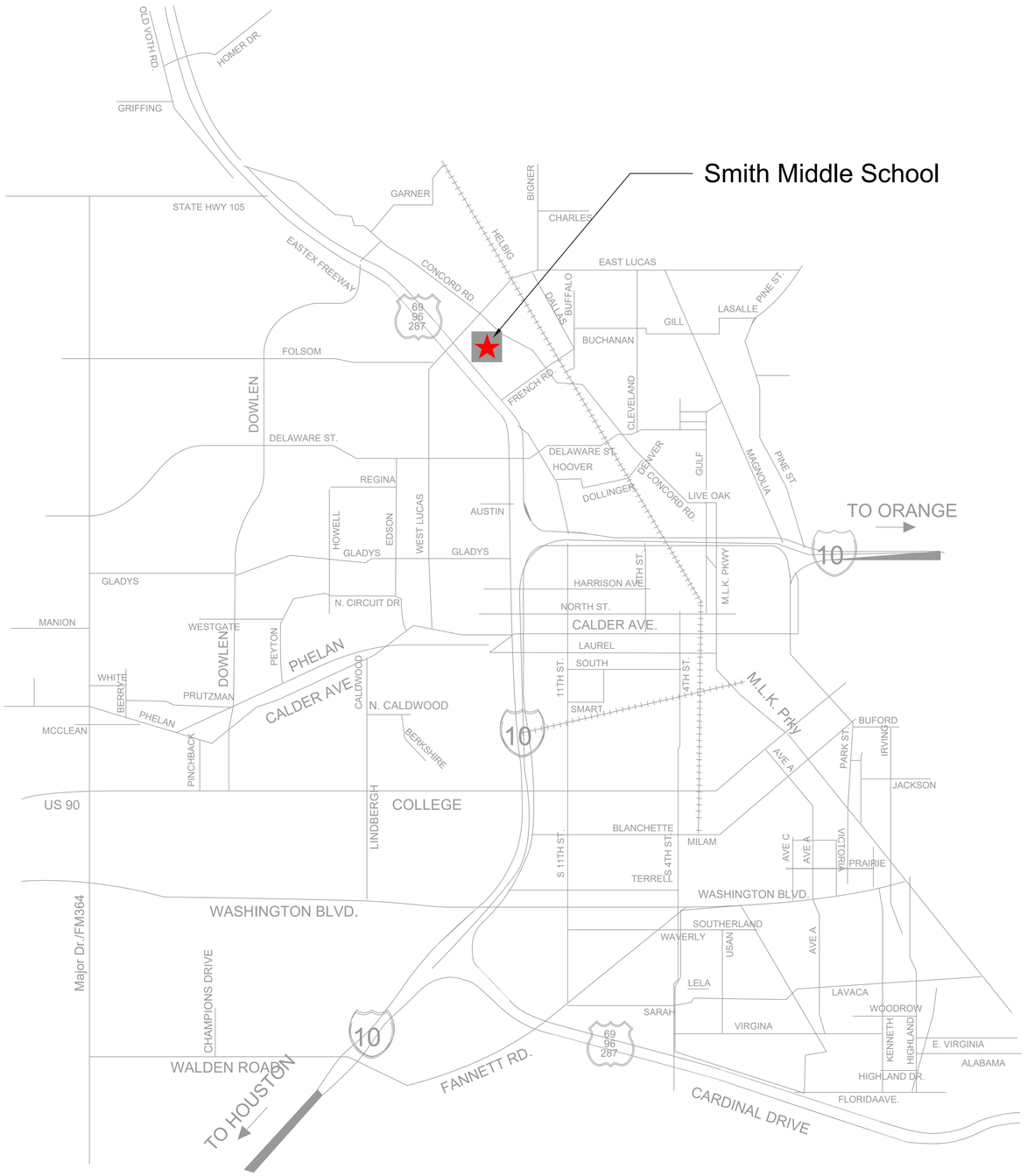
Salas O'Brien
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Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2550-00508-00

SMITH MIDDLE SCHOOL
4415 CONCORD RD, BEAUMONT, TX 77703

BEAUMONT INDEPENDENT SCHOOL DISTRICT
HVAC REPLACEMENT PROJECT
(SMITH M.S.)

CSP #26.06

SITE LOCATIONS



Beaumont ISD
Preparing Our Next Generation

LIST OF DRAWINGS:

CS0.01 COVER SHEET - LIST OF DRAWINGS
CS0.02 COVER SHEET - SITES

SMITH MIDDLE SCHOOL

M1.01 MECHANICAL ENLARGED FLOOR PLANS - SMITH MS
M2.01 MECHANICAL SCHEDULES, LEGENDS, AND DETAILS - SMITH MS
E1.01 ELECTRICAL ENLARGED FLOOR PLANS - SMITH MS
E2.01 ELECTRICAL DETAILS, SCHEDULES, AND LEGENDS - SMITH MS
P1.01 PLUMBING ENLARGED FLOOR PLANS - SMITH MS
P2.01 PLUMBING SCHEDULES AND DETAILS - SMITH MS

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CSP# 26.06

Smith Middle School
4415 Concord Rd, Beaumont, Tx 77703

NOTES

REVISIONS

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SHEET NAME
COVER SHEET - LIST OF DRAWINGS

SHEET NUMBER CS0.01 **REVISION**

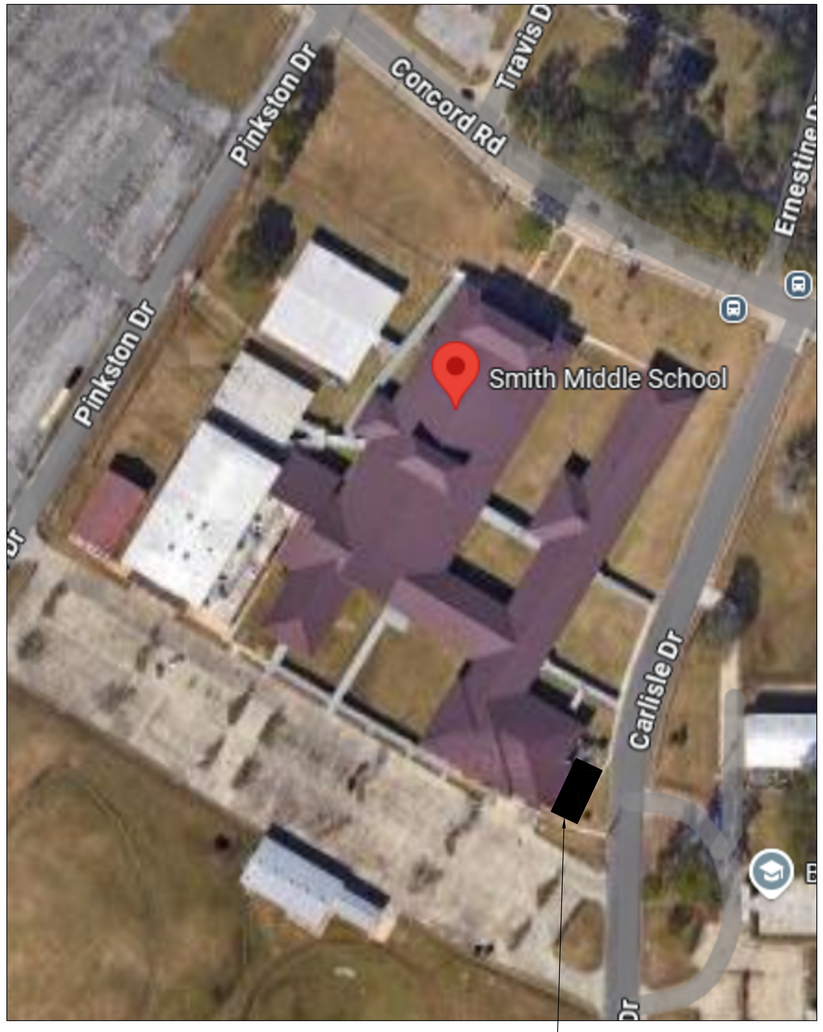
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AREA OF WORK

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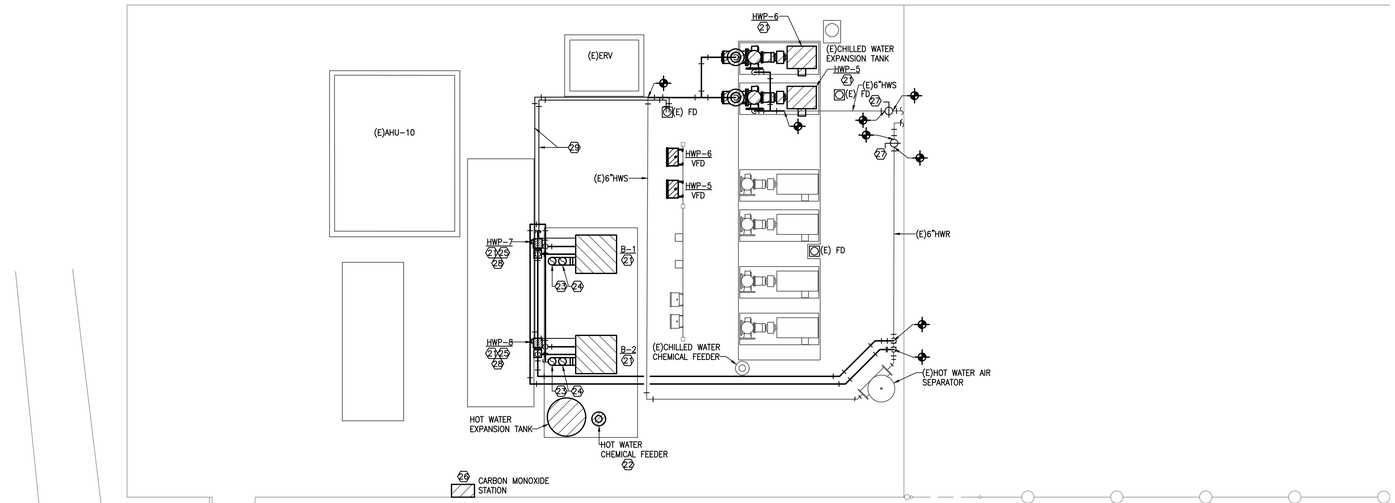
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SHEET NAME
COVER SHEET - SITES

