- Slides for article

Address and street name grids in the Philippines

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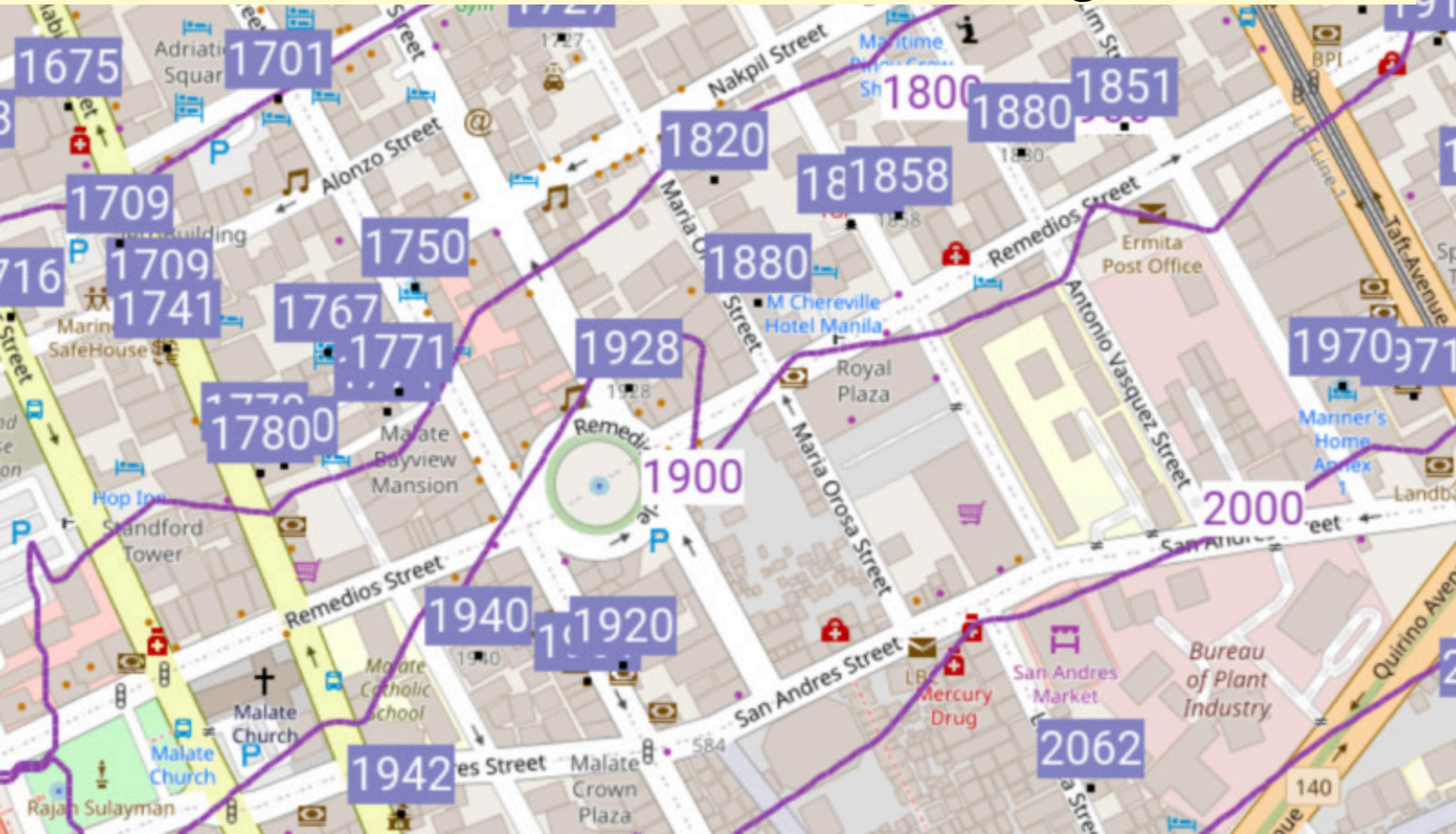
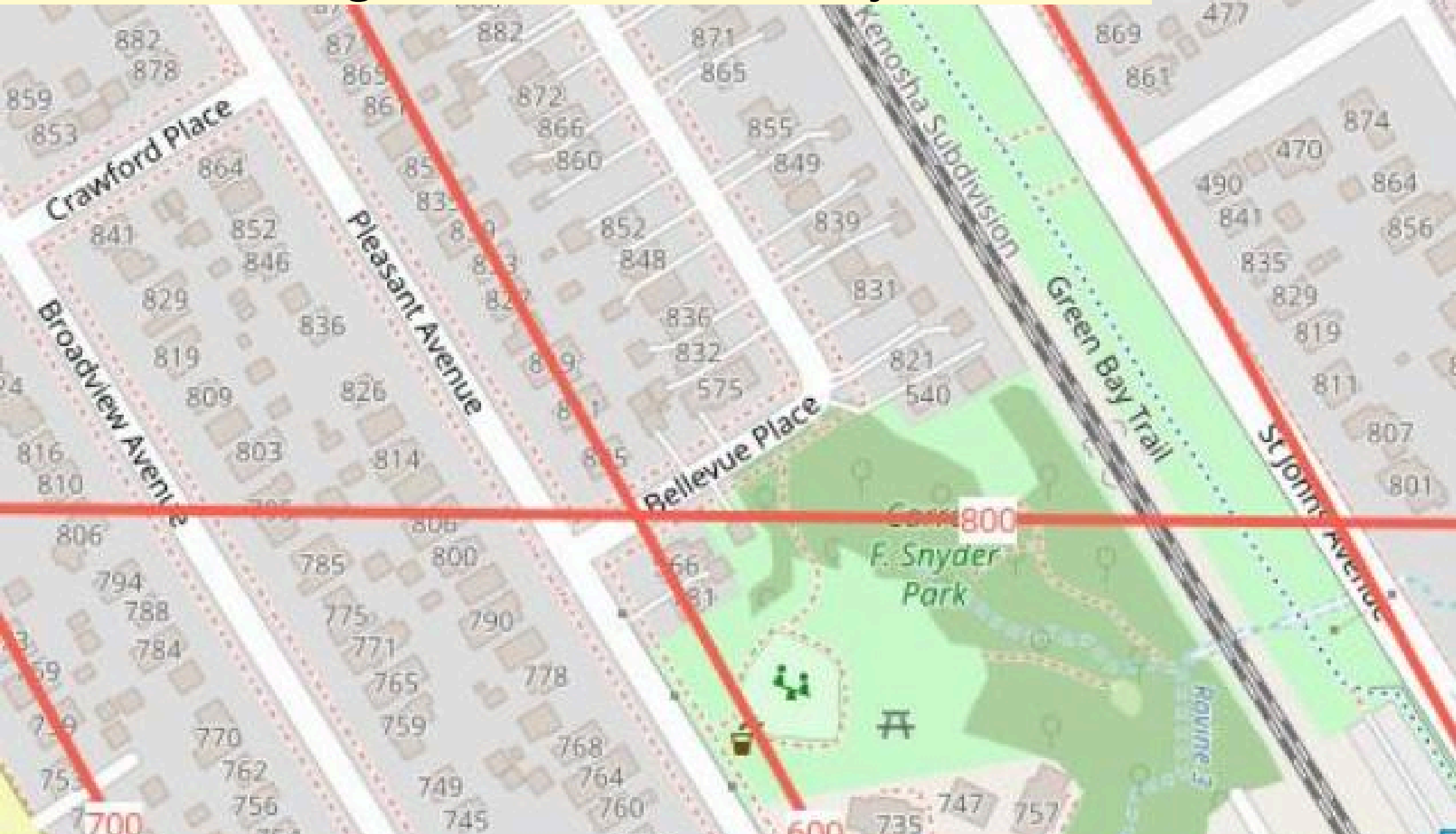
- Malate address "contours".
- Alas, OSM address point data density low here.
- What's that northward aberration at 1928 Jorge Bocobo St.?



