

PROJECT DESCRIPTION AND SCOPE OF WORK (SOW) SUMMARY

THE FOLLOWING IS A SUMMARY OF THE NATURE AND INTENT OF THE WORK, IT INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING:

- 1) REMOVAL OF EXISTING NATURAL GAS SERVICE AS INDICATED ON THE PLANS.
- 2) INSTALLATION OF NEW NATURAL GAS SERVICE AS INDICATED ON THE PLANS.
- 3) REMOVAL OF EXISTING HOT WATER BOILER OIL BURNER.
- 4) INSTALLATION OF NEW NATURAL GAS FIRED HOT WATER BOILER BURNER.
- 5) OTHER MISC. WORK AS INDICATED ON THE PLANS OR REQUIRED FOR A COMPLETE INSTALLATION READY FOR CONTINUOUS USE.

WASHINGTON COUNTY MARYLAND

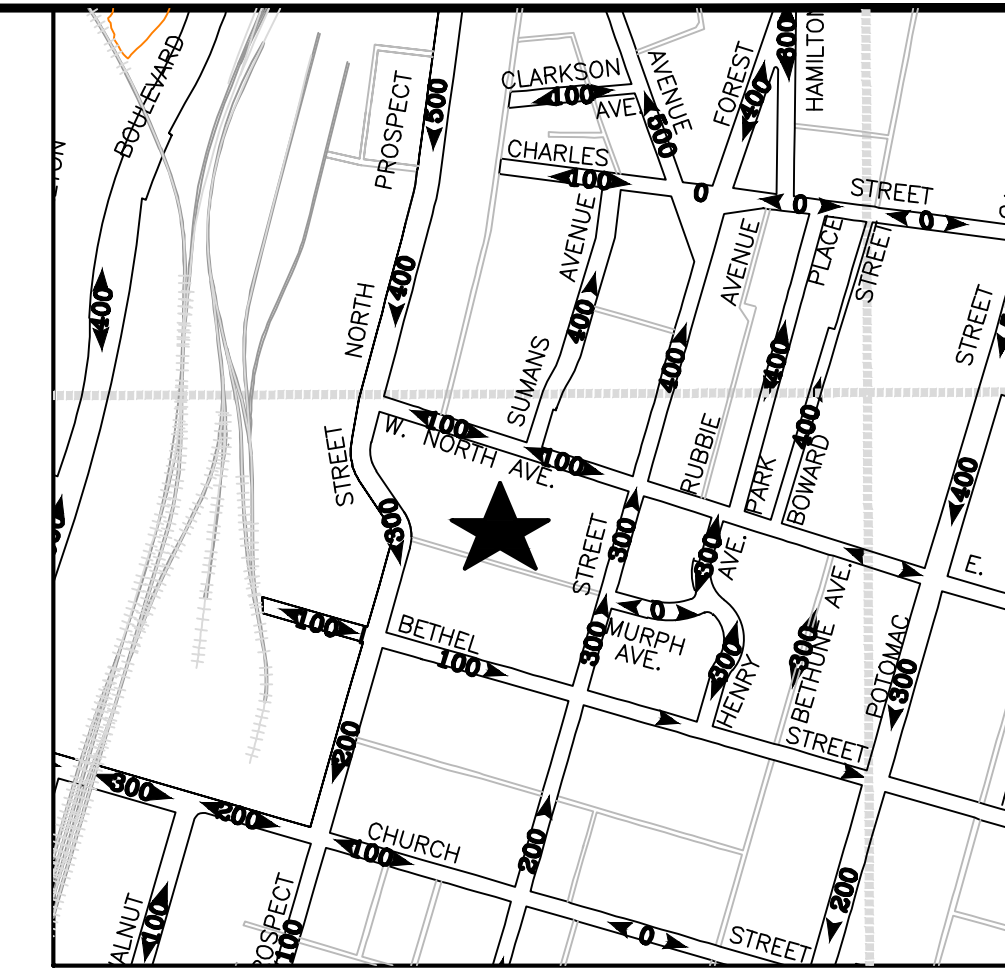
BOARD OF COUNTY COMMISSIONERS

MARTIN LUTHER KING JR. COMMUNITY CENTER

NATURAL GAS SERVICE AND MECHANICAL UPGRADES

PERMIT - PRICING SUBMISSION

PROJECT # PUR-1606

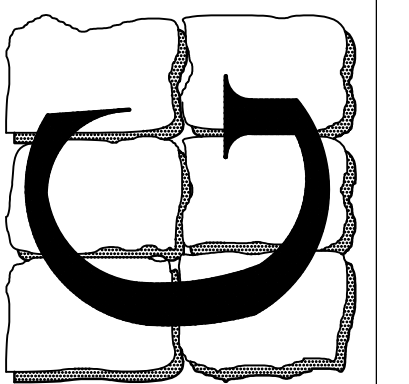


VICINITY MAP
NOT TO SCALE

21-083

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PROJECT COVER SHEET

L.S. GRIM CONSULTING ENGINEERS
PRIME CONSULTANT AND DESIGNER OF RECORD

DRAWING LIST

- | | |
|---------|---|
| C-0.0 | PROJECT COVER SHEET |
| M/P-0.0 | MECHANICAL/ PLUMBING COVER SHEET |
| E-0.0 | ELECTRICAL COVER SHEET |
| MPE-1.0 | MECHANICAL/ PLUMBING/ ELECTRICAL GENERAL ARRANGEMENT PLAN |
| MPE-1.1 | MECHANICAL/ PLUMBING/ ELECTRICAL BOILER ROOM PART PLAN |
| MPE-1.2 | MECHANICAL/ PLUMBING/ ELECTRICAL DETAILS AND NOTES |



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Professional Certification
I certify that these documents were prepared or approved by me, and that I am a duly licensed engineer under the laws of the State of Maryland
License Number: 14401
Expiration Date: 4/21/2025

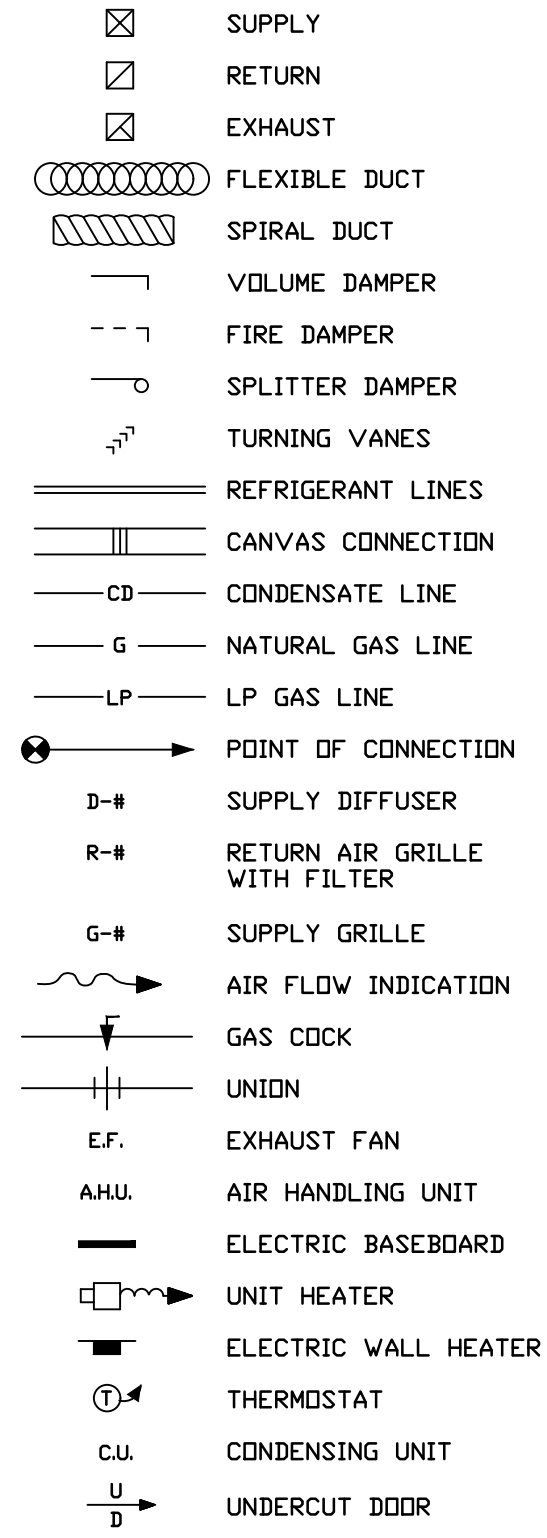
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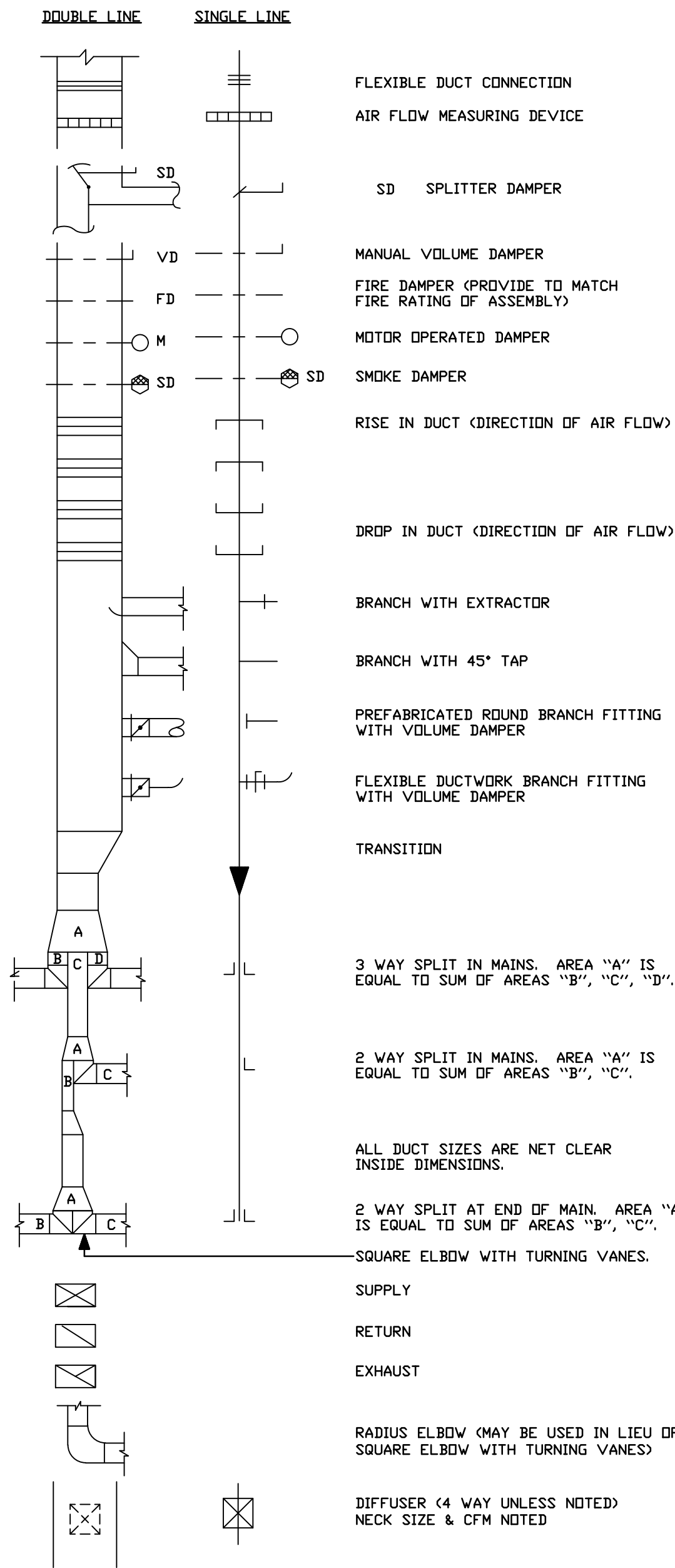
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1 OF 6 SHEETS
DATE: MARCH 8, 2023

