ADDENDUM
NO. 2

**September 30, 2022**

**Woods Lake - A Magnet Center for the Arts Remodeling & Site Improvements**

**Woods Lake Elementary**
**3215 Oakland Drive**
**Kalamazoo, MI, 49008**

**TO: ALL BIDDERS OF RECORD**

# ****BIDS DUE DATE CHANGED TO OCTOBER 6, 2022, AT 2:30 PM****

This Addendum forms a part of and modifies the Bidding Requirements, Contract Forms, Contract Conditions, the Specifications, and the Drawings dated September 1, 2022, by TowerPinkster. Acknowledge receipt of the Addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to disqualification. This Addendum consists of Page ADD 1 through ADD 5, Roofing Report, RFI Log, Reissued Section 00 31 00 Bid Form, and Issued Section 01 31 00 Project Management & Coordination. TowerPinkster Addendum No. 1, dated September 26, 2022, consisting of 37 pages, Reissued Specification Sections 10 28 00 Toilet Bath, & Laundry Accessories, 22 31 00 Domestic Water Softeners, and Reissued Drawings: C600, A101A, A101B, A601A, A601B, A801, FP101D, P101, P301, P501, M101A, M101B, M101C, M801, M802, E005, E101A, E101B, E101C, T101B, T101C, and T401.

## A. SPECIFICATION SECTION 00 00 10 – TITLE PAGE

1. All references to the **Bids Received Date** are to change from October 4, 2022, to **October 6, 2022**. Bids due at 2:30 PM (EST) and will be publicly read aloud immediately following the deadline.

2. All references to the **Bids Opened Location** are to change from in person to **VIRTUAL ONLY.**

**B. SPECIFICATION SECTION 00 00 20 – TABLE OF CONTENTS**

Add the following Specification Section:

01 31 00 – Project Management and Coordination (Volume 2)
22 31 00 – Domestic Water Softeners

**C. SPECIFICATION SECTION 00 02 00 – NOTICE TO BIDDERS**

1. All references to the **Bids Received Date** are to change from October 4, 2022, to **October 6, 2022**. Bids due at 2:30 PM (EST) and will be publicly read aloud immediately following the deadline.

2. All references to the **Bids Opened Location** are to change from in person to **VIRTUAL ONLY.**

**D. SPECIFICATION SECTION 00 10 00 – INSTRUCTIONS TO BIDDERS**

1. 1.18 Time of Commencement and Completion

Revise the following:

1. It is anticipated that construction will start within **249** calendar days after receipt of bids.

**E. SPECIFICATION SECTION 00 20 00 – Information Available to Bidders**

1. Add the following:

E. Roofing Report: A Roofing Report was prepared for the Owner on April 10, 2022, by **MasterTech Roof Management, 1620 E. Sidney Road, Stanton, MI 48888.**

**F. SPECIFICATION SECTION 01 12 00 – MULTIPLE CONTRACT SUMMARY (NOT REISSUED)**

1. Part 1.16 Time of Commencement and Completion

Revise the following:

1. It is anticipated that construction will start within **249** calendar days after receipt of bids.

3.03 Bid Categories

A. Bid Category No. 1 – GENERAL TRADES

**Add the following Clarifications:**
21. Bid Category No. 6 Metal Studs and Drywall will provide Gymnasium 312 ceiling

removal.

22. Provide glazing in factory glazed wood doors.

B. Bid Category No. 2 – SITEWORK

**Revise the following Clarification:**

Revise clarification No. 8 to read: Provide all work associated with Sheet C800 up to one foot outside Building footprint including but not limited to excavation, backfill, compaction, concrete replacement, Valve Pit procurement, and installation, piping, trenching, etc. Bid Category No. 11 Fire Suppression contractor to take over all work from one foot outside the building to inside the building.

Revise clarification No. 11 to read: Bid Category No. 3 Asphalt contractor to provide milling/removal of existing parking lot.

E. Bid Category No. 5 – FLOORING

**Add the following Clarification:**

1. Per TowerPinkster Addendum 2 Items No. D-12, provide Terrazzo floor and base patching to match existing at areas of Mechanical units demolition, typical at multiple locations.

F. Bid Category No. 6 – METAL-STUDS, ACOUSTICAL CEILINGS & DRYWALL

**Add the following Clarifications:**

1. In addition to contract allowance listed in specification section 012100-Allowances, also include a $5,000 material/equipment allowance and 40 man-hours at the current rate (including all fringe benefits and payroll expenses) for **removal and replacement of Gymnasium 312 ceiling system** to be performed at the direction of the Construction Manager. At the end of the project, the unused material/equipment allowance and labor hours will be converted into a dollar amount per Wage Scale (including fringe benefits) and returned to the Owner through a deduct Change Order.
2. Protection of gymnasium flooring is responsibility of each bid category performing the work. Typical protection methods are laying loose plastic on floor topped with plywood. Lifts used must have diapers.

G. Bid Category No. 7 – ROOFING

**Add the following Clarification:**

3. Provide all wood blocking, nailers, wood sheathing, plywood, etc. for roofing scope of work.

J. Bid Category No. 10 – MECHANICAL

**Add the following Specification:**

Added NEW Specification Section 22 31 00 - Domestic Water Softeners

**Add the following Clarifications:**

6. Temporary Cooling portion of work has been eliminated from project. All remaining Temporary measures for heating, Ventilation, etc. will be applicable to the project per section 01 51 30.
7. Protection of gymnasium flooring is responsibility of each bid category performing the work. Typical protection methods are laying loose plastic on floor topped with plywood. Lifts used must have diapers.
8. Provide Firestopping and Joint Sealants in accordance with the Contract Documents. In general, the Contractor whose work creates a joint that requires firestopping or joint sealant (in the normal sequence of work) is to provide the firestopping or joint sealant. MEP trades are to firestop all of their own penetrations.
9. Access panels shown on drawings will be provided by Bid Category No. 1 General Trades. Access Panels not shown on the drawings but required, must be provided by contractor performing the work.

K. Bid Category No. 11 – FIRE SUPPRESSION

**Revise the following Clarification:**

1. Revise clarification No. 1 to read: Bid Category No. 2 Sitework contractor will provide all work associated with Sheet C800 up to one foot outside Building footprint including but not limited to excavation, backfill, compaction, concrete replacement, Valve Pit procurement and installation, piping, trenching, etc. Bid Category No. 11 Fire Suppression contractor to take over all work from one foot outside the building to inside the building including trenching, wall penetrations, patching, and installing the backflow preventer valve in tunnel, piping, etc.

**Add the following Clarifications:**

10. Provide work associated with FDC connections included but not limited to Knox Storz Lock Tamper -proof cover(s).
11. Protection of gymnasium flooring is responsibility of each bid category performing the work. Typical protection methods are laying loose plastic on floor topped with plywood. Lifts used must have diapers.
12. Provide Firestopping and Joint Sealants in accordance with the Contract Documents. In general, the Contractor whose work creates a joint that requires firestopping or joint sealant (in the normal sequence of work) is to provide the firestopping or joint sealant. MEP trades are to firestop all of their own penetrations.
13. Access panels shown on drawings will be provided by Bid Category No. 1 General Trades. Access Panels not shown on the drawings but required, must be provided by contractor performing the work.

L. Bid Category No. 12 – ELECTRICAL

**Add the following Clarifications:**

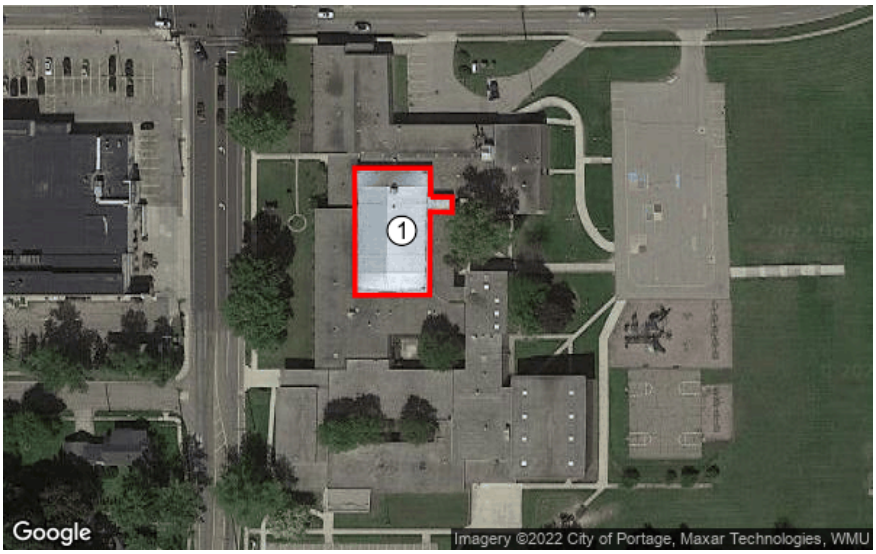
3. Protection of gymnasium flooring is responsibility of each bid category performing the work. Typical protection methods are laying loose plastic on floor topped with plywood. Lifts used must have diapers.
4. Provide outlets for new clocks in existing back boxes, typical for all clocks called for replacement.
5. Protection of gymnasium flooring is responsibility of each bid category performing the work. Typical protection methods are laying loose plastic on floor topped with plywood. Lifts used must have diapers.
6. Provide detection of the Pre-action systems.
7. Provide Firestopping and Joint Sealants in accordance with the Contract Documents. In general, the Contractor whose work creates a joint that requires firestopping or joint sealant (in the normal sequence of work) is to provide the firestopping or joint sealant. MEP trades are to firestop all of their own penetrations.
8. Access panels shown on drawings will be provided by Bid Category No. 1 General Trades. Access Panels not shown on the drawings but required, must be provided by contractor performing the work.

## G. RFI's AND SUBSTITUTION REQUESTS

1. Refer to the attached Request for Information (RFI Log), dated September 30, 2022., and RFI attachments for RFI's #26, 35, and 37.

End of Addendum

# Management Report




Kalamazoo Public Schools
Woods Lake Elementary
3216 Oakland Drive, Kalamazoo, MI

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Stanton MI 48888
www.mastertechroofmanagement.com

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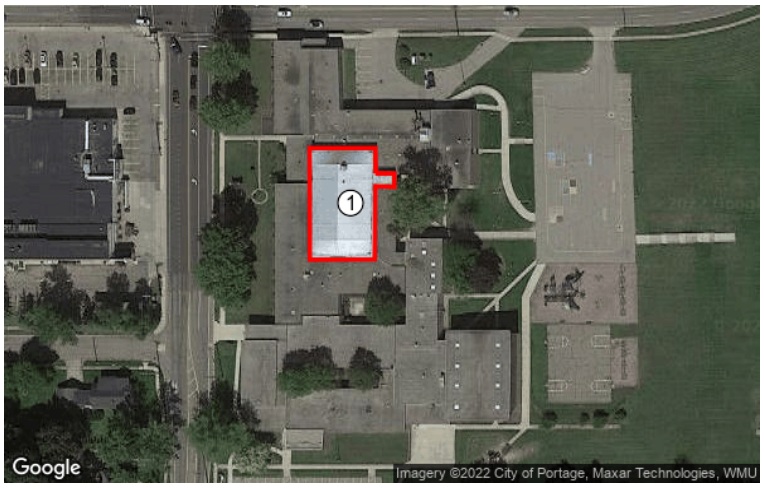
**Kalamazoo, MI 49008**

## Site Overview




**Total Sections: 1**
**Total Sq Ft: 10,100**

| Map | Name | Sq Ft | Est Install | Grade |
|---|---|---|---|---|
| 1 | Section 1 | 10,100 | | D |

**Woods Lake Elementary**
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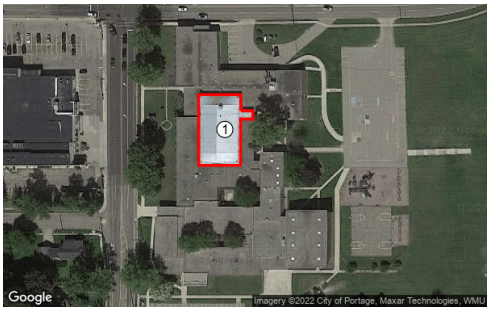
**Kalamazoo, MI 49008**




## Composition

**Section:** Section 1
**Size:** 10100
**Overall Grade:** D

**Inspection Date:** 04/10/2022
**Inspector:** Mark Malone

Flat area
Wood deck
Vapor barrier
2" Polyiso
. 5" Wood fiber
Mod/bit coated

Sloped area
Wood deck
Vapor barrier
2" Polyiso
. 5" wood fiber
Mod/bit coated

**Woods Lake Elementary**
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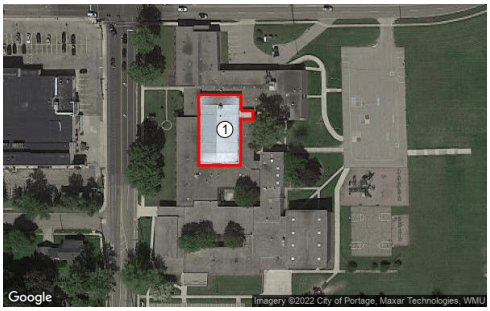


## Observations

**Section:** Section 1
**Size:** 10100
**Overall Grade:** D

**Inspection Date:** 04/10/2022
**Inspector:** Mark Malone

Section 1
Overview.

Section 1
Overview.

Section 1
Overview.
13 drains total.

Section 1
Overview.  Two curbs.

**Woods Lake Elementary**
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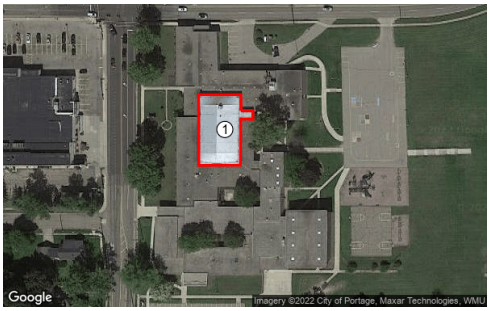


## Observations (continued)

**Section:** Section 1
**Size:** 10100
**Overall Grade:** D

**Inspection Date:** 04/10/2022
**Inspector:** Mark Malone

Section 1
Overview.

Section 1
Overview. Four pipe vents.

**Woods Lake Elementary**
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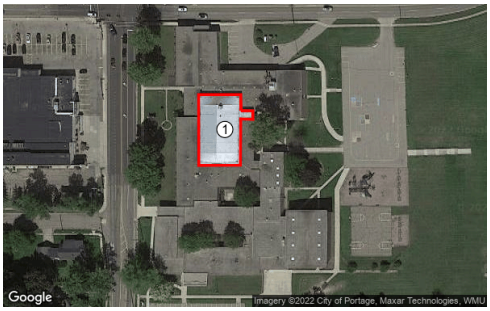


## Summary

**Section:** Section 1
**Size:** 10100
**Overall Grade:** D

**Inspection Date:** 04/10/2022
**Inspector:** Mark Malone

### Condition Summary

| | |
|---|---|
| Membrane: | D |
| Flashings: | D |
| Sheet Metal: | D |
| Overall: | D |

Estimated Replacement: 2024

Overall Grade
A = 10 Years or more of service life remaining
B = 8-10 Years of service life remaining
C = 5-7 Years of service life remaining
D = 2-4 Years of service life remaining
F = Less than 1 Year of service life remaining

### Recommendations

New roof recommendation...
Tearing everything off isn't necessary since it's only one layer of roof. The mod/bit is silver coated so we can't adhere new insulation directly to the substrate.
We can remove the old metal, add wood blocking at the roof edge and roof curbs.
Mechanically attach a layer of Polyiso, adhere an HD polyiso cover board and fully adhere . 060 EPDM.
Install new edge metal.
Making sure to install tapered drain sets at each roof drain.

Estimated Replacement Costs: $232,300.00

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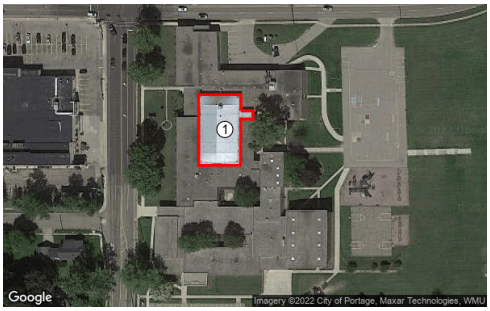


## Summary

**Section:** Section 1
**Size:** 10100
**Overall Grade:** D

**Inspection Date:** 04/10/2022
**Inspector:** Mark Malone

### 1 - Section 1 (10,100 Sq Ft ) Grade D

| Deficiency | Qty | Emergency | Remedial | Replacement |
|---|---|---|---|---|
| Full Replacement | 10,100 Sq Ft | | | $232,300.00 |
| Total | | $0.00 | $0.00 | $232,300.00 |

**Woods Lake Elementary**
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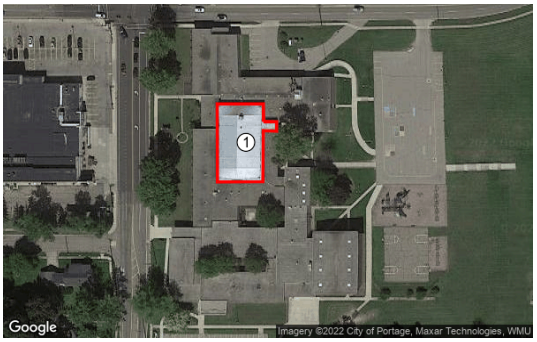
**Kalamazoo, MI 49008**

Budget Matrix
Woods Lake Elementary
Kalamazoo, MI
10100Sq Ft




Overall Grade
A = 10 Years or more of service life remaining
B = 8-10 Years of service life remaining
C = 5-7 Years of service life remaining
D = 2-4 Years of service life remaining
F = Less than 1 Year of service life remaining

| | | Emergency | Remedial | Replacement |
|---|---|---|---|---|
| **1 - Section 1 (10,100 Sq Ft) Grade D** | | | | |
| **Projected Replacement: 2024** | | | | |
| **Deficiency** | **Qty** | | | |
| Full Replacement | 10,100 Sq Ft | | | $232,300.00 |
| Total | | $0.00 | $0.00 | $232,300.00 |

| | Emergency | Remedial | Replacement |
|---|---|---|---|
| **Budget Totals** | **$0.00** | **$0.00** | **$232,300.00** |

**KPS Woods Lake - Pre-Bid RFI Log**
TSC PN: #218020.20
Date - 9/30/2022

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| RFI # | Company Submitting RFI | Date Received | RFI Description | RFI Response | |
|---|---|---|---|---|---|
| 1 | Hunter-Prell Co. | 9/21/2022 | FP 101D show pre-action system for gym.<br>Who will install detection for the pre-action system? Fire alarm typically install detection and<br>FP contractor supplies the pre-action control panel. | TSC: Fire alarm and detection provided by Electrical bid category. | RT |
| 2 | Hunter-Prell Co. | 9/21/2022 | Multiple Contract Summary - Bid Category NO 2 Sitework:<br>Number 8 Provide excavation backfill and compaction for installing Valve Pit placed by Bid category No. 1<br>1.<br>There are no notes about who will supply/install the pipe and backflow for new fire system.<br>Will the pipe be run into the building or 5' from outside building? | **TSC**: Scope or work and responsible Bid Category is revised in Addendum 2 with Clarifications. **TowerPinkster: Pit is not required for meter, however, it is requried for Valve Pit.** New fire suppression main will be routed into the building. The backflow preventor will be located in the tunnel immediately after entering the building. | RT/BG |
| 3 | Hunter-Prell Co. | 9/21/2022 | Gym ceiling replacement is an alternate.<br>How should Fire suppression address ceiling tiles in areas that will not have ceiling tiles replaced? Fire sprinkler system will have to be installed through out the entire building so tiles will have to be removed during installation of Sprinkler system.<br>It would be preferable for the general trades contractor to remove and reinstall ceiling tiles,<br>sprinkler fitters tend to have dirty hands and gloves during steel pipe installation. | TSC: Gymasnium Ceiling grid / tile removal and replacement to be by BC #6 METAL STUDS, ACOUSTICAL CEILINGS, & DRYWALL. | RT |
| 4 | Hunter-Prell Co. | 9/21/2022 | Plan C 800 show the underground vault.<br>The plan does not show a backflow preventer. The Fire plans do not show where the backflow preventer is to be installed.<br>If the backflow is installed at the fire riser all the pipe run in tunnel will have to be ductile pipe.<br>Kalamazoo does not allow galv. pipe to be installed before backflow. If backflow is installed in vault the pipe through the tunnel can be black sch. 10 pipe.<br>Please advise where the backflow is to be installed. | TP: See RFI #2 above. Refer to pipe specifications for pipe schedule. Schedule 10 is acceptable from backflow preventor to distribution. | BG |
| 5 | Hunter-Prell Co. | 9/21/2022 | Plan FP 101D shows pre-action system/valve in room 312A<br>The preaction system needs to have access to drain either to outside the building or floor drain. | TP: Refer to Addendum #2. Dry pipe system (compressor, dry pipe valve, and OS&Y) shall be located in Janitor closet 306. | BG |
| 6 | Kalamazoo Mechanical | 9/21/2022 | Reference spec section 01330 2.2B, Coordination drawings. This sections states, “comply with requirements specified in division 01 section project management and coordination”. In the table of contents I do not find this section. Please provide this so we can review. | TSC: Specificaiton section 013100 Project Management and Cordination issued in Addendum 2. | RT |
| 7 | Kalamazoo Mechanical | 9/21/2022 | Will Revit files be available to contractors on this project? | TP: Yes, per spec. section 00 6324 | LD |
| 8 | Kalamazoo Mechanical | 9/21/2022 | Will temporary construction site air conditioning be required in summer 2023? | TSC: Cooling requirements have been eleminiated from project. Temporary Heating and Ventilation must be included in base-bid. | RT |
| 9 | Kalamazoo Mechanical | 9/21/2022 | Reference sheet MD101B Note 6. Also sheet AD001, and the attached photo. During the site walk through we observed stud walls that are built around and connected to the existing AHU. These are not shown on the AD001. Please confirm which bid package is responsible for removing these walls to facilitate AHU removal and the new floor plan. Also please indicate if temporary shoring will be required to support the roof when removing these walls. | TSC: Demolition of Architectural and Structural items along with temporary shoring will be by Bid Catgeory No. 1 General Trades contractor. Mechanical contractors responsible for demolition of HVAC Equipment, piping, supports,etc. | RT |
| 10 | Kalamazoo Mechanical | 9/21/2022 | Please advise what means of protection will be required for the existing wood gym floor for operating scissor lifts to access the mechanical systems suspended from the ceiling. We would recommend an allowance to cover this by one bid package to facilitate the work as multiple trades will need access in this area. | TSC: All contractors are responsible to protect gymnasium flooring as required. Typical proteciton methods are laying loose plastic on floor topped with plywood. Lifts used must have diapers. | RT |
| 11 | Midwest Glass | 9/21/2022 | Please clarify what is being asked for alternate 5. There is a contradiction between the spec sections and the bid form. | TSC: Please see Addendum #02 for revised bid form. | RT |
| 12 | Midwest Glass | 9/21/2022 | The framing system that is described in the spec section 08 4113 does not match the details provided on the drawings 7A & 7B on A325. They system described in the specifications are calling out a front set glazing system with a frame that is 5 ¼” to 6” deep. The framing system pictured in the detailed drawings is showing a center glazed system that is 4 ½” deep. Please clarify what type of aluminum framing system is required. | TP: Refer to Addendum #2. | MG |
| 13 | Rieth-Riley | 9/21/2022 | The asphalt you are calling for is 13A at 1.5”. We do not recommend laying 13A any less than 2” due to the size of the aggerates in that mix. Is there a different mix you would prefer?<br>I would recommend a 13A base course at 2” and a 36A surface course at 1.5”. | TP: Refer to Addendum #2 updated pavement details and profiles. | JV |
| 14 | ElectroMedia | 9/23/2022 | Any data cabling that is relocated, does that require new data jacks and faceplate or are we to reuse the existing? | TP: A new data jack should be used, reuse existing faceplates and boxes. | ER/CJ |
| 15 | ElectroMedia | 9/23/2022 | The existing clocks are to be removed by the electrical contractor. Is the electrical contractor installing an electrical plug at all the new clock locations? Per the model numbers listed, we would need an outlet installed to plug in the new clocks. | TP: Electricians are responsible for providing an outlet in the exsisting clock back box. | ER/CJ |
| 16 | ElectroMedia | 9/23/2022 | A detail page clarifying the Teacher Station locations would be helpful. Something that shows the Atlona Piece and the other audio pieces along with a better detail of the projector location equipment. | TP: Refer to Addendum #2. | ER/CJ |
| 17 | ElectroMedia | 9/23/2022 | Are all the existing cable paths properly supported with J hooks or do we need to plan on installing new cable support down the halls and in the classrooms? My concern is what happens to all the existing cabling with both the ceilings be removed. How is all the cable currently being supported? | TP: Exisiting Cabling should be properly supported currently. If there are locations where additional support is needed for new cables. Then support according to BISCI standards. | ER/CJ |
| 18 | ElectroMedia | 9/23/2022 | Are there proper sleeves into the classroom? Do we need to supply and install sleeves for existing cabling? What about fire stopping? | TP: There should be proper sleeves entering into spaces. There should not be sleeves added to existing cabling. If a new sleeve is needed for new cables install the appropriate size sleeve according to BISCI Standards. All corridor walls are rated. As well as numerous JC's and other walls. Fire caulking through rated walls is required.<br>Refer to the architectural G sheets for rated walls. | ER/CJ |
| 19 | SA Morman | 9/23/2022 | Mirrors:<br>No Mirrors are noted at Boys 300, Girls 302, Girls 315A or Boys 315B. Is this correct?<br>Tag 11 Mirror is noted as 18” x 34” which is a custom size. Can a 18” x 36” standard size be used? | TP: Size shall be 18"x36". Location and quantity as identified on drawing A801. | LD |
| 20 | SA Morman | 9/23/2022 | Grab Bars:<br>Only 42” Grab Bars (one per stall) are noted at Boys 300 (1 each) & Girls 302 (3 each)<br>Only 36” Grab Bar (one per stall) at Girls 315A (3 each) & Boys 315B (2 each). Is this correct; no other grab bars required? | TP: Provide grab bars as shown on drawing A801. | LD |
| 21 | SA Morman | 9/23/2022 | Manufacturer / Model Numbers:<br>Please provide Manufacturer and Model Numbers for the following:<br>1.Grab Bars (Tags 1,2, 3 & 4)<br>2.Sanitary Napkin Disposals (Tag 6)<br>3.Mirrors (Tag 11)<br>4.Coat Hook (Tag 13) | TP: Refer to Addendum #2. | LD |
| 22 | SA Morman | 9/23/2022 | It appears that all work at Toilets/Restrooms (100J, 111, 113, 119, 300, 302, 311, 313, 315A & 315B) fall under Alternate 6. There currently is no note of Alternate 6 in the specifications or Bid Form. | TSC: Refer to Addendum #2. | LD |

| | | | | | |
|---|---|---|---|---|---|
| 23 | Cripps Fontaine Excavating | 9/23/2022 | Sitework scope line #11 and Asphalt scope line #2 both state “provide milling/removal of existing parking lot”. Who is responsible for this task? | TSC: Asphalt milling/removal to be provided by Bid Category #3 Asphalt. | RT |
| 24 | Cripps Fontaine Excavating | 9/23/2022 | Signage appears to be in the General Trades Package. Who is responsible for furnishing and installing the bollards the signs are placed in? | TSC: General Trades to provide signage in its entirety, including but not limited to concrete footings, bollards, HDPE pipe, etc. | RT |
| 25 | Cripps Fontaine Excavating | 9/23/2022 | Who is responsible for concrete removal and replacement inside the building? | TSC: Bid Category No. 1 General Trades responsible for all concrete work inside the building. | RT |
| 26 | Moss Electric | 9/21/2022 | Does this one IDF rack located in unit A serve the whole school? Or are there other IDF locations. | TP: There are 3 racks in the building located in Work Room 208, Storage 116, and Work Room 307B | ER/CJ |
| 26 | Trumble Group | 9/23/2022 | Substitution Request for OpenLight Manual Roller Shades. | TP: See submitted subsitution request response by Architect. Yes Open Light Manual Roller Shades as submitted through the substitution request is acceptable. RFI 26 ATTACHMENT INCLUDED IN ADDENDUM 02. | LD |
| 27 | Midwest Glass | 9/23/2022 | What is the intent for the windows listed as Window Systems on pages A502 & A503? Is the intent for the entire elevation be made from the aluminum window framing, or just the operable window portion of the frame? | TP: Entire elevation shall be window system. | LD |
| 28 | Moss | 9/23/2022 | I can only find ONE IDF communications rack on the prints. This is located in Unit A.<br>Does this one IDF rack serve the whole school?<br>Is there an MDF? Other IDF locations? | TP: There are 3 racks in the building located in Work Room 208, Storage 116, and Work Room 307B | ER/CJ |
| 29 | Buist | 9/23/2022 | On the feeder schedule, the feed for panel DP2, calls out a 5” conduit with #750 wire. Is that supposed to be 4” conduit and #750 aluminum? | TP: No, #750 AL or 600 CU produces a voltage drop greater than 2% allowable by code. | RS |
| 30 | Buist Electric | 9/26/2022 | The technology package is to demo and re-install all speakers, wap’s, cctv’s, etc., correct? | TSC: Refer to Technology Demolition Key Notes on TD series drawings. | RT |
| 31 | Jergens Piping | 9/27/2022 | Alternate #2 Casework and Counters: It is stated that these areas would be indicated as Alt. #2. I could not find any areas noted as Alt. #2 on the Arch or Plumbing Drawings, please clarify. I did find the find a note on the new construction arch drawings with a note 2. Should we assume all the sinks shown on P101 are part of Alt. #2? | TSC: All sinks on P101 are to be Base-bid, except for Toilet Rooms remodel is Alternate 6. | RT |
| 32 | Jergens Piping | 9/27/2022 | Temp Cooling: Schedule shows a requirement for Mechanical contractors to provide four (4) months of Temp Cooling to a building that has never had cooling in it…Does the district want to pay for temporary cooling during the 4 months that are scheduled to be cooled? | TSC: Cooling requirements have been eleminiated from project. Temporary Heating and Ventilation must be included in base-bid. | RT |
| 33 | Jergens Piping | 9/27/2022 | Temp Water: Mechanical contractor is required to provide chilled drinking water for the construction site…Seeing that there is very little work being done to the domestic water piping system, this system could remain active throughout construction and existing drinking fountains could be utilized. Is it OK to utilize existing drinking fountains within the building to meet this requirement? | TSC: Means and methods to provide drinking water is up to the Mechanical contractor, regardless of accomodating existing systems or new. | RT |
| 34 | Cripps Fontaine Excavating | 9/27/2022 | The Chain Link Fencing spec references gate operators, however, the drawings do not indicate where these would go. Are gate operators required? | TP: No motorized chain link gate operators are required. Please disregard any spec references to chain link gate operators. | TP |
| 35 | Cripps Fontaine Excavating | 9/27/2022 | Note on C400 for the 4” underdrain has arrows that point to the integral curb walk and an existing contour line. Furthermore, Detail ST9 on sheet C700 shows the 4” underdrain beneath curb and gutter, not integral curb walks. Please advise to the exact location of the 4” underdrain. | TP: See attached sketch showing the extent of the 4" diameter drain pipe. This drain pipe is to be installed below the full lenght of the new sidewalk. Quantity shall be approximately 400 lineal feet. Connect to Aquaswirl AS-4. RFI 35 ATTACHMENT INCLUDED IN ADDENDUM 02. | TP |
| 36 | Central Tile | 9/28/2022 | I see there is a spec section for terrazzo flooring in the KPS Woods Lake Project and also listed this section under the flooring bid section however I don’t see where on the finish plans Terrazzo flooring work would be required. Can you please confirm if there is indeed terrazzo flooring work needed in this project and where it is needed at? Thank you | TSC: Misc. terrazzo patching is noted in Addendum #02. | RT |
| 37 | Woodsmiths Custom Millwork | 9/28/2022 | I have a question on this project, see attached.. the wood trim is called out for the 72” wide bookcase area, but not for the 108” area. Should there be trim on both areas? Also, do you have a picture of what this trim looks like? I need to know size, wood species, etc. for this trim. | TP: Trim is only required in the classrooms listed on the drawings on the interior elevations. RFI 37 ATTACHMENT INCLUDED IN ADDENDUM 02. | LD |
| 38 | Fulton Excavating | 9/28/2022 | Can you clarify who is installing the fire suppression line on the exterior of the building? I see we have to excavate for the tank, are we digging for the line also?<br>Typically we would run the line into the building by 1ft and install the pit. Once in the building the FS contractor would take over. | TSC: Bid Category No. 2 Sitework to provide all work associated with sheet C800. Provide replacement of concrete, Valve Pit including but not limited to Valve Pit, Excavation, backfill & Compaction, piping upto one foot outside building. Bid Category No. 11 Fire Suppression is responsible for all scope from one foot outside building to inside the building. | RT |
| 39 | StoneCreek | 9/29/2022 | Room 109 (4/A631) has keynote <2> pointing at it on the floor plans, indicating that it is part of Alt. #2, however the demo plan keynote [ 1 ] for the casework in that room make it sound like it should be a base bid item; is this casework Base Bid or Alt #2? | TSC: All work associated with Room 109 casework to be included as part of Base-bid | RT |
| 40 | StoneCreek | 9/29/2022 | The following rooms do not include a key note <1> or <2> for them on the floor plans, but they do all have key note [ 9 ] in the demo plans indicating they should be Base Bid; can you confirm if they are Base Bid or Alternate #2.<br>Rooms:<br>120 (5/A631) Base Bid or Alt #2?<br>301 (9/A631) Base Bid or Alt #2?<br>303 (8/A631) Base Bid or Alt #2?<br>307 (10/A631) Base Bid or Alt #2? | TP: All Casework noted in RFI Question is part of Base-bid. Refer to A600 series finish plans for better clarification. | RT |
| 41 | StoneCreek | 9/29/2022 | BP8 scope of work mentions, “Provide end panels for casework throughout the building, reference Alternate #2 work.”, but we do not see end panels indicated in the plans; are there still separate end panels needed as part of this project? If so, could we get some assistance in locating them? | TSC: Refer to Note #8 on AD101A, Maker Space 207 and A101C, Classroom 303 for typical end panel requirements. | RT |

RFI 26

## DOCUMENT 00 12 10 – SUBSTITUTION REQUEST FORM

TO: Tower Pinkster

Project: Woods Lake - A Magnet Center for the Arts - Remodeling and Site Improvements Proj # 18-519.00

We hereby submit for your consideration the following product instead of the specified item for the above project:

| Section | Paragraph | Specified Item |
|---|---|---|
| 12 2413<br>Roller Window Shades | Part 2-Products, 2.1, A | Manual single roller shades - alternate manufacturer |

Proposed Substitution: OpenLight manual single roller shades

Attach complete technical data including laboratory tests if applicable.

Include complete information changes to Drawings and/or Specifications which proposed substitution require for proper installation.

Fill in Blanks Below, use additional sheets if necessary:

A. Does the substitution affect dimensions shown on Drawings?
No, not affected

B. Will the undersigned pay for changes to building design, including engineering and detailing costs caused by substitution, if any?
N/A - no changes needed

C. What effect does substitution have on other trades?
None

D. Differences between proposed substitution and specified item?
Very similar in functionality; we provide manufacture and support for product ourselves which reduces cost of middle-man

E. Manufacturer's guarantees of proposed and specified items are:

X Same _____ Different (explain on attachment)

The undersigned states that the function, appearance and quality are equivalent or superior to the specified item.

