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**NYCH+H
Specifications for
Cabling/Installation Services/Racks/Patch-
Cords/UPS/PDU**

**Jacobi Hospital
1400 Pelham Parkway South, Bronx, NY 10461
Building #4
3rd, 11th and 12th floors
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Proprietary and Confidential

Prepared By:

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1.0 INTRODUCTION

1.1 OBJECTIVE

The New York City Health and Hospitals Corporation (hereinafter referred to as “the Customer”) intends to implement networking services throughout its facilities.

The Customer here-within requests proposals for the installation services as described in the below “Scope of Work” by interested persons (hereinafter known as “The Vendor”). Prices quoted shall be all-inclusive and represent complete delivery of the items described below. The Vendor shall be responsible for all parts, labor, and all other associated apparatus necessary to completely install, test, and turnover for acceptance to the Customer the deliverables detailed herein.

1.2 SCHEDULE OF EVENTS

The Customer intends to expedite the evaluation of the bid responses and anticipates an immediate contract award. Hence, in submitting the bid, the Vendor shall be prepared with adequate capital and man-power required to follow an extremely aggressive schedule as the inability to do so shall be just cause to cancel said contract and subsequently award the next lowest bidder.

Deadlines and method of response will be identified in a covering letter/email.

2.0 TERMS AND CONDITIONS OF REQUEST FOR QUOTE (RFQ)

As a condition pre-requisite to the award of contract, Vendor shall provide to Customer a project plan and Statement of Work (SOW) for all phases of the work. Project tasks shall be no more than 10 calendar days in length; any task deemed longer than 10 days in duration, shall be broken into sub-tasks for the purpose of tracking and reporting. Weekly status reports shall be issued by the vendor with reference to said project plan.

Customer reserves the right to modify the sequence of work to align with construction phasing.

MINIMUM QUALIFICATIONS

In order to respond to this Request for Quote, responding vendors must meet the following minimum qualifying requirements:

Vendor must have 3+ years’ experience working on hospital cabling systems of the same or greater size and scope as that of New York City Health and Hospitals’ infrastructure.

Vendor’s personnel assigned to this work must be Panduit Certified installers.

Vendor must have full-time on site RCDD (Registered Communications Distribution Designer) personnel.

2.1 INTERPRETATIONS, CORRECTIONS, AND/OR CHANGES

Any interpretation, correction, or change of the RFQ will be made by an Addendum. Interpretations, corrections, or changes to the RFQ made in any other manner will not be binding, and the Vendors shall not rely upon such interpretations, corrections, or changes. Interpretations, changes, or corrections will be issued by the Customer. It is the responsibility of the Vendors to determine whether all addenda have been received.

2.2 ADDENDA

It will be the responsibility of all respondents to contact the Customer prior to submitting a response to the RFQ to ascertain if any addenda have been issued, and to obtain any and all addenda, execute them, and return addenda with the response to the RFQ.

2.3 QUESTIONS

Questions regarding this RFQ must be submitted in writing or e-mail to the Customer. Questions must be received by the Customer no later than 3:00 PM of the next business day or the questions will be considered null and void. Responses to all questions received in proper time frames will be made in writing and distributed to all Vendors on the bidders' list.

2.4 PROPOSAL BINDING PERIOD

Prices quoted in the Vendor's response for all labor and materials will remain in effect for a period of at least ninety (90) business days from the issuance date of the Vendor's response.

2.5 OMISSIONS

Omissions in the proposal of any provision herein described shall not be construed as to relieve the Vendor of any responsibility or obligation requisite to the complete and satisfactory delivery, operation, and support of any and all equipment or services.

2.6 PAYMENT CONDITIONS

Payment shall be made upon completion of deliverables by Vendor and acceptance of the job by the Customer.

2.7 INSPECTION, ACCEPTANCE, AND TITLE

Inspection and Acceptance will 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 Vendor 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 Vendor and return products at the Vendor's expense, based upon the terms of the Contract.

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

The Vendor shall not close up any work until the Customer has inspected the work. Should the Vendor close up the work prior to inspection by the Customer, the Vendor 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 Vendor 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 Vendor.

