

# **BLACK RIVER RAILROAD SYSTEM**

## **2015 TRACK STANDARDS & SPECIFICATIONS**

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### **FOR NEW CONSTRUCTION & UPGRADES**

#### **WOOD TIES**

Ties shall be new 7"x 9" x 8' 6" creosoted grade hardwood. All new ties shall be spiked with four (4) new spikes and box anchored with four (4) anchors per tie.

Where rail is replaced or track is re-gauged, ties that are not replaced shall be plugged and re-spiked with new spikes.

#### **STEEL TIES**

Where steel ties are specified, they shall conform to the specifications of NARSTCO M10, or better, and shall be pre-gauged for the specified rail section. Steel ties shall be fully tamped so that ballast fills inspection holes. Steel ties having Pandrol fasteners do not require anchoring. Steel ties shall not be installed in the approaches to railroad crossings where automatic warning devices are installed. Steel ties shall be spaced on 24" centers unless otherwise specified, or spaced evenly between existing ties when installed in small numbers. On curves of more than 1 degree, steel ties shall not be installed where there is more than one in-effective tie holding gauge on either side.

#### **TIMBERS**

Switch timbers shall be new 7"x 9" x 8' 6" creosoted grade hardwood and shall be of length to extend at least 18" beyond the base of the rail on the curved side of the turnout.

Bridge timbers shall be new creosoted grade hardwood to the dimensions specified by the bridge plans and notched or lagged to bridge structure.

#### **TIE PLATES**

Existing tie plates may be re-used when ties are replaced provided that they are not bent or broken and are appropriate for the size of the tie and section of rail.

For new construction double shoulder tie plates, #1 relay or better, and appropriate for the size of the tie and section of rail, shall be used.

#### **TIE SPACING**

For new track construction, ties shall be spaced on 24" centers. Suspended rail joints are preferred over supported rail joints. For tie replacement projects, existing tie spacing shall be maintained unless otherwise specified.

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### **GAUGE**

For new construction, and rail replacement, rail shall be gauged to a nominal 56-1/2", with a maximum 1/4" deviation.

For tie replacement, rail shall be gauged to a nominal 56-1/2", with a 1/4" maximum deviation at new ties and a maximum 1/2" deviation on the plus side, at old ties.

Any existing track with a gauge in excess of 57-1/2" shall be re-gauged to 56-1/2", with a 1/4" deviation.

### **RAIL**

Unless otherwise specified, 131/132/136/140# RE rail shall be used in rail replacement and new construction. Rail shall be new or #1 relay. Rail lengths shall be consistent and not less than 39' per section, except in turnouts, connection to existing track, or when adjusting staggers in curves or grade crossings. Rails shall be drilled for 1-1/8" bolts.

### **JOINT BARS**

Joint bars shall new or #1 relay and shall match the drilling and cross section of rail. Bars shall be fully bolted with new bolts, nuts and lock washers of the correct size. Bars shall not have any cracks.

For new construction and rail replacement, six (6) hole bars shall be used.

### **COMPROMISE JOINT BARS**

Compromise bars shall new or #1 relay and shall have the correct drilling, cross sections and be of the appropriate orientation for the rail sections being joined. Bars shall be fully bolted with new bolts, nuts and lock washers of the correct size. Bars shall not have any cracks.

### **INSULATED JOINT BARS**

New Alleghany (or equivalent) encapsulated insulated joint bars shall be used and shall match the drilling and cross section of rail. Bars shall be fully bolted with new bolts, nuts and lock washers of the correct size.

For new construction and rail replacement, six (6) hole bars shall be used.

### **TURNOUTS**

Unless otherwise specified, turnouts shall #10 with a 131#/132RE cross section and built to AREA design, with 16'6" points. Steel shall be new or #1 relay. Frog shall be rail bound manganese, with guardrails.

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#### **SWITCH STANDS**

Switch stand shall be New Century style, with a back saver stand. Switch stand shall be located on the diverging side of left handed turnouts and on the straight side of right handed turnouts.

