Technology Request for Bid

Trenton Public Schools

Communications by Design, Inc.
Proprietary Information – All Rights Reserved

SECTION 00 01 10
TABLE OF CONTENTS

DIVISION 00 - BIDDING AND CONTRACT REQURIEMENTS

Section	*Description*
00 01 01	Cover Page
00 01 10	Table of Contents
00 11 16	Invitation to Bid
00 40 00	Bid Forms
00 21 13	Instructions to Bidders
00 65 00	Contract Close-out

DIVISION 27 - TECHNOLOGY SYSTEMS

Section	*Description*
27 21 33	Wireless Network

APPENDICES

Section	*Description*
A	Wireless Network Building Diagrams

END OF SECTION

SECTION 00 11 16
INVITATION TO BID

PART 1 - GENERAL

1.01 WORK INCLUDED: DISTRICT TECHNOLOGY RENOVATIONS

A. Trenton Public Schools (Owner) is seeking bids for wireless equipment and installation. Proposed systems shall be configured and installed to service Owner's needs across multiple instructional facilities, and as described herein.

B. Project: DISTRICT TECHNOLOGY RENOVATIONS

C. Owner: Trenton Public Schools
2603 Charlton Road
Trenton, Michigan 48183

D. Designer: Communications by Design, Inc.

1. Sites of Work: Anderson Elementary
2600 Harrison Avenue
Trenton, Michigan 48183

2. Hedke Elementary
3201 Marian
Trenton, Michigan 48183

3. Arthurs Middle School
4000 Marian
Trenton, Michigan 48183

4. Trenton High School
2601 Charlton
Trenton, Michigan 48183

5. Trenton Administration Building
2603 Charlton
Trenton, Michigan 48183

1.02 GENERAL DESCRIPTION OF PROJECT SEQUENCE

A. Sequences and dates specified herein are for information only and indicate the plan and intent of the Owner. Actual dates shall be established based on final award of project.

B. Sequence of operations shall be established by the Contractor within the guidelines established by the Owner as required to meet schedules.

C. Schedule:

1. Request for Bid Distributed: October 26, 2026

2. Pre-Bid Meeting: November 9, 2026 at 11:00am

3. Intent to Bids Due: November 11, 2026 by 5:00pm

4. Question and Clarification Deadline: November 11, 2026 by 5:00pm

5. Public Bids Due: December 3, 2026 at 10:00am

1.03 TYPES OF BIDS

A. Bids shall be submitted in total and with required detail for each item bid and as is required herein and include all portions of the work identified for the individual bid package as specified herein. Bids shall be made on unaltered bid forms as included herein. Bidder shall fill in all blank spaces and the bid shall be signed by a legal officer or agent authorized to bind the bidder to a contract.

1.04 PRE-BID CONFERENCE

A. A pre-bid conference will be held. A discussion of the project and review of bid documents will be followed by a site review and an opportunity to ask questions. Attendance is highly encouraged for all contractors interested in bidding on any components or portions of this project. Attendance at the pre-bid conference will be a factor considered during evaluation of bids.

1. Date: November 9, 2026 at 11:00am

2. Location: Trenton Public Schools Administration Building
2603 Charlton Road
Trenton, Michigan 48183

B. Any drawings identified in the table of contents herein will be distributed and reviewed at this conference.

C. Physical building inspections of sites of work will be provided for at this time.

1.05 TIME AND PLACE OF BID RECEPTION

A. Physically sealed bids for the base bid work will be received at the district office and read aloud at a public opening. Bids arriving after the appointed time as determined by the Owner's representative conducting the public opening, shall be returned unopened. Bids will be accepted beginning forty-eight (48) hours prior to the appointed opening time provided they are in sealed packages and addressed as specified herein.

1. Bid Receipt Deadline: December 3, 2026 at 10:00am

2. Bid Opening Location: Trenton Public Schools Administration Building
   2603 Charlton Road
   Trenton, Michigan 48183

B. Faxed or electronically delivered bids will not be accepted.

1.06 EXAMINATION AND PROCUREMENT OF DOCUMENTS

A. Specifications and any relevant Drawings may be obtained from the Technology Designer. Contractors may obtain copies by documented request to Communications by Design, Attn: Rebecca Szilagy. Requests may be made by:

1. Writing – 4101 Sparks Drive SE Grand Rapids, MI 49546

2. Email – rszilagy@cbdconsulting.com

1.07 BID SECURITY

A. Bid security equal to five percent (5%) of the total bid amount, must accompany each base bid in accordance with the Instruction to Bidders.

B. Bid security shall be either a Bid Bond issued by a company licensed in the State of Michigan to furnish bid security or Certified Check made payable to the Owner.

1.08 PERFORMANCE BOND COVERAGE

A. Selected Contractor(s) will be required to provide a performance bond and payment bond in an amount equal to one hundred percent (100%) of the bid amount including any accepted alternates at the Owner's discretion. Such bonds shall be issued by surety licensed by the State of Michigan and acceptable to the Owner.

1.09 UNIVERSAL SERVICE FUND (USF) CONDITIONS

A. IDENTIFICATION NUMBER – the service provider's USF Service Provider Identification Number (SPIN) must be current and included in the Bid. Direct all questions regarding the USF requirements in this document to the Universal Service Administrative Company (USAC), Schools and Libraries Division (SLD) at (888) 203-8100.

B. FUNDING REQUESTS (FY27 E-rate) - The specified products and/or services are to be provided for FY27 (April 1, 2027-June 30, 2027) and qualify for universal service discounts under the FY27 universal service support mechanism, E-rate.

C. UNIVERSAL SERVICE DISCOUNTS – The service provider contract may be conditional upon the Owner receiving universal service discounts under the FY27 universal service support mechanism, E-rate. The Owner reserves the unrestricted right to change the contract amount by adding to, and/or reducing the amount of services and/or products in order to meet budget requirements in the event the level of universal service discounts is changed. Any such adjustments to the contract amount will be taken prior to the start of the specific work being adjusted or eliminated on a given building and/or project.

D. UNIVERSAL SERVICE DISCOUNT IMPLEMENTATION – The Owner reserves the unrestricted right to specify the filing option for the universal service discount for each product and/or service offered within the Bid: Billed Entity Applicant Reimbursement (BEAR) or Service Provider Invoice (SPI).

E. ELIGIBLE PRODUCTS AND SERVICES – The USF eligible products and/or services identified on the USAC FY27 (2026-2027) Eligible Services List, which is incorporated herein by reference, must be identified separately from any and all "ineligible" products and/or services in the Bid. Bidder shall note eligibility of items on required Schedule of Values form(s).

F. FUNDING AVAILABILITY – Owner may or may not elect to proceed with project in whole or, or in part based on multiple possible sources of funding. Approval of E-rate funding will not be the sole criteria for Owner approval to proceed with any/all/some implementation activity on or after April 1, 2027.

1.10 OWNER'S RIGHT TO REJECT BIDS

A. The Owner reserves the right to reject any and/or all bids. The Owner reserves the right to accept a bid, or portion thereof by issuance of a valid purchase order within ninety (90) calendar days following the bid opening. No bids may be withdrawn during this time without the specific approval of the Owner.

B. Withdrawal of any Bids after the opening time without specific approval by Owner may result in forfeiture of required bid security by Bidder.

1.11 DEFINITIONS

A. "Owner" is intended to mean Trenton Public Schools a general powers school district.

B. For purposes of this project, the terms "Architect", "Engineer" and "Designer" are used synonymously to refer to Communications by Design, Inc., a Michigan Corporation.

C. The term "Bidder" refers to any organization properly and accurately submitting a complete "Intent to Bid Form" prior to the required time

specified herein and subsequently properly submitting completed set of bid documents as specified herein.

D. The term “Contractor” herein is a reference to the firm(s) eventually selected by the Owner to provide the intended system(s), or any portion thereof, and fulfill the terms of the contract.

E. The term Contract is a reference to the collective set of documents, drawings, diagrams, Owner’s Purchase Order, Addenda and all other materials as provided for herein defining arrangement between Owner and Contractor.

F. The term Addenda (or Addendum) are that portion of the Contract consisting of modifications, amendments, deletions or substitutions to the contract documents issued prior to the execution of the Contract.

END OF SECTION

SECTION 00300
BID FORMS

Intent to Bid Form

Complete and submit the following form if you have interest or intend to submit a Bid for this project. Unaltered and completed forms must be received on or before 5:00 PM on November 11, 2026. Only bidders returning a completed "Intent to Bid Form" will be directly notified of required addenda.

Company Information

Name: _____

Address Line1: _____

Address Line2: _____

City, State and Zip Code _____

Primary Contact Information

Name: _____

Phone No.: _____

Fax. No.: _____

E-Mail Address: _____

_

Portions of the bid for which you will be responding:

☐ Section 27 21 33 – Wireless Network

Submit unaltered and completed form to:

Rebecca Szilagy
Communications by Design, Inc.
rszilagy@cbdconsulting.com

SEALED BID LABEL

Separate, or fold over, the label on the line below, and affix to the exterior of sealed container so information is clearly visible for Bid Submission. Ensure label is attached in a manner to prevent accidental removal or defacement. Label shall serve as sole identification for sealed bid at submission.

BID TO: Trenton Public Schools
Attention: Stephanie O'Connor
2603 Charlton Road
Trenton, Michigan 48183

BID FROM: _____

_____

_____

PROJECT: DISTRICT TECHNOLOGY RENOVATIONS
TECHNOLOGY BID #3111

INCLUDING ADDENDA: Addendum No._____Dated_____
Addendum No._____Dated_____

DUE: December 3, 2026 at 10:00am

BID FORM

BID TO: Trenton Public Schools
Attention: Stephanie O'Connor
2603 Charlton Road
Trenton, Michigan 48183

BID FROM: _____

_____

_____

PROJECT: DISTRICT TECHNOLOGY RENOVATIONS
TECHNOLOGY BID #1111

The undersigned, having familiarized themselves with all local conditions affecting the cost of work, and having examined the site and all applicable Bidding Documents herein, and herein referenced, including, but not limited to, all addenda issued thereto, hereby propose to furnish all labor, material, equipment, applicable taxes and services required for proper completion of each of the following categories of this project for the sum of:

Bid Category _____ Title_____

_____Dollars ($_____).
Said amount written above constituting the Base Bid

TAXES:
Bid sum includes all applicable taxes.

ALLOWANCES:
Base bid includes all applicable allowance cost(s) as set forth herein.

COST OF BONDS:
Bid sum includes cost of furnishing a Performance Bond and Labor and Material Payment Bond, each in the amount of one hundred percent (100%) of the bid.

ACKNOWLEDGEMENT OF ADDENDA:
The following addenda have been received, are hereby acknowledged, and their execution is included in both base bid and alternate bids herein.

Addendum No._____Dated_____ Addendum No._____Dated_____

ALTERNATES:
Based bid amount may be increased or decreased in accordance with each of the following alternate bids as may be selected, following procedures stated herein. Voluntary Alternates shown below are identified and described in detail on appropriate attachment(s) as referenced herein.

Mandatory Alternate A _____

Voluntary Alternate A _____

Voluntary Alternate B _____

PRINCIPAL SUBCONTRACTORS
As required herein, the following Subcontractors are proposed to be used for this project:

Legal Name:_____Work Proposed_____

Legal Name:_____Work Proposed_____

BID SECURITY:
Accompanying this Bid, as required herein, is a bid security in the form of Certified Check/Cashier's Check/Bidder's Bond in the amount of:

_____ Dollars ($_____),
payable to the Owner, which it is agreed, shall be retained as liquidated damages, not as a penalty, by the Owner, if the undersigned fails to execute the Contract in conformity with the form of Contract incorporated and referenced herein and fails to furnish specified bonds within ten (10) days after date of issuance of a Letter of Intent to the undersigned.

If awarded the Contract, the undersigned agrees to commence work within ten (10) calendar days after date of issuance of a Purchase Order, which shall be considered as the notice to proceed, and agrees to complete the work in accordance with the schedule herein.

FAMILIAL DISCLOSURE:
Accompanying this Bid, as required herein, is a legally executed and notarized Michigan Familial Disclosure Statement.

EXCEPTIONS:
Bidder takes no exception to terms, conditions, specifications and/or any other requirements herein unless expressly noted, and specifically identified as provided for herein on unaltered Contract Exception form accompanying this Bid.