MECHANICAL SYMBOLS



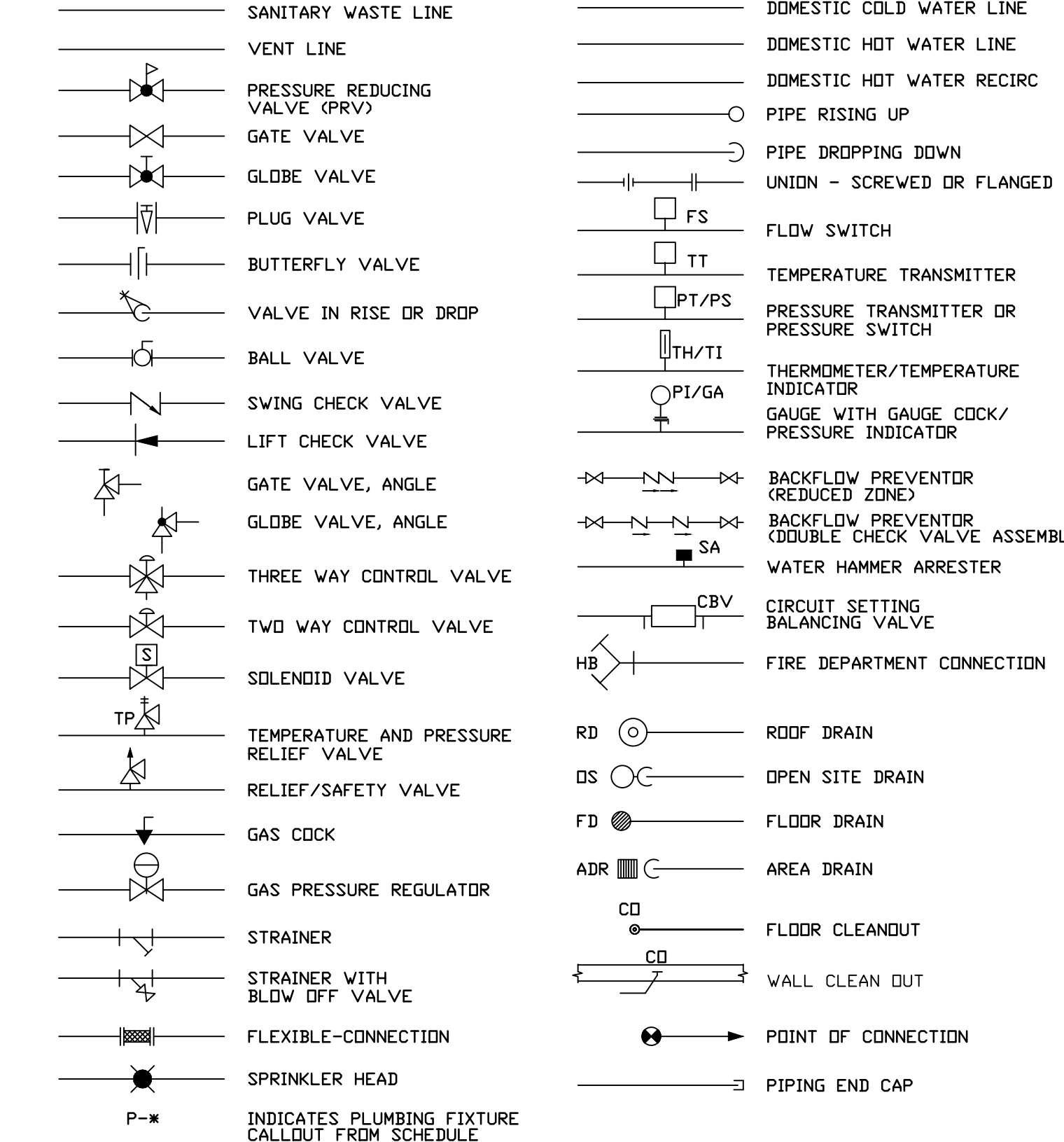
DUCTWORK SYMBOLS



GENERAL PLUMBING NOTES

- FURNISH ALL LABOR, MATERIALS, TOOLS, EQUIPMENT AND SERVICE NECESSARY AND INCIDENTAL TO INSTALL ALL PLUMBING WORK AND RELATED SYSTEMS AS SHOWN ON DRAWINGS AND INDICATED IN THE SPECIFICATIONS AS NECESSARY TO PROVIDE A FINISHED INSTALLATION. THE FINISHED INSTALLATION SHALL BE IN PERFECT WORKING CONDITION AND READY FOR CONTINUOUS AND SATISFACTORY OPERATION.
- ALL EQUIPMENT AND MATERIAL FURNISHED SHALL BE FREE FROM DEFECTS IN WORKMANSHIP AND MATERIAL. ALL EQUIPMENT AND MATERIALS SHALL MEET THE REQUIREMENTS OF ALL CODES AND STANDARDS OF LOCAL AND STATE AGENCIES HAVING JURISDICTION.
- WHERE A SUBCONTRACTOR PROPOSES TO USE AN ITEM OF EQUIPMENT OTHER THAN THE SPECIFIED OR DETAILED ITEM ON THE DRAWINGS THAT IS APPROVED BY THE ENGINEER AND THAT REQUIRES REDESIGN OF THE STRUCTURE, PARTITIONS, FOUNDATIONS, PIPING, WIRING, OR ANY OTHER PART OF THE MECHANICAL, ELECTRICAL, OR ARCHITECTURAL LAYOUT, THEN SUCH REDESIGN, NEW DRAWINGS, AND DETAILING REQUIRED FOR IT SHALL BE PREPARED BY THE SUBCONTRACTOR WITHOUT EXTRA COMPENSATION.
- THE CONTRACTOR'S SUBMITTAL INDICATES HIS/HER UNDERSTANDING AND APPROVAL OF THE SUBMITTED ITEM FOR ITS INTENDED USE. THE CONTRACTOR'S SUBMITTAL INDICATES THAT HE/SHE IS COMPLYING WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL NOTE ON THE SUBMITTAL AND DEVIATIONS WITH THE CONTRACT DOCUMENTS.
- THE SUBMITTAL WHICH HAS BEEN REVIEWED BY THE ENGINEER, WITH OR WITHOUT COMMENTS, DOES NOT RELIEVE THE CONTRACTOR FROM THE REQUIREMENTS OF COMPLYING WITH THE CONTRACT DOCUMENTS. ONLY SUBMITTALS WHICH EXPLICITLY REQUEST THE ENGINEER TO REVIEW DEVIATIONS WITH THE CONTRACT DOCUMENTS RELIEVE THE CONTRACTOR FROM THE SPECIFIC ITEM OF COMPLIANCE.
- THE LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE, AND ARE TO SERVE AS A GUIDE FOR THE INSTALLATION. THE SHIFTING OF LOCATIONS TO MEET CONDITIONS (BEFORE INSTALLATION) WILL BE EXPECTED, AND THIS SHALL BE DONE AT NO INCREASED COST.
- THE CONTRACTOR SHALL COORDINATE THE PLUMBING WORK AND EQUIPMENT WITH THE WORK TO BE PERFORMED AND THE EQUIPMENT TO BE PROVIDED UNDER OTHER DIVISIONS OF THE PROJECT.
- IT SHALL BE THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR TO INFORM THE ELECTRICAL CONTRACTOR AS REGARDS TO THE EXACT SERVICE REQUIREMENTS OF EACH PIECE OF PLUMBING EQUIPMENT.
- RENOVATION WORK: FOR RENOVATION WORK THE CONTRACTOR SHALL VISIT THE EXISTING FACILITY AND NOTE THE EXISTING CONDITIONS AND JOB SITE LIMITATIONS, PRIOR TO BIDDING.
- FOR PURPOSES OF CLARITY AND LEGIBILITY, PIPING DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC AND INDICATE ONLY SIZES, CONNECTION POINTS, AND ROUTES. IT IS NOT INTENDED OR IMPLIED THAT ALL OFFSETS, RISES, AND DROPS ARE AS SHOWN.
- PROVIDE AND INSTALL ALL CUTTING, PATCHING, FIREPROOFING, AND FIRE STOPPING REQUIRED FOR THE COMPLETE INSTALLATION OF YOUR DISCIPLINE.
- ALL DOMESTIC WATER PIPING, HOT, COLD, AND HOT WATER RE-CIRCULATION PIPING SHALL BE INSULATED. SEE SPECIFICATIONS FOR SIZE AND TYPE.
- PROVIDE A HOT AND COLD WATER DISTRIBUTION SYSTEM BEGINNING AT THE POINT OF CONNECTION WITH CONNECTIONS TO EACH PLUMBING FIXTURE. PROVIDE A COMPLETE SYSTEM OF SANITARY PIPING BEGINNING AT POINT OF CONNECTION AND CONTINUING TO ALL PLUMBING FIXTURES.
- ALL FIXTURES SHALL BE FURNISHED, SET, AND PROPERLY CONNECTED. ALL PROPER PROTECTIVE PAPER, LABELS, ETC., SHALL BE REMOVED AND FIXTURES AND FITTINGS SHALL BE THOROUGHLY CLEANED AFTER ALL TRADES HAVE COMPLETED THEIR WORK. THEY SHALL BE LEFT IN CONDITION ACCEPTABLE TO THE OWNER.
- COMPLETELY DISINFECT THE PIPING AND SYSTEM COMPONENTS WITH A SOLUTION OF SODIUM HYPO CHLORITE AS DIRECTED BY LOCAL HEALTH DEPARTMENT.
- ALL APPLICABLE CODES, LAWS AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK ARE HEREBY INCORPORATED INTO AND MADE PART OF THESE SPECIFICATIONS, AND THEIR PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR WHO SHALL INFORM THE OWNER, PRIOR TO SUBMITTING A PROPOSAL, OF ANY WORK OR MATERIALS WHICH VIOLATE ANY OF THE ABOVE LAWS AND REGULATIONS. ANY WORK DONE BY THE CONTRACTOR CAUSING SUCH VIOLATIONS SHALL BE CORRECTED BY THE CONTRACTOR.
