

2/20/2017

Request for Proposal Synchronized Clock System

For

**TSD Bid # 9840
Troy School District
1140 Rankin
Troy, MI 48083**

Prepared by

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SECTION 00 30 00 – BIDDING REQUIREMENTS – INSTRUCTION TO BIDDERS

PART 1 - GENERAL

1.1 REQUEST FOR PROPOSALS

- A. Troy School District is requesting proposals for a 100%, turnkey wireless synchronized clock system
- B. A complete list of the buildings (“Sites”) are provided in Attachment A and on project drawings and are incorporated herein by reference. **Bid documents may be obtained from the purchasing page (under Departments, Business Services) of the District’s web site at www.troy.k12.mi.us.**

- 1.2 **Due on or before 2:30 PM (local time) on March 10th, 2017 (“Due Date”)**, the Owner will receive bid proposals for the project. The Owner will not consider or accept a bid proposal received after the due date for bid proposal submission. All bid proposals received after the due date will be returned by making them available to the respective Bidder, unopened, for said Bidder to pick-up at their sole cost and expense. Bid proposals shall be submitted to:

Todd Hensley, Purchasing Supervisor
Troy School District
Purchasing Department
Facility Operations Building
1140 Rankin
Troy, Michigan 48083

1.3 PROPOSALS/QUOTES

- A. Four (4) “hard” copies and one (1) “soft” (electronic) copy on a USB “flash” drive of the proposals are to be submitted in sealed packaging, clearly marked: **“SYNCHRONIZED CLOCK SYSTEM SEALED BID”** for Troy School District and shall be identified with the Bidder’s name and address and the date and time of the bid proposal opening. The Owner is not responsible for any postal or delivery delays. No email, facsimile or other electronic bid proposals will be accepted.
- B. Proposals will be opened publicly immediately following the due date of the proposals

1.4 PROPOSAL FORMAT

- A. The Bid response shall be structured as follows:
 - 1. Section 1 – Submittal Letter, Executive Summary and Bid Bond
 - 2. Section 2 – Proposal Forms and Pricing
 - 3. Section 3 – Narratives, System Description, Information, and Brochures

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4. Section 4 - Bidder Qualifications, References

5. Section 5 – Bidder’s Maintenance Contract

B. The “hard copy” Bids shall be submitted on 8 1/2" by 11" paper, single sided, single spaced using 10 to 12-point print, in 3 ring binders, clearly labeled to show the Bidder's name.

C. The “soft copy” Bid shall be in the same structure as the “hard copy” Bids, bound in a .pdf file, submitted on an USB “flash”, “Thumb” or similar drive with the hard copies.

1.5 SECURITY

A. Each bid proposal must be accompanied by bid security in the form of a certified check or bid bond in the amount not less than 5% of the bid proposal amount, made payable to Troy School District or naming Troy School District as the obligee. Bid bonds shall be issued by a company licensed to do business in the State of Michigan

1.6 FAMILIAL DISCLOSURE AFFIDAVIT

A. Each bid proposal must be accompanied by a sworn and notarized statement disclosing any familial relationship that exists between the owner or any employee of the Bidder and any member of the Board of Education or the Superintendent of Troy School District. The Board of Education will not accept a bid proposal that does not include this sworn and notarized disclosure statement.

1.7 AFFIDAVIT OF COMPLIANCE – IRAN ECONOMIC SANCTIONS

A. Each bid proposal must be accompanied by the Iran Economic Sanctions Affidavit of Compliance in compliance with Michigan Public Act No. 517 of 2012. The Board of Education will not accept a bid proposal that does not include this sworn and notarized disclosure statement.

1.8 RESERVATION OF RIGHTS

A. The Owner reserves the right, in its sole and absolute discretion (for this provision and all other provisions contained in this RFP), to accept or reject, in whole or in part, any or all bid proposal with or without cause, to waive any irregularities or informalities in this RFP process or any bid proposal, and to award the contract to other than the low bidder, when in the opinion of the Owner, such action will best serve the Owner's interests.

1.9 WITHDRAWAL OF BID PROPOSALS/QUOTES

A. All bid proposals submitted shall not be withdrawn and shall be irrevocable for a minimum period of ninety (90) calendar days following the due date for receipt of bid proposals set forth above.

1.10 REQUESTS FOR CLARIFICATION

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- 1.11 Bidders may request that the School District clarify information contained in this RFP. All such requests must be made in writing via email to Eric Helsel, Convergent Technology Partners, at ehelsel@ctpartners.net. Requests for Clarifications and inquiries may only be made via email. The deadline for all Requests for Clarification is per the schedule of events. The aggregated answers to all Requests for Clarification will be provided in an addendum to the RFP which will be issued and posted on the Purchasing page of the District website at www.troy.k12.mi.us March 7, 2017 for all potential proposers to view.
- 1.12 RESTRICTION ON COMMUNICATION
- A. From the issue date of this RFP until a Contractor is selected and the contract is awarded a prospective Contractor shall not communicate about the subject of this RFP or a Contractor's bid proposal with the Owner, its Board of Education, or any individual member, administrators, faculty, staff, students, or employees, except for additional requests for clarification in accordance with the paragraph above.
- 1.13 RELEASE OF CLAIMS
- A. Each Bidder by submitting its Proposal releases the Owner from any and all claims arising out of, and related to, this RFP process and selection of a Contractor.
- 1.14 PROPOSAL COST
- A. Respondents of this RFP are responsible for any and all costs incurred by them or others acting on their behalf in preparing or submitting a bid proposal, or otherwise responding to this RFP, or any negotiations incidental to its bid proposal or this RFP.
- 1.15 COLLUSIVE BIDDING
- A. All Bidders certify that its bid proposal is made without any previous understanding, agreement or connection with any person, firm or corporation making a bid proposal for the same project and is in all respects fair, without outside control, collusion, fraud or otherwise illegal action.
- 1.16 DEFINITIONS
- A. Bid Documents are defined as the Instructions to Bidders, Schedule of Events, this RFP, including all Supplemental forms, Attachments, Appendices, Specifications, Drawings and Addenda and the Contract.
- B. Addenda are written or graphic instruments issued prior to the due date of bid proposals which modify or interpret the Bid Documents by additions, deletions, clarifications or corrections. All Addenda issued to Bidders prior to the due date of bid proposals shall become part of the Bid Documents and all bid proposals are to include the Project/Work therein described. Each Bid Proposal submitted shall list all Addenda that have been received prior to the due date of bid proposals.

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- C. As used in these Instructions to Bidders, the term "Bid Proposal" means a bid proposal prepared and submitted in response to this RFP.
- D. As used in these Instructions to Bidders, the term "PSC" refers to the Professional Service Contractor and means Convergent Technology Partners and its assigned representative.
- E. Throughout this RFP and Contract, the "Owner" or "District" will be used to refer to District and bidders submitting bid proposals will be referred to as "Bidders" or "Vendors" and a successful Bidder or Vendor will be referred to as a "Contractor".

1.17 BIDDER'S REPRESENTATION

- A. Each Bidder, by submitting a Bid Proposal, represents that the Bidder has read and understands the Bid Documents and is familiar with the local conditions under which the project is to be performed. Bidders will be held to have compared the Sites with Bid Documents and have satisfied themselves to all conditions affecting the execution of the Work/Project.

1.18 EXAMINATION OF BID DOCUMENTS

- A. **A mandatory Bidder's conference will be held on Wednesday, March 1, 2017 at 2:00 p.m. (EST)** for the purpose of answering any questions from the Vendors and visiting the Sites. The location of the Bidder's conference is:

Troy School District
Services Building
4420 Livernois
Troy, Michigan 48098

- B. Before submitting a Bid Proposal, each Bidder shall examine the RFP documents carefully and shall read the Specifications and the Bid Documents. Each Bidder shall gather complete information prior to bidding as to existing conditions and limitations under which the Work/Project is to be performed, and shall include in its Bid Proposal a sum to cover the cost of items necessary to perform the Work/Project as set forth in the Bid Documents.
- C. No allowance or additional fees will be made to a Bidder because of lack of such examination or knowledge. The submission of a Bid Proposal will be considered as conclusive evidence that the Bidder has made such examination. An on-site-inspection of the Sites during the Bidder's Conference will be for all Bidders and their subcontractors, if any. Vendors may use subcontractors in connection with the Work/Project performed under this RFP provided the Owner has approved the subcontractors. In using subcontractors, the Vendor agrees to be responsible for all their acts and omissions to the same extent as if the subcontractors were employees of the Vendor.
- D. Bidders may make written request to the PSC for interpretation or correction of any ambiguity, inconsistency or error in the Bid Documents that are discovered. These questions shall be submitted to the PSC no later than March 3, 2017, 5:00 PM. Only a written interpretation or

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correction by Addendum shall be binding on Bidders. No explanations or interpretations requested or made orally will be considered binding. All questions will be responded to in writing and all addenda will be posted to Purchasing page of the District website at www.troy.k12.mi.us.

1.19 SUBSTITUTIONS

- A. Each Bid Proposal shall be based upon the materials and equipment described in the Bid Documents.
- B. Voluntary alternates as substitutions for materials and equipment will be considered and evaluated if the Base Bid includes specified materials and equipment. In addition to the Base Bid, the submission of voluntary alternates is acceptable. If a voluntary alternate is submitted for consideration, it shall be expressed on the Bid Form as an "add" or "deduct" amount from the Base Bid. If a voluntary alternate is submitted, the Bidder shall also submit sufficient information in the form of drawings, specifications, and a complete description of the proposed substitute, the cost savings or advantages. Additionally, provide the name of the material or equipment for which it is substituted, drawings, cuts, performance and test data and any other data or information necessary for a complete evaluation, sufficient for analysis of the alternate. The Owner reserves the right to unilaterally accept or reject, in whole or in part, any voluntary alternates.

1.20 BIDDING PROCEDURES

- A. All Bids Proposal must be submitted on the Bid Proposal Forms provided as part of the Bid Documents and in accordance with the Advertisement to Bid and Instructions to Bidders. Bidders must provide a complete list of proposed subcontractors (one per discipline) as indicated on the Bid Forms. Listing two or more subcontractors per discipline will be grounds for disqualification.
- B. All Bidders must provide a proposal for the Base Bid that meets or exceeds the specifications set forth in this RFP. However, all Bidders may suggest Alternates if it is felt that the alternate proposal better suits the intent of this RFP. Any Alternate must be listed as such with separate pricing sheets. Any variance of the feature/functionality of the Base Bid must be identified in any Alternates proposed.
- C. Prior to the due date for bid proposals, any Addenda will be available for inspection wherever the Bid Documents are kept available for that purpose. No Addendum will be issued later than March 7, 2017. It is each Bidders responsibility to ascertain prior to submitting a Bid Proposal that he/she has received all Addenda issued and shall acknowledge their receipt in their Bid Proposal Form.
- D. All Bids must be signed as follows:
 - 1. Corporations: Signature of an officer of the firm who is authorized to bind the corporation.

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2. Partnerships: Signature of one partner who is authorized to bind the firm and all of its Partners.
 3. Bids submitted by Joint Ventures shall be signed by one of the Joint Ventures and shall be accompanied by a certified copy of the Power of Attorney authorizing the individual signing to bind all the Joint Ventures. If a certified copy of the Joint Venture's certificate submitted with the Bid Proposal indicates that all Joint Ventures have signed, no authorization is required.
 4. Individuals signing on own behalf: No authorization is required.
 5. Individual signing on behalf of another: Power of Attorney or comparable evidence of authority shall accompany Bid.
- E. Bid proposals shall be prepared on unaltered Bid Forms, which are a part of this RFP. Bidders shall make no additional stipulations on the Bid Form nor qualify the Bid Proposal in any other manner. Unauthorized conditions, limitations, or provisions attached to the Bid Proposal will be cause for rejection of the Bid Proposal. If alterations by erasure or interlineations are made for any reason, explain over such erasure or interlineations with a signed statement from the Bidder. No additional charges, other than those listed on the Bid Proposal Form and Bid Supplemental Forms, shall be made. Prices quoted will include verification/coordination of order, all costs for shipping, delivery to all Sites, insurance, payment and performance bonds, unpacking, setup, installation, operation, testing, cleanup, training and all other requirements contained in the bid documents.
- F. Bids shall be submitted in a sealed envelope. Identified on the face of the envelope:
1. Project name
 2. Name and address of Bidder
 3. Notation **"SYNCHRONIZED CLOCK SYSTEM - SEALED BID"**
- G. No responsibility shall attach to the PSC, the Owner, or the authorized representatives of either one, for the premature opening of any Bid Proposal which is not properly addressed, delivered and/or identified. In such event, that Bid Proposal will not be considered and the Bidder will be automatically disqualified from consideration.
- H. Negligence in preparation, improper preparation, errors in and/or omissions in the Bid Proposal shall not relieve the Bidder from fulfillment of any and all applicable obligations and requirements of contained in the Bid Documents.
- I. The Owner or PSC in making copies available of the Bid Documents to Bidders do so only for the purpose of obtaining bid proposals on the project and do not confer a license or grant of use to a Bidder for any other purpose.

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- J. All Bidders must complete, sign and return the attached "FAMILIAL DISCLOSURE" and "IRAN ECONOMIC SANCTIONS AFFIDAVITS" with their Bid Proposal.
- K. Bidders must include a Bill of Material (BOM), along with line item pricing for all components proposed, including, but not limited to material, maintenance and support with the total listed where indicated in the Bid Proposal Forms. Failure to provide the BOM with line item pricing will result in disqualification of the Bid proposal. This does not preclude filling out the Unit Pricing Form Attachment B.
- L. The Owner considers this RFP legally binding and will require that this Request for Proposal and the Bid Proposal be incorporated by reference into any subsequent Contract between the Contractor and the Owner. It should be understood by the Bidder that this means that the Owner expects the Bidder to satisfy all of the requirements and specifications contained in the RFP. Any exceptions to the RFP must be explicitly noted in the Bid Proposal. Lack of listing all exceptions will be considered acceptance of all of the specifications as presented in this RFP

1.21 CONSIDERATION OF BIDS

- A. The Bidder acknowledges the right of the Owner to accept or reject any or all Bid proposals, in whole or in part, with or without cause, to waive any irregularities or informalities in this RFP process or any Bid Proposal, and to award the contract to other than the low bidder. In addition, the Bidder recognizes the right of the Owner to reject a Bid Proposal:
 - 1. If the Bidder fails to furnish any required Bid Security, or to submit the data required by the Bid Documents; or
 - 2. If the Bid Proposal is in any way incomplete or irregular; or
 - 3. If the Bidder's performance was unsatisfactory under a prior contract for the construction, repair, modification, or demolition of a facility with the Owner, or a contractor in privacy of contract with the Owner, which was funded, directly or indirectly, by the Owner;
 - 4. If the Bidder was an employer of construction mechanics working on the construction of facilities funded, directly or indirectly, by the Owner through contracts under 1984 PA 431, MCL 18.1101 et seq; MSA 3.516 (101) et seq, and was determined by the Michigan Department of Labor to have failed to comply with a contractual provision requiring the payment of Department of Labor's prevailing wage or the maintenance of Department of Labor's prevailing wage or the maintenance of Department of Labor's apprentice-journeyman ratio determinations for construction mechanics for that facility.
- B. The Owner shall have the right to accept alternates in any order or combination and to determine the lowest responsible Bidder on the basis of the sum of the base bid and the alternates accepted.

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- C. Once the contract is awarded to the Contractor, the contract is contingent upon Troy School District Board of Education approval and the Contractor providing the Owner with any and all documents required by the RFP prior to commencement of the Work/Project (i.e. Insurance Certificates, Labor and Material Payment Bond and Performance Bond, etc.). Further, the Owner reserves the unrestricted right to reduce the contract amount by reducing the scope of Work/project and/or components. Any such action will be taken before specific work on a building or on a project component has commenced. Contract amount shall be reduced or increased based on the unit pricing values.
- D. Bidders to whom an award of a contract is under consideration shall submit to the Owner upon his/her request a properly executed Contractor's Qualification Statement, AIA Document A305 or other information format specified by the Owner.

1.22 BID SECURITY

- A. The Bid Proposal shall be accompanied by a Bid Security of a certified check or cashier's check payable to the Owner or by a satisfactory Bid Bond Entity naming the Owner as the obligee and executed by the Bidder and a surety company authorized to do business in the State of Michigan, in an amount identified in the Instructions to Bidders. The check or amount of Bid Bond shall be forfeited to the Owner upon failure of the Contractor to enter into the Contract. The Contractor's Bid security will be retained until the Contractor has signed the contract and has furnished the required Certificates of Insurance and other required Bonds and documents required by the RFP. Bonds signed by an Attorney-In-Fact must be accompanied by a certified and effectively dated copy of their Power of Attorney.
- B. The Owner reserves the right to retain the Bid security of all Bidders until the Contractor enters into the contract or until ninety (90) days after bid opening, whichever is later. If the Contractor refuses to enter into the Contract, the Owner may retain their Bid Security as liquidated damages but not as a penalty.

1.23 PERFORMANCE AND LABOR AND MATERIAL PAYMENT BONDS

- A. At or prior to delivery of the signed Contract, the Owner will require the Contractor to secure and post a Labor and Material Payment Bond and a Performance Bond including bonding for all subcontractors, each in the amount of 100% of the Contract Sum including bonding for all subcontractors. Surety shall be a company incorporated in the United States and must appear on the U.S. Treasury Departments approved surety list and be adaptable to the Owner. The Contractor shall obtain such bonds in a manner consistent with Michigan law.

1.24 TAXES

- A. Installation services for the tangible personal property purchased by the Owner is not subject to sales taxation. Moreover, the Owner is exempt from taxation on all tangible personal property purchased by the Owner for its use and consumption; however, this exemption would not apply to any materials required under the Bid Documents that are deemed to be a component of a

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construction/improvement project to the Owner's Sites/Facilities. All prices submitted on the Bid Proposal Form shall be inclusive of any and all applicable taxes.

1.25 PERMITS AND FEES

- A. All prices submitted on the Bid Proposal Form shall be inclusive of any and all applicable/required permits and fees.

1.26 MICHIGAN RIGHT-TO-KNOW LAW

- A. All Contractors must conform to the provisions of the Michigan Right-To-Know Law, 1986 PA 80, which requires employers to:
 - 1. Develop a communication program designed to safeguard the handling of hazardous chemicals through labeling of chemical containers, and development and availability of Material Safety Data Sheets.
 - 2. Provide training for employees who work with these chemicals; and
 - 3. Develop a written hazard communications program.
- B. The law also provides for specific employee rights. These include:
 - 1. The right to be notified (by employer or Contractor posting) of the location of Material Safety Data Sheet (MSDS);
 - 2. The right to be notified (by employer or Contractor posting) of new or revised MSDS no later than five working days after receipt; and
 - 3. The right to request copies of MSDS from their employers or Contractors.
- C. Provisions of Michigan's Right-to-Know Law may be found in those sections of the Michigan Occupational Safety and Health Act (MIOSHA), which contain Right-to-Know provisions, and the Federal Hazard Community Standard, which is part of the MIOSHA Right-to-Know Law through adoption.

1.27 WITHDRAWAL OF BIDS

- A. A Bidder may withdraw its Bid Proposal by written request from an authorized Bidder representative, at any time prior to the due date of bid proposals.
- B. No Bidder may withdraw a Bid Proposal for a period of ninety (90) calendar days, following the due date for receipt of bid proposals, and all bid proposals shall be subject to acceptance by the Owner during this ninety (90) day period.

1.28 EXECUTION OF CONTRACT

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- A. The Contractor to whom the contract is awarded shall, within ten (10) calendar days after Notice of Award and receipt of the contract from the Owner, execute and deliver required copies to the Owner.
- B. At or prior to delivery of the executed Contract, the Contractor to whom the contract is awarded shall deliver to the Owner those Certificates of Insurance required by the Bid Documents and such Labor and Materials Payment Bonds and Performance Bond as are required by Owner and any other documents required by this RFP.
- C. The Owner shall approve the provided Bonds and Certificates of Insurance before the Contractor may proceed with the Work/Project. Failure or refusal to provide Bonds, Certificates of Insurance or any other documents required by this RFP in a form(s) satisfactory to the Owner shall subject the Contractor to loss of time from the allowable construction period equal to the time of delay in furnishing the required material.

1.29 POST BID INFORMATION

- A. Bid Form(s) shall be submitted as indicated in the Bid Documents. The Bid Form(s) requires all proposed subcontractors for the project to be named; no more than one per discipline.

1.30 TIME OF COMPLETION

- A. The Bidder agrees to complete the Work within the timeframes listed in the Schedule of Events.

1.31 PREVAILING WAGE REQUIREMENTS

- A. In any contract entered into pursuant to this RFP, the Contractor shall comply with the provisions of the PREVAILING WAGE LAW.
 - 1. The Contractor will pay the latest prevailing wages and fringe benefits for all Work as required by State of Michigan/Public Act 166 dated 1965, as amended. The prevailing wage and fringe benefit rates under Michigan law are required for this project.
- B. Additionally, the Contractor is required to comply with all other provisions of the governing prevailing wage law, and shall ensure its subcontractors' compliance therewith.
- C. Allegations that individuals working on this project are not receiving compensation required by law are considered serious by the Owner. In order to expedite the resolution of prevailing wage complaints related to this project, the Owner has determined that the Michigan Fair Contracting Center ("MFCC") is the organization best equipped to expedite the investigation of these matters. Any person or entity (the "Complainant") who reasonably believes that a particular contractor, subcontractor, sub-subcontractor, supplier or other person or entity providing labor, materials, goods or services on this project (each, an "Employer") is not paying prevailing wages as required by applicable law may ask the MFCC to determine whether proper rates are being paid either by completing and submitting to MFCC a request for assistance (the "RFA") or by contacting MFCC by telephone at (734) 462-2330 or (877) 611-6322. The RFA can be

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downloaded electronically at <http://mifcc.org/Brochures/KnowYourRights.pdf> and delivered to MFCC by facsimile to (734) 462-2318 or by mail to P.O. Box 530492, Livonia, Michigan 48153-0492.

- D. Each and every Employer who is subject to an audit by MFCC pursuant to any RFA shall cooperate and comply fully with all requests, requirements and inquiries of MFCC. If, after investigation, MFCC determines that a Complainant's allegations are meritorious and the Complainant, MFCC and the Employer are unable to resolve the dispute following MFCC's determination, then, under the direction and with the assistance of MFCC, the Complainant shall file a Prevailing Wage Complaint (the "PWC") with the State of Michigan Department of Labor and Economic Growth Wage and Hour Division (the "Wage and Hour Division"). The PWC can be downloaded electronically at <http://mifcc.org/Brochures/PrevailingWageComplaint.pdf> and delivered by facsimile to (517) 322-6352 or by mail to 7150 Harris Drive, P.O. Box 30476, Lansing, Michigan 48909-7076.

- E. Upon commencement of the audit from MFCC, the Owner reserves the right to hold all payments, pending the conclusion of the audit. If the Wage and Hour Division determines that the Employer has violated any applicable prevailing wage law, then the Owner shall automatically be entitled to and will (a) withhold from such Employer any and all payments due and owing until the Employer remedies any and all violations cited by the Wage and Hour Division, and (b) back charge the Employer for all costs actually incurred in MFCC's audit of the Employer.
 - 1. The Owner shall keep a hard copy of these requirements posted at the project site at all times.

- F. The Contractor shall be financially responsible for the payment of prevailing wages by all subcontractors that are subject to the governing prevailing wage law for Work on the project.

- G. Because Work on this project is covered by the Michigan Prevailing Wage Act ("Act") the Contractor and its subcontractors that are governed by the applicable prevailing wage law shall pay all hours at the prevailing wage rates at the applicable hourly rate; no Work performed by or on behalf of the Contractor on this project will be paid on a lump sum basis or a piece rate basis in violation of the Act.
 - 1. The Contractor will pay its workers at wage and fringe benefit rates consistent with the Act regardless of whether the workers are classified as employees or independent contractors.
 - 2. The Contractor shall not misclassify any work assignments, but shall in each and every case follow proper jurisdictional assignments in compliance with the Act.
 - 3. The Contractor shall assure that any persons paid at apprentice rates under the Act are properly classified as apprentices by actual participation in a BAT certified program or as may otherwise be permitted by the Act.

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1.32 EQUAL OPPORTUNITY

- A. The Contractor and all of its subcontractors shall not discriminate against any employee or applicant for employment because of race, religion, color, sex or national origin.

PART 2 - EXECUTION

2.1 SITE REQUIREMENTS

- A. The Owner Sites are both instructional and administrative facilities that provide year-round services to their students, staff and the community. As such, activities in all buildings are critical to the provisioning of services to the students, staff and the community and shall not be interrupted by the Contractor's Work activities.
- B. The computer and telephone systems associated with this Work will not be taken off-line or removed from service during normal working hours without coordination of the Owner's IT department and the staff of affected buildings. Arrangements must be made by the Contractor to coordinate any such activities.
- C. The Contractor will be required to work around all of the conditions listed above, as well as working with the Owner's staff to minimize disruptions to normal Owner activities.
- D. Installation Guidelines
 - 1. All Work performed on this Project will be installed in accordance with the current edition of the National Electrical Code®, the current edition of the National Electrical Safety Code®, the current edition of the BICSI Telecommunications Distribution Methods Manual, the current edition of the BICSI Cabling Installation Manual, the latest issue of the ANSI/TIA/EIA Standards as published by Global Engineering Documents as TIA/EIA Commercial Building Telecommunications Standard, and all local codes and ordinances.

2.2 QUALITY ASSURANCE

- A. Project Manager
 - 1. The Contractor will provide a full-time Project Manager who will act as a single point of contact for all activities regarding this Project. The Project Manager must be a management employee and will not be involved in personally performing craft installation Work
 - 2. The Project Manager is required to attend necessary technology and construction meetings for coordination before Work is started and construction meetings once Work is in progress.
 - 3. The Project Manager will be required to make on-site decisions regarding the scope of the Work and any changes required by the Work.

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4. The Project Manager will be totally responsible for all aspects of the Work and shall have the authority to make immediate decisions regarding implementation or Owner approved changes to the Work.

B. Compliance with Laws and Regulations

1. The Contractor performance of the Work shall comply with all applicable federal, state, and local laws, rules, and regulations and Owner policies, procedure, rules and regulations. The Contractor shall give required notices, shall procure necessary governmental licenses and inspections, and shall pay without burden to the Owner, all fees and charges in connection therewith unless specifically provided otherwise. In the event of violation, the Contractor shall pay all fines and penalties; including attorney's fees and other defense costs and expenses in connection therewith.

C. Federal Communications Commission

1. Equipment requiring FCC registration or approval shall have received such approval and shall be appropriately identified.

D. Codes, Standards, and Ordinances

1. All Work shall conform to the latest edition of the National Electrical Code®, the Building Code, and all local codes and ordinances, as applicable. ANSI/TIA/EIA-568-B and ANSI/TIA/EIA-569-A shall be adhered to during all installation activities. Methodologies outlined in the latest edition of the BICSI Telecommunications Distribution Methods Manual shall also be used during all installation activities. Should conflicts exist with the foregoing, the authority having jurisdiction for enforcement will have responsibility for making interpretation. The Contractor is wholly responsible to meet or exceed all codes, standards, regulation, manufacturer installation standards and industry best practices.

2.3 SAFETY

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

2.4 INSPECTION, ACCEPTANCE, AND TITLE

- A. Inspection and Acceptance will be upon successful installation unless otherwise provided. Title to/or risk of loss or damage to all items shall be the responsibility of the Contractor until acceptance by the Owner, unless loss or damage results from negligence by the Owner. If the

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materials or services supplied to the Owner are found to be defective or do not conform to the specifications, the Owner reserves the right to cancel the Contract upon written notice to and return products at the Contractor's expense, based upon the terms of the Contract.

1. When the Owner is referred to in this section of the RFP relative to inspections, the Owner has designated the PSC as the party to perform such inspections on behalf of the Owner. Notwithstanding the above, the Owner may also perform such inspections along with the PSC.
- B. The Owner shall at all times have access to the Work wherever it is in preparation or progress, and shall provide proper facilities for such access and for inspection.
- C. The Contractor shall not close up any Work until the Owner has inspected the Work. Should the Contractor close up the work prior to inspection by The Owner, the Contractor shall uncover the Work for inspection by the Owner at no cost to the Owner, and then recover the Work according to the specifications contained herein. The Contractor shall notify the Owner in writing when the Work is ready for inspection. The Owner will inspect the Work as expeditiously as possible after receipt of notification from the Contractor.

2.5 STATUS REPORTS, MEETINGS AND CONSTRUCTION COORDINATION

- A. It shall be the Contractor's responsibility to provide the Owner / PSC with written weekly project status reports while actively engaged in craft work and a summary report at the beginning of periods of inactivity between phases or construction delays noting status at that time and expected date of return to work in addition to the requirements listed below. These reports are required and shall include, but not be limited to:
 - B. Project completion percentage.
 - C. Any and all problems that were encountered.
 - D. Any foreseeable problems that may arise.
 - E. General status of the project
 - F. The Owner / PSC reserves the right to hold additional status meetings on a regular basis with the Contractor's Project Manager.

END OF SECTION

Troy School District
Synchronized Clock System - Bid # 9840

SECTION 00 30 10 - SCHEDULE OF EVENTS

The following is a projected schedule of events for this project. The schedule may change depending upon the results of the responses and a final schedule will be established prior to contracting with the Contractor. Additionally, the final schedule shall be subject to change based on construction schedule and progress.

EVENT	DATE
Bid Release	Feb 20, 2017
Mandatory Bidder's Conference Date and time – 2:00 PM	Mar 1, 2017
Final Date and time for Questions – 5:00 PM	Mar 3, 2017
Final Addendum	March 7, 2017
Bid Due Date/time and Public Opening - 2:30 PM	March 10, 2017
Interviews	Mar 21 & 22, 2017
Contract Award	Apr 18, 2017
Earliest Project Start Date	Apr 24, 2017
Project Completion	Aug 4, 2017

End of Section



STATE OF MICHIGAN

Wage and Hour Division

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Informational Sheet: Prevailing Wages on State Projects

REQUIREMENTS OF THE PREVAILING WAGES ON STATE PROJECTS ACT, PUBLIC ACT 166 OF 1965

The State of Michigan determines prevailing rates pursuant to the Prevailing Wages on State Projects Act, Public Act 166 of 1965, as amended. The purpose of establishing prevailing rates is to provide minimum rates of pay that must be paid to workers on construction projects for which the state or a school district is the contracting agent and which is financed or financially supported by the state. By law, prevailing rates are compiled from the rates contained in collectively bargained agreements which cover the locations of the state projects. The official prevailing rate schedule provides an hourly rate which includes *wage and fringe benefit totals* for designated construction mechanic classifications. The overtime rates also include *wage and fringe benefit totals*. Please pay special attention to the overtime and premium pay requirements. Prevailing wage is satisfied when wages plus fringe benefits paid to a worker are equal to or greater than the required rate.

State of Michigan responsibilities under the law:

- The department establishes the prevailing rate for each classification of construction mechanic ***requested by a contracting agent*** prior to contracts being let out for bid on a state project.

Contracting agent responsibilities under the law:

- If a contract is not awarded or construction does not start within 90 days of the date of the issuance of rates, a re-determination of rates must be requested by the contracting agent.
- Rates for classifications needed but not provided on the Prevailing Rate Schedule, ***must*** be obtained ***prior*** to contracts being let out for bid on a state project.
- The contracting agent, by written notice to the contractor and the sureties of the contractor known to the contracting agent, may terminate the contractor's right to proceed with that part of the contract, for which less than the prevailing rates have been or will be paid, and may proceed to complete the contract by separate agreement with another contractor or otherwise, and the original contractor and his sureties shall be liable to the contracting agent for any excess costs occasioned thereby.

Contractor responsibilities under the law:

- Every contractor and subcontractor shall keep posted on the construction site, in a conspicuous place, a copy of all prevailing rates prescribed in a contract.
- Every contractor and subcontractor shall keep an accurate record showing the name and occupation of and the actual wages and benefits paid to each construction mechanic employed by him in connection including certified payroll, as used in the industry, with said contract. This record shall be available for reasonable inspection by the contracting agent or the department.
- Each contractor or subcontractor is separately liable for the payment of the prevailing rate to its employees.
- The prime contractor is responsible for advising all subcontractors of the requirement to pay the prevailing rate prior to commencement of work.
- The prime contractor is secondarily liable for payment of prevailing rates that are not paid by a subcontractor.
- A construction mechanic ***shall only*** be paid the apprentice rate if registered with the United States Department of Labor, Bureau of Apprenticeship and Training and the rate is included in the contract.

Enforcement:

A person who has information of an alleged prevailing wage violation on a state project may file a complaint with the State of Michigan. The department will investigate and attempt to resolve the complaint informally. During the course of an investigation, if the requested records and posting certification are not made available in compliance with Section 5 of Act 166, the investigation will be concluded and a referral to the Office of Attorney General for civil action will be made. The Office of Attorney General will pursue costs and fees associated with a lawsuit if filing is necessary to obtain records.



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General Information Regarding Fringe Benefits

Certain fringe benefits **may** be credited toward the payment of the Prevailing Wage Rate:

- If a fringe benefit is paid directly to a construction mechanic
- If a fringe benefit contribution or payment is made on behalf of a construction mechanic
- If a fringe benefit, which may be provided to a construction mechanic, is pursuant to a written contract or policy
- If a fringe benefit is paid into a fund, for a construction mechanic

When a fringe benefit is not paid by an hourly rate, the hourly credit will be calculated based on the annual value of the fringe benefit divided by 2080 hours per year (52 weeks @ 40 hours per week).

The following is an example of the types of fringe benefits allowed and how an hourly credit is calculated:

Vacation	40 hours X \$14.00 per hour = \$560/2080 =	\$0.27
Dental insurance	\$31.07 monthly premium X 12 mos. = \$372.84 /2080 =	\$.18
Vision insurance	\$5.38 monthly premium X 12 mos. = \$64.56/2080 =	\$.03
Health insurance	\$230.00 monthly premium X 12 mos. = \$2,760.00/2080 =	\$1.33
Life insurance	\$27.04 monthly premium X 12 mos. = \$324.48/2080 =	\$.16
Tuition	\$500.00 annual cost/2080 =	\$.24
Bonus	4 quarterly bonus/year x \$250 = \$1000.00/2080 =	\$.48
401k Employer Contribution	\$2000.00 total annual contribution/2080 =	\$.96
Total Hourly Credit		\$3.65

Other examples of the types of fringe benefits allowed:

- Sick pay
- Holiday pay
- Accidental Death & Dismemberment insurance premiums

The following are examples of items that **will not** be credited toward the payment of the Prevailing Wage Rate

- Legally required payments, such as:
 - Unemployment Insurance payments
 - Workers' Compensation Insurance payments
 - FICA (Social Security contributions, Medicare contributions)
- Reimbursable expenses, such as:
 - Clothing allowance or reimbursement
 - Uniform allowance or reimbursement
 - Gas allowance or reimbursement
 - Travel time or payment
 - Meals or lodging allowance or reimbursement
 - Per diem allowance or payment
- Other payments to or on behalf of a construction mechanic that are not wages or fringe benefits, such as:
 - Industry advancement funds
 - Financial or material loans



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OVERTIME PROVISIONS for MICHIGAN PREVAILING WAGE RATE COMMERCIAL SCHEDULE

- Overtime is represented as a nine character code. Each character represents a certain period of time after the first 8 hours Monday thru Friday.

