

# Augusta, Arkansas



# GENERAL PRE-ENGINEERED TRUSS NOTES:

1. TRUSS MANUFACTURER SHALL PROVIDE PRE-ENGINEERED WOOD TRUSSES AT 2' - 0" O.C. MAX. AS SHOWN IN THESE ARCHITECTURAL AND STRUCTURAL DRAWINGS. COORDINATE WITH OTHER TRADES AS REQUIRED.

2. FIELD VERIFY AND MATCH EXISTING TRUSS EDGE/OVERHANG PROFILE.

3. COORDINATE WITH ATTIC PLAN 3/A1.2 TO PROVIDE OPENINGS IN TRUSSES AT MECHANICAL PLATFORMS.

4. COORDINATE WITH REFECTED CEILING PLAN AND STRUCTURAL DRAWINGS TO ALLOW FOR COLLATERAL LOAD FROM THERAPY SWINGS. GC SHALL PROVIDE MOUNTING KITS FROM TRUSSES TO FACE OF LAY-IN CEILING. EACH OF FOUR (4) LOCATIONS SHALL SUPPORT 500 LBS.

5. COORDINATE WITH STRUCTURAL DRAWINGS FOR CONNECTIONS AT BEARING LOCATIONS.

	RESPONSIBILITY MATRIX											
#	ITEM	OF / OI	OF / CI	CF / CI	REMARKS / OTHER COORDINATION							
1	FIRE EXTINGUISHERS			Х	ALLOW FOR (2) IN CABINETS							
2	INTERIOR LIGHT FIXTURES AND LAMPS			х	SEE MEP SHEETS							
3	INTERIOR SIGNAGE			Х	RESTROOM SIGNAGE ONLY							
4	RESTROOM ACCESSORIES			Х	SEE ACCESSORY SCHEDULE							
5	EXTERIOR SIGNAGE	Х			NONE EXPECTED IN PROJECT							
6	FURNITURE, FIXTURES AND EQUIPMENT	Х										
7	WALL AND FLOOR FINISHES			Х	SEE FINISH SCHEDULE							
8	MILLWORK			Х	SEE MILLWORK SHEET							
9	FIRE ALARM SYSTEM			Х	SEE MEP SHEETS							
10	SPRINKLER SYSTEM			Х	SEE NOTES THIS SHEET							
11	HVAC SYSTEM			Х	SEE MEP SHEETS							
12	PLUMBING SYSTEM			Х	SEE MEP SHEETS							
13	ELECTRICAL SYSTEM			Х	SEE MEP SHEETS							
14	EMERGENCY LIGHTING / SIGNAGE			х	SEE MEP SHEETS							
15	PHONE/DATA SYSTEM	Х			NONE EXPECTED IN PROJECT							
16	AUDIO / VIDEO SYSTEMS	Х			NONE EXPECTED IN PROJECT							
17	ACCESS CONTROL AND SECURITY SYSTEMS	X		X	CONTRACTOR TO FURNISH AND INSTALL CONDUIT ONLY; SEE FLOOR PLAN FOR DOORS MARKED WITH "A.C."							

OF / OI - OWNER FURNISHED-OWNER INSTALLED OF / CI - OWNER FURNISHED-CONTRACTOR INSTALLED

CF / CI - CONTRACTOR FURNISHED-CONTRACTOR INSTALLED

# FIRE SPRINKLER NOTES:

1. PROVIDE DESIGN/BUILD WET PIPE FIRE SPRINKLER SYSTEM BY EXPANSION OF EXISTING SYSTE THROUGHOUT ADDITION, INCUL ATTIC AS REQUIRED, IN ACCORDANCE WITH NFPA 13.

2. COORDINATE WITH INSTALLAT OF FIRE ALARM SYSTEM.

3. SEE NOTE ON ROOF DEMO PI REGARDING RELOCATION OF AN EXISTING PIPE.

4. WHERE A PRODUCT IS NOT SPECIFIED, THE BUILDING STANDARD SHALL BE USED.

# **ARCARE CENTER FOR EDUCATION** AND WELLNESS

# PROJECT DIRECTORY

EM		
	OWNER:	ARCARE - STEVEN COLLIER, MD, CEO 117 SOUTH 2ND STREET P.O. BOX 497 AUGUSTA, AR 72006 870.347.2534
PLAN N	ARCHITECT:	JOSHUA STEWART, AIA P.O. BOX 363 SEARCY, AR 72145 501.454.0446
	STRUCTURAL:	PHILLIP LEWIS ENGINEERING, INC. 26320 I-30 FRONTAGE ROAD BRYANT, AR 72022 501.350.9840
	MECHANICAL, ELECTRICAL & PLUMBING	HSA ENGEINEERING CONSULTING SERVICES, INC. 5701 EUPER LANE, STE A FORT SMITH, AR 72903 501.327.5757

# **GENERAL PROJECT NOTES:**

- 1. CONTRACTORS SHALL FAMILIARIZE THEMSELVES WITH THE DRAWINGS IN THE INDEX. THE PROPOSED SITE, AND OTHER INFORMATION PRESENTED FOR THE CONSTRUCTION OF THIS PROJECT. IF DISCREPANCIES ARE FOUND OR IF CONTRACTORS HAVE QUESTIONS REGARDING LAYOUTS, MATERIALS OR DETAILS WITHIN THE PROJECT THEY SHALL BE MADE KNOWN TO THE OWNER IN WRITING PRIOR TO BIDDING THE PROJECT. CLAIMS MADE SUBSEQUENT TO THE BID WILL NOT BE ACCEPTED IF IT IS DETERMINED THAT PROPER FAMILIARIZATION COULD HAVE AVOIDED SUCH CLAIM.
- 2. THE BUILDING PERSPECTIVE VIEW ON THIS SHEET IS FOR DIAGRAMMATIC PURPOSES ONLY AND NOT FOR CONSTRUCTION.
- 3. ONLY DOCUMENTS OBTAINED THROUGH STEWARCH ARCHITECTURE ARE CONSIDERED THE OFFICIAL VERSION AND TAKE PRECEDENCE IF ANY DISCREPANCIES OCCUR. IT IS THE SOLE RESPONSIBILITY OF EACH SUBCONTRACTOR AND EACH INVITED BIDDER TO VERIFY THAT THEIR BID IS BASED ON A COMPLETE SET OF CONSTRUCTION DOCUMENTS INCLUDING ALL ADDENDA.

# CODE DATA

- OCCUPANCY LOAD:
- TYPE OF CONSTRUCTION: ALLOWABLE HEIGHT:
- ALLOWABLE BUILDING AREA:
- FLOOR AREA (GROSS):
- EXIT REQUIREMENTS AND OCCUPANCY LOAD:
- AUTOMATIC FIRE SPRINKLER AND FIRE ALARM SYSTEMS: SEISMIC REQUIREMENTS:

OCCUPANCY CLASSIFICATION: GROUP I-4, CHILD DAY CARE FACILITY

- DAY CARE 35 NET
- TYPE VB, SPRINKLERED
- ADDITION IS LOWER THAN EXISTING BUILDING
- 27,000 SF ALLOWABLE WITH SPRINKLER

EXISTING = 19,725 SF (FROM CONSTRUCTION PLANS) ADDITION = 4,483 SF TOTAL = 24,208 SF

4,483 SF/35 = 129 OCCUPANTS (CONSERVATIVE CALCULATION) 129 X .15 = 19.35"; 32" REQ'D; 66" ACTUAL FROM ADDITION

SHALL BE INSTALLED SEE STRUCTURAL DRAWINGS

# MECHANICAL / ELECTRICAL / PLUMBING COORDINATION NOTES:

1. THESE NOTES ARE PROVIDED FOR BIDDING PURPOSES ONLY. ALL WORK SHALL CONFORM TO MEP DRAWINGS UNLESS NOTED OTHERWISE.

2. RECEPTACLES FOR OWNER PROVIDED WALL MOUNTED TVS SHALL BE LOCATED WHERE INDICATED ON FLOOR PLAN WITH "TV". COORDINATE WITH ELEC. PLANS THAT SHOW A DIFFERENT LOCATION.

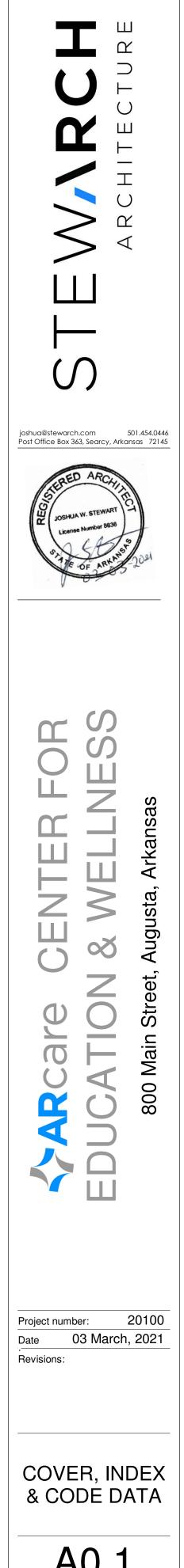
3. REFER TO ARCHITECTURAL SITE PLAN FOR ADDITIONAL COORDINATION INFORMATION. THERE IS A GC OPTION FOR GAS SUPPLY AND SANITARY SEWER SHOWN ON THIS SITE PLAN AND IN MEP DRAWINGS.

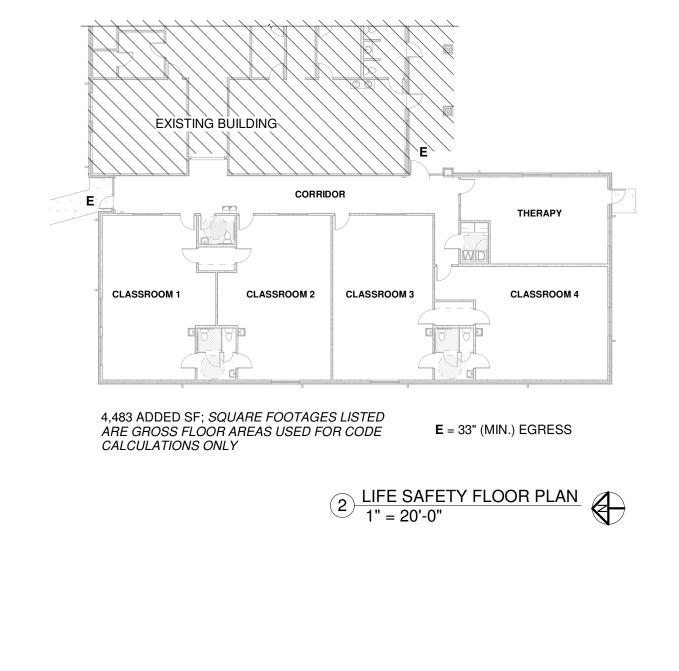
4. SEE 4/A1.2 THE TOILET MARKED AS "ADA" AND IT'S ACCESSORIES SHALL MATCH THE ADULT TOILET IN THE STAFF RR. COORDINATE WITH PLUMBING PLANS THAT CALL FOR A NON-ACCESSIBLE TOILET. VERIFY WITH OWNER.

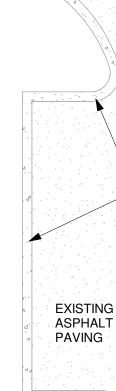
# INDEX OF DRAWINGS

A0.1	COVER, INDEX & CODE DATA
A0.2	ARCH. SITE PLAN & LIFE SAFETY PLAN
A0.3	DEMOLITION PLAN
A1.1	FLOOR PLAN & SCHEDULES
A1.2	MISC. PLANS, DETAILS & MILLWORK
A1.3	ROOF PLANS & REFLECTED CEILING PLAN
A2.1	ELEVATIONS AND BUILDING SECTIONS
A3.1	WALL SECTIONS
S1.1	FOUNDATION PLAN
S1.2	ROOF FRAMING PLAN
P1.1	NOTES, LEGEND & SCHEDULES
P2.1	PLUMBING PLANS & KEYED NOTES
P3.1	PLUMBING DETAILS
P4.1	PLUMBING RISERS
M1.1	HVAC LEGEND AND NOTES
M2.1	HVAC PLANS
M3.1	HVAC DETAILS
M6.1	MECHANICAL AND PLUMBING SPECIFICATIONS
E1.1	ELECTRICAL LEGEND, NOTES, & DETAILS
E1.2	ELECTRICAL SPECIFICATIONS
E2.1	LIGHTING PLAN
E2.2	POWER PLAN
E2.3	MECHANICAL POWER PLAN
E2.4	SPECIAL SYSTEMS PLAN
E2.5	ELECTRICAL ATTIC PLAN
E3.1	ELECTRICAL SCHEDULES AND RISER DIAGRAM

I, JOSHUA STEWART - ARCHITECT, DO HEREBY CERTIFY THAT THESE PLANS AND SPECIFICATIONS HAVE BEEN PREPARED BY ME, OR UNDER MY SUPERVISION. I FURTHER CERTIFY THAT TO THE BEST OF MY KNOWLEDGE THESE PLANS AND SPECIFICATIONS ARE AS REQUIRED BY LAW AND IN COMPLIANCE WITH THE ARKANSAS FIRE PREVENTION CODE FOR THE STATE OF ARKANSAS.



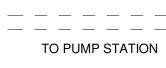


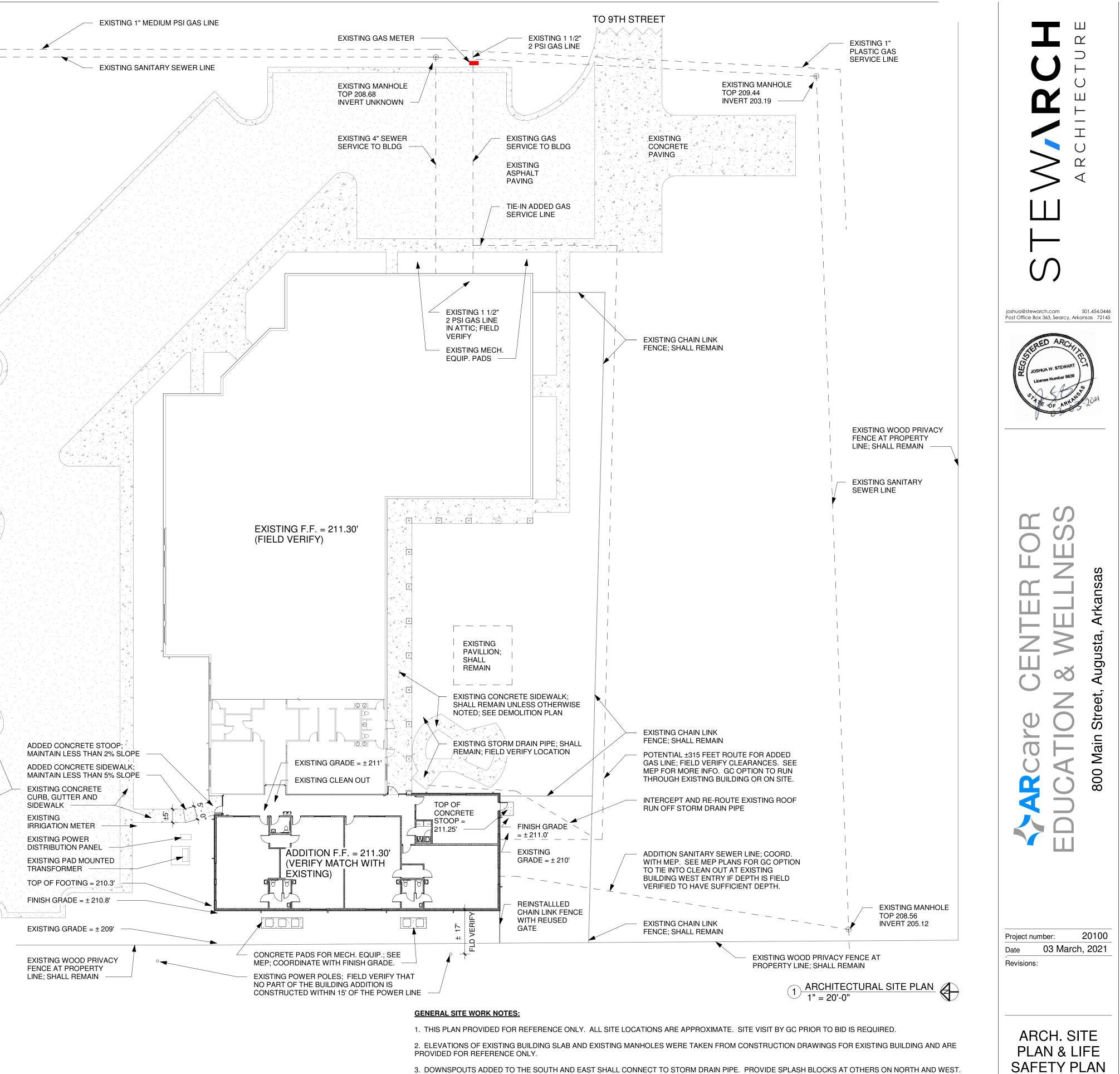






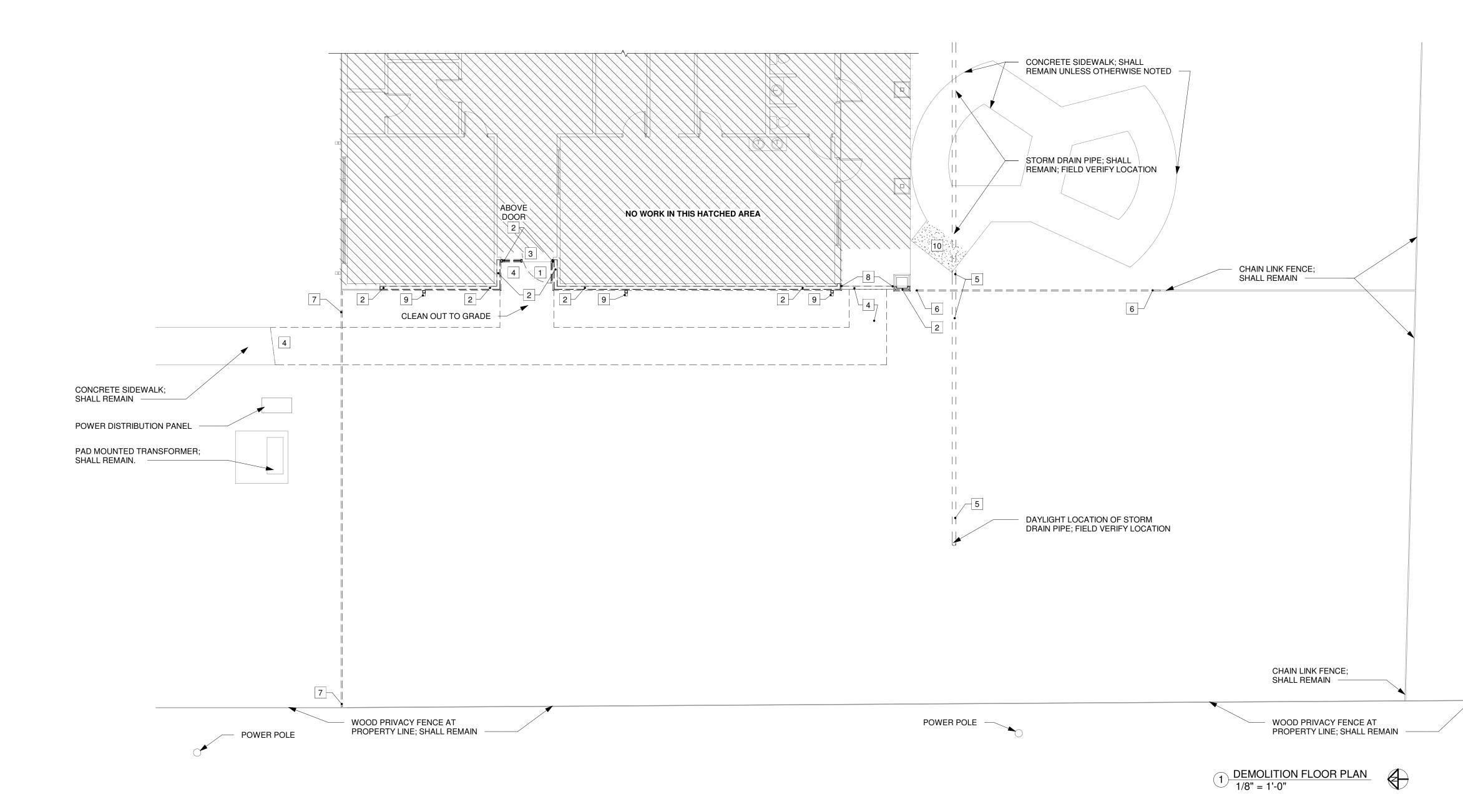






3. DOWNSPOUTS ADDED TO THE SOUTH AND EAST SHALL CONNECT TO STORM DRAIN PIPE. PROVIDE SPLASH BLOCKS AT OTHERS ON NORTH AND WEST. 4. REGRADE AND REPLACE SOD AS REQUIRED WITHIN 12 FEET OF ADDITION. SEE PLAN FOR APPROXIMATE EXISTING GRADE; FIELD VERIFY. COORDINATE WITH STRUCT. FOUNDATION DETAILS.

A0.2



3/11/2021 6:50:04 AM---

# **DEMOLITION KEYED NOTES:**

- 1 REMOVE STOREFRONT ENTRANCE SYSTEM AND PREPARE FOR REINSTALLATION. SEE DOOR SCHEDULE.
- 2 REMOVE PORTION OF BRICK AND STONE VENEER FROM EXTERIOR WALL/COLUMN AND PREPARE FOR INTERIOR FINISH; COORDINATE EXTENTS WITH FLOOR PLANS. INCLUDES HEADER OVER DOOR AS INDICATED. SEE FINISH SCHEDULE. NOTIFY OWNER IMMEDIATELY IF CONFLICTS ARE FOUND WITHIN THE EXISTING WALLS.
- 3 REMOVE EXISTING ACCESS CONTROL TO THIS DOOR AND RETURN TO OWNER FOR RE-INSTALLATION
- 4 REMOVE PORTION OF SIDEWALK INDICATED BY DASHED LINES AND HATCH PATTERN. PREPARE TO CONNECT TO ADDED SIDEWALK AS SHOWN ON FLOOR PLAN. COORDINATE THE EXTENT TO REMOVE WITH THE REQUIRED SLOPE OF ADDED SIDEWALK.
- 5 REMOVE PORTION OF STORM DRAIN PIPE UNDER AREA OF ADDITION; FIELD VERIFY LOCATION; PREPARE TO RELOCATE; SEE ARCH. SITE PLAN.
- 6 REMOVE PORTION OF CHAINLINK FENCE AND PREPARE TO TERMINATE AT SOUTHEAST CORNER OF ADDITION. PREPARE TO REINSTALL REMOVED PORTION AT SOUTHWEST CORNER OF ADDITION; SEE ARCH. SITE PLAN.
- 7 REMOVE PORTION OF CHAINLINK FENCE AND REUSE AS NEEDED. AT MINIMUM REUSE GATE WHERE CALLED FOR ON ARCH. SITE PLAN.
- 8 REMOVE METAL GATE AND RETURN TO OWNER.
- 9 REMOVE THREE (3) PREFINISHED METAL DOWNSPOUTS AND PREPARE TO REINSTALL ON WEST SIDE OF ADDITION.
- 10 CONCRETE SIDEWALK; REMOVE AND REPLACE AS NECCESSARY FOR STORM DRAIN RE-ROUTING

# GENERAL DEMOLITION PLAN NOTES:

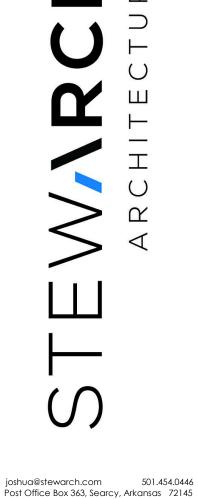
(MATCHING NOTES ON EACH DEMOLITION PLAN)

1. FIELD VERIFY ALL EXISTING CONDITIONS AND NOTIFY OWNER IF DISCREPANCIES ARE FOUND.

2. UNLESS EXPLICITLY CALLED FOR IN THAT AREA, NO WORK SHALL BE PERFORMED IN AREAS LABELED "NO WORK IN THIS HATCHED AREAS".

3. REFER TO AND COORDINATE WITH MEP PLANS FOR ADDITIONAL DEMOLITION REQUIREMENTS. PATCH/REPAIR AFFECTED/DISTURBED SURFACES THAT REMAIN.

4. COORDINATE WITH DEMOLITION ROOF PLAN 1/A1.3



N





Project number: 20100 Date 03 March, 2021 Revisions:

DEMOLITION PLAN

A0.3

#	NAME	FLOOR FINISH	BASE	WALL MATERIAL	WALL FINISH	COMMENTS
			1			1
101	CORRIDOR	LVP	VINYL	GYP BD	PAINT	NEW GYP BD AT WEST SIDI
102	CLASSROOM 1	LVP	VINYL	GYP BD	PAINT	
103	STAFF RR	LVP	VINYL	GYP BD	PAINT	
104	STORAGE	LVP	VINYL	GYP BD	PAINT	
105	RR	LVP	VINYL	GYP BD	PAINT	
106	CLASSROOM 2	LVP	VINYL	GYP BD	PAINT	
107	CLASSROOM 3	LVP	VINYL	GYP BD	PAINT	
108	STORAGE	LVP	VINYL	GYP BD	PAINT	
109	RR	LVP	VINYL	GYP BD	PAINT	
110	CLASSROOM 4	LVP	VINYL	GYP BD	PAINT	
111	THERAPY	LVP	VINYL	GYP BD	PAINT	
112	LAUNDRY	LVP	VINYL	GYP BD	PAINT	

## FINISH SCHEDULE ABBREVIATIONS:

GYP BD	- 5/8" TYPE 'X' GYPSUM WALLBOARD	

- LUXURY VINYL PLANK; CR705 VIVID LVP STEP WOOD BY MOHAWK; 2MM THK WITH 12 MIL WEAR LAYER; 6"X48"

# FINISH NOTES:

1. VERIFY ALL FINISHES WITH OWNER PRIOR TO ORDERING.

2. ALL WALLS WITH PLUMBING FIXTURES SHALL RECEIVE MOISTURE RESISTANT GYPSUM BOARD.

3. PAINT DOOR FRAMES AND MISC. METAL WITH PRIMER + 2 COATS (OIL BASED) WITH SEMI GLOSS SHEEN

# HARDWARE SCHEDULE:

THE FOLLOWING IS A GENERAL LISTING OF THE MINIMUM HARDWARE REQUIREMENTS. ANY ITEM OF HARDWARE NORMALLY REQUIRED BY GOOD PRACTICE, OR AS TO MEET STATE OR LOCAL CODES, SHALL BE INSTALLED EVEN IF IT IS NOT BE SPECIFICALLY LISTED.

SET 0 (REUSED STOREFRONT DOOR) REUSE EXISTING HARDWARE

# SET 1 (ADDED STOREFRONT DOOR)

CYLINDER TO OPERATE HARDWARE; BALANCE OF HARDWARE BY DOOR SUPPLIER. INCLUDE PANIC DEVICE.

SET 2 (EXTERIOR DOOR FROM THERAPY)

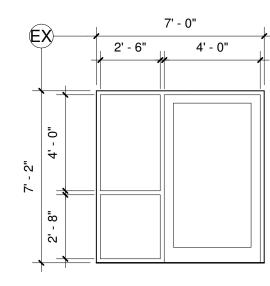
AT MIN. INCLUDING: LOCKSET, SURFACE CLOSER, KICK PLATE, THRESHOLD, WEATHER STRIPPING, SEALS & SWEEP, AND ANY ADDITIONAL ITEM(S) AS REQUIRED BY GOOD PRACTICE.

3 1 1 3	3 (STORAGE) HINGES ENTRANCE LOCKSET WALL STOP SILENCERS	3 1 1 1 1	(RR) HINGES PUSH / PULL SET SURFACE CLOSER KICK PLATE WALL STOP
	4 (LAUNDRY) HINGES	3	SILENCERS
3 1 1 1 3	STOREROOM LOCKSET SURFACE CLOSER KICK PLATE WALL STOP SILENCERS	<b>SET 7</b> 4 1 1 1	( CLASSROOMS & THERAPY HINGES ENTRANCE LOCKSET DUTCH DOOR BOLT WALL STOP DUTCH DOOR HOLDER
<b>SET</b> 3 1 1 1 3	5 (STAFF RR) HINGES PRIVACY LOCKSET SURFACE CLOSER KICK PLATE WALL STOP SILENCERS	4	SILENCERS

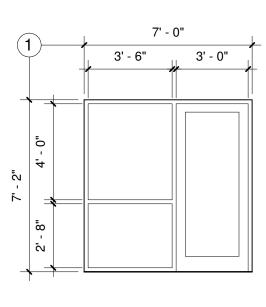
HARDWARE SCHEDULE NOTES:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR FINAL KEYING. HARDWARE SUPPLIER SHALL COORDINATE KEYING REQUIREMENTS WITH OWNER AND SUBMIT DETAILED KEYING SCHEDULE ACCORDINGLY.

- 2. CONTRACTOR SHALL BE RESPONSIBLE FOR RECEIVING & VERIFYING ALL HARDWARE IS PROVIDED TO COMPLETE EACH OPENING.
- 3. EXISTING LOCKSETS ARE PDQ AND EXISTING HINGES ARE HAGER.
- 4. WHERE A PRODUCT IS NOT SPECIFIED, THE BUILDING STANDARD SHALL BE USED.
- 5. COORDINATE AND VERFIY ALL HARDWARE WITH OWNER.







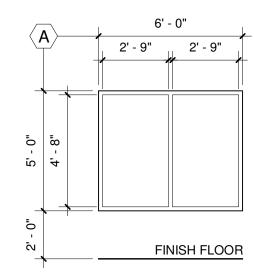
ALUMINUM STOREFRONT ENTRANCE SYSTEM

- 5/8" MOISTURE RESISTANT GYPSUM MRGB - PRIMER + 2 COATS WITH EGGSHELL PAINT SHEEN AT WALLS -4" VINYL WALL BASE VINYL

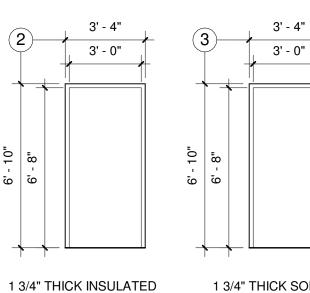
4. SUBCONTRACTORS TO VERIFY ALL LISTED SQAURE FOOTAGES.

5. PROVIDE FLOORING TRANSITION FROM EXISTING BUILDING TO CORRIDOR.

6. GYP BD SHALL BE FINISHED PER GA-214 "RECOMMENDED LEVELS OF GYPSUM BOARD FINISH". UNLESS OTHERWISE NOTED FINISH LEVEL SHALL BE LEVEL 3 AT CEILINGS AND LEVEL 4 WALLS.



ALUMINUM STOREFRONT SYSTEM

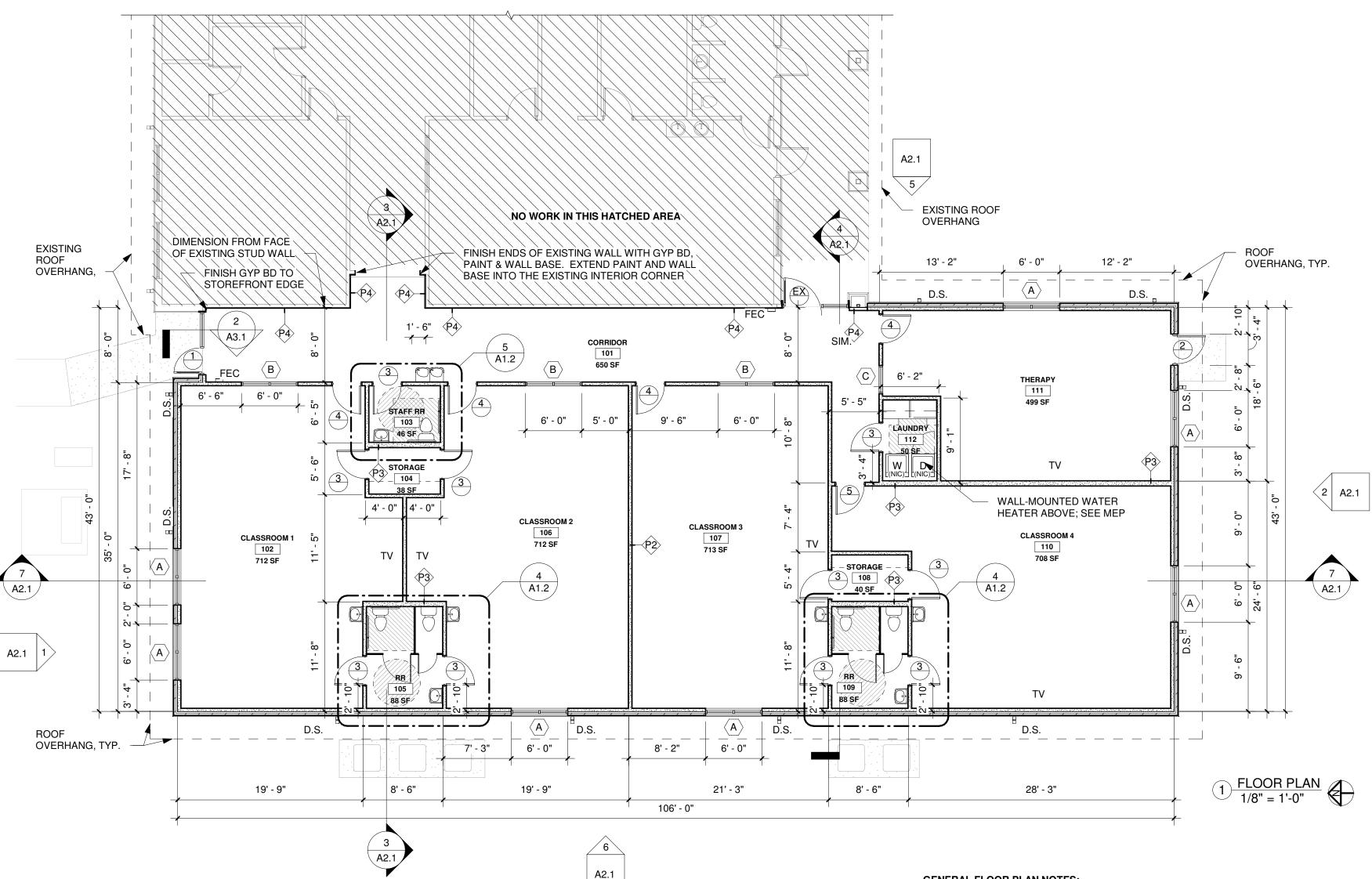


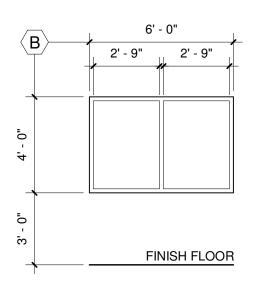
HOLLOW METAL DOOR

IN HOLLOW METAL

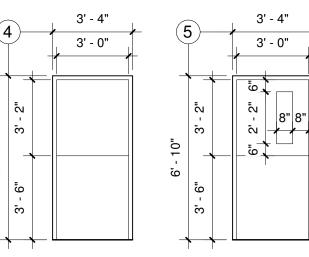
FRAME

1 3/4" THICK SOLID CORE WOOD DOOR IN HOLLOW METAL FRAME

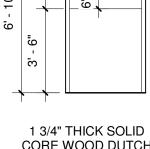




INTERIOR ALUMINUM STOREFRONT SYSTEM



1 3/4" THICK SOLID CORE WOOD DUTCH DOOR IN HOLLOW METAL FRAME



8"|8'

┇╺╅└─┘

CORE WOOD DUTCH DOOR IN HOLLOW METAL FRAME W/ VISION LITE

# NOTES:

**DOOR SCHEDULE NOTES:** 

STAFF RESTROOM DOOR.