- SUPPORT NEW PIPING FROM BUILDING STRUCTURE AND OR FRAMING IN AN APPROVED MANNER. WHERE OVERHEAD CONSTRUCTION DOES NOT PERMIT FASTENING OF SUPPORTS FOR EQUIPMENT, FURNISH ADDITIONAL FRAMING.
- INSTALL WORK SO AS TO BE READILY ACCESSIBLE FOR OPERATION, MAINTENANCE AND REPAIR. MINOR DEVIATIONS FROM DRAWINGS MAY BE MADE TO ACCOMPLISH THIS, BUT CHANGES WHICH INVOLVE EXTRA COST SHALL NOT BE MADE WITHOUT APPROVAL.
- REMOVAL AND RELOCATION OF CERTAIN EXISTING WORK WILL BE NECESSARY FOR THE PERFORMANCE OF THE GENERAL WORK. ALL EXISTING CONDITIONS CANNOT BE COMPLETELY DETAILED ON THE DRAWINGS. THE CONTRACTOR SHALL SURVEY THE SITE AND INCLUDE ALL CHANGES IN MAKING UP THE WORK PROPOSAL.
- SEAL ALL OPENINGS AROUND PIPES THROUGH PARTITIONS AND WALLS WITH APPROVED FIRE-STOPPING MATERIAL MEETING ASTM E814 AND NFPA-101.
- PROVIDE ALL NECESSARY FLASHING AND COUNTER-FLASHING TO MAINTAIN THE WATERPROOFING INTEGRITY OF THIS BUILDING AS REQUIRED BY THE INSTALLATION OR REMOVAL OF PIPES, DUCTS, CONDUIT AND EQUIPMENT.
- ALL EXISTING MATERIAL AND EQUIPMENT REMOVED UNDER THIS CONTRACT SHALL BE REMOVED FROM THE SITE OR RETURNED TO THE BUILDING OWNER AT THE OWNER'S DISCRETION.
- ACCESS TILE IDENTIFICATION: PROVIDE BUTTONS, TABS AND MARKERS TO IDENTIFY LOCATION OF CONCEALED VALVES AND EQUIPMENT. ALL MATERIAL AND EQUIPMENT TO BE NEW UNLESS OTHERWISE NOTED.
- SUBMISSION OF A PROPOSAL SHALL BE CONSTRUED AS EVIDENCE THAT A CAREFUL EXAMINATION OF THE PORTIONS OF THE EXISTING BUILDING, EQUIPMENT, ETC., WHICH AFFECT THIS WORK, AND THE EXISTING CONDITIONS AND DIFFICULTIES THAT WILL AFFECT THE EXECUTION OF THE WORK. LATER CLAIMS SHALL NOT BE MADE FOR LABOR, EQUIPMENT, OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED, WHICH COULD HAVE BEEN FORESEEN DURING SUCH AN EXAMINATION.
- PLUG OR CAP ALL PIPING. DO NOT LEAVE PIPING OPEN ENDED.
- THE CONTRACTOR SHALL OBTAIN AND PAY ALL FEES RELATED TO PERMITTING, INSPECTIONS, ETC.
- CONTRACTOR SHALL COORDINATE AND PLUMBING OR PIPING SYSTEM SHUTDOWN WITH THE OWNER 48 HOURS IN ADVANCE.
- THE BACKFLOW PREVENTION DEVICE SHALL BE INSTALLED PER LOCAL CODE AND PER AUTHORITY HAVING JURISDICTION REQUIREMENTS.
- ALL (VTR'S) VENT THRU ROOF PENETRATIONS INDICATED ON PLANS ARE PRELIMINARY. FINAL LOCATIONS SHALL BE COORDINATED WITH ALL TRADES. ALL VTR'S SHALL BE A MINIMUM OF 10'-0" FROM ALL FRESH AIR INTAKE OPENINGS.
- THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS PRIOR TO PROCEEDING WITH ANY WORK. WHERE DISCREPANCIES OCCUR BETWEEN THESE DOCUMENTS AND EXISTING CONDITIONS, THE DISCREPANCY SHALL BE REPORTED TO THE OWNER AND/OR ENGINEER FOR EXPEDITING AND RESOLVE.
- CLEAN THE JOB SITE DAILY AND REMOVE FROM THE PREMISES ANY DIRT AND DEBRIS CAUSED BY THE PERFORMANCE OF THE WORK INCLUDED IN THIS CONTRACT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFEKEEPING OF HIS OWN PROPERTY ON THE JOB SITE. OWNER ASSUMES NO RESPONSIBILITY FOR PROTECTION OF PROPERTIES AGAINST FIRE, THEFT AND ENVIRONMENTAL CONDITIONS.
- PRIOR TO STARTING CONSTRUCTION, DETERMINE EXACT INVERT ELEVATION, SIZE, DEPTH AND LOCATION OF EXISTING UTILITIES WHERE CONNECTIONS ARE TO BE MADE OR INTERSECTIONS OCCUR. NOTIFY ARCHITECT OR ENGINEER OF ANY DISCREPANCY BETWEEN DRAWINGS AND ACTUAL FIELD CONDITIONS. WORK BACK TOWARD BUILDING FROM UTILITY CONNECTION FOR ALL PIPING SYSTEMS.
- INSTALL ALL FROST PROOF HYDRANTS 30 INCHES ABOVE FINISHED GRADE.
- INSTALL ALL SHOCK ABSORBERS IN ACCORDANCE WITH THE LATEST PLUMBING AND DRAINAGE INSTITUTE STANDARDS FOR WATER HAMMER ARRESTORS.
- LOCATE ACCESS PANELS IN NON-ACCESSIBLE CEILINGS AND WALLS FOR ALL VALVES, SHOCK ABSORBERS, CLEANOUTS AND ALL OTHER ITEMS THAT REQUIRE ACCESS TO PROPERLY MAINTAIN OR SERVICE THE BUILDING REFER TO SPECIFICATIONS.
- PROVIDE CLEANOUTS AT THE BASE OF ALL SANITARY DRAINAGE, PROCESS WASTE, AND RAIN WATER CONDUCTORS.