The Vendor shall be responsible to replace any ceiling elements damaged by their work (e.g., ceiling tiles, grids, fixtures, lamps, etc.)

2.8 SAFETY

The Vendor shall take the necessary precautions and bear the sole responsibility for the safety of the methods employed in performing the work. The Vendor shall at all times comply with the regulations set forth by federal, state, and local laws, rules, and regulations OSHA and all applicable state labor laws, regulations, and standards. The Vendor shall indemnify and hold harmless the Customer from and against all liabilities, suits, damages, costs, and expenses (including attorney's fees and court costs) which may be imposed on the Customer because of the Vendor, subcontractor, or supplier's failure to comply with the regulations stated herein.

The Vendor acknowledges that they and any sub-contractors are working in a healthcare facility. As such, extraordinary precautions for cleanliness including the mounting of "Dust Partitions" to contain dust and other particulates are required. Vendor to provide "Dust Partitions".

Communication/data cables should be pulled in patient care areas after hours (clinic) and when the unit is non-operational. The sites of entry and exit of the cable will be HEPA vacuumed (ceiling tiles and pipes) before any work begins.

Cables should never be pulled over a patient's bed. The patient(s) must be relocated before the job is initiated.

When cables must be pulled in an active unit a dust partition must be used at the site of entry and exit of the cable.

The dust partition may be attached to the false ceiling because taking it to deck

may interfere with the work.

The site of entry and exit of the cable will be HEPA vacuumed (ceiling tiles and pipes) before the work begins.

Vendor may be required to provide notification in advance to various Customer groups at the location (e.g., Facilities, Patient Safety) of their work locations and work-schedule.

Vendor shall be responsible for fire-stopping any penetrations made by Vendor during the course of this scope of work.

2.9 RIGHT TO REJECT

The Customer reserves the right to reject all bids. Responses should be submitted initially with the most favorable terms that the Vendor can propose.

3.0 SYSTEM SOLUTION AND PRICING GUIDELINES:

3.1. All bidders must be Panduit / General Cable certified as this is the only approved solution for this project.

3.2. Bids received for solutions other than Panduit / General Cable will be immediately rejected without further consideration.

3.3. Installed manufacturer solutions must carry a minimum of a 20-Year warranty against manufacturer defect and a 20-Year application warranty.

3.4. The use of Keystone / Netkey etc. cabling components is strictly prohibited as these are not approved cabling products for this project.

3.5. Certificates authenticating the contractor's certified installer status must be supplied as part of the contractor bid response.

3.6. Project pricing from the manufacturers and distributors must be honored for the entire project duration, even if the contractor must pre-purchase materials to do so.

3.7. Contractor shall provide a category 6 manufacturer warranty certificate to the consulting engineers upon job completion and prior to receiving full project payment.

3.8. Submitted pricing shall be all inclusive and represent a complete operational installation for all materials and labor identified in the bid documents.

3.9. Contractors are hereby notified that they are “Buying the drawings, written specifications and installation schedule”.

3.10. Only changes issued as an addendum will be binding upon the buyer. No verbal instructions or interpretations of requirements shall be accepted.

3.11. The buyer reserves the right to modify the specifications contained within this request for proposal anytime during the bid process. All modifications would be submitted as an addendum to the original bid set with adjustments made according to the unit pricing schedule.

3.12. All system cabling, termination hardware, racks, cabling components, support structures, consumable parts, etc. shall be furnished and installed by the cabling contractor and included as part of the vendor bid-base, unless otherwise indicated in the bid documents.

3.13. The contractor shall be responsible for all parts, labor and all associated apparatus necessary to completely install, test, and turnover for production the specified manufacturer certified structured cabling system in accordance with local, state, building, industry and manufacturer rules, regulations, standards and guidelines.

3.14. Contractor must provide unit pricing and alternate pricing as required by the bid documents. All unit pricing shall include both material and labor required to completely furnish and install each specific component unless otherwise detailed.

