ADDENDUM NO. 2

PROJECT TITLE: Parker Park Community Center Pool Addition

City of Jonesboro Jonesboro, Arkansas

OWNER: City of Jonesboro

300 South Church Street Jonesboro, AR 72401

OWNER'S REPRESENTATIVE: Honorable Mayor Harold Copenhaver

(870) 932-1052 Office

ARCHITECT: Brackett-Krennerich and Associates P.A.

100 East Huntington Avenue, Suite D

Post Office Box 1655

Jonesboro, Arkansas 72403-1655

(870) 932-0571 office

COMMISSION NUMBER: 2301

DATE OF ISSUE: August 21, 2023

BID DATE/LOCATION: August 23, 2023 at 2:00 p.m. C.D.S.T

1st Floor Conference Room Municipal Building Center 300 South Church Street Jonesboro, AR 72401

Contractor shall take note of the following listed revisions and/or additions to the drawings and specifications for the above referenced project and adjust the contract sum accordingly. These revisions are hereby made a part of said documents and subsequent construction as if therein included.

GENERAL

- 1. General: The following are questions provided to the design team with corresponding answers provided:
 - A. **Question**: RFI #01 AQ100 sheet shows one Funbrella, AQ101 sheet shows three Funbrellas, specifications list none. Should any Funbrellas or anchors be included in the bid?

A: **Answer**: AQ sheet are just for the swimming pool. There is one Funbrella in the pool seating area. In addition, (2) 12' and (2) 20' Funbrellas are to be provided on the patio surface. **This is a total of (5) Funbrellas in all.**

a. 12' and 20' Funbrella Classic Umbrella shade structure.

- b. 100% dyed woven acrylic fabric.
- c. 4" aluminum center pole with winch and cables enclosed.
- d. Powder coated steel tubing at bows and braces.
- e. Removable handle, hidden winch and safety pin.
- f. Meets ASCE 7-02 requirements for 90 mph 3 second wind gust velocity when closed and secured.
- g. Flush mount ground sleeve.
- B. **Question**: RFI #02 AQ plans shows a stainless steel gutter system, specifications list cast in place. Which one is correct?

A: Answer: This has been corrected in Addendum #1.

C. **Question**: RFI #03 – Who are the approved as equals manufacturers for the filter, chemical controller, butterfly valves and the filter, water feature and jet pumps?

A: **Answer**: Filters; Miami, United Industries; Chemical Controller: none; Butterfly Vale options are in specifications; Alternate water features will be considered but there is not a list of approved.; Other pump manufacturers will be considered, for the VITs any reputable manufacturer providing the same or better quality and features.

D. **Question**: RFI #04 – Are there any prevailing wages

A: Answer: No

E. **Question**: RFI #05 – Since the pool construction contact will be in excess of \$50,000.00, will the pool contractor be listed with the mechanical, plumbing, electrical and roofing work?

A: Answer: No

F. **Question**: RFI #06 – There is a note on the plans that says all ductwork to be internally lined but the spec calls for 2" type 100 duct wrap. Can you clarify?

A: **Answer**: Note regarding internal insulation specifically refers to the bathroom building. See answer below for ductwork that can be externally insulated.

G. **Question**: RFI #07 – On the deductive alternate, above the concession's area layin ceiling it has a note #12 that says ductwork to be internally lines with paint grip finish and to paint exposed ductwork. It also appears to be spiral pipe. This ductwork is above a lay-in ceiling, does it need to be paint grip with internal insulation? Does it need to spiral pipe or can it be change to rectangle ductwork with insulation, either internal or external?

A: **Answer**: The existing 18" round is spiral duct with internal insulation. New ductwork connected to the existing 18" round should be round ductwork with external insulation. Paint grip finish is not required.

CIVIL

2. Drawings: Sheet C003- Enlarged Site Plan

- A. Omit Sheet C003 in its entirety. Replace with attached Sheet C003 dated 08.21.23. Refer to page 6 of this addendum.
 - a. Provide self-closing (tension-adjustable) closers on all 4'-0" wide single walk gates. Design intent is for these gates to close and positively latch when entering or exiting.
 - b. Provide expanded metal covers for surge tank, pump, backwash and acid storage pits as indicated by detail 1. This will require (4) covers total matching the interior dimensions of these (4) pits. Provide min. 2 hinged access doors. All steel and expanded metal are to be galvanized.
 - c. Provide (4) additional umbrellas on patio in addition to umbrella located in the pool. See Q/A section for specifications of umbrellas and sheet C

ARCHITECTURAL

- 3. Specifications: <u>Section 01 5000 Temporary Facilities and Controls</u>; 1.08 Barriers. Include the following:
 - A. C. Provide a minimum of **1,060 linear feet** of temporary 6'-0" chainlink fence around perimeter of worksite to deter entry from the neighboring communities. This cost is to be included in the base bid. Permanent fencing specified may not be used for temporary barrier fencing.
- 4. Specifications: Section 32 3119 Decorative Metal Fences and Gates
 - A. Provide the following opaque material for **120 linear feet** of decorative metal fencing for this project:
 - a. Privacy picket panels; ³/₄" pickets with extender clops and U-locks as manufactured by Hurricane Mfg. co. LLC.

MECHANICAL

- 5. Specifications: Section 22 1005; Paragraph 2.02B Revise as follows:
 - B. Piping Below Grade (Hubless):
 - 1. All lines of 2 inches and larger shall be service weight cast iron soil piping and fittings, coated inside and outside with coal tar varnish and shall be labeled with cast iron mark of quality and permanence as illustrated in Commercial Standard CS188, which indicates that it complies with this Standard.
 - 2. Pipe and fittings used in the hubless system shall bear the registered insignia indicating that these items used in the system shall comply with the Cast Iron Soil Pipe Institute's Standard 302 (latest revision) and the ASTM "Standard Specifications for Cast Iron Soil Pipe and Fittings".
 - 3. Below grade cast iron waste piping shall be encased inside a polyethylene (Polywrap) tubular polyethylene encasement protection (8 mil linear low density), for cast and ductile iron made by Trumbull Manufacturing Company in Youngstown, Ohio, phone (800) 677-1799. Tape all joints use caution in handling so as not to tear casing. This is to protect pipe from corrosive soil.

