# TIME WARNER CABLE
## Business Class

You first. The technology follows.®

## E-Rate Proposal Response For
## Marion WAN Project
## Marion County School District
**March 6, 2015**

# Dream
# Belleve
# Achleve

Ranked #1 in Customer Loyalty by

## FROST & SULLIVAN

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Voice | Internet | Television | Network Services | Cloud Services

# Table of Contents

# Executive Summary

March 6, 2015

Tim Lyons
Technology Director
Marion County School District
755 East Main Street
Lebanon, KY 40033

Time Warner Cable Inc. (TWC) is pleased to submit the enclosed response to a request for your Telecommunication Network Services.  Our response demonstrates TWC's ability to provide network solutions that will enable the *Marion County School District* to meet its technology needs.

TWC is committed to providing the *Marion County School District* with the products and services necessary to meet its current and future technology needs.  TWC is one of the world's largest digital video cable and broadband Internet service providers; our 52,000 employees have considerable expertise and insight that will be instrumental in providing the correct solutions for a project of this importance.

Within this response, pricing components, requirement acknowledgements and professional services hours are provided.

Please do not hesitate to call if you have further questions or if there is anything else you need at this time.  I look forward to speaking with you soon!

Sincerely,


David Hagan
AE| Government/Education

# Corporate Overview

The Time Warner Cable story begins with leadership in innovation, award-winning customer service, and financial stability.

## Leadership in Innovation

TWC has invested billions to build a network that sets the standard for telecommunications in America.   Our wholly owned and fully upgraded network allows us to deliver reliable and scalable solutions – whether they are Internet services, Business Class PRI, Cable Television, or Ethernet WAN services - that our customers need to be successful.

Time Warner Cable Business Class products and services are designed to support the needs of businesses large and small.  From customized dedicated fiber solutions that move large quantities of data from point to point to solutions for home offices and teleworkers, our innovative solutions provide dependable, cost effective solutions to more than 250,000 business customers nationwide.

## Award-Recognized Customer Service

Time Warner Cable's voice, data, video and security solutions are enhanced by award winning customer service and local support teams.

## Financial Stability

Time Warner Cable also means financial stability.  TWC has the financial resources and the strategic commitment to maintain and grow its network and support services in step with our customers' growing needs.

Time Warner's current Earnings Release and other relevant financial results are available at www.twc.com/investors.

# Time Warner Cable Business Class Overview

Time Warner Cable Business Class offers voice, Internet, television, and network services to businesses of all sizes, wholesale services to a broad range of regional, national and international network providers and, through our NaviSite subsidiary, managed and outsourced information technology solutions and cloud services.

Time Warner Cable Business Class (TWCBC) is the business-to-business division of Time Warner Cable (NYSE: TWC), which is among the largest providers of video, Internet and voice services in the United States.

Corporate highlights include:

- We are a Fortune 150 company
- We have more than 15 million customers
- We employ more than 50,000 people
- We generated over $22.1 billion in revenues in 2013

**Some of our unique offerings include:**

- A full suite of communications services that provide reliable, high-bandwidth alternatives to conventional telco offerings
- A wholly-owned, highly redundant, secure and reliable hybrid-fiber coaxial network spanning more than 350,000 route miles nationally – making it an attractive and reliable primary and alternate-path option to traditional communications networks
- 24/7 network monitoring, to ensure you are always connected
- Dedicated, locally based customer service and support and an online My Account portal

Our innovative products and services provide dependable, cost-effective solutions to our more than 550,000 business customers throughout the country (Figure 1).

## Figure 1. Time Warner Cable Business Class Customers
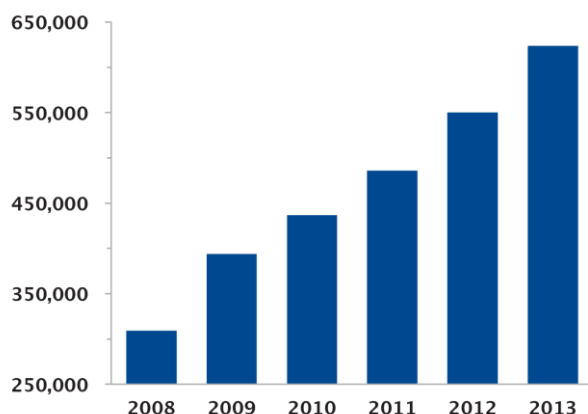


Over 75% increase between 2008 and 2013

With more than a decade of experience providing communications services to businesses, our dedicated team of experts have the experience and expertise to be your communications provider.

Combine that with our state-of the-art and fiber-rich network, Time Warner Cable Business Class is prepared to provide your company with the reliable, high-quality service and support you expect and deserve.

For additional information about Time Warner Cable, please visit www.timewarnercable.com

For more information about Time Warner Cable Business Class, please visit www.business.twc.com.

# Network Overview

A unique, competitive advantage of TWCBC is our carrier-class and wholly-owned Time Warner Cable Business Class network. (Figure 2). Competitive Local Exchange Carriers (CLECs) use the Incumbent Local Exchange Carrier (ILEC) network infrastructure. Unlike the CLECs who resell the ILEC network, we own and operate our own network, including the critical "last mile" into your business.

