



**Frederick-Firestone Fire District (FFFD)  
Executive Request for Proposal (RFP): Type I Fire Engine**

**Purpose**

The Frederick-Firestone Fire District (FFFD) is soliciting proposals from qualified fire apparatus manufacturers for the design and construction of a Type I Fire Engine.

FFFD will provide a scaled foundational specification that establishes baseline operational requirements. Vendors are expected to use this foundation to deliver an apparatus that reflects innovation, operational effectiveness, and long-term reliability.

**Objective**

- Supports all-hazards response (structure fire, EMS, WUI, rescue)
- Enhance firefighter safety, ergonomics, and efficiency
- Integrates modern, durable, and serviceable systems
- Aligns with FFFD's commitment to effective and efficient service delivery
- Balances standardization with forward-thinking design

**Design Expectation**

FFFD is seeking a partner—not a spec builder.

- Treat the specification as a foundation, not a constraint
- Provide innovative and practical design solutions
- Recommend enhancements that improve operational performance, safety and usability, durability and maintenance, and lifecycle value

**Baseline Requirements (Summary)**

- Minimum 450 HP engine
- Minimum 1250 GPM pump
- 500-gallon water tank with foam capability
- 4WD or AWD with high ground clearance
- Wheelbase 165”–180”
- Seating for four (4) personnel (forward-facing)
- Preconnected and hose configurations aligned with FFFD operations
- Full Type I ground ladder complement

(Full specification provided as an attachment.)



### Scope of Work

- Complete design, engineering, and manufacturing
- Collaboration with FFFD's Apparatus Specification Team
- Compliance with applicable NFPA standards
- Defined inspection milestones
- Delivery, testing, and acceptance
- Training, documentation, and post-delivery support

### Proposal Requirements

- Company Experience & References (similar builds)
- Technical Proposal (including deviations and enhancements)
- Project Timeline (contract to delivery)
- Itemized Pricing & Warranty
- Service and Support Capabilities

### Evaluation Criteria

- Alignment with specifications and operational needs
- Innovation and value-added design
- Build quality, reliability, and safety
- Vendor experience and past performance
- Lifecycle cost and warranty
- Delivery schedule and support capabilities

### Schedule

RFP Release: May 12, 2026

Proposal Deadline: June 15, 2026, by 5:00 pm MDT

Selection: July 6, 2026

Delivery Target: October 1, 2027

### Submission

Submit proposals electronically (PDF) to:

Greg Gilbert

Assistant Chief of Operations

[ggilbert@fffd.us](mailto:ggilbert@fffd.us)

### Closing

This apparatus is a mission-critical asset that directly impacts firefighter safety and community outcomes. FFFD is committed to selecting a vendor who delivers a product defined by performance, reliability, and purpose—and who is prepared to stand behind it.



**FREDERICK-FIRESTONE FIRE PROTECTION DISTRICT**  
**TYPE I WUI / ALL-HAZARD FIRE ENGINE SPECIFICATION**  
**Bid Specification**

**1. GENERAL INTENT**

The purpose of this specification is to define the minimum requirements for furnishing and delivering one (1) new Type I Wildland-Urban Interface (WUI) Fire Engine. The apparatus shall be designed for all-hazard response, including structural firefighting, EMS support, and WUI operations.

The completed apparatus shall comply with the most current editions of:

- NFPA 1900 (or 1901 where applicable)
- SAE Standards
- FMVSS Regulations

The apparatus shall be fully operational upon delivery and ready for immediate service.

**USA MANUFACTURER**

The entire apparatus shall be assembled within the borders of the Continental United States to insure more readily available parts (without added costs and delays caused by tariffs and customs) and service, as well as protection the purchaser should legal action ever be required.

**2. OPERATIONAL INTENT**

This apparatus shall support:

- Rapid initial fire attack
- Sustained water supply operations
- WUI and off-road response
- EMS support operations

The final configuration shall prioritize:

- Effective and efficient service delivery
- Crew safety
- Operational reliability
- Adaptability to future needs



### 3. VEHICLE DESIGN REQUIREMENTS

The apparatus shall be designed with emphasis on:

- High maneuverability in residential and WUI environments
- Off-road capability and durability
- Balanced weight distribution and safety
- Ease of maintenance and operational efficiency

*Prefer the vehicle to be pump-and-roll capability for WUI operations (will discuss further with the selected manufacturer).*

### 4. CHASSIS & POWERTRAIN

Chassis Type: Custom or commercial WUI-capable chassis

Engine: Minimum 450 HP diesel (Cummins X10 or equivalent)