6. Drawings: Sheet M302-HVAC Details

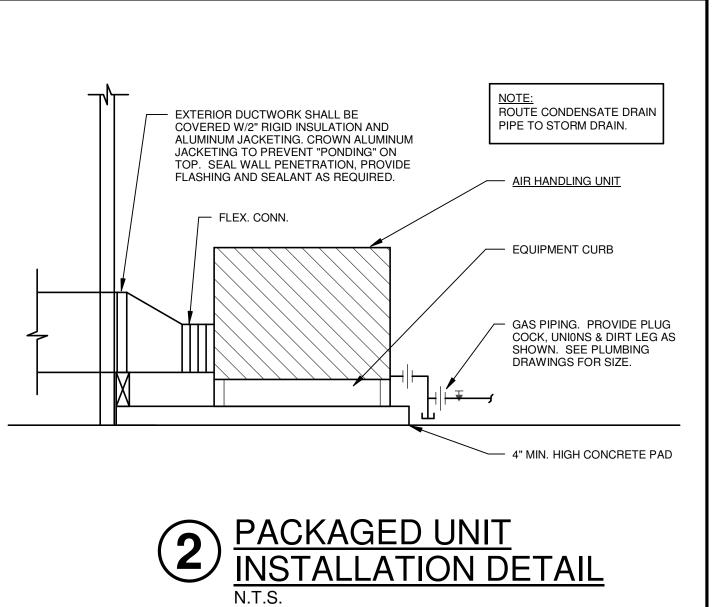
A. Omit Sheet M302 in its entirety. Replace with attached Sheet M302 dated 08.21.23. Refer to page 7 of this addendum. Revision to the exhaust fan control installation and sequence.

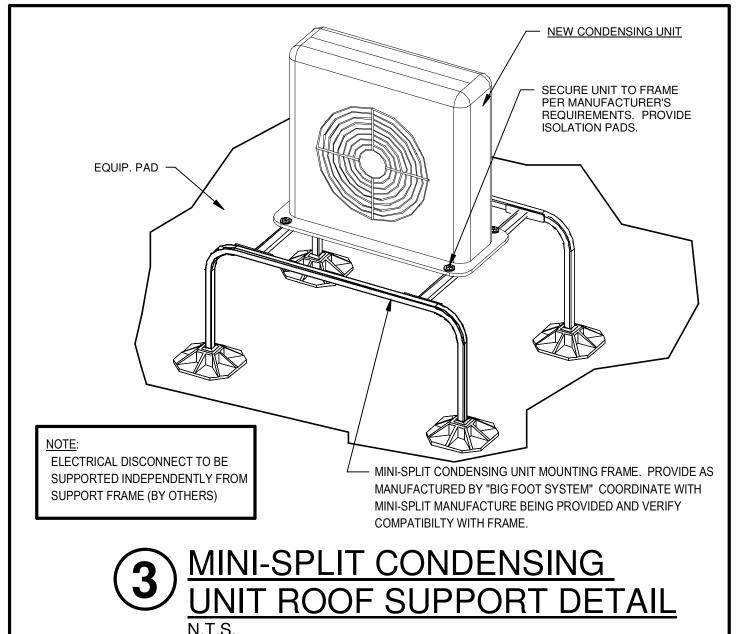
7. Drawings: Sheet M401- HVAC Schedules

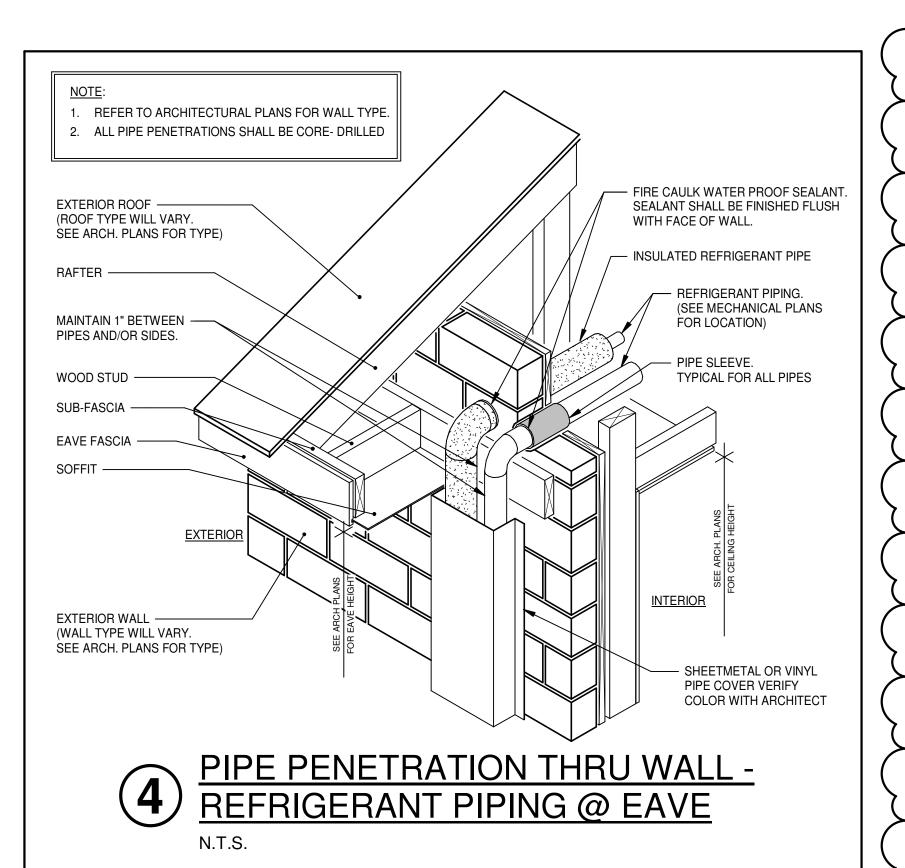
A. Omit Sheet M401 in its entirety. Replace with attached Sheet M401 dated 08.21.23. Refer to page 8 of this addendum. Revision to the exhaust fan control installation and sequence.

