

WAKELY ASSOCIATES, INC.
ARCHITECTS
30500 Van Dyke Avenue Suite 209
Warren, Michigan 48093
Warren, Michigan 48093

ADDENDUM NO. 01
MACOMB COUNTY JAIL
LAUNDRY HOT WATER STORAGE
TANKS AND BOILER REPLACEMENT
Page 1 of 3 (write up only)

November 10, 2023

ADDENDUM NO.01 to the plans and specifications for the Macomb County Jail, Laundry Hot Water Storage Tanks and Boiler Replacement, Mt. Clemens, MI, Architect's Project No. 231997, dated October 25, 2023.

The above plans and specifications are modified, supplemented or augmented as follows, and this ADDENDUM NO. 01, is hereby made a part of the contract documents.

Drawings A1.1, M0.00, M4.02 and Sign In Sheet are being issued with this Addendum.
Specification Sections 01100 and Bid Form are being issued with this Addendum.

GENERAL ITEMS

ITEM NO. G1: Sign-in Sheet attached.

ITEM NO. G2: Post Bid Interviews will be held directly after Bid Opening.

ARCHITECTURAL SPECIFICATION ITEMS

ITEM NO. AS1: Refer to Spec Section 01100 "Alternates", Bid Form and Revised Sheet A1.1 (Re-issued):

1. Alternates shall be as indicated on Bid Form and Spec Section 01100 "Alternates"
 - a. Base bid for Doors D042A and D042B is removal of existing, HM frames, doors & hardware and replacement with new HM frames, doors and hardware. Painted per 09970 "Tnemec Coating Systems".
 - b. Alternate #1 is removal of existing HM frames and doors and replacement with FRP doors in aluminum frames with new door hardware.
 - c. Existing concrete wall and floor shall be patched per Spec Sections 03300 "Bonding Agents for Concrete" and 03730 "Concrete Rehabilitation" for base bid. Alternate is only for the door and frame revision from HM to FRP.
 - d. There is no alternate for work associated with Doors D037 and C010. This is base bid work.
 1. Painting of CMU wall doors are anchored to and HM doors and frames shall be as described in Spec Section 09900 "Painting".

ARCHITECTURAL ITEMS

- ITEM NO. A1:** Refer to Sheet A1.1 (Re-issued):
1. Corrected Alternate and enlarged floor plans.
 2. Corrected composite floor plan.
 3. Removed Enlarged Plan 3A1.1.
 4. Revised Door Schedule Remark 3.
 5. Revised Demo Note 4

- ITEM NO. A2:** Clarification: Mechanical Rooms D042 and C0009 walls, ceilings piping, ductwork, doors, frames etc. shall be painted per Spec Section 09970 "Tnemec Coating Systems" color code piping. Floor is not being painted.

MECHANICAL ITEMS

- ITEM NO. M1:** Refer to sheet M0.00 (Re-issued):
1. Add sheet M4.02 to the sheet List Table.

- ITEM NO. M2:** Refer to sheet M4.02 (Issued):
1. Add sheet M4.02 to the drawing set.

- ITEM NO. M3:** All work shown on ME4.02 is base bid. Hot Water tanks shown on ME4.01 are base bid. Boilers shown on ME4.01 are Alternate #2. .

Q & A

1. Is it the intent that all the boilers are to remain existing and Alternate #1 is to replace all the existing boilers? **Boilers on ME4.01 are Alternate No. 2. (Alternate No. 1 is FRP Doors/Aluminum Frames in lieu of HM Doors/Frames) Boilers on ME4.02 are to be replaced base bid.**
2. Alternate #2 indicates associated painting of the Boiler Room. Are we to paint the walls, ceiling, floor and associated pipe and ductwork? Also please clarify what Painting Specification we are to use for painting the boiler room. Please clarify what is to be painted. **See Item No. A2 of this Addendum.**
3. Drawing ME4.02 was not issued, please have the architect issue the drawing. **It is being issued with this Addendum.**
4. Drawing A1.1- Detail 3/A1.1 Demo Note#4 indicates Alternate #2- Remove portion of existing CMU Wall and existing lintel for new door. Demo Note #1 indicates remove existing hollow meta frame, door, and hardware complete. **See Item No. A1 of this Addendum.**

5. Drawing A1.1- Detail 3A/A1.1 Base Bid Enlarge First Floor Plan New Work Plan- indicates to remove and replace Door D037. Detail 3B/A1.1 Alternate #2 Enlarge First Floor New Work Plan indicates to replace Door D037 with a double door. Should detail 3/A1.1 be indicated as Alternate #2 Demo Plan? **See Item No. AS1 “D” of this Addendum.**

Please clarify the work required in Alternate #1 and Alternate #2 as the requirements are unclear: **If Boilers are going to be replaced, the pumps are to be replaced. If the Boilers stay, the pumps stay.**

6. Item #1: Drawing ME4.01 Demo Note #1- Indicates Alternate #1 (**This is now Alternate #2**) disconnect, make safe and remove existing domestic water heating boiler and all associated components complete.
7. Note #4 indicates to disconnect, make safe and remove existing domestic water heating boilers and associated pumps complete. **The boilers that are located on ME4.01 are to be as an Alternate (Alternate No. 2) to replacement. The Boilers that are located on ME4.02 are to be replaced base bid.**
8. Item #2: Drawing ME 4.01 Demo Note #2 indicates to remove circulation pump and all associated piping between boiler and storage tanks. Base bid pumps are to remain. Provide alternate pricing to remove and provide new pumps. What alternate is this? (**This is part of Alternate No. 2**)The bid form only indicates two alternates. Item #3: Bid Form indicates painting of the Boiler in alternate #2, please clarify what is to be painted in the boiler room. **Painting is clarified to be base bid now.**

END OF ADDENDUM NO. 01

Cc: Denise Mentzer, Macomb County
Benjamin Treppa, Macomb County
Ron Syme, Wakely Associates
Domenic Guadagnino, Wakely Associates
Dave Littlefield, UBS

SECTION 01100 - ALTERNATES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS:

- A. Attention is directed to Division 0, Bidding and Contract Requirements, and to Division 1, General Requirements, which are hereby made a part of this Section.

1.02 DESCRIPTION OF WORK:

- A. This section identifies each Alternate by number, and describes the basic changes to be incorporated into the work, only when the Alternate is made a part of the work by specific provisions in the Owner-Contractor Agreement.
- B. Alternate schedule below is part of the Bidding Documents and will be considered in selection of Contractors and awarding contracts.
- C. Unless otherwise provided, Owner will accept or reject alternates within thirty (30) days of date of contract. Owner reserves the right to reject any or all alternates.

1.03 ALTERNATES:

A. General:

- 1. The descriptions for each alternate listed in the schedule are primarily scope definitions, and do not necessarily detail the full range of materials and processes needed to complete the work as required.
- 2. Refer to applicable specification sections (Division 2 through 26), and to applicable drawings, for specific requirements of the work, regardless of whether references are so noted in description of each alternative.
- 3. Coordinate pertinent related work and modify surrounding work as required to properly integrate the work under each Alternate, and to provide the complete construction required by Contract Documents.
- 4. Referenced sections of specifications stipulate pertinent requirements for products and methods to achieve the work stipulated under each Alternate.

MACOMB COUNTY JAIL
LAUNDRY HOT WATER STORAGE TANKS
AND BOILER REPLACEMENT

231997

OCTOBER 25, 2023

B. Schedule:

1. **Alternate No. 1:** Removal and replacement of designated exterior hollow metal doors with new FRP doors and aluminum frames.
2. **Alternate No. 2: Removal and replacement of existing boilers and associated pumps in Mechanical Room D042.**

END OF SECTION 01100

**BID ITEM #46-23
MACOMB COUNTY JAIL LAUNDRY HOT WATER STORAGE TANKS
AND BOILER REPLACEMENT**



BID FORM

Bid Item #46-23
Macomb County Jail
Laundry Hot Water Storage Tanks and
Boiler Replacement Project

Bidder: _____
(print or type company name)

County of Macomb
Mount Clemens, Michigan

OWNER

(Telephone Number)

MACOMB COUNTY
MT. CLEMENS, MICHIGAN 48043

ARCHITECT

WAKELY ASSOCIATES INC.
30500 VAN DYKE AVENUE, SUITE 209
WARREN, MI 48093

GENERAL AGREEMENTS

- A. The Bidder acknowledges that he/she has had the opportunity to examine the site and locality where the Work is to be performed and has become familiar with the legal requirements, laws, rules, regulations and conditions affecting the cost, progress and performance of the Work; and has made such independent investigations as Bidder deemed necessary to prepare the Bid. Further, Bidder hereby states that the Base Bid set forth in this Bid Response is true and correct.
- B. The Bidder agrees that this Bid shall not be withdrawn for a period of 30 calendar days after the scheduled closing time for receiving Bids.
- C. The Bidder declares that in preparing this Bid, Bidder is assured of the availability of all labor, materials and products to meet the substantial completion date.
- D. The Bidder acknowledges that the price stated below includes all taxes of whatever character or description.
- E. The Bidder agrees to execute a Contract for work covered by this Bid, provided that he/she be notified of its acceptance within thirty (30) days after the opening of Bids.

SCHEDULE - TIME OF COMPLETION

The undersigned agrees to commence the Work of the Contract Documents on a date specified in a written "Notice to Proceed", and shall fully complete the Work within the required time allowed. Owner requires work to be substantially complete no later than April 26, 2024. The proposed Bid is in full consideration of this.

ACKNOWLEDGEMENT OF ADDENDA

The Bidder acknowledges receipt of and use of the following Addenda in the preparation of this Bid:

Addendum No. 1, dated _____, Addendum No. 3, dated _____

Addendum No. 2, dated _____, Addendum No. 4, dated _____

**BID ITEM #46-23
MACOMB COUNTY JAIL LAUNDRY HOT WATER STORAGE TANKS
AND BOILER REPLACEMENT**



BID FORM SUPPLEMENTS

Attached to this Bid Form and incorporated herein are the following documents, completed in full by the undersigned:

Base Bid Form Supplement – Unit Prices/Supplemental Fees

BASE BID

The undersigned Bidder, having carefully examined the Bidding and Contract Requirements, Conditions of the Contract, Drawings, Specifications, and all subsequent Addenda, all as issued by the Owner, and being familiar with all conditions and requirements of the Work, hereby proposes and agrees to furnish all material, labor, equipment, tools and supervision; and to furnish all services necessary to complete the Work required in accordance with the Bidding Documents for the following projects, in the following amount:

_____ Dollars \$ _____
(Sum to be written out)

CONTINGENCY: (This amount, when unused, will be returned to the Owner. This contingency will only be used after written authorization of the Owner's representative).

- A. The undersigned acknowledges that they have included the sum of THIRTY FIVE THOUSAND DOLLARS (\$35,000.00) in the base bid for use as a Construction Contingency. Note: Unused Contingency will be returned to Owner at the end of the project.

ALTERNATES

Two Alternates are being priced. As follows:

Alternate No. 1: Replacement of existing HM doors at the Laundry Hot Water Mechanical Room with new FRP doors and aluminum framing system.

