



**Tri-County Council for the Lower Eastern
Shore of Maryland
101 West Green Street
Snow Hill, MD 21863
410-632-3300, Fax 410-632-1466**

REQUEST FOR PROPOSAL

Proposal # RFP-TC1015

Sealed proposal, plainly marked as such will be received at:

Tri-County Council for the Lower Eastern Shore of MD
Attention: Procurement Department
101 West Green Street
P.O. Box 99
Snow Hill, MD 21863

On or before Friday October 13th 2011 at 2:00 PM, after this time bid/proposals
will no longer be accepted.

**Tri-County Council for the Lower Eastern Shore of
Maryland
101 West Green Street
Snow Hill, Maryland 21863**

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Proposal Opening Date: Friday October 13th 2011

RFP NAME: DATA PROJECT

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2. AGENCY BACKGROUND

The Tri-County Council for the Lower Eastern Shore of Maryland was formed by an Act of the Maryland General Assembly in 2001. The purpose of the Council is to facilitate regional planning and development in Somerset, Wicomico and Worcester counties.

The Council membership is made up of municipal, county and state elected officials as well as the county administrators from the three counties. The voting members are the five Somerset County Commissioners, four of the seven Wicomico County Council members, the Wicomico County Executive, five of the seven Worcester County Commissioners, one municipal representative from each of the three Counties, and the members of the General Assembly who represent the region and have a majority of their districts within the three counties. Currently, there are twenty three voting members, fourteen non-voting members and the full Council meets quarterly.

The Council works closely with the Economic Development Administration (EDA) of the United States Department of Commerce and United States Department of Agriculture (USDA) Rural Development and partners with the Maryland Department of Business and Economic Development.

In November 2009 the Council was designated as an Economic Development District (EDD) by the Economic Development Administration (EDA) of the United States Department of Commerce. This will allow the Council (on behalf of the Counties) to apply directly to the EDA for funding.

The Tri-County Council for the Lower Eastern Shore of Maryland (TCC) is renovating a 76,000 square foot facility and erecting a Maintenance Building on a 26 acre campus in Salisbury, Maryland located at 31901 Tri-County Way.

3. DESCRIPTION OF THE WORK

TCC is requesting proposals for low voltage data cabling and fiber cabling and all infrastructure equipment for operation of an internet connected network for our new facility.

TCC's successful respondent, for this project, will be the sole authority and responsible party for proposed installation. TCC desires to establish a contractual relationship focused on a single point of contact associated with all support through project closure. In the event TCC's supplier utilizes any subcontractors associated with our project for any part of the system architecture, design, planning, installation or support it is understood the supplier will be the sole responsible agent for all project activities.

It is the intent of this Request for Proposal that all responders shall provide a complete end-to-end solution for the installation associated with TCC's low voltage cabling needs. The supplier shall provide all design, planning, system architecture, hardware, installation, network analysis, training and post-installation support for our project. TCC staff shall act in oversight and advisory positions only.

TCC's supplier shall be responsible for providing a comprehensive training plan for all applicable TCC employees. TCC Project Manager will work with the successful responder in an effort to establish a training plan that achieves TCC training objectives.

TCC's supplier is expected to submit a time-line for installation of the project hardware substantiating minimal impact of daily TCC operations and applicable TCC employees. TCC Project Managers will work with supplier to create a working project plan in an effort to achieve installation goals.

4. SCHEDULE OF EVENTS

September 15th 2011	Release RFP to Public
September 20 th 2011 10AM at the facility	Pre-Bid Meeting
September 21 th 2011 9AM – 2PM	Facility Assessment Visit – Option 1
September 28 st 2011 9AM – 2PM	Facility Assessment Visit – Option 2
October 4 th 2011 9AM – 2PM	Facility Assessment Visit – Option 3
October 6 th 2011 2PM	Close of RFI Questions
October 13 th 2011 2PM	Close of Bid Acceptance
October 20 th 2011	Notification of Award
October 31 st 2011	Expected Start of Project
January 1 st 2012	Completion of Project including Sign-off

5. FACILITY INFORMATION

The facility is located in the old Filtronic/Comtek/Powerwave property on route 50 across from Wor-Wic Community College. The prior address was 31901 Comteck Ln, Salisbury, MD 21804 however the road has been renamed to Tri County Way.

Renovation of the facility is currently underway. A separate RFP for all low-voltage cabling will be created to support the implementation of the phone system and other systems so no station cabling requirements will be in the Phone System RFP.

There are numerous floor plans and site plans available on the TCC website at the following address: <http://lowershore.org/NewFacility/RFPs/TCCBuildingRenovation.aspx>.

There will be a 2nd structure to be built on the property. This 2nd structure is not included in the scope of this RFP.

6. FACILITY ASSESSMENT

TCC understands and expects that each respondent may require a full facility assessment to determine the viability of installing the requirements in this RFP. We desire the supplier to perform a full facility assessment to determine what, if any, updates or quality mitigation processes must be achieved in order to support this RFP.

6.1. Respondents shall provide all results of the aforementioned assessment including necessary maps, specification thresholds, specific problem areas and the recommended solution and cost for each.

6.2. There will be 3 visitation times to perform the Facility Assessment as noted in the schedule of events.

6.3. Architectural drawings of the facility are located online at the following locations:

6.3.1. General Drawings: <http://lowershore.org/NewFacility/GeneralDrawingsandDocuments.aspx>

6.3.2. Detailed Drawings: <http://lowershore.org/NewFacility/RFPs/TCCBuildingRenovation.aspx>

6.3.3. Print Drawings: A complete set of architectural drawings may be obtained from Dicarolo Precision Imaging at 410-749-0112 or <http://dicarolo1.com> at 2006 Northwood Drive Salisbury, MD 21801.

7. SCOPE OF SERVICES

7.1. SERVICE SUMMARY

Vendor shall define the services to be offered, how these services would be used to TCC's advantage, and how vendor will be available to ensure that the voice & data cable installation services provided to TCC are consistently offered at a high level.

Vendor shall detail all costs associated with the services and products described in this RFP. It is extremely important that all costs, recurring and non-recurring, be presented in a manner that allows costs to be easily understood. Vendors shall provide information for the proposed contract period and for ongoing support and maintenance.