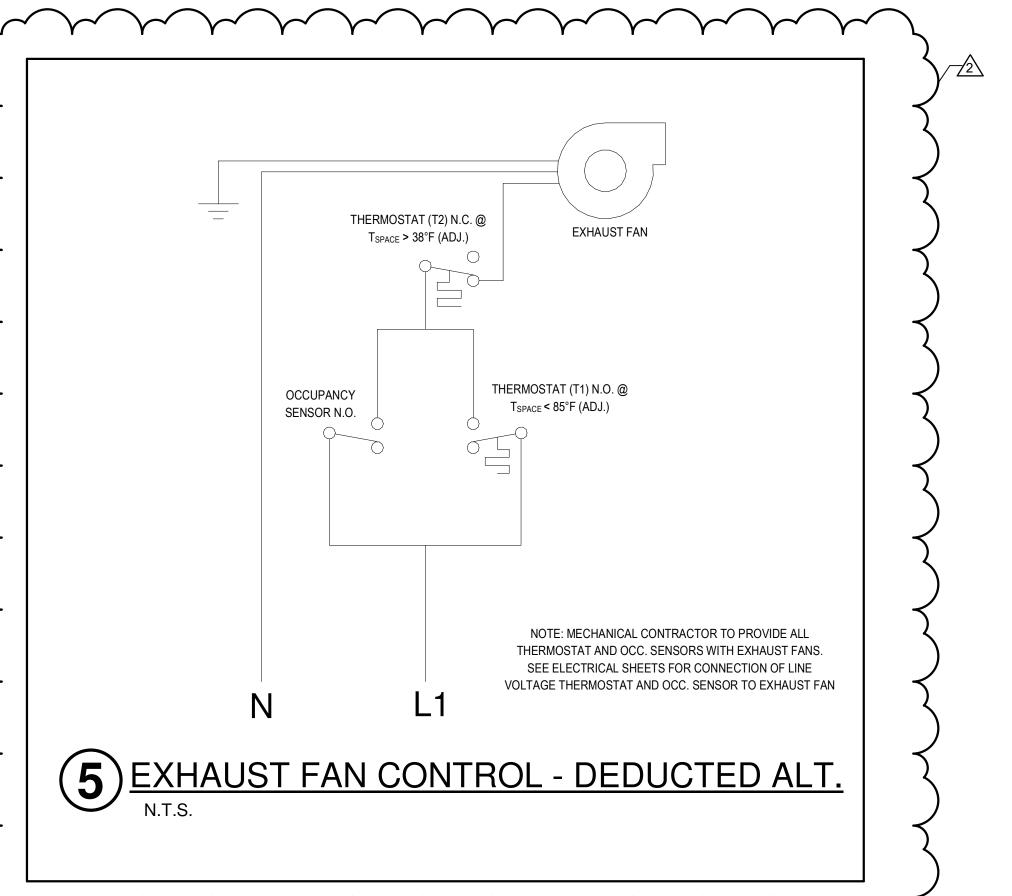
8. Drawings: Sheet M402- HVAC Schedules

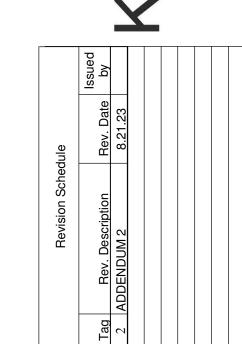
A. Omit Sheet M402 in its entirety. Replace with attached Sheet M402 dated 08.21.23. Refer to page 9 of this addendum. Revision to the exhaust fan control installation and sequence.

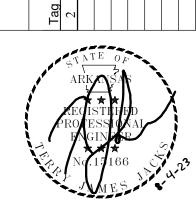








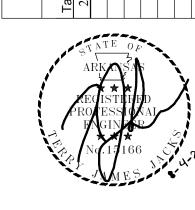


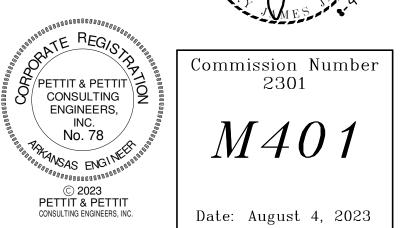




August 21, 2023

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	PACKAGED UNIT SCHEDULE																								
DESIG	. MFR/MDL	NOMINA TONS	AL AREA SERVED	TYPE	OSA DATA ERV / DAMPER TYPE	CFM	CFM	FAN DA	TA TYPE DIA.xW	ID. ROW/FIN	EAT ,	DX (TOTAL MBH	SENS.	OD AMB	FUEL	TOTAL MBH	HEATING ELECTRIC EA	T/LAT BH	HP ↓	ELECTI HP M	,` <u>, , </u>	ATA MOP	VOLT/PH	REMARKS
AC-1	JCI / XYEA7A2B3AA1A114A2	6	CONCESSIONS / STORAGE	2-STAGE COOL ELECTRIC HEAT		500	2,200	1.5"/2.13"	VARIABLE		77.5° d.b. 65.2° d.b.	56.9° d.b. 54.2° w.b.	73.0	49.0	91°d.b. 71° w.b.	HEAT PUMP / ELECTRIC	67.0 AT 47° 38.0 AT 38°	25 KW 68°	°/94.7°		9	9.8	100	208/ 3ø	SINGLE ZONE VARIABLE AIR VOLUME UNIT. VFD SUPPLY, HORIZONTAL SUPPLY / RETURN, 2" FILTERS, HEAT PUMP W/ SUPPLEMENTAL ELECTRIC HEAT, HINGED FILTER ACCESS DOOR, REFERENCE ENTHALPY ECONOMIZER, BAROMETRIC RELEIF, S.S. STAINLESS STEEL HX, HUMIDITY SENSOR, HAIL GUARDS & DEHUMIDIFICATION CONTROLS
	MANUA ODLIT INIDAAD AYA IMIT AAUEDIU E																								

	MINI-SPLIT INDOOR A/C UNIT SCHEDULE																			
DESIG	MFR/MDL	TYPE	LOCATION	CEM	OSA	ESP	DIMENSIONS	WEIGHT		OOLING			HEATING		REFRIGER	RANT PIPE SIZ		LECTRIC	CAL DATA	TO REMARKS
DESIG				(H M F)					CAPACITY	INDOOR	OUTDOOR	CAPACITY	INDOOR	OUTDOOR	GAS	LIQUID	MCA	MOCP	VOLT/PHASE	
MS-1	LG / LV181HV4	SINGLE ZONE VERTICAL AIR HANDLER	101 - OFFICE	640 - HIGH 580 - MED. 480 - LOW	25		48.39" X 18" X 18.25"	LBS.	24,000 BTU/H 18,000 BTU/H 7,200 BTU/H	80° d.b. 67° w.b.	95° d.b. 75° w.b.	24,000 BTU/H 20,000 BTU/H 8,000 BTU/H	70° d.b. 60° w.b.	47° d.b. 43° w.b.	5/8"	3/8"			208v / 1ø	(SEE SPECIFICATIONS)
MS-2	LG / LV1818HV4	SINGLE ZONE VERTICAL AIR HANDLER	102 - FAMILY RR	640 - HIGH 580 - MED. 480 - LOW	100		48.39" X 18" X 18.25"	LBS.	24,000 BTU/H 18,000 BTU/H 7,200 BTU/H	80° d.b. 67° w.b.	95° d.b. 75° w.b.	24,000 BTU/H 20,000 BTU/H 8,000 BTU/H	70° d.b. 60° w.b.	47° d.b. 43° w.b.	5/8"	3/8"			208v / 1ø	(SEE SPECIFICATIONS)
MS-3	LG / LV241HV4	SINGLE ZONE VERTICAL AIR HANDLER	105 - BOYS	710 - HIGH 640 - MED. 480 - LOW	250		48.39" X 18" X 18.25"	LBS.	30,000 BTU/H 24,000 BTU/H 9,600 BTU/H	80° d.b. 67° w.b.	95° d.b. 75° w.b.	30,000 BTU/H 27,000 BTU/H 10,800 BTU/H	70° d.b. 60° w.b.	47° d.b. 43° w.b.	5/8"	3/8"			208v / 1ø	(SEE SPECIFICATIONS)
MS-4	LG / LV241HV4	SINGLE ZONE VERTICAL AIR HANDLER	104 - GIRLS	710 - HIGH 640 - MED. 480 - LOW	250		48.39" X 18" X 18.25"	LBS.	30,000 BTU/H 24,000 BTU/H 9,600 BTU/H	80° d.b. 67° w.b.	95° d.b. 75° w.b.	30,000 BTU/H 27,000 BTU/H 10,800 BTU/H	70° d.b. 60° w.b.	47° d.b. 43° w.b.	5/8"	3/8"			208v / 1ø	(SEE SPECIFICATIONS)

