

NYCYCLIST DATA EDITOR

GISMO Webinar

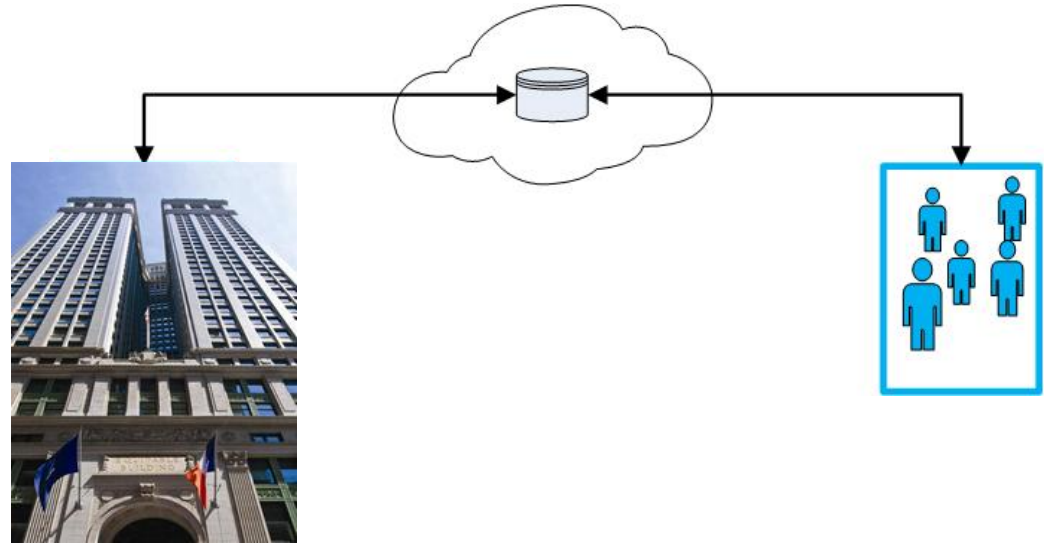
November 2016

- Introduce crowdsourcing application for City's spatial data
 - Bike routes
 - Building footprints
- Discuss some data issues that may be of interest to users, developers and data scientists.
- Recruit cyclists, developers, GIS users as pilot users

NYCyclist Summed Up

NYCyclist is a tool to facilitate government ↔ citizen spatial data collaboration.

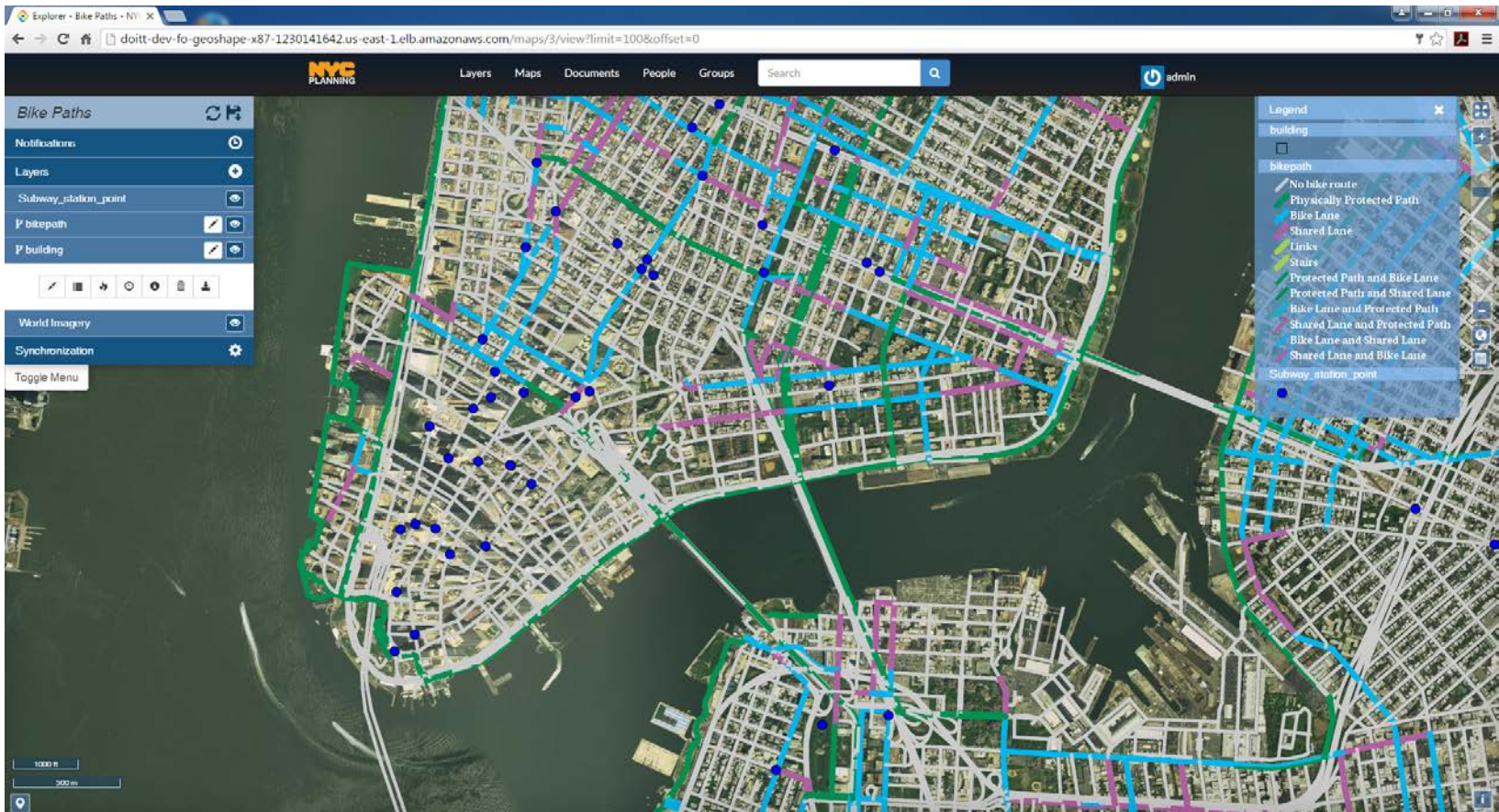
- City exports data → users make edits → City imports edits and accepts or rejects
- Yearlong pilot
- 100 user cap
- Webmap-based
- Uses only City data



