Task 3 "Interface Deployment and Initial Data Conversion" as set forth the SOW.
 - 15% Upon completion of Task 4 "Core Team Training" as set forth in the SOW.
 - 15% Upon completion of Task 5 "Functional Acceptance Testing" as set forth in the SOW.
 - 15% Upon completion of Task 6 "Client Training" as set forth in the SOW.
 - 15% Upon completion of Task 7 "Cutover" as set forth in the SOW.
- 3) Client's acceptance of this Proposal in the signature block provided below, authorizes Tiburon to proceed with the work described herein and confirms funding will be obligated. Any requisite contractual documents required by Client's purchasing procedures are the responsibility of the Client.
- 4) The terms and conditions of the above referenced Agreement, and this Proposal prevail regardless of any conflicting or additional terms and conditions on any Purchase Order or other correspondence.
- 5) Tiburon recognizes that the services under this contract are vital to public safety and must be continued without interruption and that, upon contract expiration or termination for any reason, Tiburon will exercise its best efforts and cooperation to effect an orderly and efficient transition to a successor. Insolvency, liquidation or bankruptcy shall not relieve Tiburon of its duty to provide services pursuant to this Agreement.
- 6) This fixed price Proposal is valid through April 30, 2011.

City of Sunnyvale
Enhancement Proposal # 24579 –IQResponse Suite Products

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Upon review and acceptance of this Proposal, please sign below and return the signed copy of the Proposal to Jennine Weber via e-mail at Jennine.Weber@tiburoninc.com or fax 510-217-6466. If you have any questions or require further information, please contact Ms. Weber at 925-699-0946 at your convenience.

Sincerely,

Mike Perez
VP of Sales

Attachments:

- Exhibit 1: Statement of Work
- Exhibit 2: Tiburon Applications and Fees
- Exhibit 3: Project Schedule

By the signatures below, the parties hereby mutually agree to this Proposal

City of Sunnyvale:

Signature

Date

Printed Name / Title

Tiburon, Inc.:

Signature

Date

Printed Name / Title

Exhibit 1

Statement of Work

The Statement of Work shall follow this cover page.

Exhibit 1

Sunnyvale EP-24579: IQResponse Suite Products

IQResponse Statement of Work (SOW)

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Introduction

This Statement of Work (the “SOW”) defines the principle activities and responsibilities of the Client and Tiburon for the implementation of Tiburon’s IQResponse Applications as set forth below (the “Project”):

The System will be comprised of the following Tiburon IQResponse Applications, ancillary modules, and interfaces to third party products (the “Tiburon Applications”):

Tiburon Applications	Ancillary Modules	3 rd Party Interfaces
911 Mapping Location Verification Services	911 Mapping Location Verification Services does not have Ancillary Modules	911 Mapping Location Verification Services does not have 3 rd Party Interfaces
IQResponse CAD	<ul style="list-style-type: none"> • Datawarehouse 	<ul style="list-style-type: none"> • TCP/IP Interface to State of CAD (CLETS) • NCIC • E911 for Plant • Master Time • Alphanumeric Paging with a dispatch • Fire Alerting (Zetron 6/26) • Push to talk • ProQA (for six WS, available at Cutover) • Rip and Run • Alameda Warrant (AWS) • Crossroads (available Q3 2012)
IQResponse MOBILE	IQResponse MOBILE does not have Ancillary Modules	IQResponse MOBILE does not have 3 rd Party Interfaces
IQResponse LAW	<ul style="list-style-type: none"> • WebQUERY • Alpha • Location • Vehicle • Property • Arrest and Booking • Master Universal Index (MUI) • Incident • Restraining Orders 	IQResponse LAW does not have 3 rd Party Interfaces

Tiburon Applications	Ancillary Modules	3 rd Party Interfaces
	<ul style="list-style-type: none"> • Special Flags • Case Management • UCR California/E-CARDS • Personnel/Training/Rostering • Traffic Management • License and Permits • Field Reporting • Warrant Tracking • Officer Activity • Bicycle Registration • Crime Watch • False Alarm • Crime Analysis, and • Juvenile Records 	

The above referenced ancillary modules and interfaces to third party products will be delivered to Client on a schedule of Tiburon’s discretion based on Tiburon’s internal development schedules. As a result, Client hereby understands that as an early adopter, not all modules and/or interfaces will be ready for implementation at the time of cutover and that Tiburon may have to deliver certain modules and/or interfaces at a later date through a phased approach at Tiburon’s discretion.

Client is receiving a commercial off the shelf product which will function as a baseline system. This Project does not include enhancements, customizations and modifications, which include changes to the application source code, database layouts, report output column headers, formatting, field label changes/additions (excludes limited label changes in IQResponse CAD as approved by Tiburon), and interfaces to internal/external databases or systems are not included or allowed during the Project unless otherwise agreed to by Tiburon in a signed amendment. Such limited label changes will be discussed at the Tiburon Application configuration during Task 1.

The tasks set forth in this SOW may be completed concurrently, sequentially or non-sequentially as determined best by Tiburon.

The following attachments are attached hereto and incorporated by reference into this Statement of Work. In the event of any conflict between these attachments and this Statement of Work, the latter shall control.

Attachment A: Required Hardware and Software

Attachment B: Location Verification Guidelines

Attachment C: Features and Functionality, all dates and schedules in which Tiburon is to provide the features and functionality set forth in Attachment C “Features and Functionality” are tentative and subject to change at the sole discretion of Tiburon.

Tasks, Deliverables and Acceptance Criteria

Task 1: Planning and Tiburon Application Configuration Review

Task Description:

Tiburon and the Client will review and confirm the IQResponse Application configuration of the systems, hardware requirements and final project schedule. The number of days required for each configuration session are as follows:

Session Number	Review Session	Number of Days
1	911 Mapping Location Verification Services	Not to exceed 2 days
2	IQResponse CAD	Not to exceed 4 days
3	IQResponse MOBILE	Not to exceed one (1) half (1/2) day
4	IQResponse LAW including Field Reporting	Not to exceed 4 days
5	Interfaces	Not to exceed 2 days

Responsibilities and Completion Criteria:

Tiburon Responsibility	Client Responsibility
<ul style="list-style-type: none"> a. Perform kickoff meeting. b. Deliver a final list of all hardware, third-party software, and third-party services required for this Project and identify which party will be providing each item. c. Conduct a Tiburon Application configuration review of the Tiburon Applications, ancillary modules, and interfaces and document the outcome of the meeting (these collective documents shall be referred to as the "Configuration Documentation"). d. With the Client, review the data that will be entered, converted and/or loaded into the Tiburon Applications. For records, data conversion will be limited to Incident. Alpha. And Location e. Analyze source data, generate field mapping documents, and deliver a data conversion plan. f. Review with the Client the guidelines described in Attachment B "Location Verification Guidelines". g. Perform Tiburon Application configuration review with the client, as well as the timeline for the Project and submit for approval. h. Make the Baseline Specifications available to the Client. Such documents will be made available online. 	<ul style="list-style-type: none"> a. Participate in the kickoff meeting b. Review hardware, third-party software, and third-party services required for this Project and either authorizes Tiburon to procure it or Client will move forward with procurement. c. Ensure participation of the Core Team on the Tiburon Applications, ancillary modules and interfaces, Tiburon Application configuration review meetings. d. Provide pertinent information, data, record layouts, documents and make Tiburon Application configuration decisions for interfaces. e. Deliver geo data and files in accordance with Attachment B "<u>Location Verification Guidelines.</u>" f. Provide all data to be loaded into the Tiburon Applications (in the form of Excel sheets) as applicable to the module. g. Designate a knowledgeable person to work with the Tiburon data conversion team to map the fields and purge unnecessary data in accordance with the Data Conversion Plan. h. Review and approve Configuration Documents, conversion plan and project schedule submitted by Tiburon ten (10) days after Tiburon's delivery thereof.

Tiburon Responsibility	Client Responsibility
Task Completion Criteria	
<p>This task will be deemed completed when:</p> <ul style="list-style-type: none"> • project initiation meeting has been held; • confirmation of the hardware and third party product purchase order is received; • Client and Tiburon sign off on the Configuration Documents, Data Conversion Plan, and project schedule; and • Client has completed the excel sheets and geofile per the project schedule. <p>Task completion will be confirmed by the Client’s signature on the task completion letter provided by Tiburon. A separate task completion letter may be generated for each Tiburon application</p>	

Task 2: Hardware, Software Installation & Tiburon Application Configuration Training

Task Description:

Tiburon and Client will install the system hardware and application software components. All system hardware and application software components shall be acquired prior to commencement of this task. After installation of the hardware and application software components, the Core Team will receive Tiburon Application configuration training.

The number of days required for each Tiburon Application configuration training session are as follows:

Training Session Number	Tiburon Application Configuration Training Session	Number of Days
1	IQResponse CAD	Not to exceed 4 days
2	IQResponse MOBILE	Not to exceed 1 days
3	IQResponse LAW	Not to exceed 4 days

Responsibilities and Completion Criteria:

Tiburon Responsibility	Client Responsibility
<ul style="list-style-type: none"> a. If Tiburon procures the hardware on behalf of Client, Tiburon shall install the system hardware and software required on servers to support the Tiburon Application configuration and setup of the Tiburon Applications on no more than five (5) workstation machines. b. Load all standard data set codes across all applications. c. Conduct Tiburon Application configuration training for the Client’s Core Team. This training will allow the Core Team to configure the Tiburon Applications in accordance with their business models. 	<ul style="list-style-type: none"> a. Acquire all necessary hardware which shall comply with the specifications set forth in Attachment A, whether through Tiburon or elsewhere. Verify and accept all hardware that is shipped onsite and advise Tiburon project manager once the hardware has been delivered, as well as if any hardware items are damaged. b. The Client will procure, inventory and install the Client-procured hardware Tiburon Application configuration and operating systems. The equipment to be installed will be sufficient to support initial software installation, application set up and software configuration, initial interface development, and testing activities. c. Ensure Tiburon (Cisco) VPN remote access including dedicated high speed (T1 (1.544mb/s) or greater bandwidth). Access to Client servers on Client site(s) must be interactive, including but not limited to PC Anywhere, Remote Desktop, VNC telnet, secure shell (SSH), and application-level TCP/IP socket connectivity as determined necessary by Tiburon. Provide Tiburon with administrative access rights to all pertinent servers, hardware and equipment as required for applicable implementation. In addition,

Tiburon Responsibility	Client Responsibility
	<p>Tiburon requires the ability to dynamically upload/download files to the server(s) without third-party intervention.</p> <ul style="list-style-type: none"> d. Provide Tiburon with the server and third-party information necessary for the Tiburon support files. e. Provide a site adequate for the installation, operation, and maintenance of all computer and workstation equipment. f. Provide all communication lines, modems, hubs, routers, cabling, and other components necessary for system operation and maintenance that are not provided by Tiburon. g. Assume responsibility for modifications to furniture as required for workstation operation and maintenance and loading of application on all applicable/remaining workstations h. Assist with the installation and verify operation of interfaces to any Client-provided networks. i. Provide TCP/IP communications support for any existing networks, workstations, and printers that access Tiburon Applications. j. Install and test all remote workstations and communications equipment. k. Participate in the Tiburon Application configuration training. l. Complete all other code table, file maintenance data entry and associated software configurations.
<p>Task Completion Criteria</p>	
<p>This task is complete when system installation and Tiburon Application configuration training has been conducted. Task completion will be confirmed by the Client's signature on the task completion letter provided by Tiburon. A separate task completion letter may be generated for each Tiburon application</p>	

Task 3: Interface Deployment and Initial Data Conversion

Task Description:

The parties will install and set-up the interfaces as defined in the Configuration Documents, as well as extract, convert, load, and test the specified legacy application data into the new application database(s), based upon the approved data conversion plan. Data contained in current legacy systems with no correlating fields in the Tiburon Applications will not be converted.

Responsibilities and Completion Criteria:

Tiburon Responsibility	Client Responsibility
<ul style="list-style-type: none"> a. Deploy all available interfaces in accordance with Configuration Documents. b. Perform an initial data conversion process to load the test files and review resulting test files with the Client, document any problems, and collaborate with the Client on a plan for corrective actions. 	<ul style="list-style-type: none"> a. Review resulting test files with Tiburon, document any problems, and collaborate with Tiburon on a plan for corrective action. b. Correct any problems identified during the initial data conversion task. c. Assume responsibility for any interface hardware, software licenses, modifications, or additions to any systems not supplied, installed, tested, or licensed by Tiburon. d. Act as the liaison between the agencies and third-party vendors required to support the interfaces. Provide Tiburon with the physical connections for each interface, to allow Tiburon to test the functionality of each interface in an appropriate environment. If the interfaces are currently in operation, it is the Client's responsibility to disconnect each of the interfaces from the operational environment to facilitate interface testing.
<p>Task Completion Criteria</p>	
<p>This task is complete when Tiburon has completed the initial data conversion and all interfaces have been demonstrated to function in accordance with the Configuration Documents. Data correction, delays or unavailability of external systems and/or interfaces not made available to Tiburon is not a requirement for completion of this task. Task completion will be confirmed by the Client's signature on the task completion letter provided by Tiburon. A separate task completion letter may be generated for each Tiburon application</p>	

Task 4: Core Team Training

Task Description:

Tiburon will provide the Core Team user training on the functionality of the applications, interfaces and ancillary modules of the Tiburon Applications. End-user training is not included as part of this task.

The number of days required for each training session are as follows:

Session Number	Training Session	Number of Days
1	IQResponse CAD	Not to exceed 5 days
2	IQResponse MOBILE	Not to exceed 2 days
3	IQResponse LAW	Not to exceed 5 days

Responsibilities and Completion Criteria:

Tiburon Responsibility	Client Responsibility
a. Provide training for the Core Team	a. Ensure Core Team participates in the training.
Task Completion Criteria	
This task is complete when training for the Core Team has been conducted. Task completion will be confirmed by the Client's signature on the task completion letter provided by Tiburon. A separate task completion letter may be generated for each Tiburon application.	

