The goal of the Aurora Building Division Life Safety is to assist the developer/builder with assembling a comprehensive set of plans that will result in their project moving smoothly through the building review process in the least amount of time (specific time tables are shown on the last sheet of this checklist). The material contained within this checklist will aid in both the predictability and timeliness of the plan review process and eventual installation of your project.

The following checklist contains the minimum standard information required for a "Limited" project submitted for review for the purpose of obtaining a building permit. The scope of the building plan review is the examination of fire sprinkler (and standpipe) system documents for compliance with the requirements of the adopted codes of the City of Aurora.

Prior to acceptance of plans for formal review, Life Safety plan review staff will screen the plans for general completeness and for compliance with the minimum submittal checklist requirements. Information required for each checklist item shall be clearly documented on the plans as applicable to the project, to accurately describe the scope of the proposed work. Submitted plans cannot be accepted for review until all required information contained in the checklist is clearly shown. Pre-Submittal Consultations with our Life Safety staff are available upon request to discuss or resolve any code issues related to the fire sprinkler (and standpipe) system plan review.

A City of Aurora D-7 contractor's license is required to perform Fire Sprinkler/Standpipe installations. Building permits for this type of work can only be issued to an appropriately licensed contractor. Licensing information is available from the Aurora Building Division by calling 303-739-7420. Please ask for a licensing representative.

- A plan review may only be accepted with a valid address.
- The reviews of fire sprinkler (and standpipe) plans are independent of the primary building construction documents.
- Plan review fees must be paid in full before plans will be accepted for plan review.
- A plan review submittal package is required for each individual building, tenant space and building address.
- A completed building permit application form must accompany each submittal.
- Plans received by mail, courier, UPS or otherwise unaccompanied by an applicant knowledgeable with the project will be checked for completeness per this checklist. If the plans are determined to be unacceptable for plan review, the applicant (listed contact person) will be notified that the plans must be picked up within two weeks, or they will be discarded.
- The fire sprinkler (and standpipe) system installation shall be made in accordance with the drawings, specifications, and applicable standards. Should a conflict occur between the drawings and specifications, the specifications shall prevail.

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<td><strong>Project Title</strong></td>
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<td><strong>Staff Person Reviewing Submittal</strong></td>
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**Comments**
THE CITY OF AURORA HAS ADOPTED THE FOLLOWING CODES

- 2009 International Building Code (IBC)
- 2009 International Fire Code (IFC)

KEY LIFE SAFETY PLAN REVIEW AND PERMIT PERSONNEL

- Mike Dean, Life Safety Plans Examiner Supervisor (303) 739-7447.
- Jean Pardue, Life Safety Plans Examiner (303) 739-7410.

PERMIT FEES

- A fire protection system fee schedule can be found at the following City of City of Aurora website: https://www.auroragov.org/DoingBusiness/TaxesandFees/Fees/BuildingandPermitFees/index.htm

WATER FLOW TEST INFORMATION

- Water flow test information can be obtained by calling the Aurora Water Department at 303-739-7296.

GENERAL

- The 2009 International Fire Code section 903.3 lists the requirements for the manner in which fire sprinkler systems shall be designed and installed.
- The 2007 National Fire Protection Association Standard 13 (NFPA 13) Automatic Sprinkler Systems, Section 8-1 and 8-2 lists the minimum requirements for fire sprinkler plans and specifications that must be submitted before any equipment is installed or remodeled.
- The Colorado Department of Public Safety, Division of Fire Safety, Fire Suppression Program, 8CCR 1507-11 requires the following information be submitted before any equipment is installed or remodeled:
  - All fire suppression contractors are required to include their Colorado registration number on all plans and hydraulic calculations to identify that they are registered to do business in Colorado.
  - Every registered fire suppression system contractor must register all plans, along with product data sheets and hydraulic calculations prior to all installation, fabrication, modification or alteration of any project on a fire suppression system in the State of Colorado.
- The plans and hydraulic calculations must bear the signature of a P.E. or NICET Level III or above.
- The contractor must file the required documents for registration with the local authority having jurisdiction.
- Flow tests on water supply systems must be less than one year old unless approved by the certified fire suppression system inspector having jurisdiction. For flow test information within the City of Aurora please contact the Aurora Water Department at 303-739-7296.
- When calculating water supply requirements for new installation, deduct ten (10) percent to a maximum of ten (10) psi from the static and residual pressure.
- Show the actual flow and reduction on hydraulic calculation sheets.

DRAWINGS

- All sheets to be same scale except site plan (minimum acceptable scale 1/8”) and include the drawing number, revision date and sheet title.
- Name and address of project.
- Name and address of installing contractor.
- Title block showing “Prepared By” section, NICET certification sub-field, level, number and expiration date.
- Title block showing “Reviewed By” section, Colorado Registered Professional Engineer.
- Compass points.
- Key plan for building sections.
- Standard plan symbols and legend (sprinkler symbols must comply with NFPA 170).
- All sheets must be clear and legible.

