



Automatic Fire Sprinkler System Submittal Requirements

Introduction

Thank you for your role in supporting development and life safety within the City of Bryan. The expertise, coordination, and technical judgment provided by automatic fire sprinkler system design professionals are essential to protecting occupants, supporting fire department operations, and ensuring code-compliant construction.

The purpose of this Automatic Fire Sprinkler Systems Submittal Guide is to assist sprinkler system design professionals in navigating the City of Bryan's plan review and permitting process efficiently. This guide is intended to clearly communicate submittal expectations, coordination requirements, and documentation standards necessary for a complete and compliant automatic fire sprinkler system design. Consistent and thorough submittals help reduce review cycles, minimize delays, and support successful installation, testing, and final acceptance.

By following the guidance outlined in this document, along with applicable adopted codes and the resources available through Development Services, design professionals can help facilitate a streamlined review process and a smoother progression through construction and Certificate of Occupancy approval.

We appreciate your professional contributions to projects within Bryan and look forward to working collaboratively throughout the design, review, and construction phases to support the long-term safety and success of each project.

Sincerely,

Bryan Fire Marshal's Office

414 Lawrence St, Bryan Tx, 77801
979.209.5960 Ext. 1
Bryantx.gov/fire

Disclaimer:

Submittal guides are subject to revision and update as adopted codes, local amendments, and departmental procedures change. Applicants are responsible for ensuring they are using the most current version of each submittal guide at the time of application. Always download the latest version of this document or reference the online version associated with the project to verify current requirements.

Contents

1	Code Adoption & Amendments.....	3
	NFPA ADOPTIONS	Error! Bookmark not defined.
2	Fire Sprinkler Permit Fees.....	3
2.1	Phased Construction and Multiple System Permits.....	4
3	Required Documents	4
3.1	Owner's Certificate	4
3.2	Protection of Piping Against Freezing Letter of Compliance	4
3.3	Manufacture Specifications	4
4	Drawings	5
4.1	Small Renovation Projects – Limited Scope Submittals.....	5
5	Building Design Components	5
	WALLS & PARTITIONS.....	5
	FIRE STOPPING/ CAULKING	5
6	Sprinkler System Components & Hardware	6
6.1	Underground Piping Plan Requirements	Error! Bookmark not defined.
6.2	Protection of Risers Subject to Mechanical Damage.....	6
6.3	Brackets & Hangers.....	6
6.4	Sprinkler Legends.....	6
6.5	Sprinkler Head Details.....	7
6.6	Protection against Physical Damage to Aboveground Piping.....	7
7	Valves & Connections	7
7.1	Water Flow Switch & Alarm.....	7
7.2	Control Valves	7
7.3	Control, Drain, and Test Valve Signage.....	7
7.4	Concealed Valves & Gauges.....	7
7.5	Test Connections.....	8
7.6	Inspector Test & Drain	8
7.7	FDC Requirements	8
8	Fire Department Access and Signage Requirements.....	9
9	Fire Sprinkler Acceptance Testing.....	9

Disclaimer:

Submittal guides are subject to revision and update as adopted codes, local amendments, and departmental procedures change. Applicants are responsible for ensuring they are using the most current version of each submittal guide at the time of application. Always download the latest version of this document or reference the online version associated with the project to verify current requirements.

9.1	Requesting Acceptance Testing	Error! Bookmark not defined.
9.2	Inspection Readiness and Scheduling Policy.....	9
9.3	Required Acceptance Testing Documents - Underground Piping .	Error! Bookmark not defined.
9.4	Required Acceptance Testing Documents - Aboveground Piping	9

1 Code Adoption & Amendments

The City of Bryan has adopted the 2021 edition of the International Fire Code (IFC), including Appendices B, C, D, E, F, and G, as published by the International Code Council. The code is adopted to the same extent as though fully set forth herein and is subject to the omissions, additions, supplements, and amendments contained in the [City of Bryan Municode](#)

In addition to the adopted fire code, projects within the City of Bryan are also subject to applicable provisions contained within [the Bryan / College Station Unified Design Guidelines Manual](#), Technical Specifications, and Standard Construction Details. These documents establish regional standards for site development, infrastructure, utilities, access, and construction practices and should be consulted when designing projects that involve fire department access roads, water supply infrastructure, hydrant placement, site grading, and other development features affecting fire protection and emergency access.