Submitted by:

Staci Richards
Signature Staci Richards
Firm Creative Windows
Address 2216 S. Industrial Hwy
Ann Arbor, MI 48104
Telephone 734-769-5100

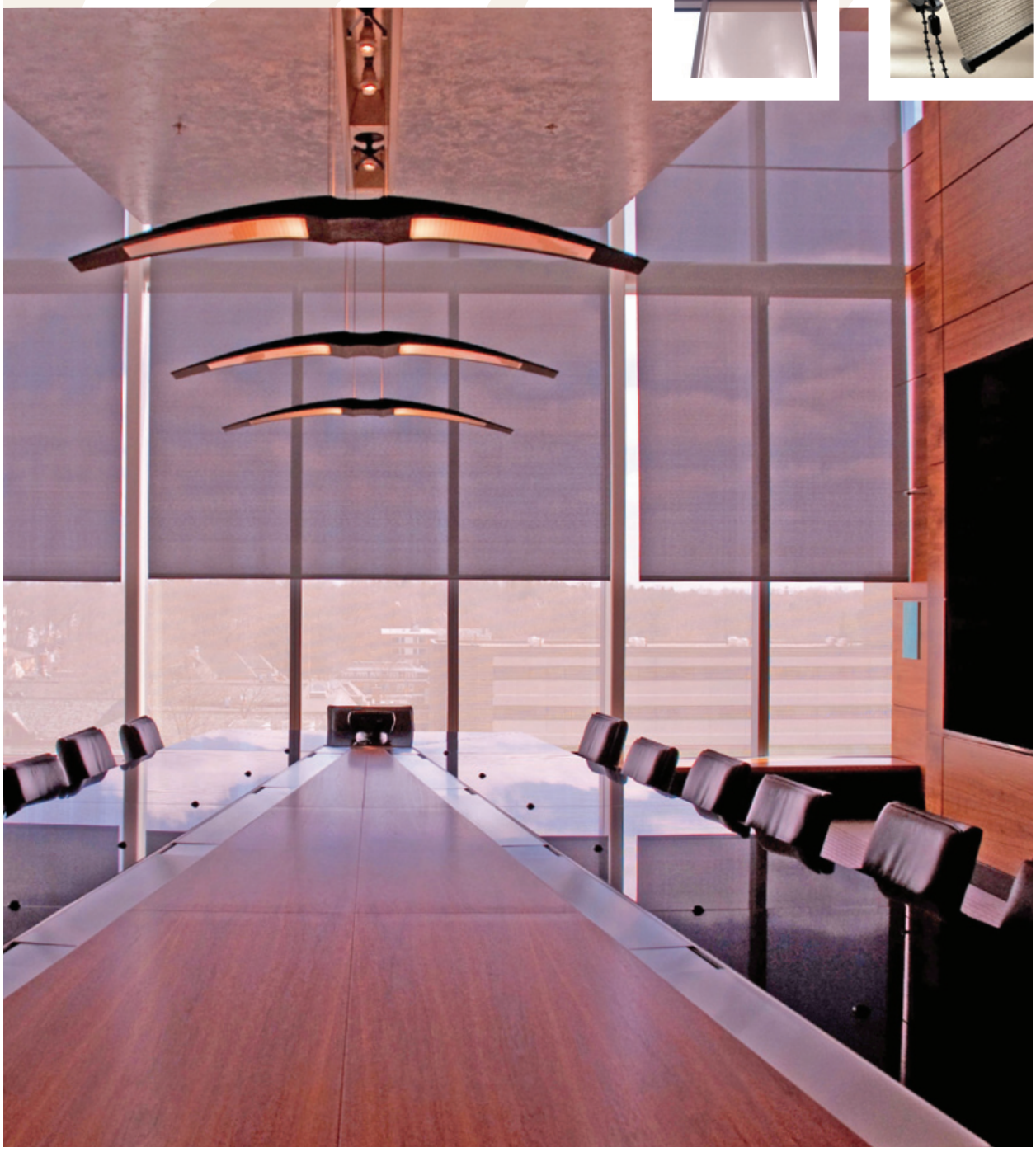
For use by Design Consultant

Accepted
Not Accepted
Accepted as Noted
Received too Late
By Carissa Benjamin
Date 09/26/2022
Remarks openlight was inadvertently left out of the spec and we will be accepting this substitution request.

# OpenLight®

## ROLLER SHADES

THE ART OF SOLAR CONTROL



University of Michigan
Stephen M. Ross
School of Business
Board Room

OpenLight® Motorized Shades controlled via Creston Operating System

Ann Arbor Public Library, Traverwood Branch: Motorized OpenLight® shades tied into the Building Management System (BMS) and switched via light sensors and timers.

OpenLight® is a registered trademark of Creative Windows.
Founded in 1981, Creative Windows wants to share its 30 years of fabricating and contracting experience with your organization. Our flexible marketing programs offer complete shades, operating systems, controls, or motor tube sub-assemblies, extruded components, brackets, and installation advice.

Our in house expertise will guide you through specification and execution of successful projects. Contact us via our toll free line, email, or web site.

1-800-589-2992

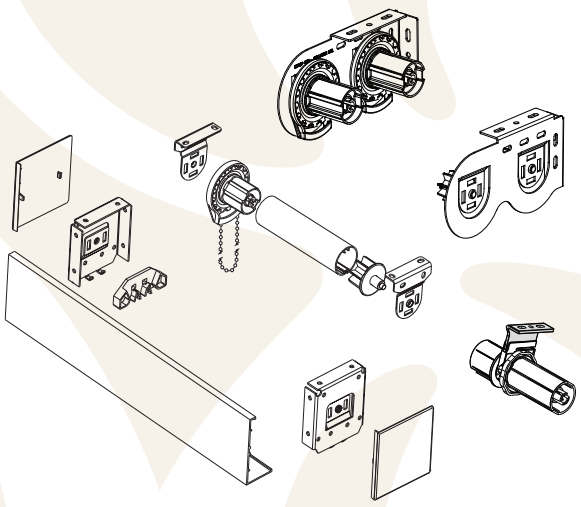
**OpenLight® Manual Shades offer economical, yet stylish and effective light control. Fabrics sourced from around the world make it easy to select opacity, color, and privacy. Each shade is carefully engineered to operate effectively based on size and weight and includes a 10 year warranty.**

# MANUAL SHADES

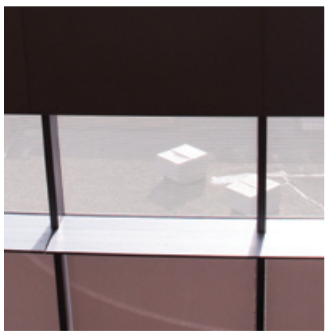
- Universal brackets allow combinations of different tube size and clutches to function side by side. All brackets allow installation to mount to any surface.
- Spring loaded idler end pins reduce width tolerances for easy measuring and installation.
- A variety of fascia and extruded shade box sizes and configurations allow your client to match privacy and light control with hidden operational components.
- Dual shades and multiple fabric panels with intermediate brackets further extend your client's options.
- Chain is offered in nickel plated steel, black plated steel, and a variety of plastic color options.
- Bottom weight bars are extruded aluminum, hidden in a welded self pocket or in upholstered wrapped fabric bar.
- Black out shades are offered with room darkening side tracks for greater opacity.

INSPIRED

## MANUAL SHADE COMPONENTS



Detroit Metro Airport
North Terminal



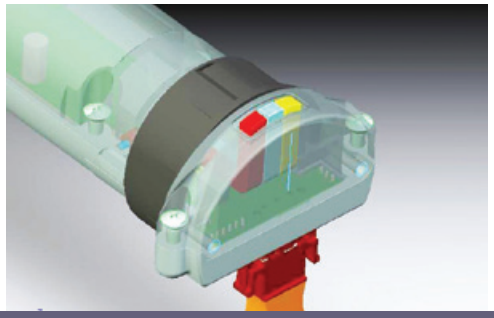
# OPENLIGHT® MOTORIZED SHADES

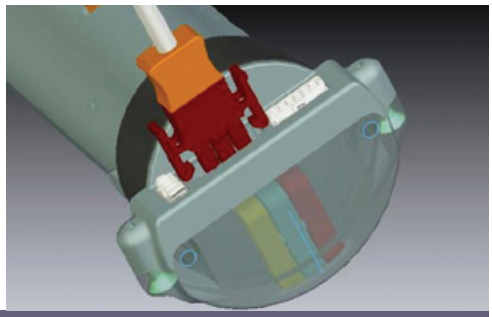
**OpenLight® Shades Motorized offer the same features as manual shades but with the ease of motorized operation. Shades are available from 3' to 20' wide with a variety of motor sizes to ensure smooth operation.**

**The OpenLight® Stealth Motors are among the most quiet in the industry and have a 5 year warranty.**

**Our revolutionary "smart" motors include built in motor controls that dramatically reduce wiring while adding flexibility over comparable systems.**

- All shades include quiet Stealth™ motors
- Bus network compatibility built into motor head eliminates the need to homerun to group controllers providing significant savings to project cost. Motor mounted lights confirm settings.
- AC and DC options are available to match any specification in the industry.
- Couple up to 4 shades together to reduce cost and wiring demand.
- Various plug and wiring options are available to meet project demands.
- Site specific wiring diagrams available upon request.





1-800-589-2992

OpenLight® Stealth shades combine a variety of control options. The motor head has ports for dry contacts and a bus network to allow simple connection to any automation system. The motors can actuate up to 99 separate intermediate stops in shade travel and can be remotely programmed to operate in groups or sub groups, and easily changed to meet ongoing client requests. Operational commands can be received from virtually any control device, photocells judging light levels, wall switches, automation systems, and building maintenance systems (BMS). Shades will respond to most operating systems (OS) on the market (RS-232, RS-485, and IP).

## MOTOR CONTROLS AND AUTOMATION SYSTEMS

- Built-in motor controls simplify wiring and allow for input devices (switches, remotes, timers, etc.) to be installed anywhere along the communication bus
- Shades can be operated with wall mounted switches, keypads, handheld radio frequency or infrared remotes
- Our integrated relays can be actuated via IP or dry contacts by virtually any Building Management System (BMS)
- Built in Wi-Fi allows shades to tie into Zigbee or Z Wave mesh networks
- Pilot PC shade automation systems allow automated control integrated with exterior weather conditions
- Flexible controls capable of integration into virtually any Smart Home control systems

INSPIRED

# FABRICS

**OpenLight® shades are available in a variety of fabric styles, colors and opacity factors. We source fabrics from around the world in order to offer the best products for your installation. All of our fabrics are rigorously tested for quality and performance standards; and most are Greenguard™ Certified, Anti-Bacterial and NFPA-701 fire rated.**

- Solar control screen fabrics offer opacity options from 1% to 15%. Many fabrics are available in 118" widths avoiding horizontal seams.
- PVC free options are available.
- Engineered to be durable, easy to clean and stylish.
- Our Designer line includes beautiful woven natural and manufactured yarns in a broad range of patterns and weaves. Our fabric collection includes: Alkenz, 3-G Mermet, Almedahls, G & G, and many more.
- Contact Creative Windows, Inc. for fenestration data, fabric specifications, and custom options.

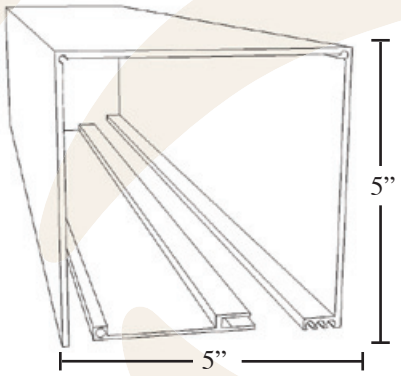
GREENGUARD Indoor Air Quality Certified

NFPA 701

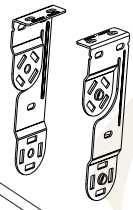
ASTM G21

# ACCESSORIES

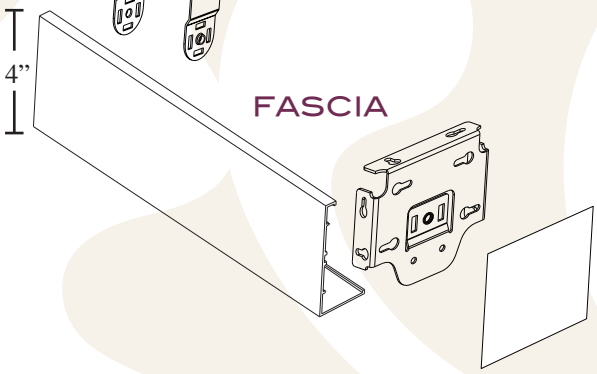
From simple brackets to custom designed ceiling pockets there are a variety of top treatments and accessories available to enhance the look and the performance of your OpenLight® Shades. Extruded aluminum fascia and light block side channels are available in several colors to match your fabric choices. Features like notch-less fascia and two piece side channels install simply with no visible fasteners.




007 BOX AND 3”CLOSURE



DUAL VERTICAL BRACKETS




FASCIA

FASCIA END CAP

BLACKOUT SIDE CHANNEL

- 3” and 4” and 7” square fascia, as well as fascia for dual shades are available in clear anodized, white, ivory, or bronze finishes (includes matching brackets)
- 5” square extruded aluminum ceiling pockets mate with our 3” or 2” closure for a clean, recessed installation. Custom sized ceiling pockets are available upon request.
- Our extruded aluminum clip can be mounted directly to soffits or attached to aluminum pockets and offer a way to mount closure in custom sized installation.

The University of Michigan Kellogg Eye Center: Manual OpenLight® shades in custom ceiling pocket.


## Creative Windows

2216 South Industrial Highway
Ann Arbor, Michigan 48104
(734) 769-5100 Office
(734) 769-5614 Fax
(800) 589-2992 Nationwide
shades@creativewindows.com
www.openlightshades.com


## Recent OpenLight® Installations:

### Art & Architecture Building
North Campus
University of Michigan

### Ross School of Business
University of Michigan

### Kellogg Eye Center
University of Michigan

### Kelsey Newberry Museum
University of Michigan

### Biomedical Research
University of Michigan

### Detroit Metropolitan Airport
North Terminal

### Duffy Daughtery
Michigan State University

### First Solar
Toledo Complex

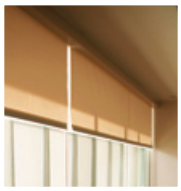
### Ann Arbor Public Library
Traver Road Branch

## WARRANTY

Creative Windows warrants its products as follows:

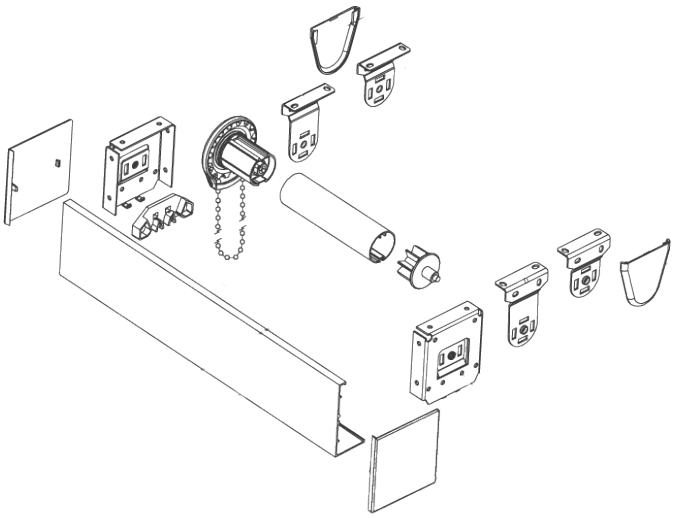
- Manual shades, when used in the interior of a building, are guaranteed to be free from defects in materials and workmanship for ten (10) years from date of purchase.
- Motorized Systems, when used in the interior of a building, are guaranteed to be free from defects in materials and workmanship for five (5) years from date of purchase.

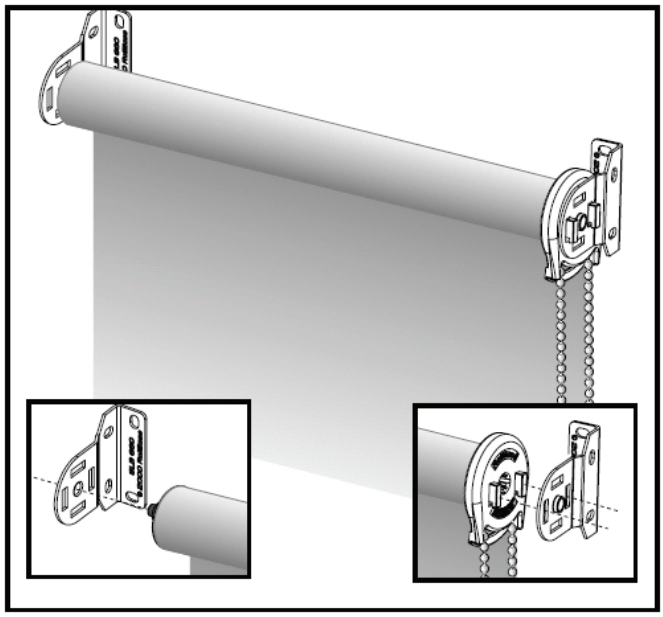
The details of these warranties, including customer remedies, are provided in greater detail in our Customer Sales Agreement.



OpenLight®

# Manual Roller Shades





## Hardware

Rollers: Extruded aluminum or steel roller tubes. Sized to reduce tube deflection.

Standard Mounting Brackets: 1018 plated steel stamping. Sizes 1.5" and 2" projections. Universal brackets can mount to face, ceiling, or jamb.

Fascia Mounting Brackets: 1018 steel stamping powder coated to match fascia color. Available in 3" and 4" sizes. Universal brackets can mount to face, ceiling, or jamb.

Fascia: Extruded aluminum L-shaped cover, .060 wall. Assembly snaps onto fascia mounting brackets without exposed fasteners. Clear anodized (standard) available in black, white, ivory or bronze powder coat finish. Optional fabric wrapped cassette is also available.

Beaded Chain Clutch Operator: High carbon steel and molded fiberglassreinforced polyester thermopolymer.

Bi-directional for mounting at either end of roller. Control chain, of any length, is a nickle plated stainless steel bead chain (standard) or plastic chain in white or black. Includes stainless steel stop-beads to stop shade in full-up or full-down positions. Never needs adjusting. Right hand location is standard, left hand available.

Spring-Assist Beaded Chain Clutch: For larger shades an adjustment-free modified clutch and spring assist system shall be used to facilitate manual lifting. All plastic clutch components are made of glass reinforced polyester thermopolymer. The clutch portion is comprised of multi-banded steel springs that create the correct pressure needed to keep the shade in the desired position.

Creative Windows
2216 South Industrial Hwy. Ann Arbor, MI 48104
734-796-5100 ph. 734-769-5614 fax
www.creativewindows.com
shades@creativewindows.com

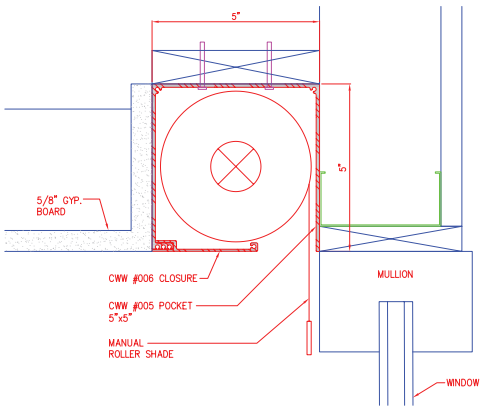
OpenLight®

# Manual Roller Shades

## Ceiling Pocket and Closure

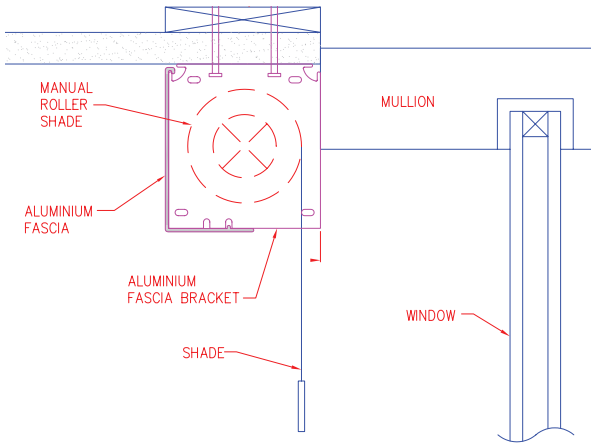
CWW .005 Ceiling Pocket: pocket is extruded 6063–T5 aluminum alloy for ceiling recessed perimeter installation. Available in mill finish or white powder coat. 5" x 5" x .144" with removable CWW .006 bottom closure. Optional tile support lip is available in white only.

CWW .010 Ceiling Clip: Clip is extruded 6063–T5 aluminum alloy. Mates with .006 Closure for installation into drywall pocket




## Bottom Hembar

Hembar: Standard hembar consists of extruded aluminum weight bar inside of heat seamed shade fabric. Optional extruded aluminum bar with fabric wrapped face and plastic end plugs.

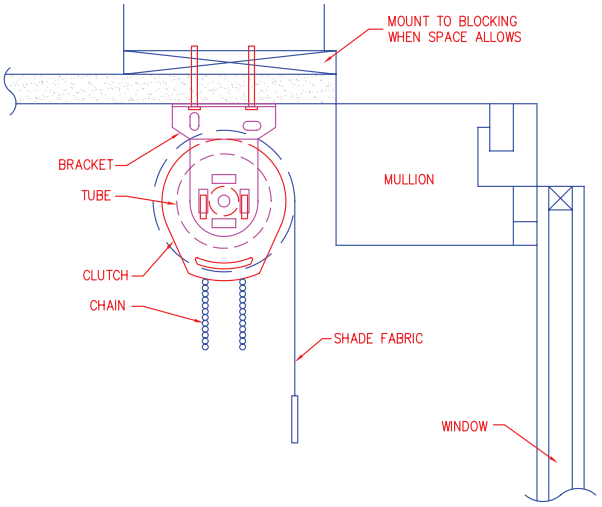


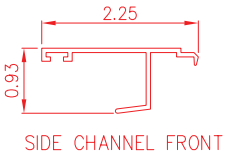

## Black Out Roller Shades

Openlight™ manual roller shades are available as blackout shades to include aluminum side and sill channels. Finished in clear anodized (standard) available in white, ivory, bronze and black podwer coat.

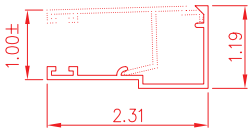
Side Channel: (1.25" x 2.375" x 16' or cut to length) Accepts side edges of fabric, prevents light gaps.

Sill Channel: ( 0.625 x 2.5" x 16' or cut to length) Accepts side edges of fabric, prevents light gaps.

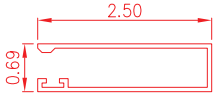



SIDE CHANNEL FRONT




SIDE CHANNEL BACK "WINDOW SIDE"




SILL CHANNEL


Creative Windows
2216 South Industrial Hwy. Ann Arbor, MI 48104
734-796-5100 ph. 734-769-5614 fax
www.creativewindows.com
shades@creativewindows.com

**OpenLight manual shade references**

**100% OF PROJECTS COMPLETED BY OUR OWN PERSONNEL**

| | |
|---|---|
| Project: | CHEMICAL BANK 150 OTTAWA |
| Address: | 150 OTTAWA GRAND RAPIDS, MI 49503 |
| CM (contract with): | LAKEWOOD CONTRUCTION |
| CM Contact & Phone: | KYLE ENGBERS 774-573-3263 |
| Architect: | GMB ARCHITECTURE |
| Architect Contact & Phone: | NICOLE SMITH 616-796-0200 |
| Contract Amount: | $17,900.00 |
| Year of award: | 2019 |
| Completion Date: | 2020 |
| Products: | 57 OPENLIGHT MANUAL SHADES, 2 OPENLIGHT MOTORIZED SHADES |

| | |
|---|---|
| Project: | WEST BLOOMFIELD SCHOOL DISTRICT - SCOTCH ELEMENTARY |
| Address: | 5959 COMMERCE RD WEST BLOOMFIELD, MI 48324 |
| Owner Name: | WEST BLOOMFIELD SCHOOL DISTRICT |
| Owner Contact & Phone: | MIKE PALUSHAJ - SUPERINTENDANT 248-752-7633 |
| CM (contract with): | GEORGE W. AUCH |
| CM Contact & Phone: | AARON ST. DENNIS 248-334-2000 |
| Architect: | FRENCH ASSOCIATES |
| Architect Contact & Phone: | SUZANNE CARLSON 248-656-1377 |
| Contract Amount: | $10,850.00 |
| Year of award: | 2019 |
| Completion Date: | Sep-19 |
| Products: | 45 OPENLIGHT MANUAL ROLLER SHADES |

| | |
|---|---|
| Project: | WMU S. NEIGHBORHOOD HOUSING (ARCADIA FLATS) |
| Address: | 1760 & 1800 S. RING RD, KALAMAZOO, MI 49008 |
| Owner Name: | WESTERN MICHIGAN UNIVERSITY |
| Owner Contact & Phone: | KATIE JACOBS 269-387-8823 |
| CM (contract with): | TRIANGLE ASSOCIATES INC |
| CM Contact & Phone: | MATT NOVAK 616-453-3950 |
| Architect: | STANTEC ARCHITECTURE INC |
| Architect Contact & Phone: | DAVID MILLIGAN |
| Contract Amount: | $69,300.00 |
| Year of award: | 2019 |
| Completion Date: | Dec-20 |
| Products: | 392 OPENLIGHT MANUAL SINGLE ROLLER SHADES |

Creative Windows

# Trusted by Michigan's Leading Businesses

Whether your goals are to reduce energy costs, enhance natural daylighting, or to make a stylish statement, the proper window treatment selection will help create a hassle-free, comfortable environment. From design to installation, Creative Windows offers solutions that seamlessly combine utility, function, and efficiency.


## A Local Company with a Commitment to Service

**In business since 1981, Creative Windows is comprised of a team of professional window treatment designers, project managers, fabricators and installers.** We are experts in our industry, and we collaborate with the construction trade and end users to detail project specific plans that can be executed on time and on budget. All projects are unique, and we work in a diverse range of environments - we've seen it all and done it all.

## Custom-Manufactured Window Treatments

Our Open Light™ roller shades are custom-designed for your space and are manufactured locally in Ann Arbor.

OVER 10,000
**Installations Completed**

OVER 100
**Years of Combined Experience**

OVER 40
**Years Serving Michigan**

# Ann Arbor, MI's Trusted Source for Custom Window Treatments Since 1981

EXCEPTIONAL SERVICE. INCREDIBLE RESULTS.

# Michigan Made: OpenLight SHADES

**At Creative Windows, we collaborate with leading industry suppliers to manufacture OpenLight roller shades. Our exclusive line of roller/solar shades are Michigan-made.**

We are specialists in manually operated, motorized, and automated shading systems, and we are here to assist you through the specification process. When every aspect of your project is handled in-house, we can assure you that all details are executed flawlessly and with beautiful results.

GM · Lansing Community College · Michigan State University · University of Michigan · Saginaw Valley State University · Saint Joseph Mercy · The Ashley Detroit · Birmingham · Broderick Tower · Detroit Metro + Willow Run · Ford · General Dynamics

## Solutions for Any Commercial Environment

- Motorized and Automated Window Treatments
- Manually Operated Blinds and Shades
- Solutions for Specialty Applications
- Exterior Shading Systems
- Commercial Drapery Treatments
- Acoustical Curtains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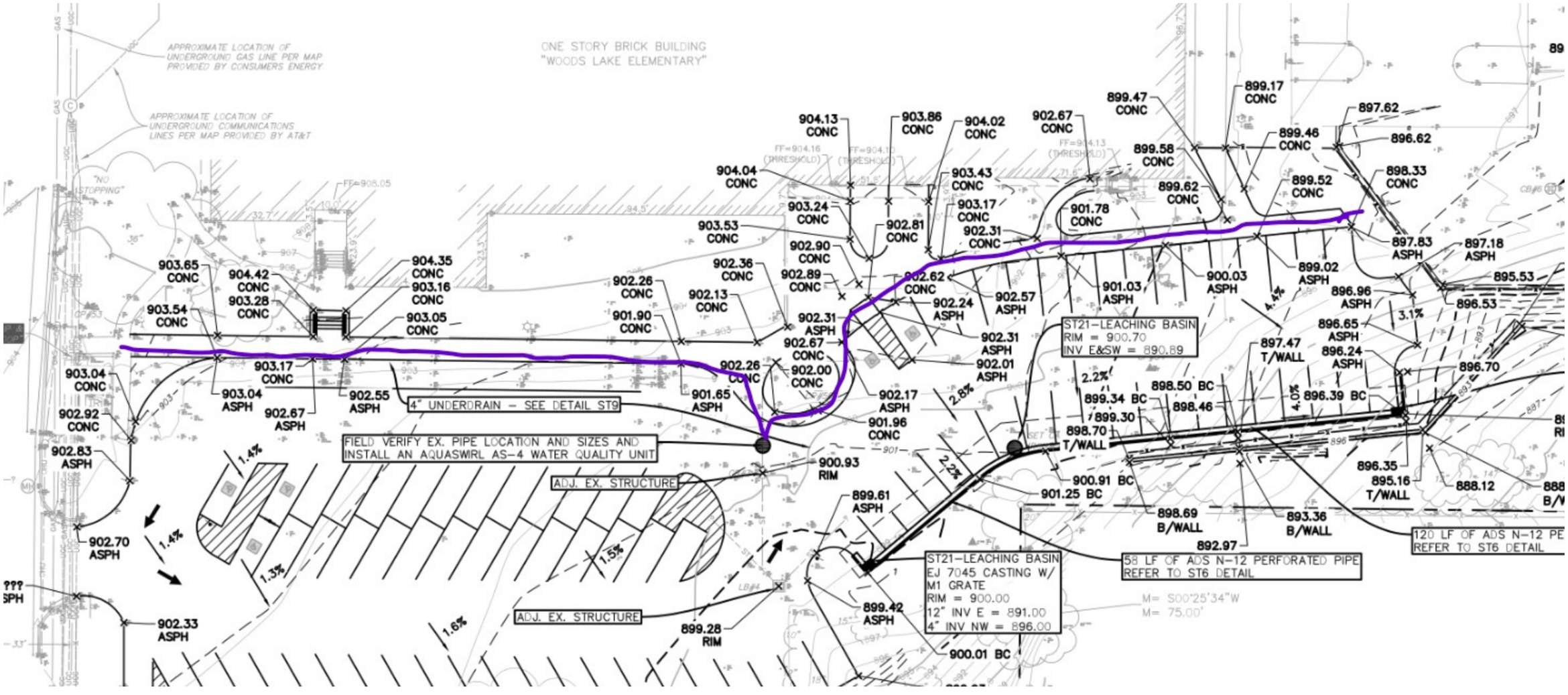
shades@creativewindows.com

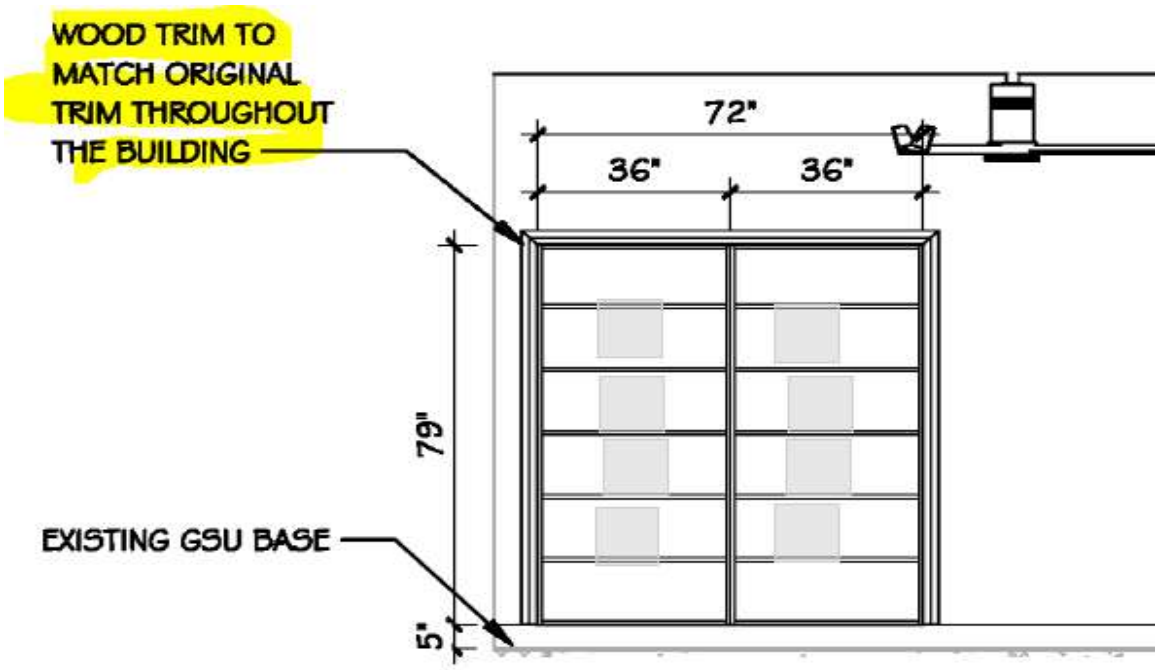
CONTACT CREATIVE WINDOWS
**734.769.5100**

2216 S Industrial Hwy
Ann Arbor, MI 48104

RFI 35


APPROXIMATE LOCATION OF UNDERGROUND GAS LINE PER MAP PROVIDED BY CONSUMERS ENERGY
APPROXIMATE LOCATION OF UNDERGROUND COMMUNICATIONS LINES PER MAP PROVIDED BY AT&T
ONE STORY BRICK BUILDING "WOODS LAKE ELEMENTARY"
"NO STOPPING"
FF=908.05
903.65 CONC
904.42 CONC
903.28 CONC
904.35 CONC
903.16 CONC
903.05 CONC
903.54 CONC
903.04 CONC
902.92 CONC
902.83 ASPH
902.70 ASPH
902.33 ASPH
903.17 CONC
903.04 ASPH
902.67 ASPH
902.55 ASPH
4" UNDERDRAIN - SEE DETAIL ST9
FIELD VERIFY EX. PIPE LOCATION AND SIZES AND INSTALL AN AQUASWIRL AS-4 WATER QUALITY UNIT
ADJ. EX. STRUCTURE
ADJ. EX. STRUCTURE
1.4%
1.4%
1.3%
1.6%
1.5%
902.26 CONC
902.13 CONC
901.90 CONC
902.36 CONC
902.89 CONC
902.31 ASPH
902.67 CONC
902.26 CONC
902.00 CONC
901.65 ASPH
900.93 RIM
899.28 RIM
904.13 CONC
903.86 CONC
904.02 CONC
904.04 CONC
903.43 CONC
903.24 CONC
903.17 CONC
903.53 CONC
902.81 CONC
902.90 CONC
902.31 CONC
902.62 CONC
902.24 ASPH
902.57 ASPH
902.31 ASPH
902.01 ASPH
902.17 ASPH
901.96 CONC
899.61 ASPH
899.42 ASPH
900.01 BC
ST21-LEACHING BASIN
RIM = 900.70
INV E&SW = 890.89
ST21-LEACHING BASIN
EJ 7045 CASTING W/
M1 GRATE
RIM = 900.00
12" INV E = 891.00
4" INV NW = 896.00
58 LF OF ADS N-12 PERFORATED PIPE
REFER TO ST6 DETAIL
M= S00°25'34"W
M= 75.00'
899.47 CONC
899.17 CONC
897.62
899.58 CONC
899.46 CONC
896.62
899.62 CONC
899.52 CONC
898.33 CONC
901.78 CONC
897.83 ASPH
897.18 ASPH
901.03 ASPH
900.03 ASPH
899.02 ASPH
895.53
896.96 ASPH
896.53
3.1%
896.65 ASPH
896.24 ASPH
896.70
897.47 T/WALL
2.2%
899.34 BC
898.50 BC
898.46
899.30
898.70 T/WALL
4.0%
896.39 BC
2.8%
2.2%
900.91 BC
901.25 BC
898.69 B/WALL
893.36 B/WALL
892.97
896.35
895.16 T/WALL
888.12
120 LF OF ADS N-12 PE
REFER TO ST6 DETAIL

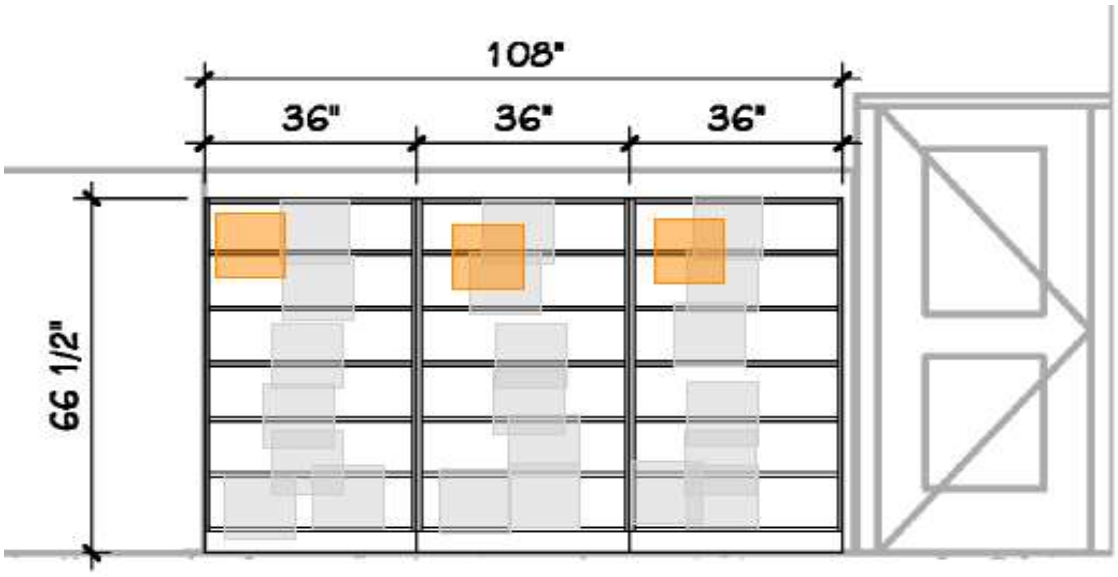
RFI 37




## ALTERNATE No. 2 - C CASEWORK

12 / A631

1/4" = 1'-0"




## ROOM ALTERNATE CASEWORK

(Amended for KPS)

**CONTRACTOR'S BID FOR PUBLIC WORKS**

# Woods Lake - A Magnet Center for the Arts Remodeling & Site Improvements

Kalamazoo Public Schools

**Kalamazoo County**

**PART I**

(To be completed for all bids)
(Please type or print)

BIDDER (firm) _____

Address _____ P.O. Box _____

City/State/Zip _____
Telephone Number _____ Email Address: _____
Person to contact regarding this Bid: _____
Pursuant to notices given, the undersigned offers to furnish labor and materials necessary to complete the construction work for:

_____
Insert Bid Category No.(s) and Name(s)

of public works project, **Woods Lake - A Magnet Center for the Arts Remodeling & Site Improvements**, in accordance with Plans and Specifications prepared by **TowerPinkster**, **242 E. Kalamazoo Avenue, Suite 100, Kalamazoo, MI 49007**, as follows:

BASE BID

For the sum of _____
(sum in words)

_____DOLLARS ($_____)
(sum in figures)

The undersigned acknowledges receipt of the following Addenda:

Receipt of Addenda No.(s)_____

PROPOSAL TIME

Bidder agrees that this Bid shall remain in force for a period of sixty (60) consecutive calendar days from the due date, and Bids may be accepted or rejected during this period. Bids not accepted within said sixty (60) consecutive calendar days shall be deemed rejected.

