

**RIVERSIDE COUNTY INFORMATION TECHNOLOGY  
STRUCTURED CABLING GENERAL TERMS, CONDITIONS AND  
CONTRACTOR QUALIFICATION REQUIRMENTS**



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REFERENCES

## 1. CODES, STANDARDS AND ORDINANCE

- A. All work shall conform to the latest issue and addenda of the National Electrical Code, the Building Code, all local codes, standards and ordinances, as applicable.
1. ANSI/TIA/EIA-455-B, Standard Test Procedures for Fiber Optic Cables and Transducers, Sensors, Connecting and Terminating Devices, and other Fiber Optic Components.
  2. ANSI/TIA-492.AAAC-B, Detail Specification for 850-nm Laser-Optimized, 50um Core Diameter/125um Cladding Diameter Class 1a Graded-index Multimode Optical Fibers (OM3/OM4).
  3. ANSI TIA-492.CAAB, Detail Specification for Class Iva Dispersion-Unshifted Single-Mode Optical Fibers with Low Water Peak.
  4. ANSI/TIA-526-7, Measurement of Optical Power Loss of Installed Single-Mode Fiber Cable Plant - OFSTP-7.
  5. ANSI/TIA-526-14-A, Optical Power Loss Measurements of Installed Multimode Fiber Cable Plant - OFSTP-14.
  6. ANSI/TIA-568-C.0, Generic Telecommunications Cabling for Customer Premises.
  7. ANSI/TIA-568-C.1, Commercial Building Telecommunications Cabling Standard.
  8. ANSI/TIA-568-C.2, Balanced Twisted Pair Telecommunications Cabling and Components Standards.
  9. ANSI/TIA-568-C.3, Optical Fiber Cabling Components Standard.
  10. ANSI/TIA-568-C.4, Broadband Coaxial Cabling Components Standard.
  11. ANSI/TIA-569-D, Commercial Building Standard for Telecommunication Pathways and Spaces.
  12. ANSI/TIA-598-C, Optical Fiber Cable Color Coding.
  13. ANSI/TIA-606-B, Administration Standard for Commercial Telecommunications.
  14. ANSI/TIA-607-B, Generic Telecommunications Bonding and Grounding (Earthing) for Customer Premises.
  15. ANSI/TIA-758-B, Customer-Owned Outside Plant Telecommunications Infrastructure Standard.
  16. ANSI/TIA-862-A, Building Automation Systems Cabling Standard.
  17. ANSI/TIA-942-A, Telecommunications Infrastructure Standard for Data Centers.
  18. ANSI/TIA TSB-140: Additional Guidelines for Field-Testing, Loss and Polarity of Optical Fiber Cabling Systems.
  19. NFPA 70 – National Electrical Code (NEC).
  20. BICSI Information Transport Systems Installation Methods Manual
  21. BICSI Telecommunications Distribution Methods Manual, (TDMM)
- B. Telecommunications contractor shall have read the above documents and shall be familiar with the requirements that pertain to RCIT installations. The documents may be obtained from:
1. Global Engineering Documents, 15 Inverness Way East, Englewood, CO, 80112, 800-854-7179, <http://global.ihs.com>
  2. BICSI, 8610 Hidden River Parkway, Tampa, FL, 33637, 800-242-7405, [www.bicsi.org](http://www.bicsi.org)

# DOCUMENT C

- C. Methodologies outlined in the latest edition of the BICSI Information Transport Systems Installation Methods Manual and BICSI Telecommunications Distribution Methods Manual shall also be used during all installation activities. Should conflicts exist with the foregoing, the authority having jurisdiction for enforcement shall have responsibility for making interpretation on codes related issues, and RCIT on standards related issues.
- D. If this document or any of the documents listed in this RFP are in conflict, then the more stringent requirement shall prevail. All documents listed are believed to be the most current releases of the documents. Bidder has the responsibility to determine and adhere to the most recent release when developing the proposal for installation.
- E. This document does not replace any code, either partially or wholly. Bidder must be aware of local codes that may impact any project.