3.15. Unit pricing submitted in response to this bid set shall be considered an “Add/Delete Schedule” for the duration of the project. Contractor to add a ten-percent (10%) line item to their bid submission entitled “Contingency”. Procurement against that contingency line to be supported by formal written change orders provided by the Customer referencing unit and alternate pricing provided by Contractor.

3.16. Contractor is responsible for identifying and/or verifying all part numbers and colors/quantities of materials, even where specified by low voltage engineers. For example, a 10.5” end panel cannot be used with a 16.25” channel depth rack, so the larger end panel would logically be required.

3.17. Should a discrepancy arise between the written specifications and drawings, the bidder must submit to the low voltage engineers a request for information (RFI) to receive clarification and/or approval on the item(s) in question.

3.18. Failure to seek approval where discrepancies exist does not waive vendor responsibility as to the intent of the infrastructure design and rectifying the error/omission shall be at the sole expense of the contractor.

3.19 4-Pair Station Cabling.

3.19.1. All horizontal 4-pair station cables shall be category 6E rated unshielded twisted pair cable.

a. General Cable Genspeed 6000 series plenum cable (71319XX, where XX is the color)

3.19.2. All category 6E workstation cable shall be of plenum construction with a colored cable jacket as follows:

a. Data 1 = Blue

b. Data 2 = Red

i. Note – 4-pack stations are 2 blue and 2 red.

c. Wireless Access Points = 2 Orange

d. Voice/Fax = White

e. Security Cameras = Black

3.19.3. All communication outlets will be wired with a varying number of cables, as defined on the bid documents. Although the contractor is basing their proposal off the cable counts found on the cable plans, generally speaking the number of cables per workstation shall be as follows:

- a. All standard workstation outlets shall be wired with four (4) category 6E plenum cables (2 Blue and 2 Red).
- b. All Fax / Multi-function device locations will be wired with three (3) category 6E plenum cables (1 Blue, 1 Red and 1 White).
- c. All Wireless Access Points will be wired with two (2) category 6E plenum cables with an orange cable jacket.
- d. All wall-phone outlets will be wired with one (1) category 6E plenum cable with a white cable jacket. Vendor is required to install customer provided Cisco wall-phone brackets.

3.19.4. All cabling shall be homerun from the workstation outlet to the appropriate IDF closet distribution racks. Splice points and intermediate distribution points will not be acceptable for any cable type on this project.

3.19.5. All cabling shall be separated by color within the overhead cable tray system.

3.19.6. Cable trays shall be grouped by quadrant and dedicated to specific racks within each wiring closet (e.g., Rack 1 = Northeast / Rack 3 = Southeast).

3.19.7. Vendor shall install flex-trays and when the conditions do not permit, then J-hooks shall be installed. Contractor shall furnish and install plenum velcro straps or plenum wire ties in the horizontal pathways between J-hooks and other support structures. Straps shall form a firm ring around the cables without binding to the cables to compromise electrical continuity. The use of electrical tape is strictly prohibited.

3.19.8. Contractor shall follow conduit routes and trunk patterns or main pathways reflected on drawings for the installation of all communications cabling. Tributary pathways shall be established for cable distribution from the main cable pathway to the endpoints. Where specific routes are not indicated, cables shall follow room boundaries in the ceiling void into walls, outlets, channels, or conduits.

3.19.9. Contractor must review the reflected ceiling plans in planning their cable pathways, as inaccessible hard ceiling areas may exist on this project. Cables must be kept in accessible tile areas where ever possible.

3.19.10. Cables run in open ceiling environments must follow column line and duct work in order to minimize visibility of installed wiring.

3.19.11. Contractor must observe the 90 meter cable distance limitation when planning cable pathways. All cable pathways must be planned and measured in advance of cable rough-in to insure all cabling remains within the industry defined distance limits. Should concern arise about remaining within the 90 meter distance limits, cabling may be installed along the building core walls or run outside common corridors in order to maintain distance requirements to workstation locations farthest from the wiring closets.

3.19.12. Contractor must advise the consulting engineers prior to cable rough-in of any discrepancies with the cable distances and seek further direction or clarification for possible alternative distribution methods in areas that exceed 90 meters.

