

**Oak Ridge High School
WELDING CLASSROOM RENOVATION
Job Number: 22023**

**ADDENDUM No. 1
April 5, 2023**

This Addendum forms a part of the Contract Documents and modifies the original Construction Documents dated February 27 2023, as noted below. Work not specifically deleted, modified, changed, or altered by this Addendum shall remain in full effect as part of the original Contract Documents. All changes, modifications and clarifications listed here-in shall be included in the scope of the Work as if part of the original contract documents.

General: None

Specifications:

- 1.1 Section 00 00 01 – TABLE OF CONTENTS:
 - A. The listed specification section has been revised and is hereby formally RE-ISSUED due to the following:
 - 1. Issuance of new and deletion of specification sections.
- 1.2 Section 03 53 50 – POLISHED CONCRETE:
 - A. The listed specification section has been DELETED.
- 1.3 Section 09 67 00 – FLUID-APPLIED FLOORING:
 - A. The listed specification section has been ISSUED, footer dated 04 APR 2023, due to the following:
 - 1. Floor finish to be applied to Welding Lab.

Drawings:

- 1.4 Sheet G100 – GENERAL
 - A. The attached drawing has been revised and is hereby formally RE-ISSUED due to but not limited to the following:
 - 1. Deletion or relocation of detail drawings.
 - 2. Revision of “Wall Rating Legend”.
- 1.5 Sheet AD101 – DEMOLITION FLOOR PLAN
 - A. The attached drawing has been revised and is hereby formally RE-ISSUED due to but not limited to the following:
 - 1. Addition of Key Notes.
 - 2. Revisions to demolition scope.
 - 3. Addition of “Demolition Elevation”.
- 1.6 Sheet A101 – NEW CONSTRUCTION
 - A. The attached drawing has been revised and is hereby formally RE-ISSUED due to but not limited to the following:
 - 1. Addition of “Drawing Key Notes” to address finishes and clarification of scope.
 - 2. Revision of “Wall Rating Legend”.
 - 3. Revisions to “Floor Plan”.
 - 4. Revisions to “Exterior Elevations”
 - 5. Addition of detail drawings.
- 1.7 Sheet A300 – REFLECTED CEILING PLAN

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- A. The attached drawing has been revised and is hereby formally RE-ISSUED due to but not limited to the following:
 - 1. Addition and revision of detail drawings.
 - 2. Dimensions added to plan.

- 1.8 Sheet M100 – FLOOR PLAN – HVAC & GAS**
 - A. The attached drawing has been revised and is hereby formally RE-ISSUED due to but not limited to the following:
 - 1. Addition of plumbing scope.

- 1.9 Sheet E101 – FLOOR PLAN - LIGHTING**
 - A. The attached drawing has been revised and is hereby formally RE-ISSUED due to but not limited to the following:
 - 1. Addition of light fixtures.
 - 2. Revision to “Wall Rating Legend”.

- 1.10 Sheet E102 – FLOOR PLAN - POWER**
 - A. The attached drawing has been revised and is hereby formally RE-ISSUED due to but not limited to the following:
 - 1. Revision to “Wall Rating Legend”.

- 1.11 Sheet E103 – FLOOR PLAN – COMMUNICATIONS & HVAC WIRING**
 - A. The attached drawing has been revised and is hereby formally RE-ISSUED due to but not limited to the following:
 - 1. Revision to “Wall Rating Legend”.

- 1.12 Sheet E201 – LEGEND AND SCHEDULES**
 - A. The attached drawing has been revised and is hereby formally RE-ISSUED due to the following:
 - 1. Clarification of “Panel HWS”.

Attachments:

Specifications:

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09 76 00 – FLUID APPLIED FLOORING

Full-Size Drawings:

G100 – GENERAL
Sheet AD101 – DEMOLITION FLOOR PLAN
Sheet A101 – NEW CONSTRUCTION
Sheet A300 – REFLECTED CEILING PLAN
Sheet M100 – FLOOR PLAN – HVAC & GAS
Sheet E101 – FLOOR PLAN - LIGHTING
Sheet E102 – FLOOR PLAN - POWER
Sheet E103 – FLOOR PLAN – COMMUNICATIONS & HVAC WIRING
Sheet E201 – LEGEND AND SCHEDULES

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NOT USED

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NOT USED

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NOT USED

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NOT USED

END OF SECTION

SECTION 09 67 00
FLUID-APPLIED FLOORING

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Fluid-applied flooring and base.

1.02 RELATED REQUIREMENTS

- A. Section 07 92 00 - Joint Sealants: Sealing joints between fluid-applied flooring and adjacent construction and fixtures.

1.03 REFERENCE STANDARDS

- A. ASTM F710 - Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring; 2017.
- B. ASTM F1869 - Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride; 2016a.
- C. ASTM F2170 - Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes; 2017.
- D. ICRI 310.2R - Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, Polymer Overlays, and Concrete Repair; 2013.

1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide data on specified products, describing physical and performance characteristics; sizes, patterns and colors available.
- C. Samples: Submit two samples illustrating color and pattern for each floor material for each color specified.
- D. Concrete Subfloor Test Report: Submit a copy of the moisture and alkalinity (pH) test reports.
- E. Manufacturer's Installation Instructions: Indicate special procedures, perimeter conditions requiring special attention, and application rate for each coat.
- F. Manufacturer's Qualification Statement.
- G. Applicator's Qualification Statement.
- H. Maintenance Data: Include maintenance procedures, recommended maintenance materials, procedures for stain removal, repairing surface, and suggested schedule for cleaning.
- I. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
 - 1. Extra Top Coat Materials: 2 gallons.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with minimum three years documented experience.
- B. Applicator Qualifications: Company specializing in performing the work of this section.
 - 1. Minimum 5 years of documented experience.
 - 2. Approved by manufacturer.
- C. Supervisor Qualifications: Trained by product manufacturer.

1.06 MOCK-UP

- A. Construct mock-up(s) of fluid applied flooring to serve as basis for evaluation of texture and workmanship.
 - 1. Number of Mock-Ups to be Prepared: One.
 - 2. Use same materials and methods for use in the work.
 - 3. Locate where directed.
 - 4. Minimum Size: 48 inches by 48 inches.

- B. See Section 01 40 00 - Quality Requirements for additional requirements.
- C. Obtain approval of mock-up by Architect before proceeding with work.
- D. Approved mock-up may remain as part of the Work.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Store resin materials in a dry, secure area.
- B. Store materials for three days prior to installation in area of installation to achieve temperature stability.

1.08 FIELD CONDITIONS

- A. Maintain minimum temperature in storage area of 55 degrees F.
- B. Store materials in area of installation for minimum period of 24 hours prior to installation.
- C. Maintain ambient temperature required by manufacturer 72 hours prior to, during, and 24 hours after installation of materials.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Fluid-Applied Flooring:
 - 1. BASF Construction Chemicals-Building Systems: www.buildingsystems.basf.com.
 - 2. PPG Flooring: www.ppgpaints.com/#sle and www.ppgpmc.com/home.aspx/#sle.
 - 3. Sherwin-Williams Company: www.protective.sherwin-williams.com/#sle.
 - 4. Substitutions: See Section 01 60 00 - Product Requirements.

2.02 FLUID-APPLIED FLOORING SYSTEMS

- A. Fluid-Applied Flooring: Epoxy base coat(s), polyurethane top coat, no aggregate.
 - 1. System Thickness: 40 mils, nominal, dry film thickness (DFT).
 - 2. Texture: Slip resistant.
 - 3. Sheen: Matte.
 - 4. Color: As selected by Architect.
 - 5. Products:
 - a. BASF Construction Chemicals-Building Systems: MasterTop 1213.
 - b. PPG Paints MegeSeal Fluid Applied Flooring; MegaSeal HSPC High Solids Primer, Clear with MegaSeal SL Self Leveling Epoxy and MegaSeal HPU: www.ppgpaints.com/#sle and www.ppgpmc.com/home.aspx/#sle.
 - c. Sherwin-Williams Company; Armorseal 100% Solids Epoxy/Polyurethane: www.protective.sherwin-williams.com/#sle.
 - d. Substitutions: See Section 01 60 00 - Product Requirements.

2.03 ACCESSORIES

- A. Base Caps: Zinc with projecting base of 1/8 inch; color as selected by Architect from Manufacturer's full color range.
- B. Cant Strips: Molded of flooring resin material.
- C. Subfloor Filler: Type recommended by fluid-applied flooring manufacturer.
- D. Primer: Type recommended by fluid-applied flooring manufacturer.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that subfloor surfaces are smooth and flat within the tolerances specified for that type of work and are ready to receive flooring.
- B. Verify that wall surfaces are smooth and flat within the tolerances specified for that type of work, are dust-free, and are ready to receive flooring.
- C. Verify that subfloor surfaces are dust-free and free of substances that could impair bonding of materials to subfloor surfaces.
- D. Cementitious Subfloor Surfaces: Verify that substrates are ready for fluid-applied flooring installation by testing for moisture and alkalinity (pH).
 - 1. Test as Follows:
 - a. Alkalinity (pH): ASTM F710.
 - b. Internal Relative Humidity: ASTM F2170.
 - c. Moisture Vapor Emission: ASTM F1869.
 - 2. Obtain instructions if test results are not within limits recommended by fluid-applied flooring manufacturer.
- E. Verify that required floor-mounted utilities are in correct location.

3.02 PREPARATION

- A. Remove subfloor ridges and bumps. Fill low spots, cracks, joints, holes, and other defects with subfloor filler.
- B. Prepare concrete surfaces according to ICRI 310.2R.
- C. Apply, trowel, and float filler to achieve smooth, flat, hard surface. Grind irregularities above the surface level. Prohibit traffic until filler is cured.
- D. Vacuum clean substrate.
- E. Apply primer to surfaces required by flooring manufacturer.

3.03 INSTALLATION - ACCESSORIES

- A. Install cant strips at base of walls where flooring is to be extended up wall as base.
- B. Install terminating cap strip at top of base; attach securely to wall substrate.

3.04 INSTALLATION - FLOORING

- A. Apply in accordance with manufacturer's instructions.
- B. Apply each coat to minimum thickness required by manufacturer.
- C. Finish to smooth level surface.
- D. Install flooring in recessed type floor access covers.
- E. At movable partitions install flooring under partitions without interrupting floor pattern.
- F. Cove at vertical surfaces.

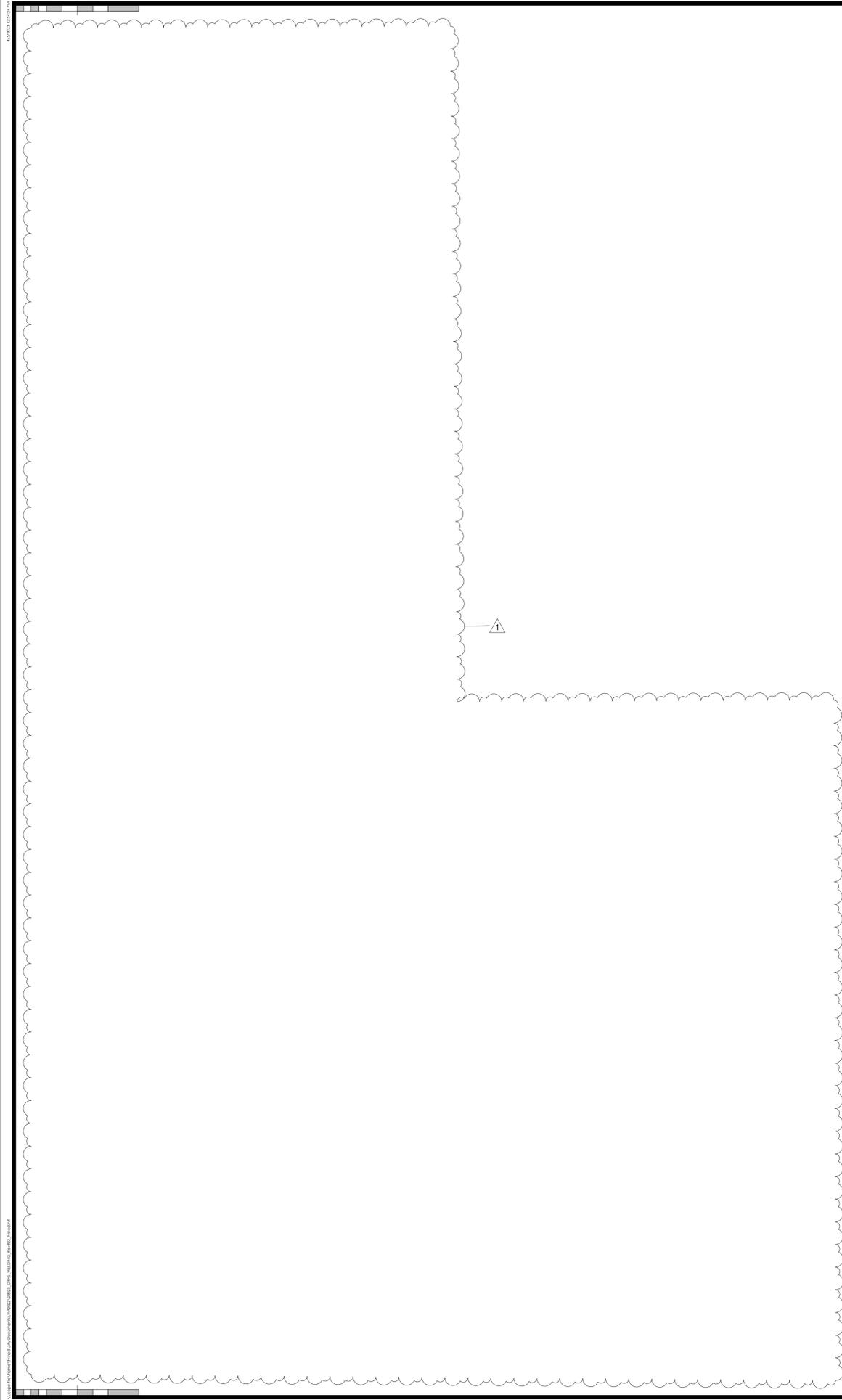
3.05 FIELD QUALITY CONTROL

- A. See Section 01 40 00 - Quality Requirements, for additional requirements.

3.06 PROTECTION

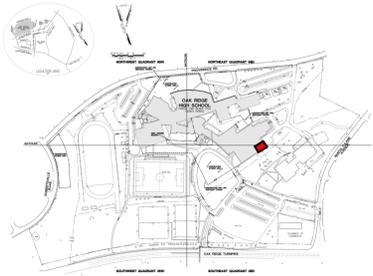
- A. Prohibit traffic on floor finish for 48 hours after installation.
- B. Barricade area to protect flooring until fully cured.