7.2. SERVICE REQUIREMENTS

Vendor shall propose a full package of typical installation services for TCC. The services proposed should include but not be limited to:

- 7.2.1. The vendor shall be licensed for the installation of low voltage wiring.
- 7.2.2. The vendor shall have a verifiable record of successfully installing CAT5E cabling.
- 7.2.3. The vendor shall have a verifiable record of successfully installing single-mode fiber.
- 7.2.4. The vendor shall have knowledge of the installation of data enclosures, equipment racks and ladder racks.
- 7.2.5. The vendor shall have knowledge of the installation of plenum rated cable and all of the requirements for hanging in a plenum rated space including but not limited to methods of attachment, proximity regulations, tension tolerances, crimping tolerances and bend radius limitations.
- 7.2.6. The vendor shall label cable terminations in accordance with ANSI/TIA/EIA-606-A.
- 7.2.7. The vendor shall install all CAT5E or higher levels of copper cable in accordance with the TIA/EIA-568-B.1-2001 specification. All copper cable installed shall be solid, not stranded.
- 7.2.8. The vendor shall install all fiber in accordance with the TIA-4720000-A specification.
- 7.2.9. The vendor is responsible for the acquisition and execution of all permits, inspections and corrections required to complete the project and sub-projects.
- 7.2.10. The vendor is responsible for providing all tools and materials necessary to complete the project.
- 7.2.11. The vendor is required to comply with all local, state and/or federal laws and regulations.

- 7.2.12. The vendor is responsible for installing appropriate plywood or other mounting sub-straight where necessary for mounting any wall-mount materials. All plywood shall be fire-rated and meet all local, county and state fire-codes.
- 7.2.13. The vendor shall warranty all labor performed for a period of 1 year.
- 7.2.14. The vendor shall be a Cisco Certified reseller and certified for the installation of any equipment needed for this project.
- 7.2.15. When pulling cable, the vendor must pull an additional pull-string.
- 7.2.16. The vendor is required to install appropriate chaff management on all cable pass through locations.

7.3. QUALITY INSURANCE

Vendor's qualifications:

- 7.3.1. Vendor must have a minimum of five years of experience completing projects of this size and scope. Provide reference information of three such projects.
- 7.3.2. Provide satisfactory evidence of technicians' qualifications for this work
- 7.3.3. Vendor shall possess a general communications cabling license.

7.4. DEFINITIONS

7.4.1. General Definitions

- 7.4.1.1. Low Voltage Schedule – This refers to a spreadsheet titled “TCC-RFP-TC1015 - Low Voltage Cabling Schedule v1.0.xls”. It can be found on the Lowershore.org website under this RFP's reference.
- 7.4.1.2. Drawings – This refers to a PDF titled “TCC-RFP-TC1015 - Data Floor Plans.vsd”. It can be found on the Lowershore.org website under this RFP's reference.

7.4.2. Physical Locations

- 7.4.2.1. TCC Facility – The entire campus facility including the entire property, buildings, improvements and constructions. This can be seen labeled in green on the Drawings. The campus is located at 31901 Tri-County Way, Salisbury MD, 21804. The previous address for this location that can be used for GPS or online map lookups is 31900 Comteck Lane, Salisbury MD 21804. This campus is situated on the north-west corner of Rte. 50 and Walston Switch Road, diagonally across from Wor-Wic Community College.
- 7.4.2.2. Main Building – The primary structure on the TCC Facility campus. A 2 story improved structure with the primary purpose of housing private and public commercial type residents. This can be seen labeled in green on the Drawings.
- 7.4.2.3. Maintenance Building – A new structure on the TCC Facility campus to be built in 2012. A 2 story improved structure with the primary purpose of providing private industrial facilities to maintain buses. This can be seen labeled in green on the Drawings.

- 7.4.2.4. 1st Floor Server Room – A centrally located room on the first floor of the Main Building to house the MDF-1, IDF-1 and multiple racks of servers. This can be seen labeled in green on the Drawings and also bears the marking of room 008.
- 7.4.2.5. MDF-1 – Located in the 1st Floor Server Room, this Main Distribution Frame will provide an area for the termination of all specified backbone cabling to other MDF's and all specified fiber terminations entering the room.
- 7.4.2.6. MDF-1t - Located in the 1st Floor Server Room, this Main Distribution Frame will provide an area for the termination of all telecom cross-connects entering the room.
- 7.4.2.7. IDF-1 - Located in the 1st Floor Server Room, this Intermediate Distribution Frame will provide an area for the termination of all workstation cabling entering this room.
- 7.4.2.8. 1st Floor Telecom Room – A centrally located room on the first floor of the Main Building to house the demark for telecom providers. This can be seen labeled in green on the Drawings and also bears the marking of room 006.
- 7.4.2.9. MDF-T – Located in the 1st Floor Telecom Room, this Main Distribution Frame will provide an area for the termination of all telecom cross-connections.
- 7.4.2.10. 2nd Floor Server Room – A centrally located room on the second floor of the Main Building to house the MDF-2, IDF-2 and multiple racks of servers. This can be seen labeled in green on the Drawings and also bears the marking of room 206.
- 7.4.2.11. MDF-2 - Located in the 2nd Floor Server Room, this Main Distribution Frame will provide an area for the termination of all specified backbone cabling to other MDF's and all specified fiber terminations entering the room.
- 7.4.2.12. IDF-2 – Located in the 2nd Floor Server Room, this Intermediate Distribution Frame will provide an area for the termination of all workstation cabling entering this room.

8. SCOPE DETAILS

8.1. LOW VOLTAGE CABLING

Part of this project is to install low voltage cabling to support phone and network operations.

8.1.1. Phasing – This RFP covers phase 1 for the majority of the main building. The second phase which is not included in this RFP will be the Shore Transit interior and other exterior locations. Please note that any areas of your proposal that are capacity sensitive are to be specified for the combined phase 1 and phase 2 implementation. For this specific RFP it is not anticipated that there will be any items impacted by phase 2.

8.1.2. Backbone Cabling Requirements

8.1.2.1. Fiber cables will be Plenum rated, laser optimized single mode indoor/outdoor cable with LC/PC type single-mode fiber optic termination connectors and must be compatible with Cisco SFP 1000BASE-SX module (GLC-SX-MM (SFP)). Cable must meet bend-insensitive specifications of the specification ITU-T G.657 and IEC 60793-2-50.

