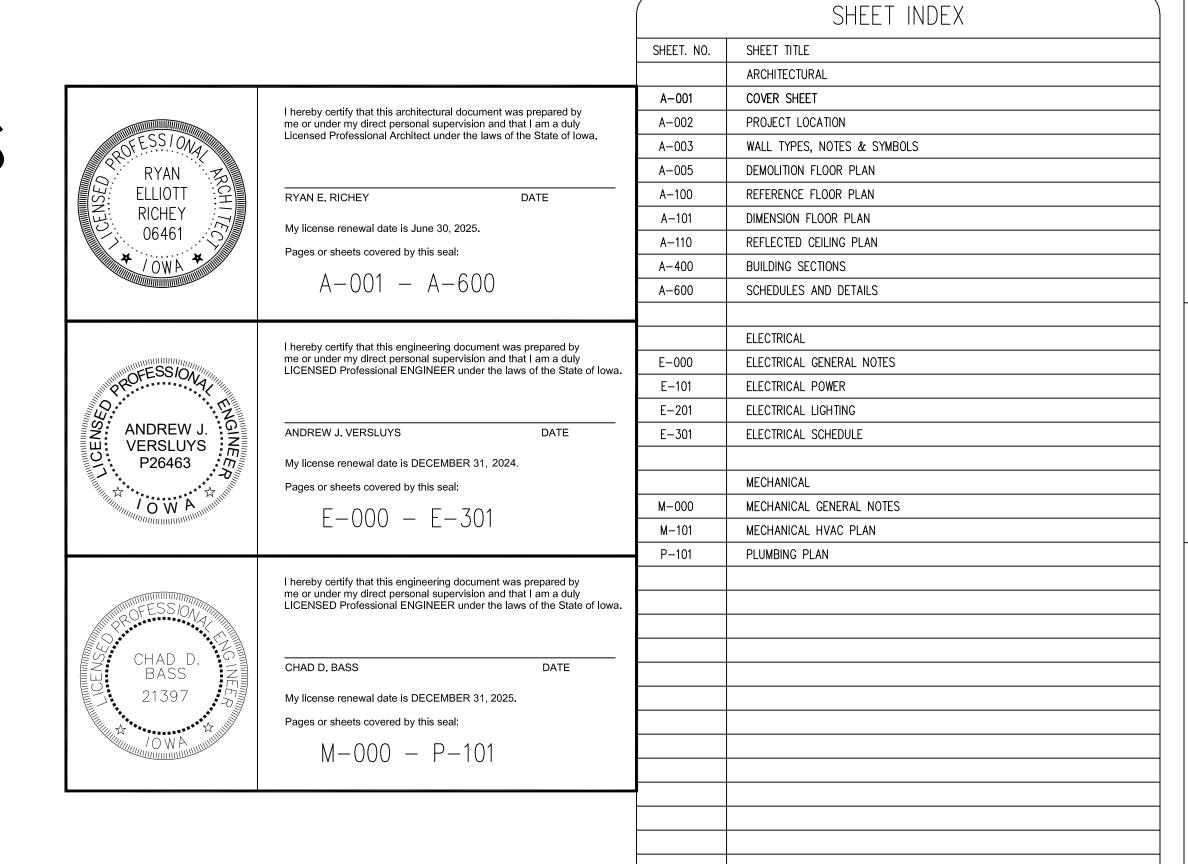
IOWA DEPARTMENT OF NATURAL RESOURCES

CONSTRUCTION DRAWINGS FOR BUILD-OUT PHASE I RATHBUN WILDLIFE UNIT APPANOOSE COUNTY, IOWA

PROJECT # 24-05-04-01 PLANS PREPARED BY LAND AND WATERS BUREAU CONSERVATION AND RECREATION DIVISION





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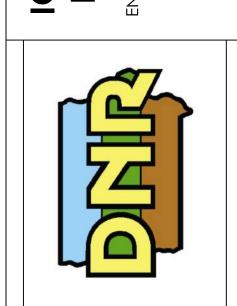
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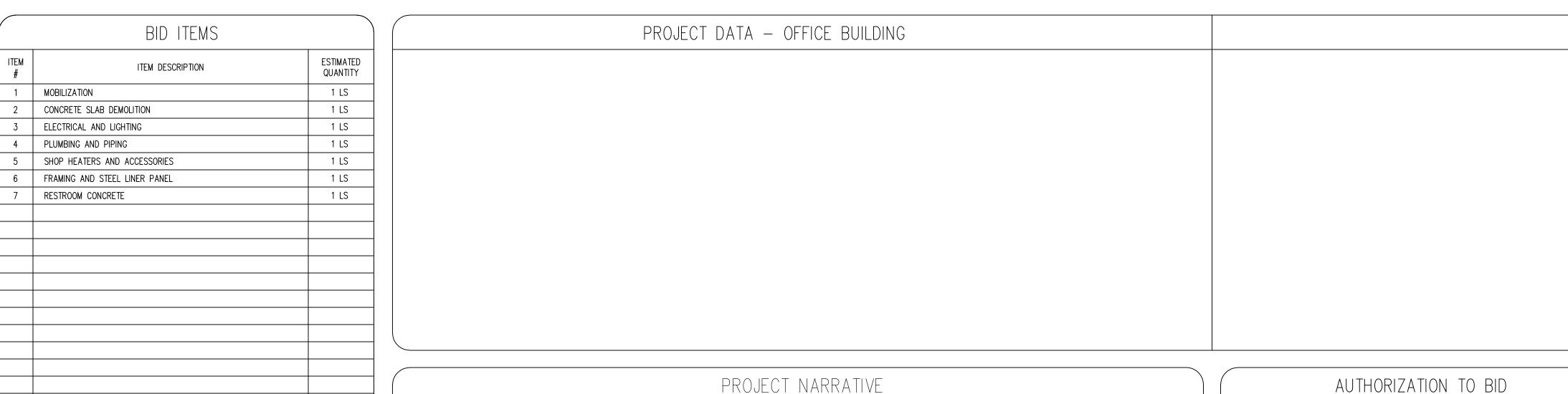


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DRAWN BY: PROJECT NUMBER: 24-05-04-01 02.20.2024

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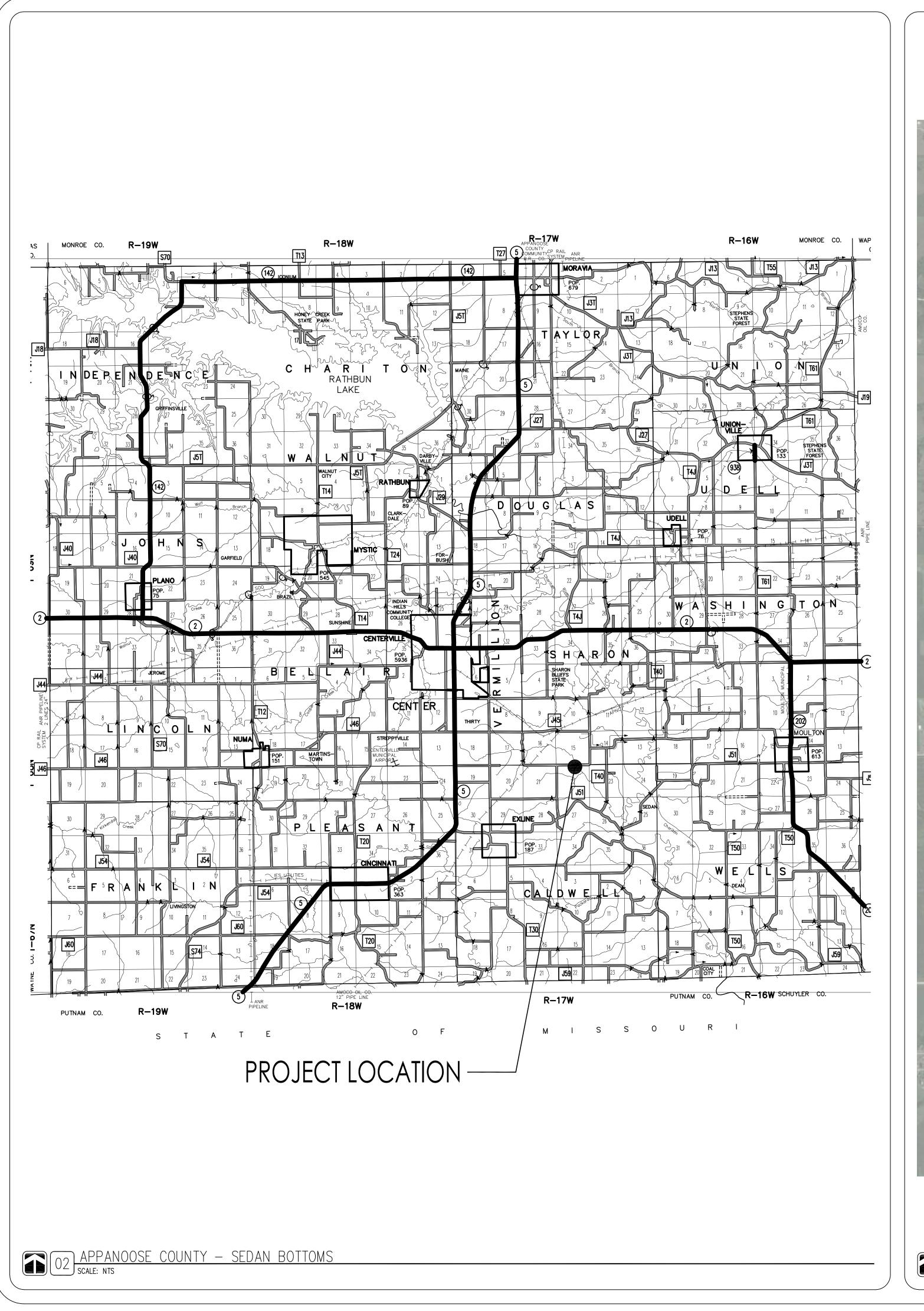
The contractor shall be responsible for providing and installing all items within this narrative, the drawings, and project manual unless specifically noted. This narrative is not meant to be a comprehensive account of all items to be covered by the contract, review all documents. The contractor is responsible for field verifying all dimensions and establishing all quantities that are dictated This project, Rathbun Wildlife Unit — Office Build—out, shall commence after the contract is executed and shall be completed no later than the completion date stated on the contract.

The contractor shall saw—cut out the concrete floor where shown for water and sanitary sewer service lines.

The contractor shall bring service lines, capped on exterior and interior, into the building through the removed concrete floor and pour a new concrete slab, thickness to match existing slab, with #4 dowels around the perimeter of the slab, as shown. The contractor shall install new partition walls as shown on A—100, refer to wall types A—002, and furr—out all existing post—frame walls with 2x4 nailers. The contractor shall install 2x4 framing between the trusses for new ceiling finish and lighting installation. Contractor shall cover all Heated Garage 103 walls with 29ga steel liner panel, include all trims required.

The contractor shall then run electric throughout the space as shown on the electrical plans. Contractor shall install outlets and lights in the Heated Garage 103 and rough—in electrical and fiber in Open Office 100 as shown. The contractor shall run rough—in water and sanitary lines, as shown on the plumbing and mechanical drawings. The contractor shall install a unit heater and shown on

AUTHORIZATION TO BID ENGINEERING BUREAU CHIEF AUTHORIZED - PARKS | WILDLIFE | FISHERIES | LAW ENFORCEMENT





PROJECT LOCATION
BUILD-OUT PHASE I FOR:
RATHBUN WILDLIFE L

O. BY REVISION

DRAWN BY: PROJECT NUMBER: 24-05-04-01

A-002

02.20.2024

DIMENSION NOTES

"EQUAL OR EQ" IS USED IN LIEU OF THE ACTUAL DIMENSIONS. WHEN A ROOM CENTERLINE IS INDICATED ONLY ONE SIDE OF THE ROOMS ELEMENTS