- Highland Park, Illinois, USA.
- OSM address point data density complete.
- 100-number guidelines, as in the city ordinance.



- Yes, there are Philippines ordinances,

Ordinance 884, November 14, **1950**: AN ORDINANCE PROVIDING FOR THE NUMBERING OF HOUSES AND OTHER BUILDINGS IN QUEZON CITY

> …Beginning from the most southerly and westerly point of each street, to its other end, numbers shall be assigned in **simple increasing arithmetical progressions**; those on the right side being even numbers and those on the left odd numbers…

- Alas, just simple one-dimensional numbering. Nothing about two-dimensional address grids.

- (Yes, both countries have "rules regarding the placing of number plates". What are numbers worth if you don't hang them up to see? However we're only talking about number *values* in this presentation today.)
- In that same year, 1950, in Highland Park, Illinois, USA, they said "enough was enough":

1919 Code, Sec. 1436, Ord. 540, passed 7/10/**50**

> …obviating the **confusion** now obtaining in the City of Highland Park occasioned by **lack of uniformity** of numbering in the various streets of the City, a **new and permanent** system of street numbering is hereby ordained and established.

- Here they tie their grid onto a US Public Land Survey System (PLSS) Principal Meridian

> There shall be and is hereby further established an Easterly Base from which shall be a straight line, the southerly limits of which shall be from a point in the center line of County Line Road projected, or the South Base Line hereinbefore established. This said point in the South Base Line shall be 3,200 feet east of the West Line of **Section 31, Township 43 North, Range 13, East of the Third Principal Meridian**. This Easterly Base Line shall extend **northwesterly** in a straight line to a point…

- (The unique oblique northwesterly X axis follows the lake shore and railroad tracks.)

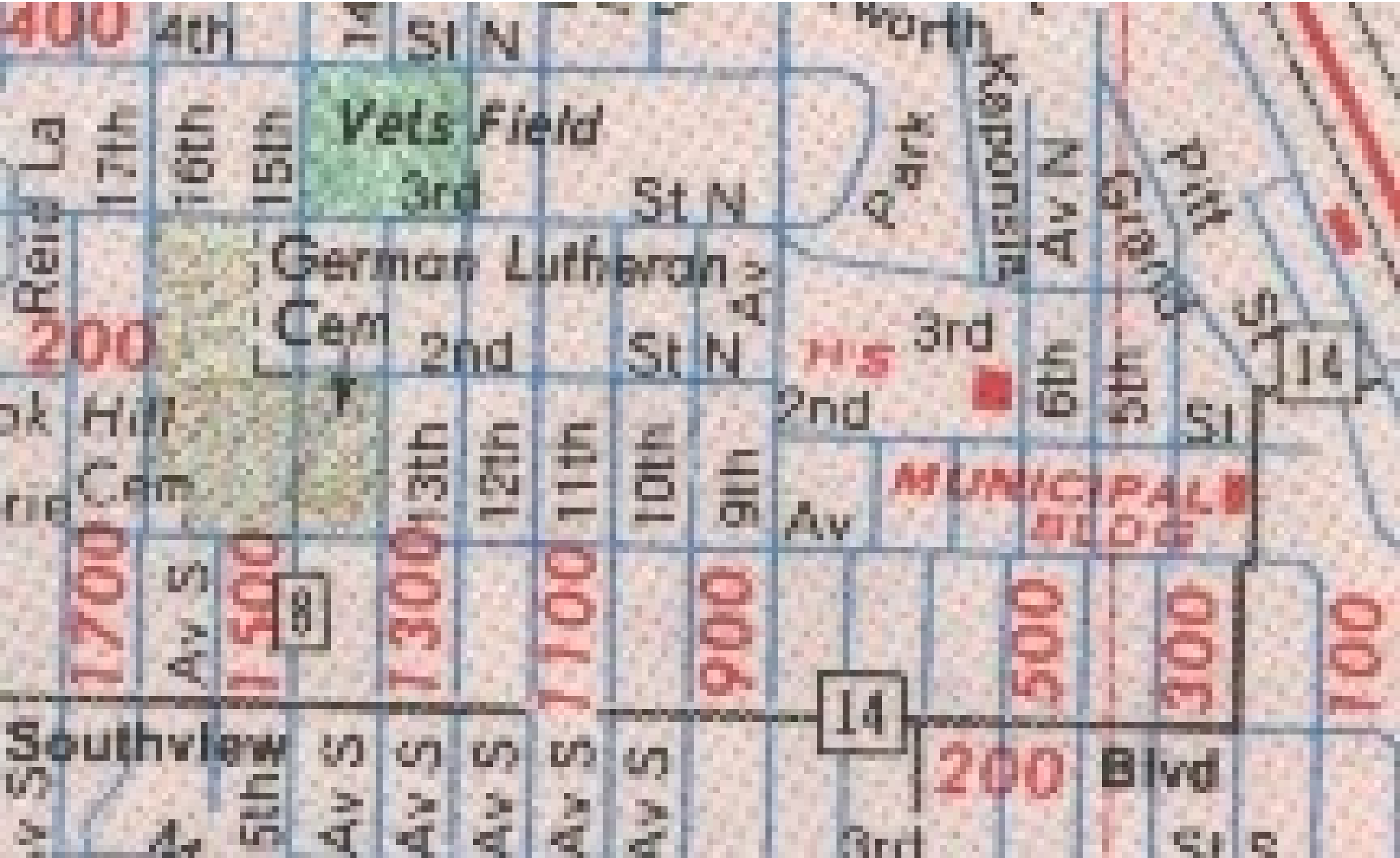
- Those 100 number "contour" lines I overlay throughout my presentation: so useful, they even are part of the law:

> (C) Lines shall thereupon be extended parallel to said South Base Line from east to west at intervals of 660 feet, and lines parallel to said Easterly Base Line shall be drawn from the south limits of the City to the north limits of the City at intervals of 660 feet, measured at right angles in each case to the base line. (Ord. 540, passed 7/10/50)
>
> …assigning 100 numbers to each 660 feet interval established by the parallel lines and at the rate of one number approximately every 13.2 feet, right angle measurement.