Task 5: Functional Acceptance Testing

Task Description:

Tiburon will demonstrate Tiburon application software functionality in accordance with the Configuration Documents

Responsibilities and Completion Criteria:

Tiburon Responsibility	Client Responsibility
a. Conduct a functional demonstration of the Tiburon application(s) at the Client's facility.	a. Enter more than 10 items of data in every code table. b. Provide workstations to support Tiburon's functional demonstration(s). c. Attend the functional demonstration(s). d. Ensure that workstations running Tiburon application(s) are located at each workspace and have access to the following: <ul style="list-style-type: none">• Client's system• Print services
Acceptance Criteria	
This task is complete when Tiburon application software functions have been demonstrated to operate in accordance with the Configuration Documents. Task completion will be confirmed by the Client's signature on the task completion letter provided by Tiburon. A separate task completion letter may be generated for each Tiburon application. This task must be completed prior to Tiburon Application Training.	

Task 6: Client Training

Task Description:

The Client shall provide end-user training to staff in preparation of cutover activities in accordance with an agreed to schedule (not to exceed 30-days).

Responsibilities and Completion Criteria:

Tiburon Responsibility	Client Responsibility
a. Provide remote support to Client trainers during Client's training sessions.	a. Client shall train remaining staff on the use of the Tiburon Applications. Such training shall not exceed thirty (30) days.
Task Completion Criteria	
This task is complete when notification that training has been completed is obtained from the client. Task completion will be confirmed by the Client's signature on the task completion letter provided by Tiburon. A separate task completion letter may be generated for each Tiburon application.	

Task 7: Final Data Conversion and Cutover

Task Description:

Final conversion of Client’s data files will be accomplished in accordance with the data conversion plan prior to placing the Tiburon Application(s) in production status.

Any delays caused by Client prior to or during cutover of specific subsystems or modules, will not prevent Tiburon from proceeding with subsequent tasks. Tiburon will support the cutover of those subsystems via remote access.

The parties shall sign the Software License Agreement (SLA) and the Master Support Agreement (MSA), as applicable.

Upon completion of the cutover, the Tiburon Application(s) will be placed back into maintenance.

Responsibilities and Completion Criteria:

Tiburon Responsibility	Client Responsibility
<ul style="list-style-type: none"> a. Execute conversion programs in accordance with the approved data conversion plan, based on Clients final data files b. Review resulting files with the Client, document any problems, and collaborate with the Client on a plan for corrective action. c. Notify Client in writing, immediately following final data conversion, that the Tiburon Application(s) are ready for cutover. d. Monitor the operation of the Tiburon Application(s) for up to five (5) days onsite. Any cutover delays resulting from or related to Client cause shall be supported via remote access rather than onsite. e. Provide one (1) onsite Project Manager for up to five (5) days following Cutover. f. Assist Client in utilizing and supporting the System(s). f. Sign the Software License Agreement and Master Support Agreement, as applicable. 	<ul style="list-style-type: none"> a. Correct any problems identified during the initial data conversion task prior to the cutover date. b. Provide Tiburon with the complete set of final data files to be converted in accordance with the data conversion plan. c. Review resulting files with Tiburon, document any problems, and collaborate with Tiburon on a plan for corrective action. d. Notify Tiburon immediately upon intent of any delays in cutover of specific subsystems or modules e. Begin using the Tiburon Applications in productive use f. Sign the Software License Agreement and Master Support Agreement, as applicable.
<p>Acceptance Criteria</p>	
<p>This task is complete after Tiburon has delivered the final converted data and placed it in live production operation. Task completion will be confirmed by the Client’s signature on the task completion letter provided by Tiburon. A separate task completion letter may be generated for each Tiburon application.</p>	

Task 8: Closing

Task Description:

Tiburon and Client shall conduct a post-project review meeting in order to review the Project and any open issues.

Tiburon Responsibility	Client Responsibility
a. Arrange and perform a turnover meeting to review the Project and any open issues b. Prepare a turnover document that will list any open issues from the Project	a. Participate in the turnover meeting b. Document any discrepancies found in the turnover document, if any.
Task Completion Criteria	
This task, and project, is complete after the turnover meeting has been conducted and the turnover document has been delivered to Client. Task completion will be confirmed by the Client's signature on the task completion letter provided by Tiburon. A separate task completion letter may be generated for each Tiburon application.	

Attachment A: Required Hardware and Software

Software:

- Windows 2008 Standard R2 edition
- Windows 2008 Enterprise R2
- SQL Server 2008 Standard per processor
- PC Anywhere 12.5
- Net Backup for Servers (Optional)
- Net Backup for Servers SAN Client (Optional)
- Net backup Windows Client (Optional)
- Net Backup VMware Protection (Optional)
- WinZip Standard
- Business Objects Crystal Reports XI Server
- Business Objects Crystal Reports XI Developer
- VSPHERE 4 ENT
- VCENTER SERVER 4 STD FOR VSPHERE

Application Server:

- Operating System - Windows Server 2008 R2, Standard Edition,x64, Includes 5 CALS
- Memory - 4GB Memory (4x1GB), 1333MHz Single Ranked UDIMMs for 1 Processor, Advanced ECC
- Primary Processor - Intel® Xeon® E5620 2.4Ghz, 12M Cache, Turbo, HT, 1066MHz Max Mem
- Disk Space - 250 GB

Database Server:

- Operating System - Windows Server 2008 R2, Standard Edition,x64, Includes 5 CALS
- Memory - 16 GB
- Processor - Intel® Xeon® E5620 2.4Ghz, 12M Cache, Turbo, HT, 1066MHz Max Mem
- Additional Processor - Intel® Xeon® E5620 2.4Ghz, 12M Cache, Turbo, HT, 1066MHz Max Mem

Workstations:

- Dell Precision T3500 - Dell Precision T3500, CMT, Standard Power Supply, C2 Motherboard
- Operating System – Genuine Windows® 7 Ultimate, No Media, 32-bit, English
- Processor - Dual Core Intel® Xeon® W3503 2.40GHZ, 4M L3, 4.8GT/s
- Memory - 4 GB
- Graphics - 512MB NVIDIA® Quadro® NVS 420, Quad Monitor, 4DVI
- Speakers - Dell AX510 Sound Bar for all Ultra Sharp Flat Panel Displays
- 2nd Monitor - Dell Professional 2009W 20in HAS Wide Monitor, VGA/ DVI
- 3rd Monitor - Dell Professional 2009W 20in HAS Wide Monitor, VGA/ DVI
- Monitor - Dell Professional 2009W 20in HAS Wide Monitor, VGA/ DVI

Attachment B: Location Verification Guidelines

Attachment B “Maverick LVS – Map Content and Construction” shall follow this cover page.



Map Content Requirements

Source Map Construction Guidelines

MapSet Import, Configuration & Maintenance

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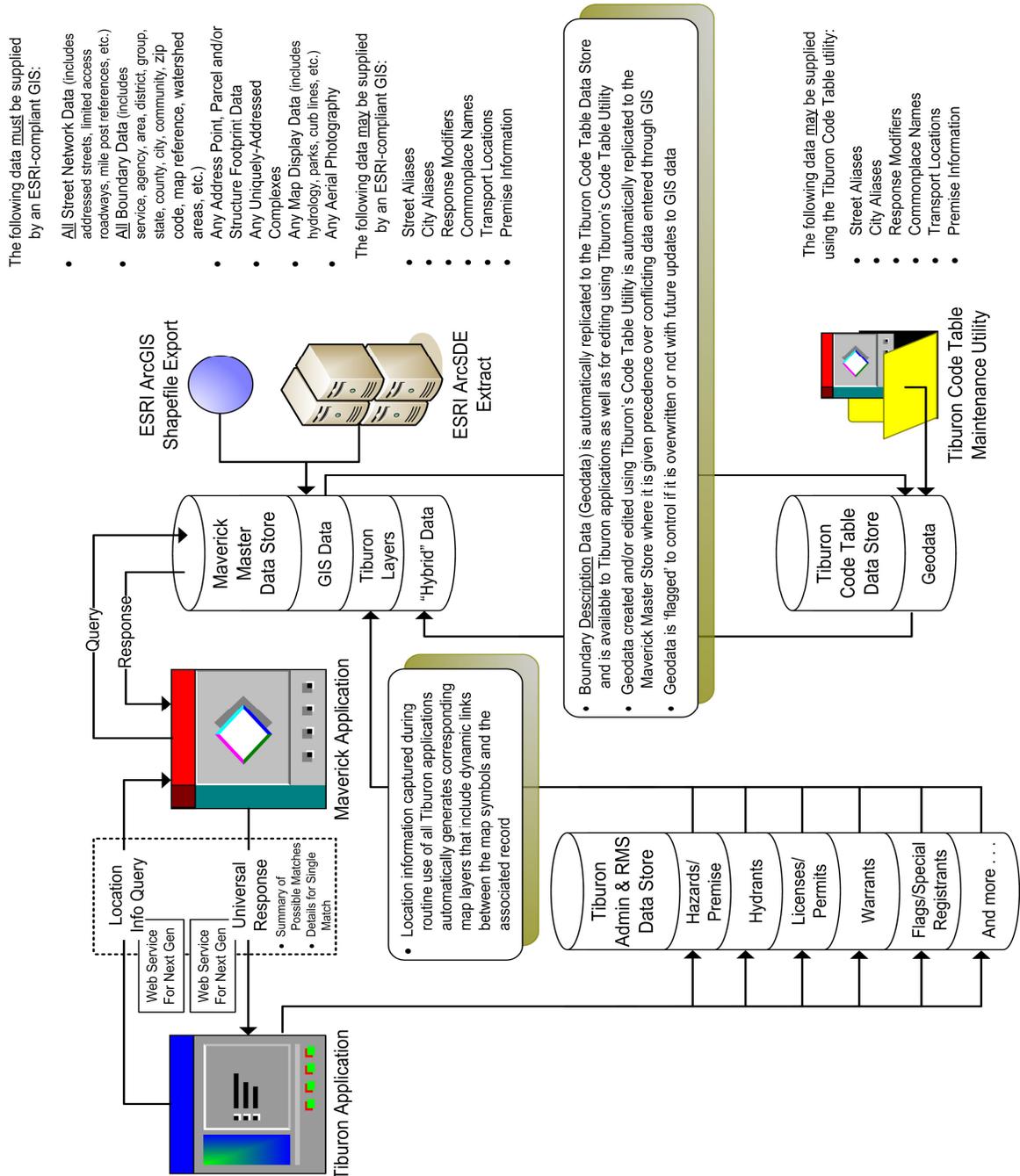
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LOCATION VERIFICATION SERVICE - WHAT'S NEW?

Maverick Location Verification Service (MaverickLVS)

MaverickLVS processes all location based information throughout the Tiburon suite. Maverick MapSetup's simple import process – will create your System Map, which will serve the same purpose as the old CAD Geofile, providing even greater functionality, flexibility and reliability.

No more GCT process. No more synchronization problems. One source for location information throughout your Tiburon system. The diagram below describes the flow of geo-spatial data to and from the various products.



Maverick MapSetup for LVS

While the MapSetup process has not changed significantly from a user standpoint, it performs many more functions in preparing your map for use in the new Location Verification Service role played by the map, along with new and enhanced functionality within Maverick's Dispatch and Mobile Mapping Programs, requires that your map contain a bit more information (see **Map Content Requirements**), and MapSetup's Import Wizard will ask a few extra questions as you bring your map layers into the system for the first time.

The benefit of this up front work will be a reliable, easy to maintain, easy to update, single source of geographic data **MaverickLVS** (Maverick's Location Verification Service).

Maverick Integrated Mapping

Callhandlers and Dispatchers will notice few changes in the GUI that they are used to. Maverick's Location Verification Service will provide the same information that the CAD Geofile provided, with several noticeable enhancements. Searches will be more flexible and more comprehensive. Map interaction will be faster and even more reliable than before. No re-training will be required.

MAP CONTENT REQUIREMENTS

Maverick can display and utilize a virtually unlimited array of data. However, an abundance of “extraneous” data can clutter the map display and make it difficult for users to quickly identify the information that they need in order to expedite their duties. In addition, the display of large amounts of extraneous data can sometimes have an adverse effect on Maverick’s performance.

At the very least, Maverick requires a Street Centerline Layer and a City Boundary Layer. If constructed properly, these two layers alone can allow Maverick to perform its work.

See Appendix A for a listing of content requirements for particular layer types.

REQUIRED LAYERS

STREET CENTERLINES LAYER (REQUIRED)

A searchable street layer, containing the required data listed below, must be present for CAD-Mapping functionality.

Street names can be in a single field containing the entire street name or can be concatenated from multiple fields containing various naming elements.

In the Maverick location process, address ranges are applied in the direction in which the line segment was drawn. The value that you designate to be “FromLeft”, for example, will be placed at end of a street segment to be the first point drawn on that segment.)

More than one street layer may be used.

Additional routing functionality can be obtained by including optional routing specific data indicated below.

All layers in your MapSet must be in the same projection.

REQUIRED CONTENT:

Your map can contain more than one street centerline layer but care should be taken to avoid duplicate information.

The street centerline layer(s) must contain the following information:

Street Name

The street name can be a single field containing the entire street name or a group of fields (Prefix, Name, Type, Suffix) which can be concatenated upon import.

Street Names and components should be consistent throughout the map, and must match both the spelling and the configuration of the names that CAD will be receiving from ALI. (RD and Road, for instance, do not match)

Address Range

The address range is comprised of 4 components: (FromLeft, ToLeft, FromRight, ToRight). The individual fields in your source data do not need to be named in any particular way, but the information must be present for every street segment in order for Maverick to process address location requests.

OPTIONAL CONTENT:

The following information, while not required for functionality, can improve the accuracy and efficiency of some Maverick features.

LAR

An “L” in this field indicates that the segment is a Limited Access Roadway. A blank value indicates the segment is not an LAR.

LAR Direction

All LAR’s are assumed to be one-way. Indicate the direction of travel of the LAR in this field using “NB”, “SB”, “EB”, “WB”.