- **Bike routes:** maintained by NYCDOT
- **Building footprints:** planimetric data maintained by DoITT

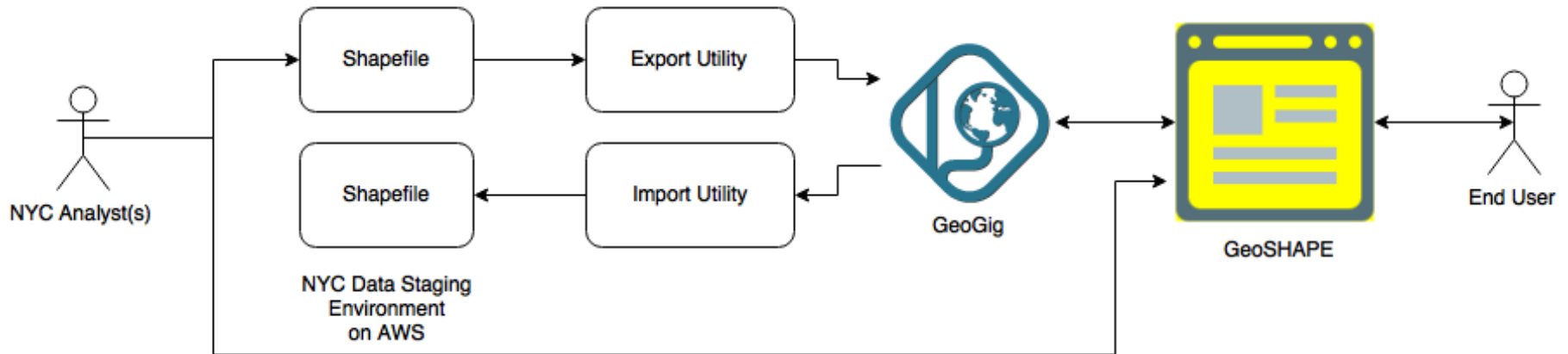
Bike Routes and Building Footprints

Webmap user interface: **GeoSHAPE** (Geospatial capabilities for Security, Humanitarian Assistance, Partner Engagement)



