

SPECIFICATION MANUAL SOLID WASTE THERMAL CAMERA INSTALLATION

July 10, 2025

General

- 1.1 The successful bidder (contractor) will provide all labor, materials, tools, equipment and incidentals required to make ready for use a complete and properly operating Premise Distribution System (PDS) to serve as a vehicle for transport of video signals.
- 1.2 The work provided under this contract document shall include all labor, materials, permits, inspections and re-inspection fees, tools, equipment, transportation, insurance, temporary protection, temporary lighting, supervision and incidental items essential for a properly installed and operating PDS, even though not specifically mentioned or indicated but which are usually provided or are essential for a properly operating PDS.
- 1.3 The contractor shall check all site drawings and existing site conditions before bidding and advise the Outagamie county representative of any discrepancies prior to the bid.
- 1.4 This contract document describes the very minimum requirements that must be met for an acceptable installation.
- 1.5 The contractor will give all notices, file all plans, pay all fees, and obtain all permits and approvals from the authorities having jurisdiction. Include all fees in the bid package.
- 1.6 Outagamie's Network Engineer shall act as the Project Manager.
- 1.7 Notify the Outagamie County's Project Manager of any discrepancies found during construction of the project and do not proceed with that portion of the project, until a written statement is received from the Outagamie County's Project Manager providing clear directions. If a conflict exists between the contract documents and any applicable code or standard, the most stringent requirement shall be included for this project. The Outagamie County Project Manager shall make the decision regarding questionable areas of conflict.

Scope of Work

1.8 Symbols

- 1.8.1 Symbols shown in the drawings shall be used. Drawings shall be presented at the Mandatory Site Survey.

1.9 Project Description

- 1.9.1 The Premise Distribution System shall include the horizontal cables, the telecommunications outlets/connectors in the work area, the patch panels in the MDF and IDF closets, patch cords located in the MDF/IDF closets, patch cords located at the telecommunications outlet/connector in the work area.
- 1.9.2 The horizontal cabling system shall accommodate future equipment and service changes.
- 1.9.3 The horizontal cabling system is a star topology. Each work area telecommunications outlet/connector as shown in the drawings shall be connected to a patch panel in the telecommunications closet.
- 1.9.4 Solid Waste MRF and Tip Floor have a telecommunications closet as indicated by the drawings.
- 1.9.5 Separation of horizontal cabling pathways from typical sources of EMI shall be adhered to as per EIA/TIA standards.
- 1.9.6 Bridged taps and splices shall not be permitted as part of the horizontal cabling system.
- 1.9.7 The maximum horizontal distance shall be 90 m (295ft), independent of media type. This cable length shall be from the mechanical termination of the media at the horizontal cross-connect in the telecommunications closet to the telecommunications outlet/connector in the work area.
- 1.9.8 Patch cords in the cross-connect facilities that connect horizontal cabling with equipment or backbone cabling shall not exceed 6 meters (20ft) in length.

- 1.9.9 All data horizontal cabling shall be plenum four pair UTP cable with a white jacket, spec for Panduit 's Category 6 (TX6000) system. There shall be no exceptions or alternatives accepted. Approved unshielded cable manufacturer for horizontal data cable: Panduit PUP6004WH-WLPZ (White Jacket) for Plenum spaces.
- 1.9.10 All horizontal cabling shall be physically supported in accordance with the latest revision of the EIA/TIA category 6 and 568 standards.
- 1.9.11 All horizontal cabling that is installed shall be supported via EMT conduit.
- 1.9.12 Installation shall occur on one campus – Solid Waste Facility
- 1.9.13 Installation hours will be Monday-Friday 10pm-6am, or Saturday-Sunday with Outagamie County Staff supervision availability.
- 1.9.14 Any furniture that must be moved, for the installation of the Premise Distribution System, is the responsibility of the contractor. The contractor shall see that any moved furniture shall be moved back into place after the installation is complete.
- 1.9.15 Telecommunications closet is located in the MRF Maintenance Telecom and Electrical Room.
- 1.9.16 Mandatory site visit required to review project details and bid.

1.10 Camera Station Area Communication Outlets

- 1.10.1 Category 6 RJ45 plugs for solid four pair UTP Category 6 cable.

1.11 Telecommunication Closet Components

- 1.11.1 Patch Panels – use existing Panduit’s mini-com all metal modular patch panels which are already installed in the MRF Telecommunication Closet. NOTE: The patch panels do not come with category 6 jacks. You must provide data jacks for the Patch Panel.
- 1.11.2 Data Jacks – Panduit’s giga-channel mini-jack TX-6 modular jack (color black), part #CJ688TGBL for all Category 6 cable.

