


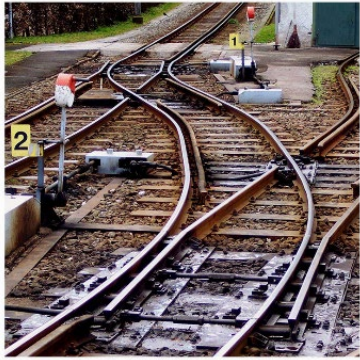

National Transit Database: Proposed Updates to Special Track Work Elements

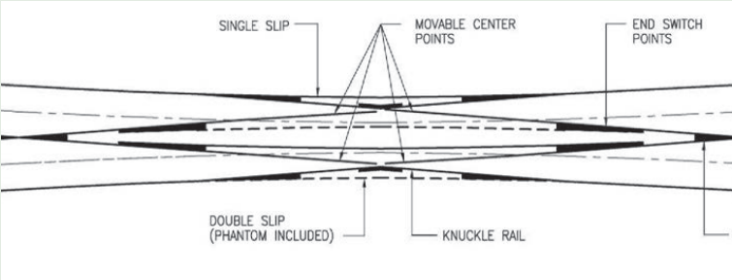
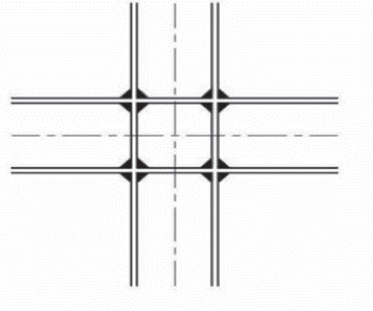
The Federal Transit Administration (FTA) has proposed updates to the Special Trackwork Elements reported by public transit agencies to the National Transit Database (NTD) on form A-20. This form currently collects the following special track work categories: Half grand union, single turnout, single crossover, and double diamond crossover. The FTA is proposing the following modifications (1) remove *half grand union*, (2) rename *double diamond crossover* to *double crossover*, and (3) include three new special track work categories: *Slip switch*, *lapped turnout*, and *rail crossing*.

The table below illustrates the changes, along with proposed definitions for required elements in Report Year 2019.

2018 Element	Proposed Change	Proposed Definition	Illustration
Single Turnout	None	An assembly of track components that collectively permit two tracks to merge with each other. The primary components of a turnout are the frog and the switch.	

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2018 Element	Proposed Change	Proposed Definition	Illustration
Single Crossover	None	A single crossover consists of two turnouts positioned in two tracks that allow the vehicle to go from one track to another. The two tracks are usually, but not always, parallel, and the turnouts are usually identical.	
Double Diamond Crossover	Change element name to <i>Double Crossover</i>	A double crossover—sometimes called a scissors crossover—consists of two crossovers of opposite hand orientation superimposed upon each other. In addition to the four turnouts involved, a track crossing diamond is needed between the two main tracks.	
Half-Grand Union**	Remove element	<i>FTA has determined that Grand Unions, ¾ Grand Unions, or Half-Grand Unions should be reported by the number of Single Turnouts or Lapped Turnouts (see definitions in this table) that make up the union, and has therefore proposed to remove this data element beginning in Report Year 2019.</i>	

2018 Element	Proposed Change	Proposed Definition	Illustration
Slip Switch	Add element (count required)	A slip switch superimposes two switches and curved closure rails on top of an elongated track crossing. A slip switch may be installed to switch from one track to another at a flat-angle crossing and space constraints make it impossible to provide separate turnouts outside of the limits of the diamond.	 <p>The diagram illustrates a slip switch trackwork element. It shows two main tracks crossing at an angle. A 'SINGLE SLIP' is shown as a track that can switch between the two main tracks. 'MOVABLE CENTER POINTS' are indicated by dashed lines and arrows, showing the path of the slip switch. 'END SWITCH POINTS' are also shown. A 'DOUBLE SLIP (PHANTOM INCLUDED)' is shown as a second slip switch. A 'KNUCKLE RAIL' is shown as a curved rail connecting the two main tracks.</p>
Crossing	Add element (count required)	Track crossings permit two tracks to cross each other. Track crossings are commonly called either crossing diamonds or simply diamonds due to shape. The intersecting angle between the two tracks can be 90 degrees or less, but rigid crossings under approximately 10 degrees are rarely encountered.	 <p>The diagram shows a track crossing where two tracks intersect at a 90-degree angle. The tracks are represented by solid lines, and the crossing is shown as a diamond shape. Dashed lines indicate the centerlines of the tracks.</p>

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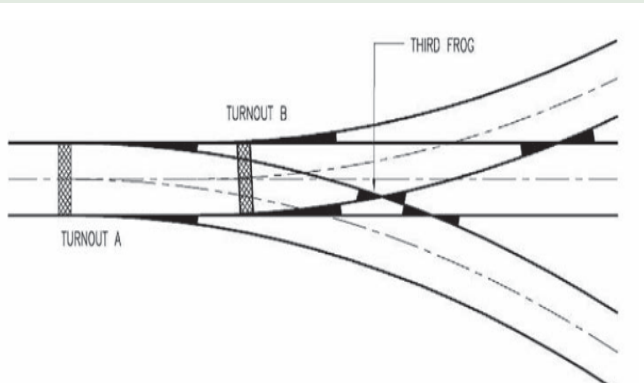
2018 Element	Proposed Change	Proposed Definition	Illustration
Lapped Turnout	Add element (count required)	A lapped turnout is a special type of turnout in which the switch rails for a second turnout will be placed between the switch and the frog of the initial turnout. Lapped turnouts are used achieve a more compact track layout in constrained locations, typically in a configuration that allows rail traffic to veer right or left in addition to proceeding straight ahead.	 <p>The diagram illustrates a lapped turnout configuration. It shows a main track on the left that splits into two paths. The lower path is labeled 'TURNOUT A' and has a switch and frog. The upper path is labeled 'TURNOUT B' and also has a switch and frog. The switch rails for Turnout B are positioned between the switch and the frog of Turnout A. A 'THIRD FROG' is also indicated, which is a frog that allows traffic to proceed straight ahead from the main track.</p>

Table 1: Special Trackwork Elements, Proposed Updates for 2019

Sources

- Crossover, Turnout, Grand Union, Double Crossover, Slip Switch, Crossing, Lapped Turnout Definitions and Diagrams: [TCRP Report 155](#)
- Grade Crossing Definition – [NTD Glossary](#)