# ELMIRA DISTRICT SECONDARY SCHOOL - WINDOW, ROOF, HVAC & SANITARY UPGRADES

## 4 UNIVERSITY AVENUE WEST, ELMIRA, ONTARIO N3B 1K2

### LOCATION MAP

### SCOPE OF WORK

THE PROJECT INVOLVES 7 PRINCIPLE PHASES OF WORK, AND ONE OPTIONAL PHASE.

1. RE-ROOFING OF THE EXISTING HIGH ROOF AND THE WEST PORTION OF THE GYMNASIUM BLOCK.
2. REPLACEMENT OF SOUTHWEST WING WINDOWS AND ENTRANCE DOOR
3. RE-ROUTING OF EXISTING SANITARY LINE FROM UNDER THE GYMNASIUM, WITH ASSOCIATE SITE WORK
4. PROVISION OF NEW RTUS FOR AIR CONDITIONING TO THE CAFETERIA
5. PROVISION OF NEW RTUS FOR AIRCONDITIONING TO THE CAFETERIA
6. LOCKER REFURBISHEMENT
7. DECOMMMISSIONING OF EXISTING BOILER AND RELOCATION OF SERVICES TO A NEW GROUND FLOOR PUMP ROOM

OPTIONAL PHASE: REMOVAL OF BASEMENT BOILER AND CURBS.

### DRAWING LIST - ARCHITECTURAL


| | |
|---|---|
| A000 | COVER SHEET AND SHEET LIST, OBC MATRIX |
| A001 | ASSEMBLIES & DOOR SCHEDULE |
| A002 | ANNOTATION LEGEND, ABBREVIATIONS & GENERAL NOTES |
| A005 | WINDOW SCHEDULE & SCREEN SCHEDULE |
| A011 | SITE PLAN & SITE DATA |
| A012 | SITE DETAILS & PHASING PLAN |
| A020 | BASEMENT FLOOR PLAN - DEMOLITION |
| A021 | GROUND FLOOR PLAN - DEMOLITION |
| A022 | SECOND FLOOR PLAN - DEMOLITION |
| A023 | THIRD FLOOR PLAN - DEMOLITION |
| A024 | ROOF PLAN - DEMOLITION |
| A025 | PARTIAL EXTERIOR ELEVATIONS - DEMOLITION |
| A100 | BASEMENT PLAN - PROPOSED |
| A101 | GROUND FLOOR PLAN - PROPOSED |
| A102 | SECOND FLOOR PLAN - PROPOSED |
| A103 | THIRD FLOOR PLAN - PROPOSED |
| A104 | ROOF PLAN - PROPOSED |
| A301 | EXTERIOR ELEVATIONS - NEW FENESTRATION |
| A501 | PLAN DETAILS |
| A510 | ROOF DETAILS |
| A521 | SECTION DETAILS |


### DRAWING LIST - ELECTRICAL


| | |
|---|---|
| EA-001 | ELECTRICAL LEGEND AND DRAWING LIST |
| EL-101 | CAFETERIA LIGHTING PLANS |
| EP-101 | CAFETERIA POWER & SYSTEMS PLANS |
| EP-102 | BOILER & PUMP ROOM PLANS ELECTRICAL |
| EP-103 | GYM MECHANICAL ROOM PLANS - ELECTRICAL |
| EP-104 | HIGH ROOF PLAN - ELECTRICAL |


### DRAWING LIST - MECHANICAL


| | |
|---|---|
| M-001 | MECHANICAL LEGEND AND DRAWING LIST |
| M-002 | MECHANICAL KEYPLANS |
| M-100 | BOILER ROOM - DEMOLITION & NEW WORK PLAN |
| M-101 | HVAC DUCTWORK - CAFETERIA - DEMO AND NEW WORK PLAN |
| M-102 | HVAC - CAFETERIA ROOF - DEMO AND NEW WORK PLAN |
| M-103 | HVAC PIPING - CAFETERIA - DEMO AND NEW WORK PLAN |
| M-104 | HVAC PIPING - CAFETERIA CORRIDOR - DEMO AND NEW WORK PLAN |
| M-105 | HVAC PIPING - GYM - DEMO AND NEW WORK PLAN |
| M-110 | GYM DRAINAGE - DEMOLITION & NEW WORK PLAN |
| M-111 | GYM MECHANICAL ROOM & ROOF - DEMOLITION & NEW WORK PLAN |
| M-112 | GYM HVAC - NEW WORK PLAN |
| M-120 | HIGH ROOF - DEMOLITION & NEW WORK PLAN |
| M-300 | MECHANICAL DETAILS 1 |
| M-301 | MECHANICAL DETAILS 2 |
| M-302 | MECHANICAL DETAILS 3 |
| M-400 | MECHANICAL SCHEDULES |


### DRAWING LIST - STRUCTURAL


| | |
|---|---|
| S1 | PARTIAL ROOF FRAMING PLANS |
| S2 | SECTIONS AND DETAILS |


### DRAWING LIST - CIVIL


| | |
|---|---|
| C1 | NOTES, LEGEND, AND DETAILS |
| C2 | EXISTING CONDITIONS, REMOVAL, AND SEDIMENT & EROSION CONTROL PLAN |
| C3 | SERVICING PLAN |


### OBC MATRIX PART 11

Name of project:
Elmira District Secondary School - Renovations

Firm Name and Address:
LGA Architectural Partners Inc.
310 Spadina Ave, Suite 100B
Toronto, ON M5T 2E8

Location:
4 University Avenue West,
Elmira, Ontario N3B 1K2

Certification of Practice Number:
No. 5162

| Ontario Building Code Data Matrix Part 11 – Renovation of Existing Building | | Building Code Reference[1] |
|---|---|---|
| 11.00 Building Code Version: | O. Reg. 332/12 Last Amendment O. Reg. 762/20 | |
| 11.01 Project Type: | ☐ Addition ☒ Renovation ☐ Addition and renovation<br>☐ Change of use<br>Description: Re-roofing, window replacement, plumbing revision and new HVAC added to portions of existing public secondary school. | [A] 1.1.2. |
| 11.02 Major Occupancy Classification: | Occupancy: Group A; Use: Secondary School | 3.1.2.1.(1) |
| 11.03 Superimposed Major Occupancies: | ☒ No ☐ Yes<br>Description: | 3.2.2.7. |
| 11.04 Building Area (m2) | Description / Existing / New / Total:<br>Basement 308.3 - 308.3<br>Ground Floor 9,129.7 - 9,129.7<br>Second Floor 2,605.8 - 2,605.8<br>Third Floor 2,090.1 - 2,090.1<br>Total 14,133.9 - 14,133.9 | [A] 1.4.1.2. |
| 11.05 Building Height | 3 Storeys above grade; 12.3 (m) Above grade<br>1 Storeys below grade | [A] 1.4.1.2. & 3.2.1.1. |
| 11.06 Number of Streets/ Firefighter access | 3<br>FIREFIGHTER ACCESS ROUTE ON WEST SIDE OF BLDG | 3.2.2.10. & 3.2.5. |
| 11.07 Building Size | ☐ Small ☐ Medium ☒ Large ☐ > Large | T.11.2.1.1.B.-N. |
| 11.08 Existing Building Classification: | Change in Major Occupancy: ☐ Yes ☒ Not Applicable (no change of major occupancy)<br>Construction Index: N/A<br>Hazard Index: N/A<br>Importance Category : ☐ Low ☐ Normal ☐ High ☐ Post-disaster N/A | 11.2.1.1.<br>T 11.2.1.1A<br>T 11.2.1.1B to N<br>4.2.1.(3), 5.2.2.1.(2) |
| 11.09 Renovation type: | ☒ Basic Renovation ☐ Extensive Renovation | 11.3.3.1. 11.3.3.2. |
| 11.10 Occupant Load | Floor Level/Area / Occupancy Type / Based On / Occupant Load (Persons):<br>Basement / Assembly / Design / EXISTING TO REMAIN<br>Ground Floor / Assembly / Design / EXISTING TO REMAIN<br>Second Floor / Assembly / Design / EXISTING TO REMAIN<br>Third Floor / Assembly / Design / EXISTING TO REMAIN | 3.1.17. |

| Ontario Building Code Data Matrix (CONT'D) | | Building Code Reference[1] |
|---|---|---|
| 11.11 Plumbing Fixture Requirements | Ratio: M/F = 1/1 Except as otherwise noted<br>Floor Level/Area / Occupant Load / OBC Reference / Fixtures Required / Fixtures Provided<br>---- EXISTING TO REMAIN UNCHANGED --- | 3.7.4. |
| 11.12 Barrier-free Design: | Yes<br>☒No | 11.3.3.2.(2) |
| 11.13 Reduction in Performance Level: | Structural: ☒ No ☐ Yes<br>By Increase in occupant load: ☒ No ☐ Yes<br>By change of major occupancy: ☒ No ☐ Yes<br>Plumbing: ☒ No ☐ Yes<br>Sewage-systems: ☒ No ☐ Yes<br>Extension of combustible construction: ☒ No ☐ Yes | 11.4.2.1.<br>11.4.2.2.<br>11.4.2.3.<br>11.4.2.4.<br>11.4.2.5.<br>11.4.2.6. |
| 11.14 Compensating Construction: | Structural: ☒ No ☐ Yes<br>Increase in occupant load: ☒ No ☐ Yes<br>Change of major occupancy: ☒ No ☐ Yes<br>Plumbing: ☒ No ☐ Yes<br>Sewage systems: ☒ No ☐ Yes<br>Extension of combustible construction: ☒ No ☐ Yes | 11.4.3.1.<br>11.4.3.2.<br>11.4.3.3.<br>11.4.3.4.<br>11.4.3.5.<br>11.4.3.6.<br>11.4.3.7. |
| 11.15 Compliance Alternatives Proposed: | ☐ No ☐ Yes | 11.5.1. |
| 11.16 Notes: | 1. ALL NEW DUCT PENETRATIONS THROUGH EXISTING 1 HOUR FIRE SEPARATIONS ARE TO HAVE FIRE DAMPERS.<br>2. NEW ROOFING SYSTEM TO EQUAL OR EXCEED THE FIRE RESISTANCE OF THE ROOFING BEING REPLACED.<br>3. 3. NEW 1 HOUR FRR PARTITION TO BE BE FULL HEIGHT & FIRE STOPPED AT EXISTING ROOF DECK. | 11.5.1. |

[1] All references are to Division B of the OBC unless preceded by [A] for Division A and [C] for Division C.

### OWNER

Waterloo Region District School Board
51 Ardelt Avenue
Kitchener, Ontario N2C 2S9
519.570.0003

### ARCHITECT

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826 King St. N., Unit 20
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519.594.0182

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250 Rowntree Dairy Road
Woodbridge, Ontario L4L 9J7
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DO NOT SCALE DRAWINGS


**ISSUE DATE:**

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 2 | 2021.03.16 | ISSUED FOR TENDER |
| 1 | 2021 | DD REVIEW |

**PROJECT:**

Elmira District Secondary School – Window, Roof, HVAC & Sanitary Upgrades

**DRAWING TITLE:**

COVER SHEET
SHEET LIST AND
OBC MATRIX

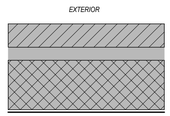
**PROJECT NO:** 20931
**SCALE:** AS NOTED
**DRAWN BY:** JG
**REVIEWED BY:** JC-B

**DRAWING NO:**

A000

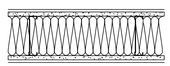
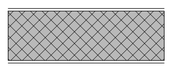
# ASSEMBLIES SCHEDULE

## W - EXTERIOR WALL ASSEMBLIES

| TYPE | DIAGRAM | DESCRIPTION | ASSEMBLY-SPECIFIC NOTES | PERFORMANCE |
|---|---|---|---|---|
| W1 |  | **EXISTING BRICK MASONRY VENEER CLADDING W/ 190mm LOADBEARING CMU BACKUP**<br>90mm EX BRICK MASONRY VENEER<br>50mm MASONRY CAVITY<br>190mm LOADBEARING CMU BLOCK<br>VAR INTERIOR FINISH, REFER TO FINISH PLANS | NOTE: CONTRACTOR IS TO VERIFY DIMENSIONS AND CONDITION OF CAVITY ON SITE AND NOTIFY CONSULATANTS OF VARIATIONS PRIOR TO WINDOW INSTALLATION<br>NOTE: REFER TO STRUCTURAL DRAWINGS FOR EXTERIOR OPENING LINTEL SUPPORT DETAILS. | CATEGORY / REQUIRED / PROVIDED<br>R-VALUE / N/A / N/A<br>RSI-VALUE / N/A / N/A |

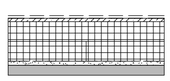


## P - INTERIOR PARTITION AND FURRING ASSEMBLIES

| TYPE | DIAGRAM | DESCRIPTION | ASSEMBLY-SPECIFIC NOTES | PERFORMANCE |
|---|---|---|---|---|
| P1 |  | **152mm NON-LOADBEARING STEEL STUDS WITH 16mm GB (BOTH SIDES)**<br>VAR FINISH, REFER TO FINISH PLANS<br>16mm GYPSUM WALL BOARD<br>152mm NON-LOADBEARING STEEL STUD FRAMING @ 406mm O.C. C/W<br>89mm INS-03 BATT INSULATION<br>16mm GYPSUM WALL BOARD<br>VAR FINISH, REFER TO FINISH PLANS | BASIS OF DESIGN UL W453 OR SIMILAR PER OBC SB-2<br>NOTE: UNLESS NOTED OTHERWISE, SPECIFIED INSULATION TO FILL ENTIRE DEPTH AND HEIGHT OF STUD CAVITY | CATEGORY / REQUIRED / PROVIDED<br>FRR / SEE SHEET A.01 / 1HR PER OBC SB-2<br>STC / - / - |
| P2 |  | **190mm LOADBEARING CMU**<br>VAR FINISH, REFER TO FINISH PLANS<br>190mm INTERIOR LOADBEARING CMU HOLLOW BLOCK, NORMAL WEIGHT TYPE "N" REFER TO STRUCTURAL<br>VAR FINISH, REFER TO FINISH PLANS | NOTE: REFER TO STRUCTURAL DRAWINGS FOR LATERAL SUPPORT CONNECTIONS AND DETAILS<br>NOTE: REFER TO STRUCTURAL DRAWINGS FOR INTERIOR OPENING LINTEL SUPPORT DETAILS.<br>NOTE: TYPICAL HORIZONTAL AND VERTICAL MORTAR JOINT SPACING TO BE 10mm UNLESS NOTED OTHERWISE.<br>NOTE: PROVIDE BULLNOSE BLOCK AT ALL EXPOSED CORNER, JAMB, AND HEAD CONDITIONS | CATEGORY / REQUIRED / PROVIDED<br>FRR / SEE SHEET A.01 / 1HR PER OBC SB-2<br>STC RATING / - / - |

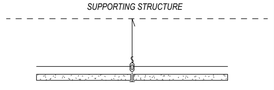
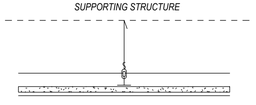
**FOR ALL ASSEMBLIES IN THE CONTRACT DOCUMENTS WITH A DESIGNATED LISTING FROM A TESTING AUTHORITY (E.G. ULC) IT IS THE FULL RESPONSIBILITY OF THE TRADE CONTRACTOR AND/OR CONSTRUCTION MANAGER TO INDEPENDENTLY RESEARCH, PROVIDE, AND CONSTRUCT THE COMPLETE PUBLISHED ASSEMBLY AS DESCRIBED BY THE ASSOCIATED TESTING AUTHORITIES. THE DESCRIPTION OF THE ASSEMBLIES IN THE CONTRACT DOCUMENTS ARE NOTED "AS BASIS OF DESIGN" AND MAY NOT REPRESENT THE FULL CRITERIA AS DEFINED BY THE TESTING AUTHORITY.**

## R - ROOF ASSEMBLIES

| TYPE | DIAGRAM | DESCRIPTION | ASSEMBLY-SPECIFIC NOTES | PERFORMANCE |
|---|---|---|---|---|
| R1 |  | **3 PLY COLD BUILT UP ROOF SYSTEM ON EXIST.**<br>1 PLY POWERPLY ENDURE 200 FR GRANULATED CAP SHEET INTO COLD RUBBERIZED ADHESIVE<br>2 PLY COMPOSITE PLY HT INTO COLD RUBBERIZED ADHESIVE<br>13mm ASPHALT COATED FIBERBOARD ADHERED W/ LOW RISE FOAM ADHESIVE<br>VAR TAPERED PERIMETER BACK SLOPE POLYISO ADHERED W/ LOW RISE FOAM ADHESIVE<br>76mm POLYISO ADHERED W/ LOW RISE FOAM ADHES.<br>76mm POLYISO ADHERED W/ LOW RISE FOAM ADHES.<br>AVC MEMBRANE (VAPOR BARRIER) & PRIMER<br>13mm DENSDECK ADHERED W/ LOW RISE FOAM ADHS.<br>VAR EXISTING ROOF DECK: REFER TO DWGS | NOTE: PROVIDE 2440 x 2400mm SUMPS (2%) AT ALL DRAIN LOCATIONS, REFER TO ROOF PLAN.<br>NOTE: PROVIDE CONTINUOUS 4570mm WIDE BACKSLOPED TAPERED INSULATION AT ALL EXTERIOR PARAPETS AND ROOF-TO-WALL CONDITIONS (2% SLOPE MINIMUM), REFER TO ROOF PLAN.<br>NOTE: ALL INSULATION BOARD JOINTS (HORIZONTAL AND VERTICAL) TO BE STAGGERED.<br>NOTE:COORDINATE WORK WITH MECHANICAL TRADES. REFER TO MECHANICAL DRAWINGS | CATEGORY / REQUIRED / PROVIDED<br>R-VALUE / R-35 (CI) / R-36.3 (CI)<br>RSI-VALUE / RSI-6.2 (CI) / RSI-6.3 (CI) |



## C - SUSPENDED CEILING ASSEMBLIES

| TYPE | DIAGRAM | DESCRIPTION | ASSEMBLY-SPECIFIC NOTES |
|---|---|---|---|
| C1<br>C2 |  | **SUSPENDED ACOUSTIC TILE CEILING WITH SUPPORT GRID SYSTEM (DRY AREAS)**<br>VAR NEW (WHERE NOTED) MAIN BEAM & CROSS TEE DRYWALL GRID SYSTEM SUPPPORT FRAMING AS REQUIRED C/W WIRE TIE HANGERS. EXISTING TO REMAIN SHALL BE MADE GOOD.<br>16mm ACOUSTIC CEILING TILE: REFER TO SPEC | NOTE: ALL CEILING GRID SYSTEM SUPPORT FRAMING, HANGERS AND TIE WIRE TO BE HOT-DIPPED GALVANIZED.<br>NOTE: WIRE TIE HANGERS ARE NOT TO BE FASTENED BACK TO PLYWOOD ROOF DECKING. CONTRACTOR TO PROVIDE ADDITIONAL ENGINEERED FRAMING AS REQUIRED TO SUPPORT CEILING ASSEMBLY AND ASSOCIATED FIXTURES. |
| C3 |  | **SUSPENDED GYPSUM BOARD CEILING WITH SUPPORT GRID SYSTEM OR STUD FRAMING (WET AREAS)**<br>VAR MAIN BEAM AND CROSS TEE DRYWALL GRID SYSTEM SUPPPORT FRAMING AS REQUIRED C/W WIRE TIE SUPPORTS<br>16mm GB GYPSUM BOARD TO ALIGN WITH EXISTING ADJACENT<br>VAR FINISH, REFER TO FINISH PLANS | NOTE: ALL DRYWALL GRID SYSTEM SUPPORT FRAMING, HANGERS AND TIE WIRE TO BE HOT-DIPPED GALVANIZED.<br>NOTE: WIRE TIE HANGERS ARE NOT TO BE FASTENED BACK TO PLYWOOD ROOF DECKING. CONTRACTOR TO PROVIDE ADDITIONAL ENGINEERED FRAMING AS REQUIRED TO SUPPORT CEILING ASSEMBLY AND ASSOCIATED FIXTURES |



# FINISH SCHEDULE

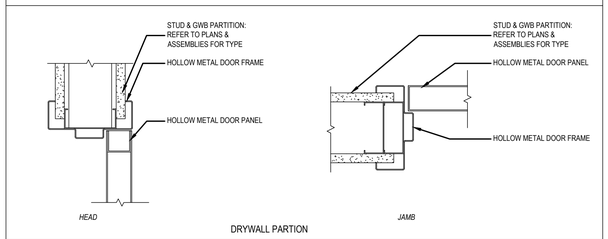
| ABBREV. | DESCRIPTION | MANUFACTURER | PRODUCT | TYPICAL LOCATION(S) | NOTES |
|---|---|---|---|---|---|
| **WALL FINISHES** | | | | | |
| PT-1 | PAINT | | | WALLS | |
| PT-2 | PAINT - ACCENT COLOUR 01 | | | CEILINGS | |
| PT-3 | PAINT - ACCENT COLOUR 02 | | | EXTERIOR DOOR | |
| **MILLWORK FINISHES** | | | | | |
| PL-1 | PLASTIC LAMINATE SILL | | | | |
| SS-1 | SOLID WOOD SILL | | | | |
| WD-1 | SOLID SURFACE SILL | | | | |

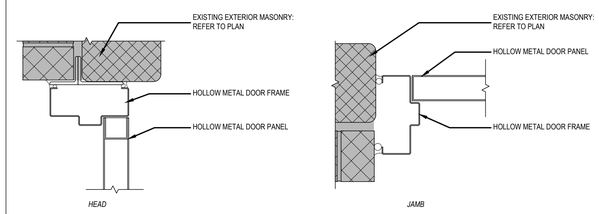
# DOOR SCHEDULE

| DOOR NO. | FROM ROOM: | | TO ROOM: | | DOOR SIZE | | | PANEL CONSTRUCTION | | | FRAME CONSTRUCTION | | | LITE TYPE | FIRE RATING | HARDWARE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ROOM NAME | ROOM # | ROOM NAME | ROOM # | REBATE WIDTH | REBATE HEIGHT | THICKNESS | TYPE | MATERIAL | FINISH | TYPE | MATERIAL | FINISH | | | |
| D01 | SOUTHWEST EXIT AT STAIR D | EXIT 3 | EXTERIOR | | 1850 | 2135 | 51 | D1 | ALUM/GLASS | CLEAR ANOD. | A | ALUMINUM | CLEAR ANOD. | TG | | ENTRANCE DP, ED, WS |
| D02 | NEW PUMP/UTILITY ROOM | D1406c | STAIR G | | 1830 | 2134 | 44 | A1 | HM | PAINT | B | HM | PAINT | | 45 MINUTES | STORERM LS, CL, SMOKESEAL |
| D03 | FAN ROOM DOOR | XXXx | EXTERIOR (ROOF) | | 1090 | 2134 | 44 | D1 | HM | PAINT | B | HM | PAINT | | | STORERM LS, WS, TH |
| D04 | SOUTH EXIT AT STAIR C | EXIT 4 | EXTERIOR | | 1850 | 2135 | 51 | D1 | ALUM/GLASS | CLEAR ANOD. | A | ALUMINUM | CLEAR ANOD. | TG | | ENTRANCE DP, ED, WS |

# TYPICAL DOOR FRAME DETAILS

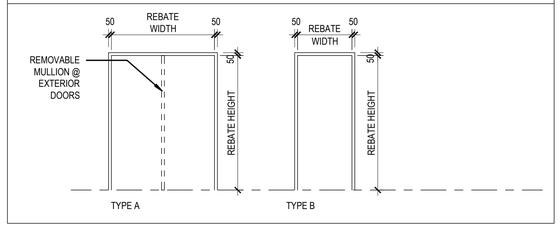
**TYPICAL INTERIOR DETAILS - HOLLOW METAL FRAME**



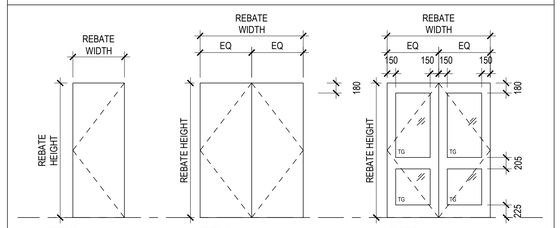




CONCRETE MASONRY UNIT PARTITION

# DOOR FRAME ELEVATIONS




# DOOR PANEL ELEVATIONS




# LEGEND

| | |
|---|---|
| AL | ALUMINUM |
| AN | CLEAR ANODIZED |
| BA | BATT INSULATION |
| HM | HOLLOW METAL |
| PI | POLYISO INSULATION |
| PN | PAINT |
| SCW | SOLID CORE WOOD |
| ST | STAIN |
| CF | CLEAR FINISH |
| WD | WOOD |
| TG | TEMPERED GLASS |

# HARDWARE LEGEND

| | |
|---|---|
| AO | AUTOMATIC DOOR OPENER |
| CC | CONCEALED CLOSER |
| CH | COAT HOOK |
| CL | CLOSER |
| CLF | CLASSROOM LOCK FUNCTION |
| CM | CENTRE MULLION |
| CS | CARD SWIPE |
| DC | DOOR CONTACT |
| DP | DOOR PULL |
| DS | DOOR STOP |
| ED | PANIC BAR EXIT DEVICE |
| EHO | ELECTRIC HOLD OPEN |
| EL | ELECTRIC LATCH |
| ESC | ELECTRIC SCREAMER |
| EST | ELECTRIC STRIKE |
| HO | HOLD OPEN, MAGNETIC |
| KP | KICKPLATE, SS. |
| L | LATCH, LOCKSET |
| OFL | OFFICE FUNCTION LOCKSET |
| PB | PUSH BUTTON |
| PH | PANIC HARDWARE |
| PHA | PANIC HARDWARE W/ ALARM OVERRIDE |
| PP | PUSH / PULL |
| PRV | PRIVACY LOCKSET |
| S | DOOR SIGNAGE |
| TH | THRESHOLD |
| WS | WEATHER STRIPPING |

# DOOR & FRAME NOTES

1. CONTRACTOR TO CONFIRM ALL FINISHES, LOCATIONS, AND QUANTITIES AND NOTIFY CONSULTANT OF ANY DISCREPANCIES.

2. ALL FIRE RATED DOORS REQUIRE DOOR CLOSERS.

3. ALL EXIT DOORS TO HAVE HARDWARE IN CONFORMANCE TO O.B.C EXIT REQUIREMENTS. GENERAL CONTRACTOR TO CO-ORDINATE INSTALLATION AND LOCATIONS WITH DOOR AND HARDWARE MANUFACTURER.

4. ALL EXTERIOR DOORS TO BE INSULATED & HAVE THERMALLY BROKEN FRAMES. FILL FRAMES AND SPACE BETWEEN FRAMES AND ADJACENT MATERIALS W/ SRPAY FOAM INSULATION TO FULLY SEAL AGAINST ALL AIR INFILTRATION.

5. FOR DOOR SWINGS REFER TO PLAN.

6. FOR PAINT COLOURS REFER TO FINISH SCHEDULE AND ELEVATIONS.

7. PROVIDE ACOUSTIC SEALANT AND FILL FRAME AT ALL DOORS IN ACOUSTICALLY RATED WALL ASSEMBLIES AND ALL DOORS AT OFFICES.

8. ALL GLAZING IN DOORS & SCREENS TO BE TEMPERED.

9. COORDINATE THROAT SIZE TO WALL SCHEDULE AND MANUFACTURES TOLERANCES. FOR DOORS TO BE INSTALLED IN EXISTING WALLS, VERIFY EXISTING WALL THICKNESS ON SITE. COORDINATE SIZE OF FRAME TO ACCOMODATE EXISTING WALL THICKNESS.

10. CONTRACTOR TO COORDINATE JAMB WIDTHS AND DETAILS WITH ON-SITE CONDITIONS. CONTRACTOR TO PRODUCE SHOP-DRAWINGS OF JAMB DETAILS FOR ARCHITECTS REVIEW AND APPROVAL.

11. PROVIDE MANUFACTURERS FLOOR ANCHOR STRAPS FOR ALL HOLLOW METAL JAMB FRAMES AND MULLION FLOOR ANCHORS FOR HOLLOW METAL MULLIONS. ANCHORS TO BE FIRE RATED TYPE.

12 PROVIDE THERMALLY BROKEN THRESHOLDS AT ALL EXTERIOR DOORS.

13. PROVIDE WEATHER STRIPPING ON ALL EXTERIOR DOORS.

14. IN FRAME DETAILS GRAPHIC OF WALL ASSEMBLIES ARE GENERIC ONLY-CONTRACTOR MUST REFERENCE ASSEMBLY TYPES FOR EXACT WIDTH & COMPOSITION OF WALLS

15. ALL SCREEN FRAMES ARE TO BE PAINTED HOLLOW METAL, UNLESS OTHERWISE NOTED. REFER TO INTERIOR ELEVATIONS, DOOR & FINISH SCHEDULES FOR PAINT COLOURS.

# ASSEMBLY GENERAL NOTES

1. REFER TO FIRE SEPARATION DRAWINGS FOR REQUIRED FIRE SEPARATION RATINGS. THE CONTRACTOR IS TO ENSURE THE CONTINUITY OF ALL FIRE SEPARATIONS AS REQUIRED.

2. THE CONTRACTOR IS TO PROVIDE ULC-LISTED FIRESTOP SYSTEMS AS REQUIRED FOR ALL BUILDING SERVICE PENTRATIONS THROUGH RATED ASSEMBLIES, REFER TO MECHANICAL AND ELECTRICAL DRAWINGS.

3. THE CONTRACTOR IS TO PROVIDE ULC-LISTED FIRESTOP SYTEMS AS REQUIRED FOR ALL RATED PARTITION ASSEMBLY CONDITIONS.

4. UNLESS NOTED OTHERWISE, ALL PARTITION AND FURRING ASSEMBLIES ARE TO EXTEND FROM STRUCTURAL DECK/SLAB TO U/S OF STRUCTURAL DECK/SLAB ABOVE.

5.. HEIGHT LIMITS FOR NON-LOADBEARING INTERIOR AND EXTERIOR CONCRETEBLOCK MASONRY IS TO CONFORM TO OBC 9.20.10.1. REFER TO STRUCTURAL DRAWINGS FOR REINFORCING, LINTELS, AND LATERAL SUPPORT.

6. HEIGHT LIMITS OF INTERIOR AND FURRING PARTITION STEEL STUD FRAMING IS TO CONFORM TO OBC 9.24.2.1, OR STEEL STUD SUPPLIER HEIGHT TABLES.

7. THE CONTRACTOR IS TO PROVIDE ENGINEERED SHOP DRAWINGS, SIGNED AND SEALED BY A P.ENG LICENSED WITHIN THE PROVICE OF ONTARIO FOR ALL STEEL STUD FRAMING DENOTED AS "WIND-BEARING" OR "STRUCTURAL".

8. THE CONTRACTOR IS TO PROVIDE STRUCTURAL STUD FRAMING AS REQUIRED TO SUPPORT ALL EXTERIOR CURTAINWALL, STOREFRONT GLAZING AND PUNCH WINDOW SYSTEMS, IN ADDITION TO ALL INTERIOR SCREENS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE STUD SPACING AND CONFIGURATION AS REQUIRED TO MEET CURTAINWALL, STOREFRONT, PUNCH WINDOW, AND INTERIOR SCREEN SUPPLIER REQUIREMENTS.

9. PROVIDE CONT. ACOUSTICAL SEALANT (BOTH SIDES) AT TOP AND BOTTOMOF ALL INTERIOR STUD AND GypSUM BOARD PARTITIONS. PROVIDE ULC-LISTED SEALANT AT ALL RATED PARTITIONS AS REQUIRED, REFER TO FIRE SEPARATION DRAWINGS.

10. ACCESS PANELS LOCATED WITHIN SUSPENDED GYPSUM BOARD CEILING ASSEMBLIES ARE TO BE PAINTED OUT TO MATCH THE SURROUNDING CEILING FINISH. PROVIDE ULC-LISTED ACCESS PANEL WHERE PANEL IS LOCATED IN A RATED CEILING, REFER TO FIRE SEPARATION DRAWINGS.

11. UNLESS NOTED OTHERWISE, ASSEMBLIES ABOVE DOORS, WINDOWS, EXTERIOR OPENINGS AND INTERIOR SCREENS IS TO BE THE SAME AS THE TYPE DENOTED ON EITHER SIDE.

12. ALL R AND RSI VALUES SHOWN ARE NOMINAL. REFER TO PROJECT MANUAL FOR FULL LISTING OF INSULATION TYPES AND WEATHER BARRIER TYPES.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DO NOT SCALE DRAWINGS


**ISSUE DATE:**

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 2 | 2021.03.16 | ISSUED FOR TENDER |
| 1 | 2021 | DD REVIEW |

**PROJECT:**

Elmira District Secondary School – Window, Roof, HVAC & Sanitary Upgrades

**DRAWING TITLE:**

ASSEMBLIES & DOOR SCHEDULE

**PROJECT NO:** 20931
**SCALE:** AS NOTED
**DRAWN BY:** JG
**REVIEWED BY:** JC-B

**DRAWING NO:**

A001

## GRAPHICS LEGEND

### TAGS

| | |
|---|---|
| 101 | DOOR TAG |
| SC | SCREEN NUMBER TAG (REFER TO SCREEN SCHEDULE) |
| W10 | WINDOW UNIT TAG (REFER TO WINDOW SCHEDULE) |
| CW | CURTAIN WALL UNIT TAG (REFER TO WINDOW SCHEDULE) |
| ? | MATERIAL FINISH TAG (REFER TO FINISH SCHEDULE) |
| 20 R @ 100mm | STAIR TAG |

### DRAWING TAGS

| | |
|---|---|
| 1 / A101 | DETAIL NUMBER<br>DRAWING SHEET NUMBER |
| 1 / A101 | SECTION NUMBER<br>DRAWING SHEET NUMBER |
| 1 / A101 | EXTERIOR ELEVATION NUMBER<br>DRAWING SHEET NUMBER |
| 1 / 4 / A101 / 2 / 3 | INTERIOR ELEVATION NUMBER<br>DRAWING SHEET NUMBER |
| X | GRID BUBBLE |
| XXX.XX | SPOT ELEVATION<br>(ABOVE FINISH FLOOR) |
| LIVING ROOM / 101 / 190 sf | ROOM TAG WITH AREA |
| 1 | REVISION TAG |
| ℄ | CENTRELINE |

### ASSEMBLY TAGS

| | |
|---|---|
| W1 | WALL ASSEMBLY TAG |
| R1 | ROOF ASSEMBLY TAG |
| F1 | FLOOR ASSEMBLY TAG |
| CL1 | CEILING TAG |

(REFER TO ASSEMBLIES SCHEDULES)

## GENERAL NOTES

1. THE CONTRACTOR WILL VERIFY ALL DIMENSIONS FOR THE WORK AND SHALL REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO COMMENCEMENT OF THE WORK.

2. DRAWINGS ARE NOT TO BE SCALED FOR CONSTRUCTION PURPOSES.

3. ALL DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF LGA ARCHITECTURAL PARTNERS. ALL COPYRIGHT CONDITIONS ARE RESERVED BY THE ARCHITECT WITH RESPECT TO THESE DOCUMENTS. THESE DOCUMENTS SHALL NOT BE DUPLICATED OR USED FOR OTHER THAN THE PURPOSE FOR WHICH THEY WERE ISSUED.

4. NO CHANGES OR SUBSTITUTIONS SHALL BE MADE TO THE WORK DESCRIBED IN THESE DRAWINGS OR SPECIFICATIONS WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF THE ARCHITECT. REFER TO THE SPECIFICATION FOR THE FULL LIST OF REQUIREMENTS AND PROCEDURES THAT MUST BE FOLLOWED TO MAKE ANY SUBSTITUTIONS. THE ARCHITECT RESERVES THE RIGHT TO REFUSE ANY REQUEST FOR SUBSTITUTION.

5. THE ARCHITECTURAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE LANDSCAPE, STRUCTURAL, ELECTRICAL, MECHANICAL, CIVIL, GEOTECHNICAL, ENVIRONMENTAL CONSULTANTS DOCUMENTS. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ARCHITECT PRIOR TO ANY EXECUTION OF RELATED WORK.

6. THE CONTRACTORS SHALL ENSURE THAT MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH CONTRACT DOCUMENTS.

7. THE CONTRACTORS SHALL ENSURE THAT THE LOCATIONS OFALL UNDERGROUND SERVICES ARE IDENTIFIED PRIOR TO THE COMMENCEMENT OF WORK AND EXCAVATIONS. THE CONTRACTOR IS FULLY RESPONSIBLE TO REPAIR ANY DAMAGE TO UNDERGROUND SERVICES THEY HAVE COMMITTED.

8. ALL STRUCTURAL COMPONENTS TO BE TAKEN OFF THE STRUCTURAL DOCUMENTS. NO STRUCTURAL DESIGN INFORMATION SHALL BE INFERRED FROM THE ARCHITECTURAL DRAWINGS.

9. ALL MECHANICAL COMPONENTS TO BE TAKEN OFF THE MECHANICAL DOCUMENTS. NO MECHANICAL DESIGN INFORMATION SHALL BE INFERRED FROM THE ARCHITECTURAL DRAWINGS.

10. ALL ELECTRICAL COMPONENTS TO BE TAKEN OFF THE ELECTRICAL DOCUMENTS. NO ELECTRICAL DESIGN INFORMATION SHALL BE INFERRED FROM THE ARCHITECTURAL DRAWINGS.

11. ALL CIVIL COMPONENTS TO BE TAKEN OFF THE CIVIL DOCUMENTS. NO CIVIL DESIGN INFORMATION SHALL BE INFERRED FROM THE ARCHITECTURAL DRAWINGS.

12. ALL LANDSCAPE COMPONENTS TO BE TAKEN OFF THE LANDSCAPE DOCUMENTS. NO LANDSCAPE DESIGN INFORMATION SHALL BE INFERRED FROM THE ARCHITECTURAL DRAWINGS.

## ARCHITECTURAL ABBREVIATIONS LEGEND

ABBREVIATIONS MAY OR MAY NOT INCLUDE PERIOD PUNCTUATION.
ABBREVIATIONS APPLY TO ARCHITECTURAL DOCUMENTS ONLY.

| | |
|---|---|
| @ | AT |
| & | AND |
| AB | AIR BARRIER |
| ACH | ADULT CHANGE TABLE |
| ACM | ALUMINUM COMPOSITE PANEL\ |
| ADO | AUTOMATIC DOOR OPENER |
| AFF | ABOVE FINISH FLOOR |
| AG | ABOVE GRADE |
| ALUM | ALUMINUM |
| ANOD | ANODIZED |
| AP | ACCESS PANEL |
| ARCH | ARCHITECTURAL |
| AVB | AIR & VAPOUR BARRIER |
| BB | BULLETIN BOARD |
| BCH | BABY CHANGE TABLE |
| BD | BOARD |
| BF | BARRIER FREE |
| BG/AS | BELOW GRADE/ABOVE SLAB |
| BLDG | BUILDING |
| BLK | BULKHEAD |
| BOTT | BOTTOM |
| BTF | BOTTLE FILLER |
| BTLS | BLUETOOTH LOCKSET |
| BTWN | BETWEEN |
| CAB | CABINET |
| CAT | CATEGORY |
| CB | CATCH BASIN |
| C/C | CENTRE TO CENTRE |
| CC | CONCEALED CLOSER |
| CF | CEILING FINISH |
| CG | CORNER GUARD |
| CH | COAT HOOK |
| CHW | CUSTOM HARDWARE |
| CJ | CONTROL JOINT |
| CL | CENTER LINE |
| CLG | CEILING |
| CLOS | CLOSER |
| CLR | CLEAR |
| CO | CLEAR OPENING |
| COL | COLUMN |
| CONC | CONCRETE |
| CONT | CONTINUOUS |
| CONST | CONSTRUCTION |
| COORD | COORDINATE |
| COR | CORROSION |
| CPT | CARPET TILE |
| CR | CARD READER |
| CST | CONCRETE STAIN |
| CW | COMPLETE WITH |
| D | DRYER |
| DB | DEADBOLT |
| DC | DOOR CONTACT |
| DF | DRINKING FOUNTAIN |
| DIA | DIAMETER |
| DIM | DIMENSION |
| DLO | DAYLIGHT OPENING (GLAZING) |
| DN | DOWN |
| DW | DISHWASHER |
| DWG | DRAWING |
| EB | EXIT BUTTON |
| EF | EXHAUST FAN |
| ELEC | ELECTRICAL |
| ELEV | ELEVATION |
| ELVR | ELEVATOR |
| EP | ELECTRICAL PANEL |
| EQ | EQUAL |
| EQUIP | EQUIPMENT |
| ES | ELECTRIC STRIKE |
| EXIST | EXISTING |
| EXP | EXPOSED |
| EXT | EXTERIOR |
| F | REFRIGERATOR |
| FAAP | FIRE ANNUNCIATOR & ALARM PANEL |
| FAN EX | FAN EXHAUST |
| FB | FLASHBOLT |
| FCL | FINISHED CEILING ELEVATION |
| FD | FLOOR DRAIN |
| FE | FIRE EXTINGUISHER |
| FF | FLOOR FINISH |
| FFL | FINISHED FLOOR LEVEL |
| FH | FIRE HYDRANT |
| FG | FIXED GLASS |
| FHC | FIRE HOSE CABINET |
| FIN | FINISHED |
| F/O | FACE OF |
| FR. GL | FROSTED GLASS |
| FRR | FIRE RESISTANCE RATING |
| FS | FIRE SHUTTER |
| G | GARBAGE BIN |
| G1S | GOOD ONE SIDE |
| G2S | GOOD TWO SIDES |
| GA | GAUGE |
| GALV | GALVANIZED |
| GB | GRAB BAR |
| GYP | GYPSUM |
| GWB | GYPSUM WALL BOARD |
| HB | HOSEBIB |
| HD | HAND DRYER |
| HM | HOLLOW METAL |
| H/O | HOLD OPEN |
| HOR | HORIZONTAL |
| HR | HOUR |
| HSS | HOLLOW STEEL SECTION |
| HT | HEIGHT |
| ID | INSIDE DIAMETER |
| INSUL | INSULATION |
| KLS | KEYLATCH SET |
| KP | KICKPLATE |
| LF | LIGHT FIXTURE |
| LK | LOCKERS |
| LLS | LEVER LATCH SET |
| M&E | MECHANICAL & ELECTRICAL |
| MAG | MAGLOCK |
| MAS | MASONRY |
| MATL | MATERIAL |
| MAX | MAXIMUM |
| MB | MOISTURE BARRIER |
| MDF | MEDIUM DENSITY FIBREBOARD |
| MECH | MECHANICAL |
| MFR | MANUFACTURER |
| MHO | MAGNETIC HOLD OPEN |
| MI | MIRROR |
| MIN | MINIMUM |
| MO | MASONRY OPENING |
| MTL | METAL |
| N/A | NOT APPLICABLE |
| NIC | NOT IN CONTRACT |
| NO. | NUMBER |
| NTS | NOT TO SCALE |
| OBC | ONTARIO BUILDING CODE |
| O.C. | ON CENTRE |
| OD | OUTSIDE DIAMETER |
| OH | OVERHEAD |
| OTA | OPEN TO ABOVE |
| OTB | OPEN TO BELOW |
| OPG | OPENING |
| OPP | OPPOSITE |
| OWSJ | OPEN WEB STEEL JOIST |
| BFPB | BARRIER FREE PUSH BUTTON |
| PH | PANIC HARDWARE |
| PL | PROPERTY LINE |
| PLAM | PLASTIC LAMINATE |
| PLS | PRIVACY LOCKET |
| PLY | PLYWOOD |
| PSF | PRESSED STEEL FRAME |
| PT | PAINT |
| PTD | PAINTED |
| PTWR | PAPER TOWEL & WASTE RECEPTACLE |
| R | RISER |
| RAD | RADIATOR |
| RCP | REFLECTED CEILING PLAN |
| RD | ROOF DRAIN |
| RE-INF | RE-INFORCED |
| REQ | REQUIRED |
| REV | REVERSE |
| RF | RESISLIENT FLOORING |
| RL | RECESSED LIGHTING |
| RM | ROOM |
| RO | ROUGH OPENING |
| ROW | RIGHT-OF-WAY |
| RP | REMOVABLE PANEL |
| RR | REMOVE & REPLACE |
| RTU | ROOF TOP UNIT |
| RWL | RAIN WATER LEADER |
| S | SEALER |
| SB | SANITARY BIN |
| SC | SEALED CONCRETE |
| SCH | SCHEDULE |
| SCR | SWIPE CARD READER |
| SCW | SOLID CORE WOOD |
| SD | SOAP DISPENSER |
| SF | SQUARE FEET |
| SG | SUPPLEMENTARY GUIDELINES OF OBC |
| SH | SILL HEIGHT |
| SIM | SIMILAR |
| SL | SLIDING DOORS |
| SM | SQUARE METER(S) |
| SMK | SMOKE SEAL |
| SND | SANITARY NAPKIN DISPOSAL |
| SOG | SLAB ON GRADE |
| SPEC | SPECIFICATION |
| SQ | SQUARE |
| SS | STAINLESS STEEL |
| SSF | STAINLESS STEEL FRAME |
| SSG | STRUCTURAL SILICON GLAZING |
| SSM | SOLID SURFACE |
| ST | STEEL |
| STC | SOUND TRANSMISSION CLASS |
| STD | STANDARD |
| ST GR | STAIN GRADE |
| STRUCT | STRUCTURAL |
| SUPP | SUPPLEMENTARY |
| T | TREADS |
| TB | THERMALLY BROKEN |
| TBD | TO BE DETERMINED |
| TG | TEMPERED GLAZING |
| THK | THICK |
| TH | THRESHOLD |
| TL | TILE |
| TM | TILT MIRROR |
| T/O | TOP OF |
| TP | TOILET PAPER DISPENSER |
| TS | TRANSITION STRIP |
| TYP | TYPICAL |
| TWB | TOWEL BAR |
| TWF | THROUGH WALL FLASHING |
| ULC | UNDERWRITER'S LABORATORY OF CANADA |
| UNO | UNLESS NOTED OTHERWISE |
| U/S | UNDERSIDE |
| VERT | VERTICAL |
| VB | VAPOUR BARRIER |
| VC | VENEER CORE |
| VCT | VINYL COMPOSITE TILE |
| VIF | VERIFY IN FIELD |
| VP | VAPOUR PERMEABLE |
| VR | VAPOUR RETARDER |
| W | WASHER |
| W/ | WITH |
| WB | WALL BASE |
| W/C | WASHROOM |
| WD | WOOD |
| WDV | WOOD VENEER |
| WG | WIRED GLASS |
| WM | WATERMAIN |
| WRB | WATER RESISTANT BARRIER |
| WS | WEATHERSTRIP |
| WSH | WINDOW SHADE |
| WTB | WHITE BOARD |


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**ISSUE DATE:**

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 2 | 2021.03.16 | ISSUED FOR TENDER |
| 1 | 2021 | DD REVIEW |

**PROJECT:**

Elmira District Secondary School – Window, Roof, HVAC & Sanitary Upgrades

**DRAWING TITLE:**

ANNOTATION LEGEND, ABBREVIATIONS, & GENERAL NOTES

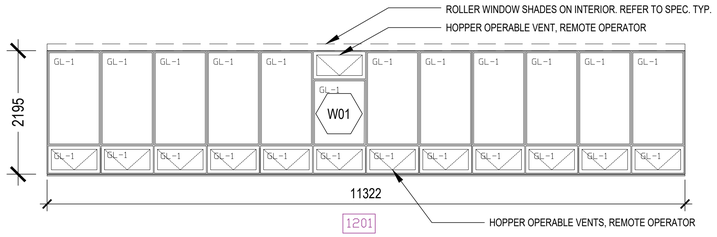
**PROJECT NO:** 20931
**SCALE:** AS NOTED
**DRAWN BY:** JG
**REVIEWED BY:** JC-B

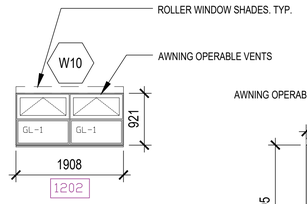
**DRAWING NO:**

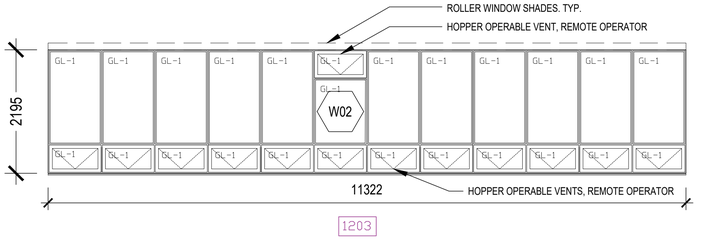
A002

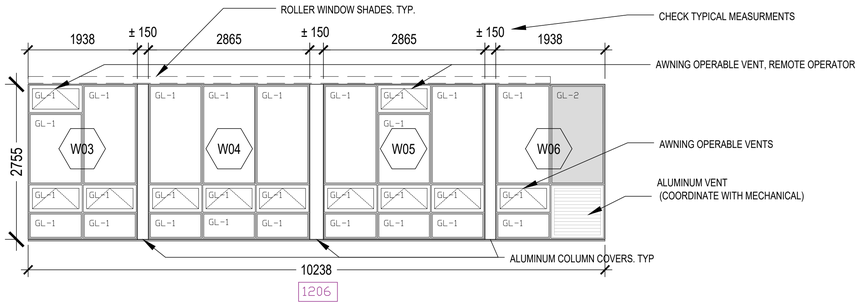
## GLAZING SCHEDULE

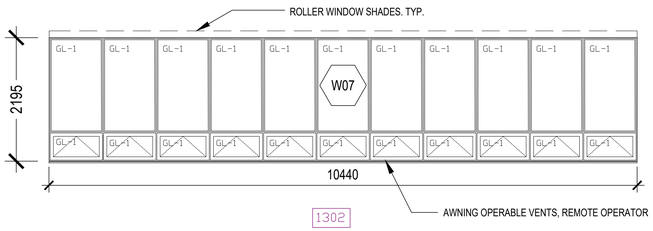
| ABBREVIATION | DESCRIPTION | MANUFACTURER | PRODUCT | NOTES |
|---|---|---|---|---|
| GL1 | DBL GLZ IGU, ARGON FILL | GUARDIAN | SN 54 LAYER 2 | |
| GL2 | DBL GLZ IGU, ARGON FILL, SPANDREL | GUARDIAN , OPACICOAT | SN 54 LAYER 2, PAINT ON LAYER 4 TBD | |

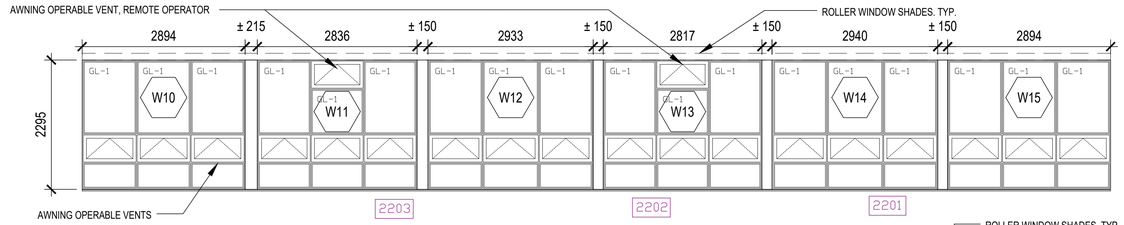


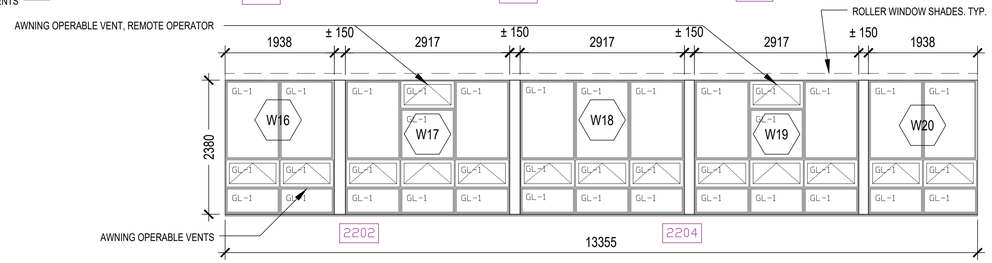



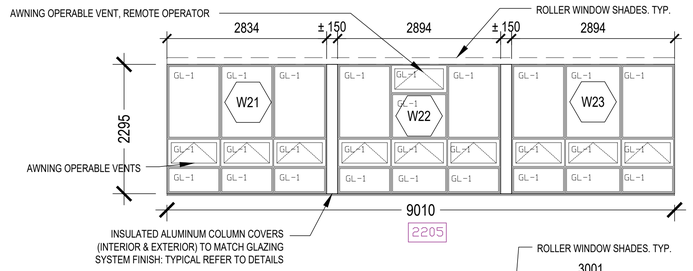



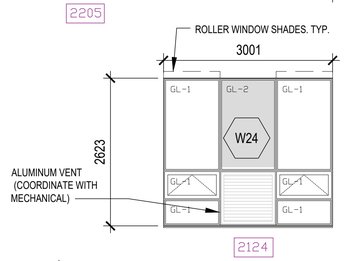



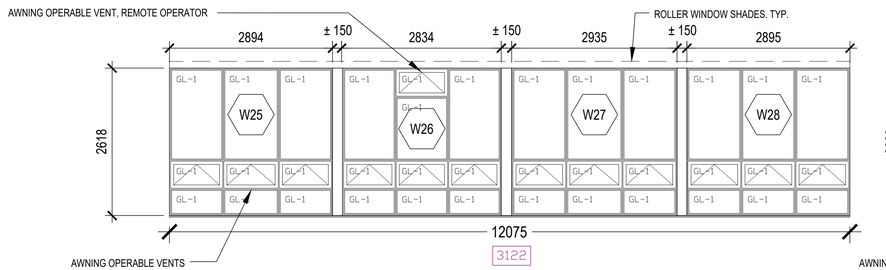



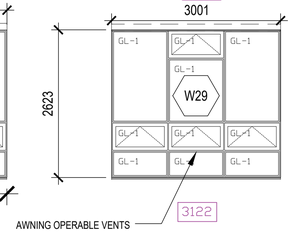



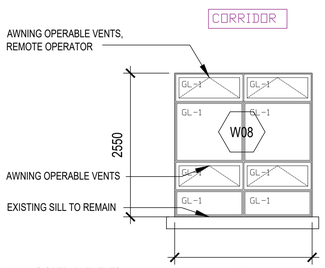



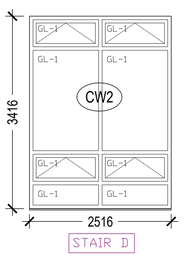



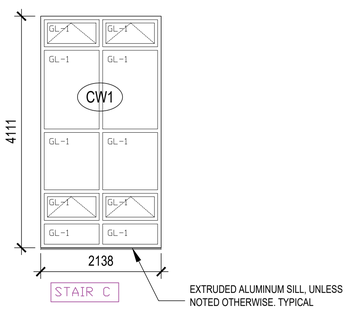



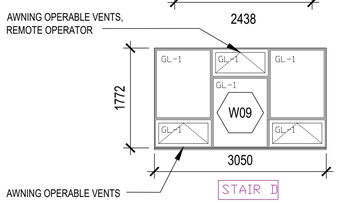



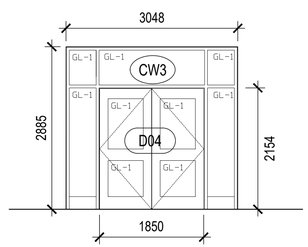



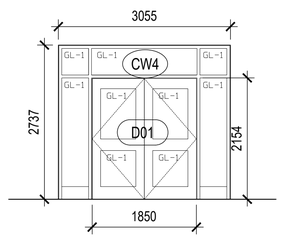




**LEGEND**

| | |
|---|---|
| XXXX | ROOM NUMBER/NAME AT EXISTING OPENING |
| | OUTLINE OF INTERIOR ROLLER WINDOW SHADE |

NOTE: ALL DOOR AND WINDOW OPENING SIZES AS DIMENSIONED HERE ARE NOMINAL. ALL OPENINGS AND EXISTING POST FRAMING TO BE VERIFIED ON SITE PRIOR TO CONSTRUCTION.