ON ALL DOORS.

1. PROVIDE ADA COMPLIANT HARDWARE

2. SEE HARWARE SCHEDULE. VERIFY

SELECTIONS AND FINISH WITH OWNER

3. PROVIDE SURFACE MOUNTED DOOR

CLOSER AT ALL EXTERIOR DOORS AND

4. ALUMINUM STOREFRONT ENTRANCE

451T, 2" X 4 1/2", THERMALLY BROKEN

REINFORCEMENT BY MANUF. AS REQ'D.

5. FRAME COLOR SHALL BE DARK BRONZE.

ROUGH FRAMING WITH STEEL

VERIFY WITH OWNER PRIOR TO

FABRICATION.

SYSTEMS SHALL BE KAWNEER TRIFAB VG

SYSTEM OR EQUAL. ENSURE SYSTEMS ARE DESIGNED TO SPAN FULL DIMENSION OF

PRIOR TO ORDERING. ALLOW FOR US10B.

3' - 0"

2' - 8"

**FINISH FLOOR** 

INTERIOR ALUMINUM

STOREFRONT SYSTEM

 $\langle \mathbf{C} \rangle$ 

\_

1. ALUMINUM STOREFRONT SYSTEMS SHALL BE KAWNEER TRIFAB VG 451T, 2" X 4 1/2", THERMALLY BROKEN SYSTEM OR EQUAL. ENSURE SYSTEMS ARE DESIGNED TO SPAN FULL DIMENSIONS OF ROUGH FRAMING.

2. INTERIOR ALUMINUM STOREFRONT SYSTEMS SHALL BE KAWNEER TRIFAB 400, 1 3/4" X 4", OR EQUAL. ENSURE SYSTEMS ARE DESIGNED TO SPAN FULL DIMENSION OF ROUGH FRAMING. (DRAWINGS ARE DIAGRAMMATIC WITH 2" MULLIONS)

3. FRAME COLOR SHALL BE DARK BRONZE. VERIFY WITH OWNER PRIOR TO FABRICATION.

4. EXTERIOR GLASS SHALL BE 1" CLEAR INSULATED WITH LOW E.

- 5. PROVIDE SAFETY GLASS AS REQUIRED BY CODE.
- 6. GLASS SHALL BE CENTER-SET IN FRAME.

(2) WINDOW SCHEDULE 1/4" = 1'-0"

6. EXTERIOR GLASS SHALL BE 1" CLEAR

INSULATED WITH LOW E. 7. ALL WOOD DOORS SHALL BE WOOD VENEER, STAINED TO MATCH BUILDING

STANDARD.

8. PROVIDE SAFETY GLASS AS REQUIRED BY CODE.

9. COORDINATE WITH OWNER'S VENDOR FOR ACCESS CONTROL REQUIRMENTS.

10. HARDWARE SUPPLIER SHALL COORDINATE WITH OWNER FOR KEYING PRIOR TO ORDERING.

11. MAKE THE REINSTALLED EXISTING DOOR OPERATIONAL . THE ONLY CURRENT ISSUE THAT IS APPARENT IS A HANGING THRESHOLD.

 $3 \frac{\text{DOOR SCHEDULE}}{1/4" - 1" 0"}$ 1/4" = 1'-0"

# **GENERAL FLOOR PLAN NOTES:**

1. PROVIDE WOOD BLOCKING BEHIND ALL TOILET ACCESSORIES, TVS, WALL DOOR STOPS, CABINETS, SHELVES, AND OTHER LOCATIONS THAT REQUIRE SUPPORT FOR WALL HUNG OBJECTS. COORDINATE WITH OWNER FOR ADDITIONAL LOCATIONS.

2. PROVIDE FIRE EXTINGUISHERS WITHIN RECESSED CABINETS INDICATED BY "FEC" ON FLOOR PLAN AND WHERE DIRECTED BY LOCAL FIRE MARSHAL. INSTALL 48" ABOVE FINISH FLOOR TO CENTER LINE OF HANDLE. ALLOW FOR (2) TWO.

3. ALL DOOR HARDWARE SHALL BE ADA ACCESSIBLE. SEE DOOR SCHEDULE.

4. REFER TO ARCH. SITE PLAN FOR ALL SITE WORK INCLUDING SIDEWALKS.

5. REFER TO MILLWORK SHEET FOR ENLARGED PLANS AT MILLWORK.

6. REFER TO MEP SHEETS FOR ADDITIONAL REQUIRED CONCRETE PADS AT GROUND MOUNTED EQUIPMENT.

7. REFER TO 8/A1.2 FOR PARTITION TYPE SCHEDULE. **(P#**) ALL INTERIOR PARTITIONS TO BE TYPE "P1" UNLESS NOTED OTHERWISE.

8. ALL DIMENSIONS ARE TO FACE OF STUD OR MASONRY OPENING UNLESS NOTED OTHERWISE.

9. INTERIOR GYPSUM BOARD TO BE 5/8" TYPE 'X' UNLESS NOTED OTHERWISE.

10. INSTALL GYPSUM CONTROL JOINTS IN CEILINGS AND WALLS AS RECOMMENDED BY GYPSUM BOARD MANUFACTURER AND AT MINIMUM (1) ONE OVER EVERY DOOR AND (1) ONE EVERY 30' O.C. IN WALLS WITHOUT DOORS. LOCATE ABOVE DOOR HEADS WHEREVER POSSIBLE

11. ALL THROUGH WALL PENETRATIONS AT INTERIOR PARTITIONS SHALL BE SEALED AROUND WITH ACCOUSTICAL SEALANT.

12. SUBCONTRACTORS TO VERIFY ALL NOTED SQAURE FOOTAGES.

13. SEE ENLARGED FLOOR PLANS FOR ADDITIONAL DIMENSIONS AT RESTROOMS.

14. TYPICAL EXTERIOR WALLS TO BE 2X4 WOOD STUDS WITH CELLULOSE INSULATION UNLESS NOTED OTHERWISE.

15. WINDOWS, DOORS AND ALL OTHER PENETRATIONS THROUGH THE WEATHER RESISTANT BARRIER SHALL BE FLASHED AND SEALED WITH SELF-ADHERING AND SELF-SEALING WATERPROOFING MEMBRANE WITH FLEXIBLE PRODUCT AT SILL. FOLLOW ALL MANUF. SPECS.

16. DENSE STIPPLED PATTERN WITHIN WALL CAVITY ON FLOOR PLANS AND WALL SECTIONS INDICATES BATT INSULATION, SEE PARTITION SCHEDULE AND DETAILS FOR FURTHER INFO.

17. PROVIDE FIREBLOCKING TO AVOID 10' OPEN CAVITY AT STUDS AND OTHER PLACES WHERE CODE REQUIRED. UNFACED FIBERGLASS BATT INSULATION IS ACCEPTABLE IF INSTALLED PER IBC 718.2.1.2.

18. COORDINATE DUTCH DOOR PLACEMENT TO ALLOW SPACE FOR SHELF WHEN OPENED TO 90 DEGREES, IF PROVIDED.

N -T ()Ŷ

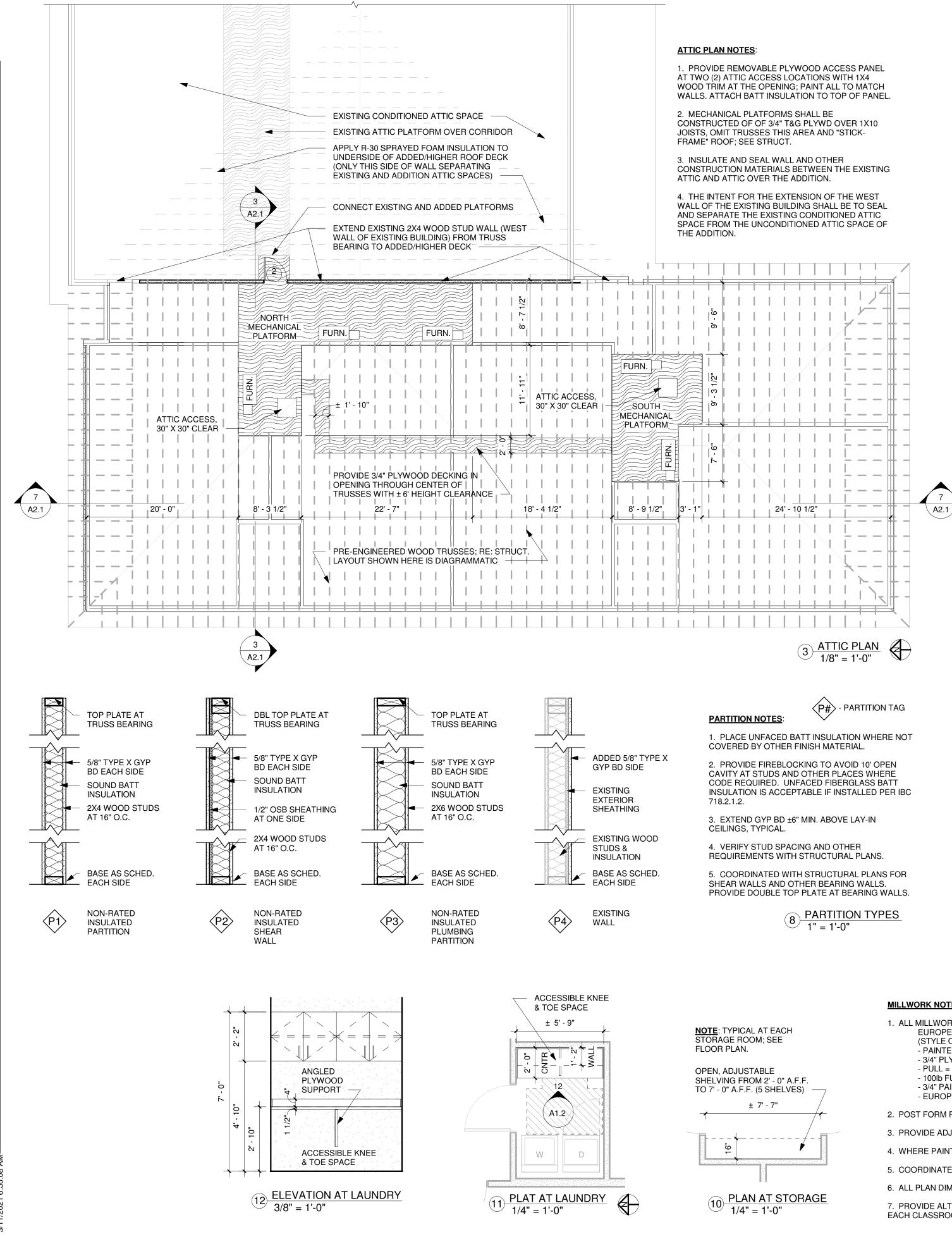


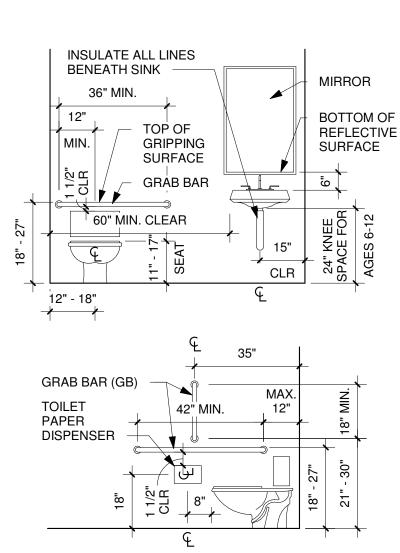
LL Š Ā et Ð U StI σ 0 80 

20100 Project number: 03 March, 2021 Date Revisions:



A1.<sup>-</sup>





NOTES:

1. MOUNT FLUSH CONTROLS ON THE SIDE OF THE TOILET OPPOSITE OF THE CLOSEST WALL.

2. MOUNTING MEASUREMENTS ARE DIAGRAMMATIC TO REPRESENT ACCESSIBILITY REQUIREMENTS FOR CHILDREN.

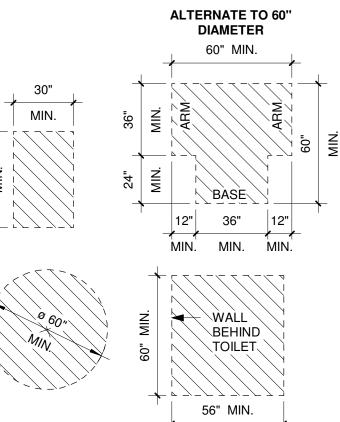
3. IF FIXTURES ARE USED PRIMARILY FOR CHILDREN, THESE DIMENSIONS MAY APPLY. COORDINATION SHALL BE MADE WITH TOILET TANK TO AVOID CONFLICT.

 $7 \frac{\text{ADA MOUNTING HTS FOR CHILDREN}}{3/8" = 1'-0"}$ 

# **MILLWORK NOTES:**

1. ALL MILLWORK, UNLESS OTHERWISE NOTED, SHALL BE EUROPEAN STYLE FULL FLUSH, PAINT GRADE CASEWORK;

- (STYLE OF CABINETS DRAWN IS DIAGRAMMATIC ONLY - PAINTED INTERIOR AND EXTERIOR
- 3/4" PLYWOOD (MDF ACCEPTABLE AT INTERIOR)
- PULL = EPCO #AP128-SS OR EQUAL - 100lb FULL EXTENSION BALL BEARING GUIDES
- 3/4" PAINTED DRAWERS, 1/4" BOTTOMS
- EUROPEAN STYLE CONCEALED HINGES, 110 DEGREE
- 2. POST FORM PLASTIC LAMINATE COUNTERTOPS WITH PAINTED SUPPORTS
- 3. PROVIDE ADJUSTABLE SHELVING WHERE INDICATED WITH DASHED LINES.
- 4. WHERE PAINTED, APPLY PRIMER + 2 COATS WITH SEMI GLOSS SHEEN
- 5. COORDINATE COLORS WITH OWNER.
- 6. ALL PLAN DIMENSIONS TO WALLS ARE ±1".



# NOTES:

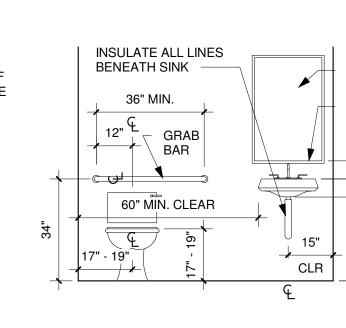
PERMITTED.

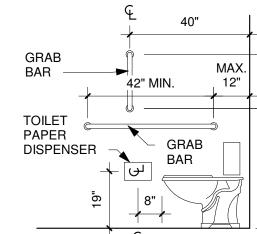
1. PROVIDE CLEAR FLOOR SPACES AS INDICATED WITH THESE DASHED LINE SYMBOLS ON THE FLOOR PLAN TO ACCOMMODATE CLEARANCE AS DESCRIBED IN THESE DETAILS. SPACES REQUIRING A VARIATION ARE DIMENTIONED ON THE PLANS.

2. SLOPES LESS STEEP THAN 1:48 SHALL NOT BE

3. REFERENCE FLOOR/DIMENSION PLANS, ENLARGED RESTROOM PLANS AND MILLWORK PLANS FOR REQUIRED CLEAR FLOOR SPACE FOR ACCESSIBILITY.







NOTES:

1. MOUNT FLUSH CONTROLS ON THE SIDE OF THE TOILET OPPOSITE OF THE CLOSEST WALL.

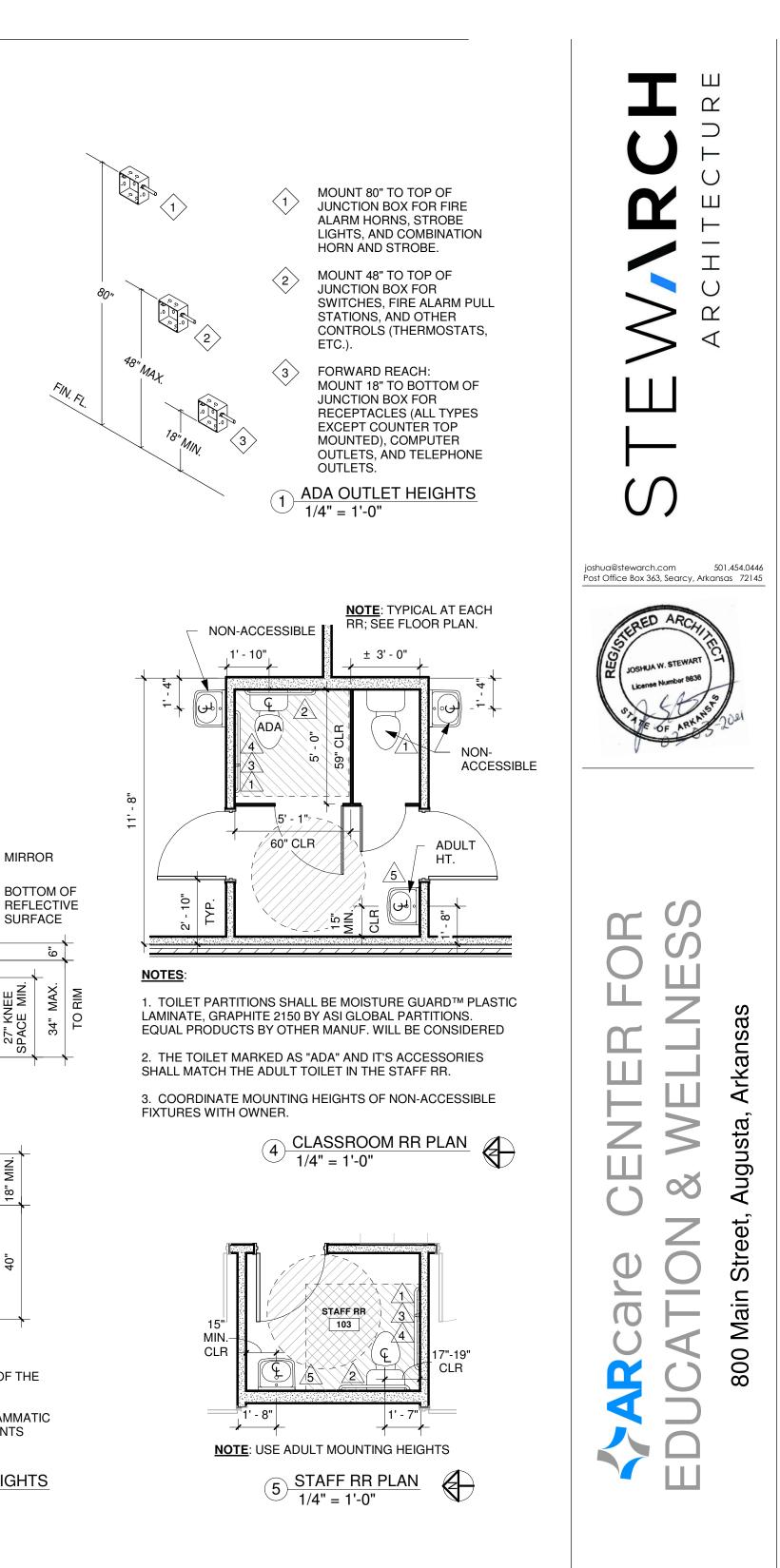
2. MOUNTING MEASUREMENTS ARE DIAGRAMMATIC TO REPRESENT ACCESSIBILITY REQUIREMENTS FOR ADULTS.

> ADA MOUNTING HEIGHTS 3/8" = 1'-0"

#	ACCESSORY	MOUNTING HEIGHT	RESPONSIBILITY
	TOILET PAPER DISPENSER (DBL ROLL)	SEE 6/A1.2 & 7/A1.2	CF / CI
2	HORIZONTAL GRAB BAR, 36" LONG	SEE 6/A1.2 & 7/A1.2	CF / CI
3	HORIZONTAL GRAB BAR, 42" LONG	SEE 6/A1.2 & 7/A1.2	CF / CI
4	VERTICAL GRAB BAR, 18" LONG	SEE 6/A1.2 & 7/A1.2	CF / CI
5	MIRROR	SEE 6/A1.2 & 7/A1.2	CF / CI

OF / OI = OWNER FURNISH / OWNER INSTALL OF / CI = OWNER FURNISH / CONTRACTOR INSTALL CF / CI = CONTRACTOR FURNISH / OWNER INSTALL

7. PROVIDE ALTERNATE PRICE FOR 1X4 WOOD CHAIR RAIL THROUGHOUT EACH CLASSROOM AND THERAPY ROOM.



NOTE: COORDINATE ELECTRICAL RECEPTACLE LOCATIONS WITH MIRROR INSTALLATION.

ACCESSORY SCHEDULE (9)1/4" = 1'-0"

20100

03 March, 2021

MISC. PLANS,

**DETAILS &** 

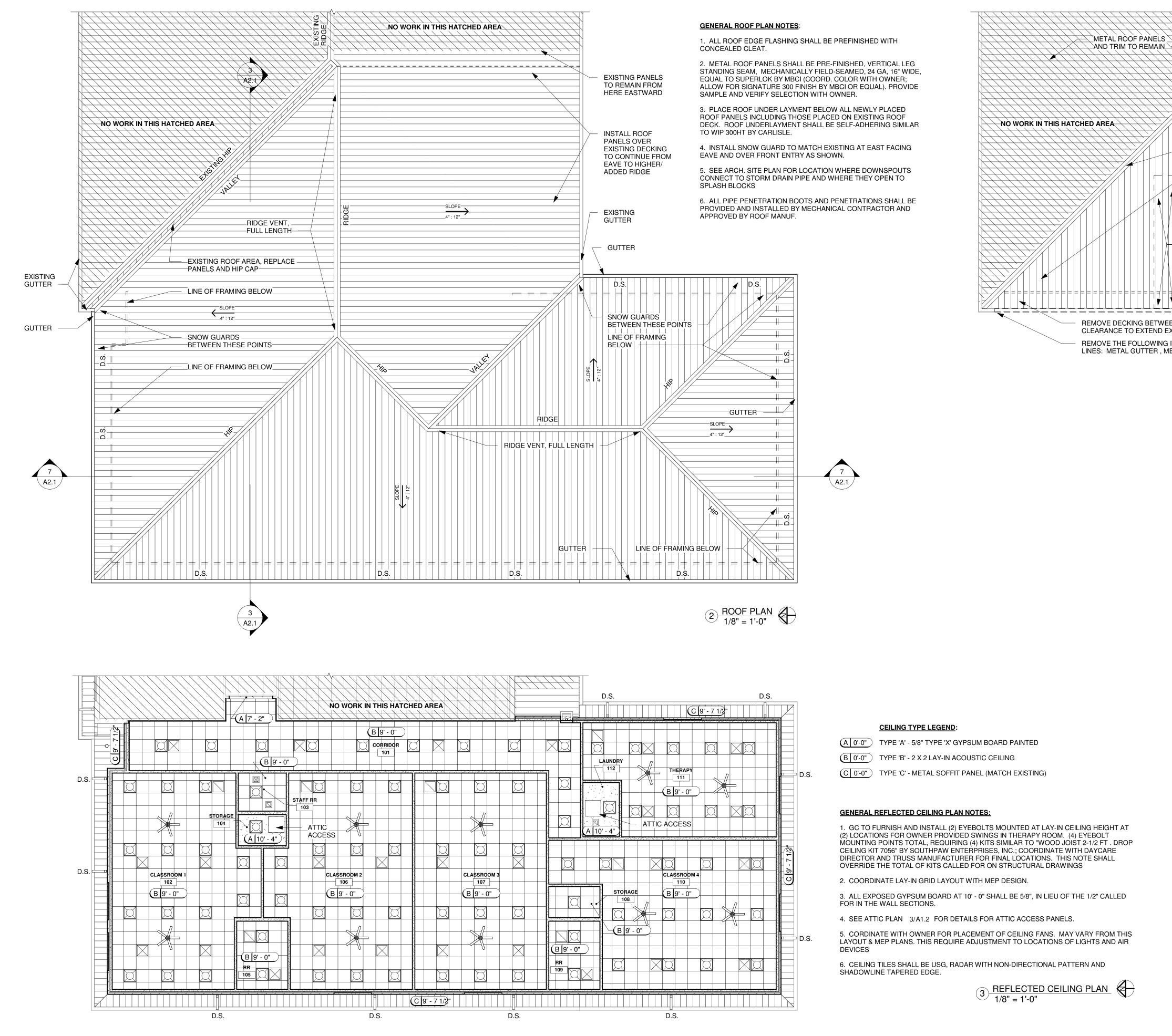
MILLWORK

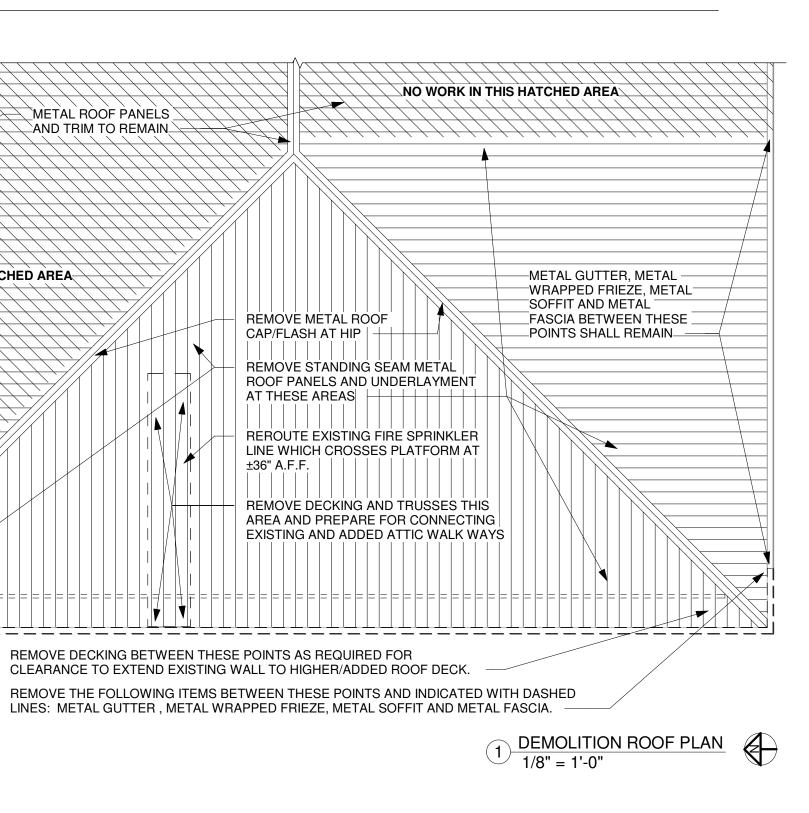
A1.2

Project number:

Date

Revisions:





# **GENERAL DEMOLITION PLAN NOTES:**

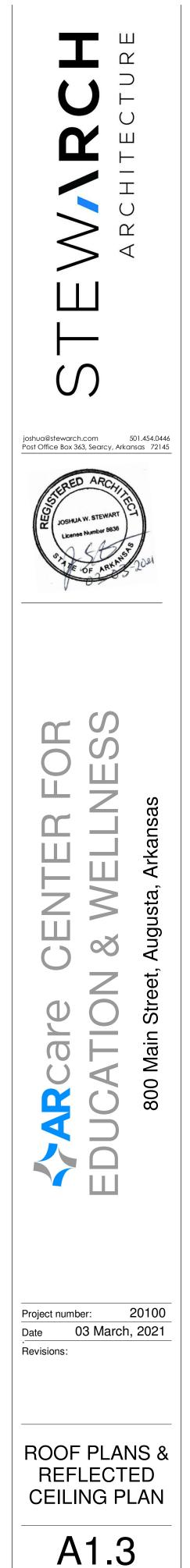
(MATCHING NOTES ON EACH DEMOLITION PLAN)

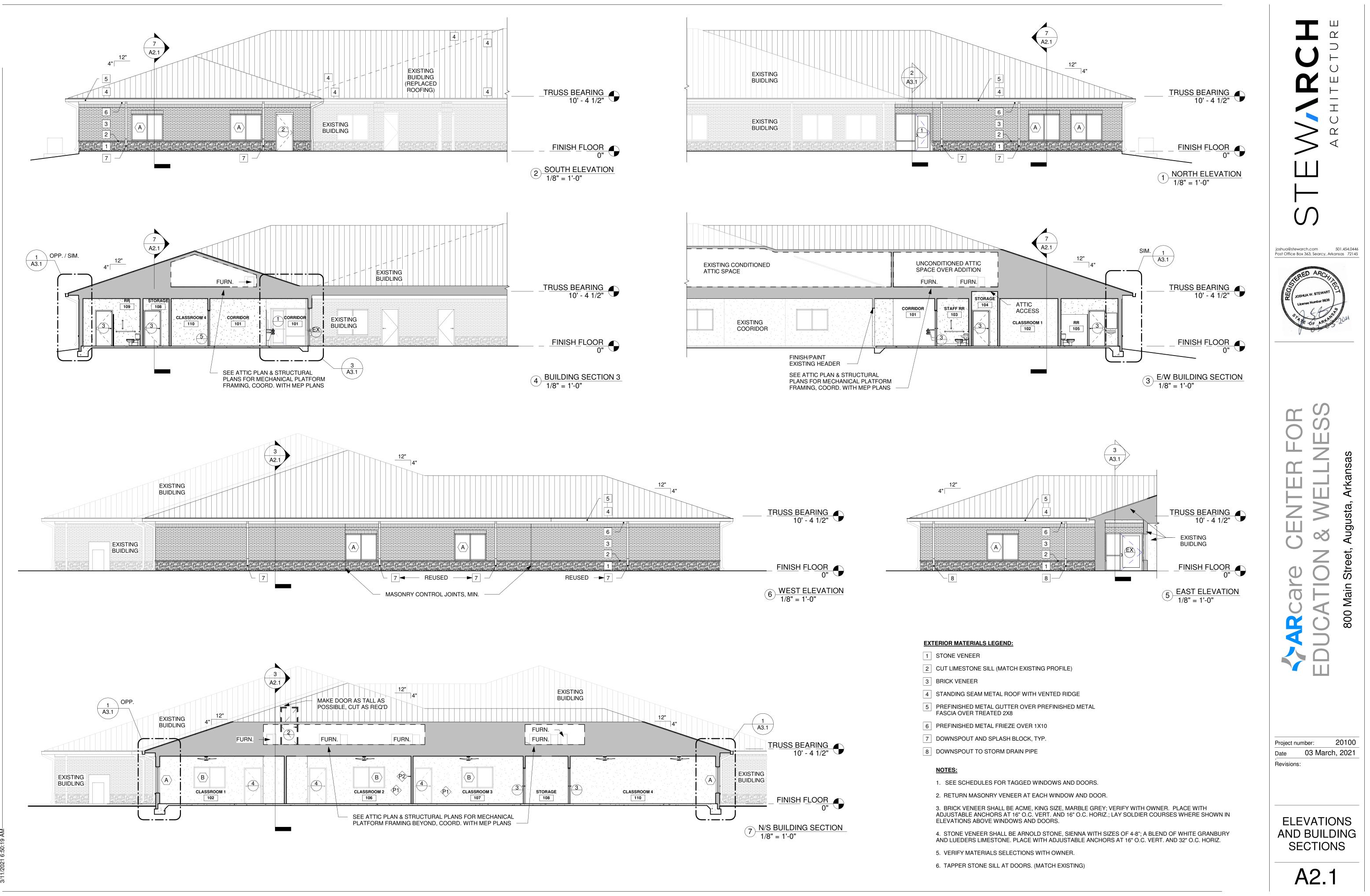
1. FIELD VERIFY ALL EXISTING CONDITIONS AND NOTIFY OWNER IF DISCREPANCIES ARE FOUND.

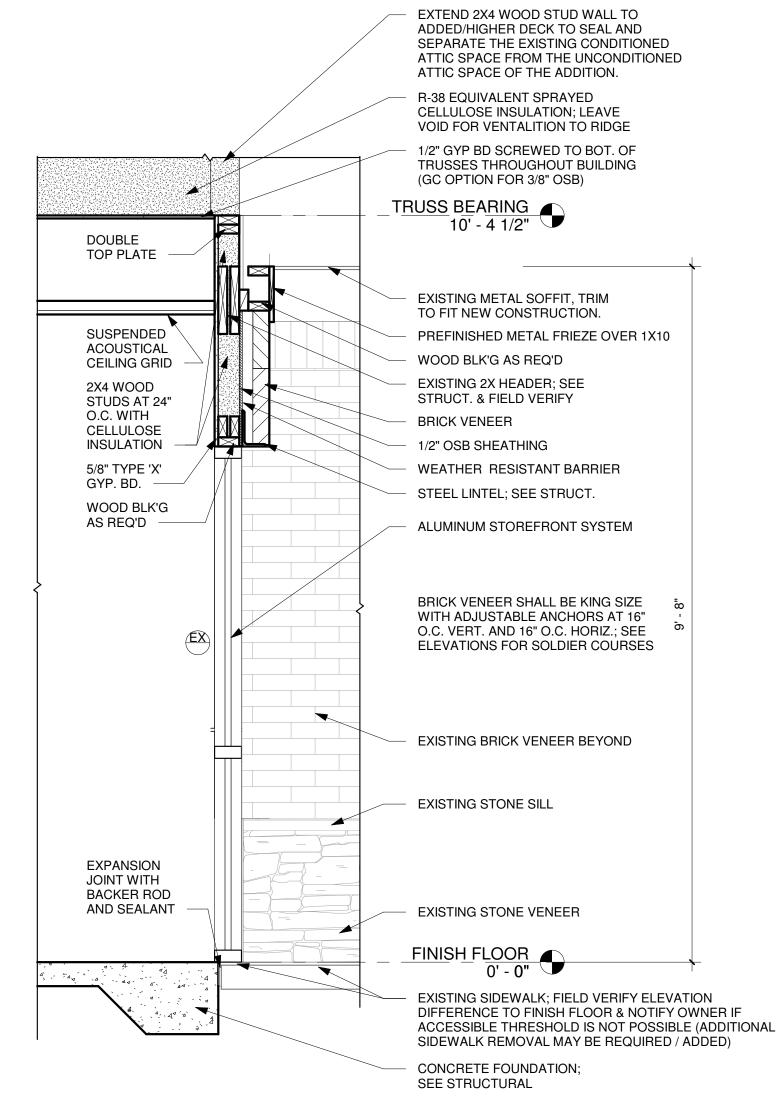
2. UNLESS EXPLICITLY CALLED FOR IN THAT AREA, NO WORK SHALL BE PERFORMED IN AREAS LABELED "NO WORK IN THIS HATCHED AREAS".

3. REFER TO AND COORDINATE WITH MEP PLANS FOR ADDITIONAL DEMOLITION REQUIREMENTS. PATCH/REPAIR AFFECTED/DISTURBED SURFACES THAT REMAIN.