SIGNATORY AUTHORITY:
The undersigned certifies they are an authorized agent of the bidding entity, and legally able to bind the bidding entity to the terms, conditions and responsibilities of this, and all referenced bid documents. Furthermore, the undersigned acknowledges an understanding that non-compliance of this authority or any other bidding requirements may result in forfeiture of bid security and/or dismissal of consideration of bid submitted.

AGREEMENT:

The undersigned agree(s) to provide the post-bid information required within ten (10) days after notification of a Letter of Intent and to execute an agreement for work covered by this Bid on the Owner's standard Purchase Order for which terms and conditions are expanded to include all Bidding Documents and subsequent addenda issued thereto.

In submitting this bid, it is understood that the Owner reserves the right to reject any or all bids. It is further agreed that this bid is binding for a period of Ninety (90) days from the opening thereof.

Respectfully submitted,

Date: _____

Firm Name: _____

By: _____

Signed: _____

Title: _____

Official Address: _____

_____

Telephone Number: _____

Fax Number: _____

Primary Contact Email Address: _____

(If Corporation, affix Seal

Michigan Familial Relationship Disclosure Statement

In accordance with Section 1267 of Michigan Revised School Code this sworn and notarized statement of an authorized representative, discloses any familial relationship between the owner and/or any employee of the Bidder, and any member of the project Owner's governing Board(s) or Superintendent(s).

If any conflict of interest is discovered subsequent to submission of bid, written disclosure shall be submitted to the project Owner within seven (7) days of discovery. The project Owner reserves the right to immediately terminate any contract with Bidder upon notification of a conflict of interest. Upon such termination, the project Owner shall compensate Bidder only for the value of any goods or services provided to the Owner prior to such termination as determined by Designer.

(Check only one Box Below)

It is hereby acknowledged and certified by Bidder that no familial relationship exists between the owner or any employee of the Bidder and any member of the project Owner's governing Board(s) or Superintendent(s).

A familial relationship exists between the owner or an employee of the Bidder and a member of the project Owner's governing Board(s) or Superintendent(s). The person(s) and the relationship(s) are as follows:

Bidder	***Board or Superintendent***
_____	_____
_____	_____
_____	_____
_____	_____

Bidder Authorized Representative:

Bidder: _____

Representative's Signature: _____

Print or Type Name: _____

Representative's Title: _____

Subscribed and sworn this _____ day of _____, 2026.

In the County of _____ State of _____

By _____ Seal or Stamp:
Notary Public Signature

My commission expires on: _____

AFFIDAVIT OF COMPLIANCE – IRAN ECONOMIC SANCTIONS ACT
Michigan Public Act No. 517 of 2012

The undersigned, the owner or authorized officer of the below named contractor (the "Contractor"), pursuant to the compliance certification requirement provided in the **TRENTON PUBLIC SCHOOLS** (the "School District") Request For Proposals for District Technology Renovations (the "RFP"), hereby certifies, represents and warrants that the Contractor (including its officers, directors and employees) is not an "Iran linked business" within the meaning of the Iran Economic Sanctions Act, Michigan Public Act No. 517 of 2012 (the "Act"), and that in the event Contractor is awarded a contract as a result of the aforementioned RFP, the Contractor will not become an "Iran linked business" at any time during the course of performing the Work or any services under the contract.

The Contractor further acknowledges that any person who is found to have submitted a false certification is responsible for a civil penalty of not more than $250,000.00 or 2 times the amount of the contract or proposed contract for which the false certification was made, whichever is greater, the cost of the School District's investigation, and reasonable attorney fees, in addition to the fine. Moreover, any person who submitted a false certification shall be ineligible to bid on a request for proposal for three (3) years from the date the it is determined that the person has submitted the false certification.

CONTRACTOR:

BIDDER'S FIRM NAME _____

BY (SIGNATURE) _____

PRINTED NAME AND TITLE _____

STATE OF MICHIGAN)
)
COUNTY OF)

Subscribe and sworn before me on this _____ Seal:

day of_____, 20____, a Notary Public

in and for _____ County,

_____
Notary Public

My Commission expires _____ _____

REFERENCES

Customer name: _____
Address: _____
City/State/Zip: _____
Contact name: _____
Contact title: _____
Phone: _____
E-mail: _____
Scope of project: _____
_____
_____
Date of completion: _____

Customer name: _____
Address: _____
City/State/Zip: _____
Contact name: _____
Contact title: _____
Phone: _____
E-mail: _____
Scope of project: _____
_____
_____
Date of completion: _____

Customer name: _____
Address: _____
City/State/Zip: _____
Contact name: _____
Contact title: _____
Phone: _____
E-mail: _____
Scope of project: _____
_____
_____
Date of completion: _____

CONTRACT EXCEPTIONS

Check one Box

☐ Bidder takes no exception to, and agrees to comply with all sections, terms, conditions and/or requirements of the Contract Documents.

☐ Bidder proposes the following exceptions to the Contract Documents:

Paragraph Number	***Explanation***
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

NOTE:
Exception(s) to any bid sections, terms, conditions and/or requirements deemed excessive for any reason by the Owner and/or Designer may result in disqualification of Bid.

SCHEDULE OF VALUES/BID FORM

(Bidder may submit version of only this form with slight variation. All information in this form is required. Form submitted must materially match below both in content and format. Electronic version of this form is required with bid package as Microsoft Excel compatible spreadsheet on USB Drive for each project section being bid. Failure to provide appropriate and complete SCHEDULE OF VALUES, as determined by the Owner and/or Designer, may result in disqualification of Bid.)

Bidder: _____ Bid Division:

ID	*Qty*	*Part Number*	*Mfg and Description*	*Unit Cost*	*Unit Labor Cost*	*Total Proposed Cost*
			PROJECT MANAGEMENT			
			TRAINING			
			BONDS AND INSURANCE			
			GRAND TOTAL (Must match base bid)			

END OF SECTION

SECTION 00 21 13
INSTRUCTIONS TO BIDDERS

PART 1 - GENERAL

1.01 OWNERSHIP

A. Bidders prepare and provide bids without any cost to the Owner and/or Designer. Once opened, bids become the sole property of the Owner. Bidders have no claim to, or ownership of bids opened. Bids become subject to all legal statutes including, if applicable, United States and Michigan Freedom of Information Acts and related laws.

1.02 COMPLIANCE

A. This document establishes the primary system(s) design configuration. The Bidder's bid response shall include all services, supplies, components and equipment required to provide a complete turnkey system(s) which meets or exceeds all specifications for each given bid item being proposed.

B. Owner prefers to enter into a contract with a single bidder for all materials for completion of this project, but shall consider combinations of portions of bids from various bidders. If portions of separate bids are deemed compatible and compliant with the intent of the project, and a combination of partial bids is deemed to be in the Owner's best interest, and the Owner reasonably expects willing and compliant bidders will cooperate with others for the benefit of the Owner during implementation of the system, the Owner reserves the right to award portions of the project to multiple bidders which will cooperate to complete the work.

C. By their response, Bidders agree to comply with all sections, terms, conditions and/or requirements of the contract documents except as expressly noted, and specifically identified by paragraph number on the unaltered Contract Exceptions Bid Form. Exceptions to any bid sections, terms, conditions and/or requirements deemed excessive by the Owner and/or Bid Coordinator may disqualify Bid.

D. In compliance with the Freedom of Information Act (FOIA), the Owner shall make bid documents available for public review after issuance of purchase order to the successful bidder/s.

E. In connection with the execution of this Contract, Contractor and any Subcontractors shall not discriminate against any employee or applicant for employment because of race, religion, color, sex, age, or national origin.

F. Negligence in preparation, improper preparation, errors in, or omissions from Bids shall not relieve Bidder from fulfillment of any and all obligations and requirements of the Contract Documents.

G. All Bid documents and worksheets must be completed in detail and submitted together on time.

H. All documents constituting the entire present agreement shall be construed in accordance with and governed by the laws of the State of Michigan.

I. Designer shall have authority for interpretation of Contract Documents. In the event terms, provisions or any other portion of the Contract Documents is/are in dispute, Designer shall have full and final authority to interpret the Contract Documents, and such interpretation shall be final and binding.

J. In the event of a conflict between any terms or conditions in any of the documents comprising the entire present Agreement, the terms and conditions set forth in this document shall take precedence.

1.03 NOTICE AND RESPONSE

A. Upon notification of Bidder being considered as a finalist, the Bidder shall provide to the Owner and Designer, within 48 hours, a current "Dunn and Bradstreet Supplier Evaluation Report" and other documentation as may be required of finalists herein and as requested by Owner and/or Bid Coordinator.

B. Bidder shall provide timely response to all requests from Designer and/or Owner regarding clarification and/or elaboration concerning, but not limited to its Bid as may be deemed relevant by the Owner and/or Designer.

1.04 PROTECTION AND SAFETY

A. Contractor shall continuously maintain adequate protection of all Work from damage and shall protect the Owner's property from injury or loss arising in connection with the execution of the Contract. Contractor shall make good any such damage, injury or loss, except such as may be directly caused by agents or employees of the Owner. The Contractor shall adequately protect adjacent property as required by law, by the Contract Documents, or as otherwise required, to cause no damage to them during the execution of the Contract. This requirement shall also apply to structures above and below ground as conditions of the site require.

B. Contractor shall be solely responsible for, and have control over means, methods, techniques, sequences and procedures for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the contract. Contractor shall take all necessary precautions for the safety of employees and visitors on the site of the Project and shall comply with applicable provisions of federal, state, and municipal safety laws and building codes to prevent accidents or injury to persons on, about, or adjacent to the premises where the Work is being performed. Contractor shall erect and properly maintain at all times, as required by the conditions and progress of the Work, all necessary safeguards for the protection of workers and the community.

C. Contractor shall vigorously defend any and all suits that may be brought against the Owner by any person and/or entity, whether in the employ of the Contractor or not, for damage to property, and/or injury or death to persons alleged or claimed to have been caused by or through the performance of work.

1.05 DRAWINGS DIAGRAMS AND ILLUSTRATIONS

A. Drawings, Diagrams and Illustrations are diagrammatic in nature and indicate general arrangement and nature of systems and work included.

B. Floor plan drawings are provided to assist the contractor in preparing documentation and reports as required herein.

PART 2 - MATERIALS

2.01 VOLUNTARY ALTERNATES AND SUBSTITUTION OF SPECIFIED PRODUCTS

A. This Request for Bid describes a particular implementation. All Bids must provide pricing on the "base bid" as described herein. Voluntary alternatives providing comparable functionality with significant cost reduction and/or performance enhancement may be proposed. Voluntary alternatives are encouraged, but must be identified as "Voluntary Alternates" and detailed on unaltered Bid Forms contained herein. Voluntary Alternates may be further detailed and/or explained in attachments to the unaltered Bid Forms contained herein. Exceptions to the Request for Bid specifications must be clearly noted and explained for each Voluntary Alternate proposed.

B. No substitutions of specified products may be made without specific prior authorization by Designer and Owner. Individual bid divisions herein contain particular information related to acceptable manufacturer and product requirements.

C. Trade-in, equipment/license exchanges or other return allowances may be provided as a voluntary alternate. Trade-in, exchange or other return equipment allowances shall not be included in base bid amount.

PART 3 - EXECUTION

3.01 EXAMINATION OF DOCUMENTS AND SITE

A. Bidders shall carefully examine the Contract Documents and the construction site to obtain first-hand knowledge of existing conditions and requirements. No plea of ignorance of conditions that exist, or any other relevant matter concerning work to be performed in the execution of work will be accepted as justification for failure to fulfill every detail of all requirements as described herein.

3.02 QUESTIONS, INTERPRETATIONS AND ADDENDA

A. Any bidder finding discrepancies between Drawings, Specifications and/or Bid Documents, or be in doubt as to the exact meaning of any provision or detail shall notify the Designer at once, and before the deadline for Questions and Clarifications. The Designer may then, at their option, issue Addenda clarifying same. The Designer is not responsible for oral instructions, or Bidder's/Contractor's misinterpretations of Drawings, Specifications and/or Bid Documents.

B. The Designer reserves the right to issue Addenda at any time up to thirty-six (36) hours prior to the scheduled bid opening. All such addenda shall become, upon issuance, an inseparable part of the Specification/Contract Documents. Each bidder shall incorporate within their bid all costs for items listed in any/all Addenda, and shall acknowledge receipt and identifying number of each Addendum on the Bid Form and on the outside of the sealed bid container.

C. Addenda will be forwarded to each bidder who has received a copy of the Bidding Documents and has submitted "Intent to Bid Form".

