



An Introduction to TeachOSM

Teaching Geography with OpenStreetMap

Agenda

- What is TeachOSM?
- Why do we need TeachOSM?
- Highlights
- Six Reasons to use OSM to teach geography
- Summary

TeachOSM: A Resource for Educators

Getting Youth Involved



Photo: middle-school school students learning to map.
Credit: MaptimSF/Lyzi Diamond

What is TeachOSM?

- TeachOSM is a growing resource for educators at all levels to introduce open source mapping in their classrooms and training sessions.
- TeachOSM offers modular lessons that teach basic geographic concepts through applied mapping on OpenStreetMap.
- TeachOSM has resources to help instructors to identify, assign, manage and grade a mapping assignment.



Photo: Mapping peaks using GPS.

Credit: SEJohnson

Why do we need TeachOSM?

- Provide tools for educators not found in other OSM learning materials
- Demonstrate the utility of OSM to teach geo-literacy
- Help students/young adults engage with the landscape
- Build a pipeline of talented mappers to sustain the project
- Create opportunities for meaningful citizen engagement

What does TeachOSM do?

- Established a web site
- Create repository of case studies
- Planned half-day workshop for educators
- Outreach to teachers, educators, youth leaders
- Established micro credential initiative to award credit for service hours



Photo: middle-school school students learning to map.
Credit: SEJohnson

For educators...

- Basic map editing skills
- How to manage student accounts
- Organizing & managing your mapping event
- The Tasking Manager, for assigning blocks of work
- Quality control, assessment, grading
- Ready-made projects for teachers to adapt



Photo: Mapathon, Spring 2014.

Credit: Brian DeRocher

For Students...

- Teach basic digital mapping skills
- Provide opportunity for vocational learning
- Offer service learning opportunities
 - Humanitarian OpenStreetMap Team (HOT)
 - MapGive
 - MissingMaps
 - DC Great Streets
- Cultivate geo-literacy through guided mapping projects

Photo: middle-school school students learning to map.
Credit: SEJohnson



GeoBadges: Micro-credentials for Service Learning

- A new initiative to give credentials to students and teachers for contributions to OpenStreetMap
- Expectations:
 - Contribute to the map & foster community
 - Be a Resource for Peers
 - Develop an Understanding of Basic Digital Mapping Constructs
 - Contribute to Community Mapping Goals (local, HOT, MapGive, MissingMaps)
- Web: <http://geobadges.org/>