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DO NOT SCALE DRAWINGS


**ISSUE DATE:**

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 2 | 2021.03.16 | ISSUED FOR TENDER |

**PROJECT:**

Elmira District Secondary School – Window, Roof, HVAC & Sanitary Upgrades

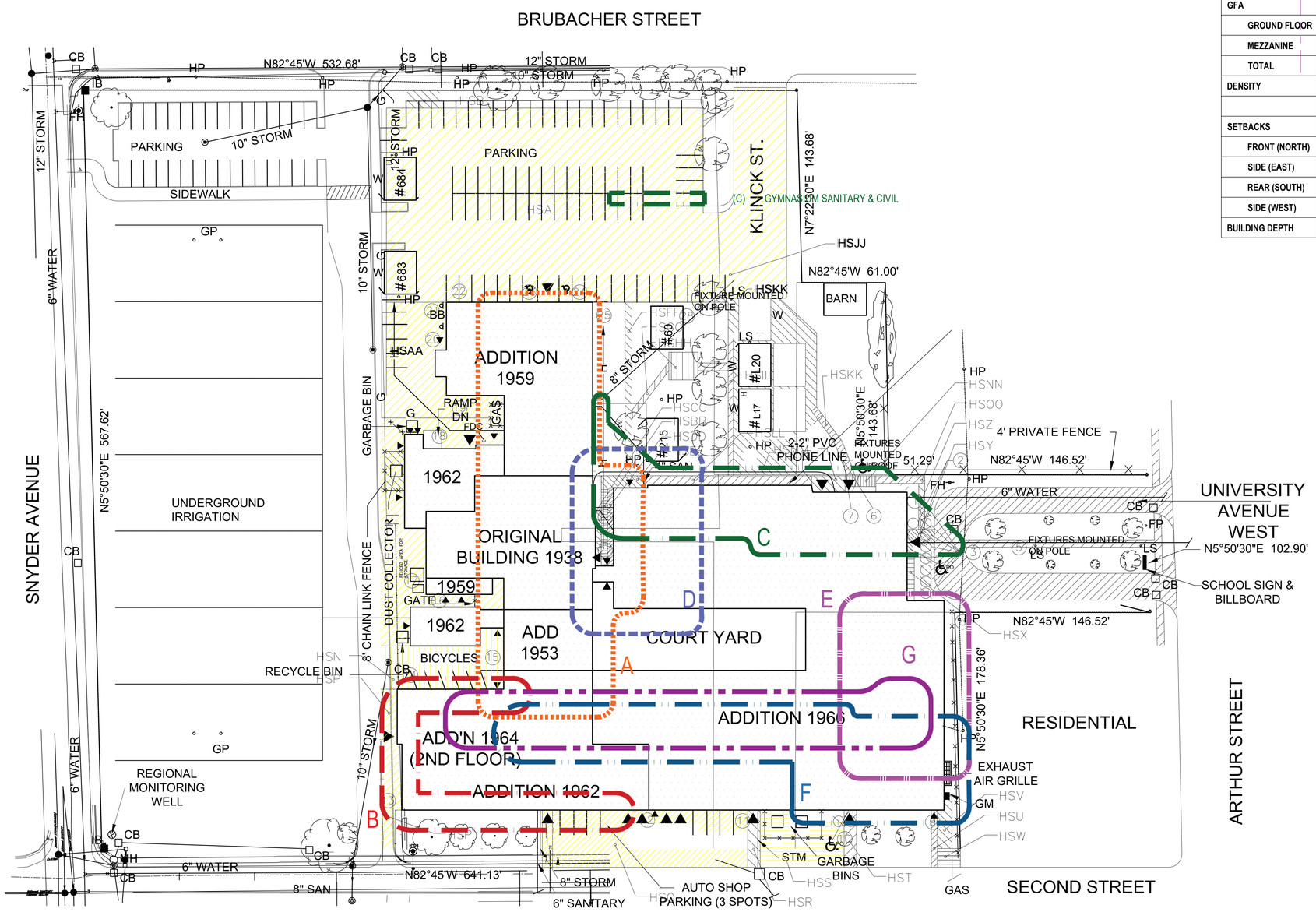
**DRAWING TITLE:**

WINDOW SCHEDULE & GLAZING SCHEDULE

**PROJECT NO:** 20931
**SCALE:** 1:50
**DRAWN BY:** XX
**REVIEWED BY:** XX

**DRAWING NO:**

A005




1 SITE PLAN
A011 1 : 500

## SITE DATA

| | | | |
|---|---|---|---|
| ADDRESS | 4 UNIVERSITY AVENUE, ELMIRA, ON N3B 1K2 | | |
| LOT & PLAN NO. | PART OF PLAN 76 LOT 32 TO LOT 40 PT LOT 31 LOT 23 TO LOT 30 CLOSED KLINCK ST TOWN OF WOOLWICH REGION MUNICIPALITY OF WATERLOO | | |
| ZONING | EXISTING TO REMAIN | | |
| | EXISTING | PROPOSED | |
| OCCUPANCY | | *EXISTING TO REMAIN* | |
| LOT AREA | | *EXISTING TO REMAIN* | |
| BUILDING AREA | | *EXISTING TO REMAIN* | |
| COVERAGE | | *EXISTING TO REMAIN* | |
| LANDSCAPE AREA | | *EXISTING TO REMAIN* | |
| PARKING SPOTS | | *EXISTING TO REMAIN* | |
| | EXISTING | NEW | PROPOSED |
| GFA | | | |
| GROUND FLOOR | | | *EXISTING TO REMAIN* |
| MEZZANINE | | | *EXISTING TO REMAIN* |
| TOTAL | | | *EXISTING TO REMAIN* |
| DENSITY | | | |
| | REQUIRED | EXISTING | PROPOSED |
| SETBACKS | | | |
| FRONT (NORTH) | | | *EXISTING TO REMAIN* |
| SIDE (EAST) | | | *EXISTING TO REMAIN* |
| REAR (SOUTH) | | | *EXISTING TO REMAIN* |
| SIDE (WEST) | | | *EXISTING TO REMAIN* |
| BUILDING DEPTH | | | *EXISTING TO REMAIN* |

PHASING LEGEND

- (A) ROOF SCOPE
- (B) WINDOW REPLACEMENT
- (C) GYMNASIUM SANITARY & CIVIL
- (D) GYMNASIUM RTU
- (E) CAFETERIA RTU & CEILING WORK
- (F) BOILER REMOVAL AND SERVICES WORK
- (G) LOCKER REFURBISHEMENT

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|---|---|---|
| 2 | 2021.03.16 | ISSUED FOR TENDER |
| 1 | 2021 | DD REVIEW |

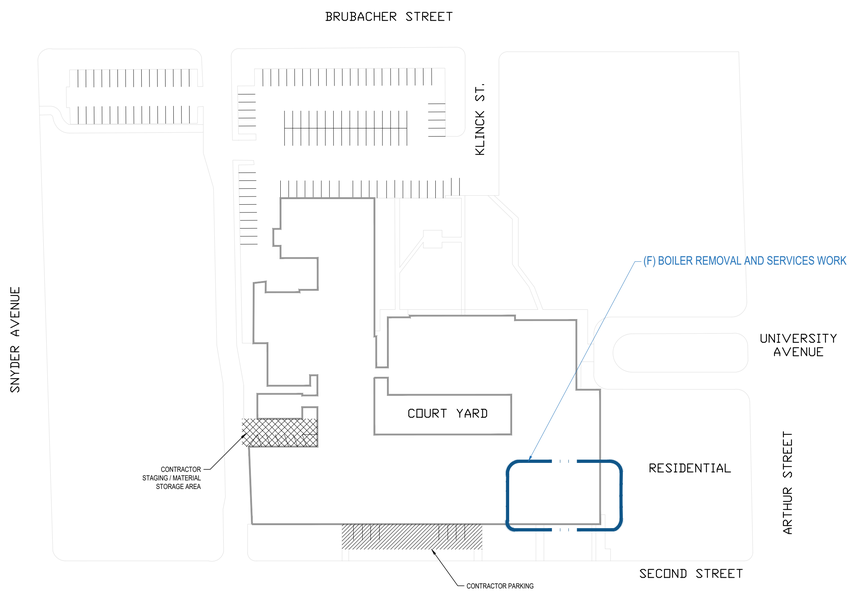
PROJECT:
Elmira District Secondary School – Window, Roof, HVAC & Sanitary Upgrades

DRAWING TITLE:
SITE PLAN & SITE DATA

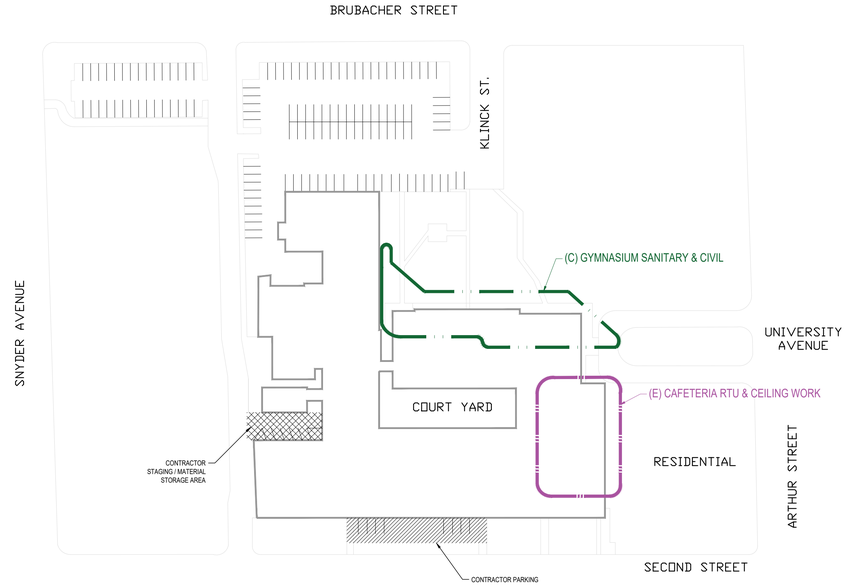
PROJECT NO: 20931
SCALE: AS NOTED
DRAWN BY: JG
REVIEWED BY: JC-B

PROJECT NORTH: N

DRAWING NO:
A011




1 A012 APRIL PHASE
1 : 1000

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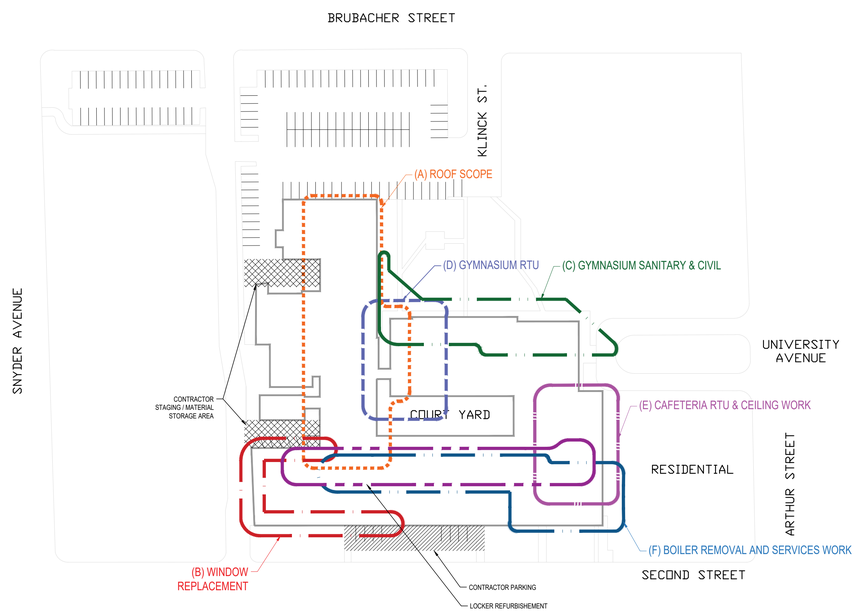
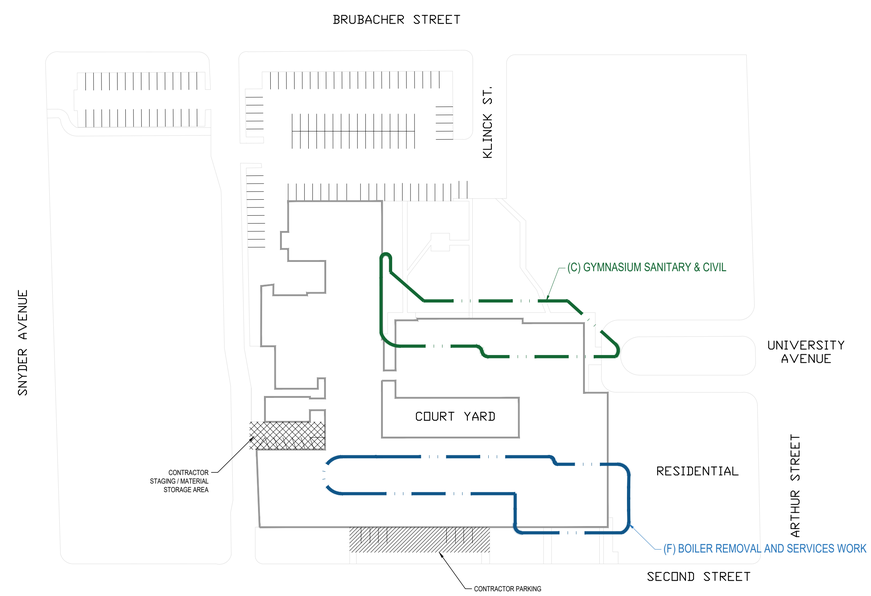
1 : 1000




3 A012 SUMMER PHASE
1 : 1000




4 A012 SEPTEMBER PHASE
1 : 1000

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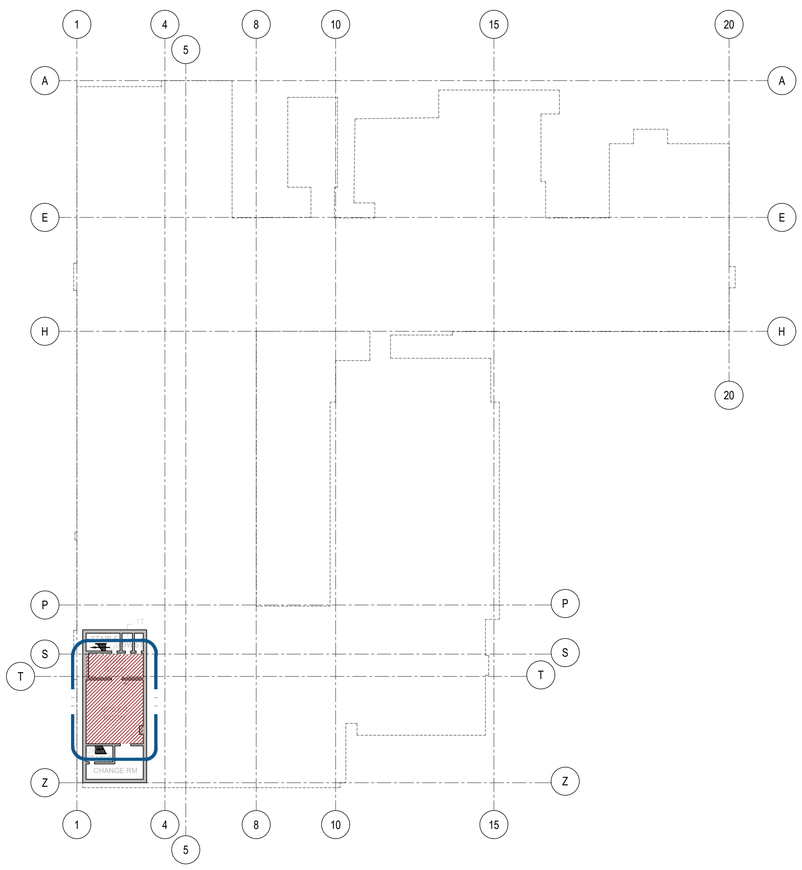
| 1 | 2021 | DD REVIEW |

**PROJECT:**
Elmira District Secondary School – Window, Roof, HVAC & Sanitary Upgrades

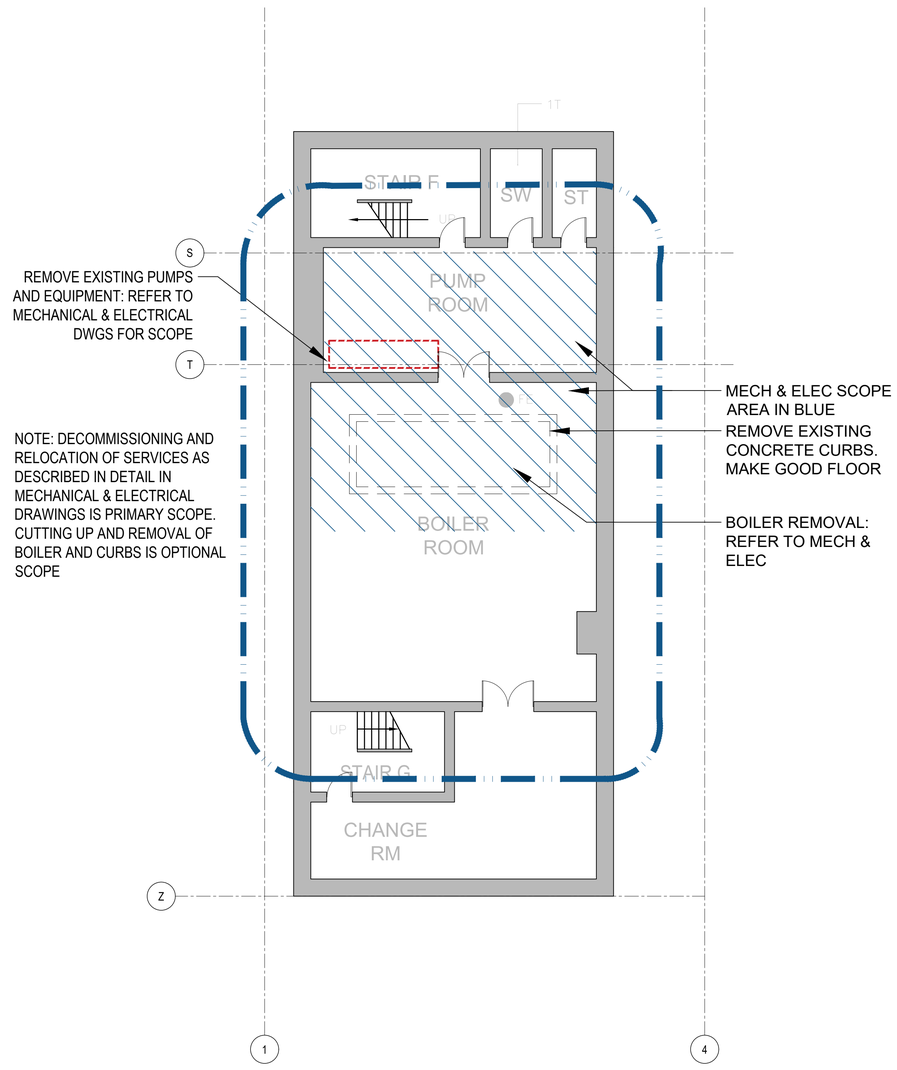
**DRAWING TITLE:**
SITE DETAILS PHASING PLAN

**PROJECT NO:** 20931
**SCALE:** AS NOTED
**DRAWN BY:** JG
**REVIEWED BY:** JC-B
**PROJECT NORTH:**

**DRAWING NO:**
A012




1 / A021 BASEMENT FLOOR KEY PLAN
1 : 500




2 / A021 BASEMENT FLOOR PARTIAL PLAN: BOILER ROOM
1 : 100

PLAN LEGEND

EXISTING WALL TO REMAIN

EXISTING WALL/ ELEMENT TO BE DEMOLISHED

## GENERAL DEMOLITION NOTES:

**THE DEMOLITION DRAWINGS ILLUSTRATE A GENERAL SCOPE OF WORK. IT IS THE FULL RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE FULL SCOPE OF DEMOLITION REQUIRED USING EXISTING CONDITIONS AND THE COMPLETE CONTRACT DOCUMENT SETS INCLUSIVE OF ALL DISCIPLINES INCLUDING BUT NOT LIMITED TO ARCHITECTURAL, STRUCTURAL, MECHANICAL, AND ELECTRICAL TO ACHIEVE THE FINAL SCOPE OF WORK.**

**1. CONTRACTOR TO REVIEW AND FOLLOW 'H.A.S.P." (HEALTH AND SAFETY PROCEDURES) AS DICTATED IN THE SPECIFICATION BEFORE BEGINNING ANY WORK.**

**2. INFORMATION SHOWN ON THE DEMOLITION DRAWINGS IS BASED ON INFORMATION AVAILABLE FROM EXISTING BUILDING DRAWINGS AND A LIMITED VISUAL INSPECTION.**

**3. CONTRACTOR TO CHECK ALL DRAWINGS AGAINST ACTUAL CONDITIONS ON SITE AND REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK.**

**4. ALL DIMENSIONS ARE TO BE DETERMINED USING THE PROPOSED CONTRACT DOCUMENTS. NO DIMENSIONS ARE TO BE INFERRED FROM THE DEMOLITION DRAWINGS.**

**5. CONTRACTOR TO MAKE GOOD ALL WALLS, CEILINGS AND FLOORING TO REMAIN THAT ARE AFFECTED BY DEMOLITION. WHERE EXISTING SURFACES ARE DISTURBED MAKE GOOD EXISTING SURFACE OR ENTIRE PLANE OF SURFACE BACK TO NEAREST CORNER OR CHANGE IN MATERIAL.**

**6. CONTRACTOR TO SUPPLY AND INSTALL ALL NECESSARY HOARDING TARPS, ETC TO PROTECT WORK AND MAINTAIN A DUST FREE ENVIRONMENT IN SURROUNDING AREAS.**

**7. CONTRACTOR TO MAKE GOOD ALL JUNCTIONS BETWEEN EXISTING STRUCTURES IDENTIFIED TO BE REMOVED AND EXISTING STRUCTURES IDENTIFIED TO REMAIN.**

**8. PROVIDE NOTICE DATE TO OWNER TO REMOVE ANY WANTED ITEMS FROM SITE**

**9. REMOVE & DISPOSE OF ALL EXISTING CEILING FINISHES AND SUPPORT SYSTEMS AS NOTED. FOR CLARITY OF DRAWINGS CEILING IS NOT DASHED IN DEMOLITION DRAWINGS, HOWEVER THEY MUST BE REMOVED AS NOTED HERE. REMOVAL OF EXISTING CEILING FINISHES SHALL INCLUDE ALL CEILING LAYERS, MATERIALS, SUPPORT SYSTEMS, MECHANICAL AND ELECTRICAL, AND ABANDONED DEBRIS IN THE CEILING SPACE. REMOVE ALL DOUBLE CEILINGS, WHERE OLDER CEILING REMAINS OBSCURED BY EXISTING CEILING.**

**10. REMOVE ALL ROOFING ASSEMBLY TO TOP OF DECK.**

**11. SALVAGE CEILING TILES FOR REUSE WHERE NOTED.**

**12. REMOVE & DISPOSE OF ALL ABANDONED SERVICES - FIXTURES, EQUIPMENT, CONDUITS, PIPE, WIRING, ETC. (INTERIOR AND EXTERIOR).**

**13. REMOVE & DISPOSE OF ALL EXISTING MILLWORK, FURNITURE, LOOSE MISCELLANEOUS ARTICLES AND EQUIPMENT UNLESS OTHERWISE NOTED.**

**14. REMOVE & DISPOSE ALL EXISTING SIGNAGE UNLESS OTHERWISE NOTED.**

**15. DEMOLISH ALL EXISTING ELEMENTS SHOWN HERE AS WELL AS ANY EXISTING ELEMENT WHERE DEMOLITION OF THE ELEMENT IS REQUIRED TO ACCOMMODATE THE WORK.**

**16. REMOVE ALL MECHANICAL SYSTEMS, FIXTURES, EQUIPMENT, PIPING, CONDUIT, DUCTWORK, ETC., UNLESS NOTED (IN AREA OF WORK).**

**17. THIS IS NOT AN EXHAUSTIVE LIST. TO BE READ WITH ALL DRAWINGS AND SPECIFICATIONS (INCLUDING BUT NOT LIMITED TO DEMOLITION DRAWINGS AND SPEC SECTIONS).**

**18. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.**

**19. REMOVE EXISTING DOORS, GRILLES, INCLUDING ALL FRAMING AS NOTED ON DEMO PLANS. ALL EXISTING LOCKS MUST BE RETURNED TO THE OWNER.**

## NOTES ON DESIGNATED SUBSTANCES:

**PRIOR TO COMMENCING WORK, READ 2017 ASBESTOS AUDIT UPDATE PREPARED BY MTE MARCH 15, 2017**

**1. THE SCOPE OF WORK DOES NOT ENTAIL THE REMOVAL OF DESIGNATED SUBSTANCES.**

**2. IN NO WAY SHOULD THE CONTRACTOR ASSUME IT OTHERWISE TO BE 100% FREE OF DESIGNATED SUBSTANCES AND AS SUCH THE CONTRACTOR SHOULD TAKE EVERY PRECAUTION WHEN WORKING IN THE BUILDING.**

**3. IF THE CONTRACTOR ENCOUNTERS TOXIC OR HAZARDOUS SUBSTANCES, OR HAS REASONABLE GROUNDS TO BELIEVE THAT TOXIC OR HAZARDOUS SUBSTANCES ARE PRESENT, THE CONTRACTOR SHALL TAKE ALL REASONABLE STEPS, INCLUDING STOPPING THE WORK, TO ENSURE THAT NO PERSON'S EXPOSURE TO ANY TOXIC OR HAZARDOUS SUBSTANCES EXCEEDS ANY APPLICABLE TIME WEIGHTED LEVELS PRESCRIBED BY APPLICABLE LEGISLATION AT THE PLACE OF THE WORK AND IMMEDIATELY REPORT THE CIRCUMSTANCES TO THE OWNER IN WRITING.**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**PROJECT:**

Elmira District Secondary School – Window, Roof, HVAC & Sanitary Upgrades

**DRAWING TITLE:**

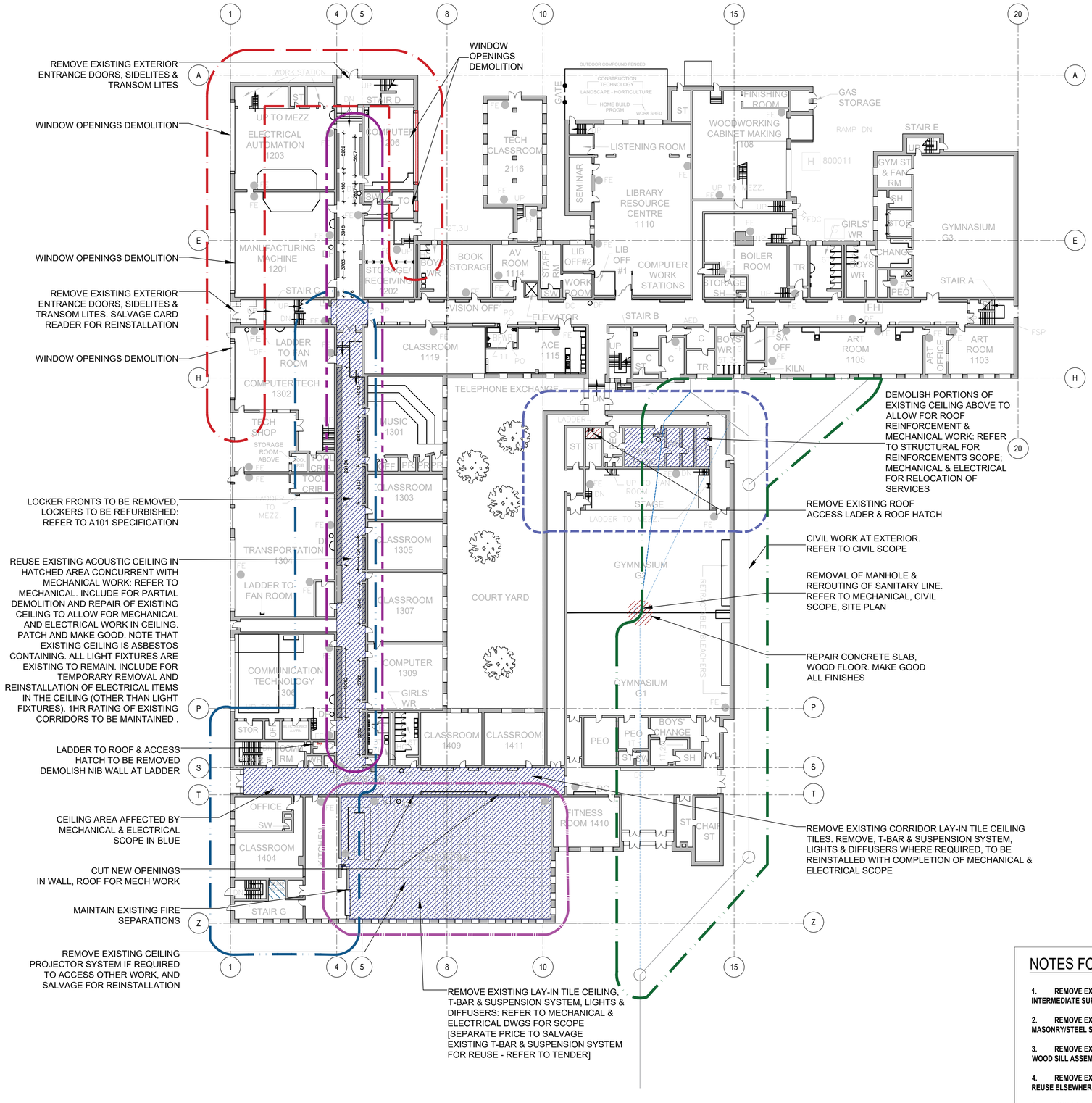
BASEMENT FLOOR PLAN DEMOLITION

**PROJECT NO:** 20931
**SCALE:** AS NOTED
**DRAWN BY:** JG
**REVIEWED BY:** JC-B

**PROJECT NORTH:**

**DRAWING NO:**

A020




1 / A021 GROUND FLOOR DEMOLITION PLAN
1 : 300

PLAN LEGEND

EXISTING WALL TO REMAIN

EXISTING WALL/ ELEMENT TO BE DEMOLISHED

## GENERAL DEMOLITION NOTES:

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10. REMOVE ALL ROOFING ASSEMBLY TO TOP OF DECK.

11. SALVAGE CEILING TILES FOR REUSE WHERE NOTED.

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19. REMOVE EXISTING DOORS, GRILLES, INCLUDING ALL FRAMING AS NOTED ON DEMO PLANS. ALL EXISTING LOCKS MUST BE RETURNED TO THE OWNER.

## NOTES FOR DEMOLITION OF WINDOWS:

1. REMOVE EXISTING GLASS BLOCK AND TRIMS, INCLUDING INTERMEDIATE SUPPORT FRAMING BELOW THE HEAD OF THE OPENING.

2. REMOVE EXISTING FLASHINGS AND SEALANTS TO EXPOSED MASONRY/STEEL STRUCTURE

3. REMOVE EXISTING INTERIOR SILLS AND SKIRTING. SALVAVAGE SOLID WOOD SILL ASSEMBLIES FOR REINSTALLATION IF CONSIDERED VIABLE.

4. REMOVE EXISTING ROLLER BLINDS AND TURN OVER TO SCHOOL FOR REUSE ELSEWHERE.

5. COORDINATE DEMOLITION & REPLACEMENT WORK AND PROTECT EXISTING MECHANICAL AIR CONDITIONING UNITS TO BE REINSTATED AFTER WINDOW REPLACEMENT.

6. EXISTING STEEL FRAMING AT TOP OF WINDOW OPENINGS IS TO REMAIN UNLESS NOTED OTHERWISE.

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| NO. | DATE | DESCRIPTION |
|---|---|---|
| 2 | 2021.03.16 | ISSUED FOR TENDER |
| 1 | 2021 | DD REVIEW |

PROJECT:

Elmira District Secondary School – Window, Roof, HVAC & Sanitary Upgrades

DRAWING TITLE:

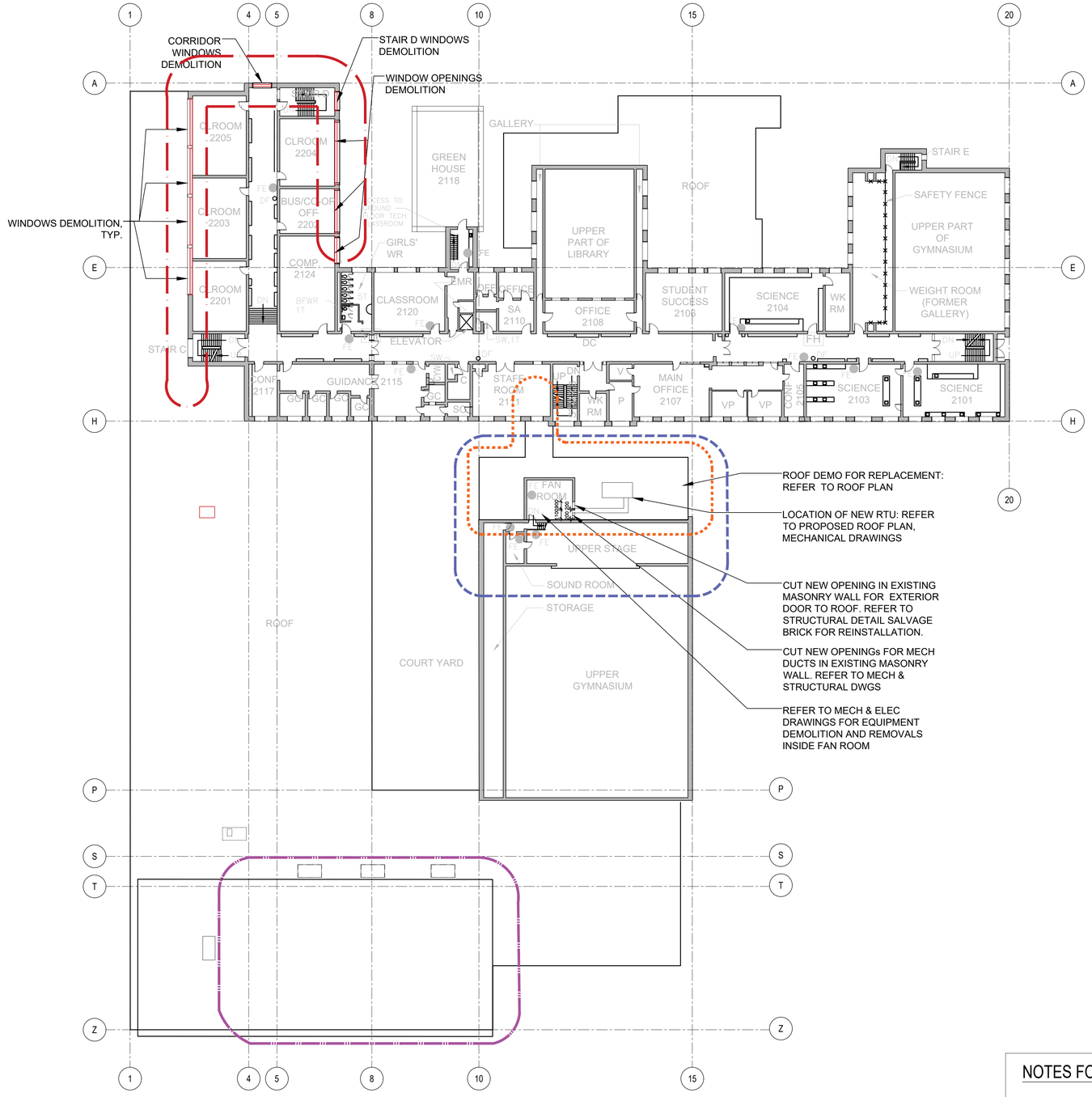
GROUND FLOOR PLAN DEMOLITION

| | |
|---|---|
| PROJECT NO: | 20931 |
| SCALE: | AS NOTED |
| DRAWN BY: | JG |
| REVIEWED BY: | JC-B |

PROJECT NORTH:

DRAWING NO:

A021




1 / A022 SECOND FLOOR DEMOLITION PLAN
1 : 300

PLAN LEGEND

EXISTING WALL TO REMAIN

EXISTING WALL/ ELEMENT TO BE DEMOLISHED

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3. REMOVE EXISTING INTERIOR SILLS AND SKIRTING. SALVAVAGE SOLID WOOD SILL ASSEMBLIES FOR REINSTALLATION IF CONSIDERED VIABLE.

4. REMOVE EXISTING ROLLER BLINDS AND TURN OVER TO SCHOOL FOR REUSE ELSEWHERE.

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6. EXISTING STEEL FRAMING AT TOP OF WINDOW OPENINGS IS TO REMAIN UNLESS NOTED OTHERWISE.

## NOTES ON DESIGNATED SUBSTANCES:

PRIOR TO COMMENCING WORK, READ 2017 ASBESTOS AUDIT UPDATE PREPARED BY MTE MARCH 15, 2017

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ISSUE DATE:

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 2 | 2021.03.16 | ISSUED FOR TENDER |
| 1 | 2021 | DD REVIEW |

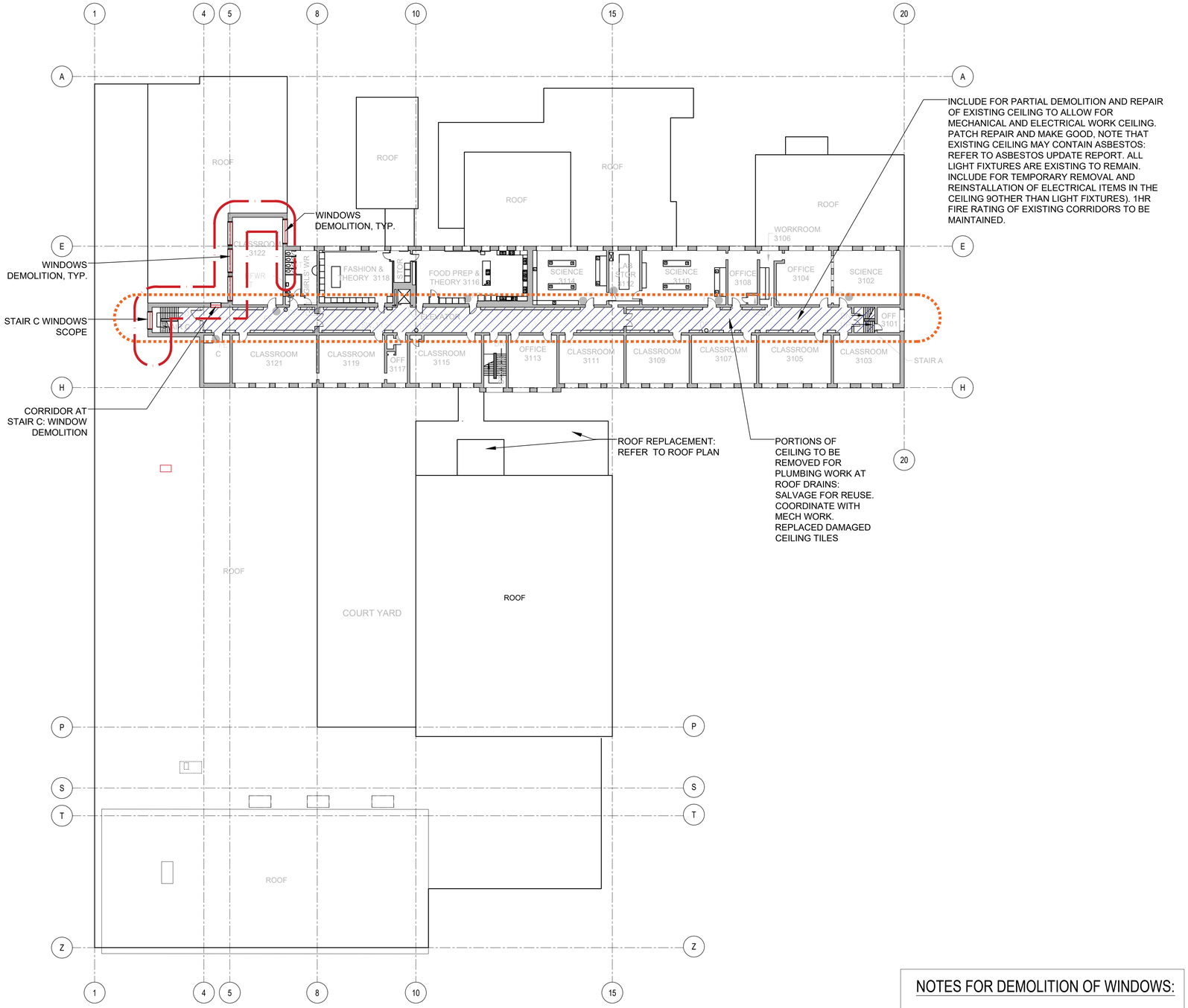
PROJECT:
Elmira District Secondary School – Window, Roof, HVAC & Sanitary Upgrades

DRAWING TITLE:
SECOND FLOOR PLAN DEMOLITION

PROJECT NO: 20931
SCALE: AS NOTED
DRAWN BY: JG
REVIEWED BY: JC-B

PROJECT NORTH: N

DRAWING NO:
A022




1 A023 THIRD FLOOR DEMOLITION PLAN
1 : 300

PLAN LEGEND

EXISTING WALL TO REMAIN

EXISTING WALL/ ELEMENT TO BE DEMOLISHED

## GENERAL DEMOLITION NOTES:

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1. CONTRACTOR TO REVIEW AND FOLLOW 'H.A.S.P." (HEALTH AND SAFETY PROCEDURES) AS DICTATED IN THE SPECIFICATION BEFORE BEGINNING ANY WORK.

2. INFORMATION SHOWN ON THE DEMOLITION DRAWINGS IS BASED ON INFORMATION AVAILABLE FROM EXISTING BUILDING DRAWINGS AND A LIMITED VISUAL INSPECTION.

3. CONTRACTOR TO CHECK ALL DRAWINGS AGAINST ACTUAL CONDITIONS ON SITE AND REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK.

4. ALL DIMENSIONS ARE TO BE DETERMINED USING THE PROPOSED CONTRACT DOCUMENTS. NO DIMENSIONS ARE TO BE INFERRED FROM THE DEMOLITION DRAWINGS.

5. CONTRACTOR TO MAKE GOOD ALL WALLS, CEILINGS AND FLOORING TO REMAIN THAT ARE AFFECTED BY DEMOLITION. WHERE EXISTING SURFACES ARE DISTURBED MAKE GOOD EXISTING SURFACE OR ENTIRE PLANE OF SURFACE BACK TO NEAREST CORNER OR CHANGE IN MATERIAL.

6. CONTRACTOR TO SUPPLY AND INSTALL ALL NECESSARY HOARDING TARPS, ETC TO PROTECT WORK AND MAINTAIN A DUST FREE ENVIRONMENT IN SURROUNDING AREAS.

7. CONTRACTOR TO MAKE GOOD ALL JUNCTIONS BETWEEN EXISTING STRUCTURES IDENTIFIED TO BE REMOVED AND EXISTING STRUCTURES IDENTIFIED TO REMAIN.

8. PROVIDE NOTICE DATE TO OWNER TO REMOVE ANY WANTED ITEMS FROM SITE

9. REMOVE & DISPOSE OF ALL EXISTING CEILING FINISHES AND SUPPORT SYSTEMS AS NOTED. FOR CLARITY OF DRAWINGS CEILING IS NOT DASHED IN DEMOLITION DRAWINGS, HOWEVER THEY MUST BE REMOVED AS NOTED HERE. REMOVAL OF EXISTING CEILING FINISHES SHALL INCLUDE ALL CEILING LAYERS, MATERIALS, SUPPORT SYSTEMS, MECHANICAL AND ELECTRICAL, AND ABANDONED DEBRIS IN THE CEILING SPACE. REMOVE ALL DOUBLE CEILINGS, WHERE OLDER CEILING REMAINS OBSCURED BY EXISTING CEILING.

10. REMOVE ALL ROOFING ASSEMBLY TO TOP OF DECK.

11. SALVAGE CEILING TILES FOR REUSE WHERE NOTED.

12. REMOVE & DISPOSE OF ALL ABANDONED SERVICES - FIXTURES, EQUIPMENT, CONDUITS, PIPE, WIRING, ETC. (INTERIOR AND EXTERIOR).

13. REMOVE & DISPOSE OF ALL EXISTING MILLWORK, FURNITURE, LOOSE MISCELLANEOUS ARTICLES AND EQUIPMENT UNLESS OTHERWISE NOTED.

14. REMOVE & DISPOSE ALL EXISTING SIGNAGE UNLESS OTHERWISE NOTED.

15. DEMOLISH ALL EXISTING ELEMENTS SHOWN HERE AS WELL AS ANY EXISTING ELEMENT WHERE DEMOLITION OF THE ELEMENT IS REQUIRED TO ACCOMMODATE THE WORK.

16. REMOVE ALL MECHANICAL SYSTEMS, FIXTURES, EQUIPMENT, PIPING, CONDUIT, DUCTWORK, ETC., UNLESS NOTED (IN AREA OF WORK).

17. THIS IS NOT AN EXHAUSTIVE LIST. TO BE READ WITH ALL DRAWINGS AND SPECIFICATIONS (INCLUDING BUT NOT LIMITED TO DEMOLITION DRAWINGS AND SPEC SECTIONS).

18. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

19. REMOVE EXISTING DOORS, GRILLES, INCLUDING ALL FRAMING AS NOTED ON DEMO PLANS. ALL EXISTING LOCKS MUST BE RETURNED TO THE OWNER.

## NOTES FOR DEMOLITION OF WINDOWS:

1. REMOVE EXISTING GLASS BLOCK AND TRIMS, INCLUDING INTERMEDIATE SUPPORT FRAMING BELOW THE HEAD OF THE OPENING.

2. REMOVE EXISTING FLASHINGS AND SEALANTS TO EXPOSED MASONRY/STEEL STRUCTURE

3. REMOVE EXISTING INTERIOR SILLS AND SKIRTING. SALVAVAGE SOLID WOOD SILL ASSEMBLIES FOR REINSTALLATION IF CONSIDERED VIABLE.

4. REMOVE EXISTING ROLLER BLINDS AND TURN OVER TO SCHOOL FOR REUSE ELSEWHERE.

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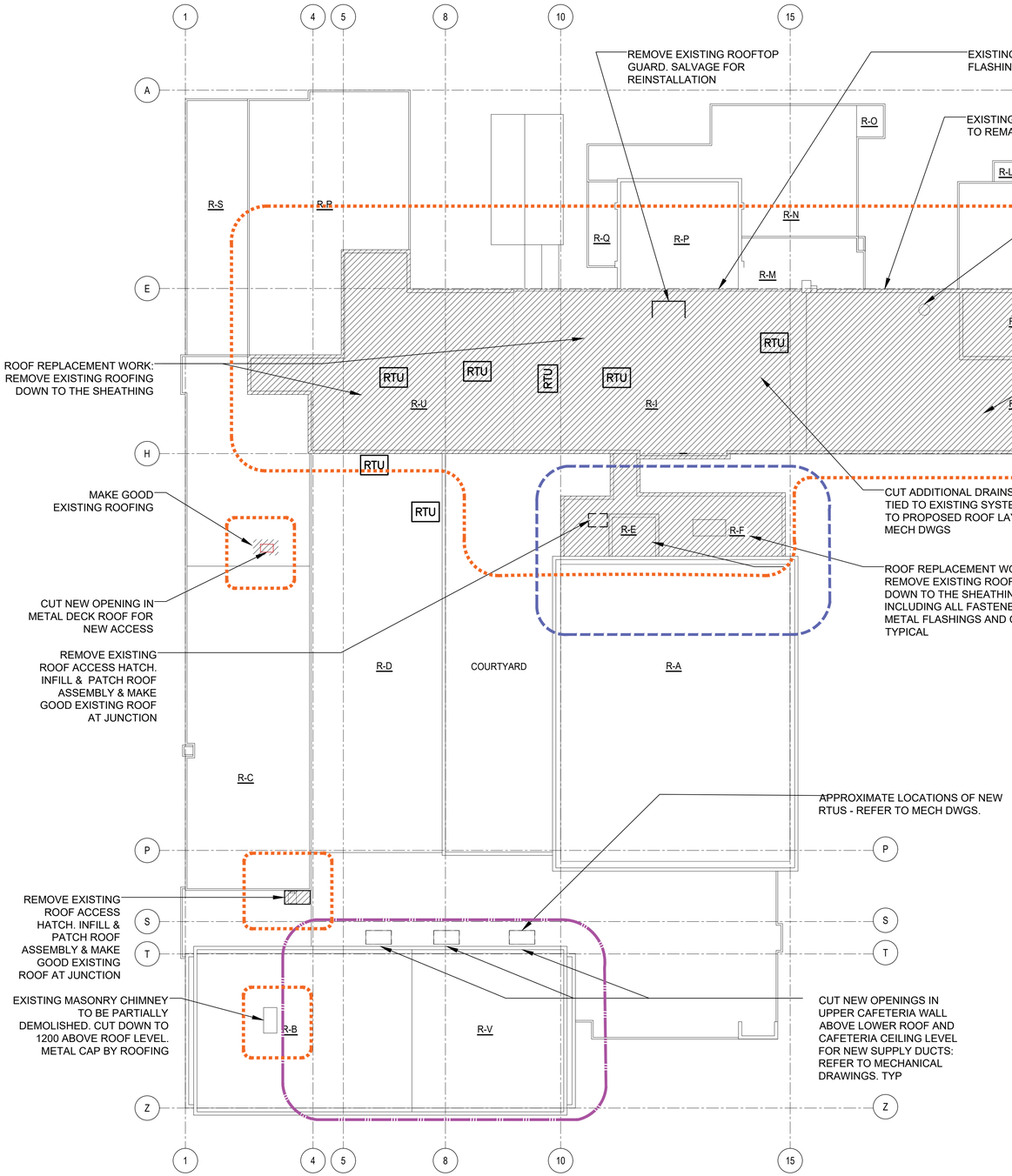
PROJECT:
Elmira District Secondary School – Window, Roof, HVAC & Sanitary Upgrades

DRAWING TITLE:
THIRD FLOOR PLAN DEMOLITION

PROJECT NO: 20931
SCALE: AS NOTED
DRAWN BY: JG
REVIEWED BY: JC-B

PROJECT NORTH:

DRAWING NO:
A023




NOTE: MECHANICAL RTU LOCATIONS ARE FOR ILLUSTRATION PURPOSES ONLY. VERIFY AND COORDINATE EXACT LOCATIONS ON SITE WITH MECHANICAL DRAWINGS

1 / A024 ROOF DEMOLITION PLAN
1 : 300

PLAN LEGEND

EXISTING WALL TO REMAIN

EXISTING WALL/ ELEMENT TO BE DEMOLISHED

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| 1 | 2021 | DD REVIEW |

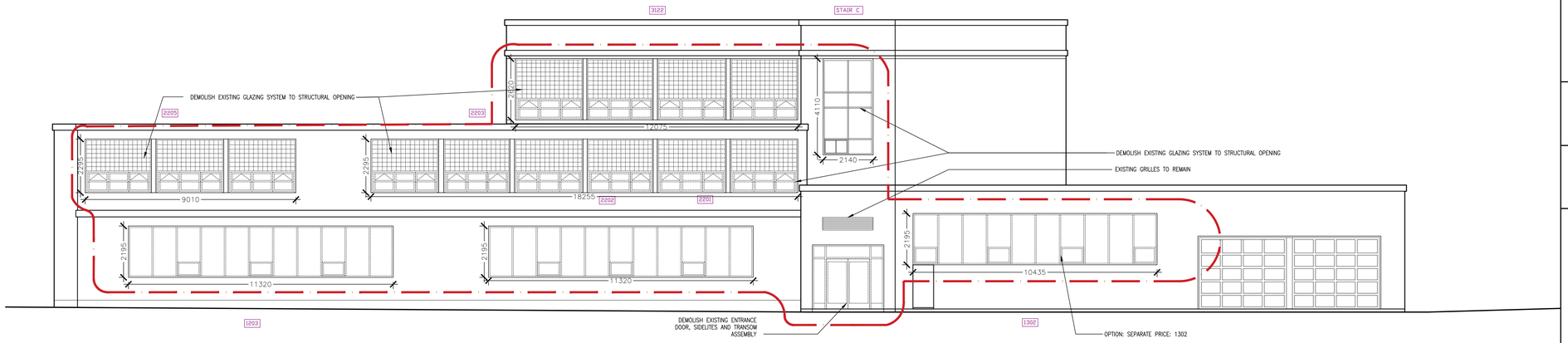
PROJECT:
Elmira District Secondary School – Window, Roof, HVAC & Sanitary Upgrades

DRAWING TITLE:
ROOF PLAN DEMOLITION

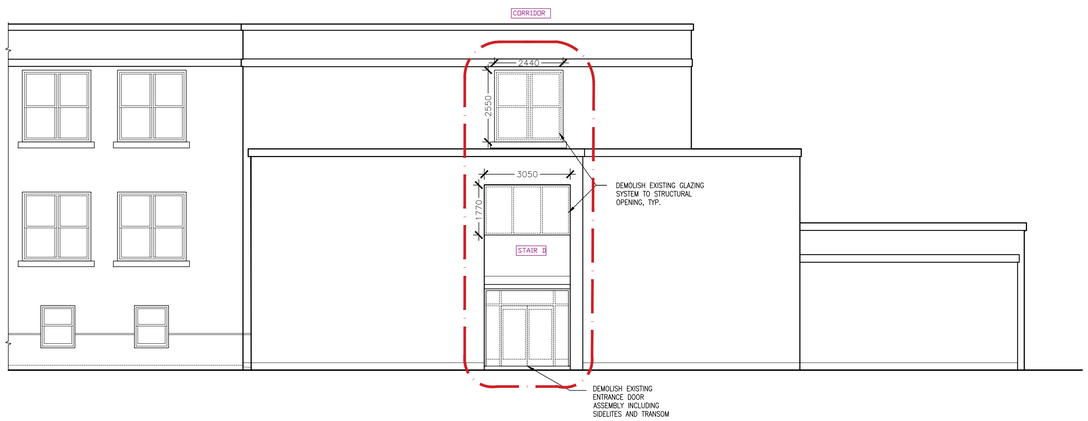
PROJECT NO: 20931
SCALE: AS NOTED
DRAWN BY: JG
REVIEWED BY: JC-B

PROJECT NORTH:

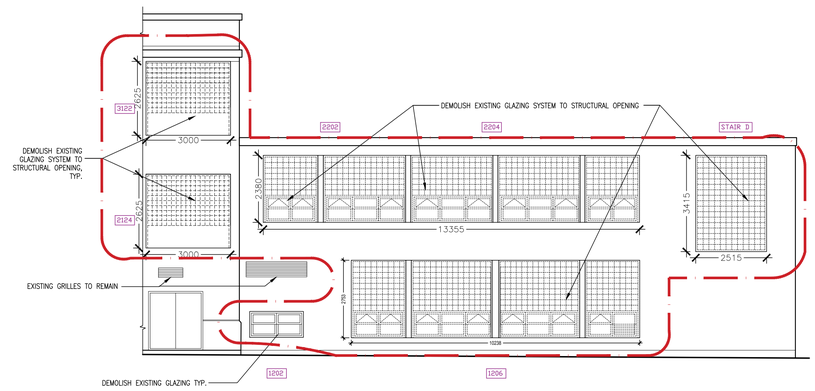
DRAWING NO:
A024




1 A201 SOUTH ELEVATION
1 : 100




2 A201 WEST ELEVATION
1 : 100




3 A201 EAST ELEVATION
1 : 100

XXXX ROOM NUMBER AT EXISTING OPNING SCOPE

## NOTES FOR DEMOLITION OF WINDOWS:

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| 2 | 2021.03.16 | ISSUED FOR TENDER |
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**PROJECT:**

Elmira District Secondary School – Window, Roof, HVAC & Sanitary Upgrades

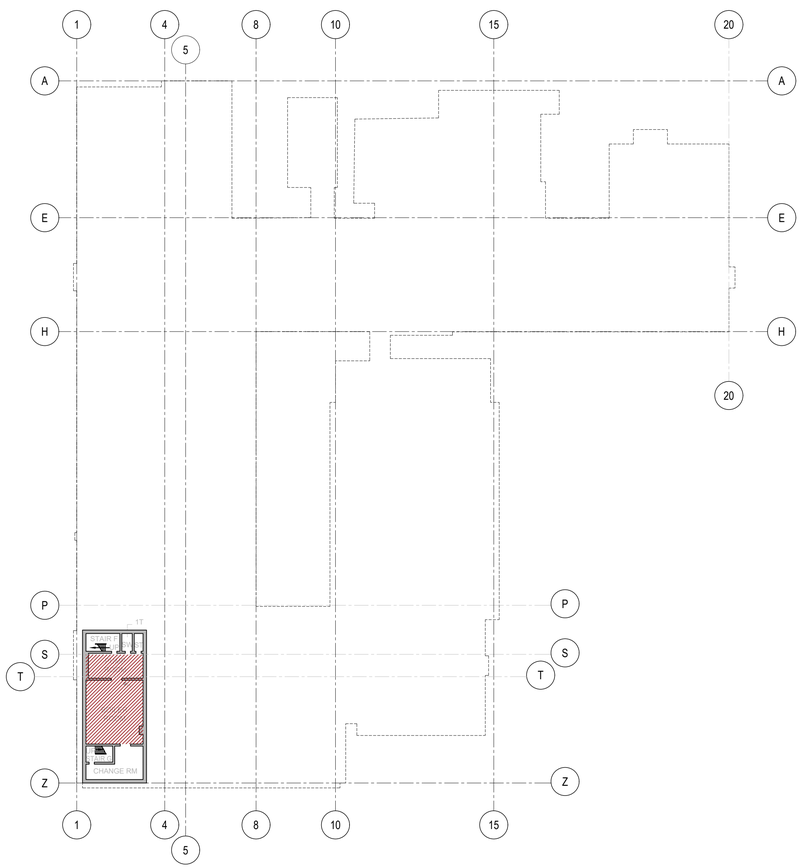
**DRAWING TITLE:**

PARTIAL EXTERIOR ELEVATIONS DEMOLITION

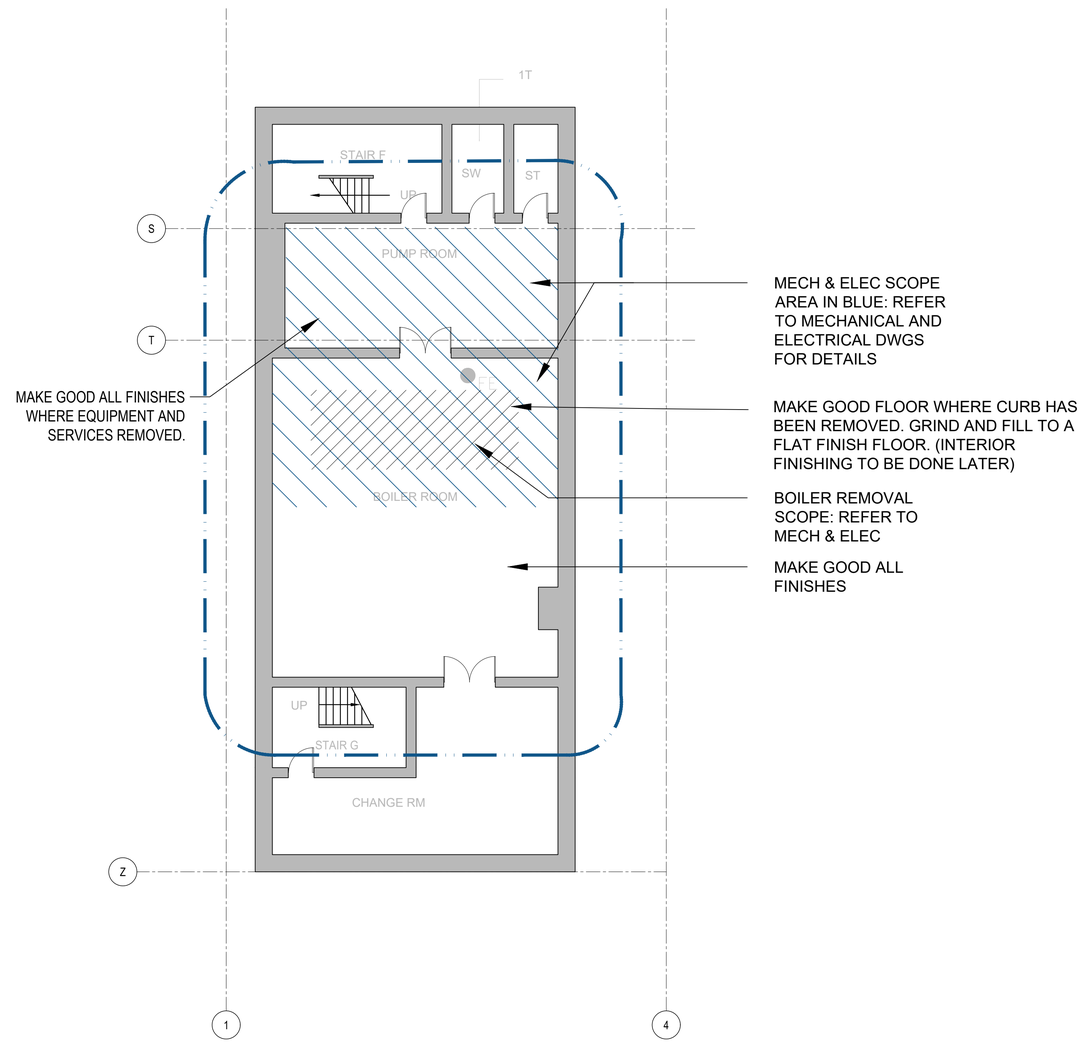
**PROJECT NO:** 20931
**SCALE:** AS NOTED
**DRAWN BY:** JG
**REVIEWED BY:** JC-B

