



CHANDLER FIRE DEPARTMENT



Plan Review Guide For Fire Sprinkler Systems

PROJECT NAME: _____
PROJECT ADDRESS: _____
CONTACT PERSON: _____

CITY LOG #: _____
CONTRACTOR: _____
TELEPHONE #: _____

Fire sprinkler system installation information shall be provided on the appropriate drawings. A copy of this guide shall be attached to submitted drawings. **A review will not be conducted without this guide being submitted with the drawings.** Any modifications to existing systems shall be submitted for plan review to Transportation and Development Department. Plans shall be reviewed, approved, permit issued and on site prior to work beginning. A contractor licensed by the State to do such work SHALL perform all such work and who holds a current valid permit from the Fire Department to work within the City of Chandler.

1. Fire Department "General Notes to the Contractor: are provided on the plans.
2. Pursuant to Board of Technical Registration guidelines adopted March 17, 1989 sprinkler system design criteria has been accomplished by a registrant; and the submittal bears the registrants seal.
3. A City Inspector shall witness the testing of the Sprinkler System. Contact your Building Inspector to schedule an inspection at least 48 hours in advance. The contractor shall provide the City Building Inspector two copies of Inspection, Testing and Maintenance form (require by NFPA), prior to the start of any Inspection or Testing of the system. One copy of the completed Inspection, Testing and Maintenance form will then be given to the contractor upon successful completion of the inspection or test of the system.
4. The Building Code occupancy class of each area or room in the building is indicated on the drawings.
5. Indicate the type of system to be installed: NFPA 13_ 13R__ 13D__ Other__
6. Plans shall be drawn to an indicated scale, on sheets of uniform size, with a plan of each floor, and shall show those items from the following list that pertain to the design of the system:
 - a. Name of owner and occupant.
 - b. Name and address of contractor.
 - c. Location, including correct street address.
 - d. Point of compass.
 - e. Full height cross section.
 - f. Ceiling construction.
 - g. Fire wall locations.
 - h. Partition wall locations.
 - i. Fire door locations.
 - j. Unprotected window openings.
 - k. Large unprotected floor openings.
 - l. Location and dimensions of:
 - i. Concealed spaces
 - ii. Bathrooms
 - iii. Attics
 - iv. Closets
 - m. Any small enclosures in which NO sprinklers are to be installed.
 - n. A legend list with descriptions.
 - o. Detail of connection to the underground fire line (do not state see civil).
 - p. Shape of design area.
 - q. A sprinkler head table listing the manufacturer, model, orifice size, temperature rating, and protection area for each head type, and number of sprinkler heads per riser on each floor.
 - r. The following in a "DESIGN CRITERIA" box:
 - i. Hazard class
 - ii. Design density
 - iii. Design Area (sq. ft.)
 - iv. Number of sprinklers in design area

- v. Water supply data:
 - 1. Test date and location
 - 2. Flow PSI and GPM
 - 3. Residual PSI
 - 4. Static PSI
 - s. City main size and system elevation relative to flow test hydrant.
 - i. System demand:
 - ii. PSI at riser
 - iii. GPM at riser
 - iv. Hose stream and in-rack sprinkler water allowance
 - t. Riser detail (including flow switch, gauges, check valve, main drain, control valve [if located on riser, if not reference civil sheet for PIV], and fittings).
 - u. Pipe type and schedule of wall thickness.
 - v. Type and location of hangers, sleeves, braces, and methods of securing sprinklers
7. Cut sheet literature describing all system components are included as attachments; or component manufacturer, make, and model data is included on the drawings when the components are listed in the Underwriters Laboratories Inc. "Fire Protection Equipment Directory".
 8. Calculations for hydraulically calculated systems contain the data required in accordance with NFPA.
 9. A detail of the hydraulic data nameplate is included on the drawings.
 10. The riser PIV shall be located as close to the outside of the building as practical where the riser is located. If the riser PIV is eliminated a note shall be place on the Fire Protections Sprinkler plans that Fire Department detail FD105 shall be used. The Civil Engineer is required to coordinate with the Fire Sprinkler Designer to ensure FD105 is placed on the Fire Sprinkler plans for review.
 11. The type and locations of all control valves, check valves, and main and auxiliary drains are indicated and identified on the drawings.
 12. The maximum floor area on any single floor, served by an individual riser, does not exceed NFPA allowance.
 13. The location and size of the inspectors test valve is indicated on the drawings.
 14. The location and type of local water flow alarm is indicated on the drawings. (Red)
 15. Third party monitoring of water flow is provided for systems in accordance with the Fire Code.
 16. Sprinkler heads are positions no closer than 4 inches to any wall, and no further from a wall that one-half the allowable distance between sprinklers.
 17. The clear space below sprinklers is in accordance with NFPA.
 18. Sprinkler system installation under exterior roofs or canopies exceeding four feet in width, attached to the building is indicated on the drawings.
 19. Sprinkler head installation under ducts (more than 4 feet in width) is indicated on the drawings.
 20. Sprinkler head installation for shade structure 3000 square feet or more is indicated on the drawings.
 21. Fire hose valves and stations (when required or provided) are spaced so that all protected areas are within thirty feet of a nozzle when attached to not more than 100 feet of hose. Fire hose valves shall be 2- 2 1/2 male connections (NST) with gate valve. All Piping to the hose stations shall be 2 ½ in or larger. **No hose shall be attached.**
 22. The placement, location and contents of the spare sprinkler head cabinet is indicated on the drawings.
 23. Show any special hazards for the building fire sprinkler system "in-rack", "bin", or "high piled" storage inside the building; storage of flammable and/or combustible liquids within the building; any use, dispensing, or mixing of flammable and/or combustible liquids within the building; any storage, use, dispensing, handling, or mixing of any chemicals other than flammable or combustible liquids inside the building.