Bus Routes, New York NY, May 2019

ISO 19139 metadata content
- Resource Identification Information
- Spatial Representation Information
- Reference System Information
- Data Quality Information
- Distribution Information
- Metadata Information

Resource Identification Information

CITATION

TITLE Bus Routes, New York NY, May 2019

PUBLICATION DATE 2019-05-31

EDITION may2019
PRESENTATION FORMAT mapDigital

SERIES
NAME NYC Mass Transit Spatial Layers

RESPONSIBLE PARTY - POINTOFCONTACT
ORGANIZATION'S NAME Newman Library, Baruch CUNY
CONTACT'S POSITION Geospatial Data Librarian

CONTACT INFORMATION
ADDRESS
DELIVERY POINT 151 E 25th St Box H-0520
DELIVERY POINT Newman Library, Baruch CUNY
CITY New York
ADMINISTRATIVE AREA NY
POSTAL CODE 10010
COUNTRY UNITED STATES

THEMES OR CATEGORIES OF THE RESOURCE structure, transportation

PLACE KEYWORDS
KEYWORDS City of New York, 2395220, Borough of Bronx, 978756, Borough of Brooklyn, 978759, Borough of Manhattan, 979190, Borough of Queens, 979404, Borough of Staten Island, 979522

THESAURUS
TITLE Geographic Names Information Service (GNIS)
ALTERNATE TITLES ANSI INCITTS 446:2008

PUBLICATION DATE 2008-01-01

PLACE KEYWORDS
KEYWORDS Bronx County, 36005, Kings County, 36047, New York County, 36061, Queens County, 36081, Richmond County, 36085
This line layer was created from the GTFS data feeds from the Metropolitan Transportation Authority (MTA) to represent New York City local bus routes. A python script was written to take the data files as input, process, and save them as a spatial layer in the local state plane coordinate reference system. Lines in this layer represent individual bus routes over a roadway for a specific direction; they were generalized from the GTFS format where lines depicted individual services. The unique ID is route_dir, which is a combination of the bus route id and its direction. This layer was created as part of the NYC Mass Transit Spatial Layers series, and is updated biannually to account for changes in the transit system.

This dataset is intended for researchers, policy makers, students, and educators for basic geographic analysis and mapping purposes. It was created by the GIS Lab at the Newman Library at Baruch College CUNY as part of the NYC Mass Transit Spatial Layers series, so that members of the public could have access to well-documented and readily-usable GIS layers of NYC mass transit features.

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RESOURCE CONSTRAINTS
LEGAL CONSTRAINTS
ACCESS CONSTRAINTS licenseUnrestricted
USE CONSTRAINTS license

SPATIAL REPRESENTATION TYPE vector

PROCESSING ENVIRONMENT Version 6.2 (Build 9200) ; Esri ArcGIS 10.4.1.5686

EXTENT
EXTENT DESCRIPTION
City of New York

GEOGRAPHIC EXTENT
BOUNDING RECTANGLE
EXTENT CONTAINS THE RESOURCE true
WEST LONGITUDE -74.040963
EAST LONGITUDE -73.779182
NORTH LATITUDE 40.762565
SOUTH LATITUDE 40.572425

TEMPORAL EXTENT
BEGINNING DATE 2019-05-01 00:00:00
ENDING DATE
INDETERMINATE TIME unknown

EXTENT

GEOGRAPHIC EXTENT
BOUNDING RECTANGLE
EXTENT CONTAINS THE RESOURCE true
WEST LONGITUDE -74.253882
EAST LONGITUDE -73.700711
NORTH LATITUDE 40.912427
SOUTH LATITUDE 40.502762

SUPPLEMENTAL INFORMATION
The direction of a bus route is indicated with a 0 (which means that the bus runs either northbound or eastbound) or a 1 (the bus runs either southbound or westbound). Bus route ids that have a plus symbol + as a suffix represent Select Bus services. These buses make fewer stops than the regular services, and riders are required to pay their fare and get a receipt from ticket machines located at the bus stop, rather than paying upon boarding the bus.

