

STATE OF MICHIGAN
 DEPARTMENT OF MANAGEMENT AND BUDGET
 ACQUISITION SERVICES
 P.O. BOX 30026, LANSING, MI 48909
 OR
 530 W. ALLEGAN, LANSING, MI 48933

October 10, 2008

CHANGE NOTICE NO. 16
TO
CONTRACT NO. 071B1001357
between
THE STATE OF MICHIGAN
and

NAME & ADDRESS OF VENDOR Integris, Inc 300 Concord Rd Billerica, MA 01821 <p style="text-align: right;">Renee.owings@bull.com</p>	TELEPHONE Renee Owings (517) 327-2280
	VENDOR NUMBER/MAIL CODE
	BUYER/CA (517) 241-7233 Joann Klasko
Contract Compliance Inspector: Sara Williams Executive Information System/Decision Support System – Department of Community Health	
CONTRACT PERIOD: From: February 1, 2001 To: September 30, 2009	
TERMS <p style="text-align: right;">Net</p>	SHIPMENT <p style="text-align: right;">N/A</p>
F.O.B. <p style="text-align: right;">N/A</p>	SHIPPED FROM <p style="text-align: right;">N/A</p>
MINIMUM DELIVERY REQUIREMENTS <p style="text-align: center;">N/A</p>	

NATURE OF CHANGE (S):

Effective immediately, this contract is hereby **INCREASED** by \$2,672,347.00 for the **CHAMPS** Project per the contract sections I-A, I-AA, and II-C (see attached). All other terms and conditions remain the same.

AUTHORITY/REASON:

Per DMB and vendor agreement and the approval of the 9/30/09 Ad Board.

AMOUNT OF INCREASE: \$2,672,347.00

TOTAL REVISED ESTIMATED CONTRACT VALUE: \$27,903,868.00

Section I-A Purpose

The purpose of this agreement is to obtain the services of the Bull HN Information Systems, Inc. who will provide, install, and implement an Executive Information System/Decision Support System (EIS/DSS), which will give the Michigan Department of Community Health (MDCH) the capacity to support State and Federal reporting needs.

Section I-AA Modification of Service – page 13 states,

"The State reserves the right to request from time to time, any changes to the requirements and specifications of the Contract and the work to be performed by the Contractor under the Contract."

Section II-C Tasks

3. The Contractor will propose a written change order control process to be used by the State to manage changes in Contractor deliverables or duties. The goal of this process will be to ensure that efforts, duties, and deliverables are in adherence to and in compliance with terms of the State's contracts with outside vendors.
4. The Contractor will ensure that any enhancements and bug fixes meet and do not conflict with state and federal reporting requirements.

**STATE OF MICHIGAN
 DEPARTMENT OF MANAGEMENT AND BUDGET
 ACQUISITION SERVICES
 P.O. BOX 30026, LANSING, MI 48909
 OR
 530 W. ALLEGAN, LANSING, MI 48933**

July 19, 2006

**CHANGE NOTICE NO. 15
 TO
 CONTRACT NO. 071B1001357
 between
 THE STATE OF MICHIGAN
 and**

NAME & ADDRESS OF VENDOR Integris, Inc 300 Concord Rd Billerica, MA 01821	TELEPHONE Renee Owings (517) 327-2280
	VENDOR NUMBER/MAIL CODE
	BUYER/CA (517) 373-7396 Joann Klasko
Renee.owings@bull.com	
Contract Compliance Inspector: Mary E. Ladd Executive Information System/Decision Support System – Department of Community Health	
CONTRACT PERIOD: From: February 1, 2001 To: September 30, 2009	
TERMS <p style="text-align: right;">Net</p>	SHIPMENT <p style="text-align: right;">N/A</p>
F.O.B. <p style="text-align: right;">N/A</p>	SHIPPED FROM <p style="text-align: right;">N/A</p>
MINIMUM DELIVERY REQUIREMENTS <p style="text-align: center;">N/A</p>	

NATURE OF CHANGE (S):

Effective immediately, this contract has been increased by \$592,000.00. Funds from Integris contract 071B42001567, \$592,000.00 are being moved to this contract as the discount was incorrectly taken on this contract. Also, commodity code 918-29, Computer Software Consultant, with CS138 – 084S3000018 has been added to this contract.

AUTHORITY/REASON:

Per DMB and vendor agreement.

AMOUNT OF INCREASE: \$592,000.00

TOTAL REVISED ESTIMATED CONTRACT VALUE: \$25,231,521.00

STATE OF MICHIGAN
 DEPARTMENT OF MANAGEMENT AND BUDGET
 ACQUISITION SERVICES
 P.O. BOX 30026, LANSING, MI 48909
 OR
 530 W. ALLEGAN, LANSING, MI 48933

July 11, 2006

CHANGE NOTICE NO. 14
 TO
 CONTRACT NO. 071B1001357
 between
 THE STATE OF MICHIGAN
 and

NAME & ADDRESS OF VENDOR Integrus, Inc 300 Concord Rd Billerica, MA 01821 steve.karzewski@bull.com	TELEPHONE Steve Karzowski (517) 337-6700
	VENDOR NUMBER/MAIL CODE
	BUYER/CA (517) 373-7396 Joann Klasko
Contract Compliance Inspector: Mary E. Ladd Executive Information System/Decision Support System – Department of Community Health	
CONTRACT PERIOD: From: February 1, 2001 To: September 30, 2009	
TERMS Net	SHIPMENT N/A
F.O.B. N/A	SHIPPED FROM N/A
MINIMUM DELIVERY REQUIREMENTS N/A	

NATURE OF CHANGE (S):

Effective immediately, this contract has been extended to September 30, 2009 and the funds have been increased by \$7,501,641.00. The cost savings to the State from the contractor's reduction in it's labor costs is approximately \$3.3 million.

AUTHORITY/REASON:

Per agency, DIT and vendor agreement.

AMOUNT OF INCREASE: \$7,501,641.00

TOTAL REVISED ESTIMATED CONTRACT VALUE: \$24,639,521.00



July 10, 2006

Mr. Greg Faremouth
Acquisition Services
State of Michigan
Department of Management and Budget
2nd Floor Mason Bldg.
P.O. Box 30026
Lansing, MI 48909

RE: CONTRACT RENEWAL UNTIL **9/30/2009** FOR BULL SERVICES UNDER CONTRACTS
071B4200156, 071B1001139 AND 071B1001357

Dear Mr. Faremouth,

Please accept this letter as a revised-proposal and Statement of Work (the "Proposal") from Integris Inc. (d/b/a Bull Services) ("Bull Services") to the State of Michigan (the "State"). Bull Services is pleased to submit this updated Proposal in response to your June 16, 2006 request in conjunction with the State's Silver Oaks initiative.

To improve the clarity of the Proposal contents, this response has been arranged into three individual proposals and corresponding Statements of Work that mirror and address the three contract extensions for contracts '0156, '1139 and '1357, respectively, and the agreed upon terms associated with those renewals.

To accept this Proposal, the State will need to issue purchase order(s) ("PO") for the products and services contained within each individual proposal. In order to take advantage of the extended discounts offered by Bull Services for the license fees and maintenance charges covering FY'07 for the "AS IS" renewal of the GCOS and Related Products under Contract '156, Bull Services will need to receive a purchase order in the amount of \$3,398,631 for such products and services by no later than July 5, 2006 and payment by no later than July 30, 2006. Accordingly, we have included an invoice for the "AS IS" renewal of maintenance and licenses in FY'07 for the GCOS and Related Products under the '0156 Contract renewal to help expedite the payment by the State to Bull Services.

By issuing any order under this letter Proposal, the State is deemed to have accepted the terms of this Proposal. Assuming the receipt of the FY'07 CGOS and Related Products PO for the "AS IS" renewal by July 5, 2006, it is Bull Services' understanding and expectation that additional purchase orders for the products and services contained in the enclosed proposals would be received by Bull Services by the following dates and under the noted Contract:

Better Information
Better Decisions
Better Government



Knowledge Solutions
| from Bull Services

Renee Owings
Bull Services
822 Centennial Way - Suite 100
Lansing, MI 48917
(517) 327-2280
Renee.Owings@Bull.com
<http://www.bullservices.com>

ASSUMING THAT THE STATE DOES NOT INITIALLY ORDER THE TERADATA OPTIONAL UPGRADE

<u>Product/Service Covered by the PO</u>	<u>Contract Number</u>	<u>Due Date For Bull Services to Receive PO</u>	<u>PO Amount</u>
1. Incremental FY'06 DCH Services	'1357	July 5, 2006	\$ 709,800
2. Teradata AS IS Renewal for FY'07	'0156	September 30, 2006	\$1,653,567
3. DCH FY'07 Services, SURS & BO	'1357	September 30, 2006	\$2,461,263
4. DHS FY'07 Services	'1139	September 30, 2006	\$1,596,600
5. GCOS and Related Products AS IS Renewal for FY'08	'0156	September 30, 2007	\$3,616,261
6. Teradata AS IS Renewal for FY'08	'0156	September 30, 2007	\$1,653,567
7. DCH FY'08 Services, SURS & BO	'1357	September 30, 2007	\$2,461,263
8. DHS FY'08 Services	'1139	September 30, 2007	\$1,596,600
9. GCOS and Related Products AS IS Renewal for FY'09	'0156	September 30, 2008	\$3,616,261
10. Teradata AS IS Renewal For FY'09	'0156	September 30, 2008	\$1,653,567
11. DCH FY'09 Services, SURS & BO	'1357	September 30, 2008	\$2,461,263
12. DHS FY'09 Services	'1139	September 30, 2008	\$1,596,600

ASSUMING THAT THE STATE ORDERS THE OPTIONAL TERADATA UPGRADE

The same POs as outlined above would be required with three types of changes:

1. There would be an additional PO covering the acquisition of the Optional Teradata Upgrade. This would be issued under Contract '0156. It would need to be received by September 30, 2006. Its amount is \$3,904,886.
2. As this additional PO would include maintenance services, software subscription and software implementation services through September 30, 2007 and as the State's PO #2 for the Teradata AS IS Renewal for FY'07 would have included some of these same type of services for the currently installed Teradata platform, Bull Services would issue a credit to the State. The amount of the credit would depend upon when maintenance services,

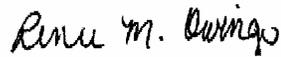
software subscription, and software implementation services commenced on the Teradata Upgrade.

3. In lieu of Purchase Orders #6 and #10 for the Teradata AS IS Renewal in FY'08 and FY'09, Bull Services would need to receive Purchase Orders from the State by September 30, 2007 and September 30, 2008, respectively, each in the amount of \$1,324,327.

As the pricing included in this Proposal covers a three year period, it is also our understanding that the State will issue Change Notices to each of the three contracts (i.e., Contracts '0156, '1357 and '1139) extending their term through September 30, 2009 and that Bull Services would receive such extensions by no later than September 30, 2006.

Again, Bull Services sincerely appreciates this opportunity to present this updated Proposal and looks forward to continuing our 25 year working relationship. If you have any additional questions or need clarification, please feel free to contact me at the phone number or email at the bottom of the first page.

Best Regards,



Renee Owings
Michigan Business Director

**A BULL SERVICES PROPOSAL
TO THE
STATE OF MICHIGAN
FOR THE DEPARTMENT OF COMMUNITY
HEALTH (DCH) SERVICES, SURS
LICENSING AND SUPPORT AND BUSINESS
OBJECTS SUPPORT
(CONTRACT 071B1001357)**



JULY 10, 2006

Knowledge[™] *Solutions*
| from Bull Services

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Bull Services acknowledges the rights of owners of the trademarks cited herein.

1 Department of Community Health (DCH) Services, SURS Licensing and Support and Business Objects Support (Contract 071B12001357)

1. Department of Community Health (DCH) Services, SURS Licensing and Support and Business Objects Support (Contract 071B1001357)

1.1 Introduction

Integrus Inc. (doing business as Bull Services) ("Bull Services") proposes the following pricing for (a) Professional Services using the labor categories set forth in this Proposal to assist State personnel, (b) the continued licensing of the SURS Software for use by the State and support of such SURS Software and (c) the continued support of Business Objects Software licensed to the State, in each case for the three (3) year period from October 1, 2006 through September 30, 2009, with the assumption that the Contract Term for Contract 071B1001357 (the '1357 Contract') would be extended through September 30, 2009 through a corresponding Change Notice issued by the State.

This pricing is offered in conjunction with, and is dependent on the State accepting, the proposals for similar three (3) year extensions under contracts '0156 and '1139.

1.2 Services Pricing

	FY2006	FY2007	FY2008	FY2009	Total
Labor List	2,132,944	2,958,143	3,106,050	3,261,352	9,325,545
Business Objects Support		34,119	34,119	34,119	102,357
SURS License & Support	240,030	253,944	253,944	253,944	761,832
List Subtotal	2,372,974	3,246,206	3,394,113	3,549,415	10,189,734
Discount	85,318	784,943	932,850	1,088,152	2,805,945
Total	2,287,656	2,461,263	2,461,263	2,461,263	7,383,789
Discount %	4.0%	26.5%	30.0%	33.4%	30.1%
Labor Hours	12,200	15,900	15,900	15,900	47,700
Avg Rate/Hour	168	137	137	137	137

Bull Services

'1357 Rates



1.3 Labor Rates

Revised Rates (for under 1,800 Hours per Month for both DCH & DHS)			
Position Description	Rate*	Annual Hours	Price
Data Warehouse Program Manager	176	600	105,600
Data Warehouse Architect - Data Modeler	163	1,800	293,400
Data Warehouse - Business Analyst Senior	158	1,800	284,400
Data Warehouse - Business Analyst Senior	158	1,800	284,400
Data Warehouse Architect - Software Engineer	158	1,800	284,400
Data Warehouse Architect - Software Engineer	158	1,800	284,400
Data Warehouse - Developer Senior	145	1,800	261,000
Data Warehouse Project Manager	168	1,800	302,400
Data Warehouse - Business Analyst Senior	158	1,800	284,400
Data Warehouse Architect - Software Engineer	158	900	142,200
DCH Subtotal		15,900	\$2,526,600
Average Cost per Hour	\$159		
Discount \$ from Existing Rates			\$144,600
Discount % from Existing Rates			5.4%

Additional Discounted Rates (for 1,800 Hours and over per Month for both DCH & DHS)			
Position Description	Rate*	Annual Hours	Price
Data Warehouse Program Manager	151	600	90,600
Data Warehouse Architect - Data Modeler	140	1,800	252,000
Data Warehouse - Business Analyst Senior	136	1,800	244,800
Data Warehouse - Business Analyst Senior	136	1,800	244,800
Data Warehouse Architect - Software Engineer	136	1,800	244,800
Data Warehouse Architect - Software Engineer	136	1,800	244,800
Data Warehouse - Developer Senior	125	1,800	225,000
Data Warehouse Project Manager	144	1,800	259,200
Data Warehouse - Business Analyst Senior	136	1,800	244,800
Data Warehouse Architect - Software Engineer	136	900	122,400
DCH Subtotal		15,900	\$2,173,200
Average Cost per Hour	\$137		
Discount \$ from Existing Rates			\$498,000
Discount % from Existing Rates			18.6%

Rate Table for Under 1,800 Hours per Month

Position Description	Rate
Data Warehouse Program Manager	\$176
Data Warehouse Project Manager	\$168
Data Warehouse Architect Principal	\$182
Data Warehouse Architect Data Modeler	\$163
Data Warehouse Architect Software Engineer	\$158
Data Warehouse Developer Senior	\$145
Data Warehouse Developer Junior	\$75
Data Warehouse - Business Analyst Senior	\$158
Data Warehouse - Business Analyst Junior	\$85
Industry Consultant - Principal	\$195
Industry Consultant - Staff	\$178

Rate Table for 1,800 and Over Hours per Month

Position Description	Rate
Data Warehouse Program Manager	\$151
Data Warehouse Project Manager	\$144
Data Warehouse Architect Principal	\$171
Data Warehouse Architect Data Modeler	\$140
Data Warehouse Architect Software Engineer	\$136
Data Warehouse Developer Senior	\$125
Data Warehouse Developer Junior	\$75
Data Warehouse - Business Analyst Senior	\$136
Data Warehouse - Business Analyst Junior	\$85
Industry Consultant - Principal	\$195
Industry Consultant - Staff	\$178

1.4 SURS Licensing and Support

Bull Services proposes the following pricing for the State's right to use the SURS Software and receive support for such software under the license and support terms set forth in '1357 for the three year period from October 1, 2006 through September 30, 2009.

	FY2006	FY2007	FY2008	FY2009	Total
SURS License & Support	240,030	253,944	253,944	253,944	761,832

1.5 Business Objects Support

Bull Services proposes the following pricing for the State's right to receive Standard Support for Business Objects Software licensed to the State, where the definition of such Standard Support is included in Exhibit A, Support and Maintenance Service Terms, to Change Request #13 that is already part of Contract '1357 for the three year period from October 1, 2006 through September 30, 2009:

	FY2006	FY2007	FY2008	FY2009	Total
Business Objects Support	34,119	34,119	34,119	34,119	102,357

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Position Descriptions

2. Position Descriptions

2.1 Data Warehouse – Program Manager

Data Warehouse Program Manager

Manage multi-function and multi-vendor efforts to plan and implement integrated computer system solutions to customer's business problems. Often works in concert with the management consultants in the latter stages of strategic planning and design efforts in order to facilitate an orderly hand-off to program/project management. Programs impact multiple company and customer geographies. Scope is sufficient to impact the customer's market position and the company's or State's long-term business.

Manages multiple programs concurrently.

Minimum Experience Level: Bachelor of Science degree in Information Systems or equivalent. 10+ years of IT experience in project type activity. 10 years of experience in planning/leading and managing projects.

Responsibilities: Establishes project structure and staffing plans, and participates in the staffing process, which may include the selection of personnel from third party vendors and customers.

Orchestrating company and third party efforts to analyze customer needs either directly with the customer or in cooperation with the management consultant(s) in the strategic planning and design phases.

Manages the proposal for the integrated hardware, software and business process solutions to customer needs.

Defines and oversees the commitment of internal and third-party resources to support the delivery of the product and services.

Acts as a mentor to Junior Project/Program Managers.

2.2 Data Warehouse Project Manager

Data Warehouse Project Manager

Manages the integration and/or development and delivery of very large and complex deliverables directly to a customer, or in support of a major enterprise-wide program. This position provides the primary interface between the company, the customer and third party providers.

Minimum Experience Level: Bachelor of Science degree in Information Systems or equivalent. 10+ years of IT experience in project type activity. 5 years of experience in planning/leading and managing projects.

Responsibilities: Establishes and manages the project plan, including the development schedule, resource requirements and integration efforts of third party products. Periodically reports on progress to management.

Motivates and directs project team; sets goals, objectives and priorities; assigns and reviews work. Typically is responsible for performance and salary reviews and development plans of team members. Approves additions and deletions to staff over the life of the project.

Acts as the primary interface with the customer on issues regarding the project deliverable. Makes sure customer reviews are held with the customer user community, and obtains sign-off on status reports and requirements.

Makes sure that approved methods, processes, and tools are consistently used.

Is accountable for meeting project schedule and results as well as for the customer satisfaction and the quality of the deliverables.

2.3 Data Warehouse Data Modeler

Data Warehouse Data Modeler

Develops, integrates, manages, and promotes enterprise level data models and data modeling standards in support of data warehousing, application database, and business intelligence initiatives. Substantial experience in analyzing requirements specified by the user community and design of the required data models to support those requirements as well as developing logical and physical data models to create and maintain relational database schemas.

Minimum Experience Level: Bachelor's degree in Computer Science, Engineering, or related field, or comparable experience, and continuing education related to the job. 5 - 7 years of experience in logical data modeling with focus in data integration and

extension of a generalized model for the design and deployment of application databases, data warehouses, and data marts.

Responsibilities: Enterprise level Data Warehouse design, transactional (ODS) modeling, relational modeling, and development of data structures.

Use of data modeling (ERwin) commercial software for Logical (large data models) and Physical database design (large databases).

Assist in the establishment of an enterprise inventory of data models and management of an enterprise metadata repository.

Lead efforts to perform the following activities:

- > Data Analysis
- > Data mapping (map data requirements between application systems)
- > Identify mapping of codes and their valid values between applications (crosswalk)
- > Identification, definition, and documentation of metadata

Lead and/or assist with development of application views to extract data from databases:

- > Assist with relevant application system design, development, and testing efforts
- > Assist with the design, development, and testing of metadata strategy

2.4 Data Warehouse Business Analyst Senior/Junior

Data Warehouse – Business Analyst Senior/Junior

Under minimal supervision the Senior Analyst performs duties and has responsibilities as an expert in the particular area of work assigned. As a resource person, the senior analyst resolves problems related to the work of staff assigned to the project. Duties include responding to requests for information regarding the particular area of expertise, solving problems related to the work and reviewing the processes involved in the work to maintain efficiency and quality in the work area. The Senior Analyst may also be asked to perform the duties of an Analyst depending on the assignment.

This position requires three to five years of experience in application development analysis.

Minimum Experience Level: Ten years in analysis consulting.

Responsibilities: Senior Analysts have expertise in developing organizational goals and strategies in tandem with the customer.

Help re-engineer existing organizations and their processes for new and changing requirements, regulations, and environments to improve efficiency and quality in the work area.

Senior Analyst capabilities include: a broad-based technology introduction, conversion and migration programs; skills in dimensions of IT infrastructure planning, logical and physical application architecture, definition and support services and their use within organizations to achieve business goals; systems analysis, including Object Oriented analysis, and estimating software development costs, identification of required resources, and schedules. They work with management and client organizations to analyze, specify and design business applications; develop functional, cross-functional, and detailed system and program specifications using structured design methods and computer aided software engineering (CASE) tools; and data mapping for use in data transition/interface to the RDBC data warehouse or other business applications.

Junior Business Analyst: same qualifications as a Senior Business Analyst except only 3-5 years of experience.

2.5 Data Warehouse Architect – Principal

Data Warehouse Architect – Principal

Designs total solutions involving multiple systems for large organizations. Solutions may use third party hardware and software. Specializes in applications areas or technology areas. May have project leadership responsibilities for complex projects.

Minimum Experience Level: Bachelor's and master's degree or equivalent in technical discipline and 10-15 years of industry experience.

Responsibilities: Works in a collaborative effort with Business Consultants, Technology Specialists, Application Specialists and Program/Project Manager to conceptualize the design and implementation phases of the total systems solutions. Focuses on all aspects of the solution (technical, product requirements, implementation, and support).

Participates in construction of models (rapid prototyping) and pilot programs with senior level managers.

Conducts models and pilot programs to test proposals or develop solutions to problems. Develops measurement criteria to evaluate programs and projects and develops or reviews estimates on technical aspects of projects.

Provides expertise on the availability and viability of third party components and services. Makes sure third part components comply with established architecture.

Develops design specifications for products and technologies.

Makes sure design proposals meet customer needs.

Approves integrated systems design proposals for technical content.

Monitors the implementation for technical correctness so that customer needs are met.

Identifies, Analyzes, and evaluates alternative design solutions.

Monitors the implementation for technical correctness so that customer needs are met.

2.6 Data Warehouse Architect – Software Engineer

Data Warehouse Architect – Software Engineer

Complete assignments requiring a wide application of theories, concepts and principles. Designs total systems solutions for smaller organization or for a segment of a large organization. Solutions may use third party hardware and software. Provides highly technical software services for major accounts and complex systems. Makes decisions on operating procedures, analytical approaches, and work flow. Must often figure out how to create the software needed to implement the solution design and within the systems parameters.

Minimum Experience Level: Bachelor's degree or equivalent in technical discipline and 8-10 years of industry experience.

Responsibilities: Works in a collaborative effort with Business Consultants, Technology Specialists, Application Specialists and Program/Project Managers to conceptualize the design and implementation phases of the total systems solutions.

Develops the information technology architecture and the total systems solutions.

Provides individual or project leader support for complex multi-system installations, systems installations with complex applications or large systems installations with complex software, business and management considerations.

Assumes principal technical role in demonstrations. Furnishes technical expertise and addresses customer questions on hardware and software.

Designs quality control and test procedures so that deliverables meet established design and performance goals.

Reviews integrated systems design proposals for technical content.

Establishes cost and time estimates for implementation.

Identifies, analyzes, and evaluates alternative design solution.

Participates in the design of new products as needed for the systems solutions.

Participates in development of design specifications for products and technologies.

Monitors the implementation for technical correctness so that customer needs are met.

2.7 Data Warehouse Developer Senior/Junior

Data Warehouse – Developer Senior/Junior

The employee within this functional level performs a full range of Information Systems Programmer assignments independently, in a full functioning capacity. Considerable independent judgment is required to carry out assignments that have significant impact on services or programs. Guidelines may be available, but require adaptation or interpretation to determine appropriate courses of action.

Minimum Experience Level: B.S. or equivalent in technical discipline and 4-8 years of industry experience.

Responsibilities: Writing, enhancement, development, and maintenance code for applications in COBOL 68, 74 and 85, GCOS utilities, TPRs, Visual Basic, Oracle, Gweb, WEB8, JAVA, PERL, C, C++, SQL, SQL Windows, ReportSmith, Crystal Reports, and other required specific technologies and languages. Working independently, interpretation of detailed design specifications and assignments to determine appropriate course of action, preparing program documentation, and migration from unsupported software (e.g., COBOL 68) to supported software (e.g., COBOL 74 and/or 85).

Junior Developer: same qualifications as a Senior Developer except only 3-5 years of experience.

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**Contract Terms and Conditions Under
Contract '1357**

3. Contract Terms and Conditions Under Contract '1357

The rate table and job descriptions included herein, replace and supersede all job categories and associated rates previously included in contract '1357.

The Minimum monthly hours utilized shall be calculated by adding those hours actually used under contract '1357 with hours used under contract '1139.

Bull Services shall invoice for any hours used under contract '1357 at the end of each calendar month during the Term of '1357 using either:

1. the "Revised Rates" if less than 1800 hours have been used during that month under Contract '1357 and under Contract '1139 on a combined basis, or
2. the "Additional Discounted Rates" at the additional discounted rate, if 1800 or more hours have been used during that month under Contract '1357 and under Contract '1139 on a combined basis.

Bull Services shall invoice the SURS licensing and support charge as of October 1 of each year during the three (3) year extended contract term under Contract '1357.

Bull Services shall invoice the Business Objects standard support charge as of October 1 of each year during the three (3) year extended contract term under Contract '1357.

STATE OF MICHIGAN
 DEPARTMENT OF MANAGEMENT AND BUDGET
 ACQUISITION SERVICES
 P.O. BOX 30026, LANSING, MI 48909
 OR
 530 W. ALLEGAN, LANSING, MI 48933

August 9, 2005

CHANGE NOTICE NO. 13
 TO
 CONTRACT NO. 071B1001357
 between
 THE STATE OF MICHIGAN
 and

NAME & ADDRESS OF VENDOR Integris, Inc 300 Concord Rd Billerica, MA 01821 steve.karzewski@bull.com	TELEPHONE Steve Karzoewski (517) 337-6700
	VENDOR NUMBER/MAIL CODE
	BUYER/CA (517) 373-7396 Joann Klasko
Contract Compliance Inspector: Mary E. Ladd Executive Information System/Decision Support System – Department of Community Health	
CONTRACT PERIOD: From: February 1, 2001 To: February 15, 2007	
TERMS Net	SHIPMENT N/A
F.O.B. N/A	SHIPPED FROM N/A
MINIMUM DELIVERY REQUIREMENTS N/A	

NATURE OF CHANGE (S):

Effective 10/1/05, the hourly rate of \$175.00/hr has been REDUCED to \$168.00/hr, per the Integris/Bull proposal dated 8/5/05.

AUTHORITY/REASON:

Per agency, DIT and vendor agreement.

TOTAL ESTIMATED CONTRACT VALUE REMAINS: \$17,137,880.00

STATE OF MICHIGAN
 DEPARTMENT OF MANAGEMENT AND BUDGET
 ACQUISITION SERVICES
 P.O. BOX 30026, LANSING, MI 48909
 OR
 530 W. ALLEGAN, LANSING, MI 48933

August 3, 2005

CHANGE NOTICE NO. 12
 TO
 CONTRACT NO. 071B1001357
 between
 THE STATE OF MICHIGAN
 and

NAME & ADDRESS OF VENDOR Integris, Inc 300 Concord Rd Billerica, MA 01821 steve.karzewski@bull.com	TELEPHONE Steve Karzoewski (517) 337-6700
	VENDOR NUMBER/MAIL CODE
	BUYER/CA (517) 373-7396 Joann Klasko
Contract Compliance Inspector: Mary E. Ladd Executive Information System/Decision Support System – Department of Community Health	
CONTRACT PERIOD: From: February 1, 2001 To: February 15, 2007	
TERMS Net	SHIPMENT N/A
F.O.B. N/A	SHIPPED FROM N/A
MINIMUM DELIVERY REQUIREMENTS N/A	

NATURE OF CHANGE (S):

Effective immediately, the hourly rate of \$175.00/hr has been REDUCED to \$168.00/hr.

AUTHORITY/REASON:

Per agency, DIT and vendor agreement.

TOTAL ESTIMATED CONTRACT VALUE REMAINS: \$17,137,880.00

STATE OF MICHIGAN
 DEPARTMENT OF MANAGEMENT AND BUDGET
 ACQUISITION SERVICES
 P.O. BOX 30026, LANSING, MI 48909
 OR
 530 W. ALLEGAN, LANSING, MI 48933

May 27, 2005

CHANGE NOTICE NO. 11
TO
CONTRACT NO. 071B1001357
between
THE STATE OF MICHIGAN
and

NAME & ADDRESS OF VENDOR Integrus, Inc 300 Concord Rd Billerica, MA 01821 steve.karzewski@bull.com	TELEPHONE Steve Karzowski (517) 337-6700
	VENDOR NUMBER/MAIL CODE
	BUYER/CA (517) 373-7396 Joann Klasko
Contract Compliance Inspector: Mary E. Ladd Executive Information System/Decision Support System – Department of Community Health	
CONTRACT PERIOD: From: February 1, 2001 To: February 15, 2007	
TERMS Net	SHIPMENT N/A
F.O.B. N/A	SHIPPED FROM N/A
MINIMUM DELIVERY REQUIREMENTS N/A	

NATURE OF CHANGE (S):

Effective immediately, funding has been added to continue the technical and consulting services. All other terms, conditions and specification remain unchanged

AUTHORITY/REASON:

Per agency, DIT and vendor agreement.

INCREASE: \$2,000,000.00

TOTAL ESTIMATED CONTRACT VALUE REMAINS: \$17,137,880.00

**STATE OF MICHIGAN
 DEPARTMENT OF MANAGEMENT AND BUDGET
 ACQUISITION SERVICES
 P.O. BOX 30026, LANSING, MI 48909
 OR
 530 W. ALLEGAN, LANSING, MI 48933**

December 28, 2004

**CHANGE NOTICE NO. 10
 TO
 CONTRACT NO. 071B1001357
 between
 THE STATE OF MICHIGAN
 and**

NAME & ADDRESS OF VENDOR Integris, Inc 300 Concord Rd Billerica, MA 01821 <p style="text-align: right;">tom.patrick@bull.com</p>	TELEPHONE Tom Patrick (517) 337-6700
	VENDOR NUMBER/MAIL CODE
	BUYER/CA (517) 373-7396 Andy Ghosh
Contract Compliance Inspector: David J. McLaury Executive Information System/Decision Support System – Department of Community Health	
CONTRACT PERIOD: From: February 1, 2001 To: February 15, 2007	
TERMS <p style="text-align: center;">Net</p>	SHIPMENT <p style="text-align: center;">N/A</p>
F.O.B. <p style="text-align: center;">N/A</p>	SHIPPED FROM <p style="text-align: center;">N/A</p>
MINIMUM DELIVERY REQUIREMENTS <p style="text-align: center;">N/A</p>	

NATURE OF CHANGE (S):

Effective immediately, funding has been added to continue the technical and consulting services per the attached work statement. As previously mentioned within Change Notice #9, the Time and Materials rate is DISCOUNTED to \$175.00 per hour.