**Figure 2. Time Warner Cable National Presence Map**



Time Warner Cable - Proprietary and Confidential

- ● TIME WARNER CABLE COVERAGE
- ○ TIME WARNER CABLE NETWORK
- ★ RDC, NDC or NOC
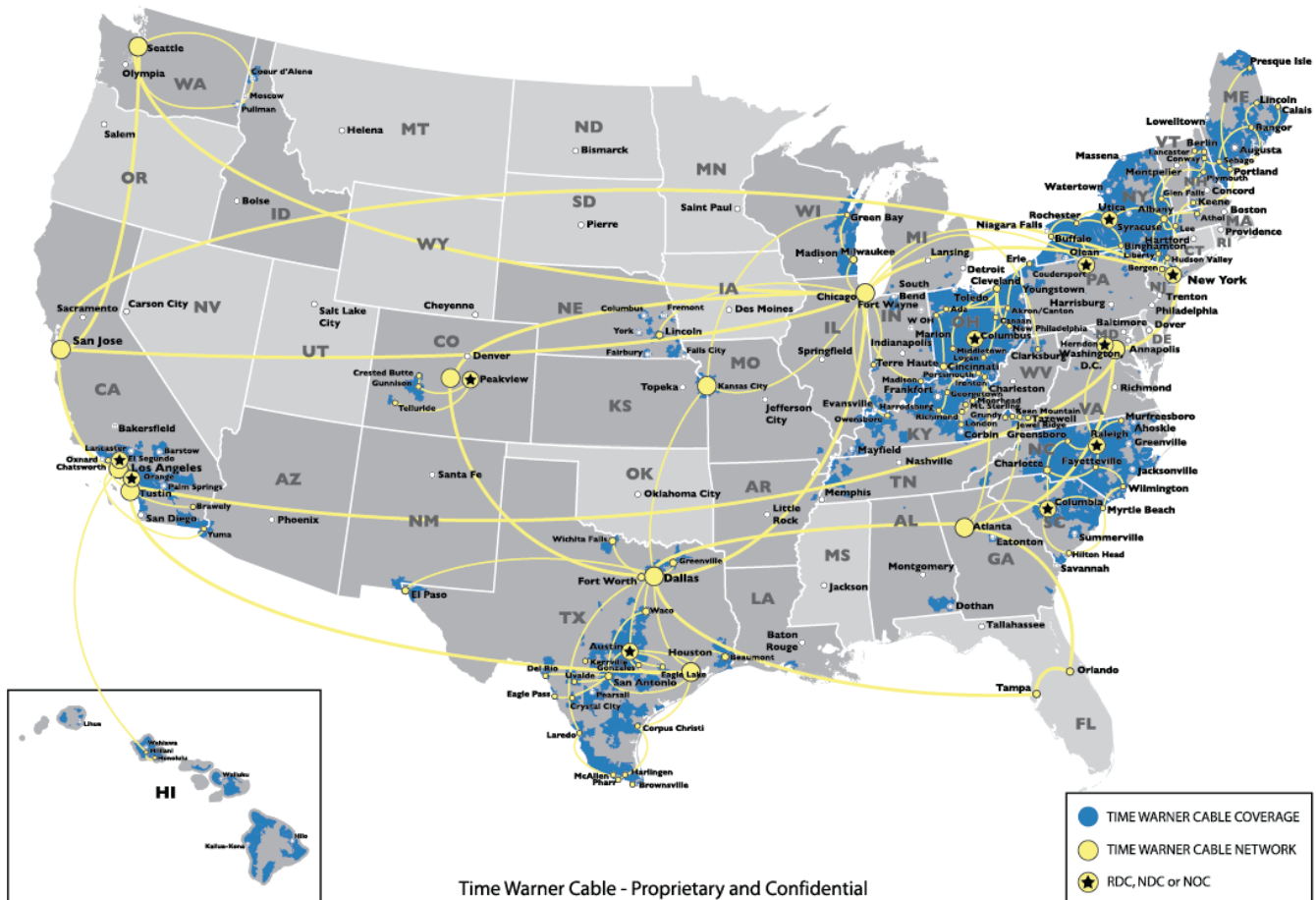
As a result, our network gives customers true route diversity, thus offering a cost-effective primary service or an alternate network for disaster recovery/network outage insurance.

## Figure 3. Time Warner Cable Route Diversity



Figure 3. Time Warner Cable Route Diversity
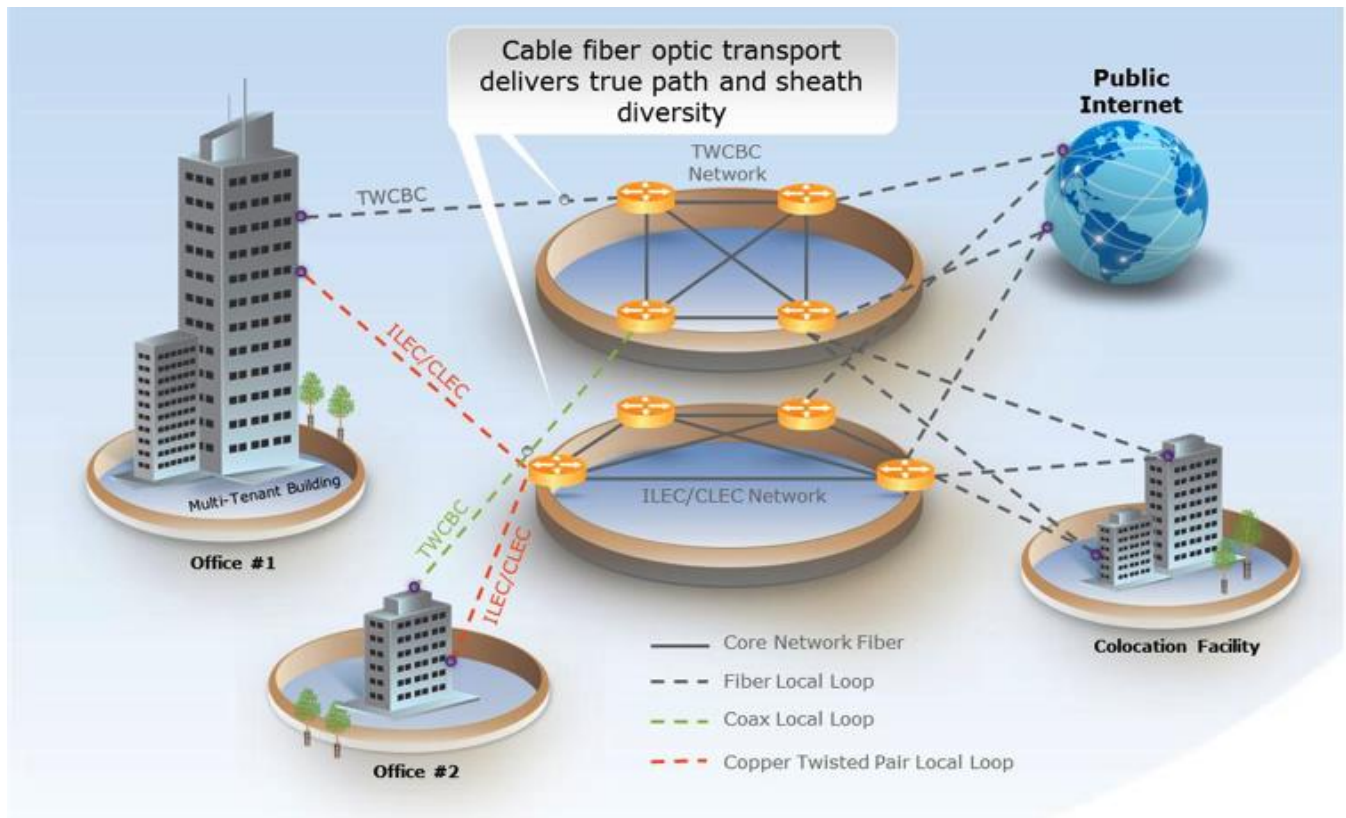
TWCBC is a facilities-based provider with a fully monitored and resilient network across the U.S. Our network was upgraded in 2011 with innovative, state-of-the-art transport technologies. It provides the completely redundant carrier-class reliability, scalability and capacity necessary for transport, Internet, data, video, and voice services.