	Monday thru Friday	Saturday	Sunday & Holidays	Four 10s
First 8 Hours		4		
9th Hour	1	5	8	9
10th Hour	2	6		
Over 10 hours	3	7		

Overtime for Monday thru Friday after 8 hours:

the 1st character is for time worked in the 9th hour (8.1 - 9 hours)
 the 2nd character is for time worked in the 10th hour (9.1 - 10 hours)
 the 3rd character is for time worked beyond the 10th hour (10.1 and beyond)

Overtime on Saturday:

the 4th character is for time worked in the first 8 hours on Saturday (0 - 8 hours)
 the 5th character is for time worked in the 9th hour on Saturday (8.1 - 9 hours)
 the 6th character is for time worked in the 10th hour (9.1 - 10 hours)
 the 7th character is for time worked beyond the 10th hour (10.01 and beyond)

Overtime on Sundays & Holidays

The 8th character is for time worked on Sunday or on a holiday

Four Ten Hour Days

The 9th character indicates if an optional 4-day 10-hour per day workweek can be worked **between Monday and Friday without paying overtime after 8 hours worked, unless otherwise noted in the rate schedule. To utilize a 4 ten workweek, notice is required from the employer to employee prior to the start of work on the project.**

- Overtime Indicators Used in the Overtime Provision:

H - means TIME AND ONE-HALF due
 X - means TIME AND ONE-HALF due after 40 HOURS worked
 D - means DOUBLE PAY due
 Y - means YES an optional 4-day 10-hour per day workweek can be worked without paying overtime after 8 hours worked
 N - means NO an optional 4-day 10-hour per day workweek *cannot* be worked without paying overtime after 8 hours worked

- EXAMPLES:

HHHHHHHDN - This example shows that the 1½ rate must be used for time worked after 8 hours Monday thru Friday (characters 1 - 3); for all hours worked on Saturday, 1½ rate is due (characters 4 - 7). Work done on Sundays or holidays must be paid double time (character 8). The N (character 9) indicates that 4 ten-hour days is not an acceptable workweek at regular pay.

XXXHHHHDY - This example shows that the 1½ rate must be used for time worked after 40 hours are worked Monday thru Friday (characters 1-3); for hours worked on Saturday, 1½ rate is due (characters 4 – 7). Work done on Sundays or holidays must be paid double time (character 8). The Y (character 9) indicates that 4 ten-hour days is an acceptable alternative workweek.



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ENGINEERS - CLASSES OF EQUIPMENT LIST

UNDERGROUND ENGINEERS

CLASS I

Backfiller Tamper, Backhoe, Batch Plant Operator, Clam-Shell, Concrete Paver (2 drums or larger), Conveyor Loader (Euclid type), Crane (crawler, truck type or pile driving), Dozer, Dragline, Elevating Grader, End Loader, Gradall (and similar type machine), Grader, Power Shovel, Roller (asphalt), Scraper (self propelled or tractor drawn), Side Broom Tractor (type D-4 or larger), Slope Paver, Trencher (over 8' digging capacity), Well Drilling Rig, Mechanic, Slip Form Paver, Hydro Excavator.

CLASS II

Boom Truck (power swing type boom), Crusher, Hoist, Pump (1 or more 6" discharge or larger gas or diesel powered by generator of 300 amps or more, inclusive of generator), Side Boom Tractor (smaller than type D-4 or equivalent), Tractor (pneu-tired, other than backhoe or front end loader), Trencher (8' digging capacity and smaller), Vac Truck.

CLASS III

Air Compressors (600 cfm or larger), Air Compressors (2 or more less than 600 cfm), Boom Truck (non-swinging, non-powered type boom), Concrete Breaker (self-propelled or truck mounted, includes compressor), Concrete Paver (1 drum, ½ yard or larger), Elevator (other than passenger), Maintenance Man, Mechanic Helper, Pump (2 or more 4" up to 6" discharge, gas or diesel powered, excluding submersible pump), Pumpcrete Machine (and similar equipment), Wagon Drill Machine, Welding Machine or Generator (2 or more 300 amp or larger, gas or diesel powered).

CLASS IV

Boiler, Concrete Saw (40HP or over), Curing Machine (self-propelled), Farm Tractor (w/attachment), Finishing Machine (concrete), Firemen, Hydraulic Pipe Pushing Machine, Mulching Equipment, Oiler (2 or more up to 4", exclude submersible), Pumps (2 or more up to 4" discharge if used 3 hrs or more a day-gas or diesel powered, excluding submersible pumps), Roller (other than asphalt), Stump Remover, Vibrating Compaction Equipment (6' wide or over), Trencher (service) Sweeper (Wayne type and similar equipment), Water Wagon, Extend-a-Boom Forklift.

HAZARDOUS WASTE ABATEMENT ENGINEERS

CLASS I

Backhoe, Batch Plant Operator, Clamshell, Concrete Breaker when attached to hoe, Concrete Cleaning Decontamination Machine Operator, Concrete Pump, Concrete Paver, Crusher, Dozer, Elevating Grader, Endloader, Farm Tractor (90 h.p. and higher), Gradall, Grader, Heavy Equipment Robotics Operator, Hydro Excavator, Loader, Pug Mill, Pumpcrete Machines, Pump Trucks, Roller, Scraper (self-propelled or tractor drawn), Side Boom Tractor, Slip Form Paver, Slope Paver, Trencher, Ultra High Pressure Waterjet Cutting Tool System Operator, Vactors, Vacuum Blasting Machine Operator, Vertical Lifting Hoist, Vibrating Compaction Equipment (self-propelled), and Well Drilling Rig.

CLASS II

Air Compressor, Concrete Breaker when not attached to hoe, Elevator, End Dumps, Equipment Decontamination Operator, Farm Tractor (less than 90 h.p.), Forklift, Generator, Heater, Mulcher, Pigs (Portable Reagent Storage Tanks), Power Screens, Pumps (water), Stationary Compressed Air Plant, Sweeper, Water Wagon and Welding Machine.



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Informational Sheet: Prevailing Wages on State Projects

CARPENTER CRAFT JURISDICTION

Michigan recognizes the Carpenters for any and all work related to weatherization that has historically been the work of the Carpenter. This work shall include, but not be limited to: all work defined under the Federal Weatherization Assistance Program.

The jurisdiction of Carpenters, as to all work that has historically and traditionally been performed consisting of the milling, fashioning, joining, assembling, erecting, fastening or dismantling of all materials of wood, plastic, metal, fiber, cork, or composition and all other substitute materials, as well as the handling, cleaning, erecting, installing and dismantling of all machinery, equipment and all materials used by Carpenters.

The jurisdiction, therefore, extends over the following divisions and subdivisions of the trade: Carpenters and Joiners, Millwrights, Pile Drivers, Bridge, Dock and Wharf Carpenters, Underpinners, Timbermen, and Core-drillers, Shipwrights, Boat Builders, Ship-hand, Stair-Builders, Millmen, Wood and Resilient Floor Decorators, Floor Finishers, Carpet-layers, Shinglers, Siders, Insulators, Acoustic and Drywall Applicators, Sharers and House Movers, Loggers, Lumber and Sawmill Workers, Reed and Rattan Workers, Shingle Weavers, Casket and Coffin Makers, Railroad Carpenters and Car Builders, regardless of material used and all those engaged in the operation of woodworking or other machinery required in fashioning, milling or manufacturing of products used in the trade, and the handling, erecting and installing materials on any of the above divisions or sub-divisions, burning, welding and rigging incidental to the trade. When the term "Carpenter and Joiner" is used, it shall mean all the subdivisions of the trade. The trade autonomy of Carpenters therefore extends over the divisions and subdivisions of the trade, which are set forth as follows:

- (a) The framing, erecting and prefabrication of roofs, partitions, floors and other parts of buildings of wood, metal, plastic or other substitutes; application of all metal flashing used for hips, valleys and chimneys; the erection of Stran Steel section or its equal. The building and setting of all forms and centers for brick and masonry. The fabrication and erection of all forms for concrete and decking, the dismantling of same (as per International Agreement) when they are to be re-used on the job or stored for re-use. The cutting and handling of all falsework for fireproofing and slabs. Where power is used in the setting or dismantling of forms, all signaling and handling shall be done by carpenters. The setting of templates for anchor bolts for structural members and for machinery, and the placing, leveling and bracing of these bolts. All framing in connection with the setting or metal columns. The setting of all bulkheads, footing forms and the setting of and fabrication of, screeds and stakes for concrete and mastic floors where the screed is notched or fitted, or made up of more than one member. The making of forms for concrete block, bulkheads, figures, posts, rails, balusters and ornaments, etc.
- (b) The handling and erecting of rough material and drywall, the handling, assembly, setting and leveling of all fixtures, display cases, all furniture such as tables, chairs, desks, coat racks, etc., all de-mountable or moveable partitions such as Von wall, E Wall, Steel Case, Herman Miller, Haworth, American Seating, Westinghouse, Lazy Boy, rosewood, etc. All rebuilding, remodeling and setting up of all kinds of partitions, finished lumber, metal and plastic trim to be erected by Carpenters shall be handled from the truck or vehicle delivering same to the job by Carpenters.



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CARPENTER CRAFT JURISDICTION

- (c) The building and moving of all scaffolding runways and staging where carpenters' tools are used, the building from the ground up of all scaffolds over fourteen (14) feet in height including metal and specially designed scaffolding. The building and construction of all hoists and derricks made of wood; the making of mortar boards, boxes, trestles, all shoring, razing and moving of buildings. Lift type trucks are to be considered a tool of the trade. Metal siding and metal roofing fall within the scope of jurisdiction for the carpenters.
- (d) The cutting or framing and fireproofing of the openings for pipes, conduits, ducts, etc., where they pass through floors, partitions, walls, roofs or fixtures composed in whole or in part of wood. The laying out of making and installation of all inserts and sleeves for pipes, ducts, etc., where carpenters' tools and knowledge are required. The making and installing of all wooden meter boards, crippling and backing for fixtures. The welding of studs and other fastenings to receive material being applied by carpenters.
- (e) The installation of all grounds, furring or stripping, ceilings and sidewalks, application of all types of shingling and siding, etc.
- (f) The installation of all interior and exterior trim or finish of wood, aluminum, kalamein, hollow or extruded metal, plastic, doors, transoms, thresholds, mullions and windows. The setting of jambs, bucks, window frames of wood or metal where braces or wedges are used. The installation of all wood, metal or other substitutes of casing, molding, chair rail, wainscoting, china closets, base of mop boards, wardrobes, metal partitions as per National Decisions or specific agreements, etc. The complete laying out, fabrication and erection of stairs. The making and erecting of all fixtures, cabinets, shelving, racks, louvers, etc. The mortising and application of all hardware in connection with our work. The sanding and refinishing of all wood, cork or composition floors to be sanded or scraped, filled, sized and buffed, either by hand or power machines. The assembling and setting of all seats in theaters, halls, churches, schools, auditorium, grandstands and other buildings. All bowling alley work.
- (g) The manufacture, fabrication and installation of all screens, storm sash, storm doors and garage doors; the installation of wood, canvas, plastic or metal awnings or eye shades, door shelters, жалousies, etc. The laying of wood, wood block and wood composition in floors.
- (h) The installation of all materials used in drywall construction, such as plasterboard, all types of asbestos boards, transite and other composition board. The application of all material which serves as base for acoustic tile, except plaster. All acoustical applications as per National Agreement or specific agreement.
- (i) The building and dismantling of all barricades, hand rails, guard rails, partitions and temporary partitions. The erection and dismantling of all temporary housing on construction projects.
- (j) The installation of rock wool, cork and other insulation material used for sound or weatherproofing. The removal of caulking and placing of staff bead and brick mold and all Oakum caulking, substitutes, etc., and all caulking in connection with carpentry work.
- (k) The installation of all chalk boards/marker boards.



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CARPENTER CRAFT JURISDICTION

- (l) The operation of all hand operated winches used to raise wooden structures.
- (m) The erection of porcelain enameled panels and siding.
- (n) The unloading and distribution of all furnished, prefabricated and built-up sections such as door bucks, window frames, cupboards, cabinets, store fixtures, counters and show cases or comparably finished or prefabricated materials, to the job sites or points of installation as used in the construction, alteration and remodeling industry.
- (o) The handling of doors, metal, wood or composite, partitions and other finished bulk materials used for trim from the point of delivery.
- (p) All processing of these materials and handling after processing.
- (q) The making up of panels and fitting them into walls, all bracing and securing, all removal of panels from the casting including all braces, whalers, hairpins, etc.
- (r) The handling and setting of all metal pans and sections from the stock piles of reasonable distance as required by job needs shall be performed by carpenters. The stripping of such metal pans, panels or sections is to be performed by carpenters.
- (s) The sharpening of all carpenter hand or power tools, or those used by carpenters.
- (t) The layout, fabrication, assembling of and erection and dismantling of all displays made of wood, metal, plastic, composition board or any substitute material; the covering of same with any type of material, the crating and un-crating, the handling from the point of unloading and back to the point of loading of all displays and other materials or components.
- (u) The same shall apply to all other necessary component parts used for display purposes such as turntables, platforms, identification towers and fixtures, regardless of how constructed, assembled or erected or dismantled.
- (v) The make-up, handling, cutting and sewing of all materials used in buntings, flags, banners, decorative paper, fabrics and similar materials used in the display decorative industry for draperies and back drops. The decorative framing of trucks, trailers and autos used as floats or moving displays. The slatting of walls to hand fabrics and other decorative materials, drilling of all holes to accommodate such installations. Setting up and removal of booths constructed of steel or aluminum tubing as stanchions, railings, etc., handling and placing of furniture, appliances, etc., which are being used to complete the booth at the request of the exhibitor. Fabricating and application of leather, plastic and other like materials used for covering of booths. The handling of all materials, fabricating of same. The loading and unloading, erecting and assembling at the exhibit of show area, also in or out of storage when used in booth decorations.



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CARPENTER CRAFT JURISDICTION

- (w) A display shall be construed as any exhibit or medium of advertising, open to private or public showing, which is constructed of wood, metal, plastic or any other substitute to accomplish the objectives of advertising or displaying.
- (x) Handling, fitting, draping, measuring and installation of fixtures and other hardwares for draperies, all manner of making, measuring, repairing, sizing, hanging and installation of necessary fixtures and hardware for shades and Venetian blinds.
- (y) Work consisting of cutting and/or forming of all materials in preparation for installing of floors, walls and ceilings; the installation of all resilient floor and base; wall and ceiling materials to include cork, linoleum, prefabricated, laminated, rubber, asphalt, vinyl, metal, plastic, seamless floors and all other similar materials in sheet, interlocking liquid or tile form; the installation of all artificial turf, the installation, cutting and/or fitting of carpets; installation of padding, matting, linen crash and all preformed resilient floor coverings; the fitting of all devices for the attachment of carpet and other floor, wall and ceiling coverings; track sewing of carpets, drilling of holes for sockets and pins, putting in dowels and slats; and all metal trimmings used; the installation of all underlayments, sealants in preparation of floors, walls and ceilings, the unloading and handling of all materials to be installed and the removal of all materials in preparing floors when contracted for by the employer, shall be done only by employees covered under this Agreement.
- (z) The installation of all sink-tops and cabinets, to include all metal trim and covering for same. All cork, linoleum, congo-wall, linewall, veos tile, plexiglass, vinawall tile, composition tile, plastic tile, aluminum tile and rubber in sheets or tile form and the application thereof. All bolta-wall and bolta-wall tile and similar products.
- (aa) The handling and placing of all pictures and frames and the assembly of bed frames and accessories. The hanging and placing of all signage.
- (bb) The installation of all framework partitions and trim materials for toilets and bathrooms made of wood, metal, plastics or composition materials; fastening of all wooden, plastic or composition cleats to iron or any other material for accessories.
- (cc) The erection of cooling towers and tanks.
- (dd) The setting, lining, leveling and bracing of all embedded plates, rails and angles. The setting of all stay in place forms.
- (ee) Environmental: Clean room, any type of environmental chamber, walk in refrigerated coolers and all refrigerated rooms or buildings.



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CARPENTER CRAFT JURISDICTION

PILE DRIVING AND CAISSON DRILLING

(ff) All unloading, handling, signaling and driving of piles, whether wood, steel, pipe, beam pile, composite, concrete or molded in place, wood and steel sheeting, cofferdam work, trestle work, dock work, floating derricks, caisson work, foundation work, bridge work, whether old or new, crib work, pipe line work and submarine work. Cutting of all wood, steel or concrete pile, whether by machine or hand; welding and cutting, peeling, and heading of all wood pile, steel sheeting and wood sheeting. The erecting and dismantling of all pile driving rigs, also derricks whether on land or water; also the moving, shoring and underpinning of all buildings. The loading and unloading of all derricks, cranes and pile driving materials. The tending, maintenance and operation of all valves pertaining to the operation of driving of pile. All diving and tending essential to the completion of jurisdictional claims.

All work done in the established yards of the Company and all work not enumerated above, shall be handled and manned as the Employer decides.

The pile driver will unload all material shipped in by rail from the point that the rail car is spotted.

All cleaning and preparation of all piling prior to driving.

The welding and attachment of all boot plates, pile points, splice plates, connectors, rock crosses, driving crosses, driving rigs, point reinforcements and overboots.

The construction, reconstruction, repair, alteration, demolition and partial or complete removal of all marine work including, but not limited to, docks, piers, wharves, quays, jetties, cribs, causeways, breakwaters, lighthouses and permanent buoys, etc. (mixing and placing of concrete excepted).

The driving and pulling of all wood, steel and concrete foundation piles and sheet piling.

The heading, pointing, splicing, cutting and welding of all piles.

The placing of all wales, bolts, studs, lagging, rods and washers including the cutting, drilling, boring or breaking of all holes or openings thereof.

The removal of all materials and/or obstructions of any nature (rip-rap included) that retard or interfere with the driving of piles or with the placing of wales, bolts and rods.



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This is to be subject to the discretion of the contractor who may choose to use blasting specialists or other demolition specialists.

The handling on the job of all materials used in the work.

The manning of all floating equipment (towing equipment excepted) engaged in the work enumerated, including deck engines, except machinery manned by Operating Engineers.

The placing of all rip-rap, fill stone, bedding stone, cover stone and concrete blocks in connection with marine construction. Work normally performed by Employers, such as soil tests, shoring, underpinning of buildings, cribbing, driving of sheet piling, marine divers, tenders, underwater construction workers and similar operations shall continue to be included in the jurisdiction of this Agreement.

All burning, cutting, welding and fabrication of pipe, H-beams, sheet pile (metal or wood), done on the job site or in the yard of the Employer shall be done by pile drivers. The driving of bearing piles, sheet piling with heavy equipment, caissons, pile caps, auger drilling and boring, the setting up for load testing for any type of piling, all layout and spotting for piling, caisson and boring work, all earth retention, ditch boarding, installing tiebacks.

ASBESTOS ABATEMENT CARPENTERS

(gg) All erection and maintenance of barriers and partitions used in the removing of asbestos or any abatement work. The abatement of any materials previously installed by the carpenter such as transite, ceiling and floor tiles. All operating and maintaining of current equipment used in any abatement work.

State of Michigan

WHPWRequest@michigan.gov

Official Request #: 230

Requestor: Troy School District

Project Description: Purchase, installation and cabling for Synchronized Clocks Systems for all District buildings

Project Number: Bid 9840 – Synchronized Clock Systems

Oakland County

Official 2017 Prevailing Wage Rates for State Funded Projects

Issue Date: 2/15/2017

Contract must be awarded by: 5/16/2017

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<u>Classification</u>		Last Updated	Straight Hourly	Time and Half	a Double Time	Overtime Provision
Name	Description					
Asbestos & Lead Abatement Laborer						
Asbestos & Lead Abatement Laborer	MLDC		\$41.25	\$55.00	\$68.75	H H H X X X D Y
4 ten hour days @ straight time allowed						
Monday-Saturday, must be consecutive						
9/16/2016						
Asbestos & Lead Abatement, Hazardous Material Handler						
Asbestos and Lead Abatement, Hazardous Material Handler	AS207		\$40.75	\$54.25	\$67.75	H H H X X X D Y
4 ten hour days @ straight time allowed						
Monday-Saturday, must be consecutive						
10/30/2015						
Boilermaker						
Boilermaker	BO169		\$54.70	\$81.08	\$107.45	H H H H H H D Y
2/17/2015						
Apprentice Rates:						
1st 6 months			\$40.31	\$59.49	\$78.67	
2nd 6 months			\$41.45	\$61.21	\$80.95	
3rd 6 months			\$42.57	\$62.88	\$83.19	
4th 6 months			\$43.69	\$64.57	\$85.43	
5th 6 months			\$44.81	\$66.24	\$87.67	
6th 6 months			\$48.63	\$72.50	\$96.36	
7th 6 months			\$49.32	\$73.01	\$96.69	
8th 6 months			\$51.58	\$76.40	\$101.21	

Official Request #: 230

Requestor: Troy School District

Project Description: Purchase, installation and cabling for Synchronized Clocks

Project Number: Bid 9840 – Synchronized Clock Systems

County: Oakland

Official Rate Schedule

Every contractor and subcontractor shall keep posted on the construction site, in a conspicuous place, a copy of all prevailing wage and fringe benefit rates prescribed in a contract.

Official 2017 Prevailing Wage Rates for State Funded Projects

Issue Date: 2/15/2017

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Classification Name Description	Last Updated	Straight Hourly	Time and Half	a Double Time	Overtime Provision
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Bricklayer

Bricklayer, stone mason, pointer, cleaner,	BR1		\$52.43	\$78.65	\$104.86 H H D H D D D D Y
<i>Make up day allowed comment</i>		10/15/2014			
Saturday for 5 day 8 hour week					
Friday for 4 day 10 hour week					
4 10s allowed M-TH					

Apprentice Rates:

First 6 months		\$31.87	\$47.81	\$63.74
2nd 6 months		\$33.72	\$50.60	\$67.44
3rd 6 months		\$35.57	\$53.37	\$71.14
4th 6 months		\$37.42	\$56.14	\$74.84
5th 6 months		\$39.27	\$58.92	\$78.54
6th 6 months		\$41.12	\$61.70	\$82.24
7th 6 months		\$42.97	\$64.46	\$85.94
8th 6 months		\$44.82	\$67.24	\$89.64

Carpenter

Diver	CA 687 D		\$67.75	\$87.50	\$107.25 X X H X X H H D Y
Four 10s allowed M-Sat; double time due when over 12 hours worked per day					
<i>Make up day allowed comment</i>		8/12/2016			
Saturday					

Official Request #: 230
 Requestor: Troy School District
 Project Description: Purchase, installation and cabling for Synchronized Clocks
 Project Number: Bid 9840 – Synchronized Clock Systems
 County: Oakland

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Official 2017 Prevailing Wage Rates for State Funded Projects

Issue Date: 2/15/2017

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Classification Name Description	Last Updated	Straight Hourly	Time and Half	a Double Time	Overtime Provision
Carpet and Resilient Floor Layer, (does not include installation of prefabricated formica & parquet flooring which is to be paid carpenter rate)	CA1045	\$51.11	\$72.33	\$93.54	X X H X X X X D Y
	7/26/2016				
Apprentice Rates:					
1st 6 months		\$25.41	\$34.28	\$43.14	
2nd 6 months		\$29.40	\$40.26	\$51.12	
3rd 6 months		\$31.57	\$43.52	\$55.46	
4th 6 months		\$33.74	\$46.77	\$59.80	
5th 6 months		\$35.91	\$50.03	\$64.14	
6th 6 months		\$38.08	\$53.28	\$68.48	
7th 6 months		\$40.25	\$56.54	\$72.82	
8th 6 months		\$42.42	\$59.79	\$77.16	
Carpenter four 10s allowed Mon-Sat; double time due when over 12 hours worked per day <i>Make up day allowed comment</i> Saturdays	CA687Z1	\$57.69	\$73.27	\$88.85	X X H X X H H D Y
	8/12/2016				
Apprentice Rates:					
1st year		\$35.37	\$43.94	\$52.51	
3rd 6 months		\$37.86	\$47.21	\$56.56	
4th 6 months		\$40.32	\$50.45	\$60.57	
5th 6 months		\$42.81	\$53.72	\$64.62	
6th 6 months		\$45.29	\$56.98	\$68.66	
7th 6 months		\$47.77	\$60.24	\$72.70	
8th 6 months		\$50.26	\$63.51	\$76.75	
Piledriver Four 10s allowed Monday-Saturday; double time due when over 12 hours worked per day <i>Make up day allowed comment</i> Saturday <i>Subdivision of county</i>	CA687Z1P	\$57.69	\$73.27	\$88.85	X X H X X H H D Y
	8/12/2016				

Official Request #: 230
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 Project Description: Purchase, installation and cabling for Synchronized Clocks
 Project Number: Bid 9840 – Synchronized Clock Systems
 County: Oakland

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Official 2017 Prevailing Wage Rates for State Funded Projects

Issue Date: 2/15/2017

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Classification Name Description	Last Updated	Straight Hourly	Time and Half	a Double Time	Overtime Provision
Cement Mason					
Cement Mason	br1cm 10/15/2014	\$50.05	\$71.17	\$92.28	X X H H H H H D N
Apprentice Rates:					
1st 6 months		\$29.13	\$39.45	\$49.77	
2nd 6 months		\$31.20	\$42.54	\$53.87	
3rd 6 months		\$35.31	\$48.67	\$62.01	
4th 6 months		\$39.46	\$54.85	\$70.23	
5th 6 months		\$41.52	\$57.91	\$74.30	
6th 6 months		\$45.67	\$64.10	\$82.52	
Cement Mason	CE514 8/17/2016	\$48.55	\$68.40	\$88.24	H H D H H H H D N
Apprentice Rates:					
1st 6 months		\$28.17	\$38.03	\$47.88	
2nd 6 months		\$30.14	\$40.98	\$51.82	
3rd 6 months		\$34.09	\$46.91	\$59.72	
4th 6 months		\$38.03	\$52.82	\$67.60	
5th 6 months		\$39.99	\$55.75	\$71.52	
6th 6 months		\$43.94	\$61.68	\$79.42	
Drywall					
Drywall Taper	PT-22-D	\$45.91	\$59.74	\$73.56	H H D H D D D D Y
Four 10s allowed Monday-Thursday					
<i>Make up day allowed comment</i>					
Friday make-up day for bad weather or holidays					
8/25/2016					
Apprentice Rates:					
First 3 months		\$32.08	\$38.99	\$45.90	
Second 3 months		\$34.85	\$43.14	\$51.44	
Second 6 months		\$37.62	\$47.30	\$56.98	
Third 6 months		\$40.38	\$51.44	\$62.50	
4th 6 months		\$41.76	\$53.51	\$65.26	

Official Request #: 230
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 Project Description: Purchase, installation and cabling for Synchronized Clocks
 Project Number: Bid 9840 – Synchronized Clock Systems
 County: Oakland

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Official 2017 Prevailing Wage Rates for State Funded Projects

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Classification Name Description	Last Updated	Straight Hourly	Time and Half	a Double Time	Overtime Provision
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Electrician

Inside Wireman	EC-58-IW	10/25/2016	\$61.78	\$82.23	\$102.67	H H H H H H H D N
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Apprentice Rates:

0-1000 hours	\$39.84	\$49.32	\$58.80
1000-2000 hours	\$41.84	\$52.32	\$62.79
2000-3500 hours	\$43.83	\$55.30	\$66.77
3500-5000 hours	\$45.83	\$58.30	\$70.76
5000-6500 hours	\$47.82	\$61.28	\$74.74
6500-8000 hours	\$51.81	\$67.28	\$82.73

Sound and Communication Installer	EC-58-SC	1/3/2017	\$40.25	\$53.87	\$67.48	H H H H H H H D N
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Apprentice Rates:

Period 1	\$26.64	\$33.45	\$40.26
Period 2	\$28.00	\$35.49	\$42.98
Period 3	\$29.36	\$37.53	\$45.70
Period 4	\$30.73	\$39.58	\$48.44
Period 5	\$32.09	\$41.62	\$51.16
Period 6	\$33.44	\$43.65	\$53.86

Elevator Constructor

Elevator Constructor	EL 36		\$56.46		\$94.99	D D D D D D D D Y
Elevator Constructor						
<i>Make up day allowed</i>		8/7/2007				

Apprentice Rates:

1st Year Apprentice	\$37.74		\$58.93
2nd Year Apprentice	\$41.90		\$66.94
3rd Year Apprentice	\$43.98		\$70.95
4th Year Apprentice	\$48.14		\$78.96

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Official 2017 Prevailing Wage Rates for State Funded Projects

Issue Date: 2/15/2017

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Classification Name Description	Last Updated	Straight Hourly	Time and Half	a Double Time	Overtime Provision
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Glazier

Glazier	GL-357	\$49.50	\$65.23	\$80.95	H H H H H H H D Y
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If a four 10 hour day workweek is scheduled, four 10s must be consecutive, M-F.

8/24/2016

Apprentice Rates:

1st 6 months	\$33.77	\$41.63	\$49.49
2nd 6 months	\$35.35	\$44.00	\$52.65
3rd 6 months	\$38.49	\$48.71	\$58.93
4th 6 months	\$40.06	\$51.07	\$62.07
5th 6 months	\$41.64	\$53.43	\$65.23
6th 6 months	\$43.21	\$55.79	\$68.37
7th 6 months	\$44.78	\$58.15	\$71.51
8th 6 months	\$47.93	\$62.87	\$77.81

Heat and Frost Insulator

Spray Insulation	AS25S	\$25.29	\$36.51	X X X H H H H H N
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6/2/2016

Heat and Frost Insulator and Asbestos Worker

Heat and Frost Insulators and Asbestos Workers	AS25	\$62.65	\$78.41	\$94.16	H H H H H H H D Y
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Four 10s must be worked for a minimum of 2 weeks consecutively, Monday thru Thursday. All hours worked in excess of 10 will be paid at double time. All hours worked on the fifth day,

comment

6/3/2016

Four 10s must be worked for a minimum of 2 consecutive weeks. OVERTIME is different on a four 10 week. OT is 2x for hours beyond 10. All hours on fifth day, M-F require time and one half. Sat first 8 hours, 1.5, all hours after 8 require double time.

Apprentice Rates:

1st Year	\$46.90	\$54.78	\$62.66
2nd Year	\$50.05	\$59.50	\$68.96
3rd Year	\$53.20	\$64.23	\$75.26
4th Year	\$56.35	\$68.96	\$81.56

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County: Oakland

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Official 2017 Prevailing Wage Rates for State Funded Projects

Issue Date: 2/15/2017

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Classification Name Description	Last Updated	Straight Hourly	Time and Half	a Double Time	Overtime Provision
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Ironworker

Fence, Sound Barrier & Guardrail erection/installation and Exterior Signage work Four ten hour work days may be worked during Monday-Saturday.	IR-25-F1	\$35.95	\$48.05	\$60.15	X	X	H	X	X	X	H	D	Y
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2/1/2017

Apprentice Rates:

60% Level	\$25.39	\$32.65	\$39.91
65% Level	\$26.71	\$34.58	\$42.44
70% Level	\$28.03	\$36.51	\$44.98
75% Level	\$29.35	\$38.42	\$47.50
80% Level	\$30.67	\$40.35	\$50.03
85% Level	\$31.99	\$42.28	\$52.56

Siding, Glazing, Curtain Wall 4 tens may be worked Monday thru Thursday @ straight time.	IR-25-GZ2	\$47.16	\$58.82	\$70.48	X	X	H	H	H	H	D	D	Y
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Make up day allowed comment
Friday

6/5/2015

Apprentice Rates:

Level 1	\$30.23	\$36.84	\$43.43
Level 2	\$32.34	\$39.58	\$46.80
Level 3	\$34.46	\$42.33	\$50.19
Level 4	\$36.58	\$45.08	\$53.57
Level 5	\$38.69	\$47.82	\$56.95
Level 6	\$40.81	\$50.57	\$60.33

Official Request #: 230

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Project Description: Purchase, installation and cabling for Synchronized Clocks

Project Number: Bid 9840 – Synchronized Clock Systems

County: Oakland

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Official 2017 Prevailing Wage Rates for State Funded Projects

Issue Date: 2/15/2017

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Classification Name Description	Last Updated	Straight Hourly	Time and Half	a Double Time	Overtime Provision
Pre-engineered Metal Work <i>Make up day allowed comment</i> 4 tens allowed M-Th with Saturday make up day	IR-25-PE-Z1 4/6/2016	\$47.49	\$58.03	\$68.56	X X H X X X X D Y
Apprentice Rates:					
1st Year		\$28.36	\$34.09	\$39.81	
3rd 6 month period		\$30.48	\$36.95	\$43.43	
4th 6 month period		\$32.61	\$39.84	\$47.08	
5th 6 month period		\$34.73	\$42.72	\$50.70	
6th 6 month period		\$36.86	\$45.60	\$54.34	
Reinforced Iron Work <i>Make up day allowed</i>	IR-25-RF 8/19/2016	\$56.98	\$85.28	\$113.57	H H D H D D D D N
Apprentice Rates:					
Level 1		\$37.63	\$54.83	\$72.77	
Level 2		\$40.00	\$58.38	\$77.51	
Level 3		\$42.36	\$63.05	\$83.73	
Level 4		\$44.90	\$66.86	\$88.81	
Level 5		\$47.43	\$69.53	\$92.37	
Level 6		\$49.97	\$74.46	\$98.95	
Rigging Work	IR-25-RIG 8/19/2016	\$62.83	\$93.95	\$125.06	H H H H H H D N
Apprentice Rates:					
Level 1 & 2		\$38.13	\$55.74	\$74.10	
Level 3		\$40.96	\$61.12	\$81.26	
Level 4		\$43.78	\$65.34	\$86.90	
Level 5		\$46.61	\$69.59	\$92.56	
Level 6		\$49.44	\$73.83	\$98.22	

Official Request #: 230

Requestor: Troy School District

Project Description: Purchase, installation and cabling for Synchronized Clocks

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County: Oakland

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Official 2017 Prevailing Wage Rates for State Funded Projects

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Classification Name Description	Last Updated	Straight Hourly	Time and Half	a Double Time	Overtime Provision
<p>Decking</p> <p>4 tens may be worked Monday thru Thursday @ straight time. If bad weather, Friday may be a make up day. If holiday celebrated on a Monday, 4 10s may be worked Tuesday thru Friday. Work in excess of 12 hours per day must be paid @ double time.</p> <p><i>Make up day allowed comment</i></p> <p>Friday for 4 tens M-Th Saturday for 5 eights M-F</p>	IR-25-SD 8/19/2016	\$54.79	\$81.86	\$108.92	X X H H H H D D Y
<p>Structural, ornamental, welder and pre-cast</p> <p>4 tens may be worked Monday thru Thursday @ straight time. If bad weather, Friday may be a make up day. If holiday celebrated on a Monday, 4 10s may be worked Tuesday thru Friday. Work in excess of 12 hours per day must be paid @ double time.</p> <p><i>Make up day allowed</i></p>	IR-25-STR 8/19/2016	\$62.96	\$94.11	\$125.26	H H H H H H D D Y
Apprentice Rates:					
Levels 1 & 2		\$38.13	\$56.87	\$75.60	
Level 3		\$40.96	\$61.12	\$81.26	
Level 4		\$43.78	\$65.34	\$86.90	
Level 5		\$46.61	\$69.59	\$92.56	
Level 6		\$49.44	\$73.83	\$98.22	
Level 7		\$52.26	\$78.06	\$103.86	
Level 8		\$55.09	\$82.31	\$109.52	
<p>Industrial Door erection & construction</p> <p><i>Make up day allowed comment</i></p> <p>Friday for bad weather when 4 tens scheduled for M-Th. If holiday celebrated on M, 4 tens may be worked T-F. Work in excess of 12 hours per day must be paid @ double time.</p>	IR-25-STR-D 8/19/2016	\$43.05	\$64.25	\$85.45	H H H H H H D D Y

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Classification Name Description	Last Updated	Straight Hourly	Time and Half	a Double Time	Overtime Provision
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Laborer

Construction Laborer, Demolition Laborer, Mason Tender, Carpenter Tender, Drywall Handler, Concrete Laborer, Cement Finisher tender, concrete chute and concrete Bucket Handler, Concrete Laborer	L1076-A-A	\$44.35	\$63.10	\$81.85	H H H H H H H D Y
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If conditions beyond the employer/employee's control prevent one or more hours of working during Mon-Fri, the employer may choose to work up to 10 hour straight time weekdays. Work may be scheduled up to 10 hours per Mon-Fri for the purpose of reaching 40 hours @ straight time. Make up days may also include 8 hours of work on Saturdays @ straight time.

