

BEFORE THE
SURFACE TRANSPORTATION BOARD

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FINANCE DOCKET NO. 35765

**PETITION OF WICHITA TERMINAL ASSOCIATION, BNSF RAILWAY COMPANY,
and UNION PACIFIC RAILROAD COMPANY FOR DECLARATORY ORDER**

REBUTTAL OF FYG'S EVIDENCE AND ARGUMENTS

Dated: September 16, 2014

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The Opening Statement of Evidence and Arguments filed by the WTA and its owners, BNSF and UP, demonstrates that the proposed Emporia Court crossing sought by FYG across the WTA's interchange tracks would cause an undue burden on interstate commerce. Specifically, the WTA provided over two (2) years' worth of statistical data proving that the IT is an integral part of the interstate rail system. The evidence submitted proves that the proposed Emporia Court crossing would functionally cut the IT in two, dramatically limiting the WTA's ability to interchange railcars, eliminating railcar storage capacity and stalling traffic along the interstate rail lines in Wichita. Further, the Opening Statement establishes that track removal and/or track relocation are not viable, necessary or appropriate remedies.

FYG's Reply, on the other hand, mischaracterizes the WTA's Opening Statement and is replete with misstatements of both law and fact. In short, FYG is demanding that WTA and its owners do the following so that the Emporia Court crossing can be installed:

- Condemn or purchase outright FYG's property so that the IT can be moved onto FYG's property at the WTA's expense;
- Move the IT onto FYG's property at WTA's expense so that the proposed crossing can be installed in compliance with the MUTCD, so as to prevent motor vehicle traffic on 25th Street from being impeded by the crossing;

- Ignore a railroad safety rule that requires minimum clearance at motor vehicle rail crossings;
- Enter into new trackage rights agreements to solve interchange and car storage problems caused by the proposed crossing;
- Rebuild the out of service Frisco rail yard at railroad expense to solve interchange and car storage problems caused by the proposed crossing;
- Construct new tracks on BNSF property, at railroad expense, west of the IT, to solve interchange and storage problems caused by the proposed crossing;
- Change rail traffic patterns in downtown Wichita to solve interchange and car storage problems caused by the proposed crossing; and/or
- Absorb additional labor costs as a result of additional switching caused by the proposed crossing.

FYG makes this long list of demands yet claims that the crossing would not be an undue burden on interstate rail operations in downtown Wichita. Moreover, FYG makes these demands in the face of uncontroverted evidence that it has access to its property both from the temporary crossing at the west end of the IT and from another public crossing to the south.

The WTA's Rebuttal Evidence and Arguments, along with the attached rebuttal verified statement, will seek to clarify the issues so that the Board can make an appropriate decision based on the actual facts and on correct statements of law.

I. ARGUMENT

A. Analysis and Rebuttal of FYG's Preemption Arguments

The WTA's Opening Statement establishes that the 1916 Wichita Ordinance is preempted by ICCTA. Opening Statement, pp. 24-28. The Board's May 20, 2014 Decision stated that the "current record contains insufficient information for the Board to determine ... the current status and applicability of the 1916 Wichita ordinance." Decision, p. 6. The Board

specifically requested that the parties address the applicability of the ordinance. *Id.* FYG’s Reply regarding the WTA’s preemption arguments should fail for at least six reasons.

First, FYG argues Wichita Ordinance 5436 is not preempted because the ordinance granted the WTA permission to install the IT. FYG Reply, p. 15. FYG cites *Township of Woodbridge, NJ, v. Consolidated Rail Corporation, Inc.*, 2000 WL 1771044 (STB 2000) to argue that the “WTA cannot avoid the agreement it voluntarily struck under the guise of regulatory concern.” *Id.*, fn. 5. However, *Township of Woodbridge* does not apply because in that case a railroad and township residents entered into a contract after litigation was filed to remedy complaints of locomotive whistle noise. 2000 WL 1771044, *1. The railroad and residents settled the litigation, but after the settlement agreement was signed, the residents alleged that the whistle noise continued. *Id.* After the residents filed a motion to enforce the agreement, and after both parties agreed to a court order regarding the original agreement, the railroad asserted preemption in an attempt invalidate the agreement. *Id.* at *1-2.

This Board held that the railroad’s “own commitments (as reflected in the contracts that it entered into voluntarily) are not preempted.” *Id.* at *3. The Board’s holding is consistent with cases excusing ICCTA preemption on “voluntary agreement” grounds pursuant to contractual obligations. In *PCS Phosphate Company, Inc. v. Norfolk Southern Corp.*, 559 F.3d 212 (4th Cir. 2009), for example, the court concluded that preemption did not apply because the “carefully negotiated bargains that [were] at the center of [the] agreements [drove] our conclusions-[that] [defendant] cannot escape its obligation by disputing the parties’ intent or hiding behind the ICCTA” *Id.* at 225.

Here, there is no contract between the WTA and the city of Wichita. Instead, Wichita Ordinance 5436 is a law. In *City of Seattle v. Burlington Northern R. Co.*, 41 P.3d 1169 (Wash.

2002) the court recognized, that “[t]he agreement is nonetheless an ordinance--that is, a law. Like any state law, a local ordinance is subject to Congressional preemption.” 41 P.3d at 1175. Thus, the *City of Seattle* court found efforts to limit the time that the railroad could block city streets preempted by the ICCTA even though such limits on the railroad’s activity were specifically preserved in the ordinance under which it operated. *Id.* at 1174-75. Unlike the railroad in *Township of Woodbridge*, the WTA did not enter into a voluntary contractual agreement with the city of Wichita or FYG. No one in the present dispute is seeking to enforce contractual obligations. Therefore, Wichita Ordinance 5436 is preempted by ICCTA even if the terms of it were formed by some “agreement.” Because the ordinance is a law and has the effect of causing undue burden on the WTA’s interstate rail operations, it is preempted.

Second, FYG contends that the WTA is procedurally barred from asserting a preemption argument because the WTA has admitted that this crossing dispute was not expressly preempted. FYG Reply, p. 16. FYG attempts to rely on the most recent Kansas Court of Appeals decision as evidence of the WTA’s admission. However, the WTA made no such admission, and FYG takes the appellate court decision out of context. The preemption issue at the appellate level in 2013 was whether ICCTA expressly preempted state law regarding the removal and reconstruction of railroad tracks. *Wichita Terminal Ass'n v. F.Y.G. Investments, Inc.*, 305 P.3d 13, 19 (Kan. Ct. App. 2013). The WTA made the argument that ICCTA preempts track removal and reconstruction, and the WTA conceded “that federal law does not expressly preempt the resolution of railroad crossing disputes by state courts.” *Id.* The WTA did not admit that the ordinance itself was not preempted. Also, while FYG argues the ordinance grants it a crossing from its adjoining property, the ordinance grants no such right. As discussed more fully below,¹

¹ See Section I, Part B, Subpart 1 of this Rebuttal Statement (pp. 9-10).

Wichita Ordinance 5436 does not require the WTA to construct crossings for adjoining landowners. Moreover, FYG cites no authority for the Board to hold that the WTA is “procedurally barred” from raising its preemption argument. Therefore, FYG’s contention on this point should be disregarded.

Third, FYG contends that the Board’s Decision precludes the WTA from asserting the preemption defense. FYG Reply, pp. 16-17. FYG relies on the Decision to argue that the Board did not invite the parties to further discuss the nature of the IT or the Board’s jurisdiction over it. FYG misinterprets the Decision. The Board instructed the parties not to discuss “the nature of the track, that is, whether the IT should be considered § 10906 excepted track or whether the Board has jurisdiction over it.” The Decision, p. 6, fn. 42. The WTA’s preemption argument applies to the nature and application of the ordinance, not the WTA’s tracks. Put simply, the Board did not restrict the WTA from arguing preemption regarding the 1916 Wichita Ordinance, and in fact invited such discussion on page 6 of the Decision where it stated that the “current record contain[ed] insufficient information for the Board to determine ... the current status and applicability of the 1916 Wichita ordinance.” Moreover, the Decision states that preemption is still an issue the Board is considering. *See* Decision, p. 6 (“In this case, there is a controversy regarding the extent to which the Board’s exclusive jurisdiction over rail transportation applies to this dispute, and, as a result, the extent to which preemption applies.”).

Fourth, FYG erroneously contends that the WTA’s preemption analysis does not apply to the proposed crossing because it is a “private rail crossing” and that “[t]he Emporia Court crossing is ‘private’ in the sense that it will not be owned by the WTA.” FYG Reply, p. 18, fn. 7. FYG’s claim that the Emporia Court crossing is “private” so that it can escape STB jurisdiction is yet another fabrication. FYG provides no support to conclude that the

proposed crossing is private simply because it will not be owned by the WTA. Furthermore, FYG admits that “the City of Wichita approved its placement for public access to a public road” *Id.*; see also August 1, 2008 Journal Entry, pp. 2-3 (FYG dedicated a public street at the crossing). Moreover, at the November 21, 2011 bench trial, FYG’s own expert witness who was involved with the 2006 public street dedication at Emporia Court repeatedly referred to the proposed Emporia Court crossing as existing within a “public right-of-way.” **Exhibit M**, November 21, 2011 Bench Trial Transcript, pp. 86-87, 100-01. Therefore, the Emporia Court crossing is a public crossing.²

Fifth, FYG argues that the WTA’s reliance on *City of Seattle* is misplaced because the ordinance in that case sought to regulate actual commercial operations as opposed to merely requiring a road crossing. FYG Reply, p. 20. Again, the Wichita ordinance does not require the WTA to provide FYG with a crossing from its property, and *City of Seattle* is directly on point. Like FYG, the city in that case claimed that ICCTA preemption did not apply because the railroad was “controlled by the language of Ordinance No. 9119.” 41 P.3d at 1174. In other words, the city claimed that because the municipal ordinance gave the railroad instruction, that ordinance could restrict the railroad in ways that would otherwise be preempted by the ICCTA. *Id.* *City of Seattle* affirmed the lower court’s decision that the ordinance was preempted by ICCTA because the city was attempting to control switching activities on city streets of a railroad engaged in interstate and intrastate commerce. *Id.* at 1172.

Sixth, in an attempt to persuade the Board the crossing should be allowed based on interstate commerce grounds, FYG relies on *New Orleans & Gulf Coast Ry. Co. v. Barrios*, 533

² See USDOT, FRA, *Compilation of State Laws and Regulations on Matters Affecting Highway-Rail Crossings*, 5th Ed., Chapter 11, <http://www.plsc.net/docs/compilationofstatelawsRR2009.pdf>, (discussing difference between public and private crossings).

F.3d 321 (5th Cir. 2008). FYG Reply, p. 21. Again, FYG's reliance is misplaced and misleading. FYG contends that *Barrios* "ruled that 270 private crossings along the 24 mile stretch of line ... did not create an unreasonable burden upon the railroad's short-line rail operations." FYG Reply, pp. 21-22. FYG *assumes* that one crossing existed every 470 feet in that case, and pleads that "[i]t is difficult to imagine, in light of *Barrios*, how a single, at grade crossing that will not inhibit any through-traffic can be considered too burdensome" *Id.* at p. 22. However, FYG misinterprets the facts and holding of *Barrios*.

The railroad in *Barrios* filed a declaratory order seeking relief for 12 of the 270 crossings. 12 crossings were in dispute not 270. 533 F.3d at 326, 338, fn. 2. *Barrios* did **not** rule that 270 (or even 12) private crossings over 24 miles did not create an unreasonable burden upon the railroad's operations. Instead, the court affirmed the district court's ruling to remand the suit to state court because the railroad could not show it was entitled to federal court jurisdiction. *Id.* at 338. In short, *Barrios* in no way stands for the proposition that 270, or 12, private crossings would not create an undue burden on interstate commerce.

B. FYG's Reliance on Wichita Ordinance 5436 and Kansas Common Law is Misplaced

FYG claims that Wichita Ordinance 5436 and Kansas common law give FYG a right to access 25th Street from its property. FYG is wrong for three primary reasons. First, the ordinance does not give FYG or any adjoining landowner a right of access to 25th Street. FYG's reliance and interpretation of the ordinance is erroneous and without merit. Second, FYG cannot rely on Kansas common law for an access right at the proposed crossing because FYG is not landlocked; FYG has access to and from public streets by use of the temporary crossing and from another crossing to the south. Third, FYG improperly contends that Kansas courts have

repeatedly ruled that the Emporia Court location is the “only viable option” given the competing interests. No Kansas court has come to such a conclusion.

1. *The Wichita Ordinance does not provide FYG a right of access to 25th Street.*

FYG argues that Wichita Ordinance 5436 provides it with a right of access to 25th Street. FYG Reply, p. 24; *see also* FYG Reply to WTA’s Petition for Declaratory Order, pp. 4-5. FYG misinterprets the ordinance. In 1916, the WTA was granted permission to install the IT on 25th Street under the following conditions:

The said Association shall construct and maintain in good order the portion of sidewalks crossed and railway crossings, and shall keep said track in good repair, and in such condition that teams and vehicles **on such street** can safely pass over such tracks **at any point on said street**

Wichita Ordinance 5436, § 2 (emphasis added). FYG apparently interprets Section 2 to mean that it is permitted “*access* across the tracks over [the] entire run” of the IT from its property. FYG Reply to WTA’s Petition for Declaratory Order, p. 4. (emphasis added); *see also* FYG Reply, p. 22. FYG misinterprets the above-cited portion of the ordinance, which has two parts that must be read together. The first part requires that the WTA “construct and maintain in good order the portion of sidewalks crossed and railway crossings.” Wichita Ordinance 5436, § 2. The second part requires the WTA to keep the IT in good condition so “that teams and vehicles **on such street** can safely **pass over such tracks** at any point **on said street**” *Id.* (emphasis added). This second part solely pertains to the condition of the IT, which demands that horse carriages and vehicles **while on 25th Street** are able to **pass over the IT** at any point **on 25th Street**. When the first and second parts are read together, the ordinance instructs the WTA to construct the IT to allow teams and vehicles **on 25th Street** to pass over the tracks at any point

on said street.³ Put simply, Wichita Ordinance 5436 is a construction and maintenance ordinance; it is not a real property law for easements and crossings to benefit adjoining landowners.