ALTERNATE NO. 1: _____
Dollars \$ _____ (sum to be written out)

Alternate No. 2: Replacement of boilers and associated pumps in Mechanical Room D042.

ALTERNATE NO. 2: _____
Dollars \$ _____ (sum to be written out)

**BID ITEM #46-23
 MACOMB COUNTY JAIL LAUNDRY HOT WATER STORAGE TANKS
 AND BOILER REPLACEMENT**



VOLUNTARY ALTERNATES

The following voluntary alternates are offered by the Bidder. The undersigned agrees that the amounts indicated below shall be added to or deducted from the Base Bid, as the case may be for each alternate which is accepted.

Description of Voluntary Alternates	Add	Deduct
1. _____	\$ _____	\$ _____
2. _____	\$ _____	\$ _____
3. _____	\$ _____	\$ _____
4. _____	\$ _____	\$ _____

Respectfully submitted this ____ day of _____, 20____.

By: _____
 (Name of bidding firm or corporation)

Witness:

By: _____
 (Signature)

Attest: _____
 (Signature)

 (Type or print name)

By: _____
 (Type or print name)

Title: _____
 (Owner/Partner/President/Vice Pres.)

Title: _____
 (Corporate Secretary or Assistant Secretary Only)

Address: _____
 Phone: _____

License: _____

Federal ID No.: _____

(Affix Corporate Seal Here)

 Company Name

 Company Representative

 Title

 Date



**BID ITEM #46-23
MACOMB COUNTY JAIL LAUNDRY HOT WATER STORAGE TANKS
AND BOILER REPLACEMENT**

BID FORM SUPPLEMENT - UNIT PRICES/SUPPLEMENTAL FEES

This form is required to be attached to the Base Bid Form.

Bid Item #46-23
Macomb County Jail
Laundry Hot Water Storage Tanks and
Boiler Replacement Project

Bidder: _____
(print or type company name)

County of Macomb
Mount Clemens, Michigan

SUPPLEMENTAL FEES

For additional work performed upon instruction of Macomb County, by Sub-Contractors of the Undersigned, add to the Sub-Contractor's prices for such work a fee of _____%, which includes all the charges of the undersigned for overhead and profit.

Any additional work performed upon instruction of Macomb County by persons other than the Sub-Contractors of the undersigned, the charges will be actual cost of the labor, and materials, (less all discounts) plus the fee of _____%, which includes all the charges of the undersigned for overhead and profit, and to which shall be added the actual cost of insurance & taxes.

Each Bid covering extra work, shall be accompanied with complete itemized material & labor breakdowns.

For all revisions involving the deletion of contract work, it is agreed that the full credit shall be given Macomb County for such work deleted, including overhead and profit as quoted hereinbefore.

NEGOTIATION

The undersigned agrees that, should the overall cost exceed the funds available, he/she will be willing to negotiate with Macomb County and Architect; for the purpose of making further reductions in the Contract work, and shall agree to give full credit for all such reductions in the work requested by Macomb County, including full value of labor, materials, and Sub-Contract work and reasonable proportionate reductions in overhead and profit, thereby arriving at an agreed upon Contract price.

**BID ITEM #46-23
MACOMB COUNTY JAIL LAUNDRY HOT WATER STORAGE TANKS
AND BOILER REPLACEMENT**



Submitted this ____ day of _____, 20____

By: _____
(Name of bidding firm or corporation)

By: _____
(Signature)

(Type or print name)

Title: _____
(Owner/Partner/President/Vice Pres.)



**BID ITEM #46-23
MACOMB COUNTY JAIL LAUNDRY HOT WATER STORAGE TANKS
AND BOILER REPLACEMENT**

BID FORM SUPPLEMENT - LIST OF SUB-CONTRACTORS

All sealed bids for construction contracts shall provide a list of preferred sub-contractors and identify, with documentation, whether each subcontractor is a County-based Enterprise.

NAME OF BIDDER: _____

NAME OF SUB-CONTRACTOR _____

CONTACT PERSON _____

ADDRESS _____

TELEPHONE NO. _____

MACOMB COUNTY BASED ENTERPRISE (Y/N) _____

NAME OF SUB-CONTRACTOR _____

CONTACT PERSON _____

ADDRESS _____

TELEPHONE NO. _____

MACOMB COUNTY BASED ENTERPRISE (Y/N) _____

NAME OF SUB-CONTRACTOR _____

CONTACT PERSON _____

ADDRESS _____

TELEPHONE NO. _____

MACOMB COUNTY BASED ENTERPRISE (Y/N) _____

NAME OF SUB-CONTRACTOR _____

CONTACT PERSON _____

ADDRESS _____

TELEPHONE NO. _____

MACOMB COUNTY BASED ENTERPRISE (Y/N) _____

DOOR SCHEDULE

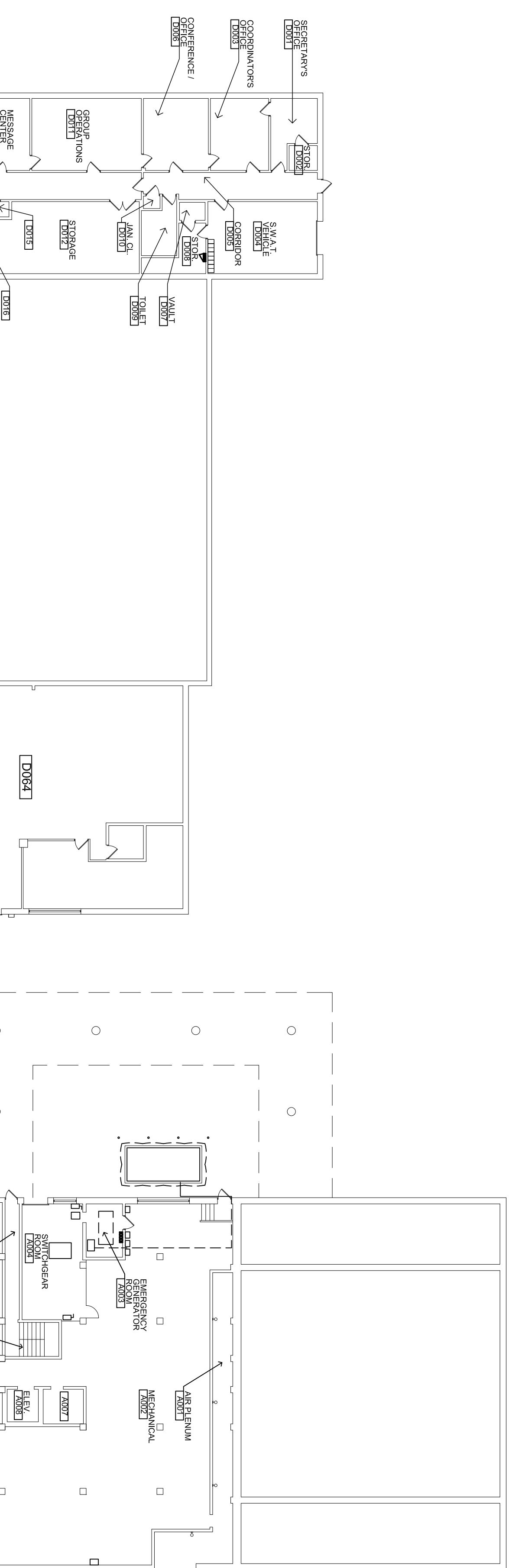
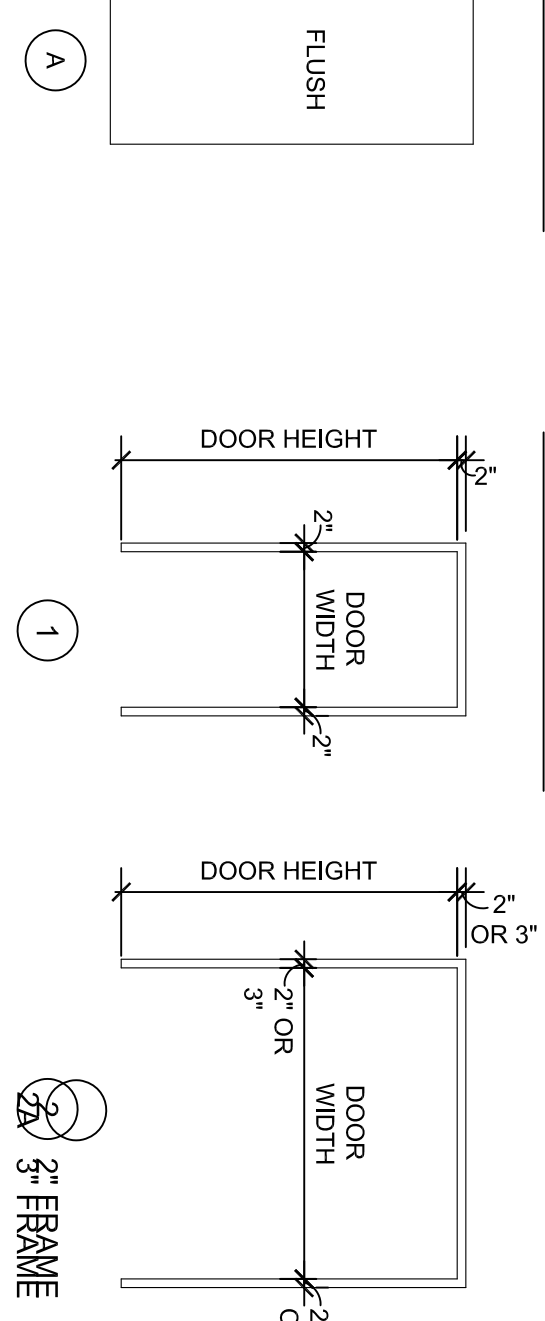
NO.	WIDTH	HEIGHT	TYPE	MATERIAL	FINISH	TYPE	MATERIAL	FINISH	HEAD	JAMB	SILL	THRESHOLD	U.L. LABEL	HARDWARE SET	REMARKS

BASEMENT - BASE BID															
C010	3'-0"	7'-0"	A	HM	PT	1	HM	PT	H1	J1	-	-	-	01	1
D037	3'-0"	7'-0"	A	HM	PT	1	HM	PT	H1	J1	-	-	-	02	1,4
DD42A	2'-3'-6"	9'-0"	A	HM	PT	2A	HM	PT	H1	J1	-	-	-	04	1,2
DD42B	2'-3'-6"	9'-0"	A	HM	PT	2A	HM	PT	H1	J1	-	-	-	04	1,2

