

# Training for OSM Turn Restrictions

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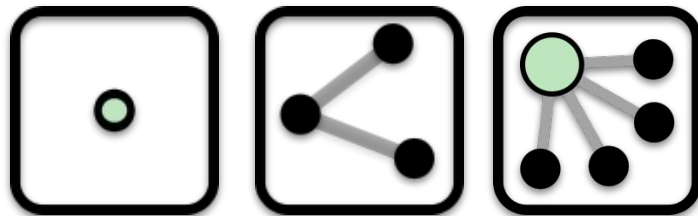
# Agenda

- **Objective**
- **Turn Restrictions**
  - **Turn Restriction Signs**
  - **Turn Restrictions Represented as a Relation**
  - **Mapping Turn Restriction in iD Editor**

# Objective

# Objective

Gain a understanding of how to read and edit turn restrictions using OSM iD Editor.



# Turn Restrictions

# Turn Restriction OSM Wiki

- Turn Restriction are different than using a Turn Lane Tag
- A turn restriction at a junction



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## Relation:restriction

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A **turn restriction** at a junction is represented by a **relation** that has a set of **tags** describing the type of turn restriction. This turn restriction relation is not limited to turns, but can also be used for instance if you are only allowed to go straight on. A bus gate is another example of a use of the turn restriction relation as an alternative to **barrier=bus\_trap**. At the **junction** passage from one side to the other is restricted (except for buses of course).

There are a number of important things that need to be taken into account when creating a turn restriction.

- There may be several turn restrictions at a junction, represented by separate relations.

 **restriction**

v · d · e



### Description

Used for a set of tags and members to represent a turn





# Turn Restriction Signs

# Turn Restriction Signs






Tag Type			iD Editor Icon	Sign Example
No Right Turn	<b>type</b>	restriction		
	<b>restriction</b>	no_right_turn		
No Left Turn	<b>type</b>	restriction		
	<b>restriction</b>	no_left_turn		
No Straight On	<b>type</b>	restriction		
	<b>restriction</b>	no_straight_on		
No U-Turn	<b>type</b>	restriction		
	<b>restriction</b>	no_u_turn		



# Turn Restriction Signs **Rare**

Tag Type			iD Editor Icon	Sign Example
No Entry	<b>type</b>	restriction		
	<b>restriction</b>	no_entry		
No Exit	<b>type</b>	restriction		
	<b>restriction</b>	no_exit		





# Turn Restriction Signs

Tag Type			iD Editor Icon	Sign Example
Only Right Turn	<b>type</b>	restriction		
	<b>restriction</b>	only_right_turn		
Only Left Turn	<b>type</b>	restriction		
	<b>restriction</b>	only_left_turn		
Only Straight On	<b>type</b>	restriction		
	<b>restriction</b>	only_straight_on		
U-Turn Only	<b>type</b>	restriction		
	<b>restriction</b>	only_u_turn		