# Customer Care Overview

At Time Warner Cable Business Class, our main priority is giving customers the support they need to get the most out of their communication services.

Our customers are supported by teams of highly trained customer service consultants who provide:

- **Tech Support:** 24 hours a day/ 7 days per week via phone. Building a partnership with our customers is of utmost importance to us.
- **Live Chat:** Mon-Fri 8:00AM- 6:00PM. You may chat one-on-one with a Customer Care chat agent who is skilled in answering all of your questions.
- **Email Support:** We know our customers are busy, so we also offer Email support 24 hours a day/ 7 days per week. Simply and quickly fill out the Email support form—responses are generally received within two hours.
- **Billing Support:** Monday through Friday from 8:00 a.m. to 6:30 p.m. Eastern Standard Time. Your questions are answered professionally and courteously; we are here to help.
- **Self Service:** The "My Account" Portal is available 24 hours a day/ 7 days per week. Through this portal, you can access and pay your bill, set up your services, troubleshoot your equipment, access webmail, check the status of and reschedule your appointments, and submit questions about your bill.

# Time Warner Cable Business Class Solution

| | | | |
|---|---|---|---|
| **Dedicated Internet Access (Fiber)** | **Dedicated Internet Connection** A fast, reliable, high-bandwidth, symmetrical, and dedicated Internet access link over TWCBC fiber. Speeds range from 5Mbps to 10Gbps. | **Industry-Leading SLAs** Service Level Agreements (SLAs) ensure high performance and availability for your mission-critical applications. | **Scalability** Speeds are dynamically scalable up to 10Gbps to meet your evolving business needs. |
| **Business Internet (Cable Modem)** | **Runs Data-Intensive Apps** Tiered service levels with speeds up to 100Mbps. Large capacity for efficient downloads and transmissions. | **Security** Includes Personal Security Suite at no extra charge for protection against spam, viruses, and spyware. | **Powers Multiple Users** Supports simultaneous use of the Internet for multiple workstations with a single Internet connection. |
| **Ethernet** | **Ethernet Topologies** Connect your locations with a secure, point-to-point, point-to-multi-point, or multi-point to multi-point Ethernet connection. A cost-effective alternative to legacy systems. | **Industry-Leading SLAs** Service Level Agreements (SLAs) ensure high performance and availability for your mission-critical applications. | **Bandwidth Grows with You** Increase your bandwidth within 2–5 days (no CPE changes) at: – up to 512Kbps–2Mbps (coax) – 5Mbps–1Gbps (fiber) – 1Gbps–10Gbps (fiber) |
| **Cable TV and Music** | **Variety of Channel Lineups** Select from lineups tailored to meet the needs of Businesses, Healthcare, Hospitality, Bars & Restaurants, and Colleges. | **Series of TV Packages** Target programing to your audience with options like Sports Pass, International, Premium Channels, and Music Choice. | **Video Service Options for Hospitality** Pro:Idiom: 60+ HD channels. Set-Back Box: 100+ HD channels and free on-demand. |
| **Phone\*** | **Business Class Phone** Unlimited local and nationwide long distance: Call anytime, anywhere within the U.S., Canada, Puerto Rico, U.S. Virgin Islands, Guam and Saipan for a flat monthly rate. Competitive international rates. | **Voice Manager Portal** Manage your business' calling features and prepare for business continuity by using the Voice Manager portal. Activate and deactivate features, such as Call Forwarding and Hunt Groups, 24/7 from any Internet connection. | **Features** Key business features, such as Custom Caller ID, Do-Not-Disturb, Call Forwarding, Hunt Groups and Call Waiting included. Upgrade to value-added features such as Auto Attendant, Voice Mail, and Toll Free. |
| **Trunks\*** | **PRI and SIP Trunks** PRI is available as 8, 12, 16 and 23B+D configurations. SIP Trunks are available with a minimum of 6 call paths with additional call paths available in increments of one. | **Long Distance Plans** 3,000, 5,000 and 10,000 minute packages are available with PRI and SIP Trunks. | **Features** Key features included are Alternate Routing, Caller ID; call blocking options such as Trunk Overflow and Toll Free are also available. |
| **Value-Added Service Upgrades** | **Managed Security** A comprehensive suite of fully-managed security services that includes management, configuration, implementation and 24/7 support. | **Online Backup** Automatic, scheduled backup of your files for safe off-site storage, with the extra advantage of secure, remote file access from anywhere. | **Web Hosting** Website set up and maintenance. Storage options from 5Gb-40Gb. Domain registration and virtual storefront packages are also available. |
| **Hosted Email, Collaboration, and Data Management** | **Microsoft® Hosted Exchange** Provides anywhere, anytime access to communication features such as email, calendars and contact lists via Microsoft Outlook®. | **Microsoft SharePoint®** Easy, reliable method to share and manage business files from a central location. | **Secure and Robust** Email security through anti-spam protection and anti-virus filtering. Enterprise-grade data centers provide high availability with robust business continuity. |
| **Managed Network Services** | **Managed Router Service** Comprehensive solution for provisioning, configuration and managing your network. | **Turn Key Solution** Bundle Managed Router Service with Business Internet or Ethernet for a turn-key solution delivered over the fiber-rich network that will reduce capital expenditures. | **Enhanced Productivity** Free up your IT staff to work on more strategic initiatives and offload network support requirements. |

\*Time Warner Cable Business Class Phone and Trunk (PRI and SIP) customer premise equipment is electrically powered and, in the event of a power outage or network failure, Enhanced 9-1-1 ("E911") services may not be available. Additional charges apply for taxes, fees, Directory Assistance, Voicemail, Special Calling Features, Operator Services and calls to international locations.

