



March 11, 2026

Marlin ISD High School Renovation
2015 IEBC Code Compliance / Life Safety Plan Amendment

ADDENDUM 1

Building Code Review and Life Safety Plan – Existing High School Facilities

MRB Group is issuing **Addendum 1** to the Building Code Review and Life Safety Plans for the existing High School facilities as follows:

1. Code Basis Update

The original code review and life safety plans were developed using the **Prescriptive Method** permitted in **Chapter 4 of the 2015 International Existing Building Code (IEBC)**. Following additional evaluation of the existing conditions at Marlin High School, and considering the scope of the proposed alterations, MRB Group has determined that provisions of **2015 IEBC Chapter 8 – Alterations Level 2** are also appropriate and applicable.

Accordingly, the Building Code Review and Life Safety Plans shall be amended to comply with the standards defined in **IEBC Chapter 8 – Alterations Level 2**.

2. Sprinkler Requirement and Applicable Exception

IEBC Section 804.2.2.2 requires automatic sprinkler protection in **Group E** buildings where:

- Exits or corridors serve an **occupant load greater than 30, and**
- The **work area exceeds 50%** of the floor area.

Independent evaluations have confirmed that the current municipal water pressure is **insufficient** to support a compliant fire sprinkler system without installation of a new fire pump.

Therefore, the following **exception** in **IEBC Section 804.2.2.2** is applicable:

Exception: *If the building does not have sufficient municipal water supply for design of a fire sprinkler system available to the floor without installation of a new fire*



pump, work areas shall be protected by an automatic smoke detection system throughout all occupiable spaces other than sleeping units or individual dwelling units that activates the occupant notification system in accordance with IBC Sections 907.4, 907.5, and 907.6.

A compliant **automatic smoke detection system** and associated **occupant notification** requirements will therefore be provided in lieu of an automatic sprinkler system.

3. Scope of Addendum

This addendum applies **solely** to the **alterations within the existing High School facility**. The **gymnasium addition** remains subject to the **2015 International Building Code** per **IEBC Chapter 11 – Additions** and is **not affected** by the provisional allowances described in this addendum.

A handwritten signature in black ink, appearing to read "Gene Dane".

Gene Dane, TX RA #20174
Architectural Director of Operations

END OF ADDENDUM 1

Code notes (for the project record):

- Group E requires a **manual fire alarm system**; **EVACS is required when $OL \geq 101$** ; EVACS can be omitted where **$OL \leq 100$** if the manual system initiates an approved occupant notification signal. **No manual system is required where $OL \leq 50$** .
- Manual fire alarm boxes may be omitted where **specific detection/activation conditions** are met (corridor smoke detection, heat detection in large assembly-type rooms and certain labs/shops, and a **manual activation point at a normally occupied location**).
- Occupant notification (audible/visible) and EVACS performance (intelligibility) must follow **IBC §907.5** and **NFPA 72 (2013)**.
- Fire alarm wiring/pathways and supervision per **IBC §907.6** (coordinate with NFPA 72 Chapter 12).



Short Code Matrix

IBC 2015 §907.2.3 (Group E): Manual system required; EVACS required at $OL \geq 101$; EVACS may be omitted at $OL \leq 100$ if manual system initiates occupant notification; manual system not required at $OL \leq 50$; exception allows omission of manual boxes when corridor smoke detection, heat detection in certain spaces, and a normally occupied manual activation point are provided.

- **IBC 2015 §907.4:** Initiating device performance, location, and supervision per listing and NFPA 72.
- **IBC 2015 §907.5:** Occupant notification; audible/visible criteria; EVACS requirements.
- **IBC 2015 §907.6:** Wiring, supervision, zoning/annunciation, and monitoring.
- **NFPA 72 (2013):** System design/installation, audibility, visible signaling, ADS/intelligibility for EVACS, acceptance testing.

Performance Specification – Automatic Smoke Detection & Occupant Notification (Group E, 2015 IBC)

1. General

1.1 Scope

Provide a complete, listed and addressable fire alarm system for a **Group E** facility that detects smoke and activates the occupant notification system, designed and installed per **IBC 2015 §§907.4, 907.5, 907.6, IBC §907.2.3 (Group E), NFPA 72 (2013), and the AHJ.**

1.2 Basis of Design—Group E Triggers

- **Manual Fire Alarm System:** Provide throughout **unless** $OL \leq 50$.
- **EVACS (Emergency Voice/Alarm Communication System):**
 - **Required** where **Occupant Load (OL) ≥ 101 .**
 - **Not required** where **OL ≤ 100 provided** the manual system initiates an approved occupant notification signal per §907.5. (If omitted, horns/strobes acceptable; if provided, speakers and strobes.)

1.3 Submittals

- Code compliance narrative showing **§907.2.3** determination (OL, EVACS yes/no, any exception to manual boxes).
- Shop drawings, riser, device schedule, **matrix of operations, battery/voltage drop** calcs, and **intelligibility design approach** per NFPA 72 (ADS identification).

2. Initiating Devices — IBC §907.4 & Group E §907.2.3



2.1 Automatic Smoke Detection

- Provide system smoke detection at locations required by IBC/NFPA 72 (e.g., area detection where used for evacuation initiation, elevator recall, control units, duct detectors per mechanical requirements, and where corridor detection is used to meet Group E exceptions).

