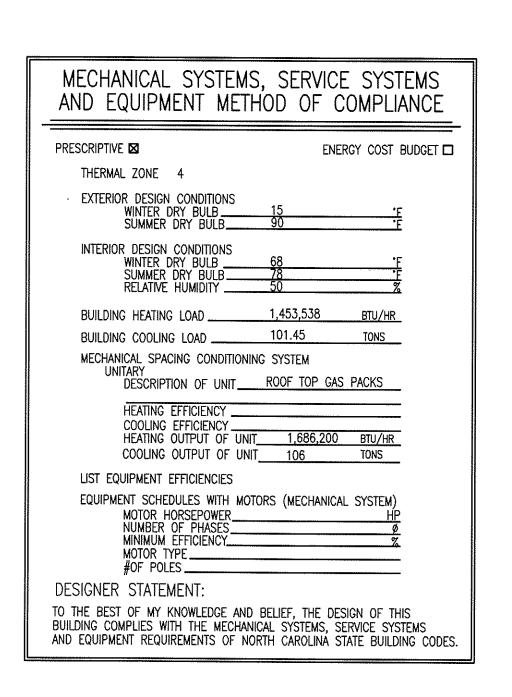
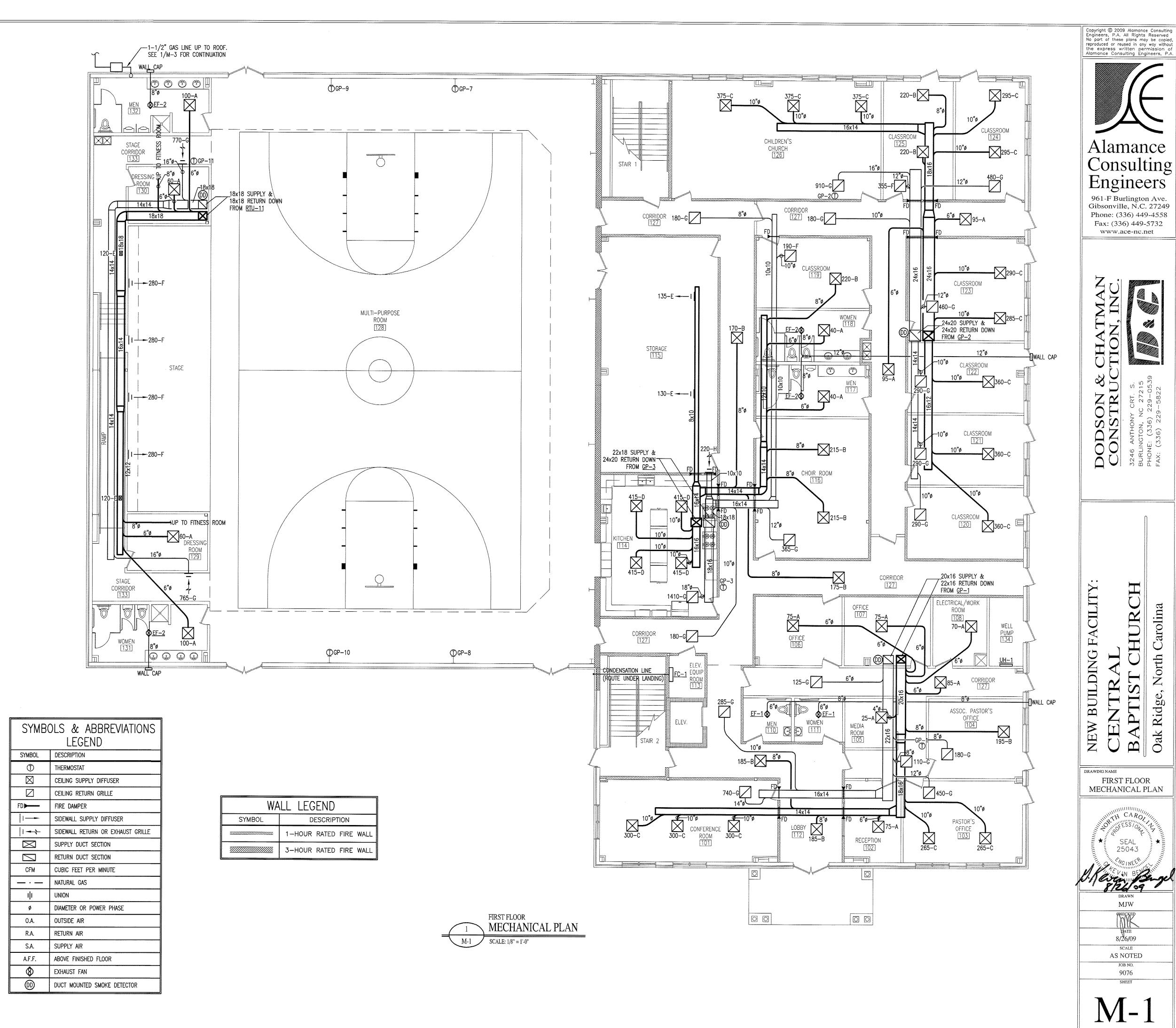
