OpenStreetMap Mapathon

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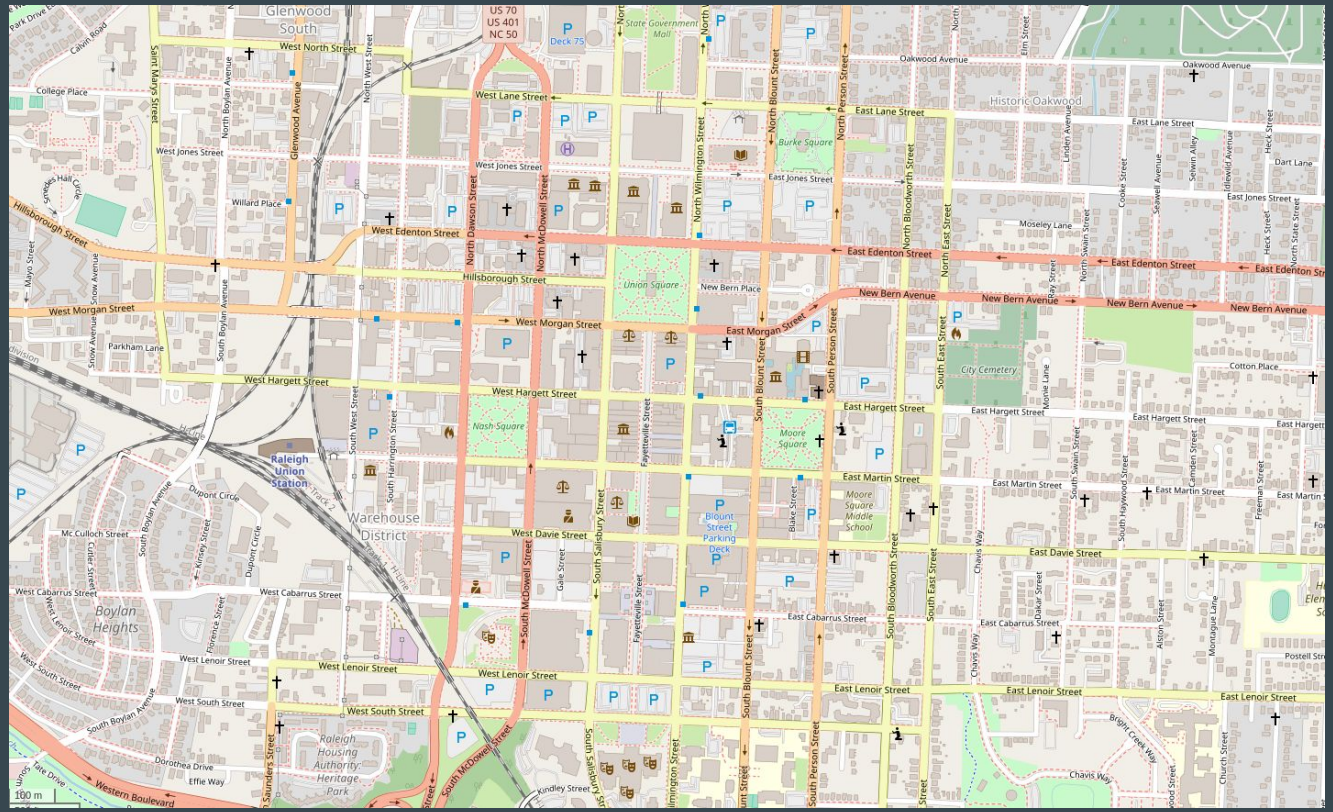
Leila Alderman
NC Clear Path