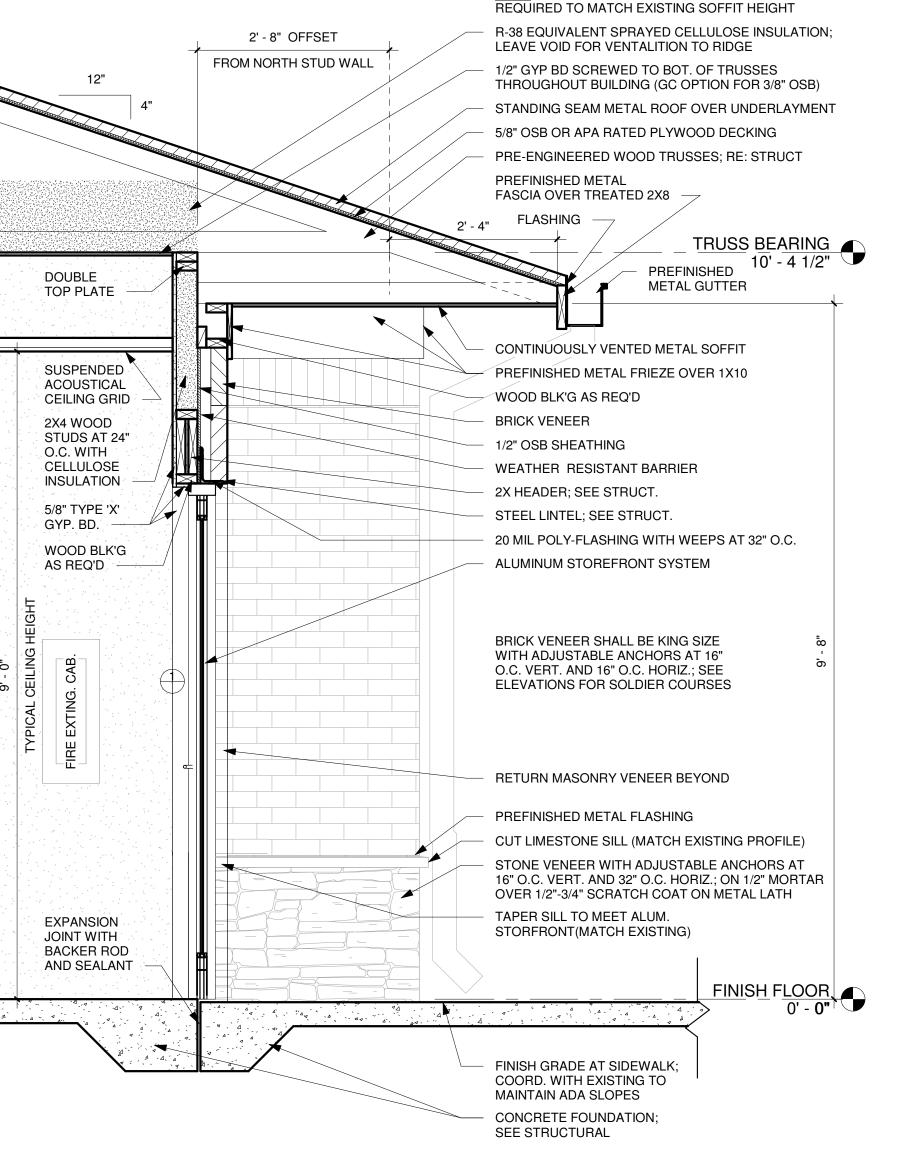
4. COORDINATE WITH DEMOLITION ROOF PLAN 1/A1.3





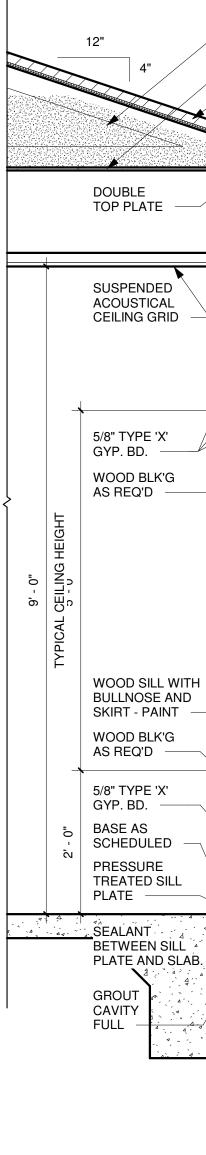


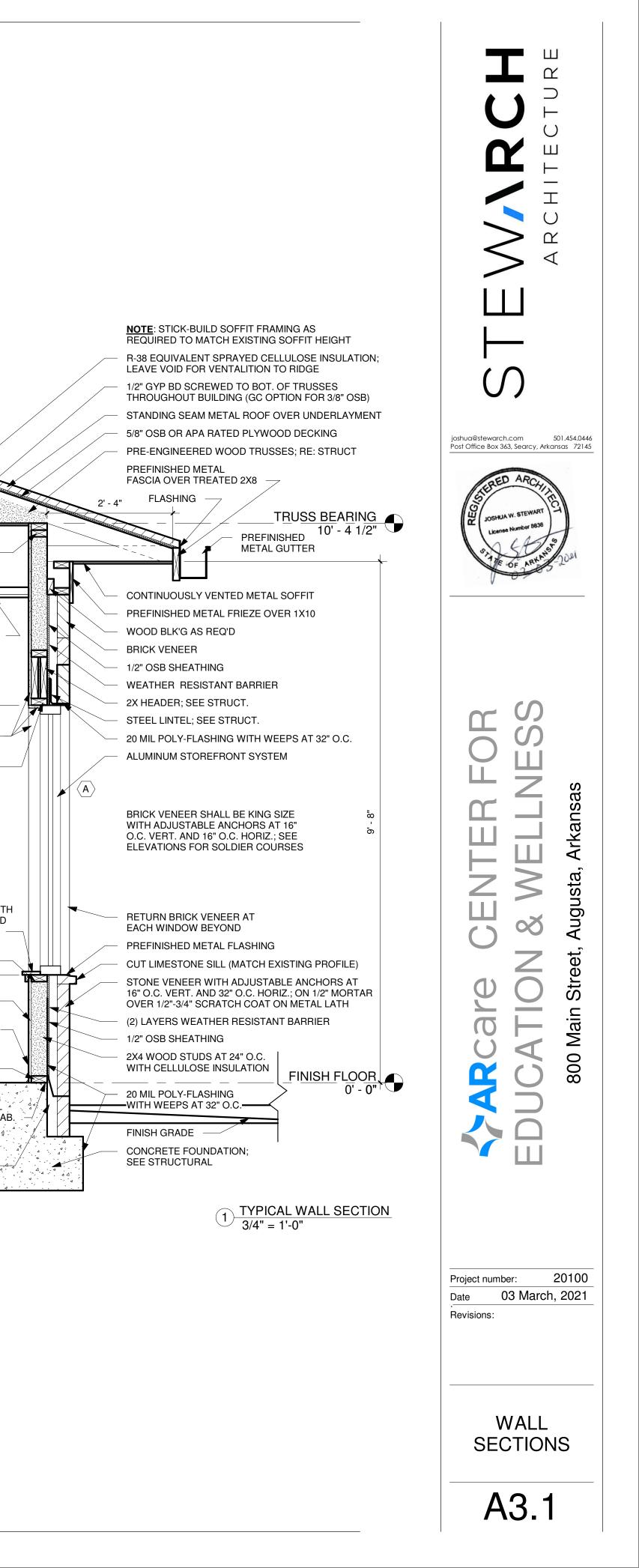
 $3 \frac{\text{WALL SECTION AT REAR ENTRY}}{3/4" = 1'-0"}$ 



NOTE: STICK-BUILD SOFFIT FRAMING AS







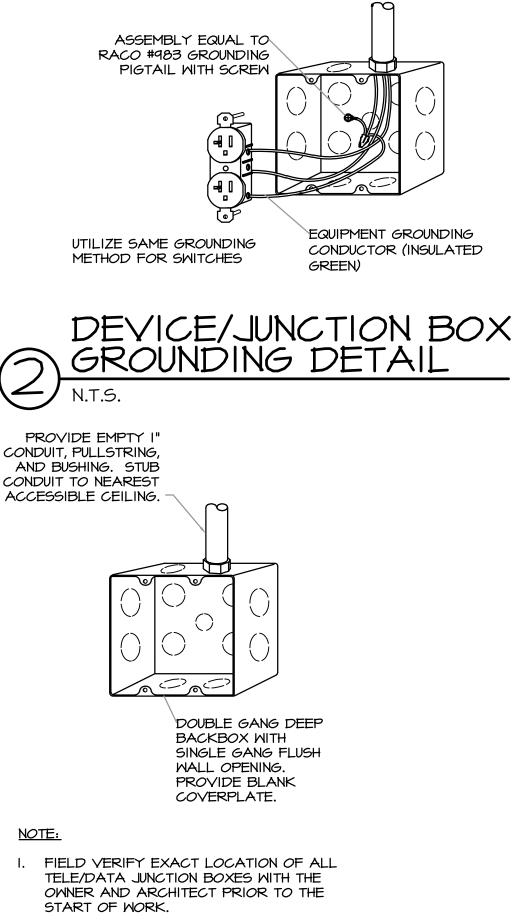
# LEGEND

	DUPLEX RECEPTACLE (TYPE 5362TR) OR-DOUBLE DUPLEX. TAMPER RESISTANT	SUBS
<b></b>	220 VOLT RECEPTACLE (NUMBER DENOTES AMPS)	
<b>=</b> ⊕ ⊡⊽	DUPLEX RECEPTACLE GROUND FAULT TYPE GF5362TR. TELEVISION CABLE OUTLET. VERIFY EXACT LOCATION WITH	
	WITH THE OWNER PRIOR TO ROUGH-IN. MOUNT 4'-6" AFF. REQUIRES DUPLEX RECEPTACLE ONLY. PROVIDE TWO GANG FLUSH BACKBOX WITH SINGLE GANG FLUSH WALL OPENING.	
$\triangleleft$	DATA: REQUIRES 4" SQUARE OUTLET BOX, APPROPRIATE PLASTER RING, AND I" C. STUBBED TO AN ACCESSIBLE LOCATION ABOVE A REMOVABLE CEILING TILE.	
	FLUSH MOUNTED JUNCTION BOX. VERIFY MOUNTING HEIGHT WITH MILLWORK DETAILS AND/OR THE OWNER'S REPRESENTATIVE. AT EQUIPMENT LOCATIONS VERIFY THE EXACT LOCATION WITH THE EQUIPMENT INSTALLER PRIOR TO ROUGH-IN.	
E NF	FUSED/NON-FUSED DISCONNECT-FUSE ALL EQUIPMENT PER MANUFACTURER RECOMMENDATION FOR THE ACTUAL EQUIPMENT FURNISHED. FURNISH NEMA-4X IN THE KITCHEN. MOUNT DISCONNECT FOR HVAC CONDENSER UNITS WITH TOP OF SWITCH AT 36" A.F.F.	
H	MOTOR - VERIFY THE SIZE WITH ACTUAL EQUIPMENT FURNISHED. NUMBER REPRESENTS HORSE POWER RATING.	
\$ <sub>M</sub>	MOTOR RATED SWITCH USED FOR EQUIPMENT DISCONNECTING MEANS. SINGLE PHASE: PROVIDE WITH THERMAL OVERLOAD SIZED PER MOTOR LOAD.	
\$	SWITCH TYPE 1221 ("3" INDICATES 3-WAY SWITCH, "D" INDICATES DIMMER). COORDINATE WITH FIXTURE/LAMP TYPE AND CIRCUIT WATTAGE.	
\$ <i>0</i> 5	WALL MOUNTED DUAL TECHNOLOGY MOTION SENSOR SWITCH WIRE PER MANUFACTURERS RECOMMENDATION. PROVIDE CONTACTORS TO CONTROL EXHAUST FAN WITH LIGHTS.	
05	"OS" - CEILING MOUNTED DUAL TECHNOLOGY MOTION SENSOR PROVIDE AND INSTALL THE APPROPRIATE POWER PACK. COORDINATE SWITCHING WITH ACTUAL MOTION SENSOR USED. COORDINATE LOCATION AND NUMBER WITH ACTUAL MOTION SENSOR USED. WIRE PER MANUFACTURERS RECOMMENDATION. PROVIDE OCCUPANCY SENSOR WHICH IS THE CORRECT TYPE FOR THE SPACE. PROVIDE CONTACTORS TO CONTROL EXHAUST FAN WITH LIGHTS.	
H05)	"OS" - WALL MOUNTED DUAL TECHNOLOGY MOTION SENSOR PROVIDE AND INSTALL THE APPROPRIATE POWER PACK. COORDINATE SWITCHING WITH ACTUAL MOTION SENSOR USED. COORDINATE LOCATION AND NUMBER WITH ACTUAL MOTION SENSOR USED. WIRE PER MANUFACTURERS RECOMMENDATION. PROVIDE OCCUPANCY SENSOR WHICH IS THE CORRECT TYPE FOR THE SPACE.	
$\bigotimes$	EXIT LIGHT - ARROW DENOTES INCLUSION OF ARROW ON LENS. CONTRACTOR TO COORDINATE PROPER MOUNTING DETAILS.	
	LIGHTING CONTACTOR-SQUARE D #8903.	
PE (] F-1,2	PHOTO-ELECTRIC CELL: EQUAL TO INTERMATIC NO. K4121M. THERMOSTAT, MOUNT. @ 48" A.F.F TO CENTER OF BOX (NUMBER	
<u>୍</u> ରେ୦୦2	DENOTES HVAC UNIT). SENSOR, MOUNT @ 54" TO CENTER IN SEPARATE SINGLE GANG BOX.	
	ELECTRICAL PANEL.	
$\sim$	BRANCH CIRCUIT HOMERUN. PANEL AND CIRCUIT NUMBER INDICATED.	
DD-	DUCT DETECTOR-FURNISHED AND INSTALLED BY THE FIRE ALARM CONTRACTOR. COORDINATE QUANTITY AND LOCATION WITH MECHANICAL PLANS.	
	MANUAL PULL STATION MOUNTED MINIMUM OF 42"; MAXIMUM OF 48" A.F.F.	
⊢SD	PHOTOELECTRIC SMOKE DETECTOR. WALL MOUNTED	
	WALL MOUNTED HEAT DETECTOR. WALL MOUNTED	
(SD) (HD)	PHOTOELECTRIC SMOKE DETECTOR. CEILING MOUNTED WALL MOUNTED HEAT DETECTOR. CEILING MOUNTED	
→	CEILING FIRE ALARM VISUAL STROBE LIGHT-WP DENOTES WEATHER	
<ul><li>(∨)</li><li>+</li></ul>	RESISTANT. REQUIRES 4" SQUARE BOX WITH 34" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING. NUMBER DENOTES CANDELA RATING. WALL MOUNT FIRE ALARM VISUAL STROBE LIGHT-WP DENOTES WEAT	THER
H.∨) — #	RESISTANT. REQUIRES 4" SQUARE BOX WITH ¾" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING. NUMBER DENOTES CANDELA RATING. WALL MOUNT FIRE ALARM HORN/STROBE LIGHT-WP DENOTES WEATHER RESISTANT. REQUIRES 4" SQUARE BOX WITH ¾" CONDUIT	
H(H√K] #	STUBBED ABOVE ACCESSIBLE CEILING. NUMBER DENOTES CANDELA RATING. CEILING FIRE ALARM HORN/STROBE LIGHT-WP DENOTES WEATHER	
HVA	RESISTANT. REQUIRES 4" SQUARE BOX WITH 34" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING. NUMBER DENOTES CANDELA RATING.	
	SLEEVES THROUGH FIRE WALLS - FURNISH 3-2" CONDUITS AS NOTED ON THE PLANS. SEAL PER RATING OF THE WALL.	
	<u>STEL/D</u> N.T.S.	• <u>A</u>

# CRIPTO

- C = COORDINATE LOCATION WITH MILLWORK-MOUNTING HEIGHTS VARY. REFER TO THE ARCHITECTURAL MILLWORK DRAWINGS. W = WALL MOUNTED @ 48" A.F.F.-OR AS SHOWN.
- GFI= GROUND FAULT CIRCUIT INTERRUPTER.
- WP = WEATHER RESISTANT RECEPTACLES ARE "GFI", WITH METAL WEATHER RESISTANT "WHILE-IN-USE" COVERS.
- MW = MICROWAVE OVEN.
- GD = GARBAGE DISPOSER
- EM = FIXTURE CONTAINS EMERGENCY BATTERY PACK. NL = UNSWITCHED EMERGENCY FIXTURE.
- H = MOUNT HORIZONTALLY IN MILLWORK.
- EC = ELECTRICAL CONTRACTOR
- AFF= ABOVE FINISHED FLOOR AFG= ABOVE FINISHED GRADE
- EWC= ELECTRIC WATER COOLER
- EWH= ELECTRIC WATER HEATER

NTS= NOT TO SCALE FVNR= FULL VOLTAGE NONREVERSING STARTER



2. OWNER SHALL PROVIDE ALL CABLING, JACKS, ETC.

# GENERAL ELECTRICAL NOTES-ALL SHEETS THESE NOTES ARE ONLY A SUPPLEMENT TO THE SPECIFICATIONS

- THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR A COMPLETE WORKING INSTALLATION.
- 2. THIS CONTRACTOR IS TO COMPLY WITH THE STATE OF ARKANSAS ADOPTED ADA ACCESSIBLE GUIDELINES IN REGARD TO ACCESSIBLE FEATURES.
- 3. AT ALL MILLWORK LOCATIONS COORDINATE THE ELECTRICAL INSTALLATION WITH THE ARCHITECTURAL DRAWINGS.
- 4. PROVIDE FIRE RATED CAULKING WHERE CONDUIT OR OTHER ELECTRICAL ITEMS PASS THOUGH FIRE-RATED WALLS, CEILINGS AND FLOORS.
- 5. INSTALL ALL CONDUIT STRAIGHT AND PARALLEL WITH THE BUILDING LINES. ALL CONDUIT IS CONCEALED
- IN PUBLIC PLACES. 6. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL PERMIT AND FEE COSTS AND SHALL INCLUDE
- THESE COSTS IN THE BID PRICE FOR THIS PROJECT. 7. THE ENTIRE ELECTRICAL INSTALLATION SHALL CONFORM TO THE LATEST ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE AND ALL APPLICABLE LOCAL CODES AND ORDINANCES. IF A CONFLICT IS FOUND BETWEEN APPLICABLE CODES, THE MORE STRINGENT SHALL APPLY. THE CONTRACTOR SHALL BE COMPLETELY FAMILIAR WITH ALL APPLICABLE MUNICIPAL CODES AND ORDINANCES.
- 8. THE SUBMISSION OF A PROPOSAL WILL BE CONSIDERED EVIDENCE THAT THE CONTRACTOR HAS FAMILIARIZED THEMSELVES WITH THE DRAWINGS, SPECIFICATION BOOK, THE BUILDING SITE AND OTHER INFORMATION PRESENTED FOR THE CONSTRUCTION OF THIS PROJECT. CLAIMS MADE SUBSEQUENT TO THE PROPOSAL FOR MATERIALS AND LABOR BECAUSE OF DIFFICULTIES ENCOUNTERED WILL NOT BE RECOGNIZED IF THEY COULD HAVE BEEN FORESEEN HAD A COMPLETE AND THOROUGH EXAMINATION BEEN MADE.
- 9. DO NOT SCALE DIRECTLY FROM THE ELECTRICAL DRAWINGS. REFER TO THE ARCHITECTURAL DRAWINGS FOR DIMENSIONAL INFORMATION. IO. THE CONTRACTOR SHALL GUARANTEE ALL WORK FOR WHICH MATERIALS ARE FURNISHED, FABRICATED
- OR FIELD ERECTED. THIS CONTRACTOR GUARANTEE SHALL EXIST FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL OWNER ACCEPTANCE OF THE WORK AND SHALL APPLY TO ALL DEFECTS IN MATERIALS AND/OR WORKMANSHIP OF ANY KIND.
- II. WHERE JOB CONDITIONS REQUIRE CHANGES FROM THE CONTRACT DOCUMENTS THAT DO NOT CHANGE THE SCOPE OR NATURE OF THE WORK REQUIRED, THE CONTRACTOR SHALL MAKE SUCH CHANGES WITHOUT ADDITIONAL COST TO THE OWNER. NO OTHER CHANGES WILL BE MADE WITH OUT THE EXPRESSED WRITTEN CONSENT OF THE OWNER.
- 12. IT IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO COORDINATE WITH ALL OTHER TRADES TO ENSURE THAT ALL CIRCUITS AND DEVICES ARE OF A PROPER SIZE FOR ACTUAL EQUIPMENT FURNISHED. THE ENGINEER SHALL BE NOTIFIED OF ANY CONFLICT WHICH CAUSES CHANGES TO ANY SYSTEM AS DESIGNED ON THESE DRAWINGS. FAILURE ON THE PART OF THE CONTRACTOR TO NOTIFY THE ENGINEER OR ARCHITECT OF SUCH CONFLICTS PLACES THE SUBSEQUENT CHANGES UPON THE CONTRACTOR.
- 13. THE ELECTRICAL CONTRACTOR IS TO PROVIDE, AT YET TO BE DECIDED LOCATIONS, TEN (10) CONDUIT STUB-UPS, WHICH ARE TO INCLUDE 4" OUTLET BOXES, PLASTER RINGS, COVER PLATES, AND CONDUIT TO ABOVE THE CEILING, FIVE ONE GANG AND FIVE TWO GANG. IN ADDITION, PROVIDE TEN (10) SINGLE GANG STUB-UPS WHICH ARE TO INCLUDE 4" OUTLET BOXES, PLASTER RINGS, COVER PLATES, INCLUDING ONE RECEPTACLE OR SWITCH WITH 50 FEET OF CIRCUIT WIRING PER SINGLE GANG STUB-UP. COMBINED TOTAL NUMBER OF STUB-UPS REQUIRED IS TWENTY (20).
- 14. ALLOW FOR THE ADDITION OF THREE (3) NEW EXIT LIGHTS WITH WIRING TO UNSWITCHED LIGHTING CIRCUIT. 15. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR THE FOLLOWING SYSTEMS:
- (A). POWER AND LIGHTING:
  - ALL DEVICE PLATES ARE STAINLESS NYLON. COORDINATE COLOR OF DEVICES WITH THE ARCHITECT. 2. ALL 20A 120V AND 250V NON-LOCKING TYPE RECPETACLES, UNLESS OTHERWISE NOTED, SHALL BE
  - TAMPER RESISTANT TYPE PER NEC 406.12. 3. WHERE DEVICES ARE SHOWN NEXT TO EACH OTHER, THEY ARE INTENDED TO BE GANGED. FIELD VERIFY ACTUAL SPACE AVAILABLE AND NOTIFY THE ARCHITECT WHERE THERE ARE SPACE CONFLICTS.
  - 4. LOW VOLTAGE WIRING IS TO BE ENCASED IN CONDUIT IN AREAS WITH NO CEILING. 5. RECEPTACLES FOR EQUIPMENT SUCH AS ELECTRIC WATER COOLERS SHALL BE LOCATED IN THE WALL AT A LOCATION WHICH IS CONCEALED BY THE EQUIPMENT CABINET.
  - 6. ALL EMPTY CONDUITS ARE TO CONTAIN A NYLON PULL STRING. EMPTY CONDUITS 2" AND LARGER ARE TO BE SWABBED OUT AND LEFT WITH A NYLON PULL ROPE FOR THE USE OF THE OWNER.
  - 7. COVER PLATES FOR EXTERIOR RECEPTACLES ARE TO BE METAL, WEATHER RESISTANT WHILE IN USE. 8. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL DRIVER AND LAMP COMBINATIONS THAT WILL PROVIDE THE OWNER WITH A FIVE YEAR WARRANTY ON THE DRIVER.
  - 9. COORDINATE WITH THE GENERAL CONTRACTOR AND THE INSULATION CONTRACTOR TO HOLD THE BATT INSULATION AWAY FROM ALL LAY-IN FIXTURES. CLEARANCE SHOULD BE 3" ON ALL SIDES, AND TOTALLY CLEAR ON THE TOP.
  - IO. ROOM NUMBERS USED IN THE PANEL SCHEDULES ARE TO REFLECT ROOM NUMBERS BY THE OWNER. ARCHITECT WILL PROVIDE CROSS OVER LIST DURING THE PROJECT.
  - II. OCCUPANCY SENSORS ARE TO BE LAID OUT BY THE LIGHTING REPRESENTATIVE FURNISHING THE EQUIPMENT HSA WILL PROVIDE AUTO CAD DRAWINGS AS NECESSARY. ELECTRICAL CONTRACTOR RESPONSIBLE FOR LOCATION DETAILS AND MOUNTING. SENSORS SHOWN ARE FOR REFERENCE ONLY.
  - 12. FURNISH 2-1" CONDUIT SLEEVES THROUGH FIRE WALLS UNLESS OTHERWISE NOTED. SEAL PER RATING OF THE WALL.
  - 13. WHERE INDIRECT (SUSPENDED) LIGHTING IS USED, THE ELECTRICAL CONTRACTOR SHALL CONTRACT WITH THE CEILING CONTRACTOR TO PROVIDE THE NECESSARY TIES TO THE STRUCTURE ABOVE AT EACH POINT OF ATTACHMENT OF THE FIXTURE HANGERS.
  - 17. WIRE SIZES:
- WIRE SIZE 120V
- A. #12 LESS THAN 75 FEET
- B. #IO BETWEEN 75-150 FEET C. #8 BETWEEN 150-250 FEET
- D. #6 BETWEEN 250-375 FEET
- (B). FIRE ALARM
  - I. ALL FIRE ALARM OUTLET BOXES ARE TO BE PAINTED RED
  - 2. THE ELECTRICAL CONTRACTOR SHALL PROVIDE NEW DEVICES THAT ARE COMPATIBLE WITH AND CONNECT TO THE EXISTING FIRE ALARM SYSTEM. FIELD VERIFY EXISTING MANUFACTURER AND LOCATION PRIOR TO SUBMITTING BID.
  - 3. INSTALL FIRE ALARM DEVICES PER N.F.P.A. AND ALL STATE AND LOCAL ORDINANCES
  - 4. COORDINATE THE OVERALL FIRE ALARM SYSTEM WITH THE FIRE MARSHAL, FURNISHING ALL DEVICES AND SYSTEMS NECESSARY FOR A COMPLETE ACCEPTABLE SYSTEM. NO EXTRA CHARGES WILL BE ALLOWED, OUTSIDE OF THE CONTRACT PRICE. THE FIRE ALARM CONTRACTOR IS TO SUBMIT PLANS TO THE FIRE MARSHALL FOR FINAL APPROVAL PRIOR TO BEGINNING CONSTRUCTION.
  - 5. DUCT DETECTORS ARE SUPPLIED AND INSTALLED BY THE FIRE ALARM CONTRACTOR. IT IS THE RESPONSIBILITY OF THE FIRE ALARM CONTRACTOR TO FURNISH ALL WIRING NECESSARY TO CONNECT THESE DEVICES TO THE FIRE ALARM SYSTEM. PROVIDE WITH REMOTE INDICATOR OR SEPARATELY ZONED. COORDINATE QUANTITY AND LOCATION WITH THE MECHANICAL DRAWINGS.
- (C). CONDUIT AND CABLE SYSTEM FOR DATA AND TELEPHONE WIRING.
  - I. CONDUIT FOR DATA AND TELEPHONE SYSTEM, TO INCLUDE SLEEVES IN FIRE WALLS.
  - 2. CABLE IS NOT TO BE INSTALLED EXPOSED. VERIFY WITH MECHANICAL PLANS FOR PLENUM SPACES CABLE IN THESE AREAS IS PLENUM RATED.
  - 3. ELECTRICAL CONTRACTOR SHALL PROVIDE JUNCTION BOXES, EMPTY CONDUIT WITH PULLSTRINGS AND BUSHINGS. OWNER SHALL PROVIDE AND INSTALL TELEPHONE/DATA CABLING.
- 4. PROVIDE STAINLESS STEEL BLANK COVER PLATES FOR UNUSED DATA OUTLETS.

(E). UNDERGROUND CONDUITS AND SLEEVES AS NECESSARY FOR DISTRIBUTION:

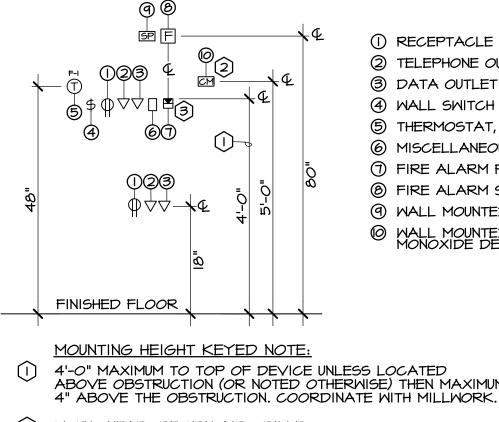
- I. DO NOT ROUTE GROUPS OF CONDUITS OR SLEEVES ABOVE FOOTINGS UNLESS NOTED
- TO DO SO. IF CONFLICT OCCURS, CONSULT ARCHITECT AND ENGINEER. 2. DO NOT ROUTE CONDUIT OR SLEEVES BELOW BEARING WALLS WHEN RUNNING PARALLEL WITH WALLS. 3. LIMIT WIDTH OF CONDUIT AND SLEEVES NOT TO EXCEED 3'-O" IN WIDTH AS IT PASSES UNDER WALL
- FOOTING. ALIGN ITEMS PERPENDICULAR TO THE FOOTINGS AS IT PASSES BELOW THE FOOTING.
- 4. PROVIDE A MINIMUM SPACING OF 2'-O" BETWEEN CONDUIT GROUPS AS THEY PASS UNDER FOOTINGS. 5. DO NOT ROUTE CONDUITS OR SLEEVES UNDER COLUMN FOOTINGS OR PAD FOOTINGS.

# GENERAL ELECTRICAL NOTES (CONTINUED.)

- (F). GROUNDING SYSTEM
- 2. GROUND BUILDING STEEL AS INDICATED ON DRAWINGS. (G). EQUIPMENT REQUIREMENTS:
- FURNISHED BY THE OTHER CONTRACTORS.
- PROVIDED BY THE MECHANICAL CONTRACTOR.
- CIRCULATION PUMPS.
- (H). HVAC CONTROL:

- FOR LINE VOLTAGE CONTROL SYSTEMS.
- MECHANICAL CONTRACTOR.

- (I). SEISMIC BRACING FOR ELECTRICAL INSTALLATION OF ELECTRICAL EQUIPMENT CALLED OUT IN SPECIFICATION SECTION 26 00 15.



<u>NOTE:</u> ALL DEVICES SHOWN MAY NOT BE USED. DETAIL INDICATES TYPICAL MOUNTING HEIGHTS ONLY. COORDINATE ALL MOUNTING HEIGHTS WITH ARCHITECT.





I. ALL CONDUITS ARE TO CONTAIN A GREEN GROUNDING CONDUCTOR, SIZED PER THE N.E.C.

I. VERIFY EXACT FUSE SIZE AND EQUIPMENT REQUIREMENTS WITH THE ACTUAL EQUIPMENT

2. ALL HOT WATER CIRCULATION PUMPS ARE TO BE CONTROLLED VIA 7 DAY TIME CLOCKS

3. FINAL EQUIPMENT CONNECTIONS: THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL LABOR AND MATERIALS REQUIRED TO MAKE FINAL ELECTRICAL CONNECTIONS TO ALL EQUIPMENT FURNISHED ON THIS PROJECT. VERIFY ALL REQUIREMENTS, CONDUCTOR SIZES, OVERCURRENT PROTECTION, PHASES, VOLTAGES, MOTOR ROTATION, ETC., WITH THE EQUIPMENT SUPPLIER PRIOR TO ROUGH-IN. PROVIDE FUSED DISCONNECT IF REQUIRED BY MANUFACTURER. FURNISH HARD WIRING FOR ALL WATER HEATERS AND

4. THE ELECTRICAL CONTRACTOR IS TO PROVIDE ALL CONTACTORS, MAGNETIC STARTERS, AND MISCELLANEOUS WIRING NECESSARY TO CONTROL EXHAUST FANS AND OTHER AUTOMATICALLY OPERATED EQUIPMENT. THE CONTROLS CONTRACTOR IS TO FURNISH ONE RELAY PER ITEM AS COMPATIBLE WITH THEIR CONTROL SYSTEM.

I. THE ELECTRICAL CONTRACTOR SHALL PROVIDE CONDUIT FROM EACH HVAC UNIT TO ITS RESPECTIVE THERMOSTAT, HUMIDISTAT, AND/OR SENSOR, AS REQUIRED. COORDINATE EXACT LOCATIONS WITH MECHANICAL CONTRACTOR AND ARCHITECT PRIOR TO ROUGH-IN. 2. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL CONDUIT AND WIRING NECESSARY

3. ALL LOW VOLTAGE CONTROL WIRING SHALL BE ENCLOSED IN CONDUIT IN SPACES WITH NO CEILING 4. COORDINATE ALL HVAC WIRING WITH THE MECHANICAL DRAWINGS AND THE

5. THE ELECTRICAL CONTRACTOR IS TO PROVIDE A MAGNETIC STARTER FOR EACH EXHAUST FAN. THIS STARTER IS CONTROLLED BY THE LIGHTING/MOTION SENSOR SYSTEM 6. THE ELECTRICAL CONTRACTOR IS TO PROVIDE AND INSTALL ALL LINE VOLTAGE THERMOSTATS.

- I. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL SEISMIC BRACING REQUIREMENTS
  - () RECEPTACLE
  - 2 TELEPHONE OUTLET
  - 3 DATA OUTLET
  - (4) WALL SWITCH
  - (5) THERMOSTAT, SENSOR
  - 6 MISCELLANEOUS, INTERCOM, ETC.
  - (1) FIRE ALARM PULL STATION

  - (9) WALL MOUNTED SPEAKER
  - WALL MOUNTED CARBON MONOXIDE DETECTOR

ABOVE OBSTRUCTION (OR NOTED OTHERWISE) THEN MAXIMUM

(2) MOUNT NEAR RETURN AIR GRILLE.

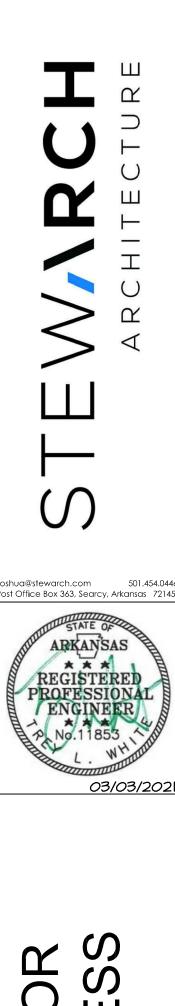
(3) THE HEIGHT OF THE MANUAL FIRE ALARM BOXES SHALL BE A MINIMUM OF 42" AND A MAXIMUM OF 48" MEASURED VERTICALLY, FROM THE FLOOR LEVEL TO THE ACTIVATING HANDLE OR LEVER OF THE BOX.

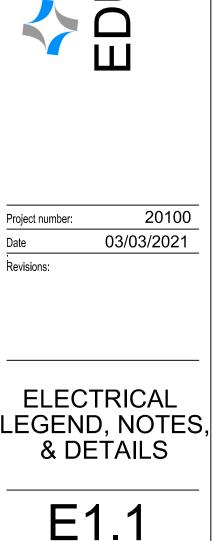


# **HSA**Engineering

501 / 327 / 5757 office 1150 Bob Courtway Drive Conway, Arkansas 72032 HSAConsultants.com

HSA JOB # 21-014





>

õ

O

σ

S

ain

 $\geq$ 

0 O

# ELECTRICAL SPECIFICATIONS

# GENERAL

- A. ALL WORK SHALL BE DONE IN A GOOD WORKMANLIKE MANNER. MATERIALS AND WORKMANSHIP SHALL COMPLY WITH ALL APPLICABLE LOCAL STATE AND FEDERAL CODES INCLUDING BUT NOT LIMITED TO:
- I. NATIONAL ELECTRICAL CODE, LATEST EDITION
- 2. UNDERWRITERS' LABORATORIES, INC 3. INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS
- 4. INSULATED POWER CABLE ENGINEERS' ASSOCIATION
- 5. NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION 6. AMERICAN STANDARDS ASSOCIATION
- 7. AMERICAN SOCIETY FOR TESTING MATERIALS
- 8. STATE FIRE PREVENTION CODE, LATEST EDITION 9. OCCUPATIONAL SAFETY AND HEALTH ACT
- IO. NATIONAL FIRE CODE II. INTERNATIONAL BUILDING CODE
- THE LATEST SPECIFICATIONS AND STANDARDS AVAILABLE SHALL BE USED FOR THE ABOVE.
- B. IN CASE OF DISCREPANCY BETWEEN THE APPLICABLE CODES, PLANS, AND SPECIFICATIONS THE MOST STRINGENT SHALL GOVERN.
- C. SHOULD THE CONTRACTOR PERFORM ANY WORK THAT DOES NOT COMPLY WITH REQUIREMENTS OF THE APPLICABLE AUTHORITIES, THEY SHALL BEAR ALL COSTS ARISING IN CORRECTING THE DEFICIENCIES. FEES, PERMITS AND INSPECTIONS

## FEES, PERMITS AND INSPECTIONS

- A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAYING ALL FEES AND OBTAINING ALL NECESSARY PERMITS AND INSPECTIONS.
- B. UNDER THIS SECTION OF WORK THE CONTRACTOR SHALL, UPON COMPLETION OF THE WORK, FURNISH A CERTIFICATE OF FINAL INSPECTION TO THE ENGINEER FROM THE INSPECTION DEPARTMENT HAVING JURISDICTION.
- C. THE CONTRACTOR SHALL PAY ALL CHARGES BY THE LOCAL ELECTRIC UTILITY FOR SERVICE TO THE BUILDING.