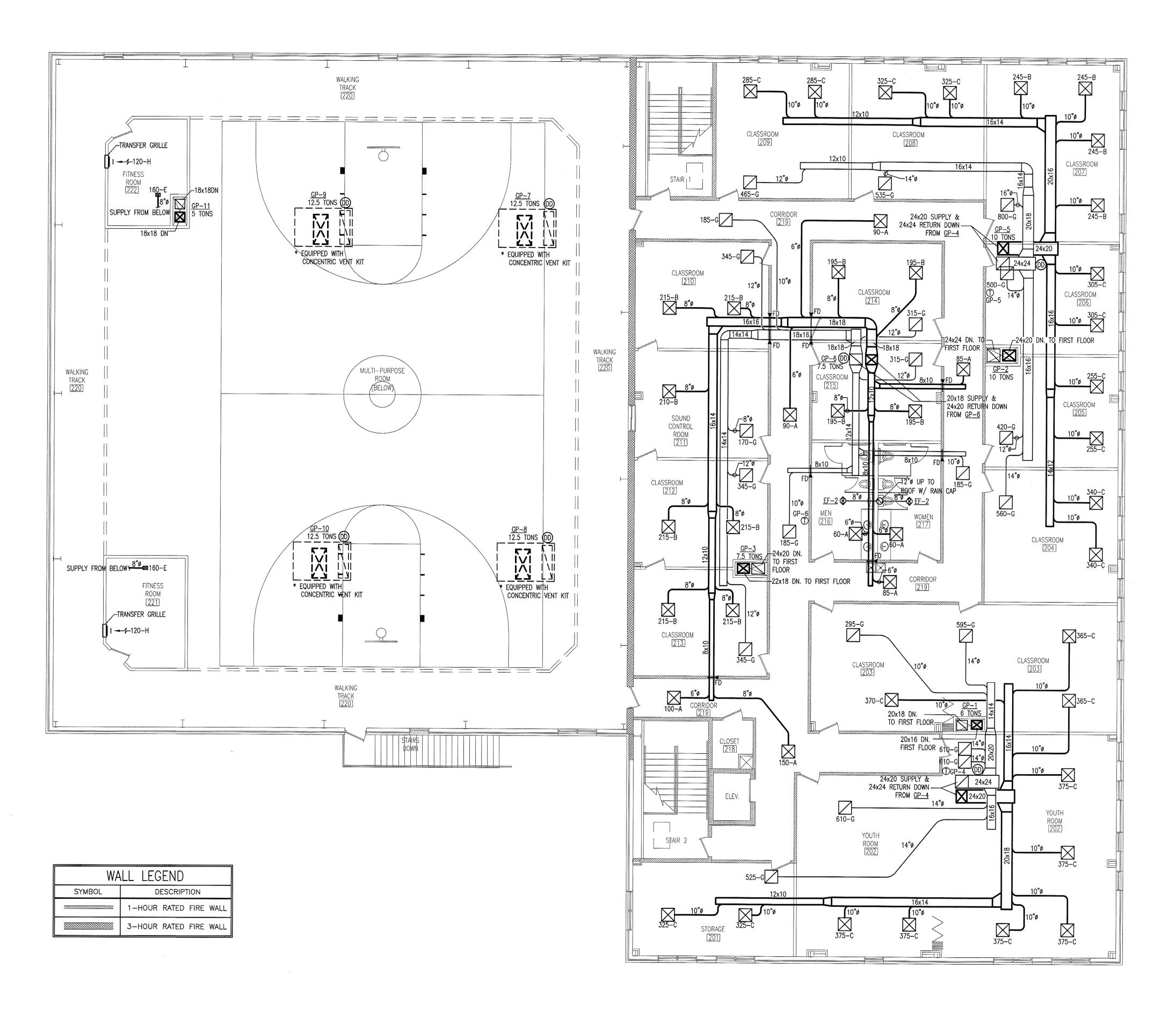
MECHANICAL NOTES:

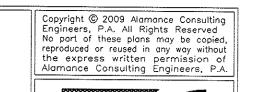
- 1. ALL HVAC EQUIPMENT AND DUCTWORK TO BE INSTALLED IN ACCORDANCE WITH STATE AND LOCAL CODES.
- 2. THE CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL DUCTWORK, PIPING, AND ELECTRICAL REQUIREMENTS WITH ALL OTHER TRADES PRIOR TO BEGINNING INSTALLATION TO AVOID CONFLICTS AND INTERFERENCE WITH OTHER TRADES.
- 3. ALL EQUIPMENT TO BE INSTALLED AS SUGGESTED BY MANUFACTURER.
- 4. INSULATE SUPPLY AND RETURN DUCTWORK LOCATED IN UNCONDITIONED SPACES BY WRAPPING WITH INSULATION WITH A MINIMUM INSTALLED R-VALUE OF 5.0. DIMENSIONS SHOWN ARE INSIDE CLEAR AREA DIMENSIONS.
- 5. FIRST 10' FROM THE HVAC UNIT OF EXPOSED INTERIOR DUCTWORK MUST BE INSULATED WITH 1" DUCT LINER.
- 6. INSTALL WASHABLE SCREEN FILTER ON OUTSIDE AIR INTAKE OF ROOF TOP UNITS.
- 7. MECHANICAL SYSTEM TO BE BALANCED AND TESTED AFTER INSTALLATION TO ASSURE PROPER OPERATION.
- 8. COORDINATE EXACT LOCATION OF THERMOSTATS WITH OWNER.
- 9. ANY FIRE RATED ASSEMBLY PENETRATIONS ARE TO BE PER CODE. CONTRACTOR SHOULD REVIEW ALL FIRE RATING PENETRATIONS.
- 10. BATHROOM EXHAUST FANS ARE TO BE FURNISHED, INSTALLED AND DUCTED TO OUTDOORS BY THE MECHANICAL CONTRACTOR. EXHAUST FAN TO BE WIRED BY THE ELECTRICAL CONTRACTOR.
- 11. SMOKE DETECTORS ARE TO BE PROVIDED IN RETURN AIR DUCT OF EACH UNIT AHEAD OF MAKE-UP AIR CONNECTIONS TO SHUT DOWN THE UNIT IN CASE OF FIRE.
- 12. DUCT SMOKE DETECTORS ARE TO BE CONNECTED TO FIRE ALARM.
- 13. EXHAUST FAN DISCHARGE TO BE AT LEAST TEN FEET AWAY FROM HVAC FRESH AIR IN-TAKE.
- 14. GAS PIPING BASED ON 2 PSI GAS PRESSURE. VERIFY ALL GAS LINES SIZES WITH GAS COMPANY.
- 15. ALL GAS PIPING TO BE BLACK STEEL PIPING WITH PROTECTIVE PAINT.
- 16. GAS FURNACES ARE TO BE PROVIDED WITH COMBUSTION AIR IN ACCORDANCE WITH MECHANICAL CODE.
- 17. SEALED COMBUSTION GAS FURNACES AND/OR WATER HEATERS ARE TO BE EQUIPPED WITH A CONCENTRIC PVC VENT. VENT TO BE SIZED PER MANUFACTURERS SPECIFICATIONS.
- 18. GAS REGULATORS FOR HVAC EQUIPMENT TO BE PROVIDED AND INSTALLED BY MECHANICAL CONTRACTOR.
- 19. FINAL UTILITY CONNECTIONS (GAS, ELECTRIC, ETC.) TO EQUIPMENT SHALL BE MADE BY THE CONTRACTOR INSTALLING THE EQUIPMENT REQUIRING THE UTILITIES.
- 20. DUCT DRAWINGS ARE DIAGRAMMATIC AND ARE INTENDED TO SHOW THE INTENT OF THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ANY ADDITIONAL TRANSITIONS, OFFSETS, OR TURNS, IN THE DUCTWORK AND/OR PIPING, NOT SHOWN BUT REQUIRED FOR A COMPLETE AND OPERATING SYSTEM.
- 21. ALL DUCTWORK SHALL BE INSTALLED TIGHT AGAINST THE STRUCTURE UNLESS OTHERWISE NOTED OR SHOWN.
- 22. AIR DISTRIBUTION LOCATIONS SHOWN ON MECHANICAL PLANS ARE APPROXIMATE. SEE ARCHITECTURAL REFLECTED CEILING PLANS FOR ACTUAL LOCATIONS.
- 23. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONED LOCATIONS OF WALLS AND PARTITIONS AND FOR PARTITION THICKNESS AND CONSTRUCTION MATERIALS.
- 24. PRESSURE REGULATORS FOR GAS KITCHEN EQUIPMENT TO BE PROVIDED BY AND INSTALLED BY CONTRACTOR INSTALLING THE GAS PIPING.
- 25. ELECTRICAL POWER REQUIREMENTS ARE BASED ON MANUFACTURER'S PUBLISHED DATA. IF ACTUAL UNIT IS A DIFFERENT MANUFACTURER OR THE ACTUAL PURCHASED UNIT(S) OTHERWISE HAVE DIFFERENT ELECTRICAL LOAD (MCA) OR CIRCUIT BREAKER (MCB) REQUIREMENTS THAN WHAT IS PUBLISHED ON THE DRAWING SCHEDULE, THE MECHANICAL CONTRACTOR MUST SUBMIT THE CORRECT DATA IN WRITING TO THE GENERAL CONTRACTOR AND ELECTRICAL CONTRACTOR (IF KNOWN). IT IS THE MECHANICAL CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE GC AND ELECTRICAL CONTRACTOR ARE NOTIFIED OF CHANGES IN THE MECHANICAL EQUIPMENT, WHICH WILL CHANGE THE ELECTRICAL WIRING, BREAKER SIZES OR QUANTITY OF