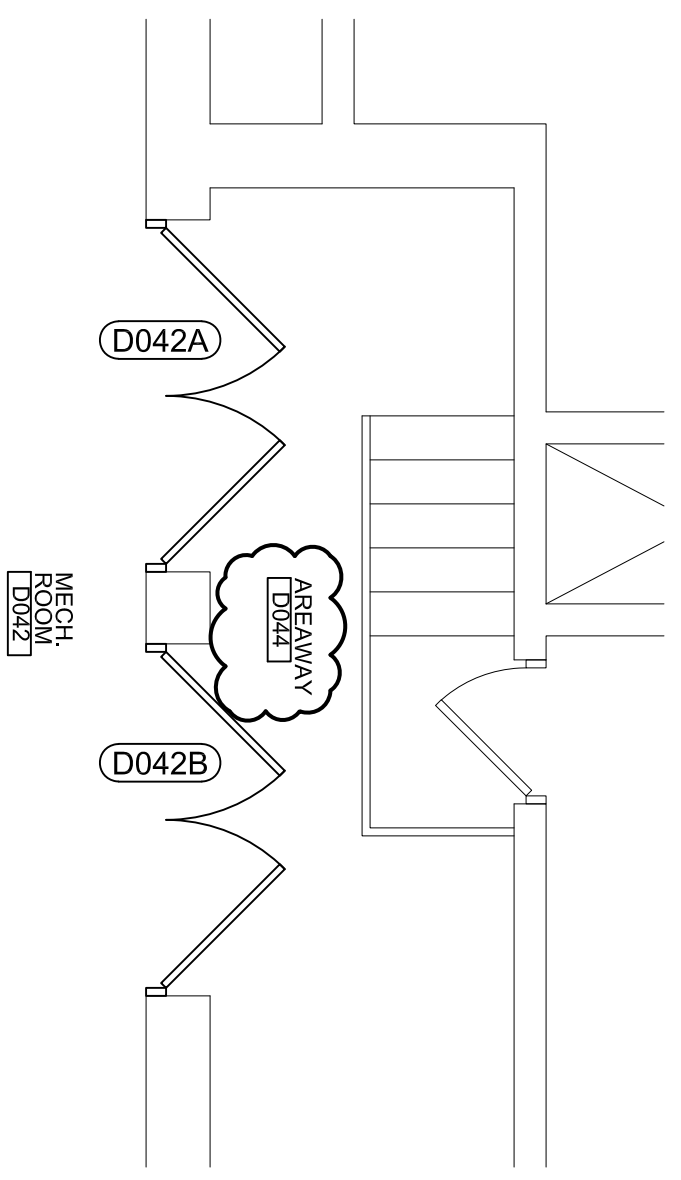
BASEMENT - ALTERNATES															
D037	2'-3'-6"	7'-0"	A	HM	PT	2	HM	PT	H1	J1	-	-	-	03	1,3
DD42A	2'-3'-6"	9'-0"	A	FRP	FRN	2A	AL	FRN	H2	J2	-	-	-	-	1,2
DD42B	2'-3'-6"	9'-0"	A	FRP	FRN	2A	AL	FRN	H2	J2	-	-	-	-	1,2

- TYPICAL CONSTRUCTION NOTES:**
1. ALL WORK SHALL COMPLY WITH NATIONAL, STATE AND LOCAL CODES, ORDINANCES AND REGULATIONS.
 2. ALL MATERIALS SHALL BE INSTALLED/USED IN STRICT ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
 3. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS PRIOR TO THE START OF WORK. ALL DIMENSIONS AND FIELD CONDITIONS SHALL BE TO THE BEST OF THE CONTRACTOR'S KNOWLEDGE AND SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS PRIOR TO THE START OF WORK. DIMENSIONS SHALL NOT BE CONSIDERED AS A GUARANTEE OF ACCURACY.
 4. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS PRIOR TO THE START OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS PRIOR TO THE START OF WORK.
 5. ALL ITEMS SHALL BE AS SPECIFIED BY ARCHITECT.
 6. SUBMIT SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES TO THE ARCHITECT FOR REVIEW PRIOR TO INSTALLATION/APPLICATION.
 7. ALL ITEMS SHALL BE LEGALLY OBTAINED OR OF THE SITE BY THE CONTRACTOR.
 8. ALL PRECAUTIONS SHALL BE TAKEN TO AVOID DAMAGE TO EXISTING MATERIALS AND CONSTRUCTION TO REMAIN.
 9. CONTRACTOR SHALL CUT AND PATCH EXISTING WALLS, FLOORS, CEILING, ETC. AS REQUIRED TO COMPLY WITH THE WORK.
 10. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS PRIOR TO THE START OF WORK.
 11. CONTRACTOR SHALL COORDINATE INSTALLATION AND PHASING OF WORK WITH THE ARCHITECT AND OWNER'S REPRESENTATIVE PRIOR TO THE START OF WORK.

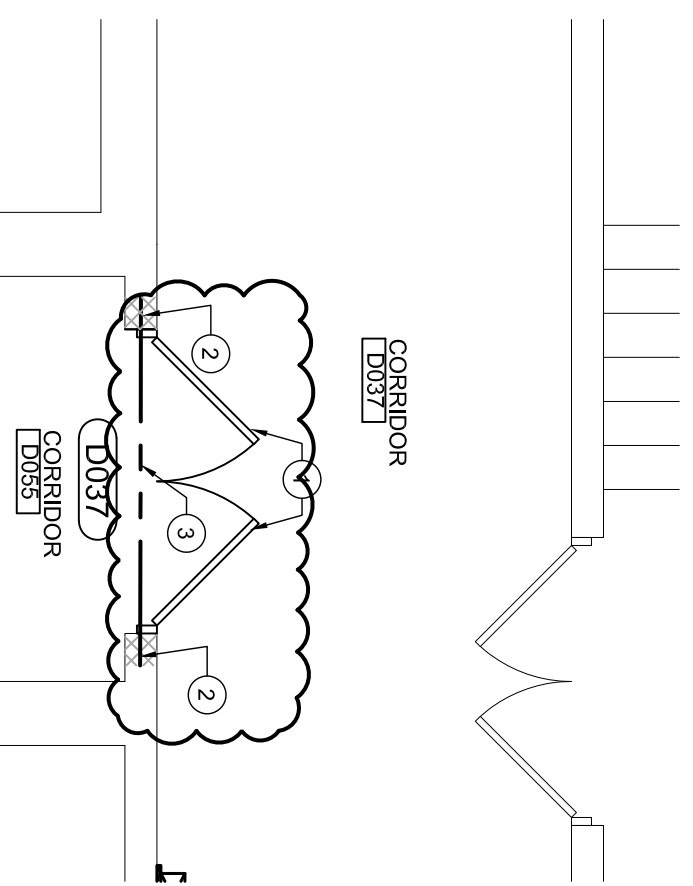
DOOR TYPES



**BASE BID 1
ENLARGED BASEMENT
FLOOR NEW WORK PLAN**
SCALE: 20" = 1"
ALTERNATE 1: REFER TO DOOR SCHEDULE FOR DOOR MATERIAL AND FRAME.



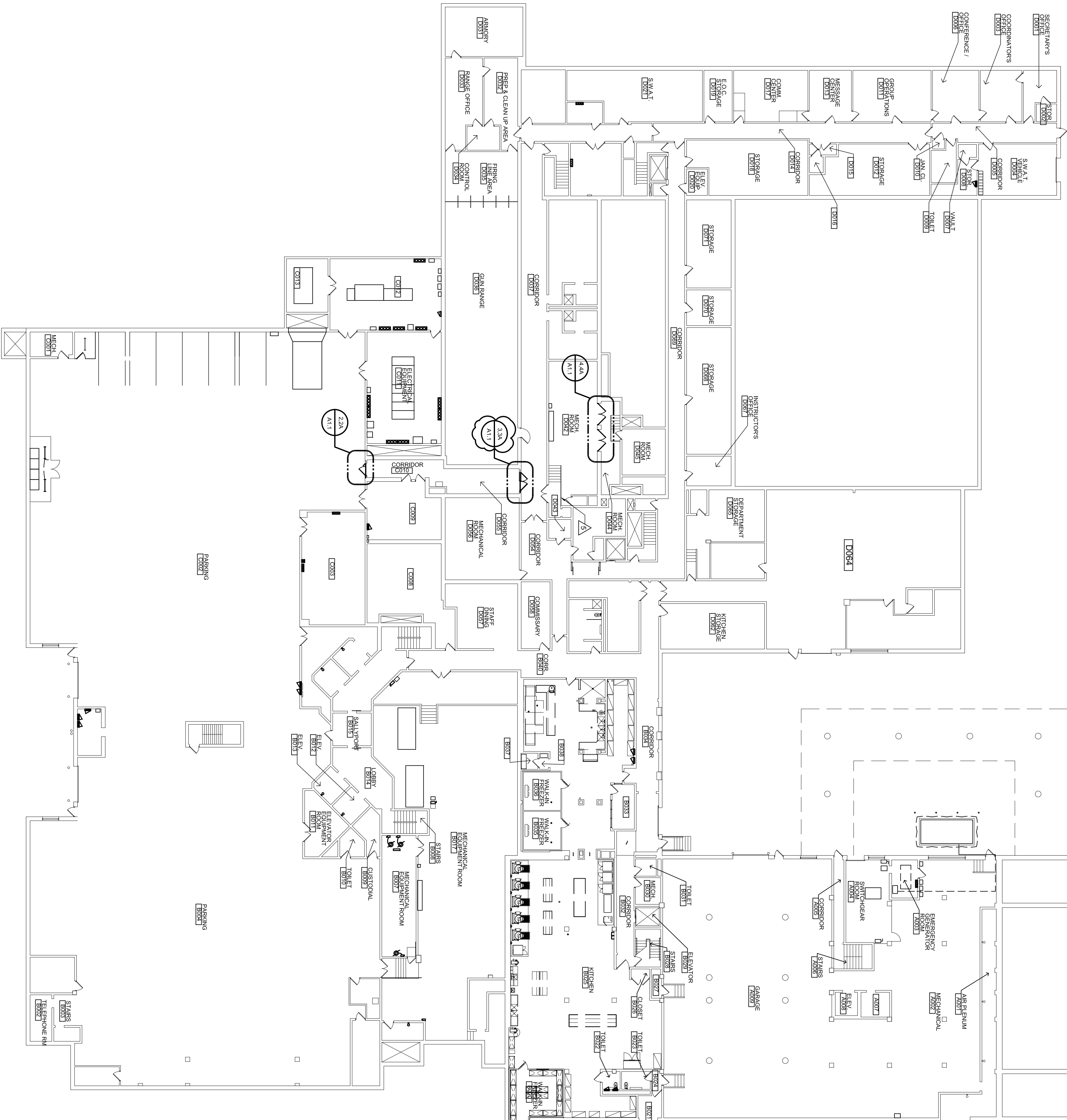
NOT USED
SCALE: 20" = 1"