# Service Delivery Overview – With Single Point of Contact

Once you select Time Warner Cable Business Class as your communications provider, our team of technical, engineering, construction and service delivery professionals – dedicated to the *Marion County School District* – will implement your service.

You want your service delivered correctly and on the promised date. We want that too. To ensure a smooth and timely delivery of your service, below are the steps we will take and what you can expect:

### Order Management

Upon receipt of your signed Service Agreement and related documents, your Account Executive will submit your order for processing – and a single point of contact from the TWCBC Service Delivery Team will be assigned to you.

Your Service Delivery Team member will reach out to you to confirm the receipt of your order, ensure its accuracy, and gather additional information, if needed. Afterwards, you will receive an email confirming your service location address and contact information and outlining next steps.

### Site Survey (if necessary)

Prior to your service installation, a site survey may be necessary to determine serviceability at your location. If needed, the site survey will involve a thorough walk through and evaluation of your service location.

If you lease your office space, a member of our Service Delivery Team will meet with the property owner or manager of your service location(s) to secure rights of entry into the building(s). If the service location is a government building, we will secure rights of entry from the appropriate government authority.

After the survey is completed, we will provide the installation requirements to your property owner or manager and work with them to get approval for that work. The survey technician will also discuss customer wiring and construction requirements during this review.

### Installation Date Scheduling

Your TWCBC Service Delivery Team member will contact you to schedule your preferred installation date and estimate the time required to perform the work. Following that conversation, you will receive an email confirming the services to be installed, your service location address, and your installation date and timeframe. This email will also contain the confirmation number for the install.

### Activation of Service

On the day of installation, a TWCBC technician will contact you prior to arrival. For our technician to complete the work, we need the following:

- Point of Contact: We need an authorized employee or company representative over 18 years of age at the service address at the time of install.
- Permission: If you lease your office space, we will gain permission from the property owner or management to run cables or perform other required services.

- Installation Site
  - Your service location needs to have electrical power.
  - Our technician will need access to exposed wires and all areas needed for installation. That can include a wide variety of areas, including but not limited to the roof, riser/telco closet, and backyard. If you do not have access, we need maintenance personnel or the building owner onsite the day of install.
  - (New York City only) Local 3 A-Card designated buildings will need to have the building or an in-house electrician run cables prior to the TWCBC installation.
- Key System or PBX: If you have a key system or PBX, you will need your Phone Vendor/ Integrator or IT Associate onsite the day of install to connect our lines into your phone system.
- Internet Access: If you are having Internet Access installed, you will need your Integrator or IT Associate onsite the day of the install to connect our lines into your network. If you use DSL and are porting the DSL number for your Internet Access, you will need your IT person onsite to configure your network.
- Cable TV: If you are having Cable TV service installed, please ensure televisions will be onsite at the time of install for proper testing and verification of services.

One to two days before the activation date, a TWCBC technician may be on site to do preliminary entrance and inside wiring work. The technician will contact you prior to arrival and will need the same access indicated above.

**Service Delivery Status**

You may contact your TWCBC Service Delivery Team member anytime throughout the service delivery process should you have questions.

# E-Rate SPIN

**TIME WARNER CABLE SPIN FOR KENTUCKY _____143030547_____**

Time Warner Cable Business Class is a holder of both Telco SPIN and Internet SPIN under the SLD E-Rate Program.

## Benefits for K-12 Schools

Implement Cost-Effective, E-Rate-Eligible Services Time Warner Cable Business Class has established relationships with some of the largest education systems in the country so we understand a school system's growing needs. Upgrade to advanced solutions tailored to fit elementary and secondary school bandwidth needs and shrinking budgets. Most offerings are eligible for E-Rate discounts, and our education-focused professionals are very familiar with the rules and regulations of the E-Rate program.

## Create Rich Learning Environments

Stimulate minds and imaginations with multimedia learning. Provide administrators, educators and students reliable, high-bandwidth, secure Internet and network access to a world of resources.

## Communicate Securely

Safeguard your network and reduce risk with a secure, private Ethernet network or an end-to-end managed security solution that addresses your school's unique policies and requirements, and delivers comprehensive security no matter where people access your network.

## Reliably Connect District Offices and Schools

Use our nationwide 350,000-mile fiber-rich IP network to connect your schools and district offices with dedicated fiber, empowering you to share information efficiently, securely and cost effectively. Furthermore, our self-healing fiber-ring topology protects your critical data and provides superior network availability and resiliency. We stand behind our solutions and your schools with an end-to-end industry-leading Service Level Agreement (SLA) that extends across our backbone, metro core and last-mile network for fiber-based services.
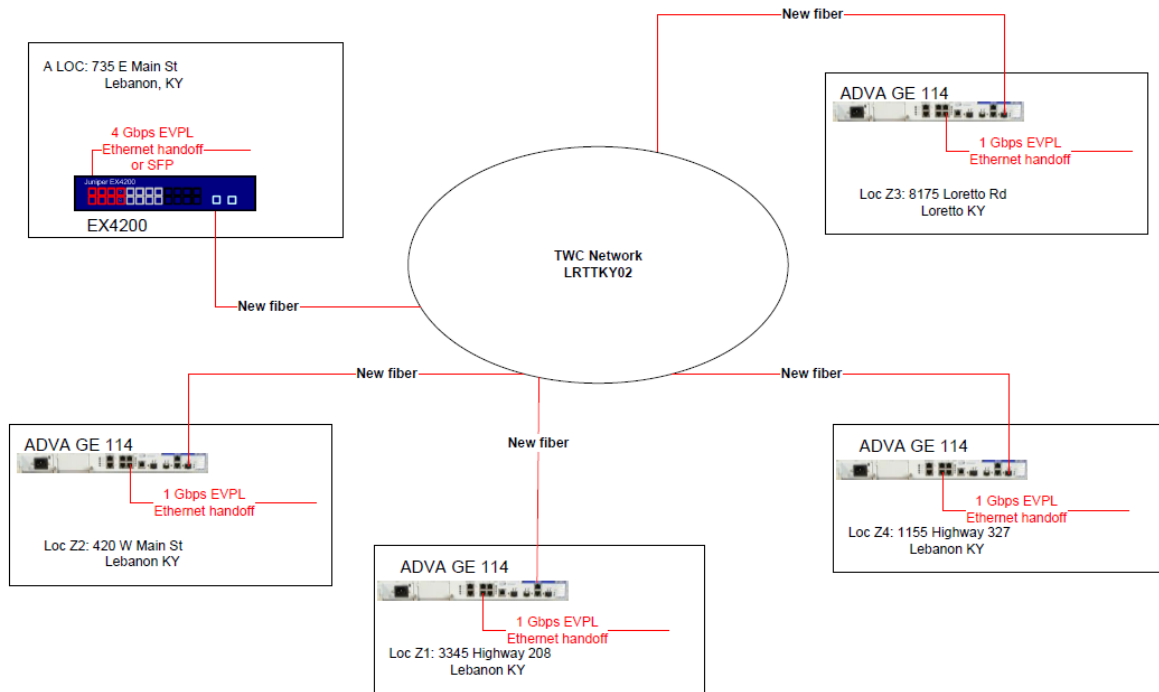
## Easily Scale a Broad Portfolio of Solutions to Meet Your Evolving Needs

