

SPRINKLER GENERAL NOTES

1. SPRINKLER CONTRACTOR SHALL PROVIDE COMPLETE SPRINKLER COVERAGE AND DETERMINE THE HAZARD CLASSIFICATION IN ALL AREAS UNDER THIS CONTRACT. CONTRACTOR SHALL LOCATE SPRINKLER HEADS AND SIZE PIPING IN ACCORDANCE WITH THE LATEST EDITION OF NFPA 13, AND AUTHORITY HAVING JURISDICTION.
2. CONTRACTOR SHALL HYDRAULICALLY DESIGN AND INSTALL THE SPRINKLER SYSTEM IN ACCORDANCE WITH THE LATEST EDITION OF NFPA 13. SPRINKLERS SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF NFPA 13, AND THE AUTHORITY HAVING JURISDICTION.
3. CONTRACTOR SHALL PROVIDE AN INDEPENDENT FLOW TEST AS REQUIRED TO CONFIRM FLOW AND PRESSURE AVAILABILITY.
4. CONTRACT DRAWINGS FOR SPRINKLER WORK ARE DIAGRAMMATIC, INTENDED TO CONVEY SCOPE AND GENERAL ARRANGEMENT. CONTRACTOR SHOULD VISIT SITE TO DETERMINE EXACT QUANTITIES AND SCOPE OF WORK.
5. PRIOR TO THE INSTALLATION OF THE SPRINKLER SYSTEM, THE SPRINKLER CONTRACTOR SHALL COORDINATE PIPING, VALVES, SPRINKLER HEADS, ETC. WITH ALL NEW AND EXISTING DUCTWORK, PIPING, CABLE TRAYS, STRUCTURAL MEMBERS AND OTHER DISCIPLINES.
6. ALL PENETRATIONS IN EXISTING OR NEW FIRE RATED WALLS, CEILINGS AND FLOORS SHALL BE SEALED TO THE FULL THICKNESS OF THE PENETRATION WITH A MATERIAL OF EQUAL FIRE RESISTANCE.
7. ALL CUTTING, DRILLING AND PATCHING OF WALLS, FLOORS OR STRUCTURAL MEMBERS FOR INSTALLATION OF THE SPRINKLER SYSTEMS SHALL BE PROVIDED BY THE SPRINKLER CONTRACTOR. STRUCTURAL COMPONENTS SHALL NOT BE CUT, DRILLED OR MODIFIED IN ANY WAY WITHOUT THE STRUCTURAL ENGINEER'S REVIEW AND APPROVAL.
8. ALL CEILINGS, WALLS, FLOORS AND FINISHES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED AND PAINTED TO MATCH EXISTING CONDITIONS.
9. ACTUAL LOCATION OF EXISTING CEILING MOUNTED LIGHTS, RETURN AND SUPPLY DUCTS, AIR GRILLES AND DIFFUSERS, SPRINKLER HEADS, PIPING AND STRUCTURAL SUPPORTS SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR.
10. ALL SPRINKLER PIPING INSTALLED IN FINISHED AREAS SHALL BE CONCEALED.
11. SHOULD THE CONTRACTOR DISCOVER ANY DISCREPANCIES OR OMISSIONS ON THE DRAWINGS OR IN THE SPECIFICATIONS, HE SHALL NOTIFY THE ENGINEER OF SUCH CONDITIONS PRIOR TO THE BID DATE OTHERWISE, IT WILL BE UNDERSTOOD THAT THE DRAWINGS AND SPECIFICATIONS ARE CLEAR AS TO WHAT IS INTENDED AND SHALL BE AS INTERPRETED BY THE ENGINEER.