END OF SECTION



WALL RATING LEGEND

| | |
|---|-------------------------------|
|  | EXISTING 2 HOUR RATED WALL |
|  | EXISTING SMOKE PARTITION |
|  | WALL PARTITION - MASONRY - NR |
| NR - NOT RATED REFER TO G100 FOR WALL PARTITION TYPES AND ASSEMBLY | |



GENERAL NOTES

1. THE CONTRACTOR AND SUB-CONTRACTORS SHALL BE LICENSED BY THE STATE IN WHICH THE PROJECT IS LOCATED.
2. CONTRACTOR SHALL REVIEW ALL FIELD CONDITIONS PRIOR TO THE START OF CONSTRUCTION. NOTIFY ARCHITECT OF ANY DISCREPANCIES FROM DIMENSIONS SHOWN, NOTED, OR REQUIRED. DO NOT SCALE DRAWINGS. IF DIMENSIONS ARE IN QUESTION, THE CONTRACTOR SHALL OBTAIN CLARIFICATION, IN WRITING, FROM THE ARCHITECT BEFORE CONTINUING WITH CONSTRUCTION.
3. THESE DRAWINGS ARE ONE PORTION OF THE CONTRACT DOCUMENTS. AS SUCH, THEY ARE NOT TO BE DIVIDED INTO PARTIAL SETS AND DISTRIBUTED TO DIFFERENT PARTIES/TRADES WITHOUT THE REMAINING PORTIONS OF THE CONTRACT DOCUMENTS. IF PARTIAL SETS ARE DISTRIBUTED BY THE GENERAL CONTRACTOR, THE GENERAL CONTRACTOR SHALL THEN BE RESPONSIBLE FOR ALL COORDINATION AND FOR ANY ADDITIONAL COSTS RELATED TO THE COORDINATION OR ANY REMEDIATION WORK ARISING FROM THE PARTIAL DISTRIBUTION OF THE CONTRACT DOCUMENTS. THIS PAYMENT SHALL OCCUR AT NO ADDITIONAL COSTS TO THE OWNER, ARCHITECT, OR ANY OF THEIR EMPLOYEES OR CONSULTANTS.
4. THE CONTRACTOR SHALL ENSURE ALL WORK DEVELOPED WITHIN THE SCOPE OF WORK SHOWN IN THE DOCUMENTS IS IN CONFORMANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL CODES. WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE CODES LISTED IN THE DRAWINGS. IN THE EVENT OF ANY DISCREPANCY BETWEEN AGENCY REQUIREMENTS, THE CONTRACTOR SHALL OBSERVE THE MOST STRINGENT AND/OR DISCUSS WITH THE ARCHITECT PRIOR TO PROCEEDING WITH WORK.
5. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS, LICENSES, AND APPROVALS PRIOR TO COMMENCING ANY WORK. THE CONTRACTOR IS RESPONSIBLE FOR ALL PERMIT AND APPROVAL FEES UNLESS SPECIFICALLY EXCLUDED IN OTHER PARTS OF THE CONTRACT DOCUMENTS. GIVE ALL NECESSARY NOTICES AND PAY COSTS OF ALL INCIDENTAL FEES, INCLUDING THE CERTIFICATE OF OCCUPANCY.
6. THE CONTRACTOR SHALL MAINTAIN ADEQUATE PROTECTION OF EXISTING FACILITIES AND ALL HIS WORK FROM DAMAGE AND SHALL PROTECT THE OWNER'S PROPERTY, ADJACENT PROPERTY, AND PUBLIC PROPERTY FROM DAMAGES. THE CONTRACTOR SHALL MAKE GOOD ANY SUCH DAMAGES OR INJURY AT NO COST TO THE OWNER, ARCHITECT, AND CONSULTANT AND ASSUMES AND BEARS ALL RISKS OF DAMAGES TO OR FAILURE OF THE WORK DURING CONSTRUCTION.
7. UNLESS OTHERWISE NOTED, ALL MATERIALS FURNISHED AND INCORPORATED INTO THE WORK SHALL BE NEW, UNUSED, AND OF QUALITY STANDARD TO THE INDUSTRY. INSTALL MATERIALS TO THE MANUFACTURER'S RECOMMENDATIONS AND BEST STANDARDS OF CORRESPONDING TRADES.
8. THE CONTRACTOR SHALL MAKE REQUIRED ADJUSTMENTS TO CONNECTIONS TO EXISTING BUILDING SYSTEM COMPONENTS AS REQUIRED BY ACTUAL FIELD CONDITIONS AND TO NO COST TO THE OWNER OR DESIGN PROFESSIONALS.
9. THE CONTRACTOR IS TO OBTAIN AND PROVIDE SHOP DRAWINGS AND/OR MATERIAL SAMPLES OF BUILDING COMPONENTS AS OUTLINED WITHIN THE SPECIFICATIONS FOR OWNER AND ARCHITECT APPROVAL. THE CONTRACTOR SHALL ALLOW ADEQUATE TIME FOR SUCH REVIEW (2 WEEKS) OR AS OUTLINED IN THE SPECIFICATIONS AND WILL HOLD THE OWNER AND ARCHITECT HARMLESS FOR DELAYS RELATED TO THE REVIEW AND DELIVERY TIMING PROCESS. ALL WORK SHALL COMPLY WITH THE CONSTRUCTION INDUSTRY STANDARDS OF PRACTICES AS SET FORTH IN THE BUILDING CODES, MANUFACTURER'S GUIDELINES, AND HANDBOOKS FOR STANDARDS OF PRACTICE.
10. ACCESS TO THE SITE AND ALL WORK AND DELIVERIES WITHIN OR ADJACENT TO EXISTING FACILITIES IS TO BE COORDINATED WITH THE OWNER. THE CONTRACTOR IS TO MEET WITH THE OWNER AND THE ARCHITECT PRIOR TO STARTING CONSTRUCTION AS DESCRIBED WITHIN THE SPECIFICATIONS. THE CONTRACTOR WILL PRESENT, TO THE OWNER AND THE ARCHITECT, THE BUILDING PERMIT AND INSURANCE CERTIFICATES PRIOR TO STARTING CONSTRUCTION.
11. THE GENERAL CONTRACTOR SHALL PROVIDE ALL NECESSARY TOOLS, LABOR, EQUIPMENT, MATERIALS, AND OTHER REQUIRED SUPPLIES AND SERVICES TO COMPLETE THE WORK IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE REQUIREMENTS OF THE LOCAL GOVERNING AUTHORITIES. THE GENERAL CONTRACTOR SHALL ENSURE THAT ALL OPERATIONS ARE CARRIED OUT IN CONFORMANCE WITH ALL APPLICABLE STATE AND FEDERAL CODES, STATUTES AND REGULATIONS CONCERNING, BUT NOT LIMITED TO, THE PROTECTION OF LIFE AND PROPERTY.
12. GENERAL CONTRACTOR SHALL COORDINATE AND MANAGE ALL TRADES AND ASPECTS OF THE WORK AS DESCRIBED IN THE CONTRACT DOCUMENTS.
13. GENERAL CONTRACTOR SHALL RETAIN ONE SET OF PLANS IN GOOD CONDITION TO NOTE AND DOCUMENT ALL CHANGES DURING CONSTRUCTION. THIS SET OF PLANS SHALL BE RETURNED TO THE OWNER AS PART OF THE REQUIRED CLOSE-OUT PACKAGE.
14. IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE GENERAL CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR CONDITION AT THE JOB SITE INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY DURING THE PERFORMANCE OF THE WORK. THE REQUIREMENT SHALL APPLY CONTINUOUSLY AND SHALL INCLUDE, BUT NOT BE LIMITED TO, MAINTAINING ALL BARRICADES, WARNING SIGNS, FLASHING LIGHTS, AND TRAFFIC CONTROL DEVICES DURING CONSTRUCTION. THE CONTRACTOR SHALL COMPLY WITH OSHA REGULATIONS AND SAFETY REQUIREMENTS.
15. THE CONTRACTOR SHALL KEEP THE PROJECT WORK IN A CLEAN AND ORDERLY FASHION AT ALL TIMES DURING CONSTRUCTION. LEAVE ALL WORK AREAS AND FINISHED SPACES "BROOM CLEAN" DAILY.
16. ALL RATED ASSEMBLIES MUST BE INSTALLED IN ACCORDANCE WITH THE MOST CURRENT REQUIREMENTS OF THE TESTING AGENCY NOTED IN THE CONTRACT DOCUMENTS. ALL ASSEMBLIES SHALL BE INSTALLED AND COORDINATED WITH ALL DISCIPLINES AS OUTLINED IN THE APPLICABLE TESTING AGENCY DETAILS AS CALLED OUT IN THE LIFE SAFETY DESIGN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING CLARIFICATION FROM THE OWNER'S REPRESENTATIVE BEFORE CONTINUING CONSTRUCTION.
17. ALL FIRE-RATED ASSEMBLIES NEED TO BE CONTINUOUS BETWEEN SPACES. ASSEMBLY AND INSTALLATION OF ALL SPECIFIED COMPONENTS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTION AND INDUSTRY STANDARDS.
18. FIREPROOFING, SEALANTS, AND DAMPERS MAY NOT BE SHOWN ON SOME DRAWINGS FOR CLARITY. ALL PENETRATIONS THROUGH NEW OR EXISTING WALLS SHALL BE MADE CLEANLY AND SEALED AS REQUIRED TO MEET THE FIRE, SMOKE OR SOUND RATING REQUIREMENTS AS OUTLINED WITHIN THE DRAWINGS AND SPECIFICATIONS.
19. PROVIDE FIRE RETARDANT TREATED WOOD BLOCKING (2X6 NOM. OR 16 GA STEEL PLATE UNLESS NOTED OTHERWISE), FOR ALL WALL MOUNTED RAILINGS, MILLWORK, SHELVES, EQUIPMENT, COAT RODS, ETC.). PROVIDE GROUNDS FOR ALL ACCESSORIES, EQUIPMENT, AND DEVICES SPECIFIED UNDER THE CONTRACT AND AS INDICATED FOR INSTALLATION OF EQUIPMENT BY OTHERS OR DEFINED AS TO BE PROVIDED BY THE OWNER.
20. ALL DIMENSIONS ON THE FLOOR PLAN ARE FROM FACE OF STUD, FACE OF MASONRY, OR FACE OF CONCRETE UNLESS NOTED OTHERWISE.
21. DIMENSIONS NOTED AS "CLEAR" SHALL BE FROM FINISHED MATERIAL FACE TO FINISHED MATERIAL FACE. ALL WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE DIMENSIONS.
22. TYPICAL DOORS SHALL BE LOCATED 4" FROM NEAREST FINISHED FACE OF WALL OR FINISHED CORNER TO OUTSIDE FACE OF JAMB UNLESS NOTED OTHERWISE.
23. INTERIOR PARTITION AND CEILING MOVEMENT CONTROL:
 - A. VERTICAL CONTROL JOINTS FOR ANY GWB WALL LENGTH ARE TO OCCUR AT NO MORE THAN 30'-0" O.C., (900 SQ. FT. MAX) IN THE HORIZONTAL DIRECTION UNLESS NOTED OTHERWISE. PROVIDE SHOP DRAWING, SHOWING LOCATION FOR ARCHITECT APPROVAL.
 - B. HORIZONTAL CONTROL JOINTS FOR ANY GWC CEILINGS ARE TO OCCUR AT NO MORE THAN 30'-0" O.C., (900 SQ. FT. MAX) IN THE HORIZONTAL DIRECTION UNLESS NOTED OTHERWISE. PROVIDE SHOP DRAWING SHOWING LOCATION FOR ARCHITECT APPROVAL.
 - C. THE TYPICAL MOVEMENT OF THE STRUCTURE DUE TO DEFLECTION AT THE HEAD OF THE WALL CONSTRUCTION RUNNING TO THE UNDERSIDE OF THE STRUCTURE SHALL BE PLUS OR MINUS 1/2"
24. FIRE WALLS, FIRE BARRIERS, FIRE PARTITIONS, SMOKE BARRIERS, AND SMOKE PARTITIONS OR ANY OTHER WALL REQUIRED TO HAVE PROTECTED OPENINGS OR PENETRATIONS SHALL BE EFFECTIVELY AND PERMANENTLY IDENTIFIED WITH SIGNS OR STENCILING. SUCH IDENTIFICATION SHALL:
 - A. BE LOCATED IN ACCESSIBLE CONCEALED FLOOR, FLOOR - CEILING, OR ATTIC SPACE.
 - B. BE LOCATED WITHIN 15 FEET OF THE END OF EACH WALL AND AT INTERVALS NOT EXCEEDING 30 FEET MEASURED HORIZONTALLY ALONG THE WALL OR PARTITION; AND
 - C. INCLUDE LETTERING NOT LESS THAN 3 INCH IN HEIGHT WITH A MINIMUM 3/8" STROKE IN A CONTRASTING COLOR INCORPORATING THE SUGGESTED WORKING, "FIRE AND/OR SMOKE BARRIER - PROTECT ALL OPENINGS" OR OTHER WORDING.
24. THE CONTRACTOR, HIS SUBCONTRACTORS, AND ALL OTHER PROVIDING WORKMAN'S COMPENSATION, BUILDERS RISK INSURANCE, AND OTHER NECESSARY INSURANCE, PROVIDE CERTIFICATES TO ARCHITECT PRIOR TO COMMENCING WORK. DESIGN ADEQUATE AND SAFELY ERECT BRACING, SHORING, TEMPORARY SUPPORT, ETC. IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
25. THE CONTRACTOR'S PRICES SHALL INCLUDE ALL STATE AND LOCAL TAXES, DELIVERY, AND INSTALLATION COST. THE CONTRACTOR WILL PROVIDE ALL NECESSARY MEASURES TO PROTECT THE WORKERS AND FACILITY OCCUPANTS DURING THE CONSTRUCTION PROCESS.
26. THESE CONSTRUCTION DOCUMENTS INDICATE MATERIALS AND METHODS OF CONSTRUCTION TO SET STANDARDS OF QUALITY AND/OR PERFORMANCE. OTHER MATERIALS AND/OR METHODS SHALL BE CONSIDERED FOR ACCEPTANCE BY THE ARCHITECT ONLY AFTER THE SUCCESSFUL BIDDER IS SELECTED. SUBSTITUTION MUST OFFER A FINANCIAL SAVINGS TO THE PROJECT AND SUBSTITUTION DOES NOT AFFECT THE VISIBLE APPEARANCE INDICATED IN ANY WAY WHATSOEVER.
27. THE CONTRACTOR SHALL WARRANT AND GUARANTEE ALL MATERIALS AND WORKMANSHIP FOR ALL PORTIONS OF THE WORK FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL COMPLETION. ACCEPTANCE BY THE OWNER AND SHALL REPAIR OR REPLACE ALL WORK WHICH BECOMES DEFECTIVE, AT NO EXPENSE TO THE OWNER.
28. ALL FIRE-RATED ASSEMBLIES NEED TO BE CONTINUOUS BETWEEN SPACES AND EXTEND TO THE UNDERSIDE OF THE STRUCTURAL DECK AND BE SEALED TIGHTLY WITH NON-COMBUSTIBLE SEALANT. REFER TO INTERIOR WALL TYPE LEGEND FOR TYPICAL WALL TYPES FOR TYPICAL WALL TYPES AND FIRE RATINGS. ALL WALL TYPES SHALL CONFORM TO THE PARTITION LEGEND UNLESS INDICATED OTHERWISE ON FLOOR PLANS, ENLARGED PLANS OR DETAILS.
29. ALL PENETRATIONS OF FIRE RATED WALLS, FLOORS/CEILING ASSEMBLIES, AND ROOF/CEILING ASSEMBLIES BY ELECTRICAL CABLES, CABLE TRAY, ELECTRICAL CONDUIT, MECHANICAL PIPING, PLUMBING PIPING SHALL BE PROTECTED BY THROUGH-PENETRATIONS FIRESTOP SYSTEMS AS TESTED BY RECOGNIZED TESTING LABORATORIES IN ACCORDANCE WITH (ASTM E 814) UL 1479 "FIRE TESTS OF THROUGH-PENETRATION FIRESTOPPS". VERIFY THAT EXISTING PENETRATION IN RATED WALLS MEET REQUIREMENTS. WHERE A DETAIL IS SHOWN OR NOTE IS DESCRIBED FOR ONE CONDITION, IT SHALL APPLY FOR ALL LIKE OR SIMILAR CONDITIONS EVEN THOUGH NOT SPECIFICALLY NOTED ON THE DRAWINGS.
31. CONTRACTOR SHALL VERIFY AND MAINTAIN ALL THE REQUIRED CLEARANCES AROUND INSTALLED EQUIPMENT.
32. THE CONTRACTOR SHALL COORDINATE AND VERIFY ALL MECHANICAL, PLUMBING, AND ELECTRICAL PORTIONS OF THE WORK THE LOCATIONS OF ALL PIPING, DUCTWORK, TRENCHES, SLEEVES, SPECIAL BOLTING FOR EQUIPMENT, CONDUITS, ETC., PIPE SLEEVES, FRAMED OPENINGS, AND ANY MISC. OPENINGS SHOWN ON ARCHITECTURAL DRAWINGS. THESE OPENINGS SHALL BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE ARCHITECT DETAILS AS REFERENCED ON THE DRAWINGS.
33. THE CONTRACTOR SHALL COORDINATE AND VERIFY ALL MECHANICAL, PLUMBING, AND ELECTRICAL PORTIONS OF THE WORK THE LOCATIONS OF ALL PIPING, DUCTWORK, TRENCHES, SLEEVES, SPECIAL BOLTING FOR EQUIPMENT, CONDUITS, ETC., PIPE SLEEVES, FRAMED OPENINGS, AND ANY MISC. OPENINGS SHOWN ON ARCHITECTURAL DRAWINGS. THESE OPENINGS SHALL BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE ARCHITECT DETAILS AS REFERENCED ON THE DRAWINGS.
34. ALL WOOD TRIM TO BE MITERED AT INTERSECTIONS AND FREE FROM VISIBLE DEFECTS. SET ALL NAIL HEADS AND FILL WITH APPROPRIATE FILLER AND SAND SMOOTH BEFORE PAINTING AND FINISHING.
35. ALL FASTENERS AND ATTACHMENTS SHALL BE FULLY CONCEALED FROM VIEW, AND SHALL BE NON-CORROSIVE SUITABLE FOR THE MATERIAL INVOLVED. FASTENERS CAUSING STAINS OR DISCOLORATION OF FINISHED SURFACE WILL BE CAUSE FOR REPLACEMENT AT NO COST TO THE OWNER. DIMENSIONED OPENINGS IN MASONRY WALLS ARE TO BE CONSIDERED MASONRY OPENINGS UNLESS NOTED OTHERWISE.
36. DIMENSIONED OPENINGS IN STUD WALLS ARE TO BE CONSIDERED ROUGH OPENINGS (OUTSIDE OF FRAME TO OUTSIDE OF FRAME), UNLESS NOTED OTHERWISE. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING DETAILS AND SCHEDULED OPENING SIZES.
37. COLUMN LINE DIMENSIONS ARE TO THE CENTERLINE OF STRUCTURAL STEEL UNLESS NOTED OTHERWISE.
38. ALL DISSIMILAR METALS SHALL BE ISOLATED FROM EACH OTHER TO AVOID GALVANIC CORROSION.
39. A FINISH INDICATION ON A WALL SHALL MEAN THE ENTIRE LENGTH AND HEIGHT OF WALL IS TO BE FINISHED OR FIRE-RATED AS INDICATED PROVIDED EXPANSION AND CONTROL JOINTS INSTALL WORK AS PER PRODUCT MANUFACTURER'S STANDARDS.