POINT OF CONTACT - pointOfContact
ORGANIZATION’S NAME Newman Library, Baruch CUNY
CONTACT’S POSITION Geospatial Data Librarian

CONTACT INFORMATION
ADDRESS
DELIVERY POINT Newman Library, Baruch CUNY
Spatial Representation - Vector

Level of topology for this dataset: geometryOnly
Geometric objects:
- Object type: composite
- Object count: 505

Reference System Information

Reference system identifier:
- Value: 2263
- Codespace: EPSG
- Version: 10.2

Data Quality Information

Scope of quality information:
- Resource level: dataset

Lineage:

This line layer was created using the data feeds from the Metropolitan Transportation Authority (MTA). The MTA provides text files that contain route information in a General Transit Feed Specification (GTFS) format, and are geographically referenced so they are able to be plotted. Python scripts were written to take the text files for each New York City borough as input, process them and create a single spatial layer for the entire New York City. The text files used for geometry creation are 'shapes.txt'; they provide geographically referenced data for the routes in the form of points. The script creates a geometry object out of the individual points provided for the route, and then creates a line geometry object out of the points grouped by the common id of the segment that they belong to. Then it joins created geometry object with data from text files, 'trips.txt' and 'routes.txt', which contain additional relevant information provided by the MTA. Based on common attribute, individual bus services for different times and days of the week, are dissolved to create lines that represented an individual bus route that travels in one direction. Local routes are separated from express routes based on the naming convention pattern of the route id. Attribute columns that are blank, redundant, or that represent information that is only relevant to specific services and not to individual routes are removed and layers for each borough are merged into a single layer. The final layer is reprojected from NAD 83 to NY State Plane Long Island in feet and saved in a shapefile format. The unique ID is route_dir, which is a combination of the bus route id and its...
direction. This layer was created as part of the NYC Mass Transit Spatial Layers series, and is updated biannually to account for changes in the transit system.

**SOURCE DATA**

**LEVEL OF THE SOURCE DATA**  Metropolitan Transportation Authority

**SOURCE CITATION**

**TITLE**  MTA NYC Transit Shapes, Trips and Routes Files

**PUBLICATION DATE**  2019-05-01

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**Distribution Information**

**DISTRIBUTOR**

**DISTRIBUTOR INFORMATION - pointOfContact**

**ORGANIZATION'S NAME**  Newman Library, Baruch CUNY

**CONTACT'S POSITION**  Geospatial Data Librarian

**CONTACT INFORMATION**

**ADDRESS**

**DELIVERY POINT**  Newman Library, Baruch CUNY

**DELIVERY POINT**  151 E 25th St Box H-0520

**CITY**  New York

**ADMINISTRATIVE AREA**  NY

**POSTAL CODE**  10010

**COUNTRY**  UNITED STATES

**FORMAT**

**NAME**  Shapefile

**VERSION**  NIL REASON  missing

**TRANSFER OPTIONS**

**TRANSFER SIZE**  0.126

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**Metadata Information**

**LAST UPDATE**  2019-05-29

**MAINTENANCE**

**UPDATE FREQUENCY**  biannually

**MAINTENANCE NOTES**  This metadata record was updated by Frank Donnelly in May 2019.

**METADATA CONSTRAINTS**

**CONSTRAINTS**

**LIMITATIONS OF USE**

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ACCESS CONSTRAINTS licenseUnrestricted

USE CONSTRAINTS license

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COUNTRY UNITED STATES

SCOPE OF THE DATA DESCRIBED BY THE METADATA dataset

METADATA LANGUAGE English
METADATA CHARACTER SET utf8

NAME OF THE METADATA STANDARD USED NAP - Metadata
VERSION OF THE METADATA STANDARD 1.2

METADATA IDENTIFIER A3D32102-068C-4D70-8B61-8FA32A770C39
URI OF THE DATA DESCRIBED BY THE METADATA
https://www.baruch.cuny.edu/confluence/display/geoportal/NYC+Mass+Transit+Spatial+Layers

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