



COMMONWEALTH OF VIRGINIA
STANDARD CONTRACT

Contract No. UCPJMU4471

This contract entered into this 30th day of July 2015, by **Mapcom Systems, LLC** hereinafter called the "Contractor" and Commonwealth of Virginia, James Madison University called the "Purchasing Agency".

WITNESSETH that the Contractor and the Purchasing Agency, in consideration of the mutual covenants, promises and agreements herein contained, agree as follows:

SCOPE OF CONTRACT: The Contractor shall provide the services to the Purchasing Agency as set forth in the Contract Documents.

PERIOD OF PERFORMANCE: From July 30, 2015 through July 29, 2016 with nine (9) one-year renewal options.

The contract documents shall consist of:

- (1) This signed form;
- (2) The following portions of the Request for Proposal # MLO-827 dated November 24, 2014:
 - (a) The Statement of Needs,
 - (b) The General Terms and Conditions,
 - (c) The Special Terms and Conditions together with any negotiated modifications of those Special Conditions,
 - (d) Addendum No. One dated December 16, 2014;
- (3) The Contractor's Proposal dated January 2, 2015 and the following negotiated modification to the Proposal, all of which documents are incorporated herein:
 - (a) Negotiations Summary dated July 14, 2015,
 - (b) M4 Solutions – Visual Operations System Proposal Prepared for James Madison University dated May 11, 2015,
 - (c) Commonwealth of Virginia Agency Contract Form Addendum to Contractor's Form dated April 15, 2015, which shall govern in the event of conflict.

IN WITNESS WHEREOF, the parties have caused this Contract to be duly executed intending to be bound thereby.

CONTRACTOR:

By: _____

(Signature)

John D. Greenger

(Printed Name)

Title: _____

President

PURCHASING AGENCY:

By: _____

(Signature)

MATASHA OWENS

(Printed Name)

Title: _____

Buyer Senior



RFP # MLO-827, Outside Plant (OSP) Infrastructure Management System, Negotiation Summary for Mapcom Systems, LLC.

July 14, 2015

1. Contractor hereby rescinds confidentiality of its entire proposal dated January 2, 2015 with the exception of the following sections:
 - a. Page 3 – Section I. About Mapcom
 - b. Attachment A – Offeror Data Sheet
2. Contractor’s pricing schedule for James Madison University can be found on Pages 16 – 19 of the M4 Solutions – Visual Operations System Proposal dated May 11, 2015.
3. Contractor’s pricing schedule for the Commonwealth of Virginia is as follows:

SOFTWARE	PRICE PER SEAT
M4 University Management Suite	
• M4 Foundation	\$10,500
• M4 Work Order	\$9,000
• M4 GPS	\$4,500
• M4 Fiber	\$15,000
• M4 Conduit Manager	\$4,800
• M4 Network Equipment Manager	\$15,000
• M4 Circuit Manager	\$15,000
• M4 Auto-Routing	\$8,000
M4 Consoles and Field Managers	
• M4 Standard Consoles	\$1,800
• M4 Construction Field Manager	\$3,600
• M4 Fiber Field Manager	\$3,600
• M4 Circuit Field Manager	\$3,600
• M4 Field Manager Suite (<i>Construction, Fiber, and Circuit Field Manager</i>)	\$10,000
• M4 Web Console (<i>25 Seats</i>)	\$18,000
M4 Data Integration Engine (<i>Pre-Requisite to all integrations: Includes 100 configuration hours</i>)	\$24,000
• Pinnacle Integration Cartridge (<i>Includes 50 configuration hours</i>)	\$15,000
• Network Monitoring System Integration Cartridge (<i>Includes 50 configuration hours</i>)	\$15,000
• Locates Integration Cartridge (<i>Includes 25 configuration hours</i>)	\$14,000
M4 Universal Translator	
• Floating Seat of SQL Database version with M4 plug in (<i>5 concurrent users</i>)	\$16,800
• Fixed Seat of SQL Database version with M4 plug in (<i>1 user</i>)	\$11,025
Google License Fee (<i>per user annually</i>)	\$25



RFP # MLO-827, Outside Plant (OSP) Infrastructure Management System, Negotiation Summary for Mapcom Systems, LLC.

July 14, 2015

PROFESSIONAL SERVICES	HOURLY RATE
Digitizer	\$73
GIS Analyst	\$78
Project Manager	\$100
Data Integration Specialist	\$105
Data Integration Manager	\$115
Junior Programmer	\$105
Product Manager	\$125
Onsite Trainer	\$150
Network Specialist	\$150
Production Programmer	\$150
Senior Management	\$165
Senior Programmer	\$165
Technical Director	\$165

4. Contractor's proposal is hereby amended as follows:
 - a. Travel related expenses shall be billed in accordance with the Commonwealth of Virginia's per diem allowance for lodging, meals, and incidental expenses at the time of travel, which can be referenced at: <http://www.jmu.edu/finprocedures/4000/4215mie.shtml>.
 - b. Billable hours shall be for actual work hours on authorized projects/tasks rounded to the half hour. Billable hours shall not include travel time.
 - c. Tech support is unlimited between 8 a.m. and 8 p.m. Eastern Time.
 - d. The Contractor shall not bill the Purchasing Agency for travel time.
5. Contractor shall waive all registration costs for the M4 User's Conference for three (3) attendees from James Madison University for the first year of the contract.
6. Contractor has disclosed all potential fees. Additional charges will not be accepted.

M4 Solutions - Visual Operations System Proposal Prepared for:



Prepared for:
James Madison University
800 South Main Street
Harrisonburg, VA 22807

Date Prepared: May 11, 2015

Prepared by:
Mapcom Systems
601 Southlake Boulevard
Midlothian, VA 23236-3921

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Scope of Work: James Madison University

1 Background and Experience

Mapcom Systems is a software development and services company focused on delivering tailored GIS solutions for communications providers, universities and municipalities. Mapcom was established in 1971 and has helped over 180 clients document and manage their communications network and infrastructure. Mapcom is best known for its development of M4® Solutions suite, a visual operations platform that allows communications providers to maximize operational efficiency in the management of the voice and data network infrastructure. Mapcom is the sole provider of M4® Solutions.

2 General Scope of Project

James Madison University offers advanced telecommunications and networking services to its students, faculty and staff, including voice and data services via a state-of-the-art campus-wide network. James Madison University has invested in such technology not only to provide the best telecommunications and network services to its students, faculty and staff, but to also ensure that it operates as efficiently and effectively as possible. The significant investment the University has made and will continue to make in its network infrastructure and facilities increases the need to accurately document each network component, fiber and asset for numerous purposes – including network management, space management, security and disaster recovery purposes, and to improve operational efficiency.

As James Madison University continues to invest in advanced technologies and the expansion of the campus and its network, now more than ever, is an opportunity to document and map the network assets and connectivity. This will play an essential role in the maintenance and upkeep of the network which will benefit students, faculty and staff.

Mapcom's M4® solutions allows for the automated import and export of nearly 300 mapping formats. This functionality will allow the Information Technology Services and Physical Plant to inter-operate through the sharing of infrastructure layers to save time in design, mapping, and locates. It will also make the process of working with contractors through all phases easier and more efficient.

Mapcom's M4® Solutions suite offers James Madison University a comprehensive network and infrastructure management solution that will enable Information Technology Services, Telecommunications to document, map, manage and plan its OSP/ISP network and the infrastructure by creating an intelligent, accurate campus map. The map provides visual representation of the network and infrastructure and every element on the map has a database record behind it that provides inventory tracking, reporting, and effective data management. The key benefits of our solution are visual representation of plant elements, asset utilization, and a central repository of information that unites all of the groups that manage voice, data and infrastructure.

Mapcom will provide Software licenses and Software Related services listed in Software, Support and Services Proposal (below) of this document. Training listed in Software, Support and Services Proposal (below) on the software will take place upon the completion of the template area. Remaining hours can be used for additional consolidation and conversion services, training or applied to future maintenance.

3 Professional Services and Project Sample Implementation

Project Kickoff and Management

When new clients sign on with Mapcom, they are welcomed with a kickoff ceremony where our high expectations for your project are shared with you. Your project will be assigned to a Project Manager with direct experience working with universities. Our Project Managers bring industry best-practice guidance, M4[®] expertise, and the experience of implementing projects with other universities. Your Project Manager will meet with you weekly to discuss progress of the project and next steps. The Project Manager leads a team of Production and Data Integration Specialists to deliver your project on time and totally configured to your specs. In general, the process is broken up into mutually agreed upon benchmarks. Below is high-level outline of the implementation methodology and conversion process.

Project Planning

Mapcom recommends that our Project Manager visit James Madison University for a two-day implementation and planning meeting to discuss and plan layer configuration, symbology, database table configuration, the mentoring/consolidation process, and finalize the overall project plan, which includes timeline, communications plan, and overall implementation strategy. During this time the Project Manager and Information Technology Services will identify and arrange to gather all source data. The Project Manager can also recommend best-practices and future work flow processes to maintain the integrity of the M4[®] project. Throughout the process, your assigned Project Manager will work side by side with James Madison University staff to ensure data integrity and kick start the implementation of M4[®]. At the conclusion of phase one, university staff members will have the ability to complete the documentation and management of all outside plant.

Project Configuration Hours

Mapcom recommends 6 days for project configuration and set-up. This will include time to configure the project based on the implementation planning meeting, and the hours required to configure the software modules to your workflows. This will provide James Madison University with a project that is configured to the specific needs and business processes of Information Technology Services, Telecommunications Group.

Land Base Configuration

Each project consists of a land base map as its foundation. Mapcom will configure an accurate land base map of the James Madison University campus and the City of Harrisonburg.

Training

Based on modules acquired and the number of users, Mapcom recommends 4 days of training. This may be completed at James Madison University or onsite at the Mapcom headquarters in Richmond, VA. Training will occur once conversion/consolidation and any digitization of a template area has been completed. In addition to the initial training, 2 additional days of online training are included to provide follow up assistance. This may be used as the Telecommunications group of Information Technology Services begins working in the project on an as needed basis at the University's discretion.

Hand Off

After the project has completed the final sign-off you begin to take ownership of the direction of the project. All along the way our customer experience team will conduct surveys at keys points during implementation to ensure we have met your needs.

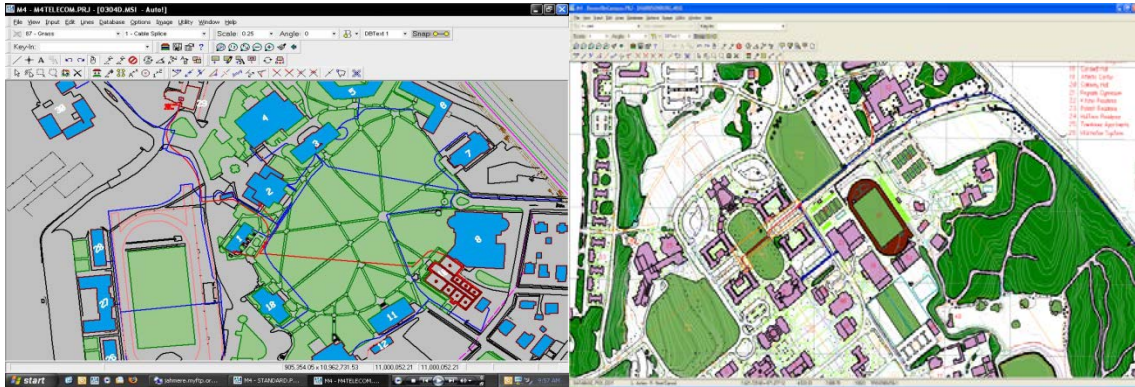
On-Going Support and Annual Project Review – *Provided as a Part of Maintenance*

Mapcom provides 2 software upgrades each year, unlimited software support by phone, email, and an online knowledge base. The Mapcom Support Center is open 8:00 AM – 6:00 PM EST, and an on-call technician is available until 8:00pm EST. Trained support technicians utilize WebEx, e-mail and telephone discussions to assist M4 users. Mapcom annually achieves a 100% "live person" rate on calls to the Support Center, and typically earns 100% "meet or exceed expectations" ratings in our annual Customer Satisfaction surveys. Mapcom also offers monthly tips and tricks webcasts and other programs to help clients use M4 solutions to the fullest extent.

4 M4® Solutions Software

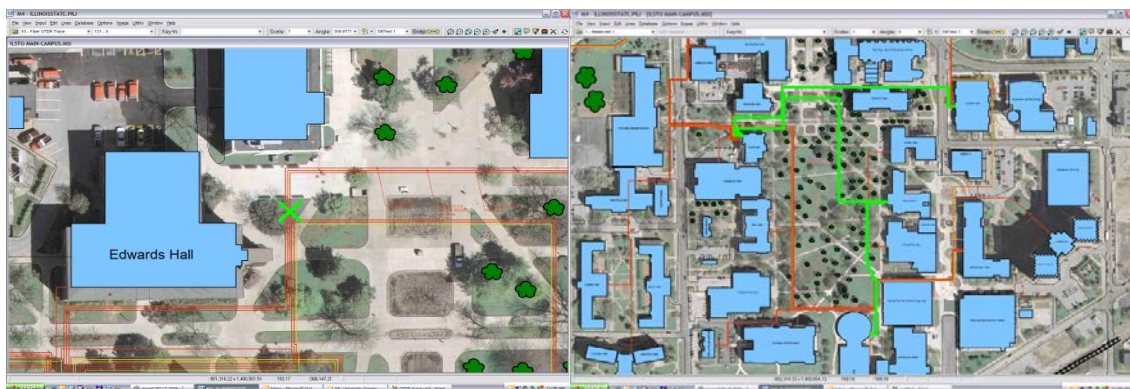
M4® Foundation

Powerful, easy, accurate mapping that ties each element to its own individual database record. Make a change to the map, it updates the database. Make a change to the database, it updates the map. Accuracy is automatic and will eliminate the need to look at a separate CAD drawing of the campus map. Various attachments, such as Visio diagrams, jpeg images and hyperlinks to websites, may also be attached to each element on the map to help preserve current documentation. The underlying database is SQL 2008 or more recent version acquired separately by James Madison University.



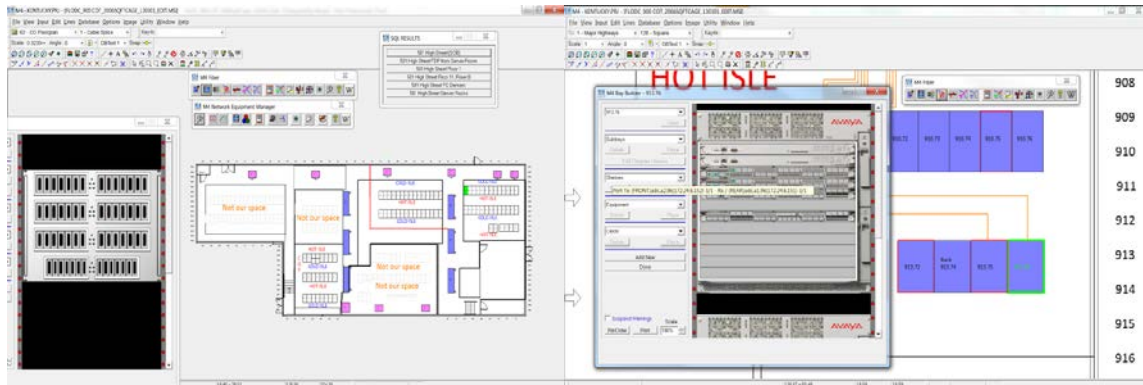
M4® Fiber

Manage the fiber network from end to end, down to the strand level, including physical cable path and associated fibers, channels and circuits. Also manage optical budget construction, splice connections and geographic OTDR point locating.



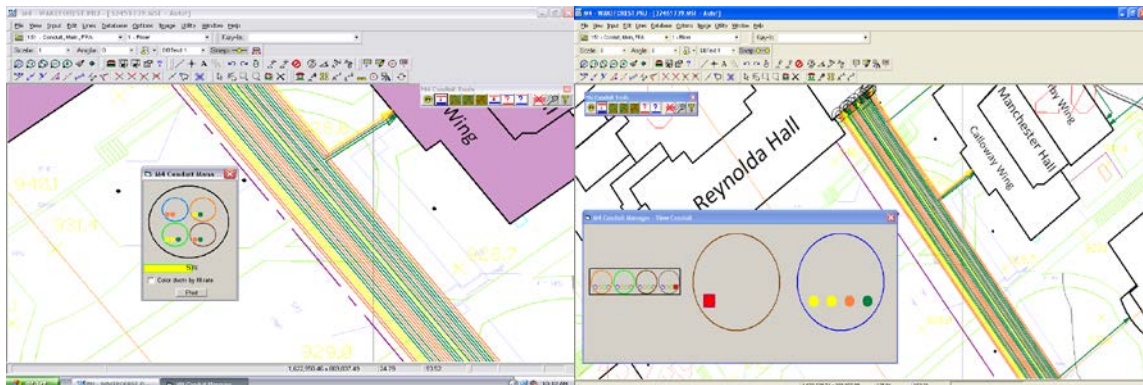
M4® Network Equipment Manager

In conjunction with M4 Telephony and M4 Fiber, this module enables the design, mapping and management of inside plant for copper, coax and fiber systems. It allows static drawings be live, interactive, database-driven rack and network equipment diagrams. NEM tracks and displays port connections and rack space utilization.



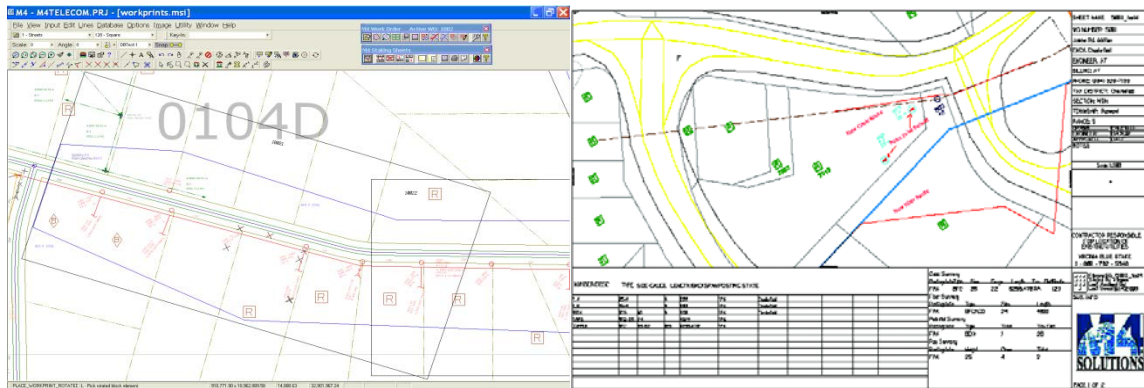
M4® Conduit Manager

Transform conduit lines on a map to an active conduit interface that links reports and manages cable within conduit. Automatically maintains cross reference records that contain conduit/cable associations.



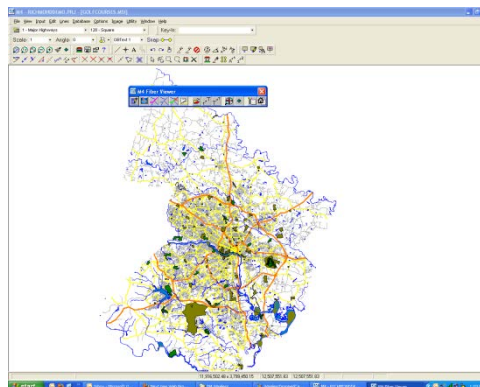
M4® Work Order with Staking Sheets

Reduce work order design and drawing time for construction work order management. Automate staking sheets and reporting capabilities to enable in-house management of construction and as-built prints. Track the history of facilities and services including sign-offs, field notes and other contractor information.



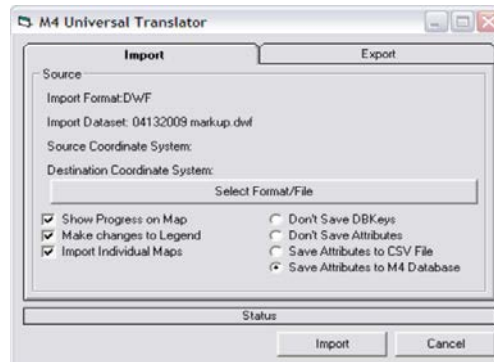
M4® Field Manager Suite and Consoles

M4 Field Managers integrate with the entire M4 Solutions Suite to ensure everyone has access to the data they need. Field Managers include all the capability of a standard console plus the ability to view conduit fill rates, initiate OTDR traces, generate fiber make up reports, and view equipment racks and port connections. Consoles are view only but do allow for searching, printing and can utilize floating menus.



M4® Universal Translator

Universal Translator enables users the ability to import and export nearly 300 mapping formats in and out of the M4 project.



5 M4® Solutions Hardware Requirements

Workstation Minimal System Requirements

Processor: Intel® Core 2 Duo Processor at 2.0 GHz with 1 MB L2 Cache, or Intel® Pentium® 4 Processor at 3.0 GHz with 1 MB L2 Cache

Memory: 1 GB RAM

Monitor: 19 in LCD (20" Widescreen LCD), 1024x768 resolutions capable

Video: DirectX 9 graphics device

Hard Drive: 160GB SATA II at 7200 RPM or faster Operating System

Operating System: Microsoft® Windows® XP Professional, or Microsoft® Windows® 7

NIC: 10/100/GB Ethernet

Optical Drive: DVD ROM Drive

Printer: Any printer/plotter that uses Windows® print drivers.

Server System Requirements

M4 Project SQL Server

Processor: Intel® Xeon® E5 Series with a minimum clock frequency of 2.5GHz.

Memory: 16GB of Ram

Hard Drive (for OS): 500GB SATA II @ 7200 RPM

Operating System: Microsoft® Windows® Server 2008 R2 64Bit

NIC: 100MB/1GB Ethernet

Optical Drive: DVD ROM drive

SQL Server: Microsoft® SQLServer 2008R2 Standard 64Bit

*Windows IIS server**

Processor: Intel® Xeon® E5 Series with a minimum clock frequency of 2.5GHz.

Memory: 8GB of Ram

Hard Drive (for OS): 1TB SATA II @ 7200 RPM

Operating System: Microsoft® Windows® Server 2008 R2 64Bit or Microsoft® Windows® Server 2008 Web Edition

NIC: 100MB/1GB Ethernet

Optical Drive: DVD ROM drive

*IIS Server required for web-based platforms only

Import/Export Functionality

AutoCAD

CableCAD

ESRI

And many other types (over 300 total)

6 Software License and Support Agreement

THIS IS A LEGALLY BINDING AGREEMENT BETWEEN YOU AND MAPCOM SYSTEMS

Licensor:
Mapcom Systems
601 Southlake Boulevard
Richmond, VA 23236-3921

Licensee:
James Madison University
800 South Main Street
Harrisonburg, VA 22807

This Software and Support Agreement (the "Agreement") is between MAPCOM SYSTEMS, and the Licensee identified above.

1. DEFINITIONS.

"Documentation", means the standard and current documentation, both in written and electronic form that MAPCOM delivers with the Software.

"Software", means the complete executable object code of the products/modules listed in Attachment A, and except where the context requires otherwise, the term includes all upgrades and enhancements thereto.

"Supported Databases", means most ODBC compliant databases.

"Supported Operating Systems", means those desktop and server operating systems identified in Attachment A.

2. LICENSE GRANT. MAPCOM grants to Licensee, a limited, nonexclusive and nontransferable right to use the Software and Documentation in exchange for the license fee and compliance with the terms of this Agreement (the "License"). This License does not extend to any third party, including without limitation any parent entity, subsidiary, affiliate or independent contractor.

3. RIGHTS OF USE.

a. Licensee may:

i. Use and run the Software, in object code form only, and in conjunction with any Access Keys provided, as a single process on a single or multi-core CPU at a time for Licensee's own use for as long as this License remains in effect. (MAPCOM reserves the right to employ other devices and codes that detect and prevent the unauthorized copying and use of the Software). **For each single-user license Licensee acquires, Licensee may install and use a single copy of the Software as a single process on a single computer.** The License permits the Licensee to install the Software purchased under this Agreement in a server-based distribution network or virtual environment owned or controlled by Licensee provided the number of single processes do not exceed the number of licenses purchased under this agreement.

ii. Use the Documentation in support of Licensee's use of the Software.

iii. Make no more than one (1) archival or backup copy of the Software and Documentation and use them only in the event that and for so long as the original media is damaged, destroyed or inoperable. All archival and

backup copies of the Software and the Documentation are subject to the terms of this Agreement.

Archival and backup copies of Documentation shall be copied with all titles, logos, and/or copyrights.

b. Licensee may not:

i. Copy, run or use the Software in any manner not expressly authorized by this Agreement.

ii. Permit the number of unique, licensed instances of the Software in a virtual or multi-core environment to exceed the number of single-user licenses purchased under this Agreement.

iii. Distribute, sublicense, lease, lend, rent, sell, transfer, assign or convey the Software or the Documentation to any third party.

iv. Allow the Software to be subject to any lien, security interest, judgment, or other encumbrance.

v. Modify, adapt, translate, or make derivations of the Software.

vi. Construct or develop a similar software program which is capable of performing the same functions or utilities as any part of the Software.

vii. Decode, decompile, disassemble, cross-assemble, replicate or otherwise reverse-engineer the Software.

viii. Remove, obstruct, alter or obscure any trade name, trademark, trademark notice, copyright notice, confidentiality warning, and designation of origin or other legend appearing in any form in connection with the Software.

ix. Add any trademark notice, copyright notice or other designation of any type to any copy of the Software or the Documentation without express prior written approval.

x. Export the Software in violation of any export laws or regulations of the United States.

4. OWNERSHIP OF INTELLECTUAL PROPERTY.

a. Licensee Material. As between Licensee and MAPCOM, Licensee (or, to the extent applicable, third parties) shall own all Intellectual Property Rights in all Licensee Material, subject to the rights and licenses granted below.

i. The term "Licensee Material" shall mean: (A) software provided by Licensee; (B) third party software provided by Licensee; (C) site content provided by Licensee; and (D) Licensee's domain names and trademarks.

ii. Licensee grants MAPCOM and its subcontractors a nonexclusive, no-charge license during

the term of this Agreement to use, reproduce, perform, display, transmit, operate, maintain, modify and prepare derivative works of Licensee Material for the sole purpose of providing services to Licensee in accordance with this Agreement.

iii. "Intellectual Property Rights" shall mean, on a worldwide basis, any and all: (i) rights associated with works of authorship, including copyrights, moral rights and mask-works; (ii) trademarks; (iii) trade secret rights; (iv) patents, designs, algorithms and other industrial property rights; (v) other intellectual and industrial property rights of every kind and nature, however designated, whether arising by operation of law, contract, license or otherwise; and (vi) registrations, initial applications, renewals, extensions, continuations, divisions or reissues thereof now or hereafter in force (including any rights in any of the foregoing).

b. MAPCOM Material. MAPCOM shall continue to own and have exclusive right, title and interest in and to (i) all pre-existing software, including with limitation the Software and all corrections, bug fixes, enhancements, updates, or other modification thereto, tools, designs, documentation (including without limitation the Documentation), data and other material developed by or for MAPCOM outside of this Agreement as may be necessary to provide the services hereunder, and (ii) any routines, tools, methodologies, processes or technologies created, adapted or used by MAPCOM in its business generally, together with all associated Intellectual Property Rights, not specially developed for Licensee (collectively "MAPCOM Material"). Licensee acknowledges that MAPCOM provides services similar to those provided under this Agreement to third parties and MAPCOM may be providing deliverables to third parties that are substantially similar to the deliverables being provided to Licensee.

5. EXCEEDING SCOPE OF LICENSE & CONFIDENTIALITY.

a. IN THE EVENT LICENSEE EXCEEDS ITS LICENSE RIGHTS UNDER THIS AGREEMENT OR ANY SCHEDULE, LICENSEE SHALL PAY TO MAPCOM THE APPLICABLE LICENSE FEES FOR SUCH INCREASED USAGE USING MAPCOM'S THEN CURRENT RATES AND SHALL PAY TO MAPCOM ANY INVESTIGATION AND COLLECTION COSTS INCLUDING WITHOUT LIMITATION REASONABLE ATTORNEYS FEES INCURRED BY MAPCOM.

b. Confidentiality of MAPCOM Material. Licensee understands and agrees that the MAPCOM Material licensed by MAPCOM hereunder contain certain information that is confidential and proprietary. Licensee shall not use, disclose, or permit any person to obtain any such confidential and proprietary information of MAPCOM whether or not the confidential and proprietary information is in writing or any other tangible form, except as specifically authorized by MAPCOM in writing. In addition, and without any intention of limiting Licensee's other obligations under this Agreement in any way, Licensee

shall not reveal any non-public information concerning the technology pertaining to the MAPCOM Material, particularly technology under current development or improvement, unless Licensee has obtained MAPCOM's advance written approval.

c. Injunctive Relief. Licensee acknowledges that the unauthorized use, transfer, or disclosure of the Software, Documentation, and/or MAPCOM Material or copies thereof by Licensee, or any parent entity, subsidiary, affiliate or independent contractor of Licensee, will: (i) substantially diminish the value of MAPCOM's Intellectual Property Rights; (ii) render MAPCOM's remedy at law for such unauthorized use, disclosure, or transfer inadequate; and (iii) cause irreparable injury in a short period of time. If Licensee, or any parent entity, subsidiary, affiliate or independent contractor of Licensee, breaches any of Licensee's obligations with respect to the use or confidentiality of the Software, Documentation, and/or MAPCOM Material, MAPCOM shall be entitled to equitable relief to protect its interests therein, including without limitation, preliminary and permanent injunctive relief.

d. Indemnification. In addition to any other remedies available to MAPCOM, Licensee agrees to indemnify MAPCOM against any and all costs, liabilities, and damages arising out of, or resulting from, any breach, act, omission or violation of Licensee's obligations by any parent entity, subsidiary, affiliate, or independent contractor, arising under, or related to, this Agreement.

e. The obligations under Section 5.b. shall survive the termination of this Agreement and of any license granted under this Agreement for whatever reason. Notwithstanding anything to the contrary herein, the parties shall not be prohibited from using or disclosing information which: (i) is already available to the public as of the date of this Agreement; (ii) becomes publicly available through no fault of the such party (or the fault of its employees or agents); (iii) is already known to such party at the time of its receipt thereof, as shown by written records existing and is available to such party from a third party who is not under an obligations of non-disclosure with respect to such information.