**OAK RIDGE HIGH SCHOOL
WELDING CLASSROOM RENOVATION**

1450 OAK RIDGE TURN PIKE
OAK RIDGE, TENNESSEE 37830

COPE ARCHITECTURE

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GENERAL

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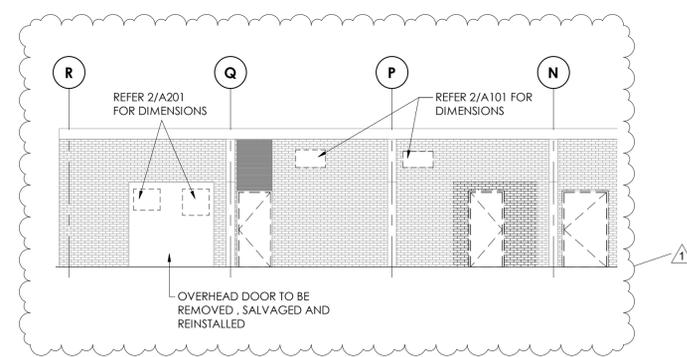
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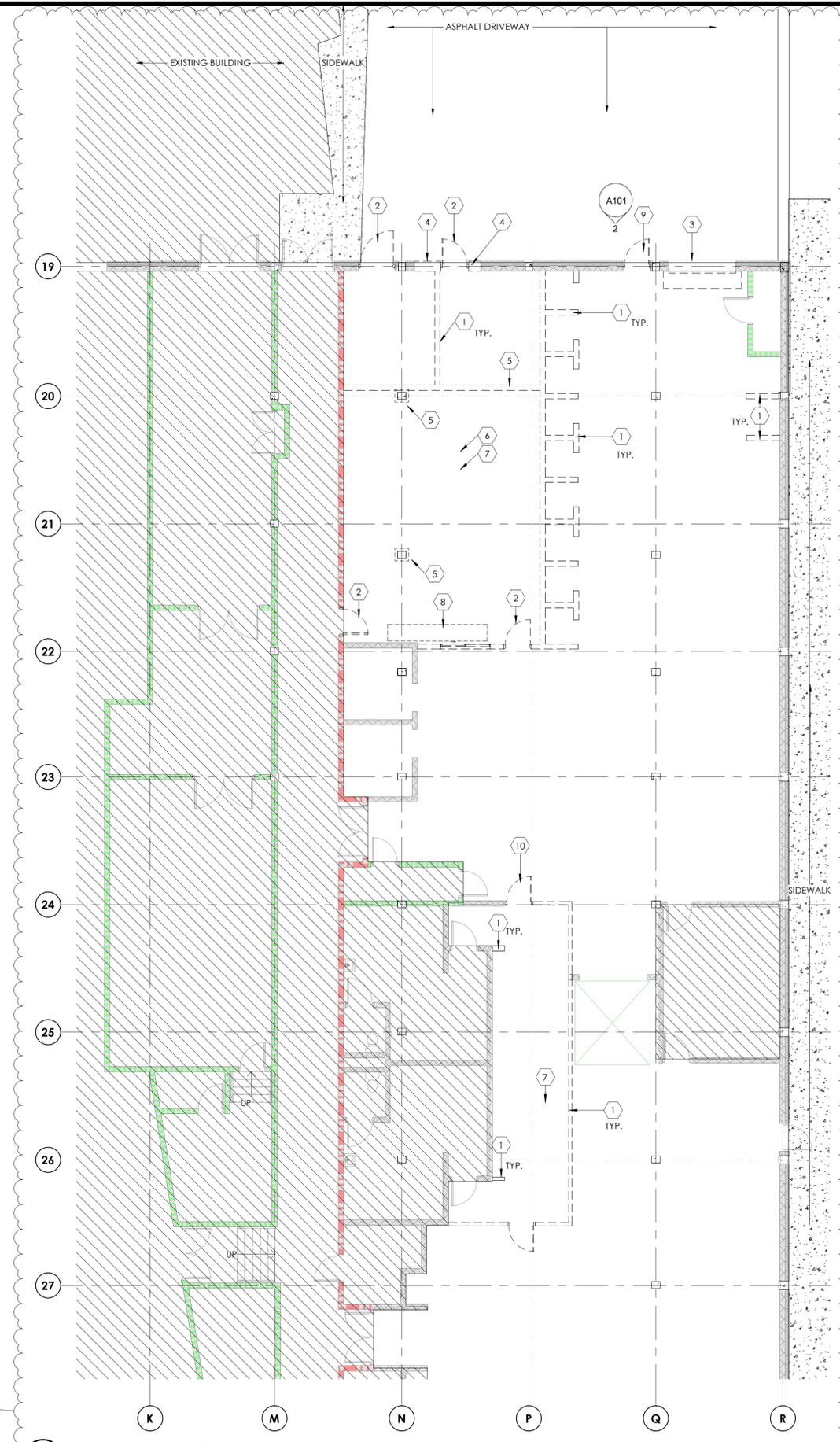
DWG NO. **G100**

PROJECT NO. 22023

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2 EXTERIOR ELEVATION - DEMOLITION
AD101 1/8" = 1'-0"



1 DEMOLITION FLOOR PLAN
AD101 1/8" = 1'-0"



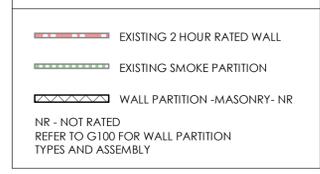
GENERAL DEMOLITION NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR THE SITE INVESTIGATION PRIOR TO DEMOLITION TO REVEAL FULL SCOPE OF WORK.
2. DEMOLITION NOTES PERTAIN TO THE GENERAL SCOPE OF WORK AND ARE TO BE CONSIDERED AS PERTAINING TO ALL CONDITIONS SIMILAR TO THOSE INDICATED, WHETHER SPECIFICALLY IDENTIFIED OR NOT.
3. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING ALL CONSTRUCTION IS PROPERLY BRACED DURING DEMOLITION AND RENOVATION. IF DURING DEMOLITION, CONDITIONS ARE REVEALED THAT MAY JEOPARDIZE THE INTEGRITY OF THE STRUCTURE OR PRECLUDE FOLLOWING THE DESIGN INTENT, CONTRACTOR IS TO NOTIFY THE ARCHITECT IMMEDIATELY.
4. THE CONTRACTOR IS RESPONSIBLE FOR ALL METHODS OF CONSTRUCTION OR DEMOLITION AND COORDINATION OF THE SAME INCLUDING; GENERAL CONSTRUCTION, STRUCTURAL, MECHANICAL, ELECTRICAL AND PLUMBING UNLESS NOTED OTHERWISE.
5. ALL DEMOLITION, CUTTING AND PATCHING SHALL BE DONE TO MAINTAIN THE INTEGRITY OF EXISTING STRUCTURE AND IS TO PROVIDE A SMOOTH FINISHED APPEARANCE WHEN COMPLETED.
6. CONTRACTOR IS RESPONSIBLE FOR PATCHING AND REPAIRING ALL AREAS OF EXISTING SURFACES DAMAGED BY DEMOLITION TO MATCH ADJACENT CONSTRUCTION UNLESS OTHERWISE SHOWN TO BE DEMOLISHED.
7. THE CONTRACTOR SHALL COORDINATE INTERRUPTION OR DISCONNECTION OF UTILITIES WITH APPROPRIATE AGENCIES AND AUTHORITIES. NOTIFY OWNER 48 HOURS IN ADVANCE OF SCHEDULED INTERRUPTIONS.
8. ALL PENETRATIONS, NEW OR EXISTING, IN EXISTING RATED WALLS TO BE REPAIRED WITH CODE APPROVED MATERIAL OF EQUAL OR GREATER FIRE RESISTANCE. THE CONTRACTOR SHALL CAREFULLY REMOVE EXISTING EQUIPMENT, FURNISHINGS, FINISHES, ETC. AND PROPERLY STORE THESE ITEMS FOR THE OWNER TO REUSE OR SALVAGE AS NOTED ON THE PLANS. ALL SALVAGED MATERIALS PROPERTY OF THE OWNER UNLESS NOTED OTHERWISE.
9. CUT, PATCH, AND REPAIR ALL DAMAGED WALLS, FLOORS AND CEILINGS AS REQUIRED TO RECEIVE NEW FINISHES OR UTILITIES. REPLACE EXISTING DAMAGED FINISHES WITH NEW FINISHES OR REFINISH ENTIRE AREA OF CONCERN WITH NEW. (SEE NEW CONSTRUCTION/FINISH PLANS AS NEEDED).
10. ALL AREAS TO RECEIVE NEW CONSTRUCTION ARE TO BE STRIPPED OF EXISTING FINISHES AND PROPERLY PREPARED TO RECEIVE THE NEW CONSTRUCTION WITH PROPER BOND.
11. ALL UNUSED AND ABANDONED DUCTING, PIPING, CONDUIT, WIRING, ETC. IS TO BE REMOVED IN ITS ENTIRETY. CAP BELOW TOP OF SLAB AND PATCH CONCRETE AS REQUIRED. COORDINATE CONCRETE FINISH WITH FINISH SCHEDULE.
12. DEMOLITION WORK SHALL BE COORDINATED WITH ALL SUBCONTRACTORS TO ENSURE UNINTERRUPTED PROGRESS OF NEW CONSTRUCTION WORK.
13. ALL WALLS INDICATED TO BE DEMOLISHED SHALL BE REMOVED FULL HEIGHT UNLESS NOTED OTHERWISE AFTER REMOVAL. FLOORS, CEILINGS AND ADJACENT WALLS SHALL BE REPAIRED AND FINISHED TO MATCH EXISTING.
14. SEE NEW CONSTRUCTION PLAN FOR OTHER NOTES AND DIMENSIONS.
15. REMOVE ALL EXISTING SUSPENDED GRID CEILING TILES AND LIGHTS (INCLUDING EXIT LIGHT AND EMERGENCY LIGHTS) TO EXTENT SHOWN ON REFLECTED CEILING PLAN.
16. COORDINATE WITH OWNER TO REMOVE ALL SIGNAGE THAT THEY WISH TO SALVAGE WITHIN CONSTRUCTION LIMITS; OTHERWISE REMOVE REMAINING SIGNAGE.

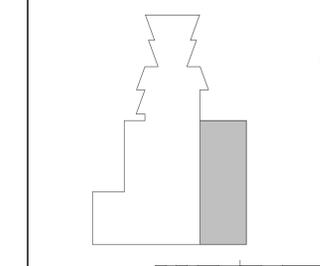
DEMOLITION PLAN KEY NOTES

1. REMOVE CMU WALL AND ALL COMPONENTS TO FINISH FLOOR OR WALL SURFACE AND GRIND SLAB SMOOTH. DRILL ANY EXPOSED REINFORCING REMAINING FROM CMU WALL BELOW FINISHED SURFACE BY 1" MINIMUM AND PATCHED.
2. REMOVE DOOR AND ALL CONNECTED COMPONENTS OF HOLLOW METAL FRAME COMPLETELY.
3. REMOVE AND REINSTALL OVERHEAD COILING DOOR, FRAME AND ALL COMPONENTS.
4. REMOVE BRICK VENEER AND CMU WALL IN PREPARATION FOR INSTALLATION OF EXISTING OVERHEAD COILING DOOR. COORDINATE DIMENSIONS FOR REMOVAL WITH REQUIREMENTS FOR REINSTALLED OVERHEAD COILING DOOR.
5. REMOVE GYPSUM BOARD FROM CONCRETE COLUMNS COMPLETELY FROM SLAB TO DECK.
6. REMOVE VCT FLOORING TO EXISTING SLAB AND REMOVE ALL REMAINING ADHESIVE COMPLETELY.
7. REMOVE ACOUSTICAL TILE CEILING OR GYPSUM BOARD CEILING, LIGHT FIXTURES, DUCTWORK, DIFFUSERS, GRILLES, SUSPENSION GRID, FRAMING AND ALL OTHER ASSOCIATED COMPONENTS. COORDINATE LIGHTING AND POWER CIRCUITRY WITH ELECTRICAL PLANS.
8. REMOVE AND SALVAGE MILLWORK AND COORDINATE WITH OWNER.
9. REMOVE HOLLOW METAL DOOR AND SALVAGE HARDWARE. FRAME IS TO REMAIN.
10. REMOVE AND REINSTALL HOLLOW METAL DOOR, FRAME AND HARDWARE.

WALL RATING LEGEND



Key Plan



**OAK RIDGE HIGH SCHOOL
WELDING CLASSROOM RENOVATION**
1450 OAK RIDGE TURN PIKE
OAK RIDGE, TENNESSEE 37830

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DEMOLITION FLOOR PLAN

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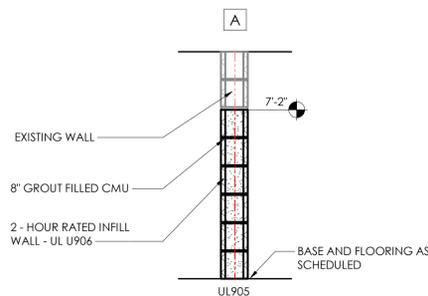
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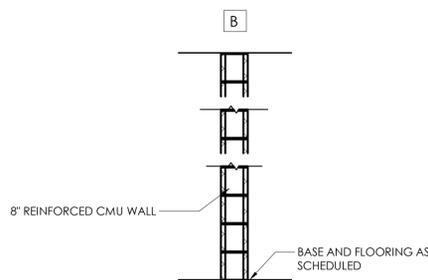


DWG NO. **AD101**
PROJECT NO. 22023

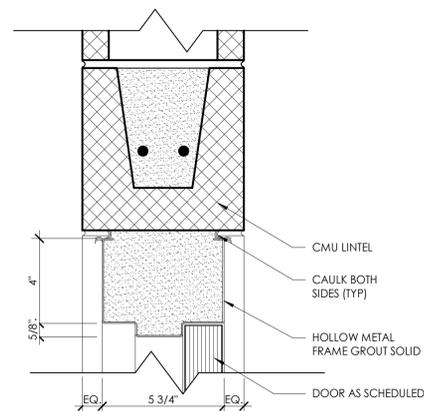
FULL SHEET SIZE: 24"x36"



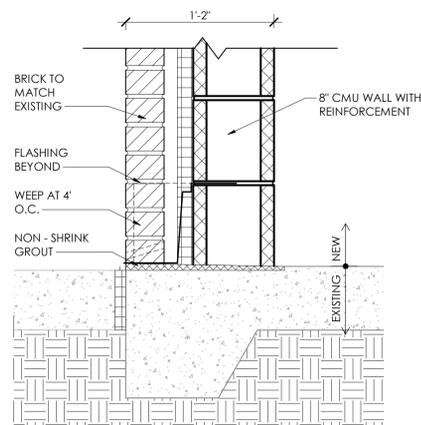
7 WALL TYPE A
A101 1/2" = 1'-0"



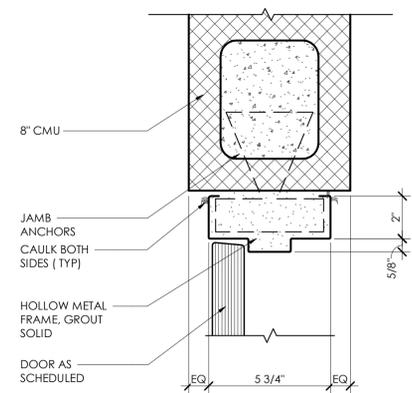
6 WALL TYPE B
A101 1/2" = 1'-0"