## 2. PERMIT, FEES, AND CERTIFICATES OF APPROVAL

- A. It is the responsibility of Bidder to make application and pay for any and all required construction permits associated with the project.

## 3. SAFETY

- A. Bidder shall take the necessary precautions and bear the sole responsibility for the safety of the methods employed in performing the work. Bidder shall at all times comply with the regulations set forth by federal, state, and local laws, rules, and regulations concerning "OSHA" and all applicable state labor laws, regulations, and standards.
- B. The National Fire Protection Code, National Electrical Safety Codes, OSHA regulations shall be adhered to during all installation activities.
- C. Bidder shall indemnify and hold harmless RCIT from and against all liabilities, suits, damages, costs, and expenses (including attorney's fees and court costs) which may be imposed on RCIT because of Bidder, subcontractor, or supplier's failure to comply with the regulations stated herein.
- D. The Contractor shall provide safety equipment to each employee to be used as appropriate or required for the work. (e.g., eye protection, sound suppressors, hard hats, gloves, respirators, etc., as required).

## 4. ASBESTOS

- A. Certain Riverside County buildings constructed prior to 1970 may contain asbestos found in the original construction materials used. The majority of materials detected with asbestos are blown-in ceiling insulation, floor tiles, walls, pipe insulation and other construction materials. If an Asbestos concern develops, immediately contact the RCIT Project Manager before any work is done.
- B. All cabling contractors will ensure that personnel they place on Riverside County premises will have asbestos awareness training and certification. Cabling Contractor's Project Managers and Technicians shall be Asbestos Administrative Awareness Certified possessing current credentials. Documentation shall be provided to Riverside County upon request.

## 5. CONDITIONS FOR SITE USE AND PROTECTION

- A. **General:**
  - 1. Use of the site shall be at RCIT's direction in matters in which RCIT deems it necessary to place restriction.

2. Access to building wherein the work is performed shall be during regular business hours unless otherwise specified or arranged.
3. Proceed with the work without interfering with ordinary use of streets, aisles, passages, exits, and operations of the customer.
4. Bidder shall coordinate with RCIT project manager the approved access and egress locations for material handling and delivery.

## **B. Site Cleanliness:**

1. The work area shall be kept clean at all times during construction. Protect floors and all adjacent surfaces by use of drop cloths and other means. All cutting, dust, and other debris shall be removed periodically during the workday so as not to be tracked into other areas of the building or create a hazard to foot traffic. At the end of the workday all unused materials shall be stacked in a neat and orderly manner and located in an area designated by the County Project Manager out of the path of others, unless otherwise specified in writing. All indoor areas of construction shall be vacuumed clean of all dust at the completion of each workday. The County Project Manager can at any time stop the job for any condition that he/ she may deem unsafe.
2. The County of Riverside dumpster(s) shall not be used by the Contractor. Contractors shall supply their own dumpster(s) and lawfully transport all trash and debris generated by the project off the County Riverside property to an appropriate dumpsite.

## **C. Protection of County's Facilities:**

1. Effectively protect RCIT and the County's facilities, equipment, and materials from dust, dirt, and damage while performing under the scope of work.
2. While accessing secure areas within the County facilities, Bidder shall not leave any doorways or access ways 'propped' open in any fashion that may normally be closed, locked, or purposely secured.
3. The Contractor shall be solely and completely responsible for the condition of the premises on which the work is performed and for safety of all persons and property on the site during performance of the contract. This requirement shall not be limited to normal working hours, but shall apply continuously throughout the project.

## **D. Pre-Installation Site Survey:**

1. Prior to start of systems installation, meet at the project site with RCIT's representative and representatives of trades performing related work to coordinate efforts. Review areas of potential interference and resolve conflicts before proceeding with the work. Bidder shall coordinate with RCIT project manager and notify project manager of unresolved conflicts and the potential for missed due dates or deadlines. Coordination with the General Contractor shall be necessary to plan the crucial scheduled completions of the equipment room and telecommunications closets.
2. Examine areas and conditions under which the system is to be installed. Do not proceed with the work until satisfactory conditions have been achieved.