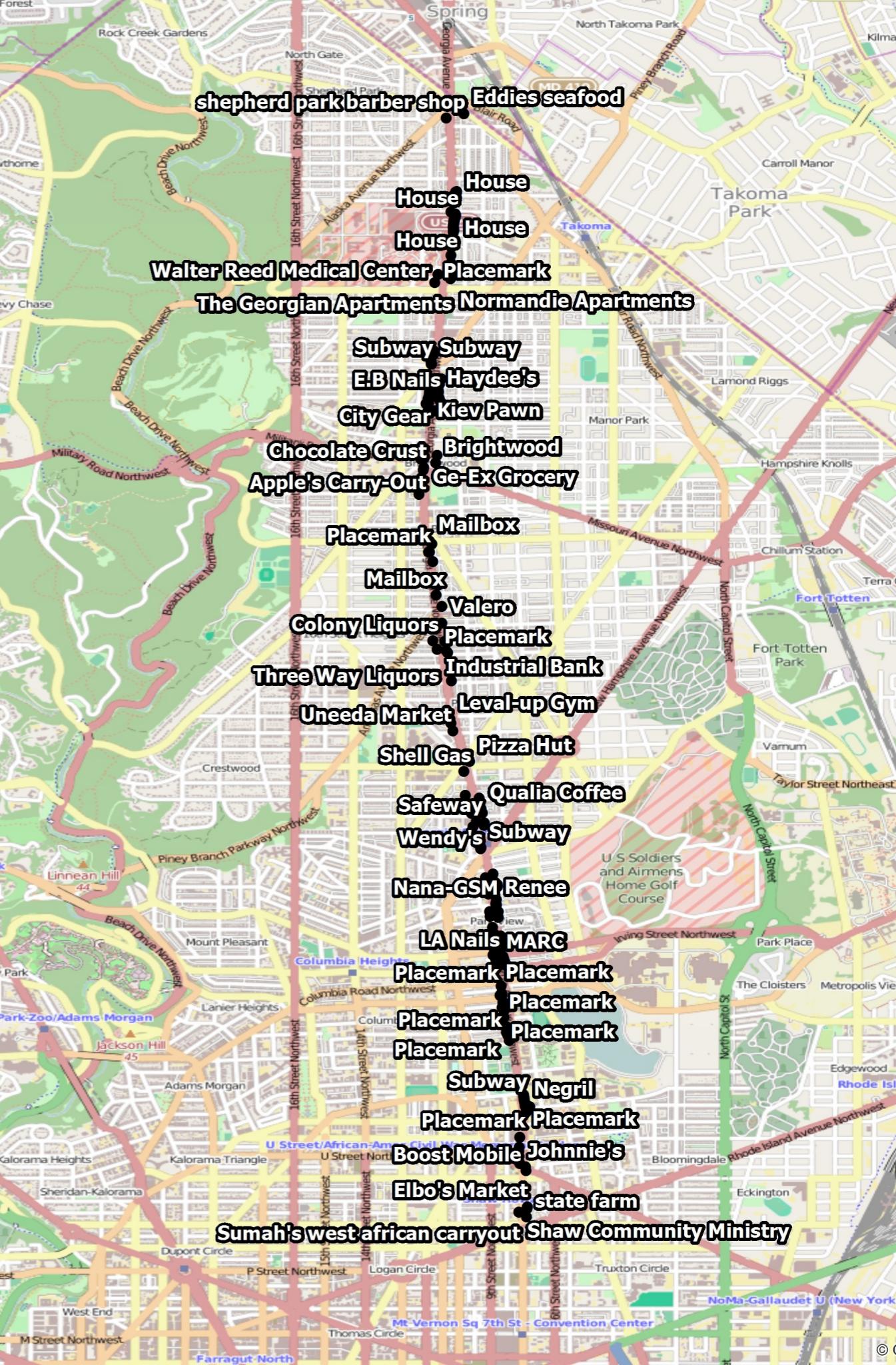


Highlight: TeachOSM and
the Georgia Avenue Project

Training Young Adults to Map

Georgia Avenue Mapping Project

- Youth Ambassadors used Georgia Ave data gathered for street-level survey
 - We trained ~15 Youth Ambassadors in how to edit in OpenStreetMap
 - Results:
 - Over 270 features added to the OpenStreetMap
 - Survey data visible on the map!
 - http://wiki.openstreetmap.org/wiki/Georgia_Avenue_Youth_Ambassadors_Mapping_Project