Agenda

- OpenStreetMap Overview
- NC Clear Path
-

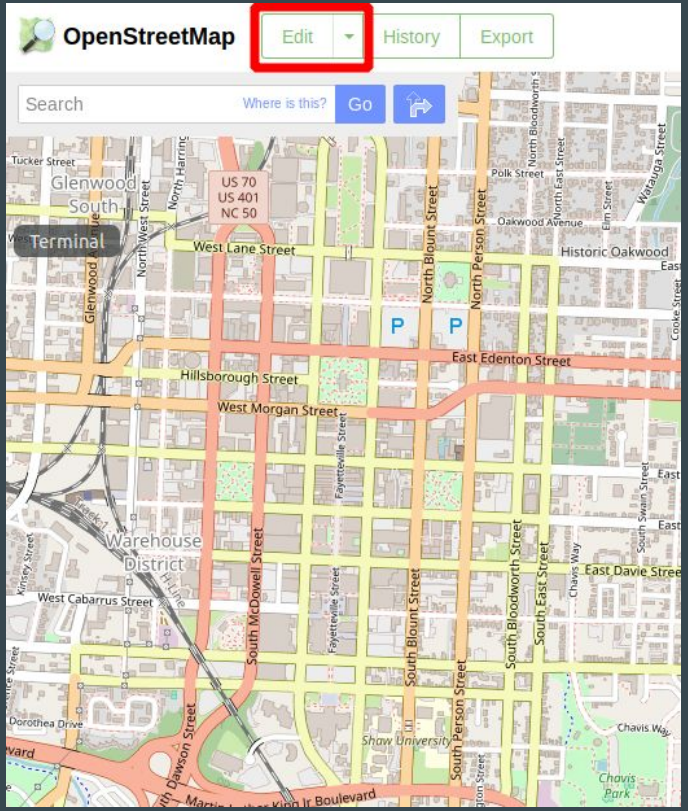
OpenStreetMap Overview

OpenStreetMap



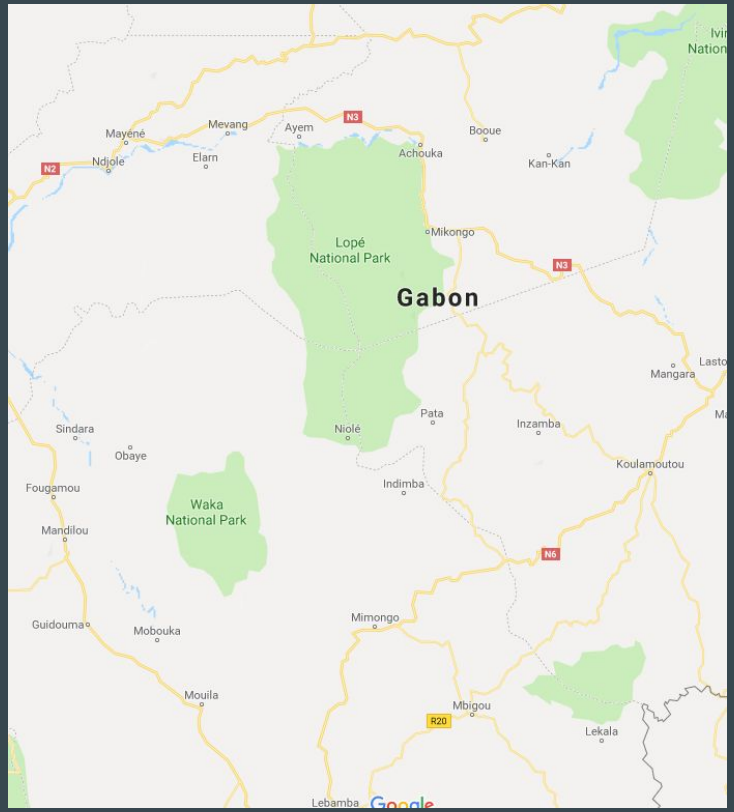
OSM: The Wikipedia of Maps

- “OpenStreetMap is a free, editable map of the whole world that is being built by volunteers largely from scratch and released with an open-content license.”
- OSM actively encourages new and interesting uses of its map data.



Why make OpenStreetMap?

- Maps that we think of as free often aren't.
- In many countries, you pay taxes that fund government mapping projects and then must also pay to get a copy of these maps.
- For-profit companies have little incentive to map poor areas of the world.



Using OpenStreetMap

- OSM is best leveraged with apps
  - Maps.me
- Many sites and applications use OSM
  - Snapchat
  - Weather.com
  - TripAdvisor
  - Craigslist
- Coding with OSM
  - Leaflet default
  - Mapbox
  - switch2osm.org

Humanitarian Mapping

- Humanitarian OpenStreetMap Team (HOT)
- International non-profit
- Supports humanitarian disaster management
- Encourages community development

HOT Initiatives

- Create maps that enables disaster responders to reach those in need
- Create maps of high vulnerability areas where data is scare, putting millions on the map
- Provide training, equipment, and knowledge exchange

NC Clear Path

Won first place at Civic Camp

Pitched at All Things Open

Won first place at Datapalooza

NC Clear Path seeks to provide safe and accessible trip planning on pedestrian ways for those with limited mobility

Kevin’s story

“Using a tool like directions on Google Maps doesn’t really help me get around. Actually sometimes this does more harm than good. I’m sent down streets I can’t cross, or up inclines that are impossible to climb. It can be deeply frustrating.”

54.5 million

people in the USA need assistive devices or
have trouble walking more than a quarter mile

What obstructs pedestrian paths?

Short-term obstacles:

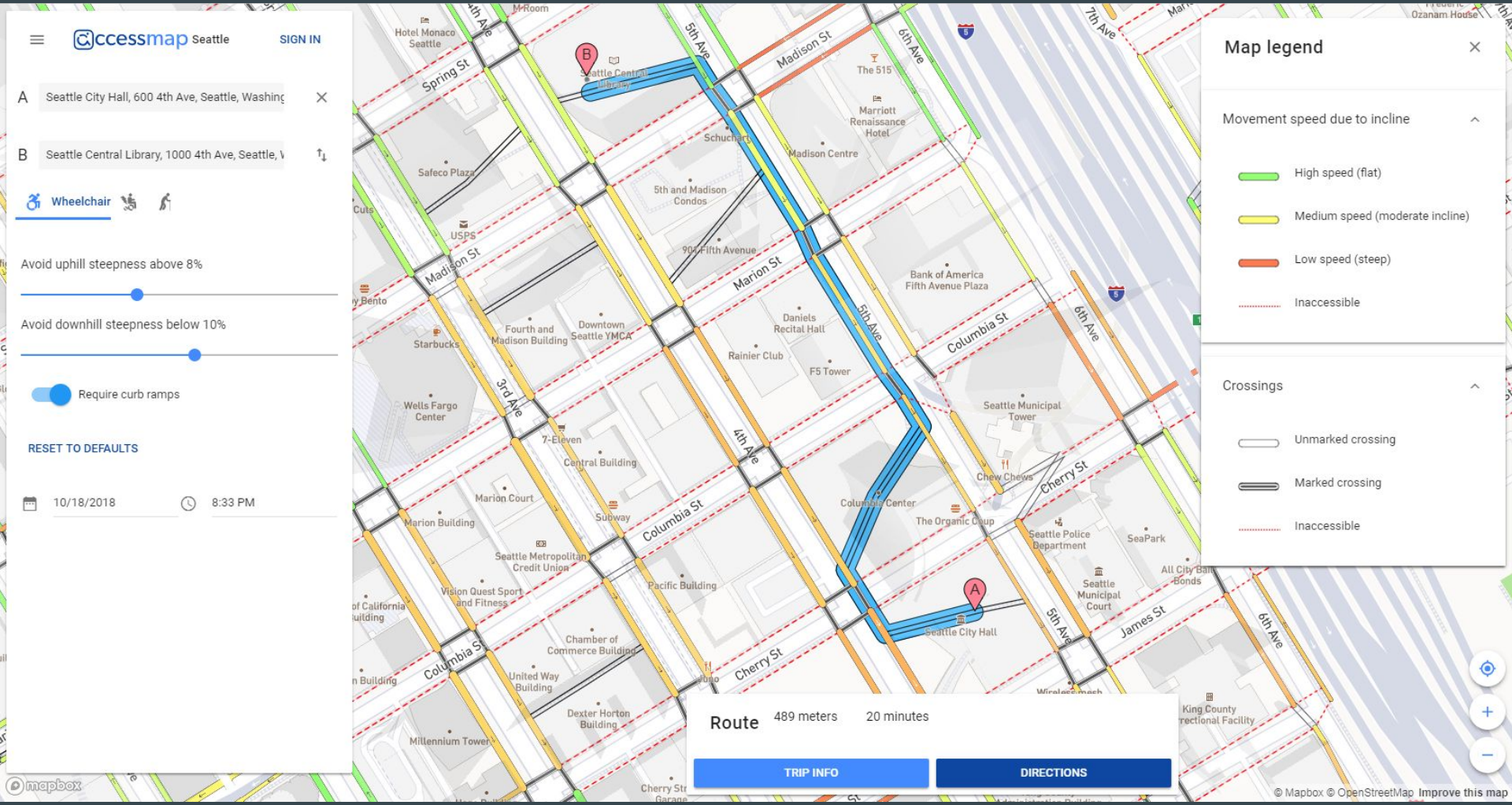
- Tree branches
- Building construction

Long-term obstacles:

- Lack of curb cuts
- Broken, uneven, and/or overgrown sidewalks

Permanent obstacles:

- Steep hills (both uphill and downhill)

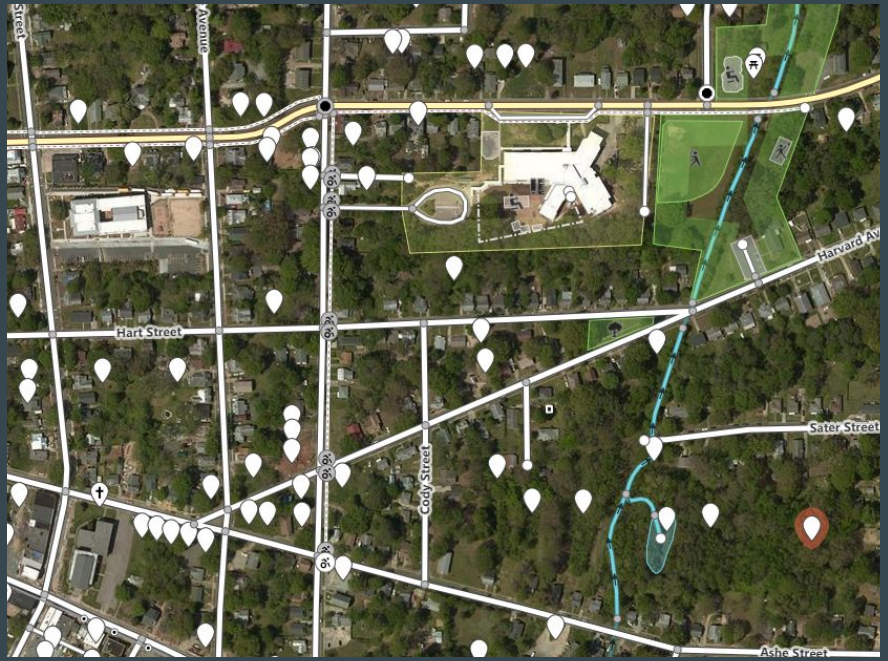

Accessmap Seattle
SIGN IN
A
Seattle City Hall, 600 4th Ave, Seattle, Washing
B
Seattle Central Library, 1000 4th Ave, Seattle, W
Wheelchair
Avoid uphill steepness above 8%
Avoid downhill steepness below 10%
Require curb ramps
RESET TO DEFAULTS
10/18/2018
8:33 PM
Map legend
Movement speed due to incline
High speed (flat)
Medium speed (moderate incline)
Low speed (steep)
Inaccessible
Crossings
Unmarked crossing
Marked crossing
Inaccessible
Route
489 meters
20 minutes
TRIP INFO
DIRECTIONS
Spring St
Madison St
Marion St
Columbia St
Cherry St
James St
3rd Ave
4th Ave
5th Ave
6th Ave
7th Ave
Seattle City Hall
Seattle Central Library
Hotel Monaco Seattle
The 515
Marriott Renaissance Hotel
Schuchart
Madison Centre
Safeco Plaza
5th and Madison Condos
USPS
900 Fifth Avenue
Bank of America Fifth Avenue Plaza
Daniels Recital Hall
Rainier Club
F5 Tower
Starbucks
Fourth and Madison Building
Downtown Seattle YMCA
Wells Fargo Center
7-Eleven
Central Building
Marion Court
Marion Building
Subway
Seattle Metropolitan Credit Union
Vision Quest Sport and Fitness
Pacific Building
Chamber of Commerce Building
United Way Building
Dexter Horton Building
Millennium Tower
Seattle Municipal Tower
Chew Chews
Columbia Center
The Organic Coup
Seattle Police Department
SeaPark
Seattle Municipal Court
All City Bail Bonds
King County Correctional Facility
Ozanam House
mapbox
© Mapbox © OpenStreetMap Improve this map

Bringing AccessMap to NC

- OpenStreetMap is currently lacking sidewalk data for North Carolina
- We need to add this data to OSM

How?

