

This tool is designed to help engineers, surveyors, and others prepare their data for the City of Durham Public Works Department’s as-built digital submittal process.

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Check Your Data Files

1. Select the utility data you want to check.
2. Load the feature file. Please see the discussion below about how to format the data file.
3. Load the pipe file. Please see the discussion below about how to format the data file.
4. Click the Check files button.
5. Any errors flagged by the check will appear in the results box. The map should zoom to the relevant area and display the features and lines with the associated featureIDs. Sanitary sewer will be displayed as green, stormwater as orange, and water as blue. If you are checking stormwater data, existing infrastructure is displayed in grey, allowing the user to assess whether they have shown the connections to the existing infrastructure.
6. If there are any errors, the user has the option to print them. Any text in the results window can also be selected and copied.
7. In addition to running the checker, please use the Zoom to Structures functionality to review where the data displays on the map and whether the correct pipes and structures are connected.

Data File Requirements

1. .txt and .csv files are acceptable formats for the data files. Excel files are not acceptable.
2. You must have a valid header on the first line of the file. The order of header does not matter as long as the fields are all included. Valid headers are listed in the table below.

Sewer Features	ID,Type,Northing,Easting,Elevation,Invert,Material
Sewer Pipes	ID,Size,Material,USId,DSId,USI,DSI,Slope,Length
Stormwater Features	ID,Type,Northing,Easting,Elevation,Invert,Material
Stormwater Pipes	ID,Size,Material,USId,DSId,USI,DSI,Slope,Length
Water Features	ID,Type,Easting,Northing,Elevation,Description
Water Lines	ID,Size,Material,FeatureID1,FeatureID2

If you correct a header in a file you must reload the corrected file.

3. If data is missing for a particular field leave it blank. For example, data for a sewer cleanout, which do not require inverts, should be included like this:

ID,TYPE,EASTING,NORTHING,ELEVATION,INVERT,MATERIAL

CO-31,CLEANOUT,2011302.64,813072.53,308.1,,PVC

Note that the “absent” invert data is represented by the commas that precede and follow the place where the invert data would go.

0 will be interpreted by the program as an error.

4. Do not include any special characters or units of measure, such as %, “, feet, Ft, N/A, NA, or LF.
5. Accepted Material abbreviations for the checker match those shown in the tables below and can also be found in the current Reference Guide. Any materials that deviate from those values will be flagged as an error.

Valid Materials for New Sanitary Sewer Infrastructure

Material	Code
Ductile Iron	DI
Fiberglass Reinforced Polymer Mortar	FRP
High Density Polyethylene	HDPE
Polyvinyl Chloride	PVC
Precast Concrete	PRECAST
Reinforced Concrete	RC

Valid Materials for New Stormwater Infrastructure

Material	Code
Concrete Block	CONB
Corrugated Aluminum	CA
Corrugated Metal	CM
Ductile Iron Pipe	DI
High-density Polyethylene	HDPE
Polyvinyl Chloride	PVC
Precast Concrete	PRECAST
Reinforced Concrete	RC

Valid Materials for New Water Infrastructure

Material	Code
Copper Pipe	CU
Ductile Iron Pipe	DI
Polyvinyl Chloride	PVC
Prestressed Concrete Cylinder	PCC

If you need more information about the as-built digital submittal process, please consult the City of Durham's Reference Guide for Development. Thank you.

Check Your Control Points

1. Enter the Northing and Easting values into the text boxes in the left-hand pane.
2. Click the "Check" buttons.
3. If the Northing or Easting value is out of range, a pop-up box will appear asking you to confirm the appropriate value.
4. If the Northing and Easting values are both in range, the map will zoom and center on a red circle added to the map to represent the control point.

Description of Updates

Additions made to Version 2.0 (January 2020)

- All features are symbolized even if the XY data are considered out of range.
- Original ID, Type, and Material values are displayed (as opposed to post-processed data used for analysis)
- Text in results window are now selectable.
- Print function added.
- Zoom to structures functionality added.
- Alert regarding clearing the data files is removed. Data files are maintained by default when the Utility Type is changed.
- Help updated.

Additions made to Version 3.0 (July 2020)

- Note added to the splash screen about compliance with Materials outlined in the Reference Guide.
- Updates to the code as it relates to material, type, and headers
- Link changed for the Reference Guide
- Functionality to check control points added

Additions made to Version 4.0 (December 2020)

- Header check code updated to distinguish between missing headers, incorrect/extraneous headers, and duplicate headers.
- User cannot check data until missing headers are incorporated into, and/or duplicate headers removed from, the data file.
- Check header code now reruns if the user switches to a new utility type.
- Check data code now distinguishes between a missing value and an incorrect value.
- "Clear results" button added.

Additions made to Version 5.0 (June 2021)

- Header check code updated to incorporate headers that are valid in the importer, specifically len (length), mat (material), slope% (slope), elev (elevation) and diameter (size).
- Code added to round the displayed scale above the scalebar to the nearest whole number.

Additions made to Version 6.0 (January 2022)

- Program flags missing or extraneous headers based on the utility and data type when a data file is initially selected. User must correct headers before the files can be checked.
- Program flags rows with an incorrect number of fields based on the utility and data type when a data file is initially selected. User must fix field count errors before data can be checked.
- Program flags string values in fields where a numeric value is expected. These fields are northing, easting, elevation, invert, length, and slope. This will catch errors such as “2.10%” because of the %.
- Existing stormwater infrastructure displays when you check stormwater data. It disappears when checking sewer or water data.
- If there is only 1 feature in the feature file, the map will zoom to the scale 1:201.
- The results window will have a scrollbar if there are a lot of errors.
- Zoom to structures, works correctly (that is, it zooms to the first structure and progresses as expected).
- Zoom to structures is disabled if user clicks the Clear Data button.
- Check Control Points is above the Help and reference guide link
- How to use this website is a link. And the link opens to the updated directions.