

A great question was asked during TTC: Flagging Part 1. One attendee wanted to know if we had a suggested list of temporary traffic control devices for a local agency. It is a difficult question to answer as local agencies vary greatly in size, traffic volumes and speeds. Following is a general summary of items to have in the inventory for a street or county highway maintenance crew. We will assume that the speeds vary from 20 mph to 55 mph, your network includes two-way two-lane roads/streets and multi-lane routes. Additionally, many local agencies maintain portions of state routes in their jurisdictions through agreements. These routes may include expressways (divided highways with partial control of access), will have extra requirements.

Safety Vests - Class 2 is required of anyone exposed to construction equipment or traffic. Class 3 is recommended for the Flagger at night. You will need at least a Class 2 vest for each employee and a set of Class 3 garments for nighttime flagging. A safety upgrade would be to purchase Class 3 for all employees to wear both day and night.

Cones - Daytime and 40 mph or less speeds, you could use an 18" cone. 45 mph or more speeds, you need to upgrade to a 28" cone. At night, the cones will need two white retroreflective stripes on them. Our suggestion is to only purchase the 28" or taller cone with two white retroreflective stripes on them. This covers you for day/night and the higher speeds. Also make sure the cones are orange. Other colors are not allowed.

How many cones do you need? This number varies greatly. A flagging set up on a county road might require 30 or more cones. A lane closure downtown may only require 25. I would suggest getting with your superintendents and determining how many crews you typically send out in a day and the types of work zones to estimate the number needed. Then buy some extra.

Signs - On a Conventional road (typical city street or county road), the road work signs will need to be at least 36" x 36". When you work on an Expressway, you will need to upgrade to a 48" x 48" sign. All signs used at night and/or on state routes will need to be retro-reflective (reflects the headlight beams back to the driver). This means mesh signs cannot be used at night or on state routes. My suggestion is to purchase retro-reflective signs. Purchase most 36" x 36" and then a set of 48" x 48" if you need work on an expressway. As a safety upgrade you could also decide to have all 48" x 48". These may not fit though on some of your smaller city streets and county roads.

To decide the type and number of signs to purchase, again I would suggest consulting with your superintendents. They will have a good idea of what you need. In general, for each flagging setup, you will need two Road Work Ahead signs, two One Lane Road Signs, two Flagger Ahead Symbol signs, and two End Road Work signs. In general, for each lane closure on an undivided road, you will need a Road Work Ahead sign, a Right/Left Lane Closed Ahead sign, a right/left Lane Ends Sign (merge symbol), and a End Road Work sign. If the roadway has a median wide enough for the signs and to maintain lateral clearances, then you will need to dual post the signs for the lane closure and will need two of each type named for a lane closure.

Temporary Sign Stands - Temporary Traffic Control signs should be a minimum of 1 foot above the travel way. Sign stands help us achieve that. The temporary sign stands need to be crashworthy. The manufacturer should be able to supply you with an FHWA letter of acceptance for crashworthiness. The number that you need will vary greatly by agency. Purchase one for each of the temporary signs that you intend to put into place for your work zones.

Barricades to Close Roads/Streets - To close a road, the MUTCD would have you use a Type 3 Barricade. The Type 3 is a minimum of 4 feet in length and has three horizontal rails. This is covered in Section 6F.68 of the MUTCD. Look at paragraphs 15, 18, and 19. The critical sentence is the second line of 6F.68 paragraph 18. It states, "Type 3 Barricades should be used to close or partially close a road." The verb "should" tells us that we should do it unless there is a very good reason not to, and that reason needs to be on the order of an engineering study or engineering judgement. My suggestion is to purchase Type 3 crashworthy barricades with retro-reflective sheeting for your road closures. The length would be up to you and the width of your streets. DOT's typically purchase them 8 feet in length. As to the number, we would suggest at least four for each road closure that you anticipate.

Stop/Slow Paddles – You will need at least two of these per flagging setup. The minimum size is 18 inches, and if you use them at night, they must be retro-reflective.

Set of Two-Way Radios – Communication between flaggers is critical. We would suggest a good set of two-way radios for each flagging crew.

Airhorn/Signal Whistle – The flagger needs to be able to sound the alarm if a motorist does not stop. One airhorn or signal whistle per flagger will do the job.

Arrow Board – Each lane closure on a multilane road, should have an arrow board. A type B, 60 x 30-inch board will suffice for most local agency applications. A type C, 96 x 48-inch board should be considered for higher speed and volume routes.

This is by no means a complete list. Each agency should carefully evaluate what it needs with respect to the Indiana MUTCD and when applicable the INDOT Standards/Specifications.