

**CITY OF NEWTON
PURCHASING DEPARTMENT**

CONTRACT FOR THE NEWTON PUBLIC SCHOOLS (NPS)

PROJECT MANUAL:

**SUPPLY, DELIVER AND INSTALL NEW IT NETWORK CABLES AND
CONDUIT EMT PIPING TO NEWTON PUBLIC SCHOOLS**

INVITATION FOR BID #22-69

(Rebid 22-52)

Bid Opening Date: April 21, 2022 at 11:00 am

MANDATORY Pre-Bid Meeting Walk Through: April 14, 2022 at 10:00 a.m.

April 2022

Ruthanne Fuller, Mayor

**CITY OF NEWTON
PURCHASING DEPARTMENT
INVITATION FOR BID #22-69**

The City of Newton (City) invites sealed bids in accordance with M.G.L. c.30B¹ from Contractors for:

Supply, Deliver and Install New IT Network Cables and Conduit EMT Piping to NPS

MANDATORY Pre-Bid Meeting: 10:00 a.m., Thursday, April 14, 2022, 687 Watertown Street, Newton

Bids will be received until: 11:00 am, Thursday, April 21, 2022

at the Purchasing Department, Room 108, Newton City Hall, 1000 Commonwealth Avenue, Newton, MA 02459. Bids will not be accepted nor may submitted bids be corrected, modified or withdrawn after the deadline for bids. Following the deadline for bids, all bids received within the time specified will be publicly opened and read aloud.

Contract Documents will be available on line at www.newtonma.gov/bids, or for pickup at Newton City Hall, Room 108, Purchasing Department, 1000 Commonwealth Avenue, Newton Centre, MA 02459 after **10:00 a.m., April 7, 2022**.

There will be no charge for contract documents.

Bid surety is **not** required with this bid.

The City has determined that bids can be more accurately and efficiently evaluated if bidders provide item prices in a separate Excel Attachment A (Bid List For 687 Watertown Street) attached to this Invitation For Bid (IFB). Bidders are to provide prices only in accordance with the terms of the IFB. Any bidder that makes changes to the Item Spreadsheet that modify the terms and conditions of the IFB as issued will be automatically disqualified.

Award will be made to the lowest responsible and responsive bidder based on the **Grand Total for all items inclusive within this Bid Scope**. Bidders are required to bid on every item or may be deemed non-responsive.

This purchase will be funded and delivered in FY22. The dollar value of the contract may not be increased by an amount more than twenty five percent (25%) of the contract total in accordance with M.G.L. c.30B, §13.

All bids are subject to the provisions of M.G.L. c.30B. F.O.B. Destination inside designated department, Newton, MA.

All bids shall be submitted as **one (1) ORIGINAL and one (1) COPY**.

All City bids are available on the City's web site at www.newtonma.gov/bids. It is the sole responsibility of the contractor downloading these bids to ensure they have received any and all addenda prior to the bid opening. Addenda will be available online within the original bid document as well as a separate file.

If you download bids from the internet site and would like to make it known that your company has done so, you may fax the Purchasing Department (617) 796-1227 or email to purchasing@newtonma.gov with your NAME, ADDRESS, PHONE, FAX AND INVITATION FOR BID NUMBER.

The City will reject any and all bids in accordance with the above referenced General Laws. In addition, the City reserves the right to waive minor informalities in any or all bids, or to reject any or all bids (in whole or in part) if it be in the public interest to do so.

¹ This procurement is for the supply and running of cable and conduit piping, and is not a building construction project subject to M.G.L. c. 149.

In the event that any person wishes to attend a bid opening or pre-bid meeting, accessible and reasonable accommodations will be provided to persons requiring assistance. If you need a reasonable accommodation, please contact the city of Newton's ADA Coordinator, Jini Fairley, at least two business days in advance of the meeting: jfairley@newtonma.gov or (617) 796-1253. For Telecommunications Relay Service, please dial 711.

CITY OF NEWTON

A handwritten signature in black ink that reads "Nicholas Read". The signature is written in a cursive style with a large, prominent "N" and "R".

Nicholas Read
Chief Procurement Officer
April 7, 2022

CITY OF NEWTON
DEPARTMENT OF PURCHASING
INSTRUCTIONS TO BIDDERS

ARTICLE 1 - BIDDER'S REPRESENTATION

- 1.1 Each General Bidder (hereinafter called the "Bidder") by making a bid (hereinafter called "bid") represents that the Bidder has read and understands the Bidding Documents, Contract Forms, General Conditions, Conditions of the Contract, General Requirements and Project Specifications (collectively, referred to as the "Contract Documents") and the bid is made in accordance therewith.
- 1.2 Bidders may inspect some or all of the classrooms in which the cables and conduit piping will be installed at the Mandatory Pre-Bid Meeting.
- 1.3 Failure to so examine the Contract Documents or inspect the classrooms will not relieve any Bidder from any obligation under the bid as submitted.

ARTICLE 2 - REQUEST FOR INTERPRETATION

- 2.1 Bidders shall promptly notify the City of any ambiguity, inconsistency, or error which they may discover upon examination of the Contract Documents, the site, and local conditions.
- 2.2 Bidders requiring clarification or interpretation of the Contract Documents shall make a written request to the *Chief Procurement Officer*, at purchasing@newtonma.gov or via facsimile (617) 796-1227. The City will only answer such requests if received **by Friday, April 15, 2022 at 12:00 noon**. In the event that the bid opening date is changed, the deadline for informational requests may also change as provided in an addendum issued by the City.
- 2.3 Interpretation, correction, or change in the Contract Documents will be made by addendum which will become part of the Contract Documents. The City will not be held accountable for any oral communication.
- 2.4 Addenda will be emailed to every individual or firm on record as having taken a set of Contract Documents. Addenda will be emailed to every individual or firm on record as having taken a set of Contract Documents. Receipt of all addenda issued must be acknowledged in the Bid Form. **YOUR FAILURE TO ACKNOWLEDGE ALL ADDENDA MAY RESULT IN YOUR BID BEING REJECTED AS NON-RESPONSIVE.**
- 2.5 Copies of addenda will be made available for inspection at the location listed in the Invitation for Bids (IFB) where Contract Documents are on file, in addition to being available online at www.newtonma.gov/bids.
- 2.6 Bidders or proposers contacting ANY CITY EMPLOYEE regarding an IFB or a Request for Proposal (RFP), outside of the Purchasing Department, once an IFB or RFP has been released, may be disqualified from the procurement process.
- 2.7 Bidders downloading information off the internet web site are solely responsible for obtaining any addenda prior to the bid opening. If the bidder makes itself known to the Purchasing Department, at purchasing@newtonma.gov or via facsimile (617) 796-1227, it shall be placed on the bidder's list. Bidders must provide the Purchasing Department with their company's name, street address, city, state, zip, phone, fax, email address and **INVITATION FOR BID #22-69**.

ARTICLE 3 - MBE PARTICIPATION

- 3.1 Notice is hereby given that the Mayor's Affirmative Action Plan for the City of Newton in effect at the time of this solicitation is applicable to all construction contracts in excess of \$10,000.00.
- 3.2 Notice is hereby given that the City of Newton Minority/Women Business Enterprise Plan and the Supplemental Equal Employment Opportunity Anti-Discrimination and Affirmative Action Program in effect at the time of this solicitation are applicable to all City contracts for goods and services in excess of \$50,000.00.
- 3.3 Copies of the Plans and Program referred to in Sections 3.1 and 3.2 are available at: www.newtonma.gov/purchasing.

ARTICLE 4 - PREPARATION AND SUBMISSION OF BIDS

- 4.1 Bids shall be submitted on the "Bid Form #22-69 and on Attachment A, Bid List For 687 Watertown Street, attached.
- 4.2 All entries on the Bid Form shall be made by typewriter or in ink; all entries on the Item Spreadsheet shall be made in Excel. Please ensure that you use the Item Spreadsheet file provided to submit your bid pricing. Enter your unit prices and product information on the Item Spreadsheet and once completed submit the paper copy with your bid. After the bid opening date an electronic file will be requested prior to the bid award. Any changes to the Item Spreadsheet other than information related to your bid response may result in your disqualification.
- 4.3 Where so indicated on the Bid Form, sums shall be expressed in both words and figures. Where there is a discrepancy between the bid sum expressed in words and the bid sum expressed in figures, the words shall control.
- 4.4 The Bid, including the bid deposit shall be enclosed in a sealed envelope with the following plainly marked on the outside:
- * GENERAL BID FOR: **#22-69**
 - * NAME OF PROJECT: **Supply, Deliver & Install New IT Network Cables and Conduit EMT Piping to NPS**
 - * BIDDER'S NAME, BUSINESS ADDRESS, AND PHONE NUMBER
- 4.5 Date and time for receipt of bids is set forth in the Invitation for Bids.
- 4.6 Timely delivery of a bid at the location designated shall be the full responsibility of the Bidder. In the event that Newton City Hall is closed on the date or at the time that bids are due, the date and time for receipt of bids shall be on the next business day following that the Newton City Hall and the Purchasing Department are open.
- 4.7 Bids shall be submitted with **one (1) original and one (1) copy**.
- 4.8 Massachusetts law requires all employees who work on Massachusetts public works construction sites must have no Less than 10 hours of OSHA-approved safety and health training. See M.G.L. c.30, §39M(c), M.G.L. c.30, §39S(a)(1), M.G.L. c.149, §44E(2) & M.G.L. c.149, §44F(2).
1. This requirement will apply to any general bid or sub bid submitted.
 2. This law directs the Massachusetts Attorney General to restrain the award of construction contracts to any contractor who is in violation to this requirement and to restrain the performance of these contracts by non-complying contractors.
 3. The contractor and all subcontractors on this project must certify on the Bid Form compliance with the applicable requirement. Non-compliance with this law will disqualify the bidder.

ARTICLE 5 - ALTERNATES

- 5.1 Each Bidder shall acknowledge alternates (if any) in Section C on the Bid Form.
- 5.2 In the event an alternate does not involve a change in the amount of the base bid, the Bidder shall so indicated by writing "No Change", or "N/C" or "0" in the space provided for that alternate.
- 5.3 Bidders shall enter on the Bid Form a single amount for each alternate which shall consist of the amount for work performed by the Contractor.
- 5.4 The low Bidder will be determined on the basis of the sum of the base bid and the accepted alternates.

ARTICLE 6 - WITHDRAWAL OF BIDS

- 6.1 Any bid may be withdrawn prior to the time designated for receipt of bids on written or electronic request. Electronic withdrawal of bids must be confirmed over the Bidder's signature by written notice postmarked on or before the date and time set for receipt of bids.
- 6.2 Withdrawn bids may be resubmitted up to the time designated for the receipt of bids.

- 6.3 No bids may be withdrawn within sixty (60) days, Saturdays, Sundays and legal holidays excluded, after the opening of the bids.

ARTICLE 7 - CONTRACT AWARD

- 7.1 The City is soliciting prices for the supply and installation of CAT 6 cable at the locations set forth in Attachment A. For each location, the bidder shall provide a Unit Cost and a Total Cost. Each bidder's bid amount in Bid Form #22-69 shall be the Grand Total from the Attachment A. It is the City's intent to award a one (1) contract to the responsive and responsible bidder offering the lowest Grand Total. A contract will be awarded within sixty (60) days, Saturdays, Sundays, and legal holidays excluded, after the opening of bids.
- 7.2 The City reserves the right to waive minor informalities in or to reject any or all Bids if it be in the public interest to do so.
- 7.3 The City reserves the right to reject any bidder who has failed to pay any local taxes, fees, assessments, betterments, or any other municipal charge, unless the bidder has a pending abatement application or has entered into a payment agreement with the collector-treasurer.
- 7.4 As used herein, the term "lowest responsible and responsive Bidder" shall mean the Bidder (1) whose bid is the lowest of those bidders possessing the skill, ability and integrity necessary for the faithful performance of the work; (2) who has met all the requirements of the invitation for bids; (3) who shall certify that he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed in the work; (4) who, where the provisions of section eight B of chapter twenty-nine apply, shall have been determined to be qualified thereunder.
- 7.5 Subsequent to the award and within five (5) days, Saturday, Sundays and legal holidays excluded, after the prescribed forms are presented for signature, the successful Bidder shall execute and deliver to the City a contract in the form included in the Contract Documents in such number of counterparts as the City may require.
- 7.6 In the event that the City receives low bids in identical amount from two or more responsive and responsible Bidders, the City shall select the successful Bidder by a blind selection process chosen by the City such as flipping a coin or drawing names from a hat. The low Bidders who are under consideration will be invited to attend and observe the selection process.

ARTICLE 8 - TAXES

- 8.1 The Bidder shall not include in this bid any tax imposed upon the sale or rental of tangible personal property in this Commonwealth, such as any and all building materials, supplies, services and equipment required to complete the work.
- 8.2 The City is exempt from payment of the Massachusetts Sales Tax, and the Bidder shall not include any sales tax on its bid. The City's exemption Number is E-046-001-404.

ARTICLE 9 – PROPRIETARY SPECIFICATIONS

- 9.1 The City has used a proprietary specification to describe the supply for which is soliciting bids. Such specifications are permitted under M.G.L. c. 30B, §14, provided that the Chief Procurement Officer has prepared a written statement that no other manner of description suffices and the justification therefore.
- 9.2 The required determination and justification have been duly prepared, and a copy may be requested in accordance with the Massachusetts Public Records Law, M.G.L. c. 66, §10.

END OF SECTION

CITY OF NEWTON

DEPARTMENT OF PURCHASING

BID FORM #22-69

A. The undersigned proposes to furnish all labor, materials, tools, equipment, transportation and supervision required to perform all work in accordance with the Project Manual prepared by the City entitled:

Supply, Deliver & Install New IT Network Cables and Conduit EMT Piping to NPS

B. This bid includes addenda number(s) _____, _____, _____, _____.

C. The contract price shall be the Grand Total on Attachment A Bid List For 687 Watertown Street:

_____ (\$_____)

D. .

Supply, Deliver & Install New IT Network Cables and Conduit EMT Piping to NPS

SEE ATTACHMENT A, EXCEL BID LIST FOR 687 WATERTOWN STREET FOR PRICING BY LINE ITEM

***If an approved equal alternate item is being proposed, the bidder shall so indicate by providing a full description of the proposed substitute as well as provide data sheets, catalog cuts, performance and test data, and any other information which will support or otherwise prove equality; such proof rests entirely with the bidder. If the alternate product information (listed above) is not provided at the time of the bid the bidder may be deemed non-responsive.**

COMPANY NAME _____

D. Prompt Payment Discounts. Bidders are encouraged to offer discounts in exchange for an expedited payment. Payments may be issued earlier than the general goal of within 30 days of receipt of the invoice only when in exchange for discounted prices. Discounts will not be considered in determining the lowest responsible bidder.

Prompt Payment Discount _____% _____ Days
Prompt Payment Discount _____% _____ Days
Prompt Payment Discount _____% _____ Days

E. The undersigned has completed and submits herewith the following documents:

- Signed Bid Form, 2 pages
- Bidder’s Qualifications and References Form, 2 pages
- Certificate of Non-Collusion, 1 page
- Certification of Tax Compliance, 1 page
- Certificate of Foreign Corporation (if applicable), 1 page
- Debarment Letter, 1 page
- IRS Form W-9, 1 page
- Business Category Information Form, 1 page
- ATTACHMENT A: EXCEL File Bid List For 687 Watertown Street

F. The undersigned agrees that, if selected as general contractor, s/he will within five days (Saturdays, Sundays and legal holidays excluded) after presentation thereof by the City, execute a contract in accordance with the terms of this bid.

The undersigned hereby certifies that it will comply fully with all laws and regulations applicable to awards made subject to M.G.L. c.30B.

The undersigned further certifies under the penalties of perjury that this bid has been made and submitted in good faith and without collusion or fraud with any other person. As used in this section the word "person" shall mean any natural person, business, partnership, corporation, union, committee, club or other organization, entity, or group of individuals. The undersigned further certifies under penalty of perjury that the said undersigned is not presently debarred from public contracting or subcontracting in the Commonwealth under the provisions of M.G.L. c.29, §29F or any other applicable debarment provisions of any other chapter of the General Laws or any rule or regulation promulgated thereunder.

G. Environmentally preferable products information (which is requested but which will not be considered in awarding a contract):

Description of environmental attributes of Bidder's goods or services:

Steps taken to (a) identify any positive or negative environmental attributes of products or services and (b) ensure that those attributes are being addressed as part of operations:

Date _____

_____ (Name of General Bidder)

BY: _____

_____ (Printed Name and Title of Signatory)

_____ (Business Address)

_____ (City, State, Zip)

_____/_____ (Telephone) (FAX)

_____ (E-mail Address)

NOTE: If the bidder is a corporation, indicate state of incorporation under signature, and affix corporate seal; if a partnership, give full names and residential addresses of all partners; if an individual, give residential address if different from business address; and, if operating as a d/b/a give full legal identity. Attach additional pages as necessary.

CITY OF NEWTON

BIDDER'S QUALIFICATIONS AND REFERENCES FORM

All questions must be answered, and the data given must be clear and comprehensive. Please type or print legibly. If necessary, add additional sheet for starred items. This information will be utilized by the City for purposes of determining bidder responsiveness and responsibility with regard to the requirements and specifications of the Contract.

- 1. FIRM NAME: _____
- 2. WHEN ORGANIZED: _____
- 3. INCORPORATED? _____ YES _____ NO DATE AND STATE OF INCORPORATION: _____
- 4. IS YOUR BUSINESS A **MBE**? _____ YES _____ NO **WBE**? _____ YES _____ NO or **MWBE**? _____ YES _____ NO
- * 5. LIST ALL CONTRACTS CURRENTLY ON HAND, SHOWING CONTRACT AMOUNT AND ANTICIPATED DATE OF COMPLETION:

- * 6. HAVE YOU EVER FAILED TO COMPLETE A CONTRACT AWARDED TO YOU?
_____ YES _____ NO
IF YES, WHERE AND WHY?

- * 7. HAVE YOU EVER DEFAULTED ON A CONTRACT? _____ YES _____ NO
IF YES, PROVIDE DETAILS.

- * 8. LIST YOUR VEHICLES/EQUIPMENT AVAILABLE FOR THIS CONTRACT:

- * 9. IN THE SPACES FOLLOWING, PROVIDE INFORMATION REGARDING CONTRACTS COMPLETED BY YOUR FIRM SIMILAR IN NATURE TO THE PROJECT BEING BID. A MINIMUM OF FOUR (4) CONTRACTS SHALL BE LISTED. PUBLICLY BID CONTRACTS ARE PREFERRED, BUT NOT MANDATORY.

PROJECT NAME: _____
OWNER: _____
CITY/STATE: _____
DOLLAR AMOUNT: \$ _____ DATE COMPLETED: _____

PUBLICLY BID? _____ YES _____ NO
TYPE OF WORK?: _____
CONTACT PERSON: _____ TELEPHONE #: (____) _____
CONTACT PERSON'S RELATION TO PROJECT?: _____
(i.e., contract manager, purchasing agent, etc.)

PROJECT NAME: _____
OWNER: _____
CITY/STATE: _____
DOLLAR AMOUNT: \$ _____ DATE COMPLETED: _____
PUBLICLY BID? _____ YES _____ NO
TYPE OF WORK?: _____
CONTACT PERSON: _____ TELEPHONE #: (____) _____
CONTACT PERSON'S RELATION TO PROJECT?: _____
(i.e., contract manager, purchasing agent, etc.)

PROJECT NAME: _____
OWNER: _____
CITY/STATE: _____
DOLLAR AMOUNT: \$ _____ DATE COMPLETED: _____
PUBLICLY BID? _____ YES _____ NO
TYPE OF WORK?: _____
CONTACT PERSON: _____ TELEPHONE #: (____) _____
CONTACT PERSON'S RELATION TO PROJECT?: _____
(i.e., contract manager, purchasing agent, etc.)

PROJECT NAME: _____
OWNER: _____
CITY/STATE: _____
DOLLAR AMOUNT: \$ _____ DATE COMPLETED: _____
PUBLICLY BID? _____ YES _____ NO
TYPE OF WORK?: _____
CONTACT PERSON: _____ TELEPHONE #: (____) _____
CONTACT PERSON'S RELATION TO PROJECT?: _____
(i.e., contract manager, purchasing agent, etc.)

10. The undersigned certifies that the information contained herein is complete and accurate and hereby authorizes and requests any person, firm, or corporation to furnish any information requested by the City in verification of the recitals comprising this statement of Bidder's qualifications and experience.

DATE: _____ BIDDER: _____
SIGNATURE: _____
PRINTED NAME: _____ TITLE: _____

END OF SECTION

CERTIFICATE OF NON-COLLUSION

The undersigned certifies under penalties of perjury that this bid or proposal has been made and submitted in good faith and submitted in good faith and without collusion or fraud with any other person. As used in this certification, the word "person" shall mean any natural person, business, partnership, corporation, union, committee club, or other organization, entity, or group or individuals.

