

## Instructions for Preparing an RFP/RFI Using This Template

**Note: This Sample RFP/RFI is designed for facilities who are in the market for a Laboratory Information System with basic web outreach only. If you are in the market for a broader outreach solution, please refer to [www.orchardsoft.com](http://www.orchardsoft.com) to download an RFP/RFI template for an Laboratory Information System AND Outreach Solution.**

1. Replace any red type with information pertaining to your facility.
2. Add any supporting information that would be helpful to the vendor to understand the dynamic of your facility such as:
  - a. Network Topology
  - b. Diagram or description of current laboratory workflow
  - c. Listing of current instrumentation/hardware
  - d. Listing of planned future instrumentation/hardware
  - e. Listing of names and contact information for your facility's key personnel that will be included in the LIS purchase process such as:
    - i. LIS Administrator
    - ii. IT Director
    - iii. Lab Manager
    - iv. Department supervisors, i.e. Microbiology, Anatomic Pathology, etc.
    - v. CEO
    - vi. CFO
3. Any rules you would like vendors to follow during the RFP/RFI process, i.e. only asking questions to a specific person at your facility.
4. Delete any questions that do not pertain to your facility.
5. Add any questions not already included that you wish to have answered during the RFP/RFI process. Keep in mind that this document is a generalized RFP/RFI with broad topics. Questions on specific functionality of the proposed system should be asked in the Functional Requirements section.
6. Include all timeline dates for the RFP/RFI due date, etc.
7. Include the number of copies you want of the RFP/RFI and the method in which it should be returned to your facility.

**\*\*Note: An RFP is a Request for Proposal, which indicates that your facility would like a cost proposal for the proposed system. An RFI is a Request for Information, which indicates that your facility is only gathering information and is not interested in a cost proposal at this time.**

*<Facility Name and Address>*

**REQUEST FOR  
PROPOSAL/INFORMATION**

**Laboratory Information System**

*<Date>*

**<FACILITY NAME>**  
**REQUEST FOR PROPOSAL/INFORMATION**

**TABLE OF CONTENTS**

|   |           |
|---|-----------|
| <b>SECTION I – INTRODUCTION .....</b>               | <b>3</b>  |
| <b>SECTION II – FACILITY PROFILE.....</b>           | <b>4</b>  |
| <b>SECTION III – CRITERIA FOR EVALUATION .....</b>  | <b>5</b>  |
| <b>SECTION IV – VENDOR PROFILE .....</b>            | <b>6</b>  |
| <b>SECTION V – TECHNICAL ENVIRONMENT.....</b>       | <b>7</b>  |
| <b>SECTION VI – IMPLEMENTATION AND SUPPORT.....</b> | <b>9</b>  |
| <b>SECTION VII – SYSTEM PROPOSAL.....</b>           | <b>10</b> |
| <b>SECTION VIII – FUNCTIONAL REQUIREMENTS.....</b>  | <b>11</b> |

## SECTION I – INTRODUCTION

This Request for Proposal is an invitation to a select group of companies to submit proposals for a Laboratory Information System for *<Facility Name>*. The intent is to obtain information leading to the selection of a Laboratory Information System that will best meet the clinical and management information needs of *<Facility Name>*.

Respondents who are selected for further consideration will be requested to make on site presentations and demonstrate their system.

*<Facility Name>* requires that all proposed software currently be installed and operating at two or more sites. If developmental software or enhanced versions of existing software is included in the overall package being proposed, the nature, status, and timing of development and delivery activities should be clearly stated.

All questions and inquiries regarding this RFP/RFI should be directed to:

*<Contact Name>*  
*<Title>*  
*<Facility Name>*  
*<Street Address>*  
*<City>*, *<State>* *<Zip Code>*  
*<Phone Number>*  
*<Fax Number>*  
*<E-mail Address>*