6. SUPPORT AND MAINTENANCE SERVICES. During the term set forth in Section 7.c. of this Agreement, the parties agree as follows:

a. MAPCOM will provide the following support and maintenance for the Software ("Support and Maintenance Services"):

i. Corrections of substantial defects in the Software so that the Software will operate as described in the documentation;

ii. Periodic updates of the Software that may incorporate (a) corrections of any substantial defects, (b) fixes of minor bugs, and (c) at MAPCOM's sole discretion, enhancements to the Software;

iii. Telephone and electronic mail support to permit the Licensee to report problems and seek assistance in using the Software;

iv. Internet accessible files containing patches and other released defect corrections to the Software;

v. Internet accessible files containing new versions of the Software made generally available during the support term.

Support and Maintenance Services also include telephone support for business days between the hours of 8:00 AM and 6:00 PM Eastern time with extended support hours until 8 PM with an on call technician and software updates for software modules owned by Licensee.

b. The following services are not included as part of the Support and Maintenance Services:

i. Charged-for enhancements that are offered at MAPCOM's sole discretion to Licensees upon payment of license fee.

ii. On-Site Support; and

iii. Training

c. Licensee will notify MAPCOM of Licensee's designated Technical Contact. Licensee shall designate a contact with sufficient technical background to report the Software problems and receive support under the terms herein.

d. Upon detection of any error in the Software, Licensee, as requested by MAPCOM, provide data that MAPCOM may reasonably request in order to reproduce operating conditions similar to those present when the error occurred. Licensee agrees to identify and document for MAPCOM currently installed releases of and all changes to operating and language support software that the Software requires for its successful operation, as determined by MAPCOM.

7. TERM AND TERMINATION.

a. Term of Agreement.

i. This Agreement and the License granted herein shall commence as of the date on which MAPCOM signs the Agreement (the "Effective Date") and shall remain in force until this Agreement is terminated.

b. Termination.

i. Licensee may, upon thirty (30) days prior written notice to MAPCOM, terminate this Agreement. However, no such termination shall entitle Licensee to a refund of any portion of any monies which have been paid to MAPCOM.

ii. MAPCOM may, by written notice to Licensee, terminate this Agreement if any of the following events occur, provided that no such termination will entitle Licensee to a refund of any portion of any monies which have been paid to MAPCOM: (A) Licensee is in breach of this Agreement, which breach, if capable of being cured, is not cured within thirty (30) days after MAPCOM gives Licensee written notice of such breach, or MAPCOM may terminate this Agreement immediately upon notice if Licensee breaches any of its obligations under Section 5.b.; or (B) Licensee terminates its business activities or becomes insolvent, admits in writing to inability to pay its debts as they mature, makes an assignment for the benefit of creditors, or becomes subject to the direct control of a trustee, receiver, or similar authority.

iii. Termination will become effective immediately or on the date set forth in the written notice of termination. Termination of this Agreement will not affect the provisions

regarding Licensee's treatment of MAPCOM Material, provisions relating to the payments of amounts due, provisions limiting or disclaiming MAPCOM's liability, and/or provisions regarding applicable law, which provisions will survive termination of this Agreement.

iv. Upon termination of this Agreement, all licenses and rights granted hereunder shall cease to be effective and Licensee shall immediately cease all use of any affected MAPCOM Software, Documentation and/or MAPCOM Material. Within fourteen (14) days of the date of termination or discontinuance of this Agreement for any reason whatsoever, Licensee shall return the Software, derivative works and all copies thereof, in whole or in part, all related Documentation and all copies thereof, and any other MAPCOM Material in its possession. Licensee shall furnish MAPCOM with a certificate signed by an executive officer of Licensee certifying that the same has been done.

v. Termination is not an exclusive remedy and all other remedies will be available whether or not termination occurs.

c. Support and Maintenance Services. i. The period of Support and Maintenance Services ("Services Term") shall be from the Effective Date and shall continue for one (1) year from such date provided that Licensee has paid support fees as billed. Termination of the License in accordance with the Section 7.b. also terminates Support and Maintenance Services. Such Services Term shall be automatically renewed for subsequent one (1) year periods unless otherwise terminated hereunder and provided that Licensee has paid support fees as billed.

ii. MAPCOM reserves the right to terminate Support and Maintenance Services, via non-renewal at the end of any Services Term, for non-current versions of the Software; however, in no instance will changes to the Software that are made as part of the Support and Maintenance Services set forth in Section 6 of this Agreement render the Software "non-current" for the purposes of this section.

8. WARRANTY; LIMITATIONS OF LIABILITY AND REMEDY.

a. LIMITED EXPRESS WARRANTY. For a period of one hundred twenty (120) days from Licensee's first receipt of the Software, MAPCOM warrants that: (1) the media on which the Software is provided and the associated Access Key(s) shall be free of material defects in material and workmanship; and (2) the Software will perform substantially in accordance with the material specifications and descriptions set forth in the Documentation. MAPCOM shall, at its sole option, either repair or replace the non-performing media, Access Key or Software, as the case may be, or refund all amounts paid by Licensee.

The above limited warranties will remain in full force and effect as long as Licensee is a current subscriber to the Support and Maintenance Services and only if:

i. The Software has been properly installed and has been used at all times in accordance with the Documentation and this Agreement;

ii. All modifications, alterations, or additions to the Software, if any, have been made by MAPCOM; and

iii. Licensee has not made or caused to be made modification, alterations, or additions to the Software that cause it to deviate from the Documentation.

b. **DISCLAIMER OF WARRANTIES. EXCEPT AS SET FORTH ABOVE, MAPCOM MAKES NO OTHER WARRANTIES WITH RESPECT TO THE SOFTWARE, DOCUMENTATION, ANY OTHER MATERIALS OR SERVICES PROVIDED TO LICENSEE UNDER THIS AGREEMENT, EXPRESS OR IMPLIED, AND SPECIFICALLY DISCLAIMS ANY AND ALL EXPRESS OR IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.**

c. **LIMITATION OF LIABILITY. IN NO EVENT SHALL MAPCOM BE HELD LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES (INCLUDING, WITHOUT LIMITATION, LOSS OF BUSINESS, LOSS OF PROFITS, BUSINESS INTERRUPTION, LOSS OF DATA, OR OTHER LOSS) WHETHER BASED ON CONTRACT, TORT, OR OTHER LEGAL THEORY, IN CONNECTION WITH THE USE OF THE SOFTWARE.** Some states do not allow the exclusion or limitation of implied warranties or liabilities for incidental or consequential damages, so the above limitations may not apply.

d. **Maximum Liability.** MAPCOM's maximum aggregate liability (whether in contract, tort, or any other form of liability) for damages or loss, howsoever arising or caused, whether or not arising from MAPCOM's negligence, shall in no event be greater than: (i) in the event such damage is not related to Support and Maintenance Services, the license fee specified in the Attachment A related to the particular Software program which caused the damage or loss; or (ii) in the event such damage is related to Support and Maintenance Services, the support fees paid by Licensee for the then current Services Term.

e. **No Additional Warranties.** No oral or written information, description or advice given by MAPCOM, its dealers, distributors, agents, affiliates, developers, directors, officers, or employees shall create a warranty or in any way increase the scope of the limited warranty.

9. GENERAL TERMS.

a. **Entire Agreement.** This Agreement and its Attachment A contains the entire agreement between Licensee and MAPCOM with respect to the subject matter of this Agreement.

This Agreement supersedes all prior agreements or understandings, whether written, oral or implied between the parties with respect to such subject matter.

b. **Notices.** Notices under this Agreement are to be sent by certified mail via the United States Postal Service, or Federal Express, or United Parcel Service to the addresses set forth at the beginning of this Agreement, or such other address as may be designated by the parties in writing.

c. **Assignment.** Neither this Agreement nor any rights under this Agreement may be assigned or otherwise

transferred by Licensee, in whole or in part, whether voluntary or by operation of law, including by way of sale of assets, merger, or consolidation, without the express prior written consent of MAPCOM. Subject to the foregoing, this Agreement will be binding upon and inure to the benefit of the parties and their respective successors and assigns. Notwithstanding the foregoing, no transfer or assignment of Licensee's rights hereunder shall be effective unless and until: (i) Licensee has paid and remains current on all amounts due hereunder; and (ii) the purported assignee agrees in writing to be bound by all of the obligations of Licensee hereunder. For purposes of this Section, a transfer of fifty percent (50%) or more of the equity ownership of Licensee shall be considered an assignment and is not permitted without the express prior written consent of MAPCOM.

d. **Severability.** Should any term of this Agreement be finally determined by a court or tribunal of competent jurisdiction to be void, unenforceable or contrary to law or equity, the parties agree that such term shall be deleted or limited and that the remainder of the Agreement shall remain in full force and effect.

e. **Waiver.** Any waiver of the provisions of this Agreement or of a party's rights or remedies under this Agreement must be in writing to be effective. Failure, neglect or delay by a party to enforce the provisions of this Agreement or its rights or remedies at any time will not be construed to be deemed a waiver of such party's rights under this Agreement and will not in any way affect the validity of the whole or any part of this Agreement or prejudice such party's right to take subsequent action.

f. **Exportation.** Neither the Software, nor the Documentation are intended or authorized to be exported outside the continental U.S. except as specifically allowed by the applicable U.S. Export Licensing Regulations.

g. **No Modification by Business Forms.** No terms, provisions or conditions of any purchase order, acknowledgement or other business form that Licensee may use in connection with the acquisition or licensing of the Software will have any effect on the rights, duties or obligations of the parties under, or otherwise modify, this Agreement, regardless of any failure of MAPCOM to object to such terms, provisions, or conditions.

h. **Governing Law.** This Agreement will be interpreted and construed pursuant to the laws of the Commonwealth of Virginia and the United States without regard to conflicts of laws and provisions thereof, and without regard to the United Nations Convention on the International Sale of Goods. Any legal action or proceeding relating to this Agreement shall be instituted in a federal court in Richmond, Virginia or a state court in the County of Chesterfield, Virginia. MAPCOM and Licensee agree to submit to the jurisdiction of, and agree that venue is proper in, these courts in any such action or proceeding. Should MAPCOM be required to bring any action to enforce its rights under this Agreement, then in addition to all other remedies available to it, MAPCOM is entitled to payment of all costs and reasonable attorney's fees expended in enforcing its rights under this Agreement.

i. Modification. This agreement can only be modified in a writing signed by duly authorized representatives of both Licensee and MAPCOM. Future modifications to this agreement will be noted as Addendums to this original document.

j. Confidentiality of Terms. The parties agree to keep all terms and conditions of this Agreement confidential.

k. Headings. Headings herein are for convenience of reference only and shall in no way affect the interpretation of the Agreement.

l. Counterparts. This Agreement may be executed in counterparts, each of which so executed will be deemed an original and such counterparts together will constitute one and the instrument.

Agreement version date: March 2012

LICENSOR

MAPCOM SYSTEMS

By: _____

Printed Name: John Granger

Title: President

Date: _____

LICENSEE

JAMES MADISON UNIVERSITY

By: _____

Printed Name: _____

Title: _____

Date: _____

M4 is a registered trademark of Mapcom Systems

7 Addendum

ADDENDUM TO AGREEMENT BETWEEN JAMES MADISON UNIVERSITY AND MAPCOM SYSTEMS

This Addendum by and between James Madison University ("University") and Mapcom Systems ("Mapcom" or "Vendor"), located at 601 Southlake Boulevard, Richmond, VA 23236, is made part of the James Madison University Visual Operations System Proposal –Section 6; Software License and Support Agreement and Section 8; Software, Support and Services Pricing – providing software and services as more particularly described in the Agreement.

WHEREAS, the Parties have agreed to make certain modifications to the Agreement.

NOW, THEREFORE, in consideration of the mutual covenants and promises set forth in the Agreement, the Parties do hereby agree as follows:

7.1 Definitions:

Except as expressly modified herein, terms defined in the Agreement shall have the same meanings when used in this Addendum.

7.2 Term of Agreement

Section 7 Letter a: "...shall remain in force until this Agreement is terminated" is hereby replaced with "shall remain in force for an initial one (1) year term with the option to renew for nine (9) additional one-year periods."

Section 7 Letter c numeral i: "Such Services shall be automatically renewed for subsequent one (1) year periods unless otherwise terminated hereunder and provided that Licensee has paid support fees as billed." Shall be struck from this agreement in accordance with the statutes of the Commonwealth of Virginia.

7.3 Confidentiality:

Section 9 Letter j.: "Confidentiality of Terms. The parties agree to keep all terms and conditions of this Agreement confidential." Shall be struck from this agreement in accordance with the statutes of the Commonwealth of Virginia.

7.4 Entire Agreement:

Section 9 Letter a: "Entire Agreement. This Agreement and its Attachment A contains the entire agreement between Licensee and MAPCOM with respect to the subject matter of this Agreement. This Agreement supersedes all prior agreements or understandings, whether written, oral or implied between the parties with respect to such subject matter." shall be struck from this agreement.

8 Software, Support and Services Proposal

8.1 Software:

Software License Pricing – James Madison University		Total
Limited University Enterprise License: Seats of following modules and additional software for use by the staff of James Madison University for the management of the James Madison University campus within the City of Harrisonburg.		
M4® University Communications Management Suite M4® Foundation (3 seats) M4® Work Order (3 seats) M4® GPS Tools (3 seats) M4® Fiber (3 seats) M4® Conduit Manager (3 seats) M4® Network Equipment Manager (2 seats)		\$128,400
M4® Consoles and Field Managers M4® Fiber Field Managers (3) M4® Standard Consoles (10)		\$16,000
Import and Export Functionality M4® Universal Translator – SQL Database Version with M4 Plug In (1fixed seat)		\$11,025
State of Virginia University Lighthouse Partner Incentive		-\$35,000
Software Subtotal		\$120,425

8.2 Services

Software Related Services	Total
Maintenance Services - 17% of current software license fee – renewed annually Free Software Upgrades Unlimited Software Support (Telephone, Email, Online) Annual Process Evaluation Scheduled Online Training Sessions User Group Membership M4 Knowledge Base	First Year Included
Project Set Up, Configuration and Testing *Configuration Hours (235) can be used for the following: 2 Day Onsite Implementation Planning Meeting with Mapcom Project Manager Project Configuration, Setup and Testing Land base Set up and Configuration City of Harrisonburg and James Madison University Campus Setup Google Maps Aerial Photography*** Database Table Configuration Layer Configuration Symbology Configuration Conduit Configuration and Testing Work Order Configuration and Testing MapSync Server and Setup 5 Laptops Universal Translator Import/Export Workbench Development and Testing <i>Implementation Management:</i> M4 Implementation Process leadership M4 Project planning Tracking and management of project risks and issues Project communications <i>Solution Requirements</i> Business and Functional requirements Reporting Requirements <i>Process Flows</i> Discovery of current-state processes Document future-state processes <i>Testing Strategy</i> Create test strategy & planning Develop test cases *Blocks of configuration hours do not represent fixed fees that are guaranteed to cover all required conversion and configuration projects listed. Configuration, testing and management of the projects listed may require less or more hours based on customer-specific variables such as the type and accuracy of the data provided, complexity of intended workflow, additions requested to standard integration features and/or delays in data readiness, project reviews and incremental milestone approvals. *Additional hours will be invoiced @ 110 per hour. If purchased in bundles of 50 hours or more, the rate will be \$100 per hour. These rates are valid through the initial term of this contract. Unused hours can be applied towards maintenance or other Mapcom products. ***Google License fee of \$25.00 per user will be invoiced annually based on the total number of individual log-ins per year.	\$23,500
Software Related Services Total	\$23,500

8.3 Conversion and Consolidation Services

Conversion/Consolidation Services	Total
<p>Pre-Paid block of hours* to be used for conversion/consolidation of OSP records and terminations:</p> <ul style="list-style-type: none"> • Import of CAD and .SHP as built records of Fiber and Conduit with FME workbench • Import and configure aerial photography from source data • Clean up of imported OSP elements • Digitization of OSP elements • Import or create records based on data from fiber termination spreadsheets • Associate fibers with conduit ducts and sub-ducts • Create splicing records of fiber in M4 based off of available as built data • Establish tabular relationship between data • Create equipment templates • Establish sourcing and connectivity • Other efforts at the discretion of JMU Telecom <p>Standard Hourly Rates</p> <ul style="list-style-type: none"> Digitizer (\$73 per hour) GIS Analyst (\$78 per hour) Project Manager (\$100 per hour) Data Integration Specialist (\$105 per hour) Data Integration Manager (\$115 per hour) Junior Programmer (\$105 per hour) Product Manager (\$125 per hour) Onsite Trainer (\$150 per hour) Network Specialist (\$150 per hour) Production Programmer (\$150 per hour) Senior Management (\$165 per hour) Senior Programmer (\$165 per hour) Technical Director (\$165 per hour) <p>*Blocks of hours do not represent fixed fees that are guaranteed to cover all required conversion and configuration projects listed. Configuration, testing and management of the projects listed may require less or more hours based on customer-specific variables such as the type and accuracy of the data provided, complexity of intended workflow, additions requested to standard integration features and/or delays in data readiness, project reviews and incremental milestone approvals.</p> <p><i>Standard hourly rates are valid for initial term of this contract</i></p>	\$30,000
Conversion/Consolidation Services Total	\$30,000

8.4 Training:

Professional Training	Total
<p>M4 Custom Training</p> <ul style="list-style-type: none"> Training Planning 4 days Software Training on James Madison University project 16 hours online mentoring / training First year M4 User's Conference registration for 3 <p><i>Training class ration is 1:5 - Supplemental training staff @ \$800/Day</i></p>	
Professional Training Subtotal	\$8,950

8.5 Investment Total

Investment Totals	Total
Software	\$120,425
Software Related Services	\$23,500
Conversion and Consolidation Services	\$30,000
Professional Training	\$8,950
Travel Expenses	\$2,000
Investment Total	\$184,875

PAYMENT TERMS:

At the execution of this agreement (\$57,115) is due net 30 days. Remaining payments are due on the following dates for the amounts listed:

9/1/2015 \$54,754 pending JMU sign off on Land Base Configuration and AutoCAD Import
 12/1/2015 \$54,754 pending JMU sign off on Project Configuration
 2/1/2016 \$18,252 pending JMU sign off on Delivery of Equipment Templates and Fiber Splicing

Future increases in software value, prices and standard hourly rates will not exceed the percentage increase in the US Consumer Price Index (CPI) annually.

Upon receipt of all fees a permanent license will be issued. Any additional professional services will be invoiced monthly as the work is completed and are due net 15 days. Mapcom Systems reserves the right to impose late fees of 1% per month for amounts due over 30 days.

MAINTENANCE SERVICES: Includes telephone support for business days between the hours of 8:00 AM and 5:00 PM Eastern time with extended support hours until 8 PM with an on call technician. Users with current maintenance receive software updates for software modules that they own.

SURVEYS, REFERENCES and PRESS RELEASE: James Madison University agrees to complete Mapcom Systems' periodic customer satisfaction surveys, and if requested serve as a customer reference and showplace account. If requested, James Madison University will host mutually agreed upon site visits. James Madison University understands that shortly after contract signing Mapcom Systems will issue a standard press release announcing that James Madison University has become a Mapcom Systems customer.

MAPCOM SYSTEMS

By: _____
 Print Name: _____
 Title: _____
 Date: _____

JAMES MADISON UNIVERSITY

By: _____
 Print Name: _____
 Title: _____
 Date: _____

**COMMONWEALTH OF VIRGINIA AGENCY
CONTRACT FORM ADDENDUM TO CONTRACTOR'S FORM**

AGENCY NAME: James Madison University

CONTRACTOR NAME: MAPCOM SYSTEMS, LLC

DATE: 4/15/15

The Commonwealth and the Contractor are this day entering into a contract and, for their mutual convenience, the parties are using the standard form agreement provided by the Contractor. This addendum, duly executed by the parties, is attached to and hereby made a part of the contract.

The Contractor represents and warrants that it is a(n) ☐ individual proprietorship ☐ association ☐ partnership ☒ corporation ☐ governmental agency or authority authorized to do in Virginia the business provided for in this contract. (Check the appropriate box.)

Notwithstanding anything in the Contractor's form to which this Addendum is attached, the payments to be made by the Commonwealth for all goods, services and other deliverables under this contract shall not exceed Purchase Order Amounts; payments will be made only upon receipt of a proper invoice, detailing the goods/services provided and submitted to James Madison University. The total cumulative liability of the Commonwealth, its officers, employees and agents in connection with this contract or in connection with any goods, services, actions or omissions relating to the contract, shall not under any circumstance exceed payment of the above maximum purchase price plus liability for an additional amount equal to such maximum purchase price. In its performance under this contract, the Contractor acts and will act as an independent contractor, and not as an agent or employee of the Commonwealth.

The Contractor's form contract is, with the exceptions noted herein, acceptable to the Commonwealth. Nonetheless, because certain standard clauses that may appear in the Contractor's form agreement cannot be accepted by the Commonwealth, and in consideration of the convenience of using that form, and this form, without the necessity of specifically negotiating a separate contract document, the parties hereto specifically agree that, notwithstanding any provisions appearing in the attached Contractor's form contract, none of the following shall have any effect or be enforceable against the Commonwealth:



1. Requiring the Commonwealth to maintain any type of insurance either for the Commonwealth's benefit or for the contractor's benefit;
2. Renewing or extending the agreement beyond the initial term or automatically continuing the contract period from term to term;
3. Requiring or stating that the terms of the attached Contractor's form agreement shall prevail over the terms of this addendum in the event of conflict;
4. Requiring the Commonwealth to indemnify or to hold harmless the Contractor for any act or omission;
5. Imposing interest charges contrary to that specified by the Code of Virginia, §2.2-4347 through 2.2-4354, Prompt Payment;
6. Requiring the application of the law of any state other than Virginia in interpreting or enforcing the contract or requiring or permitting that any dispute under the contract be resolved in the courts of any state other than Virginia;
7. Requiring any total or partial compensation or payment for lost profit or liquidated damages by the Commonwealth if the contract is terminated before its ordinary period;
8. Requiring that the contract be "accepted" or endorsed by the home office or by any other officer subsequent to execution by an official of the Commonwealth before the contract is considered in effect;


9. Delaying the acceptance of this contract or its effective date beyond the date of execution;
10. Limiting or adding to the time period within which claims can be made or actions can be brought;
11. Limiting the liability of the Contractor for property damage or personal injury;
12. Permitting unilateral modification of this contract by the Contractor;
13. Binding the Commonwealth to any arbitration or to the decision of any arbitration board, commission, panel or other entity;
14. Obligating the Commonwealth to pay costs of collection or attorney's fees;
15. Granting the Contractor a security interest in property of the Commonwealth;
16. Bestowing any right or incurring any obligation that is beyond the duly granted authority of the undersigned agency representative to bestow or incur on behalf of the Commonwealth.

This Agency contract consisting of this Agency addendum and the attached Contractor's form contract constitute the entire agreement between the parties and may not be waived or modified except by written agreement between the parties.

This contract has been reviewed by staff of the agency. Its substantive terms are appropriate to the needs of the agency and sufficient funds have been allocated for its performance by the agency. This contract is subject to appropriations by the Virginia General Assembly.

IN WITNESS WHEREOF, the parties have caused this contract to be duly executed, intending thereby to be legally bound.

AGENCY by 
Title 
Printed Name MATARHA OWENS

CONTRACTOR by 
Title VP/COO
Printed Name CHUCK FLOURNOY

JUL. 2009

Mapcom Systems Response

REQUEST FOR PROPOSAL

RFP # MLO-827

Issue Date: November 24, 2014
Title: Outside Plant (OSP) Infrastructure Management System
Issuing Agency: Commonwealth of Virginia
James Madison University
Procurement Services MSC 5720
752 Ott Street, Wine Price Bldg.
First Floor, Suite 1023
Harrisonburg, VA 22807

Period of Contract: From Date of Award Through One Year (Renewable)

Sealed Proposals Will Be Received Until 2:30 p.m. on January 6, 2015 For Furnishing The Services Described Herein.

SEALED PROPOSALS MAY BE MAILED, EXPRESS MAILED, OR HAND DELIVERED DIRECTLY TO THE ISSUING AGENCY SHOWN ABOVE.

All Inquiries For Information and Clarification Should Be Directed To: Matasha Owens, MPA, VCO, CUPO, Buyer Senior, Procurement Services, owensml@jmu.edu, 540/568-3137, (Fax) 540/568-7936 not later than five business days before the proposal closing date.

NOTE: THE SIGNED PROPOSAL AND ALL ATTACHMENTS SHALL BE RETURNED

In compliance with this Request for Proposal and to all the conditions imposed herein, the undersigned offers and agrees to furnish the goods/services in accordance with the attached signed proposal or as mutually agreed upon by subsequent negotiation.

Name and Address of Firm:

Mapcom Systems, LLC


601 Southlake Boulevard

Richmond, VA 23236

Date: 1/2/2015

Web Address: www.mapcom.com

Email: jgranger@mapcom.com

By: 
(Signature in Ink)

Name: John Granger
(Please Print)

Title: President

Phone: (804) 743-1860 ext. 248

Fax #: (804) 378-3566

ACKNOWLEDGE RECEIPT OF ADDENDUM: #1 VS #2 _____ #3 _____ #4 _____ #5 _____ (please initial)

SMALL, WOMAN OR MINORITY OWNED BUSINESS:

☐ YES; ☒ NO; IF YES $\Rightarrow \Rightarrow$ ☐ SMALL; ☐ WOMAN; ☐ MINORITY

IF MINORITY: ☐ AA; ☐ HA; ☐ AsA; ☐ NW

Mapcom Systems Response
REQUEST FOR PROPOSAL

RFP # MLO-827

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II. MAPCOM RESPONSE TO STATEMENT OF NEEDS

James Madison University offers advanced telecommunications and networking services to its students, faculty and staff, including voice and data services via a state-of-the-art campus-wide network. James Madison University has invested in such technology not only to provide the best telecommunications and network services to its students, faculty and staff, but to also ensure that it operates as efficiently and effectively as possible. The significant investment the University has made and will continue to make in its network infrastructure and facilities increases the need to accurately document each network component, fiber and asset for numerous purposes – including network management, space management, security and disaster recovery purposes, and to improve operational efficiency.

As James Madison University continues to invest in advanced technologies and the expansion of the campus and its network, now more than ever, is an opportunity to document and map the network assets and connectivity. This will play an essential role in the maintenance and upkeep of the network which will benefit students, faculty and staff.

Mapcom's M4® solutions allows for the automated import and export of nearly 300 mapping formats. This functionality will allow the Information Technology Services and Physical Plant to inter-operate through the sharing of infrastructure layers to save time in design, mapping and locates. It will also make the process of working with contractors through all phases easier and more efficient.

Mapcom's M4® Solutions suite offers James Madison University a comprehensive network and infrastructure management solution that will enable Information Technology Services, Telecommunications to document, map, manage and plan its OSP/ISP network and the infrastructure by creating an intelligent, accurate campus map. The map provides visual representation of the network and infrastructure and every element on the map has a database record behind it that provides inventory tracking, reporting, and effective data management. The key benefits of our solution are visual representation of plant elements, asset utilization, and a central repository of information that unites all of the groups that manage voice, data and infrastructure.

A. APPLICATION FUNCTIONALITY: (MAPCOM RESPONSES IN BOLD UNDER EACH ITEM)

1. Relating Spatial and Non-spatial Data: Describe the solutions ability to place the following items on a map and link the map object to non-spatial attributes stored in a relational database.

- a. Buildings

M4 Foundation provides ability to place structures on the map and verify location using GPS points of the corners of the structure or by overlaying over google maps aerial imagery. Every element on the map has a database record that is configurable.

- b. Access points (handholes, manholes, pedestals, etc.)

M4 Foundation provides the ability to place/plot all OSP elements including access points. These elements reside on their layers. These can be imported from GPS coordinates, existing CAD maps or digitized. Each element has a database record that is configurable.

- c. Fiber distribution panels

M4 Fiber and Network Equipment Manager (NEM) provide the ability to accurately represent Fiber Distribution Panels. NEM allows users to build templates of all equipment and show front and rear port connections with a mouse hover. Equipment is shown in accurate rack elevations. Each rack, piece of equipment, card/blade, and port has a database record.

- d. Cable spans (fiber, copper)

M4 Foundation and Fiber allow for the placing of fiber, copper and coaxial cable. M4 allows for strand/pair level management and tracing. Each pair or strand has a database record.

- e. Splice enclosures

M4 Fiber provides the ability to place splice enclosures on the map with a database record. M4 also allows users to manage both butt and mid-span splices to the strand level and automatically creates splice schematics to provide visual representation of all splices.

- f. Conduit

M4 Foundation, Fiber and Conduit provide the ability to show Conduit pathways and relate fibers to the ducts, inner ducts, sub-ducts and micro-ducts and manage fill capacity by based off the diameter of the cable versus the duct. M4 Conduit provides cross-sectional views of the trench and allows users to drill down to the cable level to view the database record of the cables. The trench and ducts have a database record that is configurable.

- g. Inner-duct

See Response to f.

- h. Poles

M4 Foundation provides the ability to place/plot all OSP elements including poles and show all attachments and guys. These elements reside on individual layers. These can be imported from GPS coordinates, existing CAD maps or digitized. Each element has a database record that is configurable.

- i. Emergency Phones

M4 Foundation provides the ability to place/plot all OSP elements including Emergency Phones. These elements reside on individual layers. These can be imported from GPS coordinates, existing CAD maps or digitized. Each element has a database record that is configurable. M4 Fiber provides the ability to show which strand(s) provides service.

2. Splicing Capabilities: Describe the solutions ability to:

- a. Splice individual fibers from various cables at a splice enclosure.

M4 Fiber provides the ability to place splice enclosures on the map with a database record. M4 also allows users to manage both butt and mid-span splices to the strand level and automatically creates splice schematics to provide visual representation of all splices. Fiber traces traverse through all splices to show A to Z connectivity.

- b. Show a splice schematic for any splice location.

M4 Fiber provides the ability to generate a splice schematic for any splice location. The schematic is configurable to allow additional data to be displayed on strands in the schematic view. M4 Fiber also provides the ability to generate on the fly splice reports to provide a tabular report of splices.

- c. List the cable bundles and fiber colors for the splice schematic.

M4 Fiber provides the ability to view strands by number, count, or colors within splice reports and schematics.

