SECTION 104400
FIRE PROTECTION SPECIALTIES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes fire extinguishers; fire extinguisher cabinets; and brackets for wall mounting.
B. This standard is provided to obtain and maintain adequate, approved fire protection for Stanford University. Any questions regarding this standard shall be directed to the Stanford University Fire Marshal’s Office (SUFMO).
C. In general, all fire protection design issues are subject to internal review and approval by SUFMO.

1.2 REFERENCES

A. Fire Extinguishers Study Guide, as published by the Office of State Fire Marshal.
B. UL (Underwriters Laboratories, Inc.) - Fire Protection Equipment Directory
C. CFC Section 906

1.3 SUBMITTALS

A. Architectural Drawings: All fire extinguisher (FE) locations shall be shown on the drawings and indicate whether FE's are to be in cabinet(s) or wall mounted. Provide product data submittals for all cabinets to be installed as part of the project to SUFMO for approval prior to purchase.
B. The Project Manager will submit the drawings to SUFMO for approval as part of the normal SUFMO review process. After receiving comments, the contractor shall make appropriate changes to the drawings. For any requirements not implemented, design consultant/contractor shall provide an explanation in writing.
C. Manufacturer’s data sheets for all types of fire extinguisher cabinets, signs and other accessories shall be submitted. Exact model shall be indicated on the data sheet when more than one model is shown.
   1. Include physical dimensions, operational features, color and finish, anchorage details, rough-in measurements, location and details.
D. Record Drawings: At project close-out, the Contractor shall provide to the Project Manager a record set of drawings that includes the location of each extinguisher and other installed hardware on the final floor plans.

1.4 ENVIRONMENTAL REQUIREMENTS

A. Interior cabinets shall only be located in interior locations. Exterior locations shall utilize weather-proof cabinets.

PART 2 - PRODUCTS

2.1 FIRE EXTINGUISHERS – Fire Extinguishers are Stanford furnished items and will be charged to the single project work request/work order; a separate work request is not required. Fire protection cabinets are to be approved by SUFMO and provided by the Contractor. The fire extinguishers are furnished, and by SUFMO. Delivery or pickup of fire extinguishers shall be coordinated by Contractor with SUFMO.

A. Minimum Type and Location:

1. 3A:40B:C extinguishers in all common areas, elevator control rooms, generators and at electric vehicle charging stations as required by SUFMO.

2. 5 lb CO2 extinguishers in all wet chemical labs. 10 lb CO2 extinguishers in all hook mounted main mechanical and main electrical rooms.

3. Class K to be located in kitchens using combustible cooking media (vegetable or animal oils and fats) within 30' of the appliance being served.

4. 3A:40B:C extinguishers shall also be located in commercial kitchens to address other hazards, Data Centers, Communication Hubs – type as required by SUFMO.

5. Magnet Rooms – Non-magnetic Clean Guard or Water Mist extinguisher is required to protect MRI and NMR equipment. All other fire extinguishers in proximity to an MRI or magnetic devices shall be a non-magnetic type of extinguisher.

B. Halon: Not permitted for new installations.

C. Water Type: For exterior use only as approved by SUFMO.

D. Class B,C and D fire hazards: type as required by SUFMO.

E. The minimum number of extinguishers and spacing shall be as required by CFC 906.

   a. The preferred location for ABC extinguishers is adjacent to exits and in the corridors and main egress paths.

   b. In buildings with labs; the preferred location for ABC fire extinguishers in the corridor and main egress paths with supplemental five pound C02 (B: C) extinguishers located inside each lab. Travel distance to a Class A extinguisher shall not exceed 75 ft. Travel distance to a C02 extinguisher is 30 ft in labs.
2.2 FIRE EXTINGUISHER CABINETS

A. Configuration: Recessed or Semi-Recessed
   Exception: Exterior weather-proof cabinets may be surface mounted.

B. Door: Latch or roller catch access only, key lock access is not acceptable. Cabinet doors shall be equipped with a vision panel.

C. Door Glazing: Break glass type cabinets are not acceptable.

D. Cabinet interiors to have a minimum clear space of 18 inches high by 8 inches wide x 5 inches deep and be capable of containing the specified fire extinguisher.

F. Cabinets exposed to the elements shall be weather proof.

PART 3 - EXECUTION

3.1 EXTINGUisher INSTALLATION

A. Extinguishers: Installed by Contractor, furnished by SUFMO

B. Portable Fire Extinguishers in Labs or “back of house” areas shall be bracket mounted.

C. Portable Fire Extinguishers in areas accessible to the public shall be installed in Cabinets.

D. If Portable Fire Extinguisher is not readily visible, signage shall be provided.

3.2 CABINET INSTALLATION

A. Install per Manufacture’s Specifications.

B. Install fire extinguishers in cabinets at the completion of construction.

C. Cabinets shall be located so that the hinge door has a clear opening dimension of 180 degrees.

D. Fire extinguisher cabinets shall be installed so that the top of the cabinet is not more than 5 ft. above the floor.

E. Signs shall be installed wherever extinguishers are not readily visible to identify their location. Where cabinets are used signs shall be installed to identify location along the corridor or hallway.
3.3 BRACKET INSTALLATION

A. Hand held portable fire extinguishers, not housed in cabinets, shall be installed on the hangers or brackets supplied by the manufacturer. Hangers or brackets shall be securely anchored to the mounting surface in accordance with the manufacturer’s installation instructions.

B. Brackets for hanging fire extinguishers will normally be furnished by SUFMO, and installed by contractor.

3.4 WARRANTY

A. Contractor shall warranty cabinets, accessories, and workmanship for a period of one (1) year from the date of final acceptance.

END OF SECTION