(Signature of individual)

Name of Business

CERTIFICATION OF TAX COMPLIANCE

Pursuant to M.G.L. c.62C, §49A and requirements of the City, the undersigned acting on behalf of the Contractor certifies under the penalties of perjury that the Contractor is in compliance with all laws of the Commonwealth relating to taxes including payment of all local taxes, fees, assessments, betterments and any other local or municipal charges (unless the Contractor has a pending abatement application or has entered into a payment agreement with the entity to which such charges were owed), reporting of employees and contractors, and withholding and remitting child support.*

**Signature of Individual (Mandatory)

*** Contractor's Social Security Number
(Voluntary) or Federal Identification Number

Print Name: _____

Date: _____

OR

Company Name
(Corporation, Partnership, LLC, etc.)

By: _____
**Corporate Officer (Mandatory)

Print Name: _____

Date: _____

- * The provision in this Certification relating to child support applies only when the Contractor is an individual.
- ** Approval of a contract or other agreement will not be granted until the City receives a signed copy of this Certification.
- *** Your social security number may be furnished to the Massachusetts Department of Revenue to determine whether you have met tax filing or tax payment obligations. Providers who fail to correct their non-filing or delinquency will not have a contract or other agreement issued, renewed, or extended.

CERTIFICATE OF FOREIGN CORPORATION

The undersigned hereby certifies that it has been duly established, organized, or chartered as a corporation under the laws of:

(Jurisdiction)

The undersigned further certifies that it has complied with the requirements of M.G.L. c. 30, §39L (if applicable) and with the requirements of M.G.L. c. 156D, §15.03 relative to the registration and operation of foreign corporations within the Commonwealth of Massachusetts.


Name of person signing proposal

Signature of person signing proposal

Name of Business (Please Print or Type)

Affix Corporate Seal here

City of Newton

Purchasing Department
Nicholas Read  Chief Procurement Officer
1000 Commonwealth Avenue
Newton Centre, MA 02459-1449
purchasing@newtonma.gov

Telephone
(617) 796-1220
Fax:
(617) 796-1227
TDD/TTY
(617) 796-1089

Mayor
Ruthanne Fuller

Date

Vendor

Re: Debarment Letter for Invitation For Bid #22-69

As a potential vendor on the above contract, the City requires that you provide a debarment/suspension certification indicating that you are in compliance with the below Federal Executive Order. Certification can be done by completing and signing this form.

Debarment:

Federal Executive Order (E.O.) 12549 “Debarment and Suspension“ requires that all contractors receiving individual awards, using federal funds, and all sub-recipients certify that the organization and its principals are not debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded by any Federal department or agency from doing business with the Federal Government.

I hereby certify under pains and penalties of perjury that neither I nor any principal(s) of the Company identified below is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department or agency.

(Name)

(Company)

(Address)

(Address)

PHONE _____ FAX _____

EMAIL _____

Signature

Date

If you have questions, please contact Nicholas Read, Chief Procurement Officer at (617) 796-1220.

Request for Taxpayer Identification Number and Certification

Give form to the requester. Do not send to the IRS.

Print or type
See Specific Instructions on page 2.

Name (as shown on your income tax return) _____

Business name, if different from above _____

Check appropriate box: Individual/Sole proprietor Corporation Partnership
 Limited liability company. Enter the tax classification (D=disregarded entity, C=corporation, P=partnership) ▶ _____ Exempt payee
 Other (see instructions) ▶ _____

Address (number, street, and _____)
 City, state, and ZIP code _____

List account number(s) here (optional) _____

Requester's name and address (optional) _____

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on Line 1 to avoid backup withholding. For individuals, this is your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the Part I instructions on page 3. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN* on page 3.

Social security number
or

Note. If the account is in more than one name, see the chart on page 4 for guidelines on whose number to enter.

Part II Certification

Under penalties of perjury, I certify that:

- The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me), and
- I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding, and
- I am a U.S. citizen or other U.S. person (defined below).

Certification Instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the Certification, but you must provide your correct TIN. See the instructions on page 4.

Sign Here	Signature of U.S. person ▶ _____	Name _____
	Date ▶ _____	

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Purpose of Form

A person who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) to report, for example, income paid to you, real estate transactions, mortgage interest you paid, acquisition or abandonment of secured property, cancellation of debt, or contributions you made to an IRA.

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN to the person requesting it (the requester) and, when applicable, to:

- Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),
- Certify that you are not subject to backup withholding, or
- Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income.

Note. If a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.

Definition of a U.S. person. For federal tax purposes, you are considered a U.S. person if you are:

- An individual who is a U.S. citizen or U.S. resident alien,
- A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States,
- An estate (other than a foreign estate), or
- A domestic trust (as defined in Regulations section 301.7701-7).

Special rules for partnerships. Partnerships that conduct a trade or business in the United States are generally required to pay a withholding tax on any foreign partners' share of income from such business. Further, in certain cases where a Form W-9 has not been received, a partnership is required to presume that a partner is a foreign person, and pay the withholding tax. Therefore, if you are a U.S. person that is a partner in a partnership conducting a trade or business in the United States, provide Form W-9 to the partnership to establish your U.S. status and avoid withholding on your share of partnership income.

The person who gives Form W-9 to the partnership for purposes of establishing its U.S. status and avoiding withholding on its allocable share of net income from the partnership conducting a trade or business in the United States is in the following cases:

- The U.S. owner of a disregarded entity and not the entity,

Business Category Information Form*

IFB No. 22-69

Supply, Deliver & Install New IT Network Cables and Conduit EMT Piping to NPS

Business Type Categories*	Select All That Apply
MBE: Minority-Owned Business Enterprise	
WBE: Women-Owned Business Enterprise	
VBE: Veteran Business Enterprise	
SDVOBE: Service-Disabled Veteran-Owned Business Enterprises	
DOBE: Disability-Owned Business Enterprise	
LGBTBE: Lesbian, Gay, Bisexual, Transgender Business Enterprise	

*Information is being collected as part of a City initiative to open contract opportunities to underrepresented vendors.

I do not wish to complete this form.

There is no penalty for persons who do not complete this Form, and whether or not the Form is completed will not be taken into consideration in awarding a bid.

I certify that the foregoing information is true and correct.

By: _____

Date:

**CITY OF NEWTON, MASSACHUSETTS
PURCHASING DEPARTMENT
GENERAL TERMS AND CONDITIONS**

1. The right is reserved to reject any and all bids, to waive minor informalities, and to make award as may be determined to be in the best interest of the City of Newton.
2. Prices quoted must include delivery to the City, as specified on the Purchase Order.
3. No charges will be allowed for packing, crating, freight, Express or cartage unless specifically stated and included in the bid.
4. The award to the successful bidder may be canceled if the successful bidder fails to prosecute the work with promptness and diligence.
5. Time in connection with discount offered will be computed from the date of delivery to the City, as specified on Work Order, or from date correct invoice is received by the City, if the latter date is later than the date of delivery.
6. The successful bidder shall replace, repair or make good, without cost to the City, any defects or faults arising within one (1) year after date of acceptance of articles furnished hereunder (acceptance not to be unreasonably delayed) resulting from imperfect or defective work done or materials furnished by the Seller.
7. The Contractor shall indemnify and save harmless the City and all persons acting for on behalf of it from all suits and claims against them, or any of them, arising from or occasioned by the use of any material, equipment or apparatus, or any part thereof, which infringes or is alleged to infringe on any patent rights. In case such material, equipment or apparatus, or any part thereof, in any such suit is held to constitute infringement, the Contractor, within a reasonable time, will at its expense, and as the City may elect, replace such material, equipment or apparatus with non-infringing material, equipment or apparatus, or remove the material, equipment or apparatus, and refund the sums paid therefore.
8. The successful bidder shall comply with all applicable Federal State and Local laws and regulations.
9. Purchases made by the City are exempt from Federal excise taxes and bid prices must exclude any such taxes. Tax exemption certificates will be furnished upon request.
10. If so stated in the Invitation For Bid the successful bidder will be required to furnish a performance and/or a labor and material payment bond, in an amount, in a form and with a surety satisfactory to the City. The bidder shall be responsible for the cost of the bond(s).
11. If the Invitation for Bids requires bid surety, this surety shall be in the form of a cash, bid bond, cashier's check, treasurer's check, or certified check on a responsible bank, payable to the City of Newton, and must be filed with the original bid in the Office of the Purchasing Agent. Failure to do so will lead to rejection of the bid. The bid surety will be returned to the successful bidder within seven (7) days execution of awarded, and approval by the City of performance and/or payment bond(s). The bid surety covers the City for damages when a bidder withdraws its bid after the bid submission date. Be advised that to the extent permitted by the law, the City will retain all bid deposits for withdrawn bids.
12. Verbal orders are not binding on the City and deliveries made or work done without formal Work Order or Contract are at the risk of the Contractor and may result in an unenforceable claim.
13. The Contractor shall agree to indemnify, defend and hold the City harmless from any and all claims arising out of the performance of this contract.
14. "Equal" - An item equal to that named or described in the specifications of the contract may be furnished by the Contractor and the naming of any commercial name, trademark or other identification shall not be construed to exclude any item or manufacturer not mentioned by name or as limiting competition but shall establish a standard of equality only. An item shall be considered equal to the item so named or described if (1) it is at least equal in quality, durability, appearance, strength and design; (2) it will perform at least equally the function imposed by the general design for the work being contracted for or the material being purchased; and (3) it conforms substantially, even with deviations, to the detailed requirements for the item in the specifications. The name and identification of all materials other than the one specifically named shall be submitted to the City
15. in writing for approval, prior to purchase, use or fabrication of such items. Subject to the provisions of M.G.L., Ch. 30, Sec. 39J, approval shall be at the sole discretion of the City, shall be in writing to be effective, and the decision of the City shall be final.

The City may require tests of all materials so submitted to establish quality standards at the Contractor's expense. All directions, specifications and recommendations by manufacturers for installation, handling, storing, adjustment and operation of their equipment shall be complied with; responsibility for proper performance shall continue to rest with the Contractor.

For the use of material other than the one specified, the Contractor shall assume the cost of and responsibility for satisfactorily accomplishing all changes in the work as shown. If no manufacturer is named, the Contractor shall submit the product he intends to use for approval of the City.

Except as otherwise provided for by the provisions of M.G.L., Ch. 30, Sec. 39J, the Contractor shall not have any right of appeal from the decision of the City condemning any materials furnished if the Contractor fails to obtain the approval for substitution under this clause. If any substitution is more costly, the Contractor shall pay for such costs."

16. Notice is hereby given that the City of Newton Minority/Women Business Enterprise Plan dated December 1999 is applicable to all City of Newton contracts for materials and supplies. A copy of this plan may be obtained from the Purchasing Department.

17. Right To Know:

Any Contractor who receives an order or orders resulting from this invitation agrees to submit a Material Safety Data Sheet (MSDS) for each toxic or hazardous substance or mixture containing such substance, pursuant to M.G.L., Ch. 111F, SS8, 9 and 10 and the regulations contained in 441 CMR SS 21.06 when deliveries are made. The Contractor agrees to deliver all containers properly labeled pursuant to M.G.L. Ch. 111F, SS 7 and the regulations contained in 441 CMR SS 21.05. Failure to submit an MSDS and/or label on each container will place the Contractor in noncompliance with the work order. Failure to furnish MSDSs and/or labels on each container may result in civil or criminal penalties, including bid debarment and action to prevent the Contractor from selling said substances or mixtures containing said substances within the Commonwealth. All Contractors furnishing substances or mixtures subject to Chapter 111F of the M.G.L. are cautioned to obtain and read the law and rules and regulations referred to above. Copies can be obtained from the State House Book Store, Secretary of State, State House, Room 117, Boston, MA 02133, (617-727-2834) for \$2.00 plus \$.65 postage.

17. INSURANCE REQUIREMENTS

The Contractor shall provide insurance coverage as listed below. This insurance shall be provided at the Contractor's expense and shall be in full force and effect during the full term of this Contract.

WORKER'S COMPENSATION

Worker's Compensation: Per M.G.L. c.149, §34 and c. 152 as amended.

COMMERCIAL GENERAL LIABILITY

Personal Injury \$500,000 each occurrence
\$1,000,000 aggregate
Property Damage \$500,000 each occurrence
\$1,000,000 aggregate

VEHICLE LIABILITY

Personal Injury \$500,000 each person
\$1,000,000 aggregate
Property Damage \$300,000 each occurrence
\$500,000 aggregate

The City shall be named as additional insureds on the Contractor's Liability Policies.

The Contractor shall not commence the work until proof of compliance with this has been furnished to the City by submitting one copy of a properly endorsed insurance certificate issued by a company authorized to write insurance in the Commonwealth. This certificate shall indicate that the contractual liability coverage is in force. The Contractor shall file the original and one certified copy of all policies with the City within ten (10) days after contract award. If the City is damaged by the Contractor's failure to maintain such insurance and to so notify the City, then the Contractor shall be responsible for all reasonable costs attributable thereto.

Cancellation of any insurance required by this contract, whether by the insurer or the insured, shall not be valid unless written notice thereof is given by the party proposing cancellation to the other party and City at least thirty days prior to the effective date thereof, which shall be expressed in said notice.

**FAILURE TO COMPLY WITH THESE TERMS AND CONDITIONS COULD
RESULT IN THE CANCELLATION OF YOUR CONTRACT**

SCOPE OF SERVICES

NEWTON PUBLIC SCHOOLS

Supply, Deliver & Install New IT Network Cables and Conduit EMT Piping to NPS

1.0 Scope

Newton Public Schools “NPS” is accepting bids to supply, deliver and install new IT network CAT 6 and CAT 6a cables and conduit EMT piping, J hooks (as needed), 4” sleeves in between floors and closets, ¾” EMT piping to single and double gang boxes to all data. WAP, camera and VOIP locations at 687 Watertown Street as per ATTACHMENT A EXCEL Item Sheet attached. All bids must be submitted in the manner and form prescribed by the Specifications which control award of the contract. Award will be made to the lowest responsible and responsive bidder based on the **Grand Total for all items inclusive within this Bid Scope.** Bidders are required to bid on every item or may be deemed non-responsive. **This purchase will be funded in FY22.** Funding is contingent on the NPS and City of Newton budgets.

- 1.1 Quantities specified are based on a census taken by NPS. NPS reserves the right to increase or decrease quantities to be ordered within the time limits set forth in the bid, but any increase shall be in accordance with M.G.L. c. 30B, §13 and no increase shall exceed twenty five percent (25%) of the total contract price. Regardless of the quantity of any item purchased by the City hereunder, the unit price for that item shall be the price set forth in the ATTACHMENT A Excel Bidder’s Item Sheets.
- 1.2 In an effort to purchase the quality of product necessary, samples may be required of all bid items unless bidding on the exact product referenced within the bid item description.
- 1.3 All prices shall be F.O.B. Destination inside our 687 Watertown Street Newtonville, MA 02460 school building.
- 1.4 A Mandatory Pre-Bid Meeting has been scheduled for bidders to inspect the installation sites.
- 1.5 **IMPORTANT: Floor plans have been included to provide additional information to bidders. Contrary to the floor plans indicating that external electricians will install conduit piping it will be the awarded vendor’s responsibility to supply and install all conduit EMT piping as part of this bid**

2.0 Description and Quality

- 2.1 Wherever items are specified by trade name, manufacturer, or dealer's catalog number, or by any other reference, it shall be taken to mean the items as this described or any other item equal thereto in quality, finish, durability, compatibility, safety and serviceability for the purpose for which it is intended. If an alternate item is being proposed, the bidder shall so indicate by providing a full description of the proposed substitute as well as provide data sheets, catalog cuts, performance and test data, and any other information which will support or otherwise prove equality: such proof rests entirely with the bidder. When the bidder does not state the brand, it is understood that the offer is exactly as specified. Final decisions concerning the quality of items, other than those specifically designated, is to rest with the Newton Public Schools whose determination shall be final and conclusive. Vendors shall guarantee quality control of all goods at no additional cost to the City. Samples shall be furnished free-of-charge upon request and may be retained for future comparisons. Samples and literature must be provided within three (3) days after the request.
- 2.2 The City encourages environmentally preferable products, i.e., products or services that have a lesser or reduced effect on human health and the environment when compared with competing products or services that serve the same purpose. This comparison may consider raw materials acquisition, production, manufacturing, packaging, distribution, reuse, operation, maintenance or disposal of the product or service: 1) emphasis on multiple environmental considerations such as recycled content, energy and water efficiency, renewable resource use and toxicity considerations rather than any single environmental feature; 2) evaluation of environmental impacts throughout the life cycle of the product which includes impacts during the manufacture, use and disposal of the product; and 3) recognition of cost and performance remain critical factors in all purchasing decisions. All products must be latex free and nut free.
- 2.3 Material Safety Data Sheets must be forwarded to the Purchasing Department, Newton Public Schools, 100 Walnut Street, Newtonville, MA 02460 within thirty (30) days after the bid award. All products must be properly labeled with the product name, manufacturer’s name, address and emergency telephone number, ingredients, cautions, warnings, hazard rating and first aid.

3.0 Delivery

- 3.1 All packages, cartons, or other containers must be clearly marked with a) the school designation, b) a packing slip with contents or item number from specifications, c) the number of boxes on shipment, d) the purchase order number and e) the vendor's name and order number.
- 3.2 Inside deliveries will be made to our 687 Watertown Street Newtonville, MA 02460 school building as per the bid specifications. All deliveries shall be made to the inside of the building and contractors are cautioned to notify their shipping contractors that adequate assistance must be provided at the point of delivery. No sidewalk deliveries will be accepted.
- 3.3 Deliveries shall be made between the hours of 8:00 a.m. and 3:00 p.m., Monday through Friday. Forty-eight (48) hours' notice of delivery is required by contacting the IT Department at 617-559-6190. Newton Public Schools shall not be responsible for deliveries that cannot be made because notice was not received in time.
- 3.4 Deliveries are to be completed within thirty (30) calendar days after receipt of the order unless otherwise indicated or notified by the Contractor and approved in writing by the Coordinator of Purchasing, Newton Public Schools.

4.0 Payment

- 4.1 Invoices shall be billed to Accounts Payable, Newton Public Schools, 100 Walnut Street, Newtonville, Massachusetts 02460.
- 4.2 Invoices must be in duplicate, by department, including the a) purchase order number, b) department name, c) item number, d) quantities, e) description, f) unit price and g) totals.

END OF SECTION

FY22 NEW IT NETWORK CABLES AND CONDUIT EMT PIPING BID ITEM SHEET:

Equipment quantities are estimates only based on the City's best estimates. The City makes no guarantees as to items actually procured. Regardless of the amount of the actual quantities, the unit price(s) shall be that set forth in the Item Sheet. Bid prices shall include inside delivery as indicated within the scope of this bid. *If bidding an approved equal all items must be compatible with our existing network.*

This purchase will be funded in FY22. Funding is contingent on the NPS and City of Newton budgets.

See the following Attachments:

ATTACHMENT A, EXCEL File Bid Item Sheets For 687 Watertown Street

ATTACHMENT B, 687 Watertown Street Floor Plans

IMPORTANT: Floor plans have been included to provide additional information to bidders. Contrary to the floor plans indicating that external electricians will install conduit piping it will be the awarded vendor's responsibility to supply and install all conduit EMT piping as part of this bid

All bid items will all be delivered to one location at NPS 687 Watertown Street Newton, MA .