3.03 BID SECURITY, BONDS AND INSURANCE

A. Bid Security, Performance and Payment Bonds are required on this project.

1. Bid security equal to five percent (5%) of the bid amount must accompany each bid in accordance with the Instruction to Bidders.

a. Bid security shall be either a Bid Bond issued by a company licensed in the State of Michigan to furnish bid security or Certified Check made payable to the Owner.

B. The selected Contractor will be required to provide a performance bond and a payment bond in an amount equal to one hundred percent (100%) of the bid amount including any accepted alternates at the Owner's discretion.

1. The surety of the performance bond shall remain in effect until all acceptances and final contract close-out requirements herein have been executed by the Owner.

C. Contractor shall provide, prior to beginning any work at the sites, certificate of insurance for delivery to Owner indicating all required insurance coverage is in force.

1. Workers' Compensation and Employer's Liability Insurance

a. Coverage A – Statutory

b. Coverage B - $1,000,000 Per Accident

2. Broad Form Comprehensive General Liability Insurance (including – Premises, Elevators, Contractor's Protective Liability, Contractual, Products & Completed Operations – including Broad Form Extensions).

   a. Each Occurrence - $1,000,000

   b. General Aggregate - $2,000,000

   c. Products & Completed Operation Aggregate - $2,000,000

   d. Personal Injury & Advertising Injury - $1,000,000

   e. Fire Legal - $100,000

3. Sub-contractors Operations, Products – Completed Operations and Contractual Liabilities, plus such excess coverage as may be appropriate for the limits listed.

4. Comprehensive Automobile Liability Insurance (owned, hired, and non-owned automobiles).

   a. Bodily - $1,000,000 each Person and $1,000,000 each Occurrence

   b. Property Damage - $1,000,000

5. Furnish Owner with Contingent Liability Insurance Policy with coverage and liability limits the same as for Public Liability Insurance specified herein. Designate on policy as assured, only the Owner.

6. Furnish Owner with Contingent Property Damage Insurance Policy with coverage and liability limits the same as for Property Damage specified herein. Designate on policy as assured, only the Owner.

7. Policies shall include notification clause requiring ninety (90) days written notice to Owner in the event of policy cancellation, expiration, non-renewal, coverage reduction or other material change.

8. Contractor shall not commence work under the Contract until after all insurance required herein has been obtained and certificates for such are approved by Owner.

D. All such bonds and/or insurance shall be issued by surety licensed by the State of Michigan and acceptable to the Owner.

   1. Insurance certificate(s) shall be signed by insurance agent licensed in the state of Michigan or a representative of the insurance company.

E. Contractor agrees to indemnify and hold harmless the Owner and Designer, including their agents and employees, from and against all claims, damages, losses and expenses, including, but not limited to, attorney fees arising out of, or resulting from the performance of the work.

3.04 MODIFICATION AND WITHDRAWL

A. Bids may be withdrawn and/or changed any time prior to the bid opening. Bids may not be withdrawn or changed after the bid opening, and shall be deemed a firm offer continuing for ninety (90) calendar days. Bids received after the time and date for the public opening will be returned unopened at the Owner's discretion.

B. Withdrawal of any Bid after the opening time without specific approval by Owner may result in forfeiture of required bid security by Bidder.

3.05 CODES, ORDINANCES, REGULATIONS AND RELATED

A. All labor and materials shall be furnished and installed in strict accordance with the latest applicable codes, ordinances and regulations of any governing body having jurisdiction over this project.

B. In the event the quality of labor and materials required by the Drawings and Specifications herein exceeds requirements of current applicable codes, ordinances and regulations, the Drawings and Specifications shall take precedence.

C. In the event the quality of labor and materials required by current applicable codes, ordinances and regulations having jurisdiction over this project exceeds that of the Drawings and Specifications herein, the applicable codes, ordinances and regulations shall take precedence.

D. The Contractor shall give all notices and comply with all codes, laws, ordinances, rules and regulations of any authority having jurisdiction, which bears on the performance of its work. This compliance includes, but is not limited to, the Michigan School Safety Initiative (PA129, PA130, PA131 and PA138) if applicable to work being performed.

E. The Contractor shall pay for all licenses, permits, taxes, and fees required for this project; and shall comply with all federal, state, local and Owner's codes, laws, ordinances, regulations and other requirements applicable to the work specified at no additional cost to the Owner. Contractor shall submit copies of all approved certificates and approvals to the Owner upon receipt.

3.06 SUB-CONTRACTOR AND MATERIAL SUPPLIER

A. The successful Bidder shall submit to the Owner and Designer a complete list of all sub-contractors and all material suppliers proposed to engage on the

work. Sub-contracts shall not be awarded until after they have been approved by the Designer and Owner.

B. Finalist bidders may be required to submit additional details related to sub-contractors and suppliers within forty-eight (48) hours after the bid opening.

C. Names of any principal sub-contractors must be listed on the Bid Form.

D. All contracts made by the successful Bidder with Subcontractors shall be covered by the terms and conditions herein. The successful Bidder shall see to it that Subcontractors are fully informed in regard to these terms and conditions, and shall bind all subcontractors to the same terms and conditions. Failure to do so will absolve the Owner from any liability for additional cost due to subcontractor claims for additional cost, time or any claim(s) for additional cost by subcontractor(s).

3.07 BID RESPONSE FORMAT

A. Bidder shall provide complete Bid copies in two formats as described herein.

1. One (1) Hard copy format responses shall be in a bound tabulated format. Each response shall have tab indicators for each section.

2. One (1) Electronic copy format responses shall be submitted on a USB Drive, readable by a standard Microsoft Windows 10 workstation. Electronic media shall contain separate folders to organize response documentation as described herein. Files submitted on USB Drive shall be ***Adobe Acrobat*** "PDF" format (SCHEDULE OF VALUES is additionally required to be on the disk in the appropriate folder as a spreadsheet and as described herein).

B. All Bid Response formats shall be clearly externally marked to include, but not be limited to:

1. Bidder identification.

2. Project Owner identification.

3. Project name.

4. Bid submission date.

C. Bid Responses shall include an index containing copies/PDF of a complete index of documents comprising Bid Response. Responses shall include, but not be limited to the following tabbed/folder sections:

1. Section 1 – Forms, which shall contain copies/PDF files of all required and completed bid forms.

a. BID FORM

b. Michigan Familial Relationship Disclosure Statement

c. Iranian Economic Sanctions Form

d. REFERENCES

e. CONTRACT EXCEPTIONS

f. SCHEDULE(s) OF VALUES

g. BID BOND

2. Section 2 – Overview, which shall contain copies/PDF files of cover letter and/or executive overview.

3. Section 3 – Submittals, which shall contain copies/PDF files of all required and voluntary submittals.

4. Section 4 – Appendices, which shall contain copies/PDF files of other reference materials Bidder wishes to, or is required to submit.

3.08 AWARD OF CONTRACT

A. The material proposed to be used for the completion of work, and the competency, solvency and responsibility of bidders will receive due consideration before award of contract. In the reception of bids for this work, the Owner incurs no obligation to accept the lowest, or any bid submitted. The right to accept or reject any and all bids or portion thereof is reserved by the Owner. The Owner reserves the right to require testimonial, accounting or legal documents pertaining to the solvency of a Contractor, or any other decision factor the Owner deems appropriate, prior to award of contract.

B. Owner reserves the right to select individual components from schedule of values independent of installation as may be determined in Owners best interest. Selected bidder may be required to install selected components provided by others.

C. Issuance of a Purchase Order by Owner in response to a valid bid shall be a Notice to Proceed, and shall become part of, but not limited to, all terms, conditions and requirements herein. Notice to Proceed shall have the full effect of contract award, and shall make all terms, conditions, requirements and responsibilities of Bidder binding upon issuance. Notice to Proceed, once issued, shall become an inseparable part of the contract documents herein, and constitute both Bidder and Owner's acceptance of contract.

3.09 TIME, SCHEDULES, PROJECT MANAGEMENT, MEETINGS AND PLANS

A. Time is of the essence on this project. Award of contracts for this project will be contingent on the bidder's agreement to complete the work on or before the contract completion date stated herein.

B. All Contractors will commence work in such a manner and at such a time as to expeditiously interface with the work of other Contractors, and will pursue the project diligently to completion. All Contractors will work in a cooperative manner with Owner and other Contractors.

C. Contractor shall appoint an overall Project Manager acceptable to Owner, with skills and experience deemed appropriate by the Owner for the scope and size of the project. Project Manager shall be responsible for the scheduling of all Contractor resources and attending all project meetings. Upon notification of Bidder being considered a finalist, the Bidder shall submit professional resume of proposed Project Manager within forty-eight (48) hours.

1. Project meetings shall be conducted at Owner's selected and identified location weekly and at Owner's and/or Designer's discretion.

2. Within five (5) days of Notice to Proceed (issuance of a Purchase Order by the Owner), Contractor's Project Manager shall provide to the Owner a critical flow path in the form of a "Gantt Chart" (or equivalent) indicating the proposed sequence of events and approximate beginning and completion dates in accordance with, compliance to, and coordinated with requirements herein.

3. Changes of the Project Manager during the project shall not be acceptable without prior written approval from the Owner.

4. It is the responsibility of the Contractor's Project Manager to schedule work, work out issues, ensure that all required products and services are delivered according to schedule and attend to any other matters required by the Owner in the interest of professional and timely completion of the project.

5. The appointed Project Manager, or a designee acceptable to the Owner, shall be in attendance of all project meetings throughout the term of the project. Failure to do so may be considered a material breach of contract.

6. After a ten (10) business day notice, the Owner reserves the right to request a new Project Manager, when it appears that, in the Owner's sole discretion, the Project Manager is not fulfilling the full responsibilities of the position. Failure by Contractor to provide adequate Project Manager meeting requirements of the Owner, may result in Contract termination.

3.10 CHANGES IN THE WORK

A. No changes in work with the effect of either increasing or decreasing in the project value shall be made without specific and prior authorization by the Owner and Designer.

B. Owner, without invalidating the contract and without notice to any surety, may at any time order extra work or make changes by altering, adding to or deducting from the work, the Contract Sum being adjusted accordingly. All such work shall be authorized by a written Change Order approved by Owner and Contract Designer. Upon receipt of such an order Contractor shall promptly proceed with the work involved. All such work shall be executed under the conditions of the original Contract. Owner authorized change order(s) may be issued at any time prior to Contract close out.

C. When so directed, Contractor shall promptly submit an itemized estimate and a unit price for performing or deleting such extra or changed work as my be contemplated. Any extensions or reductions of the contract time associated with extra or changed work shall be identified at the time Contractor submits such documentation.

D. At the Owner's discretion, adjustments in the Contract Sum shall be determined by one or more of the following methods:

1. By mutual acceptance of a lump sum cost, including overhead and profit, itemized and supported by sufficient substantiating data to permit evaluation.

2. By unit prices stated in the Contract Documents including, but not limited to, Schedule of Values.

3. By unit prices mutually agreed upon.

3.11 PAYMENT REQUESTS AND PAYMENTS

A. Contractor's invoices shall be submitted monthly in correlation with the Project Schedule indicating percentage of work completed.

B. All contract and change order invoices shall be sent directly to Contract Designer.

C. A 10% retainage shall be held back on all payment requests, including, but not limited to hardware, software, change orders and services, until final completion and close out of the project or project phase as determined by Owner and Designer.

D. Contractors are required to submit all invoices on approved AIA Payment Request Forms or other billing format pre-approved by Contract Designer. Each AIA Payment Request Form shall be accompanied by a properly

completed, executed and notarized Waiver of Lien which shall be in a format and contain verbiage approved by Owner.

E. The Contract Designer and Owner shall process payment requests on a monthly schedule and in accordance with their respective established processes and procedures. Payments will be made by the Owner based only on AIA Request Forms having been previously certified, audited and approved by Contract Designer and accompanied by acceptable Waiver of Lien.

END OF SECTION

SECTION 00 65 00
CONTRACT CLOSE OUT

PART 1 - GENERAL

1.01 WORK INCLUDED

A. Provide an orderly and efficient transfer of the completed work to Owner.

B. Details affecting work of this Section include, but is not limited to all other Sections herein and all related Contract Documents.

C. Activities relative to Contract close-out are described in, but not limited to, this and other Sections of this document.

1.02 SUBSTANTIAL COMPLETION

A. “Substantial Completion” shall be defined as:

1. All responsibilities of Contractor for all provisions and requirements of all divisions and sections of complete Contract herein, and as amended, are properly and fully completed or properly, accurately and acceptably provisioned for.

2. All systems, equipment, facilities, services, programming and/or components required by all divisions and sections of complete Contract are fully operational, acceptable and useful to the Owner for their intended purposes.