# Turn Restrictions Represented as a Relation

# Turn Restriction in OSM

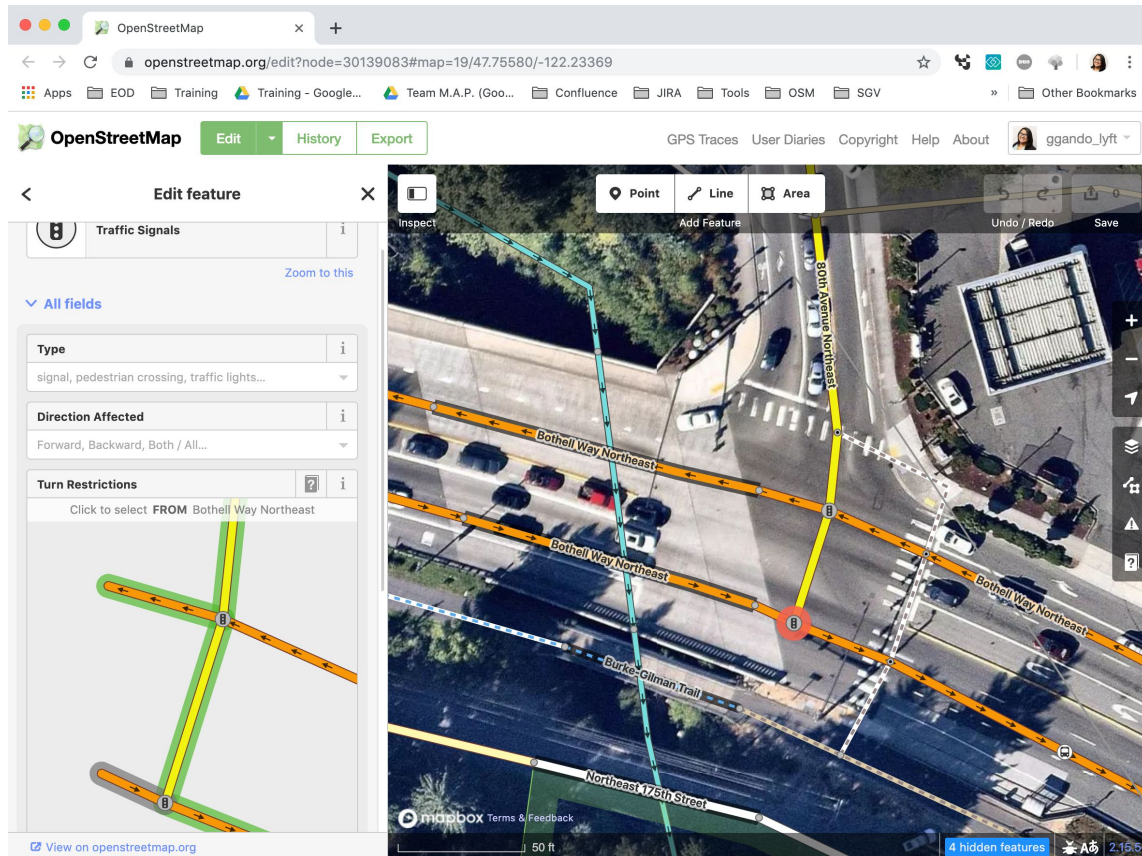
- A relation in OSM is a group of elements
- For a turn restriction it is a group of three elements
  - From
  - Via
  - To
- By using iD Editor to edit turn restrictions, this grouping of three elements will be done automatically once a turn restriction is displayed

Role	Element Type	Description
From	Way 	A way from where the restriction starts (e.g., no right turn from here).
Via	Way  Or Node 	It is important to know that the via point of a turn restriction can be either a via way or a via node. The via member connects the beginning and end ways that represent the specified maneuver.
To	Way 	The end point of the restriction.