Attended pre-bid conference YES _____ NO

Has visited the jobsite YES _____ NO

**The Bidder must attach to this bid, the sworn and notarized affidavit (attached at the end of this Bid Form) disclosing any familial relationship between the Owner or an employee of the bidder and any member of the District's Board or the Superintendent of the District.**

The Bidder has reviewed the Guideline Schedule in Section 01 32 00 and the intent of the schedule can be met. _____ YES _____ NO

The Skillman Corporation's diversity initiative is to create a program to encourage, assist and measure the active participation of Minority- Owned, Women-Owned, Veteran – Owned and Disabled Individual-Owned Businesses. The Program is to ensure that MWVDBEs are provided full and equal opportunity to participate in all Skillman Corporation's Projects.

Bidder has included:

DBE: YES _____% NO _____
MBE: YES _____% NO _____
WBE: YES _____% NO _____
VBE: YES _____% NO _____

The undersigned further agrees to furnish a bond or certified check with this Bid for an amount specified in the Notice to Bidders. If Alternate Bids apply, submit a proposal for each in accordance with the Plans and Specifications.

ALTERNATE BIDS

A blank entry or an entry of "No Bid", "N/A", or similar entry on any Alternate will cause the bid to be rejected as non-responsive only if that Alternate is selected. If no change in the bid amount is required, indicate "No Change".

****MARK "ADD" OR "DEDUCT" FOR EACH ALTERNATE****

Alternate Bid No. 1 – Instrumentation and Controls Demonstration and Training for HVAC

Change the Base Bid the sum of _____
(sum in words)

_____ DOLLARS ($_____) ADD DEDUCT
(sum in figures)

Alternate Bid No. 2 – Casework and Counters

Change the Base Bid the sum of _____
(sum in words)

_____ DOLLARS($ _____) ADD DEDUCT
(sum in figures)

Alternate Bid No. 3A – Gymnasium Ceiling

Change the Base Bid the sum of _____
(sum in words)

_____ DOLLARS($ _____) ADD DEDUCT
(sum in figures)

Alternate Bid No. 3B – Gymnasium Lighting

Change the Base Bid the sum of _____
(sum in words)

_____ DOLLARS($ _____) ADD DEDUCT
(sum in figures)

Alternate Bid No. 4 – Gymnasium Cooling

Change the Base Bid the sum of _____
(sum in words)

_____ DOLLARS ($ _____) ADD DEDUCT
(sum in figures)

## **MARK "ADD" OR "DEDUCT" FOR EACH ALTERNATE**

Alternate Bid No. 5 – Select Window Replacement

Change the Base Bid the sum of _____
(sum in words)

_____ DOLLARS($ _____) ADD DEDUCT
(sum in figures)

Alternate Bid No. 6 – Select Toilet Room Replacement

Change the Base Bid the sum of _____
(sum in words)

_____ DOLLARS($ _____) ADD DEDUCT
(sum in figures)

## **BREAKDOWN OF BASE-BID (FOR ACCOUNTING PURPOSES ONLY)**

Bid Category No. 1 - GENERAL TRADES to provide cost included in Base-Bid for DEMOLITION OF WINDOWS, ENTRANCES, AND STOREFRONTS ONLY required for entire project:

Cost DOLLARS ($_____)

Bid Category No. 1 - GENERAL TRADES to provide cost included in Base-Bid for DEMOLITION OF SECONDARY CEILING (SUB CEILING) with support structure at all the areas shown on Sheet AD 201 required for entire project:

Cost DOLLARS ($_____)

**FOR ACCOUNTING PURPOSES ONLY**

NON-COLLUSION AFFIDAVIT

The undersigned Bidder or agent, being duly sworn on oath, says that he has not, nor has any other member, representative, or agent of the firm, company, corporation or partnership represented by him, entered into any combination, collusion or agreement with any person relative to the price to be bid by anyone at such letting nor to prevent any person from bidding nor to induce anyone to refrain from bidding, and that this Bid is made without reference to any other bid and without any agreement, understanding or combination with any other person in reference to such bidding.

He further says that no person or persons, firms, or corporations has, have, or will receive directly or indirectly, any rebate, fee, gift, commission, or thing of value on account of such sale.

OATH AND AFFIRMATION

I affirm under the penalties of perjury that the foregoing facts and information are true and correct to the best of my knowledge and belief.

Dated at _____this _____ day of _____, 20___.

_____
(Name of Organization)

By _____
(Title of Person Signing)

ACKNOWLEDGEMENT

STATE OF_____)
) SS:
COUNTY OF _____ )

_____ being duly sworn, deposes and says that

he is _____of the above _____
(Title) (Name of Organization)

and that the statements contained in the foregoing Bid, certification and Affidavit are true and correct.

Subscribed and sworn to before me this _____ day of _____ , 20 ___ .

_____
Notary Public

My Commission Expires:_____

County of Residence: _____

## PART II

(Complete sections I, II, and III for all state and local public works projects)

These statements to be submitted under oath by each bidder with and as a part of his bid. (Attach additional pages for each section as needed.)

## SECTION I EXPERIENCE QUESTIONNAIRE

1. What public works projects has your organization completed?

| Contract Amount | Class of Work | When Completed | Name and Address of Owner |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

2. What public works projects has your organization now in process of construction:

| Contract Amount | Class of Work | When Completed | Name and Address of Owner |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

3. Have you ever failed to complete any work awarded to you?_____If so, where and why?_____

_____

_____

4. List references from private firms for which you have performed work.

_____

_____

_____

## SECTION II PLAN AND EQUIPMENT QUESTIONNAIRE

1. Explain your plan or layout for performing proposed Work.

2. If you intend to sublet any portion of the Work, state the name and address of each subcontractor, equipment to be used by the subcontractor, and whether you expect to require a bond.

3. What equipment do you intend to use for the proposed Project?

4. Have you made contracts or received offers for all materials within prices used in preparing your proposal? _____ yes _____ no.

## SECTION III OATH AND AFFIRMATION

I hereby affirm under the penalties of perjury that the facts and information contained in the foregoing Bid for public works are true and correct to the best of my knowledge and belief.

IN TESTIMONY WHEREOF, The Bidder has hereunto set his hand this

_____ day of _____ , 20 _____ .

Bidder:_____

IN TESTIMONY WHEREOF, The Bidder (a firm) have hereunto set their hands this

_____ day of _____, 20_____.

Firm Name: _____

By:_____

Individual names:_____

IN TESTIMONY WHEREOF, The Bidder (a corporation) has caused this proposal to be signed by its President and Secretary and affixed its corporate seal this_____ day of _____ , 20 _____.
Name of Corporation:

President: _____
Secretary:_____

ACKNOWLEDGEMENT

STATE OF_____)
) SS:
COUNTY OF_____)

_____ being duly sworn, deposes and says that

he is _____ of the above _____
(Title) (Name of Organization)

and that the answers to the questions in the foregoing questionnaires and all statements therein contained are true and correct.

Subscribed and sworn to before me this_____ day of _____, 20 ___.

_____
Notary Public

My Commission Expires: _____
County of Residence: _____

**KALAMAZOO PUBLIC SCHOOLS**
**FAMILIAL STATEMENT OF DISCLOSURE**

***** Failure to return this notarized statement/signature with the bid will result in bid disqualification *****

Kalamazoo Public Schools
600 Vine Street
Kalamazoo, MI 49008

Dear Ladies and Gentlemen:

I/We, the undersigned, acknowledge by this sworn and notarized statement disclosing any familial relationship (or lack of a relationship) that exists between the Owner or any employee of the bidder and any member of the Board of Education of the Kalamazoo Public Schools or the Superintendent of the School District. The District shall not accept a bid that does not include a sworn and notarized disclosure statement.

○ We have prior familial knowledge of parties' involved (Attached clarification).

○ We have no prior familial knowledge of parties involved.

_____
Signature

_____
Company Name

_____
Notary Public

_____County, Michigan

My Commission Expires:_____

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

The undersigned, the owner, or authorized officer of the below-named company (the "Company"), pursuant to the compliance certification requirement provided in the **Kalamazoo Public School's** Request For Proposal (the "RFP"), hereby certifies, represents, and warrants that the Company (which includes 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 the Company is awarded a contract by the **Kalamazoo Public Schools** as a result of the aforementioned RFP, the Company is not and will not become an "Iran Linked Business" at any time during the course of performing any services under the contract.

The Company 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 two (2) times the amount of the contract or proposed contract for which the false certification was made, whichever is greater, the cost of the **Kalamazoo Public School'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 that it is determined that the person has submitted the false certification.

**BIDDER:**

_____

By: _____

Its: _____

STATE OF MICHIGAN )
)ss.
COUNTY OF _____ )

This instrument was acknowledged before me on the _____ day of _____, 20__, by _____.

_____
, Notary Public

_____ County, Michigan

My Commission Expires: _____

Acting in the County of: _____

END OF SECTION 00 31 00

TowerPinkster
Architecture · Engineering · Interiors

# ADDENDUM NO. 2

| | |
|---|---|
| **DATE OF ISSUANCE:** | **September 26th, 2022** |
| **PROJECT:** | **Woods Lake Elementary School**<br>**3215 Oakland Drive**<br>**Kalamazoo, MI 49008** |
| **OWNER:** | **Kalamazoo Public Schools** |

**ARCHITECT'S PROJECT NO.: 18-519.00**

**ORIGINAL BID ISSUE DATE: September 1st, 2022**

---

**SCOPE OF WORK**

This Addendum includes changes to, or clarifications of, the original Bidding Documents and any previously issued addenda, and shall be included in the Bid. All of these Addendum items form a part of the Contract Documents. The Bidder shall acknowledge receipt of this Addendum in the appropriate space provided on the Bid Form. Failure to do so may result in disqualification of the Bid.

**DOCUMENTS INCLUDED IN THIS ADDENDUM**

This Addendum includes **three (3)** pages of text and the following documents:

- Bidding Documents: **None**
- Contract Conditions: **None**
- Specification Sections: **10 2800 Toilet, Bath, and Laundry Accessories, 22 3100 Domestic Water Softeners**
- Drawings: **C600, A101A, A101B, A601A, A601B, A801, FP101D, P101, P301, P501, M101A, M101B, M101C, M801, M802, E005, E101A, E101B, E101C, T101B, T101C, and T401**

**CHANGES TO PREVIOUSLY ISSUED ADDENDA**

None.

**CHANGES TO BIDDING REQUIREMENTS**

**ADD-2 Item No. B-1 - <Insert Title>**

None.

## CHANGES TO CONTRACT CONDITIONS

**ADD-2 Item No. C-1 - <Insert Title>**

None.

## CHANGES TO SPECIFICATIONS

**ADD-2 Item No. S-1 - 22 3100 Domestic Water Softeners**

Refer to Reissued Specification Section: 22 3100

Added specification section 22 3100 Domestic Water Softeners.

**ADD-2 Item No. S-2 - 10 2800 Toilet, Bath, and Laundry Accessories**

Refer to Reissued Specification Section: 10 2800

Reissued specification section with additional information covering specific accessories and associated model numbers.

**ADD-2 Item No. S-3 - 08 4113 Aluminum-Framed Entrances and Storefronts**

Refer to Specification Section: 08 4113 (Not Reissued)

Update Section 2.3 Framing Systems as fallows.

1. Frame Profile: Frame profile shall be a nominal 2-inch sightline by 4-1/2 inch deep.
2. Center glazed.

## CHANGES TO DRAWINGS

**ADD-2 Item No. D-1 - Civil Fire Protection Plan**

Refer to Sheet(s): C800 (not reissued)

Disregard all notes regarding water meter. No meter is required, valve pit only for new fire suppression line.

**ADD-2 Item No. D-2 - Dry Pipe Fire Suppression System**

Refer to Sheet(s): FP101D (reissued)

Relocated dry pipe system air compressor over to Janitor Closet 306.

**ADD-2 Item No. D-3 - New Domestic Water Softener**

Refer to Sheet(s): Refer to reissued sheets P101 & P501 and new sheet P301

Added new domestic water softener and associated piping as indicated on drawings.

**ADD-2 Item No. D-4 - Domestic Water Heater Piping and Controls**

Refer to Sheet(s): Refer to reissued sheets P101 & P501 and new sheet P301

Added piping and controls associated with new domestic water heater and storage tanks.

**ADD-2 Item No. D-5 - Fire and Smoke Dampers**

Refer to Sheet(s): Refer to reissued sheets M101A, M101B, and M101C

Added fire and smoke dampers in corridors and various storage areas.

**ADD-2 Item No. D-6 - Alternate Gymnasium AHU-3 Coils, Controls, and Dimensions**

Refer to Sheet(s): M801 (reissued)

Added airflow monitor station for outdoor air intake. Updated unit footprint to match model number. Increased outdoor air capacity and heating coil and pump capacities.

**ADD-2 Item No. D-7 - Alternate Gymnasium AHU-3 Controls**

Refer to Sheet(s): M802 (reissued)

Revised unit controls to be packaged controls. Modified sequence of operation to reflect this change.

**ADD-2 Item No. D-8 - Typical Toilet Room Mirror Size**

Refer to Sheet(s): Refer to reissued sheet A801

Mirror size on drawing sheet A 801 was incorrectly noted as 18” W x 34” H. Correct size shall be 18” W x 36” H.

**ADD-2 Item No. D-9 - Add Electrical Connection to New Domestic Water Softener**

Refer to Sheet(s): Refer to reissued sheets E005 and E101A

Added electrical connection to new domestic water softener.

**ADD-2 Item No. D-10 - Repair Receptacle in Receiving**

Refer to Sheet(s): Refer to reissued sheet E101A

Remove and reinstall broken receptacle in Receiving room.

**ADD-2 Item No. D-11 - Add Smoke Duct Detectors to New Smoke Dampers**

Refer to Sheet(s): Refer to reissued sheets E101A, E101B, and E101C

Added electrical connection and fire alarm connection to new duct detectors.

**ADD-2 Item No. D-12 - Add Terrazzo Floor Patching**

Refer to Sheet(s): Refer to reissued sheets A 101A, A101B, A601A, and A601B

Added terrazzo floor patching required where mechanical is demoing UV and pipping. Will need to patch terrazzo flooring to match existing.

**ADD-2 Item No. D-13 - Asphalt Paving Details**

Refer to Sheet(s): Refer to reissued sheets C 600

Revised asphalt paving details.

**ADD-2 Item No. D-14 - Teacher’s Station Device Location**

Refer to Sheet[s]: T 401

Added Teachers Station Device Detail for reference only.

**ADD-2 Item No. D-15 - IT Closest Location Call Outs**

Refer to Sheet[s]: T 101B and T 101C

Added wall mounted rack and tags.

**END OF ADDENDUM.**

# SECTION 01 3100 - PROJECT MANAGEMENT AND COORDINATION

## PART 1 - GENERAL

### 1.1 SUMMARY

A. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:

1. Administrative and supervisory personnel.
2. Project meetings.
3. Requests for Interpretation (RFIs).

B. Each contractor shall participate in coordination requirements. Certain areas of responsibility will be assigned to a specific contractor.

C. Related Sections include the following:

1. Division 01 Section "Execution" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.
2. Division 01 Section "Closeout Procedures" for coordinating closeout of the Contract.

### 1.2 DEFINITIONS

A. RFI: Request from Contractor seeking interpretation or clarification of the Contract Documents.

### 1.3 COORDINATION

A. Coordination: Each contractor shall coordinate its construction operations with those of other contractors and entities to ensure efficient and orderly installation of each part of the Work. Each contractor shall coordinate its operations with operations, included in different Sections, that depend on each other for proper installation, connection, and operation.

1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
2. Coordinate installation of different components with other contractors to ensure maximum accessibility for required maintenance, service, and repair.
3. Make adequate provisions to accommodate items scheduled for later installation.
4. Where availability of space is limited, coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair of all components, including mechanical and electrical.

B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.

1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.

C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:

1. Preparation of Contractor's Construction Schedule.
2. Preparation of the Schedule of Values.
3. Installation and removal of temporary facilities and controls.
4. Delivery and processing of submittals.
5. Progress meetings.
6. Preinstallation conferences.
7. Project closeout activities.
8. Startup and adjustment of systems.
9. Project closeout activities.

D. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials.

## 1.4 SUBMITTALS

A. Key Personnel Names: Within 5 days of starting construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home and office telephone numbers. Provide names, addresses, and telephone numbers of individuals assigned as standbys in the absence of individuals assigned to Project.

1. Post copies of list in Project meeting room, in temporary field office, and by each temporary telephone. Keep list current at all times.

## 1.5 PROJECT MEETINGS

A. General: Schedule and conduct meetings and conferences at Project site, unless otherwise indicated.

1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times.
2. Minutes: Construction Manager will record and distribute minutes.

B. Preconstruction Conference: Construction Manager will schedule a preconstruction conference before starting construction, at a time convenient to Owner, Construction Manager, and Architect. Hold the conference at Project site or another convenient location. Conduct the meeting to review responsibilities and personnel assignments.

1. Attendees: Authorized representatives of Owner, Construction Manager, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other

concerned parties shall attend the conference. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.

2. Agenda: Discuss items of significance that could affect progress, including the following:

    a. Tentative construction schedule.
    b. Critical work sequencing and long-lead items.
    c. Designation of key personnel and their duties.
    d. Procedures for processing field decisions and Change Orders.
    e. Procedures for RFIs.
    f. Procedures for testing and inspecting.
    g. Procedures for processing Applications for Payment.
    h. Distribution of the Contract Documents.
    i. Submittal procedures.
    j. Preparation of Record Documents.
    k. Use of the premises and existing building.
    l. Work restrictions.
    m. Owner's occupancy requirements.
    n. Responsibility for temporary facilities and controls.
    o. Construction waste management and recycling.
    p. Parking availability.
    q. Office, work, and storage areas.
    r. Equipment deliveries and priorities.
    s. Security.
    t. Progress cleaning.
    u. Working hours.

C. Preinstallation Conferences: Conduct a preinstallation conference at Project site before each construction activity that requires coordination with other construction.

1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Architect and Construction Manager of scheduled meeting dates.
2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:

    a. The Contract Documents.
    b. Options.
    c. Related RFIs.
    d. Related Change Orders.
    e. Purchases.
    f. Deliveries.
    g. Submittals.
    h. Review of mockups.
    i. Possible conflicts.
    j. Compatibility problems.
    k. Time schedules.
    l. Weather limitations.
    m. Manufacturer's written recommendations.

n. Warranty requirements.
o. Compatibility of materials.
p. Acceptability of substrates.
q. Temporary facilities and controls.
r. Space and access limitations.
s. Regulations of authorities having jurisdiction.
t. Testing and inspecting requirements.
u. Installation procedures.
v. Coordination with other work.
w. Required performance results.
x. Protection of adjacent work.
y. Protection of construction and personnel.

3. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.

D. Progress Meetings: Construction Manager will conduct progress meetings.

1. Attendees: In addition to representatives of Owner, Construction Manager, and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
2. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.

a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's Construction Schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.

1) Review schedule for next period.

b. Review present and future needs of each entity present, including the following:

1) Interface requirements.
2) Sequence of operations.
3) Status of submittals.
4) Deliveries.
5) Off-site fabrication.
6) Access.
7) Site utilization.
8) Temporary facilities and controls.
9) Work hours.
10) Hazards and risks.

11) Progress cleaning.
12) Quality and work standards.
13) Status of correction of deficient items.
14) Field observations.
15) RFIs.
16) Status of proposal requests.
17) Pending changes.
18) Status of Change Orders.
19) Pending claims and disputes.
20) Documentation of information for payment requests.

3. Schedule Updating: Revise Contractor's Construction Schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

1.6 REQUESTS FOR INTERPRETATION (RFIs)

A. Procedure: Immediately on discovery of the need for interpretation of the Contract Documents, and if not possible to request interpretation at Project meeting, prepare and submit an RFI in the form specified.

1. RFIs shall originate with Contractor. RFIs submitted by entities other than Contractor will be returned with no response.
2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.

B. Content of the RFI: Include a detailed, legible description of item needing interpretation and the following:

1. Project name.
2. Date.
3. Name of Contractor.
4. Name of Architect and Construction Manager.
5. RFI number, numbered sequentially.
6. Specification Section number and title and related paragraphs, as appropriate.
7. Drawing number and detail references, as appropriate.
8. Field dimensions and conditions, as appropriate.
9. Contractor's suggested solution(s). If Contractor's solution(s) impact the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
10. Contractor's signature.
11. Attachments: Include drawings, descriptions, measurements, photos, Product Data, Shop Drawings, and other information necessary to fully describe items needing interpretation.

C. Hard-Copy RFIs: Use form provided by Construction Manager.

1. Identify each page of attachments with the RFI number and sequential page number.

D. Software-Generated RFIs: Software-generated form with substantially the same content as indicated above.

1. Attachments shall be electronic files in Adobe Acrobat PDF format.

E. Architect's and Construction Manager's Action: Architect and Construction Manager will review each RFI, determine action required, and return it. Allow seven working days for Architect's response for each RFI. RFIs received after 1:00 p.m. will be considered as received the following working day.

1. The following RFIs will be returned without action:

a. Requests for approval of submittals.
b. Requests for approval of substitutions.
c. Requests for coordination information already indicated in the Contract Documents.
d. Requests for adjustments in the Contract Time or the Contract Sum.
e. Requests for interpretation of Architect's actions on submittals.
f. Incomplete RFIs or RFIs with numerous errors.

2. Architect's action may include a request for additional information, in which case Architect's time for response will start again.
3. Owner's cost for Architect's services, at Architect's normal billing rates, in responding to requests of the Contractor shall be deducted from the Contract Amount if the intent of the documents is clear in the opinion of the Architect.
4. Architect's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Division 01 Section "Contract Modifications."

a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect and Construction Manager in writing within 10 days of receipt of the RFI response.

F. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect within seven days if Contractor disagrees with response.

## 1.7 DIGITAL PROJECT MANAGEMENT PROCEDURES

A. Architect's Data Files Not Available: Architect will not provide Architect's CAD drawing digital data files for Contractor's use during construction.

B. Use of Architect's Digital Data Files: Digital data files of Architect's CAD drawings will be provided by Architect for Contractor's use during construction.

1. Digital data files may be used by Contractor in preparing coordination drawings, Shop Drawings, and Project record Drawings.
2. Architect makes no representations as to the accuracy or completeness of digital data files as they relate to Contract Drawings.
3. Digital Drawing Software Program: Contract Drawings are available in AutoCAD 2016.
4. Contractor shall execute a data licensing agreement in the form of Agreement included in Project Manual.

a. Subcontractors, and other parties granted access by Contractor to Architect's digital data files shall execute a data licensing agreement in the form of Agreement included in this Project Manual.

C. Conditions of Use of Architect's Digital Data Files: As follows:

1. Architect makes no representation as to the compatibility of these files with user's hardware or software beyond the specified release of the referenced specifications.
2. Data contained on these electronic files are part of Architect's instruments of service and shall not be used by receiving party or anyone else receiving this data through or from receiving party for any purpose other than as a convenience in the support of construction coordination for the referenced project. Any other use or reuse by receiving party or by others will be at receiving party's sole risk and without liability or legal exposure to Tower Pinkster Titus Associates. Receiving party agrees to make no claim and hereby waive, to the fullest extent permitted by law, any claim or cause of action of any nature against the Architect, its officers, directors, employees, agents or subconsultants that may arise out of or in connection with receiving party's use of the electronic files.
3. Furthermore, receiving party shall, to the fullest extent permitted by law, indemnify and hold Architect harmless against all damages, liabilities or costs, including reasonable attorneys' fees and defense costs, arising out of or resulting from receiving party's use of these electronic files.
4. These electronic files are not construction documents. Differences may exist between these electronic files and corresponding hard-copy construction documents. We make no representation regarding the accuracy or completeness of the electronic files receiving party receives. In the event that a conflict arises between the hard-copy construction documents prepared by Architect and the electronic files, the hard-copy construction documents shall govern. Receiving party is responsible for determining if any conflict exists. By receiving party's use of these electronic files, receiving party is not relieved of any duty to fully comply with the contract documents, including, and without limitation, the need to check, confirm and coordinate all dimensions and details, take field measurements, verify field conditions and coordinate your work with that of other contractors for the project.
5. Because information presented on the electronic files can be modified, unintentionally or otherwise, Architect reserves the right to remove all indicia of ownership and/or involvement from each electronic display.

D. PDF Document Preparation: Where PDFs are required to be submitted to Architect, prepare as follows:

1. Assemble complete submittal package into a single indexed file incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.
2. Name file with submittal number or other unique identifier, including revision identifier.
3. Certifications: Where digitally submitted certificates and certifications are required, provide a digital signature with digital certificate on where indicated.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

**END OF SECTION 01 3100**

# SECTION 10 2800 - TOILET, BATH, AND LAUNDRY ACCESSORIES

## PART 1 - GENERAL

### 1.1 SUMMARY

A. This Section includes the following:

1. Washroom accessories.

B. Owner-Furnished Material: Paper towel dispensers, toilet tissue dispensers, and liquid soap dispensers.

### 1.2 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Product Schedule:

1. Identify locations using room designations indicated on Drawings.
2. Identify products using designations indicated on Drawings.

C. Maintenance Data: For toilet and bath accessories to include in maintenance manuals.

### 1.3 QUALITY ASSURANCE

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

### 1.4 COORDINATION

A. Coordinate accessory locations with other work to prevent interference with clearances required for access by people with disabilities, and for proper installation, adjustment, operation, cleaning, and servicing of accessories.

B. Deliver inserts and anchoring devices set into concrete or masonry as required to prevent delaying the Work.

### 1.5 WARRANTY

A. Special Mirror Warranty: Manufacturer's standard form in which manufacturer agrees to replace mirrors that develop visible silver spoilage defects and that fail in materials or workmanship within specified warranty period.

1. Warranty Period: 15 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Fasteners: Screws, bolts, and other devices of same material as accessory unit and tamper-and-theft resistant where exposed, and of galvanized steel where concealed.

B. Mirrors: ASTM C 1503, Mirror Glazing Quality, clear-glass mirrors, nominal 6.0 mm thick.

2.2 WASHROOM ACCESSORIES

A. Basis-of-Design Product: The design for accessories is based on products indicated. Subject to compliance with requirements, provide the named product or a comparable product by one of the following:

1. American Specialties, Inc.
2. Bobrick Washroom Equipment, Inc.
3. Bradley Corporation.
4. General Accessory Manufacturing Co. (GAMCO).

B. Toilet Tissue (Roll) Dispensers: Surface mounted, Owner furnished and Contractor installed.

C. Paper Towel Dispensers: Surface mounted, Owner furnished and Contractor installed.

D. Liquid-Soap Dispensers: Surface mounted, Owner furnished and Contractor installed.

E. Grab Bars:

1. Mounting: Flanges with concealed fasteners.
2. Material: Stainless steel, 0.05 inch(1.3 mm) thick.

a. Finish: Smooth, No. 4, satin finish on ends and slip-resistant texture in grip area.

3. Outside Diameter: 1-1/2 inches(38 mm).
4. Configuration and Length: As indicated on Drawings.

F. Sanitary-Napkin Disposal Units:

1. Basis-of-Design Product: Bobrick B-254.
2. Mounting: Surface mounted.
3. Door or Cover: Self-closing disposal-opening cover and hinged face panel with tumbler lockset.
4. Receptacle: Removable.
5. Material and Finish: Stainless steel, No. 4 finish (satin).

G. Mirror Units:

1. Frame: Stainless-steel angle, 0.05 inch(1.3 mm) thick.

2. Corners: Welded and ground smooth

3. Hangers: Wall bracket of galvanized steel, equipped with concealed locking devices requiring a special tool to remove.
4. Size: 24 by 36 inches(610 by 914 mm) unless indicated otherwise.

H. Robe Hooks: Provide one in each single-occupant toilet room and other locations as indicated.
1. Basis-of-Design Product: Bobrick B-6727
2. Description: Double-prong unit.
3. Material and Finish: Stainless steel, No. 4 finish (satin).

## 2.3 FABRICATION

A. General: Fabricate units with tight seams and joints, and exposed edges rolled. Hang doors and access panels with full-length, continuous hinges. Equip units for concealed anchorage and with corrosion-resistant backing plates.

B. Keys: Provide universal keys for internal access to accessories for servicing and resupplying. Provide minimum of six keys to Owner's representative.

# PART 3 - EXECUTION

## 3.1 INSTALLATION

A. Install accessories according to manufacturers' written instructions, using fasteners appropriate to substrate indicated and recommended by unit manufacturer. Install units level, plumb, and firmly anchored in locations and at heights indicated.

1. Grab Bars : Install to withstand a downward load of at least 250 lbf(1112 N), when tested according to method in ASTM F 446.

B. Adjusting and Cleaning: Adjust accessories for unencumbered, smooth operation. Replace damaged or defective items.

1. Remove temporary labels and protective coatings.
2. Clean and polish exposed surfaces according to manufacturer's written recommendations.

**END OF SECTION 10 2800**

# SECTION 22 3100 - DOMESTIC WATER SOFTENERS

## PART 1 - GENERAL

### 1.1 SUMMARY

A. This Section includes commercial water softeners.

1. Chemicals.
2. Water testing kits.

### 1.2 ACTION SUBMITTALS

A. Product Data: For each type of product indicated.

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for water softeners.
2. Include rated capacities, operating characteristics, electrical characteristics, and furnished specialties and accessories.
3. Wiring Diagrams: For power, signal, and control wiring.

B. Manufacturer Certificates: Signed by manufacturers certifying that water softeners comply with requirements.

### 1.3 INFORMATIONAL SUBMITTALS

A. Source quality-control test reports.

B. Field quality-control test reports.

C. Warranty: Special warranty specified in this Section.

D. Maintenance service agreement.

### 1.4 CLOSEOUT SUBMITTALS

A. Operation and maintenance data.

### 1.5 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Salt for Brine Tanks: Furnish same form as and at least the same amount as original load, but not less than 200 lb(90.7 kg). Deliver on pallets in 40- or 50-lb(18.1- or 22.7-kg) packages.
2. Store salt on raised platform where directed by Owner. Do not store in contact with concrete floor.

1.6 QUALITY ASSURANCE

A. Product Options: Drawings indicate size, profiles, and dimensional requirements of water softeners and are based on the specific system indicated. Refer to Division 01 Section "Product Requirements."

B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

C. NSF Compliance as required by authorities having jurisdiction:

1. Comply with NSF 14, "Plastics Piping Components and Related Materials," for plastic domestic water piping components.
2. Comply with NSF 61, "Drinking Water System Components - Health Effects; Sections 1 through 9."
3. Comply with NSF 372, "Drinking Water System Components – Lead Content"

1.7 COORDINATION

A. Coordinate size and location of concrete bases. Concrete, reinforcement, and formwork requirements are specified in Division 03.

1.8 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer shall guarantee that under operating conditions, the water softening system will provide zero GPG hardness as determined by soap or titrate test; that the loss of mineral by attrition will be no greater than 3% per annum for three years and the turbidity of the treated water will be no greater than the untreated water due to the fault of the softener system.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:

1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, manufacturers specified.