B. Prior to requesting inspection by Designer to certify Substantial Completion, Contractor shall use adequate means to assure the Work is completed in accordance with the specified requirements and is ready for such inspection.

PART 2 - MATERIALS

2.01 NOT USED FOR THIS SECTION

PART 3 - EXECUTION

3.01 PROCEDURES

A. Contractor shall submit a written request to Designer indicating they have achieved Substantial Completion of Work.

B. Within a reasonable time after receipt of the request, Designer will inspect Work to determine status of completion.

C. Should Designer determine the Work is not substantially complete:

1. Designer promptly will so notify Contractor, in writing giving reasons therefore and providing sufficient details to allow Contractor to make corrective actions.

2. Contractor shall then expeditiously remedy the deficiencies and notify Designer in writing when ready for re-inspection.

3. Designer will re-inspect the Work.

4. Excessive re-inspections of Work may result in fees being assessed Contractor.

D. Should Designer concur the Work is substantially complete:

1. Designer will prepare a letter of Substantial Completion.

2. Designer will submit the letter to Owner and Contractor.

3. Contract shall be deemed “Closed Out” for retainage purposes.

4. Final Acceptance of the system shall be deemed complete.

END OF SECTION

SECTION 27 21 33
WIRELESS COMMUNICATION NETWORK

PART 1 - GENERAL

1.01 DESCRIPTION OF PROJECT

A. Work described in this specification section pertains to wireless systems replacement and expansion for Trenton Public Schools.

B. Owner intends to replace an existing IEEE 802.11 based Wireless Communications Network System currently covering several sections of some buildings with new technology, improved areas of RF coverage and provisions for high density connections. Owner intends the Wireless Communications System to provide for full coverage within facilities and at the sites indicated for data communications applications.

1. Owner's applications may include, but not be limited to:

a. High density workstation connectivity. This may include 1:1 student initiatives as well as student provided device connections.

1. Thirty to sixty (30-60) connections are anticipated as typical per classroom in other buildings - many of which may be streaming latency sensitive information.

2. All other areas of facilities covered by system provided are anticipated to contain similar densities of connections, based on physical size and ability to contain persons equipped with connectable devices.

b. Student owned device connectivity.

c. Staff and/or administrator portable workstations.

d. Guest workstation connectivity.

C. Contractor shall propose a System to be deployed using IEEE 802.11ac wireless technology foundation. The system shall be installed and connected to Ethernet infrastructure by others. System shall be compliant with "wireless switch" architecture using "thin" or "fit" Access Points (APs) and centrally located Wireless Controllers.

1. Owner will provide adequate Ethernet PoE compliant switch ports for the number of devices specified herein.

D. Any physical centralized Wireless Control equipment shall be installed in the Owner's existing Network Operations Center (NOC).

E. Contractor shall advise, coordinate and work cooperatively with Owner representatives related to any configuration changes required and/or proposed for Owner's Ethernet infrastructure (VLAN configuration, QoS mapping, routing, RADIUS Services, Firewall security provisions etc.).

F. Power for all APs shall be provided by way of standard IEEE Power over Ethernet (PoE) installed in appropriate distribution frames by others throughout sites of work.

G. The Contractor shall design, engineer, configure, supply, connect, test, document, train Owner representatives and warrant a fully operational and compliant Wireless Communication System, complete and with full functionality as specified herein.

H. Contractor shall coordinate their installation with other communication systems, contractors, Designer and the Owner as is appropriate.

I. Work includes the careful removal of existing wireless AP units and controller for disposition as directed by Owner.

1.02 WARRANTY

A. Complete installation shall be free from defect and/or failure for a period of five (5) years. Any replacement, upgrade or fix, including labor for any non-conforming, unsupportable or non-operational part of the system shall be fixed and/or replaced at no cost to the Owner.

B. Manufacturer's warranty shall be provided for all components of the system.

1. Any documents and/or submittals required by individual manufacturers for compliance with the standard and/or applicable extended warranty programs shall be provided and submitted for approval by the Contractor.

2. Contractor shall submit all documents, apply for warranty or extended warranty certification, and provide a Certificate of Warranty or Extended Warranty as may be applicable from the manufacturer prior to project closeout.

C. On-site services provided under the warranty shall be performed by personnel or representatives of Contractor as herein defined and located within physical proximity to provide response levels deemed acceptable to Owner.

D. Contractor shall provide the following response times for all malfunctioning equipment:

1. Four (4) hours or less for matters that render twenty percent (20%) or more of the system users at any specific building or site unable to maintain normal productivity.

2. Two (2) business days for matters not meeting the above criteria.

3. Response time shall be measured from the time Contractor is notified by Owner to the time work is begun to resolve the matter.

E. Bidder shall provide current annual maintenance contract pricing for recommended maintenance programs for all equipment following the specified and included period as a Voluntary Alternate. This information will be considered by Owner and Designer as part of the bid evaluation process.

F. System Warranty shall commence on date of substantial completion as certified by Designer and provided for herein. Delivery to work site of materials, physical removal from packaging, issuance of Contractor documents including, but not limited to invoices and/or packing slips, or any event or documentation, not specifically provided for herein, shall have no effect on Warranty or System Acceptance by Owner and/or Designer.

G. Bidder shall provide annual maintenance contract cost for the system for the first year following the warranty period. This annual maintenance cost will be used as a factor in evaluation of the bids being considered by the Owner related to total cost of ownership given different life cycle scenarios.

1.03 STORAGE OF MATERIALS

A. All materials shall be secured when not in use by the Contractor.

B. It shall be the Contractor's responsibility to secure all equipment including material to be installed as part of the contract. No changes shall be made to the contract due to loss or theft of equipment and/or materials not officially accepted by the Owner.

C. Formal receipt of the materials shall not be completed by the Owner until completion of project closeout. The Contractor shall be responsible for all equipment until time of closeout as provided for herein.

1.04 SUBMITTALS

A. Submittals shall consist of, but not be limited to, technical cut sheets and detailed information pamphlets on all components of the system to be installed. All cut sheets and submittals shall be distinctly marked to highlight the actual part number of the item being submitted for approval with Bid Proposals.

B. Shop drawings and diagrams shall be submitted by Bidder for approval by Designer with Bid Proposals.

1. Shop drawings and diagrams shall show all data relating to structural, electrical, wiring, cross connect, interconnect, equipment arrangement/layout, and any other information deemed significant by the Designer.

2. No work constituting final installation shall be commenced until after approval of shop drawings by Designer.

C. Contractor shall provide proof of manufacturer support by photocopy of certification and letter of support from major component manufacturers for this specific project with Bid Proposals.

D. Equipment or material installed for this project that does not have an approved submittal associated with it, will be removed and replaced with acceptable equipment or material as defined by the Designer. All replacement costs including, but not limited to material and labor, shall be the sole responsibility of the Contractor.

1. The Owner and/or Designer may notify Contractor of any offending situations under this provision allowing Contractor up to forty-eight (48) hours to correct the situation prior to taking other corrective action.

2. The Owner reserves the right to replace unapproved materials and deduct the costs of doing so as defined herein from any amounts that may be due, or become due Contractor.

E. The Contractor shall submit within ten (10) calendar days after the Notice to Proceed, a schedule that reflects the sequence of activities of the contractor's approach to the execution of and completion of the work. The schedule shall be broken into work areas to provide for a clear identification of the planned progress of the work. Included in the schedule will be a list of tasks with list of deliverables and the percentage of work completed. This schedule shall coincide with progress payments applications dates and projected amounts. All durations shown will be in working days. Microsoft Project is the software of choice for this schedule. The timeframe described in the Contractor's Schedule shall represent the Contractor's plan for organizing, directing, managing, controlling, staffing and executing the work required by the Contract Documents. Owner will rely on such schedules to coordinate and otherwise plan related work of Owner personnel, other separate contractors, or the Owner’s routine daily work.

1.05 REFERENCE SPECIFICATIONS

A. All work, products, and materials shall conform with the following standards as applicable for the intended use:

1. EIA/TIA Commercial and Administration Standards
2. NEC
3. IEEE 802
4. IETF RFCs
5. FCC – All Applicable Rules and Regulations
6. UL
7. MOSHA Safety Standards

1.06 CONTRACTOR

A. The Contractor shall accept complete responsibility for the installation, certification and support of the system. Contractor shall be an authorized vendor of all major components.

B. All work shall be performed and supervised by Project Managers, Engineers and/or Technicians who are qualified to install system and perform related tests as recommended by the manufacturer and in accordance with the manufacturer's best practices and methods.

C. Project Managers, Engineers and Technicians employed on this project shall be properly and fully trained and qualified by the manufacturer on the installation and testing of the equipment and systems to be installed.

D. The Contractor shall have a proven track record in Wireless Communication Network System configuration and installation. This must be shown by the inclusion of references of at least three (3) projects involving the installation of similar systems completed by the Contractor in the prior two (2) years on unaltered forms with the sealed Bid Proposal as provided herein. Bid Proposal Form(s) may be duplicated as required in order to provide adequate space to list required number of reference installations for each division Bidder is responding to.

PART 2 - PRODUCTS

2.01 Supply most current version of all products provided.

A. Prior and/or old versions of products, unless specifically approved and documented by Designer and/or Owner shall not be acceptable.

B. In cases where a newer version of hardware or software is available at the time of installation, Contractor shall request clarification from Designer on which version is to be used.

2.02 Furnish only new, first-class quality materials and equipment.

2.03 System shall be comprised of interoperable components including, but not limited to, centrally located Wireless Controllers, 802.11 Access Points, management software, antennae, power injectors/switches and battery/power conditioning equipment, integrated into a common working system.

2.04 CENTRAL WIRELESS CONTROLLER LICENSING

A. MANUFACTURERS

1. Acceptable Manufacturer:

2. Cisco/Meraki

3. HPE/Aruba

4. Or Equal.

B. System shall be capable of supporting the specified configuration and an additional 20 percent additional APs without additional hardware or software investment required (actual AP and antenna hardware cost excluded). This includes licensing for the wireless access points and additional licensing for the full term of the warranty.

C. In the event of a power failure, system shall automatically re-initialize and "become active" to the last configuration in use with no human intervention.

D. All other features currently a part of the manufacturer's latest commercial release.

2.05 INTERNAL WIRELESS ACCESS POINTS (APs)

A. MANUFACTURERS

1. Acceptable Manufacturer:

2. Cisco/Meraki

a. 9162

3. HPE/Aruba

4. Or Equal.

B. Three-Hundred Fifty (350) Wireless Access Points shall be provided.

C. APs shall properly and acceptably communicate over, and attach to, Owner's standard, existing, installed Ethernet communications network provided by others.

D. AP units shall support the following features, standards and/or protocols:

1. Wi-Fi 6 - IEEE 802.11ax

2. Ability to disable or limit connectivity of particular devices based on 802.11 version compliance and capability.

3. IEEE 802.3at

4. IEEE 802.11 MIMO

5. Multiple simultaneous BSSIDs

6. DHCP

7. SNMP

E. APs shall meet or exceed the following:

1. All antennae shall be integrated into Access Point enclosure or otherwise included with AP hardware cost.

2. Transmit and receive 2.4Ghz, 5Ghz, and 6Ghz bands simultaneously using a minimum of threw independent radios.

3. 10/100/1000 PoE Compliant (802.3at).

F. All APs shall be firmly and securely mounted to finished ceiling, wall, or other surfaces to maximize wireless coverage and minimize tampering potential.

G. Protective enclosures shall be provided and installed in all gymnasium locations.

2.06 EXTERNAL WIRELESS ACCESS POINTS (APs)

A. MANUFACTURERS

1. Acceptable Manufacturer:

2. Cisco/Meraki

a. 9177

3. HPE/Aruba

4. Or Equal.

B. Six (6) External Wireless Access Points shall be provided.

C. APs shall properly and acceptably communicate over, and attach to, Owner's standard, existing, installed Ethernet communications network provided by others.

D. AP units shall support the following features, standards and/or protocols:

1. Wi-Fi 7 - IEEE 802.11be

2. Ability to disable or limit connectivity of particular devices based on 802.11 version compliance and capability.

3. IEEE 802.3at

4. IEEE 802.11 MIMO

5. Multiple simultaneous BSSIDs

6. DHCP

7. SNMP

E. APs shall meet or exceed the following:

1. All antennae shall be integrated into Access Point enclosure or otherwise included with AP hardware cost.

2. Transmit and receive 2.4Ghz, 5Ghz, and 6Ghz bands simultaneously using a minimum of two independent radios.

3. 10/100/1000 PoE Compliant (802.3at).