- Import GIS sidewalk data from city open data sources
- Host mapathons to create additional sidewalk data



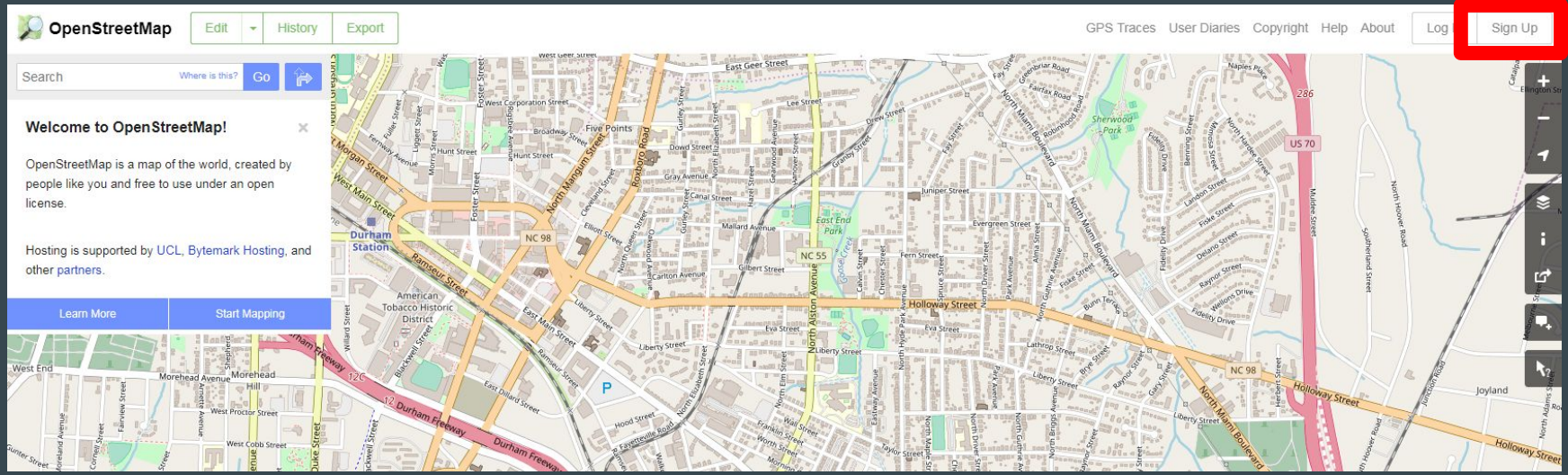
Mapathons

- No coding or mapping knowledge required!
- Raise awareness of this issue while crowd-sourcing the solution
- Increase exposure to open-source mapping

Let’s get mapping!

OpenStreetMap

- Go to https://openstreetmap.org
- Click the “Sign Up” button in the upper right corner



Create an OpenStreetMap account

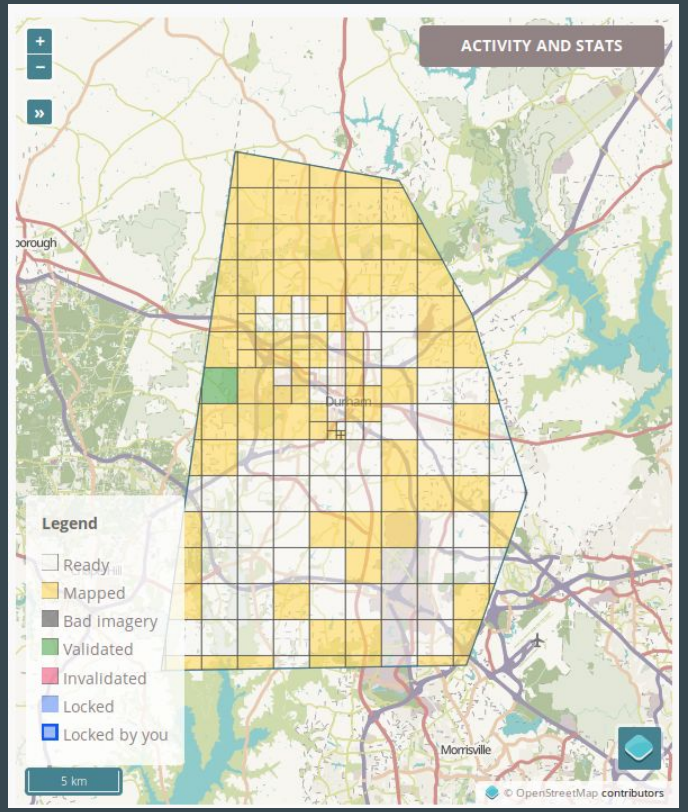
- Enter your email address
- Select a username and password
- Agreement page: select “Rest of the world”
- Please check the box at the bottom of this page to consider your contributions to OpenStreetMap to be public domain
  - This ensures that the mapping data you add will be open and available to everyone
- Go to your email and click on the confirmation link
- Click on “Start Mapping”

iD Editor mapping tutorial

- Once you've confirmed your email address, select "Start the Walkthrough"
- Let's all work through this together!