SHEET NUMBER: CS0.02
REVISION:

SYMBOL LEGEND

SYMBOL	DESCRIPTION (DISREGARD ITEMS NOT SHOWN ON PLANS)
GENERAL	
(#)	KEY NOTE TAG
	REVISION TAG
	NEW EQUIPMENT
DUCTWORK	
	SUPPLY AIR DUCTWORK
	RETURN AIR AND OUTSIDE AIR DUCTWORK
	EXHAUST AIR DUCTWORK
	FLEXIBLE DUCTWORK
	SUPPLY AIR DUCTWORK THROUGH HORIZONTAL PARTITION
	RETURN AIR AND OUTSIDE AIR DUCTWORK THROUGH HORIZONTAL PARTITION
	EXHAUST AIR DUCTWORK THROUGH HORIZONTAL PARTITION
	FIRE DAMPER (VERTICAL)
	FIRE DAMPER (HORIZONTAL)
	SMOKE DAMPER (VERTICAL)
	SMOKE DAMPER (HORIZONTAL)
	COMBINATION FIRE & SMOKE DAMPER (VERTICAL)
	COMBINATION FIRE & SMOKE DAMPER (HORIZONTAL)
	MANUAL BALANCING DAMPER (SEE DAMPER SCHEDULE)
M	MOTORIZED DAMPER (SEE DAMPER SCHEDULE)
SENSORS	
T	THERMOSTAT AND TEMPERATURE SENSOR
H	HUMIDISTAT
SD	SMOKE DETECTOR
TS	TEMPERATURE SENSOR
PIPING	
-CHWS&R-	CHILLED WATER SUPPLY & RETURN (TOTAL OF TWO PIPES, ONLY ONE PIPE SHOWN FOR DRAWING CLARITY)
—CHWS—	CHILLED WATER SUPPLY
—CHWR—	CHILLED WATER RETURN
-HWS&R-	HOT WATER FOR HYDRONIC HEATING SUPPLY & RETURN (TOTAL OF TWO PIPES, ONLY ONE PIPE SHOWN FOR DRAWING CLARITY)
—HWS—	HOT WATER FOR HYDRONIC HEATING SUPPLY
—HWR—	HOT WATER FOR HYDRONIC HEATING RETURN
—D—	CONDENSATE DRAIN LINE
—AD—	AUXILLARY CONDENSATE DRAIN LINE
—RLR—	REFRIGERANT LIQUID & GAS RECIRCULATION LINE (TOTAL OF TWO PIPES, ONLY ONE PIPE SHOWN FOR DRAWING CLARITY)
—RL—	REFRIGERANT LIQUID LINE
—HG—	REFRIGERANT HOT GAS LINE
—RS—	REFRIGERANT SUCTION LINE
	ELBOW UP
	ELBOW DOWN
	90° ELBOW
	45° ELBOW
	TEE
	TEE DOWN
	TEE UP
	TOP BRANCH CONNECTION
	BOTTOM BRANCH CONNECTION
	FLANGE
	CAP
	CONTINUATION
	FLOOR DRAIN (REFER TO PLUMBING DRAWINGS)
	GATE VALVE
	GLOBE VALVE
	CHECK VALVE
	BUTTERFLY VALVE
	BUTTERFLY VALVE WITH OPERATOR
	PLUG VALVE
	TWO-WAY CONTROL VALVE
	THREE-WAY CONTROL VALVE
	PRESSURE REDUCING VALVE
	PRESSURE RELIEF VALVE
	BALL VALVE
	STRAINER
	UNION
	THERMOMETER WELL
	PETE'S PLUG
	PRESSURE GAUGE
	TEMPERATURE SENSOR IN PIPE
	VENTURI FLOW METER
	FLOW SWITCH
FM	FLOW MEASURING STATION
	EXPANSION JOINT
	FLEXIBLE CONNECTION
	GAUGE COCK
	SITE GLASS
	DIFFERENTIAL PRESSURE SENSOR
	TURBINE FLOW METER
	ANCHOR
	PIPE GUIDE
SUBSCRIPTS AND ABBREVIATIONS	
AFF	ABOVE FINISHED FLOOR
BBS	BELOW BOTTOM OF STRUCTURE
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
CA	COMBUSTION AIR
CFM	CUBIC FEET PER MINUTE
EA	EXHAUST AIR
FPM	FEET PER MINUTE
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
OA	OUTSIDE AIR
RA	RETURN AIR
SA	SUPPLY AIR



N

2 **MECHANICAL ENLARGED FLOOR PLAN - SMITH MS**
SCALE: 1/4" = 1'-0"

BMCS NOTE:
EXISTING CONTROL SYSTEM IS BY AUTOMATED LOGIC.
REFER TO BMCS SPECIFICATION FOR MORE INFORMATION.

DEMO SYMBOL LEGEND

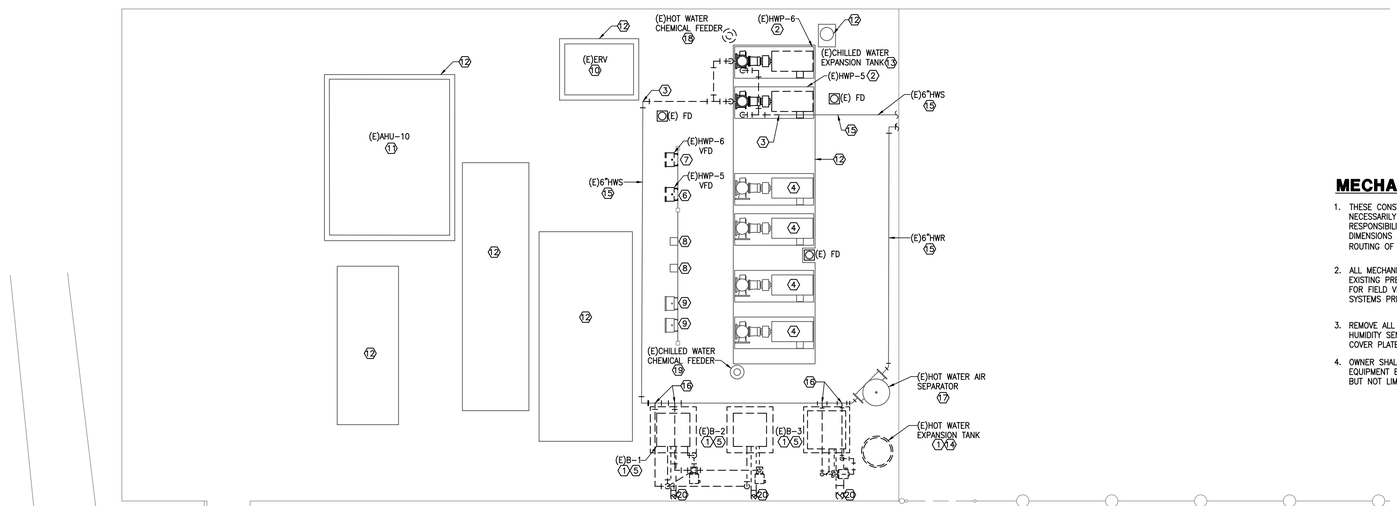
RENOVATIONS	
	ITEM TO REMAIN
	ITEM TO BE REMOVED

MECHANICAL GENERAL NOTES

1. COORDINATE IN THE FIELD THE EXACT LOCATION OF MECHANICAL EQUIPMENT WITH CONTRACTOR AND ALL TRADES
2. SENSORS SHALL BE MOUNTED AT +48" AFF (ABOVE FINISHED FLOOR). UNLESS OTHERWISE NOTED
3. MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR FOR ALL ELECTRICAL POWER REQUIREMENTS.
4. THESE CONSTRUCTION DRAWINGS ARE DIAGRAMATIC AND DO NOT NECESSARILY REFLECT ACTUAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD-VERIFY ALL DIMENSIONS AND COORDINATE PLACEMENT OF ALL EQUIPMENT AND ROUTING OF ALL PIPING AND/OR HVAC SYSTEMS.

