# *Section 2B.59 Weight Limit Signs - Interim Revisions*

**Note:** this document is an interim modification to Section 2B.59 of the Virginia Supplement to the MUTCD, Revision #1. Once the VDOT District Structure & Bridge section has made the determination that a bridge must be posted as per the latest effective revision to IIM-S&B-86, this guidance should be used to identify the appropriate signs and sign placements for establishing that weigh limit posting.

This interim modification will be incorporated into the next formal Revision to the Virginia Supplement.

Changes from the current VA Supplemented are denoted by yellow highlight.

## Table 2B-1(VA). Regulatory Sign and Plaque Sizes

| Sign or Plaque | Sign Desig-nation | Section | Conventional Road | | Express-way | Freeway | Minimum | Oversized |
|---|---|---|---|---|---|---|---|---|
| | | | Single Lane | Multi-Lane | | | | |
| Weight Limit XX Tons | R12-1 | 2B.59 | 24 x 30 | 24 x 30 | 36 x 48 | -- | -- | 36 x 48 |
| ~~Axle Weight Limit~~ | ~~R12-2~~ | ~~2B.59~~ | ~~24 x 30~~ | ~~24 x 30~~ | ~~36 x 48~~ | ~~--~~ | ~~--~~ | ~~36 x 48~~ |
| ~~No Trucks Over XX Lbs Empty Weight~~ | ~~R12-3~~ | ~~2B.59~~ | ~~24 x 36~~ | ~~24 x 36~~ | ~~--~~ | ~~--~~ | ~~--~~ | ~~--~~ |
| ~~Weight Limit XX Tons Per Axle XX Tons Gross~~ | ~~R12-4~~ | ~~2B.59~~ | ~~36 x 24~~ | ~~36 x 24~~ | ~~--~~ | ~~--~~ | ~~--~~ | ~~--~~ |
| ~~Weight Limit Silhouettes~~ | ~~R12-5~~ | ~~2B.59~~ | ~~24 x 36~~ | ~~24 x 36~~ | ~~36 x 48~~ | ~~48 x 60~~ | ~~--~~ | ~~--~~ |
| ~~Weight Limit Silhouettes~~ | ~~R12-V1~~ | ~~2B.59~~ | ~~24 x 30~~ | ~~30 x 36~~ | ~~36 x 42~~ | ~~48 x 54~~ | ~~--~~ | ~~--~~ |
| Weight Limit \| Axles 2-3, 4-5, 6+ \| Axles 3+ | R12-V2 | 2B.59 | 36 x 48 | 54 x 72 | 60 x 84 | 60 x 84 | -- | -- |
| Bridge Weight Limit \| Axles 2-3, 4-5, 6+ \| Axles 3+ | R12-V3 | 2B.59 | 36 x 54 | 54 x 84 | 60 x 90 | 60 x 90 | -- | -- |
| Weight Limit \| Axles 2+ \| Axles 3+ | R12-V4 | 2B.59 | 36 x 36 | 54 x 60 | -- | -- | -- | -- |
| Bridge Weight Limit \| Axles 2+ \| Axles 3+ | R12-V5 | 2B.59 | 36 x 42 | 54 x 72 | -- | -- | -- | -- |
| Bridge Weight Limit XX Tons | R12-V6 | 2B.59 | 24 x 36 | 36 x 54 | -- | -- | -- | -- |
| ~~BRIDGE (plaque)~~ | ~~R12-VP1~~ | ~~2B.59~~ | ~~24 x 12~~ | ~~30 x 15~~ | ~~36 x 18~~ | ~~36 x 18~~ | ~~--~~ | ~~--~~ |
| | | | | | | | | |
| | | | | | | | | |

## Section 2B.59 Weight Limit Signs (R12-1 through R12-4, R12-V2 through R12-V6)

Option:

01 The Weight Limit (R12-1) sign carrying the legend WEIGHT LIMIT XX TONS may be used to indicate vehicle weight restrictions including load.