ı	MINI-SPLIT CONDENSING UNIT SCHEDULE																					
DESIG. MFR/MDL TYPE SERVES				DIMENSIONS	WEICHT		OOLING	19/20-19-2-4T		HEATING) - / EXCLUDING FA	N DATA			OMPRESSOR D	ATA:		ELECTR	ICAL DATA	REMARKS	
DESIG.	MFK/MDC.	ITTE	SERVES	(EX W X D) →	WEIGHT	CAPACITY	INDOOR	OUTDOOR	CAPACITY	INDOOR	OUTDOOR	TYPE / QTY	CFM [*]	FLA	TYPE	COOL KW	HEATER KW	MCA	MOCP	VOLT/PHASE	REMARKS	
MSOU-1	LG / LUU189HV	AIR COOLED	MS-1	37.4" X 32.3" X 15.3"	LBS.	24,000 BTU/H 18,000 BTU/H 7,200 BTU/H	80° d.b. 67° w.b.	95° d.b. 75° w.b.	24,000 BTU/H 20,000 BTU/H 8,000 BTU/H	70° d.b. 60° w.b.	47° d.b. 43° w.b.	PROP / 1	2,048	1.6 A	INVERTER 25° - 100°	3.25 - HIGH 1.46 - MED. 0.45 - LOW	2.37 - HIGH 1.73 - MED. 0.5 - LOW	20	30	208 V/ 1ø	(SEE SPECIFICATIONS)	,
MSOU-2	LG / LUU189HV	AIR COOLED	MS-2	37.4" X 32.3" X 15.3"	LBS.	24,000 BTU/H 18,000 BTU/H 7,200 BTU/H	80° d.b. 67° w.b.	95° d.b. 75° w.b.	24,000 BTU/H 20,000 BTU/H 8,000 BTU/H	70° d.b. 60° w.b.	47° d.b. 43° w.b.	PROP / 1	2,048	1.6 A	INVERTER 25° - 100°	3.25 - HIGH 1.46 - MED. 0.45 - LOW	2.37 - HIGH 1.73 - MED. 0.5 - LOW	20	30	208 V/ 1ø	(SEE SPECIFICATIONS)	
MSOU-3	LG / LUU249HV	AIR COOLED	MS-3	37.4" X 32.3" X 15.3"	LBS.	30,000 BTU/H 24,000 BTU/H 9,600 BTU/H	80° d.b. 67° w.b.	95° d.b. 75° w.b.	30,000 BTU/H 27,000 BTU/H 10,800 BTU/H	70° d.b. 60° w.b.	47° d.b. 43° w.b.	PROP / 1	2,048	1.6 A	INVERTER 25° - 100°	3.26 - HIGH 2.10 - MED. 0.65 - LOW	3.04 - HIGH 2.31 - MED. 0.65 - LOW	20	30	208 V/ 1ø	(SEE SPECIFICATIONS)	
MSOU-4	LG / LUU249HV	AIR COOLED	MS-4	37.4" X 32.3" X 15.3"	LBS.	30,000 BTU/H 24,000 BTU/H 9,600 BTU/H	80° d.b. 67° w.b.	95° d.b. 75° w.b.	30,000 BTU/H 27,000 BTU/H 10,800 BTU/H	70° d.b. 60° w.b.	47° d.b. 43° w.b.	PROP / 1	2,048	1.6 A	INVERTER 25° - 100°	3.26 - HIGH 2.10 - MED. 0.65 - LOW	3.04 - HIGH 2.31 - MED. 0.65 - LOW	20	30	208 V/ 1ø	(SEE SPECIFICATIONS)	

	EXHAUST FAN SCHEDULE															
DECIC	DESIG MEDIMOL SERVES LOCAT				FAN DATA								МОТО	R DATA	1	DEMARKS
DESIG.	MFR/MDL	SERVES	LOCAT.	TYPE	CFM	S.P.	RPM	DRIVE	TYPE	DIA.	SONES	RPM	AMPS	HP	VOLT/PH	REMARKS
EF-1	GREENHECK/ CSP - A200	111 - HALL	111 - HALL	INLINE	50	.375"		DIRECT			0.5	598	0.6		120 / 1ø	PROVIDE WITH SPEED CONTROL, MOUNTED AND WIRED, PROVIDE CONTROL DIAL, DISCONNECT SWITCH, OCCUPANCY SENSOR & BACKDRAFT DAMPER.
EF-2	GREENHECK/ CSP - A900	107 - POOL EQUIP.	MECH. ROOM	INLINE	450	.375"		DIRECT			1.2	708	3.8		120 / 1ø	PROVIDE WITH SPEED CONTROL, MOUNTED AND WIRED, PROVIDE CONTROL DIAL, DISCONNECT SWITCH, OCCUPANCY SENSOR & BACKDRAFT DAMPER.
EF-3	GREENHECK/ CSP - A410	106 - MECH. CHASE	MECH. ROOM	INLINE	150	.375"		DIRECT			0.9	780	1.6		120 / 1ø	PROVIDE WITH SPEED CONTROL, MOUNTED AND WIRED, PROVIDE CONTROL DIAL, DISCONNECT SWITCH, OCCUPANCY SENSOR & BACKDRAFT DAMPER.
EF-4	GREENHECK/ CSP - A900	ATTIC SPACE	ATTIC	INLINE	600	.375"		DIRECT			0.4	783	3.8		120 / 1ø	PROVIDE WITH SPEED CONTROL, MOUNTED AND WIRED, PROVIDE CONTROL DIAL, DISCONNECT SWITCH, WIRED THERM / HUMIDIOSTAT & BACKDRAFT DAMPER.
EF-5	GREENHECK/ CSP - A410	104 - GIRLS	MECH. ROOM	INLINE	250	.375"		DIRECT			1.2	918	1.7		120 / 1ø	PROVIDE WITH SPEED CONTROL, MOUNTED AND WIRED, PROVIDE CONTROL DIAL, DISCONNECT SWITCH, OCCUPANCY SENSOR & BACKDRAFT DAMPER.
EF-6	GREENHECK/ CSP - A410	105 - BOYS	MECH. ROOM	INLINE	250	.375"		DIRECT			1.2	918	1.7		120 / 1ø	PROVIDE WITH SPEED CONTROL, MOUNTED AND WIRED, PROVIDE CONTROL DIAL, DISCONNECT SWITCH, OCCUPANCY SENSOR & BACKDRAFT DAMPER.
EF-7	GREENHECK/ CSP - A250	102 - FAMILY RR	CEILING	INLINE	100	.375"		DIRECT			0.3	721	0.6		120 / 1ø	PROVIDE WITH SPEED CONTROL, MOUNTED AND WIRED, PROVIDE CONTROL DIAL, DISCONNECT SWITCH, OCCUPANCY SENSOR & BACKDRAFT DAMPER.
*EF-5	GREENHECK/ CSP - A900	104 - GIRLS	MECH. ROOM	INLINE	450	.375"		DIRECT			1.2	708	3.8		120 / 1ø	PROVIDE WITH SPEED CONTROL, MOUNTED AND WIRED, PROVIDE CONTROL DIAL, DISCONNECT SWITCH, WALL MOUNTED THERMOSTAT, OCC. SENSOR & BACKDRAFT DAMPER
*EF-6	GREENHECK/ CSP - A900	105 - BOYS	MECH. ROOM	INLINE	450	.375"		DIRECT			1.2	708	3.8		120 / 1ø	PROVIDE WITH SPEED CONTROL, MOUNTED AND WIRED, PROVIDE CONTROL DIAL, DISCONNECT SWITCH, WALL MOUNTED THERMOSTAT, OCC. SENSOR & BACKDRAFT DAMPER
*EF-7	GREENHECK/ CSP - A710	102 - FAMILY RR	CEILING	INLINE	350	.375"		DIRECT			0.4	883	4.9		120 / 1ø	PROVIDE WITH SPEED CONTROL, MOUNTED AND WIRED, PROVIDE CONTROL DIAL, DISCONNECT SWITCH, WALL MOUNTED THERMOSTAT, OCC. SENSOR & BACKDRAFT DAMPER