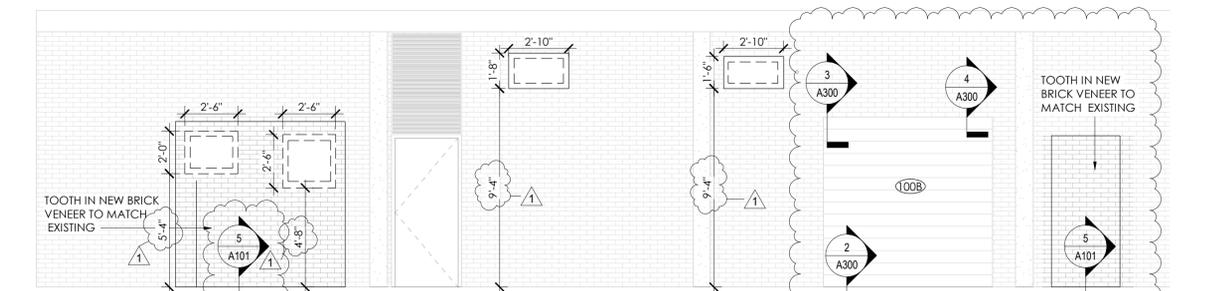
4 HM DOOR - HEAD 8" CMU
A101 3" = 1'-0"



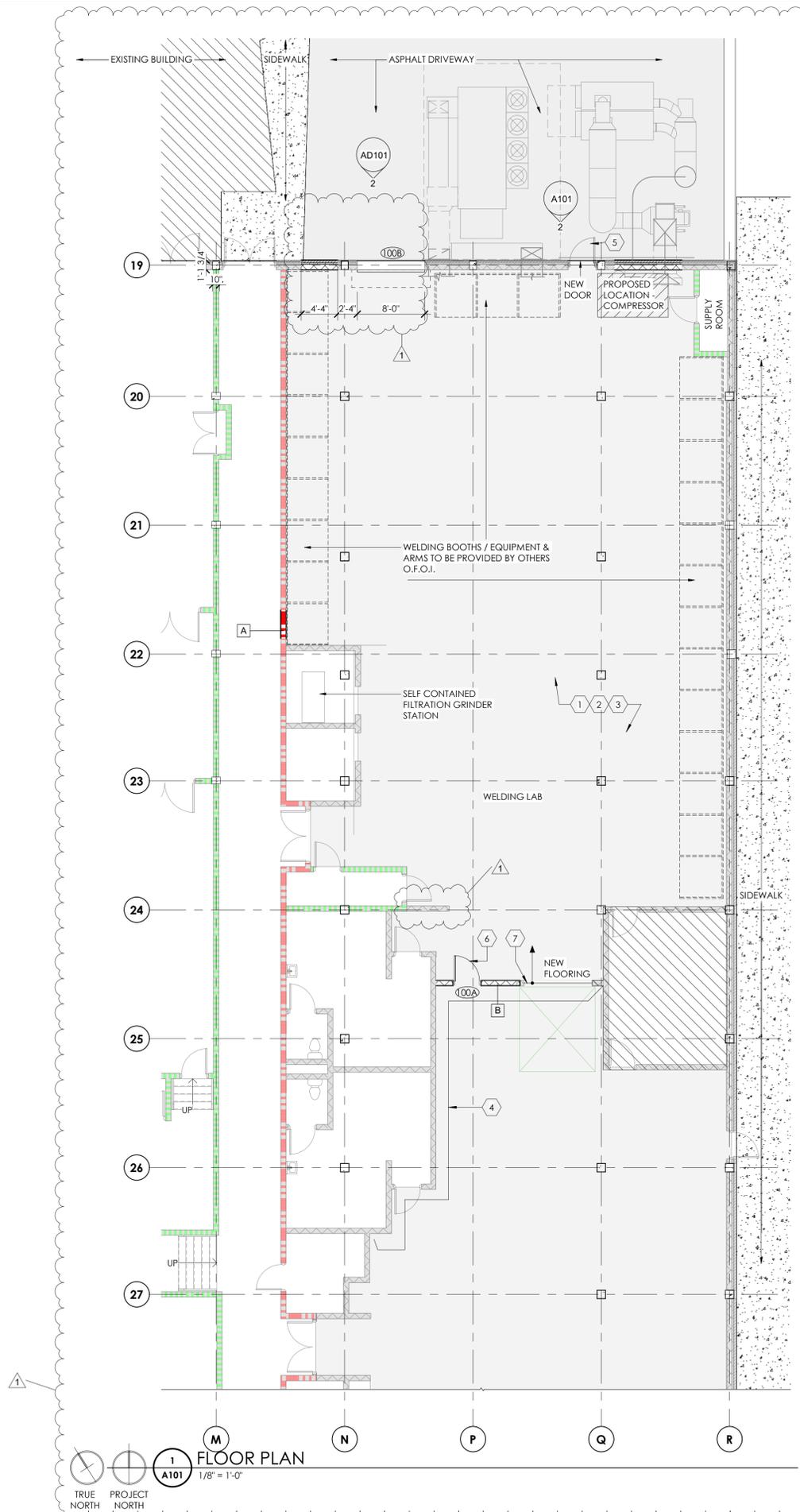
5 INFILL DETAIL AT SILL
A101 1 1/2" = 1'-0"



3 HM DOOR - JAMB 8" CMU
A101 3" = 1'-0"



2 EXTERIOR ELEVATION
A101 1/4" = 1'-0"



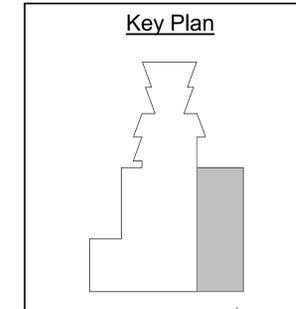
1 FLOOR PLAN
A101 1/8" = 1'-0"

DRAWING NOTES

1. WELDING LAB TO RECEIVE FLUID - APPLIED FLOORING PER SPECIFICATION SECTION 09 67 00.
2. PAINT TYPE 1 (PT-1): APPLY TO ALL EXPOSED WALLS, HOLLOW METAL DOORS AND FRAMES UP TO 9'-0" ABOVE FINISH FLOOR.
3. PAINT TYPE 2 (PT-2): APPLY ABOVE 9'-0" ABOVE FINISH FLOOR TO ALL EXPOSED WALLS AND TO ALL EXPOSED STRUCTURE, CONDUITS AND PIPING UNLESS NOTED OTHERWISE.
4. PAINT TYPE 3 (PT-3): MATCH EXISTING PAINT AND APPLY TO DECK ON WALLS AS NOTED.
5. NEW HOLLOW METAL EXTERIOR DOOR TO BE INSTALLED IN EXISTING FRAME WITH SALVAGED HARDWARE.
6. REINSTALL SALVAGE DOOR AND FRAME WITH EXPANSION ANCHORS.
7. TERMINATE NEW FLOORING AT TRANSITION STRIP.

WALL RATING LEGEND

- EXISTING 2 HOUR RATED WALL
 - EXISTING SMOKE PARTITION
 - WALL PARTITION - MASONRY - NR
- NR - NOT RATED
REFER TO G100 FOR WALL PARTITION TYPES AND ASSEMBLY



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NEW CONSTRUCTION

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DWG NO. **A101**
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REFLECTED CEILING PLAN

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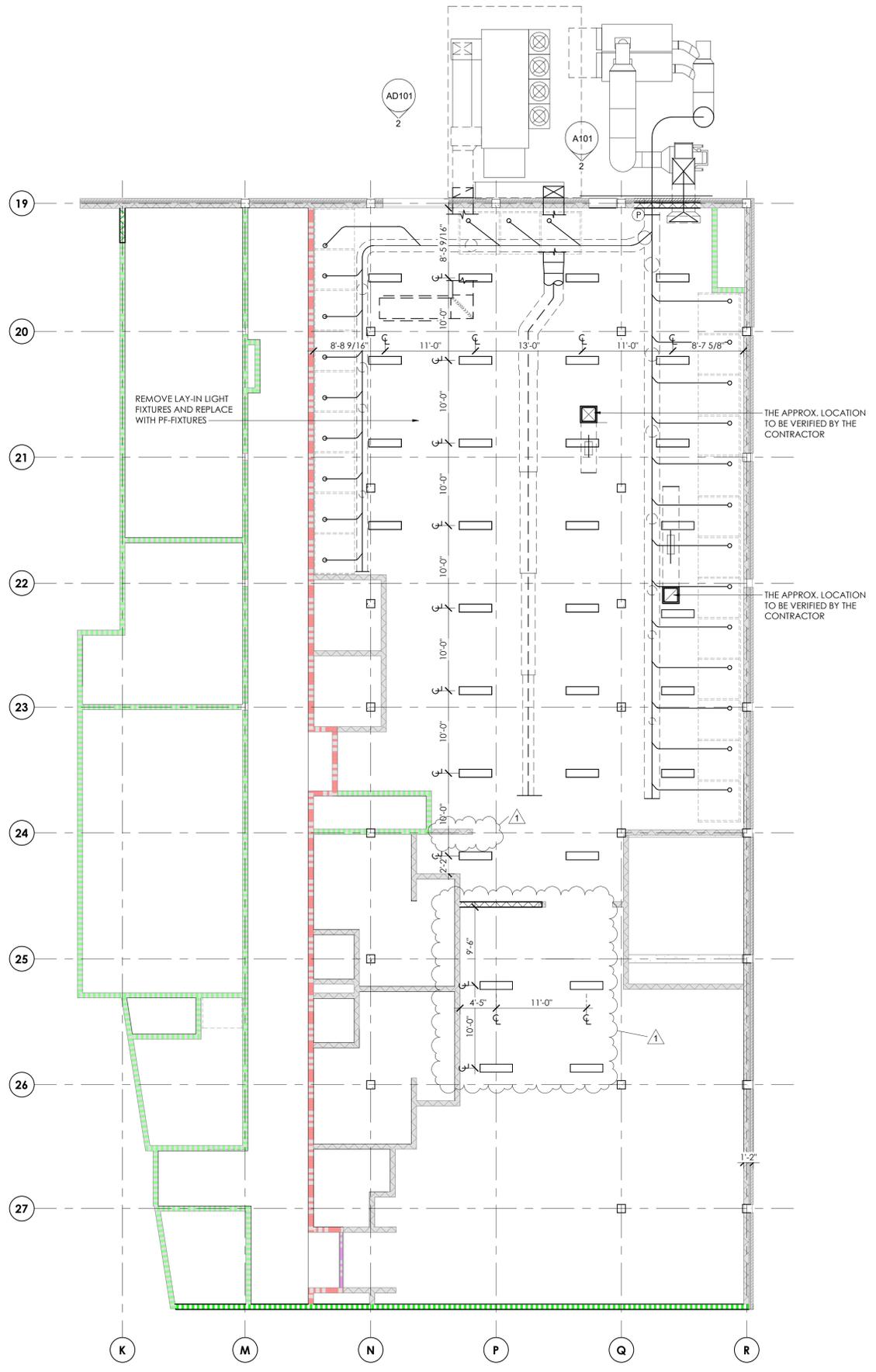
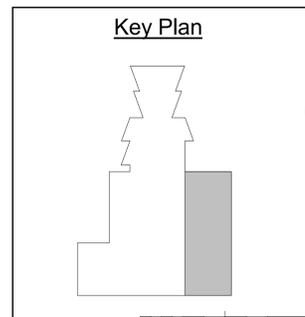


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A300
PROJECT NO.
22023

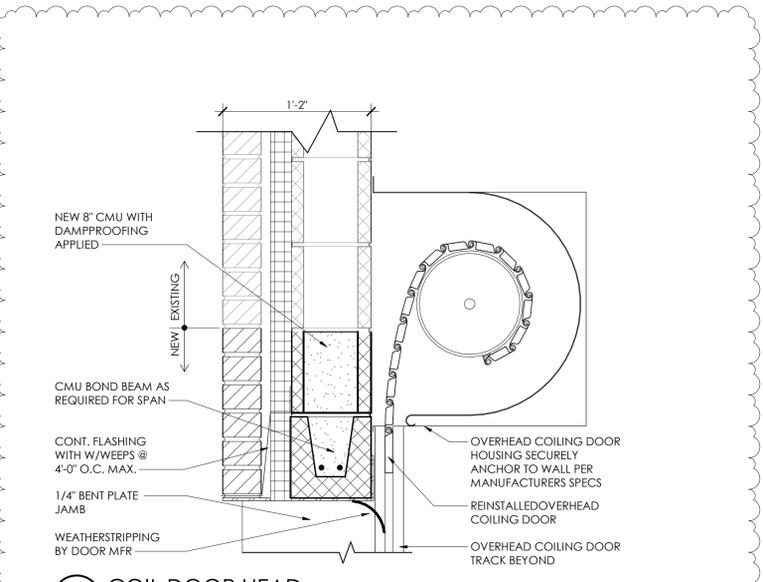
REFLECTED CEILING PLAN LEGEND

- SPRINKLER HEAD
- EMERGENCY LIGHT UNIT
- COMBINATION EXIT LIGHT AND EMERGENCY LIGHT
- CEILING MOUNTED EGRESS EXIT LIGHTS, CHEVRONS INDICATE TRAVEL DIRECTION WALL MOUNTED
- SMOKE DETECTOR
- OCCUPANCY SENSOR
- EXTERIOR WALL MOUNTED LIGHT FIXTURE
- 2X4 LED FIXTURE
- 2X2 LED FIXTURE
- 1X4 CEILING LIGHT
- 8" RECESSED CAN LIGHT
- HVAC SUPPLY DIFFUSER
- HVAC R/A GRILL
- EXHAUST FAN

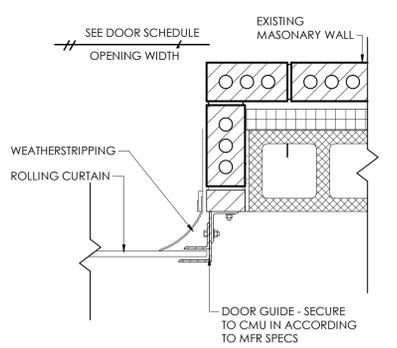
- CEILING NOTES**
- LIGHT FIXTURES DIFFUSERS, GRILLES, AND OTHER EQUIPMENT ARE LOCATED ON THE REFLECTED CEILING PLAN. IF LOCATIONS CONFLICT WITH STRUCTURAL COMPONENTS, THE CONTRACTOR SHALL CONSULT THE ARCHITECT PRIOR TO REVISING DIMENSIONS.
 - LIGHT FIXTURES, FIRE & ALARM DEVICES, AND OTHER CEILING ELEMENTS ARE TO BE CENTERED IN GYPSUM CEILING, PANEL OR SOFFIT UNLESS NOTED OTHERWISE.
 - REFER TO MECHANICAL AND ELECTRICAL PLANS FOR EXACT SIZES AND SPECIFICATIONS OF LIGHT FIXTURES DIFFUSERS, GRILLES, AND OTHER EQUIPMENT.
 - CENTER ALL SURFACE MOUNTED LIGHT FIXTURES IN ROOMS WITH HARD CEILINGS IN CLEAR DIMENSION OF EACH DIRECTION U.N.O.
 - FIELD COORDINATE PLENUM SPACE AS REQUIRED AND NOTIFY ARCHITECT OF VARIATION.
 - CENTER EXIT SIGNS OVER DOOR FRAMES U.N.O.