END OF SECTION

ATTACHMENT #A

FY22 NEW IT NETWORK CAT 6 AND 6a CABLES AND CONDUIT EMT BID LIST FOR 687 WATERTOWN STREET

Please enter unit costs for all line items and verify that grand total is accurate

LOWER LEVEL

Room#	Description	UNIT COST
009A	INSTALL DUAL CAT 6 LOCATION	\$0.00
009	INSTALL CAT 6A LOCATION FOR WAP	\$0.00
009	INSTALL DUAL CAT 6 LOCATION	\$0.00
009	INSTALL CAT 6 LOCATION FOR VOIP	\$0.00
009	INSTALL CAT 6 LOCATION FOR SPEAKER	\$0.00
007A	INSTALL CAT 6A LOCATION FOR WAP	\$0.00
007A	INSTALL DUAL CAT 6 LOCATION	\$0.00
007A	INSTALL CAT 6 LOCATION FOR VOIP	\$0.00
007A	INSTALL CAT 6 LOCATION FOR SPEAKER	\$0.00
007A	INSTALL CAT 6 LOCATION FOR TVE	\$0.00
007B	INSTALL CAT 6A LOCATION FOR WAP	\$0.00
007B	INSTALL DUAL CAT 6 LOCATION	\$0.00
007B	INSTALL CAT 6 LOCATION FOR VOIP	\$0.00
007B	INSTALL CAT 6 LOCATION FOR SPEAKER	\$0.00
HALLWAY	INSTALL CAT6 LOCATION FOR CAMERA	\$0.00
HALLWAY	INSTALL CAT 6 LOCATIONS FOR SPEAKERS	\$0.00
013	INSTALL CAT 6A LOCATION FOR WAP	\$0.00
013	INSTALL CAT 6 LOCATION FOR VOIP	\$0.00
013	INSTALL CAT 6 LOCATION FOR SPEAKER	\$0.00
003E	INSTALL CAT 6 LOCATION FOR VOIP	\$0.00
003D	INSTALL DUAL CAT 6 LOCATION	\$0.00
003C	INSTALL CAT 6A LOCATION FOR WAP	\$0.00
003C	INSTALL CAT 6 LOCATION FOR TVE	\$0.00
003C	INSTALL 6 PORT CAT 6 LOCATIONS	\$0.00
003C	INSTALL DUAL CAT 6 LOCATIONS	\$0.00
003B	INSTALL DUAL CAT 6 LOCATION	\$0.00
003B	INSTALL CAT 6 LOCATION FOR SPEAKER	\$0.00
003A	INSTALL DUAL CAT 6 LOCATION	\$0.00
003A	INSTALL CAT 6 LOCATION FOR SPEAKER	\$0.00
005	INSTALL CAT 6A LOCATION FOR WAP	\$0.00
005	INSTALL DUAL CAT 6 LOCATION	\$0.00
001	INSTALL CAT 6 LOCATION FOR CAMERA	\$0.00
001	INSTALL CAT 6 LOCATION FOR SPEAKER	\$0.00

002	INSTALL CAT 6A LOCATION FOR WAP	\$0.00
002	INSTALL DUAL CAT 6 LOCATION	\$0.00
002	INSTALL CAT 6 LOCATION FOR TVE	\$0.00
002	INSTALL CAT 6 LOCATION FOR SPEAKER	\$0.00
004	INSTALL CAT 6A LOCATION FOR WAP	\$0.00
004	INSTALL DUAL CAT 6 LOCATION	\$0.00
004	INSTALL CAT 6 LOCATION FOR TVE	\$0.00
004	INSTALL CAT 6 LOCATION FOR SPEAKER	\$0.00

FIRST

LEVEL

OUTSIDE	INSTALL CAT 6 LOCATIONS 6 CAMERAS, 1 SPEAKER	\$0.00
HALLWAY	INSTALL CAT 6A LOCATIONS FOR WAP'S	\$0.00
HALLWAY	INSTALL CAT 6 LOCATIONS FOR CAMERAS	\$0.00
102A	INSTALL CAT 6A LOCATION FOR WAP	\$0.00
102A	INSTALL DUAL CAT 6 LOCATION	\$0.00
108	INSTALL CAT 6A LOCATION FOR WAP	\$0.00
108	INSTALL DUAL CAT 6 LOCATION	\$0.00
108	INSTALL CAT 6 LOCATION FOR VOIP	\$0.00
108	INSTALL CAT 6 LOCATION FOR SPEAKER	\$0.00
108	INSTALL CAT 6 LOCATION TVE	\$0.00
110	INSTALL DUAL CAT 6 LOCATION	\$0.00
109B	INSTALL DUAL CAT 6 LOCATION	\$0.00
109B	INSTALL CAT 6 LOCATION FOR VOIP	\$0.00
109	INSTALL DUAL CAT 6 LOCATION	\$0.00
109A	INSTALL DUAL CAT 6 LOCATION	\$0.00
112	INSTALL CAT 6A LOCATION FOR WAP	\$0.00
112	INSTALL DUAL CAT 6 LOCATION	\$0.00
112	INSTALL CAT 6 LOCATION FOR VOIP	\$0.00
112	INSTALL CAT 6 LOCATION FOR SPEAKER	\$0.00
112	INSTALL CAT 6 LOCATION FOR TVE	\$0.00
111	INSTALL CAT 6A LOCATION FOR WAP	\$0.00
111	INSTALL DUAL CAT 6 LOCATION	\$0.00
111	INSTALL CAT 6 LOCATION FOR VOIP	\$0.00
111	INSTALL CAT 6 LOCATION FOR SPEAKER	\$0.00
111	INSTALL CAT 6 LOCATION FOR TVE	\$0.00
104	INSTALL DUAL CAT 6 LOCATION	\$0.00
104	INSTALL CAT 6 LOCATION FOR VOIP	\$0.00
101	INSTALL CAT 6A LOCATION FOR WAP	\$0.00
101	INSTALL DUAL CAT 6 LOCATION	\$0.00
101	INSTALL CAT 6 LOCATION FOR VOIP	\$0.00
101	INSTALL CAT 6 LOCATION FOR SPEAKER	\$0.00
101	INSTALL CAT 6 LOCATION FOR TVE	\$0.00

SECOND

LEVEL

HALLWAY	INSTALL DUAL CAT 6 LOCATIONS FOR PRINTERS	\$0.00
HALLWAY	INSTALL CAT 6 LOCATIONS FOR CAMERAS	\$0.00
HALLWAY	INSTALL CAT 6 LOCATIONS SPEAKERS	\$0.00
209A	INSTALL DUAL CAT 6 LOCATION	\$0.00
208D	INSTALL DUAL CAT 6 LOCATION	\$0.00
216A	INSTALL DUAL CAT 6 LOCATION	\$0.00
201B	INSTALL DUAL CAT 6 LOCATION	\$0.00
201	INSTALL CAT 6A LOCATION FOR WAP	\$0.00
201	INSTALL DUAL CAT 6 LOCATION	\$0.00
201	INSTALL CAT 6 LOCATION FOR VOIP	\$0.00
201	INSTALL CAT 6 LOCATION FOR SPEAKER	\$0.00
201	INSTALL CAT 6 LOCATION FOR TVE	\$0.00
202	INSTALL CAT 6A LOCATION FOR WAP	\$0.00
202	INSTALL DUAL CAT 6 LOCATION	\$0.00
202	INSTALL CAT 6 LOCATION FOR VOIP	\$0.00
202	INSTALL CAT 6 LOCATION FOR SPEAKER	\$0.00
202	INSTALL CAT 6 LOCATION FOR TVE	\$0.00
203	INSTALL CAT 6A LOCATION FOR WAP	\$0.00
203	INSTALL DUAL CAT 6 LOCATION	\$0.00
203	INSTALL CAT 6 LOCATION FOR VOIP	\$0.00
203	INSTALL CAT 6 LOCATION FOR SPEAKER	\$0.00
203	INSTALL CAT 6 LOCATION FOR TVE	\$0.00
204	INSTALL CAT 6A LOCATION FOR WAP	\$0.00
204	INSTALL DUAL CAT 6 LOCATION	\$0.00
204	INSTALL CAT 6 LOCATION FOR VOIP	\$0.00
204	INSTALL CAT 6 LOCATION FOR SPEAKER	\$0.00
204	INSTALL CAT 6 LOCATION FOR TVE	\$0.00
205	INSTALL CAT 6A LOCATION FOR WAP	\$0.00
205	INSTALL DUAL CAT 6 LOCATION	\$0.00
205	INSTALL CAT 6 LOCATION FOR VOIP	\$0.00
205	INSTALL CAT 6 LOCATION FOR SPEAKER	\$0.00
205	INSTALL CAT 6 LOCATION FOR TVE	\$0.00
206	INSTALL CAT 6A LOCATION FOR WAP	\$0.00
206	INSTALL DUAL CAT 6 LOCATION	\$0.00
206	INSTALL CAT 6 LOCATION FOR VOIP	\$0.00
206	INSTALL CAT 6 LOCATION FOR SPEAKER	\$0.00
206	INSTALL CAT 6 LOCATION FOR TVE	\$0.00
207	INSTALL CAT 6A LOCATION FOR WAP	\$0.00
207	INSTALL DUAL CAT 6 LOCATION	\$0.00
207	INSTALL CAT 6 LOCATION FOR VOIP	\$0.00
207	INSTALL CAT 6 LOCATION FOR SPEAKER	\$0.00
207	INSTALL CAT 6 LOCATION FOR TVE	\$0.00
208	INSTALL CAT 6A LOCATION FOR WAP	\$0.00

208	INSTALL DUAL CAT 6 LOCATION	\$0.00
208	INSTALL CAT 6 LOCATION FOR VOIP	\$0.00
208	INSTALL CAT 6 LOCATION FOR SPEAKER	\$0.00
208	INSTALL CAT 6 LOCATION FOR TVE	\$0.00
209	INSTALL CAT 6A LOCATION FOR WAP	\$0.00
209	INSTALL DUAL CAT 6 LOCATION	\$0.00
209	INSTALL CAT 6 LOCATION FOR VOIP	\$0.00
209	INSTALL CAT 6 LOCATION FOR SPEAKER	\$0.00
209	INSTALL CAT 6 LOCATION FOR TVE	\$0.00
210	INSTALL CAT 6A LOCATION FOR WAP	\$0.00
210	INSTALL DUAL CAT 6 LOCATION	\$0.00
210	INSTALL CAT 6 LOCATION FOR VOIP	\$0.00
210	INSTALL CAT 6 LOCATION FOR SPEAKER	\$0.00
210	INSTALL CAT 6 LOCATION FOR TVE	\$0.00
211	INSTALL CAT 6A LOCATION FOR WAP	\$0.00
211	INSTALL DUAL CAT 6 LOCATION	\$0.00
211	INSTALL CAT 6 LOCATION FOR VOIP	\$0.00
211	INSTALL CAT 6 LOCATION FOR SPEAKER	\$0.00
211	INSTALL CAT 6 LOCATION FOR TVE	\$0.00
212	INSTALL CAT 6A LOCATION FOR WAP	\$0.00
212	INSTALL DUAL CAT 6 LOCATION	\$0.00
212	INSTALL CAT 6 LOCATION FOR VOIP	\$0.00
212	INSTALL CAT 6 LOCATION FOR SPEAKER	\$0.00
212	INSTALL CAT 6 LOCATION FOR TVE	\$0.00
213	INSTALL CAT 6A LOCATION FOR WAP	\$0.00
213	INSTALL DUAL CAT 6 LOCATION	\$0.00
213	INSTALL CAT 6 LOCATION FOR VOIP	\$0.00
213	INSTALL CAT 6 LOCATION FOR SPEAKER	\$0.00
213	INSTALL CAT 6 LOCATION FOR TVE	\$0.00
214	INSTALL CAT 6A LOCATION FOR WAP	\$0.00
214	INSTALL DUAL CAT 6 LOCATION	\$0.00
214	INSTALL CAT 6 LOCATION FOR VOIP	\$0.00
214	INSTALL CAT 6 LOCATION FOR SPEAKER	\$0.00
214	INSTALL CAT 6 LOCATION FOR TVE	\$0.00
215	INSTALL CAT 6A LOCATION FOR WAP	\$0.00
215	INSTALL DUAL CAT 6 LOCATION	\$0.00
215	INSTALL CAT 6 LOCATION FOR VOIP	\$0.00
215	INSTALL CAT 6 LOCATION FOR SPEAKER	\$0.00
215	INSTALL CAT 6 LOCATION FOR TVE	\$0.00
216	INSTALL CAT 6A LOCATION FOR WAP	\$0.00
216	INSTALL DUAL CAT 6 LOCATION	\$0.00
216	INSTALL CAT 6 LOCATION FOR VOIP	\$0.00
216	INSTALL CAT 6 LOCATION FOR SPEAKER	\$0.00

216	INSTALL CAT 6 LOCATION FOR TVE	\$0.00
		\$0.00
	PROVIDE 42 U SERVER CABINET	\$0.00
	PROVIDE 48 PORT CAT 6 PATCH PANELS	\$0.00
	PROVIDE 24 PORT CAT 6 PATCH PANEL	\$0.00
	PROVIDE 48 PORT CAT 6A PATCH PANEL	\$0.00
	FURNISH & INSTALL New conduit EMT piping, J hooks (as needed), 4" sleeves in between floors and closets, 3/4" EMT piping to single and double gang boxes to all data. WAP, camera and Voip locations at 687 Watertown Street to complete project for the conveyance of network cabling and conduit piping installed per government and NPS standards.	\$0.00

GRAND TOTAL

1	\$0
1	\$0
1	\$0
4	\$0
1	\$0
1	\$0
1	\$0
AL	\$0

SYMBOL LIST

TEL/DATA OUTLETS

WALL MOUNTED TELEPHONE OUTLET @ 48" A.F.F. REFER TO TEL/DATA RISER FOR WIRING REQUIREMENTS. COVER PLATES SHALL BE STAINLESS STEEL.

WALL MOUNTED DATA OUTLET @ 18" A.F.F. REFER TO TEL/DATA RISER FOR WIRING REQUIREMENTS. NUMERICAL INDICATES NUMBER OF RJ45 JACKS ON SAME FACEPLATE. COVER PLATES SHALL BE STAINLESS STEEL.

COMBINATION TEL/DATA OUTLET @ 18" A.F.F. #V INDICATES NUMBER OF RJ45 VOICE JACKS, #D INDICATES NUMBER OF RJ45 DATA JACKS ON SAME FACEPLATE. (1) VOICE & (1) DATA IF #V/D IS NOT SHOWN (TYPICAL). REFER TO TEL/DATA RISER FOR WIRING REQUIREMENTS. COVER PLATES SHALL BE STAINLESS STEEL.

WIRELESS ACCESS NODE - DATA REFER TO TEL/DATA RISER FOR WIRING REQUIREMENTS. COVER PLATES SHALL BE STAINLESS STEEL MOUNTED ABOVE CEILING U.N.O.

CABLE/DATA OUTLET REFER TO TEL/DATA RISER FOR WIRING REQUIREMENTS. COVER PLATES SHALL BE STAINLESS STEEL MOUNTED @ 84" A.F.F. U.N.O.

VIDEO PROJECTOR OUTLET REFER TO TEL/DATA RISER FOR WIRING REQUIREMENTS. COVER PLATES SHALL BE STAINLESS STEEL. CEILING MOUNTED U.N.O.

TEACHER'S STATION REFER TO TEL/DATA RISER FOR WIRING REQUIREMENTS. COVER PLATES SHALL BE STAINLESS STEEL MOUNTED @ 18" A.F.F. U.N.O.

INTERMEDIATE DISTRIBUTION FRAME

MAIN DISTRIBUTION FRAME

WIRELESS SYSTEM CLOCK

FLUSH MOUNTED CEILING SPEAKER

FLUSH WALL MOUNTED SPEAKER

WEATHER PROOF FLUSH MOUNTED SPEAKER. FINISH TO BE SELECTED BY ARCH.

SPEAKER CEILING TYPE SUBSCRIPT 'S' DENOTES SURFACE MOUNTED

ASSISTIVE LISTENING SYSTEM

SMART RESCUE PHONE

AREA RESCUE ASSISTANCE BUTTON

CALL IN SWITCH

PAGING SYSTEM IP INPUT

PAGING SYSTEM IP OUTPUT FOR LOCAL SOUND SYSTEMS

PAGING SYSTEM IP OUTPUT FOR LOCAL SOUND SYSTEMS

CRITICAL COMMUNICATION SYSTEM MASTER STATION (COORDINATE EXACT LOCATION WITH OWNER PRIOR TO INSTALLATION)

PAGING SYSTEM IP TALKBACK MODULE

PAGING SYSTEM IP TALKBACK MODULE

RECEPTACLES

FLUSH FLOOR OUTLET BOXES WITH BOTH 120 VOLT & TELE/DATA COMPARTMENTS FLOOR BOX BY OTHERS. BRASS COVER PLATE BY I.T. CONTRACTOR.

FLUSH FLOOR OUTLET BOXES WITH BOTH 120 VOLT & DATA COMPARTMENTS. FLOOR BOX BY OTHERS. BRASS COVER PLATE BY I.T. CONTRACTOR.

WIREFORM RACEWAY PROVIDED UNDER SECTION 260000

LOCAL SOUND SYSTEMS

LOCAL SOUND SYSTEM AMPLIFIER-SEE SPEC FOR DETAILS

HIGH OUTPUT SPEAKER FOR LOCAL SOUND SYSTEM-SEE SPEC FOR DETAILS

CEILING FLUSH MTD HIGH OUTPUT SPEAKER FOR LOCAL SOUND SYSTEM-SEE SPEC FOR DETAILS

CEILING MTD HIGH OUTPUT SPEAKER FOR LOCAL SOUND SYSTEM-SEE SPEC FOR DETAILS

MICROPHONE

VOLUME CONTROL

SOUND SPHERE SPEAKER

WEATHER PROOF SPEAKER. FINISH TO BE SELECTED BY ARCH.

PRIORITY RELAY

FLUSH WALL MOUNTED SPEAKER

WEATHER PROOF SPEAKER. FINISH TO BE SELECTED BY ARCH.

