

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

January 7, 2008

CHANGE NOTICE NO. 7
TO
CONTRACT NO. 071B2001304
between
THE STATE OF MICHIGAN
and

NAME & ADDRESS OF VENDOR MacGregor Group, Inc. 321 Summer Street Boston, MA 02210 <i>i:tony.o'driscoll@itg.com</i>	TELEPHONE (617) 239-8712 Tony O'Driscoll
	VENDOR NUMBER/MAIL CODE
	BUYER (517) 373-3993 Dale N. Reif
Contract Administrator: John Buck (517) 373-3637 Trading Software & Services – Department of Treasury	
CONTRACT PERIOD: From: January 15, 2002 To: January 15, 2011	
TERMS N/A	SHIPMENT N/A
F.O.B. N/A	SHIPPED FROM N/A
MINIMUM DELIVERY REQUIREMENTS N/A	

NATURE OF CHANGE (S):

Please see attached letter from Tony O'Driscoll which provides Annual Maintenance to be reduced by 6.5%, from \$162,000.00 down to \$151,470.00 The reduced price will take effect on January 15, 2008. All other terms and conditions remain the same.

AUTHORITY/REASON:

Per DIT, DMB and contractor approval.

TOTAL ESTIMATED CONTRACT VALUE REMAINS: \$2,561,336.55



INVESTMENT
TECHNOLOGY
GROUP

321 Summer Street, Boston, MA 02210
Tel. 617.239.8700 www.itg.com

Douglas Collier, Buyer, CPPB
Department of Management & Budget
Purchasing Operations
P.O. Box 30026 (530 Allegan Street)
Lansing, MI 48909

Dear Doug,

Per our conversations, we are willing to offer a 6.5% discount on the annual maintenance fee in return for a three year contract extension, with an option to extend for another two years. All other fees will remain the same.

We look forward to working with you going forward, and want to thank you for your continued support.

Best Regards

A handwritten signature in black ink, appearing to read "Tony O'Driscoll".

Tony O'Driscoll
Vice President
Account Management

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

October 1, 2007

CHANGE NOTICE NO. 6
TO
CONTRACT NO. 071B2001304
between
THE STATE OF MICHIGAN
and

NAME & ADDRESS OF VENDOR MacGregor Group, Inc. 321 Summer Street Boston, MA 02210 i:tony.o'driscoll@itg.com	TELEPHONE (617) 239-8712 Tony O'Driscoll
	VENDOR NUMBER/MAIL CODE
	BUYER (517) 373-3993 Dale N. Reif
Contract Administrator: John Buck (517) 373-3637 Trading Software & Services – Department of Treasury	
CONTRACT PERIOD: From: January 15, 2002 To: January 15, 2011	
TERMS N/A	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 is **EXTENDED** to January 15, 2011 and **INCREASED** by \$526,410.00. All other terms, conditions and pricing remain the same.

AUTHORITY/REASON:

On 9/11/07, the State Administrative Board approved a three year extension and a \$526,410.00 increase. This change notice has been approved by DIT, DMB and the contractor.

INCREASE: \$526,410.00

TOTAL REVISED ESTIMATED CONTRACT VALUE: \$2,561,336.55

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

March 28, 2007

CHANGE NOTICE NO. 5
 TO
 CONTRACT NO. 071B2001304
 between
 THE STATE OF MICHIGAN
 and

NAME & ADDRESS OF VENDOR MacGregor Group, Inc. 321 Summer Street Boston, MA 02210	TELEPHONE (617) 239-8712 Tony O'Driscoll
	VENDOR NUMBER/MAIL CODE
	BUYER (517) 373-3993 Dale N. Reif
Contract Administrator: John Buck Trading Software & Services – Department of Treasury	
CONTRACT PERIOD: From: January 15, 2002 To: January 15, 2008	
TERMS <p style="text-align: center;">N/A</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):

Please note that the Contract Administrator for the State is now John Buck (517) 373-3637. Contact for MacGregor Group Inc. is now Tony O'Driscoll (617) 239-8712. All other terms, conditions and pricing remain the same.

AUTHORITY/REASON:

Per agency and vendor request.

TOTAL ESTIMATED CONTRACT VALUE REMAINS: \$2,034,926.55

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

March 6, 2007

CHANGE NOTICE NO. 4
TO
CONTRACT NO. 071B2001304
between
THE STATE OF MICHIGAN
and

NAME & ADDRESS OF VENDOR MacGregor Group, Inc. 321 Summer Street Boston, MA 02210	TELEPHONE (617) 239-8650 Tom Chippas
	VENDOR NUMBER/MAIL CODE
	BUYER (517) 373-3993 Dale N. Reif
Contract Administrator: Walter M. Wisniewski Trading Software & Services – Department of Treasury	
CONTRACT PERIOD: From: January 15, 2002 To: January 15, 2008	
TERMS <p style="text-align: center;">N/A</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, this contract is hereby **EXTENDED** to January 15, 2008 and **INCREASED** by \$186,000.00. Please note that the buyer has been changed to Dale Reif. All other terms, conditions and pricing remain the same.

AUTHORITY/REASON:

Per agency request and State Administrative Board approval.

INCREASE: \$186,000.00

TOTAL REVISED ESTIMATED CONTRACT VALUE: \$2,034,926.55

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

September 26, 2006

CHANGE NOTICE NO. 3
TO
CONTRACT NO. 071B2001304
between
THE STATE OF MICHIGAN
and

NAME & ADDRESS OF VENDOR MacGregor Group, Inc. 321 Summer Street Boston, MA 02210	TELEPHONE (617) 239-8650 Tom Chippas
	VENDOR NUMBER/MAIL CODE
	BUYER (517) 241-1646 Greg Faremouth
Contract Administrator: Walter M. Wisniewski Trading Software & Services – Department of Treasury	
CONTRACT PERIOD: From: January 15, 2002 To: January 15, 2007	
TERMS N/A	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 is hereby **INCREASED** by \$34,608.00. All other terms, conditions and pricing remain the same.

AUTHORITY/REASON:

Per agency request and State Administrative Board approval.

INCREASE: \$34,608.00

TOTAL REVISED ESTIMATED CONTRACT VALUE: \$1,848,926.55

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 3, 2002

CHANGE NOTICE NO. 2
TO
CONTRACT NO. 071B2001304
between
THE STATE OF MICHIGAN
and

NAME & ADDRESS OF VENDOR MacGregor Group, Inc. 321 Summer Street Boston, MA 02210	TELEPHONE (617) 239-8650 Tom Chippas
	VENDOR NUMBER/MAIL CODE
	BUYER (517) 241-1646 Greg Faremouth
Contract Administrator: Walter M. Wisniewski Trading Software & Services – Department of Treasury	
CONTRACT PERIOD: From: January 15, 2002 To: January 15, 2007	
TERMS N/A	SHIPMENT N/A
F.O.B. N/A	SHIPPED FROM N/A
MINIMUM DELIVERY REQUIREMENTS N/A	

NATURE OF CHANGE (S):

Amend Contract to encompass training outlined within attachment. Add \$8,200.00 for these services. Please see attachemnt,training to start 12/10/02.

AUTHORITY/REASON:

Change Mutually agreed to.

INCREASE: \$8,200.00

TOTAL REVISED ESTIMATED CONTRACT VALUE: \$1,814,318.55

Personal Services Requisition

1. Requesting Division Trust Accounting Division		2. Location of Proposed Employment 2501 Coolidge Road, East Lansing	
3. Index No. 32106		4. Social Security No. or FEIN FEIN onfile	5. Total Dollar Amount \$8,200.00
6. Vendor (Last name first) Macgregor		7. Commodity No.	
6. New Requests Beginning Date: 12/10/02 Ending Date: 12/12/02		FUND SOURCE <input checked="" type="checkbox"/> R G - General M - Matching F - Federal R - Restricted	SPS/ IC <input checked="" type="checkbox"/> I I - Independent Contractor S - Services Paid by Payroll Voucher
9. Complete ONLY For Extensions: Revised Ending Date: _____ Requested Additional: \$ _____ Cumulative Total: \$ _____			
10. Brief Summary of Service(s) Trading System Software Vendor to provide additional post implementation training on proprietary trading software, scheduled for December 10-12, 2002. Please see contract #071B2001304. Copy of vendor training quote.			
11. Mark Applicable Civil Service Standard and provide Justification (Mandatory). <input type="checkbox"/> A. Rule 4-6.3(A) TEMPORARY, INTERMITTENT, OR IRREGULAR Justification is provided below. <input checked="" type="checkbox"/> B. Rule 4-6.3(B) SPECIALIZED, TECHNICAL, PECULIAR OR UNIQUE Justification is provided below. <input type="checkbox"/> C. Rule 4-6.3(C) REQUIRES EQUIPMENT OR MATERIALS NOT REASONABLY AVAILABLE Appropriate analysis is attached. <input type="checkbox"/> D. Rule 4-6.3(D) SUBSTANTIAL COST SAVINGS COMPARED WITH CLASSIFIED SERVICE RFP work statement and appropriate cost savings analysis are attached. <input type="checkbox"/> E. Rule 4-6.3(E) MIXED CONTRACT Predominantly things other than services and services logically related to the nature of the contract. <u>Justification:</u>			
12. Number of Classified Employees who will be affected by approval of this request. Attach data regarding # of employees affected by type of effect and bargaining unit <input type="text" value="0"/>		13. Employee Reemployment Provisions, if any (Enter R, H, L, AND/OR O) <input type="text" value="0"/>	
14. Number of positions eliminated <input type="text" value="0"/>		15. Projected cost savings to the State over the life of the contract \$ 0.00	
16. Signature of Bureau Head or Program Administrator <i>Royce Penttila</i>		Date: 11/20/02	17. Name/Phone # of Contact Person John E. Buck (517) 373-3637

Personal Services Requisition

1. Requesting Division Trust Accounting Division		2. Location of Proposed Employment 2501 Coolidge Road, East Lansing	
3. Index No. 32106		4. Social Security No. or FEIN FEIN onfile	5. Total Dollar Amount \$8,200.00
6. Vendor (Last name first) Macgregor		7. Commodity No.	
6. New Requests Beginning Date: 12/10/02 Ending Date: 12/12/02		FUND SOURCE <input checked="" type="checkbox"/> R G - General M - Matching F - Federal R - Restricted	SPS/ IC <input checked="" type="checkbox"/> I I - Independent Contractor S - Services Paid by Payroll Voucher
9. Complete ONLY For Extensions: Revised Ending Date: _____ Requested Additional: \$ _____ Cumulative Total: \$ _____			
10. Brief Summary of Service(s) Trading System Software Vendor to provide additional post implementation training on proprietary trading software, scheduled for December 10-12, 2002. Please see contract #071B2001304. Copy of vendor training quote.			
11. Mark Applicable Civil Service Standard and provide Justification (Mandatory). <input type="checkbox"/> A. Rule 4-6.3(A) TEMPORARY, INTERMITTENT, OR IRREGULAR Justification is provided below. <input checked="" type="checkbox"/> B. Rule 4-6.3(B) SPECIALIZED, TECHNICAL, PECULIAR OR UNIQUE Justification is provided below. <input type="checkbox"/> C. Rule 4-6.3(C) REQUIRES EQUIPMENT OR MATERIALS NOT REASONABLY AVAILABLE Appropriate analysis is attached. <input type="checkbox"/> D. Rule 4-6.3(D) SUBSTANTIAL COST SAVINGS COMPARED WITH CLASSIFIED SERVICE RFP work statement and appropriate cost savings analysis are attached. <input type="checkbox"/> E. Rule 4-6.3(E) MIXED CONTRACT Predominantly things other than services and services logically related to the nature of the contract. <u>Justification:</u>			
12. Number of Classified Employees who will be affected by approval of this request. Attach data regarding # of employees affected by type of effect and bargaining unit <input type="text" value="0"/>		13. Employee Reemployment Provisions, if any (Enter R, H, L, AND/OR O) <input type="text" value="0"/>	
14. Number of positions eliminated <input type="text" value="0"/>		15. Projected cost savings to the State over the life of the contract \$ 0.00	
16. Signature of Bureau Head or Program Administrator <i>Royce Penttila</i>		Date 11/20/02	17. Name/Phone # of Contact Person John E. Buck (517) 373-3637

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

September 10, 2002

CHANGE NOTICE NO. 1
OF
CONTRACT NO. 071B2001304
between
THE STATE OF MICHIGAN
and

NAME & ADDRESS OF VENDOR MacGregor Group, Inc. 321 Summer Street Boston, MA 02210	TELEPHONE (617) 239-8650 Tom Chippas
	VENDOR NUMBER/MAIL CODE
	BUYER (517) 241-1646 Greg Faremouth
Contract Administrator: Walter M. Wisniewski Trading Software & Services – Department of Treasury	
CONTRACT PERIOD: From: January 15, 2002 To: January 15, 2007	
TERMS N/A	SHIPMENT N/A
F.O.B. N/A	SHIPPED FROM N/A
MINIMUM DELIVERY REQUIREMENTS N/A	

NATURE OF CHANGE (S):

Amend Contract so Macgregor can incorporate Microsoft Windows 2000 certification into it's software at no cost to the State. Please see letter dated 8/19/2002.

AUTHORITY/REASON:

Change Mutually agreed to.

TOTAL ESTIMATED CONTRACT VALUE REMAINS: \$1,806,118.55

**CONTRACT 071B2001304
CHANGE NOTICE NO. 1**

August 19,2002

John Buck
State of Michigan
2501 Coolidge Road
Suite 400
Lansing, Michigan 48823

Dear John,

State of Michigan has requested that Macgregor address the requirements of Microsoft Windows 2000 certification for its software. Macgregor has analyzed these requirements based on documents provided by the State of Michigan (please see attached). Macgregor has determined that we meet the majority of the requirements (see Exhibit 1). Items 1-10 listed below are the requirements that need to be incorporated into the Macgregor product to fulfill Microsoft certification mandates. Macgregor will ensure that these items will be incorporated into the product in a nine-month timeframe at no cost to the State of Michigan. These requirements will be incorporated into a service pack that the State of Michigan can upgrade to.

Microsoft Certification to be addressed (in order of priority from State of Michigan).

- 1) **3.1** Do not attempt to replace files that are protected by Windows File Protection
- 2) **4.1** Default to My Documents for storage of user-created data
- 3) **4.2** Classify and store application data correctly
- 4) **4.5** Adhere to system-level Group Policy settings
- 5) **4.3** Degrade gracefully on access denied
- 6) **2.4** Install to Program Files by default
- 7) **2.5** Support Add/Remove Programs properly
- 8) **1.6** Ensure non-hidden files outside of your application directory have associated file-types with icons, descriptions, and actions
- 9) **5.4** Expose the location of the keyboard focus
- 10) **2.6** Ensure that your application supports advertising

Please let know if you have any questions or would like to discuss this further.

Sincerely,
Irene Fusco
Director Client Management

Exhibit 1

MFTP Fulfillment of Requirements	Win2000 Requirements	Windows Fundamentals
YES	X	1.1 Perform primary functionality and maintain stability
YES	X	1.2 Provide 32-bit components and document any 16-bit code
YES	X	1.3 Support Long File Names and UNC paths
YES	X	1.4 Support printers with long names and UNC paths
YES	X	1.5 Do not read from or write to Win.ini, System.ini, Autoexec.bat or Config.sys on any Windows operating system based on NT technology
NO	X	1.6 Ensure non-hidden files outside of your application directory have associated file-types with icons, descriptions, and actions
YES	X	1.7 Perform Windows version checking correctly
YES	X	1.8 Support AutoPlay of compact discs
YES	X	1.9 Any kernel mode drivers that your application installs must pass verification testing on Windows 2000
YES	X	1.10 Any hardware drivers included with your application must pass WHQL testing
Windows Installer Service		
YES	X	2.1 Install using a Windows Installer-based package that passes validation testing
YES	X	2.2 Observe rules in componentization
YES	X	2.3 Identify shared components
NO	X	2.4 Install to Program Files by default
NO	X	2.5 Support Add/Remove Programs properly
NO	X	2.6 Ensure that your application supports advertising
YES	X	2.7 Ensure correct uninstall support
Component Sharing		
NO	X	3.1 Do not attempt to replace files that are protected by Windows File Protection
YES	X	3.2 Component producers: Build side-by-side components
YES	X	3.3 Application developers: Consume and install side-by-side components
YES	X	3.4 Install any non side-by-side shared files to the correct locations
Data and Settings Management		
NO	X	4.1 Default to My Documents for storage of user-created data
NO	X	4.2 Classify and store application data correctly
NO	X	4.3 Degrade gracefully on access denied
YES	X	4.4 Run in a secure Windows environment
NO	X	4.5 Adhere to system-level Group Policy settings
YES	X	4.6 Applications that create ADM files must properly store their ADM file settings in the registry
User Interface Fundamentals		
YES	X	5.1 Support standard system size, color, font, & input settings
YES	X	5.2 Ensure compatibility with the High Contrast option
YES	X	5.3 Provide documented keyboard access to all features
NO	X	5.4 Expose the location of the keyboard focus
YES	X	5.5 Do not rely exclusively on sound
YES	X	5.6 Do not place shortcuts to documents, help, or uninstall in the Start Menu
YES	X	5.7 Support multiple monitors
OnNow/ACPI Support		
N/A	X	6.1 For applications allowed to prevent sleep when busy, indicate busy application status properly
N/A	X	6.2 In the non-connected state, your application must allow sleep and resume normally
N/A	X	6.3 In the connected state, handle sleep notifications properly
N/A	X	6.4 Handle wake from normal sleep without losing data
N/A	X	6.5 Handle wake from critical sleep properly
Application Migration		
YES		7.1 Application must continue to function after upgrade to Windows 2000 Professional without reinstall

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 13, 2002

NOTICE
OF
CONTRACT NO. 071B2001304
between
THE STATE OF MICHIGAN
and

NAME & ADDRESS OF VENDOR MacGregor Group, Inc. 321 Summer Street Boston, MA 02210	TELEPHONE (617) 239-8650 Tom Chippas
	VENDOR NUMBER/MAIL CODE
	BUYER (517) 241-1646 Greg Faremouth
Contract Administrator: Walter M. Wisniewski Trading Software & Services – Department of Treasury	
CONTRACT PERIOD: From: January 15, 2002 To: January 15, 2007	
TERMS N/A	SHIPMENT N/A
F.O.B. N/A	SHIPPED FROM N/A
MINIMUM DELIVERY REQUIREMENTS N/A	

The terms and conditions of this Contract are enclosed. 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.

Estimated Contract Value: **\$1,806,118.55**

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

CONTRACT NO. 071B2001304
 between
 THE STATE OF MICHIGAN
 and

NAME & ADDRESS OF VENDOR <p style="text-align: center;">MacGregor Group, Inc. 316 Summer Street, 3rd Floor Boston, MA 02210</p>	TELEPHONE (617) 239-8650 Tom Chippas <hr/> VENDOR NUMBER/MAIL CODE <hr/> BUYER (517) 241-1646 Greg Faremouth
Contract Administrator: Walter M. Wisniewski <p style="text-align: center;">Trading Software & Services – Department of Treasury</p>	
CONTRACT PERIOD: From: January 15, 2002 To: January 15, 2007	
TERMS <p style="text-align: center;">N/A</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 enclosed. 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>Estimated Contract Value: \$1,806,118.55</p>	

THIS IS NOT AN ORDER: This Contract Agreement is awarded on the basis of our inquiry bearing the **ITB No. 071I1000376**. A Purchase Order Form will be issued only as the requirements of the State Departments are submitted to Acquisition Services. 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.

<p>FOR THE VENDOR:</p> <hr/> <p style="text-align: center;">Firm Name</p> <hr/> <p style="text-align: center;">Authorized Agent Signature</p> <hr/> <p style="text-align: center;">Authorized Agent (Print or Type)</p> <hr/> <p style="text-align: center;">Date</p>	<p>FOR THE STATE:</p> <hr/> <p style="text-align: center;">Signature Mike Katlin, Manager</p> <hr/> <p style="text-align: center;">Name Tactical Purchasing</p> <hr/> <p style="text-align: center;">Title</p> <hr/> <p style="text-align: center;">Date</p>
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**ACQUISITION SERVICES
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 vendor’s proposal; see also “Blanket Purchase Order.”
Contractor	The successful vendor who is awarded a Contract.
DMB	Michigan Department of Management and Budget
RFP	Request For Proposal - A term used by the State to solicit proposals for services such as consulting. Typically used when the requesting agency requires vendor assistance in identifying an acceptable manner of solving a problem.
INVITATION TO BID	Invitation to Bid - A generic form used by Acquisition Services to solicit quotations for services or commodities. The Invitation to Bid serves as the document for transmitting the RFP to interested potential vendors.
Successful Vendor	The vendor(s) awarded a Contract as a result of a solicitation.
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.



DEFINITION OF TERMS (con't.)

TERMS	DEFINITIONS
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.
MFTPTM	Abbreviation for Macgregor Financial Trading Platform, which means Macgregor's proprietary order management system software and related documentation.
MFN	Macgregor FIX Network – As described in the Work Statement attached hereto, and incorporated herein; the terms and conditions governing the use of MFN are as set forth in the MFN Agreement attached hereto and incorporated herein .