## **6. MATERIALS**

- A. All parts Bid must be new and manufactured within the past six (6) months.
- B. Bidder may only offer substitute items prior to submission of their bid, where the part(s) is identified and it can be demonstrated that the substitute meets or exceeds the performance of the part listed. Not typical or average performance values will be accepted. The Contractor shall supply the following information with each substitute requested:
  1. Name of manufacturer
  2. Part Number
  3. Product Data Sheet
  4. Third party performance comparison verification (only applicable for cabling system components)
  5. Product performance comparison
  6. Unit cost
  7. Manufacturer lead time

- C. If any part, which has been agreed upon in this bid, becomes unavailable during the life of the contract, RCIT shall select a replacement item and negotiate the price with the contractor. This part shall then become the standard during the life of the contract.
- D. During the installation of any project, substitutions shall only be allowed for the reason of unavailability of the agreed upon part. RCIT shall be notified and provided the following information:
  - 1. Part in question
  - 2. Construction start date
  - 3. Date of contractor P.O. to authorized distributor
  - 4. Delay expected
  - 5. Substitution suggested with supporting product data sheet
  - 6. Cost differences, if any
- E. It shall be the sole responsibility of RCIT to accept or reject the substitution.
- F. Delivery, Storage and Handling
  - 1. Protect equipment during transit, storage, and handling to prevent damage or theft.
  - 2. Bidder is responsible to make sufficient coordination and preparation for secure storage of equipment and materials.
  - 3. Do not store equipment where conditions fall outside manufacturer's recommendations for environmental conditions.
  - 4. Damaged equipment shall be removed from site and replaced with new equipment.
  - 5. Bidder shall be responsible for safekeeping of Bidders and subcontractors' property, such as equipment and materials, on the job site. RCIT assumes no responsibility for protection of above named property against fire, theft, and environmental conditions.

## 7. WARRANTIES

- A. The structured cabling system shall provide a warranty guaranteeing installed channel performance above the ANSI/TIA 568-C requirements for Cat 6 or ISO 11801 requirements for Class E.
  - 1. This warranty shall cover passive telecommunications infrastructure copper and optical fiber connectivity and cabling products and performance for a minimum period of Limited Lifetime from date of installation registration, and will support any existing or future applications designed to operate over a 250 MHz horizontal channel as defined in the current ANSI/TIA-568-C standards.
  - 2. Installation practices shall follow the installation guidelines and procedures specified in the manufacturer certified integrator/installer programs and the current ANSI/TIA standards.
  - 3. Acceptable manufacturer solution for the copper and optical fiber infrastructure is a Berk-Tek Leviton Technologies or RCIT Pre-Approved Equal.
  - 4. The structured cabling system shall be installed and registered by a Berk-Tek OASIS Certified Integrator and Leviton Preferred Network Installer (PNI) or RCIT Pre-Approved Equal.
  - 5. Provide closeout documentation in accordance with the manufacturer warranty requirements to comply for acceptance of warranty. Documentation shall be submitted to the manufacturer including, but not limited to:
    - a. Manufacturer warranty application form.
    - b. Compliance of the proper network test equipment and permanent link adapters.
    - c. Electronic test results per cable port and a summary report of all test results.
    - d. All documentation shall be issued electronically on a CD-ROM, FTP site or via email.
  - 6. Provide the manufacturer warranty application registration number to RCIT.