F. All APs shall be firmly and securely mounted to finished ceiling, wall, or other surfaces to maximize wireless coverage and minimize tampering potential.

G. Wireless access points shall be rated for outdoor use and installed using manufacturer best practices.

2.07 CATEGORY 6 DATA CABLING

A. Contractor shall supply, install, test and certify Category 6 data cabling in locations identified in green on the provided diagrams and specified herein.

1. Data cabling shall be Category 6 rated.

2. Data cabling shall be terminated on patch panels in nearest data closet.

3. Data cabling shall be fully supported in locations where cable trays or conduit are not available. Contractor shall supply necessary "D"-rings, beam clamps or approved cables supports at appropriate distances (6-ft minimum)

4. Cable shall be plenum rated and be continuously marked as such.

5. Data cable color shall be white in color.

6. Jacks shall be grey.

7. Above ceiling cabling shall be terminated in a biscuit jack with a high visibility sticker for easy identification.

8. Labeling shall conform to the Owners existing standard and be mechanically printed.

9. Contractor shall include any sleeves where wall penetration is needed (if existing penetrations do not exist). Sleeves shall be a minimum of 2". All sleeves shall be fully fire stopped with compliant fire stop material following cable installation.

10. Contractor shall provide end to end testing of UTP copper Category 6 cables at 350Mhz to meet or exceed reference standards. 100% of all pairs shall be tested. Documentation of test results shall be provided.

2.08 MANDATORY ALTERNATE A

A. MANUFACTURERS

1. Acceptable Manufacturer:

2. Cisco/Meraki

a. 9172

3. HPE/Aruba

4. Or Equal.

B. Three-Hundred Fifty (350) Wireless Access Points shall be provided.

C. APs shall properly and acceptably communicate over, and attach to, Owner's standard, existing, installed Ethernet communications network provided by others.

D. AP units shall support the following features, standards and/or protocols:

1. Wi-Fi 7 - 802.11be

2. Ability to disable or limit connectivity of particular devices based on 802.11 version compliance and capability.

3. IEEE 802.3at

4. IEEE 802.11 MIMO

5. Multiple simultaneous BSSIDs

6. DHCP

7. SNMP

E. APs shall meet or exceed the following:

1. All antennae shall be integrated into Access Point enclosure or otherwise included with AP hardware cost.

2. Transmit and receive 2.4Ghz, 5Ghz, and 6Ghz bands simultaneously using a minimum of threw independent radios.

3. 10/100/1000 PoE Compliant (802.3at).

F. All APs shall be firmly and securely mounted to finished ceiling, wall, or other surfaces to maximize wireless coverage and minimize tampering potential.

G. Protective enclosures shall be provided and installed in all gymnasium locations.

2.09 CONNECTION AND POWER OVER ETHERNET (PoE)

A. All equipment for system bid shall connect to Owner's Ethernet distribution system including standard IEEE 802.3at PoE+ by others. Proprietary power distribution shall not be acceptable.

B. All other features currently a part of the manufacturer's latest commercial release.

2.10 ALLOWANCES

A. Contractor shall include allowances for equipment and/or other contract service reimbursements as required below in base bid lump sum amount(s). Equipment and/or contract services shall be provided and sourced at Owner's discretion and convenience with full cooperation by Contractor, and paid for from successful bidder's contract in the amount(s) provided for herein. Any allowance amount proving to be excessive for the intended equipment and/or

contract services shall be credited to the Owner against contract payment requests.

1. Allowance shall be made in the amount of $15,000.00 for contract services related to Owner directed infrastructure upgrades.

PART 3 - EXECUTION

3.01 PREPARATION

A. Contractor shall conduct detailed walk-through examination with Designer and Owner verifying equipment and material locations as well as mounting and placement requirements prior to commencement of other installation activities.

B. Contractor shall ensure all submittals and shop drawings have been provided to, and approval has been obtained from Designer prior to commencement of any final installation activities.

3.02 INSTALLATION

A. Contractor shall conduct complete virtual RF Propagation Site Survey for all relevant IEEE 802.11 frequency bands throughout the Owner sites. Survey shall be to determine and verify specific and appropriate installation and programming standards for specific proposed AP units including, but not limited to mounting, final antennae orientation/selection and channel selection.

1. RF Propagation Site Survey shall be fully documented (Report) by Contractor and submitted to Owner and Designer including, informational presentation, for written approval prior to any physical arrangement or accommodation for installation of system.

2. RF Propagation Site Survey shall include, but not be limited to:

a. Recommended physical AP placement.

b. Recommended physical AP mounting configurations.

c. Recommended AP channel selections.

d. Recommended AP antennae configuration.

3. Owner and Designer shall require up to two weeks to complete review(s) of RF Propagation Site Survey and provide written approval. Approval will be dependent upon acceptable and timely response to answers Owner and Designer may require of Contractor after the presentation of the RF Propagation Site Survey Report.

a. If Owner and Designer are unable to approve Report, Contractor may be provided reasonable opportunity to amend, complete or correct Report.

b. If Contractor is unable to provide Report acceptable to Owner and Designer after a reasonable duration is extended to do so, Owner reserves the right to terminate Contract.

4. Post installation RF propagation site survey shall be included to ensure appropriate and intended coverage has been provided in all areas identified on virtual pre installation RF propagation site survey plan.

B. Contractor shall be familiar with the environment where work will be done as specified herein and make every reasonable effort to minimize interference with Owner's normal daily activities.

C. Work Areas shall be cleaned at the end of each day. All debris shall be cleared, removed and disposed of by Contractor off-site. No on-site disposal of any waste, packaging or related project materials will be permitted. All equipment and tools shall be removed from common areas and stored in approved, secure storage locations. Any work that may impede the general use of the space and cannot be removed shall be flagged and cordoned off by the Contractor prior to their departure.

D. All equipment and materials shall be installed in a neat and workmanlike manner. Best practices installation principles shall be used throughout the project.

E. The Contractor shall furnish, set in place, and install all equipment necessary for a fully compliant and operational system as specified herein. The installation process includes, but is not limited to the following:

1. Inventory receipt of all components and equipment.

2. Storage of all equipment and components until such time those items are installed according to the specifications.

3. Transport equipment to the Owner's installation location(s).

4. Assemble, install, configure and test all equipment and components, maintaining accurate inventory records and status documents and discarding packaging.

5. Collect all information necessary to accurately program all system devices to the Owner's intended use and need. This may include, but not be limited to VLAN configuration recommendation, SSID(s) broadcast coordination, user authentication requirements and security/encryption initiation.

6. Label all system devices as may be appropriate and required by Owner and Designer.

7. Complete end user and system administrator training programs as specified herein.

8. Work shall be performed to meet local codes and industry standards including proper grounding and bonding of installed equipment.

9. Work includes extending Ethernet Category 6 compliant patch cables from installed equipment, as required, to Owner identified connection ports at all locations.

    a. Work included to connect patch cables for some APs may be in air plenum spaces, above finished ceilings, or in other ways require special care and suitable tools to complete.

    b. Patch cables shall not exceed thirty (30) feet in length.

10. Material and labor to cross connect APs in communication closets to PoE switches shall be provided by Contractor using orange Category 6 patch cables.

    a. Cable lengths shall be appropriate for connections made, and not include excessive cable.

    b. Coordinate all work with Owner, Designer and other contractors prior to installation.

11. Contractor shall coordinate all patch cable colors with Owner in order to match existing standards for device and connection types.

12. All work shall be compliant with industry and manufacturer best practices and meet all applicable statutory codes and standards.

F. Contractor shall remove all existing wireless AP units, related patch cables and controller equipment from sites of work. All equipment removal shall be coordinated with Owner and provide for uninterrupted functional wireless operation of the districts information systems. Existing equipment removed from sites shall be transported to a designated location within the district for disposition at Owner's discretion.

G. Worksites include the following:

    1. Anderson Elementary
       2600 Harrison Avenue
       Trenton, Michigan 48183

2. Hedke Elementary
   3201 Marian
   Trenton, Michigan 48183

3. Arthurs Middle School
   4000 Marian
   Trenton, Michigan 48183

4. Trenton High School
   2601 Charlton
   Trenton, Michigan 48183

5. Trenton Administration Building
   2603 Charlton
   Trenton, Michigan 48183

H. It shall be the responsibility of the Contractor to repair or replace any damage done to the structure of finishes in the building by the Contractor. If in the course of work, Contractor damages, marks or misplaces any surfaces or access plates/panels the Contractor shall repair and/or replace the surface, plate or panel to the original condition.

   1. Final determination as to the damage condition and/or repair/replacement fitness of any surface, plate or panel shall be the sole responsibility of the Designer.

   2. The building and work area shall be returned to its original condition prior to final sign off of the project.

I. Following installation and system "turn-up", but prior to final acceptance of the system, Contractor shall conduct follow-up interviews with Owner identified administrators and staff to review system functionality, suitability and confirm feature and program fitness for Owner applications.

   1. Follow-up interviews shall be fully documented by Contractor and submitted to Owner for approval.

3.03 TESTING

A. In an effort to ensure a smooth "turn-up" of the new system Contractor shall submit to a thorough testing process as defined herein prior to cut-over.

B. Prior to requesting testing by Designer, the Contractor shall use adequate means to assure the Work is completed in accordance with the specified requirements, meets the owner's specific application requirements and is ready for functionality and integrity testing.

C. Testing Procedures

1. Prior to system “turn-up”, Contractor shall submit a written request to Designer indicating they have completed full and final configuration of the system, and are ready to have system integrity and functionality tested. Such request shall include a written proposed test plan for complete system functionality.

2. Within reasonable time after receipt of request and proposed test plan, Designer will provide amendment(s) to the proposed test plan, a test schedule and coordinate testing date(s) with Owner and Contractor.

3. Should Designer determine the Work is not acceptably configured or not of adequate integrity:

    a. Designer promptly will so notify Contractor, giving reasons therefore and providing sufficient details to allow Contractor to make corrective actions.

    b. Contractor shall then expeditiously remedy the deficiencies and notify Designer in writing when ready for re-testing.

    c. Designer will schedule re-test of the Work.

    d. Excessive re-testing of Work may result in fees being assessed Contractor.

4. Should Designer and Owner concur the Work is configured properly, and system integrity is as required:

    a. Designer will review Contractors detailed “turn-up” plan, and upon finding it acceptable issue a memorandum of Testing Completion to Owner and Contractor after which system “turn-up” can proceed.

3.04 DOCUMENTATION

A. Contractor shall provide Owner all necessary as-built drawings, owner’s manuals of all equipment installed, warranty and maintenance information and other information the Contractor, Designer and/or Owner deem necessary for final documentation package

    1. All documentation shall be provided in both a physical and digital version.

    2. Format of all provided documentation shall be coordinated with Owner and Designer.

B. Contractor shall be responsible for providing thorough, timely documentation on all hardware, software. Documentation shall include, but not be limited to:

    1. Equipment description.

2. Equipment make.

3. Model number.

4. Software release.

5. Date installed.

6. Manufacturer's warranty.

7. Maintenance contract terms.

8. Verification of maintenance contract engagement.

9. Telephone numbers for service and support.

10. Detailed technical support and service procedure instructions.

11. All product (hardware and software) manuals and manufacturer supplied documentation, including, but not limited to owner manuals, system administrator manuals and configuration guides. Where number of duplicate copies for particular manual or documentation item could be reasonably considered excessive, Contractor shall request direction from Owner and Designer.

12. Photocopy of original invoice listing make and model for all components and equipment from individual manufacturer(s), distribution source(s), or authorized agent(s) to establish manufacturer warranty start date for potential use after end of contract warranty provisions.

13. CAD as built drawings for each building.

14. System Channel and Configuration Report.

15. Complete inventory of installed hardware and system software. Hardware inventory shall include, but not be limited to, AP and antenna types (model numbers), Ethernet MAC address, AP serial number, physical installation location and software options.

3.05 TRAINING

A. Contractor shall provide training for the Owner designated system administrator(s). Owner shall designate up to four (4) administrators to be trained. Training shall be a minimum of two (2), two (2) hour session(s) in length, at the convenience of the Owner personnel, and of sufficient duration to satisfactorily complete training on all system administration functions including, but not limited to:

1. Basic trouble shooting of the installed system and components including diagnostic and problem resolution actions.

2. System back-up and restore functions and procedures for all system parameters and configurations.

3. Component replacement procedure.

4. Review of system alerts, logs and monitoring of configuration parameters including, but not limited to, configuration changes, device and port status.