02 ~~Where the restriction applies to axle weight rather than gross load, the legend may be AXLE WEIGHT LIMIT XX TONS or AXLE WEIGHT LIMIT XX LBS (R12-2).~~

~~03 To restrict trucks of certain sizes by reference to empty weight in residential areas, the legend may be NO TRUCKS OVER XX TONS EMPTY WT or NO TRUCKS OVER XX LBS EMPTY WT (R12-3).~~

~~04 In areas where multiple regulations of the type described in Paragraphs 1 through 3 are applicable, a sign combining the necessary messages on a single sign may be used, such as WEIGHT LIMIT XX TONS PER AXLE, XX TONS GROSS (R12-4).~~

**02 Standard: AXLE WEIGHT LIMIT XX TONS (R12-2), NO TRUCKS OVER XX TONS EMPY WT (R12-3), and WEIGHT LIMIT XX TONS PER AXLE, XX TONS GROSS (R12-4) signs shall not be used on VDOT-maintained roads.**

**03 Standard: All weight limit signs on VDOT-maintained roads shall display gross vehicle weight in units of Tons.**

04 Support: To promote consistency for truck drivers and freight company employees that operate in or pass through Virginia, VDOT avoids using units of pounds and avoids posting empty vehicle weight limits.

04a Support: The NO THRU TRUCKS sign may be used if a through truck restriction has been approved in accordance with CTB policy and has been developed due to general concerns about the impact of truck traffic on a road. It is not an appropriate sign for establishing a posted structure as per IIM-S&B-86. The NO TRUCKS OVER XX LBS EMPTY WT (R12-3) sign is not an appropriate substitute for the NO THRU TRUCKS sign. Note that a "truck" is defined by the Code of Virginia §46.2-100 as any vehicle with a gross vehicle weight of 7500 lbs (3.75 tons), excluding pickup and panel trucks.

Support:
05 The Code of Virginia § 46.2-1130 prohibits vehicles from crossing any bridge or culvert if the gross weight of such vehicle is greater than the amount posted for the bridge or culvert as its carrying capacity.

**Standard:**
06 **In accordance with the Code of Virginia, Weight Limit symbol (~~R12-V1~~ R12-V Series) signs (see Figure 2B-29(VA) in this Supplement) shall be installed near each end of bridges and culverts as described in Paragraph 5. Additionally, Weight Limit symbol signs shall be installed in advance of the last alternate route approaching the bridge. At the nearest junction upstream of the bridge, the ~~R12-V1~~ R12-V Series sign shall also be installed in both directions of the cross streets so as to prevent turning traffic from approaching the bridge. Figures 2B-V2a and 2B-V2b in this Supplement shows an example of such signing.**

07 **The R12-5 Weight Limit sign from the MUTCD shall not be used.**

07a Support –VDOT does not post weight limits for double-trailer combinations.

**08 The truck silhouettes in the R12-V series signs shall not be altered.**

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08a support: the truck silhouettes in the R12-V series signs apply to all trucks that meet the listed criteria for number of axles, regardless of the actual "shape" of the vehicle.

*Guidance:*
~~08 *If the weight restriction for a single unit truck is over 20 tons, the truck symbol should show tandem axles on the rear. If the weight restriction for a tractor-trailer combination is over 30 tons, the trailer symbol should show tandem axles.*~~

*Guidance:*

09 *Table 2C-4 should be used to determine the placement distance of the signs in advance of the last alternate route. One additional Weight Limit symbol (R12-V1) sign should be installed a maximum of 150 feet beyond the last intersection on the approach road in advance of the bridge or culvert.*

Option:
10 An advisory distance ahead plaque (see Section 2C.53 of the MUTCD) may be placed in advance of the last alternate route intersection.

**Standard:**
11 ~~**Where a Weight Limit symbol (R12-V1) sign is installed because of a weight restriction on a bridge, the BRIDGE (R12-VP1) plaque shall be mounted above.**~~ **Where a weight limit has been established for a bridge or culvert, all advance weight limit signs shall include the legend BRIDGE at the top of the sign.**

11a Option: the word BRIDGE may be omitted for the sign immediately at the bridge or culvert.

12 **When the advance signs are installed on the approach roads, a third sign consisting of the appropriate Directional Arrow Auxiliary (M6 Series) sign (see Section 2D.28 of the MUTCD) shall be included below the Weight Limit symbol sign to indicate the direction of the structure shall be installed (see Figure 2B-29(VA) in this Supplement).**
~~Option:~~
~~13 Restricted structures on secondary routes may be signed using the R12-1 sign if engineering judgment determines that significant volumes of trucks carrying semi-trailers are not present.~~
~~*Guidance:*~~
~~14 *When using the Option described in Paragraph 13 above, advance signing should consist of the same signing as required in Paragraphs 6 through 12 above, with the R12-1 sign substituting for the R12-V1 sign.*~~
~~Support:~~
~~15 The R12-V1 sign design is variable based on the weight restrictions determined for the truck classifications. Refer to the "Virginia Standard Highway Signs" book (see Appendix A of this Supplement for link) for design details.~~