Choose from a full suite of Internet, voice, television, network and cloud services that are right-sized to your institution's needs and district's budget. And quickly and easily scale your infrastructure and bandwidth as your needs evolve with just a phone call and little or no downtime.

**Simplify Operations and Free Up IT Resources**

Partner with Time Warner Cable Business Class for all your networking and communications needs. Our dedicated local service and support professionals will ensure your communications infrastructure remains up and running, so you can focus more on innovation and education. This is precisely why we were recently named #1 in Customer Loyalty by Frost & Sullivan.

A LOC: 735 E Main St
Lebanon, KY

4 Gbps EVPL
Ethernet handoff
or SFP

Juniper EX4200

EX4200

New fiber

TWC Network
LRTTKY02

New fiber

New fiber

New fiber

New fiber

New fiber

ADVA GE 114

1 Gbps EVPL
Ethernet handoff

Loc Z3: 8175 Loretto Rd
Loretto KY

ADVA GE 114

1 Gbps EVPL
Ethernet handoff

Loc Z2: 420 W Main St
Lebanon KY

ADVA GE 114

1 Gbps EVPL
Ethernet handoff

Loc Z4: 1155 Highway 327
Lebanon KY

ADVA GE 114

1 Gbps EVPL
Ethernet handoff

Loc Z1: 3345 Highway 208
Lebanon KY

| Title | Marion County Schools EVPL | Author | Mike Broderick | Date Revision | 2/23/2015 |
|-------|----------------------------|--------|----------------|---------------|-----------|

TIME WARNER CABLE
Business Class

# Network Diagram 2 ~ 10 Gig WAN ( Hub is Over Subscribed)

Marion County Schools
10 Gig to each location
Oversubscribed network

A LOC: 735 E Main St
Lebanon, KY

10 Gbps EVPL

Juniper EX4200

New fiber

New fiber

TWC Network
LRTTKY02

New fiber

New fiber

New fiber

Juniper EX4200

10 Gbps EVPL

Loc Z3: 8175 Loretto Rd
Loretto KY

Juniper EX4200

10 Gbps EVPL

Loc Z2: 420 W Main St
Lebanon KY

Juniper EX4200

10 Gbps EVPL

Loc Z4: 1155 Highway 327
Lebanon KY

Juniper EX4200

10 Gbps EVPL

Loc Z1: 3345 Highway 208
Lebanon KY
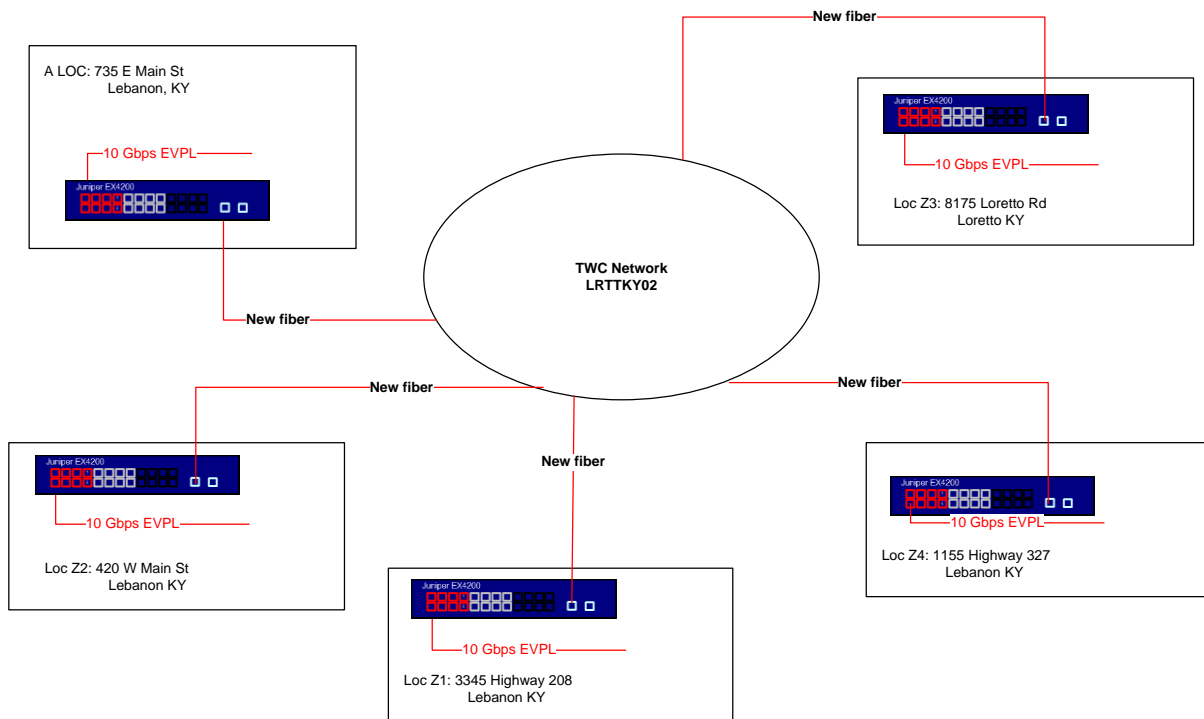
| Title | Marion County Schools 10 Gbps EVPL | Author | Mike Broderick | Date Revision | 02/23/2015 |
|-------|-------------------------------------|--------|----------------|---------------|------------|