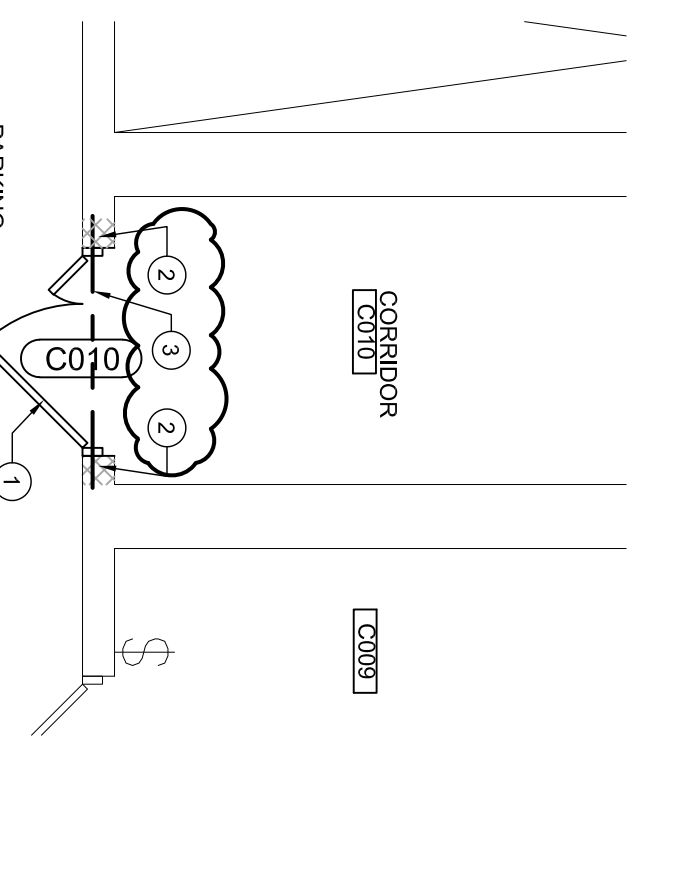
**BASE BID ENLARGED
BASEMENT FLOOR
DEMOLITION PLAN**
SCALE: 20" = 1"



COMPOSITE BASEMENT FLOOR PLAN
SCALE: 20" = 1"



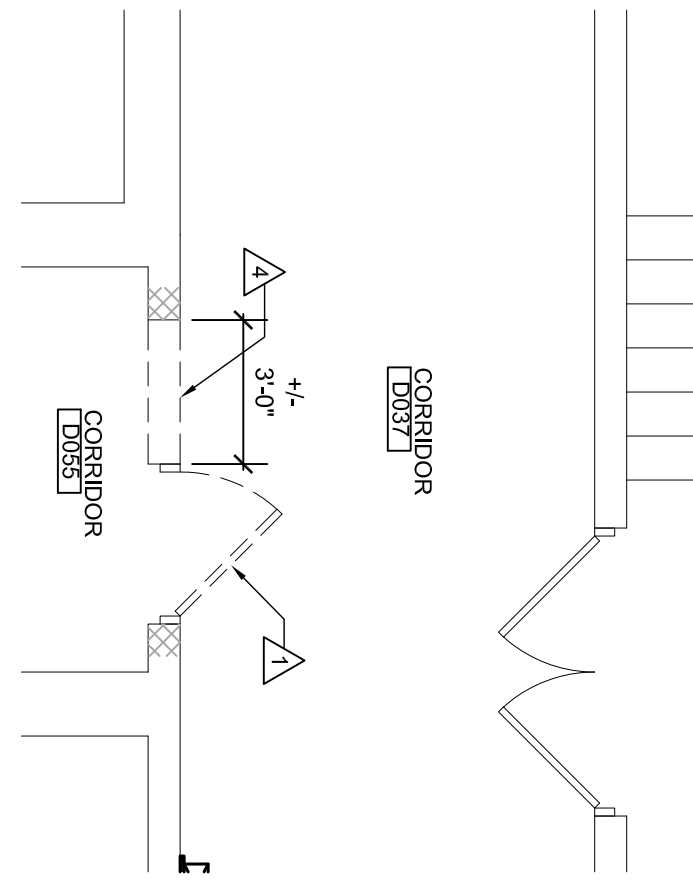
- FLOOR PLAN KEY NOTES:**
1. NEW DOOR FRAME AND HARDWARE. REFER TO DOOR SCHEDULE.
 2. TOOTH IN NEW CAUL WITH BILLOUSE (VERTICAL EDGE) AT JAMBS. PAINT TO MATCH EXISTING WALL.
 3. PROVIDE NEW MASONRY INTEL. FOR NEW DOOR OPENING.
- DEMOLITION NOTES:**
- △ REMOVE EXISTING HOLLOW METAL FRAME, DOOR AND HARDWARE.
 - △ REMOVE PORTION OF EXISTING CAUL WALL AND EXISTING INTEL. FOR NEW DOOR. REFER TO NEW WORK PLAN.
 - △ ALTERNATE NO. 1: REMOVE EXISTING HOLLOW METAL DOOR FRAME.
 - △ PROVIDE NEW DOOR FRAME AND HARDWARE.
 - △ REMOVE PORTION OF EXISTING CAUL WALL AND EXISTING INTEL. FOR NEW DOOR. REFER TO NEW WORK PLAN.
 - △ EXISTING REMOVABLE HANGAR. REMOVE AND REINSTALL AS REQUIRED FOR NEW HVAC EQUIPMENT.



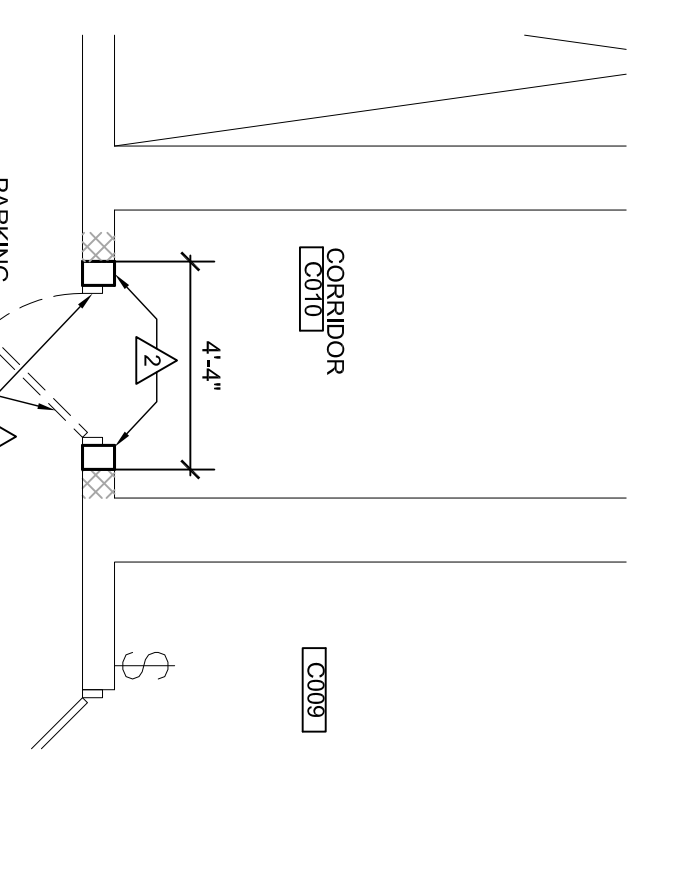
**ENLARGED BASEMENT
FLOOR NEW WORK PLAN**
SCALE: 20" = 1"



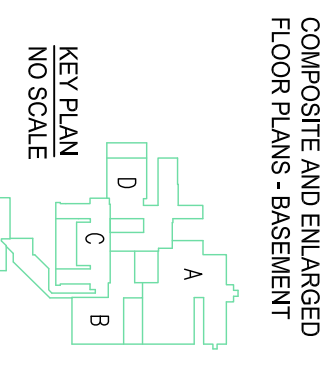
**ENLARGED BASEMENT
FLOOR DEMOLITION PLAN**
SCALE: 20" = 1"



**ENLARGED BASEMENT
FLOOR NEW WORK PLAN**
SCALE: 20" = 1"

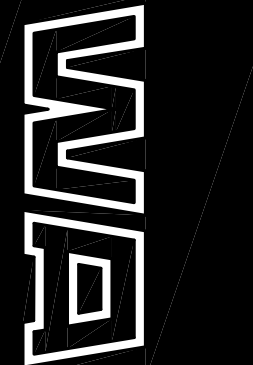


**ENLARGED BASEMENT
FLOOR DEMOLITION PLAN**
SCALE: 20" = 1"



**MACOMB COUNTY EXECUTIVE
JAIL LAUNDRY HW STOR. TANK AND BOILER REPLACEMENT
MACOMB COUNTY JAIL, MT. CLEMENS, MI**

MARKET ASSOCIATES, INC.
ARCHITECTS
3690 VAN DYKE AVENUE
SUITE 202
WARREN, MICHIGAN 48093
P: 586.573.0022
www.wmarket.com



PRELIMINARY	<input type="checkbox"/>
DESIGN DEVELOPMENT	<input type="checkbox"/>
CONSTRUCTION	<input checked="" type="checkbox"/>
FINAL RECORD	<input type="checkbox"/>
DRAWN BY: LSA	
CHECKED BY: LSA	
REVISIONS	
DATE: OCTOBER 25, 2023	
SHEET NO:	
A1.1	
JOB NO:	231997



WAKELY ASSOCIATES, INC. ARCHITECTS

30500 VAN DYKE AVENUE SUITE 209 WARREN, MICHIGAN 48093 PH: 586.573.4100 FX: 586.573.0822 www.WakelyAIA.com

MACOMB COUNTY EXECUTIVE JAIL LAUNDRY HW STOR. TANK AND BOILER REPLACEMENT MACOMB COUNTY JAIL, MT. CLEMENS, MI

MECHANICAL GENERAL INFORMATION

PRELIMINARY DESIGN DEVELOPMENT CONSTRUCTION FINAL RECORD

DRAWN BY: DJL CHECKED BY: DJL

REVISIONS

TYP. UNDER COUNTER UNDERWRITERS LABORATORIES UNINTERRUPTIBLE POWER SUPPLY UNIVERSAL SERIAL BUS VOLT VOLT AMPERE WATT WIRE GUARD WEATHERPROOF TRANSFORMER

DATE: OCTOBER 25, 2023 SHEET NO.

M0.00

JOB NO. 231997

Sheet List Table with columns for Sheet Number and Sheet Title. Includes entries for M0.00 (MECHANICAL GENERAL INFORMATION), M1.01 (MECHANICAL DEMOLITION AND NEW WORK PLANS), ME4.01 (ENLARGED MECH. AND ELEC. DEMOLITION AND NEW WORK PLANS), M4.02 (ENLARGED MECHANICAL DEMOLITION AND NEW WORK PLANS - BOILER ROOM), M6.00 (MECHANICAL SCHEDULES, DETAILS AND TEMPERATURE CONTROLS), and M7.00 (PIPING DIAGRAMS).