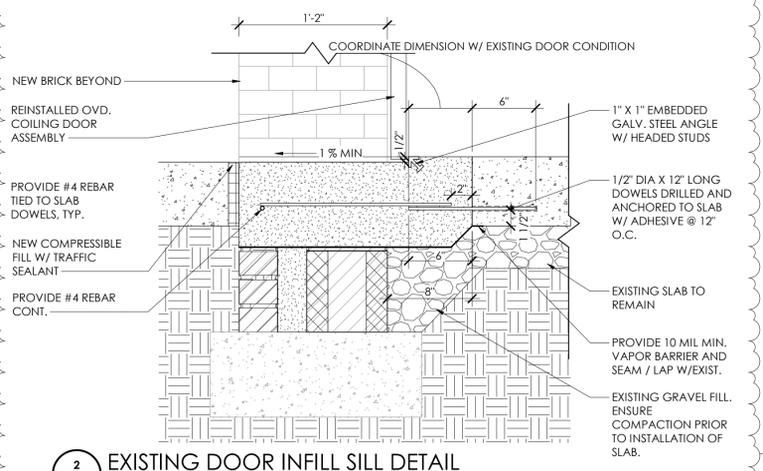
1 REFLECTED CEILING PLAN
A300 1/8" = 1'-0"



4 COIL DOOR HEAD
A300 1 1/2" = 1'-0"



3 COIL DOOR JAMB
A300 1 1/2" = 1'-0"



2 EXISTING DOOR INFILL SILL DETAIL
A300 1 1/2" = 1'-0"

DEDICATED OUTSIDE AIR UNIT (DOAS) SCHEDULE

| MARK | CFM | EXTERNAL STATIC PRESS. (INCHES W.G.) | MIN. SUPPLY FAN HP | COOLING COIL | | | GAS FURNACE | | MCA | MOCP | UNIT WEIGHT (LBS) | TRANE MODEL | SMOKE DETECTOR REQUIRED? | | |
|------|-------|--------------------------------------|--------------------|----------------|-------------|-------------------|-------------------|-------------------|-------|------|-------------------|-------------|--------------------------|--------|--------|
| | | | | SENSIBLE (MBH) | TOTAL (MBH) | ENT. AIR °F DB/WB | LVG. AIR °F DB/WB | MBH _{IN} | | | | | MBH _{OUT} | SUPPLY | RETURN |
| 1 | 5,700 | 1.0 | 5.0 | 285.6 | 543.1 | 95.0/78.0 | 50.0/49.8 | 700.0 | 560.0 | 97.1 | 110.0 | 7,500 | OAND600D4-D1 | YES | YES |

- NOTES:**
- RATINGS FOR 460V-3 PHASE; VERIFY VOLTAGE BEFORE ORDERING EQUIPMENT
 - SMOKE DETECTORS SHALL BE INSTALLED AS PER NFPA, THE INTERNATIONAL MECHANICAL CODE & THIS SCHEDULE. SMOKE DETECTORS SHALL BE FURNISHED BY ELECTRICAL CONTRACTOR & INSTALLED BY MECHANICAL CONTRACTOR
 - SMOKE DETECTORS IN THE SUPPLY DUCT SHALL BE LOCATED DOWNSTREAM OF THE FILTERS & UPSTREAM OF ANY BRANCH CONNECTION
 - PROVIDE MODULATING HOT GAS REHEAT, TWO DIGITAL SCROLL COMPRESSORS, AND CASING WITH 2" POLYISOCYANURATE FOAM INSULATION
 - PROVIDE MOTORIZED RETURN AIR DAMPER; UNIT SHALL RECIRCULATE AIRFLOW WITH 10% OUTSIDE WHILE FUME CAPTURE SYSTEM IS OFF
 - PROVIDE MODULATING STAINLESS STEEL GAS FURNACE WITH 20:1 TURNDOWN
 - PROVIDE 24" CURB SO DUCT ROUTING WON'T BLOCK EQUIPMENT ACCESS
 - PROVIDE WALL-MOUNTED TEMPERATURE AND HUMIDITY SENSOR WITH MANUAL OVERRIDE CONTROLS; INTEGRATE WITH EXISTING CENTRAL CONTROL SYSTEM

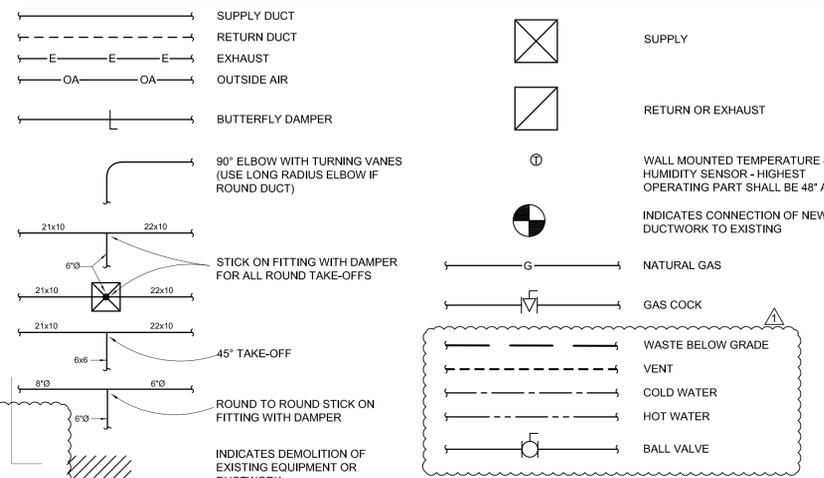
HVAC SPECIFICATIONS

- FURNISH ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO INSTALL A COMPLETE HEATING AND COOLING SYSTEM AS INDICATED AND SPECIFIED ON THE DRAWINGS.
- WORK SHALL COMPLY WITH IMC, NFPA, ALL APPLICABLE LAWS, ORDINANCES & CODES OF THE STATE OF TENNESSEE, LOCAL AUTHORITIES HAVING JURISDICTION AND WITH APPLICABLE RULES & REGULATIONS.
- OBTAIN ALL PERMITS & INSPECTIONS REQUIRED FOR THE COMPLETION OF THE WORK & PAY ALL FEES & COSTS IN CONNECTION THEREWITH.
- THE MECHANICAL DRAWINGS ARE GENERALLY DIAGRAMMATIC AND UNLESS SPECIFICALLY DIMENSIONED, THE LOCATIONS OF DUCTWORK AND EQUIPMENT AND THE ROUTING OF DUCTWORK IS APPROXIMATE ONLY AND SHALL NOT BE SCALED FROM THE MECHANICAL DRAWINGS.
- INSTALL ALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- SUBMIT TO THE ARCHITECT FOR APPROVAL, 10 DAYS AFTER RECEIPT OF NOTICE TO PROCEED WITH THE WORK, A COMPLETE LIST OF MATERIALS, EQUIPMENT AND ACCESSORIES PROPOSED FOR USE, INCLUDING COMPLETE DESCRIPTIONS AND SPECIFICATIONS OF ANY PROPOSED SUBSTITUTIONS, MANUFACTURER'S SHOP DRAWINGS, ROUGHING-IN DRAWINGS, AND ANY OTHER INFORMATION REQUIRED FOR THE PROPER INSTALLATION OF THE WORK. SUBMITTALS SHALL BE IN PDF FORMAT (NO PAPER COPIES).
- ALL DUCTWORK SHALL BE GALVANIZED STEEL FABRICATED ACCORDING TO SMACNA DETAILS. DUCTS SHALL BE SIZE INDICATED ON DRAWINGS (NET INSIDE DIMENSIONS), RIGIDLY BRACED, ADEQUATELY SUPPORTED & SECURELY FASTENED IN PLACE.
- ALL ROUND DUCTWORK AND FITTINGS EXPOSED IN FINISHED SPACES SHALL BE MCGILL AIRFLOW UNI-SEAL, SEMCO, OR EQUAL, SINGLE WALL, SPIRAL LOCKSEAM DUCT. ALL TAGS AND OTHER MARKINGS SHALL BE THOROUGHLY REMOVED.
- ALL EXPOSED DUCTWORK SHALL BE CLEANED PRIOR TO PAINTING IN STRICT ACCORDANCE WITH THE DTM (DIRECT TO METAL) PAINT MANUFACTURERS RECOMMENDATIONS. ALL TAGS AND OTHER MARKINGS SHALL BE THOROUGHLY REMOVED FROM ALL EXPOSED DUCTWORK PRIOR TO PAINTING.
- INSTALL SINGLE WALL TURNING VANES AT RIGHT ANGLES AND SMALL RADIUS TURNS IN DUCTS. MAKE REDUCTIONS IN DUCT SIZE WITH TAPERED TRANSITION PIECES. TRANSITIONS FOR CONNECTIONS TO EQUIPMENT SHALL BE DESIGNED TO SUIT CONDITIONS AND SO THAT AIR FLOW IS NOT RESTRICTED.
- INSULATE ALL SUPPLY AND RETURN AIR DUCTWORK LOCATED OUTSIDE THE BUILDING WITH 2" THICK (R-8) ELASTOMERIC INSULATION. COVER THE INSULATION WITH POLYGUARD ALUMAGUARD 60, SELF-ADHESIVE, WEATHER AND VAPOR BARRIER JACKET. THE VAPOR BARRIER JACKET SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE INSTRUCTIONS OF THE MANUFACTURER AND SHALL BE WATERTIGHT.
- GRILLES AND CEILING OUTLETS SHALL BE PRICE, OR EQUAL, STEEL CONSTRUCTION WITH ELECTRO-DEPOSITION PAINTED FINISH, SIZE SHOWN ON THE DRAWINGS AND SCHEDULED AS FOLLOWS.
 - SG SUPPLY GRILLE, PRICE MODEL 520-FL, DOUBLE DEFLECTION SIDEWALL SUPPLY GRILLE, 3/4" SPACING WITH OPPOSED BLADE DAMPER.
 - RG RETURN GRILLE, PRICE MODEL 530-FL, SURFACE MOUNT, 45° DEFLECTION, 3/4" BLADE SPACING, ALL FRONT BARS HORIZONTAL, WITH OPPOSED BLADE DAMPER.
 - EG EXHAUST GRILLE, PRICE MODEL 530-FL, SURFACE MOUNT, 45° DEFLECTION, 3/4" BLADE SPACING, ALL FRONT BARS HORIZONTAL, WITH OPPOSED BLADE DAMPER.
- VISIBLE INTERIOR PORTIONS OF DUCTS AT GRILLES AND REGISTERS SHALL BE GIVEN A COAT OF FLAT BLACK PAINT BEFORE GRILLES AND REGISTERS ARE INSTALLED.
- INSTALLATION OF GAS PIPING SHALL COMPLY WITH THE LOCAL UTILITY CO., INTERNATIONAL GAS CODE, NFPA AND ALL OTHER AGENCIES HAVING JURISDICTION. ABOVE GROUND PIPING SHALL BE SCHEDULE 40 BLACK STEEL ASSEMBLED WITH MALLEABLE IRON FITTINGS & GROUND JOINT UNIONS. GAS PIPING AT EACH APPLIANCE SHALL HAVE DIRT LEG & AND AGA GAS COCK. PAINT ALL GAS PIPING ON THE EXTERIOR AND INTERIOR OF THE BUILDING WITH TWO COATS OF CAUTION YELLOW PAINT.
- WHEN THE INSTALLATION IS COMPLETE, IT SHALL BE RUN & ADJUSTED BY THE CONTRACTOR. ANY EXCESSIVE NOISE OR VIBRATION SHALL BE CORRECTED.
- SUBMIT WRITTEN AIR BALANCE REPORT TO THE ARCHITECT A MINIMUM OF 10 DAYS PRIOR TO THE FINAL INSPECTION. THE AIR BALANCE CONTRACTOR SHALL BE AABC OR NEBB CERTIFIED.
- THE CONTRACTOR SHALL INSTRUCT THE OWNER IN THE OPERATION OF EQUIPMENT & PROVIDE THE OWNER WITH A COMPLETE SET OF OPERATING INSTRUCTIONS FOR EQUIPMENT INSTALLED UNDER HIS CONTRACT.
- THE WORK SHALL BE GUARANTEED AGAINST ALL DEFECTIVE MATERIALS & EQUIPMENT FOR A PERIOD OF ONE YEAR AFTER ACCEPTANCE. THE CONTRACTOR SHALL MAKE ALL NECESSARY CORRECTIONS WITHOUT COST TO THE OWNER.

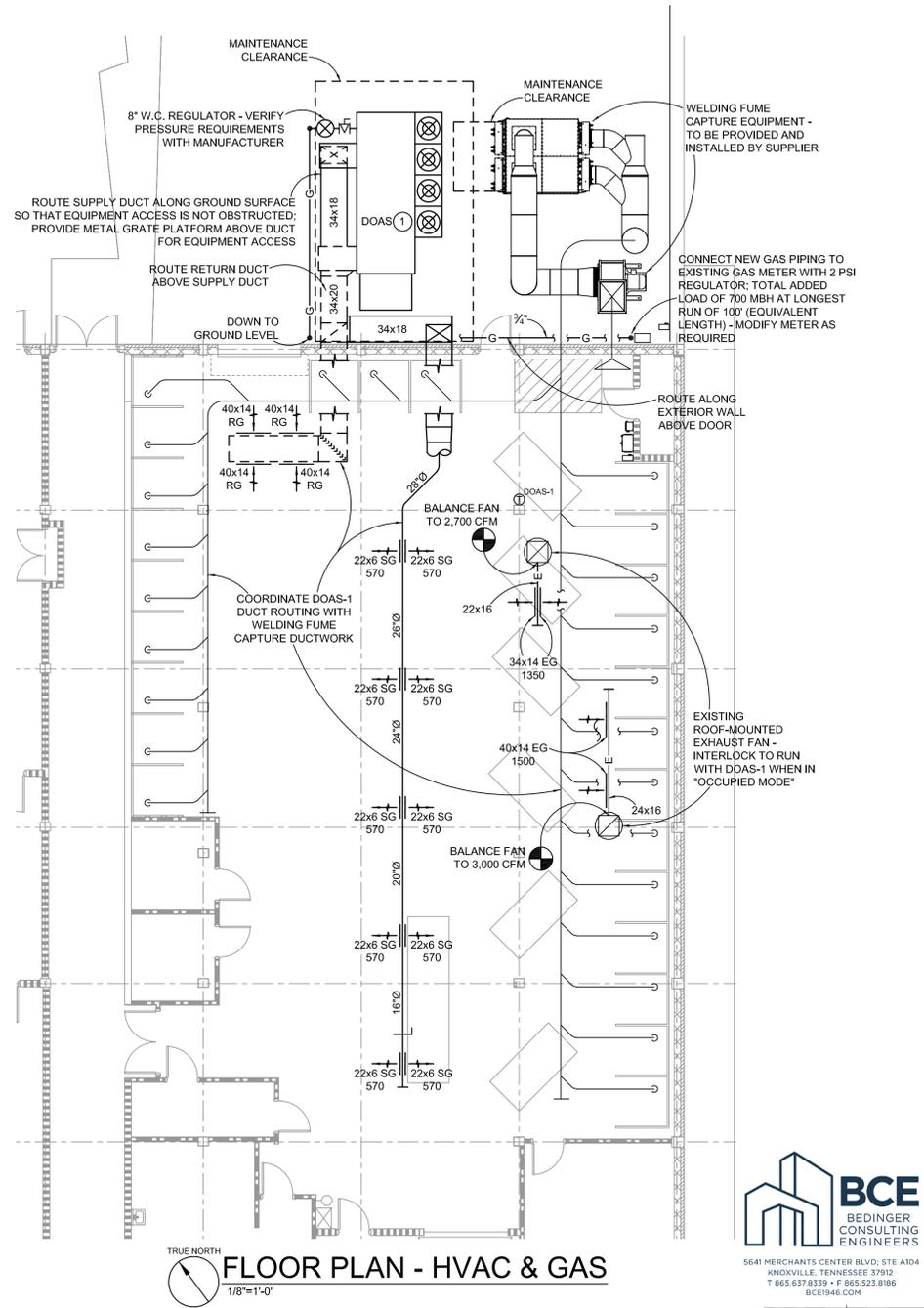
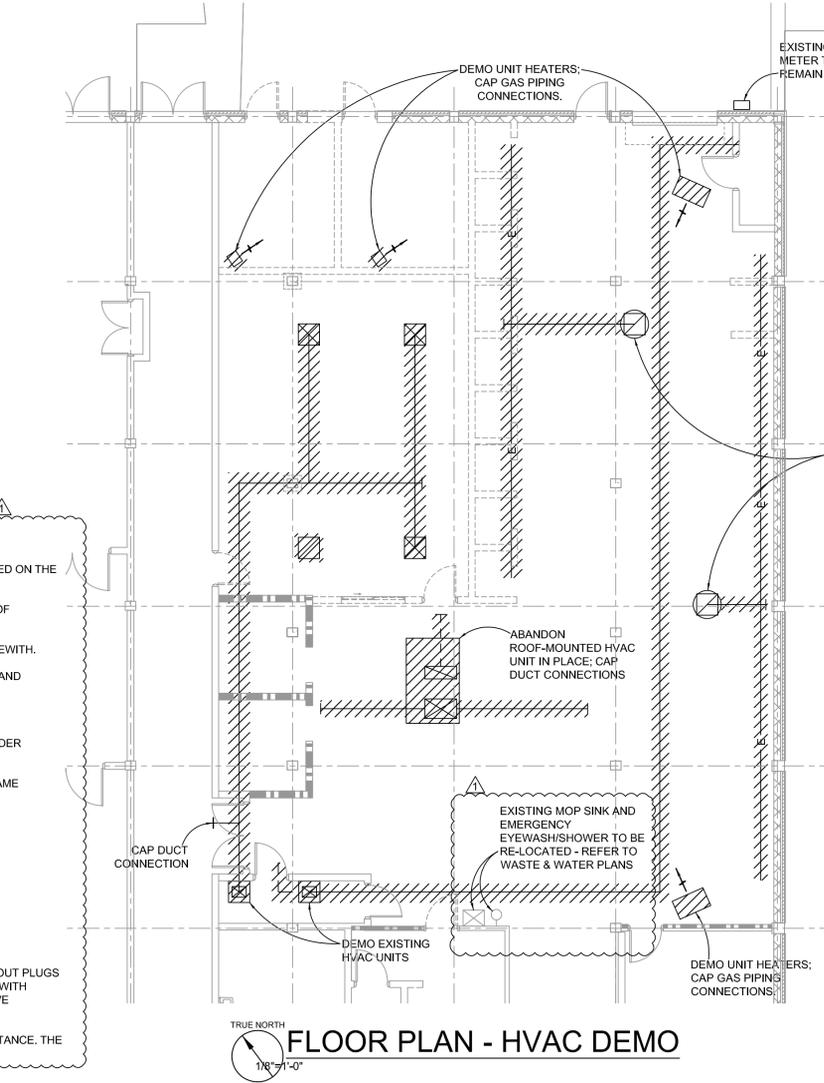
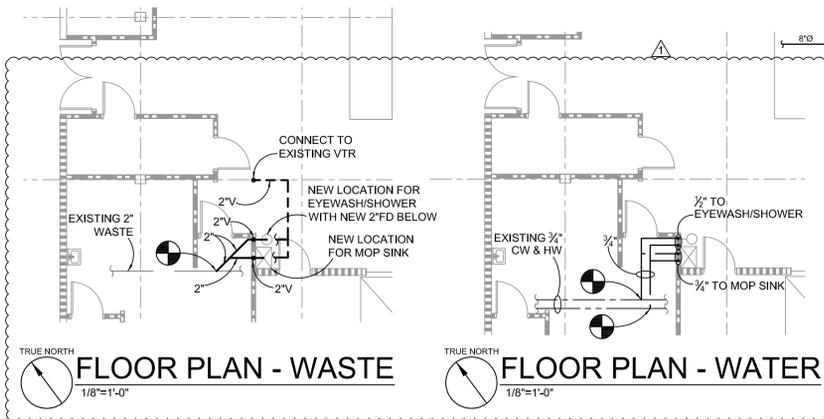
PLUMBING SPECIFICATIONS