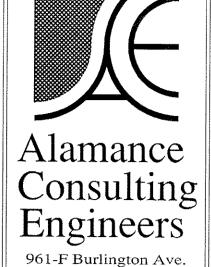




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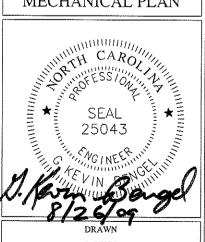
NEW BUILDING FACILITY:

CENTRAL

BAPTIST CHURCH

Oak Ridge, North Carolina

DRAWING NAME
SECOND FLOOR
MECHANICAL PLAN



DRAWN
MJW
CHECKED

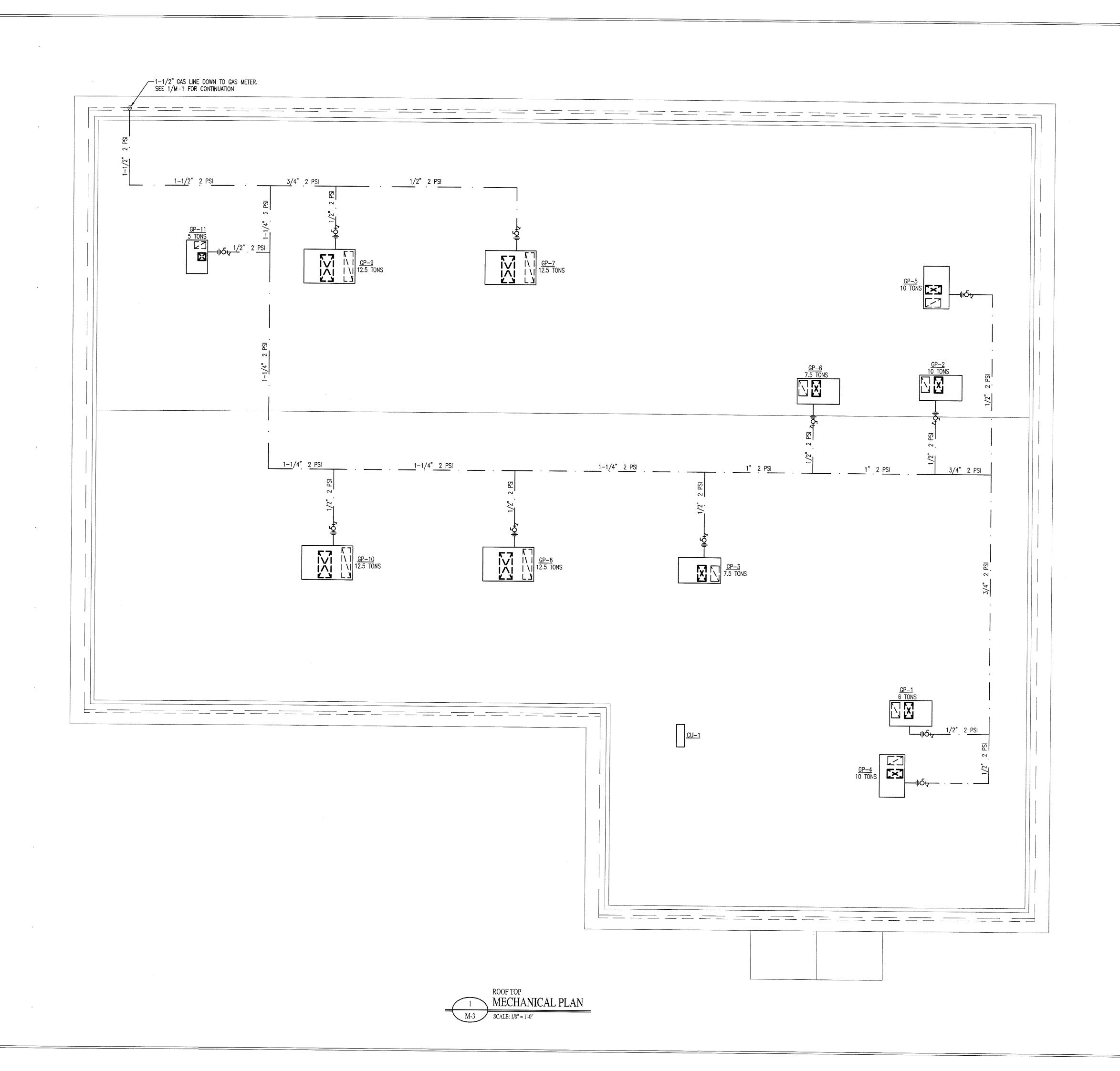
PATE
8/26/09
SCALE
AS NOTED

AS NOTED

JOB NO.
9076

SHEET

M-2



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NEW BUILDING FACILITY:
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ROOF TOP
MECHANICAL PLAN

