

PART 1 GENERAL
1.01 SUBMITTALS

- A. Product Data: Provide manufacturer's catalog sheet for equipment indicating rough-in size, finish, and accessories.

1.02 WARRANTY

- A. Correct defective Work within a five year period after Date of Substantial Completion.

PART 2 PRODUCTS

2.01 FIRE HOSE CABINETS

- A. Cabinet:
1. Style: Recessed mounted.
 2. Door: 12 gauge, 0.1046 inch thick steel, flush, glazed with 1/4 inch (6.35 mm) thick wired glass full panel; hinged, positive latch device.
 3. Finish: Prime coated.
- B. Hose Rack: Steel with polished chrome finish; swivel type with pins and water stop.
- C. Hose: 1 inch diameter, 50 feet long, of linen hose; mildew and rot-resistant.
- D. Nozzle: Chrome plated brass; combination fog, straight stream, and adjustable shut-off.

2.02 HOSE REELS AND HOSES

- A. Construction:
1. Red enameled hose reels, frames, and accessories suitable for hose length and diameter.
 2. Reels fitted with swivel and piping to allow continuous flow through hoses.
 3. Friction breaks to prevent hoses from accidental unwinding.
- B. Hoses:
1. Construction: Flexible 3-brad, single-jacket, hard rubber or heavy duty synthetic red cover, non-collapsible, non-kinking, and fitted with couplings.
- C. Couplings: Provide hole type couplings, one female and one male, both with chemical hose thread _____.
- D. Control Valve: 175 psi rated, quarter turn, ball for quick-opening operation.
- E. Hose Nozzle: 1-1/2 inch NPS chemical hose thread, polished brass, adjustable fog, off-and-on solid-stream type.

2.03 VALVES

- A. Specialty Valves:
1. Hose Station Valve:
 - a. Angle type, brass finish, 1-1/2 inch NPS with automatic ball drip.
 2. Hose Connection Valve:
 - a. Angle type; brass finish; 2-1/2 inch NPS, thread to match fire department hardware, 300 psi working pressure, with threaded cap and chain of same material and finish.
 3. Pressure Reducing Valve:
 - a. Angle type; brass finish with inner hydraulic controls; 2 inch size, thread to match fire department hardware, 400 psi inlet pressure, with threaded cap and chain of same material and finish.
 4. In-line or Angle Hose Valves:
 - a. Cast bronze, 2-1/2 inch, NPS handwheel operated globe valve with grooved or threaded end connections, rated for 400 psi inlet pressure with outlet discharge field-set to hose inlet pressure.
 5. In-line or Angle Floor Control Valves:
 - a. Cast bronze, 2-1/2 inch, NPS handwheel operated globe valve with grooved or threaded end connections, rated for 400 psi maximum inlet pressure with outlet discharge field-set to system inlet pressure. Provide integral normally-open supervisory switch, cap, and chain.
- B. Hose Connection Valve Cabinets:
1. Style: Recessed mounted.
 2. Tub: 16 gauge, 0.0598 inch thick steel, prepared for pipe and accessory rough-in.
 3. Door: 12 gauge, 0.1046 inch thick steel, flush, glazed with 1/4 inch (6.35 mm) thick wired glass full panel; hinged, positive latch device.
 4. Finish: Prime coated.

2.04 FIRE DEPARTMENT CONNECTIONS

- A. Type: Exposed, projected wall mount made of corrosion resistant metal complying with UL 405.
1. Inlets: Two-way, 2-1/2 inch swivel fittings, internal threaded. Thread size and inlets according to or Authority Having Jurisdiction. Brass caps with gaskets, chains, and lugs.
 2. Signage: Raised or engraved lettering 1 inch minimum indicating system type.

2.05 FIRE EXTINGUISHERS

- A. General: Comply with NFPA 10; FM (AG), ITS (DIR), and UL (DIR) listed product.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install in accordance with NFPA 14.
- C. Locate and secure cabinets plumb and level. Establish top of cabinet (inside horizontal) surface 66 inches above finished floor.
- D. Locate hose station valve in cabinet at 60 inches above finished floor.
- E. Connect standpipe system to water source ahead of domestic water connection.
- F. Flush entire system of foreign matter.

SECTION 21 13 00
FIRE-SUPPRESSION SPRINKLER SYSTEMS

PART 1 GENERAL

1.01 SUBMITTALS

- A. Product Data: Provide data on sprinklers, valves, and specialties, including manufacturers catalog information. Submit performance ratings, rough-in details, weights, support requirements, and piping connections.
- B. Shop Drawings:
1. Indicate hydraulic calculations, detailed pipe layout, hangers and supports, sprinklers, components, and accessories. Indicate system controls.
 2. Submit shop drawings to Authorities Having Jurisdiction for approval. Submit proof of approval to Architect.

1.02 QUALITY ASSURANCE

- A. Comply with FM (AG) requirements.