5. Complete review and administration review and training for network management application provided.

B. Contractor shall submit a written training plan, course description(s) and syllabus to Owner and Designer for approval. Owner and/or Designer may require amendments(s) to training plan, course description and syllabus prior to training being scheduled.

3.06 SCHEDULE, MEETINGS AND PLANS

A. Sequence of operations shall be established by the Contractor within the guidelines established by the Owner, documented herein, required by Designer, Architect and/or Construction Manager and as required to meet schedules.

B. Schedule

1. Post Bid Interviews: December 13, 2026

2. Contractor Chosen: January, 2027

3. Work Commences: April 1, 2027

4. Substantial Completion of Project: June 2027

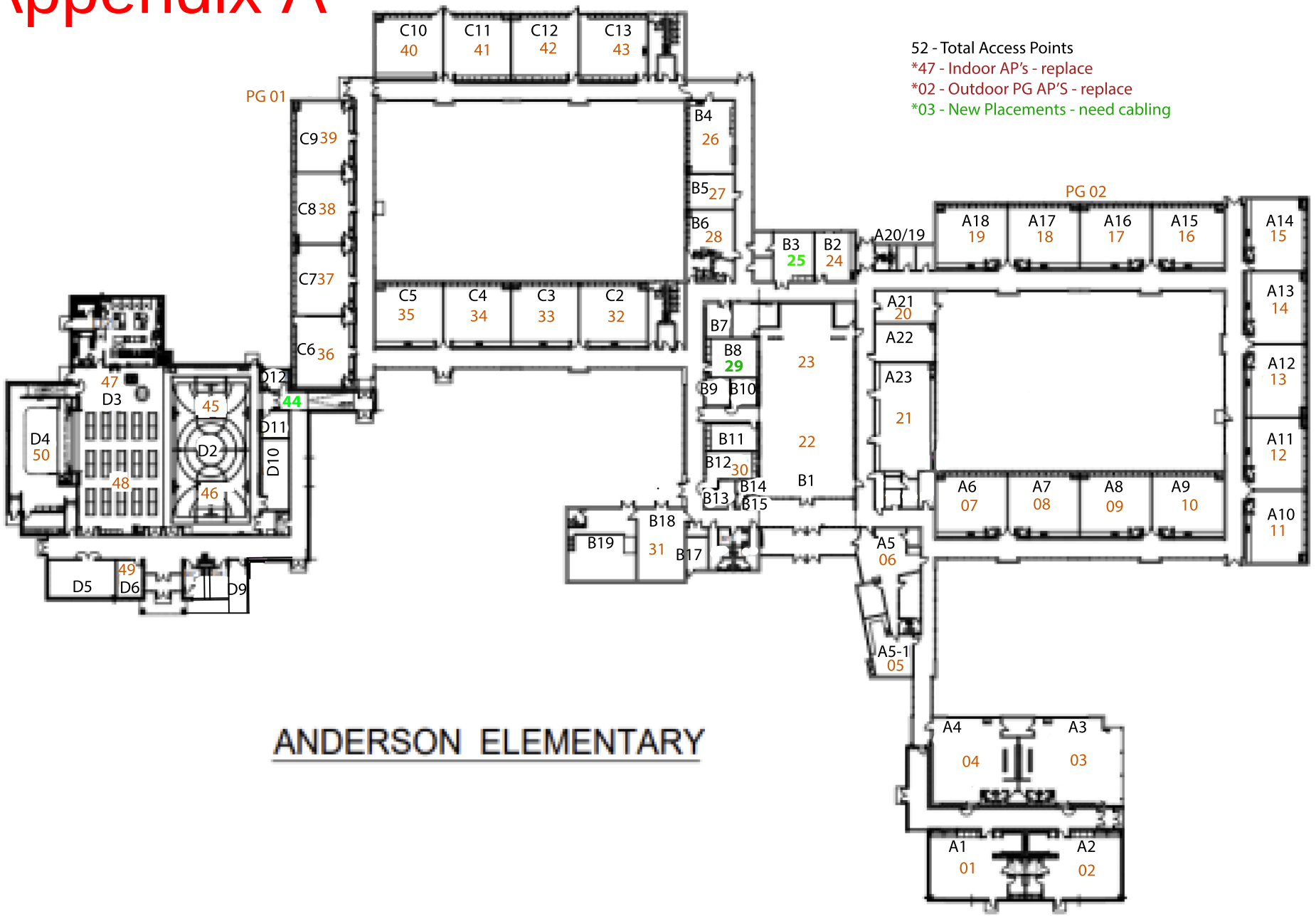
5. Project Close-out: July 2027

C. Planned sequence of operations shall be established by the Contractor within the guidelines established by the Owner, as required herein and as required to meet schedules.

D. Project progress meetings shall be held, but not limited to, weekly at a site and time identified as convenient for Owner and as required herein. Meetings will be attended by Contractor as required by Owner and Designer.

END OF SECTION

Appendix A

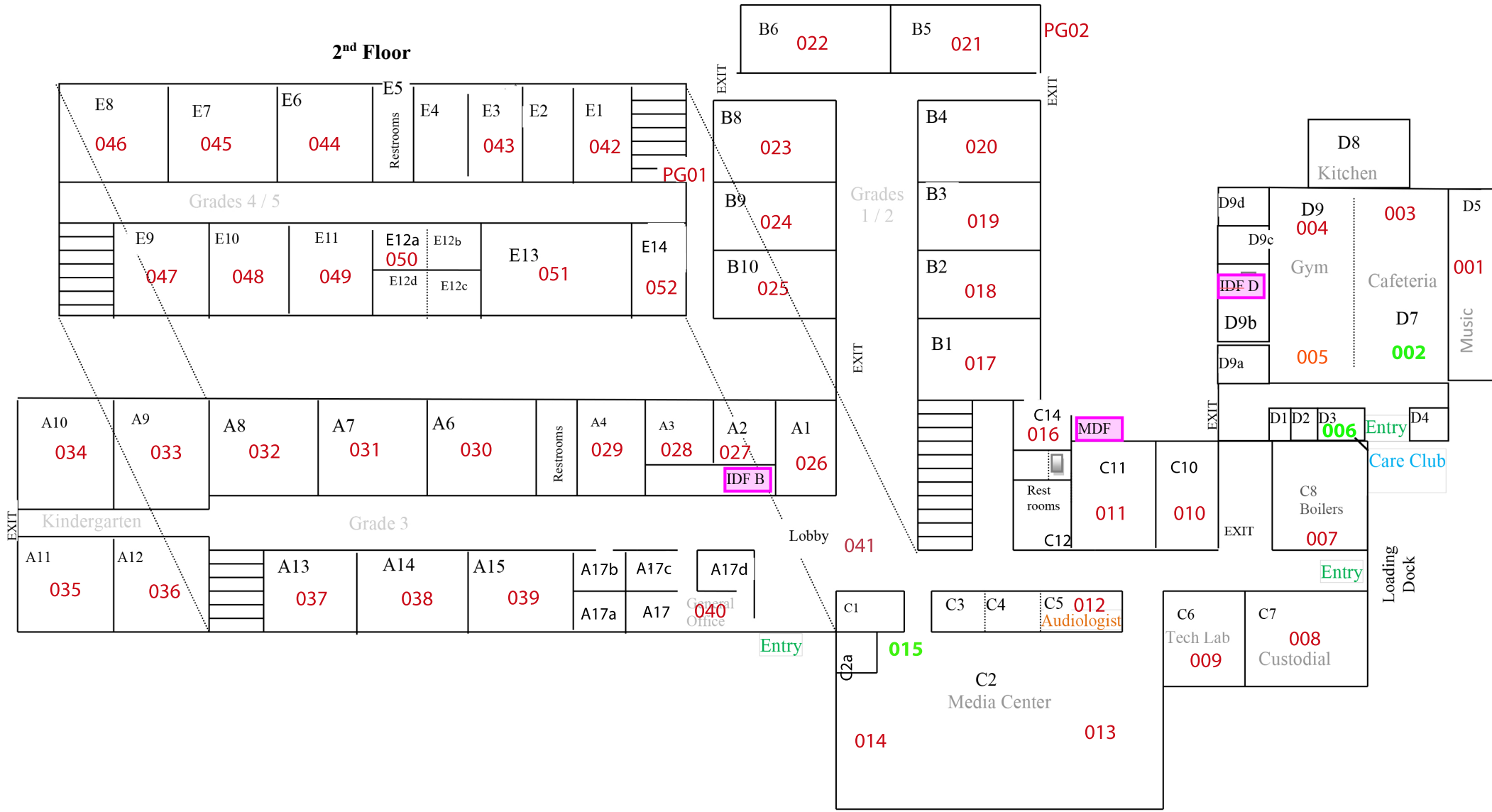

52 - Total Access Points
*47 - Indoor AP's - replace
*02 - Outdoor PG AP'S - replace
*03 - New Placements - need cabling
PG 01
PG 02
C10 40
C11 41
C12 42
C13 43
C9 39
C8 38
C7 37
C6 36
C5 35
C4 34
C3 33
C2 32
B4 26
B5 27
B6 28
B3 25
B2 24
A20/19
A18 19
A17 18
A16 17
A15 16
A14 15
A13 14
A12 13
A11 12
A10 11
A21 20
A22
A23 21
A6 07
A7 08
A8 09
A9 10
B7
B8 29
B9
B10
23
22
B11
B12 30
B13
B14
B15
B1
B18
B19
31
B17
A5 06
A5-1 05
A4 04
A3 03
A1 01
A2 02
47
D3
45
D2
48
46
D4 50
D12
44
D11
D10
49
D5
D6
D9
ANDERSON ELEMENTARY

Hedke Elementary School

3201 Marian

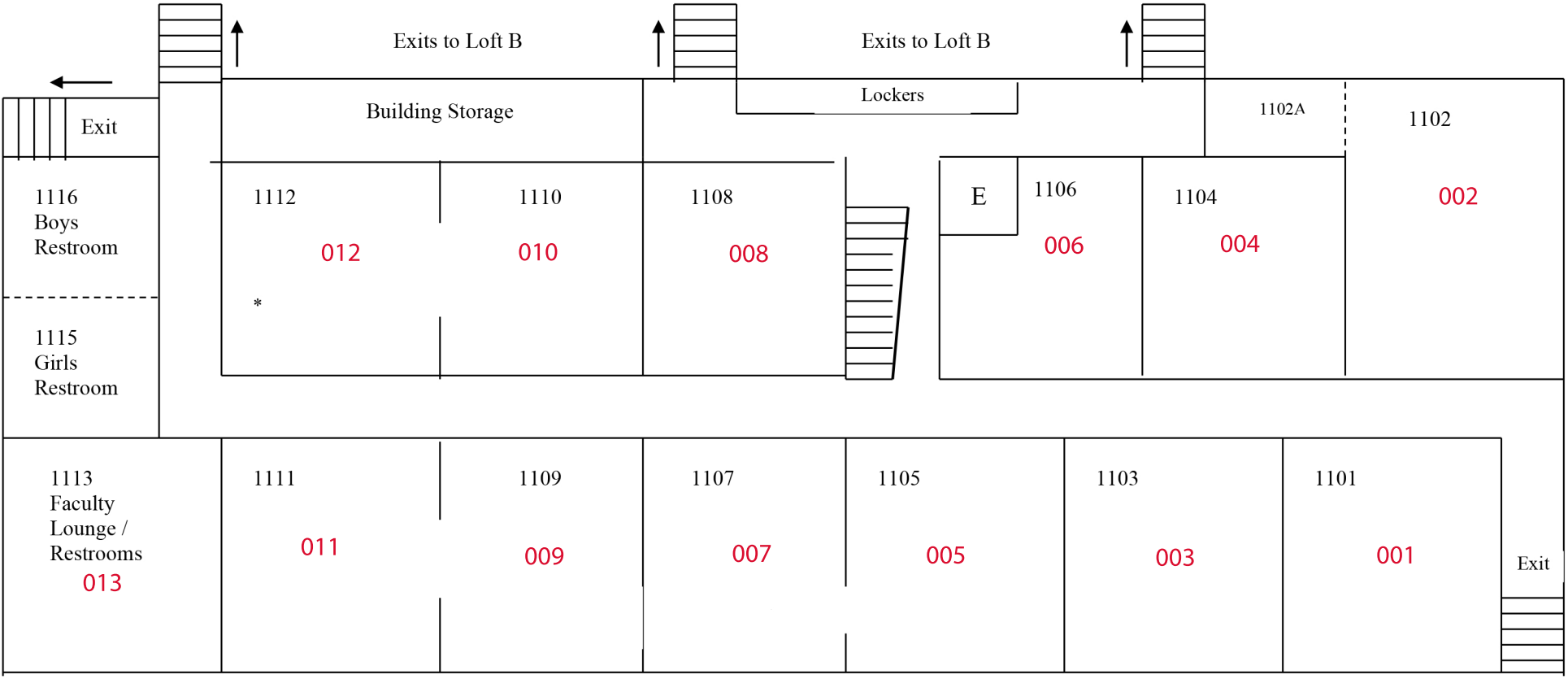
2026 - 2027

54 - Total Access Points
*49 - Indoor AP's - replace
*02 - Outdoor PG AP'S - replace
*03 - New Placements - need cabling