**DRAWING NO:**

A025




1 A100 BASEMENT FLOOR KEY PLAN
1 : 500




2 A100 BASEMENT FLOOR PROPOSED PLAN
1 : 100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**PROJECT:**

Elmira District Secondary School – Window, Roof, HVAC & Sanitary Upgrades

**DRAWING TITLE:**

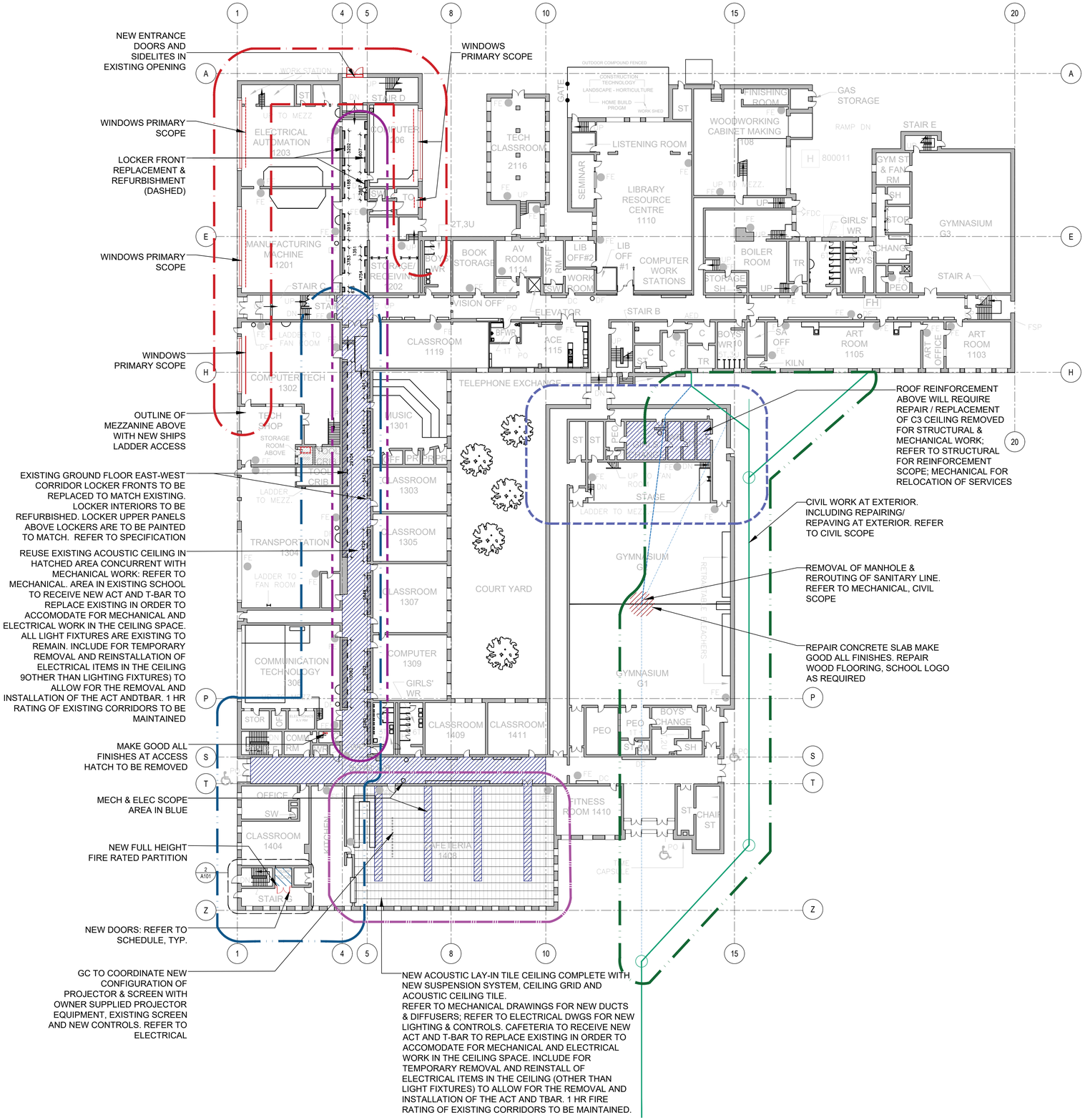
BASEMENT FLOOR PLAN PROPOSED

**PROJECT NO:** 20931
**SCALE:** AS NOTED
**DRAWN BY:** JG
**REVIEWED BY:** JC-B

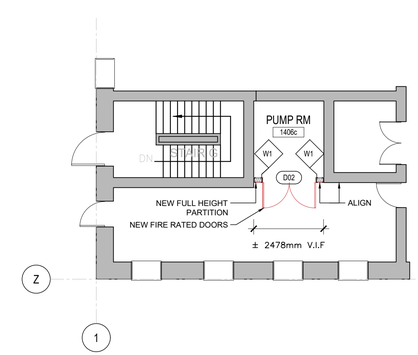
**PROJECT NORTH:**

**DRAWING NO:**

A100




1 / A101 GROUND FLOOR PROPOSED PLAN & CEILING REFLECTED CEILING PLAN
1 : 300




2 / A101 PARTIAL PLAN AT PUMP RM
1 : 100

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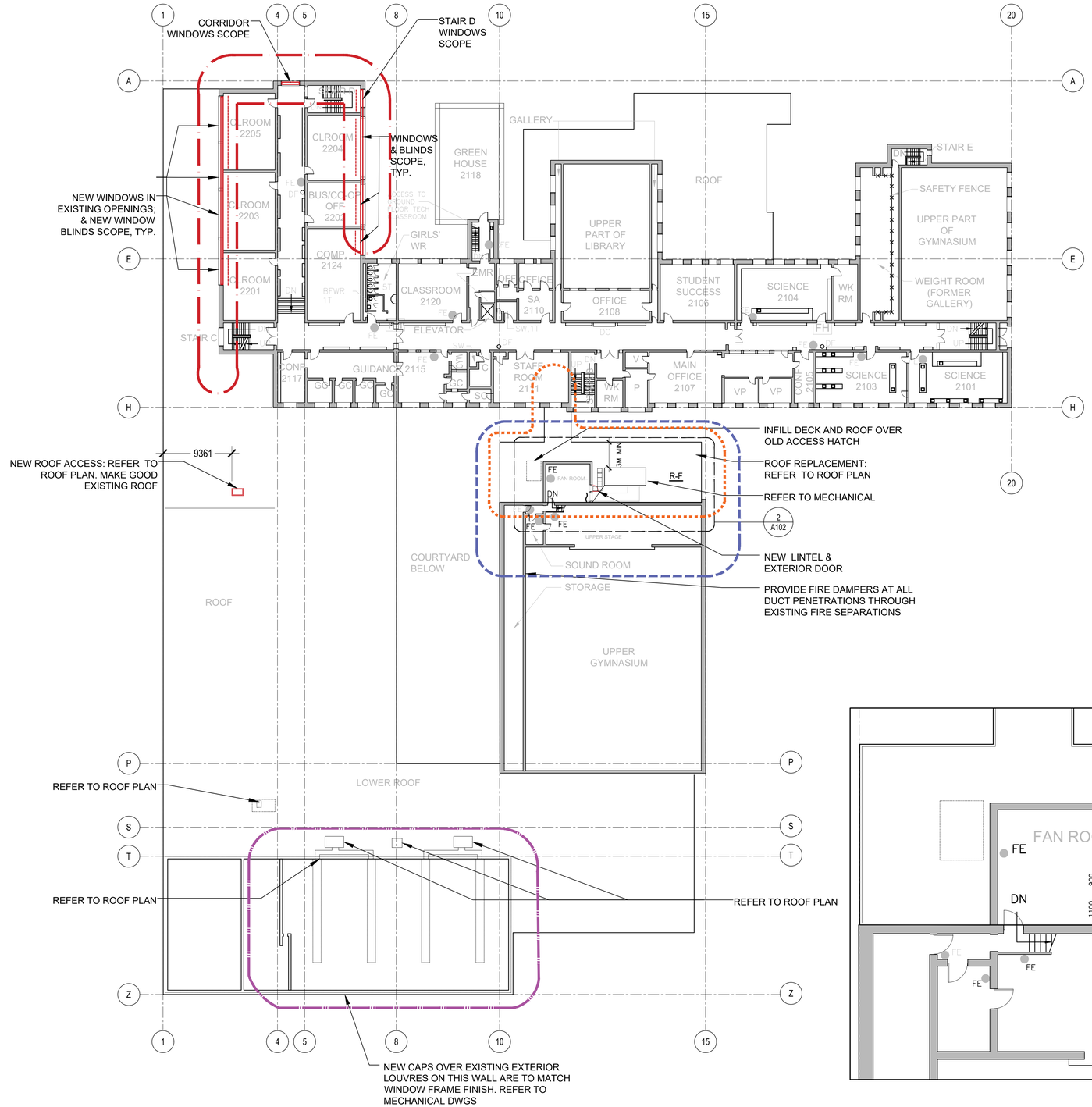
PROJECT:
Elmira District Secondary School – Window, Roof, HVAC & Sanitary Upgrades

DRAWING TITLE:
GROUND FLOOR PLAN PROPOSED

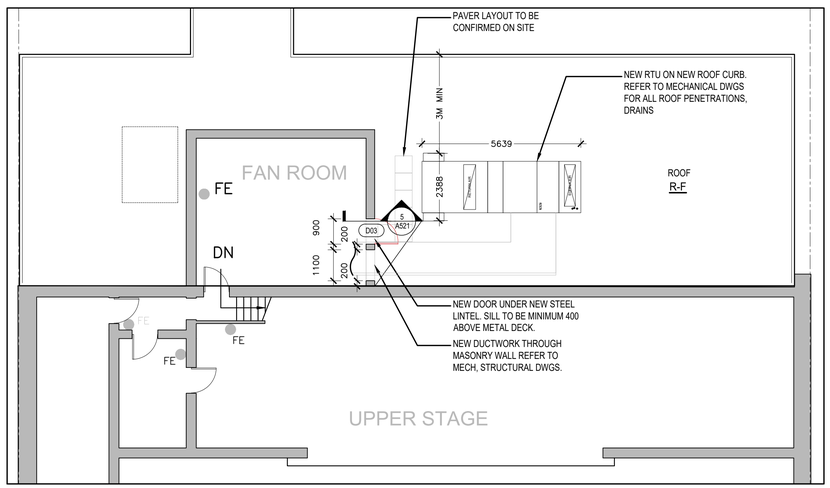
PROJECT NO: 20931
SCALE: AS NOTED
DRAWN BY: JG
REVIEWED BY: JC-B

PROJECT NORTH:

DRAWING NO:
A101




1 A102 SECOND FLOOR PROPOSED PLAN
1 : 300




2 A102 PARTIAL PLAN AT FAN ROOM & ROOF
1 : 100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**PROJECT:**

Elmira District Secondary School – Window, Roof, HVAC & Sanitary Upgrades

**DRAWING TITLE:**

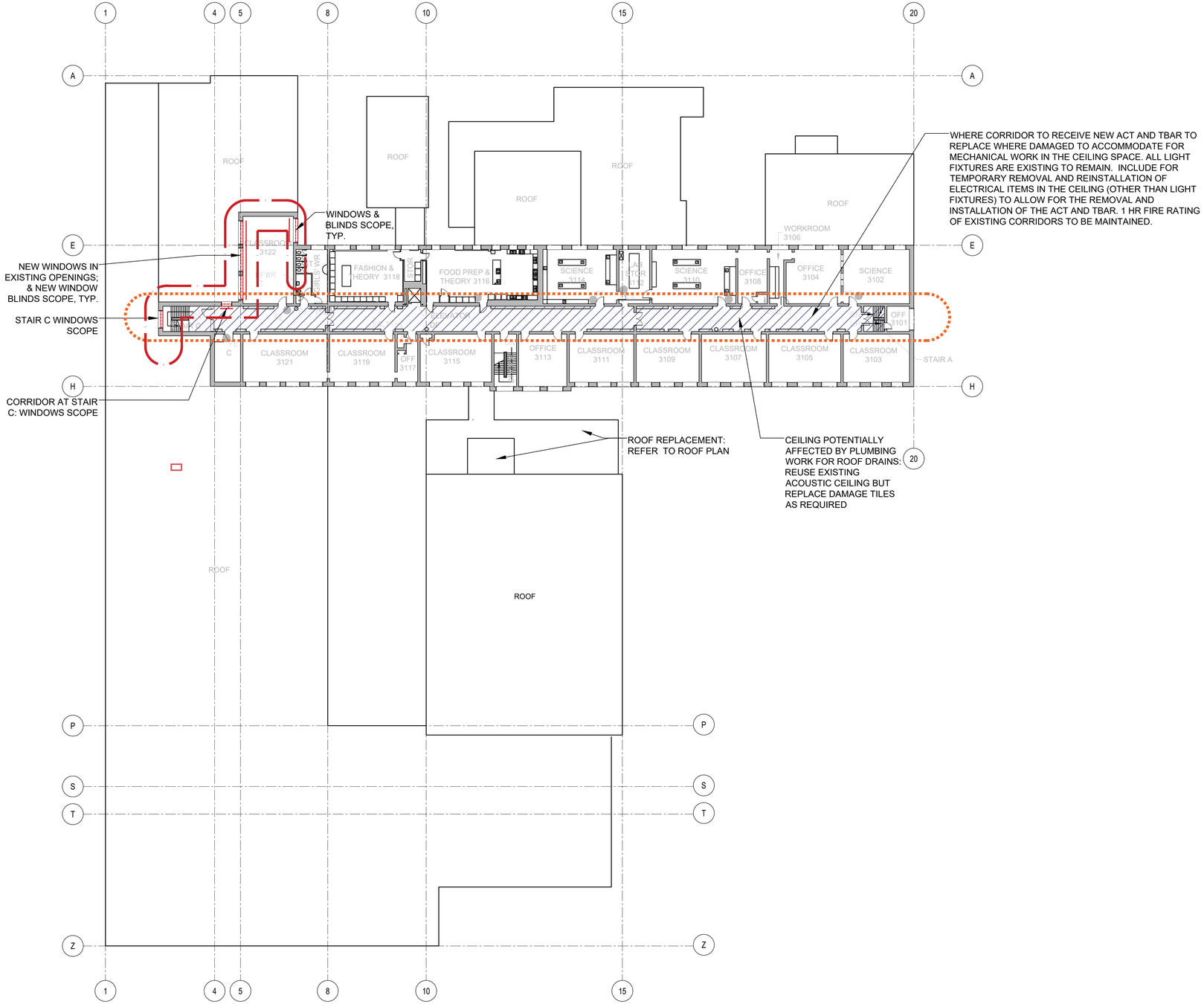
SECOND FLOOR PLAN PROPOSED

**PROJECT NO:** 20931
**SCALE:** AS NOTED
**DRAWN BY:** JG
**REVIEWED BY:** JC-B

**PROJECT NORTH:**

**DRAWING NO:**

A102




1 / A103 THIRD FLOOR PROPOSED PLAN
1 : 300

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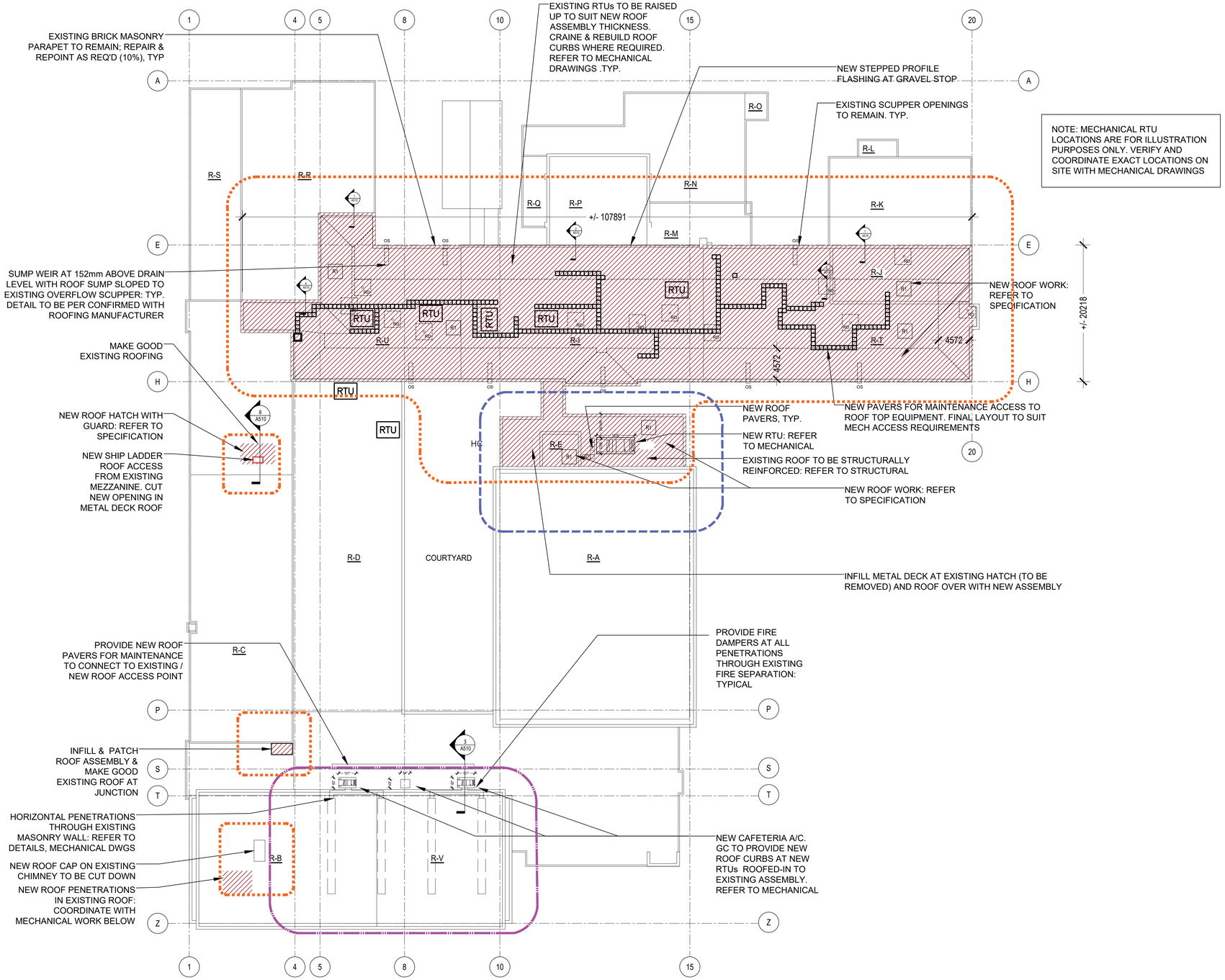
**DRAWN BY:** JG
**REVIEWED BY:** JC-B

**PROJECT NORTH:**

**DRAWING NO:**
A103







1 / A104 ROOF PROPOSED PLAN
1 : 300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DO NOT SCALE DRAWINGS


**ISSUE DATE:**

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 2 | 2021.03.16 | ISSUED FOR TENDER |
| 1 | 2021 | DD REVIEW |

**PROJECT:**

Elmira District Secondary School – Window, Roof, HVAC & Sanitary Upgrades

**DRAWING TITLE:**

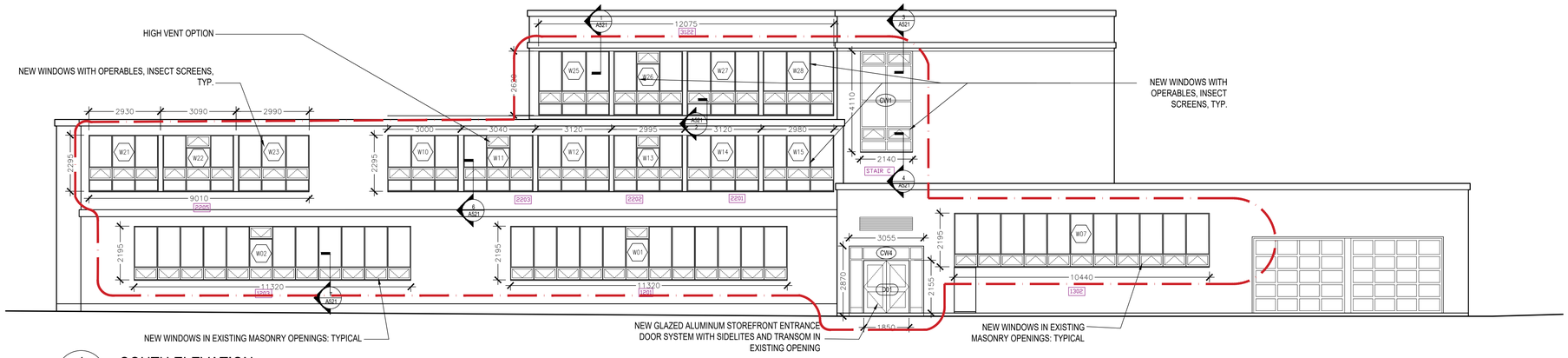
ROOF PLAN PROPOSED

**PROJECT NO:** 20931
**SCALE:** AS NOTED
**DRAWN BY:** JG
**REVIEWED BY:** JC-B

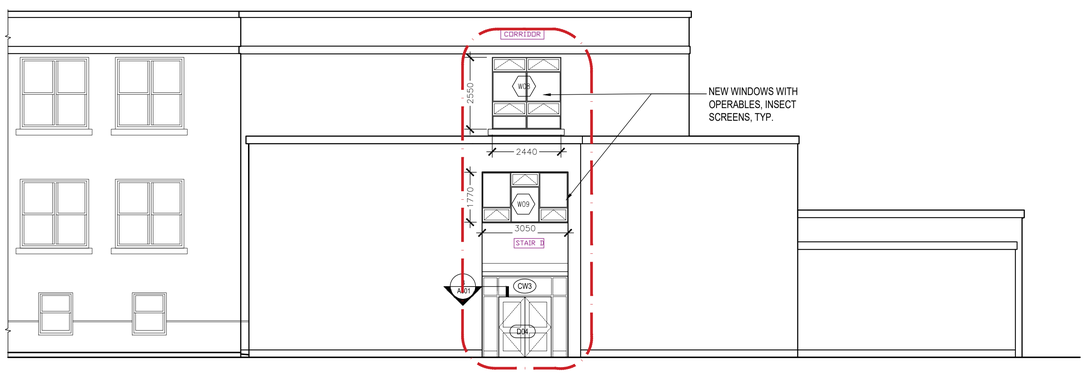
**PROJECT NORTH:** N

**DRAWING NO:**

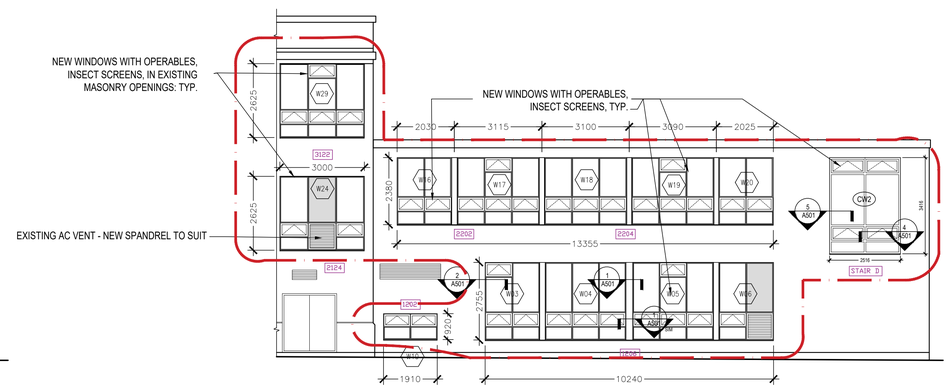
A104




1 A221 SOUTH ELEVATION
1 : 100




2 A221 WEST ELEVATION
1 : 100




3 A221 EAST ELEVATION
1 : 100

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DO NOT SCALE DRAWINGS

**ISSUE DATE:**

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 2 | 2021.03.16 | ISSUED FOR TENDER |
| 1 | 2021 | DD REVIEW |

**PROJECT:**

Elmira District Secondary School – Window, Roof, HVAC & Sanitary Upgrades

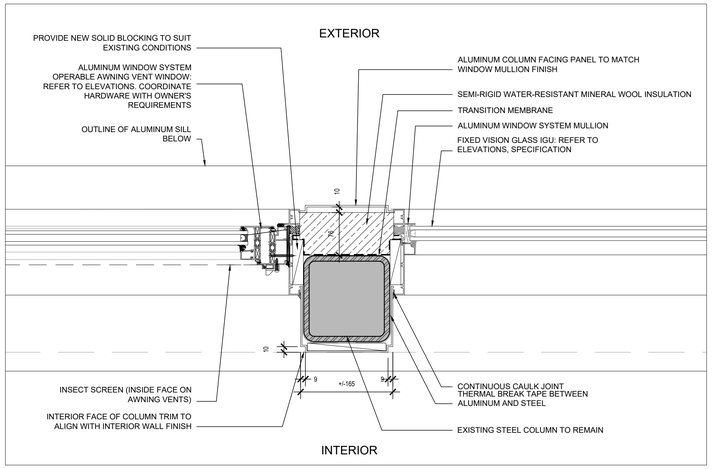
**DRAWING TITLE:**

PARTIAL EXTERIOR ELEVATIONS - NEW FENESTRATION

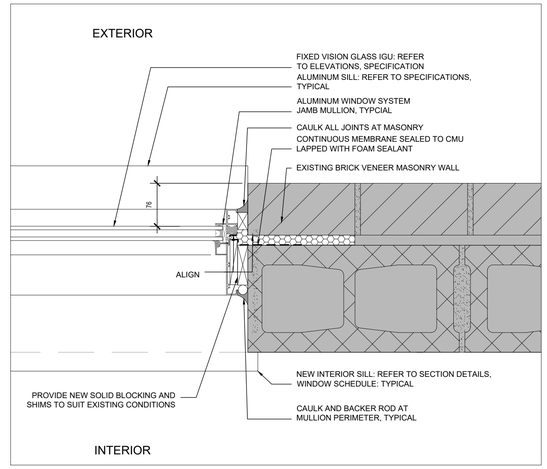
**PROJECT NO:** 20931
**SCALE:** AS NOTED
**DRAWN BY:** JG
**REVIEWED BY:** JC-B

**DRAWING NO:**

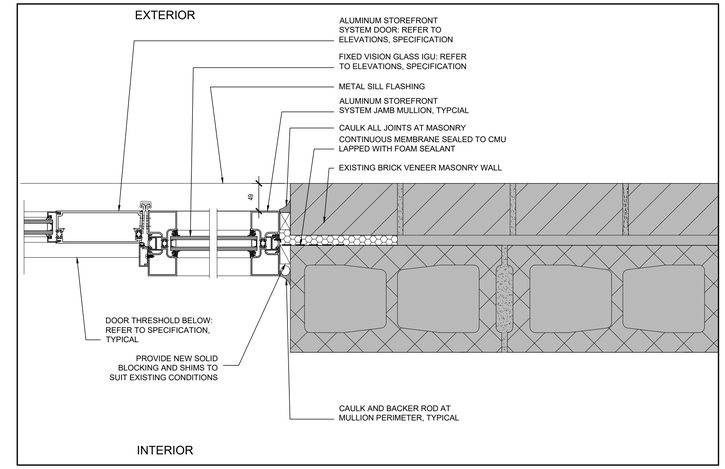
A301



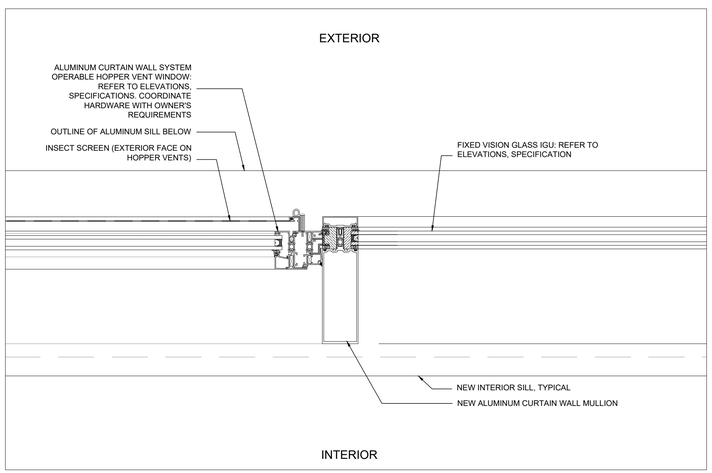

1 / A501 TYPICAL JAMB AT POST
1 : 5



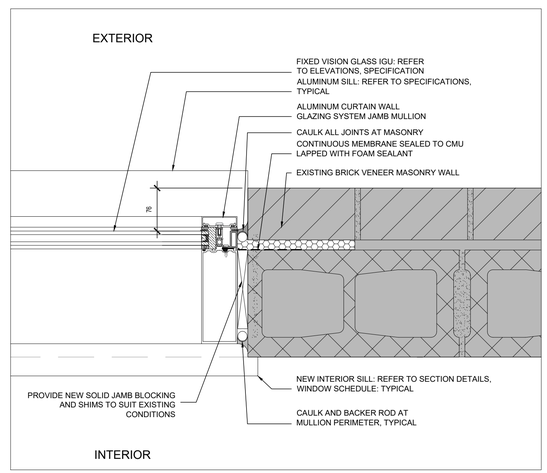

2 / A501 TYPICAL JAMB DETAIL: WINDOW
1 : 5




3 / A501 ENTRANCE DOOR JAMB IN STOREFRONT
1 : 5




4 / A501 VENT JAMB IN CURTAIN WALL
1 : 5




5 / A501 TYPICAL JAMB DETAIL: CURTAIN WALL
1 : 5

6 / A500 RESERVED
1 : 5

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**ISSUE DATE:**

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 2 | 2021.03.16 | ISSUED FOR TENDER |
| 1 | 2021 | DESIGN DEVELOPMENT |

**PROJECT:**

Elmira District Secondary School – Window, Roof, HVAC & Sanitary Upgrades

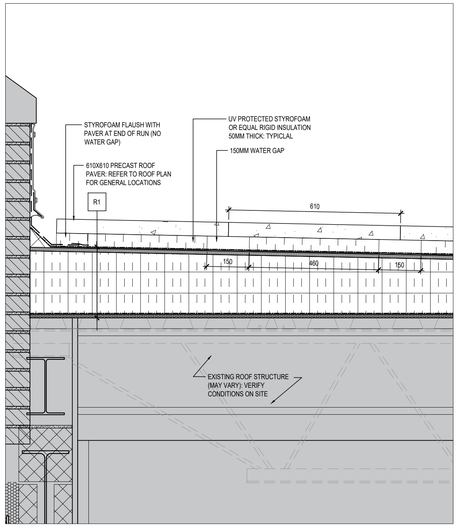
**DRAWING TITLE:**

PLAN DETAILS

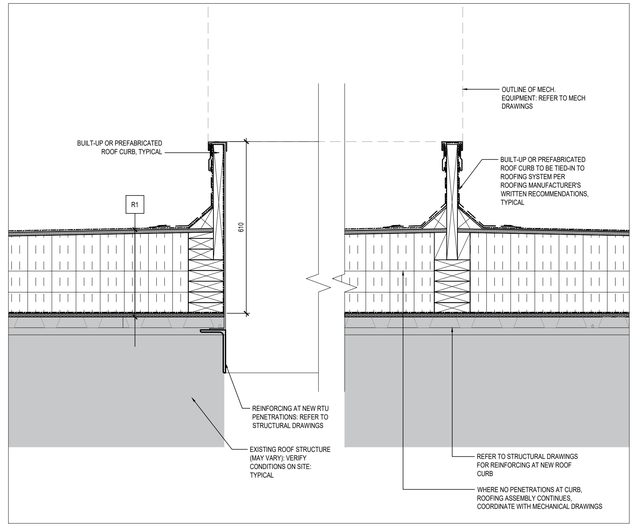
**PROJECT NO:** 20931
**SCALE:** AS NOTED
**DRAWN BY:** JG
**REVIEWED BY:** JC-B

**DRAWING NO:**

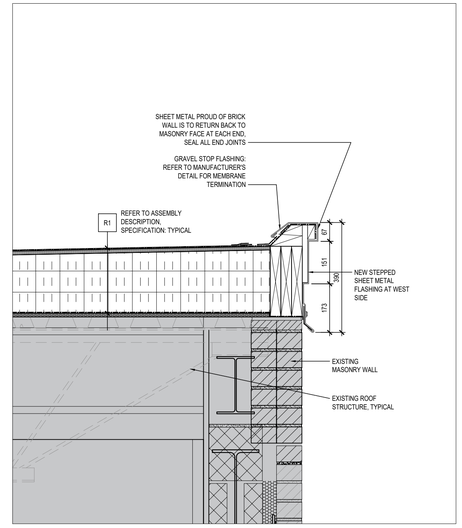
A501



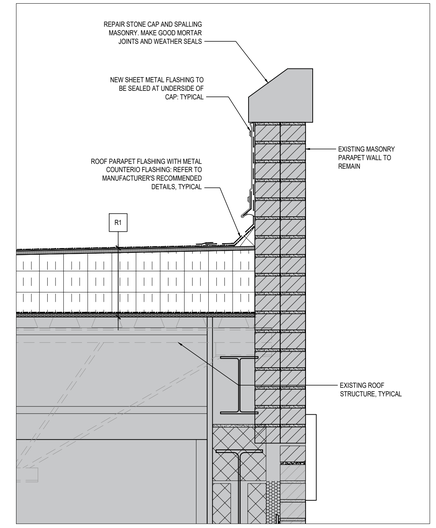

4 A510 TYPICAL ROOF PAVER DETAIL
1 : 10



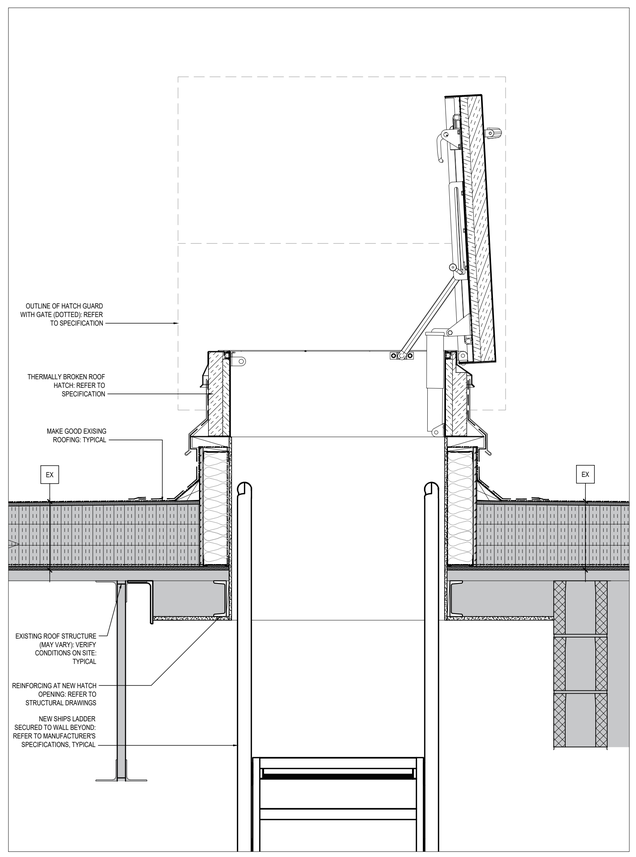

3 A510 TYPICAL ROOF CURB DETAIL
1 : 10



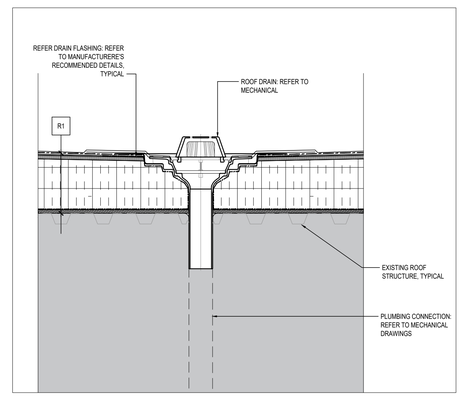

2 A510 TYPICAL GRAVEL STOP FLASHING DETAIL
1 : 10



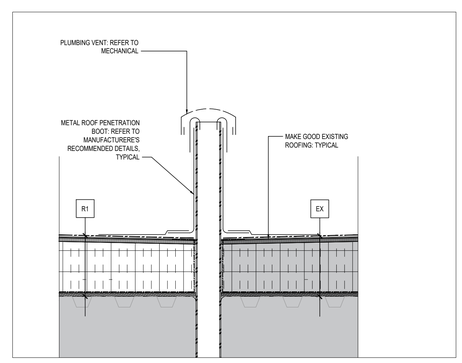

1 A510 TYPICAL DETAIL AT PARAPET
1 : 10



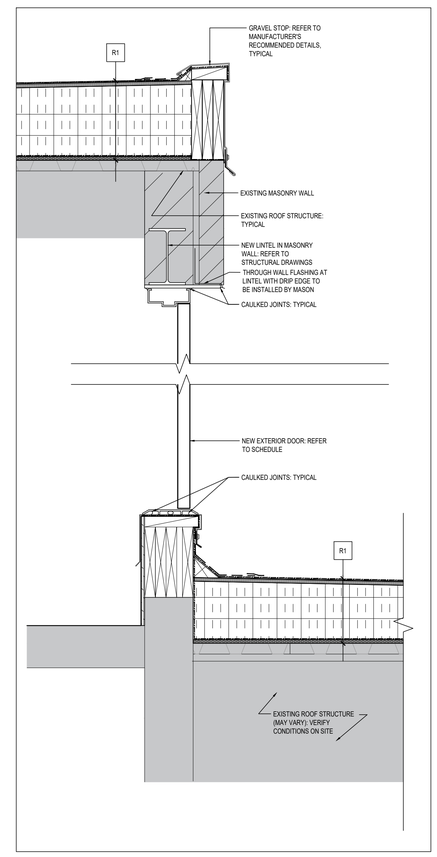

8 A510 TYPICAL ROOF HATCH DETAIL
1 : 10




6 A510 TYPICAL ROOF DRAIN DETAIL
1 : 10




7 A510 TYPICAL ROOF PENETRATION DETAIL
1 : 10




5 A510 TYPICAL DETAIL - FAN ROOM DOOR
1 : 10

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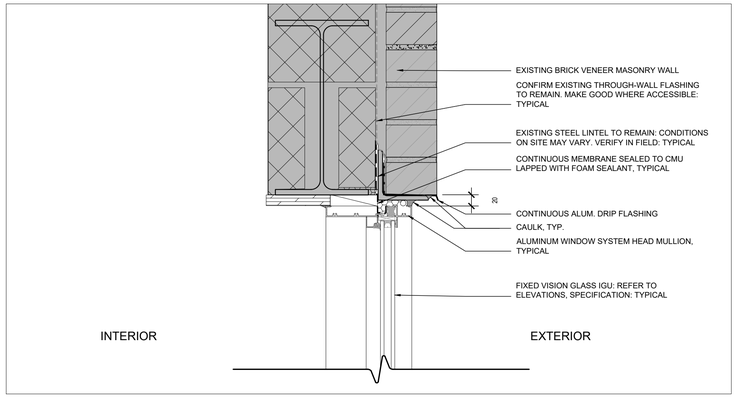
| NO. | DATE | DESCRIPTION |
|---|---|---|
| 2 | 2021.03.16 | ISSUED FOR TENDER |
| 1 | 2021 | DESIGN DEVELOPMENT |

**PROJECT:**
Elmira District Secondary School – Window, Roof, HVAC & Sanitary Upgrades

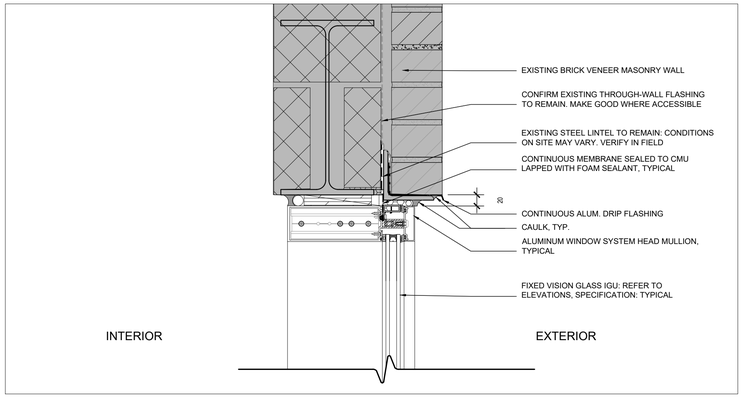
**DRAWING TITLE:**
SECTION DETAILS

**PROJECT NO:** 20931
**SCALE:** AS NOTED
**DRAWN BY:** JC
**REVIEWED BY:** JC-B

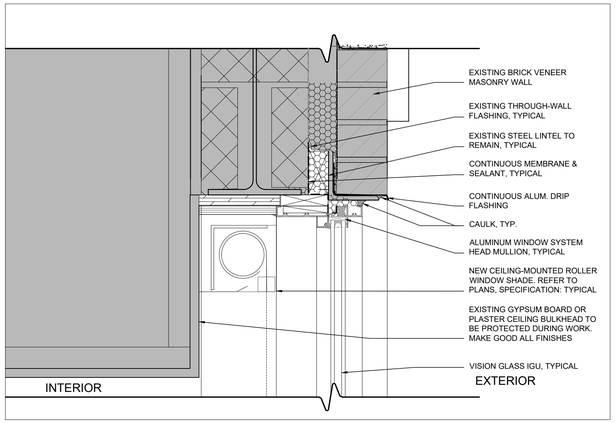
**DRAWING NO:**
A521



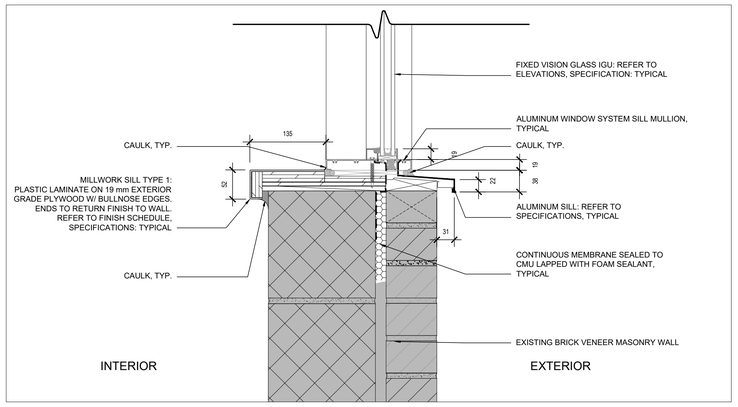

1 A521 TYPICAL HEAD DETAIL: WINDOW
1 : 5



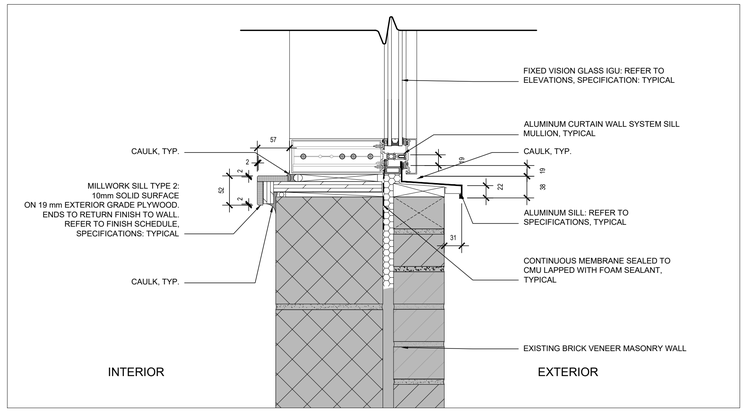

3 A521 TYPICAL HEAD DETAIL: CURTAIN WALL
1 : 5



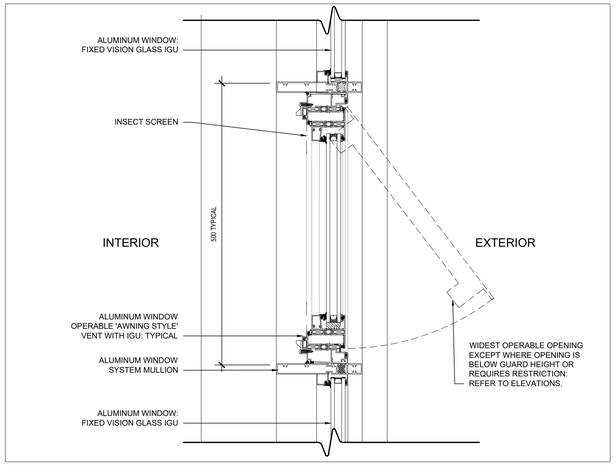

5 A521 TYPICAL HEAD DETAIL: WINDOW WITH BLIND
1 : 5



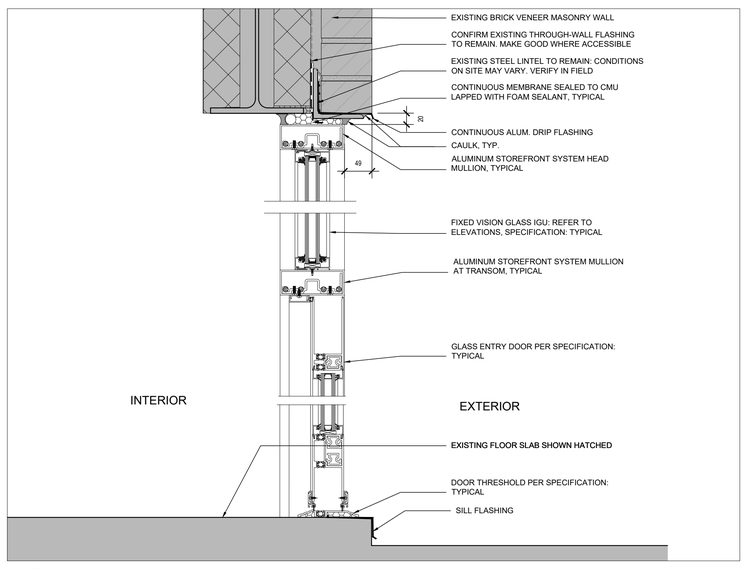

2 A521 TYPICAL SILL DETAIL: WINDOW
1 : 5



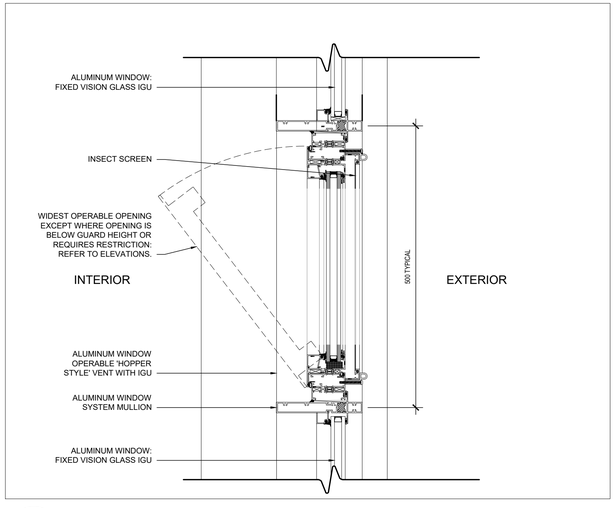

4 A521 TYPICAL SILL DETAIL: CURTAIN WALL
1 : 5




6 A521 TYPICAL VENT WINDOW: AWNING STYLE
1 : 5




8 A521 TYPICAL DETAIL: ENTRY DOORS & TRANSOM
1 : 5




7 A521 TYPICAL VENT WINDOW: HOPPER STYLE
1 : 5

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| 1 | 2021 | DESIGN DEVELOPMENT |

**PROJECT:**

Elmira District Secondary School – Window, Roof, HVAC & Sanitary Upgrades

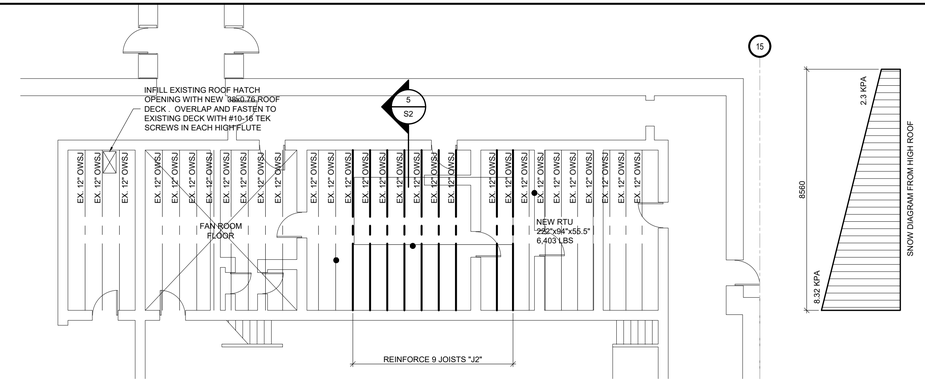
**DRAWING TITLE:**

SECTION DETAILS

**PROJECT NO:** 20931
**SCALE:** AS NOTED
**DRAWN BY:** JG
**REVIEWED BY:** JC-B

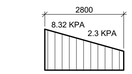
**DRAWING NO:**

A521




## PARTIAL HIGH ROOF FRAMING PLAN 1:100

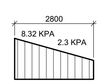
ROOF DESIGN LOADS
L.L. = 2.3 KPA OR SNOW DIAGRAM
D.L. = 1.0 KPA




SNOW DIAGRAM AROUND ROOF UNITS

## PARTIAL HIGH ROOF FRAMING PLAN 1:100

ROOF DESIGN LOADS
L.L. = 2.3 KPA OR SNOW DIAGRAM
D.L. = 1.0 KPA




SNOW DIAGRAM AROUND ROOF UNITS

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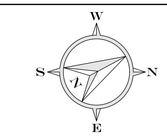



KEY PLAN

| NO. | DATE | REVISION |
|---|---|---|
| 2 | 2021.03.16 | TENDER |
| 1 | 2021.03.09 | 95% REVIEW |

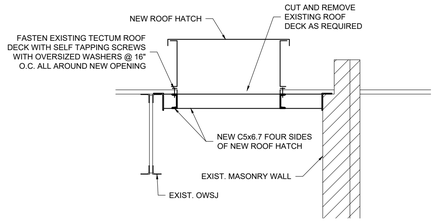
WitzelDyce ENGINEERING INC.
826 King Street North, Unit 20
Waterloo, Ontario, N2J 4G8
www.witzeldyce.com

LICENSED PROFESSIONAL ENGINEER
H. H. LIDDYCOAT
100149094
Mar. 15, 2021
PROVINCE OF ONTARIO

PROJECT
ELMIRA DISTRICT SECONDARY SCHOOL HVAC UPGRADES
4 UNIVERSITY AVE ELMIRA

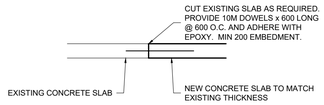
DRAWING
PARTIAL ROOF FRAMING PLANS

| | |
|---|---|
| DESIGNER HHL | PROJECT NO. 12583-102 |
| DRAWN BJD | DRAWING NO. S1 |
| DATE MARCH 2021 | |
| SCALE 1:100 | |

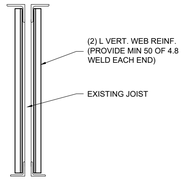



PROVIDE P.ENG. STAMPED SHOP DRAWINGS FOR SHIPS LADDER FOR REVIEW PRIOR TO FABRICATION

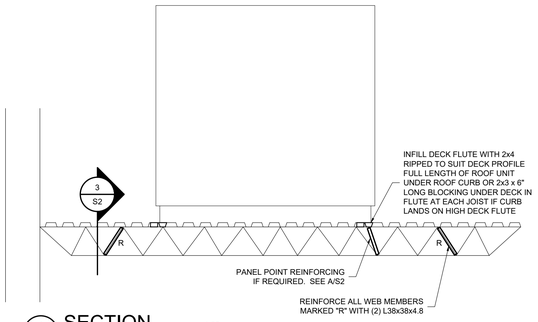
1 / S2 SECTION 1:25
NEW ROOF HATCH FRAMING



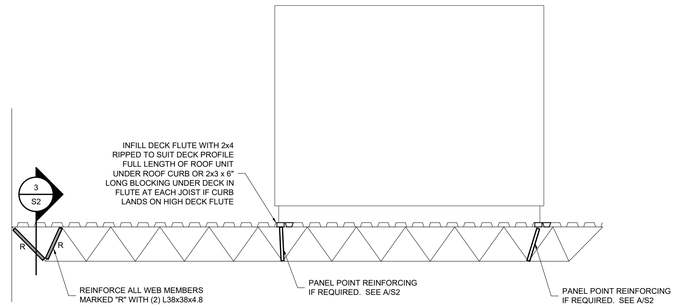

2 / S2 SECTION 1:25
CONCRETE SLAB PATCH



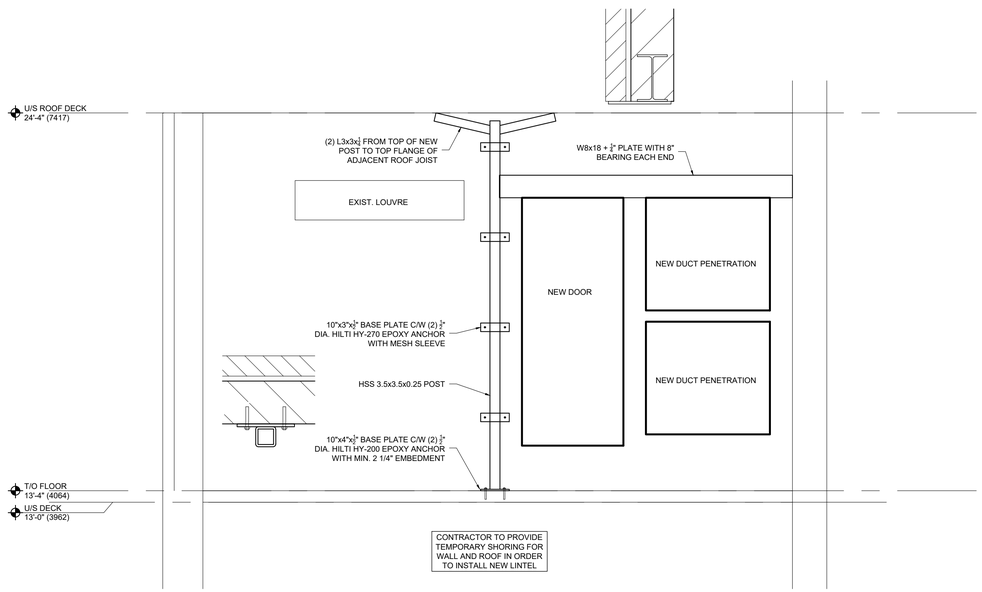

3 / S2 SECTION 1:10
JOIST REINFORCING




4 / S2 SECTION 1:25
JOIST REINFORCING 'J1' (19 TOTAL)

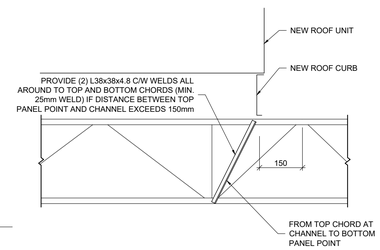



5 / S2 SECTION 1:25
JOIST REINFORCING 'J2' (9 TOTAL)




CONTRACTOR TO PROVIDE TEMPORARY SHORING FOR WALL AND ROOF IN ORDER TO INSTALL NEW LINTEL

6 / S2 ELEVATION 1:25
FAN ROOM OPENINGS




A / S2 DETAIL 1:25
PANEL POINT REINFORCING

## CONSTRUCTION NOTES:

A. GENERAL

1. ALL WORK SHALL CONFORM TO THE ONTARIO BUILDING CODE AND ALL STANDARDS REFERENCED WITHIN, LOCAL REGULATIONS AND BYLAWS, AND THE OCCUPATIONAL HEALTH AND SAFETY ACT FOR CONSTRUCTION PROJECTS. THE LATEST VERSIONS OF STANDARDS SHALL APPLY.
2. READ THESE DRAWINGS IN CONJUNCTION WITH ALL RELATED CONTRACT DOCUMENTS AND CONSULTANT DRAWINGS.
3. THE CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE THEMSELVES WITH ALL CONDITIONS WHICH MAY ADVERSELY AFFECT THE PROPER COMPLETION OF THE PROJECT. THE CONTRACTOR SHALL CHECK ALL DIMENSIONS IN RELATION TO THE DRAWINGS AND NOTIFY THE ENGINEER TO ALL DISCREPANCIES PRIOR TO PROCEEDING WITH THE WORK.
4. DRAWINGS ARE NOT TO BE SCALED.
5. THE DESIGN DOCUMENTS ARE PREPARED SOLELY FOR THE USE WITH THE PARTY WHOM THE ENGINEER HAS ENTERED INTO CONTRACT. THERE ARE NO REPRESENTATIONS MADE TO ANY PARTY WITH WHOM THE ENGINEER HAS NOT ENTERED INTO CONTRACT.
6. THE CONTRACTOR SHALL RETAIN AN INDEPENDENT TESTING AND INSPECTION COMPANY TO ENSURE THAT THE WORK IS DONE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS FOR ONSITE WELDING OF STRUCTURAL STEEL.
7. THE ENGINEER SHALL BE GIVEN MINIMUM 24 HOURS NOTICE BY THE CONTRACTOR FOR ALL CONSTRUCTION REVIEWS. SITE VISITS AND REVIEWS BY THE ENGINEER OR HIS REPRESENTATIVE ARE INTENDED FOR THE SOLE PURPOSE OF ASCERTAINING CONFORMANCE WITH THE GENERAL DESIGN CONCEPT. THE REVIEWS SHALL NOT MEAN THAT THE ENGINEER HAS SEEN ALL CONSTRUCTION PROCEDURES. REVIEW BY THE ENGINEER SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY FOR ERRORS AND OMISSIONS AND FOR MEETING ALL THE REQUIREMENTS OF THE CONSTRUCTION AND CONTRACT DOCUMENTS.
8. THE CONTRACTOR SHALL MAKE ADEQUATE PROVISIONS FOR CONSTRUCTION LOADS AND TEMPORARY BRACING TO ENSURE SAFETY AND THE BUILDING IS PLUMB AND IN TRUE ALIGNMENT AT ALL PHASES OF CONSTRUCTION AS PER O.REG 213/91. ALL BRACING MEMBERS SHOWN ON THE DRAWINGS ARE DESIGNED FOR THE FINISHED STRUCTURE AND MAY NOT BE SUFFICIENT FOR ERECTION PURPOSES. SHORING AND BRACING IS REQUIRED UNTIL PROPOSED STRUCTURE IS PROPERLY IN PLACE. SHORING AND BRACING SHALL BE DESIGNED, REVIEWED AND APPROVED BY A PROFESSIONAL ENGINEER. SHOP DRAWINGS SHALL BE SUBMITTED WITH P.ENG'S STAMP FOR OUR REVIEW PRIOR TO CONSTRUCTION.
9. NO SUBSTITUTIONS FROM THE SPECIFIED PRODUCTS AND MATERIALS ARE PERMITTED WITHOUT THE APPROVAL OF THE ENGINEER.

B. CONCRETE

1. CONCRETE WORK SHALL CONFORM TO THE LATEST VERSION OF CAN/CSA-A23.1, A23.2 AND A23.3.
2. CONCRETE PROPERTIES: (MINIMUM COMPRESSIVE STRENGTH MEASURED AT 28 DAYS UNLESS NOTED)
   a) ALL CONCRETE UNLESS NOTED OTHERWISE - 25 MPa
   b) SEE CHART FOR CONCRETE TYPES

| CONCRETE PROPERTIES / LOCATION | CSA CLASS | 28 DAY COMP. STRENGTH MPa | MAX. W/C RATIO | AIR CONTENT % | MAX. AGGREGATE mm | SLUMP mm |
|---|---|---|---|---|---|---|
| INTERIOR CONCRETE SLABS | N | 25 | 0.50 | NA | 20 | 80 ±30 |

3. CONCRETE DESIGN IS BASED ON COMPRESSIVE STRENGTH. PHYSICAL PROPERTIES (SLUMP, AGGREGATE SIZE, ETC.) TO SUIT INSTALLATION (BY OTHERS) NOT TO AFFECT STRENGTH SPECIFIED.
4. SLUMP OF CONCRETE TO BE 80mm ±30mm PRIOR TO SUPER PLASTICIZERS BEING ADDED.
5. DO NOT ADD WATER TO THE CONCRETE.
6. REINFORCING STEEL SHALL CONFORM TO THE LATEST VERSIONS OF CAN/CSA-G30.18. REINFORCING BARS SHALL BE DEFORMED, GRADE 400 MPa.
7. MAINTAIN THE FOLLOWING CONCRETE CLEAR COVER TO REINFORCING:
   a) 75mm (3") FOR CONCRETE CAST AGAINST EARTH
   b) 38mm (1 1/2") FOR CONCRETE CAST AGAINST FORMWORK
   c) 64mm (2 1/2") FOR CONCRETE EXPOSED TO DE-ICING CHEMICALS
8. ALL REINFORCING STEEL, DOWELS AND ANCHOR BOLTS ARE TO BE CLEAN AND FREE OF RUST, DIRT, FORM RELEASE AGENT, ETC. PRIOR TO POURING CONCRETE.