PART 2 PRODUCTS

2.01 SPRINKLER SYSTEM

- A. Sprinkler System: Provide coverage for entire building.
- B. Occupancy: Light hazard; comply with NFPA 13.
- C. Water Supply: Determine volume and pressure from water flow test data.
- D. Interface system with building control system.
- E. Provide fire department connections where indicated.
- F. Storage Cabinet for Spare Sprinklers and Tools: Steel, located adjacent to alarm valve.
- G. Pipe Hanger Fasteners: Attach hangers to structure using appropriate fasteners, as follows:
1. Concrete Wedge Expansion Anchors: Complying with ICC-ES AC193.
 2. Masonry Wedge Expansion Anchors: Complying with ICC-ES AC01.
 3. Concrete Screw Type Anchors: Complying with ICC-ES AC193.
 4. Masonry Screw Type Anchors: Complying with ICC-ES AC106.
 5. Concrete Adhesive Type Anchors: Complying with ICC-ES AC308.
 6. Other Types: As required.

2.02 SPRINKLERS

- A. Suspended Ceiling Type: Semi-recessed pendant type with matching push on escutcheon plate.
1. Response Type: Quick.
 2. Coverage Type: Standard.
 3. Fusible Link: Fusible solder link type temperature rated for specific area hazard.
- B. Exposed Area Type: Pendant type with guard.
1. Response Type: Quick.

2. Coverage Type: Standard.
 3. Fusible Link: Fusible solder link type temperature rated for specific area hazard.
- C. Sidewall Type: Semi-recessed horizontal sidewall type with matching push on escutcheon plate.
1. Response Type: Quick.
 2. Coverage Type: Standard.
 3. Fusible Link: Fusible solder link type temperature rated for specific area hazard.
- D. Dry Sprinklers: Concealed pendant type with matching push on escutcheon plate.
1. Response Type: Quick.
 2. Fusible Link: Fusible solder link type temperature rated for specific area hazard.
- E. Storage Sprinklers: Pendant type with guard.
1. Response Type: Standard.
 2. Coverage Type: Standard.
 3. Fusible Link: Fusible solder link type temperature rated for specific area hazard.
- F. Guards: Finish to match sprinkler finish.

2.03 PIPING SPECIALTIES

- A. Wet Pipe Sprinkler Alarm Valve: Check type valve with divided seat ring, rubber-faced clapper to automatically actuate water motor alarm, pressure retard chamber and variable pressure trim with the following additional capabilities and features:
1. Activate electric alarm.
 2. Test and drain valve.
 3. Replaceable internal components without removing valve from installed position.
- B. Dry Pipe Sprinkler Alarm Valve: Check type valve with divided seat ring, rubber faced clapper to automatically actuate water motor alarm, accelerator, and with the following additional capabilities and features:
1. Activate electric alarm.
 2. Test and drain valve.
 3. Externally resettable.
- C. Backflow Preventer: Reduced pressure principle valve assembly backflow preventer with drain and OS & Y gate valve on each end.
- D. Water Motor Alarm: Hydraulically operated impeller type alarm with aluminum alloy chrome plated gong and motor housing, nylon bearings, and inlet strainer.
- E. Electric Alarm: Electrically operated chrome plated gong with pressure alarm switch.
- F. Water Flow Switch: Vane type switch for mounting horizontal or vertical, with two contacts; rated 10 amp at 125 volt AC and 2.5 amp at 24 volt DC.
- G. Fire Department Connections:
1. Type: Exposed, projected wall mount made of corrosion resistant metal complying with UL 405.
 - a. Inlets: Two way, 2-1/2 inch swivel fittings, internal threaded. Thread size and inlets according to NFPA 1963 or Authority Having Jurisdiction. Brass caps with gaskets, chains, and lugs.

2.04 PRESSURE MAINTENANCE PUMP

- A. Type: Close coupled motor and positive displacement pump unit.
- B. Construction: Bronze with stainless steel shafts, carbon bearings.
- C. Motor: Open drip-proof, permanently lubricated.
- D. Accessories: Include flexible hose connections.
- E. Operation: Manual.

2.05 AIR COMPRESSOR

- A. Compressor: Single-unit, electric motor driven, motor, motor starter, safety valves, check valves, air maintenance device incorporating electric pressure switch and unloader valve.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with referenced NFPA design and installation standard.
- B. Install equipment in accordance with manufacturer's instructions.
- C. Flush entire piping system of foreign matter.
- D. Hydrostatically test entire system.
- E. Require test be witnessed by Fire Marshal.

SECTION 21 30 00
FIRE PUMPS

PART 1 GENERAL

1.01 SUBMITTALS

- A. Product Data: Provide manufacturers literature including general assembly, pump curves showing performance characteristics with pump and system, operating point indicated, NPSH curve, controls, wiring diagrams, and service connections.
- B. Shop Drawings: Indicate layout, general assembly, components, dimensions, weights, clearances, and methods of assembly.