Torque: Minimum 1,650 lb-ft

Transmission: Allison 3000 EVS automatic or equivalent

Drive System:

- 4x4 or On-demand all-wheel drive / hydraulic front drive assist
- Independent front suspension (preferred)

Fuel Capacity: Minimum 65 gallons

Alternator: Minimum 320-amp

### 5. DIMENSIONS & PERFORMANCE

- Wheelbase: 165" – 180"
- Ground Clearance: High-clearance WUI configuration
- Approach/Departure Angles: Optimized for off-road use
- Top Speed: Governed (~68 MPH)
- Turning Radius: Designed for tight urban/WUI access

### 6. AXLES & WEIGHT RATINGS

- Front GAWR: Minimum 18,000 lbs
- Rear GAWR: Minimum 24,000 lbs



- Load Distribution: Must safely support full complement of personnel, equipment, and water

## **7. CAB & CREW CONFIGURATION**

### Intercom System:

- A five (5) position FireCom (preferred) intercom system
- The driver/left, officer/right, and pump operator positions shall have intercom and radio interface capabilities (push-to-talk).
- The remaining two (2) crew cab positions shall have intercom capability only.
- Two (2) wireless headsets incorporated into the system.

### Headset Hangars:

There shall be four (4) headset hangers provided with the intercom system located as follows:

- One (1) for the driver seat
- One (1) for the officer seat
- Two (2) in the rear cab seating positions

### Mobile Radio Configuration:

The manufacturer shall install:

- One (1) department-supplied Motorola APX 6500 mobile radio in the cab dash or console
- One (1) department-supplied KNG-M150HPR mobile radio in the cab dash or console.

Power and ground shall be provided; however, fuse installation will be completed by a certified radio installer.

The antenna cable shall be routed to the cab roof and stubbed for final installation by others.

A radio interface cable shall be provided for a Motorola APX 700/800 MHz mobile radio and for Bendix King VHF mobile radio.

Multiple electrical access points shall be provided for future needs.

Seating Capacity: Minimum 4 personnel

Seat Configuration: Front-facing rear seats

Cab Type: 4-door enclosed cab with raised roof



SCBA Seating: Integrated SCBA seat mounts

Safety Features:

- Airbags (driver and officer)
- Seatbelt monitoring system
- NFPA-compliant occupant protection

Additional Features:

- Full HVAC system
- Multiplex display system
- Vehicle Data Recorder (NFPA compliant)

## 8. WATER & FOAM SYSTEM

Water Tank:

- Minimum 500 gallons (poly construction)

Foam System:

- Minimum 30-gallon Class A foam tank
- Fully integrated foam proportioning system (FoamPro 2001 or equivalent)

Tank Features:

- External level indicators (cab and pump panel)
- Anti-slosh baffling
- Lifetime tank warranty

## 9. FIRE PUMP

Manufacturer: Waterous

Type: Midship mounted (preferred)

Capacity: Minimum of 1,250 gallons per minute

Certification: NFPA compliant pump testing

Pump Features:

- Pressure governor
- Manual pump shift override



- Pump-and-roll capability (preferred)
- Master intake and discharge gauges

## **10. DISCHARGES & INTAKES**

Intakes:

- (2) 6" main pump suctions (L/R)
- (2) 2.5" gated suctions
- Rear tank fill/suction

Discharges:

- (4) 2.5" discharges (2 per side)
- 4" LDH discharge
- Deck gun discharge
- (3) speedlay discharges
- (2) 2.5" discharges (rear)

Test Ports on the Pump Panel:

- Discharge
- Intake

## **11. HOSE & PRECONNECT PACKAGE**

Booster Reel:

- 1" x 200'

Crosslays:

- (2) 1¾" x 200' Snap-Tite Conquest double jacket (fog nozzles)
- 2" x 200' Snap-Tite Conquest double jacket (smooth bore)

Rear Preconnect:

- 3" x 300'

Supply Line:

- Minimum 600' of 5" LDH w/Storz connections

Hard Suction:

- (2) 5" x 10' w/Storz connections



## **12. BODY & STORAGE**

Construction: Aluminum modular body

Compartments: Adjustable shelving

Doors: Swing (preferred)

Wheel Well Storage: SCBA bottle compartments

Hose Bed Capacity:

- 600' of 5" LDH
- 300' of 2.5"
- 300' of 3"

## **13. GROUND LADDERS**

Full complement of NFPA-compliant ground ladders to include:

- 24' extension ladder
- 14' roof ladder
- 10' attic ladder

Ladder rack system (side or enclosed) (preferred)

## **14. ELECTRICAL SYSTEM**

- Multiplex electrical system
- Load management system
- Integrated diagnostics

## **14. AUDIBLE WARNING SYSTEMS**

Mechanical Siren

The front bumper shall include:

- An electromechanical siren, which shall be streamlined, chrome-plated and shall produce 123 decibels of sound at 10.00 feet.
- The siren shall include mounting hardware designed to recess or flush mount.