1. IN INTERIOR SPACES THE ACTUAL DIMENSIONS MAY BE LESS IMPORTANT THAN IF AT

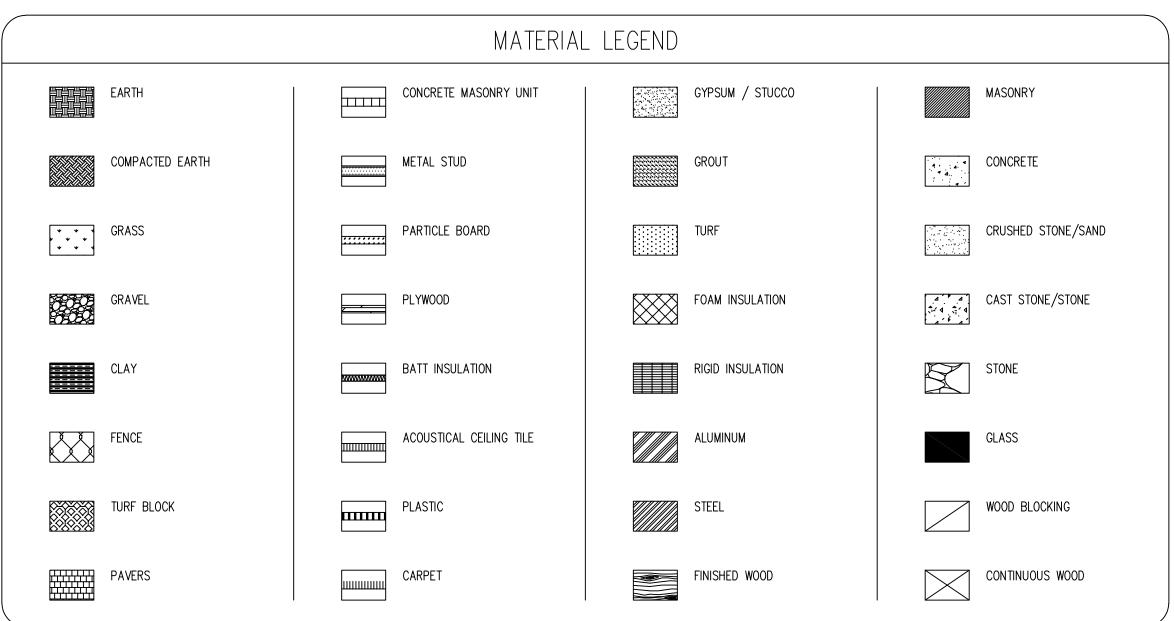
TWO ELEMENTS IN THE BUILDING WERE TO BE EQUAL. IN THESE CASES, THE WORD

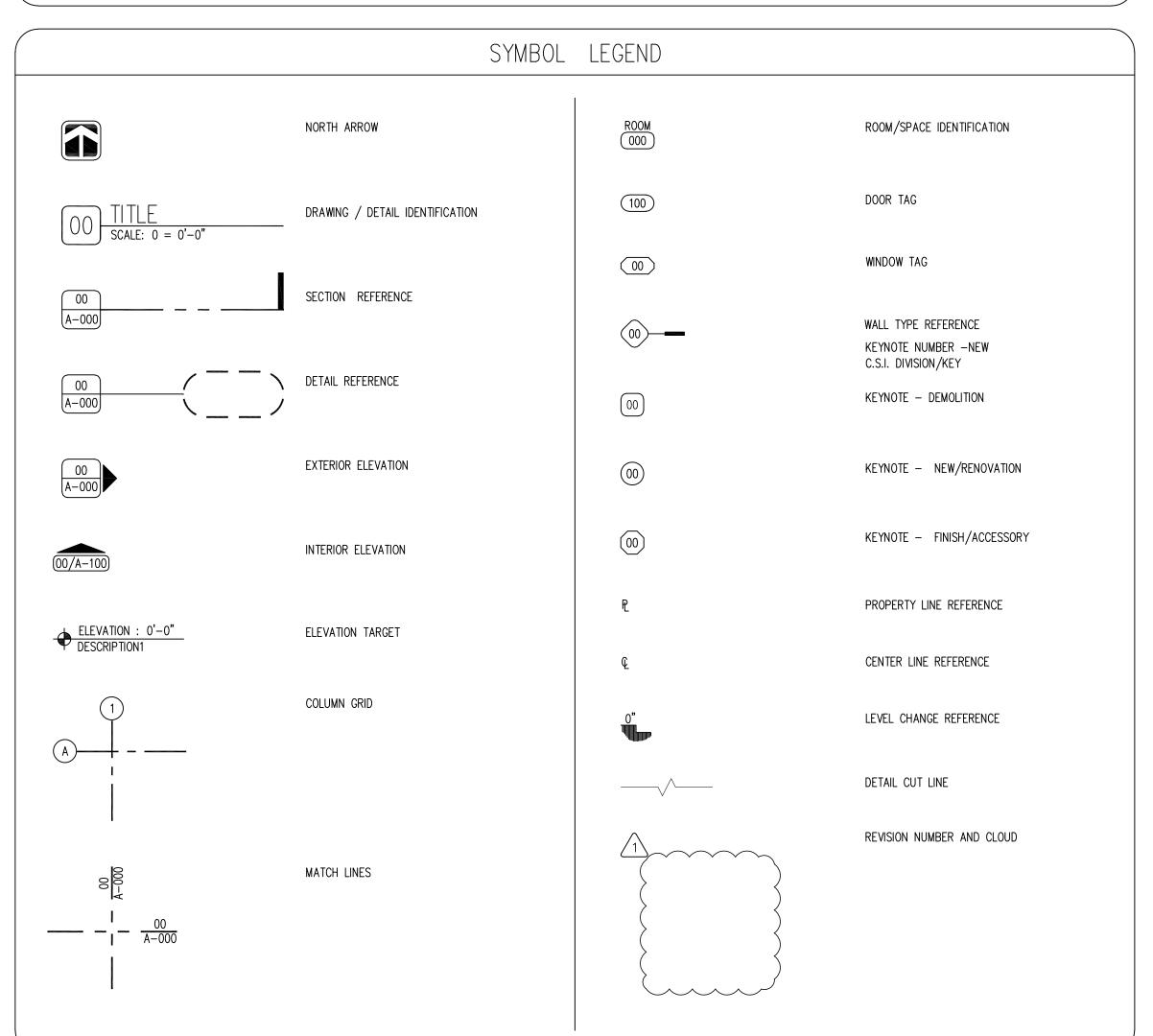
- MAY BE DIMENSIONED.
- COLUMN IDENTIFICATION: DETAILS WILL GOVERN ALL DIMENSIONS AND NO DIMENSIONS WILL BE SHOWN ON SMALL SCALE PLANS.
- PARTITION CENTERED ON COLUMN OR GRID LINES WILL NOT BE DIMENSIONED ON SMALL SCALE PLANS.
- PARTITION WITH A FINISHED FACE FLUSH WITH FINISH FACE OF COLUMN WILL NOT be DIMENSIONED ON SMALL SCALE PLANS.
- PARTITION FINISH FACE ON COLUMN OR GRID LINE WILL NOT BE DIMENSIONED ON SMALL SCALE PLANS

WHEN ONE JAMB OCCURS AT A COLUMN OR GRID LINE NO DIMENSIONS WILL BE SHOWN ON THE SMALL SCALE PLANS. THE OPENING WIDTH WILL BE GOVERNED BY CRITERIA OR SCHEDULES.

- WHEN NEITHER JAMB OCCURS AT A COLUMN OR GRID LINE ONE JAMB WILL BE DIMENSIONED.
- DOOR LOCATIONS ARE TO BE LOCATED BY ONE OF FOLLOWING:
- a. ONE JAMB FACE LOCATED BY A PARTITION AT RIGHT ANGLE. 4"TYPICAL UNLESS INDICATED ON PLAN.
- b. OR AS DIMENSIONED ON PLAN.
- 10. PARTITIONS ARE DIMENSIONED TO FACE OF CMU OR FACE OF STUD UNLESS OTHERWISE NOTED.

11. DIMENSIONS ARE INDICATED IN THE DOCUMENTS. THE DRAWINGS SHALL NOT BE SCALED FOR DIMENSIONS.





GENERAL NOTES

THE FOLLOWING GENERAL NOTES SHALL PERTAIN TO THE ENTIRE SET OF CONTRACT DOCUMENTS

- A GENERAL CONTRACTOR SHALL NOTE THAT THE ARCHITECTURAL DRAWINGS ARE ESTABLISHING A MINIMUM MATERIAL OR CONSTRUCTION METHOD STANDARD. THE GENERAL CONTRACTOR SHALL PROVIDE A BID PRICE
- BASED ON THE SPECIFIC MATERIALS NOTED. DO NOT SCALE DRAWINGS. IF DIMENSIONS ARE IN QUESTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR
- OBTAINING CLARIFICATION FROM THE ARCHITECT BEFORE CONTINUING WITH CONSTRUCTION.
- GENERAL CONTRACTOR AND SUBCONTRACTORS SHALL PERFORM THEIR WORK IN ACCORDANCE WITH ALL APPLICABLE CODES GOVERNING EACH TRADE.
- THE CONTRACTOR SHALL MAINTAIN A CLEAN AND ORGANIZED JOB SITE, ACCEPTABLE TO THE OWNER. THE CONTRACTOR SHALL COORDINATE THE SEQUENCE OF WORK WITH THE OWNER REPRESENTATIVE...
- THERE SHALL BE NO DEVIATION BY THE GENERAL CONTRACTOR FROM THE CONSTRUCTION DOCUMENTS UNLESS APPROVED IN WRITING BY THE ARCHITECT.
- EACH CONTRACTOR SHALL VERIFY EXISTING CONDITIONS IN THE FIELD PRIOR TO THE INITIATION OF WORK AND SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES OR CONDITIONS INTERFERING WITH THE ABILITY OF THE
- CONTRACTOR TO COMPLETE WORK AS OUTLINED ON THE CONSTRUCTION DRAWINGS. ALL CONTRACTORS ARE REQUIRED TO COORDINATE THEIR WORK WITH OTHER TRADES. LACK OF THIS
- COORDINATION RESULTING IN ADDED COST TO THE CONTRACT WILL BE BORNE BY THE CONTRACTOR. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING THE EXISTING BUILDING WATER TIGHT DURING
- CONSTRUCTION. 10. THE CONTRACTOR WILL VERIFY THAT EXIT EGRESS IS MAINTAINED FOR ALL OCCUPIED AREAS OF THE BUILDING THROUGHOUT ALL PHASES OF CONSTRUCTION.
- PLAN DIMENSIONS ARE GIVEN TO FACE OF STUD OR BLOCK WALL. "CLEAR" DIMENSIONS ARE GIVEN TO THE FACE THE OWNER WILL ASSUME ALL LIABILITY AND SHALL TAKE PERSONAL RESPONSIBILITY FOR ANY DECISIONS THAT THEY MAKE TO CHANGE OR ALTER THE CONSTRUCTION DOCUMENTS WITHOUT THE ARCHITECT'S WRITTEN
- PROTECT ALL EXISTING FINISHES AND MATERIALS TO REMAIN, IN ACCORDANCE WITH ACCEPTABLE TRADE PRACTICES. MANUFACTURER. RECOMMENDATIONS. OR AS DIRECTED BY THE ARCHITECT.
- CUTTING OF EXISTING CONSTRUCTION FOR THE INSTALLATION OF ALL NEW WORK BY ALL TRADES, AND THE SUBSEQUENT PATCHING THEREOF, SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR, WHETHER THE WORK IS DONE BY HIS OWN FORCES OR NOT. GRINDING OF MATERIALS FOR REMOVAL SHALL NOT BE PERMITTED. CUTTING SHALL BE TO STRAIGHT LINE. UNWORKMAN-LIKE CUTTING, DAMAGE RESULTING THEREFROM AND UNACCEPTABLE PATCHING SHALL BE REPAIRED AND/OR REPLACED TO AN ACCEPTABLE CONDITION APPROVED BY THE ARCHITECT. A OWNER PROJECT REPRESENTATIVE SHALL BE NOTIFIED PRIOR TO CUTTING OF ANY STRUCTURAL ITEM (I.E. CONCRETE FLOOR, MASONRY, WALL, ETC.) WITHIN THE EXISTING BUILDING. METHOD OF CUTTING SHALL BE APPROVED BY THE OWNER PROJECT REPRESENTATIVE.
- 15. PATCHING MATERIAL SHALL MATCH EXISTING ADJACENT MATERIALS AS CLOSELY AS POSSIBLE IN COLOR, PATTERNS, AND/OR TEXTURES.
- 16. ALL SALVAGE MATERIALS REMOVED SHALL REMAIN THE PROPERTY OF THE OWNER. ALL NON-SALVAGE CONSTRUCTION MATERIALS AND DEBRIS FROM DEMOLITION WORK SHALL BE REMOVED FROM THE SITE AS WORK
- PROGRESSES, UNLESS OTHERWISE NOTED. 17. ISOLATE ALL DISSIMILAR METALS. G SHALL REQUEST APPROVAL BY THE ARCHITECT FOR MATERIALS USED FOR
- THIS PURPOSE, PRIOR TO INSTALLATION. 18. SEALANTS SHALL BE COMPATIBLE WITH ADJACENT SURFACE(S) THAT ARE IN CONTACT. REFER TO SPECIFICATIONS
- FOR APPROVED MANUFACTURERS AND PROCEDURES.
- 19. CAULK JOINTS OF DISSIMILAR EXPOSED TO VIEW MATERIALS AS REQUIRED BY THE ARCHITECT. 20. ALL DOOR HARDWARE TO BE FL. ADA COMPLIANT.
- 21. ALL EXTERIOR WALLS, DOORS AND WINDOWS ARE EXISTING U.N.O.
- 22. ALL FINISHES TO BE PER CLASS INDICATED ON A-004
- 23. NO CONSTRUCTION SHALL OCCUR WITHOUT SHOP DRAWING APPROVAL. SHOP DRAWINGS TO BE PROVIDED TO ARCHITECT FOR REVIEW UPON BEING REVIEWED AND SIGNED/DATED BY THE GENERAL CONTRACTOR AND SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING ITEMS:
 - CABINETRY MILLWORK - RUNNING TRIM AND CASING PROFILES
 - PAINT/LAMINATE COLOR SAMPLES
 - ACOUSTICAL CEILING AND GRID TOILET ACCESSORIES
 - KITCHEN EQUIPMENT ROOF PENETRATIONS

APPROVAL.

- HVAC EQUIPMENT
- PLUMBING EQUIPMENT AND FIXTURES - ELECTRICAL EQUIPMENT AND FIXTURES
- 24. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL SUBMIT (2) COPIES OF MATERIAL SAFETY DATA SHEETS (MSDS) FOR ALL PRODUCTS USED TO PERFORM THE WORK.

VERIFY ACTUAL LOCATIONS AND ELEVATIONS WITH DNR ENGINEER.

ALL WORK SHALL CONFORM TO AND BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE CODES AND

THE CONTRACTOR SHALL VISIT THE SITE AND INSPECT THE PROJECT AREA AND THOROUGHLY FAMILIARIZE THEMSELVES WITH THE ACTUAL JOB CONDITIONS PRIOR TO BIDDING AND THE START OF WORK. FAILURE TO VISIT THE PROJECT SITE SHALL NOT RELIEVE THE CONTRACTOR FROM PERFORMING THE WORK IN ACCORDANCE TO THE PLANS, SPECIFICATION, SPECIAL PROVISIONS AND CONTRACT.

THE CONTRACTOR SHALL VERIFY, AT THE SITE, ALL DIMENSIONS AND CONDITIONS SHOWN ON THE PLANS AND SHALL NOTIFY THE DNR ENGINEER OF ANY DISCREPANCIES, OMISSIONS, AND/OR CONFLICTS PRIOR TO PROCEEDING WITH THE WORK.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE WASTE AREAS OR DISPOSAL SITES FOR EXCESS MATERIAL (EXCAVATED MATERIAL OR BROKEN CONCRETE) WHICH IS NOT DESIRABLE TO BE INCORPORATED INTO THE WORK INVOLVED ON THIS PROJECT. NO PAYMENT FOR OVERHAUL WILL BE ALLOWED FOR MATERIAL HAULED TO THESE SITES. NO MATERIAL SHALL BE PLACED WITHIN THE RIGHT-OF-WAY, UNLESS SPECIFICALLY STATED IN THE PLANS OR APPROVED BY THE DNR ENGINEER.

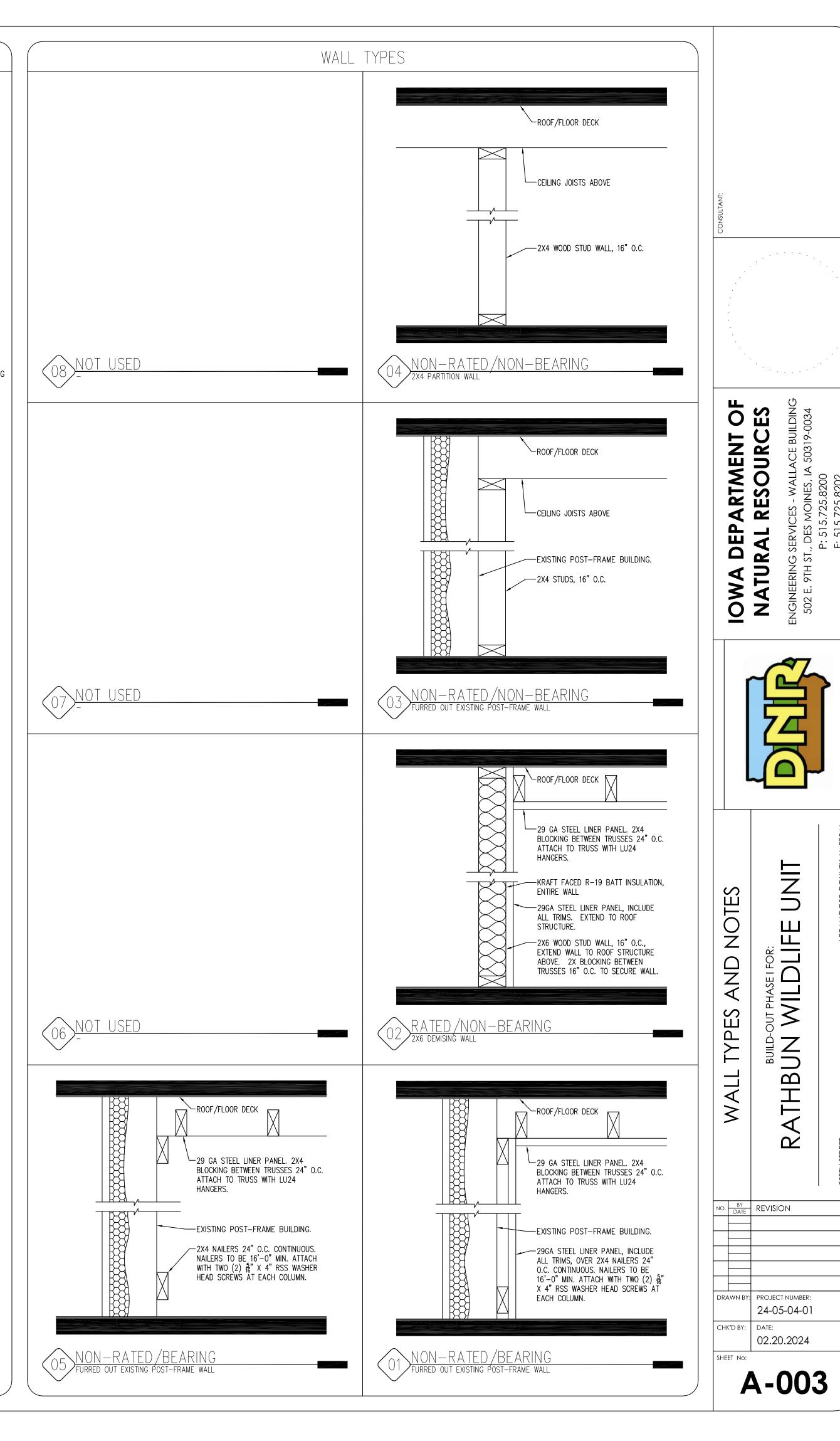
THE CONTRACTOR SHALL NOT DISTURB DESIRABLE GRASS AREAS AND DESIRABLE TREES OUTSIDE THE CONSTRUCTION LIMITS. THE CONTRACTOR WILL NOT BE PERMITTED TO PARK OR SERVICE VEHICLES AND EQUIPMENT OR USE THESE AREAS FOR STORAGE OF MATERIALS. STORAGE, PARKING AND SERVICE AREAS WILL BE SUBJECT TO THE APPROVAL OF THE DNR ENGINEER.

