FIRE PROTECTION SYMBOL LIST

BASIC

- FIRE STANDPIPE PIPING (STANDALONE)
- SPRINKLER PIPING
- DEMO SPRINKLER PIPING
- DSP — DRY SPRINKLER PIPING
- PA — PRE-ACTION SPRINKLER PIPING
- DR — DRAIN PIPING
- PIPING BELOW SLAB
- EXISTING PIPING
- EXISTING WORK TO BE REMOVED
- HEAT TRACE / FREEZE PROTECTION CABLE & INSULATION
- SLOPED CHANGE IN PIPE ELEVATION
- BOTTOM PIPE CONNECTION
- TOP PIPE CONNECTION
- SIDE CONNECTION
- PIPE DOWN/DROP
- PIPE RISE/UP
- PIPE SLOPE
- VALVE IN VERTICAL
- UNION
- REDUCER
- WATER PROOF SLEEVE
- SLEEVE
- FE-X — FIRE EXTINGUISHER
  - A - WATER
  - B - DRY CHEMICAL
  - C - GASEOUS (CO2 OR HALON 1211 - SEE SPEC.)
- FE-X — FIRE EXTINGUISHER IN CABINET
- FIRE HOSE VALVE
- FIRE HOSE VALVE IN CABINET
- FIRE HOSE VALVE w/HOSE IN CABINET
- FE-X — FIRE HOSE VALVE w/FIRE EXTINGUISHER
- ROOF MANIFOLD (3-WAY)
- SPRINKLER CONTROL VALVE ASSEMBLY
- VALVE ASSEMBLY
  - AC - ALARM CHECK
  - DR - DRY PIPE
  - PA - PRE ACTION
- CONNECT TO EXISTING
- DISCONNECT FROM EXISTING
- FIRE DEPARTMENT SIAMESE CONNECTION (WALL MOUNTED)
- EXISTING FIRE HYDRANT
- NEW FIRE HYDRANT
- TEMPERATURE AND PRESSURE RELIEF VALVE
- PLUG VALVE
- MIXING VALVE
- RELIEF VALVE
- BALL VALVE
- GATE VALVE
- GLOBE VALVE
- OUTSIDE SCREW & YOKE (OS & Y) VALVE
- CHECK VALVE
- PRESSURE REDUCING VALVE (PRV)
- SOLENOID VALVE
- FLOAT VALVE
- Y STRAINER w/BLOW-OFF VALVE
- RPDA — REDUCED PRESSURE DETECTOR ASSEMBLY
- DCDA — DOUBLE CHECK DETECTOR ASSEMBLY
- # ⓝ — HYDRAULIC REF. POINTS # = ELEMENT, ⓝ = NODE
- T — TAMPER SWITCH
- WATERFLOW SWITCH
- PRESSURE GAUGE w/GAUGE COCK
- X / # — RISER DESIGNATION: X = RISER SERVICE; # = RISER NUMBER
- EXTEND EXISTING SPRINKLER PIPING TO NEW SPRINKLER HEAD

FIRE PROTECTION ABBREVIATIONS

ABD	AUTOMATIC BALL DRIP
AD	AREA DRAIN
AFF	ABOVE FINISHED FLOOR
ATS	AUTOMATIC TRANSFER SWITCH
BOP	BOTTOM OF PIPE
CFM	CUBIC FEET PER MINUTE
CV	CHECK VALVE
DIA	DIAMETER
DN	DOWN (PENETRATES FLOOR SLAB)
DR	DRAIN
(E)	EXISTING
(ER)	EXISTING TO BE REMOVED
(ERR)	EXISTING TO BE REMOVED & RELOCATED
FD	FLOOR DRAIN
FHC	FIRE HOSE CABINET
FHR	FIRE HOSE RACK
FHV	FIRE HOSE VALVE
FHVC	FIRE HOSE VALVE CABINET
FL	FLOOR
FP	FIRE PUMP
FSP	FIRE STANDPIPE
FT	FEET
GAL	GALLONS
GC	GENERAL CONTRACTOR
GPM	GALLONS PER MINUTE
GV	GATE VALVE
HD	HEAT DETECTOR
ID	INSIDE DIAMETER
IN	INCH
JP	JOCKEY PUMP
MAX	MAXIMUM
MIN	MINIMUM
NC	NORMALLY CLOSE
NIC	NOT IN THIS CONTRACT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OD	OUTSIDE DIAMETER
OS&Y	OUTSIDE SCREW & YOKE GATE VALVE
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH (GAUGE)
PSIA	POUNDS PER SQUARE INCH (ABSOLUTE)
(RE)	RELOCATED EXISTING
(RRO)	EXISTING TO REMOVED AND RETURN TO OWNER
SD	SMOKE DETECTOR
SPKR	SPRINKLER
TOP	TOP OF PIPE
TS	TAMPER SWITCH
UON	UNLESS OTHERWISE NOTED
UP	UP (PENETRATES FLOOR SLAB)
WFS	WATER FLOW SWITCH
Z	ZONE