*Guidance:*

*13 The selection of appropriate R12-series sign should be as per the flowcharts developed by VDOT Structure & Bridge Division.*

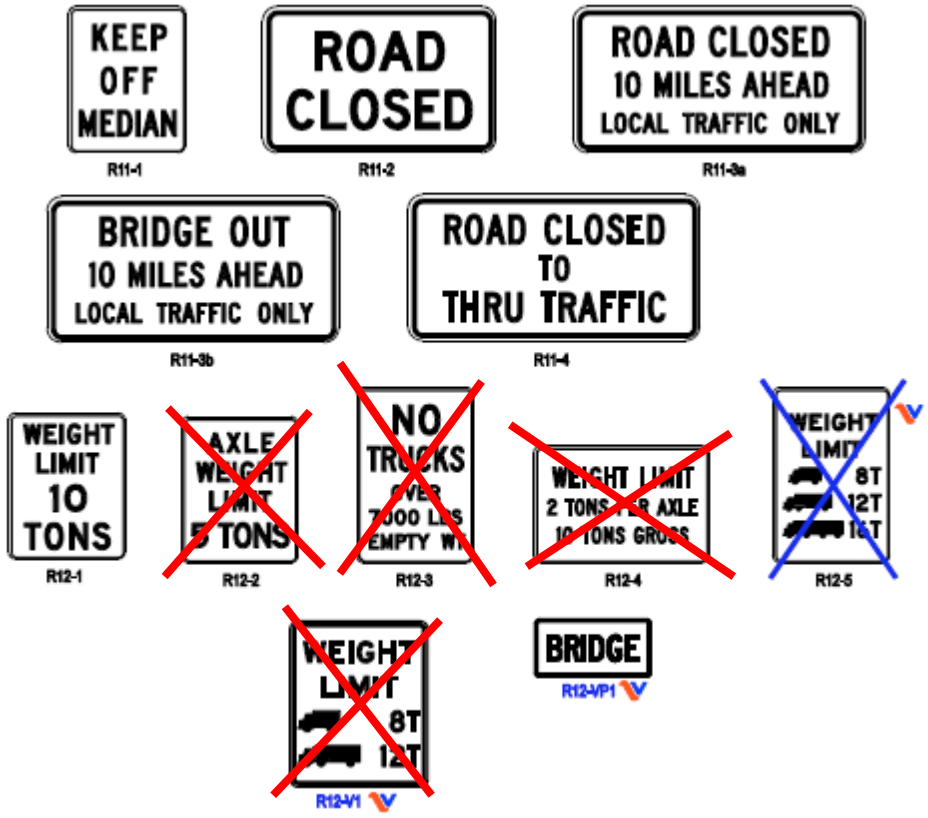
Support:

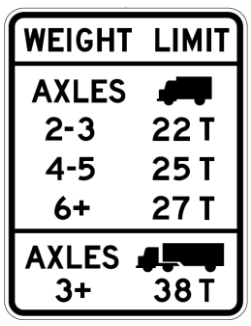
14 On roads with significant truck volumes, there is benefit to Virginia industry and VDOT if graduated weight limits are posted, with a greater weight limit for "specialized hauling vehicles" (single-unit trucks with multiple axles, e.g. dump trucks). VDOT posts such signs to encourage truck companies to select multiple-axle trucks that are less impactful to bridges and pavement. However on roads with negligible truck volumes, the R12-V6/R12-1 sign sequence is preferable in terms of size and readability. R12-V6/R12-1 signs are also used on roads with a rating sufficiently low that even empty multi-axle specialized hauling vehicles would be unable to legally cross that structure.

15 Further requirements regarding bridge weight limit signs can be found in the latest effective revision to IIM-S&B-86, "Load Rating and Posting of Structures."

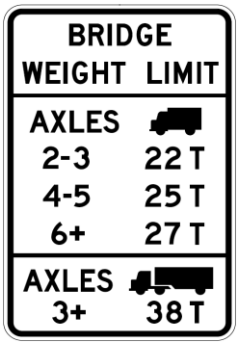
16 Future revisions to the Supplement will address the requirements of the federal FAST Act regarding emergency vehicle weight limits.