Finally, FYG misinterprets the ordinance because sidewalks and railway crossings do not exist beside, near or within the IT. This problem was recognized by the Kansas trial court. *See* August 1, 2008 Journal Entry where Judge Joseph Bribiesca recognized that “25th Street was never constructed as so designated”). Reading § 2 as a whole, the ordinance only instructs the WTA to construct and maintain sidewalks and railway crossings for the benefit of teams and vehicles on 25th Street and not for adjoining property. The second part of § 2 does not say that teams and vehicles have the right to pass over the IT from adjoining property. If this were the case (and as FYG interprets the ordinance), the WTA would have to construct road crossings “at any point” along the IT so that teams and vehicles on 25th Street could cross over the IT (at any point) onto adjoining property. The ordinance simply does not say this. Instead, the ordinance only applies to teams and vehicles passing over the IT **while on 25th Street** (not from some other parcel of property).

³ In any event, as noted in Section V, Part B, Subparts 1-2 of the WTA’s Opening Statement of Evidence and Arguments, the ordinance is clearly preempted because the language of the ordinance requires the WTA to design, construct, and maintain the IT pursuant to local authority. As such, the ordinance improperly attempts to manage and govern interstate rail transportation. The ordinance is preempted because ICCTA applies to the design, construction and maintenance of rail lines within its jurisdiction. *See Texas Central Business Lines v. City of Midlothian*, 669 F.3d 525, 533 (5th Cir. 2012) (holding that the ICCTA grants “exclusive jurisdiction” over the operation of rail tracks to the STB, “*leaving no room for local regulation*”) (emphasis added); *Pace v. CSX Transp., Inc.*, 613 F.3d 1066, 1069 (11th Cir. 2010) (“The language of section 10501(b) plainly conveys Congress’s intent to preempt all state law claims pertaining to the operation or construction of a side track.”).

2. *FYG cannot rely on Kansas common law because FYG already has access to its property.*

FYG's repeated claims that it is landlocked but for the Emporia Court crossing are fabrications. FYG Reply, p. 1. It is uncontroverted in this proceeding that FYG has access to its property both from a public crossing to the south and from the temporary crossing to the north. *See* WTA's Petition for Declaratory Order, pp. 24-25; *see also* the WTA's Reply to Reply of FYG, p. 4. As has been stated repeatedly, the WTA and its owners are willing to make the temporary crossing permanent.⁴

FYG further argues that access from the south is "cost prohibitive." FYG therefore seeks to force the WTA to spend resources either condemning FYG's property or buying it outright and then paying for and building the Emporia Court crossing. Indeed, FYG continues to demand all of the following from WTA and its owners:

- Condemn or purchase outright FYG's property so that the IT can be moved onto FYG's property at the WTA's expense (FYG Reply, p. 13);
- Move the IT onto FYG's property at WTA's expense so that the proposed crossing can be installed in compliance with the MUTCD, so as to prevent motor vehicle traffic on 25th Street from being impeded by the crossing (*Id.*; *see also* FYG Reply to WTA's Petition for Declaratory Order, p. 34);
- Ignore a railroad safety rule that requires minimum clearance at motor vehicle rail crossings (FYG Reply, p. 7);
- Enter into new trackage rights agreements to solve interchange and car storage problems caused by the proposed crossing (FYG Reply, p. 11);
- Rebuild the out of service Frisco rail yard at railroad expense to solve interchange and car storage problems caused by the proposed crossing (*Id.*);

⁴ FYG's hired consultant, Steve Sullivan, states that the WTA and its owners, UP and BNSF, are denying FYG's proposed crossing because they are driven by a policy against the installation of new grade crossings. *See* Steve Sullivan Verified Statement ("V.S."), p. 11. However, Mr. Sullivan fails to acknowledge that all three railroads have repeatedly proposed that the temporary crossing located on BNSF property be made permanent.

- Construct new storage tracks on BNSF property, at railroad expense, west of the IT, to solve interchange and car storage problems caused by the proposed crossing (FYG Reply, p. 10);
- Change rail traffic patterns in downtown Wichita to solve interchange and car storage problems caused by the proposed crossing (*Id.*); and/or
- Absorb additional labor costs as a result of additional switching caused by the proposed crossing (*See Sullivan V.S.*, p. 9).

Although FYG submits no evidence as to what access from the south might cost, FYG still has the temerity to make such demands from its railroad neighbors to alleviate the long list of problems caused by its continued demand for the Emporia Court crossing.

3. *Kansas Courts have not ruled that the Emporia Court location is the only viable option.*

FYG wrongly contends that Kansas courts have held that the location of Emporia Court is the “only viable option” FYG Reply, pp. 2-3. FYG again misleads the Board because no Kansas court made such a finding. After the Kansas District Court ruled at the February 20, 2007 bench trial that FYG had a right of access across the IT by using the proposed Emporia Court crossing, that court subsequently ruled in 2009 that “the installation of a crossing over the dual tracks at Emporia Court was practically impossible without impeding upon 25th Street.” The court also held that the proposed crossing could be installed by removing the north track. *Wichita Terminal Ass’n v. F.Y.G. Investments, Inc.*, 2011 WL 588505, at *5, 7-8 (Kan. Ct. App. 2011). The Kansas Court of Appeals in 2011 disagreed with the district court’s analysis of track removal, and remanded the suit back to state court to determine issues “including but not limited to removal of the north track at Emporia Court **and/or any other legally compliant crossing location.**” *Id.* at *11 (emphasis added). On remand, the district court issued its January 25, 2012 journal entry finding that “the most viable option for providing access to F.Y.G.’s real property is removal of the north track.” *Wichita Terminal Ass'n v. F.Y.G. Investments, Inc.*, 305 P.3d 13,

18 (Kan. Ct. App. 2013). The Kansas Court of Appeals vacated the district court's January 25 journal entry regarding track removal because track removal is within the exclusive jurisdiction of this Board. *Id.* at *23. The January 25 journal entry and the 2013 Kansas Court of Appeals decision did not find that Emporia Court was the "only viable option."

C. Analysis and Rebuttal of Mr. Sullivan's Verified Statement

1. *Mr. Sullivan's conclusions regarding the WTA's operations are unreliable.*

Mr. Sullivan offers several statements regarding the WTA's operations that should not be considered by the Board because such statements are factually incorrect or are unsupported by any reliable evidence. His verified statement does not identify the unnamed associate who observed the WTA's operations for two days and does not explain the associate's methodology. As is fully explained below, many of Mr. Sullivan's assumptions about the WTA's operations are incorrect. Moreover, Mr. Sullivan severely underestimates the impact of the Emporia Court crossing on rail operations in downtown Wichita.

- a. Mr. Sullivan's conclusion regarding the average cut of railcars is unreliable because he fails to explain his methodology and does not define "bulk wheat shipments."

Mr. Sullivan states that because the average cut of railcars crossing the IT from January 2012 to May 2014 totaled 5.7 railcars in length, the WTA's operations would be unaffected by installation of the proposed crossing. Sullivan V.S., p. 5. To reach his total, Mr. Sullivan states that he relied on the statistical information provided by all 3 railroads and that he excluded "bulk wheat shipments." *Id.* His verified statement does not define "bulk wheat shipments" and does not state the length of the trains he believes constitute bulk wheat trains. Simon Walbruch Rebuttal Verified Statement ("Walbruch R.V.S."), p. 1, attached as **Exhibit N**. As such, it is not possible to discern how Mr. Sullivan arrived at his 5.7 railcar average. *Id.*

The statistical information maintained by the three railroads and provided to the Board does not indicate train lengths, and without additional analysis from Mr. Sullivan regarding his methodology, the WTA cannot rely on his findings to support his 5.7 railcar average. *Id.*, p. 2. Moreover, the 5.7 railcar average is an understatement, and his reliance on the 5.7 railcar average is unimportant. *Id.* Because the IT can currently hold 30 railcars, the WTA would not be operating efficiently if it did not maximize the number of cars the WTA delivered to BNSF via the IT. *Id.* WTA routinely uses the IT to interchange trains well in excess of 6 railcars in length, and then stores those cars on the IT. *Id.* Mr. Sullivan testified that his unnamed associate observed eleven trains interchanged on the IT while he was in downtown Wichita, and that he saw one train exceed twelve railcars in length, and that eight times, he saw trains arrive or depart “lite” to receive or deliver 10 railcars or less. Sullivan V.S., p. 7. That would mean the associate saw two trains pulling more than 10 railcars. The lowest train length observed by the associate was 7 railcars. Based on the associate’s observations, none of the trains were at or below Mr. Sullivan’s average calculation.

Even assuming that the average cut of railcars is 6 and the proposed crossing were installed across the IT, the proposed Emporia Court crossing will still cause an undue burden on the WTA’s operations. As stated in the WTA’s Opening Statement, and as conceded to by Mr. Sullivan, the Emporia Court crossing would reduce the IT’s capacity from 30 railcars to at most 12 if the WTA complies with the General Code of Operating Rules (“GCOR”). Opening Statement, p. 6. The WTA could fit no more than the average 6 cut of railcars on one track of one side of the crossing.

Needless to say, the WTA does interchange small “cuts” of trains which may be at or below 6 railcars in length, but such moves are a function of efficiency. Walbruch R.V.S., p. 2.

The proximity of customers to the IT allows the WTA to maximize the use and storage capacity of the IT when collecting railcar from customers that are later delivered to BNSF. *Id.* Additionally, the WTA also receives large cuts of railcars from WTA customers that are stored on the IT to be delivered to BNSF. *Id.* Installation of the proposed Emporia Court crossing will force the WTA to hold back these bigger cuts, thereby creating traffic delays. *Id.*

b. Mr. Sullivan's conclusions regarding the effect of the Emporia Court crossing on the WTA's labor costs are unreliable.

Mr. Sullivan states that the effect of the crossing installation on the WTA's labor costs would also be minimal, as crews would have to devote no more than an extra hour per day to perform additional switching activities caused by the crossing. Sullivan V.S., p. 9. Mr. Sullivan's opinions are unreliable for at least two reasons. First, Mr. Sullivan provides no basis for his estimation and the conclusion is nothing more than speculation. WTA Superintendent Simon Walbruch concludes that the installation of the crossing will undoubtedly result in additional switching activities. Walbruch R.V.S., p. 3. Mr. Walbruch also concedes that estimating the additional man hours needed to accomplish such additional switching would be guess work. *Id.* Second, even assuming an additional hour is needed for each crew per day, as Mr. Sullivan claims, the additional labor costs are not inconsequential. *Id.* The WTA's total hourly cost for a train crew and clerk is \$143.64. *Id.* The WTA utilizes two train crew shifts per day. *Id.* The WTA anticipates that in 2015, the first shift will work 261 days, and the third shift will work 365 days. *Id.* The number of shifts worked by both WTA crews next year will be 626 shifts. *Id.* As such, the total next year to cover this additional one hour of time for shifts worked by the WTA's crews will be approximately \$90,000.00 (\$143.64 x 626 shifts), excluding holiday and overtime pay. *Id.*

2. *Mr. Sullivan's recommendation regarding the WTA's 250 foot rule is not prudent.*

If the proposed crossing is installed, the railroad industry's General Code requires 250 feet of clearance from standing railcars at road crossings from end-of-car to center-of-crossing. Walbruch R.V.S., p. 4. Mr. Sullivan relies on the *USDOT Railroad-Highway Grade Crossing Handbook*, Revised Second Edition August 2007 ("Crossing Handbook") to recommend that the "sight line distance" be reduced from 250 feet to 175 feet "for trains operating at 20 MPH"⁵ Sullivan V.S., pp. 8-9; *see also* excerpt of the Crossing Handbook attached as **Exhibit O**. Mr. Sullivan opines that a reduction of 75 feet will add more track capacity on the IT. *See* FYG Reply, p. 7. However, Mr. Sullivan's reliance on the Crossing Handbook and his reference to the 175 feet sight line distance rule is misplaced because the rule does not apply to railcar storage at crossings with multiple tracks. Instead, the 175 feet sight line distance rule applies to sight distances for motor vehicles on highways or streets approaching warning signs and signals at grade crossings.

Specifically, Mr. Sullivan relies on Table 38 of the Crossing Handbook, which is a minimum sight distance table. The Crossing Handbook refers to Table 38 for sight distances for drivers on roads (not trains on tracks) approaching signaled rail crossings. Table 38 was adopted from the Manual on Uniform Traffic Control Devices, 2003 Edition, where it is referenced as Table 4D-1. Table 4D-1 is for drivers on roads approaching intersections, and it specifies the minimum sight distances of the traffic control signs at various speed limits. This

⁵ FYG also argues that Wichita City Ordinance 12.04.090 applies. This local ordinance sets the minimum distance for standing railcars at crossings to within thirty feet. FYG Reply, p. 7. Not even FYG's hired consultant advocates for the reduction of track clearance by 220 feet. Also, the applicability of Wichita City Ordinance 12.04.090 is unknown, as the ordinance is vague and ambiguous as to whether it applies to crossings over dual tracks. In short, reducing such clearance to 30' at this active, busy track would be imprudent and potentially unsafe. Walbruch R.V.S., p. 4.

means that the traffic control sign must be visible at the specified distance, depending on the speed limit; if it is not, an advance traffic control sign should be used. In short, Mr. Sullivan has misapplied the Crossing Handbook as the cited table does not apply to railcar storage clearance for public grade crossings. Further, GCOR has been adopted by over three hundred railroads including BNSF, UP, and the WTA. *See* excerpt of GCOR attached as **Exhibit P**; Walbruch R.V.S., p. 4. The standard called for in the GCOR is 250 feet of clearance for standing railcars. The purpose of such a standard is to allow both motor vehicle drivers and train crews adequate time and distance to observe traffic approaching the crossing. Reducing the required clearance at the proposed crossing by 75 feet (or by 220 feet as suggested by FYG) is imprudent and potentially unsafe. Walbruch R.V.S., p. 4.