MECHANICAL KEYED NOTES:

1. REMOVE EXISTING CONCRETE HOUSE KEEPING PAD.
2. REMOVE EXISTING PUMP, CONTROLS, AND ALL ASSOCIATED APPURTENANCES.
3. REMOVE EXISTING PIPING AND ALL ASSOCIATED APPURTENANCES BACK TO POINT INDICATED.
4. EXISTING CHILLED WATER PUMP, CONTROLS, AND ALL ASSOCIATED APPURTENANCES TO REMAIN.
5. REMOVE EXISTING BOILER, CIRCULATION PUMP, CONTROLS, AND ALL ASSOCIATED APPURTENANCES.
6. REMOVE VFD FOR HWP-5 AND ALL ASSOCIATED APPURTENANCES.
7. REMOVE VFD FOR HWP-6 AND ALL ASSOCIATED APPURTENANCES.
8. EXISTING DISCONNECT SWITCH TO REMAIN.
9. EXISTING VFD TO REMAIN.
10. EXISTING ERV AND ALL ASSOCIATED APPURTENANCES TO REMAIN.
11. EXISTING AHU AND ALL ASSOCIATED APPURTENANCES TO REMAIN.
12. EXISTING CONCRETE HOUSE KEEPING PAD TO REMAIN.
13. EXISTING CHILLED WATER EXPANSION TANK AND ALL ASSOCIATED APPURTENANCES TO REMAIN.
14. REMOVE EXISTING HOT WATER EXPANSION TANK AND ALL ASSOCIATED APPURTENANCES.
15. EXISTING PIPING TO REMAIN.
16. REMOVE EXISTING PIPING AND ALL ASSOCIATED APPURTENANCES BACK TO POINT INDICATED. PATCH, SEAL, AND INSULATE MAIN PIPING AS SPECIFIED.
17. EXISTING AIR SEPARATOR AND ALL APPURTENANCES TO REMAIN.
18. REMOVE EXISTING CHEMICAL FEEDER AND ALL ASSOCIATED APPURTENANCES.
19. EXISTING CHEMICAL FEEDER AND ALL ASSOCIATED APPURTENANCES TO REMAIN.
20. REMOVE EXISTING FLUE DUCT AND ALL ASSOCIATED APPURTENANCE. PATCH AND SEAL ROOF OPENING.
21. VERIFY SERVICE CLEARANCES WITH EQUIPMENT MANUFACTURER. COORDINATE WITH ALL TRADE NOT TO OBSTRUCT.
22. PROVIDE CHEMICAL FEEDER SUPPORT. REFER TO DETAILS.
23. ROUTE BOILER FLUE UP THROUGH ROOF. INSTALL PER MANUFACTURER RECOMMENDATIONS. REFER TO DETAILS. BOILER FLUE SHALL TERMINATE 3'-0" VERTICALLY ABOVE COMBUSTION AIR INTAKE.
24. ROUTE COMBUSTION AIR INTAKE UP THROUGH ROOF. INSTALL PER MANUFACTURER RECOMMENDATIONS. REFER TO DETAILS.
25. BOILER CIRCULATION PUMP TO BE PROVIDED BY BOILER MANUFACTURER.
26. PROVIDE CARBON MONOXIDE MONITORING STATION. MOUNT ENCLOSURE AT 5'-0" AFF. INSTALL PER MANUFACTURER RECOMMENDATIONS. REFER TO SPECIFICATIONS FOR MORE INFORMATION.
27. PROVIDE ISOLATION VALVE AT LOCATION SHOWN.
28. NEW BOILERS SHALL MAINTAIN A MINIMUM OF 4'-0" FROM THE FRONT OF THE EXISTING VARIABLE FREQUENCY DRIVES (VFDS).
29. ROUTE BOILER DRAIN LINES AS INDICATED TO EXISTING FLOOR DRAIN.



N

1 **MECHANICAL DEMOLITION ENLARGED FLOOR PLAN - SMITH MS**
SCALE: 1/4" = 1'-0"

MECHANICAL DEMOLITION GENERAL NOTES

1. THESE CONSTRUCTION DRAWINGS ARE DIAGRAMMATIC, AND DO NOT NECESSARILY REFLECT ACTUAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD-VERIFY ALL DIMENSIONS AND COORDINATE PLACEMENT OF ALL EQUIPMENT AND ROUTING OF ALL PIPING AND/OR DUCT SYSTEMS.
2. ALL MECHANICAL SYSTEMS SHOWN ON THIS PLAN ARE FROM EXISTING PRELIMINARY FIELD WORK. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL LOCATIONS AND SIZES OF MECHANICAL SYSTEMS PRIOR TO THE START OF WORK.
3. REMOVE ALL EXISTING SPACE MOUNTED TEMPERATURE AND HUMIDITY SENSORS NOT BEING REUSED. PROVIDE STAINLESS STEEL COVER PLATES.
4. OWNER SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL HVAC EQUIPMENT BEING REMOVED FROM THIS PROJECT. THIS INCLUDES BUT NOT LIMITED TO BOILERS, PUMPS, AND CONTROLS.

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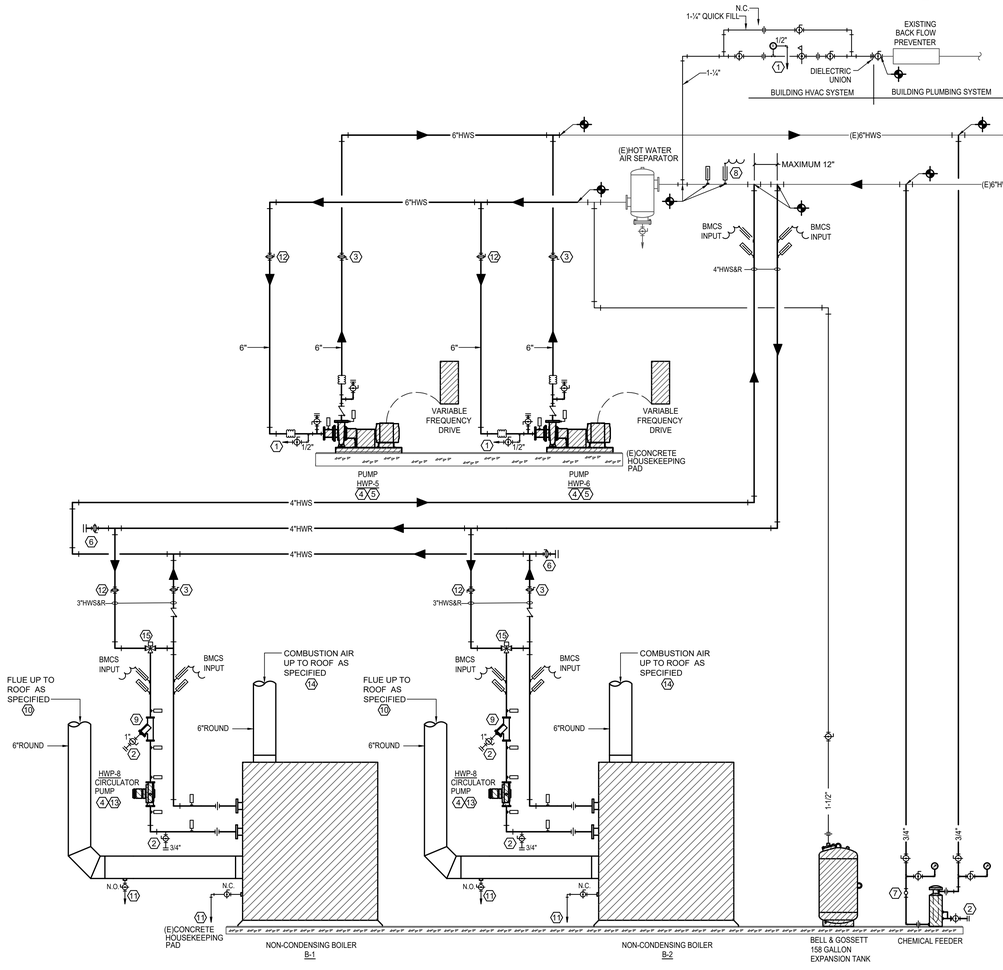
SHEET NAME

MECHANICAL ENLARGED FLOOR PLANS - SMITH MS

SHEET NUMBER	REVISION
M1.01	

HOT WATER KEYED NOTES

1. ROUTE FULL SIZE TYPE "L" COPPER DRAIN LINE TO NEAREST FLOOR DRAIN.
2. PROVIDE DRAIN BALL VALVE WITH HOSE THREAD ADAPTER.
3. BALANCING VALVE TO BE PROVIDED WITH INFINITE POSITION CRANK OR MEMORY STOP FOR BALANCING SERVICE.
4. VERIFY SERVICE CLEARANCES WITH EQUIPMENT MANUFACTURER. COORDINATE WITH ALL TRADE NOT TO OBSTRUCT.
5. PROVIDE WITH PUMP PAN. REFER TO DETAIL.
6. PROVIDE ISOLATION VALVE AND BLIND FLANGE FOR TEMPORARY CONNECTION.
7. PROVIDE AN ERNEST GAUGE #E-57-3 BRONZE BODY SIGHT GLASS WITH S.S. SHAFT, PLASTIC SPINNER AND DOUBLE WINDOW. OPERATING TEMPERATURE AND PRESSURE SHALL BE 200°F, 125 PSI MINIMUM.
8. HEADER TEMPERATURE SENSOR. PROVIDED BY BOILER MANUFACTURER.
9. PROVIDE STRAINER.
10. REFER TO DETAIL FOR MORE INFORMATION ON POWER EXHAUST FLUE.
11. ROUTE FULL SIZE CPVC PIPING FROM BOILER TO ACID NEUTRALIZATION BASIN AND FROM BASIN TO FLOOR DRAIN.
12. PROVIDE ISOLATION VALVE.
13. CIRCULATOR PUMP PROVIDED BY BOILER MANUFACTURER.
14. REFER TO DETAIL FOR MORE INFORMATION ON POWER COMBUSTION AIR INTAKE.
15. 3-WAY THERMOSTATIC MIXING VALVE. PROVIDE WITH BOILER.
16. PROVIDE ISOLATION VALVE AT LOCATION SHOWN.