City of Highland Park, Illinois
Fire District Map

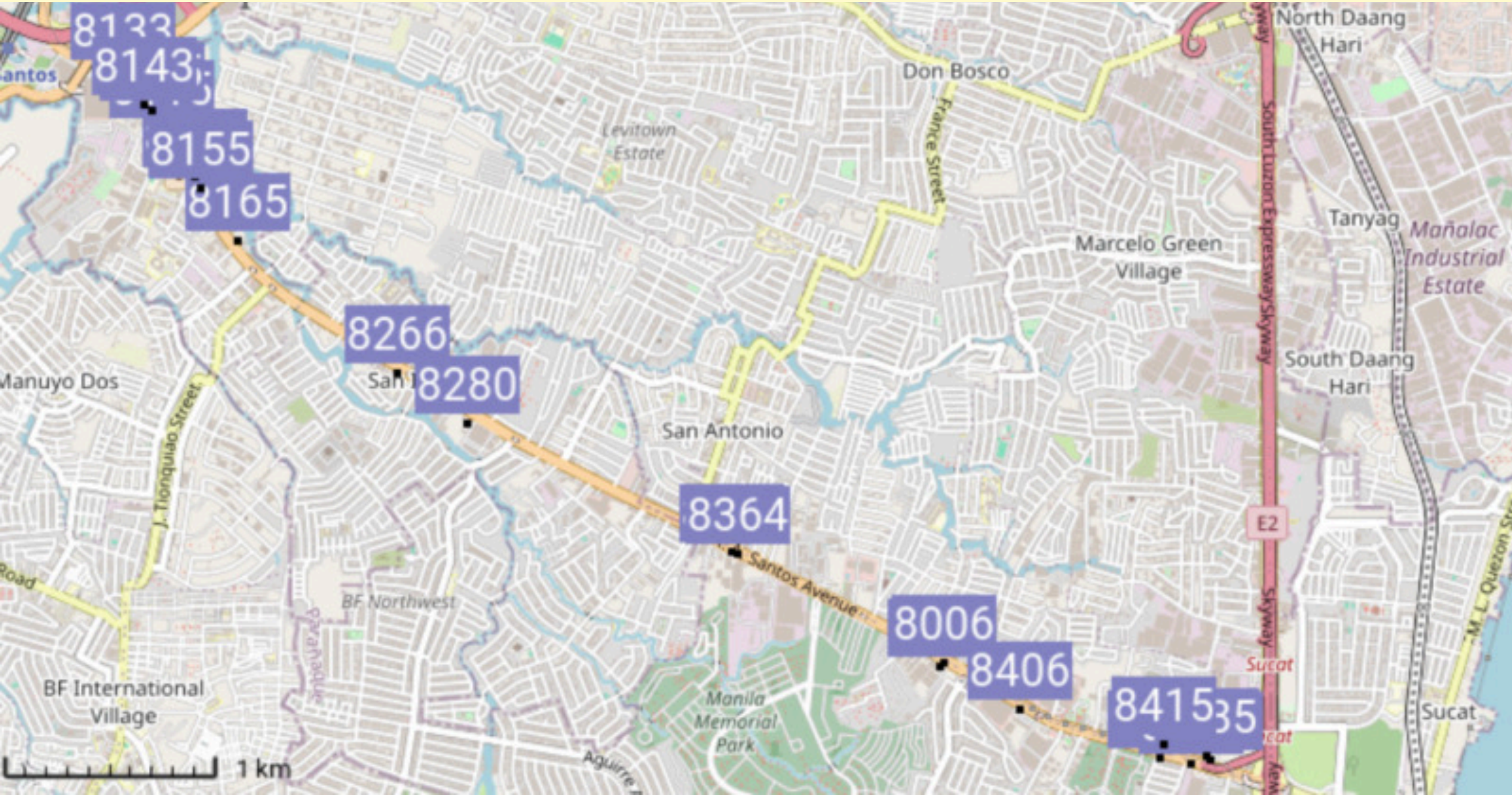
- Address grid *lines* on paper wall map.
- (Red 34xx are just fire district numbers.)

- S. St. Paul, Minnesota, USA paper map.
- Address grid values in red. 9th Ave. = 900…

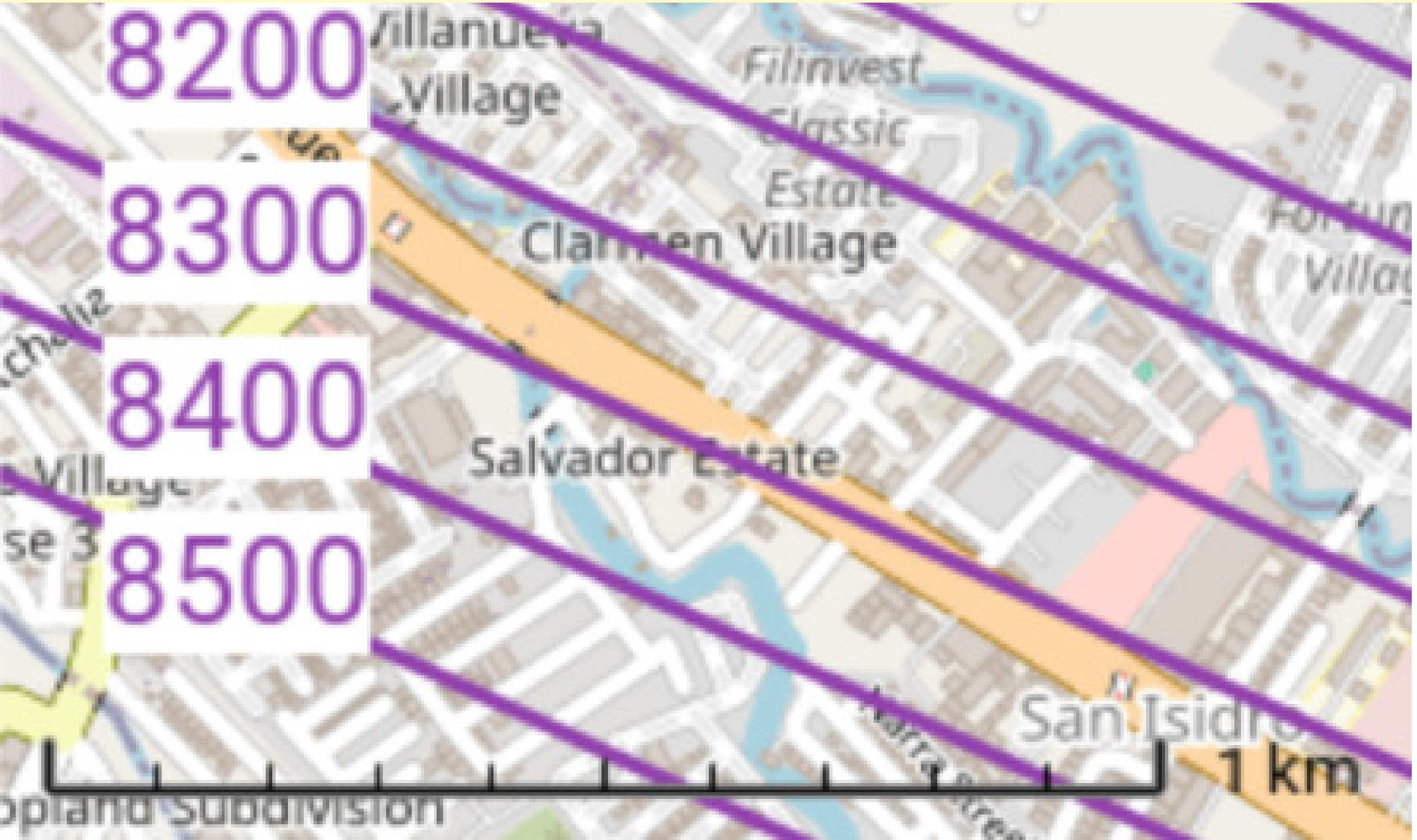


- Highland Park, Illinois, USA paper map.
- Address grid *ticks*.
- Oblique X axis: rotated ticks 0, 100, 300.

- A. Santos Ave., Parañaque (1)
- Why so many kilometers long, but house numbers only advance from 81xx to 84xx?
- And why is 8006 out of order?



- A. Santos Ave., Parañaque (2)
- Could it be the underlying grid cuts it at such an oblique angle? Something like:

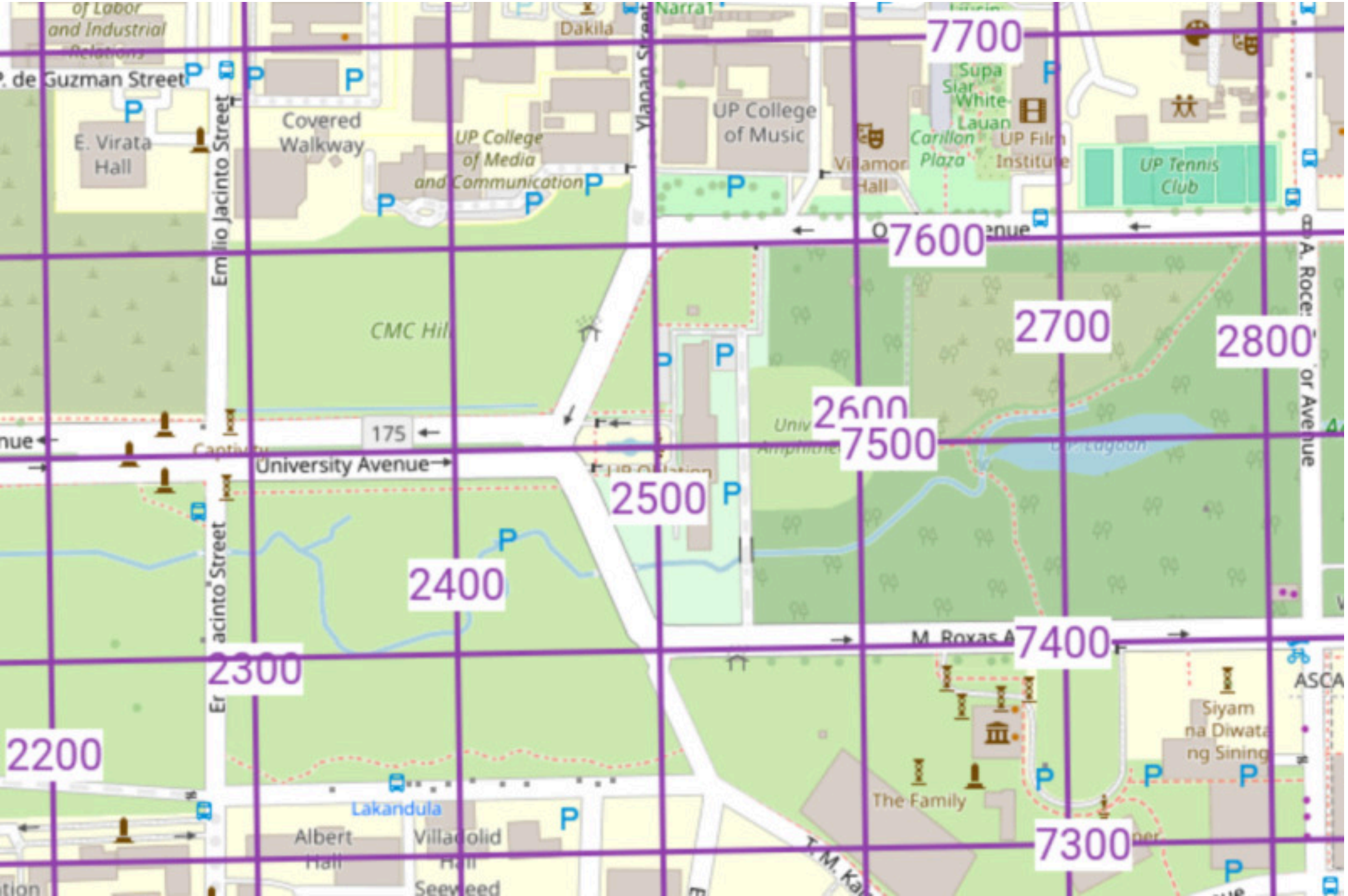


- Sampaloc, Manila address grid (current).
- We can start building a table,

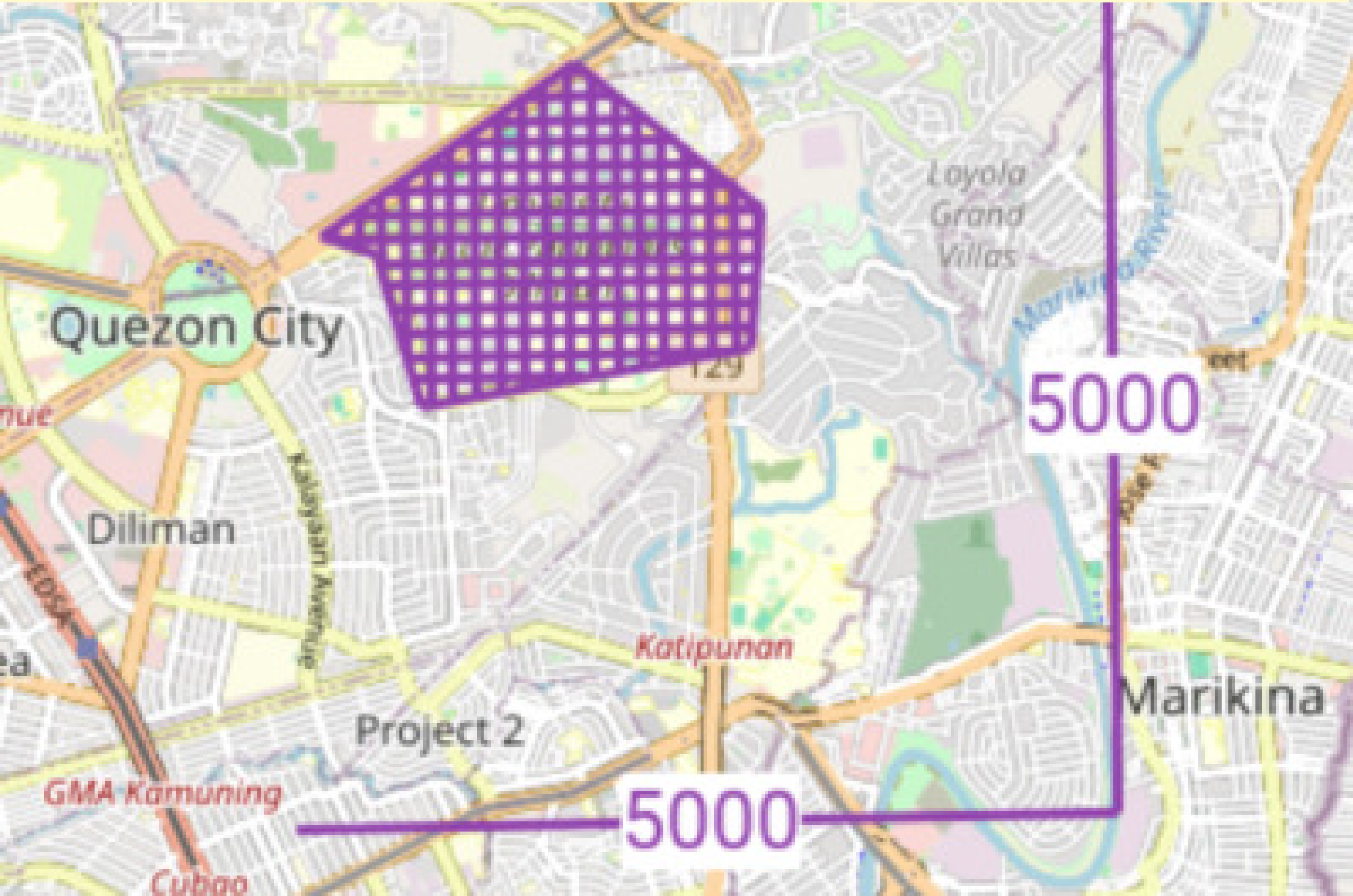
900	España Blvd
1000	P. Florentino St
1100	Piy Margal St

etc.

- UP Diliman(1): No addresses yet, so we gave them a grid!
- Origin: (2500, 7500) (Oblation Statue.)