CAROLINATE ESSION

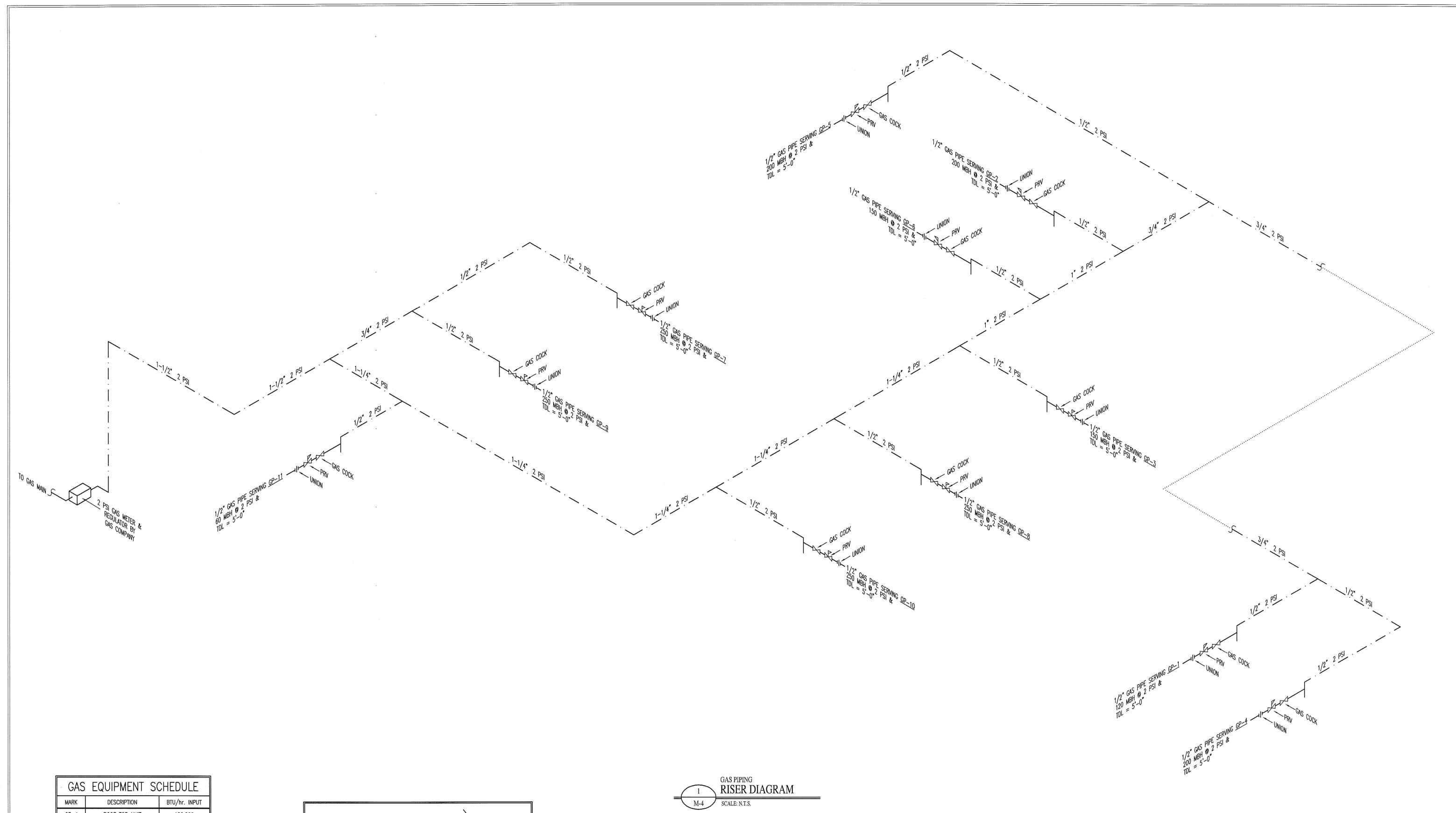
SEAL

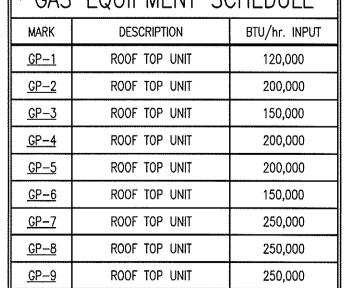
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DRAWN

DRAWN
MJW
CHECKED
DATE
8/26/09
SCALE
AS NOTED

SHEET 2





ROOF TOP UNIT

ROOF TOP UNIT

TOTAL

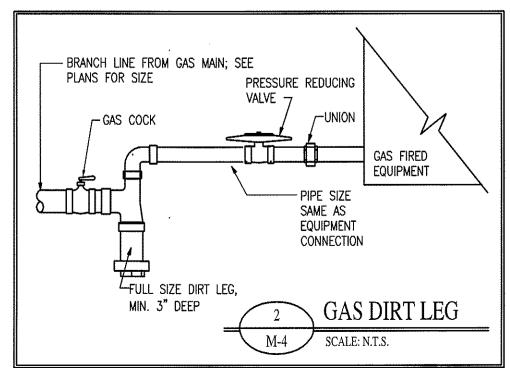
<u>GP-10</u>

250,000

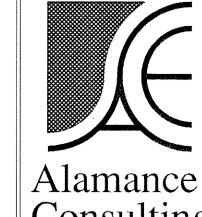
250,000

60,000

2,080,000 300' T.D.L.



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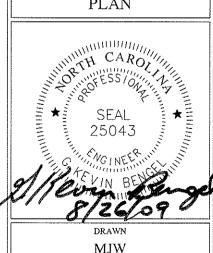
NEW BUILDING FACILITY:

CENTRAL

BAPTIST CHURCH

Oak Ridge, North Carolina

GAS PIPING PLAN



SCALE AS NOTED

	OUTSIDE AIR CALCULATIONS — GP-1														
OCCUPANCY CLASSIFICATION (PER TABLE 403.3)	NET (GROSS) SQUARE FOOTAGE	OCCUPANCY LOAD PERSONS PER 1,000 S.F.	CALCULATED # OF PEOPLE	OUTSIDE AIR REQUIRED PER PERSON (CFM)	OUTSIDE AIR REQUIRED PER S.F. (CFM)	OUTSIDE AIR REQUIRED (CFM)	OUTSIDE AIR PROVIDED (CFM)								
ręception	111	7	1	20		20	20								
PASTOR'S OFFICE	234	7	1	20	_	20	20								
LOBBY	(428)	_			0.05	21	25								
CONFERENCE ROOM	350	50	17	20	-	340	340								
ASSOCIATE PASTOR'S OFFICE	178	7	1	20		20	20								
CORRIDOR	(368)	-			0.05	18	20								
ELEC/WORK ROOM	145		-	_	0.15	22	25								
OFFICE 106	139	7	1	20	<u>-</u>	20	20								
OFFICE 107	139	7	1	20		20	20								
					TOTAL OUTSIDE AIR	501	510								

		OUTSIDE A	IR CALCU	JLATIONS - (GP-2		
OCCUPANCY CLASSIFICATION (PER TABLE 403.3)	NET (GROSS) SQUARE FOOTAGE	OCCUPANCY LOAD PERSONS PER 1,000 S.F.	CALCULATED # OF PEOPLE	OUTSIDE AIR REQUIRED PER PERSON (CFM)	OUTSIDE AIR REQUIRED PER S.F. (CFM)	OUTSIDE AIR REQUIRED (CFM)	OUTSIDE AIR PROVIDED (CFM)
CLASSROOM 120	191	50	10	*7.5	_	75	75
CLASSROOM 121	191	50	10	*7.5		75	75
CLASSROOM 122	191	50	10	*7.5	-	75	75
CLASSROOM 123	279	50	14	*7.5		105	105
CORRIDOR	(829)	_			0.05	41	45
CLASSROOM 124	193	50	10	*7.5	_	75	75
CLASSROOM 125	193	50	10	*7.5	-	75	75
CHILDRENS CHURCH 126	578	50	29	*7.5	_	218	220
					TOTAL OUTSIDE AIR	739	745