3. *Mr. Sullivan's recommendation regarding track modifications, new track construction, use of BNSF's and UP's tracks and yards for storage, and interchange are impractical and burdensome.*

Mr. Sullivan proposes that the WTA spend an unknown amount of resources to construct, maintain, procure, purchase, remove, relocate or condemn rail lines and/or land to allow for the construction of the crossing. Mr. Sullivan states that to alleviate the WTA's concerns over loss of holding capacity, tracks around the IT should be modified, reconfigured, extended and/or new tracks should be constructed. FYG Reply, pp. 6-7. His demand for new track construction actually supports the WTA's contention that the proposed crossing would unduly burden the WTA's operations by the loss of holding capacity on its existing tracks in and around the IT. Making the temporary crossing permanent is a more practical and less burdensome alternative.

Similar to Mr. Sullivan's recommendation, FYG contends that all or most of the WTA's storage issues would be solved if it procured, leased, and/or maintained the Frisco yard. FYG Reply, p. 11. Again, spending time and resources rebuilding an out of service yard is impractical

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ATTESTATION AND VERIFICATION

I, K. Paul Day, declare under penalty of perjury that the foregoing is true and correct.
Further, I certify that I am qualified and authorized to file this Rebuttal of FYG's Evidence and
Arguments.

Executed on September 16, 2014.

s/ K. Paul Day
K. Paul Day

STATEMENT REGARDING SERVICE

I hereby certify that on this 16th day of September, 2014, I have served Respondents in this proceeding with this Rebuttal of FYG's Evidence and Arguments, via First-Class mail, postage pre-paid, upon the following counsel of record:

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s/ K. Paul Day

K. Paul Day

EXHIBIT LIST

Exhibit M – Excerpt of November 21, 2011 Bench Trial Transcript

Exhibit N – Rebuttal Verified Statement of Simon Walbruch (Wichita Terminal Association)

Exhibit O - Excerpt of *USDOT Railroad-Highway Grade Crossing Handbook*, Revised Second Edition August 2007

Exhibit P – Excerpt of General Code of Operating Rules

Exhibit M

Excerpt of November 21, 2011 Bench Trial Transcript

1 MR. HOCH: Defense will call Mr. Tim Austin.

2 THE COURT: Mr. Austin, please come forward,
3 be sworn.

4 **TIMOTHY R. AUSTIN,**
5 called as a witness on behalf of the Defendants, having
6 first been duly sworn, testified as follows:

7 **DIRECT EXAMINATION**

8 **BY MR. HOCH:**

9 Q. Tim, would you introduce yourself to Judge Bribiesca,
10 please, by stating your full name and your home
11 address.

12 A. Full name is Timothy R. Austin, I live at 1215
13 Dougherty, D-O-U-G-H-E-R-T-Y, in Wichita, Kansas.

14 Q. And what's your occupation?

15 A. I am a licensed civil engineer.

16 Q. In the state of Kansas?

17 A. That's correct, in the state of Kansas.

18 Q. When did you obtain your civil engineering license?

19 A. In 1989.

20 Q. And I think I just answered the next question here,
21 what discipline do you practice in?

22 A. I'm a civil engineer.

23 Q. What does that mean as a practical matter?

24 A. Civil can mean very many disciplines. My specialty is
25 in municipal design work and working with private

1 draw some conclusions as to what those costs might be
2 or how solutions might be derived.

3 Q. Now, in 2006, FYG dedicated to the city of Wichita a
4 right-of-way for a -- a street called Emporia Court
5 running south of 25th Street. Were you involved in
6 that process?

7 A. Yes, I was.

8 Q. Would you tell us, please, what you did.

9 A. The exhibit, I don't remember what -- Exhibit 3 of
10 their exhibit, represents a right-of-way location to
11 show how the area -- actually the other exhibit might
12 be better.

13 Q. I'm sorry.

14 A. I'm sorry.

15 Q. This is Plaintiffs' Exhibit 19 for this hearing.

16 A. Sorry about that. What we looked at was how this area
17 could be utilized to its highest and best use and what
18 was the most efficient, economical means to provide
19 access for that site to be developed.

20 Q. Now, what were the constraints as you studied the most
21 effective or most efficient way to develop the
22 property?

23 A. Well, there are a number of constraints to the site,
24 some of them are physical, some of them may be legal,
25 but the site east of this drainage ditch, this is --

1 this is a drainage ditch that's owned by the city of
2 Wichita, was originally acquired for use by the North
3 Wichita Drainage District back in the late twenties, I
4 believe, and condemned for drainage, drains areas up
5 to Park City. This is a significant ditch. We went
6 out and surveyed it, measured it, did some cost
7 estimates as to how a crossing might be constructed
8 and what that cost might be. We also looked at how
9 the site would be developed with sanitary sewer and
10 with water service for any end users who might want to
11 develop that site. And then we looked at the access
12 issues in addition to coming here, looking at the 25th
13 Street corridor, where -- where the rail access is and
14 the subject of today's discussion.

15 Q. As a result of that effort, did FYG make a dedication
16 of land to the city of Wichita and did the city accept
17 that dedication?

18 A. That's correct.

19 Q. Now, in 2008, did you prepare a set of sealed drawings
20 for the construction of Emporia Court as it had been
21 dedicated to the city?

22 A. Yes, we did.

23 Q. And were the drawings for that street construction
24 work approved by the city of Wichita?

25 A. Yes, they were.

- 1 Q. (By Mr. Hoch) All right. So now you have dimensioned
2 here 7.21 feet on the left side of the drawing. What
3 is that dimension for?
- 4 A. That is the -- that is the encroachment of the dynamic
5 envelope into the -- no, I take that back, the four --
6 it's 4.71 feet is the dynamic envelope, encroachment
7 into the public right-of-way. These two dimensions,
8 my draftsman got those a little too close.
- 9 Q. All right. And the 7.21 feet, then, is the dimension
10 from --
- 11 A. The dynamic envelope to the south curb line of a
12 proposed street right-of-way.
- 13 Q. Now, in this Exhibit A, have you assumed the 25th
14 Street would be improved and that it would have curb
15 and gutter, like on a new typical city of Wichita
16 street?
- 17 A. That's correct.
- 18 Q. And what distance across, how wide a street did you
19 anticipate here?
- 20 A. Typically, the city of Wichita standard for industrial
21 streets is 41 feet from back of curb to back of curb.
- 22 Q. Is that what you've drawn here?
- 23 A. Yes.
- 24 Q. And based upon the geometry of the layout, will a
25 41-foot street fit within the public right-of-way as

1 it exists today?

2 A. Yes, it can.

3 Q. Now, have you also, then, located the warning signs
4 associated with the crossing on this drawing, Exhibit
5 A?

6 A. I did.

7 Q. And would you take us through each of those, please.

8 A. Okay. After review of the MUTCD, looking at just a
9 very preliminary look at this crossing, this location,
10 based on some of the land uses and trips and observing
11 traffic over a couple different days, looked at a
12 signage layout of starting on the -- on the left, at
13 the west end, we see a designation of W10-3, it's a
14 sign that's 36 inches square, and that would control
15 traffic coming from the west.

16 Q. And is that shown as the top sign in the sign legend?

17 A. Yes, it is.

18 Q. Okay. The next sign location, then?

19 A. The next sign location, which is right at the
20 intersection on either side, is an R15-1, that is
21 what's commonly referred to as the crossbuck. That's,
22 again, designated here on the lower left. With that
23 crossbuck is an R15-2P sign designation, which is,
24 again, shown to reflect two tracks, and that's
25 requirement on multiple tracks, according to the

Exhibit N

**Rebuttal Verified Statement of Simon Walbruch
(Wichita Terminal Association)**

BEFORE THE
SURFACE TRANSPORTATION BOARD

FINANCE DOCKET NO. 35765

**PETITION OF WICHITA TERMINAL ASSOCIATION, BNSF RAILWAY COMPANY,
and UNION PACIFIC RAILROAD COMPANY FOR DECLARATORY ORDER**

**REBUTTAL VERIFIED STATEMENT OF SIMON WALBRUCH IN SUPPORT OF
THE WTA'S REBUTTAL OF EVIDENCE AND ARGUMENTS**

My name is Simon Walbruch. I am the current Superintendent at the Wichita Terminal Association (the "WTA") and previously submitted a verified statement in this proceeding as part of the WTA's Opening Statement of Evidence and Arguments. I submit this rebuttal verified statement to respond to the assertions made by FYG in its Reply and by its paid consultant Steve Sullivan. My rebuttal addresses: (1) the number and types of train movements across the IT; (2) capacity limitations at the IT compared to customer capacity restraints; (3) the potential effect of the Emporia Court crossing on the WTA's labor costs; and (4) the 250 foot rule.

I. Average Train Size

Mr. Sullivan states that for each day between January 2012 and May 2014, the average cut of railcars that crossed the IT was 5.7 railcars in length. To reach his total, Mr. Sullivan states that he relied on the statistical information provided by all three railroads and that he excluded "bulk wheat shipments." His verified statement does not define "bulk wheat shipments" and does not state the length of the trains he believes constitute bulk wheat trains. As such, it is not possible to discern how Mr. Sullivan arrived at his 5.7 railcar average.

The statistical information maintained by the three railroads and provided to the Board does not indicate train lengths. Without additional analysis from Mr. Sullivan regarding his methodology, I am unable to rely on his findings to support his 5.7 railcar average. However, based on my experience as Superintendent, the 5.7 railcar average is an understatement. Moreover, Mr. Sullivan's reliance on the 5.7 railcar average is unimportant. Because the IT can currently hold 30 railcars, the WTA would not be operating efficiently if it did not maximize the number of cars the WTA delivered to BNSF via the IT. WTA routinely uses the IT to interchange trains well in excess of 6 railcars in length, and then stores those cars on the IT.

Mr. Sullivan testified that his unnamed associate observed eleven trains interchanged on the IT while he was in downtown Wichita for a two day period, and that he saw one train exceed twelve railcars in length, and that eight times he saw trains arrive or depart "lite" to receive or deliver 10 railcars or less. That would mean the associate saw two trains pulling more than 10 railcars. The lowest train length observed by the associate was 7 railcars. Based on the associate's observations, none of the trains were at or below Mr. Sullivan's calculated average.

Needless to say, the WTA does interchange small "cuts" of trains which may be at or below 6 railcars in length, but such moves are a function of efficiency. The proximity of customers to the IT allows the WTA to maximize the use and storage capacity of the IT when collecting railcars from customers that are later delivered to BNSF. Additionally, the WTA also receives large cuts of railcars from WTA customers that are stored on the IT to be delivered to BNSF. Installation of the proposed Emporia Court crossing will force the WTA to hold back these bigger cuts, thereby creating a backup.

II. Capacity Limitations on the IT Compared to Customer Capacity Restraints

Mr. Sullivan's statement that railcars are interchanged in multiple smaller cuts because of customer capacity constraints, and not because of IT capacity, overlooks the limited track capacity of the IT. The WTA does serve customers who have limited capacity to store railcars on their industry tracks. The IT also has limited track capacity for these same customers as well as for BNSF and UP during interchange and bridge moves. As such, the IT could not handle more railcars if the customers had more capacity. Therefore, the WTA's operations are restrained because of capacity limitations on the IT, not customer capacity. For example, if capacity is reduced on the IT, BNSF will provide fewer railcars for interchange, and the WTA will provide fewer railcars to its customers. A reduction of IT capacity would therefore slow down the movement of freight. Railcars that do not fit on the IT would need to be held for future moves, resulting in freight delivery delays. The installation of the proposed Emporia Court crossing will result in a further reduction of IT capacity.

III. The Effect of the Emporia Crossing on the BNSF's and the WTA's labor costs

Mr. Sullivan states that if the proposed crossing is installed, the WTA crews would need to work an extra hour per day handling the additional interchange moves. In my opinion, such an estimation is conjecture, and underestimates the additional man hours needed for these additional moves. However, assuming an additional hour is needed for each crew per day, the impact on labor costs would not be inconsequential. The WTA's total hourly cost for a train crew and clerk is \$143.64. The WTA utilizes two train crew shifts per day. The WTA anticipates that in 2015, the first shift will work 261 days, and the third shift will work 365 days. The number of shifts worked by both WTA crews next year will be 626 shifts. As such, the total

next year to cover this additional one hour of time for shifts worked by the WTA's crews will be approximately \$90,000.00 (\$143.64 x 626 shifts), excluding holiday and overtime pay.

IV. The 250-foot Rule

If the proposed crossing is installed, the railroad industry's General Code requires 250 feet of clearance from standing railcars at road crossings from end-of-car to center-of-crossing. The General Code of Operating Rules ("GCOR") has been adopted by over three hundred railroads, including BNSF, UP, and the WTA. GCOR 6.32.4 states:

Leave cars, engines, or equipment clear of road crossings and crossing signal circuits. When practical, avoid leaving cars, engines, or equipment standing closer than 250 feet from the road crossing when there is an adjacent track.

Assuming the proposed Emporia Court crossing is installed over the IT, the WTA would need to enforce the 250 foot rule because the rule insures that approaching motor vehicles have adequate visibility of trains approaching the crossing when the other track is occupied by a stationary train. Reducing the clearance distance to allow for the installation of the proposed Emporia Court crossing would be imprudent and potentially unsafe.

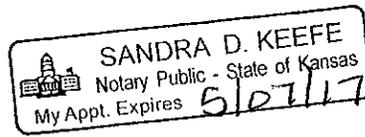
VERIFICATION

I declare under penalty of perjury that the foregoing is true and correct. Further, I certify that I am qualified and authorized to file this Rebuttal Verified Statement.

Executed on September 16, 2014


Simon Walbruch

STATE OF Kansas)
COUNTY OF Sedgwick) ss.