1 **HOT WATER PIPING DIAGRAM**
SCALE: NO SCALE

BOILER - FORCED AIR

MARK	TYPE	MINIMUM GAS INPUT (MBH)	MINIMUM HEATING OUTPUT (MBH)	MAXIMUM WATER PRESSURE DROP (IN.W.G.)	GPM	FLUE SIZE (IN. ROUND)	ELECTRICAL: BLOWER HORSEPOWER	ELECTRICAL: CURRENT CHARAC. (V/PH/HZ)	MANUFACTURER	MODEL	REMARKS
B-1	NON-CONDENSING	1,500	1,275	10	100	6	1	120/1/60	LOCHINVAR	PBN1501	(1,2)
B-2	NON-CONDENSING	1,500	1,275	10	100	6	1	120/1/60	LOCHINVAR	PBN1501	(1,2)

GENERAL NOTES:
1. PROVIDE 8 OUNCE GAS PRESSURE TO BOILER.
2. MAINTAIN MINIMUM CLEARANCE AROUND A BOILER OF 24 INCHES PER TEXAS BOILER LAW. MAINTAIN MINIMUM CLEARANCES FOR TUBE PULL AND CLEANING OF TUBES AS RECOMMENDED BY THE BOILER'S MANUFACTURER. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS FOR SERVICE, MAINTENANCE AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCES AS REQUIRED BY NEC.

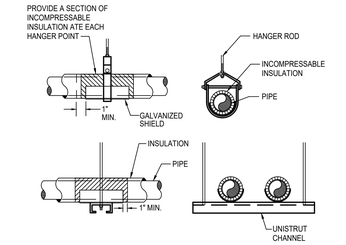
REMARKS:
1. PROVIDE WITH CIRCULATING PUMP, SIZED BY BOILER MANUFACTURER TO ENSURE CONSTANT FLOW THROUGH BOILER. PUMP TO BE SHIPPED LOOSE. POWER BY ELECTRICAL CONTRACTOR BUT CONTROLLED BY BOILER. CONTRACTOR TO WIRE FROM BOILER PUMP CONTROL CIRCUIT TO PUMP STARTER RELAY.
2. PROVIDE SEALED COMBUSTION BOILER.

PUMP

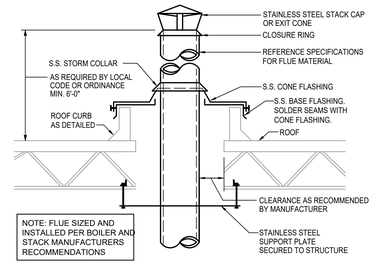
MARK	SERVICE	TYPE	GPM	HEAD (FT.)	MAXIMUM RPM	MOTOR HORSEPOWER	CURRENT	MANUFACTURER	MODEL	REMARKS
HWP-5	HOT WATER	END SUCTION	580	75	1,800	20	480/3/60	BELL & GOSSETT	E-1510	(1,2,3)
HWP-6	HOT WATER	END SUCTION	580	75	1,800	20	480/3/60	BELL & GOSSETT	E-1510	(1,2,3)
HWP-7	HOT WATER	INLINE CIRCULATOR	100	20	1,800	1.0	480/3/60	BELL & GOSSETT	E-60	(4)
HWP-8	HOT WATER	INLINE CIRCULATOR	100	20	1,800	1.0	480/3/60	BELL & GOSSETT	E-60	(4)

GENERAL NOTES:
1. PUMP IS TO HAVE A NON-OVERLOADING MOTOR.
2. MINIMUM RECOMMENDED CLEARANCE AROUND A PUMP IS 24 INCHES. MAINTAIN MINIMUM CLEARANCES AS REQUIRED FOR SERVICE, MAINTENANCE, AND INSPECTION.

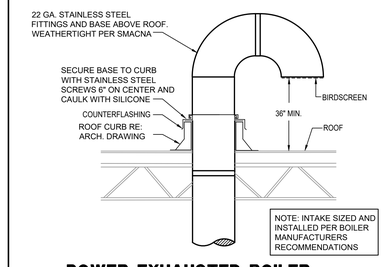
REMARKS:
1. PROVIDE BACK PULL OUT.
2. PROVIDE WITH VARIABLE FREQUENCY DRIVE (VFD).
3. PROVIDE WITH SUCTION DIFFUSER.
4. PUMP SHALL BE SELECTED BY BOILER MANUFACTURER, WITH DISCONNECT AND STARTER BY ELECTRICAL CONTRACTOR AND CONTROLLED BY BOILER.



4 **PIPE HANGERS**
SCALE: NONE



3 **POWER EXHAUSTED BOILER FLUE THRU ROOF**
SCALE: NONE



2 **POWER EXHAUSTED BOILER COMBUSTION AIR INTAKE THRU ROOF**
SCALE: NONE

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SHEET NAME
MECHANICAL SCHEDULES, LEGENDS, AND DETAILS - SMITH MS

SHEET NUMBER	REVISION
M2.01	

DISCONNECT AND REMOVE
EXISTING TO REMAIN
NEW WORK

ELECTRICAL GENERAL NOTES:

1. DISCONNECT AND REMOVE ALL CONDUIT, WIRE, AND DISCONNECTING MEANS ASSOCIATED WITH HVAC EQUIPMENT BEING REMOVED.
2. UNLESS NOTED OTHERWISE, ALL EXISTING ELECTRICAL PANELBOARDS, TRANSFORMERS, SWITCHBOARDS, ETC...SHALL REMAIN

ELECTRICAL KEYED NOTES:

1. DISCONNECT EXISTING EQUIPMENT. PULL CONDUCTORS AND DEMOLISH CONDUIT BACK TO SOURCE. FLIP BREAKER OFF AND INDICATE AS SPARE.
2. COORDINATE WITH DIVISION 23 TO PROVIDE CIRCUITING, STARTER, DISCONNECT AND/OR CONTROL INTERLOCK FOR BOILER CIRCULATING PUMP. DESIGN SHOWN IS BASED ON A PUMP WITH A DEDICATED CIRCUIT. FINAL PUMP SELECTION MAY HAVE A PUMP CIRCUITED DIRECTLY FROM THE BOILER.

EXISTING PANELBOARD SCHEDULE — A

VOLTAGE	PHASE	WIRE	MCB (A)	MLO (A)	AIC RATING	MOUNTING	LOCATION	NEMA ENCLOSURE
120/ 208	3	4	100		10,000	SURFACE	MAIN ELECTRICAL	1

LOAD TYPE LEGEND
L - LIGHTING/CONT-LD
R - RECEPTACLES
M - MECHANICAL EQUIP
K - KITCHEN EQUIP
O - OTHER/MISC

REMARKS:
FED FROM SWITCHBOARD SMSMDP VIA 30kVA XFMR

CKT #	LOAD DESCRIPTION	TYPE	WIRE SIZE	CONDUIT SIZE	CIRCUIT BREAKER TRIP	CIRCUIT BREAKER P	LOAD (VA)	PHASE	LOAD (VA)	CIRCUIT BREAKER P	CIRCUIT BREAKER TRIP	CONDUIT SIZE	WIRE SIZE	TYPE	LOAD DESCRIPTION	CKT #
1	WALLPACK	L	(E)	(E)	20A	1	500	A							SPACE	2
3	WALLPACK	L	(E)	(E)	20A	1	500	B							SPACE	4
5	HEATER #1	M	(E)	(E)	20A	1	1200	C	360	1	20A	(E)	(E)	R	RECEPTACLES	6
7	HEATER #2	M	(E)	(E)	20A	1	1200	A	360	1	20A	(E)	(E)	R	RECEPTACLES	8
9	SPACE							B							SPACE	10
11	INSIDE LIGHTS	L	(E)	(E)	20A	1	500	C	1200	1	20A	(E)	(E)	M	HEATER #3	12
13	C02	O	(E)	(E)	20A	1	100	A	100	1	20A	(E)	(E)	O	CONTROL PANEL	14
15	SPACE							B	1000	1	20A	(E)	(E)	O	ICE MACHINE	16
17	AHU VFD	O	(E)	(E)	20A	1	100	C	**1920**	**1**	**30A**	**#10**	**3/4"**	**M**	**B-1 (1HP)**	18
19	AHU VFD	O	(E)	(E)	20A	1	100	A	**1920**	**1**	**30A**	**#10**	**3/4"**	**M**	**B-2 (1HP)**	20
21	SPACE							B	**200**	**1**	**20A**	**#12**	**3/4"**	**O**	**CARBON MONOXIDE PANEL**	22
23	SPACE							C	**180**	**1**	**20A**	**#12**	**3/4"**	**R**	**MAINTENANCE RECEPTACLE**	24
25								A		2	50A				SPARE	26
27	**SPDL**		**#10**	**3/4"**	**30A**	**3**		B								28
29								C		1	20A				SPARE	30
31							1900	A	1900							32
33	ERV-8	M	(E)	(E)	20A	3	1900	B	1900	3	20A	(E)	(E)	M	ERV-8	34
35							1900	C	1900							36
37	SPARE				20A	2		A	500							38
39								B	500	3	20A	(E)	(E)	L	OUTSIDE LIGHTS	40
41	SPARE				20A	1		C	500							42