**SECTION I
CONTRACTUAL SERVICES TERMS AND CONDITIONS**

I-A PURPOSE

The purpose of this Contract (CONTRACT) is to obtain the products and services necessary for implementation and support of investment trading software for the Bureau of Investments, Michigan Department of Treasury.

This Contract is a Lump sum/fixed price Contract.

I-B TERM OF CONTRACT

The State of Michigan is not liable for any cost incurred by any vendor prior to signing of a Contract by all parties. The activities associated with the Investment Trading System implementation and support in the proposed Contract cover the period January 15, 2002 to January 15, 2007. 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), Acquisition Services, hereafter known as Acquisition Services, for the State of Michigan, Bureau of Investments Michigan Department of Treasury. Where actions are a combination of those of Acquisition Services and Bureau of Investments Michigan Department of Treasury, the authority will be known as the State.

Acquisition Services is the sole point of contact in the State with regard to all procurement and contractual matters relating to the services described herein.

Acquisition Services is the only office authorized to change, modify, amend, alter, clarify, etc., the prices, specifications, terms, and conditions of this Contract and any Contract(s) awarded as a result of this Request. Acquisition Services will remain the SOLE POINT OF CONTACT throughout the procurement process, until such time as the Director of Acquisition Services shall direct otherwise in writing. See Paragraph II-C below. All communications concerning this procurement must be addressed to:

Greg Faremouth, Buyer
 Strategic Purchasing
 DMB, Acquisition Services
 2nd Floor, Mason Building
 P.O. Box 30026
 Lansing, MI 48909
faremouthg@state.mi.us
 517-241-1646



I-D CONTRACT ADMINISTRATOR

Upon receipt at Acquisition Services of the properly executed Contract Agreement, it is anticipated that the Director of Acquisition Services 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 herein. That authority is retained by Acquisition Services. The Contract Administrator for this project is:

**Walter M. Wisniewski, Director
Bureau of Investments
Administrative Services
Department of Treasury
2501 Coolidge RD. Suite 400
East Lansing Michigan 48823
wwisniewski@invest.treas.state.mi.us**

I-E COST LIABILITY

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

I-F CONTRACTOR RESPONSIBILITIES

The Contractor will be required to assume responsibility for all contractual activities offered in their 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 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 vendor’s proposal and the resulting Contract 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. Financial and accounting records shall be made available, upon request, up to two (2) times per year to the State of Michigan, its designees, or the Michigan 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 acts of gross negligence or acts of willful misconduct 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 gross negligence or willful misconduct acts 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; provided that the State notify Contractor in writing of the claim, and allows Contractor to control solely, and cooperates with, Contractor in the defense or any related settlement negotiations. 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 pro rata credits to the State based on an eight (8) year straight line depreciation against any advanced payments made, but not earned, but shall in no event include incidental or consequential damages of any kind even if contractor has been informed of the possibility of such damages. In such event the contractor shall reimburse the State for any reasonable and actual costs incurred by the State in returning such infringing material to contractor. However, contractor has no obligation for any claim based on the State's modification of MFTP or its combination, operation, or use with any software or hardware product, or apparatus not specified or provided by contractor I Appendix D, or as amended mutually by the parties, provided that such claim is based



on such combination, operation, or use and such claim would be avoided by the absence of such combination, operation, or use, or by the combination, operation, or use with products, or apparatus specified or provided by contractor in Appendix G, or as amended mutually by the parties. This section States contractor’s entire obligation and liability to the State and the State’s exclusive remedy with respect to any claim of infringement.

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 sections, 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 sections for the statutory period of the governed law.

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, subject to the State of Michigan’s statute of limitations period on contracts.

I-K 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-L 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 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 commercially reasonable 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 commercially reasonable 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 provide support pursuant to the Technical Support Section of this Contract for all MFTP License Fees and Maintenance and Support Fees (as defined herein) for which it has been paid for and has maintenance responsibilities to insure everything is in good operating condition and will undertake all repairs and preventive maintenance in accordance with applicable manufacturer's recommendations;
10. The Contractor will use commercially reasonable 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 from the date that the services are completed on all purchased and developed software, data conversion programs, and data and customization to the product performed by the contractor.
13. Notwithstanding the foregoing provisions of this Section I-L, Contractor warrants, for the State's benefit alone, MFTP conforms in all material respects to the Minimum Functional Requirements for the current version of MFTP set forth in Appendix C, attached hereto. This warranty is expressly conditioned on the State's observance of the operating, security, and data-control procedures set forth in the documentation provided with MFTP.



I-M 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-N LIMITATION OF LIABILITY

Neither party shall be liable for any indirect, incidental, special or consequential damages, including loss of profits, revenue, data, or use, incurred by either party hereto or any third party, whether in an action in contract or tort, even if such party or such party’s personnel, agents or subcontractors have been advised of the possibility of such damages. Unless stated otherwise in this Contract, each party’s entire liability and sole remedy for damages hereunder (whichever the case may be) shall in no event exceed the amount of all Perpetual License Fees paid by State under this Contract, pro-rated from the time such damages accrued. Contractor shall have no liability for loss of data or documentation, it being understood that the State is responsible for all system administrative and management procedures, including backup procedures. This limitation upon damages and claims with respect to the parties hereto is intended to apply without regard to whether other provisions of this Contract have been breached or have proven ineffective.

I-O WORK PRODUCT AND OWNERSHIP

“Work Product” shall mean those deliverables developed solely for the State under this Agreement except for any Developments (as defined below) that may be developed or that may be embodied in any deliverable under this Agreement. All Work Product shall be deemed to be works made for hire, being works specifically commissioned by the State. Accordingly, upon the State’s payment in full for the Work Product, the State will be deemed to be their author and own all right, title and interest in and to them, including, without limitation, all patents, copyrights and trade secret rights, in all countries. Until such full payment is made, Contractor shall retain a lien against ownership of all rights to the Work Product. Contractor also agrees to, at the State’s expense, assist the State and its nominees in every proper way to secure, maintain and defend for the State’s own benefit patents or copyrights and any extensions or renewals thereof on such Work Product. Contractor retains the right to develop, use and distribute works that perform the same or similar functions as the Work Product.

“Development(s)” shall mean: (a) any proprietary computer software program(s) and documentation owned or distributed by Contractor (“Programs”) and any enhancements or modifications to the Programs; (b) any and all material and residuals (including without limitation, methodologies, techniques, innovations, knowledge, data, configuration data, specifications, documentation, documents, notes and flow charts) related to the Programs and/or any enhancements or modifications to the Programs, and (c) any tools or utilities developed by or on behalf of Contractor. Contractor retains all right, title and interest, including but not limited to all patents, copyrights and trade secrets in any Development(s). Contractor grants to the State a non-exclusive, non-transferable, royalty-free, perpetual internal use license to use such Development(s) that are incorporated into



the Work Product or any derivative works of the Work Product created by or for the State subject to the terms and conditions set forth in this Agreement.

Contractor may freely use, without obligation to the State, the “residuals” from the Work Product, provided that Contractor shall maintain the confidentiality of the State’s Confidential Information as required under the nondisclosure provisions of this Agreement. As used in this Section, the term “residuals” shall mean the Work Product in non-tangible form (i.e., not in written or other documentary form, including tape or disk), which include ideas, know-how, or techniques contained therein, provided that “residuals” shall not include Work Product committed to memory by Contractor personnel for the specific purpose of copying the Work Product. The State’s copyrights in the Work Product shall not be deemed to be violated by: (i) Contractor’s use, or the use by its subcontractors, of the residuals or any Developments in the course of providing services to any other party, even though use of such residuals or Developments may result in delivery to such third parties of certain portions of software, documentation or other products which are substantially similar to portions of the Work Product or (ii) Contractor’s use, or the use by its subcontractors, of any Developments or of ideas, concepts, know-how, or techniques that Contractor, or its subcontractors, developed previously in the course of performing services for other Contractor customers, even though the use thereof may result in delivery to the State of certain portions of software, documentation or other products which are substantially similar to portions of that owned by such Contractor customers.

I-P 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 Macgregor in order to carry out this Contract, or which become available to Macgregor 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 Macgregor for the protection of Macgregor 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. Macgregor 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 Macgregor without restriction, (3) information independently developed or acquired by Macgregor or its personnel without reliance in any way on otherwise protected information of the State. Notwithstanding the foregoing restrictions, Macgregor 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.

- 3 Licensee shall take all steps reasonably necessary to insure that the Software or components thereof will not be made available by Licensee, except as required by law, to any agent, employee, servant, independent contractor, or officer of Licensee, or to any other person, firm, governmental entity or corporation without prior written consent from Company. Licensee shall make every reasonable effort to insure that those persons having access to the Software shall observe and perform said non-disclosure covenants and that it will establish procedures for this purpose.

- 4 Licensee shall not disclose to any third party any terms of this Agreement, except where Licensee is required to make disclosure by decree, court order, law, or applicable regulation, or where Licensee reasonably deems such disclosure necessary to its auditors, accountants, bankers, attorneys, financial intermediary, or regulatory agencies.”

I-Q REMEDIES FOR BREACH OF CONFIDENTIALITY

Each party Contractor acknowledges that a breach of its confidentiality obligations as set forth in section I-P of this Contract, shall be considered a material breach of the Contract. Furthermore Macgregor 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-R 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 \$300,000.00 each occurrence and, when applicable \$1,000,000.00 annual aggregate, for non-automobile hazards and as required by law for automobile hazards.
- (4) Claims for damage 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 \$100,000.00 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 \$300,000.00 each occurrence and when applicable, \$1,000,000.00 annual aggregate.
- (6) Claims for damages because of Errors and Omissions in the performance of duties inherent to the profession of computer system design, development and integration, are subject to a limit of liability of not less than \$300,000.00 each occurrence and, when applicable, \$1,000,000.00 annual aggregate. For this coverage, the State requires that it be named as a co-insured party.

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).

UPON CONTRACT EXECUTION THE CONTRACTOR'S INSURANCE AGENCY MUST FURNISH TO THE DIRECTOR OF ACQUISITION SERVICES, 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 Acquisition Services.

I-S NOTICE AND RIGHT TO CURE

In the event of a curable breach by either party, the effective party shall provide the other party 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-T 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-U 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.

5. Upon termination of this Agreement, Licensee agrees to return all equipment, manuals, documentation, notes and any other materials provided to Licensee by Company exclusive of the hardware and software as specified in Section 4. Licensee further agrees that upon termination, Licensee shall immediately destroy and/or render inaccessible all copies of delivered Software, related files and data structures that are in Licensee's possession whether in physical or electronic form."

I-V 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 thereunder 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-W ASSIGNMENT

Neither party 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 Acquisition Services Director.

I-X 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 Acquisition Services Director has given written consent to the delegation.

I-Y NON-DISCRIMINATION CLAUSE



In the performance of any Contract or purchase order resulting herefrom, the vendor 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 vendor 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-Z MODIFICATION OF SERVICE

The Director of Acquisition Services 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.

This CONTRACT 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 New Work SHALL BE SUBJECT TO COMPETITIVE BIDDING BASED UPON THE NEW SPECIFICATIONS.

I-AA 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, return receipt requested; or (iv) the next Business Day after being sent by a nationally recognized overnight express courier with a reliable tracking system.

For the Contractor: **Corporate Counsel, 321 Summer St., Boston, MA. 02210**

For the State: **Greg Faremouth; DMB, Acquisition Services, 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-BB ENTIRE AGREEMENT

This Contract and all attachments 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-CC NO WAIVER OF DEFAULT

The failure of a party to insist upon strict adherence to any term of this CONTRACT agreement 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-DD 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-EE 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-FF 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-GG 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-HH 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-II 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-JJ 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-KK CONTRACT DISTRIBUTION

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



I-LL 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.

I-MM ADHERANCE TO PM METHODOLOGY STANDARD

The State has adopted a standard, documented Project Management Methodology (PMM) for use on all Information Technology (IT) based projects. This policy is referenced in the document titled “Project Management Methodology” – DMB Administrative Guide Procedure 1380.02 issued June 2000. Vendors may obtain a copy of this procedure by contacting the DMB Office of Information Technology Solutions. The State of Michigan Project Management Methodology can be obtained from the DMB Office of Project Management’s website at <http://www.state.mi.us/cio/opm>.

The contractor shall use the State’s PMM to manage State of Michigan Information Technology (IT) based projects. The requesting agency will provide the applicable documentation and internal agency processes for the methodology. If the vendor requires training on the methodology, those costs shall be the responsibility of the vendor, unless otherwise stated.

I-NN 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 12 months 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-OO 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-PP 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-QQ PERFORMANCE AND RELIABILITY EVALUATION (PARE)

When the State requires that a performance and reliability evaluation (PARE) is to be performed, the standard of performance for the PARE will be closely monitored during the acceptance period.

In the event that the PARE is for components only, all references to systems (processors) should be changed to components.

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 equipment listed on the ordering documents. Such equipment shall be checked for total compliance with all required specifications of the RFQ and resulting Contract. In the event that the State determines that any component or feature of the delivered equipment or software does not comply with the mandatory specifications of the RFQ and Contract, 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 equipment and software pass the specification conformance review, the equipment 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 will begin on the installation dates when the Contractor certifies that the equipment is ready for use by the State.

(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 45 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 equipment shall operate in substantial conformance with the Contractor's published specifications applicable to such equipment on the date of this Agreement. Equipment added by amendment to this contract shall operate in conformance with the Contractor's published specifications applicable to such equipment 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 equipment is returned to the State 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. Equipment 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 which 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 equipment 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 equipment has met the required effectiveness level for the prescribed time period.

I-RR LIQUIDATED DAMAGES

The PARE Review Committee will be the initial arbiter and judge of PARE effectiveness. Acquisition Services will validate any findings that would cause liquidated damages to be invoked on the vendor.

- 1. The State and the Contractor hereby agree to the specific standards set forth in this Contract. It is agreed between the Contractor and the State that the actual damages to the State as a result of Contractor's failure to provide promised services would be difficult or impossible to determine with accuracy. The State and the Contractor therefore agree that liquidated damages as set out herein shall be a reasonable approximation of the damages that shall be suffered by the State as a result thereof. Accordingly, in the event of such damages, at the written direction of the State, the Contractor shall pay the State the indicated amount as liquidated damages, and not as a penalty. Amounts due the State as liquidated damages, if not paid by the Contractor within fifteen (15) days of notification of assessment, may be deducted by the State from any money payable to the Contractor pursuant to this Contract. The State will notify the Contractor in writing of any claim for liquidated damages pursuant to this paragraph on or before the date the State deducts such sums from money payable to the contractor. No delay by the State in assessing or collecting liquidated damages shall be construed as a waiver of such rights.



2. The Contractor shall not be liable for liquidated damages when delays arise out of causes beyond the control and without fault or negligence of the Contractor. Such causes may include, but are not restricted to, acts of God or of the public enemy, acts of the State in either its sovereign or contractual capacity, fires, flood, earthquakes, epidemics, quarantine restrictions, strikes, freight embargoes, and unusually severe weather; but in every case, the delays must be beyond control and without the fault or negligence of this Contractor.

3. Liquidated Damages - The parties acknowledge and agree that in the event that the Contractor fails to complete certain obligations as specified in the Contract, damage shall be sustained by the State. The parties also agree that it is impractical and difficult to determine the actual amount of such damages. Therefore, the parties agree that the State may receive liquidated damages in the amounts specified below for any of the following failures due to the sole fault of the Contractor.
 - a.) Failure by Macgregor to deliver a substantially acceptable Software system as determined by system acceptance test plan within 150 days following acceptance by the State of the Project Plan or June 30th 2002, whichever occurs later. The Liquidated Damage amount shall be the pro rata amount equal to three (3) months of the License Fee hereunder as of the Effective Date of this Contract approximation of the damages.
 - b.) In no event shall the total amount of Liquidated Damages in this provision exceed one hundred thousand dollars (\$100,000).

The State is not obligated to assess liquidated damages before availing itself of any other remedy. The State may choose to discontinue liquidated damages and avail itself of any other remedy available under this contract or at law or equity provided however the contractor shall receive credit for said liquidated damages previously withheld, unless the contract is cancelled by the State for contractor's material breach.



SECTION II
WORK STATEMENT

II-A BACKGROUND/PROBLEM STATEMENT

The Bureau of Investments (BOI) is responsible for the investing activities of the State of Michigan Retirement System (SMRS), the general fund of the State, and various Trust funds such as the Lottery and Michigan Education Trust. The BOI has an operating budget of over \$8 million and is authorized to employ 87 employees of which approximately 46 are professional. The BOI is broken down into seven divisions by investment discipline: Alternative Investments, Short Term Fixed Income, Long Term Fixed Income, Mortgage and Real Estate, Quantitative Analysis, Stock Analysis and Trust Accounting. In carrying out its investment responsibilities, the BOI runs a broadly diversified portfolio that is primarily internally managed and includes over 2,000 individual investments.

SMRS is a \$45.5 billion Defined Benefits Plan representing over 525,000 beneficiaries. The plan assets represent the thirteenth largest public pension plan in the U.S. It is a pooled fund comprised of four funds: Public School Employees, State Employees, State Police and Judges. The State Treasurer is the sole fiduciary of the SMRS which is overseen by a five-person Investment Advisory Committee (IAC) comprised of outstanding governmental, economic and investment professionals.

Alternative Investments Division

The Alternative Investments Division is responsible for managing investments in the non-traditional asset classes of private equity and mergers and acquisitions, through both dedicated partnerships and directly into operating companies, using a variety of equity and debt instruments. Employees are responsible for establishing and maintaining relationships with private sector investment professionals, evaluating and recommending venture capital and merger/acquisition investment opportunities and portfolio management.

Short Term Fixed Income Division

The Short Term Fixed Income Division is responsible for the research, analysis and investment of assets in fixed income securities with a maturity of less than one year according to the guidelines of the BOI and the State Treasurer.

Long Term Fixed Income Division

The Long Term Fixed Income Division is responsible for the research, analysis and investment of assets in fixed income securities maturing in more than one year according to the guidelines of the BOI and the State Treasurer.



Mortgage and Real Estate Division

The Mortgage and Real Estate Division is responsible for managing SMRS assets allocated to real estate and mortgages. A single investment can range anywhere from \$10 million or more and includes investments such as office buildings, apartments, malls, etc. The staff consists of real estate specialists who oversee and make recommendations concerning the management of the investments, including buying, selling and structuring, and clerical staff who provide support to the specialists.

Quantitative Analysis Division

The Quantitative Analysis Division is responsible for managing SMRS assets allocated to passive equity investments targeting the returns of the U.S. and International stock indices. These investments targeting the S & P 500 and other benchmark indices are, or closely resemble, enhanced index funds. Staffed by investment specialists, the Division purchases and sells stocks and derivative securities, and provides information for management analysis and decision-making.

Stock Analysis Division

The Stock Analysis Division invests funds for SMRS in publicly traded stocks. The Division's purpose is to maximize rates of return without placing undue risk on the portfolio. The staff consists of equity investment specialists who research and recommend the purchase and sale of stocks of primary U.S.-based companies. These investments range in value from \$25 to \$500 million.

Trust Accounting Division

The Trust Accounting Division provides trust services to various investment divisions within the bureau and to other agencies and state departments. The division is comprised of four sections delineated by function or responsibility:

The Information Support Section supports the BOI Local Area Network, comprised of 90 workstations.

The Operations Section is responsible for processing daily cash and accounting transactions and the security settlement.

The Accounting and Systems Controls Section is responsible for cash and general ledger control functions, in addition to financial statement analysis and preparation.

The Specialized Accounting Section is responsible for managing the Performance Measurement Process and accounting for derivatives and international investments.



II-B OBJECTIVES

General:

BOI desires to expand and upgrade its internally dedicated investment local area network (LAN) software resources. During the last ten years SMRS assets have grown 193% and have become the thirteenth largest public pension in the United States. Today, SMRS investment portfolios are valued in excess of \$45.5 billion. By conservative estimates, SMRS assets will double during the next ten years. Consequently, the BOI desires to acquire and implement investment accounting, portfolio management, cash management and trading systems in order to:

- Provide more accurate, high speed processing of information for accounting/analysis/reporting and trading;
- Expand the use of electronic means to collect, process and analyze information and more fully automate these processes, and;
- Support accounting and investment functions for a variety of pension, agency and fund investment structures including pooled fund investment unit accounting and related ancillary functions, including participant accounting and;
- Provide for continued growth in volume and size of investment transactions.

Specific:

Contractor’s proposed solution to the State of Michigan Retirement System will address the need to implement a state-of-art automation solution that spans the entire investment management process from decision support to accounting including communication of trade information to 3rd parties such as custodians, brokers, and DTCC. Contractor understands all the critical success factors associated with introducing, supporting, and evolving an integrated order management solution. Contractor knows that the State’s is not to buy a software product, but to deploy an investment operations infrastructure that markedly improves the State’s operational efficiency and performance. Contractor’s understanding of the issues and requirements are as follows:

- Deploy a high-speed performance order management solution – speed is a critical success factor in a T+1 environment. Fast decisions, fast actions and fast reactions are essential. BOI requires a scalable, open and reliable trading platform that supports all asset types and will accommodate both current and projected processing and user volumes.
- Goal of implementing an automated solution is to reduce manual processes through the seamless integration of the trade order management system with other systems supporting the investment operations. This includes links to the selected investment accounting system, custodians, market data providers (Bridge, Whilshire, Bloomberg), DTCC and other analytical systems.