#### Mechanical Siren Location

- The siren shall be recess mounted on the driver side of the front fascia of the bumper, in the outboard position.

#### Air Horn

The chassis shall include:

- Two (2) be trumpet style air horns with a chrome finish on the exterior and a painted finish deep inside the trumpet.

#### Air Horn Location

The air horns shall be:

- Recess mounted in the front bumper face
- One (1) on the right side of the bumper in the inboard position relative to the right-hand frame rail
- One (1) on the left side of the bumper in the inboard position relative to the left-hand frame rail.

#### Electronic Siren Speak

There shall be:

- One (1) 100-watt speaker constructed of a nylon composite material.

#### Electronic Siren Speaker Location

- The electronic siren speaker shall be located on the front bumper face.

### **15. EMERGENCY LIGHTING PACKAGE**

The lighting system shall:

- Be 100% LED
- Meet NFPA, SAE, and FMVSS standards
- Provide full 360° visibility



- Low-power mode and high-power mode programmable

Includes:

- Roof-mounted light bar
- Front, side, and rear warning lights
- Traffic advisor (rear)
- Intersection lighting
- Scene lighting (360° coverage)
- Ground and egress lighting
- All lighting shall be synchronized and controlled via a centralized system.

## **16. SCENE & CAMERA SYSTEMS**

LED scene lighting:

- (2) per side
- Rear

Camera System:

- FRC 360 360° camera system with in-cab display
- Recording capabilities

## **17. PAINT & FINISH**

- Paint scheme to match the current FFFD fleet
- Primary Color: White
- Secondary Color: Red
- Acrylic urethane paint system
- Corrosion-resistant coating
- Minimum 7-year paint warranty
- Chevron graphics on the rear of the apparatus (specification to be provided by Frederick-Firestone Fire District)
- FFFD graphics are to be completed by Frederick-Firestone Fire District once the apparatus is delivered.



## **18. WARRANTY REQUIREMENTS**

Minimum warranties shall include:

- Apparatus: 1 year bumper-to-bumper from in service date
- Engine: 5 years / 100,000 miles
- Transmission: 5 years
- Pump: 5 years
- Tank: Lifetime
- Frame: 20 years

Warranty work can be completed by the Frederick-Firestone Fire District Fleet Staff

## **19. DELIVERY & TRAINING**

Required Delivery Date: October 2027

- Apparatus shall be delivered fully operational
- Delivery under its own power
- Minimum three (3) training sessions for personnel
- Manuals and wiring diagrams provided

## **20. INSPECTION**

Chassis preconstruction will be held at Frederick-Firestone Fire District with two manufacturer representatives and one chassis representative.

The manufacturer shall provide body preconstruction, a mid-construction, and a pre-delivery factory inspection trip for three (3) Frederick-Firestone Fire District personnel including air travel, ground travel, food and lodging. This requirement will be discussed further between the manufacturer and Frederick-Firestone Fire District if the apparatus is currently constructed.

## **21. CONTINGENCY ALLOWANCE**

A contingency allowance in the amount of \$10,000 shall be included in the bid price.



## 22. LOOSE EQUIPMENT

The following equipment shall be provided and mounted where applicable:

### Ladders:

- 24' Aluminum 2-section extension ladder, Duo Safety (preferred)
- 14' Aluminum roof ladder, Duo Safety (preferred)
- 10' Folding attic ladder, aluminum, Duo Safety (preferred)

### Hand Tools:

- 8' Fire Hooks Unlimited Colorado hook, mounted
- 6' Fire Hooks Unlimited NY hook, mounted

### Equipment:

- Folding wheel chocks, mounted
- Two (2) Akron intake valves (swivel elbow inlet) with 5" Storz caps

### Lighting:

- Four (4) Streamlight Vulcan LED ATEX lanterns (orange), mounted
- One (1) Streamlight UltraStinger LED flashlight, mounted

### Miscellaneous:

- 2.5-gallon fire extinguisher and road safety kit (chassis supplied)
- Four (4) SCBA seat inserts for each seat with an SCBA