12. SPRINKLER CONTRACTOR SHALL COORDINATE THE DESIGN AND INSTALLATION OF THE SPRINKLER SYSTEM IN THE ELEVATOR MACHINE ROOM AND ELEVATOR SHAFT WITH THE AUTHORITY HAVING JURISDICTION.
13. ALL SPRINKLER HEADS INSTALLED BELOW 8'-0" ABOVE FINISHED FLOOR SHALL BE PROVIDED WITH A SPRINKLER HEAD GUARD.
14. EXISTING SYSTEMS SHALL REMAIN IN SERVICE UNTIL NEW WORK IS TESTED AND ACCEPTED. DISCONTINUATION OF PROTECTION FOR THE PURPOSES OF MAKING TAPS OF EXISTING PIPING OR MAKING INTERCONNECTIONS BETWEEN NEW AND EXISTING WORK SHALL BE COORDINATED IN ADVANCE WITH THE OWNER.
15. CONTRACTOR SHALL MAKE MODIFICATIONS TO EXISTING SPRINKLER SYSTEM AS REQUIRED TO PROVIDE COVERAGE FOR THE NEW ARCHITECTURAL ARRANGEMENT (INCLUDING ALL OBSTRUCTIONS, SUCH AS LIGHTING FIXTURES, ETC.) IN ACCORDANCE WITH THE LATEST EDITION OF NFPA 13 AND LOCAL AUTHORITY HAVING JURISDICTION. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO COMMENCING WORK. NEW SPRINKLER HEADS, WHERE NECESSARY, SHALL BE PROVIDED TO MATCH EXISTING STYLE. CONTRACTOR SHALL RELOCATE SPRINKLER HEADS IN CEILING TILES. RELOCATE EXISTING BRANCH SPRINKLER PIPING AS REQUIRED TO ACCOMMODATE DIFFUSER AND LIGHTING FIXTURE LAYOUTS.
16. SPRINKLER CONTRACTOR SHALL CENTER SPRINKLER HEADS IN CEILING TILES.
17. THE SPRINKLER SYSTEM SHALL REMAIN IN SERVICE AS LONG AS POSSIBLE DURING OCCUPATION ON THE FLOOR. WHEN THE SYSTEM IS TAKEN OUT OF SERVICE, THE OCCUPIED PORTION OF THE FLOOR SHALL REMAIN IN SERVICE. THE UNOCCUPIED PORTIONS SHALL HAVE A FIRE WATCH WHENEVER THE BUILDING IS OCCUPIED. THE FIRE WATCH INSTRUCTIONS CAN BE OBTAINED FROM THE UNIVERSITY FIRE MARSHAL.
18. SPRINKLER LAYOUT SHALL BE FULLY COORDINATED WITH ALL LABORATORY CASEWORK, CABINETS AND SHELVING INDICATED ON THE ARCHITECTURAL DRAWINGS TO PROVIDE EXHIBITATE SPRINKER COVERAGE IN ACCORDANCE WITH NFPA REQUIREMENTS AND THE LOCAL AUTHORITY HAVING JURISDICTION. NOTE THAT SOME CABINETS, CASEWORK AND SHELVING ARE LOCATED WITHIN 16" OF THE CEILING.
19. THOUGH SOME PIPING OFFSETS ARE INDICATED, IT IS NOT THE INTENT OF THE DRAWINGS TO SHOW ALL OFFSETS THAT ARE REQUIRED. THE CONTRACTOR SHALL FULLY COORDINATE THE SPRINKLER SYSTEM WITH ALL OTHER TRADES TO PROVIDE COMPLETE SYSTEM WITHOUT INTERFERENCES.