### Anticipated Time Frames for Evaluation and Selection Process

|                                  |                     |
|----------------------------------|---------------------|
| Issue RFP/RFI to Vendors         | <i>&lt;Date&gt;</i> |
| Questions on RFP/RFI due         | <i>&lt;Date&gt;</i> |
| Responses to RFP/RFI due         | <i>&lt;Date&gt;</i> |
| On Site Vendor Demonstration     | <i>&lt;Date&gt;</i> |
| Finalists Selected               | <i>&lt;Date&gt;</i> |
| Site Visits and Reference Checks | <i>&lt;Date&gt;</i> |
| Final Evaluation and Selection   | <i>&lt;Date&gt;</i> |
| Contract Negotiations            | <i>&lt;Date&gt;</i> |
| Contract Signed                  | <i>&lt;Date&gt;</i> |
| Commence Installation            | <i>&lt;Date&gt;</i> |

**Please submit *<Number>* copies of your response to the above address.  
Responses received after *<Date>* will not be considered.**

## SECTION II – FACILITY PROFILE

1. *<Facility Name, Address, Phone, Web site>*

2. *Description of organization including type or facility (hospital, clinic, or reference lab; size (number of beds, physicians, patient requisitions/ day, etc); and configuration (number and proximity of satellites).*

### 3. LIS Project Goals and Expectations

The goals of the Laboratory Information System Project are: *<include goals your facility wishes to achieve with the implementation of a new system, i.e. expanding outreach, streamlining workflow, return on investment, increase reimbursements, etc.>*

- *<goal>*
- *<goal>*
- *<goal>*

### 4. Current Management Information System Environment

*Description of current management information systems environment including existing systems (name, version and vendor), wide and local area network environment, number of laboratories or draw sites as well as the number and type of existing hardware located at each site.*

The current Laboratory Information System (if applicable) is: *(Indicate if there is a desire to acquire historical laboratory data and import into new LIS.)*

The information systems and reference laboratory to be interfaced to the Laboratory Information Systems are: *(Include any of the below systems that are currently functional at your facility including the vendor and name of system.)*

- *Practice Management System*
- *Hospital Information System*
- *Billing System*
- *Electronic Medical Record*
- *Reference Laboratory*

The laboratory equipment to be interfaced to the Laboratory Information System is: *(Include any of the below analyzers; vendor and model—and the number of each—that are currently functional at your facility.)*

- *Chemistry Analyzer*
- *Hematology Analyzer*
- *Immunoassay Analyzer*
- *Coagulation Analyzer*
- *Microbiology Analyzer*
- *Urine Strip Reader*
- *Other Instruments to be Interfaced*

### SECTION III – CRITERIA FOR EVALUATION OF RESPONSES

*<Facility Name>* will evaluate the responses to this RFP/RFI based on the vendor's ability to:

- Meet the functional and technical requirements described in this RFP/RFI as evidenced by the RFP/RFI response and demonstration of the software.
- Provide a cost-effective solution that meets the financial goals of *<facility>*.
- Provide timely program modifications and upgrades in response to changing industry needs, regulatory requirements, and advancing technology.
- Demonstrate expertise and functionality as evidenced by client references and site visits.
- Provide a superior level of customer service and technical support, both pre-installation and post-installation to clients as evidenced by references.

## SECTION IV – VENDOR PROFILE

1. Identify the company name, address, city, state, zip code, telephone, and fax numbers.
2. Identify the name, title, address, phone and fax numbers, and e-mail address of the primary contact person for this project.
3. Provide a brief overview of your company including number of years in business, number of employees, nature of business, and description of clients.
4. Identify any parent corporation and/or subsidiaries, if appropriate.
5. Give a brief description of the evolution of the laboratory information system software. Include the date of the first installed site and major developments which have occurred (e.g. new versions, new modules, specific features). Describe any previous ownership, if appropriate.
6. List any industry awards/recognition that you have received, the awarding party, and the date received.
7. Indicate the total number of installations in the last 3 years by the year of installation and the total number of current users for the proposed system.
8. Provide a summary of your company's short term and long term goals and strategic vision.
9. Provide a list of three references similar in size and specialty mix to *<Facility Name>*. References should be clients who have had their system installed within the past 48 months. (Include name, contact, address, telephone, system(s) installed and date of installation)

## SECTION V – TECHNICAL ENVIRONMENT

### Hardware

1. Describe the hardware configuration including descriptions of central processing unit(s), networking hardware, back up devices, and Uninterrupted Power Supply.
2. Describe the ability of the proposed system to support fail-safe data storage (redundancy, mirrored, etc.).
3. Describe the requirements of system cabling for communication to the server and to the existing network.
4. Does the system employ 32-bit architecture?
5. What are the warranty periods provided for hardware?
6. Please outline service and maintenance costs for the system as proposed.