3.19.13. Horizontal cable runs shall be routed as necessary to avoid areas of potential radio frequency and electromagnetic interference, such as large motors, transformers, fluorescent lighting etc.

3.20. Workstation Terminations:

3.20.1. All 4-pair workstation outlet locations shall terminate on category 6E modular 8-pin RJ45 style modules.

3.20.2. All jacks must be individually identifiable by use of colored RJ45 inserts using the following color scheme:

- a. Data 1 = Blue
- b. Data 2 = Red
 - i. Note – 4-pack stations are 2 blue and 2 red.
- c. Wireless Access Points = Orange
- d. Voice/Fax = White
- e. Security Cameras = Black

3.20.3. Single-gang flush mounted wall plates shall be provided for all standard outlet locations. Unused ports must be filled with a blank insert.

a. All workstation faceplates shall be 4-port plates, even where fewer than 4 data cables are installed.

b. All workstation faceplates shall be Panduit mini-com executive series faceplates.

3.20.4. All designated wall-phone outlet locations will be wired to a single-gang 1-port stainless wall phone plate with telephone mounting lugs and a category 6E RJ45 module. Vendor is required to install customer provided Cisco wall-phone brackets.

3.20.5. All designated wireless access point outlet locations will be wired to a 2-port biscuit jack mounted / secured in an Oberon suspended ceiling enclosure which shall also be provided / installed by the low voltage contractor.

a. Contractor shall include labor to physically mount and connect all customer provided wireless access point devices.

b. Oberon model 1047-00 enclosures shall be used for the installation of wireless access points in all accessible ceiling tile areas.

c. Oberon model 1015-00 enclosures shall be used for the installation of wireless access points in all wall mounted or finished ceiling areas.

d. Contractor must independently support each Oberon box with wire or straps to permanent structures within the ceiling void.

3.20.6. Modular furniture faceplates, 106-style adapters and/or surface mounted boxes required to properly secure and affix the category 6E jack inserts in modular furniture, floor boxes, wire-mold raceway or table hatch openings, shall be provided in the vendor base bid. Contractor shall be responsible for identifying and supplying the correct furniture plate and bezel needed to properly affix to the furniture systems, which may not be identified at time of this bid, so an appropriate allowance must be incorporated into the low voltage base bid to capture all device quantities.

3.20.7. All exposed cable “whips” that feed modular furniture, conference room tables, etc., shall be protected with split-loom sized appropriately for each cable bundle feeding the workstation environment.

3.20.8. The use of spiral wrap shall only be acceptable for cable bundles feeding in non-exposed areas, such as within convectors or in conference table bases.

3.20.9. All 4-pair cabling shall be terminated based on T568B pin configuration standards.

3.20.10. All faceplates shall be base-bid in white, however, color samples must be submitted for architect/client approval prior to the contractor ordering job materials. Request for taking corrective measures (such as replacing non-approved colors) or restock charges will be denied for failure of receiving written approval on all color coded components.

3.21. WIRING CLOSET TERMINATIONS:

3.21.1. All 4-pair category 6E workstation cables shall terminate on rack mounted 72-port 3U category 6E angled patch panel frames with all RJ45 jack inserts matching the color scheme designated for each application (see above).

3.21.2. Contractor shall furnish/install complete horizontal cable management panels for all racks and cabinets.

3.21.3. Strain relief bars must be used at the back of all patch panels to properly secure the installed cabling, even if not provided as a standard component with the manufacturer patch panel.

3.21.4. All patch panels must have a plastic labeling window to secure the label strip. Patch panels that require the use of a P-Touch stick-on style label without a plastic label window are not approved products.

3.21.5. All 4-pair cabling shall be terminated based on T568B pin configuration standards.

3.21.6. All cabling shall be dressed from both sides of each equipment rack or termination field. Cables shall be evenly distributed and shall form a single cable bundle. For example, a 48-port patch panel shall be dressed with 24 cables from each side within the equipment racks vertical channel (separated by blue / red cable bundles.)

3.21.7. Distribution cabling shall be installed across the top of the strain-relief bar (parallel to the bar), in neat radius sweeps, tie-wrapped and routed into the area between the applicable IDC termination strips.