- d. Reflect splice changes when a route is traced through that location. State if the change ripples through the database.

Because each strand has its own record, when a splice change occurs, fiber tracing will reflect those changes as soon as the record is committed. Those changes “ripple” through the database to change the route or fiber assignment and display an updated A to Z trace highlighted on the map and in tabular format.

- e. Handle copper splicing with bridge taps.

M4 Telephony provides the ability for tracking of copper splicing and management of taps in both a visual and tabular format.

3. CATV Information Capabilities: Describe the solutions ability to:

- a. Map CATV head-end equipment.

M4 Foundation and M4 Coax provide the ability to manage head-end facilities.

- b. Fully document distribution equipment including but not limited to power supplies, amplifiers, directional couplers, splitters, and taps.

M4 Foundation and Coax allow the documentation and management of CATV plant including power supplies, amplifiers, couplers, splitters and taps. M4 Coax functions most effectively when integrated with Lode Data.

4. Cable Information Capabilities: Describe the solutions ability to:

- a. Show the cable attributes.

M4 Foundation and Fiber displays cable attribute within the database record. The database is configurable.

- b. List the cable color code.

M4 Foundation and Fiber displays cable attribute within the database record. The database is configurable.

- c. Click on the cable on the map and obtain the end to end connectivity throughout the network.

M4 Fiber allows users to initiate A to Z fiber traces from any point along the cable point or from a port. The trace is highlighted on the map showing the path the fiber traverses and a tabular report with splices, cross-connects, patches/jumpers, and attenuation loss can also be generated. This is standard report generated on the fly called a Fiber Make Up Report.

- d. Track the cable sequential markings for true physical cable length.

M4 Foundation and M4 Fiber track fiber by true physical lengths and provide the ability to show locations and footages of slack loops. Lengths are tracked in the database record and can be displayed as text on the map to show the distance of a fiber between OSP elements like poles, manholes, handholes, etc. Cable sequential markings can be recorded in the database record for each cable to get the true physical cable length.

- e. Show slack loop locations with the amount of slack loop at the location.

M4 Foundation and M4 Fiber provide the ability to show locations and footages of slack loops. Lengths are tracked in the database record and can be displayed as text on the map.

- f. Edit color codes for fiber and copper cables of all sizes.

M4 Foundation and M4 Fiber are configurable and allow the color codes of fiber and copper cables to be edited.

- g. Determine/report which pairs of each spans/route may have problems, such as a break, or if the span/route contains different fiber types.

M4 Foundation and M4 Fiber provides the ability to show spans/routes and if their make up contains different fiber types. This can also be queried through the database. M4 Foundation and M4 Fiber provide the ability to virtually represent OTDRs to identify the precise location of a fault on the map. M4 can integrate with NMS applications to show alarms and up/down status of ports, but does not actively monitor the plant.

- h. List/report/label which pairs of each span/route are leased and if so, to whom.

M4 Foundation and Fiber provides the ability to label strands/cables using the "Network Restrictions Tool." Strands can be labeled with any category or identity and can also include notes. These labels can be seen in anywhere along the fiber span/route including splice schematic and port connections.

- i. Track the placement of the cable such as underground, aerial, etc.

M4 Foundation provides complete cable management to track all plant in a GPS accurate platform regardless of plant type.

- j. Provide a general scale factor for the cable that will take the length from a physical length to an optical length.

M4 Fiber tracks a twist or scale factor that adjusts the physical length of fiber to adjust for any twist in the fiber strands.

- k. Identify the owner of the cable.

M4 Foundation and Fiber provides the ability to track cable ownership in the database record and label strands/cables using the “Network Restrictions Tool.” Strands can be labeled with any category or identity including the cable owner. These labels can be seen in anywhere along the fiber span/route including splice schematic and port connections.

- l. Relate to a materials database that has information about various types of cable.

M4 Foundation provides the ability to track and manage all plant assets within the database structure and relate them to other elements. These assets and materials can then be displayed in drop down or dynamic menus within the database record. The database is configurable and allows users to add necessary fields including non-telecommunications plant, like generators, irrigation lines, security cameras, facility information, etc.

5. Access Point Information: Describe the solutions ability to:

- a. Track size and type of manhole, handhole, pedestal, etc.

M4 Foundation provides the ability to place any OSP element on the map on its own layer. Every element on the map has a database record that tracks data. The database fields are configurable.

- b. Show the attributes of the access point.

M4 Foundation provides the ability to link and show attribute data for all OSP elements.

- c. Associate all cables with the access point they go through.

M4 Foundation, Fiber and Conduit create associations between the cables, the trench and the ducts. Tracing functions show fiber traversing through all access points.

- d. Associate all conduit with the access points they go to.

M4 Fiber shows the physical path of cables through all access points. M4 Conduit Manager is used create relationships between the ducts and the cables. Today, M4 allows the attachment of pictures and, or video files to show manhole walls. Additional functionality is in development to show wall schematics to enhance the ability to track pass through information and twists in cables.

- e. Show any lid markings on the manhole.

See 5a. in addition images or video files of manhole lids, interiors and walls can be attached to any element on the map.

- f. Link to outside data sources such as drawings, photos, etc. that relate to the access point.

M4 Foundation provides the ability to attach files, including photos, schematics, videos and hyperlinks to any element on the map.

- g. Select an access point and easily view all sequential markings and part number markings from each cable in that access point.

Cables can be linked to access points and reports or data records can be viewed to see all markings and part numbers.

- h. Relate splice enclosures to the access point they are contained in.

M4 Foundation and Fiber provides the ability to relate splice enclosures with access points and trace fibers through those points.

6. Splice Enclosure Information: Describe the solutions ability to:

- a. Relate to cables entering the enclosure.

M4 Foundation and M4 Fiber provide the ability to relate cables to enclosures.

- b. Track who entered what enclosure, when, and with what work order number.

M4 Administrator and Foundation provide the ability to track changes to the database with timestamps. That functionality would allow the tracking of all changes to the database record. If M4 Work Order was utilized, it would also allow all changes to be associated with a work order or service order number.

- c. Label enclosure information on a map next to the enclosure.

“DB text” is configurable and would automate the labeling of all enclosure on the map.

7. Fiber Distribution Frame Information (LIU): Describe the solutions ability to:

- a. Show the FDF on a map and relate it to the building it belongs in.

M4 Foundation, M4 Fiber and M4 Network Equipment Manager provides the ability to create templates, place them on the map and relate it to the building.

- b. Graphically show the front of the FDF.

M4 Network Equipment Manager allows the building/importing of templates and the ability to show visual representation of the front of the FDF with port connections.

- c. Relate the FDF to the cable(s) entering it.

M4 Foundation, Fiber and Network Equipment Manager allow the termination of cables into the rear and front of the FDF. The port connections are visible with a mouse hover or double click.

8. Termination Information: Describe the solutions ability to:

- a. Show how each fiber/pair of each outside plant cable entering a building is terminated to each coupler panel /insert in a Fiber Distribution Frame (FDF).

M4 Fiber and Network Equipment Manager provides the ability to terminate and link each cable and strand with the building, link the building to the FDF and display graphically all front and rear port connections on the panel. All cables terminating to the building can be highlighted as well.

- b. Show the status for each coupler panel /insert.

See 8a. M4 can track the status and port connections in the database.

- c. Show the ring number for each coupler panel /insert.

M4 Foundation, Fiber and Network Equipment Manager provides the ability to display the ring number for each coupler panel/insert.

- d. Show the type of connector for each coupler panel /insert.

M4 Foundation, Fiber and Network Equipment Manager provides the ability to track and display the type of connector for each coupler panel/insert.

- e. Give a priority for each coupler panel /insert.

M4 Foundation, Fiber and Network Equipment and Circuit Manager provides the ability to assign, track and change priority of each coupler panel / insert.

- f. Show the user for each coupler panel /insert.

M4 Foundation, Fiber and Network Equipment and Circuit Manager provides the ability to track and change the end user of each coupler panel / insert. If integrated with Pinnacle, the database record would reflect the “customer profile” in Pinnacle.

- g. Select a coupler panel /insert and show the associated route that the signal would take as it goes throughout the network.

M4 Foundation and M4 provide the ability for port to port tracing using the fiber make up report functionality to highlight the path and generate an on the fly report of splices, cross-connects and terminations as well as the attenuation.

- h. Select a coupler panel /insert and find a fault on the map when given a distance from that coupler panel /insert to the fault. The fault must be shown on a map and the results must also show the associated fiber/pair in the cable span that caused the fault.

M4 Foundation and M4 Fiber provide the ability to represent OTDR traces from any port based on distance. This functionality takes into account all risers lengths and slacks to place an accurate X on the map with GPS coordinates. A database record is also created to track the cable and strand the trace was run on and engineering notes.

- i. Locate the FDF in a building when given room, bay, and shelf information.

Any element is searchable through the database. Drill down buttons can be used to create a direct link back to the FDF from the room, bay or shelf. Floating menus can also provide this functionality as all of those elements are relational within the database.

- j. Link to outside data sources such as drawings, photos, etc. that relate to the FDF.

M4 Foundation provides the ability to attach photos, video files, documents and hyperlinks to any element on the map.

- k. Produce a report that shows all of the cable spans/splice locations /FDF's/etc. that the signal went through to arrive at the final destination when the route from a particular coupler panel /insert is highlighted.

M4 Foundation and M4 provide the ability for port to port tracing using the fiber make up report functionality to highlight the path and generate an on the fly report of splices, cross-connects and terminations as well as the attenuation.

- l. Show patch cord connections between jacks of the FDF and other FDF's as well as electronic equipment.

M4 Foundation, Fiber and Network Equipment Manager provides the ability to show patch cord connections between jacks or ports to other FDF's and electronic equipment.

- m. Relate OTDR traces to coupler panel /inserts and display those traces in the native format that the traces were taken in.

Using M4 Foundation and M4 Fiber a user could attach OTDR traces to ports in their native format and that file could be viewed from the panel/insert.

- n. Relate loss information to each coupler panel /insert and show a history of when past measurements had been taken.

M4 Foundation and M4 Fiber provide the ability to show historical traces and track the dates of when loss information was taken.

- o. Show how a route splits the signal and the various directions a signal may travel if an optical splitter or bridge tap is encountered.

M4 Foundation, M4 Fiber provides the ability to use optical splitters and taps and show the path and fiber assignment.

- p. Show a history of OTDR traces taken at the jack.

M4 Foundation, M4 Fiber provide the ability track historical OTDR and view them over each port or Jack.

9. Documents: Describe the solutions ability to:

- a. Relate to engineering and other design documents and let you view them in their native format.

M4 Foundation provides the ability to attach photos, video files, documents and hyperlinks to any element on the map. All of these attachments may be viewed in their native format. Engineering formats, ie. CAD and .SHP may also be brought in on their own layers for use as reference as an overlay. The layers can be turned on and off from view.

- b. Easily view the relation between an object on the map and a document that will provide more detailed information.

Every element on the map has a database record behind it that is easily accessible. Text from that database record can be used to label the maps. That is completely configurable. Most of the information is stored in the database. Also see 9a.

10. Conduit Duct Bank: Describe the solutions ability to:

- a. Show the duct bank route.

M4 Foundation and M4 Conduit Manager provide the ability to show the duct bank route.

- b. Relate the duct bank to the access points at either end.

M4 Foundation and M4 Conduit Manager provide the ability to relate duct banks to access points at either end.

- c. Track the length of the duct bank.

M4 Foundation provides the ability to track the length of the duct bank.

- d. Show which cables go in which inner duct.

M4 Conduit Manager creates a relationship between the cables and ducts, inner ducts and subducts. M4 Conduit Manager displays this in a tabular data form and visually in a cross section view of the trench and all ducts. Users can view the data record for each cable from this cross sectional view.

- e. Indicate if duct bank is leased or not, and if so, to whom.

M4 Foundation and M4 Conduit Manager all the tracking and displaying of duct ownership. The database is configurable in this manner.

- f. Connect and track inner-duct; reserve it for future use.

M4 Foundation and Conduit Manager provides the ability to connect and track inner-duct and also label it for future use.

- g. Show the depth of the duct bank at each access point it goes through.

M4 Foundation and Conduit manager provides the ability to track the depth of the duct bank at each access point it passes through. Additionally there other ways to show depth along the pathway to show particular shallow depths.

- h. Show whether duct bank is encased in concrete, slurry, or is direct bury.

M4 Foundation, M4 Fiber and Conduit Manager provide the ability to track the information relevant to managing the duct bank including encasements and direct bury.

- i. Show type and size of duct bank (*PVC, Orangeburg, etc.*).

M4 Foundation and M4 Conduit manager provide the ability to show type, size and ownership and any other information relevant to managing the duct bank.

11. Poles: Describe the solutions ability to:

- a. Show poles on a map.

M4 Foundation provides the ability to show poles on a map with a database record. The symbol for the poles is configurable as is the database record. The database record can associate attribute data such as type, owner height, attachments their positions on the poles, and information on guys and other supports.

- b. Associate attributes such as pole type, owner, height, etc.

See 11a.

- c. Show the pole attachment list for all companies on a given pole.

See 11a.

- d. Show where infrastructure is positioned on the pole.

See 11a.

12. Design Work Orders: Describe the solutions ability to:

- a. Perform mid-level design for routes (mid-level will show the route, but not the engineering detail that would include utilities, etc.).

M4 Work Order provides comprehensive design ability with the ability to show only certain designated layers.

- b. Allow for keying in splicing information, testing the splice as far as connectivity, and printing out a splicing work order with associated location detail.

M4 Fiber provides the ability to document and manage splices and generate splice work orders associated with the location or splice enclosure. M4 does not “test” the splice connectivity automatically but does provide functionality that only allows you to splice strands once to prevent any duplicate records.

- c. Track work order numbers for enclosures, distribution frames, cable spans, etc.

M4 Foundation and M4 Work Order provides the ability to track work orders by number and date for all elements including enclosures, distribution frames, cable spans, etc.

- d. Telecom uses Pinnacle software (version 6.4.3) Telecommunication Lifecycle Management System as its business management system. Indicate if your solution integrates with the Pinnacle System and describe the process and extent of integration. Indicate any 3rd party software and support required for integration and any addition costs to perform the integration.

Mapcom is strategic partners with Calero and integrates with the Pinnacle application through an API integration. The integration is designed to push information from Pinnacle to M4 through a number of exit points. This allows users to make changes to the customer profile in Pinnacle and have that data updated in M4 in real-time. Additionally, it allows user to launch Mapcom from the Pinnacle application and drill down to the location. The exit points utilized in the integration are:

- asset_api_exit.pkg
- building_api_exit.pkg
- cable_detail_api_exit.pkg
- cable_path_api_exit.pkg
- conductor_api_exit.pkg
- interconnect_api_exit.pkg
- interconnect_port_api_exit.pkg
- location_api_exit.pkg
- run_api_exit.pkg
- service_inventory_api_exit.pkg
- service_location_api_exit.pkg

The integration requires the purchase of an integration engine and cartridge from Mapcom and requires some additional professional services from Calero to configure. The number of hours varies with each Pinnacle project.

13. Information Technology Equipment: Describe the solutions ability to:

- a. Add network equipment such as routers and switches and identify the equipment rings.

M4 Fiber and Network Equipment Manager provides the ability to add network equipment such as routers and switches and identify the equipment rings.

- b. Relate the equipment with the fiber distribution frame jack it is connected to.

M4 Foundation, Fiber and Network Equipment Manager provides the ability to relate equipment with the rack or FDF and the jack it is connected to.

- c. Relate customers to the equipment.

M4 Foundation, Fiber and Network Equipment Manager provides the ability to relate equipment to the customer based on the switch port terminations.

14. Editing: Describe the solutions ability to:

- a. Draw a cable and, as you click on the enclosure or frame it terminates at, automatically relate the cable to that object in the database.

M4 Fiber provides the ability to terminate a cable to an enclosure or frame and terminate based on the strand range which creates a relationship between the strands and the enclosure or frame and the location in which it resides.

- b. Indicate a "sheath opening" and place an enclosure at the middle of a cable span and have the fibers/pairs in that cable automatically spliced together.

M4 Fiber provides the ability to place a splice enclosure anywhere along the cable and show all types of splices, ie mid-span, express, etc. accurately as they occur in the field.

- c. Click and add enclosures, access points, distribution frames, buildings, and slack loops with their associated non-spatial information.

M4 Foundation, Fiber and Network Equipment Manager provides the ability to add enclosures, access points, distribution frames, buildings, and slack loops in addition to many other elements. Each of these elements would have a unique id and a database record. The database record form fields is configurable.

15. Indicate if you have a preferred GPS data collection device for use with your product and indicate pricing per unit. Include any warranty and service options as well as any required training costs.

Mapcom recommends the Spectra Precision MobileMapper 120 and Solo Office and Solo Field Software. The unit is easy to use and provides sub-meter accuracy. If the end user opts to use a different unit, M4 is also able to import GPS coordinates from any device and plot them with data using GPS Tools and/or the Universal translator as well. Mapcom recommends a unit with sub-meter accuracy.

16. Describe requirements and devices to allow for field personnel to access, download, and upload changes to the system.

There are a number of possible workflows for M4 users to access, download and upload changes to the system. M4 Users can access the M4 project via a remote desktop to view and edit the project from the field. If a remote desktop is not available, Mapcom offers "Mapsync" in which a copy is created locally on the laptop and syncs back to the project whenever a connection with the server is established. Other channels to access the M4 project would be using Field Managers or consoles via remote desktop or Mapsync. Field Managers allow additional tracing functionality and redline changes, consoles are not able to make any changes to the database. The final option for accessing M4 from the field is M4 Web console. Web Console is accessible by any device that can connect to the internet and provides view only access to the project.

17. Describe the extent to which your solution could be leveraged to document the University's Inside Plant (ISP) preferably to jack level. Document any required hardware and software and associated costs.

M4 Foundation provides the full ability to document and manage ISP at the jack level. No additional hardware or software is required. Mapcom can provide professional services to import, convert and consolidate existing records.

18. Beyond system installation. Describe your approach to project management and provide a sample project plan.

Project Kickoff and Management

Mapcom handles all of its implementations in-house and employs a strong team of dedicated IT, telecom, GIS and Data Integration Professionals to ensure the successful deployment of its solution. In 2013 our Product Delivery team achieved a 97.84% “meets and exceeds expectations” ranking by our customers in their annual customer satisfaction survey, and our Data Integration team achieved a similar ranking of 97.90%. In the specific section concerning “Communication with Client” the two departments received “exceeded expectations” scores of 42.06% and 33.96% respectively.

When new clients sign on with Mapcom, they are welcomed with a kickoff ceremony where our high expectations for your project are shared with you. Your project will be assigned to a Project Manager with direct experience working with universities. Our Project Managers bring industry best-practice guidance, M4® expertise, and the experience of implementing projects with other universities. Your Project Manager will meet with you weekly to discuss progress of the project and next steps. The Project Manager leads a team of Production and Data Integration Specialists to deliver your project on time and totally configured to your specs. In general, the process is broken up into mutually agreed upon benchmarks. Below is high-level outline of the implementation methodology and conversion process.

Project Planning

Mapcom recommends that our Project Manager visit James Madison University for a two-day implementation and planning meeting to discuss and plan layer configuration, symbology, database table configuration, the mentoring/consolidation process, and finalize the overall project plan, which includes timeline, communications plan, and overall implementation strategy. During this time the Project Manager and staff of Information Technology will identify and arrange to gather all source data. The Project Manager can also recommend best-practices and future work flow processes to maintain the integrity of the M4® project. Throughout the process, your assigned Project Manager will work side by side with James Madison University staff to ensure data integrity and kick start the implementation of M4®. At the conclusion of phase one, university staff members will have the ability to complete the documentation and management of all outside plant.

Project Configuration Hours

Mapcom recommends 6 days for project configuration and set-up. This will include time to configure the project based on the implementation planning meeting, and the hours required to configure the software modules to your workflows. This will provide James Madison University with a project that is configured to the specific needs and business processes of Information Technology.

Land Base Configuration

Each project consists of a land base map as its foundation. Mapcom will configure an accurate land base map of the James Madison University campus and the City of Harrisonburg.

Training

Based on the modules and the number of users, Mapcom recommends 4 days of training. This may be completed at James Madison University or onsite at the Mapcom headquarters in Richmond, VA. Training will occur once conversion/consolidation and any digitization of a template area has been completed. In addition to the initial training, 2 additional days of online training are included to provide follow up assistance. This may be used as the Information Technology staff begins working in the project on an as needed basis at the University's discretion.

Hand Off

After the project has completed the final sign-off you begin to take ownership of the direction of the project. All along the way our customer experience team will conduct surveys at key points during implementation to ensure we have met your needs.

On-Going Support and Annual Project Review – Provided as a Part of Maintenance

Mapcom provides 2 software upgrades each year, unlimited software support by phone, email, and an online knowledge base. The Mapcom Support Center is open 8:00 AM – 6:00 PM EST, and an on-call technician is available until 8:00pm EST. Trained support technicians utilize GoToMeeting, e-mail and telephone discussions to assist M4 users. Mapcom annually achieves a 100% “live person” rate on calls to the Support Center, and typically earns 100% “meet or exceed expectations” ratings in our annual Customer Satisfaction surveys. Mapcom also offers monthly tips and tricks webcasts and other programs to help clients use M4 solutions to the fullest extent.

19. JMU Facilities Management uses the ESRI ArcGIS product. Describe the extent of compatibility and file sharing between your product and ESRI ArcGIS.

M4 Universal Translator can import and export spatial and attribute data to and from a .shp file format.

20. The University utilizes the following coordinate system for the majority of its data. Describe the solutions ability to utilize this system or explain why a different system should be used.

NAD_1983_StatePlane_Virginia_North_FIPS_4501_Feet
WKID: 2283 Authority: EPSG

Projection: Lambert_Conformal_Conic
False_Easting: 11482916.666666666
False_Northing: 6561666.666666666
Central_Meridian: -78.5
Standard_Parallel_1: 38.03333333333333
Standard_Parallel_2: 39.2
Latitude_Of_Origin: 37.66666666666666
Linear Unit: Foot_US (0.3048006096012192)
Geographic Coordinate System: GCS_North_American_1983
Angular Unit: Degree (0.0174532925199433)
Prime Meridian: Greenwich (0.0)

Datum: D_North_American_1983
Spheroid: GRS_1980
Semimajor Axis: 6378137.0
Semiminor Axis: 6356752.314140356
Inverse Flattening: 298.257222101

M4 can utilize this coordinate system completely.

21. If your solution is purely an ESRI ArcGIS solution, indicate the following in addition to equipment and software costs.

Not applicable, M4 is not an ESRI-based system.

- a. Number and skill level of all personnel required to deploy and maintain a server product solution.
- b. Expected initial cost of staffing for defined personnel.
- c. Total cost of ownership for first year to include personnel costs.
- d. Ongoing yearly maintenance costs.

B. APPLICATION TECHNOLOGY:

1. State if the proposed solution is a complete system or if modules can be purchased separately. If modules can be purchased separately, list and describe the various modules, module inter-dependencies, and state associated cost.

M4 Modules can be purchased as a complete solution or by individual modules. Listed below are the modules that would be applicable for possible utilization at James Madison University.

M4 Foundation (Pre-requisite to all modules)

M4 Work Order

M4 Fiber

M4 Conduit Manager (M4 Fiber is pre-requisite)

M4 Network Equipment Manager (Fiber is pre-requisite)

M4 GPS Tools

M4 Circuits (M4 Fiber and M4 Network Equipment Manager are pre-requisite)

M4 Universal Translator

M4 Integration Engine

M4 Pinnacle Integration Cartridge

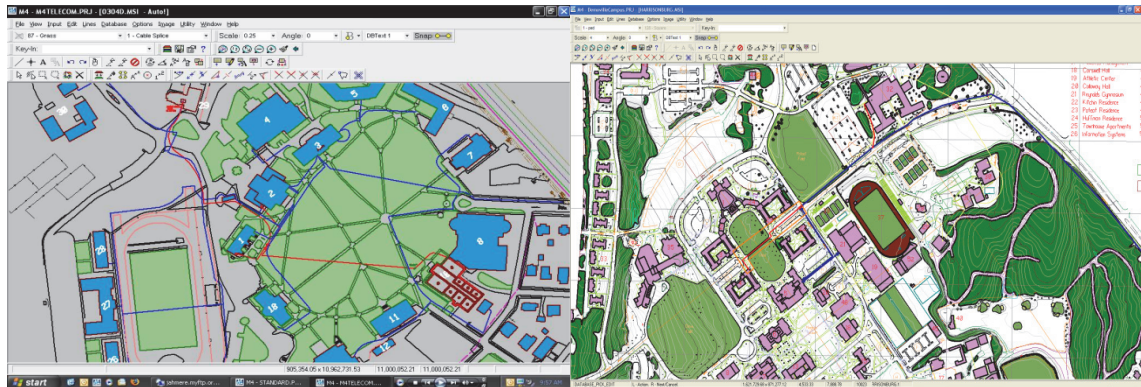
M4 Field Manager Suite (Work Order, Telephony and Fiber)

M4 Standard Console

M4 Web Console

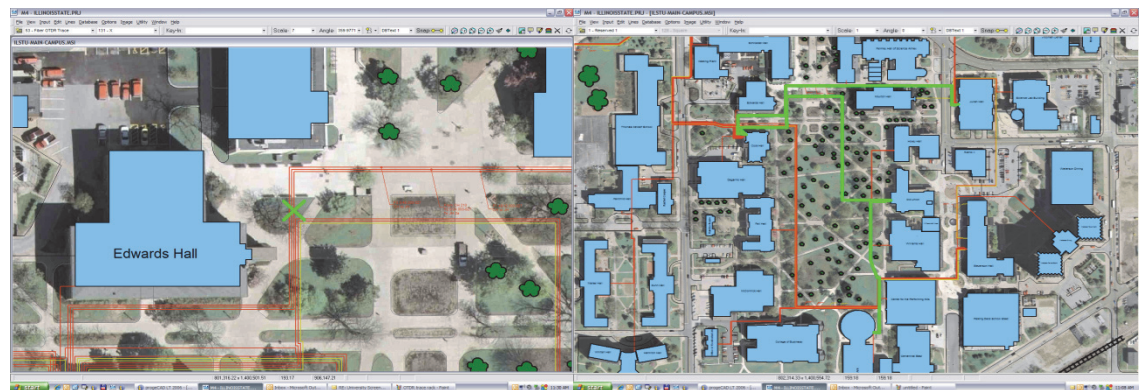
M4® Foundation

Powerful, easy, accurate mapping that ties each element to its own individual database record. Make a change to the map, it updates the database. Make a change to the database, it updates the map. Accuracy is automatic and will eliminate the need to look at a separate CAD drawing of the campus map. Various attachments, such as Visio diagrams, jpeg images and hyperlinks to websites, may also be attached to each element on the map to help preserve current documentation. The underlying database is SQL 2008 or more recent version acquired separately by James Madison University.



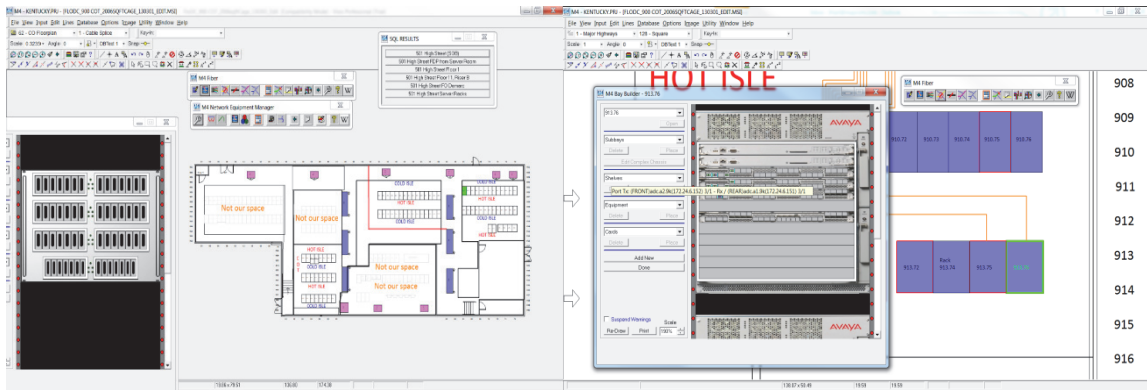
M4® Fiber

Manage the fiber network from end to end, down to the strand level, including physical cable path and associated fibers, channels and circuits. Also manage optical budget construction, splice connections and geographic OTDR point locating.



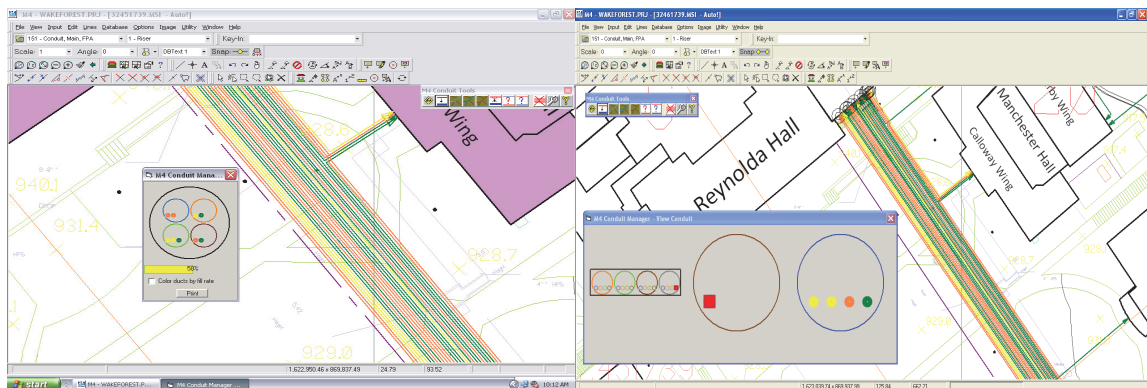
M4® Network Equipment Manager

In conjunction with M4 Telephony and M4 Fiber, this module enables the design, mapping and management of inside plant for copper, coax and fiber systems. It allows static drawings be live, interactive, database-driven rack and network equipment diagrams. NEM tracks and displays port connections and rack space utilization.



