

Mileposting Policies and Procedures

**Traffic Safety Unit
Transportation Mobility and Safety Division
North Carolina Department of Transportation**

I. CREATING MILEPOST DATA

- 1) Check if the route is an inventoried route in TEAAS
 - If inventoried and the route has a features report then print out the features report to make adjustments (additions, deletions and/or re-mileposts)
 - If inventoried but the route does not have a features report then create a features report
 - If not inventoried then create a features report and ask that the route be inventoried

- 2) Check if the route is in the Linear Referencing System (LRS, use the LRS.SQL Oracle script or ArcGIS) – if the route is not in LRS then skip to Step 3
 - Download and/or print out LRS records
 - If the validity of the LRS is suspect then bring this to the attention of the individual assigning the work

- 3) Determine High Order (HO) Segments
 - Determine what higher order segments, if any, coincide with the route
 - If the route does not coincide with any higher order segments then the high order segment for the route is itself for the entire length
 - If any parts of the route coincide with higher order segments, these segments need to be verified with LRS (using the LRSWCOROUTES.SQL Oracle script or ArcGIS)
 - Adjust existing TEAAS high order report or, if no high order report currently exists, enter high order segment data into an approved worksheet

- 4) Milepost individual features
 - If the route is in the LRS then determine the beginning point of the route from the LRS records, otherwise milepost from South to North and West to East
 - Always milepost high order routes first, then carry any adjustments down to the lower order coinciding routes
 - Milepost to three (3) decimal places
 - If the route is in the LRS then use the LRS data for initial intersection feature and state/county boundary mileposts using the LRS features and their mileposts
 - Using available maps and other information, add and milepost additional features not listed on the LRS. Acceptable resources are Spatial Data Viewer (SDV) or ArcGIS (for state routes, county boundaries, state boundaries, and bridges/culverts that carry the route) and county GIS maps (for local routes and municipal boundaries). Other resources (such as Google Maps or Google Earth) may be used in extreme cases to highlight specific items.
 - Milepost structures using mainline (non-couplet) mileposts (see Section VI)
 - Milepost additional features such as mile markers and at-grade railroad crossings as needed
 - Milepost features to both sides (mainline and couplet) of divided roadways even if the feature only intersects one side

- **Do not remove any secondary or other routes that are indicated on the features report but are no longer displayed on a map or on the state system.** For these features, the “Special Type” can be changed to “Deleted Route” or “Non-Intersection” as appropriate. However, obvious errors in spellings or placement should be indicated for further review.
 - Request new route codes as needed (see Section IV)
 - See Section V for additional information on features that are also coinciding routes
 - Don’t create new loops unless necessary
 - Don’t re-measure unless necessary
 - Distances between like features on coinciding routes must be the same
 - The “Direction to Next” must be the same if the high order report indicates the “Inventoried Direction” is “Same” but must be opposite if the high order report indicates the “Inventoried Direction” is “Reverse”
- 5) Run and print/export the MP.SQL Oracle script, or the TEAAS Fiche Report for the route. Use a zero (0) foot Y-line with a date range of January 1, 2009 – present. This step is performed as a review of unmileposted crashes in order to correct spelling mistakes or add alternate street names.
 - 6) Adjust any feature reports for intersecting routes as needed.
 - 7) Review and print any crash reports on the mainline (-L-) route(s) that need to be corrected (indicate recommended corrections directly on the reports in red and initial/date the report in the top right corner) – see Sections III and IV, below, for additional information. Do not print any crash reports that will milepost with recommended features edits. Also, do not print any crash reports on any intersecting (-Y-) route(s). Further, ignore crashes referencing loops, are in public vehicular areas (PVAs), or are on private property (PP).
 - 8) Milepost any coinciding routes with crashes or ordinances (repeat Steps 1-6 as needed)
 - 9) Submit the mileposting packet for checking and approval. This packet will contain:
 - Cover sheet
 - Adjusted TEAAS feature reports (if one exists) or a spreadsheet (for newly created routes)
 - High order segment reports
 - Maps (especially if they indicate old alignments, old routes, etc.) with the route highlighted
 - Other documentation describing peculiar adjustments and reasoning (such as DE letters or route change ordinance packages)
 - LRS or ArcGIS data
 - MP.SQL Oracle script or TEAAS Fiche Report for each different mainline route (i.e. the target route should be the only one listed in the “On Road” column) – these should be sorted by the “Milepost Route”, “MP”, and “From Road” columns (in that order)
 - Crash reports that need to be corrected (with corrections indicated on the reports)
 - Percent of crashes mileposted for each route (high order and low order) based on the results of the fiche reports