AUTHORITY/REASON:

Per DMB and Integris, Inc.

INCREASE: \$2,935,594.00

TOTAL ESTIMATED CONTRACT VALUE REMAINS: \$15,137,880.00

**Contract #071B1001357
Between
The State of Michigan
And
Integrus, Inc**

**Statement of Work Addendum
for the period 10/1/04 to 9/30/05**

Pursuant to Section I-AA Modification of Service – page 13 “...The State reserves the right to request from time to time, any changes to the requirements and specification of the Contract and the work to be performed by the Contractor under the Contract...”

DIT/DCH requests the below addendum to Section II – Work Statement.

Pursuant to Section II-B Objectives – General Objectives – page 22 “...The success of an EIS/DSS is reliant upon accurate, complete and reliable data. Data quality processes must be established and maintained. As data sources and data source systems change and new data requirements emerge, adjustments in these processes must be instituted...” and

“The Contractor is responsible for providing all necessary software, services (data enhancements, including operations, training and support, and help desk activities) documentation and materials, as well as any necessary software licenses, to meet all ITB requirements...”

Pursuant to the above objectives, the following items are being added:

- **Develop a claim adjustment process for reimbursement, policy, and audit changes**

As a result of policy and reimbursement changes or audits, it is sometimes necessary to adjust a large number of claims. In the current system, this is often done as a gross adjustment which shows up as a single payment number with no detail about which claims are being adjusted. This is caused in part because it requires a systems project to create detailed claim adjustments. The lack of detail makes it difficult to determine which services have been paid to a provider (or recouped). It can also be difficult to get an accurate estimate of how much a provider has been paid.

This project will create a mechanism to use data on the Data warehouse to create claim adjustments to be submitted through the MMIS system to be processed. This would include a mechanism to process individual claims and to create a mass upload process.

- **Develop Eligible Months table derived from beneficiary tables**

In early 1999, Bull Services began working with the MDCH Actuarial Division to create an Eligible Months table derived from the Beneficiary tables to breakout beneficiary eligibility information by month. This data is also required for the Executive Information System (EIS) and Decision Support System (DSS) Project.

The Eligible Months table contains one record per beneficiary per month for all Medicaid eligible beneficiaries. The Eligible Months table is a conglomerate of data from many tables that is brought together using various joining rules that describe which records go to together and which do not. The table is rebuilt each week to update it with the most current data. Rebuilding the table involves adding new records, updating existing records, and deleting records that no longer exist. Many records change each time the table is rebuilt. A Retroactive Eligible Months table is currently created to track the changed records, which is used for analysis.

The MDCH Actuarial Division has requested enhancements to this table to assist with the analytical queries.

The proposed changes consist of five components:

1) Changing the basic structure of the Eligible Months Table.

The structure of the Eligible Months table is to be changed to merge the data on the Retroactive Eligible Months table and the Eligible Months table to form a single table. This new table will contain one record per beneficiary per month per version. Based on business rules, each time a record is changed a new version of the record will be added to the table. Each version will be identified by a sequential number beginning with "1" along with an effective date and an expiration date to indicate the period of time the version was in effect or valid. The MDCH Actuarial Division will define the business rules that will be used to create a new version, as some beneficiary changes are not considered significant enough to create a new version of a record.

In conjunction with the Eligible Months table restructure, data on the existing Eligible Months and Retroactive Eligible Months tables will be copied/converted to the new structure and the new version number, effective date, and expiration date fields will be populated.

The Retroactive Eligible Months table records reflect a version number. Some of these records also include an effective date and an expiration date. The MDCH Actuarial Division will define the business rules, and if applicable, data source to be used to populate the missing effective and expiration dates.

2) Changing the join algorithms.

Currently one Eligible Months table-joining rule needs to be changed:

When more than one beneficiary eligibility record exists for a given month, the "maximum" record (based on the eligibility dates) needs to be used rather than the "minimum" record.

Note: MDCH Actuarial Division is investigating the possibility that this logic may also apply to the Activity, Authorization and CSHCS Eligibility tables.

3) Revising/adding “calculated” data elements.

“Calculated” data elements are those columns whose value is based on an algorithm – logic that borrows and transforms data from other columns. There are 17 such elements in the Eligible Months table. The logic for some of these “calculated” data elements needs to be changed and new elements need to be added. The MDCH Actuarial Division will provide the logic for the “calculated” data element changes and additions, which will involve no more than ten columns to be changed or added.

4) Adding new non-calculated data elements.

There are a few non-calculated data elements that need to be added to the Eligible Months table. These data elements will come from data warehouse tables that are not currently part of the eligible month build process. Therefore, to add the new data elements will require changing the Eligible Months table and creating a join algorithm.

5) Revising/creating views.

Changes to the Eligible Month table design will necessitate changes to the existing eligible month views and development of new views to facilitate ease-of-use. The MDCH Actuarial Division will identify the types of new views that will be most helpful.

• **Enhance Unique Client Identified (UCI) for additional data sets, provide ongoing operations support and systems programming support**

Industry estimates that sixty to eighty percent of the cost of a data warehouse project is associated with the process of data integration. Referenced earlier was Metadata management being a critical part of data integration. The Unique Client Identified (UCI) is another critical part of our data integration strategy for the MMIS IT Architecture.

In the current phase of our implementation we are using the UCI for linking the data sets loaded on the Data Warehouse. As additional data sets are added we envision using the UCI process to assign them a Unique Client Identifier. This will require some modifications to the programs to accommodate the additional data sets.

Included in the Data Integration strategy is support for systems and software maintenance for the UCI programs and process.

Pursuant to Section II-B Objectives – General Objectives: - page 22 “...The Department requires the contractor to provide implementation plans, tools and processes to load additional databases to the data warehouse, link them to the existing Medicaid eligibility and encounter databases, and integrate them into the EIS/DSS... Additionally, the contractor will create specific implementation plans for loading, linking and integrating data from...”

Michigan would like the ability to continue the initiative to consolidate data from multiple databases for cross agency sharing. Multiple and largely redundant copies of information are maintained by different agencies, leading to situations where different agencies (and sometimes different databases within a single agency) may have conflicting information about the same individual. Consolidating the data in the MDCH MMIS IT Architecture resolves these issues. The process which deals with Extraction, Transformation, Cleansing, Loading, and then Maintaining the data in the Data Warehouse provides us with quality data that is a single source of truth. The Unique Client Identifier process allows us to take that single source of the truth and link it to other occurrences for that individual.

Proposed additional data sets requested:

MIHAS – Incorporate the annual estimated population file into the warehouse. At the request of MIHAS, this file is produced by the State’s Demographer’s office. Ideally the report would be by year by county (MCH BG)

Epidemiology – Incorporate the Emergency Room Surveillance data which belongs to the Division of Chronic Disease and Injury Program Control.

BPTS – MAXIMUS provider file, State licensing provider file.

BPTS,CSHCS – MIChild enrollment file

CSHCS – Prior Authorization

CSHCS – Manual payments filed, Medicare buyin file

NAPIS – (National Aging Program Information System) – Incorporate care management information, client registration and services utilization information for person receiving services through the Office of Services to the Aging into the warehouse. More specific information about actual services provided and information about more clients will enable Medicaid to anticipate, and possibly avoid, the need for more intensive and costly services. Previous vies of long-term care have been too compartmentalized. The goal is to reinvent analysis of both long-term care clients and services in the direction of viewing them both on an acuity continuum.

CMIS – (Care Management Information System) – Incorporate assessment and claim-related information gathered through assessments and claims submitted by Home and Community Based Waiver Agents. This information is similar to that previously submitted through MICIS and currently housed in the Long Term Care module on the warehouse but will be linked more comprehensively to the information provided through NAPIS.

MICIS – Previously planning documents did not ensure the storing and retrieval of certain dta sets housed in MICIS. We propose to ensure the safe storage of that information and ensure access to it through the tools developed top work with the CMIS and NAPIS data.

Add data for Cost Reporting – Cost reporting data is a valuable source for analysis of institutional providers. Hospitals and long term care providers submit cost reports to the Department.

Long Term Care Cost Report Data

Nursing Facility cost reports are submitted annually to the Department. These cost reports are the basis for prospective rate setting. Nursing Facility cost reports are submitted electronically and converted into an operational audit and rate setting system managed by Electronic Data Systems (EDS). This database is extremely detailed, down to the account level cost detail and is used to reconstruct submitted and audited cost reports as well as for analysis purposes. The database is highly normalized. We propose working with analytic staff that use other long term care data, EDS support staff, and staff of the Long Term Care Rate Setting and Settlement Division to identify data elements that should be made available in the warehouse environment for analytic purposes. For example creating relationships between cost data and patient acuity data from the MDS already in the warehouse would help the Department analyze cost efficiency and create reimbursement systems that are sensitive to acuity.

Hospital Cost Report Data

Hospital Cost Reports are also submitted and maintained in a separate data system maintained by EDS. Several organizational units of the Department use this data in secondary forms and could benefit from direct access to hospital cost report data in a warehouse environment. This data is used for upper limits testing and cost modeling. We propose working with staff of the Division of Hospital and Health Plan Reimbursement, as well as other Department staff that use this data to identify data elements and processes to be made available in the warehouse.

Pursuant to II-B Objectives – General Objectives – EIS Application – page 28 – “...MDCH shall reserve the right to develop additional standard reports to be priced when defined.”

Following is MDCH’s need for additional reports:

Run production reporting on the Data Warehouse

The current Medicaid reporting function is performed on the BULL mainframe. Reports are generated to meet Federal and State reporting requirements. Users of these reports include but are not limited to DCH Medicaid management, actuarial staff, Federal agencies, counties and providers. There is a reporting team of 10 state employees maintaining and modifying COBOL code for these reports. Some of the programs were written over 20 years ago. Maintaining this code and trying to accommodate the ever-changing reporting requirements is a time consuming and difficult task. Documentation is inadequate (no consistency, outdated) and coding reports in COBOL is an inefficient process. Report changes over the years have made the code complex and at times impossible to understand.

There are over 360 reports currently being produced in a production mode. These include MARs, Paid Claims Reporting, Program investigative unit reports, Regional county hospitals, HMO enrollee, Buy In, Special Reporting, MGs, System, Federally Mandated Reports, Tracking System, MSIS, Procedure Occurrence, and misc on request. We would like to develop these reports on the Data Warehouse using an easy to use and powerful Report Generation tool.

Develop MICIS reports

The current MICIS reporting function is performed on an Oracle system. We would like to develop these reports on the Data Warehouse using an easy to use and powerful Report Generation tool.

Pursuant to Section 11-C Tasks – item 11 – page 34 – “The contractor shall provide all necessary system and user training, as previously specified, which minimally addresses the following:...” and

Section 11-C Tasks – item 15 – page 37 – “In addition to EIS/DSS tool specific training, the contractor shall provide on going data management/data quality training that is concurrent with emerging requirements and any system changes...”

Below is needed training:

Provide onsite analytic development for the various program Models, and analytic tools

End-User Development Support is a critical success factor in meeting our objective of establishing the MMIS IT Architecture as the preferred means of inter-agency data sharing.

Our vision includes providing end users with assistance in writing and modifying pre-defined queries and reports, ad-hoc queries, and informal user training, on an as-needed basis. Be available to help design, develop and implement pre-defined queries and reports. This would ensure adequate help is available as users commence their use of the expanded MMIS IT Architecture. This support would include help with the various Data Models that are developed as additional data is loaded to the Data Warehouse.

Create new models as additional data sharing occurs, modify existing models as needed, and provide training on the Models.

Bull Services



Exhibit A

September 2, 2004

Mr. Dave McLaury
Director
Bureau of Medicaid Financial Management
MICHIGAN DEPARTMENT OF COMMUNITY HEALTH
400 South Pine Street
P.O. Box 30479
Lansing, Michigan 48909-7979

RE: CONTRACT 071B1001357 CHANGE REQUEST #11 - PROPOSAL FROM INTEGRIS INC. D/B/A BULL SERVICES ("BULL SERVICES").

Dear Dave:

Pursuant to your request, Bull Services is providing the following change request to Contract 071B1001357 for additional services related to the State's existing Data Warehouse. This change request further incorporates and amends the "Executive Information System / Decision Support System" proposal dated May 20, 2002 and the "CS-SURS Software License and Support Renewal" proposal dated August 20, 2002 to the Department of Community Health (collectively, the "Proposals").

Bull Services proposes additional services, training, software, and software support for the additional DW Expansion work, as approved in the Advance Planning Document ("APD"), reference number MMW4 M3-04(MI), to enhance the State's Decision Support System.

The software and services, described below, are being proposed to provide certain approved enhancements as directed by the State. Although the following table includes an estimate of the effort for these tasks, the State agrees to purchase, at a minimum, 13,320 hours to undertake these tasks or other tasks related to the Data Warehouse, as mutually agreed upon by the parties. Bull Services agrees to provide qualified resources for these hours.

Bull Services 822 Centennial Way - Suite 100 Lansing, MI 48917
Tel: (517) 327-2280 Fax: (517) 327-3110 Email: tom.parrick@bull.com www.bullservices.com

Mr. David McLaury
 September 3, 2004
 Page 2

Description	Estimated Hours	Price	
ESTIMATED:			
The following estimated prices are based on Bull Services current understanding of the State's requirements. The services will be invoiced at the discounted rate of \$175 per hour per the terms and conditions of the Contract.			
Run production reporting on the Data Warehouse			
> Development, analyzing reporting tools, running JADS, developing requirements, producing reports.	6,615	\$1,157,625	90%
> One year of software licensing and support ⁽¹⁾		\$275,000	75%
> Training on the reporting tool selected by the State ^{(1) (2)}		\$75,000	50%
> MEDSTAT reports final payment ⁽¹⁾		\$25,000	75%
Identifying and loading additional data sets on the Data Warehouse.	1,400	\$245,000	90%
Providing onsite analytical support, support for the various program Models and analytical tools	3,720	\$651,000	75%
SURS -License and support 10/1/04 - 9/30/05 ⁽¹⁾		\$229,694	25%
Developing a claim adjustment process for reimbursement, policy, and audit changes	190	\$33,250	75%
Developing Eligible Months table derived from beneficiary tables.	235	\$41,125	50%
Enhancing the Unique Client Identifier ("UCI") for additional data sets, provide ongoing operational support and systems programming support.	1,000	\$175,000	75%
Developing additional MICIS reports	160	\$28,000	75%
TOTAL ESTIMATED COST:		\$2,935,594	

⁽¹⁾ Fixed price tasks

⁽²⁾ This price represents a maximum aggregate allotment at List Price, based upon the State's current requirements as communicated to Bull Services, and may vary depending on the actual software tool, number of users, and configuration selected by the State. In the event that the State desires to exceed this amount, a subsequent Change Request shall be necessary.

All other terms and conditions of Contract 071B1001357 and the Proposals remain in full force and effect.

Mr. David McLaury
September 3, 2004
Page 3

The State may accept this Proposal by:

- Signing this letter agreement where indicated below;
- Issuing a Change Notice to Bull Services expressly referencing this Proposal; and,
- Issuing a purchase order to Bull Services expressly referencing this Proposal in an amount at least equal to the Total estimated Cost listed herein above (\$2,935,594).

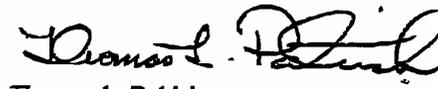
The Change Notice, purchase order, and signed letter must be received by Bull Services no later than October 31, 2004. Upon receipt of the above documents, Bull Services will countersign this letter where indicated and send a fully executed copy back to your attention for your records.

By complying with the above conditions of acceptance, the State agrees that the terms of this Agreement shall be fully incorporated into the Contract. All other terms and conditions of Contract 071B1001357 and the Proposals remain in full force and effect.

We look forward to working with you and hope this Proposal meets your Data Warehouse Expansion requirements. Please contact us if you have any questions about this Proposal.

Sincerely,


Steve Karczewski
Bull Services Program Manager


Thomas L. Patrick
Bull Services Account Manager

AGREED TO BY:

SIGNATURE:

PRINTED
NAME:

David McLaury

Michael Kelliher

TITLE

Director, Bureau of
Medicaid Financial
Management

Vice President, SISD

DATE:

**STATE OF MICHIGAN
 DEPARTMENT OF MANAGEMENT AND BUDGET
 ACQUISITION SERVICES
 P.O. BOX 30026, LANSING, MI 48909
 OR
 530 W. ALLEGAN, LANSING, MI 48933**

April 29, 2004

**CHANGE NOTICE NO. 9
 TO
 CONTRACT NO. 071B1001357
 between
 THE STATE OF MICHIGAN
 and**

NAME & ADDRESS OF VENDOR Integrus, Inc 300 Concord Rd Billerica, MA 01821 <p style="text-align: right;">tom.patrick@bull.com</p>	TELEPHONE Tom Patrick (517) 337-6700
	VENDOR NUMBER/MAIL CODE
	BUYER/CA (517) 373-7396 Andy Ghosh
Contract Compliance Inspector: David J. McLaury Executive Information System/Decision Support System – Department of Community Health	
CONTRACT PERIOD: From: February 1, 2001 To: February 15, 2007	
TERMS <p style="text-align: right;">Net</p>	SHIPMENT <p style="text-align: right;">N/A</p>
F.O.B. <p style="text-align: right;">N/A</p>	SHIPPED FROM <p style="text-align: right;">N/A</p>
MINIMUM DELIVERY REQUIREMENTS <p style="text-align: center;">N/A</p>	

NATURE OF CHANGE (S):

Effective immediately, this contract is **EXTENDED** through February 15, 2007. The Time and Materials rate is discounted to \$175.00 per hour (Total savings \$673,200.00). A summary of proposal is attached herewith.

AUTHORITY/REASON:

Per DMB and Integrus, Inc.

TOTAL ESTIMATED CONTRACT VALUE REMAINS: \$12,202,286.00



April 7, 2004

Mr. Andy Ghosh
Buyer Specialist
Acquisition Services
Department of Management and Budget
Stevens T. Mason Building, Second Floor
530 West Allegan P.O. Box 30026
State of Michigan
Lansing, Michigan 48909

RE: Contract 071B1001357 Amendment to Change Request #6 - Proposal from Integris Inc. d/b/a Bull Services ("Bull Services").

Dear Andy:

Pursuant to your request, Bull Services is providing the following amendment ("Amendment") to the pricing contained in Change Request #6 to Contract 071B1001357 (the "Contract") for additional services related to the State of Michigan's (the "State") existing Data Warehouse. This Amendment also further incorporates and amends "Executive Information System / Decision Support System" proposal dated May 20, 2002 and "CS-SURS Software License and Support Renewal" proposal dated August 20, 2002 to the Department of Community Health (collectively, the "Amended Proposal").

Under this Amended Proposal, all Time and Materials services performed by Bull Services under the Contract shall be invoiced at the discounted rate of \$182 per hour. The rate reflects a 4% discount from the originally contracted rate of \$190 per hour.

As an additional incentive, in the event that the State Department of Community Health ("DCH") accepts this Amended Proposal prior to May 15, 2004, Bull Services will provide DCH with a further discounted Time and Materials rate equal to **\$175 per hour** (equivalent to an approximate **7.9% discount** from the originally contracted rate of \$190 per hour), if the Contract is extended for an additional **Two (2) years through February 15, 2007**.



The State may accept this Amended Proposal by issuing a Change Notice to Bull Services expressly extending the term of the Contract through February 15, 2007. By issuing a Change Notice to Bull Services as indicated above, the State agrees that the terms referenced in this Amended Proposal and Change request #6, which shall be deemed incorporated into the Contract.

The Change Notice must be received by Bull Services no later than May 31, 2004.

In the event of a conflict between the terms and conditions of this Amended Proposal, Change Request #6, the Proposals or the Contract, the order of precedence shall be in the same order as listed herein. Unless expressly modified herein, all other terms and conditions of Contract 071B1001357, Change Request #6 and the Proposals shall remain in full force and effect.

We look forward to working with you and hope this Amended Proposal meets your data warehouse expansion requirements. Please contact us if you have any questions.

Sincerely,

Steve Karczewski
Bull Services Program Manager

Tom Patrick
Bull Services Account Manager

Contract #071B1001357
Change Notice # 9
Page 4 of 4

	Hourly Rate	Discount from Original Contract	Estimated # of Hours	Savings from discount	Total Savings	
Original Contract	\$190.00					
FY2003 No-cost consulting May-Jun					\$120,000	
FY2004 Proposal	\$182.00	\$8.00	13,600	\$108,800	\$108,800	4.21%
Additional FY2004 Offer*	\$175.00	\$7.00	5,200	\$36,400	\$36,400	7.89%
FY2005 Estimate**	\$175.00	\$15.00	13,600	\$204,000	\$204,000	7.89%
FY2006 Estimate**	\$175.00	\$15.00	13,600	\$204,000	\$204,000	7.89%
Total Savings					<u>\$673,200</u>	

* approximate hours remaining for T&M professional services in FY2004 Purchase Order.

** FY2005 funding for T&M services remain the same

** FY2006 funding for T&M services remain the same
savings calculated from base rate of \$190.00

**STATE OF MICHIGAN
 DEPARTMENT OF MANAGEMENT AND BUDGET
 ACQUISITION SERVICES
 P.O. BOX 30026, LANSING, MI 48909
 OR
 530 W. ALLEGAN, LANSING, MI 48933**

October 30, 2003

**CHANGE NOTICE NO. 8
 TO
 CONTRACT NO. 071B1001357
 between
 THE STATE OF MICHIGAN
 and**

NAME & ADDRESS OF VENDOR Integris, Inc 300 Concord Rd Billerica, MA 01821 <p style="text-align: right;">tom.patrick@bull.com</p>	TELEPHONE Tom Patrick (517) 337-6700
	VENDOR NUMBER/MAIL CODE
	BUYER (517) 373-7396 Andy Ghosh
Contract Administrator: David J. McLaury Executive Information System/Decision Support System – Department of Community Health	
CONTRACT PERIOD: From: February 1, 2001 To: February 15, 2005	
TERMS <p style="text-align: center;">Net</p>	SHIPMENT <p style="text-align: center;">N/A</p>
F.O.B. <p style="text-align: center;">N/A</p>	SHIPPED FROM <p style="text-align: center;">N/A</p>
MINIMUM DELIVERY REQUIREMENTS <p style="text-align: center;">N/A</p>	

NATURE OF CHANGE (S):

Effective immediately, \$2,816,354.00 is ADDED to the contract. A summary of cost proposal is enclosed herewith.

AUTHORITY/REASON:

Per request from agency and agreement from the contractor.

INCREASE: \$2,816,354.00

TOTAL REVISED ESTIMATED CONTRACT VALUE: \$12,202,286.00

October 3, 2003

Mr. Andy Ghosh
Buyer Specialist
Acquisition Services
MICHIGAN DEPARTMENT OF MANAGEMENT AND BUDGET
Stevens T. Mason Building, Second Floor
530 West Allegan P.O. Box 30026
Lansing, Michigan 48909

RE: CONTRACT 071B1001357 CHANGE REQUEST #6 - PROPOSAL FROM INTEGRIS INC. D/B/A BULL SERVICES ("BULL SERVICES").

Dear Andy:

Pursuant to your request, Bull Services is providing the following change request to Contract 071B1001357 for additional services related to the State's existing Data Warehouse. This change request further incorporates and amends "Executive Information System / Decision Support System proposal dated May 20, 2002 and "CS-SURS Software License and Support Renewal" proposal dated August 20, 2002 to the Department of Community Health (collectively, the "Proposals").

Bull Services proposes additional Time and Materials hours, training, and software support for the additional DW Expansion work as indicated below:

DESCRIPTION	ESTIMATED HOURS	PRICE
Estimated: [The following estimated prices are based on Bull Services current understanding of the requirements. The time and materials work will be invoiced at the discounted rate of \$182 per hour. The rate reflects a 4% discount from the contract rate of \$190/hr.]		

DESCRIPTION	ESTIMATED HOURS	PRICE
Encounters (New) <ul style="list-style-type: none"> Add new NCPDP (Pharmacy) elements to the new model Define edits for elements being added Change ETL programs that will insert new elements in the model 	2,700	\$491,400
Encounters (Old) <ul style="list-style-type: none"> Modify edit program to accept BC/BS encounters Change programs to use fast ETL 	1,900	345,800
Long Term Care resources <ul style="list-style-type: none"> Develop reports with DIT and LTC staff Determine what data needs to be added to the Home Care Model Load new tables Develop ETL process to accept, edit, and load new data to the Warehouse 	1,800	327,600
Fee-For Service <ul style="list-style-type: none"> Add new data elements to the new model for Pharmacy (R225) Change ETL program to insert new elements 	2,200	400,400
Training 20 BI-Query & reports training classes, and 20 Model Training classes **	N/A	** 220,500
Web Based Scorecard	1,800	327,600
Onsite Support	1,200	218,400
Data Consulting, Project Management	1,200	218,400
Shadow Pricing <ul style="list-style-type: none"> Design and develop process to add a Fee Screen for Encounters 	800	145,600
SURS – State Fiscal Year coterminous adjustment. Year 3 License and support 3/1/04 – 9/30/04 **	N/A	** 120,654
Total Estimated:		2,816,354

** Fixed price tasks

In recognition of the State of Michigan's budgetary constraints, Bull Services provided \$120,000 of services during the months of May and June 2003 at no cost to DCH or the State of Michigan.

As an additional incentive, in the event that DCH accepts this proposal by October 31, 2003, Bull Services will, at the State's option, either:

1. Provide DCH with a further discounted Time and Materials rate of **\$181/hour** (equivalent to an approximate **5% discount** from the contract price of \$191/hour), retroactive to October 1, 2003, if the contract is extended for an additional **1 year through February 15, 2006**, or
2. Provide DCH with a further discounted Time and Materials rate of **\$179/hour** (equivalent to an approximate **6% discount** from the contract price of \$191/hour), retroactive to October 1, 2003, if the contract is extended for an additional **2 years through February 15, 2007**.

All other terms and conditions of Contract 071B1001357 and the Proposals remain in full force and effect.

The State may accept this proposal by:

- Issuing a Change Notice expressly referencing this proposal dated October 3, 2003 and, if the State elects either additional discount option, such Change Notice shall also extend the term of the contract through February 15, 2006 or February 15, 2007, respectively; and
- Issuing a purchase order for an amount at least equal to the amount set forth above (\$2,816,354), where such purchase order expressly references this proposal dated October 3, 2003.

The Change Notice and purchase order should be received by Bull Services no later than October 31, 2003. By complying with the above conditions of acceptance, the State agrees that the terms referenced in this proposal shall automatically be deemed incorporated into the Contract.

We look forward to working with you and hope this amended proposal meets your Data Warehouse Expansion requirements. Please contact us if you have any questions about this proposal.

Sincerely,

Steve Karczewski
Program Manager

Thomas L. Patrick
Account Manager

**STATE OF MICHIGAN
 DEPARTMENT OF MANAGEMENT AND BUDGET
 ACQUISITION SERVICES
 P.O. BOX 30026, LANSING, MI 48909
 OR
 530 W. ALLEGAN, LANSING, MI 48933**

July 17, 2002

**CHANGE NOTICE NO. 7
 TO
 CONTRACT NO. 071B1001357
 between
 THE STATE OF MICHIGAN
 and**

NAME & ADDRESS OF VENDOR Integrus, Inc 300 Concord Rd Billerica, MA 01821	TELEPHONE Tom Patrick (517) 337-6700
	VENDOR NUMBER/MAIL CODE
	BUYER (517) 373-7396 Andy Ghosh
Contract Administrator: David J. McLaury Executive Information System/Decision Support System – Department of Community Health	
CONTRACT PERIOD: From: February 1, 2001 To: February 15, 2005	
TERMS <p style="text-align: center;">Net</p>	SHIPMENT <p style="text-align: center;">N/A</p>
F.O.B. <p style="text-align: center;">N/A</p>	SHIPPED FROM <p style="text-align: center;">N/A</p>
MINIMUM DELIVERY REQUIREMENTS <p style="text-align: center;">N/A</p>	

NATURE OF CHANGE (S):

This contract is hereby EXTENDED through February 15, 2005. The expansion of the contract is to accommodate expansion of FFS data, unique provider ID changes to applications to the data warehouse, HIPAA requirements, modifications of FFS and ED extracts, installation of Metadata System Software and eligible months table. A copy of the proposal from Integrus, Inc. is enclosed.

AUTHORITY/REASON:

Per request from agency and agreement from the contractor.

INCREASE: \$4,064,859.00

TOTAL REVISED ESTIMATED CONTRACT VALUE: \$9,385,932.00



STATE OF MICHIGAN
DEPARTMENT OF COMMUNITY HEALTH
EXPANSION OF THE DATA WAREHOUSE
AMENDMENT TO CONTRACT 071B1001357
DATED MAY 20, 2002

Bull Services

Bull



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Introduction

Over the last several years the Michigan Department of Community Health (MDCH) has made a considerable investment in the development and operation of a Medicaid Data Warehouse. This includes the initial Fee-for-Service (FFS) system that stores five years of paid claim history, provider data, beneficiary data and supporting reference files, and the Encounter system that supports the MDCH's Comprehensive Health Care Program. While both of these systems serve MDCH staff well, there is a need to expand the Data Warehouse to address:

- Expansion of the Fee-for-Service Data Warehouse
- Unique Provider Identifier
- Change applications that access the Data Warehouse
- Health Insurance Portability and Accountability Act (HIPAA) requirements
- Modification of Fee-for-Service and Encounter extractions for MEDSTAT Decision Analyst Data Mart
- Install Enterprise Metadata System software
- Eligible Months Table changes
- Phase III data analytic query development assistance
- Identification and modifications to accommodate bioterrorism requirements
- Identification and modifications to accommodate changes in beneficiary eligibility
- Develop Data Warehouse Minimum Data Set edit and update process
- MEDSTAT Assistance

Fee-for-Service Data Warehouse Expansion

Requirements Statement

The current Fee-for-Service Data Warehouse (DW) database was designed to meet the requirements of the Surveillance Utilization and Reporting System (SURS) application. As a result, only a subset of the fields available on the MDCH Weekly Paid Claims file was included. MDCH would like all Weekly Paid Claims data elements stored on the data warehouse. This will allow all reporting to be produced from the Data Warehouse.

Since implementation of the Data Warehouse, changes have been made to the forms submitted by the providers. Outpatient claims, etc. are now being submitted using UB92 forms. Database design changes are needed to store these claims appropriately.

The current process for loading GCOS 8 mainframe data to the Teradata Relational Data Base Computer (RDBC) uses FIPS channels, which is a direct connection between the two platforms. Based on the assumption that the MDCH intends to install Fast-ETL software (which is a communication product that runs over fiber channels through a UNIX server), the FIPS channels need to be converted to use the Fast-ETL software.

