

City of Mount Pleasant, Tennessee

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Office of Fire Prevention and Code Enforcement Building and Planning

Subject: Fire Marshal Review Comments/Site Plan Fire Access & Protection Deficiencies
To: Chris Brooks, Building and Planning Director
From: Ben Willard, Assistant Fire Chief/Fire Marshal
Re: Fire Code Review Site Plan (Village at River Park) – 2ND REVIEW
Date: 05/04/2026

Overview

The Office of the Fire Marshal has reviewed the resubmitted site plans and engineering responses. The plans identify an existing fire hydrant classified as a Class C hydrant (rated up to 500 GPM at 20 psi residual pressure) as the primary water supply for the proposed development. Additional field observations conducted in coordination with the local fire department and water department personnel suggest that the available flow may exceed the hydrant classification; however, these observations were informal and not conducted as a certified hydrant flow test.

Due to conflicting information regarding available fire flow and the absence of verified testing, the submittal does not demonstrate compliance with the 2024 International Fire Code (IFC). The project remains **incomplete and not approved pending resolution of the following items**. Approval must be based on certified hydrant flow testing, not hydrant classification or informal field estimates.

1. Fire Flow Verification and Documentation

The submitted plans rely on a hydrant classification indicating a maximum flow of 500 GPM. This value is not sufficient to establish the available fire flow for the proposed structure and does not reflect actual system performance under test conditions.

While informal field observations suggest higher available flow, these results were obtained through non-certified methods and cannot be used as the basis for plan approval.

Code Basis:

- **IFC §507.1** – An approved water supply capable of supplying the required fire flow for fire protection shall be provided.
- **IFC §507.3** – Fire flow shall be determined and made available for firefighting operations.

Deficiency:

- Reliance on hydrant classification rather than verified flow data
- No certified hydrant flow test provided
- Conflicting information regarding the actual available fire flow
- No documented confirmation of flow at sustained residual pressure

Required Action:

- Provide a certified hydrant flow test report (within the last 12 months).
- Include static pressure, residual pressure, and calculated GPM
- Demonstrate that the required fire flow is available under actual system conditions

2. Reliability of Water Supply

The discrepancy between the hydrant classification (≤ 500 GPM) and informal field observations ($\sim 1,130$ GPM) indicates uncertainty regarding the true capacity of the water system.

Without certified testing, the reliability of the water supply for sustained firefighting operations cannot be confirmed.

Code Basis:

- IFC §507.1 – Requires an approved and reliable water supply

Deficiency:

- Water supply capacity has not been validated through accepted testing procedures
- No assurance that observed flow can be consistently delivered during emergency conditions

Required Action:

- Provide documentation confirming consistent and reliable water system performance based on certified testing

3. Hydrant Distribution and Access

The plan continues to rely on a single hydrant located off-site to serve the structure. The submittal does not clearly demonstrate that hydrant placement provides effective coverage for fire department operations.

Code Basis:

- IFC §507.5.1 – Hydrants shall be located and distributed to provide adequate coverage

Deficiency:

- No demonstrated hydrant distribution around the building
- Limited redundancy in water supply access

Required Action:

- Provide additional detail or revised plans demonstrating adequate hydrant placement relative to the building footprint

4. Fire Lane Marking and Vertical Clearance

The addition of fire lane striping is noted; however, the plans do not provide sufficient detail to confirm compliance with fire lane marking and clearance requirements.

Code Basis:

- IFC §503.2.1 – Minimum vertical clearance of 13 feet 6 inches
- IFC §503.3 – Fire apparatus access roads shall be marked and maintained

Deficiency:

- Signage specifications not provided
- Vertical clearance not clearly demonstrated

Required Action:

- Provide compliant signage details
- Confirm required vertical clearance along all fire apparatus access routes

Conclusion

The current submittal does not demonstrate compliance with the 2024 International Fire Code due to the absence of verified fire flow data and documented water supply reliability.

The discrepancy between the hydrant classification shown on the plans and informal field observations further underscores the need for certified testing. Approval cannot be based on assumed or unverified values.

The project is not approved at this time. Approval will be contingent upon submission of certified hydrant flow testing and revised documentation clearly demonstrating:

- Verified and reliable fire flow
- Adequate hydrant distribution
- Compliance with fire apparatus access and fire lane requirements