TIME WARNER CABLE
Business Class

# Product Overview

## Ethernet Solutions

**Ethernet Solutions can offer point-to-point and point-to-multipoint connectivity, leveraging the Hybrid Fiber Coax and fiber distribution networks that supply service to millions of Time Warner Cable customers today. Ethernet Solutions will provide you with flexible, high-bandwidth Ethernet solutions supporting all of your IP-based applications.**

| FEATURES | BENEFITS |
| --- | --- |
| Tiered Service Levels | Customized configurations to meet your business needs. |
| Scalable Service Levels | Scalable service from sub-1Mbps to 10Gbps transmission speeds can be customized remotely when business needs change. |
| Service Level Agreements | Multiple service levels are available to guarantee reliability. |

## Pricing

### Marion County School District:  1 Gig WAN

| Identifier | Location | Address | Monthly Recurring | Bandwidth | One-Time Installation Fee |
|---|---|---|---|---|---|
| Hub: A Loc | Marion County High School | 735 East Main | | | $ 250.00 |
| Z1 Loc | Cavalry Elementary | 3345 Hwy 208 | $ 1,220.00 | 1 Gbps | $ 250.00 |
| Z2 Loc | Lebanon Elementary | 420 West Main | $ 1,220.00 | 1 Gbps | $ 250.00 |
| Z3 Loc | West Marion Elementary | 8175 Loretto Rd | $ 1,220.00 | 1 Gbps | $ 250.00 |
| Z4 Loc | St. Charles Elementary | 1155 Hwy 327 | $ 1,220.00 | 1 Gbps | $ 250.00 |
| Five Year Term Agreement Hub is NOT over subscribed | | | **Total Monthly Recurring** $ 4,880.00 | | **Total One-Time Installation** $ 1,250.00 |

### Marion County School District: 10 Gig WAN

| Identifier | Location | Address | Monthly Recurring | Bandwidth | One-Time Installation Fee |
|---|---|---|---|---|---|
| Hub: A Loc | Marion County High School | 735 East Main | | | $ 250.00 |
| Z1 Loc | Cavalry Elementary | 3345 Hwy 208 | $ 3,200.00 | 10 Gbps | $ 250.00 |
| Z2 Loc | Lebanon Elementary | 420 West Main | $ 3,200.00 | 10 Gbps | $ 250.00 |
| Z3 Loc | West Marion Elementary | 8175 Loretto Rd | $ 3,200.00 | 10 Gbps | $ 250.00 |
| Z4 Loc | St. Charles Elementary | 1155 Hwy 327 | $ 3,200.00 | 10 Gbps | $ 250.00 |
| Five Year Term Agreement Hub IS over subscribed | | | **Total Monthly Recurring** $12,800.00 | | **Total One-Time Installation** $ 1,250.00 |

## Attachment 1: Metro Ethernet Forum (MEF) Honoree

**Ethernet services have become increasingly important as companies deploy high-bandwidth applications to meet increased communications and productivity requirements.**

**Time Warner Cable Business Class 1st North American Service Provider to earn all 8 CE 2.0 Certifications**

To optimize these applications, businesses are adopting carrier-class Ethernet services which enable them to extend local-area network environments across the wide-area network.

A recognized industry leader, TWCBC has been at the forefront of Ethernet services innovation. Most recently, Time Warner Cable Business Class is the first North American Service Provider to earn certification in all 8 service categories granted by the Metro Ethernet Forum (MEF).

Time Warner Cable Business Class was the first Multiple System Operator (MSO) in the world to receive MEF 14 certification (part of MEF CE 1.0) in 2008. In addition, the company was a leading innovator in delivering Ethernet services over DOCSIS, which lead to an additional MEF recognition as the North American Carrier Ethernet Service Provider of the Year for Service Innovation, also in 2008.

Time Warner Cable Business Class also boasts 81 MEF-certified employees which demonstrate our investment in our local sales and support teams as a key piece of a strong customer partnership.

This achievement is significant because MEF 2.0 Certification confirms that Time Warner Cable Business Class networks deliver multiple services over a single Ethernet connection while performing at the highest industry standards. It also underscores our commitment to deliver highly scalable, reliable and standards compliant network solutions.

Read the entire MEF CE 2.0 Certification Press Release here.

## Attachment 2: Frost & Sullivan Best Practices Award Winner

At Time Warner Cable Business Class, we take customer loyalty seriously.  And, we are proud to say that, thanks to our customers, we were named the company with the highest loyalty in the primary network service provider category in Frost & Sullivan's *2012 U.S. Business Connectivity Services User Survey*.



Frost & Sullivan's survey of U.S. telecom and network decision makers revealed that current business customers of Time Warner Cable Business Class are less likely to switch to another network service provider compared to customers of its nearest competitors. In fact, more than eight out of 10 Time Warner Cable Business Class customers are not at risk of switching.

Further, this survey found that ILECs are no longer the default choice, or even preference, for multi-site small, mid-market and even some large businesses. Instead they prefer multi-system operators (MSOs) like Time Warner Cable Business Class because we have national networks comprising an optical fiber core network, metro fiber networks and dense local hybrid fiber-copper access infrastructure, over which we are offering an expanding range of Ethernet-based network solutions.

Time Warner Cable Business Class believes in putting our customers first, offering them a full complement of business communications tools, and working with them to tailor a solution that helps their businesses succeed.  Our employees practice this every day, and we will continue to deliver the quality products, services and support our customers expect.

Read the entire Frost & Sullivan press release here.

## Attachment 3: SLA's

# Time Warner Cable Business Class
# Ethernet Service Level Agreement

This document outlines the Service-Level Agreement ("SLA") for Ethernet fiber-based (the "Service"). Capitalized words used, but not defined herein, shall have the meanings given to them in Time Warner Cable Business Class Service Agreement (including the terms and conditions, attachments, and Service Orders described therein, the ("Agreement"). This SLA is a part of, and hereby incorporated by reference into, the Agreement. If any provision of this SLA and any provision of the Agreement are inconsistent or conflicting, the inconsistent or conflicting provision of this SLA shall control. This SLA document applies only to services provided over TWC's own network ("On-Net") and not to any portion that is provided by a third party. All SLA Targets in the table below are measured at the individual circuit or service level, and any applicable credits are issued only for the affected On-Net circuit or services (the "Affected Service").