ELECTRICAL ABBREVIATIONS

Table of electrical abbreviations including AFF (ABOVE FINISHED FLOOR), A (AMPERE), AF (AMPERE FUSE/AMPERE FRAME), AWG (AMERICAN WIRE GAUGE), AT (AMPERE TRIP), ATS (AUTOMATIC TRANSFER SWITCH), AIC (AVAILABLE INTERRUPTING CURRENT (AMPS)), C (CONDUIT OR CEILING MOUNTED), CB (CIRCUIT BREAKER), CU (COPPER), CT (CURRENT TRANSFORMER), DIA (DIAMETER), DISC (DISCONNECT), EMT (ELECTRICAL METALLIC TUBING), EWG (ELECTRIC WATER COOLER), EPO (EMERGENCY POWER OFF), (E) (EXISTING ELECTRICAL EQUIPMENT OR WORK), FA (FIRE ALARM), FACP (FIRE ALARM CONTROL PANEL), FLA (FULL LOAD AMPS), F (FUSE), G/GRO (GROUND), GFCI/GFI (GROUND FAULT CIRCUIT INTERRUPTER), HOA (HAND-OFF-AUTO), HP (HORSEPOWER), IG (ISOLATED GROUND), KV (KILOVOLT), KVA (KILOVOLT AMPERE), KW (KILOWATT), KWH (KILOWATT HOUR), LP (LIGHTING PANEL), MCB (MAIN CIRCUIT BREAKER), MDP (MAIN DISTRIBUTION PANEL), MLO (MAIN LUG ONLY), MAX (MAXIMUM), MIN (MINIMUM), NEC (NATIONAL ELECTRICAL CODE), NEMA (NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION), N/NEU (NEUTRAL), NF (NON-FUSIBLE), NC (NORMALLY CLOSED), NO (NORMALLY OPEN), NIC (NOT IN CONTRACT), OF/CI (OWNER FURNISHED / CONTRACTOR INSTALLED), OF/OI (OWNER FURNISHED / OWNER INSTALLED), PH. OR Ø (PHASE), P (POLE), PF (POWER FACTOR), PVC (POLYVINYL CHLORIDE (PLASTIC)), (R) (RELOCATED EXISTING ELECTRICAL EQUIPMENT), (RR) (REMOVE AND REINSTALL), RMC (RIGID METALLIC CONDUIT), RP (RECEPTACLE PANEL), SPEC/SPECS (SPECIFICATIONS), TBB (TELEPHONE BACKBOARD), TYP. (TYPICAL), UC (UNDER COUNTER), UL (UNDERWRITERS LABORATORIES), UPS (UNINTERRUPTIBLE POWER SUPPLY), USB (UNIVERSAL SERIAL BUS), V (VOLT), VA (VOLT AMPERE), W (WATT), WG (WIRE GUARD), WP (WEATHERPROOF), XFMR (TRANSFORMER).

POWER SYMBOL LIST

Table of power symbols including CONDUIT DOWN, CONDUIT UP, CONTACTOR, DISCONNECT SWITCH - NON FUSED, DISCONNECT SWITCH - FUSED, DISCONNECT SWITCH - COMB. MOTOR STARTER, ELECTRICAL PANEL - 208/240 VOLTS, ELECTRICAL PANEL - 480 VOLTS, GROUNDING ROD, GROUND, GROUNDING BAR, JUNCTION BOX, JUNCTION BOX WITH HARDWIRED CONNECTION, METER, MOTOR - SINGLE PHASE, MOTOR - THREE PHASE, MOTOR RATED SWITCH, POWER RECEPTACLE - SIMPLEX TYPE, POWER RECEPTACLE - DUPLEX TYPE, POWER RECEPTACLE - USB/DUPLEX COMBO. DEVICE, POWER RECEPTACLE - QUADRUPLUX TYPE, POWER RECEPTACLE - RECESSED FLOOR TYPE, POWER RECEPTACLE - SPECIALTY TYPE, SURGE PROTECTION DEVICE, TIME CLOCK, TRANSFORMER (REFER TO SCHEDULES FOR INFO), VARIABLE SPEED DRIVE.

NOTES: 1. ALL DEVICE RATINGS/SIZES SHALL BE COORDINATED WITH PLANS AND SCHEDULES.

AUXILIARY SYST. SYMBOL LIST

Table of auxiliary system symbols including BUZZER, CAMERA, CARD READER, COMMUNICATIONS DEVICE - 6" ABOVE COUNTER, COMMUNICATIONS DEVICE - FLOOR, COMMUNICATIONS DEVICE - WALL, MAGNETIC DOOR HOLDER, PUSH BUTTON, SPEAKER, WALL CLOCK - SINGLE FACE, WALL CLOCK - DOUBLE FACE, WALL CLOCK AND SPEAKER UNIT.

NOTES: 1. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR BOX AND CONDUIT FOR ALL DEVICES INDICATED. 2. LOW VOLTAGE CONTRACTOR SHALL PROVIDE EXACT SPECIFICATIONS AND LOCATIONS OF ALL DEVICES.

FIRE ALARM SYMBOL LIST

Table of fire alarm symbols including DETECTION DEVICE, DETECTION DEVICE - DUCT MOUNTED, DETECTION DEVICE - FLOW SWITCH, DETECTION DEVICE - TAMPER SWITCH, FIRE ALARM ANNUNCIATOR PANEL, FIRE ALARM CONTROL PANEL, FIRE DEPARTMENT COMMUNICATION OUTLET, MANUAL DEVICE - PULL STATION, NOTIFICATION DEVICE - WALL MOUNTED, NOTIFICATION DEVICE - CEILING MOUNTED.

NOTES: 1. DRAWINGS INDICATE DESIGN INTENT ONLY, FINAL LOCATIONS AND DEVICE SPECIFICATIONS SHALL BE PROVIDED BY FIRE ALARM MANUFACTURER. REFER TO PROJECT SPECIFICATIONS FOR APPROVED MANUFACTURERS.

PIPING LEGEND

Table of piping legends including COMPRESSED AIR PIPING, CONDENSATE DRAIN PIPING, DRAIN TILE, FIRE PROTECTION PIPING, FUEL OIL RETURN PIPING, FUEL OIL SUPPLY PIPING, NATURAL GAS PIPING, BOOSTED-DOMESTIC COLD WATER PIPING, BOOSTED-DOMESTIC HOT WATER PIPING, DOMESTIC COLD WATER PIPING, NON POTABLE COLD WATER PIPING, TEMPERED WATER PIPING, DOMESTIC HOT WATER PIPING, DOMESTIC 140°F HOT WATER PIPING, DOMESTIC HOT WATER RETURN PIPING, SANITARY WASTE PIPING, PUMPED SANITARY PIPING, VENT PIPING, STORM SEWER PIPING, PUMPED STORM PIPING, RAIN CONDUCTOR PIPING, OVERFLOW RAIN CONDUCTOR PIPING, CHILLED WATER RETURN PIPING, CHILLED WATER SUPPLY PIPING, CONDENSER WATER RETURN PIPING, CONDENSER WATER SUPPLY PIPING, HEATING HOT WATER RETURN PIPING, HEATING HOT WATER SUPPLY PIPING, HEAT PUMP LOOP RETURN PIPING, HEAT PUMP LOOP SUPPLY PIPING, REFRIGERANT LIQUID PIPING, REFRIGERANT SUCTION PIPING, HOT GAS BY-PASS PIPING, GEO HEAT EXCHANGE RETURN, GEO HEAT EXCHANGE SUPPLY, STEAM PIPING, HIGH PRESSURE STEAM PIPING, LOW PRESSURE STEAM PIPING, STEAM CONDENSATE RETURN PIPING, PUMPED STEAM CONDENSATE RETURN PIPING, LOW PRESSURE CONDENSATE PIPING, HIGH PRESSURE CONDENSATE PIPING, MEDICAL AIR PIPING, NITROGEN GAS PIPING, OXYGEN GAS PIPING, VACUUM PIPING.

DRAWING NOTATION

Table of drawing notation including NEW WORK KEY NOTE NO. 1, DEMOLITION KEY NOTE NO. 1, EQUIPMENT TAG, AIR TERMINAL TAG, EXISTING DEVICES OR EQUIPMENT, NEW OR MODIFIED DEVICES OR EQUIPMENT, EXISTING SYSTEM COMPONENT TO BE REMOVED, POINT OF NEW CONNECTION.

APPLICABLE CODES AND REGULATIONS

Table of applicable codes and regulations including MICHIGAN BUILDING CODE, MICHIGAN REHABILITATION CODE FOR EXISTING BUILDINGS, MICHIGAN PLUMBING CODE, MICHIGAN MECHANICAL CODE, MICHIGAN UNIFORM ENERGY CODE, INTERNATIONAL FUEL GAS CODE, NFPA 101 WITH BFS AMENDMENTS.

MECHANICAL SYMBOLS

Table of mechanical symbols including RECTANGULAR TAKE-OFF (SINGLE LINE), RECTANGULAR TAKE-OFF (DOUBLE LINE), ROUND TAKE-OFF (SINGLE LINE), ROUND TAKE-OFF (DOUBLE LINE), SPIN-IN FITTING (WITH VOLUME DAMPER), ELBOW (WITH TURNING VANES), RADIUS RECTANGULAR ELBOW, RADIUS ROUND ELBOW, RECTANGULAR ELBOW UP, ROUND ELBOW UP, RECTANGULAR ELBOW DOWN, ROUND ELBOW DOWN, CONCENTRIC TRANSITION (DOUBLE LINE), CONCENTRIC TRANSITION (SINGLE LINE), ECCENTRIC TRANSITION (DOUBLE LINE), ECCENTRIC TRANSITION (SINGLE LINE), INCLUDED RISE IN DIRECTION OF AIR FLOW (DOUBLE LINE), INCLUDED RISE IN DIRECTION OF AIR FLOW (SINGLE LINE), INCLUDED DROP IN DIRECTION OF AIR FLOW (DOUBLE LINE), INCLUDED DROP IN DIRECTION OF AIR FLOW (SINGLE LINE), FLEXIBLE CONNECTION, FLEXIBLE DUCT CONNECTION TO SUPPLY DIFFUSER, LINEAR SLOT DIFFUSER, RETURN OR EXHAUST GRILLE, TRANSFER GRILLE, CROSS SECTION OF SUPPLY AIR DUCT, CROSS SECTION OF EXHAUST OR RETURN AIR DUCT, EXISTING FIRE DAMPER (HORIZONTAL), NEW FIRE DAMPER (HORIZONTAL), EXISTING FIRE DAMPER (VERTICAL), NEW FIRE DAMPER (VERTICAL), EXISTING SMOKE DAMPER, NEW SMOKE DAMPER, EXISTING COMBINATION FIRE/SMOKE DAMPER (VERTICAL), NEW COMBINATION FIRE/SMOKE DAMPER (VERTICAL), EXISTING COMBINATION FIRE/SMOKE DAMPER (HORIZONTAL), NEW COMBINATION FIRE/SMOKE DAMPER (HORIZONTAL), VOLUME DAMPER (MANUALLY ADJUSTABLE), MOTORIZED DAMPER, SMOKE DETECTOR, CO2 SENSOR, THERMOSTAT OR TEMPERATURE SENSOR, HUMIDISTAT OR HUMIDITY SENSOR, RETURN OR EXHAUST / SUPPLY AIR FLOW.