Make up day allowed comment 6/16/2016
Saturday

Apprentice Rates:

0-1,000 work hours	\$38.33	\$54.07	\$69.81
1,001-2,000 work hours	\$39.53	\$55.87	\$72.21
2,001-3,000 work hours	\$40.73	\$57.67	\$74.61
3,001-4,000 work hours	\$43.15	\$61.30	\$79.45

Signal man (on sewer & caisson work); air,electric or gasoline tool operator (including concrete vibrator operator,acetylene torch & air hammer operator); scaffold builder, caisson worker	L1076-A-B	\$44.62	\$63.51	\$82.39	H H H H H H H D Y
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If conditions beyond the employer/employee's control prevent one or more hours of working during Mon-Fri, the employer may choose to work up to 10 hour straight time weekdays. Work may be scheduled up to 10 hours per Mon-Fri for the purpose of reaching 40 hours @ straight time. Make up days may also include 8 hours of work on Saturdays @ straight time.

Make up day allowed comment 6/16/2016
Saturday

Official Request #: 230

Requestor: Troy School District

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Issue Date: 2/15/2017

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Classification Name Description	Last Updated	Straight Hourly	Time and Half	a Double Time	Overtime Provision
Lansing Burner, Blaster & Powder Man	L1076-A-C	\$45.13	\$64.27	\$83.41	H H H H H H H D Y
<p>If conditions beyond the employer/employee's control prevent one or more hours of working during Mon-Fri, the employer may choose to work up to 10 hour straight time weekdays. Work may be scheduled up to 10 hours per Mon-Fri for the purpose of reaching 40 hours @ straight time. Make up days may also include 8 hours of work on Saturdays @ straight time.</p> <p><i>Make up day allowed comment</i> 6/16/2016 Saturday</p>					
Furnance battery heater tender, burning bar & oxy-acetylene gun	L1076-A-D	\$44.86	\$63.87	\$82.87	H H H H H H H D Y
<p>If conditions beyond the employer/employee's control prevent one or more hours of working during Mon-Fri, the employer may choose to work up to 10 hour straight time weekdays. Work may be scheduled up to 10 hours per Mon-Fri for the purpose of reaching 40 hours @ straight time. Make up days may also include 8 hours of work on Saturdays @ straight time.</p> <p><i>Make up day allowed comment</i> 6/16/2016 Saturday</p>					
Cleaner/sweeper laborer, furniture laborer - unloading of furniture to the point of installation, the setting in place or relocation of furniture	L1076-A-E	\$38.90	\$54.93	\$70.95	H H H H H H H D Y
<p>If conditions beyond the employer/employee's control prevent one or more hours of working during Mon-Fri, the employer may choose to work up to 10 hour straight time weekdays. Work may be scheduled up to 10 hours per Mon-Fri for the purpose of reaching 40 hours @ straight time. Make up days may also include 8 hours of work on Saturdays @ straight time.</p> <p><i>Make up day allowed comment</i> 1/4/2017 Saturday</p>					

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 County: Oakland

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Classification Name Description	Last Updated	Straight Hourly	Time and Half	a Double Time	Overtime Provision
Expediter man, topman and/or bottom man (blast furnace work or battery work)	L1076-A-F	\$45.64	\$65.04	\$84.43	H H H H H H H D Y

If conditions beyond the employer/employee's control prevent one or more hours of working during Mon-Fri, the employer may choose to work up to 10 hour straight time weekdays. Work may be scheduled up to 10 hours per Mon-Fri for the purpose of reaching 40 hours @ straight time. Make up days may also include 8 hours of work on Saturdays @ straight time.

comment 6/16/2016

Saturday

Plasterer Tender, Plastering Machine Operator	LPT-1	\$44.35	\$63.10	\$81.85	H H H H H H H D Y
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If conditions beyond the employer/employee's control prevent one or more hours of working during Mon-Fri, the employer may choose to work up to 10 hour straight time weekdays. Work may be scheduled up to 10 hours per Mon-Fri for the purpose of reaching 40 hours @ straight time. Make up days may also include 8

Make up day allowed comment 6/17/2016

Saturday

Apprentice Rates:

1,001 - 2,000 hours	\$39.53	\$55.87	\$72.21
2,001 - 3,000 hours	\$40.73	\$57.67	\$74.61
3,001 - 4,000 hours	\$43.15	\$61.30	\$79.45

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Issue Date: 2/15/2017

Contract must be awarded by: 5/16/2017

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Classification Name Description	Last Updated	Straight Hourly	Time and Half	a Double Time	Overtime Provision
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Laborer - Hazardous

Class A Laborer - performing work in conjunction with site preparation and other preliminary work prior to actual removal, handling, or containment of hazardous waste substances not requiring use of personal protective equipment required by state or federal regulations; or a laborer performing work in conjunction with the removal, handling, or containment of hazardous waste substances when used of personal protective equipment level "D" is required.	LHAZ-Z2-A	\$43.54	\$61.94	\$80.33	H H H H H H H D Y
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Make up day allowed comment 11/1/2013
4 10s allowed M-Th or T-F; inclement weather makeup day Friday

Apprentice Rates:

0-1,000 work hours	\$37.60	\$53.03	\$68.45
1,001-2,000 work hours	\$38.79	\$54.81	\$70.83
2,001-3,000 work hours	\$39.98	\$56.60	\$73.21
3,001-4,000 work hours	\$42.35	\$60.15	\$77.95

Class B Laborer - performing work in conjunction with the removal, handling, or containment of hazardous waste substances when the use of personal protective equipment levels "A", "B" or "C" is required.	LHAZ-Z2-B	\$44.54	\$63.44	\$82.33	H H H H H H H D Y
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Make up day allowed comment 11/7/2014
4 10s allowed M-Th or T-F; inclement weather makeup day Friday

Apprentice Rates:

0-1,000 work hours	\$38.36	\$54.17	\$69.97
1,001-2,000 work hours	\$39.59	\$56.01	\$72.43
2,001-3,000 work hours	\$40.83	\$57.87	\$74.91
3,001-4,000 work hours	\$43.30	\$61.58	\$79.85

Official Request #: 230
 Requestor: Troy School District
 Project Description: Purchase, installation and cabling for Synchronized Clocks
 Project Number: Bid 9840 – Synchronized Clock Systems
 County: Oakland

Official Rate Schedule
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Official 2017 Prevailing Wage Rates for State Funded Projects

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Classification Name Description	Last Updated	Straight Hourly	Time and Half	a Double Time	Overtime Provision
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Laborer Underground - Tunnel, Shaft & Caisson

Class I - Tunnel, shaft and caisson laborer, dump man, shanty man, hog house tender, testing man (on gas), and watchman.	LAUCT-Z1-1	\$37.87	\$48.66	\$59.44	X	X	X	X	X	X	X	X	D	Y
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9/6/2013

Apprentice Rates:

0-1,000 work hours	\$33.05	\$41.43	\$49.80
1,001-2,000 work hours	\$34.02	\$42.88	\$51.74
2,001-3,000 work hours	\$34.98	\$44.32	\$53.66
3,001-4,000 work hours	\$36.91	\$47.21	\$57.52

Class II - Manhole, headwall, catch basin builder, bricklayer tender, mortar man, material mixer, fence erector, and guard rail builder.	LAUCT-Z1-2	\$37.98	\$48.82	\$59.66	X	X	X	X	X	X	X	X	D	Y
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9/6/2013

Apprentice Rates:

0-1,000 work hours	\$33.14	\$41.56	\$49.98
1,001-2,000 work hours	\$34.10	\$43.00	\$51.90
2,001-3,000 work hours	\$35.07	\$44.45	\$53.84
3,001-4,000 work hours	\$37.01	\$47.37	\$57.72

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Classification Name Description	Last Updated	Straight Hourly	Time and Half	a Double Time	Overtime Provision																
<p>Class III - Air tool operator (jack hammer man, bush hammer man and grinding man), first bottom man, second bottom man, cage tender, car pusher, carrier man, concrete man, concrete form man, concrete repair man, cement invert laborer, cement finisher, concrete shoveler, conveyor man, floor man, gasoline and electric tool operator, gunnite man, grout operator, welder, heading dinky man, inside lock tender, pea gravel operator, pump man, outside lock tender, scaffold man, top signal man, switch man, track man, tugger man, utility man, vibrator man, winch operator, pipe jacking man, wagon drill and air track operator and concrete saw operator (under 40 h.p.).</p> <p style="text-align: right;">9/6/2013</p> <p style="text-align: center;">Apprentice Rates:</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 60%;">0-1,000 work hours</td> <td style="width: 15%;">\$33.18</td> <td style="width: 15%;">\$41.62</td> <td style="width: 10%;">\$50.06</td> </tr> <tr> <td>1,001-2,000 work hours</td> <td>\$34.15</td> <td>\$43.07</td> <td>\$52.00</td> </tr> <tr> <td>2,001-3,000 work hours</td> <td>\$35.12</td> <td>\$44.53</td> <td>\$53.94</td> </tr> <tr> <td>3,001-4,000 work hours</td> <td>\$37.07</td> <td>\$47.45</td> <td>\$57.84</td> </tr> </table>	0-1,000 work hours	\$33.18	\$41.62	\$50.06	1,001-2,000 work hours	\$34.15	\$43.07	\$52.00	2,001-3,000 work hours	\$35.12	\$44.53	\$53.94	3,001-4,000 work hours	\$37.07	\$47.45	\$57.84	LAUCT-Z1-3	\$38.04	\$48.91	\$59.78	X X X X X X X D Y
0-1,000 work hours	\$33.18	\$41.62	\$50.06																		
1,001-2,000 work hours	\$34.15	\$43.07	\$52.00																		
2,001-3,000 work hours	\$35.12	\$44.53	\$53.94																		
3,001-4,000 work hours	\$37.07	\$47.45	\$57.84																		
<p>Class IV - Tunnel, shaft and caisson mucker, bracer man, liner plate man, long haul dinky driver and well point man.</p> <p style="text-align: right;">9/6/2013</p> <p style="text-align: center;">Apprentice Rates:</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 60%;">0-1,000 work hours</td> <td style="width: 15%;">\$33.32</td> <td style="width: 15%;">\$41.83</td> <td style="width: 10%;">\$50.34</td> </tr> <tr> <td>1,001-2,000 work hours</td> <td>\$34.30</td> <td>\$43.30</td> <td>\$52.30</td> </tr> <tr> <td>2,001-3,000 work hours</td> <td>\$35.28</td> <td>\$44.77</td> <td>\$54.26</td> </tr> <tr> <td>3,001-4,000 work hours</td> <td>\$37.24</td> <td>\$47.71</td> <td>\$58.18</td> </tr> </table>	0-1,000 work hours	\$33.32	\$41.83	\$50.34	1,001-2,000 work hours	\$34.30	\$43.30	\$52.30	2,001-3,000 work hours	\$35.28	\$44.77	\$54.26	3,001-4,000 work hours	\$37.24	\$47.71	\$58.18	LAUCT-Z1-4	\$38.22	\$49.18	\$60.14	X X X X X X X D Y
0-1,000 work hours	\$33.32	\$41.83	\$50.34																		
1,001-2,000 work hours	\$34.30	\$43.30	\$52.30																		
2,001-3,000 work hours	\$35.28	\$44.77	\$54.26																		
3,001-4,000 work hours	\$37.24	\$47.71	\$58.18																		

Official Request #: 230

Requestor: Troy School District

Project Description: Purchase, installation and cabling for Synchronized Clocks

Project Number: Bid 9840 – Synchronized Clock Systems

County: Oakland

Official Rate Schedule

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Classification Name Description	Last Updated	Straight Hourly	Time and Half	a Double Time	Overtime Provision
Class V - Tunnel, shaft and caisson miner, drill runner, keyboard operator, power knife operator, reinforced steel or mesh man (e.g. wire mesh, steel mats, dowel bars)	LAUCT-Z1-5 9/6/2013	\$38.47	\$49.56	\$60.64	X X X X X X X D Y
Apprentice Rates:					
		0-1,000 work hours	\$33.50	\$42.10	\$50.70
		1,001-2,000 work hours	\$34.50	\$43.60	\$52.70
		2,001-3,000 work hours	\$35.49	\$45.09	\$54.68
		3,001-4,000 work hours	\$37.48	\$48.07	\$58.66
Class VI - Dynamite man and powder man.	LAUCT-Z1-6 9/6/2013	\$38.80	\$50.05	\$61.30	X X X X X X X D Y
Apprentice Rates:					
		0-1,000 work hours	\$33.75	\$42.47	\$51.20
		1,001-2,000 work hours	\$34.76	\$43.99	\$53.22
		2,001-3,000 work hours	\$35.77	\$45.51	\$55.24
		3,001-4,000 work hours	\$37.79	\$48.53	\$59.28
Class VII - Restoration laborer, seeding, sodding, planting, cutting, mulching and topsoil grading and the restoration of property such as replacing mail boxes, wood chips, planter boxes and flagstones.	LAUCT-Z1-7 9/6/2013	\$32.08	\$39.97	\$47.86	X X X X X X X D Y
Apprentice Rates:					
		0-1,000 work hours	\$28.71	\$34.91	\$41.12
		1,001-2,000 work hours	\$29.38	\$35.92	\$42.46
		2,001-3,000 work hours	\$30.06	\$36.94	\$43.82
		3,001-4,000 work hours	\$31.41	\$38.97	\$46.52

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Classification Name Description	Last Updated	Straight Hourly	Time and Half	a Double Time	Overtime Provision
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Landscape Laborer

Landscape Specialist includes air, gas, and diesel equipment operator, skidsteer (or equivalent), lawn sprinkler installer on landscaping work where seeding, sodding, planting, cutting, trimming, backfilling, rough grading or maintenance of landscape projects occurs.	LLAN-Z1-A	\$28.98	\$40.04	\$51.09	X X H X X X H D Y
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Sundays paid at time & one half. Holidays paid at double time.

10/13/2015

Skilled Landscape Laborer: small power tool operator, lawn sprinkler installers' tender, material mover, truck driver when seeding, sodding, planting, cutting, trimming, backfilling, rough grading or maintaining of landscape projects occurs	LLAN-Z1-B	\$24.76	\$33.71	\$42.65	X X H X X X H D Y
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Sundays paid at time & one half. Holidays paid at double time.

10/13/2015

Marble Finisher

Marble Finisher A 4 ten workweek may be worked Monday thru Thursday or Tuesday thru Friday.	BR1-MF	\$43.48	\$54.29	\$65.10	H H D H D D D D Y
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10/20/2014

Apprentice Rates:

Level 1	\$19.04	\$25.12	\$31.20
Level 2	\$20.24	\$26.92	\$33.60
Level 3	\$27.01	\$33.96	\$40.90
Level 4	\$28.47	\$36.14	\$43.82
Level 5	\$29.99	\$37.84	\$45.70
Level 6	\$31.61	\$39.86	\$48.10
Level 7	\$33.30	\$41.59	\$49.87
Level 8	\$34.79	\$43.48	\$52.17

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Classification Name Description	Last Updated	Straight Hourly	Time and Half	a Double Time	Overtime Provision
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Marble Mason

Marble Mason	BR1-MM	\$50.29	\$64.51	\$78.72	H H D H D D D D Y
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A 4 ten workweek may be worked Monday thru Thursday or Tuesday thru Friday.

10/17/2014

Apprentice Rates:

Level 1	\$25.14	\$32.65	\$40.15
Level 2	\$28.20	\$36.49	\$44.78
Level 3	\$33.41	\$41.97	\$50.53
Level 4	\$36.15	\$45.66	\$55.17
Level 5	\$38.42	\$48.17	\$57.92
Level 6	\$42.07	\$53.56	\$65.05
Level 7	\$42.74	\$54.38	\$66.02
Level 8	\$43.67	\$55.78	\$67.88

Operating Engineer

Crane with boom & jib or leads 120' or longer	EN-324-A120	\$58.61	\$76.37	\$94.13	X X H H D D D D Y
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comment

Double time after 12 hours M-F

7/28/2016

Crane with boom & jib or leads 140' or longer	EN-324-A140	\$59.43	\$77.60	\$95.77	X X H H D D D D Y
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Work in excess of 12 per day M-F shall be paid at double time.

7/28/2016

Crane with boom & jib or leads 220' or longer	EN-324-A220	\$59.73	\$78.05	\$96.37	X X H H D D D D Y
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Work in excess of 12 per day M-F shall be paid at double time.

7/28/2016

Crane with boom & jib or leads 300' or longer	EN-324-A300	\$61.23	\$80.30	\$99.37	X X H H D D D D Y
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Work in excess of 12 per day M-F shall be paid at double time.

7/28/2016

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Classification Name Description	Last Updated	Straight Hourly	Time and Half	a Double Time	Overtime Provision
Crane with boom & jib or leads 400' or longer Work in excess of 12 per day M-F shall be paid at double time.	EN-324-A400 7/28/2016	\$62.73	\$82.55	\$102.37	X X H H D D D D Y
Compressor or welding machine Work in excess of 12 per day M-F shall be paid at double time.	EN-324-CW 7/28/2016	\$47.76	\$60.10	\$72.43	X X H H D D D D Y
Forklift, lull, extend-a-boom forklift Work in excess of 12 per day M-F shall be paid at double time.	EN-324-FL 7/28/2016	\$55.07	\$71.06	\$87.05	X X H H D D D D Y
Fireman or oiler Work in excess of 12 per day M-F shall be paid at double time.	EN-324-FO 7/28/2016	\$46.73	\$58.55	\$70.37	X X H H D D D D Y
Regular crane, job mechanic, concrete pump with boom Work in excess of 12 per day M-F shall be paid at double time.	EN-324-RC 7/27/2016	\$57.75	\$75.08	\$92.41	X X H H D D D D Y
Regular engineer, hydro-excavator, remote controlled concrete breaker Work in excess of 12 per day M-F shall be paid at double time.	EN-324-RE 7/27/2016	\$56.78	\$73.63	\$90.47	X X H H D D D D Y

Apprentice Rates:

0-999 hours	\$46.35	\$58.48	\$70.61
1,000-1,999 hours	\$48.09	\$61.10	\$74.09
2,000-2,999 hours	\$49.82	\$63.68	\$77.55
3,000-3,999 hours	\$51.55	\$66.28	\$81.01
4,000-4,999 hours	\$53.29	\$68.90	\$84.49
5,000-5,999 hours	\$55.01	\$71.47	\$87.93

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Classification Name Description	Last Updated	Straight Hourly	Time and Half	a Double Time	Overtime Provision
Operating Engineer - DIVER					
Diver/Wet Tender/Tender/Rov Pilot/Rov Tender	GLF D 4/2/2014	\$52.80	\$79.20	\$105.60	H H H H H H H D N
Operating Engineer - Marine Construction					
Diver/Wet Tender, Engineer (hydraulic dredge)	GLF-1	\$72.32	\$93.82	\$115.32	X X H H H H H D Y
<i>Make up day allowed</i> 1/23/2017					
<i>Subdivision of county</i> all Great Lakes, islands therein, & connecting & tributary waters					
Crane/Backhoe Operator, 70 ton or over Tug Operator, Mechanic/Welder, Assistant Engineer (hydraulic dredge), Leverman (hydraulic dredge), Diver Tender	GLF-2	\$70.82	\$91.57	\$112.32	X X H H H H H D Y
Holiday pay = 2.5 times the straight hourly rate					
<i>Make up day allowed</i> 1/23/2017					
<i>Subdivision of county</i> All Great Lakes, islands therein, & connecting & tributary waters					
Friction, Lattice Boom or Crane License Certification	GLF-2B	\$72.32	\$93.82	\$115.32	X X H H H H H D Y
Holiday pay = 2.5 times the straight hourly rate					
<i>Make up day allowed</i> 1/23/2017					
<i>Subdivision of county</i> All Great Lakes, islands, therein, & connecting & tributary waters					
Deck Equipment Operator, Machineryman, Maintenance of Crane (over 50 ton capacity) or Backhoe (115,000 lbs or more), Tug/Launch Operator, Loader, Dozer on Barge, Deck Machinery	GLF-3	\$66.27	\$84.75	\$103.22	X X H H H H H D Y
Holiday pay = 2.5 times the straight hourly rate					
<i>Make up day allowed</i> 1/23/2017					
<i>Subdivision of county</i> All Great Lakes, islands therein, & connecting & tributary waters					

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 County: Statewide

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Classification Name Description	Last Updated	Straight Hourly	Time and Half	a Double Time	Overtime Provision
Deck Equipment Operator, (Machineryman/Fireman), (4 equipment units or more), Off Road Trucks, Deck Hand, Tug Engineer, & Crane Maintenance 50 ton capacity and under or Backhoe 115,000 lbs or less, Assistant Tug Operator	GLF-4	\$60.07	\$75.45	\$90.82	X X H H H H H D Y

Holiday pay = 2.5 times the straight hourly rate

Make up day allowed 1/23/2017

Subdivision of county All Great Lakes, islands therein, & connecting & tributary waters

Operating Engineer Steel Work

Forklift, 1 Drum Hoist	EN-324-ef	\$59.66	\$78.12	\$96.58	H H D H H H D D Y
<i>Make up day allowed comment</i> 8/4/2016					
4 10s allowed M-Th with Friday makeup day because of bad weather					
Crane w/ 120' boom or longer	EN-324-SW120	\$62.36	\$82.17	\$101.98	H H D H H H D D Y
<i>Make up day allowed comment</i> 8/5/2016					
4 10s allowed M-Th with Friday makeup day because of bad weather					
Crane w/ 120' boom or longer w/ Oiler	EN-324-SW120-O	\$63.36	\$83.67	\$103.98	H H D H H H D D Y
<i>Make up day allowed comment</i> 8/5/2016					
4 10s allowed M-Th with Friday makeup day because of bad weather					
Crane w/ 140' boom or longer	EN-324-SW140	\$63.54	\$83.94	\$104.34	H H D H H H D D Y
<i>Make up day allowed comment</i> 8/5/2016					
4 10s allowed M-Th with Friday makeup day because of bad weather					
Crane w/ 140' boom or longer W/ Oiler	EN-324-SW140-O	\$64.54	\$85.44	\$106.34	H H D H H H D D Y
<i>Make up day allowed comment</i> 8/5/2016					
4 10s allowed M-Th with Friday makeup day because of bad weather					
Boom & Jib 220' or longer	EN-324-SW220	\$63.81	\$84.35	\$104.88	H H D H H H D D Y
<i>Make up day allowed comment</i> 8/5/2016					
4 10s allowed M-Th with Friday makeup day because of bad weather					
Crane w/ 220' boom or longer w/ Oiler	EN-324-SW220-O	\$64.81	\$85.85	\$106.88	H H D H H H D D Y
<i>Make up day allowed comment</i> 8/5/2016					
4 10s allowed M-Th with Friday makeup day because of bad weather					

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Classification Name Description	Last Updated	Straight Hourly	Time and Half	a Double Time	Overtime Provision
Boom & Jib 300' or longer <i>Make up day allowed comment</i> 4 10s allowed M-Th with Friday makeup day because of bad weather	EN-324-SW300 8/5/2016	\$65.31	\$86.60	\$107.88	H H D H H H D D Y
Crane w/ 300' boom or longer w/ Oiler <i>Make up day allowed comment</i> 4 10s allowed M-Th with Friday makeup day because of bad weather	EN-324-SW300-O 8/5/2016	\$66.31	\$88.10	\$109.88	H H D H H H D D Y
Boom & Jib 400' or longer <i>Make up day allowed comment</i> 4 10s allowed M-Th with Friday makeup day because of bad weather	EN-324-SW400 8/5/2016	\$66.81	\$88.80	\$110.82	H H D H H H D D Y
Crane w/ 400' boom or longer w/ Oiler <i>Make up day allowed comment</i> 4 10s allowed M-Th with Friday makeup day because of bad weather	EN-324-SW400-O 8/5/2016	\$67.81	\$90.35	\$112.88	H H D H H H D D Y
Crane Operator, Job Mechanic, 3 Drum Hoist & Excavator <i>Make up day allowed comment</i> 4 10s allowed M-Th with Friday makeup day because of bad weather	EN-324-SWCO 8/5/2016	\$62.00	\$81.63	\$101.26	H H D H H H D D Y
Apprentice Rates:					
	0-999 hours	\$49.22	\$62.96	\$76.70	
	1,000-1,999 hours	\$51.18	\$65.90	\$80.62	
	2,000-2,999 hours	\$53.15	\$68.85	\$84.56	
	3,000-3,999 hours	\$55.11	\$71.80	\$88.48	
	4,000-4,999 hours	\$57.07	\$74.74	\$92.40	
	5,000 hours	\$59.04	\$77.69	\$96.34	
Crane Operator w/ Oiler <i>Make up day allowed comment</i> 4 10s allowed M-Th with Friday makeup day because of bad weather	EN-324-SWCO-O 8/5/2016	\$63.00	\$83.13	\$103.26	H H D H H H D D Y
Compressor or Welder Operator <i>Make up day allowed comment</i> 4 10s allowed M-Th with Friday makeup day because of bad weather	EN-324-SWCW 8/5/2016	\$54.55	\$70.46	\$86.36	H H D H H H D D Y

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Classification Name Description	Last Updated	Straight Hourly	Time and Half	a Double Time	Overtime Provision
Hoisting Operator, 2 Drum Hoist, & Rubber Tire Backhoe <i>Make up day allowed comment</i> 4 10s allowed M-Th with Friday makeup day because of bad weather	EN-324-SWHO 8/5/2016	\$61.36	\$80.67	\$99.98	H H D H H H D D Y
Oiler <i>Make up day allowed comment</i> 4 10s allowed M-Th with Friday makeup day because of bad weather	EN-324-SWO 8/5/2016	\$53.14	\$68.34	\$83.54	H H D H H H D D Y
Tower Crane & Derrick where work is 50' or <i>Make up day allowed comment</i> 4 10s allowed M-Th with Friday makeup day because of bad weather	EN-324-SWTD50 8/5/2016	\$63.09	\$83.27	\$103.44	H H D H H H D D Y
Tower Crane & Derrick 50' or more w/ Oiler <i>Make up day allowed comment</i> 4 10s allowed M-Th with Friday makeup day because of bad weather	EN-324-SWTD50-O 8/5/2016	\$64.09	\$84.77	\$105.44	H H D H H H D D Y

Operating Engineer Underground

Class I Equipment	EN-324A1-UC1 12/6/2016	\$54.54	\$70.33	\$86.12	H H H H H H H D Y
Apprentice Rates:					
		0-999 hours	\$43.26	\$54.31	\$65.36
		1,000-1,999 hours	\$44.84	\$56.68	\$68.52
		2,000-2,999 hours	\$46.43	\$59.07	\$71.70
		3,000-3,999 hours	\$48.00	\$61.42	\$74.84
		4,000-4,999 hours	\$49.58	\$63.79	\$78.00
		5,000-5,999 hours	\$51.16	\$66.17	\$81.16
Class II Equipment	EN-324A1-UC2 12/6/2016	\$49.81	\$63.24	\$76.66	H H H H H H H D Y
Class III Equipment	EN-324A1-UC3 12/6/2016	\$49.08	\$62.14	\$75.20	H H H H H H H D Y
Class IV Equipment	EN-324A1-UC4 12/6/2016	\$48.51	\$61.29	\$74.06	H H H H H H H D Y

Official Request #: 230

Requestor: Troy School District

Project Description: Purchase, installation and cabling for Synchronized Clocks

Project Number: Bid 9840 – Synchronized Clock Systems

County: Oakland

Official Rate Schedule

Every contractor and subcontractor shall keep posted on the construction site, in a conspicuous place, a copy of all prevailing wage and fringe benefit rates prescribed in a contract.

Official 2017 Prevailing Wage Rates for State Funded Projects

Issue Date: 2/15/2017

Contract must be awarded by: 5/16/2017

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Classification Name Description	Last Updated	Straight Hourly	Time and Half	a Double Time	Overtime Provision
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Master Mechanic	EN-324A1-UMM 12/6/2016	\$54.79	\$70.71	\$86.62	H H H H H H H D Y
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Painter

Painter (8 hours of repaint work performed on Sunday shall be paid time & one half rate)	PT-22-P	\$44.32	\$57.60	\$70.88	H H D H D D D D Y
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Four 10s allowed Monday-Thursday with Friday makeup day if job down due to weather, holiday or other conditions beyond the control of the employer.

Make up day allowed comment 8/25/2016
Fridays for bad weather or holidays

Apprentice Rates:

Year 1	\$31.04	\$37.68	\$44.32
Year 2	\$33.70	\$41.67	\$49.64
Year 3	\$36.35	\$45.64	\$54.94
Year 4	\$40.34	\$51.63	\$62.92
Fifth 6 months	\$38.36	\$48.79	\$59.21
Final 6 months	\$39.66	\$50.73	\$61.81

Pipe and Manhole Rehab

General Laborer for rehab work or normal cleaning and cctv work-top man, scaffold man, CCTV assistant, jetter-vac assistant	TM247 4/17/2015	\$28.20	\$38.20		H H H H H H H H N
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Tap cutter/CCTV Tech/Grout Equipment Operator: unit driver and operator of CCTV; grouting equipment and tap cutting equipment	TM247-2 4/17/2015	\$32.70	\$44.95		H H H H H H H H N
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CCTV Technician/Combo Unit Operator: unit driver and operator of cctv unit or combo unit in connection with normal cleaning and televising work	TM247-3 4/17/2015	\$31.45	\$43.07		H H H H H H H H N
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Official Request #: 230
Requestor: Troy School District
Project Description: Purchase, installation and cabling for Synchronized Clocks
Project Number: Bid 9840 – Synchronized Clock Systems
County: Statewide

Official Rate Schedule
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Official 2017 Prevailing Wage Rates for State Funded Projects

Issue Date: 2/15/2017

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Classification Name Description	Last Updated	Straight Hourly	Time and Half	a Double Time	Overtime Provision
Boiler Operator: unit driver and operator of steam/water heater units and all ancillary equipment associated	TM247-4 4/17/2015	\$33.20	\$45.70		H H H H H H H N
Combo Unit driver & Jetter-Vac Operator	TM247-5 4/17/2015	\$33.20	\$45.70		H H H H H H H N
Pipe Bursting & Slip-lining Equipment Operator	TM247-6 4/17/2015	\$34.20	\$47.20		H H H H H H H N
Pipefitter					
Pipefitter	PF-636 7/12/2016	\$69.83	\$91.03	\$108.23	H H D H D D D D Y
<i>comment</i>					
Four 10s allowed during the week preceding, following and/or the week of a holiday.					