# Mapping Turn Restrictions in iD Editor

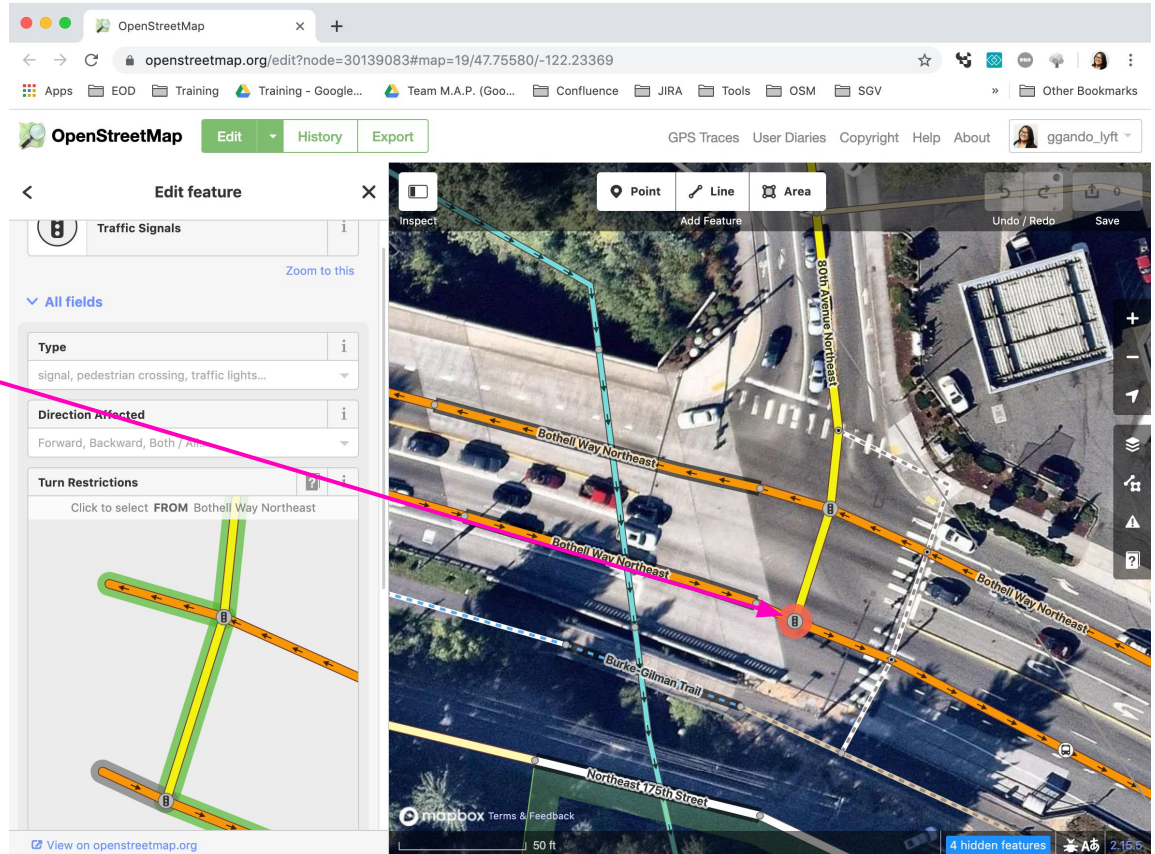
# iD Editor

- Use iD Editor to analyze and edit turn restrictions
  - Easy to visualize
  - Can visually edit
- Use any open source imagery to witness paint markings or signs
- Be aware of local laws