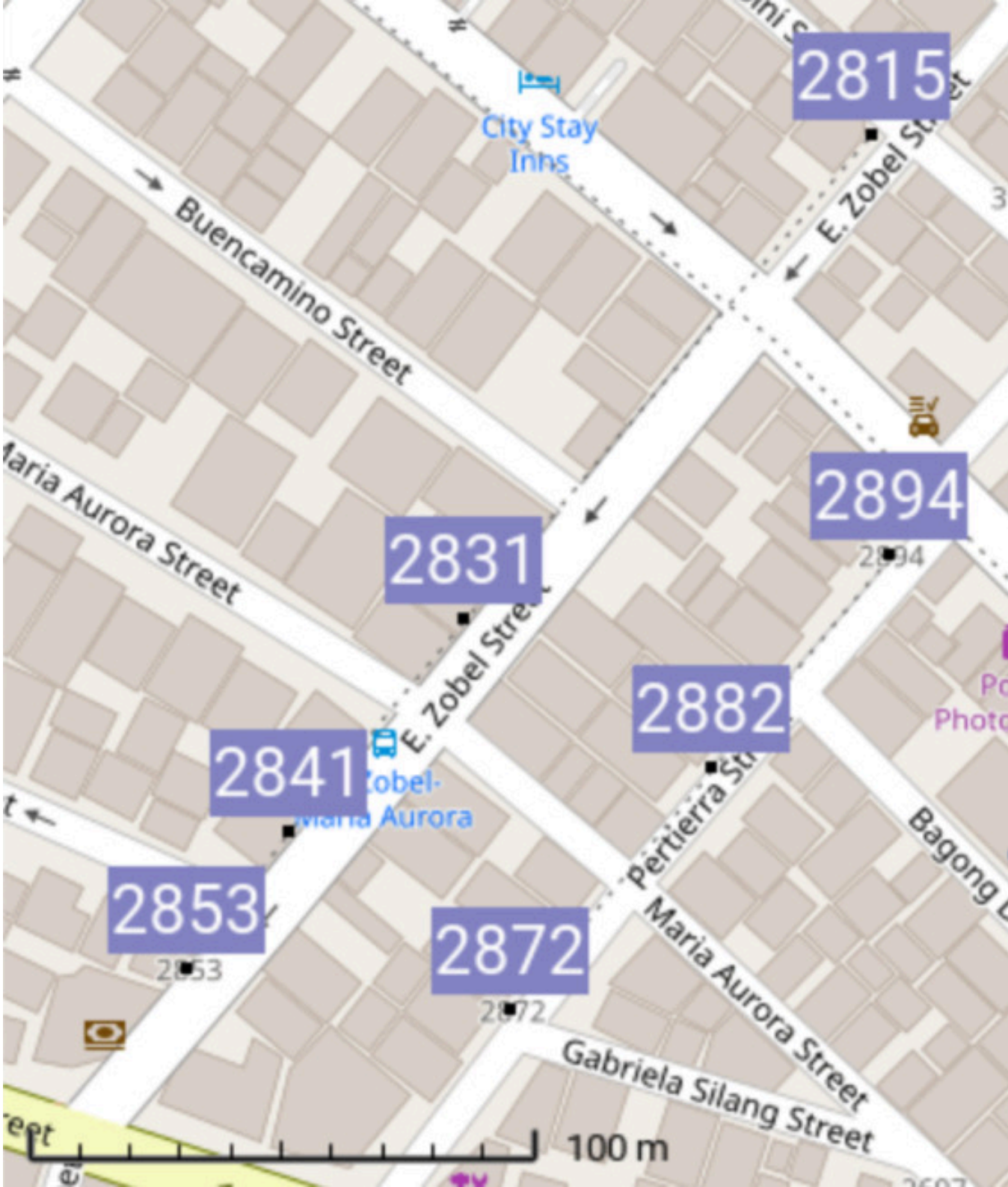


- UP Diliman(2): actually a *single folded axis* with value 5000.



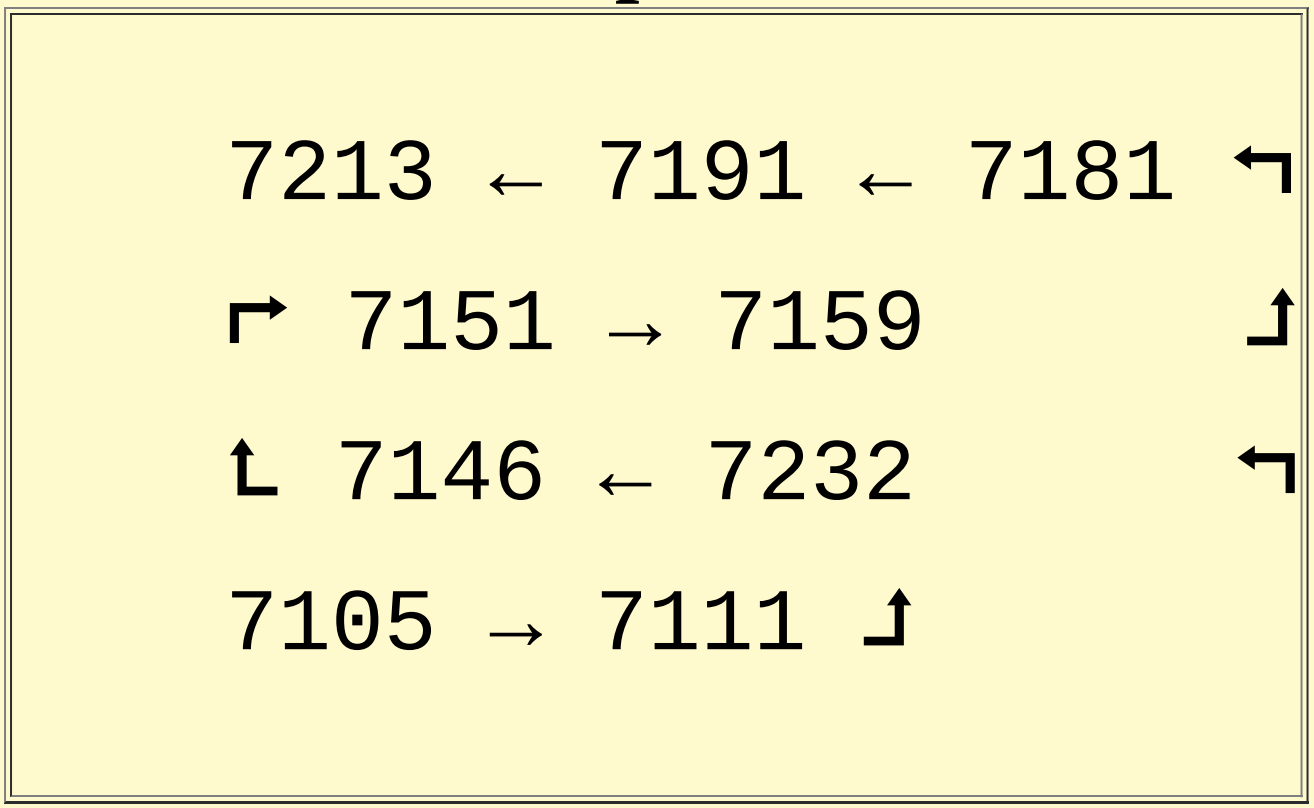
- Poblacion, Makati.
- Numbers going down one street and up the next.
- We could quibble about which side is odd vs. even, but…

- Wait, there's a larger example, in Olympia…



- Olympia, Makati: a **boustrophedon**!

- What's a **boustrophedon**?



- So Makati is filled with boustrophedons. We found two so far, despite low OSM address point density.
- Are boustrophedons protected by the Endangered Species Act?
- Well, they better be, as we note attempts to "fix" them in the City Council…

THEPHILBIZNEWS: FIRING LINE: **To `hell' with Makati addresses** By Robert B. Roque, Jr. April 20, 2023.