II. FINAL MILEPOSTING CHECK AND RELEASE

- 1) Check the milepost and highest order segment data entry to assure the consistency with the original milepost documentation.
- 2) If entered data is either incomplete or inaccuracies are found, the milepost packet will be returned to the data entry personnel to make appropriate corrections.
- 3) Re-run the MP.SQL Oracle script, or the TEAAS Fiche Report (Y-line = 0, date range of January 1, 2009 – present), to be sure that all crashes that should milepost are actually mileposted.

III. GUIDELINES FOR CORRECTING CRASH DATA

Data on crash reports can be fixed in the following cases:

- DMV data entry errors
- Cases when data on front of crash report is clearly erroneous and information provided in the crash diagram is consistent with the actual roadway information.
- The reporting officer made a simple spelling or coding error
- Cases where two roads are provided on the crash report, and the road entered by DMV causes mileposting problems. If the alternate road provided on the crash report will allow the crash to be mileposted accurately, then the alternate road can be used in place of the road originally entered by DMV.

Examples:

On Road text on crash report	Text entered in database	Problem with what is in database	Acceptable Update
ON ROAD: US 70 BUS	US 70	DMV did not enter the business route identifier	US 70 BUS
FROM ROAD: US 25	(LCL) 25	DMV coded a US route as a local route. This road should be recoded as a US route	(US) 25
FROM ROAD: LEE CO LINE	(LCL) LEE CO LINE	DMV coded a county line as a local route. This "road" should be recoded as a county line	(CL) LEE
FROM ROAD: SR 1478	SR 1478	The diagram for the crash report shows a "from" road of SR 1487, not SR 1478. SR 1478 does not intersect with the "on" road, but SR 1487 does and the "towards" road information given also agrees with the "from" road truly being SR 1487.	SR 1487
ON ROAD: GOERGETOWN RD	GOERGETOWN RD	Officer transposed the "o" and the "e"	GEORGETOWN RD
US 540	US 540	It was determined that there absolutely is no US 540 in the county that is being worked on, but there is an I-540. This rational should only be used for NC, US and Interstate routes. Do not apply to SR routes.	I 540
ON ROAD:US 74 (TUNNEL RD)	US 74	US 74 was realigned and the road that the crash actually occurred on is now called US 74A, but it is still called Tunnel Rd	TUNNEL RD
FROM ROAD: SR 1201/ SR 1205	SR 1201	SR 1201 and SR 1205 intersect the "on" road at the same point, but SR 1201 also intersects the "on" road at another point, thus creating a loop.	SR 1205

Notes about changing crash data:

- The only times changes should be made are when the change is based on information actually on the crash report.

IV. GUIDELINES FOR DECIDING TO MAKE CHANGES TO CRASH DATA OR ADD ROAD CODES TO TEAAS

The following items can be corrected on crash reports:

- On road
- Distance
- Direction
- From Road
- Toward Road

No need to print crashes that will milepost with feature report adjustments.

Crash report diagrams are not to scale so do not assume crashes are in/at an intersection. Also, do not assume distances.