Design professionals and contractors are responsible for ensuring that all submitted plans and constructed work comply with the International Fire Code, City of Bryan amendments, and applicable Unified Design Guidelines and construction standards.

NFPA Adoptions

The adopted editions of National Fire Protection Association (NFPA) standards enforced by the City of Bryan are identified within 2021 IFC Chapter 80: Referenced Standards. Where an NFPA standard is referenced by the IFC, the edition listed in Chapter 80 shall be considered the enforceable edition unless otherwise modified by local ordinance.

Design professionals should consult Chapter 80 to verify the applicable edition of each referenced NFPA standard during system design and plan preparation.

2 Fire Sprinkler Permit Fees

Fire sprinkler permit fees are based on the scope of work and may vary depending on factors such as new construction or modifications to existing systems, as well as the number of risers, sprinkler heads, fire lines, private mains, remote FDCs, standpipes, and fire pumps. The permit fee includes the cost of plan review and acceptance testing. Additional fees may be assessed for reinspection's or repeat inspections due to non-compliance. Final fee amounts will be determined during the plan review process to ensure accurate assessment. Applicants are encouraged to review the current fee schedule, available at bryantx.gov/fire, prior to submittal.

Disclaimer:

Submittal guides are subject to revision and update as adopted codes, local amendments, and departmental procedures change. Applicants are responsible for ensuring they are using the most current version of each submittal guide at the time of application. Always download the latest version of this document or reference the online version associated with the project to verify current requirements.

PHASED CONSTRUCTION AND MULTIPLE SYSTEM PERMITS

When a project includes multiple fire protection systems that will not be constructed and commissioned simultaneously, and/or when phased construction is approved, each system or phase may require a separate permit application to ensure the installation status of each phase is properly tracked, inspected, and documented.

Each permit application shall clearly identify and reflect the approved phase designation. The phase name used on the permit shall match the approved phasing plan to ensure accurate inspection scheduling, acceptance testing, and project closeout documentation.

3 Required Documents

OWNER'S CERTIFICATE

The design team, in cooperation with the building occupants and sprinkler contractor shall complete an Owner's Information Certificate as outlined in NFPA 13, Chapter 4.

PROTECTION OF PIPING AGAINST FREEZING LETTER OF COMPLIANCE

Letter of Compliance – A signed and sealed letter from a Professional Engineer (PE) licensed in the State of Texas, attesting that they have reviewed the fire sprinkler system piping design and the associated thermal insulation as incorporated into the building design. The letter shall confirm that the system has been designed and installed to prevent the freezing of fire sprinkler piping in accordance with all applicable codes and standards, including the International Code Council (ICC) codes and any local amendments as adopted by the City of Bryan, as well as all applicable National Fire Protection Association (NFPA) standards.

The letter and associated construction documents shall include **clear graphical details** identifying all attic spaces and fire sprinkler riser rooms where sprinkler piping is installed and shall demonstrate the specific methods of freeze protection provided for each condition. Details shall be of sufficient clarity to verify compliance, including but not limited to insulation type and thickness, heat tracing (where provided), conditioned space boundaries, and any other measures used to maintain the required environmental conditions.

Graphical details are required within all applicable cut sheets of the plan set and shall also be clearly reflected in the fire protection system shop drawings submitted by the fire protection system designer.

MANUFACTURE SPECIFICATIONS

All material submittals shall include all components specified in the product data section, as well as any additional items required to ensure a complete and code-compliant installation. Where multiple products are shown on a manufacturer's catalog sheet, the specific item(s) to be used shall be clearly identified. This may be accomplished by removing unrelated pages or by clearly marking the applicable products through circling or highlighting.

Disclaimer:

Submittal guides are subject to revision and update as adopted codes, local amendments, and departmental procedures change. Applicants are responsible for ensuring they are using the most current version of each submittal guide at the time of application. Always download the latest version of this document or reference the online version associated with the project to verify current requirements.

4 Drawings

In addition to NFPA 13 Chapter 27- Submittal Requirements, plans shall include the elements as describe below in the Drawings & Documents Section.

Construction documents shall be prepared, signed, and sealed by a registered design professional when required by the statutes and regulations of the jurisdiction in which the project is located. All construction documents and supporting materials shall be submitted electronically through the City's online permit application system as part of the fire protection system review and approval process.

