

SECTION 20150

RAIL

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Section includes specifications for Contractor-furnished 136 RE Continuously Welded Rail (CWR) and Owner-furnished CWR and jointed rails. Rail installation is specified in Section 20400, Track Construction.

1.02 REFERENCE STANDARDS

- A. American Railway Engineering and Maintenance of Way Association (AREMA):
 - 1. Manual for Railway Engineering (Manual)
 - 2. Portfolio of Trackwork Plans (Plans)
- B. American Association of Railroads (AAR):
 - 1. Specification for Quality Assurance M-1003

1.03 SUBMITTALS

- A. Rail Material Schedule: Within 30 days of receipt of Notice to Proceed, and prior to the delivery of the rail to site, submit a complete schedule of all Contractor-furnished rail materials proposed for installation, source of the rail, and product information including rail section, length, and date rolled.
- B. Product Data: Submit the following product data for rail:
 - 1. Manufacturer's Catalog Data
 - 2. New Rail Product Analysis
 - 3. Rail Ultrasonic Test Report
- C. Submit Certificate of Compliance that the rail furnished meets all requirements set forth in this Section.
- D. Storage Plan: Submit a storage plan for each storage area where Contractor-furnished rail is proposed to be stored or stockpiled. Include sufficient detail to demonstrate that efficient handling and security provisions will be provided, that supporting soils will not be overloaded, and that materials will not be overstressed due to bending or shear.

1.04 DELIVERABLES

- A. Quality Control Program (QCP): Submit rail manufacturer's quality control program.

1.05 QUALITY ASSURANCE

- A. Manufacturer's Quality Control Program (QCP) shall be in accordance with the AAR M-1003 or Engineer approved equivalent quality control program.
- B. Comply with AREMA Portfolio of Trackwork Plans.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Manufacturer's Quality Control Program (QCP) shall be in accordance with the AAR M-1003 or Engineer approved equivalent quality control program.
- B. Handle rail with roller, tongs or other methods that will not result in damage to the rail. Do not drop rail on uneven surfaces nor leave it unevenly supported.
- C. Move CWR on rollers, buggies or other means to fully support it. Do not drag along the ground or across crossties.
- D. Store rail in a designated site under the direction of the Engineer if not used for construction within 6 months of delivery.

PART 2 - PRODUCTS

2.01 GENERAL

- A. Refer to Section 01600, Materials, for general requirements for Owner-furnished materials and for list of Owner-furnished materials, as applicable.

2.02 136 RE CONTINUOUS WELDED RAIL (CWR)

- A. Furnish all rail, except as noted.
- B. Contractor-furnished CWR shall be new 136 RE, intermediate strength, control cooled or vacuum treated carbon steel tee rail meeting AREMA Manual, Chapter 4, Section 2.1, Specifications for Steel Rails. Contractor-furnished CWR shall have been rolled within the year prior to shipment.
- C. Deep head hardened rail in accordance with AREMA Manual, Internal Hardness of High-Strength Rail.
- D. If the Contractor-furnished CWR are in sections instead of strings, CWR shall be manufactured on-site by welding rail sections in nominal 80 ft length into 1440 ft strings, or as specified in the Contract Documents.

2.03 OWNER-FURNISHED 136 RE CWR

- A. If noted in the Contract Documents, the Owner will furnish strings of CWR of various lengths for installation at locations indicated in the Contract Drawings. Haul Owner-furnished rail from the storage locations. Haul back any surplus to storage area designated by the Engineer.
- B. Re-lay existing CWR as indicated in the Contract Drawings.

2.04 OWNER-FURNISHED JOINTED RAIL

- A. If noted in the Contract Documents, the Owner will furnish second hand jointed rail of varying sections in nominal 39 ft lengths at locations indicated on the Contract Drawings. Haul Owner-furnished jointed rail from the storage locations. Crop and weld the sections in required strings of CWR. Haul Owner-furnished surplus jointed rail back to storage area designated by the Engineer.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Prior to installation, perform visual inspection for presence of any defects in rail being installed including rail furnished by the Owner. Inspect rail as it is being installed.
- B. Notify the Engineer of any suspected defects in any rail. Remove rail that is damaged or defective, including wear and corrosion, and clearly mark and place it by the rail bed. Communicate to the Engineer and Contractor's employees whichever means the Contractor uses to mark defective rail.

3.02 INSTALLATION, CUTTING AND DRILLING OF RAIL, AND REMOVAL OF DEFECTIVE RAIL

- A. Install rail as specified in Section 20400, Track Construction.
- B. Cut and drill rail as specified in Section 20400, Track Construction.
- C. Replace rail which has been installed but which is found to be defective, including isolated defects, as specified in Section 20400, Track Construction.

END OF SECTION