MICROPHONE

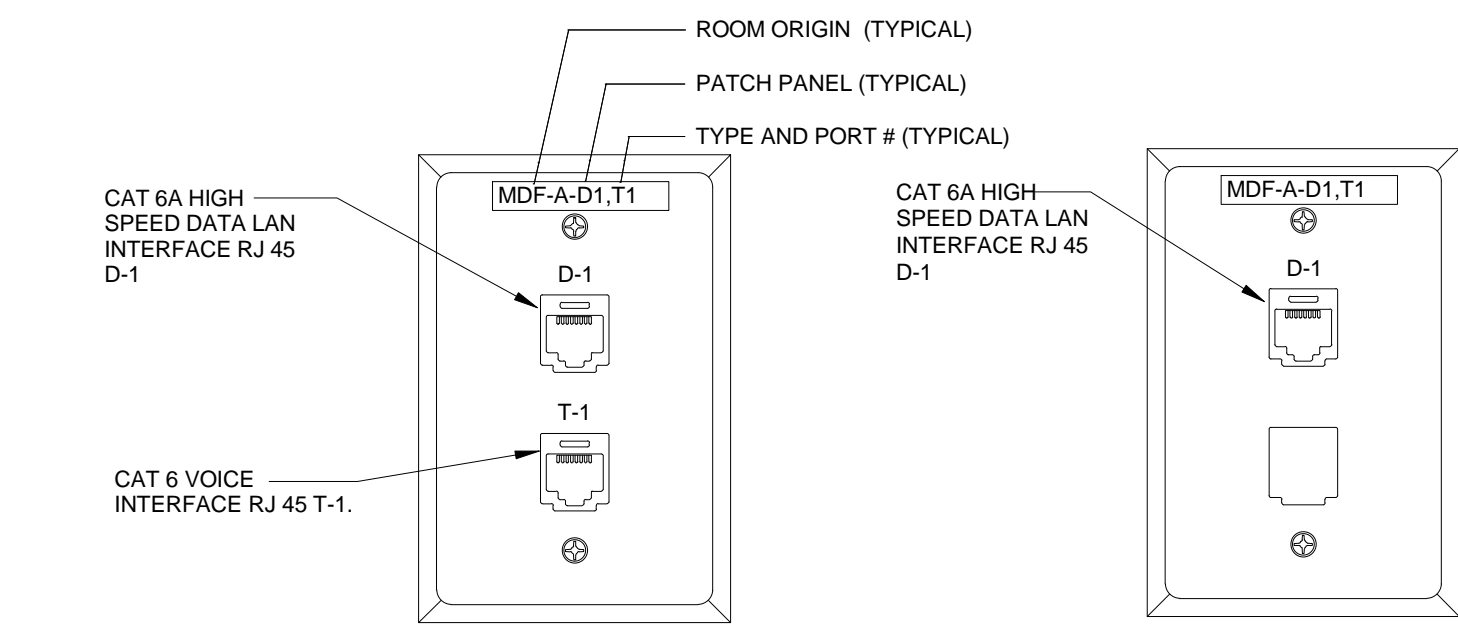
RCA AUDIO INPUT JACK

ANTENNA WALL PLATE

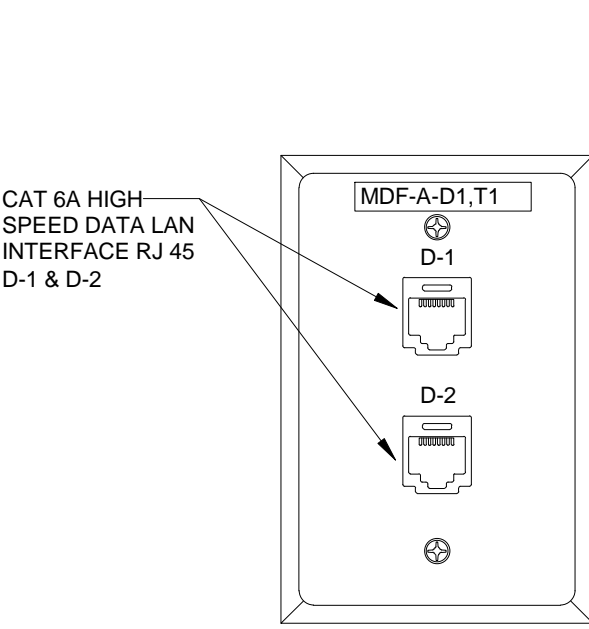
AUDIO INPUT PLATE

ABBREVIATIONS

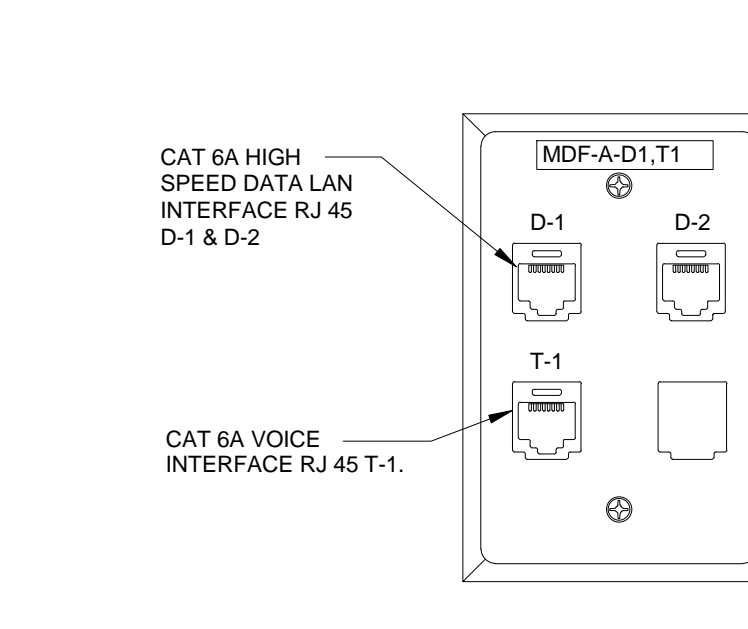
A.F.F.	ABOVE FINISHED FLOOR	P.C.	PLUMBING CONTRACTOR
A.F.G.	ABOVE FINISHED GRADE	M.H.	MOUNTING HEIGHT
APC	ANGLE POLISHED CONNECTOR	W.P.	WEATHER PROOF
ARCH.	ARCHITECT	U.N.O.	UNLESS NOTED OTHERWISE
A.T.C.	AUTO-TEMP CONTROL CONTRACTOR	WG	WIRE GUARD
€	CENTERLINE	CATV	CABLE TELEVISION
CL.G.	CEILING	DH	DOOR HOLDER
E.C.	ELECTRICAL CONTRACTOR	F.A.C.P.	FIRE ALARM CONTROL PANEL
FBI	FURNISHED AND INSTALLED	PAC	PUBLIC ACCESS COMPUTER
F.P.C.	FIRE PROTECTION CONTRACTOR	MAC	MACINTOSH COMPUTER
G.C.	GENERAL CONTRACTOR	I.T.	INFORMATION TECHNOLOGY
H.V.A.C.	HEATING, VENTILATION, AND AIR CONDITIONING CONTRACTOR	IESS	INTEGRATED ELECTRONIC SECURITY SYSTEM INTEGRATOR



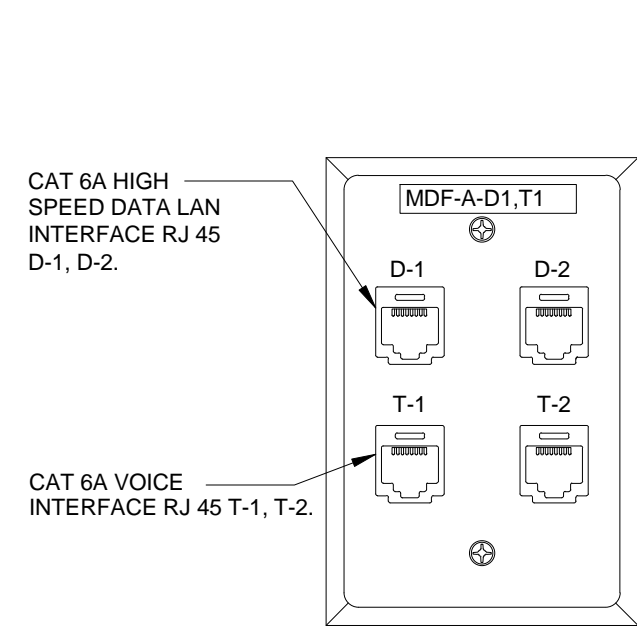
1 TYPICAL WALL MTD VOICE/DATA OUTLET (V) DETAIL
T0.01 SCALE: NTS



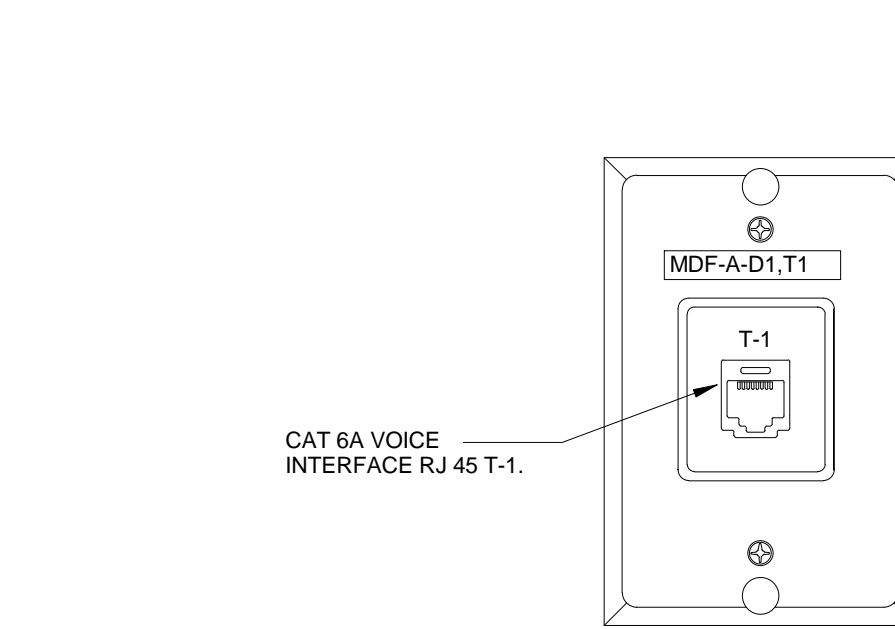
2 TYPICAL DATA OUTLET (D) DETAIL
T0.01 SCALE: NTS



3 TYPICAL DATA OUTLET (2D) DETAIL
T0.01 SCALE: NTS



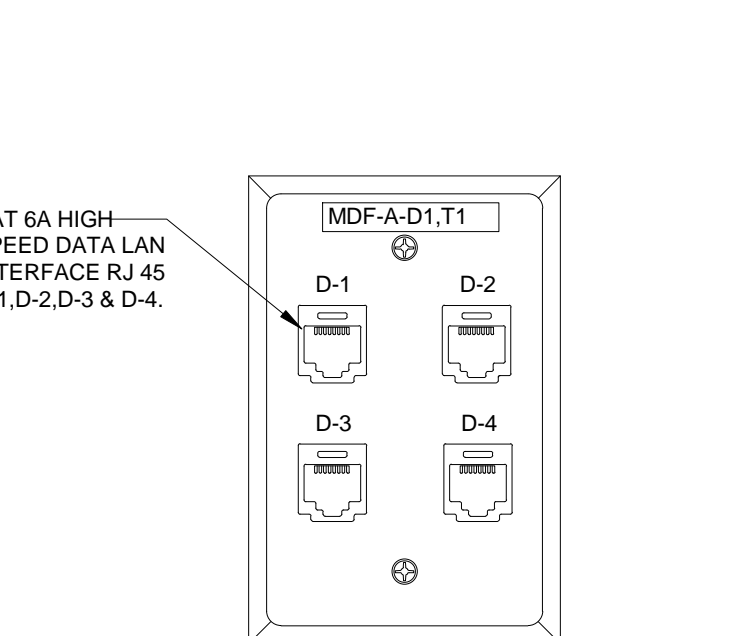
4 TYPICAL DATA OUTLET (1V2D) DETAIL
T0.01 SCALE: NTS



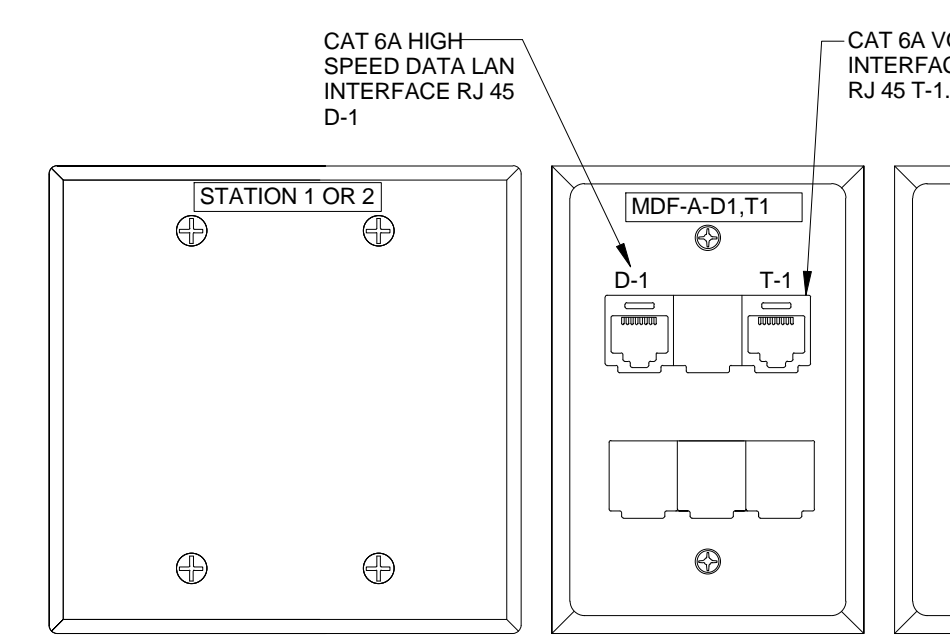
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T0.01 SCALE: NTS