C. MASONRY

1. MASONRY TO CONFORM TO THE LATEST VERSION OF CAN/CSA-S304.1 AND CSA A371.
2. STRENGTH OF LOAD-BEARING MASONRY UNITS TO BE MINIMUM 15 MPa FOR HOLLOW UNITS BASED ON NET AREA.
3. TYPE 'S' MORTAR SHALL BE USED FOR CONCRETE BLOCK. TYPE 'N' MORTAR SHALL BE USED FOR BRICK AND DECORATIVE BLOCK. GROUT STRENGTH SHALL BE 20 MPa UNLESS NOTED OTHERWISE. MORTAR AND GROUT TO CONFORM TO THE LATEST VERSION OF CSA A179.
4. ALL STEEL BEAMS AND JOISTS SHALL BE SUPPORTED BY BEARING PLATES DESIGNED TO THE LATEST VERSION OF CAN/CSA S16. BEARING PLATES SHALL HAVE MINIMUM (2) 12mm (1/2") DIAMETER x 450mm (18") LONG ANCHORS WITH 50mm (2") HOOK.
5. FOR MASONRY OPENINGS NOT SHOWN ON THE FRAMING PLANS UP TO 1200mm (48") WIDE, PROVIDE ONE L89x89x6.4 (L3.5x3.5x0.25) FOR EACH 90mm (3 1/2") THICKNESS OF MASONRY.

D. STRUCTURAL STEEL

1. STRUCTURAL STEEL SHALL CONFORM TO THE LATEST VERSION OF CAN/CSA-S16 AND THE CISC CODE OF STANDARD PRACTICE.
2. STRUCTURAL STEEL SHALL CONFORM TO THE LATEST VERSION OF CAN/CSA G40.20, G40.21 GRADE 350W CLASS C FOR H.S.S., G40.21 GRADE 350W FOR W SHAPE SECTIONS AND G40.21 GRADE 350W FOR CHANNELS, ANGLES AND MISCELLANEOUS METAL.
3. BOLTED CONNECTIONS SHALL USE GRADE A325 BOLTS.
4. WELDING SHALL CONFORM TO CSA W59 AND CSA W47 DIVISION 1 OR DIVISION 2.1 BY THE CANADIAN WELDING BUREAU. WELDING SHALL BE COMPLETED BY CWB CERTIFIED FABRICATOR AND ERECTOR TO THE CSA STANDARDS W178.1 AND W178.2.
5. WHERE FORCES ARE NOT SHOWN ON THE DRAWINGS BEAM REACTIONS SHALL BE 1/2 THE TOTAL UNIFORM DISTRIBUTED FACTORED LOADS NOTED IN THE BEAM LOAD TABLES OF PART 5 OF THE CISC'S HANDBOOK OF STEEL CONSTRUCTION.
6. COLUMN BEARING GROUT SHALL BE 40 MPa MINIMUM, NON-SHRINK AND 38mm (1 1/2") MINIMUM THICK.
7. STRUCTURAL STEEL MEMBERS SHALL NOT BE SPLICED WITHOUT THE APPROVAL OF THE ENGINEER.
8. STEEL BEAMS AND LINTELS SHALL HAVE MINIMUM 200mm (8") BEARING ON MASONRY UNLESS OTHERWISE NOTED. WELD BEAMS AND LINTELS TO BEARING PLATES WHERE PROVIDED WITH MINIMUM 4.8mm x 50mm (3/16"x2") FILLET WELD EACH SIDE.
9. ALL ROOF OPENINGS IN METAL DECK ARE TO BE REINFORCED WITH C130x10 (C5x6.7) CHANNEL FRAMES UNLESS NOTED OTHERWISE.
10. ALL STRUCTURAL STEEL IS TO BE SHOP PRIME PAINTED UNLESS NOTED OTHERWISE. STRUCTURAL STEEL WHICH IS TO BE PROTECTED WITH SPRAY APPLIED FIREPROOFING IS TO BE KEPT CLEAN AND UNCOATED. STRUCTURAL STEEL EXPOSED TO WEATHER IS TO BE HOT DIP GALVANIZED CONFORMING TO THE LATEST VERSION OF CAN/CSA-G164. ALL COATINGS ARE TO BE TOUCHED UP ON SITE WITH APPROVED PAINT FOR PRIMED STEEL AND ZINC RICH PAINT FOR GALVANIZED STEEL.

| TESTING REQUIREMENTS | |
|---|---|
| TEST | COMMENTS |
| STRUCTURAL STEEL CONNECTIONS | INSPECT ALL FIELD WELDS |
| ALL TESTING TO BE COMPLETED BY A CERTIFIED INDEPENDENT TESTING AND INSPECTION COMPANY. COPIES OF ALL REPORTS ARE TO BE FORWARDED TO THE ENGINEER FOR REVIEW. | |

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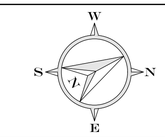


KEY PLAN

| NO. | DATE | REVISION |
|---|---|---|
| 2 | 2021.03.16 | TENDER |
| 1 | 2021.03.09 | 95% REVIEW |

WitzelDyce ENGINEERING INC.
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www.witzeldyce.com

LICENSED PROFESSIONAL ENGINEER
H. H. LIDDYCOAT
100149094
Mar. 15, 2021
PROVINCE OF ONTARIO

PROJECT
ELMIRA DISTRICT SECONDARY SCHOOL HVAC UPGRADES
4 UNIVERSITY AVE ELMIRA

DRAWING
SECTIONS AND DETAILS

| | |
|---|---|
| DESIGNER HHL | PROJECT NO. 12583-102 |
| DRAWN BJD | DRAWING NO. S2 |
| DATE MARCH 2021 | |
| SCALE 1:25 | |

## GENERAL NOTES:

1. THE OWNER'S PROFESSIONAL ENGINEER IS REQUIRED TO FIELD REVIEW THE INSTALLATION OF SERVICES INCLUDED IN THIS PROJECT IN ACCORDANCE WITH THE GENERAL REVIEW COMMITMENT CERTIFICATION PROCESS. THE OWNER'S CONTRACTOR IS TO PROVIDE AT LEAST 48 HOURS NOTICE PRIOR TO COMMENCING CONSTRUCTION OF THE SITE SERVICES.
2. THE OWNER/OWNER'S CONTRACTOR SHALL HAVE ITS PROFESSIONAL ENGINEER PROVIDE FULL–TIME ONSITE REVIEW DURING CONSTRUCTION ON AN EXISTING MUNICIPAL STREET OR EASEMENT AND PROVIDE A CERTIFICATE OF COMPLETION OF WORKS UPON COMPLETION OF ALL WORKS TO BE CONSTRUCTED.
3. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE CURRENT ONTARIO BUILDING CODE (OBC) AND ANY APPLICABLE STATUTES, REGULATIONS, CODES AND BY–LAWS.
4. STRIK, BALDINELLI, MONIZ LTD. (SBM) IS NOT RESPONSIBLE FOR THE INFORMATION (EXISTING TOPOGRAPHY, BENCHMARKS, PROPERTY BOUNDARY, ETC.) PROVIDED BY OTHERS.

## CONSTRUCTION NOTES:

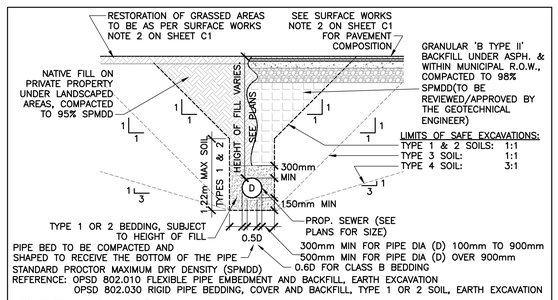
1. REFER TO THE SERVICING PLAN FOR LAYOUT DIMENSIONING.
2. THE OWNER'S CONTRACTOR IS TO CONTACT THE CONSULTING ENGINEER (SBM) FOR FINAL ONSITE REVIEW. THE CONTRACTOR IS TO PROVIDE AT LEAST 48 HOURS NOTICE PRIOR TO REQUIRED ONSITE REVIEW.
3. THE OWNER'S CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES UNDER THE OCCUPATIONAL HEALTH AND SAFETY ACT AS REQUIRED BY THE MINISTRY OF LABOUR TO EXECUTE THE WORK.
4. THE OWNER'S CONTRACTOR IS TO REVIEW AND CONFIRM ALL EXISTING CONDITION INFORMATION & INFORM SBM OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. SBM IN NO WAY ACCEPTS RESPONSIBILITY FOR ANY INACCURACIES FOUND ON THIS PLAN RELATIVE TO EXISTING CONDITIONS FOR THE SITE.
5. PRIOR TO COMMENCING ANY CONSTRUCTION, ALL SEWER OUTLET INFORMATION, BENCHMARKS, ELEVATIONS, DIMENSIONS, GRADES, ETC. MUST BE CHECKED BY THE CONTRACTOR AND VERIFIED AND ANY DISCREPANCIES REPORTED TO THE ENGINEERS.
6. PRIOR TO COMMENCING ANY WORK ON THE INSTALLATION OF SERVICES & GRADING, AN APPROVED SET OF PLANS AND SPECIFICATIONS MUST BE AVAILABLE ON THE JOB AND SHALL REMAIN THERE WHILE WORK IS BEING DONE.
7. STRIP FULL DEPTH OF TOPSOIL IN AREAS TO BE DISTURBED AND STOCK PILE FOR RE–USE IN GRASSED/LANDSCAPED AREAS.
8. OWNER'S CONTRACTOR IS RESPONSIBLE FOR ALL AS–BUILT INVERTS AND GRADES, RECORD ANY DEVIATION OF PIPE OR STRUCTURE LOCATION INVOLVED WITH THIS PROJECT AND OWNER'S CONTRACTOR TO PROVIDE A COPY OF THE AS–BUILT DRAWING SHOWING ALL CHANGES CLEARLY MARKED IN RED.
9. THE OWNER'S CONTRACTOR SHALL CONSTRUCT TEMPORARY MEASURES TO CONTROL SILT ENTERING THE STORM DRAINAGE SYSTEM TO THE SPECIFICATIONS OUTLINED IN THE GUIDELINES ON EROSION AND SEDIMENT CONTROL FOR URBAN CONSTRUCTION SITES PREPARED BY THE MINISTRY OF NATURAL RESOURCES. THESE MEASURES ARE TO BE INSTALLED PRIOR TO COMMENCING ANY CONSTRUCTION FOR THIS PROJECT AND ARE TO REMAIN IN PLACE UNTIL CONSTRUCTION HAS BEEN COMPLETED TO BASE ASPHALT AND SOD OR THE SATISFACTION OF THE MUNICIPAL ENGINEER.
10. THE CONTRACTOR SHALL INFORM GRAND RIVER TRANSIT (GRT) AT LEAST ONE WEEK PRIOR TO COMMENCING CONSTRUCTION ON ANY STREET THAT IS A GRT BUS ROUTE THAT WILL BE AFFECTED BY CONSTRUCTION.
11. THE CONTRACTOR IS RESPONSIBLE FOR:
    - 11.1. CONNECTING ANY EXISTING SEWER OR DRAIN ENCOUNTERED DURING CONSTRUCTION TO A NEW SEWER OF SIMILAR TYPE, SIZE AND MATERIAL OR INTO ANOTHER EXISTING SEWER OF THE SAME TYPE AND TO REPORT ON AS–BUILT DRAWINGS.
    - 11.2. ENSURING THAT THERE IS NO INTERRUPTION OF ANY SURFACE OR SUBSURFACE DRAINAGE FLOW THAT WOULD ADVERSELY AFFECT NEIGHBOURING PROPERTIES.
12. NO FOUNDATION DRAIN CONNECTIONS WILL BE PERMITTED INTO THE SANITARY SEWERS AND NO DIRECT GRAVITY CONNECTIONS FROM THE FOUNDATION DRAINS WILL BE PERMITTED TO THE STORM SYSTEM UNLESS THE STORM SYSTEM HAS THE CAPACITY TO PROVIDE FOR SUCH CONNECTIONS TO THE SATISFACTION OF THE MUNICIPAL ENGINEER.
13. WORK ON OR ADJACENT TO THE MUNICIPAL CITY RIGHT OF WAY (R.O.W.) SHALL BE COMPLETED IN ACCORDANCE WITH THE ONTARIO TRAFFIC MANUAL BOOK 7 CURRENT EDITION AND THE ONTARIO TRAFFIC MANUAL BOOK 18 CURRENT EDITION.

## SURFACE WORKS NOTES:

1. ALL WORK IN THE TOWN ROAD ALLOWANCE SHALL MEET THE MINIMUM STANDARDS AND SPECIFICATIONS OF REGION OF WATERLOO ENVIRONMENTAL AND ENGINEERING SERVICES DEPARTMENT. THE GENERAL CONDITIONS, SUPPLEMENTAL GENERAL CONDITIONS, STANDARD SPECIFICATIONS, STANDARD SPECIAL PROVISIONS AND STANDARD DRAWINGS FOR UNIT PRICE CONTRACTS AND THE REGION OF WATERLOO AND AREA MUNICIPALITIES DESIGN GUIDELINES AND SUPPLEMENTAL SPECIFICATIONS ARE TO BE APPLIED TO WORKS WITHIN THE MUNICIPAL ROAD ALLOWANCE UNLESS OTHERWISE APPROVED BY THE MUNICIPAL ENGINEER. THE CONTRACTOR IS REQUIRED TO OBTAIN & PAY FOR PERMIT TO WORK IN MUNICIPAL R.O.W.
2. ALL SURFACES WHICH ARE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO A CONDITION AT LEAST AS GOOD AS ORIGINAL, OR AS PER BELOW (WHICHEVER IS GREATER) OR IF WITHIN THE MUNICIPAL RIGHT OF WAY TO THE SATISFACTION OF THE MUNICIPAL ENGINEER. ALL AT NO COST TO THE MUNICIPALITY.
    - 2.1. GRASSED AREAS TO BE RESTORED w/ 100mm TOPSOIL + SOD.
    - 2.2. CONCRETE SIDEWALK TO OPSD STANDARD 310.010.
    - 2.3. CONCRETE CURB AND GUTTER TO OPSD 600.040 (ASSUMED EXISTING ON–SITE CURB).
    - 2.4. ANY ASPHALT AREA DISTURBED DURING CONSTRUCTION SHALL BE RESTORED AS FOLLOWS:
        - 2.4.1. PROOF ROLL SUBGRADE (TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER) PRIOR TO PLACEMENT OF GRANULARS (98% STANDARD PROCTOR MAXIMUM DRY DENSITY (SPMDD) MIN.).
        - 2.4.2. MILL ADJACENT ASPHALT TO BE TIED INTO 50mm DEEP x 500mm WIDE PRIOR TO RESTORATION SEE DETAIL ON SHEET C1.
        - 2.4.3. ASSUMED EXISTING DRIVING LANE PAVEMENT STRUCTURE (TO BE REVIEWED & APPROVED BY THE GEOTECHNICAL ENGINEER)
            - 40mm HL3 SURFACE ASPHALT COMPACTED TO 97% MARSHALL MIX DESIGN BULK DENSITY
            - 50mm HL8 BINDER ASPHALT COMPACTED TO 97% MARSHALL MIX DESIGN BULK DENSITY
            - ASPHALT TO BE SUPPLIED AND PLACED IN ACCORDANCE WITH OPSS 310 & 1150
            - 150mm OF GRANULAR 'A' COMPACTED TO 100% SPMDD
            - 300mm OF GRANULAR 'B' COMPACTED TO 100% SPMDD
    - 2.5. RESTORE ALL PAVEMENT MARKINGS TO MATCH EXISTING PRE–CONSTRUCTION CONDITIONS AND MARKINGS SHALL BE COMPLETED IN ACCORDANCE WITH OPSS 710 'CONSTRUCTION SPECIFICATION FOR PAVEMENT MARKING'.
    - 2.6. ALL EXTERIOR HORIZONTAL CONCRETE SHALL BE MIN 125mm THICK, 32 MPa AT 28 DAYS c/w 5–8% AIR ENTRAINMENT AND TEMPERATURE BETWEEN 10–28°C. ON MIN 150mm THICK GRANULAR 'A' COMPACTED TO 100% SPMDD.
3. ALL AREAS OUTSIDE THE CONSTRUCTION LIMITS SHALL NOT BE DISTURBED. ANY DAMAGED TO THOSE AREAS ARE TO BE REPAIRED AT THE CONTRACTORS EXPENSE.

## SERVICING NOTES:

1. ALL STORM AND/OR SANITARY SEWER INSTALLATION SHALL BE IN ACCORDANCE WITH THE CURRENT REGION OF WATERLOO'S STANDARDS AND SPECIFICATIONS AND THE CURRENT EDITION OF THE ONTARIO BUILDING CODE.
2. ALL SITE SERVICES SHALL BE INSTALLED TO 1.0m OUTSIDE FOUNDATION WALL, MECHANICAL TRADES WILL TAKE THE SERVICES FROM THAT POINT INTO THE BUILDING.
3. ALL ORGANIC, UNSTABLE OR UNSUITABLE MATERIALS BENEATH THE ROAD ALLOWANCE, SERVICES, UTILITIES, OR FOUNDATIONS MUST BE REMOVED AND THESE AREAS BACKFILLED WITH AN APPROVED FILL MATERIAL, ALL TO THE SATISFACTION OF A GEOTECHNICAL ENGINEER AND SHOULD BE PLACED IN LIFTS NOT EXCEEDING 300mm (LOOSE) THAT ARE COMPACTED TO 95% SPMDD (100% FOR PAVED SURFACES). THE FILL MATERIAL SHOULD COMPRISE OF CLEAN, COMPACTIBLE FILL WITHIN 3% OF THE OPTIMUM MOISTURE CONTENT.
4. REMOVE ALL TRENCH WATER WHEN PIPE LAYING IS IN PROGRESS. ALL REQUIREMENTS FOR DEWATERING PERMITS (INCLUDING THE MINISTRY OF ENVIRONMENT, CONSERVATION AND PARKS (M.E.C.P.)'S PERMIT TO TAKE WATER AND REGISTRY, IF REQUIRED) SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
5. CONNECTIONS FROM FOUNDATIONS, WEEPING TILE, SUMP PUMP, AND ROOF DRAINS ARE NOT PERMITTED TO ENTER THE SANITARY SEWER SYSTEM AND SHALL BE IN ACCORDANCE WITH THE REGION OF WATERLOO'S DRAINAGE BY–LAW 1–90.
6. ALL PROPOSED SANITARY SEWER PIPE TO BE PVC SMOOTH WALL (CSA B182.2) (100ø TO 600ø) OR RIBBED (CSA B182.4) (200ø TO 600ø) OR NON–REINFORCED CONCRETE (CAN/CSA 257.1) (100ø TO 600ø) OR REINFORCED CONCRETE (CAN/CSA 257.2). PVC PIPE SHALL BE LAID WITH TYPE 1 BEDDING UNDER 4.5m OF COVER AND TYPE II BEDDING OVER 4.5m OF COVER. CONCRETE PIPE SHALL BE LAID WITH CLASS B (B1 OR B2) BEDDING. ALL SEWER BACKFILL MUST BE COMPACTED TO 95% STANDARD MAXIMUM DRY DENSITY (MINIMUM) (100% FOR PAVED AREAS). REFER TO THE REGION OF WATERLOO'S DRAWING E1–01.
7. CLASS B1 BEDDING (CRUSHED STONE) TO EXTEND FROM THE INLET AND OUTLET PIPES OF ANY MAINTENANCE HOLE FOR A DISTANCE OF 5.0m. REFER TO REGION OF WATERLOO'S DRAWING E1–01.
8. ALL STORM AND SANITARY SEWERS/SERVICES LEADS SHALL HAVE APPROVED RUBBER GASKET JOINTS + BE INSTALLED USING A LASER LEVEL.
9. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR ALL PRECAST CONCRETE STRUCTURES.
10. MAINTENANCE HOLES TO BE CONSTRUCTED OF PRE–CAST CONCRETE. ALL MAINTENANCE HOLES TO BE INSTALLED IN ACCORDANCE WITH THE ONTARIO PROVINCIAL STANDARDS (OPSD) DIVISION 700 DETAILS AND REQUIREMENTS, SEE LIST OF COMMON DETAILS. ALL STRUCTURES TO BE DESIGNED TO RESIST BUOYANCY IF REQUIRED.
11. ENSURE MINIMUM OF 1 ADJUSTMENT UNIT FOR ALL STRUCTURES. MAXIMUM TOTAL ADJUSTMENT UNITS HEIGHT: 300mm.
12. RUNG SPACING IN MAINTENANCE HOLES TO BE 300mm MIN. AND A MAX. OF 600mm DISTANCE BETWEEN THE LID AND THE FIRST RUNG.
13. ALL SUBSTITUTIONS MUST BE APPROVED BY THE MANAGER OF ENGINEERING.
14. THE ELEVATION OF THE GROUND WATER TABLE IS UNKNOWN. CONTRACTOR TO ADVISE SBM IF GROUNDWATER IS ENCOUNTERED DURING EXCAVATION OPERATIONS; FURTHER REVIEW/INVESTIGATION BY A GEOTECHNICAL ENGINEER MAY BE REQUIRED. IF GROUNDWATER IS ENCOUNTERED DURING EXCAVATION OPERATIONS, CIVIL STRUCTURES ARE TO BE DESIGNED FOR HYDROSTATIC PRESSURE AND UPLIFT/BUOYANCY FORCES. PROVIDE SHOP DRAWINGS SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE PROVINCE OF ONTARIO FOR REVIEW.




## OPEN CUT/ TRENCH DETAIL

N.T.S.

## UTILITIES NOTES:

1. ALL WORK FOR COORDINATION, DESIGN, AND CONSTRUCTION OF UTILITIES IS BY OTHERS. SBM DESIGN AND DRAWINGS ARE FOR MUNICIPAL SERVICING ONLY. ANY UTILITY INFORMATION SHOWN IS FOR REFERENCE/COORDINATION PURPOSES ONLY AND MAY NOT BE ACCURATE.
2. THE UTILITIES COORDINATING COMMITTEE MUST BE INFORMED AT LEAST TWO WEEKS PRIOR TO CONSTRUCTION ON ANY EXISTING MUNICIPAL ROAD ALLOWANCE. ALL EXISTING UNDERGROUND SERVICE OR UTILITIES WITHIN THE LIMITS OF THE CONSTRUCTION SITE SHALL BE LOCATED AND MARKED. ANY UTILITIES, DAMAGED OR DISTURBED DURING CONSTRUCTION, SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE GOVERNING BODY AT THE CONTRACTOR'S EXPENSE.
3. ALL EXISTING UNDERGROUND UTILITY (TELEPHONE, HYDRO, GAS, CABLE, SEWER, WATERMAINS, ETC.) THAT WILL BE CROSSED UNDER DURING THE INSTALLATION OF SERVICES FOR THIS DEVELOPMENT SHALL BE SUPPORTED, AS MAY BE REQUIRED BY THE OWNERS OF THE UTILITY BEING CROSSED UNDER.
4. OWNER'S CONTRACTOR TO LOCATE/FIELD VERIFY LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
5. OWNER'S CONTRACTOR TO COORDINATE WITH UTILITIES PROVIDER FOR BRACING, DECOMMISSIONING AND/OR RELOCATION OF EXISTING GAS, HYDRO, TELEPHONE, CABLE, ETC. SERVICES, IF REQUIRED.

## REFERENCE DOCUMENTS:

1. TOPOGRAPHIC INFORMATION, LEGAL LINEWORK, AND EXISTING SERVICING INFORMATION OBTAINED FROM PLANS BY MACDONALD AND TAMBLYN LORD SURVEYING DRAWING NO. 20–40–014–00 DATED JANUARY 20, 2021.
2. EXISTING UTILITY/SERVICING INFORMATION OBTAINED FROM PLANS BY ONSITE LOCATES REFERENCE NUMBER 20–46–30781 DATED FEBRUARY 18, 2021.

## LIST OF STANDARD DETAILS:

ONTARIO PROVINCIAL STANDARDS:

| | | |
|---|---|---|
| OPSD | 219.110 | LIGHT–DUTY SILT FENCE BARRIER |
| OPSD | 310.010 | CONCRETE SIDEWALK |
| OPSD | 401.010 | CAST IRON, SQUARE FRAME WITH CIRCULAR CLOSED OR OPEN COVER FOR MAINTENANCE HOLES |
| OPSD | 600.040 | CONCRETE BARRIER CURB WITH STANDARD GUTTER |
| OPSD | 701.010 | PRECAST CONCRETE MAINTENANCE HOLE, 1200mm DIAMETER |

## LIST OF ITEMS REQUIRING ENGINEER'S REVIEW

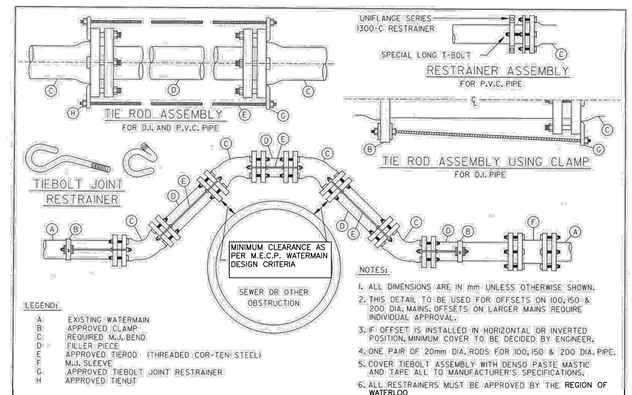
| |
|---|
| NOTE: CONTRACTOR TO PROVIDE MIN. 48 HOURS NOTICE PRIOR TO REQUESTED FIELD REVIEW TIME. |
| EROSION AND SEDIMENT CONTROL MEASURES, UPON COMPLETION |
| SERVICING IN MUNICIPAL RIGHT–OF–WAY (R.O.W.), EXISTING AND FUTURE, DURING CONSTRUCTION |
| GRADING – CURB & GUTTER STRINGLINE, PRIOR TO CURB INSTALLATION |

## LIST OF SUBMITTALS

| |
|---|
| NOTE: CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR REVIEW PRIOR TO ORDERING MATERIALS. |
| SHOP DRAWINGS – SANITARY STRUCTURES |
| PRODUCT SPECIFICATIONS – SANITARY SEWER |
| ASPHALT JOB MIX FORMULA(E) |
| CONCRETE (CURB AND SIDEWALK) MIX DESIGN(S) |
| GRANULAR 'A' AND 'B' SIEVE ANALYSIS' |
| EXCESS FILL – DUMP SITE INFORMATION AND PERMISSION LETTER |
| MATERIAL TESTING REPORT – ENGINEERED FILL SOURCE LETTER (RE CONTAMINANTS, ETC.) |
| MATERIAL TESTING REPORT – ENGINEERED FILL COMPACTION |
| MATERIAL TESTING REPORT – ENGINEERED FILL PLAN |
| MATERIAL TESTING REPORT – SUBGRADE COMPACTION/PREPARATION |
| MATERIAL TESTING REPORT – GRANULAR COMPACTION |
| MATERIAL TESTING REPORT – CONCRETE CYLINDERS |
| MATERIAL TESTING REPORT – ASPHALT COMPACTION |
| MATERIAL TESTING REPORT – ASPHALT SAMPLES |
| AS–BUILT SURVEY FOR EARTHWORKS QUANTITIES |
| CCTV OF SANITARY SEWERS |

## LEGEND:

| | |
|---|---|
| ×271.00 | EXISTING SPOT ELEVATION |
| ×271.00 | EXISTING SPOT ELEVATION (TO REMAIN) |
| ×271.00 | PROPOSED SPOT ELEVATION |
| ×271.00 | PROPOSED SWALE ELEVATION |
| | EXISTING CATCH BASIN |
| | PROPOSED CATCH BASIN |
| | EXISTING CLEANOUT |
| | PROPOSED CLEANOUT |
| | PROPOSED CATCH BASIN MAINTENANCE HOLE |
| | EXISTING MAINTENANCE HOLE |
| | PROPOSED MAINTENANCE HOLE |
| 2.0% | PROPOSED SWALE |
| 2.0% | PROPOSED SLOPE |
| | PROPOSED DRAINAGE DIRECTION |
| | EXISTING OVERLAND FLOW ROUTE |
| OFR | PROPOSED OVERLAND FLOW ROUTE |
| FR–2 | PROPOSED SIGN, TYPE OF SIGN |
| 20.0–300ø ST @ 1.0% | EXISTING STORM SEWER |
| **20.0–300ø ST @ 1.0%** | PROPOSED STORM SEWER |
| 20.0–150ø SA @ 1.0% | EXISTING SANITARY SEWER |
| **20.0–150ø SA @ 1.0%** | PROPOSED SANITARY SEWER |
| 150 PVC WSC | EXISTING WATERMAIN |
| **150 PVC WSC** | PROPOSED WATERMAIN |
| | EXISTING FIRE HYDRANT |
| | PROPOSED FIRE HYDRANT |
| | EXISTING WATER VALVE |
| | PROPOSED WATER VALVE |
| | EXISTING WATER METER |
| | PROPOSED WATER METER |
| | PROPOSED CURB STOP |
| | PROPOSED SUMP PUMP (SEE ARCHITECTURAL DRAWINGS) |
| | PROPOSED RAMP |
| TC | TOP OF CURB |
| BC | BOTTOM OF CURB |
| TW | GROUND ELEVATION AT TOP OF RETAINING WALL |
| BW | GROUND ELEVATION AT BOTTOM OF RETAINING WALL |
| HP | HIGH POINT |
| TL | TOP OF LID |
| | BUILDING ENTRANCE |
| | OVERHEAD DOOR |
| | PROPOSED LIGHT–DUTY ASPHALT |
| | PROPOSED HEAVY–DUTY ASPHALT |
| | PROPOSED CONCRETE |
| | PROPOSED RETAINING WALL (DESIGNED BY OTHERS) |
| | MILL/PAVE LAP JOINT AS PER DETAIL ON THIS PAGE |
| | LIMITS OF DRAINAGE AREA |
| | PROPOSED SILT SACK |
| | PROPOSED STRAW BALE BARRIER |
| | EXISTING BUILDING |
| | PROPOSED BUILDING |
| | PROPOSED SILT FENCE |
| | PROPOSED TREE PRESERVATION FENCE |
| | LIMITS OF SUBJECT PROPERTY |
| | DECIDUOUS/CONIFEROUS TREE |
| | DECIDUOUS/CONIFEROUS TREE TO BE REMOVED |

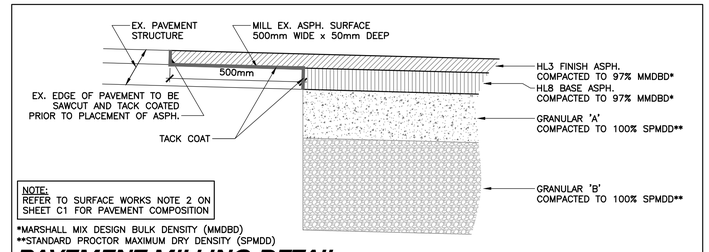



## TYPICAL MECHANICAL JOINT OFFSET INSTALLATION USING TIEBOLT COUPLINGS

N.T.S.

## LIST OF DRAWINGS

| | |
|---|---|
| SHEET C1 | NOTES, LEGEND, AND DETAILS |
| SHEET C2 | EXISTING CONDITIONS, REMOVALS, AND SEDIMENT & EROSION CONTROL PLAN |
| SHEET C3 | SITE ENGINEERING PLAN |




## PAVEMENT MILLING DETAIL

N.T.S.

## SITE BENCHMARK:

MONUMENT TYPE: BENCHMARK

LOCATION: TWO STOREY RED BRICK HOUSE (#254) ON THE WEST SIDE OF WATERLOO REG RD 21, 1.3 KM SOUTH OF JCT OF WATERLOO REG RD 86 AND 21 IN ELMIRA, 1.3 KM NORTH OF THE JCT OF WATERLOO REG RD 21 AND HYWS 85 AND 86, 42.0 M SOUTH OF CENTERLINE OR ORIOLE PKWY AND 61.0 M WEST OF CENTERLINE OF WATERLOO REG RD 21. TABLET IS SET HORIZONTALLY IN SOUTH FACE OF CONCRETE FOUNDATION, 4.08 M WEST OF W.E. CORNER AND 12 CM BRICKWORK.

GEODETIC ELEVATION: 362.940m (CGVD28:78)

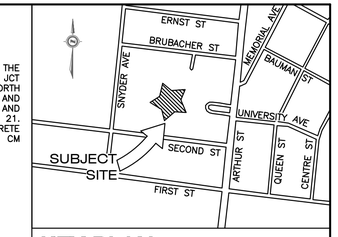
(CONTRACTOR TO CONFIRM BENCHMARK ELEVATIONS)

MONUMENT TYPE: BENCHMARK

LOCATION: RED BRICK CHURCH (EMMANUEL MISSIONARY) ON THE WEST SIDE OF WATERLOO REG RO 21, 0.8 KM SOUTH OF THE JCT OF WATERLOO REG RDS 86 AND 21 IN ELMIRA, 1.8 KM NORTH OF THE JCT OF WATERLOO REG RD 21 AND HWYS 85 AND 86, 27.4 M NORTH OF CENTERLINE OR FIRST ST AND 16.9 M WEST OF CENTERLINE OF WATERLOO REG RD 21. TABLET IS SET HORIZONTALLY IN EAST FACE OF CONCRETE FOUNDATION, 91 CM SOUTH OF N.E. CORNER AND 27 CM BELOW BRICKWORK.

GEODETIC ELEVATION: 362.937m (CGVD28:78)

(CONTRACTOR TO CONFIRM BENCHMARK ELEVATIONS)

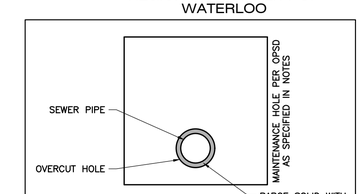



## KEY PLAN

N.T.S.

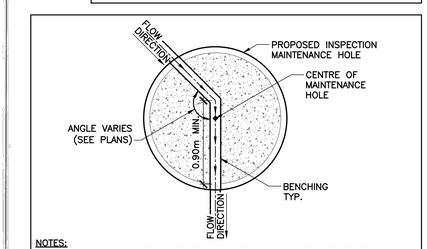
## LEGAL INFORMATION

PART OF
PLAN 76
LOT 32 TO LOT 40 PT LOT 31
LOT 23 TO LOT 30 CLOSED KLINCK ST
IN THE
TOWN OF WOOLWICH
REGION MUNICIPALITY OF WATERLOO




## PARGING DETAIL

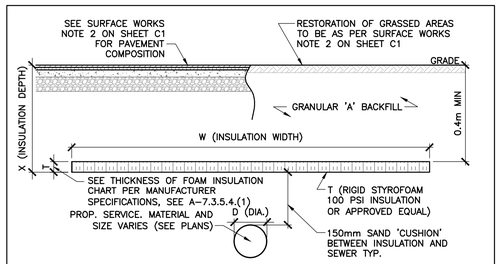
N.T.S.




NOTES:
1. STORM AND SANITARY INSPECTION MAINTENANCE HOLES ARE TO BE LOCATED AT THE PROPERTY LINE, ENTIRELY ON PRIVATE PROPERTY.

## TYP. INSPECTION MAINTENANCE HOLE BENCHING DETAIL

N.T.S.




NOTES:
1. INSULATION TO COVER WATERMAIN/SEWER UNTIL THE MINIMUM AMOUNT OF COVER (1.5m) BETWEEN THE FINISHED GROUND AND CROWN OF THE PIPE CAN BE ACHIEVED.
2. MINIMUM UN–INSULATED DEPTH FOR STORM SEWERS SHALL BE 1.22m.
3. FOR ALL OTHER NOTES SEE OBC A–7.3.5.4.(1) FROM THE CURRENT BUILDING CODE COMPENDIUM

MINIMUM WIDTH = D + 2(F–X) – 0.3m
F = MINIMUM FROST DEPTH (PER OPSD 3090.101 OR GEOTECHNICAL REPORT)

## SEWER INSULATION DETAIL

N.T.S.

| AS CONSTRUCTED SERVICES | COMPLETION | | No. | REVISIONS | D/M/Y | BY |
|---|---|---|---|---|---|---|
| | | DESIGN LS/JSF | 1 | ISSUED FOR CLIENT REVIEW | 26/02/21 | JSF |
| | | DRAWN JSF | 2 | ISSUED FOR TENDER | 15/03/21 | JSF |
| | | CHECKED LS | | | | |
| | | APPROVED LS/NGu | | | | |
| | | DATE 10/02/2021 | | | | |
| | | CAD 20–4137 | | | | |

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Email: sbm@sbmltd.ca

LICENSED PROFESSIONAL ENGINEER
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100147337
MARCH 16, 2021
PROVINCE OF ONTARIO

ENGINEER'S STAMP

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LGA ARCHITECTURAL PARTNERS
310 SPADINA AVENUE, SUITE 100B
TORONTO, ON
M5T 2E8
P: 416.203.7600
E: jose@lga-ap.com

SCALE
N/A

TITLE
NOTES, LEGEND, AND DETAILS
ELMIRA SECONDARY SCHOOL
4 UNIVERSITY AVENUE WEST
ELMIRA, ON.

PROJECT No. SBM–20–4137
SHEET No. C1
PLAN FILE No. –

OFF-SITE WORKS NOTE:
PERMIT OF APPROVED WORKS FOR ALL EXTERNAL WORKS IS REQUIRED.

*EXISTING SERVICING NOTE:
INVERTS OF THE EX. SANITARY & STORM SEWERS @ CONNECTION POINTS SHALL BE CONFIRMED BY THE OWNER'S CONTRACTOR PRIOR TO THE START OF CONSTRUCTION/ORDERING STRUCTURES. THE CONSULTANT IS TO BE INFORMED IF DIFFERENT THAN NOTED.

RESTORATION NOTE:
ALL WORK IN THE ROAD ALLOWANCE SHALL MEET THE MINIMUM SPECIFICATIONS OF THE REGION OF WATERLOO ENVIRONMENTAL AND ENGINEERING SERVICES DEPARTMENT. THE GENERAL CONDITIONS, SUPPLEMENTAL GENERAL CONDITIONS, STANDARD SPECIFICATIONS, STANDARD SPECIAL PROVISIONS AND STANDARD DRAWINGS FOR UNIT PRICE CONTRACTS AND THE REGION OF WATERLOO AND AREA MUNICIPALITIES DESIGN GUIDELINES AND SUPPLEMENTAL SPECIFICATIONS ARE TO BE APPLIED TO WORKS WITHIN THE MUNICIPAL ROAD ALLOWANCE UNLESS OTHERWISE APPROVED BY THE MUNICIPALITY.

SITE PREPARATION NOTE:
THIS PLAN HAS BEEN PREPARED TO IDENTIFY REMOVALS, EROSION & SEDIMENT CONTROL MEASURES AND TEMPORARY CONSTRUCTION WORKS FOR THE BENEFIT OF THE OWNER'S CONTRACTOR IN ADVANCE OF SERVICING WORKS. IT IS NOT INTENDED TO IDENTIFY PERMANENT GRADING PATTERNS.

STORM DRAINAGE NOTE:
STORM DRAINAGE MAY TEMPORARILY NEED TO BE CONTROLLED AND PUMPED FROM STORM SEWER SYSTEM. ANY SUCH TEMPORARY MEASURES SHALL BE CONDUCTED AT NO EXTRA COST TO THE CONTRACT AND BE BASED UPON THE OWNER'S CONTRACTOR'S WATER CONTROL PLANS. WHICH MUST BE APPROVED BY THE CONTRACT ADMINISTRATOR/ENGINEER PRIOR TO CONSTRUCTION.

UTILITIES NOTE:
FOR CLARITY, NOT ALL EXISTING UTILITIES MAY BE SHOWN. THE OWNER'S CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL UTILITY LOCATES PRIOR TO CONSTRUCTION.

SEDIMENT AND EROSION CONTROL MEASURES MAY ONLY BE REMOVED UPON STABILIZATION OF CONTRIBUTING CATCHMENT AREA AND SUBJECT TO APPROVAL OF ENGINEER/MUNICIPALITY.

UNLESS OTHERWISE NOTED ON THE PLANS, GEOTEXTILE SHALL BE NON-WOVEN TO MEET CLASS 2-OPSS 1860.07.02 (I.E. TERRAFIX 270R, OR APPROVED EQUAL) WITH 300mm MIN. OVERLAPS.

SILT SACKS (OR APPROVED EQUAL) SHALL BE INSTALLED AND MAINTAINED IN EXISTING CB's AND PROPOSED CB'S AND CBMH'S FOR DURATION OF PROJECT UNTIL SURFACES ARE PAVED AND BOULEVARDS ARE SODDED.

SILT FENCE TO BE CONSTRUCTED ON PROPERTY LINE. LINE WORK IS SHOWN AS OFFSET FOR CLARITY.

OWNER'S CONTRACTOR SHALL BE RESPONSIBLE FOR REGULAR MONITORING & CLEANUP OF TRACKED MUD/DEBRIS ON ADJACENT LANDS & PUBLIC ROADS TO THE SATISFACTION OF THE ENGINEER/MUNICIPALITY.

OWNER'S CONTRACTOR SHALL TAKE ALL REASONABLE MEASURES TO AVOID MIXING TOPSOIL WITH SUBSOIL, WHERE REQUIRED FOR REUSE ON-SITE.

TOPSOIL STOCKPILE SIZES/LOCATIONS TO BE DETERMINED IN THE FIELD. SILT FENCE SHALL BE CONSTRUCTED AT TOE OF DOWNGRADE EDGES OF TOPSOIL STOCKPILE

ALL NATIVE FILL PLACED SHALL MEET THE REQUIREMENTS FOR ENGINEERED FILL, COMPACTED TO 100% SPMDD OR AS OUTLINED IN THE GEOTECHNICAL REPORT.

BOULEVARD AREAS AND CONCRETE SIDEWALKS DISTURBED DURING INSTALLATION OF SERVICES SHALL BE RESTORED TO MATCH EX. CONDITION OR SURFACE WORKS NOTES ON SHEET C1, WHICHEVER IS GREATER, ALL AT NO COST TO THE MUNICIPALITY.

DISPOSAL NOTE:
ALL ITEMS NOTED AS "TO BE REMOVED" SHALL BE DISCARDED OFF-SITE AT AN APPROVED FACILITY.

OWNER'S CONTRACTOR TO CLEAR AND GRUB SITE PRIOR TO CONSTRUCTION AND DISPOSE OF ALL DEBRIS AND EXCESS FILL/TOPSOIL OFF-SITE AT AN APPROVED FACILITY.

THE OWNER'S CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL MEASURES IN COMPLIANCE WITH THE ONTARIO TRAFFIC MANUAL BOOK 7 FOR ALL WORKS WITHIN THE MUNICIPAL RIGHT-OF-WAY. THE OWNER'S OWNER'S CONTRACTOR SHALL SUBMIT TRAFFIC CONTROL PLANS TO THE MUNICIPALITY/ENGINEER FOR REVIEW PRIOR TO PROCEEDING WITH CONSTRUCTION.

## SEDIMENT & EROSION CONTROL MEASURES:

1. PROTECT ALL EXPOSED SURFACES AND CONTROL ALL RUNOFF DURING CONSTRUCTION.
2. SEDIMENT AND EROSION CONTROL MEASURES TO BE REMOVED AT COMPLETION OF PROJECT (FOLLOWING COMPLETION OF BASE ASPHALT AND SOD).
3. MAINTAIN EROSION CONTROL MEASURES DURING CONSTRUCTION.
4. ALL COLLECTED SEDIMENT TO BE DISPOSED OF AT AN APPROVED LOCATION.
5. MINIMIZE AREA DISTURBED DURING CONSTRUCTION.
6. ALL DEWATERING TO BE DISPOSED OF IN AN APPROVED SEDIMENTATION BASIN.
7. PROTECT ALL CATCH BASINS, MAINTENANCE HOLES AND PIPE ENDS FROM SEDIMENT INTRUSION WITH GEOTEXTILE FABRIC (TERRAFIX 270 R), SILT SACKS, OR APPROVED EQUAL.
8. KEEP ALL SUMPS CLEAN DURING CONSTRUCTION.
9. PREVENT WIND-BLOWN DUST.
10. ALL OF THE ABOVE NOTES AND ANY SEDIMENT & EROSION CONTROL MEASURES ARE AT THE MINIMUM TO BE IN ACCORDANCE WITH THE MINISTRY OF NATURAL RESOURCES GUIDELINES ON EROSION AND SEDIMENT CONTROL FOR URBAN CONSTRUCTION SITES.
11. SEDIMENT AND EROSION CONTROL MEASURES ARE TO BE INSPECTED WEEKLY OR FOLLOWING SIGNIFICANT RAINFALL EVENTS.
12. ON-SITE SEDIMENT AND EROSION CONTROL MEASURES ARE TO BE REVIEWED AND MODIFIED TO MEET THE CHANGING SITE.
13. SEDIMENT AND EROSION CONTROL MEASURES SHALL BE REPAIRED WITHOUT DELAY BY THE OWNERS CONTRACTOR AS INSTRUCTED BY THE CONTRACT ADMINISTRATOR/ENGINEER AT NO EXPENSE TO THE OWNER.
14. MUD MATS TO BE PROVIDED ON-SITE AT CONSTRUCTION ENTRANCE LOCATIONS WHERE CONSTRUCTION VEHICLES EXIT THE SITE. MUD MAT SHALL BE A MINIMUM OF 6.7m WIDE, 11.0m LONG (LENGTH MAY VARY DEPENDING ON SITE LAYOUT) AND 0.3m DEEP AND SHALL CONSIST OF 200mm CLEAR STONE MATERIAL OR APPROVED EQUIVALENT. CONTRACTOR TO ENSURE ALL VEHICLES LEAVE THE SITE VIA THE MUD MAT AND THAT IT IS MAINTAINED IN A MANNER TO MAXIMIZE ITS EFFECTIVENESS AT ALL TIMES.

## SITE BENCHMARK:

MONUMENT TYPE: BENCHMARK

LOCATION: TWO STOREY RED BRICK HOUSE (#254) ON THE WEST SIDE OF WATERLOO REG RD 21, 1.3 KM SOUTH OF JCT OF WATERLOO REG RD 86 AND 21 IN ELMIRA, 1.3 KM NORTH OF THE JCT OF WATERLOO REG RD 21 AND HYWS 85 AND 86, 42.0 M SOUTH OF CENTERLINE OR ORIOLE PKWY AND 51.0 M WEST OF CENTERLINE OF WATERLOO REG RD 21. TABLET IS SET HORIZONTALLY IN SOUTH FACE OF CONCRETE FOUNDATION, 4.08 M WEST OF W.E. CORNER AND 12 CM BRICKWORK.

GEODETIC ELEVATION: 362.940m (CGVD28:78)

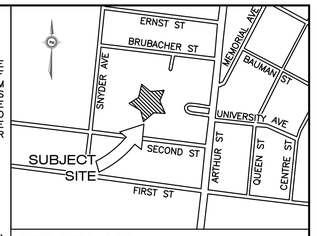
(CONTRACTOR TO CONFIRM BENCHMARK ELEVATIONS)

MONUMENT TYPE: BENCHMARK

LOCATION: RED BRICK CHURCH (EMMANUEL MISSIONARY) ON THE WEST SIDE OF WATERLOO REG RO 21, 0.8 KM SOUTH OF THE JCT OF WATERLOO REG RDS 86 AND 21 IN ELMIRA, 1.8 KM NORTH OF THE JCT OF WATERLOO REG RD 21 AND HWYS 85 AND 86, 27.4 M NORTH OF CENTERLINE OF FIRST ST AND 16.9 M WEST OF CENTERLINE OF WATERLOO REG RD 21. TABLET IS SET HORIZONTALLY IN EAST FACE OF CONCRETE FOUNDATION, 91 CM SOUTH OF N.E. CORNER AND 27 CM BELOW BRICKWORK.

GEODETIC ELEVATION: 362.937m (CGVD28:78)

(CONTRACTOR TO CONFIRM BENCHMARK ELEVATIONS)

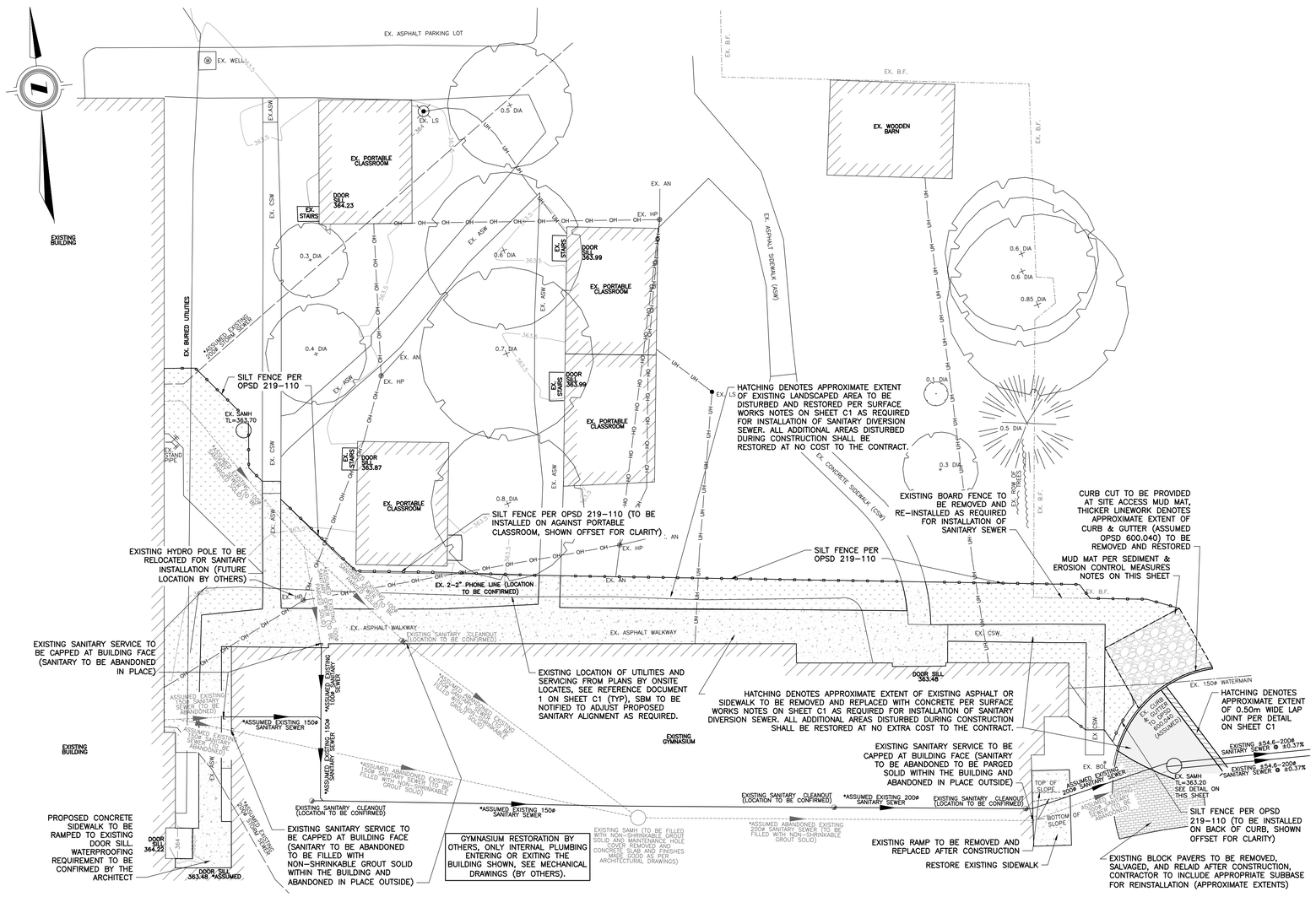


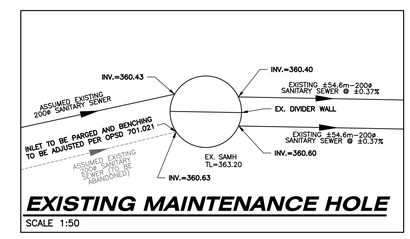

## KEY PLAN

N.T.S.

## LEGAL INFORMATION

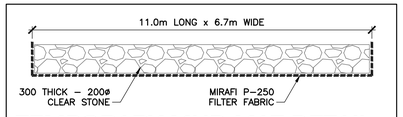
PART OF
PLAN 76
LOT 32 TO LOT 40 PT LOT 31
LOT 23 TO LOT 30 CLOSED KLINCK ST
IN THE
TOWN OF WOOLWICH
REGION MUNICIPALITY OF WATERLOO



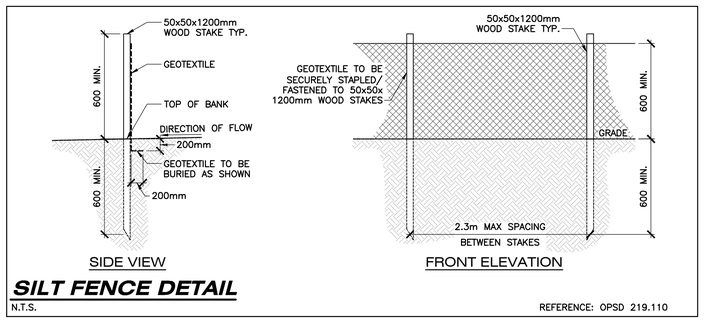

## EXISTING MAINTENANCE HOLE

SCALE 1:50




## TEMPORARY MUD MAT DETAIL

N.T.S.




## SILT FENCE DETAIL

N.T.S.

REFERENCE: OPSD 219.110

| AS CONSTRUCTED SERVICES | COMPLETION | | | No. | REVISIONS | D/M/Y | BY |
|---|---|---|---|---|---|---|---|
| | | DESIGN | LS/JSF | 1 | ISSUED FOR CLIENT REVIEW | 26/02/21 | JSF |
| | | DRAWN | JSF | 2 | ISSUED FOR TENDER | 15/03/21 | JSF |
| | | CHECKED | LS | | | | |
| | | APPROVED | LS/NGu | | | | |
| | | DATE | 09/02/2021 | | | | |
| | | CAD | 20-4137 | | | | |

CONSULTANT

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LICENSED PROFESSIONAL ENGINEER
N.A.GUIOTRUBIANO
100147337
MARCH 16, 2021
PROVINCE OF ONTARIO

ENGINEER'S STAMP

CLIENT
LGA ARCHITECTURAL PARTNERS
310 SPADINA AVENUE, SUITE 100B
TORONTO, ON
M5T 2E8
P: 416.203.7600
E: jose@lga-ap.com

SCALE
SCALE – 1:200
2.0 0 4.0m

TITLE
EXISTING CONDITIONS, REMOVALS, AND SEDIMENT & EROSION CONTROL PLAN
ELMIRA SECONDARY SCHOOL
4 UNIVERSITY AVENUE WEST
ELMIRA, ON.

PROJECT No. SBM-20-4137
SHEET No. C2
PLAN FILE No. –

S:\2020 Jobs\SBM-20-4137 LGA Architects WRDSB Elmira Secondary School, Elmira\03 Dwgs\03 Civil\03 Production Drawings\SBM-20-4137 LGA Architects WRDSB Elmira Secondary School, Elmira - C2.dwg

WATERMAIN & SEWER CROSSING NOTE:
1. UNDER PRACTICAL CONDITIONS, WATERMAINS SHALL CROSS ABOVE SEWERS WITH SUFFICIENT VERTICAL SEPARATION TO ALLOW FOR PROPER BEDDING AND STRUCTURAL SUPPORT OF THE WATERMAIN AND SEWER.
2. WHEN IT IS NOT POSSIBLE FOR THE WATERMAIN TO CROSS ABOVE THE SEWER, THE WATERMAIN PASSING UNDER A SEWER SHALL BE PROTECTED BY:
   2.1. PROVIDING A VERTICAL SEPARATION OF AT LEAST 0.5 METRES BETWEEN THE INVERT OF THE SEWER AND THE CROWN OF THE WATERMAIN;
   2.2. PROVIDING ADEQUATE STRUCTURAL SUPPORT FOR THE SEWERS TO PREVENT EXCESSIVE DEFLECTION OF JOINTS AND SETTLING; AND
   2.3. ENSURING THAT THE LENGTH OF WATER PIPE SHALL BE CENTERED AT THE POINT OF CROSSING SO THAT THE JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE SEWER.

REFERENCE: JUNE 2012 MINISTRY OF THE ENVIRONMENT'S 'WATERMAIN DESIGN CRITERIA FOR FUTURE ALTERATION AUTHORIZED UNDER A DRINKING WATER WORKS PERMIT'

ALL CLEARANCES TO ELECTRICAL CONDUCTORS AS SET OUT IN THE CURRENT OBC DIV. B–3.1.19.1 'ELECTRICAL CONDUCTOR CLEARANCES TO BUILDINGS' SHALL BE MAINTAINED

UTILITIES NOTE:
FOR CLARITY, NOT ALL EXISTING UTILITIES MAY BE SHOWN. THE OWNER'S CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL UTILITY LOCATES PRIOR TO CONSTRUCTION.

OWNER'S CONTRACTOR SHALL SUPPORT ALL EXISTING UTILITIES AS REQUIRED DURING THE INSTALLATION OF SERVICES TO THE SATISFACTION OF THE UTILITY OWNER AT NO EXTRA COST TO THE CONTRACT.

ALL SUMP PIT CONFIGURATIONS SHALL MEET, AT MINIMUM, OBC SECTION 7. ALL PUMPS ARE TO INCLUDE A CHECK VALVE.

BOULEVARD AREAS AND CONCRETE SIDEWALKS DISTURBED DURING INSTALLATION OF SERVICES SHALL BE RESTORED TO MATCH EX. CONDITION OR SURFACE WORKS NOTES ON SHEET C1, WHICHEVER IS GREATER, ALL AT NO COST TO THE MUNICIPALITY.

OFF–SITE WORKS NOTE:
PERMIT OF APPROVED WORKS FOR ALL EXTERNAL WORKS IS REQUIRED.

*EXISTING SERVICING NOTE:
INVERTS OF THE EX. SANITARY & STORM SEWERS @ CONNECTION POINTS SHALL BE CONFIRMED BY THE OWNER'S CONTRACTOR PRIOR TO THE START OF CONSTRUCTION/ORDERING STRUCTURES. THE CONSULTANT IS TO BE INFORMED IF DIFFERENT THAN NOTED.