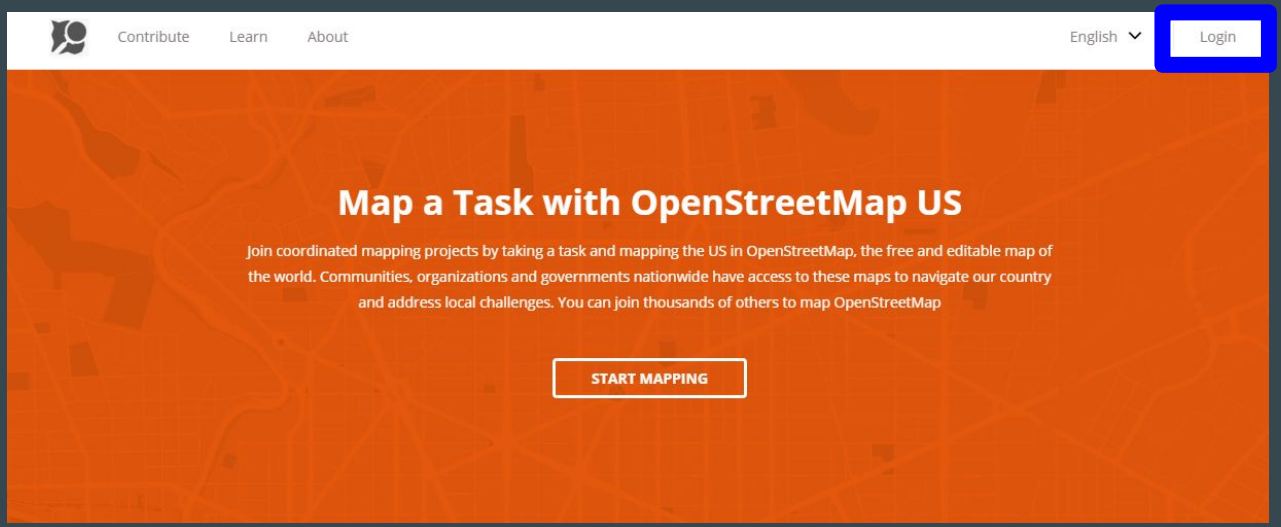
Tasking Manager

- Used for collaborative mapping efforts
- Divides up the area to be mapped into small squares
- Tracks project progress and prevents duplicate work



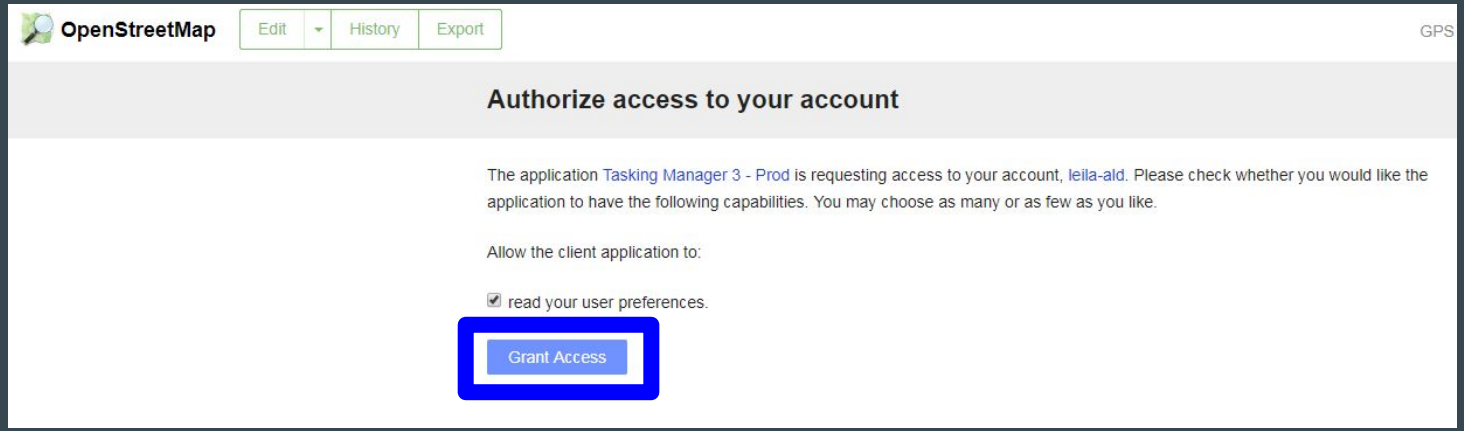
Login to US HOT Tasking Manager

- Go to https://tasks.openstreetmap.us/
- In the upper right corner, click “Login”



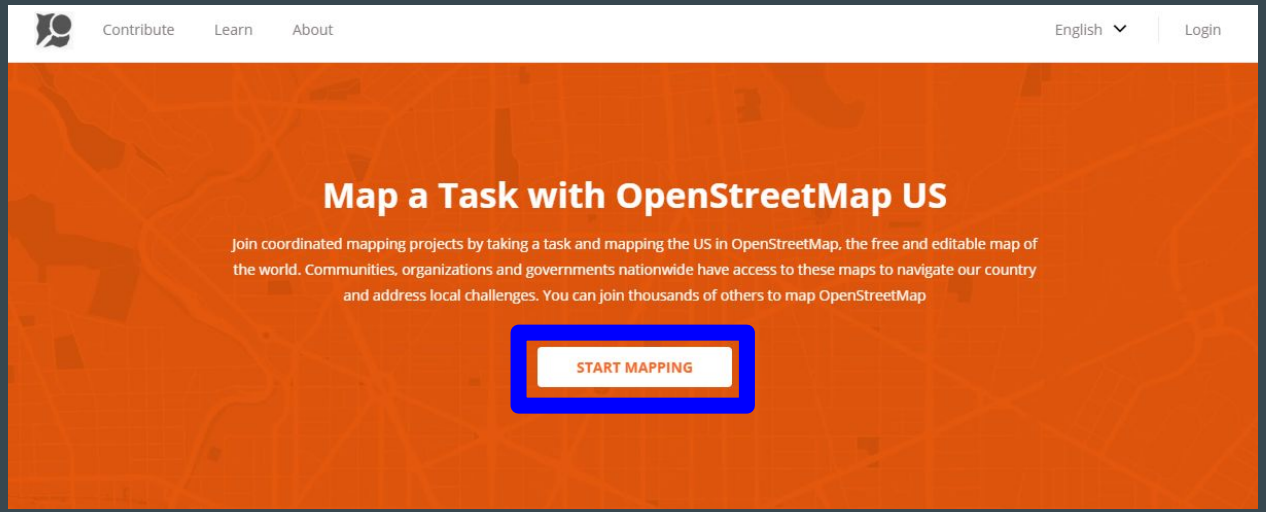
Authorize your OpenStreetMap account

- On the authorize screen, click “Grant Access” to connect to your OpenStreetMap account