Response Modifiers

Response Modifiers can be included with individual segment or point data. These modifiers can indicate (among other things) a specific response to this particular street segment, house or Common Place. The list of modifiers and their definitions comes from CAD.

If Response Modifiers are used, two fields (Left and Right) are required for each service that is being dispatched. If an agency dispatches Police, Fire and EMS, then the Street Centerline should have the following fields for response modifiers:

Police_L, Police_R, Fire_L, Fire_R, EMS_L, EMS_R

Aliases

Any number of Alias fields can be included which will contain alternate names for the segment.

Grid

A field may be included to indicate the Grid in which the segment is located.

One-Way Street Information

Each segment can contain information indicating whether the segment is one-way and, if so, in what direction. A one-way-designated field should contain either "FT" (From-To: indicating that the segment is one-way in the direction in which the line was drawn) or "TF" (To-From: indicating that the one-way direction is opposite to the line direction). A blank in this field would indicate that the segment is not one-way.

NOTE: Only one of the following fields will be used when determining routes. If no segment-specific information is available, you will have the opportunity to set a global speed limit which will be applied to all streets for routing purposes.

Speed Limit

If a speed limit field is present and populated (in mph values), limits can be set for each segment. This method offers the opportunity to apply a more "real world" limit to each segment. If you prefer, you can set a default speed limit for all streets in your map which Maverick will then use when recommending routes.

Cost of Traversal

A relative cost is assigned to every segment which can be used to determine route recommendations.

Time of Traversal

This field should contain the actual time required to travel each segment (in seconds), which will then be used to determine route recommendations.

Morning/Evening Rush Hour

Include field(s) for morning and evening rush hour to utilize Maverick's Scheduled Routing feature. These two fields can contain any one of the above three routing parameters (Speed Limit, Cost of Traversal, or Time of Traversal) and the system will use the different values depending on the time of day.

SERVICE BOUNDARIES / DISPATCH GROUPS

(Required for each covered service)

Police Service Boundary Layer
Fire Service Boundary Layer
EMS Service Boundary Layer

These layers are used to determine response recommendations. Care should be taken to draw these layers as accurately as possible.

One Boundary Layer is required for each service to be dispatched (Police, Fire, EMS, Etc.).

NOTE: See Appendix A for a listing of content requirements for particular layer types.

REQUIRED CONTENT:

Each Service Boundary layer must contain the following information:

Service ID
Agency
Dispatch Group
Area/Name ID (RD)
Response Modifier

CITY BOUNDARY LAYER

The City Layer is used to differentiate between duplicate addresses in different cities.

NOTE: See Appendix A for a listing of content requirements for particular layer types.

REQUIRED CONTENT:

City Name
City Code

OPTIONAL LAYERS

Virtually any number of layers can be added to your MapSet. Some, such as Houses or Address Points will increase the accuracy of Maverick's location search capability. Common Places and Landmarks layers can be search by name in addition to address. Other layers, such as Hydrants, Aerial Photos and Building Footprints may add efficiency. A Camera layer ties remote video into your Maverick console. Still other layers (Curblines, Hydrology) provide additional useful and helpful visual reference.

HOUSES LAYER OR PARCELS LAYER

An address points layer will allow the system to find exact locations of addressed objects contained within the layer. Multiple address layers can be used – again, avoid duplication.

Once again, multiple layers containing addressed objects may be used. For instance, Commercial properties or Businesses could be contained in a separate layer. Each Address Layer should contain the same location information in a consistent format.

REQUIRED CONTENT:

Address Number –

The address number of the property. Every effort should be made to use addresses that conform to NENA standards; however, certain “sub-address” information, such as fractionals, will be accepted by Maverick, provided the request exactly matches the point data.

Location –

Location information can be present in modular form as with the centerline (House Number, Prefix, Name, Type, Suffix) which can be concatenated upon import, or it can be contained in a single field containing the House Number and the entire street name

Street Names and components should be consistent throughout all layers of the map, and must match both the spelling and the configuration of the names that CAD will be receiving from ALI. Requests that do not match map contents will usually require the extra step required to resolve the conflict.

OPTIONAL CONTENT:

Contact Information –

While it may be useful if your address points layer contains contact names and phone numbers, resident-specific information is very maintenance intensive, requiring almost constant updating.

COMPLEXES LAYER

A Complexes Layer consists of polygons which are named (ex: Spiral Estates) and addressed (ex: 11 Spiral Dr). Objects in this layer can be searched by name or address. Complexes can contain street segments and points. Maverick will notify CAD when a location falls within a complex polygon.

REQUIRED CONTENT:

Complex Name

Location Information

COMMON PLACES LAYER

Common Places (also known as Landmarks) layers are points layers, similar to Address layers in that they should contain location information in the same formats called for in the Address Points Layer. In addition, this layer should contain a Name field which allows the layer to be searched by name (ie: City Hall)

REQUIRED CONTENT:

Common Place Name

Location Information

OPTIONAL CONTENT:

Contact Information: In the case of Common Places such as commercial properties, apartment complexes, etc., contact information may not only be more useful but should be somewhat easier to maintain as these “commercial” properties generally tend to have less turnover than residences.

HYDRANTS LAYER

REQUIRED CONTENT:

None required. This layer can be used for visual reference only.

OPTIONAL CONTENT:

If the layer is to be searchable, each hydrant should be given a unique name. Flow rates, Service records, and any other hydrant information that might be useful can also be included.

HYDROLOGY LAYER

Water features are usually contained in at least two layers to accommodate lines (for streams) and polygons (for rivers, lakes, etc) which can be filled. These layers may be named and labeled, but are rarely addressed.

REQUIRED CONTENT:

None required. This layer can be used for visual reference only.

OPTIONAL CONTENT:

Names: While not required, names should be provided for significant lakes, rivers and streams.

PARKS LAYER

REQUIRED CONTENT:

Names: Although not required, names should be provided for labeling. In addition, names will allow objects in this layer to be searched if the layer is processed as a Common Place Layer.

OPTIONAL CONTENT:

Location Information: The inclusion of location information will allow objects in this layer to be searched if the layer is processed as a Common Place layer.

Contact Information:

RAILROADS LAYER

REQUIRED CONTENT:

Although not required, names should be provided for labeling.

CAMERAS LAYER

A camera layer can contain video links to remote surveillance cameras.

REQUIRED CONTENT:

Name or other unique identifier and a **URL link** to the camera.

BUILDING FOOTPRINTS LAYER

REQUIRED CONTENT:

None required. Usually for visual reference only.

OPTIONAL CONTENT:

Location Information:

If it contains location information, a Footprints layer can be used to create a searchable Address layer. If that is the case then all Name, Location information should be contained within the data and the layer should be imported as searchable. (Similar to a Parcels layer.)

CURBLINES LAYER

Sometimes called Right-of-Way.

REQUIRED CONTENT:

None required. For visual reference only.

AERIAL PHOTOGRAPHY LAYER

REQUIRED CONTENT:

Geographically rectified aerial photos. MrSids, ECW format, JPEG2000, Photometry, Geotiffs, Etc. The projection of aerial photos must match map projection.

MILEPOSTS LAYER

Milepost points can be placed along highways to aid in determining locations. Shouldn't there be a little more information on drawing mileposts?

REQUIRED CONTENT:

Milepost Number
Milepost Name
Highway Name to which the Milepost applies
LAR direction (if applicable)

COMMUNITY LAYER

A layer of unofficial Communities (or Neighborhoods)

REQUIRED CONTENT:

Community Name
Community Code

ZIP CODE LAYER

REQUIRED CONTENT:

Zip Code Number

COUNTY LAYER

REQUIRED CONTENT:

County Name
Abbreviation

STATE LAYER

REQUIRED CONTENT:

State Name
Abbreviation

MAPBOOK LAYER

REQUIRED CONTENT:

Mapbook name
Page number

Grid indicator

More than one Mapbook can be referenced if needed.

OTHER OPTIONAL LAYERS

There are a number of other layers that may be useful depending on the application and needs of the agency and, of course, on the presence of the necessary data. These “layers” can be provided through Tiburon’s layer generation capability.

Among these are:

Hazards (points)

Firearm Permit Holders (points)

Warrants (points)

Sex Offenders (points)

Gangs (points or polygon)

RMS Special Flags (points or polygon)

SOURCE MAP CONSTRUCTION

Obviously the more accurate and complete your map is, the better it will function. Below we have listed some of the more important aspects to consider as you prepare your source maps for use in Location Verification.

TIPS

ADDRESS RANGE APPLICATION

Maverick sees the “From” end of a segment as the first node that was drawn in that segment. In other words, the address will usually run in the direction in which the line was drawn. Be aware of line direction when applying your address ranges.

END-POINT MATCHING

End-point nodes should be congruent, eliminating gaps which could be interpreted as a dead end or otherwise discontinuous street. This requirement applies internally to individual layers and (if multiple centerline layers are used) applies to the “seams” between such multiple layers.

INTERSECTIONS

All segments should be broken at intersections with other segments. Conversely, Segments which cross but do not intersect (overpasses) should, in most cases, not be broken at the point of crossing.

EXTRANEOUS NODES

Many maps supplied by outside GIS departments do not take into account the specific needs of emergency services dispatch, often concentrating, instead, on accuracy or “appearance” which can sometimes effect the map’s performance in a dispatch environment. Extraneous Nodes is one such condition.

For example: A circular street (for the purpose of a smooth line) can have thousands of nodes as close as 6 inches apart. This condition has the potential to delay processing as combs through these thousands of nodes to determine label placement, for instance.

UNNAMED STREETS

While Unnamed Streets will be utilized in Maverick’s routing routines, no locations will be found on streets without names (or address ranges).

CONTINUOUS VERSUS PRECISE ADDRESS RANGES

When it comes to applying ranges to street segments, there are two choices. If you have the opportunity to choose one or the other, the advantages and disadvantages of each method should be considered before making a selection.

THE CONTINUOUS RANGE METHOD. Pros: Contains no gaps. All valid addresses will be located. Cons: Because addresses are located mathematically within the entire range of a segment, the location will be less exact if the segments range exceeds the actual physical addresses on that segment.

PRECISE RANGE METHOD. Pros: Locations will be more exact since the range reflects the actual physical addresses on the segment. Cons: Does not allow for errors or “approximate” addresses. Requires more monitoring and maintenance to allow for new construction which might expand the range.

POTENTIAL PROBLEMS

This section describes some of the problems you are likely to encounter in constructing or adapting your map, and how you can avoid them. Many of these conditions, if left uncorrected, will cause location issues.

ZERO ADDRESS RANGES

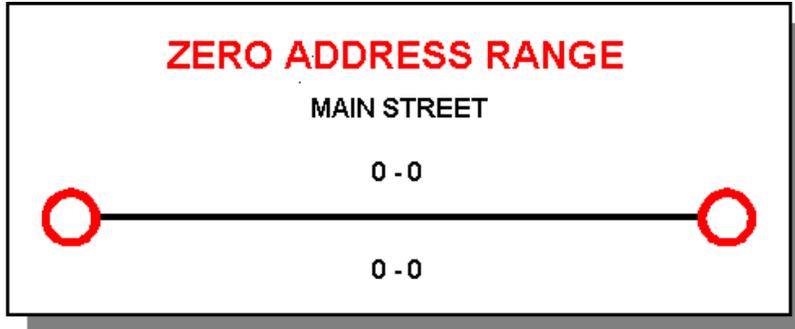


Figure 1 - Zero Address Range

Zero-Zero address segments will be ignored in the address location process. A segment with a Zero-Zero range on the odd side of the street will be seen as having no odd addresses. Blank address range entries will be treated as zero's. While such segments will be used in routing, no locations will be found on zero-zero segments.

Single Zero address ranges (0-123, for instance) are more problematic as such ranges may well create an overlap with another segment range. See Overlapping Ranges.

HIGH/LOW FLIPS

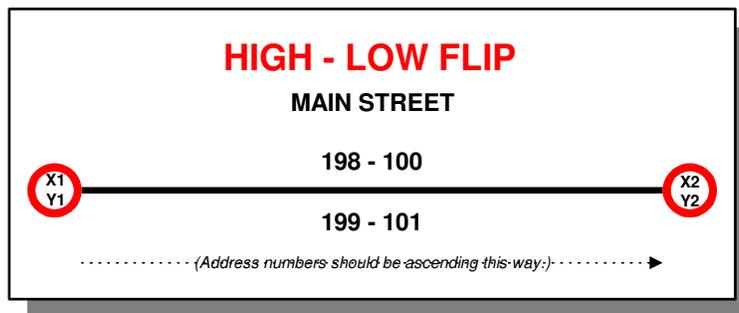


Figure 2 - High - Low Flip

Maverick sees the "From" end of a segment as the first node that was drawn in that segment. In other words, the address range run in the direction in which the line was drawn. Lines should be drawn with the lowest address being the first point and the highest address being the last point of the segment. Often, however, the original map may not have been drawn in this manner, so be aware of line direction when applying your address ranges. Failure to apply ranges properly could result in less accurate locations being displayed on "flipped" segments.

ODD/EVEN MISMATCH

An Odd/Even mismatch consists of differing oddness/evenness from the low end of an address range to the high end.

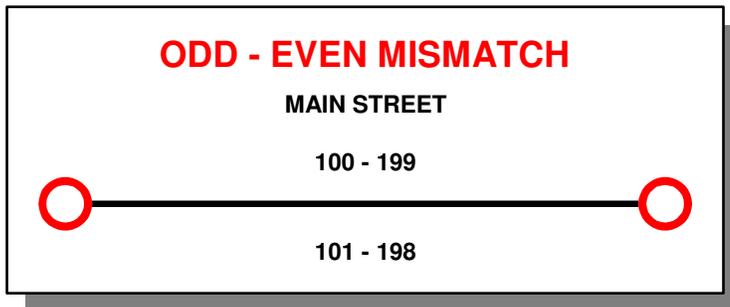


Figure 3 - Odd - Even Mismatch

In the example, the correct range is probably 100-198 and 101-199.

In the example, the address 170 would fit into both ranges – an obvious conflict.

In such rare instance where even and odd addresses do exist on the same side of the street., it would be better to break the segment to accommodate this irregularity in a separate "range".