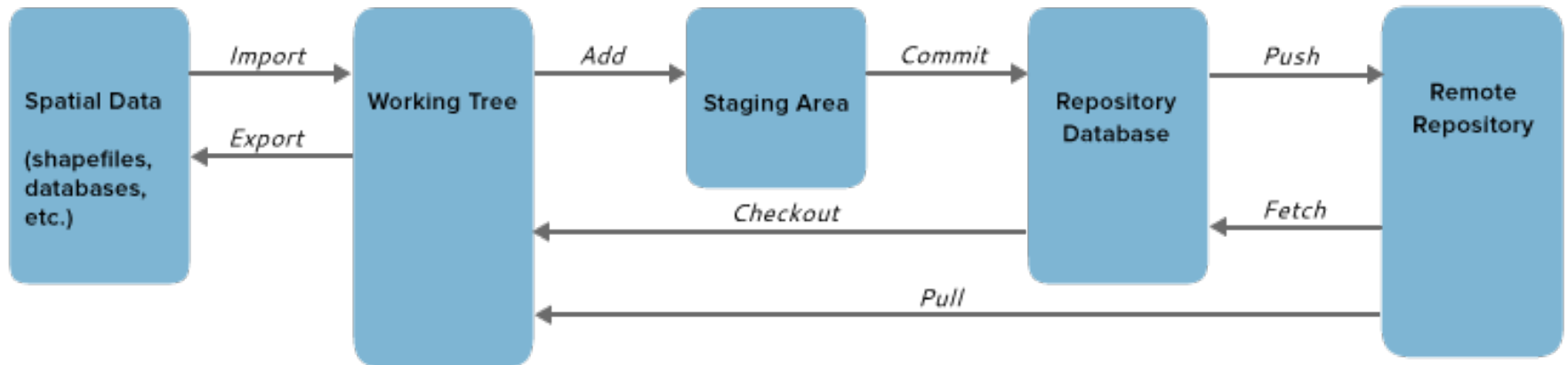
NYCyclist Feedback Loop

Users will log in, make edits in the webmap environment. The city will import the data, accept or reject edits and export the data back to the app.



GeoGig is an open-source, Distributed Version Control system for geospatial data

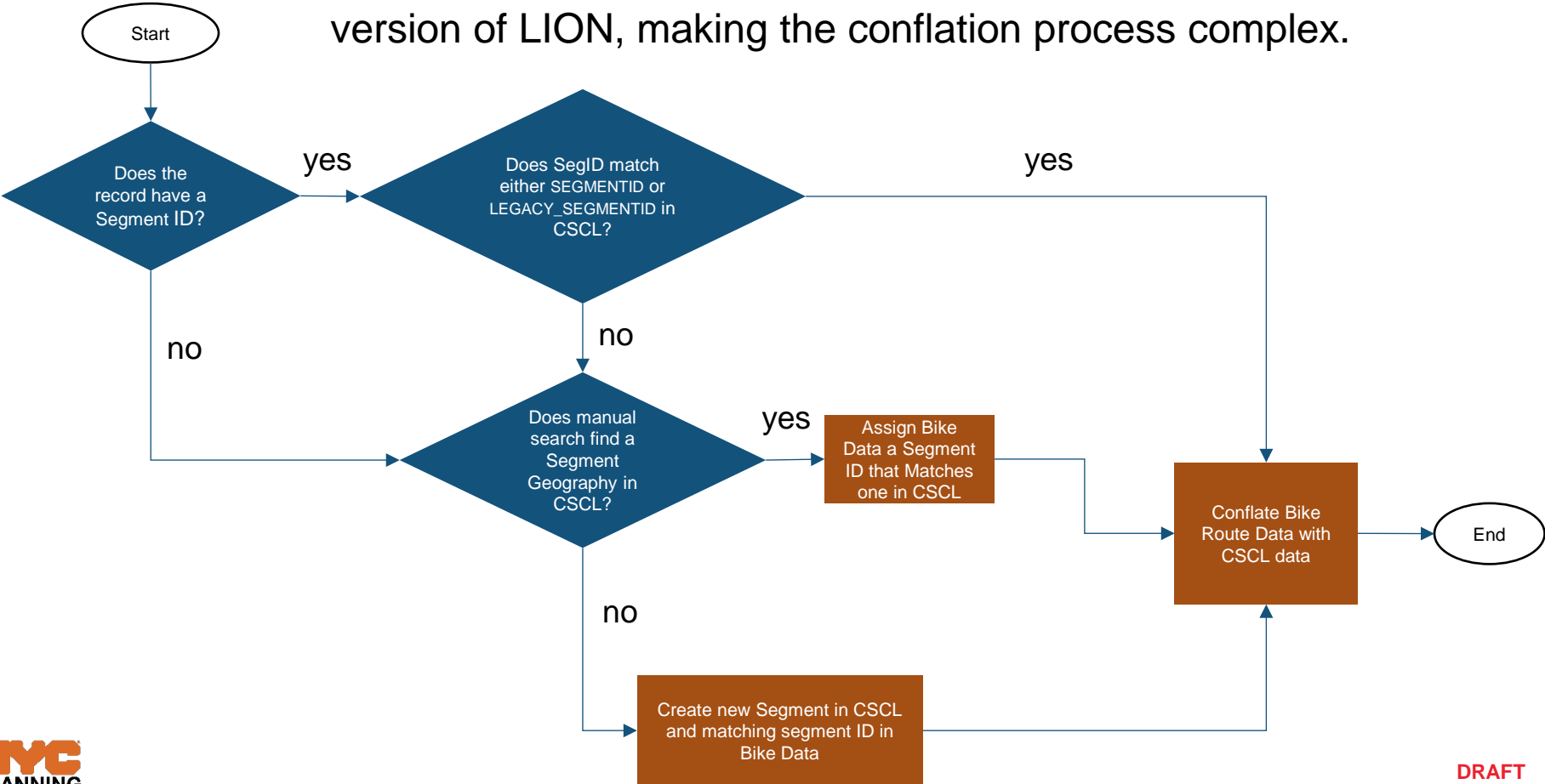
- **Working tree:** where data editing takes place
- **Staging area:** intermediate area before data is moved to database
- **Database:** where history of data repository is stored