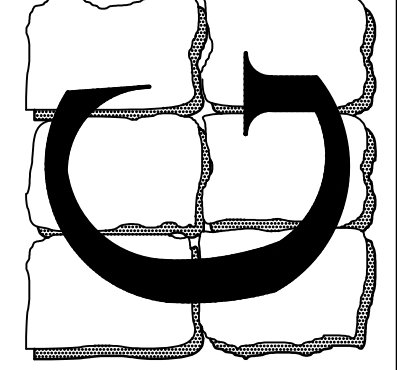
PLUMBING/PIPING SYMBOLS



GENERAL NOTES - MECHANICAL - WORKMANSHIP / COORDINATION

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| <p>GN-1 ALL WORK SHALL BE PERFORMED IN A CLEAN AND WORKMANLIKE MANNER. CARE SHALL BE EXERCISED TO MINIMIZE ANY INCONVENIENCE OR DISTURBANCE TO OTHER AREAS OF THE BUILDING WHICH ARE TO REMAIN IN OPERATION. ISOLATE WORK AREAS BY MEANS OF TEMPORARY PARTITIONS AND/OR TARPS TO DEEP DUST AND DIRT WITHIN THE CONSTRUCTION AREA.</p> <p>GN-2 NO PIPING, EQUIPMENT, ETC. SHALL BE REMOVED, DISCONNECTED OR SHUT DOWN WITHOUT PRIOR REVIEW WITH THE OWNER AND/OR ENGINEER TO CONFIRM THAT AREAS TO REMAIN IN OPERATION WILL NOT BE AFFECTED. IF ANY AREAS NOT WITHIN THE SCOPE OF WORK ARE AFFECTED BY ANY SHUTDOWN, REMOVAL OR DISCONNECTION, SUFFICIENT ADVANCE NOTICE MUST BE GIVEN TO THE OWNER INDICATING WHICH AREAS WILL BE AFFECTED, WHEN THE PROPOSED SHUTDOWN WILL OCCUR, AND FOR HOW LONG A PERIOD OF TIME.</p> <p>GN-3 ALL ITEMS REMOVED SHALL BECOME PROPERTY OF THE OWNER AND SHALL BE DISPOSED OF AS PER THE OWNER'S INSTRUCTIONS, UNLESS INDICATED OTHERWISE. ALL ITEMS WHICH ARE NOT TO BE STORED ON SITE BY OWNERS SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR.</p> <p>GN-4 THIS CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS PRIOR TO PROCEEDING WITH ANY WORK. WHERE DISCREPANCIES OCCUR BETWEEN THESE DOCUMENTS AND EXISTING CONDITIONS, THE DISCREPANCY SHALL BE REPORTED TO THE OWNER AND/OR ENGINEER FOR EXPEDITING AND RESOLVE.</p> <p>GN-5 ALL SHUT DOWNS OF EXISTING SYSTEMS SHALL BE SCHEDULED AND APPROVED BY THE OWNER PRIOR TO COMMENCING WITH WORK.</p> <p>GN-6 CLEAN THE JOB SITE DAILY AND REMOVE FROM THE PREMISES ANY DIRT AND DEBRIS CAUSED BY THE PERFORMANCE OF THE WORK INCLUDED IN THIS CONTRACT.</p> | <p>GN-7 USE OF THE OWNER'S ELEVATORS AND BUILDING CORRIDORS FOR HANDLING OF THE OWNER AND REMOVED EQUIPMENT AND MATERIALS SHALL BE AT THE DIRECTION OF THE OWNER AND SHALL BE COORDINATED WITH HIS OPERATIONS.</p> <p>GN-8 THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFEKEEPING OF HIS OWN PROPERTY ON THE JOB SITE. OWNER ASSUMES NO RESPONSIBILITY FOR PROTECTION OF PROPERTIES AGAINST FIRE, THEFT AND ENVIRONMENTAL CONDITIONS.</p> <p>GN-9 SUCCESSFULLY PRESSURE TEST ALL PIPING SYSTEMS. TEST SHALL BE PERFORMED AT NORMAL SYSTEM OPERATING PRESSURES. REPAIR AND RETEST AS REQUIRED UNTIL SYSTEMS PROVE TIGHT.</p> <p>GN-10 EXISTING MATERIALS THAT ARE REMOVED SHALL NOT BE REUSED IN NEW SYSTEMS, EXCEPT WHERE INDICATED AS BEING RELOCATED.</p> <p>GN-11 PROVIDE ALL NECESSARY TEMPORARY OR PERMANENT CAPS OR PLUGS FOR PIPING. DO NOT LEAVE PIPING OPEN ENDED.</p> <p>GN-12 WHERE USED, THE TERM "PROVIDE" SHALL MEAN "FURNISH AND INSTALL".</p> <p>GN-13 THIS CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL OTHER TRADES PRIOR TO FABRICATION, PURCHASE AND/OR INSTALLATION OF ALL WORK.</p> <p>GN-14 MECHANICAL CONTRACTOR SHALL COORDINATE ELECTRICAL REQUIREMENT OF ANY EQUIPMENT WITH G.C. AND ELECTRICAL CONTRACTOR PRIOR TO ROUGH-IN.</p> <p>GN-15 THE CONTRACTOR SHALL REFER TO PROJECT SPECIFICATIONS FOR ANY ADDITIONAL PROJECT REQUIREMENTS</p> |
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MECHANICAL / PLUMBING COVER SHEET

Professional Certification
 I certify that these documents were prepared or approved by me, and that I am a duly licensed engineer under the laws of the State of Maryland.
 License Number: 14401
 Expiration Date: 4/21/2025

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REV.	DATE	COMMENT
1	3/8/23	BID SET

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MP-0.0
 2 OF 6 SHEETS
 DATE: MARCH 8, 2023