Figure 2B-29(VA). Road Closed and Weight Limit Signs

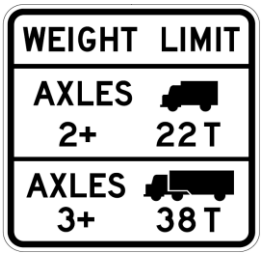


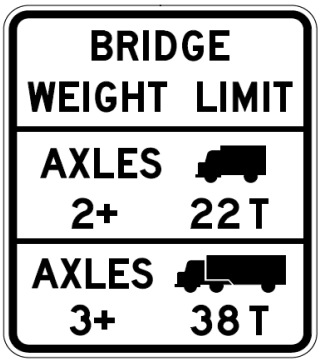

R12-V2




R12-V3



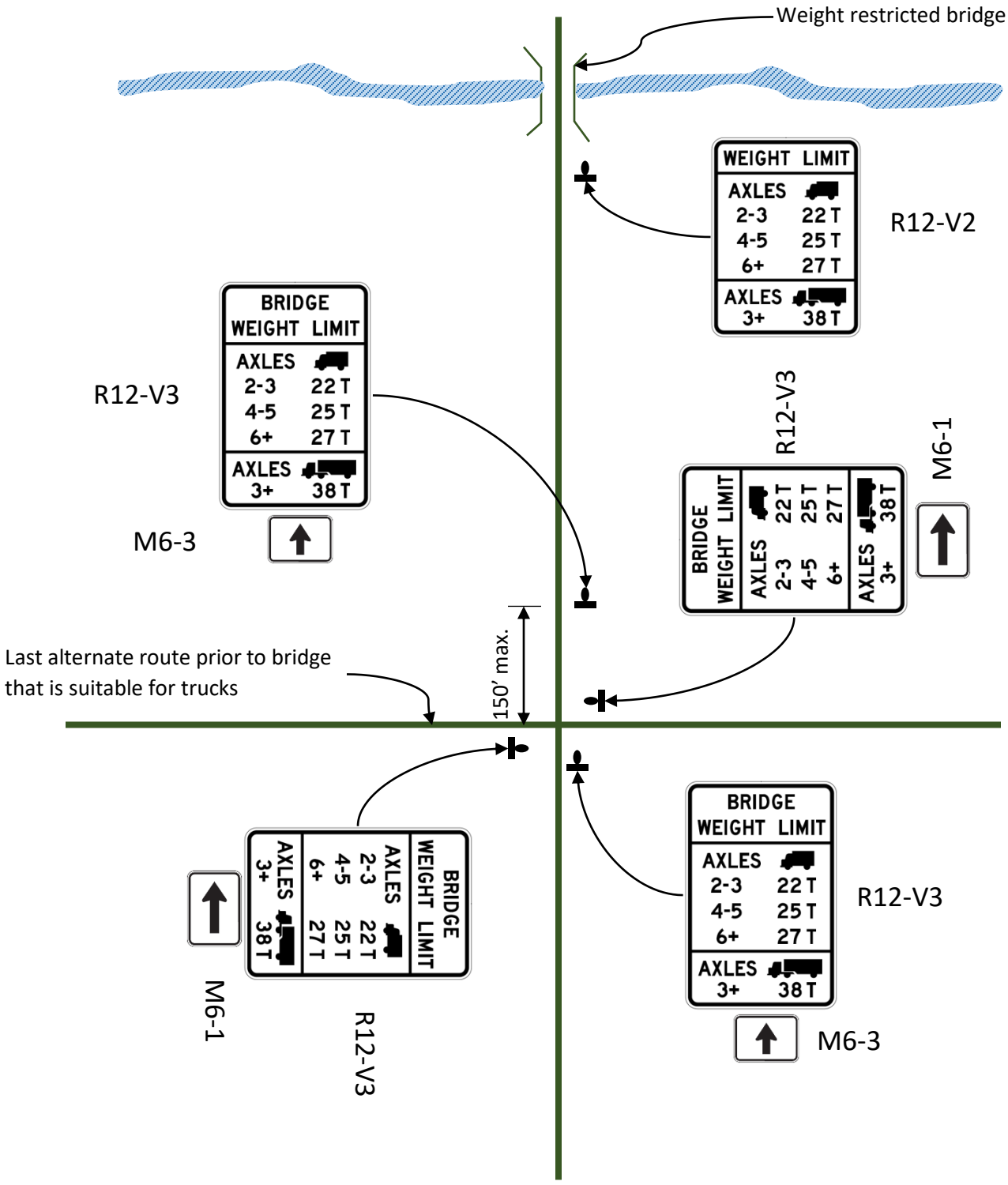

R12-V4




R12-V5


R12-V6

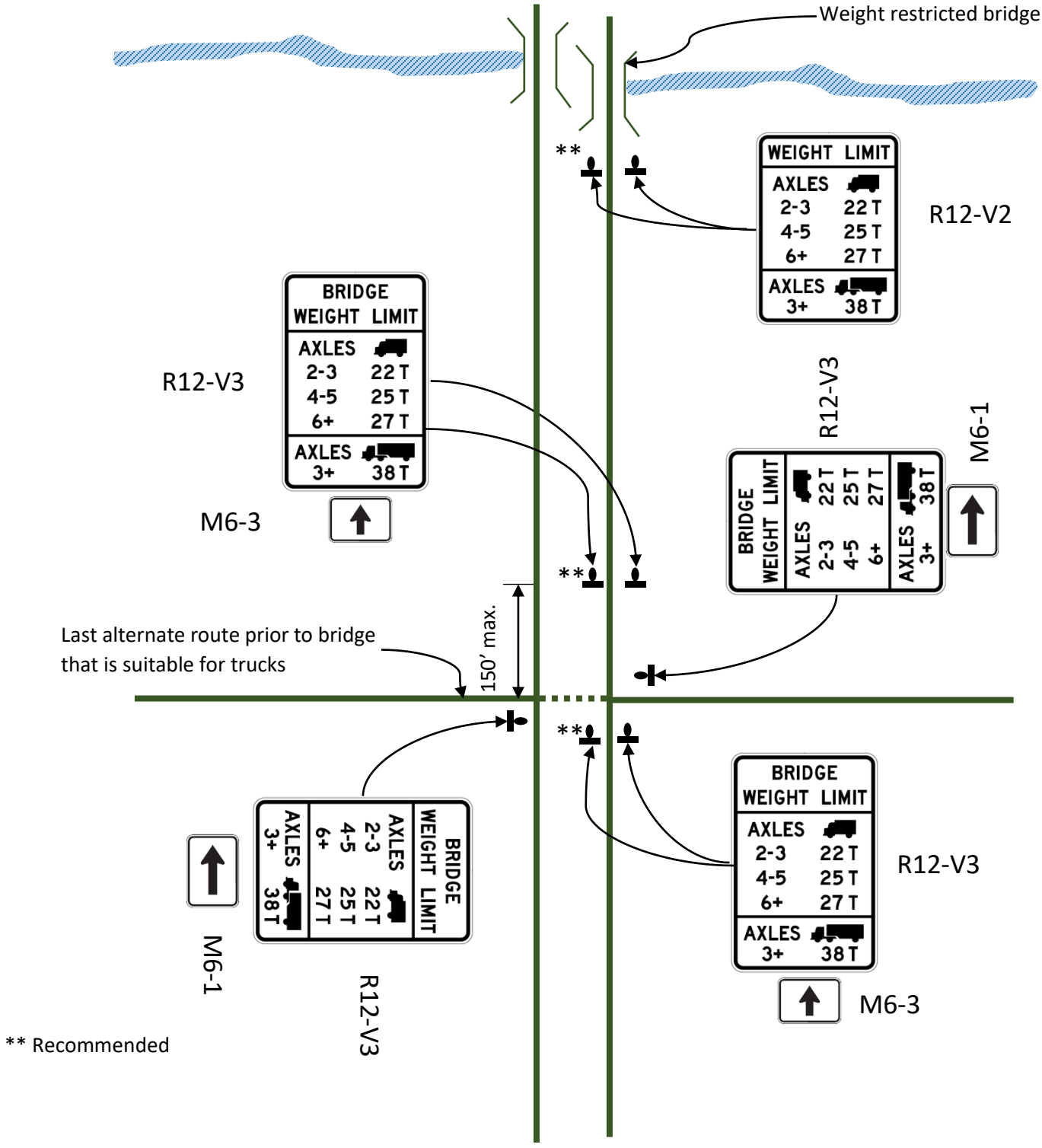
## Figure 2B- V2a. Example of Bridge Weight Signing on Undivided Road




NOTES:

1. R12-V2 and R12-V3 signs are shown for shown for illustration purposes, however appropriate R12-V series sign should be determined as per VDOT S&B guidance.

## Figure 2B- V2b. Example of Bridge Weight Signing on Divided Road




NOTES:

1. R12-V2 and R12-V3 signs are shown for shown for illustration purposes, however appropriate R12-V series sign should be determined as per VDOT S&B guidance.