ODD/EVEN FLIP

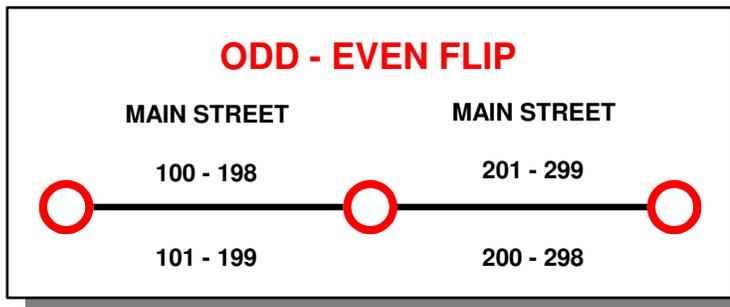


Figure 4 - Odd - Even Flip

An odd/even flip indicates that the side of a street where the "oddness" or "evenness" has changed. For example, you may be traveling down a street with the even side of the street on your right side. At the next block, the right side becomes odd. While this may be a correct situation (such as crossing a city boundary) the error warrants manual verification for each instance.

RANGE OVERLAPS

A range overlap indicates that the address range of a street link overlaps the range of an adjacent link. In other words, two different links can represent the same address.

This is very rarely an accurate condition. In the highly unlikely case where an address or two from Segment 1 actually exist in Segment 2 (thereby causing an overlap when a single range is applied), the individual segments should be broken to reflect the real-world condition.

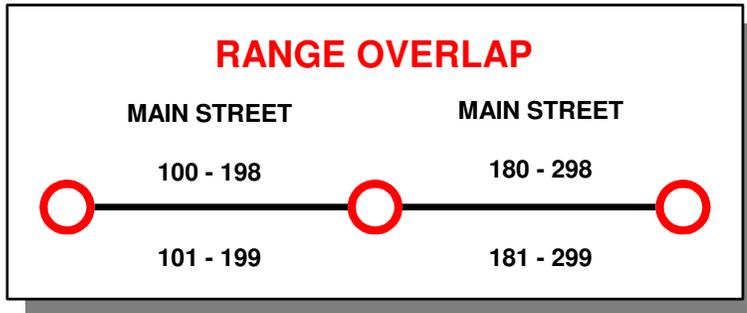


Figure 5 - Range Overlaps

RANGE GAPS

A range gap indicates that the address ranges of two adjacent segments are not continuous. This may not be an issue if Precise Address Ranges are used. Whether or not this condition is considered an error is up to the customer.

In the example below, a request of 203 Main Street would not result in an immediate validation but would instead generate a choice of segments with nearby ranges from which the user would choose a "valid" address to locate.

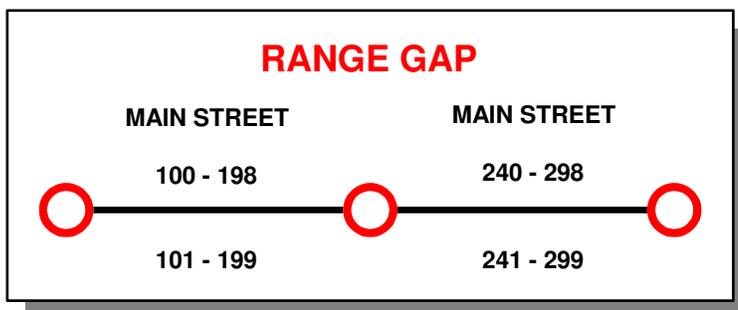


Figure 6 - Range Gap

ORPHAN SEGMENTS

An orphan segment is a link that is not connected to the rest of the street network.

While valid addresses on such a segment will be found and located, no cross streets or intersections will be found since the segment is not connected to any other street; and no routes to the location will be given.

Orphan segments should be corrected.

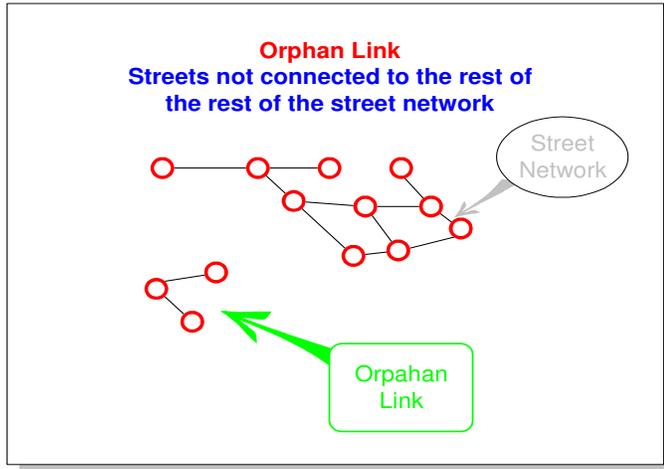


Figure 7 - Orphan Link

NODE MISMATCHES

A node mismatch indicates that the endpoints of two links fall within a specified tolerance distance, but are not equal.

The intersection generation and routing routines rely upon connecting street links sharing an X,Y coordinate. Since some data sources may have rounding errors, a scan for node mismatches is warranted and, if mismatches are found, they should be corrected.

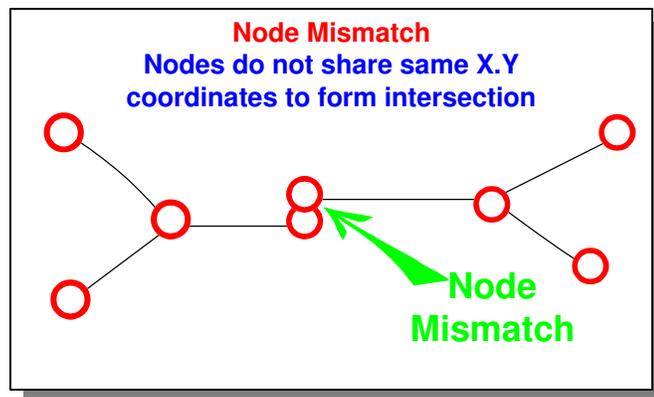


Figure 8 - Node Mismatch

There may be some cases where a node mismatch is correct, such as a cul-de-sac that ends near another street. Node mismatches should be manually verified before being snapped beyond a certain distance.

OVERLAPPING SEGMENTS

An overlapping segment occupies part or all of the same space as another segment. This condition is usually caused by double digitizing or otherwise inaccurate digitizing.

Overlapping segments can produce the same problems as overlapping ranges do. In addition, there will be problems with the generation of cross streets and intersections.

Overlapping segments are always errors and should be corrected.

Coincident links produce many problems during intersection generation. Furthermore, a coincident link will by definition produce an address overlap. Since a graphic visualization is the best way to locate these problems, a manual verification using a graphical tool is the preferred method for error correction.

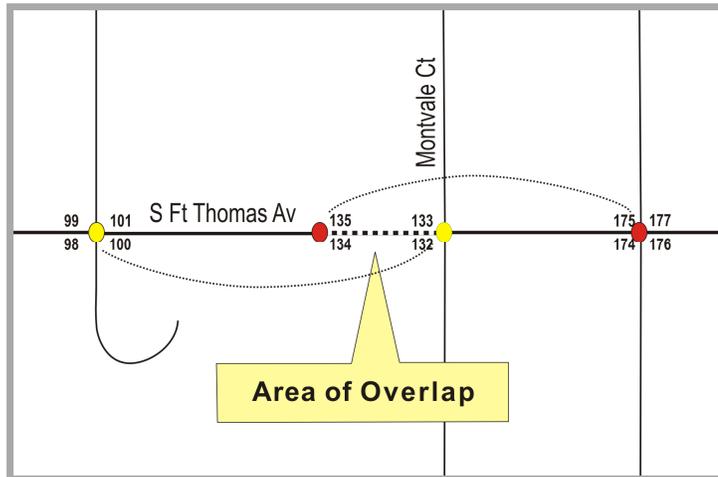


Figure 9A – Overlapping Segment

UNBROKEN INTERSECTING SEGMENTS

Any time a segment intersects with another segment, it should have an end node and a new segment should begin.

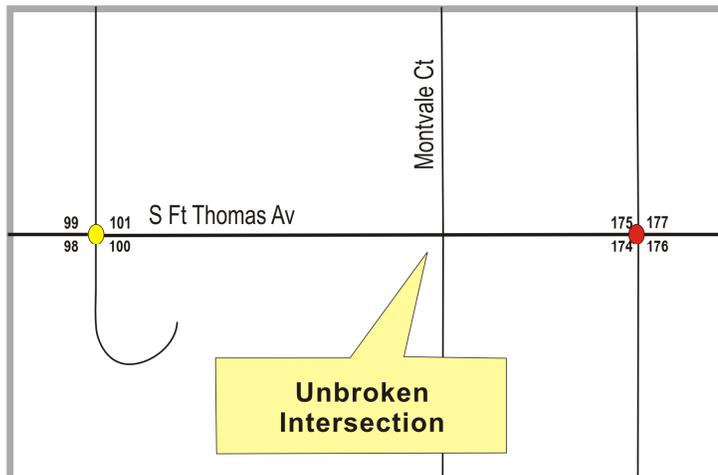


Figure 10 – Unbroken Intersection

COORDINATE SYSTEM COMPATIBILITY

All source materials from which you will build your system's MapSet must be in the same Geographic Projection.

HIGHWAYS - NAMING AND ADDRESSING

In this section we are referring to Interstates and other major roadways which are usually Limited Access (LARs) and most often do not have standard addresses.

NAMING

The naming of such major roadways should be simple but descriptive (I471SB).

More importantly though, highway names should be consistent throughout your map in order to avoid confusion.

Aliases can be used just as in regular street centerline layers.

ADDRESSING

Two methods of addressing highways are available.

The traditional “streets” method of applying address ranges to each segment is often not applicable to major highways or interstates. Although this method can be used, it is rare that either a caller, a dispatcher or a responder would know an “address” on an interstate.

The much more accepted method to use on such roadways is to use Mile Markers.

RAMPS - NAMING AND ADDRESSING

Ramps are a difficult proposition for map builders as well as dispatchers. The best approach is to come up with a consistent system in order to simplify the process. One such system would be to begin each name with RAMP and then the add the two roadways that it connects. For example: RMP I-471 to GRAND AV.

REQUIRED CONTENT:

Unique Name as described above.

Address Ranges can be the same for all ramps (Ex: Left=1-9; Right=2-10). This will enable the operator to specify the approximate location on the ramp if it is known.

BOUNDARY CROSSINGS

Segments that span boundaries must be split at the point they cross the boundary. If this process is difficult to maintain by the customer’s GIS, then the agency should consider only creating RDs which follow streets and cross at existing intersections.

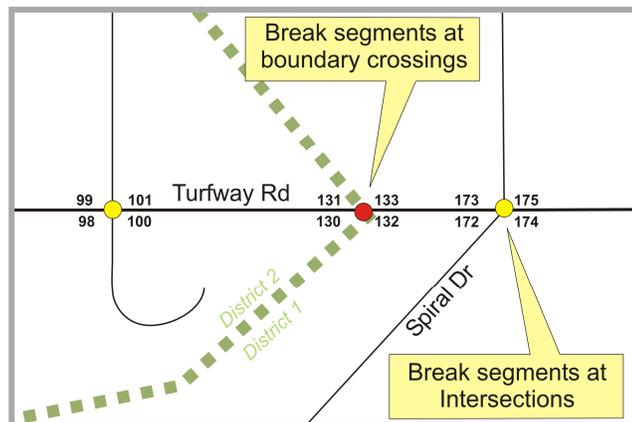


Figure 11 - Boundary Crosses

BUILDING YOUR LOCATION VERIFICATION MAPSET

Using MAVERICK LVS Import Wizard - Overview

The LVS Import Wizard is the process by which a MapSet is created, and new or updated layers are added to an existing MapSet.

Throughout this document, the term “import” is used to signify the process of bringing your source maps (usually ESRI layers) into the Maverick system. The Import Wizard merely organizes your existing source data for use in the Maverick system. As with previous versions, the Maverick Import Wizard does not alter your source data in any way.

LVS Import Wizard assigns default styles and colors to your new layers based on the layer type that you designate (streets, highways, houses, businesses, parks, etc.). Depending on the number of layers and complexity of your MapSet, the mapping administrator will still need to adjust the map for optimum display, but the original results of the import process makes for a much more readable initial display and leaves less work for the administrator in setting up the display parameters of each layer.

The first time you import your source map files, (shape files) the wizard will ask you a few questions about each layer. These questions are quite simple, but very important as the requested information will influence the functionality of your map. LVS Import Wizard remembers certain selections that you have made and reduces the number of repetitive answers by populating the answer box when applicable on subsequent layers as well as when updating layers in the future.

The first time you import your source map files, (shape files) the wizard will ask you a few questions about each layer. These questions are quite simple, but very important as the requested information will influence the functionality of your map.

Once you have completed the wizard for your original system map layers, your answers will be stored. Bringing in updated maps will be virtually automatic, unless you add new layers or change the names or database structure of existing layers, in which case those layers will have to go through the import process again.

The newly imported map layers will display in MapSetup with Maverick’s default settings (color, style, zoom, labels, etc.). The administrator can then adjust the map’s configuration and save the MapSet for distribution. Once the map is setup, the rest of the process is virtually automatic as the updated map layers are processed into the system and distributed to all mapping stations on the network by MapUpdateServer with a simple new Distribution process (see MapSetup section).

These are just some of the most recent advance towards our goal to make Maverick the most user-friendly Public Safety mapping system available while still providing the features and power for your growing needs.

Maverick’s LVS Import Wizard will guide you, step-by-step, through the process, asking simple questions about each imported map layer. Each step is described on the following pages. The wizard asks only what it needs to know based on previously provided information so the windows that you see may vary from the examples that follow.

Rather than present every conceivable scenario, we have chosen in this document, to detail the process, step-by-step, for a few representative layer types: Street Centerlines(Polylines), Response Boundaries (Polygons), and Addresses (Points). These examples will prepare you for the import of other, less complex layers.