MECHANICAL PIPING SYMBOLS

Table of mechanical piping symbols including PIPE ELBOW UP, PIPE ELBOW DOWN, PIPE TEE DOWN, DIRECTION OF FLOW, UNION, STRAINER, CONCENTRIC REDUCER, ECCENTRIC REDUCER, MECHANICAL EXPANSION JOINT, FLEXIBLE CONNECTION, PIPE ANCHOR, PIPE GUIDE, PIPE CAP OR PLUG, ISOLATION VALVE, CIRCULATING PUMP, GLOBE VALVE, BALL VALVE, BUTTERFLY VALVE, ANGLE VALVE, CHECK VALVE (SWING), CHECK VALVE (SPRING), PLUG VALVE, NEEDLE VALVE, OUTSIDE SCREW AND YOKE VALVE (OS&Y), PRESSURE REGULATING VALVE, SOLENOID VALVE, CONTROL VALVE (2-WAY / 3-WAY), CENTRIFUGAL FAN, AUTOMATIC GAS SHUT-OFF VALVE, TRAP (PLAN VIEW), FLOOR DRAIN / FUNNEL FLOOR DRAIN (PLAN VIEW), FLOOR DRAIN / FUNNEL FLOOR DRAIN (ELEVATION), ROOF SUMP, CLEAN OUT (IN FLOOR), CLEAN OUT (IN LINE), CLEAN OUT (WALL), BACKFLOW PREVENTER, WATER METER ASSEMBLY, HOSE BIBB, WALL HYDRANT, DIRECTION OF PIPE PITCH, SPRINKLER HEAD (UPRIGHT), SPRINKLER HEAD (SIDEWALL), FLOW SWITCH, SIAMESE CONNECTION (YARD), SIAMESE CONNECTION (WALL MOUNTED), FIRE HYDRANT, FLOW MEASURING DEVICE, BALANCING VALVE, COMBINATION FLOW MEASURING AND BALANCING DEVICE, AUTOMATIC AIR VALVE, MANUAL AIR VALVE.

MECHANICAL ABBREVIATIONS

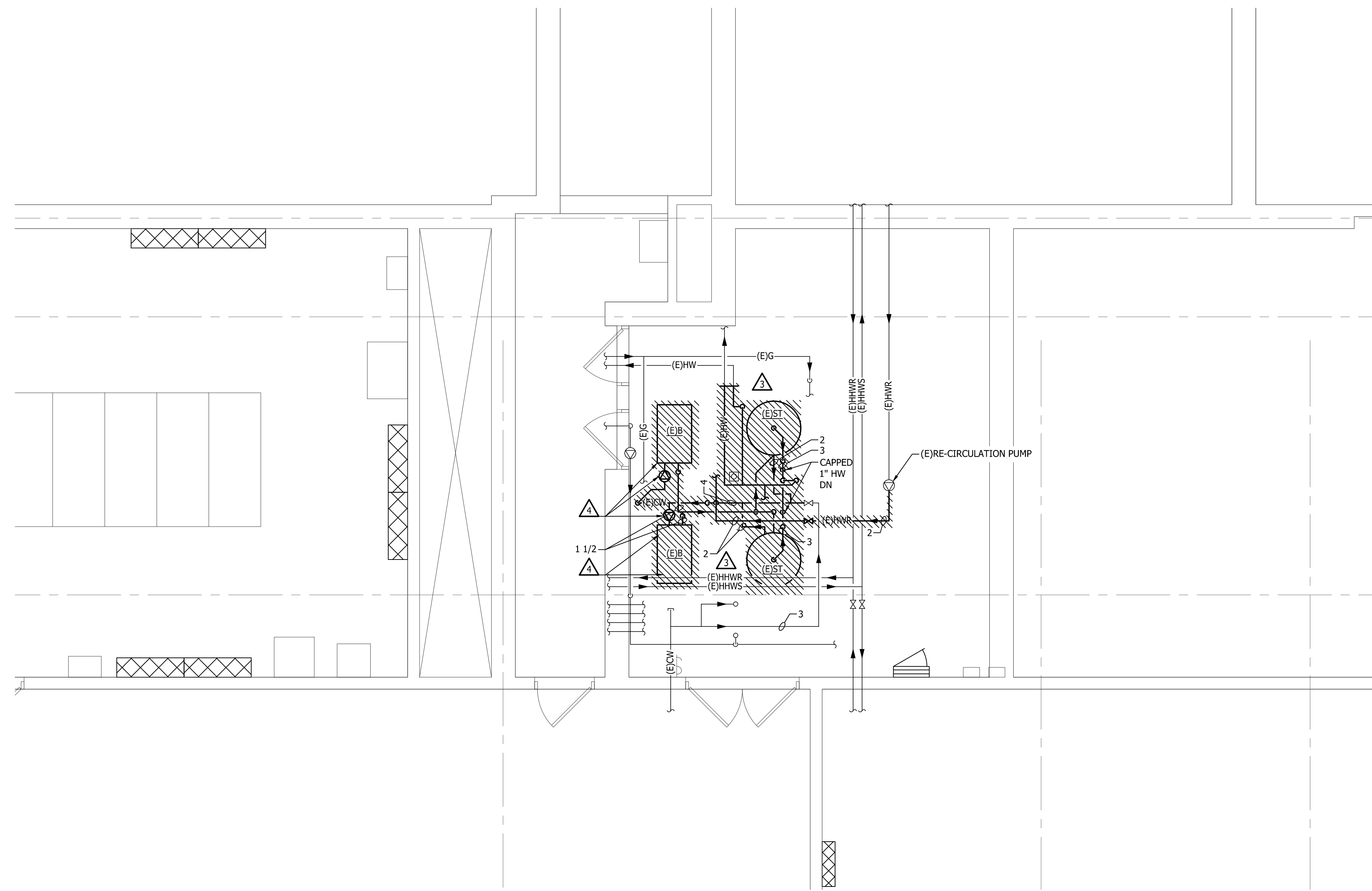
Table of mechanical abbreviations including UR (URINAL), VD (VOLUME DAMPER (MANUALLY ADJUSTABLE)), VTR (VENT THRU ROOF), W (WASTE), W&V (WASTE AND VENT), WB (WET BULB TEMPERATURE), WC (WATER CLOSET), WG (WATER GAUGE), WH (WALL HYDRANT), HR (HOUR), HTG (HEATING), HYD (HYDRANT), HZ (HERTZ), ID (INSIDE DIAMETER), IE (INVERT ELEVATION), IN (INCHES), INST (INSTALLED), INV (INVERT), ISP (INTERNAL STATIC PRESSURE), IW (INDIRECT WASTE), KW (KILOWATT), LAT (LEAVING AIR TEMPERATURE), LAV (LAVATORY), LBS/HR (POUNDS PER HOUR), LDB (LEAVING DRY BULB TEMPERATURE), LRA (LOCKED ROTOR AMPS), LWB (LEAVING WET BULB TEMPERATURE), MAV (MANUAL AIR VENT), MAX (MAXIMUM), MBH (1000 BRITISH THERMAL UNITS PER HOUR), MCA (MINIMUM CIRCUIT AMPACITY), MECH (MECHANICAL), MFR (MANUFACTURER), MH (MANHOLE), MIN (MINIMUM), MISC (MISCELLANEOUS), MOD (MOTOR OPERATED DAMPER (AUTOMATIC)), MOP (MAXIMUM OVER-CURRENT PROTECTION), N.C. (NOISE CRITERIA), NIC (NOT IN CONTRACT), NC (NORMALLY CLOSED), NO (NORMALLY OPEN), NOM (NOMINAL), OA (OUTSIDE AIR), OBD (OPPOSED BLADE DAMPER), OC (ON CENTER / CENTER TO CENTER), OD (OUTSIDE DIAMETER), OED (OPEN ENDED DUCT), ORS (OVERFLOW ROOF SUMP), OS&Y (OUTSIDE SCREW AND YOKE), PD (PRESSURE DROP (FEET OF WATER)), PRV (PRESSURE REDUCING VALVE), PSIG (POUNDS PER SQUARE INCH - GAUGE), PT (PRESSURE / TEMPERATURE PORT), RA (RETURN AIR), RH (RELATIVE HUMIDITY), REQD (REQUIRED), RELA (RELIEF AIR), RPM (REVOLUTIONS PER MINUTE), RPZ (REDUCED PRESSURE ZONE), RS (ROOF SUMP), SA (SUPPLY AIR), SH (SHOWER), SP (STATIC PRESSURE), SqFt / SF (SQUARE FOOT/SQUARE FEET), SS (SERVICE SINK), TC (TEMPERATURE CONTROL), T & P (TEMPERATURE AND PRESSURE), TSP (TOTAL STATIC PRESSURE), TYP (TYPICAL), UG (UNDERGROUND), UH (UNIT HEATER), UL (UNDERWRITERS LABORATORY), UNO (UNLESS NOTED OTHERWISE).