Make crash data changes when:

- Changes are trivial spelling mistakes and does not repeatedly happen
- Additional spaces are included in the road text
- Roads are coded improperly

Make requests for new road codes when:

- The spelling of the road is legitimate and a variation of the road text cannot be found in TEAAS **and** at least one crash references the road

Make requests for alternate spelling when:

- The spelling of the road is legitimate and a variation of the road text can be found in TEAAS
- A road is commonly misspelled

Examples:

Text entered in database	Why road text did not get a road code in database	Resolved by
JONES DT	DMV entered DT instead of DR	Making crash data changes – DT to DR
MOOSE HAVERN	There is no MOOSE HAVERN road, but MOOSE HAVEN is legitimate	Making crash data changes - MOOSE HAVERN to MOOSE HAVEN
JONES DR	DMV entered an extra space between JONES and DR	Making crash data changes – remove extra space
US 540	US 540 does not exist	Make crash data changes – change route type to Interstate
JOHN TERRY DR	No road code for JOHN TERRY DR, and no close variation to it.	Create new road code of JOHN TERRY, along with create alt spelling JOHN TERRY DR (JOHN TERRY)
C.T. JONES DR	No road code for C.T. JONES DR, and no close variation to it.	Create new road code of C.T. JONES, along with create alt spellings C.T. JONES DR and possibly CT JONES, CT JONES DR (C.T. JONES)
ST. ALBANS	No road code for ST. ALBANS. Could use SAINT ALBANS as alternate spelling	Create alt spelling for ST. ALBANS (SAINT ALBANS)
STONES PL	No road code for STONES. Could use STONE as alternate spelling	Create alt spelling for STONES PL (STONE)

WOOD BRIDGE DR	No road code for WOOD BRIDGE DR. Could use WOODBRIDGE	Create alt spelling for WOOD BRIDGE DR and WOOD BRIDGE (WOODBIDGE)
MURRIL DR	No road code for MURRIL DR. Could use MURRILL	Create alt spelling for MURRIL DR (MURRILL)
CATE'S FARM DR	No road code for CATE'S FARM DR. Could use CATES FARM as alternate spelling	Create alt spelling for CATE'S FARM DR and CATE'S FARM (CATES FARM)
W FAIRWAY	No road code for W FAIRWAY. Could use FAIRWAY as alternate spelling	Create alt spelling for W FAIRWAY (FAIRWAY)
WESTBEND	No road code for WESTBEND, but since "WEST" is used as part of the name and not as a directional prefix, "WESTBEND" should be the preferred name	Create road code for WESTBEND
PLANES DR	No road code for PLANES DR. Could use PLAIN as alternate spelling	Create alt spelling for PLANES DR, PLANES and possibly PLANE DR, PLANE (PLAIN)

New road code/alternate spelling request notes:

- Only Primary Data Maintainers (PDMs) can create new road codes
- Check for all possible alternate spelling variations, by liberally using wild cards (*) in text searches
- Be sure to clearly specify EXACTLY the text that you wish to get a road code for. If a request is made to have an alt spelling of "THOMAS DR" added to the preferred name "THOMAS", any crash entered into the database with "THOMAS DR." (notice the period after DR) will not get associated with the preferred name of "THOMAS".
- When requesting new road codes, if you include the suffix (ST, RD, DR, etc), it will be assumed that you want to have both the core name set up as a preferred spelling and an alt spelling which includes the suffix. For example the request for PYLE BRANCH DR would generate both a new road code for PYLE BRANCH and an alt spelling for this road code of PYLE BRANCH DR.
- Group and separate new road code requests from alt spelling requests.
- For alt spelling requests, include the road code of the preferred road name so that it will not be necessary for the road code to be looked up again by the person who will be entering the data
- Although it is preferred that all features that occur along a roadway are mileposted, if a street name is found on a mileposted route that does not have a road code AND there are no crashes associated with this feature, a new road code should NOT be requested. This obviously means that this uncoded feature cannot be mileposted. Note, all valid features that have valid road codes, regardless of road length or number of crashes associated with them, should still be mileposted. Exceptions to this rule are in cases such as new road alignments, where it would be expected that future crashes would be referenced to these uncoded features.
- Below is one example of a valid request format (other basic formats are acceptable, as long as they are organized and provide all the necessary information):

Please add the following road codes:

HAGEN JONES DR

J.R. YATES ST

Please add the following alternate spellings:

SW JONES ST (JONES, 50015722)

TOAST ST (TOAST, 50030568)

TOAST ST. (TOAST, 50030568)