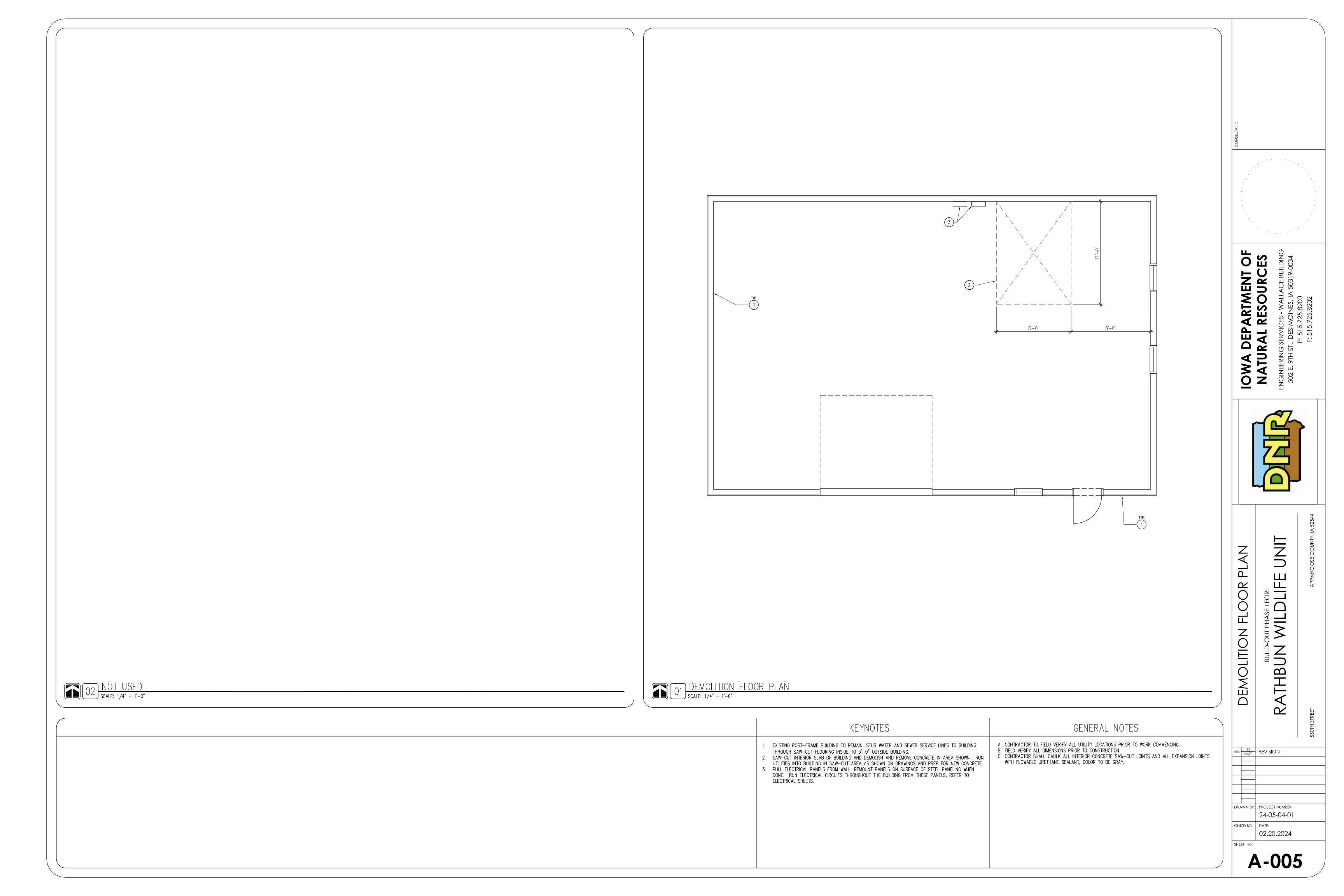
WHERE UTILITIES AND FIXTURES ARE SHOWN AS EXISTING ON THE PLANS OR ENCOUNTERED WITHIN THE CONSTRUCTION AREA, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE DNR ENGINEER OF THOSE UTILITIES PRIOR TO THE BEGINNING OF ANY CONSTRUCTION. THE CONTRACTOR SHALL BE AFFORDED ACCESS TO THESE FACILITIES FOR NECESSARY MODIFICATION OF SERVICES. UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS AND THEREFORE THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. IT IS POSSIBLE THERE MAY BE OTHERS, THE EXISTENCE OF WHICH IS PRESENTLY NOT KNOWN OR SHOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THEIR EXISTENCE AND EXACT LOCATION AND TO AVOID DAMAGE THERETO. NO CLAIMS FOR ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR FOR ANY INTERFERENCE OR DELAY CAUSED BY SUCH WORK.

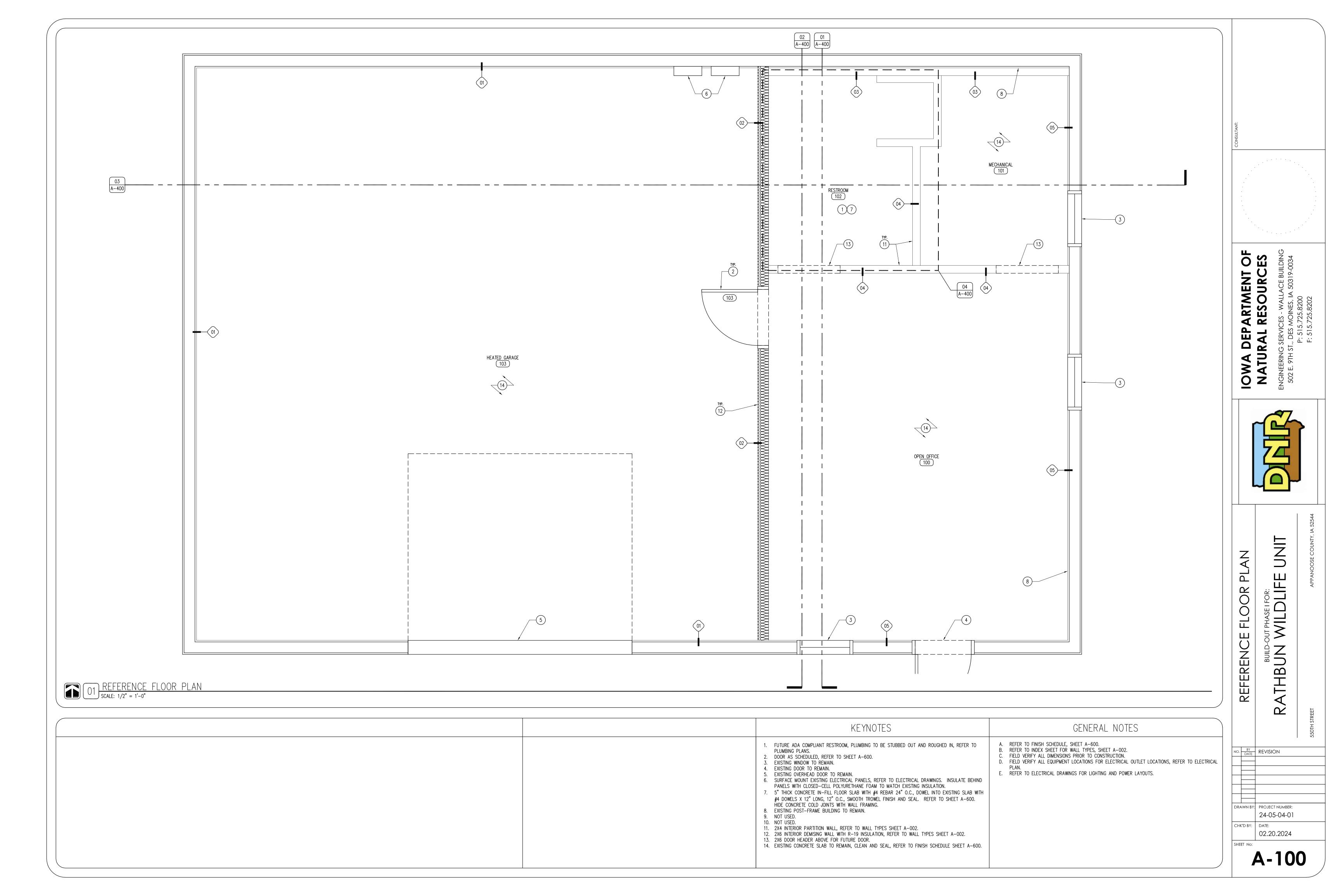
THE CONTRACTOR SHALL SHAPE GRADED AREA TO MAINTAIN SURFACE DRAINAGE. ALL ELEVATIONS ARE TO

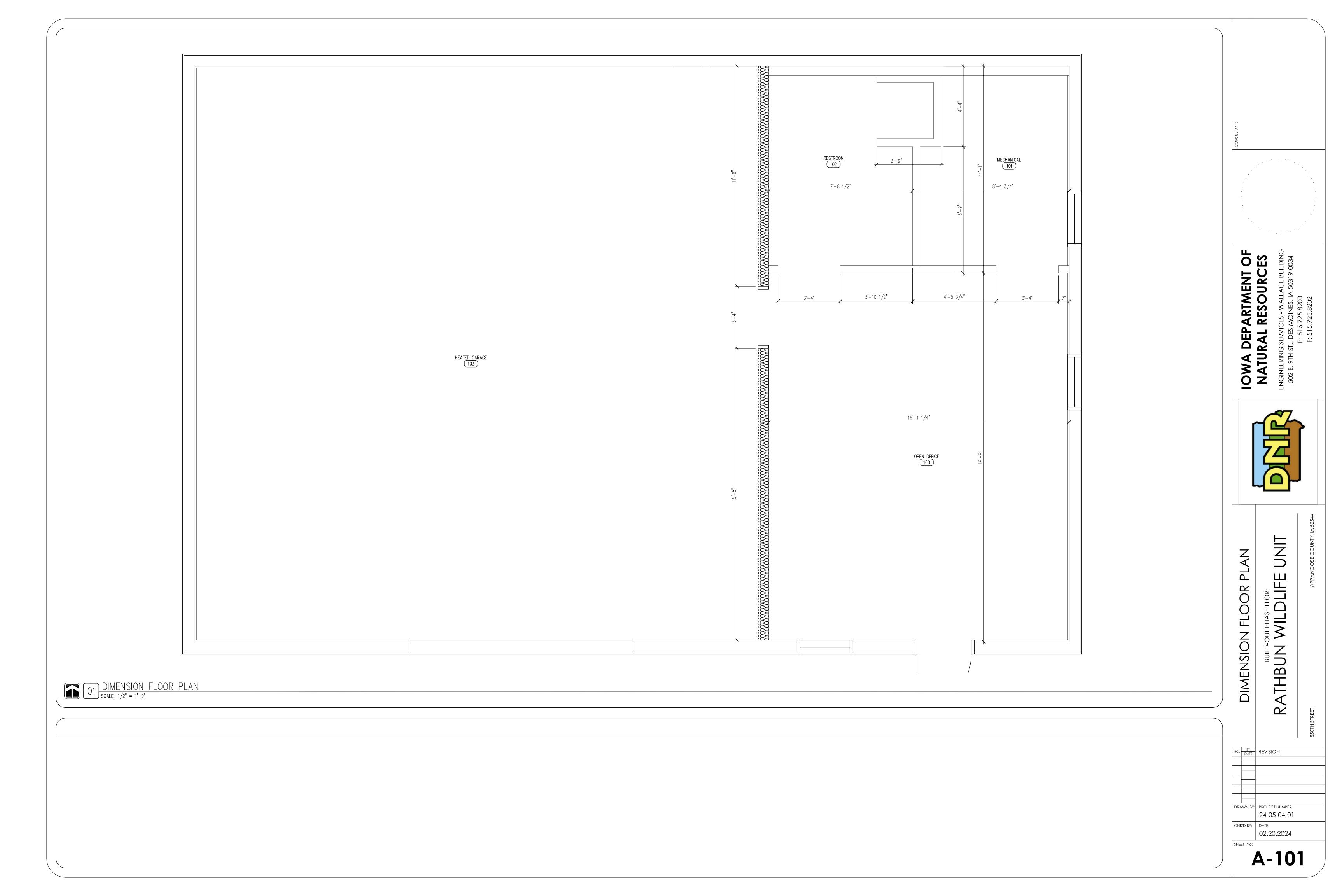
THE CONTRACTOR IS EXPECTED TO HAVE MATERIALS, EQUIPMENT, AND LABOR AVAILABLE ON A DAILY BASIS TO INSTALL AND MAINTAIN EROSION CONTROL FEATURES ON THE PROJECT. THIS MAY INVOLVE SEEDING, SILT FENCE, ROCK DITCH CHECKS, SILT BASINS OR SILT DIKES.

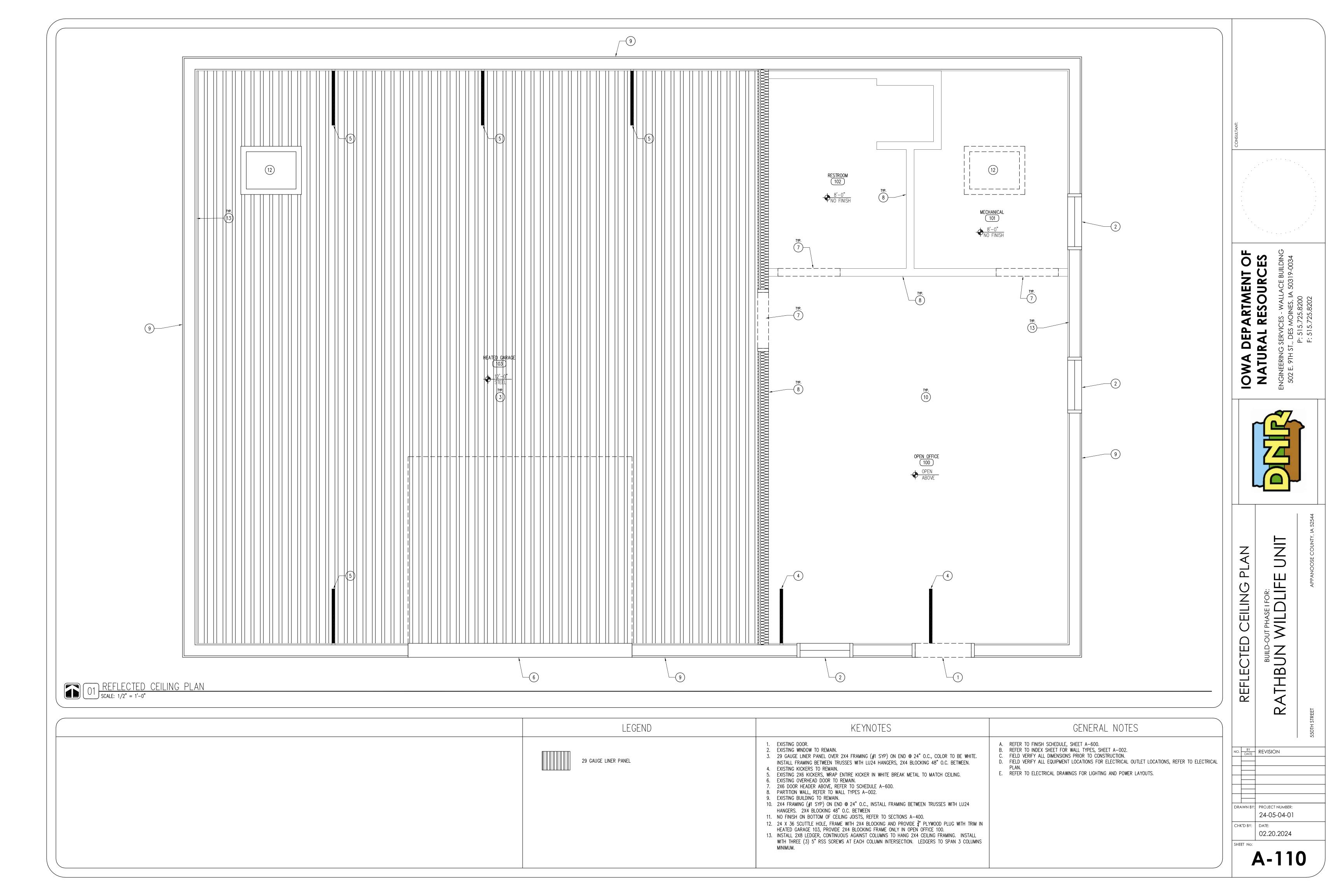
*DIVISIONS 20-41 OF THE STANDARD SPECIFICATIONS FOR BRIDGE AND HIGHWAY CONSTRUCTION, CURRENT EDITION WITH GS-15011 SHALL APPLY TO THIS PROJECT.