Subscribed and sworn to before me, a Notary Public, this 16th day of September, 2014.

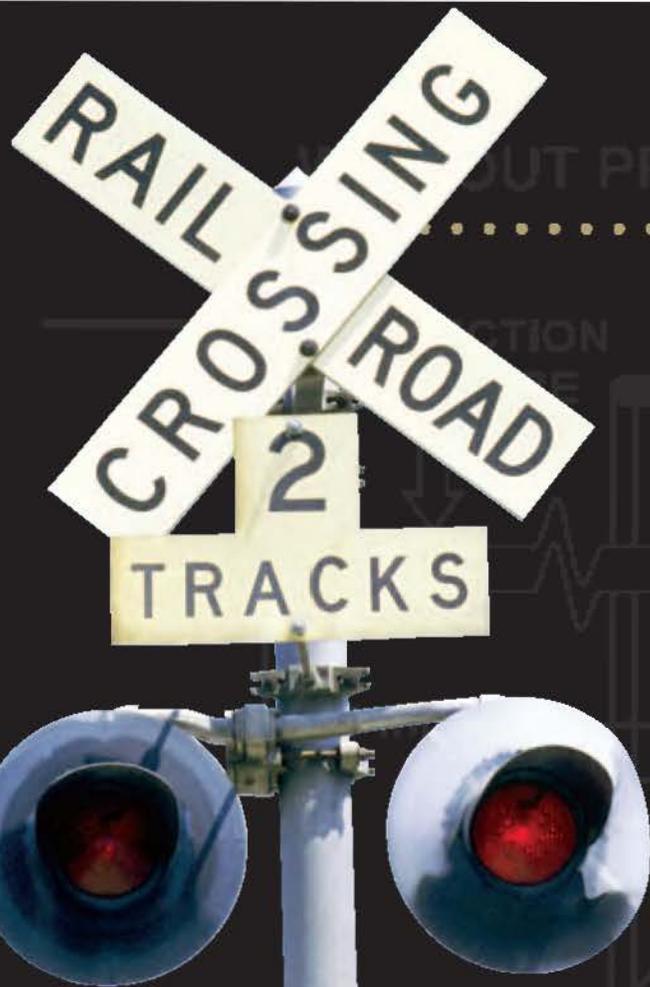
My Commission Expires:

5/17/17

Sandra D. Keefe
Notary Public

Exhibit O

Excerpt of *USDOT Railroad-Highway Grade Crossing Handbook*, Revised Second Edition August 2007



Railroad-Highway Grade Crossing *Handbook*



Revised Second Edition
August 2007

U.S. Department of Transportation
Federal Highway Administration



EXHIBIT O

should be notified of these intentions. The state highway agency might work out an agreement with the state regulatory commission that any information on railroad abandonments is automatically sent to the state highway agency. Additionally, the state highway agency should periodically call the state regulatory commission or STB to obtain the records on rail abandonments in the state. Railroad personnel responsible for crossing safety and operations should also seek the same information from their traffic and operating departments.

Once a rail line has been identified as abandoned or abandonment is planned, the crossings on that line should be identified. This can be determined from the state inventory of crossings or obtained from FRA, custodian of the U.S. DOT National Highway-Rail Crossing Inventory. A field inspection of these crossings should be made to determine if all crossings on that line, both public and private, are listed in the inventory and to verify the type of traffic control devices located at each crossing.

This field inspection provides an excellent opportunity to assess the safety and operations of each crossing on that line, as discussed in Chapter III. If the rail line is not abandoned, the necessary information has been gathered to improve each crossing by one of the alternatives described in following sections.

If rail service has been discontinued, pending resolution of the abandonment application and formal abandonment, immediate measures should be taken to inform the public. For example, "Exempt" signs, if authorized by state law or regulation, can be placed at the crossing to notify drivers of special vehicles that a stop at the crossing is not necessary. Gate arms should be removed, and flashing light signal heads should be hooded, turned, or removed. However, if these actions are taken, the traffic control devices must be restored to their original condition prior to operating any trains over the crossing. For any subsequent use of the crossing by rail traffic pending final abandonment, the railroad shall provide flagging, law enforcement, or other case-by-case manual control of the crossing. The railroad might flag the train over the crossing until such action can be taken.

If it appears that rail service has been permanently discontinued, and resolution of official abandonment appears certain, the track should be paved over and all traffic control devices removed. This action should be taken immediately following official abandonment if no possibility exists for resumption of rail service. This can be determined by examining the potential for industry or business to require rail service. For

example, if the rail line was abandoned because the industry that required the service has moved and other plans for the land area have been made, it could be determined whether need for the rail service will continue. An agreement may be necessary between the public authority and the railroad to accomplish the physical removal of the tracks.

G. New Crossings

Similar to crossing closure/consolidation, opening a new public highway-rail crossing should likewise consider public necessity, convenience, safety, and economics. Generally, new grade crossings, particularly on mainline tracks, should not be permitted unless no other viable alternatives exist and, even in those instances, consideration should be given to closing one or more existing crossings. If a new grade crossing is to provide access to any land development, the selection of traffic control devices to be installed at the proposed crossing should be based on the projected needs of the fully completed development.

Communities, developers, and highway transportation planners need to be mindful that once a highway-rail grade crossing is established, drivers can develop a low tolerance for the crossing being blocked by a train for an extended period of time. If a new access is proposed to cross a railroad where railroad operation requires temporarily holding trains, only grade separation should be considered.⁸⁵

H. Passive Traffic Control Devices

Passive traffic control devices provide static messages of warning, guidance, and, in some instances, mandatory action for the driver. Their purpose is to identify and direct attention to the location of a crossing to permit drivers and pedestrians to take appropriate action. Passive traffic control devices consist of regulatory signs, warning signs, guide signs, and supplemental pavement markings. They are basic devices and are incorporated into the design of active traffic control devices.

Signs and pavement markings are to be in conformance with MUTCD, which is revised periodically as the need arises. If there are differences between this handbook and the current edition of MUTCD concerning both active and passive traffic control devices, MUTCD should be

⁸⁵ *Ibid.*

followed. The diagrams shown in this handbook are taken from the current version of MUTCD (2003 Edition, Revision 1). Practitioners should confirm all signs, dimensions, and criteria with the latest edition of MUTCD.

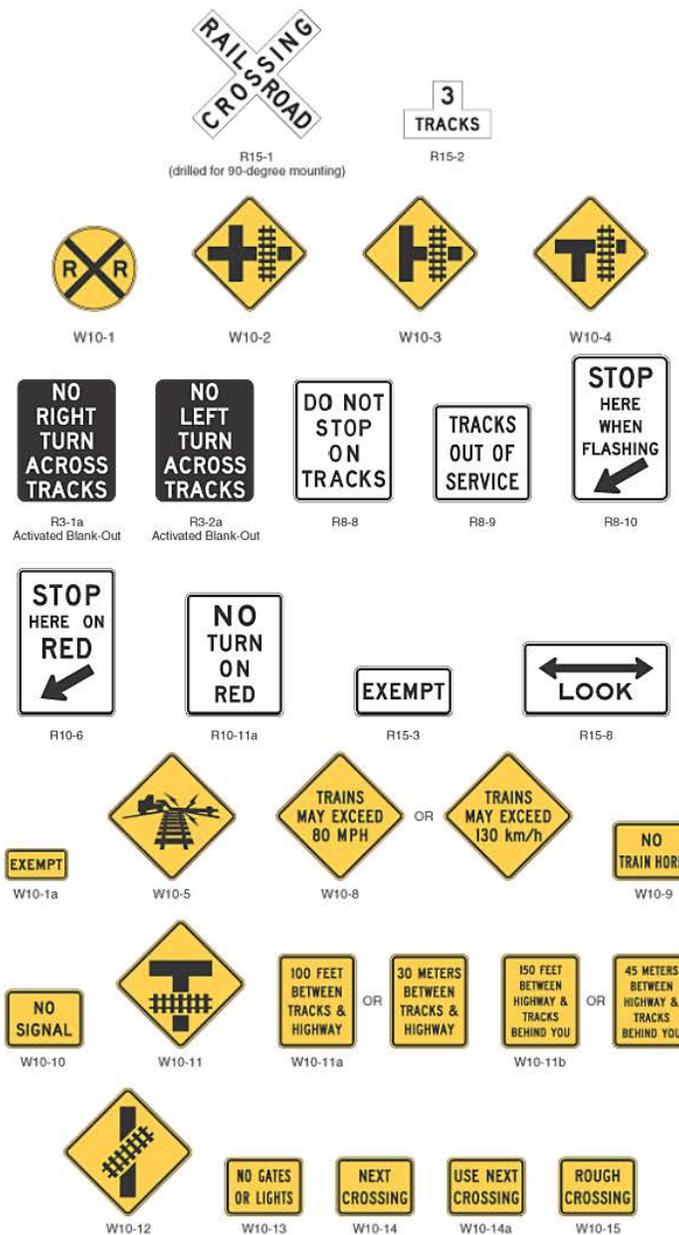
Federal law requires that, as a minimum, each state shall provide signs at all crossings. The railroad crossbuck sign and other supplemental signs attached to the crossbuck mast are usually installed and maintained by the railroad company. The agency responsible for

maintenance of the roadway is normally responsible for advance warning signs and pavement markings.

1. Signs

The typical signs used at highway-rail grade crossings are shown in Figure 11 and listed in Table 35. Individual characteristics and location requirements follow.

Figure 11. Typical Crossing Signs



Source: Manual on Uniform Traffic Control Devices, 2003 Edition. Washington, DC: Federal Highway Administration, 2003.

Table 35. Current MUTCD Devices

MUTCD no.	Section	Traffic control device	Application or indication of need
R3-1a	8B.06, 10C.09	No Right Turn Across Tracks	Used to prohibit turning movements toward the highway-rail grade crossing during preemption.
R3-2a	8B.06, 10C.09	No Left Turn Across Tracks	Used to prohibit turning movements toward the highway-rail grade crossing during preemption.
R8-8	8B.07, 10C.05	Do Not Stop on Tracks	Where queuing occurs or where storage space is limited between a nearby highway intersection and the tracks; may be supplemented with a flashing light activated by queuing traffic in the exit lane(s) from the crossing. (See discussion on queue cutter signals.)
R8-9	8B.09, 10C.06	Tracks Out of Service	Applicable when there is some physical disconnection along the railroad tracks to prevent trains from using those tracks.
R8-10	8B.10, 10C.08	Stop Here When Flashing	May be used at a highway-rail grade crossing to inform drivers of the location of the stop line or the point at which to stop when the flashing light signals (Section 8D.02) are activated.
R10-6	8B.11, 10C.07	Stop Here on Red	May be used at locations where vehicles frequently violate the stop line or where it is not obvious to road users where to stop.
R10-11a	8D.07, 10C.09	No Turn on Red	If there is a nearby signalized intersection with insufficient clear storage distance for a design vehicle or the highway-rail grade crossing does not have gates.
R15-1	8B.03, 10C.02	Highway-Rail Grade Crossing (crossbuck)	Required device.
R15-2	8B.03, 10C.02	Number of Tracks	Standard required device, with two or more tracks and no gate; optional with gate.
R15-3	8B.05, 10C.10	Exempt	School buses and commercial vehicles that are usually required to stop at crossings are not required to do so where authorized by ordinance.
R15-4a	10C.13	Light Rail Only Right Lane	For multilane operations where roadway users might need additional guidance on lane use and/or restrictions.
R15-4b	10C.13	Light Rail Only Left Lane	For multilane operations where roadway users might need additional guidance on lane use and/or restrictions.
R15-4c	10C.13	Light Rail Only Center Lane	For multilane operations where roadway users might need additional guidance on lane use and/or restrictions.
R15-5	10C.14	Light Rail Do Not Pass	Where vehicles are not allowed to pass LRT vehicles loading or unloading passengers where no raised platform physically separates the lanes.
R15-5a	10C.14	Do Not Pass Stopped Train	Where vehicles are not allowed to pass LRT vehicles loading or unloading passengers where no raised platform physically separates the lanes.
R15-6	10C.12	Do Not Drive On Tracks Light Rail Symbol	Used where there are adjacent vehicle lanes separated from the LRT lane by a curb or pavement markings.
R15-6a	10C.12	Do Not Drive On Tracks	Used where there are adjacent vehicle lanes separated from the LRT lane by a curb or pavement markings.
R15-7	10C.11	Light Rail Divided Highway Symbol	Use with appropriate geometric conditions.
R15-7a	10C.11	Light Rail Divided Highway Symbol (T-intersection)	Use with appropriate geometric conditions.
R15-8	8B.16, 10C.03	Look	<ul style="list-style-type: none"> • Multiple tracks • Collision experience • Pedestrian presence
W10-1	8B.04, 10C.15	Highway-Rail Grade Crossing Advance Warning	Required device, with MUTCD exceptions (Section 8B.04); school buses and commercial vehicles that are usually required to stop at crossings are not required to do so where authorized by ordinance.
W10-1a	8B.05, 10C.10	Exempt	

(continued)

MUTCD no.	Section	Traffic control device	Application or indication of need
W10-2,3,4	8B.04, 10C.15	Highway-Rail Grade Crossing Advance Warning	Based upon specific situations with a nearby parallel highway.
W10-5	8B.17, 10C.18	Low Ground Clearance Highway-Rail Grade Crossing	As indicated by MUTCD guidelines, incident history, or local knowledge.
W10-7	10C.17	Light Rail Activated Blank-Out Symbol	Supplements the traffic control signal to warn road users turning across the tracks of an approaching parallel LRT vehicle.
W10-8	8B.13	Trains May Exceed 130 km/h (80 mph)	Where train speed is 80 mph (130 km/hr.) or faster.
W10-9	8B.14	No Train Horn	Shall be used only for crossings in FRA-authorized quiet zones.
W10-10	8B.15	No Signal	May be used at passive controlled crossings.
W10-11	8B.18, 10C.18	Storage Space Symbol	Where the parallel highway is close to the crossing, particularly with limited storage space between the highway intersection and tracks.
W10-11a	8B.18, 10C.18	Storage Space XX Meters (Feet) Between Tracks & Highway	Where the parallel highway is close to the crossing, particularly with limited storage space between the highway intersection and tracks.
W10-11b	8B.18, 10C.18	Storage Space XX Meters (Feet) Between Highway & Tracks Behind You	Used where there is a highway intersection in close proximity to the highway-rail grade crossing and an engineering study determines that adequate space is not available to store a design vehicle(s) between the highway intersection and the train dynamic envelope.
W10-12	8B.19, 10C.19	Skewed Crossing	May be used at a skewed highway-rail grade crossing to warn drivers that the railroad tracks are not perpendicular to the highway.
W10-13	8B.15	No Gates or Lights	May be installed at highway-rail grade crossings that are not equipped with automated signals.
W10-14	8B.17	Next Crossing	Placed below the W10-5 sign at the nearest intersecting highway where a vehicle can detour or at a point on the highway wide enough to permit a U-turn.
W10-14a	8B.17	Use Next Crossing	Placed below the W10-5 sign at the nearest intersecting highway where a vehicle can detour or at a point on the highway wide enough to permit a U-turn.
W10-15	8B.17	Rough Crossing	If the highway-rail grade crossing is rough.
I-12	10C.20	Light Rail Station Symbol	Used to direct road users to a light rail station or boarding location.
I-13	8B.12, 10C.21	Emergency Notification	Post at all crossings to provide for emergency notification.
I-13a	8B.12, 10C.21	Emergency Notification	Post at all crossings to provide for emergency notification.