TOAST STREET (TOAST, 50030568)

PLACID BLVD (PLACID, 50024354)

- From the above information the following data would be entered into TEAAS:

New road code for HAGEN JONES

Alt spelling of HAGEN JONES DR added to HAGEN JONES

New road code for J.R. YATES

Alt spelling of J.R. YATES ST, JR YATES, JR YATES ST added to J.R. YATES

Alt spelling of SW JONES ST added to JONES

Alt spelling of TOAST ST added to TOAST

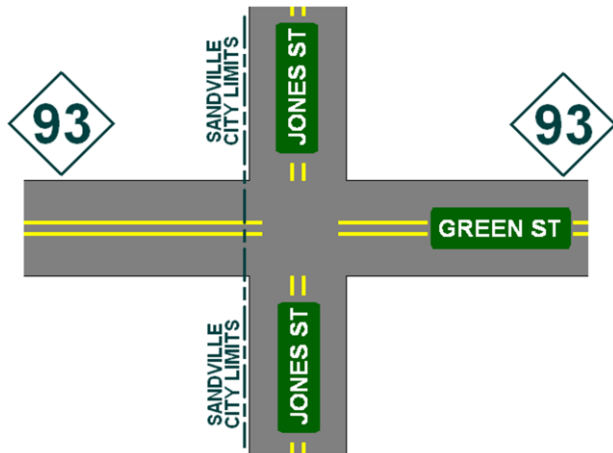
Alt spelling of TOAST ST. added to TOAST

Alt spelling of TOAST STREET added to TOAST

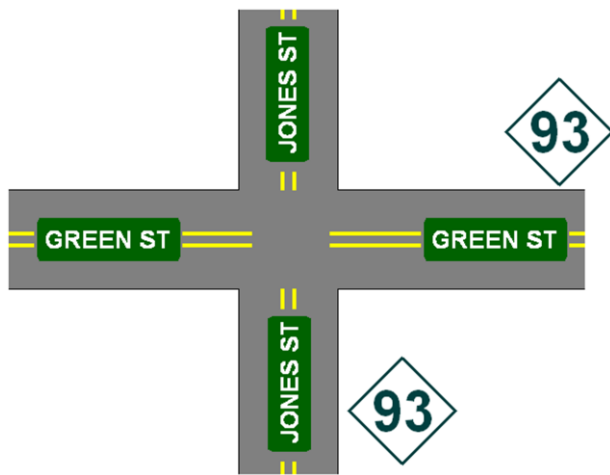
Alt spelling of PLACID BLVD added to PLACID

V. GUIDELINES FOR MILEPOSTING FEATURES THAT ARE ALSO COINCIDING ROUTES

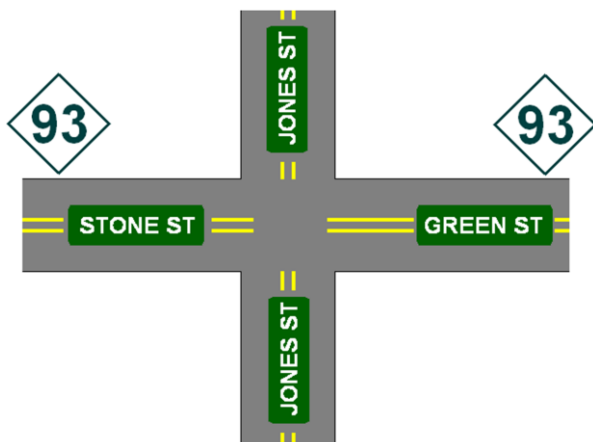
In these situations, if NC 93 was being mileposted, how would GREEN ST be handled.