Arthurs Middle School (Lower) Loft A
2026/2027

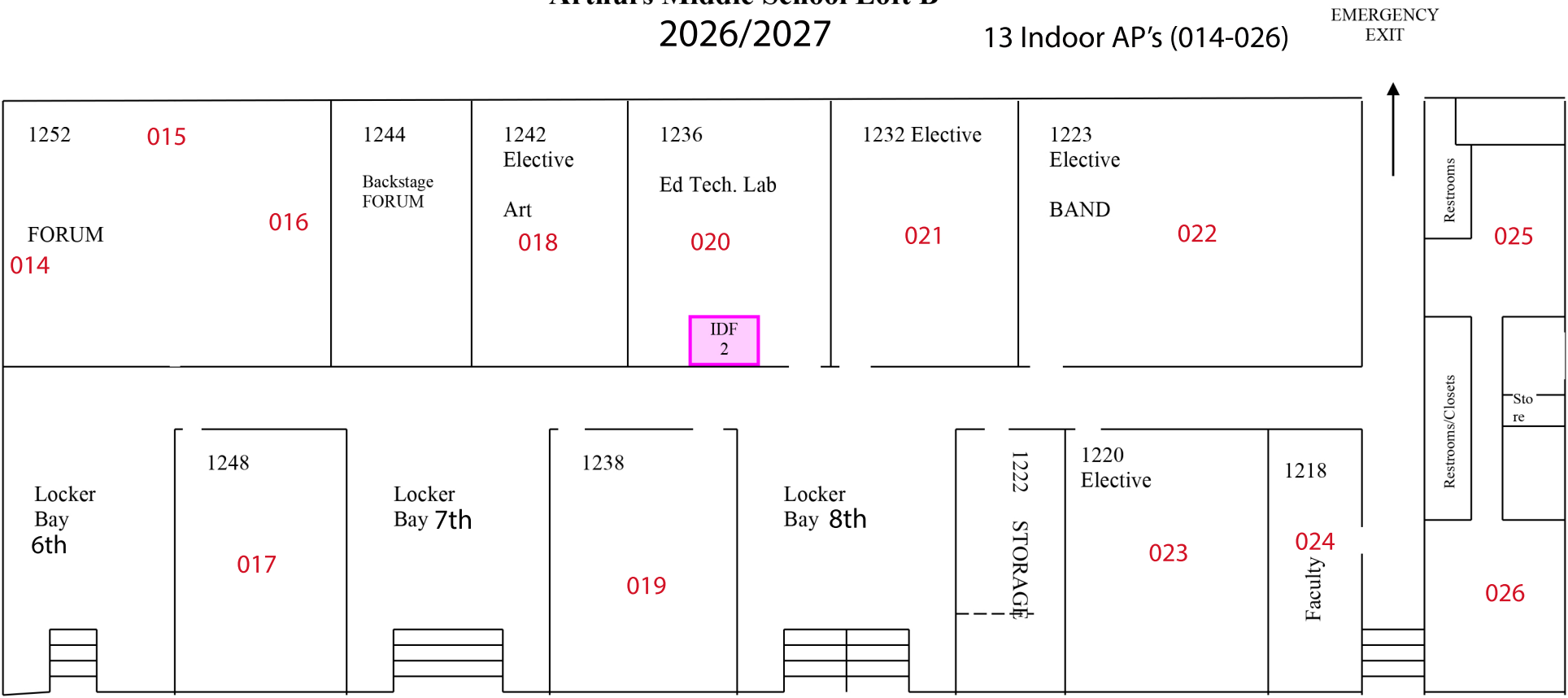
13 Indoor AP's (001-013)