### DRAWINGS AND PLANS

- A. THE ELECTRICAL PLANS ARE A GUIDE TO THE CONTRACTOR TO SHOW GENERAL ARRANGEMENT OF CONDUIT AND WIRING AND EQUIPMENT REQUIRED. IF ANY ERROR OMISSIONS OR OBSCURITIES APPEAR THEREIN, WHICH ARE QUESTIONABLE, DO NOT CONFORM TO GOOD PRACTICE OR APPEAR CONTRARY TO THE PURPOSE AND INTENT OF THE WORK THE CONTRACTOR SHALL PROMPTLY NOTIFY THE ENGINEER AND APPLY FOR DIRECTIONS BEFORE CONSTRUCTION. THE EXACT LOCATION OF CONDUIT RUNS AND LENGTHS SHALL BE DETERMINED BY THE CONTRACTOR IN THE FIELD.
- B. THE DRAWINGS MAY BE SUPERSEDED BY LATER REVISED OR DETAILED DRAWINGS OR SPECIFICATION ADDENDA PREPARED BY THE ENGINEER. THE CONTRACTOR SHALL CONFORM TO ALL REASONABLE CHANGES WITHOUT EXTRA COST TO THE OWNER. ALL ITEMS NOT SPECIFICALLY MENTIONED IN THE SPECIFICATIONS OR NOTED ON THE DRAWINGS, BUT WHICH ARE OBVIOUSLY NECESSARY TO MAKE A COMPLETE WORKING INSTALLATION, SHALL BE INCLUDED.

### RECORD DRAWINGS

A. THE CONTRACTOR SHALL KEEP A NEAT AND ACCURATE RECORD OF FIELD CHANGES MADE DURING CONSTRUCTION. CHANGES SHALL BE PENCILED IN ON A SEPARATE SET OF DRAWINGS USED ONLY FOR RECORDING CHANGES. AT COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL DELIVER THIS SET TO THE ENGINEER FOR PREPARATION OF RECORD DRAWINGS.

### STATEMENT OF WORK

- A. THE CONTRACTOR SHALL PROVIDE ALL EQUIPMENT, LABOR, TOOLS AND MATERIALS TO COMPLETE THE WORK AS PER THESE SPECIFICATIONS AND THE ASSOCIATED PLANS. THE WORK SHALL INCLUDE BUT NOT NECESSARILY BE LIMITED TO:
- (1) SYSTEM OF LIGHTING CIRCUITS.
- (2) SYSTEM OF POWER CIRCUITS.
- (3) EMPTY CONDUIT SYSTEMS AS REQUIRED. (4) LIGHTING FIXTURES, LAMPS AND MOUNTING EQUIPMENT.
- (5) CONTROL WIRING
- (6) ELECTRICAL SERVICE.
- (7) TELEPHONE, TELEVISION CABLE AND COMPUTER
- RACEWAYS.
- WORK SPECIFIED ELSEWHERE: (I) TEMPORARY SERVICES.

(2) HEATING, COOLING & VENTILATING POWER AND THERMOSTAT RACEWAYS (SEE MECHANICAL PLANS AND COORDINATE WITH MECHANICAL CONTRACTOR.) (3) PAINTING.

INSTALL WIRING, CONDUIT AND EQUIPMENT TO PROVIDE ALL ELECTRICAL SYSTEMS AS DESCRIBED HEREIN AND ON THE PLANS. THIS SHALL INCLUDE PROVIDING TEMPORARY SERVICE FOR CONSTRUCTION AND ALL CONDUIT AND WIRING SYSTEMS AND POWER FOR MECHANICAL SYSTEMS AS DESCRIBED IN DIVISION 15 AND NECESSARY CONDUIT AND ENCLOSURES FOR TELEPHONE AND CABLE SERVICES AND DATA COMMUNICATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL INCIDENTAL WORK REQUIRED TO ACCOMPLISH THIS WORK INCLUDING BUT NOT LIMITED TO TRENCHING AND BACKFILLING OF TRENCHES, AND ALL NECESSARY PENETRATIONS.

### SUBMITTALS

- A. PRIOR TO ORDERING EQUIPMENT, THE CONTRACTOR SHALL MAKE SUBMITTALS (IN PDF FORMAT) FOR APPROVAL. THE SUBMITTALS SHALL INCLUDE DESCRIPTIVE DATA INCLUDING DIMENSIONS, VOLTAGE RATING, CURRENT RATING, WEIGHT, CAPACITY, DELIVERY TIME AND OTHER PERTINENT
- B. THE CONTRACTOR SHALL SUBMIT TWO SETS IN LOOSE LEAF BINDERS OF A COMPILATION OF CATALOG DATA OF EACH ITEM OF EQUIPMENT IN THE ELECTRICAL WORK TO THE ENGINEER, BEFORE FINAL PAYMENT IS MADE. THIS DATA SHALL INCLUDE OPERATING, MAINTENANCE AND SPARE PARTS INFORMATION.

### COORDINATION OF WORK

- A. THE CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND REVIEW DRAWINGS AND SPECIFICATIONS FOR ALL DISCIPLINES TO PROVIDE PROPER COORDINATION AND AVERT POSSIBLE INSTALLATION CONFLICTS. SHOULD DRASTIC CHANGES FROM ORIGINAL DRAWINGS BE NECESSARY, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND SECURE WRITTEN APPROVAL AND AGREEMENT FROM THE ENGINEER ON NECESSARY ADJUSTMENTS.
- B. THE CONTRACTOR SHALL COORDINATE WITH OTHER TRADES WHERE NECESSARY TO ASSURE PROPER INTERFACE BETWEEN ELECTRICAL, MECHANICAL, STRUCTURAL, AND ARCHITECTURAL SYSTEMS AND CONSTRUCTION.

EQUIPMENT AND MATERIALS

- A. EQUIPMENT AND MATERIALS SHALL BE NEW AND SHALL BEAR THE MANUFACTURER'S NAME, TRADE NAME AND THE UL LABEL IN EVERY CASE WHERE A STANDARD HAS BEEN ESTABLISHED FOR THE PARTICULAR MATERIAL. EQUIPMENT SHALL BE THE STANDARD PRODUCT OF A MANUFACTURER REGULARLY ENGAGED IN THE PRODUCTION OF THE REQUIRED TYPE OF EQUIPMENT, AND SHALL BE THE MANUFACTURER'S LATEST APPROVED DESIGN.
- B. EQUIPMENT AND MATERIALS OF THE SAME GENERAL TYPE SHALL BE OF THE SAME MAKE THROUGHOUT THE WORK TO PROVIDE UNIFORM APPEARANCE, OPERATION AND MAINTENANCE.
- C. DELIVERY AND STORAGE: EQUIPMENT AND MATERIALS SHALL BE DELIVERED TO THE SITE AND STORED IN ORIGINAL CONTAINERS, SUITABLY SHELTERED FROM THE ELEMENTS, BUT READILY ACCESSIBLE FOR INSPECTION BY THE ENGINEER UNTIL INSTALLED. ALL ITEMS SUBJECT TO MOISTURE DAMAGE (SUCH AS CONTROLS) SHALL BE STORED IN DRY, HEATED SPACES.

EQUIPMENT AND MATERIALS (CONT.)

- D. PROTECTION: EQUIPMENT SHALL BE TIGHTLY COVERED AND PROTECTED AGAINST DIRT, WATER AND CHEMICAL OR MECHANICAL INJURY AND THEFT. AT COMPLETION OF THE WORK, FIXTURES, EQUIPMENT AND MATERIALS SHALL BE FREE FROM DEFECTS AND DAMAGE AND SHALL BE CLEANED AND POLISHED AND TURNED OVER TO THE OWNER IN THE WORK SHALL BE MADE GOOD AT THE CONTRACTOR'S EXPENSE.
- E. DIMENSIONS: IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSURE THAT ITEMS INSTALLATION SHALL SUIT THE TRUE INTENT AND MEANING OF THE DRAWINGS AND SPECIFICATIONS.
- F. MANUFACTURER'S DIRECTIONS SHALL BE FOLLOWED COMPLETELY IN THE DELIVERY, STORAGE, PROTECTION AND INSTALLATION OF EQUIPMENT AND MATERIALS. NOTIFY THE AND THE MANUFACTURER'S DIRECTIONS AND OBTAIN THE ENGINEER'S WRITTEN INSTRUCTION BEFORE PRECEDING WITH THE WORK. SHOULD THE CONTRACTOR PERFORM ANY WORK THAT DOES NOT COMPLY WITH THE MANUFACTURER'S DIRECTIONS OR SUCH ARISING IN CORRECTING THE DEFICIENCIES.
- THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL ACCESSORIES, AND G. INCIDENTAL ITEMS TO COMPLETE THE WORK, READY TO USE AND FULLY OPERATIONAL
- STANDARD OF QUALITY. OTHER MATERIAL OF EQUAL QUALITY MAY BE SUBSTITUTED WITH APPROVAL BY THE ENGINEER.

# RACEWAYS

- STEEL TUBING, RIGID GALVANIZED STEEL, PVC, FLEXIBLE STEEL CONDUIT OR NEOPRENE COVERED FLEXIBLE STEEL CONDUIT.
- B. ALL CONDUIT SYSTEMS SHALL BE INSTALLED COMPLETE BEFORE PULLING WIRES.
- C. WATER TIGHT JUNCTION BOXES, FITTINGS, EXPANSION JOINTS, COMPRESSIONS FITTINGS, CONDUIT HUBS, ETC., SHALL BE PROVIDED, FOR ALL ELECTRICAL SYSTEMS WHEREVER CONSTRUCTION DICTATES INCLUDING OUTDOOR LOCATIONS.
- D. METALLIC TUBING SHALL ONLY BE USED IN AREAS NOT SUBJECT TO MECHANICAL ABUSE. RIGID GALVANIZED CONDUIT SHALL BE USED IN AREAS WHERE CONDUIT SHALL BE SUSCEPTIBLE TO SUCH ABUSE.
- E. FLEXIBLE CONDUIT USED IN OUTDOOR LOCATIONS OR INDOOR LOCATIONS WHERE EXPOSED AND UL LISTED. ALL FITTINGS FOR SUCH APPLICATIONS SHALL BE LIQUID TIGHT, NYLON INSULATED THROAT TYPE AS MANUFACTURED BY THOMAS AND BETTS, SERIES 5331 OR APPROVED EQUAL
- F. SUFFICIENT SLACK SHALL BE PROVIDED IN ALL FLEXIBLE CONDUIT CONNECTIONS TO REDUCE THE EFFECTS OF VIBRATION.
- G. INSULATED BUSHINGS SHALL BE USED ON ALL CONDUITS 1/2" AND LARGER. H. ALL CONDUIT BENDS SHALL HAVE A RADIUS GREATER THAN OR EQUAL TO THAT STIPULATED BY THE NEC. STANDARD FACTORY ELBOWS SHALL BE USED, FOR BENDS IN ALL 1/2" AND LARGER CONDUITS.
- I. PVC IS NOT TO BE INSTALLED EXPOSED.
- J. E.M.T. FITTINGS SHALL BE COMPRESSION TYPE.
- L. ALL LOW VOLTAGE CONDUIT (TEMPERATURE CONTROL, LIGHTING CONTROL, TELEPHONE/DATA ETC..) SHALL BE BLUE
- M. ALL FIRE ALARM CONDUIT SHALL BE RED.

### HANGERS AND SUPPORTS

- A. THE CONTRACTOR SHALL PROVIDE ADEQUATE SUPPORT FOR ALL RACEWAYS IN COMPLIANCE WITH THE NEC TO PREVENT APPRECIABLE SAGGING OF CONDUIT.
- BE SUPPORTED BY TRAPEZES OF CHANNELS SUSPENDED ON RODS. ALL SUPPORT
- C. PERFORATED STRAP IRON OR WIRE SHALL NOT BE USED FOR SUPPORTING CONDUITS OR EQUIPMENT
- D. WHERE LARGE CONDUITS ARE SUPPORTED BENEATH BAR JOIST, HANGER RODS SHALL THE JOIST AND SHALL SPAN TWO OR MORE JOIST TO DISTRIBUTE THE WEIGHT PROPERLY

E. SUPPORTS SHALL BE INSTALLED WITHIN THREE FEET OF EACH COUPLING OR CONNECTOR.

### JUNCTION, OUTLET AND PULL BOXES

- JUNCTION AND PULL BOXES SHALL BE INSTALLED WHERE SHOWN ON THE PLANS AND Α. WHERE REQUIRED TO OVERCOME MECHANICAL DIFFICULTIES DUE TO ARRANGEMENT OF RUNS. NO RUNS OVER 100' SHALL BE MADE WITHOUT THE USE OF A PULL BOX.
- B. ALL DEVICES SHALL BE SUPPORTED BY TWO STUDS.
- C. ALL BOXES SHALL BE GALVANIZED METAL INSIDE AND OUTSIDE AND SHALL BE PROVIDED WITH GALVANIZED COVERS. NO PLASTIC ENCLOSURES OR BOXES SHALL BE ACCEPTED, EXCEPT WHERE NOTED ON THE PLANS.

#### WALL PENETRATIONS

- A. ALL WALL PENETRATIONS SHALL BE CAULKED AND SEALED.
- B. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY SLEEVES AND
- CEILINGS OR THE ROOF.
- WIRE AND CABLES A. ALL WIRE AND CABLE SHALL BE SOFT DRAWN COPPER WITH INSULATION CONFORMING TO REQUIREMENTS OF THE NEC AND ALL RELEVANT ASTM SPECIFICATIONS.
- B. WIRE AND CABLE SHALL BE NEW, SHALL HAVE SIZE, GRADE OF INSULATION, VOLTAGE AND MANUFACTURER NAME, PERMANENTLY MARKED ON OUTER COVERING AT REGULAR INTERVALS.
- C. WIRE SHALL BE COLOR CODED WITH A SEPARATE COLOR FOR EACH PHASE AND NEUTRAL AND THE COLOR CODE SHALL BE CONSISTENT THROUGHOUT INSTALLATION.
- D. ALL WIRE NO. & AND LARGER SHALL BE STRANDED. WHERE NO. 12 OR 10 STRANDED IS USED, TERMINATE WITH INSULATED COMPRESSION LUG OF THE PROPER SIZE.
- E. ALL WIRE SHALL HAVE 600 VOLT TYPE THWN INSULATION, UNLESS SPECIFIED OTHERWISE ON THE PLANS.

FIRST CLASS CONDITION. DAMAGE OR DEFECTS DEVELOPING BEFORE ACCEPTANCE OF

FURNISHED FIT THE SPACE AVAILABLE. THE CONTRACTOR SHALL MAKE NECESSARY FIELD MEASUREMENTS TO ASCERTAIN SPACE REQUIREMENTS, INCLUDING THOSE FOR CONNECTIONS, AND SHALL FURNISH AND INSTALL SUCH SIZES AND SHAPES OF EQUIPMENT THAT THE FINAL

ENGINEER OF ANY CONFLICT BETWEEN ANY REQUIREMENT OF THE CONTRACT DOCUMENTS

WRITTEN INSTRUCTIONS FROM THE ENGINEER, THE CONTRACTOR SHALL BEAR ALL COSTS

H. EQUIPMENT AND MATERIALS SPECIFIED HEREIN ARE NAMED TO ESTABLISH A

# A. ALL WIRING SYSTEMS SHALL BE INSTALLED IN RACEWAYS CONSISTING OF GALVANIZED

# TO CONTINUOUS OR INTERMITTENT MOISTURE SHALL BE LIQUID TIGHT, NEOPRENE COVERED

# K. "MC" CABLE IS ALLOWED FOR FIXTURE "WHIPS" ONLY. NO DAISY CHAINING OF FIXTURES IS ALLOWED.

# B. MULTIPLE CONDUITS RUNNING HORIZONTALLY AT THE SAME GRADE AND ELEVATION MAY COMPONENTS SHALL BE OF ADEQUATE SIZE FOR LOADED WEIGHTS BEING SUPPORTED.

BE SECURED TO ANGLE IRONS OF ADEQUATE SIZE. EACH ANGLE SHALL BE WELDED TO

CHASES FOR ALL WORK PASSING THROUGH AND ATTACHING TO WALLS, FLOORS,

# GROUNDING

- A. ALL ELECTRICAL EQUIPMENT AND ASSOCIATED SYSTEMS SHALL BE GROUNDED IN STRICT COMPLIANCE WITH ARTICLE 250 OF THE NEC.
- B. ALL CIRCUITS SHALL HAVE A GREEN COVERED GROUND WIRE SIZED PER NEC REQUIREMENTS OR AS PER THE PLANS. GROUND WIRES SHALL BE BONDED TO ALL PANELS, ENCLOSURES, MOTOR FRAMES, EQUIPMENT FRAMES, OUTLET, JUNCTION AND PULL BOXES.

WIRING DEVICES

- A. ALL DISCONNECT SWITCHES SHALL BE HEAVY DUTY TYPE.
- B. DISTRIBUTION PANELS SHALL BE SQUARE D, GENERAL ELECTRIC, CUTLER HAMMER OR APPROVED EQUAL AS SCHEDULED ON PLANS.
- C. RECEPTACLES SHALL BE 20 AMP, 3 WIRE GROUNDING TYPE 5362 OR EQUAL. TAMPER RESISTANT.
- D. LIGHT SWITCHES SHALL BE 20 AMP 125/277 VOLT TYPE 1221 OR EQUAL.
- E. PROVIDE HIGH IMPACT NYLON COVERS FOR ALL INTERIOR DEVICES.

COLOR TO BE COORDINATED WITH THE ARCHITECT AND OWNER.

F. EXTERIOR WEATHER RESISTANT DEVICES SHALL BE METAL NEMA 3R RATED, WHILE IN USE. LIGHTING FIXTURES

A. PROVIDE FIXTURES OF THE TYPE SHOWN ON THE DRAWINGS AND WITH THE FOLLOWING ACCESSORIES AS APPLICABLE.

- I. RECESSED FIXTURES:
- A. PROVIDE HOUSING NEC AND U.L. LISTED FOR DIRECT CONTACT WITH INSULATION. B. PROVIDE FRAME OF TYPE REQUIRED FOR THAT PARTICULAR CEILING CONSTRUCTION A. AFTER INSTALLATION IS COMPLETE, THE CONTRACTOR SHALL CONDUCT OPERATING AND FINISH.
- C. HOLD ALL INSULATION AWAY FROM FIXTURES BY 3".
- 2. FLUORESCENT FIXTURES: A. PROVIDE BALLASTS AS PER THE FIXTURE SCHEDULE.
  - B. PROVIDE LOW TEMPERATURE TYPE BALLAST FOR FIXTURES IN LOW TEMPERATURE INDOOR AREAS AND AT ALL OUTDOOR AREAS.
  - C. PROVIDE LAMPS AT ALL FLUORESCENT FIXTURES PER FIXTURE SCHEDULE.
- 3. LED LAMPS: A. LED LAMP MANUFACTURERS MUST HAVE ENERGY STAR/DLC RATING OR SHALL OFFER LH-80, TM-21 TEST RESULTS.

B. NOTE LAMP COLOR ON THE FIXTURE SCHEDULE, MINIMUM SHALL BE 80.

MOTOR STARTERS

- A. PROVIDE SQUARE D, G.E., CUTLER HAMMER OR EQUAL STARTING SWITCHES PROTECTIVE DEVICES AND OTHER ITEMS REQUIRED BY THE MANUFACTURER AND THE NEC.
  - I. VERIFY HORSEPOWER RATINGS AND VOLTAGES.
  - PROVIDE AUTOMATIC OR REMOTE CONTROL AND ACCESSORIES AS REQUIRED FOR PROPER OPERATION AND AS SHOWN ON DRAWINGS.
- B. CONDUIT CONNECTIONS:
- INSTALL 24" MAX. OF FLEXIBLE CONDUIT BETWEEN EQUIPMENT AND MOTORS THAT ARE ATTACHED TO BUILDINGS. 2. AT EXTERIOR AND DAMP INTERIOR LOCATIONS USE POLYVINYL CHLORIDE JACKETED FLEXIBLE CONDUIT.

ELECTRICAL WORK

A. WHEREVER EQUIPMENT REQUIRING ELECTRICAL CONNECTION IS SPECIFIED, ALL WIRING SHALL BE FURNISHED AND INSTALLED UNDER THE ELECTRICAL SECTION OF THE SPECIFICATIONS. STARTING SWITCHES, PROTECTIVE DEVICES AND OTHER MEANS FOR THE OPERATION AND CONTROL OF EQUIPMENT SHALL BE FURNISHED AND ELECTRICALLY CONNECTED COMPLETE UNDER THE ELECTRICAL SECTION, UNLESS OTHERWISE SPECIFICALLY NOTED. ADDITIONAL DISCONNECTS REQUIRED BY THE NATIONAL ELECTRICAL CODE SHALL BE FURNISHED, INSTALLED AND CONNECTED.

**IDENTIFICATION** 

- A. THE ELECTRICAL CONTRACTOR SHALL PROVIDE NAMEPLATES FOR ALL ELECTRICAL EQUIPMENT, IDENTIFYING EACH ITEM BY NAME. THE CONTRACTOR SHALL PROVIDE NAMEPLATES ON ALL PANELS, STARTERS, DISCONNECT SWITCHES, ETC.
- B. THE NAMEPLATES SHALL BE CONSTRUCTED OF LAMINATED BAKELITE AND BE SECURELY FASTENED TO THE EQUIPMENT BY AN APPROVED MEANS (NO STICK-ON TAPE WILL BE ALLOWED). THE NAMEPLATES SHALL BE WHITE IN COLOR WITH ENGRAVED UPPER CASE LETTERS BLACK IN COLOR. THE LETTERS SHALL BE A MINIMUM OF 3/8" IN HEIGHT.
- C. PROVIDE TYPED PANEL SCHEDULES FOR ALL PANEL BOARDS ADDED OR CHANGED.
- D. ALL JUNCTION BOXES SHALL BE HAND LABELED WITH A PERMANENT BLACK MARKER INDICATING PANEL AND CIRCUIT FEEDS CONTAINED.
- E. PROVIDE LABELS ON EACH PANEL DESCRIBING VOLTAGE AND PHASE, AND COLOR CODE OF THE CABLE WITHIN.

TELEPHONE, CABLE TV, AND DATA SYSTEM

- A. TELEPHONE, CABLE TV AND DATA SYSTEMS SHALL CONSIST OF A METAL RACEWAY, AND CONDUITS. COORDINATE EFFORTS WITH RESPECTIVE TELEPHONE AND THE OWNER.
- PROVIDE CONDUIT TO ALL TELEPHONE, TELEVISION AND DATA OUTLETS AS SHOWN ON DRAWINGS. MINIMUM SIZE SHALL BE I". TERMINATE CONDUIT 6" ABOVE CEILING WITH BUSHING AND PULL STRING.
- C. TELEVISION AND TELEPHONE OUTLET BOXES TO BE STANDARD 4" SQUARE ELECTRIC BOXES WITH EXTENSION PLATE FLUSH WITH FINISH. PROVIDE CONDUIT TO 6" ABOVE CEILING WITH BUSHING AND PULL STRINGS.
- D. ALL RACEWAYS SHALL BE PROVIDED WITH A SUITABLE PULL WIRE IN EACH RUN TO FACILITATE THE INSTALLATION OF TELEPHONE, TELEVISION AND DATA CABLES.

FIRE ALARM

- TO BE COMPLETE AND FUNCTIONAL
- THIS SPECIFICATION.

QUALIFICATIONS.

TEST FOR APPROVAL BY THE ENGINEER. TEST SHALL INCLUDE VERIFICATION OF DIRECTION OF ROTATION FOR ALL MOTORS. THE EQUIPMENT SHALL BE DEMONSTRATED TO OPERATE IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS. THE TEST SHALL BE PERFORMED IN THE PRESENCE OF THE ENGINEER. GUARANTEE

AND MATERIAL UNDER NORMAL USE AND SERVICE.

FINALLY

A. IT IS THE INTENTION THAT THIS SPECIFICATION SHALL PROVIDE A COMPLETE INSTALLATION. ALL ACCESSORIES AND APPARATUS NECESSARY FOR A COMPLETE OPERATIONAL SYSTEM SHALL BE INCLUDED. THE OMISSION OF SPECIFIC REFERENCE TO ANY PART OF THE WORK NECESSARY FOR SUCH COMPLETE INSTALLATION SHALL NOT BE INTERPRETED AS RELIEVING THIS CONTRACTOR FROM FURNISHING AND INSTALLING SUCH PARTS.

# EXCAVATION AND TRENCHING FOR ELECTRICAL CONDUIT

A. PROTECTION OF EXISTING UTILITIES: EXISTING UTILITY LINES TO BE RETAINED THAT ARE SHOWN ON THE DRAWINGS OR THE LOCATIONS OF WHICH ARE MADE KNOWN TO THE CONTRACTOR PRIOR TO EXCAVATION, AS WELL AS ALL UTILITY LINES UNCOVERED DURING EXCAVATION OPERATIONS, SHALL BE PROTECTED FROM DAMAGE DURING EXCAVATION AND BACKFILLING, AND IF DAMAGED, SHALL BE REPAIRED BY THE CONTRACTOR, AT HIS EXPENSE.

A. THE BIDDING CONTRACTOR IS TO DESIGN THE NEW PLAN TO MEET ALL NATIONAL AND LOCAL CODES AS WELL AS THE NFPA. ALL COSTS NECESSARY FOR A COMPLETE SYSTEM ARE TO BE INCLUDED IN THE BID PRICE. NO EXTRAS WILL BE CONSIDERED. THE SYSTEM IS

ALL EQUIPMENT IS TO BE NEW AND OF THE MOST MODERN DESIGN. ALL DEVICES SHALL BE LISTED FOR THE PURPOSE FOR WHICH THEY ARE USED AND SHALL BE INSTALLED IN COMPLIANCE WITH ALL CODES AND STANDARDS. COORDINATE THE INSTALLATION WITH THE AUTHORITY HAVING JURISDICTION. PROVIDE PLANS AND CALCULATIONS TO THE FIRE MARSHALL AND ENGINEER PRIOR TO THE START OF CONSTRUCTION. PROVIDE FULL SUBMITTALS AS PER

C. THE BIDDING CONTRACTOR SHALL PROVIDE ALL COSTS FOR ANY REQUIRED HARDWARE AND SHALL COORDINATE THE INSTALLATION WITH THE AUTHORITY HAVING JURISDICTION PRIOR TO SUBMITTING BID ..

THE INSTALLATION ORGANIZATION SHALL BE A COMPANY SPECIALIZING IN THE INSTALLATION OF DETECTION AND ALARM SYSTEM. THE ORGANIZATION SHALL HAVE A MINIMUM OF 10 YEARS EXPERIENCE IN THIS FIELD. THIS ORGANIZATION SHALL HAVE AN EMPLOYEE WHO IS NICET LEVEL III OR HIGHER. ALL SUBMITTALS SHALL INCLUDE A FULL DISCLOSURE OF INSTALLER

A. THE WORK HEREIN SPECIFIED SHALL BE FREE FROM DEFECTS IN WORKMANSHIP

IF WITHIN TWELVE (12) MONTHS FROM DATE OF SUBSTANTIAL COMPLETION OF THE WORK HEREIN DESCRIBED, ANY OF THE EQUIPMENT OR MATERIALS, OR THE INSTALLATION THEREOF, IS FOUND TO BE DEFECTIVE IN WORKMANSHIP OR MATERIALS, IT SHALL BE REPLACED OR REPAIRED FREE OF CHARGE.







20100

03/03/2021

ELECTRICAL

E٦

SPECIFICATIONS

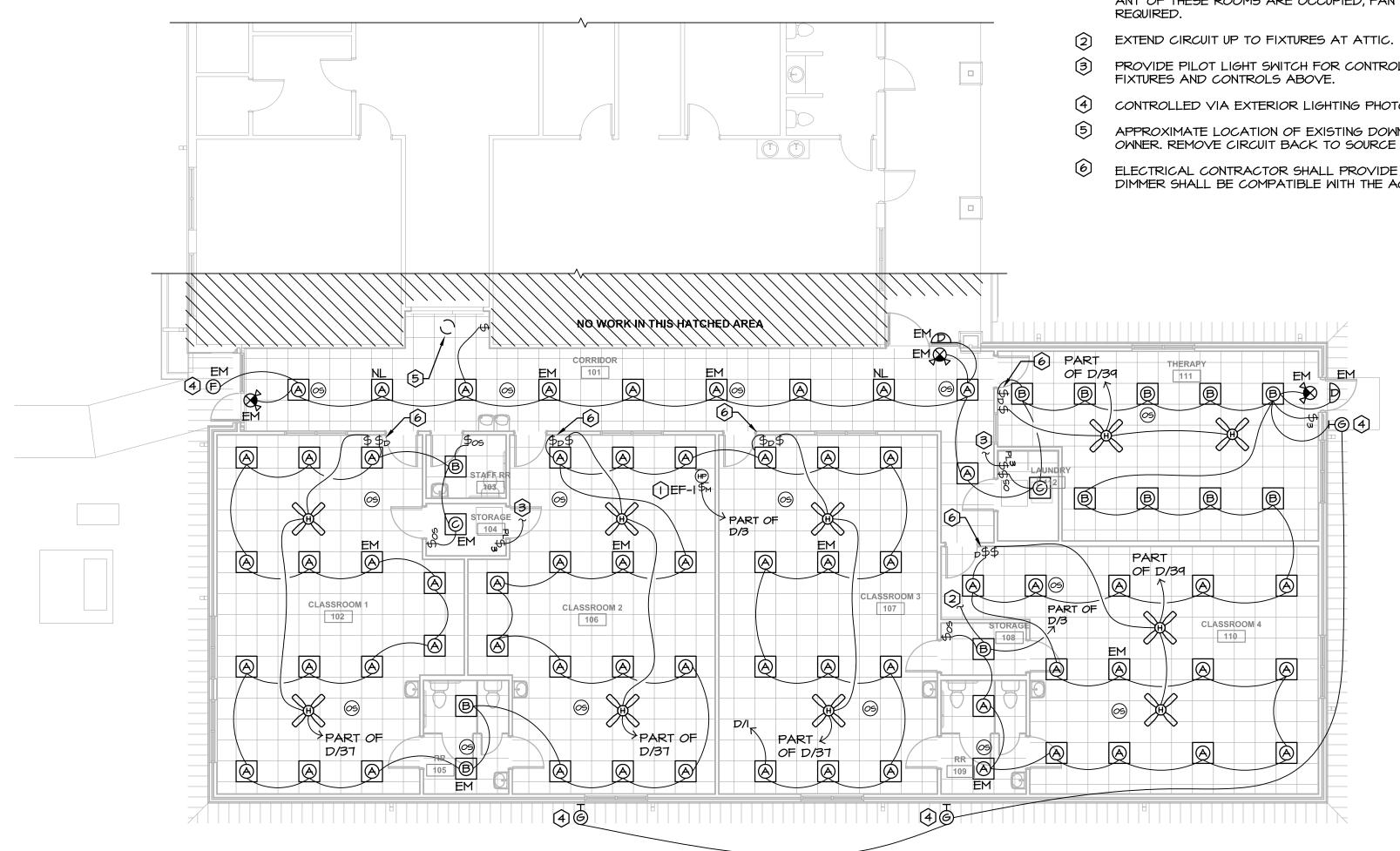
Proiect number

Date

Revisions:



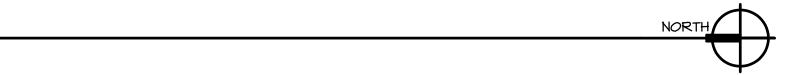
**HSA**Engineering 501 / 327 / 5757 office 1150 Bob Courtway Drive Conway, Arkansas 72032 HSAConsultants.com

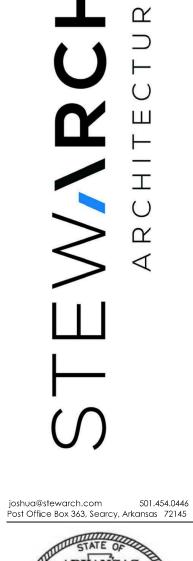




# KEYED ELECTRICAL NOTES

- EF-1. INTERCONNECT WITH LIGHTING CONTROLS AT STAFF RR 103, RR 105, RR 109, LAUNDRY 112. IF ANY OF THESE ROOMS ARE OCCUPIED, FAN SHALL BE ON. PROVIDE QUANTITY OF RELAYS AS
- PROVIDE PILOT LIGHT SWITCH FOR CONTROL OF NEW ATTIC LIGHTS. EXTEND CIRCUIT UP TO
- CONTROLLED VIA EXTERIOR LIGHTING PHOTOCELL. PHOTOCELL ON/PHOTOCELL OFF.
- APPROXIMATE LOCATION OF EXISTING DOWNLIGHT TO BE REMOVED AND RETURNED TO OWNER. REMOVE CIRCUIT BACK TO SOURCE OR NEXT DEVICE TO REMAIN.
- ELECTRICAL CONTRACTOR SHALL PROVIDE A SINGLE POLE WALLBOX PRESET SLIDE DIMMER. DIMMER SHALL BE COMPATIBLE WITH THE ACTUAL FIXTURES USED. TYPICAL OF ALL.