8.1.3.Backbone Cabling Configurations

8.1.3.1. IDF-1 to IDF-2 Cross Connections

8.1.3.1.1. 25 Pair Plenum CAT5E Cross Connect – A total of sixty (60) 25 pair CAT5E cross connect cables (plenum rated) will be installed on RJ45 patch panels. All 4 pairs of the RJ45 cross connects are to be wired with the ANSI/TIA/EIA-568-B.1-2001 specification. Labeling of the cross connect will comprise of the prefix “12C-“ and a 3 digit sequential number starting from 001.

8.1.3.2. MDF-1 to MDF-2 Cross Connections

8.1.3.2.1. 24 strand fiber – A single plenum rated cable consisting of 24 strands of fiber is to be installed between the 2 MDF locations. Each strand will be terminated in a LC style connector patch panel. Labeling of the cross connect will comprise of the prefix “12F-“ and a two digit sequential number starting from 01.

8.1.3.3. MDF-T to MDF-1t Cross Connections

8.1.3.3.1. 25 pair CAT5 Cross Connect – One 25 pair CAT5E cross connect cable (plenum rated) will be installed on CAT5 66 Blocks mounted to the wall at each location. The cable will be extended up through the drop ceiling with D rings or equivalent. This cross connect is to support Telecom connections from Verizon (ranging from POTS lines to T1). This cable must be run through existing 4” conduit.

8.1.3.4. MDF-T to MDF-1 Cross Connection

8.1.3.4.1. 50 pair CAT5E Cross Connect – Two 25 pair CAT5E cables (plenum rated) will be installed to cross connect these two locations. In the MDF-T they will be punched down on a 12 port CAT5E RJ45 Patch panel mounted to the wall (only 48 of the 50 pairs are needed for this connection). In the MDF-1 they will be punched down on the same patch panels as the previously specified cross connects. Labeling of the cross connect will comprise of the prefix “T1C-“ and a 3 digit sequential number starting from 001. This cable must be run through existing 4” conduit.

8.1.3.4.2. 50 pair CAT5 Cross Connect – Two 25 pair CAT5E cross connect cables (plenum rated) will be installed on CAT5 66 Blocks mounted to the wall the MDF-T and in a suitable rack mountable CAT5 66 Block in the MDF-1. The cable will be extended up through the drop ceiling with D rings or equivalent. This cross connect is to support Telecom connections from Verizon (ranging from POTS lines to T1). This cable must be run through existing 4” conduit.

8.1.3.4.3.

8.1.3.5. MDF-T to 2nd Floor Server Room Cross Connection

8.1.3.5.1. 25 pair CAT5 Cross Connect – One 25 pair CAT5E cross connect cables (plenum rated) will be installed on CAT5 66 Blocks mounted to the wall at each location. The cable will be extended up through the drop ceiling with D rings or equivalent. This cross connect is to support Telecom connections from Verizon

(ranging from POTS lines to T1). The location for the 66 block in the 2nd floor server room is to be determined with the customer.

- 8.1.3.5.2. 50 pair CAT5E Cross Connect – Two 25 pair CAT5E cables (plenum rated) will be installed to cross connect these two locations. In the MDF-T they will be punched down on a 12 port CAT5E RJ45 Patch panel mounted to the wall (only 48 of the 50 pairs are needed for this connection). In the MDF-1 they will be punched down on the same patch panels as the previously specified cross connects. Labeling of the cross connect will comprise of the prefix “T2C-“ and a 3 digit sequential number starting from 001.

8.1.4. Server room/MDF/IDF Configurations

8.1.4.1. Common Requirements

8.1.4.1.1. Patch Panels

- 8.1.4.1.1.1. All patch panels shall be designed to fit within standard 19” equipment racks. If modular patch panels are specified, the panels shall contain the quantity of RJ45 modular connectors as identified in the drawings or specifications.
- 8.1.4.1.1.2. All patch panels will be installed starting at the top of a rack and working down.

8.1.4.1.2. Wall Racks

- 8.1.4.1.2.1. All racks located next to a wall (parallel to the wall and no more than 12” from the wall) shall be standard 2 post racks, 84”. An example of this type of rack is the ICC model ICCMSR1984 (<http://bit.ly/nFdE4S>).
- 8.1.4.1.2.2. 2U horizontal wire management (D-Ring, 3 ½”) shall be installed between every 48 ports and at the top of a rack. An example of the style of horizontal cable management required is the ICC model ICCMSCMP52 (<http://bit.ly/q2IkTJ>).
- 8.1.4.1.2.3. Vertical wire managers (dual finger) shall be installed on both sides of racks to extend the full height of the rack. An example of this is the ICC model ICCMSCMA82 (<http://bit.ly/oO1Asj>). Each rack must have a left and right vertical manager dedicated to it, even if next to another rack of the same type.
- 8.1.4.1.2.4. Appropriate vertical ladder racks should extend from the top of the rack to the ceiling mounted ladder racks and anchored to the wall. An example of the ladder rack to be used is the ICC model ICCMSLST05 (<http://bit.ly/nN8jzJ>).

- 8.1.4.1.3. Wiring Cabinets - All cabinets for wiring purposes will be stand-alone cabinets approximately 80” tall with side mesh panels, a rear locking door, a front locking door, width to accommodate vertical wire managers and rails on which to mount standard 19” equipment. Specification is Dell PowerEdge 4220W (Wide) Rack Enclosure standard width and depth with wheels and standard power distribution. Reference Link: (<http://dell.to/q5ZkWQ>). Each

cabinet must have an APC Rack Mount UPS model APC Smart-UPS 3000VA RM 2U LCD 120V (<http://bit.ly/niXfII>), specifically with an L5-30 input connector.

8.1.4.1.4. Ladder Racks – Ladder racks are required in some areas. An example of the 90 degree radius turn ladder is the ICC model ICCMSLFT90 (<http://bit.ly/oYT79m>) and an example of the straight ladder rack is the ICC model ICCMSLST10 (<http://bit.ly/n41NpY>). An example of the interior radius ladder rack is the ICC model ICCMSLIR90 (<http://bit.ly/otA6oc>). The vendor is to supply all mounting and hanging hardware necessary.

8.1.4.2. 1st Floor Server Room

8.1.4.2.1. The vendor will supply a ladder rack system extending around part of the perimeter of the room and over the area for cabinets to be installed. It will require 1 90 degree radius turn and approximately 45 linear feet of ladder rack. The rack is to be hung from the structure above the drop ceiling so that the ladder rack is 96” above the height of the raised floor. A drawing of the layout of the ladder rack can be found on Drawing A.