PLUMBING GENERAL NOTES

1. WHERE POSSIBLE, MAKE WATER CONNECTIONS TO FIXTURES ABOVE FLOOR.
2. PROVIDE VACUUM BREAKERS ON ALL HOSE CONNECTION TYPE FITTING HOSE BIBBS, WALL HYDRANTS, ETC.
3. PROVIDE PIPE SLEEVE EXTENDING FULL WIDTH OF FOOTINGS FOR PIPING THROUGH FOOTINGS, FOUNDATION WALLS, ETC.
4. LIMIT SANITARY AND WASTE PIPING DEAD END TO 12 INCHES FROM MAIN OR MAIN BRANCH.
5. PROVIDE A MINIMUM OF 24 INCHES CLEARANCE FOR RODDING OF CLEANOUTS.
6. CONTRACTOR SHALL COORDINATE ALL WORK WITH ALL OTHER DISCIPLINES PRIOR TO CONSTRUCTION.
7. ACCESS SHALL BE PROVIDED FOR ALL CONCEALED VALVES, CLEANOUTS ETC. LOCATED AT/IN CEILINGS, WALLS OR FLOORS.
8. CONTRACTOR SHALL REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF PLUMBING FIXTURES FLOOR DRAINS AND OTHER EQUIPMENT.
9. ALL FLOOR DRAINS AND SHOWER DRAINS CONNECTED TO THE SANITARY SHALL BE PROVIDED WITH A PRIMED TRAP UNLESS OTHERWISE NOTED.
10. CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL FLUSH TYPE CLEANOUTS WITH WALLS, EQUIPMENT DUCTWORK, PIPE, STRUCTURAL MEMBERS, ETC.
11. ALL SPECIFICATIONS AND DRAWINGS (I.E., ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING, FIRE PROTECTION AND ELECTRICAL) ARE COMPLEMENTARY AND MUST BE USED IN COMBINATION TO OBTAIN COMPLETE CONSTRUCTION INFORMATION.
12. ALL VERTICAL SANITARY SEWER AND STORM WATER PIPING WHICH TURN 90 DEGREES AFTER PASSING THROUGH A FLOOR SHALL BE INSTALLED AS TIGHT AS POSSIBLE TO THE UNDERSIDE OF THE STRUCTURE. ALL VOID OPENINGS AROUND PIPE SHALL BE FIRE STOPPED AS REQUIRED AND APPROVED BY LOCAL CODES.
13. COORDINATE ALL PIPING TO BE INSTALLED WITH OTHER TRADES (I.E., MECHANICAL, FIRE PROTECTION AND ELECTRICAL) TO ASSURE THAT ALL PIPING SYSTEMS ARE INSTALLED ABOVE FINISHED CEILING OR IN A CONCEALED SPACE. ALL CEILING HEIGHTS INDICATED ON ARCHITECTURAL AND/OR INTERIOR DESIGN DRAWINGS AND MINIMUM CLEARANCES REQUIRED BY LOCAL CODES SHALL BE MAINTAINED THROUGHOUT THE BUILDING.
14. ALL CUTTING, DRILLING AND PATCHING OF WALLS, FLOORS OR STRUCTURAL MEMBERS FOR THE INSTALLATION OF THE PLUMBING SYSTEMS SHALL BE PROVIDED BY THE PLUMBING CONTRACTOR. STRUCTURAL COMPONENTS SHALL NOT BE CUT, DRILLED OR MODIFIED IN ANY WAY WITHOUT THE STRUCTURAL ENGINEER'S REVIEW AND APPROVAL.
15. PROVIDE ONE (1) TRAP PRIMER VALVE FOR EACH FLOOR DRAIN WITHOUT A CONSTANT SOURCE OF WATER SUPPLY TO MAINTAIN TRAP SEAL. PRIMER VALVE SHALL BE LOCATED IN AN ACCESSIBLE AREA AND CONNECTED TO THE NEAREST 3/4" COLD WATER LINE SERVING A FIXTURE.
16. BACKFLOW PREVENTER ASSEMBLY SHALL BE INSTALLED IN AN ACCESSIBLE LOCATION NOT TO EXCEED 48" ABOVE THE FINISHED FLOOR. PIPE RELIEF OUTLET DISCHARGE TO NEAREST FLOOR DRAIN.
17. ALL PIPING, SYSTEMS, VALVES AND EQUIPMENT SHALL BE PROPERLY IDENTIFIED.
18. PROVIDE ATMOSPHERIC VENTS FOR GAS REGULATORS IN ACCORDANCE WITH LOCAL CODE AND SUPPLIERS REQUIREMENT. REGULATOR VENTS SERVING DIFFERENT PRESSURE SYSTEMS SHALL NOT BE INTERCONNECTED.
19. ALL HORIZONTAL DRAINAGE PIPING AND TRAPS FROM AN OPEN SIGHT DRAIN OR RECEPTORS RECEIVING A/C UNIT CONDENSATE SHALL BE INSULATED.
20. COLD WATER SUPPLY MAINS AND BRANCHES SHALL BE INSULATED IN ACCORDANCE WITH THE SPECIFICATIONS.
21. ALL PIPING VALVES, AND ACCESSORIES SERVING EQUIPMENT SHALL BE INSTALLED TO ALLOW SERVICING OR REMOVAL WITHOUT DISCONNECTING ALL PIPING ACCESSORIES.
22. ALL VALVES SHALL HAVE THEIR NORMAL (IN OPERATION) POSITION IDENTIFIED, SUCH AS "NORMALLY OPEN" OR "NORMALLY CLOSED".
23. EXPANSION LOOPS AND ANCHORS SHALL BE PROVIDED ON ALL PIPING SYSTEMS WHICH CROSS BUILDING EXPANSION JOINTS AND ALL HORIZONTAL AND VERTICAL PIPING LENGTHS EXCEEDING 100 FEET OR EACH PORTION THEREOF.
24. EXPANSION LOOPS AND ANCHORS SHALL BE PROVIDED ON ALL PIPING, UNIONS, VALVES, VACUUM BREAKERS, STRAINERS, ETC. REQUIRED TO CONNECT EQUIPMENT AT LOCATION SHOWN AND TO MAKE FULLY OPERABLE IN ACCORDANCE WITH ALL LOCAL CODES AND REGULATIONS.
25. ALL ROUGH-IN AND FINAL CONNECTION FOR EQUIPMENT SPECIFIED BY OTHERS SHALL BE PROVIDED.
26. ALL EXPOSED PIPING AND FITTINGS SHALL BE CHROME PLATED.
27. ALL HORIZONTAL PIPING LINES EXTENDED AND CONNECTED TO EQUIPMENT SHALL BE INSTALLED AT THE HIGHEST POSSIBLE ELEVATION AND NOT LESS THAN 6" ABOVE FLOOR.
28. VERIFY EQUIPMENT LOCATIONS WITH OTHER CONSULTANTS OR SUPPLIERS BEFORE PROCEEDING WITH ANY ROUGH-IN.
29. ALL PIPING SHALL BE INSTALLED ABOVE CEILING OR IN A CONCEALED SPACE UNLESS NOTED OR INDICATED OTHERWISE.
30. CLEANOUTS SHALL BE PROVIDED AT THE BASE OF EACH SANITARY OR STORM WATER STACK.
31. ALL LAB EQUIPMENT CONNECTED TO THE DOMESTIC WATER SYSTEM SHALL BE PROVIDED WITH BACKFLOW PROTECTION IN ACCORDANCE WITH ALL LOCAL CODES AND REGULATIONS.
32. THOUGH SOME PIPING OFFSETS ARE INDICATED, IT IS NOT THE INTENT OF THE DRAWINGS TO SHOW ALL OFFSETS THAT ARE REQUIRED. THE CONTRACTOR SHALL FULLY COORDINATE THE PLUMBING WORK WITH THE WORK OF ALL OTHER TRADES TO PROVIDE COMPLETE SYSTEM WITHOUT INTERFERENCES.
33. REMOVE ALL EXISTING PIPING ABOVE CEILINGS OR EXPOSED NOT TO REMAIN IN USE. DISCONNECT ABANDONED PIPING IN WALLS OR BELOW SLAB FROM DISTRIBUTION SYSTEM.
34. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS INCLUDING EXISTING INVERTS, LOCATIONS AND SIZES OF PIPES, DUCTWORK, LIGHTING AND STRUCTURAL MEMBERS PRIOR TO CONSTRUCTION.
35. ALL PLUMBING VENTS SHALL BE A MINIMUM OF FIFTEEN FEET (15') FROM OUTSIDE AIR INTAKES.

PLUMBING LEGEND

COLD WATER (CW)		PIPE GUIDE OR SLEEVE	
HOT WATER (HW)	- - - -	PIPE ANCHOR	
HOT WATER RECIRCULATION (HWR)	----	GAS METER	
CONDENSATE DRAIN LINE	— CD —	GAS COCK	
SANITARY PIPING	————	WALL HYDRANT	
STORM WATER PIPING	-- SW --	PIPING ELBOW DOWN	
VENT PIPING	-----	PIPING ELBOW UP	
CHECK VALVE		PIPE CONNECTION BOTTOM	
BALL VALVE		PIPE CONNECTION TOP	
GATE VALVE		FLOOR CLEANOUT	
PRESSURE REGULATOR		WALL CLEANOUT	
BUTTERFLY VALVE		HOSE BIBB	
OS & Y GATE VALVE		VENT THRU ROOF	
GLOBE VALVE		CONNECT TO EXISTING	
BALANCING VALVE		DEMOLITION ENDS HERE	
VALVE IN VERTICAL POSITION		FIRE DEPARTMENT VALVE	
RELIEF VALVE		FLOW SWITCH	
REDUCED PRESSURE ZONE BACKFLOW PREVENTER		FIRE DEPARTMENT SIAMESE CONNECTION	
DOUBLE CHECK VALVE BACKFLOW PREVENTER			
HOSE END VALVE			
BUCKET STRAINER			
WYE STRAINER WHOSE END VALVE			
FLANGED CONNECTION			
GAUGE AND VALVE			
INLINE CIRCULATING PUMP			
TEMPERATURE/PRESSURE TEST PORT			
TEE			
WATER HAMMER ARRESTOR			
THERMOMETER			
UNION			
PIPING CAP			
CONCENTRIC REDUCER			
ECCENTRIC REDUCER			
HEAT TRACED AND INSULATED PIPE			
ROOF DRAIN			
FUNNEL FLOOR DRAIN			
FLOOR DRAIN			
FLOOR SINK			
AREAWAY DRAIN			
		ABBREVIATIONS	
		ABOVE FINISHED FLOOR	AFF
		ACID VENT	AV
		ACID WASTE	AW
		AIR HANDLING UNIT	AHU
		BACKWATER VALVE	BWV
		COLD WATER	CW
		DOUBLE CHECK VALVE BACKFLOW PREVENTER	DCVBP
		EXISTING TO REMAIN	ETR
		FIRE DEPARTMENT VALVE	FDV
		HORSEPOWER	HP
		HOT WATER	HW
		HOT WATER RECIRCULATING	HWR
		INDIRECT WASTE	IW
		LABORATORY COLD WATER	LCW
		LABORATORY HOT WATER	LHW
		LABORATORY HOT WATER RECIRC.	LHWR
		NORMALLY CLOSED	NC
		NORMALLY OPENED	NO
		NOT IN CONTRACT	NIC
		REDUCED PRESSURE ZONE BACKFLOW PREVENTER	RPZBP
		REMOVE EXISTING	RX
		SANITARY	SAN
		SHOWER DRAIN	SD
		STANDPIPE	STP
		TRAP PRIMING LINE	TPL
		UNLESS OTHERWISE NOTED	UON
		WASTE	W

[illegible]

Consultants
**BURDETTE KOEHLER MURPHY
& ASSOCIATES, INC.**
MECHANICAL / ELECTRICAL CONSULTING ENGINEERING
1423 CLARKVIEW ROAD, SUITE 500
BALTIMORE, MARYLAND 21209
410.323.0600 - FAX 410.377.2543

BUILDING COST CONSULTANTS
COST ESTIMATING
12917 - 30TH AVENUE
PLATTSMOUTH, NEBRASKA 68048
402.298.8260 - FAX 402.298.8290

Seal:

1301 Enterprise Court, Suite 103-C 410.803.214
Bel Air, Maryland 21014-1847 fax 410.838.1603
www.polt-design.com

ARCHITECTURE
PLANNING
ENGINEERING

Drawing Scale:	Drawing Title: PLUMBING GENERAL NOTES, LEGEND AND ABBREVIATIONS	Project Title: BUILDING 15 RENOVATION			Date: 12-19-2012
Drawing Start Date:	Approved: Associate Director for Operations:				Project No: xxx-10-xxx
Drawing Finish Date:	Approved: Chief, Facilities Engineer:	Building No: 15	Checked: JDS	Drawn: CCH	DRAWING NO: 15-P1
Drawing Approved:	Approved: Director, Medical Center:	Location: VAMHCS MEDICAL CENTER WILMINGTON, DELAWARE			Dwg. - Of xx