	A	B	C	TOTAL
CONNECTED LOAD ABOVE (VA)	8580	6000	9760	24340
CONNECTED AMPACITY ABOVE (A)	71.50	50.00	81.33	

LOAD TYPE	CONN LD(VA)	SUBPANEL LOADS (VA)	CONN. LD (VA)	SIZING FACTOR	SIZING LOAD (VA)
LIGHTING/CONT-LD	3000		3000	125%	3750
RECEPTACLES	900		900	*	900
MECHANICAL EQUIP	18840		18840	100%	18840
KITCHEN EQUIP				100%	
KITCHEN EQUIP QTY					**
OTHER/MISC	1600		1600	100%	1600
TOTAL CONNECTED (VA)			24340		25090 SIZING TOTAL (VA) PER NEC
CONNECTED AMPACITY (A)			67.56		69.64 SIZING AMPACITY (A) PER NEC

NOTES
* 1ST 10KVA @ 100%, REMAINING @ 50%
** SIZE PER NEC TABLE 220.56
*** NON-SIMULTANEOUS LOAD
G. PROVIDE GFI CIRCUIT BREAKER
S. PROVIDE SHUNT TRIP CIRCUIT BREAKER
L. PROVIDE LOCK ON/OFF CIRCUIT BREAKER
NEW WORK IN **BOLD** - PROVIDE NEW BREAKER

EXISTING PANELBOARD SCHEDULE — HA

VOLTAGE	PHASE	WIRE	MCB (A)	MLO (A)	AIC RATING	MOUNTING	LOCATION	NEMA ENCLOSURE
277/ 480	3	4		125	18,000	SURFACE	MAIN ELECTRICAL	1

LOAD TYPE LEGEND
L - LIGHTING/CONT-LD
R - RECEPTACLES
M - MECHANICAL EQUIP
K - KITCHEN EQUIP
E - EXISTING
O - OTHER/MISC

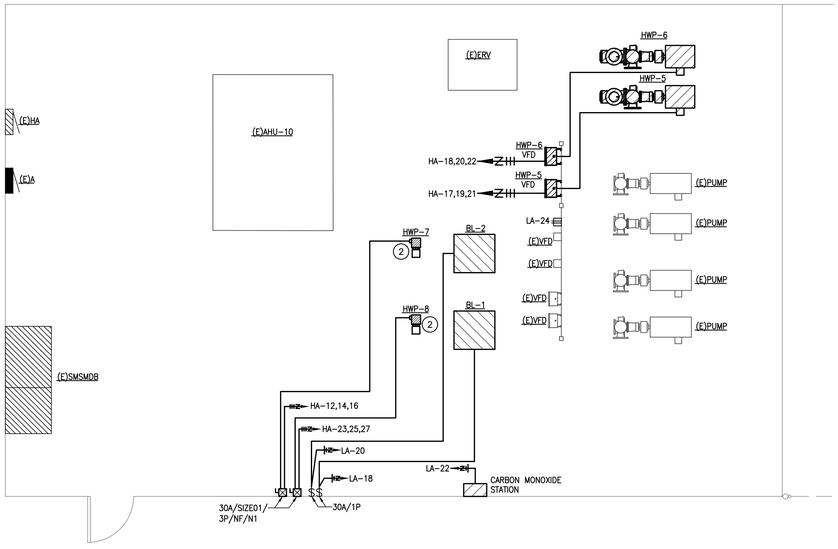
REMARKS:
FED FROM SWITCHBOARD SMSMDP

CKT #	LOAD DESCRIPTION	TYPE	WIRE SIZE	CONDUIT SIZE	CIRCUIT BREAKER TRIP	CIRCUIT BREAKER P	LOAD (VA)	PHASE	LOAD (VA)	CIRCUIT BREAKER P	CIRCUIT BREAKER TRIP	CONDUIT SIZE	WIRE SIZE	TYPE	LOAD DESCRIPTION	CKT #
1	PARKING LIGHTS	L	(E)	(E)	20A	1	2400	A	2400	1	20A	(E)	(E)	L	PARKING LIGHTS	2
3	PARKING LIGHTS	L	(E)	(E)	20A	1	2400	B	2400	1	20A	(E)	(E)	L	PARKING LIGHTS	4
5	LIGHTING CONTACTOR	O	(E)	(E)	20A	1	200	C	300	1	20A	(E)	(E)	O	LIGHTING CONTACTOR	6
7	SPARE				20A	1		A		1	20A				SPARE	8
9	SPARE				20A	1		B		1	20A				SPARE	10
11	SPARE				20A	1		C	**852**							12
13	SPARE				20A	1		A	**852**	**1**	**20A**	**3/4"**	**#12**	**M**	**HWP-7 (1HP)**	14
15	SPARE				20A	1		B	**852**							16
17							**7500**	C	**7500**							18
19	**HWP-5 (20HP)**	**M**	**#6**	**1"**	**60A**	**3**	**7500**	A	**7500**	**3**	**60A**	**1"**	**#6**	**M**	**HWP-6 (20HP)**	20
21							**7500**	B	**7500**							22
23							**852**	C							SPACE	24
25	**HWP-8 (1HP)**	**M**	**#12**	**3/4"**	**20A**	**3**	**852**	A								26
27							**852**	B		**3**	**30A**	**3/4"**	**#10**	**O**	**SPDL**	28
29	SPACE							C								30

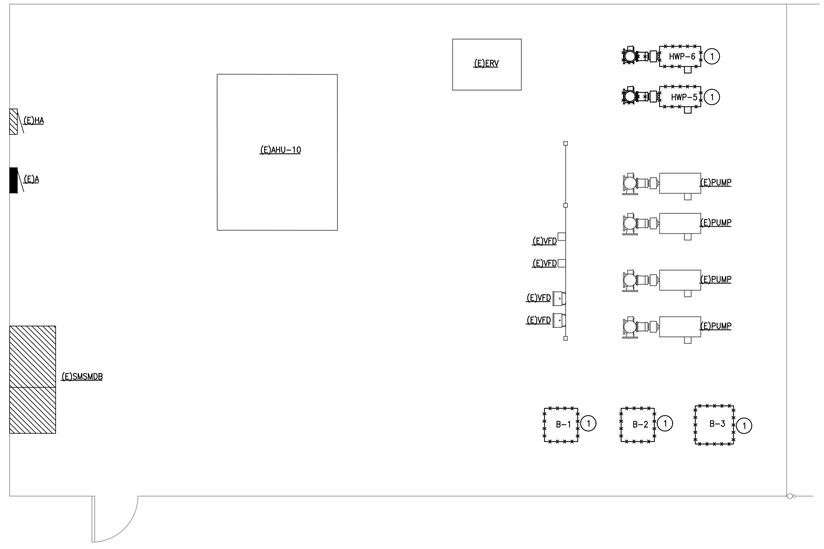
	A	B	C	TOTAL
CONNECTED LOAD ABOVE (VA)	21504	21504	17204	60212
CONNECTED AMPACITY ABOVE (A)	77.63	77.63	62.11	

LOAD TYPE	CONN LD(VA)	SUBPANEL LOADS (VA)	CONN. LD (VA)	SIZING FACTOR	SIZING LOAD (VA)
LIGHTING/CONT-LD	9600		9600	125%	12000
RECEPTACLES	4		4	*	4
MECHANICAL EQUIP	48408		48408	100%	48408
KITCHEN EQUIP				100%	
KITCHEN EQUIP QTY					
				125%	
OTHER/MISC	500		500	100%	500
TOTAL CONNECTED (VA)			58512		60912 SIZING TOTAL (VA) PER NEC
CONNECTED AMPACITY (A)			70.38		73.27 SIZING AMPACITY (A) PER NEC

NOTES
* 1ST 10KVA @ 100%, REMAINING @ 50%
** SIZE PER NEC TABLE 220.56
*** NON-SIMULTANEOUS LOAD
G. PROVIDE GFI CIRCUIT BREAKER
S. PROVIDE SHUNT TRIP CIRCUIT BREAKER
L. PROVIDE LOCK ON/OFF CIRCUIT BREAKER
NEW WORK IN **BOLD** - PROVIDE NEW BREAKER



N
2 **ELECTRICAL ENLARGED FLOOR PLAN - SMITH MS**
SCALE: 1/4" = 1'-0"



N
1 **ELECTRICAL DEMOLITION ENLARGED FLOOR PLAN - SMITH MS**
SCALE: 1/4" = 1'-0"

Salas O'Brien
salasobrien.com 281-664-1900
Houston
10930 W. Sam Houston Pkwy N. #900
Houston, TX 77064

Registration: F-4111
Project No.: 2550-00508-00

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Beaumont ISD
Preparing Our Next Generation

2550-00508-00
Beaumont Independent School District

HVAC REPLACEMENT PROJECT (SMITH M.S.)

