ABBREVIATIONS

A	AB	ABOVE
	ACFM	ACTUAL CUBIC FEET PER MINUTE
	AD	AREA DRAIN
	ACT	ACOUSTIC CEILING
	AFF	ABOVE FINISH FLOOR
	AG	AIR GAP
	AGA	AREA GAS ALARM PANEL
	AHT	ACID NEUTRALIZING TANK
	AP	ACCESS PANEL
B	BFP	BACKFLOW PREVENTER
	BFV	BUTTERFLY VALVE
	BLV	BALL VALVE
	BV	BALANCING VALVE
	BWV	BACKWATER VALVE
C	CA	COMPRESSED AIR
	CAV	CAPPED AND VALVED
	CB	CATCH BASIN
	CFH	CUBIC FEET PER HOUR
	CLG	CEILING
	CONC	CONCENTRATION
	CSS	CLINIC SERVICE SINK
	CTE	CONNECT TO EXISTING
	CO	CLEANOUT
	CV	CHECK VALVE
	CW	COLD WATER
D	DCVA	DOUBLE CHECK VALVE ASSEMBLY
	DF	DRINKING FOUNTAIN
	D.I.S.S.	DIAMETER INDEX SAFETY SYSTEM
	DN	DOWN THROUGH FLOOR
	DP	DROP
	DWG	DRAWING
	DWH	DOMESTIC WATER HEATER
E	EL	ELEVATION
	ES	EMERGENCY SHOWER
	ETR	EXISTING TO REMAIN
	EW	EYE WASH, WALL MOUNTED
	EV	EVACUATION (WAGD) PIPING
	EW	EMERGENCY EYEWASH
	EWC	EMERGENCY WATER COOLER
	EX	EXISTING
	EXPTK	EXPANSION TANK
F	FA	FRESH AIR INTAKE
	FCO	FLOOR CLEANOUT
	FD	FLOOR DRAIN
	FFE	FINISH FLOOR ELEVATION
	FLR	FLOOR
G	GC	GENERAL CONTRACTOR
	GM	GAS METER & REGULATOR SET
	GT	GREASE TRAP
	GV	FUEL GAS VALVE
	GVB	FUEL GAS VALVE BOX
H	H&C	HOT & COLD WATER PIPING
	HB	HOSE BIBB
	HW	HOT WATER PIPING
	HWR	HOT WATER RETURN PIPING
I	IE	INVERT ELEVATION
	INV	INVERT
	IW	INDIRECT WASTE
J	JC	JANITOR'S CLOSET
	JSS	JANITOR'S SLOP SINK
K	KEC	KITCHEN EQUIPMENT CONTRACTOR
	KW	KITCHEN WASTE (GREASE)
L	L	LAUNDRY
	LAB	LABORATORY
	LGA	LOCAL MEDICAL GAS ALARM PANEL
	LOW	LIMIT OF WORK
	LV	LOCKED MEDICAL VALVE
M	MA	MEDICAL AIR
	MAC	MEDICAL AIR COMPRESSOR
	MGO	MEDICAL GAS OUTLET IDENTIFICATION
	MGA	MASTER MEDICAL GAS ALARM PANEL
	MH	MANHOLE
	MSB	MAIN SERVICE BASIN
	MV	MEDICAL VACUUM PIPING
	MVE	MEDICAL VACUUM EXHAUST PIPING
	MVP	MEDICAL VACUUM PUMP
N	N2	NITROGEN PIPING
	N2O	NITROUS OXIDE PIPING
	NC	NORMALLY CLOSED
	NCP	NITROGEN CONTROL PANEL
	NIC	NOT IN CONTRACT
	NO	NORMALLY OPEN
	NPCW	NON-POTABLE COLD WATER
	NPHW	NON-POTABLE HOT WATER
	NTS	NOT TO SCALE
O	OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
	OFI	OWNER FURNISHED & INSTALLED
	OX	OXYGEN PIPING
P	PC	PLUMBING CONTRACTOR
	PLGD	PLUGGED
	PRV	PRESSURE REDUCING VALVE
	PRVA	PRESSURE REDUCING VALVE ASSEMBLY
	PS	PRESSURE SWITCH
	PVB	PRESSURE VACUUM BREAKER
	PG	PRESSURE GAUGE
R	RD	ROOF DRAIN
	RP	RECIRC. PUMP
	RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
	RV	RELIEF VALVE
	RW	RAIN WATER PIPING
S	SH	SHOWER
	SK	SINK
	SL	SLOPE (1/4" PER FOOT)
	S.VR. W	SOIL OR WASTE PIPING
	SQ. FT.	SQUARE FEET
	ST	STRAINER
	STR	STRAINER
	SP	SUMP PUMP
	SV	SPECIAL VENT
	SVTR	SPECIAL VENT THROUGH ROOF
	SW	SPECIAL WASTE
T	T&P	TEMPERATURE & PRESSURE RELIEF VALVE
	TG	TEMPERATURE GAUGE
	TMV	THERMOSTATIC MIXING VALVE
	TOC	TOP OF CONCRETE
	TOP	TRAP PRIMER
	TR	THROUGH ROOF
	TYP.	TYPICAL
U	UN	UNION
	UP	UP (THROUGH SLAB ABOVE)
	UP&DN	UP&DN (THROUGH FLOOR SLAB)
	U	URINAL
	UW	UNSAFE (NON-POTABLE) WATER PIPING
V	V	VENT PIPING
	VAC	MEDICAL VACUUM PIPING
	VB	VACUUM BREAKER
	VE	MEDICAL VACUUM EXHAUST PIPING
	VP	MEDICAL VACUUM PUMP
	VS	VENT STACK
	VTR	VENT THROUGH ROOF
W	W&T	WASTE AND TRAP
	W&V	WASTE AND VENT
	WAAD	WASTE ANESTHETIC GAS DISPOSAL
	WB	WATER BOOSTER
	WC	WATER CLOSET
	WCO	WALL CLEANOUT
	WFA	WATER FILTER ASSEMBLY
	WH	WALL HYDRANT
	WHA	WHEEL FENDER ARRESTOR
	WP	WHEEL PORTAL
Y	YCO	YARD CLEAN OUT
Z	ZVB	MEDICAL GAS ZONE VALVE BOX

SYMBOLS LEGEND

A1.2 / E — COLUMN LINE DESIGNATION

A — MEDICAL GAS OUTLET DESIGNATION

CONNECT TO EXISTING

WC-1 — PLUMBING FIXTURE DESIGNATION

X / AXXX — DRAWING NUMBER / SHEET NUMBER — DETAIL DESIGNATION

X / XX — REVISION DESIGNATION

K1 — KITCHEN EQUIPMENT DESIGNATION

GENERAL NOTES

DEMOLITION

1. DISCONNECT AND DISMANTLE EXISTING PLUMBING SYSTEMS AND EQUIPMENT TO BE DEMOLISHED AND LEAVE DEBRIS AND DISCONNECTED EQUIPMENT ON THE FLOOR FOR REMOVAL UNDER SECTION 02070 – SELECTIVE DEMOLITION.
2. REMOVE EXISTING PLUMBING STACKS, MAINS AND BRANCHES WHEN SERVING FIXTURES TO BE DEMOLISHED. REMOVE PIPING BACK TO WITHIN 24" OF THE ACTIVE MAIN AND PROVIDE CAP OR PLUG TO SUIT SYSTEM. OBTAIN EXISTING RECORD DRAWINGS FROM THE OWNER. MAINTAIN EXISTING PLUMBING RISERS AND STACKS SERVING FIXTURES TO REMAIN.
3. AFTER WALLS AND CEILINGS ARE REMOVED AND PIPING IS EXPOSED, VERIFY PIPING SERVES ONLY PLUMBING FIXTURES & EQUIPMENT INDICATED FOR DEMOLITION BEFORE SHUTDOWN FOR DISCONNECTION. IDENTIFY EXISTING PIPING WHICH SERVES FIXTURES & EQUIPMENT TO REMAIN. PROMPTLY NOTIFY ARCHITECT OF ACTIVE PIPING TO BE MAINTAINED WHEN LOCATED IN PARTITIONS TO BE DEMOLISHED.
4. REMOVE EXISTING STACKS AND RISERS LOCATED IN EXISTING PARTITIONS TO BE DEMOLISHED AND PROVIDE NEW OFFSET AT CEILING AND DROP THROUGH THE FLOOR AND RECONNECT TO THE EXISTING SERVICES AT THE FLOOR BELOW.

DRAWING LIST

PLUMBING

P001	PLUMBING LEGENDS, NOTES, DETAILS, AND ABBREVIATIONS
P108.2	PLUMBING CONNECTOR SUB-LEVEL 1 PLAN – DEMOLITION
P108.2	PLUMBING CONNECTOR BASEMENT PLAN – DEMOLITION
P208.6.1	PLUMBING GARAGE SUB-LEVEL 6 PLAN
P208.5.1	PLUMBING GARAGE SUB-LEVEL 5 PLAN
P208.4.1	PLUMBING GARAGE SUB-LEVEL 4 PLAN
P208.3.1	PLUMBING GARAGE SUB-LEVEL 3 PLAN
P208.2.1	PLUMBING GARAGE SUB-LEVEL 2 PLAN
P208.1.1	PLUMBING GARAGE SUB-LEVEL 1 PLAN
P208.1	PLUMBING GARAGE BASEMENT PLAN
P200.1	PLUMBING GARAGE GROUND LEVEL PLAN
P201.1	PLUMBING GARAGE FIRST LEVEL PLAN
P202.1	PLUMBING GARAGE SECOND LEVEL PLAN
P203.1	PLUMBING GARAGE THIRD LEVEL PLAN
P204.1	PLUMBING GARAGE FOURTH LEVEL PLAN
P208.1	PLUMBING GARAGE ROOF PLAN
P208.1.2	PLUMBING CONNECTOR SUB-LEVEL 1 PLAN
P208.2	PLUMBING CONNECTOR BASEMENT PLAN – RENOVATION
P200.2	PLUMBING CONNECTOR GROUND LEVEL PLAN
P208.2	PLUMBING CONNECTOR ROOF PLAN
P201.3	PLUMBING HELIPORT FIRST AND SECOND LEVEL PLAN
P300	STORM RISER DIAGRAM

General Notes:

1. THIS IS A STANDARD SYMBOL LIST. ALL SYMBOLS MAY NOT NECESSARILY APPEAR ON THE FLOOR PLANS OR DETAIL SHEETS. ONLY THOSE INDICATED ON THE FLOOR PLANS AND DETAILS SHEETS SHOULD BE USED, AND ALL OTHERS SHOULD BE DISREGARDED.

PIPING LEGEND

GENERAL
- EXISTING PIPING TO REMAIN
- EXISTING PIPING TO BE REMOVED
- NEW PIPING

WATER
- COLD WATER PIPING
- HOT WATER PIPING
- HOT WATER RETURN PIPING
- HOT WATER PIPING (140°F)
- HOT WATER RETURN PIPING (140°F)
- DEIONIZED WATER PIPE
- DISTILLED WATER PIPE
- COLD WATER PIPING (HIGH PRESSURE)
- HOT WATER PIPING (HIGH PRESSURE)
- HOT WATER RETURN PIPING (HIGH PRESSURE)
- NON-POTABLE COLD WATER PIPING
- NON-POTABLE HOT WATER PIPING
- NON-POTABLE HOT WATER RETURN PIPING
- REVERSE OSMOSIS WATER PIPING
- REVERSE OSMOSIS DEIONIZED WATER PIPING
- TEPID WATER PIPING
- TEPID WATER RETURN

DRAINAGE
- SANITARY OR WASTE PIPING
- UNDER SLAB SANITARY OR WASTE PIPING
- VENT PIPING
- UNDER SLAB VENT PIPING
- GARAGE WASTE PIPING (GAS/OIL WASTE)
- UNDER SLAB GARAGE WASTE PIPING
- GARAGE VENT PIPING
- UNDER SLAB GARAGE VENT PIPING
- INDIRECT WASTE PIPING
- KITCHEN WASTE PIPING (GREASE WASTE)
- UNDER SLAB KITCHEN WASTE PIPING
- PUMPED DISCHARGE PIPING
- RAIN WATER PIPING
- UNDER SLAB RAIN WATER PIPING
- SPECIAL WASTE PIPING
- UNDER SLAB SPECIAL WASTE PIPING
- SPECIAL VENT PIPING
- UNDER SLAB SPECIAL VENT PIPING

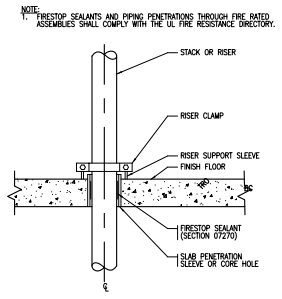
GAS
- CARBON DIOXIDE PIPING
- COMPRESS AIR PIPING
- EVACUATION (WAGD) PIPING
- FRESH AIR INTAKE PIPING
- NATURAL GAS PIPING
- GAS HIGH PRESSURE
- NATURAL GAS VENT PIPING
- LABORATORY VACUUM PIPING
- MEDICAL AIR PIPING
- GAS MEDIUM PRESSURE
- MEDICAL VACUUM PIPING
- MEDICAL VACUUM EXHAUST PIPING
- NITROGEN PIPING
- NITROUS OXIDE PIPING
- OXYGEN PIPING
- SPECIAL GAS PIPING

PIPING SYMBOL LEGEND

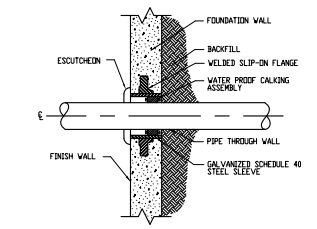
DRAINS
- AD — AREA DRAIN
- FD — FLOOR DRAIN
- RD — ROOF DRAIN
- TD — TRENCH DRAIN

PIPING
- CAPPED
- CLEANOUT
- DOWN THROUGH FLOOR
- DROP (OR RISE)
- FLEX CONNECTOR
- FLOW ARROW
- FLUSH FLOOR CLEANOUT
- IN-LINE PRESSURE SENSOR
- PIPE GUIDE
- PRESSURE GAUGE
- PRESSURE SWITCH
- SLOPE (1" PER FOOT)
- UNION
- UP (THROUGH SLAB ABOVE)
- UP & DOWN (THROUGH FLOOR SLAB)
- UP & TRAP
- TEMPERATURE GAGE
- WASTE & TRAP

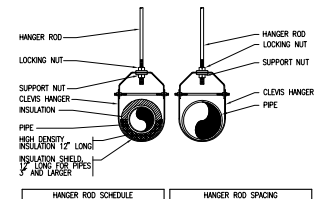
VALVES
- BACKWATER VALVE
- BALANCING VALVE
- BUTTERFLY VALVE
- CAPPED & VALVED
- CHECK VALVE
- DCVA — DOUBLE CHECK VALVE ASSEMBLY
- GAS COCK
- GATE VALVE
- HB — HOSE BIBB
- ISOLATION VALVE
- PRESSURE REDUCING VALVE
- PRESSURE REGULATING VALVE ASSEMBLY
- RPBP — REDUCED PRESSURE BACKFLOW PREVENTER
- RELIEF VALVE
- STRAINER
- TEMPERATURE & PRESSURE RELIEF VALVE
- WH — WALL HYDRANT
- ZVB — MEDICAL GAS ZONE VALVE BOX



1 TYPICAL SLAB PENETRATION AND RISER SUPPORT SLEEVE
SCALE: NTS



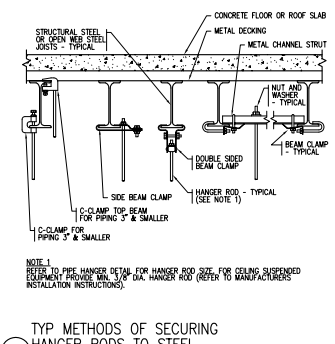
2 WATER PROOF SLEEVE
SCALE: NTS



HANGER ROD SCHEDULE	
PIPE SIZE	ROD SIZE
UP TO 2"	3/8" DIA.
2 1/2" THRU 3"	1/2" DIA.
4" AND 5"	5/8"
6" THRU 8"	3/4"
10"	7/8"

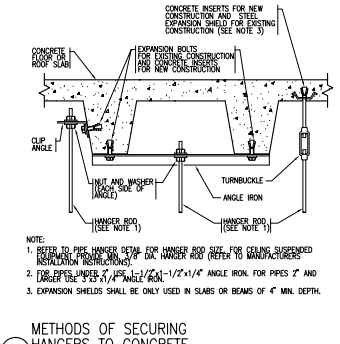
HANGER ROD SPACING	
PIPE SIZE	MAX. ALLOWABLE SPACING
1"	8'
1 1/2"	9'
2"	10'
3"	11'
4" THRU 6"	14'
8" THRU 12"	15'

3 PLUMBING PIPE HANGER INSTALLATION
SCALE: NTS



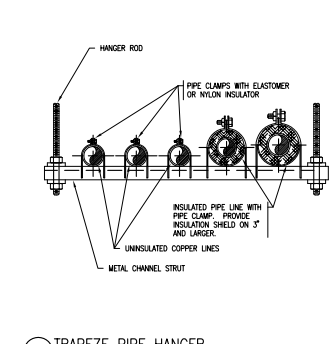
NOTE 1
REFER TO PIPE HANGER DETAIL FOR HANGER ROD SIZE, FOR CEILING SUSPENDED EQUIPMENT PROVIDE MIN. 3/8" DIA. HANGER ROD (REFER TO MANUFACTURERS INSTALLATION INSTRUCTIONS).