3.21.8. All cable bundles must be secured within the equipment rack “channel” without interference or restrictions for mounting of equipment. All unused rack units must be fully accessible for mounting of network equipment.

3.22. Fiber Riser:

3.22.1. Contractor shall furnish and install multi-mode fiber as identified in the drawings/spreadsheet.

3.22.2. Contractor shall furnish and install all fiber terminations using LC fiber connectors and 12-port duplex LC fiber coupler panels.

3.22.3. Fibers shall terminate in Panduit 4U fiber distribution panels (Panduit # FRME4) as noted on the drawings.

3.22.4. Contractor shall furnish and install blank filler panels for all unused fiber chassis bulkheads.

3.22.5. Contractor shall request a site coordination meeting with the client and engineers to finalize panel placement and labeling schemes prior to terminations.

3.23. Patch Cords:

3.23.1. Contractor shall furnish/install one (1) category 6E RJ45/RJ45 patch cords for each workstation location to establish network connectivity within the IDF closet. Contractor shall install patch cords per client requirements and guidelines (TBD)

3.23.2. Contractor shall furnish category 6E RJ45/RJ45 patch cords for each workstation location to establish network connectivity at the user workstation.

3.23.3. IDF closet patch cords shall be provided in 7' and 12' lengths for connections within the wiring closets as to minimize cable congestion within the vertical wire management troughs.

3.23.4. All workstation patch cords shall be provided in 12' lengths.

3.23.5. Prior to ordering materials, contractor shall measure required cord lengths to use minimum length needed as to avoid congestion in the vertical cable management troughs. This must be reviewed with approved by the client and consulting engineers.

3.23.6. All copper patch cords shall match the cable jack up for each application (e.g., red, blue, orange, white, black).

3.23.7. Contractor shall install velcro straps around all horizontal and vertical cable bundles.

3.23.8. All patch cords must be factory terminated, tested and certified.

3.23.9. Contractor must solicit and receive written approval prior to ordering patch cords as cable colors, lengths and quantities may vary between this issue for bid set (which is an allowance) and a time of installation.

3.24. Distribution racks, server cabinets and peripherals:

3.24.1. All 2-post racks in the IDF closets shall be furnished and installed by the low-voltage contractor and shall be Panduit 45U racks with patch-runner dual sided 45U 12” vertical cable managers between racks and 45U 8” vertical managers at the ends of each assembly. Dual hinged doors to be included on all cable managers.

a. 2-post rack = Panduit # R2P

b. 8” vertical cable manager/door = Panduit # PRV8 / PRD8

c. 12” vertical cable manager/door = Panduit PRV12 / Panduit PRD12

3.24.2. Contractor shall furnish and install all server cabinets as noted on the drawings/spreadsheet. All server cabinets must include vertical cable management panels and PDU mounting brackets.

a. All server cabinet shall be APC 24” wide 42U AR 3300 series cabinets.

3.24.3. Contractor shall furnish/install the following PDUs:

a. Two (2) Raritan model # PX2-5497 30A vertical switched/ metered power-strip PDU with wifi option per server cabinet.

3.24.4. Contractor shall furnish/install 4U horizontal management panels as shown on the drawings. Horizontal managers shall be Panduit Netmanager series model # NM4.

3.24.5. Contractor shall furnish/install 2U horizontal management panels at the top of each APC and Panduit 4-post cabinet -- Panduit patch link series model number # WMPF1E.

3.24.6. Front and rear rack clearances shown on the equipment room layout drawings are measured to the cabinet frames and must be field verified with the client representatives prior to final placement or securing the leveling feet.

3.24.7. Contractor shall level all equipment cabinets to allow for proper loading of equipment.

3.24.8. An extra quantity of 50 rack screws/cage nuts shall be provided by the contractor for each server cabinet.

3.25. Ladder rack cable tray

3.25.1. Contractor shall furnish and install 12” and 24” wide rigid horizontal ladder rack within the IT closets and for all main cable distribution.