Updating CSCL with Bike Route Data

Data Task 1: DOT bike data needed to be conflated to CSCL geometry.

NYCDOT Bike Routes data was based on an outdated version of LION, making the conflation process complex.





Data Task 2: Creating a system for keeping the bike data in the application up to date.

- **First plan:** Give NYCDOT direct CSCL editing privileges allowing City to export nightly to GeoGig
- **Final plan:** DCP and NYCDOT make edits and City exports LION quarterly

Data Task 3: Collecting data on bike route direction

- How can we prompt users to enter this data correctly?



Bike Route Direction

How can we prompt the users with the appropriate from-street and to-street?

“LION – NYCyclist” attribute table

- No from-street or to-street data
- Has NodeIDFrom and NodeIDTo

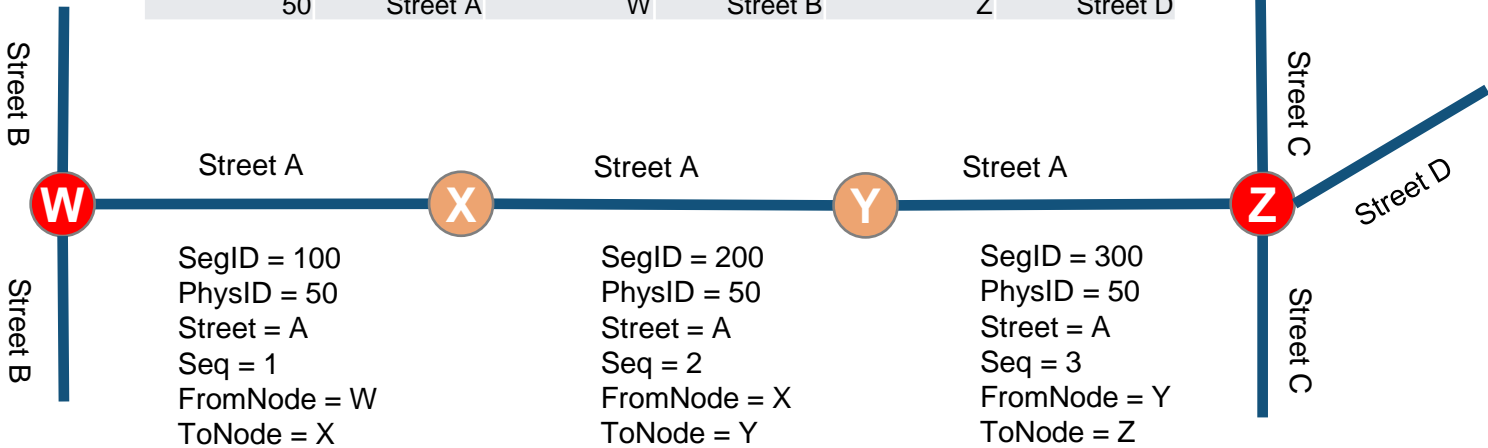
| FID | Shape * | Street | SeqNum | SegmentID | NodeIDFrom | NodeIDTo | PhysicalID | BikeLane | BikeDir | Impediment | Notes | FromStreet | ToStreet | NewRt_Y_N | BikeRtCond | TrafficCond |
|-----|----------|-----------------------|--------|-----------|------------|----------|------------|----------|---------|------------|-------|------------|----------|-----------|------------|-------------|
| 0 | Polyline | EAST 168 STREET | 03070 | 0078126 | 0047740 | 9045677 | 35231 | | | | | | | | | |
| 1 | Polyline | WEST 192 STREET | 00040 | 0079796 | 0048679 | 0048678 | 35248 | | | | | | | | | |
| 2 | Polyline | UNION AVENUE | 00130 | 0077356 | 0047288 | 0047822 | 35252 | | | | | | | | | |
| 3 | Polyline | UNION AVENUE | 00130 | 0077356 | 0047288 | 0047822 | 35252 | | | | | | | | | |
| 4 | Polyline | DELAFIELD AVENUE | 01020 | 0073402 | 0045034 | 0045038 | 35275 | | | | | | | | | |
| 5 | Polyline | WEST 252 STREET | 03010 | 0174883 | 0084655 | 0045050 | 35279 | | | | | | | | | |
| 6 | Polyline | CLAREMONT PARKWAY | 00020 | 0078173 | 0047763 | 0047765 | 35287 | | | | | | | | | |
| 7 | Polyline | TOPPING AVENUE | 00060 | 007219 | 0047788 | 0047803 | 35297 | | | | | | | | | |
| 8 | Polyline | EAST 175 STREET | 01050 | 0078218 | 0047788 | 0047792 | 35299 | | | | | | | | | |
| 9 | Polyline | WEST 234 STREET | 01060 | 0080816 | 0049300 | 0049298 | 35305 | | | | | | | | | |
| 10 | Polyline | DAVIDSON AVENUE | 00120 | 0079587 | 0048563 | 0048576 | 35313 | | | | | | | | | |