GENERAL ELECTRICAL NOTES

- MATERIALS, EQUIPMENT, AND SYSTEMS SHALL MEET ALL PERTINENT REQUIREMENTS OF THE AMERICAN SOCIETY FOR TESTING MATERIALS (ASTM), 2017-NATIONAL-ELECTRIC-CODE (N.E.C.), THE UNDERWRITERS LABORATORY (UL), THE NATIONAL ELECTRIC MANUFACTURER'S ASSOCIATION (NEMA), NATIONAL FIRE PROTECTION ASSOCIATION (NFPA), AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI), AND OTHER NATIONALLY RECOGNIZED AGENCIES AS WELL AS APPLICABLE LOCAL CODES.
- ANYTHING DRAWN OR SPECIFIED SHALL NOT BE CONSTRUED TO CONFLICT WITH ANY LOCAL, MUNICIPAL OR STATE LAW, REGULATION OR ORDINANCE WHICH GOVERNS THE INSTALLATION OF ANY ELECTRICAL OR RELATED WORK. ITEMS SHALL NOT BE INSTALLED IN CONFLICT WITH THE N.E.C. RESOLVE ANY AND ALL CONFLICTS BEFORE INSTALLATION AT NO ADDITIONAL EXPENSE TO THE OWNER.
- ALL ELECTRICAL EQUIPMENT SHALL BE LISTED AND LABELED FOR THE QUALIFIED USE. VERIFY CIRCUIT BREAKER INTERRUPT CAPACITY NEEDED FOR EACH PANEL WITH LOCAL UTILITY. FOR BID PURPOSES, ASSUME 65,000 AIC FOR SERVICE ENTRANCE EQUIPMENT, AND 25,000 AIC ELSEWHERE. BALANCE THE POWER EQUALLY (+/- 10%) ON ALL PHASES.
- THE SYSTEMS SHOWN ON DRAWINGS SHALL BE PROVIDED TO SERVE ALL FIXTURES, EQUIPMENT, AND AREAS WITHIN THE CONTRACT LIMIT LINES AS SET FORTH BY THE ARCHITECTURAL SOLUTION FOR THE PROJECT. THE BIDDING AND CONTRACT REQUIREMENTS, GENERAL REQUIREMENTS, AND GENERAL PROVISIONS SHALL APPLY TO THIS SECTION. SYSTEMS SHALL INCLUDE ALL EQUIPMENT, APPURTENANCES, SAFETY DEVICES, AND CONTROLS NECESSARY FOR THE INTENDED SERVICE.
- ALL PERMITS AND FEES REQUIRED FOR THE WORK SHALL BE SECURED AND PAID FOR BY THE ELECTRICAL CONTRACTOR AND INCLUDED IN BID PRICE.
- WHERE JOB CONDITIONS REQUIRE CHANGES FROM THE CONTRACT DOCUMENTS THAT DO NOT CHANGE THE SCOPE OF INSTALLATION OR NATURE OF WORK REQUIRED, THE CONTRACTOR SHALL MAKE SUCH CHANGES WITHOUT ADDITIONAL COST TO THE OWNER. NO OTHER CHANGES MAY BE MADE WITHOUT WRITTEN PERMISSION OF THE OWNER.
- BIDDERS SHALL BE LICENSED CONTRACTORS IN ACCORDANCE WITH LOCAL AND STATE LAWS.
- ALL EQUIPMENT SHALL BE NEW AND UNUSED. ALL EQUIPMENT SHALL BE INSTALLED IN STRICT CONFORMANCE TO MANUFACTURER'S RECOMMENDATIONS, EXCEPT WHERE THESE SPECIFICATIONS REQUIRE A HIGHER QUALITY INSTALLATION THAN RECOMMENDED BY THE MANUFACTURER.
- ALL INSTALLED SYSTEMS, DEVICES AND RELATED ITEMS SHALL BE TESTED IN PLACE ON SITE. REPLACE ANY AND ALL CONTRACTOR-SUPPLIED DEFECTIVE DEVICES, ITEMS OR SYSTEMS AT CONTRACTOR'S OWN EXPENSE BEFORE COMPLETION OF THE PROJECT.
- CONTRACTOR SHALL GUARANTEE ALL WORK FOR WHICH MATERIALS ARE FURNISHED, FABRICATED OR FIELD ERRECTED, ALL FACTORY ASSEMBLED EQUIPMENT FOR WHICH NO SPECIFIC MANUFACTURER'S GUARANTEE IS FURNISHED, AND ALL WORK IN CONNECTION WITH INSTALLING MANUFACTURER'S GUARANTEED EQUIPMENT. THIS CONTRACTOR'S GUARANTEE SHALL EXIST FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF FINAL OWNER ACCEPTANCE OF THE WORK AND SHALL APPLY TO DEFECTS IN MATERIAL AND TO DEFECTIVE WORKMANSHIP OF ANY KIND.
- VERIFY FINAL LOCATIONS FOR ROUGH-INS WITH FIELD MEASUREMENTS AND WITH THE REQUIREMENTS OF THE ACTUAL EQUIPMENT TO BE CONNECTED. VERIFY ALL DIMENSIONS BY FIELD MEASUREMENTS.
- SEQUENCE, COORDINATE, AND INTEGRATE INSTALLATIONS OF ELECTRICAL MATERIALS AND EQUIPMENT FOR EFFICIENT FLOW OF THE WORK. GIVE PARTICULAR ATTENTION TO LARGE EQUIPMENT REQUIRING POSITIONING PRIOR TO CLOSING-IN THE BUILDING. COORDINATE THE CUTTING AND PATCHING OF BUILDING COMPONENTS TO ACCOMMODATE INSTALLATION OF ELECTRICAL EQUIPMENT AND MATERIALS.
- COORDINATE THE INSTALLATION OF ELECTRICAL MATERIALS AND EQUIPMENT ABOVE CEILINGS WITH SUSPENSION SYSTEM, MECHANICAL EQUIPMENT AND SYSTEMS, AND STRUCTURAL COMPONENTS. COORDINATE ELECTRICAL EQUIPMENT AND MATERIALS INSTALLATION WITH OTHER BUILDING COMPONENTS.
- WHERE MOUNTING HEIGHTS ARE NOT DETAILED OR DIMENSIONED, INSTALL ELECTRICAL SERVICES AND OVERHEAD EQUIPMENT TO PROVIDE THE MAXIMUM HEADROOM POSSIBLE. INSTALL ELECTRICAL EQUIPMENT TO FACILITATE MAINTENANCE AND REPAIR OR REPLACEMENT OF EQUIPMENT COMPONENTS. AS MUCH AS PRACTICAL, CONNECT EQUIPMENT FOR EASE OF DISCONNECTING, WITH MINIMUM OF INTERFERENCE WITH OTHER INSTALLATIONS.
- COORDINATE CONNECTION OF ELECTRICAL SYSTEMS WITH EXTERIOR UNDERGROUND AND OVERHEAD UTILITIES AND SERVICES. COMPLY WITH REQUIREMENTS OF GOVERNING REGULATIONS, FRANCHISED SERVICE COMPANIES, AND CONTROLLING AGENCIES. PROVIDE REQUIRED CONNECTION FOR EACH SERVICE.
- DO NOT ENDANGER OR DAMAGE INSTALLED WORK THROUGH PROCEDURES AND PROCESSES OF CUTTING AND PATCHING. ARRANGE FOR REPAIRS REQUIRED TO RESTORE OTHER WORK, BECAUSE OF DAMAGE CAUSED AS A RESULT OF ELECTRICAL INSTALLATIONS.
- BIDDERS SHALL THOROUGHLY ACQUAINT THEMSELVES WITH THE CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED. THEY SHALL EXAMINE ALL SERVICES, EQUIPMENT, SURFACES, ETC., WHICH THIS WORK IS IN ANY WAY DEPENDENT UPON, AND BRING ANY DISCREPANCIES DETERMINED OR OMISSIONS FOUND IN THE DRAWINGS TO THE OWNER'S ATTENTION BEFORE SUBMITTING BID.
- VERIFY MECHANICAL EQUIPMENT SWITCH AND CONNECTION REQUIREMENTS, ITEM BY ITEM, WITH THE MECHANICAL CONTRACTOR, BEFORE WIRING EQUIPMENT. RESOLVE ALL DISCREPANCIES WITHOUT FURTHER COST TO OWNER.
- ALL WIRING SHALL BE IN MC CABLE OR CONDUIT, 1/2" EMT MINIMUM WITH SET SCREW FITTINGS SUPPORTED AT 10'-0" INTERVALS.
- ALL WIRING SHALL BE THIN/THWN COPPER (NO. 12 AWG MINIMUM) UNLESS OTHERWISE NOTED. WIRE AND CONDUIT SIZES ARE SHOWN ON THE PANEL SCHEDULE.
- ALL LIGHTS SHALL BE SUPPORTED AND SECURED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. THE SUPPORT SHALL BE FROM A BUILDING SUPPORT MEMBER AND NOT THE FIRE PROTECTION SYSTEM OR OTHER PIPES.
- ALL PANELS, CONTROL DEVICES AND MISCELLANEOUS ELECTRICAL APPARATUS SHALL BE CLEARLY MARKED FOR EASY IDENTIFICATION AND SAFETY. USE BLACK PLASTIC OR BAKELITE NAME PLATE ENGRAVED WITH WHITE LETTERS 1/4" HIGH. PUNCHED TAPE IS NOT ACCEPTABLE.
- PANELS SHALL BE PROVIDED WITH A TYPEWRITTEN DIRECTORY AFFIXED TO INSIDE OF PANEL DOOR WITH A CLEAR PLASTIC SLEEVE.
- THE ELECTRICAL DRAWINGS ARE DIAGRAMMATIC AND ARE FOR CIRCUIT ALLOCATION ONLY. DO NOT SCALE DRAWINGS.
- ELECTRICAL CONTRACTOR SHALL FURNISH RECORD SET OF DRAWINGS WITH ANY DEVIATIONS MARKED IN RED INK.

ELECTRICAL NOTES:

- SCOPE OF WORK:**
 - CONTRACTOR SHALL VISIT SITE PRIOR TO BIDDING. BIDS SHALL SERVE AS EVIDENCE OF KNOWLEDGE OF EXISTING CONDITIONS TO THE EXTENT POSSIBLE, CONCEALED CONDITIONS EXCLUDED. FIELD VERIFY ALL ELECTRICAL EQUIPMENT.
 - FURNISH ALL LABOR, MATERIALS, EQUIPMENT AND TOOLS TO PERFORM ELECTRICAL WORK SHOWN, NOTED OR SCHEDULED FOR A COMPLETE AND FINISHED INSTALLATION.
 - MATERIALS, PRODUCTS AND EQUIPMENT, INCLUDING ALL COMPONENTS THEREOF, SHALL BE NEW AND SUCH AS APPEAR ON THE UNDERWRITERS LABORATORIES LIST OF APPROVED ITEMS AND SHALL BE SIZED IN CONFORMITY WITH REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE AND OTHER APPLICABLE CODES, WHICHEVER ARE MORE STRINGENT.
 - ALL WORK TO BE IN ACCORDANCE WITH NATIONAL ELECTRIC CODE (2017).
 - ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN STRICT COMPLIANCE WITH THE MANUFACTURER'S INSTALLATION PROCEDURES.
 - THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL LABOR AND MATERIALS NECESSARY FOR A COMPLETE ELECTRICAL SYSTEM, WHETHER SPECIFIED OR IMPLIED.
- PERMITS:**
 - SECURE AND PAY FOR ALL REQUIRED PERMITS AND INSPECTION CERTIFICATES.
- SHOP DRAWINGS:**
 - SUBMIT MATERIAL LIST AND SHOP DRAWINGS FOR MAJOR EQUIPMENT TO THE ARCHITECT FOR APPROVAL. SUBMITTALS SHALL BE IN ACCORDANCE WITH GENERAL CONDITIONS AND SHALL BEAR STAMP OF THE GENERAL CONTRACTOR SHOWING THAT HE HAS REVIEWED AND APPROVED THEM. LACK OF SUCH CONTRACTOR'S APPROVAL WILL BE CAUSE FOR REJECTION WITHOUT REVIEW BY THE ARCHITECT OR ENGINEER.
 - SUBMIT ELECTRONIC COPIES.
- CONDUITS:**
 - THE TYPE OF CONDUIT SHALL BE AS FOLLOWS FOR ALL FEEDERS AND DISTRIBUTION CIRCUITS, UNLESS OTHERWISE SPECIFIED:

APPLICATION	TYPE OF CONDUIT
BURIED IN CONCRETE	PVC - SCHEDULE 40
IN MASONRY	EMT OR IMC
EXPOSED ABOVE GRADE	ARC
UNDERGROUND	PVC - SCHEDULE 40
SUPPLY TO DISTRIBUTION PANELS	EMT
INTERIOR BRANCH CIRCUITS (CONCEALED)	MC
INTERIOR BRANCH CIRCUITS (EXPOSED)	EMT
- WIRE:**
 - WIRE SHALL BE SINGLE CONDUCTOR COPPER WITH 600 VOLT INSULATION. #10 AND SMALLER SHALL BE SOLID. #8 AND LARGER SHALL BE STRANDED. MINIMUM WIRE SIZE SHALL BE #12 EXCEPT #14 MAY BE USED FOR CONTROL. ALL WIRE AND CABLE SHALL BE NEW AND SHALL BE BROUGHT TO THE SITE IN UNBROKEN PACKAGES. ALL WIRING OF ANY TYPE SHALL BE IN CONDUIT.
 - GENERAL WIRING SHALL BE THW OR THHN ALUMINUM CONDUCTORS ARE NOT PERMITTED.
 - WIRE CONNECTORS SHALL BE EQUAL BY SCOTCHLOCK FOR #6 AND SMALLER AND T & B 'LOCK-LITE' FOR #8 AND LARGER.
- LIGHTING:**
 - LIGHTING FIXTURES AND LAMPS (UNLESS NOTED OTHERWISE) SHALL BE FURNISHED BY THE ELECTRICAL CONTRACTOR. ELECTRICAL CONTRACTOR SHALL INSTALL ALL FIXTURES AND LAMPS.
- WIRE DEVICES:**
 - RECEPTACLES SHALL BE 20 AMP, 3-WIRE GROUNDING TYPE EQUAL TO HUBBELL 5362 (MOUNTING @ 18" A.F.F.).
 - SWITCHES SHALL BE STANDARD GRADE RATED 20 AMP AT 120 VOLT (MOUNTING @ 48" A.F.F.).
 - SPECIAL DEVICES SHALL BE A SPECIFICATION GRADE.
- SAFETY SWITCHES:**