Source: Manual on Uniform Traffic Control Devices, 2003 Edition. Washington, DC: Federal Highway Administration, 2003.

In general, MUTCD specifies that signs should be located on the right-hand side of the highway, where the driver is looking for them. Signs should be located to optimize visibility. Signs should not be located in a highway dip or beyond the crest of a hill. Care should be taken so that the sign is not obscured by parked cars or foliage or covered by roadside splatter or snow accumulation.

In rural areas, signs along the side of the road should be at least 5 feet high, measured from the bottom of the

sign to the elevation of the near edge of the pavement. In business, commercial, and residential areas, where parking and/or pedestrian movements are likely to occur or where there are other sight obstructions, the clearance to the bottom of the sign should be at least 7 feet. The height to the bottom of a secondary sign mounted below another sign may be 1 foot lower than the height specified above.

Signs should have the maximum practical lateral clearance from the edge of the traveled way for the

safety of motorists who may leave the highway and strike the sign supports (see MUTCD, 2003 Edition, Section 2A.19). Advantage should be taken of existing guardrails, overcrossing structures, and other conditions to minimize the exposure of sign supports to traffic.

Normally, signs should not be closer than 6 feet from the edge of the shoulder or, if none, 12 feet from the edge of the traveled way. In urban areas, a lesser clearance may be used where necessary. Although 2 feet is recommended as a working urban minimum, a clearance of 1 foot from the curb face is permissible if sidewalk width is limited or where existing poles are close to the curb.

Signs should be mounted approximately at right angles to the direction of and facing the traffic they are intended to serve. Post-mounted signs located close to the highway should be turned slightly away from the highway to avoid the reflection of headlights off the sign directly back into drivers' eyes.

Sign posts and their foundations and sign mountings should be constructed to hold signs in a proper and permanent position, to resist swaying in the wind or displacement by vandalism. If ground-mounted sign supports cannot be sufficiently offset from the pavement edge, sign supports should be of a suitable breakaway or yielding design. Concrete bases for sign supports should be flush with the ground level.

Sign materials are usually aluminum, wood, or galvanized or nongalvanized steel. Signs are retroreflective or illuminated to provide visibility at night. The requirements of sign illumination are not considered to be satisfied by street or highway lighting or by strobe lighting. Information on reflective materials is contained in the *Traffic Control Devices Handbook*. A 2003 study presents updated minimum recommended retroreflectivity levels in recognition of available sheeting materials, the needs of older drivers, and the evolution of vehicles and headlamps.⁶⁶ FHWA has been developing standards on the retroreflectivity of signs, which include minimum values to be provided and maintained. FHWA recently published a Supplemental Notice of Proposed Amendments to MUTCD. The provisions were out for comment at the time this handbook was prepared.⁶⁷

66 Carlson, Paul J. and H. Gene Hawkins, Jr. *Updated Minimum Retroreflectivity Levels for Traffic Signs*. FHWA-RD-03-081, July 2003.

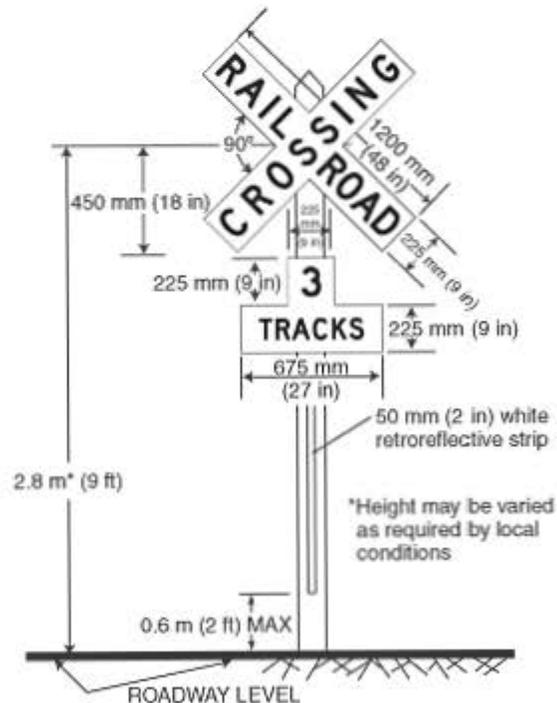
67 23CFR Part 655, FHWA Docket No. FHWA-2003-15149. Federal Register, May 8, 2006.

“Railroad Crossing” (crossbuck) sign (R15-1) and “Number of Tracks” sign (R15-2).

The “Railroad Crossing” sign, commonly identified as the crossbuck sign, consists of a white reflectorized background with the words RAILROAD CROSSING in black lettering, as shown in Figures 11 and 12. A minimum of one crossbuck shall be used on each highway approach to every crossing, alone or in combination with other traffic control devices.

Note: Crossbuck signs are not usually used at light-rail grade crossings where the tracks run in the street and traffic is controlled by traffic signals. Refer to Chapter IX, Part C for a discussion of clarifying language approved by the National Committee on Uniform Traffic Control Devices (NCUTCD) in June 2005. If there are two or more tracks at the crossing, the number of tracks is to be indicated on an auxiliary sign mounted below the crossbuck, as shown in Figure 12. The use of this auxiliary sign is optional at crossings with automatic gates.

Figure 12. Crossing Sign (Crossbuck)



Source: Manual on Uniform Traffic Control Devices, 2003 Edition. Washington, DC: Federal Highway Administration, 2003.

Where physically feasible and visible to approaching traffic, the crossbuck sign should be installed on the right-hand side of the highway on each approach to the crossing. Where an engineering study finds restricted

sight distance or unfavorable road geometry, crossbuck signs shall be placed back to back or otherwise located so that two faces are displayed to that approach. Some states and railroads use back-to-back crossbucks at every crossing; other states and railroads place reflectorized white stripes on the back of every crossbuck.

Crossbuck signs should be located with respect to the highway pavement or shoulder as discussed above for all signs and should be located with respect to the nearest track in accordance with signal locations as discussed in the next section. Where unusual conditions exist, the placement of crossbucks should provide the best possible combination of view and safety clearances as determined by engineering judgment.

Advance warning signs (W10-1, W10-2, W10-3, W10-4). The round, black, and yellow advance warning sign (W10-1) is located in advance of the crossing and serves to alert the motorist that a crossing is ahead. The advance warning sign has a minimum diameter of 36 inches for conventional roads. The sign is required in advance of all crossings except:

- On an approach to a highway-rail grade crossing from a T-intersection with a parallel highway, if the distance from the edge of the track to the edge of the parallel roadway is less than 30 meters (100 feet) and W10-3 signs are used on both approaches of the parallel highway; or
- On low-volume, low-speed highways crossing minor spurs or other tracks that are infrequently used and are flagged by train crews; or
- In business districts where active highway-rail grade crossing traffic control devices are in use; or
- Where physical conditions do not permit even a partially effective display of the sign.

When the crossing is on a divided highway, it is desirable to place an additional advance warning sign on the left side of each approach. It may also be desirable to place an additional sign on the left side of a highway approach when the highway alignment limits the visibility of signs mounted on the right side.

The distance from the advance warning sign to the track is dependent upon the highway speed but in no case should be less than 100 feet in advance of the nearest rail. This distance should allow the driver sufficient time to comprehend and react to the sign's

message and to perform any necessary maneuver. The recommended distances are shown in Tables 36 and 37. Condition A is used for advanced warning sign placement.

Where a road runs parallel to a railroad and the perpendicular distance between the two is less than 100 feet, there is not enough distance to display the advance warning sign (W10-1). For traffic turning from the parallel road, one of three other warning signs (W10-2, W10-3, and W10-4) can be used when their need has been determined from an engineering study. Figure 13 shows typical sign placements for crossings located near highway intersections; Figure 14 indicates a recommended treatment for crossings that lack adequate clear storage distance; and Figure 15 shows possible signage placement for locations with limited sight distance.

“No Signal” and “Signal Ahead” signs (W10-10 and W10-16). A recent study of passive devices at highway-rail grade crossings recommended that a supplemental sign should be placed at the location of the advance warning sign to inform highway users as to whether passive or active devices are present at a downstream grade crossing.⁸⁸ Subsequently, at the January 2006 meeting of NCUTCD, the council approved proposed changes to MUTCD that would allow use of “No Signal” and “Signal Ahead” signs (W10-10 and W10-16) for locations where the grade crossing advance warning sign is placed.

Advisory speed plate (W13-1). The advisory speed plate should be used when sight or geometric conditions require a speed lower than the posted speed limit. It should not be erected until the recommended speed has been determined by an engineering study of the specific crossing. If the plate is used, the recommended speed should be periodically reviewed and revised as necessary. Should it be determined that the advisory speed plate is not effective in reducing vehicular speeds, it may be appropriate to use a regulatory speed limit sign (R2-1). The advisory speed plate must be mounted on the same assembly and is normally below the advance warning sign (W-10 series).

STOP and YIELD signs (R1-1 & R1-2). The 2003 edition of MUTCD requires the crossbuck (R15-1) sign for all highway approaches to railroad grade crossings. It also allows the optional use of YIELD or STOP signs at passive crossings.

88 Lerner, Neil D. et al. *Traffic-Control Devices for Passive Railroad-Highway Grade Crossings*. Washington, DC: National Cooperative Highway Research Program Report 470, Transportation Research Board, 2002.

Table 36. Placement Distances for Advance Warning Signs (English Units)

Posted or 85th-Percentile Speed	Advance Placement Distance ¹								
	Condition A: Speed Reduction and Lane Changing in Heavy Traffic ²	Condition B: Deceleration to the listed advisory speed (mph) for the condition ⁴							
		0 ³	10	20	30	40	50	60	70
20 mph	225 ft.	N/A ⁵	N/A ⁵	—	—	—	—	—	—
25 mph	325 ft.	N/A ⁵	N/A ⁵	N/A ⁵	—	—	—	—	—
30 mph	450 ft.	N/A ⁵	N/A ⁵	N/A ⁵	—	—	—	—	—
35 mph	550 ft.	N/A ⁵	N/A ⁵	N/A ⁵	N/A ⁵	—	—	—	—
40 mph	650 ft.	125 ft.	N/A ⁵	N/A ⁵	N/A ⁵	—	—	—	—
45 mph	750 ft.	175 ft.	125 ft.	N/A ⁵	N/A ⁵	N/A ⁵	—	—	—
50 mph	850 ft.	250 ft.	200 ft.	150 ft.	100 ft.	N/A ⁵	—	—	—
55 mph	950 ft.	325 ft.	275 ft.	225 ft.	175 ft.	100 ft.	N/A ⁵	—	—
60 mph	1100 ft.	400 ft.	350 ft.	300 ft.	250 ft.	175 ft.	N/A ⁵	—	—
65 mph	1200 ft.	475 ft.	425 ft.	400 ft.	350 ft.	275 ft.	175 ft.	N/A ⁵	—
70 mph	1250 ft.	550 ft.	525 ft.	500 ft.	425 ft.	350 ft.	250 ft.	150 ft.	—
75 mph	1350 ft.	650 ft.	625 ft.	600 ft.	525 ft.	450 ft.	350 ft.	250 ft.	100 ft.

Notes:

¹ The distances are adjusted for a sign legibility distance of 175 ft. for Condition A. The distances for Condition B have been adjusted for a sign legibility distance of 250 ft., which is appropriate for an alignment warning symbol sign.

² Typical conditions are locations where the road user must use extra time to adjust speed and change lanes in heavy traffic because of a complex driving situation. Typical signs are Merge and Right Lane Ends. The distances are determined by providing the driver a PIEV time of 14.0 to 14.5 seconds for vehicle maneuvers (2001 AASHTO Policy, Exhibit 3-3, Decision Sight Distance, Avoidance Maneuver E) minus the legibility distance of 175 ft. for the appropriate sign.

³ Typical condition is the warning of a potential stop situation. Typical signs are Stop Ahead, Yield Ahead, Signal Ahead, and Intersection Warning signs. The distances are based on the 2001 AASHTO Policy, Stopping Sight Distance, Exhibit 3-1, providing a PIEV time of 2.5 seconds, a deceleration rate of 11.2 ft./second², minus the sign legibility distance of 175 ft.

⁴ Typical conditions are locations where the road user must decrease speed to maneuver through the warned condition. Typical signs are Turn, Curve, Reverse Turn, or Reverse Curve. The distance is determined by providing a 2.5 second PIEV time, a vehicle deceleration rate of 10 ft./second², minus the sign legibility distance of 250 ft.