	AIR DEV	ICE SCH	EDULE				
DESIG.	MFR./MDL.	TYPE	FACE SIZE	FINISH	FREE AREA	ACCESS.	REMARKS
CD-1	TITUS / TMS-AA	LOUVER FACE CEILING SUPPLY	AS NOTED	WHITE		OPPOSED BLADE DAMPER	2'x2' GRILLE WITH ROUND NECK
CD-2	TITUS / TDC-AA	LOUVER FACE CEILING SUPPLY	AS NOTED	WHITE		OPPOSED BLADE DAMPER	2'x2' GRILLE WITH SQUARE NECK
SG-1	TITUS / 300FL	DOUBLE DEFLECTION SIDEWALL SUPPLY	AS NOTED	WHITE		OPPOSED BLADE DAMPER	PROVIDE W/ 3/4" SPACED BLADES, 22.5° DEFLECTION, FRONT BLADES PARALLEL TO LONG DIMENSION.
LD-1	TITUS / ML-38	LINEAR	AS NOTED	WHITE		OPPOSED BLADE DAMPER	PROVIDE W/ NUMBER OF SLOTS DESIGNATED ON PLANS, 3/4" SLOT WIDTH, END CAPS, AND CONTINUOUS INSULATED PLENUM. PLENUM HEIGHT SHALL BE ADEQUATELY TALL FOR CONNECTION OF DUCT SIZE SHOWN ON PLANS
LD-2	TITUS / CT-PP-580	LINEAR	AS NOTED	COORD. W/ ARCHITECT		OPPOSED BLADE DAMPER	PROVIDE W/ WIDTH OF DEVICE DESIGNATED ON PLANS, REMOTE DAMPER REGULATOR ACCESSIBLE FROM FACE OF AIR DEVICE, END CAPS, AND CONTINUOUS INSULATED PLENUM. PLENUM HEIGHT SHALL BE ADEQUATELY TALL FOR CONNECTION OF DUCT SIZE SHOWN ON PLANS. SEE ARCHITECTURAL SHEETS FOR FLOOR TYPES.
RA-1	TITUS / PAR-AA	PERF. FACE CEILING RETURN	AS NOTED	WHITE	51%	OPPOSED BLADE DAMPER	22" x 22" NECK TYPICAL UNLESS NOTED OTHERWISE ON PLANS.
RA-2	TITUS / 350FL	SIDEWALL RETURN	AS NOTED	WHITE		OPPOSED BLADE DAMPER	PROVIDE W/ 3/4" SPACED BLADES, 22.5° DEFLECTION, FRONT BLADES PARALLEL TO LONG DIMENSION.
ER-1	TITUS / 50F	EGGCRATE CEILING EXHAUST	AS NOTED	WHITE	51%	OPPOSED BLADE DAMPER	SQUARE NECK.
SE-1	TITUS / 350FL	SIDEWALL EXHAUST	AS NOTED	WHITE		OPPOSED BLADE DAMPER	PROVIDE W/ 3/4" SPACED BLADES, 22.5° DEFLECTION, FRONT BLADES PARALLEL TO LONG DIMENSION.

* DENOTES EQUIPMENT TO BE PROVIDED IN DEDUCTIVE ALTERNATE ONLY.

Commission Number

Date: August 4, 2023

	UNIT HEATER SCHEDULE															
DESIG.	GIG MED/MDI CEDVEC TVDE CEM 1 m = 3 0 m = 1											BLOWER		TRICAL	REMARKS	
DESIG.		SERVES	ITPE	CIW	LENGTH	LENGTH	LENGTH	HEIGHT	DEPTH	WATTS	BTU / HOUR	HP	VOLT / PHASE	AMPS	VOLT / PHASE	NEWARKS
EH-1	QMARK / MUH0521- PRO-SSP	106 - MECH. CHASE	WALL HEATER	350			16"	14"	7.5"	5,000	17,060			18.0	208 / 3ø	PROVIDE WITH OVERHEAD MOUNTING BRACKET, LOUVER DIFFUSER, DUST SHIELD, SECURITY COVER, THERMOSTAT, AND UNIT DISCONNECT.
EH-2*	QMARK / AWH4408F	104 - GIRLS	WALL HEATER	100			15.75"	19.32"	3.9"	4,000	13,649			19.2	208 / 1ø	PROVIDE WITH MOUNTING SLEVE FOR IN-WALL INSTALLATION, SECURITY COVER, THERMOSTAT, AND UNIT DISCONNECT.
EH-3*	QMARK / AWH4408F	105 - GIRLS	WALL HEATER	100			15.75"	19.32"	3.9"	4,000	13,649			19.2	208 / 1ø	PROVIDE WITH MOUNTING SLEVE FOR IN-WALL INSTALLATION, SECURITY COVER, THERMOSTAT, AND UNIT DISCONNECT.
EH-4*	QMARK / AWH3180F	102 - FAMILY RR	WALL HEATER	100			15.75"	19.32"	3.9"	1,800	6,142			15	120 / 1ø	PROVIDE WITH MOUNTING SLEVE FOR IN-WALL INSTALLATION, SECURITY COVER, THERMOSTAT, AND UNIT DISCONNECT.
EH-5*	QMARK / AWH3150F	103 - SHOWER	WALL HEATER	100			15.75"	19.32"	3.9"	1,500	5,118			12.5	120 / 1ø	PROVIDE WITH MOUNTING SLEVE FOR IN-WALL INSTALLATION, SECURITY COVER, THERMOSTAT, AND UNIT DISCONNECT.
* DENOTES	EQUIPMENT TO BE PRO	OVIDED IN DEDUC	TIVE ALTERNAT	E ONLY.												