RESTORATION NOTE:
ALL WORK IN THE ROAD ALLOWANCE SHALL MEET THE MINIMUM SPECIFICATIONS OF THE REGION OF WATERLOO ENVIRONMENTAL AND ENGINEERING SERVICES DEPARTMENT. THE GENERAL CONDITIONS, SUPPLEMENTAL GENERAL CONDITIONS, STANDARD SPECIFICATIONS, STANDARD SPECIAL PROVISIONS AND STANDARD DRAWINGS FOR UNIT PRICE CONTRACTS AND THE REGION OF WATERLOO AND AREA MUNICIPALITIES DESIGN GUIDELINES AND SUPPLEMENTAL SPECIFICATIONS ARE TO BE APPLIED TO WORKS WITHIN THE MUNICIPAL ROAD ALLOWANCE UNLESS OTHERWISE APPROVED BY THE MUNICIPALITY.

SUMP PUMP AND DRAIN LOCATIONS ARE SHOWN FOR SCHEMATIC PURPOSES ONLY. REFER TO ARCHITECTS PLANS FOR SUMP PUMP DESIGN.

SERVICE STUBS TO BE CAPPED AT 1.0m O/S FROM BUILDING ENVELOPE FOR CONNECTION ONCE BUILDING SERVICES ARE INSTALLED.

OWNER'S CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY CONSTRUCTION MEASURES SUCH AS, BUT NOT LIMITED TO, PIPE COVER AT NO ADDITIONAL CHARGE TO THE CONTRACT.

STORM DRAINAGE NOTE:
STORM DRAINAGE MAY TEMPORARILY NEED TO BE CONTROLLED AND PUMPED FROM STORM SEWER SYSTEM. ANY SUCH TEMPORARY MEASURES SHALL BE CONDUCTED AT NO EXTRA COST TO THE CONTRACT AND BE BASED UPON THE OWNER'S CONTRACTORS WATER CONTROL PLANS. WHICH MUST BE APPROVED BY THE CONTRACT ADMINISTRATOR/ENGINEER PRIOR TO CONSTRUCTION.

THE SUBJECT SITE HAS BEEN DESIGNED UNDER A SINGLE OWNERSHIP. IF ONE OF THE LAND PARCELS IS SOLD TO ANOTHER OWNER, AN ECA FOR SHARED SEWER WILL BE REQUIRED FROM THE M.E.C.P..

IT IS RECOMMENDED THAT SUMP DRAINAGE BE DIRECTED TO THE BUILDING STORM DRAIN VIA EJECTOR PUMP w/ ELEVATED DISCHARGE LOOP.

THE OWNER'S CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL MEASURES IN COMPLIANCE WITH THE ONTARIO TRAFFIC MANUAL BOOK 7 FOR ALL WORKS WITHIN THE MUNICIPAL RIGHT–OF–WAY. THE OWNER'S OWNER'S CONTRACTOR SHALL SUBMIT TRAFFIC CONTROL PLANS TO THE MUNICIPALITY/ENGINEER FOR REVIEW PRIOR TO PROCEEDING WITH CONSTRUCTION.

INSULATION NOTE:
INSULATE SEWERS + WATER PIPES AS PER THE ONTARIO BUILDING CODE A–7.3.5.4.(1) FROM THE CURRENT BUILDING CODE COMPENDIUM WHERE 1.70m (1.22m FOR ON–SITE SEWERS) COVER CAN NOT BE PROVIDED.

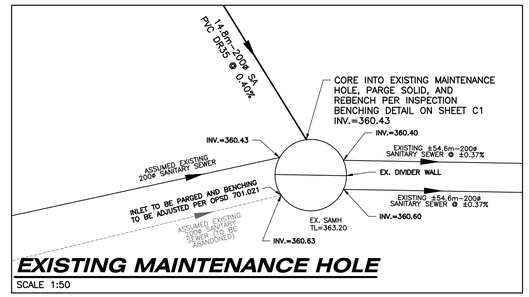
PRIOR TO ANY CONSTRUCTION, ALL GRADES AND ELEVATIONS MUST BE CHECKED AND VERIFIED AND ANY DISCREPANCIES MUST BE REPORTED TO THE ENGINEERS.

NOTE: ALL THE SERVICING SHOWN INSIDE THE SUBJECT PROPERTY IS DIRECTLY DERIVED FROM THE DRAWINGS PROVIDED BY LGA ARCHITECTS IN EMAIL DATED NOVEMBER 23, 2020 AND IS NOTED AS "ASSUMED"

THE ASSUMED UNDERSIDE OF FOOTING ELEVATIONS ARE BASED OFF 1.22m (4') COVER FROM THE LOWEST SURFACE ELEVATION AT THE BUILDING PERIMETER.

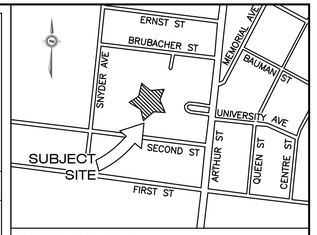
## PIPE CROSSINGS & VERTICAL CLEARANCES

| CROSSING No. | SEWER/WATERMAIN ELEVATIONS | | | | | | | | VERTICAL CLEARANCES | *VERTICAL OFFSET |
|---|---|---|---|---|---|---|---|---|---|---|
| CR1 | 150mm | WM | INV. | 361.16 | 200mm | SAN | OBV. | 360.66 | 0.50 | YES* |
| *SEE MECHANICAL OFFSET DETAIL ON SHEET C1 AND ASSUMPTION NOTE ON THIS SHEET | | | | | | | | | | |




## EXISTING MAINTENANCE HOLE

SCALE 1:50




## KEY PLAN

N.T.S.

## LEGAL INFORMATION

PART OF
PLAN 76
LOT 32 TO LOT 40 PT LOT 31
LOT 23 TO LOT 30 CLOSED KLINCK ST
IN THE
TOWN OF WOOLWICH
REGION MUNICIPALITY OF WATERLOO

## SITE BENCHMARK:

MONUMENT TYPE: BENCHMARK

LOCATION: TWO STOREY RED BRICK HOUSE (#254) ON THE WEST SIDE OF WATERLOO REG RD 21, 1.3 KM SOUTH OF JCT OF WATERLOO REG RD 86 AND 21 IN ELMIRA, 1.3 KM NORTH OF THE JCT OF WATERLOO REG RD 21 AND HYWS 85 AND 86, 42.0 M SOUTH OF CENTERLINE OR ORIOLE PKWY AND 61.0 M WEST OF CENTERLINE OF WATERLOO REG RD 21. TABLET IS SET HORIZONTALLY IN SOUTH FACE OF CONCRETE FOUNDATION, 4.08 M WEST OF W.E. CORNER AND 12 CM BRICKWORK.

GEODETIC ELEVATION: 362.940m (CGVD28:78)

(CONTRACTOR TO CONFIRM BENCHMARK ELEVATIONS)

MONUMENT TYPE: BENCHMARK

LOCATION: RED BRICK CHURCH (EMMANUEL MISSIONARY) ON THE WEST SIDE OF WATERLOO REG RO 21, 0.8 KM SOUTH OF THE JCT OF WATERLOO REG RDS 86 AND 21 IN ELMIRA, 1.8 KM NORTH OF THE JCT OF WATERLOO REG RD 21 AND HWYS 85 AND 86, 27.4 M NORTH OF CENTERLINE OF FIRST ST AND 16.9 M WEST OF CENTERLINE OF WATERLOO REG RD 21. TABLET IS SET HORIZONTALLY IN EAST FACE OF CONCRETE FOUNDATION, 91 CM SOUTH OF N.E. CORNER AND 27 CM BELOW BRICKWORK.

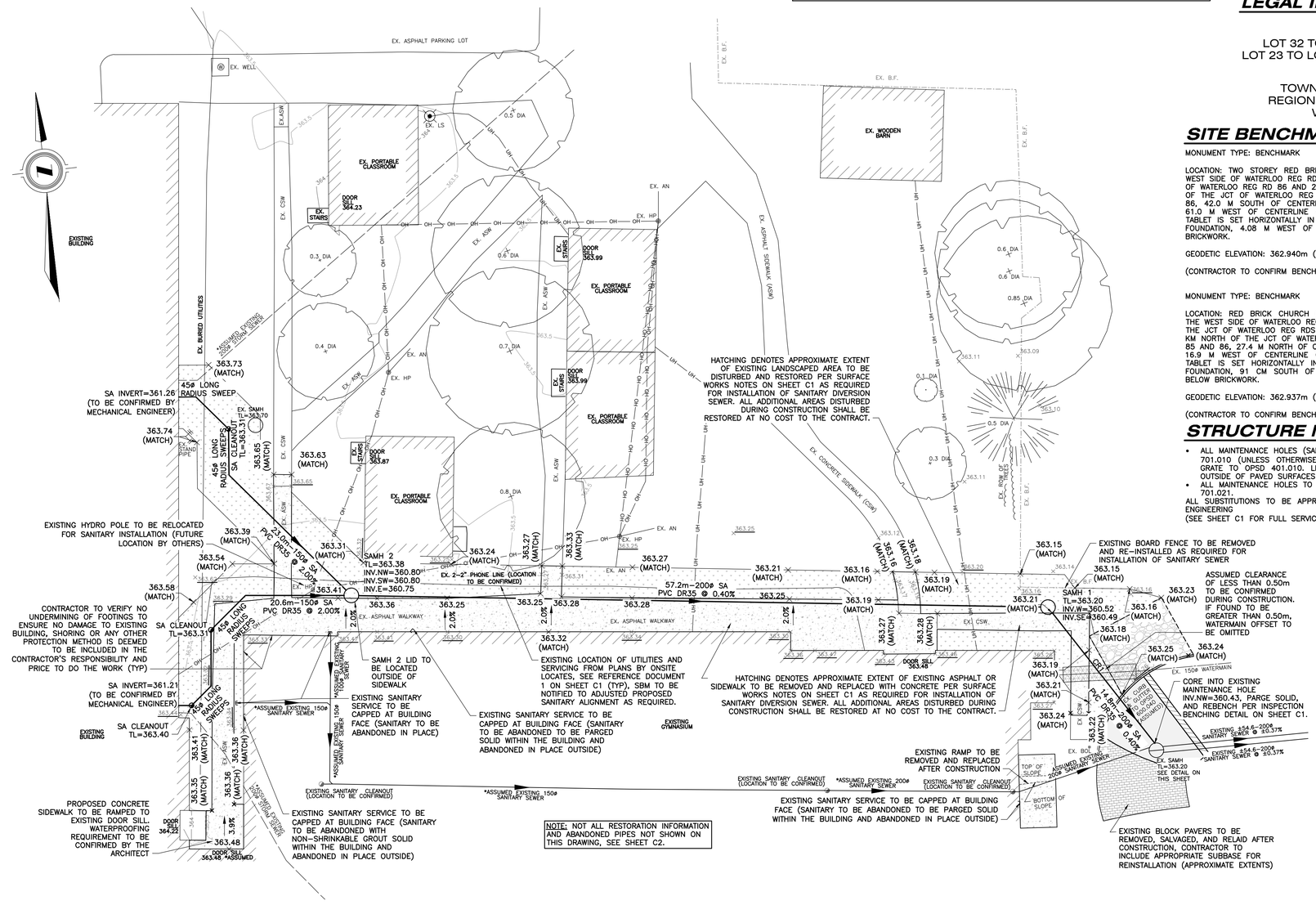
GEODETIC ELEVATION: 362.937m (CGVD28:78)

(CONTRACTOR TO CONFIRM BENCHMARK ELEVATIONS)

## STRUCTURE NOTES:

- ALL MAINTENANCE HOLES (SAMH) TO BE 1200ø TO OPSD 701.010 (UNLESS OTHERWISE NOTED), WITH FRAME AND GRATE TO OPSD 401.010. LIDS TO BE LOCATED TO BE OUTSIDE OF PAVED SURFACES WHERE POSSIBLE.
- ALL MAINTENANCE HOLES TO BE BENCHED AS PER OPSD 701.021.

ALL SUBSTITUTIONS TO BE APPROVED BY THE MANAGER OF ENGINEERING
(SEE SHEET C1 FOR FULL SERVICING NOTES)




| AS CONSTRUCTED SERVICES | COMPLETION | | No. | REVISIONS | D/M/Y | BY |
|---|---|---|---|---|---|---|
| | | DESIGN LS/JSF | 1 | ISSUED FOR CLIENT REVIEW | 26/02/21 | JSF |
| | | DRAWN JSF | 2 | ISSUED FOR TENDER | 15/03/21 | JSF |
| | | CHECKED LS | | | | |
| | | APPROVED LS/MGu | | | | |
| | | DATE 10/02/2021 | | | | |
| | | CAD 20–4137 | | | | |

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STRIK BALDINELLI MONIZ
PLANNING • CIVIL • STRUCTURAL • MECHANICAL • ELECTRICAL
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Tel: (519) 471-6667 Fax: (519) 471-0034
Email: sbm@sbmltd.ca

LICENSED PROFESSIONAL ENGINEER
N.A. GUIOT RUBIANO
100147337
MARCH 16, 2021
PROVINCE OF ONTARIO

ENGINEER'S STAMP

CLIENT
LGA ARCHITECTURAL PARTNERS
310 SPADINA AVENUE, SUITE 100B
TORONTO, ON
M5T 2E8
P: 416.203.7600
E: jose@lga–ap.com

SCALE
SCALE – 1:200
2.0 0 4.0m

TITLE
SERVICING PLAN
ELMIRA SECONDARY SCHOOL
4 UNIVERSITY AVENUE WEST
ELMIRA, ON.

PROJECT No. SBM–20–4137
SHEET No. C3
PLAN FILE No. –

## GENERAL

| SYMBOL | DESCRIPTION |
|---|---|
| | EXISTING TO REMAIN |
| | EXISTING TO BE DEMOLISHED |
| R | EXISTING TO BE REMOVED FOR RELOCATION |
| R | EXISTING RELOCATED IN NEW WORK |
| | NEW WORK |
| CTE | CONNECT TO EXISTING |
| CO | CLEAN OUT |
| DN | PIPE TURNING DOWN |
| | PIPE TURNING UP |
| | PRESSURE REDUCING VALVE |
| T | ROOM THERMOSTAT |
| H | ROOM HUMIDISTAT |
| | PUMP |
| | AUTOMATIC CONTROL VALVE - TWO WAY |
| | AUTOMATIC CONTROL VALVE - THREE WAY |
| | ISOLATION VALVE |
| | BALANCING VALVE |
| | CHECK VALVE |
| | STRAINER - OVER 50MM WITH VALVED FLUSHING DRAIN |
| | PIPE BRANCH OFF TOP |
| | PIPE BRANCH OFF BOTTOM |
| | RELIEF VALVE (PIPE TO DRAIN) |
| | PRESSURE GUAGE |
| | THERMOMETER |
| CAP | CAP |

## VENTILATION

| SYMBOL | DESCRIPTION |
|---|---|
| FD | FUSIBLE LINK FIRE DAMPER (DOUBLE LINE) |
| FD | FUSIBLE LINK FIRE DAMPER (SINGLE LINE) |
| BDD | BACK DRAFT DAMPER (DOUBLE LINE) |
| BDD | BACK DRAFT DAMPER (SINGLE LINE) |
| BD | BALANCING DAMPER (DOUBLE LINE) |
| BD | BALANCING DAMPER (SINGLE LINE) |
| 600x300 | RECTANGULAR DUCTWORK - DIMENSION AS SHOWN |
| 600Ø | ROUND DUCTWORK - DIMENSION AS SHOWN |
| 600x300 | DUCTWORK (SINGLE LINE) - DIMENSION AS SHOWN |
| | SUPPLY RISER UP |
| | EXHAUST/RETURN RISER UP |
| | SUPPLY RISER DOWN |
| | EXHAUST/RETURN RISER DOWN |
| | MITRED ELBOW WITH AIR TURNING VANES |
| | DUCT RISE (DOUBLE LINE) |
| | DUCT RISE (SINGLE LINE) |
| MD | MOTORIZED DAMPER |
| | SUPPLY GRILLE |
| | EXHAUST/RETURN GRILLE |
| | CEILING SUPPLY AIR DIFFUSER |
| | CEILING EXHAUST/RETURN GRILLE |
| | BRANCH TAKE-OFF WITH ADJUSTABLE SPLITTER DAMPER IN SUPPLY DUCT (DOUBLE LINE) |
| | BRANCH TAKE-OFF WITH ADJUSTABLE SPLITTER DAMPER IN SUPPLY DUCT (SINGLE LINE) |
| O.E.D. | OPEN ENDED DUCT WITH BALANCING DAMPER AND BELLMOUTH. DIRECTION AS SHOWN (DOUBLE LINE) |
| O.E.D. | OPEN ENDED DUCT WITH BALANCING DAMPER AND BELLMOUTH. DIRECTION AS SHOWN (SINGLE LINE) |
| | FLEXIBLE DUCT CONNECTION |
| TYPE<br>NECK SIZE (mm)<br>A-200Ø-100<br>AIRFLOW IN L/s | DIFFUSER TAG |
| TYPE<br>A-100<br>AIRFLOW IN L/s | GRILLE TAG |
| | ACOUSTICALLY LINED DUCTWORK (DOUBLE LINE) |
| | ACOUSTICALLY LINED DUCTWORK (SINGLE LINE) |
| SL | SILENCER (ATTENUATOR) |
| | FLEXIBLE DUCT (DOUBLE LINE) |
| | FLEXIBLE DUCT (SINGLE LINE) |
| | DUCT TRANSITION FROM RECTANGULAR TO ROUND |
| | RECTANGULAR DUCT BREAK |
| | ROUND DUCT BREAK |
| | SINGLE LINE DUCT BREAK |

## HEATING & COOLING

| SYMBOL | DESCRIPTION |
|---|---|
| HWR | HEATING WATER RETURN |
| HWS | HEATING WATER SUPPLY |
| HGR | HEATING GLYCOL RETURN |
| HGS | HEATING GLYCOL SUPPLY |
| CNDR | CONDENSATE DRAIN |
| REFR | REFRIGERANT GAS |
| REFS | REFRIGERANT LIQUID |
| G | GAS |
| BB - XXX | ELECTRIC BASEBOARD HEATER OUTPUT AS SHOWN (KW) |
| ECH | ELECTRIC CABINET HEATER |
| CUH | CABINET HEATER |
| UH | UNIT HEATER |
| CV<br>1200-5.6 | CONVECTOR - LENGTH - HEAT OUTPUT (KW) |
| WF<br>1200-5.6 | WALL FIN - LENGTH - HEAT OUTPUT (KW) |
| | UNION |
| | MANUAL AIR VENT |
| | AUTOMATIC AIR VENT |
| | EXPANSION COMPENSATOR |
| | EXPANSION SWING |
| | PIPE ANCHOR |
| | PIPE GUIDE |
| | PIPE SLEEVE |
| | FLOAT & THERMOSTATIC TRAP |
| | INVERTED BUCKET TRAP |
| | ELECTRIC TRACING |
| 8C-600-1100 = 2.1 | RADIANT PANEL - 8 DENOTES DEPTH, 600mm DENOTES HEIGHT, 1100mm DENOTES LENGTH & 2.1 HEAT OUTPUT (KW) |
| | |

## CONTROLS

| SYMBOL | DESCRIPTION |
|---|---|
| SF | SUPPLY FAN |
| RF | RETURN EXHAUST FAN |
| EF | EXHAUST FAN |
| H/C | HEATING COIL |
| C/C | COOLING COIL |
| P/C | PRE-HEAT COIL |
| | FILTERS |
| | HUMIDIFIER |
| | THERMOMETER |
| SA | SUPPLY AIR |
| EA | EXHAUST AIR |
| OA | OUTDOOR AIR |
| RA | RETURN AIR |
| MD | MOTORIZED DAMPER |
| VFD | VARIABLE FREQUENCY DRIVE |
| NO | NORMALLY OPEN |
| NC | NORMALLY CLOSED |
| EP | ELECTRO-PNEUMATIC SWITCH |
| PE | PRESSURE ELECTRIC SWITCH |
| H | HUMIDITY SENSOR |
| T | TEMPERATURE SENSOR |
| BAS | BUILDING AUTOMATED SYSTEM |
| AI | ANALOG INPUT |
| AO | ANALOG OUTPUT |
| DI | DIGITAL INPUT |
| DO | DIGITAL OUTPUT |
| OS | OCCUPANCY SENSOR |

# GENERAL NOTES

1. THE MECHANICAL CONTRACTOR SHALL VISIT THE SITE TO VERIFY EXISTING CONDITIONS PRIOR TO SUBMITTING BID. THIS SHALL BE DONE IN ORDER TO CONFIRM THAT EQUIPMENT AND SERVICES CAN BE INSTALLED AS SHOWN ON DRAWINGS AND THAT ADDITIONAL COSTS ARE INCLUDED IN BID TO FACILITATE INSTALLATION. IT IS THE CONTRACTORS RESPONSIBILITY TO NOTIFY THE ENGINEERS OF ANY DISCREPANCIES, OMISSIONS, AND INTERFERENCES. CONTRACTOR SHALL PROVIDE INTERFERENCE DRAWINGS TO CONSULTANT FOR REVIEW AND DIRECTION.
2. ENSURE THAT ALL NEW AND EXISTING MECHANICAL EQUIPMENT REQUIRING MAINTENANCE IS ACCESSIBLE AND THAT ACCESS REQUIREMENTS ARE NOT OBSTRUCTED BY NEW OR EXISTING SERVICES AND STRUCTURE. COORDINATE WITH PROJECT MANAGER AND ALL OTHER TRADES. INSTALL MECHANICAL EQUIPMENT IN SUCH A WAY AS TO PROVIDE ALL ACCESS REQUIREMENTS. REFER TO SHOP DRAWINGS AND/OR MANUFACTURER'S RECOMMENDATIONS FOR ACCESS REQUIREMENTS. REPORT ANY OBSTRUCTIONS TO THE PROJECT MANAGER AND MECHANICAL ENGINEER. PROVIDE ACCESS DOORS/PANELS TO BE AS SPECIFIED.
3. PROVIDE ALL REQUIRED CUTTING AND PATCHING OF EXISTING CEILINGS AND WALLS TO FACILITATE DEMOLITION AND THE INSTALLATION OF THE MECHANICAL SERVICES OUTLINED FOR THIS SCOPE OF WORK.
4. WELDING TO BE PERFORMED WITH STRINGENT ENVIRONMENTAL CONDITIONS FOR SMOKE AND FUME EVACUATION.
5. THE MECHANICAL DRAWINGS ARE PERFORMANCE DRAWINGS, DIAGRAMMATIC, AND SHOW APPROXIMATE LOCATIONS OF EQUIPMENT AND CONNECTING SERVICES. ANY INFORMATION REGARDING ACCURATE MEASUREMENT OF THE BUILDING ARE TO BE TAKEN AT THE SITE. DO NOT SCALE THE DRAWINGS, AND DO NOT USE THE DRAWINGS FOR PREFABRICATION WORK.
6. FOR CLARITY, NOT ALL EXISTING EQUIPMENT, DUCTWORK, PIPING, ETC. HAS BEEN SHOWN ON THE DRAWINGS. THE EXISTING EQUIPMENT, PIPES, DUCTS AND SERVICES ARE SHOWN FOR REFERENCE ONLY. EXACT LOCATIONS, SIZES AND DIMENSIONS SHALL BE DETERMINED ON SITE. WHERE INTERFERENCES EXIST, CONTRACTOR SHALL REROUTE THE NEW WORK TO SUIT THE EXISTING PIPING.
7. NOT ALL CONNECTIONS TO EQUIPMENT ARE SHOWN. REFER TO THE MANUFACTURERS LITERATURE FOR ALL PIPING CONNECTIONS.
8. CONTRACTOR IS TO BE RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF ALL PIPING AND EQUIPMENT AS SHOWN ON THE DEMOLITION PLAN.
9. COORDINATE ALL TEMPORARY SHUT DOWNS WITH THE OWNER. PROVIDE ISOLATION VALVES AS REQUIRED.
10. SURVEY ALL AFFILIATED WORK AREAS AND REPORT ABNORMALITIES AND DISCREPANCIES TO CONSULTANT.
11. WHERE CEILING, FLOOR, WALL OR ROOF OPENINGS ARE REQUIRED TO RUN MECHANICAL AND ELECTRICAL SERVICES, INCLUDE ALL COSTS FOR REINSTATING THE CEILING, FLOOR,WALL, OR ROOF. SEAL ALL OPENINGS WITH APPROVED FIRE-STOPPING MATERIALS AS REQUIRED. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
12. HOUSEKEEPING PADS FOR EQUIPMENT SHALL BE AMPLY SIZED TO EXTEND A MINIMUM OF 4" BEYOND THE FOOTPRINT OF THE EQUIPMENT IT SUPPORTS.
13. IF ASBESTOS CONTAINING MATERIAL IS SUSPECTED OR IDENTIFIED IN THE WORK AREA AND REQUIRED TO BE HANDLED AS PART OF THE DEMOLITION PHASE OF THE PROJECT,CONTRACTOR SHALL HALT WORK AND INFORM CONSULTANT OF SUCH CONDITIONS. CONTRACTOR SHALL NOT PROCEED WITH DEMOLITION OF SUCH AREAS WITHOUT AUTHORIZATION BY CONSULTANT. REMOVAL OF SUCH MATERIALS TO ACCOMMODATE THE WORK DESCRIBED AND OUTLINED IN THESE DRAWINGS SHALL BE ARRANGED THROUGH THE OWNER. ASBESTOS ABATEMENT, IF ANY, IS EXCLUDED FROM THIS CONTRACT AND WILL BE HANDLED SEPARATELY BY OWNER.
14. ALL ABANDONED OR OBSOLETE MECHANICAL SERVICES SUCH AS VALVES, PIPING, EQUIPMENT, INSTRUMENTATION, ETC. SHALL BE REMOVED WITHIN THE WORK AREA TO FACILITATE ALL NEW MECHANICAL WORK.
15. CONTRACTOR SHALL IDENTIFY AND LABEL CLEARLY ALL PIPING, SERVICES AND EQUIPMENT INSTALLED UNDER THE SCOPE OF WORK OF THIS PROJECT. IDENTIFICATION SHALL BE AS PER THE SPECIFICATIONS AND OWNER REQUIREMENTS.
16. INSULATE ALL NEW PIPING AND AND ANY EXISTING PIPING WHERE INSULATION HAS BEEN REMOVED OR DAMAGED BY THIS WORK . REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
17. ALL PIPE WORK IN MECHANICAL ROOM TO BE TESTED FOR LEAKS WHEREVER NEW CONNECTIONS ARE MADE.
18. WHERE CONNECTIONS ARE MADE TO EXISTING SERVICES, CONTRACTOR SHALL MATCH ALL EXISTING PIPE SIZES UNLESS OTHERWISE NOTED.

## Drawing List

| Sheet Number | Sheet Title |
|---|---|
| M-001 | MECHANICAL LEGEND AND DRAWING LIST |
| M-002 | MECHANICAL KEYPLANS |
| M-100 | BOILER ROOM - DEMOLITION & NEW WORK PLAN |
| M-101 | HVAC DUCTWORK - CAFETERIA - DEMO AND NEW WORK PLAN |
| M-102 | HVAC - CAFETERIA ROOF - DEMO AND NEW WORK PLAN |
| M-103 | HVAC PIPING - CAFETERIA - DEMO AND NEW WORK PLAN |
| M-104 | HVAC PIPING - CAFETERIA CORRIDOR - DEMO AND NEW WORK PLAN |
| M-105 | HVAC PIPING - GYM - DEMO AND NEW WORK PLAN |
| M-110 | GYM DRAINAGE - DEMOLITION & NEW WORK PLAN |
| M-111 | GYM MECHANICAL ROOM & ROOF - DEMOLITION & NEW WORK PLAN |
| M-112 | GYM HVAC - NEW WORK PLAN |
| M-120 | HIGH ROOF - DEMOLITION & NEW WORK PLAN |
| M-300 | MECHANICAL DETAILS 1 |
| M-301 | MECHANICAL DETAILS 2 |
| M-302 | MECHANICAL DETAILS 3 |
| M-400 | MECHANICAL SCHEDULES |


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WEB: WWW.QUASARCG.COM

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**ISSUE DATE:**

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 3 | 16-MAR-21 | ISSUED FOR TENDER |
| 2 | 08-MAR-21 | ISSUED FOR 95% TENDER REVIEW |
| 1 | 18-FEB-21 | ISSUED FOR 80% CD |

**PROJECT:**

ELMIRA DISTRICT SECONDARY SCHOOL - 4 UNIVERSITY AVE WEST, ELMIRA ON N3B 1K2

**DRAWING TITLE:**

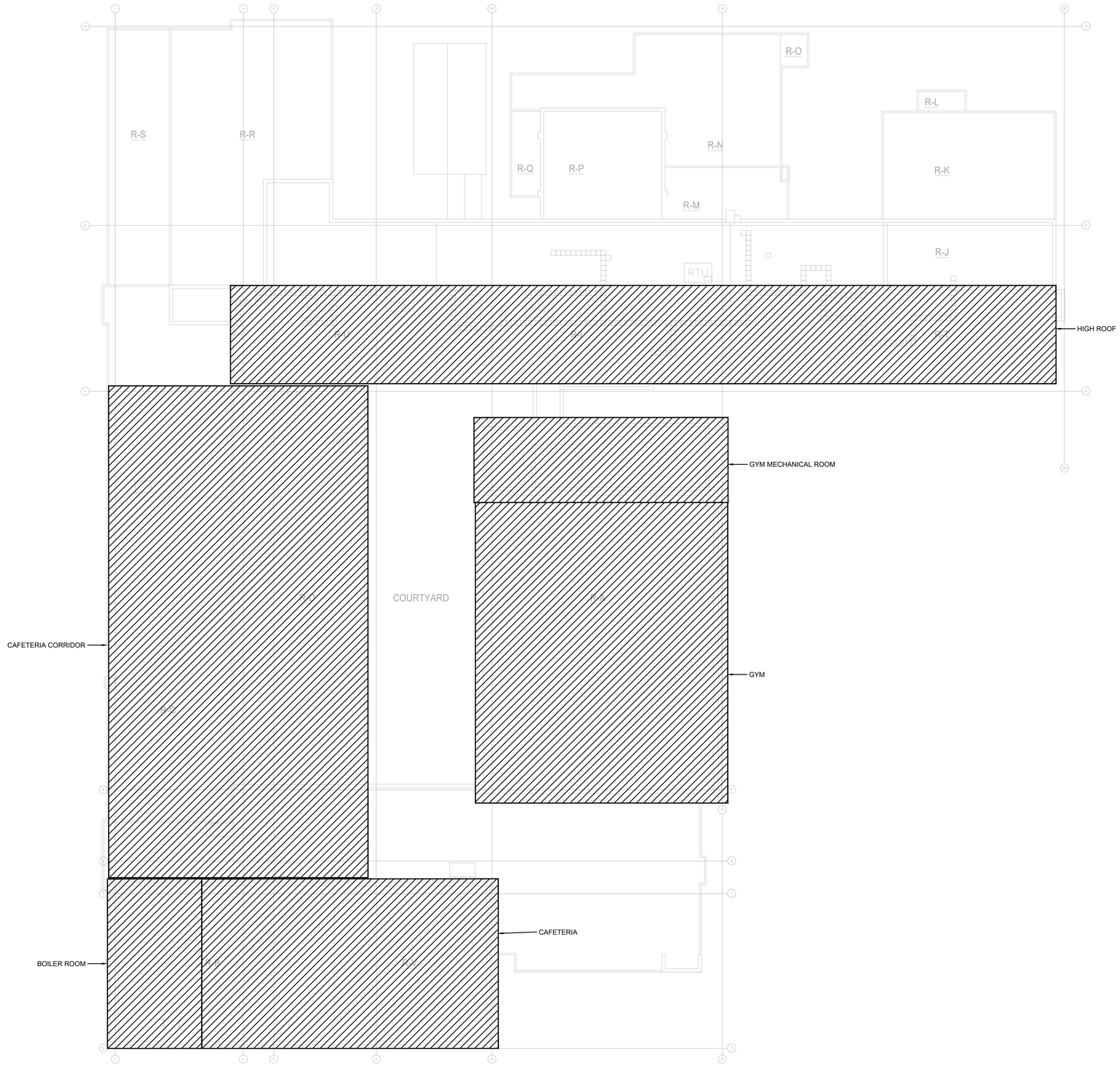
MECHANICAL LEGEND AND DRAWING LIST

**PROJECT NO:** ED-20-300
**SCALE:** AS SHOWN
**DRAWN BY:** RH
**REVIEWED BY:** MH

**PROJECT NORTH:**

**DRAWING NO:**

M-001




1 KEYPLAN - MECHANICAL
SCALE: 1:250

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**PROJECT:**

ELMIRA DISTRICT SECONDARY SCHOOL - 4 UNIVERSITY AVE WEST, ELMIRA ON N3B 1K2

**DRAWING TITLE:**

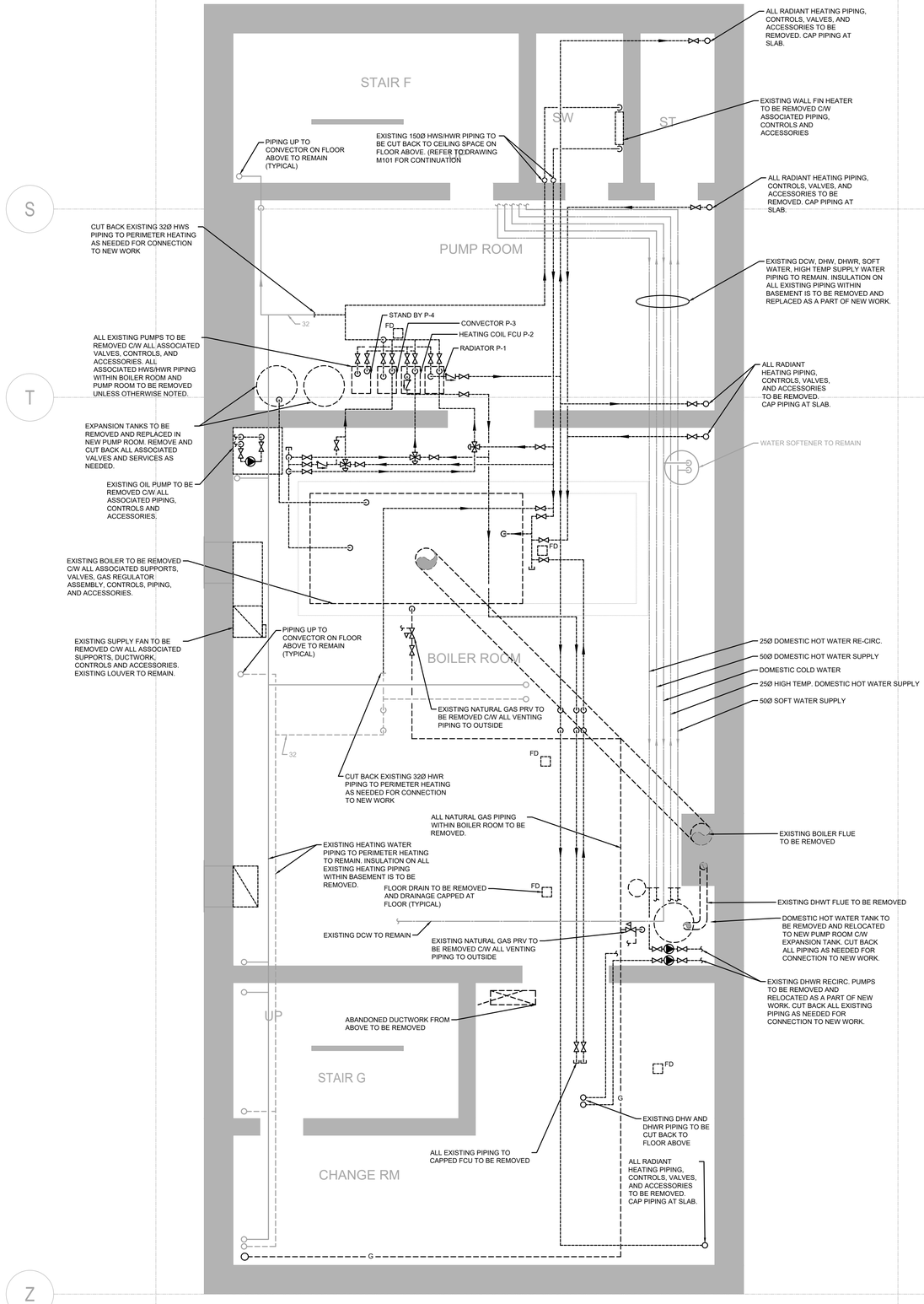
MECHANICAL KEYPLANS

**PROJECT NO:** ED-20-300
**SCALE:** AS SHOWN
**DRAWN BY:** RH
**REVIEWED BY:** MH

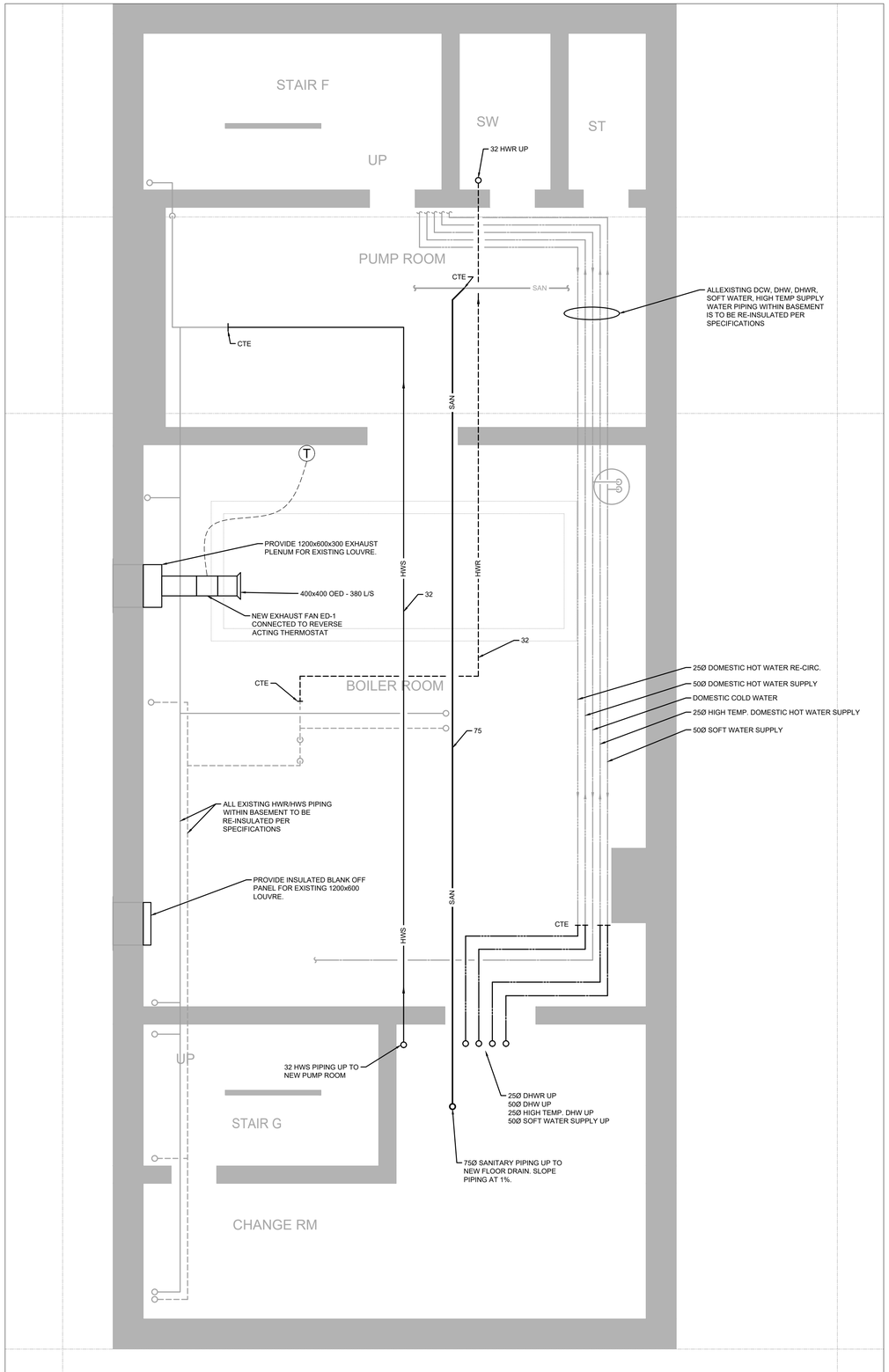
**PROJECT NORTH:**

**DRAWING NO:**

M-002




1 HVAC - BOILER ROOM DEMOLITION PLAN
SCALE: 1:50




2 HVAC - BOILER ROOM NEW WORK PLAN
SCALE: 1:50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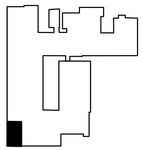
KEYPLAN



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**PROJECT:**

ELMIRA DISTRICT SECONDARY SCHOOL - 4 UNIVERSITY AVE WEST, ELMIRA ON N3B 1K2

**DRAWING TITLE:**

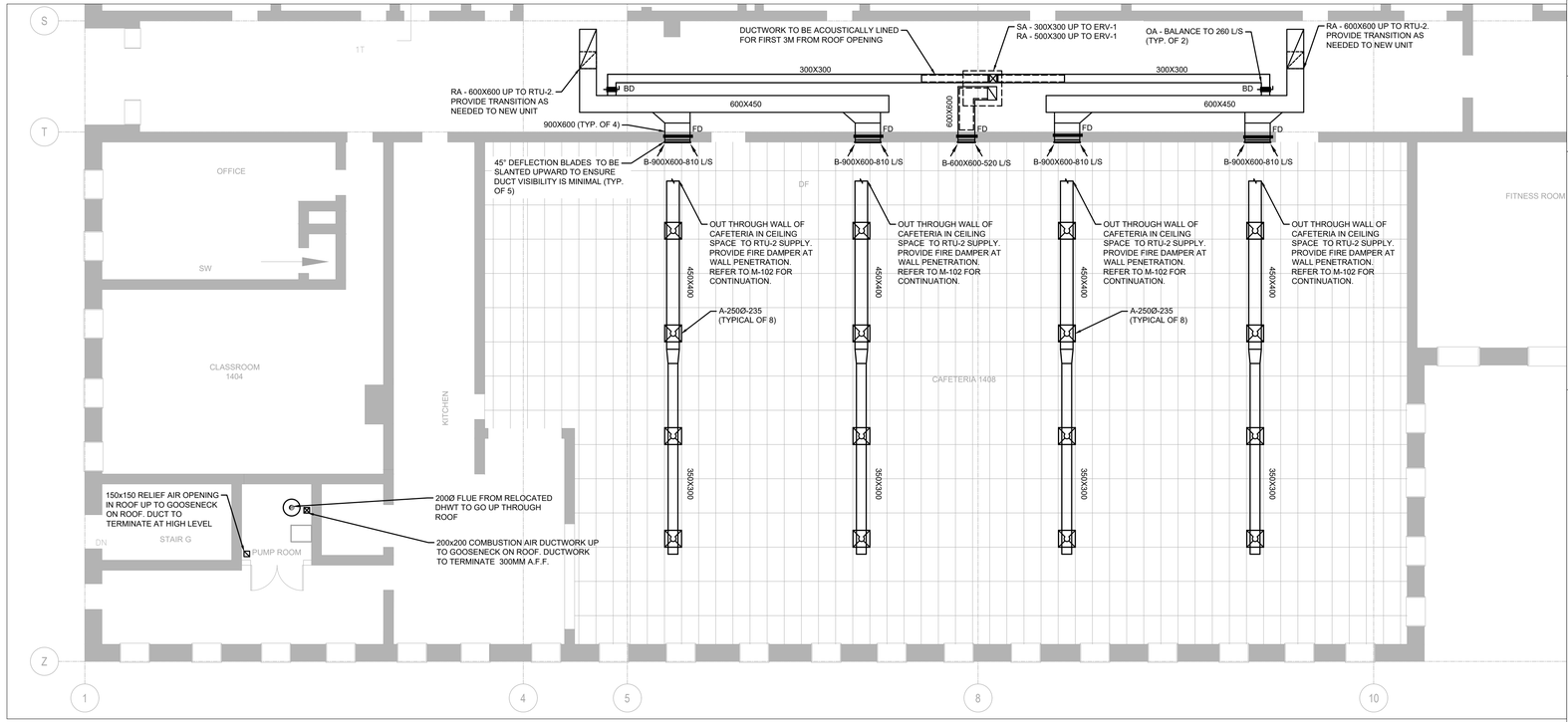
BOILER ROOM - DEMOLITION & NEW WORK PLAN

**PROJECT NO:** ED-20-300
**SCALE:** AS SHOWN
**DRAWN BY:** RH
**REVIEWED BY:** MH

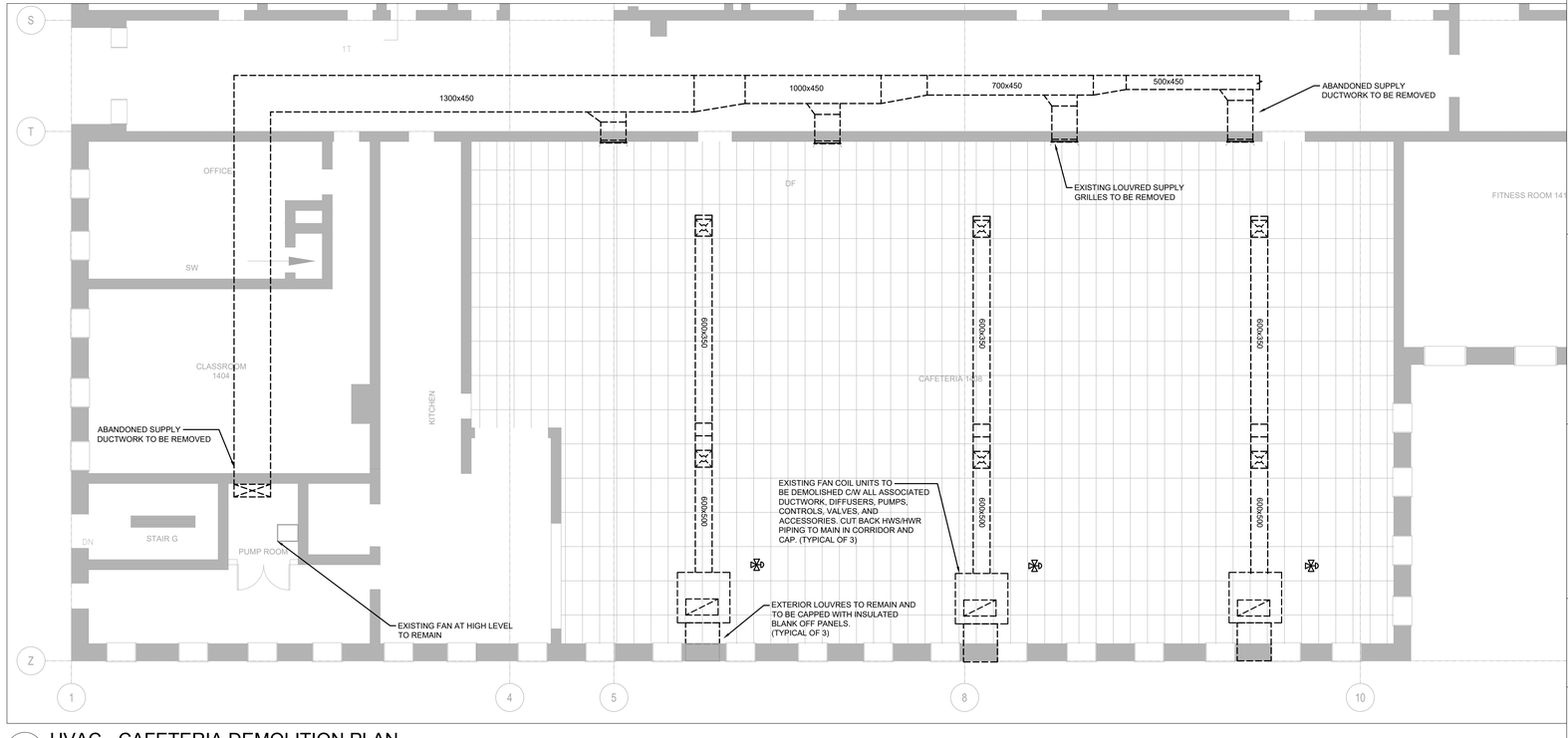
**PROJECT NORTH:**

**DRAWING NO:**

M-100




2 HVAC - CAFETERIA NEW WORK PLAN
SCALE: 1:100




1 HVAC - CAFETERIA DEMOLITION PLAN
SCALE: 1:100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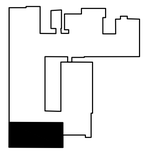
KEYPLAN



**ISSUE DATE:**

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 3 | 16-MAR-21 | ISSUED FOR TENDER |
| 2 | 08-MAR-21 | ISSUED FOR 95% TENDER REVIEW |
| 1 | 18-FEB-21 | ISSUED FOR 80% CD |

**PROJECT:**

ELMIRA DISTRICT SECONDARY SCHOOL - 4 UNIVERSITY AVE WEST, ELMIRA ON N3B 1K2

**DRAWING TITLE:**

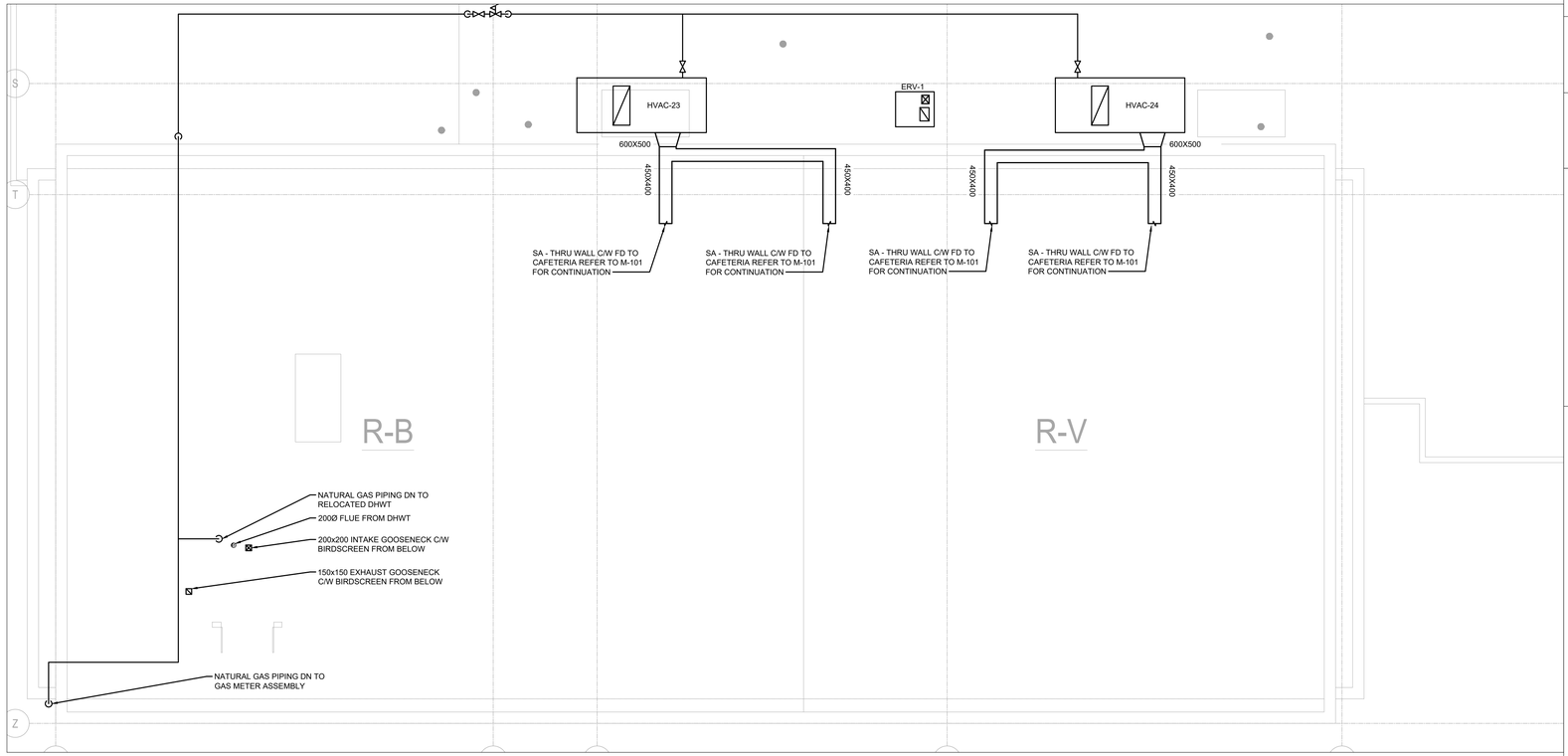
HVAC DUCTWORK - CAFETERIA - DEMO AND NEW WORK PLAN

**PROJECT NO:** ED-20-300
**SCALE:** AS SHOWN
**DRAWN BY:** RH
**REVIEWED BY:** MH

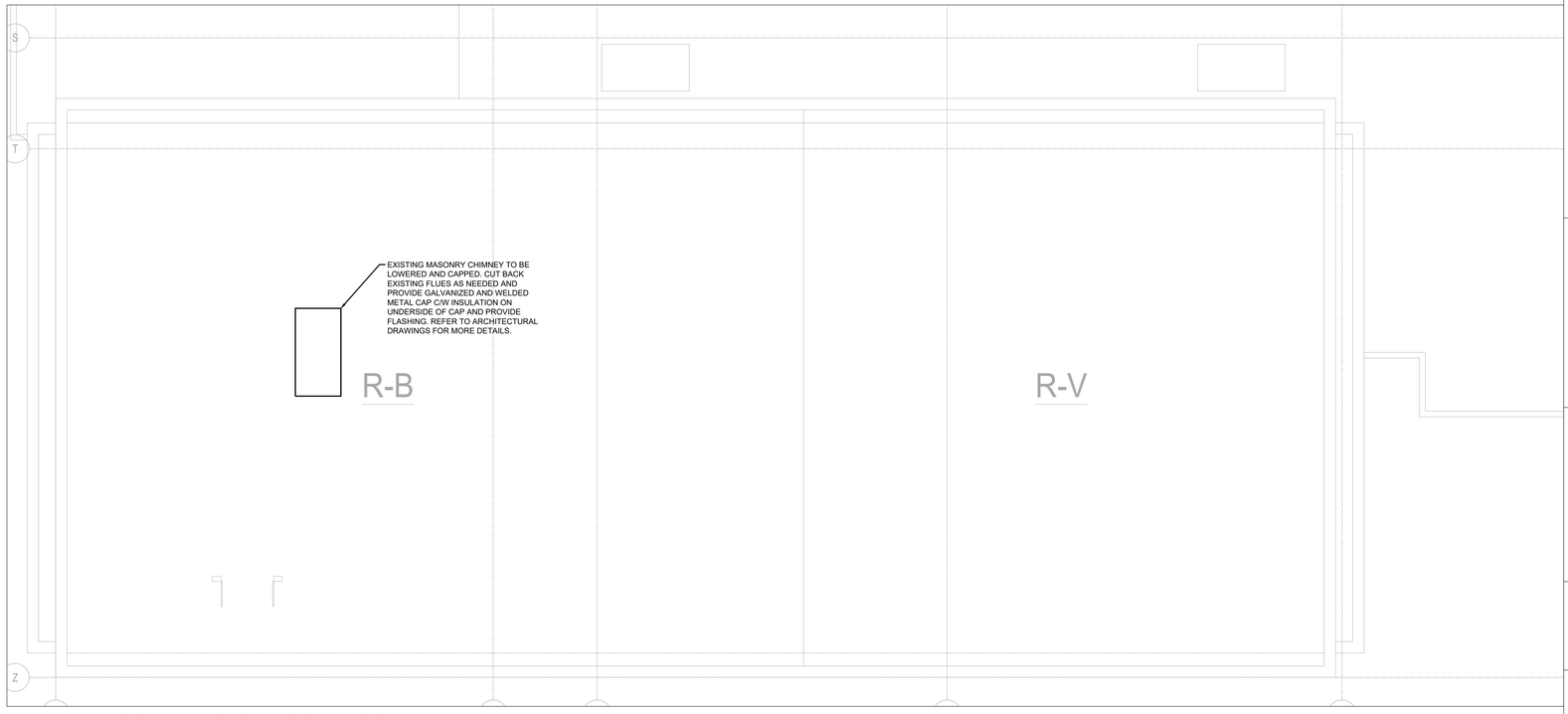
**PROJECT NORTH:**

**DRAWING NO:**

M-101




2 HVAC - ROOF CAFETERIA NEW WORK PLAN
SCALE: 1:100




1 HVAC - ROOF CAFETERIA DEMOLITION PLAN
SCALE: 1:100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WEB: WWW.QUASARCG.COM

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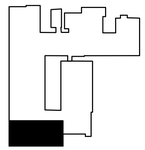
KEYPLAN



**ISSUE DATE:**

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 3 | 16-MAR-21 | ISSUED FOR TENDER |
| 2 | 08-MAR-21 | ISSUED FOR 95% TENDER REVIEW |
| 1 | 18-FEB-21 | ISSUED FOR 80% CD |

**PROJECT:**

ELMIRA DISTRICT SECONDARY SCHOOL - 4 UNIVERSITY AVE WEST, ELMIRA ON N3B 1K2

**DRAWING TITLE:**

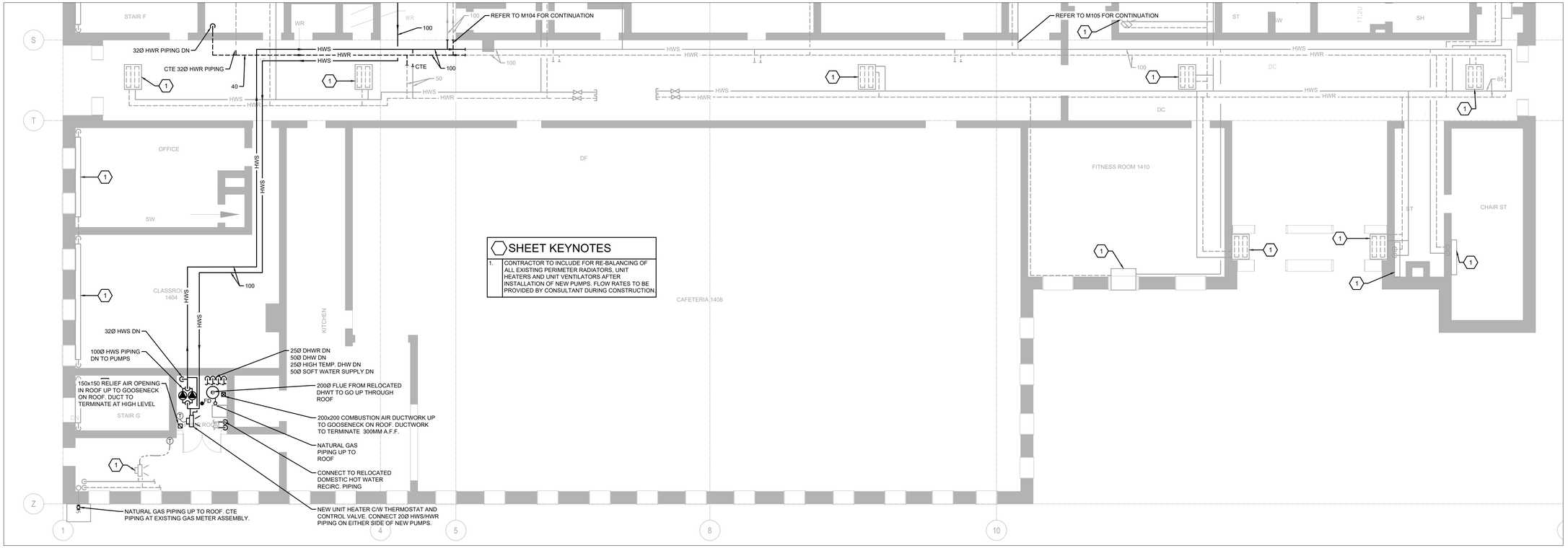
HVAC - CAFETERIA ROOF - DEMO AND NEW WORK PLAN

**PROJECT NO:** ED-20-300
**SCALE:** AS SHOWN
**DRAWN BY:** RH
**REVIEWED BY:** MH

**PROJECT NORTH:**

**DRAWING NO:**

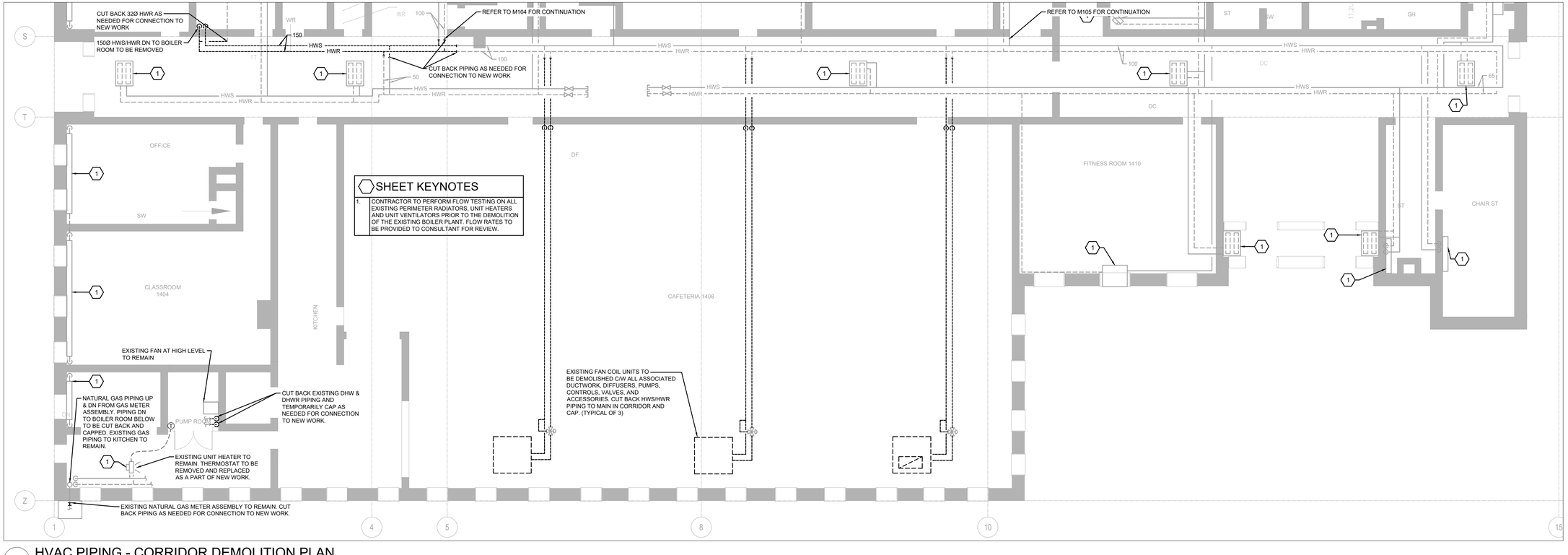
M-102




## SHEET KEYNOTES

1. CONTRACTOR TO INCLUDE FOR RE-BALANCING OF ALL EXISTING PERIMETER RADIATORS, UNIT HEATERS AND UNIT VENTILATORS AFTER INSTALLATION OF NEW PUMPS. FLOW RATES TO BE PROVIDED BY CONSULTANT DURING CONSTRUCTION.