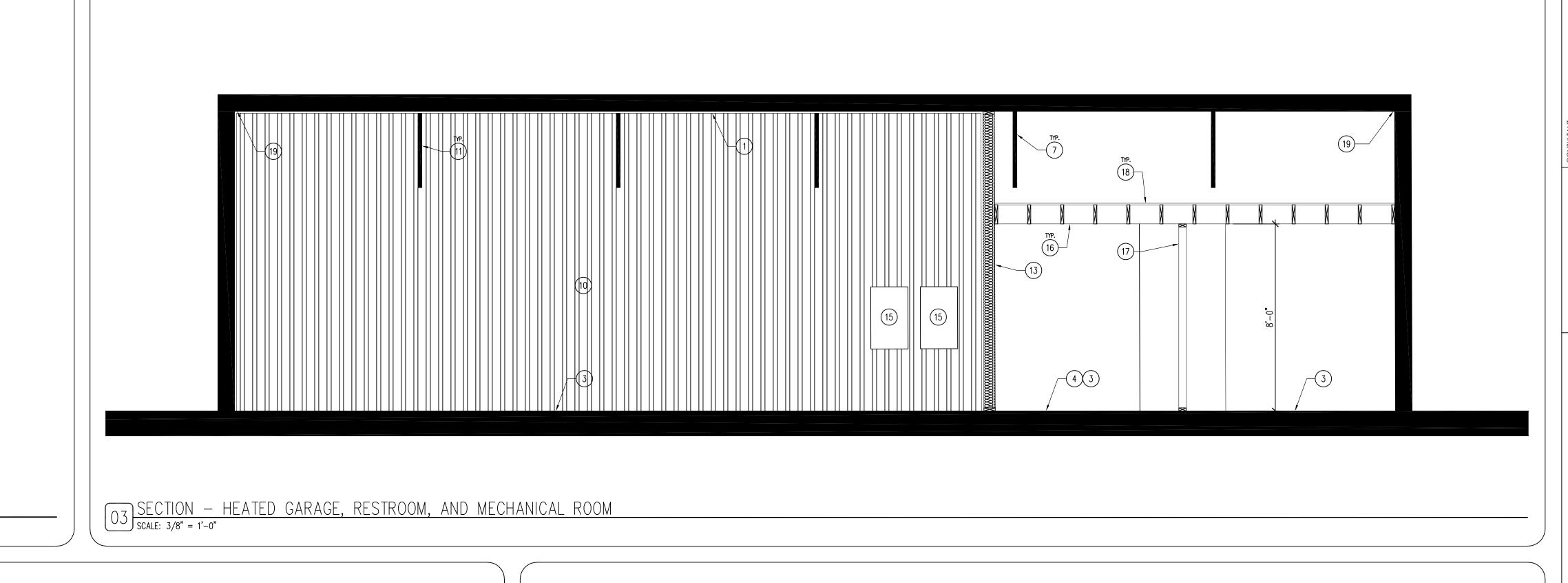


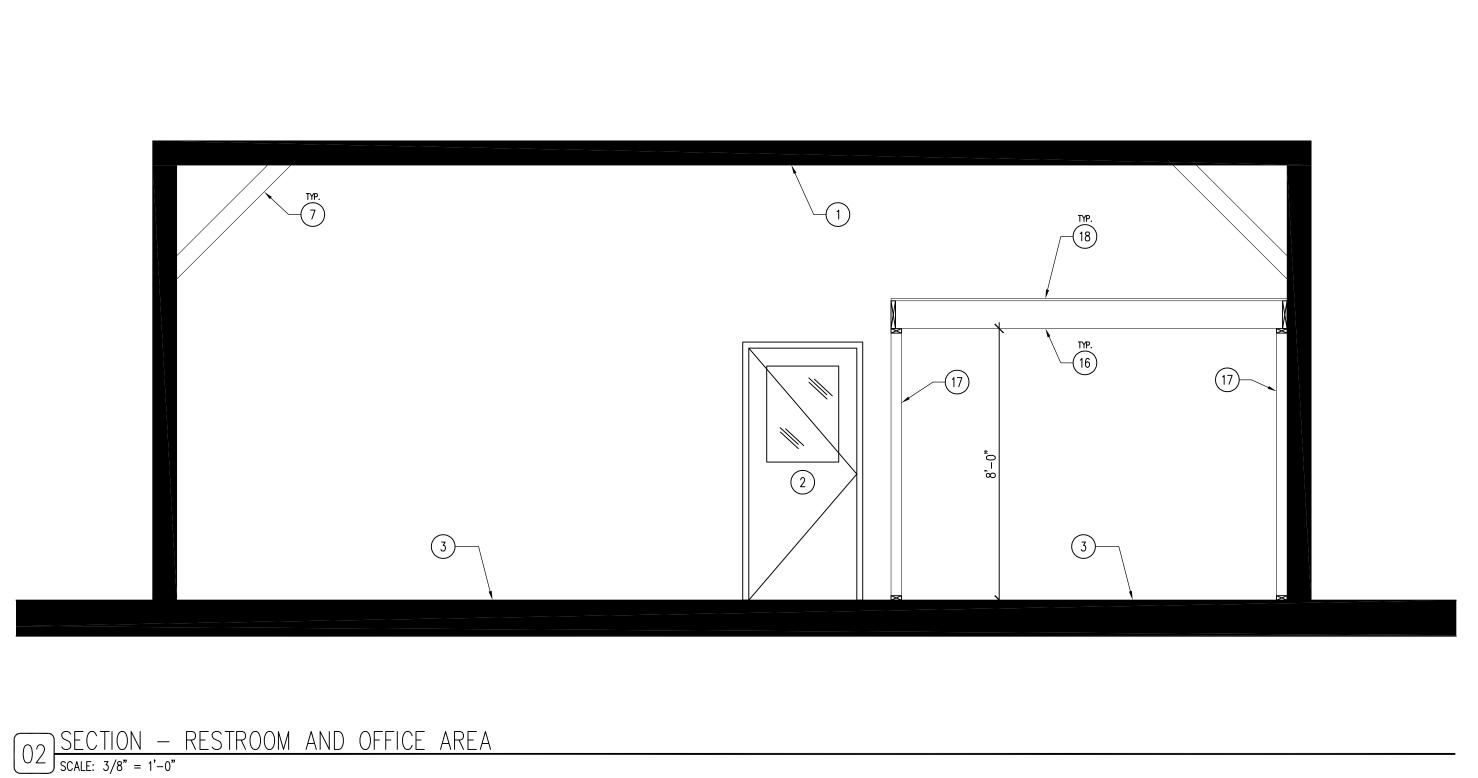




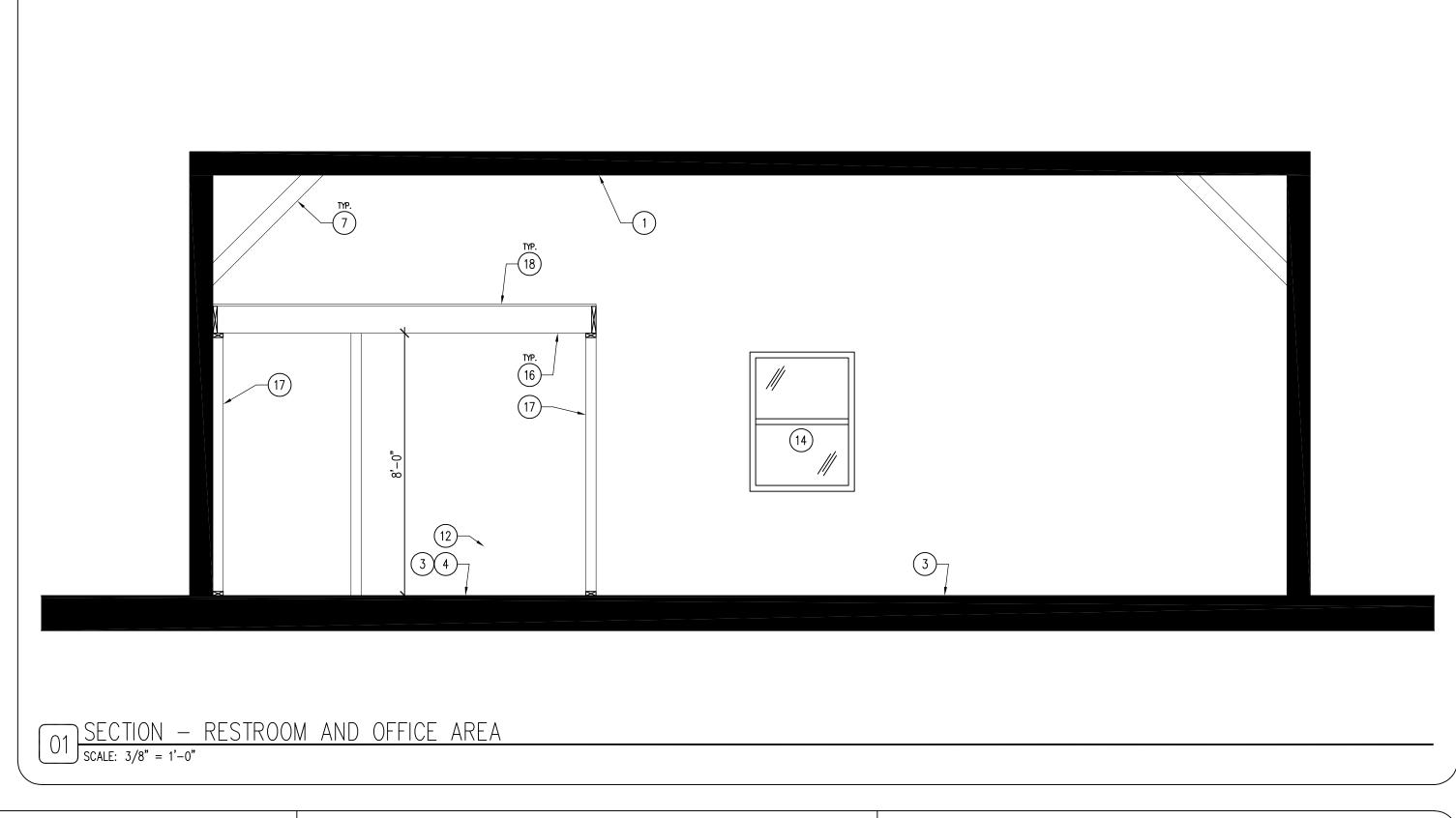








04 NOT USED SCALE: 3/4" = 1'-0"



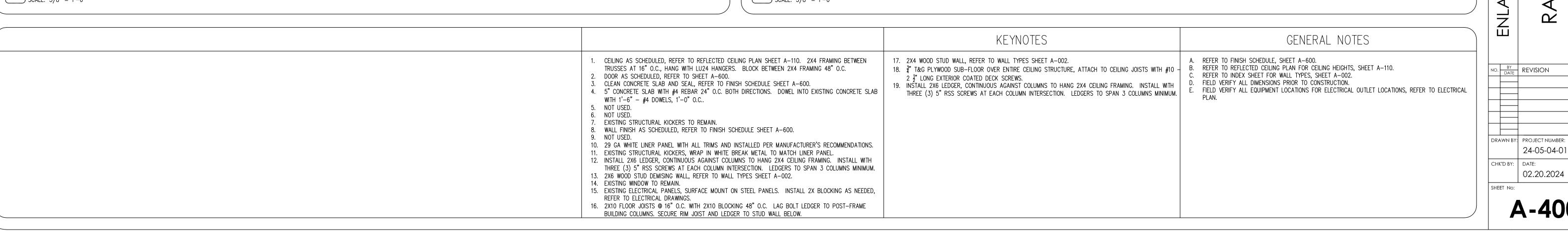
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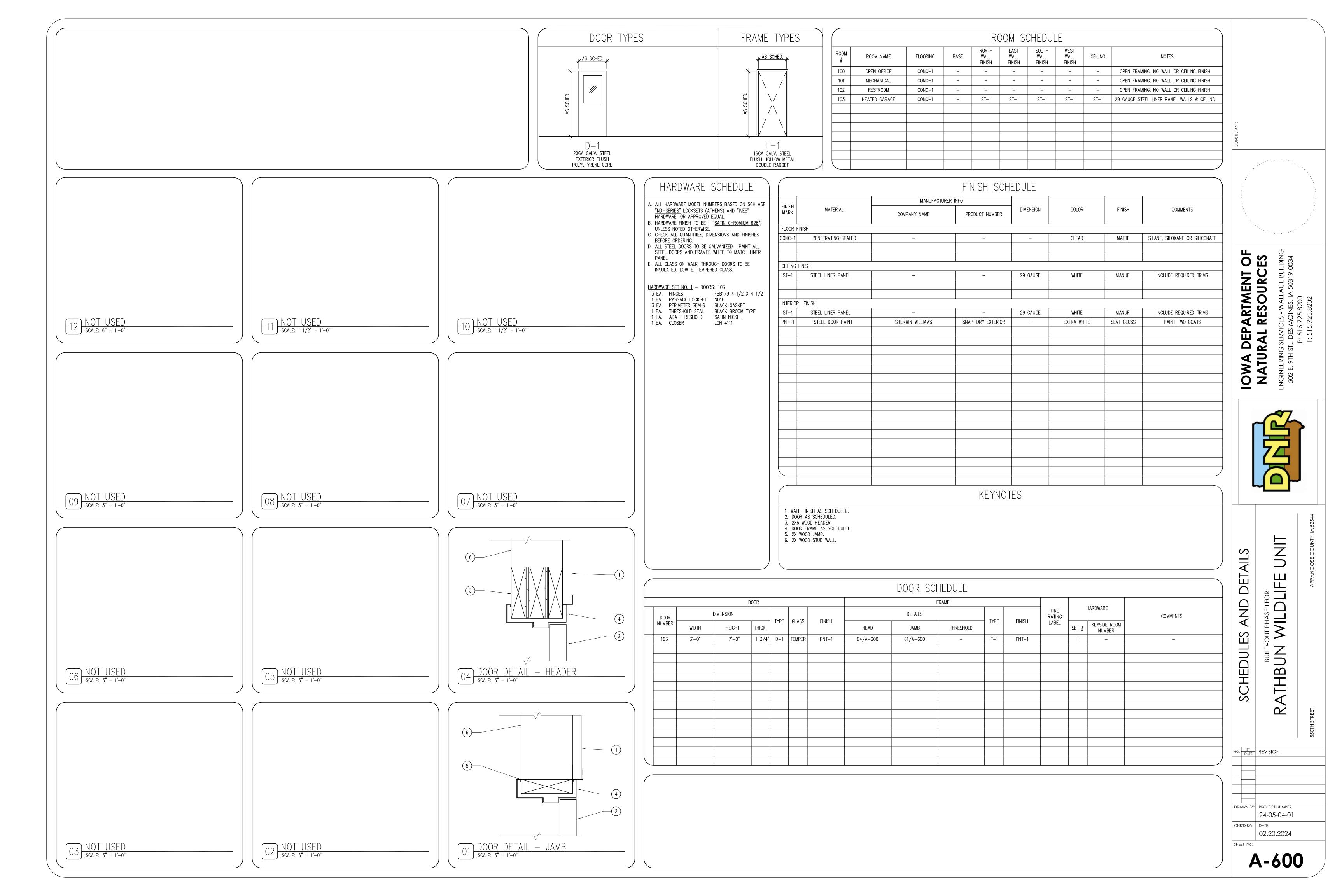
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INSTALLATION NOTES - ELECTRICAL

- BECOME FAMILIAR WITH EXISTING CONDITIONS PRIOR TO BID.
- INCREASE CONDUCTOR SIZES ON 20A 120V-1 PHASE CIRCUITS EXCEEDING 100 FEET TO CENTER OF LOAD TO ACCOUNT FOR VOLTAGE DROP.
- RACEWAYS AND BOXES ARE SHOWN DIAGRAMMATICALLY ONLY AND INDICATE GENERAL AND APPROXIMATE LOCATIONS. LAYOUTS DO NOT ALWAYS SHOW THE TOTAL NUMBER OF RACEWAYS OR BOXES FOR THE CIRCUITS REQUIRED, NOR ARE THE LOCATIONS OF INDICATED RUNS INTENDED TO SHOW THE ACTUAL ROUTING OF THE RACEWAYS.
- LIGHT FIXTURES, SWITCHES, DEVICES, ETC. ARE SHOWN IN PREFERRED LOCATION. MODIFY CONDUIT, HANGERS, CIRCUITING, ETC. TO PROVIDE A COMPLETE AND
- PROVIDE A DEDICATED GREEN INSULATED GROUND CONDUCTOR TO ALL DEVICES. DO NOT USE CONDUIT SYSTEM AS THE ONLY EQUIPMENT GROUNDING METHOD.
- BALANCE PANEL LOADS DURING INSTALLATION. CIRCUIT NUMBERING SHOWN ON PLANS MAY BE ADJUSTED TO ACCOMMODATE.
- PROVIDE TYPED PANEL DIRECTORY AT PROJECT COMPLETION FOR NEW PANELS AND EXISTING PANELS WITH CIRCUITS MODIFIED AS A RESULT OF THIS PROJECT. USE OWNER'S CURRENT ROOM NUMBERS AND EQUIPMENT NAMES.
- CONTRACTOR IS RESPONSIBLE FOR OPENINGS IN WALLS, FLOORS, CEILINGS, AND ROOFS THAT ARE REQUIRED TO COMPLETE THEIR SCOPE OF WORK. SEAL PENETRATIONS IN ACCORDANCE WITH THE RATING OF THE AFFECTED ASSEMBLY REFER TO ARCHITECTURAL CODE PLAN FOR RATED WALLS, FLOORS, AND CEILINGS.