The proposed Fee-for-Service Data Warehouse expansion will incorporate the additional Weekly Paid Claims records and convert the process to run with Fast-ETL.

Proposed Expansion Approach

There are currently 251 Weekly Paid Claims file data elements that are not included in the Data Warehouse.

2.2.1 Bull Services proposes to lead a group of MDCH paid claims subject matter experts who will play a key role in defining the requirements for adding the 251 Weekly Paid Claims file data elements to the Data Warehouse and assist in defining the UB92 changes. This group will meet to review the current design and participate in Logical Database Modeling sessions. During this process the group will meet once a week for a minimum of four hours each week. The deliverables for this process will consist of:

2.2.1.1 A Requirements Definition Document

2.2.1.2 A Logical Database Design Document that MDCH is to approve

2.2.1.3 A Physical Database Design Document. Bull Services will use the Logical Database Design Document to develop the Physical Database Design.

2.2.2 Based on the Physical Database Design, Bull Services will change the existing Extraction, Cleansing, and Load programs as follows:

(Reference the *Appendix* for a description of the existing Weekly Paid Claims process.)

Note: The following proposed changes assume that the MDCH will install the Fast-ETL software. If the MDCH defers installation of the Fast-ETL software, the proposed changes will exclude all tasks that reflect "Fast-ETL" and Bull Services will use the Bull mainframe to do the extractions and loads.

2.2.2.1 Replace the claims editing program HC0200 as follows:

2.2.2.1.1 Write a COBOL 85 program to split the Weekly Paid Claims tape into individual files of one per record type. The Fast-ETL File Mode calls will be used to write these files directly on the NCR 4400 UNIX system.

2.2.2.1.2 Develop ten multiload activities to load these files into worktables. The multiloads will run on the NCR 4400 platform but will be invoked from GCOS 8 platform via Fast-ETL.

2.2.2.1.3 Develop a set of BTEQ queries to perform the same edits that are now done by HC0200 and add the edits and formatting for the new record types. This process will move records from the new worktables and to the existing worktables (Inpatient, Outpatient, etc.).

This is a two step development process: first the current HC0200 edits will be implemented and parallel tested with the existing program, and then the new edits will be added.

2.2.2.2 The current queries that check for records already in the data warehouse and for duplicates on the input data will not be changed.

2.2.2.3 The queries that insert worktable records into the data warehouse will be modified to include the newly added fields.

2.2.2.4 The process that fixes adjusted claims by correcting previous CRN and CLN values and the Adjustment Code will be replaced with BTEQ queries when possible, or modified to not use embedded SQL, which is not used by Fast-ETL.

2.2.2.5 The process that builds the SURS tables will not be changed.

2.2.2.6 The JCLs will be modified to use BTEQ running on the NCR 4400 platform instead of SQL Batch running on the GCOS 8 platform.

2.2.2.7 The operational documentation will be updated to reflect these changes.

2.2.2.8 Bull Services will assist MDCH in acceptance testing of the system as indicated above.

Assumptions

Bull Services has based its proposal on the following assumptions:

- Bull Services and MDCH will define mutually acceptable acceptance criteria
- Program folders and operations guide will be provided in the format currently used

Unique Provider Identifier

Requirements Statement

MDCH has expressed a need to provide a department wide view of the providers who service their recipients. By integrating the Department's varied data sources into a single environment for analysis and reporting purposes, Department staff and management can begin to evaluate the total impact of programs and policies on individuals, groups of individuals and geographic areas by the providers that service them. This single view can assist the Department in forecasting costs and budgets, evaluating health status, responding to legislative inquiries and improving services.

The integration of these additional data sets does represent a challenge. While an individual provider may exist in several different Data Warehouse databases, a single unique identifying field does not exist to allow a provider to be related across these separate Data Warehouse databases. Therefore, Bull Services will need to construct a Common Provider Identifier (CPI) and associated cross-reference table. Once constructed, this table will allow staff to evaluate a provider across the Data Warehouse databases and the Executive Information System (EIS) and Decision Support System (DSS) systems.

Proposed Changes

MDCH is requesting a record linkage process, or the joining of data from various sources into a common format utilizing data elements that exist in two or more of the data sources. Bull Services has proven its ability to perform record linkage processes through its development of the Unique Client Identifier (UCI) for MDCH. The UCI process links records from 12 data sources into a common MDCH Client table.

Bull Services proposes to perform the following time and materials services:

- Define requirements to implement a provider registry
- Design a provider registry model to uniquely identify providers
- Design the linkage process for integrating all providers used by the different divisions
- Code and test the load and update processes
- Perform systems testing
- Assist MDCH with acceptance testing

-
- Document the system
 - Turn the system over to MDCH

Define requirements to implement a provider registry

To create a provider registry that meets MDCH's requirements, a Joint Application Development (JAD) session with participants from MDCH and Bull Services will be conducted. During this session the following information will be identified:

- Uses of the provider registry
- Treatment of individuals and groups
- Common elements usable for matching
- Format of data in common elements
- Anomalies within the data (dummy records, deleted records, substitute values, etc.)
- Ongoing maintenance process
- Security issues
- Acceptance criteria

Design provider registry model to uniquely identify providers

The provider registry will ultimately become a table or group of tables on the Data Warehouse that allows the disparate provider information to be modeled as a harmonious entity. As part of the design process, Bull Services will provide MDCH with:

- A Logical Provider Database Registry Model
- A Physical Provider Database Registry Model
- A BI/Query data model for use with the UPI database

Design Linkage Process

There are numerous processes available for record linkage. During the project Bull Services will determine the best method of record linkage for the provider registry. The tasks accomplished during the design phase are:

- Determine the linking methodology (merge operation, deterministic, or probabilistic)
- Define any additional Extract, Transformation and Load (ETL) processes required
- Define the process for handling data source updates
- Define the type of comparison algorithm for each pair of data elements
- Define the blocking rules
- Define the matching rules
- Define the views to the provider registry, including security

Code and Test the Load and Update Processes

Once the requirements, provider registry model, and lineage process have been defined, the actual coding and testing of the ETL and matching process can be developed. The steps involved are:

- Code and unit test the ETL
- Code and unit test the blocking process
- Code and unit test the comparison, or scoring process
- Code and unit test the matching and UPI assignment process
- Create the provider registry views

Perform Systems Testing

The entire process, from ETL through UPI assignment, will be system tested as a complete entity for conformity to the specified design functions prior to MDCH acceptance testing and turning over the UPI process.

Assist MDCH with Acceptance Testing

Bull Services will develop tests to gauge the effectiveness of the provider matching process and assist MDCH in acceptance testing of the system.

Document System and Turnover to MDCH

Documentation is an important part of all systems. It assists in the operation and maintenance of the system. Bull Services will provide the following documentation:

- A Requirements Document incorporating the results of the JAD session and the design process
- An Operations Guide describing the process and how it is run from the beginning or from a restart
- Program folders for each activity in the process

Assumptions

Bull Services has based its proposal set forth in this amendment on the following assumptions:

- Bull Services and MDCH will define mutually acceptable acceptance criteria
- The provider data being linked contains data elements that make it possible to match with other data sources
- The data provided to Bull Services will contain information in the data elements used in the matching process
- Address cleansing software will be procured by MDCH and provided to Bull Services as required

-
- The Unique Provider Identifier (UPI) will be limited to the following data sources:
 - ↑ Medicaid
 - ↑ Maximus Provider File
 - ↑ Newborn Screening
 - ↑ Lead Screening
 - ↑ MCIR

Changes to Applications that Access the Data Warehouse

As part of the change to the Fee-for-Service database, the following applications and processes used by the Data Warehouse will need to be modified to reflect the new structure:

- SURS Extraction
- Audit Application
- Case Management Application
- Fee-for-Service Executive Information System (EIS) and Decision Support System (DSS) BI/Query Reports

Bull Services proposes to perform the following time and materials services:

- Define the requirements
- Code and test the applications
- Perform systems testing
- Assist MDCH with testing
- Document the system
- Turn the system over to MDCH

Encounter Data Warehouse Changes for Health Insurance Portability and Accountability Act (HIPAA) Requirements Statement

Currently encounter data is loaded to the Data Warehouse for use in analysis and Federal reporting. Beginning October 16, 2002 the following encounter data is to be submitted to MDCH in Electronic Data Interchange (EDI) ANSI 837v 1040 format for load to the Data Warehouse:

- Health Maintenance Organizations (HMOs) encounters
- Mental Health encounters
- MI-Child encounters
- Capitated Dental Claims encounters
- Substance Abuse encounters
- Special Health Plan encounters

Proposed Changes

Bull Services estimates the following database changes, extraction, transformation, and cleansing processes are required for this change:

5.2.1 HMO Encounters:

- Define and add new elements to database
- Define additional edits to accommodate new transmission
- Design database for HMO's provider network
- Design extraction, transformation, and load process to store plan provider data
- Redesign process to accept HMO EDI transmissions instead of the current proprietary format
- Modify existing edit process to accommodate new format
- Add new edits to accommodate additional elements

5.2.2 EDI submission of Capitated Dental Plans, MI-Child, Substance Abuse, Children's Special Health Care Services (CSHCS) Special Health Plans (SHP), and Mental Health Encounters:

- Define data elements that need to be collected from the EDI ANSI 837v 1040 format
- Define edits to be applied
- Define submission process for beneficiary demographics (non-Medicaid population)
- Database design
- Design ETL extraction, transformation and load strategy
- Program extraction, transformation and load process

Modification of Fee-for-Service and Encounter Extractions for MEDSTAT Decision Analyst Data Mart Requirements Statement

As part of the changes to the Fee-for-Service and Encounter databases, the extraction programs that are used to update the MEDSTAT Decision Analyst Data Mart will need to be modified to reflect the new structures.

Bull Services proposes to perform the following time and materials services:

- Define the requirements
- Code and test the applications
- Perform systems testing
- Assist MDCH with testing

-
- Document the system
 - Turn the system over to MDCH

Install Metadata System Software

Requirements Statement

The MDCH has requested Bull Services to provide, for installation on the Data Warehouse, a metadata software system with capabilities similar to the Enterprise Metadata System Software supplied by Bull Services in connection with other Data warehouse installations (“Metadata Software”). Bull Services will license in accordance with the terms in Section 13 the Metadata Software for the license fees set forth below in Section 12. As a prerequisite, MDCH needs a basic understanding of the metadata they want to collect and display, and that all of the metadata has already been entered into an Erwin model. At installation, Bull Services will discuss with MDCH any additional metadata that needs to be collected, and the tools available to import the metadata.

The Metadata Software requires the following prerequisite hardware and software: a NCR/Teradata server, Teradata RDBMS version R2V4, and PC workstation with Microsoft Windows NT, Windows 2000, or Windows XP operating system, and RoboHelp® Office 2002. All such prerequisite hardware and software shall be supplied by MDCH, except for RoboHelp® Office 2002, which will be supplied by Bull Services in accordance with this amendment.

Monthly License Fee Support Coverage

The metadata software monthly license fee includes trouble ticket reporting via email to the Lansing, Michigan project team as further defined in Section 13 (“MetaData Software Basic Support”). MDCH Metadata Software usage assistance requests subsequent to the initial software usage training and/or support in addition to MetaData Software Basic Support (“MetaData Software T&M Support”) are not included in the monthly license fee. Usage assistance and MetaData Software T&M Support will be provided subject to availability of the Bull Services technical resource and billed to MDCH on a time and materials hourly rate using hours estimated for Other Data Warehouse Expansion Requirements, reference Section 0 below.

The Metadata Software will be configured and installed to function in accordance with specifications mutually acceptable to MDCH and Bull Services. If MDCH chooses to upgrade any of the software on the system (e.g., Teradata RDBMS), the Metadata Software may need to be modified or upgraded to a later version. Services required to modify the Metadata Software will be billed to MDCH on a time and materials hourly rate using hours estimated for Other Data Warehouse Expansion Requirements, reference Section 0 below. A separate upgrade charge will be required for any future updates, upgrades or enhancements of the Metadata Software.

Proposed Changes

The software license and support fee for the Metadata Software and one time paid up license fee for an eHelp Systems Inc.’s RoboHelp® Office 2002 software license is included within this proposal.

Bull Services will deliver the Metadata Software on a CD, which will include a copy of the Metadata Software usage guide and administrator’s guide.

- The Metadata Software will be installed by Bull Services.
- Following installation, Bull Services will support MDCH in building the meta-model. (The meta-model defines the base repository structure.)

-
- Bull Services will define an XML file used to map the Erwin model to the metadata meta-model and import the Erwin model into the Metadata Software. This process will populate the repository.
 - Bull Services will build the Windows Help file and/or HTML user display output. This involves invoking a builder utility that will be provided along with executing RoboHelp®. Once complete, the metadata output may be displayed using the Windows Help file and/or a browser.
 - Bull Services will provide one day of training to MDCH personnel on using the Metadata Software utilities. This includes how to modify the XML files used by the Metadata Software to map the metadata from one program to the next.

Eligible Months Table Changes

Requirements Statement

In early 1999, Bull began working with the MDCH Actuarial Division to create an Eligible Months table derived from the Beneficiary tables to breakout beneficiary eligibility information by month. This data is also required for the MEDSTAT Decision Analyst tool and the Executive Information System (EIS) and Decision Support System (DSS) Project.

The Eligible Months table contains one record per beneficiary per month for all Medicaid eligible beneficiaries. The Eligible Months table is a conglomerate of data from many tables that is brought together using various joining rules that describe which records go together and which do not. The table is rebuilt each week to update it with the most current data. Rebuilding the table involves adding new records, updating existing records, and deleting records that no longer exist. Many records change each time the table is rebuilt. A Retroactive Eligible Months table is currently created to track the changed records, which is used for analysis.

The MDCH Actuarial Division has requested enhancements to this table to assist with their analytical queries.

Proposed Changes

The proposed changes consist of five components:

8.2.1 Changing the basic structure of the Eligible Months table:

The structure of the Eligible Months table is to be changed to merge the data on the Retroactive Eligible Months table and the Eligible Months table to form a single table. This new table will contain one record per beneficiary per month per version. Based on business rules, each time a record is changed a new version of the record will be added to the table. Each version will be identified by a sequential number beginning with "1" along with an effective date and an expiration date to indicate the period of time the version was in effect or valid. The MDCH Actuarial Division will define the business rules that will be used to create a new version, as some beneficiary changes are not considered significant enough to create a new version of a record.

In conjunction with the Eligible Months table restructure, data on the existing Eligible Months and Retroactive Eligible Months tables will be copied/converted to the new structure and the new version number, effective date, and expiration date fields will be populated.

- The Retroactive Eligible Months table records reflect a version number. Some of these records also include an effective date and an expiration date.

-
- The MDCH Actuarial Division will define the business rules, and if applicable data source, to be used to populate the missing effective and expiration dates.

8.2.2 Changing the join algorithms:

Currently one Eligible Months table-joining rule needs to be changed:

- When more than one beneficiary eligibility record exists for a given month, the “maximum” record (based on the eligibility dates) needs to be used rather than the “minimum” record.

Note: MDCH Actuarial Division is investigating the possibility that this logic may also apply to the Activity, Authorization and CSHCS Eligibility tables. Time estimates to change these tables has not been included in this amendment.

8.2.3 Revising/adding “calculated” data elements:

“Calculated” data elements are those columns whose value is based on an algorithm - logic that borrows and transforms data from other columns. There are 17 such elements in the Eligible Months table. The logic for some of these “calculated” data elements needs to be changed and new elements need to be added. The MDCH Actuarial Division will provide the logic for the “calculated” data element changes and additions, which will involve no more than ten columns to be changed or added.

8.2.4 Adding new non-calculated data elements:

There are a few non-calculated data elements that need to be added to the Eligible Months table. These data elements will come from data warehouse tables that are not currently part of the eligible month build process. Therefore, to add the new data elements will require changing the Eligible Months table and creating a join algorithm.

8.2.5 Revising/Creating views:

Changes to the Eligible Month table design will necessitate changes to the existing eligible month views and development of new views facilitate ease-of-use. The MDCH Actuarial Division will identify the types of new views that will be most helpful.

Bull Services proposes to perform the following time and materials services:

- Define the requirements
- Code and test the applications
- Perform systems testing
- Assist MDCH with testing
- Document the system
- Turn the system over to MDCH

Other Data Warehouse Expansion Requirements

Assistance in Developing Analytical Queries for Phase III data

The MDCH has requested Bull Services to assist the Phase III data area analysts in developing queries to help with their analytical needs. This may include:

- BI-Query Model training
- Assistance with developing production reports
- GIS Mapping Reports
- Data Mining

Data Warehouse Modifications to Accommodate Bioterrorism

The MDCH has requested Bull Services to assist in loading Bioterrorism surveillance data to the Data Warehouse once the requirements and mutually acceptable specifications have been defined.

Data Warehouse Modifications to Accommodate Beneficiary Eligibility

The MDCH has requested Bull Services to assist with changes to the Data Warehouse for beneficiary eligibility information resulting from the implementation of MI-Family, which is based on the requirements of a Health Insurance Flexibility and Accountability (HIFA) waiver.

- Define the requirements for storing the eligibility information on the Data Warehouse
- Design the tables to store the eligibility information on the Data Warehouse
- Design and implement the extraction, transformation, and load strategy to store the eligibility information on the Data Warehouse

Develop Data Warehouse Minimum Data Set Edit and Update Process for Home Health Care and Nursing Home Waivers

Currently the Minimum Data Set information for home health care waivers and nursing home waivers resides on one or more Oracle databases. The MDCH goal is to eliminate the home health care waivers on the Oracle database and store both sets of data on the Data Warehouse. The strategy is to obtain the home health care waiver Minimum Data Set (MDS) information directly from Home Health Care and to obtain the nursing home waivers from the Oracle database. Bull Services has been requested to receive the data from the two sources, edit the information, and store on the Data Warehouse. Bull Services estimates that the following tasks would be included in this requirement:

- Define the data elements from the MDS that are to be stored on the data warehouse
- Design the database
- Define and implement a process to receive home health care waiver data from the Data Exchange Gateway (DEG) and edit the MDS data
- Define home health care waiver and nursing home waiver extraction, transformation and Data Warehouse load strategy/strategies
- Design a BI/Query Data Model for the database
- Two to three days training for up to eight Long Term Care (LTC) staff in current BI/Query Data Model for encounters and claims
- Design, develop, test and implement standard reports in MDS Data Warehouse for:
 - Resource Utilization Groups (RUGs)
 - Activities of Daily Living Indexing (ADLI)
 - Case Mix Indexing (CMI)
 - Client Assessment Protocols (CAPs) and Triggers
 - Cost analysis based on RUGs groupings

-
- Two to three days training for up to eight LTC staff on the new Data Warehouse MDS components

Analytic Support BI/Query

Upon request, Bull Services will provide MDCH with analytic support of BI/Query on a time and material basis and subject to resource availability.

General Time and Material services

Upon request, Bull Services will provide MDCH with the expertise and resources appropriate for performing the tasks defined in this proposal on a time and material basis and subject to resource availability.

MEDSTAT Assistance

Requirements Statement

MDCH has decided to adopt the EDI ANSI 837v 1040 format standards for data transmission and put these in place with data submitted by October of this year. Little change is planned in the current edit process, with Fee-for-Service claims continuing to be edited by the Medicaid Management Information System (MMIS) and the encounter data edit process remaining as the stand-alone process it is today. MDCH has already performed a gap analysis on both the Fee-for-Service and encounter data sets in contrast to the 837 format. The proposed changes described below assume that MEDSTAT would have access to the already complete list of data elements identified by this analysis that must be addressed.

Proposed Changes

MEDSTAT will supply the following services as a subcontractor to Bull Services.

HIPAA Compliance – Integration (Fixed Price):

As the new data format (EDI ANSI 837) is received, MDCH will need to make decisions on how to integrate the new coding standards with existing coding practices. MDCH will either need to map old data to new standard values or map standard values back to existing format values. Provider type, which has different values for FFS, encounter and EDI, is an example of this situation. There may also be data elements available in the new format not currently stored in the warehouse (or vice versa), as identified by the gap analysis. Decisions will need to be made regarding populating these fields, both historically and prospectively. MEDSTAT will work with MDCH to identify where changes must be made, make the tradeoffs of various decisions clear and recommend a course of action. Once decisions are complete on what changes are going to be made, MEDSTAT will recommend whether changes should be made to the edit process to accommodate any data element additions/deletions. Please see Section 5.2.1 for changes to the edit process.

HIPAA Compliance – Privacy (Fixed Price):

HIPAA is also very specific as to data privacy. Certain data elements must be encrypted with limited access provided to users on a business need basis. To implement this standard, MDCH will need to examine every department accessing the DSS, make clear what their business needs encompass and do not encompass, and limit access to each department accordingly. MEDSTAT proposes to lead the effort of identifying these fields and examining the business and information requirements of end usage departments, make specific recommendations for access by each department, and implement these changes by working with MDCH technical support staff on the Advantage database.

To implement the privacy policies in Advantage, it is likely that MDCH will need the addition of some encrypted fields, such as provider and recipient zip code. Other data elements will need to be blocked for some departments. To accomplish these types of changes, the Advantage database will need to be rebuilt. This process is discussed later in this amendment under Additional Data Sets.

Submitter Manual Changes (Fixed Price):

The Health Plan Submitter's Manual is a key document for MDCH-participating health plans. The document describes how data is to be formatted, the frequency of submission, and details of the edit process employed by MDCH to evaluate the quality of submitted data and the process for resubmission of data requiring correction. While HIPAA provides implementation guidelines for the EDI ANSI 837 format, MDCH will need to add to the Submitter's Manual to clarify those areas of the implementation guide that may be misinterpreted. An example of this is the usage of some segments and data elements in the payer-to-payer COB loops (e.g., the QHP's claim number should be coded in loop 2330B, Other Payer Secondary Identifier REF segment – REF02 – not the 2300 Loop, CLM01 data element where the provider's claim ID is stored). The Submitter's Manual will also need to be updated with respect to submission requirements and edit processes. As the initial authors of the Submitter's Manual, MEDSTAT will revise the guide based on the changes determined during the HIPAA compliance activities described above.

Recommendations on Extract Changes:

Once decisions are made about what data will be added, eliminated, changed, etc., and MDCH determines if additional elements are to be added to the Advantage database, the data extract from the Data Warehouse that supports the EIS/DSS may need to be changed. MEDSTAT will make recommendations on the changes that need to be implemented with the assumption that Bull Services will implement the changes to the extract. Please see section 6 for changes to the extract programs.

Revisions to the Data Quality Improvement Process:

With more than four years of encounter data submission completed, it is time to reexamine and revise the Data Quality Improvement (DQIP) process. The initial focus of this process was to populate all encounters with limited denials. While some changes have been made, the focus has been on basic data quality issues of was the data present and valid. As we change the source data, MEDSTAT recommends changing the focus of plan evaluation from whether data has been submitted to whether the data is reasonable – moving from a focus on data quality measures to use of analytic measures of utilization and cross-plan comparison. MEDSTAT proposes that a new set of reports be developed to enhance the DQIP process to better address the current needs of staff to assess health plan performance. These reports will be developed to leverage the capabilities of the DSS now available. Please see section 10.2.6.2 for report development.

Additional Support Issues

10.2.6.1 Additional Data Sets:

A significant amount of data is currently not included in the DSS/EIS. Each provides substantial value to MDCH by integrating into the DSS. Some of these data sets are outlined below:

10.2.6.1.1 Excluded in Phase III:

In an effort to remain on schedule, a number of data sets were not included in the Phase II/III database. These include mental health, newborn metabolic and hearing screening, CSHCS data, and BPCTS.

10.2.6.1.2 Non-Medicaid:

While non-Medicaid data such as vital records was added into the DSS/EIS, it was only for Medicaid beneficiaries. This was because the data being added for the Unique Client Identifier (UCI) was not complete. MDCH may want to consider adding non-Medicaid enrollee data into the DSS/EIS to provide a complete picture of such data sets as vital records, WIC, and immunizations.

10.2.6.1.3 Additional Data:

MDCH may want to also consider including additional claims data from programs such as MI-Child and Delta Dental.

The most efficient approach to making database changes is to bundle many changes into a single rebuild of the database. MEDSTAT proposes that MDCH combine a rebuild of the database that addresses HIPAA changes, extract changes and changes resulting from end user requests (such as adding federal category of service) with the loading of up to four additional data feeds.

Rebuild: A database rebuild to address changes in information requirements has been discussed as something that would occur annually. The rebuild effort to accomplish these changes will include: changing the database design, adding new data elements, changing the convert programs, performing all testing and designing new reports and measures to apply the additional information.

Data Sources: New data sources most likely to be available during this timeframe include: CSHCS, MI-Child, Delta Dental, and newborn metabolic and hearing screens.

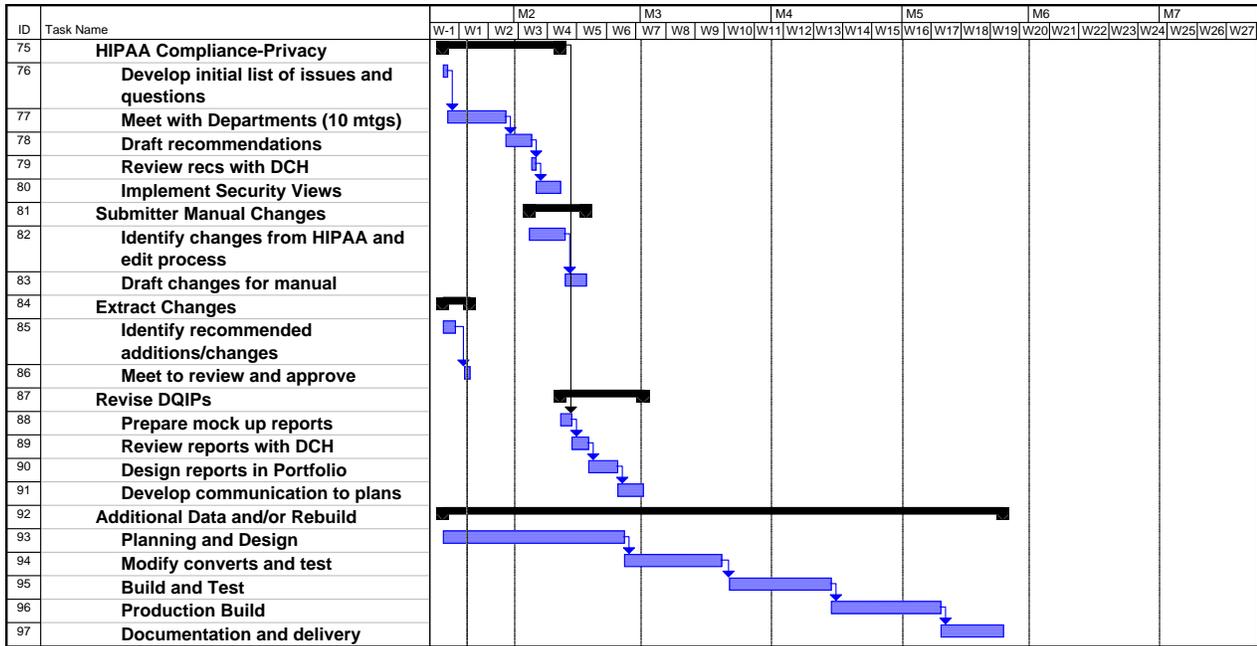
10.2.6.2 Analytic Support:

MDCH has dramatically changed the Managed Care Monitoring Guide since its inclusion in the RFP. In addition, with the Phase II/III production database, a great deal of effort has gone into the development of customized EIS reporting for the FFS and Phase III data sets. However, it is likely that these reporting requirements will change over time. In addition, MEDSTAT has provided analytic support on specific topics such as the development of the 416 Report and evaluation of disease management opportunities. MEDSTAT proposes 500 hours of time and materials services so that MEDSTAT could provide analytic support ranging from the creation of new DSS/EIS reports to development of analysis.

The following is a preliminary project plan for the services documented in this amendment. Upon implementation of each of the proposed services, a detailed project plan will be developed, updated, and reviewed with MDCH periodically during the service delivery period.

ID	Task Name	M2		M3			M4			M5			M6			M7												
		W-1	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	W11	W12	W13	W14	W15	W16	W17	W18	W19	W20	W21	W22	W23	W24	W25	W26
1	Department of Community Health Data Warehouse Enhancements	[Summary bar]																										
2	Fee-For-Service Data Warehouse Expansion	[Summary bar]																										
3	Database Design (Appx 10 new Entities and 251 Attributes)	[Summary bar]																										
4	Requirements Definition	[Task bar]																										
5	Design Logical Model	[Task bar]																										
6	Design Physical Model	[Task bar]																										
7	Programming Changes (ETCL)	[Summary bar]																										
8	Redesign Extract (HC0200)	[Task bar]																										
9	Redesign Upsert Process (71 programs)	[Task bar]																										
10	Develop New Multiload Scripts (10)	[Task bar]																										
11	Develop BTEQ Programs to replace ETL logic in HC0200 (Old Extract Program)	[Task bar]																										
12	Modify BTEQ Programs to add new tables and columns	[Task bar]																										
13	Modify programs which insert work records into warehouse to reflect new tables and	[Task bar]																										
14	Modify or replace program HC5700 which fixes adjusted claims.	[Task bar]																										
15	Modify all Batch SQL activities to use BTEQ	[Task bar]																										
16	Update Operations Guide	[Task bar]																										
17	Update Program Folders	[Task bar]																										
18	Conversion	[Summary bar]																										
19	Develop Conversion Plan	[Task bar]																										
20	Load Data	[Task bar]																										
21	Create new Bi-Query Model	[Task bar]																										
22	Acceptance Test	[Task bar]																										
23	Rollover to Production	[Task bar]																										
24	Unique Provider Identifier	[Summary bar]																										
25	Define Requirements	[Task bar]																										
26	Design Provider Registry	[Task bar]																										
27	Design Linkage Process	[Task bar]																										
28	Code and unit test process	[Task bar]																										
29	Perform system testing	[Task bar]																										
30	Assist DCH with acceptance testing	[Task bar]																										
31	Document system	[Task bar]																										
32	Turn over to DCH	[Task bar]																										
33	Changes to Applications that access the Warehouse	[Summary bar]																										
34	SURS Extraction	[Task bar]																										
35	Audit Application	[Task bar]																										
36	Case Management Application	[Task bar]																										
37	FFS EIS-DSS (BI-Query Reports)	[Task bar]																										

ID	Task Name	M1		M2				M3				M4				M5				M6				M7				
		W-1	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	W11	W12	W13	W14	W15	W16	W17	W18	W19	W20	W21	W22	W23	W24	W25	W26
38	Encounter Data Warehouse Changes for HIPAA	[Solid black bar]																										
39	EDI submissions of HMO Encounters	[Solid black bar]																										
40	Requirements Definition	[Solid black bar]																										
41	Identify new elements to be added to the warehouse	[Solid black bar]																										
42	Identify new edit criteria to be applied to edit/update process	[Solid black bar]																										
43	Define Data Warehouse insert/update process	[Solid black bar]																										
44	Database Design Changes	[Blue bar]																										
45	Design and Program Data Warehouse changes to the ETL	[Blue bar]																										
46	System Test new process	[Solid black bar]																										
47	User Acceptance Test	[Solid black bar]																										
48	Rollover to Production	[Solid black bar]																										
49	EDI submission of Capitated Dental Plans, MI-Child, Substance Abuse, CSHCS Special Health Plans (SHP), and Mental Health Encounters	[Solid black bar]																										
50	Requirements Definition	[Solid black bar]																										
51	Identify data elements needed for transmission of Delta Dental, MI-Child, and Mental Health Encounters	[Solid black bar]																										
52	Define Procedures for transmission of data	[Solid black bar]																										
53	Define edit criteria	[Solid black bar]																										
54	Database Design	[Solid black bar]																										
55	Program Development	[Solid black bar]																										
56	Design and Program ETL Process for insert/Update of the Warehouse	[Solid black bar]																										
57	System Test	[Solid black bar]																										
58	User Acceptance Test	[Solid black bar]																										
59	Modify FFS and Encounter Extraction Process for Decision Analyst	[Blue bar]																										
60	Install Bull Enterprise Metadat System (BEMDS) Software	[Blue bar]																										
61	Eligible Months Table Changes	[Blue bar]																										
62	Other Data Warehouse Expansion Requirements	[Solid black bar]																										
63	Assistance in Developing Analytical Queries for Phase III Data	[Blue bar]																										
64	Data Warehouse Modifications to Accommodate Bioterrorism	[Blue bar]																										
65	Data Warehouse Modifications to Accommodate Beneficiary Eligibility	[Blue bar]																										
66	Develop Data Warehouse Minimum Data Set Edit and Update Process for Home Health Care and Nursing Home Waivers	[Blue bar]																										
67	Analytic Support	[Blue bar]																										
68	MEDSTAT Assistance	[Solid black bar]																										
69	HIPAA Compliance-Integration	[Solid black bar]																										
70	Kick off Mtg	[Blue bar]																										
71	Review Gap Analysis	[Blue bar]																										
72	Identify diffs btwn HIPAA, FFS, HMO	[Blue bar]																										
73	Write Recs	[Blue bar]																										
74	Meet with DCH	[Blue bar]																										



Pricing

DESCRIPTION	PRICE
Fixed Price:	
The following quoted prices are fixed and included in the proposed enhancements documented in each of the above sections.	
2. Fee-for-Service Data Warehouse Expansion	\$463,775.
3. Unique Provider Identifier	413,625.
10. MEDSTAT Assistance	392,206.
Total Fixed Price:	\$1,269,607.