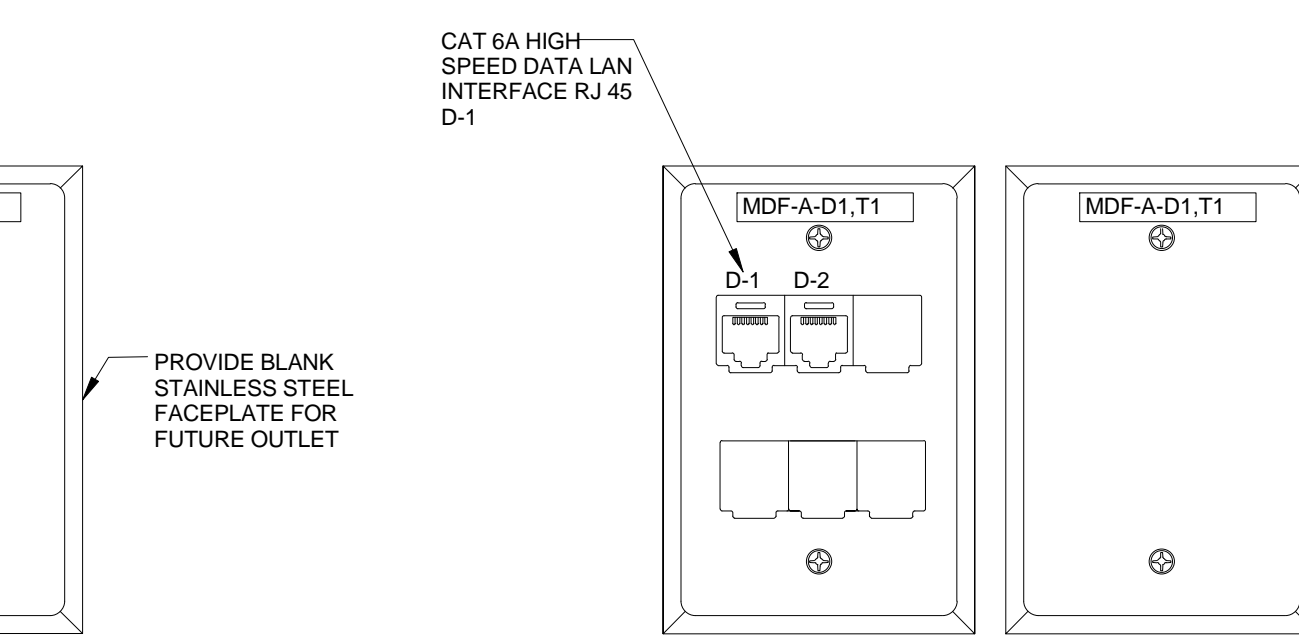
6 TYPICAL WALL PHONE OUTLET (V) DETAIL
T0.01 SCALE: NTS



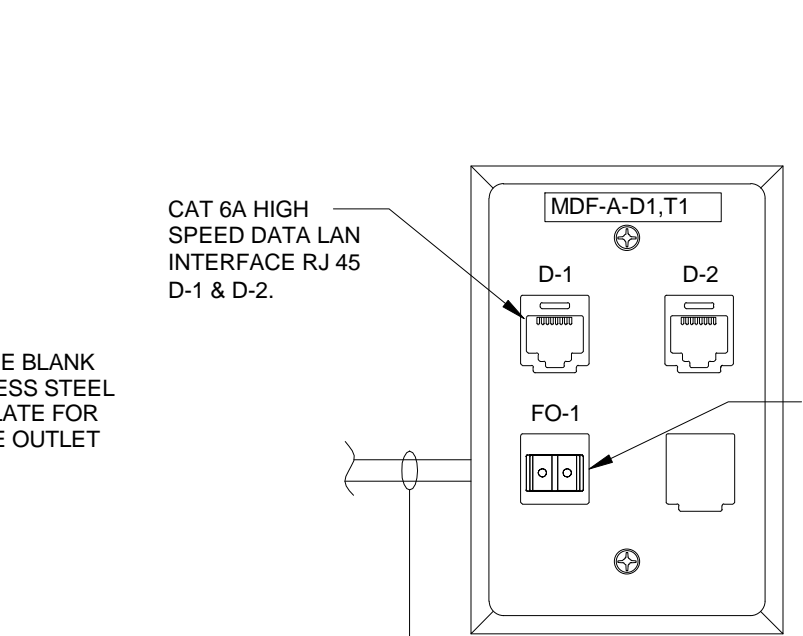
7 TYPICAL DATA OUTLET (4D) DETAIL
T0.01 SCALE: NTS



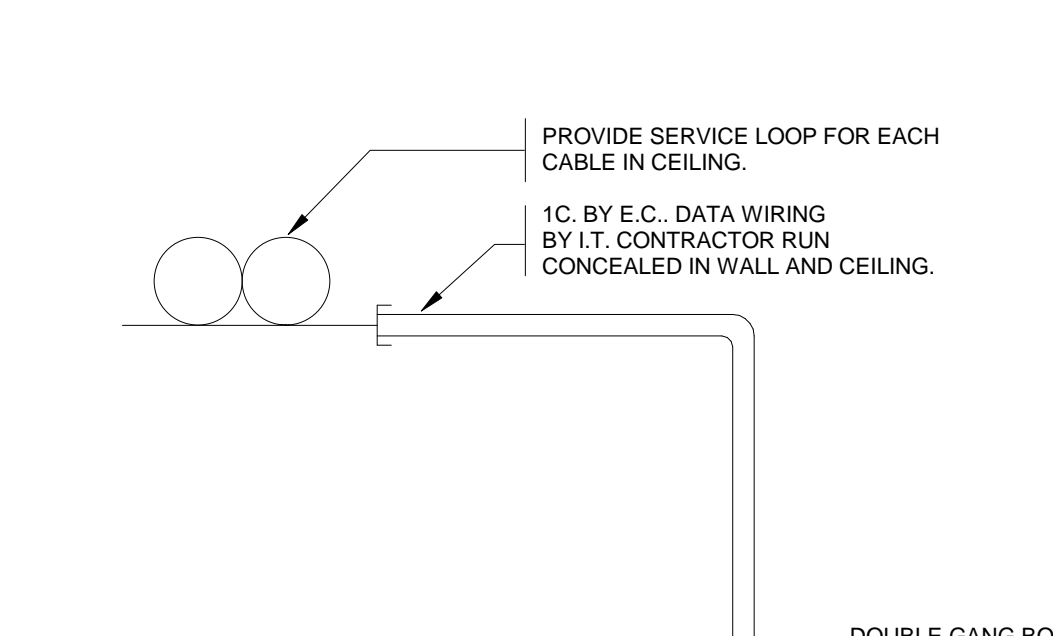
8 TYPICAL TEACHER STATION OUTLET (TV) DETAIL
T0.01 SCALE: NTS



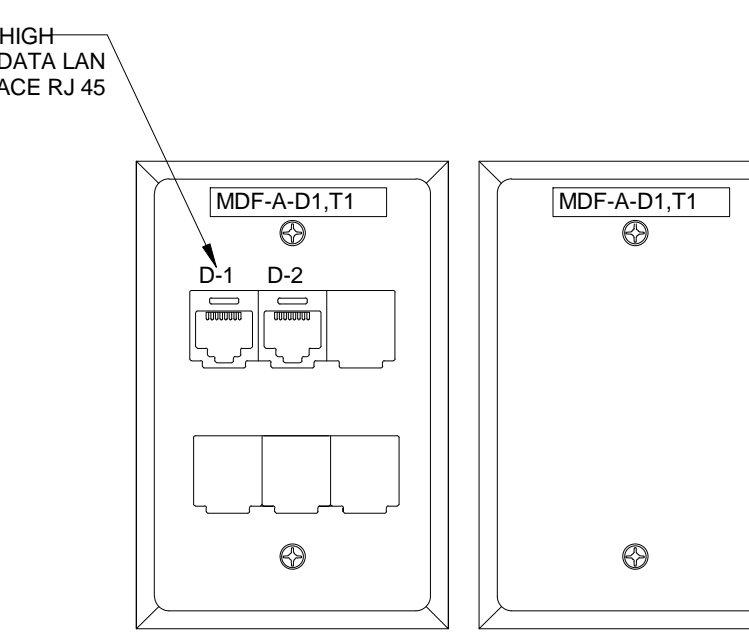
9 LCD PROJECTOR JACK OUTLET (TV) DETAIL
T0.01 SCALE: NTS



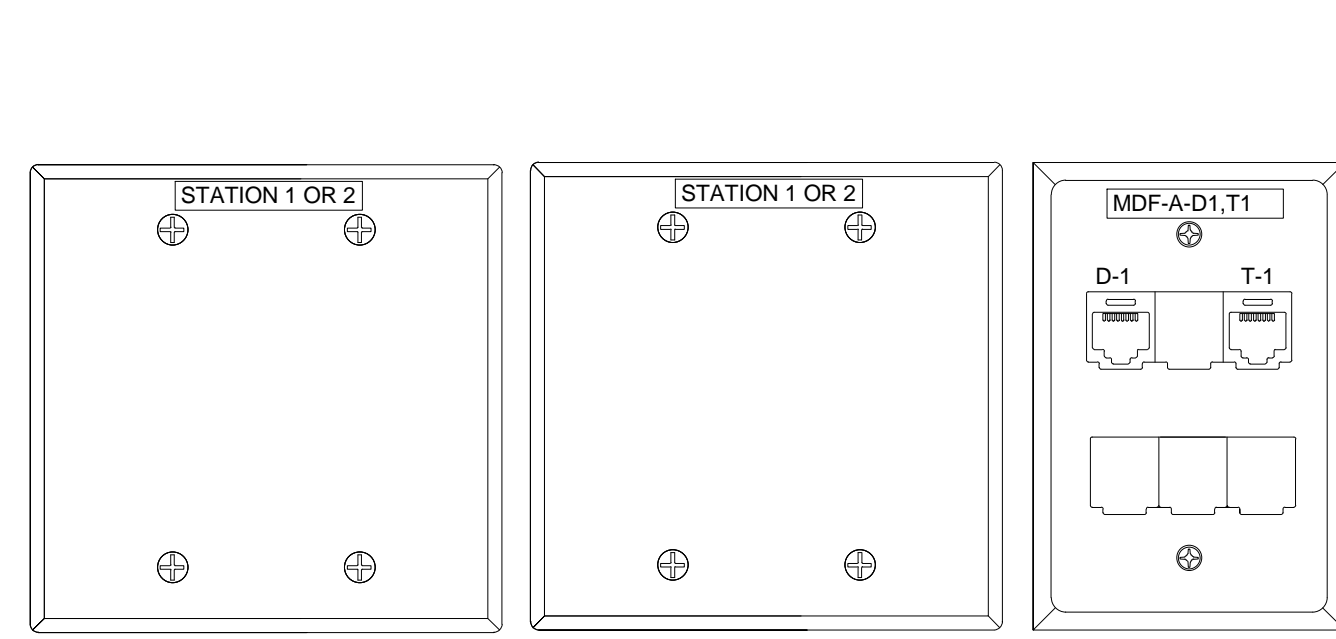
10 TYPICAL OUTLET (AN) DETAIL
T0.01 SCALE: NTS



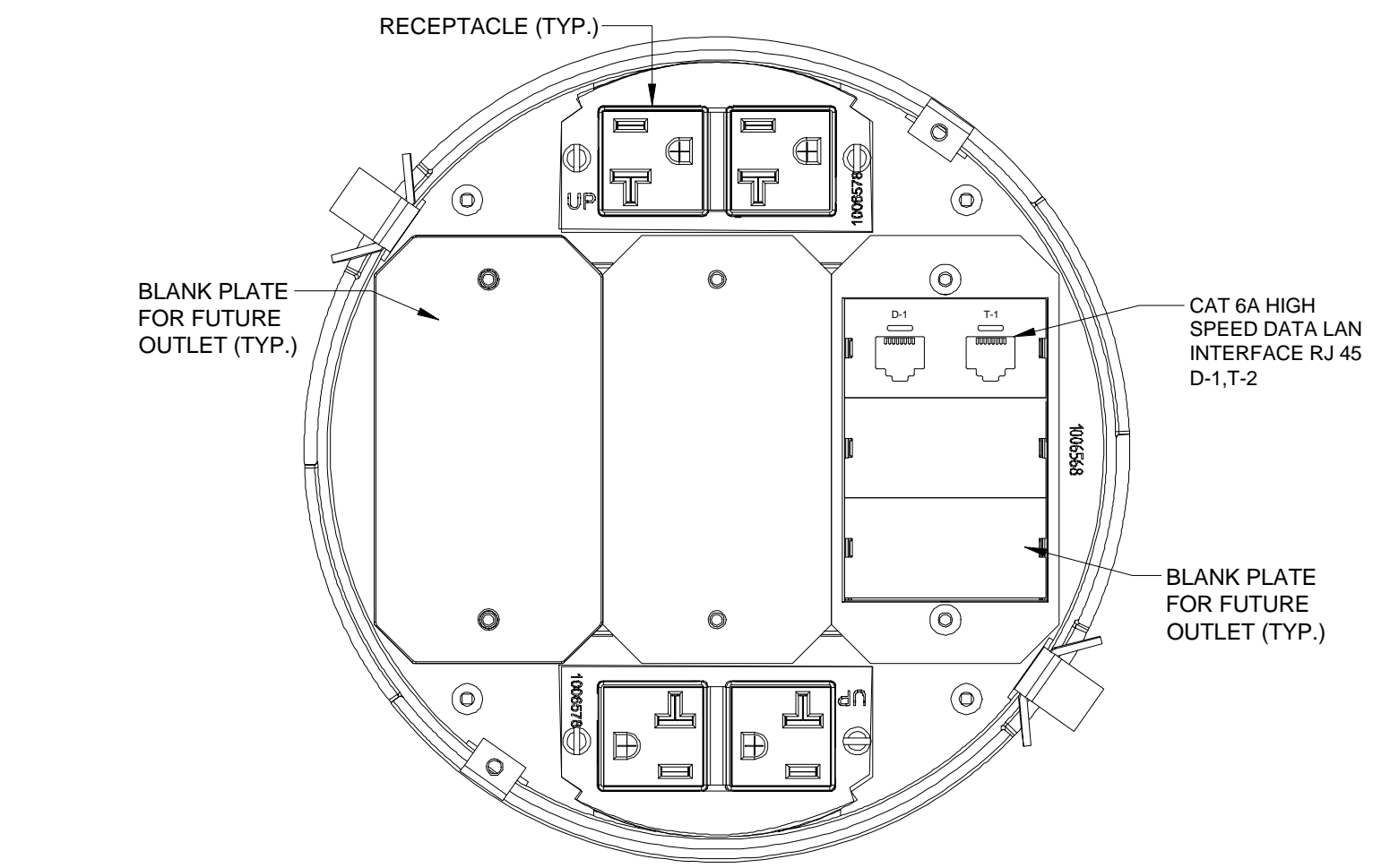
11 DATA OUTLET DETAIL
T0.01 SCALE: NTS



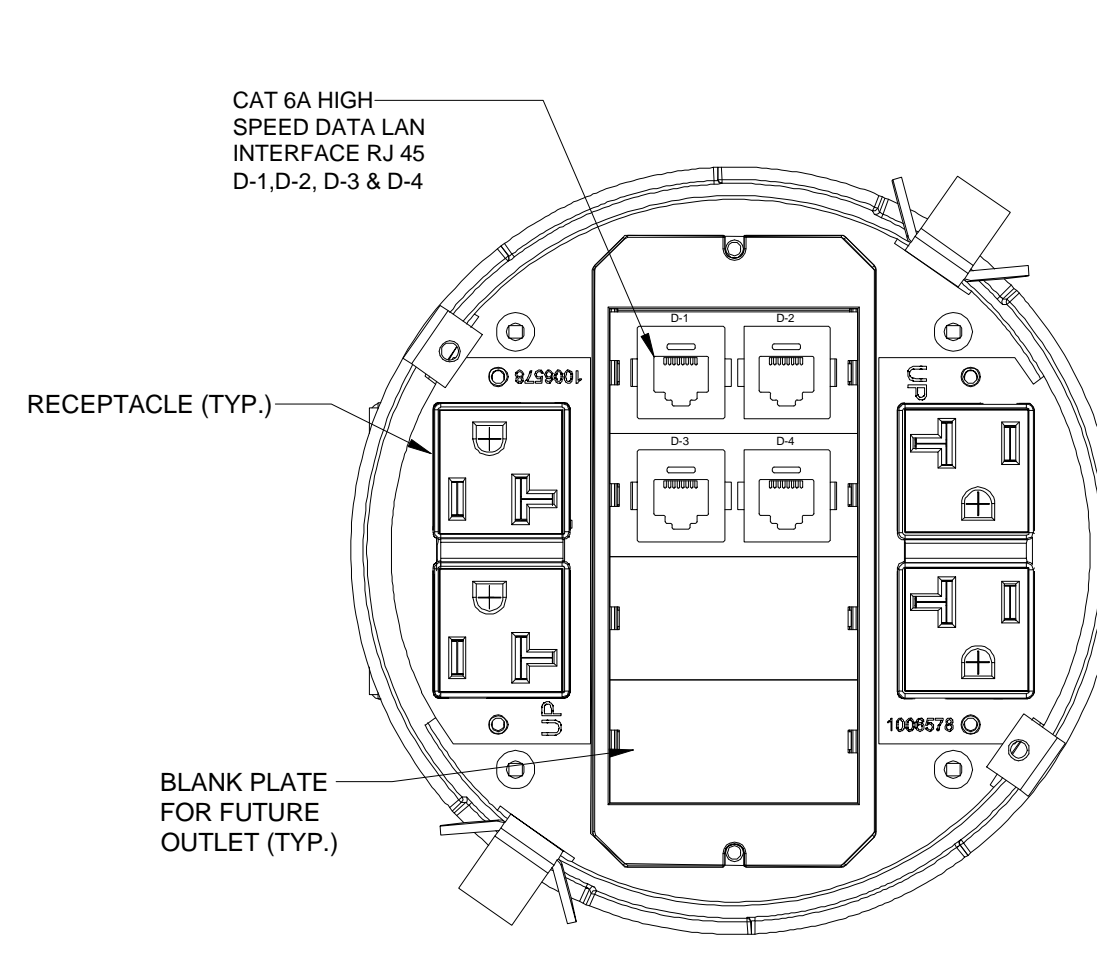
13 LCD/LED DISPLAY JACK OUTLET (TV) DETAIL
T0.01 SCALE: NTS



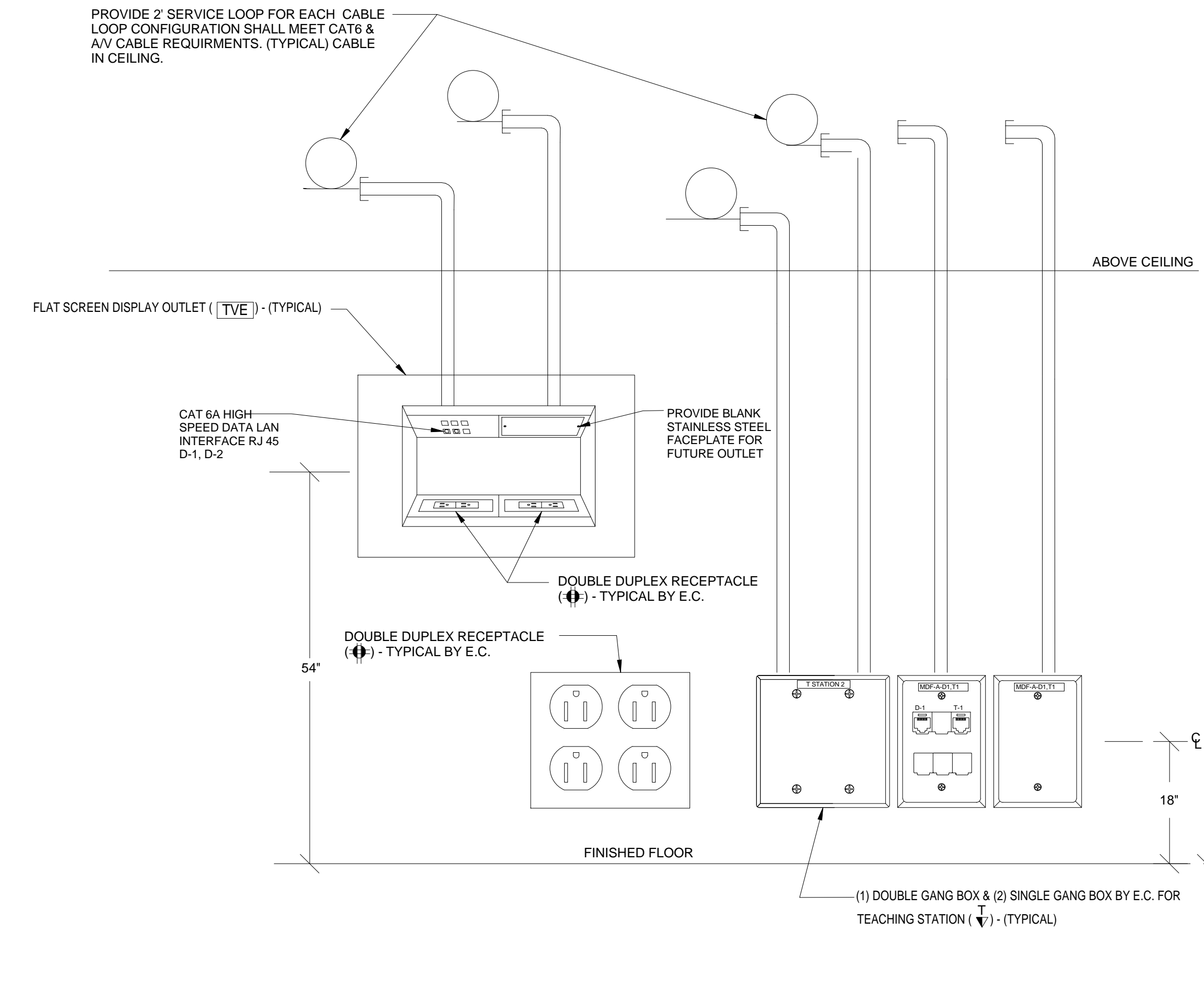
14 LCD/LED DISPLAY JACK OUTLET (TV) DETAIL
T0.01 SCALE: NTS



15 TYPICAL 8" POKE THRU DATA OUTLET (V) DETAIL
T0.01 NOT TO SCALE

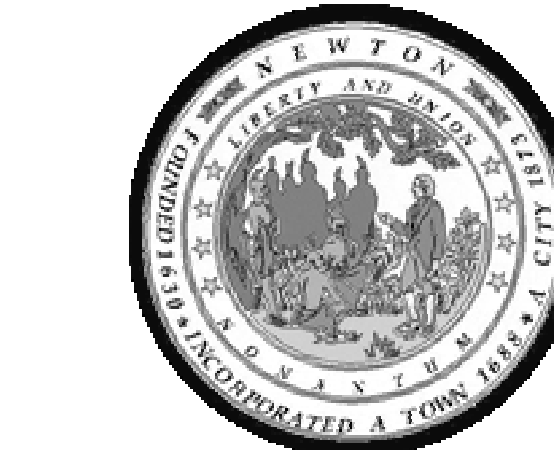


16 TYPICAL 6" POKE THRU DATA & VOICE OUTLET (2V, 4D) DETAIL
T0.01 SCALE: NTS



17 TYPICAL TEACHER STATION JACK OUTLET (TV) DETAIL
T0.01 SCALE: NTS

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ARCHITECT:
ARROWSTREET
ARCHITECTURE & DESIGN

10 POST OFFICE SQUARE
SUITE 700H
BOSTON, MA 02109
617-623-5555
www.arrowstreet.com

CONSULTANTS:



GARCIA GALUSKA DESOUSA
CONSULTING ENGINEERS
205 Paine Center Blvd., Suite D, Duxbury, MA 02019 • 781-525-3200
388 West Street, Foxboro, MA 01935 • 508-548-9910

PROJECT INFORMATION:

NECP

687 Watertown Street
Newton, MA 02460

ISSUANCE:

CONSTRUCTION DOCUMENTS

STAMP:

REVISIONS:

No.	Date	Description
1	7.22.19	SCHEM. DESIGN

PROJECT

TRUE NORTH



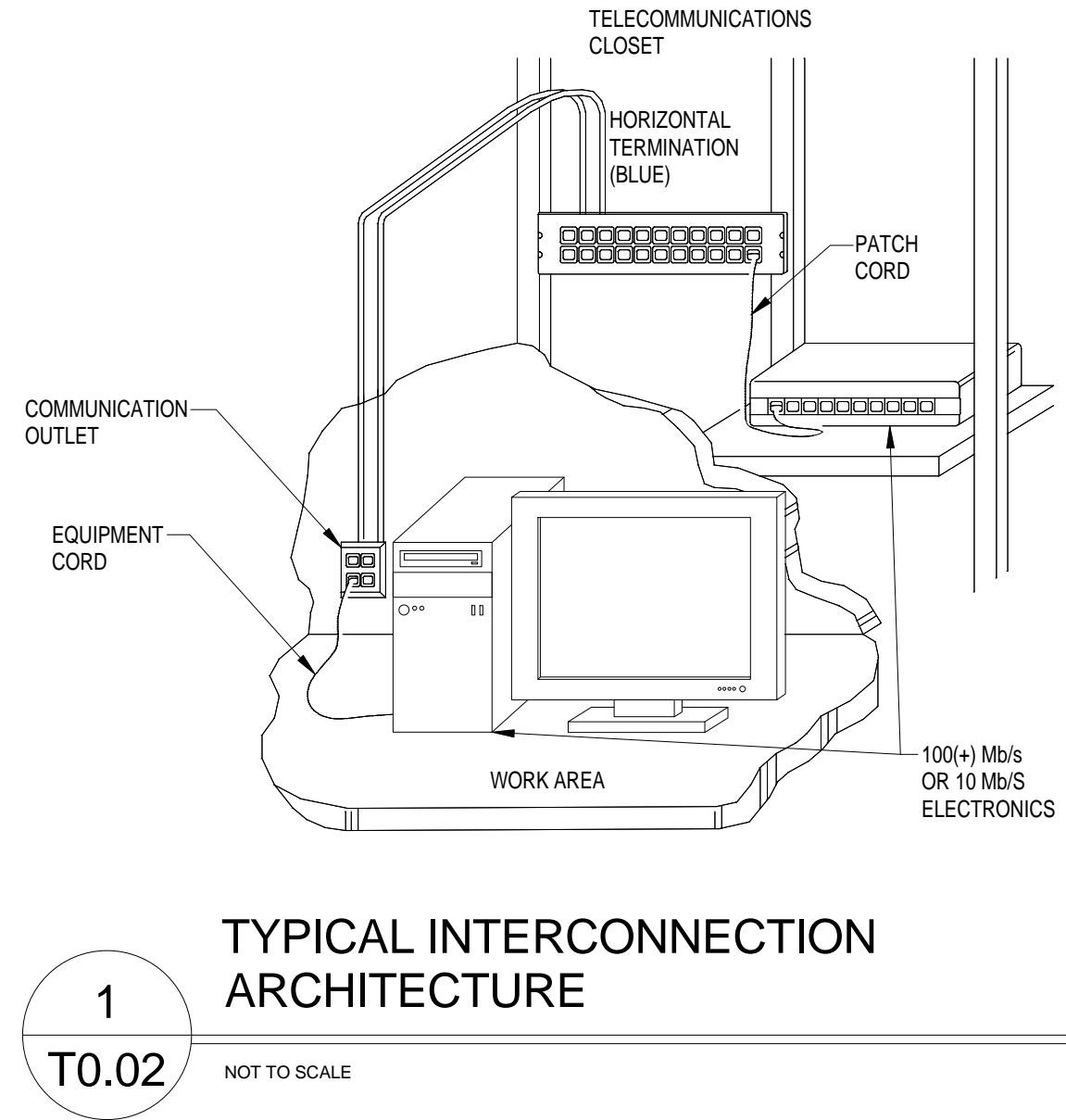
DRAWING TITLE:

TECHNOLOGY SYMBOL LIST & DETAILS

Project No. 19001
Dwn/Chk By MFM/DMP
Date 02/28/20
Scale

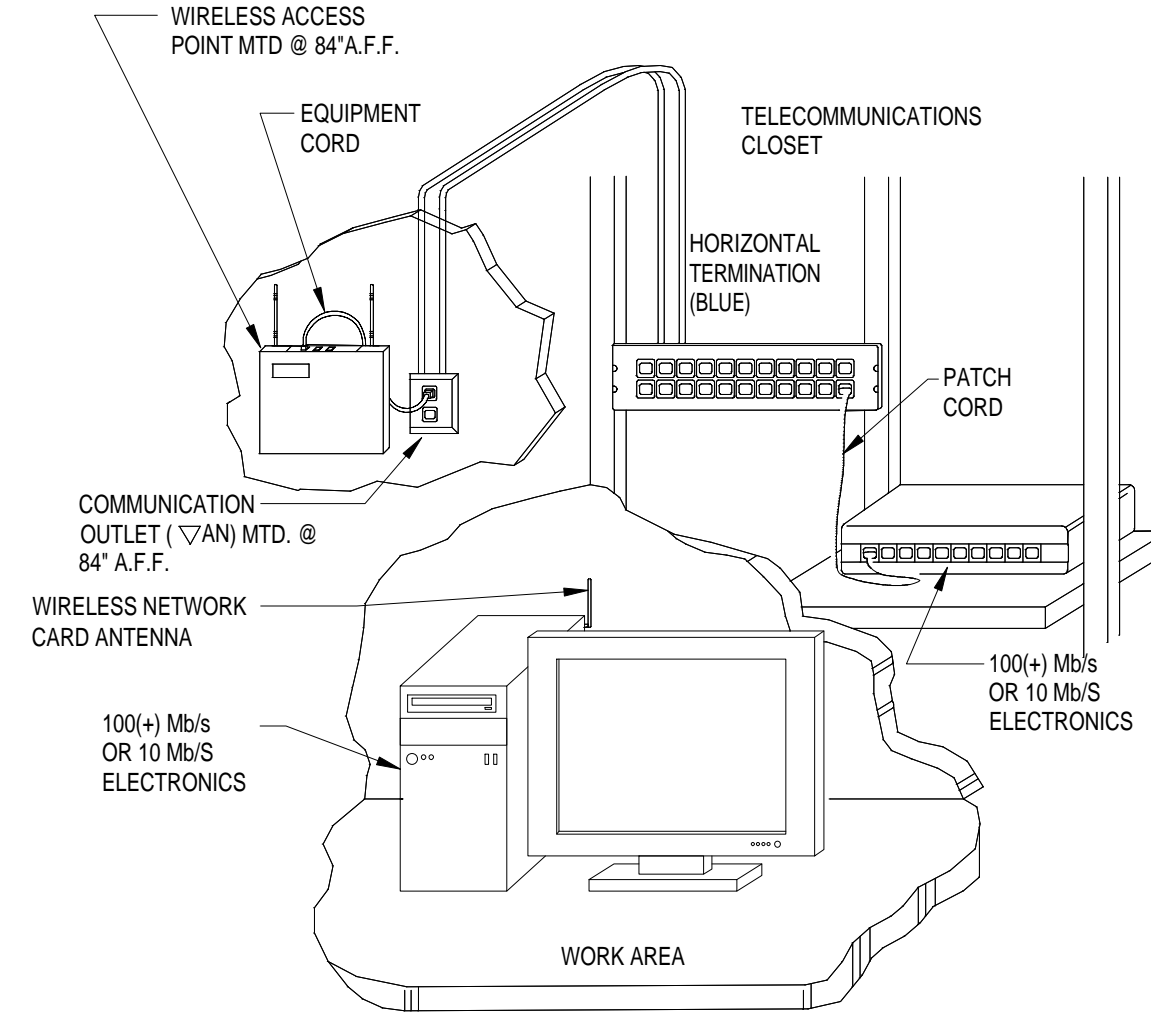
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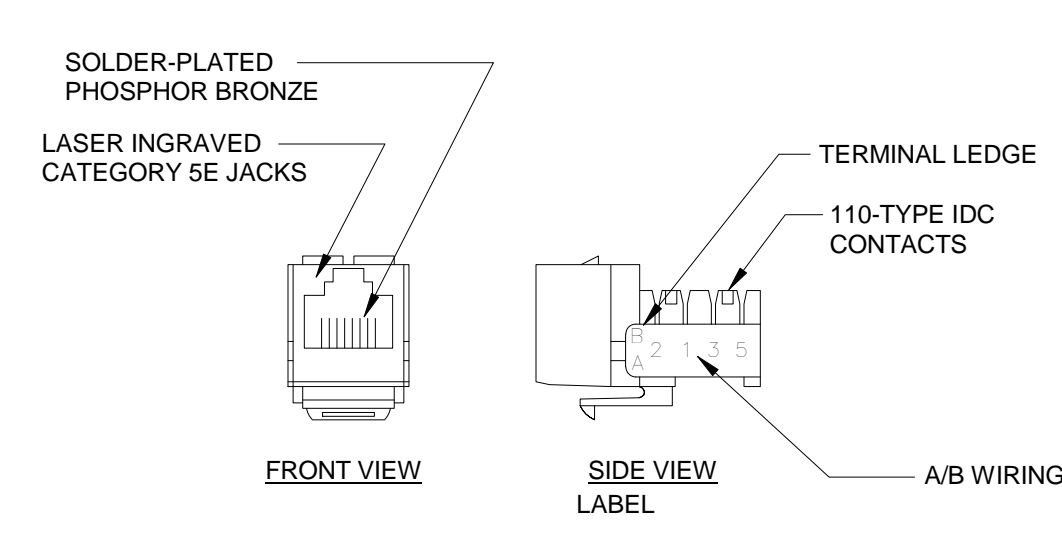
1
T0.02
NOT TO SCALE