- Provide more accurate, high speed processing of information for accounting/analysis/reporting and trading.
 - Ability for the traders to communicate electronically with brokers and ECN's
- Implement a technology solution that will allow BOI to keep costs under control as your business grows.

Contractor's architectural approach to developing workflow solutions for the buy-side community manifests itself in our Extended OMS, the **Macgregor Financial Trading Platform (MFTP)** and the **Macgregor FIX Network (MFN)**. Contractor's experienced and knowledgeable Professional Services staff will provide consulting services for implementing the State's order management solution.

II-C TASKS

1) The Macgregor Financial Trading Platform – MFTP

Contractor proposes that the Macgregor Financial Trading Platform be deployed in an environment to satisfy the State of Michigan complete business requirements. MFTP would serve as the front end and work in concert with BOI's investment accounting solution. MFTP provides the BOI:

- Real time order, multi-currency order management system supporting a broad range of asset types with comprehensive support for fixed income and equity securities. MFTP also calculates the analytics required to process money market and fixed income trades.
- Portfolio Managers and Traders tools for order generation, position management compliance and trade order management.
- Comprehensive functionality to support trade, capture the ability to generate an order, enter an execution, allocate units to one or more accounts, confirm and order and update positions and cash.
- Flexible and scaleable system that will provide the BOI with a solution that maximizes accuracy and efficiency in:
 - Position Management
 - Order Generation
 - Trade Order Management
 - Electronic Communication to Counter parties
 - Brokers via FIX
 - Custodians
 - DTCC



2) The Contractor FIX Network – MFN

The Contractor FIX Network (MFN) is a unique offering of Contractor in that MFN is tightly integrated with our FIX engine and the MFTP blotter proving BOI a fully supported and stable end-to-end platform for electronic trading and straight thru processing. This provides BOI the ability to trade electronically with the over 100 brokers and ECNs connected to the network. MFN communicates FIX based indications of interest (IOIs), orders, executions and allocations and handles thousands of FIX messages daily. MFN has been in production since 1997 and is the most stable and high volume FIX network available. Please refer to *The Contractor FIX Network* document for a full description of MFN as well as a list of the over 100 supported trading venues.

3) Contractor Professional Services

Contractor’s consultants will work with BOI to produce positive, measurable results. Using proven approaches and methods, Contractor delivers solutions that span the entire life cycle of the system. This approach allows the State to focus on the State’s strengths in trading and investment management. Contractor understands the role of mission-critical systems in today’s investment management organizations and the global challenges for the industry that lie ahead.

For the State of Michigan BOI, Contractor will offer a complete product implementation service which will include the following:

- Project planning and management,
- Workflow analysis and requirements engineering,
- Systems integration,
- Installation and configuration,
- User education,
- User acceptance testing, and
- Onsite support



II-D WORKSTATEMENT

I. Purpose To provide the State with costs and timeframes associated with installing and implementing Macgregor Financial Trading Platform (MFTP) version 6.14.5.x and related components.

II. Scope Contractor will provide support to the State in the implementation of MFTP, relative to the Services noted in Section IV of this Work Statement. This also includes the following modules:

- Portfolio Managers Workstation (PMW)
- CompAlert®
- Contractor Financial Network (MFN) and FIX Protocol
- MFTP
- Advanced Fixed Income module (AFI)

III. Statement of Understanding
(Assumptions)

- There are 30 users and 1 site (Lansing, Michigan) that will be using the MFTP system.
- The Investment Accounting System (QED) will be implemented prior to MFTP implementation.
- There are no other system interfaces required.
- There are no product enhancements required to MFTP v6.14.5.x.
- The State of Michigan will be using MFTP Advanced Fixed Income module.
- All data required for trading would be obtained from the Investment Accounting System. Macgregor will be responsible for extracting the data to a format acceptable to MFTP import programs.
- There are no reporting or other integration requirements.
- The State will be utilizing MS SQL as the database option.



IV.
Description of
Services

Contractor will work with The State to implement the MFTP to facilitate Production Use, by providing resources and support as deemed necessary and described in Appendix A, Installation and Implementation services.

V. Services

Contractor will provide the following services listed in appendix A Installation and Implementation services. The Services reflect only those Services for which Contractor assumes responsibility.

VI. Required
Resources
from the State
of Michigan

In order to complete the Services described in this Work Statement and Appendix A , Contractor will require timely access to the individuals with knowledge about the State of Michigan’s environment and order management systems environments, including technical resources and traders/trade support staff.

Contractor will provide the following resources :

- 1. Project Manager**
- 2. Project Consultant**
- 3. Engineer**
- 4. Integration Consultant**

In addition to the above-named resources, Contractor will assign additional resources when needed to ensure the timely completion of the listed Services.

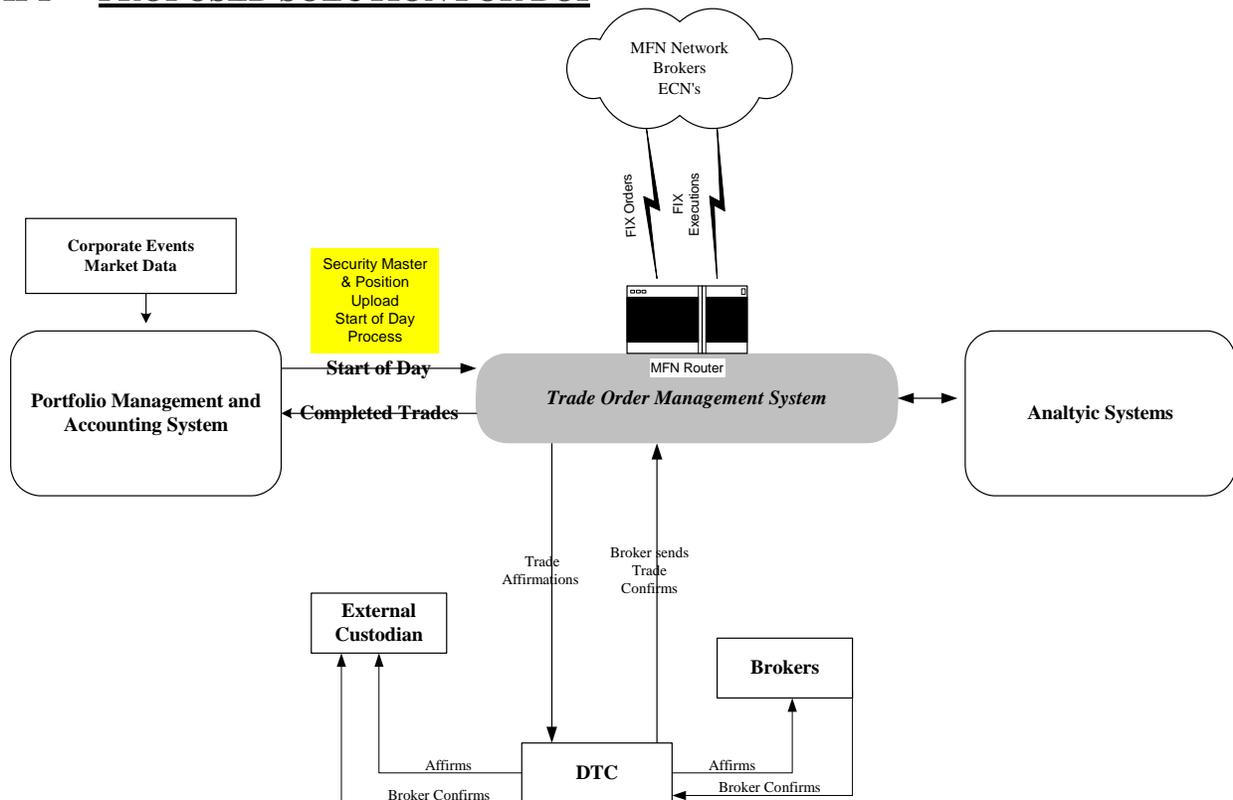
II-E BENEFITS TO BOI

- A critical success factor for deploying an order management solution is an end user application that can support your required workflows. Contractor’s clients include a wide range of organizations, for the largest, most diverse financial firms to smaller highly focused players. Contractor supports all users types and all asset types.
- Automation of the Investment Process - Electronic trading increases the speed and accuracy of trade communications and reduces the amount of time a trader spends as a data entry clerk. One or many trades along w/ basic details (symbol, side, amount, price, handling instruction) can be communicated accurately in seconds when sent electronically. Upon disbursement and receipt, the orders are handled electronically such that data entry is eliminated getting your trades to market faster. Since data entry is eliminated, attendant typing and transposition errors are eliminated.



- Integrated FIX Network - Single vendor approach and a dedicated FIX Help Desk eliminates the need to deal with multiple vendors or brokers to get started and allows BOI to make a single phone call to resolve any software, hardware or network related issues.
- Scalable Platform - By developing MFTP on an open, 32 bit Windows architecture, users are guaranteed the scalability and performance needed to support a mission critical application. MFTP runs on the high-powered Sybase DBMS or MS-SQL, with options of running the servers either on Windows NT or Sun Solaris.
- Seamless Integration - Designed to support each institution’s environment, MFTP provides for flexible interfaces to analytical packages, accounting systems, custodian banks, prime brokers and settlement systems. These interfaces help you to establish a straight-through-processing environment with support from one vendor.

II-F PROPOSED SOLUTION FOR BOI



Proposed Trading Solution

- MFTP Trading System as the platform for integration
- MFN – Plug & Play FIX Connectivity. Provides the necessary electronic communication for providing more accurate, high speed processing of information.
- Required Interface Development
 - Real time interface with Investment Accounting System
 - Interface to DTCC



- o Interface to other internal systems

In summary Contractor provides BOI with an automated trading **solution** with a completely integrated and fully support of FIX Network that addresses your trading requirements.

II-G MINIMUM FUNCTIONAL REQUIREMENTS (See also Appendix B)

1. MFTP supports the ability to trades equity swap derivatives.
2. MFTP supports the ability to trade limited partnerships.
3. MFTP provides traders, portfolio managers and compliance officers with real time positions, cash and fully integrated pre-trade compliance checking. In addition executed trades can be communicated to the investment accounting system real time.
4. MFTP supports average cost take down method
5. Support Depository Trust & Clearing Corporation (DTCC) interface
Contractor integration team will build a file export in the DTCC format to communicate trades. Contractor is working in conjunction with OMGEO and will be building a standard interface to the OMGEO solution. This will be available to BOI upon release.

II-H SYSTEM REQUIREMENTS

1. MFTP is a real time system providing the users with real time positions, cash and compliance checking.
2. NT/Windows 2000 compatible
3. The system will support ODBC MFTP is based on open database architecture. As such, any ODBC-compatible report writer or application can be used to integrate MFTP data. Crystal Reports and Microsoft Access and Excel are most frequently used at client sites.
4. MFTP supports MS SQL Server 7.0
5. MFTP is a scalable client/server system. Client workstations run end-user applications and application daemons. The server machine hosts the RDBMS server.
6. Contractor supports large volume/high speed processing. Much of the effort spent of deploying version 6 of MFTP was spent on optimizing MFTP to perform well under large concurrency loads. There are several architectural features in MFTP specifically aimed at supporting large complex sites with many concurrent users. These include optimizing the physical layout of key shared tables, moving data intensive functionality from the client into the server through stored procedures,



selective caching of frequently used data, and specialized daemons to offload complex processing.

Contractor's standard performance benchmark tests 100 simultaneous users. As part of the version 6-development process Contractor engaged Sybase Consulting services to validate and enhance the approach to achieve high multi-user performance. Contractor continues to use a number of tools and techniques to evaluate and improve the performance of the system under heavy load scenarios

7. The MFTP system will provide tape backup and recovery functionality and support transaction roll-forward and rollback capabilities. Both Sybase and SQL Server use a transaction log for performance and recovery. If the server fails in an environment where no fault tolerance is in, committed transactions can be recovered from the transaction log. If the database is lost, it can be recovered from a previous backup and the transaction logs. Regular database backups are at the core of any recovery strategy.

A number of database vendor provided fault tolerance schemes that can be implemented to facilitate recovery after server failure. These range from full database replications, through redundant hardware (e.g. clusters, raid disks), to simple recovery from backups. The recovery procedures for server failures will vary depending on the fault tolerance scheme in use. The more sophisticated schemes require no user intervention after failure. The simpler schemes may require an operator to load a tape, run the database vendor standard recovery applications, and restart the server (on the original hardware or backup host).

Recovery of abnormal termination of applications is achieved by simply restarting the application from an icon or command line (on the original hardware or backup workstation). In the case of hardware failure, any INI settings associated with the user will have to available from the new workstation.

Our clients currently implement a variety of fault tolerance schemes (mostly driven by internal IT preferences). Our professional services group can advise you regarding recovery procedures as part of the implementation phase.

II-I DEVELOPMENT REQUIREMENTS

1. Contractor will develop specialized interfaces with other modules, such as accounting, analytics, etc. MFTP's integration engineers and designers are experienced and available.
2. Contractor will Interface with custodial banks MFTP supports a standard ISITC file extract for electronic communication with custodian banks.
3. Interface with data vendors, such as, Bloomberg, Bridge, Wilshire, etc. MFPT supports the ability to easily interface with a variety of market data vendors. We currently have productized interfaces with Reuters and Bridge. We are working with Bloomberg, Bondedge and Yield Book to provide additional standard interfaces. Our



integration developers would develop custom a custom interface to Wilshire and any other vendors that require information to flow between that application and MFTP.

4. Interface and exchange files with brokers and broker Electronic Communication Networks (ECN) using standard interface protocols, standard data sets and standard file formats.

The Contractor FIX Network (MFN). MFN connects institutional money managers with brokers and ECNs communicating FIX-based indications of interest, orders, executions and allocations. The MFN private network provides clients a fully supported, single point of communication for all message types supported by FIX. By providing a single point of communication a secure private network and certification of each broker’s software prior to activation, MacGregor ensures that all FIX traffic will reach its appropriate destination.

Please refer to *The Contractor FIX Network* document for a full description of MFN as well as a list of the over 100 supported trading venues.

II-J TRADING INTERFACE CAPABILITIES

Trading Interface Capabilities –

1. Accounting software provider Contractor has been interfaced to many portfolio accounting systems, portfolio management systems and research systems at client sites.

PORTIA PORTIA APO,FMC Pacer,Global IM2
 GPVS,Maximis,Advent AXYS,SS&C
 Camra,C-Port,Shaw,GPS
PAM,Mpower,Sungard
 MFACT,Custom Systems

2. Contractor integration: the centerpiece of the proposed software solution is the Contractor’s proprietary order management system known as “Macgregor Financial Trading Platform” –(“MFTP™”). The system provides the platform for integration and can be seamlessly integrated with the investment accounting system. MFTP will serve as the front end to other systems and data can be exported to BOI’s Investment Accounting System as well as other internal or 3rd Party applications. This will satisfy the need to automate the link between portfolio management, trading and accounting.

Extract data from the Investment Accounting System

1. MFTP does not come with any data, and it needs to be populated with definitional information before it can begin handling trading data. The system is typically setup to periodically load and reconcile account, asset, and broker information from the system of record (e.g. daily, weekly). This is an effective approach since MFTP simply adopts all the coding standards of the system of record, thus eliminating the need to



translate/map codes between systems. Other definitional data such as default broker commissions and broker direction is sometimes maintained directly on MFTP. Specifically, the interface between MFTP and the States portfolio accounting systems will consist of the following:

- A. Accounts
 - B. Security Master File Data
 - C. Pricing & FX
 - D. Position Data (tax lot level or average cost)
 - E. Other: Definitional Data such as brokers, country, sector, etc.
2. Convert Files to MFTP Format

Contractor utilizes the Generic Import offering, this consist of programs and configurable field definition files which allow a firm to easily configure interfaces, without programming, to import definitional data (e.g. broker list, client list) and refreshes of data that changes daily (e.g. client cash and positions). The Generic Import offering also includes a configurable order import process, which allows a firm to import orders and/or executions and allocations from an outside source.
 3. Load Files into MFTP

Once the trading database has been populated with the definitional data, portfolio holdings are loaded into the system. Holdings are extracted from the accounting systems, typically at start-of-day, and are loaded into the MFTP OMS for use at order generation and tracking intra-day. The MFTP OMS uses the information extracted from the accounting system and loads it into the trading database as the basis for evaluating market values of portfolios, available cash and currently held long and short positions. During the day, order generation and executions will update this information in real-time, thereby keeping portfolio managers and traders in sync with where the portfolios stand throughout the day.
 4. MFTP- Order Generation, Compliance, Position and Trade Management

During the course of the trading day, executions are recorded and allocated to portfolios. For the accounting systems to recognize these executions and allocations, information are extracted from the MFTP OMS database and loaded into the accounting system. This extraction process is known as posting.
 5. Outgoing Allocations
 - Extract allocations for confirmed trades from MFTP
 - Translate allocation message into accounting system specific format
 - Load allocation into accounting system (system specific load scheme)

The above processes can be run at any time during the day, even multiple times per day. This is useful when definitional data changes in mid-day; a new broker is designated for trading, or a new account opens or new securities are cleared for trading. The MFTP OMS can load this definitional data and make it available for immediate use by portfolio managers or traders. Similarly, if you wish to post executions multiple times per day, the



MFTP OMS posting process can be easily automated to run every day at three pre-set times or every hour on the hour or every 5 minutes if you like. The tight coupling of the MFTP OMS to the accounting system ensures that you will always have the most up-to-date information on hand when making investment decisions.

Finally, Contractor will provide a configurable Generic Export process that allows a firm to export out completed order details for use in other systems downstream. The orders export program produces configurable files that are easily manipulated to handle specific client requirements.

II-K TRAINING

Macgregor will provide training to State of Michigan in the implementation of MFTP. This will include but is not limited to the following training curriculum:

- **Getting Started with MFTP**

A 2-day series of lecture and labs, which will teach the new Users how to manipulate the blotter, simulate a “typical” trade flow and set up data in MFTP System Maintenance.

Delivery: Instructor led classroom

Audience: Implementation Project Team and MFTP Users

- Macgregor will provide training for the Client Implementation Project Team
- Macgregor will provide two (3) training sessions of 10 users each.

Objectives: By participating in Getting Started with MFTP, new users will be able to:

- Understand MFTP concepts and terminology
- Understand how a Portfolio Manager & Traders use MFTP
- Set up and Manage trading blotters
- Enter orders in MFTP to simulate "typical" trade workflow
- Understand and effectively use MFTP functions such as:
 - Combining orders on the Blotter
 - Front End Archive Views
 - Splitting an Order
 - Checking for Duplicates and Contras
- Understand and effectively use MFTP System Maintenance functions such as
 - Set up a Trader/Manager
 - Populate and maintain the database tables
 - Understand basic background information about how the System addresses trading functions
 - Navigate around the database tables that control the trading system
 - Understand and set up Dash System requirements
 - Master the system setting

- **Portfolio Managers Workstation (PMW) Training**

A one day sessions facilitated by a Macgregor Instructor or SME which will allow the user to effectively use and understand the MFTP Portfolio Managers Workstation tool.



Delivery: Instructor led classroom

Audience: Portfolio Managers

Objectives: By participating in MFTP PMW training Users will be able to:

- Understand PMW concepts and terminology and learn how to use the tool to:
 - View positions and evaluation the impact of “What-If” trades.
 - Model and rebalance portfolios against internal or imported models or indexes
 - Quickly generate orders based on share amount, percentage of portfolio or cash amounts.

● **Fixed Income Workflow Training**

A one-day session facilitated by a Macgregor Instructor or SME which will allow the user to effectively use and understand MFTP Fixed Income functionality.

Delivery: Instructor led classroom

Audience: Fixed Portfolio Managers/Traders

Objectives: By participating in MFTP Fixed Income Training Users will be able to:

- Understand and configure an Fixed Income Blotter
- Understand Fixed Income Security Types
- Enter a new Fixed Income Security
- Be familiar with Fixed Income Order Entry and Modeling

● **MFTP Compliance/Rule Expert Training**

A one-day session facilitated by a Macgregor Instructor or SME that will allow the user to effectively set up, use and understand MFTP Compliance functionality.

Delivery: Instructor led classroom

Audience: Compliance Officer and/or other Users that need to understand the compliance functionality in MFTP.

Objectives: By participating Users will be able to:

- Understand the business reasons behind CompAlert’s standard rule set.
- Understand the compliance rule types
- Define regulatory, prospectus based and other restrictions to provide pre-trade compliance review.
- User RuleExpert to create custom rules.

Tasks

- There are 30 Users to be trained on Getting Started with MFTP
- The Project Team will be trained first
- Users to be trained by a Macgregor Instructor on site at the State of Michigan’s Bureau of Investment Facility
- Macgregor Education will conduct a training needs analysis.

A Macgregor Instructor or SME will provide any additional specialized training for an additional fee.



