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Design Directive

To: Distribution

From: Erik J. Stoothoff, P.E. *EJS*
Chief Engineer

Date: 4/5/2022

RE: Life Safety System Code Compliance

This Design Directive is intended to consolidate, reiterate, supplement, and clarify the MBTA's Project Scoping approach, preferences, and requirements as they relate to Fire and Life Safety Code Compliance.

In the event that conditions warrant deviation from this Directive, a design waiver signed by the Chief Engineer and department owning the scope of work will be required of the project.

The Design Consultants shall design to standards as prescribed by all applicable Codes as a minimum. MBTA Specifications, Standards, and Design Directives shall also apply as they have been created to address the Owners preferences and requirements for basic operational and safety concerns. Where applicable Codes and Standards do not address a topic or the Owner requires a standard above and beyond Code, the more stringent shall apply with written approval from the Office of the Chief Engineer (OCE).

OBJECTIVE

Design Scope for all new construction, repair or replacement projects shall follow standards that are consistent with MBTA's priorities to safety and resiliency. As such, Design Scope shall document and prioritize all Life Safety related items as they relate to the project. The scope for Life Safety Systems shall not be limited to the area of the construction, alterations, or repairs. The Design Team shall assess the systems for code compliance for the entire station or facility and coordinate with E&M and OCE as to current functional status (beyond state of good repair).

DESIGN PRINCIPLES

At the initiation of each project, The Project shall be responsible for a Fire Life Safety Code Compliance review for the full extent of the facility.

- The Project shall address any elements/assets that are not compliant to Federal, State and Local Codes in the project scope.
- The current functional/repair status and state of the existing Life Safety systems shall be evaluated. Reviewing the most recent inspection reports and/or coordinate inspections of the safety systems to be performed by E&M.

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- For items that are beyond repair by MBTA forces, the project scope shall include coordination between E&M, OCE and Capital to ascertain if the inclusion in the project is warranted and required to maintain safety.
- Sub-standard systems that are no longer maintainable (e.g., standpipes under platforms) or systems that are entirely absent due to their age which are required by MBTA Standard or Code (emergency egress lighting and generation capacity) shall be included in the Project's base scope.
- At no time shall existing deficits in Life Safety systems be considered an existing variance unless fully documented by inclusion (specifically listed in as built documentation) and ratified by waiver to the requirements of this directive.
- This shall be documented in the delivery of the 15% design submittal, and in all subsequent design submissions.

Documentation:

- Each project shall obtain and evaluate records of most recent tests or inspections for the following items and make recommendations for project scope consistent with this directive, at minimum:
 - Emergency Power (Generator)
 - Emergency Lighting (Lights Out)
 - Standpipe
 - Sprinkler
 - Fire Alarm
- For projects that tie into and/or modify existing Life Safety systems, code triggers for the update or upgrade of the systems to current code standards are to be evaluated by the Engineer of Record, MBTA Project Manager, and the OCE.
- Existing wall and slab penetrations within the Project's Areas of Work shall be evaluated and repaired per the requirements detailed in the MBTA's Firestopping Design Directive.

Delivery:

- Final construction bid documents shall document code compliance requirements for project to move forward and which parties hold responsibility for required Fire Life Safety scope.