- B. The System components must be new, unused, current edition and in original packing material.
  - a. Approved products shall be listed on the most recent version of the applicable manufacturer's data sheets.
- C. Horizontal channels shall be completed with factory-terminated copper and/or fiber optic patch cords in order to be eligible for the applicable manufacturer Warranty with channel performance guarantees.
- D. The System must be installed by a Certified Integrator/Installer in good standing, authorized by the specified Manufacturer(s) for the past five (5) years and adhere to the terms and conditions specified within the Certified Integrator/Installer Program Agreements.
- E. Unless otherwise specified, unconditionally guarantee in writing, the materials, equipment, and workmanship for a period of not less than one (1) year from date of Project Closeout letter issued by the RCIT project manager. Acceptance shall be deemed as beneficial use by RCIT.
- F. Transfer manufacturer's warranties to RCIT in addition to the General System Guarantee. Submit these warranties on installed cabling system. Detail specific parts within equipment that are subject to separate conditional warranty. Warranty proprietary equipment and systems involved in this contract during the warranty period. Final payment shall not relieve Bidder of these obligations.
- G. Manufacturer Limited Lifetime Warranty shall be Berk-Tek Leviton Technologies or RCIT pre-approved equal.
- H. Repair problems associated with any cabling installation reported by RCIT shall be corrected in accordance with the following schedule:
  - a. Any installation within an eighty (80) mile radius of RCIT Administrative Center located at 4080 Lemon Street, Riverside, CA, shall be corrected within one (1) working day from notification.
  - b. Installations outside an eighty (80) mile radius of same County Administrative Center shall be corrected within two (2) working days from notification.
- I. If Bidder responds to a problem and determines that the problem was not caused due to the installation, Bidder has the right to bill RCIT.
- J. If Bidder procures equipment or materials under the contract, Bidder shall obtain for the benefit of RCIT equipment and materials warranties against defects in materials and workmanship to the extent such warranties are reasonably obtainable.
- K. Bidder shall pass along to RCIT any additional warranties offered by the manufacturers, at no additional costs to RCIT, should said warranties extend beyond the period specified herein.

## **8. INSPECTION, ACCEPTANCE, AND TITLE**

- A. Inspection and Acceptance shall be at destination and upon successful installation unless otherwise provided. Title to/or risk of loss or damage to all items shall be the responsibility of the successful Contractor until acceptance by RCIT, unless loss or damage results from negligence by RCIT.
- B. If the materials or services supplied to RCIT are found to be defective or do not conform to the specifications, RCIT reserves the right to cancel the contract upon written notice to Bidder and return products at Bidder's expense, based upon the terms of the Contract.
- C. Bidder shall not close up any ceiling tiles until RCIT has been contacted and given the opportunity to inspect the installation. Should Bidder close up the work prior to giving RCIT the option to inspect the work, Bidder shall

uncover the work for inspection by RCIT at no cost to RCIT, and then recover the work according to the specification contained herein.

- D. Bidder shall notify RCIT in writing when the work is ready for inspection. RCIT shall inspect the work within twenty four (24) hours after receipt of notification from Bidder.
- E. RCIT reserves the right to conduct, at RCIT's expense, using Contractor equipment and labor, a random re-test of up to 5 percent of the cable plant to confirm documented results. Any failing cabling shall be re-tested and restored to a passing condition. In the event the cable plant fails during re-test, the entire cable plant shall be retested and restored to a passing condition at no additional cost to RCIT. If the cable still fails, the cable shall be replaced at no charge to RCIT.
- F. Acceptance shall be subject to completion of all work, successful post-installation testing, which yields 100 percent PASS rating, and receipt of full documentation.
- G. RCIT shall inspect the completed installation prior to acceptance to ensure the installation was completed in compliance with all guidelines and directives as outlined in this document.
- H. RCIT shall provide prints, as required, in either paper format or electronic format (VISIO 2010 or AutoCAD 2014). Bidder shall provide "As built" documentation in the same format as received within five (5) working days after completing the job. These drawings shall include WAO locations, label numbers, pathways, firestop system locations, backbone cables, pair counts, TR locations, etc.
- I. Bidder shall provide within five (5) working days at the conclusion of the project:
  - 1. Warranty documents for equipment.
  - 2. Data cabling certification test result printouts and electronic media.
  - 3. Cable records and cross-connect sheets.
  - 4. Current Test Equipment Certification Report.
  - 5. Provide one (1) copy of items 1,2 & 3 above in a 1.5" binder with the following items:
    - 1. Binder cover sheet
    - 2. Divider tabs
    - 3. RCDD Project signoff document