# iD Editor

1. Click on the intersection you want to analyze in the map

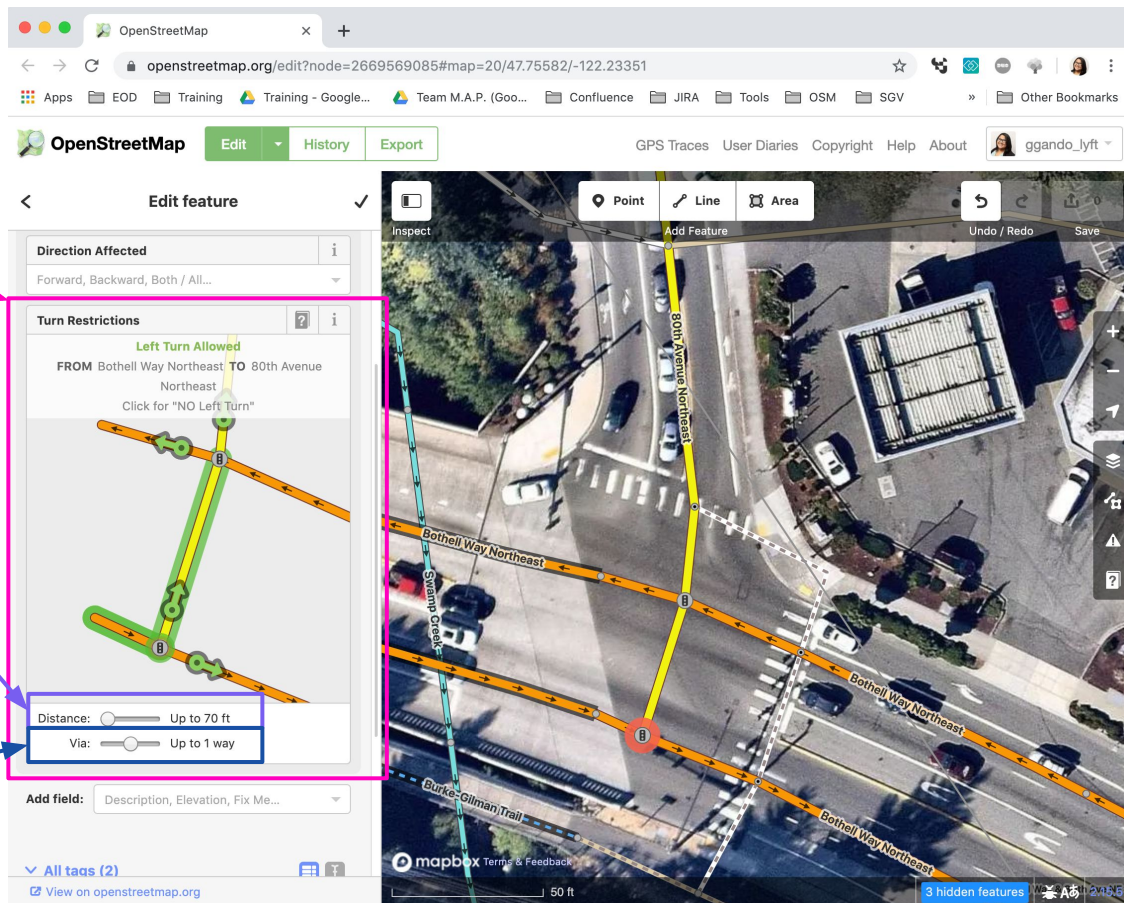




# iD Editor

2. On the left side panel scroll down to see the Turn Restriction section

- Be able to see all turns possible from the initial way
- If not all turn restrictions are visible change the **Distance**
- If a turn restriction is more than 1 element away change the **Via**