TYPICAL INTERCONNECTION ARCHITECTURE



2
T0.02
NOT TO SCALE

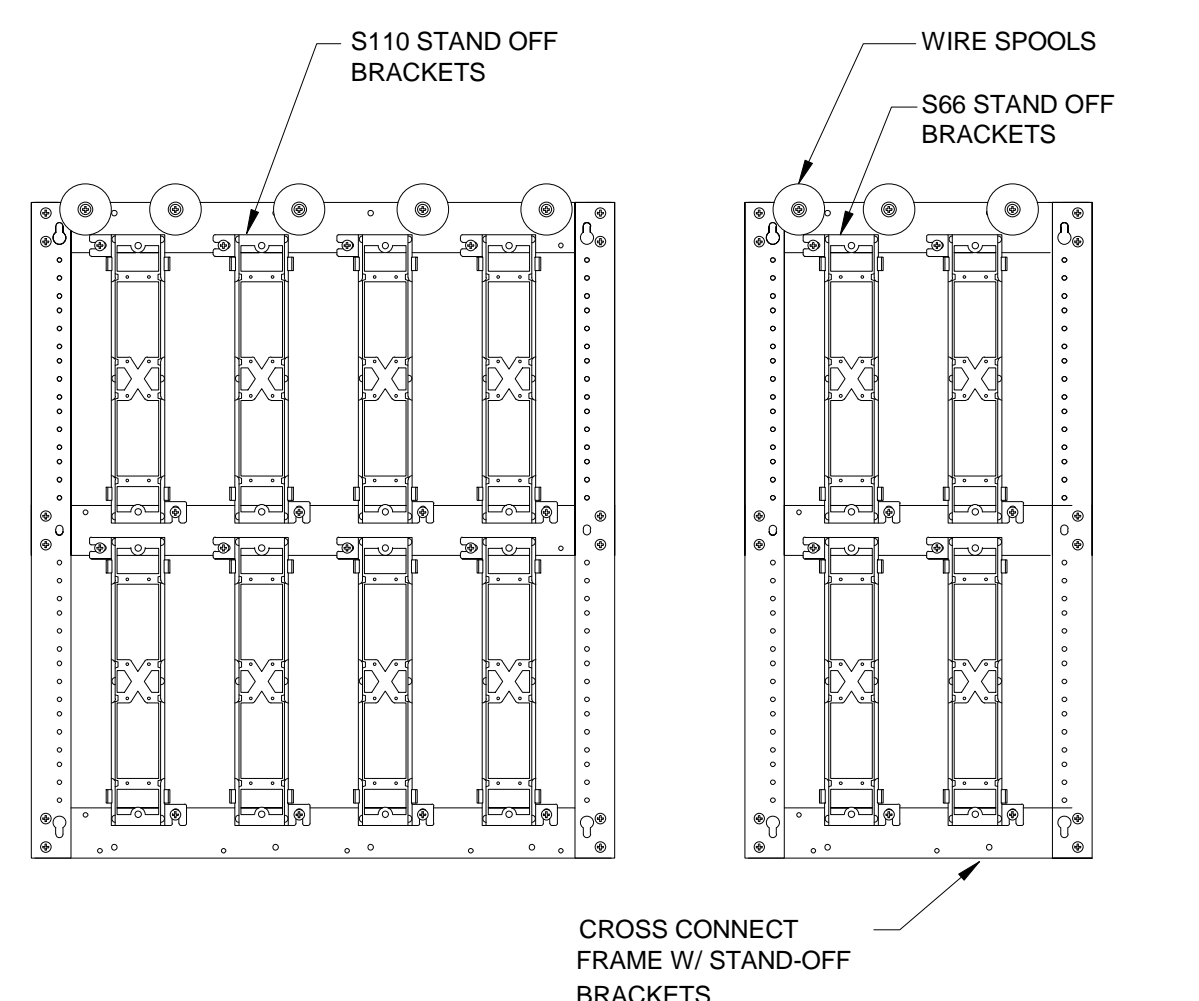
TYPICAL WIRELESS INTERCONNECTION ARCHITECTURE



3
T0.02
NOT TO SCALE

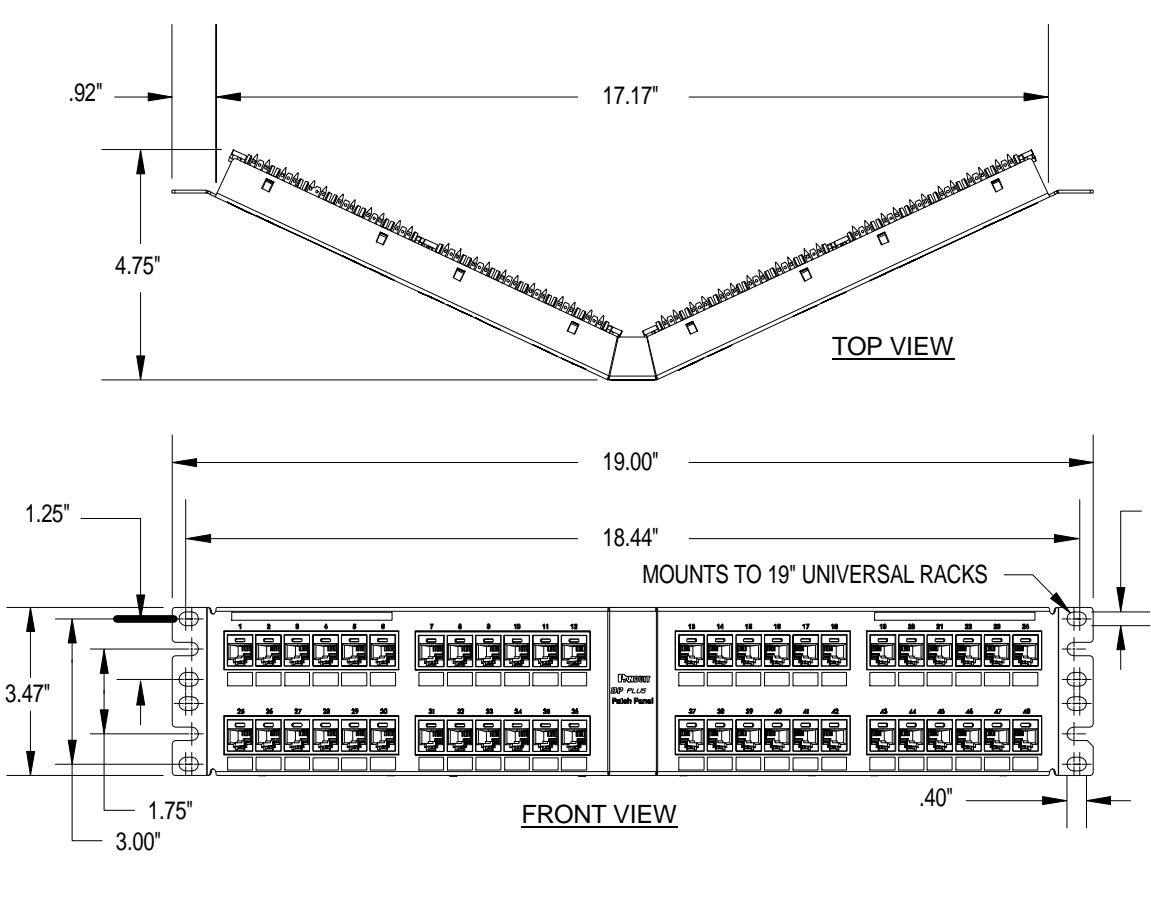
RJ45 CONNECTION DETAILS

NOTE: PANELS SHALL BE UL LISTED, MEET NATIONAL ELECTRICAL CODE REQUIREMENTS AND SPECIFICATIONS FOR UL 1983, AND FULLY COMPLY WITH FCC PART 68 AND TIA-568-A CATEGORY 5E.



4
T0.02
NOT TO SCALE

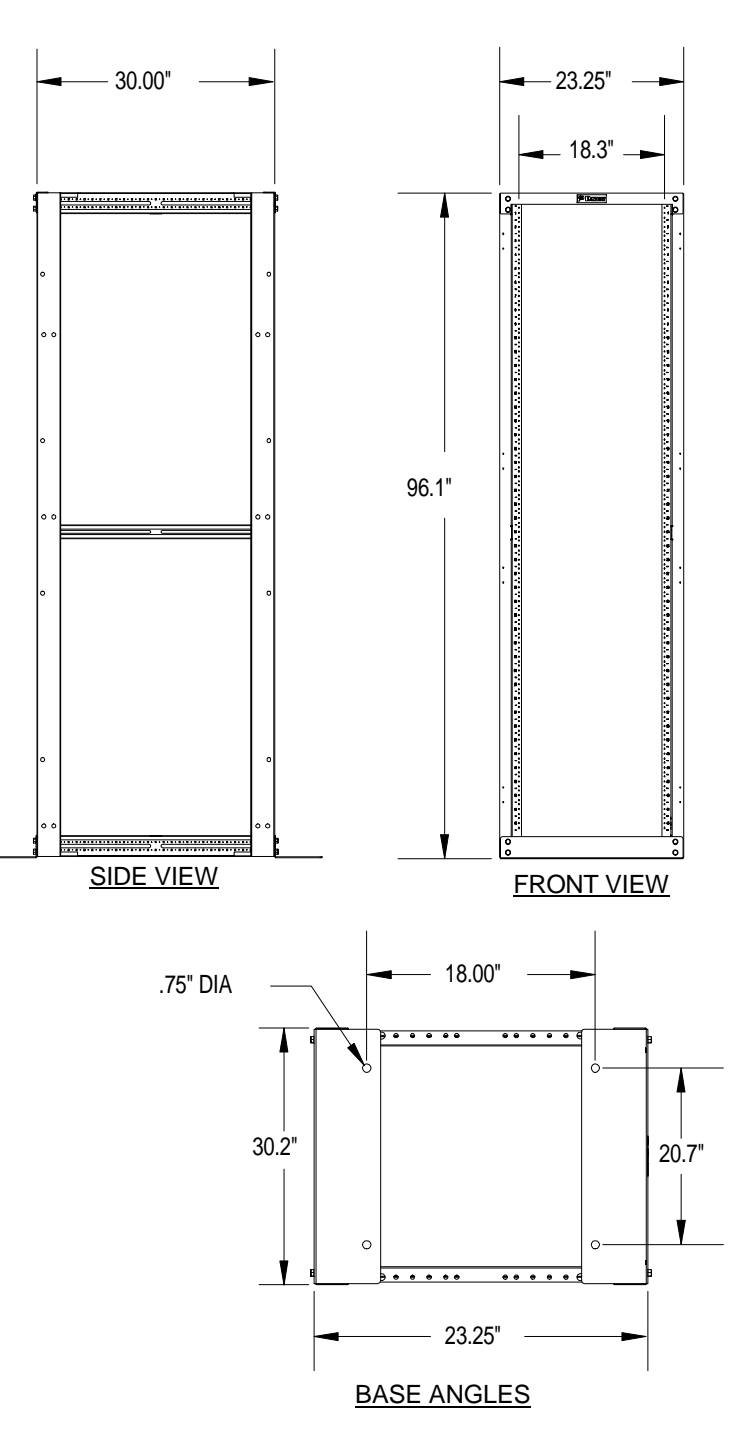
TYPICAL CROSS CONNECT



5
T0.02
NOT TO SCALE

48 PORT CAT 6A PATCH PANEL

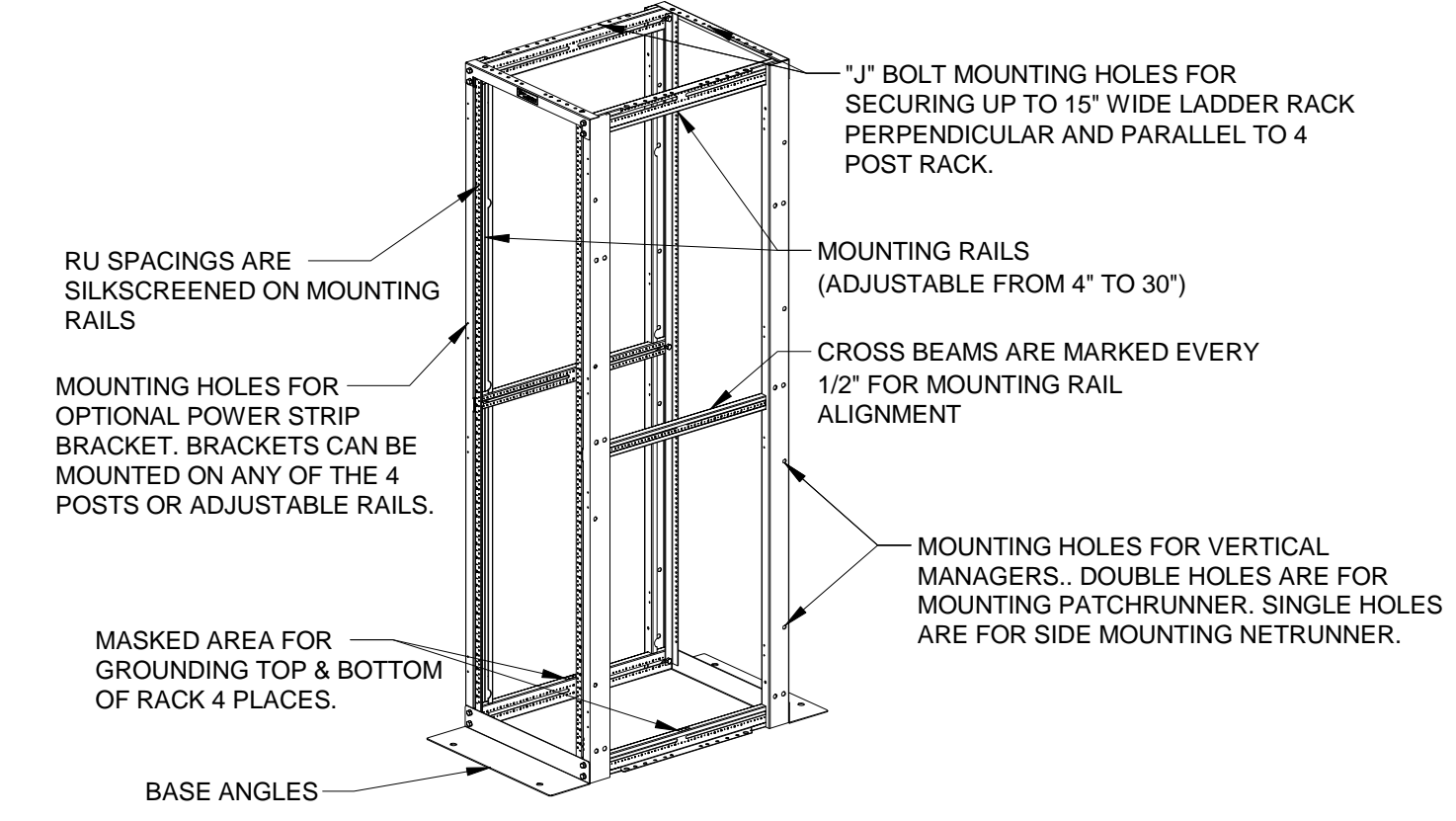
NOTE: PANELS SHALL BE UL LISTED, MEET NATIONAL ELECTRICAL CODE REQUIREMENTS AND SPECIFICATIONS FOR UL 1983, AND FULLY COMPLY WITH FCC PART 68 AND TIA-568-A CATEGORY 6.



6
T0.02
SCALE: N.T.S.

4 POST RACK

- NOTES:
- CAN BE USED WITH ANY EIA STANDARD COMPONENT IN ADDITION TO ALL PANDUIT HORIZONTAL CABLE MANAGEMENT AND PATCH PANEL PRODUCTS.
 - 52 AVAILABLE RACK SPACES.
 - RU SPACING NUMBERS ARE CLEARLY PRINTED ON MOUNTING RAILS.
 - EASY ASSEMBLY. ONE WRENCH NEEDED TO INSTALL BOLTS INTO WELDNUTS IN ALL 8 CORNERS.
 - FULLY BONDED STRUCTURE WHEN ASSEMBLED PER INSTRUCTIONS.
 - LOAD RATING - 2000 LBS.