CSP# 26.06

Smith Middle School
4415 Concord Rd, Beaumont, Tx 77703

NOTES

REVISIONS

Δ	DESCRIPTION	DATE

CHECKED BY: JZ
DRAWN BY: AW

SHEET NAME
ELECTRICAL ENLARGED FLOOR PLANS - SMITH MS

SHEET NUMBER: E1.01
REVISION:

SYMBOL SCHEDULE

SYMBOL	DESCRIPTION (DISREGARD ITEMS NOT SHOWN ON PLANS)
LIGHTING (LETTER DENOTES TYPE – SEE LIGHT FIXTURE SCHEDULE)	
	FLUORESCENT FIXTURE
	FLUORESCENT FIXTURE ON EMERGENCY CIRCUIT
	DOWNLIGHT FIXTURE
	LIGHT FIXTURE – WALL MOUNTED
	DOWNLIGHT FIXTURE ON EMERGENCY CIRCUIT
	LIGHT FIXTURE – WALL MOUNTED ON EMERGENCY CIRCUIT
	EXIT LIGHT–CEILING MTD WITH DIRECTIONAL ARROWS AS REQUIRED
	EXIT LIGHT–WALL MTD WITH DIRECTIONAL ARROWS AS REQUIRED
	EMERGENCY LIGHTING UNIT EQUIPMENT
SWITCHES	
$	SINGLE POLE SWITCH
$2	2–POLE SWITCH
$3	3–WAY SWITCH
$K	KEYED SWITCH
$D	WALL DIMMER SWITCH, SIZE AND TYPE AS REQUIRED
$P	SWITCH WITH PILOT LIGHT
$MC	MOMENTARY CONTACT SWITCH
	PUSH BUTTON SWITCH
TS	TIME SWITCH
$5	DUAL LEVEL SWITCHING
	CEILING MOUNTED OCCUPANCY SENSOR
	WALL MOUNTED OCCUPANCY SENSOR
RECEPTACLES AND OUTLETS	
	SIMPLEX RECEPTACLE
	DUPLEX RECEPTACLE
	125/250 VOLT, 1 PHASE, 3–WIRE, 20 AMPS UNLESS NOTED OTHERWISE
	DOUBLE DUPLEX IN 2–GANG BOX WITH SINGLE COVER PLATE
	DOUBLE DUPLEX ISOLATED GROUND IN 2–GANG BOX WITH SINGLE COVER PLATE
	ISOLATED GROUND DUPLEX RECEPTACLE
	ISOLATED GROUND SIMPLEX RECEPTACLE
	250 VOLT, 1 PHASE, SPECIAL PURPOSE OUTLET, 20 AMPS UNLESS NOTED OTHERWISE
	JUNCTION BOX
	FLUSH FLOOR DUPLEX RECEPTACLE OUTLET
	DUPLEX GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE
	DOUBLE DUPLEX GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE IN 2–GANG BOX WITH SINGLE COVER PLATE
	FLUSH FLOOR JUNCTION BOX
	TELEVISION OUTLET (RECEPTACLE AND CATV CONNECTIONS)
	REMOTE VCR INPUT PATCH CABLE TO TV LOCATION
	TWO CHANNEL POWER/COMMUNICATIONS POWER POLE
SWITCHES	
$	LINE VOLTAGE SINGLE POLE SWITCH
$3	LINE VOLTAGE 3–WAY SWITCH
$4	LINE VOLTAGE 4–WAY SWITCH
$K	LINE VOLTAGE MOMENTARY DPST KEYED SWITCH
$D	LINE VOLTAGE DIMMER SWITCH, SIZE AND TYPE AS REQUIRED
$P	LINE VOLTAGE SWITCH WITH PILOT LIGHT
$T	6–HOUR ROTARY TIMER SWITCH WITH NO HOLD U.N.O.
	PUSH BUTTON EPO SWITCH WITH COVER
$MC	LOW VOLTAGE MOMENTARY CONTACT SWITCH
$R	LOW VOLTAGE DIGITAL KEYPAD
$B	LOW VOLTAGE BUILDING MANAGEMENT (BMCS) LOCAL OVERRIDE SWITCH
	OCCUPANCY SENSOR (AUTO ON / AUTO OFF WITHIN 20–MINUTES)
	VACANCY SENSOR (MANUAL ON / AUTO OFF WITHIN 20–MINUTES)
	PHOTOCELL SENSOR
R#	LIGHTING CONTROL SYSTEM. ('#' DENOTES TYPE – SEE LIGHTING CONTROLS SCHEDULE)
ERC	EMERGENCY LOAD CONTROL RELAY. MINIMUM 16A & 0–10V COMPATIBLE. PROVIDE U.L. 924 U.N.O.
MOTOR CONTROLLERS AND EQUIPMENT	
	MOTOR, MAKE FINAL MOTOR CONNECTION
	3–PHASE MOTOR, MAKE FINAL MOTOR CONNECTION
	DISCONNECT SWITCH AS REQUIRED
	COMBINATION MOTOR STARTER/DISCONNECT SWITCH AS REQUIRED
	MOTOR STARTER
	MOTOR CONTROLLER PUSH BUTTON CONTROL, P=PILOT LIGHT
$M	MANUAL MOTOR SWITCH AS REQUIRED
	PREWIRED DEVICE, MAKE ELECTRICAL FINAL CONNECTIONS
VFD	VARIABLE FREQUENCY DRIVE MOTOR CONTROLLER FURNISHED BY DIVISION 23 AND INSTALLED BY DIVISION 26
ELECTRICAL EQUIPMENT	
	277/480 VOLT DISTRIBUTION OR PANELBOARD
	120/208 VOLT PANELBOARD
	TELEPHONE CABINET
	PLYWOOD TELEPHONE BACKBOARD
	DRY TYPE TRANSFORMER
CIRCUITING	
	CONDUIT
	CONDUIT BELOW FLOOR, SLAB, OR GRADE
#12	3/4"C. UNLESS OTHERWISE NOTED; LONG HATCH, NEUTRAL; SHORT HATCH, PHASE; "Z" HATCH, INSULATED GROUND. NO HATCHES INDICATES 2 CONDUCTORS. ARROW INDICATES HOMERUN.
	PARTIAL ELECTRICAL HOME RUN
SUBSCRIPTS AND ABBREVIATIONS	
WP	INDICATES WEATHERPROOF
WG	INDICATES WIREGUARD
E	INDICATES EXISTING
TL	INDICATES TWIST LOCK TYPE
NL	LIGHT FIXTURE ON NIGHT LIGHT CIRCUIT
•	NEXT TO ANY SYMBOL INDICATES FINAL ROUGH–IN FIELD COORDINATION BY CONTRACTOR WITH ARCHITECTURAL MILLWORK DRAWINGS AND OTHER TRADES

GENERAL NOTE:
ALL EXTERIOR BUILDING ELECTRICAL EQUIPMENT TO BE WEATHERPROOF NEMA–3R MINIMUM.

SWITCHBOARD CIRCUIT BREAKER LABELING:

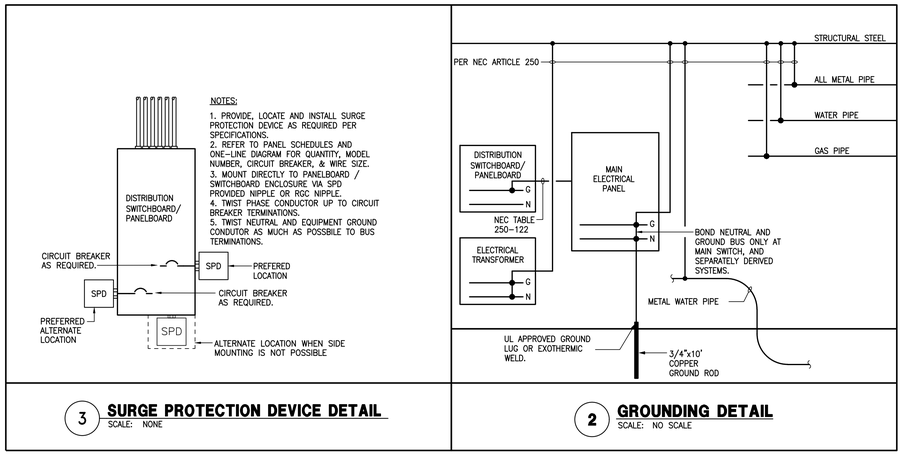
CONTRACTOR SHALL RECORD AND/OR PRESERVE THE EXISTING CIRCUIT BREAKER LABELING, IF ANY, FOR THE SOLE PURPOSE UPON COMPLETION OF NEW WORK OF PRODUCING NEW CIRCUIT BREAKER LABELS.

CONTRACTOR SHALL PROVIDE AS PART OF THE CONSTRUCTION DOCUMENTS NEW, ENGRAVED PLAQUES INDICATING THE LOAD SERVED ADJACENT TO EACH INDIVIDUAL BREAKER ON THE MODIFIED SWITCHBOARD. CONTRACTOR SHALL TRACE ALL EXISTING CIRCUITS AND SHALL LEGIBLY IDENTIFY AS TO ITS CLEAR, EVIDENT, AND SPECIFIC PURPOSE OR USE, LOADS SERVED AND LOCATION. THE WORD "EXISTING" SHALL NOT BE USED ON PLAQUES. SPARE BREAKERS ARE TO BE SWITCHED OFF AND LABELED AS "SPARE." SPACES WITH NO BREAKERS ARE TO BE LEFT BLANK. REFER TO NEC–2017: 408.4(A) FOR DETAILS.

