

# 8734-M7

## NCC Security Systems Infrastructure & Network Cabling

### Overview & Scope of Work

The Worcester Public Schools (WPS) is requesting bids for a comprehensive, turnkey infrastructure upgrade at a single district site. This unified project encompasses two primary tracks of work:

1. **Camera & Access Control Systems:** The purchase, installation, and software licensing of multiple IP cameras and access control components.
  - a. Installation will consist of 25 new Category 6 (CAT 6) UTP wiring drops to support security cameras and door controllers.
  - b. Installation of (21) IP Cameras, (4) Door Controllers, and (5) Card Access Readers. Installation locations will be referenced in separate *Appendix A* documents
2. **Network Cabling Drops:** The installation and testing of (102) new Category 6 (CAT 6) UTP wiring drops. Installation locations will be referenced in a separate *Appendix B* document.

The vendor must provide all hardware, software licensing, labor, materials, tools, and equipment necessary to deliver a complete, permanent, fully functional, and verified deployment.

### Location

- **Site:** New Citizens Center Secondary
- **Address:** 1407A Main Street, Worcester, MA 01603

### Project Timelines & Site Walkthrough

#### Important Dates & Deadlines

- **Walkthrough Date & Time:** JUNE 25, 2026 at 9:00AM
- **Complete Project Completion Deadline:** All supply and installation must be completed No Later Than (NLT) 90 days After Receipt of Order (ARO)

#### Walkthrough RSVP Requirements

- Vendors must RSVP for the site walkthrough by emailing their intention to attend to [smithm@worcesterschools.net](mailto:smithm@worcesterschools.net) (Mike Smith) and [meyere@worcesterschools.net](mailto:meyere@worcesterschools.net) (Elizabeth Meyer).
- If there are no responses to the RSVP, the walkthrough will be canceled.
- Vendors submitting a bid are strongly encouraged to attend

# Bill of Materials & Hardware Specifications

All hardware, wiring, materials, and components provided must be brand-new. Products quoted must be as specified. The WPS has standardized on AXIS brand cameras and “Powered by Genetec” access control hardware, HID readers, and Genetec as the surveillance/security control software. Any equivalent hardware must be clearly listed in the vendor's submission and must be approved by the WPS.

## Track 1: Cameras, Access Control, & Genetec Licensing

The following specific devices and applicable Genetec licenses must all be quoted for the submission to be considered:

Component Type	Model / Description	Part Number	Qty
IP Camera	AXIS M3086-V	02374-001	7
IP Camera	AXIS P3277-LV	03152-001	4
IP Camera	AXIS P3287-LVE	02984-001	1
IP Camera	AXIS P3748-PLVE	02898-001	2
IP Camera	AXIS P4707-PLVE	02416-001	2
IP Camera	AXIS Q1808-LE	02507-001	2
IP Camera	AXIS Q4809-PVE	02658-001	2

<b>Intercom / Video Station</b>	AXIS A8207-VE Mk II	02026-001	1
<b>Card Reader</b>	HID Signo Reader 40	40KTKS-00-000000	5
<b>Door Controller</b>	Powered By Genetec A1210	Sy-A1210G	4
<b>Security Relay</b>	AXIS A9801 Security Relay	5801-141	1
<b>Magnetic Contacts</b>	Resideo	950W-GY	10
<b>Mounting Hardware</b>	AXIS TP31018-E Pendant Kit	03233-001	2
<b>Mounting Hardware</b>	AXIS T91H61 Wall Mount	5507-641	2
<b>Mounting Hardware</b>	AXIS T91A64 Corner Bracket	5017-641	2
<b>Mounting Hardware</b>	AXIS T91E61 Wall Mount	5506-481	1
<b>Mounting Hardware</b>	AXIS T94K01D Pendant Kit	5505-081	1

<b>Software Licensing</b>	Genetec Camera License	GSC-Om-E-1C	21
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## Track 2: Network Cabling Infrastructure Hardware