1.12 Solid Waste MRF Maintenance Level Termination of Camera Station End Telecommunication Outlet/Connector

- 1.12.1 See Below
 - 1. Camera 1. Label cable “A-10” – Terminate the Station location with RJ45 end.
 - 2. Camera 2. Label cable “A-11” – Terminate the Station location with RJ45 end.
 - 3. Camera 3. Label cable “A-12” – Terminate the Station location with RJ45 end.
 - 4. Camera 4. Label cable “A-13” – Terminate the Station location with RJ45 end.
 - 5. Camera 5. Label cable “A-14” – Terminate the Station location with RJ45 end.
 - 6. Camera 6. Label cable “A-15” – Terminate the Station location with RJ45 end.
 - 7. Camera 7. Label cable “A-16” – Terminate the Station location with RJ45 end.
 - 8. Camera 8. Label cable “A-17” – Terminate the Station location with RJ45 end.
 - 9. Camera 9. Label cable “A-18” – Terminate the Station location with RJ45 end.
 - 10. Camera 10. Label cable “A-19” – Terminate the Station location with RJ45 end.
 - 11. Camera 11. Label cable “A-20” – Terminate the Station location with RJ45 end.
 - 12. Camera 12. Label cable “A-21” – Terminate the Station location with RJ45 end.
 - 13. Camera 13. Label cable “A-22” – Terminate the Station location with RJ45 end.
 - 14. Camera 14. Label cable “A-23” – Terminate the Station location with RJ45 end.
 - 15. Camera 15. Label cable “A-24” – Terminate the Station location with RJ45 end.
 - 16. Camera 16. Label cable “A-25” – Terminate the Station location with RJ45 end.
 - 17. Camera 17. Label cable “A-26” – Terminate the Station location with RJ45 end.
 - 18. Camera 17. Label cable “A-27” – Terminate the Station location with RJ45 end.

1.13 Solid Waste Thermal Camera Cabling Details

- 1. Electrical metallic duplex box to be installed at the termination of each conduit run to allow cameras to be mounted to. All electrical metallic duplex box installation locations shall be verified with Outagamie County project manager prior to installation.
- 2. Awarded bidder to provide all necessary equipment needed for installation, including lifts.
- 3. Contractor to provide their onsite specific Health and Safety plan for our review.

1.14 Labeling

1.14.1 All cables shall be labeled with a computer generated ID number (2-4 inches above the termination) which follows the labeling standards of Outagamie County. Use Panduit TurnTell cable labels which allow for the label to move up or down the cable jacket and rotate without twisting the terminated cable.

1.14.2 All jack locations shall have computer generated labeling easily identifying all communication outlets for that location.

1.14.3 All patch panels shall be labeled with a computer generated ID number, which follows the labeling standards of Outagamie County.

1.15 Warranty

1.15.1 Materials and workmanship hereinafter specified and furnished shall be fully provided with Panduit 25 year System Warranties.

1.15.2 If the awarded bidder procures equipment or materials under the Contract, the awarded bidder shall obtain for the benefit of the Customer, equipment and material warranties against defects in materials and workmanship to the extent such warranties are reasonably obtainable.

1.15.3 The awarded bidder shall pass along to the Customer any additional warranties offered by the manufacturers, at no additional costs to the Customer, should said warranties extend beyond the period specified herein.

1.15.4 This warranty shall in no manner cover equipment that has been damaged or rendered unserviceable due to negligence, misuse, acts of vandalism, or tampering by the Customer or anyone other than employees or agents of the awarded bidder. The awarded bidder's obligation under its warranty is limited to the cost of repair of the warranted item or replacement thereof, at the awarded bidder's option. Insurance covering said equipment from damage or loss is to be borne by the awarded bidder until full acceptance of equipment and services.

1.16 Reference Standards

1.16.1 UL Underwriter's Laboratories, Inc.

1.16.2 NEC National Electric Code

1.16.3 NFPA National Fire Protection Association

1.16.4 NEMA National Electric Manufacturers Association

1.16.5 ASTM American Society for Testing and Materials

1.16.6 IEEE Institute of Electrical and Electronic Engineers

1.16.7 ANSI American National Standards Institute, Inc.

1.16.8 BICSI Building Industry Consultants Service International

1.16.9 EIA/TIA Electronic / Telecommunications Industry Association

1.16.10 All Federal, State, County and City laws, codes and standards apply

1.16.11 All work shall be performed under the latest edition of the above standards, available at the time of bidding. All references to a PDS within the above standards shall be in effect as having been written within this contract document.