Training Services

Macgregor will manage and/or perform the following Services:

<u>Services</u>	<u>Hours</u>
MFTP Basics Project Team Training	20
MFTP Basics User Training	34
MFTP Basics - 10 users	10
MFTP Basics – 10 users	10
MFTP Basics – 10 users	10
Portfolio Managers Workstation Training	Incl.
Compliance/RuleExpert Training	Incl
Fixed Income Training	Incl
Total	84 hours

Required Resources

In order to complete the Services described in this Section, Macgregor will require timely access to the individuals with knowledge about the State’s information and order management systems environments, including technical resources and traders/trade support staff.

Macgregor will provide the following resources on an “as needed” basis (unless otherwise noted):

1. Macgregor Instructor
2. Macgregor Subject Matter Expert (SME)

In addition to the above-named resources, Macgregor will assign additional resources when needed to ensure the timely completion of the listed Services.

II-L PROJECT CONTROL AND REPORTS

1. Project Control

- a. The Contractor will carry out this project under the direction and control of the Contract Administrator, Walter M. Wisniewski.



- b. Although there will be continuous liaison with the Contractor team, the client agency's project director, John Buck, will meet weekly 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. Within five (5) working days of the award of the Contract, the Contractor will submit to the BOI's Contract Administrator for final approval a work plan. This final implementation plan must be in agreement with section IV-C subsection 2 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

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.

Draft preliminary reports shall be done as each task is completed. A final report shall be generated 30 days after all draft preliminary reports have been reviewed by the Contract Administrator. The specific due dates will be negotiated between Contractor and the project manager.



II-M PRICE PROPOSAL

All prices/rates quoted in vendor's response to the Invitation to Bid and included within this CONTRACT, will be firm for the duration of the Contract. No price changes will be permitted.

II-N. Schedule Milestones

The parties anticipate the Services to be performed according to the following schedule. The dates presented in this Section assume a start date of, **February 15th 2002**

Technical Support Services Milestone	Responsibility	Expected Completion Date	MFTP Perpetual License and Installation Services Payment Schedule*
Delivery of software	Macgregor	Within 7 days of execution	\$64,046
Subscriber Acquires Hardware to Specifications	Subscriber	3/1/2002	
Onsite MFTP Installation Complete	Macgregor	3/4/2002	\$64,046
Database Setup	Macgregor	3/4/2002	\$104,546
Database Setup Complete	Macgregor	3/4/2002	\$104,546
Concept of Operations Complete	Macgregor/Subscriber	4/8/2002	
Deliver Project Team Training	Subscriber/Macgregor	4/15/2002	
Data Population Complete	Subscriber/Macgregor	5/15/2002	
MFN/FIX Installation Complete	Macgregor/Subscriber	7/1/2002	
System Test Complete	Macgregor	7/15/2002	\$185,546
Deliver Training to End Users	Subscriber/Macgregor	7/31/2002	\$185,546
Parallel Test Complete	Subscriber	8/14/2002	
Successful Go Live - Transfer to State Services	Macgregor	8/18/2002	\$185,546
Transfer to Client Services Group	Macgregor	9/1/2002	
Holdover - 30 days	Subscriber	9/31/2002	\$107,746
		Total	\$1,001,568

1. Payments are due upon completion of each corresponding milestone as indicated.
1. All travel and related expenses are not included in the above milestone services, and are the responsibility of the State, as specified in Appendix A.
2. Annual Maintenance fee to be paid after completion of installation and holdover payment.
3. MFN subscription fee to be paid monthly and to start after successful installation and holdover payments.



II-O CONTRACT PAYMENT

(A) All invoices should reflect actual work done. Specific details of invoices and payments will be agreed upon between the Contract Administrator and the Contractor after the proposed Contract Agreement has been signed and accepted by both the Contractor and the Director of Acquisition Services, Department of Management & Budget. This activity will occur only upon the specific written direction from Acquisition Services. 10% of the total price will remain for final payment).

II-P 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 Work Statement. 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 Work Statement. 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.

The State and the Contractor agree that the following personnel are Key Personnel for purposes of this Contract:

- Name Kathleen Sweeney
- Title_ SR. Project Manager
- Name_ John Wong
- Title__SR. Consultant
- Name_ Alan Dowd
- Title__ Consultant
- Name_ George Zhang
- Title__ Consultant
- Name_ Jill Bolen
- Title__ Consultant



**Appendix A
MFTP Pricing Schedule**

The MFTP License fees are calculated based on the number of Authorized Users of MFTP and Modules, according to the following schedule.

Fee per User	Number of Users	Fee
Core OMS		
MFTP Core System	30	\$486,000.00 (one-time)
Additional Users		
		(One-time fee per Additional User)
1- 10 - \$500.00 per user		(See Appendix A-1,#6 for additional information)
Over 10, up to 20 - \$450.00 per user		
Over 20, up to 30 - \$400.00 per user		
Over 30 - \$350.00 per user	0	\$0.00
		\$20% of the cost per each additional user added
Annual Maintenance for Additional Users		
<i>Total Users</i>	<i>30</i>	
Modules		
Portfolio Managers Workstation (PMW)	\$2,500.00	1 \$90,000.00 (one-time)
CompAlert Compliance	\$2,500.00	1 \$90,000.00 (one-time)
Advanced Fixed Income	\$3,200.00	\$3,200.00(one-time)
FIX Protocol	\$2,500.00	1 \$90,000.00 (one-time)
Fax Reporting	\$500.00	\$0.00
Network		
MFN	\$2,000.00	1 \$2,000.00 (per month)
Interfaces		
Reuters Triarch	\$1,000.00	0.00
POSIT via FIX	\$1,000.00	\$0.00
Instinet via FIX	\$1,000.00	1 \$36,000.00 (one-time)
OASYS	\$250.00	\$0.00
OASYS Global	\$750.00	\$0.00
Plexus	\$500.00	\$0.00
ISITC – Batch	\$500.00	\$18,000.00 (one-time)
Total Perpetual License Fee (36 X monthly subscription less MFN):		
	22,500x36	\$813,200.00



Total Annual Maintenance Fee (20% of current Perpetual License Fee	\$162,000.00*
Total Annual MFN Subscription	\$24,000.00**

*Subject to increase for additional modules.

**Subject to change if connectivity and port speed are increased.

**INSTALLATION AND IMPLEMENTATION SERVICES
TIMELINE & PRICING SCHEDULE**

Services	Estimated Hours	Resource	Cost
<ul style="list-style-type: none"> • Concept of Operations and Workflow Review On site interviews Writing up proposed workflow Reviewing proposed workflow with the State. 	100	Project Manager/ Project Consultant	\$20,000
<ul style="list-style-type: none"> • Data Population/Integration Support On site Training on MFTP import program configuration and use. Phone and e-mail question support during data imports 	160	Project Manager/ Project Consultant	\$32,000
<ul style="list-style-type: none"> • Overnight Process Configuration On-site installation of process On-site training 	32	Project Consultant	\$6,400
<ul style="list-style-type: none"> • On-Site Training. Project- team training. End User Training 	80	Project Manager/ Project Consultant	\$16,000
<ul style="list-style-type: none"> • On-Site Support. On-site support for parallel. On-site support live day 	94	Project Manager/ Project Consultant	\$18,800



<ul style="list-style-type: none"> • Engineering Support. MFTP product installation. MET/MFN installation. Database configuration. Question support 	64	System Engineer	\$12,800
<ul style="list-style-type: none"> • The State System Testing/Functionality Support. Support during function unit testing. Support during User Acceptance Testing 	240	Project Manager/ Project Consultant	\$48,000
<ul style="list-style-type: none"> • Project Management & Administration. Status Reports. Conference calls. Bi-weekly Billing Reports. 	125	Project Manager	\$34,375
Fixed Price Total			\$188,375

*TOTAL 1st YEAR COSTS for MFTP and INSTALLATION SERVICES \$ 1,187,575.00

(MFTP, Installation, 1st Year Maintenance and MFN Services)

*Year 2-10 Costs (Maintenance and MFN support) \$ 186,000.00/year**

** Subject to the State adding additional licenses and maintenance

Fees and Payment

Payment: 100% of Perpetual License Fee and initial term of Annual Maintenance and Support Fees are due in accordance with the milestone schedule set forth in Section VII of the Work Statement, attached hereto.

Annual Maintenance and Support Fees: 20% of Perpetual License Fee, valid for five (5) years beyond the Term stated in Section I-B of this Contract.

Maximum Annual Maintenance and Support Renewal Price Increase Rate: 7.5% after the initial 10 years of this Contract.



The State agrees to pay for Maintenance and Support, which is not included in the Perpetual License Fee and will be invoiced at the rate of 20% of the current Perpetual License Fee. The Perpetual License Fee is calculated based on usage and modules specified.

In the event the State elects to cancel Maintenance and Support, the State shall give written notice to Contractor with ninety (90) days of such quarterly invoice. The cancellation of Maintenance and Support will become effective at the commencement of the next billing quarter and the cancellation of said Maintenance and Support will have no effect on the State's use of the current paid for product being used.

At the end of the 10 years, and at the end of every renewal thereafter, Contractor may adjust the Annual Maintenance and Support Fee. If adjusted, this fee may be increased, at most, by and in accordance with the percentage rate and applicable duration conditions indicated as the Maximum Annual Renewal Price Increase Rate above.

The Maintenance and Support Fee for MFTP includes Technical Support Services as specified in Appendix A-1, and under the terms and conditions of this Contract. The State agrees to pay for Technical Support Services not included in the Maintenance and Support Fee at the agreed upon contractual Rate described in Section II-C Tasks-Continued. In the event the State asks and agrees to have vendor furnish additional technical Services not described herein the Contractor will bill according to the current Additional Technical Support Services Rate is specified below. The State will be invoiced for all Additional Technical Support Services on a monthly basis.

The State may request that Contractor purchase, on Subscriber's behalf, equipment, software, documentation, services, and other products or services needed by the State for purposes related to the use of MFTP. Contractor, at its sole discretion, may elect to purchase such products and services for the State upon the State's request. The State agrees to reimburse Contractor for such purchases upon receipt of an invoice from Contractor for reimbursement of those purchases.

Contractor shall be reimbursed by the State for all reasonable expenses incurred by Contractor in the performance of Technical Support Services and Additional Technical Support Fees that are not covered by the Maintenance and Support Fee. These expenses include, but are not limited to, travel (pursuant to the State of Michigan Travel Rates as Set forth in Appendix G, attached hereto and incorporated herein. The State agrees to reimburse Contractor for such expenses upon receipt of an invoice from Contractor.

All charges and reimbursements are payable at the beginning of each month or upon invoice. A monthly interest charge of three quarters of one percent, could be assessed on payments more than sixty (60) days past due. Notwithstanding anything in this Contract to the contrary, the State's obligation to pay the amounts due or to become due hereunder shall be absolute and unconditional and shall not be subject to any reduction, setoff, defense, counterclaim, or deferment for any reason whatsoever.

In the event that Contractor is required to bring an action at law or suit in equity to collect amounts due under this Contract, the State, in addition to all other sums, which the State may be called upon to pay, will pay to Contractor a reasonable sum for its attorney fees, provided that Contractor is successful in such action at law or suit in equity.



Appendix A-1

MFTP Software License Terms & Conditions

1. Definitions

1.1 As used in this Agreement, the following terms shall have the following respective meanings:

- (a) The term “Agreement” shall mean this Software License Agreement, including all Exhibits attached hereto.
- (b) The term “Authorized Users” shall mean those individual users of Subscriber, so authorized by this Agreement to access or otherwise use MFTP for the stated License Fee as specified in Appendix A, attached hereto and incorporated herein, subject to the terms and conditions set forth hereunder. The number of Authorized Users are as specified in this Appendix A and as increased from time to time by The State (“Additional Authorized Users”).
- (c) The term “Computer Program” shall mean any instruction or instructions, in machine readable form, for controlling the operation of or operating with a central processing unit.
- (d) The term “MFTP” shall mean the package of Computer Programs and documentation identified in Appendix B, attached hereto and incorporated herein.
- (e) The term “System of Record” shall mean any computer system, software, or manually maintained records that serve as the State’s official record of portfolio transactions and security and cash holdings.
- (f) The term “Production Use of MFTP” shall mean any use of the MFTP software that results in the use of data generated by MFTP software, either directly or indirectly, in file or printed form, to update the State’s System of Record.
- (g) Use of any MFTP Computer Program requires the specification of a database file from which the Computer Program will access data. The term “MFTP Database” shall mean any such database file created and/or updated by a MFTP Computer Program.
- (h) The term “Production Database” shall mean any MFTP database that is used in Production Use of MFTP.

2. License

2.1 In consideration of the payment of the license fees as computed using the schedule set forth in Appendix A, attached hereto and incorporated herein, Contractor grants the State a nonexclusive, nontransferable perpetual license to use MFTP, subject to the terms and conditions stated in this Contract (“Perpetual License Fee”). The Perpetual License Fee shall be calculated according to the number of Authorized Users and any Additional Authorized Users of MFTP, Modules, Additional Modules, and any other Contractor product or service implemented or performed pursuant to this Contract. Contractor does not sell or transfer title of MFTP to the State. All world wide rights, title and interest to MFTP shall at all times remain solely with Contractor and its licensors. The Perpetual License Fee does not include Contractor’s consulting services, which are invoiced separately on a time and materials basis.



2.2 Subscriber may:

- (a) Install MFTP on the State’s computer systems.
- (b) Use and execute MFTP for purposes of serving the internal needs of the State’s business.
- (c) Permit use of MFTP only by employees of the State or its agents.
- (d) Make one copy of MFTP for backup purposes only, provided that Contractor’s proprietary legend is included.
- (e) Notwithstanding anything herein to the contrary, Subscriber may authorize third party consultants who are hired by Subscriber to have access to MFTP in the course of rendering such consulting services to Subscriber provided that such third party consultants are not a competitor of Contractor and further provided that such third party consultants sign Contractor’s form of confidentiality agreement. For purposes of this section a competitor of Contractor is any third party that competes with Contractor with respect to (i) the development, sale or servicing of, or the provision of front office trading systems. Any such third party consultants, a (“Restricted Third Party”) may only access MFTP subject to the following restrictions: (i) such access shall be solely in connection with the Restricted Third Party’s provision of consulting services directly to Subscriber, and any other access use by the Restricted Third Party shall only be upon Contractor’s prior written approval, which approval will not be unreasonably withheld, (ii) such access shall only be to the extent necessary to provide such consulting services, and (iii) all other access to MFTP shall be limited to only those employees of the Restricted Third Party who are regularly involved in the provision of such consulting services.

3 Responsibilities of the State

- 3.1 the State is responsible for selecting users who are qualified to operate MFTP on the State’s own equipment and are familiar with the information, calculations, and reports that serve as the inputs and outputs of MFTP, and the business processes that use of MFTP pertains to.
- 3.2 The State is responsible for procuring, installing and configuring the computer systems on which MFTP will operate, and ensuring a proper environment and proper utilities for such systems. The MFTP Minimum Hardware Requirements attached hereto and incorporated herein as Appendix D, describes the minimum required equipment, software and accessories needed for correct functioning of MFTP. Contractor assumes no responsibility under this Contract for obtaining or providing such equipment. The State may request that Contractor procure, install, and/or configure the computer systems under which MFTP will operate. Such services would be covered under a separate Work Statement



- 3.3 The State may not use, copy, modify, or distribute MFTP or its associated documentation (electronically or otherwise), or any copy, adaptation, transcription, or merged portion thereof, except as expressly authorized by Contractor. The State may not reverse assemble, reverse compile, or otherwise translate MFTP.
- 3.4 The State's rights may not be transferred, leased, assigned, or sub-licensed except for a transfer of license in its entirety to (1) a successor in interest of the State's entire business who assumes the obligations of this Agreement or (2) any other party who is reasonably acceptable to Contractor, enters into a substitute version of this Contract, and pays an administrative fee intended to cover attendant costs.
- 3.5 The State hereby authorizes Contractor to enter the State's premises in order to inspect MFTP in any reasonable manner during regular business hours to verify the State's compliance with the terms hereof. Contractor agrees to conduct such inspections in conformance with the State's security restrictions.

4. Technical Support

- 4.1 Contractor shall, during the hours of 8:00 a.m. to 8:00 p.m. Eastern Standard Time on weekdays (exclusive of New York Stock Exchange holidays), make telephone support available to the State's employees and agents that have been fully trained by Contractor in the use of the MFTP. Contractor will respond to all telephone support calls within two (2) hours or less during the hours of 8:00 a.m. to 6:00 p.m. Eastern Standard Time on weekdays, and at other times by 10:00 a.m. Eastern Standard Time on the next business day. Contractor reserves the right to direct the State requests to the appropriate documentation.
- 4.2 For each call, Contractor will attempt to resolve whether the problem is due to the State usage, data-related problems, the MFTP Computer Program*, or some combination of these factors. If the problem is due to either usage or data or both, but not the MFTP Computer Program, Contractor has no obligation to address the problem beyond explaining the correction to the State. Contractor agrees to determine if the problem is due to the MFTP Computer Program within two (2) business days. If Contractor, in its discretion, requests written verification of a problem related to the MFTP Computer Program discovered by the State, the State shall immediately provide such verification, by electronic mail, telecopy or overnight mail, setting forth in reasonable detail such problem.
- 4.3 In order to provide telephone support in accordance with the terms of this Contract, the State will allow Contractor to establish a communications link, via telephone line and modem at a minimum, to the State's Primary MFTP Server in order to diagnose the State reported problems or to transmit new software to the State. The cost of installing and maintaining the communications link** will be the responsibility of the State.
- 4.4 Contractor will only support the most current version of MFTP on an on-going basis. Previous versions of MFTP will only be supported for a period of six (6) months from



the date at which that version ceases to become the most recent version. Subject to the foregoing sentence, Contractor shall provide to the State, without additional charge, all modifications to MFTP in the form of fixes and further releases that Contractor makes generally available to all end-users. Such modifications, when delivered, shall become part of MFTP, and shall be maintained in accordance with this Contract.

- 4.5 Contractor is not obligated to provide technical support if the State elects not to install or configure MFTP as described in the associated documentation.
- 4.6 Contractor is not responsible for providing systems administration or management services to the State. The State is responsible for performing administrative tasks pertaining to the system on which MFTP is run. The State may request that Contractor provide systems administration and management services. Such services would be covered under a separate Work Statement.

* MFTP program related issues include:

- MFTP, Compliance, PMW & Connectivity questions and troubleshooting
- Reporting questions and troubleshooting
- Overnight processing questions and troubleshooting
- Interface processing questions and troubleshooting

**The Help Desk representatives utilize a remote access product (e.g. PCAnywhere™) to provide real time, production support to your environment. With the necessary security controls in place, a Help Desk representative is able to quickly identify, replicate and resolve issues in your production environment.

5. Installation and Data Conversion

5.1. The installation and data conversion services are to be provided by Contractor. Macgregor will solely be responsible for the implementation of their software within the confines of the fixed price and time frames contained within this contract.

6. Additional License Fees for Increase in Users or Modules

If the State elects to add additional users or modules beyond the initial set of users and modules an Additional License Fee will be calculated based on the monthly fee from the pricing schedule(appendix A) multiplied times 36. In conjunction the Annual Maintenance and Support Fee will be increased by 20% of the Additional License Fee.

For the purposes of the count of users, each employee or agent of the State that uses the Software system three (3) or more times in a given month is considered a user.



7. Softdollar Pricing Option

Contractor offers its subscribers the option to acquire its investment technology on a soft dollar basis through a network of leading brokerage firms. It has established arrangements with Archipelago, Merrill Lynch, UBS Warburg/Paine Webber, Pershing and Capital Institutional Services (CIS), whereby subscribers can trade directly with these brokers and credit Contractor’s broker dealer affiliate, Blackwatch Brokerage Inc.

8. Additional Technical Support

1. All of the State’s users that will require Technical Support Services must register with Contractor. Users may be registered by the State with Contractor’s MFTP Client Services Group.
2. Technical Support Services to all of the State’s registered users will be provided free of charge, so long as such support pertains directly to the MFTP product.
3. Technical Support Services to all of the State’s registered users pertaining to items external to the MFTP system (including but not limited to integration scripts, requests to convert data, requests to perform systems administration activities, questions or problems with system hardware or operating systems and other such indirect functions and tasks) shall be charged to the State at Contractor’s then current Technical Support Services Rate.
4. All calls from the State’s registered users that request Contractor to take action, other than answering questions or conducting research into the answers to those questions, shall be charged to the State at Contractor’s then current Additional Technical Support Services Rate.
5. Contractor will not provide the State with additional Technical Support Services that results in charges to the State unless Contractor has been given prior written authorization, either in the form of a specific approval for specific project, or an open-end authorization to provide a specified level of on-going support.
6. Where this Contract, or as requested by the State from time to time requires Contractor to provide additional support services (“Additional Technical Support Services”) outside of the Maintenance and Support (“Technical Support” as set forth in Section 4 of this Appendix A-1) that the State receives in exchange for the State’s payment of Maintenance and Support Fees hereunder, the State shall to pay for such services on a time and materials basis, as well as all expenses incurred by Contractor as set forth in this Contract. Such time and materials, hourly, or per diem charges, shall be billable to the State at Contractor's then current Additional Technical Support Services Rate.