- PROVIDE SAFETY AND DISCONNECT SWITCHES, FUSED OR NONFUSED, AS CALLED FOR ON DRAWINGS AND AS REQUIRED BY CODE. SWITCHES SHALL BE HEAVY DUTY, LOAD AND HORSEPOWER RATED AS MANUFACTURED BY SQUARE D, GUILD, ITE OR EQUAL.
 - MANUAL MOTOR STARTERS WITH OVERLOAD PROTECTION MAY BE USED FOR FRACTIONAL HORSEPOWER MOTORS. SINGLE PHASE STARTERS SHALL BE SQUARE D OR EQUAL. THREE PHASE STARTERS SHALL BE PROVIDED WITH OVERLOAD DEVICES IN EACH PHASE. MAGNETIC MOTOR STARTERS SHALL BE USED FOR INTEGRAL HORSEPOWER MOTORS, COMBINATION STARTERS, WHEN USED, SHALL CONTAIN FUSIBLE SWITCHES.
- BOXES:**
 - OUTLET BOXES AND COVERS SHALL BE GALVANIZED, ONE-PIECE PRESSED STEEL KNOCKOUT.
 - JUNCTION, PULL BOXES AND COVERS SHALL BE GALVANIZED STEEL, CODE GAUGE SIZE.
- SERVICES:**
 - PROVIDE ELECTRICAL SERVICE AS SHOWN ON THE DRAWINGS. ALL WORK NOT SPECIFICALLY NOTED AS BEING BY THE OWNER OR POWER COMPANY SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR. CLOSELY CO-ORDINATE ENTIRE INSTALLATION WITH OWNER AND POWER COMPANY AS REQUIRED.

- INSTALLATION:**
 - ALL ELECTRICAL WORK SHALL BE INSTALLED SO AS TO BE READILY ACCESSIBLE FOR OPERATING, SERVICING, MAINTAINING AND REPAIRING. HANGERS SHALL INCLUDE ALL MISCELLANEOUS STEEL SUCH AS CHANNELS, RODS, ETC., NECESSARY FOR THE INSTALLATION OF WORK AND SHALL BE FASTENED TO STEEL, CONCRETE OR WOOD, BUT NOT TO PIPING. ALL CONDUIT SHALL BE CONCEALED WHEREVER POSSIBLE. EXPOSED CONDUIT SHALL BE IN STRAIGHT LINES PARALLEL WITH OR AT RIGHT ANGLES TO COLUMN LINES OR BEAMS AND SEPARATED AT LEAST 3 INCHES FROM WATER LINES WHEREVER THEY RUN ALONG SIDE OR ACROSS SUCH LINES. CONDUCTORS SHALL BE IN CONDUIT, DUCTS OR APPROVED RACEWAYS.
 - THE CONTRACTOR SHALL DO ALL CUTTING, CHASING OR CHANNELING AND PATCHING REQUIRED FOR ANY WORK UNDER THIS DIVISION. ANY CUTTING SHALL HAVE PRIOR APPROVAL OF OWNER. SLEEVES SHALL EXTEND AT LEAST TWO (2) INCHES ABOVE FINISHED FLOOR AND ALL SLEEVES, OPENINGS, ETC., THROUGH FIRE RATED WALLS AND FLOORS SHALL BE SEALED AFTER CONDUIT INSTALLATION TO REMAIN THEIR FIRE RATING.
 - THE FOLLOWING EQUIPMENT SHALL BE IDENTIFIED WITH ENGRAVED BAKELITE NAMEPLATES AS TO NAME AND/OR FUNCTION: DISTRIBUTION PANEL, LIGHTING PANELS, MOTOR STARTERS, TIME CLOCKS, AND DISCONNECT SWITCHES.
 - THE LOCATION OF OUTLETS AND EQUIPMENT SHOWN ON THE DRAWINGS ARE APPROXIMATE AND THE ARCHITECT SHALL HAVE THE RIGHT TO RELOCATE ANY OUTLETS OR FIXTURES BEFORE THEY ARE INSTALLED WITHOUT ADDITIONAL COST.
 - ELECTRICAL CONTRACTOR SHALL RECORD ALL FIELD CHANGES IN HIS WORK AS THE JOB PROGRESSES.
- GUARANTEE:**
 - MATERIALS, EQUIPMENT AND INSTALLATION SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR FROM DATE OF ACCEPTANCE. DEFECTS WHICH APPEAR DURING THAT PERIOD SHALL BE CORRECTED AT THIS CONTRACTOR'S EXPENSE.
 - FOR THE SAME PERIOD, THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO PREMISES CAUSED BY DEFECTS IN WORKMANSHIP OR IN THE WORK OR EQUIPMENT FURNISHED AND/OR INSTALLED BY HIM.
- FINALLY:**
 - IT IS THE INTENT THAT THE FOREGOING WORK SHALL BE COMPLETE IN EVERY RESPECT AND THAT ANY MATERIAL OR WORK NOT SPECIFICALLY MENTIONED OR SHOWN ON THE DRAWINGS, BUT NECESSARY TO FULLY COMPLETE THE WORK SHALL BE FURNISHED.

ELECTRICAL POWER SYMBOLS

	POWER WIRING LEG
	HOME RUN TO PANEL/CKT. NUMBER OF TICK MARKS = NUMBER OF CONDUCTORS EXCLUDING GROUND. PROVIDE 'GREEN' GROUND WIRE FOR ALL CIRCUITS. NUMBER OF ARROW HEADS = NUMBER OF HOME RUNS.
	DUPLEX GROUNDED RECEPTACLE
	DUPLEX RECEPTACLE WITH GROUND FAULT INTERRUPTER
	QUAD DUPLEX GROUNDED RECEPTACLE
	SPECIAL PURPOSE OUTLET, CONFIRM OUTLET CONFIGURATION (TYPE) WITH EQUIPMENT TO BE SERVED PRIOR TO INSTALLATION
	DISCONNECT SWITCH
	JUNCTION BOX
	EXHAUST FAN
	MOTOR OR MISCELLANEOUS LOAD
	TELEPHONE/DATA/TV BOX
	CEILING MOUNTED MOTION SENSOR
	WALL MOUNTED MOTION SENSOR
	RADIO POWER SAVER WIRELESS DAYLIGHT SENSOR
	LUTRON POWPAK DIMMING MODULE WITH 0-10V DIMMING
	SINGLE POLE SWITCH
	DOUBLE SWITCH
	THREE WAY SWITCH
	FOUR WAY SWITCH
	DIMMER SWITCH
	KEYED SWITCH
	JAMB SWITCH
	TIMER SWITCH
	MOTION SWITCH
	DIMMING MOTION SWITCH
	TOUCHLESS WAVE LIGHT SWITCH
	LED EMERGENCY EXIT LIGHT
	LED COMBINATION EXIT/EMERGENCY LIGHT
	LED EMERGENCY LIGHT

ELECTRICAL DRAWING LIST

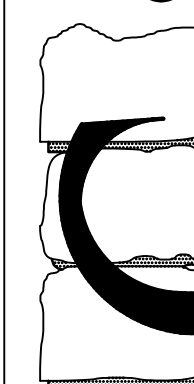
E-0.0 ELECTRICAL COVER SHEET
MPE-1.0 MECHANICAL/ PLUMBING/ ELECTRICAL
GENERAL ARRANGEMENT PLAN

NAME PLATES

'EQUIPMENT NO.'
FED FROM
'PANEL NO.'

21-083

L.S. GRIM, INC.
Consulting Engineers



MARTIN LUTHER KING JR.
COMMUNITY CENTER
181 WEST NORTH AVENUE
HAGERSTOWN, MD 21740

ELECTRICAL COVER SHEET

Professional Certification

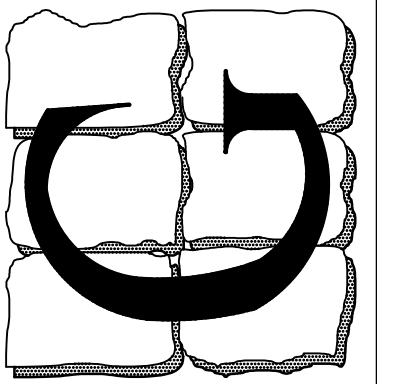
I certify that these documents were prepared or approved by me, and that I am a duly licensed engineer under the laws of the State of Maryland. License Number: 14401 Expiration Date: 4/21/2025

LESLIE SCOTT GRIM, P.E.
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DC. PROF. ENG. NO. PE001201
DE. PROF. ENG. NO. 19513
GA. PROF. ENG. NO. PE032682
HI. PROF. ENG. NO. PE13043
MD. PROF. ENG. NO. 14401
NE. PROF. ENG. NO. 033364
NJ. PROF. ENG. NO. 38497
NY. PROF. ENG. NO. 075414
PA. PROF. ENG. NO. PE032636E
VA. PROF. ENG. NO. 022240
WV. PROF. ENG. NO. 10764

REV.	DATE	COMMENT
1	3/8/23	BID SET
2		
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10		