⁵ No suggested distances are provided for these speeds, as the placement location is dependent on site conditions and other signing to provide an adequate advance warning for the driver.

Source: Manual on Uniform Traffic Control Devices, 2003 Edition. Washington, DC: Federal Highway Administration, 2003.

Table 37. Placement Distances for Advance Warning Signs (Metric Units)

Posted or 85th-Percentile Speed (km/hr.)	Advance Placement Distance ¹												
	Condition A: Speed Reduction and Lane Changing in Heavy Traffic ²	Condition B: Deceleration to the listed advisory speed (km/hr.) for the condition ⁴											
		0 ³	10	20	30	40	50	60	70	80	90	100	110
30	60 m	N/A ⁵	N/A ⁵	—	—	—	—	—	—	—	—	—	—
40	100 m	N/A ⁵	N/A ⁵	N/A ⁵	—	—	—	—	—	—	—	—	—
50	150 m	N/A ⁵	N/A ⁵	N/A ⁵	—	N/A ⁵	—	—	—	—	—	—	—
60	180 m	30 m	N/A ⁵	—	—	—	—	—	—				
70	220 m	50 m	40 m	30 m	N/A ⁵	N/A ⁵	N/A ⁵	N/A ⁵	—	—	—	—	—
80	260 m	80 m	60 m	55 m	50 m	40 m	30 m	N/A ⁵	N/A ⁵	—	—	—	—
90	310 m	110 m	90 m	80 m	70 m	60 m	40 m	N/A ⁵	N/A ⁵	N/A ⁵	—	—	—
100	350 m	130 m	120 m	115 m	110 m	100 m	90 m	70 m	60 m	40 m	N/A ⁵	—	—
110	380 m	170 m	160 m	150 m	140 m	130 m	120 m	110 m	90 m	70 m	50 m	N/A ⁵	—
120	420 m	200 m	190 m	185 m	180 m	170 m	160 m	140 m	130 m	110 m	90 m	60 m	40 m
130	460 m	230 m	230 m	230 m	220 m	210 m	200 m	180 m	170 m	150 m	120 m	100 m	70 m

Notes:

- ¹ The distances are adjusted for a sign legibility distance of 50 m for Condition A. The distances for Condition B have been adjusted for a sign legibility distance of 75 m, which is appropriate for an alignment warning symbol sign.
- ² Typical conditions are locations where the road user must use extra time to adjust speed and change lanes in heavy traffic because of a complex driving situation. Typical signs are Merge and Right Lane Ends. The distances are determined by providing the driver a PIEV time of 14.0 to 14.5 seconds for vehicle maneuvers (2001 AASHTO Policy, Exhibit 3-3, Decision Sight Distance, Avoidance Maneuver E) minus the legibility distance of 50 m for the appropriate sign.
- ³ Typical condition is the warning of a potential stop situation. Typical signs are Stop Ahead, Yield Ahead, Signal Ahead, and Intersection Warning signs. The distances are based on the 2001 AASHTO Policy, Stopping Sight Distance, Exhibit 3-1, providing a PIEV time of 2.5 seconds, a deceleration rate of 3.4 m/second², minus the sign legibility distance of 50 m.
- ⁴ Typical conditions are locations where the road user must decrease speed to maneuver through the warned condition. Typical signs are Turn, Curve, Reverse Turn, or Reverse Curve. The distance is determined by providing a 2.5 second PIEV time, a vehicle deceleration rate of 3 m/second², minus the sign legibility distance of 75 m.
- ⁵ No suggested distances are provided for these speeds, as the placement location is dependent on site conditions and other signing to provide an adequate advance warning for the driver.

Source: Manual on Uniform Traffic Control Devices, 2003 Edition. Washington, DC: Federal Highway Administration, 2003.

Figure 13. Supplemental Advance Warning Signs

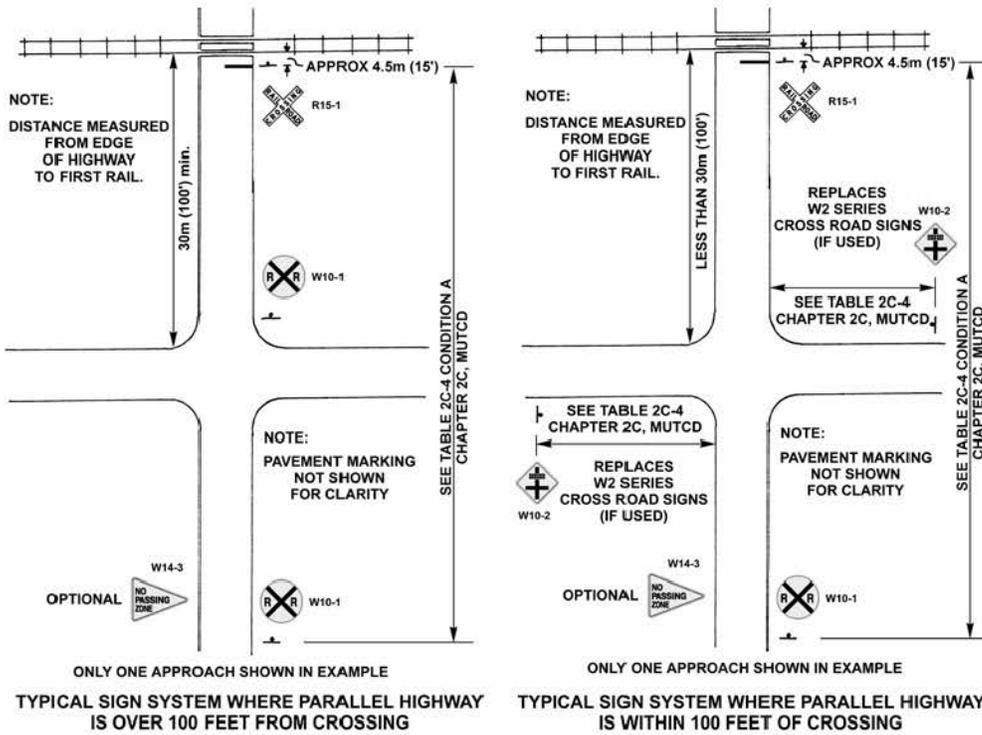
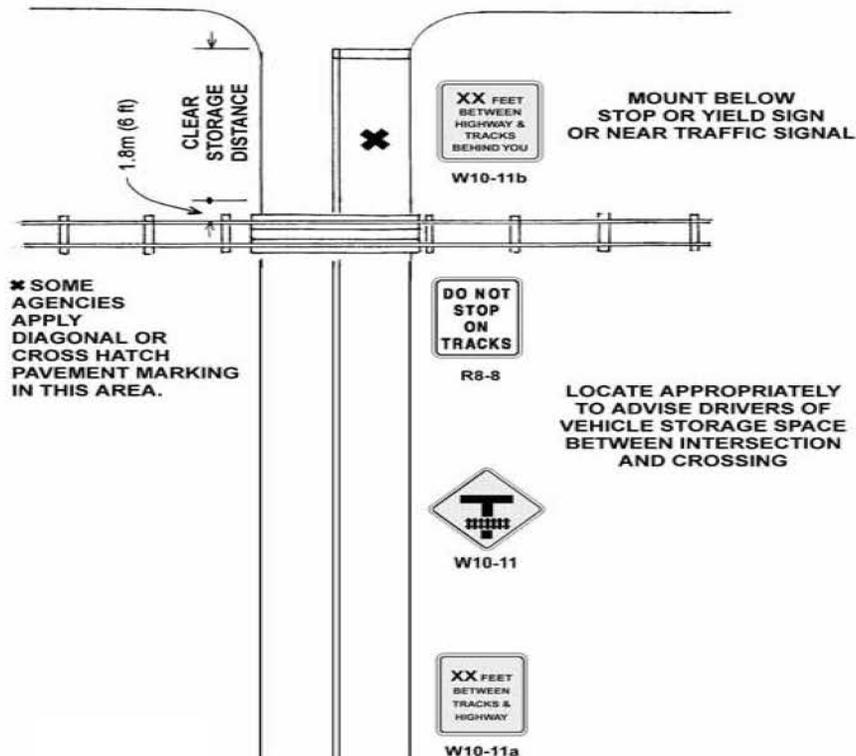
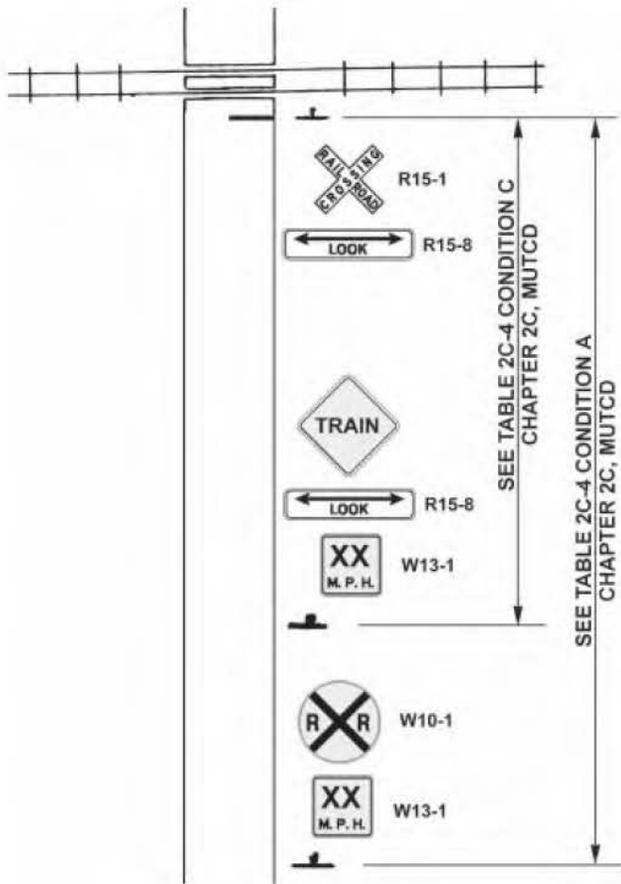


Figure 14. Substandard Clear Storage Distance



Source: Traffic Control Devices Handbook. Washington, DC: Institute of Transportation Engineers, 2001.

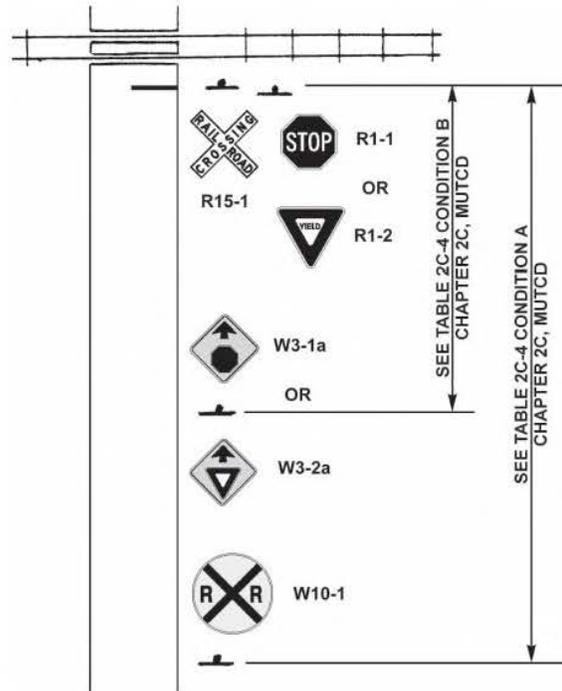
Figure 15. Possible Sign System Where Sight Distance Is Limited On Approach to the Crossing



Source: Traffic Control Devices Handbook. Washington, DC: Institute of Transportation Engineers, 2001.

Although the crossbuck sign is a regulatory sign that requires vehicles to yield to trains and stop if necessary, recent research indicates insufficient road user understanding of and compliance with that regulatory requirement when just the crossbuck sign is present at passive crossings. FHWA encourages consideration of the use of the YIELD sign in conjunction with the crossbuck sign at all passive crossings, except where train crews always provide flagging to roadway users. The STOP sign should be used at locations where engineering judgment determines it is appropriate. Figure 16 shows the typical layout, where STOP or YIELD signs are provided. For determination of the need for STOP or YIELD signs, refer to criteria provided in Chapter V of this handbook.

Figure 16. Typical Sign System Where STOP or YIELD at Crossing Is Required

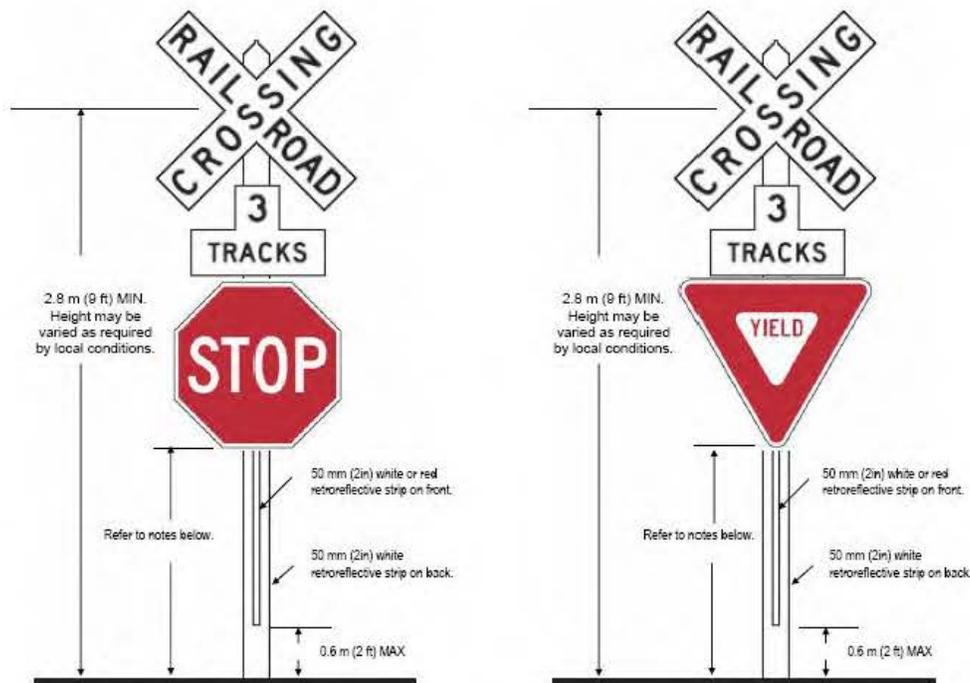


Source: Traffic Control Devices Handbook. Washington, DC: Institute of Transportation Engineers, 2001.