PANELBOARD CIRCUIT DIRECTORY:

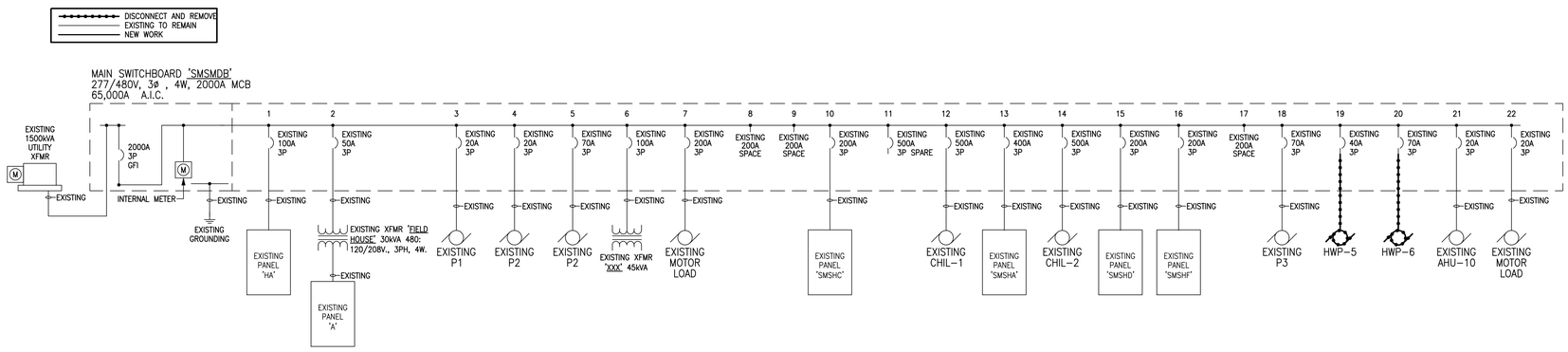
CONTRACTOR SHALL RECORD AND/OR PRESERVE THE EXISTING CIRCUIT DIRECTORY, IF ANY, FOR THE SOLE PURPOSE UPON COMPLETION OF NEW WORK OF PRODUCING A NEW CIRCUIT DIRECTORY.

CONTRACTOR SHALL PROVIDE AS PART OF THE CONSTRUCTION DOCUMENTS A NEW, NEATLY TYPED DIRECTORY. CONTRACTOR SHALL TRACE ALL EXISTING CIRCUITS AND SHALL LEGIBLY IDENTIFY AS TO ITS CLEAR, EVIDENT, AND SPECIFIC PURPOSE OR USE, LOADS SERVED AND LOCATION AND/OR THE PANELBOARD SCHEDULE ON THE DRAWINGS. THE WORD "EXISTING" SHALL NOT BE USED ON PANELBOARD DIRECTORIES. SPARE BREAKERS ARE TO BE SWITCHED OFF AND LISTED AS "SPARE", SPACES WITH NO BREAKERS ARE TO BE LEFT BLANK. REFER TO NEC–2017: 408.4(A) FOR DETAILS.



3 **SURGE PROTECTION DEVICE DETAIL**
SCALE: NONE

2 **GROUNDING DETAIL**
SCALE: NO SCALE



1 **EXISTING/DEMOLITION ELECTRICAL ONELINE**
SCALE: NO SCALE

ELECTRICAL GENERAL NOTES:

1. ALL EMPTY CONDUIT SHALL HAVE PULL STRING.
2. EACH CONDUIT SHALL BE LIMITED TO (3) CIRCUITS MAXIMUM.
3. NO MORE THAN THREE SINGLE PHASE CIRCUITS AND NO MORE THAN SIX CURRENT CARRYING CONDUCTORS SHALL BE INSTALLED IN A SINGLE RACEWAY. WHEN FOUR, FIVE, OR SIX CURRENT CARRYING CONDUCTORS ARE INSTALLED IN A SINGLE RACEWAY, THEIR CURRENT CARRYING AMPACITIES SHALL BE DERATED AS REQUIRED BY THE NEC FOR NON–DIVERSIFIED LOADS. THE INSTALLED WIRE SIZE SHALL HAVE A NOMINAL AMPACITY RATING OF 125% OF THAT REQUIRED OR SPECIFIED WHEN FOUR OR MORE CURRENT CARRYING CONDUCTORS ARE INSTALLED IN A SINGLE RACEWAY. NEUTRAL CONDUCTORS SHALL BE CONSIDERED A CURRENT CARRYING CONDUCTOR IN ALL NON–LINEAR LOADED CIRCUITS AS REQUIRED BY THE NEC.
4. ALL LIGHTING, RECEPTACLE, AND EQUIPMENT BRANCH CIRCUITS CONDUITS SHALL CONTAIN A GROUND WIRE. USING THE CONDUIT SYSTEM AS THE ONLY GROUND PATH IS NOT ACCEPTABLE.

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Beaumont Independent School District

HVAC REPLACEMENT PROJECT (SMITH M.S.)

CSP# 26.06

Smith Middle School

4415 Concord Rd, Beaumont, Tx 77703

NOTES

REVISIONS

Δ	DESCRIPTION	DATE

CHECKED BY JZ **DRAWN BY** AW

SHEET NAME

ELECTRICAL DETAILS, SCHEDULES, AND LEGENDS - SMITH MS

SHEET NUMBER E2.01 **REVISION**



N

2 **PLUMBING ENLARGED FLOOR PLAN - SMITH MS**

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

PLUMBING KEYED NOTES:

1. REMOVE EXISTING GAS PIPING BACK TO THIS POINT. PREPARE FOR CONNECTION OF THE PIPING.
2. EXISTING GAS PIPING TO REMAIN.
3. EXISTING GAS PIPING TO BE REMOVED.
4. EXISTING BOILER TO BE REMOVED IN IT'S ENTIRETY. REMOVE GAS PIPING BACK TO POINT INDICATED.
5. 1-1/2" GAS DOWN TO SERVE BOILER. PLACE PRESSURE REGULATOR IN VERTICAL AT 60" A.F.F. PRESSURE REGULATOR 5PSI TO 14" W.C. PRESSURE. 1500 CFH. ROUTE DISCHARGE TO NEAREST FLOOR DRAIN.



N

1 **PLUMBING DEMOLITION ENLARGED FLOOR PLAN - SMITH MS**

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

Salas O'Brien

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SHEET NAME

PLUMBING ENLARGED FLOOR PLANS - SMITH MS

SHEET NUMBER	REVISION
P1.01	

PLUMBING GENERAL NOTES

1. WITHIN THE EXISTING BUILDING, EXISTING WATER, WASTE AND VENT SERVICES ARE TO BE MODIFIED AS REQUIRED AND REUSED FOR THE INSTALLATION OF NEW AND/OR RELOCATED PLUMBING FIXTURES. REFER TO PLUMBING FLOOR PLANS FOR POINTS OF CONNECTION.
2. WITHIN THE EXISTING BUILDING, SAWCUT AND REMOVE EXISTING FLOOR SLAB AS REQUIRED TO PROVIDE NEW AND/OR RELOCATED PLUMBING FIXTURES, CLEANOUTS, AND UNDERSLAB WASTE AND VENT PIPING. PATCH AND REFINISH FLOOR TO MATCH EXISTING.
3. IN AREAS WHERE THE FLOOR SLAB IS REMOVED, CONTRACTOR SHALL ALSO REMOVE UNDERSLAB WASTE AND VENT PIPING WHICH SERVES FIXTURES DESIGNATED FOR REMOVAL. PRIOR TO ANY REMOVAL, FIELD VERIFY THAT LINES TO BE REMOVED DO NOT SERVE ANY EXISTING FIXTURES TO REMAIN OR NEW FIXTURES TO BE INSTALLED.
4. IN AREAS WHERE THE FLOOR SLAB IS NOT REMOVED, CONTRACTOR SHALL ABANDON IN PLACE ANY UNDERSLAB WASTE AND VENT PIPING NO LONGER NEEDED, UNLESS THE PIPING MUST BE REMOVED TO ACCOMMODATE NEW CONSTRUCTION. IF NEW WORK DOES NOT NECESSITATE THEIR REMOVAL, CUT AND PLUG SUCH LINES BELOW SLAB, AND PATCH FLOOR TO MATCH EXISTING.
5. FIELD VERIFY EXACT LOCATION, SIZE, DEPTH, DIRECTION OF FLOW, CAPACITY, PIPE MATERIAL AND CONDITION OF EXISTING WASTE PIPING PRIOR TO BEGINNING CONSTRUCTION. ENSURE THAT PROPER CONNECTIONS TO AND EXTENSION OF SUCH UTILITIES CAN BE MADE.
6. WASTE LINES TO BE RE-USED OR RECONNECTED TO SHALL BE THOROUGHLY RODDED OUT AND FLUSHED TO ENSURE THEY ARE FREE FROM BLOCKAGES.
7. CONTRACTOR SHALL COORDINATE ROUTING OF PIPING BELOW SLAB WITH COLUMN FOOTINGS, GRADE BEAMS, UNDERGROUND PLUMBING AND ELECTRICAL UTILITIES, AND OTHER SUB-SURFACE BUILDING ELEMENTS.
8. CONTRACTOR SHALL COORDINATE ROUTING OF PIPING IN CEILING SPACES WITH MECHANICAL AND ELECTRICAL EQUIPMENT, DUCTWORK AND CONDUIT. SHOULD A CONFLICT OCCUR THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER PRIOR TO INSTALLING AN ALTERNATE PIPING PLAN.
9. CONTRACTOR TO COORDINATE ALL REMODEL WORK WITH THE WORK OF OTHER TRADES TO AVOID CONFLICTS AND TO MINIMIZE INTERRUPTION OF SERVICES.
10. COORDINATE ALL FIXTURE AND EQUIPMENT LOCATIONS AND CONNECTION REQUIREMENTS WITH LATEST ARCHITECTURAL DRAWINGS AND SPECIFICATIONS PRIOR TO ANY ROUGH-INS.
11. DO NOT ROUGH-IN FROM THESE DRAWINGS. REFER TO LATEST ARCHITECTURAL DRAWINGS FOR DIMENSIONED LOCATIONS.
12. CONTRACTOR TO FIELD VERIFY AS NECESSARY THE EXACT ROUTING AND SIZES OF ALL PIPING.
13. ALL WORK, METHODS AND INSTALLATIONS INVOLVED IN THE PLUMBING DESIGN SHALL BE IN ACCORDANCE WITH THE CITY BUILDING CODE, INSPECTION REGULATIONS AND ALL OTHER OFFICIALS HAVING JURISDICTION.
14. THE PROPER INSTALLATION OF NEW FIXTURES AND THE PROPER CONTINUED OPERATION OF EXISTING FIXTURES TO REMAIN SHALL DETERMINE THE EXTENT AND NATURE OF PLUMBING REMODEL WORK.
15. EACH VENT SHALL TERMINATE VERTICALLY NOT LESS THAN 6" ABOVE ROOF, MAINTAIN MINIMUM 10'-0" DISTANCE BETWEEN VENT TERMINALS THROUGH ROOF AND ALL FRESH AIR INTAKES, AND A MINIMUM 5'-0" FROM ANY EXTERIOR WALL.
16. PRIOR TO BEGINNING CONSTRUCTION, COORDINATE BUILDING BACKFLOW PREVENTION REQUIREMENTS WITH THE LOCAL AUTHORITY HAVING JURISDICTION AND PROVIDE AS DIRECTED.

