



RAPID TRANSIT SYSTEM EXTENSIONS
COMPENDIUM OF DESIGN CRITERIA

VOLUME III
AERIAL GUIDEWAY DESIGN CRITERIA

CHAPTER 1
ARCHITECTURAL DESIGN CRITERIA

INTERIM RELEASE

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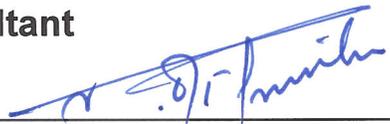
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VOLUME III – AERIAL GUIDEWAY

CHAPTER 1 – ARCHITECTURAL DESIGN CRITERIA

REVISION 1

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1	No changes were made to this chapter in this revision.

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1.1 AERIAL GUIDEWAY CONFIGURATION

1.1.1 SCOPE

The following criteria define the architectural considerations of aerial guideway structures, as indicated on the Standard and Directive Drawings and applicable Guideway Design Criteria, which are further documented in the following subsections to provide proper coordination of all elements comprising the aerial guideway structures.

1.1.2 GENERAL

Design policy pertaining to aerial guideway structures shall be subject to the practical considerations of engineering and systemwide equipment criteria and shall follow the provisions of criteria described herein to ensure continuity of configuration and standardized construction techniques on a systemwide basis.

The current adopted version of the codes, standards and regulations cited within this document shall apply, and unless otherwise directed, all addenda, interim supplements, revisions and ordinances by the respective code body shall also apply. Where conflicts exist between these, the more stringent requirement shall take precedence, unless otherwise directed by MDT.

1.1.3 ALIGNMENT CONFIGURATION

See Guideway Structural Criteria.

1.1.3.1 MECHANICAL SYSTEMS

- A. All drainage systems for the aerial guideway shall be configured so as to be structurally integrated with the track girder and track girder supports. Refer to the Standard and Directive Drawings for typical conditions.

- B. Drainage of the top flange of the girder shall be designed as configured in the Standard and Directive Drawings to preclude and prevent staining of the guideway structure due to the uncontrolled overflow of accumulated water.

1.1.4 AERIAL GUIDEWAY CONCRETE COLOR AND FINISHES

- A. The guideway girders, both precast and cast-in-place, shall be of uniform color throughout the system. The specifications shall address the methods by which this uniformity is to be achieved.
- B. If steel girders are needed at extremely long spans, the steel shall be detailed and coated to harmonize with the concrete girders.
- C. The specifications, complemented by finish schedules on the drawings, shall employ such controls as the following to obtain uniform color, texture and surface quality among the various elements of the guideway.
 - 1. Requiring consistent color and gradation in Portland cement and aggregates.
 - 2. Controlling impurities, admixtures, water content and other variation-producing factors.
 - 3. Setting limits to the acceptable amount of cracks, holes, honeycomb, spalls, discoloration and other surface imperfections.
- D. To properly benchmark the concrete quality for the system, the specifications shall require that small sample panels be cast and

finished by the girder manufacturer to serve as samples for bidders and contractors in other parts of the system.

- E. Each contractor will be required by the specifications to cast sample panels showing concrete texture and color, for comparison by the Engineer with the benchmark samples.
- F. Guideway piers will be required to match as much as possible the color and texture of the guideway girders. Sandblasting will be employed to aid the match.
- G. To reduce dirt pickup, reduce streaking staining, reduce dirt splash-up, and to ease the cleanup of graffiti and hand marks, a transparent concrete sealer will be specified for the surface of the guideway piers.

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