When used at a passive crossing, the YIELD or STOP sign shall be installed in conformance with the general principles and standards for sign installations in Part 2 and Part 8 of MUTCD. In addition, the following guidance can be considered for the installation of YIELD or STOP signs at passive crossings:

- When the YIELD or STOP sign is installed on the same support as the crossbuck sign, a strip of retroreflective material shall be used on the front and back of the support. The color of the retroreflective strip on the front of the support may be red (as per Section 2A.21) or white (as per Section 8B.03). The color of the retroreflective strip on the back of the support shall be white. The dimensions and placement of the retroreflective strips shall be in conformance with the standards in Section 8B.03.
- When a STOP sign is installed in conjunction with the crossbuck sign, a stop line should be installed, if appropriate to the roadway surface, to indicate the point behind which vehicles are required to stop, as per Section 3B.16.
- When a YIELD sign is used in conjunction with the crossbuck sign, either a yield line

Figure 17. Highway-Rail Grade Crossing (Crossbuck) Sign and STOP or YIELD Sign on Same Post



** Note: 1.2-meter (4-foot) minimum for installations of STOP or YIELD sign on existing crossbuck sign support; 2.1-meter (7-foot) minimum in areas with pedestrian movements or parking.*

Sources: Guidance for Use of YIELD or STOP Signs with the Crossbuck Sign at Passive Highway-Rail Grade Crossings. Memo issued by Jeffrey P. Pantall, Associate Administrator for Operations, and John R. Baxter, Acting Associate Administrator for Safety, Federal Highway Administration, Washington, DC, March 2008.

(per Section 3B.16) or a stop line (per Section 8B.21 and Figure 8B-6) may be installed to supplement the YIELD sign. When used, the stop line or yield line (such as size, pattern, and location) must be in conformance with provisions in the current edition of MUTCD.

- The stop line or yield line should be located no less than 4.8 meters (15 feet) measured perpendicular from the nearest rail, as per Figure 8B-6.

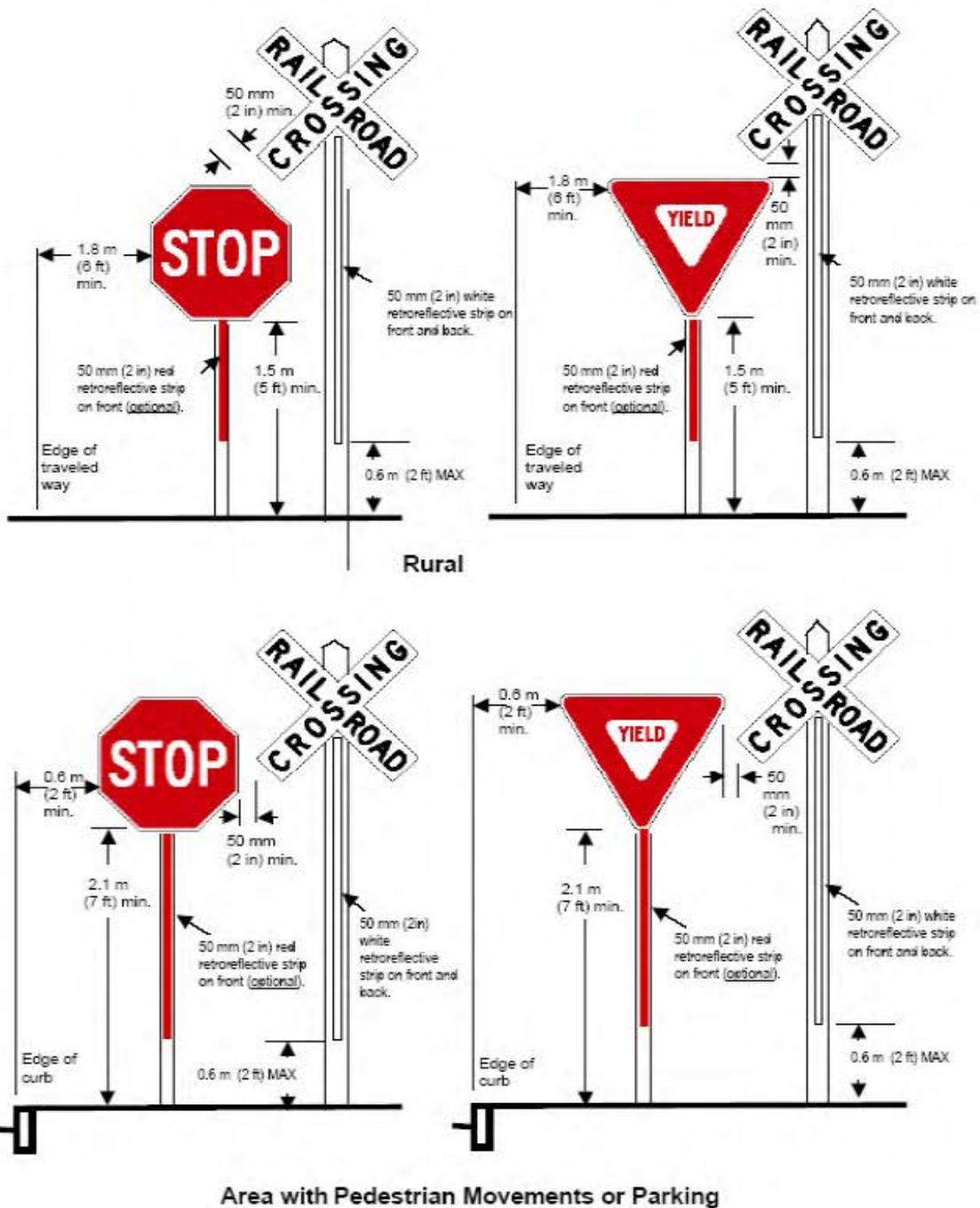
Examples of design and placement of YIELD or STOP signs in conjunction with crossbuck signs are shown in Figures 17 and 18.

“Stop Ahead” and “Yield Ahead” signs (W3-1 & W3-2). MUTCD also requires that “Stop Ahead” or “Yield Ahead” advance warning signs shall be installed if STOP or YIELD signs are used at the crossing and highway users do not have a continuous view of at least two sign faces for the distances specified in

MUTCD Table 4D-1 (see Tables 38 and 39.) If used, the placement of “Stop Ahead” or “Yield Ahead” advance signs shall be in accordance with MUTCD Table 2C-4 (refer to Tables 36 and 37.)

“Do Not Stop on Tracks” sign (R8-8). In accordance with MUTCD Section 8B.07, whenever engineering judgment determines that the potential for vehicles stopping on the tracks is high, a “Do Not Stop on Tracks” (R8-8) sign should be used. The sign, if used, should be located on the right side of the highway on either the near or far side of the highway-rail grade crossing, depending upon which side provides better visibility to approaching drivers. “Do Not Stop on Tracks” signs may be placed on both sides of the track. On divided highways and one-way streets, a second “Do Not Stop on Tracks” sign may be placed on the near or far left side of the highway-rail grade crossing to further improve visibility of the sign.

Figure 18. Highway-Rail Grade Crossing (Crossbuck) Sign and STOP or YIELD Sign on Separate Posts



*** Note: Place face of signs in the same plane and the YIELD or STOP sign closest to the traveled way; 50-millimeter (2-inch) minimum separation between the edge of the crossbuck sign and the edge of YIELD or STOP sign.**

Source: Guidance for Use of YIELD or STOP Signs with the Crossbuck Sign at Passive Highway-Rail Grade Crossings. Memo issued by Jeffrey P. Pantait, Associate Administrator for Operations, and John R. Baxter, Acting Associate Administrator for Safety, Federal Highway Administration, Washington, DC, March 2008.

**Table 38. Minimum Sight Distance Table
(English Units)**

85 th -percentile speed (mph)	Minimum sight distance (feet)
20	175
25	215
30	270
35	325
40	390
45	460
50	540
55	625
60	715

Source: Manual on Uniform Traffic Control Devices, 2003 Edition.
Washington, DC: Federal Highway Administration, 2003.

**Table 39. Minimum Sight Distance Table
(Metric Units)**

85 th -percentile speed (km/hr.)	Minimum sight distance (meters)
30	50
40	65
50	85
60	110
70	140
80	165
90	195
100	220

Source: Manual on Uniform Traffic Control Devices, 2003 Edition.
Washington, DC: Federal Highway Administration, 2003.

“Exempt” sign (R15-3, W-10-1a). When authorized by law or regulation, a supplemental “Exempt” (R15-3) sign with a white background bearing the word EXEMPT may be used below the crossbuck sign or “Number of Tracks” sign, if present, at the highway-rail grade crossing, and a supplemental “Exempt” (W10-1a) sign with a yellow background bearing the word EXEMPT may be used below the highway-rail advance warning (W10-1) sign. These supplemental signs inform drivers of vehicles carrying passengers for hire, school buses carrying students, or vehicles carrying hazardous materials that a stop is not required at certain designated highway-rail grade crossings, except when a train, locomotive, or other railroad equipment is approaching or occupying the highway-rail grade crossing or the driver’s view is blocked.

Turn prohibition signs (R3-1a and R3-2a). Per MUTCD Section 8B.06, at a signalized intersection located within 60 meters (200 feet) of a highway-rail grade crossing, measured from the edge of the track

to the edge of the roadway, where the intersection traffic control signals are preempted by the approach of a train, all existing turning movements toward the highway-rail grade crossing should be prohibited during the signal preemption sequences. A blank-out or changeable message sign, and/or appropriate highway traffic signal indication or other similar type sign, may be used to prohibit turning movements toward the highway-rail grade crossing during preemption. The R3-1a and R3-2a signs shown in Figure 11 may be used for this purpose. Turn prohibition signs that are associated with preemption shall be visible only when the highway-rail grade crossing restriction is in effect.

“No Passing Zone” sign (W14-3). The “No Passing Zone” sign may be installed at crossings to supplement “No Passing” pavement markings. This sign consists of black letters and border on a yellow background and shall be a pennant-shaped isosceles triangle with its longer axis horizontal and pointing to the right with dimensions of 36 inches by 48 inches by 48 inches. The sign is to be placed on the left side of the highway at the beginning of the no passing zone.

2. Pavement Markings

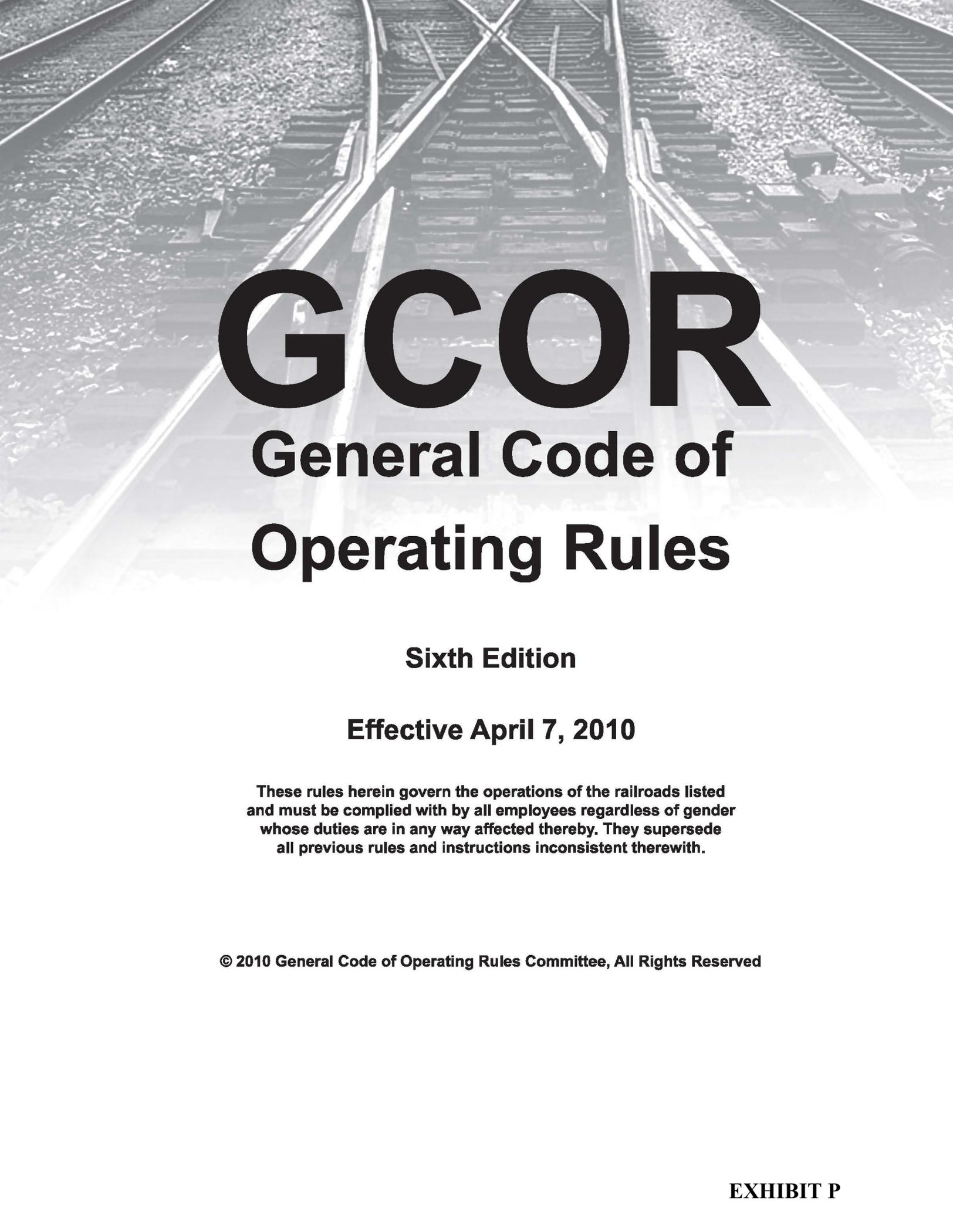
Pavement markings are used to supplement the regulatory and warning messages presented by crossing signs and signals. Pavement markings have limitations in that they may be obliterated by snow, may not be clearly visible when wet, and may not be very durable when subjected to heavy traffic.