### Software

1. Describe the operating systems under which the proposed system will operate. (UNIX, DOS, Windows, Windows NT, etc.)
2. Name and describe the database management program utilized by the system.
3. What programming language(s) was used to develop the system?
4. How many records can be stored in the proposed system?
5. Describe the file purging/archiving methodology used by the proposed system.
6. List cost of license agreements, renewal, and upgrades.
7. Describe the length of time a software version is supported.
8. Please describe your system's database reporting tools.
9. Describe the security system used by the proposed system.
10. Describe your proposed disaster recovery plan to safeguard source code and ensure that the proposed system is recoverable in the event of a disaster at the headquarters of your facility.
11. Describe your proposed disaster recovery plan for *<facility>* to ensure that our data is safe and secure in the event of a disaster.

**Network and Interface Issues**

1. Have you interfaced your LIS with other Clinical Information Systems? (Provide names of interfaced systems.)
2. Does the proposed system comply with Health Level 7 (HL7) interface standards for importing and exporting data to and from other systems?
3. Have you interfaced your LIS with reference laboratories? (Provide names of interface reference laboratories.) Describe the interface functionality.
4. Does your LIS have the capability to provide a direct link to off-site locations for order entry and result retrieval?
5. What communication protocols are supported?
6. What speed of network lines are required for proposed system to function on a Wide Area Network?

## **SECTION VI – SYSTEM IMPLEMENTATION AND TECHNICAL SUPPORT**

1. Describe and attach your typical implementation plan.
2. Describe the experience and qualifications of your installation team.
3. What kind of client communication and implementation planning is done prior to the installation?
4. Describe the training provided. Include a training outline.
5. Where is your technical support center located?
6. What are the methods for contacting technical support?
7. What are your hours of operation for technical support?
8. Describe the qualifications of your technical support staff.
9. Describe the organization and structure of your technical support services.
10. What percentage of your total employees is responsible for direct client support?
11. Describe the ongoing system support provided by the vendor.
12. Are software upgrades provided as part of the software support contract?
13. Describe your software upgrade process.
14. Are their “hot fixes” or “updates” between versions?
15. How often are new versions released?
16. How are customer requests for enhancements and customizations handled?
17. Describe the recent history of system enhancements.
18. Describe the qualifications of your product development department.
19. What percentage of your total employees is responsible for product development?
20. Do you have a formal users’ group?
21. Describe the company’s policy regarding source code.

## **SECTION VII – SYSTEM PROPOSAL**

Provide a system proposal that includes:

1. Detailed listing of hardware provided.
2. Detailed listing of software provided.
3. Description of training provided, including location and time commitment.
4. Description and cost of ongoing support.
5. Cost of proposed system.

## **SECTION VII – FUNCTIONAL REQUIREMENTS**

Refer to the following Functional Requirements checklist. A response to each checklist item is required. Brief comments may be entered in the table. Elaborate on any items that differentiate you from other vendor. Assign one of the following Availability Codes to each item:

A – Feature is available and installed

B – Feature is available but not yet installed

D – Feature is currently under development (indicate anticipated date of availability)

N – Feature is not available

## LABORATORY INFORMATION SYSTEM FUNCTIONAL REQUIREMENTS

**A** - Feature is available and installed.  
**B** - Feature is available but not yet installed.  
**D** - Feature is currently under development (Indicate anticipated date of availability).  
**N** - Feature is not available