3.25.2. The ladder rack “system” shall include horizontal sections above all equipment racks and vertical ladder rack sections that extend from the above-rack horizontal sections to the above ceiling wall penetrations.

3.25.3. Contractor shall furnish and install 18” wide vertical ladder rack sections to support all riser cabling between floors. These vertical sections shall be located with the riser sleeves for proper strapping / fastening of the riser cabling to the ladder rack sections.

3.25.4. Ladder rack shall be bolted directly to the top of each equipment rack using proper anchors and mounting plates (from the rack manufacturer) and supported via threaded rod as necessary for extended length sections that do not sit above racks / cabinets.

3.25.5. Ladder rack sections shall be attached to walls using appropriate cable runway wall angle kits.

3.25.6. Cable runway radius bends shall be provided to transition cable from all vertical ladder rack sections into the ceiling void.

3.25.7. Cable runway radius drops shall be provided to transition cable from all horizontal ladder rack sections into the equipment rack vertical cable management troughs. Cross-member and stringer radius drops may be required depending on the direction and method used to anchor each ladder rack section.

3.25.8. Contractor shall furnish and install all required bolts, anchors, elevation kits, angle kits, splice kits etc. required to fully install the ladder rack system, even if not specifically called out in the specifications.

3.25.9. Chatsworth or equivalent manufacturer are approved for all ladder rack components.

3.25.10. All equipment and ladder rack components must be provided in black and properly grounded/bonded per EIA/TIA standards.

3.26. Cable supports/dressing/termination:

3.26.1. All installation work shall be done in a neat, high quality manner and in conformity with appropriate manufacturer, national and local codes, regulations and standards.

3.26.2. Cables shall be securely held in place by an industry acceptable practice and installed with sufficient bending radius so as not to kink, shear, or damage electrical conductors.

3.26.3. Under no circumstances shall local voltage cabling rest on ceiling grid systems, light fixtures or any other power source.

3.26.4. Caddy cablecat straps, CPI tri-hook supports or technical equivalent are approved for all cable trunk feeds. Contractor must submit cut sheet for approval of their preferred cable support structure.

3.26.5. J-hooks or technical equivalent are approved for all branch cable runs.

3.26.6. Kellum grips shall be used to support all vertical cable bundles running between floors.

3.26.7. Cables running to free-floating workstations or floor penetrations will be installed via conduits from the floor below or chopped into the floor. In either case, cables will be installed overhead on individual floors and drop into the conduit stub-ups in an area local to the workstations (unless otherwise specified in the engineering drawings).

3.26.8. All cable bundles must be secured and bundled with plenum velcro straps or plenum wire ties in the ceiling void and other plenum spaces. Use of electrical tape is strictly prohibited.

3.26.9. All cables shall be dressed in a neat matter, observing cable and bend radius limits at each workstation and equipment rack. Cabling at racks must be neatly dressed and wrapped in bundles not greater than 24 cables. Cables must be securely bundled, but may not display insulation/sheath damage or pair distortion from over tightening of the tire-wraps or velcro straps.

3.26.10. Insulation shall be maintained as closely as possible to the point of termination at the jack. Pair twists shall be maintained do within 1/2 inch of the termination point.

3.27. Labeling requirements:

3.27.1. All copper workstation outlets will be labeled using a 2 line label with the following format

a. Line 1 = floor # - room# - device type – location #

b. Line 2 = floor # - room # - rack # - patch panel # - patch panel port #

3.27.2. All fiber cabling will be labeled using a 2 line label with the following format

a. Line 1 = Near side

a.a. floor-room-rack#-panel#-port#-#

b. Line 2 = Far side

b.a. floor-room-rack#-panel#-port#-#

3.27.3. All workstation cables shall terminate in numerical sequence without openings or spare ports on the patch panels. Terminations for tie cabling and wireless access points will be separated from the workstation cabling (e.g., Last panel working reverse order) to allow for future growth on the workstation cabling - as detailed in the pool schedules.

3.27.4. Individual cables shall be labeled (at both ends) with the appropriate cable number and cable identifiers. These labels shall be white wrap-around labels with black lettering with the text printed four times for clear visibility of the cable number.