The vendor is responsible for determining the total length of cabling required and provisioning any additional support hardware not explicitly itemized below:

- **Wall Faceplate (2-port)** (General Data) – FS N2FWHLP
- **Wall Faceplate (4-port)** (General Data) – FS N4FWHLP
- **Surface Mount Box** – Panduit CBXQ2IW-A
- **Copper Patch Panels** – Flat, 24-port or 48-port, 19-inch rack-mountable (FS Patch Panel 316985 or equivalent)
- **Copper Keystones** – FS CAT 6 Unshielded Keystone 152439 (or equivalent)
- **Phone Wall Plates** – Comscope M10LW4SP (or equivalent)
- **Phone Wall Plate Keystones** – Comscope MGS400-WH (or equivalent)
- **White (VoIP) Patch Cables** – Slim patch cables (FS 74095 or equivalent)
- **Blue (Data/Projector) Patch Cables** – Slim patch cables (FS 71880 or equivalent)

# Technical & Installation Requirements

## General Wiring & Cable Routing

- **Cable Type:** Installation of Category 6 (CAT-6) Unshielded Twisted Pair (UTP) plenum-rated cable to each predetermined location.
- **Color-Coding Scheme:** Cable jacket color depends on the designated use case:
  - **White:** VoIP Phones
  - **Blue:** General Data / Projectors
  - **Yellow:** Security Cameras / Access Control
- **Standard:** Vendors must utilize the T568B wiring scheme for all punch downs and terminations.
- **Termination Endpoints:** Cabling must be run as home runs directly to the main MDF location marked on Appendix B and terminated to new patch panels..
- **Distance Constraints (>100 Meters):**
  - Any CAT 6 run exceeding the standard 100-meter limit **MUST** utilize *Paige Datacom Solutions Game Changer CAT6* cable.
  - Use of Game Changer cable is strictly limited to a maximum length of 200 meters.
  - Any run beyond 100 meters must be certified to a minimum of 1Gbps and capable of IEEE 802.3at (PoE+) standards for power delivery.
  - All final decisions regarding runs over 100 meters must be coordinated with WPS IT.

## Cable Management & Environmental Pathways

- **Service Loops:** A 10-foot service loop must be provided for each drop at all termination endpoints.
- **Tension & Bending:** Vendor must not exceed 25 lbs of pulling tension to avoid stretching copper pairs and must maintain a minimum bend radius of 4 times the cable's outer diameter. Cables must not be kinked or knotted.
- **Support Structures:** J-hooks (or existing J-hooks/cable trays) must be used above ceiling tiles; cables may not be laid directly across or on top of ceiling tiles. Cables must be dressed and managed using Velcro.
- **Conduit & Containment:** EMT conduit is strictly required when cabling is run through any exposed areas or below the ceiling line.
- **Penetrations & Weatherproofing:** All wall or floor penetrations must be sleeved and fire-stopped. The vendor is responsible for providing watertight connections and enclosures for all exterior-mounted cameras, intercoms, and exterior components, and all exterior penetrations must be thoroughly caulked.

## Door Controller Installation Requirements

- **Integration:** Door controllers must be installed, wired, and mapped to the specified door electric strike, video station or card reader, door contacts, security relay, and the CAT6 network connection.

- **Mounting:** The door controller must be mounted inside the building, directly above the door it controls.
- **Contacts:** Door contacts must be installed on the door frame and wired to a Normally Closed (NC) input on the controller; the contact magnet must be installed on the door slab.
- **Electric Strike:** Electric strikes must be procured, installed, and wired to the controller as "Fail Secure" (Magnetic) unless explicitly prohibited by building code.
- **Relay Integration:** An output from the Video Station must be wired to an input on the door controller through the AXIS A9801 Security Relay.
- **Wiring Standards:** UL listed or R/C AWM wires with a conductor gauge range of AWG 22–14 must be used.
- **Verification:** Full functionality must be verified with the WPS IT Department.