Fixed Price Payment Schedule

Fee for Service - Fixed Price (Add 251 Elements, UB92 & HCFA changes)

- Upon approval and sign-off of Change Request #5 \$115,944
- Upon approval and sign-off of Physical Model \$115,944
- Upon approval and sign-off of Rollover to production \$231,888

Unique Provider ID

- Upon approval and sign-off of Change Request #5 103,406
- Upon approval and sign-off of requirements document 103,406
- Upon approval and sign-off of acceptance testing 206,813

MEDSTAT assistance (paid upon completion)

- HIPAA compliance - Integration 39,506
- HIPAA compliance - Privacy 53,750
- Submitter manual changes 19,850

Recommendations on Extract changes	9,413
Revisions to the DQIP process	35,313
Additional Data sets (minimum)	234,375

Description	Estimated Hours	Price
Time and Materials Estimate:		
The following estimated prices are based on Bull Services current understanding of the requirements and will be billed on a time and materials basis at \$190 per hour.		
4. Changes to Applications that Access the Data Warehouse	1,372	\$260,756.
5. Encounter Data Warehouse Changes for Health Insurance Portability and Accountability Act (HIPAA)	2,130	404,700.
6. Modification of Fee-for-Service and Encounter Extractions for MEDSTAT Decision Analyst Data Mart	750	142,500.
7. Install Metadata Software	48	9,120.
8. Eligible Months Table Changes	160	30,400.
9. Other Data Warehouse Expansion Requirements		
9.1 Assistance in Developing Analytical queries for Phase III data	602	114,380.
9.2 Data Warehouse Modifications to Accommodate Bioterrorism	602	114,380.
9.3 Data Warehouse Modifications to Accommodate Beneficiary Eligibility	604	114,760.
9.4 Develop Data Warehouse Minimum Data Set Edit and Update Process for Home Health Care and Nursing Home Waivers	2,096	398,240.
9.5 Analytic Support of BI/Query	400	76,000.
10. MEDSTAT Assistance - Time and Materials	500	103,500.
Total Estimated Time and Materials:		\$1,768,236.

Time and Materials Payment Schedule

All Time and Materials services identified above are inclusive of travel and living expenses and will be invoiced based on actual hours worked on a monthly basis.

Description	Price
Software Licenses:	
7. Metadata Related Software	
Metadata Software Basic Support and License Fee (\$1,800 per month for 12 months)	\$21,600.*
RoboHelp® Software License Fee (one time paid up license)	899.*
8. MEDSTAT Annual License Renewal Advantage Suite Licensee Fees (30 named users for 12 months), Torrent Orchestrate (12 processors for 12 months), MEDSTAT user tracking software	1,004,417.**
Total Software Licenses:	\$1,027,016.

License Payment Schedule

All License Fees will be invoiced annually in advance and payment will be due upon receipt of invoice.

- * The Metadata Software Basic Support and License Fee and the RoboHelp® Software License Fee shall be invoiced on completion of installation.
- ** The MEDSTAT Annual License Renewal for an additional one year license term shall be invoiced in accordance with Contract 071B1001357 on the expiration of the current licensee term ending on February 15, 2003.

Total MDCH Data Warehouse Expansion:	\$4,064,859.
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Contract Terms

Bull Services is providing this proposal under the assumption and condition that any products and services provided pursuant to this proposal will be provided under the terms and conditions of Contract Agreement No. 071B1001357 between Bull Services and the MDCH, as amended by this proposal (“Agreement”). The provisions contained in this proposal and the terms and conditions in the Agreement allocate the risks to be assumed by Bull Services under this proposal, and the pricing contained in this proposal reflects such allocation of risk. Any variation to any of the provisions of this proposal or modification of the terms and conditions of the Agreement, as negotiated and entered into in connection with this proposal may impact Bull Services’ pricing, and Bull Services reserves the right to modify the pricing in this proposal based upon any such negotiated terms and conditions.

In addition, with respect to the MetaData Software identified in Section 7 of this proposal, the following additional terms shall apply:

- (a) The Metadata Software shall be licensed subject to the license terms set forth in Contract 071B1001357 that are applicable to licensed software supplied by Bull Services under Contract 071B1001357.
- (b) Metadata Software Basic Support shall consist of Bull Services using commercially reasonable efforts, as determined by Bull Services, to respond to the trouble tickets received by Bull Services in a commercially reasonable time period, as determined by Bull Services. The actual response time will be based on the type

and complexity of each reported anomaly and resource availability. If correcting a problem reported by MDCH requires what Bull Services determines to be more than reasonable commercial efforts, additional support services shall be provided on a time and materials basis as set forth in Section 7.2.

This proposal from Bull Services is based on the MDCH's verbal request for the products and services described in the proposal. MDCH's needs may change and only MDCH can determine whether this proposal helps to meet your specific business requirements. All references in the proposal to your needs, requirements, specifications and the like shall mean only as they are defined in mutually acceptable documents.

This proposal does not constitute or contain any express or implied warranties, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. Bull Services does not warrant that the use of the software products will be uninterrupted or that the software products are error-free.

Bull Services is not liable for any indirect, special or consequential damages or lost profits arising out of this proposal or any equipment, products or services provided.

Appendix

How the Existing Fee-for-Service System Works

The system consists of 71 activities:

The worktables are cleared. [Activity 1].

Program HC0200 reads the Weekly Paid Claims tape and creates nine tapes/files of records for the following work tables: [Activity 2]

- Inpatient and Inpatient Line Item
- Long Term Care (LTC) and LTC Line Item
- Outpatient
- Practitioner
- Pharmacy
- Condition
- Occurrence

The tapes and files are Fastloaded to the worktables. [Activities 3-20].

Any claims in the worktables that match claims already in the FFS database are removed from the worktables. (Claims are considered to match if they have the same values of Claim Reference Number [CRN], Claim Line Number [CLN] and Adjustment Code [AC]). [Activity 21]

In some cases, records from two different worktables may be moved to the same table in the FFS database. (The worktables where this can happen are: Practitioner, Inpatient, Outpatient, LTC and Pharmacy). These tables are checked for the case where the same record (based on CRN, CLN and AC) appears in two or more worktables, which would lead to duplicate records in the FFS database.

The problem is handled by changing the last two digits of the CRN to a code representing the work table in which the record appeared, then moving the duplicate rows to a separate set of tables. For example, if a record appeared in both the Inpatient and LTC table having CRN = "199901213333200", the Inpatient record would be stored in the Duplicate Inpatient table under CRN "1999012133332IP" and the LTC record would be stored in the Duplicate LTC table under CRN "1999012133332LT". The original records would then be deleted from both worktables.

(The purpose of this process is to give the duplicate claims unique CRNS so they may be added to the FFS database if desired.) [Activity 22]

Indexes are dropped from the following FFS database tables:

- ClaimBase
- ClaimProcedure
- ClaimPayment
- ClaimDiagnosis
- Pharmacy

An index is added for the “Date of Payment” field of all five tables. [Activities 23-25]

Bad dates in various worktables (represented by the value “3001/01/01”) are replaced with NULL values. [Activities 26-28]

All rows from all five-work tables are inserted into the FFS Claimbase table. [Activities 28-33]

All rows from the Inpatient, LTC, Outpatient, Practitioner and Pharmacy worktables are inserted into the identically named FFS tables. [Activity 34-38]

One record is inserted into the FFS ClaimDiagnosis table for each non-blank diagnosis code in a record in any of these work tables: [Activities 39-42]

- Inpatient
- LCT
- Outpatient
- Practitioner

One record is inserted into the FFS ClaimPayment table for each non-blank payment code with corresponding non-zero payment amount in a record in any of the worktables. [Activities 43-47]

One record is inserted into the FFS ClaimProcedure table for each non-blank procedure code in an Inpatient, Outpatient or Practitioner work record. [Activities 48-50]

All records from the InpatientLine worktable are inserted into the FFS InpatientLine table if there is a corresponding record in the Inpatient worktable. [Activity 51]

All records from the LTCLine worktable are inserted into the FFS LTCLine table if there is a corresponding record in the LTC worktable. [Activity 52]

All rows from the Occurrence worktable are inserted into the FFS Occurrence table. [Activity 53]

All rows from the Condition worktable are inserted into the FFS Condition table. [Activity 54]

Indexes on all worktables are dropped. [Activity 55]

The “Fully Adjusted Claim” process is performed to tie adjusted records to their originals. (On input, each adjusted record points to the immediately preceding adjustment and has an adjustment code of “1”; this process points it to the original claim and corrects the adjustment number.) [Activities 56-58]

The SURS tables are populated. [Activities 59-68]

Indexes on FFS tables are recreated. [Activity 69]

The “Fully Adjusted Claim” table is rebuilt. For each CRN and CLN this table gives the number of the most recent adjustment, allowing users to extract only the current records. [Activity 70]

Row counts and table sizes for the FFS tables are added to the Update_Statistics table. [Activity 71]

11.1.1 Current Data Volumes

Input Records:

Record	Record Length	Record Count	Total
R201	720	640,070	460,850,400
R202	720	1,108,652	798,229,440
R203	400	634,581	253,832,400
R205	368	717	263,856
R215	500	40,808	20,404,000
All others	720*	595,690	428,896,800
			1,962,476,896

* Since individual counts for other records types are not available, records length is the worst case (maximum of all other record types).

Output records:

Record	Record Length	Record Count	Total
Practitioner	437	304,435	133,038,095
Outpatient	429	111,425	47,801,325
Inpatient	508	3,597	1,827,276
IP Line	42	38,697	1,625,274
Pharmacy	456	290,683	132,551,448
Long Term Care	414	16,155	6,688,170
LTC Line	48	16,807	806,736
Cond-UB92	20	52,030	1,040,600
Occurrence	28	7,238	202,664
			325,581,588

Note: None of the input or output files currently approach the 2 GB file size limit for the NCR 4400 system, so no special handling of these files will be required.

**STATE OF MICHIGAN
 DEPARTMENT OF MANAGEMENT AND BUDGET
 ACQUISITION SERVICES
 P.O. BOX 30026, LANSING, MI 48909
 OR
 530 W. ALLEGAN, LANSING, MI 48933**

February 11, 2002

**CHANGE NOTICE NO. 6
 TO
 CONTRACT NO. 071B1001357
 between
 THE STATE OF MICHIGAN
 and**

NAME & ADDRESS OF VENDOR Integrus, Inc 300 Concord Rd Billerica, MA 01821	TELEPHONE Tom Patrick (517) 337-6700
	VENDOR NUMBER/MAIL CODE
	BUYER (517) 373-7396 Andy Ghosh
Contract Administrator: David J. McLaury Executive Information System/Decision Support System – Department of Community Health	
CONTRACT PERIOD: From: February 1, 2001 To: February 1, 2003	
TERMS <p style="text-align: right;">Net</p>	SHIPMENT <p style="text-align: right;">N/A</p>
F.O.B. <p style="text-align: right;">N/A</p>	SHIPPED FROM <p style="text-align: right;">N/A</p>
MINIMUM DELIVERY REQUIREMENTS <p style="text-align: center;">N/A</p>	

NATURE OF CHANGE (S):

The purpose of this change notice is to include the expenditures for FY 2002 security amendments.

AUTHORITY/REASON:

Per request from agency, per letter from Bruce McKenzie dated 1-11-02 and in accordance with the modification clause.

INCREASE: \$254,716.00

TOTAL REVISED ESTIMATED CONTRACT VALUE: \$5,321,073.00

Form No. DMB 234 (Rev. 1/96)
AUTHORITY: Act 431 of 1984
COMPLETION: Required
PENALTY: Contract will not be executed unless form is filed

STATE OF MICHIGAN
DEPARTMENT OF MANAGEMENT AND BUDGET
OFFICE OF PURCHASING
P.O. BOX 30026, LANSING, MI 48909
OR
530 W. ALLEGAN, LANSING, MI 48933

December 7, 2001

CHANGE NOTICE NO. 4
TO
CONTRACT NO. 071B1001357
between
THE STATE OF MICHIGAN
and

NAME & ADDRESS OF VENDOR Bull HN Information System, Inc. 822 Centennial Way, Suite 100 Lansing, MI 48917	TELEPHONE Tom Patrick (517) 337-6700
	VENDOR NUMBER/MAIL CODE
	BUYER (517) 373-7396 Andy Ghosh
Contract Administrator: David J. McLaury Executive Information System/Decision Support System – Department of Community Health	
CONTRACT PERIOD: From: February 1, 2001 To: February 1, 2003	
TERMS Net	SHIPMENT N/A
F.O.B. N/A	SHIPPED FROM N/A
MINIMUM DELIVERY REQUIREMENTS N/A	

NATURE OF CHANGE (S):

Please note that buyer has changed to Andy Ghosh.

AUTHORITY/REASON:

Per DMB/OOP

TOTAL ESTIMATED CONTRACT VALUE REMAINS: \$5,066,357.00

STATE OF MICHIGAN
DEPARTMENT OF MANAGEMENT AND BUDGET
OFFICE OF PURCHASING
P.O. BOX 30026, LANSING, MI 48909
OR
530 W. ALLEGAN, LANSING, MI 48933

November 19, 2001

CHANGE NOTICE NO. 3
TO
CONTRACT NO. 071B1001357
between
THE STATE OF MICHIGAN
and

NAME & ADDRESS OF VENDOR Bull HN Information System, Inc. 822 Centennial Way, Suite 100 Lansing, MI 48917	TELEPHONE Tom Patrick (517) 337-6700
	VENDOR NUMBER/MAIL CODE
	BUYER (517) 373-1080 Melissa Castro
Contract Administrator: David J. McLaury Executive Information System/Decision Support System – Department of Community Health	
CONTRACT PERIOD: From: February 1, 2001 To: February 1, 2003	
TERMS Net	SHIPMENT N/A
F.O.B. N/A	SHIPPED FROM N/A
MINIMUM DELIVERY REQUIREMENTS N/A	

NATURE OF CHANGE (S):

Effective immediately, the attached revised payment plan is incorporated into the contract.

AUTHORITY/REASON:

Per agency's request from David McLaury and vendor's approval on 10/12/01 and in accordance with the modification clause.

TOTAL ESTIMATED CONTRACT VALUE: \$5,066,357.00

071B1001357
CN #3

Page 12, Table 1 of the proposal dated August 27, 2001 should read as follows:

Table 1 Project cost

Project Deliverables	Estimated Duration	Estimated Cost
TrustCheck Assessment Report	3 Weeks	\$33,333
Information Security Audit Policies	4 Weeks	\$46,667
Technical Tool Recommendation for Audit	4 Weeks	\$33,333
Security Awareness Curriculum	2 Weeks	\$26,667
Incident Response & Reporting Procedures	4 Weeks	\$46,667
Internal Service Level Agreement	2 Weeks	\$46,667
<u>Final Acceptance</u>	<u>1 Week</u>	<u>\$21,382</u>
Total Project Investment		\$254,716.00

Form No. DMB 234 (Rev. 1/96)
AUTHORITY: Act 431 of 1984
COMPLETION: Required
PENALTY: Contract will not be executed unless form is filed

STATE OF MICHIGAN
DEPARTMENT OF MANAGEMENT AND BUDGET
OFFICE OF PURCHASING
P.O. BOX 30026, LANSING, MI 48909
OR
530 W. ALLEGAN, LANSING, MI 48933

May 25, 2001

CHANGE NOTICE NO. 2
TO
CONTRACT NO. 071B1001357
between
THE STATE OF MICHIGAN
and

NAME & ADDRESS OF VENDOR Bull HN Information System, Inc. 822 Centennial Way, Suite 100 Lansing, MI 48917	TELEPHONE Tom Patrick (517) 337-6700
	VENDOR NUMBER/MAIL CODE
	BUYER (517) 373-2049 Lisa Arnott
Contract Administrator: David J. McLaury Executive Information System/Decision Support System – Department of Community Health	
CONTRACT PERIOD: From: February 1, 2001 To: February 1, 2003	
TERMS Net	SHIPMENT N/A
F.O.B. N/A	SHIPPED FROM N/A
MINIMUM DELIVERY REQUIREMENTS N/A	

NATURE OF CHANGE (S):

Effective immediately, contract value is DECREASED by \$32,400.00 because DCH MIS will purchase the Oracle 8i initial license and maintenance for 30 named users directly from Oracle.

AUTHORITY/REASON:

Agency request/vendor agreement.

DECREASE: \$32,400.00

TOTAL REVISED ESTIMATED CONTRACT VALUE: \$5,066,357.00

Form No. DMB 234 (Rev. 1/96)
AUTHORITY: Act 431 of 1984
COMPLETION: Required
PENALTY: Contract will not be executed unless form is filed

STATE OF MICHIGAN
DEPARTMENT OF MANAGEMENT AND BUDGET
OFFICE OF PURCHASING
P.O. BOX 30026, LANSING, MI 48909
OR
530 W. ALLEGAN, LANSING, MI 48933

April 23, 2001

CHANGE NOTICE NO. 1
TO
CONTRACT NO. 071B1001357
between
THE STATE OF MICHIGAN
and

NAME & ADDRESS OF VENDOR Bull HN Information System, Inc. 822 Centennial Way, Suite 100 Lansing, MI 48917	TELEPHONE Tom Patrick (517) 337-6700
	VENDOR NUMBER/MAIL CODE
	BUYER (517) 373-2049 Lisa Arnott
Contract Administrator: David J. McLaury Executive Information System/Decision Support System – Department of Community Health	
CONTRACT PERIOD: From: February 1, 2001 To: February 1, 2003	
TERMS Net	SHIPMENT N/A
F.O.B. N/A	SHIPPED FROM N/A
MINIMUM DELIVERY REQUIREMENTS N/A	

NATURE OF CHANGE(S):

Effective immediately, mail code is changed to 017. Also the phone number for the vendor is changed to (517) 337-6700.

AUTHORITY/REASON:

Agency Request.

INCREASE: \$0.00

TOTAL REVISED ESTIMATED CONTRACT VALUE: \$5,098,757.00

Form No. DMB 234 (Rev. 1/96)
 AUTHORITY: Act 431 of 1984
 COMPLETION: Required
 PENALTY: Contract will not be executed unless form is filed

**STATE OF MICHIGAN
 DEPARTMENT OF MANAGEMENT AND BUDGET
 OFFICE OF PURCHASING
 P.O. BOX 30026, LANSING, MI 48909
 OR
 530 W. ALLEGAN, LANSING, MI 48933**

February 12, 2001

**NOTICE
 TO
 CONTRACT NO. 071B1001357
 between
 THE STATE OF MICHIGAN
 and**

NAME & ADDRESS OF VENDOR Bull HN Information System, Inc. 822 Centennial Way, Suite 100 Lansing, MI 48917	TELEPHONE Tom Patrick (517) 327-6700
	VENDOR NUMBER/MAIL CODE
	BUYER (517) 373-2049 Lisa Arnott
Contract Administrator: David J. McLaury Executive Information System/Decision Support System – Department of Community Health	
CONTRACT PERIOD: From: February 1, 2001 To: February 1, 2003	
TERMS <p style="text-align: right;">Net</p>	SHIPMENT <p style="text-align: right;">N/A</p>
F.O.B. <p style="text-align: right;">N/A</p>	SHIPPED FROM <p style="text-align: right;">N/A</p>
MINIMUM DELIVERY REQUIREMENTS <p style="text-align: center;">N/A</p>	

The terms and conditions of this Contract are those of ITB #071I1000072, this Contract Agreement and the vendor's quote dated 11/20/00. In the event of any conflicts between the specifications, terms and conditions indicated by the State and those indicated by the vendor, those of the State take precedence.

Total Contract Period Estimated Contract Cost: \$5,098,757.00

Form No. DMB 234 (Rev. 1/96)
 AUTHORITY: Act 431 of 1984
 COMPLETION: Required
 PENALTY: Contract will not be executed unless form is filed

**STATE OF MICHIGAN
 DEPARTMENT OF MANAGEMENT AND BUDGET
 OFFICE OF PURCHASING
 P.O. BOX 30026, LANSING, MI 48909
 OR
 530 W. ALLEGAN, LANSING, MI 48933**

**CONTRACT NO. 071B1001357
 between
 THE STATE OF MICHIGAN
 and**

NAME & ADDRESS OF VENDOR <p style="text-align: center;">Bull HN Information System, Inc. 822 Centennial Way, Suite 100 Lansing, MI 48917</p>	TELEPHONE Tom Patrick (517) 327-6700 VENDOR NUMBER/MAIL CODE BUYER (517) 373-2049 Lisa Arnott
Contract Administrator: David J. McLaury <p style="text-align: center;">Executive Information System/Decision Support System - DCH</p>	
CONTRACT PERIOD: From: February 1, 2001 To: February 1, 2003	
TERMS <p style="text-align: center;">Net</p>	SHIPMENT <p style="text-align: center;">N/A</p>
F.O.B. <p style="text-align: center;">N/A</p>	SHIPPED FROM <p style="text-align: center;">N/A</p>
MINIMUM DELIVERY REQUIREMENTS <p style="text-align: center;">N/A</p>	
MISCELLANEOUS INFORMATION: <p>The terms and conditions of this Contract are those of ITB #071I1000072, this Contract Agreement and the vendor's quote dated 11/20/00. In the event of any conflicts between the specifications, terms and conditions indicated by the State and those indicated by the vendor, those of the State take precedence.</p> <p>Total Contract Period Estimated Contract Cost: \$5,098,757.00</p>	

THIS IS NOT AN ORDER: This Contract Agreement is awarded on the basis of our inquiry bearing the ITB No. 071I1000072. A Purchase Order Form will be issued only as the requirements of the State Departments are submitted to the Office of Purchasing. Orders for delivery may be issued directly by the State Departments through the issuance of a Purchase Order Form.

All terms and conditions of the invitation to bid are made a part hereof.

FOR THE VENDOR:	FOR THE STATE:
Firm Name	Signature David F. Ancell
Authorized Agent Signature	Name State Purchasing Director
Authorized Agent (Print or Type)	Title
Date	Date

OFFICE OF PURCHASING
STATE OF MICHIGAN

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DEFINITION OF TERMS

TERMS	DEFINITIONS
Contract	A binding agreement entered into by the State of Michigan resulting from a bidder's proposal; see also "Blanket Purchase Order."
Contractor	The successful bidder who is awarded a Contract.
DMB	Michigan Department of Management and Budget
State	The State of Michigan For Purposes of Indemnification as set forth in section I-J, State means the State of Michigan, its departments, divisions, agencies, offices, commissions, officers, employees and agents.
Blanket Purchase Order	Alternate term for "Contract" used in the State's Computer system (Michigan Automated Information Network [MAIN])
Expiration	Except where specifically provided for in the Contract, the ending and termination of the contractual duties and obligations of the parties to the Contract pursuant to a mutually agreed upon date.
Cancellation	Ending all rights and obligations of the State and Contractor, except for any rights and obligations that are due and owing.
Work Product	Work Product means any data compilations, reports, and any other media, materials, or other objects or works of authorship created or produced by the Contractor as a result of and in furtherance of performing the services required by this Contract.

**SECTION I
CONTRACTUAL SERVICES TERMS AND CONDITIONS**

I-A PURPOSE

The State of Michigan, Department of Management & Budget, Office of Purchasing, being the Contracting Authority for the State, hereby enters into a Contractual Agreement, referred to herein as "Contract" with Bull HN Information Systems, Inc. for the Michigan Department of Community Health.

The purpose of this agreement is to obtain the services of the Bull HN Information Systems, Inc. who will provide, install, and implement an Executive Information System/Decision Support System (EIS/DSS), which will give the Michigan Department of Community Health (MDCH) the capacity to support State and Federal reporting needs. This system shall allow access to an integrated health care database comprised of encounter and other health care data. The EIS/DSS design and operational implementation must provide the capabilities to meet performance requirements of this Contract for all predefined queries and reports. The proposed solution must provide quick retrieval and analysis of information on-line without the need for computer programming.

This system shall enable MDCH to (1) provide staff with increased information regarding the Medicaid Program; (2) enhance data access and analysis capabilities at varying levels of user sophistication; (3) identify patterns of behavior across recipients and providers and service usage to better understand utilization issues and design effective cost containment measures; (4) apply normative data from other Medicaid programs to measure cost, utilization, and quality of care findings against relevant norms; (5) provide for monitoring and analysis of encounter submissions to improve quality of care; (6) support the continuing rate setting activities of the Medicaid program; (7) provide for the detection of potential fraud and abuse; and (8) build the supporting infrastructure to expand integration of additional data sources, data volumes, and users into the system

The contract is a part lump sum/fixed price and part unit price contract.

I-B TERM OF CONTRACT

The State of Michigan is not liable for any cost incurred by the contractor prior to signing of a Contract by all parties. The activities in the Contract cover the period February 1, 2001 to February 1, 2003. The State, upon mutual agreement with the Contractor and with 90 days advance notice, may extend any end-date of the Agreement by three one-year extensions. The State will provide notification of an extension 90 days in advance. The State fiscal year is October 1st through September 30th. The prospective Contractor should realize that payments in any given fiscal year are contingent upon enactment of legislative appropriations.

I-C ISSUING OFFICE

This Contract is issued by the State of Michigan, Department of Management and Budget (DMB), Office of Purchasing, hereafter known as the Office of Purchasing, for the State of Michigan, Department of Community Health. Where actions are a combination of those of the Office of Purchasing and the Department of Community Health, the authority will be known as the State.

The Office of Purchasing is the sole point of contact in the State with regard to all contractual matters relating to the services described herein. The Office of Purchasing is the only office authorized to change, modify, amend, alter, clarify, etc., the prices, specifications, terms, and conditions of this Contract. The OFFICE OF PURCHASING will remain the SOLE POINT OF CONTACT throughout the contractual process, until such time as the Director of Purchasing shall direct otherwise in writing. See Paragraph I-D below. All communications concerning this procurement must be addressed to:

Lisa Arnott, Buyer Specialist
Technology and Professional Services Division
DMB, Office of Purchasing
2nd Floor, Mason Building

P.O. Box 30026
Lansing, MI 48909
Email:ArnottL@state.mi.us Phone: (517) 373-2049

I-D CONTRACT ADMINISTRATOR

Upon receipt at the Office of Purchasing of the properly executed Contract Agreement, it is anticipated that the Director of Purchasing will direct that the person named below or any other person so designated be authorized to administer the Contract on a day-to-day basis during the term of the Contract. However, administration of this Contract implies no authority to change, modify, clarify, amend, or otherwise alter the prices, terms, conditions, and specifications of such Contract. That authority is retained by the Office of Purchasing. The Contract Administrator for this project is:

David J. McLaury, Chief Administrative Officer
Medical Services Administration
Michigan Department of Community Health
P.O. Box 30479
Lansing, Michigan 48909-7979
Email – mclauryd@state.mi.us
Telephone (517) 335-5001

I-E COST LIABILITY

The State of Michigan assumes no responsibility or liability for costs incurred by the Contractor prior to the signing of any Contract resulting from this Request. Total liability of the State is limited to the terms and conditions of any resulting Contract.

I-F CONTRACTOR RESPONSIBILITIES

The Contractor will be required to assume responsibility for all contractual activities offered in this proposal whether or not that Contractor performs them. Further, the State will consider the Prime Contractor to be the sole point of contact with regard to contractual matters, including but not limited to payment of any and all costs resulting from the anticipated Contract. If any part of the work is to be subcontracted, the contractor must notify the state and identify the subcontractor(s), including firm name and address, contact person, complete description of work to be subcontracted, and descriptive information concerning subcontractor's organizational abilities. The State reserves the right to approve subcontractors for this project and to require the Contractor to replace subcontractors found to be unacceptable. The Contractor is totally responsible for adherence by the subcontractor to all provisions of the Contract.

I-G NEWS RELEASES

News releases pertaining to this document or the services, study, data, or project to which it relates will not be made without prior written State approval, and then only in accordance with the explicit written instructions from the State. No results of the program are to be released without prior approval of the State and then only to persons designated.

I-H DISCLOSURE

All information in a bidder's proposal and any Contract resulting from this ITB is subject to the provisions of the Freedom of Information Act, 1976 Public Act No. 442, as amended, MCL 15.231, *et seq.*

I-I ACCOUNTING RECORDS

The Contractor will be required to maintain all pertinent financial and accounting records and evidence pertaining to the Contract in accordance with generally accepted principles of accounting and other procedures specified by the State of Michigan. Financial and accounting records shall be made available, upon request, to the State of Michigan, its designees, or the Michigan Department of Auditor General at any time during the Contract period and any extension thereof, and for three (3) years from the expiration date and final payment on the Contract or extension thereof.