### I.     SLA Targets for On-net Services

| SERVICE AVAILABILITY | MEAN TIME TO RESTORE ("MTTR") | LATENCY / FRAME DELAY (ROUNDTRIP) | JITTER / FRAME DELAY VARIATION | PACKET LOSS / FRAME LOSS |
|---|---|---|---|---|
| End to End: 99.99% | Priority 1 Outages within 4 hours | Metro Market – 10ms<br>WAN – 25ms<br>WAN Exceptions – 45ms<br>National – 125ms | < 2ms within Metro Market<br>< 4ms within WAN | < 0.1% |

### II.     Priority Classified

A "Service Disruption" is defined as an outage, disruption, or service degradation, other than an Excluded Disruption, that interferes with the ability of a TWC network hub to transmit and receive network traffic between Customer's A and Z locations. The service disruption period begins when Customer reports a Service Disruption using TWC's trouble ticketing system by contacting Customer Care, TWC acknowledges receipt of such trouble ticket, TWC validates that the Service is affected, and Customer releases the Service for testing. The Service Disruption ends when the affected Service has been restored.

"Service Degradation" means a degradation of the Service that is not a Service Disruption as a result of an Excluded Disruption, such as a failure of the Service to achieve the SLA Targets for Latency / Frame Delay, Jitter / Frame Variation, or Packet / Frame Loss.

"Excluded Disruptions" means (i.) planned outages, (ii.) routine or urgent maintenance, (iii.) time when TWC is unable to gain access to Customer's premises to troubleshoot, repair or replace equipment or the Service, (iv.) service problems resulting from acts of omission of Customer or Customer's representative or agent, (v.) Customer equipment failures, (vi.) Customer is not prepared to release the Service for testing, and (vii.) Force Majeure Events. TWC will classify Service problems as follows:

| PRIORITY | CRITERIA |
|---|---|
| Priority 1 | A. Service Disruption resulting in a total loss of Service; or<br>B. Service Degradation to the point that Customer is unable to use the Service and is prepared to release it for immediate testing (each a "Priority 1 Outage"). |
| Priority 2 | Service Degradation where Customer is able to use the Service and is not prepared to Release it for immediate testing. |
| Priority 3 | A. A service problem that does not impact the Service; or<br>B. A single non-circuit specific quality of Service inquiry. |

## III.     Service Availability

"Service Availability" is calculated as the total number of minutes in a calendar month less the number of minutes the On-Net Service is unavailable due to a Priority 1 Outage ("Downtime"), divided by the total number of minutes in a calendar month.

The following table contains examples of the percentage of Service Availability translated into minutes of Downtime for the 99.99% Service Availability Targets:

| PERCENTAGE BY DAYS PER MONTH | TOTAL MINUTES / MONTH | DOWNTIME MINUTES |
|---|---|---|
| 99.99% for 31 Days | 44,640 | 4.5 |
| 99.99% for 30 Days | 43,200 | 4.3 |
| 99.99% for 29 Days | 41,760 | 4.2 |
| 99.99% for 28 Days | 40,320 | 4 |

## IV.     Mean Time to Restore ("MTTR")

The MTTR measurement for Priority 1 Outage is the average time to restore Priority 1 Outages during a calendar month calculated as cumulative length of time it takes TWC to restore an On-Net Service

following a Priority 1 Outage in a calendar month divided by the corresponding number of trouble tickets for Priority 1 Outage open during the calendar month for On-Net Services.

$$\text{MTTR} = \frac{\text{Cumulative length of time to restore Priority 1 Outage(s) per On-Net Service}}{\text{Total number of Priority 1 Outage trouble tickets per On-Net Service}}$$

## V.  Latency/Frame Delay

Latency or Frame Delay is the average roundtrip network delay, measured every 5 minutes during a calendar month, unless measurement is not possible as a result of an Excluded Disruption, to adequately determine a consistent average monthly performance level for frame delay for each On-Net Services.  The roundtrip is expressed in milliseconds (ms). TWC measures frame delay on an end-to-end basis using a standard 64-byte ping from the Customer's dedicated access port at the Customer premises to the TWC Internet access router in a roundtrip fashion.

Latency is calculated as follows:

$$\text{Latency / Frame Delay} = \frac{\text{Sum of the roundtrip delay measurements for an On-Net Service}}{\text{Total \# of measurements for an On-Net Service}}$$

Latency / Frame Delay Targets for Services in defined Metro Area markets, WAN, WAN Exceptions and National are as follows:

| METRO AREA MARKET – 10MS LATENCY | WAN – 25MS LATENCY | WAN EXCEPTIONS – 45MS LATENCY | NATIONAL – 125MS |
|---|---|---|---|
| Roundtrip where both sites A and Z are *within* the same Metro Area Market | Roundtrip *between* any 2 Metro Area Markets within the same WAN | Roundtrip *between* any Metro Area Market and WAN Exception within the same WAN, except that where both sites A and Z are within the same WAN Exception, the Latency target is | Roundtrip *between* any two WANs |

| | | | | |
|---|---|---|---|---|
| • Austin, TX<br>• Beaumont, TX<br>• Corpus Christi, TX | • Laredo, TX<br>• San Antonio, TX<br>• Dallas, TX | Texas WAN | • El Paso, TX<br>• Rio Grande Valley, TX<br>• Del Rio, TX<br>• Eagle Pass, TX<br>• Wichita Falls, TX<br>• Kansas City, KS<br>• Kansas City, MO<br>• Lincoln, NE | |
| • North Los Angeles, CA<br>• South Los Angeles, CA<br>• San Diego, CA | • Desert Cities, CA<br>• Palm Springs, CA<br>• Yuma, AZ | PacWest WAN | • Coeur d'Alene, ID<br>• Gunnison, CO<br>• Telluride, CO<br>• Pullman, WA<br>• Libby, MT<br>• Honolulu, HI | |
| • Columbus, OH<br>• Cincinnati, OH<br>• Dayton, OH<br>• Akron, OH<br>• Cleveland, OH<br>• Lima, OH | • Louisville, KY<br>• Lexington, KY<br>• Green Bay, WI<br>• Appleton, WI<br>• Milwaukee, WI | Mid-West WAN | • Bolivar, TN<br>• Charleston, WV<br>• Clarksburg, WV<br>• Richmond, KY<br>• Terre Haute, IN | |
| • New York City (including all surrounding boroughs and metro areas in New Jersey and | • Albany, NY<br>• Buffalo, NY<br>• Rochester, NY<br>• Syracuse, NY | Northeast/ NYC WAN | • Portland, ME | |
| • Greensboro, NC<br>• Raleigh, NC<br>• Charlotte, NC<br>• Fayetteville, NC<br>• Asheville, NC<br>• Wilmington, SC | • Florence, SC<br>• Columbia, SC<br>• Myrtle Beach, SC<br>• Hilton Head, SC<br>• Charleston, SC<br>• Greenville, SC | Carolinas WAN | • Atlanta, GA<br>• Augusta, GA<br>• Birmingham, AL<br>• Dothan, AL<br>• Huntsville, AL<br>• Chattanooga, TN<br>• Knoxville, TN<br>• Nashville, TN | |