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CLIENT:
ARCHITECT:
ARROWSTREET
ARCHITECTURE & DESIGN
10 POST OFFICE SQUARE
SUITE 700H
BOSTON, MA 02109
617-623-5555
www.arrowstreet.com

CONSULTANTS:
GARCIA GALUSKA DESOUSA
CONSULTING ENGINEERS, INC.
205 Parker Center Street, Suite D, Duxbury, MA 02019
978-948-0700 FAX: 978-948-1880 E: 196A-196B-01-01.com

PROJECT INFORMATION:
NECP
687 Watertown Street
Newton, MA 02460

ISSUANCE:
CONSTRUCTION DOCUMENTS

STAMP:

REVISIONS:

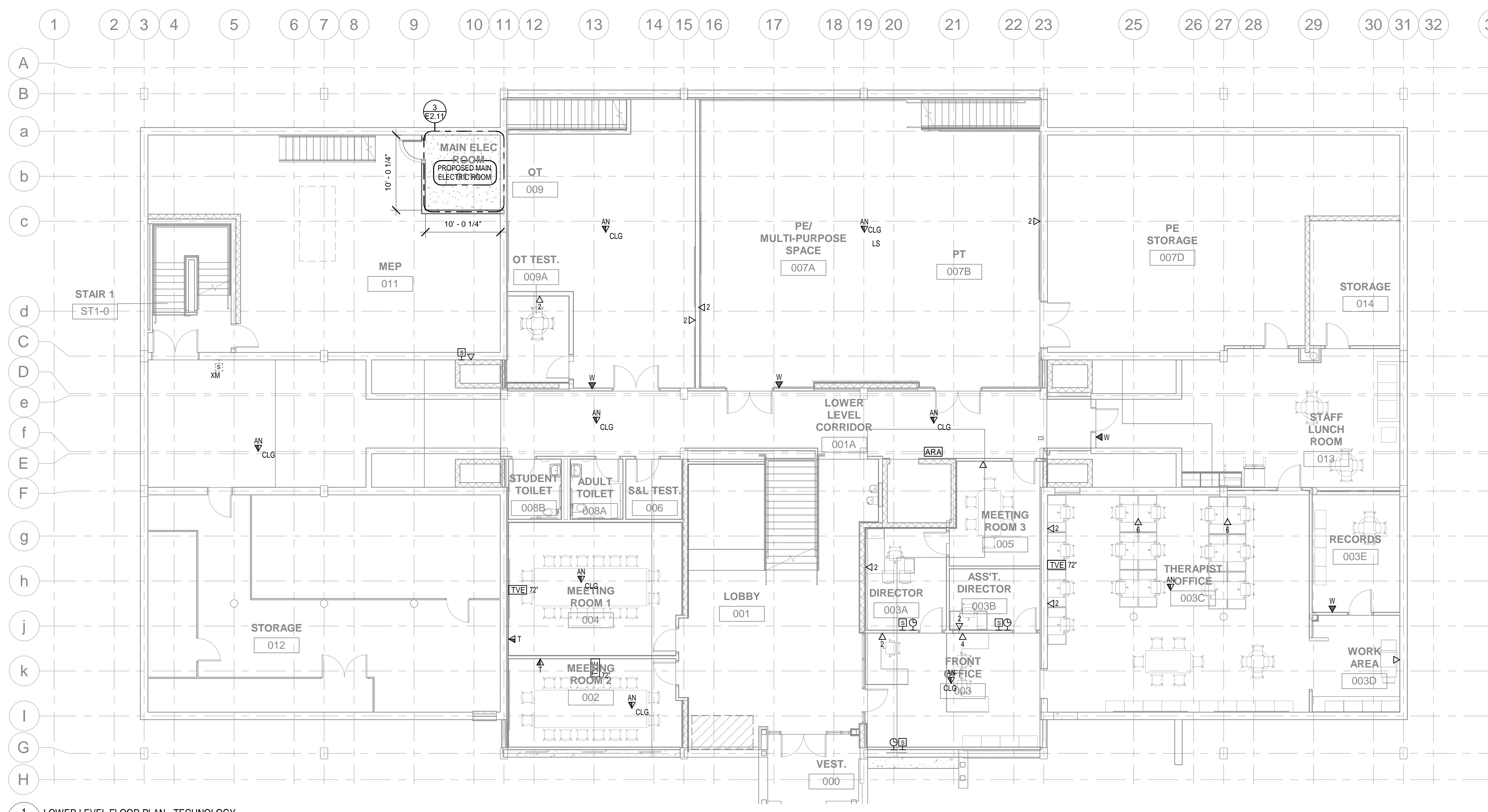
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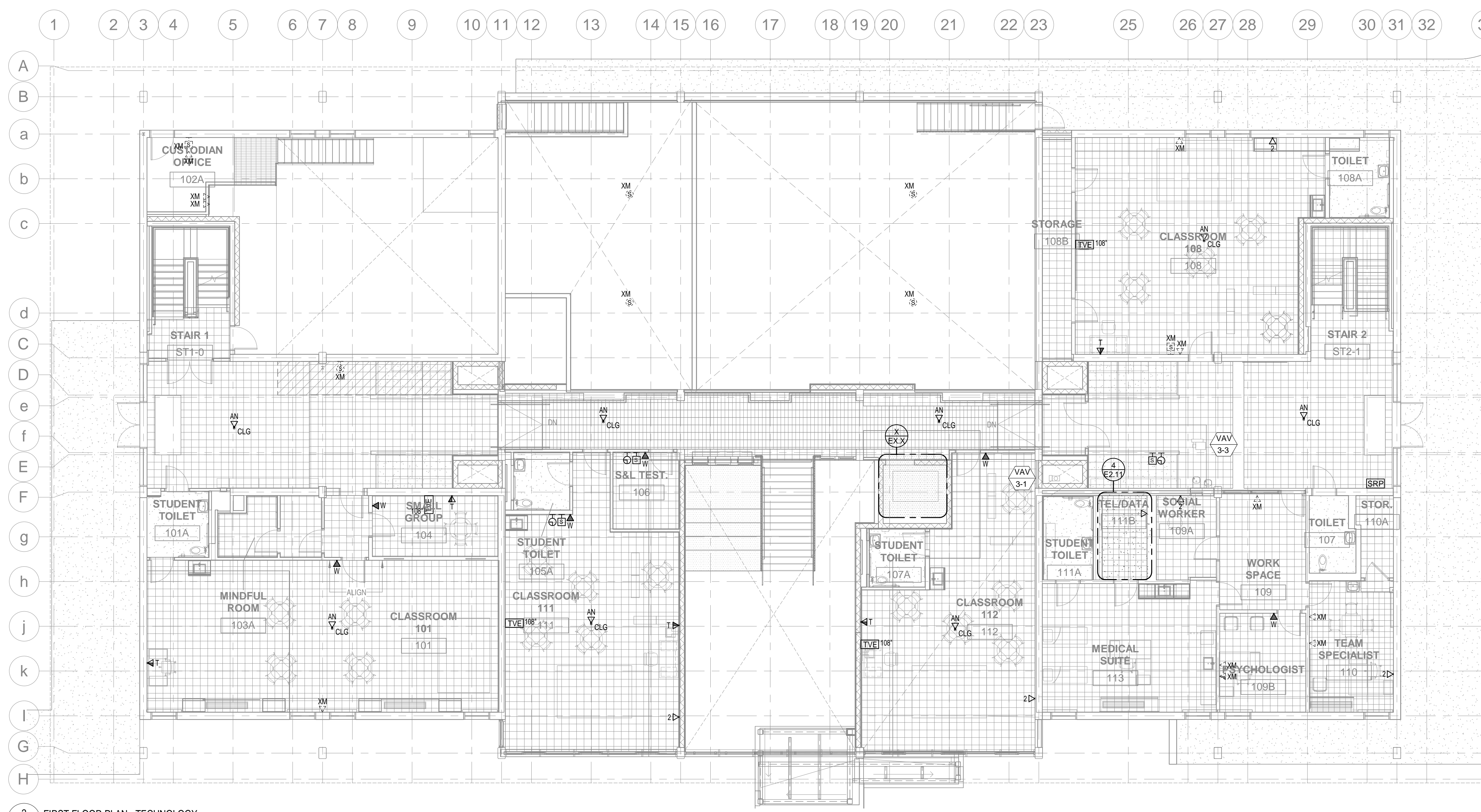
DRAWING TITLE:
TECHNOLOGY DETAILS

Project No.	19001
Dwn/Chk By	MFM/DMP
Date	02/28/20
Scale	

DRAWING NUMBER:
T0.02



1 LOWER LEVEL FLOOR PLAN - TECHNOLOGY
 T1.11 SCALE: 1/8" = 1'-0"



2 FIRST FLOOR PLAN - TECHNOLOGY
 T1.11 SCALE: 1/8" = 1'-0"

GENERAL TECHNOLOGY NOTES:

1. COMMUNICATIONS OUTLETS ARE SHOWN FOR REFERENCE PURPOSES. EXACT LOCATIONS WILL BE AS SHOWN ON ELECTRICAL DRAWINGS. COORDINATE INSTALLATION OF ALL CABLING WITH ELECTRICAL SUBCONTRACTOR.
2. KEEP COMMUNICATIONS CABLING AT LEAST 12" AWAY FROM POWER WIRING.
3. ALL CONDUITS AND JUNCTION BOXES TO BE PROVIDED UNDER DIVISION 260000. CONDUITS SHOWN ARE FOR REFERENCE ONLY.

CLIENT:



ARCHITECT:

ARROWSTREET
 ARCHITECTURE & DESIGN

10 POST OFFICE SQUARE
 SUITE 700A
 BOSTON MA 02109
 617.623.5555
 www.arrowstreet.com

CONSULTANTS:



GARCIA GALUSKA DESOUSA
 CONSULTING ENGINEERS
 205 Faxon Court West, Suite D, Derry, NH 03041-1528
 603.988.0700 FAX: 603.988.0803 E: NHGALUSKA@GMAIL.COM

PROJECT INFORMATION:

NECP

687 Watertown Street
 Newton, MA 02460

ISSUANCE:

CONSTRUCTION
DOCUMENTS

STAMP:

REVISIONS:

No.	Date	Description
1	7.22.19	SCHEM. DESIGN

PROJECT



DRAWING TITLE:

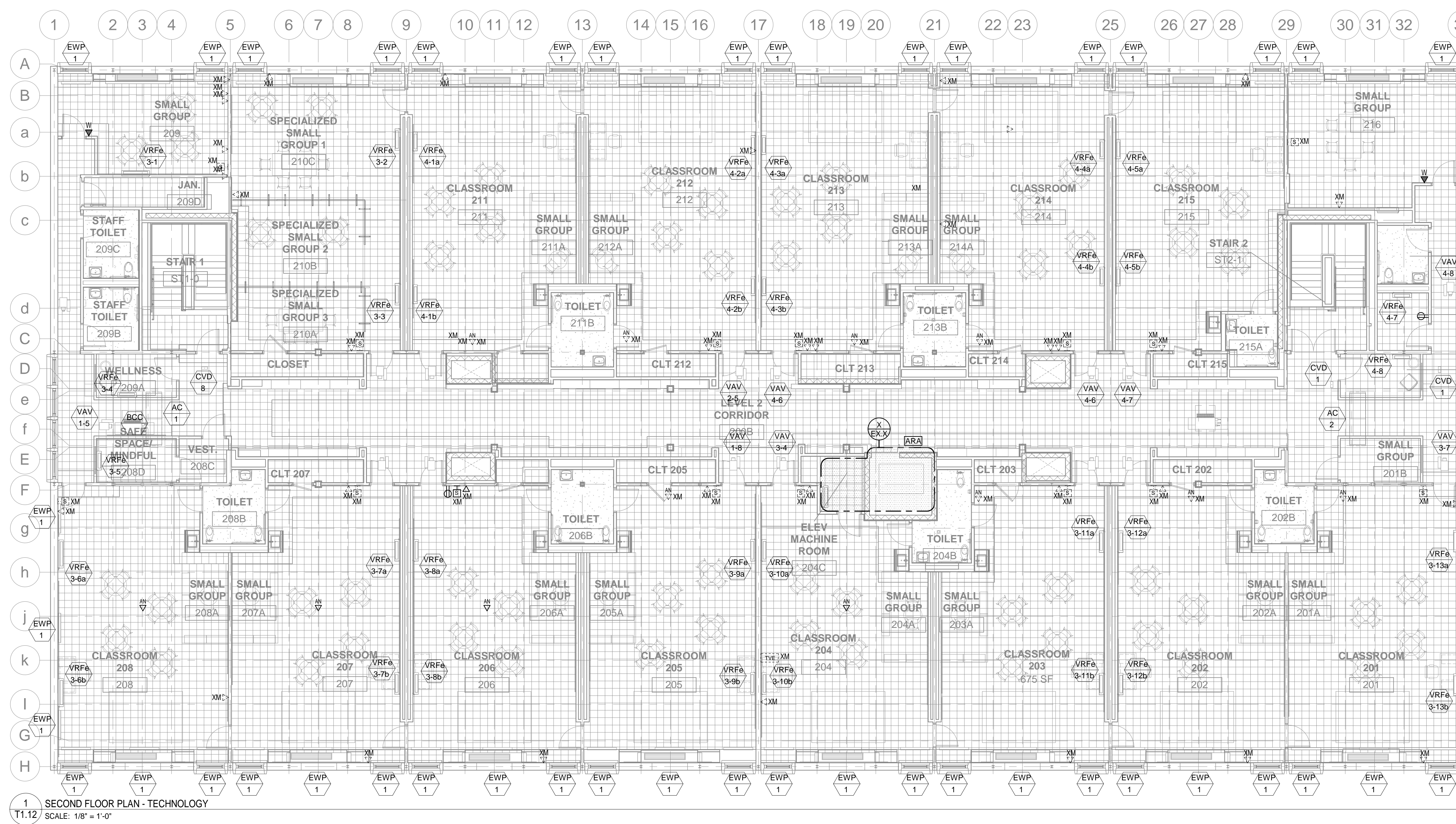
**LOWER LEVEL &
 FIRST FLOOR
 PLAN -
 TECHNOLOGY**

Project No. 19001
 Dwn/Chk By MFM/DMP
 Date 02/28/20
 Scale As indicated

DRAWING NUMBER:

T1.11

DRAWINGS ARE PROVIDED FOR COORDINATION OF LOCATIONS AND DEVICES. ANY REFERENCE TO WORK BY ELECTRICAL CONTRACTOR TO BE VOIDED. REFER TO INSTRUCTIONS TO BIDDERS FOR EXTENT OF SCOPE FOR THIS PROJECT.



GENERAL TECHNOLOGY NOTES:

1. COMMUNICATIONS OUTLETS ARE SHOWN FOR REFERENCE PURPOSES. EXACT LOCATIONS WILL BE AS SHOWN ON ELECTRICAL DRAWINGS. COORDINATE INSTALLATION OF ALL CABLEING WITH ELECTRICAL SUBCONTRACTOR.
2. KEEP COMMUNICATIONS CABLEING AT LEAST 1" AWAY FROM POWER WIRING.
3. ALL CONDUITS AND JUNCTION BOXES TO BE PROVIDED UNDER DIVISION 280000. CONDUITS SHOWN ARE FOR REFERENCE ONLY.

DRAWINGS ARE PROVIDED FOR COORDINATION OF LOCATIONS AND DEVICES. ANY REFERENCE TO WORK BY ELECTRICAL CONTRACTOR TO BE VOIDED. REFER TO INSTRUCTIONS TO BIDDERS FOR EXTENT OF SCOPE FOR THIS PROJECT.



ARCHITECT:
ARROWSTREET
ARCHITECTURE & DESIGN

10 POST OFFICE SQUARE
SUITE 700A
BOSTON MA 02109
617-623-5555
www.arrowstreet.com

CONSULTANTS:

GARCIA GALUSKA DESOUSA
CONSULTING ENGINEERS
205 Parker Center Plaza, Suite D, Dedham, MA 02017-1528
508-998-0262 FAX: 508-998-1882 E: 106A-1882@ga-ll.com

PROJECT INFORMATION:
NECP

687 Watertown Street
Newton, MA 02460

ISSUANCE:
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STAMP:

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1	7.22.19	SCHEM. DESIGN



DRAWING TITLE:
SECOND FLOOR & ROOF PLAN - TECHNOLOGY

Project No. 19001
Dwn/Chk By MFM/DMP
Date 02/28/20
Scale As indicated
DRAWING NUMBER:

T1.12



ARCHITECT:
ARROWSTREET
ARCHITECTURE & DESIGN

10 POST OFFICE SQUARE
SUITE 700A
BOSTON, MA 02109
617.623.5555
www.arrowstreet.com

CONSULTANTS:



GARCIA GALUSKA DESOUSA
CONSULTING ENGINEERS, INC.
205 Parker Center Road, Suite D, Duxbury, MA 02114
978.388.0700 FAX: 978.388.0800 E-MAIL: ggd@ggde.com

PROJECT INFORMATION:

NECP

687 Watertown Street
Newton, MA 02460

ISSUANCE:

CONSTRUCTION DOCUMENTS

STAMP:

REVISIONS:

No.	Date	Description
1	7.22.19	SCHEM. DESIGN

PROJECT:

TRUE NORTH



DRAWING TITLE:

TECHNOLOGY RISER DIAGRAM

Project No. 19001

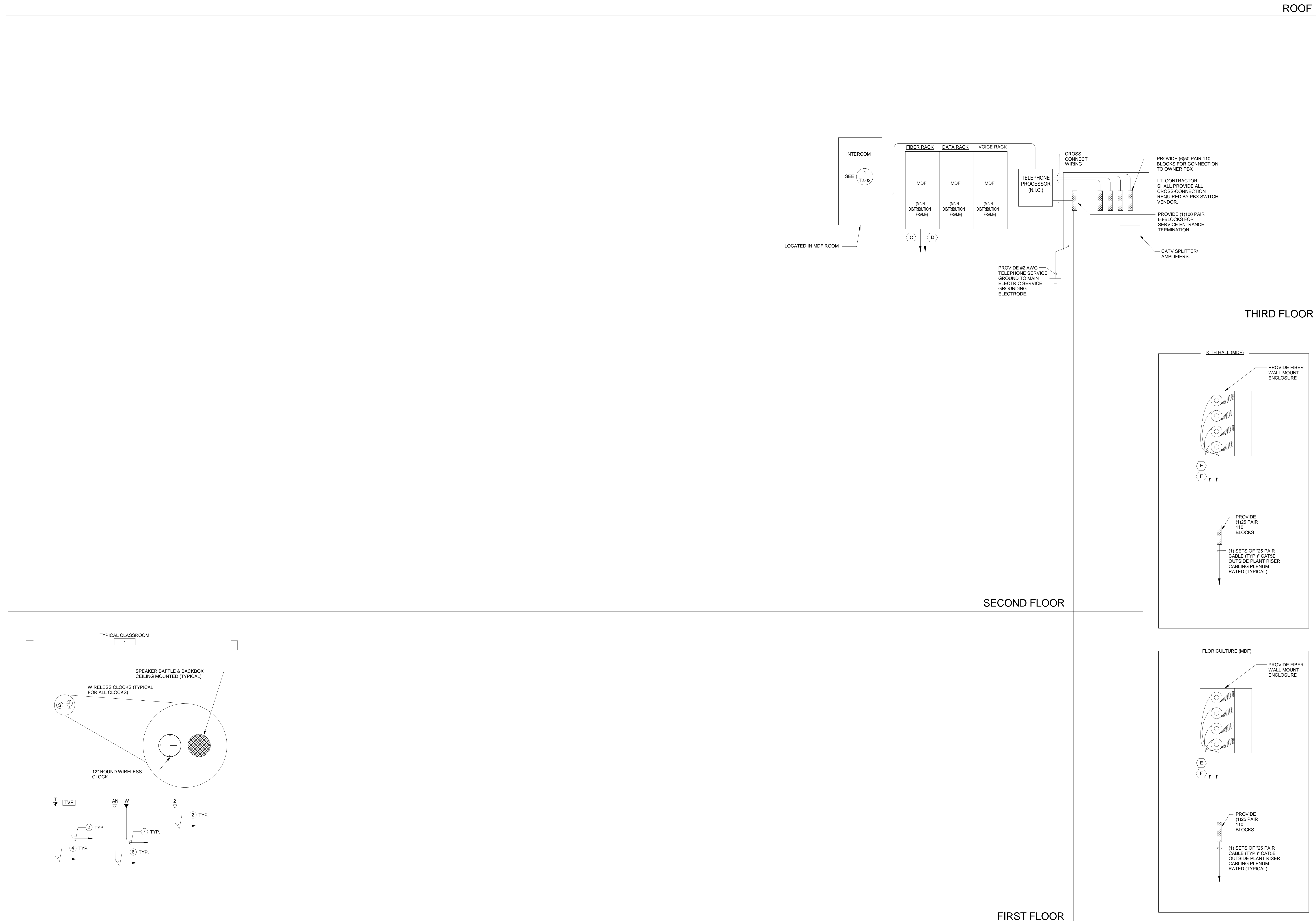
Dwn/Chk By MFM/DMP

Date 02/28/20

Scale

DRAWING NUMBER:

T2.01



NOTES:

- 1 - (1) CAT 6A UTP CABLES PLENUM RATED TO IDF/MDF DATA RACK IN BLOCKED AREA (TYPICAL)
- 2 - (2) CAT 6A UTP CABLES PLENUM RATED TO IDF/MDF DATA RACK IN BLOCKED AREA (TYPICAL)
- 3 - (4) CAT 6A UTP CABLES PLENUM RATED TO IDF/MDF DATA RACK IN BLOCKED AREA (TYPICAL)
- 4 - (1) CAT 6A UTP CABLE PLENUM RATED TO IDF/MDF DATA RACK IN BLOCKED AREA & (1) CAT 6A UTP CABLE PLENUM RATED TO IDF/MDF VOICE RACK IN BLOCKED AREA (TYPICAL)
- 5 - (2) CAT 6A UTP CABLES PLENUM RATED TO IDF/MDF DATA RACK IN BLOCKED AREA & (1) CAT 6A UTP CABLES PLENUM RATED TO IDF/MDF VOICE RACK IN BLOCKED AREA (TYPICAL)
- 6 - (2) CAT 6A UTP CABLES PLENUM RATED TO IDF/MDF DATA RACK IN BLOCKED AREA & (2) STRAND MULTI-MODE LASER OPTIMIZED ARMORED FIBER CABLE TO IDF/MDF IN BLOCKED AREA (TYPICAL)
- 7 - (1) CAT 6A UTP CABLE PLENUM RATED TO IDF/MDF VOICE RACK IN BLOCKED AREA (TYPICAL)

NOTE:

- A 12 STRAND MULTI-MODE FIBER CABLE TO MDF. INSTALL PLENUM RATED INNER-DUCT.
- B 6 STRAND SINGLE MODE 89 MICRON FIBER CABLE TO MDF. INSTALL PLENUM RATED INNER-DUCT.
- C 84 STRAND MULTI-MODE OUTSIDE PLANT FIBER CABLE TO MDF. INSTALL PLENUM RATED INNER-DUCT.
- D 42 STRAND SINGLE MODE 89 MICRON OUTSIDE PLANT FIBER CABLE TO MDF. INSTALL PLENUM RATED INNER-DUCT.
- E 12 STRAND MULTI-MODE OUTSIDE PLANT FIBER CABLE TO MDF. INSTALL PLENUM RATED INNER-DUCT.
- F 6 STRAND SINGLE MODE 89 MICRON OUTSIDE PLANT FIBER CABLE TO MDF. INSTALL PLENUM RATED INNER-DUCT.