2.2 COMMERCIAL WATER SOFTENERS

A. Description: Factory-assembled, pressure-type water softener.

1. Available Manufacturers:

a. Aquion Water Treatment Products.
b. Canney"s Inc.
c. Culligan International Company.
d. Flier's Inc.
e. Kinetico Incorporated.
f. Mitco Inc.
g. Peerless, Inc.
h. Sterling Water Treatment.

2. Comply with NSF 61, "Drinking Water System Components--Health Effects."
3. Configuration: Twin unit with two mineral tanks and one brine tank.
4. Mineral Tanks: FRP, pressure-vessel quality.

a. Construction: Non-ASME code.
b. Pressure Rating: 150 psig(1030kPa) minimum.
c. Wetted Components: Suitable for water temperatures from 40 to at least 100 deg F(5 to at least 38 deg C).
d. Freeboard: 50 percent minimum for backwash expansion above normal resin bed level.
e. Support: Legs or skirt attached to tank.
f. Upper Distribution System: Single, point type, fabricated from galvanized-steel pipe and fittings.
g. Lower Distribution System: Hub and radial-arm or header-lateral type; fabricated from nonmetallic pipe and fittings with individual, fine-slotted, nonclogging plastic strainers; arranged for even flow distribution through resin bed.

5. Controls: Fully automatic; factory mounted on unit and factory wired.

a. Adjustable duration of various regeneration steps.
b. Push-button start and complete manual operation.
c. Electric time clock and switch for fully automatic operation, adjustable to initiate regeneration at any hour of day and any day of week or at fixed intervals.
d. Sequence of Operation: Program multiport pilot-control valve to automatically pressure-actuate main operating valve through steps of regeneration and return to service.
e. Pointer on pilot-control valve shall indicate cycle of operation.
f. Means of manual operation of pilot-control valve if power fails.
g. Main Operating Valves: Industrial, automatic, multiport, diaphragm type with the following features:

1) Slow opening and closing, nonslam operation.
2) Diaphragm guiding on full perimeter from fully open to fully closed.
3) Isolated dissimilar metals within valve.
4) Self-adjusting, internal, automatic brine injector that draws brine and rinses at constant rate independent of pressure.

5) Sampling cocks for soft water.
6) Special tools are not required for service.

h. Flow Control: Automatic, to control backwash and flush rates over wide variations in operating pressures, and that does not require field adjustments.
1) Demand-Initiated Control: Equip each mineral tank of twin mineral-tank units with automatic-reset-head water meters that electrically activate cycle controllers to initiate regeneration at preset total in gallons(liters). Design so heads automatically reset to preset total in gallons(liters) for next service run. Include electrical lockout to prevent simultaneous regeneration of both tanks.

6. Brine Tank: Combination measuring and wet-salt storing system.

a. Tank and Cover Material: Fiberglass, 3/16 inch(4.8 mm) thick; or molded PE, 3/8 inch(9.5 mm) thick.
b. Brine Valve: Float operated and plastic fitted for automatic control of brine withdrawn and freshwater refill.
c. Size: Large enough for at least four regenerations at full salting.

7. Factory-Installed Accessories:

a. Piping, valves, tubing, and drains.
b. Sampling cocks.
c. Main-operating-valve position indicators.
d. Water meters.

## 2.3 CHEMICALS

A. Mineral: High-capacity, sulfonated-polystyrene ion-exchange resin that is stable over entire pH range with good resistance to bead fracture from attrition or shock.

B. Salt for Brine Tanks: High-purity sodium chloride, free of dirt and foreign material. Rock and granulated forms are not acceptable.

## 2.4 WATER TESTING SETS

A. Description: Manufacturer's standard water-hardness testing apparatus and chemicals with testing procedure instructions. Include metal container suitable for wall mounting.

## 2.5 SOURCE QUALITY CONTROL

A. Hydrostatically test mineral tanks before shipment to minimum of one and one-half times pressure rating.

B. Prepare test reports.

PART 3 - EXECUTION

3.1 CONCRETE BASES

A. Install concrete bases of dimensions indicated for commercial water softeners. Refer to Division 22 Section "Common Work Results for Plumbing."

1. Install dowel rods to connect concrete base to concrete floor. Unless otherwise indicated, install dowel rods on 18-inch(450-mm) centers around full perimeter of base.

B. Cast-in-place concrete materials and placement requirements are specified in Division 03.

3.2 WATER SOFTENER INSTALLATION

A. Install commercial water softener equipment on concrete bases, level and plumb. Maintain manufacturer's recommended clearances. Arrange units so controls and devices that require servicing are accessible. Anchor mineral and brine tanks and floor-mounting accessories to substrate.

B. Install brine lines and fittings furnished by equipment manufacturer but not specified to be factory installed.

C. Prepare mineral-tank distribution system and underbed for minerals and place specified mineral into mineral tanks.

D. Install water testing sets mounted on wall, unless otherwise indicated, and near water softeners.

3.3 CONNECTIONS

A. Piping installation requirements are specified in other Division 22 Sections. Drawings indicate general arrangement of piping, fittings, and specialties.

B. Install piping adjacent to equipment to allow service and maintenance.

C. Make piping connections between water-softener-unit headers and dissimilar-metal water piping with dielectric connections. Dielectric connections are specified in Division 22 Section "Common Work Results for Plumbing."

D. Install shutoff valves on raw-water inlet and soft-water outlet piping of each mineral tank.

E. Install shutoff valves on raw-water inlet and soft-water outlet piping of each mineral tank.

1. Metal general-duty valves are specified in Division 22 Section "General-Duty Valves for Plumbing Piping."

F. Install pressure gages on raw-water inlet and soft-water outlet piping of each mineral tank. Pressure gages are specified in Division 22 Section "Meters and Gages for Plumbing Piping."

1. Exception: Water softeners with factory-installed pressure gages at locations indicated.

G. Install valved bypass water piping around water softeners.

1. Metal general-duty valves are specified in Division 22 Section "General-Duty Valves for Plumbing Piping."
2. Water piping is specified in Division 22 Section "Domestic Water Piping."

H. Install drains as indirect wastes to spill into open drains or over floor drains.

I. Ground equipment according to Division 26 Section "Grounding and Bonding for Electrical Systems."

J. Connect wiring according to Division 26 Section "Low-Voltage Electrical Power Conductors and Cables."

## 3.4 FIELD QUALITY CONTROL

A. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect, test, and adjust field-assembled components and equipment installation, including connections, and to assist in field testing. Report results in writing.

B. Perform the following field tests and inspections and prepare test reports:

1. Water Analysis: Obtain water sample and perform water analysis.
2. Leak Test: After installation, charge system and test for leaks. Repair leaks and retest until no leaks exist.
3. Operational Test: After electrical circuitry has been energized, start units to confirm proper unit operation.
4. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

C. Remove and replace malfunctioning water softeners that do not pass tests and inspections and retest as specified above.

## 3.5 STARTUP SERVICE

A. Engage a factory-authorized service representative to perform startup service.

1. Complete installation and startup checks according to manufacturer's written instructions.

B. Add water to brine tanks and fill with salt.

C. Sample water softener effluent after startup and at three consecutive seven-day intervals (total of four samples), and prepare certified test reports for required water performance characteristics.

## 3.6 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain water softeners. Refer to Division 01 "Demonstration and Training" Section

END OF SECTION 22 3100

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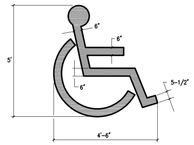
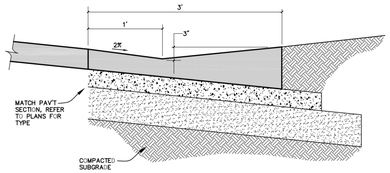
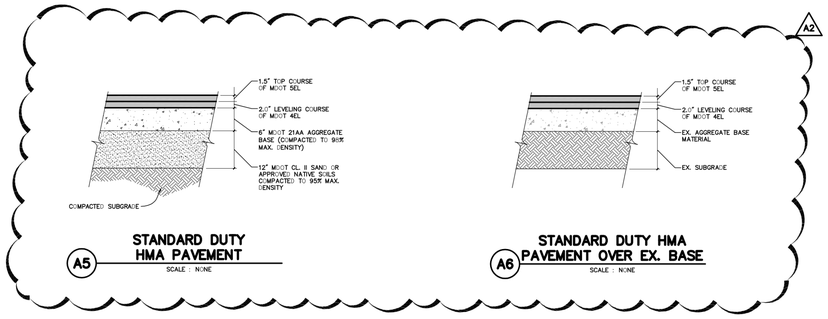



**BARRIER FREE PARKING SYMBOL**
M21 SCALE : NONE

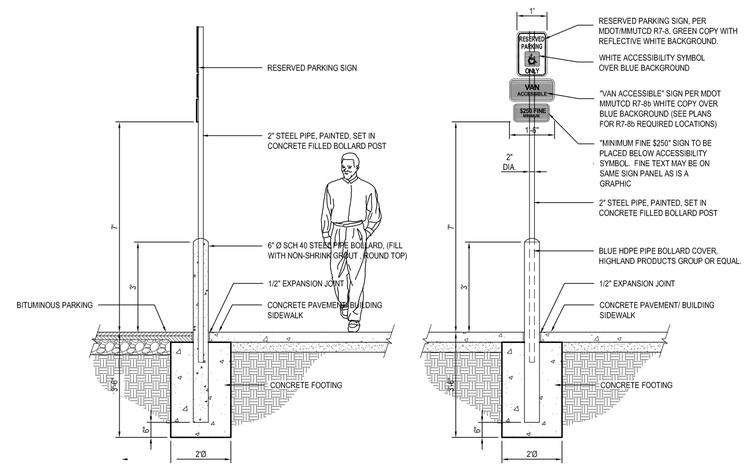



**ROLLED TYPE 1 BITUMINOUS GUTTER**
A1 SCALE : NONE

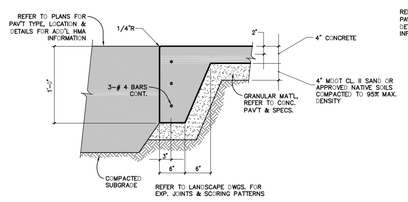



**STANDARD DUTY HMA PAVEMENT**
A5 SCALE : NONE

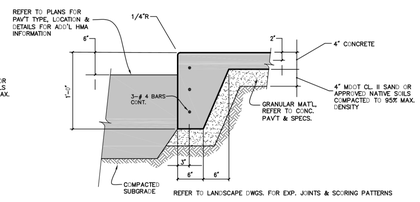
**STANDARD DUTY HMA PAVEMENT OVER EX. BASE**
A6 SCALE : NONE



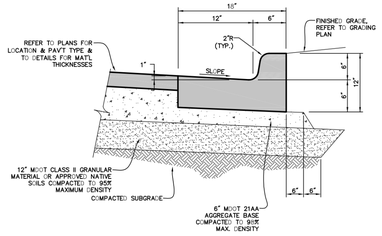

**BARRIER FREE PARKING SIGN**
T1 SCALE : NONE



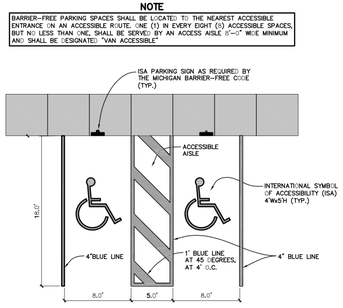

**CONCRETE FLUSH TURNED DOWN WALK**
C28 SCALE : NONE



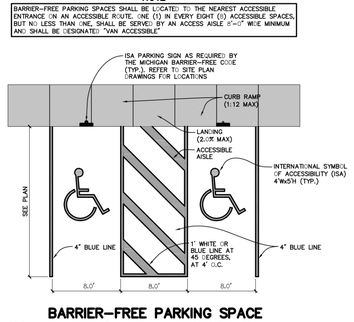

**CONCRETE TURNED DOWN WALK**
C29 SCALE : NONE



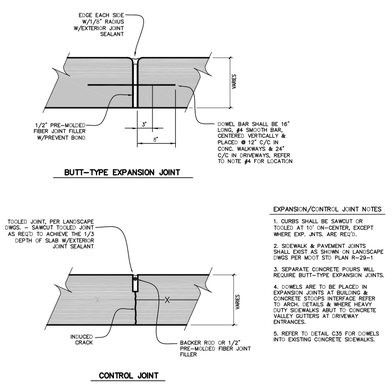

**CURB AND GUTTER TYPE 1 CONCRETE**
C3 SCALE : NONE



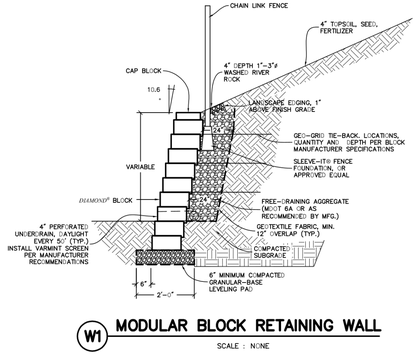

**BARRIER-FREE PARKING SPACE LAYOUT**
M22 SCALE : NONE




**BARRIER-FREE PARKING SPACE LAYOUT – VAN ACCESSIBLE**
M23 SCALE : NONE




**EXPANSION & CONTROL JOINT**
C0 SCALE : NONE




**MODULAR BLOCK RETAINING WALL**
W1 SCALE : NONE

**ADDENDUM #2** 09/26/2022
**ISSUED FOR** DATE

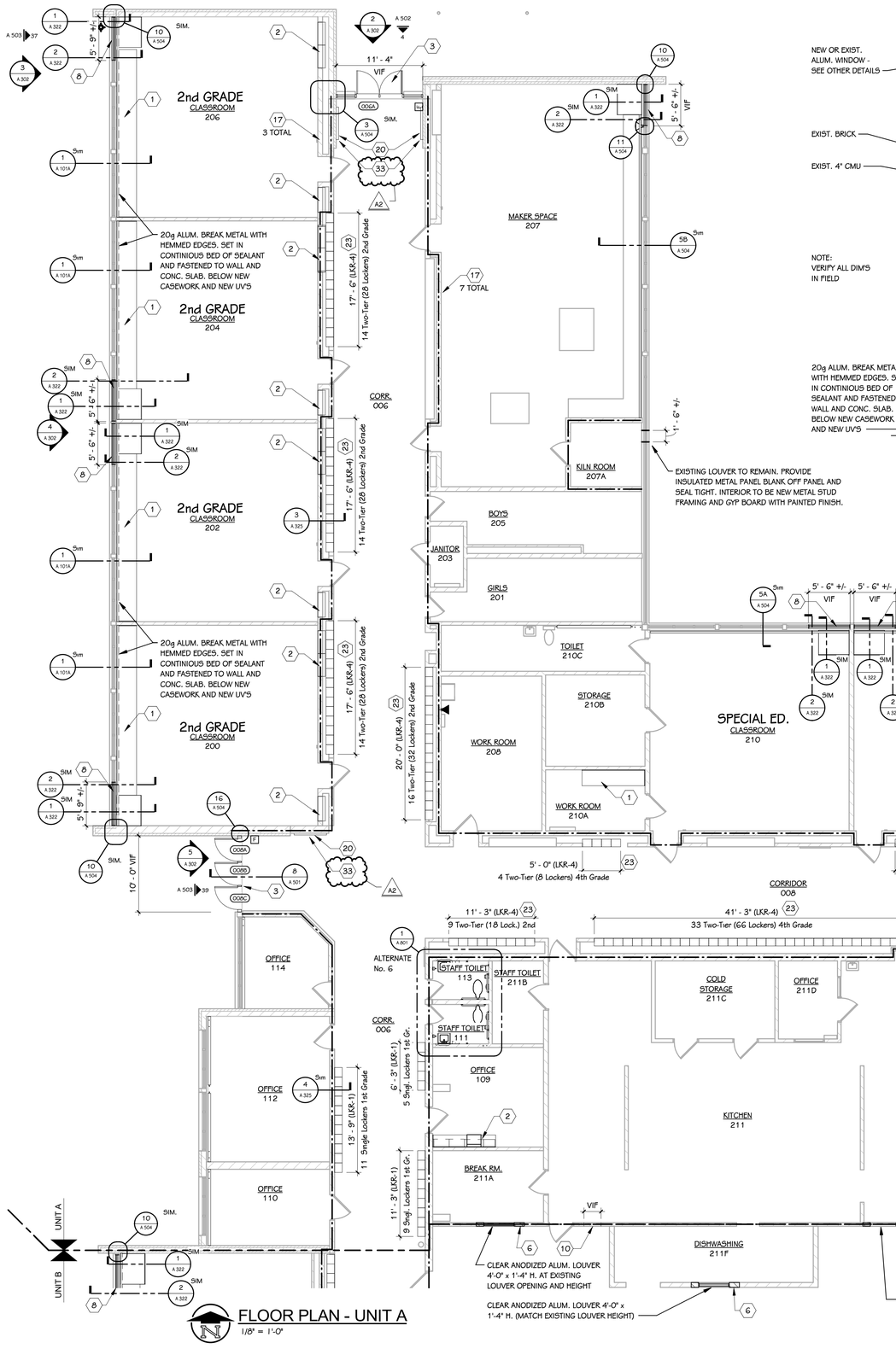
**PROJECT TITLE**
WOODS LAKE: A MAGNET CENTER FOR THE ARTS - REMODELING & SITE IMPROVEMENTS

**OWNER**
KALAMAZOO PUBLIC SCHOOLS
Kalamazoo, Michigan

**SHEET TITLE**
SITE DETAILS

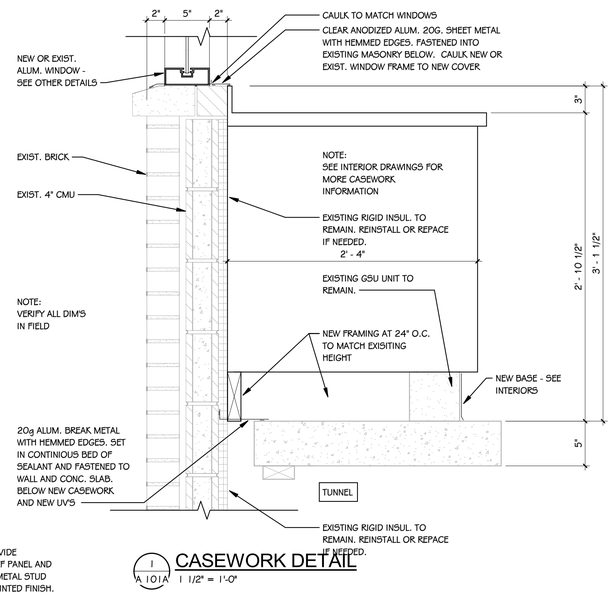
**DATE**
AUGUST 26, 2022

**SHEET NUMBER**
C 600
18-519.00




## FLOOR PLAN - UNIT A

1/8" = 1'-0"

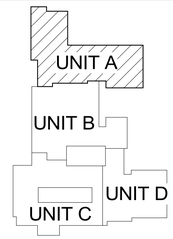



## CASEWORK DETAIL

1 1/2" = 1'-0"

| | |
|---|---|
| LKR-1 SINGLE-TIER, SURFACE MOUNTED | DETAIL 4/A325 |
| LKR-2: DOUBLE-TIER SURFACE MOUNTED | DETAIL 4/A325 |
| LKR-3 SINGLE-TIER RECESSED | DETAIL 3/A325 |
| LKR-4: DOUBLE-TIER RECESSED | DETAIL 3/A325 |

**WOODS LAKE: A MAGNET CENTER FOR THE ARTS -**




## KEY PLAN

SCALE: NO SCALE

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269.343.6133 PHONE


**ADDENDUM No. 2** **September 26, 2022**

**ISSUED FOR** **DATE**

**PROJECT TITLE**
WOODS LAKE: A MAGNET CENTER FOR THE ARTS - REMODELING & SITE IMPROVEMENTS

**OWNER**
KALAMAZOO PUBLIC SCHOOLS

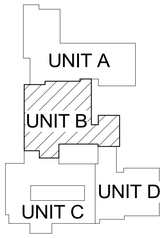
Kalamazoo, Michigan

**SHEET TITLE**
PARTIAL FLOOR PLAN - UNIT A

**DATE**
SEPTEMBER 1, 2022

**SHEET NUMBER**
A 101A
18-519.00

# WOODS LAKE: A MAGNET CENTER FOR THE ARTS -




**KEY PLAN**
SCALE: NO SCALE

## GENERAL NOTES

1. REFER TO CODE COMPLIANCE PLAN FOR WALL RATING LINES.
2. REFER TO FLOOR FINISH PLANS FOR INTERIOR ELEVATION CALLOUTS.
3. CONTRACTOR TO VERIFY AND CONFIRM ALL EXISTING DOOR AND WINDOW OPENINGS IN FIELD

## KEYED NOTES - NEW CONSTRUCTION

1 NEW CASEWORK (SEE INTERIOR DRAWINGS)
2 ALTERNATE #2 - NEW CASEWORK (SEE INTERIOR DRAWINGS)
3 NEW EXTERIOR INSULATED ALUM DOORS AND FRAME SYSTEM - SEE EXTERIOR ELEVATIONS AND DOOR SCHEDULE FOR MORE INFORMATION
4 NEW EXTERIOR ALUM. FENESTRATION SYSTEM - SEE EXT. ELEV. FOR MORE INFORMATION
5 NEW PRIMED AND PAINTED STEEL ROOF ACCESS LADDER AND CLEAR ANODIZED ALUM. ROOF HATCH - PATCH ROOF AROUND NEW ROOF ACCESS HATCH TO MATCH EXISTING WEATHER TIGHT.
6 TOOTH IN BRICK AND OR CMU AROUND NEW OPENING.
7 NEW EXTERIOR WALL - INFILL TO MATCH EXISTING. TOOTH IN BRICK AND BLOCK
8 NEW ALUM. LOUVER - COORD. WITH MECH. DRAWINGS
9 NEW EXTERIOR WALL
10 INFILL EXISTING CMU WALL FLUSH TO FACE - PRIME AND PAINT TO MATCH EXISTING. TOOTH IN CMU AS REQUIRED.
11 NEW ALUM. LOUVER INSTALLED IN EXISTING OPENING
12 NEW CEILING LOCATED AT EXISTING HEIGHT - PATCH PRIME AND PAINT TO MATCH EXIST. - PRIME AND PAINT ENTIRE CEILING TO MATCH EXISTING.
13 AT REMOVED RECESSED OR SEMI RECESSED CABINET HEATHER LOCATION INFILL WITH SALVAGED BRICKS OR NEW BRICKS TO MATCH EXISTING.
14 NEW CEILING LOCATED AT NEW HEIGHT
15 NEW 6" HIGH CONCRETE MECHANICAL PAD. FINAL SIZE AND LOCATION TO BE COORDINATED WITH MECHANICAL DRAWINGS AND WITH MECHANICAL EQUIPMENT DURING CONSTRUCTION
16 EXISTING CEILING TO REMAIN - PRIME AND PAINT
17 FILL CMU OPENING AT REMOVED TRANSFER GRILLES WITH NEW CMU. NEW CMU TO MATCH EXISTING. PRIME AND PAINT TO MATCH SURROUNDING. APPROX. OPENING SIZE IS 20"W x 10" TALL AT +/- 9'-4" AFF.
18 EXISTING LOUVER INFILL. INFILL WITH SALVAGED BRICK AND NEW CMU. TOOTH IN BRICK AND BLOCK AS REQUIRED. PAINT INTERIOR TO MATCH EXISTING.
19 INFILL BEHIND LOUVER W/ 3" INSULATED METAL PANEL (BLACK) AND SEAL TIGHT IN OPENING, AND INFILL WITH 8" CMU ON INSIDE OF ROOM AND PAINT TO MATCH EXISTING.
20 AT REMOVED SURFACE MOUNTED CABINET HEATHER LOCATION REMOVE AND REPLACE ANY DAMAGED AND STAINED BRICKS OR ANY BRICKS WITH FASTENERS, ABANDONED SLEEVES, ETC. WITH SALVAGED BRICKS OR NEW BRICKS TO MATCH EXISTING.
21 AT REMOVED SURFACE MOUNTED CABINET HEATHER LOCATION REMOVE AND REPLACE ANY DAMAGED AND STAINED GSU UNITS OR ANY GSU UNITS WITH FASTENERS, ABONDONED SLEEVES, ETC. WITH SALVAGED OR OWNER PROVIDED GSU UNITS TO MATCH EXISTING.
22 ENLARGE CONC. BASE BELOW UNIT VENTILATOR AS PER DETAIL 3/A323
23 CENTER LOCKERS IN EXISTING OPENING. PROVIDE EQUAL FILLER PANEL AT EACH END
24 NEW SOLID SURFACE WINDOW SILL FULL LENGTH OF WINDOW OPENING. EXTEND 1/2" PAST FACE OF WALL.
29 NEW ROOF PENETRATION AND ROOF CURB. SEE DETAILS. PATCH ROOF WEATHER TIGHT - SEE MECH. DRAWINGS.
30 EXISTING ROOF PENETRATION AND ROOF CURB - REUSE FOR NEW MECHANICAL EQUIPMENT - SEE MECHANICAL DRAWINGS.
31 NEW ROOF PENETRATION. SEE DETAILS. PATCH ROOF WEATHER TIGHT - SEE MECH. DRAWINGS.
32 EXIST. MECH. ROOF CURB. ABANDON AND CAP - SEE MECH. DRAWINGS.
33 AT REMOVED SURFACE MOUNTED CABINET HEATHER TERRAZOO FLOOR PATCHING REQUIRED - PATCH TO MATCH EXISTING - SEE INTERIORS

| | |
|---|---|
| LKR-:1 SINGLE-TIER, SURFACE MOUNTED | DETAIL 4/A325 |
| LKR-2: DOUBLE-TIER SURFACE MOUNTED | DETAIL 4/A325 |
| LKR-3 SINGLE-TIER RECESSED | DETAIL 3/A325 |
| LKR-4: DOUBLE-TIER RECESSED | DETAIL 3/A325 |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**ADDENDUM No. 2** **September 26, 2022**

**ISSUED FOR** **DATE**

**PROJECT TITLE**
WOODS LAKE: A MAGNET CENTER FOR THE ARTS - REMODELING & SITE IMPROVEMENTS

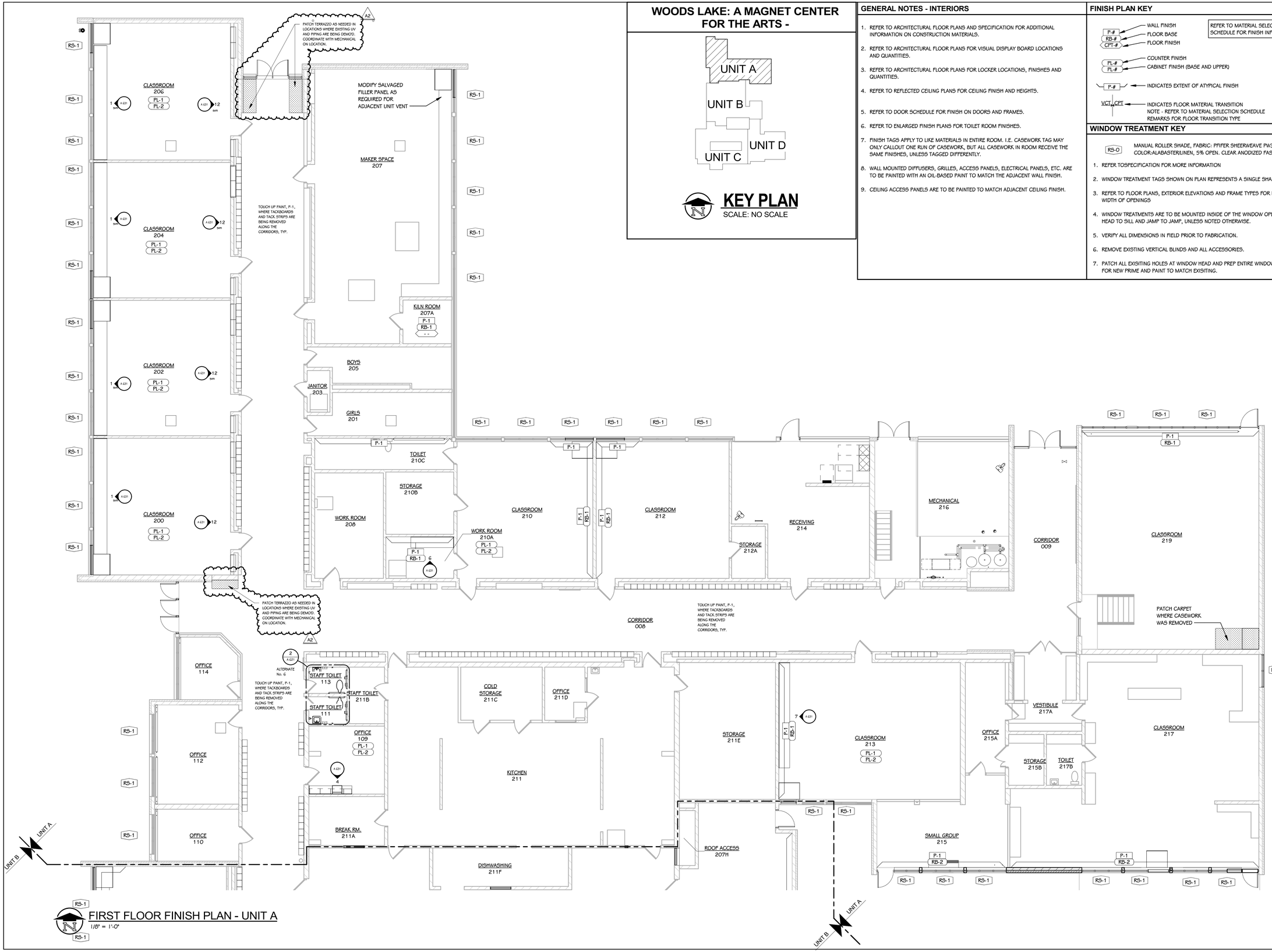
**OWNER**
KALAMAZOO PUBLIC SCHOOLS
Kalamazoo, Michigan

**SHEET TITLE**
PARTIAL FLOOR PLAN - UNIT B

**DATE**
SEPTEMBER 1, 2022

**SHEET NUMBER**
A 101B
18-519.00

FLOOR PLAN - UNIT B
1/8" = 1'-0"




FIRST FLOOR FINISH PLAN - UNIT A
1/8" = 1'-0"

## WOODS LAKE: A MAGNET CENTER FOR THE ARTS -




**KEY PLAN**
SCALE: NO SCALE

## GENERAL NOTES - INTERIORS

1. REFER TO ARCHITECTURAL FLOOR PLANS AND SPECIFICATION FOR ADDITIONAL INFORMATION ON CONSTRUCTION MATERIALS.
2. REFER TO ARCHITECTURAL FLOOR PLANS FOR VISUAL DISPLAY BOARD LOCATIONS AND QUANTITIES.
3. REFER TO ARCHITECTURAL FLOOR PLANS FOR LOCKER LOCATIONS, FINISHES AND QUANTITIES.
4. REFER TO REFLECTED CEILING PLANS FOR CEILING FINISH AND HEIGHTS.
5. REFER TO DOOR SCHEDULE FOR FINISH ON DOORS AND FRAMES.
6. REFER TO ENLARGED FINISH PLANS FOR TOILET ROOM FINISHES.
7. FINISH TAGS APPLY TO LIKE MATERIALS IN ENTIRE ROOM. I.E. CASEWORK TAG MAY ONLY CALLOUT ONE RUN OF CASEWORK, BUT ALL CASEWORK IN ROOM RECEIVE THE SAME FINISHES, UNLESS TAGGED DIFFERENTLY.
8. WALL MOUNTED DIFFUSERS, GRILLES, ACCESS PANELS, ELECTRICAL PANELS, ETC. ARE TO BE PAINTED WITH AN OIL-BASED PAINT TO MATCH THE ADJACENT WALL FINISH.
9. CEILING ACCESS PANELS ARE TO BE PAINTED TO MATCH ADJACENT CEILING FINISH.

## FINISH PLAN KEY

P-# — WALL FINISH
RB-# — FLOOR BASE
CPT-# — FLOOR FINISH
REFER TO MATERIAL SELECTION SCHEDULE FOR FINISH INFORMATION
PL-# — COUNTER FINISH
PL-# — CABINET FINISH (BASE AND UPPER)
P-# — INDICATES EXTENT OF ATYPICAL FINISH
VCT / CPT — INDICATES FLOOR MATERIAL TRANSITION
NOTE - REFER TO MATERIAL SELECTION SCHEDULE REMARKS FOR FLOOR TRANSITION TYPE

## WINDOW TREATMENT KEY

R5-0 — MANUAL ROLLER SHADE, FABRIC: PFIFER SHEERWEAVE PW3560, COLOR:ALABASTER/LINEN, 5% OPEN. CLEAR ANODIZED FASCIA

1. REFER TOSPECIFICATION FOR MORE INFORMATION
2. WINDOW TREATMENT TAGS SHOWN ON PLAN REPRESENTS A SINGLE SHADE
3. REFER TO FLOOR PLANS, EXTERIOR ELEVATIONS AND FRAME TYPES FOR HEIGHT AND WIDTH OF OPENINGS
4. WINDOW TREATMENTS ARE TO BE MOUNTED INSIDE OF THE WINDOW OPENING FROM HEAD TO SILL AND JAMP TO JAMP, UNLESS NOTED OTHERWISE.
5. VERIFY ALL DIMENSIONS IN FIELD PRIOR TO FABRICATION.
6. REMOVE EXISTING VERTICAL BLINDS AND ALL ACCESSORIES.
7. PATCH ALL EXISITING HOLES AT WINDOW HEAD AND PREP ENTIRE WINDOW HEAD AREA FOR NEW PRIME AND PAINT TO MATCH EXISITING.