DRAWN BY: NAME

E-0.0
3 OF 6 SHEETS
DATE: MARCH 8, 2023



Professional Certification
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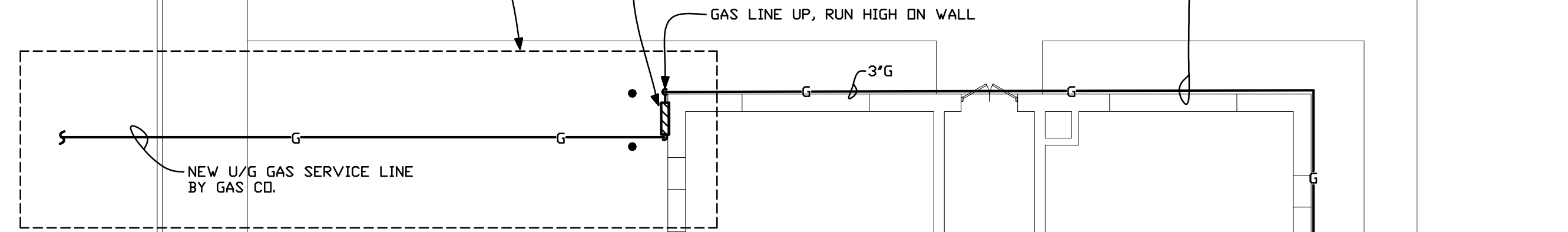
MECHANICAL PLAN GENERAL NOTES:

- 1) PAINT ALL EXPOSED GAS PIPING GRAY. INSTALL STICKERS WITH YELLOW BACKING AND BLACK LETTERING LABELED "NATURAL GAS" WITH THE FLOW DIRECTION JUST PAST THE SERVICE METER AND AT ANY FLOW SPLIT LOCATION. INSIDE THE BUILDING THE LABELS SHALL BE PLACED EVERY 5 FEET.
- 2) REFER TO SHEET 5 MPE-11 FOR MECHANICAL/PLUMBING/ELECTRICAL KEYED NOTES.

GAS STREET CONNECTION TO METER INCLUDING EXCAVATION, ROAD AND SIDEWALK REPAIRS, AND BOLLARDS WILL BE COMPLETED BY THE OWNER.

NEW GAS METER & PRV BY GAS CO. 2# SERVICE, (9 MILLION BTU).

MOUNT PIPING IN WALL @ APPROXIMATELY 11' ABOVE GRADE, ATTACH TO BRICK WALL.



PICK UP EXISTING GAS TO KITCHEN, PROVIDE PRV, 75MBH KITCHEN LOAD (1# 2# GAS UP)

SEE SHEET FOR BOILER ROOM PART PLAN

BOILER ROOM AREA OF NEW WORK

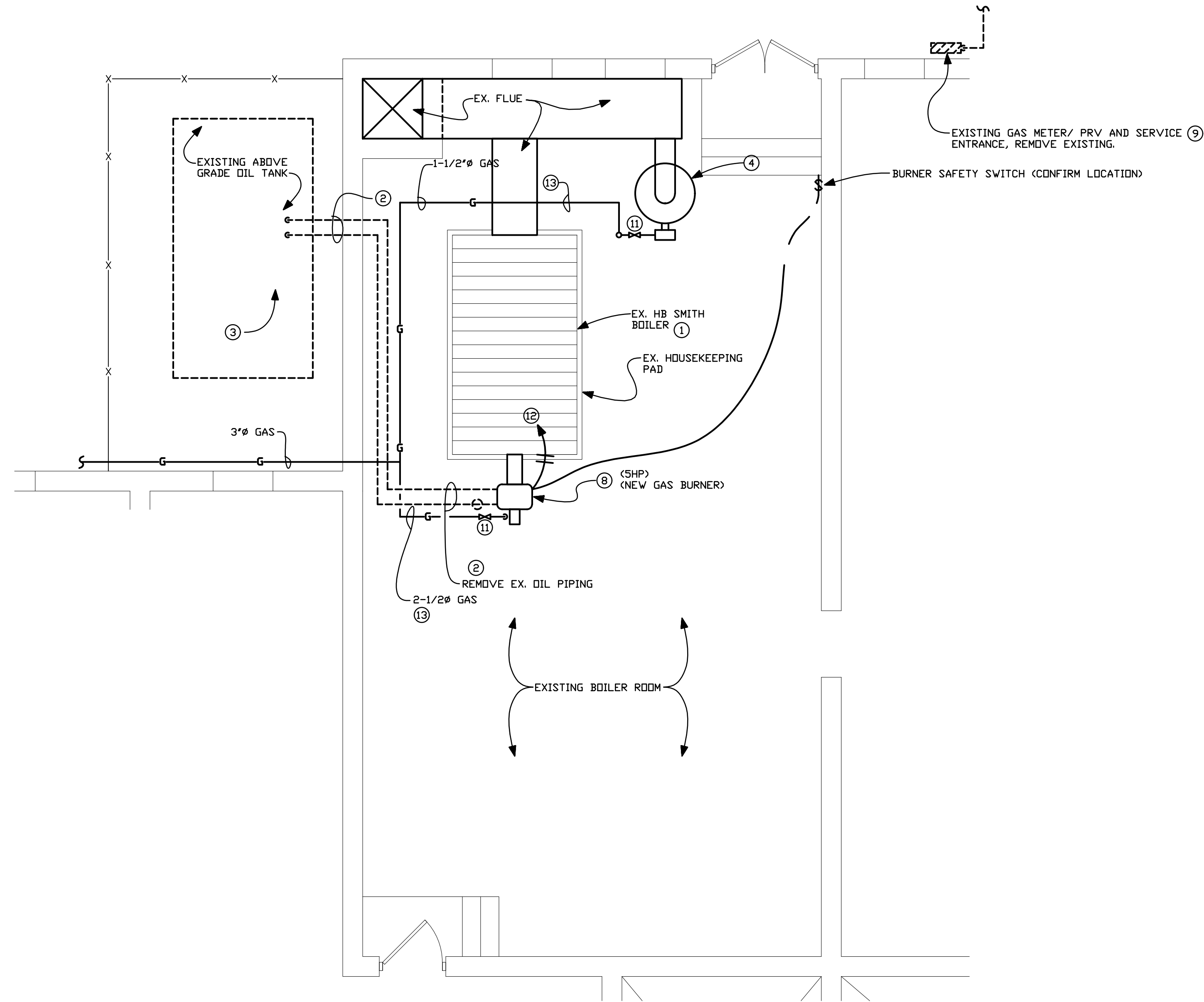
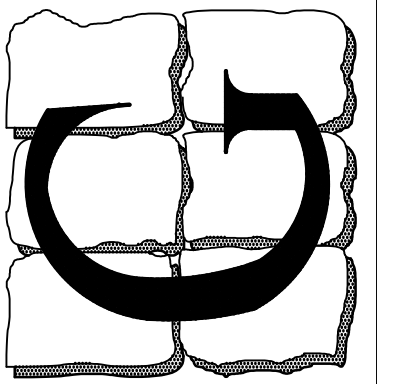
PROVIDE 1-1/2\"/>

BASEMENT LEVEL NO WORK THIS AREA

MECHANICAL/ PLUMBING/ ELECTRICAL GENERAL ARRANGEMENT PLAN
 SCALE: 3/32" = 1'-0"

REV.	DATE	COMMENT
1	3/8/23	BID SET
2		
3		
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5		

MPE-1.0
 4 OF 6 SHEETS
 DATE: MARCH 8, 2023



MECHANICAL/ PLUMBING/ ELECTRICAL KEYED NOTES:

- ① EXISTING HB SMITH BOILER, 450 MILLS BOILER 18 SECTIONS, 2,872 MBH, MD #13466H TO REMAIN, PROVIDE NEW GAS BURNER ASSEMBLY.
- ② EXISTING #2 FUEL OIL PIPING, REMOVE IN ENTIRETY BACK TO TANK.
- ③ EXISTING ABOVE GROUND OIL TANK, CONTRACTOR SHALL PUMP DOWN TANK AND TRANSFER REMOVED OIL AS DIRECTED BY WASH. CO. CONTRACTOR SHALL REMOVE AND DISPOSE OF TANK.
- ④ EXISTING HB SMITH GAS HOT WATER HEATER MODEL #BC42780, 420MBH TO REMAIN, CONTRACTOR SHALL REWORK EXISTING GAS PIPING TO NEW MAIN.
- ⑤ NEW GAS METER/ PRV AND SERVICE BY GAS CO., CONTRACTOR SHALL COORDINATE THE INSTALLATION OF THE NEW SERVICE; NEW CONNECTED LOAD, 9 MILLION BTUH.
- ⑥ CONNECT EX. GAS LINE SERVING KITCHEN IN BUILDING TO NEW SERVICES.
- ⑦ CONNECT EX. GAS LINE SERVING HWH TO NEW SERVICE.
- ⑧ REMOVE EX. OIL BURNER IN ENTIRETY, PROVIDE NEW POWER FLAME MODEL C4-G-30 FORCED DRAFT GAS BURNER RATED AT 7,469 MBH, 208V 19, FULL MODULATING OPERATION COMPLETE GAS TRAIN, UL, CS3-1 CODE, BURNER MOUNTED CENTRAL PANEL, FIREYE RB110 FLAME SAFEGUARD CENTRAL OR APPROVED EQUAL.
- ⑨ EX. GAS METER REMOVE AND CAP. SERVICE.
- ⑩ REMOVE EX. GAS LINE ON BUILDING, INSTALL NEW GAS SERVICE LINE FROM FRONT OF BUILDING.
- ⑪ PROVIDE 2# TO 7\"/>

M/E/P PLAN GENERAL NOTES:

- 1) CONTRACTOR SHALL ADJUST LAYOUT AS NECESSARY FOR EXISTING CONDITIONS.
- 2) INTEGRATE EXISTING BOILER CONTROLS TO CONTROL NEW BURNER.