Apprentice Rates:

1st & 2nd periods	\$29.93	\$38.28	\$45.28
3rd period	\$31.93	\$41.28	\$49.28
4th period	\$33.18	\$43.16	\$51.78
5th period	\$34.43	\$45.03	\$54.28
6th period	\$35.68	\$46.90	\$56.78
7th period	\$36.93	\$48.78	\$59.28
8th period	\$37.93	\$50.28	\$61.28
9th period	\$38.93	\$51.78	\$63.28
10th period	\$40.36	\$53.92	\$66.14

Official Request #: 230
 Requestor: Troy School District
 Project Description: Purchase, installation and cabling for Synchronized Clocks
 Project Number: Bid 9840 – Synchronized Clock Systems
 County: Oakland

Official Rate Schedule
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Official 2017 Prevailing Wage Rates for State Funded Projects

Issue Date: 2/15/2017

Contract must be awarded by: 5/16/2017

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Classification Name Description	Last Updated	Straight Hourly	Time and Half	a Double Time	Overtime Provision
Plasterer					
Plasterer	BR1P	\$45.04	\$67.56	\$90.08	H H H H H H D N
<i>Make up day allowed comment</i>	11/1/2012				
Saturday					
Apprentice Rates:					
1st 6 months		\$32.11	\$48.17	\$64.22	
2nd 6 months		\$33.40	\$50.10	\$66.80	
3rd 6 months		\$34.69	\$52.04	\$69.38	
4th 6 months		\$37.28	\$55.92	\$74.56	
5th 6 months		\$39.87	\$59.81	\$79.74	
6th 6 months		\$42.45	\$63.68	\$84.90	
Plasterer	PL67	\$44.72	\$60.11	\$75.50	H H H X D D D D N
	9/8/2010				
Apprentice Rates:					
1st 6 months		\$29.33	\$37.02	\$44.72	
2nd 6 months		\$30.87	\$39.34	\$47.80	
3rd 6 months		\$32.41	\$41.64	\$50.88	
4th 6 months		\$35.49	\$46.26	\$57.04	
5th 6 months		\$38.56	\$51.16	\$63.76	
6th 6 months		\$41.64	\$55.49	\$69.34	

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County: Oakland

Official Rate Schedule

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Official 2017 Prevailing Wage Rates for State Funded Projects

Issue Date: 2/15/2017

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Classification Name Description	Last Updated	Straight Hourly	Time and Half	a Double Time	Overtime Provision
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Plumber

Plumber	PL-98	\$64.45	\$84.87	\$101.29	H H D H D D D D Y
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comment 7/18/2013

4 tens allowed M-Th or T-F; OT of time and one half required on 11th & 12th hour of any ten hour days

Apprentice Rates:

Period 1	\$19.93	\$26.43	\$32.93
Period 2	\$23.90	\$31.40	\$38.90
Period 3	\$30.60	\$39.19	\$47.77
Period 4	\$31.23	\$40.13	\$49.03
Period 5	\$32.39	\$41.87	\$51.35
Period 6	\$33.54	\$43.59	\$53.65
Period 7	\$34.69	\$45.32	\$55.95
Period 8	\$35.86	\$47.07	\$58.29
Period 9	\$37.01	\$48.80	\$60.59
Period 10	\$38.16	\$50.53	\$62.89

Roofer

Commercial Roofer	RO-149-WOM	\$55.93	\$70.93	\$85.93	X X H X X H H D N
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9/27/2016

Apprentice Rates:

new apprentice	\$37.34	\$45.07	\$52.80
Apprentice 1	\$41.85	\$49.81	\$57.77
Apprentice 2	\$42.36	\$50.57	\$58.79
Apprentice 3	\$43.87	\$52.84	\$61.81
Apprentice 4	\$45.37	\$55.09	\$64.81
Apprentice 5	\$46.88	\$57.35	\$67.83
Apprentice 6	\$48.29	\$59.47	\$70.65
Apprentice 7	\$49.90	\$61.89	\$73.87
Apprentice 8	\$51.41	\$64.15	\$76.89

Official Request #: 230

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County: Oakland

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Official 2017 Prevailing Wage Rates for State Funded Projects

Issue Date: 2/15/2017

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Classification Name Description	Last Updated	Straight Hourly	Time and Half	a Double Time	Overtime Provision
Sewer Relining					
Class I-Operator of audio visual CCTV system including remote in-ground cutter and other equipment used in conjunction with CCTV	SR-I 11/24/2015	\$43.66	\$59.01	\$74.36	H H H H H H H D N
Class II-Operator of hot water heaters and circulation system; water jetters; and vacuum and mechanical debris removal systems and those assisting.	SR-II 11/24/2015	\$42.13	\$56.72	\$71.30	H H H H H H H D N
Sheet Metal Worker					
Sheet Metal Worker A 4 10 schedule may be worked, 4 consecutive days Monday thru Friday.	SHM-80 8/30/2016	\$64.50	\$82.20	\$99.89	H H D X H H H D Y
Apprentice Rates:					
1st & 2nd Periods		\$40.99	\$48.95	\$56.92	
3rd & 4th Periods		\$42.75	\$51.60	\$60.44	
5th & 6th Periods		\$44.52	\$54.26	\$63.98	
7th & 8th Periods		\$46.29	\$56.91	\$67.52	

Official Request #: 230
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 Project Description: Purchase, installation and cabling for Synchronized Clocks
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 County: Oakland

Official Rate Schedule
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Official 2017 Prevailing Wage Rates for State Funded Projects

Issue Date: 2/15/2017

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Classification Name	Description	Last Updated	Straight Hourly	Time and Half	a Double Time	Overtime Provision
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Sprinkler Fitter

Sprinkler Fitter	SP 704		\$66.92	\$85.66	\$104.39	H H D H D D D D Y
4 ten hour days allowed Monday-Friday						
Double time pay due after 12 hours worked M-F						

1/3/2017

Apprentice Rates:

1st Period		\$29.27	\$37.92	\$46.57
2nd Period		\$43.13	\$52.86	\$62.59
3rd Period		\$45.29	\$56.10	\$66.91
4th Period		\$47.45	\$59.34	\$71.23
5th Period		\$49.62	\$62.59	\$75.57
6th Period		\$51.78	\$65.83	\$79.89
7th Period		\$53.94	\$69.07	\$84.21
8th Period		\$56.10	\$72.31	\$88.53
9th Period		\$58.27	\$75.57	\$92.87
10th Period		\$60.43	\$78.81	\$97.19

Terrazzo

Terrazzo Finisher	BR1-TRF		\$43.97	\$55.03	\$66.08	H H D H D D D D Y
A 4 ten workweek may be worked Monday thru Thursday or Tuesday thru Friday.						

10/17/2014

Apprentice Rates:

Level 1		\$19.04	\$25.12	\$31.20
Level 2		\$20.24	\$26.92	\$33.60
Level 3		\$27.01	\$33.96	\$40.90
Level 4		\$28.47	\$36.14	\$43.82
Level 5		\$29.99	\$37.84	\$45.70
Level 6		\$31.61	\$39.86	\$48.10
Level 7		\$33.30	\$41.59	\$49.87
Level 8		\$34.79	\$43.48	\$52.17

Official Request #: 230

Requestor: Troy School District

Project Description: Purchase, installation and cabling for Synchronized Clocks

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County: Oakland

Official Rate Schedule

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Official 2017 Prevailing Wage Rates for State Funded Projects

Issue Date: 2/15/2017

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Classification Name Description	Last Updated	Straight Hourly	Time and Half	a Double Time	Overtime Provision
Terrazzo Worker A 4 ten workweek may be worked Monday thru Thursday or Tuesday thru Friday.	BR1-TRW	\$49.73	\$63.67	\$77.60	H H D H D D D D Y

10/17/2014

Apprentice Rates:

Level 1	\$25.14	\$32.65	\$40.15
Level 2	\$28.20	\$36.49	\$44.78
Level 3	\$33.41	\$41.97	\$50.53
Level 4	\$36.15	\$45.66	\$55.17
Level 5	\$38.42	\$48.17	\$57.92
Level 6	\$42.07	\$53.56	\$65.05
Level 7	\$42.74	\$54.38	\$66.02
Level 8	\$43.67	\$55.78	\$67.88

Tile

Tile Finisher A 4 ten workweek may be worked Monday thru Thursday or Tuesday thru Friday.	BR1-TF	\$43.50	\$54.32	\$65.14	H H D H D D D D Y
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10/17/2014

Apprentice Rates:

Level 1	\$19.04	\$25.12	\$31.20
Level 2	\$20.24	\$26.92	\$33.60
Level 3	\$27.01	\$33.96	\$40.90
Level 4	\$28.47	\$36.14	\$43.82
Level 5	\$29.99	\$37.84	\$45.70
Level 6	\$31.61	\$39.86	\$48.10
Level 7	\$33.30	\$41.59	\$49.87
Level 8	\$34.79	\$43.48	\$52.17

Official Request #: 230

Requestor: Troy School District

Project Description: Purchase, installation and cabling for Synchronized Clocks

Project Number: Bid 9840 – Synchronized Clock Systems

County: Oakland

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Official 2017 Prevailing Wage Rates for State Funded Projects

Issue Date: 2/15/2017

Contract must be awarded by: 5/16/2017

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Classification Name Description	Last Updated	Straight Hourly	Time and Half	a Double Time	Overtime Provision
Tile Layer A 4 ten workweek may be worked Monday thru Thursday or Tuesday thru Friday.	BR1-TL 10/17/2014	\$49.68	\$63.59	\$77.50	H H D H D D D D Y
Apprentice Rates:					
Level 1		\$25.14	\$32.65	\$40.15	
Level 2		\$28.20	\$36.49	\$44.78	
Level 3		\$33.41	\$41.97	\$50.53	
Level 4		\$36.15	\$45.66	\$55.17	
Level 5		\$38.42	\$48.17	\$57.92	
Level 6		\$42.07	\$53.56	\$65.05	
Level 7		\$42.74	\$54.38	\$66.02	
Level 8		\$43.67	\$55.78	\$67.88	

Truck Driver

on all trucks of 8 cubic yard capacity or less (except dump trucks of 8 cubic yard capacity or over, tandem axle trucks, transit mix and semis, euclid type equipment, double bottoms and low boys)	TM-RB1 6/7/2016	\$44.10	\$48.81		H H H H H H H H Y
of all trucks of 8 cubic yard capacity or over	TM-RB1A 6/7/2016	\$44.20	\$48.96		H H H H H H H H Y
on euclid type equipment <i>Make up day allowed</i>	TM-RB1B 6/7/2016	\$44.35	\$49.19		H H H H H H H H Y

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Official 2017 Prevailing Wage Rates for State Funded Projects

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Classification Name Description	Last Updated	Straight Hourly	Time and Half	a Double Time	Overtime Provision
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Underground Laborer Open Cut, Class I

Construction Laborer	LAUC-Z1-1		\$37.72	\$48.43	\$59.14 X X X X X X D Y
		9/5/2013			

Apprentice Rates:

0-1,000 work hours		\$32.94	\$41.26	\$49.58
1,001-2,000 work hours		\$33.90	\$42.70	\$51.50
2,001-3,000 work hours		\$34.85	\$44.13	\$53.40
3,001-4,000 work hours		\$36.76	\$46.99	\$57.22

Underground Laborer Open Cut, Class II

Mortar and material mixer, concrete form man, signal man, well point man, manhole, headwall and catch basin builder, guard rail builders, headwall, seawall, breakwall, dock builder and fence erector.	LAUC-Z1-2		\$37.83	\$48.60	\$59.36 X X X X X X D Y
		10/25/2013			

Apprentice Rates:

0-1,000 work hours		\$33.02	\$41.38	\$49.74
1,001-2,000 work hours		\$33.98	\$42.82	\$51.66
2,001-3,000 work hours		\$34.95	\$44.27	\$53.60
3,001-4,000 work hours		\$36.87	\$47.15	\$57.44

Underground Laborer Open Cut, Class III

Air, gasoline and electric tool operator, vibrator operator, drillers, pump man, tar kettle operator, bracers, rodder, reinforced steel or mesh man (e.g. wire mesh, steel mats, dowel bars, etc.), cement finisher, welder, pipe jacking and boring man, wagon drill and air track operator and concrete saw operator (under 40 h.p.), windlass and tugger man, and directional boring man.	LAUC-Z1-3		\$37.88	\$48.67	\$59.46 X X X X X X D Y
		9/5/2013			

Apprentice Rates:

0-1,000 work hours		\$33.06	\$41.44	\$49.82
1,001-2,000 work hours		\$34.02	\$42.88	\$51.74
2,001-3,000 work hours		\$34.99	\$44.33	\$53.68
3,001-4,000 work hours		\$36.92	\$47.23	\$57.54

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Issue Date: 2/15/2017

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Classification Name Description	Last Updated	Straight Hourly	Time and Half	a Double Time	Overtime Provision
------------------------------------	-----------------	--------------------	------------------	------------------	-----------------------

Underground Laborer Open Cut, Class IV

Trench or excavating grade man.	LAUC-Z1-4		\$37.96	\$48.79	\$59.62 X X X X X X D Y
		9/5/2013			

Apprentice Rates:

0-1,000 work hours	\$33.12	\$41.53	\$49.94
1,001-2,000 work hours	\$34.09	\$42.99	\$51.88
2,001-3,000 work hours	\$35.06	\$44.44	\$53.82
3,001-4,000 work hours	\$36.99	\$47.33	\$57.68

Underground Laborer Open Cut, Class V

Pipe Layer	LAUC-Z1-5		\$38.02	\$48.88	\$59.74 X X X X X X D Y
		9/5/2013			

Apprentice Rates:

0-1,000 work hours	\$33.16	\$41.59	\$50.02
1,001-2,000 work hours	\$34.14	\$43.06	\$51.98
2,001-3,000 work hours	\$35.11	\$44.51	\$53.92
3,001-4,000 work hours	\$37.05	\$47.43	\$57.80

Underground Laborer Open Cut, Class VI

Grouting man, top man assistant, audio visual television operations and all other operations in connection with closed circuit television inspection, pipe cleaning and pipe relining work and the installation and repair of water service pipe and appurtenances.	LAUC-Z1-6		\$35.47	\$45.06	\$54.64 X X X X X X D Y
		9/5/2013			

Apprentice Rates:

0-1,000 work hours	\$31.25	\$38.73	\$46.20
1,001-2,000 work hours	\$32.10	\$40.00	\$47.90
2,001-3,000 work hours	\$32.94	\$41.26	\$49.58
3,001-4,000 work hours	\$34.63	\$43.79	\$52.96

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 Requestor: Troy School District
 Project Description: Purchase, installation and cabling for Synchronized Clocks
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 County: Oakland

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Issue Date: 2/15/2017

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Classification Name Description	Last Updated	Straight Hourly	Time and Half	a Double Time	Overtime Provision
Underground Laborer Open Cut, Class VII					
Restoration laborer, seeding, sodding, planting, cutting, mulching and topsoil grading and the restoration of property such as replacing mail boxes, wood chips, planter boxes, flagstones etc.	LAUC-Z1-7	\$32.09	\$39.99	\$47.88	X X X X X X D Y

9/5/2013

Apprentice Rates:

0-1,000 work hours	\$28.72	\$34.93	\$41.14
1,001-2,000 work hours	\$29.39	\$35.93	\$42.48
2,001-3,000 work hours	\$30.07	\$36.95	\$43.84
3,001-4,000 work hours	\$31.42	\$38.98	\$46.54

Official Request #: 230

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Project Description: Purchase, installation and cabling for Synchronized Clocks

Project Number: Bid 9840 – Synchronized Clock Systems

County: Oakland

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Troy School District
Synchronized Clock System - Bid # 9840

SECTION 00 40 10 - BID PROPOSAL FORM

OWNER: Todd Hensley, Purchasing Supervisor
Troy School District
Purchasing Department
Facility Operations Building
1140 Rankin
Troy, Michigan 48083

PROJECT: Synchronized Clock System

NAME OF BIDDER: _____

BASE BID:

Lump sum bid for all work specified and shown on the drawings as indicated for base bid in the amount of:

_____ Dollars (\$ _____)

The Bid Proposal amount shall be shown in both words and figures. In the case of discrepancy, the amount shown in words shall govern.

BASE BID: The undersigned, having examined the Bid Documents and examined the conditions affecting the Work/Project, hereby proposes and agrees to furnish all of the labor, materials, and equipment and perform all work necessary to complete the Work/Project as required by the Bid Documents for the stipulated sum identified above and detailed in Supplemental A (Cost Analysis Worksheet). The Bid Documents set forth the terms and conditions upon which the Bidder will provide a "turnkey" solution for the installation and operation of the project for use by the Owner and represents and warrants that the design, operation and functionality of the project are in accordance with the Bid Documents. All prices provided by the Bidder on this Bid Proposal Form must include all cables, connectors, equipment etc. that are necessary to make the project fully operational for the intent and purpose stated in the Bid Documents

BID SECURITY

Enclosed herewith find (Certified Check)/ (Bid Bond) in the amount of \$ _____ being five percent (5%) of the maximum Bid Proposal herein, made payable to Troy School District or naming Troy School District as obligee. The proceeds of which are to remain the property of Troy School District, if the Bidder does not, within ten (10) days after notice of the acceptance of Bid Proposal, enter into the Contract.

TAXES

BID PROPOSAL FORM

00 40 10 - 1 of 3

Troy School District
Synchronized Clock System - Bid # 9840

Please identify the amount, if any, of this Bid Proposal that has been attributed to sales or use tax. If an amount has been attributed to such tax, please identify which components of the Bid to which the tax has been attributed.

SUBCONTRACTORS

Bidders must provide attach complete list of proposed subcontractors (one per discipline), if any are proposed to be utilized on the project. Listing two or more subcontractors per discipline will be grounds for disqualification.

EXCEPTIONS

Any Exceptions to the terms and conditions contained in the RFP or contract are identified below:

ADDENDA

This RFP incorporates the following Addenda:

Addendum No. ____ Dated _____ Addendum No. ____ Dated _____

Addendum No. ____ Dated _____ Addendum No. ____ Dated _____

Addendum No. ____ Dated _____ Addendum No. ____ Dated _____

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BID PROPOSAL FORM SUPPLEMENTS:

The following Bid Form Proposal Supplements are attached hereto and are considered an integral part of this Bid Proposal Form:

- SUPPLEMENTAL A – Cost Analysis Worksheet
- SUPPLEMENTAL B – Unit Pricing
- SUPPLEMENTAL C – Not used
- SUPPLEMENTAL D – Voluntary Alternates
- SUPPLEMENTAL E – Familial Disclosure Affidavit
- SUPPLEMENTAL F – Iran Economic Sanctions Act Compliance Affidavit

BIDDER NAME: _____

ADDRESS: _____

DATE: _____

TELEPHONE: _____

EMAIL ADDRESS: _____

If award is made to our firm based upon our Bid Proposal, we agree to enter into the form of Contract with the School District in accordance with this Request for Proposal, the contract and our Bid Proposal.

My signature certifies that the Bid Proposal as submitted complies with all terms and conditions as set forth in this Request for Proposal, unless specifically enumerated as an exception as part of this Bid Proposal Form.

I hereby certify that I am authorized to sign as a Representative for the Firm:

(Authorized Signature) (Title)

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SUPPLEMENTAL A - COST ANALYSIS WORKSHEET

OWNER: Todd Hensley, Purchasing Supervisor
Troy School District
Purchasing Department
Facility Operations Building
1140 Rankin
Troy, Michigan 48083

BIDDER: _____

ADDRESS: _____

BASE BID BREAKDOWN

Building	COMPONENT	Cost
Barnard Elementary	Material	
	Labor	
	Sub Total	
Bemis Elementary	Material	
	Labor	
	Sub Total	
Costello Elementary	Material	
	Labor	
	Sub Total	
Hamilton Elementary	Material	
	Labor	
	Sub Total	
Hill Elementary	Material	
	Labor	
	Sub Total	
Leonard Elementary	Material	
	Labor	
	Sub Total	
Martell Elementary	Material	
	Labor	
	Sub Total	

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Morse Elementary	Material	
	Labor	
	Sub Total	
Schroeder Elementary	Material	
	Labor	
	Sub Total	
Troy Union Elementary	Material	
	Labor	
	Sub Total	
Wass Elementary	Material	
	Labor	
	Sub Total	
Wattles Elementary	Material	
	Labor	
	Sub Total	
Baker Middle School	Material	
	Labor	
	Sub Total	
Boulan Park Middle School	Material	
	Labor	
	Sub Total	
Larson Middle School	Material	
	Labor	
	Sub Total	
Smith Middle School	Material	
	Labor	
	Sub Total	
Athens High School	Material	
	Labor	
	Sub Total	
Troy High School	Material	
	Labor	
	Sub Total	

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International Academy: East	Material	
	Labor	
	Sub Total	
Troy College & Career High School	Material	
	Labor	
	Sub Total	
Central Office	Material	
	Labor	
	Sub Total	
Services Building	Material	
	Labor	
	Sub Total	
Transportation Building	Material	
	Labor	
	Sub Total	
Facility Operations Building	Material	
	Labor	
	Sub Total	
	Sub-Total Material	
	Sub-Total Labor	
	Total	
	Bid Bond	
	Proposal Total	

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SUPPLEMENTAL B - UNIT PRICING

All bid proposals shall include a detailed Bill of Materials that notes each item, part number, and unit price.

Provide this Bill of Materials, attached to and submitted with the Bid Proposal. These unit costs, which shall be considered firm pricing during the contract period and not subject to change, will be used to determine costs (**Inclusive of both labor and material**) for additions and deletions during the contract period. The Owner reserves the right to adjust any or all quantities at any time.

In addition to the required Bill of Materials, include the following Unit Prices (also include cost of associated licenses).

Item	Part Number	Unit Price
Perpendicular Wall Mounting Bracket – Dual Analog Clocks		
Perpendicular Wall Mounting Bracket – Dual Digital Clocks		
Perpendicular Wall Mounting Bracket – Single Analog Clock		
Perpendicular Wall Mounting Bracket – Single Digital Clock		
Ceiling Mounting Bracket – Dual Analog Clocks		
Ceiling Mounting Bracket – Dual Digital Clocks		
12" Analog Clock and wall bracket (Battery powered)		
12" Analog Clock and wall bracket (110VAC– plug)		
12" Analog Clock and wall bracket (110VAC - hardwired)		
12" Analog Clock and wall bracket (24VDC - hardwired)		
18" Analog Clock and wall bracket (Battery powered)		
4" Digital Clock and wall bracket (110VAC - hardwired)		
4" Digital Clock and wall bracket (24VDC - hardwired)		
24VDC Power Supply		
Wireless Repeater		
24VDC Plenum rated power cabling to one (1) location		
Building Master Clock		

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SUPPLEMENTAL D - VOLUNTARY ALTERNATES

VOLUNTARY ALTERNATE 1:

Add/Deduct/No Change

_____ Dollars (\$_____)

VOLUNTARY ALTERNATE 2:

Add/Deduct/No Change

_____ Dollars (\$_____)

VOLUNTARY ALTERNATE 3:

Add/Deduct/No Change

_____ Dollars (\$_____)

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SUPPLEMENTAL E - FAMILIAL DISCLOSURE AFFIDAVIT

The undersigned, the owner or authorized officer of _____ (the "Bidder"), pursuant to the familial disclosure requirement provided in the Troy School District (the "District") Request for Proposal(s), hereby represents and warrants that, except as provided below, no familial relationships exist between the owner or any employee of the Bidder, and any member of the Board of Education of the School District or the Superintendent of the School District.

List any Familial Relationships:

BIDDER:

By:

Title:

STATE OF MICHIGAN
COUNTY OF _____

This instrument was acknowledged before me on the ____ day of _____, 2017, by

_____.

Notary Public

_____ County, Michigan

My Commission Expires: _____

Acting in the County of: _____

SUPPLEMENTAL E FAMILIAL DISCLOSURE AFFADAVIT

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SUPPLEMENTAL F - 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 applicant (the “Applicant”), pursuant to the compliance certification requirement provided in the Troy School District (the “District”) Request For Proposals for Synchronized Clock System (the “RFP”), hereby certifies, represents and warrants that the Applicant (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 Applicant is awarded a contract as a result of the aforementioned RFP, the Applicant will not become an “Iran linked business” at any time during the course of performing the Work or any services under the contract.

The Applicant 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 it is determined that the person has submitted the false certification.

APPLICANT:

Name of Applicant

By:

Title:

Date:

STATE OF Michigan

COUNTY OF _____)

This instrument was acknowledged before me on the ____ day of _____, _____, by

_____.

_____, Notary Public _____ County, _____

My Commission Expires: _____

Acting in the County of: _____

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SECTION 27 53 13 – WIRELESS CLOCK SYSTEMS

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- A. The Owner is seeking proposals for a 100%, turnkey unified time system (Clocks) for all buildings within the district. The successful bidder shall be required to design, furnish and install all equipment, accessories, and materials in accordance with these performance specifications and drawings to provide a complete and operating wireless clock system.
- B. It is the Owner's intent to replace all time displays/clocks with this new system, premise-wide.

1.2 SUMMARY

- A. This Section addresses the needs and requirements of the wireless clock system. It includes requirements for the wireless clock system components including, but not limited to, the following:
 - 1. (Primary) Master Clock with Wireless Transceiver
 - 2. Wireless Repeater
 - 3. Secondary Analog Clock
 - 4. Secondary Digital Clock
 - 5. 24VDC Power Supplies
- B. Clocks shall be battery powered with wireless communication to the Master clock in each classroom, which in turn will connect to the Owner's existing Network Time Server.
- C. Common and office space 24VDC or 110VAC clocks shall be analog and/or digital, one or two sided as indicated within these specifications and drawings.
- D. Quantity, location and clock size as indicated within these specifications and drawings
- E. Wireless synchronization shall be accomplished through direct clock to clock, clock to master or clock to repeater synchronization. Wireless signals shall not use the Owner's wireless 802.11 wireless network.
- F. Building masters shall be located in the Main Distribution Frame (MDF) of each building, where the master shall hardwire connect to the Owner's Ethernet system.

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1.3 SCOPE OF WORK

- A. Provide and install “line powered” 110VAC and 24VDC clocks and equipment as specified herein and on project drawings.
 - 1. Retain the services of a licensed electrician for all electrical work with voltages greater than 100VAC.
- B. Provide and install battery powered clocks and equipment as specified herein and on project drawings.
- C. Provide and install all associated equipment for a 100% complete, fully functional system, including but not limited to Master clock(s), clocks, wiring, power supplies, repeaters, etc.
- D. Connect to Network Time Server, commission and test.
- E. Demo existing clocks and associated equipment; reuse electrical (110VAC) and 24VDC wiring as indicated on project drawings.
 - 1. Provide and Replace all 24 VDC power supplies
- F. Fabricate and install a custom steel plate to cover wall back box in hallways as required. Mount clock to steel plate.

1.4 RELATED DOCUMENTS

- A. RFP, Specifications, Drawings and general provisions of Contract apply to this Section.

1.5 REFERENCE STANDARDS

- A. Federal Communications Division (FCC) - Part 15 - Code of Federal Regulations.
- B. National Fire Protection Association (NFPA) - FPA 70E-[2012], Standard for Electrical safety in the Workplace.
- C. US Green Building Council (USGBC) - LEED® NC Version 2.2-[2009], LEED (Leadership in Energy and Environmental Design): Green Building Rating System Reference Package For New Construction and Major Renovations.
- D. Underwriter’s Laboratories (UL)

1.6 ADMINISTRATIVE REQUIREMENTS

- A. Co-ordination: Co-ordinate work of this Section with communications and electronics work and with work of other trades for proper time and sequence to avoid construction delays.

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- B. Pre-installation Meeting: Convene pre-installation meeting after Award of Contract and before starting work of this Section to verify project requirements, substrate conditions and coordination with other building sub-trades, and to review manufacturer's written installation instructions.
- C. Notify attendees 2 weeks prior to meeting and ensure meeting attendees include as minimum:
 - 1. Owner
 - 2. Consultant
 - 3. Subcontractor
- D. Ensure meeting agenda includes review of methods and procedures related to insulation installation including co-ordination with related work.
- E. Record meeting proceedings including corrective measures and other actions required to ensure successful completion of work and distribute to each attendee within 1 week of meeting.

1.7 SUBMITTALS

- A. Submit equipment prints, full electronic wiring diagrams and specifications sheets for each item specified General: Submit the following in accordance with Conditions of Contract
 - 1. Provide a tabulation of the specification clearly comparing the submitted item with the specified item, being able to refer to all written expressed functions and capabilities. Specification sheets shall be submitted on all items
 - a. Shop drawings detailing wireless clock(s)
 - b. Wiring diagrams, detailing wiring for power, signal, and control
 - c. Submit wiring diagrams showing typical connections for all equipment
 - d. Submit a certificate of completion of installation and service training

1.8 QUALITY ASSURANCE

- 1. All items of equipment shall be designed by the manufacturer to function as a complete system and shall be accompanied by the manufacturer's complete service notes and drawings detailing all interconnections.
- 2. The Vendor shall be an established communications and electronics Vendor that has had and currently maintains a locally run and operated business for at least three (3) years. The Vendor shall utilize a duly authorized distributor of the equipment supplied for this project location with full manufacturer's warranty privileges.

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3. The Vendor shall show satisfactory evidence, upon request, that the Vendor maintains a fully equipped service organization capable of furnishing adequate inspection and service to the system. The Vendor shall maintain at his facility the necessary spare parts in the proper proportion as recommended by the manufacturer to maintain and service the equipment being supplied.
4. Electrical Component Standard: Provide work complying with applicable requirements of NFPA 70 "National Electrical Code" including, but not limited to:
 - a. Article 250, Grounding.
 - b. Article 300, Part A. Wiring Method.
 - c. Article 310, Conductors for General Wiring.
 - d. Article 725, Remote Control, Signaling Circuits.
 - e. Article 800, Communication Systems.
5. Installation and startup of all systems shall be under the direct supervision of a local Vendor regularly engaged in installation, repair, and maintenance of such systems. The Vendor shall be accredited by the proposed equipment manufacturers.
6. The Vendor providing equipment shall be responsible for providing all specified equipment and mentioned services for all equipment as specified herein. The Vendor must be a local authorized distributor of all specified equipment for single source of responsibility and shall provide documents proving such. The Vendor must provide written proof that the Vendor is adequately staffed with factory-trained technicians for all of the specified equipment. The Vendor must have established business for and currently be providing all services for the equipment.
7. The Vendor shall guarantee availability of local service by factory-trained personnel of all specified equipment from an authorized distributor of all equipment specified under this section. Maintenance shall be provided at no cost to the purchaser for a period of one (1) year (parts and labor) from date of acceptance unless damage or failure is caused by misuse, abuse, neglect, or accident. Additionally, major manufacturer supplied products must be covered by five (5) year (parts only) limited warranty from the date of acceptance.
 - a. Major manufacturer supplied products shall include all headend equipment, master clocks, repeaters, etc. This warranty shall not include secondary clocks or other associated ancillary products.
8. The Vendor shall, at the Owner's request, make available a service contract offering continuing factory authorized service of the system after the initial warranty period.

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9. The Vendor shall visit the sites and familiarize himself with the existing conditions and field requirements prior to submitting a proposal.
10. The Vendor is responsible for all cost associated with proper installation, termination, configuration, programming, impedance and load matching of all system components.
11. The Vendor shall provide all necessary masonry, covering, patching, and painting work in order to render any residue of the existing central equipment invisible. All finished surfaces shall be chosen in consultation with the Owner, to assure that the Owner's aesthetic preferences have been adhered to.

1.9 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products in factory boxes. Store in clean, dry space in original boxes. Protect products from fumes and construction traffic. Handle carefully to avoid damage.
- B. Contractor shall provide off-site storage – the district will not accept deliveries or provide storage. The Contractor shall deliver to sites as equipment is needed for the installation.

1.10 IN-SERVICE TRAINING

- A. The Vendor shall provide training with this system. These sessions shall be broken into segments that will facilitate the training of individuals in the operation of this system. Operators Manuals and Users Guides shall be provided at the time of this training.

PART 2 - PRODUCTS

2.1 GENERAL

- A. The intent of this performance specification is to establish a standard of quality, function and features. It is the responsibility of the bidder to ensure that the proposed product meets or exceeds every standard set forth in these specifications.
- B. The functions and features specified are vital to the operation of this facility, therefore, the acceptance of alternate manufacturers does not release the Vendor from strict compliance with the requirements of this specification.
- C. The Vendor for this work shall be held to have read all of the Bidding Requirements, the General Requirements, and Contract Proposal Forms; and in the execution of this work, he will be bound by all of the conditions and requirements therein.
- D. The Vendor shall be responsible for providing a complete functional system including all necessary components whether included in this specification or not.
- E. In preparing the bid, the bidder should consider the following:

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1. No claim will be made against the Owner for any costs incurred by the bidder for any equipment demonstrations which the Owner requests.
2. Any prior approval of an alternate system does not automatically exempt the Vendor from the intent of these specifications. Failure to comply with the operational and functional intent of these specifications may result in the total removal of the alternate system at the expense of the Vendor.

2.2 BASIS-OF-DESIGN

- A. Sapling Wireless Clock System.

2.3 MANUFACTURERS

- A. Sapling
- B. Dukane Communication Systems; Part of GE Security, Inc.
- C. National Time & Signal Corporation.
- D. Rauland-Borg Corporation.
- E. SimplexGrinnell LP.
- F. Approved Equal.

2.4 SYSTEM REQUIREMENTS

- A. Wireless analog and digital clock system with interface capability to GPS, network, internet for once a day reset.

2.5 SYSTEM DESCRIPTION

- A. The system is intended to operate as single district-wide solution. However, if communications with the Owner's Network Time Server is lost, the system shall work as a stand-alone system in each building until communication with the Owner's Network Time Server is reestablished.
 1. Network Time Server is located in the Services Building.
- B. The system shall be designed to work in an environment where cabling options are not available. The system shall be capable of frequency-hopping technology. The system shall be capable of automatic transmission of data along 51 alternating frequencies that allows for an enhanced signal, even if there is interference in one of the frequencies.
- C. Each clock in the system shall be capable of receiving and transmitting the wireless signal which allows it to be used as a repeater while boosting the data stream and sending along the system. With this dual capability, there shall be no limit on the number of clocks that can be used in the

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installation. The clock shall be designed to automatically work together without interference with each other. The system shall be capable of increasing the quality of the signal while increasing the quantity of the clocks.

1. Analog clocks shall be capable of working as follows:
 - a. 110VAC or 24VDC; the clock receives and transmits time every one (1) minute.
 - b. Battery powered; the clock transmits and receives every 2-4 hours.
2. Digital clocks shall be capable of working as follows:
 - a. 110VAC or 24VDC; the clock receives and transmits time every one (1) minute.

- D. Clocks shall include automatic calibration for time base to minimize deviation from each other.
- E. The analog clock shall have a built-in close-loop system that will allow the clock to detect the position of the hands and bring the clock to the right time even if the clock were manually or forcefully altered.
- F. The analog clock shall have the capability for diagnostic function that will allow the user to view the quality of the signal, how long since the last time the clock received a signal, as well as functional tests of the electronics and the gears.
- G. The system shall operate in a license-free frequency range where no license is required.

2.6 FCC APPROVAL

- A. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a commercial installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
 1. Reorient or relocate the receiving antenna.
 2. Increase the separation between the equipment and receiver.
 3. Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
 4. Consult the dealer or an experienced radio/TV technician.

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2.7 MASTER CLOCK/TRANSCEIVER/TRANSMITTER

- A. The Master clock in each building shall be considered the “Primary Clock”.
- B. The Master Clock / Transmitter shall have a LED display, as well as a backlit, two row by twenty-character LCD display. The transmitter shall be capable of transmitting data to wireless analog clocks. The master clock shall be capable of receiving a signal from any SNTP time server via the Owners network or the Internet. The master clock shall have up to ten pre-programmed SNTP servers to use in case the clock does not receive time from one of the servers via a web interface. The transmitter will be capable of wirelessly. The transmitter shall have the capability of transferring a wired system into a wireless system.
- C. The transmitter shall be capable of acting as a repeater while receiving a signal wirelessly from the main transmitter. The master clock shall be programmed via keypad, Owner’s network or via system applications over the internet (browser based). The transmitter shall be capable of interfacing with analog clocks wirelessly. The transmitter shall utilize frequency-hopping technology. The master clock shall be powered by 110VAC/60 Hz or 220VAC/50 Hz.
- D. Web Interface – The master clock shall be able to be programmed completely from a web interface that can be accessed through any typical web browser such as Microsoft Internet Explorer, Chrome or Mozilla FireFox. The interface shall allow the user to program all display features, IP settings of the master clock and any system setting that the master clock has.
 - 1. Interface shall include the minimum following functions:
 - a. Display features;
 - b. Show IP settings;
 - c. Show other master clock settings;
 - d. Set time and date;
 - e. Download or upload master clock settings;
 - f. Configure e-mail alerts for various instances.
 - 2. Sync-wire 58 and 59-minute correction
 - 3. Sync-wire National Time/Rauland
- E. SNTP Server – The master clock shall have the capability to act as a SNTP server that other devices can point to in order to receive the time through SNTP protocol.