1.17 Workmanship

1.17.1 Acceptable workmanship is characterized by first quality appearance and function, conforming to all applicable standards of PDS construction, and exhibiting a high degree of quality and proficiency, which is judged by the Owner and Project Manager as equivalent or better than ordinary produced by a qualified industry tradesman.

1.17.2 The awarded bidder must be a Panduit PSC entity capable of providing the Customer with the twenty-five-year warranty on Panduit's Category 6 System. The project shall be staffed at all times by Installers and Technicians who, in the role of lead craftsmen, will be able to provide leadership and technical resources for the remaining craftsmen on the project. A copy of the Panduit registered installers must be submitted in the awarded bidder's response to this RFB. The awarded bidder shall assign Panduit registered installers to this project.

1.17.3 Personnel shall not be used in the performance of the installation of material and equipment who in the opinion of the Owner and/or Project Manager, are deemed to be careless or unqualified to perform the assigned tasks. Material and equipment installations not in compliance with the contract documents, or installed with the substandard workmanship and not acceptable to the Owner and/or Project Manager, shall be removed and reinstalled by the qualified craftsman at no charge to the Owner and with no changes to the

contract price.

1.17.4 Wiring color codes shall be observed at all times and terminations shall be uniform throughout the PDS.

1.17.5 EIA/TIA 568A wiring code shall standardize all data communications twisted pair wiring.

1.17.6 Identification labeling and system marking shall be uniform throughout the PDS.

1.18 General Cabling Practices

1.18.1 Fire stopping shall be the responsibility of the awarded bidder. All penetrations of walls and/or floor spaces shall be fire stopped with the exact time rating as the wall and/or floor itself.

1.18.2 Refer and adhere to EIA/TIA 607 and the National Electric Code for all grounding.

1.19 Cable Support and Routing

1.19.1 Station cable and tie cables used in this PDS are to be installed per standard cabling practices. When ceiling space is used, cables shall be routed at right angles to electrical power circuits and a minimum of 12 feet from those circuits.

1.19.2 Use of ceiling tile grids or hanger wires for cable supports shall be prohibited.

1.19.3 Vertical riser cables and bundles of horizontal cabling passing between floors shall be properly secured to prevent slippage due to gravity. As a minimum requirement, cables shall be supported at their uppermost point and at each floor of vertical placement.

1.19.4 All horizontal cabling shall be physically supported in accordance with the latest revision of the EIA/TIA category 6 and 568 standards.

1.20 Testing

1.20.1 Each data outlet shall be verified to Category 6 compliance per most recent revision of EIA/TIA standard. All testing will be between the workstation outlet and patch panel port in the Telecommunication Closet. Test all newly installed and re-terminated cables.

1.20.2 Documentation of the testing shall be required. The contractor shall provide an electronic copy of the test results, from the test unit used, to the Project Manager for approval. The report shall show all defective pairs not cleared and the defect and test results of all pairs listed. All defects must be repaired or replaced at no additional cost to the Owner.

1.21 Inspection, Acceptance, and Title

1.21.1 Inspection will be at destination and upon successful installation unless otherwise provided. Acceptance will be at destination upon successful installation, and after the Customer receives the certificate of warranty (25 years) from Panduit. Title to/or risk of loss or damage to all items shall be the responsibility of the successful awarded bidder until acceptance by the Customer, unless loss or damage results from negligence by the Customer. If the materials or services supplied to the Customer are found to be defective or do not conform to the specifications, the Customer reserves the right to cancel the contract upon written notice to the awarded bidder and return products at the awarded bidder's expense, based upon the terms of the Contract.

1.21.2 The Customer shall at all times have access to the work wherever it is in preparation or progress, and the awarded bidder shall provide proper facilities for such access and for inspection.

1.21.3 The awarded bidder shall not close up any work until the Customer has inspected the work. Should the awarded bidder close up the work prior to inspection by the Customer, the awarded bidder shall uncover the work for inspection by the Customer at no cost to the Customer, and then recover the work according to the specification contained herein. The awarded bidder shall notify the Customer in writing when the work is ready for inspection. The Customer will inspect the work as expeditiously as possible after receipt of notification from the awarded bidder.