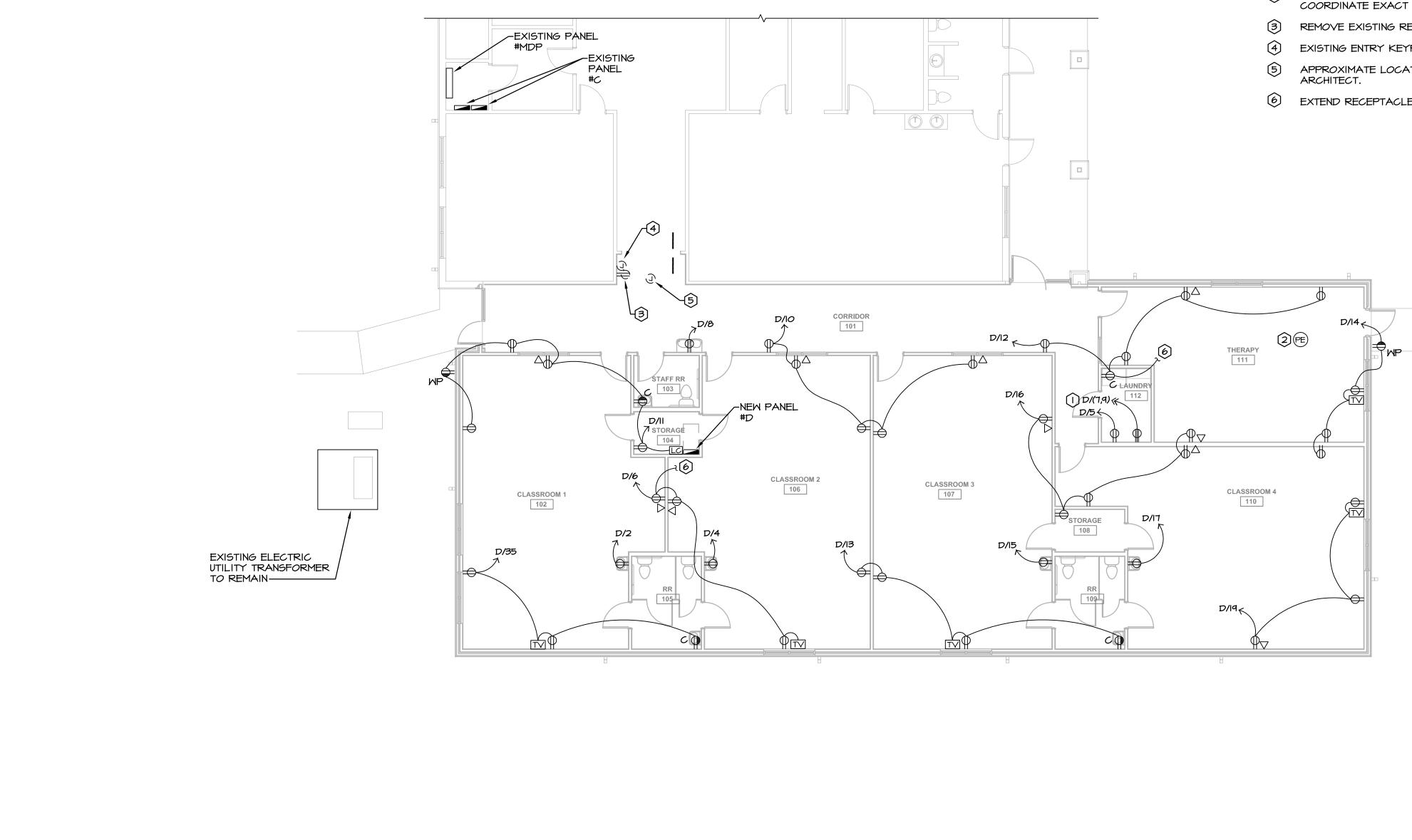
20100 Project number: 03/03/2021 Date Revisions:

LIGHTING PLAN

E2.1



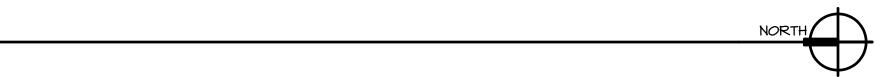
**HSA**Engineering 501 / 327 / 5757 office 1150 Bob Courtway Drive Conway, Arkansas 72032 HSAConsultants.com



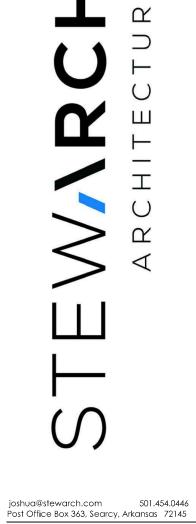
POWER PLAN

# KEYED ELECTRICAL NOTES

- PROVIDE A 30-2P RECEPTACLE FOR DRYER. VERIFY NEMA CONFIGURATION WITH THE OWNER PRIOR TO ROUGH IN. 2
- PROVIDE EXTERIOR ROOF MOUNTED PHOTOCELL WITH EAST EXPOSURE. COORDINATE EXACT FINAL MOUNTING LOCATION IN THE FIELD.
- REMOVE EXISTING RECEPTACLE, BACK TO SOURCE OR NEXT DEVICE TO REMAIN.
- EXISTING ENTRY KEYPAD. COORDINATE WITH THE OWNER AND ARCHITECT.
- 6 EXTEND RECEPTACLE CIRCUIT FROM BELOW.



APPROXIMATE LOCATION OF EXISTING SURVEILLANCE CAMERA. COORDINATE WITH THE OWNER AND









**HSA**Engineering 501 / 327 / 5757 office 1150 Bob Courtway Drive Conway, Arkansas 72032 HSAConsultants.com

HSA JOB # 21-014



POWER PLAN

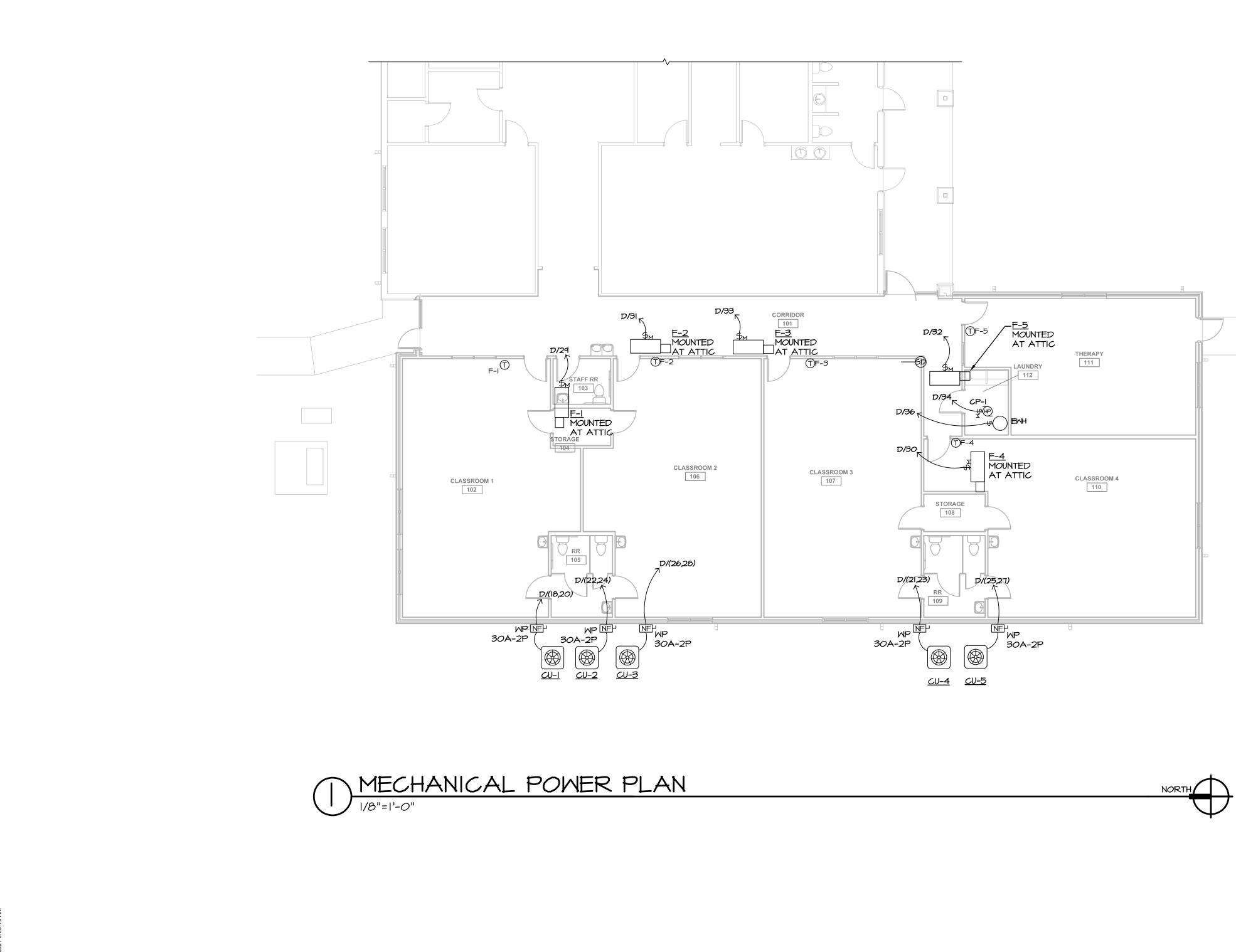
Project number:

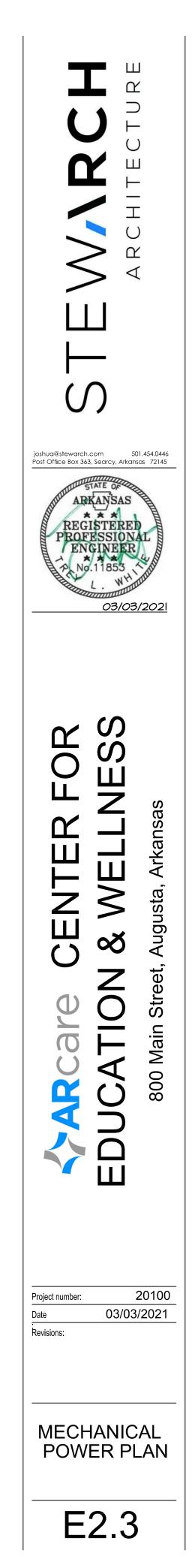
Date

Revisions:

20100

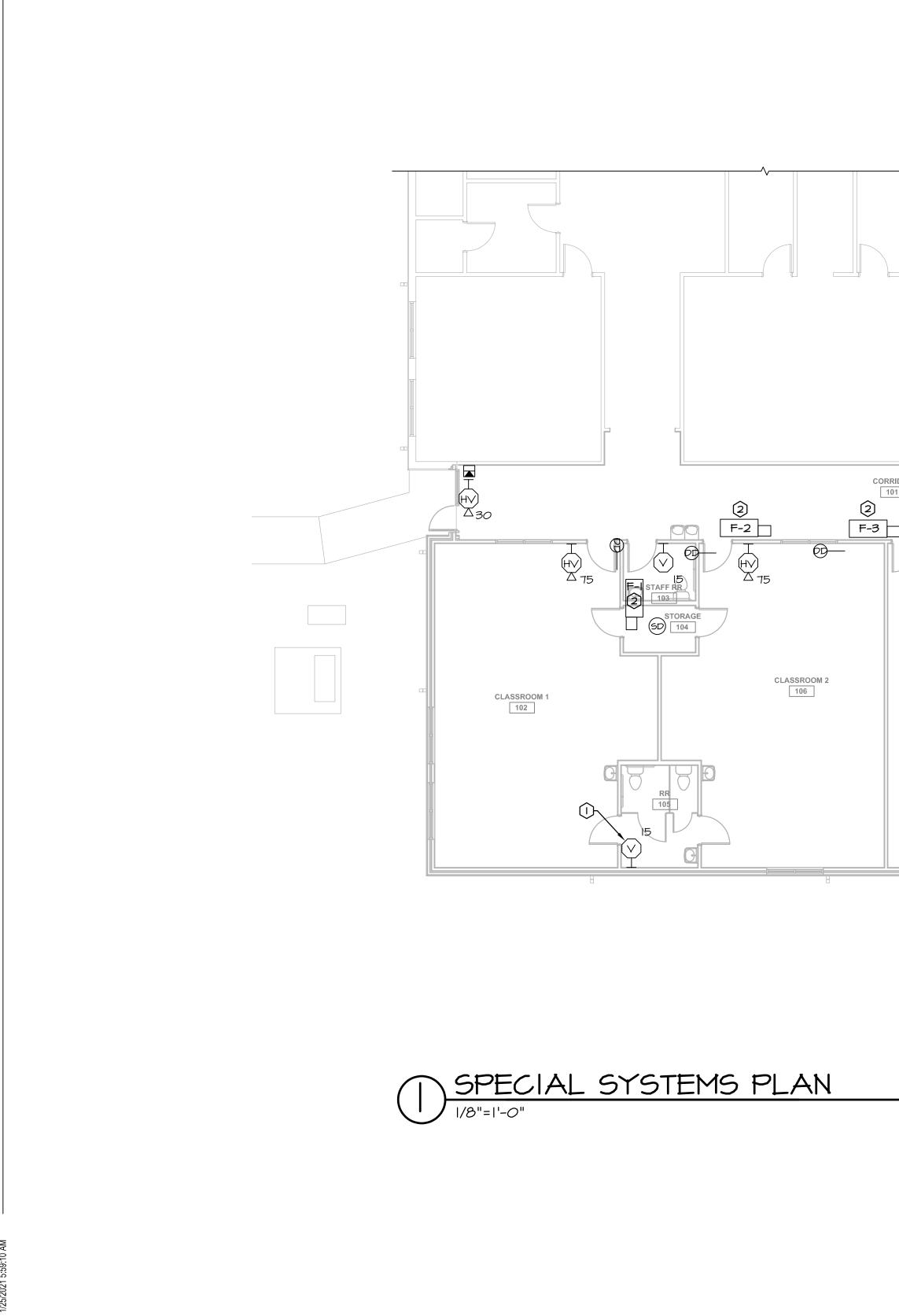
03/03/2021







HSAEngineering 501 / 327 / 5757 office 1150 Bob Courtway Drive Conway, Arkansas 72032 HSAConsultants.com



# GENERAL ELECTRICAL NOTES

I. FIELD VERIFY MANUFACTURER AND LOCATION OR FIRE ALARM CONTROL PANEL.

NORTH

# 2 MOUNTED AT ATTIC. CORRIDOI 101 HV A30 -<u>F-5</u>2 THERAPY -60 30 $\cap$ LAUNDRY HD F-42 CLASSROOM 3 CLASSROOM 4 SD 3C

2

# KEYED ELECTRICAL NOTES

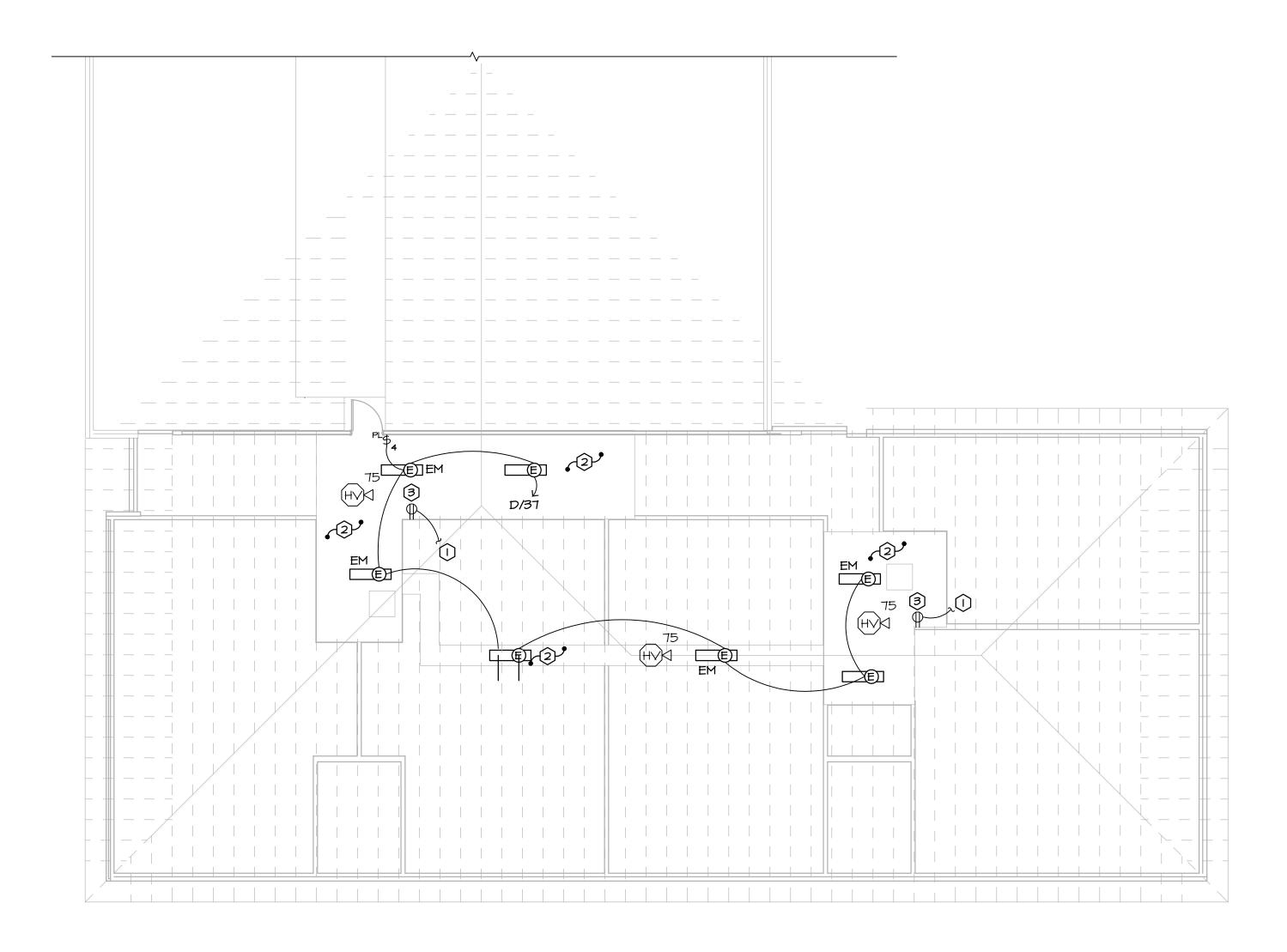
() ALL NEW FIRE ALARM DEVICES SHALL BE COMPATIBLE WITH AND CONNECT TO THE EXISTING FIRE ALARM CONTROL PANEL. FIELD VERIFY MANUFACTURER AND LOCATION. TYPICAL OF ALL.



**HSA**Engineering 501 / 327 / 5757 office 1150 Bob Courtway Drive Conway, Arkansas 72032 HSAConsultants.com

HSA JOB # 21-014

Ŷ  $\supset$ Ш \_ Т  $\bigcirc$ N  $\int$ joshua@stewarch.com 501.454.0446 Post Office Box 363, Searcy, Arkansas 72145 ARKANSAS \* \* \* 03/03/2021 С) M U.  $\bigcirc$ Ш  $\mathbb{H}$ CENT à, August 5 య 800 Main Street, **TION** are EDUC 20100 Project number: 03/03/2021 Date Revisions: SPECIAL SYSTEMS PLAN E2.4





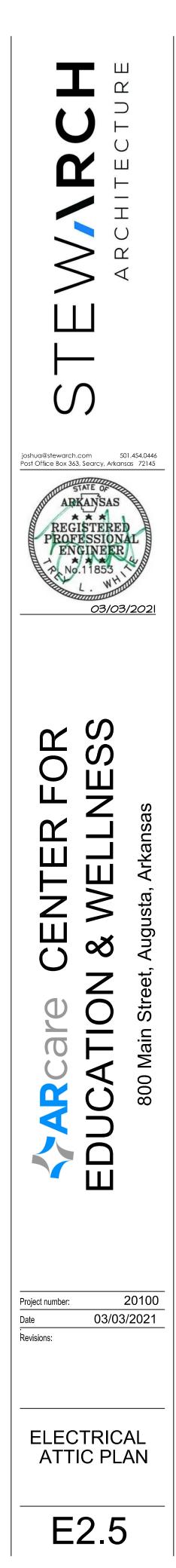
# GENERAL ELECTRICAL NOTES

- EXTEND RECEPTACLE CIRCUIT FROM BELOW.
- 2
- 3



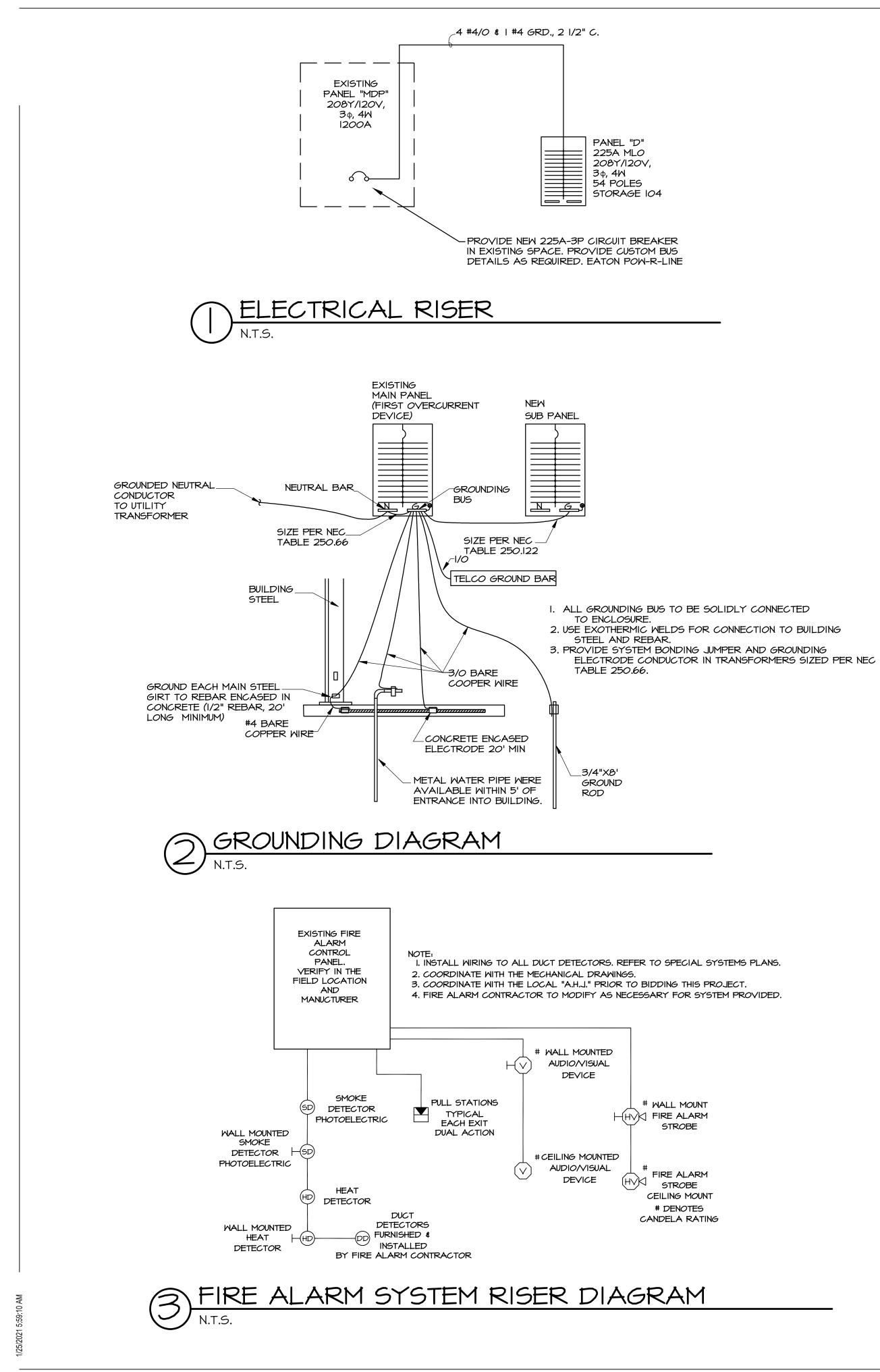
APPROXIMATE LOCATION OF SURFACE MOUNT LIGHT FIXTURES. ADJUST FINAL LOCATION TO AVOID CONFLICTS WITH DUCTWORK, PIPING, ETC. PROVIDE ALL REQUIRED HARDWARE.

COORDINATE IN THE FIELD EXACT FINAL MOUNTING LOCATION FOR MAINTENANCE RECEPTACLE.





**HSA**Engineering 501 / 327 / 5757 office 1150 Bob Courtway Drive Conway, Arkansas 72032 HSAConsultants.com



							<u> </u>			
						<u>G F</u>	<del> </del> T	<u>  N</u>	<u>g fixt</u>	<u>URE SCHEDULE</u>
MADE	VOLT			LAMP		MOUN	NTING	5		CATALOG NO.
MARK	VOLI	MATT	NO.	TYPE	BRKT	PEND	REC	SURF	MANUFACTURER	CATALOG NO.
~	UNV	29	-	LED W/ UNIT			×		COLUMBIA WILLIAMS	LCAT22-27MLG-R-EDIU AT3-22-L40/827-P-DIMI-UNV
в	UNV	32	-	LED W/ UNIT			×		<i>CO</i> LUMBIA WILLIAMS	LCAT22-27HLG-R-EDIU AT3-22-L40/827-P-DIMI-UNV
с	UNV	32	-	LED W/ UNIT				×	COLUMBIA WILLIAMS	LCAT22-40HL-SM-R-EDIU ATS3-22-L40/840-P-DIMI-UNV
D	UNV	10	-	LED W UNIT				×	ISOLATE WILLIAMS	ELED-EM-BZ EMER/DECO-DBR-LT-D
E	UNV	30	-	LED W/ UNIT				×	COLUMBIA WILLIAMS	MP54-40MW-CWEU 75R-4-L50/840-DIM-UNV
F	UNV	23	-	LED W/ UNIT			×		PRESCOLITE WILLIAMS	LTR-6RD-H-ML20L-LTR-6RDTL-40K8-MD-5-WT 6DR-TL-L20/840-DIM-UNV-0M-0F-C5-MWT-N-FI
6	UNV	20	-	LED W UNIT				×	PRESCOLITE WILLIAMS	WPAD520U-40-B WL5-Q-X-L22-840-X-DIM-UNV
н	UNV	50	-	LED W/ UNIT				×	QUORUM	CUSTOM HUGGER 11425-6 OR APPROVED EQUAL
<b>Ø</b>	120	5	NA	LED W UNIT				×	COMPASS WILLIAMS	CE SERIES EXIT-R-EM-WHT-120V
×,	120	II	NA	W/ UNIT				×	COMPASS WILLIAMS	CC SERIES EXIT/EM/LED-R-WHT-120V

GENERAL NOTES:

NOTE : HOLD ALL INSULATION OFF RECESSED FIXTURES AND A MINIMUM OF 3" TO THE SIDE.

NOTE : EXIT LIGHTS AND EMERGENCY LIGHTS REQUIRES UNSWITCHED HOT WIRE PER MANUFACTURER RECOMMENDATION. : EM DENOTES EMERGENCY BATTERY PACK GOOD FOR MINIMUM OF 1.5 HOURS.

NOTE : ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL DRIVER AND LEDS THAT NOTE

WILL PROVIDE THE OWNER WITH A FIVE YEAR WARRANTY.

NOTE : FIXTURES DENOTED AS NIGHT LIGHTS (NL) SHALL BE WIRED AHEAD OF LOCAL CONTROLS.

							F	<u> </u>	1 E L	S	СН	ED	ULE	<u> </u>								
PANEL MARK: D MANUFACTURER: EATON										TON TYPE: PR							FAULT RA	TING:		12kAlC		
MAIN BRK'R AMPS:		MLO S	MLO SIZE: 225								D:					•		WIRE:		RE	FER TO RISER	
VOLTAGE: 20	08Y/120V		PHASE	:		į	3 <b>φ</b> , 4	М			MOL	INTIN	<u>G:</u>			SUR	FACE		REMARKS	5:		CU BUS
DESCRIPTION		LOAD		SIZE .	912E MIRE SIZE	₽₩	Р Е	POLE	TRIP	circ.	CIRC.	ткір	POLE	# OF MIRES	6RD SIZE	<b>MRE</b> SIZE	₽₩		LOAD			DESCRIPTION
DESCRIPTION	ΦA	ΦB	ቀር	30	I I I I I I I I I I I I I I I I I I I	<u>5</u> 0	# <u></u>	ЬО	Ľ₽	ซื	CE	¥	РО	# <u></u>	ซีเรี	≣ S	<u>S</u> u	ΦA	ΦB	ቀር		DESCRIPTION
LTG	1170			3/4	10	0	З	Ι	20	Ι	2	20	-	З	12	12	3/4	600			EWC	
LTG		1300		3/4	10	10	З	Ι	20	З	4								600		EWC	
WASHER			1500	3/4	10	0	З	Ι	20	5	6									720	REC	
	2250			3/4		2	4	ſ	30	7	8		1			-		600			EWC	
DRYER		2250		] 5/4	10	10	4	2	30	٩	10								900		REC	
REC			1080		12	12	З	I	20		12									900	REC	
REC	900									13	14							900			REC	
EMC		600								15	16	$\downarrow$	$\downarrow$	$\downarrow$	$\downarrow$	$\downarrow$	$\downarrow$		1080		REC	
EMC			600			1				17	18		<u>,</u>							סדדו		
REC	720				$\downarrow$	$\downarrow$	$\downarrow$	$\downarrow$		19	20	25	2	4	10	10	3/4 -	0771			- CU-I	
		0771		- -		-		*	~-	21	22	<u> </u>	_				3/1		0771			
CU-4			0771			10	4	2	25	23	24	25	2	4	10	10	3/4 -			0771	- CU-2	
	1250									25	26		_					0771				
CU-5		1250		3/4	12	12	4	2	20	27	28	25	2	4	10	10	3/4		0771		- CU-3	
F-I			780	3/4	12	12	3	Ι		29	30	20	Ι	3	12	12	3/4			780	F-4	
F-2	780			3/4	12	12	З			31	32			3	12	12	3/4	780			F-5	
F-3		780		3/4	12	12	3			33	34			3	12	12	3/4		530		CP-I	
REC			720	3/4	12	12	3			35	36			З	12	12	3/4			1500	EMH	
CLG FANS	300			3/4	12	12	З			37	38			•	•	•	•	•			SPA	RE
CLG FANS		200		3/4	12	12	3			39	40			•	•	•	•		•			
SPARE				1						41	42			•	•	•				· ·		
				1						43	44			•	•	•		•				
 				1						45	46			•	•	•			•			
				1						47	48			•	•	•						
				1						49	50			•	•	•		•				
				1						51	52			•	•	•			· ·			
				1						53	54				•	•						
TOTAL WATTS:	40550	1	PHA	SE A:	<u> </u>	130	80	ΤP	HASE		1430	20	Ť۴	HASE	С:	13	3170	D	VERSITY:	1	<u> </u>	
	CONNECTED			SE A:				_	HASE					HASE					OTAL AMF			

NOTES:

\* DENOTES GROUND FAULT CIRCUIT INTERRUPTER TYPE CIRCUIT BREAKER

REMARKS
2X2 CENTER BASKET TYPE TROFFER. 3400 LUMENS, 2700K. RECTANGULAR PERFORATED SHIELD. RECESS LAY IN CEILING. 0-10V TO 1% DIMMABLE DRIVER.
2X2 CENTER BASKET TYPE TROFFER. 3700 LUMENS, 2700K. RECTANGULAR PERFORATED SHIELD. RECESS LAY IN CEILING. 0-10V TO 1% DIMMABLE DRIVER.
2X2 CENTER BASKET TYPE TROFFER. 3700 LUMENS, 4000K. RECTANGULAR PERFORATED SHIELD. RECESS LAY IN CEILING. 0-10V TO 1% DIMMABLE DRIVER.
EXTERIOR EMEGENCY LIGHT. NICAD BATTERY RATED MINIMUM I 1/2 HOURS. WET LABEL. ARCHITECT SHALL SELECT STANDARD FINISH. SELF DIAGNOSTICS AND HIGH CHARGE INDICATOR.
4' LENS STRIP. 3800 LUMENS, 4000K. CURVED FROSTED ACRYLIC LENS. WIDE DISTRIBUTION. PROVIDE ALL REQUIRED MOUNTING HARDWARE FOR SURFACE MOUNTING.
6" APERTURE LED DOWNLIGHT. 2000 LUMENS, 4000K. MEDIUM DISTRIBUTION. SPECULAR REFLECTOR. DAMP LABEL.
EXTERIOR LED WALL PACK. 2100 LUMENS, 4000K. WET LABEL. BRONZE FINISH. MOUNT AS HIGH AS POSSIBLE ON WALL.

42" - 5 BLADE CLG FAN. ADJUSTABLE SPEED. SURFACE MOUNT. WITHOUT LIGHT KIT. PROVIDE FAN SPEED CONTROLLER. WHITE

THERMOPLASTIC LED EXIT. NICAD BATTERY RATED MINIMUM I 1/2 HOURS. RED ON WHITE. PROVIDE DIRECTIONAL INDICATORS AS REQUIRED. TEST SWITCH AND HIGH CHARGE INDICATOR.

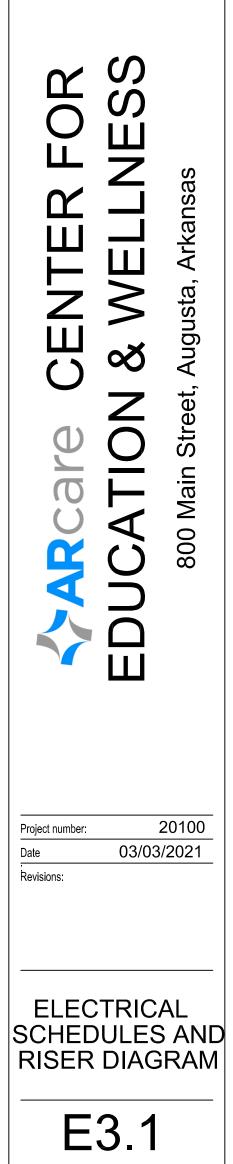
COMBINATION EXIT/EMERGENCY UNIT. NICAD BATTERY RATED MINIMUM | 1/2 HOURS. PROVIDE DIRECTIONAL INDICATORS AS REQUIRED. RED ON WHITE. TEST SWITCH AND HIGH CHARGE INDICATOR.



**HSA**Engineering

501 / 327 / 5757 office 1150 Bob Courtway Drive Conway, Arkansas 72032 HSAConsultants.com





# <u>GENERAL NOTES</u>

- I. COORDINATE GRILLE LOCATIONS WITH LIGHT FIXTURES, SPRINKLERS AND CEILING GRID.
- 2. INDICATED DUCT SIZES ARE NET FREE AREA.
- 3. ADJUST ALL AIR QUANTITIES AS SHOWN ON THE PLANS AFTER COMPLETION OF THE JOB.
- 4. INSULATE THE SUPPLY GRILLE TOPS, RETURN AIR GRILLE PLENUMS AND EXHAUST AIR PLENUMS WITH R-6 FOIL BACKED INSULATION.
- 5. EXTERNALLY INSULATE ALL ROUND SUPPLY AND RETURN DUCT WITH R-6 FOIL BACKED INSULATION. INTERNALLY INSULATE ALL RECTANGULAR SUPPLY AND RETURN DUCT WITH R-6 INSULATION PER ARKANSAS MECHANICAL CODE. ATTACH THE INTERNAL INSULATION TO THE DUCT WITH APPROVED ADHESIVE AND WELDED FASTENERS.
- 6. MECHANICAL CONTRACTOR SHALL COORDINATE ALL DUCTWORK WITH FIELD CONDITIONS AND PROVIDE ALL OFFSETS, BENDS, TRANSITIONS AND SPECIAL FITTINGS FOR A COMPLETE INSTALLATION OF THE SYSTEMS.
- 7. INTERIOR OF ALL DUCT PLENUMS VISIBLE THROUGH GRILLE SHALL BE PAINTED MATTE BLACK PRIOR TO INSTALLATION.
- 8. PAINT ALL SUPPLY AND RETURN AIR GRILLES NOT SPECIFIED AS PRE-FINISHED, TO ARCHITECT'S SPECIFICATIONS UNLESS OTHERWISE SPECIFIED.
- 9. MAINTAIN 10 FT. MINIMUM CLEARANCE BETWEEN FRESH AIR INTAKES AND ALL EXHAUST OUTLETS, GAS FLUES AND PLUMBING VENTS.
- IO. INSTALL VOLUME CONTROL DAMPERS IN SUPPLY, RETURN, EXHAUST AND FRESH AIR BRANCH DUCT RUNS.
- II. ALL MECHANICAL INSTALLATIONS SHALL CONFORM TO THE LATEST ACCEPTABLE ARKANSAS MECHANICAL CODE.
- 12. SEAL ALL DUCT SEAMS WITH HARDCAST IRON GRIP 601 SEALANT SYSTEM OR AN APPROVED EQUAL. DUCT TAPE, WHETHER LISTED OR NOT, WILL NOT BE ACCEPTED.
- 13. FABRICATE AND INSTALL AUXILIARY CONDENSATE DRAIN PAN UNDER ENTIRE AIR HANDLER WITH CONDENSATE PAN SWITCH INTERLOCKED WITH AIR HANDLER FOR SHUT DOWN WHEN CONDENSATE OVER FLOW IS SENSED.
- 14. EVERY ATTIC OR FURRED SPACE IN WHICH MECHANICAL EQUIPMENT IS INSTALLED SHALL BE ACCESSIBLE BY AN OPENING AND PASSAGEWAY AS LARGE AS THE LARGEST PIECE OF THE EQUIPMENT AND IN NO CASE LESS THAN 22 X 36 INCHES CONTINUOUS FROM THE OPENING TO THE EQUIPMENT AND ITS CONTROLS. THE OPENING TO THE PASSAGEWAY SHALL BE LOCATED NOT MORE THAN 20 FT. FROM THE EQUIPMENT MEASURED ALONG THE CENTER LINE OF SUCH PASSAGEWAY. EVERY PASSAGEWAY SHALL BE UNOBSTRUCTED AND SHALL HAVE SOLID CONTINUOUS FLOORING NOT LESS THAN 24 IN. WIDE FROM THE EQUIPMENT. ON THE CONTROL SIDE AND OTHER SIDES WHERE ACCESS IS NECESSARY FOR SERVICING THE EQUIPMENT, A LEVEL PLATFORM EXTENDING A MINIMUM 30 IN. FROM THE EDGE OF THE EQUIPMENT WITH A 36 IN. HIGH CLEAR WORKING SPACE SHALL BE PROVIDED. TOP OR BOTTOM SERVICE EQUIPMENT SHALL HAVE A FULL CLEARANCE ABOVE OR BELOW THE UNIT FOR COMPONENT REMOVAL.
- 15. SMOKE DETECTOR PROVIDED AND INSTALLED BY MECHANICAL CONTRACTOR.
- 16. SUPPLY AIR SYSTEMS AND RETURN AIR SYSTEMS INSTALLED IN AN ATTIC, VENTILATED CRAWL SPACE OR OTHER NON-CONDITIONED AREA SHALL BE INSULATED.
- 17. SPRINKLER CONTRACTOR TO BE RESPONSIBLE FOR ROUTING ALL SPRINKLER PIPING TO AVOID ALL UNCONDITIONED SPACES.
- 18. DO NOT SCALE DIRECTLY FROM THE HVAC DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONAL INFORMATION.