* OUTSIDE AIR REDUCED TO 7.5 CFM PER PERSON PER EXCEPTION H OF TABLE 403.3 OF NC MECHANICAL CODE

		OUTSIDE A	IR CALCU	JLATIONS - (SP-3							
OCCUPANCY CLASSIFICATION (PER TABLE 403.3)	NET (GROSS) SQUARE FOOTAGE	OCCUPANCY LOAD PERSONS PER 1,000 S.F.	CALCULATED # OF PEOPLE	OUTSIDE AIR REQUIRED PER PERSON (CFM)	OUTSIDE AIR REQUIRED PER S.F. (CFM)	OUTSIDE AIR REQUIRED (CFM)	OUTSIDE AIR PROVIDED (CFM)					
CORRIDOR 3	(821)	_	****		0.05	41	45					
KITCHEN 114	388	20	8	15		120	120					
STORAGE 115	644	-		-	0.15	97	100					
CLASSROOM 119	191	50	10	*7.5	-	75	75					
CHOIR ROOM 116	369	50	19	*10	-	190	190					
	TOTAL OUTSIDE AIR 523 530											

* OUTSIDE AIR REDUCED TO 7.5 CFM PER PERSON PER EXCEPTION H OF TABLE 403.3 OF NC MECHANICAL CODE

		OUTSIDE A	IR CALCU	JLATIONS - (SP−4	-							
OCCUPANCY CLASSIFICATION (PER TABLE 403.3)	(PER TABLE 403.3) SQUARE FOOTAGE PERSONS PER 1,000 S.F. # OF PEOPLE PER PERSON (CFM) PER S.F. (CFM) REQUIRED (CFM) PROVIDED (CFM)												
YOUTH ROOM 202	00M 202 1169 50 59 *7.5 - 443												
CLASSROOM 203	701	50	35	*7.5	_	263	265						
STORAGE 201	277	-		***	0.15	42	45						
TOTAL OUTSIDE AIR 748 755													

* OUTSIDE AIR REDUCED TO 7.5 CFM PER PERSON PER EXCEPTION H OF TABLE 403.3 OF NC MECHANICAL CODE

		OUTSIDE A	IR CALCU	JLATIONS - (GP-5		
OCCUPANCY CLASSIFICATION (PER TABLE 403.3)	NET (GROSS) SQUARE FOOTAGE	OCCUPANCY LOAD PERSONS PER 1,000 S.F.	CALCULATED # OF PEOPLE	OUTSIDE AIR REQUIRED PER PERSON (CFM)	OUTSIDE AIR REQUIRED PER S.F. (CFM)	OUTSIDE AIR REQUIRED (CFM)	OUTSIDE AIR PROVIDED (CFM)
CLASSROOM 204	317	50	16	* 7.5		120	120
CLASSROOM 205	263	50	13	*7.5		98	100
CLASSROOM 206	263	50	13	*7.5	-	98	100
CLASSROOM 207	422	50	21	*7.5	***	158	160
CLASSROOM 208	320	50	16	*7.5		120	120
CLASSROOM 209	322	50	16	*7.5		120	120
	-	-			TOTAL OUTSIDE AIR	714	720

* OUTSIDE AIR REDUCED TO 7.5 CFM PER PERSON PER EXCEPTION H OF TABLE 403.3 OF NC MECHANICAL CODE

		OUTSIDE A	IR CALCU	JLATIONS — (GP-6		
OCCUPANCY CLASSIFICATION (PER TABLE 403.3)	NET (GROSS) SQUARE FOOTAGE	OCCUPANCY LOAD PERSONS PER 1,000 S.F.	CALCULATED # OF PEOPLE	OUTSIDE AIR REQUIRED PER PERSON (CFM)	OUTSIDE AIR REQUIRED PER S.F. (CFM)	OUTSIDE AIR REQUIRED (CFM)	OUTSIDE AIR PROVIDED (CFM)
CLASSROOM 210	256	50	13	*7.5	_	98	100
SOUND CONTROL ROOM 211	254	7	2	20	••••	40	40
CLASSROOM 212	254	50	13	*7.5	-	98	100
CLASSROOM 213	254	50	13	*7.5		98	100
CLASSROOM 215	225	50	12	*7.5	-	90	90
CLASSROOM 214	225	50	12	*7.5		90	90
CORRIDOR 1	(915)			-	0.05	46	50
CORRIDOR 2	(742)				0.05	37	40
					TOTAL OUTSIDE AIR	597	610

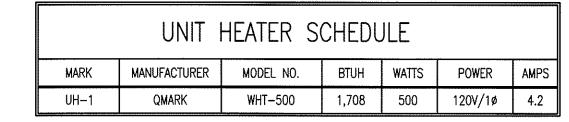
^{*} OUTSIDE AIR REDUCED TO 7.5 CFM PER PERSON PER EXCEPTION H OF TABLE 403.3 OF NC MECHANICAL CODE

OUTSIDE AIR CALCULATIONS — GP-7 THROUGH GP-10													
OCCUPANCY CLASSIFICATION NET (GROSS) OCCUPANCY LOAD CALCULATED OUTSIDE AIR REQUIRED (CFM) PROVIDED (CFM)													
MULTI-PURPOSE ROOM 128	7023	20	140	* 7.5	-	1050	1050						
					TOTAL OUTSIDE AIR	1050	1050						