3.27.5. Patch panel ports will be individually labeled with the corresponding station and cable number.

3.27.6. Faceplate and the patch panel labels shall be installed behind the plastic labeling window provided with each component.

3.27.7. All labels must be computer generated. Handwritten labels are not acceptable and will be replaced at the contractor's expense.

3.27.8. Label font size should be as large as possible given the numbering sequence/format at each device and given the available space within each device.

3.27.9. Colored labels strips must be used at all 110 blocks and patch panels using the following color scheme:

- a. Voice type cabling/riser = white
- b. Data station cabling = blue
- c. Data tie cabling = green

3.27.10. Contractor must receive written approval from the client and/or consulting engineer on the final agreed upon numbering sequence - prior to starting the cable rough-in process.

3.27.11. All equipment racks, cabinets, frames and wall termination fields shall be labeled by means of engraved Lamacoid nameplates showing 1” high white lettering on a black background.

SCOPE OF WORK

Deliverables: - Vendor shall provide the following Deliverables pursuant to this Scope of Work. Floor plans may be found in the Appendix.

- 4.1 Provide & Install (87) General CAT 6E Blue/Red Cable for Quad Workstation Locations on 3rd Floor. Each location will consist of 4 Cables-2 Blue General Part #7131900 and 2 Red General Part #7131904.
- 4.2 Provide & Install (96) General CAT 6E Blue/Red Cable for Quad Workstation Locations on 3rd Floor. Each location will consist of 4 Cables-2 Blue General Part #7131900 and 2 Red General Part #7131904.
- 4.3 Provide & Install (92) General CAT 6E Blue/Red Cable for Quad Workstation Locations on 3rd Floor. Each location will consist of 4 Cables-2 Blue General Part #7131900 and 2 Red General Part #7131904.
- 4.4 Provide & Install (30) General Single CAT 6E Black Cable for Camera Locations. Each location will consist of 1 Cables-1 Black General Part #7131907
- 4.5 Provide & Install (15) General CAT 6E Blue/Red Cable for Quad Conference Room Locations. Each Conference Room will have 3 locations-Two on Conference Table and One behind Room Display-Total of Five Conference Rooms Each location will consist of 4 Cables-2 Blue General Part #7131900 and 2 Red General Part #7131904.
- 4.6 Provide & Install Panduit Data Jacks for each Workstation on 3rd Floor-Qty 174 Panduit Part CJ688TGBU and Qty 174 Panduit Part CJ688TGRD
- 4.7 Provide & Install Panduit Data Jacks for each Workstation on 11th Floor-Qty 192 Panduit Part CJ688TGBU and Qty 192 Panduit Part CJ688TGRD
- 4.8 • Provide & Install Panduit Data Jacks for each Workstation on 12th Floor-Qty 184 Panduit Part CJ688TGBU and Qty 184 Panduit Part CJ688TGRD
- 4.9 Provide & Install Panduit Data Jacks for Conference Room Locations-Total of 5 Conference Rooms-3 locations Per Conference Room-Qty 30 Panduit Part CJ688TGBU and Qty 30 Panduit Part CJ688TGRD
- 4.10 Provide & Install Panduit Blue and Red Data Jacks for Existing HHC Unloaded Panduit Patch Panel on 3rd Floor-Qty 174 Panduit Part CJ688TGBU and Qty 174 Panduit Part CJ688TGRD