DEVICE INSTALLATION AND MATERIALS - ELECTRICAL

- PROVIDE NORMAL WIRING DEVICES AS WHITE IN FINISHED SPACES AND GRAY IN GARAGE
- PLASTIC TO MATCH DEVICE IN FINISH SPACES AND STAINLESS STEEL IN GARAGE SPACE.
- PROVIDE GFCI TYPE RECEPTACLES AT ALL LOCATIONS REQUIRED BY THE NEC.
- INSTALL WALL MOUNTED RECEPTACLES AT +18" ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED.
- INSTALL WALL MOUNTED JUNCTION BOXES FOR LIGHT SWITCHES AT +46" ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED. EXCEPTION; INSTALL DEVICES ABOVE AN OBSTRUCTED HIGH FORWARD REACH OBSTACLE GREATER THEN 20 INCHES IN DEPTH AT +42".

INSTALLATION NOTES - LIGHTING

- UNLESS NOTED OTHERWISE, CONNECT ALL EMERGENCY BATTERY FIXTURES WITH AN UN-SWITCHED LEG OF THE LIGHTING CIRCUIT THAT SERVES THE FIXTURES SPACE. MAINTAIN NORMAL SWITCHING SCHEME OF EMERGENCY FIXTURES UNDER NORMAL OPERATION. INSTALL PER EMERGENCY FIXTURE OR TRANSFER DEVICE INSTRUCTIONS.
- VERIFY CEILING TYPE (IE. GRID, GYP) WITH ARCHITECTURAL REFLECTED CEILING PLANS PRIOR TO RELEASE OF LIGHTING FIXTURE EQUIPMENT PACKAGE. ADJUST FIXTURE TYPE, CONSTRUCTION, FLANGE, OR OTHER COORDINATION DETAILS AS REQUIRED FOR CEILING
- LIGHTING CONTROLS SENSORS ARE SHOWN ON PLANS AT SUGGESTED LOCATIONS ONLY. VERIFY LOCATIONS WITH MANUFACTURER GUIDELINES AND INSTALLATION RECOMMENDATIONS. ADJUST LOCATIONS AS REQUIRED TO MEET MANUFACTURER
- PROVIDE LIGHTING CONTROLS AS A COMPLETE SYSTEM AND INCLUDE MATERIAL AND INSTALLATION FOR ALL POWER PACKS, ACCESSORIES, CONTROLLERS, AND WIRING

BUILDING EQUIPMENT COORDINATION NOTES - ELECTRICAL

- REFER TO EQUIPMENT CONNECTION SCHEDULE FOR COORDINATION DETAILS BETWEEN MECHANICAL AND ELECTRICAL SYSTEMS.
- PROVIDE AND INSTALL ELECTRICAL SYSTEMS UNDER THIS CONTRACT MEETING THE REQUIREMENTS OF THE SPECIFIED MECHANICAL, FIRE PROTECTION, AND PLUMBING SYSTEMS. REFERENCE THE ENTIRE PROJECT DOCUMENTS, MANUALS, SCHEDULES, DETAILS,
- PROVIDE ELECTRICAL CONNECTIONS AND ACCESSORIES INCLUDING STARTERS, DISCONNECTS, CONTROL WIRING, ETC. AS REQUIRED FOR THE BUILDING MECHANICAL EQUIPMENT. INFORMATION HEREIN AND ON THE DRAWINGS IS FOR GENERAL DESCRIPTION AND ESTIMATING PURPOSES ONLY. VERIFY VOLTAGE, AMPERAGE, PHASE, INRUSH, ETC. FOR EACH ITEM OF EQUIPMENT BEFORE PROCEEDING WITH INSTALLATION. INSTALL EQUIPMENT PER WIRING DETAILS AND INSTRUCTIONS FURNISHED BY THE SUPPLIERS OF THE EQUIPMENT TO PROVIDE PROPER OPERATION.
- REVIEW MECHANICAL EQUIPMENT SHOP DRAWINGS FOR COMPLIANCE AND COORDINATION WITH ELECTRICAL CONNECTIONS. NOTIFY ENGINEER IF CHANGES TO ELECTRICAL CONNECTIONS, WIRING, AND BREAKER REQUIREMENTS ARE NECESSARY TO ACCOMMODATE EQUIPMENT BEING SUPPLIED.
- PROVIDE DISCONNECTS RATED FOR EQUIPMENT AS REQUIRED AND AS INDICATED WITHIN EQUIPMENT CONNECTION SCHEDULE. COORDINATE DISCONNECT MOUNTING TO ALLOW EQUIPMENT REMOVAL WITHOUT DISCONNECT REMOVAL AND TO MINIMIZE WIRING WORK
- PROVIDE HEAVY DUTY TYPE DISCONNECTS RATED FOR THE INSTALLED ENVIRONMENT. PROVIDE MINIMUM NEMA 3R RATED DISCONNECTS FOR EXTERIOR INSTALLATIONS OR AS
- VERIFY LOCATIONS OF ALL EQUIPMENT. REFER TO MECHANICAL, PLUMBING, AND ARCHITECTURAL DRAWINGS AND COORDINATE WITH THE ASSOCIATED SUB-CONTRACTOR. ADJUST ELECTRICAL INSTALLATION AS REQUIRED.

ELECTRICAL ABBREVIATIONS

- DEVICE MOUNTED +8" ABOVE COUNTER TOP (VERIFY LOCATION) ABOVE FINISHED FLOOR ATS AUTOMATIC TRANSFER SWITCH CEILING CIRCUIT BREAKER CT CURRENT TRANSFORMER **EXISTING ITEM TO REMAIN** ELECTRICAL CONTRACTOR EM EMERGENCY LIGHT FIXTURE ER NEW LOCATION OF EXISTING ITEM
- ROUGH IN FOR FUTURE DEVICE FAAP FIRE ALARM ANNUNCIATOR PANEL FACP FIRE ALARM CONTROL PANEL FSD FIRE SMOKE DAMPER GROUND FAULT CIRCUIT INTERRUPTER GND GROUND
- KVA KILO-VOLT-AMPERES KW KILOWATTS MECHANICAL CONTRACTOR MCB MAIN CIRCUIT BREAKER MDP MAIN DISTRIBUTION PANEL
- VOLTS **VOLT-AMPERES** WIREGUARD COVER MLO MAIN LUGS ONLY WEATHERPROOF DEVICE NEW DEVICE IN EXISTING LOCATION WEATHER RESISTANT DEVICE +24" INDICATES MOUNTING HEIGHT CENTER

TV

NIC NOT IN CONTRACT

OFCI OWNER FURNISHED

OFOI OWNER FURNISHED,

RELOCATED

TELEVISION

TYP TYPICAL

CONTRACTOR INSTALLED

EXISTING ITEM TO BE REMOVED

RN EXISTING ITEM TO BE REMOVED AND

TCC TEMPERATURE CONTROL CONTRACTOR

UNINTERRUPTIBLE POWER SUPPLY

LINE OF DEVICE TO FINISHED FLOOR

SCCR SHORT CIRCUIT CURRENT RATING

TAMPER PROOF DEVICE

EXISTING ITEM TO BE REMOVED AND

OWNER INSTALLED

REPLACED WITH NEW

NM NONMETALLIC

NTS NOT TO SCALE

OC ON CENTER

GENERAL NOTES - ELECTRICAL

- COORDINATE LOCATION/INSTALLATION OF MECHANICAL AND ELECTRICAL WORK WITH ALL OTHER TRADES. BEGIN INSTALLATION AND ROUGH-IN ONLY AFTER PROPER AND TIMELY COORDINATION WITH ALL TRADES ASSOCIATED WITH THE INSTALLATION IS COMPLETE. COORDINATE WITH BUILDING STRUCTURE, ARCHITECTURE, MECHANICAL SHEET METAL, ALL PIPING SYSTEMS, LIGHT FIXTURES, CONDUITS, CABLE TRAYS, EQUIPMENT ACCESS/CLEARANCE, ETC. REFER TO ALL GENERAL, MECHANICAL, AND ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT. CONTRACTOR IS RESPONSIBLE FOR REWORK OF INSTALLED EQUIPMENT RESULTING FROM INSUFFICIENT COORDINATION.
- ELECTRICAL DRAWINGS ARE ONLY A PORTION OF THE COMPLETE SET OF PLANS AND CONTRACT DOCUMENTS. THE ELECTRICAL SCOPE OF WORK IS DEFINED BY THE COMPLETE SET OF CONTRACT DOCUMENTS. THIS INCLUDES BUT IS NOT LIMITED TO REFERENCING; ARCHITECTURAL PLANS FOR DIMENSIONS AND DETAILS; EQUIPMENT PLANS FOR ROUGH-IN REQUIREMENTS, MECHANICAL PLANS FOR EQUIPMENT SIZES AND LOCATIONS.

CODE NOTES - ELECTRICAL

- PROVIDE ELECTRICAL INSTALLATION IN ACCORDANCE WITH ALL LOCAL, STATE, AND NATIONAL CODES.
- THE CURRENT ADOPTED EDITION OF THE ELECTRICAL CODE IS THE STANDARD FOR THE ELECTRICAL INSTALLATION. VERIFY WITH LOCAL OFFICIALS WHEN PERMITS ARE OBTAINED. NOTIFY DESIGN TEAM OF ANY DISCREPANCIES BETWEEN THE PROJECT MANUAL OR DRAWINGS AND THE GOVERNING CODE.
- INSTALLATION SHALL FOLLOW REQUIREMENTS OF THE ADAAG -AMERICANS WITH DISABILITIES ACT.
- REFER TO PROJECT MANUAL AND PROJECT CODE REVIEW SHEET FOR LIST OF APPLICABLE CODES.



GENERAL NOTE:

UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES HAVE BEEN SHOWN BASED UPON INFORMATION OBTAINED FROM FIELD LOCATIONS BY UTILITY COMPANIES, AVAILABLE SURVEYS AND RECORDS. THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. IT IS ALSO POSSIBLE THAT THERE MAY BE OTHER UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES IN EXISTENCE THAT ARE NOT SHOWN. IT IS THE RESPONSIBILITY OF EACH INDIVIDUAL PARTY REFERENCING THIS PLAN TO DETERMINE THE EXACT LOCATION AND TYPE OF UNDERGROUND FACILITIES ON THE SITE. HAND EXCAVATE AT CRITICAL POINTS AS NECESSARY TO VERIFY LOCATIONS, SIZES, ELEVATIONS, FLOW LINES, ETC. IF A PROBLEM OR INTERFERENCE EXISTS, NOTIFY ARCHITECT/ENGINEER BEFORE PROCEEDING.

NOTE: ALL SYMBOLS MAY NOT APPLY TO THIS PROJECT

GENERAL SYMBOLS

- CEILING MOUNT JUNCTION BOX WITH PULL STRING.
- WALL MOUNTED JUNCTION BOX WITH PULL STIRNG, ELEVATION +46" OR OTHERWISE NOTED.
- KEYNOTE
- EQUIPMENT IDENTIFICATION TAG. REFER TO EQUIPMENT CONNECTION SCHEDULE

POWER SYMBOLS

- DUPLEX RECEPTACLE, CEILING MOUNT
- DUPLEX RECEPTACLE, TAMPER-RESISTANT, WALL MOUNT +18", OR AS NOTED
- QUADRAPLEX RECEPTACLE, TAMPER-RESISTANT, WALL MOUNT +18", OR AS NOTED

SPECIAL RECEPTACLE, WALL MOUNT +18", OR AS NOTED, REFER TO ELECTRICAL

- EQUIPMENT CONNECTION SCHEDULE FOR RECEPTACLE TYPE.
- EQUIPMENT CONNECTION, REFER TO ELECTRICAL EQUIPMENT CONNECTION SCHEDULE FOR CONNECTION TYPE
- MOTORIZED DOOR OPERATOR CONTROL STATION, WALL MOUNT, +48", OR AS NOTED
- SAFETY DISCONNECT SWITCH
- PANELBOARD SURFACE MOUNTED

LIGHTING SYMBOLS

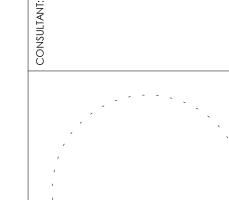
INDUSTRIAL STRIP LIGHT FIXTURE

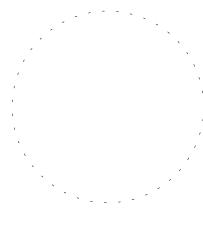
SINGLE POLE SWITCH, WALL MOUNT +48", OR AS NOTED, \$ a LETTER INDICATES SWITCH LEG

LIGHTING PLANS NOTATION KEY

UPPERCASE LETTERING INDICATES FIXTURE TYPE. REFER TO LUMINAIRE SCHEDULE - +## INDICATES FIXTURE MOUNTING HEIGHT FROM BOTTOM OF FIXTURE TO FINISHED FLOOR. COORDINATE ALL FIXTURE ELEVATIONS WITH ARCHITECTURAL RCP PRIOR TO ROUGH-IN AND SHOP SUBMITTALS. +10'-6" - LOWERCASE LETTERING INDICATES SWITCH LEG.