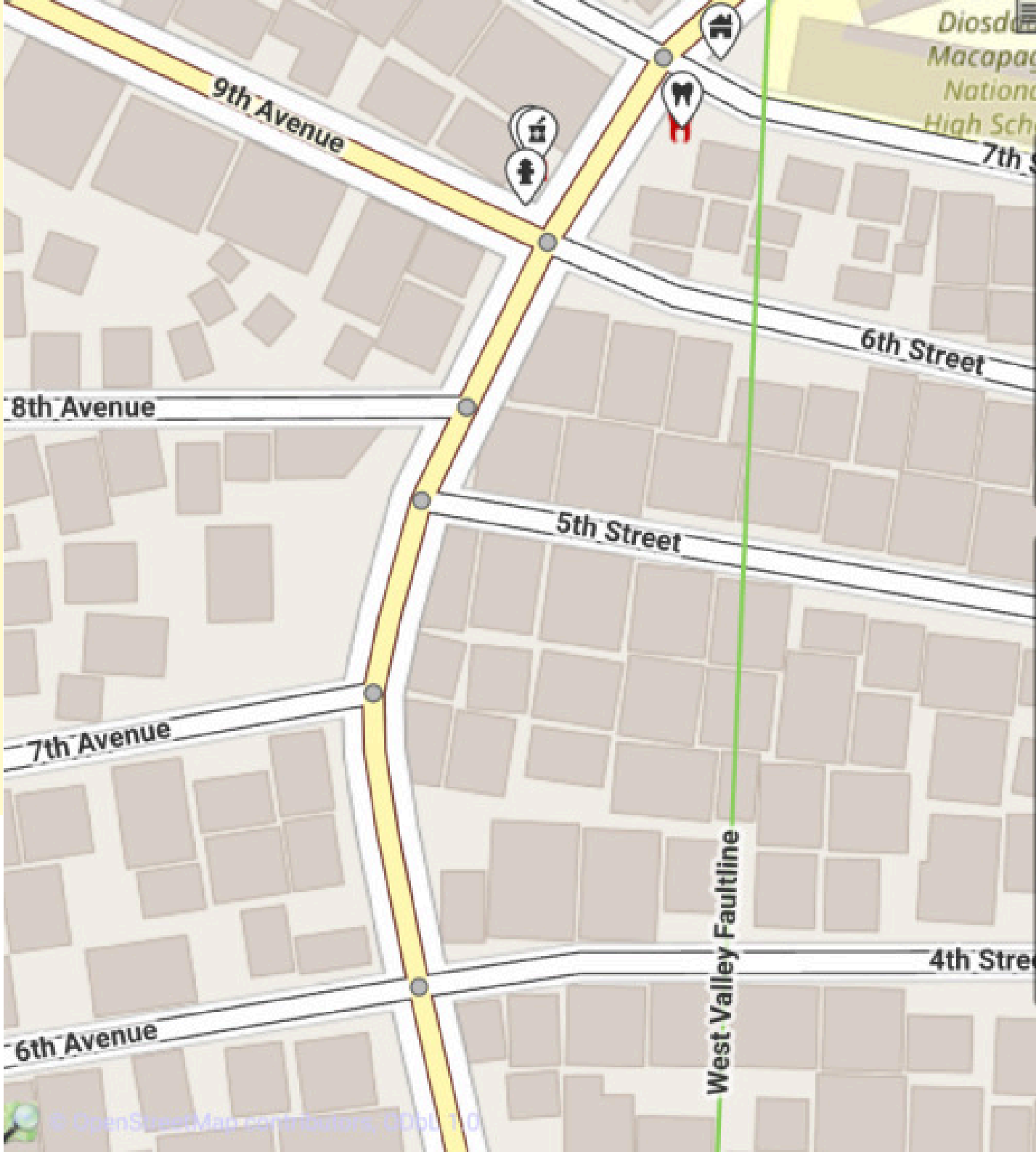
> Premised on good intentions, the Makati City Council has passed an ordinance that will standardize the assignment of address numbers for all lots citywide in the interest of sound management in the local government's disposition of social and basic services as well as protective and emergency response.
>
> This move came about as statistics in this highly urbanized and modern city showed that well over 6,000 individual lots are without a numbered address. At the same time, out of the 36,000 land parcels with

- The numbers are not unique across Makati:

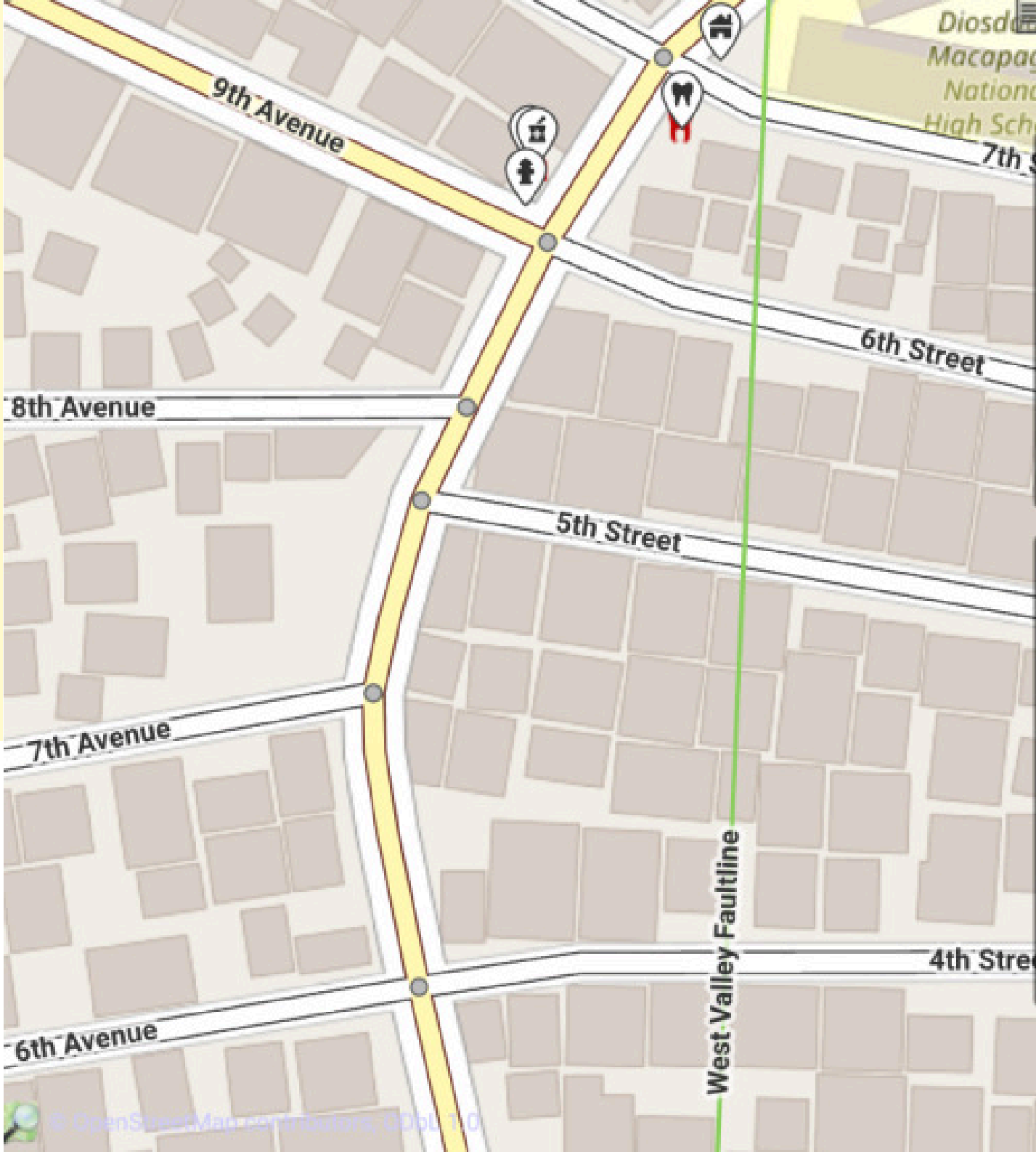
```
8056..9074 Hormiga Street
8185..8233 Constancia Street
```

- The numerical overlap makes me imagine there were several workers, each given a ledger with empty entries #1 to 9999, who were sent off to different parts of Makati and told to "go down the street" assigning entries. And when reaching the end of a street, "go up the next one."
- Moral of story: boustrophedons: easy to create, nightmare to use. Next time choose a well enginerred system that is a no-brainer for the general public to use (even without a cellphone.)

- Katuparan, Taguig(1)
- 6th Av. = 4th St.
  9th Av. = 6th St.
  10th Av. = 7th St.
- North-south backbone: 8th St.
- I bet the local school kids could have done a better job, if asked.



- Katuparan, Taguig(2)
- As a matter of fact, "street naming and house numbering systems" simply isn't taught. No, not even in university urban planning graduate curriculum.