	AIR DISTRIBUTION SCHEDULE														
MARK	K CFM NECK SIZE MFG.		MODEL	TYPE	FINISH	FRAME	REMARKS/ ACCESSORIES								
A	0-100	6"¢(I2XI2)	TITUS	TMS	SUPPLY	WHITE	T-BAR LAY-IN	Ι, 3							
В	0-100	6"Ф	TITUS	TMS	SUPPLY	WHITE	T-BAR LAY-IN	Ι							
С	100-200	8"Φ	TITUS	TMS	SUPPLY	WHITE	T-BAR LAY-IN	Ι							
D	200-325	I <b>Ο</b> "Φ	TITUS	TMS	SUPPLY	MHITE	T-BAR LAY-IN	Ι							
E	0-1000	22X22	TITUS	355RL	RETURN	MHITE	T-BAR LAY-IN	Ι							
F	0-500	12X12	TITUS	50F	EXHAUST	MHITE	T-BAR LAY-IN	2, 3							
G	0-1000	24X24	TITUS	50F	EXHAUST	MHITE	T-BAR LAY-IN	2							
GV-I	600	Ι2"Φ	GREENHECK	GRSI	INTAKE GRAVITY VENTILATOR	-	ROOF MOUNTED	2, 4							
GV-2	320	I <i>O</i> "Φ	GREENHECK	GRSI	INTAKE GRAVITY VENTILATOR	-	ROOF MOUNTED	2, 4							

**REMARKS/ACCESSORIES** 

I. STEEL CONSTRUCTION

2. ALUMINUM CONSTRUCTION.

3. I2XI2 GRILLE IN A 24X24 T-BAR LAY-IN FRAME

4. PROVIDE STEEL INSECT SCREEN

# KEYED NOTES

- (I) SMOKE DETECTORS TO BE INSTALLED IN THE SUPPLY AND RETURN AIR DUCTS AND INTERLOCKED WITH AIR HANDLER FAN FOR SHUT-OFF PER N.F.P.A. 90 A & B ON ALL AIR HANDLERS GREATER THAN 2000 C.F.M. SUPPLY AIR DUCT SMOKE DETECTOR SHALL BE INSTALLED ON SUPPLY SIDE OF AIR HANDLING SYSTEM DOWN STREAM OF ANY AIR FILTERS AND PRIOR TO ANY BRANCH DUCT CONNECTIONS. EXCEPTION: THE SMOKE DETECTOR IN THE SUPPLY AIR STREAM MAY BE OMITTED IN SYSTEMS 2000 C.F.M. OR LESS. CAPACITY. RECIRCULATING AIR SYSTEMS WITH FAN CAPACITY LESS THAN 2000 C.F.M., BUT SERVING AREAS USED FOR EGRESS SHALL HAVE AUTOMATIC SMOKE DETECTION SHUTDOWN. SMOKE DETECTORS SHALL BE PROVIDED, INSTALLED AND WIRED BY (MECHANICAL CONTRACTOR. MECHANICAL CONTRACTOR SHALL WIRE SMOKE DETECTOR TO THE FAN SHUT OFF CONTACTS. MECHANICAL CONTRACTOR SHALL PROVIDE ALL ACCESSORIES REQUIRED TO MAKE THE FAN SHUT OFF CONNECTION. LOCATE SMOKE DETECTORS IN RETURN AIR DUCT PRIOR TO THE INTRODUCTION OF THE OUTSIDE AIR. MECHANICAL CONTRACTOR SHALL PROVIDE SMOKE DETECTORS COMPATIBLE WITH THE BUILDING'S EXISTING FIRE ALARM SYSTEM.
- (2) MAINTAIN 10 FT. CLEARANCE BETWEEN ALL EXHAUST OR ROOF VENT OPENINGS AND ANY FRESH AIR INTAKE. IF IO FT. CLEARANCE CANNOT BE MAINTAINED, EXHAUST OR ROOF VENT SHALL BE RAISED TO AT LEAST 36 INCHES ABOVE HIGHEST FRESH AIR INTAKE WITHIN 10 FT. OF INTAKE PER 2010 ARKANSAS MECHANICAL CODE.
- (3) LOCATE THERMOSTAT, CO2 SENSOR OR HUMIDISTAT AS INDICATED WITH THE CENTER OF THE THERMOSTAT AT 48 IN. ABOVE FINISHED FLOOR. SEAL ALL THERMOSTAT CONDUITS AT TOP AND BOTTOM OF CONDUIT. PROVIDE INSULATED BACKING FOR MOUNTING THERMOSTATS.
- (4) MECHANICAL CONTRACTOR SHALL INSTALL ALL EQUIPMENT, FANS AND APPLIANCES A MINIMUM OF IO FEET FROM A ROOF EDGE OR OPEN SIDE WHERE SUCH EDGE OR OPEN SIDE IS GREATER THAN 30 INCHES ABOVE A FLOOR, ROOF OR GRADE BELOW. GUARD RAILS A MINIMUM OF 42 INCHES THE ELEVATED SURFACE SHALL BE PROVIDED AND INSTALLED BY THE GENERAL CONTRACTOR AND EXTENDED A MINIMUM OF 30 INCHES BEYOND EACH END OF SUCH EQUIPMENT, FAN OR APPLIANCE WHERE APPLIANCES, EQUIPMENT, FANS OR OTHER COMPONENTS ARE LOCATED WITHIN THE REQUIRED IO FOOT CLEARANCE REQUIREMENT. THE GUARD SHALL BE CONSTRUCTED SO AS TO PREVENT THE PASSAGE OF A 21 INCH DIAMETER SPHERE AND COMPLY WITH THE LOADING REQUIREMENTS FOR GUARDS SPECIFIED IN THE LATEST ACCEPTED INTERNATIONAL BUILDING CODE.

RETURN AIR DUCT SECTION
SUPPLY DUCT SECTION
EXHAUST DUCT SECTION
CEILING SUPPLY AIR GRILLE
CEILING RETURN AIR GRILLE
EXHAUST GRILLE

(T) F-I

SUPPLY DUCT SECTION
EXHAUST DUCT SECTION
CEILING SUPPLY AIR GRILLE
CEILING RETURN AIR GRILLE
EXHAUST GRILLE
THERMOSTAT. MOUNT AT 48" A.F.F.

(NUMBER DENOTES FURNACE)

CONDENSING UNIT SCHEDULE								
MARK	MFG.	MODEL	TMBH/SMBH	MIN. CIRC. AMPS	MAX. FUSE SIZE	UNIT MT (LBS)	VOLT/PH/HZ	REMARKS/ ACCESSORIES
CU-I	DAIKIN	DXI4SA30	28.6/21.2	דו	25	200	208/1/60	I, 2, 3, 4, 5, 6
CU-2	DAIKIN	DXI4SA30	28.6/21.2	דו	25	200	208/1/60	I, 2, 3, 4, 5, 6
CU-3	DAIKIN	DXI4SA30	28.6/21.2	דו	25	200	208/1/60	I, 2, 3, 4, 5, 6
CU-4	DAIKIN	DXI4SA30	28.6/21.2	דו	25	200	208/1/60	I, 2, 3, 4, 5, 6
CU-5	DAIKIN	DXI4SAI8	18.0/13.0	12	20	200	208/1/60	I, 2, 3, 4, 5, 6

# REMARKS/ACCESSORIES

I. MINIMUM 14.0 SEER CONDENSER

2. PROVIDE LOW AMBIENT TO O F CONTROL WITH TXV CRANK CASE HEATERS

3. PROVIDE LIQUID LINE SIGHT GLASS.

4. PROVIDE LIQUID LINE FILTER DRYER. 5. PROVIDE HAIL GUARD.

6. SIZE AND INSTALL REFRIGERANT LINES PER MANUFACTURERS RECOMMENDATIONS

FURNACE SCHEDULE												
MARK	MFG	MODEL	ESP IN.		INPUT	HEATIN OUTPUT	IG TYPE OF	<i>0</i> .A.	MTR	VOLT / PH / HZ	UNIT WEIGHT	REMARKS/
			WC.	0111	MBH	MBH	FUEL	CFM	HP		LBS.	ACCESSORIES
F-I	DAIKIN	DM92550603BN	.6	1000	60	55	GAS	200	1/3	120 / 1 / 60	135	1, 2, 3, 4, 5, 6, 7, 8
F-2	DAIKIN	DM92550603BN	.6	1000	60	55	GAS	200	1/3	120 / 1 / 60	135	1, 2, 3, 4, 5, 6, 7, 8
F-3	DAIKIN	DM92550603BN	.6	1000	60	55	GAS	200	1/3	120 / 1 / 60	135	1, 2, 3, 4, 5, 6, 7, 8
F-4	DAIKIN	DM92550603BN	.6	1000	60	55	GAS	200	1/3	120 / 1 / 60	135	1, 2, 3, 4, 5, 6, 7, 8
F-5	DAIKIN	DM92550402BN	.6	1000	40	36	GAS	120	1/3	120 / 1 / 60	120	1, 2, 3, 4, 5, 6, 7, 8

REMARKS/ACCESSORIES

I. 92% MIN. AFUE UPFLOW GAS FURNACE

2. ELECTRONIC SPARK IGNITION

3. PROVIDE FACTORY VERTICAL CONCENTRIC VENT TERMINATION KIT. RE: 5/M3.I FOR DETAIL 4. 10 YEAR MIN. NON-PRORATED HEAT EXCHANGER

5. HORIZONTAL FURNACE. PROVIDE MEZZANINE STAND. RE: 9/M3.I FOR DETAIL

6. PROVIDE 2" FARR 30/30 FILTERS

7. PROVIDE MULTI-POSITION CASED "A" TYPE COIL WITH TXV REFRIGERANT CONTROL 8. PROVIDE 7-DAY PROGRAMMABLE THERMOSTAT.

EXHAUST FAN SCHEDULE										
MARK	MFG.	MODEL	CFM	E.S.P. IN. WC	H.P.	VLT / PH / HZ	SONE	RPM	UNIT WEIGHT LBS.	ACCESSORIES
EF-I	GREENHECK	G-090-D	450	0.5	1/15	115/1/60	7.2	1529	50	I, 2, 3

ACCESSORIES

I. PROVIDE FACTORY BACK DRAFT DAMPER.

2. PROVIDE FACTORY PITCHED 14 INCH ROOF CURB. FIELD VERIFY ROOF PITCH

3. INTERLOCK EXHAUST FAN WITH LIGHT SWITCH IN ROOMS 103, 105, 109 & 112 BY ELECTRICAL CONTRACTOR

# MECHANICAL LEGEND

-		
	OR	
	$\bigcirc$	
6	⋛—	

NEW DUCT
VOLUME DAMPER
SEE KEYED NOTES
SMOKE DETECTOR. REFER TO KEYED NOTE I.



**HSA**Engineering

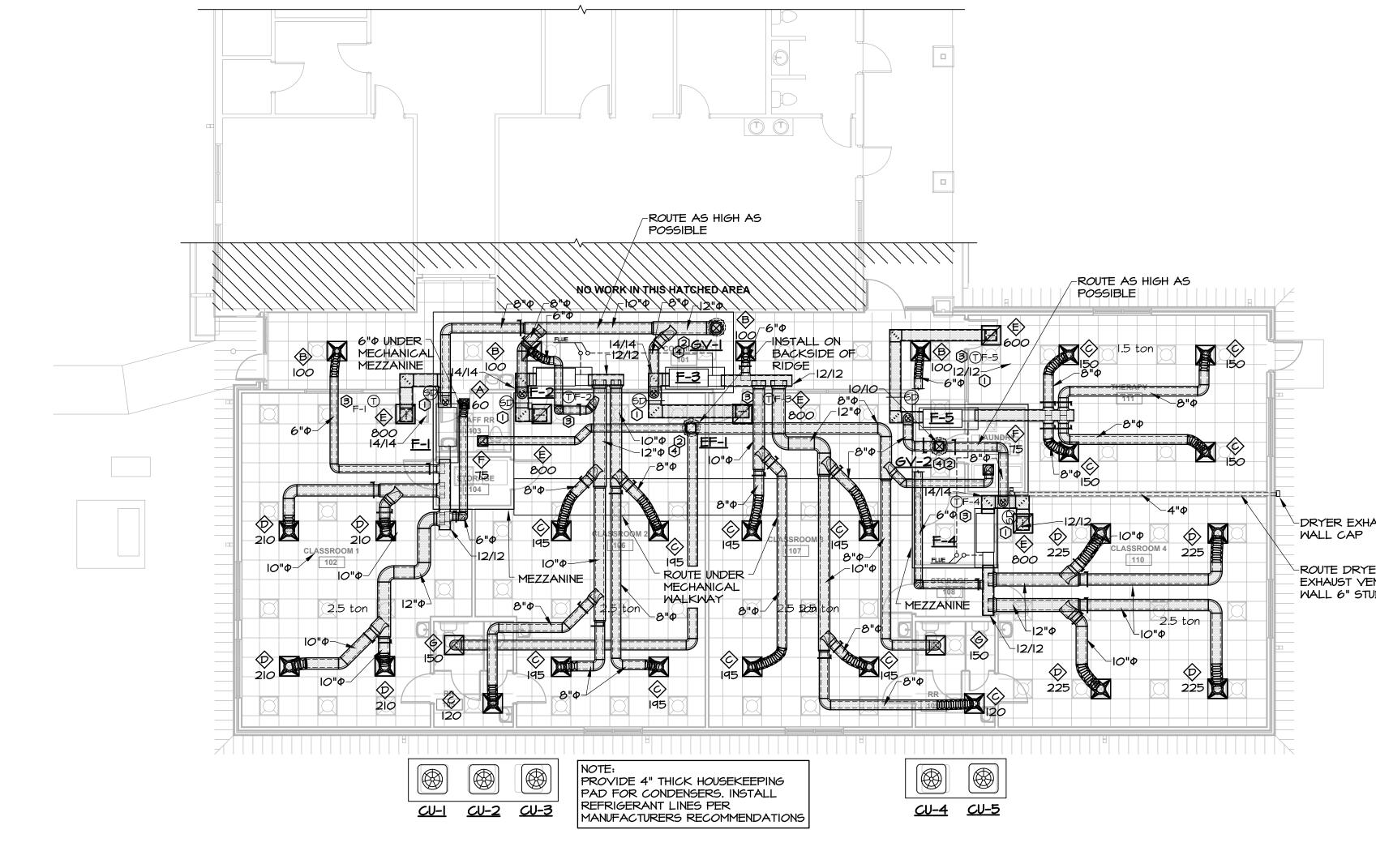
501 / 327 / 5757 office 1150 Bob Courtway Drive Conway, Arkansas 72032 HSAConsultants.com

HSA JOB # 21-014

STE V. ARC	ARCHITECTU
joshua@stewarch.com Post Office Box 363, Search STATE ARKAN REGIST PROFESS EXGIN	OF
CENTER FC	EUUCATION & VVELLINEOO 800 Main Street, Augusta, Arkansas
Project number: Date ( Revisions:	20100 03/03/2021
HVAC LE AND N	

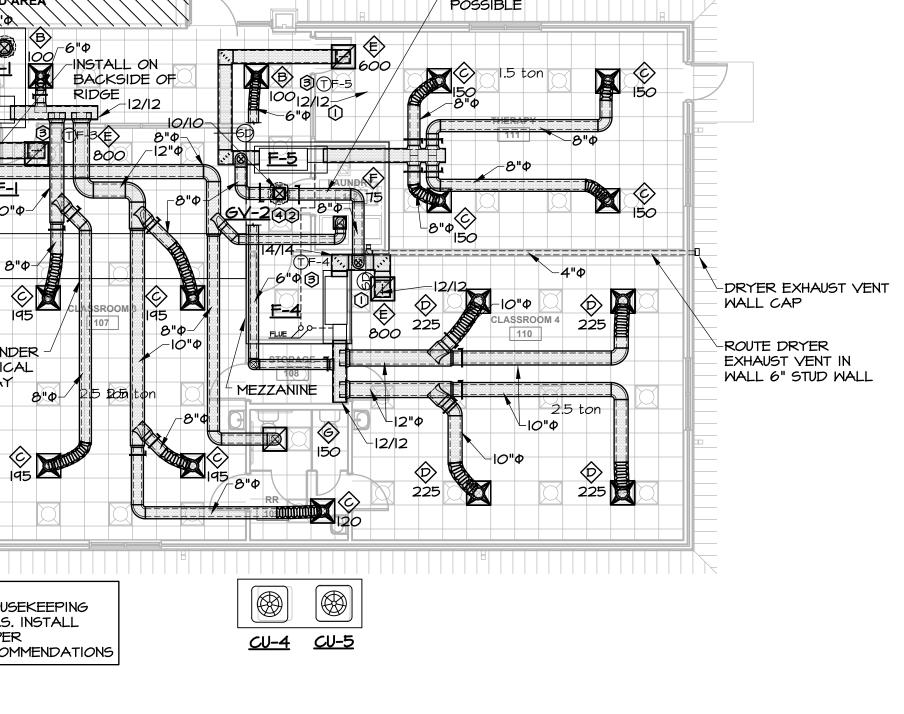
M1.

N

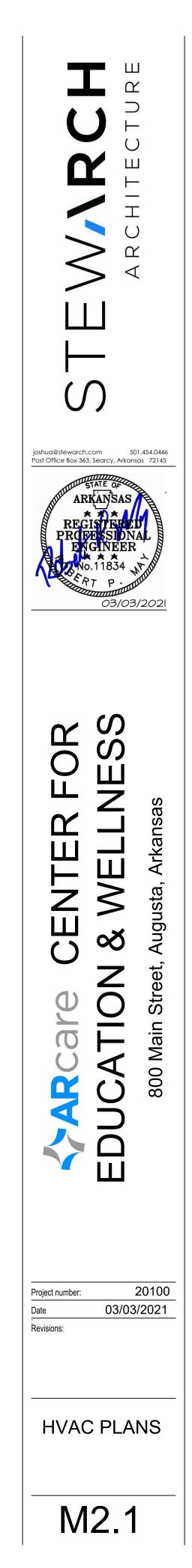






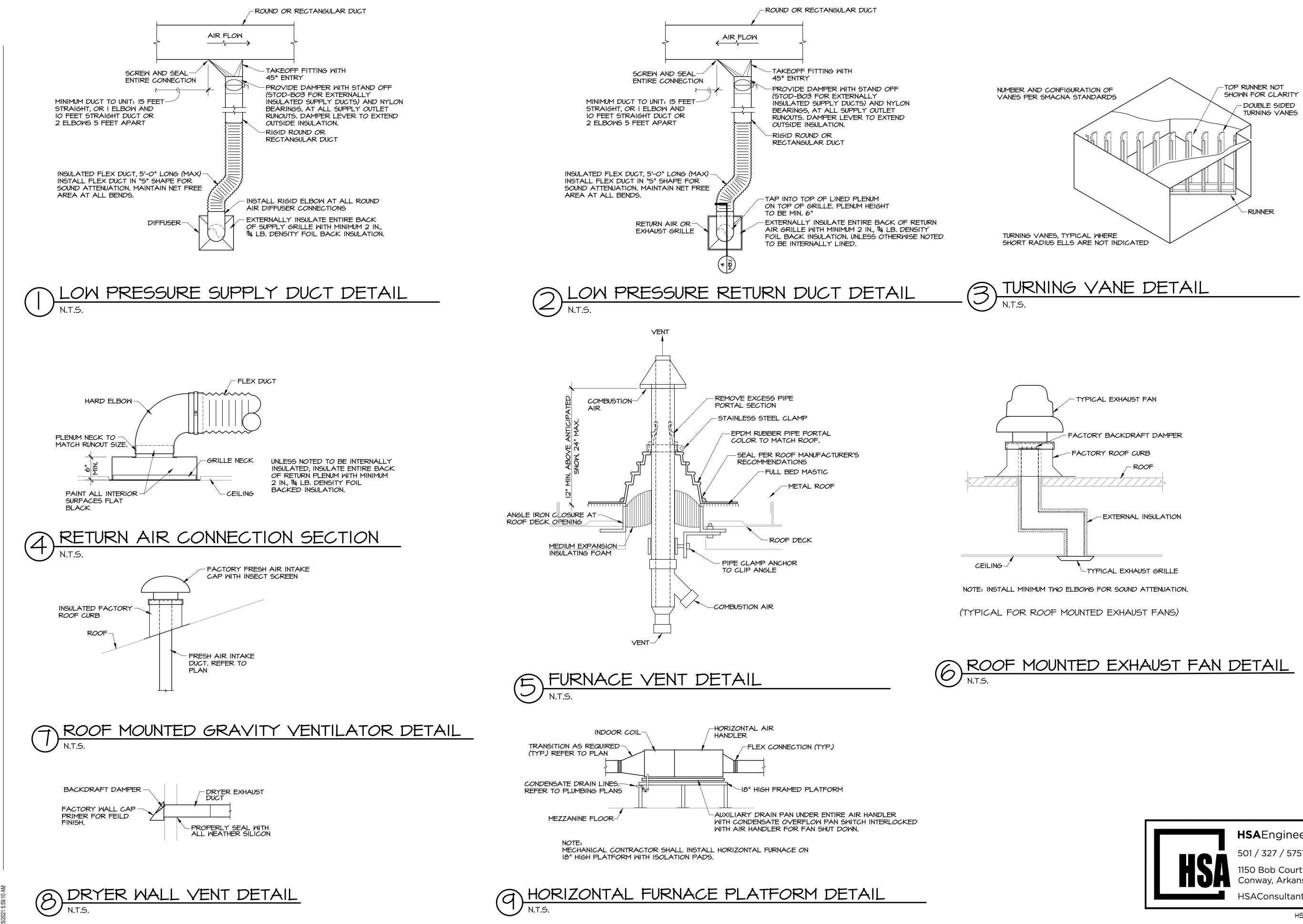


NORTH





**HSA**Engineering 501 / 327 / 5757 office 1150 Bob Courtway Drive Conway, Arkansas 72032 HSAConsultants.com



**HSA**Engineering 501 / 327 / 5757 office 1150 Bob Courtway Drive Conway, Arkansas 72032 HSAConsultants.com

HSA JOB # 21-014

# N -I ()Ŷ joshua@stewarch.com 501.454.0446 Post Office Box 363 Searcy Arkansas 72145 ARKANSAS $\star \star \star$ 03/03/202 August >Š $\bigcirc$ Street, Ζ Ō -----Main σ 4 800 ) EDU 20100 Project number: 03/03/2021 Date Revisions: **HVAC DETAILS**

M3.1

### MECHANICAL SPECIFICATIONS

# GENERAL

- A. Furnish all labor, equipment and material for the heating, ventilation, air conditioning, piping and plumbing in strict accordance with the specifications and drawinas.
- B. All work shall be done in good workman like manner and shall comply with all applicable local, state and federal codes including but not limited to American Society of Heating, Refrigeration and Air Conditioning (AŠHRAE), Sheet Metal and Air Conditioning Contractors Association (SMACNA), Kentucky Department of Health Rules and Regulations, OSHA, City Building Codes, NFPA and International Building Code. The latest specifications, codes and standards as adopted by the authority having jurisdiction shall be used for the above.
- C. In case of discrepancies between the plans, applicable codes or specifications, the most stringent shall govern.
- D. Should the Contractor perform any work that does not comply with requirements of applicable authorities, Contractor shall bear all cost arising in correcting the deficiencies.

### FEES, PERMITS AND INSPECTIONS

- A. Contractor shall be responsible for obtaining all necessary permits and inspections which are requested by state, federal and local codes.
- B. Under this section of work Contractor shall, upon completion of the work, furnish a certificate of final inspection to the owner from the inspection department having jurisdiction.

### SUBMITTALS

- A. Prior to ordering equipment, the Contractor shall make submittals (6 copies) for approval. The submittals shall include complete descriptive data including dimensions, mechanical capacities, weight, delivery time, motor horsepower, and other pertinent data
- B. It is the responsibility of the Contractor to investigate any desired substitutions for specified equipment prior to submission of his bid. The Contractor shall be responsible for any changes required in Mechanical, Electrical, Structural or Plumbing and shall bear all cost for those changes.

### RECORD OF DRAWINGS

A. The Contractor shall keep a neat and accurate record of field changes made during construction. At the completion of the project the Contractor shall deliver this change set to the Owner for record drawings.

### COORDINATION OF WORK

- A. The Mechanical Contractor shall field verify existing conditions and review and compare drawings and specifications for all disciplines to avert possible installation conflicts. Changes required in the work of the Mechanical Contractor caused by his neglect to do so shall be made by him at no additional cost to the Owner.
- B. Lines which pitch such as drain piping shall have the right-of-way over those which do not pitch.
- C. Provide and install all accessories, and incidental items to complete the work, ready to use and make fully operational.

### CUTTING, PATCHING AND SLEEVING

- A. Mechanical Contractor shall be responsible for all required digging, cutting, etc., incidental to his work, and shall make all satisfactory repairs. In NO case shall the Contractor cut into any major structural element, beam or column.
- B. Install sleeves for pipes and ducts which pass through floors, walls or roofs. Sleeves shall be large enough so that pipe or duct insulation can pass through freely, but not larger than necessary.

# EQUIPMENT AND MATERIALS

- A. Equipment and materials shall be new and shall bear the manufacturer's name, trade name and the UL label in every case where a standard has been established for the particular material. Equipment shall be the standard product of a manufacturer regularly engaged in the production of the required type of equipment, and shall be the manufacturer's latest approved design.
- B. Equipment and materials of the same general type shall be of the same throughout the work to provide uniform appearance, operation and maintenance.

### SLEEVES

- A. Install sleeves for pipes and ducts which pass through floors or roof, and for pipes which pass through masonry or concrete walls or partitions. Sleeves for pipe shall be standard weight black steel pipe. Sleeves for ducts shall be 16-gauge galvanized sheet steel.
- B. Sleeves shall be large enough so that pipe and insulation can pass through freely, but not larger than necessary. Sleeves in floor slabs shall be extended 2" above the surface of the floor, whether in finished rooms, concealed spaces, chases or partitions. Sleeves in roof slab, walls and partitions shall be flush with the finished surfaces.
- C. In exterior walls, the space between sleeves and pipes passing through the sleeves shall be sealed with graphite coated packing to a watertight condition.
- D. Openings in fire barriers for air handling duct work or air movement shall be protected in accordance with NFPA 90A and NFPA 90B.
- E. Pipes, conduits, bus ducts, cables, wires, air ducts, pneumatic tubing and similar building service equipment that pass through fire barriers shall be protected in accordance with latest NFPA 101 Life Safety Code from Fire in Buildings and Structures.

# GENERAL PIPING INSTALLATION

- A. Furnish and install a complete system of piping, all valved as indicated or as necessary to completely control the entire apparatus and all appurtenances. The piping drawings are diagrammatic and indicate the general location and connections.
- B. Open ends of pipes and equipment shall be properly capped or plugged to keep dirt and other foreign materials out of the system.
- C. Contractor shall take every precaution to remove dirt, grease and all other foreign matter from each length of piping before making field connections.

TEST AND ACCEPTANCE

- A. Water piping system shall be tested with water at 100 psi for one (1) hour or city water for twenty-four (24) hours and prove tight and free of leaks.
- B. Plumbing and drainage systems shall be tested with water and checked for leaks.
- C. Conduct test on plumbing apparatus installed to demonstrate satisfactory operation.
- D. Air handlers shall be tested with certified instruments and balanced. After balance is completed, submit to the Owner the following:
- (1) Air handler fan rpm, motor amps, cfm, suction and discharge static pressure. (2) Entering and leaving air temperatures both wet and dry bulb. E. All air quantities shall, after completion of the job, be adjusted to provide the air
- quantities shown on the plans. After complete adjustment, additional readjustment shall be performed to satisfy desired temperatures.
- F. Air Balance Contractor shall furnish air balancing forms which include air device locations, system size, pattern design, design cfm and final measured cfm. Air balance procedure shall include traverse readings on air handlers and exhaust fans greater than 2000 cfm, measuring each supply, return and exhaust fan against design cfm and making required pulley adjustments, and measuring each supply, return and exhaust grill against design cfm. After balancing is complete and adjustments made, the Balancing Contractor shall prepare and submit four (4) copies of the complete balance forms to the Engineer.

### DEMOLITION

A. It is the responsibility of the Contractor to investigate the job site and provide all labor, materials and equipment as required for demolition of existing mechanical systems and plumbing as noted on the plans.

#### PIPING

A. All piping systems materials, installation and insulation shall be installed per standards established by local, state and federal codes as well as existing building standards.

### STERILIZATION

A. Each unit of completed water line installed under this contract shall be thoroughly sterilized with chlorine or hypochlorite before it is placed in operation. The amount of chlorine applied shall be such as to provide a dosage of not less than 50 parts per million. The chlorination materials shall be introduced into the water line in such a manner as to distribute the chlorine throughout the system and as approved by the Engineer.

#### UNIONS

- A. All union connections on piping 2" and smaller in diameter shall be ground joint brass union, having brass taper seat and both screw ends hexagonal and shall be designed for a steam working pressure up to 125 pounds.
- B. All union connections on similar piping  $2 \frac{1}{2}$  and larger in diameter shall be made with cast iron (for steel pipe) and cast brass (for copper pipe) gasket type flange unions.

### VALVES

- A. All valves shall have the name or trademark of the manufacturer and the guaranteed working pressure cast or stamped on the body. Adapters shall be provided for all valves on copper lines.
- B. All stop valves used on this work, unless otherwise specified or required, shall be of the gate pattern, suitable for 125 pounds working pressure.
- C. All gate valves shall be packed and left perfectly tight at the completion of the
- D. Gate valves 2" and smaller shall be made of the best brass of screwed pattern of the solid wedge type, double seat, non-rising stem, with gland stuffing box and iron wheel, Crane No. 438, Jenkins or approved equal. Gate values  $2 \frac{1}{2}$  and larger shall be iron body, brass trimmed, flanged ends and otherwise of same type as smaller valves. Crane No. 462. Jenkins or approved equal.
- E. Globe valves 2" and smaller shall be made of the best grade brass, screwed pattern, removable disc suitable for the fluid to be controlled, with gland stuffing box and iron wheel, Crane No. 7, Jenkins or approved equal. Globe values  $2 1/2^{\circ}$  and larger shall be iron body, brass trimmed, flanged ends and otherwise same type or smaller valves. Crane No. 359. Jenkins or approved equal.
- F. Check valves 2" and smaller shall be made of the best grade brass, screwed pattern, swing check, Crane No. 37, Jenkins or approved equal for hot water and No. 41 for cold water. Check values 2 1/2" and larger shall be iron body and brass trimmed, flanged ends, swing check, Crane No. 373, Jenkins or approved equal, for hot water and No. 373 with No. 6 disc for cold water.
- G. Cocks 1" and smaller shall be 125# square head, iron body with brass plug, Crane No. 324, Jenkins or approved equal. Cocks 1 1/2" through 2" shall be made of semisteel, screwed pattern, lubricated, Nordstrom No. 114 or approved equal. Cocks 2 1/2" and larger shall be flanged ends and otherwise same type as smaller cocks, Nordstrom No. 115, Homestead or approved equal.

# SOIL, VENT AND SANITARY DRAINAGE PIPING

- A. Waste arms for lavatories and urinals shall be DWV copper with cast brass adapters and wrought copper fittings. All other waste and vent piping inside the building shall be service weight cast iron soil pipe and fittings. All cast iron soil pipe and fittings below grade shall be of the reinforced hub type, all cast iron pipe and fittings above grade shall be no hub type, both shall be coated inside with coal tar varnish and shall conform to the ASTM "Standard Specifications for Cast Iron Soil Pipe and Fittings".
- B. Soil, waste and vent piping must be of sizes noted and run as indicated on the drawings, and shall be given a uniform grade of 1/4" per foot wherever possible, but in J. Furnish and install offset drains, supply water and drain insulation kits equal to Handi-Lav Guard on all exposed handicap lavatories. no case less than 1/8" per foot for 4" pipe and 1/16" per foot for 6" pipe. The soil vent pipe shall be extended through the roof and shall project 10" above roof line and shall be GAS PIPING thoroughly flashed with 6 lb. sheet lead flashing. Where so shown, connect vents below roof
- C. Sanitary sewer fittings beneath the building slab or under driveways shall be cast iron soil pipe, same as waste piping.
- D. Sanitary sewer piping exterior to the building shall be reinforced cast iron hub and spigot joints with neoprene gaskets unless otherwise noted on the plans.
- E. When allowed by code, schedule 40 pvc waste and vent systems may be installed in lieu of cast iron.

Following a contact period of not less than eight (8) hours, the heavily chlorinated water shall be flushed from the lines with clean water until the residual chlorine content is not greater than 0.2 parts per million. All valves in water lines being sterilized shall be opened and closed several times during the eight hour period.