R ES

OZ



 $\mathbf{\Omega}$

GENE

NO. BY REVISION

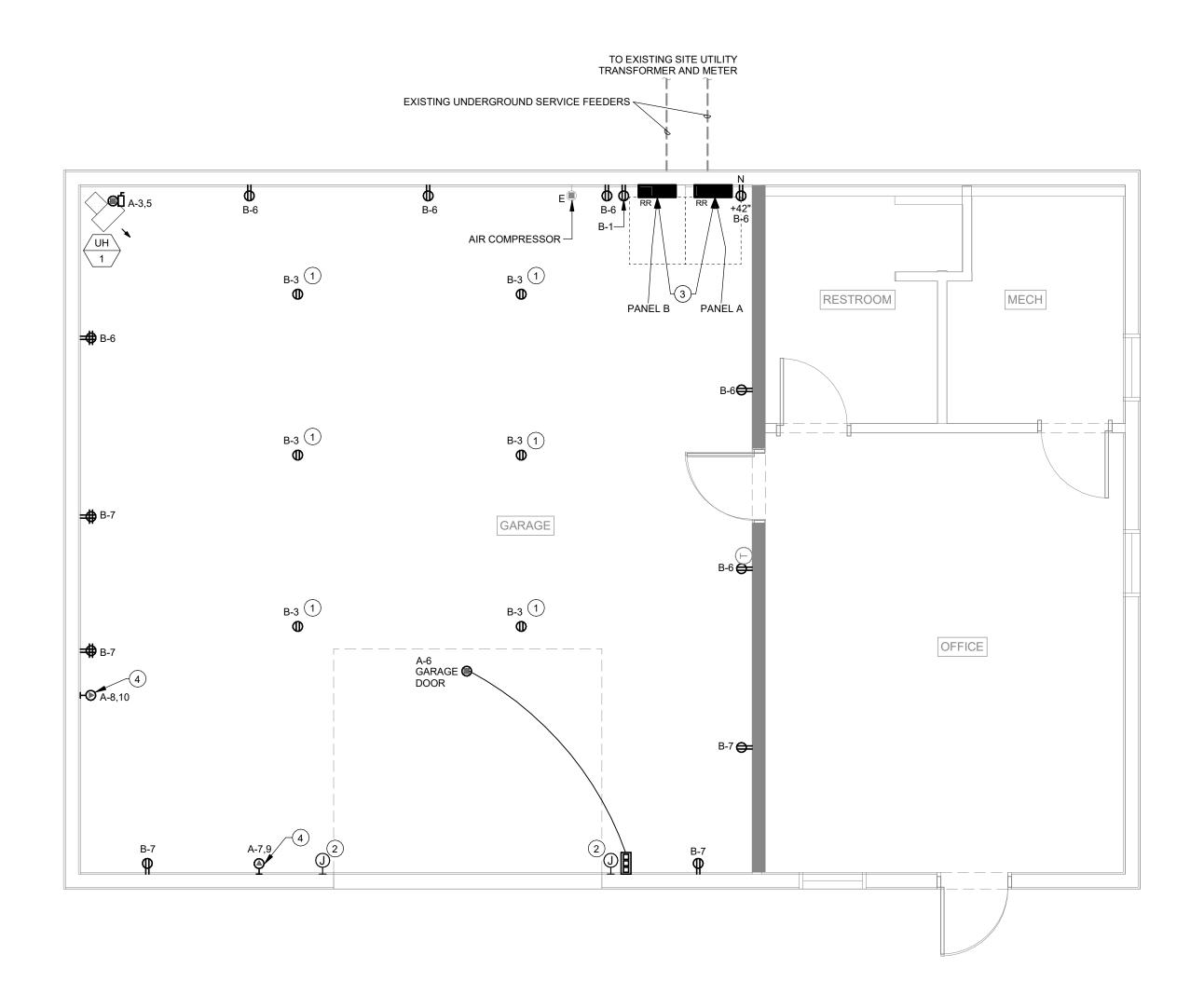
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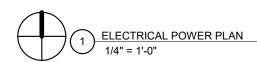
CHK'D BY: DATE: 02.20.2024

POWER GENERAL NOTES

- A. COORDINATE LOCATION/INSTALLATION OF MECHANICAL AND ELECTRICAL WORK WITH ALL OTHER TRADES. NO ASPECT OF A SYSTEM INSTALLATION OR ITS ROUGH-IN SHALL COMMENCE UNTIL PROPER AND TIMELY COORDINATION WITH ALL TRADES ASSOCIATED WITH THE INSTALLATION HAS TRANSPIRED. ITEMS TO BE COORDINATED SHALL INCLUDE BUT NOT BE LIMITED TO: BUILDING STRUCTURE, SHEET METAL, PIPING SYSTEMS, LIGHT FIXTURES, CONDUITS, CABLE TRAYS, ETC. REFER TO ALL GENERAL, MECHANICAL, AND ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
- B. COORDINATE ELECTRICAL REQUIREMENTS FOR MECHANICAL UNITS WITH MECHANICAL CONTRACTOR AND FINAL MECHANICAL SHOP DRAWINGS.
- C. PROVIDE PENETRATIONS REQUIRED FOR ROUTING RACEWAYS THROUGH THE BUILDING. COORDINATE FIRE RATED WALL PENETRATIONS AND PROVIDE CONDUIT SLEEVES AND FIRE STOPPING TO MAINTAIN RATING.

- MOUNT RECEPTACLE TO STRUCTURE WITH RECEPTACLE FACE DOWN.
- INSTALL JUNCTION BOX WITH 1-GANG DEVICE RING AND 1/2"
- CONDUIT UP WALL FOR GARAGE DOOR SAFETY SENSORS. DISCONNECT AND RELOCATE EXISTING SURFACE MOUNTED PANELS. MOUNT PANELS IN PLACE AND RECESSED WITHIN NEW WALLS. PROTECT EXISTING ELECTRICAL EQUIPMENT AND PATHWAYS DURING DEMOLITION.
- 4 VERIFY RECEPTACLE TYPE AS NEMA 14-50R, AND BREAKER SIZE AS 60A WITH OWNER PROVIDED EQUIPMENT (TYP).







RATHBUN WILDLIFE

ELECTRICAL POWER

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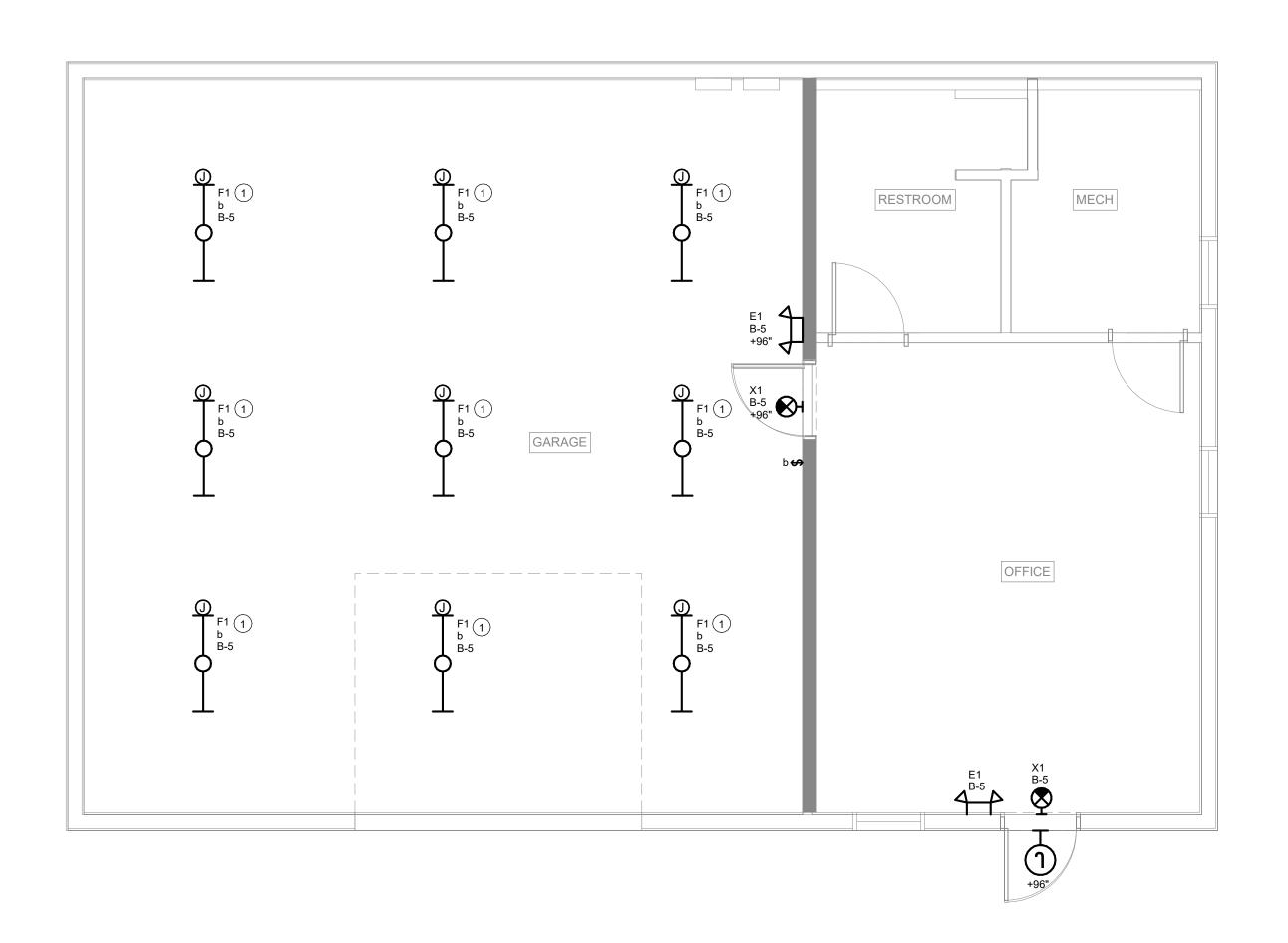
E-101

LIGHTING GENERAL NOTES

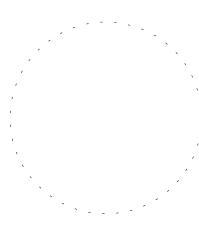
A. COORDINATE LOCATION/INSTALLATION OF MECHANICAL AND ELECTRICAL WORK WITH ALL OTHER TRADES. NO ASPECT OF A SYSTEM INSTALLATION OR ITS ROUGH-IN SHALL COMMENCE UNTIL PROPER AND TIMELY COORDINATION WITH ALL TRADES ASSOCIATED WITH THE INSTALLATION HAS TRANSPIRED. ITEMS TO BE COORDINATED SHALL INCLUDE BUT NOT BE LIMITED TO: BUILDING STRUCTURE, SHEET METAL, ALL PIPING SYSTEMS, LIGHT FIXTURES, CONDUITS, CABLE TRAYS, ETC. REFER TO ALL GENERAL, MECHANICAL, AND ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.

KEYNOTES

SUSPEND LUMINIARE TO 11'-0" VIA CHAIN, TYP. VERIFY WITH EXISTING OVERHEAD DOOR AND OTHER TRADES ON THE CEILING. NOTIFY ENGINEER OTHERWISE.



ELECTRICAL LIGHTING



OWA DEPARTMENT OF NATURAL RESOURCES

RATHBUN WILDLIFE UNIT

NO. BY REVISION

DRAWN BY: PROJECT NUMBER: 24-05-04-01

CHK'D BY: DATE: 02.20.2024

E-201

LIGHTING FIXTURE SCHEDULE

1. ALL FIXTURES SHALL BE U.L. OR SIMILARLY LISTED.

- 2. INCLUDE A MINIMUM 1 YEAR WARRANTY FOR LIGHTING FIXTURES, WHERE NOT OTHERWISE SPECIFIED.
- 3. REFER TO ARCHITECTURAL DOCUMENTS FOR EXACT MOUNTING LOCATIONS, DETAILS, AND CONFIGURATIONS OF ALL LUMINAIRES. IF ARCHITECTURAL DRAWINGS DO NOT CLARIFY EXACT MOUNTING
- LOCATION OR DETAIL, ISSUE AN RFI FOR ARCHITECT TO SPECIFICALLY CLARIFY PRIOR TO FIXTURE ROUGH-IN.
- 4. VERIFY COMPATIBILITY OF LIGHT FIXTURES WITH CEILING MATERIAL, ADJACENT CONSTRUCTION, AND ADJACENT FINISHES PRIOR TO SHOP DRAWINGS SUBMITTAL NOTIFY THE ARCHITECT OF ANY CONFLICTS WITH THE PROPOSED INSTALLATION.
- 5. CONTRACTOR IS RESPONSIBLE FOR ALL MISCELLANEOUS HARDWARE NECESSARY TO INSTALL AND SUPPORT THE LUMINAIRES.
- 6. AIM AND TARGET ADJUSTABLE INTERIOR AND EXTERIOR LIGHT FIXTURES UNDER THE OBSERVATION AND IN COMPLIANCE WITH RECOMMENDATIONS OF THE ARCHITECT.

INCLUDE LABOR AND MATERIAL COSTS MADE NECESSARY BY THIS REQUIREMENT.

7. CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND FILLING OUT ALL UTILITY REBATE FORMS FOR OWNER.

DESIGNED BY: DLB

| TYPE | MANUFACTURER | MODEL | DESCRIPTION | <u>FINISH</u> | NOMINAL LUMENS | <u>CRI</u> | DRIVER TYPE | SOURCE- CCT | VOLTAGE | LOAD-VA APPROVED EQUALS |
|------|-------------------|---------------------------------------|--|---------------|-------------------|------------|----------------------|----------------|---------|---|
| E1 | LITHONIA LIGHTING | ELM2L-UVOLT-SDRT / ELAWGI | WALL MOUNTED EMERGENCY UNIT, THERMOPLASTIC HOUSING, TWO AIMABLE LED LAMPS. INTEGRAL SELF-DIAGNOSTICS. COORDINATE FINAL AIMING WITH OWNER. BATTERY CAPACITY TO POWER NEARBY E2 REMOTE HEAD FIXTURE, WIRE GUARD INCLUDED | WHITE | 400 | 80+ | - | LED-4000K | 120 V | 5 VA DUAL-LITE, EMERGI-LITE, MULE,OR AS PRIOR APPROVED BY ENGINEER. |
| F1 | LITHONIA LIGHTING | | CHAIN OR SURFACE MOUNT 3' STRIPLIGHT, PLUG-AND-CORD TO CEILING MOUNT RECEPTACLE, FLAT DIFFUSE LENS, WIDE DISTRIBUTION, WIRE GUARD INCLUDED. | WHITE | 7000 | 80+ | 0-10V DIMMING TO 10% | LED-4000K | 120 V | 50 VA NO EQUALS |
| X1 | LITHONIA LIGHTING | LQM-S-W-3-R-MVOLT-EL-N-SD / ELAWG1 | UNIVERSAL MOUNTING SINGLE FACE EXIT SIGN, HIGH IMPACT, FLAME RATED AND UV STABLE WHITE THERMOPLASTIC HOUSING, CANOPY AND MOUNTING HARDWARE INCLUDED, WIRE GUARD INCLUDED | WHITE | - | - | - | RED LED | 120 V | 3 VA DUAL-LITE, EMERGI-LITE, MULE, OR AS APPROVED BY ENGINEER |

EQUIPMENT CONNECTION SCHEDULE

GENERAL NOTES:

1. INCLUDE AUXILLIARY CONTACTS AND LOW-VOLTAGE WIRING TO AUXILLIARY EQUIPMENT THAT RUNS IN TANDEM WITH EQUIPMENT, (I.E. 120V DAMPERS WITH 480V MOTORS).

ST SHUNT TRIP

ABBREVIATIONS:

NEMA 1 ENCLOSURE

3R NEMA 3R ENCLOSURE

NEMA 4 ENCLOSURE

4X NEMA 4X ENCLOSURE

BO PROVIDED BY OTHERS

CB CIRCUIT BREAKER IN PANEL

CSD COMBINATION STARTER/DISCONNECT

CP CORD AND PLUG PROVIDED WITH UNIT

HOA HAND-OFF-AUTO

ECB ENCLOSED CIRCUIT BREAKER

FAR FIRE ALARM SHUTDOWN RELAY

FDS FUSED DISCONNECT SWITCH, HEAVY DUTY

GF GROUND FAULT CIRCUIT INTERRUPTION

| VFD | VARIABLE FREQUENCY DRIVE |
|-----|--------------------------|
| | |
| | |

TOR TIME DELAY OFF RELAY

INT INTEGRAL WITH EQUIPMENT FROM FACTORY

NFD NON-FUSED DISCONNECT SWITCH, HEAVY DUTY

MMS MANUAL MOTOR STARTER WITH FUSES

RSR RUN STATUS RELAY, NORMALLY OPEN

SSP START/STOP PUSHBUTTON WITH PILOT

TS TOGGLE SWITCH WITH PLUG FUSE

RD RETURN AIR DUCT DETECTOR

SD SUPPLY AIR DUCT DETECTOR

SS START/STOP PUSHBUTTON

DISCONNECT SIZE (AMPS) NEMA RATING **TYPE** EC TO INSTALL LINE-VOLTAGE THERMOSTAT ALONG EAST WALL. THERMOSTAT PROVIDED BY MC. REFER TO MECHANICAL 42.4 NFD UH-1 240 V PLANS FOR EXACT LOCATION.