Pavement markings in advance of highway-rail grade crossings shall consist of an X, the letters RR, a NO PASSING marking for two-lane roads, and certain transverse lines, as shown in Figure 19. These pavement markings shall be placed on each approach lane on all paved approaches to crossings where crossing signals or automatic gates are located, and at all other crossings where the prevailing speed of highway traffic is 40 mph or greater. These markings are also to be placed at crossings where engineering studies indicate there is a significant potential conflict between vehicles and trains. These markings may be omitted at minor crossings or in urban areas if an engineering study indicates that other crossing devices provide suitable control. Figure 19 shows a placement example of warning signs and pavement markings at highway-rail grade crossings.

The most common pavement marking material is paint; however, a wide variety of other materials is available. Pavement markings are to be retroreflectorized by mixing glass beads in wet paint or thermoplastic material. Raised pavement markers can be used

Exhibit P

Excerpt of General Code of Operating Rules



GCOR

General Code of Operating Rules

Sixth Edition

Effective April 7, 2010

These rules herein govern the operations of the railroads listed and must be complied with by all employees regardless of gender whose duties are in any way affected thereby. They supersede all previous rules and instructions inconsistent therewith.

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EXHIBIT P

Adopted by:

Acadiana Railway Company
Adrian & Blissfield Rail Road Company
Alabama & Gulf Coast Railway
Alabama Southern Railroad
Alabama & Tennessee River Railway, LLC
Alabama Warrior Railroad
Alaska Railroad Corporation
Albany & Eastern Railroad Company
Aliquippa & Ohio River Railroad
Alliance Terminal Railway, LLC
Altamont Commuter Express Rail Authority
Alton & Southern Railway
Amtrak—Chicago Terminal
Amtrak—Michigan Line
Amtrak—NOUPT
AN Railway
Apache Railway Company
A&R Terminal Railroad Company
Arizona & California Railroad
Arizona and California Railway Company
Arizona Central Railroad
Arizona Eastern Railway Company
Arkansas Louisiana & Mississippi Railroad
Arkansas Midland Railroad Company Inc.
Arkansas & Missouri Railroad Company
Arkansas Southern Railroad
Ashtabula, Carson & Jefferson Railroad
AT&L Railroad Company
Atlantic & Western Railway
Austin Western Railroad
Baton Rouge Southern Railroad
Bauxite & Northern Railway
Bay Line Railroad
Belt Railway Company of Chicago
BHP Nevada Railway Company
Blackwell Northern Gateway Railroad
BNSF Railway
Boise Valley Railroad
Buckingham Branch Railroad
Buffalo & Pittsburg Railroad
California Northern Railroad
California Western Railroad
Camas Prairie RailNet, Inc.
Canadian Pacific
Caney Fork & Western Railroad
Canon City and Royal Gorge Railroad
Carolina Piedmont Railroad
Carrizo Gorge Railway
Cascade and Columbia River Railroad
Cedar Rapids & Iowa City Railway Company
Central California Traction Company
Central Illinois Railroad
Central Kansas Railway
Central Midland Railway
Central Montana Rail
Central Oregon & Pacific Railroad, Inc.
Central Railroad of Indiana
Central Railroad of Indianapolis
Charlotte Southern Railroad Company
Chattahoochee Bay Railroad
Chattahoochee Industrial Railroad
Chattooga & Chickamauga Railway
Chesapeake & Albemarle Railroad Company, Inc.
Chicago, Ft. Wayne & Eastern Railroad
Chicago Rail Link
Chicago SouthShore & South Bend Railroad
City of Prineville Railway
C&NC Railroad Corporation
Columbia Basin Railroad Co.
Columbia and Cowlitz Railway
Columbia Terminal
Columbus & Greenville Railway
Columbus & Ohio River Railroad
Commonwealth Railway
Connecticut Southern Railroad

Corpus Christi Terminal Railroad
Council Bluffs Railway
D&I Railroad
Dakota, Minnesota & Eastern Railroad
Dakota, Missouri Valley & Western Railroad, Inc.
Dakota Southern Railway
Dallas, Garland & Northeastern Railroad, Inc.
Dardanelle & Russellville Railroad
Decatur Junction Railway Company
Denver Rock Island Railroad
DeQueen & Eastern Railroad Company
Detroit Connecting Railroad Company
East Tennessee Railway
Eastern Alabama Railway
Eastern Idaho Railroad
Ellis & Eastern Company
Escanaba & Lake Superior Railroad
Farmrail Corporation
First Coast Railroad
Florida East Coast Railway
Fordyce & Princeton Railroad
Fort Worth & Western Railroad
Fox Valley & Western
Fulton County Railway, LLC
Galveston Railroad
Gateway Western Railway
Georgetown Railroad Company
Georgia Central Railway
Georgia & Florida Railway
Georgia Southwestern Railroad, Inc.
Georgia Woodlands Railroad
Golden Isles Terminal Railroad
Golden Triangle Railroad
Grain Belt Corp
Grand Canyon Railway
Grand Elk Railroad
Grand Rapids Eastern Railroad
Great Northwest Railroad
Great Western Railway
Gulf Colorado & San Saba Railroad
Huron and Eastern Railway Company, Inc.
Hutchinson and Northern Railway Company
Idaho Northern & Pacific Railroad Company
Illinois & Midland Railroad, Inc.
Illinois Railway, Inc.
Indiana & Ohio Railway
Indiana Rail Road Company
Indiana Southern Railroad, Inc.
International Bridge & Terminal Company
Iowa Chicago & Eastern Railroad
Iowa Interstate Railroad Ltd.
Iowa Northern Railway Company
Jaxport Terminal Railway
Kansas City Southern Railway
Kansas City Terminal Railway Company
Kansas & Oklahoma Railroad
Kaw River Railroad
Kentucky West Tennessee Railway
Keokuk Junction Railway Company
Kettle Falls International Railway, LLC
Kiamichi Railroad
Kyle Railroad Company
Lahaina Kaanapali & Pacific Railroad
Lake Superior and Ishpeming Railroad
Lapeer Industrial Railroad Company
Lewis and Clark Railway Company
Little Rock and Western Railway, LP
Longview Switching Company
Los Angeles Junction Railway
Louisiana and Delta Railroad Company
Louisiana Southern Railroad
Luxapallia Valley Railroad
Mahoning Valley Railroad
Manufacturers Junction Railway
Maryland Midland Railway
Maumee & Western Railroad

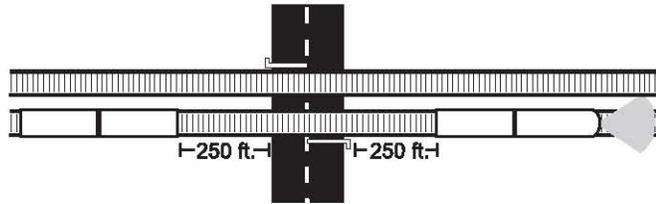
McCloud Railway Company
Meridian and Bigbee Railroad
Meridian Southern Railway, LLC
Messena Terminal Railroad Company
Michigan Air-Line Railway Company
Michigan Central Railway
Michigan Shore Railroad
Mid-Michigan Railroad, Inc.
Minnesota Commercial Railway Company
Minnesota, Dakota & Western Railway Company
Minnesota Northern Railroad, Inc.
Minnesota Prairie Line Incorporated
Minnesota Southern Railway
Minnesota Valley Transportation Company
Mission Mountain Railroad
Mississippi Southern Railroad
Mississippi & Tennessee RailNet, Inc.
Mississippi Tennessee Railroad
Missouri & Northern Arkansas RR Company, Inc.
Missouri & Valley Park Railroad
Modesto & Empire Traction Company
Montana Rail Link
Mount Vernon Terminal Railway, Inc.
Napa Valley Railroad Company
Nashville and Eastern Railroad
Nashville and Western Railroad
National Coal Rail Line
Nebkota Railway, Inc.
Nebraska Central Railroad Company
Nebraska Kansas Colorado Railway, Inc.
Nebraska Northeastern Railway Company
New England Central Railroad, Inc.
New Mexico Rail Runner Express
New Orleans & Gulf Coast Railway Company
New Orleans Lower Coast Railroad
New Orleans Public Belt Railroad
Newburgh & South Shore Railroad Company
New York & Atlantic Railway
North Carolina & Virginia Railroad Company, Inc.
Northeast Illinois Regional Commuter Railroad Corp.
Northern Indiana Commuter Transportation District
Northern Lines Railway
Northern Ohio & Western Railway
Northern Plains Railroad
Ohio & Pennsylvania Railroad
Ohio Central Railroad
Ohio Southern Railroad
Omaha, Lincoln & Beatrice Railway Company
Osceola and St. Croix Valley Railroad Company
Otter Tail Valley Railroad Company, Inc.
Pacific Harbor Line
Pacific Sun Railroad
Palouse River and Coulee City Railroad
Panhandle Northern Railroad
Pecos Valley Southern Railway Company
Pend Oreille Valley Railroad
Peninsula Corridor Joint Powers Board (Caltrain)
Pennsylvania Southwestern Railroad
Pittsburgh Industrial Railroad
Pittsburgh & Ohio Central Railroad
Point Comfort & Northern Railway Company
Port Bienville Railroad
Port of Tillamook Bay Railroad
Portland & Western Railroad
Portland Terminal Railroad Company
Progressive Rail Inc.
Puget Sound & Pacific Railroad
Rarus Railway, Inc.
Red River Valley & Western Railroad Co.
Riceboro Southern Railway
Richmond Pacific Railroad
Richmond Terminal Railroad Company
Rio Valley Switching Company
Rochester & Southern Railroad
Rockdale, Sandow & Southern Railroad Company
Saginaw Valley Railroad Company

San Diego & Imperial Valley Railroad Company, Inc.	Timber Rock Railroad
San Diego Northern Railway	Toledo, Peoria & Western Railway
San Francisco Bay Railroad	Tomahawk Railroad
San Joaquin Valley Railroad Co., Inc.	Transportación Ferroviaria Mexicana
San Luis Central Railroad Company	Trinity Railway Express
San Pedro and Southwestern Railway Company	Trona Railway Company
Sand Springs Railway Company	Tulare Valley Railroad
Santa Cruz, Big Trees & Pacific Railway Company	Tulsa-Sapulpa Union Railway Company
Santa Fe Southern Railway, Inc.	Twin Cities & Western Railroad Company
Sault Ste. Marie Bridge Company	Union Pacific Railroad
Savage Bingham & Garfield Railroad Company	United States Army Military Railroad System
Savannah Port Terminal Railroad	Utah Central Railway
SEMO Port Railroad	Utah Railway Company
Sierra Railroad Company	Utah Transit Authority
South Buffalo Railway	V&S Railroad Inc.
South Carolina Central Railroad Company, Inc.	Valdosta Railway
South Central Tennessee Railroad	Ventura County Railway Company
South East Kansas Railroad	Verde Canyon Railroad
South Kansas and Oklahoma Railroad	Vicksburg Southern Railroad
South Plains Lamesa Railroad Ltd.	Virginia Southern Division
Southern California Regional Rail Authority	Wabash Central Railroad
Southern Switching Company	Warren & Trumbull Railroad
Southwestern Railroad Company, Inc.	WATCO Transportation Services
St. Croix Valley Railroad Company	West Tennessee Railroad, LLC
St. Maries River Railroad Company	West Tennken Railroad Corp.
Stillwater Central Railroad	West Texas and Lubbock Railroad
Tacoma Municipal Belt Line Railway	Wichita, Tillman & Jackson Railway
Talleyrand Terminal Railroad	Willamette & Pacific Railroad, Inc.
Tazewell & Peoria Railroad	Willamette Valley Railroad
Tecumseh Branch Connecting Railroad Company	Willamina and Grand Ronde Railway
Tennessee Valley Railroad Museum, Inc	Wilmington Terminal Railroad
Tennken Railroad Company Inc.	Wisconsin & Southern Railroad Company
Terminal Railroad Association of St. Louis	Wyoming/Colorado Railroad Company
Texas - New Mexico Division	Yellowstone Valley Railroad
Texas North Western Railway Company	York Railway
Texas Northeastern Railroad	Youngstown & Austintown Railroad
Texas, Gonzales & Northern Railway Company	Youngstown Belt railroad
Texas Rock Crusher Railway Co.	Yreka Western Railroad

6.32.4 Clear of Crossings and Signal Circuits

Leave cars, engines, or equipment clear of road crossings and crossing signal circuits.

When practical, avoid leaving cars, engines, or equipment standing closer than 250 feet from the road crossing when there is an adjacent track.



[Diagram A.]

6.32.5 Actuating Automatic Warning Devices Unnecessarily

Avoid actuating automatic warning devices unnecessarily by leaving switches open or permitting equipment to stand within the controlling circuit. If this cannot be avoided and if the signals are equipped for manual operation, a crew member must manually operate the signal for movement of traffic. A crew member must restore signals to automatic operation before a train or engine occupies the crossing or before it leaves the crossing.

6.32.6 Blocking Public Crossings

When practical, a standing train or switching movement must avoid blocking a public crossing longer than 10 minutes.