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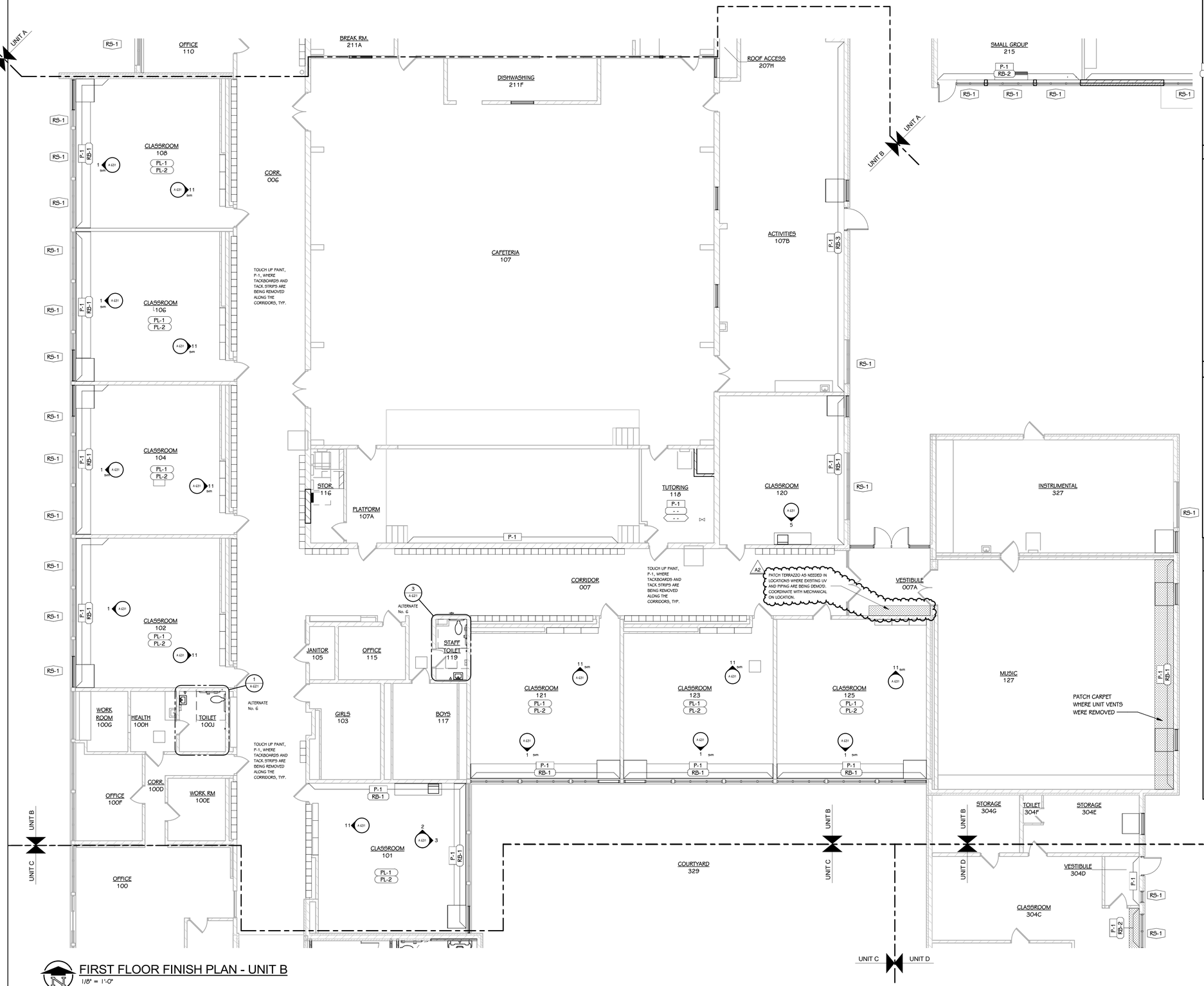
OWNER
KALAMAZOO PUBLIC SCHOOLS
Kalamazoo, Michigan

SHEET TITLE
FIRST FLOOR FINISH PLAN - UNIT A

DATE
SEPTEMBER 1, 2022

SHEET NUMBER
A 601A
18-519.00




## FIRST FLOOR FINISH PLAN - UNIT B

1/8" = 1'-0"

## FINISH PLAN KEY

REFER TO MATERIAL SELECTION SCHEDULE FOR FINISH INFORMATION

- P-# / RB-# / CPT-# — WALL FINISH / FLOOR BASE / FLOOR FINISH
- PL-# / PL-# — COUNTER FINISH / CABINET FINISH (BASE AND UPPER)
- P-# — INDICATES EXTENT OF ATYPICAL FINISH
- P-1 / RB-2 VCT / CPT — INDICATES FLOOR MATERIAL TRANSITION. NOTE - REFER TO MATERIAL SELECTION SCHEDULE REMARKS FOR FLOOR TRANSITION TYPE
- RS-1 / RS-1 — INDICATES MULTIPLE MATERIAL TYPES ON A SURFACE. REFER TO DETAIL OR ELEVATIONS.
- MULTI
- - P — INDICATES MATERIAL PATTERN. REFER TO DETAILS

## GENERAL NOTES - INTERIORS

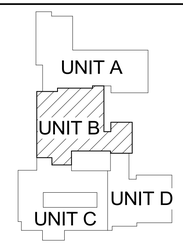
1. REFER TO ARCHITECTURAL FLOOR PLANS AND SPECIFICATION FOR ADDITIONAL INFORMATION ON CONSTRUCTION MATERIALS.
2. REFER TO ARCHITECTURAL FLOOR PLANS FOR VISUAL DISPLAY BOARD LOCATIONS AND QUANTITIES.
3. REFER TO ARCHITECTURAL FLOOR PLANS FOR LOCKER LOCATIONS, FINISHES AND QUANTITIES.
4. REFER TO REFLECTED CEILING PLANS FOR CEILING FINISH AND HEIGHTS.
5. REFER TO DOOR SCHEDULE FOR FINISH ON DOORS AND FRAMES.
6. REFER TO ENLARGED FINISH PLANS FOR TOILET ROOM FINISHES.
7. FINISH TAGS APPLY TO LIKE MATERIALS IN ENTIRE ROOM. I.E. CASEWORK TAG MAY ONLY CALLOUT ONE RUN OF CASEWORK, BUT ALL CASEWORK IN ROOM RECEIVE THE SAME FINISHES, UNLESS TAGGED DIFFERENTLY.
8. WALL MOUNTED DIFFUSERS, GRILLES, ACCESS PANELS, ELECTRICAL PANELS, ETC. ARE TO BE PAINTED WITH AN OIL-BASED PAINT TO MATCH THE ADJACENT WALL FINISH.
9. CEILING ACCESS PANELS ARE TO BE PAINTED TO MATCH ADJACENT CEILING FINISH.

## WINDOW TREATMENT KEY

RS-0 — MANUAL ROLLER SHADE, FABRIC: PFIFER SHEERWEAVE PW3560, COLOR:ALABASTER/LINEN, 5% OPEN. CLEAR ANODIZED FASCIA

1. REFER TOSPECIFICATION FOR MORE INFORMATION
2. WINDOW TREATMENT TAGS SHOWN ON PLAN REPRESENTS A SINGLE SHADE
3. REFER TO FLOOR PLANS, EXTERIOR ELEVATIONS AND FRAME TYPES FOR HEIGHT AND WIDTH OF OPENINGS
4. WINDOW TREATMENTS ARE TO BE MOUNTED INSIDE OF THE WINDOW OPENING FROM HEAD TO SILL AND JAMP TO JAMP, UNLESS NOTED OTHERWISE.
5. VERIFY ALL DIMENSIONS IN FIELD PRIOR TO FABRICATION.
6. REMOVE EXISTING VERTICAL BLINDS AND ALL ACCESSORIES.
7. PATCH ALL EXISITING HOLES AT WINDOW HEAD AND PREP ENTIRE WINDOW HEAD AREA FOR NEW PRIME AND PAINT TO MATCH EXISITING.

## WOODS LAKE: A MAGNET CENTER FOR THE ARTS -




## KEY PLAN

SCALE: NO SCALE

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OWNER
KALAMAZOO PUBLIC SCHOOLS
Kalamazoo, Michigan

SHEET TITLE
FIRST FLOOR FINISH PLAN - UNIT B

DATE
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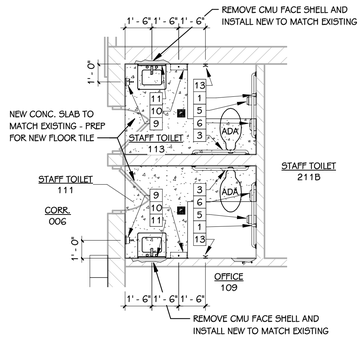
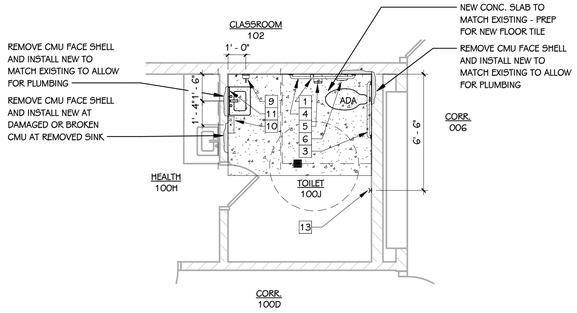


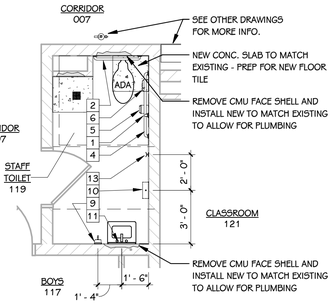

## ALTERNATE No. 6
## STAFF TOILET ENLARGED PLAN

1 / A 801 — 1/4" = 1'-0"




## ALTERNATE No. 6
## ADA/BF STAFF TOILET ENLARGED PLAN

2 / A 801 — 1/4" = 1'-0"




## ALTERNATE No. 6
## STAFF TOILET ENLARGED PLAN

3 / A 801 — 1/4" = 1'-0"

TOILET ROOM NOTES:
UNLESS NOTED ON THIS SHEET - ALL DIMENSIONS AND LOCATIONS FOR ALL TOILET ROOM FIXTURES AND ACCESSORIES ARE ON DRAWING SHEET G101

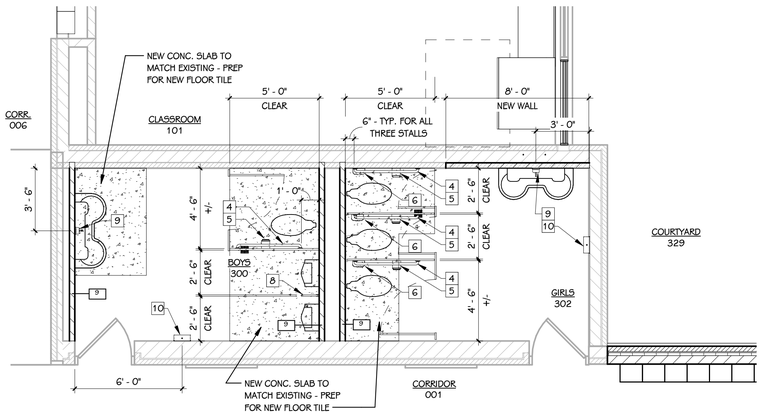
TOILET ROOMS BEING REMODELED ARE NOT ADA/BF UNLESS NOTED ON ENLARGED PLANS ON THIS DRAWING. WHERE POSSIBLE EFFORTS HAVE BEEN MADE TO IMPROVE THE ACCESSIBILITY OF THESE TOILET ROOMS. OTHER TOILET ROOMS IN THIS FACILITY ARE ACCESSIBLE.

## ACCESSORY MATRIX

| DESCRIPTION | OP | OI | CP | CI | NIC |
|---|---|---|---|---|---|
| CODE REQUIRED INTERIOR SIGNAGE (ALL TOILET ROOMS, STAIRS, RAMPS, ELEVATORS, ELEVATOR SPRINKLER SHUT-OFF VALVE, AREAS OF REFUGE, TWO-WAY COMMUNICATION IN AREA OF REFUGE AND ASSEMBLY OCCUPANT LOADS | | | X | X | |
| WASTE BASKET | X | X | | | |
| GRAB BARS | | | X | X | |
| MIRRORS | | | X | X | |
| PAPER TOWEL DISPENSERS | X | | | X | |
| SANITARY NAPKIN DISPOSAL | | | X | X | |
| TOILET TISSUE DISPENSERS | X | | | X | |
| COAT HOOKS | | | X | X | |
| SOAP DISPANSER | X | | | X | |
| TOILET PARTITIONS | | | X | X | |
| URINAL SCREEN | | | X | X | |

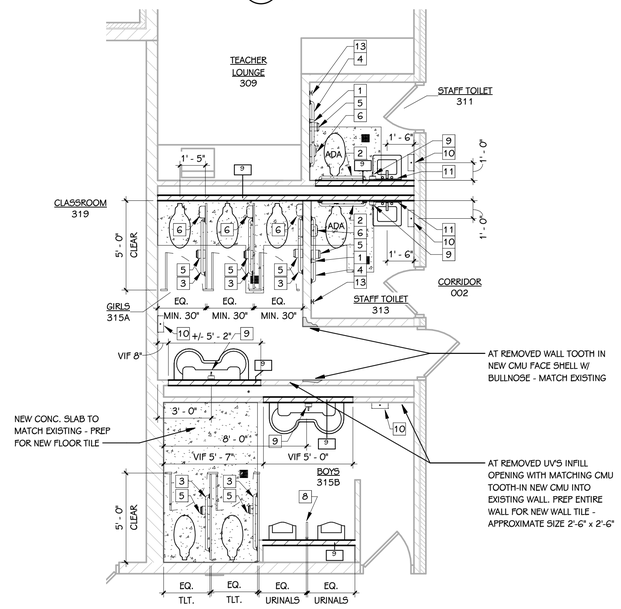
### ACCESSORY MATRIX NOTES

1. OP = OWNER PURCHASED, OI = OWNER INSTALLED, CP = CONTRACTOR PURCHASED, CI = CONTRACTOR INSTALLED.
2. DIMENSIONS INDICATED ARE TYPICAL UNLESS NOTED OTHERWISE ON PLANS.
3. GENERIC PLUMBING FIXTURES ARE SHOWN. REFER TO PLUMBING DRAWINGS AND SPECIFICATIONS FOR FIXTURE TYPES, MANUFACTURER'S AND MOUNTING HEIGHTS.
4. CODE REQUIRES INTERIOR SIGNAGE IS THE MINIMUM REQUIRED FOR OCCUPANCY. COORDINATE REQUIREMENT WITH OWNER IF THEY ARE PROVIDING INTERIOR SIGNAGE.




## ALTERNATE No. 6
## STUDENT TOILETS ENLARGED PLAN

4 / A 801 — 1/4" = 1'-0"




## ALTERNATE No. 6
## STUDENT TOILETS ENLARGED PLAN

5 / A 801 — 1/4" = 1'-0"

### KEYED NOTES - ENLARGED PLAN

1 18" VERTICAL STAINLESS STEEL GRAB BAR
2 30" STAINLESS STEEL GRAB BAR
3 36" STAINLESS STEEL GRAB BAR
4 42" STAINLESS STEEL GRAB BAR
5 TOILET PAPER DISPENSER
6 SANITARY NAPKIN DISPOSAL
7 TOILET PARTITION
8 URINAL SCREEN - HEAVY DUTY CONTINUOUS BRACKET FULL SCREEN HEIGHT
9 SOAP DISPENSER
10 PAPER TOWEL DISPENSER
A2 11 STAINLESS STEEL FRAMED MIRROR (18"W x 36"H)
12 WASTE BASKET
13 COAT HOOK

REMOVE AND DISPOSE EXISTING UV AND INFILL OPENING WITH MATCHING TOOTH-IN CMU AND FINISH WITH NEW WALL TILE - SEE INTERIOR DRAWINGS.
REMOVE AND DISPOSE EXISTING TOILET ROOM PARTITIONS, ACCESSORIES, AND PLUMBING FIXTURES.
REMOVE AND DISPOSE EXISTING WALL TILE AND BASE

ROOM (315B)

REMOVE AND DISPOSE EXISTING TOILET ROOM PARTITIONS, ACCESSORIES, AND PLUMBING FIXTURES.
REMOVE AND DISPOSE EXISTING WALL TILE AND BASE

ROOM (313)

REMOVE AND DISPOSE EXISTING WALL TILE AND BASE
REMOVE AND DISPOSE EXISTING TOILET ROOM PARTITIONS, ACCESSORIES, AND PLUMBING FIXTURES.

ROOM (300)

REMOVE AND DISPOSE EXISTING WALL TILE AT CHASE WALLS AND PREP FOR NEW WALL TILE.

ROOM (119)

REMOVE AND DISPOSE OF EXISTING TOILET PARTITIONS

ROOM (119)

REMOVE AND DISPOSE EXISTING TOILET ROOM PARTITIONS, ACCESSORIES, AND PLUMBING FIXTURES.
REMOVE AND DISPOSE EXISTING WALL TILE AND BASE

ROOM (315A)

REMOVE AND DISPOSE EXISTING TOILET ROOM PARTITIONS, ACCESSORIES, AND PLUMBING FIXTURES.

ROOM (100J)

REMOVE AND DISPOSE EXISTING WALL TILE AND BASE

ROOM (300)

REMOVE AND DISPOSE ALL EXISTING TOILET ROOM ACCESSORIES.

ROOM (113)

REMOVE AND DISPOSE EXISTING MIRROR
REMOVE AND DISPOSE OF EXISTING WALL TILE AND BASE AND INSTALL NEW TILE.
REMOVE AND DISPOSE EXISTING UV AND INFILL OPENING WITH MATCHING TOOTH-IN CMU AND FINISH WITH NEW WALL TILE - SEE INTERIOR DRAWINGS.
REMOVE AND DISPOSE EXISTING SINK

GIRLS (315A) AND BOYS (315B)

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OWNER
KALAMAZOO PUBLIC SCHOOLS
Kalamazoo, Michigan

SHEET TITLE
ALTERNATE No. 6 - ENLARGED TOILET ROOM FLOOR PLANS

DATE
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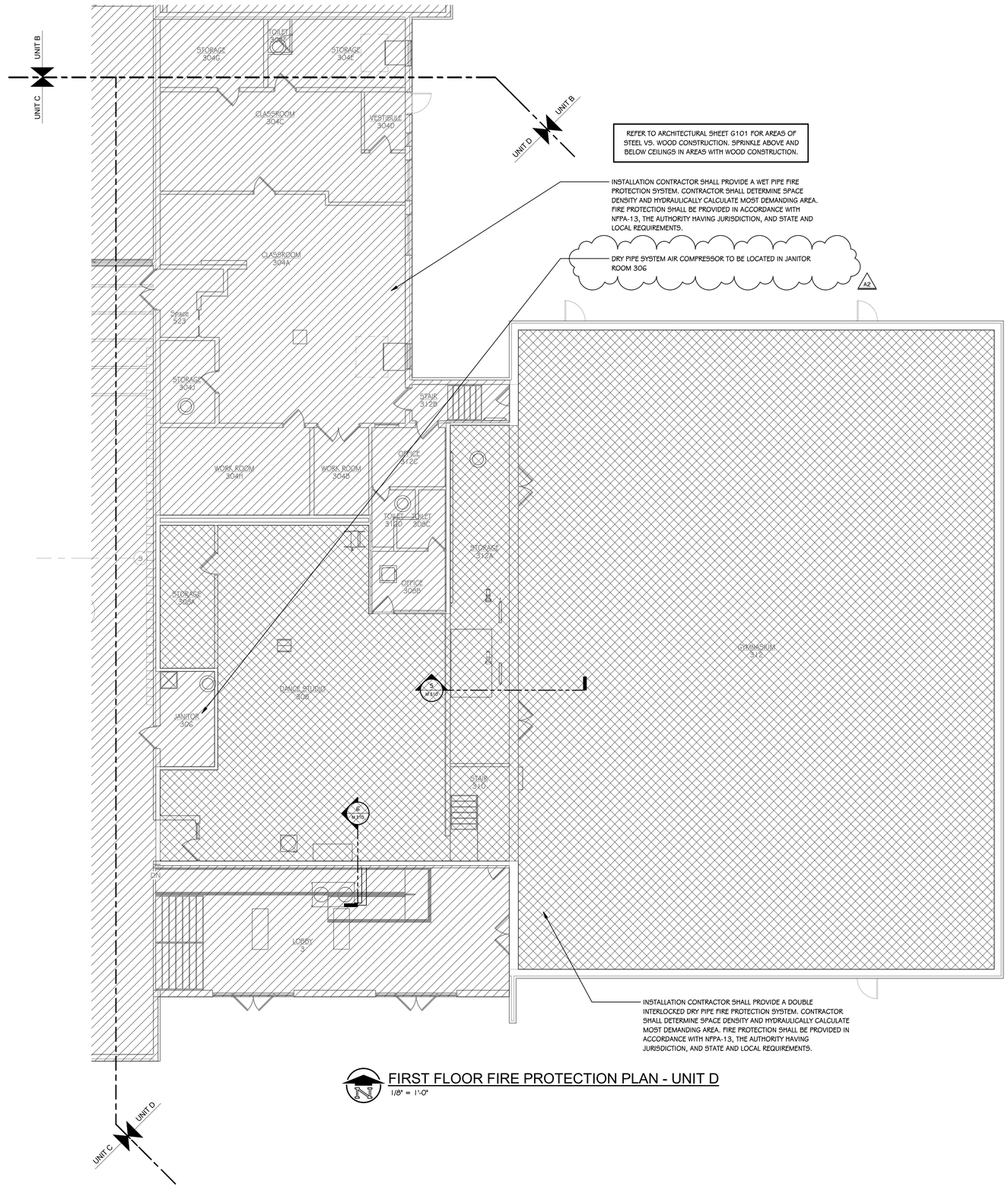
SHEET NUMBER
A 801
18-519.00




## FIRST FLOOR FIRE PROTECTION PLAN - UNIT D

1/8" = 1'-0"

FIRE STOPPING NOTES:

1. INSTALL COMPLETE ASSEMBLY AS REQUIRED PER FIRE STOPPING FIRE TEST.
2. PROVIDE AT ALL FIRE RATED FLOORS. SEE ARCH. DRAWINGS FOR FIRE RATING HOURS.
3. REFER TO SPEC. SECTION 07 8413.
4. MULTIPLE PIPES CAN BE USED IF IN COMPLIANCE WITH FIRE TEST.
5. THESE ARE GENERIC DETAILS; OTHER FIRE STOPPING SYSTEMS CAN BE USED IF THEY ARE IN COMPLIANCE WITH FIRE TEST REQUIREMENTS.
6. IF FIRE TEST ARE NOT AVAILABLE FOR T-RATINGS PROVIDE HIGHEST AVAILABLE T-RATING BUT NOT TO EXCEED F-RATING OF FIRE ASSEMBLY.
7. FIRE PROTECTION CRITERIA: EDUCATION OCCUPANCY = LIGHT HAZARD

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OWNER
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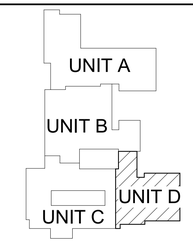
WOODS LAKE ELEMENTARY




KEY PLAN
SCALE: NO SCALE

0' 5' 10' 15' 25'
1/8" = 1'-0" GRAPHIC SCALE

SHEET TITLE
FIRST FLOOR FIRE PROTECTION PLAN - UNIT D

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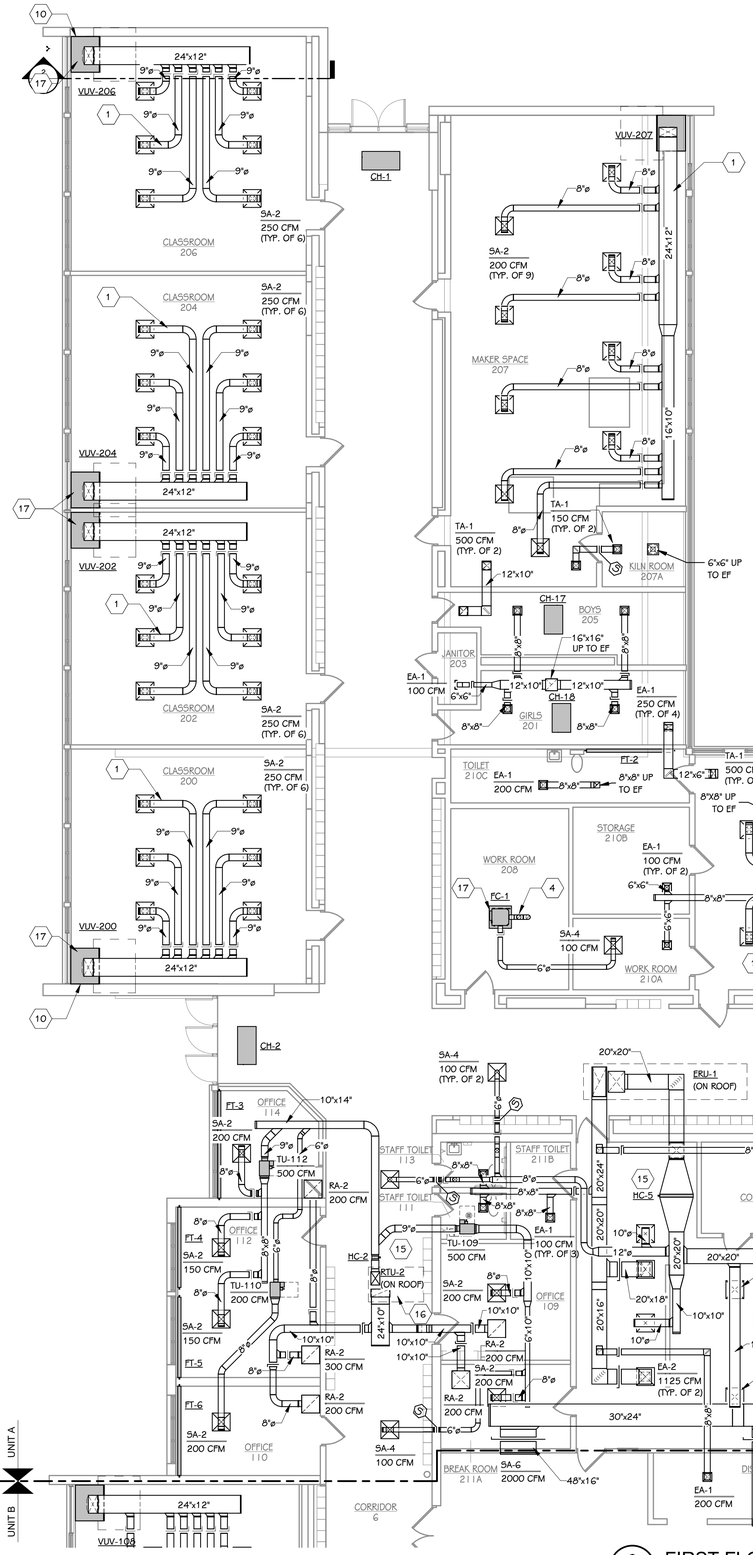
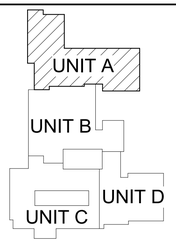



## FIRST FLOOR SHEET METAL PLAN - UNIT A

1/8" = 1'-0"

## WOODS LAKE ELEMENTARY




## KEY PLAN

SCALE: NO SCALE

0' 5' 10' 15' 25'

1/8" = 1'-0" GRAPHIC SCALE

## KEYED NOTES - MECHANICAL

1. ROUTE ALL DUCTWORK BETWEEN LAY-IN CEILING AND HARD LID. RELOCATE ALL ELECTRICAL CONDUITS AS REQUIRED TO FACILITATE INSTALLATION. COORDINATE WITH ALL OTHER TRADES (I.E. ELECTRICAL, STRUCTURAL, ETC.) TO ENSURE PROPER FITMENT AND LOCATION OF DIFFUSERS. (TYP. OF ALL)
2. CLEAN/PREP ALL NEW EXPOSED DUCTWORK AND PRIME FOR PAINT.
3. DUCT DOWN WITH 10" ROUND DUCT AND PROVIDE BALANCE DAMPER.
4. 6" FAI DUCT WITH MOTORIZED OPERATED DAMPER UP THROUGH ROOF. TERMINATE WITH GOOSENECK FITTING AND BIRD SCREEN A MINIMUM OF 24" ABOVE ROOF.
5. 
6. 40"x60" DUCT DROP FOR RELIEF HOOD SERVING AHU-1. REFER TO RELIEF HOOD DETAIL.
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| ADDENDUM #2 | 09-26-2022 |
|---|---|
| ISSUED FOR | DATE |

PROJECT TITLE
WOODS LAKE: A MAGNET CENTER FOR THE ARTS - REMODELING & SITE IMPROVEMENTS

OWNER
KALAMAZOO PUBLIC SCHOOLS

Kalamazoo, Michigan

SHEET TITLE
FIRST FLOOR SHEET METAL PLAN - UNIT A

DATE
SEPTEMBER 1, 2022

SHEET NUMBER
M 101A
18-519.00

## KEYED NOTES - MECHANICAL

1. ROUTE ALL DUCTWORK BETWEEN LAY-IN CEILING AND HARD LID. RELOCATE ALL ELECTRICAL CONDUITS AS REQUIRED TO FACILITATE INSTALLATION. COORDINATE WITH ALL OTHER TRADES (I.E. ELECTRICAL, STRUCTURAL, ETC.) TO ENSURE PROPER FITMENT AND LOCATION OF DIFFUSERS. (TYP. OF ALL)
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3. DUCT DOWN WITH 10" ROUND DUCT AND PROVIDE BALANCE DAMPER.
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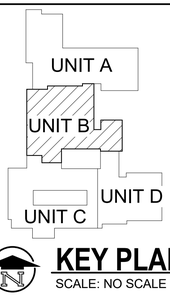


KEY PLAN
SCALE: NO SCALE

0' 10' 5' 15' 25'
1/8" = 1'-0" GRAPHIC SCALE

FIRST FLOOR SHEET METAL PLAN - UNIT B
1/8" = 1'-0"

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OWNER
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Kalamazoo, Michigan

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DATE
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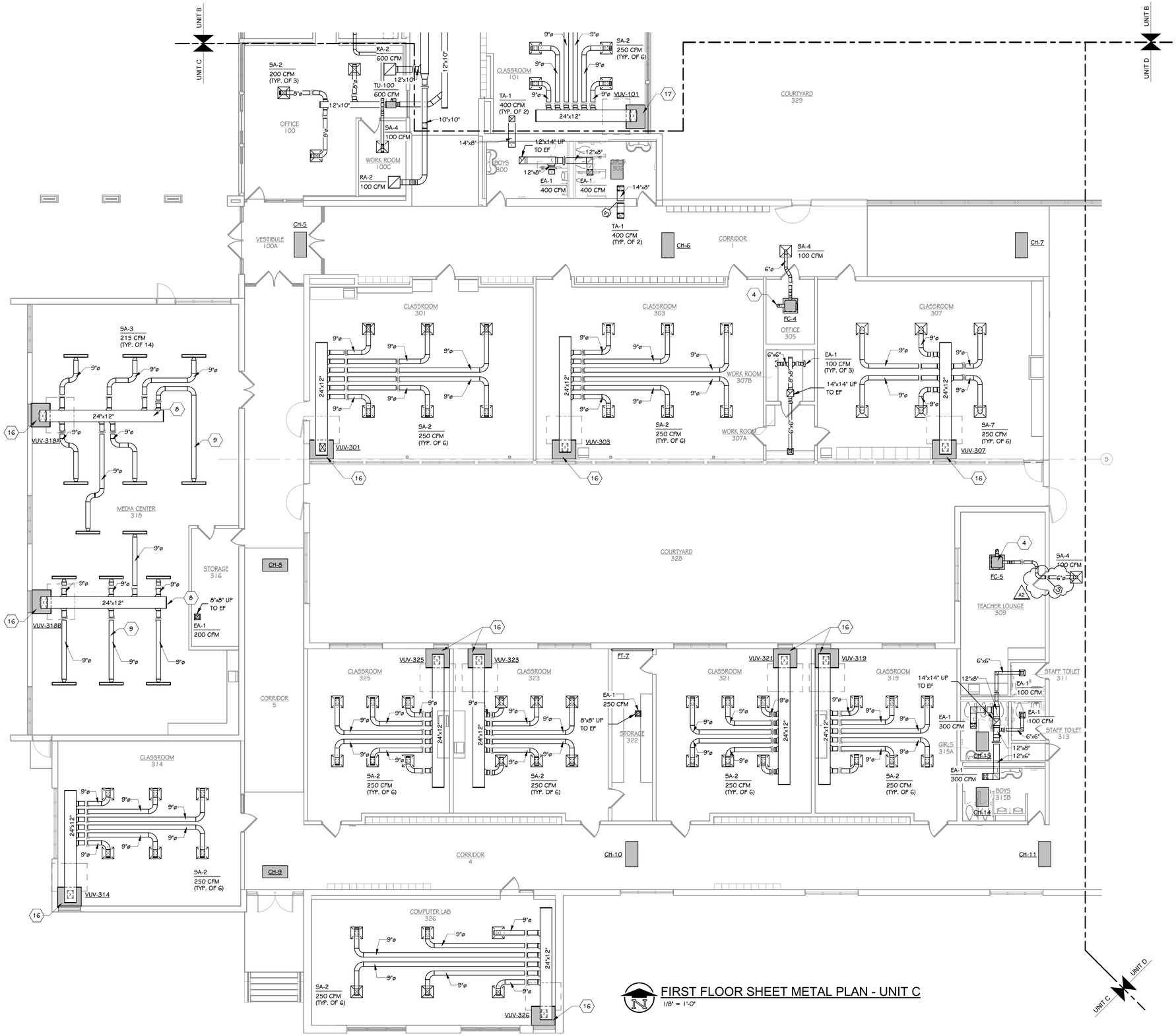


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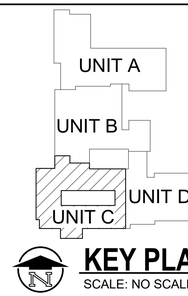


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OWNER
KALAMAZOO PUBLIC SCHOOLS
Kalamazoo, Michigan

SHEET TITLE
FIRST FLOOR SHEET METAL PLAN - UNIT C

DATE
SEPTEMBER 1, 2022

SHEET NUMBER
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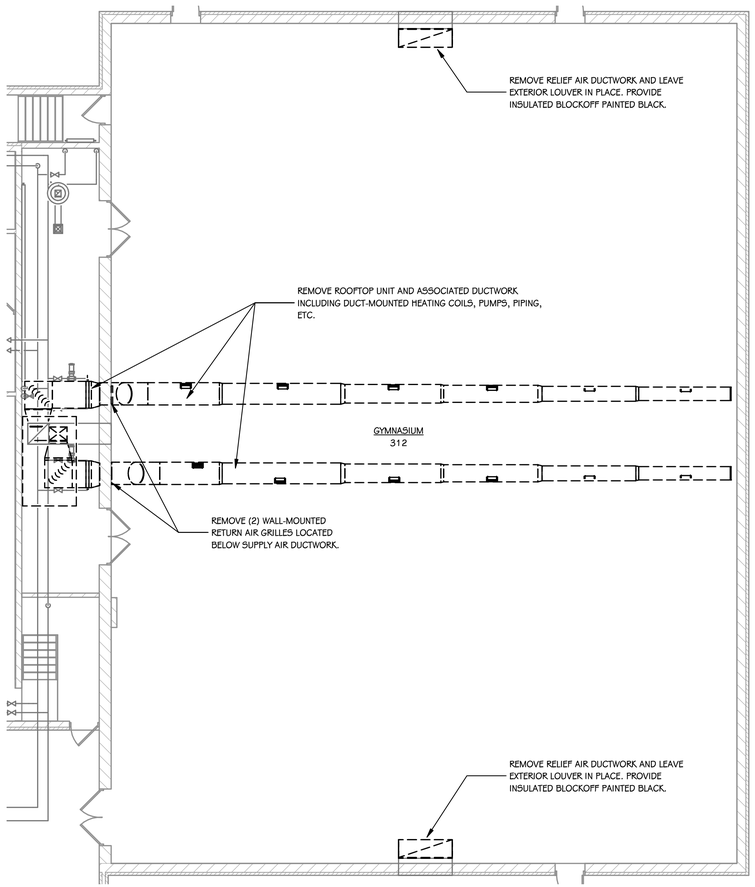
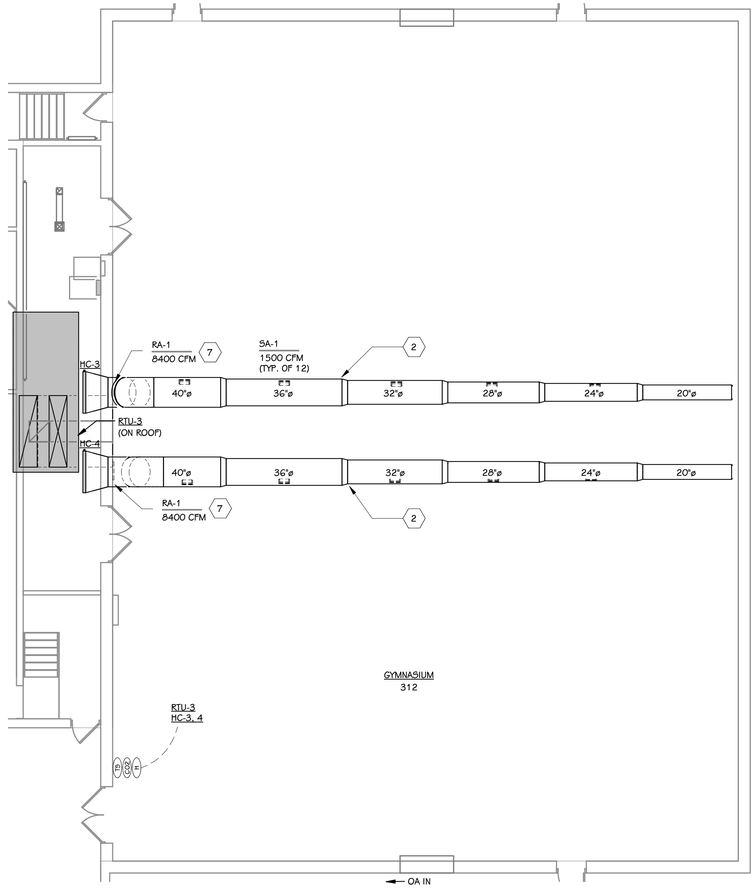



1 / M 801 FIRST FLOOR MECHANICAL DEMOLITION PLAN - UNIT D - ALTERNATE No. 4
1/8" = 1'-0"




2 / M 801 FIRST FLOOR SHEET METAL PLAN - UNIT D - ALTERNATE No. 4
1/8" = 1'-0"

**DUCT MOUNTED HEATING COILS - HOT WATER** — BASED ON CARRIER

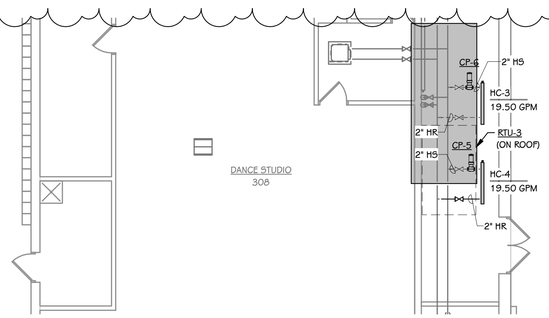
| MARK | MODEL | FACE SIZE | M.B.H. | FLOW RATE (GPM) | AIRFLOW (CFM) | MAX AIR VELOCITY (FPM) | APD (IN WC) | WPD (FT) | A.T.R. | LOCATION | REMARK |
|---|---|---|---|---|---|---|---|---|---|---|---|
| HC-3 | HW589 | 36"x56" | 480.3 | 32.4 | 8400 CFM | 600 | 0.50 | 4.00 | 87 | SERVES RTU-3 (GYMNASIUM) | 1 |
| HC-4 | HW589 | 36"x56" | 480.3 | 32.4 | 8400 CFM | 600 | 0.50 | 4.00 | 87 | SERVES RTU-3 (GYMNASIUM) | 1 |

NOTES:
1. BASED ON 130°F EWT, 30°F dT.