1. THIS CONTRACTOR SHALL PROVIDE FOR A COMPLETE INSTALLATION. FURNISH ALL EQUIP., LABOR, WIRING AND OUTLETS REQUIRED FOR A COMPLETELY OPERATIONAL SYSTEM.

2. ALL WIRING SHALL BE IN ACCORDANCE WITH EQUIPMENT SUPPLIER. COORDINATE ALL WIRING REQUIREMENTS PRIOR TO ROUGHING-IN.

3. PROVIDE APPROPRIATE QUANTITIES OF DATA PATCH PANELS TO ACCOMMODATE ALL RESPECTIVE DATA CIRCUITS.

4. PROVIDE CAT 6A PATCH CORDS TO MATCH TOTAL QUANTITY OF PATCH PANEL PORTS AT BOTH MDF/IDF AND WORK STATION.

DRAWINGS ARE PROVIDED FOR COORDINATION OF LOCATIONS AND DEVICES. ANY REFERENCE TO WORK BY ELECTRICAL CONTRACTOR TO BE VOIDED. REFER TO INSTRUCTIONS TO BIDDERS FOR EXTENT OF SCOPE FOR THIS PROJECT.

MAIN DISTRIBUTION FRAME MDF					
LOCATION: MDF (MDF XXX)					
CAT 6A (RJ45) VOICE PORT			CAT 6A (RJ45) DATA PORTS		
USED	SPARE	PATCH PANEL SIZE	USED	SPARE	PATCH PANEL SIZE
-	-	(-) 48 PORT	-	-	(-) 48 PORT

INTERMEDIATE DISTRIBUTION FRAME IDF					
LOCATION: IDF-1B (XXX)					
USED	SPARE	PATCH PANEL SIZE	USED	SPARE	PATCH PANEL SIZE
-	-	(-) 48 PORT	-	-	(-) 48 PORT

INTERMEDIATE DISTRIBUTION FRAME IDF					
LOCATION: IDF-2B (XXX)					
USED	SPARE	PATCH PANEL SIZE	USED	SPARE	PATCH PANEL SIZE
-	-	(-) 48 PORT	-	-	(-) 48 PORT

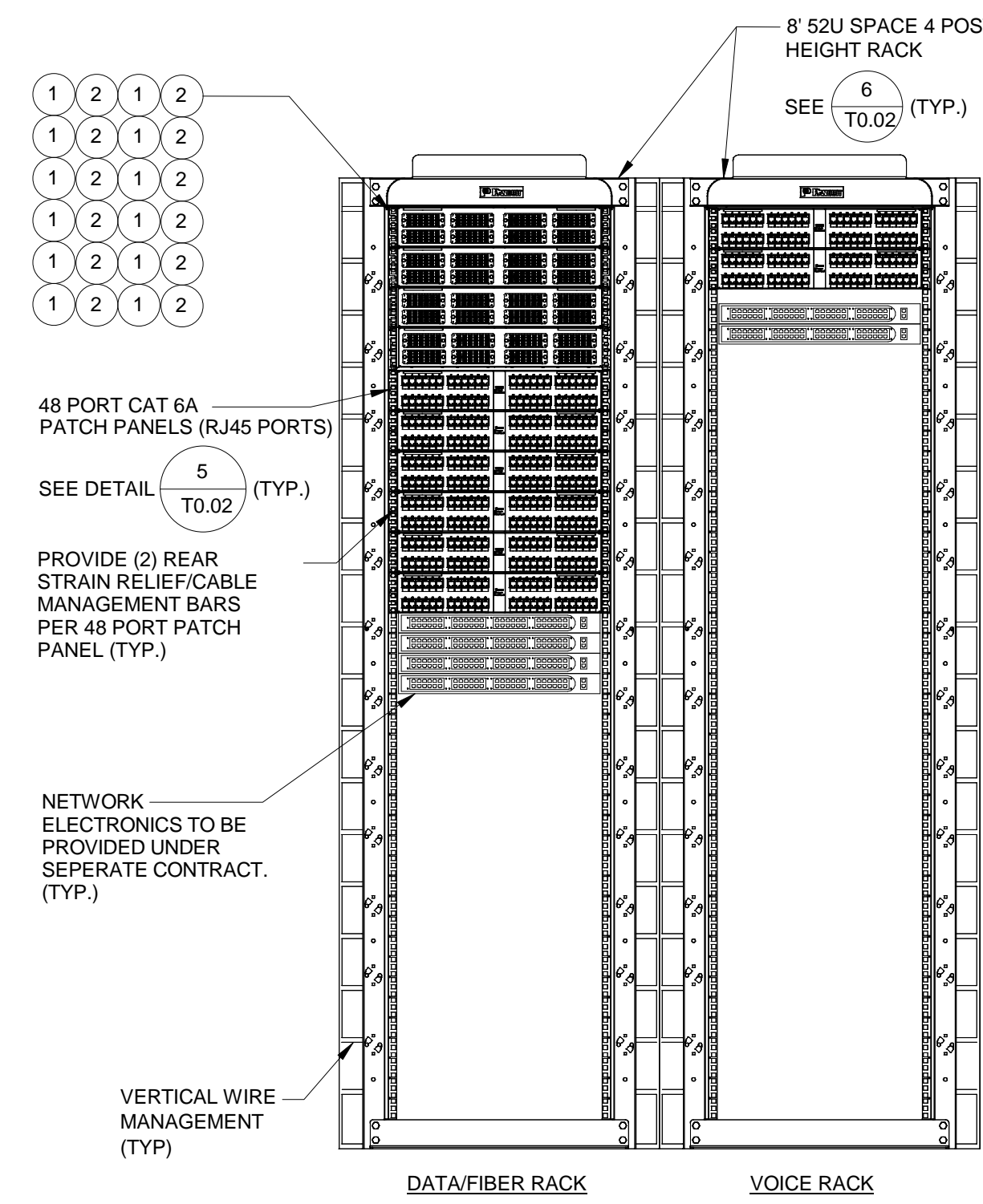
QUANTITY OF DEVICES			
MDF (MDF XXX)			
	DATA (CAT 6A)	VOICE (CAT 6A)	
∇	-	-	-
2	-	-	-
∇	-	-	-
4	-	-	-
∇	-	-	-
AN	-	-	-
∇	-	-	-
TVSD	-	-	-
∇	-	-	-
W	-	-	-
∇	-	-	-
TVL	-	-	-
∇	-	-	-
TVC	-	-	-
TOTAL	-	-	-

QUANTITY OF DEVICES			
IDF-1B (DATA XXX)			
	DATA (CAT 6A)	VOICE (CAT 6A)	
∇	-	-	-
2	-	-	-
∇	-	-	-
4	-	-	-
∇	-	-	-
AN	-	-	-
∇	-	-	-
TVSD	-	-	-
∇	-	-	-
W	-	-	-
∇	-	-	-
TVL	-	-	-
∇	-	-	-
TVC	-	-	-
TOTAL	-	-	-

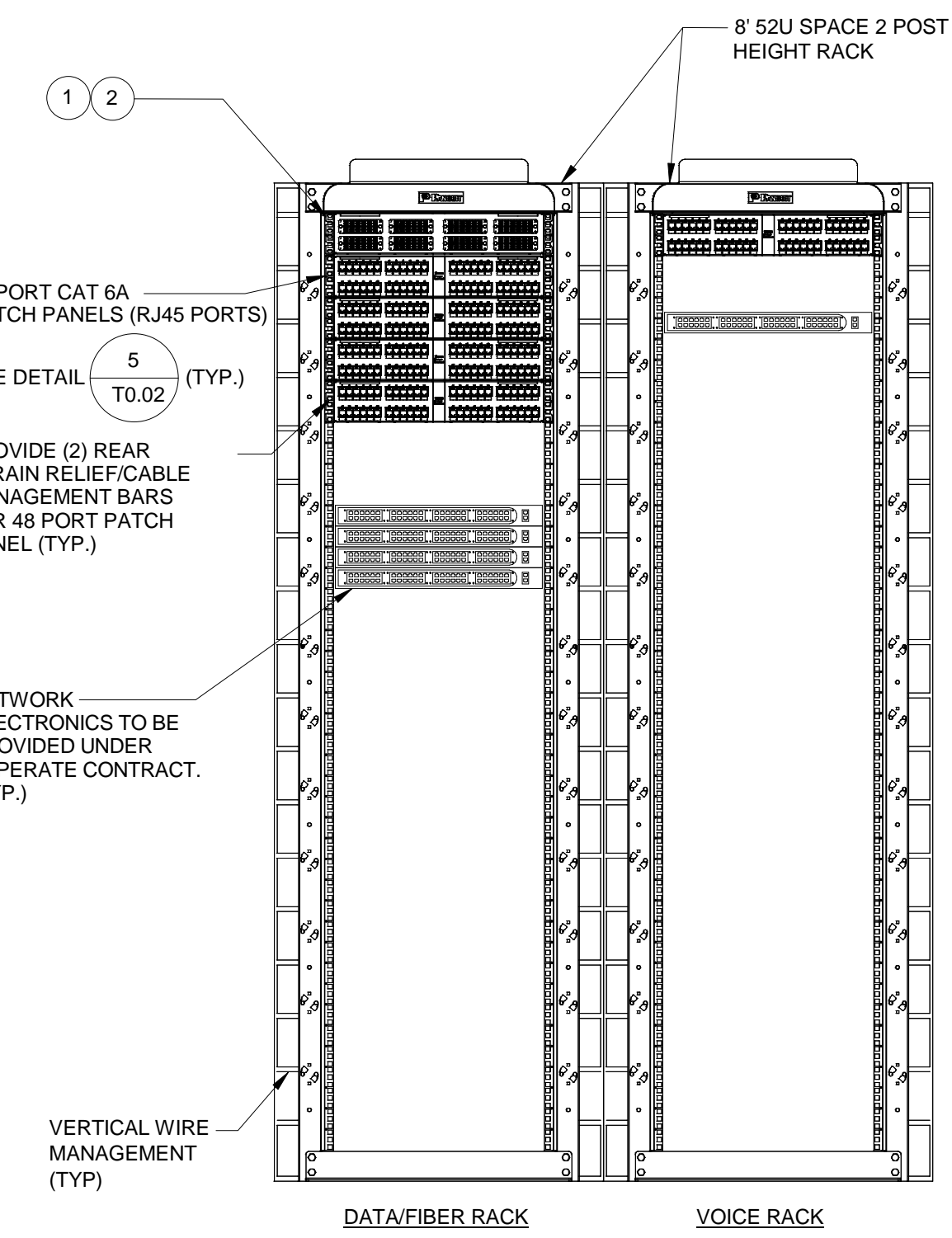
QUANTITY OF DEVICES			
IDF-2B (DATA XXX)			
	DATA (CAT 6A)	VOICE (CAT 6A)	
∇	-	-	-
2	-	-	-
∇	-	-	-
4	-	-	-
∇	-	-	-
AN	-	-	-
∇	-	-	-
TVSD	-	-	-
∇	-	-	-
W	-	-	-
∇	-	-	-
TVL	-	-	-
∇	-	-	-
TVC	-	-	-
TOTAL	-	-	-

CABLE/FIBER SCHEDULE

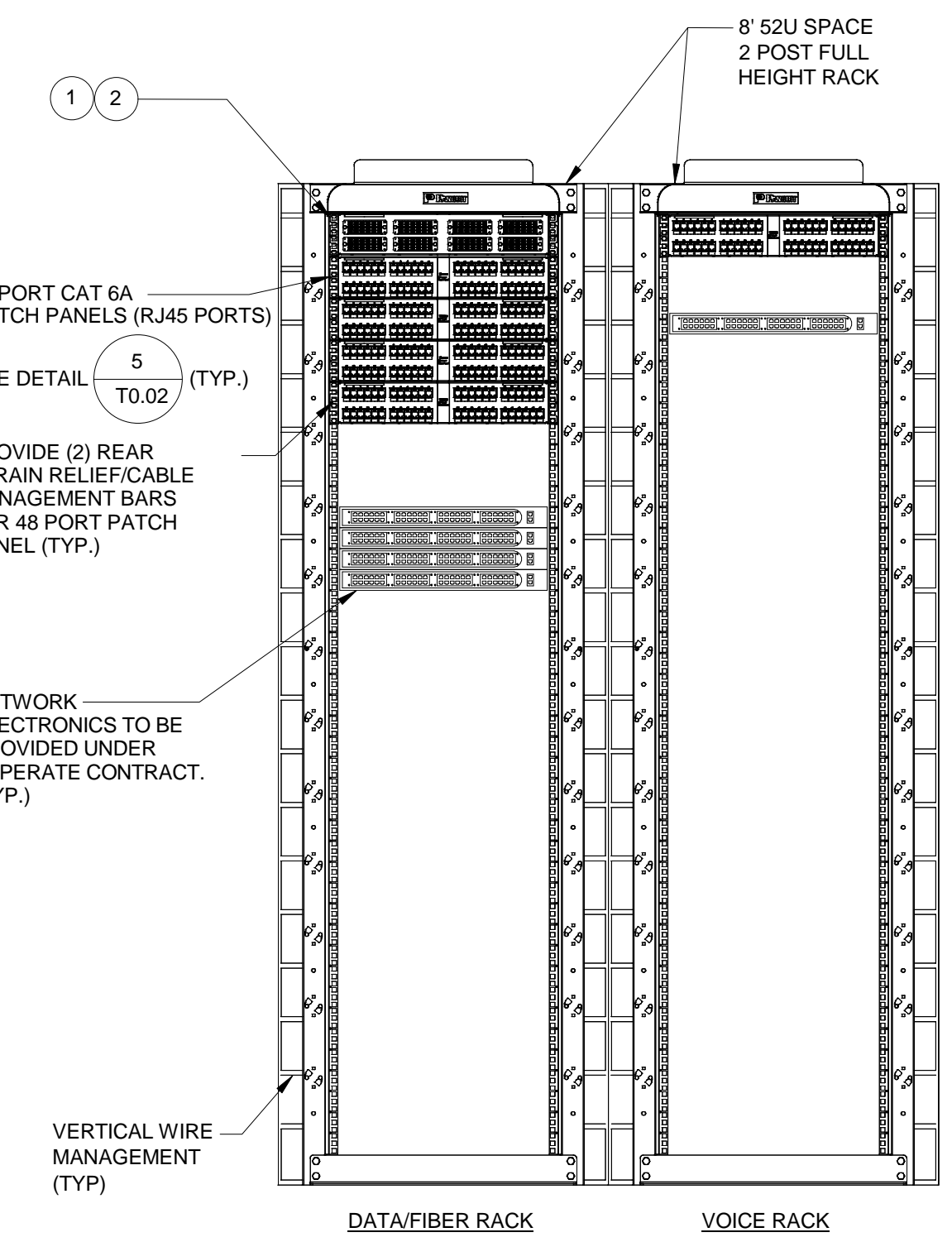
- 1 FIBER OPTIC MULTIMODE L1U (LIGHTGUIDE INTERFACE UNIT) PATCH PANEL (12 PORT - SC CONNECTORS) - PREMISES DISTRIBUTION
- 2 FIBER OPTIC SINGLEMODE L1U (LIGHTGUIDE INTERFACE UNIT) PATCH PANEL (6 PORT - ST CONNECTORS) - PREMISES DISTRIBUTION
- 3 FIBER OPTIC SINGLEMODE L1U (LIGHTGUIDE INTERFACE UNIT) PATCH PANEL (12 PORT - ST CONNECTORS) - PREMISES DISTRIBUTION



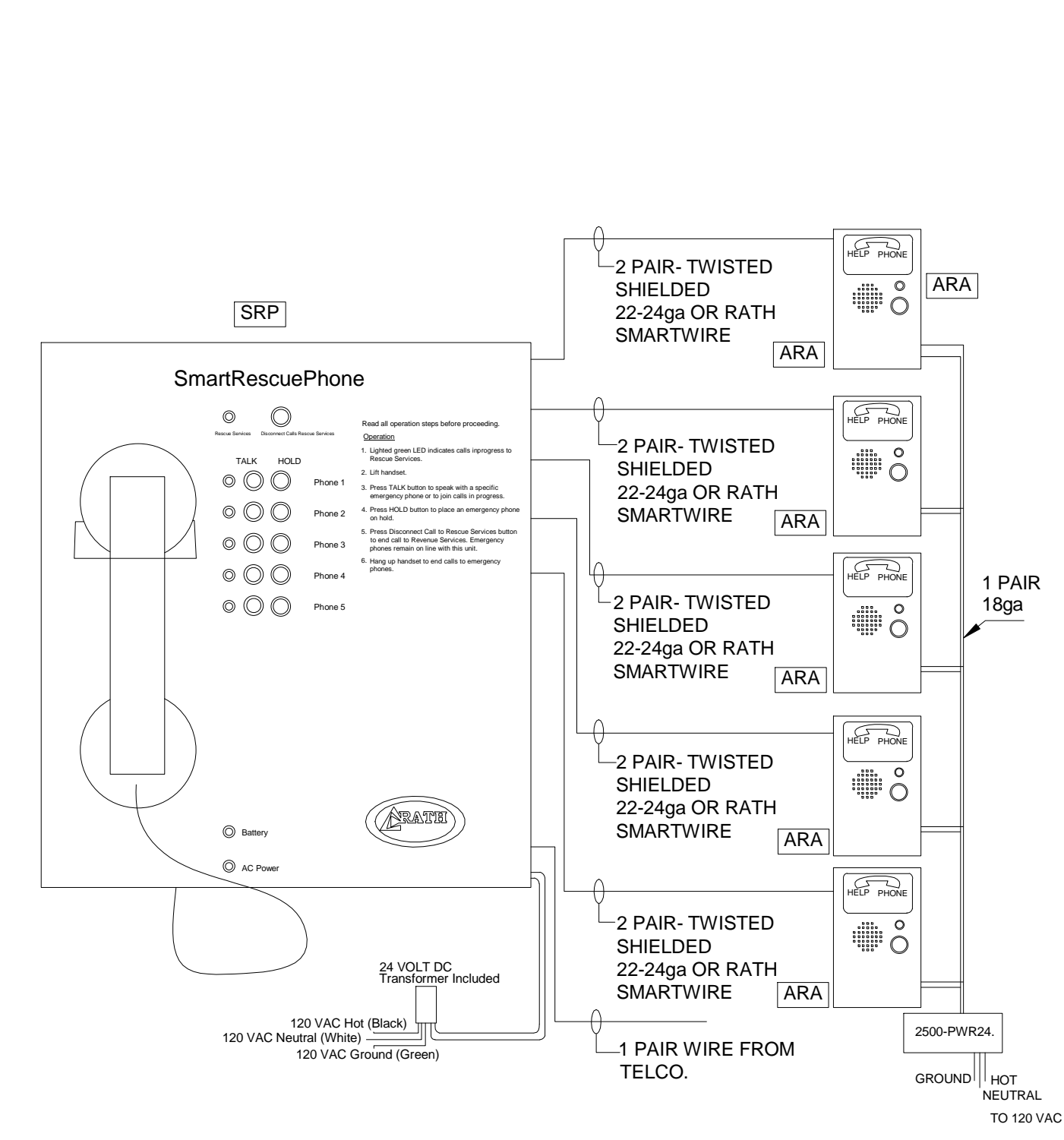
1 MDF DETAIL
T2.02 NOT TO SCALE



2 TYPICAL IDF DETAIL
T2.02 NOT TO SCALE



3 TYPICAL IDF DETAIL
T2.02 NOT TO SCALE



4 SMARTRESCUE BASE STATION WIRING DIAGRAM
T2.02 SCALE: N.T.S.

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ARCHITECT:
ARROWSTREET
ARCHITECTURE & DESIGN

10 POST OFFICE SQUARE
SUITE 700A
BOSTON, MA 02109
617.623.5555
www.arrowstreet.com

CONSULTANTS:



GARCIA GALUSKA DESOUSA
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NECP

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Newton, MA 02460

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DRAWING TITLE:

TECHNOLOGY DETAILS

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Date	02/28/20
Scale	

DRAWING NUMBER:

T2.02