(E) BRANCH PANEL: A

LOCATION: HEATED GARAGE 103 SUPPLY FROM:

MOUNTING: SURFACE **ENCLOSURE**: TYPE 1

VOLTAGE: 120/240 SINGLE PHASES: 1 WIRES: 3

SCCR RATING: 10,000 **MAINS TYPE:** MCB MAINS RATING: 200 A MCB RATING: 200 A

PROVIDE NEW BREAKER EXCEPT WHERE CIRCUIT IS NOTED AS EXISTING. MODEL SQAURE D QOC42UF. EXISTING PANEL A TO REMAIN.

| CIRCUIT DESCRIPTION | Р | | AMP | CKT NO | | A | | В | CKT NO | AMP | Р | CIRCUIT DESCRIPTION |
|---------------------|---|---|------|-----------|------|-------|------|------|-----------|-------|---|-------------------------|
| EXISTING OUTLET | 1 | | 15 A | 1 | 0 | 0 | | | 2 | 100 A | 2 | EXISTING OFFICE SUBFEED |
| UH-1 | 2 | G | 60 A | 3 | | | 4800 | 0 | 4 | 100 A | | EXISTING OFFICE SUBFEED |
| OI I-1 | | | 00 A | 5 | 4800 | 0 | | | 6 | 20 A | 1 | GARAGE DOOR |
| SPECIALITY RCPT | 2 | G | 60 A | 7 | | | 90 | 90 | 8 | 60 A | 2 | WELDER |
| SPECIALITY NOFT | | | 00 A | 9 | 90 | 90 | | | 10 | 00 A | | WELDEN |
| SPARE | 1 | | 20 A | 11 | | | 0 | 0 | 12 | 20 A | 1 | SPARE |
| SPARE | 1 | | 20 A | 13 | 0 | 0 | | | 14 | 20 A | 1 | SPARE |
| SPARE | 1 | | 20 A | 15 | | | 0 | 0 | 16 | 20 A | 1 | SPARE |
| SPARE | 1 | | 20 A | 17 | 0 | 0 | | | 18 | 20 A | 1 | SPARE |
| SPARE | 1 | | 20 A | 19 | | | 0 | 0 | 20 | 20 A | 1 | SPARE |
| SPACE | 1 | | | 21 | | | | | 22 | | 1 | SPACE |
| SPACE | 1 | | | 23 | | | | - | 24 | | 1 | SPACE |
| SPACE | 1 | | | 25 | | | | | 26 | | 1 | SPACE |
| SPACE | 1 | | | 27 | | | | | 28 | | 1 | SPACE |
| SPACE | 1 | | | 29 | | | | | 30 | | 1 | SPACE |
| SPACE | 1 | | | 31 | | | | - | 32 | | 1 | SPACE |
| SPACE | 1 | | | 33 | | | | | 34 | | 1 | SPACE |
| SPACE | 1 | | | 35 | | | | | 36 | | 1 | SPACE |
| SPACE | 1 | | | 37 | | | | | 38 | | 1 | SPACE |
| SPACE | 1 | | | 39 | | | | - | 40 | | 1 | SPACE |
| SPACE | 1 | | | 41 | | | | | 42 | | 1 | SPACE |
| | ' | | | _ | 498 | 80 VA | 498 | 0 VA | | | | |

LEGEND:

"G" INDICATES GFCI TYPE BREAKER "F" INDICATES RED LOCK-ON HASP

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED | PANEL TOTALS |
|---------------------|----------------|---------------|-----------|----------------------------|
| POWER | 9600 VA | 100.00% | 9600 VA | |
| RECEPTACLE | 360 VA | 100.00% | 360 VA | TOTAL CONN. LOAD: 9960 VA |
| | | | | TOTAL EST. DEMAND: 9960 VA |
| | | | | TOTAL CONN.: 42 A |
| | | | | TOTAL EST. DEMAND: 42 A |

42 A

42 A

(E) BRANCH PANEL: B

LOCATION: HEATED GARAGE 103 SUPPLY FROM:

MOUNTING: SURFACE

ENCLOSURE: TYPE 1

VOLTAGE: 120/240 SINGLE PHASES: 1

WIRES: 3

SCCR RATING: 10,000 MAINS TYPE: MCB MAINS RATING: 200 A MCB RATING: 200 A

PROVIDE NEW BREAKER EXCEPT WHERE CIRCUIT IS NOTED AS EXISTING. MODEL SQAURE D QOC42UF. EXISTING PANEL B TO REMAIN.

| CIRCUIT DESCRIPTION | Р | AMP | CKT NO | | A | ı | В | CKT NO | AMP | Р | CIRCUIT DESCRIPTION |
|---------------------|---|--------|-----------|-----|------|------|------|-----------|--------|---|-------------------------|
| EXISTING SEPTIC | 1 | 20 A | 1 | 180 | 0 | | | 2 | 50 A | 2 | EXISTING AIR COMPRESSOR |
| GARAGE RCPT | 1 | G 20 A | 3 | | | 1080 | 0 | 4 | 30 A | | EXISTING AIR COMPRESSOR |
| LIGHTING | 1 | 20 A | 5 | 743 | 1440 | | | 6 | 20 A G | 1 | GARAGE RCPT |
| GARAGE RCPT | 1 | G 20 A | 7 | | | 1260 | 0 | 8 | 20 A | 1 | SPARE |
| SPARE | 1 | 20 A | 9 | 0 | 0 | | | 10 | 20 A | 1 | SPARE |
| SPARE | 1 | 20 A | 11 | | | 0 | 0 | 12 | 20 A | 1 | SPARE |
| SPARE | 1 | 20 A | 13 | 0 | 0 | | | 14 | 20 A | 1 | SPARE |
| SPARE | 1 | 20 A | 15 | | | 0 | 0 | 16 | 20 A | 1 | SPARE |
| SPARE | 1 | 20 A | 17 | 0 | 0 | | | 18 | 20 A | 1 | SPARE |
| SPARE | 1 | 20 A | 19 | | | 0 | 0 | 20 | 20 A | 1 | SPARE |
| SPACE | 1 | | 21 | | | | | 22 | | 1 | SPACE |
| SPACE | 1 | | 23 | | | | | 24 | | 1 | SPACE |
| SPACE | 1 | | 25 | | | | | 26 | | 1 | SPACE |
| SPACE | 1 | | 27 | | | | | 28 | | 1 | SPACE |
| SPACE | 1 | | 29 | | | | | 30 | | 1 | SPACE |
| SPACE | 1 | | 31 | | | | | 32 | | 1 | SPACE |
| SPACE | 1 | | 33 | | | | | 34 | | 1 | SPACE |
| SPACE | 1 | | 35 | | | | | 36 | | 1 | SPACE |
| SPACE | 1 | | 37 | | | | | 38 | | 1 | SPACE |
| SPACE | 1 | | 39 | | | | | 40 | | 1 | SPACE |
| SPACE | 1 | | 41 | | | | | 42 | | 1 | SPACE |
| | I | I | 1 | 236 | 3 VA | 234 | 0 VA | | I | 1 | |

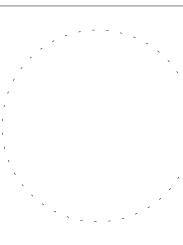
LEGEND:

"G" INDICATES GFCI TYPE BREAKER.
"F" INDICATES RED LOCK-ON HASP

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED | PANEL TOTALS | | |
|---------------------|----------------|---------------|-----------|--------------------|---------|--|
| LIGHTING | 743 VA | 125.00% | 929 VA | | | |
| RECEPTACLE | 3960 VA | 100.00% | 3960 VA | TOTAL CONN. LOAD: | 4703 VA | |
| | | | | TOTAL EST. DEMAND: | 4889 VA | |
| | | | | TOTAL CONN.: | 20 A | |
| | | | | TOTAL EST. DEMAND: | 20 A | |
| | | | | | | |
| | | | | | | |

20 A

20 A





-OR: $\mathbf{\Omega}$

SCHEDU

NO. DATE REVISION

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CHK'D BY: DATE: 02.20.2024

PLUMBING - NOTES

- COORDINATE WORK WITH ALL OTHER TRADES AS DESCRIBED IN MECHANICAL GENERAL NOTE #1.
- 2. INSTALL ALL EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. SIZE AND INSTALL PLUMBING SYSTEM PER PLUMBING CODE. COMPLY WITH ALL LOCAL AND STATE CODES AND OWNER'S REQUIREMENTS.
- 3. DRAWING PLANS, SCHEMATICS, AND DIAGRAMS INDICATE GENERAL LOCATION AND ARRANGEMENT OF PLUMBING SYSTEM.
- 4. SEAL ALL WALL PIPE PENETRATIONS. PROVIDE THROUGH-PENETRATION FIRESTOPPING WHERE REQUIRED. REFER TO ARCHITECTURAL DRAWINGS FOR WALL, FLOOR, AND CEILING ASSEMBLY RATINGS.
- 5. CONTINUE PIPE INSULATION THROUGH WALL, FLOOR, AND CEILING PENETRATIONS UNBROKEN. SEAL AROUND PIPE INSULATION AT PENETRATIONS.
- 6. VERIFY WITH ENGINEER FOR ANY FIXTURES NOT TAGGED OR PIPED PRIOR TO ANY WORK. CONTRACTOR IS RESPONSIBLE FOR ALL PLUMBING FIXTURES SHOWN ON ARCHITECTURAL DRAWINGS; TAGGED OR NOT TAGGED ON PLUMBING / MECHANICAL DRAWINGS UNLESS SPECIFICALLY NOTED AS EXCLUDED FROM SCOPE.





GENERAL NOTE:

UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES HAVE BEEN SHOWN BASED UPON INFORMATION OBTAINED FROM FIELD LOCATIONS BY UTILITY COMPANIES, AVAILABLE SURVEYS AND RECORDS. THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. IT IS ALSO POSSIBLE THAT THERE MAY BE OTHER UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES IN EXISTENCE THAT ARE NOT SHOWN. IT IS THE RESPONSIBILITY OF EACH INDIVIDUAL PARTY REFERENCING THIS PLAN TO DETERMINE THE EXACT LOCATION AND TYPE OF UNDERGROUND FACILITIES ON THE SITE. HAND EXCAVATE AT CRITICAL POINTS AS NECESSARY TO VERIFY LOCATIONS, SIZES, ELEVATIONS, FLOW LINES, ETC. IF A PROBLEM OR INTERFERENCE EXISTS, NOTIFY ARCHITECT/ENGINEER BEFORE PROCEEDING.

MECHANICAL ABBREVIATIONS

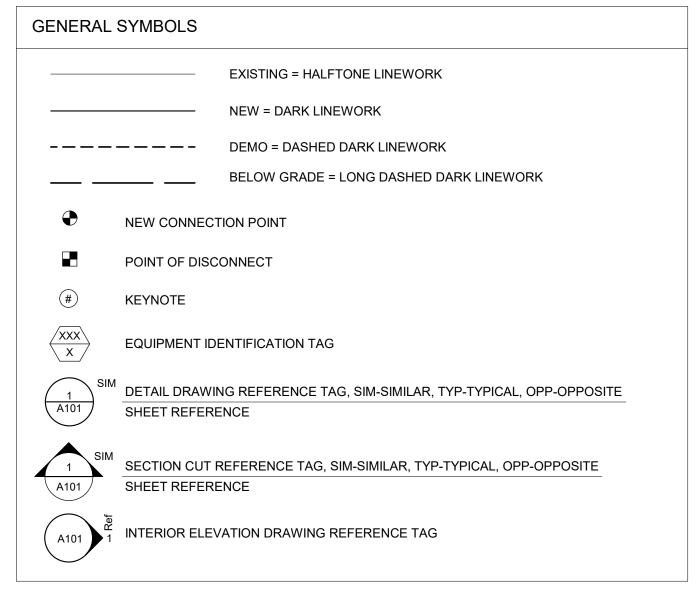
| ABSOR | ABSORPTION | FT | FINTUBE |
|------------|--|------------|--------------------------|
| ACU | ABSORPTION AIR CONDITIONING UNIT ACCESS DOOR OR AREA DRAIN | FTG | FOOTING |
| AD | ACCESS DOOR OR AREA DRAIN | GA | GAGE |
| AFF | ABOVE FINISHED FLOOR | GAL | GALLON |
| AFG | ABOVE FINISHED GRADE | GALV | GALVANIZED |
| AHU | AIR HANDLING UNIT | GC | GENERAL CONTRACTOR |
| AV | AIR VENT | GW | GREASE WASTE |
| вот | BOTTOM | GPH | GALLONS PER HOUR |
| BTU | BRITISH THERMAL UNIT | GPM | GALLONS PER MINUTE |
| BTUH | BTU PER HOUR | HR | HOUR |
| BV | BALL VALVE | HTG | HEATING |
| CA | COMPRESSED AIR | HB | HOSE BIBB |
| CB | CATCH BASIN | | INTERNAL STATIC PRESSURE |
| CENT | CENTRIFUGAL | ISP JR | JANITOR RECEPTOR |
| CFM | CUBIC FEET PER MINUTE | LAV | LAVATORY |
| CI | CAST IRON | LDBT | |
| CL | CENTER LINE | LDD1 | TEMPERATURE |
| COND | CONDENSATE | LWT | LEAVING WATER |
| COND | CLEAN OUT | LVVI | TEMPERATURE |
| CONC | CONCRETE | LWBT | LEAVING WET BULB |
| CONTR | | LVVDI | TEMPERATURE |
| | CONDENSATE PUMP/CIRC. PUMP | MD | |
| CP | COPPER | MB MBH | MOP BASIN 1000 BTUH |
| CU | | | |
| CUH | CABINET UNIT HEATER | MC MECH | MECHANICAL CONTRACTOR |
| CWP | CIRCULATING WATER PUMP | | MECHANICAL |
| DDC | DIRECT DIGITAL CONTROLS | MH | MANHOLE |
| DN | DOWN | NTS | NOT TO SCALE |
| DR | DRAIN | OA | OUTSIDE AIR |
| DS | DOWNSPOUT | OD | OVERFLOW ROOF DRAIN |
| EA | EXHAUST AIR TEMPERATURE | PC | PLUMBING CONTRACTOR |
| EAT | EXHAUST AIR TEMPERATURE | PSI | POUNDS PER SQUARE INCH |
| EC | ELECTRICAL CONTRACTOR | PRV | POWER ROOF VENTILATOR |
| EDBT | ENTERING DRY BULB | PRV | PRESSURE REDUCING VALVE |
| \ <u>^</u> | TEMPERATURE | PV | PRESSURE VENT |
| EEW | EMERGENCY EYE WASH | PVC | POLYVINYL CHLORIDE |
| EF | EXHAUST FAN | RA | RETURN AIR |
| EJ | EXPANSION JOINT | RD | |
| EQUIP | | RH | RELATIVE HUMIDITY |
| ESE | EMERGENCY SHOWER/EYEWASH | RTU | ROOF TOP UNIT |
| EST | EXTERNAL STATIC PRESSURE | RV | RELIEF VALVE |
| EWBT | ENTERING WET BULB | RVT | ROOF VENT TERMINATION |
| | TEMPERATURE | SK | SINK |
| EWC | ELECTRIC WATER COOLER | SA | SUPPLY AIR |
| EWT | ENTERING WATER | SH | SHOWER |
| | TEMPERATURE | SO | STORM OVERFLOW |
| EX | EXISTING | ST | STORM |
| EXH | EXHAUST | TCC | TEMPERATURE CONTROL |
| EXP | EXPANSION | | CONTRACTOR |
| FAI | FRESH AIR INTAKE | TYP | TYPICAL |
| FCU | FAN COIL UNIT | UH | UNIT HEATER |
| FD | FLOOR DRAIN | UR | URINAL |
| FDC | FIRE DEPARTMENT CONNECTION | UV | UNIT VENTILATOR |
| FLEX | FLEXIBLE | VA | VENTILATION AIR |
| FLR | FLOOR | VTR | VENT THROUGH ROOF |
| FPM | FEET PER MINUTE | WB | WALL BOX – CONDENSATE |
| FPS | FEET PER SECOND | WC | WATER CLOSET |
| FS | FLOOR SINK | WHA | WATER HAMMER ARRESTOR |
| ESEC | EOOD SEDVICE EOUIDMENT CONSULTANT | \//LI | MATED HEATED |

MECHANICAL - GENERAL NOTES

1. COORDINATE MECHANICAL AND ELECTRICAL WORK WITH ALL OTHER TRADES. BEGIN INSTALLATION AND ROUGH-IN AFTER COORDINATION WITH ALL TRADES ASSOCIATED WITH THE INSTALLATION IS COMPLETE. COORDINATE BUILDING STRUCTURE, ARCHITECTURAL ASSEMBLIES, SHEET METAL, ALL PIPING SYSTEMS, LIGHT FIXTURES, CONDUITS, CABLE TRAYS, ETC. REFER TO ALL GENERAL, MECHANICAL, AND ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT. CONTRACTOR IS RESPONSIBLE FOR REWORK ASSOCIATED WITH FAILURE TO COORDINATE.