2.8 12” ANALOG CLOCK

- A. All clocks shall be battery powered with wireless synchronization. The clock will be capable of receiving a signal from multiple clocks. The clock shall receive and transmit with frequency-hopping technology. The clock is to be capable of transmitting the time simultaneously without interfering with each other.

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- B. The clocks shall include automatic calibration, as well as a diagnostic function that allows the user to view the quality of the signal, the last time the clock received a correction signal, a gearbox test and a comprehensive analysis of the entire clock. The clock shall have a maximum correction time of five (5) minutes.
 - 1. Clocks shall have a built-in closed-loop system in analog clocks capable of allowing clocks to detect position of hands and bring clocks to correct time even if clocks are manually altered.
- C. Battery powered clocks shall be capable of receiving a signal every 2 to 4 hours. It shall be designed to be used with the Master Clock (with transmitter option) or the Repeater, which can be regulated via proprietary wireless communication protocol. Upon receipt of the wireless signal, the clock will immediately self-correct.
- D. The clock shall have a semi-flush smooth surface ABS case. The dial is to be made of durable polystyrene material. The crystal is to be shatterproof, side molded polycarbonate. Glass and visible molding marks are unacceptable. The clock shall have a white face, black hour and minute hands as well as a red second hand. The clock shall be FCC compliant, part 15 Section 15,247.
- E. Clock shall be rated for 5-years continuous use per battery change.

2.9 DIGITAL CLOCK

- A. The clock shall be wireless with digital readout, and shall have a 4.0" high efficiency red LED numeral display. The clock will operate as a wireless digital slave clock. The clock shall receive signals from other clocks in the surrounding area or from the transceiver. The clock shall receive and transmit with frequency-hopping technology. The clocks will be capable of transmitting and receiving the time without interfering with each other.
- B. The digital clock shall include automatic digital calibration for time base to minimize deviation from each other.
- C. The clock shall have data LEDs on the board to display the receiving of data. It shall have a 12 or 24-hour display format.
 - 1. The clock shall have a shatter-proof, anti-glare red display with a smooth surface. The clock will have two (2) levels of adjustable brightness and will feature immediate correction for time changes. When the input is lost, the colon on the display of the clock shall flash.
 - 2. The digital clock shall be capable of being installed either surface, single or double mount. No external screws shall be visible on the bezel or clock housing. The clock shall be FCC compliant, part 15 Section 15,247.

2.10 WALL BRACKETS

- A. Double-sided clocks

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1. Supports two (2) clocks for a double-sided time display
2. Same mount can be used for a wall or ceiling installation
3. Three adjustable positions on the pole
4. Reinforce ABS adapters and aluminum pole
5. UL, cUL listed
6. Black color
7. Hardware for 4" Digital and 12-inch and 18-inch Analog clock mounting

B. Single clock, flag mount housing for round clocks

1. Provide an alternative set of options for a single round analog clock
2. Same mount can be used for a wall or ceiling installation
3. Three adjustable positions on the pole
4. ABS adapters and reinforced aluminum pole
5. UL, cUL listed
6. Black color
7. Hardware for both 12-inch and 18-inch clock mounting

2.11 SURFACE MOUNTING

- A. Single clocks shall have the ability to be surface mounted directly to walls

2.12 WARRANTY

- A. Provide 5-year manufacturer warranty on all major (headend) system equipment. The warranty shall commence upon final acceptance by the Owner. The warranty shall include labor and material to replace all components that fails or do not comply with the performance specifications.
- B. Provide a minimum 1-year manufacturer warranty on all other material. The warranty shall commence upon final acceptance by the Owner. The warranty shall include labor and material to replace all components that fails or do not comply with the performance specifications.

PART 3 - EXECUTION

3.1 EXAMINATION

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- A. Examine conditions, with the Installer present, for compliance with requirements and other conditions affecting the performance of the wireless clock system.
- B. Do not proceed until unsatisfactory conditions have been corrected.

3.2 COORDINATION

- A. Coordinate exact location for installation in each building listed in Attachment A and as shown on drawings with Owner or Owner Representative (PSC)
- B. A standardized location within each space will be determined at the project kickoff meeting. Vendor shall adhere the standard as much as practical, and immediately confer the Owner or Owner's representative (PSC) prior to installing in a non-standard location.

3.3 INSTALLATION

- A. Provide and install clocks per drawings and requirements herein.
- B. This work shall be performed in accordance with acknowledged industry standards and professional practices and in accordance with NFPA 70E. Install system in accordance with applicable codes. Install equipment in accordance with manufacturer's written instructions. Install clocks and other devices square and plumb.
- C. Integrate clock system with Owner's electrical and communications network.
- D. Install clocks only after painting and other finish work is completed in each room.
- E. Coordination with the Owner for working hours shall be coordinated with the Owner or Owner's representative (PSC).
 - 1. Installation shall be accomplished outside of normal school hours and days during the school year
 - 2. Installation shall be accomplished during normal business hours during school (student) breaks such as spring break, school holidays or in-service days and over summer break.
- F. Wiring Methods
 - 1. Conceal wiring except in unfinished spaces.
 - 2. All new wiring on this project must be properly rated for the application.
 - 3. Any required cable shall be installed in a neat and workmanlike manner, following the standard procedures used in the electrical contracting trade.
 - 4. Exposed wiring will not be permitted under any circumstances on this project.

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5. Any wiring, which is considered sloppy by the Engineer, shall be strictly unacceptable.
 6. Upon installation completion, a room-by-room test shall be conducted for every device in the system. A technician shall perform the test after school hours, and repairs shall be performed as needed at no cost to the Owner to any devices, which do not function correctly, including cable. A written room-by-room report following testing and repairs shall be prepared and submitted to the Engineer
- G. Reuse protective cages in areas of potential normal abuse (gymnasiums, etc.), replace cages as required at no additional cost to the owner.

3.4 FIELD QUALITY ASSURANCE

A. Vendor Field Service:

1. Provide services of a service representative for this project location to supervise the field assembly and connection of components and the pre-testing, testing, and adjustment of the system.

B. Inspection

1. Make observations to verify that units and controls are properly labeled, mounted properly, all equipment is plumb and level.

C. Testing:

1. Rectify deficiencies indicated by tests and completely re-test work affected by such deficiencies at the Vendor's expense. Verify by the system test that the total system meets the specifications and complies with applicable standards.

3.5 TESTING AND COMMISSIONING

- A. Upon completion of the installation, each system device shall be fully tested for proper connectivity and operation with the Owner's Network Time Server. Demonstrate the same to the Owner or Owner's Representative (PSC) for final acceptance.

- B. Evaluate and test each device in clock system on room-by-room basis using factory-trained technicians.

1. Fix or replace devices which fail test or are functioning incorrectly.
2. Submit evaluation and report showing results of room-by-room tests and overall system compliance within 3 days of testing being carried out.

- C. Schedule training with Owner through the PSC, with at least seven (7) days advance notice

Troy School District
Synchronized Clock System - Bid # 9840

- D. Train Owner's maintenance personnel in the procedures and schedules involved in operating, troubleshooting, servicing, and preventative maintenance of the system. Operators Manuals and Users Guides shall be provided at the time of this training.

3.6 CLEANING AND PROTECTION

- A. Prior to final acceptance, clean system components
- B. Provide adequate protection to Owner facilities to protect from damage.
- C. All spaces associated with this work shall be left clean at the end of each day's work, and at the end of the project. Trash, boxes, packing material, debris and litter shall be removed daily and disposed of
 - 1. Large quantities (I.e.- equipment boxes and packing material) shall be disposed of off-site
- D. Restoration of, or compensation for, damage to the facility or Owner's contents by the Vendor is the Vendor's sole responsibility. Examples include paint, wall and ceiling damage.

3.7 DEMOLITION OF EXISTING AND RESTORATION

- A. Remove all existing clocks, mounts, shelves, wiring, power supplies and associated hardware and materials replaced by the new system or as indicated herein or on project drawings. Properly dispose of all equipment and material offsite.
 - 1. Unused wiring removed shall be completely removed from all ceiling spaces in accordance with NFPA 70.
 - 2. Coordinate removal and/ or proper termination of electrical wiring with circuits in excess of 100VAC with the Owner or Owner PSC.
 - a. The Clock contractor is responsible for performing all electrical work.
- B. Existing clocks shall not be removed or taken out of service prior to the full operation of the new system in occupied instructional spaces (I.e. – during the school year or classrooms being used for summer school).
- C. Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
 - 1. Boxes and openings for existing clocks or hardware installed in walls may be covered by an approved steel plate and painted to match adjoining construction. Plates shall be manufactured or fabricated for this purpose and be aesthetically pleasing as determined and approved by the Owner.

3.8 CLOSEOUT SUBMITTALS

WIRELESS CLOCK SYSTEMS

27 53 13 13 -14

Troy School District
Synchronized Clock System - Bid # 9840

- A. Operation and Maintenance Data: Supply maintenance data for clock system
- B. Record Documentation and as-built drawings, schematics and diagrams
 - 1. List materials used in clock system work.
- C. Warranty: Submit warranty documents specified.

END OF SECTION

Troy School District
Synchronized Clock System - Bid # 9840
Attachment A - Sites

Barnard Elementary

3601 Forge, Troy, MI 48083

Bemis Elementary

3571 Northfield Pkwy, Troy, MI 48084

Costello Elementary

1333 Hamman, Troy, MI 48085

Hamilton Elementary

5625 Northfield Pkwy, Troy, MI 48098

Hill Elementary

4600 Forsyth, Troy, MI 48085

Leonard Elementary

4401 Tallman Dr. Troy, MI 48085

Martell Elementary

5666 Livernois, Troy, MI 48098

Morse Elementary

475 Cherry St. Troy, MI 48083

Schroeder Elementary

3541 Jack Dr. Troy, MI 48084

Troy Union Elementary

1340 East Square Lake Rd. Troy, MI 48085

Wass Elementary

2340 Willard Dr. Troy, MI 48085

Wattles Elementary

3555 Ellenboro, Troy, MI 48083

Baker Middle School

1359 Torpey Dr. Troy, MI 48083

Boulan Park Middle School

3570 Northfield Pkwy, Troy, MI 48084

Larson Middle School

2222 E. Long Lake Rd. Troy, MI 48085

Smith Middle School

5835 Donaldson, Troy, MI 48085

Athens High School

4333 John R, Troy, MI 48085

Troy High School

4777 Northfield Pkwy, Troy, MI 48098

International Academy: East

1291 Torpey Dr. Troy, MI 48083

Troy College & Career High School

201 W. Square Lake Rd. Troy, MI 48098

Central Office

4400 Livernois Rd. Troy, MI 48098

Services Building

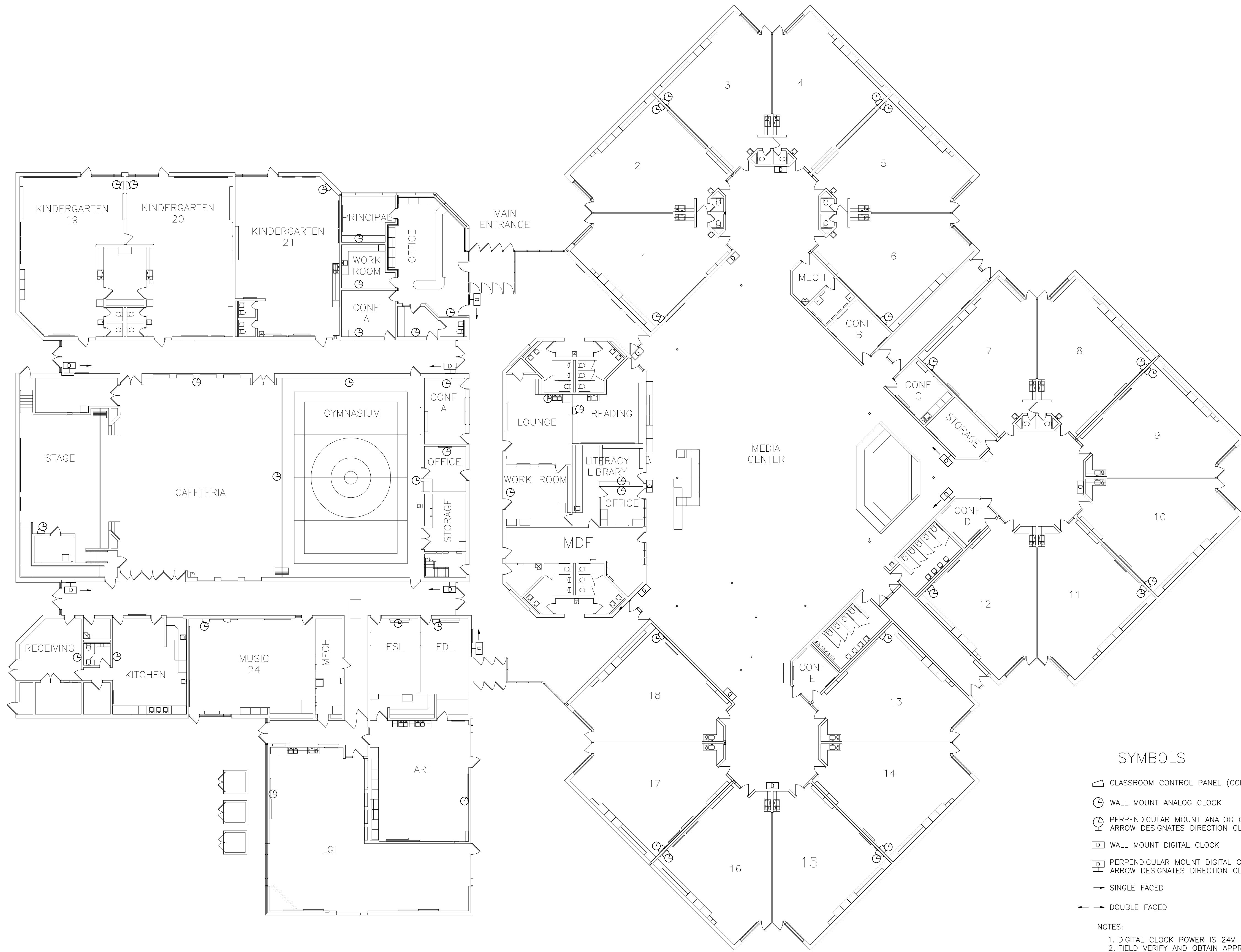
4420 Livernois Rd. Troy, MI 48098

Transportation Building

120 Hart St. Troy, MI 48098

Facility Operations Building

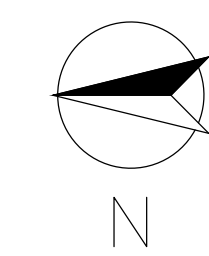
1140 Rankin, Troy, Michigan 48083



SYMBOLS

- CLASSROOM CONTROL PANEL (CCP)
- WALL MOUNT ANALOG CLOCK
- PERPENDICULAR MOUNT ANALOG CLOCK
ARROW DESIGNATES DIRECTION CLOCK FACES
- WALL MOUNT DIGITAL CLOCK
- PERPENDICULAR MOUNT DIGITAL CLOCK
ARROW DESIGNATES DIRECTION CLOCK FACES
- SINGLE FACED
- DOUBLE FACED

NOTES:
 1. DIGITAL CLOCK POWER IS 24V HARD-WIRED.
 2. FIELD VERIFY AND OBTAIN APPROVAL FOR ALL CLOCKS PRIOR TO INSTALLATION.



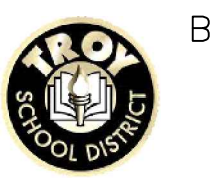
No.	Revision/Issue	Date
	UPDATED	2/13/17
	ISSUE	2/10/17

Firm Name and Address



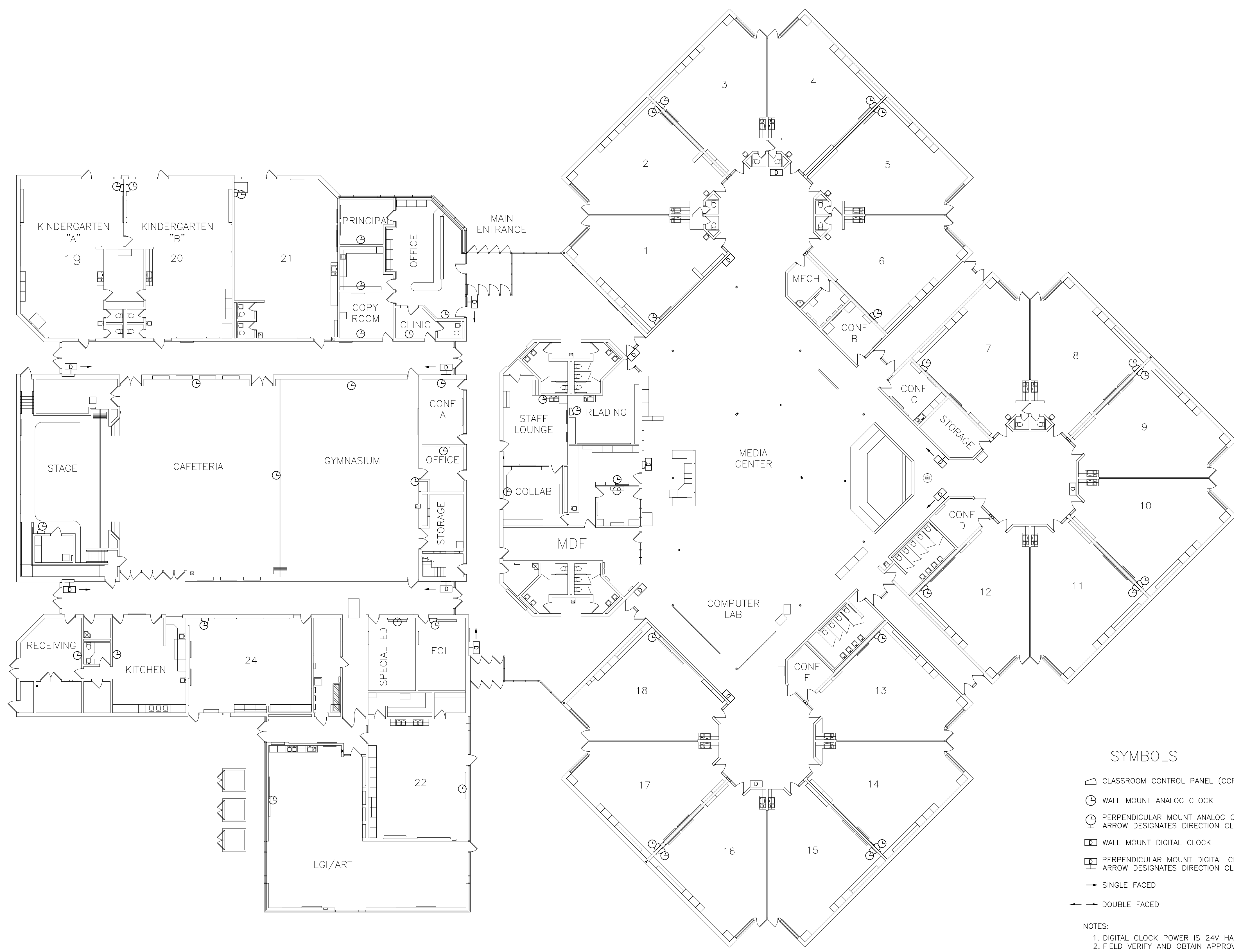
CONVERGENT
 TECHNOLOGY PARTNERS
 111 E. COURT STREET
 SUITE 202
 FLINT, MI 48502

Project Name and Address



TROY SCHOOL DISTRICT
 BARNARD ELEMENTARY
 SCHOOL
 3601 FORGE
 TROY, MI 48083
 (248) 823-4300

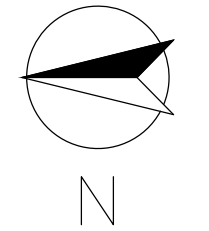
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Date	02/09/17		
Scale	1/16" = 1'		



SYMBOLS

- CLASSROOM CONTROL PANEL (CCP)
- WALL MOUNT ANALOG CLOCK
- PERPENDICULAR MOUNT ANALOG CLOCK
ARROW DESIGNATES DIRECTION CLOCK FACES
- WALL MOUNT DIGITAL CLOCK
- PERPENDICULAR MOUNT DIGITAL CLOCK
ARROW DESIGNATES DIRECTION CLOCK FACES
- SINGLE FACED
- DOUBLE FACED

NOTES:
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No.	Revision/Issue	Date
	UPDATED	2/14/17
	UPDATED	2/13/17
	ISSUE	2/10/17

Firm Name and Address

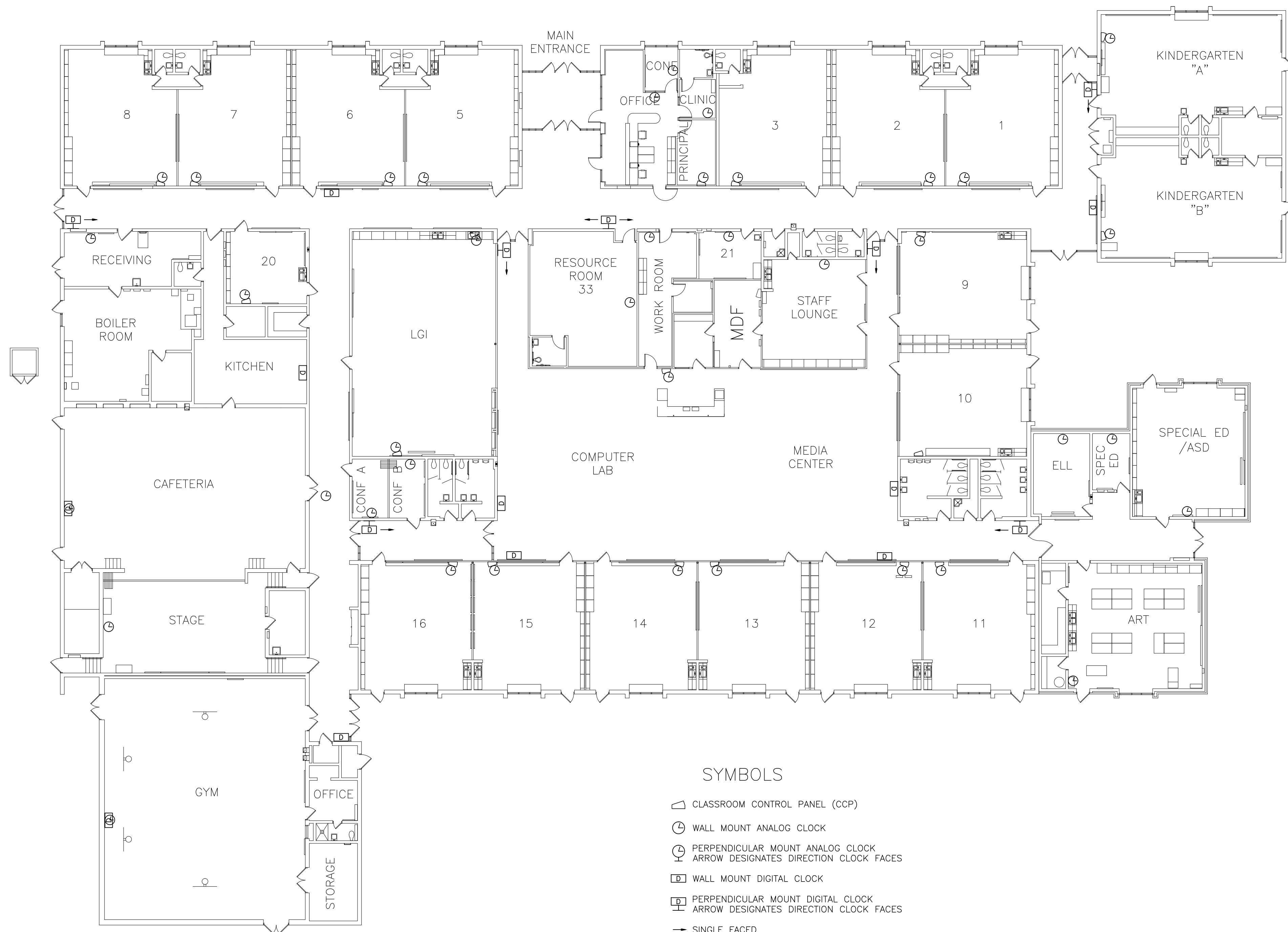


CONVERGENT
 TECHNOLOGY PARTNERS
 111 E. COURT STREET
 SUITE 202
 FLINT, MI 48502








Project Name and Address

TROY SCHOOL DISTRICT
 BEMIS ELEMENTARY SCHOOL
 3571 NORTHFIELD PKWY
 TROY, MI 48084
 (248) 823-4100

Project	WIRELESS CLOCKS	Sheet	TX1.2
Date	02/09/17		
Scale	1/8" = 1'		



SYMBOLS

-  CLASSROOM CONTROL PANEL (CCP)
-  WALL MOUNT ANALOG CLOCK
-  PERPENDICULAR MOUNT ANALOG CLOCK
ARROW DESIGNATES DIRECTION CLOCK FACES
-  WALL MOUNT DIGITAL CLOCK
-  PERPENDICULAR MOUNT DIGITAL CLOCK
ARROW DESIGNATES DIRECTION CLOCK FACES
-  SINGLE FACED
-  DOUBLE FACED

NOTES:
 1. DIGITAL CLOCK POWER IS 24V HARD-WIRED.
 2. FIELD VERIFY AND OBTAIN APPROVAL FOR ALL CLOCKS PRIOR TO INSTALLATION.

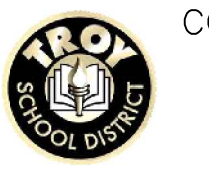
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	UPDATED	2/14/17
	UPDATED	2/13/17
	ISSUE	2/10/17

Firm Name and Address



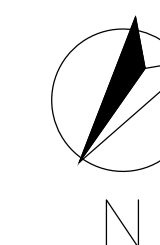
CONVERGENT
 TECHNOLOGY PARTNERS
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 SUITE 202
 FLINT, MI 48502

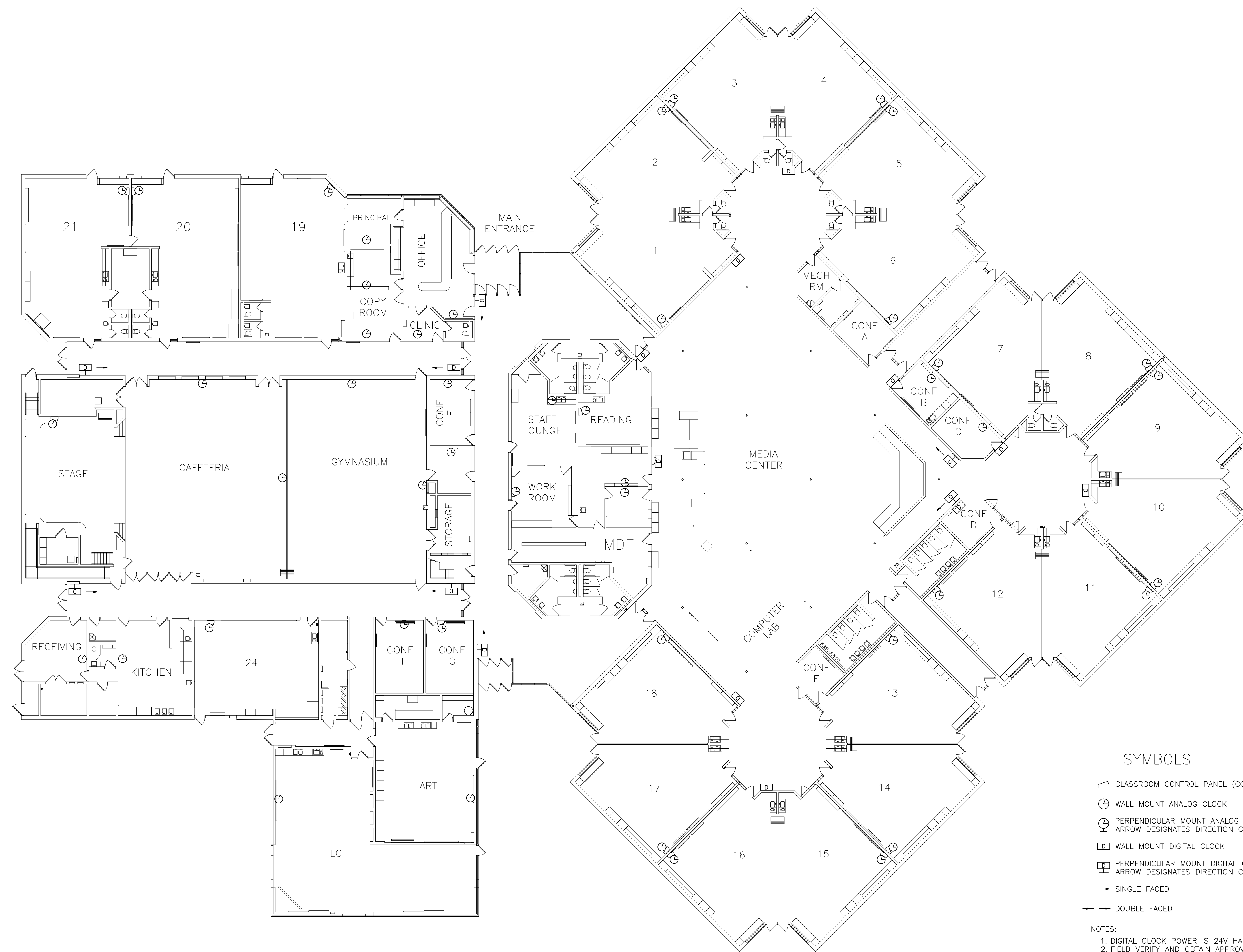
Project Name and Address



TROY SCHOOL DISTRICT
 COSTELLO ELEMENTARY SCHOOL
 1333 HAMMAN
 TROY, MI 48085
 (248) 823-3700

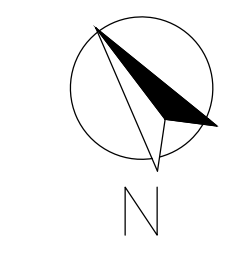
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WIRELESS CLOCKS	TX1.3
Date: 02/09/17	
Scale: 1/16" = 1'	





- SYMBOLS**
- CLASSROOM CONTROL PANEL (CCP)
 - WALL MOUNT ANALOG CLOCK
 - PERPENDICULAR MOUNT ANALOG CLOCK
ARROW DESIGNATES DIRECTION CLOCK FACES
 - WALL MOUNT DIGITAL CLOCK
 - PERPENDICULAR MOUNT DIGITAL CLOCK
ARROW DESIGNATES DIRECTION CLOCK FACES
 - SINGLE FACED
 - DOUBLE FACED

NOTES:
 1. DIGITAL CLOCK POWER IS 24V HARD-WIRED.
 2. FIELD VERIFY AND OBTAIN APPROVAL FOR ALL CLOCKS PRIOR TO INSTALLATION.



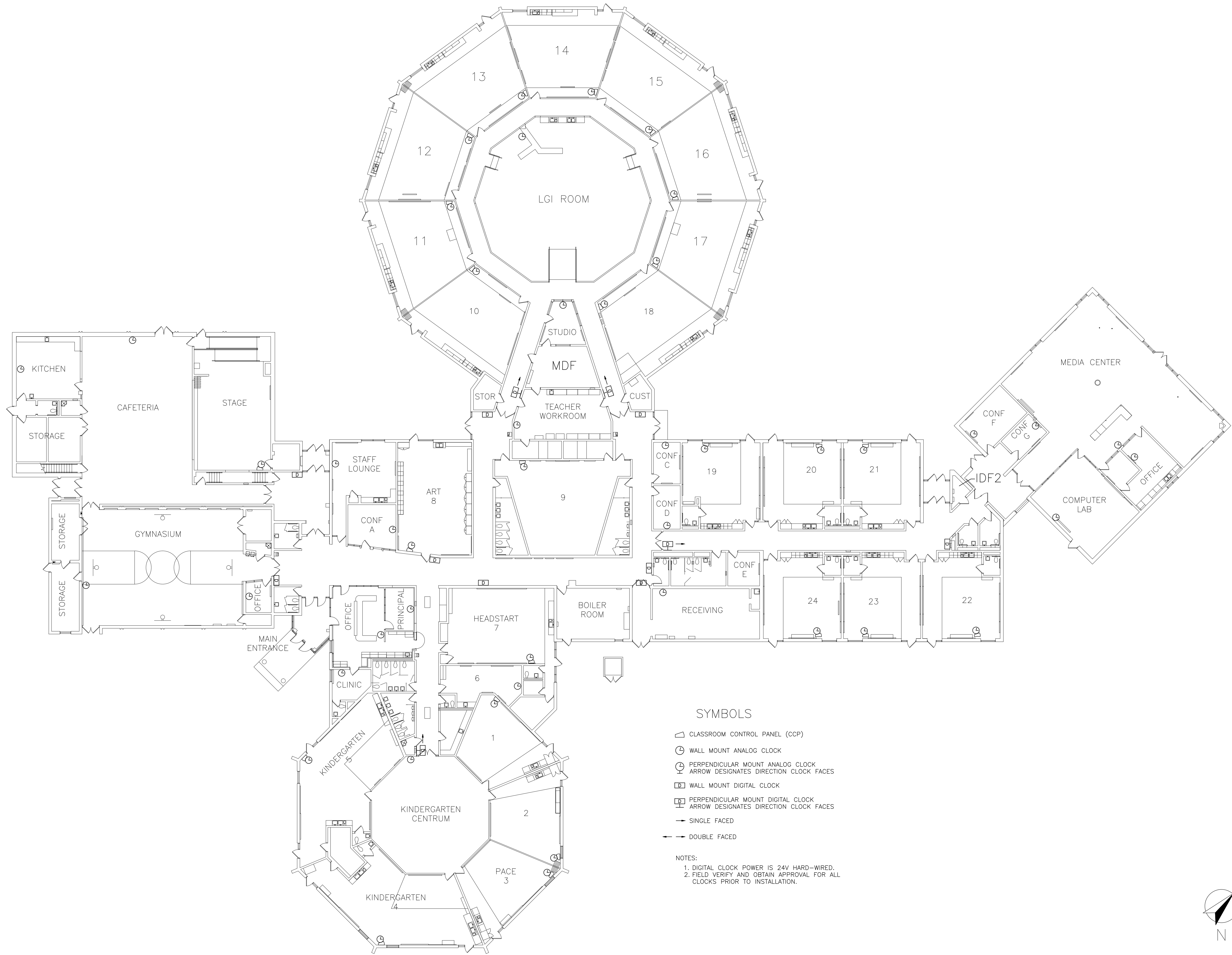
General Notes

No.	Revision/Issue	Date
	UPDATED	2/14/17
	UPDATED	2/13/17
	ISSUE	2/10/17

Firm Name and Address
CONVERGENT
 TECHNOLOGY PARTNERS
 111 E. COURT STREET
 SUITE 202
 FLINT, MI 48502

Project Name and Address
 TROY SCHOOL DISTRICT
 HAMILTON ELEMENTARY SCHOOL
 5625 Northfield Pkwy
 TROY, MI 48098
 (248) 823-4400

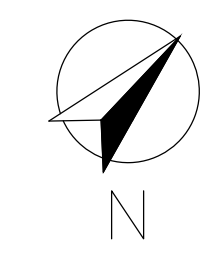
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Date 02/09/17	
Scale 1/16" = 1'	



SYMBOLS

- ◻ CLASSROOM CONTROL PANEL (CCP)
- ⌚ WALL MOUNT ANALOG CLOCK
- ⌚ PERPENDICULAR MOUNT ANALOG CLOCK
ARROW DESIGNATES DIRECTION CLOCK FACES
- ⌚ WALL MOUNT DIGITAL CLOCK
- ⌚ PERPENDICULAR MOUNT DIGITAL CLOCK
ARROW DESIGNATES DIRECTION CLOCK FACES
- SINGLE FACED
- ↔ DOUBLE FACED

NOTES:
 1. DIGITAL CLOCK POWER IS 24V HARD-WIRED.
 2. FIELD VERIFY AND OBTAIN APPROVAL FOR ALL CLOCKS PRIOR TO INSTALLATION.