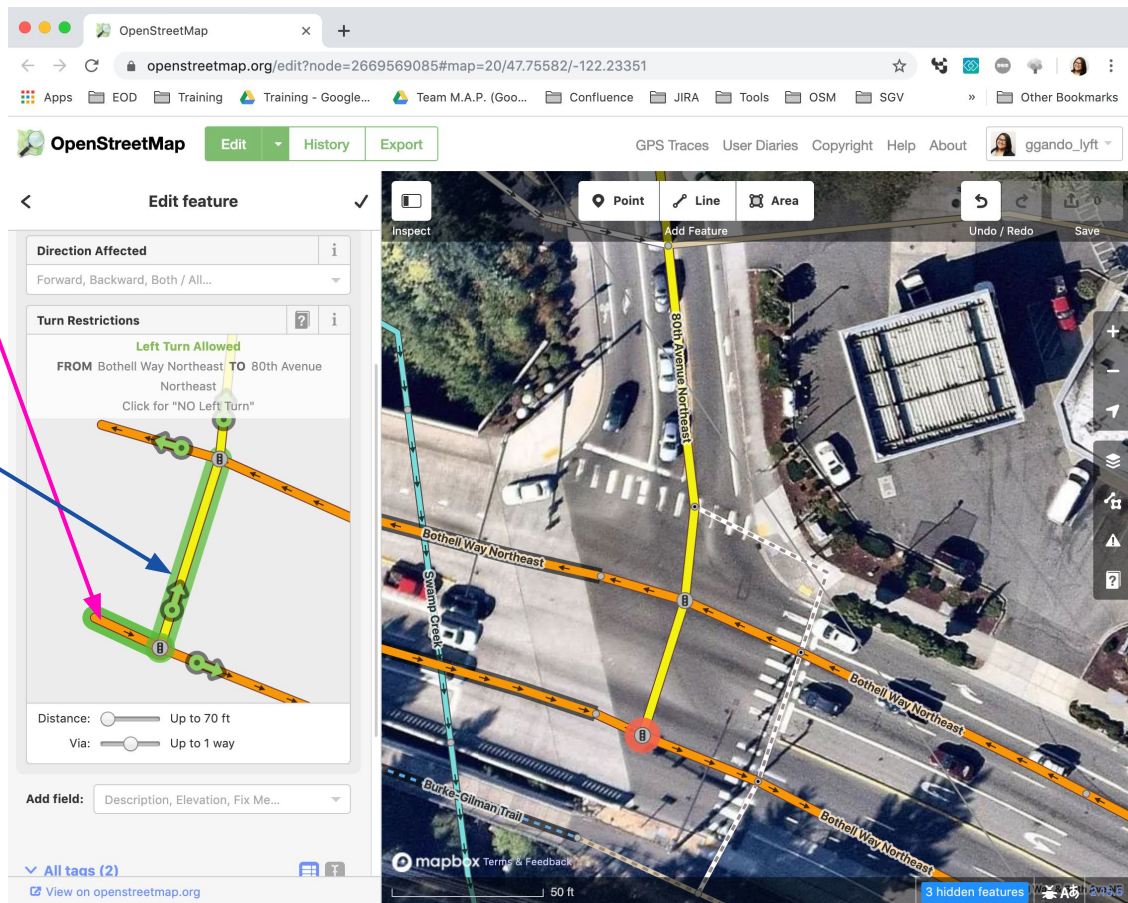
# iD Editor

3. Click on Way that Approaches an intersection

- Be able to see all turns possible from the initial way

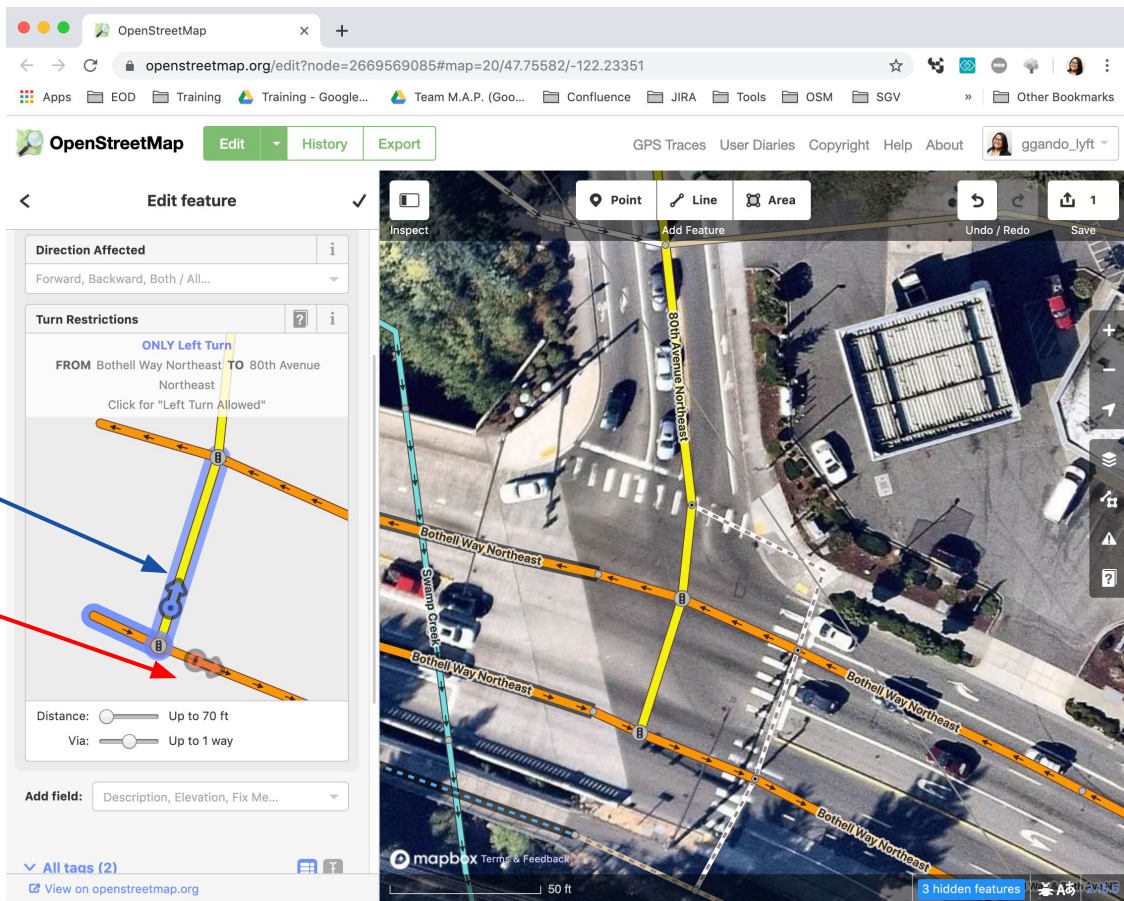
4. On the way where the turn would complete click on turn restriction