FSEC FOOD SERVICE EQUIPMENT CONSULTANT WH WATER HEATER

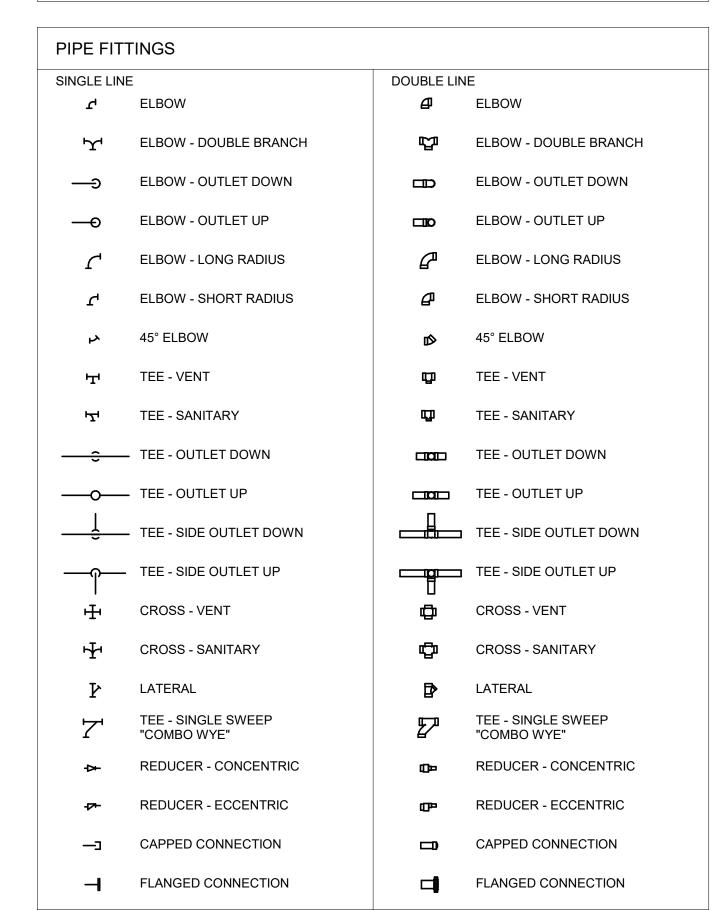
- 2. INCORPORATE MECHANICAL SPECIFICATIONS, DRAWINGS, STATE AND LOCAL CODES, AND OWNER STANDARDS INTO WORK.
- 3. WARNING CALL 48 HOURS BEFORE YOU DIG: LAW REQUIRES ANYONE DOING ANY EXCAVATION, FENCING, PLANTING OR DRILLING TO CALL 48 HOURS IN ADVANCE. HAND DIG WITHIN 18 INCHES OF ANY LOCATE MARK OR FLAG. ONE CALL 811.
- 4. REFER TO ARCHITECTURAL SPECIFICATIONS FOR THROUGH-PENETRATION FIRESTOPPING AND TO ARCHITECTURAL CODE PLAN FOR FIRE RATED WALLS, FLOORS, AND CEILINGS. EACH TRADE IS RESPONSIBLE TO FIRESTOP PENETRATIONS THROUGH RATED ASSEMBLIES.
- 5. EACH TRADE IS RESPONSIBLE FOR MAKING PENETRATIONS WHERE REQUIRED IN EXISTING WALLS, FLOORS, CEILINGS, AND ROOFS. MAKE PENETRATIONS NEAT. PATCH, CONCEAL, OR CAULK OVERCUT.
- CAULK ALL CONCEALED AND EXPOSED PIPING AND DUCT WALL PENETRATIONS TO PREVENT NOISE TRANSFER BETWEEN SPACES.
- ON COMPLETION OF THE INSTALLATION, COOPERATE WITH THE OWNER TO PROVIDE TESTING, ADJUSTING, AND BALANCING TO OBTAIN PROPER OPERATION OF ALL EQUIPMENT AND SYSTEMS. PROVIDE ALL FACILITIES AND EQUIPMENT AND COMPLETE ALL TESTS REQUIRED FOR ADJUSTMENTS AND BALANCING TO ESTABLISH THE PROPER PERFORMANCE OF EQUIPMENT.
- 8. PROVIDE WARRANTIES FOR ALL EQUIPMENT AND INSTALLATION PER THE CONTRACT DOCUMENTS. ALL DEFECTS THAT BECOME APPARENT WITHIN THE WARRANTY PERIOD SHALL BE REPAIRED BY THE MECHANICAL CONTRACTOR AS DIRECTED BY THE ENGINEER THROUGH THE OWNER'S REPRESENTATIVE. WARRANTY DOES NOT OBLIGATE THE MECHANICAL CONTRACTOR TO REPAIR DAMAGE RESULTING FROM THE OWNER'S ACCIDENT, IMPROPER OPERATION, OR FAILURE TO PROVIDE MAINTENANCE. WARRANTY COVERS DEFECTIVE MATERIAL AND INSTALLATION. REFER TO SPECIFICATIONS FOR ADDITIONAL DETAILS AND OTHER WARRANTY INFORMATION.

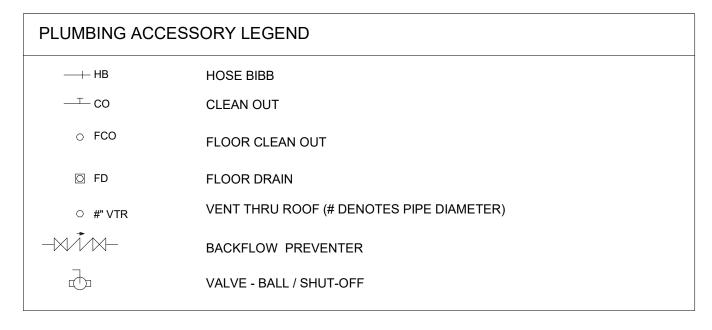


DOMESTIC COLD WATER

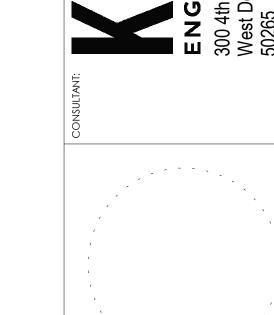
DOMESTIC HOT WATER

PIPING LEGEND - PLUMBING



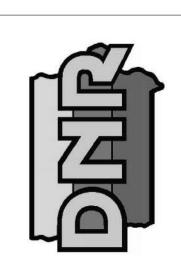


NOTE: ALL SYMBOLS MAY NOT APPLY TO THIS PROJECT



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SINEERING SERVICES - WALLAC BUILDING 9TH ST., DES MOINES, IA 50319-P: 515.725.8200



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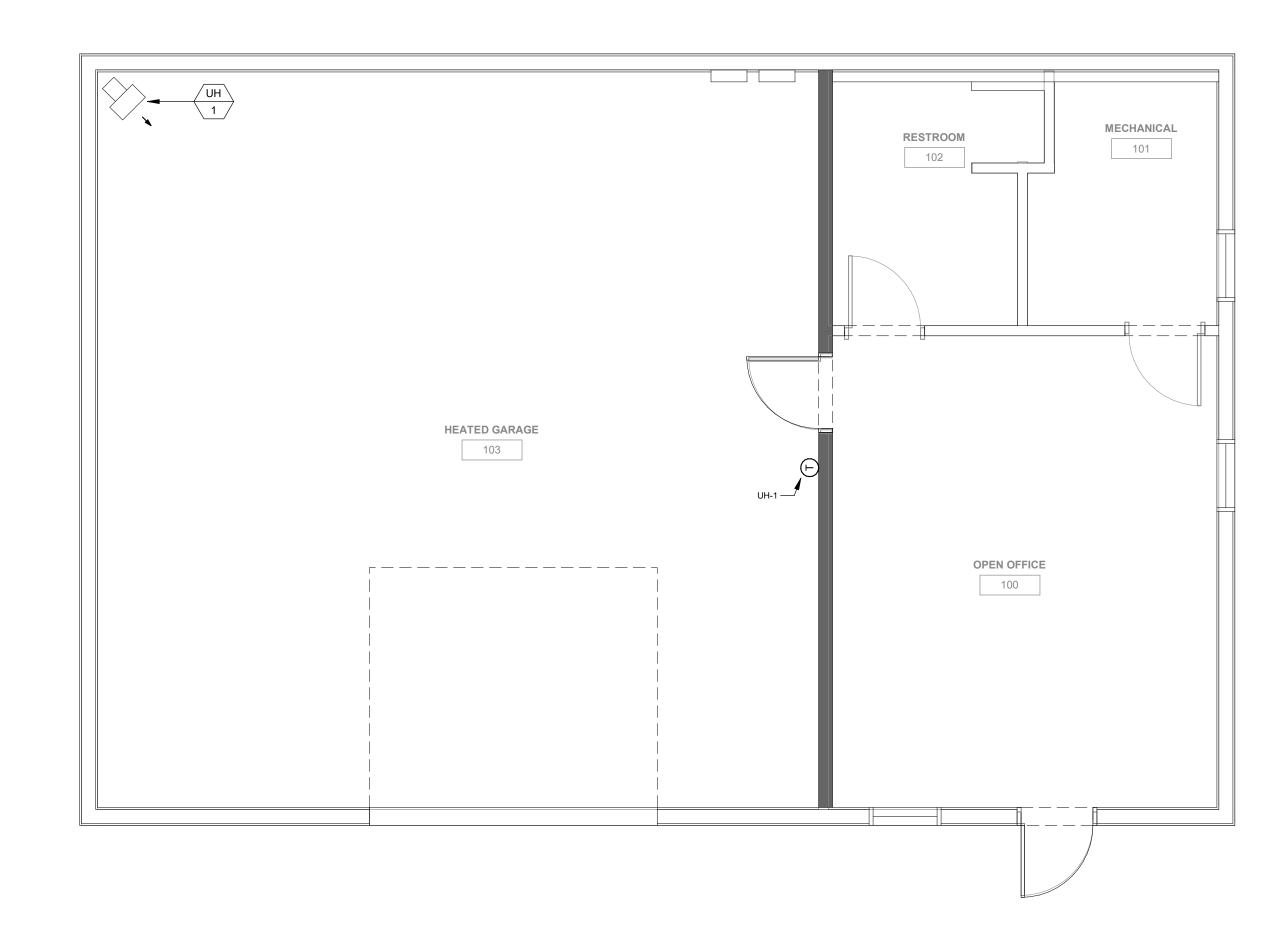
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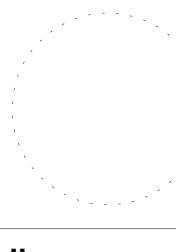
02.20.2024



| JNIT HEATER SCHED | ULE |
|----------------------------------|----------------|
| REFERENCE | UH-1 |
| MANUFACTURER | INDEECO |
| SERIES | UCI |
| ERVES | GARAGE |
| /EIGHT (LBS) | 45 |
| DIMENSIONS - L x W x H (INCHES) | 17 X 16.5 X 12 |
| YPE | ELECTRIC |
| APACITY (MBH) | 35 |
| IRFLOW (CFM) | 700 |
| LECTRIC COIL (KW) | 10 |
| ISCHARGE AIR TEMP. RISE (DEG. F) | 45 |
| ONTROL AMPS (24 VOLT) | 1.0 |
| ELECTRICAL | |
| OLTAGE - PHASE | 240/1 |
| MPS | 42.4 |
| CA | 50 |
| ОР | 15 |
| IOTES | 1 THROUGH 4 |

- 1. PROVIDE UNIT WITH SINGLE POINT POWER CONNECTION. DISCONNECT BY ELECTRICAL CONTRACTOR.
- 2. PROVIDE UNIT WITH LINE VOLTAGE THERMOSTAT. WIRING BY EC
- 3. UNIT TO INCLUDE ALL MOUNTING BRACKETS. HARDWARE, ETC. FOR COMPLETE INSTALL.
- 4. MOUNT UNIT HEATER WHERE BOTTOM IS AT MINIMUM OF 12'-0" AFF, OR AS RECOMMENDED BY UNIT MFR.





ATHBUN WILDLIFE

MECHANICAL HVAC

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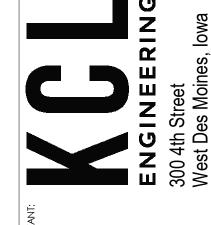
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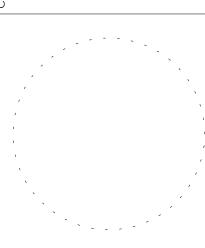
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M-101

GENERAL NOTES:

- A. REFER TO M-000 FOR GENERAL NOTES & SYMBOLS.
- REFER TO PLUMBING FIXTURE ROUGH-IN SCHEDULE FOR BRANCH PIPE SIZING TO INDIVIDUAL PLUMBING FIXTURES.







THBUN WILDLIFE

PLUMBING PLAN

DRAWN BY: PROJECT NUMBER:

NO. DATE REVISION

24-05-04-01 CHK'D BY: DATE: 02.20.2024

P-101

PLUMBING FIXTURE SCHEDULE REFERENCE MFR MODEL **DESCRIPTION** ZURN Z1474 GRADE CLEANOUT, ROUND, DURA-COATED CAST IRON, SIZE AS INDICATED, DOUBLE FLANGED HOUSING, HEAVY DUTY SECURED SCORIATED DURA-COATED CAST IRON COVER, LIFTING DEVICE, BRONZE CLEANOUT PLUG WITH GAS/WATER-TIGHT SEAL.

NOTES:

1. REFER TO PLUMBING FIXTURE ROUGH-IN SCHEDULE FOR MINIMUM CONNECTION SIZES.

| PLUMBING PIPING | G AND INS | ULATION S | SCHEDULE | | | |
|--------------------------|---------------------------|------------------|------------------------|------------------------|------------------------|-------|
| SYSTEM | SIZE RANGE (INCHES) | LOCATION | PIPE MATERIAL (NOTE 1) | JOINT TYPE (NOTE 1) | VALVE TYPES (NOTE 3) | NOTES |
| DOMESTIC COLD | 3/4 - 2 | BELOW GROUND | TYPE K COPPER | SOLDER / BRAZE | BRONZE BALL W/ SS TRIM | |
| SANITARY DRAIN (GRAVITY) | 1 1/2 - 8 | BELOW GROUND | SCH 40 PVC DWV / CI | SOLVENT / HUB & SPIGOT | N/A | |
| SANITARY VENT PIPING | 1 1/4 - 4 | BELOW GROUND | SCH 40 PVC DWV / CI | SOLVENT / HUB & SPIGOT | N/A | |
| SANITARY VENT PIPING | 1 1/4 - 6 | ABOVE GROUND | SCH 40 PVC DWV / CI | SOLVENT / NO HUB | N/A | 1,2 |

1. INSULATION APPLIED TO PIPING THAT IS LOCATED IN RETURN AIR PLENUMS SHALL MEET ASTM E 84 25/50 FLAME AND SMOKE SPREAD RATING AND COMPLY WITH NFPA STANDARD 90A.

2. VENT PIPING SHALL BE INSULATED A MINIMUM OF 5'-0" FROM EXTERIOR WALL OR ROOF PENETRATION.

| FIXTURE | VENT | WASTE | NOTES |
|--------------------------|--------|--------|-------|
| FLOOR DRAIN | 1 1/2" | 2" | 1 |
| LAVATORY | 1 1/4" | 1 1/4" | 1,2 |
| MOP BASIN | 1 1/2" | 3" | 1 |
| SHOWER | 1 1/2" | 2" | 1 |
| WATER CLOSET (TANK TYPE) | 2" | 4" | 1 |

2. ALL VERTICAL WASTE RISERS TO FIXTURES AND ALL BELOW FLOOR WASTE SIZES SHALL BE A MINIMUM OF 2".