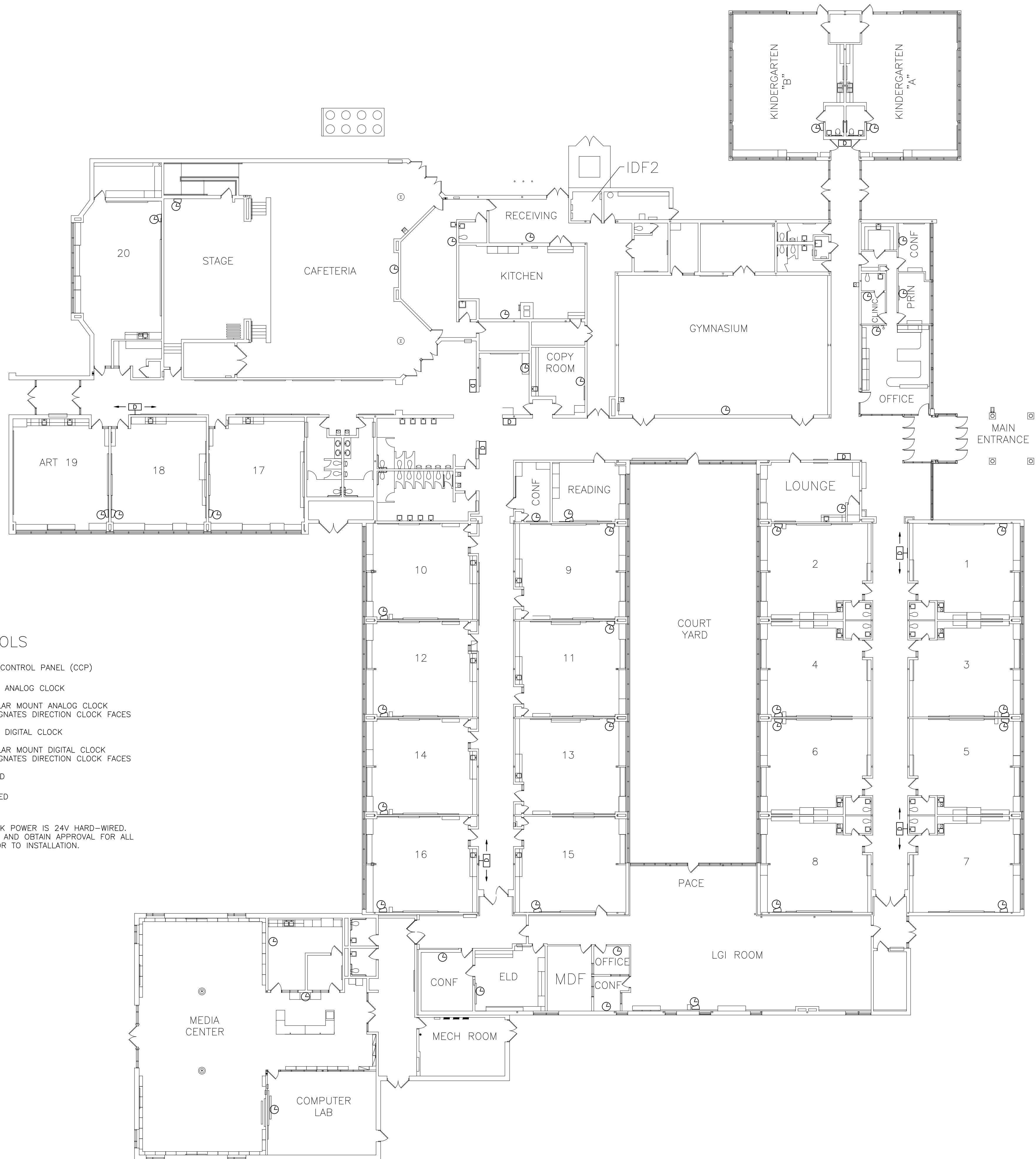


No.	Revision/Issue	Date
	UPDATED	2/14/17
	UPDATED	2/14/17
	ISSUE	2/10/17

Firm Name and Address
 **CONVERGENT**
 TECHNOLOGY PARTNERS
 111 E. COURT STREET
 SUITE 202
 FLINT, MI 48502

Project Name and Address
TROY SCHOOL DISTRICT
 **HILL ELEMENTARY SCHOOL**
 4600 FORSYTH
 TROY, MI 48085
 (248) 823-3500

Project	WIRELESS CLOCKS	Sheet	
Date	02/09/17		TX1.5
Scale	1/16" = 1'		



- SYMBOLS**
- CLASSROOM CONTROL PANEL (CCP)
 - WALL MOUNT ANALOG CLOCK
 - PERPENDICULAR MOUNT ANALOG CLOCK
ARROW DESIGNATES DIRECTION CLOCK FACES
 - WALL MOUNT DIGITAL CLOCK
 - PERPENDICULAR MOUNT DIGITAL CLOCK
ARROW DESIGNATES DIRECTION CLOCK FACES
 - SINGLE FACED
 - DOUBLE FACED

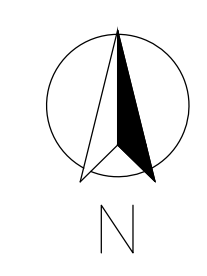
NOTES:
 1. DIGITAL CLOCK POWER IS 24V HARD-WIRED.
 2. FIELD VERIFY AND OBTAIN APPROVAL FOR ALL CLOCKS PRIOR TO INSTALLATION.

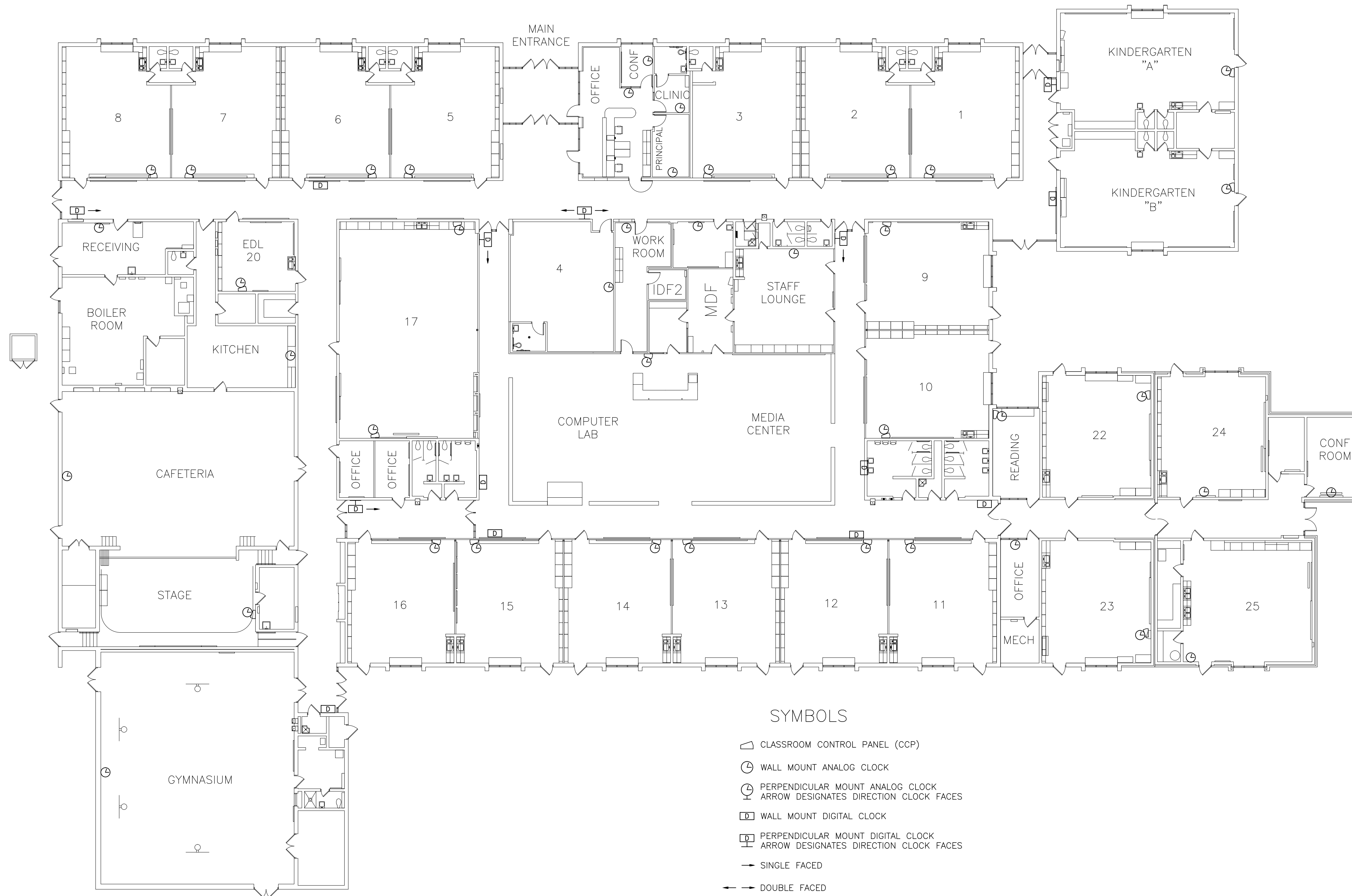
No.	Revision/Issue	Date
	UPDATED	2/14/17
	UPDATED	2/14/17
	ISSUE	2/10/17

Firm Name and Address
CONVERGENT
 TECHNOLOGY PARTNERS
 111 E. COURT STREET
 SUITE 202
 FLINT, MI 48502

Project Name and Address
 TROY SCHOOL DISTRICT
LEONARD ELEMENTARY SCHOOL
 4401 TALLMAN DR.
 TROY, MI 48085
 (248) 823-3300

Project	WIRELESS CLOCKS	Sheet	TX1.6
Date	02/09/17		
Scale	1/16" = 1'		





SYMBOLS

- CLASSROOM CONTROL PANEL (CCP)
- WALL MOUNT ANALOG CLOCK
- PERPENDICULAR MOUNT ANALOG CLOCK
ARROW DESIGNATES DIRECTION CLOCK FACES
- WALL MOUNT DIGITAL CLOCK
- PERPENDICULAR MOUNT DIGITAL CLOCK
ARROW DESIGNATES DIRECTION CLOCK FACES
- SINGLE FACED
- DOUBLE FACED

NOTES:
 1. DIGITAL CLOCK POWER IS 24V HARD-WIRED.
 2. FIELD VERIFY AND OBTAIN APPROVAL FOR ALL CLOCKS PRIOR TO INSTALLATION.

TX1.3

No.	Revision/Issue	Date
	UPDATED	2/14/17
	UPDATED	2/13/17
	ISSUE	2/10/17

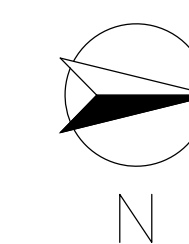
Firm Name and Address

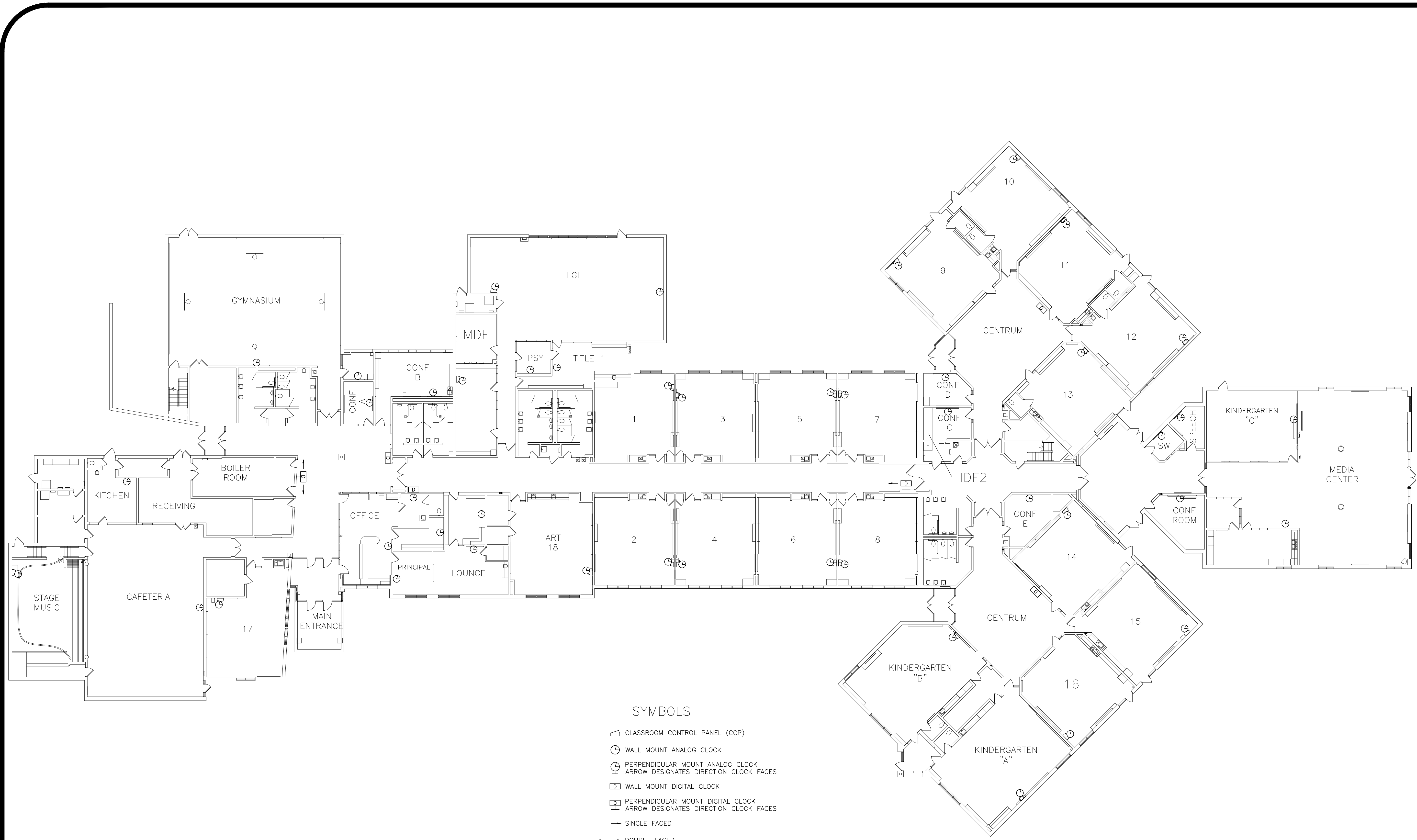
CONVERGENT
 TECHNOLOGY PARTNERS
 111 E. COURT STREET
 SUITE 202
 FLINT, MI 48502

Project Name and Address

TROY SCHOOL DISTRICT
 MARTELL ELEMENTARY SCHOOL
 5666 LIVERNOIS
 TROY, MI 48098
 (248) 823-3800

Project	WIRELESS CLOCKS	Sheet	TX1.7
Date	02/09/17		
Scale	1/16" = 1'		





SYMBOLS

- CLASSROOM CONTROL PANEL (CCP)
- WALL MOUNT ANALOG CLOCK
- PERPENDICULAR MOUNT ANALOG CLOCK
ARROW DESIGNATES DIRECTION CLOCK FACES
- WALL MOUNT DIGITAL CLOCK
- PERPENDICULAR MOUNT DIGITAL CLOCK
ARROW DESIGNATES DIRECTION CLOCK FACES
- SINGLE FACED
- DOUBLE FACED

NOTES:
 1. DIGITAL CLOCK POWER IS 24V HARD-WIRED.
 2. FIELD VERIFY AND OBTAIN APPROVAL FOR ALL CLOCKS PRIOR TO INSTALLATION.

No.	Revision/Issue	Date
	UPDATED	2/14/17
	UPDATED	2/14/17
	ISSUE	2/10/17


Firm Name and Address



CONVERGENT
 TECHNOLOGY PARTNERS
 111 E. COURT STREET
 SUITE 202
 FLINT, MI 48502

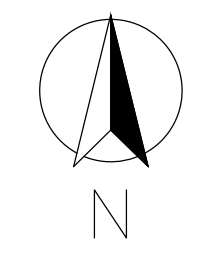
Project Name and Address

TROY SCHOOL DISTRICT



MORSE ELEMENTARY SCHOOL
 475 CHERRY ST.
 TROY, MI 48083
 (248) 823-3200

Project	WIRELESS CLOCKS	Sheet	TX1.8
Date	02/09/17	Scale	1/16" = 1'

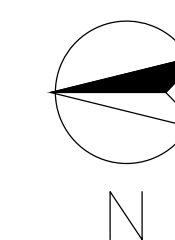




SYMBOLS

- CLASSROOM CONTROL PANEL (CCP)
- WALL MOUNT ANALOG CLOCK
- PERPENDICULAR MOUNT ANALOG CLOCK
ARROW DESIGNATES DIRECTION CLOCK FACES
- WALL MOUNT DIGITAL CLOCK
- PERPENDICULAR MOUNT DIGITAL CLOCK
ARROW DESIGNATES DIRECTION CLOCK FACES
- SINGLE FACED
- DOUBLE FACED

NOTES:
 1. DIGITAL CLOCK POWER IS 24V HARD-WIRED.
 2. FIELD VERIFY AND OBTAIN APPROVAL FOR ALL CLOCKS PRIOR TO INSTALLATION.



No.	Revision/Issue	Date
	UPDATED	2/14/17
	UPDATED	2/14/17
	ISSUE	2/10/17

Firm Name and Address
CONVERGENT
 TECHNOLOGY PARTNERS
 111 E. COURT STREET
 SUITE 202
 FLINT, MI 48502

Project Name and Address
 TROY SCHOOL DISTRICT
 SCHROEDER ELEMENTARY
 SCHOOL
 3541 JACK DR.
 TROY, MI 48084
 (248) 823-3600

Project WIRELESS CLOCKS	Sheet TX1.9
Date 02/09/17	
Scale 1/16" = 1'	



SYMBOLS

- CLASSROOM CONTROL PANEL (CCP)
- WALL MOUNT ANALOG CLOCK
- PERPENDICULAR MOUNT ANALOG CLOCK
ARROW DESIGNATES DIRECTION CLOCK FACES
- WALL MOUNT DIGITAL CLOCK
- PERPENDICULAR MOUNT DIGITAL CLOCK
ARROW DESIGNATES DIRECTION CLOCK FACES
- SINGLE FACED
- DOUBLE FACED

NOTES:
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No.	Revision/Issue	Date
	UPDATED	2/14/17
	UPDATED	2/14/17
	ISSUE	2/10/17

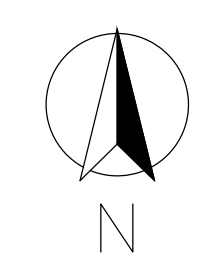
Firm Name and Address

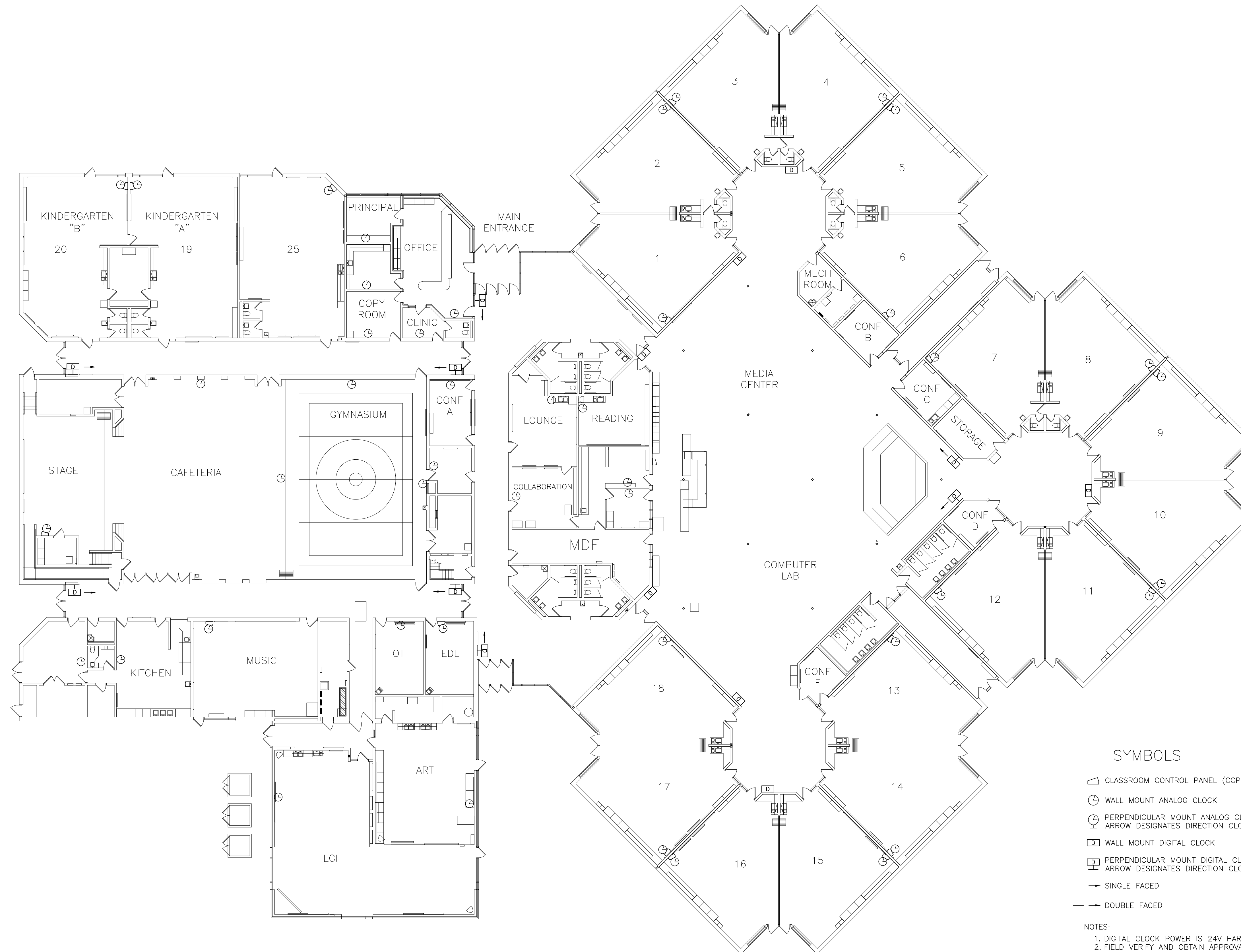
CONVERGENT
 TECHNOLOGY PARTNERS
 111 E. COURT STREET
 SUITE 202
 FLINT, MI 48502

Project Name and Address

TROY SCHOOL DISTRICT
 TROY UNION
 ELEMENTARY SCHOOL
 340 E. SQUARE LAKE RD.
 TROY, MI 48083
 (248) 823-3100

Project WIRELESS CLOCKS	Sheet TX1.10
Date 02/09/17	
Scale 1/16" = 1'	

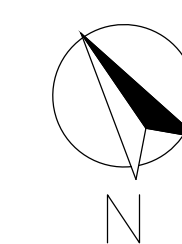




SYMBOLS

- CLASSROOM CONTROL PANEL (CCP)
- WALL MOUNT ANALOG CLOCK
- PERPENDICULAR MOUNT ANALOG CLOCK
ARROW DESIGNATES DIRECTION CLOCK FACES
- WALL MOUNT DIGITAL CLOCK
- PERPENDICULAR MOUNT DIGITAL CLOCK
ARROW DESIGNATES DIRECTION CLOCK FACES
- SINGLE FACED
- DOUBLE FACED

- NOTES:**
1. DIGITAL CLOCK POWER IS 24V HARD-WIRED.
 2. FIELD VERIFY AND OBTAIN APPROVAL FOR ALL CLOCKS PRIOR TO INSTALLATION.




No.	Revision/Issue	Date
	UPDATED	2/14/17
	ISSUE	2/10/17

Firm Name and Address



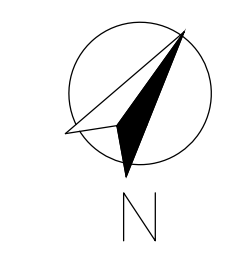
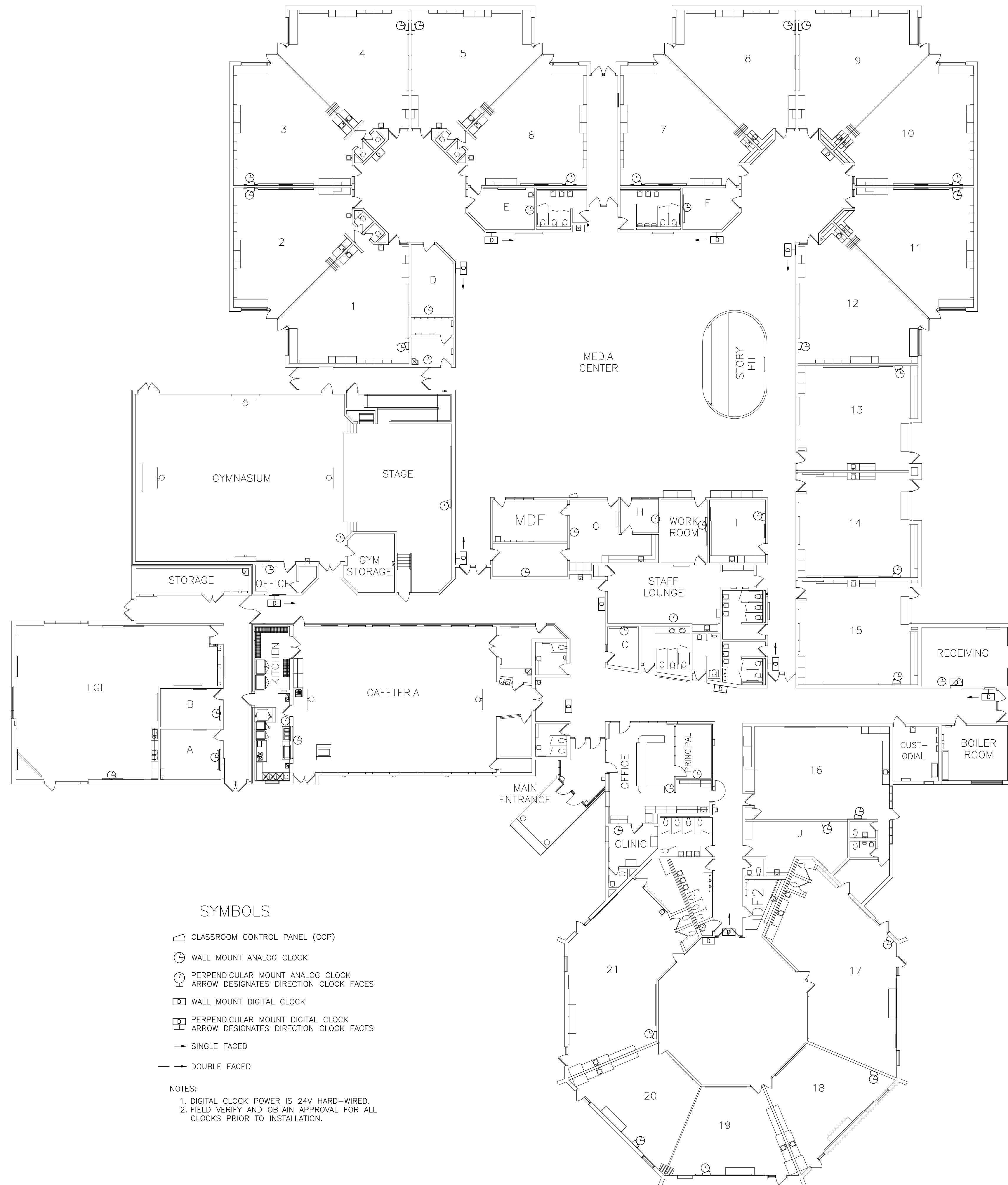
CONVERGENT
TECHNOLOGY PARTNERS
111 E. COURT STREET
SUITE 202
FLINT, MI 48502

Project Name and Address



TROY SCHOOL DISTRICT
WASS ELEMENTARY
SCHOOL
2340 WILLARD DR.
TROY, MI 48085
(248) 823-3900

Project WIRELESS CLOCKS	Sheet TX1.11
Date 02/09/17	
Scale 1/16" = 1'	



No.	Revision/Issue	Date
	UPDATED	2/14/17
	UPDATED	2/14/17
	ISSUE	2/10/17


Firm Name and Address



CONVERGENT
TECHNOLOGY PARTNERS
111 E. COURT STREET
SUITE 202
FLINT, MI 48502

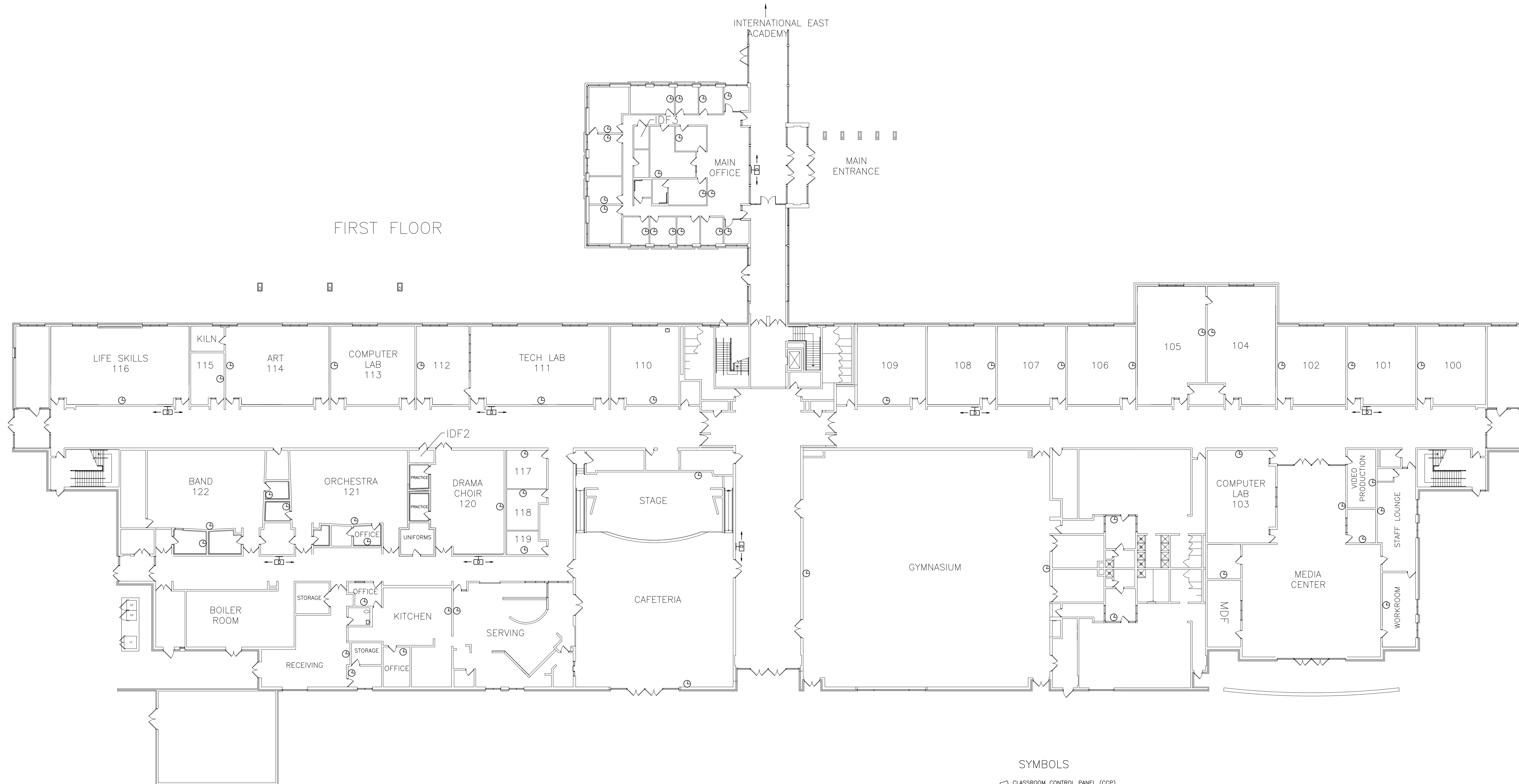
Project Name and Address

TROY SCHOOL DISTRICT



WATTLES ELEMENTARY SCHOOL
3555 ELLENBORO
TROY, MI 48083
(248) 823-3400

Project	WIRELESS CLOCKS	Sheet	TX1.12
Date	02/09/17		
Scale	1/16" = 1'		



FIRST FLOOR

SYMBOLS

- ◻ CLASSROOM CONTROL PANEL (CCP)
- ⊙ WALL MOUNT ANALOG CLOCK
- ⊙ PERPENDICULAR MOUNT ANALOG CLOCK
ARROW DESIGNATES DIRECTION CLOCK FACES
- ⊙ WALL MOUNT DIGITAL CLOCK
- ⊙ PERPENDICULAR MOUNT DIGITAL CLOCK
ARROW DESIGNATES DIRECTION CLOCK FACES
- SINGLE FACED
- ↔ DOUBLE FACED

NOTES:
 1. DIGITAL CLOCK POWER IS 24V HARD-WIRED.
 2. FIELD VERIFY AND OBTAIN APPROVAL FOR ALL
 CLOCKS PRIOR TO INSTALLATION.