- By clicking this turn you will be exposed to the different kinds of turn restrictions possible



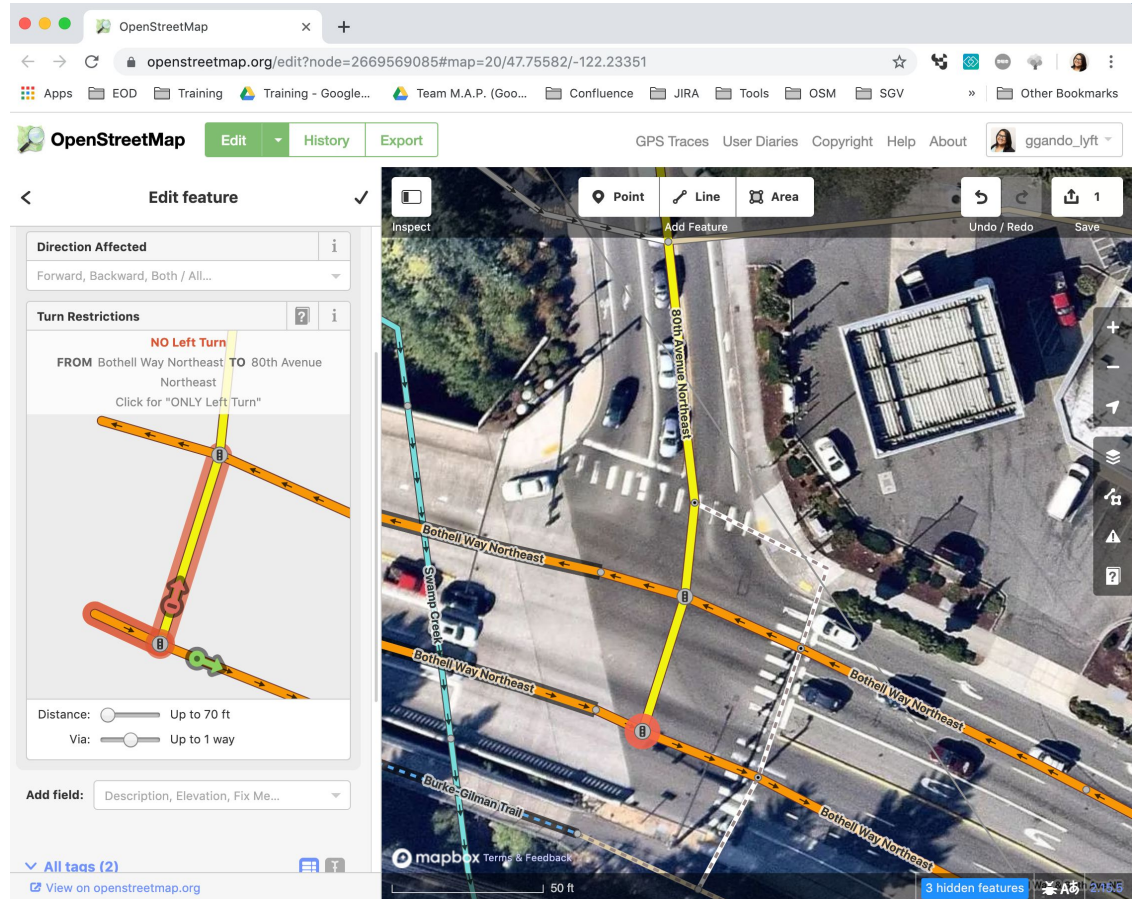
# iD Editor

5. Keep clicking on the way that would end the turn to see different turn restriction possibilities
6. Clicked on this way to see a **ONLY Left Turn**
  - Other turns will be updated accordingly