Contractor’s current rates* as of the Effective Date of this Contract are as follows:

- \$275/hour for the role of Senior Project Consultant or Project Manager (\$2200/day)
- 275/hour for any Senior Integration Engineer (\$2200/day)
- \$200/hour for any Project Consultant or Integration Engineer (\$1600/day)



* Rates apply only to weekdays, as weekends and holiday rates are higher; in addition, rates are subject to the Maximum Annual Maintenance and Support Renewal Price Increase Rate specified in Appendix A.



Appendix B Functional requirements

OVERVIEW OF MFTP

The MFTP (Macgregor Financial Trading Platform) is a PC-based order management and electronic trading system designed to mirror and automate the way institutional portfolio managers and traders track the executions of their trades. Automation at every step of the order management process, allows the user to make better trading decisions, eliminate time-consuming paperwork, prevent costly errors, reduce overhead, enhance performance and comply with shortening settlement cycles.

Traditionally, user's scribbled out buy and sell tickets, which at the end of the day were re-keyed into several different systems for various back end processing. Using MFTP the information is entered using 1-2 keystrokes and instantly processed to:

- Update in real time the status of all orders and executions, completes, leaves, recaps, average prices, fund/client positions and cash balances.
- Allocates shares to client's accounts, providing instant snapshots of positions and both realized and unrealized gains and losses.
- Print tickets and create transaction summaries for automatic faxing or electronic transmission to clearing firms, brokers and custodial banks.

The system can be seamlessly installed as a front-end to other systems and data can be smoothly exported to any other portfolio analytics, account management or accounting system

Benefits

- Eliminate time consuming paperwork
- Prevent costly errors
- Fewer accounting errors from re-keying the same data in different places
- Improved trading and portfolio management through access to real-time position and profit & loss information
- Provides the platform for integration to other MFTP products, brokers via FIX, and other industry services such as Oasys, Oasys Global and DTC IID.



Trade Blotter features

All MFTP activities originate from the trade blotter. The blotter displays all trades, special order indicators, and dash system requirement indicators. With one keystroke, you can enter, execute, allocate, and confirm orders from the blotter. You may also customize your blotter by selecting blotter views, sorting and filtering criteria, and personalizing blotter colors.

Single Key Access to Most Trade Data

The trade blotter displays all order summaries at a glance. Retrieval of more detailed information about allocations, executions or other data is as simple as a keystroke.

Multiple blotter views

The system includes multiple blotter views containing information relevant to different users.

Special indicators

The system allows you to customize your blotter with special indicators that highlight order status and other information.

Dash system requirements

The “smart” dash system enables you to define compliance and external system data requirements on the security type level according to your needs. The system indicates whether an order fulfills the dash system requirements on the trade blotter by displaying a series of dashes to the left of each order. This helps to insure seamless integration to external systems.

Sorting and filtering

The system can sort trades by most fields on the Order Entry screen, in ascending and descending order. The trader can also filter information on almost any order criteria.

Customize blotter colors

You can customize your blotter by selecting colors for different transaction types, as well as background and foreground colors.

Order Entry

The system allows you to enter orders for virtually any type of security and can be input on behalf of one or more accounts assigned to the Fund Code (a group of clients, accounts, or mutual funds).

Order entry for a fund code

You can enter orders quickly, with a minimum of keystrokes, for an individual fund code.

Percent of portfolio

The system allows you to calculate the quantity of securities to buy or sell as a percentage of portfolio or as a percentage of current holdings across portfolios.



- Percent of total worth** You can enter Buy orders to increase and Sell orders to decrease a position to a specified percentage of total worth. In addition, the system has the ability to specify a position by a percentage of total equity worth or total fixed income worth of a portfolio for balanced accounts.

- Percent of holdings** The system also allows you to enter Sell orders as a percentage of holdings to decrease a position in a security by a specified target percentage.

- Percent of money target** The Percent of Portfolio Calculator allows you to specify a target amount of money, across currencies, to spend on the purchase of a particular security. You may enter a different target amount of money for each client included in the Calculator order.

- Target per portfolio** The system allows you to target a number of shares to buy or sell across a group of portfolios for an individual security.

- Compliance calculator** A Percent of Portfolio Calculator that checks compliance restrictions and cash availability prior to allocation.
 - ◆ *Maximum compliance rules:* Determines the maximum allocation an account can receive based on relevant compliance rules and prohibits you from pre-allocating more than compliance restrictions allow.
 - ◆ *Maximum by cash equivalent:* The system will generate orders based on allocating to accounts the maximum amount allowed by compliance based on available cash & cash equivalents, which ever is less.

- Multi-fund order entry** Allows multiple groups of accounts to participate in a single trade

Executions

- Execution Entry** The execution screen is a complete facility for entering new or editing existing executions as well as displaying execution information for the order.

- Quick execution entry** Allows you to highlight the order you want to execute and type a number for faster trading.

- Execution recap viewing** For each order, the system displays the price and the security amount executed at every price level.



Allocations

- Pro-rata distribution** Upon execution of an order, the system distributes the securities to the fund code’s clients according to preset or calculated allocation percentages, taking round lots into consideration.

- Flexible editing capabilities** The system offers flexible allocation editing capabilities that allow you to change account target quantities and their allocation percentages, and readjust allocations based on a client’s total worth/current account total.

- Distribution calculator** After executions have been taken, this feature allows you to allocate the shares based on targeted ownership for this security across accounts.

- Automatic recalculation** Allows you to lock one or more clients into a set allocation rate and then distribute the remaining shares to other clients in proportion to total worth.

- Net money display** Enables you to view net money on a trade prior to confirmation.

- Settlement instructions** The allocation screen allows you to view settlement instructions for a trade prior to confirmation.

Order Management Features

- Combine orders** The MFTP allows you to group orders for the same security, transaction type, and broker into a single, combined order.

- Split orders** You can also split unexecuted quantities among any number of executing brokers. In addition to assigning a portion of the order and commission to a specified broker, the system generates a new order for each split and displays it as a separate order on the blotter.

- Directed brokers** The system allows splitting part or all of a trade among directed brokers. All accounts assigned a directed broker are grouped into new trades with the directed broker as executing broker. You may assign a default directed broker for each account or you may assign or change the directed broker during order entry.

- Step-out brokers** You can perform a “step-out” of commission dollars and shares to a specific broker requested by the client using a separate rate and reason code.

- Selling concessions** For initial public offerings, the platform allows entry of selling concessions to syndicate brokers. The commission report tracks both selling concessions and normal commissions.



Advanced Multi Currency Features

Using these features, you can trade securities across multiple currencies, and trade and hedge using currencies, spots, forward contracts and foreign exchange. The system supports foreign expense, tax and commission structures, numerous settlement and holiday calendars, and cross currency conversions.

Multi-Currency Trading

Foreign Taxes, Fees, and Commissions

Allows you to establish default information for each exchange through which your company trades, including the exchange currency, foreign taxes, commission rates, and other expenses. During order entry, the system calculates all expense information based on the defaults specified for the exchange and security type.

Settlement and Holiday Calendars

To determine domestic maturity and settlement dates, the system accesses an internal calendar listing weekends and non-trading days. A holiday calendar can also be created to list information such as national and bank holidays for each country in which your company trades.

Settlement Money Calculated in Base Currency

The system monitors net costs in the exchange currency and converts net costs and settlement money into the client's base currency.

Foreign Exchange

FX Trading

MFTP supports the trading of FX spot, FX forward, and currency option deals.

FX Marry

Calculates the total currency that must be purchased to cover the underlying security's trade. Once the spot rate is filled in, the exact amount of currency is allocated to each account parties acting in the underlying security's trade.

FX Hedge

Allows you to hedge your currency risk against any number of securities in an individual group of currencies.



On Line Data Accessibility

Client trade date Cash MFTP answers almost any client trade date cash question, determined by the client’s starting cash at the beginning of the trade day or the client’s current cash. The system calculates the starting or current long, short, and net money for each client and displays the cash amounts based on any of these views:

- Cash committed to confirmed trades
- Cash committed to all executions, confirmed and unconfirmed
- Cash spent if the entire target quantity is executed and confirmed
- Cash spent if the entire leaves quantity is executed and confirmed

Total money Allows you to view the net money balances of all trades in any of these ways:

- In the currency of the exchange
- In the settlement currency
- Converted into base currency
- Based on the net quantity of short term fixed income trades only

Positions You can select the information by which you want to retrieve positions including the client or fund whose positions you want to view. The system offers these position reports:

- Positions summed by Fund Code
- Open positions summed by client
- Positions summed for a set of default Fund Codes by security
- Percent of portfolio summed by Fund Code for each security and country
- Percent return summed by Fund Code for each security and country
- Fixed income positions by Fund Code, including analytic information

Archived trades All trade information is saved in archives and can be recalled for viewing, printing, cancel and correcting.

Security

The system allows you to control user access and trading activities as well as to prevent incorrect trade entries with these security features:

- User passwords and pin numbers
- Access rights to specific features and functions
- Desk type partitioning based on the user’s trading desk
- Detailed audit trails
- Optional double authorization of trades prior to confirmation



Ticket Printing

Once you confirm an order, you may instruct the system to print the ticket or fax it to designated brokers based on the security type traded. Different tickets are available for these security types:

- Equities
- Fixed income
- Foreign Exchange
- Repurchase agreements
- Money market mutual funds
- Mortgage Backed Securities

Reports

Transaction reports

- Transaction report by fund code
- TRANSACTION REPORT BY CLIENT**
- Transaction report by client/account
- Open orders report
- Orders executed report

Commission Reports

- Commission report by reason code
- Commission report by security type

Position Reports

- Positions report by fund code and client
- Fixed income positions
- (Both with Ad Hoc filtering, sorting and sub-totaling)

International Reports

- International book value to market value report
- International percent of portfolio holdings matrix report
- FX hedging positions report
- FX positions report by international fund code/client

Ad-hoc reports

The platform supports the use of off-the-shelf report writers as a means of creating custom reports and interface files.



Interfaces

General interfaces Generic import and export facilities for most users are available.

Commercial interfaces

- Advent
- Investors Bank and Trust
- MaxData
- Oasys (real-time format)
- Shaw Data
- State Street Bank
(ISITC)
- FX Match

Custom interfaces The off-the-shelf report writers used to build the ad hoc reports can also be used to create custom export files to support interfaces with other commercial and proprietary systems.

MFTP Module Descriptions

CompALERT™

CompALERT alerts traders and portfolio managers to potential violations of various investment and portfolio guidelines they must comply with. CompALERT can perform compliance checks of diversification, portfolio and other limits, assisting with compliance with federal and state regulations. With the flexibility to monitor firm-wide, client-specific, fund-based and virtually any other type of restriction, CompALERT tests guidelines prior to trading and after the trading day is complete. Most significant and unique to CompALERT is the capability to test these guidelines for investment ideas before order generation, providing minimum and maximum share or par amount to be bought or sold with a minimum of key strokes and updated in real-time for intra-day orders and executions.

Advanced Fixed Income (AFI)

MFTP’s Advanced Fixed Income Module provides support for fixed income portfolio management and trading with the ability to support centralized trading through criteria (generic) order entry, contingent order management, and sophisticated switch/swap analysis based on duration (neutral or change) or proceeds. AFI provides the following functions:

Criteria Order Form – Allows users to create and route orders based on security criteria (i.e. not linked to a specific security). Features include:

- Facility to “convert” Criteria Order to a Standard Order (with Re-Approval and Audit-Trail features).
- Use with Cash Check function to create a “place holder” for orders when a specific security has not yet been selected.
- Order/Trade routing similar to that of a standard trade.

Fixed Income Switch Form - A switch is comprised of a buy group and a sell group, with each group being comprised of one or more individual orders. Features include:



- Security selection via Security Search or from within holdings via Holdings Filter interface.
- The calculation of the required quantity to balance a switch based on net proceeds.
- The ability to add or raise cash in the balancing calculation.
- The calculation of group aggregate statistics and group differential statistics.
- Order/Trade routing similar to that of a standard trade.

Contingent Order Functionality - Users can create contingent grouped orders (two or more individual orders linked by an “AND” or an “OR”). Features include:

- Order/Trade routing similar to that of a standard trade.
- Ability to link trades in order to decrease risk or enhance execution.

Portfolio Managers Workstation (PMW)

PMW enables portfolio managers to easily model client portfolios or funds against internal or imported models and quickly generate orders for one or more accounts. MFTP users generate orders based on share amounts, percentage of portfolio or cash amounts using various modeling techniques and allocation algorithms. Real-time allocation or execution data, cash, and security positions are updated to prevent users from overselling. PMW also works with CompALERT to prevent any portfolio restrictions from making it to the trader’s desk. A unique feature of PMW is it’s ease of use, allowing the manager to perform multiple “what if” scenarios and completely controlling which trades are sent to the trader.

- Rebalancing an account to mimic a benchmark account or model. Ability to over- or underweight securities or sectors. User-defined tolerances to limit proposed trades to assets with larger deviations from the model.
- Calculating desired buys/sells based upon user instructions which includes:
 - Percent of assets for a particular security, industry, country, etc.
 - Percent of assets to be held in cash.
 - Spending/raising a specified dollar amount.
 - Maintaining current asset percentages after a cash contribution/withdrawal.
 - Redistributing assets from one set of securities, industries, etc. to another.
- Displaying proposed trades for online approval and modification.
- Compliance checking.
- Cash checking and cash view.
- Denominator for “percent of assets” can include or exclude cash.
- Asset weighting can include or exclude open trades.
- Viewing and printing portfolio grouped by industry or other category and sorted on any column.
- Ability to set aside reserve cash.



**APPENDIX C
MINIMUM FUNCTIONAL REQUIREMENTS
INVESTMENT SOFTWARE REQUIREMENTS**

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**APPENDIX C
MINIMUM FUNCTIONAL REQUIREMENTS**

Please explain your ability to support the following:

ID	FUNCTIONAL REQUIREMENTS	Proposed Vendor Software			Reference	Comments
		Complies with Requirement	Does Not Comply	Will Comply with Modifications		
A.1	Pooled/unit fund accounting	N/A				
A.2	Accounting for complex equity swap derivatives (see Appendix C 6, 16)	N/A				
A.3	Accounting for limited partnerships on equity basis	N/A				
A.4	Real-time transaction processing	X				MFTP provides Real-time transaction processing.
A.5	Cash management from transaction to pool levels	N/A				
A.6	Allow client to open and close accounting periods	N/A				
A.7	Recognize investment transactions on effective date and provide AIMR compliance performance measurement, while recognizing accounting transactions in current open period					
A.8	Account for investments using average cost	X				
A.9	Support Depository Trust & Clearing Corporation (DTCC) interface	X				We are currently working with OMGEO and will interface with their proposed product.
A.10	Ability to support, on demand, AIMR compliance performance Measurement	N/A				



ID	SYSTEM REQUIREMENTS	Proposed Vendor Software			Reference	Comments
		Complies with Requirement	Does Not Comply	<u>Will Comply with Modifications</u>		
B.1	Real-time processing	X				
B.2	NT/Windows 2000 compatibility	X				Next release will be Compliant with Windows 2000
B.3	Support ODBC	X				SYBASE ODBC version 3.11 or higher, Microsoft ODBC version 3.7 or higher
B.4	SQL database	X				MS-SQL Server 7.0 Standard or Enterprise Edition
B.5	Scalable client server technology	X				MFTP is highly configurable, scalable and user extensible.
B.6	Support large number (20, 40, 60, 80 etc.) of <u>concurrent</u> users	X				Contractor has a client with 300 concurrent users.



ID	SYSTEM REQUIREMENTS	Proposed Vendor Software			Reference	Comments
		Complies with Requirement	Does Not Comply	<u>Will Comply with Modifications</u>		
B.7	Support large volume/high-speed processing	X				MFTP's unique dual database structure provides for support of large volumes, high speed and unlimited storage of archived data without affecting performance.
B.8	Provide tape backup and recovery functionality	X				This functionality is typically performed by the client's internal DBA. However, Contractor offers Database Administration services remotely.



ID	SYSTEM REQUIREMENTS	Proposed Vendor Software			Reference	Comments
		Complies with Requirement	Does Not Comply	<u>Will Comply with Modifications</u>		
B.9	Support transaction roll-forward and roll-back capabilities	X				Contractor offers Database Administration remotely. This functionality is typically performed by the client's internal DBA. However, Contractor offers Database Administration services remotely.



ID	DEVELOPMENT REQUIREMENTS	Proposed Vendor Software			Reference	Comments
		Complies with Requirement	Does Not Comply	Will Comply with Modifications		
C.1	Develop general ledger interfaces with the Michigan Administrative Information Network (MAIN)	N/A				
C.2	Develop an interface with the State of Michigan Cash Management System	N/A				
C.3	Develop specialized interfaces with other modules, such as trading, analytics, etc.	X				<p>MFTP has been deployed at over 60 client locations into a wide range of processing environments utilizing interfaces to analytical packages, accounting systems, proprietary order generation systems, custodian banks, prime brokers and settlement systems. These interfaces help you to establish a straight-through-processing environment with support from one vendor.</p> <p>The MFTP system currently provides support for interfaces with MS Excel and MS</p>



						<p>Access. Additionally, the MFTP system has standard interfaces to OASYS and OASYS Global, Bond Edge, Yield Book, and PC Product. Lastly, through the FIX protocol, MFTP users may route orders through MFN.</p> <p>The remaining systems requiring interfaces, Bloomberg, Barra and Alert would need to be developed. The cost of developing these various interfaces would vary from system to system, and would require full scope definition for a cost proposal.</p>
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ID	SYSTEM REQUIREMENTS	Proposed Vendor Software			Reference	Comments
		Complies with Requirement	Does Not Comply	<u>Will Comply with Modification</u>		
C.4	Interface with custodial banks	X				ISITC for qualifying trade.
C.5	Interface with data vendors, such as, Bloomberg, Bridge, Wilshire, etc.	X				Please refer to question C.3 comments.
C.6	Interface and exchange files with brokers and broker Electronic Communication Networks (ECN) using standard interface protocols, standard data sets and standard file formats	X				Known as The Contractor Fix Network, MFN connects asset managers and brokers/ECNs communicating FIX-based indications of interest, orders and executions. Based on the industry standard Financial Information eXchange (FIX) protocol, MFN offers a private network model that combines FIX certification, security, redundancy, and



						<p>end-to-end support to insure convenient, highly reliable communication of time-sensitive trade information. MFN broker participation has increased to more than 100 sell-side firms and ECNs to meet buy-side demand for maximum access to liquidity and operational efficiency.</p>
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ID	SUPPORT REQUIREMENTS	Proposed Vendor Software			Reference	Comments
		Complies with Requirement	Does Not Comply	Will Comply with Modifications		
D.	Provide support during the hours of 7:00 am – 6:00 pm, Eastern Standard Time, Monday thru Friday	X				Help Desk hours are 8AM-8PM Monday thru Friday EST. Extended helpdesk hours can be requested for an additional fee.



APPENDIX D
ACCOUNTING/ANALYSIS/REPORTING FUNCTIONALITY
INVESTMENT SOFTWARE REQUIREMENTS

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16. Custom Developmen
17. System Capabilities
18. Conversion Schedule



ID	FUNCTIONALITY – ACCOUNTING BASIS			Reference	Comments	
	Proposed Vendor Software					
		Complies with Requirement	Does Not Comply	Will Comply with Modifications		
	Provide the capability to account for and track securities and other investments according to the following evaluation methods as defined by user:					
1-1	Average cost	X				
1-2	Equity basis	X				
	Specific Lot:					
1-3	LIFO	X				
1-4	FIFO	X				
1-5	Fair Value			X		
1-6	High cost/low gain	X				



ID	FUNCTIONALITY – PORTFOLIO CASH MANAGEMENT	Proposed Vendor Software			Reference	Comments
		Complies with Requirement	Does Not Comply	Will Comply with Modifications		
2-1	Provide the capability to determine trade date and settlement date cash on a real time basis.			X		Contractor is currently developing settlement date cash forecasting for delivery in v6.14.6 of MFTP.
2-2	Provide the capability to project cash flows, including interest and dividends, maturities, principal paydowns and other security actions.			X		Contractor is currently developing settlement date cash forecasting for delivery in v6.14.6 of MFTP.
2-3	Provide the capability, in conjunction with the cash management process, to report maturing short-term investment information into the cash position.			X		Contractor is currently developing settlement date cash forecasting for delivery in v6.14.6 of MFTP.