- FURNISH ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO INSTALL A COMPLETE PLUMBING SYSTEM AS INDICATED AND SPECIFIED ON THE DRAWINGS.
- WORK SHALL COMPLY WITH THE INTERNATIONAL PLUMBING CODE AND ALL APPLICABLE LAWS, ORDINANCES & CODES OF THE STATE OF TENNESSEE, LOCAL AUTHORITIES HAVING JURISDICTION AND WITH APPLICABLE RULES & REGULATIONS.
- OBTAIN ALL PERMITS & INSPECTIONS REQUIRED FOR THE COMPLETION OF THE WORK & PAY ALL FEES & COSTS IN CONNECTION THEREWITH.
- THE PLUMBING DRAWINGS ARE GENERALLY DIAGRAMMATIC AND UNLESS SPECIFICALLY DIMENSIONED, THE LOCATIONS OF FIXTURES AND EQUIPMENT AND THE ROUTING OF PIPING IS APPROXIMATE ONLY AND SHALL NOT BE SCALED FROM THE PLUMBING DRAWINGS.
- INTERIOR SOIL, WASTE, AND VENT PIPING SHALL BE SCHEDULE 40 PVC SOLID WALL-DWV ASSEMBLED WITH SOLVENT WELD JOINTS.
- ABOVE GRADE DOMESTIC WATER PIPING SHALL BE HARD DRAWN COPPER, TYPE "L" PIPING ASSEMBLED WITH WROUGHT COPPER SOLDER FITTINGS. CONNECTIONS OF COPPER PIPE TO FERROUS PIPE SHALL BE MADE WITH DIELECTRIC UNIONS OR COUPLINGS.
- ALL COLD WATER, HOT WATER AND HOT WATER RECIRCULATING LINES SHALL BE INSULATED WITH ARMAFLEX, OR EQUAL, WITH A FLAME SPREAD AND SMOKE DEVELOPED RATING NOT EXCEEDING 25 AND 50 RESPECTIVELY.
 - COLD WATER
 - 1/2" TO 1 1/4" PIPE - 1/2" THICK INSULATION
 - 1 1/2" TO 8" PIPE - 1" THICK INSULATION
 - HOT WATER & HOT WATER RECIRCULATING
 - 1/2" TO 1 1/4" PIPE - 1" THICK INSULATION
 - 1" TO 8" PIPE - 1/2" THICK INSULATION
- FIRE STOPPING SYSTEM SHALL BE PROVIDED AND INSTALLED THROUGH ALL FIRE RATED WALLS, CEILINGS, FLOORS, PARTITIONS OR CONSTRUCTION.
- FLOOR DRAINS SHALL BE ZURN Z-2N415-8B, OR EQUAL. DRAINS SHALL HAVE NICKEL BRONZE STRAINER AND TOPS, AND WHEN CLEANOUT PLUGS ARE REQUIRED, THEY SHALL BE NICKEL BRONZE. WHERE REQUIRED BY CODE, FLOOR DRAINS SHALL HAVE TRAP PRIMERS INSTALLED WITH ACCESS DOORS TO PRIMERS. OTHERWISE, ALL FLOOR DRAINS SHALL BE INSTALLED WITH DEEP SEAL P-TRAPS. FLOOR DRAINS TO HAVE STANDARD 8" STRAINERS FOR 3" & 4" SIZE DRAINS
- THE WORK SHALL BE GUARANTEED AGAINST ALL DEFECTIVE MATERIALS & WORKMANSHIP FOR A PERIOD OF ONE YEAR AFTER ACCEPTANCE. THE CONTRACTOR SHALL MAKE ALL NECESSARY CORRECTIONS WITHOUT COST TO THE OWNER.

DUCT & PIPING LEGEND



PLUMBING SYMBOLS



**OAK RIDGE HIGH SCHOOL
WELDING CLASSROOM RENOVATION**

1450 OAK RIDGE TURN PIKE
OAK RIDGE, TENNESSEE 37830

COPE architecture

Cope Associates, Inc.
2807 Kingston Pike, Suite 5
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FLOOR PLAN - HVAC & GAS

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| 1 | 03/24/23 | ADDENDUM |

DATE: 01-30-2023



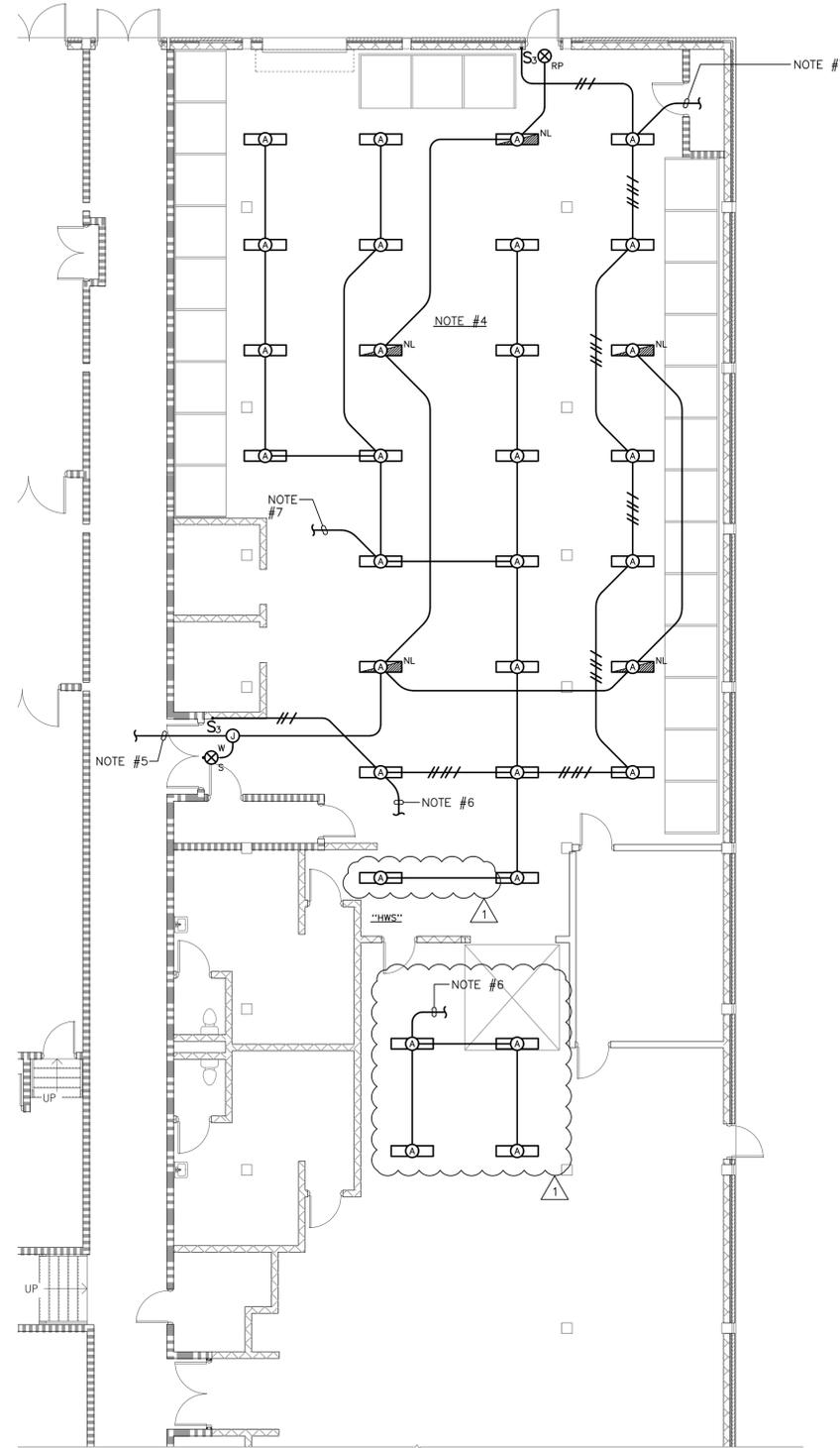
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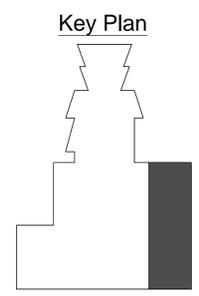
PROJECT NO.

BCE
BEDINGER
CONSULTING
ENGINEERS

5641 MERCHANTS CENTER BLVD, STE A104
KNOXVILLE, TENNESSEE 37912
T 965.637.8339 • F 965.523.9196
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- LIGHTING NOTES:**
- REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATIONS OF ALL LIGHTING FIXTURES.
 - "NL" BY LIGHTING FIXTURE INDICATES FIXTURE TO BE UNSWITCHED "NIGHT LIGHT".
 - EXIT SIGNS AND DESIGNATED EMERGENCY LIGHTS SHALL BE CONNECTED TO BE UNSWITCHED AS INDICATED ON DRAWINGS.
 - REMOVE ALL EXISTING LIGHTING FIXTURES, LIGHTING CONTROLS, BRANCH WIRING, ETC. SERVING RENOVATION AREA AND REPLACE WITH NEW LIGHTING FIXTURES, LIGHTING CONTROLS, BRANCH WIRING, ETC. EXISTING CONDUIT AND BOXES MAY BE REUSED WHERE PRACTICABLE TO ACHIEVE NEW LAYOUT SHOWN. OTHERWISE, PROVIDE NEW WIRING AS SHOWN.
 - RECONNECT TO EXISTING 277-VOLT, 20 AMPERE CORRIDOR EMERGENCY LIGHTING CIRCUIT E1H1-3.
 - RECONNECT TO NORMAL POWER 277-VOLT, 20 AMPERE LIGHTING CIRCUIT SERVING THIS AREA FROM EXISTING PANEL H1H2, CIRCUIT 9.
 - RECONNECT EXISTING LIGHTING IN STORAGE ROOM(S).
 - "RP" BY EXIT SIGN INDICATES CONTRACTOR TO REPLACE EXISTING SIGN WITH NEW EXIT SIGN.



WALL RATING LEGEND

| | |
|--|----------------------------|
| | EXISTING 1 HOUR RATED WALL |
| | EXISTING SMOKE PARTITION |

Vreeland Engineers Inc.

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**OAK RIDGE HIGH SCHOOL
WELDING CLASSROOM RENOVATION**

1450 OAK RIDGE TURN PIKE
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FLOOR PLAN - LIGHTING

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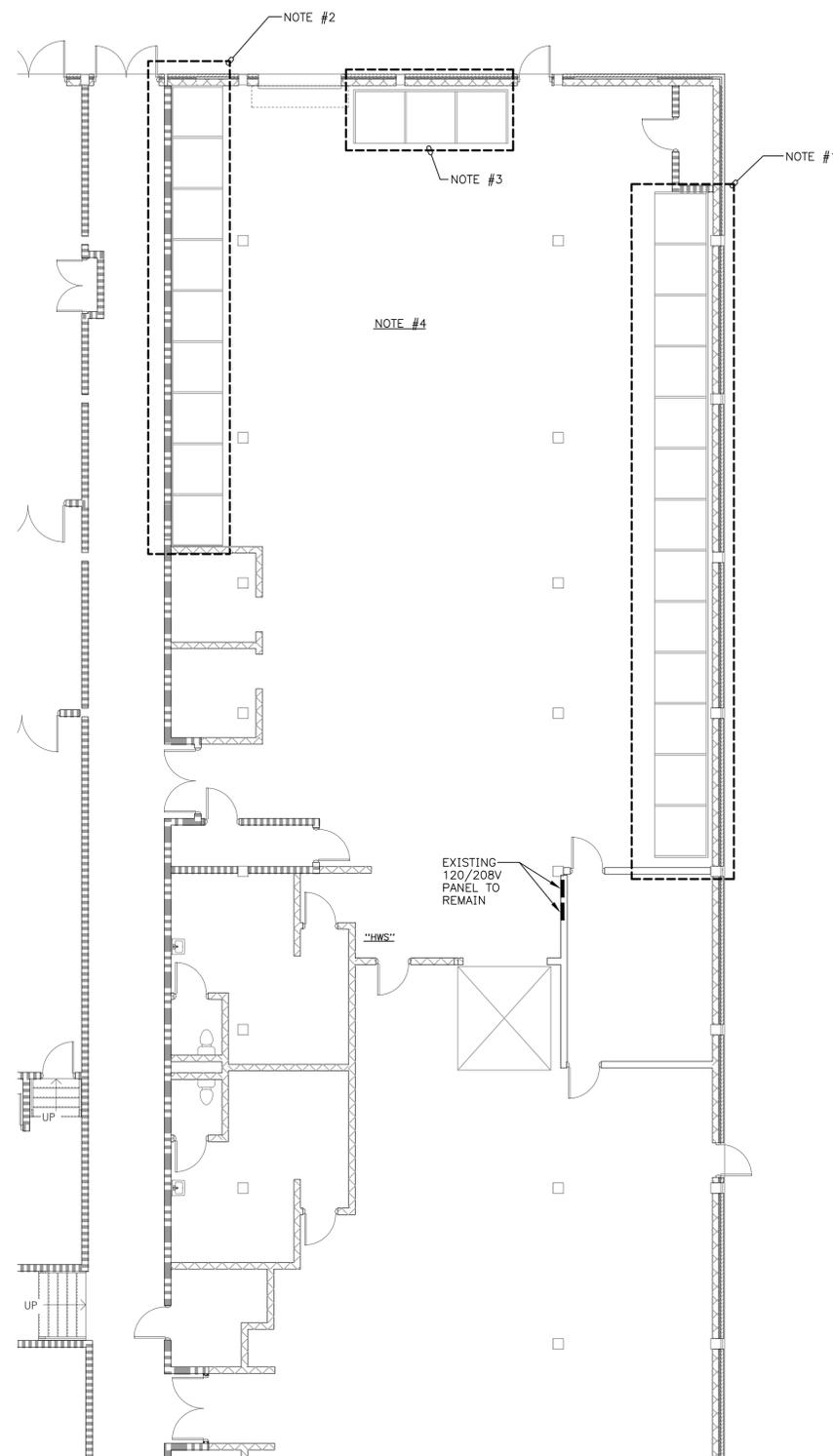
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| 1 | 03-29-23 | ADDENDUM 1 |
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DATE: 02-27-2023