- 4.11 Provide & Install Panduit Blue and Red Data Jacks for Existing HHC Unloaded Panduit Patch Panel on 11th Floor-Qty 192 Panduit Part CJ688TGBU and Qty 192 Panduit Part CJ688TGRD
- 4.12 Provide & Install Panduit Blue and Red Data Jacks for Existing HHC Unloaded Panduit Patch Panel on 12th Floor-Qty 184 Panduit Part CJ688TGBU and Qty 184 Panduit Part CJ688TGRD
- 4.13 Provide & Install Panduit Blue and Red Data Jacks for Existing HHC Unloaded Panduit Patch Panel for 5 Conference Rooms-Qty 30 Panduit Part CJ688TGBU and Qty 30 Panduit Part CJ688TGRD
- 4.14 Provide & Install Panduit Black Data Jacks for Existing HHC Unloaded Panduit Patch Panel on 3rd, 11th and 12 Floor-Qty 30 Panduit Part CJ688TGBK.
- 4.15 Provide & Install Panduit Workstation Faceplates for Floors 3, 11 and 12-Qty 290 Panduit CFPE4WH
- 4.16 Provide Labor to Test all new Copper Cables with Level 4 Tester-Provide Test Results to HHC
- 4.17 Provide Labor and Material for Required Cable Pathways on each floor.
- 4.18 Provide 210 Labor Hours for cable demo. Existing Cable shall be removed on Floors 3, 11 and 12 back to existing HHC IT Rack. All Labor is at NYC Prevailing Wage Electrician Rate
- 4.19 Provide and Install (16) Raritan Power Strip-PX3-5749V-V2
- 4.20 Provide and Install (16) Raritan WIFI DPX2-WIFI-KIT
- 4.21 Provide Labor to Install HHC Provided Cisco MX800 Dual Screen Conference Room Display into 5 Conference Rooms. Pricing to include all Testing of Display with HHC IT Department.
- 4.22 Provide and Install (2) Black CAT 6 Shielded Cables From MX800D to Conference Table-For Scaler Use-Total of 5 Conference Rooms
- 4.23 Provide and Install (2) Black CAT 6 Shielded Cables From MX800D to Conference Table-For Control Pad-Total of 5 Conference Rooms
- 4.24 Provide and Install 22gauge/4C Shielded Cable From MX800D to Conference Table-For Microphone Use-Total of 5 Conference Rooms
- 4.25 Provide and Install (2) FSR T6 Cable Cubby with Electric/Data Ports/HDMI/VGA-

Total of 5 Conference Rooms

- 4.26 Provide and Install (2) Atlona HDMI TX/RX Extenders per Conference Room-
Total of 5 Conference Rooms- Total of (10) AT-HDVS-150-TX and (10) AT-
HDVS-150-RX Switcher. Pricing shall include all HDMI/VG and Shielded
Patch Cords for Full integration with MX800D
- 4.27 Provide for HHC Install all CAT 6 Panduit Patch Cords as specified below:
- | | | |
|--------|---------------------------------|----------|
| 4.27.1 | 7 Ft Red Panduit UTP28SP7RD | Qty. 700 |
| 4.27.2 | 12 Ft Red Panduit UTP28SP12RD | Qty. 700 |
| 4.27.3 | 7 Ft Blue Panduit UTP28SP7BU | Qty. 700 |
| 4.27.4 | 12 Ft Blue Panduit UTP28SP12BU | Qty. 700 |
| 4.27.5 | 3 Ft Black Panduit UTP28SP3BK | Qty. 40 |
| 4.27.6 | 7 Ft Black Panduit UTP28SP7BK | Qty. 40 |
| 4.27.7 | 12 Ft Black Panduit UTP28SP12BK | Qty. 20 |
| 4.27.8 | 3 Ft White Panduit UTP28SP3WH | Qty. 100 |
| 4.27.9 | 7 Ft White Panduit UTP28SP7WH | Qty. 100 |
- 4.28 Provide and Install all Hilti Firestop-Qty 20 Hilti 4" Sleeves Part # CP653-4", Qty
20 Hilti 2" Sleeves Part # CP653-2" and Qty 12 Hilti CP618 Putty Sticks
- 4.29 Provide All Project Management to Coordinate with GC and HHC Project Staff.
Pricing includes attending weekly Construction Meetings and dedicated
Project Manager.
- 4.30 Provide all Panduit Labeling for Cables, Faceplates and patch panels following
HHC Labeling Guidelines
- 4.31 Provide all Final As-Builts auto-cad drawings of completed Cable Installs.
- 4.32 All Project Labor pricing based on NYC Prevailing Wage Guidelines-Electrical
Rate
- 4.33 Provide and Install all Ceiling Support for Wiring.
- 4.34 The copper cabling to be supplied and installed by the Vendor shall be General
brand Cables.