Changes:

The Maverick LVS process of “importing” map layers into your system MapSet hasn’t changed much and previous Maverick users will be familiar with the Import Wizard GUI. But, because the files that Import Wizard creates will now serve as the Location Verification source for all geo-referencing Tiburon modules, a bit more information is required. As a result, some layers will present a few more info request screens as you go through the import process.

This single process now creates/updates your map and that map serves as your CAD Geofile. No more synchronization problems. No more GCT. The “Import” Process

Import Process – Walk Through

Importing a Streets Layer

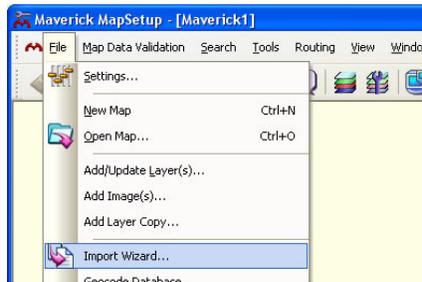
Before starting, review the required and optional information for Streets layers. The LVS Import Wizard will ask you for the location of this information within your data. Information marked as “Optional”, while not required, will enable additional functionality.

- Step 1** Open MapSetup from the start menu:
START > PROGRAMS > 911 MAPPING > MAVERICK MAPSETUP

The steps below assume you are creating a new MapSet, starting with your streets layer so choose **FILE > NEW MAP** to open a blank map screen.

If you already have a MapSet, it will display when you open MapSetup. If this is not the case, use **FILE>OPEN MAP** and browse to **C://Program Files/911 Mapping/MapSetup/Maps** folder (or other location) and select the map to open (.map extension).

- Step 2** Select **FILE > IMPORT WIZARD** to begin creating your new MapSet.

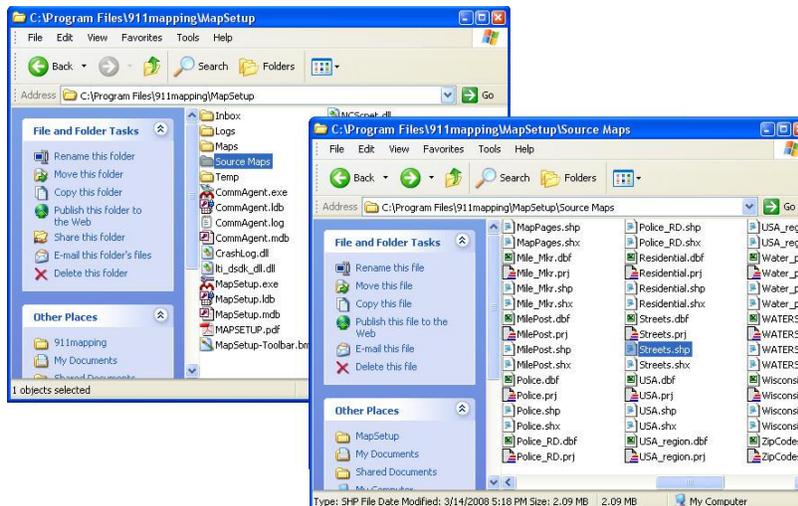


- Step 3** The default location for storage of your source maps is
C://Program Files/911 Mapping/MapSetup/Source Maps

Browse to this folder to select layer(s) for import. If you keep your source maps elsewhere, browse to that location and select the layer(s) that you want to import.

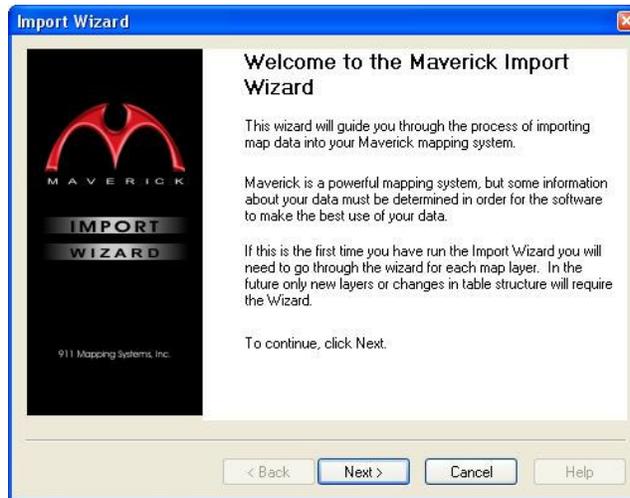
In this example, we will be processing an ESRI street centerline layer (Streets.shp) which will be used for address searching and routing.

You can, of course, import more than one layer at a time by holding CTRL and highlighting the layers you want to import.

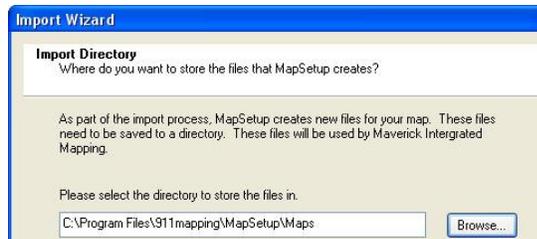


Once you've selected the layer(s) for import, Click **OPEN** to proceed.

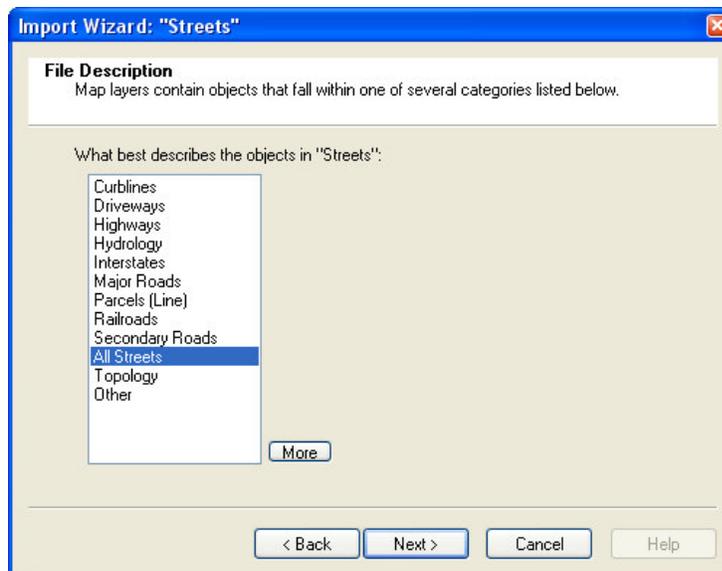
- Step 4** The LVS Import Wizard is now ready to begin processing the specified layers. Click **NEXT** to continue.



- Step 5** The Import Directory dialog asks you to specify the folder where the processed map will be saved. The default directory is C://Program Files/911 Mapping/MapSetup/Maps. In any case, the layers that are included in your system map must be in the same folder as the **.map** file that you are working with.

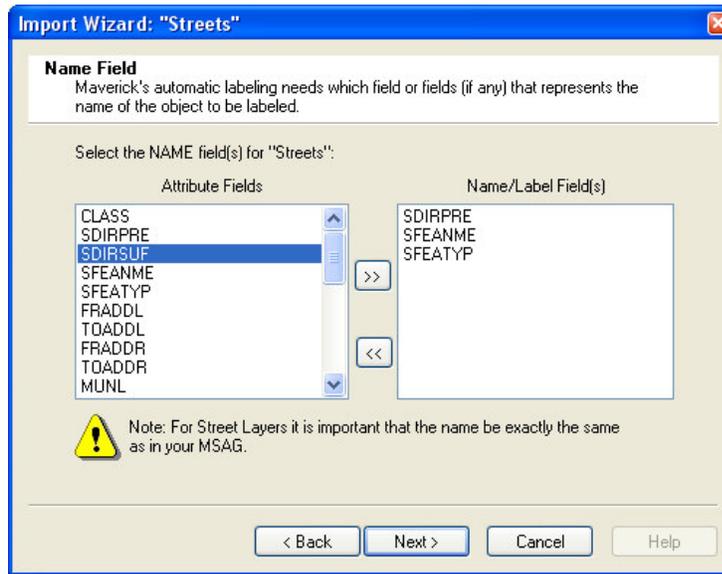


- Step 7** In the File Description dialog, the LVS Import Wizard asks you to describe the file currently being processed. (The name of the file being processed appears in the Wizard's title bar.) The Wizard uses this description to determine what information to request and to apply certain defaults to the layer's display.



Highlight the description that most closely matches the layer and click **NEXT**.

- Step 8** In the Name Field dialog, you are asked to specify the field or fields from the Attribute Fields list which contain the name of objects in this layer. In the case of the Streets layer in this example, the name that you indicate in this dialog will be used in address range searching and will also be used to label the streets on your map.

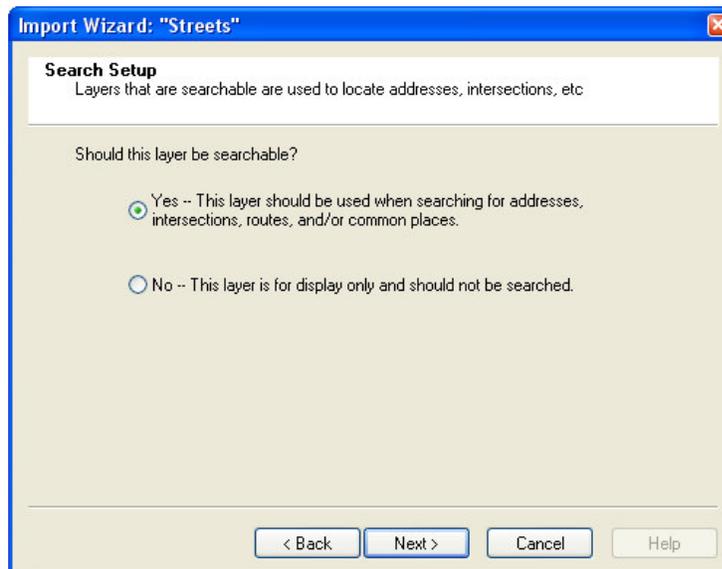


Highlight the field in the Attribute Fields column and move it into the Name/Label Field(s) column by clicking the  (or simply double click on each attribute field).

If the name is made up of more than one field, move them (in order) to the Name/Label list. Maverick will concatenate the name in the order in which they appear in the Name/Label Field(s) column.

Click **NEXT** when done.

- Step 9** In the Search Setup dialog you will designate whether or not the layer will be searchable. Say Yes and the layer being processed will be searchable. While many layers of your map may not need to be searched, your main streets layer(s) will always be searchable.



Click **NEXT**.

- Step 10** In the Number of Services dialog you will indicate how many services fall under your jurisdiction for which information is contained in this layer. Enter only the number of services here for which you have corresponding modifiers within this layer. (Example: If you dispatch for Fire, Police and EMS and have fields containing modifiers for all three services, enter "3". If your layer contains no modifiers, enter "0")

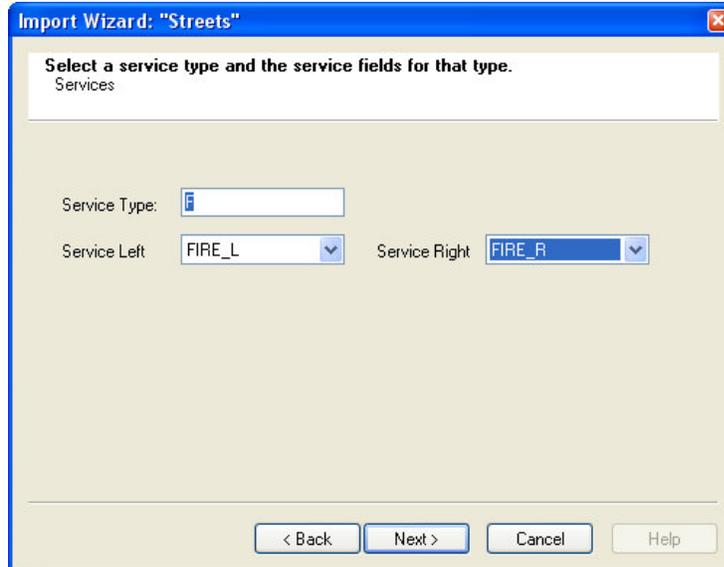


Click **NEXT**.

- Step 11** For each of the services that you designated in the previous dialog, you will be asked to specify the location of fields containing pertinent information.

Service type is indicated by a single letter "F" = Fire; "P" = Police; "E" = EMS

Service Left and **Service Right**: Select from the dropdown list the field containing service information pertaining to the indicated service (F in the example) for both sides of the street.



Click **NEXT** to go to the next Service Type dialog until all are completed.

Step 12 In the Street Attributes dialog you will be asked to indicate the fields containing certain information which will be used in address location.

FROM LEFT, TO LEFT, FROM RIGHT, TO RIGHT: Indicate the fields containing the requested information.

LAR (Limited Access Roadway): If your street centerline data contains LAR info, indicate the field which designates a segment as an LAR. If you have no LAR info in your layer, leave blank.

LAR DIR: Indicate the field containing direction of travel for LAR segments. Direction is indicated with the compass direction of the LAR. (NB, SB, EB, WB)

Once again, leave this textbox blank if you have no LAR info in your layer.

WISCONSIN GRID PREFIX: As stated, this piece of information only applies if you are A) in Wisconsin and B) using the Wisconsin Grid. Otherwise, don't ask... leave this box blank.