| 11 | Polyline | FULTON AVENUE | 00040 | 0078137 | 0047745 | 0047840 | 35327 | | | | | | | | | |
| 12 | Polyline | FULTON AVENUE | 00040 | 0078137 | 0047745 | 0047840 | 35327 | | | | | | | | | |
| 13 | Polyline | INDIAN ROAD | 00010 | 0178643 | 0095303 | 0049337 | 35333 | | | | | | | | | |
| 14 | Polyline | EAST 173 STREET | 01020 | 0078339 | 0047856 | 0047858 | 35340 | | | | | | | | | |
| 15 | Polyline | JEROME AVENUE | 00360 | 0073071 | 0044749 | 0048560 | 35344 | | | | | | | | | |
| 16 | Polyline | GRAND CONCOURSE | 01420 | 0072377 | 0044304 | 0047789 | 35451 | | | | | | | | | |
| 17 | Polyline | WEST 230 STREET | 02024 | 9000277 | 9004993 | 0044798 | 151152 | | | | | | | | | |
| 18 | Polyline | WEST 230 STREET | 02024 | 9000277 | 9004993 | 0044798 | 151152 | | | | | | | | | |
| 19 | Polyline | WEST 230 STREET | 02024 | 9000277 | 9004993 | 0044798 | 151152 | | | | | | | | | |
| 20 | Polyline | NAPLES TERRACE | 00010 | 0079708 | 0048634 | 0048631 | 35824 | | | | | | | | | |
| 21 | Polyline | EAST 149 STREET | 02010 | 0077201 | 0047201 | 0047257 | 35826 | | | | | | | | | |
| 22 | Polyline | EAST 149 STREET | 01160 | 0077202 | 0047201 | 0047258 | 35827 | | | | | | | | | |
| 23 | Polyline | EAST 149 STREET | 01160 | 0077202 | 0047201 | 0047258 | 35827 | | | | | | | | | |
| 24 | Polyline | BATHGATE AVENUE | 00020 | 0078338 | 0047855 | 0047858 | 35870 | | | | | | | | | |
| 25 | Polyline | EXTERIOR STREET | 00850 | 0113549 | 0067162 | 0048615 | 151144 | | | | | | | | | |
| 26 | Polyline | EAST 150 STREET | 02020 | 0077204 | 0047202 | 0047204 | 35892 | | | | | | | | | |
| 27 | Polyline | CRESTON AVENUE | 00010 | 0072393 | 0044311 | 0047808 | 35896 | | | | | | | | | |
| 28 | Polyline | WEST 250 STREET | 00040 | 0080884 | 0049343 | 0049341 | 35920 | | | | | | | | | |
| 29 | Polyline | WEST 232 STREET | 00020 | 0080819 | 0049302 | 0049299 | 35929 | | | | | | | | | |
| 30 | Polyline | TINTON AVENUE | 00150 | 0107127 | 0063717 | 0047830 | 35935 | | | | | | | | | |
| 31 | Polyline | EAST 158 STREET | 03030 | 0070575 | 0043284 | 0047222 | 35951 | | | | | | | | | |
| 32 | Polyline | TRINITY AVENUE | 02020 | 0070576 | 0043284 | 0047232 | 35958 | | | | | | | | | |
| 33 | Polyline | WEST 232 STREET | 00040 | 0130818 | 0073482 | 0044982 | 35932 | | | | | | | | | |
| 34 | Polyline | IRWIN AVENUE | 01030 | 0073402 | 0044983 | 0049308 | 36045 | | | | | | | | | |