SMALL RENOVATION PROJECTS – LIMITED SCOPE SUBMITTALS

For renovation projects affecting fewer than 20 sprinkler heads, a detailed written scope of work and a clear sketch of the affected area may be submitted in lieu of full shop drawings. Hydrostatic testing shall be performed in accordance with NFPA 13 Section 29.7.1.1. The Fire Code Official reserves the right to require full shop drawings and/or hydrostatic testing at their discretion, even when fewer than 20 heads are involved, based on project complexity or field conditions.

5 Building Design Components

WALLS & PARTITIONS

The locations of partitions and fire-rated walls shall be clearly identified on the drawings through the use of legends, callouts, or other methods approved by the Fire Code Official, to ensure accurate coordination with the fire protection system design.

FIRE STOPPING/ CAULKING

Plans shall clearly identify the approved materials and methods to be used for firestopping and caulking, along with the specific locations where such protection is required. Additionally, notes and/or callouts shall designate the party responsible for the execution and completion of this work.

RISER ROOMS

The system design shall anticipate and provide adequate working space within the riser room to support required inspection, testing, and maintenance activities. Layouts shall account for the full operational envelope of valves and equipment and shall not create congested conditions that would hinder servicing or emergency operations.

Where wall-mounted heaters or other freeze protection equipment are installed, the design shall maintain the minimum clearances required by the manufacturer's installation instructions, and such clearances shall be clearly shown on the plans. The following sign shall be required to be posted in a conspicuous location near wall mounted heaters. Sign shall not be less than 5 inches by 7 inches and shall be made of durable material.

Disclaimer:

Submittal guides are subject to revision and update as adopted codes, local amendments, and departmental procedures change. Applicants are responsible for ensuring they are using the most current version of each submittal guide at the time of application. Always download the latest version of this document or reference the online version associated with the project to verify current requirements.

NOTICE: This wall-mounted heater and thermostat are provided for **fire sprinkler freeze protection** and are designed to maintain the riser room temperature **above 40°F (4°C)**.

- The thermostat **shall not be set higher than necessary** to prevent freezing.
- Excessive temperature settings are **prohibited**.

Improper thermostat settings may result in:

- Damage to the fire sprinkler system
- Unwanted or false system activations
- Increased risk of fire or equipment failure

Maintain thermostat settings only as required for freeze protection.

Do not adjust without authorization from qualified maintenance personnel.

6 Sprinkler System Components & Hardware

PROTECTION OF RISERS SUBJECT TO MECHANICAL DAMAGE

when required, plans shall display details and methods used to meet the requirements of IFC 507.5 and NFPA 16.5. Where installation of protective devices is required, plans shall provide notes and/or callouts for the party responsible for the execution and completion of this work.

INSTALLATION OF ABOVEGROUND PIPING- STRUCTURAL PENETRATIONS AND MODIFICATIONS

Where installation of aboveground fire sprinkler system piping requires boring, drilling, notching, or other modification of structural members, the construction documents and fire protection system shop drawings shall include **clear graphical details** identifying the location, size, and extent of all proposed penetrations or alterations.

Details shall demonstrate compliance with the applicable provisions of the International Building Code (IBC), referenced structural standards, and the structural engineer's design criteria.

BRACKETS & HANGERS

Plans shall include graphic details illustrating manufacturer specifications for the installation of all proposed hangers, sleeves, braces, and sprinkler support methods to be used on the project. These details must clearly depict the approved means of securing system components in accordance with applicable codes and manufacturer requirements.

SPRINKLER LEGENDS

Sprinkler legends shall be limited to information specific to the components utilized in the proposed project. Inclusion of unrelated or unused system components is not permitted.

Disclaimer:

Submittal guides are subject to revision and update as adopted codes, local amendments, and departmental procedures change. Applicants are responsible for ensuring they are using the most current version of each submittal guide at the time of application. Always download the latest version of this document or reference the online version associated with the project to verify current requirements.

SPRINKLER HEAD DETAILS

Plans shall include graphic details referencing manufacturer installation specifications for each type and model of sprinkler head identified in the sprinkler legend. These details shall indicate all applicable minimum and maximum installation dimensions to ensure compliance with manufacturer requirements and applicable code provisions.