|           | Functional Description   | Feature Availability | Vendor Comments |
|-----------|--|----------------------|-----------------|
| <b>A.</b> | <b>SYSTEM ARCHITECTURE AND MAINTENANCE</b>   |                      |                 |
| A.1       | Provide a system with client/server architecture that operates in a Windows environment.   |                      |                 |
| A.2       | Provide a system that employs a centralized relational database.   |                      |                 |
| A.3       | Allow the system to operate on both local and wide area networks, linking all practice sites and databases. Able to move information from one database to another. |                      |                 |
| A.4       | Allow full system functionality from any workstation within the network.   |                      |                 |
| A.5       | Provide a scalable system that can be expanded easily as our facility grows.   |                      |                 |
| A.6       | Provide an operational environment which will ensure the security and integrity of the system and all its data.  |                      |                 |
| A.7       | Provide for redundant storage of all system data files.  |                      |                 |
| A.8       | Provide for redundant processing capabilities to protect against processor failures.   |                      |                 |
| A.9       | Provide a check-point recovery capability to restore data files after a system failure.  |                      |                 |
| A.10      | Provide expanded descriptions for error messages.  |                      |                 |
| A.11      | Please describe any scheduled maintenance procedures.  |                      |                 |
| <b>B.</b> | <b>SECURITY AND AUDITING</b>   |                      |                 |
| B.1       | Provide a multi-level security system to ensure the confidentiality of patient-related information and to control access to system functions and features.         |                      |                 |

|           |   |  |  |
|-----------|---|--|--|
| B.2       | Restrict access to specific areas of the application based on system function to be performed.  |  |  |
| B.3       | Restrict access to specific patient records based on specific tests performed.  |  |  |
| B.4       | Allow password protection at different levels.  |  |  |
| B.5       | Allow a user of proper security clearance to modify the database parameters once the system is live, without requiring programming knowledge.                     |  |  |
| B.6       | Restrict access to configuration tables, profile indexes, etc. to designated lab personnel via security controls.   |  |  |
| B.7       | Maintain an automated system log of user sign-on activity.  |  |  |
| B.8       | Maintain an audit trail for system entries including user code, date, and time of each system transaction.  |  |  |
| B.9       | Provide multi-level password security down to options within menus.   |  |  |
| <b>C.</b> | <b>INTERFACING</b>  |  |  |
| C.1       | Provide operational software or interfaces for the following equipment and/or applications (Please provide a functional description of each interface available): |  |  |
| C.1.1     | Chemistry Analyzer  |  |  |
| C.1.2     | Immunoassay Analyzer  |  |  |
| C.1.3     | Hematology Analyzer   |  |  |
| C.1.4     | Coagulation Analyzer  |  |  |
| C.1.5     | Urine Strip Reader  |  |  |
| C.1.6     | Microbiology Analyzer   |  |  |
| C.1.7     | Other laboratory instruments  |  |  |
| C.1.8     | Practice Management System  |  |  |
| C.1.9     | Billing System  |  |  |
| C.1.10    | Electronic Medical Record   |  |  |
| C.1.11    | Reference Laboratory  |  |  |
| C.2       | Allow analyzer interfaces to operate so that result verification and reporting can be performed simultaneously at multiple workstations.                          |  |  |
| <b>D.</b> | <b>ORDER ENTRY</b>  |  |  |
| D.1       | Allow multiple tests ordering for a single patient using a common demographic record.   |  |  |
| D.2       | Allow laboratory orders to be entered from an off-site location.  |  |  |
| D.3       | Allow the lab to develop and customize orderable items.   |  |  |