LOUVER / VENTILATOR SCHEDULE											
DESIG.	MFR./MDL.	TYPE	SERVES	CFM	S.P.	SIZE	VELOCITY FPM	REMARKS			
L-1	GREENHECK / EHH-701	FIXED DRAINABLE	EF-1 RELIEF	250	0.05	16" W X 16" H	409	PROVIDE W/ BIRD SCREEN. COLOR BY ARCHITECT.			
L-2	GREENHECK / EHH-701	FIXED DRAINABLE	EF-2 RELIEF	450	0.02	36" W X 16" H	322	PROVIDE W/ BIRD SCREEN. COLOR BY ARCHITECT.			
L-3	GREENHECK / EHH-701	FIXED DRAINABLE	(105 - MECH.) EXHAUST INTAKE	150	0.01	36" W X 16" H	206	PROVIDE W/ BIRD SCREEN. COLOR BY ARCHITECT.			
*L-4	GREENHECK / EHH-701	FIXED DRAINABLE	(104 - GIRLS) EXHAUST INTAKE	450	0.02	36" W X 16" H	322	PROVIDE W/ BIRD SCREEN. COLOR BY ARCHITECT.			
*L-5	GREENHECK / EHH-701	FIXED DRAINABLE	(105 - BOYS) EXHAUST INTAKE	450	0.02	36" W X 16" H	322	PROVIDE W/ BIRD SCREEN. COLOR BY ARCHITECT.			
*L-6	GREENHECK / EHH-701	FIXED DRAINABLE	(102 - FAMILY RR) EXHAUST INTAKE	350	0.03	36" W X 16" H	289	PROVIDE W/ BIRD SCREEN. COLOR BY ARCHITECT.			
GV-1	GREENHECK / GRSR-10	GRAVITY VENTILATOR	<u>EF-5</u> RELIEF	250	0.023	10" W X 10" H	439	PROVIDE ROOF CURB, GRAVITY BACKDRAFT DAMPER, & BIRDSCREEN			
GV-2	GREENHECK / GRSR-10	GRAVITY VENTILATOR	EF-6 RELIEF	250	0.023	10" W X 10" H	439	PROVIDE ROOF CURB, GRAVITY BACKDRAFT DAMPER, & BIRDSCREEN			
GV-3	GREENHECK / GRSR-8	GRAVITY VENTILATOR	EF-3 RELIEF	150	0.008	8" W X 8" H	405	PROVIDE ROOF CURB, GRAVITY BACKDRAFT DAMPER, & BIRDSCREEN			
GV-4	GREENHECK / GRSR-8	GRAVITY VENTILATOR	<u>EF-7</u> RELIEF	150	0.008	8" W X 8" H	405	PROVIDE ROOF CURB, GRAVITY BACKDRAFT DAMPER, & BIRDSCREEN			
GV-5	GREENHECK / GRSR-16	GRAVITY VENTILATOR	MINI-SPLIT O.S.A. INTAKE	625	0.036	16" W X 16" H	431	PROVIDE ROOF CURB, GRAVITY BACKDRAFT DAMPER, & BIRDSCREEN			
GV-6	GREENHECK / GRSR-16	GRAVITY VENTILATOR	EF-4 RELIEF	600	0.036	16" W X 16" H	414	PROVIDE ROOF CURB, GRAVITY BACKDRAFT DAMPER, & BIRDSCREEN			
GV-1*	GREENHECK / GRSR-16	GRAVITY VENTILATOR	<u>EF-5</u> RELIEF	450	0.023	10" W X 10" H	310	PROVIDE ROOF CURB, GRAVITY BACKDRAFT DAMPER, & BIRDSCREEN			
GV-2*	GREENHECK / GRSR-16	GRAVITY VENTILATOR	EF-6 RELIEF	450	0.023	10" W X 10" H	310	PROVIDE ROOF CURB, GRAVITY BACKDRAFT DAMPER, & BIRDSCREEN			
GV-4*	GREENHECK / GRSR-12	GRAVITY VENTILATOR	<u>EF-7</u> RELIEF	350	0.008	" W X" H	320	PROVIDE ROOF CURB, GRAVITY BACKDRAFT DAMPER, & BIRDSCREEN			
GV-5*	GREENHECK / GRSR-8	GRAVITY VENTILATOR	MINI-SPLIT O.S.A. INTAKE	25	0.036	8" W X 8" H	208	PROVIDE ROOF CURB, GRAVITY BACKDRAFT DAMPER, & BIRDSCREEN			

EQUIPMENT SEQUENCE OF OPERATION

THE OCCUPIED MODE SHALL BE INITIATED ACCORDING TO THE OWNER DEFINED SCHEDULE.

THE SUPPLY FAN SHALL RUN CONTINUOUSLY. THE SPACE THERMOSTAT SHALL CYCLE MECHANICAL COOLING TO MAINTAIN THE OCCUPIED COOLING SETPOINT (75 °F ADJ.). THE OUTSIDE AIR DAMPER SHALL OPEN TO THE MINIMUM POSITION. WHEN THE SPACE TEMPERATUR IS SATISFIED, MECHANICAL COOLING CYCLES OFF. WHEN THE SPACE THERMOSTAT CALLS FOR HEATING, ELECTRIC HEAT SHALL CYCLE ON TO MAINTAIN THE OCCUPIED HEATING SETPOINT (72 °F ADJ.). WHEN THE SPACE TEMPERATURE IS SATISFIED, THE ELECTRIC HEAT CYCLES OFF. DURING ECONOMIZER MODE, THE OUTSIDE AIR DAMPER SHALL MODULATE FULLY OPEN AND THE RETURN AIR DAMPER SHALL CLOSE. WHEN OUTDOOR AIR IS ABOVE ENTHALPY SETPOINT, THE OUTSIDE AIR DAMPER SHALL CLOSE TO THE MINIMUM POSITION AND THE RETURN AIR DAMPER SHALL OPEN.

THE SPACE THERMOSTAT SHALL CYCLE THE SUPPLY FAN AND MECHANICAL COOLING OR HEATING TO MAINTAIN THE UNOCCUPIED TEMPERATURE SETPOINT. THE OUTDOOR AIR DAMPER SHALL REMAIN CLOSED. A SPACE OVERRIDE TIMER (2 HRS.) LOCATED AT THE THERMOSTAT SHALL START/STOP THE SYSTEM ACCORDING TO ITS NORMAL OCCUPIED MODE SEQUENCE.