| 35 | Polyline | WASHINGTON AVENUE | 01081 | 9003096 | 0047741 | 9005023 | 36052 | | | | | | | | | |
| 36 | Polyline | WASHINGTON AVENUE | 01081 | 9003096 | 0047741 | 9005023 | 36052 | | | | | | | | | |
| 37 | Polyline | GREYSTONE AVENUE | 00050 | 0080858 | 0049324 | 0049325 | 36095 | | | | | | | | | |
| 38 | Polyline | TINTON AVENUE | 00080 | 0077251 | 0047227 | 0047228 | 35942 | | | | | | | | | |
| 39 | Polyline | WEST 250 STREET | 00020 | 0116474 | 0068544 | 0049338 | 35922 | | | | | | | | | |
| 40 | Polyline | CLAFLIN AVENUE | 00020 | 0079811 | 0048687 | 0048693 | 36100 | | | | | | | | | |
| 41 | Polyline | KINGSBRIDGE TERRACE | 00070 | 0079860 | 0048717 | 0048777 | 36103 | | | | | | | | | |
| 42 | Polyline | FOREST AVENUE | 00010 | 0077239 | 0047221 | 0047223 | 36112 | | | | | | | | | |
| 43 | Polyline | MONROE AVENUE | 00030 | 0175816 | 0084828 | 0047784 | 36116 | | | | | | | | | |
| 44 | Polyline | WEST KINGSBRIDGE ROAD | 00100 | 0079668 | 0048610 | 0048609 | 36109 | | | | | | | | | |
| 45 | Polyline | WEST KINGSBRIDGE ROAD | 00100 | 0079668 | 0048610 | 0048609 | 36109 | | | | | | | | | |
| 46 | Polyline | FOREST AVENUE | 01010 | 0082774 | 0047819 | 0047828 | 36117 | | | | | | | | | |
| 47 | Polyline | GRAND CONCOURSE | 02080 | 0076245 | 0079248 | 0048645 | 35667 | | | | | | | | | |
| 48 | Polyline | UNION AVENUE | 00110 | 0077339 | 0047279 | 0047280 | 35354 | | | | | | | | | |
| 49 | Polyline | EAST 175 STREET | 02040 | 008397 | 0047886 | 0047964 | 36149 | | | | | | | | | |
| 50 | Polyline | MONROE AVENUE | 00040 | 0173818 | 0084985 | 0047783 | 36120 | | | | | | | | | |
| 51 | Polyline | JACKSON AVENUE | 01030 | 0077742 | 0047222 | 0047234 | 36350 | | | | | | | | | |
| 52 | Polyline | WEST 261 STREET | 00090 | 0081423 | 0049694 | 0049693 | 36353 | | | | | | | | | |
| 53 | Polyline | EAST 179 STREET | 00050 | 0175883 | 0090144 | 0047904 | 36364 | | | | | | | | | |
| 54 | Polyline | PROSPECT AVENUE | 00070 | 0077324 | 0047271 | 0047272 | 36369 | 2 | | | | | | | | |
| 55 | Polyline | PROSPECT AVENUE | 00070 | 0077324 | 0047271 | 0047272 | 36369 | 2 | | | | | | | | |
| 56 | Polyline | WEST 263 STREET | 00020 | 0081457 | 0049715 | 0049712 | 36395 | | | | | | | | | |
| 57 | Polyline | WEST 263 STREET | 00020 | 0081457 | 0049715 | 0049712 | 36395 | | | | | | | | | |