I-J INDEMNIFICATION

A. General Indemnification

Upon receipt of written notice, as required herein, the CONTRACTOR shall indemnify, defend and hold harmless the State, its departments, divisions, agencies, sections, commissions, officers, employees and agents from and against all losses, liabilities, penalties, fines, damages and claims (including taxes), and all related costs and expenses (including reasonable attorneys' fees and disbursements and costs of investigation, litigation, settlement, judgments, interest and penalties), arising from or in connection with any of the following:

- (1) any claim, demand, action, citation or legal proceeding against the State, its departments, divisions, agencies, sections, commissions, officers, employees and agents for any negligence or wrongful acts arising out of or resulting from (1) the services and products provided or (2) performance of the work, duties, responsibilities, actions or omissions of the CONTRACTOR or any of its subcontractors under this CONTRACT;
- (2) any claim, demand, action, citation or legal proceeding against the State, its departments, divisions, agencies, sections, commissions, officers, employees and agents arising out of or resulting from a material breach by the CONTRACTOR of any representation or warranty made by the CONTRACTOR in the CONTRACT;
- (3) any claim, demand, action, citation or legal proceeding against the State, its departments, divisions, agencies, sections, commissions, officers, employees and agents arising out of or related to occurrences that the CONTRACTOR is required to insure against as provided for in this CONTRACT;
- (4) any claim, demand, action, citation or legal proceeding against the State, its departments divisions, agencies, sections, commissions, officers, employees and agents arising out of or resulting from the death or bodily injury of any person, or the damage, loss or destruction of any real or tangible personal property, in connection with the performance of services by the CONTRACTOR, by any of its subcontractors, by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable; provided, however, that this indemnification obligation shall not apply to the extent, if any, that such death, bodily injury or property damage is caused by the negligence or reckless or intentional wrongful conduct of the State;
- (5) any claim, demand, action, citation or legal proceeding against the State, its departments, divisions, agencies, sections, commissions, officers, employees and agents which results from an act or omission of the CONTRACTOR or any of its subcontractors in its or their capacity as an employer of a person.

B. Patent/Copyright Infringement Indemnification

The CONTRACTOR shall indemnify, defend and hold harmless the State, its departments, divisions, agencies, sections, commissions, officers, employees and agents from and against all losses, liabilities, penalties, fines, damages (including taxes), and all related costs and expenses (including reasonable attorneys' fees and disbursements and costs of investigation, litigation, settlement, judgments, interest and penalties) incurred in connection with any action or proceeding threatened or brought against the State by a third party to the extent that such action or proceeding is based on a claim that any piece of equipment, software, commodity or service supplied by the CONTRACTOR or its subcontractors, or the operation of such equipment, software, commodity or service, infringes any United States or foreign patent, copyright, trade secret or other proprietary right of any person or entity, which right is enforceable under the laws of the United States. In addition, should the equipment, software, commodity, or service, or the operation thereof, become or in the Contractor's opinion be likely to become the subject of a claim of infringement, the CONTRACTOR shall at the Contractor's sole expense (i) procure for the State the right to continue using the equipment, software, commodity or service or, if such option is not reasonably available to the CONTRACTOR, (ii) replace or modify the same with equipment, software, commodity or service of equivalent function and performance so that it becomes non-infringing, or, if such option is not reasonably available to CONTRACTOR, (iii) accept its return by the State with appropriate

credits to the State against the Contractor's charges and reimburse the State for any losses or costs incurred as a consequence of the State ceasing its use and returning it.

C. Indemnification Obligation Not Limited

In any and all claims against the State of Michigan, its departments, divisions, agencies, sections, commissions, officers, employees and agents, by any employee of the CONTRACTOR or any of its subcontractors, the indemnification obligation under the CONTRACT shall not be limited in any way by the amount or type of damages, compensation or benefits payable by or for the CONTRACTOR or any of its subcontractors under worker's disability compensation acts, disability benefit acts or other employee benefit acts. This indemnification clause is intended to be comprehensive. Any overlap in subclauses, or the fact that greater specificity is provided as to some categories of risk, is not intended to limit the scope of indemnification under any other subclauses.

D. Continuation of Indemnification Obligation

The duty to indemnify will continue in full force and effect notwithstanding the expiration or early termination of the contract with respect to any claims based on facts or conditions which occurred prior to termination.

I-K LIMITATION OF LIABILITY

Except as set forth in Sections I-J.A (3) & (4) and Section I-J.B of the Contract, neither the Contractor nor the State shall be liable to the other party for indirect or consequential damages, even, if such party has been advised of the possibility of such damages.

I-L NON INFRINGEMENT/COMPLIANCE WITH LAWS

The Contractor warrants that in performing the services called for by this Contract it will not violate any applicable law, rule, or regulation, any contracts with third parties, or any intellectual rights of any third party, including but not limited to, any United States patent, trademark, copyright, or trade secret.

I-M WARRANTIES AND REPRESENTATIONS

The Contract will contain customary representations and warranties by the Contractor, including, without limitation, the following:

1. The Contractor will perform all services in accordance with high professional standards in the industry;
2. The Contractor will use adequate numbers of qualified individuals with suitable training, education, experience and skill to perform the services;
3. The Contractor will use its best efforts to use efficiently any resources or services necessary to provide the services that are separately chargeable to the State;
4. The Contractor will use its best efforts to perform the services in the most cost effective manner consistent with the required level of quality and performance;
5. The Contractor will perform the services in a manner that does not infringe the proprietary rights of any third party;
6. The Contractor will perform the services in a manner that complies with all applicable laws and regulations;
7. The Contractor has duly authorized the execution, delivery and performance of the Contract;
8. The Contractor has not provided any gifts, payments or other inducements to any officer, employee or agent of the State;

9. The Contractor will maintain all equipment and software for which it has maintenance responsibilities in good operating condition and will undertake all repairs and preventive maintenance in accordance with applicable manufacturer's recommendations;
10. The Contractor will use its best efforts to ensure that no viruses or similar items are coded or introduced into the systems used to provide the services;
11. The Contractor will not insert or activate any disabling code into the systems used to provide the services without the State's prior written approval;
12. A ninety (90) day warranty on all purchased and developed software, data conversion programs, and data and customization to the product performed by the contractor.

I-N TIME IS OF THE ESSENCE

The Contractor agrees that time is of the essence in the performance of the Contractor's obligations under this Contract.

I-O STAFFING OBLIGATIONS

The State reserves the right to approve the Contractor's assignment of Key Personnel to this project and to recommend reassignment of personnel deemed unsatisfactory by the State.

The Contractor shall not remove or reassign, without the State's prior written approval any of the Key Personnel until such time as the Key Personnel have completed all of their planned and assigned responsibilities in connection with performance of the Contractor's obligations under this Contract. The Contractor agrees that the continuity of Key Personnel is critical and agrees to the continuity of Key Personnel. Removal of Key Personnel without the written consent of the State may be considered by the State to be a material breach of this Contract. The prohibition against removal or reassignment shall not apply where Key Personnel must be replaced for reasons beyond the reasonable control of the Contractor including but not limited to illness, disability, resignation or termination of the Key Personnel's employment.

I-P WORK PRODUCT AND OWNERSHIP

1. Work Products shall be considered works made by the Contractor for hire by the State and shall belong exclusively to the State and its designees, unless specifically provided otherwise by mutual agreement of the Contractor and the State. If by operation of law any of the Work Product, including all related intellectual property rights, is not owned in its entirety by the State automatically upon creation thereof, the Contractor agrees to assign, and hereby assigns to the State and its designees the ownership of such Work Product, including all related intellectual property rights. The Contractor agrees to provide, at no additional charge, any assistance and to execute any action reasonably required for the State to perfect its intellectual property rights with respect to the aforementioned Work Product.
2. Notwithstanding any provision of this Contract to the contrary, any preexisting work or materials including, but not limited to, any routines, libraries, tools, methodologies, processes or technologies (collectively, the "Development Tools") created, adapted or used by the Contractor in its business generally, including any all associated intellectual property rights, shall be and remain the sole property of the Contractor, and the State shall have no interest in or claim to such preexisting work, materials or Development Tools, except as necessary to exercise its rights in the Work Product. Such rights belonging to the State shall include, but not be limited to, the right to use, execute, reproduce, display, perform and distribute copies of and prepare derivative works based upon the Work Product, and the right to authorize others to do any of the foregoing, irrespective of the existence therein of preexisting work, materials and Development Tools, except as specifically limited herein.
3. The Contractor and its subcontractors shall be free to use and employ their general skills, knowledge and expertise, and to use, disclose, and employ any generalized ideas, concepts, knowledge, methods, techniques

or skills gained or learned during the course of performing the services under this Contract, so long as the Contractor or its subcontractors acquire and apply such information without disclosure of any confidential or proprietary information of the State, and without any unauthorized use or disclosure of any Work Product resulting from this Contract.

I-Q CONFIDENTIALITY OF DATA AND INFORMATION

1. All financial, statistical, personnel, technical and other data and information relating to the State's operation which are designated confidential by the State and made available to the Contractor in order to carry out this Contract, or which become available to the Contractor in carrying out this Contract, shall be protected by the Contractor from unauthorized use and disclosure through the observance of the same or more effective procedural requirements as are applicable to the State. The identification of all such confidential data and information as well as the State's procedural requirements for protection of such data and information from unauthorized use and disclosure shall be provided by the State in writing to the Contractor. If the methods and procedures employed by the Contractor for the protection of the Contractor's data and information are deemed by the State to be adequate for the protection of the State's confidential information, such methods and procedures may be used, with the written consent of the State, to carry out the intent of this section.
2. The Contractor shall not be required under the provisions of this section to keep confidential, (1) information generally available to the public, (2) information released by the State generally, or to the Contractor without restriction, (3) information independently developed or acquired by the Contractor or its personnel without reliance in any way on otherwise protected information of the State. Notwithstanding the foregoing restrictions, the Contractor and its personnel may use and disclose any information which it is otherwise required by law to disclose, but in each case only after the State has been so notified, and has had the opportunity, if possible, to obtain reasonable protection for such information in connection with such disclosure.

I-R REMEDIES FOR BREACH OF CONFIDENTIALITY

The Contractor acknowledges that a breach of its confidentiality obligations as set forth in section I-Q of this Contract, shall be considered a material breach of the Contract. Furthermore the Contractor acknowledges that in the event of such a breach the State shall be irreparably harmed. Accordingly, if a court should find that the Contractor has breached or attempted to breach any such obligations, the Contractor will not oppose the entry of an appropriate order restraining it from any further breaches or attempted or threatened breaches. This remedy shall be in addition to and not in limitation of any other remedy or damages provided by law.

I-S CONTRACTOR'S LIABILITY INSURANCE

The Contractor shall purchase and maintain such insurance as will protect him/her from claims set forth below which may arise out of or result from the Contractor's operations under the Contract (Purchase Order), whether such operations be by himself/herself or by any subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

- (1) Claims under workers' disability compensation, disability benefit and other similar employee benefit act. A non-resident Contractor shall have insurance for benefits payable under Michigan's Workers' Disability Compensation Law for any employee resident of and hired in Michigan; and as respects any other employee protected by workers' disability compensation laws of any other State the Contractor shall have insurance or participate in a mandatory State fund to cover the benefits payable to any such employee.
- (2) Claims for damages because of bodily injury, occupational sickness or disease, or death of his/her employees.
- (3) Claims for damages because of bodily injury, sickness or disease, or death of any person other than his/her employees, subject to limits of liability of not less than \$1,000,000.00 each occurrence and, when

applicable \$3,000,000.00 annual aggregate, for non-automobile hazards and as required by law for automobile hazards.

- (4) Claims for damages because of injury to or destruction of tangible property, including loss of use resulting therefrom, subject to a limit of liability of not less than \$50,000.00 each occurrence for non-automobile hazards and as required by law for automobile hazards.
- (5) Insurance for Subparagraphs (3) and (4) non-automobile hazards on a combined single limit of liability basis shall not be less than \$1,000,000.00 each occurrence and when applicable, \$3,000,000.00 annual aggregate.

The insurance shall be written for not less than any limits of liability herein specified or required by law, whichever is greater, and shall include contractual liability insurance as applicable to the Contractor's obligations under the Indemnification clause of the Contract (Purchase Order).

BEFORE STARTING WORK THE CONTRACTOR'S INSURANCE AGENCY MUST FURNISH TO THE DIRECTOR OF THE OFFICE OF PURCHASING, ORIGINAL CERTIFICATE(S) OF INSURANCE VERIFYING LIABILITY COVERAGE. THE CONTRACT OR PURCHASE ORDER NO. MUST BE SHOWN ON THE CERTIFICATE OF INSURANCE TO ASSURE CORRECT FILING. These Certificates shall contain a provision that coverage's afforded under the policies will not be canceled until at least fifteen days prior written notice bearing the Contract Number or Purchase Order Number has been given to the Director of Purchasing.

I-T NOTICE AND RIGHT TO CURE

In the event of a curable breach by the Contractor, the State shall provide the Contractor written notice of the breach and a time period to cure said breach described in the notice. This section requiring notice and an opportunity to cure shall not be applicable in the event of successive or repeated breaches of the same nature or if the State determines in its sole discretion that the breach poses a serious and imminent threat to the health or safety of any person or the imminent loss, damage or destruction of any real or tangible personal property.

I-U CANCELLATION

The State may cancel this Contract without further liability or penalty to the State, its departments, divisions, agencies, offices, commissions, officers, agents and employees for any of the following reasons:

- 1. Material Breach by the Contractor. In the event that the Contractor breaches any of its material duties or obligations under the Contract, which are either not capable of or subject to being cured, or are not cured within the time period specified in the written notice of breach provided by the State, or pose a serious and imminent threat to the health and safety of any person, or the imminent loss, damage or destruction of any real or tangible personal property, the State may, having provided written notice of cancellation to the Contractor, cancel this Contract in whole or in part, for cause, as of the date specified in the notice of cancellation.

In the event that this Contract is cancelled for cause, in addition to any legal remedies otherwise available to the State by law or equity, the Contractor shall be responsible for all costs incurred by the State in canceling the Contract, including but not limited to, State administrative costs, attorneys fees and court costs, and any additional costs the State may incur to procure the services required by this Contract from other sources. All excess procurement costs and damages shall not be considered by the parties to be consequential, indirect or incidental, and shall not be excluded by any other terms otherwise included in the Contract.

In the event the State chooses to partially cancel this Contract for cause charges payable under this Contract will be equitably adjusted to reflect those services that are cancelled.

In the event this Contract is cancelled for cause pursuant to this section, and it is therefore determined, for any reason, that the Contractor was not in breach of contract pursuant to the provisions of this section, that cancellation for cause shall be deemed to have been a cancellation for convenience, effective as of the same date, and the rights and obligations of the parties shall be limited to that otherwise provided in the Contract for a cancellation for convenience.

2. Cancellation For Convenience By the State. The State may cancel this Contract for its convenience, in whole or part, if the State determines that such a cancellation is in the State's best interest. Reasons for such cancellation shall be left to the sole discretion of the State and may include, but not necessarily be limited to (a) the State no longer needs the services or products specified in the Contract, (b) relocation of office, program changes, changes in laws, rules, or regulations make implementation of the Contract services no longer practical or feasible, and (c) unacceptable prices for additional services requested by the State. The State may cancel the Contract for its convenience, in whole or in part, by giving the Contractor written notice 30 days prior to the date of cancellation. If the State chooses to cancel this Contract in part, the charges payable under this Contract shall be equitably adjusted to reflect those services that are cancelled.
3. Non-Appropriation. In the event that funds to enable the State to effect continued payment under this Contract are not appropriated or otherwise made available. The Contractor acknowledges that, if this Contract extends for several fiscal years, continuation of this Contract is subject to appropriation or availability of funds for this project. If funds are not appropriated or otherwise made available, the State shall have the right to cancel this Contract at the end of the last period for which funds have been appropriated or otherwise made available by giving written notice of cancellation to the Contractor. The State shall give the Contractor written notice of such non-appropriation or unavailability within 30 days after it receives notice of such non-appropriation or unavailability.
4. Criminal Conviction. In the event the Contractor, an officer of the Contractor, or an owner of a 25% or greater share of the Contractor, is convicted of a criminal offense incident to the application for or performance of a State, public or private Contract or subcontract; or convicted of a criminal offense including but not limited to any of the following: embezzlement, theft, forgery, bribery, falsification or destruction of records, receiving stolen property, attempting to influence a public employee to breach the ethical conduct standards for State of Michigan employees; convicted under State or federal antitrust statutes; or convicted of any other criminal offense which in the sole discretion of the State, reflects upon the Contractor's business integrity.
5. Approval(s) Rescinded. In the event any final administrative or judicial decision or adjudication disapproves a previously approved request for purchase of personal services pursuant to Constitution 1963, Article 11, section 5, and Civil Service Rule 4-6. Cancellation may be in whole or in part and may be immediate as of the date of the written notice to the Contractor or may be effective as of the date stated in such written notice.

I-V RIGHTS AND OBLIGATIONS UPON CANCELLATION

1. If the Contract is canceled by the State for any reason, the Contractor shall, (a) stop all work as specified in the notice of cancellation, (b) take any action that may be necessary, or that the State may direct, for preservation and protection of Work Product or other property derived or resulting from the Contract that may be in the Contractor's possession, (c) return all materials and property provided directly or indirectly to the Contractor by any entity, agent or employee of the State, (d) transfer title and deliver to the State, unless otherwise directed by the Contract Administrator or his or her designee, all Work Product resulting from the Contract, and (e) take any action to mitigate and limit any potential damages, or requests for

Contractor adjustment or cancellation settlement costs, to the maximum practical extent, including, but not limited to, canceling or limiting as otherwise applicable, those subcontracts, and outstanding orders for material and supplies resulting from the canceled Contract.

2. In the event the State cancels this Contract prior to its expiration for its own convenience, the State shall pay the Contractor for all charges due for services provided prior to the date of cancellation and if applicable as a separate item of payment pursuant to the Contract, for partially completed Work Product, on a percentage of completion basis. In the event of a cancellation for cause, or any other reason under the Contract, the State will pay, if applicable, as a separate item of payment pursuant to the Contract, for all partially completed Work Products, to the extent that the State requires the Contractor to submit to the State any such deliverables, and for all charges due under the Contract for any cancelled services provided by the Contractor prior to the cancellation date. All completed or partially completed Work Product prepared by the Contractor pursuant to this Contract shall, at the option of the State, become the State's property, and the Contractor shall be entitled to receive just and fair compensation for such Work Product. Regardless of the basis for the cancellation, the State shall not be obligated to pay, or otherwise compensate, the Contractor for any lost expected future profits, costs or expenses incurred with respect to Services not actually performed for the State.
3. If any such cancellation by the State is for cause, the State shall have the right to set-off against any amounts due the Contractor, the amount of any damages for which the Contractor is liable to the State under this Contract or pursuant to law and equity.
4. Upon a good faith cancellation, the State shall have the right to assume, at its option, any and all subcontracts and agreements for services and materials provided under this Contract, and may further pursue completion of the Work Product under this Contract by replacement contract or otherwise as the State may in its sole judgment deem expedient.

I-W EXCUSABLE FAILURE

1. Neither party shall be liable for any default or delay in the performance of its obligations under the Contract if and to the extent such default or delay is caused, directly or indirectly, by: fire, flood, earthquake, elements of nature or acts of God; riots, civil disorders, rebellions or revolutions in any country; the failure of the other party to perform its material responsibilities under the Contract (either itself or through another contractor); injunctions (provided the injunction was not issued as a result of any fault or negligence of the party seeking to have its default or delay excused); or any other cause beyond the reasonable control of such party; provided the non-performing party and its subcontractors are without fault in causing such default or delay, and such default or delay could not have been prevented by reasonable precautions and cannot reasonably be circumvented by the non-performing party through the use of alternate sources, workaround plans or other means, including disaster recovery plans. In such event, the non-performing party will be excused from any further performance or observance of the obligation(s) so affected for as long as such circumstances prevail and such party continues to use its best efforts to recommence performance or observance whenever and to whatever extent possible without delay provided such party promptly notifies the other party in writing of the inception of the excusable failure occurrence, and also of its abatement or cessation.
2. If any of the above enumerated circumstances substantially prevent, hinder, or delay performance of the services necessary for the performance of the State's functions for more than 14 consecutive days, and the State determines that performance is not likely to be resumed within a period of time that is satisfactory to the State in its reasonable discretion, then at the State's option: (a) the State may procure the affected services from an alternate source, and the State shall not be liable for payments for the unperformed services under the Contract for so long as the delay in performance shall continue; (b) the State may cancel any portions of the Contract so affected and the charges payable there under shall be equitably adjusted to reflect those services canceled; or (c) the Contract will be canceled without liability of the State to the

Contractor as of the date specified by the State in a written notice of cancellation to the Contractor. The Contractor will not have the right to any additional payments from the State as a result of any excusable failure occurrence or to payments for services not rendered as a result of the excusable failure condition. Defaults or delays in performance by the Contractor which are caused by acts or omissions of its subcontractors will not relieve the Contractor of its obligations under the Contract except to the extent that a subcontractor is itself subject to any excusable failure condition described above and the Contractor cannot reasonably circumvent the effect of the subcontractor's default or delay in performance through the use of alternate sources, workaround plans or other means.

I-X ASSIGNMENT

The Contractor shall not have the right to assign this Contract or to assign or delegate any of its duties or obligations under this Contract to any other party (whether by operation of law or otherwise), without the prior written consent of the State. Any purported assignment in violation of this section shall be null and void. Further, the Contractor may not assign the right to receive money due under the Contract without the prior written consent of the State Purchasing Director.

I-Y DELEGATION

The Contractor shall not delegate any duties or obligations under this Contract to a subcontractor other than a subcontractor named in the bid unless the State Purchasing Director has given written consent to the delegation.

I-Z NON-DISCRIMINATION CLAUSE

In the performance of any Contract or purchase order resulting herefrom, the bidder agrees not to discriminate against any employee or applicant for employment, with respect to their hire, tenure, terms, conditions or privileges of employment, or any matter directly or indirectly related to employment, because of race, color, religion, national origin, ancestry, age, sex, height, weight, marital status, physical or mental disability unrelated to the individual's ability to perform the duties of the particular job or position. The bidder further agrees that every subcontract entered into for the performance of any Contract or purchase order resulting herefrom will contain a provision requiring non-discrimination in employment, as herein specified, binding upon each subcontractor. This covenant is required pursuant to the Elliot Larsen Civil Rights Act, 1976 Public Act 453, as amended, MCL 37.2101, *et seq*, and the Persons with Disabilities Civil Rights Act, 1976 Public Act 220, as amended, MCL 37.1101, *et seq*, and any breach thereof may be regarded as a material breach of the Contract or purchase order.

I-AA MODIFICATION OF SERVICE

The Director of Purchasing reserves the right to modify this service during the course of this Contract. Such modification may include adding or deleting tasks that this service shall encompass and/or any other modifications deemed necessary.

Any Contract resulting from this RFP may not be revised, modified, amended, extended, or augmented, except by a writing executed by the parties hereto, and any breach or default by a party shall not be waived or released other than in writing signed by the other party.

The State reserves the right to request from time to time, any changes to the requirements and specifications of the Contract and the work to be performed by the Contractor under the Contract. The Contractor shall provide a change order process and all requisite forms. The State reserves the right to negotiate the process during contract negotiation. At a minimum, the State would like the Contractor to provide a detailed outline of all work to be done, including tasks necessary to accomplish the deliverables, timeframes, listing of key personnel assigned, estimated hours for each individual per task, and a complete and detailed cost justification.

1. Within five (5) business days of receipt of a request by the State for any such change, or such other period of time as to which the parties may agree mutually in writing, the Contractor shall submit to the State a proposal describing any changes in products, services, timing of delivery, assignment of personnel, and

the like, and any associated price adjustment. The price adjustment shall be based on a good faith determination and calculation by the Contractor of the additional cost to the Contractor in implementing the change request less any savings realized by the Contractor as a result of implementing the change request. The Contractor's proposal shall describe in reasonable detail the basis for the Contractor's proposed price adjustment, including the estimated number of hours by task by labor category required to implement the change request.

2. If the State accepts the Contractor's proposal, it will issue a change notice and the Contractor will implement the change request described therein. The Contractor will not implement any change request until a change notice has been issued validly. The Contractor shall not be entitled to any compensation for implementing any change request or change notice except as provided explicitly in an approved change notice.
3. If the State does not accept the Contractor's proposal, the State may:
 - a) withdraw its change request; or
 - b) modify its change request, in which case the procedures set forth above will apply to the modified change request.

If the State requests or directs the Contractor to perform any activities that are outside the scope of the Contractor's responsibilities under the Contract ("New Work"), the Contractor must notify the State promptly, and before commencing performance of the requested activities, that it believes the requested activities are New Work. If the Contractor fails to so notify the State prior to commencing performance of the requested activities, any such activities performed before notice is given by the Contractor shall be conclusively considered to be In-scope Services, not New Work.

If the State requests or directs the Contractor to perform any services or functions that are consistent with and similar to the services being provided by the Contractor under the Contract, but which the Contractor reasonably and in good faith believes are not included within the scope of the Contractor's responsibilities and charges as set forth in the Contract, then prior to performing such services or function, the Contractor shall promptly notify the State in writing that it considers the services or function to be an "Additional Service" for which the Contractor should receive additional compensation. If the Contractor does not so notify the State, the Contractor shall have no right to claim thereafter that it is entitled to additional compensation for performing such services or functions. If the Contractor does so notify the State, then such a service or function shall be governed by the change request procedure set forth in the preceding paragraph.

IN THE EVENT PRICES ARE NOT ACCEPTABLE TO THE STATE, THE CONTRACT SHALL BE SUBJECT TO COMPETITIVE BIDDING BASED UPON THE NEW SPECIFICATIONS.

I-BB NOTICES

Any notice given to a party under this Contract must be written and shall be deemed effective, if addressed to such party as addressed below upon (i) delivery, if hand delivered; (ii) receipt of a confirmed transmission by facsimile if a copy of the notice is sent by another means specified in this section; (iii) the third (3rd) Business Day after being sent by U.S. mail, postage pre-paid; or (iv) the next Business Day after being sent by a nationally recognized overnight express courier with a reliable tracking system.

For the Contractor: Michael Kelliher, Public Sector
Bull HN Information Systems Inc.
300 Concord Road
Billerica, MA 01821

For the State: Lisa Arnott, Buyer Specialist
Technology and Professional Services Division

DMB, Office of Purchasing
2nd Floor, Mason Building
P.O. Box 30026
Lansing, MI 48909

Either party may change its address where notices are to be sent giving written notice in accordance with this section.

I-CC ENTIRE AGREEMENT

The contents of this document and the vendor's proposal will become contractual obligations, if a Contract ensues. Failure of the successful bidder to accept these obligations may result in cancellation of the award.

The Contract resulting from this RFP shall represent the entire agreement between the parties and supersedes all proposals or other prior agreements, oral or written, and all other communications between the parties relating to this subject.

I-DD NO WAIVER OF DEFAULT

The failure of a party to insist upon strict adherence to any term of a Contract resulting from this RFP shall not be considered a waiver or deprive the party of the right thereafter to insist upon strict adherence to that term, or any other term, of the Contract.

I-EE SEVERABILITY

Each provision of the Contract shall be deemed to be severable from all other provisions of the Contract and, if one or more of the provisions of the Contract shall be declared invalid, the remaining provisions of the Contract shall remain in full force and effect.

I-FF HEADINGS

Captions and headings used in the Contract are for information and organization purposes. Captions and headings, including inaccurate references, do not, in any way, define or limit the requirements or terms and conditions of this Contract.

I-GG RELATIONSHIP OF THE PARTIES

The relationship between the State and the Contractor is that of client and independent Contractor. No agent, employee, or servant of the Contractor or any of its subcontractors shall be or shall be deemed to be an employee, agent, or servant of the State for any reason. The Contractor will be solely and entirely responsible for its acts and the acts of its agents, employees, servants and subcontractors during the performance of this Contract.

I-HH UNFAIR LABOR PRACTICES

Pursuant to 1980 Public Act 278, as amended, MCL 423.231, et seq, the State shall not award a Contract or subcontract to an employer whose name appears in the current register of employers failing to correct an unfair labor practice compiled pursuant to section 2 of the Act. This information is compiled by the United States National Labor Relations Board.

A Contractor of the State, in relation to the Contract, shall not enter into a Contract with a subcontractor, manufacturer, or supplier whose name appears in this register. Pursuant to section 4 of 1980 Public Act 278, MCL 423.324, the State may void any Contract if, subsequent to award of the Contract, the name of the Contractor as an employer, or the name of the subcontractor, manufacturer or supplier of the Contractor appears in the register.

I-II SURVIVOR

Any provisions of the Contract that impose continuing obligations on the parties including, but not limited to the Contractor's indemnity and other obligations shall survive the expiration or cancellation of this Contract for any reason.

I-JJ GOVERNING LAW

This Contract shall in all respects be governed by, and construed in accordance with, the laws of the State of Michigan. Any dispute arising herein shall be resolved in the State of Michigan.

I-KK YEAR 2000 SOFTWARE COMPLIANCE

The vendor warrants that all software for which the vendor either sells or licenses to the State of Michigan and used by the State prior to, during or after the calendar year 2000, includes or shall include, at no added cost to the State, design and performance so the State shall not experience software abnormality and/or the generation of incorrect results from the software, due to date oriented processing, in the operation of the business of the State of Michigan.

The software design, to insure year 2000 compatibility, shall include, but is not limited to: data structures (databases, data files, etc.) that provide 4-digit date century; stored data that contain date century recognition, including, but not limited to, data stored in databases and hardware device internal system dates; calculations and program logic (e.g., sort algorithms, calendar generation, event recognition, and all processing actions that use or produce date values) that accommodates same century and multi-century formulas and date values; interfaces that supply data to and receive data from other systems or organizations that prevent non-compliant dates and data from entering any State system; user interfaces (i.e., screens, reports, etc.) that accurately show 4 digit years; and assurance that the year 2000 shall be correctly treated as a leap year within all calculation and calendar logic.

I-LL CONTRACT DISTRIBUTION

The Office of Purchasing shall retain the sole right of Contract distribution to all State agencies and local units of government unless other arrangements are authorized by the Office of Purchasing.

I-MM TRANSITION ASSISTANCE

If this Contract is not renewed at the end of this term, or is canceled prior to its expiration, for any reason, the Contractor must provide for up to 90 days after the expiration or cancellation of this Contract, all reasonable transition assistance requested by the State, to allow for the expired or canceled portion of the Services to continue without interruption or adverse effect, and to facilitate the orderly transfer of such services to the State or its designees. Such transition assistance will be deemed by the parties to be governed by the terms and conditions of this Contract, (notwithstanding this expiration or cancellation) except for those Contract terms or conditions that do not reasonably apply to such transition assistance. The State shall pay the Contractor for any resources utilized in performing such transition assistance at the most current rates provided by the Contract for Contract performance. If the State cancels this Contract for cause, then the State will be entitled to off set the cost of paying the Contractor for the additional resources the Contractor utilized in providing transition assistance with any damages the State may have otherwise accrued as a result of said cancellation.

I-NN DISCLOSURE OF LITIGATION

1. The Contractor shall notify the State in its bid proposal, if it, or any of its subcontractors, or their officers, directors, or key personnel under this Contract, have ever been convicted of a felony, or any crime involving moral turpitude, including, but not limited to fraud, misappropriation or deception. Contractor shall promptly notify the State of any criminal litigation, investigations or proceeding which may have arisen or may arise involving the Contractor or any of the Contractor's subcontractor, or any of the foregoing entities' then current officers or directors during the term of this Contract and three years thereafter.
2. The Contractor shall notify the State in its bid proposal, and promptly thereafter as otherwise applicable, of any civil litigation, arbitration, proceeding, or judgments that may have arisen against it or its

subcontractors during the five years proceeding its bid proposal, or which may occur during the term of this Contract or three years thereafter, which involve (1) products or services similar to those provided to the State under this Contract and which either involve a claim in excess of \$250,000 or which otherwise may affect the viability or financial stability of the Contractor, or (2) a claim or written allegation of fraud by the Contractor or any subcontractor hereunder, arising out of their business activities, or (3) a claim or written allegation that the Contractor or any subcontractor hereunder violated any federal, state or local statute, regulation or ordinance. Multiple lawsuits and or judgments against the Contractor or subcontractor, in any an amount less than \$250,000 shall be disclosed to the State to the extent they affect the financial solvency and integrity of the Contractor or subcontractor.