THE UNIT SHALL SHUT DOWN UPON DETECTION OF SMOKE BY EITHER THE SUPPLY OR RETURN AIR & SMOKE DETECTORS.

EACH SYSTEM SHALL BE CONTROLLED BY ITS WALL MOUNTED HEAT PUMP CONTROLLER. THE CONTROLLER FOR THE INDOOR UNIT SHALL BE THE PRIMARY CONTROLLER FOR THE MODE OF OPERATION OF THE OUTDOOR UNIT. OCCUPIED AND UNOCCUPIED SETTINGS SUCH AS TIME SCHEDULES AND TEMPERATURE SETPOINTS SHALL BE ADJUSTED AT THE CONTROLLERS (IF APPLICABLE).

- EF-1 EXHAUST FAN SHALL BE INTERLOCKED (ON/OFF) WITH THE LIGHTS VIA. WALL MOUNTED SWITCH.
- <u>EF-2</u> EXHAUST FAN SHALL RUN CONTINUOUSLY.
- <u>EF-3</u> EXHAUST FAN SHALL BE INTERLOCKED (ON/OFF) WITH THE LIGHTS VIA. WALL MOUNTED SWITCH.

38°F (ADJ). THE EXHAUST FAN CYCLES OFF. EF-5 - EXHAUST FAN SHALL BE INTERLOCKED (ON/OFF) WITH THE LIGHTS VIA. WALL MOUNTED SWITCH.

EF-4 - THE EXHAUST FAN SHALL BE CONTROLLED BY LINE VOLTAGE THERMOSTAT LOCATED IN ATTIC SPACE AND SET TO RUN CONTINUOUSLY; UNLESS THE SPACE HAS REACHED A TEMPERATURE OF 38°F (ADJ.). ONCE THE SPACE HAS REACHED THE MIN. TEMPERATURE OF

DEDUCTED ALT: THE EXHAUST FAN SHALL BE CONTROLLED BY LINE VOLTAGE THERMOSTAT(S) AND OCCUPANCY SENSOR. SET OCCUPANCY SENSOR TO RUN 30 MIN. AFTER LAST DETECTION OF MOTION. UNLESS THE SPACE HAS REACHED A TEMPERATURE BELOW 38°F (ADJ.) OR ABOVE 85°F (ADJ.) THE FAN SHALL CYCLE ON/OFF VIA. OCC. SENSOR. ONCE THE SPACE HAS REACHED THE MIN. TEMPERATURE OF 38°F (ADJ), THE EXHAUST FAN CYCLES OFF CLOSING THE MOTORIZED DAMPER AT LOUVER L-4; OR THE SPACE HAS REACHED THE MAX. TEMPERATURE OF 85°F (ADJ), THE EXHAUST FAN CYCLES ON AND OPENS THE MOTORIZED DAMPER AT LOUVER L-4. THE FAN REMAINS ON UNTIL THE SETPOINT OF 85°F (ADJ.) IS REACHED THEN THE FAN CYCLE OFF CLOSING THE MOTORIZED DAMPER. SEE DETAIL 5, SHEET M3.02 FOR WIRING SCHEMATIC. COORD. WITH ELECTRICAL CONTRACTOR FOR WIRING OF LINE VOLTAGE OCC. SENSORS AND THERMOSTATS.

EF-6 - EXHAUST FAN SHALL BE INTERLOCKED (ON/OFF) WITH THE LIGHTS VIA. WALL MOUNTED SWITCH.

DEDUCTED ALT: THE EXHAUST FAN SHALL BE CONTROLLED BY LINE VOLTAGE THERMOSTAT(S) AND OCCUPANCY SENSOR. SET OCCUPANCY SENSOR TO RUN 30 MIN. AFTER LAST DETECTION OF MOTION. UNLESS THE SPACE HAS REACHED A TEMPERATURE BELOW 38°F (ADJ.) OR ABOVE 85°F (ADJ.) THE FAN SHALL CYCLE ON/OFF VIA. OCC. SENSOR. ONCE THE SPACE HAS REACHED THE MIN. TEMPERATURE OF 38°F (ADJ), THE EXHAUST FAN CYCLES OFF CLOSING THE MOTORIZED DAMPER AT LOUVER L-5; OR THE SPACE HAS REACHED THE MAX. TEMPERATURE OF 85°F (ADJ), THE EXHAUST FAN CYCLES ON AND OPENS THE MOTORIZED DAMPER AT LOUVER L-5. THE FAN REMAINS ON UNTIL THE SETPOINT OF 85°F (ADJ.) IS REACHED THEN THE FAN CYCLE OFF CLOSING THE MOTORIZED DAMPER. SEE DETAIL 5, SHEET M3.02 FOR WIRING SCHEMATIC. COORD. WITH ELECTRICAL CONTRACTOR FOR WIRING OF LINE VOLTAGE OCC. SENSORS AND THERMOSTATS.

EF-7 EXHAUST FAN SHALL BE CONTROLLED BY WALL MOUNTED OCCUPANCY SENSOR FURNISHED WITH EXHAUST FAN.

DEDUCTED ALT: THE EXHAUST FAN SHALL BE CONTROLLED BY LINE VOLTAGE THERMOSTAT(S) AND OCCUPANCY SENSOR. SET OCCUPANCY SENSOR TO RUN 30 MIN. AFTER LAST DETECTION OF MOTION. UNLESS THE SPACE HAS REACHED A TEMPERATURE BELOW 38°F. (ADJ.) OR ABOVE 85°F (ADJ.) THE FAN SHALL CYCLE ON/OFF VIA. OCC. SENSOR. ONCE THE SPACE HAS REACHED THE MIN. TEMPERATURE OF 38°F (ADJ), THE EXHAUST FAN CYCLES OFF CLOSING THE MOTORIZED DAMPER AT LOUVER L-6; OR THE SPACE HAS REACHED THE MAX. TEMPERATURE OF 85°F (ADJ), THE EXHAUST FAN CYCLES ON AND OPENS THE MOTORIZED DAMPER AT LOUVER L-6. THE FAN REMAINS ON UNTIL THE SETPOINT OF 85°F (ADJ.) IS REACHED THEN THE FAN CYCLE OFF CLOSING THE MOTORIZED DAMPER. SEE DETAIL 5, SHEET M3.02 FOR WIRING SCHEMATIC. COORD. WITH ELECTRICAL CONTRACTOR FOR WIRING OF LINE VOLTAGE OCC. SENSORS AND THERMOSTATS.

ELECTRIC HEATERS (EH-1 THRU EH-5)

THE INTEGRATED THERMOSTAT SHALL CYCLE THE HEATER TO MAINTAIN THE TEMPERATURE SETPOINT.