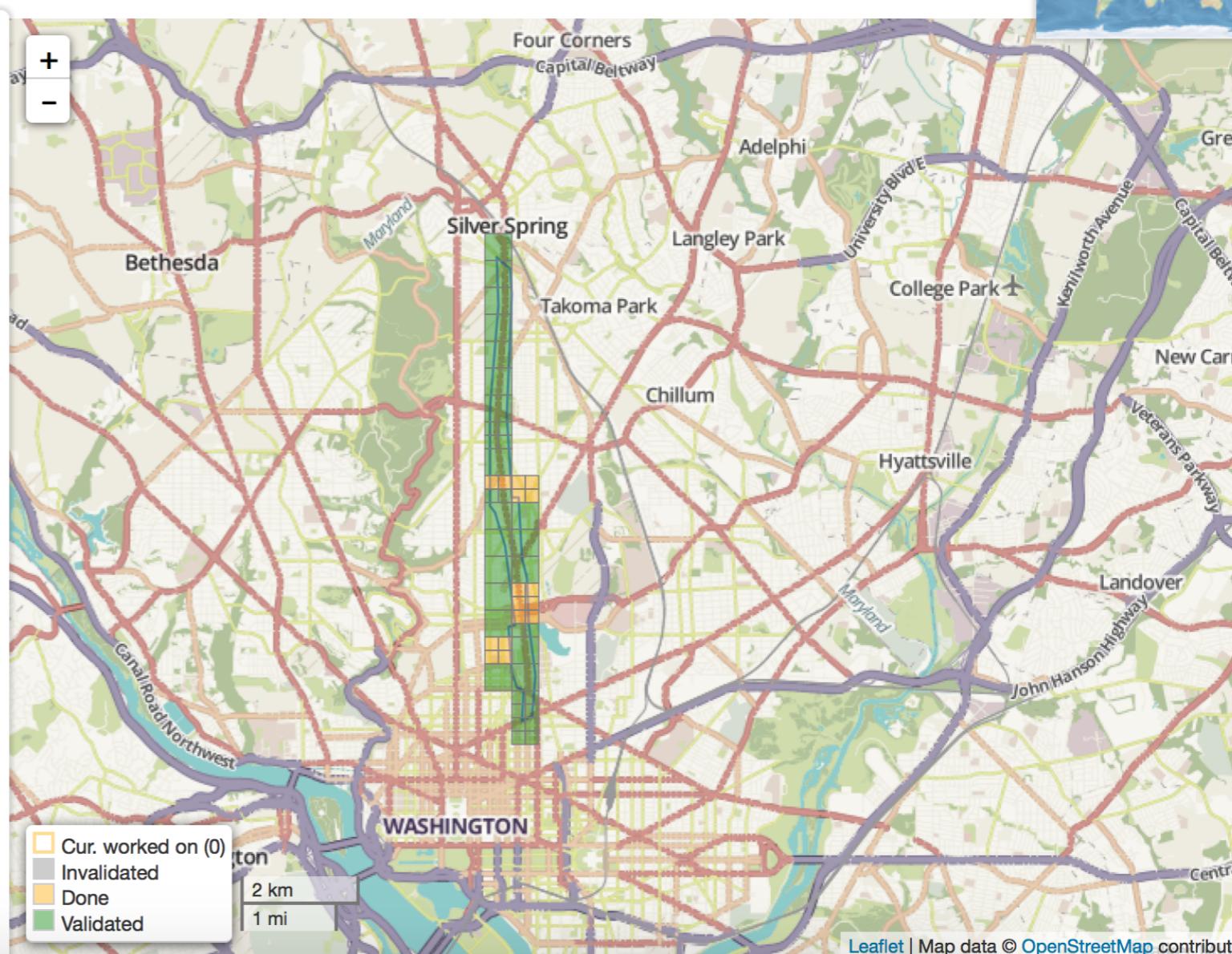
Using the OSM Tasking Manager to control workflow

#579 - Washington, DC Georgia Avenue Youth Mapping

Description Instructions Contribute Activity Stats

20 students who are part of the city's Summer Youth Program are working with the Georgia Avenue Community Development Task Force, Georgia Avenue Business Alliance and MOMIEs TLC, a local educational nonprofit, to learn about businesses, entrepreneurship and local history. Mapping DC is helping them collect and put the data it on OpenStreetMap so everybody can use it going forward. Please map the buildings, starting with those facing Georgia Avenue.

The map data will also be used for a local business directory and in a business needs assessment survey in the area.