4 TYP METHODS OF SECURING HANGER RODS TO STEEL
SCALE: NTS

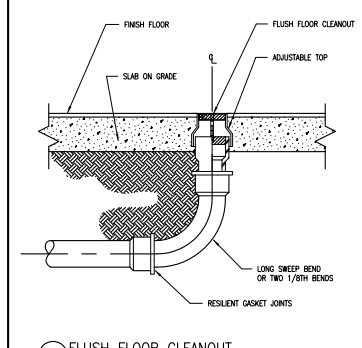


NOTE:
1. REFER TO PIPE HANGER DETAIL FOR HANGER ROD SIZE FOR CEILING SUSPENDED EQUIPMENT PROVIDE MIN. 3/8" DIA. HANGER ROD (REFER TO MANUFACTURERS INSTALLATION INSTRUCTIONS).
2. FOR PIPES UNDER 3", PROVIDE 1-1/2"x1-1/2"x1/4" ANGLE IRON. FOR PIPES 3" AND LARGER USE 2-1/2"x2-1/2"x1/4" ANGLE IRON.
3. EXPANSION SHIELDS SHALL BE ONLY USED IN SLABS OR BEAMS OF 4" MIN. DEPTH.

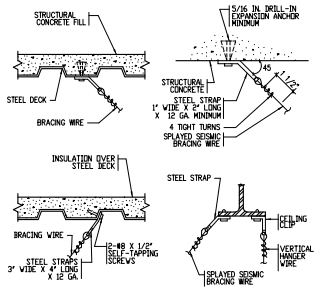
5 METHODS OF SECURING HANGERS TO CONCRETE
SCALE: NTS



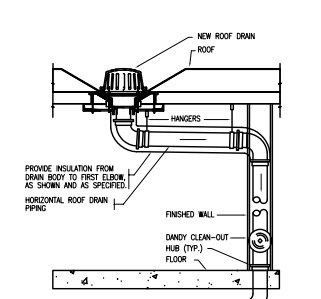
6 TRAPEZE PIPE HANGER
SCALE: NTS



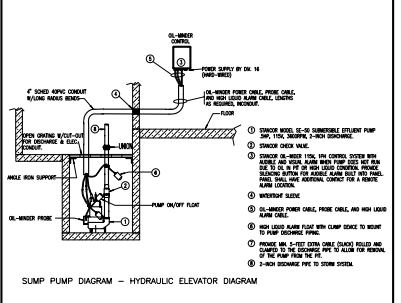
7 FLUSH FLOOR CLEANOUT
SCALE: NTS



8 SEISMIC CABLE RESTAINT ATTACHMENTS
SCALE: NTS



9 ROOF DRAIN PIPING CONNECTION DETAIL
SCALE: NTS

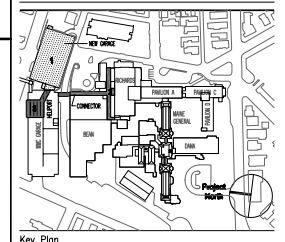


SUMP PUMP DIAGRAM – HYDRAULIC ELEVATOR DIAGRAM

10 ELEVATOR SUMP PUMP DETAIL
SCALE: NTS

MARK	ISSUE DATE	DESCRIPTION
PERMIT	09/16/04	PERMIT SET
BID	08/26/04	BID SET

Issue Log



Key Plan

TRO
ARCHITECTURE
PLANNING
ENGINEERING
INTERIOR DESIGN
The Ritchie Organization
80 Bridge Street
Newton, MA 02465-1134
617-969-8480

Maine Medical Center
Pkg F - Garage / Vault / Conn / Heliport
Portland, ME — MMC Project No. 21845

Drawing Title
PLUMBING LEGENDS, NOTES, DETAILES, & ABBREVIATIONS

0" 0 0 0 0

Commission No.	4678	Date Issued	08/26/04
Scale	NTS	Sheet Number	PKG-F P001
Drawn By	SDB		
Approved By	RMH		
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