1.02 QUALITY ASSURANCE

- A. Comply with NFPA 13 and NFPA 20; where requirements differ comply with the most stringent.
- B. Design fire pump system under direct supervision of a Professional Engineer experienced in design of this work and licensed at the State in which the Project is located.
- C. Equipment and Components: Bearing FM (AG) label or marking.
- D. Products Requiring Electrical Connection: Listed and classified by Underwriters Laboratories Inc. as suitable for the purpose specified and indicated.

PART 2 PRODUCTS

2.01 FIRE PUMPS

- A. Split-Case Fire Pump:
1. UL 448 and UL 778; vertical- or horizontal-mounted, single-stage, double-suction centrifugal pump for maximum working pressure of 294 psi.
 2. Casing: Cast iron, with suction and discharge gauge ports, renewable bronze casing wearing rings, seal flush connection, drain plug, flanged suction and discharge.
 3. Impeller: Bronze double suction fully enclosed, balanced and keyed to shaft.
 4. Bearings: Grease lubricated ball bearings, replaceable without opening casing.
 5. Shaft: Alloy steel with replaceable bronze shaft sleeve.
 6. Seal: Packing gland with minimum four rings graphite impregnated packing and bronze lantern rings, 230 degrees F maximum continuous operating temperature.
 7. Drive: Flexible coupling with coupling guard.
 8. Baseplate: Cast iron or fabricated steel with integral drain rim.
- B. Accessories:
1. Eccentric suction reducer and OS&Y gate or butterfly valve on suction side of pump.
 2. Concentric increaser and check valve in pump discharge and OS&Y gate or butterfly valve on system side of check valve.
 3. Fire pump bypass fitted with OS&Y gate or butterfly valves and check valve.
 4. Main relief valve, UL 1478 and enclosed type waste cone.
 5. Suction pressure gauge, 4-1/2 inch diameter dial with snubber, valve cock and lever handle.
 6. Discharge pressure gauge mounted on board attached to pump, with snubber, valve cock and lever handle.
 7. 3/4 inch casing relief valve.
 8. Float operated 3/4 inch automatic air release valve.
 9. Hose valve manifold with 2-1/2 inch hose gate valves with caps and chains.
 10. Flow metering system for closed loop testing.

2.02 ELECTRIC MOTOR DRIVE:

- A. Motor: Squirrel cage induction type, NEMA MG 00001; in open drip-proof NEMA EN 10250 enclosure, 3,500 rpm; see Section 21 05 13.
- B. Controller: Limited service type with auto-transformer starter, in NEMA EN 10250 enclosure, including the following:

2.03 JOCKEY PUMP

- A. Electrically operated, horizontal or vertical, single or multi stage, turbine type centrifugal pump with standard open drip-proof horizontal motor.
- B. Control by automatic jockey pump controller with full voltage starter and minimum run timer to start pump on pressure drop in system and stay in operation for minimum period of time. Fire pump shall start automatically on further pressure drop or on jockey pump failure.

2.04 FIRE PUMP PACKAGE SYSTEMS

- A. Description: Factory built, skid-mounted, custom-assembled fire pump package. Unit to be pretested and ready to use. Include system controller, piping, fittings, valves, and other required externally mounted components and accessories for field installation.
- B. Package Configuration:

1. Prewire alarm and trouble or fault contacts into central junction box or panel for field interface by fire alarm system.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with NFPA 20.
- B. Provide access space around pumps for service; no less than minimum as recommended by manufacturer.
- C. Lubricate pumps before start-up.
- D. Provide supervisory alarm notifications using auxiliary dry contacts interconnected into fire alarm system for monitoring by Owner-designated central or off-site point of constant attendance; see Section 28 46 00.
- E. Provide remote monitoring of pump using either auxiliary dry contacts or software data-link into BAS, BMS, SCADA, or other Integrated Automation System; see Section 25 15 00 and 23 09 23 or 25 14 00. Remotely monitored points to include:
1. Run status.
 2. Trouble or fault status.
 3. Phase reversal status.
 4. Supervisory alarm notifications.
- F. Install diesel fuel maintenance system in accordance with manufacturer's instructions.
1. Position fuel intake and fuel return within tank to maximize fuel circulation.
 2. Do not exceed lift capabilities of circulating pump.
 3. Provide isolation valves, foot valves, priming tees, relief valves, and check valves where called for by manufacturer.

3.02 FIELD QUALITY CONTROL

- A. Perform hydrostatic tests, flushing, and field acceptance tests as specified in NFPA 20.



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FOR PERMIT &
CONSTRUCTION

Revision Schedule		Description	
Rev. #	Date	Rev. #	Date

NEW ARCADE MEDICAL OFFICE BUILDING
2709 Massard Rd
FT. SMITH, AR 72903

ARcare
117 S. 2ND ST.
AUGUSTA, AR 72006

DATE	DRAWN BY
06-15-2026	CO
PROJECT #	CHECKED BY
2517	JT

SHEET
F002
FIRE PROTECTION
SPECIFICATIONS

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