2 HVAC PIPING - CORRIDOR NEW WORK PLAN
SCALE: 1:100




## SHEET KEYNOTES

1. CONTRACTOR TO PERFORM FLOW TESTING ON ALL EXISTING PERIMETER RADIATORS, UNIT HEATERS AND UNIT VENTILATORS PRIOR TO THE DEMOLITION OF THE EXISTING BOILER PLANT. FLOW RATES TO BE PROVIDED TO CONSULTANT FOR REVIEW.

1 HVAC PIPING - CORRIDOR DEMOLITION PLAN
SCALE: 1:100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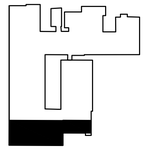
KEYPLAN



**ISSUE DATE:**

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 3 | 16-MAR-21 | ISSUED FOR TENDER |
| 2 | 08-MAR-21 | ISSUED FOR 95% TENDER REVIEW |
| 1 | 18-FEB-21 | ISSUED FOR 80% CD |

**PROJECT:**

ELMIRA DISTRICT SECONDARY SCHOOL - 4 UNIVERSITY AVE WEST, ELMIRA ON N3B 1K2

**DRAWING TITLE:**

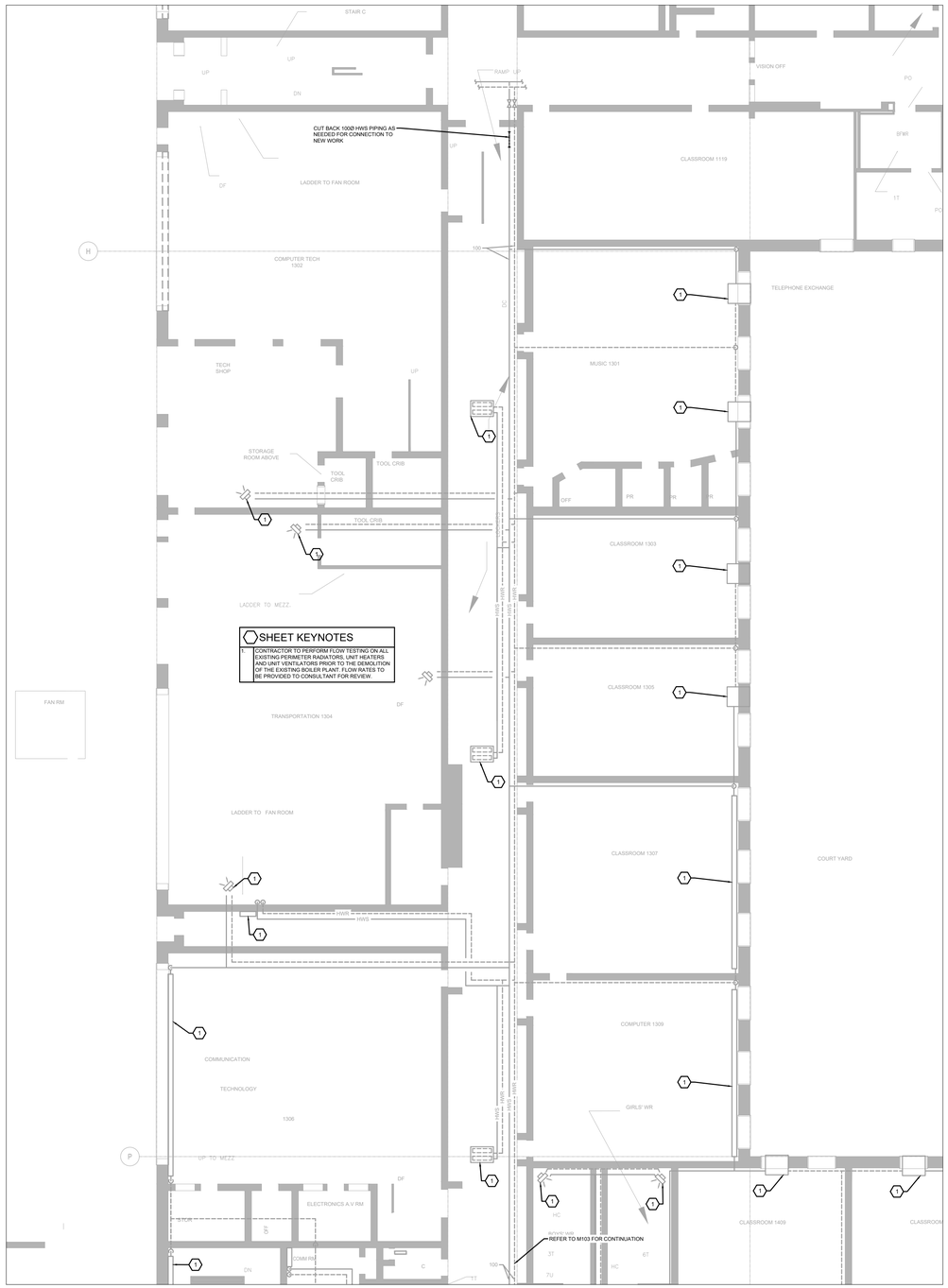
HVAC PIPING - CAFETERIA - DEMO AND NEW WORK PLAN

**PROJECT NO:** ED-20-300
**SCALE:** AS SHOWN
**DRAWN BY:** RH
**REVIEWED BY:** MH

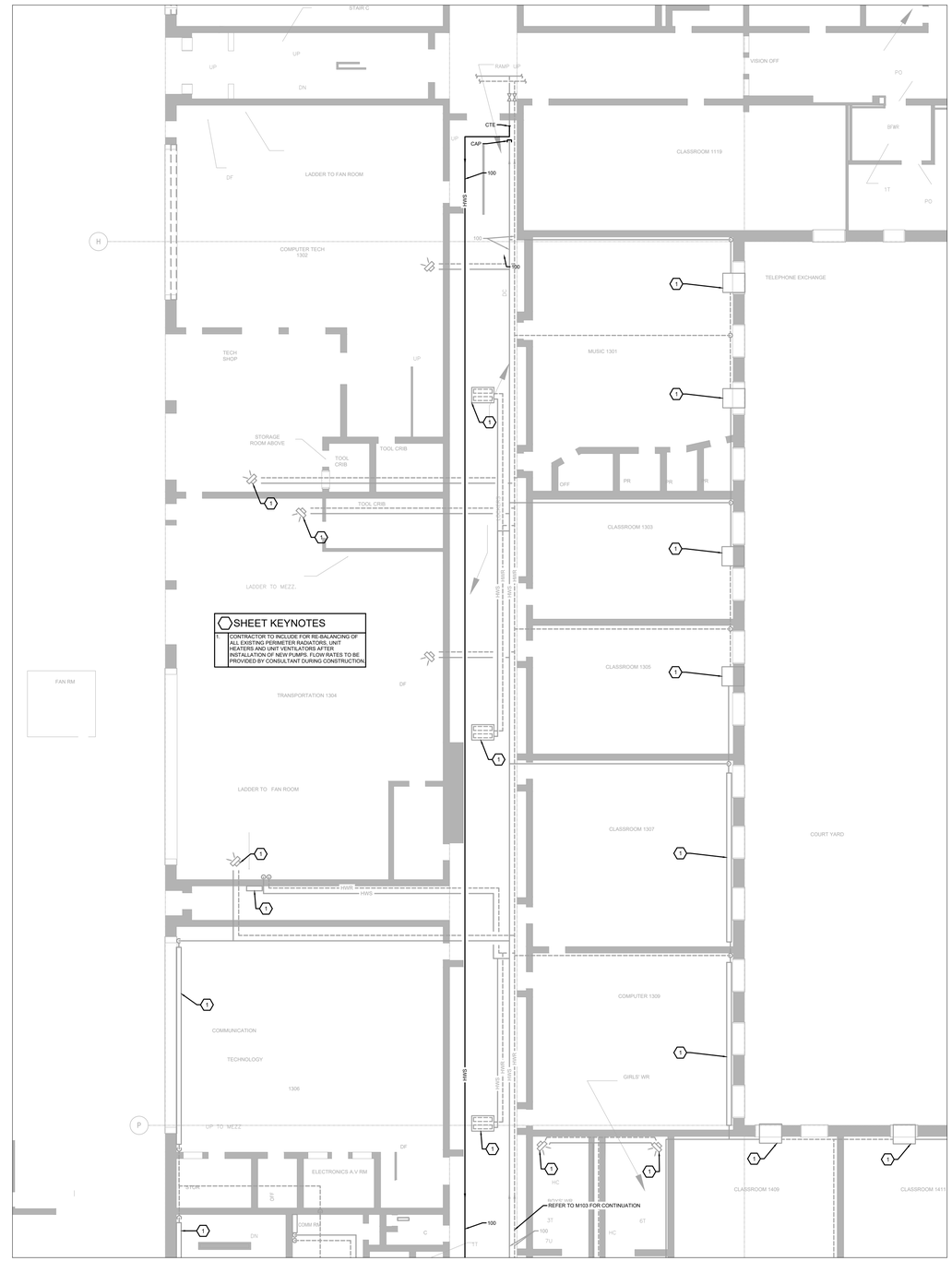
**PROJECT NORTH:**

**DRAWING NO:**

M-103




1 HVAC PIPING - CORRIDOR DEMOLITION PLAN
SCALE: 1:100




2 HVAC PIPING - CORRIDOR NEW WORK PLAN
SCALE: 1:100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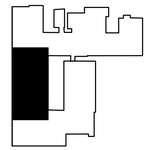
KEYPLAN



**ISSUE DATE:**

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 3 | 16-MAR-21 | ISSUED FOR TENDER |
| 2 | 08-MAR-21 | ISSUED FOR 95% TENDER REVIEW |
| 1 | 18-FEB-21 | ISSUED FOR 80% CD |

**PROJECT:**

# ELMIRA DISTRICT SECONDARY SCHOOL - 4 UNIVERSITY AVE WEST, ELMIRA ON N3B 1K2

**DRAWING TITLE:**

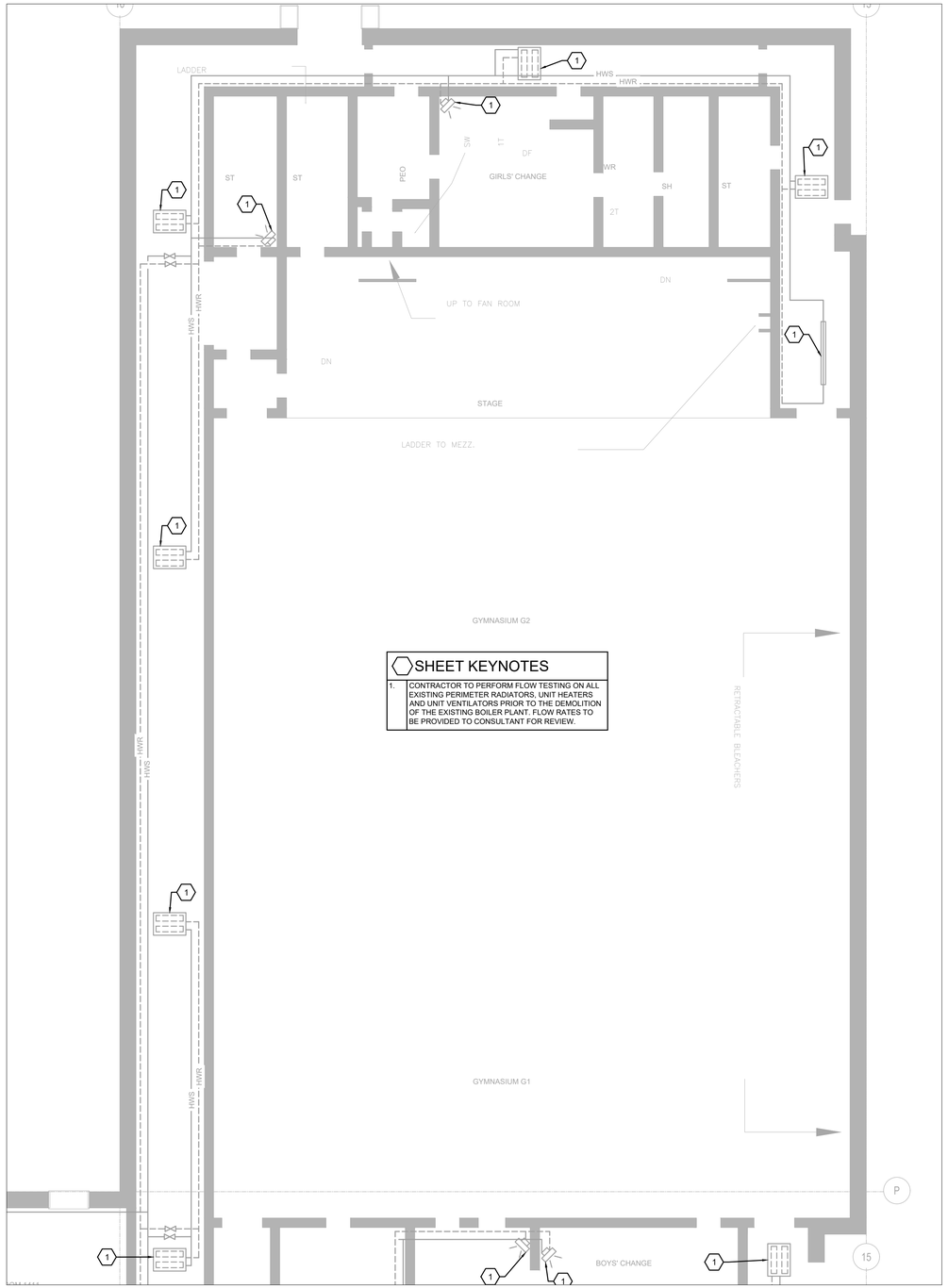
HVAC PIPING - CAFETERIA CORRIDOR - DEMO AND NEW WORK PLAN

**PROJECT NO:** ED-20-300
**SCALE:** AS SHOWN
**DRAWN BY:** RH
**REVIEWED BY:** MH

**PROJECT NORTH:**

**DRAWING NO:**

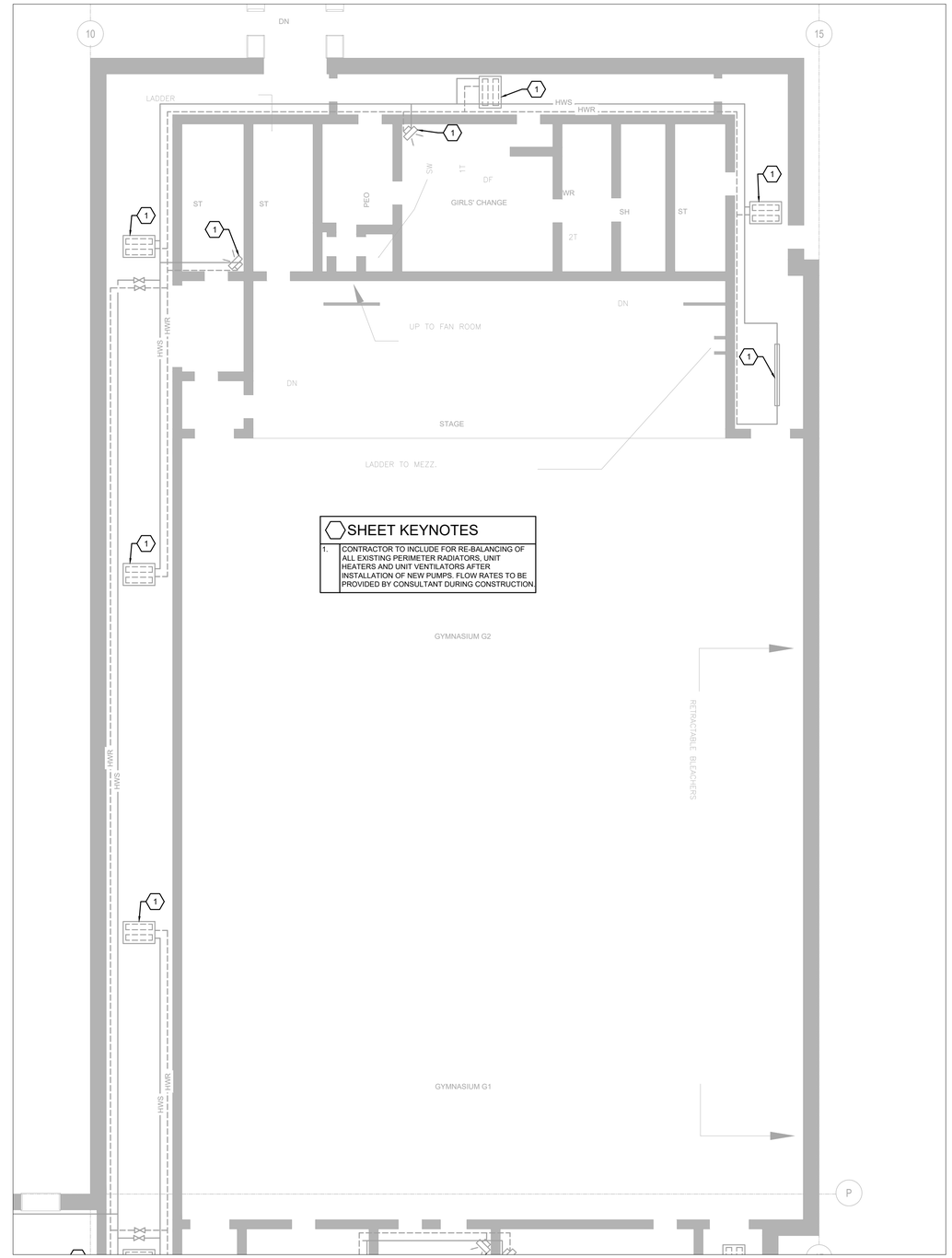
M-104




SHEET KEYNOTES

| | |
|---|---|
| 1. | CONTRACTOR TO PERFORM FLOW TESTING ON ALL EXISTING PERIMETER RADIATORS, UNIT HEATERS AND UNIT VENTILATORS PRIOR TO THE DEMOLITION OF THE EXISTING BOILER PLANT. FLOW RATES TO BE PROVIDED TO CONSULTANT FOR REVIEW. |

1 HVAC PIPING - GYM DEMOLITION PLAN
SCALE: 1:100




SHEET KEYNOTES

| | |
|---|---|
| 1. | CONTRACTOR TO INCLUDE FOR RE-BALANCING OF ALL EXISTING PERIMETER RADIATORS, UNIT HEATERS AND UNIT VENTILATORS AFTER INSTALLATION OF NEW PUMPS. FLOW RATES TO BE PROVIDED BY CONSULTANT DURING CONSTRUCTION. |

2 HVAC PIPING - GYM NEW WORK PLAN
SCALE: 1:100

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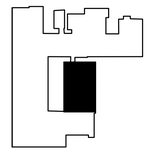
KEYPLAN



**ISSUE DATE:**

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 3 | 16-MAR-21 | ISSUED FOR TENDER |
| 2 | 08-MAR-21 | ISSUED FOR 95% TENDER REVIEW |
| 1 | 18-FEB-21 | ISSUED FOR 80% CD |

**PROJECT:**

ELMIRA DISTRICT SECONDARY SCHOOL - 4 UNIVERSITY AVE WEST, ELMIRA ON N3B 1K2

**DRAWING TITLE:**

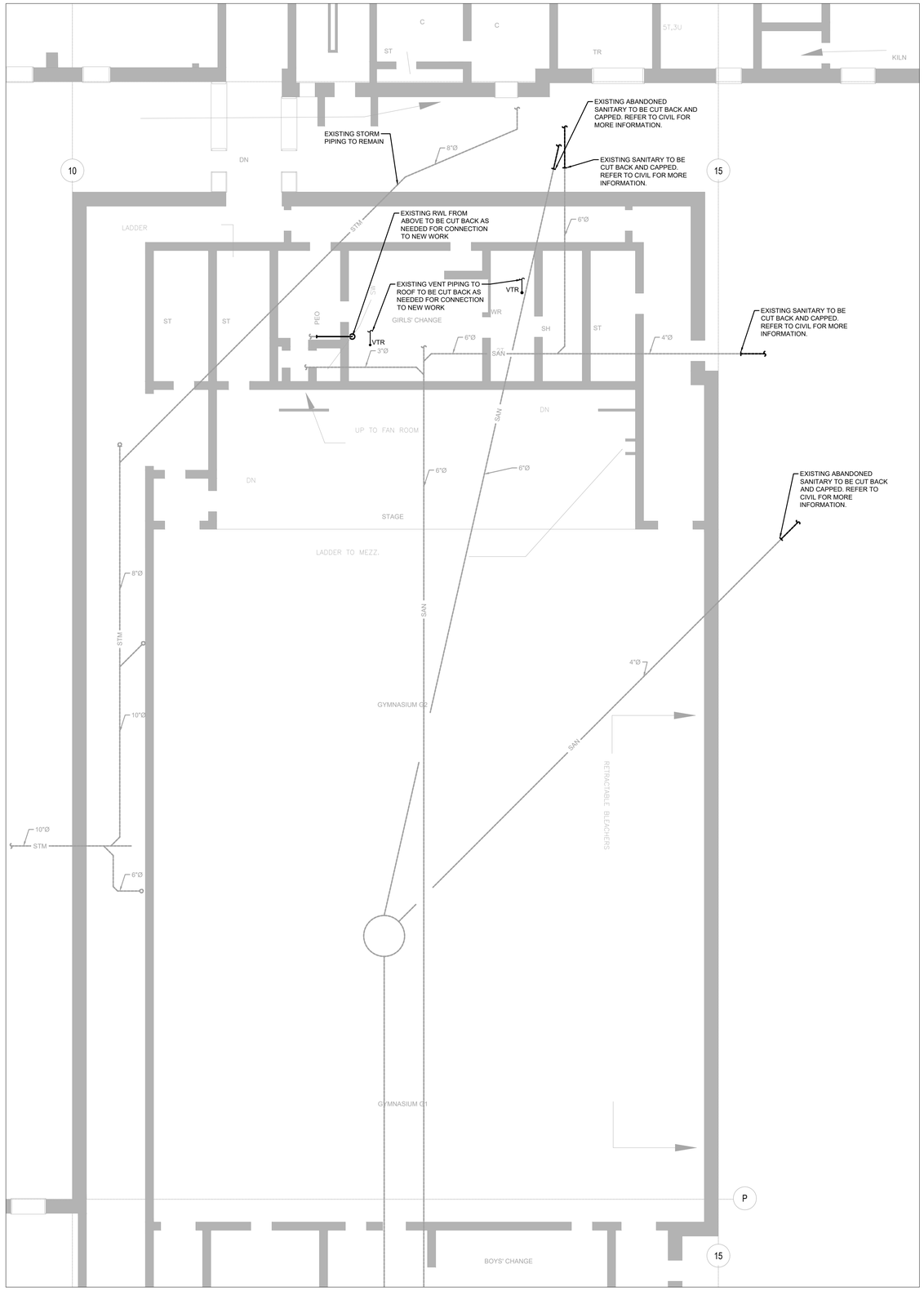
HVAC PIPING - GYM - DEMO AND NEW WORK PLAN

**PROJECT NO:** ED-20-300
**SCALE:** AS SHOWN
**DRAWN BY:** RH
**REVIEWED BY:** MH

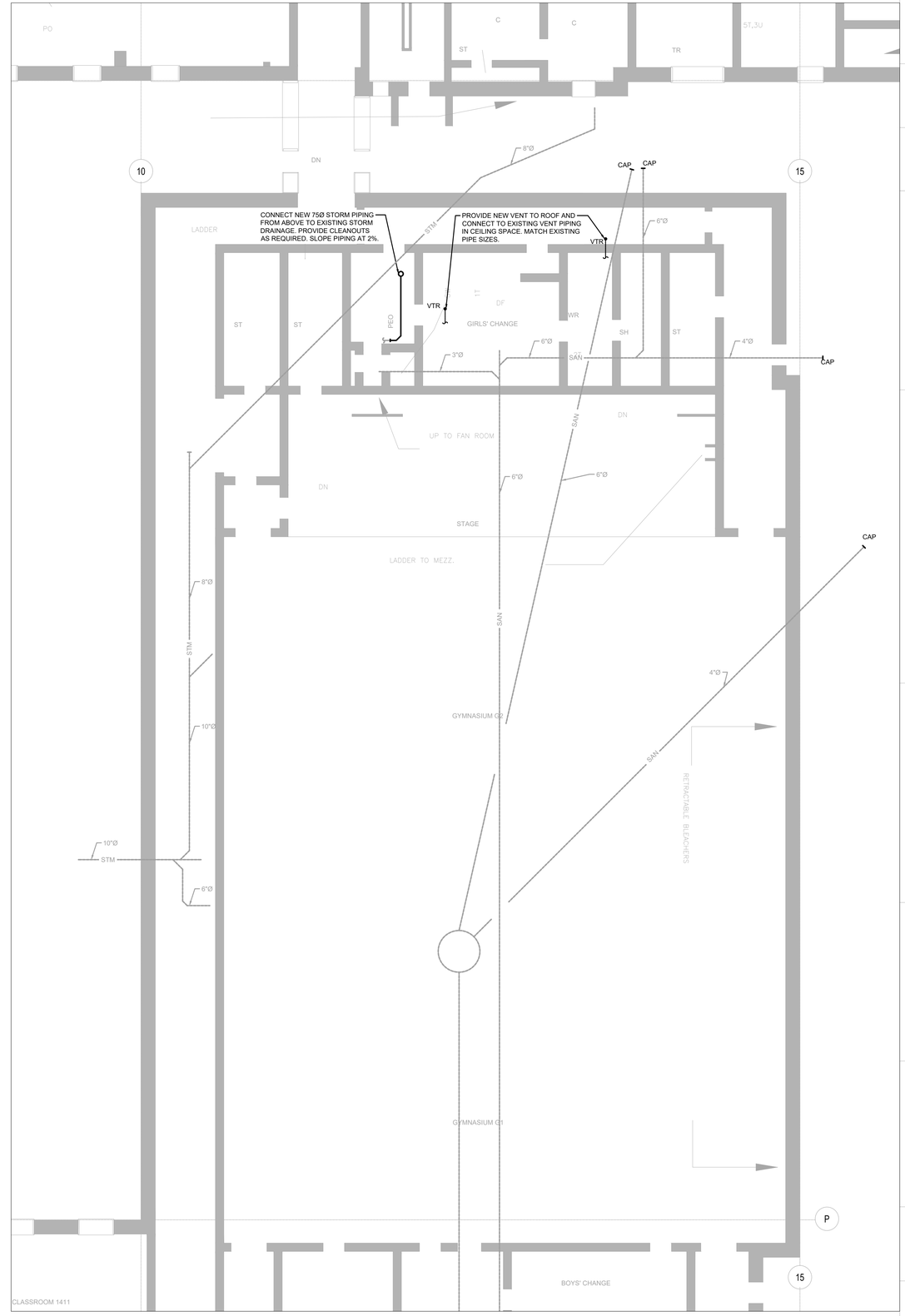
**PROJECT NORTH:**

**DRAWING NO:**

M-105




1 HVAC - GYM DRAINAGE DEMOLITION PLAN
SCALE: 1:100




2 HVAC - GYM DRAINAGE NEW WORK PLAN
SCALE: 1:100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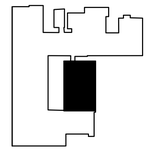
KEYPLAN



ISSUE DATE:

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 3 | 16-MAR-21 | ISSUED FOR TENDER |
| 2 | 09-MAR-21 | ISSUED FOR 95% TENDER REVIEW |
| 1 | 18-FEB-21 | ISSUED FOR 80% CD |

PROJECT:

ELMIRA DISTRICT SECONDARY SCHOOL - 4 UNIVERSITY AVE WEST, ELMIRA ON N3B 1K2

DRAWING TITLE:

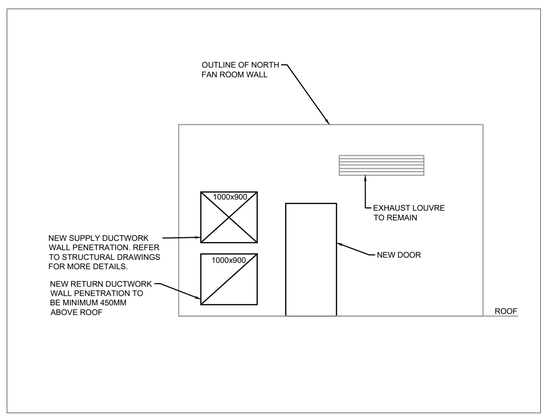
GYM DRAINAGE - DEMOLITION & NEW WORK PLAN

PROJECT NO: ED-20-300
SCALE: AS SHOWN
DRAWN BY: RH
REVIEWED BY: MH

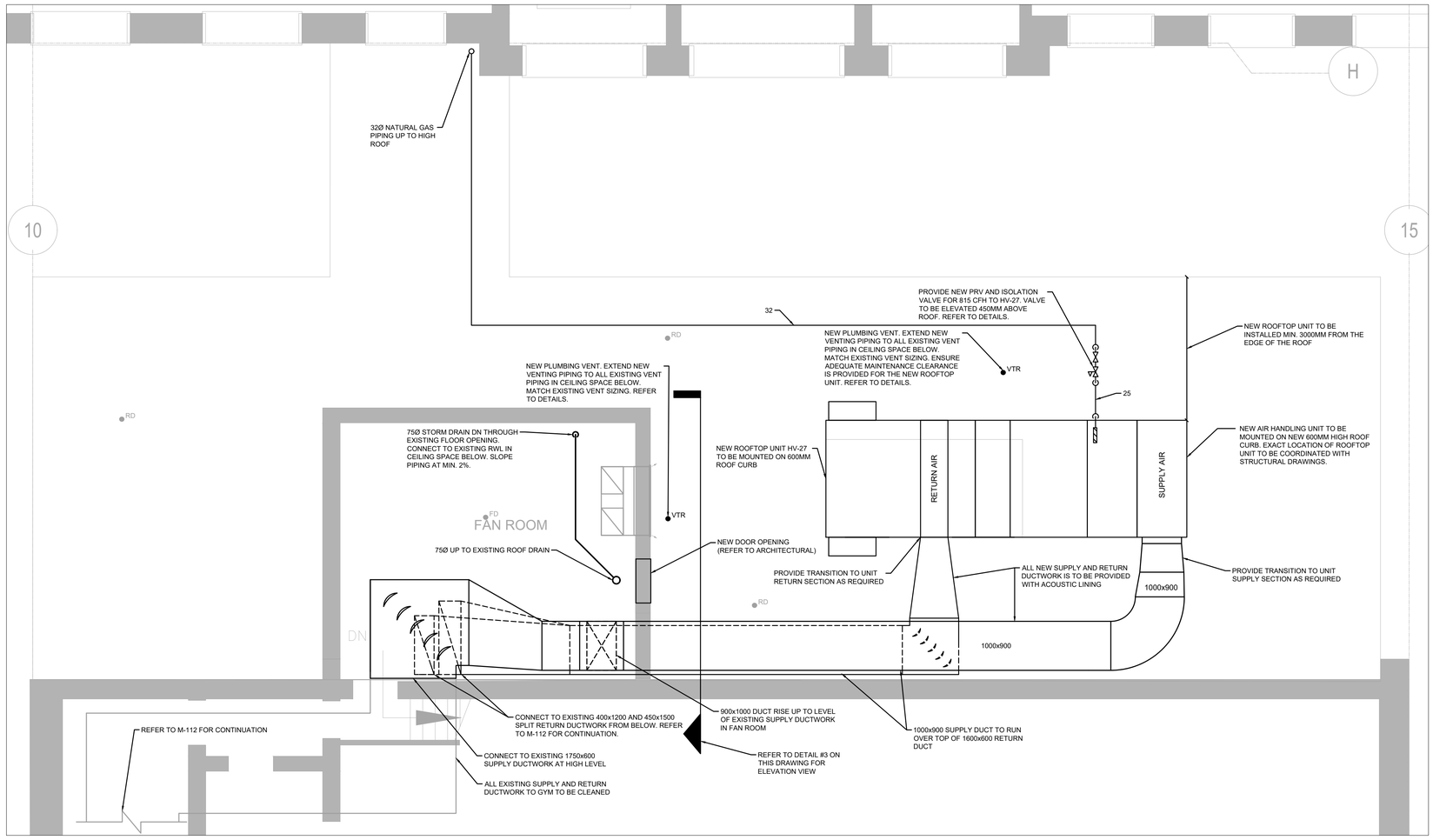
PROJECT NORTH:

DRAWING NO:

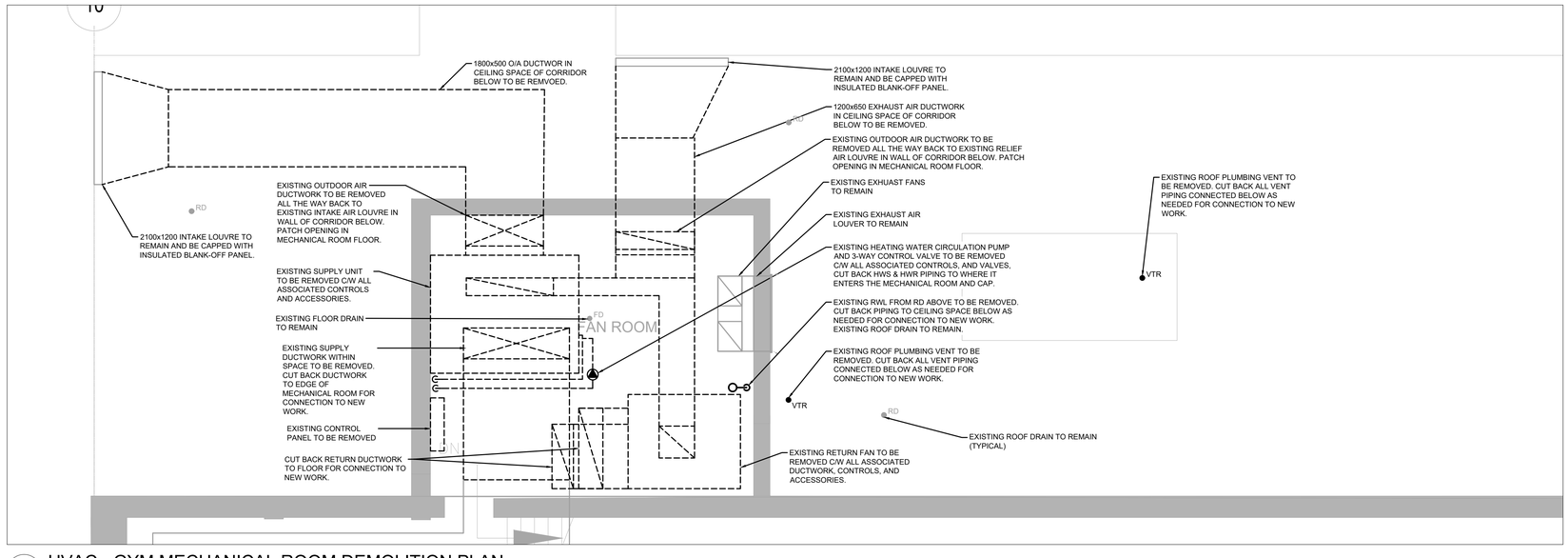
M-110




3 ELEVATION OF NORTH FAN ROOM WALL
N.T.S.




2 HVAC - GYM MECHANICAL ROOM NEW WORK PLAN
SCALE: 1:50




1 HVAC - GYM MECHANICAL ROOM DEMOLITION PLAN
SCALE: 1:50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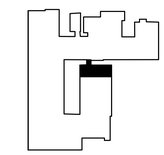
KEYPLAN



ISSUE DATE:

| NO. | DATE | DESCRIPTION |
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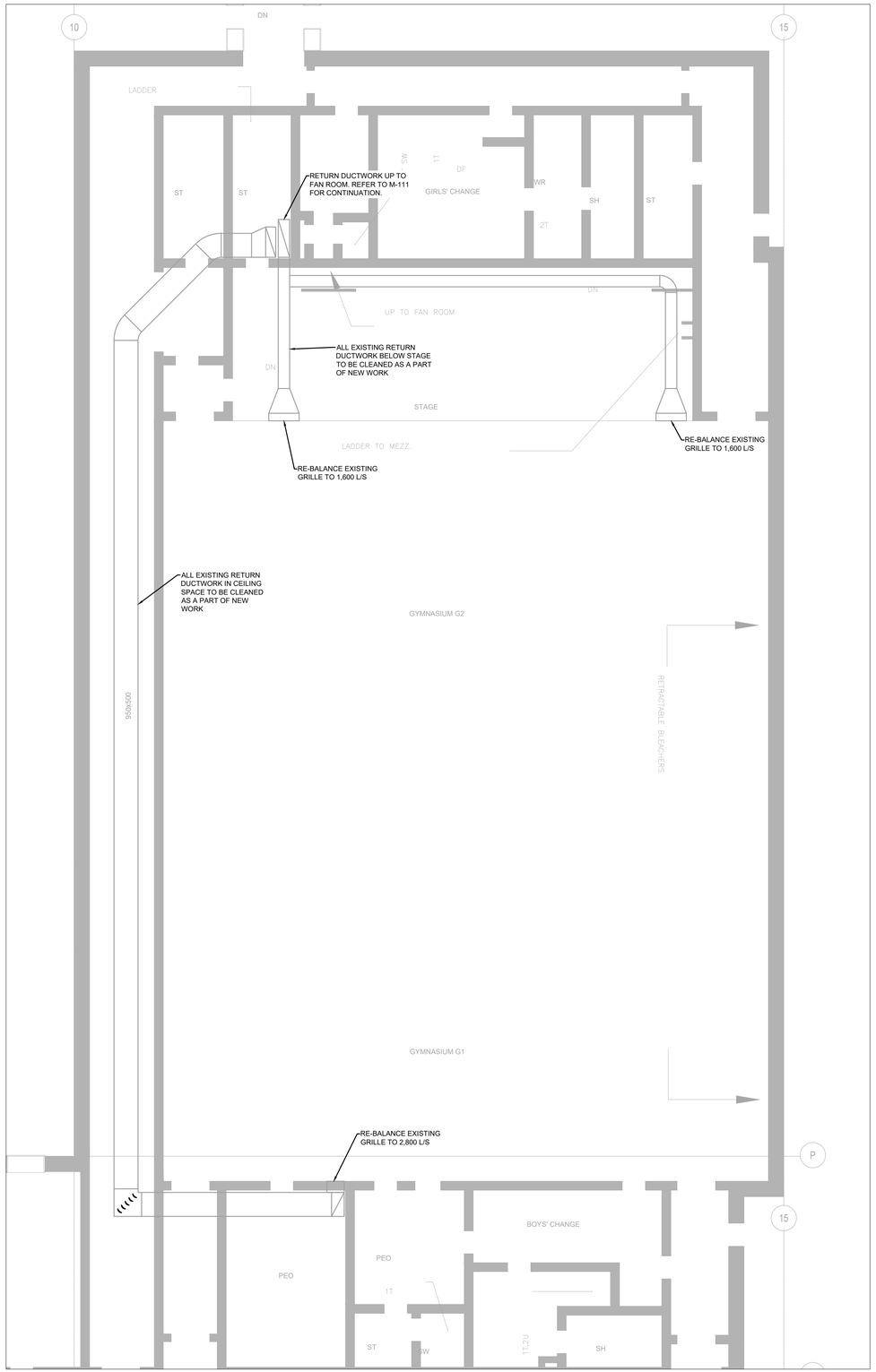
| 3 | 16-MAR-21 | ISSUED FOR TENDER |
| 2 | 08-MAR-21 | ISSUED FOR 95% TENDER REVIEW |
| 1 | 18-FEB-21 | ISSUED FOR 80% CD |

PROJECT:
ELMIRA DISTRICT SECONDARY SCHOOL - 4 UNIVERSITY AVE WEST, ELMIRA ON N3B 1K2

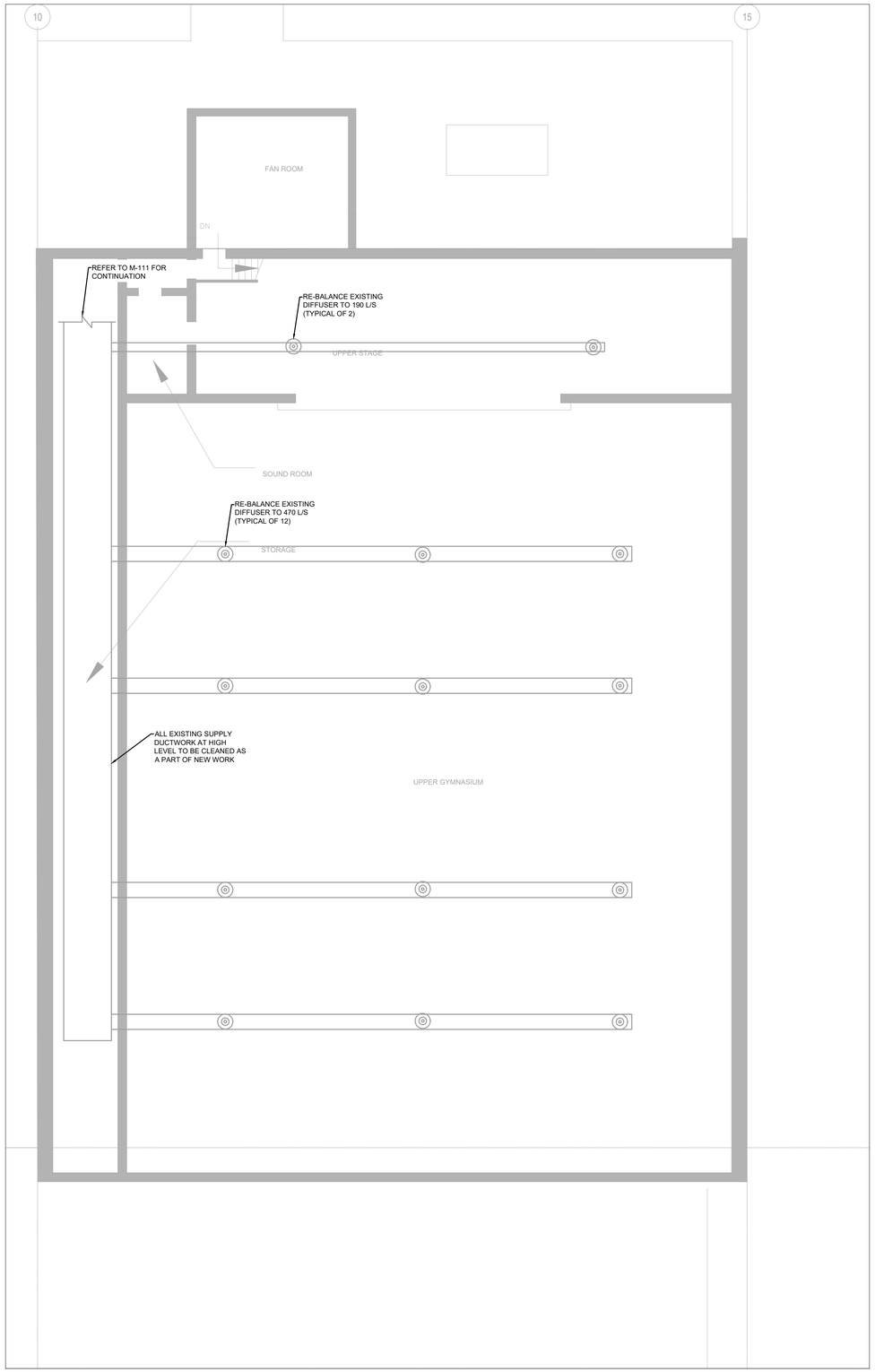
DRAWING TITLE:
GYM MECHANICAL ROOM & ROOF - DEMOLITION & NEW WORK PLAN

PROJECT NO: ED-20-300
SCALE: AS SHOWN
DRAWN BY: RH
REVIEWED BY: MH
PROJECT NORTH:

DRAWING NO:
M-111




1 HVAC - GYM MECHANICAL LOW LEVEL RETURN
SCALE: 1:100




2 HVAC - GYM MECHANICAL HIGH LEVEL SUPPLY
SCALE: 1:100

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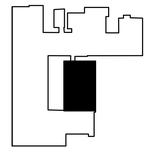
KEYPLAN



ISSUE DATE:

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 3 | 16-MAR-21 | ISSUED FOR TENDER |
| 2 | 08-MAR-21 | ISSUED FOR 95% TENDER REVIEW |
| 1 | 16-FEB-21 | ISSUED FOR 80% CD |

PROJECT:
ELMIRA DISTRICT SECONDARY SCHOOL - 4 UNIVERSITY AVE WEST, ELMIRA ON N3B 1K2

DRAWING TITLE:
GYM HVAC - NEW WORK PLAN

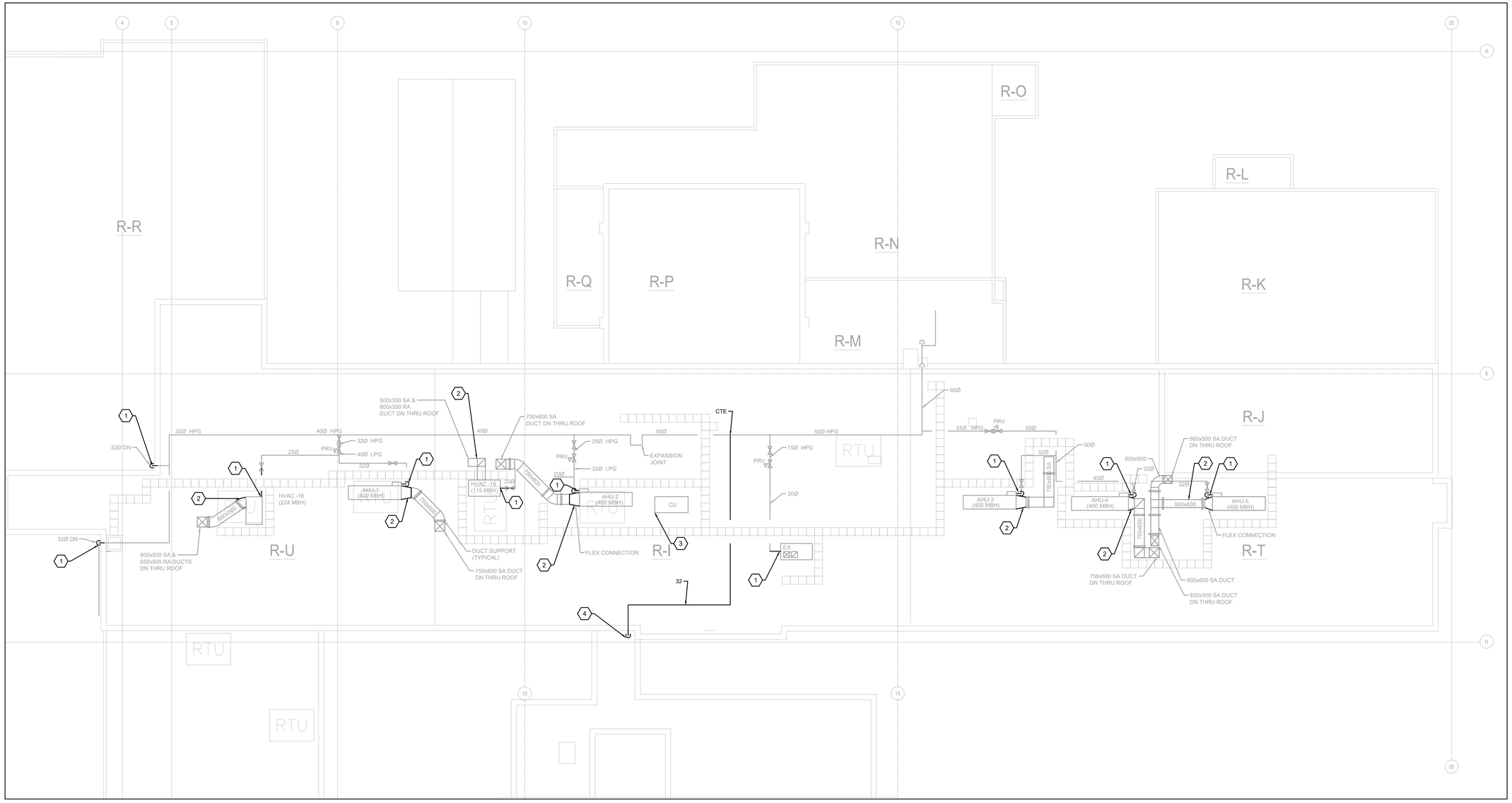
PROJECT NO: ED-20-300
SCALE: AS SHOWN
DRAWN BY: RH
REVIEWED BY: MH

PROJECT NORTH:

DRAWING NO:
M-112

## SHEET KEYNOTES

| | |
|---|---|
| 1. | EXISTING NATURAL GAS PIPING ON ROOF TO BE DISCONNECTED FROM EQUIPMENT AND TEMPORARILY RAISED TO FACILITATE INSTALLATION OF NEW ROOF. PIPING IS TO BE RECONNECTED TO EXISTING UNITS AFTER NEW ROOF HAS BEEN INSTALLED. THE SURFACE OF ALL EXISTING NATURAL GAS PIPING ON HIGH ROOF IS TO BE CLEANED AND RE-PAINTED AS A PART OF THIS WORK. |
| 2. | DUCT SUPPORTS FOR EXISTING ROOF MOUNTED DUCTWORK ARE TO BE REMOVED TO FACILITATE INSTALLATION OF NEW ROOF. PROVIDE NEW DUCT SUPPORTS FOR DUCTWORK AFTER NEW ROOF HAS BEEN INSTALLED. |
| 3. | EXISTING CONDENSING UNIT IS TO BE TEMPORARILY DISCONNECTED AND RAISED TO FACILITATE INSTALLATION OF NEW ROOF. CUT BACK SEVEN (7) EXISTING REFRIGERANT LINES AS NEEDED FOR RAISING OF UNIT. UNIT TO BE RECONNECTED AFTER INSTALLATION OF NEW ROOF AND PIPING IS TO BE RE-INSULATED. |
| 4. | CONNECT TO EXISTING NATURAL GAS PIPING ON ROOF AND EXTEND PIPING DOWN TO LOW ROOF TO SERVE NEW GYM ROOFTOP UNIT. REFER TO M-111. |




1 HVAC - HIGH ROOF DEMOLITION AND NEW WORK PLAN
SCALE: 1:150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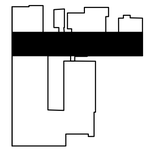
KEYPLAN



**ISSUE DATE:**

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 3 | 16-MAR-21 | ISSUED FOR TENDER |
| 2 | 08-MAR-21 | ISSUED FOR 95% TENDER REVIEW |
| 1 | 18-FEB-21 | ISSUED FOR 80% CD |

**PROJECT:**

# ELMIRA DISTRICT SECONDARY SCHOOL - 4 UNIVERSITY AVE WEST, ELMIRA ON N3B 1K2

**DRAWING TITLE:**

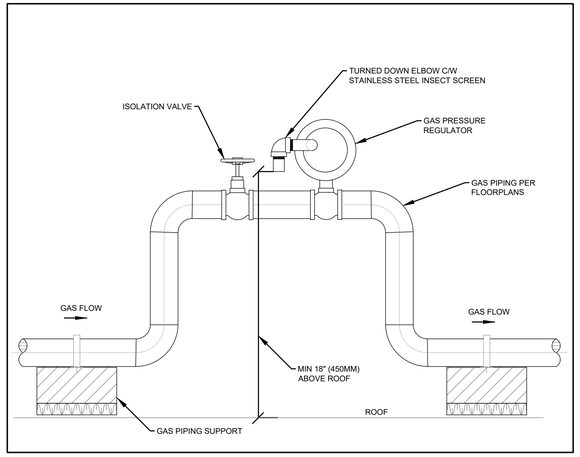
HIGH ROOF - DEMOLITION & NEW WORK PLAN

**PROJECT NO:** ED-20-300
**SCALE:** AS SHOWN
**DRAWN BY:** RH
**REVIEWED BY:** MH

**PROJECT NORTH:**

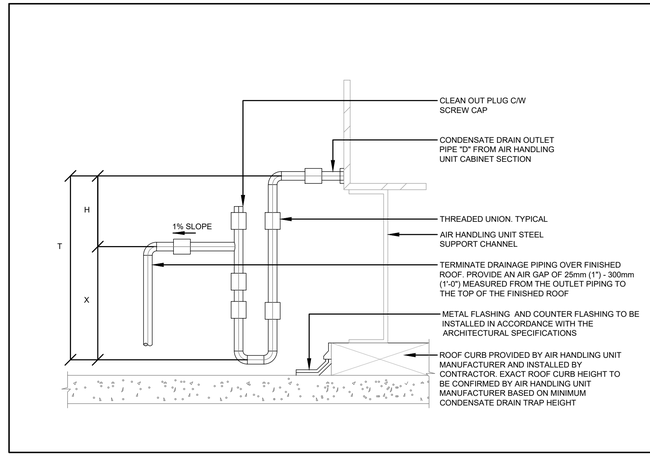
**DRAWING NO:**

# M-120




## 23 30 00.10 ROOF MOUNTED GAS PRESSURE REGULATOR INSTALL

NOT TO SCALE




| REQUIRED CONDENSATE DRAIN TRAP HEIGHT | | | | |
|---|---|---|---|---|
| | NEGATIVE STATIC PRESSURE | | POSITIVE STATIC PRESSURE | |
| DIAMETER "D" | STATIC PRESSURE | T (MINIMUM) | STATIC PRESSURE | T (MINIMUM) |
| 20mm (3/4") | 248 Pa (-1" W.C.) | 104mm (4.1") | 248 Pa (1" W.C.) | 104mm (4.1") |
| | 497 Pa (-2" W.C.) | 142mm (5.6") | 497 Pa (2" W.C.) | 129mm (5.1") |
| 25mm (1") | 248 Pa (-1" W.C.) | 114mm (4.5") | 248 Pa (1" W.C.) | 114mm (4.5") |
| | 497 Pa (-2" W.C.) | 152mm (6.0") | 497 Pa (2" W.C.) | 140mm (5.5") |
| | 747 Pa (-3" W.C.) | 190mm (7.5") | 747 Pa (3" W.C.) | 165mm (6.5") |
| 32mm (1-1/4") | 248 Pa (-1" W.C.) | 135mm (5.3") | 248 Pa (1" W.C.) | 135mm (5.3") |
| | 497 Pa (-2" W.C.) | 173mm (6.8") | 497 Pa (2" W.C.) | 160mm (6.3") |
| | 747 Pa (-3" W.C.) | 211mm (8.3") | 747 Pa (3" W.C.) | 185mm (7.3") |

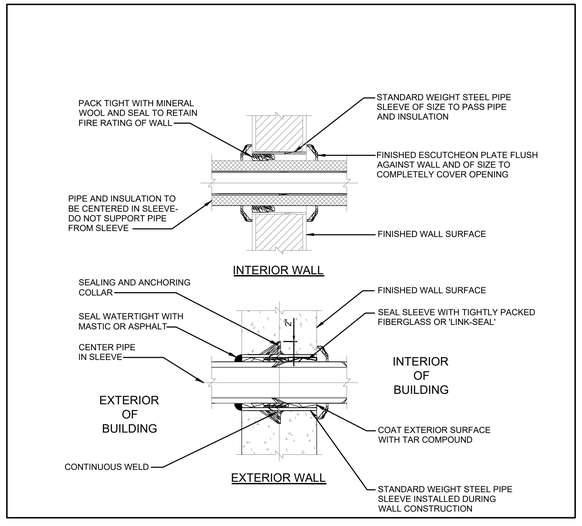
T = TOTAL TRAP HEIGHT = X + H*(1.5*D)

NEGATIVE STATIC PRESSURES:
- X = 0.5*H (MINIMUM)
- H = 25mm (1") + UNIT STATIC PRESSURE IN AIR HANDLING UNIT CABINET SECTION (MINIMUM)
- D = PIPE DIAMETER

POSITIVE STATIC PRESSURES:
- X = 25mm (1") + UNIT STATIC PRESSURE IN AIR HANDLING UNIT CABINET SECTION (MINIMUM)
- H = 25mm (1") (MINIMUM)
- D = PIPE DIAMETER

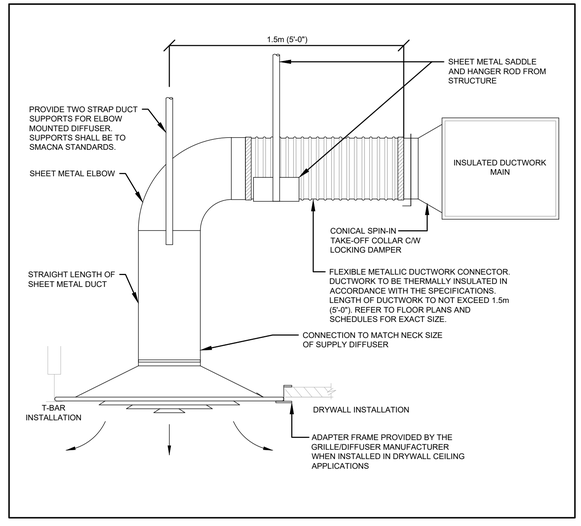
## 23 74 13.02 CONDENSATE DRAIN TRAP HEIGHT - OUTDOOR AIR HANDLING UNIT

NOT TO SCALE



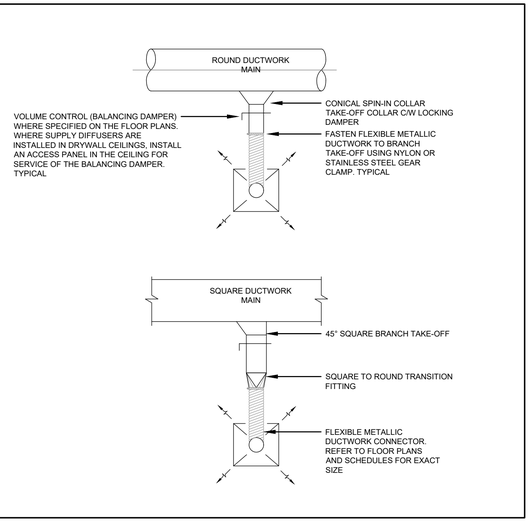

## 20 05 00.12 DETAIL OF PIPING PENETRATION THROUGH WALL

NOT TO SCALE



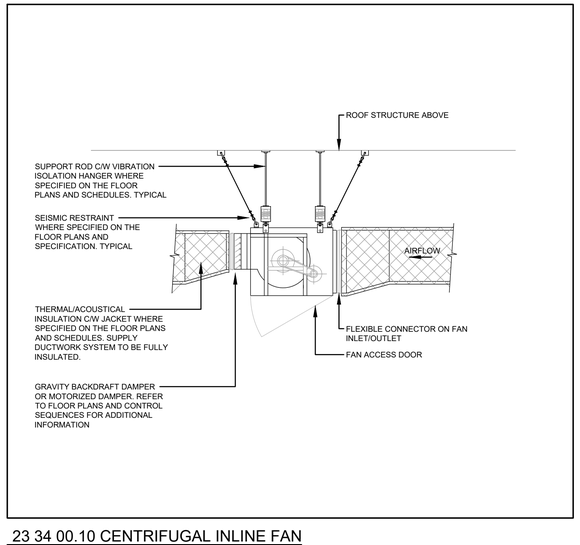

## 23 30 09.01 FLEXIBLE METALLIC DUCTWORK

NOT TO SCALE



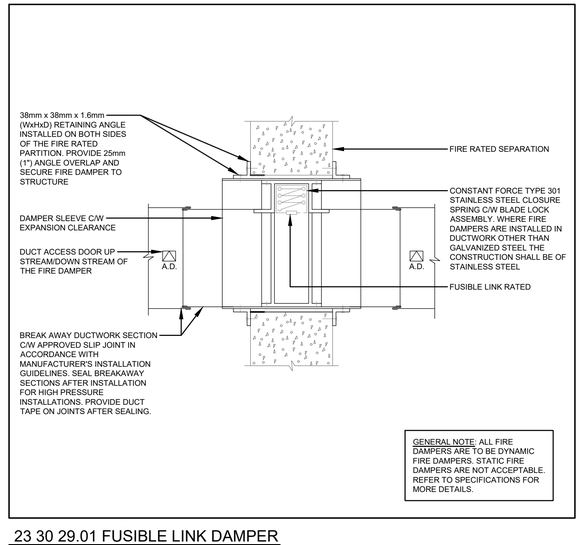

## 23 30 09.02 FLEXIBLE METALLIC DUCTWORK CONNECTION

NOT TO SCALE




## 23 34 00.10 CENTRIFUGAL INLINE FAN

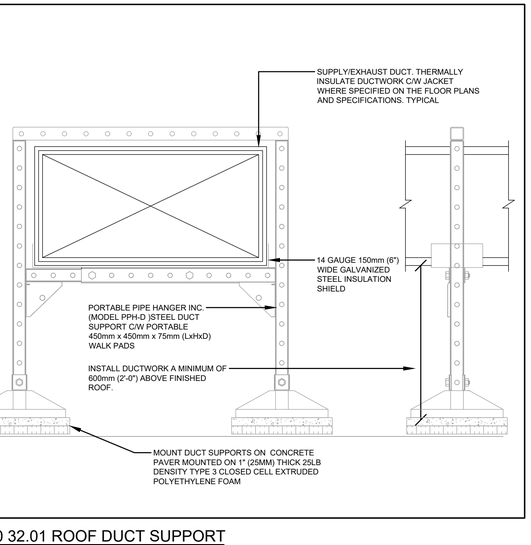
NOT TO SCALE




GENERAL NOTE: ALL FIRE DAMPERS ARE TO BE DYNAMIC FIRE DAMPERS. STATIC FIRE DAMPERS ARE NOT ACCEPTABLE. REFER TO SPECIFICATIONS FOR MORE DETAILS.