- SOIL, VENT AND SANITARY DRAINAGE PIPING con't
- F. Where waste and vent systems are installed in fire rated walls or return air plenums, materials shall be cast iron.
- PIPE JOINTS
- A. Joints in cast iron soil pipes shall be gasketed bell and spigot with Tyler "Ty-Seal" neoprene joints, pipe shall be adequately and rigidly supported at each joint.
- EXCAVATION AND TRENCHING
- A. Excavate to provide three (3) foot minimum cover or greater depths as required to provide adequate slope and burial depth. Grade bottom of trenches to provide uniform bearing and support for each section of pipe on undisturbed soil. Provide a 4inch thick (minimum) layer of 3/4-inch No. 4 gravel aggregate bedding beneath all buried piping. Bedding shall be compacted and leveled to provide required sloping. Backfill trenches with excavated materials of earth, sandy clay, sand, gravel or other approved materials, free from clods of earth or stones 2 1/2-inch maximum dimension, deposited in 6-inch layers and compacted to 95% Standard Proctor Compaction Test.
- CLEANOUTS
- A. Cleanouts shall be provided at the ends and at points in change of direction of all drain, soil, waste pipes and branches thereof, at the foot of each riser, at all offsets, in all horizontal runs at approximately 50' intervals, and at other points where indicated on plans or where required.
- B. All cleanouts in connection with cast iron pipe except the traps and fittings on horizontal branches, shall have tapped "Y" fittings of same size as pipe up to 4" and 4" for all larger pipe, closed with screw plugs. All other cleanouts in connection with cast iron pipe, except hose that occur in finished floors and walls, shall have heavy cast iron ferrules same size as pipe up to 4" and 4" for all larger pipe, caulked into hub, and closed with a screw plug.
- C. All cleanouts in finished floors shall be Wade or approved equal, with membrane anchorage pan and clamping collar, saturated nickel-bronze access cover and adjustable frame; cleanout plug shall be straight threaded with tapered shoulder that seals against caulked seat in body. Sizes and locations shall be as indicated on the drawings.
- D. All cleanouts in finished walls shall be Wade, or approved equal, with polished nickel-bronze access cover and straight-threaded, tapered shoulder plug that seals against caulked lead seat.
- E. All exterior cleanouts shall be as detailed on drawings.
- TRAPS AND DRAINS
- A. P-traps shall be placed under all floor drains, and where indicated in wastes, and at other points indicated on plans. P-traps shall be service weight, cast iron, bell and spiaot pattern.
- B. Drains shall be Wade, or approved equal, in accordance with the schedule on the drawings. Sizes and locations shall be as indicated on the drawings.
- C. Humidity drains shall be type PVC tubing with PVC fittings. Provide traps for all drains.
- D. Provide and install an approved trap primer or trap guard on all floor sinks and drains.
- HOT AND COLD WATER PIPING
- A. Hot and Cold water piping which is to run in the ground, under the building, shall be type L hard drawn copper with solder joint wrought copper tube fittings or schedule 80 PVC. ASTM D 1785.
- B. All cold and hot water piping within the building shall be Type L hard drawn copper tubing, with solder joint wrought copper tube fittings. Joints shall be made with 95-5
- C. Adapters shall be used for screwed valves in copper piping. Connections between copper and steel shall be insulated to prevent electrolysis. All water piping shall pitch to low point to drain.
- D. Hot and cold water piping which is run in the ground, under the building, shall be Type L color coated soft copper up to 1" with solder joint wrought copper tube fittings above slab. Provide Type K rigid copper for lines greater than 1" wrapped with  $1/2^{\circ}$  armaflex or equal. All solder joints made below slab shall be made with silver solder.

# PLUMBING FIXTURES

- A. Furnish and install all fixtures shown on plans and hereinafter specified.
- B. All fixtures shall be new and best of their respective kinds. They shall be nonabsorbent throughout and free from waves, kiln marks or discoloration.
- C. All surfaces coming in contact with walls, floor or surface of other fixtures shall be ground truly flat and shall be bedded with fine dental plaster.
- D. All fixtures shall have concealed vent and concealed air chambers, air chambers shall be same diameter as the supply pipes and 12" long.
- E. All supplies shall be brass, except where otherwise specified. All exposed finished metal parts shall be chromium plated; rough bodied parts shall be heavily nickel plated. All enameled iron wire shall be acid resisting.
- F. Traps for lavatories shall be two-piece chrome plated cast brass P-traps with cleanout. All escutcheons on supplies and wastes shall be heavy cast brass set screw type.
- G. All faucets throughout shall have removable units comprising all the wearing parts.
- H. Furnish and install all backing for lavatories, or any equipment requiring same.
- All fixtures which may be subject to damage prior to completion of the building shall be protected with not less than two thicknesses of tough building paper, pasted on and fully covering all surfaces, using paste as recommended by the fixtures manufacturer. Job must be turned over to the Owner with all fixtures clean and free from damage.
- A. Gas piping shall be Schedule 40 black iron. Provide stop cock, drip pocket, valves and all required accessories at all equipment connections.
- B. Gas piping 2 1/2-inch and larger to be Schedule 40 A53 carbon steel pipe and butt welded fittings. All medium or high pressure gas piping, regardless of size, shall be welded

# GAS PIPING con't

# DUCTWORK

- plans.

# INSULATION

- C. Insulation schedule:

#### Piping Humidity drain Domestic hot sanitary waste Domestic cold Domestic hot inside interior

isolation valves.

# ELECTRICAL WORK

### **GUARANTEE**

Owner.

# FINALLY

C. Exterior underground gas service piping to building shall be a high density polyethylene plastic pipe manufactured in accordance with ASTM No. D-2517 or D-2513. Provide a #12 THN copper wire in trench with pipe and leave both ends exposed for future accessibility. All exposed exterior gas piping shall be coated. D. All gas piping exposed to ambient shall be painted with an epoxy paint.

A. Duct sizes are inside clear dimensions. Fabricate all duct in accordance with SMACNA duct construction standards latest edition and ASHRAE handbooks. B. All elbows shall have a throat radius equal to the width of the duct where possible

install turn veins in all square elbows.

Seal all supply, return, fresh air and exhaust duct seams and joints with "Hardcast" Iron Grip 601, or equal, duct sealant, installed in strict accordance with manufacturer's recommendations. Duct tape shall not be accepted.

D. Install volume control dampers in supply, return and fresh air duct as shown per

E. Install canvas connectors on all fan discharge and fan return air duct connections. F. Access shall be provided for all air balancing devices, control dampers and accessories required access for maintenance or adjustment.

A. Externally insulate all round supply, return and fresh air duct with R-6 foil back duct wrap insulation. Duct wrap shall be wrapped tightly with minimum 2" overlap at all joints. Internally insulate all rectangular supply, return and fresh air duct with R-6 duct liner. All round flex duct shall be class I, R-6 foil back insulation with surface burning characteristics of a maximum flame spread of 25 and a maximum smoke spread of 25 and a maximum smoke development of 50.

B. Insulate all domestic water, above grade sanitary waste piping, steam, hot water piping, humidity drains, all valves and fittings using a fiber insulation with factory applied vapor barrier jacket molded to conform to piping. Provide metal jacket protective covering for all piping exposed to weather or possible damage.

s and refrigerant lines	Insulation Thickness	
water and	0.75"	
water (indeers)	1.0"	
water (indoors) and cold water	1.0"	
conditioned walls	0.5"	

D. After the plumbing and roof drain piping insulation is complete, install plastic pipe identification markers on the pipes every 15 feet. In addition, install valve tags on all

A. Conduit, wiring, disconnect switches and electrical connections for electric motors and equipment and starters for motors are specified under ELECTRICAL, unless specifically furnished by Mechanical Contractor. Starting switches, protective devices and other means for the operation and control of equipment shall be furnished with the mechanical equipment unless otherwise specifically noted.

INSTRUCTIONS TO THE OWNER'S REPRESENTATIVE

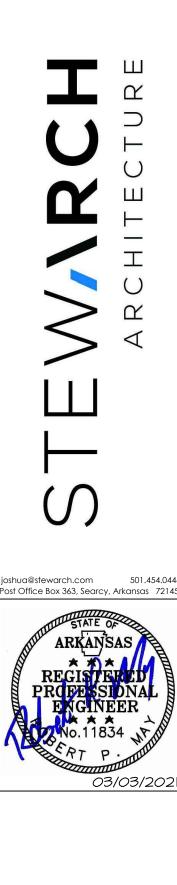
A. Instruct the Owner's representative in the proper operation and maintenance of all elements of the mechanical systems.

A. The work herein specified shall be free from defects in workmanship and material under normal use and service. If within twelve (12) months from the date of substantial completion of the work or acceptance by the Owner, any of the equipment or materials, or the installation thereof, is found to be defective in workmanship or materials, it shall be replaced or repaired at no charge to the

A. It is the intention that these plans and specifications shall provide a complete installation. All accessories and apparatus necessary for complete operational systems shall be included. The omission of specific reference to any part of the work necessary for such complete installation shall not be interpreted as relieving this Contractor from furnishing and installing such part.

# **HSA**Engineering

501 / 327 / 5757 office 1150 Bob Courtway Drive Conway, Arkansas 72032 HSAConsultants.com







<u>GENERAL</u>	PLUMBING NOTES	

- I. ALL PLUMBING MATERIALS AND INSTALLATION SHALL COMPLY WITH THE ARKANSAS STATE PLUMBING CODE, LATEST EDITION.
- 2. INSTALL ALL DOMESTIC HOT AND COLD WATER PIPING AS PER STATE AND LOCAL CODES.
- 3. INSULATE ABOVE GRADE CONCEALED DOMESTIC HOT, COLD AND CONDENSATE WATER LINES PER SPECIFICATIONS.
- 4. INSTALL DEEP SEAL TRAPS AT ALL DRAIN CONNECTIONS.
- 5. COORDINATE UNDER SLAB PIPING WITH COLUMNS AND FOOTINGS. REFER TO STRUCTURAL DRAWINGS.
- 6. BURY YELLOW #10 THWN COPPER TRACER WIRE IN TRENCH WITH ALL UNDER GROUND PLASTIC SERVICES. LEAVE ENDS EXPOSED FOR FUTURE LOCATION.
- 7. VERIFY LOCATION AND SIZE OF EXISTING SITE UTILITIES WITH UTILITY AUTHORITIES PRIOR TO CONSTRUCTION.
- 8. ALL IMPROVEMENTS (PAVEMENTS, CURB AND GUTTER, SOD, ETC.) SHALL BE REPLACED BY GENERAL CONTRACTOR TO PRECONSTRUCTION CONDITION.
- 9. WHERE FIRE RATED PARTITIONS OR FLOORS OCCUR, ALL FLOOR TO FLOOR AND ROOM TO ROOM PENETRATIONS SHALL BE PROPERLY FIRE SEALED WITH U.L. LISTED AND CLASSIFIED FIRE CAULK OR FIRE SEALED BY USING AN APPROVED FIRE SEAL SLEEVE METHOD WHICH MEETS U.L. REQUIREMENTS. ALL OTHER PENETRATIONS OF RATED CHASES OR WALLS SHALL BE PROPERLY FIRE SEALED AND WHERE EXTENDING THROUGH SUCH RATED SURFACE SHALL BE A RATED FIRE STOP PENETRATION. ALL FIRE STOPPING, FIRE CAULKING AND FIRE SLEEVING OR OTHER FIRE SEALING SHALL BE ACCEPTABLE BY THE LOCAL AUTHORITIES AND SHALL BEAR THE U.L. SEAL.
- IO. VERIFY LOCATION, INVERT AND SIZE OF ALL EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
- II. PROVIDE CITY APPROVED REDUCED PRESSURE BACKFLOW PREVENTERS ON ALL DOMESTIC SERVICE LINES CONNECTED TO ALL DEVICES, APPURTENANCES, APPLIANCES AND APPARATUS INTENDED TO SERVE SOME SPECIAL FUNCTION, SUCH AS STERILIZATION, DISTILLATION, PROCESSING, COOLING OR STORAGE OF FOODS OR ICE. WATER PUMPS, FILTERS, SOFTENERS, TANKS AND ALL OTHER APPLIANCES AND DEVICES THAT HANDLE OR TREAT POTABLE WATER SHALL BE PROTECTED AGAINST CONTAMINATION WITH SIMILAR BACKFLOW PREVENTER.
- 12. ALL MECHANICAL INSTALLATIONS SHALL CONFORM TO THE LATEST ACCEPTABLE ARKANSAS STATE MECHANICAL CODE.
- 13. ALL WATER AND SEWER LINE MATERIALS AND INSTALLATION METHODS SHALL BE IN ACCORDANCE WITH THE CITY OF AUGUSTA STANDARD SPECIFICATIONS FOR PUBLIC WORK CONSTRUCTION AS WELL AS THE ARKANSAS STATE PLUMBING CODE.
- 14. CONTRACTOR SHALL PROVIDE "AS BUILT" DRAWINGS OF ALL PLUMBING AND PIPING SYSTEMS UPON COMPLETION OF THE PROJECT.
- 15. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE DRAWINGS, THE BUILDING SITE, AND OTHER INFORMATION PRESENTED FOR THE CONSTRUCTION OF THIS PROJECT. IF CONTRACTOR HAS QUESTIONS REGARDING ASSEMBLIES OR LAYOUTS WITH THE PROJECT HE SHALL MAKE THEM KNOWN TO THE ENGINEER IN WRITING PRIOR TO BIDDING THE PROJECT. CLAIMS MADE SUBSEQUENT TO THE BID WILL NOT BE ACCEPTED IF IT IS DETERMINED THAT PROPER FAMILIARIZATION COULD HAVE AVOIDED SUCH CLAIM.
- 16. MECHANICAL CONTRACTOR SHALL COORDINATE INSTALLATION PLUMBING SITE UTILITIES WITH SITE WORK OF OTHER TRADES. IN INSTANCES WHERE COORDINATION REQUIRES DEVIATION FROM PLANS MECHANICAL CONTRACTOR SHALL NOTIFY ENGINEER OF PROPOSED CHANGES.
- 17. COMPLY WITH STATE OF ARKANSAS ADOPTED ADA ACCESSIBLE GUIDELINES IN REGARD TO ACCESSIBLE FEATURES.
- 18. PROVIDE DRIP PAN FOR ENTIRE LENGTH OF PIPE WHERE PIPE MUST BE INSTALLED ABOVE ELECTRICAL EQUIPMENT.
- 19. DO NOT ROUTE GROUPS OF CONDUIT, PIPES, AND SLEEVES ABOVE FOOTINGS UNLESS NOTED TO DO SO. IF CONFLICT OCCURS, CONSULT ARCHITECT/ENGINEER.
- 20. LIMIT WIDTH OF CONDUIT, PIPES AND SLEEVES NOT TO EXCEED 3 FEET IN WIDTH AS IT PASSES UNDER WALL FOOTING. AS MUCH AS POSSIBLE, ALIGN THE ITEMS PERPENDICULAR TO THE FOOTING AS IT PASSES BELOW FOOTING.
- 21. PROVIDE A MINIMUM SPACING OF 2 FEET BETWEEN CONDUIT OR PIPE GROUPS AS ITEMS PASS UNDER FOOTINGS.
- 22. DO NOT ROUTE CONDUITS, PIPE OR SLEEVES UNDER COLUMN FOOTINGS OR PAD FOOTINGS.
- 23. MECHANICAL CONTRACTOR MUST REVIEW ALL ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF PLUMBING FIXTURES AND FLOOR DRAINS. IF PLUMBING FIXTURES OR DRAINS ARE SHOWN ON THE ARCHITECTURAL DRAWINGS THEY MUST BE INCLUDED IN THE CONTRACT EVEN IF NOT SHOWN ON THE MECHANICAL DRAWINGS.
- 24. DO NOT SCALE DIRECTLY FROM THE PLUMBING DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONAL INFORMATION.
- 25. PROVIDE AND INSTALL 6 IN. DIRT LEG AND GAS STOP (BALL VALVE ONLY) AT ALL EQUIPMENT GAS CONNECTIONS.
- 26. ALL GAS PIPING SYSTEMS WITHIN A BUILDING AND OTHER ABOVE GROUND GAS PIPING SHALL BE ELECTRICALLY CONTINUOUS AND BONDED TO A GROUNDED ELECTRODE AS DEFINED IN N.F.P.A. 70.

# PLUMBING LEGENI

———EX 55———	EXISTING SANIT
	VENT PIPING
	COLD WATER P
	HOT WATER PIP
—HWR	HOT WATER RE
	LOW PRESSURE
MPG	MEDIUM PRESSL
CD	CONDENSATE D
	BALL VALVE
	CHECK VALVE
	GAS BALL VAL
O	GAS REGULATC MODEL 243. INL SET OUTLET PR
$\bullet$	CONNECTION PC
$\bigcirc$	REFER TO KEY!
P-I	PLUMBING FIXTI

COTG	
HD	
FPHB	
ADA	
WCO	

MH

CONNECTION POIN
REFER TO KEYED
PLUMBING FIXTURI (RE: TO PLBG FIX
CLEAN OUT TO GR
HUB DRAIN
FREEZE PROOF H
ACCESSIBLE

MALL	CLEAN	<i>O</i> UT
NATER	R HEATE	R

<u>NG LEGEND</u>					<b>1BING FIXTURE SCHE</b> CONNECTION IN INCHES			EDULE
SANITARY WASTE PIPING	MARK	FIXTURE	MFG./MODEL	MOUNT			SS	-
EXISTING SANITARY WASTE PIPING VENT PIPING	P-I	ACCESSIBLE WATER CLOSET	AMERICAN STD. 2467.016	FL <i>OO</i> R	1/2	-	4	WHITE VIT BOWL, TAI SEAT AND
COLD WATER PIPING	P-2	WATER CLOSET	AMERICAN STD. 2462.016	FLOOR	1/2	-	4	WHITE VIT BOWL, TAI SEAT AND
HOT WATER PIPING HOT WATER RETURN PIPING LOW PRESSURE GAS PIPING (II IN. W.C.)	P-3	ACCESSIBLE LAVATORY	AMERICAN STD. 0355.012	MALL	<u>к</u>	1/2	الار الار	WHITE VIT PROVIDE FAUCET W #520 WAL MOUNT 34 THERMOS
MEDIUM PRESSURE GAS PIPING (5 PSIG) CONDENSATE DRAIN PIPING BALL VALVE CHECK VALVE	P-4	LAVATORY	AMERICAN STD. 0355.012	MALL	1/2	1/2	14	WHITE VIT PROVIDE FAUCET W WALL CAR WATTS LF TEMPERA
GAS BALL VALVE GAS REGULATOR EQUAL TO EQUIMETER MODEL 243. INLET PRESSURE @ 5 PSI,	P-5	BARRIER FREE HI-LO ELECTRIC WATER COOLER	OASIS PG8ACSL	MALL	₹	-	1/4	WALL MOU 8.0 GPH A AMPS. CO CONTRAC SPOUT 40
SET OUTLET PRESSURE @ II IN. W.C.	P-6	LAUNDRY WALL BOX	GUY GRAY BB200TS	WALL	1/2	1/2	2	WASHING BOTTOM (
REFER TO KEYED NOTES	P-7	FREEZE PROOF HOSE BIB	WOODFORD MODEL B67	WALL	3⁄4	-	-	FREEZE P BACKFLO
PLUMBING FIXTURE NUMBER (RE: TO PLBG FIXTURE SCHEDULE, PI.I)	P-8	ELECTRIC WATER HEATER	RHEEM EGSP30	FL <i>OO</i> R	3⁄4	3⁄4	-	ELECTRIC WATTS. SE MOUNT AS
CLEAN OUT TO GRADE HUB DRAIN	P-9	HUB DRAIN	PVC REDUCER	ABOVE FLOOR	_	-	2	PVC REDU SHALL BE
FREEZE PROOF HOSE BIB ACCESSIBLE	P-10	WALL CLEANOUT	WADE MODEL 8550-R	WALL	_	-	*	*SIZE TO STAINLES
WALL CLEAN OUT	P-II	CLEAN OUT TO GRADE	WADE MODEL 6000	TO GRADE	_	-	*	*SIZE TO TRACTOR
WATER HEATER				FLOOD				*SIZE TO

NOTES:

P-12

I. INSTALL ACCESSIBLE FLUSH VALVE TO THE ACCESSIBLE SIDE.

CIRCULATING PUMP SCHEDULE							
MARK	MFG.	MODEL	GPM	HEAD (FT)	VLT/PH/HZ	WATTS	REMARKS/ACCE
CP-I	BELL & GOSSETT	PL-36	5. <i>0</i>	8	115 / 1 / 60	1/6	I, 2, 3

WADE MODEL 6000

FLOOR

-

-

ACCESSORIES

. BRONZE CONSTRUCTION FOR HOT WATER RECIRCULATION.

FLOOR CLEANOUT

2. PROVIDE AQUASTAT. 3. PLUMBING CONTRACTOR TO PROVIDE TC-I AUTOMATIC TIMER.

DULE
REMARKS / ACCESSORIES
WHITE VITREOUS CHINA, LOW CONSUMPTION, PRESSURE ASSISTED, ELONGATED BOWL, TANK TYPE TOILET. PROVIDE ANGLE SHUT-OFF, OLSONITE #10 SCC OPEN SEAT AND BOLT CAPS. INSTALL 17 IN. FROM TOP OF SEAT TO FLOOR. I.6 GPF.
WHITE VITREOUS CHINA, LOW CONSUMPTION, PRESSURE ASSISTED, ELONGATED BOWL, TANK TYPE TOILET. PROVIDE ANGLE SHUT-OFF, OLSONITE #10 SCC OPEN SEAT AND BOLT CAPS. I.6 GPF. MOUNT FIXTURE IS IN. A.F.F. TO RIM.
WHITE VITREOUS CHINA LAVATORY WITH FAUCET LEDGE AND BACKSPLASH. PROVIDE AMERICAN STANDARD RELIANT 7385.050 SINGLE LEVER, 0.5 GPM FAUCET WITH EXTRA LONG HANDLE, BASE PLATE AND GRID DRAIN. WADE #520 WALL CARRIER, HANDILAV MOLDED DRAIN & SUPPLY INSULATION KIT. MOUNT 34 IN. A.F.F. TO TOP OF RIM. PROVIDE WATTS LFMMV UNDER COUNTER THERMOSTATIC MIXING VALVE. SET WATER TEMPERATURE AT 105° F.
WHITE VITREOUS CHINA LAVATORY WITH FAUCET LEDGE AND BACKSPLASH. PROVIDE AMERICAN STANDARD RELIANT 7385.050 SINGLE LEVER, 0.5 GPM FAUCET WITH EXTRA LONG HANDLE, BASE PLATE AND GRID DRAIN. WADE #520 WALL CARRIER, HANDILAV MOLDED DRAIN & SUPPLY INSULATION KIT. PROVIDE WATTS LFMMV UNDER COUNTER THERMOSTATIC MIXING VALVE. SET WATER TEMPERATURE AT 105° F. COORDINATE MOUNTING HEIGHT WITH ARCH/OWNER.
WALL MOUNTED, HI-LO SPLIT LEVEL, BARRIER FREE ELECTRIC WATER COOLER, 8.0 GPH AT ARI STANDARDS, II5 VOLT, SINGLE PHASE, 1/4 HP, 4.6 FULL LOAD AMPS. COORDINATE LOCATION OF ELECTRICAL OUTLET WITH ELECTRICAL CONTRACTOR. MOUNT LOW SPOUT 36 IN. A.F.F. TO TOP OF SPOUT. MOUNT HIGH SPOUT 40 IN. A.F.F. TO TOP OF SPOUT.
WASHING MACHINE WALL BOX WITH TOP SUPPLY AND 2 IN. DRAIN. MOUNT BOTTOM OF BOX MINIMUM 36 IN. A.F.F.
FREEZE PROOF HOSE BIB IN LOCKING BOX. PROVIDE VACUUM BREAKER AND BACKFLOW PREVENTION.
ELECTRIC WATER HEATER, 30 GALLON TANK CAPACITY, 120V I PHASE, 1500 WATTS. SET TEMPERATURE AT 115 °F. MOUNT WATER HEATER ABOVE DRYER. MOUNT AS HIGH AS POSSIBLE.
PVC REDUCER WITH TRAP. PROVIDE TRAP GUARD PROTECTION. REDUCER SHALL BE WITHIN TWO PIPE SIZES OF CONNECTED SANITARY PIPING.
*SIZE TO MATCH WASTE LINE, MAXIMUM TO 4 INCHES. PROVIDE WADE 8480-R STAINLESS STEEL WALL ACCESS COVER.
*SIZE TO MATCH WASTE LINE MAXIMUM TO 4 INCHES. PROVIDE HEAVY DUTY

TRACTOR TYPE COVER.

\*

\*SIZE TO MATCH WASTE LINE, MAXIMUM TO 4 INCHES. PROVIDE OPTIONAL TOP TO MATCH FLOOR FINISH. REFER TO ARCHITECTURAL PLANS FOR FINISH SCHEDULE.



03/03/202

>

>

Š

0

\_\_\_\_

\_\_\_

 $\bigcirc$ 

σ

**M** 

Б

ISN

Augi

eet

Str

Main

N

-

T

()

N

ESS



**HSA**Engineering 501 / 327 / 5757 office 1150 Bob Courtway Drive Conway, Arkansas 72032 HSAConsultants.com

HSA JOB # 21-014

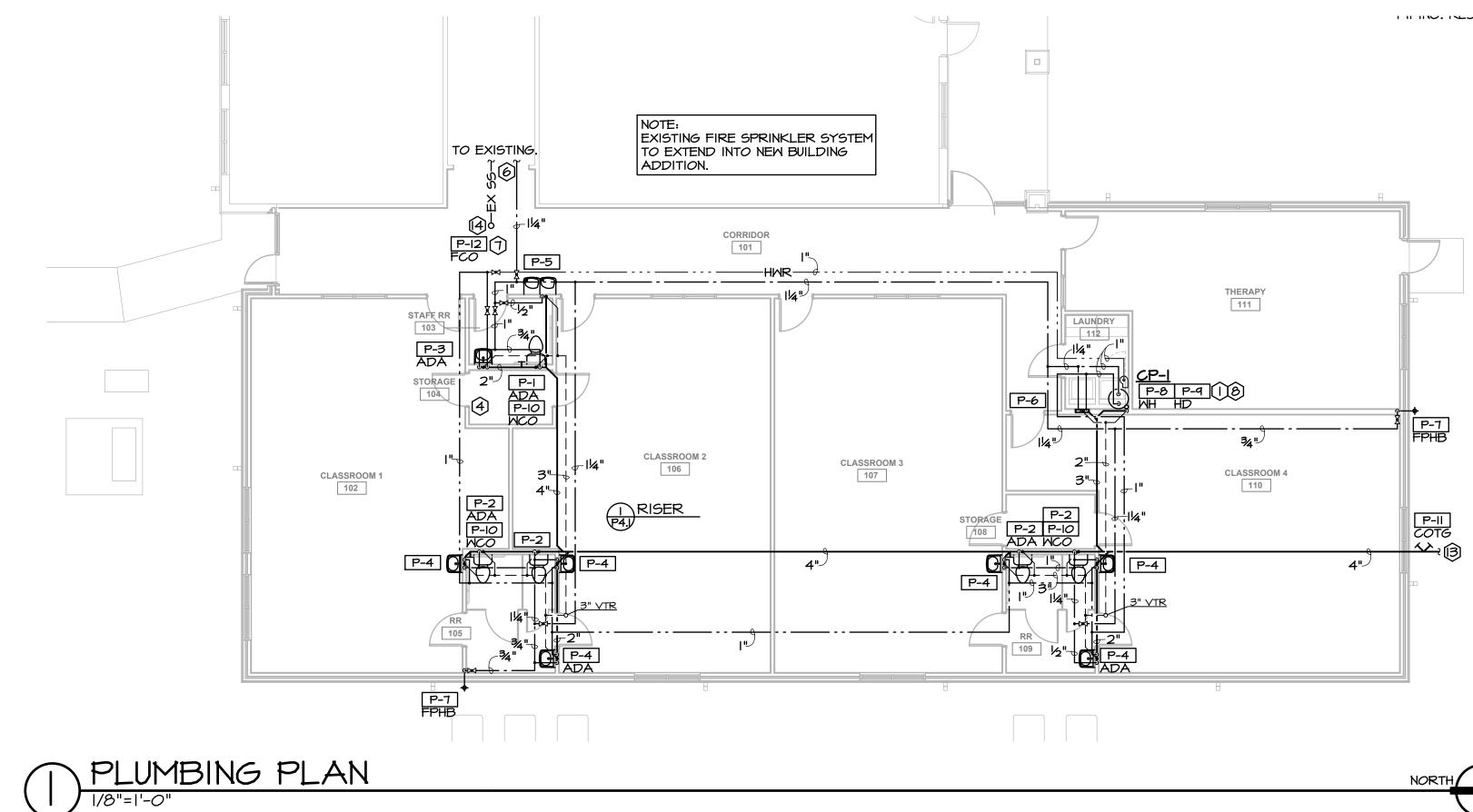
800 20100 Project number: 03/03/2021 Date Revisions:

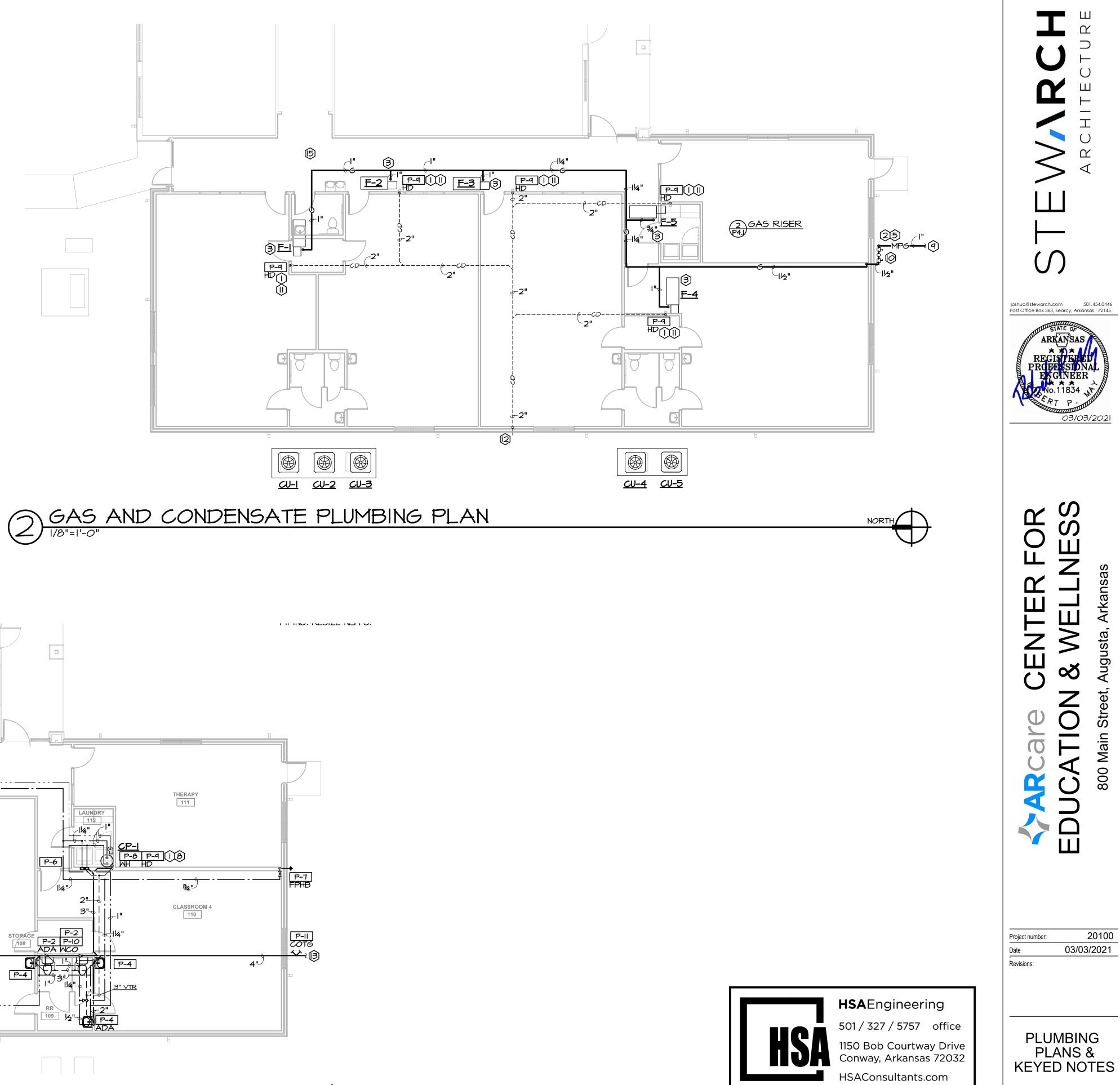


P1.1

# PLUMBING KEYED NOTES

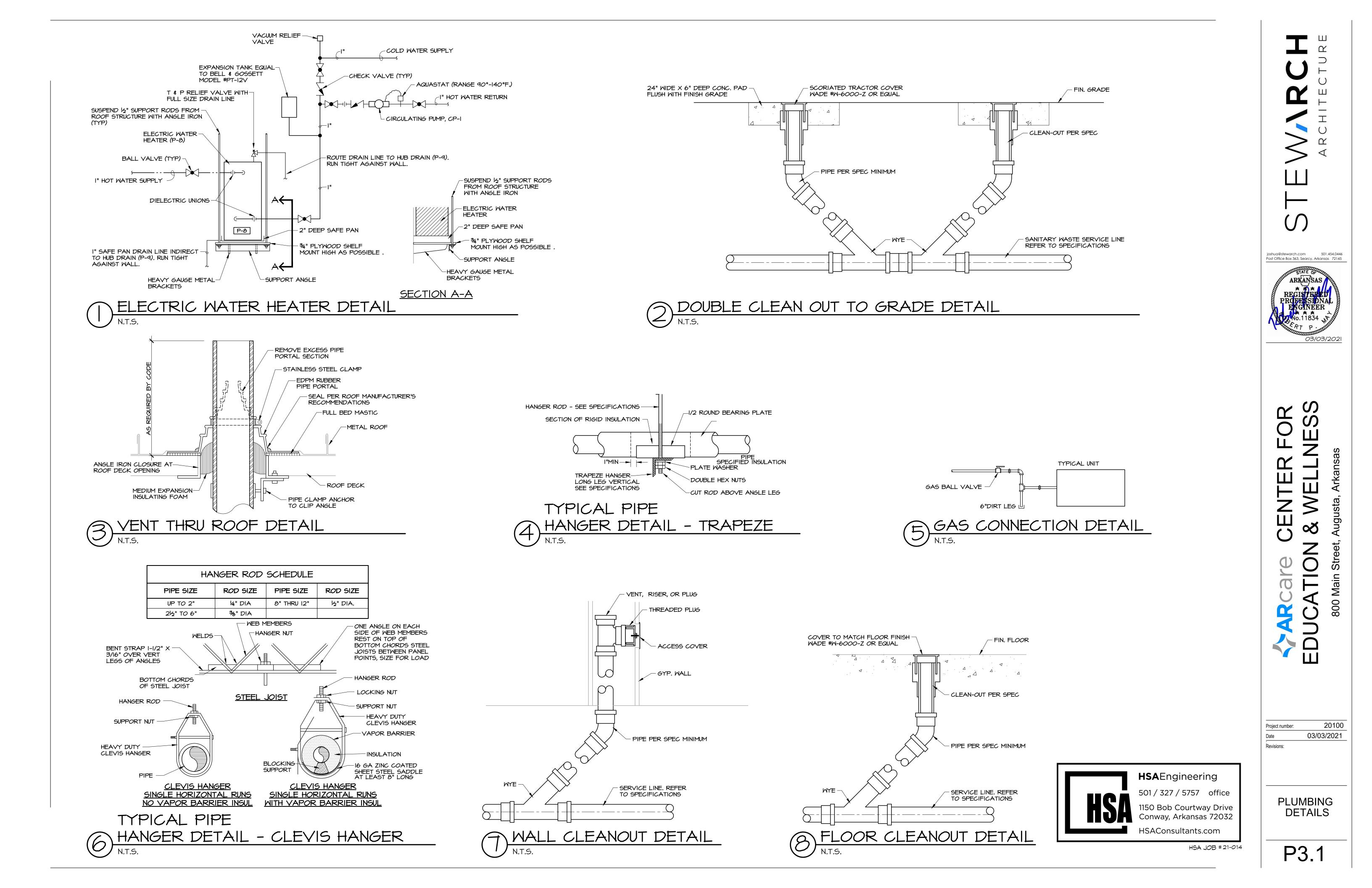
- (I) INSTALL AN APPROVED TRAP GUARD PRODUCT THAT CONFORMS TO NSF-14, CSA B602-99 AND CSA B79-94.
- 2 COORDINATE UNDERSLAB PIPING WITH STRUCTURAL FOOTINGS. REFER TO STRUCTURAL PLANS FOR LOCATIONS AND SIZES OF FOOTINGS.
- 3 PROVIDE AND INSTALL 6 INCH DIRT LEG AND GAS STOP (BALL VALVE ONLY) AT ALL EQUIPMENT GAS CONNECTIONS. REFER TO DETAIL 5/P3.1.
- (4) MECHANICAL CONTRACTOR SHALL NOT INSTALL ANY WATER LINES ABOVE ELECTRICAL PANELS. REFER TO ELECTRICAL PLANS FOR PANEL LOCATIONS.
- (5) IDENTIFY OUTDOOR UNDERGROUND LINES WITH CONTINUOUS STRIP OF PLASTIC UTILITY MARKER. TAPE SHOULD STATE AT REGULAR INTERVALS: "CAUTION (STATE UTILITY) PIPE BELOW". INSTALL TAPE ONE FOOT DIRECTLY ABOVE PIPE BEFORE BACKFILLING TO GRADE.
- 6 ROUTE 14" COLD WATER LINE TO THE NEAREST EXISTING 14" OR LARGER COLD WATER LINE. ESTIMATED LENGTH TO EXISTING WATER LINE IS +/-25 FEET.
- (1) EXTEND EXISTING COTG TO NEW FLOOR AND ADD A FLOOR CLEANOUT.
- (6) MOUNT HUB DRAIN UNDERNEATH WATER HEATER, FOR SAFE PAN AND RELIEF VALVE DRAIN LINES.
- (9) ROUTE NEW MEDIUM PRESSURE GAS LINE TO EXISTING GAS LINE COMING FROM EXISTING GAS METER. PROVIDE GAS REGULATOR EQUAL TO EQUIMETER MODEL 243. INLET PRESSURE @ 2 PSI. FOR EXISTING GAS LOAD. COORDINATE WITH GAS COMPANY, DWIGHT PEEBLES (870-919-6396) FOR REWORK OF EXISTING GAS METER TO ACCOMMODATE NEW GAS INLET PRESSURE OF 5 PSI. AND ADDED ESTIMATED GAS CONNECTED LOAD OF 280 MBH IF NEEDED, ESTIMATED Le = +/- 500 FEET. FIELD VERIFY EXACT LOCATION AND DISTANCE PRIOR TO BID.
- PROVIDE GAS REGULATOR EQUAL TO EQUIMETER MODEL 243, INLET PRESSURE @ 5 PSI. SET OUTLET PRESSURE @ II IN. WG. ESTIMATED CONNECTED LOAD = 280 MBH. ESTIMATED Le = +/- 150 FEET.
- (II) ROUTE 2" VENT PIPING FROM HUB DRAIN TO THE NEAREST VENT PIPING.
- (2) DAYLIGHT CONDENSATE PIPING 12 IN. A.F.F.
- (3) ROUTE 4" SANITARY SEWER TO EXISTING MANHOLE TO THE SOUTH. ESTIMATED DISTANCE TO EXISTING MANHOLE +/-200 FEET. FIELD VERIFY EXACT LOCATION, DISTANCE AND INVERT PRIOR TO BID.
- PROVIDE DEDUCTIVE ALTERNATE PRICE TO ATTACH NEW SANITARY SEWER TO EXISTING CLEANOUT IF INVERT IS FOUND TO BE A ACCEPTABLE DEPTH AND MEETS CODE AT TIME OF INSTALLATION, FIELD VERIFY.
- (5) PROVIDE ALTERNATE PRICE TO ROUTE NEW | 1/2" GAS PIPING THROUGH ATTIC TO EXISTING | 1/2" 2 PSI MEDIUM PRESSURE GAS PIPING, FIELD VERIFY. PROVIDE REGULATOR WITH VENT FOR NEW 1 1/2" GAS PIPING. RESIZE NEW GAS PIPING TO ACCOMMODATE NEW ROUTING IF NEEDED.