GENERAL NOTES

- DUE TO THE SMALL SCALE OF THIS DRAWING, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS, AND ACCESSORIES WHICH MAY BE REQUIRED. THE CONTRACTOR SHALL INVESTIGATE THE STRUCTURAL AND FINISH CONDITIONS AFFECTING THE WORK AND SHALL COORDINATE AND ARRANGE HIS WORK ACCORDINGLY.
- ROUND BRANCH DUCT RUNOUTS SHALL BE SAME SIZE AS DIFFUSER THROAT UNLESS OTHERWISE NOTED.
- FLEXIBLE DUCT MAY BE USED FOR FINAL CONNECTIONS TO DIFFUSERS. A MAXIMUM LENGTH OF THREE FEET (3') SHALL BE USED. A HARD 90° ELBOW MUST BE USED WHERE DUCT TURNS DOWN ABOVE DIFFUSER.
- ALL CEILING-MOUNTED SUPPLY DIFFUSERS SHALL HAVE FOUR-WAY (4-WAY) PATTERN UNLESS OTHERWISE INDICATED.
- WHERE MANUAL DAMPERS ARE INSTALLED IN EXTERNALLY INSULATED DUCTWORK, PROVIDE STAND-OFF BRACKET TO PREVENT COMPRESSION OF INSULATION BY DAMPER OPERATOR
- PROVIDE TURNING VANES IN ALL 90-DEGREE MITERED ELBOWS.
- PROVIDE SLEEVES THROUGH WALLS AND FLOORS. SEAL LOCATIONS AND SIZES OF SLEEVES WITH GENERAL CONTRACTOR. SLEEVES SHALL PROVIDE A MAXIMUM OF 1" CLEARANCE BETWEEN DUCT OR PIPE AND SLEEVE. SEAL PENETRATION IN FIRE/SMOKE RATED WALLS AND FLOOR WITH
- DUCTWORK
- RUN COOLING COIL CONDENSATE DRAINS FULL SIZE TO
- INSULATE ALL REFRIGERANT PIPING AND CONDENSATE DRAIN PIPING WITH 3/4" ELASTOMERIC INSULATION (ARMAFLEX). COAT
- COORDINATE LOCATION OF DUCTS AND DIFFUSERS WITH STRUCTURAL FRAMING MEMBERS. OFFSET DUCTS AS REQUIRED
- 16. COORDINATE LOCATIONS AND ELEVATION OF DUCT RUNS WITH
- 17. COORDINATE MAKE-UP WATER AND GAS REQUIREMENTS WITH
- PROVIDE ACCESS DOORS FOR ALL FIRE DAMPERS. PROVIDE CEILING ACCESS DOORS FOR DAMPERS ABOVE GYPSUM BOARD
- 19. PAINT DUCTWORK BLACK THAT MAY BE VISIBLE ABOVE PARTIAL CEILINGS. COORDINATE PAINTING OF DUCTWORK WITH
- ARCHITECTURAL REFLECTED CEILING PLANS.

<u>LEGEND</u> , TH TA,

l	\bowtie	CEILING DIFFUSER	S YH YA	AIR VENT (AUTO/HAND)
•			$\mathbf{S}_{\mathbf{m}}$	BUTTERLFLY VALVE
		RETURN AIR GRILLE (RA)		AUTOMATIC CONTROL V (3-WAY)
		EXHAUST REGISTER (ER)	$\mathbf{S} = \mathbf{\widehat{\mathbf{S}}} \mathbf{S}$	AUTOMATIC CONTROL V
	624 CD-1	SIZE - DESIGNATION	$\mathbf{H}\mathbf{H}$	CHECK VALVE
	100 CFM	CUBIC FEET PER MINUTE	\$\$	FLEXIBLE CONNECTOR (BRAIDED)
		FLEXIBLE DUCT CONNECTOR	├	GATE VALVE

THE SHEET WHERE DETAIL IS SHOWN

DUCT SMOKE DETECTOR

CONNECT TO EXISTING

DEMOLITION TERMINATION

TURNING VANES

EXCESS OPENING WITH WATER-PROOF SEALANT. COORDINATE

AN APPROVED FIRE/SMOKE BLOCK SEALANT.

EXHAUST DUCTWORK SHALL BE UN-INSULATED, UNLESS NOTED

10. EXTERNALLY INSULATE LOW-VELOCITY ROUND RUNOUT

MINIMUM OF 1/2" THICK FIBERGLASS DUCT WRAP.

14. REFER TO ARCHITECTURAL PLANS FOR LOCATIONS OF FIRE AND

PLUMBING, SPRINKLER, AND ELECTRICAL CONTRACTORS.

PLUMBING CONTRACTOR.

ERLFLY VALVE DMATIC CONTROL VALVI

EXTERNALLY INSULATE SUPPLY, RETURN, RELIEF, AND OUTSIDE

AIR DUCTWORK UNLESS NOTED OTHERWISE.

OTHERWISE

I. INSULATE THE TOP OF ALL SUPPLY AIR DIFFUSERS WITH A

ALL EXTERIOR PIPE INSULATION WITH UV PROTECTANT PAINT.

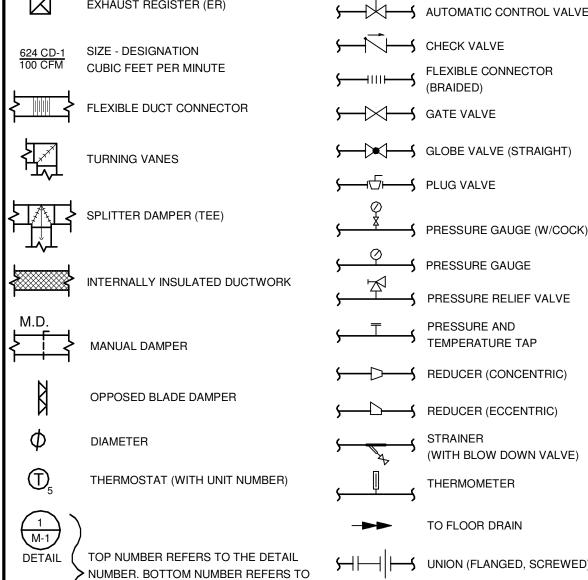
SMOKE RATED PARTITIONS.

TO CLEAR STRUCTURAL MEMBERS.

20. COORDINATE CEILING DIFFUSER LOCATIONS WITH

SECTION

NEAREST FLOOR OR ROOF DRAIN.



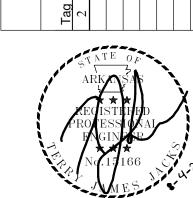
← CHS ← CHILLED WATER SUPPLY

← CHR ← CHILLED WATER RETURN

→ HWS → HEATING WATER SUPPLY

→ HWR → HEATING WATER RETURN

← D ← DRAIN



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