## VI.    Packet Loss / Frame Loss Ratio

Packet Loss or Frame Loss Ratio is defined as percentage of frames that are not successfully received compared to the total frames that are sent in a calendar month, except where any packet or frame loss is the result of an Excluded Disruption.  The percentage calculation is based on frames that are transmitted from a network origination point and received at a network destination point (TWC network hub to TWC network hub).

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| Packet Loss / Frame Loss (%) = 100 (%) – Frames Received |
| --- |

## VII.    Jitters/Frame Delay Variation

Jitter or Frame Delay Variation is defined as the variation in delay for two consecutive frames that are transmitted (one way) from a network origination point and received at a network destination point (TWC network hub to TWC network hub). TWC measures a sample set of frames every 5 minutes during a calendar month, unless measurements are not possible as a result of an Excluded Disruption, and determines the average delay between consecutive frames within each sample set.  The monthly Jitter / Frame Delay Variation is calculated as the average of all of the frame delay variation measurements during such calendar month and is expressed in milliseconds (ms).

**Sum of the Frame Delay Variation measurements for an On-Net Service**

Jitter / Frame Delay Variation =  ─────────────────────────────────

**Total # of measurements for an On-Net Service**

## VIII.    Network Maintenance

**Maintenance Notice:**

Customer understands that from time to time TWC will perform network maintenance for network improvements and preventive maintenance.  In some cases, TWC will need to perform urgent network maintenance, which will usually be conducted within the routine maintenance windows. TWC will use reasonable efforts to provide advance notice of the approximate time, duration, and reason for any urgent maintenance outside the routine maintenance windows.

**Maintenance Windows:**

Routine maintenance may be performed Monday – Friday 12 Midnight – 3 a.m. local time.

## IX.    Remedies

**Service Credits:**

If the actual performance of an On-Net Service during any calendar month is less than the SLA Targets, and Customer has complied with the requirements in this SLA, then Customer may request credit(s) equal to the percentage(s) of the monthly Service Charges for only the Affected Service as set forth in the table below.  Any credits will be applied as an offset against any amounts due from Customer to TWC.  All credits must be: (i.) requested by the Customer within 30 days of a Service Disruption or Service Degradation by calling the Customer Care Center and opening a trouble ticket, and (ii.) confirmed by TWCBC engineering support teams as associated with a trouble ticket and as failing to meet the applicable SLA Targets.

| SERVICE AVAILABILITY | MEAN TIME TO RESTORE ("MTTR") FRAME LOSS | | LATENCY / FRAME DELAY (ROUNDTRIP) | JITTER / FRAME DELAY VARIATION | PACKET LOSS / |
|---|---|---|---|---|---|
| 30% | > 4 hours ≤ 7:59:59 hours | 4% | 5% | 5% | 5% |
| | > 8 hours | 10% | | | |

Except as set forth below, the credits described in this SLA shall constitute Customer's sole and Exclusive remedy, and TWC's sole and exclusive liability, with respect to TWC's failure to meet any SLA Targets. All SLA Targets are monthly measurements and Customer may request only one credit per SLA Target per month up to a maximum of 40 % of the monthly Service Charges for the Affected Service.  Customer shall not be eligible for credits exceeding four (4) months of Customer's applicable monthly Service Charges during any calendar year.

Chronic Priority 1 Outages:

If Customer experiences and reports three (3) separate Priority 1 Outages where the Downtime exceeds four (4) hours during each Priority 1 Outage within three (3) consecutive calendar months, then Customer may terminate the Affected Service without charge or liability by providing at least thirty (30) days written notice to TWC; provided, however, the (i.) Customer may only terminate the Affected Service, (ii.) Customer must exercise its right to terminate the Affected Services by providing written notice to TWC within thirty (30) days after the event giving rise to Customer's termination right (iii.) Customer shall have paid TWC all amounts due at the time of such termination for all Services provided by TWC pursuant to the Agreement, and (iv.) the foregoing termination right provides the sole and exclusive remedy of Customer and the sole exclusive liability of TWC for chronic Priority 1 Outages and Customer shall not be eligible for any additional credits.  Termination will be effected forty-five (45) days after TWC's receipt of such written notice of termination.

# Attachment 4: Escalation List

## Division Escalation Procedures

The following information describes escalation procedures for our VIP customers in the event service issues arise. All Fiber connections are pro-activity monitored – Time Warner Engineers are notified via computer alarms and voice blasts.

The customer must open a trouble ticket with the CSC (a dedicated support number and escalation process information will be provided). Once a call is placed with the CSC and a ticket is opened, the CSC will forward the call to our local dedicated Tier III Business technical support team. Note: If the customer does not speak to Tier III at that point, they will be contacted within one hour. In the event a service call is placed after hours (after 10 PM), a field technician will be paged and will respond to the customer within one hour with status.

| Escalation Guidelines and Process | Response |
|---|---|
| VIP Support | 24x7x365 |
| 8 AM - 10 PM (daily operations) | Local Tier III / 15-30 minutes |
| 10 PM - 8 AM (after hours) | On Call Field Engineers / Within one hour |
| Pro Active monitoring | Immediately following an open ticket |
| VIP Support Number | 585-756-1767 |

## Time Warner Cable Escalation Procedures

Within the TWC GNOC, escalation provides a means by which GNOC management is assured that the fault resolution process includes a specific set of procedures that bring additional efforts to restore service to normal operating conditions.  The TWC GNOC uses these procedures to provide for the reallocation of resources or use of extra resources to accelerate the resolution of a fault.  Incidents are escalated to the next level of management at specified time intervals based on the severity of the incident.

## Attachment 5: TWCBC Terms and Conditions

Please refer to the website below for our terms and conditions.

http://business.timewarnercable.com/legal/terms-conditions.html