|      |   |  |  |
|------|---|--|--|
| D.4  | Allow simple test ordering: Single header linked to a single test result field (e.g. Glucose).  |  |  |
| D.5  | Allow compound test ordering: Single header linked to multiple test result fields (e.g. CBC, Lipid Panel, and Comprehensive Metabolic Panel). |  |  |
| D.6  | Allow the user to order tests by entering test codes and/or by selecting from a test menu.  |  |  |
| D.7  | Automatically alerts users to previously ordered lab work.  |  |  |
| D.8  | Allow at the time of ordering a request that patient lab results be sent to more than one provider.   |  |  |
| D.9  | Allow the cancellation of orders for patients who do not show for appointment.  |  |  |
| D.10 | Provide Medical Necessity validation based on lab-defined valid diagnosis codes for each applicable test.                                     |  |  |
| D.11 | Allow the generation of Medicare-compliant ABN forms when test ordering fails medical necessity validation.                                   |  |  |
| D.12 | Allow entry of four diagnosis codes for each ordered test.  |  |  |
| D.13 | Provide automatic testing destination routing as specified in payor's contract.   |  |  |
| D.14 | Provide automatic label printing as orders are entered.   |  |  |
| D.15 | Allow lab-defined label configuration.  |  |  |
| D.16 | Describe the bar code formats your LIS accepts and prints.  |  |  |
| D.17 | Provide the specific sample requirements or sample tube types at the time of order entry.   |  |  |
| D.18 | Store diagnosis codes in registration function.   |  |  |
| D.19 | Support retrieval of patient records by partial (e.g. first few letters of) patient last name.  |  |  |
| D.20 | Include test, profile, or battery name (mnemonic code) in order data.   |  |  |
| D.21 | Process orders for profiles that include multiple tests (e.g. cardiac enzyme profile).  |  |  |
| D.22 | Allow a miscellaneous test code so previously undefined tests can be ordered and charged.   |  |  |

|      |  |  |  |
|------|--|--|--|
| D.23 | Ability to correct a field on a screen without having to re-enter entire order transaction.  |  |  |
| D.24 | Allow entry of orders for future dates.  |  |  |
| D.25 | Allow splitting one ordered test into more than one request (e.g. group tests, pre-op, and coag screen).   |  |  |
| D.26 | Automatically check for and warn of duplicate single test orders with profile orders.  |  |  |
| D.27 | Support cancellation of tests--logging accession #, test code, patient name, reason, date, time, and tech ID.  |  |  |
| D.28 | Provide simple method to order additional test requests on sample already received and processed in lab.   |  |  |
| D.29 | Allow cancellation of an order without canceling prior results.  |  |  |
| D.30 | Provide flexible, customizable Sample ID formats.  |  |  |
| D.31 | Print sample collection labels for timed and routine collections.  |  |  |
| D.32 | Allow for multiple labels per test to print.   |  |  |
| D.33 | Print instructions/comments (e.g. do not collect from right arm) on sample labels.   |  |  |
| D.34 | Print aliquot labels when more than one test is drawn in the same collection tube.   |  |  |
| D.35 | Provide that uncollected samples continue to appear on subsequent lists until cancelled or collected.  |  |  |
| D.36 | Provide for easy free text entry of information such as critical result notification, sample rejection, or culture sites.  |  |  |
| D.37 | Provide for intelligent prompting for accessioning; e.g. When a wound culture is ordered, the system prompts the user for site/location.   |  |  |
| D.38 | Provide easy access to sample requirements for laboratory users.   |  |  |
| D.39 | Provide intelligent sample labeling – groups samples in chemistry together and prints on labels, while hematology tests print on separate label and microbiology prints separately. Allows for making the number of labels |  |  |

|           |   |  |  |
|-----------|---|--|--|
|           | customizable for each test.   |  |  |
| D.40      | Provide intuitive user interface – easy to locate screens for accessioning, reporting queries, etc.   |  |  |
| D.41      | Provide for an easy, systematic, and logical method of adding, editing, or deleting tests in the test code dictionary.  |  |  |
| D.42      | When looking up a patient in the system, tests performed on that patient and test results are made available without additional steps.                              |  |  |
| <b>E.</b> | <b>RESULT REVIEW AND REPORTING</b>  |  |  |
| E.1       | Allow reporting of numerical results to lab-defined number of significant digits per test.  |  |  |
| E.2       | Allow reporting of alpha results: Single word (e.g. positive or negative) and free text (e.g. short phrases or longer paragraph).                                   |  |  |
| E.3       | Allow attachment of a comment to any test header or test field (e.g. allow free text and pre-defined comments).   |  |  |
| E.4       | Ability to select between reportable and non-reportable comments.   |  |  |
| E.5       | Allow the user to accept, reject, or re-run a test.   |  |  |
| E.6       | Allow automatic calculations based on test results from other fields.   |  |  |
| E.7       | Allow the user to override current test results for a patient.  |  |  |
| E.8       | Allow the user to retain over-ridden results.   |  |  |
| E.9       | Provide identification of the verifying technologist when reporting results.  |  |  |
| E.10      | Provide automatic print reporting capabilities to laser printers.   |  |  |
| E.11      | Provide scheduler for automatic result delivery.  |  |  |
| E.12      | Provide automatic fax reporting capabilities.   |  |  |
| E.13      | Provide ability to send patient reports via the Internet.   |  |  |
| E.14      | Provide ability to e-mail reports.  |  |  |
| E.15      | Automatically maintain a record of reports delivered by each reporting modality (FAX, Printer, and E-Mail, etc.). Provide easy access to these results at any time. |  |  |