DWG NO. **E101**

PROJECT NO. 22023

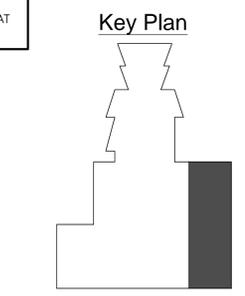


- POWER NOTES:**
1. MAINTAIN EXISTING POWER FEEDS FROM 800 AMPERE, 480/277V PANEL DPHW WHICH SERVES WELDING CUBICLES IN THIS AREA PRESENTLY. RELOCATE EXISTING DISCONNECT SWITCHES, RECEPTACLES, ETC. AND ASSOCIATED WIRING REQUIRED TO SERVE RENOVATED WELDING CUBICLE ARRANGEMENT.
 2. ELECTRICAL CONTRACTOR SHALL RELOCATE EXISTING MAIN POWER FEEDS FROM 800 AMPERE, 480/277V PANEL DPHW TO NEW LOCATIONS OF NINE (9) WELDING BOOTHS WHERE INDICATED ON THIS PLAN. WIRING RELOCATION WORK SHALL INCLUDE, BUT NOT BE LIMITED TO RE-ROUTING OF EXISTING FEEDER WIRING FROM PANEL DPHW, RELOCATION OF EXISTING DISCONNECT SWITCHES AND RECEPTACLES TO NEW LOCATIONS OF WELDING CUBICLES, ALONG WITH ALL ASSOCIATED BRANCH WIRING MODIFICATIONS, ETC.
 3. PROVIDE NEW WIRING FOR THREE NEW WELDING BOOTHS INDICATED. SEE FEEDER DIAGRAM FOR ADDITIONAL INFORMATION.
 4. REMOVE ALL BRANCH WIRING, DEVICES, ETC. FROM CLASSROOM AND STORAGE ROOM WALLS BEING REMOVED. CONTRACTOR SHALL UTILIZE 120-VOLT, 20 AMPERE CIRCUITS L1H2-4 AND L1H2-6 WHICH PRESENTLY SERVES THE DEMOLITION AREA TO SERVE NEW DEVICES TO BE PROVIDED IN RENOVATED WELDING SHOP. FOR THE PURPOSES OF ESTIMATION, CONTRACTOR SHALL ASSUME THAT TEN (10) NEW 120-VOLT, 20 AMPERE GFCI DUPLEX RECEPTACLES WILL BE PROVIDED IN RECONFIGURED WELDING SHOP BY ELECTRICAL CONTRACTOR. EXACT LOCATIONS OF THESE DEVICES WILL BE AS DIRECTED BY OWNER IN FIELD. ASSUME THAT FIVE (5) EACH GFCI DUPLEX RECEPTACLES WILL BE PROVIDED ON AVAILABLE CIRCUITS L1H2-4 AND L1H2-6.
 5. RECESSED OUTLET BOXES ON OPPOSITE SIDES OF FIRE RATED PARTITIONS SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF AT LEAST 24 INCHES.

FLOOR PLAN - POWER
 SCALE: 1/8" = 1'-0"
 0' 4' 8' 16'

WALL RATING LEGEND

| | |
|--|----------------------------|
| | EXISTING 1 HOUR RATED WALL |
| | EXISTING SMOKE PARTITION |



**OAK RIDGE HIGH SCHOOL
 WELDING CLASSROOM RENOVATION**
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FLOOR PLAN - POWER

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| 1 | 03-29-23 | ADDENDUM 1 |
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DATE: 02-27-2023



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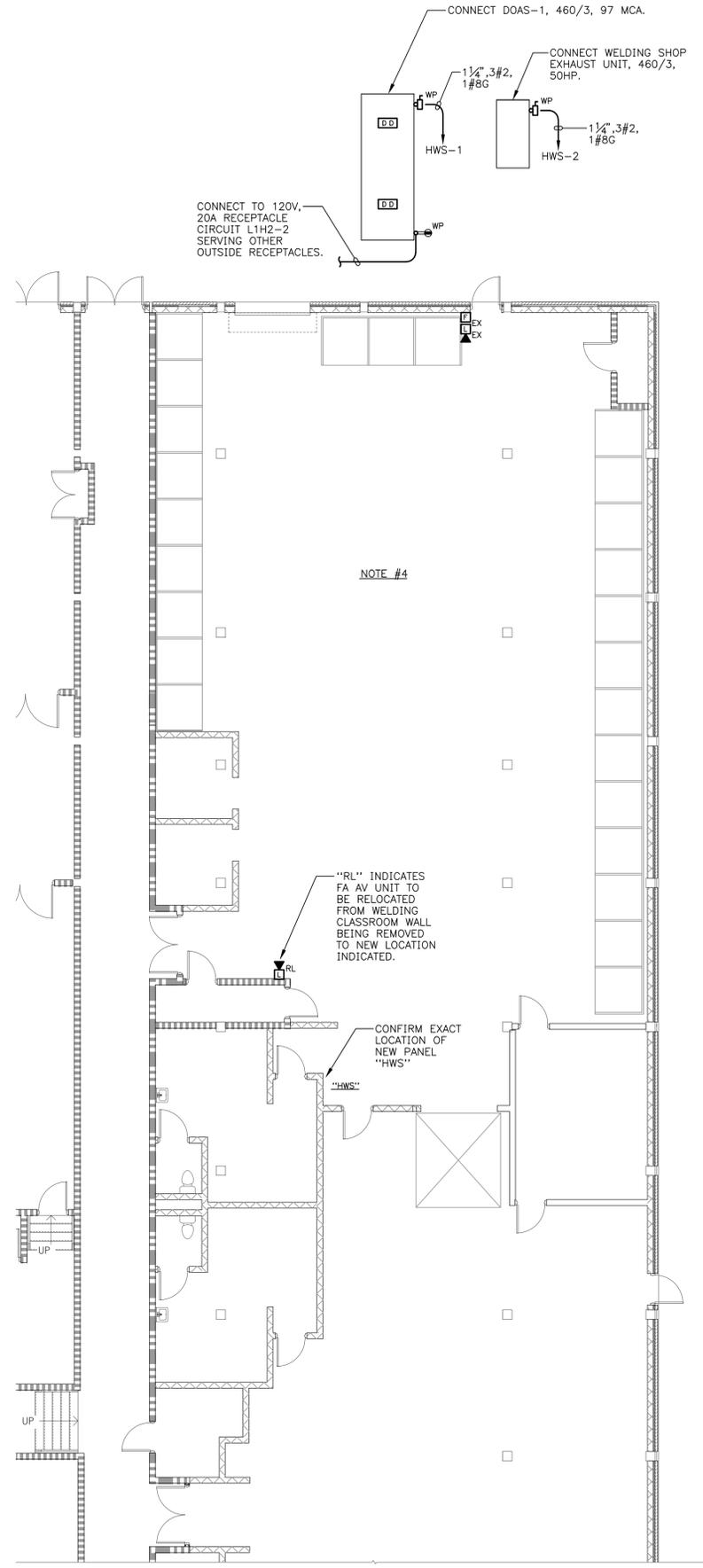
E102

PROJECT NO. 22023

Vreeland Engineers Inc.
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 1-800-362-9789
 vreelandengineers.com

DATE PLOTTED: 02/27/2023

ORHS Welding Shop Renovation - Floor Plan - Comm & HVAC Wiring.dwg
M.R.M. 02/01/23 3:51 PM HD22274(HD)



CONNECT TO 120V,
20A RECEPTACLE
CIRCUIT L1H2-2
SERVING OTHER
OUTSIDE RECEPTACLES.

CONNECT DOAS-1, 460/3, 97 MCA.

CONNECT WELDING SHOP
EXHAUST UNIT, 460/3,
50HP.

HWS-1

HWS-2

WP

WP

WP

WP

NOTE #4

"RL" INDICATES
FA AV UNIT TO
BE RELOCATED
FROM WELDING
CLASSROOM WALL
BEING REMOVED
TO NEW LOCATION
INDICATED.

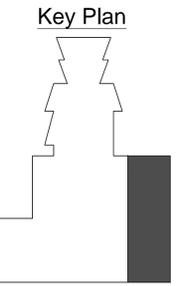
CONFIRM EXACT
LOCATION OF
NEW PANEL
"HWS"

"HWS"

FLOOR PLAN - COMMUNICATIONS & HVAC WIRING

SCALE: 1/8" = 1'-0"
0' 4' 8' 16'

- COMMUNICATIONS/HVAC WIRING NOTES:**
1. RECESSED OUTLET BOXES ON OPPOSITE SIDES OF FIRE RATED PARTITIONS SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF AT LEAST 24 INCHES.
 2. PRIOR TO BEGINNING CONDUIT INSTALLATION FOR HVAC/PLUMBING EQUIPMENT ELECTRICAL CONTRACTOR SHALL CONFIRM WITH MECHANICAL/PLUMBING CONTRACTOR THE VOLTAGES FOR ALL HVAC/PLUMBING EQUIPMENT REQUIRING ELECTRICAL SERVICE. ELECTRICAL CONTRACTOR SHALL CALL ANY DISCREPANCIES BETWEEN ELECTRICAL DRAWINGS AND VOLTAGE INFORMATION PROVIDED BY MECHANICAL/PLUMBING CONTRACTOR TO THE ATTENTION OF ENGINEER PRIOR TO PROCEEDING WITH WORK.
 3. CONFIRM EXACT ROUGH-IN LOCATIONS FOR ALL HVAC/PLUMBING EQUIPMENT WITH MECHANICAL/PLUMBING CONTRACTOR PRIOR TO INSTALLATION OF CONDUIT.
 4. CONTRACTOR SHALL REMOVE ALL COMMUNICATIONS DEVICES, WIRING, EQUIPMENT, ETC. FROM WELDING CLASSROOM BEING DEMOLISHED. COORDINATE REMOVAL OF ALL DEVICES, WIRING, ETC. WITH OWNER'S IT STAFF AND OWNER'S SYSTEM VENDOR(S) FOR FIRE ALARM, SECURITY, INTERCOM, ACCESS CONTROL, DATA/VOICE, ETC. CONFIRM REQUIREMENTS IN FIELD AND WITH OWNER'S IT STAFF AND VENDOR(S). MAINTAIN OR RELOCATE EXISTING COMMUNICATIONS DEVICES IN EXPANDED WELDING SHOP AS REQUIRED.



WALL RATING LEGEND

| | |
|--|----------------------------|
| | EXISTING 1 HOUR RATED WALL |
| | EXISTING SMOKE PARTITION |

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**FLOOR PLAN -
COMMUNICATIONS &
HVAC WIRING**