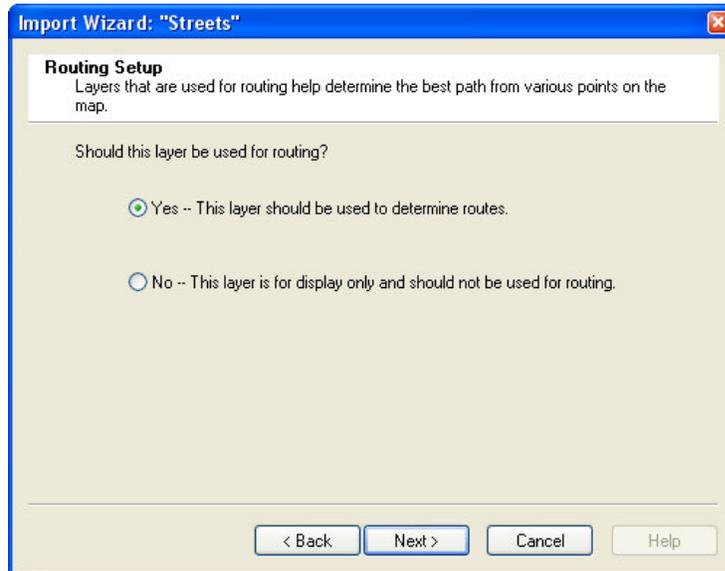
The screenshot shows a dialog box titled "Import Wizard: 'Streets'". Inside, there is a section titled "Street Attributes" with the text "Street attribute fields are used by Maverick to verify and locate incoming addresses." Below this, it says "Select the fields that correspond to the following street attribute values:". There are seven dropdown menus arranged in two columns. The first column has "FROM LEFT" (LEFT_FROM), "FROM RIGHT" (RIGHT_FROM), and "LAR" (LAR). The second column has "TO LEFT" (LEFT_TO), "TO RIGHT" (RIGHT_TO), and "LAR DIR" (LAR_DIR). Below these is a single dropdown menu for "WISCONSIN GRID PREFIX (Wisconsin Grid Maps Only)". At the bottom, there are four buttons: "< Back", "Next >", "Cancel", and "Help".

Click **NEXT** when done.

- Step 13** If your streets layer contains Alias information, tell Maverick where that info is located by highlighting the proper field or fields. To select multiple fields as shown below, hold down the CTRL key while selecting.



- Step 14** In the Routing Setup dialog, indicate whether or not the layer should be used to determine routes. For most street layers the answer here will be Yes. However, if you have a layer of bus routes (for instance) which duplicates streets on your main street layer and is used only to indicate bus routes in a different color, select No. Using two layers with duplicate streets for routing will cause delays in the routing process.



Click **NEXT**.

- Step 15** The Routing Information Type dialog asks you what type of routing-related information is contained in your layer. Click the box next to each info type that you have. If your layer contains no specific information of the types listed, leave them blank.

NOTE: For the purpose of demonstration, we have indicated that we have every available type of routing information. It is highly unlikely that your map would contain more than one of the following: Speed Limits, Cost/Impedence, Time of Traversal. In any case, Maverick will only use one of these three values to calculate routes.

The screenshot shows the 'Import Wizard: Streets' dialog box. The title bar is blue with the text 'Import Wizard: "Streets"'. The main area has a light beige background. At the top, it says 'Routing Information Type' and explains that Street Center Line files often contain information on roads. Below this, it asks the user to select the type(s) of routing information available for the map layer, noting that all are selected. There are five checkboxes: 'One Way Streets' (checked), 'Speed Limits' (checked), 'Cost/Impedence' (unchecked), 'Time of Traversal' (unchecked), and 'Schedule Based Costs' (checked).

Click **NEXT** when done.

- Step 16** Tell Maverick where to look for One-Way Street Information.

One-Way Field textbox: choose the field containing the one-way indicators.

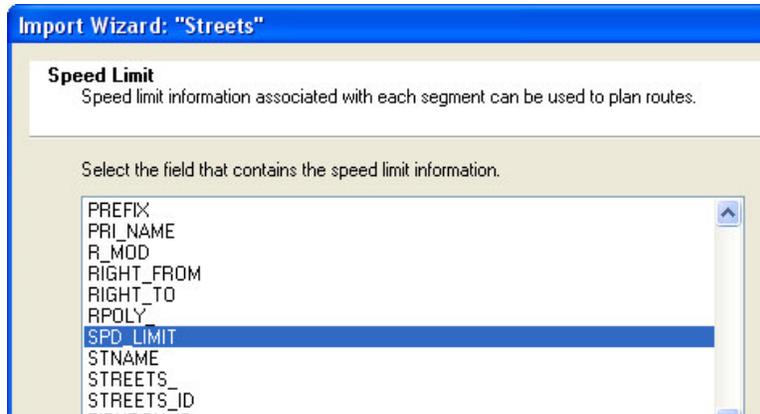
To-From One-Way Value: The drop-down will list the values in the field that you picked above. Select the value that indicates the segment is one-way in the To-From direction. ("TF" is the standard indicator for To-From.)

One-Way Field textbox: The drop-down will list the values in the field that you picked above. Select the value that indicates the segment is one-way in the To-From direction. ("FT" is the standard indicator for From-To.)

The screenshot shows the 'Import Wizard: Streets' dialog box at the 'One Way Street Information' step. The title bar is blue with the text 'Import Wizard: "Streets"'. The main area has a light beige background. It asks the user to select strings which indicate that a street is one-way. Below this, it asks the user to choose the field that indicates a street is one way, then choose the values from that field which indicate the direction of the street. There are three drop-down menus: 'One - Way Field' (set to 'ONE_WAY'), 'To-From One-Way Value' (set to 'TF'), and 'From-To One-Way Value' (set to 'FT'). At the bottom, there are four buttons: '< Back', 'Next >', 'Cancel', and 'Help'.

Click **NEXT** when done.

Step 17 Tell Maverick where to look for Speed Limit Information by highlighting the appropriate field in the list.



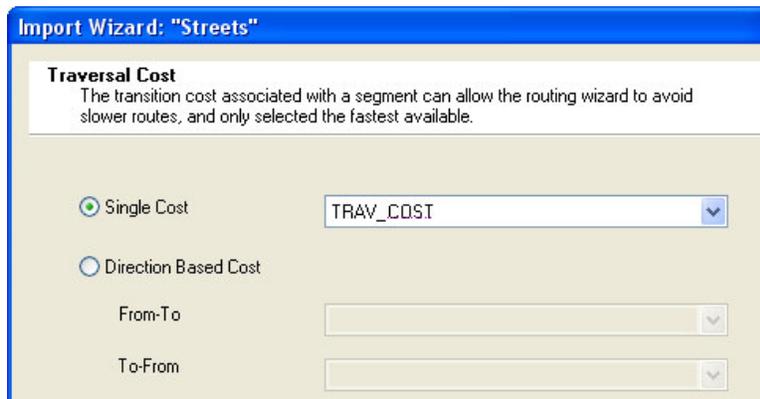
Click **NEXT** when done.

Step 18 Traversal cost, as used here, is a number (usually seconds) which is used to determine the fastest route recommendations. Lower numbers correspond to higher speeds. Think of Traversal Cost as a "penalty".

If your layer contains Traversal Cost Information, tell Maverick where to look for it.

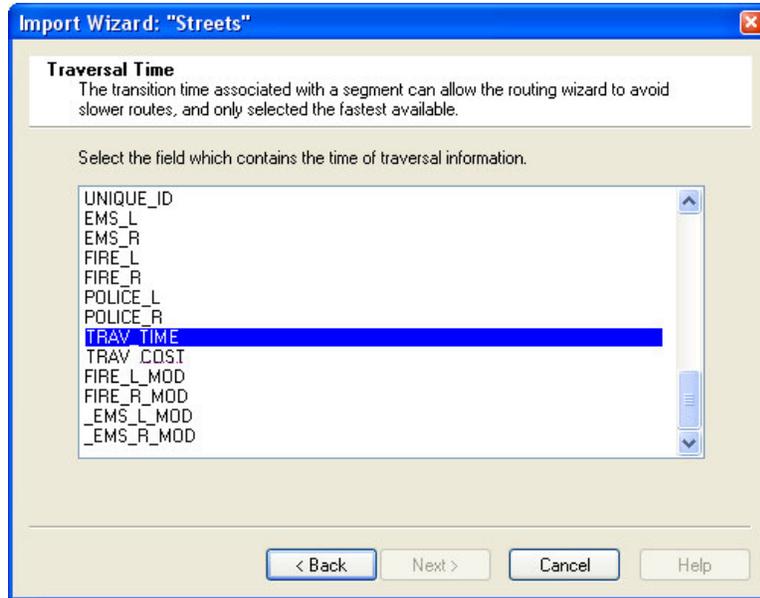
Single Cost: If your cost is not dependent upon the direction of travel, choose the Single Cost radio button and pick the appropriate field from the list.

Direction Based Cost: If your cost is direction based, choose this radio button and indicate one field each for From-To and To-From costs.



Click **NEXT** when done.

- Step 19** With the more conventional Traversal Time method, each segment of your map contains the traversal time (usually in seconds) required to travel the length of the segment.



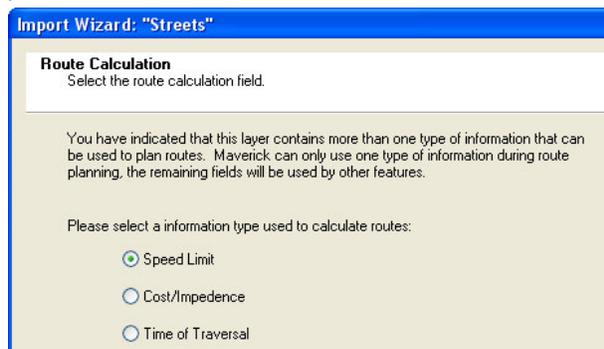
Click **NEXT** when done.

- Step 20** Indicate the format of the Traversal Times. (Seconds is most common)



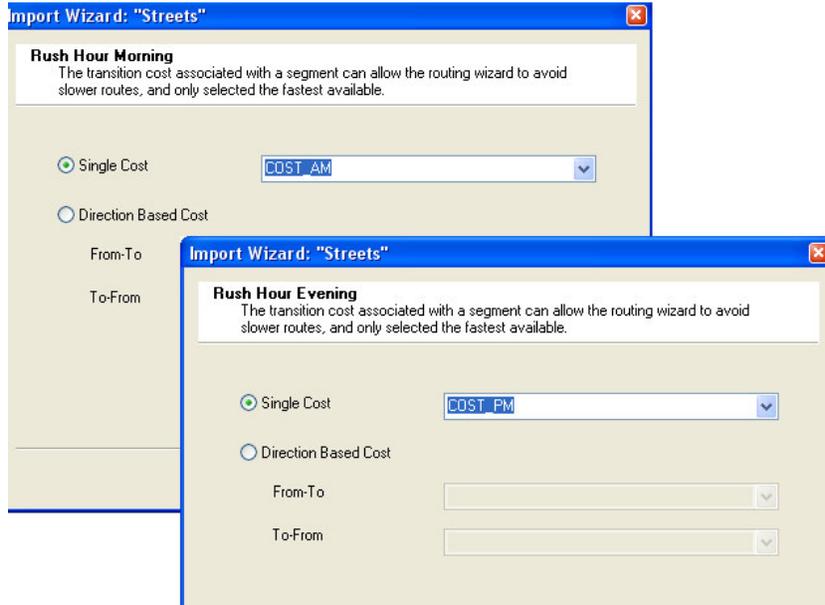
Click **NEXT**

- Step 21** In the Route Calculation dialog, you will indicate which routing info will be used in Maverick's route recommendation process. This dialog will only appear when you have indicated that you have more than one potential source of such information.



Click **NEXT**

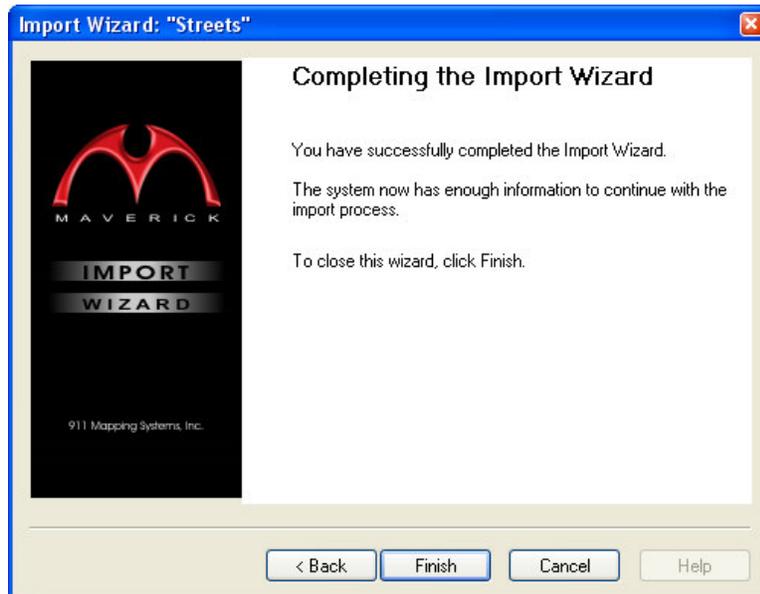
- Step 22** Schedule based routing requires a cost for Morning and Evening rush hours. Indicate the field containing cost info for Rush Hour Morning and Rush Hour Evening.
- You can apply a directional cost even if your data contains only one cost field. (Example: If From_To is the direction to which you want the Evening cost to apply, indicate a field only in the From_To drop-down and leave the To_From text box empty.)



Click **NEXT**.

- Step 23** You have now completed the import of the streets layer. If you selected more than multiple layers to begin with, you will see the Progress Dialog (see Step 1 on the next page) from which you will proceed to the next layer.
- If this is your last or only layer, you'll see the Completing screen,

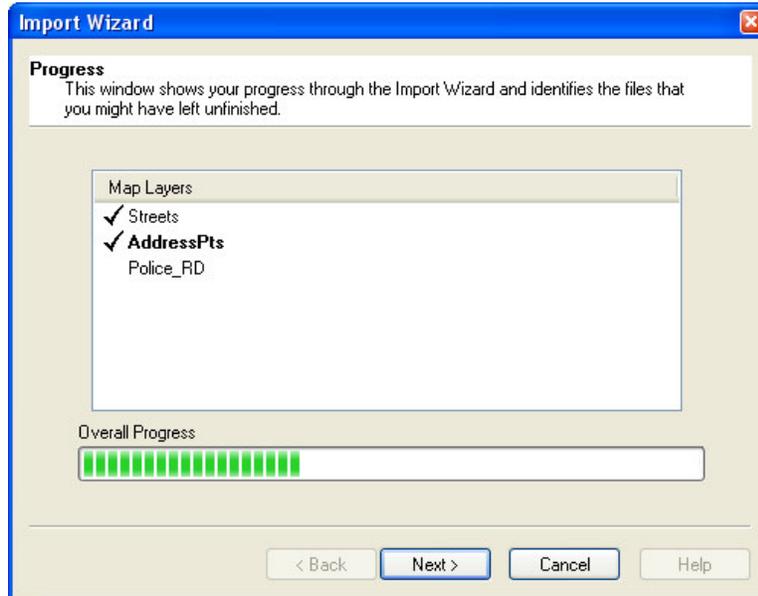
Click **FINISH** and your newly processed layer(s) will be displayed in the map window.