ID	FUNCTIONALITY – POOLED FUNDS (UNITIZED ACCOUNTING)	Proposed Vendor Software			Reference	Comments
		Complies with Requirement	Does Not Comply	Will Comply with Modifications		
	Capability to support pooled fund accounting functions including:					
3-1	Daily Valuations			X		
	Daily Performance Measurement by:					
3-2	AIMR (Association for Investment Management Research) Compliant Methodologies					Not Applicable
3-3	Multi-Level analysis (security to pool)					Not Applicable
3-4	Comparisons with external universes					Not Applicable
	Daily Real Time Cash Management by:					
3-5	Trade Date Cash	X				
3-6	Settlement Date Cash			X		Contractor is currently developing settlement date cash forecasting for delivery in v6.14.6 of MFTP.
3-7	Modeling – Capable of supporting multi-level modeling and analytics capabilities to analyze and evaluate individual security attributes, security class attributes, investments by analyst, investments by manager, investments by fund, or any other recognized segment, and perform “what if” scenarios.	X				
3-8	Detailed Participant Accounting					Not Applicable
	Capability to support accounting for the State Treasurer’s Common Cash Fund including:					Not Applicable
3-9	Capability to generate participant Statements.					Not Applicable
3-10	Capability to generate Income and Expense allocations.					Not Applicable



ID	FUNCTIONALITY – PORTFOLIO VALUATION	Proposed Vendor Software			Reference	Comments
		Complies with Requirement	Does Not Comply	Will Comply with Modifications		
4-1	Capability to value securities/portfolios at user designated intervals.	X				
4-2	Capability to interface with industry standard pricing vendors.	X				



ID	FUNCTIONALITY – SYSTEM SECURITY	Proposed Vendor Software			Reference	Comments
		Complies with Requirement	Does Not Comply	Will Comply with Modifications		
5-1	Provide for adequate audit trails with time, date, and author stamps.	X				
	Provide on-line password security by users, at the following levels:					
5-2	Application	X				
5-3	Menu	X				
5-4	Module	X				
5-5	File	X				
	Record – broken down by:					
5-6	Field	X				
5-7	Operation (add, change, delete, inquiry)	X				
5-8	Protect stored reports individually from authorized user access or modification.	X				
5-9	Suppress passwords so that they do not appear on the screen as they are being entered.	X				
5-10	Log all update transactions in a secure audit trail file.	X				
5-11	Provide for required changes to user passwords based on a user-specified period of time.	X				
5-12	Provide on-line access to audit trail information including terminal operator ID, time, date, revised amount, and before and after updated results.	X				
5-13	Provide the capability to define an access category relating to groups of users (e.g., members of a management or processing class).	X				
5-14	Report attempts of unauthorized system access or use.	X				

5-15	Allow for the segregation of processing duties by providing the ability to prevent a single user from processing an entire transaction from start to finish.	CONTRACT #071B2001304 X				
5-16	Provide clear audit trails of all transactions from source data entry through summarization at higher levels or integration with other application systems.	X				
5-17	Audit trail information should include before and after images, the date, time and identification of the person making the entry.	X				





ID	FUNCTIONALITY – INVESTMENT TYPES	Proposed Vendor Software			Reference	Comments
		Complies with Requirement	Does Not Comply	Will Comply with Modifications		
	Capability to support investment accounting for the following investment types:					
	Cash and money market securities:	X				
6-1	Agency Notes	X				
6-2	Bankers Acceptance	X				
6-3	Certificates of Deposit	X				
6-4	Prime Commercial Paper	X				
6-5	Repurchase Agreements	X				
6-6	Reverse Repos	X				
6-7	Time Deposits	X				
6-8	Treasury Bills	X				
6-9	Synthetic Cash (Short Future, Equity Index, and Cash)	X				
	Equities:					
6-10	Common Stock	X				
6-11	American Depository Receipts/American Depository Securities	X				
6-12	Preferred Stock	X				
	Derivatives:					
6-13	Futures	X				
6-14	Options	X				
6-15	Synthetic Equities (Long Future, Dedicated Note and Cash)			X		



ID	FUNCTIONALITY – INVESTMENT TYPES (CONTINUED)	Proposed Vendor Software			Reference	Comments
		Complies with Requirement	Does Not Comply	Will Comply with Modifications		
6-16	Equity Swaps Derivative agreements are comprised of a Quanto and Local segment. Each segment includes a synthetic future, synthetic bond and a long LIBOR floating rate note. The components are linked, valued, evaluated and reported as a single security. Interest on the long bond is received quarterly and interest payments are made to the counterparties quarterly on the notional amount of the agreement. At the maturity of the equity swap agreement (which lasts two to three years), there will be either a gain or loss resulting in the closing of the synthetic future position.			X		
6-17	Mutual Funds	X				
6-18	Rights & Warrants	X				
	Alternative Investments:					
6-19	Venture Capital	X				
6-20	Limited Partnerships	X				
6-21	LBO Limited Partnerships	X				
6-22	Direct Investments	X				
6-23	Other	X				
	Fixed Income:					
6-24	Agency Bonds	X				
6-25	Asset-Backed Securities	X				
6-26	CALLABLE AND PUTABLE BONDS	X				
6-27	Collateralized Mortgage Obligations	X				
6-28	Convertible Bonds	X				
6-29	Convertible Preferred	X				
6-30	Corporate Bonds	X				



ID	FUNCTIONALITY – INVESTMENT TYPES (CONTINUED)	Proposed Vendor Software			Reference	Comments
		Complies with Requirement	Does Not Comply	Will Comply with Modifications		
6-31	Export-Import Bank	X				
6-32	Government Agency	X				
6-33	Guaranteed Investment Contacts	X				
6-34	Banks for Cooperatives	X				
6-35	Federal Farm Credit Bank	X				
6-36	Federal Home Loan Bank	X				
6-37	Federal Intermediate Credit Bank	X				
6-38	Federal Land Bank	X				
6-39	FHLMC Mortgage Backed Securities	X				
6-40	FNMA Mortgage Backed Securities	X				
6-41	FNMA Debentures	X				
6-42	GNMA Mortgage Backed Securities	X				
6-43	Miscellaneous U.S. Government Backed Securities	X				
6-44	Inter-America Development Bank	X				
6-45	Interest Only (IO) and Principal Only (PO) Securities	X				
6-46	Medium Term Notes	X				
6-47	Pay In-Kind Corporate Securities	X				
6-48	Private Placements Bonds	X				
6-49	REMIC's	X				
6-50	Securities with odd first or last coupons	X				
6-51	Securities with Sinking Funds	X				
6-52	Securities with Stepped Coupons	X				
6-53	Synthetic Guaranteed Investment Contracts			X		
6-54	Synthetic Fixed Income			X		
6-55	Treasury Bonds	X				
6-56	Treasury Notes	X				



ID	FUNCTIONALITY – INVESTMENT TYPES (CONTINUED)	Proposed Vendor Software			Reference	Comments
		Complies with Requirement	Does Not Comply	Will Comply with Modifications		
6-57	Treasury STRIPS	X				
6-58	Variable Rate Securities	X				
6-59	Yankee Bonds	X				
6-60	Zero Coupon Bonds (Government & Corporate)	X				
	International Investments:					
	Short Term:					
6-61	Foreign Exchange - Forward Contracts	X				
6-62	Foreign Exchange - Spot Contracts	X				
6-63	Euro CD's	X				
	Fixed Income:					
6-64	Euro Bonds	X				
6-65	Foreign Bonds	X				
6-66	Equities	X				
6-67	Mutual Funds (EAFE)	X				
6-68	Derivatives	X				
6-69	Foreign Depository Receipts/Foreign Depository Receipts	X				
	Mortgages:	X				
	FHA:	X				
6-70	FHA Multi-Family Cash Back	X				
6-71	FHA Multi-Family Debentures	X				
6-72	HEW Hospitals	X				
6-73	Farmers Home Administration	X				
	Conventional:	X				
6-74	Conventional –Multi-Family	X				
6-75	Conventional- Commercial	X				
6-76	Private Mortgage Insured- Single Family Block	X				



ID	FUNCTIONALITY – INVESTMENT TYPES (CONTINUED)	Proposed Vendor Software			Referen ce	Comments
		Complies with Requireme nt	Does Not Comply	Will Comply with Modifications		
6-77	Conventional- Mortgage Insurance Certificate	X				
	Real Estate:					
6-78	Direct Ownership	X				
6-79	Separate Accounts	X				
6-80	Real Estate	X				
6-81	Commingled Funds	X				
	Other:	X				
6-82	DRIPS – Dividend Reinvestment Plans	X				



ID	FUNCTIONALITY – TRANSACTIONS SUPPORTED	Proposed Vendor Software			Reference	Comments
		Complies with Requirement	Does Not Comply	Will Comply with Modifications		
7-1	For performance measurement purposes, provide the ability to post investment transactions on effective date, while recognizing accounting impact in current open accounting period.					Not Applicable
7-2	For performance measurement purposes, provide the ability to control the opening and closing of accounting periods, and the subsequent posting of accounting transactions to the proper accounting period, even if different from the effective date of the transaction.					Not Applicable
7-3	Provide the capability for accrual calculations that follow industry standards, utilizing the appropriate calendars to accommodate accrual calculations for all types.	X				
7-4	Provide the transaction, capital change, and income processing for individual securities and portfolios.	X				
7-5	Provide the capability to electronically recognize and record stock dividend receivable, stock splits, spin-off, and cash dividend receivable from data accessible through primary industry vendor services.			X		
7-6	Provide the real-time capability to enter transactions, as they occur, updating both portfolio holdings and cash balances, and generating appropriate accounting entries.	X				
7-7	Provide the capability to generate summary accounting transactions that summarize daily purchases, sales, and income.	X				
7-8	Provide the capability to generate accounting transactions that summarize unrealized gains/losses daily, weekly and monthly.			X		
7-9	Provide the capability to generate accounting transactions that summarize accrued interest.	X				
7-10	Provide the capability to track investment maturity/call dates and amounts.	X				



7-11	Provide the capability to calculate and track interest accruals.			X		
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ID	FUNCTIONALITY – TRANSACTIONS SUPPORTED (CONTINUED)	Proposed Vendor Software			Reference	Comments
		Complies with Requirement	Does Not Comply	Will Comply with Modifications		
7-12	Provide the capability to adjust investment transactions and accurately reflect the effect of the transaction on calculations inquires and reports. (e.g. to adjust mortgage or mortgage-backed securities principal and interest calculations.)	X				
7-13	Maintain a comprehensive real-time database of all settled and pending investment positions and associated detailed transactions.	X				
7-14	Record other miscellaneous investment fees, management fees, commitments etc. attributable to a specific holding, portfolio or manager.	X				
	Capability of generating transactions necessary to support Synthetic Cash strategies, including:			X		
7-15	Capability to process margin payments.			X		
7-16	Capability to link, measure, and report all components of a single strategy.			X		
7-17	Capability to automatically generate the transfer of the underlying equities to an equity Portfolio, and automatically determine the new basis of those equities using original cost adjusted by the market weighted cumulative futures margin.			X		
	Capability of generating transactions necessary to support Synthetic Equity strategies, including:			X		
7-18	Capability to process margin payments.			X		
7-19	Capability to automatically link all components of each strategy.			X		
	Capability of generating transactions necessary to support Equity Swap strategies, including:			X		



7-20	Capability to link and recognize trade transactions for equity swap components including: synthetic futures, synthetic bonds, and the real bonds.			X		
ID	FUNCTIONALITY – TRANSACTIONS SUPPORTED (CONTINUED)					
		Proposed Vendor Software				
		Complies with Requirement	Does Not Comply	Will Comply with Modifications	Reference	Comments
7-21	Capability to post interest to the counter party on the synthetic bonds.			X		
7-22	Capability to post interest on the actual bonds.	X				
7-23	Capability to link, measure and report all components of each strategy.	X				
7-24	Capability to accurately value equity swap strategies.			X		
7-25	Capability to process stock dividends.			X		
7-26	Capability to process stock distributions.			X		



ID	PORTFOLIO MANAGEMENT – PERFORMANCE MANAGEMENT					
	Capability to measure security/class/portfolio performance measurement on user defined intervals, i.e.:	Proposed Vendor Software			Reference	Comments
Complies with Requirement		Does Not Comply	Will Comply with Modifications			
8-1	Daily					Not Applicable
8-2	Weekly					Not Applicable
8-3	Monthly					Not Applicable
8-4	Month-to-Date					Not Applicable
8-5	Quarter-to-Date					Not Applicable
8-6	Year-to-Date (Calendar or Fiscal)					Not Applicable
8-7	Capability to download data required to complete the performance measurement exercise for transmission to 3 rd party performance measurement consultants.			X		
8-8	Capability to comply with and utilize AIMR compliant methodologies for performance analysis.					Not Applicable
8-9	Capability to perform multi-level performance measurement analysis (from individual securities, classes of securities, analyst, manager, portfolios, funds or any recognized segment).					Not Applicable
8-10	Possess the capability to compare performance measurement results with external benchmarks.					Not Applicable



ID	PORTFOLIO MANAGEMENT – MODELING	Proposed Vendor Software			Reference	Comments
		Complies with Requirement	Does Not Comply	Will Comply with Modifications		
	Capability to analyze portfolios, security classes or any other RECOGNIZED SEGMENT AND PERFORM “WHAT IF “ SCENARIOS BASED ON SECURITY, CLASS OR OTHER ATTRIBUTES INCLUDING:					
9-1	Yield	X				
9-2	Quality	X				
9-3	Duration	X				
9-4	Convexity	X				
9-5	Calculate and report on portfolio characteristics (Duration, coupon, sector, Beta, P/E /EPS/ Growth, etc.)			X		The MFTP OMS does not currently provide the capabilities to display Beta, PE, EPS or Growth.
9-6	Provide for modeling capabilities, including the capability to perform “what if” scenarios to analyze the effect of projected trades on portfolio yields.	X				
9-7	Provide the capability to maintain coding and recommendation history.	X				



ID	PORTFOLIO MANAGEMENT – INVESTMENT ANALYSIS	Proposed Vendor Software			Reference	Comments
		Complies with Requirement	Does Not Comply	Will Comply with Modifications		
	Capability to analyze and compare various security attributes and perform commonly utilized calculations, such as:					
10-1	Yield to maturity	X				
10-2	Yield to market	X				
10-3	Convexity	X				
10-4	Duration	X				
10-5	Quality analysis	X				
10-6	Capability to support bond calculator and calendar calculator features. The bond calculator will perform calculations such as yield-to-maturity, yield-to-call, and internal rate of return. The calendar calculator will perform calculations on a full range of accrual basis, such as actual/actual, 30/360, or any of the other industry recognized basis.	X				
10-7	Capability to support a global database with fundamental, historical, company, industry, index country data, and forecasting.	X				



ID	INTERFACES/INTEGRATION	Proposed Vendor Software			Reference	Comments
		Complies with Requirement	Does Not Comply	Will Comply with Modifications		
11-1	Provide the capability to support external interfaces using industry standard protocols	X				
11-2	Provide the capability to support internal interfaces with other system components, such as trading module, analytics module, etc.	X				
11-3	Support standard custodial bank interfaces, including State Street Bank and Trust, Bank One, etc.			X		Most interfaces between MFTP and third party systems are developed at the request and in conjunction with specific clients.
11-4	Support industry standard custodial bank interfaces with a wide range of data vendors.	X				
11-5	Support the State of Michigan General Ledger interface with the Michigan Administrative Information Network (MAIN) including R*STARS and ADPICS, the Treasury Cash Management System, and other components.			X		



ID	INQUIRY, REPORTING AND DATA EXCHANGE	Proposed Vendor Software			Reference	Comments
		Complies with Requirement	Does Not Comply	Will Comply with Modifications		
12-1	Provide for flexible custom generated display reports, with print option.	X				
12-2	Provide for user friendly ad-hoc reporting resources.	X				
12-3	Provide for standard reports library for daily, weekly and monthly reports.	X				
12-4	Provide the capability for users to download data and results of calculations to other applications, i.e., lotus, excel, word, or other commonly used desktop applications.	X				
12-5	Capability to generate transaction histories for any user Specified time frame, with display and print options.	X				
12-6	Provide file exchange and capability to input a broker or outside manager program trading file directly into core accounting software, and support user specified fields, such as: Stock Exchange Symbols and CUSIPs Buy or Sell Codes Number of Shares Fund or Portfolio Estimate Unit Price Commission Amount and Rate Broker Code Capability to indicate Special handling and Special settlement requirements, i.e., Symbol CUSIP changes, stock split, or stock distribution within trade-settlement period.	X				



ID	GENERAL – DATA ISSUES	Proposed Vendor Software			Reference	Comments
		Complies with Requirement	Does Not Comply	Will Comply with Modifications		
13-1	Capability to support automated data reconciliation (between two files).			X		
13-2	Capability to be able to sort data in user specified orders.	X				
13-3	Capability to be able to accommodate field sizes at least 12 digits to the left of the decimal point (999,999,999,999.99) and at least 5 to the right of the decimal point (999,999,999,999.99999), be easily expanded to include more digits either side of the decimal point, and utilize a comma thousands separator.	X				
13-4	Display error message, which adequately describes the cause of the error and recommended course of action.	X				
13-5	Flexible account structure.	X				
13-6	Flexible security type creation.	X				
13-7	Flexible processing cycles.	X				
13-8	Allow validation rules to be changed easily by the user without programming changes.	X				
13-9	Automate the reconciliation of assets quantity, cost and market, income received, and maintain historical currency exchange rates.			X		
	Maintenance:					
13-10	Flexible account structure	X				
13-11	Flexible security type creation	X				
13-12	Processing	X				



ID	GENERAL – USER ISSUES	Proposed Vendor Software			Reference	Comments
		Complies with Requirement	Does Not Comply	Will Comply with Modifications		
14-1	Must be able to support multiple user operations down to the program level so that many people may access the same files and programs at the same time.	X				
14-2	Must have an extensive on-line help facility, sufficient to provide the user the necessary knowledge to complete all maintenance and input issues.					
14-3	System must be easily navigated and manual input paths user intuitive, i.e., user friendly.	X				
14-4	Provide user-defined on-line Help screen for field description, policies, or procedures related to specific screens.	X				
14-5	Allow user to move from screen to screen without moving through menu hierarchies.	X				
14-6	Provide on-line programs that are fully interactive and self-prompting. On-line information incorrectly entered should be edited and the appropriate error and correction prompt immediately displayed on the screen.	X				
14-7	Easily correct data entry errors, with adequate audit trails.	X				
14-8	Capability to place erroneous or incomplete transactions to a suspense status, apply corrections, post or re-post and maintain an audit trail of all activity.	X				



ID	TRAINING AND SUPPORT	Proposed Vendor Software			Reference	Comments
		Complies with Requirement	Does Not Comply	Will Comply with Modifications		
15-1	Provide initial on-site training for the various levels of users and system support personnel.	X				
15-2	Provide follow-up training for major changes in systems releases	X				
15-3	Provide on-site functional and technical support.	X				
15-4	Provide on-site loading of applications software, testing of databases and initial file sizing.	X				
15-5	Provide telephone support during normal hours of operation and 24-hour emergency support.	X				
15-6	Provide whatever technical support necessary in order to meet all critical processing support requirements.	X				
15-7	Provide updates to technical and functional systems documentation.	X				



ID	CUSTOM DEVELOPMENT	Proposed Vendor Software			Reference	Comments
		Complies with Requirement	Does Not Comply	Will Comply with Modifications		
16-1	Provide design, development and testing of custom modifications, as needed. Also, support custom modifications in all future releases.	X				
16-2	Integration/Interfaces with other modules (i.e. trading performances measurement, analytics, etc.)	X				
16-3	Interfaces with the State of Michigan General Ledger (MAIN)			X		



ID	SYSTEM CAPABILITIES	Proposed Vendor Software			Reference	Comments
		Complies with Requirement	Does Not Comply	Will Comply with Modifications		
17-1	Windows	X				
17-2	Real-time	X				
17-3	ODBC	X				
17-4	SQL Database	X				
17-5	NT/windows/linux	X				
17-6	System Documentation	X				
17-7	Technical Telephone Support	X				
17-8	Software updates	X				
17-9	Explain your software backup and recovery capabilities	X				<p>If the server fails in an environment where no fault tolerance is in, committed transactions can be recovered from the transaction log. If the database is lost, it can be recovered from a previous backup and the transaction logs. Regular database backups are at the core of any recovery strategy.</p> <p>A number of</p>



						<p>database vendor provided fault tolerance schemes that can be implemented to facilitate recovery after server failure. These range from full database replications, through redundant hardware (e.g. clusters, raid disks), to simple recovery from backups. The recovery procedures for server failures will vary depending on the fault tolerance scheme in use. The more sophisticated schemes require no user intervention after failure. The simpler schemes may require an operator to load a tape, run the database vendor standard recovery applications, and restart the server (on the original</p>
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						<p>hardware or backup host).</p> <p>Recovery of abnormal termination of applications is achieved by simply restarting the application from an icon or command line (on the original hardware or backup workstation). In the case of hardware failure, any INI settings associated with the user will have to available from the new workstation.</p> <p>Our clients currently implement a variety of fault tolerance schemes (mostly driven by internal IT preferences). Our professional services group can advise you regarding recovery procedures as part of the implementation</p>
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.....CONTRACT #071B2001304

							phase.
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ID	CONVERSION SCHEDULE	Proposed Vendor Software			Reference	Comments
		Complies with Requirement	Does Not Comply	Will Comply with Modifications		
	Capacity to adhere to strict conversion deadlines, as follows:					
18-1	Complete initial conversion by 01/01/02.	X				
18-2	Support parallel operations with legacy system by 01/01/02 and support thru 03/31/02.	X				
18-3	Be system of record 04/01/02.	X				This assumes that the requirements stated are accurate and there are no unknown dependencies. Once a complete workflow analysis is completed we can provide you with a more definitive response.