* OUTSIDE AIR REDUCED TO 7.5 CFM PER PERSON PER EXCEPTION H OF TABLE 403.3 OF NC MECHANICAL CODE

		OUTSIDE A	IR CALCU	LATIONS — G	P-11		
OCCUPANCY CLASSIFICATION	NET (GROSS)	OCCUPANCY LOAD	CALCULATED	OUTSIDE AIR REQUIRED	OUTSIDE AIR REQUIRED	OUTSIDE AIR	OUTSIDE AIR
(PER TABLE 403.3)	SQUARE FOOTAGE	PERSONS PER 1,000 S.F.	# OF PEOPLE	PER PERSON (CFM)	PER S.F. (CFM)	REQUIRED (CFM)	PROVIDED (CFM)
DRESSING ROOM 129	107			-	0.2	22	25
STAGE	539	70	39	*7.5	<u>-</u>	293	295
DRESSING ROOM 130	107	-	-	*****	0.2	22	25
STAGE CORRIDOR	(587)				0.05	29	30
FITNESS ROOM 221	156	20	3	15	_	45	45
FITNESS ROOM 222	151	20	3	15	_	4 5	45
					TOTAL OUTSIDE AIR	456	465

* OUTSIDE AIR REDUCED TO 7.5 CFM PER PERSON PER EXCEPTION H OF TABLE 403.3 OF NC MECHANICAL CODE



			DUCTL	ESS	SPL	_IT AIR	COND	IOITI	VING	SYSTEM			
MARK	MANUFACTURER -	INDO	OUTDOOR UNIT				FAN D)ATA	COOLING CAPACITY				
MUNI	WAITOTACTOTICIT	MODEL NO.	POWER	MCA	мсв	MODEL NO.	POWER	MCA	MCB	AIR FLOW (CFM)	MOTOR SIZE (H.P.)	TOTAL (BTUH)	MIN. EFF.
FC-1/CU-1	MITSUBISHI	MS-A09WA	115/1ø	1.2	20	MU-A09WA	115/1ø	14	20	335	0.63	9,500	13 SEER

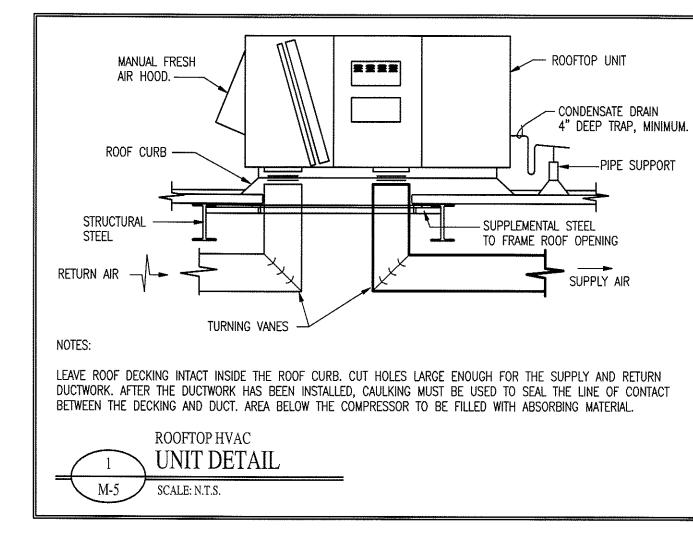
			AIR DI	STRIBUTI	ON SC	HEDULE			
MARK	MANUFACTURER	NECK SIZE	PANEL SIZE	CFM RANGE	USE	TYPE	MODEL	MATERIAL	FILTER SIZE
А	E.H. PRICE	6 " ø	24x24	0-150	SUPPLY	STAMPED LOUVER FACE	SCD	STEEL	-
В	E.H. PRICE	8"ø	24x24	151-250	SUPPLY	STAMPED LOUVER FACE	SCD	STEEL	-
С	E.H. PRICE	10"ø	24x24	251-375	SUPPLY	STAMPED LOUVER FACE	SCD	STEEL	
D	E.H. PRICE	12"ø	24x24	376-550	SUPPLY	STAMPED LOUVER FACE	SCD	STEEL	
E	e.H. Price	_	9x6	0-180	SUPPLY	LOUVERED FACE DIRECTIONAL DIFFUSER	SMD	STEEL	-
F	E.H. PRICE	_	15x6	251-310	SUPPLY	LOUVERED FACE DIRECTIONAL DIFFUSER	SMD	STEEL	
G	E.H. PRICE	22x22	24x24	0-1600	RETURN	non-filtered Return Grille	PDDR	STEEL	-
Н	E.H. PRICE	22x22	10x10	0-300	RETURN	non-filtered Return Grille	530	STEEL	_

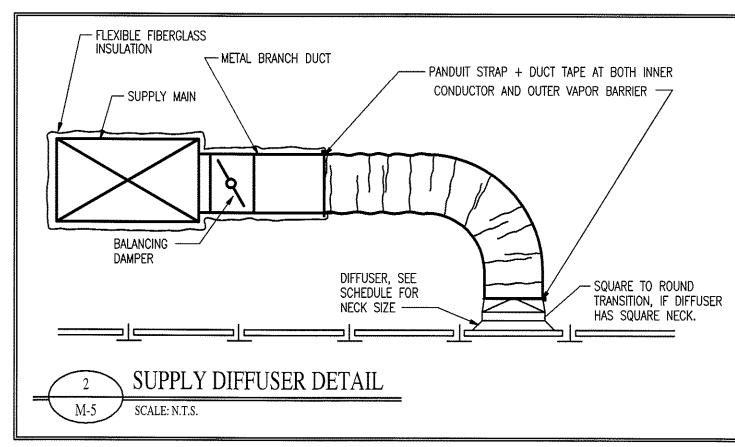
	EXHAUST FAN SCHEDULE												
MARK	MANUFACTURER	CFM	SP	MOTOR	POWER	SONES	WATTS	CONTROL					
EF-1	GREENHECK	SP-B80	CEILING EXHAUST	75	0.125" W.G.	FHP	120V/1ø	2.9	54	WALL SWITCH			
EF-2	GREENHECK	SP-A250	CEILING EXHAUST	225	0.125" W.G.	FHP	120V/1ø	3.0	83	WALL SWITCH			