DO NOT MILEPOST GREEN ST
(MILEPOST JONES ST AND CITY LIMIT)



MILEPOST GREEN ST
(MILEPOST JONES ST ALSO)

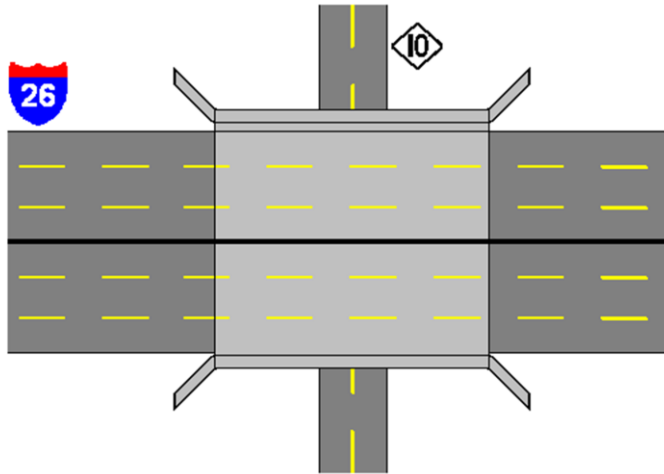


DO NOT MILEPOST GREEN ST
(MILEPOST JONES ST)

These guidelines should be followed except for specific cases where in depth analysis (MP.SQL results, etc.) show that adjusting these guidelines for the specific case is warranted.

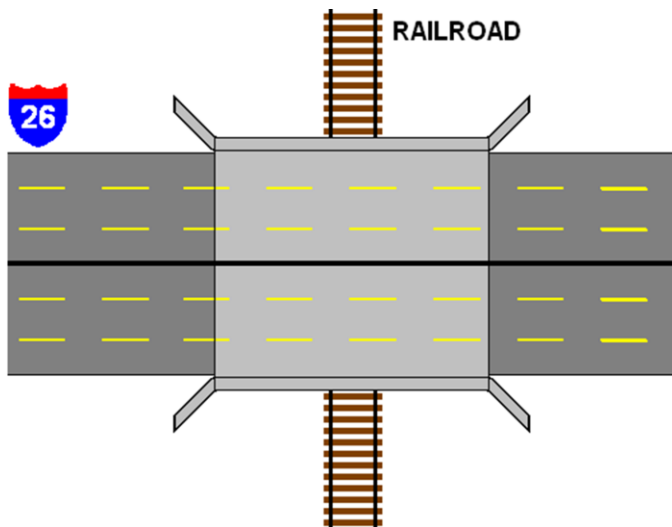
VI. GUIDELINES FOR MILEPOSTING BRIDGE OVERPASSES/UNDERPASSES

When mileposting a roadway that goes under a bridge, do not milepost the bridge. In these cases only milepost the roadway that is intersected, type "GRADE SEPERATION, NO RAMPS". Do not milepost railroads that are not at grade crossings.

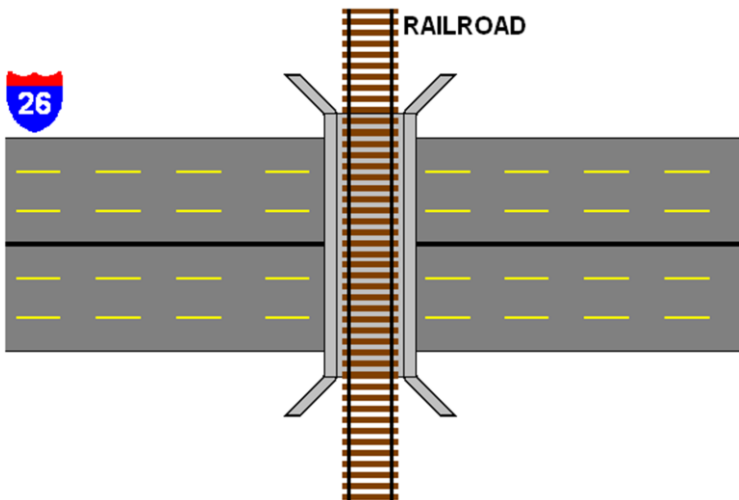


If mileposting I-26, milepost following features:
- NC 10, GRADE SEPERATION, NO RAMPS
- Bridge

If mileposting NC 10, milepost following features
- I-26, GRADE SEPERATION, NO RAMPS



If mileposting I-26, milepost following features:
- Bridge



If mileposting I-26, milepost following features:
None