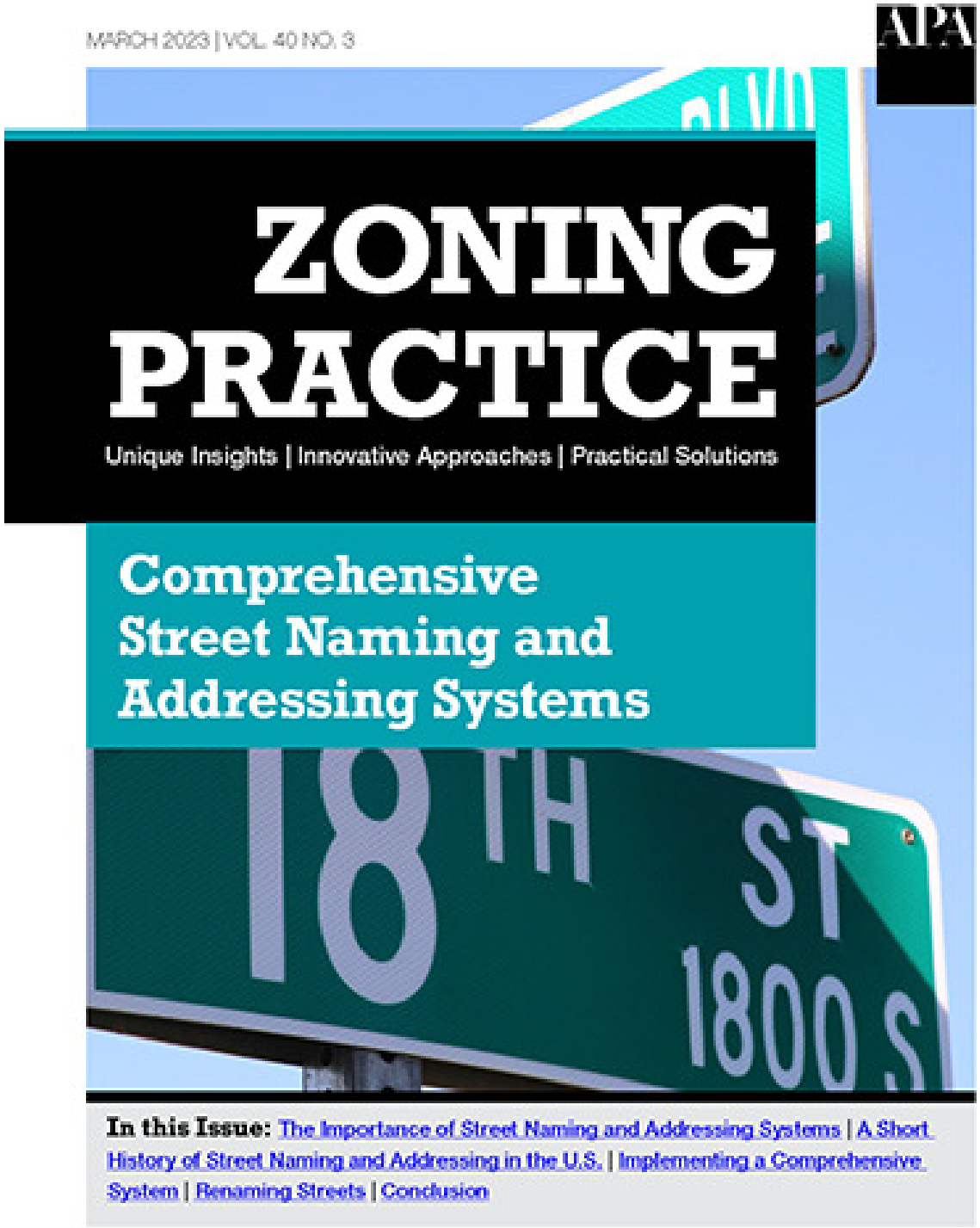


- So where does one turn to officially learn it?

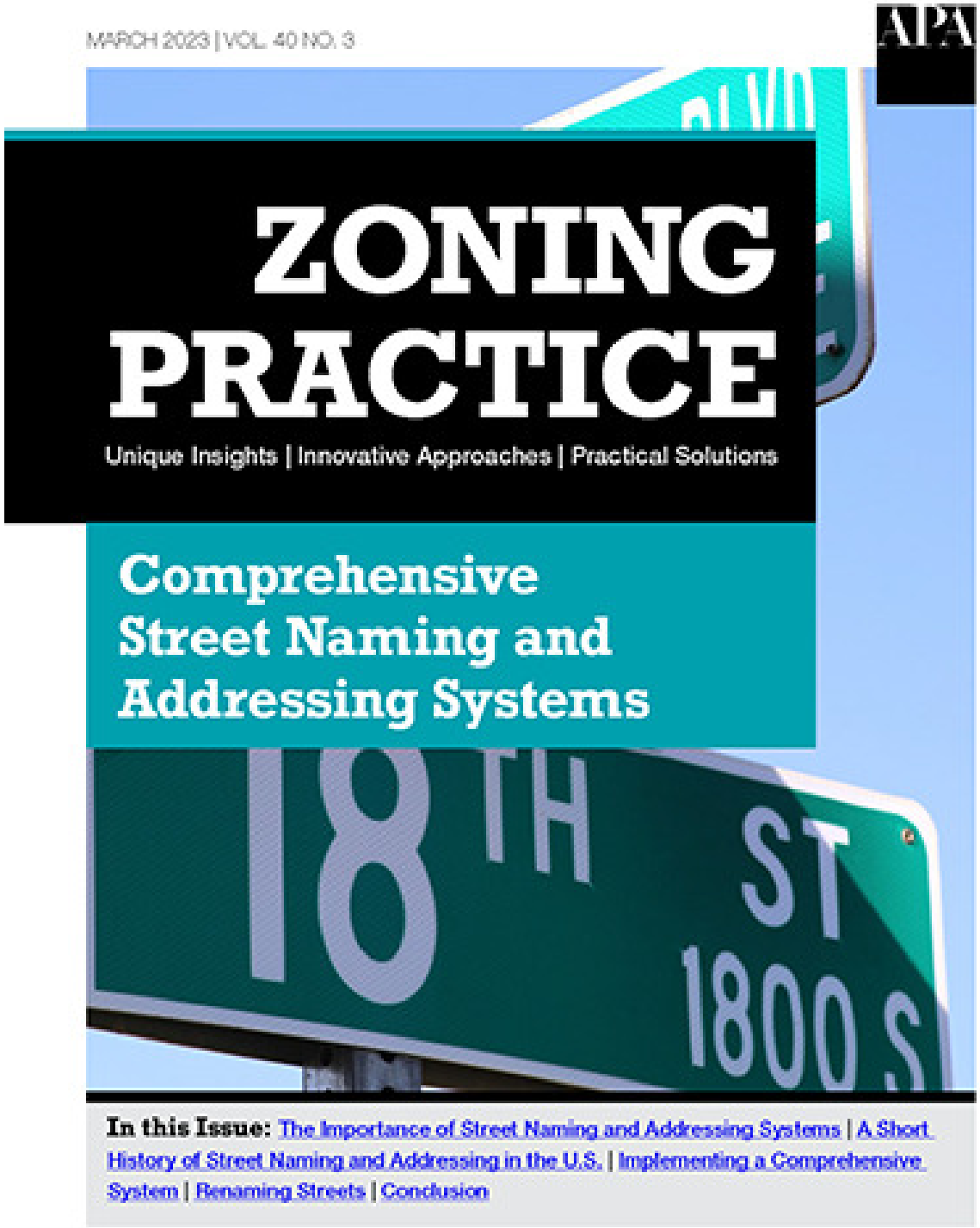
AMERICAN SOCIETY OF PLANNING OFFICIALS
Information Report No. 13; April **1950**:
Street Naming and House Numbering Systems

> "Though fog or night the scene encumbers,
> Why don't all buildings show their numbers
> On lintel, wall or door?
> Why can't a house say good and plenty,
> 'Hey look at me! I'm Nineteen-twenty,
> The joint you're looking for!'
>
> "Why can't our thoroughfares, our highways,
> Our squares, our streets, our parks, our byways,
> Have signs where all can see?