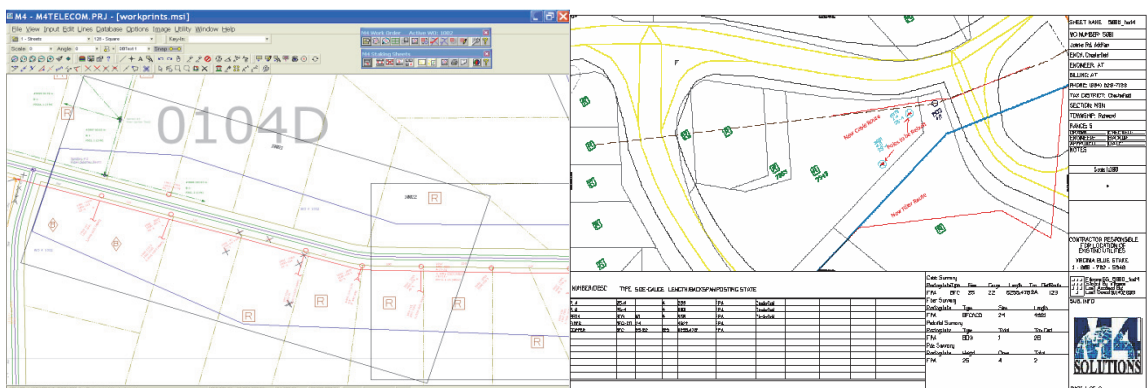
M4® Conduit Manager

Transform conduit lines on a map to an active conduit interface that links reports and manages cable within conduit. Automatically maintains cross reference records that contain conduit/cable associations.



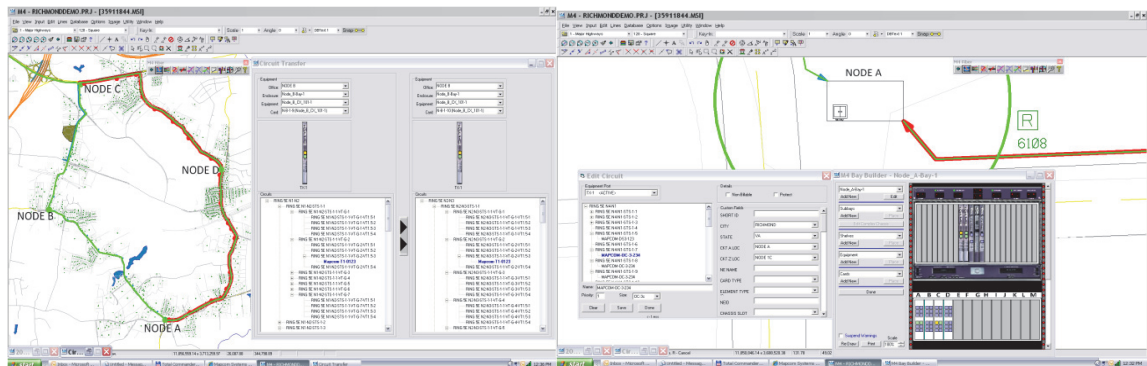
M4® Work Order with Staking Sheets

Reduce work order design and drawing time for construction work order management. Automate staking sheets and reporting capabilities to enable in-house management of construction and as-built prints. Track the history of facilities and services including sign-offs, field notes and other contractor information.



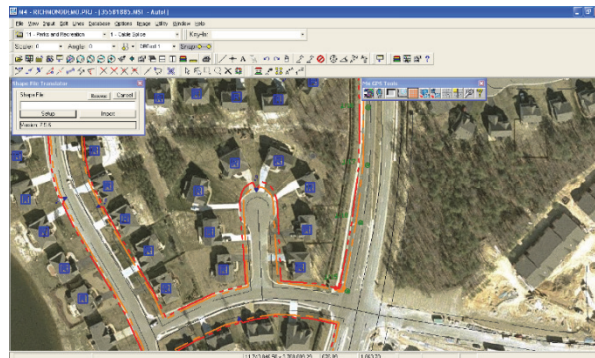
M4® Circuits

Design and manage circuits across multiple equipment types. M4 Circuit Manager extends M4's scope from infrastructure connections to both the physical and logical layers in M4.



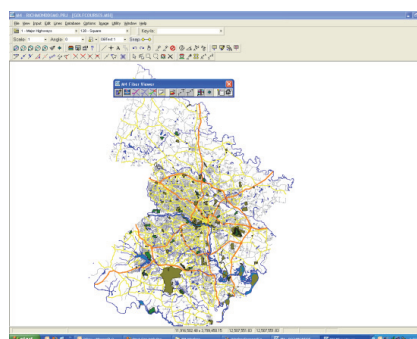
M4® GPS Tools

Along with superior functionality and performance, M4 GPS tools allows for tightly integrated information flow from the field collection of GPS data into the M4 database. It facilitates the creation of records of all outside plant items.



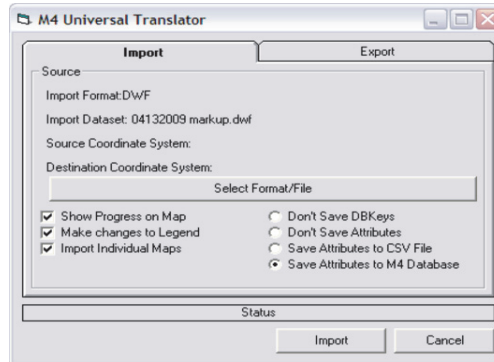
M4® Field Manager Suite, Consoles and Web Console

M4 Field Managers integrate with the entire M4 Solutions Suite to ensure everyone has access to the data they need. Field Managers include all the capability of a standard console plus the ability to view conduit fill rates, initiate OTDR traces, generate fiber make up reports, and view equipment racks and port connections. Consoles are view only but do allow for searching, printing and can utilize floating menus.



M4® Universal Translator

Universal Translator enables users the ability to import and export nearly 300 mapping formats in and out of the M4 project.



2. Describe how the modules function as an integrated whole and detail any limitations in their ability to function independently from other modules.

As an integrated whole, the M4 modules listed would provide a comprehensive system to manage all telecommunications plant infrastructure. Mapcom has intentionally designed modules to operate independently of each other or in conjunction with some prerequisite or bundled modules to provide only the functionality an organization needs to address specific requirements and allow organizations to implement M4 Solutions in a phases.

3. Describe the application security features for data, for each module, and for the system. Describe all row-level security options as well as any field-level encryption available.

Security is built into the application to allow users to access only the necessary data. Fields and layers can be hidden, read-only, or only allow certain values. Security and encryption can also be handled at the database level per group or user. M4 also has security to allow administrator, edit, and read-only access to the software.

4. Describe any transactions or functions that are not done on a real time basis and list batch jobs required for this function.

All transactions are done on a real time basis.

5. Describe how menus are used within the system and if menus are customizable and/or configurable. Define what *customizable* and *configurable* mean for your application.

M4 has a toolbar with menus and icons. These menus provide the basic functionality of M4 Foundation. Other than which icons display, and where they display on the toolbar these functions are not configurable or customizable. Each M4 Module has toolbars that provide the functionality of the module. These icons and functions are also not configurable or customizable.

Within M4 Foundation is a tool called M4 Administrator. It is through this function that the M4 project can be completely configured. This is where floating menus are built and

configured, and all symbols, colors, layers, etc. are configured. Database fields can also be configured to fill specific needs within a record. Drill down buttons can also be added to the database forms to allow users to dig into more relational tables.

Customizable means development work is needed to make the change. Mapcom does not customize the software for individual clients. Clients request enhancements, many of which are added to the product in future releases or in co-development agreements.

We make the software configurable so the end user can adjust it to meet their workflow or company needs.

6. Describe the extent to which the user can configure or customize all forms, reports, input/output screens, formats, etc. to brand the application for JMU. Define what *modifiable*, *customizable* and *configurable* mean for your application.

Organizations can configure forms, reports and formats to include logos or other “letter head” like information. Any template based report or form, like a Work Print, Staking Sheet, Bill of Materials, Circuit Layout Reports, etc. can be configured to include logos or other information.

Customizable means development work is needed to make the change. Mapcom does not customize the software for individual clients. Clients request enhancements, many of which are added to the product in future releases or in co-development agreements.

We make the software configurable so the end user can adjust it to meet their workflow or specific needs.

7. Describe the tools and expertise which university technical staff would use to support, troubleshoot, configure or customize the application.

One of the key product drivers that is considered as M4 has been developed and continues to evolve is ease of use. Mapcom provides professional training and mentoring and Mapcom Support can also provide assistance in all troubleshooting and configurations as part of the annual maintenance agreement. The M4 Wiki Knowledge Base would be another tool that is used by M4 users to get guidance on customization and configuration.

8. Describe other customizations available and associated cost, i.e., hourly and fixed fee.

Mapcom also provides a host of professional services at both hourly and fixed fees. One typical area is custom reports. Most customizations are addressed during implementation or through Mapcom Support.

9. Describe how configuration and customization will affect future releases of software.

Customizable means development work is needed to make the change. Mapcom does not customize the software for individual clients. Clients request enhancements and are added to the product in future releases or in co-development agreements. Customization does not affect future releases because it is not done outside of a release.

We make the software configurable so the end user can adjust it to meet their workflow or company needs. All configurations are part of the release testing and do not affect final release of the software.

10. Describe workflow functionality included with the application and provide a list of any function for which workflow is already built and delivered.

M4 Work Order utilizes a flow from design to as built. M4 Process Manager is another module that allows for complete Work Flow creation but is not included in the proposal.

11. Describe how JMU's e-mail systems would be incorporated with your system's operation. (*Faculty/Staff – on-premise Exchange and Students – Office365*).

We utilize Microsoft SQL Server DBMail to send emails from the application and will work with JMU's e-mail system.

- a. Describe third party e-mailing, if this functionality is part of your solution. What messaging service is utilized by your system? Describe details of how messages look (*from, etc.*).

When building the messages, the from, subject, etc. are configurable.

C. REPORTING:

1. Describe application approach/strategy for reporting including the approach to ad-hoc reporting for power users as well as the occasional user.

Most reports in M4 are generated on the fly, presenting up to the moment data in a dashboard style formats generated via Microsoft SQL report writer. In most cases commands to generate reports are built into floating menus so the experience and ease is the same, regardless of the end user.

2. Describe all reporting tools supported and how they integrate with the product. State if application licensing includes any of the products.

M4 has several standard reports that are built into the modules. Mapcom takes pride in our ability to provide a great deal of standard functionality while still being flexible enough to meet the diverse needs of our clients. That being said, we still offer an ever increasing library of report templates like Bill of Materials, Fiber Route Miles, Open Work Orders, Loop Makeup Report, Retirements, Port Availability; that can be easily adapted to any client data configuration.

There are many ways to create a custom report in M4. The user can use the query tool to build a query statement, a floating menu button can be used to store a custom report that is run often, and the M4 Report Designer allows a user to create a report in a fashion similar to crystal reports. M4 also offer a web reporting tools utilizing SQL report writer to offer dashboard like reports.

3. Provide a list of all reports delivered as part of the base product including a short description of each. Also include a sample of several reports for review. Describe the system's ability to provide the following:
 - a. The ability to select any region to determine the amount of sheath length, fiber length, or route length.

M4 Foundation can produce a report based on a boundary or user defined region.

- b. A materials report - amount of materials being used and where.

M4 Foundation can produce a materials reports based on area, work order, or any other data in the system.

- c. A termination report - how fibers on various rings are allocated.

M4 Fiber allows a user to select any fiber to determine and show the allocations.

M4 Network Equipment Manager allows a user to select any panel to determine and show the allocations.

- d. A "taper" report - how a cable tapers throughout the network, where each fiber/pair ends.

M4 can produce a report to show where each fiber strand or pair ends or is utilized.

- e. A fiber use report - what is available, and where.

M4 can produce a report to show fiber strand availability and where the strands can be accessed.

- f. A duct use report - what is available, and where.

M4 can produce a report to show duct fill.

- g. A cable placement report - what is aerial, underground, etc. and the location.

M4 can produce a visual and tabular report to see aerial, buried, and underground facilities are located.

- h. The ability to customize database queries.

The user can create a query of any data in the system.

- 4. Describe reporting output formats available.

Reports are viewed in M4 Reports, which is a web-based report viewer which utilizes SSRS or in M4 Foundation/M4 Web Console.

- 5. Describe the types of reporting that would typically require Information Technology staff support.

Any complex reports might require IT staff support depending on the level of User that is using M4. We train M4 users on how to create basic reports.

D. SERVICES:

- 1. Describe available training options, including location (*manufacturer training facility, customer's site, online CBT, etc.*) and provide a catalog of training offerings and their associated costs. Response should include differentiation between technical staff and end-user training.

Mapcom Training Program - Mapcom offers training tailored to each client's specific needs. Training classes will be presented using JMU's actual data, whenever possible, and the curriculum will be defined by the Project Manager in conjunction with JMU to specifically address JMU's needs and the roll out of software modules owned.

Training Availability - Training classes can be performed for individuals, in groups, or as a train-the-trainer. Locations for training can be hosted on-line, on-site at JMU or in Mapcom's corporate offices in Richmond, Virginia.

M4 Certification – The “M4 Certified” designation is given to M4 users who successfully complete training courses for various modules of M4 and demonstrate the skills to effectively use the applications available to them. Certification is a part of all Mapcom training classes.

M4 Users Group - A Users Group does exist and Mapcom looks forward to spending time with each of our clients and partners at our annual Users Conference. The conference focuses heavily on training with multiple sessions that are designed to provide timely topics with working scenarios in an environment that encourages interaction and relationship-building among clientele and Mapcom's staff. Discounted group training sessions are offered both before and after the conference, which is generally held each year around the first week of October.

M4 Knowledge Base - Mapcom has a client wiki-style knowledgebase that contains frequently asked questions, scenarios, and other searchable reference materials.

Regular Education Sessions - Mapcom also hosts regularly scheduled Tips and Tricks training sessions and webcasts on various M4 products, new releases, and timely issues.

2. Describe the complete training documentation/materials offered upon purchase of the solution.

Mapcom provides manuals for all modules. These manuals are updated with every version of the software and are also available online. The manuals include practice exercises to test skills. Also, see #1 above regarding other training materials.

3. Describe services available from your company and/or partners including pricing information that may be included in the final contract. Examples of services that could be included are:

- a. Implementation

Mapcom provides complete implementation services as part of every project as defined in a Statement of Work.

- b. Development

Mapcom provides custom development for minor areas of functionality like custom reports.

- c. Project Management

Mapcom provides complete project management and continued user support.

- d. Architecture and Design

Mapcom provides best practice guidance during implementation.

- e. Capacity Planning

Mapcom provides best practice guidance during implementation.

- f. Installation and Configuration

Mapcom provides complete assistance in installation and configuration. Mapcom provides best practice guidance during implementation and continued user support.

- g. Performance and Scalability

Mapcom provides best practice guidance during implementation and continued user support.

- h. Conversion

Mapcom provides all data conversion and consolidation services.

- i. Monitoring, administration and upgrades

Mapcom provides administration and support as part of maintenance services. Mapcom does not provide “monitoring”, but does provide rapid response support as part of support.

- j. Operations metrics

The only operations metrics Mapcom can provide is by providing an “impact study” to demonstrate the number of hours saved by using M4 to manage OSP/ISP operations.

- 4. Describe the support options available through your company including on-going support of the application. Describe what portions of support to be performed by IT, the customer versus the vendor.

Mapcom provides 2 software upgrades each year, unlimited software support by phone, email, and an online knowledgebase. The Mapcom Support Center is open 8:00 AM – 6:00 PM Eastern Time, and an on-call technician is available until 8:00pm Eastern Time. Trained support technicians utilize GoToMeeting, e-mail and telephone discussions to assist M4 users. Mapcom annually achieves a 100% “live person” rate on calls to the Support Center, and typically earns 100% “meet or exceed expectations” ratings in our annual Customer Satisfaction surveys. Mapcom also offers monthly Tips and Tricks webcasts and other programs to help clients use M4 Solutions to the fullest extent. Mapcom does not differentiate between severity and response and resolution times. Most support calls are resolved in one call.

Customer IT is responsible for server setup, maintenance and providing access to the application.

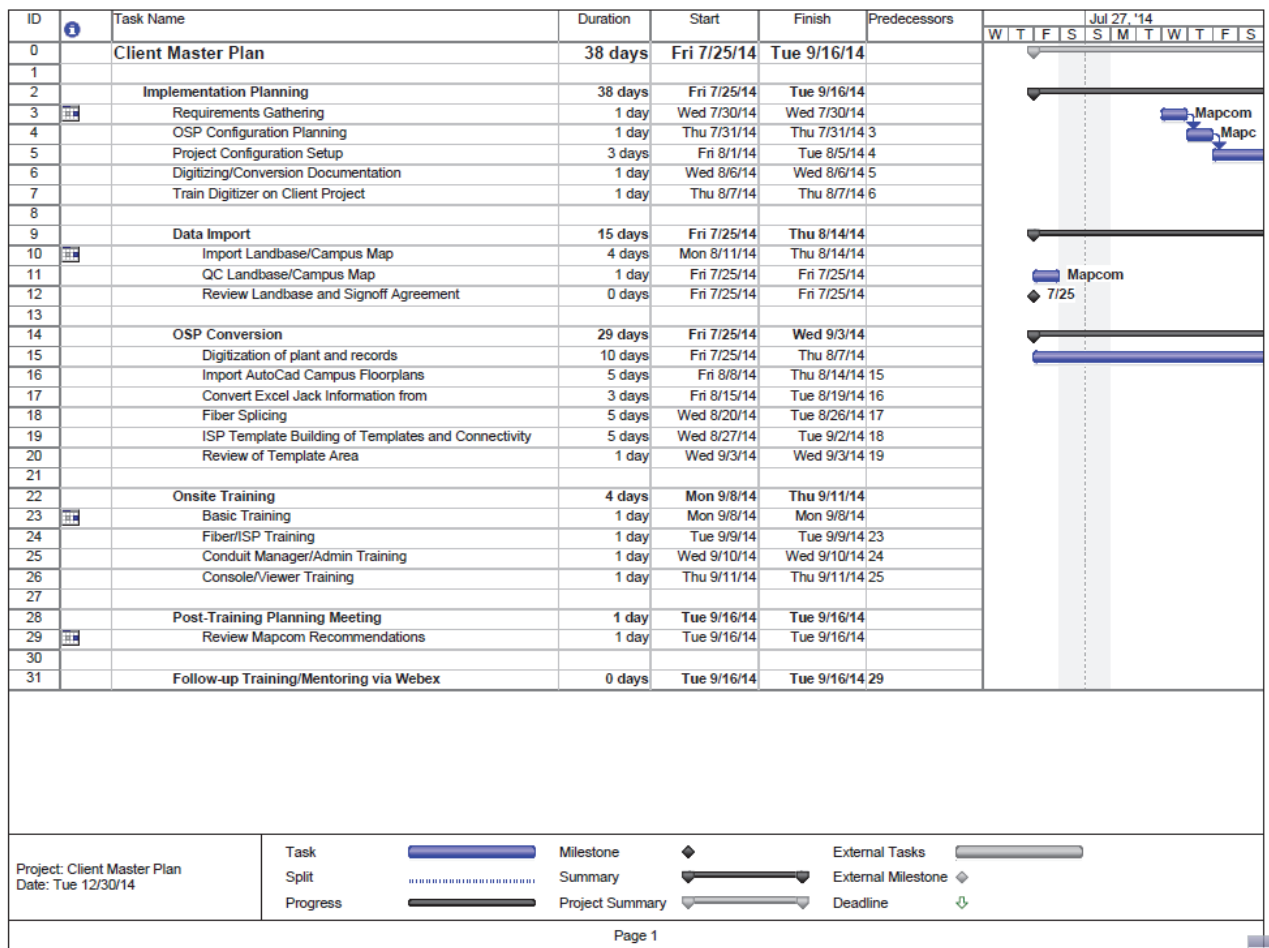
- 5. If support is provided to end-users directly as part of your services, provide the SLA under which you would operate.

See #4 above

E. GENERAL:

1. Describe typical implementation timeline and project plan and include examples of previously used project plans.

Mapcom utilizes Microsoft Project for project plans. Timelines are created mutually as part of the implementation process. Timeline goals become benchmarks that are signed off on when completed and accepted. Below is a fairly generic example.



2. Describe your approach to test and production environments including licensing requirements and any additional costs.

We recommend having a test and production environment. There is no additional cost for the M4 Software to use in a test environment with an enterprise license.

3. Describe how product(s) addresses accessibility to ensure the application is accessible to people with disabilities. Describe testing for adherence to accessibility guidelines and standards. Provide documentation of the testing performed and results of that testing including the Web Accessibility and Template Guide (WATG located at <http://www.vadsa.org/watg>).

Mapcom currently does not test for accessibility but would look into it further if chosen as the vendor for the OSP Infrastructure Management System.

4. Describe the Help system(s), including electronic help files available, and how it can be modified.

M4 Help Files are located on our customer wiki. Mapcom updates the help files when new software is released.

5. Describe your relationship with the vendor(s) of any third party tools (*i.e. reporting tools, application server and DBMS vendors, etc.*) included in this proposal including licensing, costs, support for the product(s), and versions (*e.g. full or modified*).

All third party tools are from Microsoft. Mapcom has development relationships with Microsoft but do not resell any Microsoft software(application server, DBMS, etc.).

6. JMU is interested in developing a strategic relationship with the successful vendor. Provide information regarding ideas on how such a relationship can prove mutually beneficial.

Mapcom sees every engagement as a partnership opportunity. In each new version we build in hundreds of enhancements to improve our platform and address changing technology. Between 30 and 50% of those enhancements come directly from our client base.

Another potential area is through our internship program. Mapcom attends JMU career fairs and actively recruits JMU students for internships and full time careers. It is very foreseeable that a student could work for Mapcom using M4 during the summer and then work as a student worker in the IT department, utilizing the training and professional experience they gained. Mapcom employs several James Madison University Alumni.

7. Describe active user groups and how they function.

M4 Users Group - A Users Group does exist and Mapcom looks forward to spending time with each of our clients and partners at our annual Users Conference. The conference focuses heavily on training with multiple sessions that are designed to provide timely topics with working scenarios in an environment that encourages interaction and relationship-building among clientele and Mapcom's staff. Discounted group training sessions are offered both before and after the conference, which is generally held each year around the first week of October.

University M4 Users Special Interest Group and M4 Fiber and Circuits Special Interest Group. Designed to unite M4 users with like needs in interactive forums that meet via GoToMeeting 4 times each year to discuss best practices, enhancement needs, view case studies, share ideas and promote networking amongst similar M4 users.

8. Describe licensing. If licensing is based on number of users, describe the models used to obtain numbers both for current and future usage.

M4 is licensed to the work station per module. Mapcom offers both seat based and enterprise (unlimited use) licensing structures. Through a requirements gathering process the number of users for each of the modules is identified.

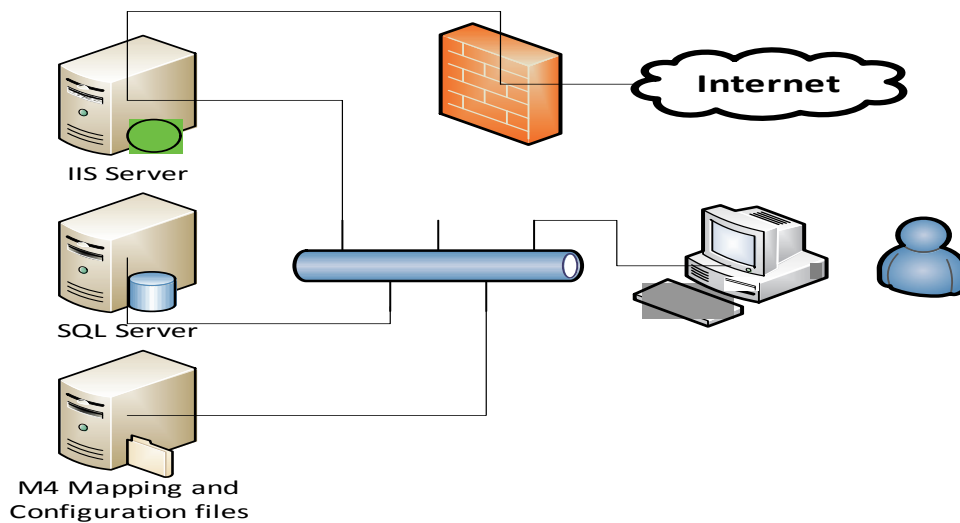
F. TECHNICAL:

1. Provide a detailed diagram of the typical architecture/technical environment required for the system. List all protocols and ports used for communications and indicate which components are clients and which are servers and whether the communications are fully, partially, or not encrypted. Specify any communications paths where unencrypted authentication or other sensitive data are passed. List all third party dependent integration points and data paths including any web content included from or sent to outside parties.

The M4 architecture works on a standard client/server model. M4 accesses two resources, one is a database and the other is configuration and mapping files from windows file shares.

M4 is installed on client machines and accesses the SQL database running on a Windows server through a standard ODBC connection. The M4 Project files can be located on a file server or a shared network storage drive.

If the M4 Web console is deployed then a Windows IIS server is required. This can be configured for Intranet or Internet access and utilizes HTTPS encryption.



2. Describe the toolset from which your application is derived.

The M4 Application is built using Microsoft technologies.

3. Describe hardware and software requirements for the proposed system(s) along with any sizing assumptions made to arrive at those requirements.

Server Requirements based on physical hardware (minimum specs)

Client Workstation:

Processor: Intel® Core 2 Duo Processor at 2.0GHz with 1MB L2 Cache

Memory: 2GB RAM

Monitor: 20" Widescreen LCD

Video: DirectX 9 graphics device

Hard Drive: 250GB SATA II @7200 RPM

Operating System: Microsoft® XP®, Windows® 7 and Windows® 8
NIC: 10/100/GB Ethernet
Optical Drive: DVD ROM drive
Printer: Any printer/plotter that uses Windows® print drivers
SQL: 2008 Express **

Microsoft SQL Server:

Processor: Intel® Xeon® E5 Series with a minimum clock frequency of 2.5GHz
Cores: Minimum of 4 Cores
Memory: 16GB RAM
Hard Drive (for OS): 500GB SATA II @7200 RPM
Operating System: Microsoft® Windows® Server 2008 R2 64Bit
NIC: 10/100/GB Ethernet
Optical Drive: DVD ROM drive
SQL Server: Microsoft® SQL Server 2008 R2 Standard 64Bit

Windows IIS server:

Processor: Intel® Xeon® E5 Series with a minimum clock frequency of 2.5GHz
Cores: Minimum of 4 Cores
Memory: 8GB RAM
Hard Drive (for OS): 1TB SATA II @7200 RPM
Operating System: Microsoft® Windows® Server 2008 R2 64Bit
NIC: 100MB/1GB Ethernet
Optical Drive: DVD ROM drive

Note: CALs are required for SQL Server and Windows Server access per Microsoft licensing agreement

*** IIS 7 is required to for Mapcom Web Products**

**** If the client is using Map-Sync, a local copy of SQL Express is required per client machine**

4. Describe supported server hardware and/or virtualized platforms. Describe support for the following operating systems: Linux and Windows. If virtualization is supported, what virtualization technologies are supported including what components can be virtualized?

Windows and virtualized environments are supported. The database and application servers can both be virtualized. M4 is not supported in a Linux environment.

5. Describe support for load balancing and system failover including any and all vendor specific preferences. Also include any vendor specific configuration guides.

The M4 database and Project files will work with standard implementations of load balancing and failover systems. Standard Mapcom support does not cover such implementations.

6. Describe how scalability is accomplished as the criticality of the system(s) and number of users increase.

Due to the low overhead of the M4 application it easily scales as the user base increases.

7. Describe the system capabilities and options for the backup and restoration of the system components (example: database)

M4 does not have built-in backup capabilities. Backups of the M4 database and Project files are a complete backup and can be achieved in multiple ways. This is the responsibility of the client.

8. Describe the average client response time for all the various functions of the proposed system.

The M4 application has low network overhead and is very responsive with multiple users. Due to the client/server model network congestion can impact performance.

9. Describe services not available during scheduled maintenance.

Project maintenance is required to be run periodically. M4 is available to users during this periodic maintenance period. Clients normally schedule this maintenance outside of normal business hours.

10. Describe any standard and proprietary APIs, integration/connection resources, and development languages and tools that extend your toolset.

SQL QUERY and FME

11. Describe the client operating system and browser requirements for your toolset. List any additional client-side software required for development/management of your toolset.

M4 runs on standard Windows operating systems. Mapcom recommends Google Chrome browser for M4 Web modules.

12. Describe any aspects of your application that do not support the Macintosh. Describe any changes to default browser or client security settings.

M4 is a Windows only application.

13. Describe any functionality loss, installation problems, upgrade problems, or other difficulties if client applications are run using a regular user account.

M4 installation and upgrades require administrator privileges. All M4 applications can run with regular user account privileges.

14. Describe your support for mobile technologies including technology used, distribution method, functionality, integration and development toolset and security.

Currently M4 web applications run on mobile devices. All communicates run using standard HTTPS encryption.

15. Describe requirements for application servers. Describe specific platform recommendations or requirements for certified configuration (*e.g. WebLogic, and Apache Tomcat*); include either specific application server version or required J2EE version.

SQL Database running on Windows Server

File Server – SAN or Windows File Server

Windows IIS server for Web modules (ASP .NET 4.5 is required)

16. Describe support for web servers (*i.e. Apache, Weblogic and IIS*).

IIS 7.0 or greater is supported.

17. Describe the supported database platforms including versions and include any information on additional features required of the DBMS needed to support the functionality of your system as proposed.

Microsoft SQL Server is the supported database. SSRS is also used for Reporting.

18. Describe your SLA to stay current with versions of software utilized by your product.

Mapcom supports the current version and 2 previous versions of the software.

19. Provide an overall compatibility matrix of software required to operate your system. As appropriate, and at a minimum, this should include operating systems, drivers, browsers, JDKs, and compilers.

Operating systems: Microsoft Windows XP, Win7, Win8

Browsers: Google Chrome

20. Describe support for real-time access to data through some other method (*e.g. on-the-fly access to database through ODBC, ADO, JDBC, LDAP, etc. allowing dynamic web content and applications*).

Mapcom supports an open database architecture. JMU can access the data through any method that they wish.

21. Describe support for integration with JMU's existing systems listed in the background statement including pricing, availability of APIs, toolkits for creating connectors, available services, etc. Provide a full list of application connectors. Describe any other methods of integration supported.