## 9. PAYMENT CONDITIONS

- A. Payment shall be made as follows:
  - 1. Monthly progress payments will be made based upon the progress of the project as agreed upon by both the Bidder and RCIT project manager. The amount of monthly progress payments shall not exceed the amount of work completed to date.
  - 2. The final invoice shall not be submitted until the Project CLOSEOUT Notification letter is sent to Bidder, reconciling is performed, and deliverables are completed.
  - 3. Upon receipt of the Project Closeout Notification letter, Bidder shall notify RCIT in writing of a release of all liens for all materials and services associated with this project.
  - 4. The project shall be deemed "COMPLETED" when Bidder delivers to RCIT:
    - a. All cable test results.
    - b. All Warranty documentation.
    - c. Acceptance shall be deemed "IN FULL" upon receipt by Bidder of the Project Closeout Notification letter issued by RCIT upon beneficial use and full implementation of the Terms and Conditions and Technical Specifications of the Contract.



## 10. Change Orders

- A. In the event of a change order, applicable unit cost as quoted will be extended for both materials and labor to cover the addition of work. No increase to unit cost shall be permitted. Change order must be agreed upon in writing by both County and Contractor prior to service being rendered.

## 11. REQUIRED EXPERIENCE AND CERTIFICATIONS

- A. The selected Contractor shall be certified by the following manufacturers and currently maintain the noted program level. A copy of such documents must be submitted with the estimate in order for the quote to be valid:
  - 1. Berk-Tek - OASIS Integrator
  - 2. Leviton - PNI Installer
- B. Contractor must certify 100 percent of the installation and termination crew assigned to any project shall be a current Building Industry Consulting Service International (BICSI) ITS (Information Technology Systems) certified Installer 1. For any project, the onsite lead shall be a minimum of a BICSI current certified ITS Technician or industry equivalent. A copy of such documents must be submitted with the estimate in order for the quote to be valid. Bidder is responsible for workmanship and installation practices in accordance with the manufacturer specifications.
- C. Bidder and/or their subcontractor shall hold current and valid C7 license as required by state law to perform such work as described herein within the State of California.
- D. Bidder must be fully capable and have a minimum of five (5) years of experience in the design and installation of voice, data, video, outside plant and fiber optic cabling.
- E. Bidder shall have a BICSI certified (Registered Communications Distribution Designer) RCDD on staff and in their local support office assigned to support this contract. This person shall maintain current RCDD registration and shall be responsible for quality control during installation, equipment setup, and testing. RCDD on staff will stamp and sign off all project as-built documentation and test results. A copy of such documents must be submitted with the estimate in order for the quote to be valid.
- F. Bidder shall provide a Project Manager (PM) who shall act as a single point of contact for all activities regarding installations. The PM shall be required to make decisions regarding the scope of the work and any changes required by the work. The PM shall be responsible for all aspects of the work and shall have the authority to make immediate decisions regarding implementation or changes to the work.
- G. Bidder shall provide an on-site Lead person responsible for on-site job management. On-site Lead shall be required to attend site construction meetings throughout the duration of the installation.
- H. All Contractor personnel performing work associated with this project shall wear shirts and/or badges clearly identifying their company.

## 12. REFERENCES

- A. RCIT may, with full cooperation of Bidder, visit client installations to observe equipment operations and consult with references. Specified visits and discussion shall be arranged through Bidder, with Contractor personnel present during these discussions.
- B. Describe a minimum of three (3) references of recent (3 years) similar projects that the County is requesting for in this RFP. These referenced projects must show the qualifications of the bidder's team capabilities to complete the County's project. References cannot include Riverside County Elected Officials, Department Directors, or Information Technology staff as a reference. References shall include at minimum the following information:
  - 1. Company name

2. Address
3. Contract person
4. Email address
5. Telephone number
6. Project name
7. Dates work performed
8. Summary of scope of services
9. Project cost