3. All notices under subsection 1 and 2 herein shall be provided in writing to the State within fifteen business days after the Contractor learns about any such criminal or civil investigations and within fifteen days after the commencement of any proceeding, litigation, or arbitration, as otherwise applicable. Details of settlements which are prevented from disclosure by the terms of the settlement shall be annotated as such. Semi-annually, during the term of the Contract, and thereafter for three years, Contractor shall certify that it is in compliance with this Section. Contractor may rely on similar good faith certifications of its subcontractors, which certifications shall be available for inspection at the option of the State.
4. Assurances - In the event that such investigation, litigation, arbitration or other proceedings disclosed to the State pursuant to this Section, or of which the State otherwise becomes aware, during the term of this Contract, causes the State to be reasonably concerned about:
 - a) the ability of the Contractor or its subcontractor to continue to perform this Contract in accordance with its terms and conditions, or
 - b) whether the Contractor or its subcontractor in performing services is engaged in conduct which is similar in nature to conduct alleged in such investigation, litigation, arbitration or other proceedings, which conduct would constitute a breach of this Contract or violation of Michigan or Federal law, regulation or public policy, then the Contractor shall be required to provide the State all reasonable assurances requested by the State to demonstrate that: (a) the Contractor or its subcontractors hereunder will be able to continue to perform this Contract in accordance with its terms and conditions, (b) the Contractor or its subcontractors will not engage in conduct in performing services under this Contract which is similar in nature to the conduct alleged in any such litigation, arbitration or other proceedings.
5. The Contractor's failure to fully and timely comply with the terms of this section, including providing reasonable assurances satisfactory to the State, may constitute a material breach of this Contract.

I-00 STOP WORK

1. The State may, at any time, by written stop work order to the Contractor, require that the Contractor stop all, or any part, of the work called for by this Contract for a period of up to 90 days after the stop work order is delivered to the Contractor, and for any further period to which the parties may agree. The stop work order shall be specifically identified as such and shall indicate that it is issued under this section. Upon receipt of the stop work order, the Contractor shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of costs allocable to the work covered by the stop work order during the period of work stoppage. Within the period of the stop work order, the State shall either:
 - a) Cancel the stop work order; or
 - b) Cancel the work covered by the stop work order as provided in the cancellation section of this Contract.

2. If a stop work order issued under this section is canceled or the period of the stop work order or any extension thereof expires, the Contractor shall resume work. The State shall make an equitable adjustment in the delivery schedule, the contract price, or both, and the Contract shall be modified, in writing, accordingly, if:
 - a) The stop work order results in an increase in the time required for, or in the Contractor's costs properly allocable to the performance of any part of this Contract; and
 - b) The Contractor asserts its right to an equitable adjustment within 30 days after the end of the period of work stoppage; provided, that if the State decides the facts justify the action, the State may receive and act upon a proposal submitted at any time before final payment under this Contract.
3. If the stop work order is not canceled and the work covered by the stop work order is canceled for reasons other than material breach, the State shall allow reasonable costs resulting from the stop work order in arriving at the cancellation settlement.
4. If a stop work order is not canceled and the work covered by the stop work order is canceled for material breach, the State shall not allow, by equitable adjustment or otherwise, reasonable costs resulting from the stop work order.
5. An appropriate equitable adjustment may be made in any related contract of the Contractor that provides for adjustment and is affected by any stop work order under this section. The State shall not be liable to the Contractor for loss of profits because of a stop work order issued under this section.

I-PP STATEWIDE CONTRACTS

If the contract is for the use of more than one agency and if the goods or services provided under the contract do not meet the form, function and utility required by an agency, that agency may, subject to state purchasing policies, procure the goods or services from another source.

SECTION II

WORK STATEMENT

II-A BACKGROUND/PROBLEM STATEMENT

The MDCH Medical Services Administration (MSA) is the single state agency charged with the responsibility of administering the Medicaid program. The Department is responsible for assuring that needy Michigan residents have the opportunity to request and receive Medicaid services through an eligibility process and that providers of direct services will be reimbursed for services received by Medicaid recipients. The State's Medicaid program is funded by state and federal dollars that are used to pay for health care services for individuals or families with low income and limited resources. The federal government pays for the largest share of Medicaid costs, with Michigan's Medicaid program receiving various levels of federal reimbursement for different services and functions.

The MDCH administers the Medicaid program through a variety of contracts and Medicaid waivers, as well as directly employing Department staff. The program has recently transitioned from a centrally administered, primarily fee-for-service (FFS) program to a more fully capitated, decentralized, HMO-based program where Medicaid enrollees in all Michigan counties currently have at least two Qualified Health Plans (QHPs) from which to choose. Over 700,000 of Michigan's 1.1 million Medicaid beneficiaries are enrolled in QHPs. The Medicaid program also includes two managed health care programs designed specifically to meet the needs of Children Special Health Care Services (CSHCS) beneficiaries. These Special Health Plans (SHPs) are responsible for arranging, coordinating and providing quality health care services for their members. There are currently approximately 2000 children enrolled in these SHPs. It is expected that these numbers will increase as the SHPs expand into additional counties.

MDCH has a relational database, which includes five years of FFS claims. The database has been expanded to include managed care encounter data. At this time, two years of encounter data is included in the warehouse. Ultimately it will house five years of encounter data as well. Users currently access detailed data via the State's WAN and MDCH's local area networks using Hummingbird BI/Query, SPSS 10, Paradox 8, Microsoft Access 2000, Microsoft Excel and Query Man. Additionally, the Department expects to use Oracle in the future. The Department also has a preprogrammed set of reports to support its Program Investigation functions. MDCH wishes to acquire an Executive Information System (EIS)/Decision Support System (DSS) to more easily access both summary and detailed data. The EIS/DSS must use the State's database as its data source and its configuration must not prevent the State from using current software tools for accessing the State's database, although MDCH expects the contractor to offer superior software alternatives. The State requires that the EIS/DSS be installed and operational within six months of award of contract for managed care encounter data associated with comprehensive health plans. The data associated with FFS and the CSHCS managed care program data can be implemented subsequently. It is anticipated at this time that FFS will be implemented no later than nine to twelve months after the award of contract, and CSHCS managed care program approximately six months after the date when CSHCS managed care data collection starts, which is anticipated to occur sometime in the 2001 fiscal year.

The MDCH also collects data on health status and the delivery of other services to vulnerable populations that substantially overlap with the Medicaid eligible population. While none of these data currently reside on the data warehouse, they represent additional sources of information that, if integrated and accessible to the EIS/DSS, would provide a more comprehensive picture of service recipients across the continuum of care. The State expects the Contractor to develop the tools and processes to augment the data warehouse with data from the Women, Infants, and Children Supplemental Nutrition Program (WIC), the Michigan Childhood Immunization Registry (MCIR), the Beneficiary and Provider Contact Tracking System, Vital Records (birth and death records), Community Mental Health (encounter data), the Maternal and Child Health System including Maternal and Infant Health Advocacy Services Program (MIHAS), the Pregnancy Risk Assessment Monitoring System (PRAMS), and Lead Screening. The Contractor will specify the data warehouse structures to house these data sets, develop tools to load these data into the data warehouse, and develop efficient auto-linking processes to integrate the data. The State requires that these data be loaded into the data warehouse and linked within one year of the award of the contract.

In July 1994, the State of Michigan contracted with Bull Worldwide Information Systems (Bull) to develop and implement a data warehouse of fee-for-service data, where users have access to detailed data by using Hummingbird's BI/Query tool for ad-hoc reporting and analysis. This functionality involving the State's data warehouse is already operational.

In the summer of 1998, the State subsequently contracted with Bull to add managed care encounter data to the data warehouse, a project referred to as the "Managed Care Encounter System" or MCES. In November of 1998, the qualified health plan (QHP) test data assessment phase was initiated. During this phase, each QHP was required to submit a representative data set that included all types of data (hospital/facility, professional, long-term care, drug, vision, and dental, as appropriate). As data sets were submitted, outside contractor staff worked with each QHP to discuss identified issues and corrections that each QHP needed to make. Currently, all 30 QHPs have been certified for transition to production, with approximately 720,000 Medicaid beneficiaries in managed care.

The Michigan Department of Community Health must implement a strategy for administrators, program managers, program analysts, researchers, policy makers, and knowledge managers to access, manipulate, and report Medicaid program data quickly and easily. This strategy provides for the implementation of a Medicaid EIS/DSS that includes:

1. Standard templates for generating a broad scope of information typically sought by Medicaid agencies to assist in program management and decision making.
2. Drill-down capability for easily and efficiently analyzing information to supplement queries and reports provided as standard templates.
3. Presenting program information in an intuitive and meaningful format.

An integral part of the strategy will be the development and implementation of policies and procedures that address security and confidentiality issues relating to data access. These policies and procedures must address users within MDCH, as well as users outside of the Department.

The MDCH must implement the EIS/DSS application(s) as quickly as reasonably possible. Its strategy, therefore, considers the potential for a phased implementation approach to quickly address its needs to report and analyze managed care information. Although eventually MDCH will require that both managed care and FFS summary and detailed data be accessed via the EIS/DSS application(s), the predominant need initially is to access key indicators of health plan and managed care program performance. The Contractor must make this information available in the most efficient manner.

Unlike the qualified health plans in the Comprehensive Health Plan program, the State has not fully developed its requirements for CSCHS managed care. CSCHS managed care should be implemented after managed care data for comprehensive health plans is operational using the EIS/DSS application(s). The EIS/DSS application(s) must be able to handle managed care and FFS data; therefore, the Contractor's bid response must also include an implementation plan to address these other types of data.

Data sets not yet loaded to the data warehouse exist on a number of different platforms ranging from Bull 9000 Mainframe to Sun Server based Oracle databases. The Contractor's bid response should include a general methodology for loading new databases into the data warehouse, linking them to Medicaid eligibility and encounter data, and integrating them for access and analysis by the EIS/DSS applications. Further, the Contractor's bid response should include specific implementation plans for loading, linking, and integrating data from the WIC, MCIR, Vital Records, Community Mental Health, Maternal and Child Health System, and Beneficiary and Provider Contact Tracking System. Descriptions of the WIC, MCIR, Beneficiary and Provider Contact Tracking System, MIHAS, PRAMS and Lead Screening databases are available in the MDCH Bidder's Library. Descriptions of the Community Mental Health and Vital Records databases will be available at a later date.

The Contractor is to recommend an appropriate configuration for the EIS/DSS application(s) within the State's environment. As the State has made a major investment in the design, development, and implementation of a data warehouse and its related infrastructure, it must leverage that investment going forward. Specifically, the State's data warehouse currently runs on NCR 5100M Teradata equipment at MIPC. The current equipment is described in *Appendix 1 – Data Warehouse Description*. While MDCH is open to alternative configurations for storage of summary data, the MDCH's requirement is that no duplication of detailed data be kept. Instead, the bidder must make a recommendation in which detailed data is accessed directly from the data warehouse

II-B OBJECTIVES

With respect to the EIS/DSS requirements, MDCH requires proposals that provide a well thought out, integrated, comprehensive, and technically sound business solution. Any bidder should propose what they believe to be the best overall approach to substantially meet the objectives/requirements of this ITB. If a bidder's response does not, or cannot, meet in whole or in part, one or more of the objectives/requirements for one or more of the system(s), the proposal must expressly identify the extent to which this applies and the extent to which the proposed system(s) provide, if any, alternative (i.e., substitute) capabilities, performance, and features that are, in whole or in part, reasonably comparable to, or better than, the objectives/requirements that the proposal does not specifically meet. The State reserves the right to evaluate the acceptability and suitability of such alternatives (substitutions), and at its sole discretion, to accept or reject any such proposed alternatives.

General Objectives:

The MDCH requires a contractor provide, install, and maintain an integrated Executive Information System (EIS) and Decision Support System (DSS) commercially available software package with demonstrated performance for other clients. Through the EIS/DSS package, MDCH users must have the capacity to support state and federal reporting needs through a combination of pre-defined and ad-hoc queries and reports. The EIS/DSS design and operational implementation must provide the capabilities to meet performance requirements of this ITB for all pre-defined queries and reports. The proposed solution must provide quick retrieval and analysis of information on-line without the need for computer programming.

The Department requires the Contractor to provide implementation plans, tools, and processes to load additional databases to the data warehouse, link them to the existing Medicaid eligibility and encounter databases, and integrate them into the EIS/DSS. The contractor will also develop a general process for evaluating, preparing, loading, linking and integrating new data sets to enable the Department to continue to expand the utility of the system. Additionally, the contractor will create specific implementation plans for loading, linking and integrating data from the WIC, MCIR, Vital Records, Community Mental Health, Beneficiary and Provider Contact Tracking System, and Maternal and Child Health System including MIHAS, PRAMS, and Lead Screening.

The Contractor is responsible for providing all necessary software, services (data enhancements including operations, training and support, and help desk activities) documentation and materials, as well as any necessary software licenses, to meet all ITB requirements, including but not limited to the objectives and requirements associated with the EIS/DSS software application(s), perform all tasks identified in ITB, and adhere to performance standards.

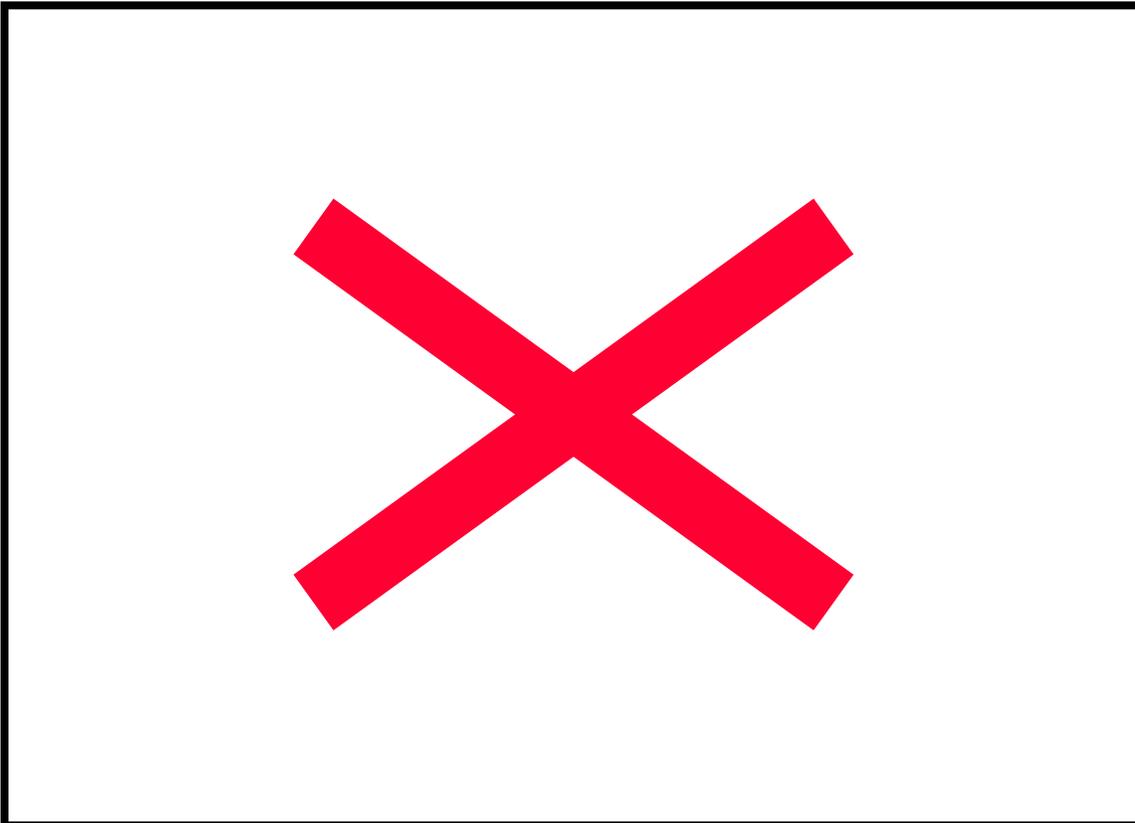
Development and implementation of policies and procedures addressing security and confidentiality issues relating to data access will be an essential part of this project. The Contractor is responsible for working with MDCH in the development and implementation of this framework.

The MDCH will acquire and maintain the equipment that is required to operate the chosen EIS/DSS. The Contractor is responsible for delineating the specifications of the equipment that will be required to support the EIS/DSS.

The success of an EIS/DSS is reliant upon accurate, complete and reliable data. Data quality processes must be established and maintained. As data sources and data source systems change and new data requirements emerge, adjustments in these processes must be instituted.

The contractor is responsible for providing professional analytical and data management consulting support to ensure maintenance of the data quality process. The contractor is also responsible for providing training on analysis of encounter data.

The typical access by tool set expected by the State is shown as follows:



The EIS shall be an easy-to-use, management oriented, system that presents summary data to users in a clear and concise manner, utilizing charts, graphs, and maps where appropriate. The system shall allow users to select the type and level of information to be presented and allow them to jump to new areas or subsections easily.

The DSS shall be a flexible and powerful system for ad-hoc navigation, query capabilities, and analytical capabilities. The purpose of the DSS is to support analysis for maximizing management planning and control; identify, explore, and analytically investigate access, use, cost, treatment patterns, and quality of MDCH-funded health care using internally generated and external (where available) normative benchmarks. Specifically it must include (a) access to summary and enhanced data for executives and non-technical users to use standard data reporting and adjustment methodologies using guided drill-down capabilities and (b) detailed raw data for specialists to perform in-depth analysis:

The State considers implementation of the EIS/DSS to be a single integrated project. The Contractor is ultimately responsible for all aspects of the project, including software, services, documentation and materials, as well as any software licenses (one-time or renewable). (The Contractor is responsible for notifying the State when licenses are to be renewed, if applicable.) Services shall also include, but not be limited to, operations, training and support, and help desk activities associated with the EIS/DSS application(s).

Specific Requirements:

EIS/DSS Application(s)

1. The EIS and DSS software may be provided as one integrated application or in separate applications accessing the same open database in a manner seamless to users. Whether the EIS and DSS are provided through a single integrated application or in separate applications, the Contractor shall meet all ITB requirements.
2. The EIS/DSS application(s) shall provide both executive and standard query reporting processes that also permits the DSS user to create complex component sets using the principles of mathematical sets, but does not require detailed understanding of mathematical operators or standard query language (SQL) semantics. The reporting capabilities shall include both population and episodic reporting of service and utilization data.
3. The EIS/DSS shall support a menu driven system(s) that provides on-line accessibility for users to analyze the contents of the State's very large data warehouse of detailed data and display results of both summary, enhanced, and detailed data via graphical and tabular reports using statistical techniques and functions. It must also allow progressive pattern analysis of summary, enhanced, and detailed data where any valid user can drill down from any summary or enhanced level to the detailed data level, if needed.
4. See *Appendix 2-Key Features* - The Contractor's approach shall take full advantage of the Microsoft Windows 95™ and later, Windows' compatible graphical user interface. It shall facilitate mouse-driven point-and-click and drag-and-drop interactive user navigation. It shall also provide high resolution on-screen multi-color displays of information (reports, text, tables, graphs, charts, and maps) and flexible capability for users to print such information in print preview or hard-copy format (black/white and color) using high-resolution laser printers attached to MDCH's LAN(s). The Contractor is to provide the minimum and suggested workstation configuration(s) for running the EIS/DSS application(s), specifying processor speed, memory, disk space, etc. The Contractor shall provide a thin-client based EIS/DSS application as opposed to a client/server which is thick-client based. This requirement for a browser based thin client application is to enable the State to minimize the extent to which software will need to be installed and/or updated on individual workstations. These features are also included in the Key Features Appendix.
5. The EIS/DSS application shall utilize the MDCH network user login as the first level of security. In order to maintain the highest degree of system security, a separate and additional login at the application level is also required.
6. So that the system administrator can keep users informed about system updates, the EIS/DSS application will have the capability to display "news" messages to users when they log onto the system.
7. The EIS/DSS shall maintain access and use logs. These logs should record when users log on or off the system, as well as queries performed and reports generated.
8. The EIS/DSS application shall control access by a series of user "roles" and provide a system administration interface that will allow MDCH staff to control user access (add, delete, modify users and groups) to application features and data sets.
9. The EIS/DSS application shall generate system management and utilization reports. These reports will provide summary and detail data on users/groups, as well as system utilization.
10. The EIS/DSS application(s) shall allow menu-driven access to pre-defined queries and reports using pre-established data groupings, as well as ad-hoc analyses. Users shall have the choice to perform work in foreground, background, or deferred processing based on the timeliness and quantity of data involved. The application(s) shall notify an individual user who makes a request for background or deferred processing when it has been completed. If the user is not on-line at the completion of processing, a message should be sent via e-mail notifying them when the process is complete. The State currently uses GroupWise.

11. The EIS/DSS application(s) shall provide a range of chart types for presentation (including stacked and side-by-side bar, area, line, pie, column, scatter, radar, combination of types, and other commonly-used types) using linear or logarithmic scales. These charts shall be selectable and easily manipulated by users (e.g. sorting, moving, deleting columns or rows, or combining columns, rows, or fields). Formatting of these graphs and charts shall meet the following requirements:
 - a) Chart attributes, such as orientation, legends, tic marks, labels, titles, intervals, scaling, and comments shall be easily customized.
 - b) The ability to manipulate font styles and sizes of any text or numeric information shall be allowed.
 - c) The ability to include shadowing, mirroring, highlighting, or axis flipping shall also be allowed.
 - d) Axis annotations (labels and numbers) shall be outside the chart lines, yet shall be large and clear enough to be read easily, with all data sets and sub-sets also labeled.
 - e) Axis scales shall be easily interpolated.
 - f) Axis scaling shall permit the same scaling on multiple charts for ease of comparison.

This capability must be an integrated part of the EIS/DSS software.

12. The EIS/DSS application(s) shall provide mapping capabilities for analysis of demographics by presentation of data on geographical maps and allow users to add titles, legends, labels, and comments to maps. It should also provide the ability to easily create groupings of counties into regions. The application(s) should also contain a symbol library and provide prepared map sets for such data as population density by zip code and census tract. This application must be an integrated part of the EIS/DSS software.
13. The EIS/DSS application(s) shall provide users with flexible features for statistical and econometric analysis of information and the projection of trends.
14. The EIS/DSS application(s) shall also provide context sensitive help to users, with the display of information immediately applicable to where users are in the application(s).
15. The EIS/DSS application(s) shall provide security from inappropriate access to, or use of, the application(s) through logon, password, and/or individual profile capabilities. When signing on, a user shall use a single logon, single password combination to define the level of user access and define any restrictions to data contained in the integrated health care database.
16. Information shall be displayed in clear English, with minimal use of abbreviations, such that major information shall be accessible, at the user's option, through applicable code or numerical identifier and by its full English name or a subset of its name.
17. The EIS/DSS application(s) shall be transparently accessible to MDCH staff through the State's wide area network (WAN) and MDCH's local area networks (LANs).
18. The EIS/DSS application(s) shall use industry-standard data interfaces. The applications(s) must be able to off load analysis results, as well as any graphics created, into Microsoft PowerPoint, Excel and/or Word, as well as off load data tables in standard comma delimited and .dbf file formats.
19. The EIS/DSS shall be fully implemented, rigorously tested, properly installed, in complete and error-free operation. It shall be properly maintained throughout the remainder of the contract, including any contract extensions authorized by the State.
20. See *Appendix 2 - Key Features* for a discussion of selected key EIS/DSS features and characteristics desired by MDCH management and staff.
21. See *Appendix 3 - Existing Plan Monitoring Reports* for listing of measures that MDCH management and staff have identified as potential analyses to be performed for managed care. Examples of the types of reports and analyses that MDCH would like included among the standard EIS/DSS reports and analyses are:

- a) Access measures, which include, but are not limited to, rate of maternal support services, infant support services, family planning services, well child EPSDT (early & periodic screening, diagnosis, and treatment) services, outpatient visits, and rate of use and length of stay in a nursing home setting.
 - b) Quality measures, which include, but are not limited to, rate of ambulatory sensitive hospital admissions, rate of vaginal and cesarean deliveries, and percent of expected immunizations and well child visits for different age groups.
 - c) Cost/use measures, which include, but are not limited to, adjusted annual capitation rate to bid price index per plan or plan capitation enrollment index, derived cost of services ratio, and quarterly inpatient use profile.
 - d) Services and expenditures by provider, provider type, specialty, beneficiary aid code, age, sex, county, and plan.
 - e) Utilization reports display calculations for per member per month (PMPM), per member per year (PMPY), and per 1,000 members per month, and annualized each population, group and plan.
 - f) Cost/benefit analyses of specific health care services.
 - g) Geographic analysis of expenditures, beneficiary participation, and provider participation.
22. The Contractor shall provide an integrated and comprehensive database that holds 60 months of historical service data at the FFS claim and encounter summary level, and the equipment must be scalable to 150% of the 5-year level without hardware swap out.
23. The EIS/DSS application(s), with access to managed care data, shall be successfully installed within six months of the contract award, with ongoing operations, support, and help desk activities available at the same time. Access to FFS data should be provided no later than nine to twelve months after the award of the Contract.
24. MDCH currently has approximately 200 BI/Query users. The Department will work with the selected vendor to determine the number of staff who should have access to the data via the EIS/DSS and the corresponding degrees of access. User training will be provided just prior to the installation of each application. Additionally, the bidder is asked to provide a cost proposal for subsequent training for groups of 15 people.
25. The implementation of the EIS/DSS application must follow State policy and procedures. Specifically State policy, as prescribed in Administrative Manual Procedure 10.02.06, must be followed when a project includes the design, development or implementation of a computerized system. Also, documentation requirements, as prescribed in Administrative Guide Procedure 1310.06 and 1310.07, must be followed. (See DMB website – www.state.mi.us/dmb/oas).
26. The EIS/DSS software shall be Year 2000 compliant, as discussed in greater detail in ITB *Section II-I Software Performance*.

EIS Application

27. In general terms, the EIS application shall provide the following:
- a) Flexibility, ease, and speed of use to MDCH’s users, including:

It shall be easy for users to use without the need for extensive training to access information in pre-defined report formats. The EIS shall be designed in such a manner that most users will be able to effectively and efficiently use its functions with no more than 4 hours of specialized training for high-level management users and 8 hours for other staff.

No user programming shall be necessary to use the EIS or any of its capabilities.

The EIS shall provide information in aggregate, summary, comparative and sub-aggregated form (i.e., not data in record level detail as is provided through the DSS) that facilitates immediate user visualization and understanding without the need for separate analysis. The structure should be predetermined but allow for further pattern analysis capabilities.

All functions shall be available to users on-line. The response time for screen display of any preformatted report, following the last keystroke, shall take between 1-7 seconds for response time approximately 95% of time. (The Contractor should specify expected response time for their application(s) and be able to demonstrate it in an environment similar to the State's.) The use of deferred overnight or batch processing shall be at the user's option.

The EIS shall provide functions to allow reports to be directed to screen, printer, or file.

b) Ability to easily detect and analyze patterns

The EIS shall provide non-technical end-users with an array of powerful and flexible capabilities for users to easily detect, analyze, and report patterns and trends, and to identify and test assumptions about MDCH expenditures, utilization, program operation, outcomes, access and quality of care, including performance expectations.

These patterns shall include increasing and decreasing trends, rates of change, transitions through important thresholds (e.g., actual access and quality compared to published health goals or other standards), clustering and grouping, and correlation between variables. This includes the ability for users to easily look for deviations from norms and expectations.

The EIS shall provide a broad set of capabilities for time series analysis and trend reporting.

c) Ability to have multiple views of information

The EIS shall provide users with the ability to view information from multiple perspectives to maximize users' understanding and learning.

This shall include flexible and moderate drill-down capabilities (not to record level detail as is provided through the DSS software) and well-organized viewing options that maximize access to meaningful information and the presentation of information in meaningful formats, including charts, tables, and maps.

d) Standard reports and analyses

The EIS shall provide monthly, quarterly, year-to-date, and annual total reporting of statistical summaries by plan, county, and state, which array service data and cost data as available. These reports shall include, where appropriate, aggregate summaries and related percentages. All standard reports shall be available on-line and in printer form using industry-standard formats for use in other software programs, with graphical output an option for all report types.

The algorithms for all pre-defined reports and queries shall be available to allow informal comparisons between the EIS standard reports and the State's BI-Query reports and queries.

MDCH shall reserve the right to develop additional standard reports to be priced when defined.

The EIS shall incorporate statistical measures, including sum, average, mean, variance, standard deviation, coefficient of variation, minimum, maximum, and range of values, as well as the ability to use duplicated or unduplicated counts of eligibles, beneficiaries, providers, services, claims, encounter volumes, or other appropriate counts.

e) Access to information

While the DSS' focus is on data analysis and decision-making, the EIS will primarily focus on information presentation. The EIS shall support an on-line, interactive interface without the need for user programming for (1) drilling down from summary to sub-aggregated information, (2) rolling up details and sub-aggregate information to summary totals, (3) cross tabulations, and (4) tabular and graphical presentations of information across multiple dimensions.

The EIS shall display data by either date of service and date of payment, based on a user's choice.

DSS Application

28. In general terms, the DSS application shall meet all of the EIS objectives discussed in Paragraph 27 immediately above, unless changed in the section that follows:

a) Flexibility, ease, and speed of use to MDCH's users, including:

The DSS shall be designed in such a manner that most users will be able to effectively and efficiently use its functions with no more than 16 hours of specialized training.

The DSS shall provide users with the ability to quickly assimilate and compare aggregate and summary-level information, as well as detail service line data, and to quickly identify problems and opportunities. Response times shall be prompt and all functions shall be available to users on an on-line basis. The response time for screen display of any preformatted report, following the last keystroke, shall take between 1-20 seconds for response time approximately 95% of time. (The Contractor should specify expected response time for their application(s) and be able to demonstrate it in an environment similar to the State's.)

The DSS shall support English language queries for inquiry and data manipulation without requiring specific programming knowledge or the use of special languages such as SQL by users. Techniques like query by form or query by example can be used. The DSS shall, to the extent possible, provide the capability for users to use alternate inquiry languages through SQL interfaces for data access. MDCH will work with the Contractor to determine the best alternative(s) to meet this need.

The DSS shall allow calculation of data by any element or combination of elements in the database.

The DSS shall provide sub-setting and norms generation capabilities on any element of the database.

The DSS shall provide the ability to save subsets, queries, and results in Microsoft Office 2000 for use in spreadsheets, word processing, and other database programs already used.

b) Ability to detect and analyze patterns

The DSS shall provide a sophisticated range of basic, intermediate, and advanced mathematical and statistical functions, including the ability for users to easily array and analyze time series data.

The DSS shall provide access to episodic as well as population data and allow the use of the full range of statistical and pattern analysis functions on such data.

c) Advanced modeling and analysis capabilities

The DSS shall provide advanced on-line data modeling and forecasting capability to perform "what if" scenarios. The Bidder should indicate the extent to which this capability exists within its base system. If the capability is delivered through a separate module or system, the bidder should indicate.

The DSS shall allow unrestricted calculations, consolidations, and/or data manipulations across data dimensions and different levels of aggregations without the need for users to program such actions. It shall also permit users to easily perform the same actions on different dimensions at any level of aggregation. It shall include individual-level analyses, as well as aggregated analyses.