FIRST SHEET OF DRAWINGS (TITLE SHEET)

- General notes must include:
  - This project consists of a _____ Story building, constructed of _____ and used as _____ (Per 2009 IBC, Chapter 5).
  - Type of construction _____.
  - Building occupancy classification per the 2009 IBC _____.
  - System #1 is a _____ system designed to the 2007 NFPA 13 Edition.
  - All branch line piping to be _____.
  - All fittings ¾” through 2” to be _____ type fittings.
  - All fittings 2-1/2” & larger to be _____ grooved type fittings.
  - All hangers to be in accordance with 2007 NFPA 13 Editions.
  - All material to meet 2007 NFPA 13 Edition.
  - All underground piping to be tested and flushed prior to connecting the overhead piping system.
  - Maximum square footage per head is _____ Sq. Ft.
  - Sprinkler heads _____ to be located in the center of the ceiling tile or aligned with light/ceiling fixtures.
  - Sprinkler contractor to begin work at _____.
  - The authority having jurisdiction is the aurora building division/life safety.
  - Scope of work ____ in accordance with the 2009 ifc and the 2007 NFPA 13 Edition.
- Specific notes required by the Aurora Building Division must include:
  - Owner is responsible for providing heat, above 40 degrees fahrenheit, adequate enough to prevent freezing of the sprinkler piping.
  - All valves controlling the water supply to 20 or more sprinkler heads must be supervised. At the time of final inspection, fire safety systems must be supervised by an approved ul-listed monitoring agency.
• The contractor (or designee) must provide all necessary testing equipment and perform all testing required by the life safety inspector.

• All new or existing fire alarm systems must be interconnected with the flow switch of the fire sprinkler systems outside horn and strobe.

• Installation of interior alarms activated by the fire sprinkler water flow will be required per 2009 IFC, 903.4.2. Approved audible devices shall be connected to every automatic fire sprinkler system.

• Important: in the event that a concealed space is not shown on the plan submittal and is discovered in the field, the installing contractor must comply with 2007 NFPA 13, Section 8.15.1.

• All water supply valves and water flow switches shall be electrically supervised, IFC 2007, 903.4.

• Electrical exterior horn and strobe should be listed for outdoor use, IFC 903.4.2. Outside horn and strobe will activate upon both general alarm and flow switch activation. When fire alarm panel is silenced, the interior and exterior strobes will continue until fire alarm panel is reset.

• All control valve(s) within the riser room must be accessible, 2007 NFPA Section 8.16.1.1.7.

• Pressure gauges are required on the system side of the main valve and on the supply side of the backflow preventor.

• Both new and existing fire sprinkler systems must be equipped with approved Knox caps.

• The fire department connection must be located not less than 18 in. And not more than 4 ft above the level of the adjacent grade or access level. 2007 NFPA 13, Section A.8.17.2.

SHORT-FORMAT DESIGN CRITERIA FOR CHANGES OF TWENTY (20) OR FEWER SPRINKLERS

- Existing system alterations, or the installation of a tenant finish system to an existing riser assembly, and consisting of 20 or fewer heads is considered a small project, and can be issued as a counter permit.

- Existing system alterations or modifications involving fewer than 20 sprinkler heads shall not require hydrostatic testing, unless piping has been replaced and/or altered.

- Small systems meeting the above requirements may be eligible for “walk thru” plan review depending on availability of plan review staff.

- Plan preparation required by a NICET III qualification for fire sprinkler system or qualified Professional Engineer.

- Project name.

- Contractor’s name, address and phone number.

- Location of project (address, suite, etc.).

- Written scope of work including the square footage of the project.

- Graphical scope of work reflecting the connection of new work into the existing system.

- Key map showing where the respective project is within the building/site.

- Location of all sprinklers and piping to be modified.

- When project is a tenant finish, show adjacent rooms, piping and sprinklers.

- New work conducted on existing fire sprinkler or standpipe systems will require the installation of approved Knox caps.

STANDPIPE REQUIREMENTS

- All designs must meet the 2007 NFPA 14 Edition criteria and requirements as required of the 2009 IFC.

BACKFLOW PREVENTION

- The backflow prevention device must be shown on the sprinkler drawings. A specification sheet must be included with the fire sprinkler (or standpipe) plan submittal.

- Only those models approved by the Cross Connection Control group of the Aurora Water Department will be allowed to be installed. For questions related to approved backflow prevention devices please contact the Cross Connection Control Division at 303-326-8129 or 303-326-8114.

- The hydraulic calculations must reflect the backflow prevention devices pressure loss data.

- All fire lines, landscape irrigation lines and commercial water service lines will require a reduced pressure backflow prevention assembly or double check backflow prevention assembly as required by the City of Aurora Water Department. Contact the Building Division at (303) 739-7420 to schedule flow tests for private fire lines prior to the issuance of a certificate of occupancy. For more information on backflow prevention, contact Aurora Water at (303) 326-8129.