# iD Editor

7. Clicked on this way to see a **NO Left Turn**
- Way will turn red



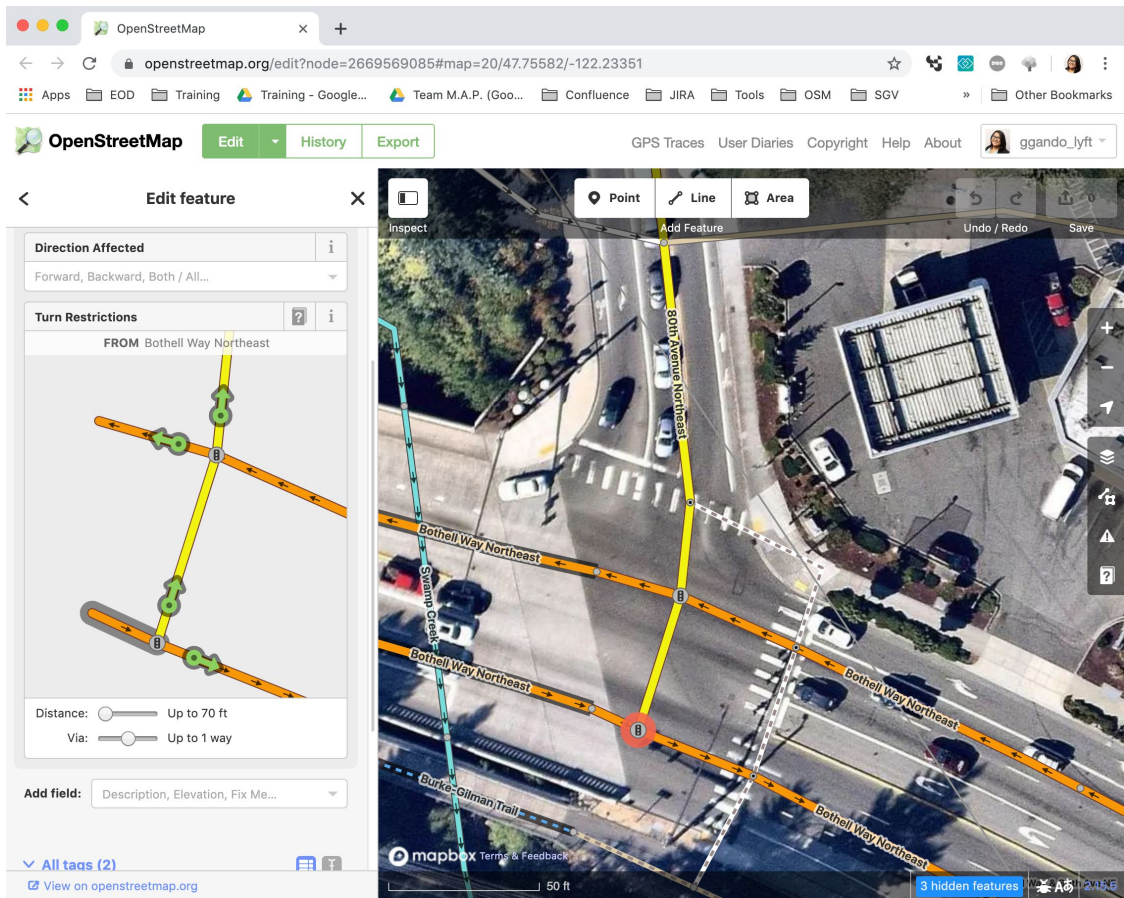


# iD Editor

8. Clicked on this way again and turns to a green arrow
- Back to the original state

## Things to Note

- Can click on way again to cycle through different turn restrictions
- If there is already turn restrictions mapped arrows will not be green when you initially look at the map





**Thank you**

June 1, 2020