The DSS shall provide hierarchical consolidation of data and advanced progressive pattern analysis capabilities for simplified and complex analysis, profiling, and reporting. It shall provide users with the ability to easily and interactively drill down to any level or combination of data within the State's integrated health database.

The DSS shall provide advanced capabilities to identify, explore, and analyze access, use, cost, treatment patterns, and quality of MDCH-funded health care using health statistical measures.

The DSS shall provide flexibility to access, define, link, and analyze sets and subsets of the State's integrated health care database (or any portion thereof based on any data variable), including the ability to create normative comparisons from any set or subset of the data.

The DSS shall allow for creation of reports that can subsequently be moved to a shared drive(s). It is the intent of MDCH that the shared drive(s) will serve as a library for selected DSS created reports.

The algorithms for all pre-formatted reports and queries shall be available to allow informal comparisons between the DSS standard reports and the State's BI-Query reports and queries.

MDCH expects to use the DSS capabilities to perform functions for both claims and encounters, separately, in total, as well as in comparison. Examples of functions that the DSS should enable MDCH staff to perform can be found in *Appendix 2 – Key Features*.

The DSS shall provide advanced capabilities for the identification, analysis, and reporting of utilization management problems and opportunities, cost and use problems, and medically unnecessary or inappropriate care.

II-C TASKS

The following is a preliminary listing of major tasks the Contractor must engage in for the life of the project. The Contractor is not, however, constrained from recommending additional tasks, based on experience with similar engagements, to better accomplish the stated objectives of the project.

1. The Contractor will meet initially with key management and line staff from the Medical Services Administration (MSA), any vendors named by MDCH, MDCH MIS, DMB, and other State units regarding the project's background and objectives, status of State's integrated health care database, and Contractor and State project responsibilities.
2. The Contractor will develop an overall approach and work plan that lists and describes all work steps and activities that must be developed as a basis for executing and monitoring steps and activities as the project progresses. Essential to the process is the preparation of a sound approach to attain the project's objectives. The work plan must outline required tasks, schedules, and deliverables/work products to successfully complete this project. It must also specify when the Contractor will need MDCH staff and how much of their time will be required. The Contractor will develop a detailed work plan, using an automated project management tool (preferably Microsoft Project 98), to support the overall work plan. MDCH management requires prior approval of the approach and work plan before additional activities can be started. Progress against plan should be updated bi-weekly. Any modifications that the Contractor wishes to make requires prior approval by MDCH management.
3. The Contractor will propose a written change order control process to be used by the State to manage changes in Contractor deliverables or duties. The goal of this process will be to ensure that efforts, duties, and deliverables are in adherence to and in compliance with terms of the State's contracts with outside vendors.
4. The Contractor will ensure that any enhancements and bug fixes meet and do not conflict with state and federal reporting requirements.
5. The Contractor shall be fully responsible for the proper planning and implementation of the EIS/DSS application(s) and any required software, services, documentation and materials, as well as any necessary software licenses. The Contractor is to recommend all necessary activities for successfully implementing EIS/DSS, which shall minimally include the following general tasks:
 - a) Project definition and implementation planning
 - b) Requirements analysis and functional specifications
 - c) System specifications and design, including working with MDCH MIS and its vendors to identify data warehouse modifications, if any, necessary to support the EIS/DSS application(s), as well as delineation of the specifications for the equipment that will support the EIS/DSS.
 - d) Programming and system testing
 - e) Data conversion
 - f) System and user documentation
 - g) System and user training
 - EIS use for both executives and other non-technical users
 - DSS use for technical users

- h) Acceptance testing
 - i) Installation
 - j) Ongoing maintenance and support
 - k) Post-implementation review, testing, and refinement
6. The Contractor will collaborate with key staff identified by MDCH in developing departmental policies and procedures that define how the Department grants access to the data. These policies and procedures will address users within MDCH, as well as users outside of the Department.
7. The Contractor is responsible for providing professional analytical and data management consulting support for DCH in determining appropriate analyses and uses of the data. The contractor should specify data quality improvement support activities that will be included, as well as amount of staff time that will be devoted to these activities.
8. The Contractor has overall responsibility for the timely and successful completion of each of the tasks and is responsible for clearly specifying and requesting information or data from the State, if appropriate, in such a manner as to not delay the schedule.
9. In developing its approach and work plan, the Contractor is to identify associated deliverables and work products, which minimally shall include:
- a) Quality assurance
 - Quality assurance plan (updated at each step of process)
 - Bi-weekly progress reports and schedule updates
 - b) Project definition and implementation planning
 - Detailed work plan
 - Bi-weekly progress reports and schedule updates
 - c) Requirements analysis and functional specifications
 - A description of the technical scope of the system with a requirements definition document, including a preliminary data dictionary
 - A listing of tangible and intangible benefits of the system
 - A description of system and user documentation
 - A detailed description of system hardware, software, and communications requirements
 - Data flow diagrams and descriptions of user requirements
 - d) System specifications and design
 - A summary of overall system
 - System schematics and a complete data dictionary
 - System specifications for system controls (e.g. security, backup, recovery, and restart)
 - System specifications for data requirements
 - System specifications for software, hardware, or telecommunications requirements
 - System structure charts
 - Recommended system design and programming alternatives (if any)
 - Preliminary system testing plan and acceptance testing support plan
 - Compliance with specifications for system performance (including response time, turnaround, and system throughput, timeliness of screen and printed output, refresh rates, accuracy of output, system availability, mean time between failures, mean time to repair)
 - e) Programming and system testing

- Detailed design documents and diagrams for the system and each newly-developed program within system (if any)
 - Detailed program documentation and source listings (including embedded comments when appropriate) for each newly-developed program within the system (if any)
 - An updated system testing plan (if necessary)
 - System testing results
 - Results in variance with the expected results or the ITB requirements or the Contractor's technical proposal, and detailed plans for the resolution and correction of these variances
 - Recommended acceptance testing support plan
 - Preliminary data conversion plans (if any)
- f) Data conversion
- An updated data conversion plan (if necessary)
 - Data conversion results
 - Results in variance with the expected results or the ITB requirements or the Contractor's technical proposal, and detailed plans for the resolution and correction of these variances
 - Preliminary installation plan
- g) System and user documentation
- On-line context sensitive help
 - A user's guide for the complete EIS/DSS system, which covers all features and capabilities of the system in which a high degree of detail, including examples, diagrams, explanations, and screen views (one Microsoft Word 2000 electronic copy, one Adobe Acrobat PDF electronic copy, and 50 paper copies)
 - An executive user's guide that is shorter and less detailed than the user's guide for the complete system, which covers most commonly used system features and capabilities that an MDCH executive would use (one Microsoft Word 2000 electronic copy, one Adobe Acrobat PDF electronic copy, and 10 paper copies)
 - Desk aide or a short document focusing on basic instructions to, for example, enter and exit the system, retrieve information and data, print reports, and save data (one Microsoft Word 2000 electronic copy, one Adobe Acrobat PDF electronic copy, and 50 paper copies)
 - An operator's guide for the complete system (one Microsoft Word 2000 electronic copy, one Adobe Acrobat PDF electronic copy, and 5 paper copies)
- h) System and user training
- Staff training plan whereby the Contractor is responsible for providing the following EIS/DSS training sessions at a facility located in the Lansing area. Cost for use of the facility will be the responsibility of the Contractor.
 - EIS use for both executives and other non-technical users for up to 50 users initially, with subsequent classes for groups of 15 users
 - DSS use for technical users for up to 250 users initially, with subsequent classes for groups of 15 users
- i) Installation
- An updated installation plan (if necessary)
 - A full, complete, and error-free installation of the system in conformance with the ITB and the Contractor's technical proposal
 - A comprehensive set of release, maintenance, and support procedures
 - An updated plan for security, backup, recovery, restart, and ongoing user support and training
- j) Post-implementation review, testing, and refinement

- Plans for completion of performance and reliability evaluation (PARE) process conducted during initial implementation
 - Assessment of the success and shortcomings of the system in terms of anticipated benefits and costs
 - Plans to address any system deficiencies and/or inefficiencies found subsequent to initial PARE process
 - Detailed plans for periodic reviews of system performance, functionality, and user satisfaction
- k) Ongoing support
- Day-to-day operations and support of software necessary for EIS/DSS application(s)
 - Detailed log of problems, upgrades, or other system changes
 - Technical help desk activities
10. In developing its approach and work plan, the Contractor is also to recommend the type and extent to which State testing activities are to be performed. It should minimally include for each type of testing activity the following:
- a) Objectives for each type of testing activity
 - b) Schedules and responsibilities for each testing activity
 - c) Availability of automated tools and recommendations on how they will be used during testing activities
 - d) Procedures and standards for planning and conducting tests
 - e) Procedures and standards for reporting of testing results
 - f) Criteria for determining a testing activity's successful completion
 - g) Sign-off procedures
11. The Contractor shall provide all necessary system and user training, as previously specified, which minimally addresses the following:
- a) Purpose
 - b) Advantages of utilizing the application(s)
 - c) Data quality, consistency, and integrity
 - d) Use of tool set
 - e) Use and understanding of data structure and associated models
 - f) Issues involved with data (for example, integrity, point in time, etc.)
 - g) Tools and procedures that may be used to access, analyze, and report data efficiently
 - h) How to identify required data
 - i) Development of queries and reports using graphics and other presentation options
 - j) Testing of query results
 - k) Techniques to determine correctness of results
12. The standard of performance for the PARE will be closely monitored during the acceptance period. The PARE will be based on a review/evaluation of the system requirements included in Section IIB/Specific Requirements/EIS/DSS Application(s)/EIS Application/DSS Application (pages 21-26).

The Performance and Reliability Evaluation will consist of two phases.

A. PHASE I

The first phase shall be comprised of a specification compliance review of the software listed on the ordering documents. Such software shall be checked for total compliance with all required specifications of the ITB. In the event that the State determines that any component or feature of the delivered software does not comply with the mandatory specifications of the ITB, the State shall so notify the Contractor, allowing 14 calendar days for rectification by the Contractor. Should the Contractor be unable to rectify the deficiency, the State reserves the right to cancel the ordering document. Should the software pass the specification conformance review, the software shall enter Phase II of the PARE.

B. PHASE II

(1) Determination of System Readiness

- a. Prior to the PARE, a committee of three persons will be formed to evaluate the system's performance on a daily basis. The committee will consist of one Contractor representative and two State personnel.
- b. The PARE process will begin six months after the contract award.

(2) During the PARE:

All rerun times resulting from equipment failure and preventive maintenance shall be excluded from the performance hours.

- a. All reconfiguration and reload time shall be excluded from the performance hours.
- b. If files are destroyed as a result of a problem with Contractor equipment and must be rebuilt, the time required to rebuild the files will be considered "down-time" for the system.
- c. If the Contractor requests access to failed equipment and the State refuses, then such maintenance will be deferred to a mutually agreeable time and the intervening time will not count against the PARE.
- d. A functional benchmark demonstration will be run for the PARE Committee to confirm that the installed system is capable of performing the same functions that were demonstrated. This run must be completed to the satisfaction of the PARE Committee.

C. STANDARD OF PERFORMANCE

- a. The performance period (a period of thirty consecutive calendar days) shall commence on the installation date, at which time the operational control becomes the responsibility of the State. It is not required that one thirty day period expire in order for another performance period to begin.
- b. If each component operates at an average level of effectiveness of 95 percent or more for a period of 30 consecutive days from the commencement date of the performance period, it shall be deemed to have met the State's standard of performance period. The State shall notify the Contractor in writing of the successful completion of the performance period. The average effectiveness level is a percentage figure determined by dividing the total operational use time by the total operational use time plus associated down-time. In addition, the software shall operate in substantial conformance with the Contractor's published specifications applicable to such software on the date of this Agreement. Software added by amendment to this contract shall operate in conformance with the Contractor's published specifications applicable to such software at the time of such amendment.
- c. During the successful performance period, all rerun time resulting from equipment failure and preventive maintenance time shall be excluded from the performance period hours. All reconfigurations and reload time shall be excluded from the performance hours. Equipment failure down-time shall be measured by those intervals during the performance period between the time that the Contractor is notified of equipment failure and the time that the Contractor is notified by the State that the equipment is in operating condition.

- d. During the successful performance period, a minimum of 80 hours of operational use time on each component will be required as a basis for computation of the average effectiveness level. However, in computing the effectiveness level, the actual number of operational use hours shall be used when in excess of the minimum stated above.
 - e. No more than one hour will accrue to the performance hours during any one wall clock hour.
 - f. Software shall not be accepted by the State and no charges will be paid by the State until the standard of performance is met.
 - g. When a system involves on-line machines that are remote to the basic installation, the required effectiveness level shall apply separately to each component in the system.
 - h. Promptly upon successful completion of the performance period, the State shall notify the Contractor in writing of acceptance of the software and authorize the monthly payments to begin on the first day of the successful performance period.
 - i. If successful completion of the performance period is not attained within 90 days of the installation date, the State shall have the option of terminating the Contract, or continuing the performance tests. The State's option to terminate the contract shall remain in effect until such time as a successful completion of the performance period is attained. The Contractor shall be liable for all outbound preparation and shipping costs for contracted items returned under this clause.
 - j. The PARE will be complete when the software has met the required effectiveness level for the prescribed time period.
13. The Contractor shall provide all upgrades to its commercially available, off-the-shelf software package released during the life of the project. Prior to the installation of any upgrade, the Contractor shall provide appropriately updated (in whole or in part, as necessary) documentation to reflect the changes and improvements made in the upgrade of the EIS/DSS application(s). In order to allow sufficient time for MDCH to make changes to and test routines, this documentation should be provided at least 30 days prior to the upgrade.
14. The Contractor shall provide help desk services capable of supporting all aspects of the EIS/DSS application(s). The Contractor's EIS/DSS help desk will be positioned as an adjunct to the MDCH MIS help desk, whose standard hours of operation are from 7:00 a.m. to 5:00 p.m., Monday to Friday. The MDCH MIS help desk will serve as the first point of contact for any problems, which will be routed if necessary to the Contractor's EIS/DSS help desk for service and problem resolution. The MDCH MIS help desk will continue to support all external functions related to the operational performance of the EIS/DSS tool, such as communications, connectivity, etc. This will ensure continuity and allow for the hardware and network issues to be ruled out before the call is passed to the EIS/DSS Contractor. Once routed to the Contractor, the follow-up on problems will then continue to flow directly between the EIS/DSS help desk and MDCH users until problems are resolved. The Contractor must report closure of associated MDCH MIS help tickets when issues are resolved. Proposal should include pricing on a per call basis. Minimally, the Contractor's help desk must provide the following:
- a) Complete documentation of the EIS/DSS application(s), including a thorough explanation of the operating system, a complete description of all error codes/functions, and corrective actions that can be applied to error codes/functions.
 - b) Support and assistance via on-line help, such as frequently asked questions (FAQ) for use of EIS/DSS application(s).
 - c) Technical support when notified via 1-800 hot-line or e-mail message.

- d) Problem logging and tracking.
 - e) Escalation process should be used to denote that a call ticket has not been resolved and therefore will be given a higher priority.
 - f) Patch and release distribution procedures.
 - g) Monthly reports of all reported help desk calls and associated status.
15. In addition to EIS/DSS tool specific training, the contractor shall provide on going data management/data quality training that is concurrent with emerging requirements and any system changes, as well as training on data quality topics of a more general nature. Structured training groups will be comprised of 15 individuals. This training may include off site educational opportunities that address relevant topics.
16. The contractor shall provide training on analysis of encounter data. This will include instruction in what types of measures are appropriate for capitated programs and how to make comparisons across plans, to fee-for-service experience, and to external normative data. In depth review of the selected management reports will focus on the measures and methodologies selected for building them. Training must include instruction in application of basic statistical measures to health care analysis. Structured training groups will be comprised of 12 individuals.
17. The Contractor shall work cooperatively with any quality assurance (QA) personnel that the State identifies to assist management and staff through EIS/DSS implementation.
18. The Contractor will meet with key management and staff from MDCH's Quality Improvement and Customer Services Bureau, MDCH MIS, other State units and MDCH identified vendors, as appropriate, on an ongoing basis throughout the contract period. The Contractor will prepare written summaries of the meetings with any applicable recommendations.
19. The system shall meet the following performance standards:
- The EIS/DSS application(s) shall minimize degradation in the performance, accessibility, or functionality as users simultaneously use and navigate through multiple dimensions, aggregate or sub-aggregate data, and/or drill down to and zoom out from lower levels of data consolidation paths in producing queries or reports.
 - The system performance specifications (such as response time, turnaround, and system throughput, timeliness of screen and printed output, refresh rates, accuracy of output, system availability, mean time between failures, mean time to repair) shall meet standards preliminarily identified in this ITB and others agreed upon (based on specific information provided as part of the Contractor's bid response).
 - The system availability (up time) for the EIS/DSS application(s) shall be twenty-four (24) hours a day, seven (7) days a week with some portion of the 7th day (likely Sunday non-prime time) unavailable to users due to maintenance and support activities, according to a schedule approved by MDCH management.
 - The help desk availability (up time) for the EIS/DSS application(s) shall minimally be ten (10) hours a day, five (5) days a week, according to a schedule approved by MDCH management. As part of pricing proposal, the bidder may provide multiple options up to twenty-four (24) hours a day, six (6) days a week.

II-D PROJECT CONTROL AND REPORTS

1. Project Control

- a. The Contractor will carry out this project under the direction and control of the Michigan Department of Community Health.

- b. Although there will be continuous liaison with the Contractor team, the client agency's project director will meet biweekly as a minimum, with the Contractor's project manager for the purpose of reviewing progress and providing necessary guidance to the Contractor in solving problems which arise.
- c. The Contractor will establish a facility in Lansing with a project manager also to be stationed in Lansing. The State will also provide up to four dedicated offices to be located within State facilities.
- d. The Contractor will submit brief written biweekly summaries of progress which outline the work accomplished during the reporting period; work to be accomplished during the subsequent reporting period; problems, real or anticipated, which should be brought to the attention of the client agency's project director; and notification of any significant deviation from previously agreed-upon work plans.
- e. Within fifteen (15) working days of the award of the Contract, the Contractor will submit to the Michigan Department of Community Health project director for final approval a work plan. This final implementation plan must be in agreement with section IV-C subsection 1 as proposed by the bidder and accepted by the State for Contract, and must include the following:
 - (1) The Contractor's project organizational structure.
 - (2) The Contractor's staffing table with names and title of personnel assigned to the project. This must be in agreement with staffing of accepted proposal. Necessary substitutions due to change of employment status and other unforeseen circumstances may only be made with prior approval of the State.
 - (3) The project breakdown showing sub-projects, activities and tasks, and resources required and allocated to each.
 - (4) The time-phased plan in the form of a graphic display, showing each event, task, and decision point in your work plan.

2. Reports

- a. Included in the work plan should be a detailed discussion of the Contractor's proposed activities and tasks. In cases where identifiable sub-plans are required, for example implementation plans, they will be submitted for approval prior to execution and a report on the results of implementation will be submitted. Similar plans and reports are required for all major activities and tasks proposed by the Contractor. Any reports or deliverables associated with these activities and tasks require submission of draft copies to permit MDCH and DMB Office of Purchasing to satisfy themselves as to their completeness and factual accuracy prior to creation of final copies.
- b. All reports identified in this ITB and resulting Contract must be provided to the Contract Administrator.

II-E PRICE PROPOSAL

All prices/rates will be firm for the duration of the Contract. No price changes will be permitted.

II-F CONTRACT PAYMENT

All invoices must reflect actual work done. The schedule must show payment amount and must reflect actual work done by the payment dates, less any penalty cost charges accrued by those dates. In the Contractor's response to this ITB, specific deliverables and their associated time frames and efforts must be identified. From these, a milestone payment amount will be determined for each deliverable. Milestone payments will be held back until approved in writing by the State upon successful completion and delivery by the Contractor, as

determined by the State of Michigan. As a general policy, invoices shall be forwarded to the designated representative by the 10th day of the following month. Under P.A. 428 payments will be made within 45 days after receipt of invoice.

APPENDIX 1

STATE OF MICHIGAN DATA WAREHOUSE

Server	NCR 5100M (RDBC)
Location	Michigan Information Processing Center
Current Capacity	12 Nodes 40 (4.2 GB) Disks per Node 2 Terabytes Total 8 CPU's per Node (96 Virtual Amps Total) Pentium 166 MHZ 1 GB Memory per Node Two Microchannel@40MHz FastwideSCSI@20MB/Sec

**Appendix 2
Key Features**

Listed below are selected key features that MDCH management wishes to have incorporated into its EIS/DSS system. As part of your *Management Summary - Narrative Summary Description* response (described in *Section IV – Information Required from Bidders* of the ITB), please complete this matrix to identify how your EIS/DSS product addresses each item below.

Healthcare Methods

Requirement	Bidder Response
Automatic adjustment capability	
Age-sex	
Case mix	
Severity of illness	
Episodes of care (across all settings of care)	
IBNR (incurred but not reported) claim completion factors	
Ability to apply all methods using either paid date or service date	
Automatic study group linkage (patients-services-providers, etc.)	

Healthcare Applications and Reports

Requirement	Bidder Response
Automatically-calculated measures and key indicators of healthcare performance, such as admission rate/1000, office visits/PMPM, ER rate, payments/unduplicated recipient, C-section rate, immunization rates, etc., for the following areas of interest:	
Quality of care	
Access to care	
Utilization	
Cost	
Eligibility	
The ability to apply these measures by:	
Provider	
Plan	
Program	
Eligibility category	
Waiver category	
Region	
Customer-defined	
Across all programs whether paid on a capitated or FFS basis	
Norms and benchmarks:	
National norms	
Regional norms	
Medical norms	
Client-defined norms	
User-defined norms (ability to create norms on any subset)	
National benchmarks	
Pre-defined and customizable reports for the following types of analysis:	
Clinical analysis, including:	

Avoidable admissions	
Maternity	
Disease prevalence	
Trend analysis with automatic change (variance) analysis capability	
Eligibility analysis such as new member analysis	
Provider/plan/network profiling	
Financial analysis	
Utilization:	
Appropriateness of care setting	
High cost/high use procedures	
Underutilization	
Quality of care (LOS, readmission experience, etc.)	

Drug analysis:	
Questionable drug use	
Pharmacy profiling	
Generic efficiency	
Disease management	
Population-based reporting:	
Automatic calculation of periods of continuous enrollment	
PMPM rates	
MARS reporting	
SURS reporting	
MSIS reporting	
EPSDT reporting	

Statistical Capability

Requirement	Bidder Response
Sort	
Range	
Rank	
Minimum and maximum	
Mean	
Median	
Standard deviations	
Time series analyses, variance analyses, multi-variate analyses, cross-tabulations, regression analyses	
Totals and running totals	
Count unique (e.g., the ability to produce a rate based on unduplicated recipients) and percentages	
Any other statistical features that facilitate trend analyses, patterns of illness and treatments, and forecasting of information	

Advanced Analytic Query And Reporting Capability

Requirement	Bidder Response
Automatic periodicity functions	
Agent technology	
Detect and alert technology and other forms of exception reporting	
Data visualization techniques (e.g., exception highlighting, imbedded graphing)	
Drag-and-drop report formatting	
Dimensional reporting	
Directed drilling (up, down, and across)	
Flexible drag-and-drop sub-setting (filtering)	
Ease of use, with no need to understand SQL or other query programming language	
Access to SQL, with ability to create or amend SQL, if desired	
English-language field labels, query creation, and coding translation	

Database Construction Methods

Requirement	Bidder Response
Data cleansing – assessment of data for completeness, validity, reasonableness	
Standardization – making key variables consistent across all data feeds	
Integration – tagging, linking, and keying in ways that uniquely support healthcare analysis (FFS with managed care data, eligibility with service data, individual providers with group practices, population-based reporting, etc.)	
Conversion –support of rules-based edits in data conversion	
Grouping methodologies	
DRG (diagnosis related groups) – HCFA	
DRG – Client-specific	
MDC (major diagnostic category)	
Ambulatory procedures groups	
Inpatient cases	
Age categories	
Drug therapeutic class, generic class	
Others	
Population (eligibility) data linked to service data	
Intelligent metadata (supports measures calculation)	

Fraud and Abuse Advanced Detection Capability (as an option)

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Executive Information System and Decision Support System Capability

Requirement	Bidder Response
Extremely easy-to-use GUI interface with point-and-click information access and drag-and-drop capability for changing on-screen parameters	
Graphical views, geographic views, and table views of all data without having to invoke other tools	
Thin-client based	
Ability to customize these graphical views	
Ability to quickly create HTML-formatted panels	
Extremely easy pre-formatted print capability	
No need to understand the principles of graph or table creation	
High-level, summary data indicators of performance at the following levels:	
Program	
Plan	
Eligibility category	
Service category	
Provider category	
Others	
Built-in, instantly available measures of healthcare performance in the following areas:	
Use	
Quality	
Access	
Eligibility	
Cost	
A catalog of pre-defined measures as well as the ability to add customer-defined measures	
Instantly available benchmark information specific to Medicaid	
Flexibility to change information views quickly and easily in the following ways:	
Drill-down within the summary data	

Sub-setting	
High-level dimensional reporting by:	
Eligibility category	
Demographic characteristics	
Region	
Managed care program	
Managed care plan	
Time periods	
Ability to display fixed-format reports produced by other systems	

Ability to integrate data from multiple sources:	
Claims	
Encounters	
Vital statistics	
Census data	
Capitation systems	
Other sources	
Customer choice of reporting bases: service date or paid date	
On-line help that provides background on the information methods presented	
Customizable on-line help capability	

**Appendix 3
Existing Plan Monitoring Reports**

Access Measures

Measure ID & Name	Question	Definition & Purpose
1A 'Quarterly Professional Provider Outpatient Visit per Member'	What is the total number of professional provider visits per unique member per plan?	To track the distribution of professional provider visits (Primary Care Professional Providers) per member in each plan. These visits are important because they are opportunities for enrollees to receive preventive care and early treatment, preventing unnecessary admissions or poor outcomes.
1B 'Quarterly Outpatient Visits per Member for Specific Preventive Services'	What is the total number of professional provider visits for specific preventive services per member in each plan?	To track the distribution of professional provider visits for selected preventive services per member in each plan. In this measure, professional providers include physician specialists, vision and hearing practitioners.
2 'Quarterly rate of use for Maternal Support Services/Infant Support Services, Family Planning and Well-Child EPSDT Screens'	What is the rate of use for maternal support services/infant support services, family planning and well-child screens?	To track the rate of use for key maternal/child support services. This measure is designed to track each in individual sub-measures.
3 'Quarterly rate of use and length of stay for restorative care in a Nursing Home setting'	What is the rate of use and Average Length of Stay for restorative health care in a Nursing Home setting? (Does not exceed 45 day LOS)	To track the rate of use of the extended care benefit and the relative intensity of the care provided as reflected in the length of stay.
4 'Quarterly rate of out-of-plan use for selected provider types'.(Acute inpatient, outpatient specialty physician and DME)	What is the rate (percent and per 1,000 members) and type of out of plan use?	To track and evaluate the adequacy of plan networks as reflected in the rate of use of 'out of network' services.
5 'Quarterly rate of outpatient mental health visits per plan'	What is the rate of outpatient mental health visits per plan?	To monitor plan delivery of outpatient mental health services and track changes in rate that may signal access problems for enrollees.
6 'Quarterly percent of unduplicated enrollees receiving at least one outpatient service'	What is the percent of unduplicated enrollees receiving services by plan each quarter?	To evaluate the 'penetration' of services to beneficiaries enrolled in a plan and signals how many of the plans' enrollees are actually accessing care.

Quality Measures

7 'Quarterly rate of ambulatory sensitive hospital admissions'	What is the rate of preventable hospitalizations?	To measure an indirect evaluation of the access each plan's population has to outpatient care that "prevents" certain hospitalizations from becoming necessary. This is evaluated through examining inpatient admission rates for certain conditions that could have been effectively treated if access to ambulatory or outpatient care was available earlier in the episode of the disease or condition.
8 'Quarterly 15 Day Readmission'	What is the rate of hospital re-admissions?	To indirectly measure the effectiveness or completeness of care given during an initial hospitalization by evaluating the rate of re-admissions. This can signal either ineffective inpatient care or inappropriate access to follow-up care post-hospitalization.

9	'Rate of vaginal and cesarean deliveries'	How many deliveries by C-section or vaginal delivery?	To indirectly evaluate the appropriateness of intrapartum care management through examining the rates of cesarean deliveries against national trends/patterns.
10A	'Rate of women hospitalized less than 2 days* after delivery' (* reports only women with lengths of stay less than 2 days after delivery and no record of a home visit)	How long are women staying after delivery?	To evaluate the appropriateness of intrapartum care against regulatory maternal discharge requirements.
10B	'Rate of women hospitalized more than two (2) days following deliveries'	How long are women staying after delivery?	To evaluate the appropriateness of intrapartum care against regulatory maternal discharge requirements
11	'Percent of expected immunizations by second birthday'	Do children receive appropriate immunizations?	To track percent of expected immunizations adjusted for length of time in plan, the age of the child and the schedule of recommended immunizations for each age group.
12A	'Percent of expected well-child visits 0 – 15 months'	Are the children getting well-child visits?	To evaluate the appropriateness of well-child care by evaluating the number of well-child visits against an expected rate – in this case, the HEDIS standard.
12B	'Percent of expected well-child visits for 2 to 5 year olds'	Are the children getting well-child visits?	To evaluate the appropriateness of well-child care by evaluating the number of well-child visits against an expected rate – in this case, the HEDIS standard.
12C	'Percent of expected adolescent well-child visits'	Are the children getting well-child visits?	To evaluate the appropriateness of well-child care by evaluating the number of well-child visits against an expected rate – in this case, the HEDIS standard.

Cost/Use Measures

13	'Adjusted Annual Capitation rate to Bid Price Index per Plan or Plan Capitation Enrollment Index'	What is the effective capitation rate and how does it compare to the QHP's bid price?	To identify the enrollment case mix variance from initial bid price assumptions. DCH established the capitation rates based on historical Fee-for-Service Medicaid cost experience and enrollment patterns. Because the QHP enrollment estimates may differ significantly, it is important to understand how the variations of eligibility and demographic case mix may change the capitation amounts which plans actually receive versus what they initially bid.
14	'Derived Cost of Services Ratio'	How do capitation payments received by the plans compare to the derived* cost of services they provide?	To provide an index of the degree to which the capitation payments are consistent with the value of the services being rendered by a QHP. Derived cost of services refers to constructing a proxy for the cost of services provided by plans, since the amount plans actually pay to their providers is not on the encounter record. This is accomplished by placing a 'price' on encounters based on fee-for-service fee schedules linked to procedure codes reported for delivered services. The accuracy of the result is highly dependent on the complete submission of data by the plans and on good procedure coding.
15	'Quarterly Inpatient Use Profile'	What is the utilization profile of each QHP?	To provide utilization information on key services plans are required to provide in order to track overall volume, distribution and rates of those service types.

APPENDIX 4

EIS/DSS ITB – Responses to Questions from Potential Bidders

1. **General Objectives.** This section includes a statement that “The MDCH will acquire and maintain the equipment that is required to operate the EIS/DSS. The Contractor is responsible for delineating the specifications of the equipment.” Please clarify if pricing for all hardware and software necessary for EIS/DSS operations is to be included in the proposal. If so, please specify where hardware pricing is to be presented.

All hardware and software necessary to operate the EIS/DSS must be listed in the response to the ITB. Only the software will require pricing.