|      |  |  |  |
|------|--|--|--|
| E.16 | Allow patient test to be incomplete for at least 8 weeks in the system.  |  |  |
| E.17 | Print daily detailed master log of all work performed in lab for audit purposes.   |  |  |
| E.18 | Provide capabilities for graphic display of test results.  |  |  |
| E.19 | Support entry of comments for non-numeric results and interpretative reporting in result entry screens.                                      |  |  |
| E.20 | Maintain table of lab-defined panic, delta, and reference result ranges based on age and sex.  |  |  |
| E.21 | Display previous test's value, time, and date if delta check limit is exceeded during result entry.  |  |  |
| E.22 | Print list of received but untested samples due to insufficient quantity.<br><br>Allow for a comment to be placed on the sample accordingly. |  |  |
| E.23 | Print list of all patient tests that require it (e.g. exceed delta check, panic values, and reference intervals).                            |  |  |
| E.24 | Allow for cumulative result reporting. Please explain.   |  |  |
| E.25 | Describe the procedure for correcting test results that have been resultued. After correcting, are the corrections able to be altered?       |  |  |
| E.26 | Includes features that allow batch reporting for phlebotomy, travel fees, microbiology no growths, and others.                               |  |  |
| E.27 | Provide easy to set-up and use reflex rules (e.g. if TSH >5.5, then do a FT4).   |  |  |
| E.28 | Provide the date/time reported on reports transmitted by FAX, laser printer, and e-mail.   |  |  |
| E.29 | Provide a permanent log of all test results that have been edited.   |  |  |
| E.30 | Provide for release of results after they have been reviewed and approved by technical personnel (there is no merging function).             |  |  |
| E.31 | Workstations work independently of each other. Multiple functions can occur simultaneously without one party having to exit the system.      |  |  |
| E.32 | Provide flexible reporting formats.  |  |  |

|           |  |  |  |
|-----------|--|--|--|
| E.33      | Provide the ability to access all patients of a particular client by name, date, or date range.  |  |  |
| E.34      | Allow look-up of patient and patient results by client number.   |  |  |
| E.35      | Allow for unlimited “canned comments.”   |  |  |
| E.36      | Allow comments to be attached to specific tests & specific clients such as “Current Dosage_____” attached to Protime tests.  |  |  |
| E.37      | Ability for verification of profile components with results released individually.   |  |  |
| <b>F.</b> | <b>RULES-BASED LOGIC</b>   |  |  |
| F.1       | Ability for rules-based logic where laboratory personnel can define criteria in “if-then” statements.  |  |  |
| F.2       | Ability for Rules program to evaluate all rule entries for tests, not just the first one, so that complex or “cascading” rules may easily be designed, where several rules can be invoked based on one scenario. |  |  |
| F.3       | Provide rules-based report routing.  |  |  |
| F.4       | Provide the ability to create rules to assist in decision support.   |  |  |
| F.5       | Must have ability to flag results based on criteria other than standard reference ranges to include testing location, drawing location, ordering provider, patient age, and priority of order.                   |  |  |
| F.6       | Charge rule capability.  |  |  |
| <b>G.</b> | <b>FLAGS AND DATA COMPARISON</b>   |  |  |
| G.1       | Allow lab-defined age- and sex-related reference ranges for all test results.  |  |  |
| G.2       | Provide the ability to flag results based on criteria other than standard reference ranges.  |  |  |
| G.3       | Highlight abnormal results on patient reports without relying solely on color text.  |  |  |
| G.4       | Allow flagging of test results based on failed lab-defined delta checks.   |  |  |
| G.5       | Flag routine orders when timed pick-up, stats, etc. are ordered, to prevent multiple sticks.   |  |  |

