



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

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GOVERNOR

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E. NORRIS TOLSON
SECRETARY

March 10, 1999

MEMORANDUM

To: L. N. Stallings, P.E.
Assistant State Traffic Engineer

From: A. R. Thomas, P.E.
Crossing Safety Engineering Manager

Subject: Field Review of the Candidate Crossings for the Federal-aid Railroad Grade Crossing Safety Program

This is to request field investigation and sight distance evaluation and staff of rail-highway grade crossings by the Area Traffic Engineers. The attachment to this letter contains instructions for performing the investigations to meet the needs of the Crossing Safety Engineering Program, so you may distribute this letter with your authorization for your staff to perform this work.

Enclosed is a copy of the individual railroad crossing folders for candidate railroad-highway grade crossing safety program improvement projects for each Traffic Engineering Area. Each folder contains the following information:

1. "Field Investigation" form
2. "Railroad Inventory" form
3. "Field Sketch" form (last year's sketch if available)
4. Any accident reports for the crossing (for the past 10 years)
5. Maps of the individual crossings

In addition, we are including hard copies of digital county maps with crossing numbers, an updated Investigative Index for the counties in each Area, and a list of locations for which we are requesting investigations. Please note that we have requested reinvestigation of several locations investigated but not recommended for inclusion in the TIP in past years.

We ask that your staff forward their recommendations and field reviews as soon as possible, but no later than April 9, 1999. If you have any questions, please contact me at (919) 733-5564.

ART

Enclosures

cc: J. M. Lynch, P.E.
P. C. Worley
T. W. Ku, P.E.
W. L. Jernigan
Area Traffic Engineers

AREA TRAFFIC ENGINEERING FIELD INVESTIGATIONS RAILROAD-HIGHWAY GRADE CROSSINGS

While conducting field investigations, we ask that the following tasks be performed:

1. Fill out the "Field Investigation" form with your recommendation, SDF(s) ("0" "2" or "4" only), comments, etc.
2. Update the "Railroad Inventory" form by marking any changes with a red pen.
(Note, it is not necessary to update the "grayed out" fields)
3. Provide a sketch of the crossing and the surrounding area on the "Field Sketch" form
(or mark any significant changes on last year's sketch using a red pen)
4. Take four (4) photographs (using your Digital Camera) of the crossing; one facing the crossing along each approach
5. Save digital photos to cc4/public/public/rail/area#.

The photographs should be taken using the Digital cameras (DC-120). After the photographs have been taken:

1. **Download the images from the camera to your computer's hard drive**
The default names PhotoEnhancer assigns to the images is "image01.kdc", "image02.kdc", "image03.kdc" and "image04.kdc", etc.
2. **Create a unique directory each for each railroad crossing number**
For instance, crossing number 123 456A will have a directory called "123456A".
3. **Move each set of image files (4 per crossing) into its appropriate crossing directory**
At this point, each crossing number directory will contain 4 ".kdc" files.
4. **Convert the ".kdc" image files to ".jpg" image files**
 1. Open PhotoEnhancer program
 2. Select "File"
 3. Select "Open..."
 4. Select the directory in which you moved the existing image files (.kdc)
 5. Open the first image file (Example: "image01.kdc")
 6. Select "File"
 7. Select "Save As..."
 8. Change the Save File as Type: pull down option list to JPEG – Low Quality (*.jpg)
 9. Rename the file in the File Name: box using the following file naming scheme:

Use the first 6 digits of the RR Crossing number (i.e.; 123456) followed by the direction the photo was taken (N, S, E or W), and the perspective from which photo was taken [either the character "T" (for Track) or "R" (for Road)].

1 2 3 4 5 6 _ _ . jpg

"N", "S", "E" or "W"

"T" (track) or "R" (Road)

After renaming each set of ".kdc" image files, the crossing number directory will contain 4 ".kdc" files and 4 ".jpg" files. It is no longer necessary to keep the ".kdc" files. You may delete the ".kdc" files from each directory.

You may save the ".jpg" photos directly to *cc4/public/public/rail/area#*, or you may save to your computer and copy the files to *cc4/public/public/rail/area#*. Crossing Safety Engineering Program staff will printout the images after you save to that directory. You may want to print out the images for your own reference.

As you did last year, please assign a sight distance factor (to each of the four quadrants) based on your judgment on the sight distance. The sight distance factors must either be "0" "2" or "4", with the worst condition being a four (4). Crossings in which sight distance would not be a factor in deciding the need for improvement should be assigned a factor of zero (0). The average condition would warrant factor of two (2). Train speed should be considered as you judge the sight distance restrictions in each quadrant. Denote the sight distance factors on the "Field Investigation" form so we can adjust the Investigative Indexes accordingly. (Remember that sight distance is not counted if the crossing already has some type of active railroad warning device.)

We are again programming for one year. These TIP projects will be for federal fiscal year 2000. Each crossing on this list should be field reviewed so we can re-evaluate every crossing with respect to every other crossing in North Carolina.

One last item, all ADTs on the Investigative Index have a year associated with them. As you can see, some of the locations still have not had ADT updates in twenty years. We are working on the problem; but, in the meantime, if you have a recent ADT for a crossing location, please let us know the ADT and year it was counted.