## 23 30 29.01 FUSIBLE LINK DAMPER

NOT TO SCALE




## 23 30 32.01 ROOF DUCT SUPPORT

NOT TO SCALE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**ISSUE DATE:**

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 3 | 16-MAR-21 | ISSUED FOR TENDER |
| 2 | 08-MAR-21 | ISSUED FOR 95% TENDER REVIEW |
| 1 | 18-FEB-21 | ISSUED FOR 80% CD |

**PROJECT:**

# ELMIRA DISTRICT SECONDARY SCHOOL - 4 UNIVERSITY AVE WEST, ELMIRA ON N3B 1K2

**DRAWING TITLE:**

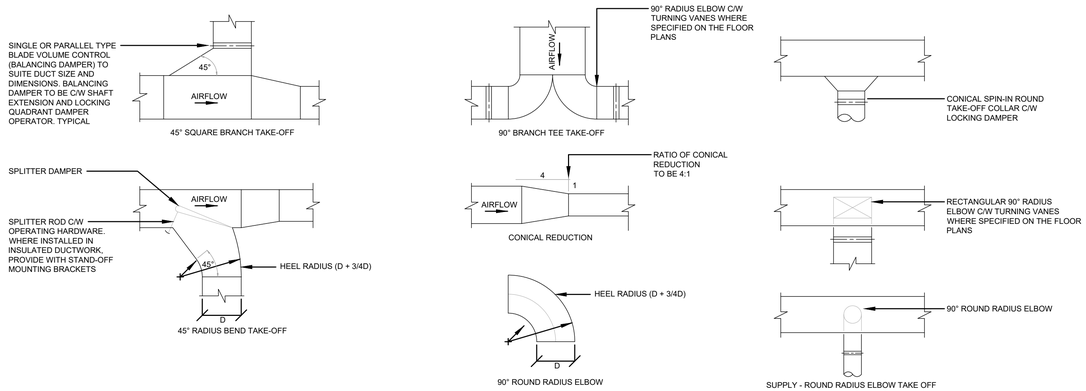
MECHANICAL DETAILS 1

**PROJECT NO:** ED-20-300
**SCALE:** AS SHOWN
**DRAWN BY:** RH
**REVIEWED BY:** MH

**PROJECT NORTH:**

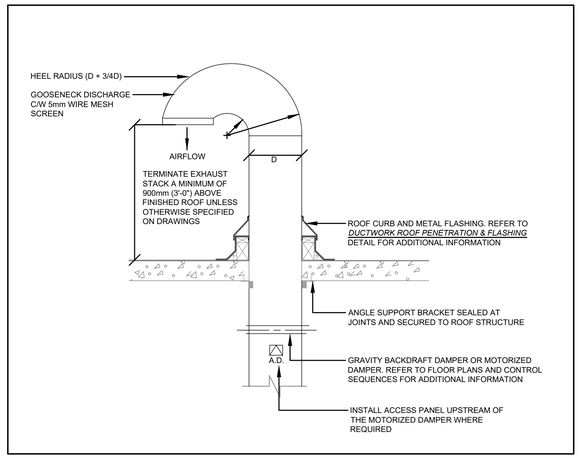
**DRAWING NO:**

# M-300



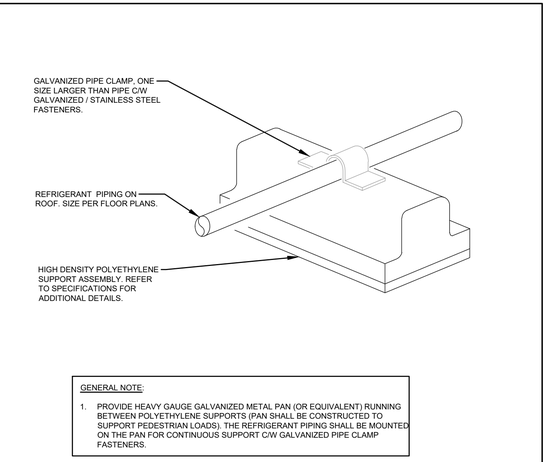

## 23 30 00.01 DUCTWORK FITTINGS & TAKE-OFF'S

NOT TO SCALE




## 23 30 00.02 DUCT THROUGH ROOF PENETRATION & TERMINATION

NOT TO SCALE

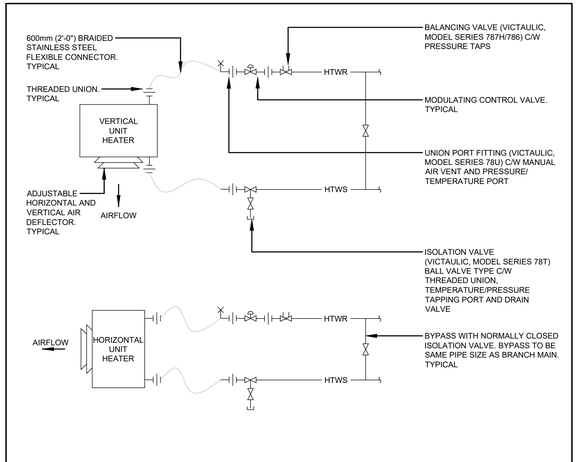



GENERAL NOTE:

1. PROVIDE HEAVY GAUGE GALVANIZED METAL PAN (OR EQUIVALENT) RUNNING BETWEEN POLYETHYLENE SUPPORTS (PAN SHALL BE CONSTRUCTED TO SUPPORT PEDESTRIAN LOADS). THE REFRIGERANT PIPING SHALL BE MOUNTED ON THE PAN FOR CONTINUOUS SUPPORT C/W GALVANIZED PIPE CLAMP FASTENERS.

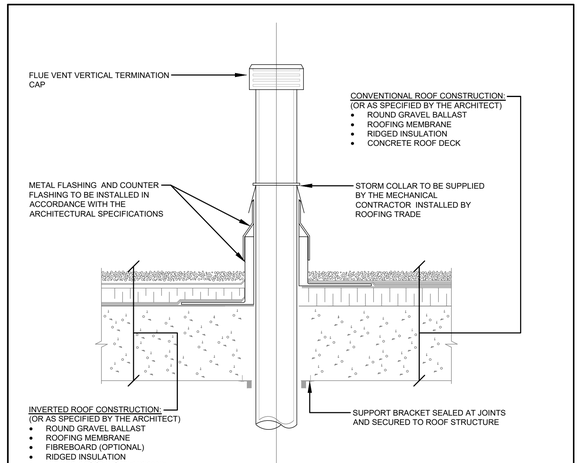
## 23 23 00.01 REFRIGERANT PIPING SUPPORT ON ROOF

NOT TO SCALE



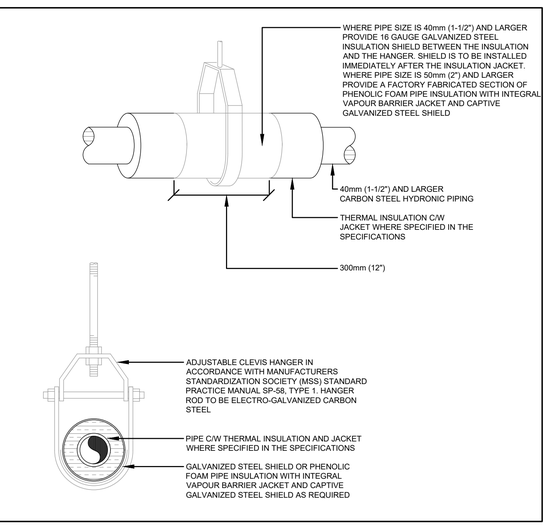

## 23 82 39.01 HYDRONIC UNIT HEATER

NOT TO SCALE



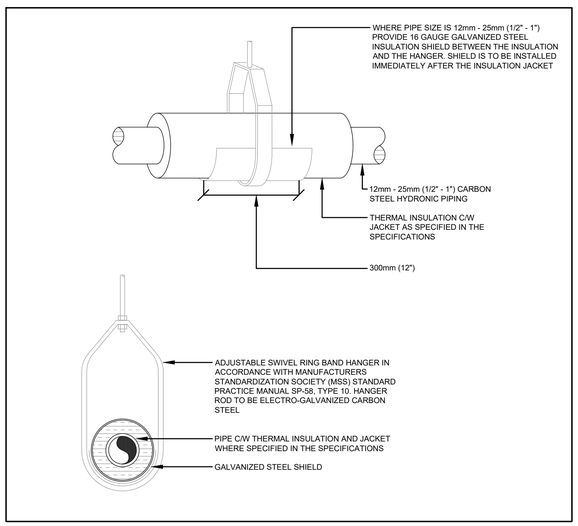

## 23 51 00.01 EXHAUST FLUE VENT ROOF PENETRATION & FLUE VENT CAP

NOT TO SCALE



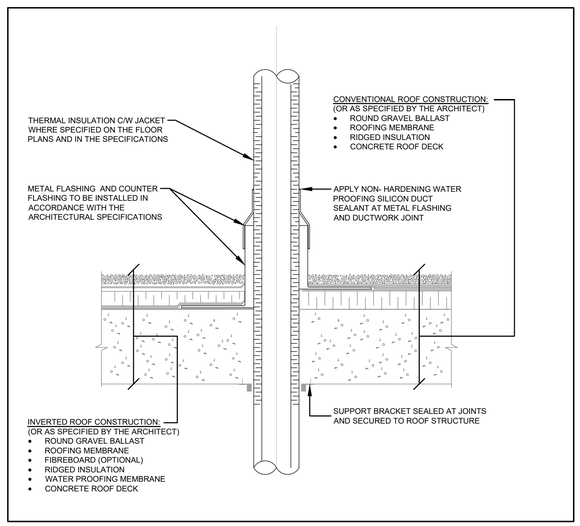

## 20 05 00.04 PIPING HANGERS AND SUPPORTS

NOT TO SCALE




## 20 05 00.03 PIPING HANGERS AND SUPPORTS

NOT TO SCALE




## 20 05 00.02 HVAC PIPE ROOF PENETRATION & FLASHING

NOT TO SCALE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**ISSUE DATE:**

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 3 | 16-MAR-21 | ISSUED FOR TENDER |
| 2 | 08-MAR-21 | ISSUED FOR 95% TENDER REVIEW |
| 1 | 18-FEB-21 | ISSUED FOR 80% CD |

**PROJECT:**

# ELMIRA DISTRICT SECONDARY SCHOOL - 4 UNIVERSITY AVE WEST, ELMIRA ON N3B 1K2

**DRAWING TITLE:**

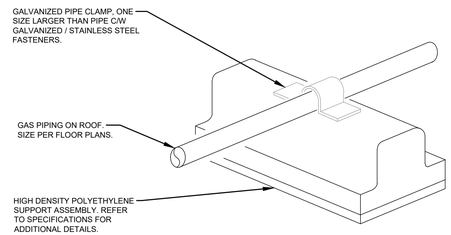
MECHANICAL DETAILS 2

**PROJECT NO:** ED-20-300
**SCALE:** AS SHOWN
**DRAWN BY:** RH
**REVIEWED BY:** MH

**PROJECT NORTH:**

**DRAWING NO:**

# M-301

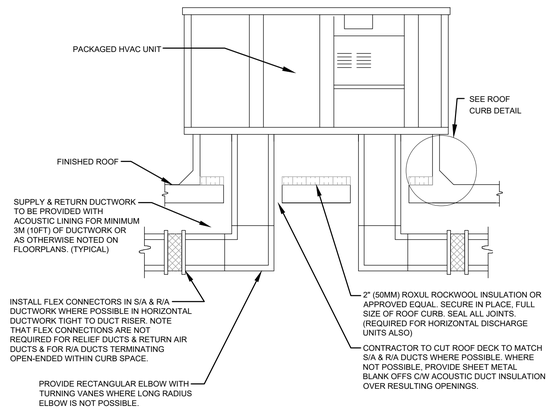



GENERAL NOTE:

1. GAS SUPPORTS SHALL BE SPACED ACCORDING TO GAS CODE REQUIREMENTS EXCEPT THAT MAX SPACING BETWEEN SUPPORTS SHALL BE 8'-0" (2400MM) AND ONE SUPPORT SHALL BE PROVIDED FOR EVERY THREADED FITTING.

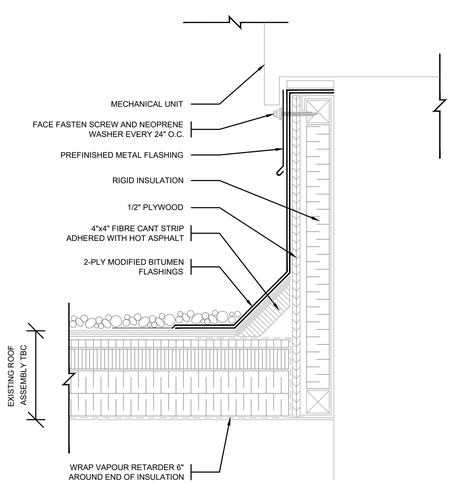
23 11 23.01 NATURAL GAS PIPING SUPPORT ON ROOF

NOT TO SCALE



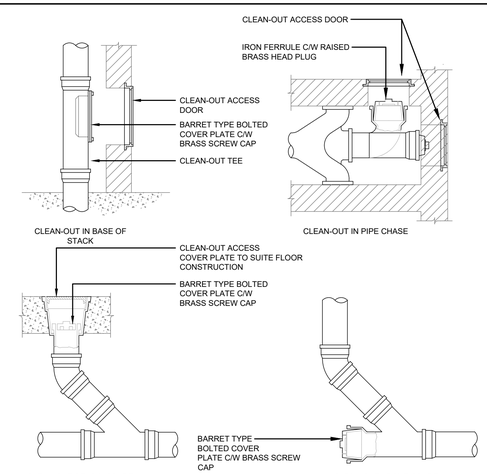

23 74 13.01 DETAIL OF ROOFTOP UNIT INSTALLATION

NOT TO SCALE



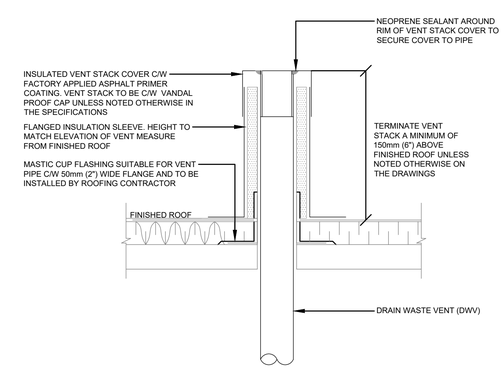

20 05 00.15 DETAIL OF PREFABRICATED ROOF CURB

NOT TO SCALE




22 13 00.02 SANITARY & STORM WATER CLEANOUTS

NOT TO SCALE




22 13 00.01 DWV ROOF PENETRATION & VENT CAP COVER

NOT TO SCALE

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**ISSUE DATE:**

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| 2 | 08-MAR-21 | ISSUED FOR 95% TENDER REVIEW |
| 1 | 18-FEB-21 | ISSUED FOR 80% CD |

**PROJECT:**

# ELMIRA DISTRICT SECONDARY SCHOOL - 4 UNIVERSITY AVE WEST, ELMIRA ON N3B 1K2

**DRAWING TITLE:**

MECHANICAL DETAILS 3

**PROJECT NO:** ED-20-300
**SCALE:** AS SHOWN
**DRAWN BY:** RH
**REVIEWED BY:** MH

**PROJECT NORTH:**

**DRAWING NO:**

# M-302

# ENERGY RECOVERY VENTILATOR SCHEDULE

| SYSTEM | AREA SERVED | LOCATION | MANUFACTURER | MODEL NO. | SUPPLY FAN | | EXHAUST FAN | | SUMMER | | | | | | | WINTER | | | | | | | ELECTRICAL | | | WEIGHT (KG) | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | ENTERING AIR TEMP (°C) | | | | LEAVING AIR TEMP (°C) | | TOTAL HEAT RECOVERY (KW) | ENTERING AIR TEMP (°C) | | | | LEAVING AIR TEMP (°C) | | TOTAL HEAT RECOVERY (KW) | | | | | |
| | | | | | AIRFLOW (L/s) | ESP (PA) | AIRFLOW (L/s) | ESP (PA) | OUTDOOR AIR | | RETURN AIR | | SUPPLY AIR | | | OUTDOOR AIR | | RETURN AIR | | SUPPLY AIR | | | MCA (A) | MOCP (A) | V/ϕ/Hz | | |
| | | | | | | | | | Db | Wb | Db | RH % | Db | Wb | | Db | Wb | Db | RH % | Db | Wb | | | | | | |
| ERV-1 | CAFETERIA | ROOF | COOK | ERV-1500 | 1,100 | 125 | 1,000 | 125 | 31.1 | 22.7 | 23.8 | 50.0 | 25.6 | 18.6 | 9.3 | -17.1 | -18.3 | 22.2 | 35.0 | 12.9 | 7.6 | 21.0 | 9.73 | 15 | 208/1/60 | 432 | SEE NOTES |

NOTES:
1. NEW ROOF CURB TO BE MINIMUM 600MM HIGH
2. C/W 2" MERV 8 FILTERS.
3. ROOFTOP UNIT SHALL HAVE SINGLE POINT POWER FEED , AND 120V/1ϕ/60Hz FIELD WIRED RECEPTACLE. RECEPTACLE SHALL BE 20A, GFI PROTECTED AND INSTALLED WITHIN WEATHERPROOF ENCLOSURE.
4. EACH UNIT SHALL BE IN CONFORMANCE WITH ASHRAE 90.1 - 2010 EFFICIENCY.
5. EACH FAN TO BE COMPLETE WITH INTERNAL VIBRATION ISOLATION SPRINGS & FLEXIBLE CONNECTION.
6. UNIT DISCONNECT TO BE FIELD SUPPLIED.
7. REFER TO SPECIFICATION FOR ADDITIONAL REQUIREMENTS.

# SCHEDULE OF ROOFTOP AIR HANDLING UNITS

| SYSTEM | AREA SERVICED | MODEL NO. (DAIKIN) | UNIT WEIGHT (KG) | AIRFLOW (L/s) | % FRESH AIR | COOLING COIL | | | | HEAT EXCHANGER | | | SUPPLY FAN | | | | | | | RETURN FAN | | | | | | | | FILTERS | ELECTRICAL | | | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | CAPACITY | | | COIL TYPE | CAPACITY | | INLET PRESSURE (INWC) | | | | | | | | | | | | | | | | | | | | |
| | | | | | | NOMINAL (TONS) | GROSS (KW) | SENSIBLE (KW) | | INPUT (KW) | OUPUT (KW) | | FAN TYPE | SUPPLY AIR (L/S) | TSP (Pa) | ESP (Pa) | R.P.M. | MOTOR (KW) | VFD | DISCHARGE ORIENTATION | FAN TYPE | RETURN AIR (L/s) | TSP (Pa) | ESP (Pa) | R.P.M. | MOTOR (KW) | VFD | DISCHARGE ORIENTATION | RETURN AIR FILTER | MCA | MOCP | ELECTRICAL V/ϕ/Hz | |
| HV-27 | GYM | RDS802C | 1,323 | 6,040 | 25 | UNIT IS HEATING ONLY | | | | 238.1 | 190.5 | 7"-14" | FIXED DRIVE | 6,038 | 948.7 | 498.0 | 1,479 | 11.2 | YES | SIDE | FIXED DRIVE | 6,040 | 374 | 374 | 1132 | 7.46 | YES | BOTTOM | MERV 8 | 84.2 | 110.0 | 208/3/60 | 1,3,4,5,6,7,9 |
| HVAC-23 & HVAC-24 | CAFETERIA | DPS016A | 1,583 | 1,888 | 50 | 15.6 | 54.8 | 35.7 | DX | 131.9 | 105.5 | 7"-14" | DIRECT DRIVE | 1,887 | 672.3 | 423.3 | 1,724 | 5.6 | YES | SIDE | DIRECT DRIVE | 1,888 | 125 | 125 | 2033 | 2.98 | YES | SIDE | MERV 8 | 100.2 | 125.0 | 208/3/60 | 1,2,3,4,5,6,8,9 |

NOTES:
1. ROOFTOP UNITS TO BE PROVIDED WITH STAINLESS STEEL GAS FIRED HEAT EXCHANGER.
2. RTU-2 DX COOLING COIL PERFORMANCE IS BASED ON R-410A REFRIGERANT.
3. EACH UNIT SHALL BE IN CONFORMANCE WITH ASHRAE 90.1 - 2010 EFFICIENCY.
4. NEW ROOF CURBS TO BE MINIMUM 600MM HIGH.
5. ROOFTOP UNIT SHALL HAVE SINGLE POINT POWER FEED.
6. EACH FAN TO BE COMPLETE WITH INTERNAL VIBRATION ISOLATION SPRINGS & FLEXIBLE CONNECTION.
7. RTU-1 C/W SIDE-DISCHARGE KITS AND FIELD MODIFIED TO SUIT SIDE DISCHARGE.
8. RTU-2 C/W BOTTOM DISCHARGE KITS AND FIELD MODIFIED TO SUIT BOTTOM RETURN.
9. RTU-1 & RTU-2 C/W ECONOMIZER.

# SCHEDULE OF GRILLES AND DIFFUSERS

| TAG | SERVICE | MANUFACTURER | MODEL NO. | SIZE (MMxMM) | FINISH | REMARKS |
|---|---|---|---|---|---|---|
| A | CEILING SUPPLY DIFFUSER | E.H. PRICE | ASCD | 600x600, REFER TO FLOORPLAN FOR NECK CONNECTION | BY ARCH | ADJUSTABLE DIFFUSER |
| B | EGG CRATE RETURN/EXHAUST | E.H. PRICE | 80 DAL | PER FLOOR PLAN | BY ARCH | SEE NOTE 1 |

NOTES:
1. RETURN/EXHAUST GRILES TO HAVE ANGLED BLADES ORIENTED UPWARDS TO PREVENT VISIBILITY OF DUCTWORK.

# SCHEDULE OF MISCELLANEOUS FANS

| TAG | AREA SERVED | MODEL NO. | MANUFACTURER | PERFORMANCE DATA | | | | ELECTRICAL V/ϕ/Hz | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| | | | | CAPACITY (L/s) | E.S.P. (PA) | FAN RPM | MOTOR (kW) | | |
| EF-1 | BOILER ROOM EXHAUST | SQI-D-90SQ15D | COOK | 375 | 75 | 1550 | 0.23 | 120/1/60 | 1,2,3 |

NOTES:
1. BACKDRAFT DAMPER
2. REVERSE ACTING THERMOSTAT
3. PROVDIE WITH ISOLATION HANGERS

# SCHEDULE OF PUMPS

| TAG | SYSTEM | LOCATION | MAKE | MODEL NO. | CAPACITY (L/s) | HEAD (KPa) | RPM | MOTOR BKW | MOTOR (KW) | ELECTRICAL V/ϕ/Hz | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| C9 & C10 | HEATING WATER PUMPS | PUMP ROOM | ARMSTRONG | 4300 1505-005.0 | 10.4 | 215 | 2331 | 3.3 | 3.73 | 208/3/60 | 1,2 |
| C11 | DOMESTIC RECIRC PUMP | PUMP ROOM | GRUNDFOS | UPS 32-80 F | 0.41 | 62 | 1800 | 0.28 | 0.158 | 115/1/60 | 1 |

NOTES:
1. INLINE PUMP TO BE MOUNTED ON PIPING.
2. C/W SUCTION GUIDE AND LONG RADIUS ELBOW.


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| 2 | 08-MAR-21 | ISSUED FOR 95% TENDER REVIEW |
| 1 | 18-FEB-21 | ISSUED FOR 80% CD |

**PROJECT:**

ELMIRA DISTRICT SECONDARY SCHOOL - 4 UNIVERSITY AVE WEST, ELMIRA ON N3B 1K2

**DRAWING TITLE:**

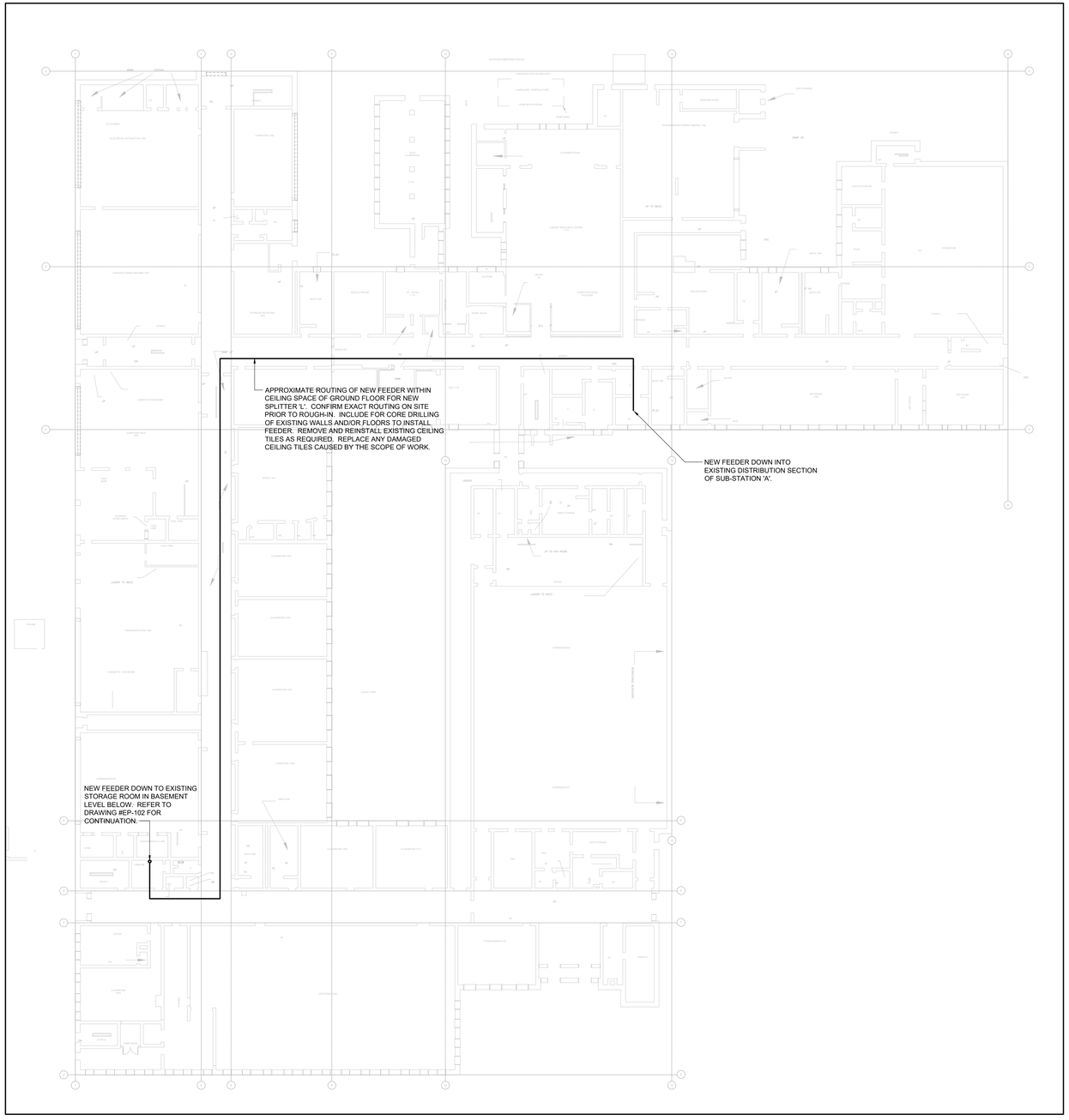
MECHANICAL SCHEDULES

**PROJECT NO:** ED-20-300
**SCALE:** AS SHOWN
**DRAWN BY:** RH
**REVIEWED BY:** MH

**PROJECT NORTH:**

**DRAWING NO:**

M-400




1 KEY PLAN - ELECTRICAL
SCALE: 1:300

## ELECTRICAL LEGEND

| SYMBOL | DESCRIPTION |
|---|---|
| | **LINETYPES** |
| | NEW WORK |
| | WORK TO BE DEMOLISHED, OR REMOVED |
| | EXISTING MATERIAL/EQUIPMENT/SERVICES TO REMAIN |
| | **ABBREVIATIONS** |
| E | EXISTING TO REMAIN |
| D | EXISTING TO BE DEMOLISHED/REMOVED |
| R | EXISTING TO BE RELOCATED/IN RELOCATED POSITION |
| ER | EXISTING TO BE REMAIN AND REPLACED WITH NEW |
| RR | REMOVE AND REINSTALL IN SAME POSITION |
| RL | REMOVE AND RELOCATE |
| C | CEILING MOUNTED CONNECTION |
| W | WALL MOUNTED CONNECTION |
| F | FLOOR MOUNTED CONNECTION |
| ℄ | CENTRE LINE |
| AFF | ABOVE FINISHED FLOOR |
| AFG | ABOVE FINISHED GRADE |
| O/C | OVER COUNTER |
| U/C | UNDER CABINET |
| U/F | UNDER RAISED FLOOR |
| CCT | CIRCUIT |
| CTE | CONNECT TO EXISTING |
| AFCI | ARC FAULT CIRCUIT INTERRUPTER |
| GFCI | GROUND FAULT CIRCUIT INTERRUPTER |
| GFI | GROUND FAULT INTERRUPTER |
| IG | ISOLATED GROUND |
| TL | TWIST LOCK |
| TR | TAMPER RESISTANT |
| WG | WIRE GUARD |
| WP | WEATHER PROOF |
| R/I | ROUGH-IN ONLY |
| NIC | NOT IN CONTRACT |
| SIM. | SIMILAR TO |
| TYP. | TYPICAL |
| | **ABBREVIATIONS - CODES AND STANDARDS** |
| OBC | ONTARIO BUILDING CODE |
| OESC | ONTARIO ELECTRICAL SAFETY CODE |
| | **ANNOTATIONS** |
| | ROOM NUMBER |
| CL | CLOSET |
| WR | WASHROOM |
| | **FIRE PROTECTION** |
| | FIRE EXTINGUISHER |
| SPK | SPRINKLER HEAD |
| FHC | STANDPIPE FIRE HOSE CABINET |
| | **HVAC** |
| T | THERMOSTAT OR TEMPERATURE SENSOR |
| BBH | ELECTRIC BASEBOARD HEATER (BBH) |
| FFH | FORCED FLOW HEATER |
| ERV | ENERGY RECOVERY VENTILATOR |
| HRU | HEAT RECOVERY UNIT |
| MUA | MAKE-UP AIR UNIT |
| | **CONDUIT AND BOXES** |
| | CONDUIT WITH END BUSHING |
| | CONDUIT UP |
| | CONDUIT DOWN |
| JB | JUNCTION BOX |
| PB | PULL BOX |
| | **CONNECTIONS TO EQUIPMENT** |
| DW | DISHWASHER |
| FR | FRIDGE |
| MW | MICROWAVE |
| HD | HAND DRYER. ALLOW UP TO 208V-1PH-20A |
| PSC | PLUMBING SENSOR CONTROL (TOUCHLESS FAUCETS) |
| PTP | PLUMBING TRAP PRIMER |
| | 1-PHASE DIRECT CONNECTION OUTLET AS NOTED. |
| | 3-PHASE DIRECT CONNECTION OUTLET AS NOTED. |
| W | ADJACENT TO 3-PHASE DIRECT CONNECTION, DENOTES WALL SYSTEM FURNITURE FEED FOR POWER AND COMMUNICATIONS. |
| | SINGLE PHASE MOTOR, HP (KW) AS NOTED. |
| | THREE PHASE MOTOR, HP (KW) AS NOTED. |
| | CLOCK. |
| | **LIGHTING CONTROLS** REFER TO SPECIFICATIONS AND RESPECTIVE SCHEDULES FOR EXACT REQUIREMENTS |
| S | SWITCH OR OTHER USER INTERFACE DEVICE AS DESCRIBED ON LIGHTING CONTROLS SCHEDULE. |
| DIM | ADJACENT TO SWITCH, DENOTES DIMMING SWITCH. |
| K | ADJACENT TO SWITCH, DENOTES KEY SWITCH. |
| M | ADJACENT TO SWITCH, DENOTES MASTER CONTROL FOR ALL LUMINAIRES IN A ROOM OR SPACE, OR AS NOTED. |
| PIR | WALL MOUNTED SWITCH/OCCUPANCY SENSOR. PIR DENOTES 'PASSIVE INFRARED', DT DENOTES 'DUAL PASSIVE INFRARED/ULTRASONIC'. LINE VOLTAGE TO SUIT CONTROLLED CIRCUIT. |
| PP | POWER PACK |
| T | TIMER SWITCH. |
| DT | CEILING MOUNTED OCCUPANCY SENSOR. PIR DENOTES 'PASSIVE INFRARED', UT DENOTES 'ULTRASONIC' (OR MICROPHONIC), DT DENOTES 'DUAL TECHNOLOGY'. |
| DT | WALL MOUNTED OCCUPANCY SENSOR. |
| | **DISTRIBUTION EQUIPMENT** |
| | SURFACE MOUNTED LIGHTING AND RECEPTACLE PANELBOARD |
| | RECESSED RECEPTACLE PANELBOARD |
| | DISCONNECT SWITCH |
| | FUSED DISCONNECT SWITCH |
| | **POWER RECEPTACLES AND BOXES** |

THIS LEGEND IS GENERIC. ALL SYMBOLS LISTED MAY NOT BE APPLICABLE FOR THIS PROJECT. REFER TO FLOOR PLANS TO DETERMINE USED DEVICES AND EQUIPMENT.

## ELECTRICAL LEGEND

| SYMBOL | DESCRIPTION |
|---|---|
| | 120V U-GROUND DUPLEX RECEPTACLE. |
| | 120V U-GROUND DUPLEX RECEPTACLE - CONTROLLED (ASHRAE 90.1-2010, 8.4.2). |
| | 120V U-GROUND QUAD RECEPTACLE. |
| | SPECIAL RECEPTACLE. VERIFY OUTLET REQUIREMENTS PRIOR TO ROUGH-IN. |
| | 120V U-GROUND DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER TOP OR AS INSTRUCTED ON SITE. |
| | **LIGHTING FIXTURES** SYMBOLS IN ACCORDANCE WITH IES DG-3-00 WHERE NOT DETAILED OTHERWISE HERE. REFER TO LIGHTING FIXTURE SCHEDULE FOR FURTHER DETAILS AND EXACT FIXTURE REQUIREMENTS. |
| | SURFACE MOUNTED LINEAR LUMINAIRE |
| | RECESSED MOUNTED LUMINAIRE |
| | RECESSED DOWNLIGHT |
| Z1, Z2, ETC. | DENOTES ZONING/CIRCUITING ASSIGNMENTS FOR LUMINAIRES AND CONTROLS IN THE SAME SPACE. |
| | **EMERGENCY LIGHTING** REFER TO EMERGENCY LIGHTING FIXTURE SCHEDULE FOR EXACT FIXTURE REQUIREMENTS. |
| | CEILING OR WALL MOUNTED ILLUMINATED EXIT SIGN. SHADED AREA INDICATES ILLUMINATED FACE. PROVIDE DIRECTIONAL ARROWS AS INDICATED ON PLANS. |
| | EMERGENCY LIGHTING BATTERY UNIT. |
| | ONE AND TWO HEAD WALL MOUNTED EMERGENCY LIGHTING REMOTE UNITS. |
| EM | DENOTES 'EMERGENCY" |
| | **COMMUNICATIONS** |
| | WALL MOUNTED DATA (D) OR VOICE (V) OUTLET. PROVIDE 1V AND 1D UNLESS NOTED OTHERWISE. |
| | WALL MOUNTED VOICE (TELEPHONE) OUTLET. PROVIDE 1V UNLESS NOTED OTHERWISE. |
| | WALL MOUNTED DATA OUTLET. PROVIDE 1D UNLESS NOTED OTHERWISE. |
| WAP | WIRELESS ACCESS POINT (WIFI) |
| PA | PUBLIC ADDRESS SPEAKER, CEILING AND WALL MOUNTED, RESPECTIVELY. |
| | **ACCESS CONTROL** |
| CR | CARD READER |
| DC | DOOR CONTACT |
| ES | ELECTRIC STRIKE |
| | MUSHROOM HEAD PUSH BUTTON FOR MAGLOCK RELEASE, OR OTHER PUSH BUTTON AS INDICATED |
| | BARRIER FREE DOOR OPERATOR PUSH BUTTON |
| | **INTRUSION DETECTION** |
| | GLASS BREAK (GB) |
| MD | MOTION DETECTOR (MD) |
| KP | KEYPAD (KP) |
| | SOUNDER |
| | **FIRE DETECTION AND ALARM** |
| FACP | FIRE ALARM CONTROL PANEL |
| FAAP | FIRE ALARM ANNUNCIATOR PANEL |
| FAPG | FIRE ALARM PASSIVE GRAPHIC |
| FAZ | FIRE ALARM ZONE |
| FSZ | FIRE ALARM SUPERVISORY ZONE |
| EOL | END OF LINE DEVICE |
| WG | WIRE GUARD |
| | MANUAL PULL STATION (MPS) |
| CG | WHERE NOTED ADJACENT TO MANUAL PULL STATIONS, DENOTES PULL STATION C/W LEXAN COVER. |
| | FIRE ALARM HORN |
| | FIRE ALARM HORN/STROBE, WALL MOUNTED. |
| | FIRE ALARM WALL MOUNTED STROBE LIGHT |
| | PHOTOELECTRIC SMOKE DETECTOR |
| A | ADJACENT TO SMOKE DETECTOR, INDICATES C/W AUXILIARY RELAY |
| SA | WHEN ADJACENT TO PHOTOELECTRIC SMOKE DETECTOR, INDICATES RESIDENTIAL SMOKE ALARM |
| | DUCT MOUNTED SMOKE DETECTOR |
| EOL | END OF LINE (EOL) DEVICE ON ZONE INITIATION OR SIGNAL CIRCUITS |
| IM | ISOLATOR MODULE |
| | HEAT DETECTOR - FIXED TEMPERATURE |
| DH | MAGNETIC DOOR HOLDER AND RELEASING DEVICE ("HOLD OPEN") |
| FS | FLOW SWITCH |
| PS | PRESSURE SWITCH |
| SV | SUPERVISED VALVE |
| | **SINGLE LINE DIAGRAM** |
| | CIRCUIT BREAKER |
| | DISCONNECT (UNFUSED) |
| | FUSE |
| M | METER |
| | TRANSFORMER |
| C | CONTACTOR |
| DP | DISTRIBUTION PANELBOARD |
| PP | POWER PANELBOARD |
| SPD | SURGE PROTECTIVE DEVICE |
| SWBD | SWITCHBOARD |
| TX | TRANSFORMER |
| | **DETAIL REFERENCES** |
| 1 | SHEET KEYNOTE |
| 1 | REVISION NUMBER |

THIS LEGEND IS GENERIC. ALL SYMBOLS LISTED MAY NOT BE APPLICABLE FOR THIS PROJECT. REFER TO FLOOR PLANS TO DETERMINE USED DEVICES AND EQUIPMENT.

## Sheet List Table


| Sheet Number | Sheet Title |
|---|---|
| EA-001 | ELECTRICAL LEGEND AND DRAWING LIST |
| EL-101 | CAFETERIA LIGHTING PLANS |
| EP-101 | CAFETERIA POWER & SYSTEMS PLANS |
| EP-102 | BOILER & PUMP ROOM PLANS - ELECTRICAL |
| EP-103 | GYM MECHANICAL ROOM PLANS - ELECTRICAL |
| EP-104 | ROOF PLANS - ELECTRICAL |
| EX-101 | ELECTRICAL SCHEDULES AND SINGLE LINE DIAGRAM |
| EX-102 | ELECTRICAL DETAILS |



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| 3 | 16-MAR-21 | ISSUED FOR TENDER |
| 2 | 08-MAR-21 | ISSUED FOR 95% TENDER REVIEW |
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**PROJECT:**

# ELMIRA DISTRICT SECONDARY SCHOOL - 4 UNIVERSITY AVE WEST, ELMIRA ON N3B 1K2

**DRAWING TITLE:**

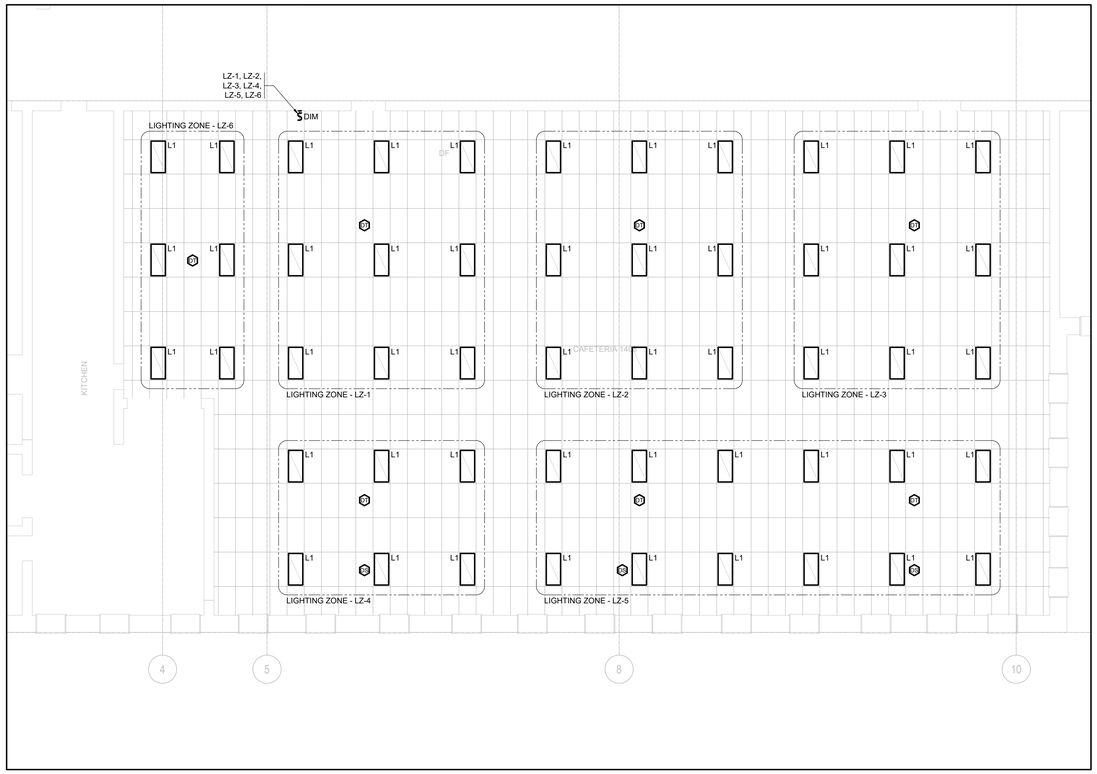
ELECTRICAL LEGEND AND DRAWING LIST

**PROJECT NO:** ED-20-300
**SCALE:** NOT TO SCALE
**DRAWN BY:** CW
**REVIEWED BY:** BD/TWS

**PROJECT NORTH:**

**DRAWING NO:**

# EA-001




2 CAFETERIA NEW WORK PLAN - LIGHTING
SCALE: 1:100

1 CAFETERIA DEMOLITION PLAN - LIGHTING
SCALE: 1:100

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**PROJECT:**

ELMIRA DISTRICT SECONDARY SCHOOL - 4 UNIVERSITY AVE WEST, ELMIRA ON N3B 1K2

**DRAWING TITLE:**

CAFETERIA LIGHTING PLANS

**PROJECT NO:** ED-20-300
**SCALE:** AS SHOWN
**DRAWN BY:** CW
**REVIEWED BY:** BD/TWS

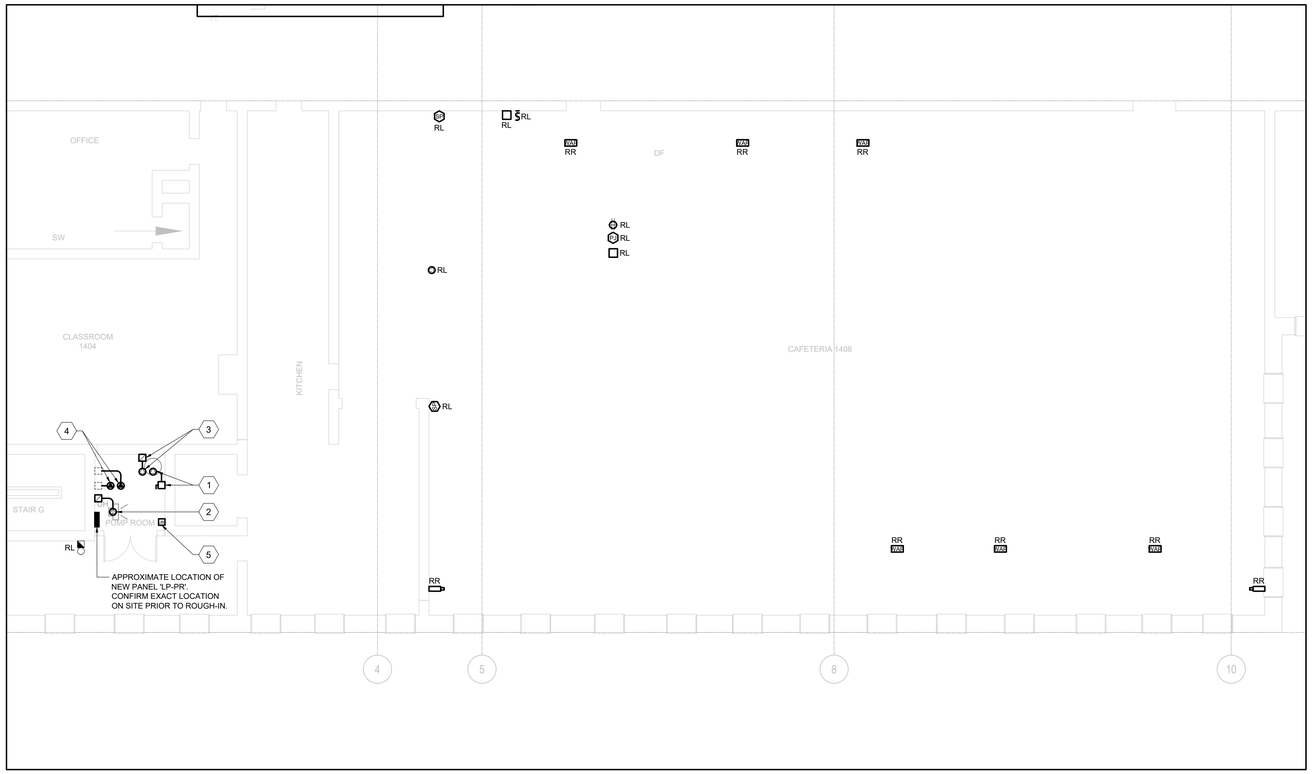
**PROJECT NORTH:**

**DRAWING NO:**

EL-101

## NEW WORK SHEET KEYNOTES

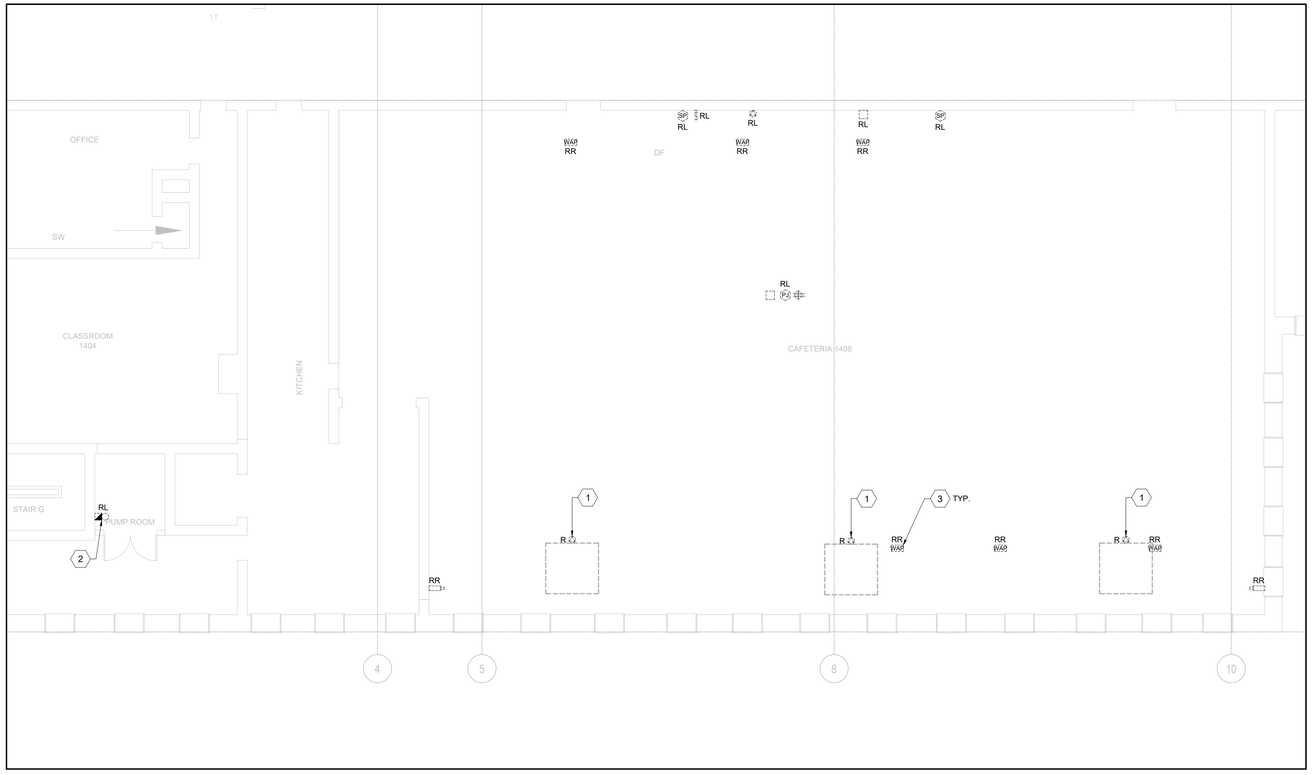
1. CONNECTION TO RELOCATED DOMESTIC HOT WATER TANK. EXTEND 2#10 + GROUND IN 21mm (¾") CONDUIT FROM DHW TANK TO BREAKER IN NEW PANEL 'LP-PR' AND CONNECT COMPLETE. REFER TO PANEL SCHEDULES FOR FURTHER DETAILS.
2. CONNECTION TO NEW UNIT HEATER 'UH-1'. EXTEND 2#12 + GROUND IN 21mm CONDUIT FROM BREAKER IN NEW PANEL 'LP-PR' TO UNIT HEATER LOCATION AND CONNECT COMPLETE. INCLUDE FOR REQUIRED LINE AND LOAD CONNECTIONS BETWEEN UNIT HEATER AND ASSOCIATED STARTER BEING SUPPLIED BY MECHANICAL CONTRACTOR.
3. CONNECTION TO NEW DOMESTIC HOT WATER RECIRC PUMP 'C11'. EXTEND 2#10 + GROUND IN 21mm (¾") CONDUIT FROM RECIRC. PUMP TO ASSOCIATED BREAKER IN NEW PANEL 'LP-PR' AND CONNECT COMPLETE. INCLUDE FOR REQUIRED LINE AND LOAD CONNECTIONS TO ASSOCIATED STARTER. STARTER TO BE SUPPLIED BY MECHANICAL CONTRACTOR AND INSTALLED BY ELECTRICAL CONTRACTOR. REFER TO PANEL SCHEDULES FOR FURTHER DETAILS.
4. CONNECTION TO NEW PUMPS 'C9' AND 'C10' AND ASSOCIATED VARIABLE FREQUENCY DRIVES, FED FROM NEW SPLITTER 'L' IN BASEMENT. INCLUDE FOR REQUIRED LINE AND LOAD CONNECTIONS TO ASSOCIATED VFDs. REFER TO SINGLE LINE DRAWING FOR BRANCH FEEDER REQUIREMENTS.




2 CAFETERIA NEW WORK PLAN - POWER & SYSTEMS
SCALE: 1:100

## DEMOLITION SHEET KEYNOTES

1. CONNECTION TO EXISTING FAN COIL UNIT WITHIN CEILING SPACE OF CAFETERIA TO BE REMOVED IN ITS ENTIRETY, INCLUDING ALL ASSOCIATED WIRING AND CONDUIT BACK TO SOURCE ELECTRICAL DISTRIBUTION. CONDUIT EMBEDDED WITHIN WALLS OR FLOORS CAN BE ABANDONED. RETAIN EXISTING BREAKERS IN PANELBOARD AS SPARE.
2. EXISTING FIRE ALARM BELL TO BE RELOCATED TO ACCOMMODATE ENCLOSING OF SPACE TO CREATE A NEW PUMP ROOM. BE RESPONSIBLE TO MODIFY EXISTING SYSTEM WIRING AS REQUIRED TO SUIT NEW LOCATION OF DEVICE AS SHOWN ON NEW WORK PLANS. TEST AND VERIFY DEVICE UPON COMPLETION OF WORK.
3. EXISTING WIRELESS ACCESS POINT TO BE DISCONNECTED AND REMOVED, STORED ON SITE AND RE-INSTALLED IN SAME LOCATION BY OWNER'S (WRDSB) PREFERRED SYSTEM VENDOR AS PART OF A PRIME COST ALLOWANCE CARRIED BY THE GENERAL CONTRACTOR. BE RESPONSIBLE TO CONFIRM ON SITE IF EXISTING BACKBOXES EXIST BEHIND ACCESS POINT AND PROVIDE NEW, AS REQUIRED, FOR REINSTALLATION OF ACCESS POINT.