**PUMPS** — BASED ON BELL & GOSSETT

| MARK | MODEL | FLOW RATE (GPM) | HEAD (FT) | PUMP EFF. (%) | MOTOR DATA | | | | SYSTEM | LOCATION | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | HP | BHP | RPM | VOLTAGE | | | |
| CP-5 | e-60 1.25x1.25x5.25 | 19.6 | 25.00 | 40.5 | 0.5 | 0.4 | 1800 | 208/3 | HC-4 | STORAGE 312A | 2 |
| CP-6 | e-60 1.25x1.25x5.25 | 19.6 | 25.00 | 40.5 | 0.5 | 0.4 | 1800 | 208/3 | HC-3 | STORAGE 312A | 2 |

NOTES:
1. VFD PROVIDED BY TCC. ALL AVAILABLE POINTS TO BE REVEALED.
2. CENTRIFUGAL IN-LINE PUMP.




3 / M 801 FIRST FLOOR HVAC PIPING PLAN - UNIT D - ALTERNATE No. 4
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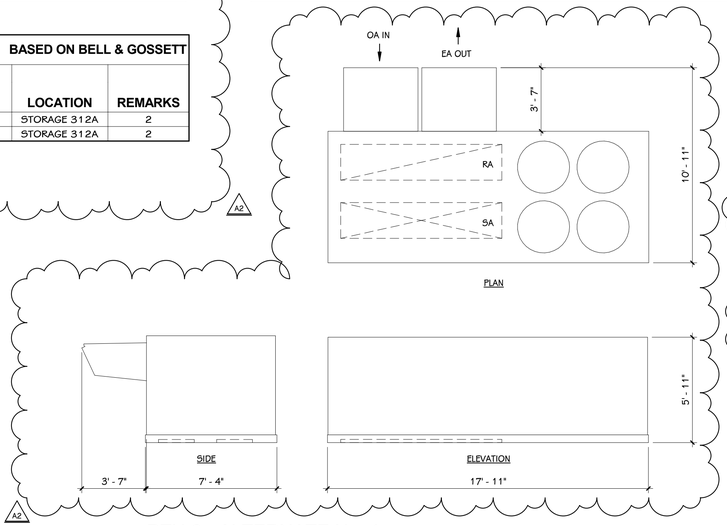


RTU-3 - ALTERNATE No. 4
SCALE: NONE

**RTU-3 GYM**

AREA SERVED: GYM
BASED ON: CARRIER MODEL 50AG
TYPE: VARIABLE VOLUME UNIT WITH DX COOLING.
OUTSIDE AIR: MIN. 3,000 CFM BASED ON CO2, BAROMETRIC RELIEF AND 100% (LOW LEAK) ENTHALPY ECONOMIZER
WEIGHT: 5,600 LBS
UNIT MOUNTING: 14" HIGH ROOF CURB

OA & RA DAMPERS: OPPOSED BLADE LOW-LEAK DAMPERS W/MODULATING ACTUATOR

OUTDOOR AIR INTAKE: TEMPERATURE CONTROLS CONTRACTOR TO PROVIDE EBTRON GOLD SERIES THERMAL DISPERSION AIRFLOW MEASUREMENT DEVICE WITH OUTPUT DENSITY "D". LOCATE IN INTAKE HOOD. A2

EA DAMPER: GRAVITY

FILTERS: SUPPLY: 2" PLEATED MERV 8 FILTER

AIR-COOLED DX COIL: 482.7 TMBH, 369.6 SMBH, 77.1°F DB/65.1°F WB EAT, 56.6°F DB/55.6°F WB LAT, 550 FPM MAX FACE VELOCITY, CIRCUIT -A: 2-STAGE, HOT GAS REHEAT, STD. SCROLL, 5S IAQ DRAIN PAN, CIRCUIT -B: 2-STAGE, HOT GAS REHEAT, DIGITAL SCROLL, 5S IAQ DRAIN PAN. A2

HOT WATER COIL: DUCT-MOUNTED HW COIL(S) (SEE HW COIL SCHEDULES).

SUPPLY FAN:

16,800 CFM @ 1.3" ESP AND 1.45" TSP, 1,061 RPM, 19.56 BHP, 20 HP PREMIUM EFF. FAN MOTOR WITH VFD, 208/3/60.

ELECTRICAL: SINGLE POINT POWER WITH DISCONNECT AND 120V POWERED GFCI OUTLET, 208/3/60, 244 MCA, 300 MOP.

CONTROLS: PROVIDE FACTORY CONTROLS AND BACNET CARD FOR SYSTEM INTEGRATION. A2

**GRILLES, REGISTERS, & DIFFUSERS** — BASED ON PRICE

| MARK | FACE SIZE | NECK SIZE | MODEL | CFM RANGE | VCD | MATERIAL | FINISH | INSTALLATION | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| SA-1 | - | 10"x24" | HCD2 | 950-1600 | YES | ALUMINUM | PRIME COAT | DUCT-MOUNTED | PAINT TO MATCH DUCTWORK |
| RA-1 | 38"x50" | 36"x48" | 95 | 0-8400 | NO | ALUMINUM | CLEAR ANO | WALL-MOUNTED | 0° DEFLECTION - 1/2" BAR SPACING |

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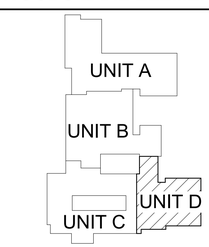
**WOODS LAKE ELEMENTARY**

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WOODS LAKE: A MAGNET CENTER FOR THE ARTS - REMODELING & SITE IMPROVEMENTS

OWNER
KALAMAZOO PUBLIC SCHOOLS
Kalamazoo, Michigan

SHEET TITLE
FIRST FLOOR MECHANCIAL PLAN - ALTERNATE No. 4

DATE
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SHEET NUMBER
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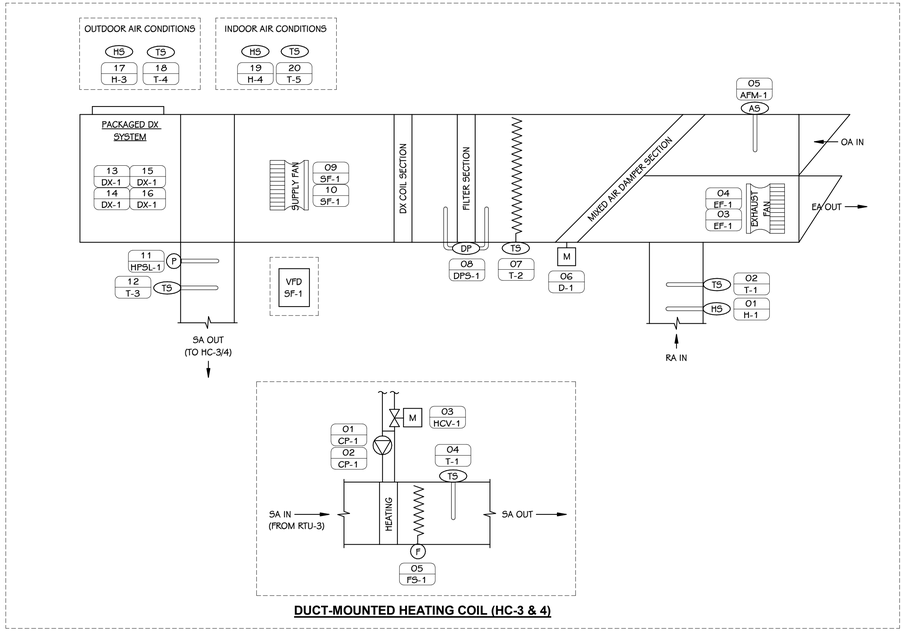
18-519.00







**DUCT-MOUNTED HEATING COIL (HC-3 & 4)**

## ROOFTOP UNIT (RTU-3) CONTROLS DIAGRAM

SCALE: NONE

### CONTROL POINTS

| NUMBER | TAG | DESCRIPTION | ALARM | TREND | REMARKS |
|---|---|---|---|---|---|
| HC-3 & 4 | | | | | |
| 01 | CP-1 | PUMP ENABLE/DISABLE | | ▮ | |
| 02 | CP-1 | PUMP STATUS | ▮ | | |
| 03 | HCV-1 | HEATING CONTROL VALVE OUTPUT | | ▮ | |
| 04 | T-1 | HEATING COIL DISCHARGE AIR TEMPERATURE | | ▮ | |
| 05 | FS-1 | FREEZE STAT ALARM STATUS | ▮ | | HARD WIRED SAFETY - MANUAL RESET |
| RTU-3 | | | | | |
| 01 | H-1 | RETURN AIR HUMIDITY | ▮ | ▮ | DISPLAY ENTHALPY BASED ON T&H READINGS |
| 02 | T-1 | RETURN AIR TEMPERATURE | ▮ | ▮ | DISPLAY ENTHALPY BASED ON T&H READINGS |
| 05 | AFM-1 | OUTDOOR AIR FLOW | | ▮ | |
| 06 | D-1 | MIXED AIR DAMPER OUTPUT | | ▮ | |
| 07 | T-2 | MIXED AIR TEMPERATURE | ▮ | ▮ | ALARM AT 45°F ADJ. |
| 08 | DPS-1 | FILTER STATUS | ▮ | ▮ | ALARM AT 0.75" ADJ. |
| 09 | SF-1 | STATUS | ▮ | ▮ | |
| 10 | SF-1 | ENABLE/DISABLE | | ▮ | |
| 11 | HPSL-1 | HIGH PRESSURE STATIC LIMIT | ▮ | ▮ | HARD WIRED SAFETY - MANUAL RESET |
| 12 | T-3 | DISCHARGE AIR TEMPERATURE | ▮ | ▮ | DISPLAY ENTHALPY BASED ON T&H READINGS |
| 13 | DX-1 | COOLING SYSTEM ALARM STATUS | ▮ | ▮ | |
| 14 | DX-1 | COOLING SYSTEM ENABLE/DISABLE | | ▮ | |
| 15 | DX-1 | COOLING SYSTEM RUN STATUS | | ▮ | |
| 16 | DX-1 | COOLING SYSTEM STAGE | | ▮ | |
| 17 | H-3 | OUTDOOR AIR HUMIDITY | | ▮ | DISPLAY ENTHALPY BASED ON T&H READINGS (GLOBAL) |
| 18 | T-4 | OUTDOOR AIR TEMPERATURE | | ▮ | DISPLAY ENTHALPY BASED ON T&H READINGS (GLOBAL) |
| 19 | H-4 | INDOOR AIR HUMIDITY SENSOR | ▮ | ▮ | |
| 20 | T-5 | INDOOR AIR TEMPERATURE | ▮ | ▮ | SEE SPACE TEMPERATURE SCHEDULE BELOW |

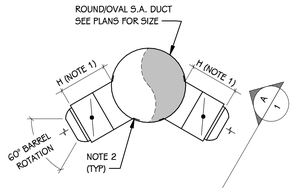
### SEQUENCE OF OPERATIONS

NOTE: ALL LABOR, MATERIAL, EQUIPMENT AND SOFTWARE NOT SPECIFICALLY INDICATED WITHIN CONTROLS DRAWINGS THAT IS REQUIRED TO MEET THE FUNCTIONAL INTENT OF THE SEQUENCE OF OPERATIONS SHALL BE PROVIDED WITHOUT ADDITIONAL COST. POINT LISTS SHALL BE A GUIDE TO THE POINTS REQUIRED FOR CONTROL SYSTEM. FINAL POINTS SHALL BE DETERMINED BY SEQUENCE OF OPERATIONS. ALL SET POINTS SHALL BE OPERATOR ADJUSTABLE THROUGH THE BMS. ALL POINTS SHALL BE TRENDABLE.

ROOFTOP UNIT (RTU-3) CONTROLS PER MANUFACTURER

1. UNIT IS A COMBINATION OF OUTDOOR SINGLE ZONE VARIABLE VOLUME UNIT, WITH SUPPLY FAN, DUCT-MOUNTED HEATING COIL(S), DIRECT EXPANSION COIL WITH ASSOCIATED HOT GAS REHEAT COIL, MERV13 FILTERS, OUTDOOR - EXHAUST - RETURN AIR DAMPERS AND ACTUATORS, CONSTANT VOLUME EXHAUST FAN AND AIR TEMPERATURE/AIRFLOW SENSORS. UNIT IS EQUIPPED WITH PACKAGED CONTROLS.
2. UNIT SHALL HAVE ADJUSTABLE SCHEDULE BASED ON THE FOLLOWING:
   A. TIME OF DAY (TOD) SCHEDULE.
3. UNIT SHALL HAVE THE FOLLOWING ADJUSTABLE SETPOINTS:
   A. OCCUPIED 75°F COOLING / 70°F HEATING
4. REFER TO MANUFACTURER'S SEQUENCE FOR UNIT OPERATION.
5. SAFETY SHUTDOWNS:
   A. PROVIDE A HIGH STATIC PRESSURE SENSOR IN THE SUPPLY DISCHARGE PLENUM TO DE-ENERGIZE THE UNIT UPON SENSING A HIGH STATIC PRESSURE OF 4.0" W.C.. PROVIDE MANUAL RESET.
   B. LOW TEMPERATURE LIMIT: REFER TO DUCT-MOUNTED HEATING COIL SEQUENCE OF OPERATION.
   C. FAN FAILURE WILL DISABLE UNIT CLOSING THE OUTDOOR AIR DAMPER AND OPEN THE RETURN AIR DAMPER.
   D. DUCT MOUNTED IONIZATION SMOKE DETECTOR(S) PROVIDED WITH UNIT SHALL DE-ENERGIZE THE UNIT WHENEVER PRODUCTS OF COMBUSTION ARE SENSED.
6. THE FOLLOWING WILL BE PROVIDED BY AND INSTALLED BY THE TEMPERATURE CONTROLS CONTRACTOR:
   A. AIRFLOW MONITORING STATION. AFMS SHALL BE USED TO BALANCE, MONITOR, AND TREND OUTDOOR AIR. THE PACKAGED UNIT CONTROLS SHALL CONTROL OUTDOOR AIR DAMPER OPERATION IN ALL MODES.

REFER TO SHEET MG01 FOR DUCT-MOUNTED HEATING COIL (HC-3 & 4) SEQUENCE OF OPERATION



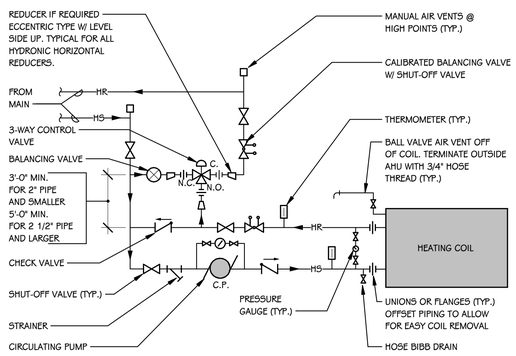

REFER TO PLANS & SCHEDULE FOR DIFFUSERS
PAINT TO MATCH SUPPLY DUCTWORK

NOTES:

1. DIMENSION "H" EQUALS HEIGHT OF DAMPER BLADE PLUS 2" (MIN.) TO ALLOW FOR INSTALLATION OF DAMPER WITHOUT DAMPER BLADE PROTRUDING INTO STREAM OF BRANCH MAIN DUCT.
2. SEAL (SUITABLE FOR PAINTING) ALL SEAMS AND JOINTS AIR TIGHT (TYP.)

## DUCT MOUNTED DIFFUSER DETAIL

SCALE: NONE




## DUCT-MOUNTED HEATING COIL PIPING DETAIL (2-WAY VALVE)

SCALE: NONE

A2 ADDENDUM #2 09-26-2022

ISSUED FOR DATE

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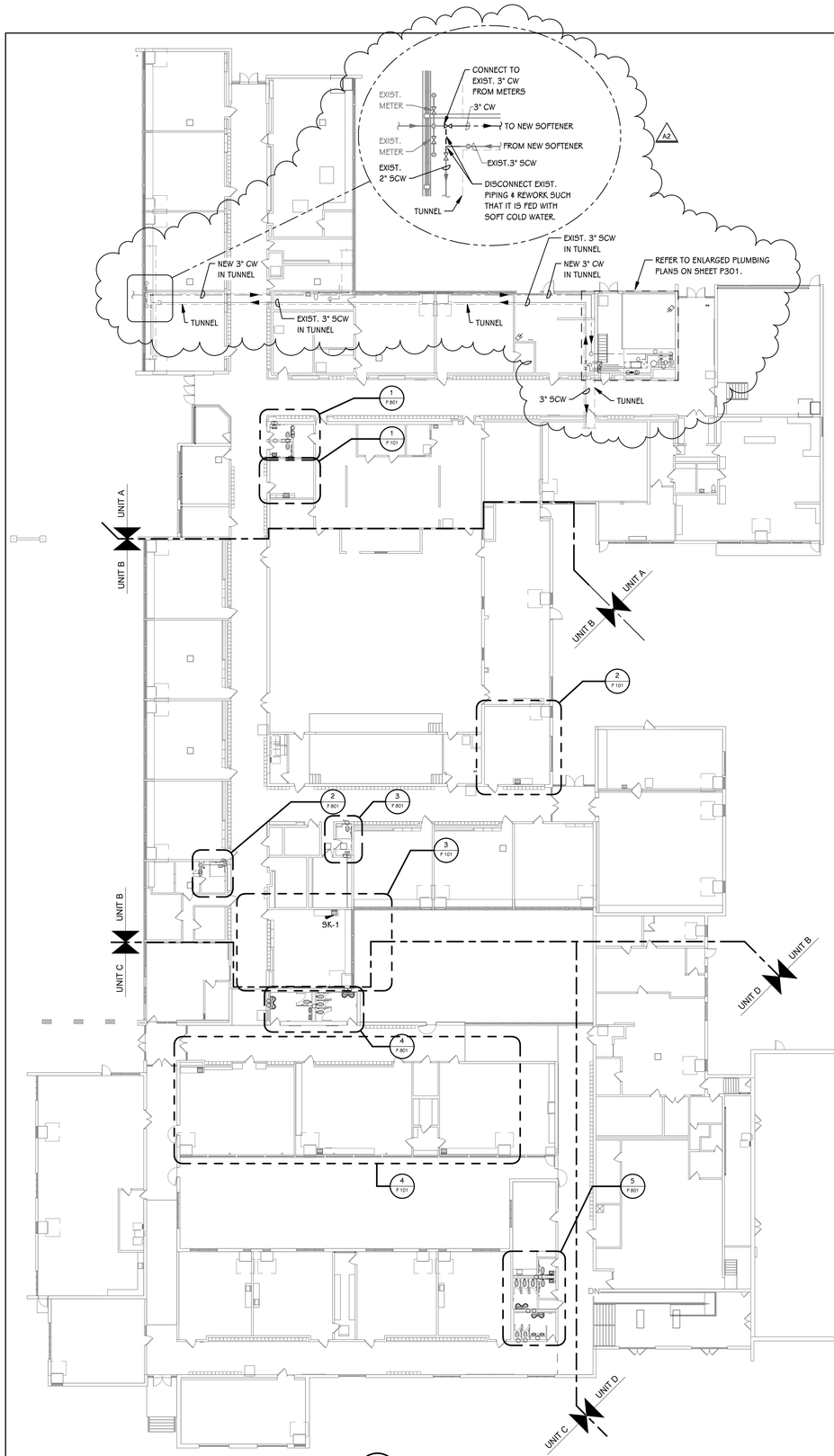
PROJECT TITLE
WOODS LAKE: A MAGNET CENTER FOR THE ARTS - REMODELING & SITE IMPROVEMENTS

OWNER
KALAMAZOO PUBLIC SCHOOLS
Kalamazoo, Michigan

SHEET TITLE
MECHANICAL DETAILS & TEMPERATURE CONTROLS - ALTERNATE No. 4

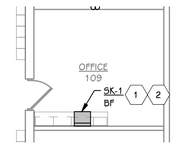
DATE
SEPTEMBER 1, 2022

SHEET NUMBER
M 802
18-519.00



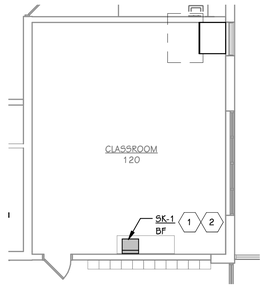

## FIRST FLOOR PLUMBING PLAN

3/64" = 1'-0"



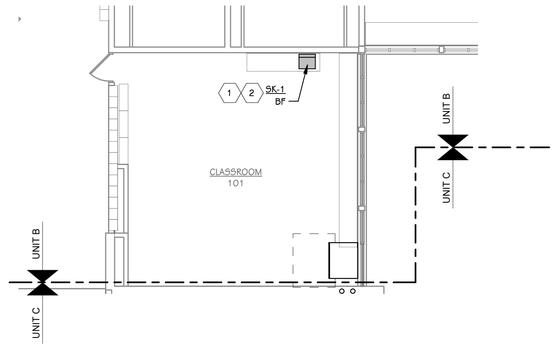

## 1 P 101 FIRST FLOOR PLUMBING PLAN - UNIT A

1/8" = 1'-0"



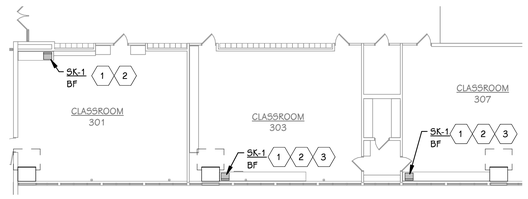

## 2 P 101 FIRST FLOOR PLUMBING PLAN - UNIT B

1/8" = 1'-0"




## 3 P 101 FIRST FLOOR PLUMBING PLAN - UNIT B

1/8" = 1'-0"



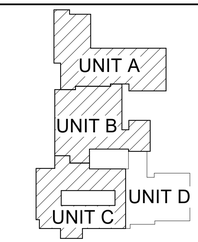

## 4 P 101 FIRST FLOOR PLUMBING PLAN - UNIT C

1/16" = 1'-0"

### KEYED NOTES - PLUMBING

1. CONNECT 1/2" HW, 1/2" CW, 1-1/2" SAN, AND 1-1/2" V TO EXISTING.
2. EXTEND ALL SERVICES (I.E. CW, HW, SAN, V, ETC.) TO NEW FIXTURE AS REQUIRED TO FACILITATE INSTALLATION.
3. PROVIDE AIR ADMITTANCE VALVE TO TERMINATE ABOVE FLOOD RIM.
4. RELOCATE EXIST. SANITARY BELOW FLOOR AS REQ'D FOR NEW WATER CLOSET LOCATION.
5. TIE INTO EXIST. SANITARY BELOW FLOOR.
6. ROUTE ALL NEW PIPING DOWN INSIDE EXISTING WALL TO NEW FIXTURE. COORDINATE WITH GENERAL TRADES FOR CHANNELING AND REPAIR OF EXISTING WALL. REFER TO ARCHITECTURAL DEMO SHEETS.
7. 1/2" CW, 1/2" HW, 3" SAN, ⊄ 1 1/2" VENT TO WASH FOUNTAIN.
8. 1" CW, 4" SAN, ⊄ 1 1/2" VENT TO WATER CLOSET.
9. 1/2" CW, 1/2" HW, 3" SAN, ⊄ 1 1/2" VENT TO LAV.
10. 3/4" CW, 3" SAN, ⊄ 1 1/2" VENT TO URINAL.

### WOODS LAKE ELEMENTARY




## KEY PLAN

SCALE: NO SCALE

0' 5' 10' 15' 25'

1/8" = 1'-0" GRAPHIC SCALE

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| ISSUED FOR | DATE |

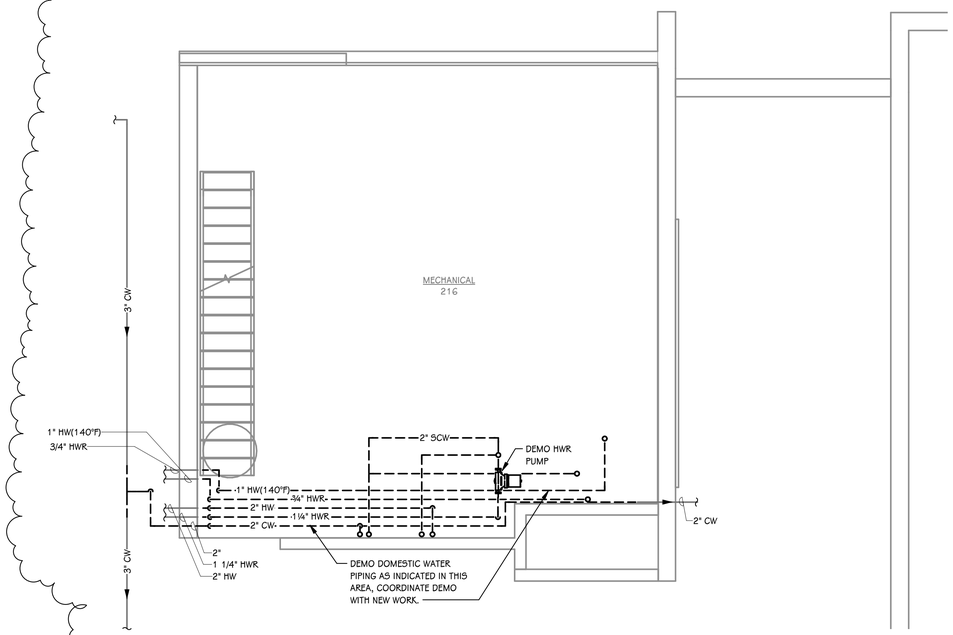
PROJECT TITLE
WOODS LAKE: A MAGNET CENTER FOR THE ARTS - REMODELING & SITE IMPROVEMENTS

OWNER
KALAMAZOO PUBLIC SCHOOLS
Kalamazoo, Michigan

SHEET TITLE
PARTIAL FIRST FLOOR PLUMBING PLANS

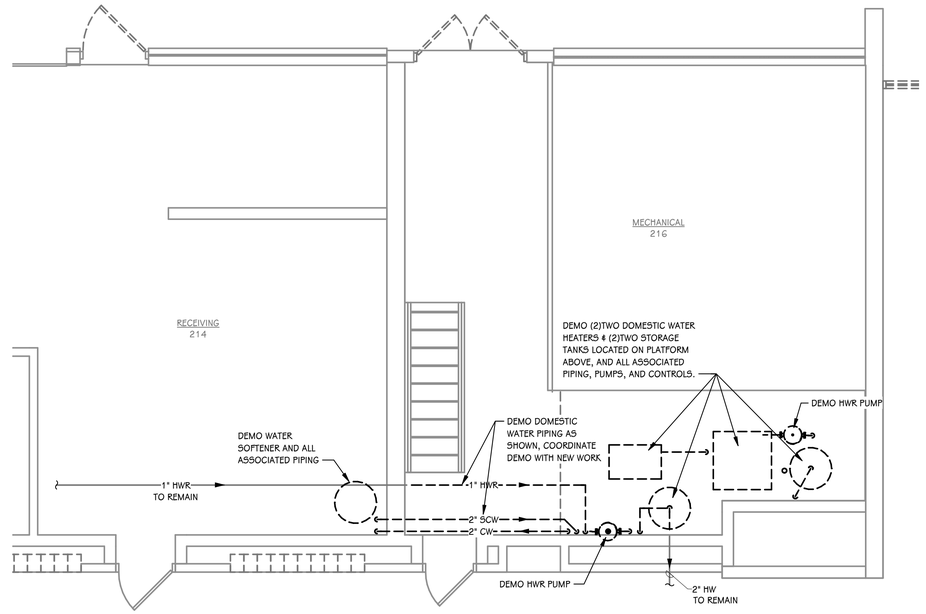
DATE
SEPTEMBER 1, 2022

SHEET NUMBER
P 101
18-519.00



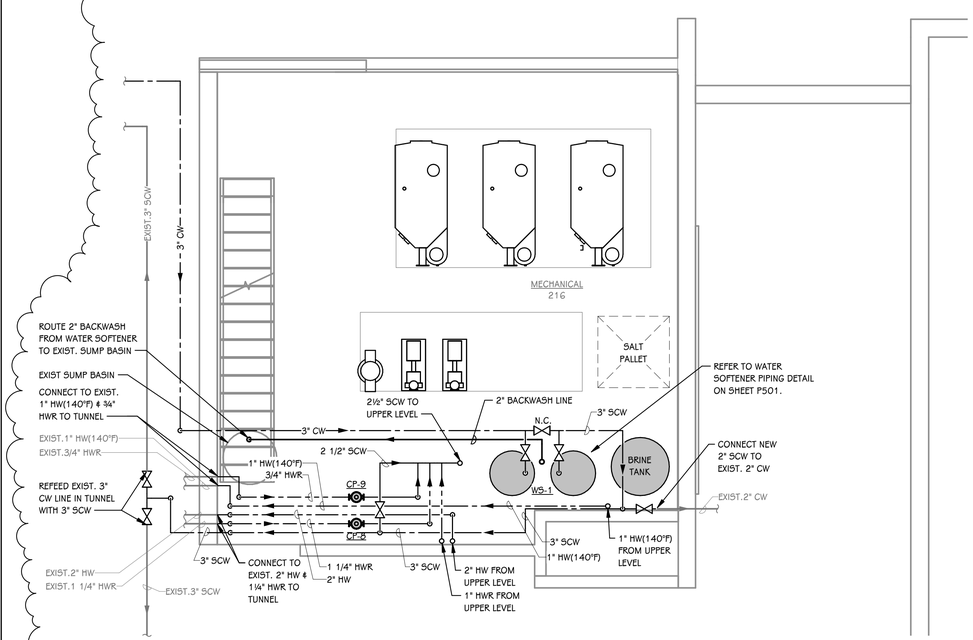

ENLARGED LOWER LEVEL BOILER ROOM PLUMBING DEMOLITION PLAN

1/4" = 1'-0"



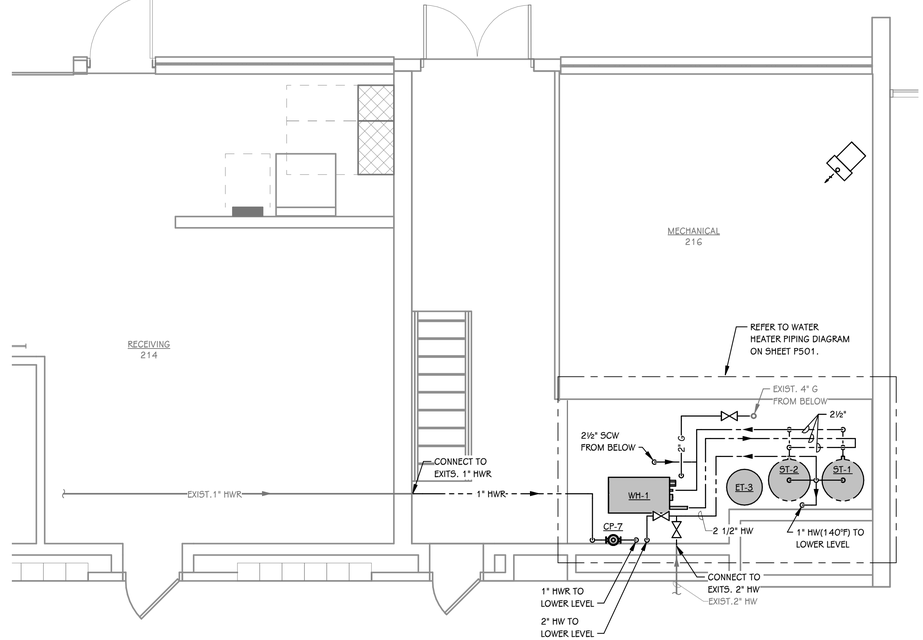

ENLARGED UPPER LEVEL BOILER ROOM PLUMBING DEMOLITION PLAN

1/4" = 1'-0"




ENLARGED LOWER LEVEL BOILER ROOM PLUMBING PLAN

1/4" = 1'-0"




ENLARGED UPPER LEVEL BOILER ROOM PLUMBING PLAN

1/4" = 1'-0"

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| ISSUED FOR | DATE |
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| ADDENDUM #2 | 09-26-2022 |

PROJECT TITLE
WOODS LAKE: A MAGNET CENTER FOR THE ARTS - REMODELING & SITE IMPROVEMENTS

OWNER
KALAMAZOO PUBLIC SCHOOLS
Kalamazoo, Michigan

SHEET TITLE
ENLARGED PLUMBING PLANS

DATE
SEPTEMBER 1, 2022

A2

SHEET NUMBER
P 301
18-519.00

## CONTROL POINTS

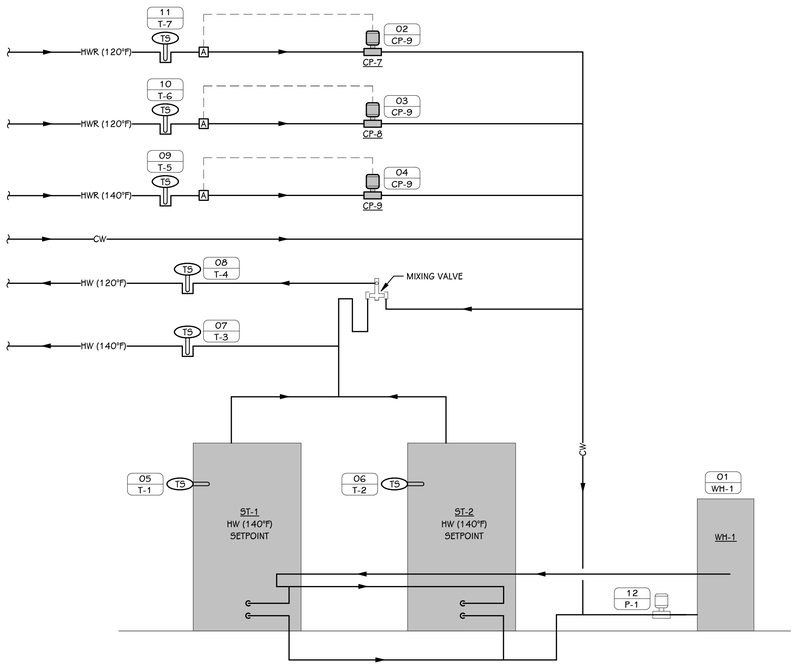
| NUMBER | TAG | DESCRIPTION | ALARM | TREND | REMARKS |
|---|---|---|---|---|---|
| DOMESTIC HOT WATER SYSTEM | | | | | |
| 01 | WH-1 | RUN STATUS | ▮ | ▮ | |
| 02 | CP-9 | HWR PUMP STATUS | ▮ | ▮ | |
| 03 | CP-9 | HWR PUMP STATUS | ▮ | ▮ | |
| 04 | CP-9 | HWR PUMP STATUS | ▮ | ▮ | |
| 05 | T-1 | STORAGE TANK TEMPERATURE | ▮ | ▮ | 140°F |
| 06 | T-2 | STORAGE TANK TEMPERATURE | ▮ | ▮ | 140°F |
| 07 | T-3 | SUPPLY WATER TEMPERATURE | ▮ | ▮ | 140°F |
| 08 | T-4 | SUPPLY WATER TEMPERATURE | ▮ | ▮ | 140°F |
| 09 | T-5 | RETURN WATER TEMPERATURE | | ▮ | 140°F |
| 10 | T-6 | RETURN WATER TEMPERATURE | | ▮ | 120°F |
| 11 | T-7 | RETURN WATER TEMPERATURE | | ▮ | 120°F |
| 12 | P-1 | WH CIRC. PUMP STATUS | ▮ | ▮ | CIRC. PUMP PROVIDED WITH WATER HEATER |

## SEQUENCE OF OPERATIONS

NOTE: ALL LABOR, MATERIAL, EQUIPMENT AND SOFTWARE NOT SPECIFICALLY INDICATED WITHIN CONTROLS DRAWINGS THAT IS REQUIRED TO MEET THE FUNCTIONAL INTENT OF THE SEQUENCE OF OPERATIONS SHALL BE PROVIDED WITHOUT ADDITIONAL COST. POINT LISTS SHALL BE A GUIDE TO THE POINTS REQUIRED FOR CONTROL SYSTEM. FINAL POINTS SHALL BE DETERMINED BY SEQUENCE OF OPERATIONS. ALL SET POINTS SHALL BE OPERATOR ADJUSTABLE THROUGH THE BMS. ALL POINTS SHALL BE TRENDABLE.