2.2 Manual Fire Alarm Boxes (Group E)

- Provide double-action manual pull stations per NFPA 72: at each required exit and along paths of egress with maximum travel distance to a box per NFPA 72 (2013), installed at accessible mounting heights and supervised.
- **Exceptions (where manual boxes may be omitted):**
 - a) Interior **corridors protected by smoke detectors; and**
 - b) **Auditoriums, cafeterias, gymnasiums** protected by **heat** or other approved detection; **and**
 - c) **Shops/labs with dusts or vapors** protected by **heat** or other approved detection; **and**
 - d) A **manual activation** feature is provided at a **normally occupied location**.
(When all conditions are met, the manual boxes can be omitted.)
- **2.3 Waterflow & Supervisory**
- Where sprinklers are provided, connect **waterflow** and **supervisory** signals to the FACU and have waterflow initiate the occupant notification per the system design (and EVACS, where provided).
- **2.4 Addressing & Supervision**
- All initiating devices shall be uniquely addressable and fully supervised for open/ground/short conditions per NFPA 72 and IBC §907.6.

3. Occupant Notification — IBC §907.5 (Group E specific)

3.1 General

- Activation of any **automatic smoke detector, manual station, or sprinkler waterflow** shall **initiate occupant notification** throughout the building or per the approved zoning plan.

3.2 Audible/Visible Appliances (Non-Voice or Voice per EVACS determination)

- **Audible:** Provide minimum sound pressure levels per IBC §907.5.2.1 and NFPA 72 public-mode criteria (≥ 15 dBA above average ambient or ≥ 5 dBA above max 60-s ambient, whichever is greater; observe max levels and special spaces).
- **Visible:** Provide strobe coverage per IBC §907.5.2.3 and NFPA 72 Ch. 18 for public/common areas and other required locations.
- **3.3 EVACS (Required where OL ≥ 101)**
- Provide **emergency voice/alarm communication** meeting IBC §907.5.2.2 and **NFPA 72 (2013) Chapter 24**. System shall deliver **intelligible** and **audible**

messages to all **acoustically distinguishable spaces (ADS)** designated to require intelligibility; document ADS in design; perform qualitative intelligibility verification (or quantitative where required by AHJ).

- Provide **pre-recorded** evacuation and live paging capability; default alarm tone shall be **Temporal-3**, followed by voice instructions; provide prioritization and automatic message sequences per NFPA 72.
- **Speaker/Appliance Layout:** Provide speakers to achieve intelligibility and audibility; coordinate with architectural acoustics and ambient noise profiles; include amplifier capacity, backup channels, and NAC circuiting to maintain required coverage with single fault.

3.4 Lockdown / All-Hazards (If required by Owner/AHJ)

- Where the Owner/AHJ requires dual-use messaging (e.g., lockdown), provide distinct tones and plain-language messages consistent with NFPA 72 ECS provisions and local policy; ensure fire alarm functions have priority.

4. Fire Alarm System Wiring & Pathways — IBC §907.6

4.1 Installation & Supervision

- Provide circuits and pathways in accordance with IBC §907.6 and NFPA 72 Ch. 12; all initiating, SLC, and NAC/EVC pathways shall be **supervised** and arranged so that a **single open/ground** does not disable required functions beyond code allowances.
- **4.2 Pathway Survivability (Where EVACS or control functions require)**
- Meet survivability Levels per NFPA 72 for EVACS and any required fire-safety functions (e.g., 2-hour rated cable/enclosures where applicable) as accepted by AHJ.

4.3 Power Supplies

- Primary and **secondary (battery)** power sized per NFPA 72 (\geq 24 hours standby + 15 minutes alarm for EVACS unless otherwise required by AHJ; note any local amendments).

5. Sequences of Operation

5.1 Alarm

- **Any smoke detector** activation: initiate occupant notification to required zones; display device address/location at FACU; transmit to supervising station where provided; execute programmed **fire safety functions** (e.g., door hold-open release, elevator recall, HVAC shutdown).

5.2 EVACS Messaging (If provided)



- On alarm: play **Alert tone + Evac message** to the affected notification zone(s); provide manual control for **All-Call** and **Selective Paging** from the fire command/annunciator location.
- **5.3 Supervisory & Trouble**
- **Supervisory:** Visual indication at FACU and transmission (if monitored).
- **Trouble:** Local audible/visual trouble at FACU and transmission (if monitored); troubles do not impede alarm notification.

6. Testing, Commissioning, and Training

6.1 Acceptance Testing

- Perform acceptance testing per **NFPA 72 (2013) Chapter 14**, including **audibility verification**, **visible appliance** synchronization, device functional tests, **intelligibility verification** for EVACS per the approved ADS plan, and pathway supervision and power tests. Provide final test report and record documents.

6.2 Owner Training & Record Documents

- Train staff in normal and emergency operations, EVACS paging, and basic troubleshooting; provide O&M manuals, as-builts, battery calcs, and input/output matrix.

7. Project Options & Clarifications (Complete during Design)

- **Occupant Load (OL):** ≤ 50 → Manual system not required by §907.2.3; confirm with AHJ. 51–100 → Provide **manual fire alarm**; EVACS **not required** if manual initiates occupant notification per §907.5. ≥ 101 → Provide **manual fire alarm + EVACS**.
- **Manual Box Exception Path:** If pursuing omission of manual boxes under the **four-condition** exception, document corridor smoke detection layout, heat detection in large assembly spaces and shops/labs, and the normally occupied **manual activation** point.
- **Monitoring:** Provide supervising-station monitoring where required by local code/policy.