Bike Route Direction

From-streets and to-streets were assigned to each LION segment based on Physical ID

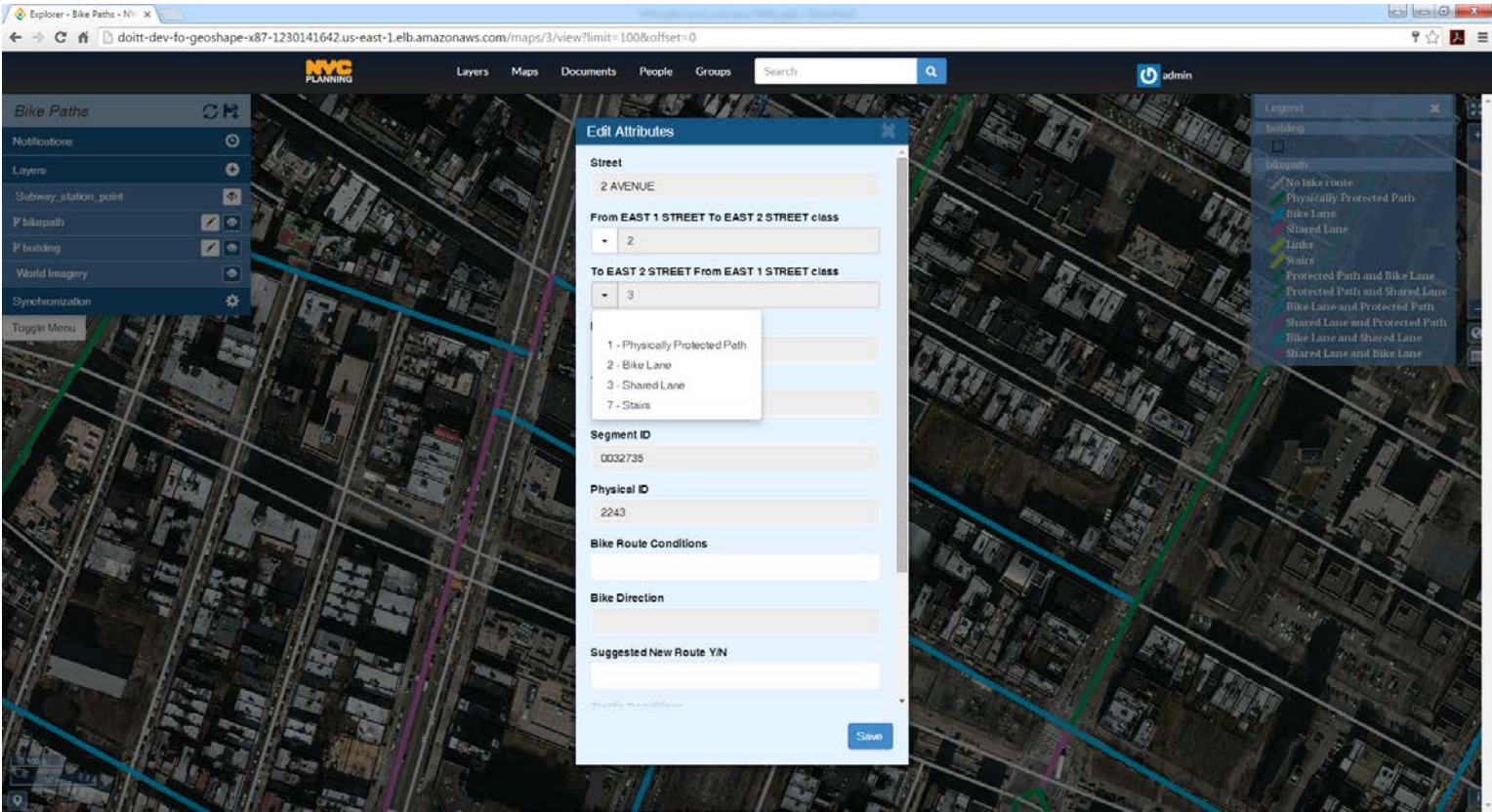
Result Table for Segments 100, 200 and 300

| PhysSegID | Street | PhysID From Node | Phys ID From Node Street (excluding "Street") | Phys ID To Node | Phys ID To Node Street (excluding "Street") |
|-----------|----------|------------------|---|-----------------|---|
| 50 | Street A | W | Street B | Z | Street C |
| 50 | Street A | W | Street B | Z | Street D |