No.	Revision/Issue	Date
	UPDATED	2/15/17
	ISSUE	2/14/17

Firm Name and Address

 111 E. COURT STREET
 SUITE 202
 FLINT, MI 48502

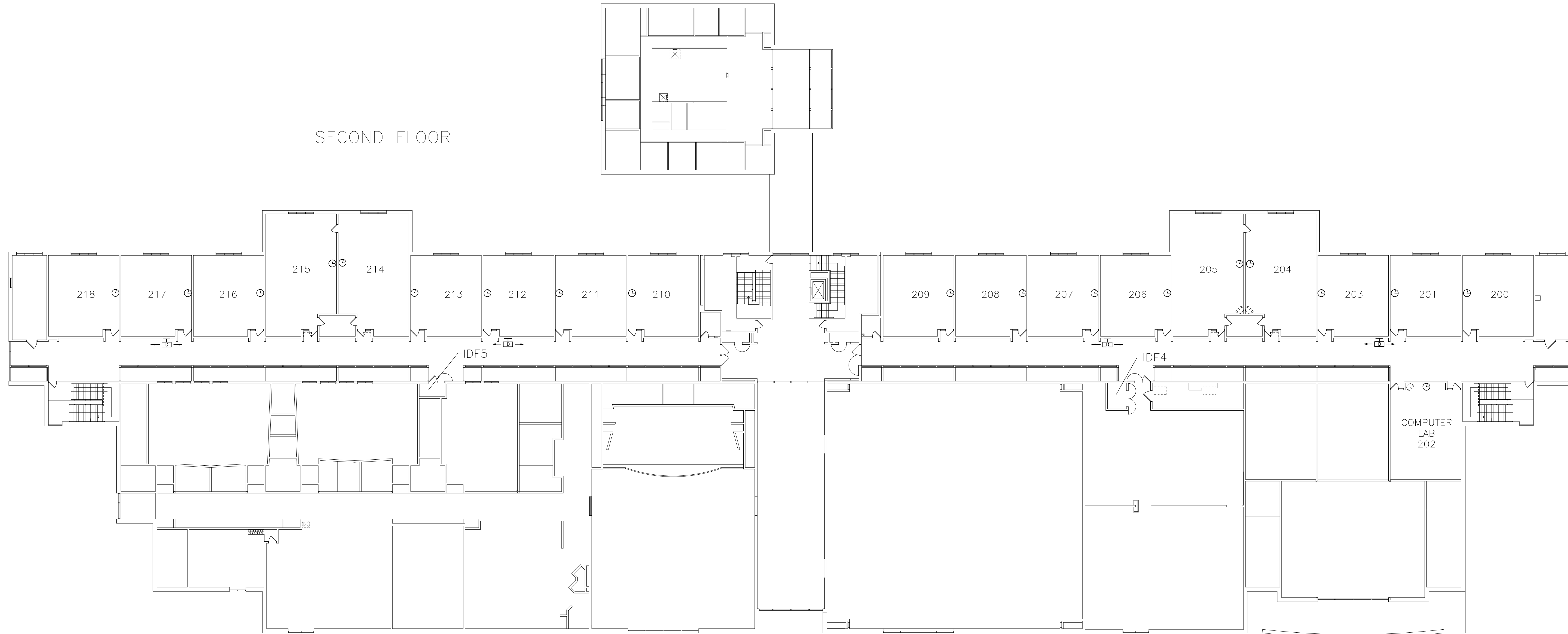
Project Name and Address

 TROY SCHOOL DISTRICT
 BAKER MIDDLE SCHOOL
 FIRST FLOOR
 1359 TORPEY DRIVE
 TROY, MI 4809834
 (248) 823-4600

Project	WIRELESS CLOCKS	Sheet	TX1.13A
Date	02/09/17		
Scale	1"=20'		



SECOND FLOOR



SYMBOLS

- ⏏ CLASSROOM CONTROL PANEL (CCP)
- ⌚ WALL MOUNT ANALOG CLOCK
- ⌚ PERPENDICULAR MOUNT ANALOG CLOCK
ARROW DESIGNATES DIRECTION CLOCK FACES
- ⏱ WALL MOUNT DIGITAL CLOCK
- ⏱ PERPENDICULAR MOUNT DIGITAL CLOCK
ARROW DESIGNATES DIRECTION CLOCK FACES
- SINGLE FACED
- ↔ DOUBLE FACED

NOTES:
 1. DIGITAL CLOCK POWER IS 24V HARD-WIRED.
 2. FIELD VERIFY AND OBTAIN APPROVAL FOR ALL
 CLOCKS PRIOR TO INSTALLATION.

No.	Revision/Issue	Date
	UPDATED	2/15/17
	ISSUE	2/14/17

Firm Name and Address



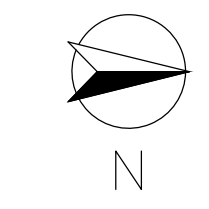
CONVERGENT
 TECHNOLOGY PARTNERS
 111 E. COURT STREET
 SUITE 202
 FLINT, MI 48502

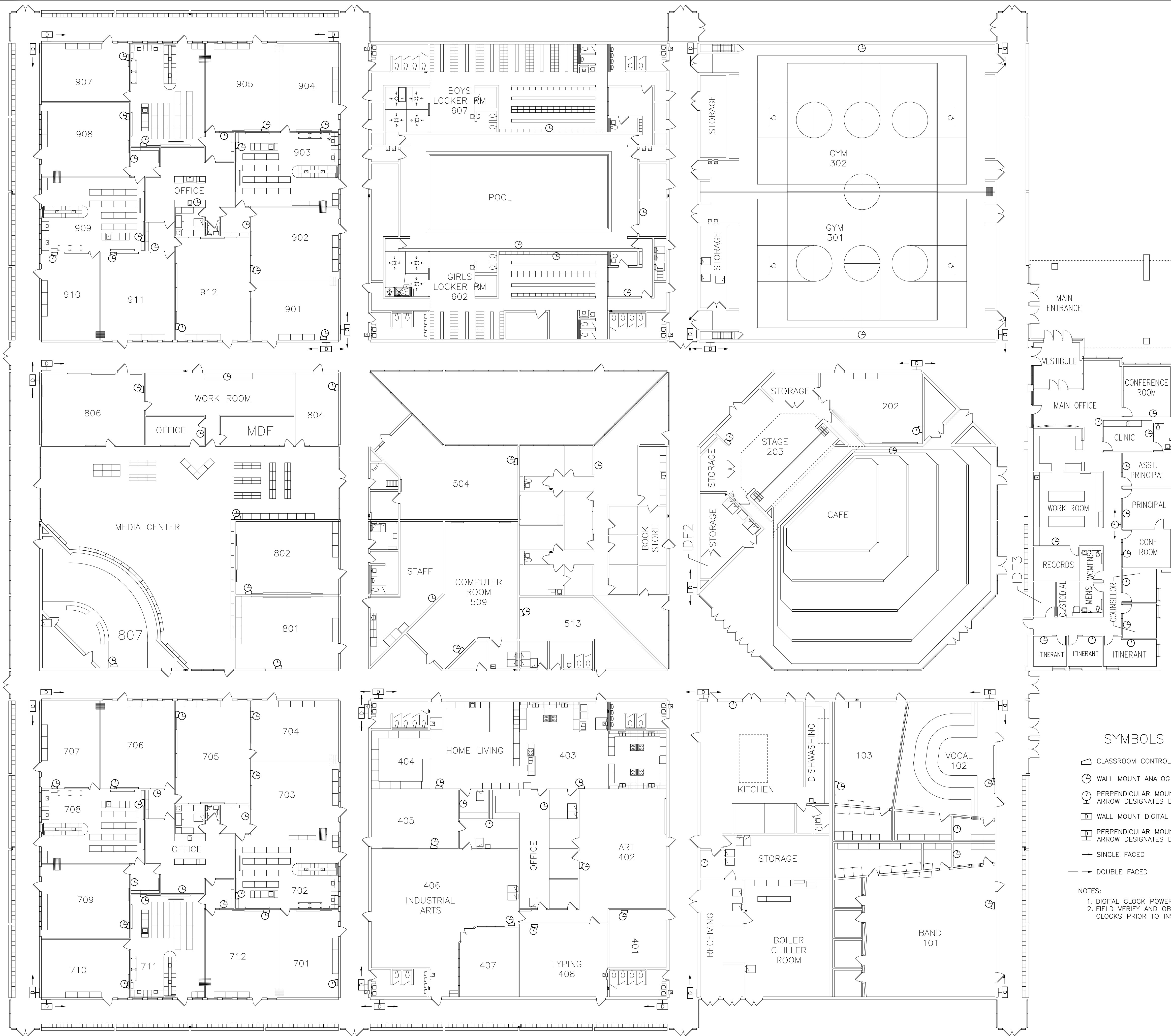
Project Name and Address

TROY SCHOOL DISTRICT
 BAKER MIDDLE SCHOOL
 SECOND FLOOR
 1359 TORPEY DRIVE
 TROY, MI 4809834
 (248) 823-4600



Project	WIRELESS CLOCKS	Sheet	TX1.13B
Date	02/09/17		
Scale	1"=20'		

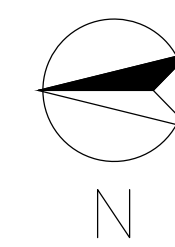




SYMBOLS

- CLASSROOM CONTROL PANEL (CCP)
- WALL MOUNT ANALOG CLOCK
- PERPENDICULAR MOUNT ANALOG CLOCK
ARROW DESIGNATES DIRECTION CLOCK FACES
- WALL MOUNT DIGITAL CLOCK
- PERPENDICULAR MOUNT DIGITAL CLOCK
ARROW DESIGNATES DIRECTION CLOCK FACES
- SINGLE FACED
- DOUBLE FACED

NOTES:
 1. DIGITAL CLOCK POWER IS 24V HARD-WIRED.
 2. FIELD VERIFY AND OBTAIN APPROVAL FOR ALL CLOCKS PRIOR TO INSTALLATION.



No.	Revision/Issue	Date
	UPDATED	2/15/17
	UPDATED	2/14/17
	ISSUE	2/10/17

Firm Name and Address

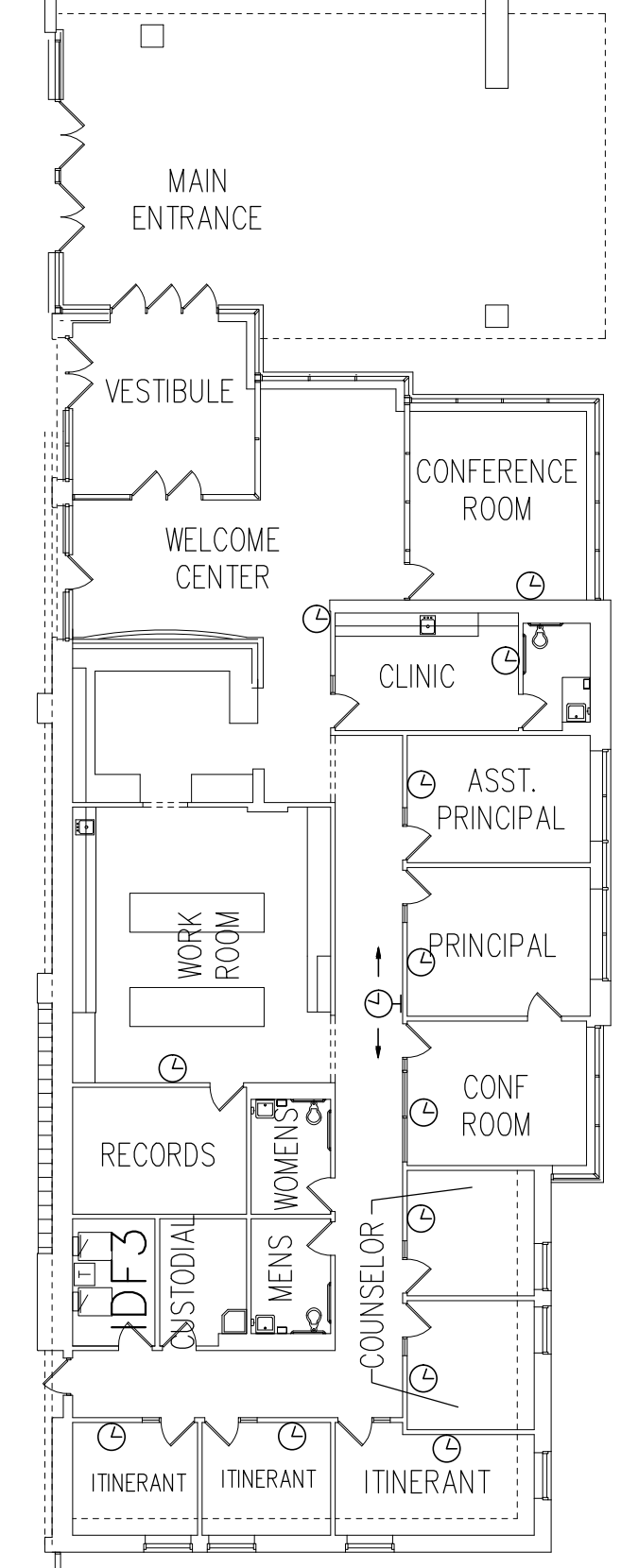
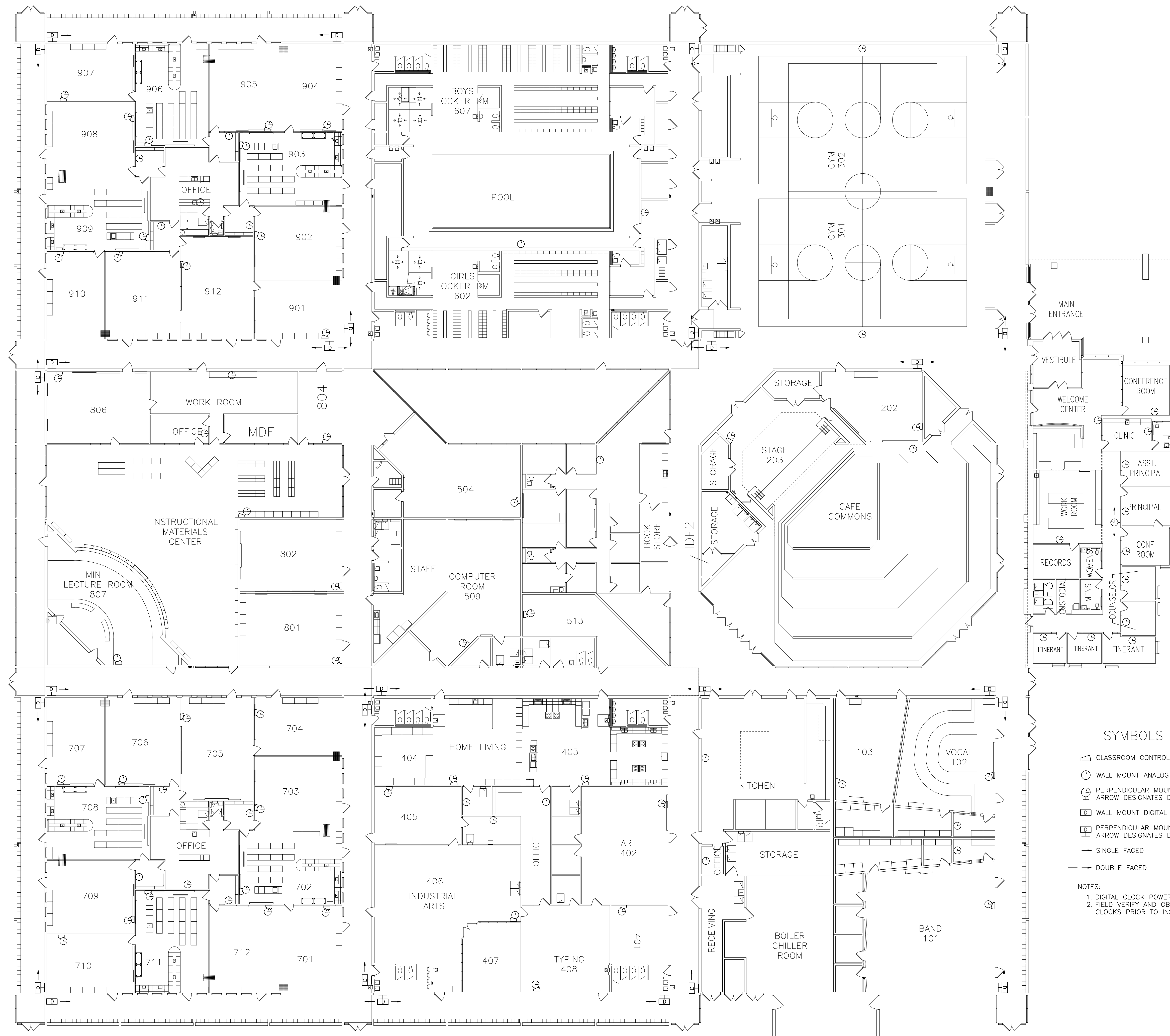


CONVERGENT
 TECHNOLOGY PARTNERS
 111 E. COURT STREET
 SUITE 202
 FLINT, MI 48502

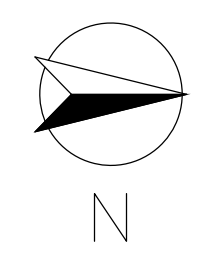
Project Name and Address

TROY SCHOOL DISTRICT
 BOULAN PARK
 MIDDLE SCHOOL
 3570 NORTHFIELD PKWY
 TROY, MI 48084
 (248) 823-4900

Project	WIRELESS CLOCKS	Sheet
Date	02/09/17	TX1.14
Scale	1/16" = 1'	



- SYMBOLS**
- CLASSROOM CONTROL PANEL (CCP)
 - WALL MOUNT ANALOG CLOCK
 - PERPENDICULAR MOUNT ANALOG CLOCK
ARROW DESIGNATES DIRECTION CLOCK FACES
 - WALL MOUNT DIGITAL CLOCK
 - PERPENDICULAR MOUNT DIGITAL CLOCK
ARROW DESIGNATES DIRECTION CLOCK FACES
 - SINGLE FACED
 - DOUBLE FACED
- NOTES:**
1. DIGITAL CLOCK POWER IS 24V HARD-WIRED.
 2. FIELD VERIFY AND OBTAIN APPROVAL FOR ALL CLOCKS PRIOR TO INSTALLATION.



No.	Revision/Issue	Date
	UPDATED	2/15/17
	UPDATED	2/14/17
	ISSUE	2/10/17

Firm Name and Address

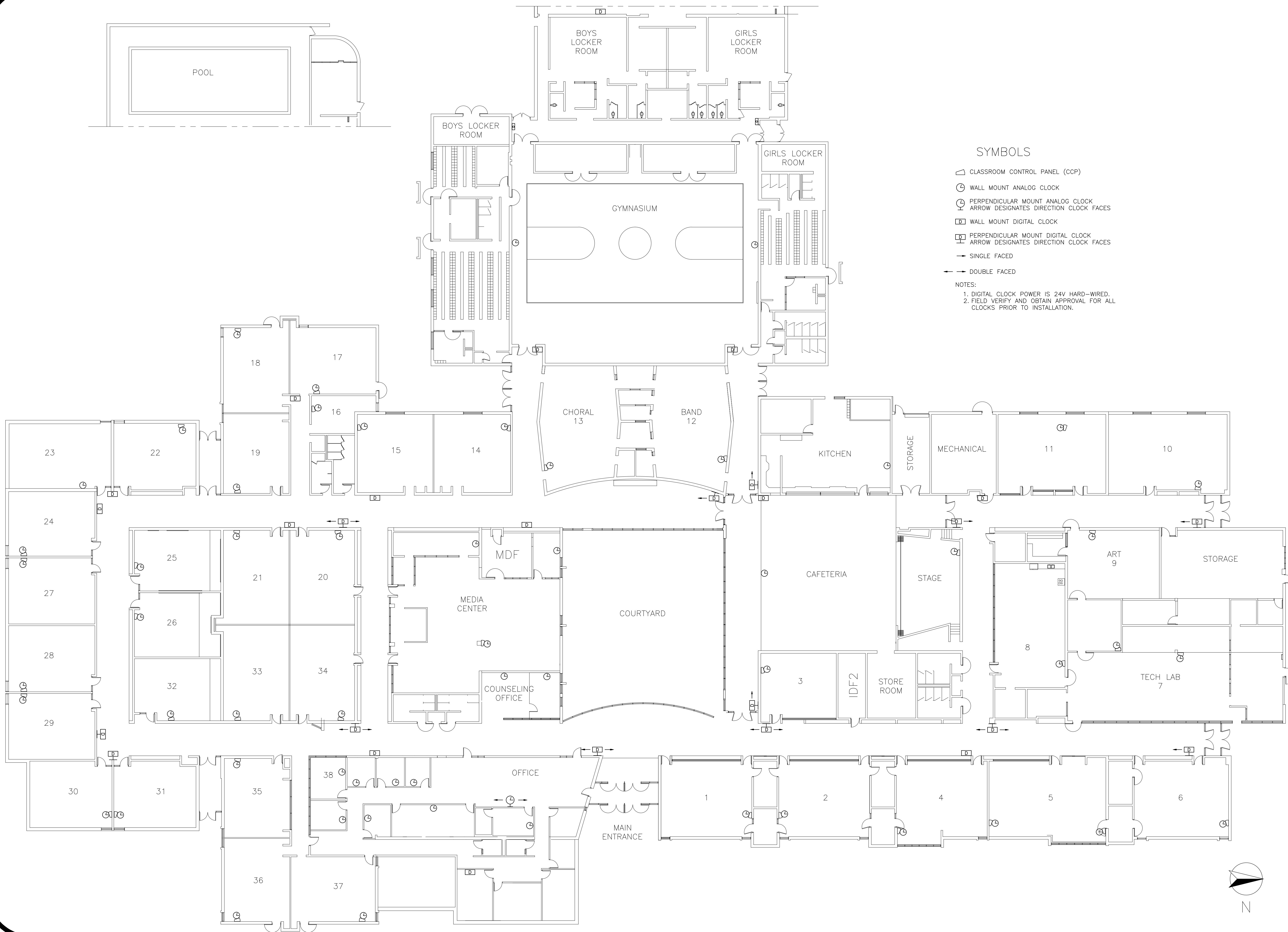
111 E. COURT STREET
SUITE 202
FLINT, MI 48502

Project Name and Address

TROY SCHOOL DISTRICT

LARSON MIDDLE SCHOOL
2222 LONG LAKE RD.
TROY, MI 48085
(248) 823-4800

Project WIRELESS CLOCKS	Sheet TX1.15
Date 02/09/17	
Scale 1/16" = 1'	



SYMBOLS

- ◻ CLASSROOM CONTROL PANEL (CCP)
- ⊙ WALL MOUNT ANALOG CLOCK
- ⊙ PERPENDICULAR MOUNT ANALOG CLOCK
ARROW DESIGNATES DIRECTION CLOCK FACES
- ◻ WALL MOUNT DIGITAL CLOCK
- ◻ PERPENDICULAR MOUNT DIGITAL CLOCK
ARROW DESIGNATES DIRECTION CLOCK FACES
- SINGLE FACED
- ↔ DOUBLE FACED

NOTES:
 1. DIGITAL CLOCK POWER IS 24V HARD-WIRED.
 2. FIELD VERIFY AND OBTAIN APPROVAL FOR ALL CLOCKS PRIOR TO INSTALLATION.

No.	Revision/Issue	Date
	UPDATED	2/15/17
	UPDATED	2/13/17
	ISSUE	2/9/17

Firm Name and Address



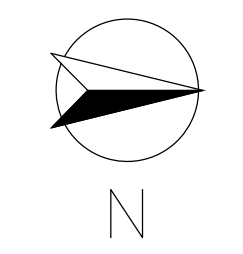
CONVERGENT
 TECHNOLOGY PARTNERS
 111 E. COURT STREET
 SUITE 202
 FLINT, MI 48502

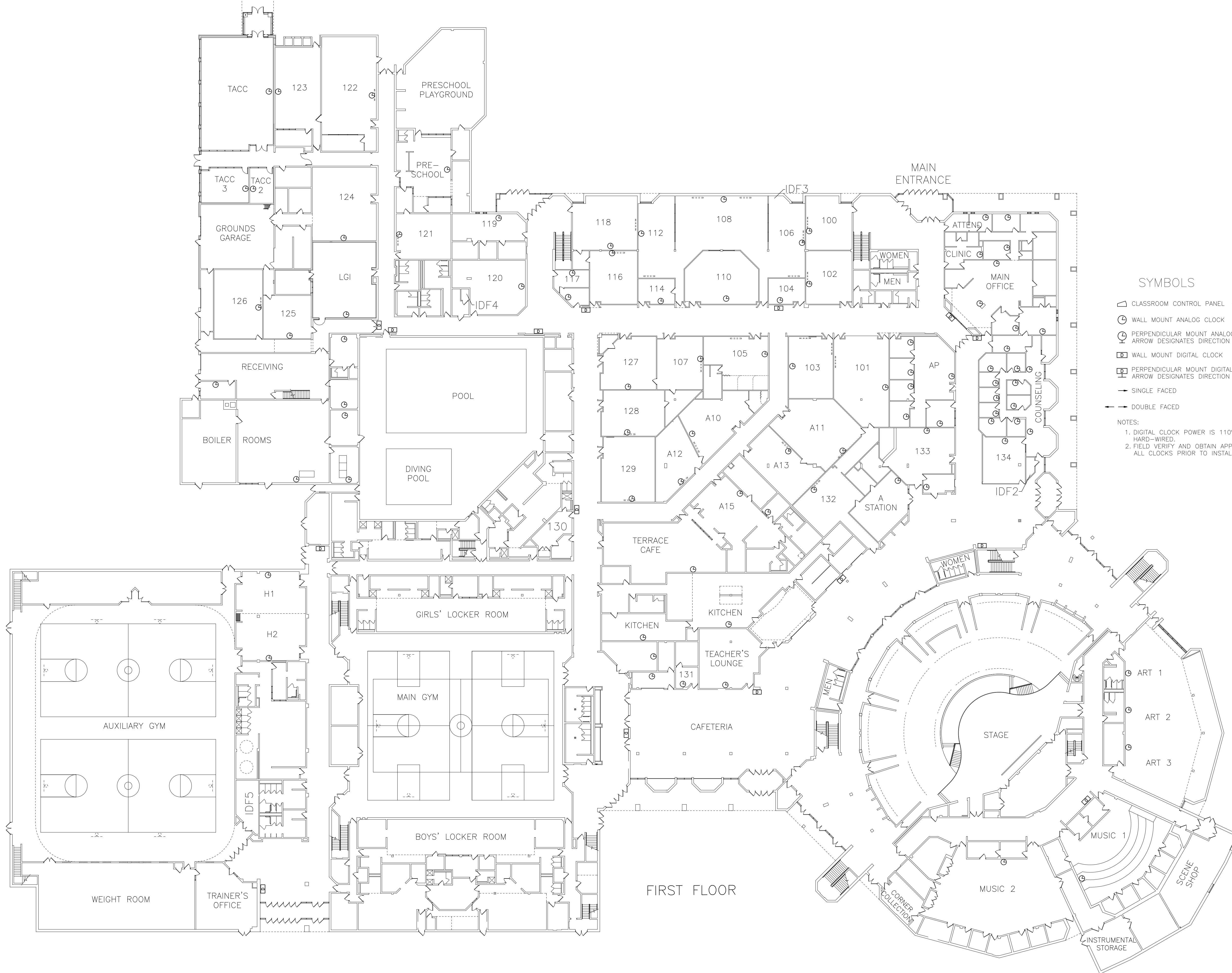
Project Name and Address



TROY SCHOOL DISTRICT
 SMITH MIDDLE SCHOOL
 5835 DONALDSON
 TROY, MI 48085
 (248) 823-4700

Project	WIRELESS CLOCKS	Sheet	
Date	02/09/17		TX1.16
Scale	1/16" = 1'		





SYMBOLS

- ◻ CLASSROOM CONTROL PANEL (CCP)
- ⊙ WALL MOUNT ANALOG CLOCK
- ⊙ PERPENDICULAR MOUNT ANALOG CLOCK
ARROW DESIGNATES DIRECTION CLOCK FACES
- ◻ WALL MOUNT DIGITAL CLOCK
- ◻ PERPENDICULAR MOUNT DIGITAL CLOCK
ARROW DESIGNATES DIRECTION CLOCK FACES
- SINGLE FACED
- DOUBLE FACED

NOTES:
 1. DIGITAL CLOCK POWER IS 110V
 HARD-WIRED.
 2. FIELD VERIFY AND OBTAIN APPROVAL FOR
 ALL CLOCKS PRIOR TO INSTALLATION.