Mapcom is willing to integrate with any of JMU's existing systems. We have integrated with many systems over the years and see ourselves as leaders in integrating M4 with applications such as billing, accounting, GPS, EMS, NMS, and others. We utilize APIs and Safe Software's FME technology to build integration engines and cartridges.

22. Describe support for inclusion of your application as part of the PeopleSoft application portal. Describe any pagelets available and how that integration would occur. Describe support for delegating authentication for the pagelet Oracle Access Manager Single Sign and/or PeopleSoft single-sign-on. Describe support for other single-sign-on technologies.

Mapcom currently does not have a pagelet but have discussed on multiple occasions creating one for applications similar to PeopleSoft. We have built object controls to open M4 from other applications similar to PeopleSoft.

23. Describe your product's support for Web Services/Service Oriented Architecture based standards such as JSR 168 Portlet development standard, and JSR 172 Web Services Interoperability Standard.

M4 is not currently built based on standards such as JSR 168 – but is proven to be interoperable.

24. Describe the ability for your product to create consumable web standards based content (*such as RSS feeds, hcard, ical, and other microformat specifications*) and the ability to pull XML based content from your system and any APIs supporting the delivery of such data/content.

M4 does not have the ability today to create web standards based content. This could be a potential enhancement for Mapcom to consider in future releases.

25. Describe storage including file formats.

Storage is necessary for the project folder. The project folder contains maps and configuration files to run the M4 application. File types include .PRJ (Project configuration file), .MSI (map files), .CFG (project config files), etc.

26. Describe operational monitoring and reporting capabilities. Include the capabilities for application, content, access, and storage metrics, security and the method for obtaining them (*e.g. command line tools, SNMP, and GUI*).

M4 utilizes Microsoft based tools including SQL for operational monitoring and reporting. Many of these items can be obtained via the SQL Management Studio.

G. SECURITY:

1. Describe how users and processes are authenticated before gaining access to data and services. Include authentication between components and between the product and external services. Describe your support for the following:

- a. LDAP/S

LDAP/S are used for forms based authentication of web applications.

- b. Native AD authentication

Native AD authentication are used for database and file share access.

- c. Shibboleth 1 and 2 - N/A

- d. Kerberos - N/A

- e. SAML - N/A

- f. Other federated systems - N/A

- g. OpenID - N/A

- h. Any two-factor authentication system - N/A

- i. Certificate-based authentication - N/A

- j. Other - N/A

2. IF you support LDAP for authentication or authorization, describe use of LDAP(S). List the LDAP(S) servers integrated with product(s). Describe integration and support with LDAP(S) user database for authentication (*Active Directory/OID*) and authorization using attributes/group

memberships.

Mapcom support all types of LDAP authentication

3. Describe handling access to licensed/copyrighted content where access must be restricted.

Windows AD is used to restrict access to database objects and file shares.

4. Describe your use of authentication credentials and associated attributes, group membership, roles, etc. to make authorization decisions. Include method(s) and granularity of authorization of access to data and services (e.g. individual accounts, IP address, unix groups, LDAP groups, Active Directory accounts.)

Using standard authentication: individual accounts, LDAP groups, Active Directory accounts are supported.

5. Describe how and where any sensitive data (*e.g. credit card, financial data, SSN, FERPA, HIPAA or other legally regulated data*) including authentication credentials, is stored on clients, servers, and participating external devices. Is it cryptographically protected? If so, provide details on cryptographic protocols, procedures, and key protection.

Not Applicable

6. Describe auditing and logging capabilities and data. Include the information recorded with each event. For example,
 - a. Successful and failed authentication or bind
 - b. Successful and failed access authorization
 - c. Successful and failed policy change

Windows server logs can be used to audit security policies that are in place.

7. Describe the effects of auditing and logging on a production implementation. Is the proposed system sized for full audit capability? Describe auditing methodologies and capabilities for managing integrity and change control. Describe elements captured with the audit process.
 - a. Describe enterprise audit capabilities
 - b. List the events and logs that can be sent to an external syslog server
 - c. List the events and logs that cannot be sent to a syslog server

M4 stores logs of user activity in the SQL database. Changes to the database and project files are tracked.

8. Provide up to date, signed documentation that the offered solution and vendor is compliant with all PCI DSS and PADSS requirements if applicable. Provide documentation of your most current PCI system scan and the signature page from your Record of Compliance (ROC) or Attestation of Compliance (AOC).

Not Applicable

H. MAINTENANCE AND SUPPORT:

Because consistency and stability of the operating environment and rapid correction of system failures are critical to James Madison University, major consideration will be given to the amount and extent of hardware and software maintenance coverage and to the quality of maintenance.

1. Describe the maintenance philosophy including frequency of updates, approach to completing updates, and model for obtaining them.

Mapcom currently releases two major updates per year for all software, as well as integrations. All upgrades are included as part of Mapcom's Annual Maintenance Services. Upgrades to the new software version are performed by the Support Department. The Support Department follows an upgrade plan customized for each client's needs, including testing of the Update on the client project locally on Mapcom's network, testing in a test environment on the client network, followed by upgrading the live project and ensuring that the upgrade completed successfully. All tests are performed using established test cases, which are customized based on client needs. Mapcom will notify clients of each new version release via email. Software upgrades may be requested by contacting the Support department via email or phone.

2. Describe capabilities for remote support and specify days of week, time of day, etc. Indicate what access to accounts and systems is required. Describe the locations from which this activity would take place. Describe any maintenance options/tiers and whether they vary in cost by time of day, response time, etc.

Mapcom Support is available from 8am-8pm EST, Monday-Friday. There is a 100% Live Person Guarantee from 8am-6pm EST, Monday-Friday. Extended hours of On-call support technicians are available 6pm-8pm EST, Monday-Friday. Mapcom also offers On-call support outside of business hours and on weekends in the event of issues requiring immediate attention, such as a system down issue. Mapcom provides remote support via Citrix GoToMeeting, as well as the option to access the client system via VPN. Unlimited customer support is included in Annual Maintenance Services. Off-hours and weekend calls may be billable.

3. Describe services that may be required in the normal course of operating the system that are not covered under the maintenance contract.

Custom report building and, or customization of standard Universal Translator workbenches as requested by the client are examples of services that may be billable. The typical guideline is any task which takes over 2 hours of dedicated time is billable.

4. Describe the maintenance costs for the first year, and, on the basis of an annually renewable contract, the maintenance costs for each of the following five (5) years.

Maintenance costs are 18% of the current software license fee. The first year's maintenance is included to account for the implementation window. Maintenance is renewed annually based on 18% of the current software license fee.

5. Describe the procedures for obtaining services for all types of maintenance (*e.g. installation of corrective code, enhancements, applicable "escalation" procedures for providing additional assistance in diagnosing a failure that is not resolved in a timely manner to include notification*

procedures and timing as well as what higher levels of assistance will be made available.)

- **Installation of corrective code or software update can be obtained by contacting Mapcom Support or the Project Manager.**
 - **Mapcom will provide contact information, email and phone number, for management within all departments involved in client project, including: Product Delivery, Integrations and Support. Mapcom will provide escalation trees for each department, as well as contact information for senior management, including the COO, VP-Client Experience and VP-Technology.**
 - **The M4 Knowledge base, including recorded trainings and Tips N' Tricks, can be accessed via Mapcom's website.**
 - **Software and integration enhancements can be requested by contacting Mapcom Support. They may also be submitted via Mapcom's web site.**
6. Describe the nature of any continuing research and development performed by the manufacturer to detect and correct problems in the system design, to improve efficiency, and/or to enhance the capabilities of the system proposed.

Mapcom devotes over 21,000 man-hours to software research and development annually. This includes software enhancements, corrections to problems with the software, development of new modules and increasing the efficiency of existing functionality. Mapcom implemented 247 enhancements and new features to the software releases in 2014, including 101 client suggested enhancements.

7. Describe your approach to security reviews during each phase of the software development lifecycle.

Mapcom works closely with outside consultants during the design phase in regards to security. Security and Regression testing occur during development and testing phases to make sure the application

8. Describe the procedures followed in distribution of information to James Madison University pertinent to system problems encountered at other locations, along with the solutions to those problems, when such information is relevant to the University's software.

In the rare event that Mapcom deems a solution is necessary for JMU based on findings internally or at other locations, Mapcom Support will contact JMU to address the issue as quickly as possible.

9. Describe procedure for handling upgrades. Specify how often upgrades are made to the application software and how "patches" and "fixes" to the systems are handled. Describe if and how your product impacts our ability to apply security updates in a timely manner to underlying or supporting products (*e.g. Windows, Linux, Java, Oracle, MS Office, Web server*). Timely is defined as no later than 30 days from the time of vendor release.

Major Upgrades are handled on a scheduled basis after testing the client's project. Patches or fixes are rolled out as necessary when Mapcom deems it necessary for the University. JMU can continue to apply security updates in a timely manner.

10. Describe the nature of system enhancements in development that are scheduled for release in the next twelve months.

Over the next twelve months Mapcom is continuing to focus development efforts around M4 Fiber, M4 Network Equipment Manager, M4 Circuit Tools, M4 Workforce, and M4 Process Manager with minor enhancements to the other modules. Mapcom is always looking to increase performance and security of the system as well.

11. Describe all responsibilities of both the contractor and James Madison University in the isolation and diagnosis of system failures.

Mapcom Support is responsible for isolating and diagnosing system failures identified by the University or other clients.

12. Describe your "escalation" procedure.

Support Hierarchy

Tier 1: Front Line, able to respond to licensing, basic project and database troubleshooting issues

Tier 2: More advanced troubleshooting, able to answer advanced project and database troubleshooting and simple data integration related issues

Tier 3: Data Integration Specialists and Development teams – Any issues that cannot be resolved by the first two tiers and/or require comprehensive Data Integration or Testing

Tier 4: Product Managers and Senior Development – Any issues that require significant project reconfiguration and process changes.

Calls and emails come into Tier 1 and most are resolved. Those that are unresolved move into Tier 2 and so on. Over 75% of calls have a one-call resolution. Outstanding issues are escalated to Tier 3 by the Support Manager. This may include escalating the issue internally to a data integration specialist or developer. The manager will investigate the issue internally, and will review all correspondence and notes within our internal ticketing system. The manager will then take appropriate action based on their findings to ensure that the client's concerns are resolved with the handling of the issue.

I. PRIVACY:

M4 is a locally hosted application where no information is being collected back to Mapcom. Because of this Mapcom does not have and has not been asked for a privacy statement regarding data collection.

1. Provide your privacy statement.

Mapcom does not currently have a privacy statement because of the nature of the application it provides.

2. Identify the type/specific information being collected (*User Data – Anonymous or Personally Identifiable*).

No information is collected by Mapcom except users in the case of auto-licensing.

3. Specify who collects the information.

See # 2 above

4. Specify why the information is collected.

See # 2 above

5. Describe how the information is collected (*explicitly, via Cookies, via Web Bugs, etc.*)

See # 2 above

6. Describe how the information is used.

See #2 above

7. Specify how long the information is retained.

See # 2 above

8. Describe how the information is stored and kept.

See #2 above

9. Describe how the information is secured.

See # 2 above

10. Specify whether you share the information with another party. If information is shared with another party, then respond to Items a. through h. below relative to this information.

Mapcom / M4 does not share information with other parties outside the passing of data via data integrations. For and OSP solution with no data integrations there would be no sharing of information.

- a. Identify the type/specific information being collected (*User Data – Anonymous or Personally Identifiable*).
 - b. Specify who collects the information.
 - c. Specify why the information is collected.
 - d. Describe how the information is collected (*explicitly, via Cookies, via Web Bugs, etc.*)
 - e. Describe how the information is used.
 - f. Specify how long the information is retained.
 - g. Describe how the information is stored and kept.
 - h. Describe how the information is secured.
11. Specify whether you collect information on JMU or any party related to JMU from third parties. Respond to Items a. through i. below relative to this information.

Mapcom does not collect information on its clients from any parties.

- a. Identify the type/specific information being collected (*User Data – Anonymous or Personally Identifiable*).
 - b. Specify who collects the information.
 - c. Specify why the information is collected.
 - d. Describe how the information is collected (*explicitly, via Cookies, via Web Bugs, etc.*)
 - e. Describe how the information is used.
 - f. Specify how long the information is retained.
 - g. Describe how the information is stored and kept.
 - h. Describe how the information is secured.
 - i. Specify whether you share the information with another party.
12. Specify the transaction information collected/maintained

Mapcom does not collect transaction information.

Pages 65-73 of the contract titled “Software License and Support Agreement” and labeled as pages 41-49, were replaced during negotiations. See pages 13-22 of the contract for new “Software License and Support Agreement” labeled as pages 10-19 of the M4 Solutions – Visual Operations System Proposal dated May 11, 2015.

Software License and Support Agreement

THIS IS A LEGALLY BINDING AGREEMENT BETWEEN YOU AND MAPCOM SYSTEMS

Licensor:
Mapcom Systems
601 Southlake Boulevard
Richmond, VA 23236-3921

Licensee:
James Madison University
800 South Main Street
Harrisonburg, VA 22807

This Software and Support Agreement (the "Agreement") is between MAPCOM SYSTEMS, and the Licensee identified above.

1. DEFINITIONS.

"Documentation", means the standard and current documentation, both in written and electronic form that MAPCOM delivers with the Software.

"Software", means the complete executable object code of the products/modules listed in Attachment A, and except where the context requires otherwise, the term includes all upgrades and enhancements thereto.

"Supported Databases", means most ODBC compliant databases.

"Supported Operating Systems", means those desktop and server operating systems identified in Attachment A.

2. LICENSE GRANT. MAPCOM grants to Licensee, a limited, nonexclusive and nontransferable right to use the Software and Documentation in exchange for the license fee and compliance with the terms of this Agreement (the "License"). This License does not extend to any third party, including without limitation any parent entity, subsidiary, affiliate or independent contractor.

3. RIGHTS OF USE.

a. Licensee may:

i. Use and run the Software, in object code form only, and in conjunction with any Access Keys provided, as a single process on a single or multi-core CPU at a time for Licensee's own use for as long as this License remains in effect. (MAPCOM reserves the right to employ other devices and codes that detect and prevent the unauthorized copying and use of the Software). **For each single-user license Licensee acquires, Licensee may install and use a single copy of the Software as a single process on a single computer.** The License permits the Licensee to install the Software purchased under this Agreement in a server-based distribution network or virtual environment owned or controlled by Licensee provided the number of single processes do not exceed the number of licenses purchased under this agreement.

ii. Use the Documentation in support of Licensee's use of the Software.

iii. Make no more than one (1) archival or backup copy of the Software and Documentation and use them only in the event that and for so long as the original media is damaged, destroyed or inoperable. All archival and backup copies of the Software and the Documentation are subject to the terms of this Agreement.

Archival and backup copies of Documentation shall be copied with all titles, logos, and/or copyrights.

b. Licensee may not:

i. Copy, run or use the Software in any manner not expressly authorized by this Agreement.

ii. Permit the number of unique, licensed instances of the Software in a virtual or multi-core environment to exceed the number of single-user licenses purchased under this Agreement.

iii. Distribute, sublicense, lease, lend, rent, sell, transfer, assign or convey the Software or the Documentation to any third party.

iv. Allow the Software to be subject to any lien, security interest, judgment, or other encumbrance.

v. Modify, adapt, translate, or make derivations of the Software.

vi. Construct or develop a similar software program which is capable of performing the same functions or utilities as any part of the Software.

vii. Decode, decompile, disassemble, cross-assemble, replicate or otherwise reverse-engineer the Software.

viii. Remove, obstruct, alter or obscure any trade name, trademark, trademark notice, copyright notice, confidentiality warning, and designation of origin or other legend appearing in any form in connection with the Software.

ix. Add any trademark notice, copyright notice or other designation of any type to any copy of the Software or the Documentation without express prior written approval.

x. Export the Software in violation of any export laws or regulations of the United States.

4. OWNERSHIP OF INTELLECTUAL PROPERTY.

a. Licensee Material. As between Licensee and MAPCOM, Licensee (or, to the extent applicable, third parties) shall own all Intellectual Property Rights in all Licensee Material, subject to the rights and licenses granted below.

i. The term "Licensee Material" shall mean: (A) software provided by Licensee; (B) third party software provided by Licensee; (C) site content provided by Licensee; and (D) Licensee's domain names and trademarks.

ii. Licensee grants MAPCOM and its subcontractors a nonexclusive, no-charge license during the term of this Agreement to use, reproduce, perform, display, transmit, operate, maintain, modify and prepare derivative works of Licensee Material for the sole purpose of providing services to Licensee in accordance with this Agreement.

iii. "Intellectual Property Rights" shall mean, on a worldwide basis, any and all: (i) rights associated with works of authorship, including copyrights, moral rights and mask-works; (ii)

trademarks; (iii) trade secret rights; (iv) patents, designs, algorithms and other industrial property rights; (v) other intellectual and industrial property rights of every kind and nature, however designated, whether arising by operation of law, contract, license or otherwise; and (vi) registrations, initial applications, renewals, extensions, continuations, divisions or reissues thereof now or hereafter in force (including any rights in any of the foregoing).

b. MAPCOM Material. MAPCOM shall continue to own and have exclusive right, title and interest in and to (i) all pre-existing software, including with limitation the Software and all corrections, bug fixes, enhancements, updates, or other modification thereto, tools, designs, documentation (including without limitation the Documentation), data and other material developed by or for MAPCOM outside of this Agreement as may be necessary to provide the services hereunder, and (ii) any routines, tools, methodologies, processes or technologies created, adapted or used by MAPCOM in its business generally, together with all associated Intellectual Property Rights, not specially developed for Licensee (collectively "MAPCOM Material"). Licensee acknowledges that MAPCOM provides services similar to those provided under this Agreement to third parties and MAPCOM may be providing deliverables to third parties that are substantially similar to the deliverables being provided to Licensee.

5. EXCEEDING SCOPE OF LICENSE & CONFIDENTIALITY.

a. IN THE EVENT LICENSEE EXCEEDS ITS LICENSE RIGHTS UNDER THIS AGREEMENT OR ANY SCHEDULE, LICENSEE SHALL PAY TO MAPCOM THE APPLICABLE LICENSE FEES FOR SUCH INCREASED USAGE USING MAPCOM'S THEN CURRENT RATES AND SHALL PAY TO MAPCOM ANY INVESTIGATION AND COLLECTION COSTS INCLUDING WITHOUT LIMITATION REASONABLE ATTORNEYS FEES INCURRED BY MAPCOM.

b. Confidentiality of MAPCOM Material. Licensee understands and agrees that the MAPCOM Material licensed by MAPCOM hereunder contain certain information that is confidential and proprietary. Licensee shall not use, disclose, or permit any person to obtain any such confidential and proprietary information of MAPCOM whether or not the confidential and proprietary information is in writing or any other tangible form, except as specifically authorized by MAPCOM in writing. In addition, and without any intention of limiting Licensee's other obligations under this Agreement in any way, Licensee shall not reveal any non-public information concerning the technology pertaining to the MAPCOM Material, particularly technology under current development or improvement, unless Licensee has obtained MAPCOM's advance written approval.

c. Injunctive Relief. Licensee acknowledges that the unauthorized use, transfer, or disclosure of the Software, Documentation, and/or MAPCOM Material or copies thereof by Licensee, or any parent entity, subsidiary, affiliate or independent contractor of Licensee, will: (i) substantially diminish the value of MAPCOM's Intellectual Property Rights; (ii) render MAPCOM's remedy at law for such unauthorized use, disclosure, or transfer inadequate; and (iii) cause irreparable

injury in a short period of time. If Licensee, or any parent entity, subsidiary, affiliate or independent contractor of Licensee, breaches any of Licensee's obligations with respect to the use or confidentiality of the Software, Documentation, and/or MAPCOM Material, MAPCOM shall be entitled to equitable relief to protect its interests therein, including without limitation, preliminary and permanent injunctive relief.

d. Indemnification. In addition to any other remedies available to MAPCOM, Licensee agrees to indemnify MAPCOM against any and all costs, liabilities, and damages arising out of, or resulting from, any breach, act, omission or violation of Licensee's obligations by any parent entity, subsidiary, affiliate, or independent contractor, arising under, or related to, this Agreement.

e. The obligations under Section 5.b. shall survive the termination of this Agreement and of any license granted under this Agreement for whatever reason. Notwithstanding anything to the contrary herein, the parties shall not be prohibited from using or disclosing information which: (i) is already available to the public as of the date of this Agreement; (ii) becomes publicly available through no fault of the such party (or the fault of its employees or agents); (iii) is already known to such party at the time of its receipt thereof, as shown by written records existing and is available to such party from a third party who is not under an obligations of non-disclosure with respect to such information.

6. SUPPORT AND MAINTENANCE SERVICES. During the term set forth in Section 7.c. of this Agreement, the parties agree as follows:

a. MAPCOM will provide the following support and maintenance for the Software ("Support and Maintenance Services"):

i. Corrections of substantial defects in the Software so that the Software will operate as described in the documentation;

ii. Periodic updates of the Software that may incorporate (a) corrections of any substantial defects, (b) fixes of minor bugs, and (c) at MAPCOM's sole discretion, enhancements to the Software;

iii. Telephone and electronic mail support to permit the Licensee to report problems and seek assistance in using the Software;

iv. Internet accessible files containing patches and other released defect corrections to the Software;

v. Internet accessible files containing new versions of the Software made generally available during the support term.

Support and Maintenance Services also include telephone support for business days between the hours of 8:00 AM and 6:00 PM Eastern time with extended support hours until 8 PM with an on call technician and software updates for software modules owned by Licensee.

b. The following services are not included as part of the Support and Maintenance Services:

i. Charged-for enhancements that are offered at MAPCOM's sole discretion to Licensees upon payment of license fee.

ii. On-Site Support; and

iii. Training

c. Licensee will notify MAPCOM of Licensee's designated Technical Contact. Licensee shall designate a contact with sufficient technical background to report the Software problems and receive support under the terms herein.

d. Upon detection of any error in the Software, Licensee, as requested by MAPCOM, provide data that MAPCOM may reasonably request in order to reproduce operating conditions similar to those present when the error occurred. Licensee agrees to identify and document for MAPCOM currently installed releases of and all changes to operating and language support software that the Software requires for its successful operation, as determined by MAPCOM.

7. TERM AND TERMINATION.

a. Term of Agreement.

i. This Agreement and the License granted herein shall commence as of the date on which MAPCOM signs the Agreement (the "Effective Date") and shall remain in force until this Agreement is terminated.

b. Termination.

i. Licensee may, upon thirty (30) days prior written notice to MAPCOM, terminate this Agreement. However, no such termination shall entitle Licensee to a refund of any portion of any monies which have been paid to MAPCOM.

ii. MAPCOM may, by written notice to Licensee, terminate this Agreement if any of the following events occur, provided that no such termination will entitle Licensee to a refund of any portion of any monies which have been paid to MAPCOM: (A) Licensee is in breach of this Agreement, which breach, if capable of being cured, is not cured within thirty (30) days after MAPCOM gives Licensee written notice of such breach, or MAPCOM may terminate this Agreement immediately upon notice if Licensee breaches any of its obligations under Section 5.b.; or (B) Licensee terminates its business activities or becomes insolvent, admits in writing to inability to pay its debts as they mature, makes an assignment for the benefit of creditors, or becomes subject to the direct control of a trustee, receiver, or similar authority.

iii. Termination will become effective immediately or on the date set forth in the written notice of termination. Termination of this Agreement will not affect the provisions regarding Licensee's treatment of MAPCOM Material, provisions relating to the payments of amounts due, provisions limiting or disclaiming MAPCOM's liability, and/or provisions regarding applicable law, which provisions will survive termination of this Agreement.

iv. Upon termination of this Agreement, all licenses and rights granted hereunder shall cease to be effective and Licensee shall immediately cease all use of any affected MAPCOM Software, Documentation and/or MAPCOM Material. Within fourteen (14) days of the date of termination or discontinuance of this Agreement for any reason whatsoever, Licensee shall return the Software, derivative works and all copies thereof, in whole or in part, all related Documentation and all copies thereof, and any other MAPCOM Material in its possession. Licensee shall furnish MAPCOM with a certificate signed by an executive officer of Licensee certifying that the same has been done.

v. Termination is not an exclusive remedy and all other remedies will be available whether or not termination occurs.

c. Support and Maintenance Services.

i. The period of Support and Maintenance Services ("Services Term") shall be from the Effective Date and shall continue for one (1) year from such date provided that Licensee has paid support fees as billed. Termination of the License in accordance with the Section 7.b. also terminates Support and Maintenance Services. Such Services Term shall be automatically renewed for subsequent one (1) year periods unless otherwise terminated hereunder and provided that Licensee has paid support fees as billed.

ii. MAPCOM reserves the right to terminate Support and Maintenance Services, via non-renewal at the end of any Services Term, for non-current versions of the Software; however, in no instance will changes to the Software that are made as part of the Support and Maintenance Services set forth in Section 6 of this Agreement render the Software "non-current" for the purposes of this section.

8. WARRANTY; LIMITATIONS OF LIABILITY AND REMEDY.

a. LIMITED EXPRESS WARRANTY. For a period of one hundred twenty (120) days from Licensee's first receipt of the Software, MAPCOM warrants that: (1) the media on which the Software is provided and the associated Access Key(s) shall be free of material defects in material and workmanship; and (2) the Software will perform substantially in accordance with the material specifications and descriptions set forth in the Documentation. MAPCOM shall, at its sole option, either repair or replace the non-performing media, Access Key or Software, as the case may be, or refund all amounts paid by Licensee. The above limited warranties will remain in full force and effect as long as Licensee is a current subscriber to the Support and Maintenance Services and only if:

i. The Software has been properly installed and has been used at all times in accordance with the Documentation and this Agreement;

ii. All modifications, alterations, or additions to the Software, if any, have been made by MAPCOM; and

iii. Licensee has not made or caused to be made modification, alterations, or additions to the Software that cause it to deviate from the Documentation.

b. DISCLAIMER OF WARRANTIES. EXCEPT AS SET FORTH ABOVE, MAPCOM MAKES NO OTHER WARRANTIES WITH RESPECT TO THE SOFTWARE, DOCUMENTATION, ANY OTHER MATERIALS OR SERVICES PROVIDED TO LICENSEE UNDER THIS AGREEMENT, EXPRESS OR IMPLIED, AND SPECIFICALLY DISCLAIMS ANY AND ALL EXPRESS OR IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

c. LIMITATION OF LIABILITY. IN NO EVENT SHALL MAPCOM BE HELD LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES (INCLUDING, WITHOUT LIMITATION, LOSS OF BUSINESS, LOSS OF PROFITS, BUSINESS INTERRUPTION, LOSS OF

DATA, OR OTHER LOSS) WHETHER BASED ON CONTRACT, TORT, OR OTHER LEGAL THEORY, IN CONNECTION WITH THE USE OF THE SOFTWARE.

Some states do not allow the exclusion or limitation of implied warranties or liabilities for incidental or consequential damages, so the above limitations may not apply.

d. Maximum Liability. MAPCOM's maximum aggregate liability (whether in contract, tort, or any other form of liability) for damages or loss, howsoever arising or caused, whether or not arising from MAPCOM's negligence, shall in no event be greater than: (i) in the event such damage is not related to Support and Maintenance Services, the license fee specified in the Attachment A related to the particular Software program which caused the damage or loss; or (ii) in the event such damage is related to Support and Maintenance Services, the support fees paid by Licensee for the then current Services Term.

e. No Additional Warranties. No oral or written information, description or advice given by MAPCOM, its dealers, distributors, agents, affiliates, developers, directors, officers, or employees shall create a warranty or in any way increase the scope of the limited warranty.

9. GENERAL TERMS.

a. Entire Agreement. This Agreement and its Attachment A contains the entire agreement between Licensee and MAPCOM with respect to the subject matter of this Agreement.

This Agreement supersedes all prior agreements or understandings, whether written, oral or implied between the parties with respect to such subject matter.

b. Notices. Notices under this Agreement are to be sent by certified mail via the United States Postal Service, or Federal Express, or United Parcel Service to the addresses set forth at the beginning of this Agreement, or such other address as may be designated by the parties in writing.

c. Assignment. Neither this Agreement nor any rights under this Agreement may be assigned or otherwise transferred by Licensee, in whole or in part, whether voluntary or by operation of law, including by way of sale of assets, merger, or consolidation, without the express prior written consent of MAPCOM. Subject to the foregoing, this Agreement will be binding upon and inure to the benefit of the parties and their respective successors and assigns. Notwithstanding the foregoing, no transfer or assignment of Licensee's rights hereunder shall be effective unless and until: (i) Licensee has paid and remains current on all amounts due hereunder; and (ii) the purported assignee agrees in writing to be bound by all of the obligations of Licensee hereunder. For purposes of this Section, a transfer of fifty percent (50%) or more of the equity ownership of Licensee shall be considered an assignment and is not permitted without the express prior written consent of MAPCOM.

d. Severability. Should any term of this Agreement be finally determined by a court or tribunal of competent jurisdiction to be void, unenforceable or contrary to law or equity, the parties agree that such term shall be deleted or limited and that the remainder of the Agreement shall remain in full force and effect.

e. Waiver. Any waiver of the provisions of this Agreement or of a party's rights or remedies under this

Agreement must be in writing to be effective. Failure, neglect or delay by a party to enforce the provisions of this Agreement or its rights or remedies at any time will not be construed to be deemed a waiver of such party's rights under this Agreement and will not in any way affect the validity of the whole or any part of this Agreement or prejudice such party's right to take subsequent action.

f. Exportation. Neither the Software, nor the Documentation are intended or authorized to be exported outside the continental U.S. except as specifically allowed by the applicable U.S. Export Licensing Regulations.

g. No Modification by Business Forms. No terms, provisions or conditions of any purchase order, acknowledgement or other business form that Licensee may use in connection with the acquisition or licensing of the Software will have any effect on the rights, duties or obligations of the parties under, or otherwise modify, this Agreement, regardless of any failure of MAPCOM to object to such terms, provisions, or conditions.

h. Governing Law. This Agreement will be interpreted and construed pursuant to the laws of the Commonwealth of Virginia and the United States without regard to conflicts of laws and provisions thereof, and without regard to the United Nations Convention on the International Sale of Goods. Any legal action or proceeding relating to this Agreement shall be instituted in a federal court in Richmond, Virginia or a state court in the County of Chesterfield, Virginia. MAPCOM and Licensee agree to submit to the jurisdiction of, and agree that venue is proper in, these courts in any such action or proceeding. Should MAPCOM be required to bring any action to enforce its rights under this Agreement, then in addition to all other remedies available to it, MAPCOM is entitled to payment of all costs and reasonable attorney's fees expended in enforcing its rights under this Agreement.

i. Modification. This agreement can only be modified in a writing signed by duly authorized representatives of both Licensee and MAPCOM. Future modifications to this agreement will be noted as Addendums to this original document.

j. Confidentiality of Terms. The parties agree to keep all terms and conditions of this Agreement confidential.

k. Headings. Headings herein are for convenience of reference only and shall in no way affect the interpretation of the Agreement.

l. Counterparts. This Agreement may be executed in counterparts, each of which so executed will be deemed an original and such counterparts together will constitute one and the instrument.