Arthurs Middle School Loft B

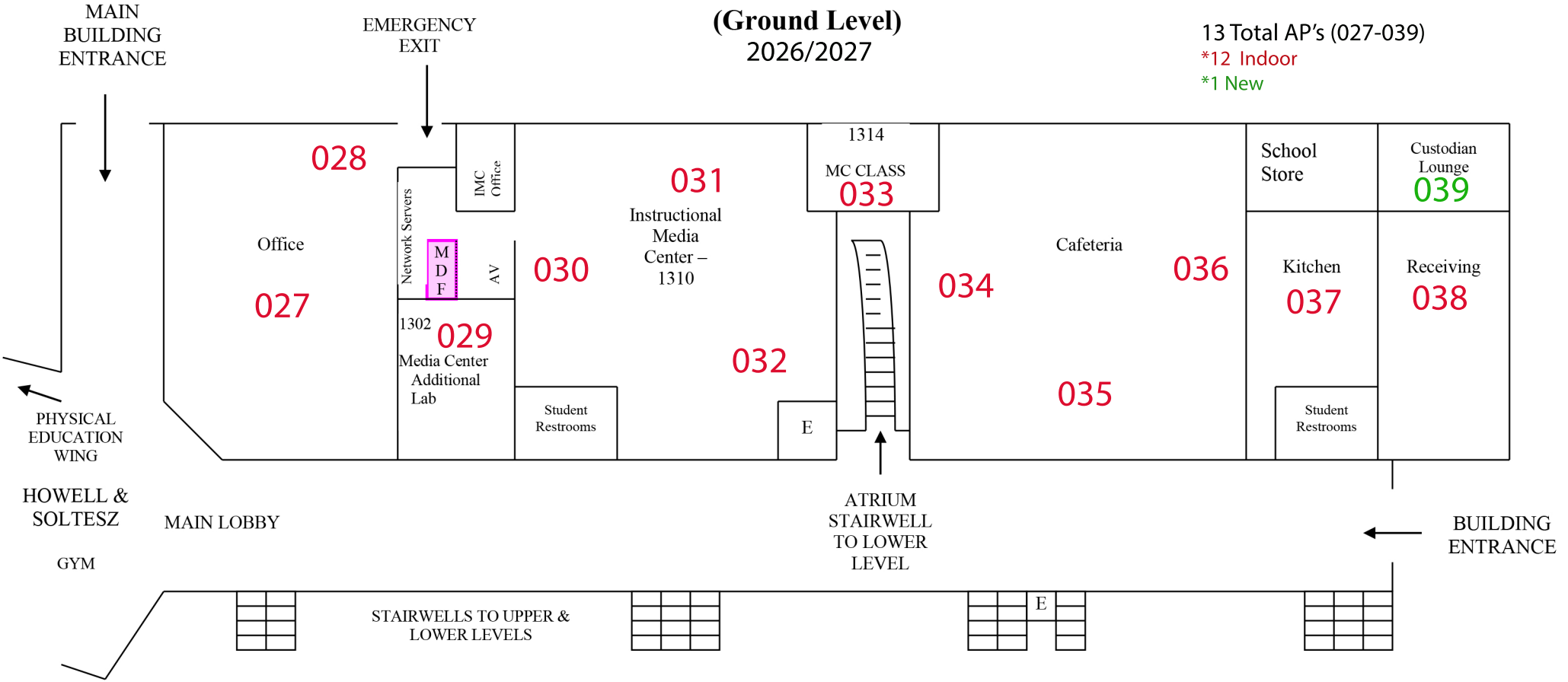
2026/2027

13 Indoor AP's (014-026)

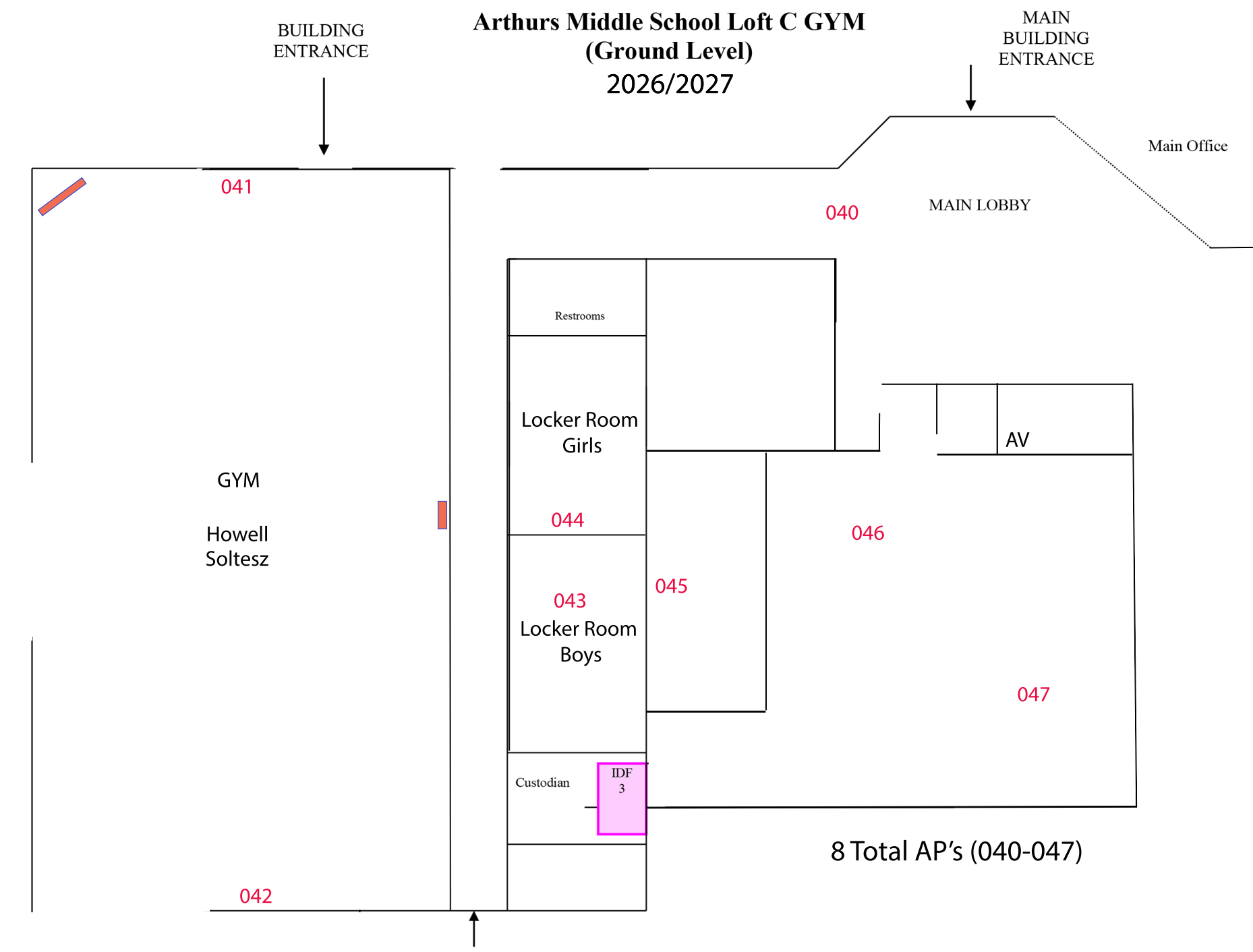


Arthurs Middle School Loft C
(Ground Level)
2026/2027

13 Total AP's (027-039)
*12 Indoor
*1 New



Arthurs Middle School Loft C GYM
(Ground Level)
2026/2027



Arthurs Middle School (Upper) Loft D

7th/8th Grade 2026/2027

22 Total AP's (048-069)
*21 Indoor - replace
*1 Indoor new - needs cabling



THS First Floor AP Map
2026/2027

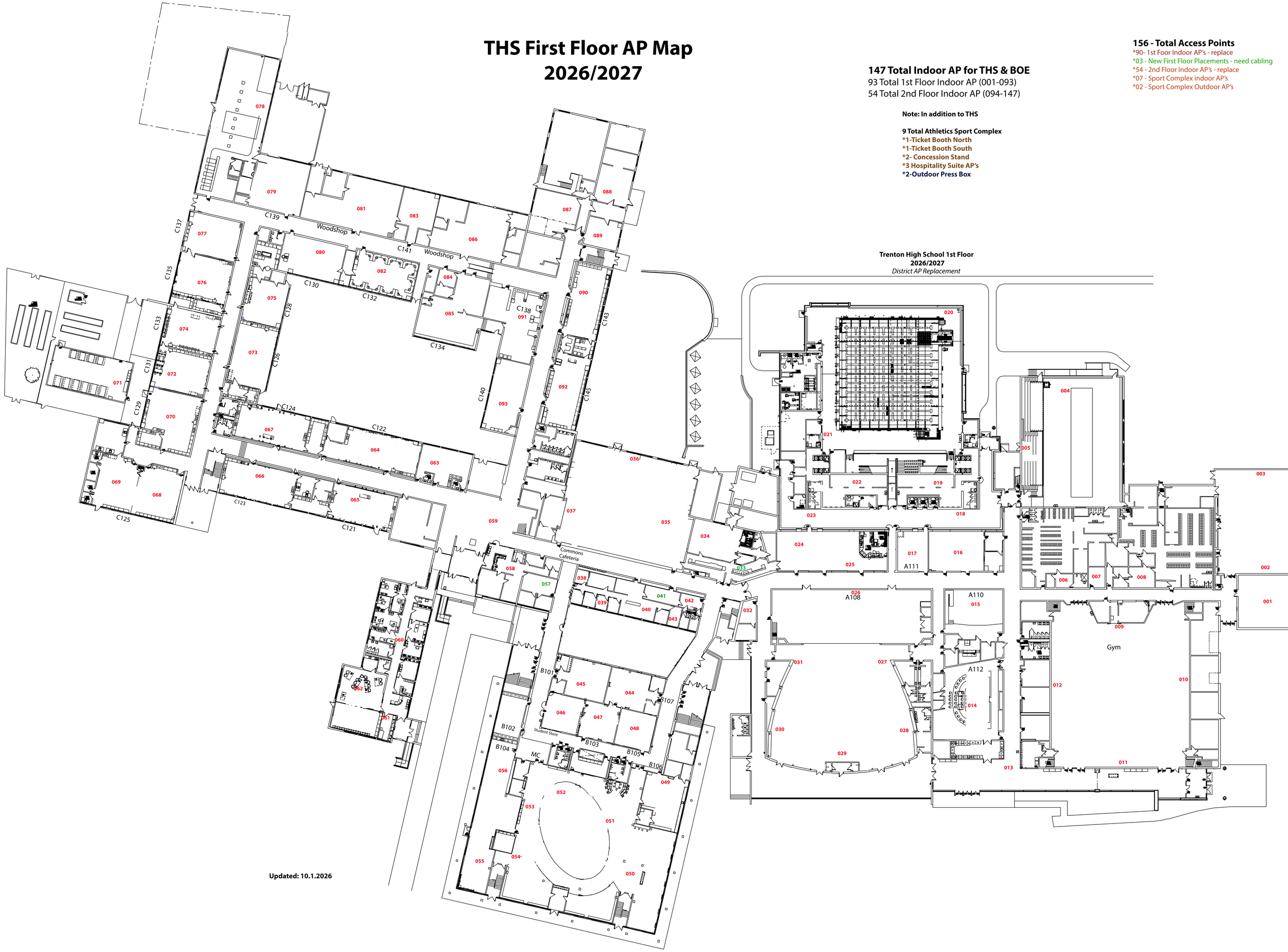
147 Total Indoor AP for THS & BOE
93 Total 1st Floor Indoor AP (001-093)
54 Total 2nd Floor Indoor AP (094-147)

Note: In addition to THS

9 Total Athletics Sport Complex
***1-Ticket Booth North**
***1-Ticket Booth South**
***2- Concession Stand**
***3 Hospitality Suite AP's**
***2-Outdoor Press Box**

156 - Total Access Points
*90- 1st Foor Indoor AP's - replace
*03 - New First Floor Placements - need cabling
*54 - 2nd Floor Indoor AP's - replace
*07 - Sport Complex indoor AP's
*02 - Sport Complex Outdoor AP's

Trenton High School 1st Floor
2026/2027
District AP Replacement



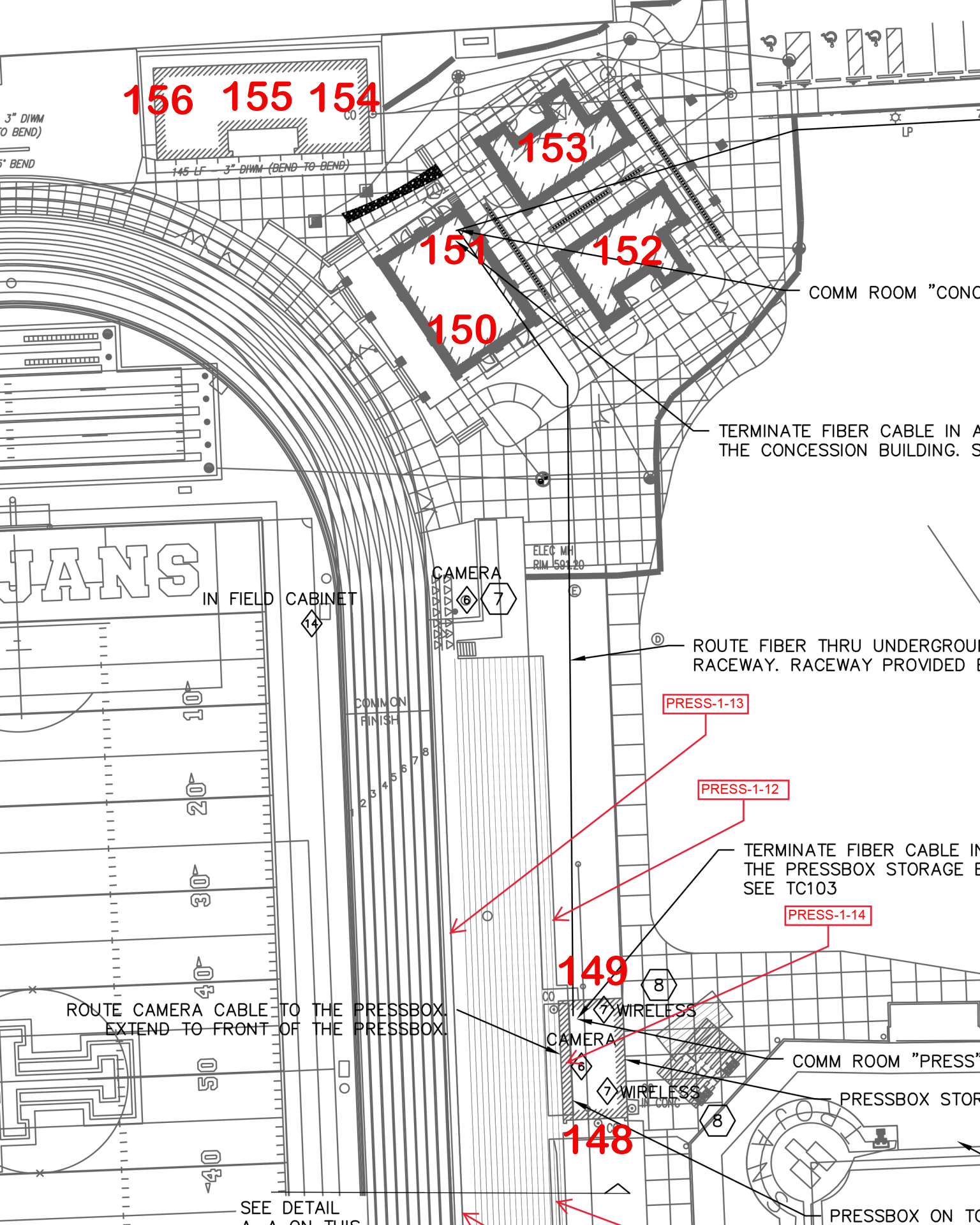
Updated: 10.1.2026

TRENTON HIGH SCHOOL
2nd FLOOR
ARROWS DENOTE STAIR
EXITS TO 1st FLOOR

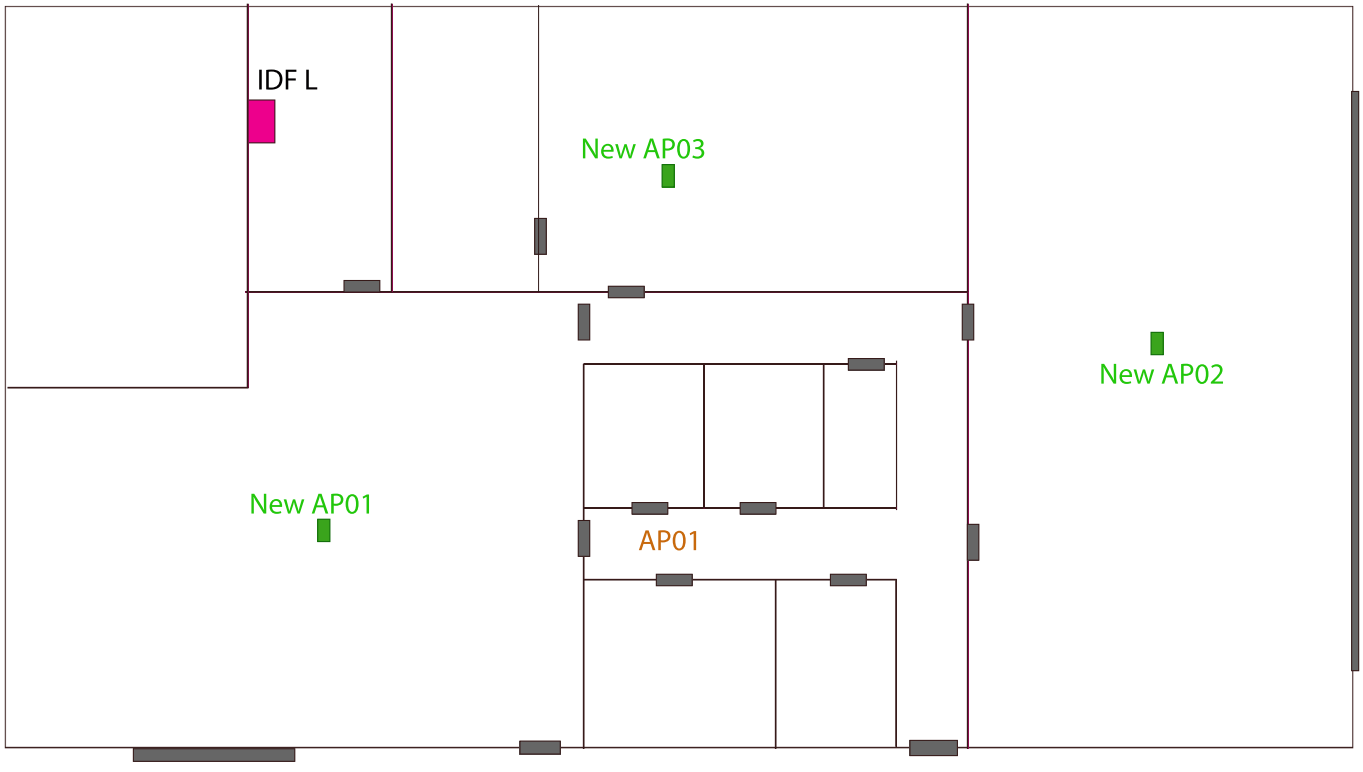
54 Upstairs Indoor AP (094-147)

0 IDF Network Closets




156
155
154
153
151
152
150
149
148
145 LF — 3" DIWM (BEND TO BEND)
COMM ROOM "CONC
TERMINATE FIBER CABLE IN A
THE CONCESSION BUILDING. S
ELEC MH
RIM 591.20
CAMERA
6
7
IN FIELD CABINET
14
ROUTE FIBER THRU UNDERGROU
RACEWAY. RACEWAY PROVIDED E
COMMON
FINISH
PRESS-1-13
PRESS-1-12
TERMINATE FIBER CABLE IN
THE PRESSBOX STORAGE E
SEE TC103
PRESS-1-14
8
7 WIRELESS
CAMERA
6
COMM ROOM "PRESS"
PRESSBOX STOR
IN CONC
ROUTE CAMERA CABLE TO THE PRESSBOX.
EXTEND TO FRONT OF THE PRESSBOX.
SEE DETAIL
PRESSBOX ON TO

Maintenance Service Building



Loft above Offices