[➡ Instructions](#)

shepherd park barber shop Eddies seafood

House
House
House

Walter Reed Medical Center Placemark

The Georgian Apartments Normandie Apartments

Subway Subway

E.B Nails Haydee's

City Gear Kiev Pawn

Chocolate Crust Brightwood

Apple's Carry-Out Ge-Ex Grocery

Placemark Mailbox

Mailbox

Valero
Colony Liquors Placemark

Three Way Liquors Industrial Bank

Uneeda Market Leval-up Gym

Shell Gas Pizza Hut

Safeway Qualia Coffee

Wendy's Subway

Nana-GSM Renee

LA Nails MARC

Placemark Placemark

Placemark Placemark

Placemark Placemark

Subway Negril

Placemark Placemark

Boost Mobile Johnnie's

Elbo's Market state farm

Sumah's west african carryout Shaw Community Ministry



Highlight: HOT
Indonesia

University Outreach Program

University Outreach & Contingency Planning

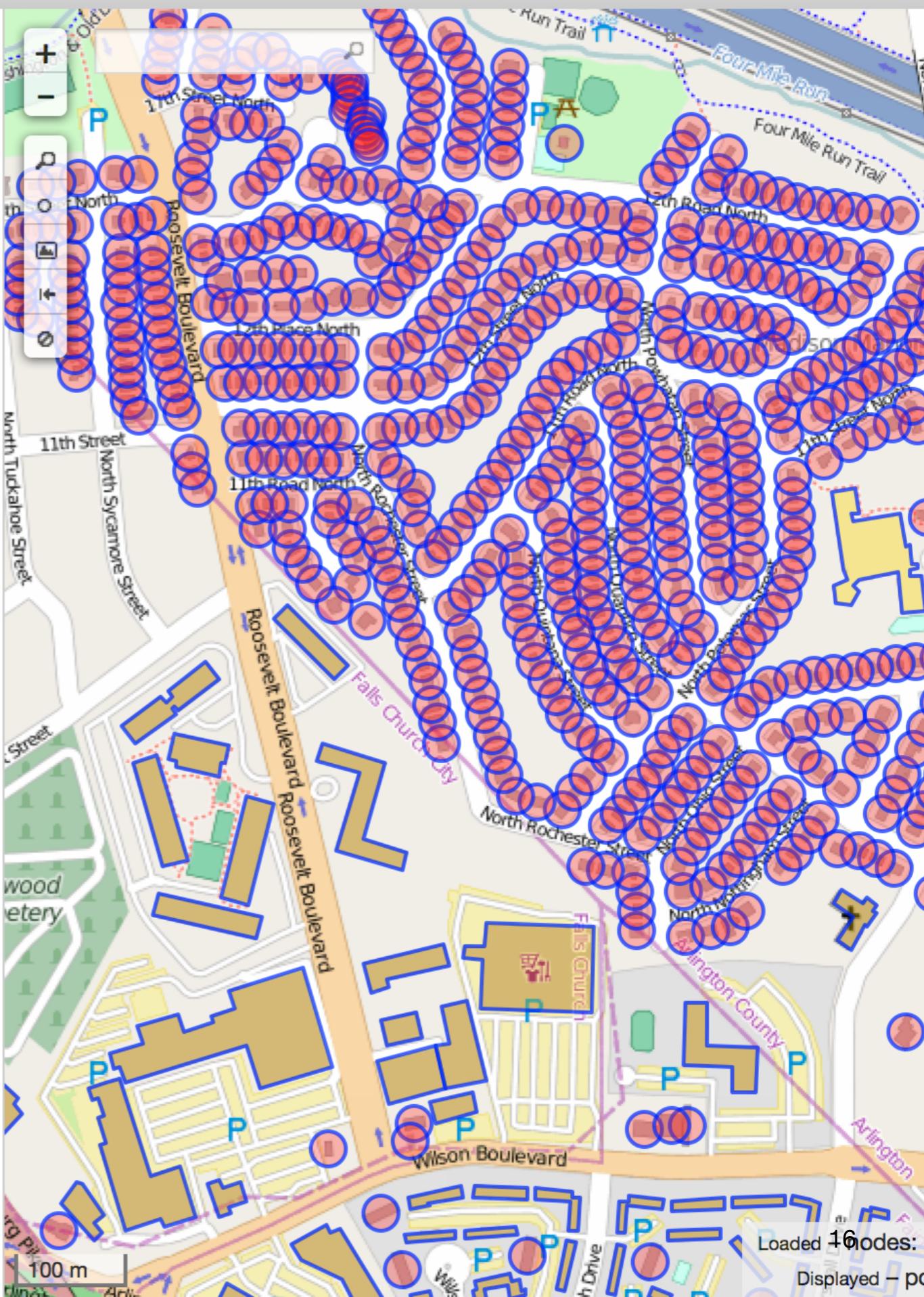
- Focus is disaster preparedness and contingency planning for vulnerable areas
- Working with local communities to identify & map exposure and risk
- Using QGIS & InaSAFE plugin for downstream analysis
- Over 4 years, conducted 86 trainings, 2300 people trained, ~2m buildings, ~14500 schools