Agreement version date: March 2012

LICENSOR

MAPCOM SYSTEMS

By: _____

Printed Name: John Granger

Title: President

Date: _____

LICENSEE

JAMES MADISON UNIVERSITY

By: _____

Printed Name: _____

Title: _____

Date: _____

M4 is a registered trademark of Mapcom Systems.

Software, Support and Services Proposal

Based on the scope of the RFP Mapcom recommends the following software package. All of the following are one-time cost except the the “Maintenance Services” which is renewed annually.

Software Licenses	Total
Limited University Enterprise License: 8 Seats of following modules for use by the staff of The James Madison University for the management of the James Madison University campus within the City of Harrisonburg.	
M4[®] University Management Suite (8) M4 [®] Foundation M4 [®] Work Order M4 [®] Fiber M4 [®] Conduit Manager M4 [®] Network Equipment Manager (2) of these 8 seats, 2 will also have ISP functionality to build templates)	\$197,900
M4[®] Consoles and Field Managers M4 [®] Fiber Field Managers (5) M4 [®] Standard Consoles (10)	\$20,000
Import and Export Functionality M4 [®] Universal Translator – SQL Database Version with M4 Plug In (1 fixed seat)	\$11,025
<i>State of Virginia University Lighthouse Partner Incentive – 40%</i>	<i>-(\$91,570)</i>
Software Subtotal	\$137,355

Mapcom also offers other modules that are outside the scope of this RFP, but may be of future interest to James Madison University. M4 GPS Tools, M4 Circuits, M4 Web Console, and M4 Data Integration Engine and Pinnacle Integration Cartridge.

Should Mapcom be fortunate enough to be selected as the software provider of choice, we would recommend that additional examination of these modules and number of seats to provide the best solution and most logical path forward for James Madison University.

Professional Services

Software Related Services	Total
Maintenance Services - 18% of current software license fee annually Free Software Upgrades Unlimited Software Support (Telephone, Email, Online) Annual Process Evaluation Scheduled Online Training Sessions User Group Membership M4 Knowledge Base	First Year Included
Project Set Up, Configuration and Testing Configuration Hours (235) can be used for the following: 2 Day Onsite Implementation Planning Meeting with Mapcom Project Manager Project Configuration, Setup and Testing Land base Set up and Configuration City of Harrisonburg and James Madison University Campus Setup Google Maps Aerial Photography Database Table Configuration Layer Configuration Symbology Configuration Conduit Configuration and Testing Work Order Configuration and Testing MapSync Server and Setup 4 Laptops Universal Translator Import/Export Workbench Development and Testing <i>Implementation Management:</i> M4 Implementation Process leadership M4 Project planning Tracking and management of project risks and issues Project communications <i>Solution Requirements</i> Business and Functional requirements Reporting Requirements <i>Process Flows</i> Discovery of current-state processes Document future-state processes <i>Testing Strategy</i> Create test strategy & planning Develop test cases <p>*Blocks of configuration hours do not represent fixed fees that are guaranteed to cover all required conversion and configuration projects listed. Configuration, testing and management of the projects listed may require less or more hours based on customer-specific variables such as the type and accuracy of the data provided, complexity of intended workflow, additions requested to standard integration features and/or delays in data readiness, project reviews and incremental milestone approvals.</p> <p>*Additional hours will be invoiced @ 110 per hour. If purchased in bundles of 50 hours or more, the rate will be \$100 per hour. These rates are valid through 12/31/15. Unused hours can be applied towards maintenance or other Mapcom products.</p>	\$23,500
Software Related Services Total	\$23,500

Conversion and Consolidation Services

Conversion/Consolidation Services	Total
<p>Block of TBD hours to be used for conversion/consolidation of OSP records and terminations:</p> <ul style="list-style-type: none"> • Import of CAD and .SHP as built records of Fiber and Conduit with FME workbench • Clean up of imported OSP elements • Import or create records based on data from fiber termination spreadsheets • Associate fibers with conduit ducts and sub-ducts • Create splicing records of fiber in M4 based off of available as built data • Establish tabular relationship between data • Create equipment templates • Establish sourcing and connectivity <p>Standard Hourly Rates</p> <ul style="list-style-type: none"> Digitizer (\$73 per hour) GIS Analyst (\$78 per hour) Project Manager (\$100 per hour) Data Integration Specialist (\$105 per hour) Data Integration Manager (\$115 per hour) Junior Programmer (\$105 per hour) Product Manager (\$125 per hour) Onsite Trainer (\$150 per hour) Network Specialist (\$150 per hour) Production Programmer (\$150 per hour) Senior Management (\$165 per hour) Senior Programmer (\$165 per hour) Technical Director (\$165 per hour) Quality Manager (\$165 per hour) <p><i>Standard hourly rates are valid through 12/31/2015</i></p>	<p>Estimated \$20,000 - \$50,000 depending on Scope of Mapcom Effort</p>
Conversion/Consolidation Services Total	Estimated \$20,000 - \$50,000

Travel time and expenses are NOT included in these prices.

Training:

Professional Training	Total
<p>M4® Custom Training</p> <ul style="list-style-type: none"> Training Planning 4 days Software Training on James Madison University project 16 hours online mentoring / training First year M4 User's Conference registration for 2 <p><i>Training class ration is 1:5 - Supplemental training staff @ \$800/Day</i></p>	<p>\$8,590</p>
Professional Training Subtotal	\$8,590

Travel time and expenses are NOT included in these prices

Investment Total

Investment Totals	Total
Software	\$137,355
Software Related Services	\$23,500
Conversion and Consolidation Services	\$20,000 - \$50,000
Professional Training	\$8,590
Investment Total	\$189,445 – \$219,445

PAYMENT TERMS: At the execution of this agreement 40% (\$TBD) is due net 30 days. The remaining 60% (\$TBD) is due net 120 days.

Mapcom's Standard Payment Terms are stated above. However, if selected Mapcom is willing to structure monthly or annual terms, as well as lease options, to accommodate the needs of James Madison University.

Upon receipt of all fees a permanent license will be issued. Any additional professional services will be invoiced monthly as the work is completed and are due net 15 days. Mapcom Systems reserves the right to impose late fees of 1% per month for amounts due over 30 days.

TRAVEL EXPENSES: Mapcom Systems' travel time and expenses are billed at cost,

Anticipated Travel Expenses	
Implementation Planning (2 Days)	
On-Site Training (4 Days)	
Estimate Based on the Following Factors	
- Hotel Lodging	
- Car Rental	
- Employee Meals	
- Fuel Costs	
- Travel Time	
Estimated Travel Expenses: Invoiced as incurred not to exceed \$5,000.00 without written consent of the James Madison University	\$TBD

EXPIRATION: Unless executed, this agreement expires 3/1/2015.

CONFIDENTIALITY: James Madison University and Mapcom Systems agree to keep all terms and conditions of this agreement confidential.

MAINTENANCE SERVICES: Includes telephone support for business days between the hours of 8:00 AM and 5:00 PM Eastern time with extended support hours until 8 PM with an on call technician. Users with current maintenance receive software updates for software modules that they own.

SURVEYS, REFERENCES and PRESS RELEASE: James Madison University agrees to complete Mapcom Systems' periodic customer satisfaction surveys, and if requested serve as a customer reference and showplace account. If requested, James Madison University will host mutually agreed upon site visits. James Madison University understands that shortly after contract signing Mapcom Systems will issue a standard press release announcing that James Madison University has become a Mapcom Systems customer.

IV. ATTACHMENTS

[Attachment A](#): Offeror Data Sheet (Completed)

[Attachment B](#): Small, Women and Minority-owned Businesses (SWaM) Utilization Plan (Completed)

[Attachment C](#): Standard Contract Sample

TO BE COMPLETED BY OFFEROR

- _____

- | CLIENT | LENGTH OF SERVICE | ADDRESS | CONTACT PERSON/PHONE # |
|------------|-------------------|------------|------------------------|
| [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] |
| | | [REDACTED] | [REDACTED] |
| | | [REDACTED] | [REDACTED] |
| [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] |
| | | [REDACTED] | [REDACTED] |
| | | [REDACTED] | [REDACTED] |
| [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] |
| | | [REDACTED] | [REDACTED] |
| | | [REDACTED] | [REDACTED] |
| [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] |
| | | [REDACTED] | [REDACTED] |
| | | [REDACTED] | [REDACTED] |
| [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] |
| | | [REDACTED] | [REDACTED] |
| | | [REDACTED] | [REDACTED] |

- _____

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ATTACHMENT A
OFFEROR DATA SHEET
TO BE COMPLETED BY OFFEROR

5. RELATIONSHIP WITH THE COMMONWEALTH OF VIRGINIA: Is any member of the firm an employee of the Commonwealth of Virginia who has a personal interest in this contract pursuant to the [CODE OF VIRGINIA](#), SECTION 2.2-3100 – 3131?

 IF YES, EXPLAIN:

RETURN OF THIS PAGE IS REQUIRED

ATTACHMENT B

Small, Women and Minority-owned Businesses (SWaM) Utilization Plan

Offeror Name: __Mapcom Systems, LLC__ **Preparer Name:** Lake Stockdreher

Date:1/2/2015

Is your firm a **Small Business Enterprise** certified by the Department of Minority Business Enterprise?

Yes____ No X____

If yes, certification number: _____ Certification date: _____

Is your firm a **Woman-owned Business Enterprise** certified by the Department of Minority Business Enterprise? Yes____ No X____

If yes, certification number: _____ Certification date: _____

Is your firm a **Minority-Owned Business Enterprise** certified by the Department of Minority Business Enterprise? Yes____ No X____

If yes, certification number: _____ Certification date: _____

Instructions: *Populate the table below to show your firm's plans for utilization of small, women-owned and minority-owned business enterprises in the performance of the contract. Describe plans to utilize SWAMs businesses as part of joint ventures, partnerships, subcontractors, suppliers, etc.*

Small Business: "Small business " means a business, independently owned or operated by one or more persons who are citizens of the United States or non-citizens who are in full compliance with United States immigration law, which, together with affiliates, has 250 or fewer employees, or average annual gross receipts of \$10 million or less averaged over the previous three years.

Woman-Owned Business Enterprise: A business concern which is at least 51 percent owned by one or more women who are U.S. citizens or legal resident aliens, or in the case of a corporation, partnership or limited liability company or other entity, at least 51 percent of the equity ownership interest in which is owned by one or more women, and whose management and daily business operations are controlled by one or more of such individuals. **For purposes of the SWAM**

Program, all certified women-owned businesses are also a small business enterprise.

Minority-Owned Business Enterprise: A business concern which is at least 51 percent owned by one or more minorities or in the case of a corporation, partnership or limited liability company or other entity, at least 51 percent of the equity ownership interest in which is owned by one or more minorities and whose management and daily business operations are controlled by one or more of such individuals. **For purposes of the SWAM Program, all certified minority-owned businesses are also a small business enterprise.**

All small, women, and minority owned businesses must be certified by the Commonwealth of Virginia Department of Minority Business Enterprise (DMBE) to be counted in the SWAM program. Certification applications are available through DMBE at 800-223-0671 in Virginia, 804-786-6585 outside Virginia, or online at www.dmbv.virginia.gov (Customer Service).

RETURN OF THIS PAGE IS REQUIRED

ATTACHMENT B (CNT'D)

Small, Women and Minority-owned Businesses (SWaM) Utilization Plan

Procurement Name and Number: OSP Infrastructure Management System RFP# MLO-827 12/22/2014
 Listing of Sub-Contractors, to include, Small, Woman Owned and Minority Owned Businesses
 for this Bid/Proposal and Subsequent Contract Date Form Completed

Offeror / Proposer:
 Mapcom Systems
 Firm

601 Southlake Boulevard Richmond, VA 23236
 Address Lake Stockdreher
 Contact Person/No.

Sub-Contractor's Name and Address	Contact Person & Phone Number	DMBE Certification Number	Services or Materials Provided	Total Subcontractor Contract Amount (to include change orders)	Total Dollars Paid Subcontractor to date (to be submitted with request for payment from JMU)
Mapcom does not use sub-contractors	N/A	N/A	N/A	N/A	N/A

(Form shall be submitted with proposal and if awarded, again with submission of each request for payment)

ATTACHMENT C



**COMMONWEALTH OF VIRGINIA
STANDARD CONTRACT**

Contract No. _____

This contract entered into this _____ day of _____, 20____, by _____ hereinafter called the "Contractor" and Commonwealth of Virginia, James Madison University called the "Purchasing Agency".

WITNESSETH that the Contractor and the Purchasing Agency, in consideration of the mutual covenants, promises and agreements herein contained, agree as follows.

SCOPE OF CONTRACT: The Contractor shall provide the services to the Purchasing Agency as set forth in the Contract Documents.

PERIOD OF PERFORMANCE: From _____ through _____

The contract documents shall consist of:

- (1) This signed form;
- (2) The following portions of the Request for Proposals dated _____:
 - (a) The Statement of Needs,
 - (b) The General Terms and Conditions,
 - (c) The Special Terms and Conditions together with any negotiated modifications of those Special Conditions;
 - (d) List each addendum that may be issued.
- (3) The Contractor's Proposal dated _____ and the following negotiated modification to the Proposal, all of which documents are incorporated herein.
 - (a) Negotiation Summary dated _____.

IN WITNESS WHEREOF, the parties have caused this Contract to be duly executed intending to be bound thereby.

CONTRACTOR:

PURCHASING AGENCY:

By: _____
(Signature)

By: _____
(Signature)

(Printed Name)

(Printed Name)

Title: _____

Title: _____



December 16, 2014

ADDENDUM NO. ONE

TO ALL OFFERORS:

REFERENCE: Request for Proposal No: **RFP# MLO-827**
Dated: **November 24, 2014**
Commodity: **Outside Plant (OSP) Infrastructure Management System**
RFP Closing On: **January 6, 2015 at 2:30 p.m. (Eastern)**

Please note the clarifications and/or changes made on this proposal program:

1. QUESTION: My firm's application is purchased on a per license basis and provides full edit capabilities. What is the total number of full edit users needed by the various organizations at James Madison University?

ANSWER: *Five (5) full edit users.*

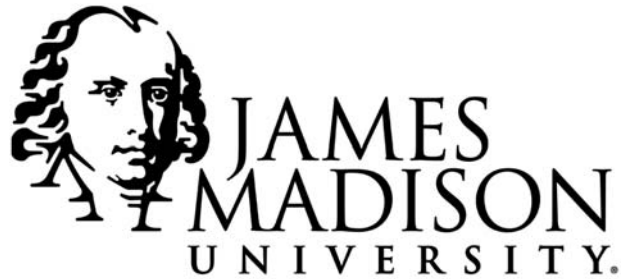
Signify receipt of this addendum by initialing "*Addendum #1*" on the signature page of your proposal.

Sincerely,

Matasha Owens, MPA, VCO, CUPO
Buyer Senior
Phone: (540-568-3137)

PROCUREMENT SERVICES

MSC 5720
752 Ott Street
First Floor
Harrisonburg, VA 22807
540.568.3145 Phone
540.568.7936 Fax



Request for Proposal

RFP # MLO-827

**Outside Plant (OSP) Infrastructure
Management System**

November 24, 2014



College of William and Mary
George Mason University
James Madison University
Old Dominion University
Radford University
The University of Virginia
Virginia Commonwealth University
Virginia Military Institute
Virginia Tech

REQUEST FOR PROPOSAL
RFP # MLO-827

Issue Date: November 24, 2014
Title: Outside Plant (OSP) Infrastructure Management System
Issuing Agency: Commonwealth of Virginia
James Madison University
Procurement Services MSC 5720
752 Ott Street, Wine Price Bldg.
First Floor, Suite 1023
Harrisonburg, VA 22807

Period of Contract: From Date of Award Through One Year (Renewable)

Sealed Proposals Will Be Received Until 2:30 p.m. on January 6, 2015 For Furnishing The Services Described Herein.

SEALED PROPOSALS MAY BE MAILED, EXPRESS MAILED, OR HAND DELIVERED DIRECTLY TO THE ISSUING AGENCY SHOWN ABOVE.

All Inquiries For Information and Clarification Should Be Directed To: Matasha Owens, MPA, VCO, CUPO, Buyer Senior, Procurement Services, owensml@jmu.edu, 540/568-3137, (Fax) 540/568-7936 not later than five business days before the proposal closing date.

NOTE: THE SIGNED PROPOSAL AND ALL ATTACHMENTS SHALL BE RETURNED

In compliance with this Request for Proposal and to all the conditions imposed herein, the undersigned offers and agrees to furnish the goods/ services in accordance with the attached signed proposal or as mutually agreed upon by subsequent negotiation.

Name and Address of Firm:

By: _____
(Signature in Ink)
Name: _____
(Please Print)

Title: _____

Date: _____ Phone: _____
Web Address: _____ Fax #: _____
Email: _____

ACKNOWLEDGE RECEIPT OF ADDENDUM: #1 _____ #2 _____ #3 _____ #4 _____ #5 _____ (please initial)

SMALL, WOMAN OR MINORITY OWNED BUSINESS:

☐ YES; ☐ NO; IF YES ⇒ ⇒ ☐ SMALL; ☐ WOMAN; ☐ MINORITY **IF MINORITY**: ☐ AA; ☐ HA; ☐ AsA; ☐ NW

Note: This public body does not discriminate against faith-based organizations in accordance with the Code of Virginia, § 2.2-4343.1 or against a bidder or offeror because of race, religion, color, sex, national origin, age, disability, or any other basis prohibited by state law relating to discrimination in employment.

REQUEST FOR PROPOSAL

RFP # MLO-827

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[A.](#) Offeror Data Sheet

[B.](#) SWaM Utilization Plan

[C.](#) Sample of Standard Contract

I. PURPOSE

The purpose of this Request for Proposal (RFP) is to solicit sealed proposals from qualified sources to enter into a contract to provide an Outside Plant (OSP) Infrastructure Management System for James Madison University (JMU), an agency of the Commonwealth of Virginia. Initial contract shall be for one (1) year with an option to renew for nine (9) additional one-year periods.

II. BACKGROUND

James Madison University (JMU) is a comprehensive public institution in Harrisonburg, Virginia with an enrollment of approximately 20,000 students and 3,000 faculty and staff. Further information about the University may be found at the following website: <http://www.jmu.edu>.

The JMU Telecommunications Department (Telecom) is tasked with installing and maintaining all Outside Plant (OSP) facilities for the university to include Single and Multi-Mode Fiber Optic cabling, Copper cabling in various pair counts, and Coax cabling for the CATV system. The OSP facilities are provided via a mix of manhole, conduit, QUAZITE, tunnels, bridge spans, and aerial assets. The OSP facilities have been installed over a span of 30+ years and are documented in various methods including CAD drawings, as-built drawings, spreadsheets, word processing documents, and hand-drawn sketches. Additionally, some information may be based on tacit knowledge of current employees and human memory. The documentation is not stored in a centrally accessible location.

The University has numerous systems that may be considered for integration including Colero-Pinnacle software (version 6.4.3) Telecommunication Lifecycle Management System, PeopleSoft Financials version 9.1 (PeopleTools 8.5x), PeopleSoft HCM 9.1 (PeopleTools 8.5x), PeopleSoft Campus Solutions version 9.0 (PeopleTools 8.5x), PeopleSoft Application Portal version 9.1 (PeopleTools 8.5x), and DaProSystems Public Safety System. The university's e-mail system for Faculty / Staff is Exchange 2013.

III. SMALL, WOMAN-OWNED AND MINORITY (SWAM) PARTICIPATION

It is the policy of the Commonwealth of Virginia to contribute to the establishment, preservation, and strengthening of small businesses and businesses owned by women and minorities and to encourage their participation in State procurement activities. The Commonwealth encourages contractors to provide for the participation of small businesses, and businesses owned by women and minorities through partnerships, joint ventures, subcontracts, and other contractual opportunities. Attachment B contains information on reporting spend data with subcontractors.

IV. STATEMENT OF NEEDS

James Madison University is seeking an Outside Plant (OSP) Infrastructure Management System that will allow for the capture and import of existing records formats and institutional data in order to provide for standardized documentation, centralized storage, and ongoing maintenance of its current and future OSP facilities. The system must be capable of generating detailed work orders, storing detailed provisioning/configuration data, providing detailed configuration and work order reports, and providing accurate GIS mapping. The Contractor shall have available and be able to demonstrate the use and functions of the following components and/or features for a Telecom Outside Plant (OSP) Infrastructure Management System. It is expected that any proposed software will already be fully developed, tested, offered publicly for sale and available immediately for installation. For this project, the University is not interested in a custom developed software. Describe in detail the manner in which each item is addressed by the system.

A. APPLICATION FUNCTIONALITY:

1. Relating Spatial and Non-spatial Data: Describe the solutions ability to place the following items on a map and link the map object to non-spatial attributes stored in a relational database.
 - a. Buildings
 - b. Access points (handholes, manholes, pedestals, etc.)
 - c. Fiber distribution panels
 - d. Cable spans (fiber, copper)
 - e. Splice enclosures
 - f. Conduit
 - g. Inner-duct
 - h. Poles
 - i. Emergency Phones
2. Splicing Capabilities: Describe the solutions ability to:
 - a. Splice individual fibers from various cables at a splice enclosure.
 - b. Show a splice schematic for any splice location.
 - c. List the cable bundles and fiber colors for the splice schematic.
 - d. Reflect splice changes when a route is traced through that location. State if the change ripples through the database.
 - e. Handle copper splicing with bridge taps.
3. CATV Information Capabilities: Describe the solutions ability to:
 - a. Map CATV head-end equipment.
 - b. Fully document distribution equipment including but not limited to power supplies, amplifiers, directional couplers, splitters, and taps.
4. Cable Information Capabilities: Describe the solutions ability to:
 - a. Show the cable attributes.
 - b. List the cable color code.
 - c. Click on the cable on the map and obtain the end to end connectivity throughout the network.
 - d. Track the cable sequential markings for true physical cable length.

- e. Show slack loop locations with the amount of slack loop at the location.
 - f. Edit color codes for fiber and copper cables of all sizes.
 - g. Determine/report which pairs of each spans/route may have problems, such as a break, or if the span/route contains different fiber types.
 - h. List/report/label which pairs of each span/route are leased and if so, to whom.
 - i. Track the placement of the cable such as underground, aerial, etc.
 - j. Provide a general scale factor for the cable that will take the length from a physical length to an optical length.
 - k. Identify the owner of the cable.
 - l. Relate to a materials database that has information about various types of cable.
5. Access Point Information: Describe the solutions ability to:
- a. Track size and type of manhold, handhole, pedestal, etc.
 - b. Show the attributes of the access point.
 - c. Associate all cables with the access point they go through.
 - d. Associate all conduit with the access point they go to.
 - e. Show any lid markings on the manhole.
 - f. Link to outside data sources such as drawings, photos, etc. that relate to the access point.
 - g. Select an access point and easily view all sequential markings and part number markings from each cable in that access point.
 - h. Relate splice enclosures to the access point they are contained in.
6. Splice Enclosure Information: Describe the solutions ability to:
- a. Relate to cables entering the enclosure.
 - b. Track who entered what enclosure, when, and with what work order number.
 - c. Label enclosure information on a map next to the enclosure.
7. Fiber Distribution Frame Information (LIU): Describe the solutions ability to:
- a. Show the FDF on a map and relate it to the building it belongs in.
 - b. Graphically show the front of the FDF.
 - c. Relate the FDF to the cable(s) entering it.
8. Termination Information: Describe the solutions ability to:

- a. Show how each fiber/pair of each outside plant cable entering a building is terminated to each coupler panel /insert in a Fiber Distribution Frame (FDF).
 - b. Show the status for each coupler panel /insert.
 - c. Show the ring number for each coupler panel /insert.
 - d. Show the type of connector for each coupler panel /insert.
 - e. Give a priority for each coupler panel /insert.
 - f. Show the user for each coupler panel /insert.
 - g. Select a coupler panel /insert and show the associated route that the signal would take as it goes throughout the network.
 - h. Select a coupler panel /insert and find a fault on the map when given a distance from that coupler panel /insert to the fault. The fault must be shown on a map and the results must also show the associated fiber/pair in the cable span that caused the fault.
 - i. Locate the FDF in a building when given room, bay, and shelf information.
 - j. Link to outside data sources such as drawings, photos, etc. that relate to the FDF.
 - k. Produce a report that shows all of the cable spans/splice locations /FDF's/etc. that the signal went through to arrive at the final destination when the route from a particular coupler panel /insert is highlighted.
 - l. Show patch cord connections between jacks of the FDF and other FDF's as well as electronic equipment.
 - m. Relate OTDR traces to coupler panel /inserts and display those traces in the native format that the traces were taken in.
 - n. Relate loss information to each coupler panel /insert and show a history of when past measurements had been taken.
 - o. Show how a route splits the signal and the various directions a signal may travel if an optical splitter or bridge tap is encountered.
 - p. Show a history of OTDR traces taken at the jack.
9. Documents: Describe the solutions ability to:
- a. Relate to engineering and other design documents and let you view them in their native format.
 - b. Easily view the relation between an object on the map and a document that will provide more detailed information.
10. Conduit Duct Bank: Describe the solutions ability to:
- a. Show the duct bank route.

- b. Relate the duct bank to the access points at either end.
- c. Track the length of the duct bank.
- d. Show which cables go in which inner duct.
- e. Indicate if duct bank is leased or not, and if so, to whom.
- f. Connect and track inner-duct; reserve it for future use.
- g. Show the depth of the duct bank at each access point it goes through.
- h. Show whether duct bank is encased in concrete, slurry, or is direct bury.
- i. Show type and size of duct bank (*PVC, Orangeburg, etc.*).

11. Poles: Describe the solutions ability to:

- a. Show poles on a map.
- b. Associate attributes such as pole type, owner, height, etc.
- c. Show the pole attachment list for all companies on a given pole.
- d. Show where infrastructure is positioned on the pole.

12. Design Work Orders: Describe the solutions ability to:

- a. Perform mid-level design for routes (mid-level will show the route, but not the engineering detail that would include utilities, etc.).
- b. Allow for keying in splicing information, testing the splice as far as connectivity, and printing out a splicing work order with associated location detail.
- c. Track work order numbers for enclosures, distribution frames, cable spans, etc.
- d. Telecom uses Pinnacle software (version 6.4.3) Telecommunication Lifecycle Management System as its business management system. Indicate if your solution integrates with the Pinnacle System and describe the process and extent of integration. Indicate any 3rd party software and support required for integration and any addition costs to perform the integration.

13. Information Technology Equipment: Describe the solutions ability to:

- a. Add network equipment such as routers and switches and identify the equipment rings.
- b. Relate the equipment with the fiber distribution frame jack it is connected to.
- c. Relate customers to the equipment.

14. Editing: Describe the solutions ability to:

- a. Draw a cable and, as you click on the enclosure or frame it terminates at, automatically relate the cable to that object in the database.

- b. Indicate a "sheath opening" and place an enclosure at the middle of a cable span and have the fibers/pairs in that cable automatically spliced together.
 - c. Click and add enclosures, access points, distribution frames, buildings, and slack loops with their associated non-spatial information.
- 15. Indicate if you have a preferred GPS data collection device for use with your product and indicate pricing per unit. Include any warranty and service options as well as any required training costs.
- 16. Describe requirements and devices to allow for field personnel to access, download, and upload changes to the system.
- 17. Describe the extent to which your solution could be leveraged to document the University's Inside Plant (ISP) preferably to jack level. Document any required hardware and software and associated costs.
- 18. Beyond system installation. Describe your approach to project management and provide a sample project plan.
- 19. JMU Facilities Management uses the ESRI ArcGIS product. Describe the extent of compatibility and file sharing between your product and ESRI ArcGIS.
- 20. The University utilizes the following coordinate system for the majority of its data. Describe the solutions ability to utilize this system or explain why a different system should be used.

NAD_1983_StatePlane_Virginia_North_FIPS_4501_Feet
WKID: 2283 Authority: EPSG

Projection: Lambert_Conformal_Conic
False_Easting: 11482916.666666666
False_Northing: 6561666.666666666
Central_Meridian: -78.5
Standard_Parallel_1: 38.03333333333333
Standard_Parallel_2: 39.2
Latitude_Of_Origin: 37.66666666666666
Linear Unit: Foot_US (0.3048006096012192)

Geographic Coordinate System: GCS_North_American_1983
Angular Unit: Degree (0.0174532925199433)
Prime Meridian: Greenwich (0.0)
Datum: D_North_American_1983
Spheroid: GRS_1980
Semimajor Axis: 6378137.0
Semiminor Axis: 6356752.314140356
Inverse Flattening: 298.257222101

- 21. If your solution is purely an ESRI ArcGIS solution, indicate the following in addition to equipment and software costs.
 - a. Number and skill level of all personnel required to deploy and maintain a server product solution.
 - b. Expected initial cost of staffing for defined personnel.

- c. Total cost of ownership for first year to include personnel costs.
- d. Ongoing yearly maintenance costs.

B. APPLICATION TECHNOLOGY:

1. State if the proposed solution is a complete system or if modules can be purchased separately. If modules can be purchased separately, list and describe the various modules, module inter-dependencies, and state associated cost.
2. Describe how the modules function as an integrated whole and detail any limitations in their ability to function independently from other modules.
3. Describe the application security features for data, for each module, and for the system. Describe all row-level security options as well as any field-level encryption available.
4. Describe any transactions or functions that are not done on a real time basis and list batch jobs required for this function.
5. Describe how menus are used within the system and if menus are customizable and/or configurable. Define what *customizable* and *configurable* mean for your application.
6. Describe the extent to which the user can configure or customize all forms, reports, input/output screens, formats, etc. to brand the application for JMU. Define what *modifiable*, *customizable* and *configurable* mean for your application.
7. Describe the tools and expertise which university technical staff would use to support, troubleshoot, configure or customize the application.
8. Describe other customizations available and associated cost, i.e., hourly and fixed fee.
9. Describe how configuration and customization will affect future releases of software.
10. Describe workflow functionality included with the application and provide a list of any function for which workflow is already built and delivered.
11. Describe how JMU's e-mail systems would be incorporated with your system's operation. (*Faculty/Staff – on-premise Exchange and Students – Office365*).
 - a. Describe third party e-mailing, if this functionality is part of your solution. What messaging service is utilized by your system? Describe details of how messages look (*from, etc.*).