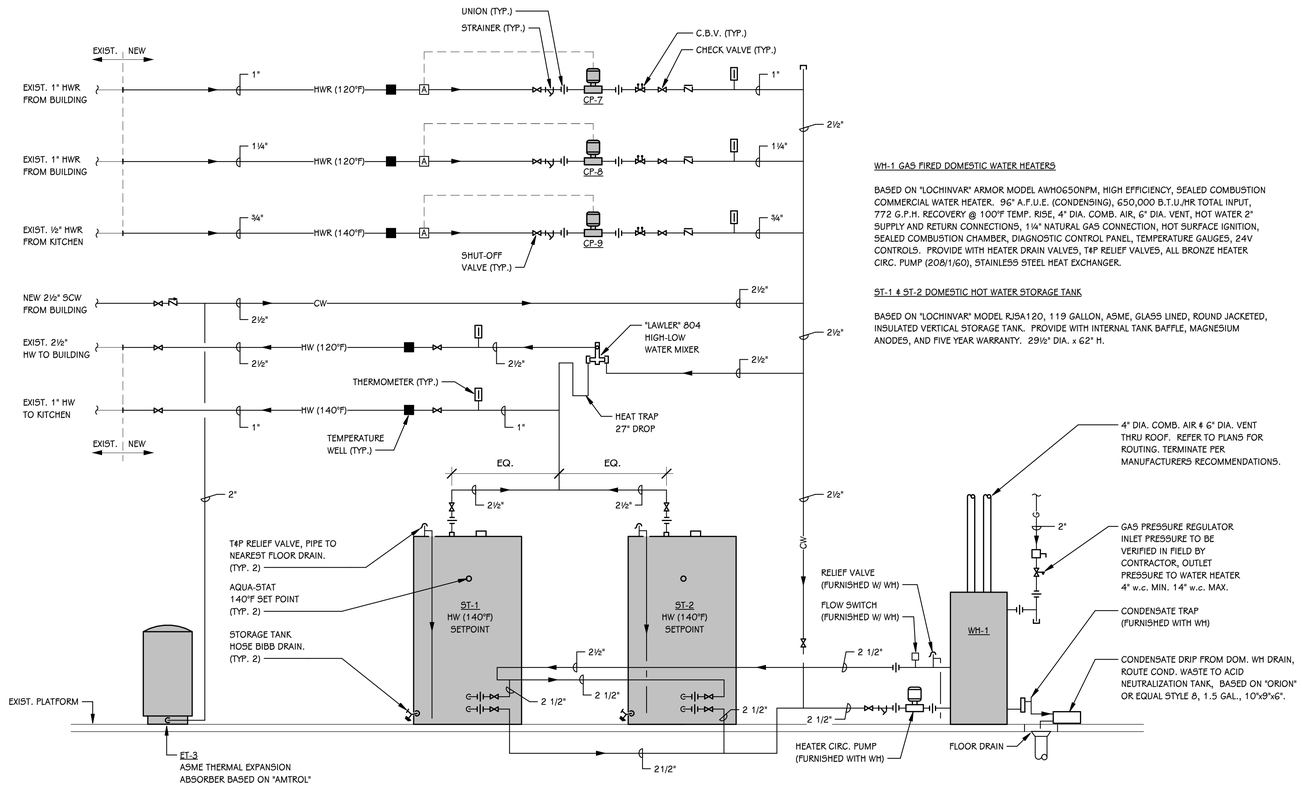
WATER HEATER

1. PROVIDE DIRECT DIGITAL CONTROLS (DDC) FOR WATER HEATER SYSTEM MONITORING.
   A. SYSTEM SHALL BE MONITORED BY DDC BASED ON THE FOLLOWING:
      a. WATER HEATER RUN STATUS
      b. WHEN RUNNING, A RUN TIMER WILL BE ACTIVE FOR HEATER
      c. WATER HEATER CYCLE COUNT
      d. STORAGE TANKS TEMPERATURE
      e. TEMPERATURE ALARM STATUS
      f. HOT WATER SUPPLY TEMPERATURE (140°F)
      g. HOT WATER SUPPLY TEMPERATURE (120°F)
      h. HOT WATER RETURN TEMPERATURES
      i. RETURN PUMPS STATUS
      j. HW CIRC. PUMP STATUS




WATER HEATER CONTROLS DIAGRAM

SCALE: NONE




WATER HEATER PIPING DIAGRAM

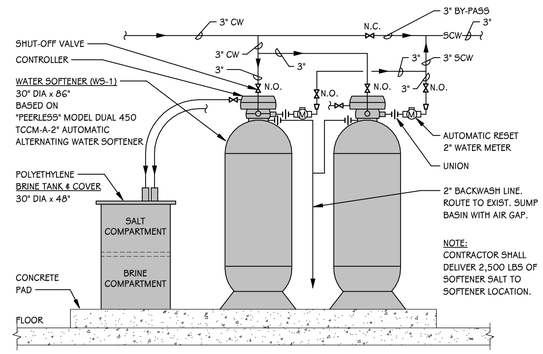
SCALE: NONE

WH-1 GAS FIRED DOMESTIC WATER HEATERS

BASED ON "LOCHINVAR" ARMOR MODEL AWH0650NPM, HIGH EFFICIENCY, SEALED COMBUSTION COMMERCIAL WATER HEATER. 96" A.F.U.E. (CONDENSING), 650,000 B.T.U./HR TOTAL INPUT, 772 G.P.H. RECOVERY @ 100°F TEMP. RISE, 4" DIA. COMB. AIR, 6" DIA. VENT, HOT WATER 2" SUPPLY AND RETURN CONNECTIONS, 1¼" NATURAL GAS CONNECTION, HOT SURFACE IGNITION, SEALED COMBUSTION CHAMBER, DIAGNOSTIC CONTROL PANEL, TEMPERATURE GAUGES, 24V CONTROLS. PROVIDE WITH HEATER DRAIN VALVES, T&P RELIEF VALVES, ALL BRONZE HEATER CIRC. PUMP (208/1/60), STAINLESS STEEL HEAT EXCHANGER.

ST-1 & ST-2 DOMESTIC HOT WATER STORAGE TANK

BASED ON "LOCHINVAR" MODEL RJSA120, 119 GALLON, ASME, GLASS LINED, ROUND JACKETED, INSULATED VERTICAL STORAGE TANK. PROVIDE WITH INTERNAL TANK BAFFLE, MAGNESIUM ANODES, AND FIVE YEAR WARRANTY. 29½" DIA. x 62" H.




WATER SOFTENER DETAIL - DUPLEX

SCALE: NONE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| ADDENDUM #2 | 09-26-2022 |
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PROJECT TITLE
WOODS LAKE: A MAGNET CENTER FOR THE ARTS - REMODELING & SITE IMPROVEMENTS

OWNER
KALAMAZOO PUBLIC SCHOOLS

Kalamazoo, Michigan

SHEET TITLE
PLUMBING SCHEDULES AND DETAILS

DATE
SEPTEMBER 1, 2022

SHEET NUMBER
P 501
18-519.00

A2

# EXISTING EM1" LOAD SCHEDULE

**EX PANEL:** EM1 **MOUNTING:** SURFACE **VOLTAGE:** 208/120V, 3PH, 4W
**LOCATION:** BASEMENT **AMPS:** 225 A MLO **FED FROM:** ATSEL
**I.C. RATING:** 10 KAIC

| | CIRCUIT DESCRIPTION | TRIP (A) | POLES | A | | B | | C | | POLES | TRIP (A) | CIRCUIT DESCRIPTION | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | EXISTING FREEZER ACCU | 50 | 2 | 2600 | 0 | | | | | 2 | 40 | SPARE | 2 |
| 3 | -- | -- | -- | | | 2600 | 0 | | | -- | -- | -- | 4 |
| 5 | EXISTING FREEZER | 20 | 2 | | | | | 1200 | 0 | 2 | 20 | SPARE | 6 |
| 7 | -- | -- | -- | 1200 | 0 | | | | | -- | -- | -- | 8 |
| 9 | SPACE | -- | -- | | | 0 | 0 | | | 1 | 20 | SPARE | 10 |
| 11 | EXISTING RECEPTS - 211 | 20 | 1 | | | | | 540 | 0 | 1 | 20 | SPARE | 12 |
| 13 | EXISTING RECEPTS - 211 | 20 | 1 | 540 | 750 | | | | | 1 | 20 | HVAC - WH-1 | 14 |
| 15 | EXISTING RECEPTS - 211 | 20 | 1 | | | 540 | 1500 | | | 1 | 20 | HVAC - BOILER B-1 | 16 |
| 17 | EXISTING RECEPTS - 211 | 20 | 1 | | | | | 540 | 1500 | 1 | 20 | HVAC - BOILER B-2 | 18 |
| 19 | SPARE | 20 | 1 | 0 | 1500 | | | | | 1 | 20 | HVAC - BOILER B-3 | 20 |
| 21 | SPARE | 20 | 1 | | | 0 | 3867 | | | 3 | 60 | HVAC - P-1 PRIMARY | 22 |
| 23 | SPARE | 20 | 1 | | | | | 0 | 3867 | -- | -- | -- | 24 |
| A2 25 | SPARE | 20 | 1 | 0 | 3867 | | | | | -- | -- | -- | 26 |
| 27 | RECEPTACLE - WS-1 | 20 | 1 | | | 180 | 0 | | | 3 | 60 | HVAC - P-2 STANDBY | 28 |
| 29 | HVAC - CP-7 | 20 | 1 | | | | | 250 | 0 | -- | -- | -- | 30 |
| 31 | HVAC - CP-8 | 20 | 1 | 250 | 0 | | | | | -- | -- | -- | 32 |
| 33 | HVAC - CP-9 | 20 | 1 | | | 250 | 250 | | | 1 | 20 | HVAC - UH-1 & UH-3 | 34 |
| 35 | POWER - TEMP CONTROL PANEL | 20 | 1 | | | | | 500 | 0 | 1 | 20 | HVAC - EF-5 | 36 |
| 37 | EM2 | 60 | 3 | 0 | 250 | | | | | 1 | 20 | HVAC - EF-6 | 38 |
| 39 | -- | -- | -- | | | 0 | 500 | | | 1 | 20 | HVAC - MOTORIZED DAMPERS | 40 |
| 41 | -- | -- | -- | | | | | 250 | 0 | 1 | 20 | HVAC - EM SHUT-OFF CKT | 42 |
| | | **TOTAL LOAD:** | | 10957 VA | | 9687 VA | | 8647 VA | | | | | |
| | | **TOTAL AMPS:** | | 93 A | | 82 A | | 72 A | | | | | |

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS | |
|---|---|---|---|---|---|
| HVAC - | 18851 VA | 100.00% | 18851 VA | | |
| POWER - | 500 VA | 100.00% | 500 VA | **TOTAL CONNECTED LOAD:** | 29291 VA |
| RECEPTACLE - | 180 VA | 100.00% | 180 VA | **TOTAL ESTIMATED DEMAND:** | 29291 VA |
| Spare | 9760 VA | 100.00% | 9760 VA | **TOTAL CONNECTED LOAD (A):** | 81 A |
| | | | | **TOTAL ESTIMATED DEMAND...** | 81 A |

**NOTES:** REMOVE EXISTING 20A/1P BREAKERS AS REQUIRED AND PROVIDE NEW BREAKERS IN EXISTING SQUARE D PANELBOARD AS REQUIRED FOR ALL NEW WORK.

# EXISTING P9" LOAD SCHEDULE

**EX PANEL:** P9 **MOUNTING:** SURFACE **VOLTAGE:** 208/120V, 3PH, 4W
**LOCATION:** FIRST FLOOR **AMPS:** 225 A MLO **FED FROM:** MDP
**I.C. RATING:** 10 KAIC

| | CIRCUIT DESCRIPTION | TRIP (A) | POLES | A | | B | | C | | POLES | TRIP (A) | CIRCUIT DESCRIPTION | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | EXISTING - LIGHTING | 20 | 1 | 750 | 750 | | | | | 1 | 20 | EXISTING - LIGHTING | 2 |
| 3 | EXISTING - LIGHTING | 20 | 1 | | | 750 | 0 | | | 1 | 20 | SPARE | 4 |
| 5 | EXISTING - LIGHTING | 20 | 1 | | | | | 750 | 750 | 1 | 20 | EXISTING - LIGHTING | 6 |
| 7 | EXISTING - LIGHTING | 20 | 1 | 750 | 750 | | | | | 1 | 20 | EXISTING - LIGHTING | 8 |
| 9 | EXISTING - LIGHTING | 20 | 1 | | | 750 | 750 | | | 1 | 20 | EXISTING - LIGHTING | 10 |
| 11 | EXISTING - LIGHTING | 20 | 1 | | | | | 750 | 750 | 1 | 20 | EXISTING - LIGHTING | 12 |
| 13 | EXISTING - LIGHTING | 20 | 1 | 750 | 0 | | | | | 1 | 20 | SPARE | 14 |
| 15 | EXISTING - LIGHTING | 20 | 1 | | | 750 | 540 | | | 1 | 20 | EXISTING - RECEPTS | 16 |
| 17 | EXISTING - RECEPTS | 20 | 1 | | | | | 540 | 750 | 1 | 20 | EXISTING - RECEPTS | 18 |
| 19 | EXISTING - RECEPTS | 20 | 1 | 540 | 750 | | | | | 1 | 20 | EXISTING - LIGHTING | 20 |
| 21 | EXISTING - RECEPTS | 20 | 1 | | | 540 | 0 | | | 1 | 20 | SPARE | 22 |
| 23 | EXISTING - RECEPTS | 20 | 1 | | | | | 540 | 0 | 1 | 20 | SPARE | 24 |
| 25 | SPACE | -- | -- | 0 | 0 | | | | | -- | -- | SPACE | 26 |
| 27 | SPACE | -- | -- | | | 0 | 0 | | | -- | -- | SPACE | 28 |
| 29 | SPACE | -- | -- | | | | | 0 | 0 | -- | -- | SPACE | 30 |
| 31 | SPACE | -- | -- | 0 | 0 | | | | | -- | -- | SPACE | 32 |
| 33 | SPACE | -- | -- | | | 0 | 0 | | | -- | -- | SPACE | 34 |
| 35 | SPACE | -- | -- | | | | | 0 | 0 | -- | -- | SPACE | 36 |
| 37 | SPACE | -- | -- | 0 | 0 | | | | | -- | -- | SPACE | 38 |
| 39 | SPACE | -- | -- | | | 0 | 0 | | | -- | -- | SPACE | 40 |
| 41 | SPACE | -- | -- | | | | | 0 | 0 | -- | -- | SPACE | 42 |
| 43 | EXISTING - EXHAUST FAN | 20 | 1 | 250 | 2600 | | | | | 2 | 50 | EXISTING - KILN | 44 |
| 45 | SPARE | 20 | 1 | | | 0 | 2600 | | | -- | -- | -- | 46 |
| 47 | SPARE | 20 | 1 | | | | | 0 | 3218 | 3 | 40 | HVAC - VUV-206 | 48 |
| 49 | SPARE | 20 | 1 | 0 | 3218 | | | | | -- | -- | -- | 50 |
| 51 | EXISTING - DRINKING FOUNTAIN | 20 | 1 | | | 180 | 3218 | | | -- | -- | -- | 52 |
| 53 | SPARE | 20 | 1 | | | | | 0 | 4203 | 3 | 45 | HVAC - VUV-207 | 54 |
| 55 | SPARE | 20 | 1 | 0 | 4203 | | | | | -- | -- | -- | 56 |
| 57 | SPARE | 20 | 1 | | | 0 | 4203 | | | -- | -- | -- | 58 |
| 59 | SPARE | 20 | 1 | | | | | 0 | 3218 | 3 | 40 | HVAC - VUV-204 | 60 |
| 61 | SPARE | 20 | 1 | 0 | 3218 | | | | | -- | -- | -- | 62 |
| 63 | SPARE | 20 | 1 | | | 0 | 3218 | | | -- | -- | -- | 64 |
| 65 | SPARE | 20 | 1 | | | | | 0 | 3218 | 3 | 40 | HVAC - VUV-202 | 66 |
| 67 | SPARE | 20 | 1 | 0 | 3218 | | | | | -- | -- | -- | 68 |
| 69 | SPARE | 20 | 1 | | | 0 | 3218 | | | -- | -- | -- | 70 |
| 71 | SPARE | 20 | 1 | | | | | 0 | 0 | 1 | 20 | SPARE | 72 |
| 73 | SPARE | 20 | 1 | 0 | 0 | | | | | 1 | 20 | SPARE | 74 |
| 75 | SPARE | 20 | 1 | | | 0 | 0 | | | 1 | 20 | SPARE | 76 |
| 77 | SPARE | 20 | 1 | | | | | 0 | 0 | 1 | 20 | SPARE | 78 |
| 79 | SPARE | 20 | 1 | 0 | 0 | | | | | 1 | 20 | SPARE | 80 |
| 81 | SPARE | 20 | 1 | | | 0 | 0 | | | 1 | 20 | SPARE | 82 |
| 83 | SPARE | 20 | 1 | | | | | 0 | 0 | 1 | 20 | SPARE | 84 |
| | | **TOTAL LOAD:** | | 21748 VA | | 20718 VA | | 18688 VA | | | | | |
| | | **TOTAL AMPS:** | | 184 A | | 175 A | | 156 A | | | | | |

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS | |
|---|---|---|---|---|---|
| HVAC - | 41574 VA | 100.00% | 41574 VA | | |
| Spare | 19580 VA | 100.00% | 19580 VA | **TOTAL CONNECTED LOAD:** | 61154 VA |
| | | | | **TOTAL ESTIMATED DEMAND:** | 61154 VA |
| | | | | **TOTAL CONNECTED LOAD (A):** | 170 A |
| | | | | **TOTAL ESTIMATED DEMAND...** | 170 A |

**NOTES:** REMOVE EXISTING 20A/1P BREAKERS AS REQUIRED AND PROVIDE NEW BREAKERS IN EXISTING SQUARE D PANELBOARD AS REQUIRED FOR ALL NEW WORK.

# EXISTING P8" LOAD SCHEDULE

**EX PANEL:** P8 **MOUNTING:** SURFACE **VOLTAGE:** 208/120V, 3PH, 4W
**LOCATION:** FIRST FLOOR **AMPS:** 225 A MLO **FED FROM:** MDP
**I.C. RATING:** 10 KAIC

| | CIRCUIT DESCRIPTION | TRIP (A) | POLES | A | | B | | C | | POLES | TRIP (A) | CIRCUIT DESCRIPTION | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SPARE | 20 | 1 | 0 | 750 | | | | | 1 | 20 | EXISTING - LTS 114 | 2 |
| 3 | SPARE | 20 | 1 | | | 0 | 0 | | | 1 | 20 | SPARE | 4 |
| 5 | SPARE | 20 | 1 | | | | | 0 | 0 | 1 | 20 | SPARE | 6 |
| 7 | SPARE | 20 | 1 | 0 | 0 | | | | | 1 | 20 | SPARE | 8 |
| 9 | EXISTING - HALL LTS | 20 | 1 | | | 750 | 0 | | | 1 | 20 | SPARE | 10 |
| 11 | EXISTING - HALL LTS | 20 | 1 | | | | | 750 | 750 | 1 | 20 | EXISTING - LTS 114 | 12 |
| 13 | SPARE | 20 | 1 | 0 | 0 | | | | | 1 | 20 | SPARE | 14 |
| 15 | SPARE | 20 | 1 | | | 0 | 0 | | | 1 | 20 | SPARE | 16 |
| 17 | SPARE | 20 | 1 | | | | | 0 | 0 | 1 | 20 | SPARE | 18 |
| 19 | SPARE | 20 | 1 | 0 | 0 | | | | | 1 | 20 | SPARE | 20 |
| 21 | SPARE | 20 | 1 | | | 0 | 0 | | | 1 | 20 | SPARE | 22 |
| 23 | SPARE | 20 | 1 | | | | | 0 | 0 | 1 | 20 | SPARE | 24 |
| 25 | SPARE | 20 | 1 | 0 | 0 | | | | | 1 | 20 | SPARE | 26 |
| 27 | SPARE | 20 | 1 | | | 0 | 0 | | | 1 | 20 | SPARE | 28 |
| 29 | SPARE | 20 | 1 | | | | | 0 | 0 | 1 | 20 | SPARE | 30 |
| 31 | SPARE | 20 | 1 | 0 | 0 | | | | | 1 | 20 | SPARE | 32 |
| 33 | SPARE | 20 | 1 | | | 0 | 0 | | | 1 | 20 | SPARE | 34 |
| 35 | SPARE | 20 | 1 | | | | | 0 | 0 | 1 | 20 | SPARE | 36 |
| 37 | SPARE | 20 | 1 | 0 | 0 | | | | | 1 | 20 | SPARE | 38 |
| 39 | SPARE | 20 | 1 | | | 0 | 0 | | | 1 | 20 | SPARE | 40 |
| 41 | SPARE | 20 | 1 | | | | | 0 | 0 | 1 | 20 | SPARE | 42 |
| 43 | SPARE | 20 | 1 | 0 | 0 | | | | | 1 | 20 | SPARE | 44 |
| 45 | SPARE | 20 | 1 | | | 0 | 0 | | | 1 | 20 | SPARE | 46 |
| 47 | SPARE | 20 | 1 | | | | | 0 | 0 | 1 | 20 | SPARE | 48 |
| 49 | HVAC - VUV-200 | 40 | 3 | 3218 | 0 | | | | | 1 | 20 | SPARE | 50 |
| 51 | -- | -- | -- | | | 3218 | 0 | | | 1 | 20 | SPARE | 52 |
| 53 | -- | -- | -- | | | | | 3218 | 0 | 1 | 20 | SPARE | 54 |
| 55 | HVAC - RTU-2 | 50 | 3 | 3843 | 0 | | | | | 1 | 20 | SPARE | 56 |
| 57 | -- | -- | -- | | | 3843 | 0 | | | 1 | 20 | SPARE | 58 |
| 59 | -- | -- | -- | | | | | 3843 | 0 | 1 | 20 | SPARE | 60 |
| 61 | RECEPTACLE / LIGHTS RTU-2 | 20 | 1 | 500 | 0 | | | | | 1 | 20 | SPARE | 62 |
| 63 | HVAC - RTU-2 TERMINAL UNITS | 20 | 1 | | | 300 | 0 | | | 1 | 20 | SPARE | 64 |
| 65 | RECEPTACLE - ERU-1 ROOF OUTLET / LIGHTS | 20 | 1 | | | | | 500 | 0 | 1 | 20 | SPARE | 66 |
| 67 | HVAC - ERU-1 | 80 | 3 | 6881 | 0 | | | | | 1 | 20 | SPARE | 68 |
| 69 | -- | -- | -- | | | 6881 | 0 | | | 1 | 20 | SPARE | 70 |
| 71 | -- | -- | -- | | | | | 6881 | 0 | 1 | 20 | SPARE | 72 |
| 73 | HVAC - CP-2 | 15 | 3 | 300 | 0 | | | | | 1 | 20 | HVAC - EF-17 | 74 |
| 75 | -- | -- | -- | | | 300 | 700 | | | 1 | 20 | HVAC - SMOKE DAMPERS | 76 |
| 77 | -- | -- | -- | | | | | 300 | 700 | 1 | 20 | HVAC - SMOKE DAMPERS | 78 |
| 79 | HVAC - CP-4 | 15 | 3 | 300 | 988 | | | | | 2 | 15 | HVAC - ACCU-2 | 80 |
| 81 | -- | -- | -- | | | 300 | 988 | | | -- | -- | -- | 82 |
| 83 | -- | -- | -- | | | | | 300 | 180 | 1 | 20 | ACCU-2 ROOF OUTLET, COND PUMP | 84 |
| | | **TOTAL LOAD:** | | 16665 VA | | 17165 VA | | 17307 VA | | | | | |
| | | **TOTAL AMPS:** | | 139 A | | 144 A | | 145 A | | | | | |

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS | |
|---|---|---|---|---|---|
| HVAC - | 45258 VA | 100.00% | 45258 VA | | |
| POWER - | 1000 VA | 100.00% | 1000 VA | **TOTAL CONNECTED LOAD:** | 51136 VA |
| RECEPTACLE - | 180 VA | 100.00% | 180 VA | **TOTAL ESTIMATED DEMAND:** | 51136 VA |
| Spare | 4700 VA | 100.00% | 4700 VA | **TOTAL CONNECTED LOAD (A):** | 142 A |
| | | | | **TOTAL ESTIMATED DEMAND...** | 142 A |

**NOTES:** REMOVE EXISTING 20A/1P BREAKERS AS REQUIRED AND PROVIDE NEW BREAKERS IN EXISTING SQUARE D PANELBOARD AS REQUIRED FOR ALL NEW WORK.

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**ADDENDUM No. 2** **September 26, 2022**

**ISSUED FOR** **DATE**

**PROJECT TITLE**
WOODS LAKE: A MAGNET CENTER FOR THE ARTS - REMODELING & SITE IMPROVEMENTS

**OWNER**
KALAMAZOO PUBLIC SCHOOLS
Kalamazoo, Michigan

**SHEET TITLE**
ELECTRICAL PANEL LOAD SHEETS

**DATE**
SEPTEMBER 1, 2022

**SHEET NUMBER**
E 005
18-519.00

## GENERAL ELECTRICAL NOTES

1 REFER TO SHEETS E000, E101C, OR E101D FOR GENERAL NOTE REQUIREMENTS.

## ELECTRICAL KEYED NOTES

1 RECONNECT NEW MECHANICAL EQUIPMENT TO EXISTING CIRCUIT. WHERE EXISTING EQUIPMENT WAS DEMOLISHED, CONNECT TO EXISTING CIRCUIT AT NEAREST ACTIVE JUNCTION BOX, EXTEND AND REWORK EXISTING CIRCUIT AS REQUIRED. PROVIDE NEW DISCONNECTING MEANS AND RECEPTACLE WHERE INDICATED ON DRAWINGS.

2 RELOCATED WIREMOLD SURFACE 4000 RACEWAY CONTAINING POWER AND DATA OR TEACHING STATION CONTAINING POWER, DATA, AV CABLING, AND PROJECTOR WHERE INDICATED. COORDINATE FINAL LOCATION WITH NEW MECHANICAL UNIT AND AV CONTRACTOR PRIOR TO INSTALLATION. REWORK AND EXTEND EXISTING POWER CIRCUIT AS REQUIRED FOR A COMPLETE INSTALLATION. REFER TO TECH DRAWINGS FOR DATA AND AV REQUIREMENTS.

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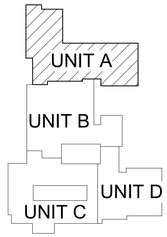
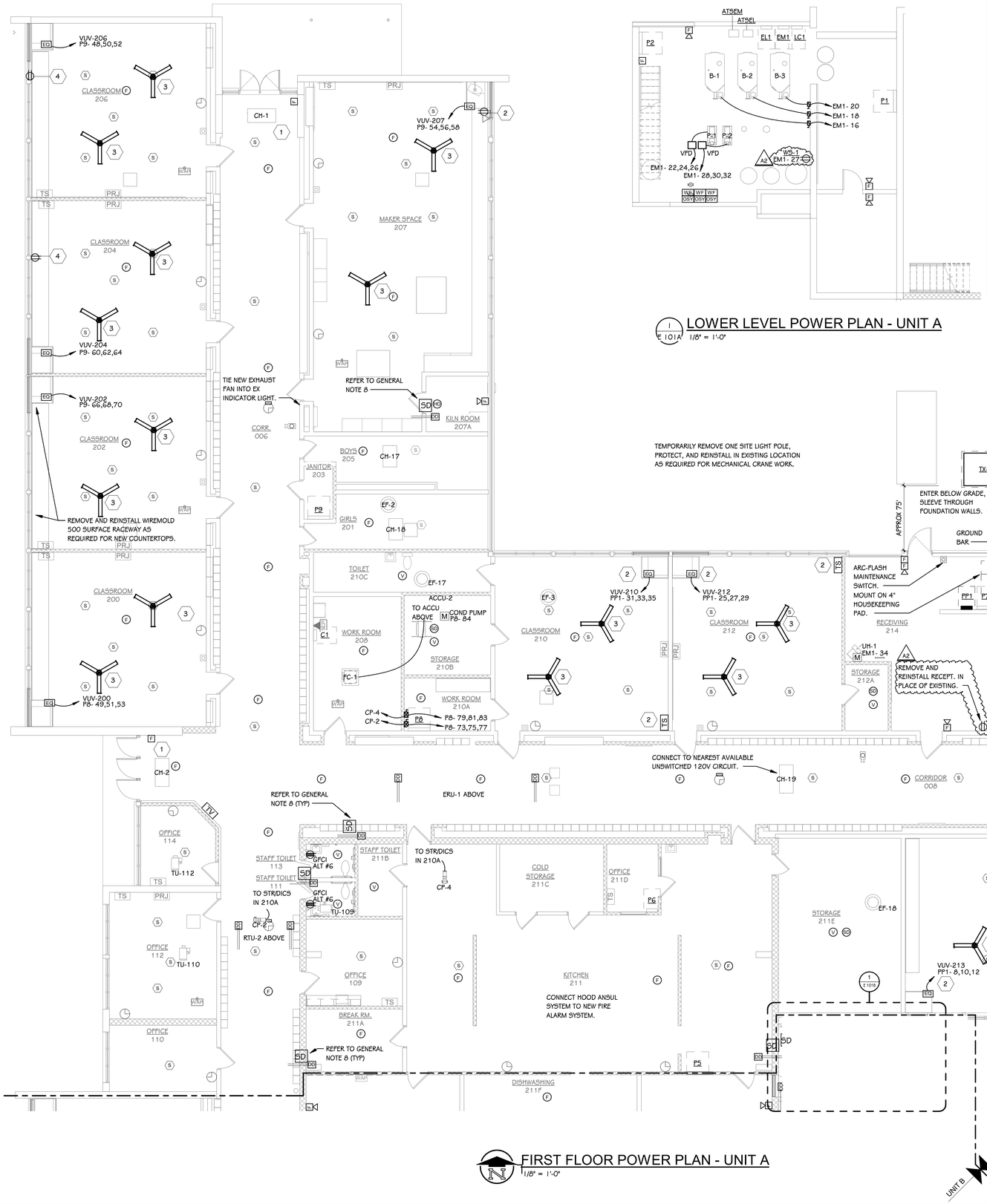
4 REMOVE AND REINSTALL RECEPTABLE INTEGRATED INTO CASEWORK / COUNTERTOP. COORDINATE WITH GENERAL TRADES.

## WOODS LAKE ELEMENTARY




**KEY PLAN**
SCALE: NO SCALE




1 E101A LOWER LEVEL POWER PLAN - UNIT A
1/8" = 1'-0"




1 E101A FIRST FLOOR POWER PLAN - UNIT A
1/8" = 1'-0"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**ADDENDUM No. 2** **September 26, 2022**

**ISSUED FOR** **DATE**

**PROJECT TITLE**
WOODS LAKE: A MAGNET CENTER FOR THE ARTS - REMODELING & SITE IMPROVEMENTS

**OWNER**
KALAMAZOO PUBLIC SCHOOLS

Kalamazoo, Michigan

**SHEET TITLE**
FIRST FLOOR POWER PLAN - UNIT A

**DATE**
SEPTEMBER 1, 2022

**SHEET NUMBER**
E 101A
18-519.00

## GENERAL ELECTRICAL NOTES

1 REFER TO SHEETS E000, E101C, OR E101D FOR GENERAL NOTE REQUIREMENTS.

## ELECTRICAL KEYED NOTES

1 RECONNECT NEW MECHANICAL EQUIPMENT TO EXISTING CIRCUIT. WHERE EXISTING EQUIPMENT WAS DEMOLISHED, CONNECT TO EXISTING CIRCUIT AT NEAREST ACTIVE JUNCTION BOX, EXTEND AND REWORK EXISTING CIRCUIT AS REQUIRED. PROVIDE NEW DISCONNECTING MEANS AND RECEPTACLE WHERE INDICATED ON DRAWINGS.