Click **FINISH**.

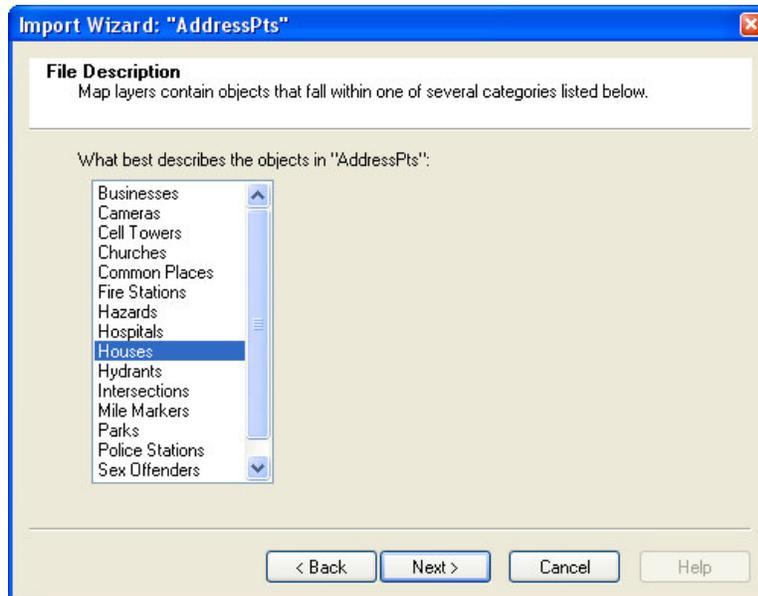
Importing an Address Points Layer (Points)

- Step 1** The second layer example is an Address Points layer. The Progress dialog shows that the Streets layer is completed and the AddressPts layer is ready for processing.

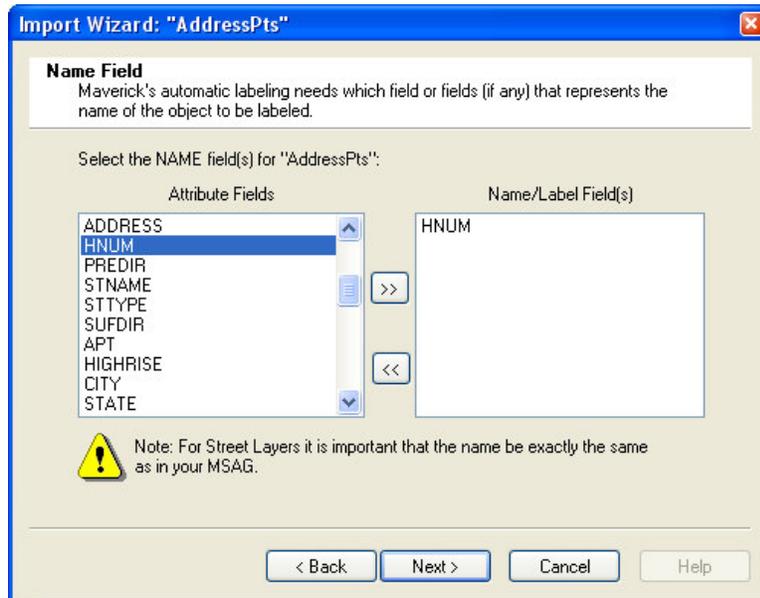


Click **NEXT** to begin processing the AddressPts layer.

- Step 2** Some of the parameters that were specified in the import of the first layer, such as the geographic projection, are remembered by the Wizard, allowing you to skip some of the screens and avoid redundant requests. Highlight the proper file description from the list and click **NEXT** to proceed.

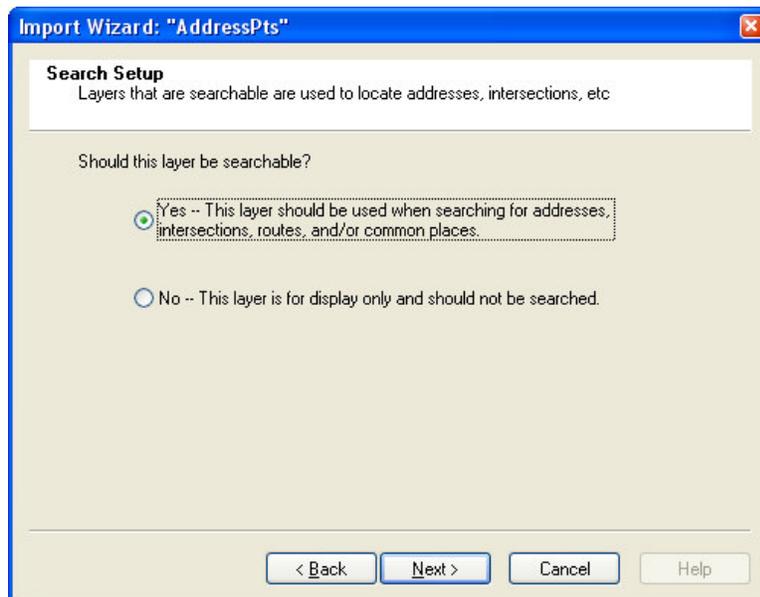


- Step 3** In the Name Field dialog, you are asked to specify the field or fields from the Attribute Fields list which contain the name of objects in this layer. In the case of the Streets layer in this example, the name that you indicate in this dialog will be used in address range searching and will also be used to label the streets on your map. In this example, the Address Points, or Houses, do not have formal names. Instead we will use the address as the Name, for labeling purposes.



- Step 4** In the Search Setup dialog you will designate whether or not the layer will be searchable. Say Yes and the layer being processed will be searchable if you choose to use that option in MapSetup. Many layers (such as hydrology, city boundaries, etc.) do not need to be searchable.

In our example, the AddressPts layer contains individual addresses (Houses) and we will want to be able to search it for addresses. Click the **YES** button, then click **NEXT** to continue.



- Step 5** In the Number of Services dialog you will indicate how many services fall under your jurisdiction for which information is contained in this layer. Enter only the number of services here for which you have corresponding modifiers within this layer. (For instance: If you dispatch for Fire, Police and EMS and have fields containing modifiers for all three services, enter "3". If your layer contains no modifiers, enter "0")
- Our Address Points layer contains no response modifiers, so we choose "0" as the number of services. If you indicate that modifiers are present you will be asked on subsequent screens to provide relevant information. If modifiers are present in your address layer, see Steps 10 and 11 under Importing a Streets Layer section.

Click **NEXT**.

- Step 6** In the Common Place Layers dialog, Maverick asks whether the layer is a Common Place layer. If the layer contains actual Names that you wish to search for ("City Building", "Centennial Towers", Etc.) click the "YES" button.
- Our AddressPts layer does not contain names and we only want to search by address, so we choose "NO" and click **NEXT**.

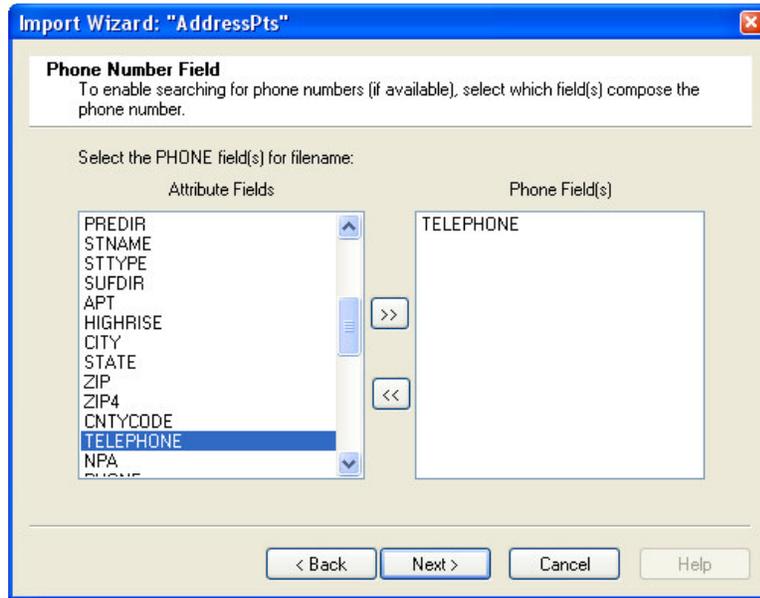
- Step 7** In the Address Field dialog, designate the field or fields in the layer's database, which contain the address of the objects in the layer.

In the example layer, the "Address" is made up of 5 different elements, each in its own field. Highlight the field in the Attribute Fields column and move it into the Name/Label Field(s) column by clicking the **>>** (or simply double click on each attribute field). Maverick will concatenate the fields in the order in which they appear in the Name/Label Field(s) column.

Click **Next** when finished.

- Step 8** If your layer contains telephone numbers, indicate the field or fields in the layer's database, containing the phone number. Highlight and double-click the appropriate field or fields to move them into the right column. If the Area Code is in one field and the Local Number is in another, move each element into the right-hand column in the proper order.

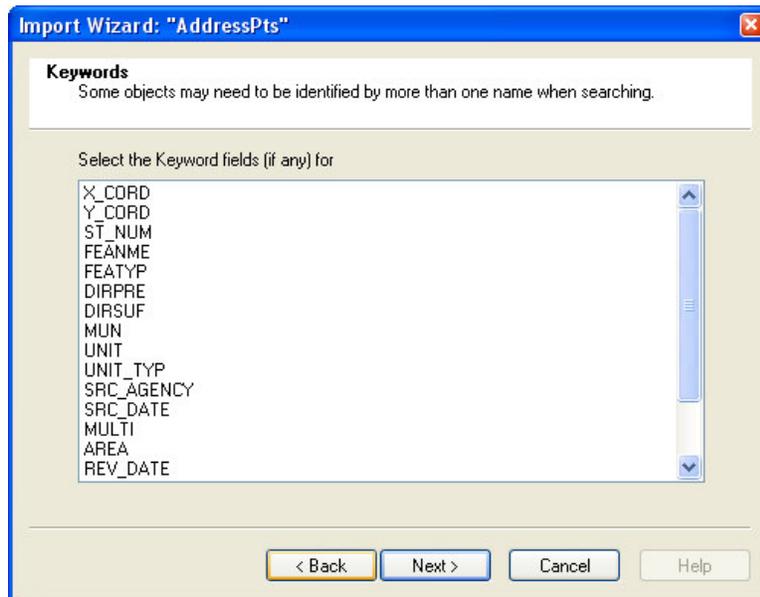
If no phone number info exists, as is the case in our example, make no selection and click **NEXT**.



Step 9 A relatively new Maverick feature allows the user to search the map using Keywords. If your data contains a keyword field, designate that field here. Maverick will search this field and return all objects found containing the specified keyword.

If you are building a keyword field, list all keywords in a single field, separated by commas. Keyword examples: restaurant, school, theatre, park, etc.

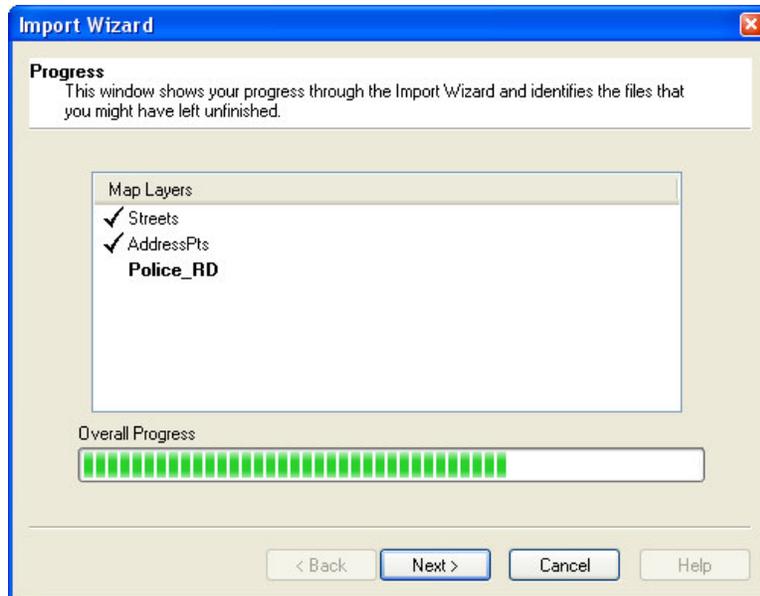
Our sample layer contains no keywords, so we just click **NEXT** without making a selection.



- Step 10** If your streets layer contains Alias information, tell Maverick where that info is located by highlighting the proper field. (Aliases are most often contained in the Street Centerline layer(s).)



- Step 11** The processing of the AddressPts layer is now complete. Two layers remain to be processed.