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DATE: 02-27-2023



DWG NO. **E103**

PROJECT NO. 22023

ELECTRICAL SPECIFICATIONS

- SCOPE: FURNISH PLANT, LABOR, MATERIAL, SERVICES, AND EQUIPMENT NECESSARY FOR AND REASONABLY INCIDENTAL TO THE INSTALLATION OF ELECTRICAL FACILITIES SHOWN ON THE DRAWINGS AND CALLED FOR HEREINAFTER.
- CODES AND PERMITS: SECURE NECESSARY PERMITS, PAY NECESSARY FEES, CONFORM TO ALL APPLICABLE LOCAL, STATE, AND NATIONAL CODES.
- POWER SERVICE: POWER SERVICE FOR THE RENOVATION AREA SHALL BE TAKEN FROM EXISTING BUILDING POWER DISTRIBUTION SYSTEM AS INDICATED ON DRAWINGS.
- WIRING METHODS: ALL NEW LINE VOLTAGE POWER WIRING REQUIRED ON THIS PROJECT SHALL BE INSTALLED IN CONDUIT. UTILIZE ELECTRIC-METALLIC TUBING (EMT) FOR ALL OVERHEAD WIRING INSIDE THE BUILDING IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE REQUIREMENTS. WHERE CONDUIT IS INSTALLED EXPOSED WHERE SUBJECT TO PHYSICAL DAMAGE, UTILIZE GALVANIZED RIGID STEEL OR INTERMEDIATE METAL CONDUIT. ALL NEW WIRING SHALL BE INSTALLED CONCEALED TO THE MAXIMUM EXTENT PRACTICABLE. OBTAIN APPROVAL FROM ARCHITECT FOR ANY REQUIRED EXPOSED CONDUIT RUNS. EXPOSED CONDUIT WILL BE PERMISSIBLE IN MECHANICAL ROOMS, ELECTRICAL ROOMS, JANITOR CLOSETS, ETC. CONDUIT INSTALLATION SHALL BE DONE IN A NEAT AND WORKMANLIKE MANNER, PARALLEL OR PERPENDICULAR TO BUILDING STRUCTURAL ELEMENTS. ALL CONDUCTORS ON THE PROJECT SHALL BE COPPER WITH "THHN/THWN" INSULATION, RATED 600-VOLTS, AC. COLOR CODE CONDUCTORS IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE REQUIREMENTS. METAL CLAD (MC) CABLE SHALL BE PERMISSIBLE FOR FINAL CONNECTIONS TO LAY-IN LIGHTING FIXTURES FROM LOCAL JUNCTION BOXES IN APPLICATIONS WHERE RUNS OF MC CABLE DO NOT EXCEED 6'. OTHERWISE, THE USE OF METAL CLAD CABLE SHALL NOT BE PERMITTED.
- LIGHTING FIXTURES: FURNISH AND INSTALL NEW LIGHTING FIXTURES AS SHOWN ON DRAWINGS COMPLETE WITH LAMPS. REFER TO LIGHTING FIXTURE SCHEDULE FOR REQUIREMENTS.
- EXIT SIGNS/EMERGENCY LIGHTING UNITS: PROVIDE COMBINATION EXIT SIGN/EMERGENCY LIGHTING UNITS WHERE INDICATED ON DRAWINGS. THESE UNITS SHALL BE SIMILAR AND EQUAL TO LITHONIA LHM QUANTUM SERIES, WHITE THERMOPLASTIC HOUSING, RED LETTERS, LED LAMPING, AND NICKEL CADMIUM BATTERY BACKUP. FURNISH AND INSTALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. EXIT SIGN ONLY UNITS SHALL BE SIMILAR AND EQUAL TO LITHONIA QUANTUM LQM SERIES, WHERE THERMOPLASTIC HOUSING, RED LETTERS, LED LAMPING, AND BUILT-IN NICKEL CADMIUM BATTERY BACKUP.
- WIRING DEVICES: FURNISH AND INSTALL WIRING DEVICES (I.E., DUPLEX PLUG RECEPTACLES, WALL SWITCHES, ETC.) WHERE INDICATED ON DRAWINGS AND AS CALLED FOR HEREINAFTER. NEW WIRING DEVICES SHALL BE TAMPER RESISTANT WITH MINIMUM RATING OF 20-AMPERES FOR THE VOLTAGE SERVICE SUPPLIED, UNLESS NOT REQUIRED BY CODE TO BE TAMPER RESISTANT IN WHICH CASE SPECIFICATION GRADE DEVICES WILL BE UTILIZED. THE USE OF 15-AMPERE RATED DEVICES SHALL NOT BE PERMISSIBLE. DEVICE COLOR SHALL BE AS DIRECTED BY ARCHITECT. UTILIZE STAINLESS STEEL COVERPLATES.
- WORK AT EXISTING PANELBOARDS: CERTAIN POWER FOR THE RENOVATION AREA SHALL BE TAKEN FROM EXISTING PANELBOARDS AS NOTED ON DRAWINGS. CONFIRM MAKE AND MODEL AND MOUNTING PROVISIONS OF REQUIRED NEW CIRCUIT BREAKERS TO BE INSTALLED IN EXISTING PANELBOARDS PRIOR TO BID. AIC RATINGS OF NEW CIRCUIT BREAKERS SHALL MATCH EXISTING CIRCUIT BREAKERS IN RESPECTIVE PANELS. PROVIDE UPDATED CIRCUIT DIRECTORIES IN EACH EXISTING PANELBOARD AFFECTED BY RENOVATION WORK. HANDWRITTEN IDENTIFICATION OF CHANGES SHALL NOT BE PERMISSIBLE.
- PANELBOARDS: FURNISH AND INSTALL NEW BRANCH CIRCUIT PANELBOARDS WHERE INDICATED ON DRAWINGS. NEW PANELBOARDS SHALL BE RATED 120/208-VOLT, 3-PHASE, 4-WIRE, OR 480/277-VOLT, 3-PHASE, 4-WIRE AS INDICATED ON DRAWINGS. NEW PANELBOARDS SHALL BE SIMILAR AND EQUAL TO SQUARE D "NO" OR "NF" SERIES FOR THE PARTICULAR VOLTAGE REQUIRED FOR EACH RESPECTIVE PANELBOARD. ALL BUSING IN NEW PANELBOARD SHALL BE COPPER. UTILIZE "BOLT-ON" TYPE CIRCUIT BREAKERS IN EACH NEW PANELBOARD. PROVIDE TYPED CIRCUIT DIRECTORY IN EACH PANELBOARD IDENTIFYING TYPE OF LOAD AND LOCATION OF LOAD FOR EACH PANELBOARD. HANDWRITTEN CIRCUIT DIRECTORIES WILL NOT BE PERMISSIBLE.
- SAFETY SWITCHES: FURNISH AND INSTALL HEAVY-DUTY FUSIBLE DISCONNECT SWITCHES WHERE INDICATED ON DRAWINGS. DISCONNECT SWITCHES SHALL BE QUICK-MAKE, QUICK-BREAK WITH ARC SHIELD. SAFETY SWITCHES LOCATED INSIDE SHALL BE HOUSED IN NEMA 1 ENCLOSURES. UTILIZE NEMA 3R ENCLOSURES WHERE SAFETY SWITCHES ARE INSTALLED OUTSIDE. INSTALL FUSES IN SAFETY SWITCHES IN ACCORDANCE WITH NAMEPLATE DATA OF EQUIPMENT BEING SERVED. CONFIRM MOUNTING LOCATIONS OF ALL SAFETY SWITCHES PRIOR TO INSTALLATION.
- COMMUNICATIONS WIRING PROVISIONS: FURNISH AND INSTALL EMPTY CONDUIT AND BOXES FOR COMMUNICATIONS WIRING TO BE INSTALLED BY OTHERS. TYPICAL COMMUNICATIONS OUTLET BOX SHALL CONSIST OF 4-1 1/16" SQUARE BOX WITH SINGLE-GANG DEVICE RING AND A 1" CONDUIT STUBBED OUT ABOVE ACCESSIBLE LAY-IN CEILING. TERMINATE ALL CONDUIT STUBBED OUT ABOVE ACCESSIBLE CEILINGS WITH PLASTIC BUSHINGS. INSTALLATION OF COMMUNICATIONS CABLING, FACEPLATES, MODULAR JACKS, ETC., SHALL BE FURNISHED AND INSTALLED BY OWNER'S LOW VOLTAGE WIRING VENDOR.
- DEMOLITION: PROVIDE ELECTRICAL DEMOLITION AS INDICATED ON DRAWINGS AND AS CALLED FOR HEREINAFTER. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION CONCERNING DEMOLITION REQUIREMENTS. EXISTING CONDUIT AND BOXES MAY BE UTILIZED WHERE PRACTICABLE TO INSTALL NEW WIRING INDICATED. OTHERWISE, PROVIDE ALL NEW CONDUIT, BOXES, BRANCH WIRING, ETC. FOR RENOVATION AREA AS INDICATED ON DRAWINGS. REMOVE ALL ABANDONED ACCESSIBLE CONDUIT AND BOXES. REMOVE ALL ABANDONED BRANCH CIRCUIT CONDUCTORS BACK TO SUPPLYING PANELBOARDS. CIRCUITS NO LONGER IN USE SHALL BE LABELED "SPARE" IN EXISTING PANELBOARDS. ABANDONED UNDER-SLAB CONDUIT SHALL BE CUT BELOW FLOOR WITH FLOOR PATCHING PROVIDED IN ORDER TO MATCH SURROUNDING CONDITIONS.
- GROUNDING: GROUND EQUIPMENT AND LIGHTING FIXTURES IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE. PROVIDE A CODE-SIZED EQUIPMENT GROUNDING CONDUCTOR IN ALL NEW BRANCH CIRCUIT AND FEEDER CONDUIT WIRING RUNS. SEPARATE GROUNDING CONDUCTOR IS GENERALLY NOT INDICATED ON PLANS BUT SHALL BE REQUIRED. GROUND DRY TYPE TRANSFORMERS IN ACCORDANCE WITH DETAIL SHOWN ON DRAWINGS.
- FIRE ALARM SYSTEM: EXPAND THE EXISTING BUILDING FIRE ALARM SYSTEM INTO RENOVATION AREA AS REQUIRED. ALL NEW EQUIPMENT SHALL BE COMPATIBLE WITH THE EXISTING BUILDING FIRE ALARM SYSTEM AND SHALL BE OF THE MAKE/MODEL RECOMMENDED FOR USE BY EXISTING SYSTEM MANUFACTURER. NO SUBSTITUTIONS WILL BE PERMITTED. TEST SYSTEM AT CONCLUSION OF JOB TO INSURE PROPER OPERATION IN ACCORDANCE WITH NFPA 72 AND REQUIREMENTS OF LOCAL AHJ. INCLUDE TEST REPORTS AS PART OF PROJECT CLOSE-OUT DATA.
- SUBMITTALS: PROVIDE SUBMITTAL IN ELECTRONIC PDF FILE FORMAT FOR REVIEW BY DESIGN TEAM. SUBMITTALS SHALL BE NEATLY ORGANIZED WITH APPROPRIATE FILENAMES AND ALL PROPOSED EQUIPMENT CLEARLY HIGHLIGHTED AS THEY APPLY TO THIS PROJECT. SUBMITTALS SHALL INCLUDE, BUT NOT BE LIMITED TO, LIGHTING FIXTURES, SWITCHGEAR, WIRING DEVICES, AND FIRE ALARM. FIRE ALARM SUBMITTAL SHALL INCLUDE INSTALLATION DRAWINGS OF THE PROPOSED SYSTEM INCLUDING WIRING COUNT, DEVICE LAYOUT, BATTERY CALCULATIONS, VOLTAGE DROP CALCULATIONS, EQUIPMENT CUT SHEETS, ETC., AS REQUIRED TO MEET ALL NATIONAL AND LOCAL CODES.
- VISIT THE SITE: VISIT THE SITE SO AS TO HAVE A FULL UNDERSTANDING OF WORK REQUIRED IN EXISTING BUILDING. MAKE DUE ALLOWANCE FOR SAME IN BID PRICE.
- GUARANTY: GUARANTEE ALL WORK TO BE FREE FROM DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE YEAR AFTER DATE OF FINAL ACCEPTANCE OF JOB.

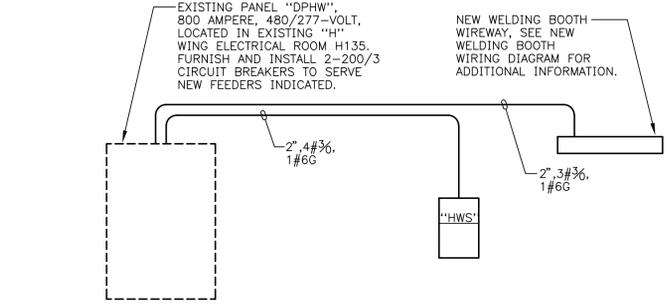
LIGHTING FIXTURE SCHEDULE

| DESIGNATION | ILLUMINATION | | | MOUNTING | | | DESCRIPTION: SHIELDING, TYPE MATERIALS, FINISH, MOUNTING | MANUFACTURER'S PRODUCT ITEM | # EQUAL PRODUCT PERMITTED | REMARKS | |
|-------------|--------------|------------------|------------------------|-------------|----------|--------------------------------------|---|--------------------------------|---------------------------------|---------|---|
| | WATTS | DELIVERED LUMENS | COLOR TEMPERATURE (°K) | MINIMUM CRI | CEILING | | | | | | WALL |
| | | | | | RECESSED | HEIGHT ABOVE FINISHED FLOOR OR GRADE | | | | | |
| A | 50.2 | 7200 | 3500 | | | | | H.E. WILLIAMS | 76R-4-L72/ 835-DIM- UNV | • | PROVIDE BUILT-IN BATTERY PACKS IN FIXTURES NOTED ON DRAWINGS. |

* UNLESS NOTED, EQUAL PRODUCT TO THAT SPECIFIED WILL BE ACCEPTED. THE DESIGN PROFESSIONAL SHALL HAVE SOLE JUDGEMENT CONCERNING EQUIVALENCY OF SUBSTITUTION.

| CKT. NO. | SERVES | LOAD (kVA) | | | BREAKER | | | LOAD (kVA) | | | SERVES | CKT. NO. | |
|------------------------|------------|------------|------|------------------------|---------|------|------|------------------------|------|------|--------|----------------------|-------|
| | | #A | #B | #C | TRIP | POLE | TRIP | POLE | #A | #B | | | #C |
| 1 | DOAS-1 | 20.6 | | | 110 | 3 | | 3 | 100 | 17.2 | | WELDING EXHAUST UNIT | 2 |
| 3 | | | 20.6 | | | | | | | | | | 4 |
| 5 | | | | 20.6 | | | | | | 17.2 | | | 6 |
| 7 | SPACE ONLY | | | | 20 | 1 | 1 | 20 | | | | SPACE ONLY | 8 |
| 9 | SPACE ONLY | | | | 20 | 1 | 1 | 20 | | | | SPACE ONLY | 10 |
| 11 | SPACE ONLY | | | | 20 | 1 | 1 | 20 | | | | SPACE ONLY | 12 |
| 13 | SPACE ONLY | | | | 20 | 1 | 1 | 20 | | | | SPACE ONLY | 14 |
| 15 | SPACE ONLY | | | | 20 | 1 | 1 | 20 | | | | SPACE ONLY | 16 |
| 17 | SPACE ONLY | | | | 20 | 1 | 1 | 20 | | | | SPACE ONLY | 18 |
| SUB TOTAL CONNECTED | | 20.6 | 20.6 | 20.6 | | | | | 17.2 | 17.2 | 17.2 | SUB TOTAL CONNECTED | |
| SUB TOTAL CONNECTED #A | | 37.8 | | SUB TOTAL CONNECTED #B | | 37.8 | | SUB TOTAL CONNECTED #C | | 37.8 | | TOTAL CONNECTED: | 113.4 |

NOTES:
1. PANEL HWS SCHEDULED ABOVE WILL BE FURNISHED BY OWNER AND INSTALLED BY CONTRACTOR.



FEEDER DIAGRAM
N.T.S.

LEGEND

- SYMBOL DESCRIPTION
- LED LIGHTING FIXTURE; "B" REFERS TO DESIGNATION IN THE LIGHTING FIXTURE SCHEDULE; "a" REFERS TO SWITCH CONTROL; AND "2" REFERS TO CIRCUIT NUMBER.
 - LED LIGHTING FIXTURE WITH BUILT-IN EMERGENCY BATTERY PACK TO PROVIDE LIGHTING UPON LOSS OF NORMAL POWER. PROVIDE SEPARATE UNSWITCHED ENERGIZED CONDUCTOR TO BATTERY PACK IN ORDER TO ALLOW NORMAL SWITCHING OF LIGHTING FIXTURES WITHOUT DISCHARGING BATTERY PACK.
 - WALL SWITCH; SINGLE POLE UNLESS NOTED 3- OR 4-WAY; "P" INDICATES EQUIPPED WITH PILOT LIGHT TO INDICATE WHEN SWITCH IS ON; W.P. INDICATES WEATHERPROOF; "K" INDICATES KEY OPERATED SWITCH; +48" / - ABOVE FLOOR EXCEPT IN MASONRY WALLS WHERE HEIGHT SHALL BE ADJUSTED TO HAVE BOX EDGE OCCUR AT A MASONRY JOINT. PROVIDE NEUTRAL CONDUCTOR IN ADDITION TO LINE AND SWITCHED CONDUCTORS.
 - EXIT SIGN, "W" INDICATES WALL MOUNTING, "C" INDICATES CEILING MOUNTING, "S" INDICATES SINGLE FACE, "D" INDICATES DOUBLE FACE, "P" INDICATES PENDANT MOUNTED. PROVIDE DIRECTIONAL ARROWS ON EXIT SIGNS AS INDICATED ON PLANS. "WG" BY DEVICE INDICATES WIRE GUARD TO BE PROVIDED. UNIT EQUIPPED WITH BATTERY BACK-UP. CONNECT TO UNSWITCHED, "HOT", LIGHTING CIRCUIT.
 - DUPLEX PLUG RECEPTACLE; 120-VOLTS; 20-AMPERES; MOUNT 3" ABOVE BACKSPLASH AT WORK COUNTERS AND LAVATORIES AND +18" AFF ELSEWHERE UNLESS NOTED TO A DIFFERENT HEIGHT. TAMPER RESISTANT, UNLESS NOT REQUIRED BY CODE.
 - DUPLEX PLUG RECEPTACLE, 120-VOLTS, 20-AMPERES, SHADED CENTER INDICATES EQUIPPED WITH BUILT-IN GROUND FAULT CIRCUIT INTERRUPTER, MOUNT 3" ABOVE BACKSPLASH AT WORK COUNTERS/LAVATORIES AND +18" AFF ELSEWHERE UNLESS NOTED TO A DIFFERENT HEIGHT. PROVIDE WEATHER RESISTANT DEVICE AND WEATHERPROOF "EXTRA DUTY WHILE IN USE" COVER WHERE LOCATED OUTDOORS. TAMPER RESISTANT, UNLESS NOT REQUIRED BY CODE.
 - PANELBOARD, RECESSED OR SURFACE MOUNTED AS INDICATED ON DRAWINGS, TOP 6-FEET ABOVE FINISHED FLOOR ADJUSTED TO OCCUR AT A MASONRY JOINT, SEE PANELBOARD SCHEDULE FOR EQUIPMENT CONTAINED.
 - CONDUIT IN THE FLOOR CONSTRUCTION OR UNDERGROUND SHOWN TURNING UP.
 - CONDUIT IN THE WALL OR CEILING CONSTRUCTION SHOWN TURNING DOWN.
 - JUNCTION BOX, SIZE AND USE AS REQUIRED; COVERPLATE SHALL OVERLAP THE BOX EDGE BY 1/2" WHERE RECESSED IN WALL WITH CONCEALED WIRING.
 - FUSED DISCONNECT SWITCH, HEAVY DUTY "HP" RATED, PROVIDE NEMA 3R ENCLOSURE OUTDOORS.
 - FIRE ALARM MANUAL PULL STATION, TOP OF BOX 48" AFF.
 - WALL MOUNTED FIRE ALARM COMBINATION SPEAKER/STROBE UNIT, CANDELA AND DBA RATING AS NOTED ON DRAWINGS. PROVIDE BACKBOX SUCH THAT BOTTOM OF STROBE LENS IS 81" ABOVE FINISHED FLOOR, COORDINATE BACKBOX TYPE AND EXACT MOUNTING HEIGHT WITH FIRE ALARM EQUIPMENT SUPPLIER. "WG" BY SPEAKER/STROBE INDICATES CONTRACTOR TO PROVIDE WIRE GUARD.
 - FIRE ALARM DUCT SMOKE DETECTOR, FURNISHED BY ELECTRICAL, INSTALLED DUCTWORK BY MECHANICAL, CONNECTED TO FIRE ALARM SYSTEM BY ELECTRICAL, CONNECT TO SHUT UNIT DOWN UPON ALARM. FURNISH AND INSTALL "LED" REMOTE STATUS INDICATOR, FIELD VERIFY LOCATION.
 - CONDUIT AND CONDUCTORS EXTENDED TO PANELBOARD A, CIRCUITS 1, 3, AND 5. CROSS LINES INDICATE #12 AWG PHASE AND NEUTRAL CONDUCTORS WHERE MORE THAN TWO. SINGLE CIRCUIT BRANCH CIRCUIT WIRING RUNS SHOWN WITHOUT CROSS LINES SHALL BE PROVIDED WITH #12, 1#12G. EACH 20 AMPERE BRANCH CIRCUIT SHALL BE PROVIDED WITH SEPARATE NEUTRAL CONDUCTOR. SHARING OF NEUTRAL CONDUCTORS SHALL NOT BE PERMITTED. PROVIDE EQUIPMENT GROUNDING CONDUCTOR IN EACH CONDUIT RUN.

OAK RIDGE HIGH SCHOOL
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LEGEND AND SCHEDULES

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| REVISIONS | | |
|-----------|----------|-------------|
| NO. | DATE | DESCRIPTION |
| 1 | 03-29-23 | ADDENDUM 1 |

DATE: 02-27-2023



DWG NO.

E201

PROJECT NO.

22023
FULL SHEET SIZE: 24"x36"

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