1 CAFETERIA DEMOLITION PLAN - POWER & SYSTEMS
SCALE: 1:100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**PROJECT:**

# ELMIRA DISTRICT SECONDARY SCHOOL - 4 UNIVERSITY AVE WEST, ELMIRA ON N3B 1K2

**DRAWING TITLE:**

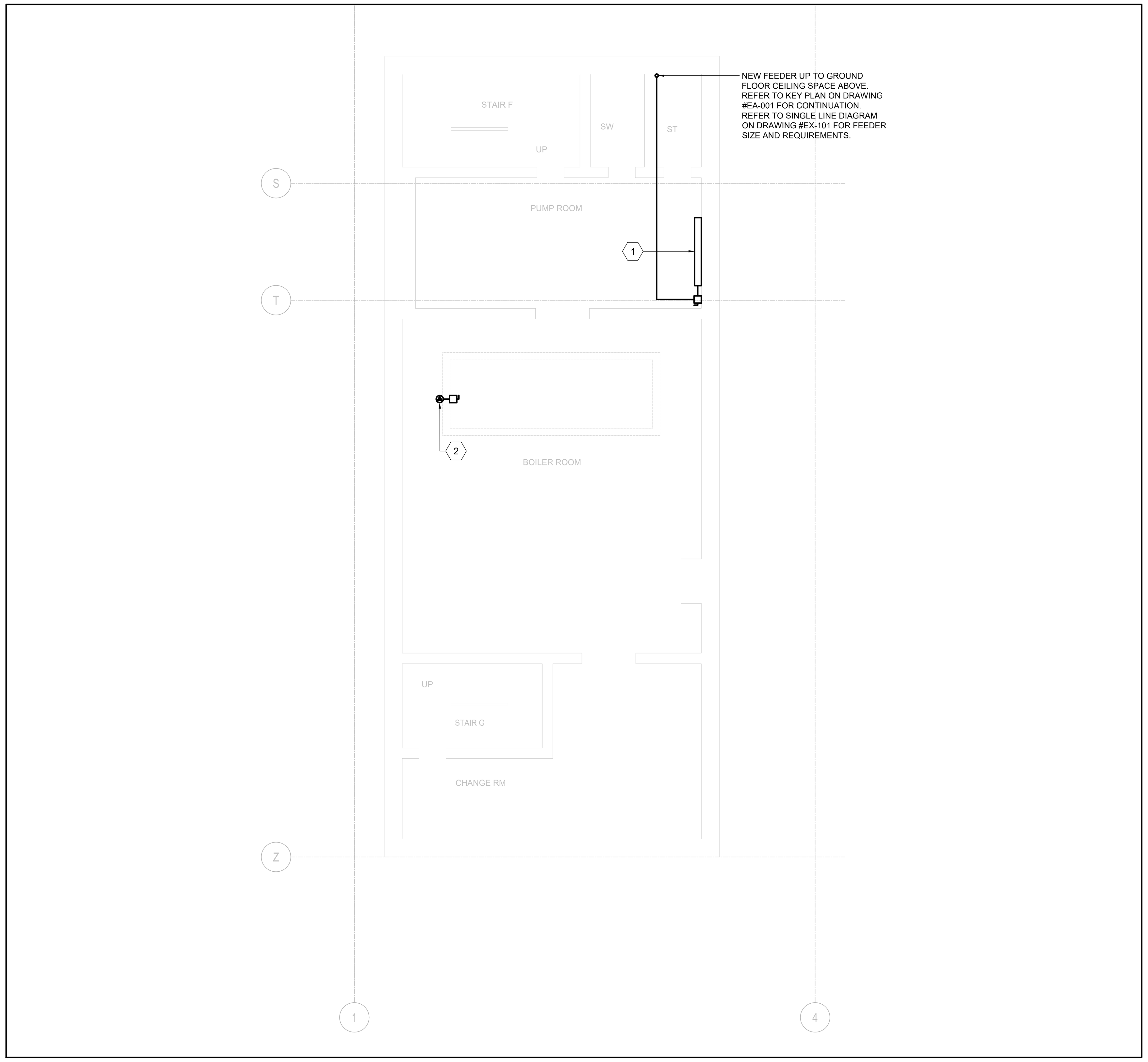
CAFETERIA POWER & SYSTEMS PLANS

**PROJECT NO:** ED-20-300
**SCALE:** AS SHOWN
**DRAWN BY:** CW
**REVIEWED BY:** CW

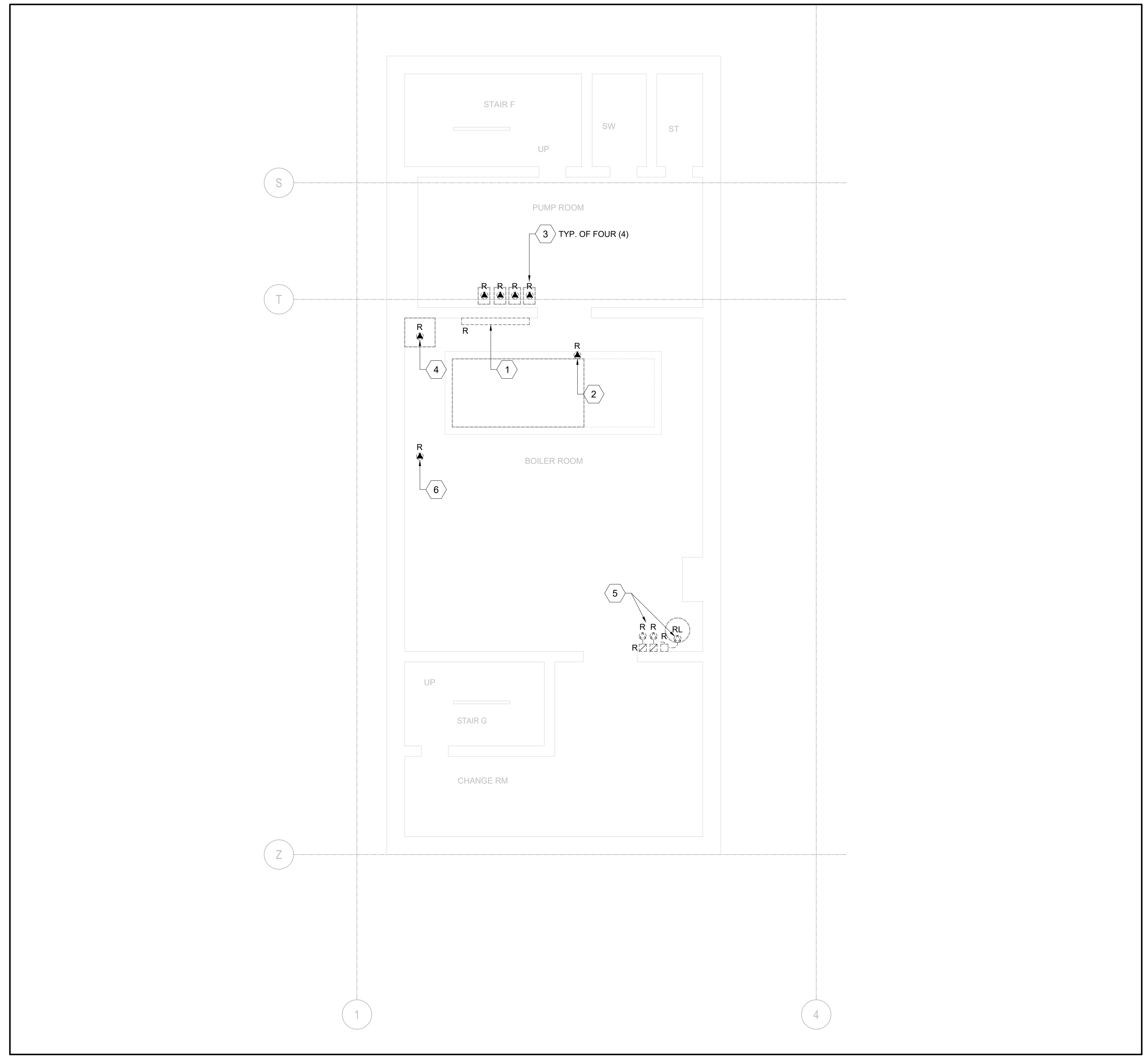
**PROJECT NORTH:**

**DRAWING NO:**

# EP-101




2 **BOILER & PUMP ROOM NEW WORK PLAN - ELECTRICAL**
SCALE: 1:100




1 **BOILER & PUMP ROOM DEMOLITION PLAN - ELECTRICAL**
SCALE: 1:100

## NEW WORK SHEET KEYNOTES

1. NEW SPLITTER 'L' AND ASSOCIATED DISCONNECT SWITCH MOUNTED ON WALL. BE RESPONSIBLE TO RECONNECT ALL EXISTING LOADS TO NEW DISCONNECT SWITCHES AND/OR STARTERS COMPLETE AND CONNECT ALL NEW LOADS TO NEW DISCONNECT SWITCHES AND/OR STARTERS COMPLETE. REFER TO SINGLE LINE DIAGRAM FOR FURTHER DETAILS.
2. PROVIDE CONNECTION TO NEW EXHAUST FAN 'EF-1', FED FROM NEW SPLITTER 'L', INCLUDING ALL REQUIRED LINE AND LOAD CONNECTIONS TO ASSOCIATED STARTER. REFER TO SINGLE LINE DIAGRAM FOR BRANCH FEEDER REQUIREMENTS. STARTER TO BE SUPPLIED BY MECHANICAL CONTRACTOR AND INSTALLED AND CONNECTED BY ELECTRICAL CONTRACTOR.

## DEMOLITION SHEET KEYNOTES

1. EXISTING SPLITTER PANEL 'L' TO BE REMOVED AND REPLACED IN ITS ENTIRETY. BE RESPONSIBLE TO REMOVE EXISTING FEEDER (CONDUIT AND WIRE) BACK TO SOURCE SUBSTATION 'A' IN ITS ENTIRETY AND RETAIN EXISTING BREAKER AS SPARE. ANY CONDUIT CONCEALED WITHIN EXISTING WALL OR FLOOR CONSTRUCTION SHALL BE ABANDONED. FOR EXISTING LOADS BEING RETAINED, BE RESPONSIBLE TO SPLICE AND EXTEND EXISTING FEEDERS TO NEW SPLITTER LOCATION AND CONNECT TO ASSOCIATED NEW DISCONNECT SWITCH/STARTER COMPLETE. REFER TO SINGLE LINE DRAWING FOR FURTHER DETAILS. REFER TO KEYPLAN ON DRAWING #EA-001 FOR LOCATION OF EXISTING SUBSTATION 'A'.
2. CONNECTION TO EXISTING BOILER TO BE REMOVED IN ITS ENTIRETY, INCLUDING ALL ASSOCIATED CONDUIT, CABLING BACK TO SOURCE AND ASSOCIATED STARTER WITHIN EXISTING SPLITTER PANEL 'L'.
3. CONNECTION TO EXISTING PUMP TO BE REMOVED IN ITS ENTIRETY, INCLUDING ALL ASSOCIATED CONDUIT, CABLING BACK TO SOURCE AND ASSOCIATED STARTER WITHIN EXISTING SPLITTER PANEL 'L'.
4. CONNECTION TO EXISTING OIL PUMP TO BE REMOVED IN ITS ENTIRETY, INCLUDING ALL ASSOCIATED CONDUIT, CABLING BACK TO SOURCE AND ASSOCIATED STARTER WITHIN EXISTING SPLITTER PANEL 'L'.
5. CONNECTIONS TO EXISTING DOMESTIC HOT WATER TANK AND ASSOCIATED RECIRC. PUMPS TO BE REMOVED IN THEIR ENTIRETY, INCLUDING ALL ASSOCIATED WIRING AND CONDUIT BACK TO SOURCE. EXISTING STARTERS AND ASSOCIATED LINE AND LOAD CONNECTIONS TO RECIRC. PUMPS TO BE REMOVED IN THEIR ENTIRETY.
6. CONNECTION TO EXISTING BOILER ROOM SUPPLY FAN TO BE REMOVED IN ITS ENTIRETY, INCLUDING ALL ASSOCIATED CONDUIT AND CABLING BACK TO SOURCE AND ASSOCIATED STARTER WITHIN EXISTING SPLITTER PANEL 'L'.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**ISSUE DATE:**

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 3 | 16-MAR-21 | ISSUED FOR TENDER |
| 2 | 08-MAR-21 | ISSUED FOR 95% TENDER REVIEW |
| 1 | 18-FEB-21 | ISSUED FOR 80% CD |

**PROJECT:**

ELMIRA DISTRICT SECONDARY SCHOOL - 4 UNIVERSITY AVE WEST, ELMIRA ON N3B 1K2

**DRAWING TITLE:**

BOILER & PUMP ROOM PLANS - ELECTRICAL

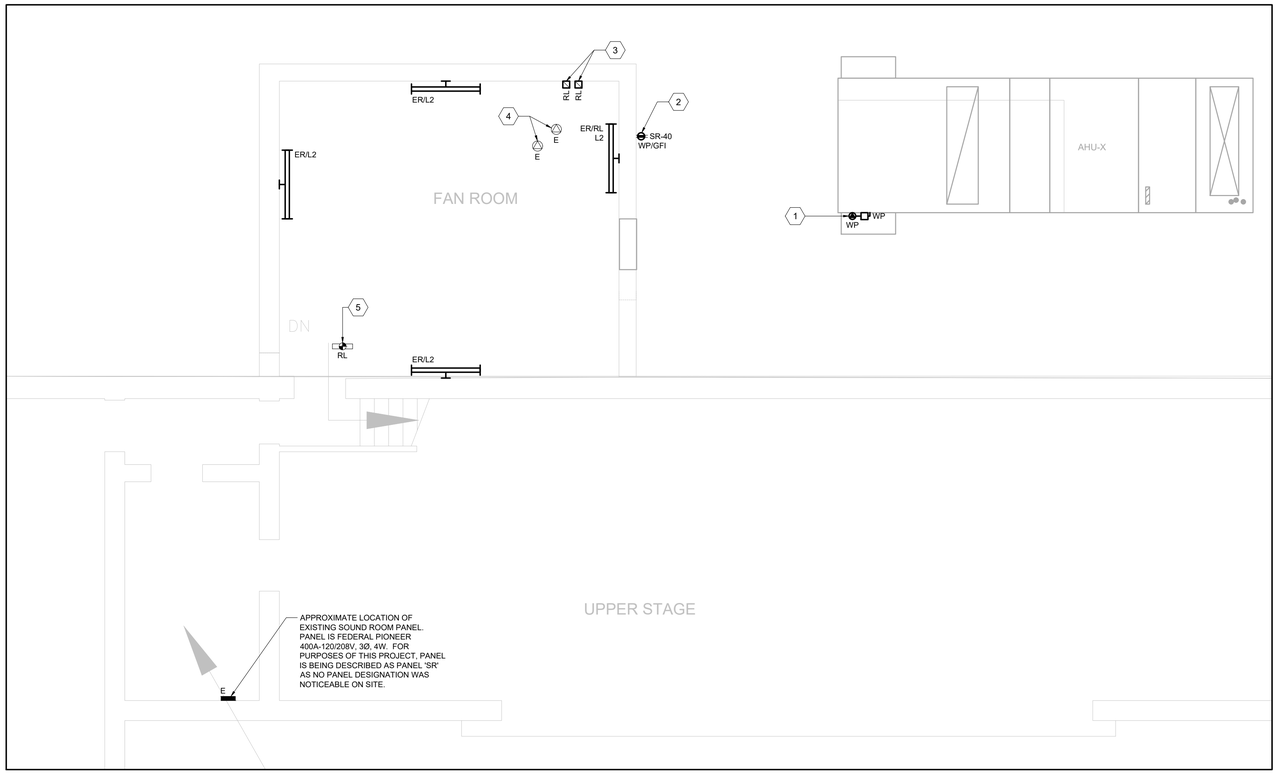
**PROJECT NO:** ED-20-300
**SCALE:** AS SHOWN
**DRAWN BY:** CW
**REVIEWED BY:** CW
**PROJECT NORTH:**

**DRAWING NO:**

EP-102

## NEW WORK SHEET KEYNOTES

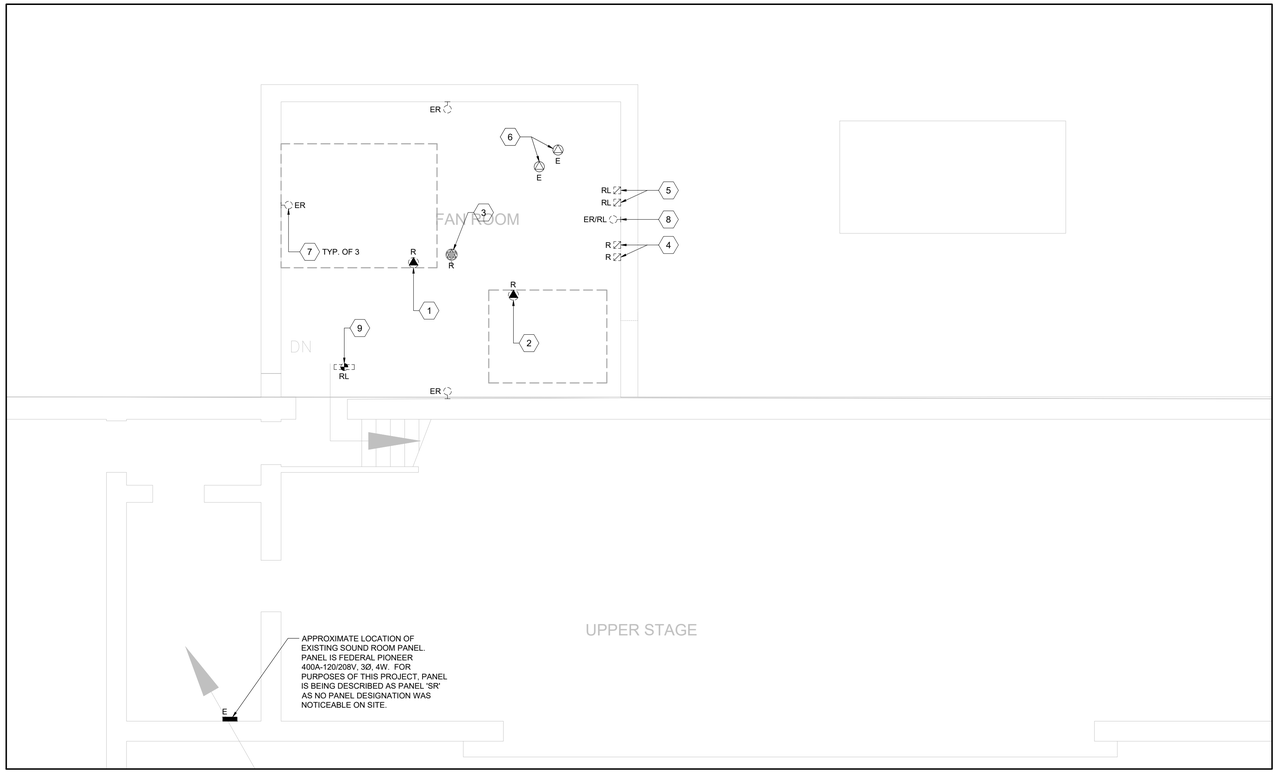
1. CONNECTION TO NEW ROOF TOP UNIT 'HV-27'. EXTEND NEW FEEDER FROM UNIT TO NEW SPLITTER 'L' WITHIN EXISTING PUMP ROOM AS SHOWN ON DRAWING #EP-102. REFER TO SINGLE DIAGRAM FOR FEEDER REQUIREMENTS.
2. PROVIDE NEW WALL MOUNTED SERVICE RECEPTACLE. PROVIDE A 20A-1P GFI TYPE BREAKER WITHIN EXISTING PANEL IN SOUND ROOM AND EXTEND 2#10 + GROUND IN 21mm CONDUIT FROM BREAKER TO RECEPTACLE LOCATION AND CONNECT COMPLETE. RECEPTACLE SHALL BE INSTALLED MINIMUM 750mm ABOVE FINISHED ROOF LEVEL.
3. EXISTING STARTERS FOR EXISTING WASHROOM AND CHANGE ROOM EXHAUST FANS IN RELOCATED POSITION.
4. CONNECTIONS TO EXISTING WASHROOM AND CHANGE ROOM EXHAUST FANS TO REMAIN.
5. RE-INSTALL EXISTING FIRE ALARM DUCT DETECTOR WITHIN NEW DUCTWORK AND RECONNECT TO EXISTING SYSTEM WIRING COMPLETE. TEST AND VERIFY DEVICE UPON COMPLETION OF WORK.




2 GYM MECHANICAL ROOM NEW WORK PLAN - ELECTRICAL
SCALE: 1:50

## DEMOLITION SHEET KEYNOTES

1. CONNECTION TO EXISTING SUPPLY AIR UNIT TO BE REMOVED IN ITS ENTIRETY, INCLUDING ALL ASSOCIATED CONDUIT, CABLING BACK TO SOURCE AND ASSOCIATED STARTER WITHIN EXISTING SPLITTER PANEL WITHIN EXISTING BOILER ROOM.
2. CONNECTION TO EXISTING RETURN FAN TO BE REMOVED IN ITS ENTIRETY, INCLUDING ALL ASSOCIATED CONDUIT, CABLING BACK TO SOURCE AND ASSOCIATED STARTER WITHIN EXISTING SPLITTER PANEL WITHIN EXISTING BOILER ROOM.
3. CONNECTION TO EXISTING HOT WATER CIRCULATION PUMP TO BE REMOVED IN ITS ENTIRETY INCLUDING ALL ASSOCIATED CONDUIT, WIRING AND DISCONNECT SWITCH/STARTER BACK TO SOURCE ELECTRICAL DISTRIBUTION. EXISTING CONDUIT EMBEDDED WITHIN EXISTING WALL OR FLOOR CONSTRUCTION CAN BE ABANDONED.
4. STARTERS FOR EXISTING GYM SUPPLY AIR AND RETURN AIR UNITS TO BE DISCONNECTED AND REMOVED IN THEIR ENTIRETY.
5. STARTERS FOR EXISTING WASHROOM AND CHANGE ROOM EXHAUST FANS TO BE RELOCATED TO ACCOMMODATE NEW DOOR. BE RESPONSIBLE TO MODIFY EXISTING BRANCH CIRCUIT WIRING AS REQUIRED TO REROUTE EXISTING FEEDERS AWAY FROM NEW DOOR, INCLUDING ACCESSING CEILING SPACE OF FLOOR BELOW. REFER TO TO NEW WORK DRAWINGS FOR NEW LOCATION OF STARTERS.
6. CONNECTIONS TO EXISTING WASHROOM AND CHANGE ROOM EXHAUST FANS TO REMAIN.
7. EXISTING WALL MOUNTED LUMINAIRES TO BE REMOVED AND REPLACED WITH NEW. BE RESPONSIBLE TO MODIFY EXISTING LIGHTING BRANCH CIRCUIT(S) AS REQUIRED TO ACCOMMODATE NEW LUMINAIRES.
8. EXISTING WALL MOUNTED LUMINAIRE TO BE RELOCATED AND REPLACED WITH NEW TO ACCOMMODATE NEW DOOR. BE RESPONSIBLE TO MODIFY EXISTING LIGHTING BRANCH CIRCUIT(S) AS REQUIRED TO ACCOMMODATE NEW LUMINAIRE. REFER TO NEW WORK PLAN FOR NEW LOCATION OF LUMINAIRE.
9. EXISTING FIRE ALARM DUCT DETECTOR TO BE REMOVED FROM EXISTING DUCTWORK BEING DEMOLISHED AND RE-INSTALLED WITHIN NEW DUCTWORK INSTALLATION. BE RESPONSIBLE TO MODIFY EXISTING SYSTEM WIRING AS REQUIRED TO ACCOMMODATE REMOVAL AND REINSTALLATION OF DUCT DETECTOR. RE-VERIFY DEVICE UPON COMPLETION OF WORK.




1 GYM MECHANICAL ROOM DEMOLITION PLAN - ELECTRICAL
SCALE: 1:50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| 3 | 16-MAR-21 | ISSUED FOR TENDER |
| 2 | 08-MAR-21 | ISSUED FOR 95% TENDER REVIEW |
| 1 | 18-FEB-21 | ISSUED FOR 80% CD |

**PROJECT:**

ELMIRA DISTRICT SECONDARY SCHOOL - 4 UNIVERSITY AVE WEST, ELMIRA ON N3B 1K2

**DRAWING TITLE:**

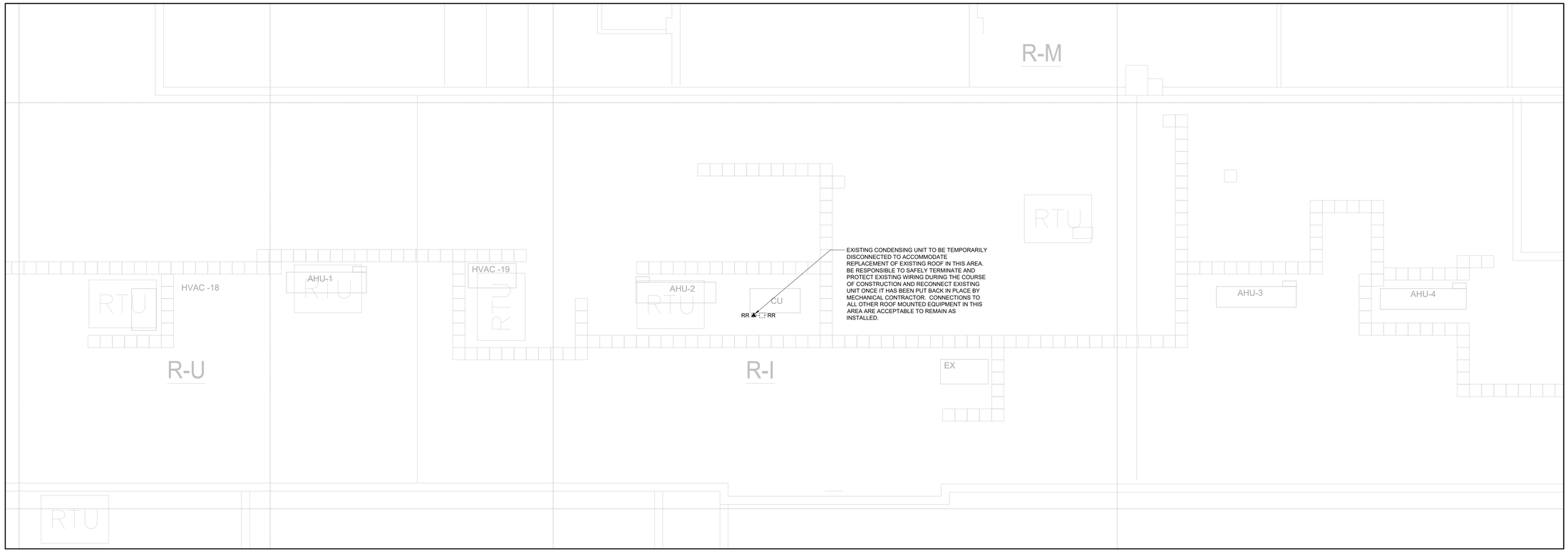
GYM MECHANICAL ROOM PLANS - ELECTRICAL

**PROJECT NO:** ED-20-300
**SCALE:** AS SHOWN
**DRAWN BY:** CW
**REVIEWED BY:** CW

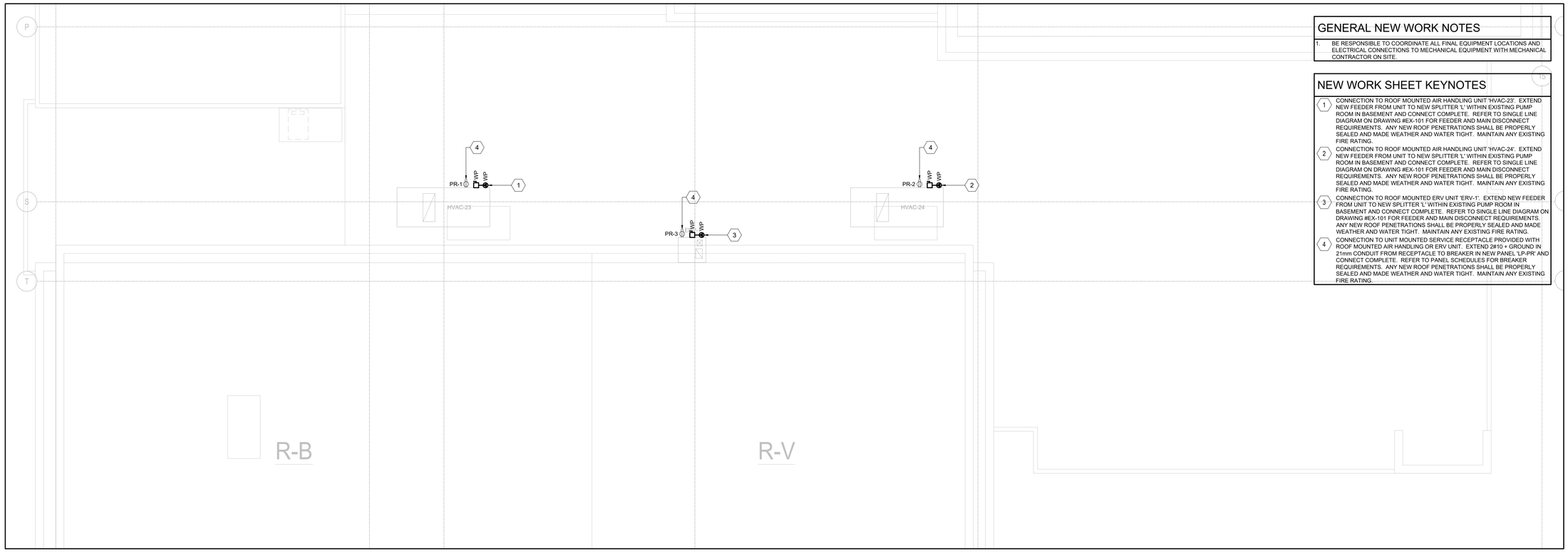
**PROJECT NORTH:**

**DRAWING NO:**

EP-103




2 PARTIAL HIGH ROOF PLAN - ELECTRICAL
SCALE: 1:100




1 PARTIAL ROOF PLAN ABOVE CORRIDOR AT CAFETERIA - ELECTRICAL
SCALE: 1:100

## GENERAL NEW WORK NOTES

1. BE RESPONSIBLE TO COORDINATE ALL FINAL EQUIPMENT LOCATIONS AND ELECTRICAL CONNECTIONS TO MECHANICAL EQUIPMENT WITH MECHANICAL CONTRACTOR ON SITE.

## NEW WORK SHEET KEYNOTES

1. CONNECTION TO ROOF MOUNTED AIR HANDLING UNIT 'HVAC-23'. EXTEND NEW FEEDER FROM UNIT TO NEW SPLITTER 'L' WITHIN EXISTING PUMP ROOM IN BASEMENT AND CONNECT COMPLETE. REFER TO SINGLE LINE DIAGRAM ON DRAWING #EX-101 FOR FEEDER AND MAIN DISCONNECT REQUIREMENTS. ANY NEW ROOF PENETRATIONS SHALL BE PROPERLY SEALED AND MADE WEATHER AND WATER TIGHT. MAINTAIN ANY EXISTING FIRE RATING.
2. CONNECTION TO ROOF MOUNTED AIR HANDLING UNIT 'HVAC-24'. EXTEND NEW FEEDER FROM UNIT TO NEW SPLITTER 'L' WITHIN EXISTING PUMP ROOM IN BASEMENT AND CONNECT COMPLETE. REFER TO SINGLE LINE DIAGRAM ON DRAWING #EX-101 FOR FEEDER AND MAIN DISCONNECT REQUIREMENTS. ANY NEW ROOF PENETRATIONS SHALL BE PROPERLY SEALED AND MADE WEATHER AND WATER TIGHT. MAINTAIN ANY EXISTING FIRE RATING.
3. CONNECTION TO ROOF MOUNTED ERV UNIT 'ERV-1'. EXTEND NEW FEEDER FROM UNIT TO NEW SPLITTER 'L' WITHIN EXISTING PUMP ROOM IN BASEMENT AND CONNECT COMPLETE. REFER TO SINGLE LINE DIAGRAM ON DRAWING #EX-101 FOR FEEDER AND MAIN DISCONNECT REQUIREMENTS. ANY NEW ROOF PENETRATIONS SHALL BE PROPERLY SEALED AND MADE WEATHER AND WATER TIGHT. MAINTAIN ANY EXISTING FIRE RATING.
4. CONNECTION TO UNIT MOUNTED SERVICE RECEPTACLE PROVIDED WITH ROOF MOUNTED AIR HANDLING OR ERV UNIT. EXTEND 2#10 + GROUND IN 21mm CONDUIT FROM RECEPTACLE TO BREAKER IN NEW PANEL 'LP-PR' AND CONNECT COMPLETE. REFER TO PANEL SCHEDULES FOR BREAKER REQUIREMENTS. ANY NEW ROOF PENETRATIONS SHALL BE PROPERLY SEALED AND MADE WEATHER AND WATER TIGHT. MAINTAIN ANY EXISTING FIRE RATING.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**PROJECT:**

ELMIRA DISTRICT SECONDARY SCHOOL - 4 UNIVERSITY AVE WEST, ELMIRA ON N3B 1K2

**DRAWING TITLE:**

ROOF PLANS - ELECTRICAL

**PROJECT NO:** ED-20-300
**SCALE:** AS SHOWN
**DRAWN BY:** CW
**REVIEWED BY:** CW

**PROJECT NORTH:**

**DRAWING NO:**

EP-104

## 26 06 20.16 - ELECTRICAL PANELBOARD SCHEDULE

| | | |
|---|---|---|
| PANEL ID: LP-PR | VOLTS: 120/208V | LOCATION: NEW PUMP ROOM |
| MAIN BUS: 100A | PHASE: 3 | FED FROM: NEW SPLITTER 'L' (BASEMENT) |
| MAIN BREAKER: NONE | WIRE: 4 | FEEDER ENTRY AT: BOTTOM |
| TYPE: | MOUNTING: RECESSED | FEEDER: REFER TO SINGLE LINE |
| INTERRUPTING CAPACITY: 10KA MIN | ENCLOSURE RATING: | REMARKS: |

| CIR NO. | DESCRIPTION | WATTAGE | | | BRK R | Ø | BRK R | WATTAGE | | | DESCRIPTION | CIR NO. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ØA | ØB | ØC | | | | ØA | ØB | ØC | | |
| 1 | 'HVAC-23' SERVICE RECEPTACLE | 1500 | - | - | 20** | A | 20** | 1500 | - | - | 'HVAC-23' SERVICE RECEPTACLE | 2 |
| 3 | 'ERV-1' SERVICE RECEPTACLE | - | 1500 | - | 20** | B | 15 | - | 150 | - | UNIT HTR 'UH-1' | 4 |
| 5 | DHW RECIRC. PUMP 'C11' | - | - | 150 | 15 | C | 15 | - | - | 500 | DHW TANK | 6 |
| 7 | SPARE BRKR | - | - | - | 20 | A | 15 | - | - | - | SPARE BRKR | 8 |
| 9 | SPARE BRKR | - | - | - | 20 | B | 15 | - | - | - | SPARE BRKR | 10 |
| 11 | SPARE BRKR | - | - | - | 15 | C | 15 | - | - | - | SPARE BRKR | 12 |
| 13 | SPARE BRKR | - | - | - | 15 | A | 15 | - | - | - | SPARE BRKR | 14 |
| 15 | SPACE | - | - | - | 15 | B | 20 | - | - | - | SPACE | 16 |
| 17 | SPACE | - | - | - | 15 | C | 15 | - | - | - | SPACE | 18 |
| 19 | SPACE | - | - | - | 15 | A | 15 | - | - | - | SPACE | 20 |
| 21 | SPACE | - | - | - | 15** | B | 15 | - | - | - | SPACE | 22 |
| 23 | SPACE | - | - | - | | C | 15 | - | - | - | SPACE | 24 |
| 25 | SPACE | - | - | - | 15** | A | 15 | - | - | - | SPACE | 26 |
| 27 | SPACE | - | - | - | | B | 15* | - | - | - | SPACE | 28 |
| 29 | SPACE | - | - | - | 15 | C | 15 | - | - | - | SPACE | 30 |

TOTAL ØA: ____W , TOTAL ØB: ____W , TOTAL ØC: ____W

NOTES:

* - PROVIDE LOCKABLE BREAKER
** - PROVIDE GFI TYPE BREAKER
*** - COORDINATE EXACT BREAKER SIZE WITH EQUIPMENT SHOP DRAWINGS
R - RECEPTACLE
L - LIGHTING

CIRCUIT NUMBERS ARE GIVEN FOR GROUPING ONLY. SITE VERIFY AVAILABLE CIRCUIT BREAKER SPACES IN PANELS DURING TENDER WALKTHROUGH.

## SCHEDULE 26 06 50.16 - LIGHTING FIXTURE SCHEDULE

| SYMBOL | TYPE | DESCRIPTION | BASIS OF DESIGN MANUFACTURER AND CAT NO. SEE NOTE 1 | VOLTAGE/ INPUT WATTS | LUMEN PACKAGE (3500 K CCT UNLESS NOTED OTHERWISE) MINIMUM 80 CRI | MOUNTING | REFERENCE | REMARKS |
|---|---|---|---|---|---|---|---|---|
| | L1 | RECESSED 2' x 4' LED TROFFER STYLE LUMINAIRE COMPLETE WITH WHITE FINISH, AND K12 ACRYLIC PRISMATIC LENS, 0.125" THICK. | PEERLESS ELECTRIC (OMNILUMEN) PEERLUX SERIES CAT.#LACH3-24G-48-40K-12P-MV | 120V | 4800 LUMEN 4000K | RECESSED T-BAR CEILING | | |
| | L4-4 | WALL MOUNTED 4'-0" LONG LED LUMINAIRE COMPLETE WITH ROUNDED EXTRUDED RIBBED FROSTED EXTRUDED LENS AND WHITE FINISH. | PEERLESS ELECTRIC (OMNILUMEN) PEERLUX SERIES CAT.#NSL-RA-4-40-40K-W-MV | 120V | 4000 LUMEN 4000K | SURFACE WALL MOUNT | | |

LIGHTING FIXTURE SCHEDULE NOTES:
1. UNLESS NOTED OTHERWISE, ACCEPTED ALTERNATE MANUFACTURES AND SUPPLIERS: ACUITY BRANDS LIGHTING, COOPER LIGHTING SOLUTIONS, CREE CANADA, HUBBELL LIGHTING, PEERLESS ELECTRIC, SIGNIFY (FORMERLY PHILIPS LIGHTING), VISCOR/VISIONEERING.
2. WHERE AN INCOMPLETE MODEL/CAT NO. IS LISTED, MANUFACTURERS/SUPPLIERS MUST CONFIRM THE PROPOSED FIXTURE WITH THE CONSULTANT A MINIMUM OF ONE WEEK PRIOR TO TENDER CLOSE.
3. SUBMIT SHOP DRAWINGS FOR CONSULTANT'S REVIEW PRIOR TO PLACING ANY ORDER.

## SCHEDULE 26 06 50.23 - LIGHTING CONTROL DEVICE SCHEDULE

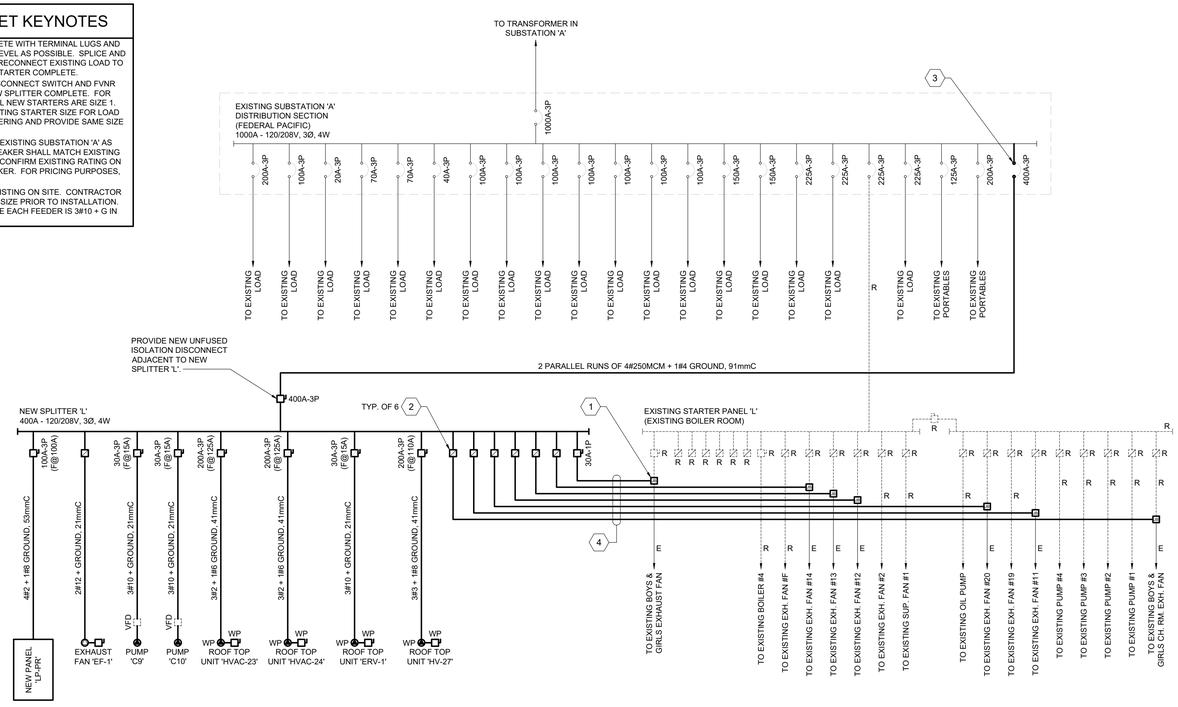
| SYMBOL | TYPE | DESCRIPTION | BASIS OF DESIGN MANUFACTURERS AND PRODUCT SERIES | CONTROL WIRING | VOLTAGE OUTPUT | MOUNTING | SPECIFICATION SECTION | SPACES SERVED | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| Z1, Z2 | UI-DIM-NV-X B | DIMMING WALL STATION, MULTI-BUTTON WALL INTERFACE CONTROL C/W ENGRAVED BUTTONS. BUTTONS: EACH ZONE CONTROLLED (SEE PLANS), DIM UP, DIM DOWN, ALL OFF, ALL ON 'X' DENOTES NUMBER OF CONTROLLED ZONES | ACUITY BRANDS CONTROLS/nLIGHT NPODM SERIES PHILIPS REVOLUTION SERIES DR2PA | DIGITAL | - | WALL | 26 09 43 | | |
| DT | DT-W-2V | WALL MOUNT OCCUPANCY SENSOR, 24 V, DUAL TECHNOLOGY SENSOR, MIN 1200 SQ FT COVERAGE | PHILIPS OCCUSWITCH CLASSIC LRM2265 SERIES WATTSTOPPER DT-200 SERIES | | 24 V | WALL, +/- 12 FEET AFF | 26 09 23 | | |
| DH | DH-C | CEILING MOUNTED PHOTOCELL SENSOR FOR INTERIOR DAYLIGHT HARVESTING | | | 24 V | | 26 09 23 | | |

LIGHTING CONTROLS SCHEDULE NOTES:
1. LIGHTING CONTROLS OF ONE MANUFACTURER THROUGH PROJECT TO ENSURE PRODUCT COMPATIBILITY.
2. ALTERNATE MANUFACTURERS: ACUITY BRANDS LIGHTING (SENORSWITCH, nLIGHT), COOPER LIGHTING SOLUTIONS, DOUGLAS LIGHTING CONTROLS, LUTRON, SIGNIFY (FORMERLY PHILIPS LIGHTING), WATTSTOPPER-LEGRAND.
3. DUAL TECHNOLOGY SENSORS: PASSIVE INFRARED/ULTRASONIC, OR PASSIVE INFRARED/MICROPHONIC, DEPENDING ON MANUFACTURER. MICROPHONIC SENSORS ACCEPTABLE IN LIEU OF ULTRASONIC.
4. POSITION CEILING MOUNTED OCCUPANCY SENSORS A MINIMUM 1200 mm (4'-0") FROM NEAREST AIR DIFFUSER, HVAC OUTLETS, HEATING BLOWERS, ETC.
5. CONFIRM INSTALLATION REQUIREMENTS, WIRING DIAGRAMS, ETC. WITH MANUFACTURER'S DETAILS.
6. SUBMIT SHOP DRAWINGS FOR CONSULTANT'S REVIEW PRIOR TO PLACING ANY ORDER.
7. CONFIRM FINISH COLOUR WITH CONSULTANT DURING SUBMITTAL REVIEW.

2 ELECTRICAL LIGHTING AND PANEL SCHEDULES
SCALE: NOT TO SCALE

## NEW WORK SHEET KEYNOTES

1. PROVIDE JUNCTION BOX COMPLETE WITH TERMINAL LUGS AND INSTALL AS CLOSE TO CEILING LEVEL AS POSSIBLE. SPLICE AND EXTEND EXISTING FEEDER AND RECONNECT EXISTING LOAD TO NEW DISCONNECT SWITCH OR STARTER COMPLETE.
2. PROVIDE NEW COMBINATION DISCONNECT SWITCH AND FVNR STARTER AND CONNECT TO NEW SPLITTER COMPLETE. FOR PRICING PURPOSES, ASSUME ALL NEW STARTERS ARE SIZE 1. CONTRACTOR TO CONFIRM EXISTING STARTER SIZE FOR LOAD BEING RETAINED PRIOR TO ORDERING AND PROVIDE SAME SIZE STARTER.
3. PROVIDE NEW BREAKER WITHIN EXISTING SUBSTATION 'A' AS INDICATED. KAIC RATING OF BREAKER SHALL MATCH EXISTING SUBSTATION. CONTRACTOR TO CONFIRM EXISTING RATING ON SITE PRIOR TO ORDERING BREAKER. FOR PRICING PURPOSES, ASSUME 25KA.
4. NEW FEEDERS SHALL MATCH EXISTING ON SITE. CONTRACTOR SHALL CONFIRM EXACT FEEDER SIZE PRIOR TO INSTALLATION. FOR PRICING PURPOSES ASSUME EACH FEEDER IS 3#10 + G IN 21mm CONDUIT.




1 SINGLE LINE DIAGRAM - ELECTRICAL
SCALE: NOT TO SCALE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**PROJECT:**

ELMIRA DISTRICT SECONDARY SCHOOL - 4 UNIVERSITY AVE WEST, ELMIRA ON N3B 1K2

**DRAWING TITLE:**

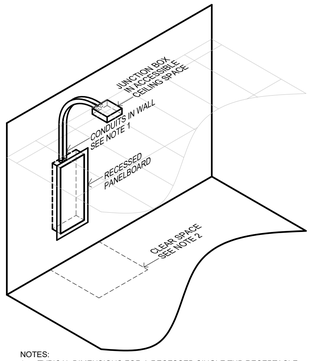
ELECTRICAL SCHEDULES AND SINGLE LINE DIAGRAM

**PROJECT NO:** ED-20-300
**SCALE:** NOT TO SCALE
**DRAWN BY:** CW
**REVIEWED BY:** CW

**PROJECT NORTH:**

**DRAWING NO:**

EX-101




NOTES:
1. TYPICAL DIMENSIONS FOR A RECESSED SINGLE TUB RECEPTACLE PANELBOARD WITH MAX. 100A FRAME SIZE BRANCH BREAKERS:
   1.1. TUB DEPTH: 146.1 mm (5.75"). ARCHITECTURAL TO ALLOW PARTITION DEPTH MINIMUM 150 mm (6") FROM FACE TO INSIDE CLEAR.
   1.2. TUB WIDTH: 508 mm (20").
   1.3. TUB HEIGHT: VARIES BASED ON NUMBER OF BRANCH BREAKERS, TYPICALLY RANGES BETWEEN 48 INCH (30 POLE), AND 72 INCH (42 POLE), BUT CAN ALSO BE TALLER.
   1.4. RECESSED PANELBOARD TRIM PLATE: TYPICALLY TUB DIMENSIONS PLUS 38.2 mm (1.5").
2. CLEAR SPACE: MINIMUM 1000 mm BY 1000 mm SQUARE BY 2000 mm HIGH. PANEL NEED NOT BE CENTRED IN THE CLEAR SPACE (ONTARIO ELECTRICAL SAFETY CODE RULE 2-308(1)).
3. BRANCH CIRCUIT CONDUIT QUANTITY AND SIZE TO ACCOMMODATE CIRCUITS AS FOLLOWS:
   3.1. UP TO 100A, 42 CIRCUIT PANELBOARD: 2 x 41 mm (1-1/2") Ø
   3.2. UP TO 225A, 42 CIRCUIT PANELBOARD: 2 x 41 mm (1-1/2") Ø
   3.3. UP TO 400A, 42 CIRCUIT PANELBOARD: 2 x 53 mm (2") Ø
   3.4. UP TO 600A, 42 CIRCUIT PANELBOARD: 3 x 53 mm (2") Ø
4. MINIMUM JUNCTION BOX SIZE: 600 mm BY 600 mm BY 75 mm.
5. WHEN INSTALLING NEW RECESSED PANELBOARD IN EXISTING PARTITION OR WALL, REINSTATE WALL AND CEILING.

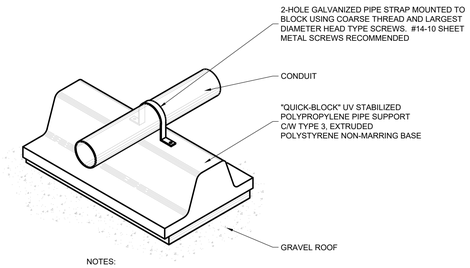
4 PANEL BOARD DETAIL
SCALE: NOT TO SCALE

## MAXIMUM BRANCH WIRING DISTANCE FOR 120 V SYSTEM AT 3% VOLTAGE DROP

| WIRE SIZE | BREAKER SIZE (AMPERES) | 15 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|
| | MAX. LOAD AT 80% (AMPERES) | 12 | 16 | 24 | 32 | 40 | 48 | 56 | 68 | 80 |
| NO. 12 | - | 24.4 | 18.3 | - | - | - | - | - | - | - |
| NO. 10 | - | 38.1 | 29.0 | 19.1 | - | - | - | - | - | - |
| NO. 8 | - | 59.4 | 44.2 | 30.5 | 22.9 | - | - | - | - | - |
| NO. 6 | - | 91.4 | 70.1 | 47.2 | 35.1 | 28.2 | 23.6 | - | - | - |
| NO. 4 | - | - | 109.7 | 73.2 | 54.9 | 42.7 | 38.1 | 32.0 | 27.4 | - |
| NO. 2 | - | - | - | 114.3 | 85.3 | 68.6 | 57.9 | 50.3 | 41.1 | 35.0 |
| NO. 1 | - | - | - | - | 103.6 | 85.3 | 73.2 | 61.0 | 54.9 | 43.4 |
| NO. 1/0 | - | - | - | - | 128.0 | 102.9 | 85.3 | 73.2 | 64.0 | 48.8 |
| NO. 2/0 | - | - | - | - | - | 121.9 | 100.6 | 86.9 | 74.7 | 60.9 |
| NO. 3/0 | - | - | - | - | - | - | 118.1 | 102.1 | 88.4 | 70.1 |
| NO. 4/0 | - | - | - | - | - | - | - | 120.4 | 102.9 | 83.8 |
| 250 MCM | - | - | - | - | - | - | - | - | 114.3 | 91.4 |
| 300 MCM | - | - | - | - | - | - | - | - | - | 103.6 |

NOTE: DISTANCES INDICATED IN METRES FROM PANEL TO LOAD FOR SINGLE PHASE.

3 MAXIMUM WIRING DISTANCE AT 3% VOLTAGE DROP
SCALE: NOT TO SCALE



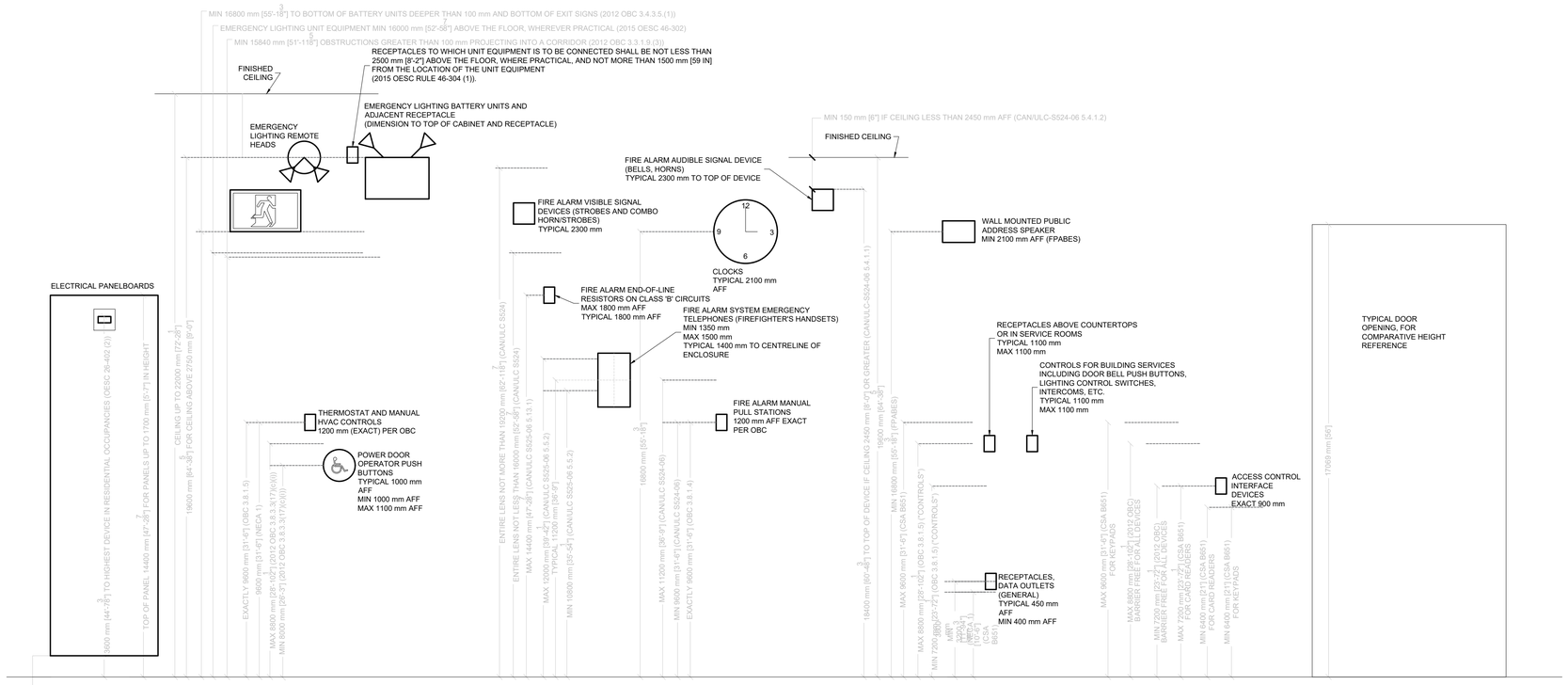

NOTES:
1. INSTALL SUPPORTS A MINIMUM OF 2400 mm (8 FEET) ON CENTRE AND AT EACH CHANGE IN DIRECTION OF CONDUIT.

2 ROOF TOP CONDUIT SUPPORT DETAIL
SCALE: NOT TO SCALE

GENERAL NOTES:
1. DEVICE DIMENSIONS TO THE CENTRELINE OF THE DEVICE, UNLESS NOTED OTHERWISE. METRIC DIMENSIONS GOVERN.
2. DEVICES, INCLUDING ACCESS CONTROL INTERFACE DEVICES, DOOR OPERATOR PUSH BUTTONS, AND FIRE ALARM MANUAL PULL STATIONS ARE NOT TO BE INSTALLED ON HOLLOW METAL DOOR FRAMES UNLESS OTHERWISE NOTED.
3. DEVICE MOUNTING HEIGHT RULES:
   3.1. EXACT DIMENSIONS, WHERE INDICATED, MUST BE FOLLOWED, AND NO DEVIANCE IS PERMITTED.
   3.2. TYPICAL DIMENSIONS, WHERE INDICATED, ARE A PREFERENCE OF THE DESIGNER FOR CONSISTENCY OF INSTALLATION.
   3.3. WHERE CIRCUMSTANCES PREVENT A TYPICAL DIMENSION FROM BEING MET, DEVICES MAY BE INSTALLED WITHIN THE RANGE OF MINIMUM AND MAXIMUM THAT MEETS ALL THE REFERENCED DOCUMENTS. CONFIRM EXACT MOUNTING HEIGHT WITH THE CONSULTANT.
4. METRIC DIMENSIONS GOVERN. DIMENSIONS PROVIDED IN OTHER UNITS PROVIDED FOR EASE OF REFERENCE ONLY.
5. REFER TO ARCHITECT OR INTERIOR DESIGNER'S DRAWINGS FOR ELEVATIONS OR MOUNTING HEIGHTS NOT DETAILED HERE.

THIS DETAIL IS SPECIFIC TO INSTALLATIONS IN ONTARIO.

REFERENCES AND DOCUMENT ORDER OF PRECEDENCE FOR ACCESSIBLE DESIGN:
1. 2012 ONTARIO BUILDING CODE (OBC), WITH AMENDMENTS EFFECTIVE JAN 1, 2015 (MANDATORY)
2. CAN/ULC S524-06 - INSTALLATION OF FIRE ALARM SYSTEMS (MANDATORY)
3. CSA B651-04 - ACCESSIBLE DESIGN FOR THE BUILT ENVIRONMENT (VOLUNTARY STANDARD).
4. FINAL PROPOSED ACCESSIBLE DESIGN STANDARD - JULY, 2010 (FPABES). THIS DOCUMENT WAS SUBMITTED TO THE ONTARIO MINISTRY OF MUNICIPAL AFFAIRS AND HOUSING FOR CONSIDERATION IN AN UPCOMING REVISION TO THE ONTARIO BUILDING CODE. TO DATE, THE RECOMMENDATIONS HAVE NOT BEEN ACTED UPON AND THE FPABES IS THEREFORE NOT MANDATORY.
5. ONTARIO ELECTRICAL SAFETY CODE (OESC).
6. NECA 1-2010: STANDARD FOR GOOD WORKMANSHIP IN ELECTRICAL CONSTRUCTION (TABLE 3 - TYPICAL MOUNTING HEIGHTS).
7. GOOD ENGINEERING JUDGEMENT AND MANUFACTURER'S RECOMMENDATIONS.




1 TYPICAL MOUNTING HEIGHTS OF WALL MOUNTED DEVICES
SCALE: NOT TO SCALE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DO NOT SCALE DRAWINGS


THE SPECIFICATIONS ARE TO BE CONSIDERED AS AN INTEGRAL PART OF THESE DRAWINGS AND NEITHER THE DRAWINGS NOR THE SPECIFICATIONS SHALL BE USED ALONE. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS. DO NOT SCALE.


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**ISSUE DATE:**

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 3 | 16-MAR-21 | ISSUED FOR TENDER |
| 2 | 08-MAR-21 | ISSUED FOR 95% TENDER REVIEW |
| 1 | 18-FEB-21 | ISSUED FOR 80% CD |

**PROJECT:**

ELMIRA DISTRICT SECONDARY SCHOOL - 4 UNIVERSITY AVE WEST, ELMIRA ON N3B 1K2

**DRAWING TITLE:**

ELECTRICAL DETAILS

**PROJECT NO:** ED-20-300
**SCALE:** NOT TO SCALE
**DRAWN BY:** CW
**REVIEWED BY:** BD/TWS

**PROJECT NORTH:**

**DRAWING NO:**

EX-102