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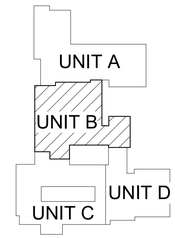
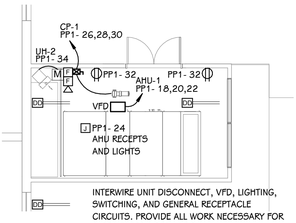
## WOODS LAKE ELEMENTARY

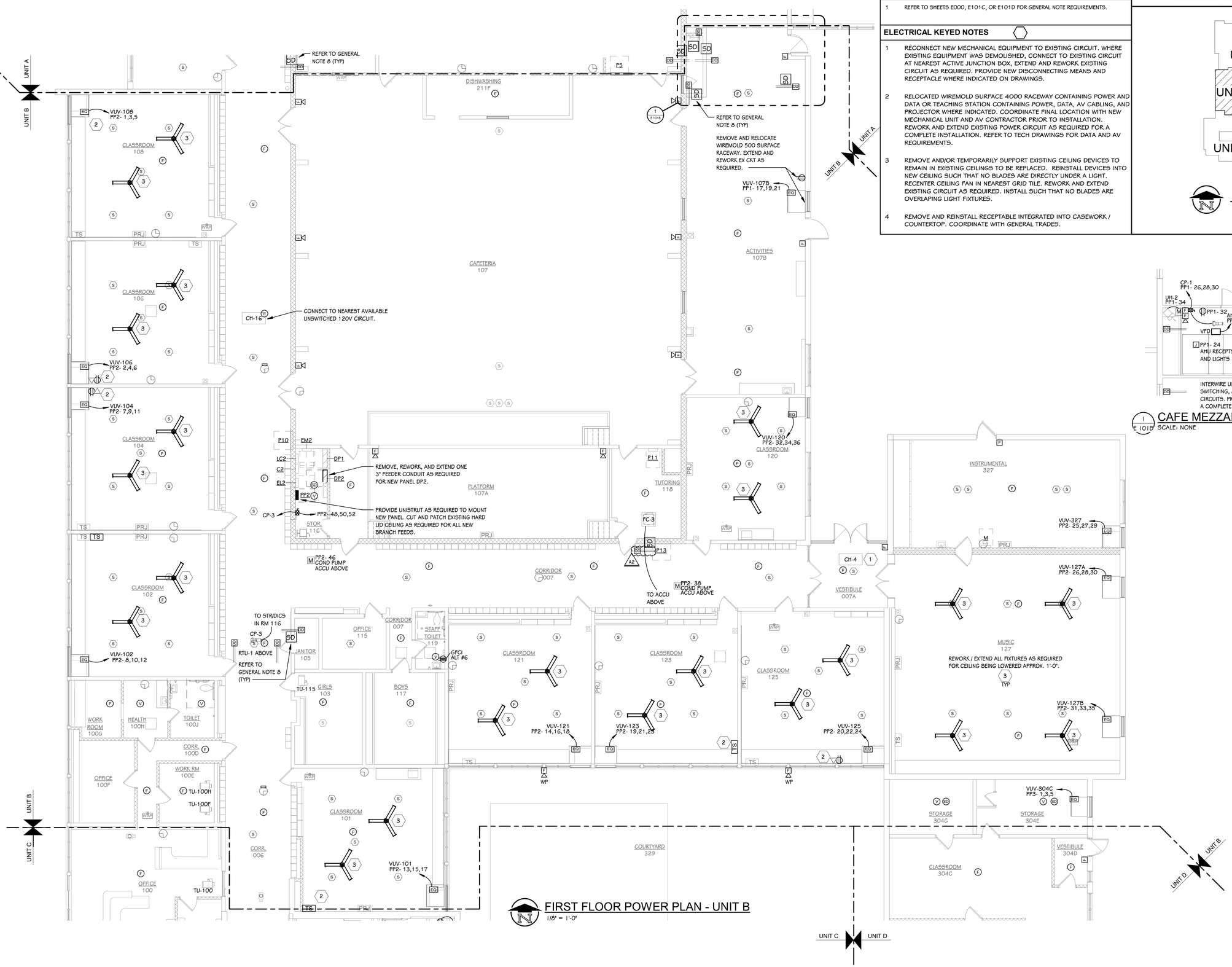



## KEY PLAN
SCALE: NO SCALE




INTERWIRE UNIT DISCONNECT, VFD, LIGHTING, SWITCHING, AND GENERAL RECEPTACLE CIRCUITS. PROVIDE ALL WORK NECESSARY FOR A COMPLETE INSTALLATION.

## CAFE MEZZAINE POWER PLAN
SCALE: NONE




## FIRST FLOOR POWER PLAN - UNIT B
1/8" = 1'-0"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ADDENDUM No. 2 September 26, 2022

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OWNER
KALAMAZOO PUBLIC SCHOOLS
Kalamazoo, Michigan

SHEET TITLE
FIRST FLOOR POWER PLAN - UNIT B

DATE
SEPTEMBER 1, 2022

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E101B
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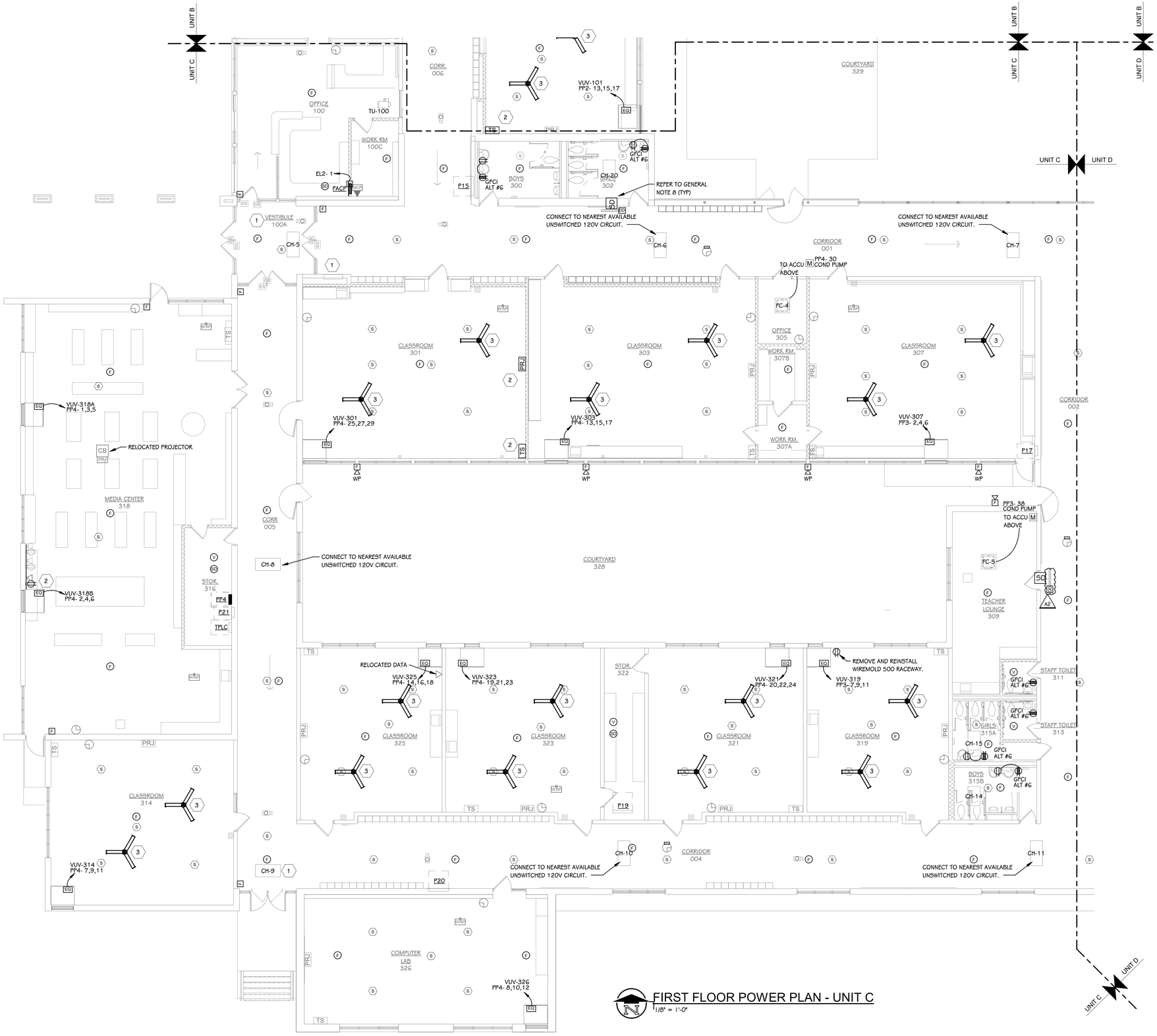


## GENERAL ELECTRICAL NOTES

1. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING REQUIRED FOR NEW WORK OR WHERE DEVICES ARE REMOVED AND NOT REPLACED.
2. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH G SERIES SHEETS DEVICE COORDINATION DETAIL. DEVICES ARE TO ALIGN VERTICALLY AND HORIZONTALLY AND FOLLOW THE RULES OF THIS DETAIL CONSISTENTLY. A PRE-INSTALL DEVICE COORDINATION MEETING FOR DEVICE FINISHES AND LAYOUT MAY BE REQUIRED IN THE SPECIFICATION FOR THIS PROJECT.
3. PATCH ALL PENETRATIONS AS REQUIRED TO MAINTAIN FIRE RATING.
4. REFER TO INTERIOR ELEVATIONS, SECTIONS, ARCHITECTURAL ELEVATIONS AND RELATED DRAWINGS FOR EXACT DEVICE LOCATIONS AND MOUNTING HEIGHTS. WHERE DEVICES ARE MOUNTED UNDER OR ABOVE TACK BOARDS, DOORS, WINDOWS, OR ANY PIECE OF EQUIPMENT, THE ELECTRICAL DEVICE SHALL BE CENTERED AS SHOWN. COORDINATE LOCATION OF FURNITURE CONNECTIONS AND/OR RECEPTACLES AND DATA RACEWAYS WITH APPROVED FURNITURE SHOP DRAWINGS, FINAL CONNECTIONS TO FURNITURE BY ELECTRICAL CONTRACTOR.
5. ALL CONDUITS SHALL RUN AS NEAR TO DECK AS PERMITTED BY CODE. SOME CONDUITS WILL BE EXPOSED AND SHALL BE RUN IN A NEAT MANNER. MAINTAIN THE SAME SPACING WHEN CONDUITS ARE RUN TOGETHER. CONCEAL JUNCTION BOXES OVER LAY-IN CEILING AND USE EMT DROPS DOWN TO CLOUDS. LOCATE CONDUIT DROPS TO CLOUDS AND CEILING ELEMENTS IN LEAST VISIBLE LOCATION.
6. WHEN CEILINGS ARE REMOVED ELECTRICAL CONTRACTOR SHALL PROPERLY SUPPORT ALL CONDUIT AND LOW VOLTAGE WIRING AS REQUIRED PER NEC.
7. REMOVE CEILINGS AND GRID AS REQUIRED. REPLACE ANY DAMAGED CEILINGS.
8. CONNECT POWER TO ALL VAV, TERMINAL UNITS, SMOKE DAMPERS AND MISCELLANEOUS MECHANICAL DAMPERS AND VALVES PROVIDED WITH LOW VOLTAGE TRANSFORMERS. PROVIDE AT LEAST A CIRCUIT FOR EVERY 4 UNITS TO BE ON A TRANSFORMER, COORDINATE EXACT LOCATIONS AND TRANSFORMER QUANTITIES WITH BUILDING AUTOMATION SYSTEM AND MECHANICAL CONTRACTORS AND REFER TO MECHANICAL CONTROLS AND SEQUENCE OF OPERATIONS DETAIL.
9. ALL CONDUITS SHALL ENTER/EXIT THE BUILDING BELOW GRADE. PROVIDE TRENCHING AND DIRECTIONAL BORING AS REQUIRED. CUT AND PATCH AS REQUIRED. NO EXPOSED CONDUIT SHALL BE ALLOWED ON EXTERIOR OF BUILDING.
10. PROVIDE 120V CIRCUIT FROM NEAREST GENERATOR STANDBY PANEL FOR ALL BMS/BAS CONTROL PANELS. COORDINATE LOCATION AND NUMBER OF CIRCUITS WITH CONTROLS CONTRACTOR.
11. PROVIDE FINAL CONNECTION TO ALL OWNER/CONTRACTOR PROVIDED EQUIPMENT. COORDINATE RECEPTACLE SIZES AND TYPE WITH EQUIPMENT, ADJUST CIRCUIT SIZE AS REQUIRED.
12. PROVIDE ROUGH IN FOR NEW CLOCK; CONNECT TO NEAREST UNSWITCHED 120V CIRCUIT. PROVIDE RECEPTACLE IN NEW CLOCK BACKBOX SUCH THAT FACE OF OUTLET SHALL BE FACING THE CENTER OF THE BOX. COORDINATE WITH TECHNOLOGY CONTRACTOR PRIOR TO INSTALLATION.

## ELECTRICAL KEYED NOTES

1. RECONNECT NEW MECHANICAL EQUIPMENT TO EXISTING CIRCUIT. WHERE EXISTING EQUIPMENT WAS DEMOLISHED, CONNECT TO EXISTING CIRCUIT AT NEAREST ACTIVE JUNCTION BOX, EXTEND AND REWORK EXISTING CIRCUIT AS REQUIRED. PROVIDE NEW DISCONNECTING MEANS AND RECEPTACLE WHERE INDICATED ON DRAWINGS.
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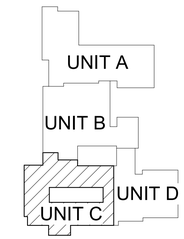
4. REMOVE AND REINSTALL RECEPTABLE INTEGRATED INTO CASEWORK / COUNTERTOP. COORDINATE WITH GENERAL TRADES.

## WOODS LAKE ELEMENTARY




**KEY PLAN**
SCALE: NO SCALE

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ADDENDUM No. 2 September 26, 2022

ISSUED FOR DATE

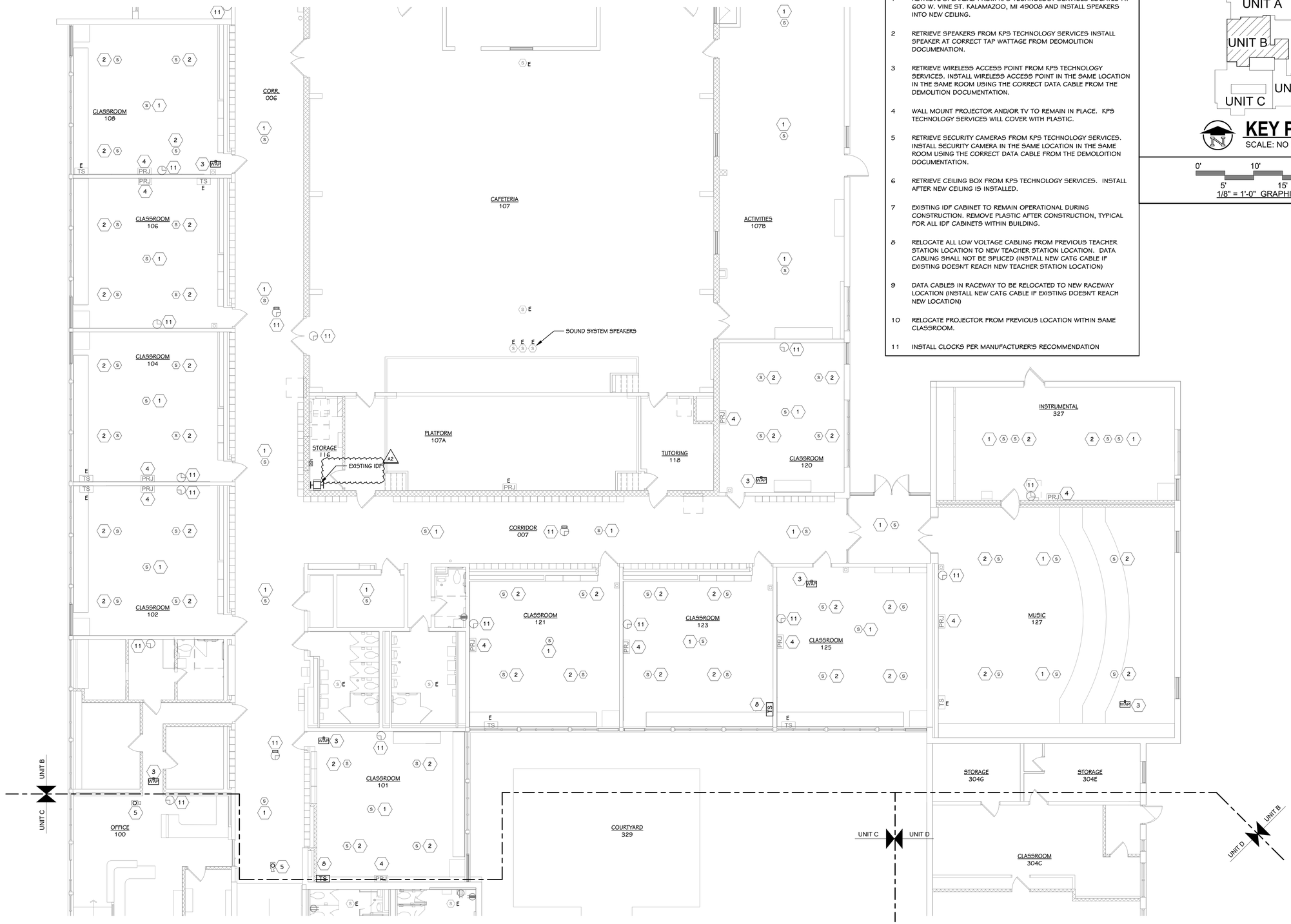
PROJECT TITLE
WOODS LAKE: A MAGNET CENTER FOR THE ARTS - REMODELING & SITE IMPROVEMENTS

OWNER
KALAMAZOO PUBLIC SCHOOLS
Kalamazoo, Michigan

SHEET TITLE
FIRST FLOOR POWER PLAN - UNIT C

DATE
SEPTEMBER 1, 2022

SHEET NUMBER
E101C
18-519.00




FIRST FLOOR TECHNOLOGY PLAN - UNIT B

1/8" = 1'-0"

## GENERAL TECHNOLOGY NOTES

1 REFER TO SHEETS T001 FOR GENERAL NOTE REQUIREMENTS.

## TECHNOLOGY KEYED NOTES

1 RETRIEVE SPEAKERS FROM KPS TECHNOLOGY SERVICES LOCATED AT 600 W. VINE ST. KALAMAZOO, MI 49008 AND INSTALL SPEAKERS INTO NEW CEILING.

2 RETRIEVE SPEAKERS FROM KPS TECHNOLOGY SERVICES INSTALL SPEAKER AT CORRECT TAP WATTAGE FROM DEOMOLITION DOCUMENATION.

3 RETRIEVE WIRELESS ACCESS POINT FROM KPS TECHNOLOGY SERVICES. INSTALL WIRELESS ACCESS POINT IN THE SAME LOCATION IN THE SAME ROOM USING THE CORRECT DATA CABLE FROM THE DEMOLITION DOCUMENTATION.

4 WALL MOUNT PROJECTOR AND/OR TV TO REMAIN IN PLACE. KPS TECHNOLOGY SERVICES WILL COVER WITH PLASTIC.

5 RETRIEVE SECURITY CAMERAS FROM KPS TECHNOLOGY SERVICES. INSTALL SECURITY CAMERA IN THE SAME LOCATION IN THE SAME ROOM USING THE CORRECT DATA CABLE FROM THE DEMOLOITION DOCUMENTATION.

6 RETRIEVE CEILING BOX FROM KPS TECHNOLOGY SERVICES. INSTALL AFTER NEW CEILING IS INSTALLED.

7 EXISTING IDF CABINET TO REMAIN OPERATIONAL DURING CONSTRUCTION. REMOVE PLASTIC AFTER CONSTRUCTION, TYPICAL FOR ALL IDF CABINETS WITHIN BUILDING.

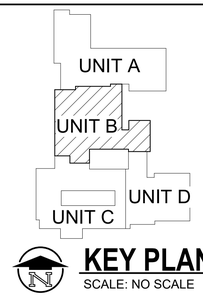
8 RELOCATE ALL LOW VOLTAGE CABLING FROM PREVIOUS TEACHER STATION LOCATION TO NEW TEACHER STATION LOCATION. DATA CABLING SHALL NOT BE SPLICED (INSTALL NEW CAT6 CABLE IF EXISTING DOESN'T REACH NEW TEACHER STATION LOCATION)

9 DATA CABLES IN RACEWAY TO BE RELOCATED TO NEW RACEWAY LOCATION (INSTALL NEW CAT6 CABLE IF EXISTING DOESN'T REACH NEW LOCATION)

10 RELOCATE PROJECTOR FROM PREVIOUS LOCATION WITHIN SAME CLASSROOM.

11 INSTALL CLOCKS PER MANUFACTURER'S RECOMMENDATION

## WOODS LAKE ELEMENTARY




KEY PLAN

SCALE: NO SCALE

0' 5' 10' 15' 25'

1/8" = 1'-0" GRAPHIC SCALE

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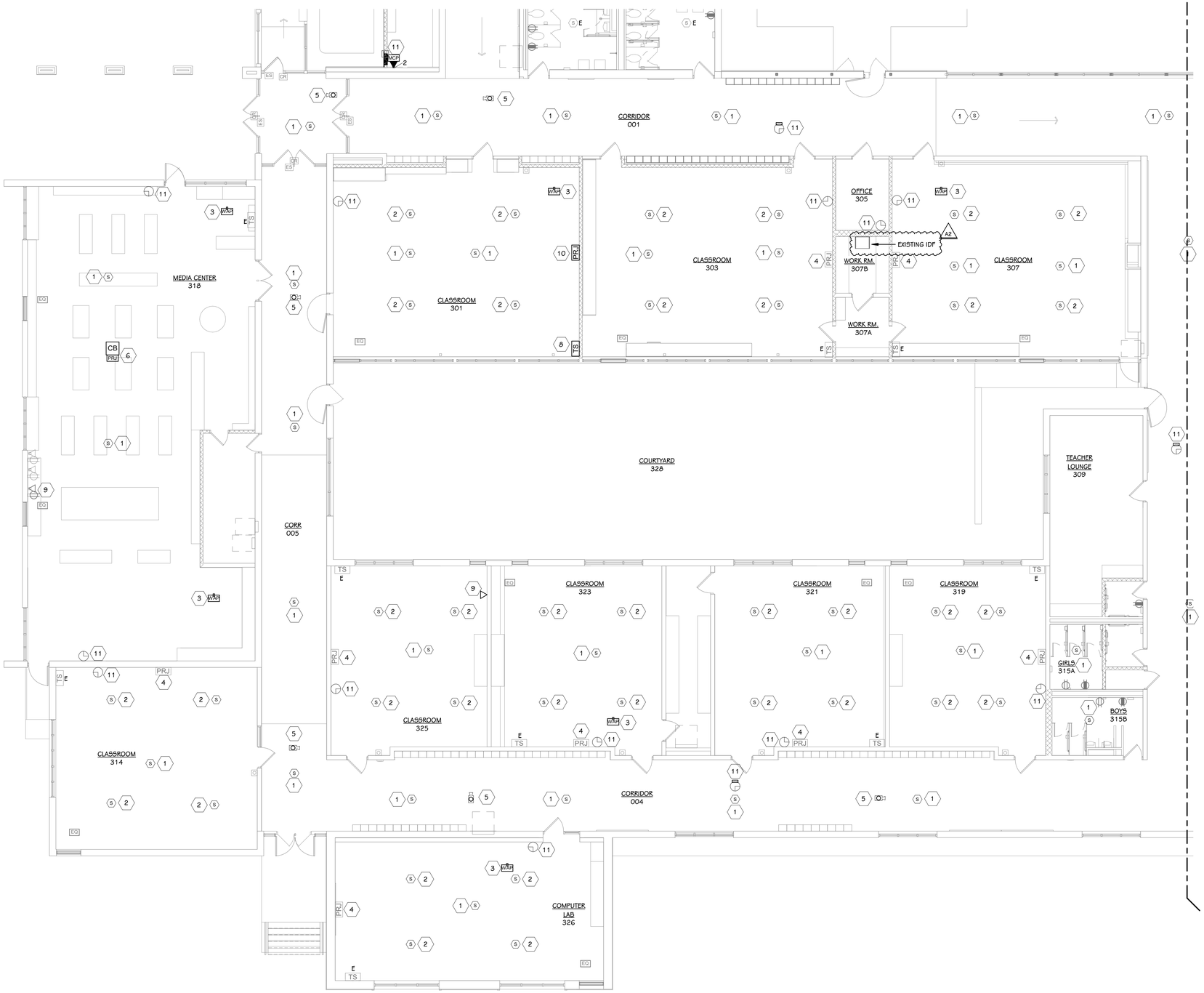
OWNER
KALAMAZOO PUBLIC SCHOOLS
Kalamazoo, Michigan

SHEET TITLE
FIRST FLOOR TECHNOLOGY PLAN - UNIT B

DATE
SEPTEMBER 1, 2022

SHEET NUMBER
T 101B
18-519.00




FIRST FLOOR TECHNOLOGY PLAN - UNIT C

1/8" = 1'-0"

## GENERAL TECHNOLOGY NOTES

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## TECHNOLOGY KEYED NOTES

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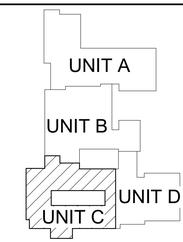


**KEY PLAN**
SCALE: NO SCALE

0' 5' 10' 15' 25'
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ADDENDUM #2 09/26/2022

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OWNER
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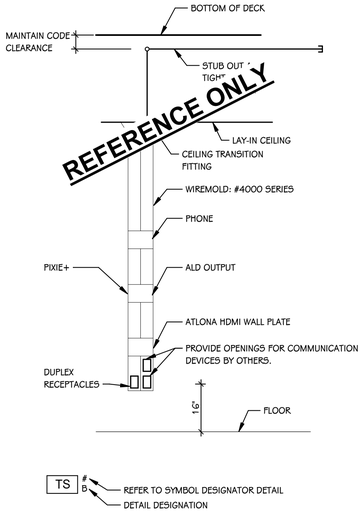
Kalamazoo, Michigan

SHEET TITLE
FIRST FLOOR TECHNOLOGY PLAN - UNIT C

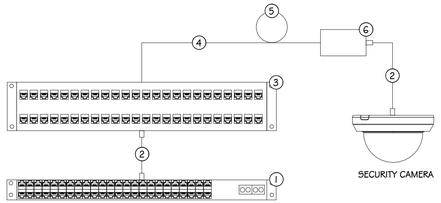
DATE
SEPTEMBER 1, 2022

SHEET NUMBER
T 101C
18-519.00




## SURFACE TEACHERS STATION DEVICE LOCATIONS

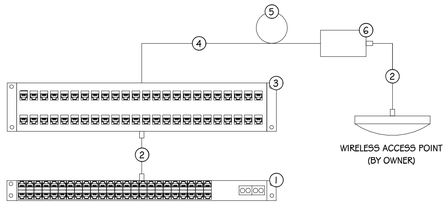
SCALE: NONE




| | | |
|---|---|---|
| 1 | NETWORK SWITCH | PROVIDED BY OWNER |
| 2 | CAT6 PATCH CABLE | REFER TO CABLE & JACK LEGEND |
| 3 | 48 PORT PATCH PANEL | REFER TO RACK ELEVATION |
| 4 | CAT6 CABLE | REFER TO CABLE & JACK LEGEND |
| 5 | SERVICE LOOP | MINIMUM 15FT SERVICE LOOP |
| 6 | SURFACE MOUNT BOX | REFER TO TYPICAL LABELING DETAIL |

## INTERIOR SECURITY CAMERA CABLING DETAIL

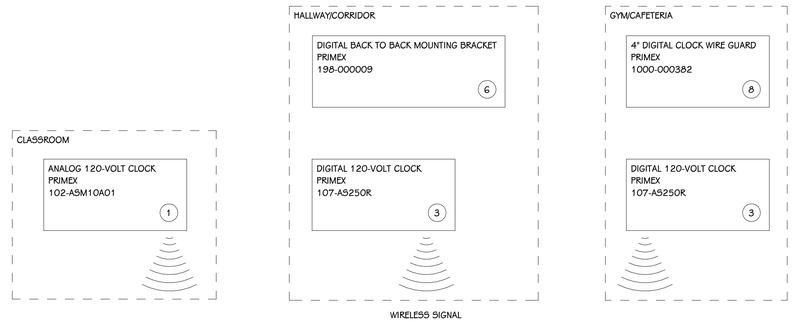
SCALE: NONE

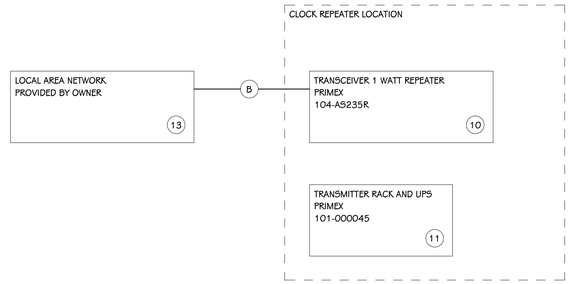



| | | |
|---|---|---|
| 1 | NETWORK SWITCH | PROVIDED BY OWNER |
| 2 | CAT6 PATCH CABLE | REFER TO CABLE & JACK LEGEND |
| 3 | 48 PORT PATCH PANEL | REFER TO RACK ELEVATION |
| 4 | CAT6 CABLE | REFER TO CABLE & JACK LEGEND |
| 5 | SERVICE LOOP | MINIMUM 15FT SERVICE LOOP |
| 6 | SURFACE MOUNT BOX | REFER TO TYPICAL LABELING DETAIL |

## WIRELESS ACCESS POINT CABLING DETAIL

SCALE: NONE




## CLOCK RISER

SCALE: NONE

### DATA CABLE SCHEDULE

| COLOR | PURPOSE | MFG | PART # |
|---|---|---|---|
| WHITE - PLENUM | PLENUM CAT6 CABLE | GENERAL CABLE | 7131801 |
| WHITE - RISER | RISER CAT6 CABLE | GENERAL CABLE | 7133801 |

### DATA JACK SCHEDULE

| COLOR | PURPOSE | MFG | PART # |
|---|---|---|---|
| RED | COPPER BACKBONE | PANDUIT | CJ688TGRD |
| ORANGE | RESERVED | PANDUIT | CJ688TGOR |
| YELLOW | WIRELESS ACCESS POINTS | PANDUIT | CJ688TGRD |
| GREEN | FACILITIES | PANDUIT | CJ688TGGR |
| BLUE | SPECIAL NETWORK | PANDUIT | CJ688TGBU |
| VIOLET | SECURITY CAMERAS | PANDUIT | CJ688TGVL |
| BLACK | RESERVED | PANDUIT | CJ688TGBL |
| GREY | POTS LINES | PANDUIT | CJ688TGIG |
| IVORY, WHITE OR OFF-WHITE | GENERAL DATA & IP PHONES | PANDUIT | CJ688TGEI |

### PATCH CABLE SCHEDULE

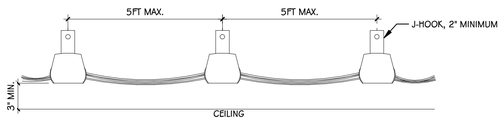
| COLOR | PURPOSE | MFG | PART # | QUANTITY |
|---|---|---|---|---|
| WHITE, NON-PLENUM | CROSS-CONNECT IN TELECOM RM. | PANDUIT | UTP28SP1 | 1 PER INSTALLED CABLE |
| WHITE, NON-PLENUM | WORKSTATION OR DEVICE | PANDUIT | UTP5P10Y | 1 PER INSTALLED CABLE |
| BLUE, PLENUM | INSTALLED IN PLENUM SPACE | PANDUIT | UPPBU*10 | 1 PER INSTALLED CABLE |

### FACEPLATE & SURFACE BOX SCHEDULE

| COLOR | TYPE | MFG | PART # |
|---|---|---|---|
| MATCH ELECTRICAL WITHIN SAME ROOM | 1-PORT FACEPLATE, SINGLE-GANG | PANDUIT | CFPL1**Y |
| | 2-PORT FACEPLATE, SINGLE-GANG | PANDUIT | CFPL2**Y |
| | 3-PORT FACEPLATE, SINGLE-GANG | PANDUIT | CFPL3**Y |
| | 4-PORT FACEPLATE, SINGLE-GANG | PANDUIT | CFPL4**Y |
| | 6-PORT FACEPLATE, SINGLE-GANG | PANDUIT | CFPL6**Y |
| | 1-PORT SURFACE BOX | PANDUIT | CBX1IW-A |
| | 2-PORT SURFACE BOX | PANDUIT | CBX2IW-AY |
| MATCH FURNITURE COLOR | 4-PORT FURNITURE PLATE | PANDUIT | |
| | | | |

## CABLE & JACK SCHEDULE

SCALE: NONE




## CABLE SUPPORT DETAIL

SCALE: NONE

### CLOCK EQUIPMENT SCHEDULE

| KEY # | DESCRIPTION | MANUFACTURER | PART # | COMMENTS |
|---|---|---|---|---|
| 1 | ANALOG 120-VOLT CLOCK | PRIMEX | 102-ASM10A01 | |
| 3 | DIGITAL 120-VOLT CLOCK | PRIMEX | 107-AS250R | |
| 6 | DIGITAL BACK TO BACK MOUNTING BRACKET | PRIMEX | 198-000009 | |
| 8 | 4" DIGITAL CLOCK WIRE GUARD | PRIMEX | 1000-000382 | |
| 9 | TRANSMITTER W/ NTP | PRIMEX | 104-AS235N | |
| 10 | TRANSCEIVER 1 WATT REPEATER | PRIMEX | 104-AS235R | |
| 11 | TRANSMITTER RACK AND UPS | PRIMEX | 101-000045 | |
| 12 | ETHERNET SWITCH | PROVIDED BY OWNER | | |
| 13 | LOCAL AREA NETWORK | PROVIDED BY OWNER | | |
| B | PATCH CORD | REFER TO SCHEDULE | | |

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ADDENDUM #2 09/26/2022

ISSUED FOR DATE

PROJECT TITLE
WOODS LAKE: A MAGNET CENTER FOR THE ARTS - REMODELING & SITE IMPROVEMENTS

OWNER
KALAMAZOO PUBLIC SCHOOLS
Kalamazoo, Michigan

SHEET TITLE
TECHNOLOGY DETAILS

DATE
SEPTEMBER 1, 2022

SHEET NUMBER
T 401
18-519.00