No.	Revision/Issue	Date
	UPDATED	2/14/17
	ISSUE	2/14/17

Firm Name and Address

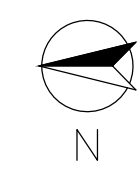


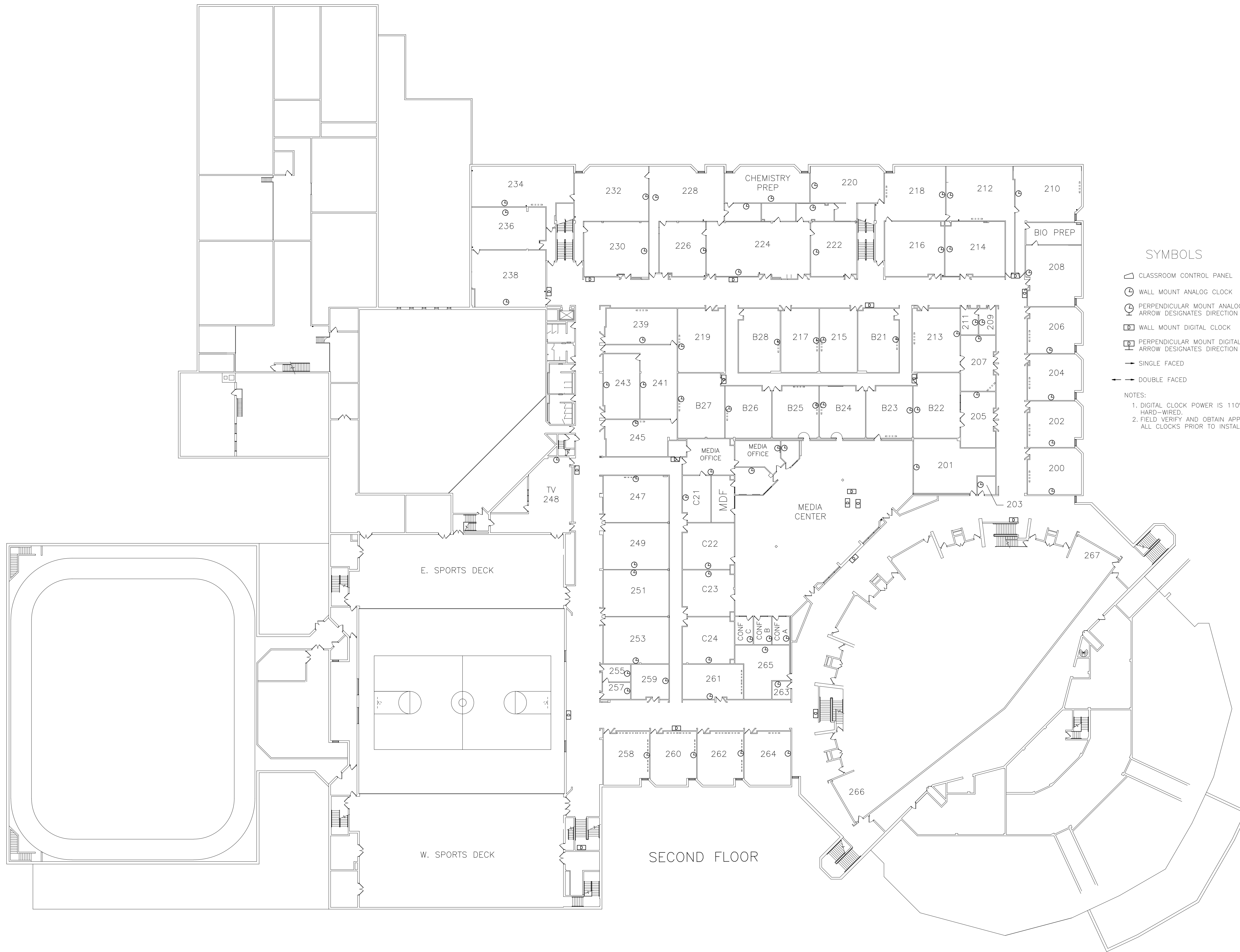
CONVERGENT
 TECHNOLOGY PARTNERS
 111 E. COURT STREET
 SUITE 202
 FLINT, MI 48502

Project Name and Address

TROY SCHOOL DISTRICT
 ATHENS HIGH SCHOOL
 FIRST FLOOR
 4333 JOHN R RD.
 TROY, MI 48085
 (248) 823-2900

Project	WIRELESS CLOCKS	Sheet	
Date	02/09/17		TX1.17A
Scale	1"=25'		





SYMBOLS

- ◻ CLASSROOM CONTROL PANEL (CCP)
- ⊙ WALL MOUNT ANALOG CLOCK
- ⊙ PERPENDICULAR MOUNT ANALOG CLOCK
ARROW DESIGNATES DIRECTION CLOCK FACES
- ⊙ WALL MOUNT DIGITAL CLOCK
- ⊙ PERPENDICULAR MOUNT DIGITAL CLOCK
ARROW DESIGNATES DIRECTION CLOCK FACES
- SINGLE FACED
- ↔ DOUBLE FACED

NOTES:

1. DIGITAL CLOCK POWER IS 110V
HARD-WIRED.
2. FIELD VERIFY AND OBTAIN APPROVAL FOR
ALL CLOCKS PRIOR TO INSTALLATION.

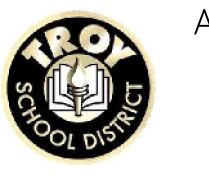
No.	Revision/Issue	Date
	UPDATED	2/14/17
	ISSUE	2/14/17

Firm Name and Address



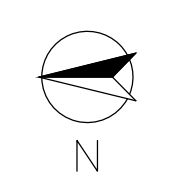
CONVERGENT
TECHNOLOGY PARTNERS
111 E. COURT STREET
SUITE 202
FLINT, MI 48502

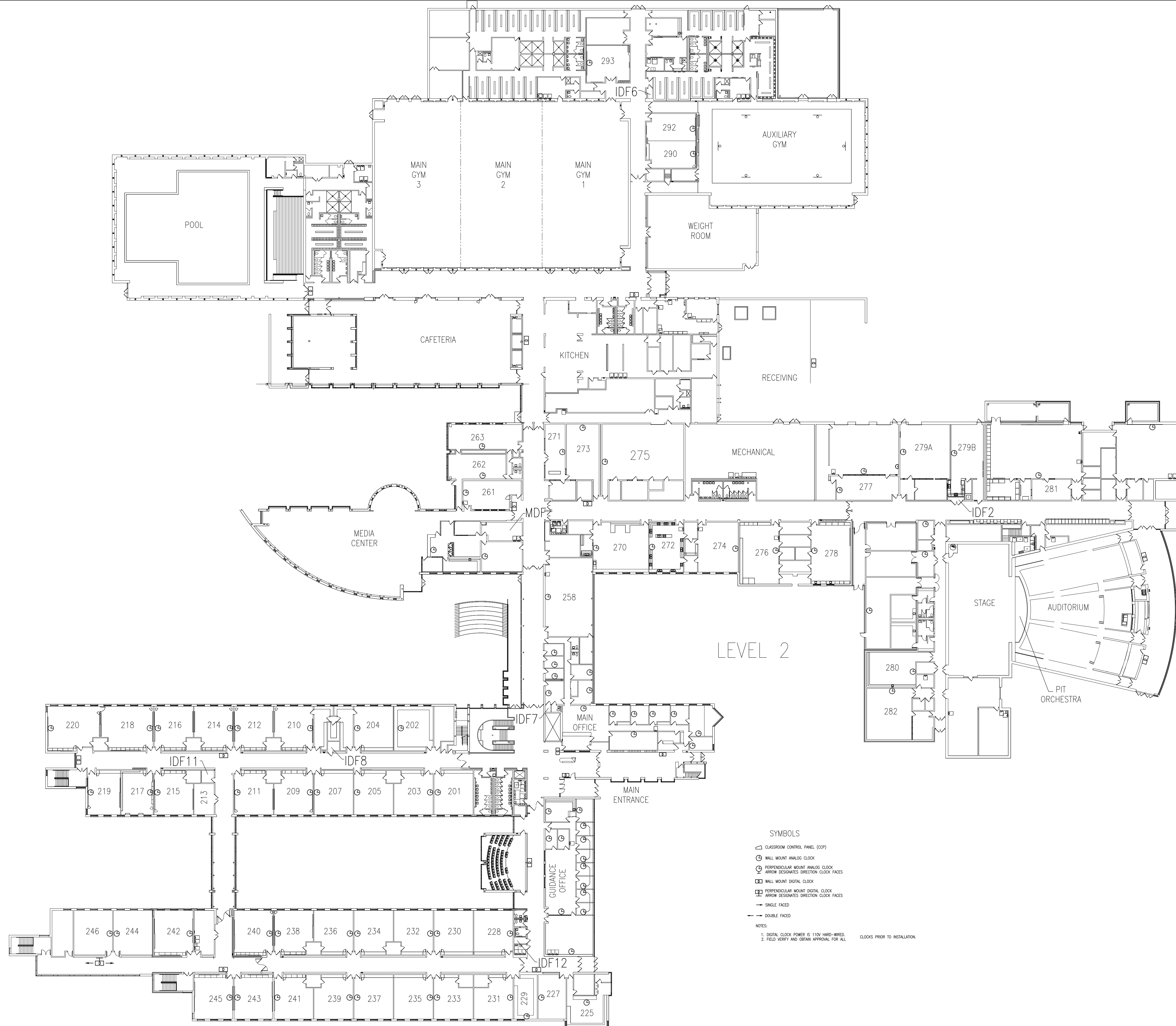
Project Name and Address



TROY SCHOOL DISTRICT
ATHENS HIGH SCHOOL
SECOND FLOOR
4333 JOHN R RD.
TROY, MI 48085
(248) 823-2900

Project	WIRELESS CLOCKS	Sheet	
Date	02/09/17		TX1.17B
Scale	1"=25'		





LEVEL 2

SYMBOLS

- CLASSROOM CONTROL PANEL (CCP)
- WALL MOUNT ANALOG CLOCK
- PERPENDICULAR MOUNT ANALOG CLOCK
- ARROW DESIGNATES DIRECTION CLOCK FACES
- WALL MOUNT DIGITAL CLOCK
- PERPENDICULAR MOUNT DIGITAL CLOCK
- ARROW DESIGNATES DIRECTION CLOCK FACES
- SINGLE FACED
- DOUBLE FACED

NOTES:
 1. DIGITAL CLOCK POWER IS 110V HARD-WIRED. CLOCKS PRIOR TO INSTALLATION.
 2. FIELD VERIFY AND OBTAIN APPROVAL FOR ALL.

No.	Revision/Issue	Date
	UPDATED	2/14/17
	ISSUE	2/14/17

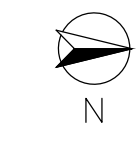
Firm Name and Address

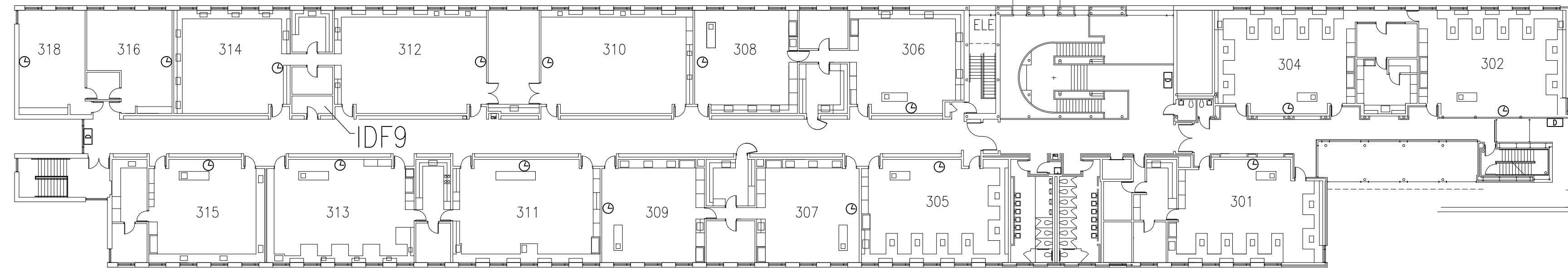
CONVERGENT
 TECHNOLOGY PARTNERS
 111 E. COURT STREET
 SUITE 202
 FLINT, MI 48502

Project Name and Address

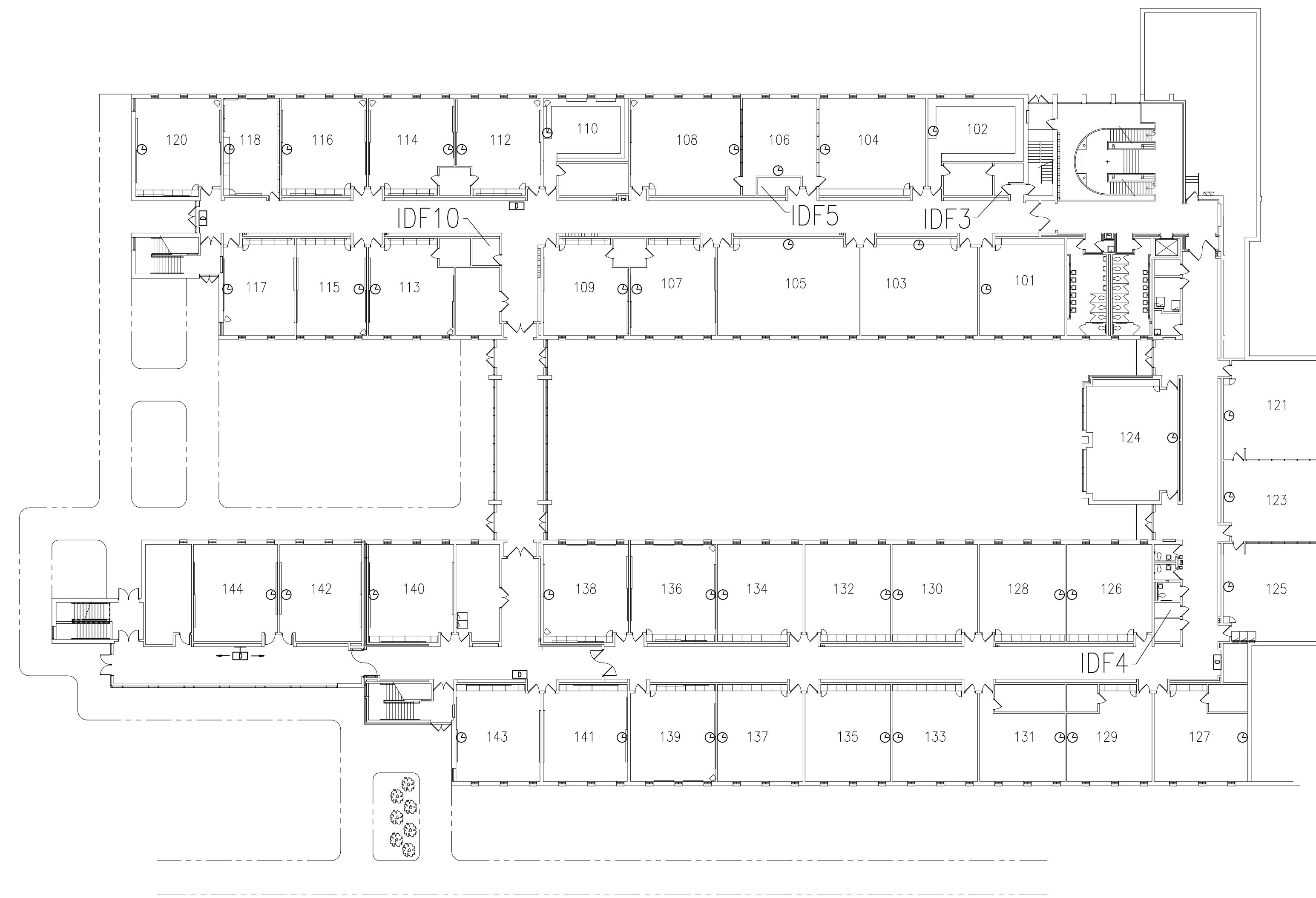
TROY SCHOOL DISTRICT
 TROY HIGH SCHOOL
 LEVEL 2
 4777 NORTHFIELD PKWY.
 TROY, MI 48098
 (248) 823-2700

Project	WIRELESS CLOCKS	Sheet	TX1.18A
Date	02/09/17		
Scale	1/32" = 1'		





LEVEL 3



LEVEL 1

- SYMBOLS**
- Ⓞ CLASSROOM CONTROL PANEL (CCP)
 - Ⓢ WALL MOUNT ANALOG CLOCK
 - Ⓢ PERPENDICULAR MOUNT ANALOG CLOCK
ARROW DESIGNATES DIRECTION CLOCK FACES
 - Ⓢ WALL MOUNT DIGITAL CLOCK
 - Ⓢ PERPENDICULAR MOUNT DIGITAL CLOCK
ARROW DESIGNATES DIRECTION CLOCK FACES
 - SINGLE FACED
 - DOUBLE FACED
- NOTES:**
1. DIGITAL CLOCK POWER IS 110V HARD-WIRED.
 2. FIELD VERIFY AND OBTAIN APPROVAL FOR ALL CLOCKS PRIOR TO INSTALLATION.



No.	Revision/Issue	Date
	UPDATED	2/15/17
	UPDATED	2/14/17
	ISSUE	2/14/17

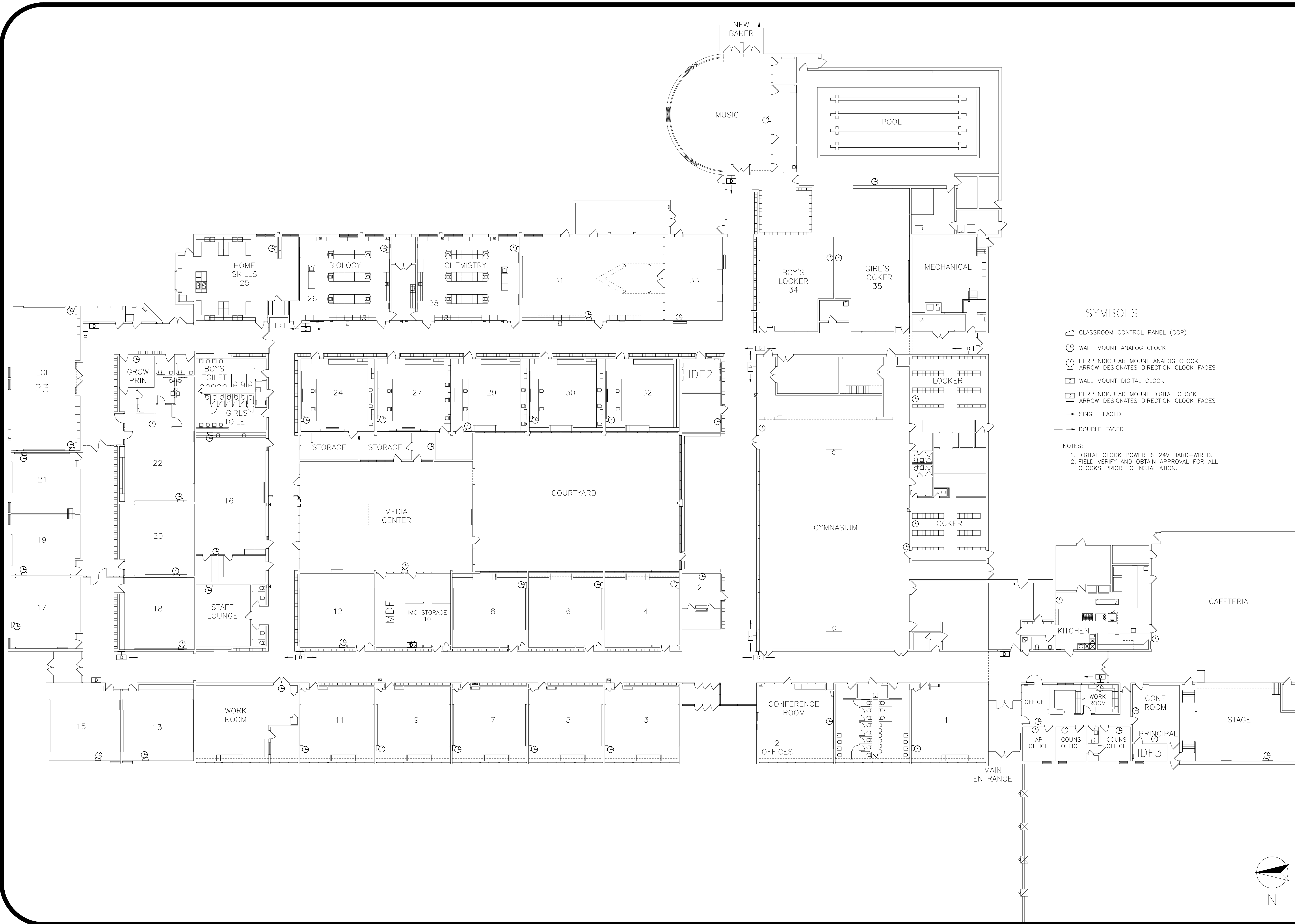
Firm Name and Address

CONVERGENT
 TECHNOLOGY PARTNERS
 111 E. COURT STREET
 SUITE 202
 FLINT, MI 48502

Project Name and Address
TROY SCHOOL DISTRICT

TROY HIGH SCHOOL
 LEVELS 1 & 3
 4777 NORTHFIELD PKWY.
 TROY, MI 48098
 (248) 823-2700

Project WIRELESS CLOCKS	Sheet TX1.18B
Date 02/09/17	
Scale 1"=25'	



SYMBOLS

- ◻ CLASSROOM CONTROL PANEL (CCP)
- ⊙ WALL MOUNT ANALOG CLOCK
- ⊙ PERPENDICULAR MOUNT ANALOG CLOCK
ARROW DESIGNATES DIRECTION CLOCK FACES
- ⊙ WALL MOUNT DIGITAL CLOCK
- ⊙ PERPENDICULAR MOUNT DIGITAL CLOCK
ARROW DESIGNATES DIRECTION CLOCK FACES
- SINGLE FACED
- ↔ DOUBLE FACED

NOTES:
 1. DIGITAL CLOCK POWER IS 24V HARD-WIRED.
 2. FIELD VERIFY AND OBTAIN APPROVAL FOR ALL CLOCKS PRIOR TO INSTALLATION.

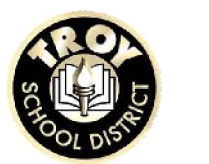
No.	Revision/Issue	Date
	UPDATED	2/15/17
	UPDATED	2/14/17
	ISSUE	2/10/17

Form Name and Address



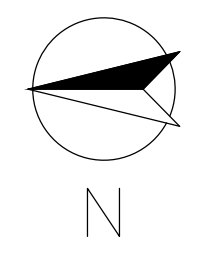
CONVERGENT
 TECHNOLOGY PARTNERS
 111 E. COURT STREET
 SUITE 202
 FLINT, MI 48502

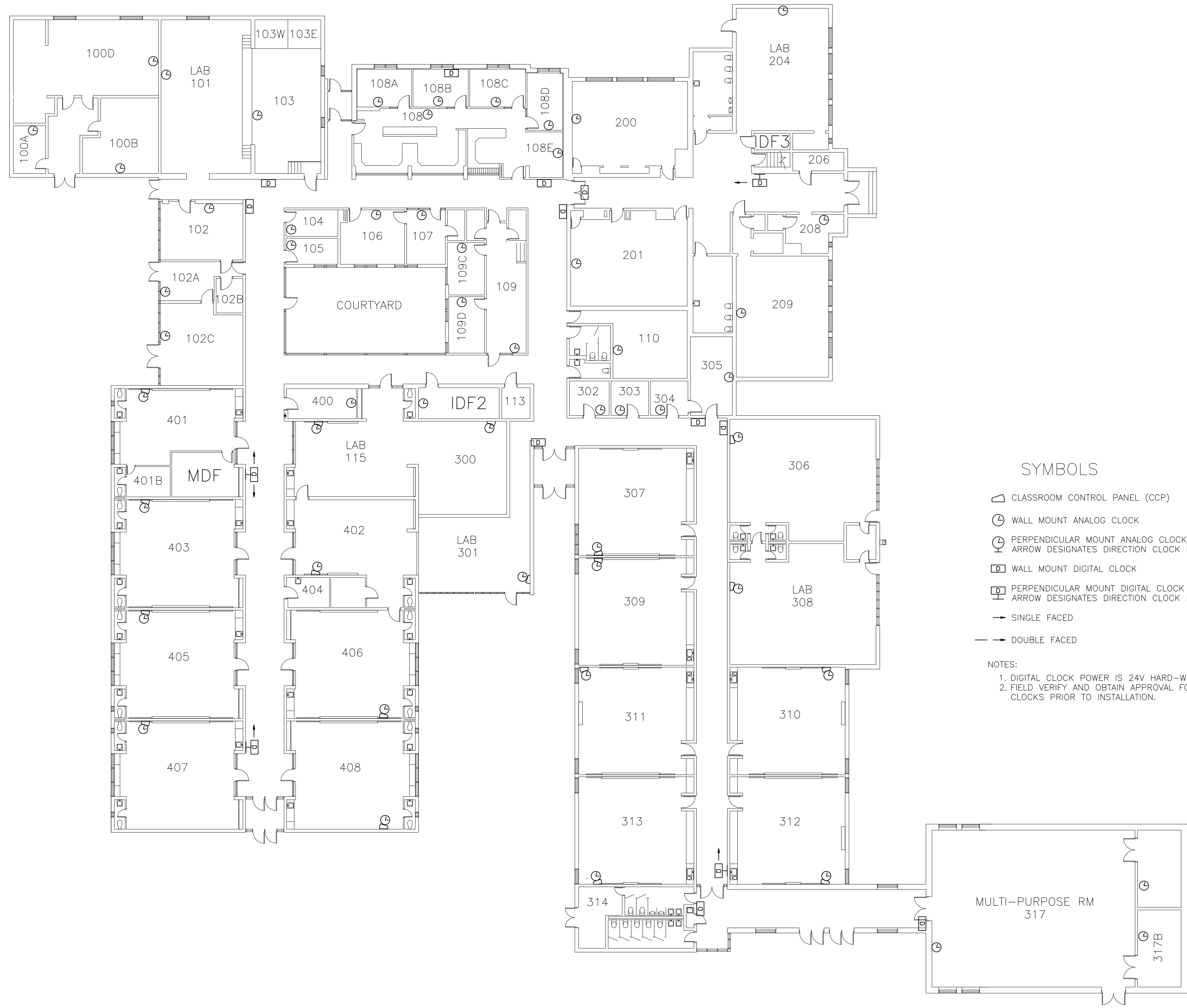
Project Name and Address



TROY SCHOOL DISTRICT
 INTERNATIONAL COLLEGE EAST
 1291 TORPEY DRIVE
 TROY, MI 4809834
 (248) 823-8300

Project	WIRELESS CLOCKS	Sheet	
Date	02/09/17		TX1.19
Scale	1/16" = 1'		

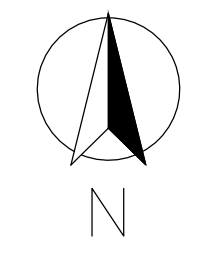




SYMBOLS

- CLASSROOM CONTROL PANEL (CCP)
- WALL MOUNT ANALOG CLOCK
- PERPENDICULAR MOUNT ANALOG CLOCK
ARROW DESIGNATES DIRECTION CLOCK FACES
- WALL MOUNT DIGITAL CLOCK
- PERPENDICULAR MOUNT DIGITAL CLOCK
ARROW DESIGNATES DIRECTION CLOCK FACES
- SINGLE FACED
- DOUBLE FACED

NOTES:
 1. DIGITAL CLOCK POWER IS 24V HARD-WIRED.
 2. FIELD VERIFY AND OBTAIN APPROVAL FOR ALL CLOCKS PRIOR TO INSTALLATION.



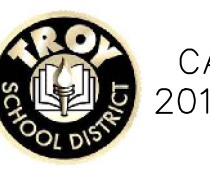
No.	Revision/Issue	Date
	UPDATED	2/15/17
	UPDATED	2/14/17
	ISSUE	2/10/17

Firm Name and Address



CONVERGENT
 TECHNOLOGY PARTNERS
 111 E. COURT STREET
 SUITE 202
 FLINT, MI 48502








Project Name and Address



TROY SCHOOL DISTRICT
 TROY COLLEGE &
 CAREER HIGH SCHOOL
 201 W.SQUARE LAKE RD.
 TROY, MI 480984
 (248) 823-5156

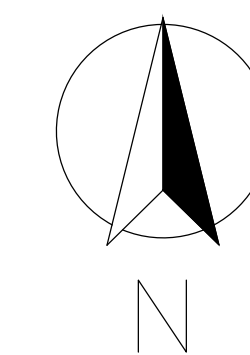
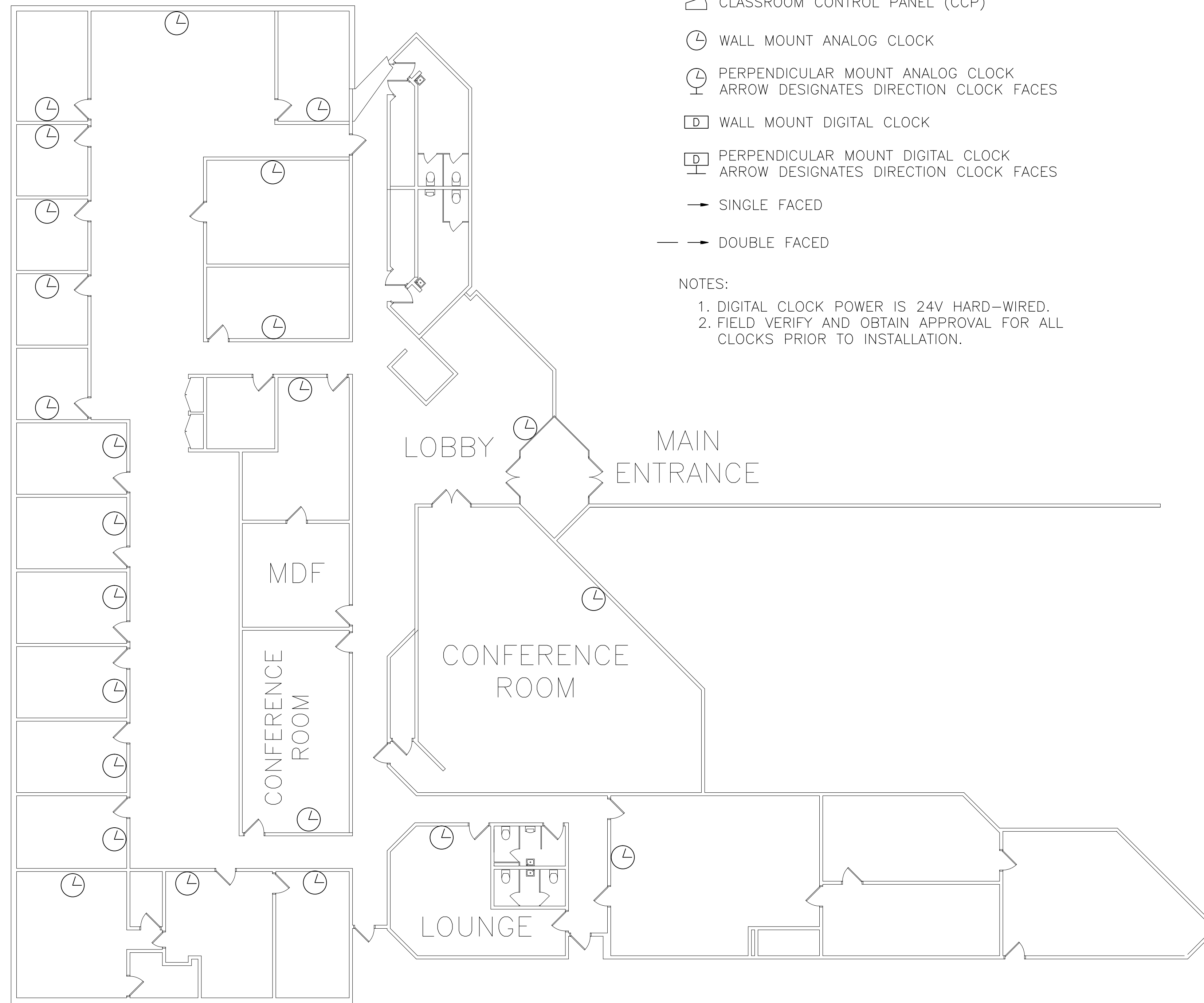
Project WIRELESS CLOCKS	Sheet TX1.20
Date 02/09/17	
Scale 1/16" = 1'	

SYMBOLS

-  CLASSROOM CONTROL PANEL (CCP)
-  WALL MOUNT ANALOG CLOCK
-  PERPENDICULAR MOUNT ANALOG CLOCK
ARROW DESIGNATES DIRECTION CLOCK FACES
-  WALL MOUNT DIGITAL CLOCK
-  PERPENDICULAR MOUNT DIGITAL CLOCK
ARROW DESIGNATES DIRECTION CLOCK FACES
-  SINGLE FACED
-  DOUBLE FACED

NOTES:

1. DIGITAL CLOCK POWER IS 24V HARD-WIRED.
2. FIELD VERIFY AND OBTAIN APPROVAL FOR ALL CLOCKS PRIOR TO INSTALLATION.



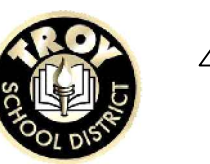
	UPDATED	2/14/17
	ISSUE	2/10/17
No.	Revision/Issue	Date

Firm Name and Address



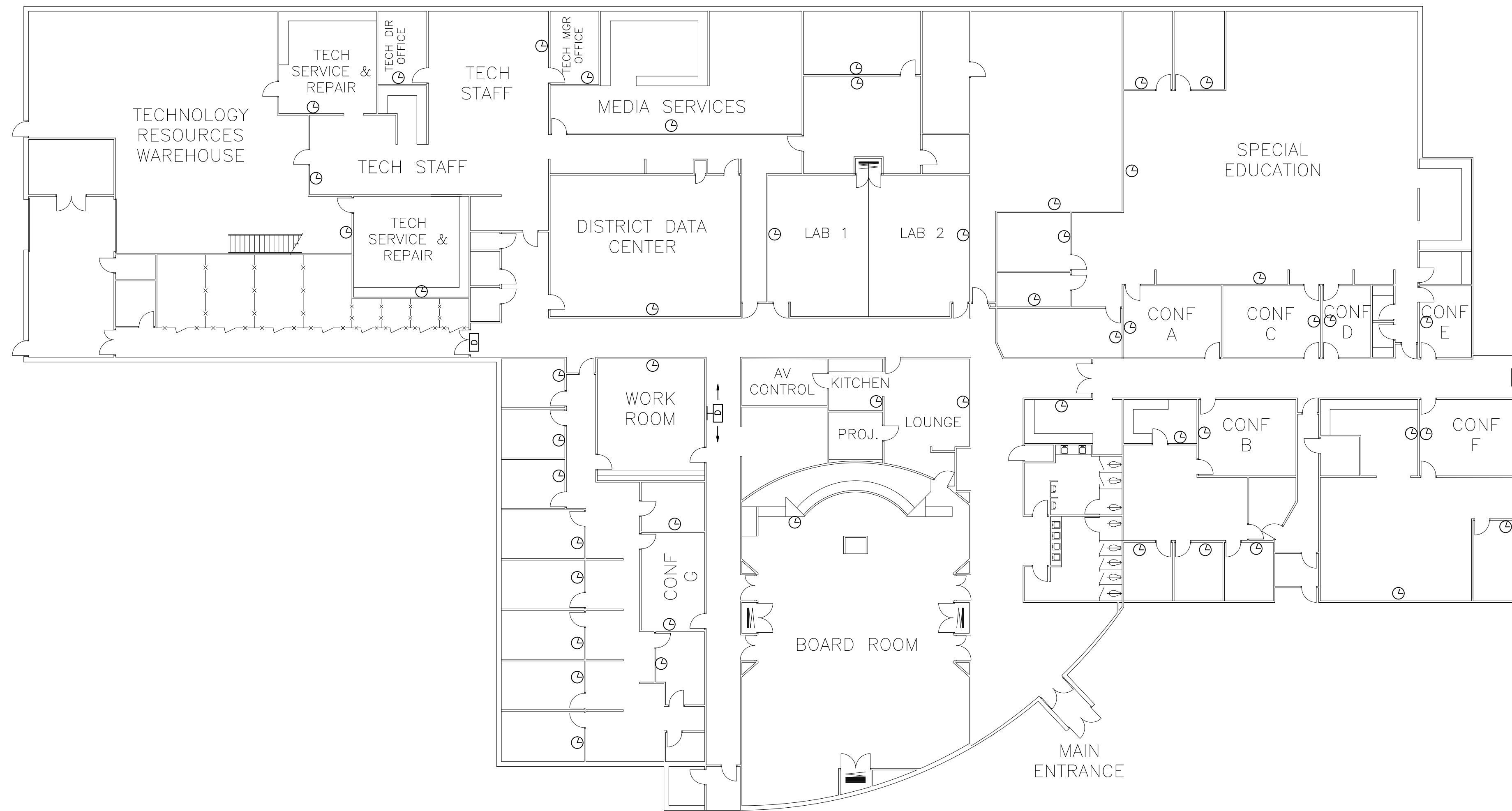
CONVERGENT
TECHNOLOGY PARTNERS
111 E. COURT STREET
SUITE 202
FLINT, MI 48502

Project Name and Address



TROY SCHOOL DISTRICT
CENTRAL OFFICE
4400 LIVERNOIS RD.
TROY, MI 48098
(248) 823-4000

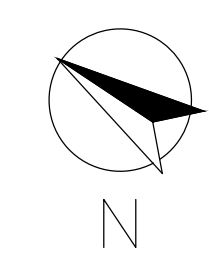
Project	WIRELESS CLOCKS	Sheet	TX1.21
Date	02/09/17		
Scale	3/32"=1'		



SYMBOLS

- CLASSROOM CONTROL PANEL (CCP)
- WALL MOUNT ANALOG CLOCK
- PERPENDICULAR MOUNT ANALOG CLOCK
ARROW DESIGNATES DIRECTION CLOCK FACES
- WALL MOUNT DIGITAL CLOCK
- PERPENDICULAR MOUNT DIGITAL CLOCK
ARROW DESIGNATES DIRECTION CLOCK FACES
- SINGLE FACED
- DOUBLE FACED

- NOTES:
1. DIGITAL CLOCK POWER IS 24V HARD-WIRED.
 2. FIELD VERIFY AND OBTAIN APPROVAL FOR ALL CLOCKS PRIOR TO INSTALLATION.



No.	Revision/Issue	Date
	UPDATED	2/14/17
	ISSUE	2/10/17

Firm Name and Address



111 E. COURT STREET
SUITE 202
FLINT, MI 48502

Project Name and Address



TROY SCHOOL DISTRICT
SERVICES BUILDING
4420 LIVERNOIS
TROY, MI 48098
(248) 823-4000

Project WIRELESS CLOCKS	Sheet TX1.22
Date 02/09/17	
Scale 1/16" = 1'	

BIDDER	Bid Bond	Familial Disclosure Affadavit Sup. E	Iran Economic Sanctions Sup. F	Base Bid	Mandatory Alternate 1	Mandatory Alternate 2	Mandatory Alternate 3	Mandatory Alternate 4	Mandatory Alternate 5	Mandatory Alternate 6
Amcomm	Yes	Yes	Yes	\$ 492,000.00	X	X	X	X	X	X
Digital Age Technologies (DAT)	Yes	Yes	Yes	\$ 403,787.00	X	X	X	X	X	X
I.COMM	Yes	Yes	Yes	\$ 430,372.96	X	X	X	X	X	X
Sound Engineering	Yes	Yes	Yes	\$ 391,473.00	X	X	X	X	X	X