- Backflow prevention requirements can be found in section 19.03 of Aurora Waters “Standard and Specifications Regarding Water, Sanitary Sewer and Storm Drainage Infrastructure Manual” at the following City of Aurora website.

UNDERGROUND FIRE SERVICE LINE REQUIREMENTS

- The fire service line must be shown on the sprinkler drawings. Indicate the size and the type of piping material of the underground fire service line being connected to the overall fire sprinkler system.

- All fire service lines shall be installed, in their entirety, by a state licensed contractor. Licensing can be obtained from the Colorado Division of Fire Safety which is located at 690 Kipling Street, Denver, CO 80215 (303-239-4600).
Approved civil plans from the Aurora Water are required for all fire service line connections. For submittal requirements contact Aurora Water, 15151 E. Alameda Parkway, Aurora CO 80012, Phone 303-739-7370. To review our fire service line installation requirements please visit our website.

(Public Improvement Inspections) Once civil plans are approved the contractor must contact the Aurora Water Customer Call Center to schedule the chlorine, pressure and bacteria tests required by the Utilities Specifications Manual, Section 15 by calling 303-326-8645. Life Safety Inspector from the Building Division is not required to attend these inspections.

(Building Division Permit and Inspection) Once civil plans are approved the contractor must obtain a public improvements permit through the Aurora Building Division for the final flow test (super flush). The Contractor must present licenses and a copy of the approved civil plans to the Aurora Building Division (303-739-7420) to obtain this permit. Both Aurora Water Inspector and Life Safety Inspectors are needed for this inspection.

Upon completion of work, inspection and tests shall be made by the contractor’s representative and witnessed by an owner's representative. All defects shall be corrected and system left in service before contractor’s personnel finally leave the job. A “Contractor’s Material and Test Certificate for Underground Piping” certificate shall be filled out and signed by both representatives. Copies shall be prepared for approving authorities, owners, and contractor. It is understood the owner’s representative’s signature in no way prejudices any claim against contractor for faulty material, poor workmanship, or failure to comply with approving authority’s requirements or local ordinances. See Figure 10.10.1 of the 2007 NFPA 13 Standard.

REPAIR OF UNDERGROUND FIRE SERVICE LINE REQUIREMENTS

- Open trenching needed to repair any existing fire service line will require a Public Improvement permit obtained through the Aurora Building Division. For additional information call 303-739-7420.

FIRE HOSE THREADS & F.D.C. REQUIREMENTS

- Hose thread connections to sprinkler systems, standpipes or any other fire appliances shall be as follows:
  - 2½ Inch Connections – National Standard Thread (NST).
  - 1½ Inch Connections – Iron Pipe Thread (IPT)

- Approved Knox Caps are required on all FDC’s.
- New work conducted on existing fire sprinkler or standpipe systems will require the installation of approved Knox caps.

- Freestanding FDC installed must be pre-approved by the Life Safety Plans Examiner.
- The FDC must be located on the front main entry side of the structure and within 100 ft. of an on-site fire hydrant.
- The FDC must be fully visible and recognizable from the street or nearest point of fire department apparatus accessibility, and shall be located and arranged so that hose lines can be attached to the inlets without interference from nearby objects, including buildings, fences, posts, or other fire department connections.

FIRE SPRINKLER ROUGH AND FINAL INSPECTIONS - PROCEDURES FOR REQUESTING INSPECTIONS

- 24 hours advance notice is requested to meet scheduling request.
- Please contact (303) 739-7416 to schedule a fire sprinkler (or standpipe) inspection.
- Access to all required areas must be assured by the contractor to insure proper inspection of required system components.
- Special equipment or appliances necessary for any required inspection shall be provided by the contractor or business owner.
- Re-inspection fees may be applied to projects requiring multiple re-inspections due to poor system installation or repeated failure of NFPA 13 required system testing.

PLAN REVIEW TIMES

The City of Aurora Building Division has committed to overall maximum average times for plan reviews. Those plans requiring corrections will be rejected within the time frame listed below and, when resubmitted with all corrections done properly, would receive a plan approval within the time frame listed below following receipt of the complete and error free corrections.

City plan review for code compliance = 7 working days
Code corrections by applicant = 5 working days
City review of code corrections = 2 working days

TOTAL WORKING DAYS = 14 DAYS
TOTAL CALENDAR DAYS (WEEKS) = 21 DAYS (3 WEEKS)

BOARD OF APPEALS: The City of Aurora has created a Building Code and Contractors’ Appeals and Standards Board. Applicants have the right to have the board hear appeals of orders, decisions or determinations made by the building official relative to the application and interpretation of the building code. Any application for appeal to the board shall be based on a claim that the true intent of the code or the rules legally adopted thereunder have been incorrectly interpreted, the provisions of the building code do not fully apply or an equally good or better form of construction is proposed.

COMMENTS OR CONCERNS: We are always looking for ways to improve the website and our hand-outs for the Building Division. Please email bldginsp@auroragov.org with your comments and suggestions.

“Colorado’s only IAS Accredited Building Department”