Why TeachOSM?

Reasons to Use
OpenStreetMap to
Teach Geography

overpass turbo



OpenStreetMap Gives Students Immediate Experience

- Direct Learning - Young adults gain direct experience of space, place, and location
 - Geography at a 1:1 Scale
 - The terrain *is* the map
 - Nurture and understanding of how to read the landscape

OpenStreetMap Reinforces Social & Historical Literacy

- Provides meaningful engagement for children that can broaden academic & career options
 - History-shaping events often happen at certain places for geographic reasons.
 - Contributing to OSM, -through site surveys, editing, & meeting other citizens, helps us understand geographic processes that underpin social events.

OpenStreetMap Supports Collaborative Learning

- Mapathons help students establish positive relationships with other mappers in the community
 - Collaborate with your fellow citizens to record features of interest
 - Share observations about your community
 - Give visibility to community landmarks

OpenStreetMap Provides Opportunities for Service-based Learning

- Opportunities to engage in ongoing community service projects & service learning engagements
 - Contribute to humanitarian relief efforts through Humanitarian OpenStreetMap Team
 - Use MapRoulette ‘micro-tasking’ to help improve map quality
 - Give young adults a meaningful stake in maintaining map data in their neighborhood

OpenStreetMap Supports Self-directed Learning

- The open platform encourages self-guided learning and allows students to challenge themselves.
- Mapping projects encourage collaboration & teamwork
- Students learn how to think critically about geographic features and how to model their world.
- Active mapping nurtures the young adult's natural inquiries into the world.

OpenStreetMap Requires No Special Resources

- No software required - works in the browser
- No permission required - OSM is a do-acracy: DO IT!
- Data are free and can be exported for downstream use in desktop GIS packages (e.g. QGIS, ArcGIS)
- No fees, licensing charges, royalties, paywalls, subscriptions, etc.

Sample Ideas for Projects

- Conduct a street survey in your neighborhood:
 - http://teachosm.org/en/cases/DCGreatStreets_survey_casestudy/
- Map for disaster relief/preparedness:
 - <http://mapgive.state.gov> and <http://missingmaps.org/>
- Add historical features to OpenHistoricalMap:
 - <http://ow.ly/MfhZw>
- Map local food resources:
 - <http://teachosm.org/en/cases/farmers-market/>
- Start a student mapping society:
 - <https://www.facebook.com/GWHMS>

Getting Involved

- Where do I get started?
 - Subscribe to the TeachOSM mailing list
 - Send an inquiry to info@teachosm.org
- How do I contribute?
 - Draft a case study for the web site (<http://teachosm.org>)
 - Help refine our materials



Photo: middle-school school students learning to map.
Credit: MaptimSF/Lyzi Diamond

Summary

- As an open freely editable map of the world, OpenStreetMap is an excellent platform for teaching geography
- OpenStreetMap offers students geo-literacy, social engagement, service learning, and independent learning opportunities.
- OpenStreetMap is free and requires no special equipment
- Use TeachOSM and help us make it better

Thank You!

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