C. REPORTING:

1. Describe application approach/strategy for reporting including the approach to ad-hoc reporting for power users as well as the occasional user.
2. Describe all reporting tools supported and how they integrate with the product. State if application licensing includes any of the products.
3. Provide a list of all reports delivered as part of the base product including a short description of each. Also include a sample of several reports for review. Describe the system's ability to provide the following:

- a. The ability to select any region to determine the amount of sheath length, fiber length, or route length.
 - b. A materials report - amount of materials being used and where.
 - c. A termination report - how fibers on various rings are allocated.
 - d. A "taper" report - how a cable tapers throughout the network, where each fiber/pair ends.
 - e. A fiber use report - what is available, and where.
 - f. A duct use report - what is available, and where.
 - g. A cable placement report - what is aerial, underground, etc. and the location.
 - h. The ability to customize database queries.
- 4. Describe reporting output formats available.
 - 5. Describe the types of reporting that would typically require Information Technology staff support.

D. SERVICES:

- 1. Describe available training options, including location (*manufacturer training facility, customer's site, online CBT, etc.*) and provide a catalog of training offerings and their associated costs. Response should include differentiation between technical staff and end-user training.
- 2. Describe the complete training documentation/materials offered upon purchase of the solution.
- 3. Describe services available from your company and/or partners including pricing information that may be included in the final contract. Examples of services that could be included are:
 - a. Implementation
 - b. Development
 - c. Project Management
 - d. Architecture and Design
 - e. Capacity Planning
 - f. Installation and Configuration
 - g. Performance and Scalability
 - h. Conversion
 - i. Monitoring, administration and upgrades
 - j. Operations metrics
- 4. Describe the support options available through your company including on-going support of the

application. Describe what portions of support to be performed by IT, the customer versus the vendor.

5. If support is provided to end-users directly as part of your services, provide the SLA under which you would operate.

E. GENERAL:

1. Describe typical implementation timeline and project plan and include examples of previously used project plans.
2. Describe your approach to test and production environments including licensing requirements and any additional costs.
3. Describe how product(s) addresses accessibility to ensure the application is accessible to people with disabilities. Describe testing for adherence to accessibility guidelines and standards. Provide documentation of the testing performed and results of that testing including the Web Accessibility and Template Guide (WATG located at <http://www.vadsa.org/watg>).
4. Describe the Help system(s), including electronic help files available, and how it can be modified.
5. Describe your relationship with the vendor(s) of any third party tools (*i.e. reporting tools, application server and DBMS vendors, etc.*) included in this proposal including licensing, costs, support for the product(s), and versions (*e.g. full or modified*).
6. JMU is interested in developing a strategic relationship with the successful vendor. Provide information regarding ideas on how such a relationship can prove mutually beneficial.
7. Describe active user groups and how they function.
8. Describe licensing. If licensing is based on number of users, describe the models used to obtain numbers both for current and future usage.

F. TECHNICAL:

1. Provide a detailed diagram of the typical architecture/technical environment required for the system. List all protocols and ports used for communications and indicate which components are clients and which are servers and whether the communications are fully, partially, or not encrypted. Specify any communications paths where unencrypted authentication or other sensitive data are passed. List all third party dependent integration points and data paths including any web content included from or sent to outside parties.
2. Describe the toolset from which your application is derived.
3. Describe hardware and software requirements for the proposed system(s) along with any sizing assumptions made to arrive at those requirements.
4. Describe supported server hardware and/or virtualized platforms. Describe support for the following operating systems: Linux and Windows. If virtualization is supported, what virtualization technologies are supported including what components can be virtualized?
5. Describe support for load balancing and system failover including any and all vendor specific preferences. Also include any vendor specific configuration guides.

6. Describe how scalability is accomplished as the criticality of the system(s) and number of users increase.
7. Describe the system capabilities and options for the backup and restoration of the system components (example: database)
8. Describe the average client response time for all the various functions of the proposed system.
9. Describe services not available during scheduled maintenance.
10. Describe any standard and proprietary APIs, integration/connection resources, and development languages and tools that extend your toolset.
11. Describe the client operating system and browser requirements for your toolset. List any additional client-side software required for development/management of your toolset.
12. Describe any aspects of your application that do not support the Macintosh. Describe any changes to default browser or client security settings.
13. Describe any functionality loss, installation problems, upgrade problems, or other difficulties if client applications are run using a regular user account.
14. Describe your support for mobile technologies including technology used, distribution method, functionality, integration and development toolset and security.
15. Describe requirements for application servers. Describe specific platform recommendations or requirements for certified configuration (*e.g. WebLogic, and Apache Tomcat*); include either specific application server version or required J2EE version.
16. Describe support for web servers (*i.e. Apache, Weblogic and IIS*).
17. Describe the supported database platforms including versions and include any information on additional features required of the DBMS needed to support the functionality of your system as proposed.
18. Describe your SLA to stay current with versions of software utilized by your product.
19. Provide an overall compatibility matrix of software required to operate your system. As appropriate, and at a minimum, this should include operating systems, drivers, browsers, JDKs, and compilers.
20. Describe support for real-time access to data through some other method (*e.g. on-the-fly access to database through ODBC, ADO, JDBC, LDAP, etc. allowing dynamic web content and applications*).
21. Describe support for integration with JMU's existing systems listed in the background statement including pricing, availability of APIs, toolkits for creating connectors, available services, etc. Provide a full list of application connectors. Describe any other methods of integration supported.
22. Describe support for inclusion of your application as part of the PeopleSoft application portal. Describe any pagelets available and how that integration would occur. Describe support for delegating authentication for the pagelet Oracle Access Manager Single Sign and/or PeopleSoft

single-sign-on. Describe support for other single-sign-on technologies.

23. Describe your product's support for Web Services/Service Oriented Architecture based standards such as JSR 168 Portlet development standard, and JSR 172 Web Services Interoperability Standard.
24. Describe the ability for your product to create consumable web standards based content (*such as RSS feeds, hcard, ical, and other microformat specifications*) and the ability to pull XML based content from your system and any APIs supporting the delivery of such data/content.
25. Describe storage including file formats.
26. Describe operational monitoring and reporting capabilities. Include the capabilities for application, content, access, and storage metrics, security and the method for obtaining them (*e.g. command line tools, SNMP, and GUI*).

G. SECURITY:

1. Describe how users and processes are authenticated before gaining access to data and services. Include authentication between components and between the product and external services. Describe your support for the following:
 - a. LDAP/S
 - b. Native AD authentication
 - c. Shibboleth 1 and 2
 - d. Kerberos
 - e. SAML
 - f. Other federated systems
 - g. OpenID
 - h. Any two-factor authentication system
 - i. Certificate-based authentication
 - j. Other
2. IF you support LDAP for authentication or authorization, describe use of LDAP(S). List the LDAP(S) servers integrated with product(s). Describe integration and support with LDAP(S) user database for authentication (*Active Directory/OID*) and authorization using attributes/group memberships.
3. Describe handling access to licensed/copyrighted content where access must be restricted.
4. Describe your use of authentication credentials and associated attributes, group membership, roles, etc. to make authorization decisions. Include method(s) and granularity of authorization of access to data and services (e.g. individual accounts, IP address, unix groups, LDAP groups, Active Directory accounts.)

5. Describe how and where any sensitive data (*e.g. credit card, financial data, SSN, FERPA, HIPAA or other legally regulated data*) including authentication credentials, is stored on clients, servers, and participating external devices. Is it cryptographically protected? If so, provide details on cryptographic protocols, procedures, and key protection.
6. Describe auditing and logging capabilities and data. Include the information recorded with each event. For example,
 - a. Successful and failed authentication or bind
 - b. Successful and failed access authorization
 - c. Successful and failed policy change
7. Describe the effects of auditing and logging on a production implementation. Is the proposed system sized for full audit capability? Describe auditing methodologies and capabilities for managing integrity and change control. Describe elements captured with the audit process.
 - a. Describe enterprise audit capabilities
 - b. List the events and logs that can be sent to an external syslog server
 - c. List the events and logs that cannot be sent to a syslog server
8. Provide up to date, signed documentation that the offered solution and vendor is compliant with all PCI DSS and PADSS requirements if applicable. Provide documentation of your most current PCI system scan and the signature page from your Record of Compliance (ROC) or Attestation of Compliance (AOC).

H. MAINTENANCE AND SUPPORT:

Because consistency and stability of the operating environment and rapid correction of system failures are critical to James Madison University, major consideration will be given to the amount and extent of hardware and software maintenance coverage and to the quality of maintenance.

1. Describe the maintenance philosophy including frequency of updates, approach to completing updates, and model for obtaining them.
2. Describe capabilities for remote support and specify days of week, time of day, etc. Indicate what access to accounts and systems is required. Describe the locations from which this activity would take place. Describe any maintenance options/tiers and whether they vary in cost by time of day, response time, etc.
3. Describe services that may be required in the normal course of operating the system that are not covered under the maintenance contract.
4. Describe the maintenance costs for the first year, and, on the basis of an annually renewable contract, the maintenance costs for each of the following five (5) years.
5. Describe the procedures for obtaining services for all types of maintenance (*e.g. installation of corrective code, enhancements, applicable "escalation" procedures for providing additional assistance in diagnosing a failure that is not resolved in a timely manner to include notification procedures and timing as well as what higher levels of assistance will be made available.*)

6. Describe the nature of any continuing research and development performed by the manufacturer to detect and correct problems in the system design, to improve efficiency, and/or to enhance the capabilities of the system proposed.
7. Describe your approach to security reviews during each phase of the software development lifecycle.
8. Describe the procedures followed in distribution of information to James Madison University pertinent to system problems encountered at other locations, along with the solutions to those problems, when such information is relevant to the University's software.
9. Describe procedure for handling upgrades. Specify how often upgrades are made to the application software and how "patches" and "fixes" to the systems are handled. Describe if and how your product impacts our ability to apply security updates in a timely manner to underlying or supporting products (*e.g. Windows, Linux, Java, Oracle, MS Office, Web server*). Timely is defined as no later than 30 days from the time of vendor release.
10. Describe the nature of system enhancements in development that are scheduled for release in the next twelve months.
11. Describe all responsibilities of both the contractor and James Madison University in the isolation and diagnosis of system failures.
12. Describe your "escalation" procedure.

I. PRIVACY:

1. Provide your privacy statement.
2. Identify the type/specific information being collected (*User Data – Anonymous or Personally Identifiable*).
3. Specify who collects the information.
4. Specify why the information is collected.
5. Describe how the information is collected (*explicitly, via Cookies, via Web Bugs, etc.*)
6. Describe how the information is used.
7. Specify how long the information is retained.
8. Describe how the information is stored and kept.
9. Describe how the information is secured.
10. Specify whether you share the information with another party. If information is shared with another party, then respond to Items a. through h. below relative to this information.
 - a. Identify the type/specific information being collected (*User Data – Anonymous or Personally Identifiable*).
 - b. Specify who collects the information.

- c. Specify why the information is collected.
 - d. Describe how the information is collected (*explicitly, via Cookies, via Web Bugs, etc.*)
 - e. Describe how the information is used.
 - f. Specify how long the information is retained.
 - g. Describe how the information is stored and kept.
 - h. Describe how the information is secured.
11. Specify whether you collect information on JMU or any party related to JMU from third parties. Respond to Items a. through i. below relative to this information.
- a. Identify the type/specific information being collected (*User Data – Anonymous or Personally Identifiable*).
 - b. Specify who collects the information.
 - c. Specify why the information is collected.
 - d. Describe how the information is collected (*explicitly, via Cookies, via Web Bugs, etc.*)
 - e. Describe how the information is used.
 - f. Specify how long the information is retained.
 - g. Describe how the information is stored and kept.
 - h. Describe how the information is secured.
 - i. Specify whether you share the information with another party.
12. Specify the transaction information collected/maintained.

V. PROPOSAL PREPARATION AND SUBMISSION

A. GENERAL INSTRUCTIONS:

To ensure timely and adequate consideration of your proposal, offerors are to limit all contact, whether verbal or written, pertaining to this RFP to the James Madison University Procurement Office for the duration of this Proposal process. Failure to do so may jeopardize further consideration of Offeror's proposal.

1. RFP Response: In order to be considered for selection, the **Offeror shall submit a complete response to this RFP**; and shall submit to the issuing Purchasing Agency:
 - a. **One (1) original and six (6) copies** of the entire proposal, INCLUDING ALL ATTACHMENTS. Any proprietary information should be clearly marked in accordance with 3.f below.

- b. **One (1) electronic copy in WORD format or searchable PDF** (*CD or flash drive*) of the entire proposal, INCLUDING ALL ATTACHMENTS. Any proprietary information should be clearly marked in accordance with 3.f below.
- c. Should the proposal contain **proprietary information**, provide **one (1) redacted hard copy** of the proposal and attachments **with proprietary portions removed or blacked out**. This copy should be clearly marked “*Redacted Copy*” on the front cover. The classification of an entire proposal document, line item prices and/or total proposal prices as proprietary or trade secrets is not acceptable. JMU shall not be responsible for the Contractor’s failure to exclude proprietary information from this redacted copy.

No other distribution of the proposal shall be made by the Offeror.

- 2. The version of the solicitation issued by JMU Procurement Services as amended by any addenda is the mandatory controlling version of the document. Any modification of or additions to the solicitation by the Offeror shall not modify the official version of the solicitation issued by JMU Procurement Services unless accepted in writing by the University. Such modifications or additions to the solicitation by the Offeror may be cause for rejection of the proposal; however, JMU reserves the right to decide, on a case by case basis, in its sole discretion, whether to reject such a proposal. If the modifications or additions are not identified until after the award of the contract, the controlling version of the solicitation document shall still be the official state form issued by Procurement Services.

3. Proposal Preparation:

- a. Proposals shall be signed by an authorized representative of the offeror. All information requested should be submitted. Failure to submit all information requested may result in the purchasing agency requiring prompt submissions of missing information and/or giving a lowered evaluation of the proposal. Proposals which are substantially incomplete or lack key information may be rejected by the purchasing agency. Mandatory requirements are those required by law or regulation or are such that they cannot be waived and are not subject to negotiation.
- b. Proposals should be prepared simply and economically, providing a straightforward, concise description of capabilities to satisfy the requirements of the RFP. Emphasis should be placed on completeness and clarity of content.
- c. Proposals should be organized in the order in which the requirements are presented in the RFP. All pages of the proposal should be numbered. Each paragraph in the proposal should reference the paragraph number of the corresponding section of the RFP. It is also helpful to cite the paragraph number, sub letter, and repeat the text of the requirement as it appears in the RFP. If a response covers more than one page, the paragraph number and sub letter should be repeated at the top of the next page. The proposal should contain a table of contents which cross references the RFP requirements. Information which the offeror desires to present that does not fall within any of the requirements of the RFP should be inserted at the appropriate place or be attached at the end of the proposal and designated as additional material. Proposals that are not organized in this manner risk elimination from consideration if the evaluators are unable to find where the RFP requirements are specifically addressed.
- d. As used in this RFP, the terms “must”, “shall”, “should” and “may” identify the criticality of requirements. “Must” and “shall” identify requirements whose absence will have a major negative impact on the suitability of the proposed solution. Items labeled as “should” or “may” are highly desirable, although their absence will not have a large impact and would be useful, but are not necessary. Depending on the overall response to the RFP, some individual “must” and

“shall” items may not be fully satisfied, but it is the intent to satisfy most, if not all, “must” and “shall” requirements. The inability of an offeror to satisfy a “must” or “shall” requirement does not automatically remove that offeror from consideration; however, it may seriously affect the overall rating of the offeror’s proposal.

- e. Each copy of the proposal should be bound or contained in a single volume where practical. All documentation submitted with the proposal should be contained in that single volume.
 - f. Ownership of all data, materials and documentation originated and prepared for the State pursuant to the RFP shall belong exclusively to the State and be subject to public inspection in accordance with the Virginia Freedom of Information Act. Trade secrets or proprietary information submitted by the offeror shall not be subject to public disclosure under the Virginia Freedom of Information Act; however, the offeror must invoke the protection of Section 2.2-4342F of the Code of Virginia, in writing, either before or at the time the data is submitted. The written notice must specifically identify the data or materials to be protected and state the reasons why protection is necessary. The proprietary or trade secret materials submitted must be identified by some distinct method such as highlighting or underlining and must indicate only the specific words, figures, or paragraphs that constitute trade secret or proprietary information. The classification of an entire proposal document, line item prices and/or total proposal prices as proprietary or trade secrets is not acceptable and will result in rejection and return of the proposal.
4. Oral Presentation: Offerors who submit a proposal in response to this RFP may be required to give an oral presentation of their proposal to James Madison University. This provides an opportunity for the offeror to clarify or elaborate on the proposal. This is a fact finding and explanation session only and does not include negotiation. James Madison University will schedule the time and location of these presentations. Oral presentations are an option of the University and may or may not be conducted. Therefore, proposals should be complete.

B. SPECIFIC PROPOSAL INSTRUCTIONS:

Proposals should be as thorough and detailed as possible so that James Madison University may properly evaluate your capabilities to provide the required services. Offerors are required to submit the following items as a complete proposal:

1. Return RFP cover sheet and all addenda acknowledgments, if any, signed and filled out as required.
2. Plan and methodology for providing the goods/services as described in Section IV “*Statement of Needs*” of this Request for Proposal.
3. A written narrative statement to include, but not limited to the expertise, qualifications, and experience of the firm and resumes of specific personnel to be assigned to perform the work.
4. Offeror Data Sheet, included as Attachment A to this RFP.
5. Small Business Subcontracting Plan, included as Attachment B to this RFP. Offeror shall provide a Small Business Subcontracting plan which summarizes the planned utilization of DMBE-certified small businesses which include businesses owned by women and minorities, when they have received DMBE small business certification, under the contract to be awarded as a result of this solicitation. This is a requirement for all prime contracts in excess of \$100,000.
6. Identify the amount of sales your company had during the last twelve months with each VASCUPP Member Institution. A list of VASCUPP Members can be found at:

7. Proposed Cost. See Section X. "*Pricing Schedule*" of this Request for Proposal.

VI. EVALUATION and AWARD CRITERIA

A. EVALUATION CRITERIA:

Proposals shall be evaluated by James Madison University using the following criteria:

1. Quality of products/services offered and suitability for the intended purposes.
 2. Qualifications and experience of Offeror in providing the goods/services.
 3. Specific plans or methodology to be used to perform the services.
 4. Participation of Small, Women-Owned and Minority (SWAM) Businesses
 5. Cost
- B. **AWARD:** Selection shall be made of two or more offerors deemed to be fully qualified and best suited among those submitting proposals on the basis of the evaluation factors included in the Request for Proposals, including price, if so stated in the Request for Proposals. Negotiations shall be conducted with the offerors so selected. Price shall be considered, but need not be the sole determining factor. After negotiations have been conducted with each offeror so selected, the agency shall select the offeror which, in its opinion, has made the best proposal, and shall award the contract to that offeror. The Commonwealth may cancel this Request for Proposals or reject proposals at any time prior to an award, and is not required to furnish a statement of the reasons why a particular proposal was not deemed to be the most advantageous. Should the Commonwealth determine in writing and in its sole discretion that only one offeror is fully qualified, or that one offeror is clearly more highly qualified than the others under consideration, a contract may be negotiated and awarded to that offeror. The award document will be a contract incorporating by reference all the requirements, terms and conditions of the solicitation and the contractor's proposal as negotiated.

VII. GENERAL TERMS AND CONDITIONS (Rev. 7/3/14 ABS)

- A. **PURCHASING MANUAL:** This solicitation is subject to the provisions of the Commonwealth of Virginia's Purchasing Manual for Institutions of Higher Education and Their Vendors and any revisions thereto, which are hereby incorporated into this contract in their entirety. A copy of the manual is available for review at the purchasing office. In addition, the manual may be accessed electronically at <http://www.jmu.edu/procurement> or a copy can be obtained by calling Procurement Services at (540) 568-3145.
- B. **APPLICABLE LAWS AND COURTS:** This solicitation and any resulting contract shall be governed in all respects by the laws of the Commonwealth of Virginia and any litigation with respect thereto shall be brought in the courts of the Commonwealth. The Contractor shall comply with applicable federal, state and local laws and regulations.
- C. **ANTI-DISCRIMINATION:** By submitting their proposals, offerors certify to the Commonwealth that they will conform to the provisions of the Federal Civil Rights Act of 1964, as amended, as well as the Virginia Fair Employment Contracting Act of 1975, as amended, where applicable, the Virginians With Disabilities Act, the Americans With Disabilities Act and §10 of the Rules Governing

Procurement, Chapter 2, Exhibit J, Attachment 1 (available for review at <http://www.jmu.edu/procurement>). If the award is made to a faith-based organization, the organization shall not discriminate against any recipient of goods, services, or disbursements made pursuant to the contract on the basis of the recipient's religion, religious belief, refusal to participate in a religious practice, or on the basis of race, age, color, gender or national origin and shall be subject to the same rules as other organizations that contract with public bodies to account for the use of the funds provided; however, if the faith-based organization segregates public funds into separate accounts, only the accounts and programs funded with public funds shall be subject to audit by the public body. (*§6 of the Rules Governing Procurement*)

In every contract over \$10,000 the provisions in 1. and 2. below apply:

1. During the performance of this contract, the contractor agrees as follows:
 - a. The contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin, age, disability, or any other basis prohibited by state law relating to discrimination in employment, except where there is a bona fide occupational qualification reasonably necessary to the normal operation of the contractor. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.
 - b. The contractor, in all solicitations or advertisements for employees placed by or on behalf of the contractor, will state that such contractor is an equal opportunity employer.
 - c. Notices, advertisements and solicitations placed in accordance with federal law, rule or regulation shall be deemed sufficient for the purpose of meeting these requirements.
 2. The contractor will include the provisions of 1. above in every subcontract or purchase order over \$10,000, so that the provisions will be binding upon each subcontractor or vendor.
- D. ETHICS IN PUBLIC CONTRACTING: By submitting their proposals, offerors certify that their proposals are made without collusion or fraud and that they have not offered or received any kickbacks or inducements from any other offeror, supplier, manufacturer or subcontractor in connection with their proposal, and that they have not conferred on any public employee having official responsibility for this procurement transaction any payment, loan, subscription, advance, deposit of money, services or anything of more than nominal value, present or promised, unless consideration of substantially equal or greater value was exchanged.
- E. IMMIGRATION REFORM AND CONTROL ACT OF 1986: By entering into a written contract with the Commonwealth of Virginia, the Contractor certifies that the Contractor does not, and shall not during the performance of the contract for goods and services in the Commonwealth, knowingly employ an unauthorized alien as defined in the federal Immigration Reform and Control Act of 1986.
- F. DEBARMENT STATUS: By submitting their proposals, offerors certify that they are not currently debarred by the Commonwealth of Virginia from submitting bids or proposals on contracts for the type of goods and/or services covered by this solicitation, nor are they an agent of any person or entity that is currently so debarred.
- G. ANTITRUST: By entering into a contract, the contractor conveys, sells, assigns, and transfers to the Commonwealth of Virginia all rights, title and interest in and to all causes of action it may now have or hereafter acquire under the antitrust laws of the United States and the Commonwealth of Virginia, relating to the particular goods or services purchased or acquired by the Commonwealth of Virginia under said contract.

H. MANDATORY USE OF STATE FORM AND TERMS AND CONDITIONS RFPs: Failure to submit a proposal on the official state form provided for that purpose may be a cause for rejection of the proposal. Modification of or additions to the General Terms and Conditions of the solicitation may be cause for rejection of the proposal; however, the Commonwealth reserves the right to decide, on a case by case basis, in its sole discretion, whether to reject such a proposal.

I. CLARIFICATION OF TERMS: If any prospective offeror has questions about the specifications or other solicitation documents, the prospective offeror should contact the buyer whose name appears on the face of the solicitation no later than five working days before the due date. Any revisions to the solicitation will be made only by addendum issued by the buyer.

J. PAYMENT:

1. To Prime Contractor:

- a. Invoices for items ordered, delivered and accepted shall be submitted by the contractor directly to the payment address shown on the purchase order/contract. All invoices shall show the state contract number and/or purchase order number; social security number (for individual contractors) or the federal employer identification number (for proprietorships, partnerships, and corporations).
- b. Any payment terms requiring payment in less than 30 days will be regarded as requiring payment 30 days after invoice or delivery, whichever occurs last. This shall not affect offers of discounts for payment in less than 30 days, however.
- c. All goods or services provided under this contract or purchase order, that are to be paid for with public funds, shall be billed by the contractor at the contract price, regardless of which public agency is being billed.
- d. The following shall be deemed to be the date of payment: the date of postmark in all cases where payment is made by mail, or the date of offset when offset proceedings have been instituted as authorized under the Virginia Debt Collection Act.
- e. Unreasonable Charges. Under certain emergency procurements and for most time and material purchases, final job costs cannot be accurately determined at the time orders are placed. In such cases, contractors should be put on notice that final payment in full is contingent on a determination of reasonableness with respect to all invoiced charges. Charges which appear to be unreasonable will be researched and challenged, and that portion of the invoice held in abeyance until a settlement can be reached. Upon determining that invoiced charges are not reasonable, the Commonwealth shall promptly notify the contractor, in writing, as to those charges which it considers unreasonable and the basis for the determination. A contractor may not institute legal action unless a settlement cannot be reached within thirty (30) days of notification. The provisions of this section do not relieve an agency of its prompt payment obligations with respect to those charges which are not in dispute (*Rules Governing Procurement, Chapter 2, Exhibit J, Attachment 1 § 53; available for review at <http://www.jmu.edu/procurement>*).

2. To Subcontractors:

- a. A contractor awarded a contract under this solicitation is hereby obligated:
 - (1) To pay the subcontractor(s) within seven (7) days of the contractor's receipt of payment from the Commonwealth for the proportionate share of the payment received for work

performed by the subcontractor(s) under the contract; or

- (2) To notify the agency and the subcontractor(s), in writing, of the contractor's intention to withhold payment and the reason.
- b. The contractor is obligated to pay the subcontractor(s) interest at the rate of one percent per month (unless otherwise provided under the terms of the contract) on all amounts owed by the contractor that remain unpaid seven (7) days following receipt of payment from the Commonwealth, except for amounts withheld as stated in (2) above. The date of mailing of any payment by U. S. Mail is deemed to be payment to the addressee. These provisions apply to each sub-tier contractor performing under the primary contract. A contractor's obligation to pay an interest charge to a subcontractor may not be construed to be an obligation of the Commonwealth.
3. Each prime contractor who wins an award in which provision of a SWAM procurement plan is a payment, evidence and certification of compliance (subject only to insubstantial shortfalls and to shortfalls arising from subcontractor default) with the SWAM procurement plan. Final payment under the contract in question may be withheld until such certification is delivered and, if necessary, confirmed by the agency or institution, or other appropriate penalties may be assessed in lieu of withholding such payment.
4. The Commonwealth of Virginia encourages contractors and subcontractors to accept electronic and credit card payments.
- K. PRECEDENCE OF TERMS: Paragraphs A through J of these General Terms and Conditions and the Commonwealth of Virginia Purchasing Manual for Institutions of Higher Education and their Vendors, shall apply in all instances. In the event there is a conflict between any of the other General Terms and Conditions and any Special Terms and Conditions in this solicitation, the Special Terms and Conditions shall apply.
- L. QUALIFICATIONS OF OFFERORS: The Commonwealth may make such reasonable investigations as deemed proper and necessary to determine the ability of the offeror to perform the services/furnish the goods and the offeror shall furnish to the Commonwealth all such information and data for this purpose as may be requested. The Commonwealth reserves the right to inspect offeror's physical facilities prior to award to satisfy questions regarding the offeror's capabilities. The Commonwealth further reserves the right to reject any proposal if the evidence submitted by, or investigations of, such offeror fails to satisfy the Commonwealth that such offeror is properly qualified to carry out the obligations of the contract and to provide the services and/or furnish the goods contemplated therein.
- M. TESTING AND INSPECTION: The Commonwealth reserves the right to conduct any test/inspection it may deem advisable to assure goods and services conform to the specifications.
- N. ASSIGNMENT OF CONTRACT: A contract shall not be assignable by the contractor in whole or in part without the written consent of the Commonwealth.
- O. CHANGES TO THE CONTRACT: Changes can be made to the contract in any of the following ways:
 1. The parties may agree in writing to modify the scope of the contract. An increase or decrease in the price of the contract resulting from such modification shall be agreed to by the parties as a part of their written agreement to modify the scope of the contract.
 2. The Purchasing Agency may order changes within the general scope of the contract at any time by written notice to the contractor. Changes within the scope of the contract include, but are not limited

to, things such as services to be performed, the method of packing or shipment, and the place of delivery or installation. The contractor shall comply with the notice upon receipt. The contractor shall be compensated for any additional costs incurred as the result of such order and shall give the Purchasing Agency a credit for any savings. Said compensation shall be determined by one of the following methods:

- a. By mutual agreement between the parties in writing; or
 - b. By agreeing upon a unit price or using a unit price set forth in the contract, if the work to be done can be expressed in units, and the contractor accounts for the number of units of work performed, subject to the Purchasing Agency's right to audit the contractor's records and/or to determine the correct number of units independently; or
 - c. By ordering the contractor to proceed with the work and keep a record of all costs incurred and savings realized. A markup for overhead and profit may be allowed if provided by the contract. The same markup shall be used for determining a decrease in price as the result of savings realized. The contractor shall present the Purchasing Agency with all vouchers and records of expenses incurred and savings realized. The Purchasing Agency shall have the right to audit the records of the contractor as it deems necessary to determine costs or savings. Any claim for an adjustment in price under this provision must be asserted by written notice to the Purchasing Agency within thirty (30) days from the date of receipt of the written order from the Purchasing Agency. If the parties fail to agree on an amount of adjustment, the question of an increase or decrease in the contract price or time for performance shall be resolved in accordance with the procedures for resolving disputes provided by the Disputes Clause of this contract or, if there is none, in accordance with the disputes provisions of the Commonwealth of Virginia Purchasing Manual for Institutions of Higher Education and their Vendors. Neither the existence of a claim nor a dispute resolution process, litigation or any other provision of this contract shall excuse the contractor from promptly complying with the changes ordered by the Purchasing Agency or with the performance of the contract generally.
- P. DEFAULT: In case of failure to deliver goods or services in accordance with the contract terms and conditions, the Commonwealth, after due oral or written notice, may procure them from other sources and hold the contractor responsible for any resulting additional purchase and administrative costs. This remedy shall be in addition to any other remedies which the Commonwealth may have.
- Q. INSURANCE: By signing and submitting a bid or proposal under this solicitation, the bidder or offeror certifies that if awarded the contract, it will have the following insurance coverage at the time the contract is awarded. For construction contracts, if any subcontractors are involved, the subcontractor will have workers' compensation insurance in accordance with § 25 of the *Rules Governing Procurement – Chapter 2, Exhibit J, Attachment 1, and 65.2-800 et. Seq. of the Code of Virginia* (available for review at <http://www.jmu.edu/procurement>). The bidder or offeror further certifies that the contractor and any subcontractors will maintain these insurance coverage during the entire term of the contract and that all insurance coverage will be provided by insurance companies authorized to sell insurance in Virginia by the Virginia State Corporation Commission.