### Video Station Installation Requirements

- **Mounting:** The video station must be installed using a proper bracket on the exterior of the building at the door specified by WPS, adhering to Axis documentation and recommended height guidelines (1–1.6m from the ground).
- **Demolition:** When applicable, any existing video stations must be removed prior to the new installation.
- **Wiring:** Connection requires a new or existing CAT6 network run. The built-in card reader must be wired to the new or existing door controller for that specified door.
- **Relay:** An output from the Video Station must be wired to an input on the door controller through the Security Relay.
- **Verification:** Full video station and card reading functionality must be verified with the WPS IT Department.

### Card Reader Installation Requirements

- **Mounting & Wiring:** Card readers must be mounted per manufacturer specifications and wired directly to the designated door controller.
- **Cable Specification:** ALPHA Communication and Control 1295C (22 AWG) 5-conductor minimum stranded cable with an overall shield (or equivalent) must be used for the connection.
- **Verification:** Full card reader functionality must be verified with the WPS IT Department.

### Camera Installation & Positioning

- **Pre-Project Meeting:** Integration includes a mandatory meeting before the project starts with WPS personnel to verify the correct positioning and aiming of all cameras.
- **Operational Expenses:** The vendor is fully responsible for all costs associated with installation, including but not limited to permits, interior/exterior lifts, and/or bucket trucks.

# Testing, Labeling, & Required Deliverables

## Testing Protocol

- All installed copper links and connections must be tested using a professional cable tester to ensure the specified pinout, check for wiring faults or breaks, and confirm that cable lengths are within acceptable specifications.
- All connections must be tested for full operational functionality.

## Machine-Printed Labeling Specifications

All labels must be machine-printed and strictly follow the WPS Network Operation Team's formatting specifications. Labeling is required on cabling jackets at each end (within a foot of termination), wall faceplates, patch panels, and patch panel ports.

- **Format for Components/Faceplates:** [IDF/MDF Room #] - [Patch Panel ID] - [Patch Panel Port #] (e.g., 101-A-01).
- **Format for Patch Panels:** [IDF/MDF Room #] - [Panel ID] (e.g., 101-A).
- **Format for Patch Panel Ports:** [Wiring Drop Room #] - [Patch Panel ID and Patch Panel Port #] (e.g., 201-A01).

### Example Matrix:

Patch Panel Label	Wall Jack Label
201-A01	101-A-01
201-A02	101-A-02

## Required Hand-off Deliverables

Upon completion, the vendor must provide the WPS Network Operations Team with:

1. A master document detailing patch panel labeling and its associated wall/surface jack locations.
2. An updated floor plan with any altered or final jack locations accurately annotated.
3. Coordination and patching of all new patch panel ports into designated switch ports provided by WPS IT using the appropriate white (VoIP) or blue (Data) slim patch cables. Any necessary removal of existing racked networking equipment must be coordinated with WPS IT beforehand.

# Site Operations, Safety, & Payments

## Working Hours & Cleanliness

- All work must be conducted during hours when there is no student activity unless pre-arranged with the district (typically meaning after normal school business hours).
- The vendor must clean up the work environment at the end of each workday. No ceiling tiles are permitted to be left open overnight.

## Hazardous Materials Guardrails

**CRITICAL SAFETY NOTE:** Hazardous materials may exist at this location, and an official hazardous materials document is located on-site. It is the vendor's strict responsibility to avoid and ensure no hazardous materials are disturbed.

If hazardous materials are disturbed, the vendor **must stop work immediately** and notify an authorized WPS representative. The vendor will be held entirely responsible for all financial costs associated with the cleanup, remediation, and air quality/verification testing conducted by WPS's environmental vendor of choice.

## Payment Verification

Integration and installation tracks will be considered complete only after formal verification by Worcester Public Schools Technical Services that all work has been performed exactly to specification. Payments will be made to vendors as installations are completed