MECHANICAL/ PLUMBING/ ELECTRICAL
BOILER ROOM PART PLAN

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

Professional Certification

I certify that these documents were prepared or approved by me, and that I am a duly licensed engineer under the laws of the State of Maryland
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REV.	DATE	COMMENT
1	3/8/23	BID SET

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MPE-11
 5 OF 6 SHEETS
 DATE: MARCH 8, 2023

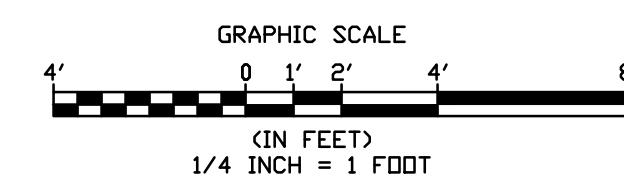




EXHIBIT #1: H.W. HEATER

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



EXHIBIT #2: H.W. BOILER

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

Power Flame
AN ASTEC INDUSTRIES COMPANY

The optional Director SCS provides PLC control for optimum boiler/burner performance

STANDARD EQUIPMENT

- Alpha System™ LED indicators (power, demand, main fuel, P5G alarm, customer selectable) & control switch
- Pressure regulators, pilot and main gas cocks
- Oil valve, nozzle assembly, manual fuel selector switch
- Air safety switch & leakage test cock
- Gas electric pilot and gas ignition transformer

ADDED FEATURES

X-Standard O-Optional NA-Not Available

	C1-GO-10 C1-GO-12 C2-GO-15	C2-GO-20A C2-GO-20B C2-GO-20C	C3-GO-25 C3-GO-25B C3-GO-25C	C4-GO-25 C4-GO-25B C4-GO-25C	C5-GO-30 C5-GO-30B C5-GO-30C	C7-GO-30 C7-GO-30B C7-GO-30C
Flame Safeguard with UV and purpurgue with interrupted pilot	X	X	A/X	A/X	A/X	A/X
On-Off diaphragm gas valve with fixed air control manual adjustment	X	NA	NA	NA	NA	NA
Low-Hi-Off motorized gas valve with automatic air control	O	X	X	X	X	X
Low-Hi-Off motorized gas valve with automatic air control	O	O	O	O	O	NA
Modulation with automatic air control	O	O	O	O	X	X
Integral 2 stage fuel unit (C1, C2 single stage)	X	X	X	X	X	NA
Remote mounted 2 stage fuel unit (single stage for C6-C8)	O	O	O	O	X	X
Dual gas and dual oil safety valves	X	X	X	X	X	X
High and Low gas pressure switches	O	O	X	X	X	X
Direct spark ignition (DSI)	O	O	O	O	O	O
Low fire oil start with automatic air control	O	X	X	X	X	X
Man/Auto switch - manual potentiometer - modulation only	X	X	X	X	X	X

Postpurgue standard on C2-GO-20B and all C3 to C8 models
Conforms to UL 268 and UL 756

5,000 MBH and below may be replaced by one (1) proof of closure valve above
6,000 MBH one (1) of the safety valves will include proof of closure feature.

MODEL CR (For low centerline applications)

MODEL C

DIMENSIONS (Inches) Standard Models.

ADD 3/8" TO "H" FOR SIZE OF OPENING IN BOILER FRONT PLATE

RATINGS & SPECIFICATIONS

Burner Model	DIMENSIONS (Inches)										CAPACITY ¹		Blower Motor H.P. (3450 RPM)	Stat. Pressure (in. WC)	Gas Pressure Required (in. WC) ²								
	A	B	8/10"	C	C(1)	D	E	F**	G	G	#2 Oil	Natural Gas				Nominal Boiler H.P.							
C1-GO-10	34 1/4	3 1/4	5 1/4	14 1/4	14 1/4	4 1/4	12 1/4	20	3 1/4	4 1/4	7 1/4	10 1/4	17 1/4	12 1/4	7 1/4	7.0	980	23.5	1 1/2	1119	5.8		
C1-GO-12	34 1/4	3 1/4	5 1/4	14 1/4	14 1/4	4 1/4	12 1/4	20	3 1/4	4 1/4	7 1/4	10 1/4	17 1/4	12 1/4	7 1/4	9.7	1,360	32.3	1 1/2	1 1/2	1119	5.3	
C2-GO-15	39 1/4	4 1/4	8 1/4	14 1/4	14 1/4	5 1/4	14	20	4	8 1/4	8 1/4	10 1/4	18 1/4	13 1/4	8 1/4	15.7	2,200	52.3	1 1/2	1 1/2	1170	5.2	
C2-GO-20A	39 1/4	4 1/4	8 1/4	14 1/4	14 1/4	5 1/4	14	20	4	8 1/4	8 1/4	10 1/4	18 1/4	13 1/4	8 1/4	17.5	2,500	60.0	1	2	70	4.8	
C2-GO-20B	39 1/4	4 1/4	8 1/4	14 1/4	14 1/4	5 1/4	14	20	4	8 1/4	8 1/4	10 1/4	18 1/4	13 1/4	8 1/4	22.0	3,800	73.5	1 1/2	2	70	4.8	
C3-GO-25	44 1/4	5 1/4	7 1/4	18 1/4	18 1/4	6 1/4	18	22 1/4	4 1/4	8 1/4	10 1/4	11 1/4	19 1/4	14 1/4	22 1/4	10	30.0	4,200	100.0	2	2	105	7.8
C3-GO-25B	44 1/4	5 1/4	7 1/4	18 1/4	18 1/4	6 1/4	18	22 1/4	4 1/4	8 1/4	10 1/4	11 1/4	19 1/4	14 1/4	22 1/4	10	37.5	5,250	125.0	3	2 1/2	135	7.2
C4-GO-25	50 1/4	8 1/4	7 1/4	18 1/4	18 1/4	7 1/4	18 1/4	28	6	9	12 1/4	14 1/4	20 1/4	19 1/4	12	45.0	6,300	150.0	5	2 1/2	135	8.0	
C4-GO-30	50 1/4	8 1/4	7 1/4	18 1/4	18 1/4	7 1/4	18 1/4	28	6	9	12 1/4	14 1/4	20 1/4	19 1/4	12	56.0	7,840	190.0	5	3	135	12.1	
C5-GO-30(B)	50 1/4	8 1/4	7 1/4	18 1/4	18 1/4	7 1/4	18 1/4	28 1/2	6	9	12 1/4	14 1/4	20 1/4	19 1/4	12	75.0	10,500	250.0	7 1/2	3	250	18.5	
C6-GO-30	49 1/4	8 1/4	7 1/4	18 1/4	18 1/4	7 1/4	19 1/4	28 1/2	5	11 1/4	13 1/4	14 1/4	20 1/4	19	13 1/4	101.5	14,215	340.0	10	3	250	26.5	
C7-GO-30	51 1/4	8 1/4	10 1/4	24 1/4	22 1/4	8 1/4	18	21 1/4	4 1/4	11 1/4	15 1/4	13 1/4	9 1/4	26 1/4	19	13 1/4	121.4	17,000	404.0	15	3	235	40.0
C7-GO-30B	51 1/4	8 1/4	10 1/4	24 1/4	22 1/4	8 1/4	18	21 1/4	4 1/4	11 1/4	15 1/4	13 1/4	9 1/4	26 1/4	19	13 1/4	126.4	17,700	421.0	20	3	235	45.0
C8-GO-30	58 1/4	8 1/4	10 1/4	27 1/4	27 1/4	8 1/4	20	24 1/4	3 1/4	9 1/4	15 1/4	12 1/4	9 1/4	24 1/4	17 1/4	136.4	19,100	454.0	15	3	235	50.0	

NOTES:

- Capacities listed are based on 0.20" W.C. positive pressure, except for C5-GO-30B, which is rated for 250 BHP at +1.2" W.C. Refer to capacity curves for derates based upon combustion chamber pressure.
- At inlet to main manual shutoff cock to obtain PFF certified ratings with standard U.L. gas train. Optional gas trains and combustion heads available for lower pressures.

1. Remote Pump Set with 300 (200) or 200/60/2400 motor, 3450 RPM, 3/4 HP - C4; 1750 RPM, 1 1/2 HP - C5; C6; 1750 RPM, 1 1/2 HP - C7, C8.
†† For On-Off and modulating firing modes only. Refer to C Manual for capacities on other models.

CALL US: 620-421-0480
VISIT: WWW.POWERFLAME.COM
EMAIL: CSD@POWERFLAME.COM

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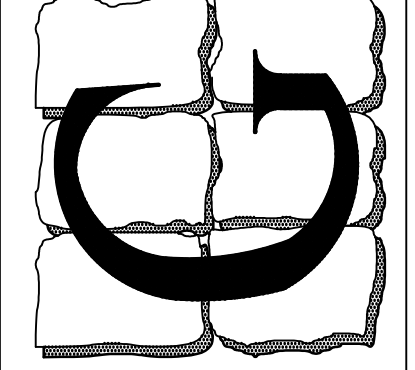
EXHIBIT #3: NEW BURNER

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

21-083

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Consulting Engineers

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MECH./ PLUM./ ELEC. DETAILS + NOTES

Professional Certification

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REV.	DATE	COMMENT
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MPE-1.2
6 OF 6 SHEETS
DATE: MARCH 8, 2023