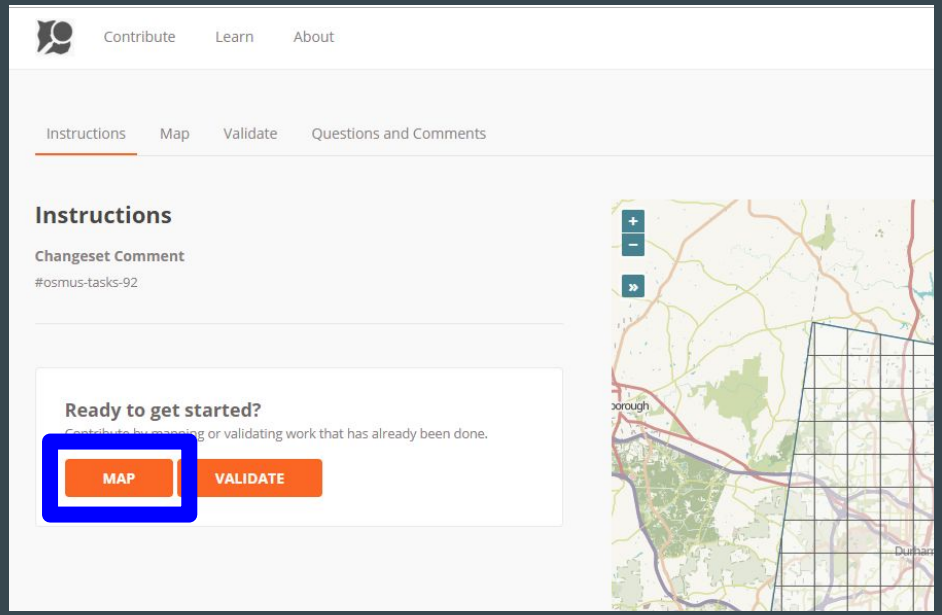
Start mapping

- Navigate back to the main page
- Click “Start Mapping”
- Go to https://tasks.openstreetmap.us/project/117



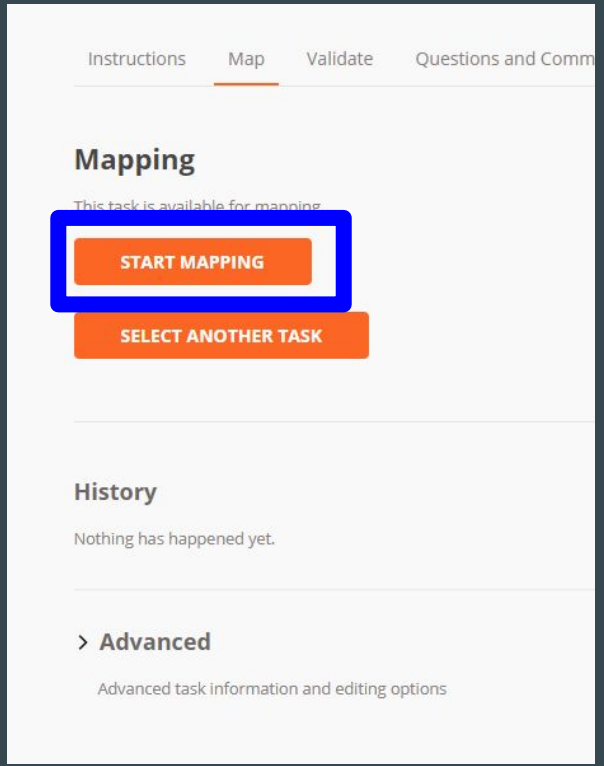
Project map

- The map shows the current project area with color coded squares indicating progress
- Locked squares are currently being worked on
- Select “Map” to get started



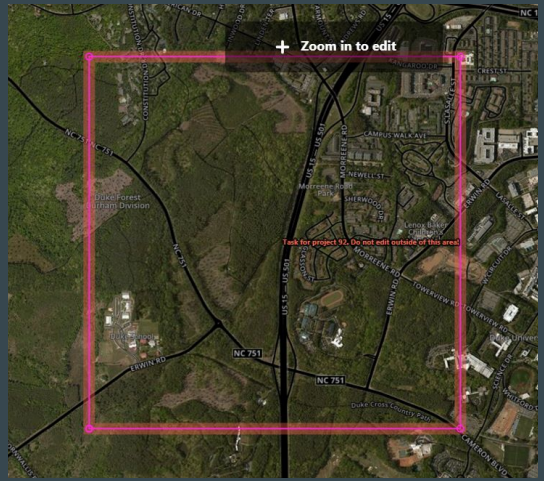
NC Clear Path - Raleigh project

- Select an area to map
  - click on an available square on the map or
  - click “Select a random task”
- Click “Start Mapping” to lock this area for editing



Select an area to map

- Click “Start Editor”
- The map editor will open in a new window with a pink square overlay
- This square indicates the mapping area that you have checked out
- Don’t map outside of this square!