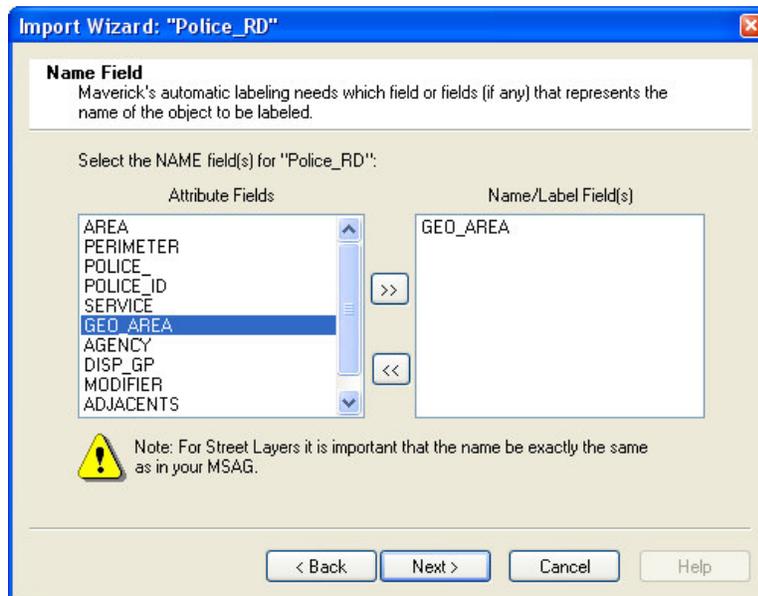
Click **NEXT** to continue to the Police_RD layer.

Importing a Boundary Layer (Polygons)

- Step 1** Our final layer example is a Boundary layer. Select the description that best describes this layer. The sample layer, called Police_Zones, contains police coverage boundaries.



- Step 2** In the Name Field dialog, you are asked to specify the field or fields from the Attribute Fields list which contain the name of objects in this layer. In the case of the Police_Zones layer, choose the field containing the name with which you will want to label the zones.



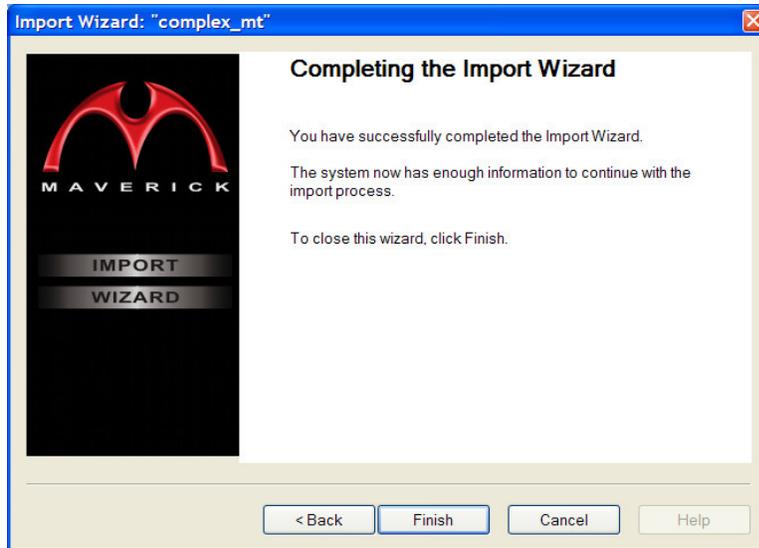
Step 3 Choose the fields containing the requested information. This screen will only appear during the processing of Response Boundaries.

Note: The information requested in this dialog is required for Maverick's response recommendation functionality. The presence of this info should have been confirmed during the data acquisition and pre-load preparation of your maps.



Step 4 Completing the Import Wizard.

Import of the selected layers is complete. Click FINISH and Maverick will process all of the information that you've provided and your map will open. This may take a minute or so depending on the volume of data that has been imported.



Once done, the LVS Import Wizard will close and the newly Added/Updated layers will be displayed in your map window. You can now use the various Maverick tools to adjust the settings for these layers. When everything is the way you want be sure to SAVE the new MAVERICK.map to make the additions and changes permanent.

Import Process – Projection Setup

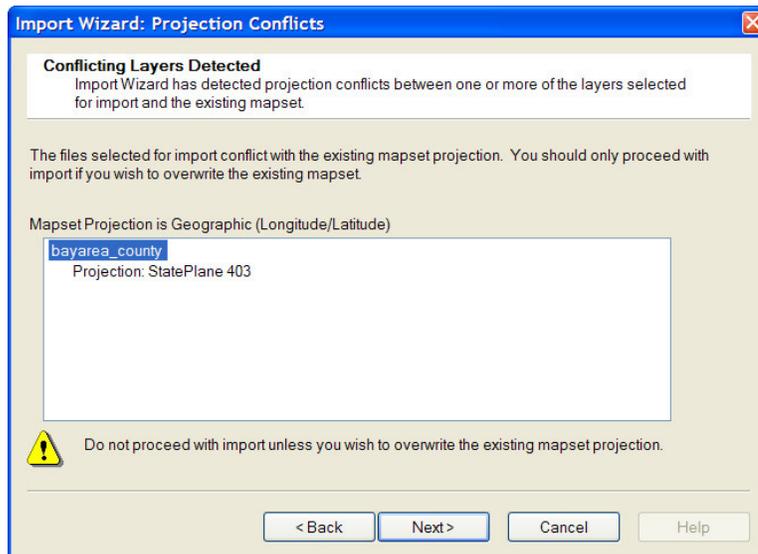
Most source maps are in ESRI format and will contain projection information in a .prj file that accompanies the shape files you will be processing. Maverick will read the projection of the incoming layers and automatically determine the projection of your System Map.

While Maverick can easily handle most commonly used projection systems, please note that all imported layers (including Aerial Photos) must be in the same projection. Aerials are specifically mentioned here because they are most often in State Plane projection and conversion to another projection can be quite expensive.

If the source map files do not contain projection information the LVS Import Wizard will assume the incoming layer to be in the same projection as the map into which it is being imported. This assumption is usually – but not always – correct. In the event that a layer without projection info is imported, which is wrongly assumed to be a projection match, the map will import, but will not display properly. Remove the mis-matched layer from your mapset and have the layer re-exported from the source platform in the projection that matches your other layers.

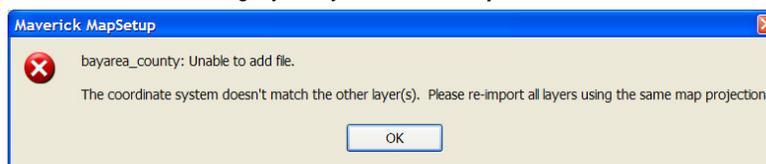
Conflicting Projections

If the source map layer contains projection information which conflicts with the import settings of the open MapSet, the LVS Import Wizard will issue the following conflict alert:



The warning tells you the source projection of the current Mapset (Longitude/Latitude) and indicates the projection of the conflicting layer (StatePlane 403).

As noted above, proceeding with the import of a layer with a projection conflicts will negatively affect the display of your System Map and is strongly discouraged. If you choose to proceed, the **.layer** and **.mdb** will be created, but you will not be permitted to add the conflicting layer to your current **.map**.



Most of the time, the conflict is a result of an export error. In some cases, you may obtain a layer from a different source (Aerial Photos, for instance). In rare situations, you may actually wish to “convert” your current source projection (to match Aerials, for instance, which are expensive to convert to a different projection).

In any case, **Maverick requires that all imported layer be in the same Geographic Projection**, so the problem must be corrected by re-exporting (from the source platform) the conflicting layer in the same projection as your MapSet; or, by having all of your existing layers re-exported in the new projection.

Creating a new map with a different Geographic Projection

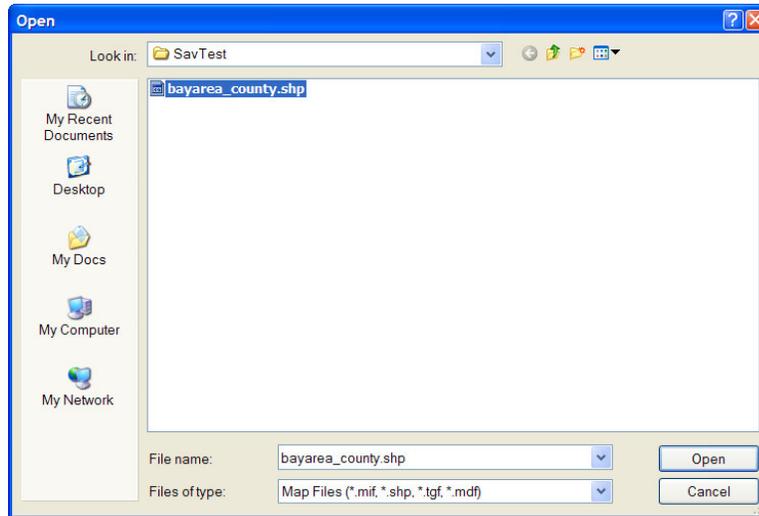
In the event that you do wish to create a new **.map** with a different source projection, close any open map and import the new layers as follows:

Step 1 – In MapSetup, close any maps that you have open.

Step 2 – Select FILE > NEW MAP to create a new (blank) map window.

Step 3 – Select FILE > LVS IMPORT WIZARD

Step 4 – In the resulting OPEN dialog, browse to and select the layers (.shp files) that you want to import. This will begin the LVS Import Wizard process.



Step 5 – In the example layer we have chosen (bayarea_county.shp) there is no projection information, so the Wizard asks you to supply the information required.

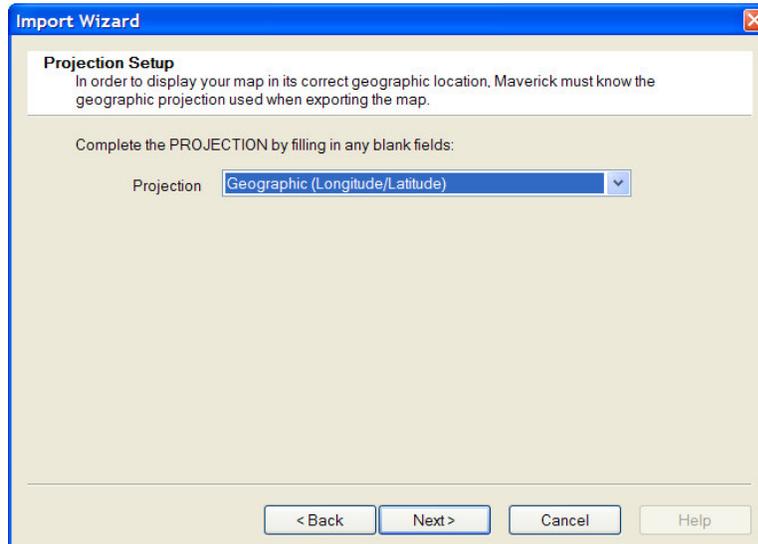
The Wizard will display the projection last used when importing a layer.

If the source map files contain projection information, the LVS Import Wizard will read that information.

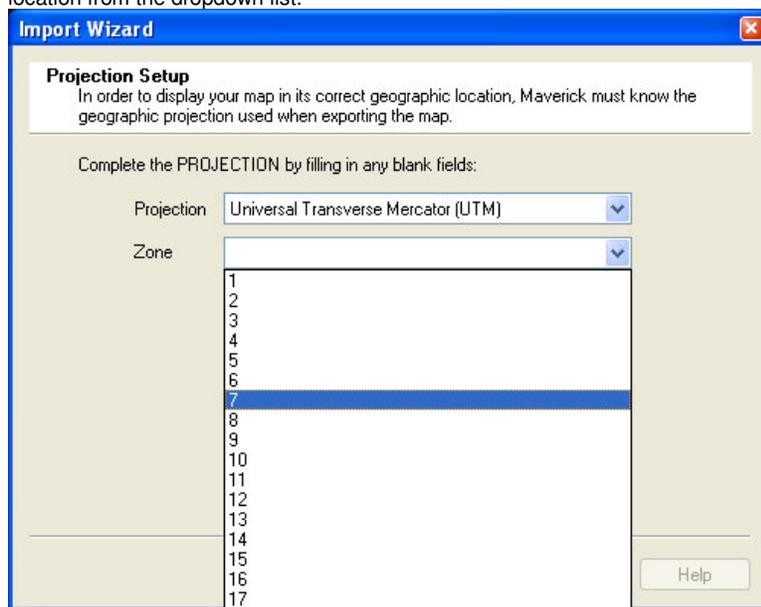
In our example, though, only .shp, .shx and .dbf files were present, so the Projection Setup dialog asks you to designate the projection of the layers you are importing. Each projection dialog is detailed below.

Step 5A – Choose the proper projection from the drop-down list.

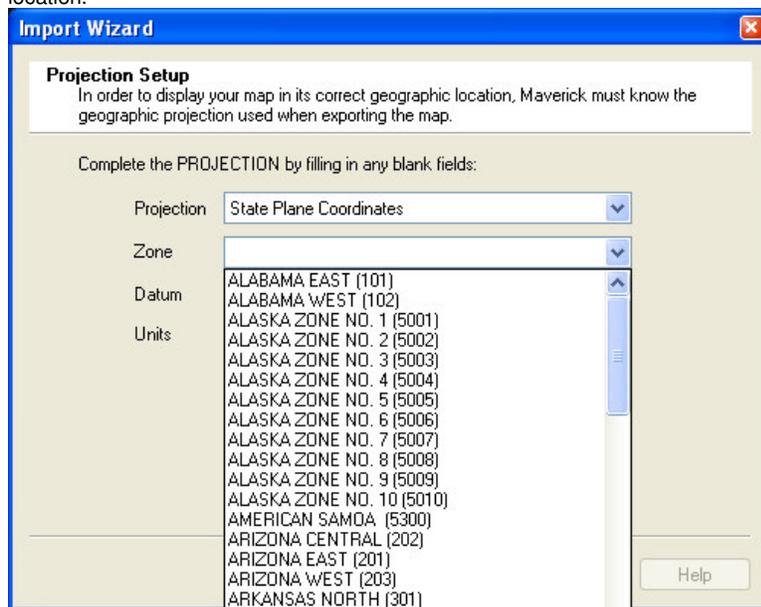
If you choose **Geographic (Longitude/Latitude)** no other projection information is required.



If you choose **Universal Transverse Mercator (UTM)** you are required to select a Zone for your specific location from the dropdown list.



If you choose State Plane Projection, you are asked to designate Zone, Datum and Units specific to your location.



Complete the requested information for your particular projection; then click **Next**.

Once the new projection has been set, the LVS Import Wizard will assume subsequent layers to be in the same projection.

Step 6 . . . The Wizard will now present you with various screens already described. Provide the requested information for each layer to complete the import process.