2. **I-A.** This section states that one purpose of the DSS/EIS is to support rate setting. Does the State currently utilize a traditional age/gender/aid category capitation methodology or a risk-adjusted capitation payment system?

The State of Michigan utilizes both a traditional age/gender/aid category capitation rate methodology supplemented by a risk adjustment. The traditional category is applied at the beneficiary level and the risk adjustment is a factor that is applied at the Qualified Health Plan level. The State will supply the diagnostic risk adjustor to be used for cost comparisons between the QHPs and FFS. The Contractor will not be responsible for calculating this adjustor.

3. **II-A.** We understand that the State contracted with Bull Worldwide Information Systems in 1994 to develop the FFS data warehouse and again in 1998 to expand the data warehouse to include encounter data. Is Bull currently under contract to maintain the data warehouse? If so, what will be the extent of Bull’s participation in the population and ongoing maintenance of the EIS/DSS?

Yes. A contract is in place until March 3, 2001 to provide requested system enhancements and to transfer the weekly update process to the responsibility of DCH staff.

4. **II-A.** This section states that the Contractors methodology should include a strategy for loading a number of databases into the data warehouse, and subsequently to incorporate some of the additional data into the EIS/DSS. Are we to assume that the data to be brought into EIS/DSS is to be limited to no more than 20 or so key identifiers and performance variables from each source?

This should not be assumed.

5. **II-A.** This section lists the data access tools currently in use by the State, followed by a statement that the State “expects to move to Oracle”. Is it the State’s intention to migrate the warehouse to an Oracle 8i Relational Data Base Management System or is this a reference to Oracle OLAP and query and reporting tools such as Discover and Oracle Express Server?

We can only state that for the foreseeable future, the data warehouse will be consistent with what is stated in the ITB.

6. **II-A.** This section lists additional data sources for inclusion in the data warehouse. We understand that the contractor is responsible for developing efficient auto-linking processes to join the various data sources

within the warehouse. Does the State currently utilize a Universal Client Identifier or does one need to be developed during the course of this project?

The State does not currently utilize a Universal Client Identifier. The contractor will need to develop a linkage that will tie in disparate databases. The State does intend to comply with HIPAA Standards when issued.

7. **II-C.5.** This section details the Contractors responsibilities in regard to design, development, implementation and ongoing support and maintenance. We assume the EIS/DSS will be configured within the State's current environment and will be co-located with the data warehouse. Can the State elaborate on the scope of the EIS/DSS maintenance activities to be performed by the Contractor?

It will be up to the bidder to tell the State where it is best to have the EIS/DSS located. With the exception of the actual hardware, all maintenance will be the responsibility of the contractor.

8. **II-C.19, Bullet 3.** This section references the availability of the EIS/DSS. Please clarify the State's expectations in regard to system maintenance. Specifically, will the State or the Contractor be responsible for performing the data loading and processing of the EIS/DSS during operations?

With the exception of the hardware, it will be the responsibility of the contractor to provide all maintenance for the EIS/DSS. This includes the data loading and processing.

9. Appendix 2. "Episodes of Care across all settings" is stated as a Health Care methods requirement. In our experience, ambulatory episode groupers perform poorly with Medicaid data. The primary reason is that commercially accepted episode groupers require a "clean period" both before and after an episode. If no clean period exists, the episode will not group. In Medicaid, many conditions begin prior to eligibility and therefore fail to meet the clean period of the grouper. Further, certain chronic illnesses common to Medicaid, such as diabetes and mental illness, do not have an ending and become "perpetual episodes". For these reasons we find that the value of these groupers often do not justify the cost. For pricing purposes, would the State prefer limiting the episodic grouping requirement to long-term care and inpatient stays pending a complete cost/benefit analysis of the alternatives?

No.

10. Appendix 2. This section contains several references to national norms. However, because of differences in eligibility thresholds and geography, the demographic composition of Medicaid enrollees varies widely from state to state even within similar aid categories. For this reason, comparing across states is much like comparing apples to oranges. Would the state instead prefer an approach that provides meaningful state-specific norms based on eligibility category, age, gender, geography, health plan enrollment and morbidity?

The bidders are free to suggest additional norms that they think would be more meaningful. However, the State is still very interested in seeing the norm comparisons listed in the ITB.

11. Appendix 2. Both SURS and MARS reports are listed under Health Care Reports. We understand that SUR and MARS reports are currently being produced by MMIS subsystems. Can the State clarify their intentions in regard to SUR and MAR reports being contained in the EIS/DSS?

The State wishes to explore the possibility of including both SURS and MARS, but has not yet determined that this will be required.

12. Appendix 2. Disease Management is listed as a requirement under HealthCare Reports, Drug Analysis. Can the state elaborate on the scope of disease management capabilities required by this ITB? There are a variety of programs and applications designed to address disease management, ranging widely in cost and capability.

The State has yet to determine the scope of disease management capabilities and desires to view a range of options. At a minimum, the State would expect the capacity to analyze encounter data and prescription data to identify patients at risk for a drug-disease interaction, drug-drug interaction, or patients with selected diagnoses whose use of services may not reflect current accepted guidelines for optimal management of their condition(s). In addition, disease management module should be able to support rapid access to subsequent encounters for use by case managers for selected patients.

13. III-A. This section states that answers to questions will be posted as an addendum on November 6th. Given the short window between the posting of the addendum and the proposal due date, would the State agree to extending the proposal due date until December 6th?

No.

14. For each of the data sets not yet in the data warehouse:

- Women, Infant, and Children Supplemental Nutrition Program (WIC)
- Michigan Childhood Immunization Registry (MCIR)
- Beneficiary & Provider Contact Tracking System
- Vital Records (birth & death records)
- Community Mental Health (encounter data)
- Maternal & Child Health System including Infant Health Advocacy Services Program (MIHAS)
- Pregnancy Risk Assessment Monitoring System (PRAMS)
- **Lead Screening**

What are the platforms for each of the data sets?

What are the database engines and versions for each of the data sets?

Are data models for the data sets available for review?

	WIC	Bull Mainframe	IDSII DB	2 GB
<i>MCIR</i>	<i>Sun</i>	<i>ORACLE</i>	<i>65 GB</i>	
<i>BPCT</i>	<i>Sun</i>	<i>ORACLE</i>	<i>24 GB</i>	
<i>Vital Records</i>	<i>Bull/MS SQL</i>	<i>IDSIII/MS SQL</i>	<i>300 GB</i>	
<i>CMH</i>	<i>Novell</i>	<i>Access</i>	<i>not available</i>	
<i>MIHAS</i>	<i>Novell</i>	<i>Access</i>	<i>1 GB</i>	
<i>PRAMS</i>	<i>not available</i>	<i>not available</i>	<i>not available</i>	
<i>Lead Screening</i>	<i>Novell</i>	<i>Foxpro</i>	<i>100 MB</i>	

Versions & Data Models for each of the data sets are not available at this time.

15. What is the database engine and version for the data warehouse?

The database engine is Teradata Version 2 Release 2.

16. Is a data model for the data warehouse available for review?

Yes. The FFS model and encounter data model will be placed in the bidder's library. Additionally, a copy of the FFS model is included at the end of this document.

17. Reference IIB Objectives, EIS Application, 27.a) At the end of the fourth paragraph some text is missing. Please provide the correct paragraph wording.

The last sentence in this paragraph should read, "The use of deferred overnight or batch processing shall be at the user's option."

18. Section II-A, paragraph 1 - Please provide greater detail as to the location and structure of each of the eight additional data sources. For example: is the data source located on a mainframe using MVS flat files or is it a RDBMS on a UNIX server?

See response to question #14.

19. Section II – A - What is the size of each of the eight additional data source databases (record count/size in MB/GB)?

See response to question #14.

20. Section II – A - The ITB states eight additional data sources to augment the data warehouse. The bidder's library has documentation for the existing data warehouse and six of the eight additional data sources. Please provide documentation for the other two data sources if they are now available: Vital Records (birth and death), and Community Mental Health (encounter data).

Not available at this time.

21. Section II-B, paragraph 2 - What is the frequency of updates for the fee-for-service data?

All tables are updated weekly.

22. Section II-B, paragraph 2 - Please define the number of fee-for-service claims that are stored on a yearly basis on the Teradata server.

39 million.

23. Section II-B, paragraph 3 - What is the frequency of updates to the managed care encounter data?

The State requires at least monthly submissions by the Qualified Health Plans.

24. Section II-B, paragraph 3 - Please define the number of encounters received on a yearly basis that are stored on the Teradata server.

Current count of encounters by year are as follows:

- 1998 – 11,750,578
- 1999 – 17,796,872
- 2000 – 11,695,606

Count of records received, including replaced and voided records, total 69,302,105.

25. Section II-B, paragraph 1 - Does the current detail data warehouse on the Teradata server contain paid, denied, and adjusted claims?

The current detail data warehouse contains paid and adjusted claims, but not denied claims.

26. Section II-A, paragraph 1 - The state allows for a phased implementation approach. Given this statement, is it the state's intent to have the "additional data sources" such as MCIR, Vital Records, WIC, etc., integrated into the EIS/DSS solution after the 12 month window stated for fee-for-service claims?

No. See ITB, Section IIA, paragraph 4 which states "The state requires that these data be loaded into the data warehouse & linked within one year of the award of the contract.."

27. Section II-A - The ITB states that the existing data warehouse must be leveraged for the new EIS/DSS. Is MDCH expecting the new contractor to maintain and operate the existing NCR/Teradata warehouse under this contract, or will the incumbent contractor or MDCH be responsible for maintaining and operating the existing data warehouse?

The new contractor will not be responsible for maintenance and operation of the MIPC NCR/Teradata warehouse.

28. Section II – A, paragraph 4 - If the new contractor is responsible for maintenance and operation of the existing data warehouse, please provide the current costs and staffing levels supplied by the incumbent contractor and/or MDCH to maintain and operate the existing data warehouse.

See response to Question #27.

29. Section II – A, paragraph 5 - Will the new contractor be responsible for the software licenses for the existing data warehouse? If so, please specify the number and types of software licenses required.

No.

30. Section II –B, paragraph 5, - Is the requirement for notification to the state for software license renewals referring to third-party commercial software licenses or upgrades, which will be paid for by MDCH?

The contractor is responsible for providing the initial software and all available software upgrades during the life of the contract.

31. Section II – A, paragraph 4 - How many software licenses will be necessary for technical and nontechnical (executive) staff?

Bidder is asked to provide a cost estimate for 300 users. The actual number may be different.

32. Section II-B, item 27 - The performance requirements for the EIS/DSS solution are dependent on the network capacity of the state's existing LAN/WAN. Please clarify the performance criteria given the fact that the existing network plays a significant role in data transmissions and can affect the EIS/DSS performance.

The State feels that Section II-B, item #27 adequately addresses performance criteria.

33. Section II-B, number 27a, paragraph 4 - The sentence begins with "The use of deferred overnight or batch processing shall be at the"... Please provide the remaining missing text in the sentence.

The last sentence in this paragraph should read, "The use of deferred overnight or batch processing shall be at the user's option."

34. Section II-C, item 14 - What is the current volume of help desk calls for the existing data warehouse?

The current volume of calls varies greatly. The State does not feel that this is a predictor of calls related to the EIS/DSS.

35. Section II-C, paragraph 1 - What volume of help desk calls does MDCH expect the contractor to be prepared to handle under the new contract?

This varies and is dependent upon the number of users.

36. Appendix 2 - In Appendix 2, the state lists DRG grouper. Are the inpatient claims on the Teradata server already grouped by DRG with the codes stored within that detailed data warehouse? If so, what DRG grouper is used in this process? Are the DRG codes and descriptions stored on the data warehouse as well for reference?

The claims on the data warehouse have the DRG that applied when the claim was paid. The DRG grouper used varies depending on the date. The DRG codes and descriptions are stored on the data warehouse. The State is currently using Grouper 17. The bidder should assume that the claims will have to be recoded to the current grouper for comparison purposes. The State plans to update the DRG Grouper every April to match the Medicare Grouper.

37. Appendix 7 A - Should the pricing for help desk services be included in this pricing sheet?

No.

38. Appendix 7 A - Please provide a detailed explanation of which prices are to be included into the Total Price column.

Bidder should address per Appendix 7A format.

39. Appendix 7 A - Are the help desk service prices to be unit based and included in this pricing matrix? Please provide guidance as to which column these are to be included.

Bidder should detail as a task in Appendix 7B.

40. Appendix 7 B - Please explain how to differentiate prices for each of the contract periods such as the two-year base period vs. the three one-year options.

Bidder should use Matrix for two-year contract, and price option years separately in the same manner.

41. In responding to the questions, will you please include a list of the persons who asked questions and the corporate entities that they represent?

*Tom Patrick – Bull HN Information Systems
Pamela Conrad, MEDSTAT Group
Dave Ferguson, Health Management Associates
Denis Teeter, Keane
Tim Robl, EDS
Wade Thompson, Compuware
Sharon Jackson, Deloitte Consulting L.P.*

42. What is the size of the FFS claims data, and what is the expected size of the “Encounter Data” when five years are collected?

FFS = 286 GB; Encounter = 250 GB.

43. When does MDCH expect to use Oracle, and should this warehouse be designed/optimized for Oracle?

See response to question #5.

44. Is there an actual date (i.e. March 15th, 2001) that the system needs to be active?

Information included in ITB – See Section II-A, third paragraph, which states “The State requires that the EIS/DSS be installed and operational within six months of award of contract for managed care encounter data associated with comprehensive health plans...”

45. What is the size and complexity (#of tables, and rows) of the WIC, MCIR, Beneficiary and Provider Contact Tracking System, Vital Records, Community Mental Health Maternal and Child Health System including MIHAS, PRAMS, and Lead Screening Databases. (Is this covered by the descriptions in the Bidder’s Library?).

Information included in the Bidder’s Library, with the exceptions of Vital Records and Community Mental Health. Also, see response to Question #14 for information relating to size.

46. Is the data structure set for the CSHCS managed care database, or has the design not been finalized?

The data structure has not been set, but it will include at least the data being currently collected from the Qualified Health Plans and may include additional fields.

47. Does the State have a Software package in mind or what packages has the State reviewed for EIS/DSS system?

Bidder to present options.

48. What are the numbers of current queries that will need to be replicated, and what is the estimate for new queries to be created?

The State is not expecting the contractor to replicate any current queries. The bidder should address new queries as dictated by the requirements of the ITB.

49. Does the State have current Metrics in mind to be applied once this data is in the Warehouse or will Metrics be created after the Warehouse is operational?

Metrics will be created after the system is operational.

50. Does the State have algorithms for analysis of data or is the contractor responsible for developing these with the State? How many current, and how many to be created?

Contractor is expected to create all algorithms necessary to meet the requirements of the ITB. The State has designed and implemented an algorithm to calculate eligible months (and therefore eligible years). The output of this algorithm is stored in a table on the data warehouse and contains one record for each beneficiary/month combination. The record contains all the eligibility and demographic information for that month.

51. Can the offload of analysis results be an image or does it need to be a graph with the supporting detail exported?

This must meet the requirements of the ITB (e.g. – drill down capability).

52. Page 29 - # 27.a – there s a sentence that was not completed (“The use of deferred overnight or batch processing shall be at the”), please complete this sentence.

The last sentence in this paragraph should read, “The use of deferred overnight or batch processing shall be at the user’s option.”

53. Do reports have to be calculated on the fly or can reports be pre-calculated?

This must meet the requirements of the ITB.

54. DCH is currently using Hummingbird. Is this too great of an investment to migrate to another tool? Is DCH interested in augmenting that tool?

Bidder should propose options that meet the requirements of the ITB.

55. Section II-B.9 – System Management and Utilization. What tools, if any, does the State use at present to measure and manage system utilization today?

At this time, we are not aware of any tools currently being used to measure and manage system utilization.

56. Section II-B.12 - Mapping. Does the State currently have a GIS tool in use? If so, would it prefer to continue using this tool?

MDCH does not have a standard GIS tool in use. The ARC view may be used by other State departments.

57. Section II-B – EIS Application, Section 27.a. The last sentence in the fourth paragraph appears to have been truncated.

The last sentence in this paragraph should read, “The use of deferred overnight or batch processing shall be at the user’s option.”

58. Diagram in Section II-B showing departmental data marts. Does MDCH have any data marts in place today? What is the State’s vision for the ultimate number and use of department-specific data marts?

The State does not currently have any data marts in place. The State does not have a specific number of data marts in mind and has not formulated particular uses of the data marts at this time.

59. Section II-C Tasks Subsection 9.k Bullet 1. This requirement to provide day-to-day operations and support of the software could possibly be inconsistent with other sections that indicate that operational control becomes the responsibility of the State at a certain point. Is it correct to assume that the software support the State desires is generally the standard new release and error-correction tasks that are common to ongoing software maintenance contracts?

The date of the State take over will be determined at a later date. The contractor will be responsible for day-to-day operations until the State takes over operational control.

60. Section II-C Subsection 2.C – PARE. Since the PARE does not begin until the end of the implementation process, can implementation milestone be defined before the PARE begins? What effect does the PARE have on the last implementation milestone payments? How is the PARE scheduled?

See ITB – Section II F, regarding milestones and payments.

61. Section II-C.14 re: Help Desk Support – The State has requested that Help Desk Support be provided on a per-call pricing basis. Since this is not usually the most economical approach, would the State be willing to consider a fixed-rate or some other pricing approach?

No.

62. Section II-C.19 Bullet 3 re: System Availability. Since the State is assuming operational control of the system, what would be the contractor’s role in assuring system availability (up time)?

See response to question #59.

63. Section IV-C Management Summary. Section IV-C.1 would appear to be the place in the proposal where the bidder should state its responses to all the Objectives and Specific Requirements of ITB Sections II-B, II-C, and II-D. Therefore, C.1 would be a long section of the proposal. In light of that, would it be acceptable to place the responses to ITB Appendix 2 (Key Features) in an Appendix to the Proposal rather than in the body of Section IV-C.1?

Please respond as specified in the ITB.

64. Appendix 7A and 7B - Pricing. Does the State want the price to be broken out by contract year? If not, should we price only the two-year base contract period or the option years as well?

See response to Question #40.

65. (Pricing – General). Does the State want the EIS/DSS contractor to *supply* or just *specify* third-party software required to support the system platform, such as the operating system, DBMS, utilities, performance monitoring and administration tools, etc.?

Bidder is asked to specify all software necessary to operate the EIS/DSS, as well as supply pricing for the software.

66. (General). Does MDCH have any particular intention as to how frequently it wants to update the data in the EIS/DSS?

Weekly.

67. (General) Does MDCH have a preference as to where the system hardware should be located within Lansing?

This has not yet been determined.

68. Section I, page 1 - How does a bidder take exception to, amend and/or request clarification of one or more terms in the RFP?

The State will entertain negotiations on terms and conditions, however, the bidder needs to be aware that if there are qualified bidders who do not take exception to the State's terms and conditions, this can impact the award decision.

In order for the State to review your exceptions or amendments to the State terms and conditions, you will need to include in your proposal, a Section titled "Contractual Service Terms and Conditions. For language you want revised, you will need to reiterate the State's Language in one paragraph, then have the following paragraph contain the language you want the State to consider. Your language should be highlighted in this revised paragraph and the State's language struck out for comparison purposes. Again, please take in consideration that vendor proposals that take exception to the State's terms and conditions, can impact the award decision.

69. Section I, subsection I-B - Will the State represent and warrant to the Contractor that sufficient funds have been appropriated and are available to pay for all products delivered and services performed under the Contract through February 1, 2003?

As stated in Section I-B Term of Contract, "the prospective Contractor should realize that payments in any given fiscal year are contingent upon enactment of legislative appropriations.

70. Section I, subsection I-J - Will the State agree that all indemnification by the Contractor shall relate solely to the Contractor's negligent acts or omissions, and also such indemnification shall not be applicable to claims arising out of the State's and its employees negligent acts or omissions?

Please refer to the response in Question #68 above.

71. Section I, subsection I-K - Will the State agree to limit the amount total damages to the State arising out of Contractor's gross negligence or willful misconduct or Contractor's indemnification responsibilities to the State as set forth in subsection I-J with respect to third party claims, actions and proceedings brought against the State?

Please refer to the response in Question #68 above.

72. Section I, subsection I-N – Will the State agree to delete this subsection?

Please refer to the response in Question #68 above.

73. Section I, subsection I-O – Will the State agree that it will not be unreasonable in the consideration of Contractor's requests for the removal or reassignment of Key Personnel during the term of the contract?

The State will agree that it will not be unreasonable in the consideration of the Contractor's requests for the removal or reassignment of Key Personnel during the term of the Contract. However, appropriate notification, i.e., thirty days, must be given to the State for removal or reassignment of key personnel. In addition, there must be appropriate overlap of staff for training and project coordination.

74. Section I, subsection I-P - Will the State agree to the following clarification and amendment relating to ownership of the system: Any information, software, documentation or other data first developed or created by Contractor on behalf of the State pursuant to this Contract (hereinafter "Developed Work") is considered a work for hire. The State shall own all rights, including all intellectual property rights in the Developed Work. The Developed Work will become the property of the State. Notwithstanding the above, Contractor will retain a perpetual, royalty-free, worldwide, non-exclusive, transferable license, with the right to possess, copy, use, modify, disclose, distribute, and sublicense the Developed Work, provided, however, that the Contractor's retained license and any sublicenses shall not be inconsistent with the State's ownership rights as provided herein or of any rights retained by the United States or its agencies pursuant to applicable federal law or regulations. Contractor also agrees, upon the request of the State, to execute such papers and perform other acts necessary to assist the State to obtain and register copyrights on the Developed Work.

Please refer to the response in Question #68 above.

75. Section I, subsection I-T - Will the State agree that the Contractor shall not be in default under the contract if Contractor cures or commences curing and diligently proceeds to cure any failure to perform or default of the Contractor alleged by the State? Will the State provide at least 30 days prior written notice of any alleged material non-compliance with any of the Contract terms, and an opportunity to cure or to commence curing the non-compliance within the 30-day period and if the Contractor is diligently proceeding with the cure?

Please refer to the response in Question #68 above.

76. Section I, subsection I-U (1) - Will the State agree that Contractor will only be liable to the State for commercially reasonable excess costs for such similar supplies or services?

Please refer to the response in Question #68 above.

77. Section I, subsection I-U (2) - Will the State agree to delete the Cancellation for Convenience by the State provision?

Please refer to the response in Question #68 above.

78. Section I, subsection I-V (2) - Will the State agree to pay a commercially reasonable amount to the Contractor for partially completed deliverables accepted by the State?

Yes, this is agreeable subject to final negotiations.

79. Section I, subsection I-W (1) - Will the State agree to include in Excusable Failure any failure or delay in performance due to any cause beyond Contractor's and its subcontractors' and suppliers' reasonable control, strikes, lightning, electrical disturbances or other similar causes?

Please refer to the response in Question #68 above.

80. Section I, subsection I-AA - Will the State agree that all modifications of service during the course of the Contract shall be mutually agreed to in writing by the State and the Contractor and that certain modifications may require pricing adjustments?

Yes.

81. Section I, subsection I-AA (2) - Will the State include in the change order process that its determination to provide consent and exercise its discretion will be reasonable?

Please refer to the response in Question #68 above.

82. Will the State agree that the Contractor's Proposal shall become an integral part of the Contract document, including any amendments and clarifications, and thereby become a higher-order document superseding the RFP, including all addenda and written clarifications?

The Contract will consist of the ITB terms and conditions, the resulting addendum, and the Contractor's proposal. The Contractor's proposal does not supercede the specifications, terms and conditions of the Contract.

83. Will the State agree to the following clarifications and amendments relating to ownership of information and data and license provisions for software programs:

All materials ("Materials") specifically created by the Contractor to perform its contractual duties, including designs, drawings, specifications, notes, electronically or magnetically recorded material, first developed specifically for the State in the performance of this Contract shall become the property of the State, except that the United States Department of Health and Human Services and other federal agencies depending on the funding sources reserve a royalty-free, non-exclusive, non-transferable and irrevocable license to reproduce, publish, or otherwise use, or authorize others to use, such software, modifications, and documentation. Notwithstanding the above, the Contractor will retain a perpetual, royalty-free, worldwide, non-exclusive, transferable license with the right to possess, copy, use, modify, disclose, distribute and sublicense, such materials, provided, however, that the Contractor's retained license and any sublicenses shall not be inconsistent with the State's ownership rights as provided herein or of any rights retained by the United States or its agencies pursuant to applicable federal law or regulations. An exception to this requirement to assign ownership rights to the State is the use of commercial software, which is available to the State on the open market. The Contractor will demonstrate that the software is available to the State through other sources.

Contractor grants to the State a non-exclusive and non-transferable license to use, for its own internal purpose, each Software Program provided to the State subject to the following license terms and conditions:

- a) The Software Program, including any subsequent updates as provided herein, may be used only on the identified hardware on which it is first installed or for which it is otherwise licensed.
- b) State may obtain updates to such Software Program, which Contractor makes generally available for use only on such identified hardware.
- c) State shall not provide, disclose or otherwise make available Software Programs, in any form, to any person other than the State's employees without Contractor's prior written consent, except when any such person is on the State's premises and under the State's direction and control for purposes specifically related to the State's permitted use of the Software Programs.
- d) The State agrees to take appropriate action by instruction, agreement or otherwise with the State's employees or other persons allowed access to Software Programs to satisfy its obligations under this Contract with respect to use, copying, modification, disclosure, protection and security of Software Programs.
- e) The State shall reproduce and include Contractor's trade secret or copyright notices on and in any copies, including but not limited to partial or physical copies in any form. The State shall not reverse assemble or reverse compile the Software Program in whole or in part.
- f) Contractor warrants that the Software will comply with the representations by Contractor in its published specifications for the entire term of the warranty period.

- g) The State's remedy for breach of the Software Program Warranty is that Contractor will exchange or correct any defects or deficiencies within thirty (30) days from the time it is notified in writing, at no cost to the State. If Contractor is unable to correct or exchange, then Contractor shall pay the State actual damages not to exceed the charges paid by the State for the Software Program causing the actual damage. This remedy is in addition to all other legal remedies available to the State.
- h) Contractor warrants that it shall provide all updates to the Software that Contractor develops in the course of its general modification and enhancement activities for as long as the State has a Software License with Contractor pursuant to this Contract. All Software updates shall be provided at no cost to the State during the Software Program Warranty period.
- i) The term of the Software Warranty is 12 months from the completion of the installation of the Software.
- j) Each Software Program and the information it contains, any updates, and all copies of them are Contractor's property, and title to them remains in Contractor or Contractor's licensor. All applicable rights in patents, copyrights and trade secrets in the Software Programs are and will remain in Contractor. No title to, or ownership of, the Software Programs or the information they contain is transferred to the State.
- k) Contractor shall have the right to terminate any of the State's licenses and rights granted in the section for which the State fails to pay applicable license fees or if the State fails to comply with the terms and conditions of this section. Upon notice of termination, the State agrees to immediately return or destroy the affected Software Programs and all portions and copies of them.
- l) The State's obligations contained in this section shall survive any termination of this Contract.

Please refer to the response in Question #68 above.

84. Will the State reasonably inform the Contractor of all applicable federal and state laws, policies, rules and regulations related to the development and implementation of the Executive Information System/Decision Support System?

Yes, it is expected that the contractor would be informed of applicable federal and state laws, policies, rules and regulations and that the State would review appropriate subject matter with the contractor.

85. Will the State agree to the following provisions relating to disclaimers of implied warranties, limitations of liability and limitations of remedy:

CONTRACTOR AND ITS SUPPLIERS DISCLAIM ALL IMPLIED WARRANTIES, INCLUDING WITHOUT LIMITATION THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE NOT SPECIFIED HEREIN, RESPECTING THIS CONTRACT AND THE PRODUCTS, SOFTWARE PROGRAMS, DOCUMENTATION, SUPPORT AND SERVICES PROVIDED. CONTRACTOR DOES NOT WARRANT THAT USE OF ANY SOFTWARE PROGRAMS WILL BE UNINTERRUPTED OR THAT THE SOFTWARE PROGRAMS ARE ERROR-FREE.

Contractor is not liable for any indirect, special or consequential damages or lost profits to anyone arising out of this Contract or the use of any Product, Software Program, Support, Services, documentation or materials provided by the Contractor under this Contract.

Except for an action for payment of taxes, no action in any form arising out of this Contract shall be instituted more than 2 years after the cause of action has arisen or in the case of nonpayment, more than 2 years from the date of last payment or promise to pay.

The State's exclusive remedy and Contractor's entire liability in contract, tort or otherwise is (i) for equipment under warranty that is defective, to repair or exchange such equipment, and (ii) for software and software support services, to correct or exchange the software or service which is inoperable.

If Contractor is unable to correct, repair or exchange, then Contractor shall pay the State actual damages not to exceed the charges paid Contractor for (i) the defective equipment under warranty causing the actual damages or (ii) the inoperable software or services during the period causing the actual damages.

The State agrees that the Products, Software Programs, Support, and Services fully set forth Contractor's responsibilities to the State under this Contract. Any Services or items not expressly set forth herein as being supplied by Contractor are excluded and shall not in any event be implied by any provision of this Contract or otherwise. In particular, but without limitation, this Contract does not include any changes to the State's applications, data, files or software to correctly handle Year 2000 date functions and calculations and Contractor shall have no obligation or liability in connection therewith.

Please refer to the response in Question #68 above.

86. Section II-A Background/Problem Statement - Can we assume that the data warehouse won't be undergoing migration to a new hardware platform during the timeframe of this project (say, until contract signing + 12 months)?

See response to question #5.

87. Section II - Specific Requirements for EIS/DSS (number refers to requirement in proposal): Item 17 - Does the requirement for transparent availability across the LAN imply some kind of virtual private networking capability to protect the confidentiality of data from non-DCH LAN users.

No.

88. Section II – A Background/Problem Statement - What are the anticipated volumes of data for the 2 Children Special Health Care Services CSHCS?

There are currently about 2,200 children enrolled in the SHPs. That number is expected to double within the next year.

89. On page 24, General Objectives, the RFP states that the department

- > Requires the contractor to provide implementation plans, tools and
- > Processes to load additional databases to the data warehouse.
- > A) Do these additional databases all use the same individual, family?
- > And case identifiers as the existing identifiers in the data warehouse?

- > B) If not, what identifiers are used?
- > I) Have any studies or analyses been conducted in the past to determine the degree of accuracy of these identifiers? In other words, if SSN is an identifier on a given database, how often does it become an incorrect identifier?
- > II) Will the Department or the Contractor be responsible for creating common identifiers across the databases so that they all contain common identifiers?

Analysis to determine what identifiers will be used to tie the many different databases together has not been done. It will be the contractor's responsibility, working with MDCH, to develop a solution to tie the databases together.

90. On page 24, General Objectives, the RFP states that the department
- > requires the contractor to provide implementation plans, tools and
 - > processes to load additional databases to the data warehouse. However,
 - > Appendix 2, Healthcare Applications and Reports, and Appendix 3, Existing
 - > Plan Monitoring Reports, only address healthcare issues. Does the
 - > Department plan to release additional information outlining analysis and
 - > reporting requirements for these other databases, including how they would
 - > like to utilize this additional information in conjunction with their
 - > healthcare data? Or is the Contractor solely responsible for developing
 - > these criteria?

The State does not plan to release additional information outlining analysis and reporting requirements for these other databases.

APPENDIX 5

APPENDIX 6