DEMOLITION GAS EQUIPMENT SCHEDULE

EQUIPMENT NUMBER.	DESCRIPTION	BTU PER HOUR LOAD	TOTAL BTU PER HOUR	TOTAL CFH
(E)BOILER	BOILER	1,999,000 BTU	1,999,000 BTU	1,999 CFH
(E)BOILER	BOILER	500,000 BTU	500,000 BTU	500 CFH
(E)BOILER	BOILER	500,000 BTU	500,000 BTU	500 CFH
TOTAL REMOVED:		2,999,000 BTU	2,999,000 BTU	2,999 CFH

GAS EQUIPMENT SCHEDULE

EQUIPMENT NUMBER.	DESCRIPTION	BTU PER HOUR LOAD	TOTAL BTU PER HOUR	TOTAL CFH
B-1	BOILER	1,500,000 BTU	1,500,000 BTU	1,500 CFH
B-2	BOILER	1,500,000 BTU	1,500,000 BTU	1,500 CFH
TOTAL:		3,00,000 BTU	3,00,000 BTU	3,000 CFH

PLUMBING PIPING LEGEND

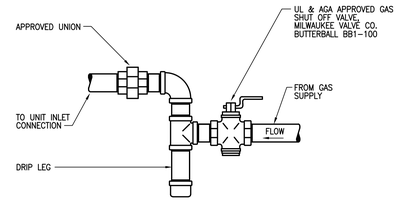
SYMBOLS	DESCRIPTION
SAN	SANITARY OR WASTE PIPING ABOVE GRADE (SAN)
SAN	SANITARY OR WASTE PIPING BELOW GRADE (SAN)
GW	GREASE WASTE PIPING (GW)
GW	GREASE WASTE PIPING BELOW GRADE (GW)
SD	STORM DRAIN PIPING (SD)
SD	STORM DRAIN PIPING BELOW GRADE (GW)
SSD	SUB-SOIL DRAIN OR FOOTING DRAIN (SSD)
AW	ACID WASTE PIPING (AW)
AW	ACID WASTE PIPING BELOW GRADE (AW)
PD	PUMPED DISCHARGE (PD)
CD	CONDENSTATE DRAIN PIPING (CD)
D	CONDENSTATE – INDIRECT DRAIN PIPING (D)
	VENT PIPING (V)
CW	COLD WATER PIPING (CW)
HW	HOT WATER PIPING (HW)
HWR	HOT WATER RETURN PIPING (HWR)
SCW	SOFT COLD WATER PIPING (SCW)
CDW	CHILLED DRINKING WATER PIPING (CDW)
TP	TRAP PRIMER LINE (TP)
F	FIRE PROTECTION PIPING (F)
AS	AUTOMATIC SPRINKLER PIPING (AS)
GAS	NATURAL GAS PIPING (G)
GV	GAS VENT PIPING (GV)
AIR	COMPRESSED AIR PIPING (A)
	FLOW DIRECTIONAL ARROW
	SHUT-OFF VALVE
	BALANCING VALVE (BV)
	SOLENOID VALVE (SV)
	BALL VALVE (BV)
	BUTTERFLY VALVE
	LUBRICATED PACKED PLUG STOP STOP COCK (PC)
	HORIZONTAL SWING CHECK
	UNION
	HORIZONTAL SWING CHECK
	REDUCER OR INCREASER
	ECCENTRIC REDUCER
	REDUCED PRESSURE BACKFLOW PREVENTER (RPBFP)
	PIPING DOWN
	RISE OR DROP PIPING
	PIPING UP –OR– PIPING UP & DOWN
	CAP ON END OF PIPE
	CLEANOUT (WALL OR CEILING) (CO)
	FLOOR CLEANOUT (FCO)
	EXTERIOR CLEANOUT WITH 18"x18"x4" CONCRETE PAD (ECO)
	TWO-WAY CLEANOUT (PROVIDE 18"x24"x4" CONCRETE PAD OUTSIDE)
	FIRE DEPARTMENT VALVE AT RISER
	FIRE HYDRANT
	FIRE DEPARTMENT CONNECTION
	PRESSURE REDUCING VALVE (PRV)
	BRANCH CONNECTION OUT OF TOP
	BRANCH CONNECTION OUT OF BOTTOM
	BRANCH CONNECTION OUT OF SIDE
	WYE & 1/8TH BEND BRANCH CONNECTION
	WYE BRANCH CONNECTION
	HOSE BIBB
	PRESSURE GAUGE WITH COCK
	THERMOMETER
	GAS PRESSURE REGULATOR
	TEST COCK
	GAS METER
	WALL HYDRANT
	VALVE IN RISE
	ASME TEMPERATURE & PRESSURE RELIEF VALVE
	VACUUM RELIEF VALVE
	ANGLE VALVE
	OS&Y VALVE
	ROOF DRAIN
	REFER TO KEYED NOTE
FS	FLOW SWITCH
	FLOOR SINK (FS)
	FLOOR DRAIN (FD)
	FLOOR DRAIN WITH P-TRAP (FD)
	FLOOR DRAIN WITH P-TRAP AT 45° ANGLE (FD)
	HUB DRAIN (HD)
	ACCESS PANEL FOR TRAP PRIMER OR SHOCK ABSORBER
AP	ACCESS PANEL LOCATION SYMBOL
A	SHOCK ABSORBER
	AIR CHAMBER
(E)	EXISTING
(N)	NEW
VTR	VENT THRU ROOF
B.F.F.	BELOW FINISHED FLOOR
A.F.F.	ABOVE FINISHED FLOOR
	NEW CONNECTION
IE=100.00'	INVERT ELEVATION
1	DELTA CHANGE SYMBOL
P/1 4" VTR	RISER FLAG

PLUMBING MATERIAL LIST

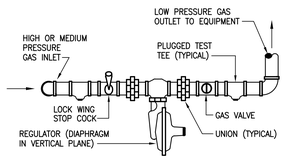
GAS PIPING SHALL BE

PIPE 2" AND SMALLER. PROVIDE SCHEDULE 40 ASTM A 53 BLACK STEEL WITH FACTORY FABRICATED SOCKET WELD FITTINGS.

PIPE LARGER THAN 2", USE SCHEDULE 40 ASTM A 53 BLACK STEEL PIPE WITH LONG RADIUS WELD FITTINGS.



1 **GAS CONNECTION**
SCALE: NONE GA07-11/12/08



NOTE: REFERENCE DRAWINGS FOR PIPE SIZES.

2 **GAS PRESSURE REGULATOR INSTALLATION**
SCALE: NONE GA02-11/12/08

Salas O'Brien
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Registration: F-4111
Project No.: 2550-00508-00

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PROFESSIONAL SEAL



ISSUE DATE	DESCRIPTION
07/25/2025	ISSUE FOR BID

Beaumont ISD
Preparing Our Next Generation

2550-00508-00
Beaumont Independent School District

HVAC REPLACEMENT PROJECT (SMITH M.S.)

CSP# 26.06

Smith Middle School
4415 Concord Rd, Beaumont, Tx 77703

NOTES

REVISIONS

Δ	DESCRIPTION	DATE

CHECKED BY: EH
DRAWN BY: BR

SHEET NAME
PLUMBING SCHEDULES AND DETAILS - SMITH MS

SHEET NUMBER: P2.01
REVISION: