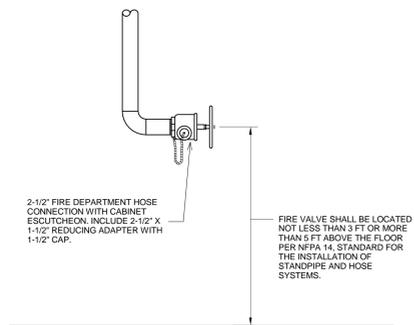
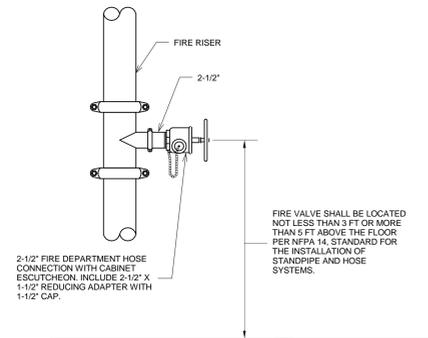


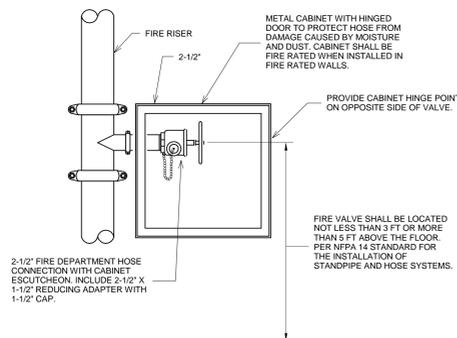
12 HANGER WITH CONCRETE
NTS



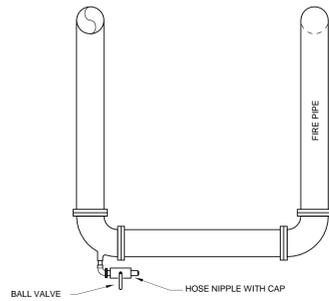
13 FIRE DEPARTMENT VALVE
NTS



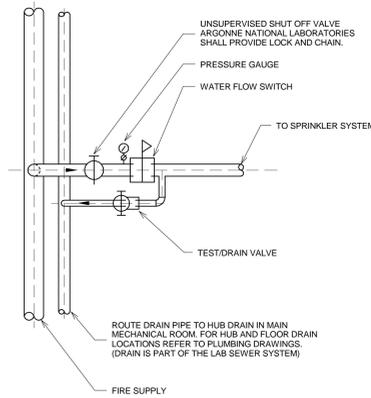
14 FIRE DEPARTMENT VALVE WITH RISER
NTS



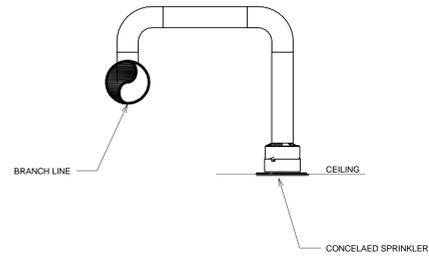
15 FIRE VALVE CABINET
NTS



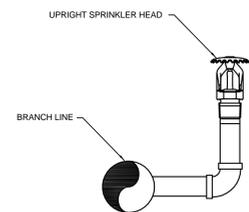
8 LOW POINT DRAIN
NTS



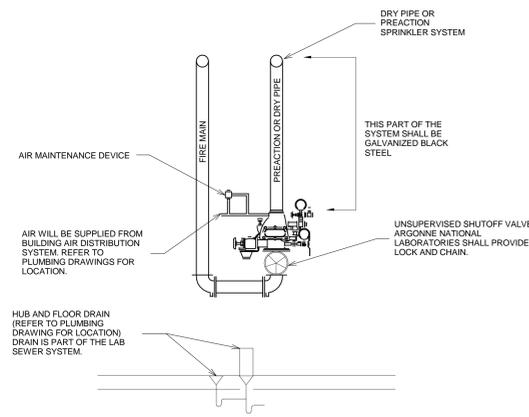
9 SPRINKLER ZONE CONTROL VALVE ASSEMBLY
NTS



10 SPRINKLER HEAD - CONCEALED
NTS

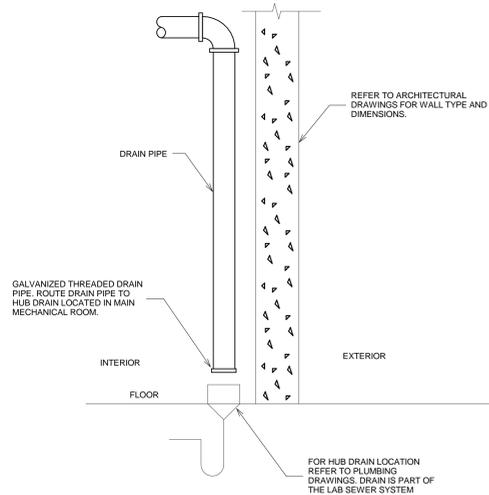


11 SPRINKLER HEAD - UPRIGHT
NTS

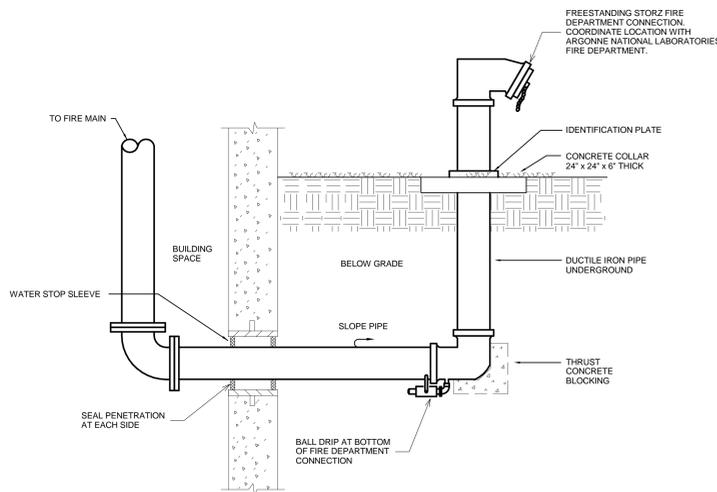


NOTE:
1. APPROXIMATE FREE SPACE NEEDED FOR DRY PIPE OR PREACTION ROOM BASED ON 1 ASSEMBLY:
5'-6" X 3'-6" CLEAR SPACE IF THE DOOR SWINGS INTO THE ROOM.
4'-0" X 3'-9" CLEAR SPACE IF THE DOOR SWINGS OUT OF THE ROOM.
110" OF SPACE NEEDED ON EACH SIDE OF THE UNIT AND 6" OF SPACE FROM UNIT TO BACK OF WALL. 36" OF SPACE NEEDED IN FRONT OF THE UNIT IF THE DOOR SWINGS IN.)
2. FOR HUB DRAIN AND FLOOR DRAIN LOCATIONS REFER TO PLUMBING DRAWINGS.

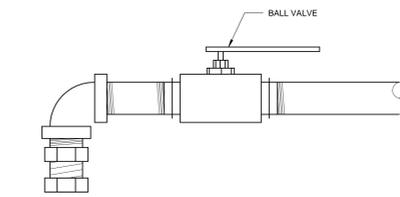
5 DRY PIPE OR PREACTION VALVE ASSEMBLY
NTS



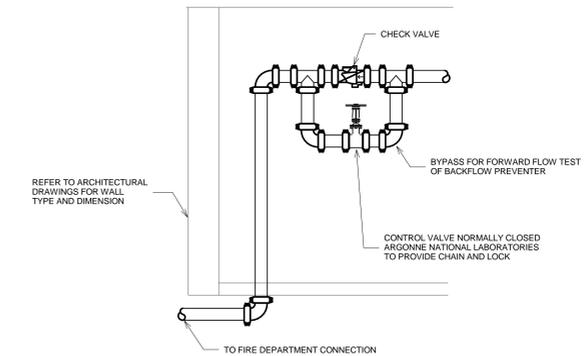
6 INTERIOR DRAIN PIPE
NTS



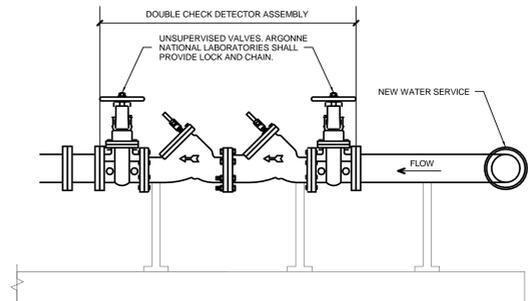
7 STORZ FIRE DEPARTMENT CONNECTION
NTS



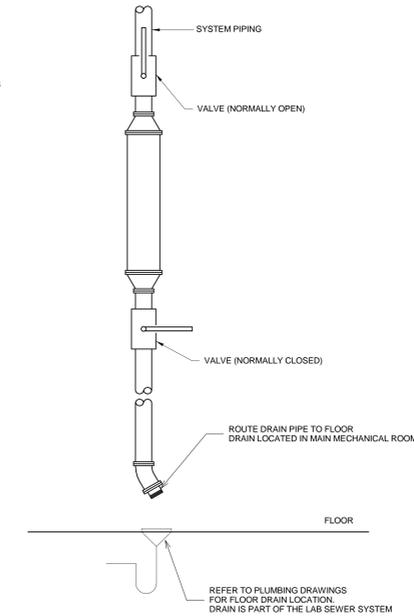
1 AUXILLARY DRAIN
NTS



2 FIRE DEPARTMENT CONNECTION BYPASS VALVE
NTS



3 DOUBLE CHECK DETECTOR ASSEMBLY
NTS



4 DRUM DRIP
NTS

SMITHGROUP
architecture engineering interiors planning

SMITHGROUP, INC
35 EAST WACKER
SUITE 2200
CHICAGO, IL 60601
T 312.641.0770
F 312.641.6728
www.smithgroup.com

JJR
landscape architecture
planning
urban design
civil engineering
environmental science

JJR, LLC
35 EAST WACKER DRIVE
SUITE 2200
CHICAGO, ILLINOIS 60601
312.641.0510 T
312.641.0668 F
www.jjr-us.com

AEI Affiliated Engineers

Affiliated Engineers, Inc.
5802 Research Park Boulevard
Madison, Wisconsin 53719
Tel 608.238.2616 Fax 608.238.2614

Thornton Tomasetti

Thornton Tomasetti, Inc.
330 N. Wabash Avenue, Suite 1500
Chicago IL 60611-7622
T 312.596.2000 F 312.596.2001

TERRA
ENGINEERING LTD.
225 West Ohio Street, 4th Floor
Chicago, Illinois 60654
T 312.467.5123 F 312.467.6220

SEALS AND SIGNATURES



ISSUED FOR CONSTRUCTION 07/03/12

REV. NO. DESCRIPTION BY APVD DATE

Argonne
NATIONAL LABORATORY

FMS
Facilities Management Services

PROJECT TITLE ADVANCED PROTEIN CRYSTALLIZATION FACILITY, ARGONNE NATIONAL LABORATORY

PROJECT NO. 08541-00

DRAWING TITLE

FIRE PROTECTION DETAILS

DESIGNED SPF A/E CAD FILE F6.1.0 FACILITY (NOI)

DRAWN MYL A/E DWG. NO. F6.1.0

CHECKED SPF CAD NO.

PROJECT MANAGER DWG STATE

ANL - JESSE ADAMS BND ORDER

DATE - 04/26/11

FACILITY DOCUMENT NUMBER REV. NO.

J446-101-W- F6.1.0