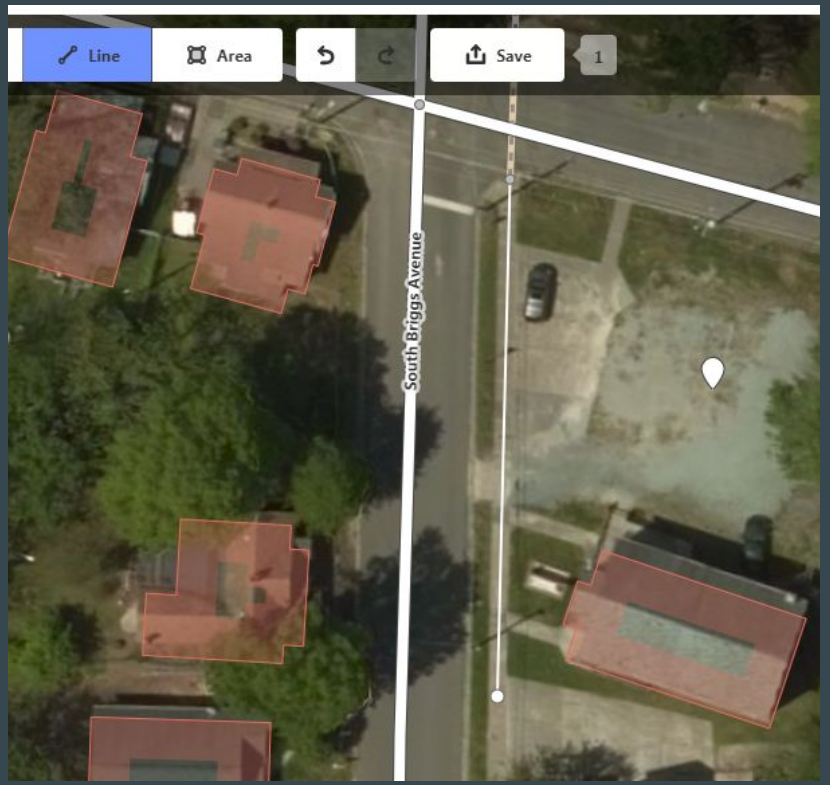


Mapping Sidewalks

Sidewalk elements

- Trace sidewalks using the Line tool
- Select “Sidewalk”

- *Optional:* tag the sidewalk surface (i.e., concrete, gravel, grass)
- *Optional:* tag the smoothness



Smoothness guidelines

Good: Racing bike

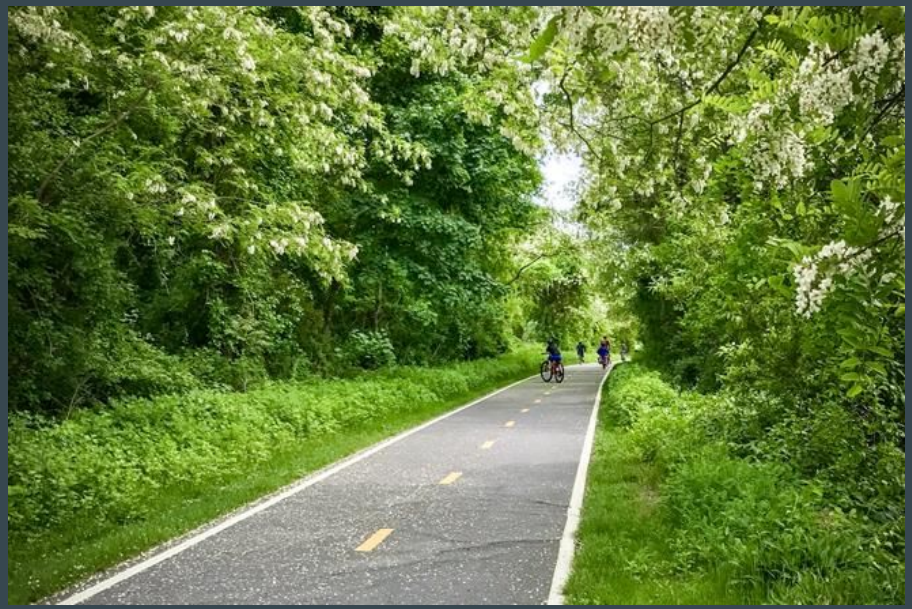
Intermediate: Wheelchair

Bad: Normal cars

Very bad: Light-duty off-road vehicles

Footpaths

- For any walkways not adjacent to a roadway, use “Footpath” instead of “Sidewalk”



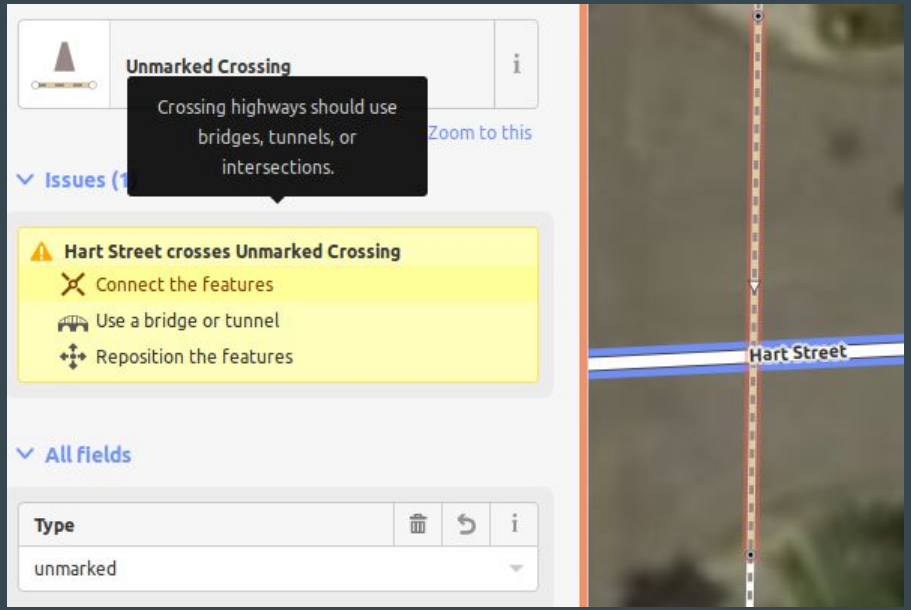
Street crossings

- Draw sidewalks up to where they intersect the road
- Using the Line tool, draw a new line across the road for the pedestrian crossing
- Select “Street Crossing”
- Select the type of crossing:
  - For any type of marked crossing, use “marked”.
  - For a crossing that is not marked at all, use “unmarked”.