#### **DERAILS**

Derails shall be Hayes Style, or equivalent, bi-directional, and operated by a New Century style switch stand with a back saver handle, mounted on new timbers. Derail shall match cross section of rail and shall be arranged to divert movement away from main track.

#### **TRACK CENTERS**

Unless otherwise specified, parallel tracks and sidings shall be on fourteen (14) foot centers. The alignment of track between turnouts and parallel tracks shall be according to PRR/PC offsets.

#### **SURFACE AND LINE**

New and resurfaced track shall be in line with, and run off into existing track unless otherwise specified.

Tangent track shall have 0" cross level with a maximum deviation of 1/2", at any point.

Curve track shall have a 1" cross level in the body of the curve with smooth spirals and a maximum deviation of 1/2", at any point.

#### **BALLAST**

Clean 2-1/2" hard rock ballast shall be provided, tamped, regulated, and broomed, to support a uniform line and surface, and to fill all cribs, and provide uniform shoulders, through the project limits, with run offs as required to existing track.

#### **FILTER FABRIC**

For new constructions and where cribs are leveled and or sub-roadbed is disturbed, filter fabric shall be installed at least 24" below final top of ties.

#### **DITCHES**

Ditches shall be cleared of track materials, brush, and other debris.

#### **PUBLIC GRADE CROSSINGS**

For new or renewal, public grade crossing surfaces shall be Premiere pre-cast concrete, unless otherwise specified, and installed to manufactures recommendations. Crossing surface shall extend at least five (5) feet beyond the curb line or edge of roadway or sidewalks.

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Rail through crossing shall be new 132RE CWR, with each length being about the same and at least 120 feet in length. Rails shall be staggered not less than six (6) feet or more than ten (10) feet and according to Railroad preference. An insulated joint shall be installed at each end of the crossing rails. The crossing rails shall be installed so that the two opposing insulated joints closest to the roadway are about equal distance from the curb line or edge of roadway or sidewalks.

A full length – at least 39' – of new 132RE rail shall be installed at each end of the crossing rails. Beyond these four full length rails, short rails and compromise joints of appropriate cross section shall be used to transition to existing rail and staggers. The short rails shall be at least 130 lbs./yard, twelve (12') long, and staggers shall not be less than six (6) feet.

Schedule 80 PVC pipe with pull strings, shall be buried at least twelve (12) inches under roadway on both sides and parallel to the tracks, and under tracks at least twelve (12) inches below ties on both sides and parallel to roadway, providing conduit for warning devices and connecting all four quadrants.

Fifty new ties shall be installed on both approaches to the crossing.

Crossing surface shall be placed at an elevation and in a line specified by the Railroad. All new construction shall be in the same surface and line. Existing tracks shall be lined and surfaced to meet new construction.

### **PRIVATE GRADE CROSSINGS**

For new or renewal, private grade crossing surfaces shall be asphalt with PPI rubber flangeways, unless otherwise specified, and installed to manufactures recommendations. Flangeway material shall extend at least two (2) feet beyond the edge of roadway.

Rail through crossing shall match the cross section of rail in both approaches, so long as there are no joints in the roadway or interfering with flangeway material.

If existing joints fall in the roadway or interfere with the installation of flangeway material, the existing rail shall be replaced with CWR, of the cross section and length, as specified by the Railroad.

New ties shall be installed under the roadway and ten new ties shall be installed on both approaches to the crossing. In addition new ties shall be installed under any joint which is disturbed by rail replacement.

Crossing surface shall be placed at an elevation and in a line specified by the Railroad. All new construction shall be in the same surface and line. Existing tracks shall be lined and surfaced to meet new construction.

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**AREA/FRA STANDARDS**

Notwithstanding any specifications contained herein, all materials and work shall meet all applicable AREA Engineering Requirements and Standards, and all track shall meet FRA Minimum Standards for Class II Track upon completion of work.

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THAT IT NEEDS TO BE DONE, EXCEPT SAFELY.**