Division 21 Fire Suppression pre-submittal checklist

PROJECT	SPEC SECTION	SUBMITTAL NO.

CHECKED BY	DATE

1. Before you start

These apply to every submittal, whatever the trade.

- [ ] Pull the exact spec section this package answers to, including addenda that changed it.
- [ ] Read the submittal articles in Part 1 and list every item they ask for.
- [ ] Confirm the transmittal names the right section number, and that each product is tagged to the paragraph it answers.
- [ ] Mark any deviation from the spec yourself on the transmittal. A declared deviation gets reviewed; a hidden one gets the package rejected.
- [ ] Keep a copy of exactly what you sent, with the date, for your submittal log.

2. Named manufacturers and products match the spec **Blocker**

Compare every product in the package to the manufacturer and model the spec names. If anything differs, attach the approved substitution or or-equal letter, or swap back before you send. Tick each item once you have checked it and nothing below applies without written approval.

- [ ] Sprinkler head manufacturer substitutions (Viking, Tyco/Johnson Controls, Victaulic, Reliable, Globe)
- [ ] Fire pump manufacturer substitutions (Aurora/Pentair, Patterson, Peerless, Fairbanks Morse)
- [ ] Alarm valve and check valve manufacturer substitutions (Viking, Tyco, Victaulic)
- [ ] Fire department connection (FDC) manufacturer changes
- [ ] Clean agent system manufacturer substitutions (Kidde/Carrier, Fike, Ansul/Tyco)
- [ ] Pipe and fitting manufacturer changes (where spec names specific brands)
- [ ] Fire pump controller manufacturer substitutions (Firetrol, Metron, Tornatech, Eaton)

3. Performance values meet the spec numbers **Blocker**

Put the data sheet next to the spec and compare the actual values, not just the test method. A sheet that says "tested per ASTM" without the number is not proof. Tick each value once it meets or beats the spec.

- [ ] **Sprinkler K-factor** (K5.6, K8.0, K11.2, K14.0, K16.8, K25.2 - must match hydraulic calculations)
- [ ] **Sprinkler temperature rating** (135F/57C ordinary, 175F/79C intermediate, 200F/93C, 286F/141C - must match hazard/location)

- [ ] **Sprinkler response type** (standard response SR vs quick response QR vs ESFR)
- [ ] **Coverage area per head** (maximum spacing per NFPA 13 for hazard classification)
- [ ] **System design density** (gpm/sf for density/area method per NFPA 13)
- [ ] **Fire pump rated capacity** (GPM at rated pressure in psi)
- [ ] **Fire pump pressure** (psi at rated flow, churn/shutoff, and 150% of rated flow)
- [ ] **Fire pump driver horsepower** (HP)
- [ ] **Standpipe flow rate** (GPM per NFPA 14 - Class I: 500 GPM first riser, 250 GPM each additional)
- [ ] **Standpipe residual pressure** (100 psi at topmost outlet per NFPA 14)
- [ ] **Pipe schedule vs hydraulically calculated** system design basis
- [ ] **Clean agent design concentration** (% by volume per NFPA 2001)
- [ ] **Clean agent discharge time** (10 seconds per NFPA 2001)
- [ ] **Seismic bracing loads** (per NFPA 13 Chapter 18 / ASCE 7)

4. Certifications and test reports are attached **Fix and Resubmit**

Reviewers want the report itself, not a line on the data sheet saying one exists. Tick each document that the spec requires and the package actually contains. Skip lines that do not apply to your section.

- [ ] **UL listing** for all components (sprinklers, pipe, fittings, valves, hangers - UL is mandatory per NFPA 13)
- [ ] **FM Approval** (often specified as alternative or in addition to UL)
- [ ] **NFPA 13** compliance (Installation of Sprinkler Systems - the governing standard)
- [ ] **NFPA 14** compliance (Standpipe and Hose Systems)
- [ ] **NFPA 20** compliance (Installation of Stationary Pumps for Fire Protection)
- [ ] **NFPA 2001** compliance (Clean Agent Fire Extinguishing Systems)
- [ ] **NFPA 25** compliance (Inspection, Testing, and Maintenance of Water-Based Fire Protection)
- [ ] **Fire pump test curves** (certified factory test per NFPA 20)
- [ ] **Hydraulic calculations** (must be submitted with shop drawings per NFPA 13)
- [ ] **Seismic bracing calculations** per NFPA 13 Chapter 18 and IBC/ASCE 7
- [ ] **AHJ approval** documentation (fire marshal/local fire authority)
- [ ] **NICET certification** for fire protection designer (Level III or IV per spec)
- [ ] **Contractor license** verification (fire protection contractor state license)
- [ ] **Backflow preventer certification** (for fire service connections)
- [ ] **Material certificates** for pipe (ASTM A795, A135, A53)

5. Colors, finishes, and profiles match the selection Fix and Resubmit

Match each visible attribute to the spec text and the architect's approved sample or color schedule. Tick each one you have confirmed.

- [ ] Sprinkler head finish (brass, chrome, white, custom painted) in exposed/architectural applications
- [ ] Exposed pipe finish (painted color) in exposed-ceiling designs
- [ ] Escutcheon plate type and finish for concealed/recessed heads
- [ ] Fire extinguisher cabinet style, size, and finish (trim, door type)

6. Details and installation match the spec and drawings Fix and Resubmit

These are the mismatches reviewers catch most in this division. Check your shop drawings and installation data against the spec and the contract drawings, and tick each line once you have confirmed it does not apply to your package.

- [ ] **Sprinkler head orientation** (upright vs pendant vs sidewall) differs from drawings
- [ ] **Sprinkler head type** (concealed vs recessed vs flush vs exposed) differs
- [ ] **Pipe material** mismatch (Schedule 40 vs Schedule 10 vs CPVC, black steel vs galvanized)
- [ ] **Pipe joining method** differs (threaded vs grooved/Victaulic vs welded vs CPVC solvent)
- [ ] **Hanger type or spacing** exceeds NFPA 13 maximum
- [ ] **Seismic bracing** type, spacing, or load rating differs
- [ ] **Valve location** differs from riser diagram
- [ ] **Standpipe connection size** differs (2.5" vs 1.5" hose connection)
- [ ] **Fire department connection (FDC)** type, size, or location differs
- [ ] **Alarm device type or location** differs (waterflow switch, tamper switch, pressure switch)
- [ ] **Pipe size** at specific locations differs from hydraulic calculations
- [ ] **Drain and test connection** locations differ

7. Every required item is in the package Fix and Resubmit

Open the submittal articles in Part 1 of your spec section (often split into action and informational submittals) and confirm each required item is present. The list below is what this division's specs most often require.

- [ ] Sprinkler system shop drawings (piping layout, head locations, hanger locations)
- [ ] Hydraulic calculations (demand/supply analysis per NFPA 13)
- [ ] Sprinkler head cut sheets with UL/FM listing documentation
- [ ] Valve and trim product data
- [ ] Fire pump certified factory test curves
- [ ] Fire pump controller product data and wiring diagrams
- [ ] Seismic bracing calculations and layout

- [ ] Material certificates for pipe and fittings
- [ ] Alarm device product data (flow switches, tamper switches, pressure switches)
- [ ] Fire department connection (FDC) product data
- [ ] Backflow preventer product data and certification
- [ ] NICET designer certification documentation
- [ ] Contractor license documentation
- [ ] Sequence of operations for preaction/deluge systems
- [ ] Clean agent system design calculations and agent quantity

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Free checklist from deviationcheck.com/checklists/21-fire-suppression/. Want the package checked against your spec? Deviation Check reviews it for $35 at deviationcheck.com.