FIRE PROTECTION DEMOLITION NOTES

1. REMOVE EXISTING SPRINKLER HEADS AND PIPING IN THE AREA OF WORK, BACK TO EXISTING SPRINKLER MAINS. ALL ABANDONED PIPING TO BE REMOVED.
2. MAKE ANY NECESSARY TEMPORARY CONNECTIONS BETWEEN EXISTING AND NEW WORK TO MAINTAIN CONTINUOUS SERVICE OF ALL EXISTING SYSTEMS. MINIMIZE SHUTDOWNS. OBTAIN WRITTEN APPROVAL FROM ARCHITECT/OWNER FOR SHUTDOWNS. ALL SHUT-DOWNS REQUIRE 48 HOUR NOTICE TO OWNER.
3. CONTRACTOR SHALL CAREFULLY EXAMINE EXISTING CONDITIONS BEFORE STARTING ANY WORK.
4. CONTRACTOR SHALL NOTIFY ARCHITECT/ENGINEER BEFORE REMOVING OR RELOCATING ANY EXISTING PIPING NOT INDICATED ON DRAWINGS.

FIRE PROTECTION GENERAL NOTES

1. GENERAL NOTES, SYMBOL LIST AND DETAILS ARE APPLICABLE TO ALL FIRE PROTECTION DRAWINGS.
2. ALL WORK IS NEW UNLESS OTHERWISE NOTED.
3. ALL FIRE PROTECTION WORK SHALL BE IN ACCORDANCE WITH THE CURRENT FIRE PROTECTION CODE AND ALL APPLICABLE LOCAL CODES AND DRAWINGS.
4. REFER TO SPECIFICATION SECTION 01382 FOR GENERAL LEED REQUIREMENTS FOR COMMERCIAL INTERIORS.
5. REFER TO SPECIFICATION SECTION 01810 FOR LEED REQUIREMENTS FOR COMMISSIONING.
6. PROVIDE WET-PIPE SPRINKLERS IN ALL AREAS. PROVIDE DRY-TYPE SPRINKLER SYSTEM IN ALL AREAS WHERE AMBIENT TEMPERATURE IS 40 DEG F OR BELOW.
7. SECURE WATER FLOW TEST DATA TAKEN FROM FIRE HYDRANTS NEAREST SITE. IF RECENT FLOW TEST DATA IS NOT AVAILABLE FROM CITY RECORDS, MAKE NECESSARY TESTS AS REQUIRED BY NFPA STANDARDS TO DETERMINE CHARACTER OF WATER SUPPLY. MINIMUM OF 20 PSI DROP IN PRESSURE BETWEEN STATIC AND RESIDUAL PRESSURE SHALL BE REQUIRED IN ORDER TO OBTAIN ACCURATE DATA.
8. SPRINKLER SYSTEM SHALL BE HYDRAULICALLY CALCULATED.
9. ADD 10% CONTINGENCY FACTOR TO HYDRAULIC CALCULATIONS.
10. EXACT LOCATION OF SPRINKLER HEADS IN FINISHED AREAS WITH SUSPENDED CEILING SHALL BE AS INDICATED ON REFLECTED CEILING PLANS.
11. MINIMUM PRESSURE AT END SPRINKLER HEAD 7 PSI.
12. EQUIVALENT FITTING LENGTHS USED IN HYDRAULIC CALCULATIONS SHALL BE IN ACCORDANCE WITH NFPA STANDARD NO. 13 AND FACTORY MUTUAL 0.5 2-8N.