PROTECTION AGAINST PHYSICAL DAMAGE TO ABOVEGROUND CONCEALED PIPING

Plans shall include graphic details and callouts clearly indicating the required method and specific locations of pipe protection within concealed spaces. Where non-metallic piping is installed through holes or notches in framing members (such as studs, joists, or rafters) and is located less than 1¼ inches from the nearest edge, steel shield plates shall be provided. These plates shall be a minimum of 0.0575 inches (16-gauge) in thickness, extend over the area of pipe penetration, and project no less than 2 inches above sole plates and below top plates. All protection methods shall be in accordance with 2021 IPC Section 305.6.

7 Valves & Connections

WATER FLOW SWITCH & ALARM

A main water flow switch shall be installed at the main riser downstream of the backflow preventer. All sprinkler water flow switches should be set to operate between 30 and 90 seconds. Alarm Bells shall have specific details indicating compliance to COB Amendment to IFC 2021 903.4.2. The alarm device required on the exterior of the building shall be a weatherproof horn/strobe notification appliance with a minimum 75 candela strobe rating, installed as close as practicable to the fire department connection.

CONTROL VALVES

Where required, a floor control valve assembly and test drain assembly, including waterflow and tamper detection devices, shall be provided for each floor and/or zone of the building. All control, supply, and test valves shall be installed in readily accessible locations, with operating handles or wheels positioned no higher than 7 feet above the finished floor, in accordance with applicable codes and standards.

CONTROL, DRAIN, AND TEST VALVE SIGNAGE

Valve Identification, Access, and Operability – All control, drain, and test valves shall be clearly identified with durable signage indicating the valve type and the specific area of the building (e.g., floor or zone) it serves. Sign lettering shall be a minimum of ¼ inch in height. Proposed wording shall be submitted for approval (e.g., “Control Valve – Fourth Floor North”). Signs shall be securely attached to the valve using a chain or other approved method.

All control valves shall be readily accessible and operable by a gloved hand without the use of tools, excessive force, or the need to remove building elements. Inline-type ball valves shall be installed with sufficient working clearance to allow both maintenance personnel and emergency responders to easily locate, reach, and fully manipulate the valve through its complete range of

Disclaimer:

Submittal guides are subject to revision and update as adopted codes, local amendments, and departmental procedures change. Applicants are responsible for ensuring they are using the most current version of each submittal guide at the time of application. Always download the latest version of this document or reference the online version associated with the project to verify current requirements.

motion. Valve orientation and surrounding conditions shall not impede rapid operation during emergency conditions.

CONCEALED VALVES & GAUGES

All components required to be accessible for inspection, testing, and maintenance in accordance with NFPA 25, and which are located within valve pits, behind doors, or concealed by removable access panels, shall be clearly identified on the plans. Notes and/or graphic details shall indicate the exact locations and dimensions of required signage to ensure visibility and accessibility. All identification shall comply with the provisions of NFPA 13 Section 16.1.1.

TEST CONNECTIONS

In accordance with NFPA 13, Section 7.2.5, any test connection provided shall be equipped with an orifice having a K-factor equal to or smaller than the smallest sprinkler K-factor installed in the system. Per Section 7.2.6, where a pressure-reducing or pressure-regulating valve is installed on a stand-alone system, a test connection with a K-factor equal to or greater than the smallest sprinkler K-factor on the system shall be provided downstream of the device. The use of bushings in drain lines is not permitted in new construction.

INSPECTOR TEST & DRAIN

Main drains shall be sized to accommodate the full flow capacity of the sprinkler system in accordance with applicable standards. Plans shall verify that adequate floor drain capacity is provided to handle discharge during main drain testing. A minimum air gap of ½ inch shall be maintained between the drain piping and the floor drain or funnel to prevent cross-contamination and ensure proper drainage during operation.

FDC REQUIREMENTS

All sprinkler systems with a supply line of 4 inches or greater shall be equipped with a 2½-inch Siamese fire department connection (FDC). For NFPA 13R systems, the fire department connection shall be a minimum of 1½ inches in size. All FDCs shall be installed in accordance with applicable codes, standards, and local jurisdictional requirements.