8.1.4.3. MDF-1

8.1.4.3.1. All cables terminating at the MDF-1 will terminate in “Wiring Cabinets” as previously defined. The number of these racks will be determined by the vendor based on the wiring configuration. We currently expect there to be only 1 cabinet based on the configuration. The first rack will be located in the location denoted on Drawing A and proceeding to the right.

8.1.4.4. LDF-1

8.1.4.4.1. All cables terminating at the LDF-1 will terminate in “Wall Racks” as previously defined. The number of these racks will be determined by the vendor based on the wiring configuration. The first rack will be located in the location denoted on Drawing A and proceeding to the right.

8.1.4.5. 2nd Floor Server Room

8.1.4.5.1. The vendor will supply a ladder rack system extending from the raised floor near the entrance to the room, up the wall, and over the area for cabinets to be installed. It will require approximately 35 linear feet of ladder rack with an inside corner ladder rack. The rack is to be hung from the structure above the drop ceiling so that the ladder rack is 96” above the height of the raised floor. A drawing of the layout of the ladder rack can be found on Drawing B.

8.1.4.6. MDF-2 & LDF-2

8.1.4.6.1. All cables terminating at the MDF-2 and LDF-2 will terminate in “Wiring Cabinets” as previously defined. The number of these racks will be determined by the vendor based on the wiring configuration. The first rack will be located in the location denoted on Drawing B and proceeding to the left.

8.1.5. Horizontal Cabling Requirements

- 8.1.5.1. All station cabling will be Plenum rated, CAT5E and must meet the ANSI/TIA/EIA-568-B.1-2001 specification.
- 8.1.5.2. All station cables must support Power-Over-Ethernet Plus (PoE+) standard IEEE 802.3at-2009 for use up to 25.5W.
- 8.1.5.3. All Data patch cords shall be factory assembled patch cords. All patch cords shall meet the performance characteristics standard non-plenum CAT5E cable with stress relief boots. The contractor shall provide patch cables as specified.
- 8.1.5.4. J-hooks shall be industry standard J-hooks with adequate support brackets as required by code. J-hooks shall be supported using commercially available components designed for the purpose of the existing building structure, and appropriate brackets for mounting application. J-hooks shall not be supported from fixtures originally placed to support other equipment. Cabling contractor shall utilize the appropriate quantity of hooks and spaced as recommended by TIA/EIA industry standards.
- 8.1.5.5. All Power or Data poles, if required, shall be industry standard with lengths designed and installed by the contractor to meet proper cable installation requirements. All data outlets at the data poles shall use the same faceplate as the wall mount applications.

8.1.6. Station Cabling Configurations

- 8.1.6.1. There are 6 configurations that will be utilized for station cabling as follows:
- 8.1.6.2. Configuration A – This will be 4 individual CAT5E cables with 4 CAT5E jacks mounted in a single gang plate. There are approximately 160 of these types of station endpoints in this RFP. The number and location of these drops is defined on the Low Voltage Schedule. These drops will be wall mounted in existing low voltage mounting bracket. These locations already have pull strings through the walls from above the drop ceiling.
- 8.1.6.3. Configuration B - This will be 2 individual CAT5E cables with 2 CAT5E jacks mounted in a single gang plate. There are approximately 129 of these types of station endpoints in this RFP. The number and location of these drops is defined on the Low Voltage Schedule. These drops will be wall mounted in existing low voltage mounting bracket. These locations already have pull strings through the walls from above the drop ceiling.
- 8.1.6.4. Configuration C - This will be 1 individual CAT5E cable with 1 CAT5E jack mounted in a single gang plate. There are approximately 44 of these types of station endpoints in this RFP. The number and location of these drops is defined on the Low Voltage Schedule. These drops will be wall mounted in existing low voltage mounting bracket. These locations already have pull strings through the walls from above the drop ceiling.
- 8.1.6.5. Configuration D - This will be 1 individual CAT5E cable with 1 CAT5E jack mounted in a single gang plate. These will be wall mounted in a vendor installed low voltage mounting bracket approximately 4 to 6 inches below the drop ceiling. The vendor is responsible for cutting in the drywall, installing the plate and fishing the cable(s) through the bracket from above the drop ceiling. There are approximately 19

of these types of station endpoints in this RFP. The number and location of these drops is defined on the Low Voltage Schedule.

8.1.6.6. Configuration E – The base configuration will be 1 individual CAT5E cable with 1 CAT5E jack mounted in a single gang plate. These will be mounted inside a supplier provided normal depth single gang metal box above the ceiling for use with exterior mounted cameras. The box must be properly mounted to the structure near the junction box that leads outside in a location agreed to by the customer. The box must have an appropriate fitting so that there is no chafing by the metal box on the cable. The vendor is also required to pull a patch cable of sufficient length through the exterior conduit and patch into the installed jack such that there is at least 2' of slack cable after a camera is attached. Due to the unique location of these jacks, there may be some that are combined into a single box based to be determined by the customer. There are approximately 14 of these types of station endpoints in this RFP. The number and location of the exterior camera drops are defined on the Low Voltage Schedule.

8.1.6.7. Configuration F - This will be 1 individual CAT5E cable with 1 CAT5E jack mounted in a single gang plate. These will be mounted inside a supplier provided normal depth single gang metal box above the ceiling for use with WiFi access points mounted above the ceiling. The box must be properly mounted to the structure in a location agreed to by the customer. The box must have an appropriate fitting so that there is no chafing by the metal box on the cable. There are approximately 6 of these types of station endpoints in this RFP. The number and location of these drops is defined on the Low Voltage Schedule.

8.1.7. Station Labeling

8.1.7.1. All workstation jacks will be labeled with the following information: Room Number, Plate Number, and Jack Number(s).