|           |   |  |  |
|-----------|---|--|--|
| G.6       | Provide a means for documenting critical results and critical result documentation; generate reports regarding critical results communicated.   |  |  |
| <b>H.</b> | <b>SAMPLE STATUS AND TRACKING</b>   |  |  |
| H.1       | Provide the ability to track patient samples throughout the testing process.  |  |  |
| H.2       | Provide identification of the individual who ordered the test, collected the sample, and released the test results, including the date and time of these occurrences so that this information is accessible throughout the process. |  |  |
| H.3       | Support user-defined priorities.  |  |  |
| H.4       | Support a way to identify the phlebotomist, (doctor, nurse, etc.) in system for samples not drawn by laboratory personnel.  |  |  |
| H.5       | Include data for tracing order (dates, times, tech ID, results) from order entry to final reporting in master log.  |  |  |
| H.6       | Provide index to master log by accession number.  |  |  |
| <b>I.</b> | <b>PATIENT RECORDS</b>  |  |  |
| I.1       | Maintain patient databases and provide ability to easily generate historical patient reports.   |  |  |
| I.2       | Allow patient database search based on:   |  |  |
| I.2.1     | Patient name  |  |  |
| I.2.2     | Patient account number  |  |  |
| I.2.3     | Patient SSN   |  |  |
| I.3       | Allow the user to search previous patient results for specific tests and easily view historical results of that test.   |  |  |
| I.4       | Allow the user to graph patient results by test to identify possible trends.  |  |  |
| I.5       | Allow historical results for multiple tests to be graphed on one normalized graph.  |  |  |
| I.6       | Allow the user to easily access archived patient records.   |  |  |
| I.7       | Allow the user to review specific patient's results without paging through the entire list of patient results.  |  |  |

|           |  |  |  |
|-----------|--|--|--|
| I.8       | Allow for patient searches by a variety of means: Name, Social Security Number, Client, Accession #, or Requisition #. |  |  |
| <b>J.</b> | <b>REFERENCE LABORATORIES</b>  |  |  |
| J.1       | Allow testing laboratory destination routing based on patient's payor contract.  |  |  |
| J.2       | Allow testing laboratory destination routing based on laboratory testing menu.   |  |  |
| J.3       | Provide ability to override specified destination for laboratory testing.  |  |  |
| J.4       | Differentiate sample type based upon in-house and reference lab requirements.  |  |  |
| J.5       | Provide bi-directional interfaces to clinical reference laboratories.  |  |  |
| J.6       | Provide ability to print lab-defined reference laboratory requisition.   |  |  |
| J.7       | Allow manual entry of reference laboratory test results (e.g. non-interfaced reference laboratories).                  |  |  |
| <b>K.</b> | <b>QUALITY CONTROL</b>   |  |  |
| K.1       | Allow implementation of Westgard QC rules and flags.   |  |  |
| K.2       | Allow flagging of out-of-range QC values.  |  |  |
| K.3       | Allow entry, storage, and retrieval of corrective action comments.   |  |  |
| K.4       | Provide ability to view and print QC graphs (Levey-Jennings).  |  |  |
| K.5       | Provide ability to plot multiple levels of control on one graph.   |  |  |
| K.6       | Calculate the following QC statistics:   |  |  |
| K.6.1     | Cumulative mean.   |  |  |
| K.6.2     | Observed mean over a specified date range.   |  |  |
| K.6.3     | Standard deviation.  |  |  |
| K.6.4     | Coefficient of variation.  |  |  |
| K.7       | Provide ability to document QC review.   |  |  |
| K.8       | Provide ability to enter comments by QC level.   |  |  |
| K.9       | Provide ability to enter comments by QC result.  |  |  |
| K.10      | Support patient-based quality control procedures.  |  |  |
| K.11      | Maintain calibration records for on-line instruments.  |  |  |