MECHANICAL ABBREVIATIONS

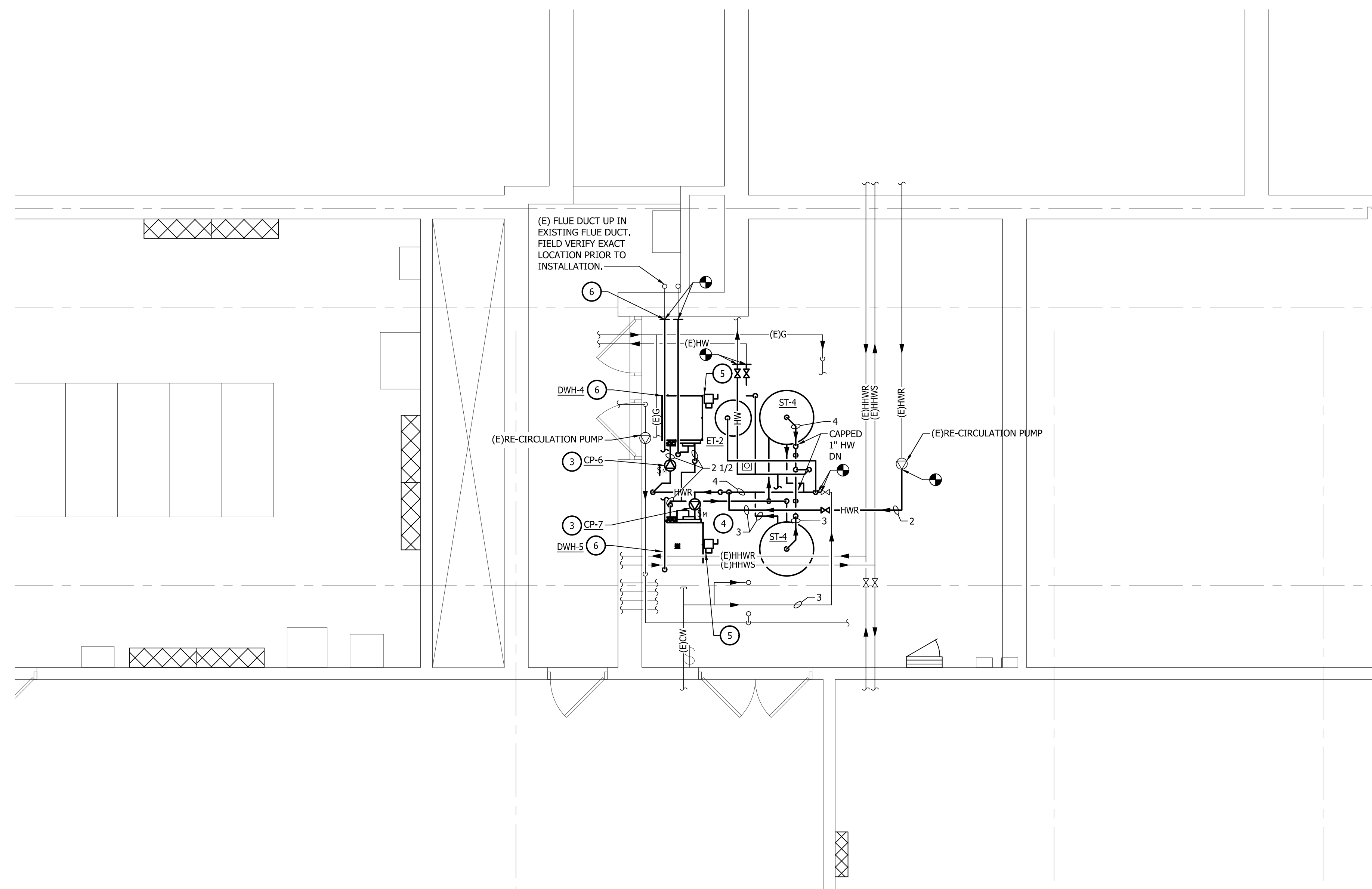
Table of mechanical abbreviations including HR (HOUR), HTG (HEATING), HYD (HYDRANT), HZ (HERTZ), ID (INSIDE DIAMETER), IE (INVERT ELEVATION), IN (INCHES), INST (INSTALLED), INV (INVERT), ISP (INTERNAL STATIC PRESSURE), IW (INDIRECT WASTE), KW (KILOWATT), LAT (LEAVING AIR TEMPERATURE), LAV (LAVATORY), LBS/HR (POUNDS PER HOUR), LDB (LEAVING DRY BULB TEMPERATURE), LRA (LOCKED ROTOR AMPS), LWB (LEAVING WET BULB TEMPERATURE), MAV (MANUAL AIR VENT), MAX (MAXIMUM), MBH (1000 BRITISH THERMAL UNITS PER HOUR), MCA (MINIMUM CIRCUIT AMPACITY), MECH (MECHANICAL), MFR (MANUFACTURER), MH (MANHOLE), MIN (MINIMUM), MISC (MISCELLANEOUS), MOD (MOTOR OPERATED DAMPER (AUTOMATIC)), MOP (MAXIMUM OVER-CURRENT PROTECTION), N.C. (NOISE CRITERIA), NIC (NOT IN CONTRACT), NC (NORMALLY CLOSED), NO (NORMALLY OPEN), NOM (NOMINAL), OA (OUTSIDE AIR), OBD (OPPOSED BLADE DAMPER), OC (ON CENTER / CENTER TO CENTER), OD (OUTSIDE DIAMETER), OED (OPEN ENDED DUCT), ORS (OVERFLOW ROOF SUMP), OS&Y (OUTSIDE SCREW AND YOKE), PD (PRESSURE DROP (FEET OF WATER)), PRV (PRESSURE REDUCING VALVE), PSIG (POUNDS PER SQUARE INCH - GAUGE), PT (PRESSURE / TEMPERATURE PORT), RA (RETURN AIR), RH (RELATIVE HUMIDITY), REQD (REQUIRED), RELA (RELIEF AIR), RPM (REVOLUTIONS PER MINUTE), RPZ (REDUCED PRESSURE ZONE), RS (ROOF SUMP), SA (SUPPLY AIR), SH (SHOWER), SP (STATIC PRESSURE), SqFt / SF (SQUARE FOOT/SQUARE FEET), SS (SERVICE SINK), TC (TEMPERATURE CONTROL), T & P (TEMPERATURE AND PRESSURE), TSP (TOTAL STATIC PRESSURE), TYP (TYPICAL), UG (UNDERGROUND), UH (UNIT HEATER), UL (UNDERWRITERS LABORATORY), UNO (UNLESS NOTED OTHERWISE).

MECHANICAL ABBREVIATIONS

Table of mechanical abbreviations including AAV (AUTOMATIC AIR VENT / AIR ADMITTANCE VALVE), AD (ACCESS DOOR), AE (AIR EXTRACTOR), AFF (ABOVE FINISHED FLOOR), APD (AIR PRESSURE DROP), ASR (AUTOMATIC SPRINKLER RISER), BFP (BACKFLOW PREVENTER), BHP (BRAKE HORSEPOWER), BOD (BOTTOM OF DUCT), BTU (BRITISH THERMAL UNIT), BTUH (BRITISH THERMAL UNITS PER HOUR), BWV (BACKWATER VALVE), CAP (CAPACITY), CAV (CONSTANT AIR VOLUME), CFH (CUBIC FEET PER HOUR), CFM (CUBIC FEET PER MINUTE), CIRC (CIRCULATING), CLG (COOLING), CO (CLEAN OUT), CONT (CONTINUATION OR CONTINUED), CONV (CONVECTOR), CUH (CABINET UNIT HEATER), CV (CONTROL VALVE), DB (DRY BULB TEMPERATURE), DEG (DEGREES), DDC (DIRECT DIGITAL CONTROL), DN (DOWN), DTC (DRAIN TILE CONNECTION), DWH (DOMESTIC WATER HEATER), (E) (EXISTING), EA/EXH (EXHAUST AIR), EAT (ENTERING AIR TEMPERATURE), EDB (ENTERING DRY BULB TEMPERATURE), EF (EXHAUST FAN), EJ (EXPANSION JOINT), EL (ELEVATION), ELECT (ELECTRICAL), EMS (ENERGY MANAGEMENT SYSTEM), ESP (EXTERNAL STATIC PRESSURE), EWB (ENTERING WET BULB TEMPERATURE), EWC (ELECTRIC WATER COOLER), °F (DEGREES FAHRENHEIT), FA (FACE AREA (COIL) / FREE AREA (LOUVER)), FC (FLEXIBLE CONNECTION), FD (FLOOR DRAIN), FDC (FIRE DEPARTMENT CONNECTION), FH (FIRE HYDRANT), FHC (FIRE HOSE CABINET), FHR (FIRE HOSE RACK), FHV (FIRE HOSE VALVE), FLA (FULL LOAD AMPS), FLR (FLOOR), FPM (FEET PER MINUTE), FFD (FUNNEL FLOOR DRAIN), FFE (FINISHED FLOOR ELEVATION), FS (FLOOR SINK), FT (FEET), FURN (FURNISHED), FV (FACE VELOCITY), FVC (FIRE VALVE CABINET), GAL (GALLON), GPH (GALLONS PER HOUR), GPM (GALLONS PER MINUTE), HB (HOSE BIBB), HO (HUB OUTLET), HP (HORSEPOWER).



1
MDL01
ENLARGED MECHANICAL DEMOLITION PLAN
SCALE: 1/4" = 1'-0"



2
MDL01
ENLARGED MECHANICAL NEW WORK PLAN
SCALE: 1/4" = 1'-0"

GENERAL DEMOLITION NOTES	
A	THESE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL EXTENT OF WORK TO BE PERFORMED. THE EXACT EXTENT OF DEMOLITION SHALL BE DETERMINED BY THE NEW WORK.
B	ANY INTERRUPTIONS OF EXISTING SERVICES AND/OR EQUIPMENT SHALL BE PERFORMED AT A TIME APPROVED IN ADVANCE BY THE OWNER'S REPRESENTATIVE SO AS NOT TO INTERFERE WITH THE PRESENT BUILDING'S OPERATION.
C	PRIOR TO COMMENCEMENT OF WORK, CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH EXISTING SITE CONDITIONS, SYSTEMS, AND UTILITIES. NOTIFY DESIGN PROFESSIONAL OF ANY INTERFERENCES OR DISCREPANCIES.
D	ALL ITEMS INDICATED WITH CROSS-HATCHING SHALL BE REMOVED COMPLETE WITH ALL RELATED ITEMS INCLUDING HANGARS, SUPPORTS, INSULATION, CONTROLS, ETC. CAP ALL OPEN ENDED PIPES AND DUCTS.
E	THE OWNER SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL EQUIPMENT BEING REMOVED. ALL ITEMS REMOVED SHALL BE LEGALLY DISPOSED OF. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXISTING RELOCATED AND OWNER PROVIDED EQUIPMENT.
F	VERIFY DEPTH, SIZE, LOCATIONS, AND CONDITIONS OF EXISTING UTILITIES IN THE FIELD, INCLUDING POINTS OF CONNECTION PRIOR TO STARTING ANY WORK.
G	ALL ITEMS ON DEMOLITION PLAN SHALL BE CONSIDERED EXISTING UNLESS OTHERWISE NOTED. ALL WORK INDICATED ON PLANS HAS BEEN LOCATED PER EXISTING DRAWINGS AND/OR FIELD OBSERVATION AND REQUIRES FIELD VERIFICATION.
H	ALL EXISTING WORK TO REMAIN SHALL BE PROTECTED FROM DAMAGE. WHERE DUCT WORK PIPE INSULATION HAS BEEN DAMAGED DURING DEMOLITION, THE CONTRACTOR SHALL REPAIR INSULATION AS REQUIRED TO MATCH EXISTING.

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G	ALL ITEMS ON DEMOLITION PLAN SHALL BE CONSIDERED EXISTING UNLESS OTHERWISE NOTED. ALL WORK INDICATED ON PLANS HAS BEEN LOCATED PER EXISTING DRAWINGS AND/OR FIELD OBSERVATION AND REQUIRES FIELD VERIFICATION.
H	ALL EXISTING WORK TO REMAIN SHALL BE PROTECTED FROM DAMAGE. WHERE DUCT WORK PIPE INSULATION HAS BEEN DAMAGED DURING DEMOLITION, THE CONTRACTOR SHALL REPAIR INSULATION AS REQUIRED TO MATCH EXISTING.

DEMOLITION KEYED NOTES	
1	ALTERNATE #1 - DISCONNECT, MAKE-SAFE, AND REMOVE EXISTING DOMESTIC WATER HEATING BOILER AND ALL ASSOCIATED COMPONENTS COMPLETE. EXISTING ELECTRICAL TO BE RE-USED. PRE-PARE CONDUIT AND WIRING FOR EXTENSION AS REQUIRED. BASE BID: DOMESTIC WATER HEATING BOILERS TO REMAIN. CIRCULATION PUMPS TO BE REMOVED AND RE-INSTALLED.
2	REMOVE CIRCULATION PUMP AND ALL ASSOCIATED PIPING BETWEEN BOILER AND STORAGE TANK COMPLETE. BASE BID PUMPS ARE TO REMAIN. PROVIDE ALTERNATE PRICING TO REMOVE AND PROVIDE NEW PUMPS. IF REMOVING, TURN OVER PUMPS TO OWNER. REMOVE ALL FLUE AND COMBUSTION AIR DUCT TO MAIN. PREPARE MAIN FOR FUTURE CONNECTION.
3	REMOVE DOMESTIC WATER STORAGE TANK AND ALL ASSOCIATED COMPONENTS COMPLETE.
4	DISCONNECT, MAKE-SAFE AND REMOVE EXISTING DOMESTIC WATER HEATING BOILERS AND ASSOCIATED PUMPS COMPLETE. REMOVE FLUE AND COMBUSTION AIR AS REQUIRED FOR INSTALLATION OF NEW BOILERS. REFER TO NEW WORK PLANS FOR FURTHER INFORMATION.