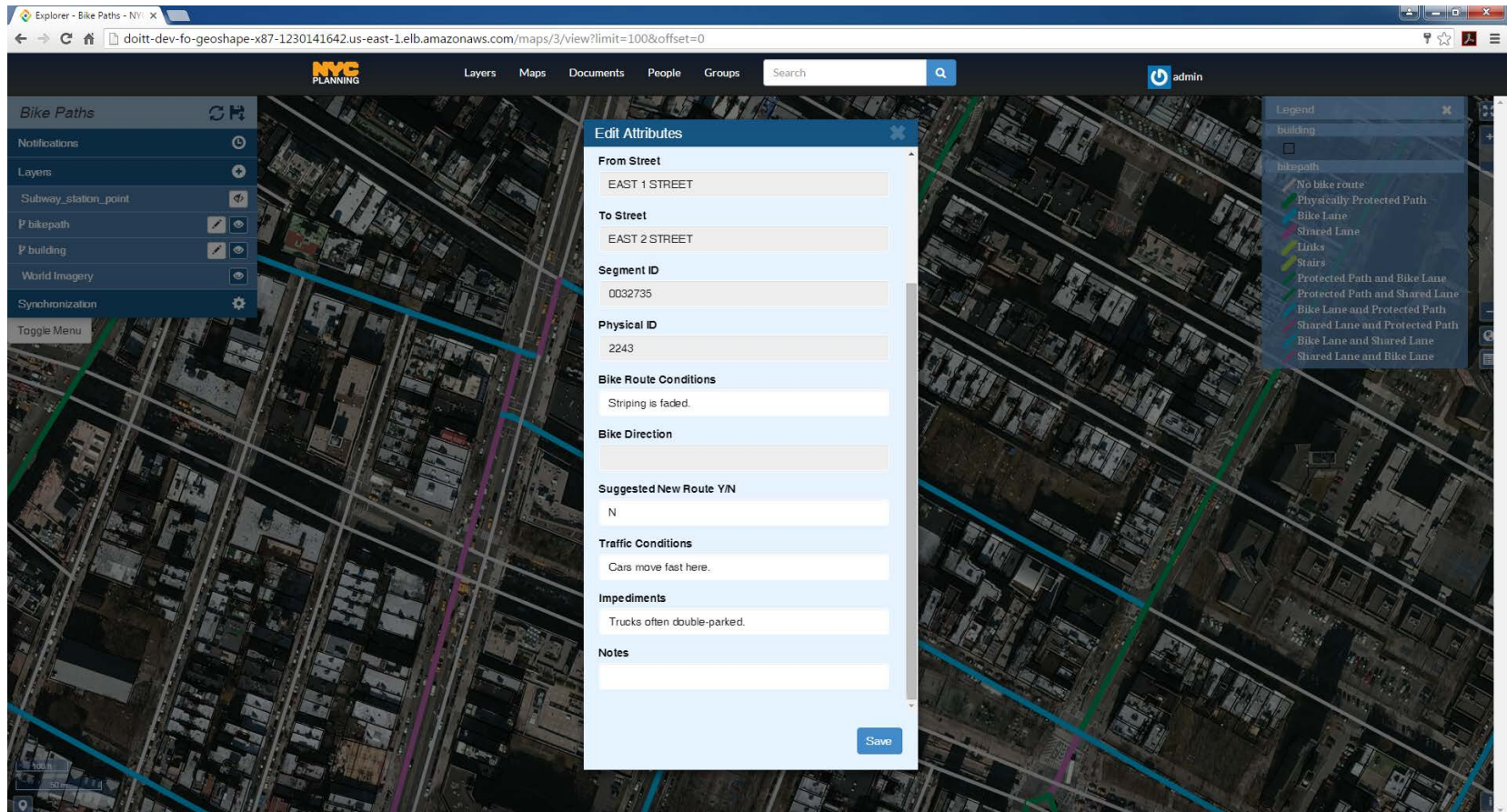


Bike Route Direction

Provide a dropdown menu that allows users to choose the appropriate bike route for each direction.



Data Task 4: Collecting new data on bike routes



- We are recruiting 100 users for the pilot project. Give me your info.
- Tell your cyclist, developer and GIS user friends.
- Upcoming presentation with GeoNYC Meetup group in December.

Contact: Conor Clarke

cclarke@planning.nyc.gov

212-720-3329