A. APPENDIX E

**TRADING FUNCTIONALITY
INVESTMENT SOFTWARE REQUIREMENTS**

TABLE OF CONTENTS

1. Functionality
2. Interfaces (Daily)
3. Reporting
4. Training and Support
5. Custom Development
6. System Requirements



	FUNCTIONALITY	Proposed Vendor Software		
		Complies with Requirement	Does Not Comply	Will Comply with Modifications
		1-1	Automated portfolio allocations using multiple allocation methods.	X
	Capability to set restrictions by:	X		
1-2	Portfolio guidelines, price limits, quantity limits.			
1-3	Exclusion lists	X		
	Capability to initiate intra day compliance checking by:	X		
1-4	% of portfolio	X		
1-5	13D/13G	X		
1-6	On line, real time program creation.	X		
1-7	Multi-level trading authorizations.	X		
1-8	Modify or cancel programs with appropriate authorization/audit trails.	X		
1-9	Electronic exchange of programs/Electronic Communications Network (ECN) with brokers.	X		
1-10	Real-time inventory confirmation.	X		
1-11	Real-time trade tracking.	X		
1-12	End of day aggregation by broker.	X		
1-13	Intra-day Cash and position monitoring.	X		
1-14	Support electronic clearinghouse confirmation/affirmation process.	X		
1-15	Provide for trade error correction at trader level.	X		
1-16	Capture transactions from outside trade managers and trade systems.	X		
1-17	Real-time portfolio inventory updating.	X		
1-18	Capability to monitor transactions on trade or settlement date basis.	X		
1-19	Capability to process large transaction volumes	X		



ID	<u>INTERFACES (Daily)</u>	Proposed Vendor Software		
		Complies with Requirement	<u>Does Not Comply</u>	<u>Will Comply with Modifications</u>
2-1	Custodial	X		
	Other complementing modules:			
2-2	Trading	X		
2-3	Performance measurement	N/A		
2-4	NAV	N/A		
2-5	Analytics	X		X
2-6	Data service providers	X		
2-7	State's general ledger	N/A		



ID	REPORTING	Proposed Vendor Software		
		<u>Complies with Requirement</u>	Does Not Comply	<u>Will Comply with Modifications</u>
3-1	Flexible user generated display reports with print option.	X		
3-2	Screen Customization	X		
	Standard Reports Library:			
3-3	Daily	X		
3-4	Weekly	X		
3-5	Monthly	X		
3-6	User friendly ad hoc resources	X		
3-7	Download data into other applications	X		



ID	TRAINING AND SUPPORT	Proposed Vendor Software		
		<u>Complies with Requirement</u>	<u>Does Not Comply</u>	<u>Will Comply with Modifications</u>
4-1	Provide initial on-site training for the various levels of users and system support personnel.	X		
4-2	Provide follow-up training for major changes in systems Releases.	X		
4-3	Provide on-site functional and technical support.	X		
4-4	Provide on-site loading of applications software, testing of databases and initial file sizing.	X		
4-5	Provide telephone support during normal hours of operation and 24-hour emergency support.	X		
4-6	Provide whatever technical support necessary in order to meet all critical processing support requirements.	X		
4-7	Provide updates for Information Technology (IT), including technical and functional documentation.	X		

ID	CUSTOM DEVELOPMENT	Proposed Vendor Software		
		<u>Complies with Requirement</u>	<u>Does Not Comply</u>	<u>Will Comply with Modifications</u>
5-1	Provide design, development and testing of custom modifications, as needed. Also, support custom modifications in all future releases.	X		
5-2	Integration/Interfaces with other modules (i.e. trading performances measurement, analytics, etc.)	X		
5-3	Interfaces with the State of Michigan General Ledger	<u>N/A</u>		



	which is called Michigan Administrative Information Network (MAIN)			
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ID	SYSTEMS REQUIREMENTS	Proposed Vendor Software			Reference
		Complies with Requirement	Does Not Comply	Will Comply with Modifications	
6-1	Windows	X			
6-2	Real-time	X			
6-3	ODBC	X			
6-4	SQL Database	X			
6-5	NT/windows/linux	X			
6-6	System Documentations	X			
6-7	Technical Telephone Support	X			
6-8	Software updates	X			



APPENDIX F
COMPALERT® ADDENDUM
to
MFTP AGREEMENT

This CompALERT® Addendum is incorporated into and made a part of the MFTP Agreement (the "Agreement"), pursuant to which Subscriber has, among other things, taken a license to use the CompALERT compliance module of the MFTP. Defined terms used herein and not otherwise defined shall have the definitions ascribed to them in the Agreement.

CompALERT is a **user-defined** template of attributes of various types of securities against which data input by the user of the System may be measured in order to assist the user in determining its compliance with certain specified tests. **SUCH TESTS DO NOT CONSTITUTE ALL TESTS EMBODIED IN APPLICABLE SECURITIES AND OTHER LAWS, REGULATIONS AND RESTRICTIONS. SUBSCRIBER SHALL AT ALL TIMES BE SOLELY RESPONSIBLE FOR THE DATA AND ATTRIBUTES INPUT INTO THE SYSTEM AND FOR THE CONSEQUENCES THEREOF.**

COMPALERT DOES NOT PROVIDE OR EMBODY LEGAL OR REGULATORY ADVICE. SUBSCRIBER'S COMPLIANCE WITH APPLICABLE SECURITIES AND OTHER LAWS, REGULATIONS AND RESTRICTIONS IS AND REMAINS THE **SOLE RESPONSIBILITY AND OBLIGATION OF SUBSCRIBER**. SUBSCRIBER'S LICENSE OF COMPALERT DOES NOT ALTER OR DIMINISH ANY SUCH RESPONSIBILITY OR OBLIGATION IN ANY WAY, NOR DOES MACGREGOR ASSUME ANY SUCH RESPONSIBILITY OR OBLIGATION, WHETHER BY IMPLICATION OR OTHERWISE.

MACGREGOR RECOMMENDS THAT SUBSCRIBER'S COMPLIANCE OFFICER REVIEW COMPALERT CALCULATIONS AND THE DEFAULT AND OTHER ASSUMPTIONS UNDERLYING COMPALERT CALCULATIONS. MACGREGOR FURTHER RECOMMENDS THAT SUBSCRIBER'S COMPLIANCE OFFICER REVIEW AND VERIFY, ON A REGULAR ONGOING BASIS, THE ATTRIBUTES, PARAMETERS AND PROCEDURES INPUT AND REVISED IN SUBSCRIBER'S COMPALERT SYSTEM.

SUBSCRIBER'S COMPLIANCE OFFICER MUST ALSO MAKE INDEPENDENT DETERMINATIONS AS TO SUBSCRIBER'S COMPLIANCE WITH APPLICABLE SECURITIES AND OTHER LAWS, REGULATIONS AND RESTRICTIONS.

SUBSCRIBER ACKNOWLEDGES AND AGREES THAT MACGREGOR'S SOLE AND EXCLUSIVE LIABILITY IN CONNECTION WITH COMPALERT SHALL BE AS EXPRESSLY SET FORTH AND LIMITED IN THE TERMS AND CONDITIONS PORTION OF THE AGREEMENT.



APPENDIX E (Continued)
TIPS ADDENDUM

Macgregor has embedded the bond calculation software of Trading & Investment Programs & Systems, Inc. (“TIPS”) in the System. As a result, Macgregor is required, pursuant to Macgregor’s software license agreement with TIPS, to include the following provisions in Macgregor’s license agreements:

“SIA” means the Security Industry Association.

“PSA” means the Public Securities Association, which changed its name and is now known as the Bond Market Association.

TIPS DOES NOT MAKE ANY REPRESENTATIONS, WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OR CONDITIONS OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO MACGREGOR’S SOFTWARE, AND NO INFERENCES SHOULD BE DRAWN FROM THE FACT THAT TIPS IS THE SOURCE OF SOME OF MACGREGOR’S SOFTWARE. TIPS PROVIDES NO WARRANTY OR CONDITION, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND THOSE ARISING BY STATUTE OR OTHERWISE IN LAW OR FROM A COURSE OF DEALING OR USAGE OF TRADE.

NEITHER PSA NOR SIA MAKES ANY REPRESENTATIONS, WARRANTIES, OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OR CONDITIONS OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO TIPS SOFTWARE AND/OR TIPS SOFTWARE-SIA VERSION AND/OR TIPS SOFTWARE-SIA/PSA VERSION. PSA AND SIA PROVIDE NO WARRANTY OR CONDITION, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND THOSE ARISING BY STATUTE OR OTHERWISE IN LAW OR FROM A COURSE OF DEALING OR USAGE OF TRADE.



APPENDIX G

The Macgregor Financial Trading Platform for Windows

Minimum Hardware Requirements

The Hardware Requirements List specifies the minimum hardware and network configurations required to install The Macgregor Financial Trading Platform (MFTP) and ancillary products. Please read the Minimum Hardware Requirements List and plan appropriate purchases prior to system installation to avoid disruptions and waiting time. Hardware requirements will change with new system features. Please check with Macgregor to ensure that you have the most recent hardware requirements.

Macgregor Financial Trading Platform:

The Macgregor Financial Trading Platform, Version 6 (Sybase / MS-SQL) can operate with the database management systems (DBMS) server platforms indicated in the ['MFTP Database Server Minimum Requirements'](#) section of this document. Depending on a number of factors (e.g., the number of users, administration experience, price/cost, scalability needs) you may find one choice more appropriate than the other. If you are uncertain of which platform to choose, please discuss this with a Macgregor or Sybase representative before making a decision.

Macgregor Disk Space Requirements:

The amount of disc space required by the MFTP varies depending on: number of fund/client relationships, number of securities, number of positions, daily trade volume, the length of time one wishes to maintain archive trade data on-line without purging, and the ability to maintain both production and test databases. In practice, the volume space noted below should allow most clients to trade heavily and maintain at least one year's worth of archived data.

Data Files (Database Server)	
Intraday Database (per instance)	250 MB
Archive Database (per instance)	500 MB
Program and Configuration Files (File Server)	
Executables	300 MB
Support and Configuration Files	50 MB
Total Disc Space Requirements	1,100 MB

File Server and Network

A general-purpose file server should be made available with adequate space (see above) available for Macgregor executables, log files, configuration files, and scripts. Long file names are used in MFTP version 6 and must be supported by the operating system of the file server. This file server simply serves as a storage area for Macgregor programs and does not have to be dedicated to Macgregor.



I. MFTP Database Server Minimum Requirements (Required)

Sybase					MS-SQL Server
Minimum Requirements:	NT	Sun Solaris	HP/UX	AIX	NT
Processor	Pentium III - 500 Mhz+ or latest available Mid-High Range Intel Processor Dual processor minimum.	Enterprise class server. Dual processor minimum	2-Way R Class or higher	Dual Processor Mid-Range (i.e. 44P/270 or F50)	Pentium III - 500 Mhz+ or latest available Mid-High Range Intel Processor Dual processor minimum.
Memory	512 MB*	512 MB*	512MB*	512MB*	512 MB*
Disc Subsystem	High Speed redundant SCSI hard drives	High Speed redundant SCSI hard drives	High Speed redundant SCSI hard drives	High Speed redundant SCSI hard drives	High Speed redundant SCSI hard drives
Monitor	800x600 resolution	Terminal or Monitor	Terminal or Monitor	Terminal or Monitor	800x600 resolution
Database	Sybase ASE 11.9.2.3	Sybase ASE 11.9.2.3	Sybase ASE 11.9.2.3	Sybase ASE 11.9.2.3	Microsoft SQL Server 7.0 Standard or Enterprise Edition
System	Windows NT Server 4.0 SP5 or SP6a	Sun Solaris Version 2.5.1 or 2.6 With required Y2K Patches	HP/UX 10.20 With Required Y2K Patches	AIX 4.2.1 or 4.3.2	Windows NT Server 4.0 SP5 or SP6a
Networking	TCP/IP	TCP/IP	TCP/IP	TCP/IP	TCP/IP
	Network Interface Card (NIC)	Network Interface Card (NIC)	Network Interface Card (NIC)	Network Interface Card (NIC)	Network Interface Card (NIC)



Backup Device	Any mass-storage devices	Any mass-storage devices	Any mass-storage device	Any mass-storage device	Any mass-storage devices
Disaster Recovery	Disk Mirroring, or Disk Duplexing. For others, consult your Macgregor representative.	Disk Mirroring or Disk Duplexing. For others, consult your Macgregor representative.	Disk Mirroring or Disk Duplexing. For others, consult your Macgregor representative.	Disk Mirroring or Disk Duplexing. For others, consult your Macgregor representative.	Disk Mirroring, or Disk Duplexing. For others, consult your Macgregor representative.
Other	CD-ROM Drive	CD-ROM Drive	CD-ROM Drive	CD-ROM Drive	CD-ROM Drive

I. Workstations (Required)

32MB is the minimum RAM required to run the MFTP on NT with no additional applications running. The 64MB minimum is specified below to provide a minimum cushion for running other applications concurrently. Workstation RAM requirements are also heavily dependent on client, security, compliance, and position database sizes, as well as daily trade volumes. It is not unusual for the TICKW application to use up to 25MB of RAM when accessing larger data-sets. Additional third party applications running concurrently on the system will have their own memory requirements over and above what is required by Macgregor. Plan accordingly by using diagnostics tools available with NT to determine current system memory usage in worst-case scenarios. System performance degrades significantly when there is not enough Physical Memory available for the MFTP Applications. Please discuss this with a Macgregor representative.

Minimum Requirements:	Sybase	MS-SQL
Processor	Pentium III 450 Mhz+ or latest available Mid-High Range Intel processor	Pentium III 450 Mhz+ or latest available Mid-High Range Intel processor
Memory	128MB Minimum	128MB Minimum
Disk Space for Macgregor	20 MB in addition to swap file	20 MB in addition to swap file
Monitor	800 x 600 Resolution	800 x 600 Resolution
Operating System	Windows NT Workstation 4 SP5 or SP6a	Windows NT Workstation 4 SP5 or SP6a
Other	TCP/IP	TCP/IP



	Sybase System 11 ODBC 3.11 or higher	MS-SQL ODBC 3.70 or higher
	Open Client v11.1.1 EBF 8060 (provided with Sybase license)	
	Network Interface Card (NIC)	Network Interface Card (NIC)



III. Communication PC (Requirement)

Macgregor requires the use of a Communications PC to facilitate problem resolution and setup during the implementation by the install team and after an implementation by the Help Desk. Macgregor currently uses PC Anywhere32 v9.2 as their preferred remote access software. The Communication function of this PC could be run on a dedicated PC, a user workstation, the Macgregor Application server or an NT based Database server. This PC must meet the same requirements as the [Workstations](#) and will be configured to run Macgregor software as a workstation.

Please consult with your Macgregor representative regarding and special requirements you may have such as SecureID, Citrix, or RAS.

Minimum Requirements:	Sybase	MS-SQL
Processor	Pentium III 450 Mhz+ or latest available Mid-High Range Intel processor	Pentium III 450 Mhz+ or latest available Mid-High Range Intel processor
Memory	128MB	128MB
Disk Space for Macgregor	20 MB in addition to swap file	20 MB in addition to swap file
Monitor	800x600 Resolution	800x600 Resolution
Operating System	Windows NT Workstation 4.0 SP5 or SP6a	Windows NT Workstation 4.0 SP5 or SP6a
Other	TCP/IP	TCP/IP
	Sybase ODBC v3.11 or higher Sybase Open Client 11.1.1 EBF 8060	MS-SQL ODBC v3.70 or higher
Communications Software	PC Anywhere32 Version 9.2	PC Anywhere32 Version 9.2
Modem	56 kbps modem	56 kbps modem

IV. MFTP Applications Server (Required)

MFTP Application Server is a generic term used to describe an NT System configured to run various MFTP Daemon processes. One or more MFTP Application Servers can be configured depending on the needs of the client. One MAS is configured with a primary process, the Message Server, which facilitates and monitors system messaging, user connections and also connections between other daemons & workstations. As additional daemons



are added to the MAS, memory and processing requirements increase. Larger clients with high data volumes have benefited from using dual-processor systems for the MFTP Application Server. Contact your Macgregor representative for more information.

Requirements:	Sybase	MS-SQL
Processor	Pentium III - 500 Mhz+ or latest available Mid-High Range Intel Processor Dual processor minimum if running 4 or more processes.	Pentium III - 500 Mhz+ or latest available Mid-High Range Intel Processor Dual processor minimum if running 4 or more processes.
Memory	218 MB (additional RAM for each Macgregor daemon - see chart)	128 MB (additional RAM for each Macgregor daemon - see chart)
Monitor	800 x 600	800 x 600
Operating System	Windows NT Workstation 4 SP5 or SP6a	Windows NT Workstation 4 SP5 or SP6a
Other	TCP/IP Sybase Open Client 11.1.1	TCP/IP MS SQL ODBC Driver 3.7 or higher

- Necessary if any daemon other than Message server will be running on this machine.



Daemons and Server Processes

Listed below are the various Macgregor daemon server processes that can be loaded on Macgregor Application Servers. Typical configurations would include two or three daemons per MAS. This depends heavily on the usage level of each individual daemon. Macgregor Engineers will assist you in configuring the placement of these processes during the planning phase of an implementation. Memory requirement listed below are to be used as a guideline only - actual memory requirements will vary with dataset sizes and trade volumes.

Name	Memory	Description	
Compliance Daemon	24MB	Checks calculated restrictions - part of CompAlert.	With many restrictions i
Confirmation Daemon	24MB	Allow centralized confirmation of trades moving the processing for this function off the workstation.	Can be memory and quantities of trades are b many allocations per processed
Message Server	6MB	Allows simple messaging amongst Macgregor workstations and various Macgregor Daemons	Not memory or CPU in connection
MFax Daemon	24MB	Creates files of tickets to be faxed by FAX PC.	Not particularly memor memory intensive if p
Oasys	24MB	Creates files of tickets to be sent to Thompson Oasys PC.	Not particularly memor memory intensive if p
Global Oasys	24MB	Creates files of tickets to be sent to Thompson Global Oasys PC with AutoMatch.	Not particularly memor memory intensive if p
AutoCalc	24MB	Part of projected cash functionality. Refer to release notes for a complete description.	Contact
Auto Confirm	24MB	Automatically confirms executed trades.	Can be memory and quantities of trades are b many alloc
Monitor Server	16MB	Monitors Macgregor Daemons and alerts specified user when a Daemon is stopped or Started.	Not memory
CompAlert Reports and End of Day	128MB	Produces various reports and processes restrictions as part of the overall End of Day.	These processes can b intensive when used wit large quantities of restr



			these processes as part least 12
End of Day/Start of Day	N/A	Nightly cycle functions, imports, exports, archiving, database dumps, etc.	Many processes contro run on a MAS or on a Macgregor for an appro these processes can b in



V. Macgregor Electronic Trading System Process Manager (FIX Daemon)

The MET System PC, or Process Manager, is a dedicated PC attached to the network that connects you to the Macgregor Electronic Trading System. This system, along with FIX router, can be placed outside of a production LAN (or behind a firewall) provided that connection to Sybase or MS-SQL server is tested & working.

Requirements:	Sybase	MS-SQL
Processor	Pentium III - 500 Mhz+ or latest available Mid-High Range Intel Processor Dual processor minimum if more than 15 connections are expected.	Pentium III - 500 Mhz+ or latest available Mid-High Range Intel Processor Dual processor minimum if more than 15 connections are expected.
Memory	128 MB	128 MB
Disk Space Available for Macgregor	500 MB	500 MB
Monitor	800x600	800x600
Operating System	Windows NT Workstation 4 SP5 or SP6a	Windows NT Workstation 4 SP5 or SP6a
Other	TCP/IP Sybase Open Client 11.1.1 Simba Sybase ODBC Drivers (provided by Macgregor) ActiveState PERL (provided by Macgregor) Network Interface Card (NIC) MacGregor FIX Network line MacGregor FIX Network Router	TCP/IP MS SQL ODBC Driver 3.7 or higher ActiveState PERL (provided by Macgregor) Network Interface Card (NIC) MacGregor FIX Network line MacGregor FIX Network Router



VI. Faxing (Optional)

The MFTP Faxing Daemon allows you to fax trade tickets from any PC connected to the network, using the internal fax modem. Currently, the MFTP Faxing System, MFax is designed to work with WinFAX Pro client software. Installing fax modem is optional, depending on your fax server network configuration.

Requirements:	Sybase	MS-SQL
Processor	Pentium III 450 Mhz+ or latest available Mid-High Range Intel processor	Pentium III 450 Mhz+ or latest available Mid-High Range Intel processor
Memory	64 MB	64MB
Monitor	800 x 600 Resolution	800 x 600 Resolution
Operating System	NT 4.0 Workstation or Server SP5 or SP6a	NT 4.0 Workstation or Server SP5 or SP6a
Modem	Any WinFax Pro compatible internal/external modem	Any WinFax Pro compatible internal/external modem
Other	Analog Phone line (Optional) Network Interface Card (NIC) Network Client (depends on file server) WinFaxPro v10 Client Printer attached or network printer	Analog Phone line (Optional) Network Interface Card (NIC) Network Client (depends on file server) WinFaxPro v10 Client Printer attached or network printer

Notes

- A. Especially for sites over 5 users, it is very strongly recommended that the MFTP Database Server be a dedicated server.
- B. The two major considerations that must be addressed when planning the SCSI drive configuration are flexibility and redundancy.



