

# CHAPTER 4

## RAIL<sup>1</sup>

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<sup>1</sup> The material in this and other chapters in the *AREMA Manual for Railway Engineering* is published as recommended practice to railroads and others concerned with the engineering, design and construction of railroad fixed properties (except signals and communications), and allied services and facilities. For the purpose of this Manual, RECOMMENDED PRACTICE is defined as a material, device, design, plan, specification, principle or practice recommended to the railways for use as required, either exactly as presented or with such modifications as may be necessary or desirable to meet the needs of individual railways, but in either event, with a view to promoting efficiency and economy in the location, construction, operation or maintenance of railways. It is not intended to imply that other practices may not be equally acceptable.

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## INTRODUCTION

The Chapters of the AREMA Manual are divided into numbered Parts, each comprised of related documents (specifications, recommended practices, plans, etc.). Individual Parts are divided into Sections by centered headings set in capital letters and identified by a Section number. These Sections are subdivided into Articles designated by numbered side headings.

**Page Numbers** – In the page numbering of the Manual (4-2-1, for example) the first numeral designates the Chapter number, the second denotes the Part number in the Chapter, and the third numeral designates the page number in the Part. Thus, 4-2-1 means Chapter 4, Part 2, page 1.

In the Glossary and References, the Part number is replaced by either a “G” for Glossary or “R” for References.

**Document Dates** – The bold type date (Document Date) at the beginning of each document (Part) applies to the document as a whole and designates the year in which revisions were last made somewhere in the document, unless an attached footnote indicates that the document was adopted, reapproved, or rewritten in that year.

**Article Dates** – Each Article shows the date (in parenthesis) of the last time that Article was modified.

**Revision Marks** – All current year revisions (changes and additions) which have been incorporated into the document are identified by a vertical line along the outside margin of the page, directly beside the modified information.

**Proceedings Footnote** – The Proceedings footnote on the first page of each document gives references to all Association action with respect to the document.

**Annual Updates** – New manuals, as well as revision sets, will be printed and issued yearly.

## Part 1

# Design of Rail<sup>1</sup>

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## SECTION 1.1 RECOMMENDED RAIL SECTIONS

Except for specific purposes, such as repair rail, insulated joint replacement, and special trackwork, AREMA recommends that the purchase of new rail be limited to the 115, 136 and 141 pound sections shown in Figure 4-1-1, Figure 4-1-5, and Figure 4-1-6.

Figure 4-1-2, Figure 4-1-3 and Figure 4-1-4 are shown for informational purposes.

<sup>1</sup> References, Vol. 16, 1915, pp. 397, 1117; Vol. 49, 1948, pp. 375, 614; Vol. 54, 1953, pp. 1177, 1413, Vol. 63, 1962, pp. 498, 768; Vol. 92, 1991, p. 49; Vol. 96, p. 28.