Long Range Planning

EDL Location Verification

## Introduction

The Road Inventory Office currently maintains three different data sources which are supposed to contain information on every EDL in the state: TRIMS, TN-TIMES, and Chris’ spreadsheet. While these sources should contain identical information, this is not the case in practice. The goal of this project was to find conflicts in the data sources, specifically where an EDL was present in some sources but not others and where an EDL was recorded in different locations in TRIMS and TN-TIMES.

## Methods

Once the data was collected from each of the three sources individually, the rest of the work for this project was done by an R script. The first step was to create a unique ID for each station which would appear in each of the three tables. An ID was generated for the data from TRIMS and Chris’ sheet which matched the format of the ID’s from TN-TIMES. This ID was always eight digits long, the first two digits were the county number of the county that the station was in, then there were a number of zeroes (2-4) and then the last digits were the station number. Using this ID, all three tables were joined together using the `dplyr::full\_join()` function. The joined results included rows for each station in every data source, and information about which data source(s) that station could be found in. In addition, the joined results and the `sf::st\_distance()` function used to calculate the distance between where TRIMS and TN-TIMES said each station was for all stations that were recorded in both sources. The joined results were then written out of R and reformatted as an excel workbook

## Results

In short, the vast majority (93.41%) of stations are present in all three sources, but most (76.56%) stations reported in TN-TIMES are reported at locations over 300 feet away from their location in TRIMS. Below are more specifics on stations which are not present in all three sources, organized by the sources they are missing from and any visible reasons why they may be missing.

Ramp EDL’s – Included only in TRIMSStation IDs: 79000065, 79000057, 79000063, 79000065, 79000062, 79000061, 79000059, 79000058, 79000064  
These stations are in TRIMS in the Route Features Table with route description code “969 – Embedded Detection Loops.” Although their descriptions identify them as ramp counts, they are counted as regular EDL’s in TRIMS. In TN-Times, however, these stations are under the category “RP/EDL” separate from the other EDL’s. These stations are in both TRIMS and TN-TIMES, but only TRIMS reports them when querying EDL’s. Ramp EDL’s were deleted from Chris’ spreadsheet before this analysis begun, so that is why they appear missing from there.

Inactive Stations – Included only in Chris’ Sheet.  
Station IDs: 15000069, 19000343, 19000327  
These three stations are marked missing from TN-TIMES and TRIMS. This may be because they are inactive. They are present in TN-TIMES, but they are marked as inactive and do not appear when EDL’s are queried.

TN-TIMES Category: CCStation IDs: 78000021, 79000281  
These two stations are marked missing from TN-TIMES. They are not exported when EDL’s are queried because they are currently stored with the category “CC” instead of “EDL.”

MiscellaneousStation ID: 19000312  
This station is in TN-TIMES and Chris’ sheet, but not in TRIMS.  
Station ID: 88000001   
This station is only in TN-TIMES, and not in TRIMS or Chris’ sheet.  
Station ID: 79000279  
This station is in TRIMS and TN-TIMES, but not in Chris’ sheet (or at least in my copy).

## More Information

More information on each station can be found in the excel workbook edl\_location\_validation\_final.xlsx and the code which was used to generate the results is the script find\_conflicting\_edls.R.