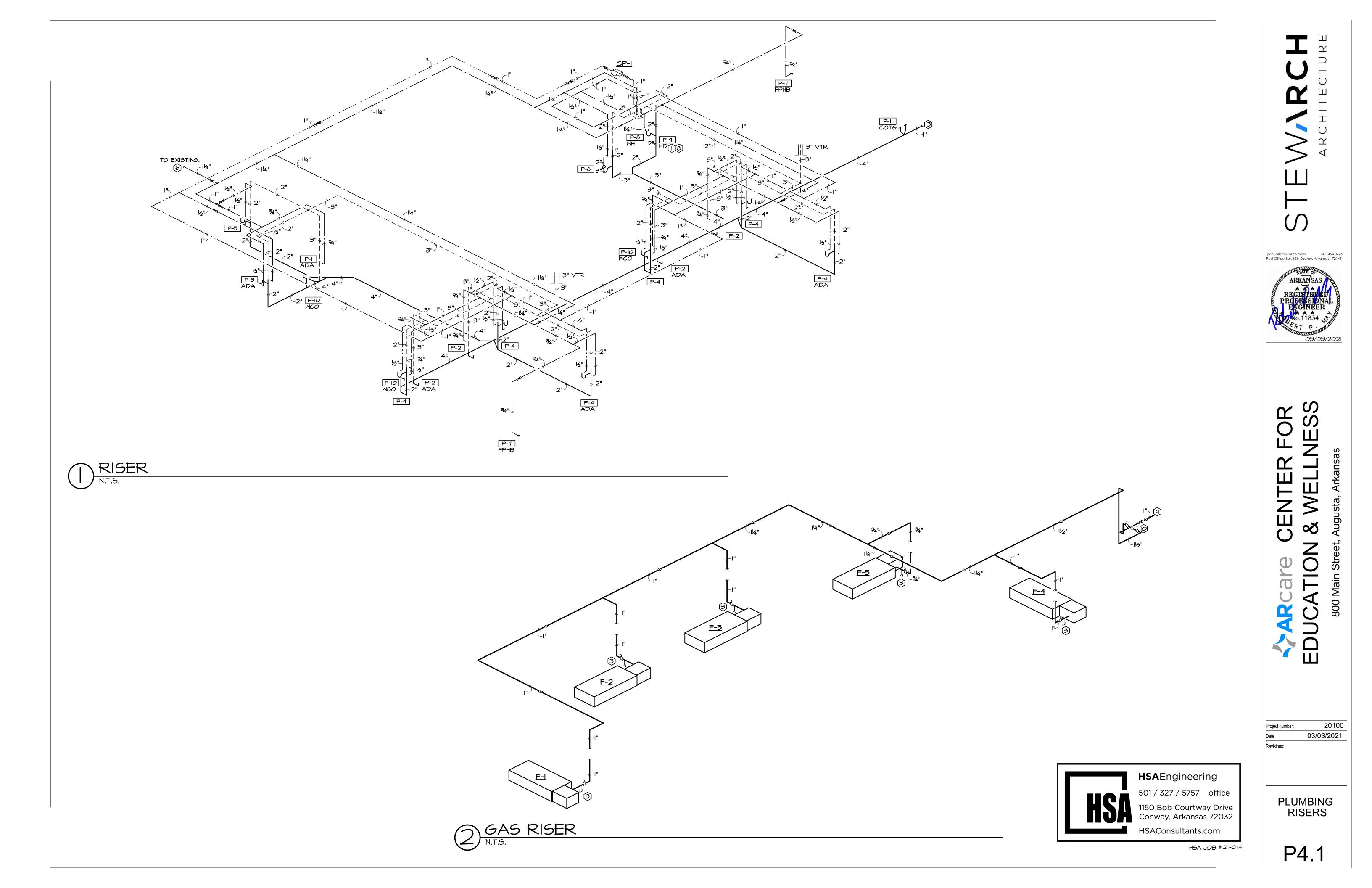


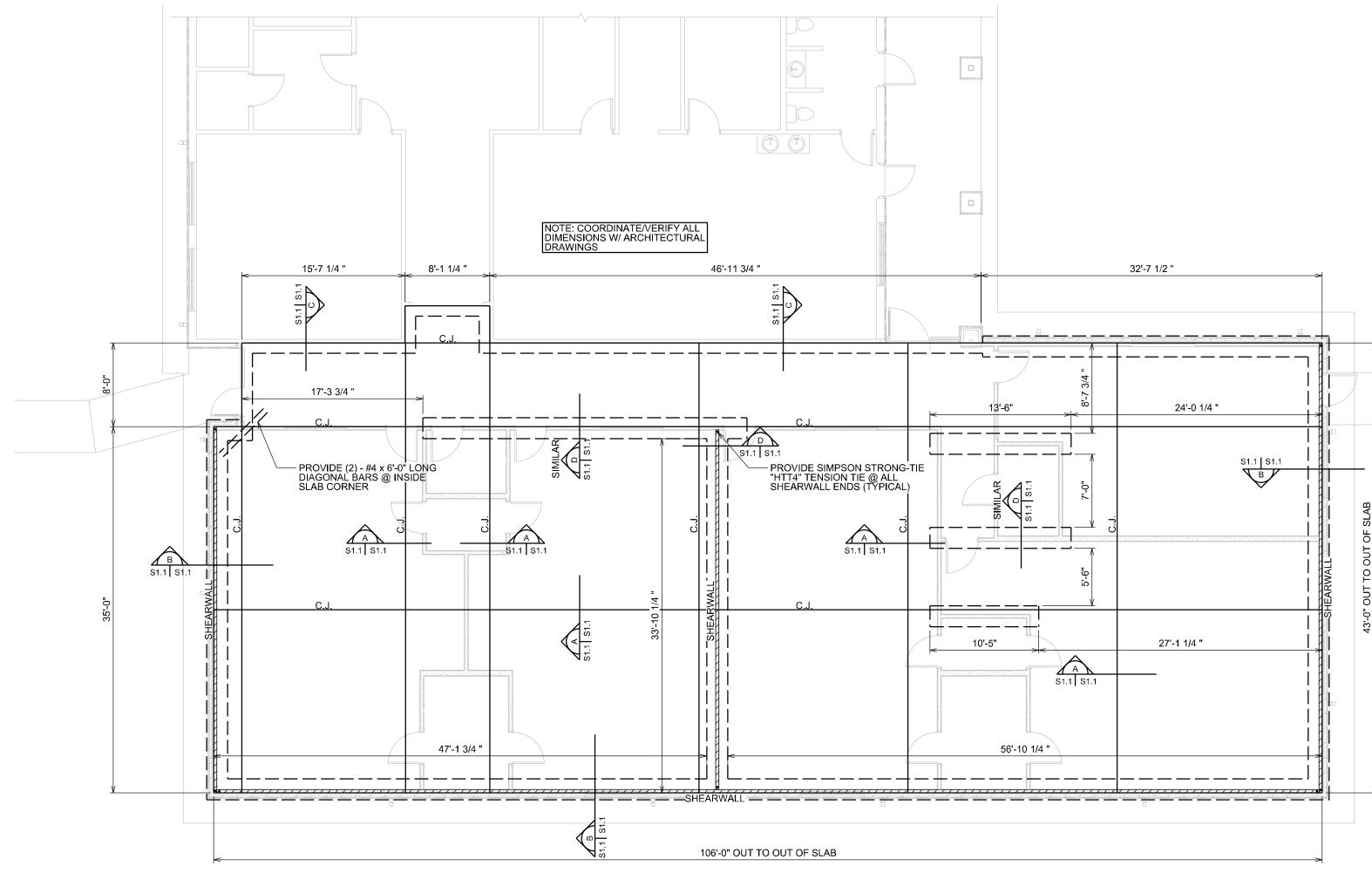


HSA JOB # 21-014

P2.1







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

# FOUNDATION PLAN

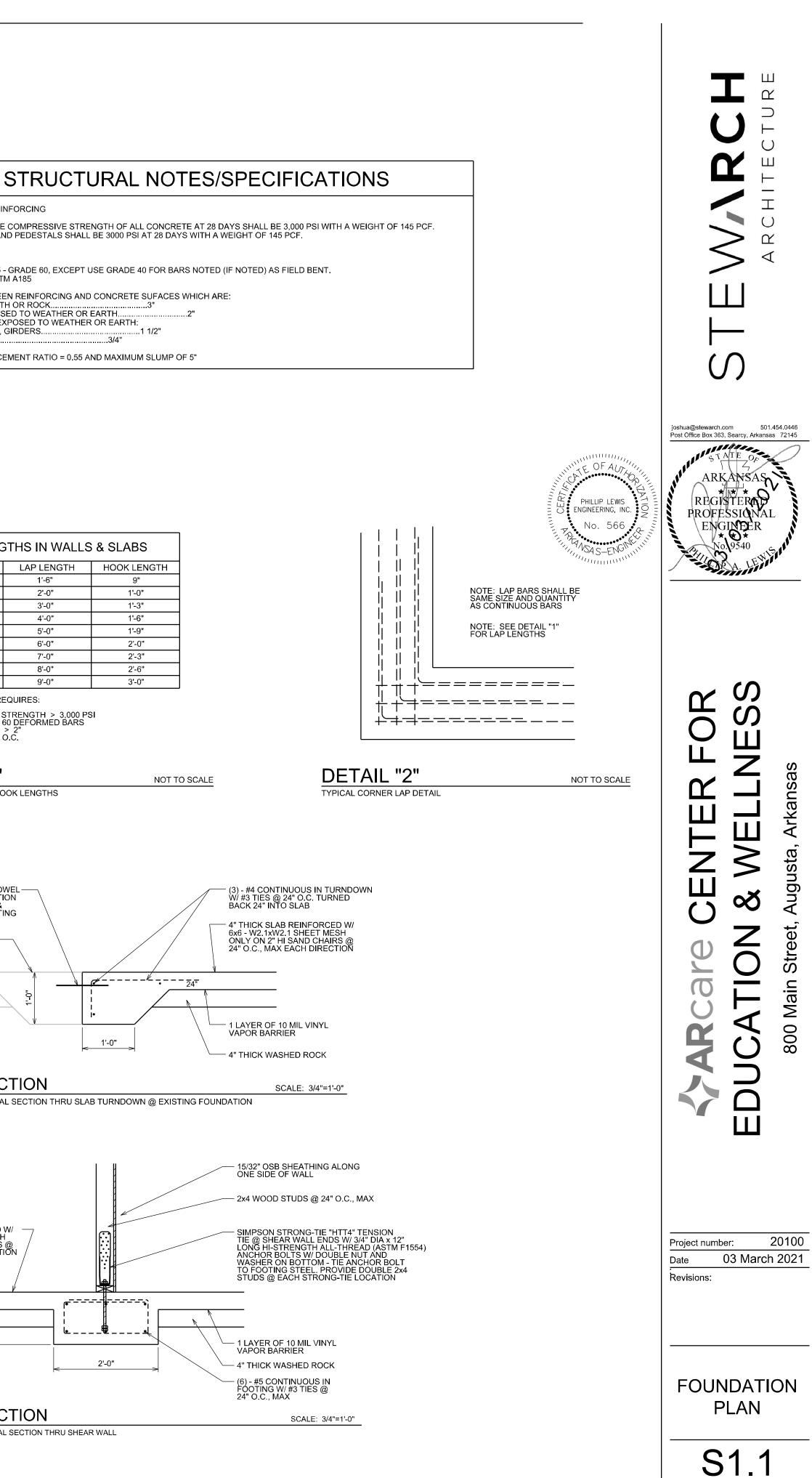
NOTE:

- 1. CONCRETE SHALL ACHIEVE 3000 PSI IN 28 DAYS.
- 2. MAXIMUM ALLOWABLE w/c RATIO = 0.55 3. MAXIMUM ALLOWABLE SLUMP = 5"
- 4. NO CHLORIDE ADDITIVES ALLOWED.

SECTION "D" ON SHEET S1.1.

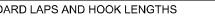
- 5. "C.J." INDICATES CONTROL JOINT PER SECTION "A". SAWCUTS SHALL BE MADE WITHIN 8 HOURS OF POUR.
- 6. PATTERN DENOTES SHEARWALL. 7. ALL SHEARWALLS TO CONTAIN SIMPSON STRONG-TIE "HTT4" TENSION TIE @ ENDS. SEE

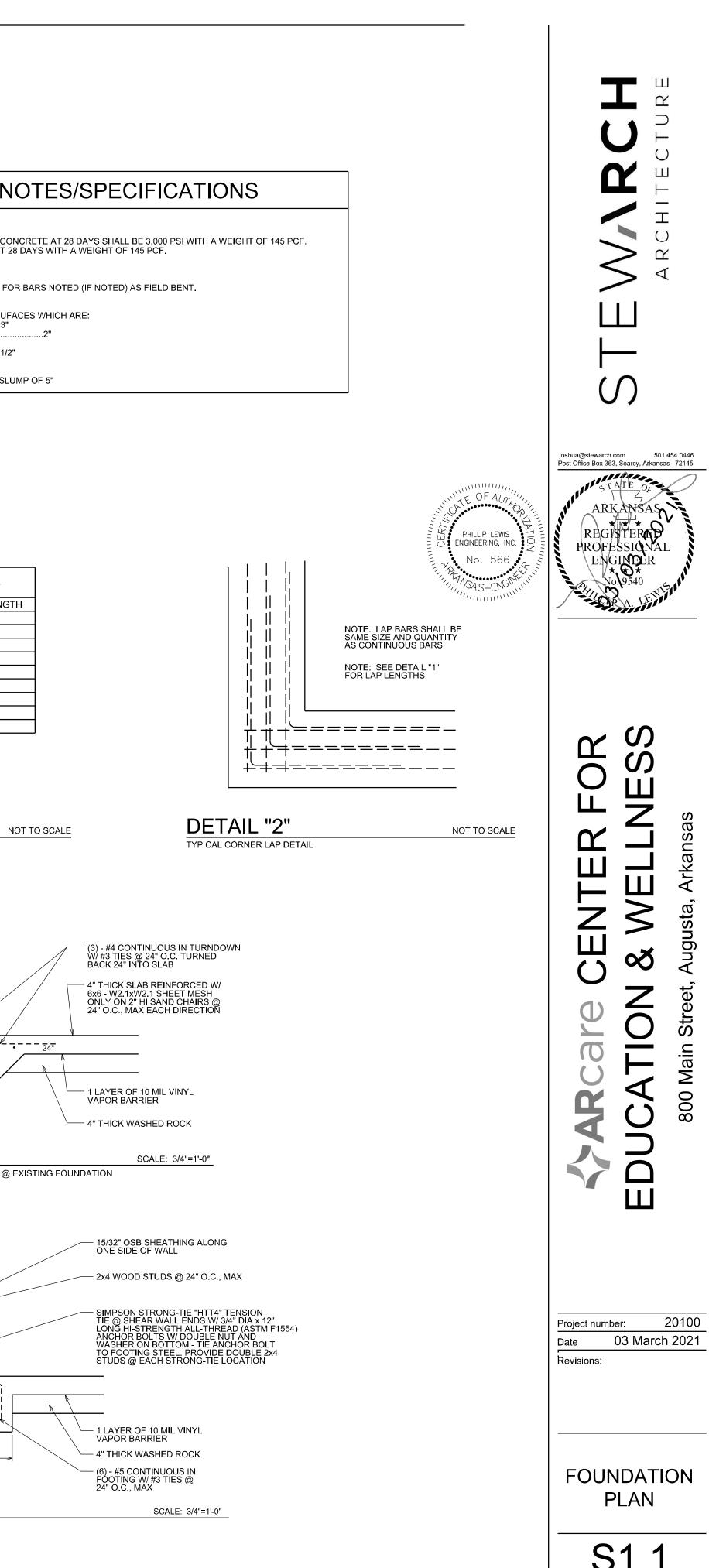
6x6 - ONLY 24" O DIRE 1/8" V JOIN JOIN	NICK SLAB REINFORCED W/ W2.1xW2.1 SHEET MESH ( ON 2" HI SAND CHAIRS @ ON CENTER (MAX) EACH CTION WIDE x 1-1/2" DEEP SAW CUT T - FILL W/ ELASTOMERIC T MATERIAL	
	WIRE MESH ALONG CONTROL T (EVERY OTHER PERPENDICULAR E)	
S1.1 S1.1 TYPICAL SECTION THRU CONT	SCALE: 3/4"=1'-0" TROL JOINT	S1.1 S1.1 TYPICAL

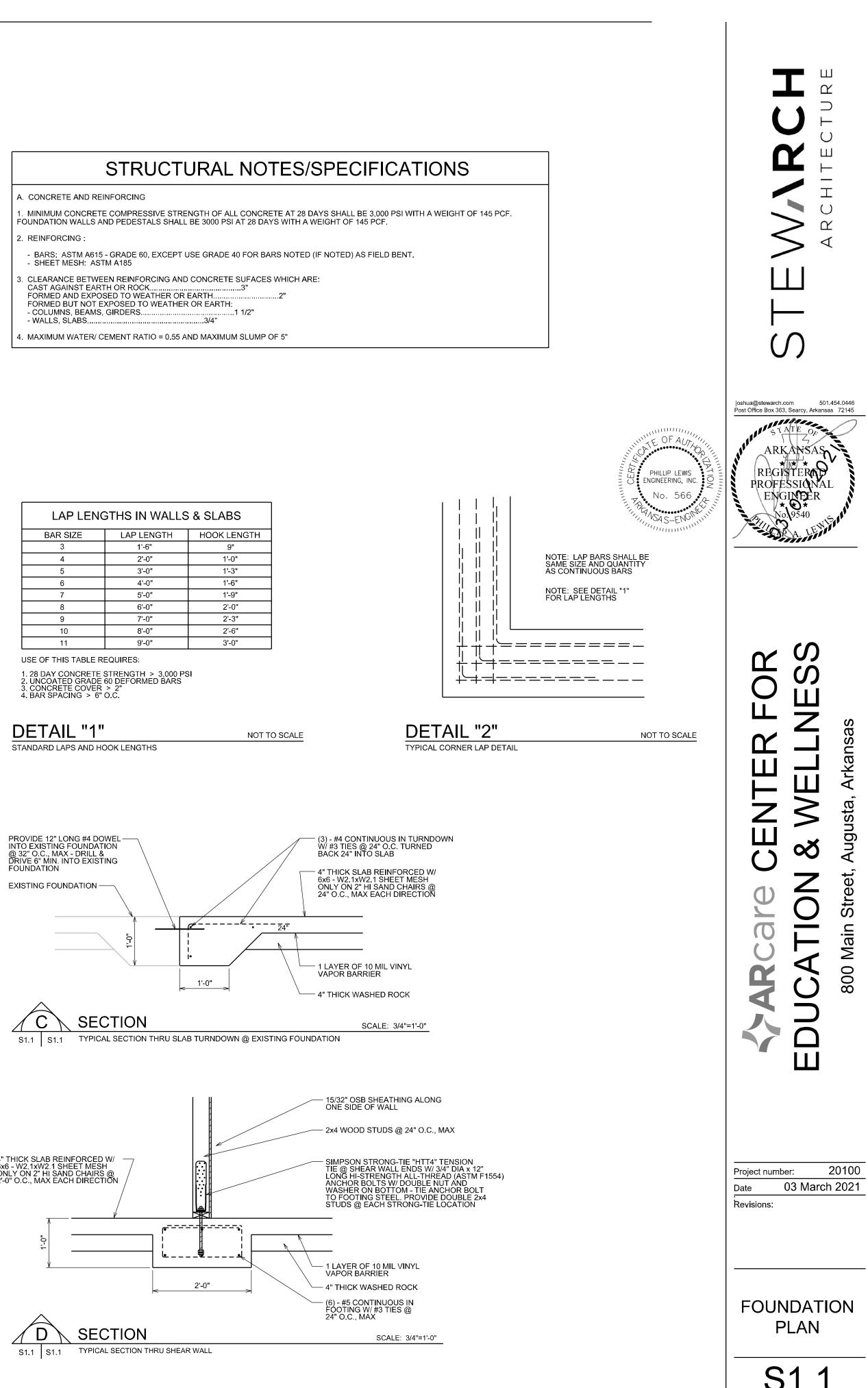


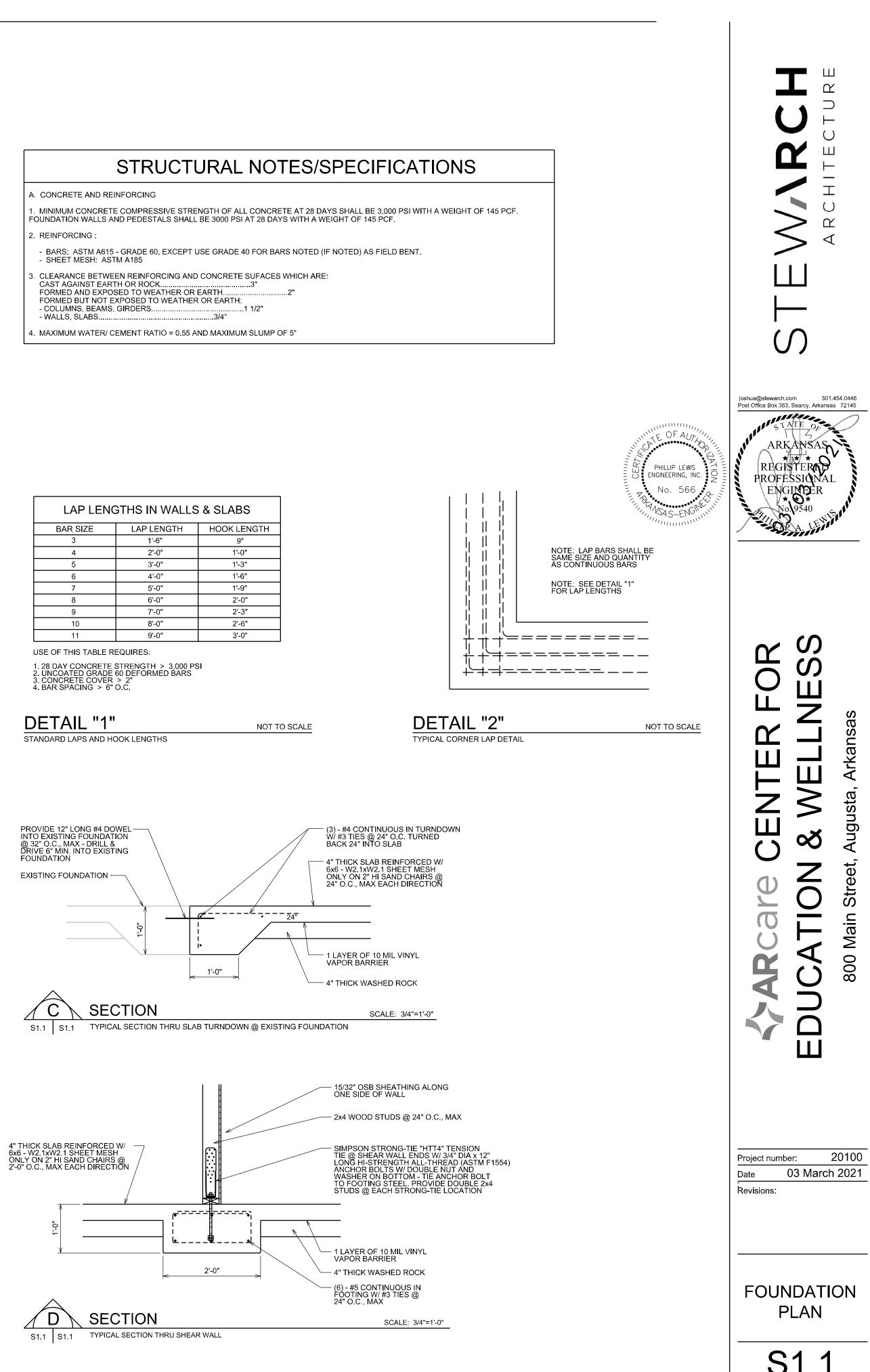
- SHEET MESH: ASTM A185
- CAST AGAINST EARTH OR ROCK .... FORMED AND EXPOSED TO WEATHER OR EARTH..

LAP LENG	LAP LENGTHS IN WALLS & SLABS					
BAR SIZE	LAP LENGTH HOOK LEN					
3	1'-6"	9"				
4	2'-0"	1'-0"				
5	3'-0"	1'-3"				
6	4'-0"	1'-6"				
7	5'-0"	1'-9"				
8	6'-0"	2'-0"				
9	7'-0"	2'-3"				
10	8'-0"	2'-6"				
11	9'-0"	3'-0"				

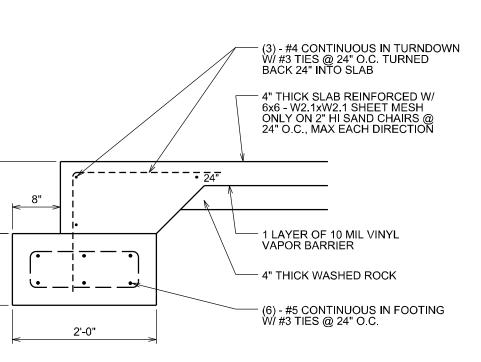








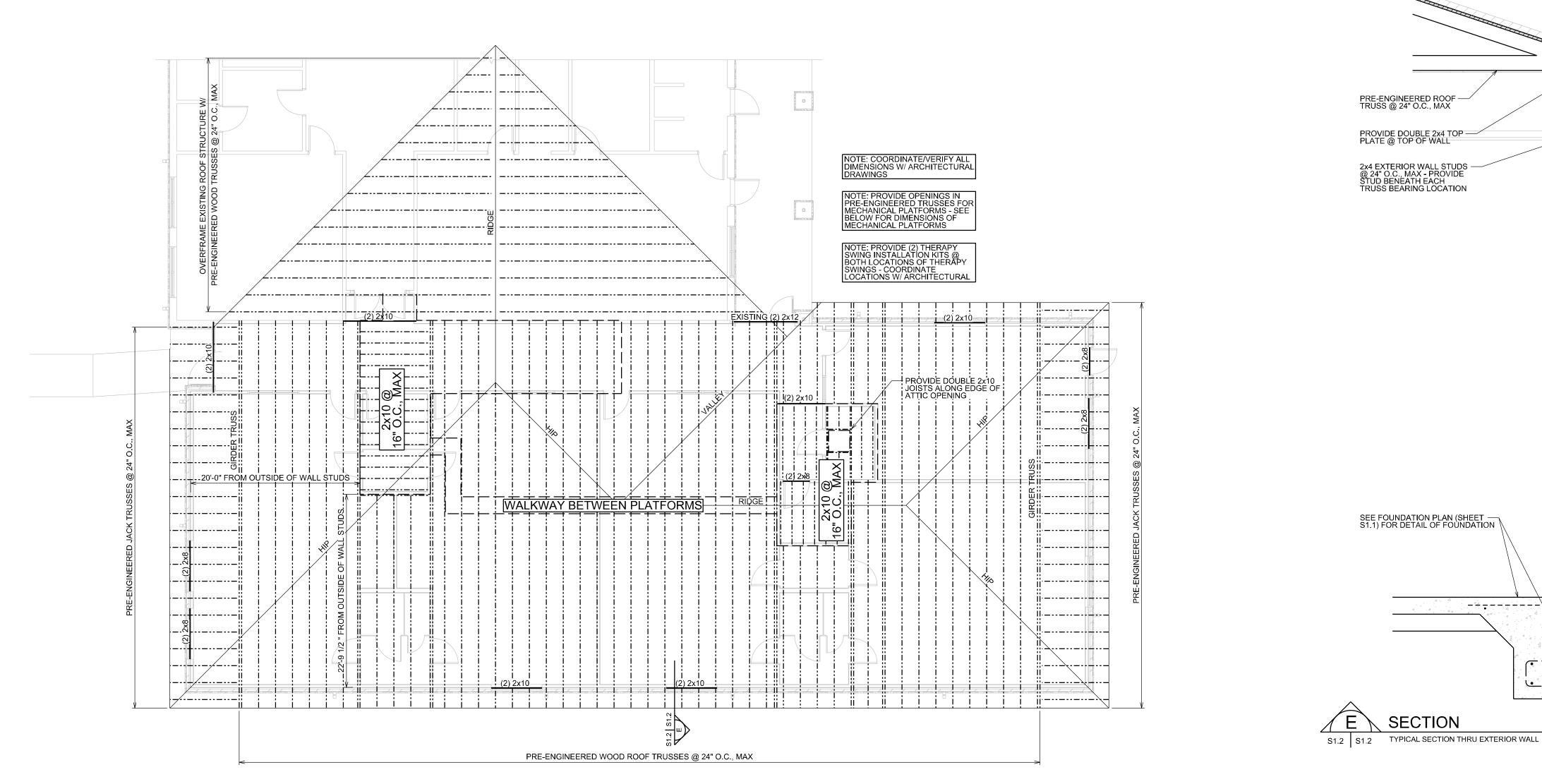




SCALE: 3/4"=1'-0"

TION

L SECTION THRU PERIMETER SLAB TURNDOWN



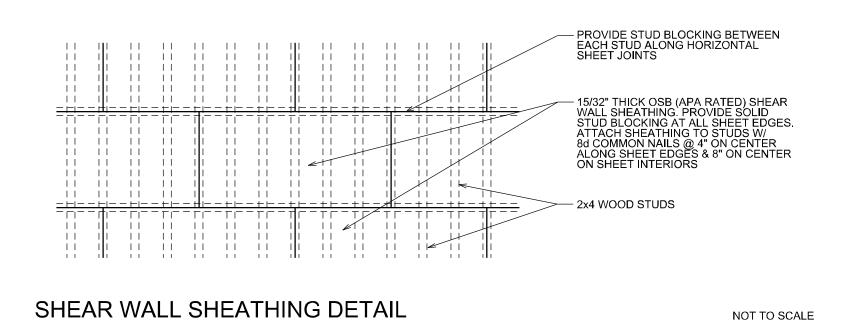
# ROOF FRAMING PLAN

1. WOOD "STICK" ROOF FRAMING AND PRE-ENGINEERED WOOD TRUSSES SHALL BE DESIGNED FOR THE FOLLOWING LOADS:

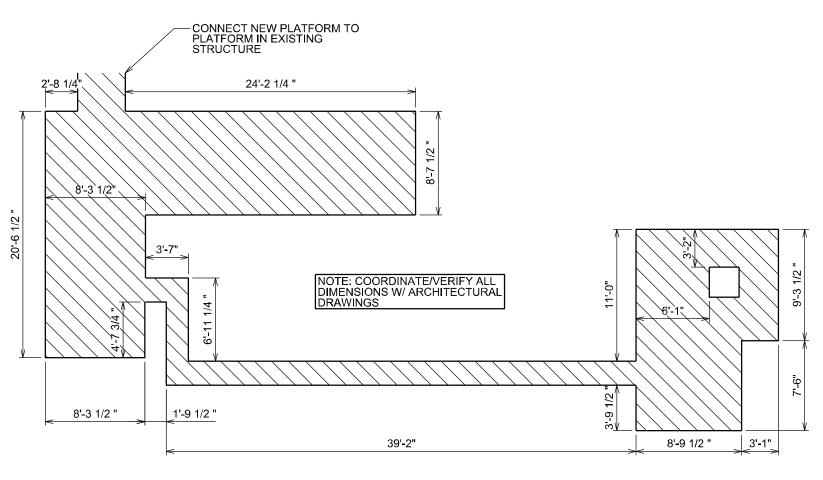
20 PSF - DEAD AND COLLATERAL LOADS

20 PSF - LIVE LOAD

2. ALL DIMENSIONAL LUMBER TO BE NO. 2 GRADE (OR BETTER) SOUTHERN YELLOW PINE OR DOUGLAS FIR-LARCH.



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



MECHANICAL PLATFORM DIMENSIONS

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