MINIMUM INSURANCE COVERAGES AND LIMITS REQUIRED FOR MOST CONTRACTS:

1. Workers' Compensation – Statutory requirements and benefits. Coverage is compulsory for employers of three or more employees, to include the employer. Contractors who fail to notify the Commonwealth of increases in the number of employees that change their workers' compensation requirement under the Code of Virginia during the course of the contract shall be in noncompliance with the contract.

2. Employer's Liability - \$100,000.
 3. Commercial General Liability - \$1,000,000 per occurrence and \$2,000,000 in the aggregate. Commercial General Liability is to include bodily injury and property damage, personal injury and advertising injury, products and completed operations coverage. The Commonwealth of Virginia must be named as an additional insured and so endorsed on the policy.
 4. Automobile Liability - \$1,000,000 combined single limit. *(Required only if a motor vehicle not owned by the Commonwealth is to be used in the contract. Contractor must assure that the required coverage is maintained by the Contractor (or third party owner of such motor vehicle).)*
- R. ANNOUNCEMENT OF AWARD: Upon the award or the announcement of the decision to award a contract over \$50,000, as a result of this solicitation, the purchasing agency will publicly post such notice on the DGS/DPS eVA web site (www.eva.virginia.gov) for a minimum of 10 days.
- S. DRUG-FREE WORKPLACE: During the performance of this contract, the contractor agrees to (i) provide a drug-free workplace for the contractor's employees; (ii) post in conspicuous places, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana is prohibited in the contractor's workplace and specifying the actions that will be taken against employees for violations of such prohibition; (iii) state in all solicitations or advertisements for employees placed by or on behalf of the contractor that the contractor maintains a drug-free workplace; and (iv) include the provisions of the foregoing clauses in every subcontract or purchase order of over \$10,000, so that the provisions will be binding upon each subcontractor or vendor.
- For the purposes of this section, "drug-free workplace" means a site for the performance of work done in connection with a specific contract awarded to a contractor, the employees of whom are prohibited from engaging in the unlawful manufacture, sale, distribution, dispensation, possession or use of any controlled substance or marijuana during the performance of the contract.
- T. NONDISCRIMINATION OF CONTRACTORS: A bidder, offeror, or contractor shall not be discriminated against in the solicitation or award of this contract because of race, religion, color, sex, national origin, age, disability, faith-based organizational status, any other basis prohibited by state law relating to discrimination in employment or because the bidder or offeror employs ex-offenders unless the state agency, department or institution has made a written determination that employing ex-offenders on the specific contract is not in its best interest. If the award of this contract is made to a faith-based organization and an individual, who applies for or receives goods, services, or disbursements provided pursuant to this contract objects to the religious character of the faith-based organization from which the individual receives or would receive the goods, services, or disbursements, the public body shall offer the individual, within a reasonable period of time after the date of his objection, access to equivalent goods, services, or disbursements from an alternative provider.
- U. eVA BUSINESS-TO-GOVERNMENT VENDOR REGISTRATION, CONTRACTS, AND ORDERS: The eVA Internet electronic procurement solution, website portal www.eVA.virginia.gov, streamlines and automates government purchasing activities in the Commonwealth. The eVA portal is the gateway for vendors to conduct business with state agencies and public bodies. All vendors desiring to provide goods and/or services to the Commonwealth shall participate in the eVA Internet procurement solution by completing the free eVA Vendor Registration. All bidders or offerors must register in eVA and pay the Vendor Transaction Fees specified below; failure to register will result in the bid/proposal being rejected. Vendor transaction fees are determined by the date the original purchase order is issued and the current fees are as follows:

Vendor transaction fees are determined by the date the original purchase order is issued and the current fees are as follows:

- a. For orders issued July 1, 2014 and after, the Vendor Transaction Fee is:
 - (i) DMBE-certified Small Businesses: 1%, capped at \$500 per order.
 - (ii) Businesses that are not DMBE-certified Small Businesses: 1%, capped at \$1,500 per order.

For orders issued prior to July 1, 2014 the vendor transaction fees can be found at www.eVA.virginia.gov.

The specified vendor transaction fee will be invoiced, by the Commonwealth of Virginia Department of General Services, approximately 30 days after the corresponding purchase order is issued and payable 30 days after the invoice date. Any adjustments (increases/decreases) will be handled through purchase order changes.

- V. AVAILABILITY OF FUNDS: It is understood and agreed between the parties herein that the Commonwealth of Virginia shall be bound hereunder only to the extent of the funds available or which may hereafter become available for the purpose of this agreement.
- W. BID PRICE CURRENCY: Unless stated otherwise in the solicitation, bidders/offerors shall state bid/offer prices in US dollars.
- X. E-VERIFY REQUIREMENT OF ANY CONTRACTOR: Any employer with more than an average of 50 employees for the previous 12 months entering into a contract in excess of \$50,000 with James Madison University to perform work or provide services pursuant to such contract shall register and participate in the E-Verify program to verify information and work authorization of its newly hired employees performing work pursuant to any awarded contract.
- Y. TAXES: Sales to the Commonwealth of Virginia are normally exempt from State sales tax. State sales and use tax certificates of exemption, Form ST-12, will be issued upon request. Deliveries against this contract shall usually be free of Federal excise and transportation taxes. The Commonwealth's excise tax exemption registration number is 54-73-0076K.

VIII. SPECIAL TERMS AND CONDITIONS (Rev. 10/1/13 ABS)

- A. AUDIT: The Contractor hereby agrees to retain all books, records, systems, and other documents relative to this contract for five (5) years after final payment, or until audited by the Commonwealth of Virginia, whichever is sooner. The Commonwealth of Virginia, its authorized agents, and/or State auditors shall have full access to and the right to examine any of said materials during said period.
- B. CANCELLATION OF CONTRACT: James Madison University reserves the right to cancel and terminate any resulting contract, in part or in whole, without penalty, upon 60 days written notice to the contractor. In the event the initial contract period is for more than 12 months, the resulting contract may be terminated by either party, without penalty, after the initial 12 months of the contract period upon 60 days written notice to the other party. Any contract cancellation notice shall not relieve the contractor of the obligation to deliver and/or perform on all outstanding orders issued prior to the effective date of cancellation.
- C. IDENTIFICATION OF PROPOSAL ENVELOPE: The signed proposal should be returned in a separate envelope or package, sealed and identified as follows:

From: _____

Name of Offeror	D	Due Date	Time	e
Street or Box No.		RFP Number		
City, State, Zip Code	RF	P Title		
Name of Purchasing Officer: _____				

The envelope should be addressed as directed on the title page of the solicitation.

The offeror takes the risk that if the envelope is not marked as described above, it may be inadvertently opened and the information compromised, which may cause the proposal to be disqualified. Proposals may be held and delivered to the designated location in the office issuing the solicitation. No other correspondence or other proposals should be placed in the envelope.

- D. LATE PROPOSALS: To be considered for selection, proposals must be received by the issuing office by the designated date and hour. The official time used in the receipt of proposals is that time on the automatic time stamp machine in the issuing office. Proposals received in the issuing office after the date and hour designated are automatically non-responsive and will not be considered. The University is not responsible for delays in the delivery of mail by the U.S. Postal Service, private couriers, or the intra university mail system. It is the sole responsibility of the Offeror to ensure that its proposal reaches the issuing office by the designated date and hour.
- E. UNDERSTANDING OF REQUIREMENTS: It is the responsibility of each offeror to inquire about and clarify any requirements of this solicitation that is not understood. The University will not be bound by oral explanations as to the meaning of specifications or language contained in this solicitation. Therefore, all inquiries deemed to be substantive in nature must be in writing and submitted to the responsible buyer in the Procurement Services Office. Offerors must ensure that written inquiries reach the buyer at least five (5) days prior to the time set for receipt of offerors proposals. A copy of all queries and the respective response will be provided in the form of an addendum to all offerors who have indicated an interest in responding to this solicitation. Your signature on your Offer certifies that you fully understand all facets of this solicitation. These questions may be sent by Fax to 540/ 568 -7936 or 540/568-7935.
- F. RENEWAL OF CONTRACT: This contract may be renewed by the Commonwealth for a period of nine (9) successive one year periods under the terms and conditions of the original contract except as stated in 1. and 2. below. Price increases may be negotiated only at the time of renewal. Written notice of the Commonwealth's intention to renew shall be given approximately 90 days prior to the expiration date of each contract period.
1. If the Commonwealth elects to exercise the option to renew the contract for an additional one-year period, the contract price(s) for the additional one year shall not exceed the contract price(s) of the original contract increased/decreased by no more than the percentage increase/decrease of the other services category of the CPI-W section of the Consumer Price Index of the United States Bureau of Labor Statistics for the latest twelve months for which statistics are available.
 2. If during any subsequent renewal periods, the Commonwealth elects to exercise the option to renew the contract, the contract price(s) for the subsequent renewal period shall not exceed the contract price(s) of the previous renewal period increased/decreased by more than the percentage increase/decrease of the other services category of the CPI-W section of the Consumer Price Index of the United States Bureau of Labor Statistics for the latest twelve months for which statistics are available.

- G. SUBMISSION OF INVOICES: All invoices shall be submitted within sixty days of contract term expiration for the initial contract period as well as for each subsequent contract renewal period. Any invoices submitted after the sixty day period will not be processed for payment.
- H. OPERATING VEHICLES ON JAMES MADISON UNIVERSITY CAMPUS: Operating vehicles on sidewalks, plazas, and areas heavily used by pedestrians is prohibited. In the unlikely event a driver should find it necessary to drive on James Madison University sidewalks, plazas, and areas heavily used by pedestrians, the driver must yield to pedestrians. For a complete list of parking regulations, please go to www.jmu.edu/parking; or to acquire a service representative parking permit, contact Parking Services at 540.568.3300. The safety of our students, faculty and staff is of paramount importance to us. Accordingly, violators may be charged.
- I. COOPERATIVE PURCHASING / USE OF AGREEMENT BY THIRD PARTIES: It is the intent of this solicitation and resulting contract(s) to allow for cooperative procurement. Accordingly, any public body, *(to include government/state agencies, political subdivisions, etc.)*, cooperative purchasing organizations, public or private health or educational institutions or any University related foundation and affiliated corporations may access any resulting contract if authorized by the Contractor.

Participation in this cooperative procurement is strictly voluntary. If authorized by the Contractor(s), the resultant contract(s) will be extended to the entities indicated above to purchase goods and services in accordance with contract terms. As a separate contractual relationship, the participating entity will place its own orders directly with the Contractor(s) and shall fully and independently administer its use of the contract(s) to include contractual disputes, invoicing and payments without direct administration from the University. No modification of this contract or execution of a separate agreement is required to participate; however, the participating entity and the Contractor may modify the terms and conditions of this contract to accommodate specific governing laws, regulations, policies, and business goals required by the participating entity. Any such modification will apply solely between the participating entity and the Contractor.

The Contractor will notify the University in writing of any such entities accessing this contract. The Contractor will provide semi-annual usage reports for all entities accessing the contract. The University shall not be held liable for any costs or damages incurred by any other participating entity as a result of any authorization by the Contractor to extend the contract. It is understood and agreed that the University is not responsible for the acts or omissions of any entity and will not be considered in default of the contract no matter the circumstances.

Use of this contract(s) does not preclude any participating entity from using other contracts or competitive processes as needed.

J. SMALL BUSINESS SUBCONTRACTING AND EVIDENCE OF COMPLIANCE:

1. It is the goal of the Commonwealth that 40% of its purchases are made from small businesses. This includes discretionary spending in prime contracts and subcontracts. All potential bidders/offers are required to submit a Small Business Subcontracting Plan. Unless the bidder/offeror is registered as a DMBE-certified small business and where it is practicable for any portion of the awarded contract to be subcontracted to other suppliers, the contractor is encouraged to offer such subcontracting opportunities to DMBE-certified small businesses. This shall not exclude DMBE-certified women-owned and minority-owned businesses when they have received DMBE small business certification. No bidder/offeror or subcontractor shall be considered a Small Business, a Women-Owned Business or a Minority-Owned Business unless certified as such by the Department of Minority Business Enterprise (DMBE) by the due date for

receipt of bids or proposals. If small business subcontractors are used, the prime contractor agrees to report the use of small business subcontractors by providing the purchasing office at a minimum the following information: name of small business with the DMBE certification number or FEIN, phone number, total dollar amount subcontracted, category type (small, women-owned, or minority-owned), and type of product/service provided. **This information shall be submitted to: JMU Office of Procurement Services, Attn: SWAM Subcontracting Compliance, MSC 5720, Harrisonburg, VA 22807.**

2. Each prime contractor who wins an award in which provision of a small business subcontracting plan is a condition of the award, shall deliver to the contracting agency or institution with every request for payment, evidence of compliance (subject only to insubstantial shortfalls and to shortfalls arising from subcontractor default) with the small business subcontracting plan. **This information shall be submitted to: JMU Office of Procurement Services, SWAM Subcontracting Compliance, MSC 5720, Harrisonburg, VA 22807.** When such business has been subcontracted to these firms and upon completion of the contract, the contractor agrees to furnish the purchasing office at a minimum the following information: name of firm with the DMBE certification number or FEIN number, phone number, total dollar amount subcontracted, category type (small, women-owned, or minority-owned), and type of product or service provided. Payment(s) may be withheld until compliance with the plan is received and confirmed by the agency or institution. The agency or institution reserves the right to pursue other appropriate remedies to include, but not be limited to, termination for default.
 3. Each prime contractor who wins an award valued over \$200,000 shall deliver to the contracting agency or institution with every request for payment, information on use of subcontractors that are not DMBE-certified small businesses. When such business has been subcontracted to these firms and upon completion of the contract, the contractor agrees to furnish the purchasing office at a minimum the following information: name of firm, phone number, FEIN number, total dollar amount subcontracted, and type of product or service provided. **This information shall be submitted to: JMU Office of Procurement Services, Attn: SWAM Subcontracting Compliance, MSC 5720, Harrisonburg, VA 22807.**
- K. **ADDITIONAL GOODS AND SERVICES:** The University may acquire other goods or services that the supplier provides than those specifically solicited. The University reserves the right, subject to mutual agreement, for the Contractor to provide additional goods and/or services under the same pricing, terms, and conditions and to make modifications or enhancements to the existing goods and services. Such additional goods and services may include other products, components, accessories, subsystems, or related services that are newly introduced during the term of this Agreement. Such additional goods and services will be provided to the University at favored nations pricing, terms, and conditions.
- L. **AUTHORIZATION TO CONDUCT BUSINESS IN THE COMMONWEALTH:** A contractor organized as a stock or nonstock corporation, limited liability company, business trust, or limited partnership or registered as a registered limited liability partnership shall be authorized to transact business in the Commonwealth as a domestic or foreign business entity if so required by Title 13.1 or Title 50 of the *Code of Virginia* or as otherwise required by law. Any business entity described above that enters into a contract with a public body shall not allow its existence to lapse or its certificate of authority or registration to transact business in the Commonwealth, if so required under Title 13.1 or Title 50, to be revoked or cancelled at any time during the term of the contract. A public body may void any contract with a business entity if the business entity fails to remain in compliance with the provisions of this section.

- M. PUBLIC POSTING OF COOPERATIVE CONTRACTS: James Madison University maintains a web-based contracts database with a public gateway access. Any resulting cooperative contract/s to this solicitation will be posted to the publicly accessible website. Contents identified as proprietary information will not be made public.
- N. CRIMINAL BACKGROUND CHECKS OF PERSONNEL ASSIGNED BY CONTRACTOR TO PERFORM WORK ON JMU PROPERTY: The Contractor shall obtain criminal background checks on all of their contracted employees who will be assigned to perform services on James Madison University property. The results of the background checks will be directed solely to the Contractor. The Contractor bears responsibility for confirming to the University contract administrator that the background checks have been completed prior to work being performed by their employees or subcontractors. The Contractor shall only assign to work on the University campus those individuals whom it deems qualified and permissible based on the results of completed background checks. Notwithstanding any other provision herein, and to ensure the safety of students, faculty, staff and facilities, James Madison University reserves the right to approve or disapprove any contract employee that will work on JMU property. Disapproval by the University will solely apply to JMU property and should have no bearing on the Contractor's employment of an individual outside of James Madison University.
- O. NONVISUAL ACCESS TO TECHNOLOGY: All information technology which, pursuant to this Agreement, is purchased or upgraded by or for the use of any State agency or institution or political subdivision of the Commonwealth (the "Technology") shall comply with the following nonvisual access standards from the date of purchase or upgrade until the expiration of this Agreement:
- (i) effective, interactive control and use of the Technology shall be readily achievable by nonvisual means;
 - (ii) the Technology equipped for nonvisual access shall be compatible with information technology used by other individuals with whom any blind or visually impaired user of the Technology interacts;
 - (iii) nonvisual access technology shall be integrated into any networks used to share communications among employees, program participants or the public; and
 - (iv) the technology for nonvisual access shall have the capability of providing equivalent access by nonvisual means to telecommunications or other interconnected network services used by persons who are not blind or visually impaired.

Compliance with the foregoing nonvisual access standards shall not be required if the head of the using agency, institution or political subdivision determines that (i) the Technology is not available with nonvisual access because the essential elements of the Technology are visual and (ii) nonvisual equivalence is not available.

Installation of hardware, software or peripheral devices used for nonvisual access is not required when the Technology is being used exclusively by individuals who are not blind or visually impaired, but applications programs and underlying operating systems (including the format of the data) used for the manipulation and presentation of information shall permit the installation and effective use of nonvisual access software and peripheral devices.

If requested, the Contractor must provide a detailed explanation of how compliance with the foregoing nonvisual access standards is achieved and a validation of concept demonstration.

The requirements of this Paragraph shall be construed to achieve full compliance with the Information Technology Access Act, 2.2-3500 through 2.2-3504 of the *Code of Virginia*.

All information technology which, pursuant to this Agreement, is purchased or upgraded by or for the use of any Commonwealth agency or institution or political subdivision of the Commonwealth (the "Technology") shall comply with Section 508 of the Rehabilitation Act (29 U.S.C. 794d), as amended. If requested, the Contractor must provide a detailed explanation of how compliance with Section 508 of the Rehabilitation Act is achieved and a validation of concept demonstration. (<http://www.section508.gov/>). The requirements of this Paragraph along with the Non-Visual Access to Technology Clause shall be construed to achieve full compliance with the Information Technology Access Act, §§2.2-3500 through 2.2-3504 of the *Code of Virginia*.

- P. CONFIDENTIALITY OF PERSONALLY IDENTIFIABLE INFORMATION: The contractor assures that information and data obtained as to personal facts and circumstances related to clients will be collected and held confidential, during and following the term of this agreement, and will not be divulged without the individual's and the agency's written consent and only in accordance with federal law or the Code of Virginia. Contractor's who utilize, access, or store personally identifiable information as part of the performance of a contract are required to safeguard this information and immediately notify the agency of any breach or suspected breach in the security of such information. Contractors shall allow the agency to both participate in the investigation of incidents and exercise control over decisions regarding external reporting. Contractors and their employees working on this project may be required to sign a confidentiality statement.
- Q. EXCESSIVE DOWNTIME: Equipment or software furnished under the contract shall be capable of continuous operation. Should the equipment or software become inoperable for a period of more than 24 hours, the contractor agrees to prorate maintenance charges to account for each full day of inoperability. The period of inoperability shall commence upon initial notification. In the event the equipment or software remains inoperable for more than two (2) consecutive calendar days, the contractor shall promptly replace the equipment or software at no charge upon request of the procuring agency. Such replacement shall be with new, unused product(s) of comparable quality, and must be installed and operational within two (2) days following the request for replacement.
- R. LATEST SOFTWARE VERSION: Any software product(s) provided under the contract shall be the latest version available to the general public as of the due date of this solicitation.
- S. RENEWAL OF MAINTENANCE: Maintenance of the hardware or software specified in the resultant contract may be renewed by the mutual written agreement of both parties for an additional one-year periods, under the terms and conditions of the original contract except as noted herein. Price changes may be negotiated at time of renewal; however, in no case shall the maintenance costs for a succeeding one-year period exceed the prior year's contract price(s), increased or decreased by more than the percentage increase or decrease in the other services category of the CPI-W section of the US Bureau of Labor Statistics Consumer Price Index, for the latest twelve months for which statistics are available.
- T. SOFTWARE UPGRADES: The Commonwealth shall be entitled to any and all upgraded versions of the software covered in the contract that becomes available from the contractor. The maximum charge for upgrade shall not exceed the total difference between the cost of the Commonwealth's current version and the price the contractor sells or licenses the upgraded software under similar circumstances.
- U. SOURCE CODE: In the event the contractor ceases to maintain experienced staff and the resources needed to provide required software maintenance, the Commonwealth shall be entitled to have, use,

and duplicate for its own use, a copy of the source code and associated documentation for the software products covered by the contract. Until such time as a complete copy of such material is provided, the Commonwealth shall have exclusive right to possess all physical embodiments of such contractor owned materials. The rights of the Commonwealth in this respect shall survive for a period of twenty years after the expiration or termination of the contract. All lease and royalty fees necessary to support this right are included in the initial license fee as contained in the pricing schedule.

- V. TERM OF SOFTWARE LICENSE: Unless otherwise stated in the solicitation, the software license(s) identified in the pricing schedule shall be purchased on a perpetual basis and shall continue in perpetuity. However the Commonwealth reserves the right to terminate the license at any time, although the mere expiration or termination of this contract shall not be construed as an intent to terminate the license. All acquired license(s) shall be for use at any computing facilities, on any equipment, by any number of users, and for any purposes for which it is procured. The Commonwealth further reserves the right to transfer all rights under the license to another state agency to which some or all of its functions are transferred.
- W. THIRD PARTY ACQUISITION OF SOFTWARE: The contractor shall notify the procuring agency in writing should the intellectual property, associated business, or all of its assets be acquired by a third party. The contractor further agrees that the contract's terms and conditions, including any and all license rights and related services, shall not be affected by the acquisition. Prior to completion of the acquisition, the contractor shall obtain, for the Commonwealth's benefit and deliver thereto, the assignee's agreement to fully honor the terms of the contract.
- X. TITLE TO SOFTWARE: By submitting a proposal, the offeror represents and warrants that it is the sole owner of the software or, if not the owner, that it has received all legally required authorizations from the owner to license the software, has the full power to grant the rights required by this solicitation, and that neither the software nor its use in accordance with the contract will violate or infringe upon any patent, copyright, trade secret, or any other property rights of another person or organization.
- Y. WARRANTY AGAINST SHUTDOWN DEVICES: The contractor warrants that the equipment and software provided under the contract shall not contain any lock, counter, CPU reference, virus, worm, or other device capable of halting operations or erasing or altering data or programs. Contractor further warrants that neither it, nor its agents, employees, or subcontractors shall insert any shutdown device following delivery of the equipment and software.

IX. METHOD OF PAYMENT

The contractor will be paid on the basis of invoices submitted in accordance with the solicitation and any negotiations. James Madison University recognizes the importance of expediting the payment process for our vendors and suppliers. We are asking our vendors and suppliers to enroll in the Wells Fargo Bank single use Commercial Card Number process or electronic deposit (ACH) to your bank account so that future payments are made electronically. Additional information is available online at: http://www.jmu.edu/acctgserv/expenditures/vendor_pay_methods.shtml

X. PRICING SCHEDULE

The offeror shall provide pricing for all products and services included in proposal indicating one-time and on-going costs.

XI. ATTACHMENTS

[Attachment A](#): Offeror Data Sheet

[Attachment B](#): Small, Women and Minority-owned Businesses (SWaM) Utilization Plan

[Attachment C](#): Standard Contract Sample

ATTACHMENT A

OFFEROR DATA SHEET

TO BE COMPLETED BY OFFEROR

1. QUALIFICATIONS OF OFFEROR: Offerors must have the capability and capacity in all respects to fully satisfy the contractual requirements.
2. YEARS IN BUSINESS: Indicate the length of time you have been in business providing these types of goods and services.

Years_____ Months_____

3. REFERENCES: Indicate below a listing of at least five (5) organizations, either commercial or governmental/educational, that your agency is servicing. Include the name and address of the person the purchasing agency has your permission to contact.

CLIENT	LENGTH OF SERVICE	ADDRESS	CONTACT PERSON/PHONE #
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4. List full names and addresses of Offeror and any branch offices which may be responsible for administering the contract.

5. RELATIONSHIP WITH THE COMMONWEALTH OF VIRGINIA: Is any member of the firm an employee of the Commonwealth of Virginia who has a personal interest in this contract pursuant to the [CODE OF VIRGINIA](#), SECTION 2.2-3100 – 3131?

[] YES [] NO

IF YES, EXPLAIN:_____

RETURN OF THIS PAGE IS REQUIRED

ATTACHMENT B

Small, Women and Minority-owned Businesses (SWaM) Utilization Plan

Offeror Name: _____ **Preparer Name:** _____

Date: _____

Is your firm a **Small Business Enterprise** certified by the Department of Minority Business Enterprise?

Yes _____ No _____

If yes, certification number: _____ Certification date: _____

Is your firm a **Woman-owned Business Enterprise** certified by the Department of Minority Business Enterprise? Yes _____ No _____

If yes, certification number: _____ Certification date: _____

Is your firm a **Minority-Owned Business Enterprise** certified by the Department of Minority Business Enterprise? Yes _____ No _____

If yes, certification number: _____ Certification date: _____

Instructions: *Populate the table below to show your firm's plans for utilization of small, women-owned and minority-owned business enterprises in the performance of the contract. Describe plans to utilize SWaMs businesses as part of joint ventures, partnerships, subcontractors, suppliers, etc.*

Small Business: "Small business " means a business, independently owned or operated by one or more persons who are citizens of the United States or non-citizens who are in full compliance with United States immigration law, which, together with affiliates, has 250 or fewer employees, or average annual gross receipts of \$10 million or less averaged over the previous three years.

Woman-Owned Business Enterprise: A business concern which is at least 51 percent owned by one or more women who are U.S. citizens or legal resident aliens, or in the case of a corporation, partnership or limited liability company or other entity, at least 51 percent of the equity ownership interest in which is owned by one or more women, and whose management and daily business operations are controlled by one or more of such individuals. **For purposes of the SWaM**

Program, all certified women-owned businesses are also a small business enterprise.

Minority-Owned Business Enterprise: A business concern which is at least 51 percent owned by one or more minorities or in the case of a corporation, partnership or limited liability company or other entity, at least 51 percent of the equity ownership interest in which is owned by one or more minorities and whose management and daily business operations are controlled by one or more of such individuals. **For purposes of the SWaM Program, all certified minority-owned businesses are also a small business enterprise.**

All small, women, and minority owned businesses must be certified by the Commonwealth of Virginia Department of Minority Business Enterprise (DMBE) to be counted in the SWaM program. Certification applications are available through DMBE at 800-223-0671 in Virginia, 804-786-6585 outside Virginia, or online at www.dmbv.virginia.gov (Customer Service).

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ATTACHMENT B (CNT'D)

Small, Women and Minority-owned Businesses (SWaM) Utilization Plan

Procurement Name and Number: _____
Listing of Sub-Contractors, to include, Small, Woman Owned and Minority Owned Businesses
for this Bid/Proposal and Subsequent Contract

Date Form Completed

Offeror / Proposer:

Firm Address Contact Person/No.

Sub-Contractor's Name and Address	Contact Person & Phone Number	DMBE Certification Number	Services or Materials Provided	Total Subcontractor Contract Amount (to include change orders)	Total Dollars Paid Subcontractor to date (to be submitted with request for payment from JMU)

(Form shall be submitted with proposal and if awarded, again with submission of each request for payment)

Revised 3/20/14 (ABS)

RETURN OF THIS PAGE IS REQUIRED

ATTACHMENT C



COMMONWEALTH OF VIRGINIA
CONTRACT

STANDARD

Contract No. _____

This contract entered into this _____ day of _____, 20____, by _____ hereinafter called the "Contractor" and Commonwealth of Virginia, James Madison University called the "Purchasing Agency".

WITNESSETH that the Contractor and the Purchasing Agency, in consideration of the mutual covenants, promises and agreements herein contained, agree as follows:

SCOPE OF CONTRACT: The Contractor shall provide the services to the Purchasing Agency as set forth in the Contract Documents.

PERIOD OF PERFORMANCE: From _____ through _____

The contract documents shall consist of:

- (1) This signed form;
- (2) The following portions of the Request for Proposals dated _____:
 - (a) The Statement of Needs,
 - (b) The General Terms and Conditions,
 - (c) The Special Terms and Conditions together with any negotiated modifications of those Special Conditions;
 - (d) List each addendum that may be issued.
- (3) The Contractor's Proposal dated _____ and the following negotiated modification to the Proposal, all of which documents are incorporated herein.
 - (a) Negotiation Summary dated _____.

IN WITNESS WHEREOF, the parties have caused this Contract to be duly executed intending to be bound thereby.

CONTRACTOR:

PURCH

ASING AGENCY:

By: _____
(Signature)

By: _____
(Signature)

(Printed Name)

(Printed Name)

Title: _____

Title: _____