HVAC GENERAL NOTES	
A	THESE DRAWINGS ARE DIAGRAMMATIC AND REPRESENT THE GENERAL EXTENT OF THE WORK TO BE PERFORMED. PROVIDE AND EXECUTE ALL HVAC SYSTEMS PER ENGINEER'S SPECIFICATION, AND LOCAL APPLICABLE CODES INCLUDING AMENDMENTS, BULLETINS, ETC. AS WELL AS THE STANDARDS OF INSTALLATION AND EQUIPMENT ESTABLISHED FOR THE BUILDINGS, AND REQUIREMENTS OF THE OWNER.
B	EXCEPT FOR CHANGES AS MAY BE SPECIFICALLY APPROVED BY THE ENGINEER OF RECORD, IN ACCORDANCE WITH ALTERNATES OF OPTIONS AS STATED HEREINAFTER, ALL WORK MUST BE IN FULL ACCORDANCE WITH THE INTENT OF THE PLANS AND SPECIFICATIONS. SYSTEMS ARE TO BE COMPLETE, EFFICIENT, AND SATISFACTORY OPERATION WHEN PROJECT IS DELIVERED TO THE OWNER.
C	THE CONTRACTOR AND EACH SUBCONTRACTOR COVENANTS AND AGREES TO IDENTIFY, DEFEND, AND HOLD HARMLESS THE CONSULTING ENGINEER, ARCHITECT, AND OWNER FROM AND AGAINST ANY LIABILITY, LOSS, DAMAGE, OR EXPENSE INCLUDING ATTORNEY'S FEES ARISING FROM A FAILURE OR ALLEGED FAILURE ON THE PART OF THE CONTRACTOR, SUBCONTRACTORS, AND THEIR AGENTS/EMPLOYEES PROPERLY TO DISCHARGE THE OBLIGATIONS ASSUMED BY HIM/HER IN THE PERFORMANCE OF THE WORK, INCLUDING ANY ACT OR OMISSION ALLEGEDLY RESULTING IN DEATH, PERSONAL INJURY, PROPERTY DAMAGE, OR IMPROPER CONSTRUCTION PROTOCOL.
D	CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND APPROVAL FROM GOVERNING AUTHORITIES AND FILE NECESSARY FORMS, PAY ALL INSPECTION FEES.
E	CONTRACTOR TO EXAMINE ALL ADJOINING WORK BEFORE COMMENCEMENT OF HIS/HER SCOPE OF WORK. REPORT ANY DISCREPANCIES TO THE CONSTRUCTION MANAGER FOR REVIEW AND APPROVAL. COORDINATE ALL WORK WITH OTHER TRADES TO ENSURE THAT INSTALLATION IS MADE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
F	PROVIDE REQUIRED CLEARANCE IN FRONT OF ELECTRICAL EQUIPMENT, DUCTWORK/PIPING SHALL NOT INTERFERE WITH ELECTRICAL EQUIPMENT CLEARANCE.
G	CONNECTION TO EQUIPMENT SHALL BE VERIFIED WITH MANUFACTURER'S CERTIFIED DRAWINGS. ALL PIPING CONNECTIONS SHALL BE MINIMUM 3/4" UNLESS NOTED OTHERWISE.
H	FURNISH ADEQUATE LIABILITY INSURANCE AND BONDING DOCUMENTS AS REQUIRED BY THE OWNER.
J	SUPPORT ALL ANCHORS SECURED TO THE BOTTOM OF FLOOR SLABS SHALL BE DROP-IN OR SLEEVE ANCHOR TYPE. ALL SUPPORTING STEEL SHALL BE PROVIDED BY THE CONTRACTOR.
K	DUCTWORK/PIPING SHALL NOT BE INSTALLED IN A LOCATION THAT RESTRICTS THE ACCESS TO MECHANICAL DEVICES REQUIRING ACCESS.
L	THE CONTRACTOR SHALL PROVIDE ALL MISCELLANEOUS SUPPORTING STEEL FOR THE PROPER INSTALLATION OF MECHANICAL SYSTEMS.
M	BRANCH DUCTWORK TO GRILLES, REGISTERS, AND DIFFUSERS SHALL BE THE SAME SIZE AS THE TERMINAL DEVICE NECK SIZE WHERE NO DUCT SIZE IS INDICATED.

POWER GENERAL NOTES	
A	THESE DRAWINGS ARE DIAGRAMMATIC AND REPRESENT THE GENERAL EXTENT OF THE WORK TO BE PERFORMED. PROVIDE AND EXECUTE ALL HVAC SYSTEMS PER ENGINEER'S SPECIFICATION, AND LOCAL APPLICABLE CODES INCLUDING AMENDMENTS, BULLETINS, ETC. AS WELL AS THE STANDARDS OF INSTALLATION AND EQUIPMENT ESTABLISHED FOR THE BUILDINGS, AND REQUIREMENTS OF THE OWNER.
B	EXCEPT FOR CHANGES AS MAY BE SPECIFICALLY APPROVED BY THE ENGINEER OF RECORD, IN ACCORDANCE WITH ALTERNATES OF OPTIONS AS STATED HEREINAFTER, ALL WORK MUST BE IN FULL ACCORDANCE WITH THE INTENT OF THE PLANS AND SPECIFICATIONS. SYSTEMS ARE TO BE COMPLETE, EFFICIENT, AND SATISFACTORY OPERATION WHEN PROJECT IS DELIVERED TO THE OWNER.
D	CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND APPROVAL FROM GOVERNING AUTHORITIES AND FILE NECESSARY FORMS, PAY ALL INSPECTION FEES.
E	ELECTRICAL CONTRACTOR SHALL COMPLY WITH THE LATEST NATIONAL ELECTRICAL CODE, LIFE SAFETY CODE AND APPLICABLE STATE AND LOCAL CODES AND ORDINANCES.
F	ELECTRICAL EQUIPMENT AND WIRING SHALL BE NEW AND SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR, UNLESS OTHERWISE NOTED.
G	WIRING SHALL BE IN CONDUIT. CONDUIT SHALL BE 3/4" CONDUIT MINIMUM. CONDUITS IN FINISHED AREAS SHALL BE CONCEALED.
H	NEW WIRES SHALL BE TYPE THHN. MINIMUM SIZE SHALL BE #12 AWG, UNLESS OTHERWISE NOTED. FINAL CONNECTIONS TO EQUIPMENT, FURNISHED AND INSTALLED BY OTHERS, SHALL BE PROVIDED BY THIS CONTRACTOR.

NEW WORK KEYED NOTES	
1	ALTERNATE #1 - INSTALL DOMESTIC HOT WATER HEATING BOILERS AND EXISTING CIRCULATING PUMPS AS INDICATED. EXTEND AND CONNECT 12" Ø FLUE AND COMBUSTION AIR TO EXISTING COMBINED SYSTEM AS INDICATED. FIELD VERIFY ALL EXACT SIZES AND LOCATIONS PRIOR TO INSTALLATION. FLUE SHALL BE STAINLESS STEEL. EXTEND GAS PIPING TO NEW LOCATION AS REQUIRED. REPLACE ISOLATION VALVE AND REGULATOR AS REQUIRED. BASE BID - EXISTING DOMESTIC WATER HEATING BOILER SHALL REMAIN. ALL PIPING SHALL BE REPLACED AND CIRCULATING PUMPS SHALL BE REMOVED AND RE-INSTALLED.
2	ALTERNATE #1 - CONTRACTOR SHALL PROVIDE AND INSTALL A NEW UNISTRUT SUPPORT STAND AND 120V (ON-OFF) SWITCH AS REQUIRED FOR NEW WATER HEATERS BEING INSTALLED. COORDINATE EXACT PLACEMENT OF THE UTILITY STAND, AND SWITCH IN THE FIELD WITH THE MECHANICAL CONTRACTOR. EXTEND THE EXISTING CONDUIT AND WIRING AS REQUIRED TO RE-FEED THE NEW WATER HEATERS FROM EXISTING CIRCUIT. CONTRACTOR SHALL PROVIDE AND INSTALL A TOGGLE SWITCH HANDLE LOCKING GUARD WITH PADLOCK PROVISION FOR THE (ON-OFF) SWITCH TO SECURE CONTROL OF THE SWITCH IN THE 'OFF' POSITION FOR SERVICE OR MAINTENANCE.
3	PROVIDE NEW MOTOR RATED SINGLE POLE DISCONNECT SWITCH FOR CP-1, CP-2, CP-3, CP-4, CP-5, CP-6, CP-7. EXTEND EXISTING CONDUIT AND WIRING AS REQUIRED TO NEW LOCATION. COORDINATE EXACT PLACEMENT WITH MECHANICAL CONTRACTOR PRIOR TO INSTALLATION. FIELD VERIFY EXISTING VOLTAGE AND PHASE PRIOR TO ORDER. IF VARIES FROM DRAWING, PLEASE NOTIFY ENGINEER. ELECTRICAL CONTRACTOR TO FIELD VERIFY OVER CURRENT PROTECTION DEVICES AND PROVIDE NEW AS REQUIRED.
4	RE-PIPE ALL EQUIPMENT FROM EXISTING BOILER AS INDICATED. REFER TO PIPING DIAGRAMS FOR FURTHER INFORMATION. PIPE SIZES SHALL MATCH THAT OF EXISTING. PLUMBING CONTRACTOR SHALL FIELD VERIFY ALL PIPE SIZES PRIOR TO ORDER. COORDINATE EXACT LOCATION OF NEW ISOLATION VALVES WITH OWNER PRIOR TO INSTALLATION. ALL PIPING SHALL BE INSULATED AND JACKETED AND PROVIDED WITH PIPE LABELS.
5	CONTRACTOR SHALL PROVIDE AND INSTALL A NEW UNISTRUT SUPPORT STAND AND 120V (ON-OFF) SWITCH AS REQUIRED FOR NEW WATER HEATERS BEING INSTALLED.
6	INSTALL NEW BOILER IN APPROXIMATE LOCATION OF EXISTING. EXTEND GAS PIPING TO NEW LOCATION AS REQUIRED. PROVIDE NEW ISOLATION VALVES AND PRESSURE REGULATING VALVES AS REQUIRED. EXTEND 7" Ø FLUE AND COMBUSTION AIR DUCT TO EXISTING AND CONNECT. FLUE SHALL BE STAINLESS STEEL AND MATCH EXISTING. FIELD VERIFY EXACT LOCATION IN FIELD PRIOR TO INSTALLATION.