- C. MFTP Version 6.x currently supports only Windows NT 4 as a workstation operating system. Windows 95 and later versions, including Windows 98, are not supported.
- D. Contact Sybase directly to purchase the required database software as well as the appropriate number of licenses to support your installation. Remember to account for any machine running MFTP Daemon processes when calculating the total number of licenses required.
- E. New Patches and Service Packs are constantly being created that update the database and operating system components on which Macgregor relies. Macgregor makes every effort to stay up to date evaluating these releases so please contact your Account Manager if a component you wish to use is older or newer than what is listed in this document.



**THE MACGREGOR FIX NETWORK
INVESTMENT MANAGER USER AGREEMENT**

The State, by execution of this MFN Agreement (“Agreement”), hereby subscribes for the services (the “Services”) identified as the Macgregor FIX Network (“MFN”) in this Agreement and the schedules (the “Schedules”) attached hereto and The MacGregor Group, Inc. (“Macgregor” also referred to as “Contractor” in the Contract to which this Agreement is attached) agrees to provide the State with the Services under the following terms and conditions:

1. Access and Services.—Macgregor agrees to grant State access to MFN, establish a connection to MFN using the equipment issued for that purpose and communicate with other MFN subscribers over MFN using the FIX protocol.

Macgregor, at no extra charge to State, will provide telephone support to State between the hours of 8:30 a.m. and 5:30 p.m. E.S.T. on weekdays (exclusive of New York Stock Exchange holidays). State may ask questions relating to The MacGregor FIX Network and MFN Goods and/or Services FIX software and report operational problems related to any transmission made or attempted over MFN. Macgregor will exercise diligence in responding to all calls as quickly as practicable.

If State reports an operational problem relating to any transmission made or attempted over MFN, Macgregor will attempt to resolve whether the problem is due to State usage, data-related problems, defects in the FIX software, or some combination of these factors.

Macgregor will coordinate the installation of new broker connections to be made over MFN; perform connectivity testing on new MFN connections; and configure State’s MFN Goods and/or Services FIX software for such connections.

Macgregor will test each subscribing broker’s FIX software for compatibility with MFN Goods and/or Services’s FIX software to minimize the risk of application related failures.

2. Use of Services.—All equipment resources granted to State will be used for processing associated with the State’s trading of securities. All Services shall be used exclusively by State and for State’s own use.

3. Term and Termination.—This Agreement shall remain in force from the date of execution of this Agreement (the “Effective Date”) until terminated as per Cancellation Provision I-T in Section I [of the Contract](#).

4. Charges for Services.—In return for use of MFN, State agrees to pay the fees set forth in the Fee Schedule, attached hereto and incorporated herein, specifying access, telecommunication and installation fees and any other schedules the parties’ attach hereto from time to time, within 30 days of date rendered. The State also agrees to pay any and all sales, use and other taxes or charges levied by any governmental authority in connection with Macgregor’s furnishing Services under this Agreement. Interest of ¾ of one percent will be charged on overdue accounts. Macgregor may revise its charges at any time upon 30 days’ written notice. State’s obligations for payment for Services rendered to the date of termination shall survive termination of this Agreement.



5. State’s Responsibilities.—Macgregor and State agree to provide each other with a single point of contact to work on a service problem or failure. These points of contact will be responsible for service restoration and any internal escalation procedures necessary to restore service.

State is responsible for procuring and maintaining its own FIX software pursuant to the terms and conditions set forth in the Contract, to which this Agreement is attached.

State agrees to cooperate with Macgregor in troubleshooting application and communication problems related to transmissions made between State and other MFN participants over MFN. State agrees to provide Macgregor with timely access to information contained in transaction logs relating to transmissions made over MFN, timely remote access to systems operating the MFN Goods and/or Services FIX processes and permission to manage those FIX processes for State.

State will be responsible for reserving Internet Protocol (“IP”) addresses for each MFN connection and ensuring that messages sent to such addresses route directly to the provided router. One IP address will be required for each MFN connection made.

6. Limitation of Liability.—

Neither party shall be liable for any indirect, incidental, special or consequential damages, including loss of profits, revenue, data, or use, incurred by either party hereto or any third party, whether in an action in contract or tort, even if such party or such party’s personnel, agents or subcontractors have been advised of the possibility of such damages. Unless stated otherwise in this Agreement, each party’s entire liability and sole remedy for damages hereunder (whichever the case may be) shall in no event exceed the amount of all Perpetual License Fees paid by State under this Contract, pro-rated from the time such damages accrued. Contractor shall have no liability for loss of data or documentation, it being understood that the State is responsible for all system administrative and management procedures, including backup procedures. This limitation upon damages and claims with respect to the parties hereto is intended to apply without regard to whether other provisions of this Agreement have been breached or have proven ineffective.

7. Proprietary Rights

MFN and MFN documentation, if any, are proprietary products of Macgregor, or its licensors, and are protected by copyright law. By virtue of this Agreement, State acquires only the non-exclusive right to use MFN in connection with the Services, pursuant to the terms and conditions set forth herein, and does not acquire any rights of ownership in MFN or MFN documentation, if any, or any media upon which it may be embodied. Macgregor, or its licensors, shall at all times retain all rights, title, and interest in MFN and in any and all equipment issued by Macgregor to State, to facilitate the Services provided hereunder.

Except as otherwise expressly provided for in this Agreement, State acquires no rights of any kind in or to any trade name, logo, or trademark of Macgregor, or Macgregor’s subsidiaries, affiliates, or licensors, or any product designation under which the Services were or are marketed and shall not make use of the same for any reason except as expressly authorized by this Agreement or otherwise authorized in writing by Macgregor.



8. Nondisclosure

By virtue of this Agreement, the parties may have access to information that is confidential to one another ("Confidential Information"). Confidential Information shall be limited to the business and activities of the parties hereto including, but not limited to, information or material regarding the parties' respective clients, organization, work, know-how, programs, products and services in connection with the Services under this Agreement, and all information clearly marked as confidential, or information identified by the disclosing party as confidential at the time of disclosure and summarized as confidential in a written memorandum delivered to the recipient within fifteen (15) days of disclosure. A party's Confidential Information shall not include information which: (a) is or becomes a part of the public domain through no act or omission of the other party; or (b) was in the other party's lawful possession prior to the disclosure and had not been obtained by the other party either directly or indirectly from the disclosing party; or (c) is lawfully disclosed to the other party by a third party without restriction on disclosure; or (d) is independently developed by the other party; or (e) is disclosed under operation of law, provided the disclosing party gives the other party notice of any such request so that the other party may seek an appropriate protective order. Results of benchmark tests run by State may not be disclosed unless Macgregor consents to such disclosure in writing.

The parties agree, during the term of this Agreement and for a period of three (3) years thereafter, to hold each other's Confidential Information in confidence. The parties agree not to make each other's Confidential Information available in any form to any third party or to use each other's Confidential Information for any purpose other than the implementation of this Agreement. Each party agrees to take all reasonable steps to ensure that Confidential Information is not disclosed or distributed by its employees or agents in violation of the provisions of this Agreement.

9. Miscellaneous

- (a) The invalidity or unenforceability for any reason of any provision of this Agreement shall in no way affect the validity or enforceability of any other provision.
- (b) No delay or failure by either party in exercising any right hereunder and no partial or single exercise of such right shall be deemed to constitute a waiver of any rights hereunder.
- (c) Except as expressly provided in this Agreement, neither this Agreement nor any provision hereof may be changed, waived or discharged other than by a statement in writing and signed by an authorized representative of both parties.
- (d) 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; provided that the State notify Contractor in writing of the claim, and allows Contractor to control solely, and cooperates with, Contractor in the defense or any related settlement negotiations. 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 pro rata credits to the State against any advance payments made, but not earned, but shall in no event include incidental or consequential damages of any kind, even if Contractor has been informed of the possibility of such damages. In such event, the Contractor shall reimburse the State for any reasonable and actual costs incurred by the State in returning such infringing material to Contractor. However, Contractor has no obligation for any claim based on the State's modification of MFN or its combination, operation, or use with any software or hardware product, or apparatus not specified or provided by Contractor for the use of MFN, or as amended mutually by the parties, provided that such claim is based on such combination, operation, or use and such claim would be avoided by the absence of such combination, operation, or use, or by the combination, operation, or use with products, or apparatus specified or provided by Contractor for the use of MFN, or as amended mutually by the parties. **THIS SECTION STATES CONTRACTOR'S ENTIRE OBLIGATION AND LIABILITY TO THE STATE AND THE STATE'S EXCLUSIVE REMEDY WITH RESPECT TO ANY CLAIM OF INFRINGEMENT.**

- (e) Neither Macgregor nor State may assign or transfer its interest in this Agreement without prior written consent of the other party, which consent shall not be unreasonably withheld.
- (f) In the event that any of the terms of this Agreement is or becomes or is declared to be invalid or void by any court or tribunal of competent jurisdiction, such term or terms shall be null and void and shall be deemed severed from this Agreement and all remaining terms of this Agreement shall remain in full force and effect.
- (g) State and Macgregor agree that the contents of this Agreement shall not be disclosed to any party not materially associated with either State or Macgregor except as may be required by law.
- (h) Notices under this Agreement shall be considered to have been duly given when sent by certified mail, return receipt requested, or by a recognized courier service, or by a countersigned facsimile acknowledgment of a facsimile notice transmission to The MacGregor Group, Inc. at 321 Summer Street, Boston, MA 02210, Attention: Corporate Counsel and to the State at the address on the front of this page. Such addresses may be changed by notice as herein provided.
- (i) In the absence of a specific agreement to the contrary, Macgregor may not disclose the identity of State to current and prospective users of MFN without the express written approval of the State Acquisition Services Director.
- (j) This Agreement shall be governed by and construed in accordance with the laws of the State of Michigan.
- (k) This Agreement, and all Schedules attached hereto, contains the entire understanding and agreement between the parties with respect to the subject matter hereof. All prior agreements, representations



.....CONTRACT #071B2001304

and undertakings executed or existing between the parties as of the Effective Date in respect of the subject matter hereof are superseded by this Agreement.



APPENDIX H
TRAVEL AND LIVING EXPENSES

September 30, 2000

MEMORANDUM

TO: Contractors and Board Members
Eligible for Travel Reimbursement in
DMB and the Executive Office

FROM: Howard Pizzo, Director
Fiscal Management Division
Office of Administrative Services

SUBJECT: 2000/01 Guideline for Travel Reimbursement of Contractors
and Board Members, that are NOT on the State payroll system

This guideline is directed to all contractors and members of boards who are not state employees and NOT on the state payroll, but who prepare expense vouchers for reimbursement of authorized travel expenses. You should be aware of the many rules and limitations affecting travel expense reimbursement in order to avoid delays in the processing of reimbursement or to preclude the rejection of unallowable claims.

You are expected to pay your own individual travel expenses, with the exception of air fare, and submit an Expense Voucher. When it is known that no other expenses will be incurred during an agency defined travel reporting period, a voucher should be submitted within 15 days after the conclusion of travel.

Your Attention Is Directed To The Following:

- The premium mileage remains at 32.5¢ per mile.
- Reimbursement may not be authorized for travel, to or from board or commission meetings, beginning or terminating in another state (see item #17 below).
- For state employees on the state payroll, please refer to the state employee travel guidelines.
- The standard mileage rate increases to 29¢ per mile.
- Promotional Items are not allowed. See Item #18.



- Certain meals rates have increased. See Item #3.
- Lodging rates have increased to \$65.00. See Item #10.

The Standardized Travel Regulations issued jointly by DMB, Vehicle Travel Services DMB, Office of Financial Management and the Department of Civil Service have been established to provide a fair and equitable means for reimbursing individuals for necessary state business travel expenses. In no way should travel expense reimbursements be viewed as a source of supplemental income or profit to the individual.

The following list is a summary of the most critical requirements and limitations that you must understand and follow. For further information, review the related rules found in the Standardized Travel Regulations (STR) or Administrative Services Letters (ASL) as noted.

1. Signatures. Both the traveler and the agency director must sign their full names. The signature of the agency director indicates substantiation for the expenses reported. Name stamps will not be accepted.
2. Required Information. Complete voucher legibly, especially the following:

Traveler's Name
 Phone Number
 Social Security Number must be legible and correct; If not, the payment will be delayed.
 Home Address (for mailing of reimbursement check).



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Title of Position
 Official Work Station
 Departure and Return: Indicate time in hours and minutes. Do not use military time.
 Nature of Official Business: State specific reasons for travel.
 General statements are not acceptable in most situations.
 State Owned Vehicle Number: Indicate mode of travel used if a state owned vehicle is not used.
 Description: Indicate specific explanation of travel for audit purposes.

3. Meal Allowance Schedule. Meal rates and allowed time periods are shown in the following schedule. Receipts are not required to document meal costs. Board members are reimbursed at special meeting rates or out-of-state rates, whichever is higher.

<u>Meal</u>	Depart on or Prior to	Return on or After	<u>In-State</u>	Michigan	Out-of-	Out-of-State
				Select <u>Cities</u>	State	Select <u>Cities</u>
Breakfast	6:00 a.m.	8:30 a.m.	\$ 6.75	\$ 8.50	\$ 8.25	\$ 11.00
Lunch	11:30 a.m.	2:00 p.m.	\$ 7.25 a.	\$ 8.50 a.	\$ 8.75 a.	\$ 11.00 a.
Dinner	6:30 p.m.	8:00 p.m.	\$16.50	\$21.00	\$20.50	\$ 22.00

- a. Group meeting rates apply only to Board members.



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4. Group Meeting Rates. Section 7.8 of the Standardized Travel Regulations allows state contractors to be reimbursed for actual meal expenses not exceeding the group meeting rates listed below for prearranged meetings called by a commission, department or agency head. All prearranged meetings must have the prior approval of the DMB Office of Administrative Services. A request for authorization should include an explanation for the meeting, why it is necessary to hold it over the meal hour, and a listing of those to attend. The approval request for authorization should accompany the travel voucher.

Group Meeting Rates:

Breakfast	\$ 6.75
Lunch	\$10.25
Dinner	\$16.50

5. Mileage. Totals from city to city should be the same as those printed on the State of Michigan Official Transportation Map. Out-of-state mileage should be the same as those printed in the Rand McNally Atlas. In addition, vicinity mileage should be recognized on a separate line and not included in the distance from workstation to destination on a daily basis.
6. Premium Mileage. Premium rate of 32.5¢ per mile is available to contractors and board members for allowable official state travel using their own vehicle.
7. Guest Meals. No guest meals will be allowed for contractors or board members.
8. Tips. Reimbursement for tips (for porters, maid service or taxis) is a maximum of \$2.00 per day.
9. Parking and Toll Charges. Reimbursement for toll and parking charges is allowed, including metered parking. Receipts should be attached to the travel voucher if obtainable.



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10. Lodging. DMB requires paid, original receipts to support all lodging expense claims without exception.

The lodging rates excluding taxes are as follows:

	<u>Maximum</u>
In-State	\$65.00 or contact Spartan Travel
In-State Select Cities	Contact Spartan Travel
Out-of-State	Contact Spartan Travel
Out-of-State Select Cities	Contact Spartan Travel

Taxes are reimbursable in addition to lodging expense and should be included in the lodging total. If an individual member is accompanied by a spouse, the lodging reimbursement is limited to the single room rate or the state maximum whichever is less. In some instances where the government rate listed by the hotel exceeds the state rate, a co-pay is required of the traveler.

The office director should arrange for member lodging at hotels allowing state rates. If such a hotel will not offer the member the state rate due to lack of state employee identification, the actual cost of lodging will be allowed if an indication is provided that the state rate was not available.

Whenever the lodging rate exceeds the state limits identified above, contact Spartan Travel.

11. Alcoholic Beverages. Reimbursement for alcoholic beverages is never allowed.
12. Political Donations, Charitable Contributions, or Gifts. Tickets to political events, charitable fund raisers, and retirement dinners are never allowed. The actual cost of the meal provided at the event would be allowable with prior approval of the department director.
13. IRS Ruling. The reimbursement for mileage at premium rates in excess of federal rates and meal expenses when no overnight stay occurs are viewed by the Federal Internal Revenue Service as taxable income.

Use the correct column for taxable miles and meals.

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14. Travel Advances. Cash advances are available upon request when 75% of estimated travel expenses exceed \$175.00. (ASL 1-5).
15. Coding Directions: Travel expenses for contractors and board members who are not classified employees, coding requirements are explained in the following paragraphs.



- A. Contractors or Board Members are to use the non-reportable coding for direct vouchers. As long as the state's reimbursable amounts stay below the federal rates, they are non-reportable.

<u>Agency Object</u>	<u>Comm. Code</u>	
6171	FTR-18	Premium Mileage Rate - 1099 Non-Reportable
6171	FTR-18	Instate Meals, Overnight - 1099 Non-Reportable
6171	FTR-18	Outstate Meals, Overnight-1099 Non-Reportable
6171	FTR-18	Instate Day Trip Meals, No Overnight, 1099 Non-Reportable
6171	FTR-18	Outstate Day Trip Meals, No Overnight, 1099 Non-Reportable
6171	FTR-18	All instate other travel related costs, never use 360's for non-state employees
6171	FTR-18	Outstate Other Travel for non state employees

- B. The following agencies have Board, Commission, Council or Committee members. Their respective indexes to be used on direct vouchers are shown below:

Retirement Bureau:	
Public School Employees	53015
State Employees (Only 2 Receive Per Diem)	53024
Judges	53026
State Employees (Those not Receiving Per Diem)	53024
State Police	53025
Sheltered Workshop Committee	28015
State Building Authority	26000
Local Government Claims Board (DMB)	22014
Paper Work Reduction Committee, Office Services	47013



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16. Telephone Costs should be business related and minimized in travel status. The cost of telephone calls may be reimbursed on the travel voucher under the "other expense" column with a footnote indicating telephone costs. The cost should be supported by the detail on the lodging bill or a telephone billing and should be business related. For overnight work trips, a brief call home is authorized each night.
17. Outstate Travel is limited in accordance with Accounting Letter 92-3. Reimbursement may not be authorized for travel, to or from board or commission meetings, beginning or terminating in another state.
18. Promotional Items earned or received as a consequence of state paid travel are the property of the state not the traveler. In accordance with Administrative Circular No. 38, promotional items, such as frequent flyer miles, tickets offered because of "bumping," etc., when acquired through travel at state expense is the property of the state and must not be used for personal benefit. This should be broadly interpreted so that any benefit earned, no matter how small, accrues to the state and not to the personal benefit of the traveler. Notify DMB, Office of Administrative Services, of any promotions earned.
19. Airline, Lodging and Car Rental Reservations may be made through the authorized state travel agent:

Spartan Travel, Inc.; Telephone, 517-333-5880 or 1-800-968-2238; Fax, 517-351-8111.
 Spartan Travel's web site address is <http://www.spartantravel.com>.

Reservations may be also made through VTS' Powertrip Program. Contact Ronda Whiting, at VTS, phone 322-5110, for more information.

The travel agent may also be used to make travel arrangements for non-state employees under contract with the state.
20. Contact VTS to get current out-of-country travel expense rates.
21. Questions regarding these travel regulations should be directed to Uday Malavia at 5-1567 or Howard Pizzo at 5-1557.



ATTACHMENT A

DEPARTMENT OF MANAGEMENT AND BUDGET
OFFICE OF ADMINISTRATIVE SERVICES

DETROIT METROPOLITAN AREA

In the Standardized Travel Regulations, Section 4.1 authorizes other areas to be designated by the department as one metropolitan work station. Consistent with this authorization the following designation is made for the Detroit Metropolitan area as one official work station.

The Detroit Metropolitan area is one official work station that is bounded by Fourteen Mile Road on the north, Inkster Road on the west, Pennsylvania Road on the south, and the Detroit River and Lake St. Clair on the east. The following municipalities all are within this Detroit Metropolitan official work station.

- | | |
|----------------------|------------------|
| Allen Park | Hamtramck |
| Berkley | Harper Woods |
| Beverly Hills | Hazel Park |
| Bingham Farms | Highland Park |
| Centerline | Huntington Woods |
| Dearborn | Lathrup Village |
| Dearborn Heights | Lincoln Park |
| Detroit | Madison Heights |
| Eastpointe | Melvindale |
| Ecorse | Oak Park |
| Ferndale | River Rouge |
| Franklin | Roseville |
| Fraser | Royal Oak |
| Grosse Pointe | St. Clair Shores |
| Grosse Pointe Farms | Southfield |
| Grosse Pointe Park | Southgate |
| Grosse Pointe Shores | Taylor |
| Grosse Pointe Woods | Warren |
| | Wyandotte |

The official work station must be shown on an employee's travel voucher.

Section 7.6 states that no allowance for meals will be authorized at home or official work station unless attending a conference where a meal is included.