Street crossings: “Marked” examples

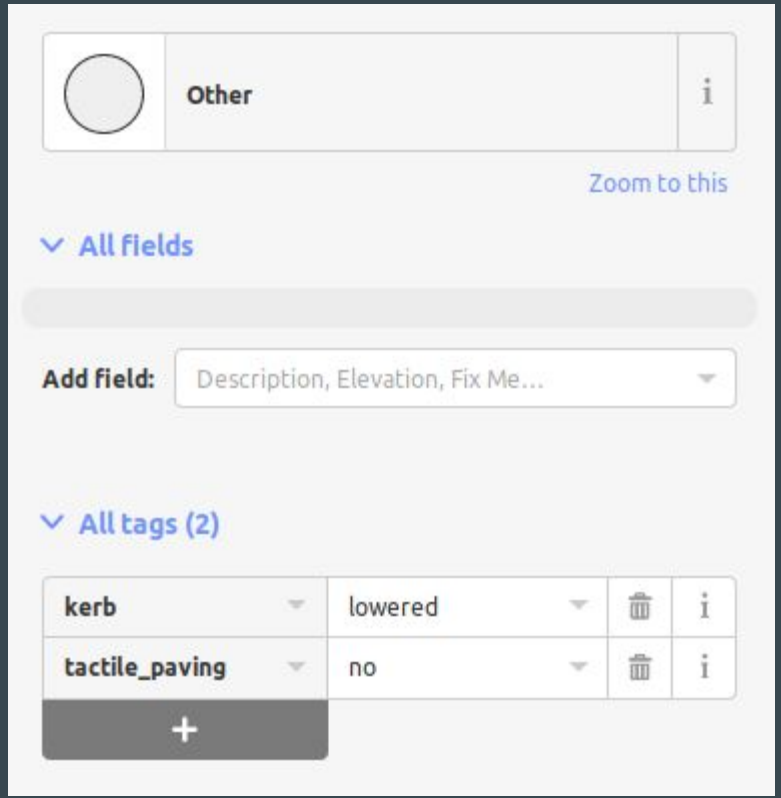
Street crossings: Connect to streets

- All street crossings should connect to the streets they cross
  - Create a node at the street as you draw the crossing;
  - Split the crossing at the street after you've drawn the crossing; or
  - Select "Connect the features" on the warning that pops up on the crossing



Curbs

- Curbs are nodes where a sidewalk and crossing meet
- In OSM, called “kerb”
- Feature type is “Other”
  - Not “Kerb” type



Curb types

Raised: > 1”

Lowered: ~ 1”

Flush: ~ 0”

Curb: Tactile paving

- Optionally, tag “Tactile Paving”
- Textured surfaces that indicate lowered curbs at street crossings
- Helpful for providing tactile sensation as a warning to blind users

Mapping obstructions

- Add a node to the sidewalk
- Tag as “barrier=*”
- Add “wheelchair=no” attribute
- Add “foot=yes” attribute

Don’t use Google Maps street view!!

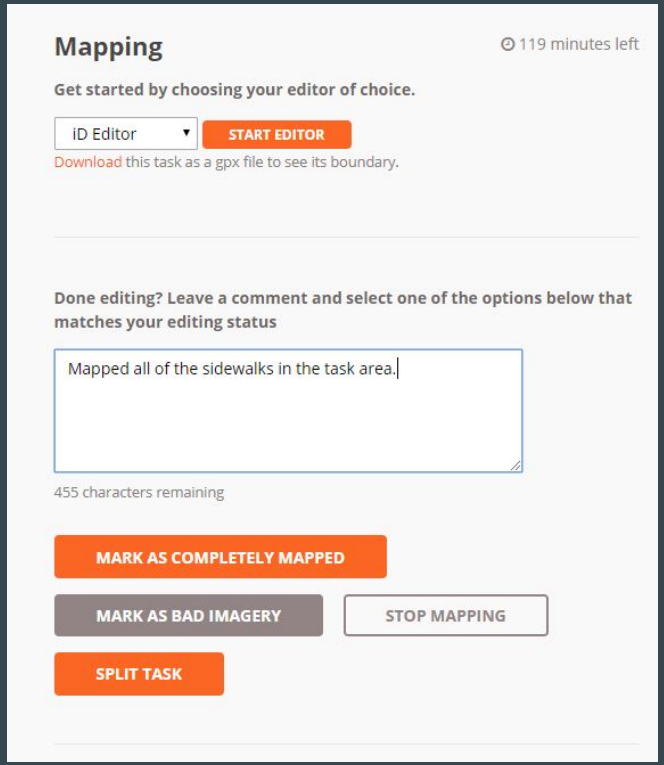
- Although it’s tempting, don’t do it!
- All of the data in Google Maps is copyrighted
- It’s **not** free, open data
- That’s why we have OSM!

Save in iD Editor

- To save your changes, click on “Save” along the top of the screen
- Add Changeset Comments
  - Include a summary of the work you did
- Include hashtags:
  - #osmus-tasks-117
  - #nc-clear-path
  - #mapathon
- Select “Sources: aerial imagery”
- Optional: Click the check box to request that someone review your edits
- Upload!

Close out of Tasking Manager

- After you've finished editing the map and you've saved your edits, go back to the HOT Tasking Manager screen
- Add a note to describe your work
- If you finished mapping the entire task area, click "Mark as completely mapped"
- Otherwise, click "Stop mapping" so that someone else can pick this up later



Thank you!

Contact info:

leila.alderman@gmail.com

https://nc-clear-path.github.io/

Open NC Slack channel

Additional Resources

- http://learnosm.org
  - great beginner's guide
- https://labs.mapbox.com/mapping/
  - OSM mapping guides, from beginner to advanced
- https://wiki.openstreetmap.org/wiki/Main_Page
  - OSM's wiki, which has lots of great information
  - It may not be the best resource for how to map sidewalks, though.
- https://osmus-slack.herokuapp.com/
  - OSM US-based Slack chat
  - Amazing resource for asking questions!
- http://vespucci.io/
  - Vespucci is a mobile app that lets you map on the go