    A. WHEREVER FITTINGS ARE USED IN CONJUNCTION WITH LIGHTWALL PIPE, EQUIVALENT FITTING LENGTHS INDICATED IN NFPA-13 SHALL BE INCREASED BY 39%.
13. MAXIMUM FLOW VELOCITY SHALL NOT EXCEED 20 F.P.S.
14. ALL AUTOMATIC SPRINKLER HEADS, PIPE FITTINGS, PIPE HANGERS, AUTOMATIC CONTROL VALVES AND MANUAL CONTROL VALVES SHALL BE UL LISTED AND BEAR FACTORY MUTUAL APPROVAL AND SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.
15. ALL EXPOSED PIPE, FITTINGS, HANGERS AND SUPPLEMENTARY STEEL SHALL BE PAINTED.
16. ENDS OF ALL CROSS MAINS SHALL BE PROVIDED WITH THREADED FLUSHING CONNECTION NO MORE THAN 2 INCHES IN DIAMETER.
17. PROVIDE AUXILIARY DRAINS FOR ALL PIPING BELOW DUCT SPRINKLERS AND OPEN TRAPPED SECTIONS. PIPING TO ONE SINGLE SPRINKLER IS EXCLUDED.
18. PROVIDE FLUSHING CONNECTIONS WHERE REQUIRED BY NFPA AND F.M.
19. COORDINATE WITH OWNER FOR ALL SHUTDOWNS.
20. PROVIDE TEST CONNECTIONS AT HIGHEST POINT OF MAIN PORTION OF EACH SPRINKLER SYSTEM, WITH 1" PIPE AND VALVE. TEST PIPE SHALL BE CONNECTED TO SPRINKLER PIPE AT LEAST 1-1/4" IN SIZE AND SHALL DISCHARGE OUTSIDE BUILDING OR THROUGH 1/2" SMOOTH BORE BRASS OUTLET, WHERE IT CAN BE EASILY SEEN.
21. PROVIDE ADDITIONAL HEADS UNDER DUCTWORK LARGER THAN 48" WIDE.
22. THE REUSE OF EXISTING SPRINKLER HEADS SHALL BE PROHIBITED.
23. NEW SPRINKLER HEAD TYPE AND TEMPERATURE RATING SHALL BE IN ACCORDANCE WITH SCHEDULE UNLESS NOTED OTHERWISE AND/OR REQUIRED BY THE LOCAL AUTHORITY HAVING JURISDICTION.
24. COORDINATE ALL PIPE PENETRATIONS AND CORING WITH STRUCTURAL ENGINEER AND IN ACCORDANCE WITH DIVISION 01.
25. REFER TO ARCHITECTURAL DRAWINGS FOR ALL CEILING RELATED WORK.
26. COORDINATE ALL NEW FIRE PROTECTION WORK WITH ALL EXISTING AND/OR NEW DUCTWORK, PIPING AND UTILITIES OF ANY SYSTEMS. DRAWINGS ARE DIAGRAMMATIC AND SHOW THE INTENT OF THE DESIGN. REROUTE ANY PIPING AROUND EXISTING AND/OR NEW SYSTEMS INCLUDING ALL REQUIRED FITTINGS AND SUPPORTS TO MAKE THE INSTALLATION OF THE PIPING AND SPRINKLER HEADS POSSIBLE. RESEAL ANY FIRE AND/OR SMOKE RATED PENETRATIONS THAT HAVE BEEN AFFECTED AS A RESULT OF THE MODIFICATION.
27. ALL COMPONENTS USED IN FIRE PROTECTION SYSTEMS SHALL BE IN ACCORDANCE WITH THE OWNER'S GUIDELINES, STANDARDS AND SPECIFICATIONS.

SPRINKLER HEAD SCHEDULE

TYPE	DESIGNATION	UPRIGHT	PENDENT	FLUSH PLATE SPKR.	RECESSED	SIDEWALL (CONCEALED)	SIDEWALL (NATURAL BRONZE FINISH)	FLUSH PENDENT	DRY	QUICK RESPONSE	EXTENDED COVERAGE	EXIST SPKLR TO BE REMOVED	EXIST SPRINKLER HD	MANUFACTURER: CENTRAL	MANUFACTURER: RELIABLE	MANUFACTURER: GRINNELL	MANUFACTURER: STAR	MANUFACTURER: VIKING	MANUFACTURER:	MODEL NUMBER	REMARKS
	—○												●								
	⊠											●									
	—●			●						●										G5-56	K=5.6, 1/2" ORIFICE 165°F RATING, 135°F COVERPLATE
	—⊙	●								●										F1FR56	K=5.6, 1/2" ORIFICE 155°F RATING
	—◁					●				●										G6-56	K=5.6, 1/2" ORIFICE 155°F RATING, 135°F COVERPLATE

NOTES:

1. EXPOSED UPRIGHT HEADS IN OCCUPIED SPACES SHALL BE CHROME FINISH.
2. PROVIDE ESCUTCHEONS WHEN PENETRATING EXPOSED WALL.
3. PROVIDE SPRINKLER GUARDS AT ALL HEADS 7'-0" AND LOWER.
4. COLOR SELECTION BY ARCHITECT.
5. CORRIDOR SPRINKLER HEAD TO MATCH THERMAL SENSITIVITY WITH EXISTING SPRINKLER HEADS.

FIRE PROTECTION DRAWING LIST

DRAWING No.	DRAWING TITLE
F00-01	FIRE PROTECTION COVER SHEET
F01-0B	FIRE PROTECTION BASEMENT PLAN
F02-00	FIRE PROTECTION DETAILS

PLAN NORTH / TRUE NORTH

Reviewed for Code Compliance
Portland Fire Prevention Division
Approved with Conditions

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Title

FIRE PROTECTION COVER SHEET

Sheet

F00-01

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