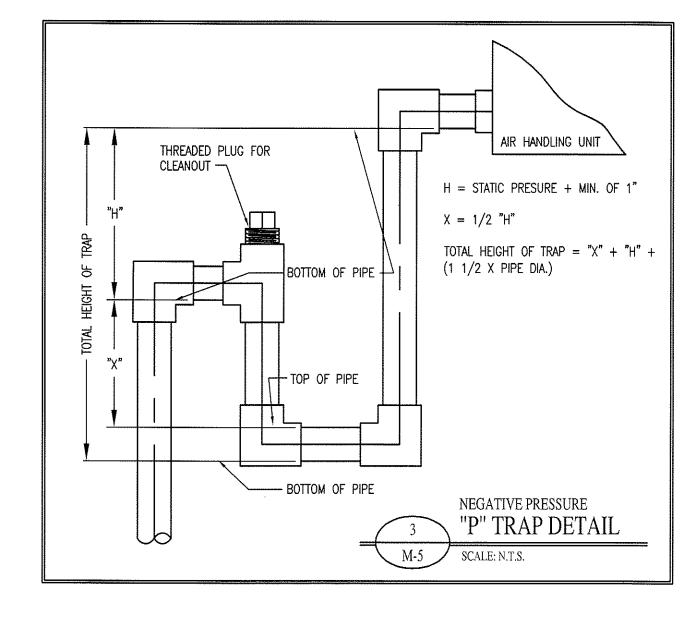
								P.A	ACKAGED (GAS UNIT	SCHEDULE						
MARK	MANUICACTURED	MODE: NO	TONC	חסשבם	1404	NOD			FAN DATA			cc	OLING CAPACITY		HEATING CAPACITY		
ЛЯКМ	MANUFACTURER	MODEL NO.	TONS	POWER	MCA	MCB	AIR FLOW (CFM)	R.A. FLOW (CFM)	O.A. FLOW (CFM)	E.S.P. (IN. W.G.)	MOTOR SIZE (H.P.)	SENSIBLE (BTUH)	TOTAL (BTUH)	MIN. EFF.	INPUT (BTUH)	OUTPUT (BTUH)	MIN. EFF.
GP-1	TRANE	YSC072A4	6	460/3ø	17.6	25	2400	1890	510	0.50	0.70	53,600	72,000	10.3 SEER	120,000	97,200	81%
GP-2	TRANE	YSC120A4	10	460/3ø	26.9	35	4000	3255	745	0.70	0.75	93,000	118,000	10.4 SEER	200,000	162,000	81%
GP-3	TRANE	YSC090A4	7.5	460/3ø	22.6	35	3000	2470	530	0.70	0.70	71,800	95,000	10.3 SEER	150,000	121,500	81%
GP-4	TRANE	YSC120A4	10	460/3ø	26.9	35	4000	3245	755	0.70	0.75	93,000	118,000	10.4 SEER	200,000	162,000	81%
GP-5	TRANE	YSC120A4	10	460/3ø	26.9	35	4000	3280	720	0.70	0.75	93,000	118,000	10.4 SEER	200,000	162,000	81%
GP-6	TRANE	YSC090A4	7.5	460/3ø	22.6	35	3000	2390	610	0.70	0.70	71,800	95,000	10.3 SEER	150,000	121,500	81%
GP-7	TRANE	YCD150C4*	12.5	460/3ø	33	40	5000	4740	260	0.70	3.0	106,000	149,000	9.8 EER	250,000	203,000	81%
GP-8	TRANE	YCD150C4*	12.5	460/3ø	33	40	5000	4740	260	0.70	3.0	106,000	149,000	9.8 EER	250,000	203,000	81%
GP-9	TRANE	YCD150C4*	12.5	460/3ø	33	40	5000	4735	265	0.70	3.0	106,000	149,000	9.8 EER	250,000	203,000	81%
GP-10	TRANE	YCD150C4*	12.5	460/3ø	33	40	5000	4735	265	0.70	3.0	106,000	149,000	9.8 EER	250,000	203,000	81%
GP-11	TRANE	YSC060A4	5	460/3ø	16	25	2000	1535	465	0.50	0.75	48,200	63,100	10.2 SEER	60,000	48,000	81%

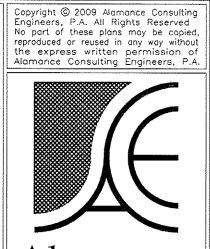
ALL UNITS TO BE EQUIPPED WITH ON-BOARD BREAKER OR FUSED DISCONNECT
ALL UNITS TO BE EQUIPPED WITH ON-BOARD CONVENIENCE RECEPTACLES, FACTORY ROOF CURBS, AND OUTSIDE AIR DAMPERS

* UNIT TO BE EQUIPPED WITH CONCENTRIC VENT KIT









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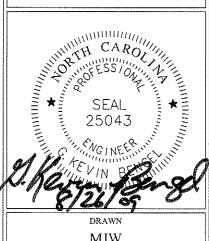
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/ BUILDING FACILITY:
NTRAL
PTIST CHURCH

DRAWING NAME

MECHANICAL

NOTES & DETAILS



DRAWN
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M-5