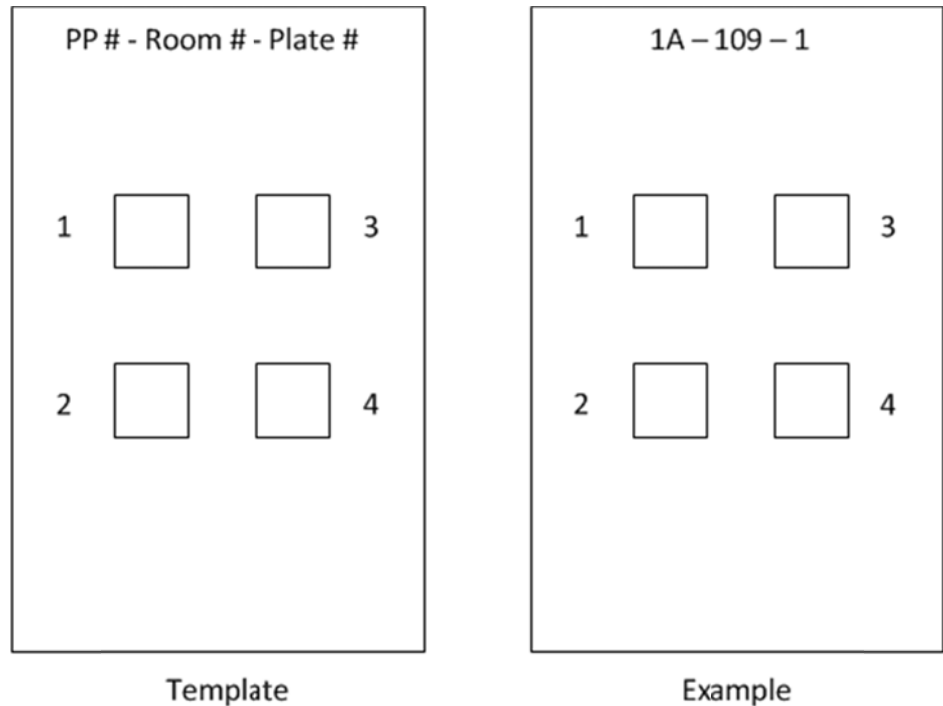
8.1.7.2. Patch Panel numbers will be sequential starting with “1” for the LDF1/MDF1, “2” for the LDF2/MDF2 and “M” for the LDF-M/MDF-M. This will be followed by a letter representing the panel location in that location. For example, the 3rd patch panel in the first floor server room would be labeled as 1A.

8.1.7.3. Room numbers will be taken from the 911 space plan provided by the customer.

8.1.7.4. Plate number – vendor will number the plates in a given room starting with the first plate to the left of the main entrance door and proceeding clockwise around the room. Plate numbers in each room will start with the number 1.

8.1.7.5. Jack Number – vendor will number the individual jacks on a given plate starting with the top left location being 1, then proceeding down the first column and starting again at the top of the second column.

8.1.7.6. An example plate labeling is as follows:



8.1.8. Cable Certification

8.1.8.1. The supplier will test all cables and certify their proper operation for each cable type. The results of the certifications are to be provided to the customer at the completion of each sub-project.

8.1.9. Normative Reference

8.1.9.1. Reference Documents

8.1.9.1.1. The latest edition of referenced standards (from the latest available draft in the case of proposed standards) shall be the controlling document. Where the standards appear to conflict with one another, the one with the most stringent requirements shall be applicable.

8.1.9.1.2. ANSI/ICEA S-90-661 CSA UL 444 ANSI/TIA/EIA-568-B
ANSI/TIA/EIA-569-B ANSI/TIA/EIA-606-A ANSI/TIA/EIA-607 ISO/IEC
11801 CENELEC EN50173: 1995 NEC, NFPA70 NEMA WC-63/66

8.1.9.1.3. In addition to the requirements shown above, UTP cables shall previously meet the requirements of: ANSI/TIA/EIA-568-B ISO/IEC 11801

8.1.9.1.4. All connecting hardware and patch cords shall previously meet, as a minimum, all the requirements including the electrical and mechanical performance requirements of:

8.1.9.1.5. CSA UL 1863 ANSI/TIA/EIA-568-B ISO/IEC 11801 ISO/IEC 60603-7
CENELEC EN50173: 1995 NEC, NFPA70

8.1.9.2. Applicable Testing Standards

Testing of individual components and channel shall be conducted in accordance with the following standards: ASTM D 4566-94, Standard Test Methods for Electrical Performance Properties of Insulation and Jackets for Telecommunications Wire and Cable, 1994 ANSI/TIA/EIA-568-B, Commercial Building Telecommunications Standard, ISO/IEC 11801

8.1.10. Installation Requirements

In order for unshielded twisted-pair cabling infrastructure to deliver high-speed performance, it is manufactured to very tight specifications. Consequently, to maintain the unshielded twisted-pair cabling system performance proper installation practices must be followed. Listed below are some requirements that shall be followed:

- 8.1.10.1. In the MDF, IDF and computer rooms and plenum applications, no nylon cable ties shall be allowed. Instead all ties should be plenum rated Velcro.
- 8.1.10.2. The cable jacket on UTP shall only be stripped back the minimum required to terminate to connecting hardware.
- 8.1.10.3. Cable management panels shall be used when terminating cable.
- 8.1.10.4. Maximum cable lengths shall not exceed industry standards.
- 8.1.10.5. All horizontal runs, moves, adds, and changes must be documented. Permanent link test results must be provided.
- 8.1.10.6. Any undocumented penetrations must be preapproved by TCC. Any penetrating item (i.e., riser slots and sleeves, cables, conduit, cable tray, and raceways, etc.) shall be properly fire stopped.
- 8.1.10.7. The vendor shall provide TCC with As-Built drawings of all installations.
- 8.1.10.8. Grounding shall meet the requirements of the NEC and additionally grounding bonding shall conform to ANSI/TIA/EIA-607. Any additional Ground bars and Plates not in current plans will be the responsibility of the awarded cabling contractor to meet the requirements of this document.

8.2. NETWORK EQUIPMENT

Part of this project is to install network equipment as follows.

8.2.1. Requirements - All equipment in this section is to be new equipment. Any devices specified must include the first year of 24x7 maintenance and support and pricing for continuing maintenance beyond the first year. All equipment specified is to be supplied with appropriate power cords or power supplies. All equipment must be supplied with rack mounting tabs/arms.

8.2.2. Configuration – The vendor will be required to install, setup and configure all equipment. For the firewall, the vendor will be required to configure the firewall for a detailed configuration similar to existing equipment installed at other TCC locations. This will include VPN connections to other Cisco Firewalls. For switches, up to 5 VLANs may be requested by TCC to be configured.

8.2.3.MDF-1

8.2.3.1. Network Equipment - The following switches are to be installed:

Qty	Equipment Type
1	Cisco Catalyst 3750 - WS-C3750X-248T-S
3	Cisco Catalyst 3750 - WS-C3750X-48P-S
3	Cisco Interconnect Cables CAB-XPS-150CM=
4	Cisco 10GBase Fiber Transceivers

8.2.4.MDF-2

8.2.4.1. Network Equipment - The following switches are to be installed:

Qty	Equipment Type
1	Cisco Catalyst 3750 - WS-C3750X-248T-S
3	Cisco Catalyst 3750 - WS-C3750X-48P-S
3	Cisco Interconnect Cables CAB-XPS-150CM=
4	Cisco 10GBase Fiber Transceivers
1	Cisco Aironet 2504 WLC - AIR-CT2504-15-K9 (licensed for 15 APs)

8.2.4.1. Edge Equipment – The following firewall/router is to be installed:

Qty	Equipment Type
1	Cisco 2911 Security Bundle - Router - Ethernet, Fast Ethernet, Gigabit Ethernet - 2U – external

8.2.4.2. Installation Requirements – The equipment is to be installed in the same cabinet as installed for the cross connects and station wiring. 150CM switch interconnect cables are specified to provide for a 2U horizontal cable management mounted between each switch. Additional horizontal cable management should be mounted at the top and bottom of the switch stack.

8.2.5.WiFi Equipment

8.2.5.1. The following access points are to be installed in the Drawings labeled C, D, E and F.

Qty	Equipment Type
6	AIR-LAP1142N-US-K9—802.11a/g/n Indoor Lightweight AP

8.2.5.2. Installation Requirements – The access points are to be installed above the drop ceiling at the locations denoted in the spreadsheet under the column Wiring Config F and the drawings C, D, E and F.

8.2.6.Patch Cables – The following patch cables are required. They must be **CAT6** and have molded strain relief boots.

Qty	Color	Length	Purpose
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10	White	1'	Telephone Cross Connects
10	White	2'	
25	White	3'	
75	White	5'	
75	White	8'	
75	White	10'	
25	White	14'	
5	Pink	1'	Public Network Cross Connects
5	Pink	3'	
5	Pink	5'	
5	Pink	10'	
5	Pink	14'	
2	Pink	25'	
10	Orange	1'	TCC Workstation Cross Connects
20	Orange	2'	
40	Orange	3'	
75	Orange	5'	
75	Orange	10'	
50	Orange	14'	
15	Orange	25'	
5	Green	1'	WiFi Cross Connects
5	Green	3'	
5	Green	5'	
5	Green	10'	
20	Purple	1'	IP Cameras
20	Purple	3'	
20	Purple	5'	

8.3. TRAINING

8.3.1. Supplier is expected to provide up to 10 hours of instruction to TCC Technical Services staff on the physical layout of all installed wiring and systems.

8.3.2. Supplier is expected to provide up to 10 hours of instruction to TCC Technical Services staff on the configuration and basic administrative use of the firewall, routers and switches.

8.3.3. Successful RFP respondent will also provide paper and electronic copies of manuals and operational handbooks, as part of contract award, at no additional cost to TCC.

8.4. SOLUTION REQUIREMENTS

8.4.1. If respondent proposes a specific switching solution to TCC's requirements, respondent shall provide detailed specifications for proposed solution, applicable equipment, pricing and placement of equipment. Maintenance cost for proposed switching equipment shall be reflected in the maintenance section of this response.

8.5. SUPPLIER REQUIREMENTS

Supplier will provide "as-built" documentation in relationship to system hardware/software and device addressing schemes, initial inventory of equipment for each completed area including

model and serial numbers, applicable hardware/software and additional system specific equipment and all wiring locations.

8.6. PROJECT MANAGEMENT

Supplier is expected to provide a Project Manager for TCC's system installation who will interface and evolve as the main contact for the supplier for the duration of the project. Said Project Manager shall be assigned to TCC throughout the life of the project and whose assignment shall not be changed without prior written consent from TCC. TCC expects that the Project Manager will attend all requested meetings for the duration of our project. TCC also reserves the right to request a change in Project Management based on performance.

8.7. MAINTENANCE AND SUPPORT

Supplier shall provide TCC with a comprehensive listing of available service and support plans. Said plans shall include the range of offered services inclusive of all levels of support plus the escalation plan as follows:

8.7.1. An Itemized list of services for TCC's facility.

8.7.2. On-going Maintenance Plan and costs incurred.

8.7.3. Respondent shall provide detail of local support, hours or limits of coverage for service and repairs.

8.7.4. Respondent shall provide respective Maintenance Plan options with one hour, or less, response times.

8.7.5. Provide software upgrades inclusive in Maintenance Plan.

8.8. EMERGENCY SUPPORT TIMEFRAME

The supplier is required to provide on-site support within one hour in emergency conditions.

8.9. CONTINUAL OPERATION

The system must be able to maintain continuous operation, 24 hours per day, 365 days per year assuming normal environmental and power parameters.

9. BIDDING PROCEDURES

A complete bid must be submitted to be considered.

Proposals shall be organized into the following major sections:

- Scope of Services
- Work Proposal
- Company Background
- Requirements Checklist (Appendix 2)
- Project Supervisor/Project Manager Profile & Credentials
- Diagram of locations of proposed trunk runs
- Client References
- Completed 'Proposal Cost-Out Spreadsheet'
- Exceptions to the RFP

- Service Options
- Verification of MD state business license
- Verification of Insurance and Bond
- Sample Documents
- Required Attachments

The applicant must sign proposals. An unsigned proposal may be rejected.

Bidder response should be typed on company letterhead and signed by a company official who is authorized to enter into agreements/contracts. Bidders should certify that all the information is given in a clear and concise manner. By submitting a bid, the Bidder shall be deemed to have accepted all the terms, conditions and requirements set forth. The bid shall be awarded to the lowest responsive bidder. That will be determined by comparing the unit costs of the items.

Submit two (2) original and six (6) copies.

Submit proposal in a sealed package. Include name and address of the applicant.

Bids can be hand delivered or mailed. Those vendors interested in submitting a bid must do so by 2:00pm on October 13th 2011. All bids should be postmarked by that date. Successful vendor will be notified no later than October 20th 2011. Bids should be submitted to:

Tri-County Council for the Lower Eastern Shore of Maryland
 Procurement Department
 Attn: Procurement Officer
 Proposal #
 101 W. Green St./PO Box 99
 Snow Hill, Maryland 21863

Please be advised that the final award of contract will be at the sole discretion of the Tri-County Council for the Lower Eastern Shore of Maryland.

10. BIDDING REQUIREMENTS

- 10.1. Appendix 2 Requirements Checklist – This checklist must be completed by bidder, signed and included with bid package.
- 10.2. Scope of Services - Define your scope of work and specific services being offered in your proposal. Your response should address the Scope of Work and Specifications listed in Section 2 of this RFP.
- 10.3. Work Proposal – Provide details on the schedule of the project timeline for each sub-project. Estimate how many people will be needed per section of the proposal.
- 10.4. Completed ‘Proposal Cost-Out Spreadsheet’ – Provide all details on all costs as identified in the provided spreadsheet template.
- 10.5. Service Options – Provide service plan options for the ongoing support and maintenance of all items provided in this RFP. Specifically provide a pricing option for 8x5 support, 24x7x365 support and MAC (Move/Add/Change) pricing.
- 10.6. Describe start-up requirements and the lead-time necessary to begin providing services.

- 10.7. Diagram of locations of proposed trunk runs – The bidder must provide a drawing that specifies their proposed location for trunk runs from each of the main workstation areas and proceeding into the 1st floor computer room and 2nd floor computer room.
- 10.8. Provide the escalation procedure to be invoked in the event that first level service personnel are unable to remedy TCC's service request (include time limits, escalation levels, and the contact name, title, location, and phone number for each level).
- 10.9. Describe any additional professional service offerings that may be of value to TCC.
- 10.10. Provide pricing for removal or addition of any individual cable run as defined by cable configurations A through F. This pricing will be used to accommodate any add or deletes of the workstation cabling specification during the execution of this contract.

11. INVOICING REQUIREMENTS

This project will be funded by a single source through TCC. The vendor is required to complete the attached bid spreadsheet so that TCC can obtain and allocate funds accordingly.

Vendor submitted invoices will include the following items:

- TCC RFP Number
- TCC Project and sub-project description
- Line items for materials
- Line items for labor

12. TIMEFRAME

The selected vendor will be required to work with the sites General Contractor(s) to schedule suitable installation locations and timeframes. TCC expects the contract process to take 7 days and the implementation to take less than 45 days. TCC's objective is that all work is completed by the building renovation project completion date which is currently January 1st 2012. The selected vendor is required to comply with all regulations and guidelines required by the General Contractor on the site (i.e. wearing hard hats).

13. LIQUIDATED DAMAGES

It is expressly understood and agreed by and between the Contractor and the Owner that the Contract Time stipulated in the bid form is a reasonable time for completion of the work, taking into consideration the average climatic range and the usual conditions prevailing in the locality of the project. Time is an essential element of the Contract and it is important that the work be vigorously prosecuted and conform to the scheduled start and finish dates of the Construction Schedule.

The Contractor agrees that he can and will substantially complete the total projects work in accordance with the Contract Documents within the stated Contract Time.

The Owner and Contractor agree that due to the uniqueness of this contract and the fact that the Owner is a government agency and other relevant factors, damages resulting from failure of the Contractor to perform the contract within the time specified therefore will result in damages to the Owner which shall be difficult, if not impossible, to ascertain; therefore, the provision for damages herein specified shall be applied in the event of such a default. The Owner and the Contractor, both of whom are, by their own admissions, sophisticated business entities with prior experience in dealing with construction contracts, stipulate that damages shall be the sum of 0.25% of contractors base bid for each day that the work shall remain uncompleted beyond the time(s) specified elsewhere in the

contract, provided, however, that due account shall be taken of any adjustment of specified completion time(s) for completion of work as granted by approved change orders.

The Contractor, by the execution of the contract document, does hereby irrevocably constitute, designate and appoint the Owner to be his agent for the limited but express purpose of deducting on a daily basis the liquidated damages as above determined from the balance of the contract funds in the hands of the Owner and due to the Contractor, and the failure of the Owner to deduct such sum for any day or any combination of days, whether consecutive or not, shall not operate as a waiver of such liquidated damages for that period, and such damages for such day or days shall be cumulative and may be subsequently deducted by the owner from such sums as may be due the Contractor, but work performed. In the event that the amounts due the Contractor are less than the amount of such damages, the Contractor, shall be liable to the Owner for the difference.

The power granted by the Contractor to the Owner above is a power coupled with an interest and is irrevocable.

14. PROOF OF INSURANCE

Attach insurance certificates indicating liability insurance of a minimum of \$1,000,000 for each of the following: comprehensive general, motor vehicle, professional and worker's compensation.

15. APPROVED EQUALS, CLARIFICATIONS & EXCEPTIONS

Requests for approved equals, clarifications, and/or exceptions to the specifications shall be received by Tri-County Council on the form provided (Appendix 1) not less than fifteen (15) working days before the date of the scheduled bid closing.

Any request for an approved equal or exception to the specifications shall be fully supported with technical data, test results and any other pertinent information available as evidence that the substitute offered is equal to or better than the Specification Requirement. Tri-County Council may require a bidder offering a substitute to supply additional descriptive material, a sample and/or a demonstration.

Unless a request for an approved equal is granted it is understood that the bidder is offering referenced brand names as specified.

Wherever a specific trade or product name is used within this specification the following statement applies, "or approved equal with essentially comparable standards of quality, design and performance."

Written requests for clarifications and additional information shall be directed to Tri-County Council, Procurement Department, PO Box 99, Snow Hill, MD 21863, Attention: Procurement Officer, by email to procurement@lowershore.org or by Fax to 410-632-1466 – Attn: Procurement Officer. Please include the Proposal number for this RFP on all your correspondence. All correspondence must be received no later than close of business, October 6th 2011 at 2PM. A Request for Exception/Clarification form is attached as Appendix 1. Clarifications and additional information, if any, will be posted on the TCC Procurement website. It is the responsibility of the perspective bidders to check the TCC website for updates on clarifications and equals.

16. AWARD OF CONTRACTS

This contract shall be awarded to the most responsible and responsive bidder whose bid meets the requirements and is the most competitive bid.

TCC reserves the right to not award the contract.

17. CUSTOMER RESPONSIBILITIES

TCC is responsible for the following:

17.1.1. We will allow the contractor's employees free access to the premises and facilities at all reasonable hours during the installation.

17.1.2. We will be available for inspections when notified by the contractor that the equipment or any part thereof is ready for acceptance.

18. CONTRACTOR RESPONSIBILITIES:

The winning contractor is responsible for the following:

18.1.1. Providing all supervision, labor, tools, equipment, materials, transportation, erection, construction, unloading, inspection and inventory housing. Must also return spare material as specified.

18.1.2. Furnishing and installing materials in this RFP.

18.1.3. Promptly repairing all damage to the building due to carelessness of contractor employees and exercising reasonable care to avoid any damage to the building. Reporting to TCC any damage to the building that may exist or may occur during the contractor's occupancy of the building.

18.1.4. Installing the wire, cable, hardware and software in accordance with the specifications outlined herein.

18.1.5. Conducting tests and inspections as specified post-installation.

18.1.6. Promptly correcting all defects for which contractor is responsible as determined by TCC.

18.1.7. Coordinating all work with TCC representative before the commencement of the installation.

18.1.8. Maintaining insurance and appropriate warranty bonds on the proposed distribution system until such time as it is accepted by TCC.

18.1.9. Removing all tools, equipment, rubbish and debris from the premises and leaving the premises clean and neat upon completion of the work.

18.1.10. Abiding by the safety and security rules in force on the work site per local and governmental regulation.

18.1.11. Following industry standard installation practices and as defined in this RFP.

- 18.1.12. The contractor must have been in business operating as an entity, and in the business of installing low voltage network cabling and fiber optic cabling, continuously, for a period of at least 5 years, prior to the date of this bid. This requirement is firm and is non-negotiable. Proof of when the business began operation must be included in the bid documents.
- 18.1.13. Contractor must also provide a list of key installation personnel, their hire dates, and a resume of their experience. Key installation personnel shall include at least one project manager and one journey level installer or technician. By submitting the names of these personnel, the contractor is committing them to the execution of the project outlined in this specification.
- 18.1.14. Personnel knowledgeable in local, state, province and national codes and regulations. All work shall comply with the latest revision of the codes or regulations. When conflict exists between local or national codes or regulations, the most stringent codes or regulations shall be followed.
- 18.1.15. Personnel trained and certified in fiber optic cabling, splicing, termination and testing techniques. Personnel must have experience using a light meter and OTDR.
- 18.1.16. Personnel trained in the installation of pathways and support for housing horizontal and backbone cabling.
- 18.1.17. The contractor must have successfully performed at least **three** projects of similar scope that have been functional for at least one year within date of this bid. Proof of performance shall be in the form of reference sheets which shall include a brief description of the project, the beginning and ending contract price, the project foreman or superintendent's name, and the name, address, and telephone number of a project contact.
- 18.1.18. The contractor shall not subcontract data cabling, termination or testing.
- 18.1.19. The contractor must be bondable.
- 18.1.20. Failure or refusal of a contractor to execute a contract following award, or untimely withdrawal of a proposal before such award is made and approved, may result in forfeiture of that portion of any surety required as liquidated damages to the TCC. Where surety is not required, such failure may result in a claim for damages by the TCC and may be grounds for removing the contractor from the TCC's vendor list.
- 18.1.21. All contractors must disclose with their proposal the name(s) of any officer, director, agent, or immediate family member (spouse, parent, sibling, and child) who is also an employee of the TCC. Further, all contractors must disclose the name of any TCC employee who owns, either directly or indirectly, any interest in the proposer or any of its affiliates.
- 18.1.22. The successful contractor shall be required to agree to indemnify and hold harmless TCC and its officers, employees, and agents, from and against any and all actions, claims, liabilities, losses and expenses, including but not limited to attorneys' fees, for personal, economic or bodily injury, wrongful death, loss of or damage to property, in law or in equity, which may arise or be alleged to have arisen from the negligent acts or omissions or other wrongful conduct of the successful proposer, its employees, or agents in connection with the performance of service pursuant to the resultant Contract; the successful proposer shall pay all such claims and losses and shall pay all such costs and judgments which may

issue from any lawsuit arising from such claims and losses, and shall pay all costs expended by TCC in the defense of such claims and losses, including appeals.

18.1.23. If through any cause within reasonable control of the successful contractor, it shall fail to fulfill in a timely manner or otherwise violate any of the covenants, agreements, or stipulations to the agreement, TCC shall thereupon have the right to terminate the services then remaining to be performed by giving written notice to the successful contractor of such termination which shall become effective upon receipt by the successful proposer of the written termination notice.

19. REQUEST FOR EXCEPTION/CLARIFICATION – APPENDIX 1

TRI-COUNTY COUNCIL Proposal # RFP-TC1015

Proposal Opening Date: October 13th 2PM

NAME OF BIDDER / PROPOSER: _____

TITLE OF DOCUMENT REFERENCE AND NUMBER: _____

PAGE and REFERENCE: _____

CONTRACT DOCUMENT REQUIREMENT: _____

BIDDER / PROPOSER REQUEST: _____

APPROVED: _____ DISAPPROVED: _____

TRI-COUNTY COMMENTS: _____

Forward to: Procurement@lowershore.org

- or -

Fax to: **410-632-1466** – Attn: **Procurement Officer**

20.REQUIREMENTS CHECKLIST –APPENDIX 2

TRI-COUNTY COUNCIL Proposal # RFP-TC1015

NAME OF BIDDER / PROPOSER: _____

Checklist Item	Bidder Validation	TCC Validation
Read and understood all aspects of this RFP		
Attended Facility Assessment Visit		
Customer Reference for CAT5E cabling provided		
Customer Reference for single mode fiber cabling provided		
Three Customer References for project of this scope provided		
Cisco Certified Reseller Documentation provided		
“Solution Equipment” Certified Reseller Documentation (If applicable) provided		
Project Manager Profile & Credentials provided		
Proposal Cost-Out Spreadsheet provided		
Diagram of Proposed Trunk Runs provided		
Emergency Support Timeframe documentation provided		
MD State Business License copy provided		
Insurance/Bond documentation copy provided		
Scope of Services documentation provided		
Work Proposal provided		
Service Options proposal provided		
Start-up Requirements/Lead Time proposal provided		
Escalation Procedure documentation provided		
Add/Delete Pricing per Cable Configuration provided		
Proposal includes pricing for maintenance after year 1		

Bidder Validation Completed by:

Bidder/Proposer Name: _____

Signature: _____

Date: _____