REMOTE FDC'S

The use of remote FDCs is generally discouraged due to increased installation complexity, higher potential for underground piping failures, greater exposure to damage or vandalism, and increased maintenance requirements. Remote FDCs often involve longer piping runs that are susceptible to corrosion, ground movement, and undetected leaks, and require additional flushing and hydrostatic testing efforts. They also depend heavily on proper signage for visibility, which, if obstructed or inadequately placed, can delay emergency response. Additionally, remote FDC installations typically involve higher costs related to trenching and site coordination. Building-mounted FDCs are preferred unless site conditions necessitate an alternative, in which case remote FDCs must be clearly justified and approved by the Fire Code Official.

Disclaimer:

Submittal guides are subject to revision and update as adopted codes, local amendments, and departmental procedures change. Applicants are responsible for ensuring they are using the most current version of each submittal guide at the time of application. Always download the latest version of this document or reference the online version associated with the project to verify current requirements.

FDC LOCKING CAPS

All sprinkler systems requiring a fire department connection (FDC) shall be equipped with Knox® FDC Caps with swivel guards, to be provided by the contractor unless otherwise approved by the Fire Code official. Plans shall clearly indicate this requirement and identify the party responsible for procuring and installing the FDC caps.

8 Fire Department Access and Signage Requirements

Applicants shall refer to the **Fire Department Access and Signage Requirements** document for additional fire code requirements applicable to fire alarm and detection system submittals. Where the installation of a fire alarm and detection system creates or triggers these requirements, the applicant is responsible for coordinating, documenting, and demonstrating compliance with the applicable provisions identified in the referenced document, including but not limited to key box installation and required door and access point signage.

Compliance with these requirements shall be addressed as part of the fire alarm system submittal and coordinated with all applicable parties.

9 Fire Sprinkler Acceptance Testing

The inspection and testing process for fire sprinkler systems is divided into three components:

- Aboveground Piping – Cover Inspection
- Aboveground Piping – Pressure Testing
- System Operational Testing

Each of these inspections must be scheduled as needed based on the construction phase. The permit holder is responsible for requesting the appropriate inspection(s).

INSPECTION READINESS AND SCHEDULING POLICY

To ensure timely and efficient service for all customers, acceptance testing inspections shall not be scheduled until all associated work has been completed and verified as code-compliant by the contractor. By requesting an inspection, the applicant affirms that all components related to the inspection are fully installed, functional, and ready for review at the scheduled time.

If the work is found to be incomplete, the inspection may be immediately terminated, and a reinspection fee will be assessed. Rescheduling will be based on Fire Marshal's Office availability and may result in significant project delays.

Additionally, appointment cancellations made with less than one full business day notice may be subject to additional fees.

REQUIRED ACCEPTANCE TESTING DOCUMENTS - ABOVEGROUND PIPING

Disclaimer:

Submittal guides are subject to revision and update as adopted codes, local amendments, and departmental procedures change. Applicants are responsible for ensuring they are using the most current version of each submittal guide at the time of application. Always download the latest version of this document or reference the online version associated with the project to verify current requirements.

For **Cover-up** and **Pressure Testing**: At the time of the scheduled aboveground piping inspection(s), the RME-G of record shall have the Texas State Fire Marshal's Office Form SF041, "Contractor's Material and Test Certificate for Aboveground Piping," readily available and completed to the appropriate level based on the phase of testing.

The Operational Test: Acceptance testing shall not be scheduled until the fully completed and signed SF041 form has been uploaded to the Citizenserve permit file. Submission of this form certifies that all required aboveground piping components, devices, valves, alarms, and associated appurtenances have been installed, tested, and verified to be in proper working order in accordance with applicable NFPA standards prior to requesting witnessed acceptance testing.

Final approval of the aboveground piping will not be granted until the properly executed SF041 form has been uploaded. Failure to provide and submit this form may result in denial of the Operational Test, rescheduling of inspections, assessment of reinspection fees, and may ultimately result in denial of the Certificate of Occupancy until the requirement is satisfied.

If you have any questions, please call our office at 979.220.5960 Ext. 1

Disclaimer:

Submittal guides are subject to revision and update as adopted codes, local amendments, and departmental procedures change. Applicants are responsible for ensuring they are using the most current version of each submittal guide at the time of application. Always download the latest version of this document or reference the online version associated with the project to verify current requirements.