|           |  |  |  |
|-----------|--|--|--|
| K.12      | Allow for instrument status (recent service, troubleshooting, etc.) to be stored on-line.  |  |  |
| <b>L.</b> | <b>OUTREACH</b>  |  |  |
| L.1       | Provide a web-based outreach solution.   |  |  |
| L.2       | Describe how your system provides secure access via the web.   |  |  |
| L.3       | Provide a multi-level security system to ensure the confidentiality of all patient-related information and to control access to outreach functions and features. |  |  |
| L.4       | Allow for electronic notification of the physician's review of results.  |  |  |
| L.5       | Provide the ability to link physician group practice names with individual doctors in the practice.  |  |  |
| L.6       | Provide practice level security.   |  |  |
| L.7       | Provide customizable order entry screens and application windows with outreach client's specific needs.  |  |  |
| L.8       | Provide data mining capability within outreach application for use on any web-based computer.  |  |  |
| L.9       | Provide multiple electronic interfaces to various outreach client information systems.   |  |  |
| <b>M.</b> | <b>COMMUNICATION</b>   |  |  |
| M.1       | E-mail capability for laboratory personnel.  |  |  |
| <b>N.</b> | <b>MICROBIOLOGY</b>  |  |  |
| N.1       | Provide an electronic worksheet that allows for paperless microbiology.  |  |  |
| N.2       | Allow for ordering of microbiology procedures on the same requisition as general lab procedures.   |  |  |
| N.3       | Allow for printing of labels specific to media setup protocols for each microbiology procedure.  |  |  |
| N.4       | Provide bi-directional interface to automated microbiology analyzer.   |  |  |
| N.5       | Provide ability to alter billing "on the fly" for microbiology procedures performed.   |  |  |
| N.6       | Provide ability to bill microbiology procedures automatically.   |  |  |
| N.7       | Provide ability to create preliminary microbiology reports, independent of general lab procedures on the same order  |  |  |

|           |  |  |  |
|-----------|--|--|--|
| N.8       | Provide for preliminary reporting of culture results.  |  |  |
| N.9       | Provide epidemiology reports in a variety of formats.  |  |  |
| <b>O.</b> | <b>MANAGEMENT AND ADMINISTRATION</b>   |  |  |
| O.1       | Provide ability to create completion reports by date.  |  |  |
| O.2       | Provide ability to create billing summary reports by date.   |  |  |
| O.3       | Provide ability to create reports of failed medical necessity checks.  |  |  |
| O.4       | Provide ability to create cancelled test reports that include test name and reason for cancellation.   |  |  |
| O.5       | Provide for a customizable overdue report that would indicate tests such as urine cultures that become overdue at 4 days while blood cultures become overdue at 7 days and CBC overdue at 4 hours. |  |  |
| O.6       | Provide ability to create turnaround time reports by date.   |  |  |
| O.7       | Provide a summary report for test usage over a user-definable period of time.  |  |  |
| O.8       | Provide physician utilization report (e.g. number of tests requested by a physician).  |  |  |
| O.9       | Provide ability to print a list of draws that need to be performed.  |  |  |
| <b>P.</b> | <b>DATA MINING</b>   |  |  |
| P.1       | Provide user-friendly report generator with graphical user interface.  |  |  |
| P.2       | Provide ability to create reports of previous day test results.  |  |  |
| P.3       | Provide ability to create abnormal test value report.  |  |  |
| P.4       | Provide ability to create critical test value report.  |  |  |
| P.5       | Provide ability to electronically document supervisory review of all critical values.  |  |  |
| P.6       | Provide ability to generate patient lists (with certain demographic data) who meet specific result criteria for public health reporting.   |  |  |
| P.7       | Provide ability to mine any field (textual or numerical) in the data base.   |  |  |
| P.8       | Provide ability to write queries using logic in great detail.  |  |  |
| P.9       | Support the use of commercially  |  |  |

|      |  |  |  |
|------|--|--|--|
|      | available tools for report generation.                                   |  |  |
| P.10 | Provide ability to save commonly performed searches.                     |  |  |
| P.11 | Provide ability to schedule automatic, unattended runs of data reports.  |  |  |
| P.12 | Provide ability to store supply records.                                 |  |  |
| P.13 | Provide on-line help screens to assist novice users in all applications. |  |  |