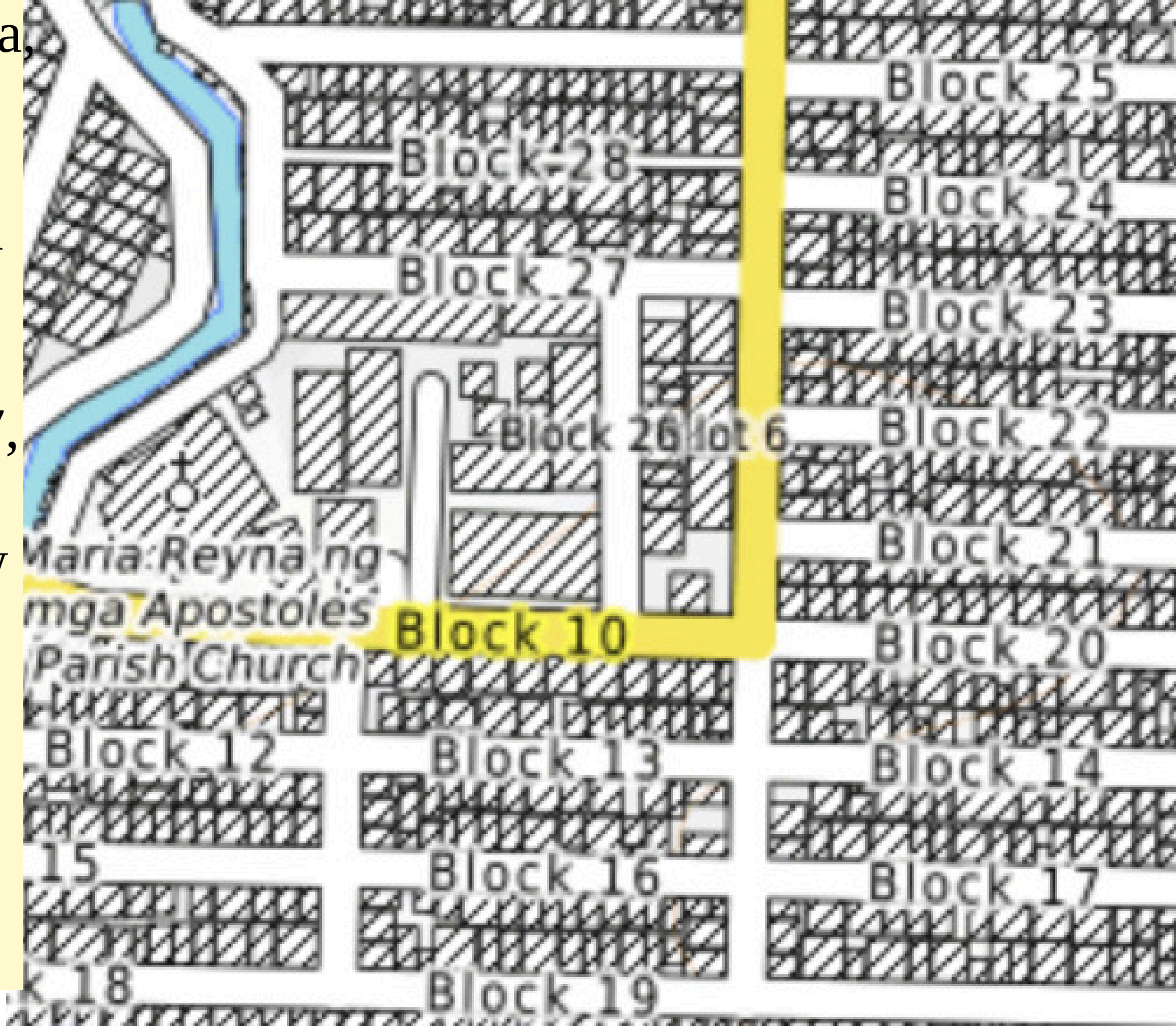
- That was (also!) 1950.
- Later in 2023 →
- So where might OSM want to store the fact that 18th St. = 1800 South?
  1. ~~Just multiply by -100, or estimate from nearby address points. No tag needed.~~
  2. ~~Store it the tag for the street: name=18th St. value=-1800~~



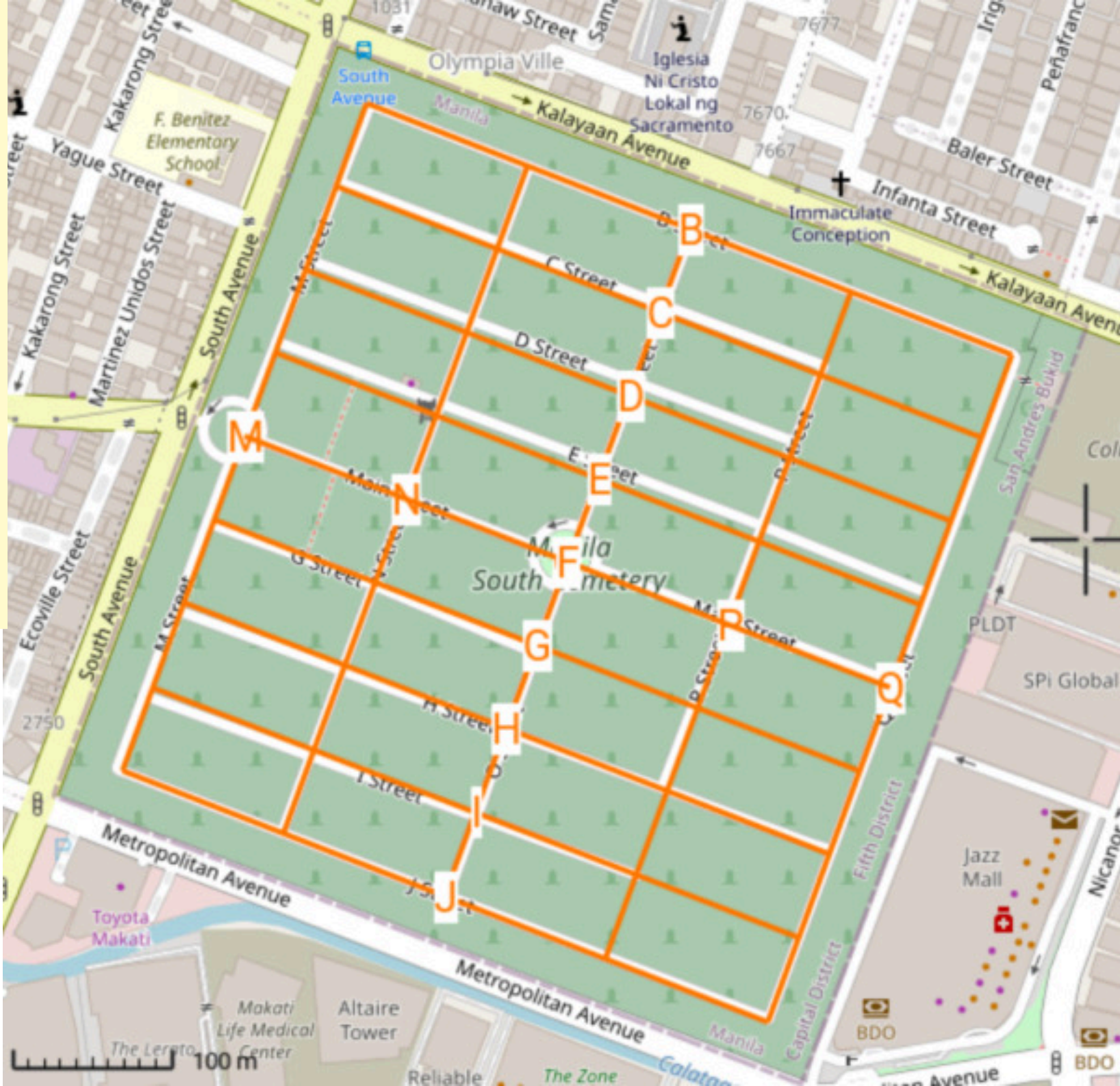
- 3. In the USA a town (county, or state) tag could store numbers_per_mile_x, numbers_per_mile_y (usually the same), and how the grid ties into the PLSS.
  4. Elsewhere an origin lon/lat and azimuth…
- Now e-maps too can have address grids! Not just low-tech "address interpolation ranges."



- Pinagsama, Taguig
- Better numbered with just "XY": X=3, Y=7, XY=37.
- Wait, how could a street be named "block"? Mapper mistake!

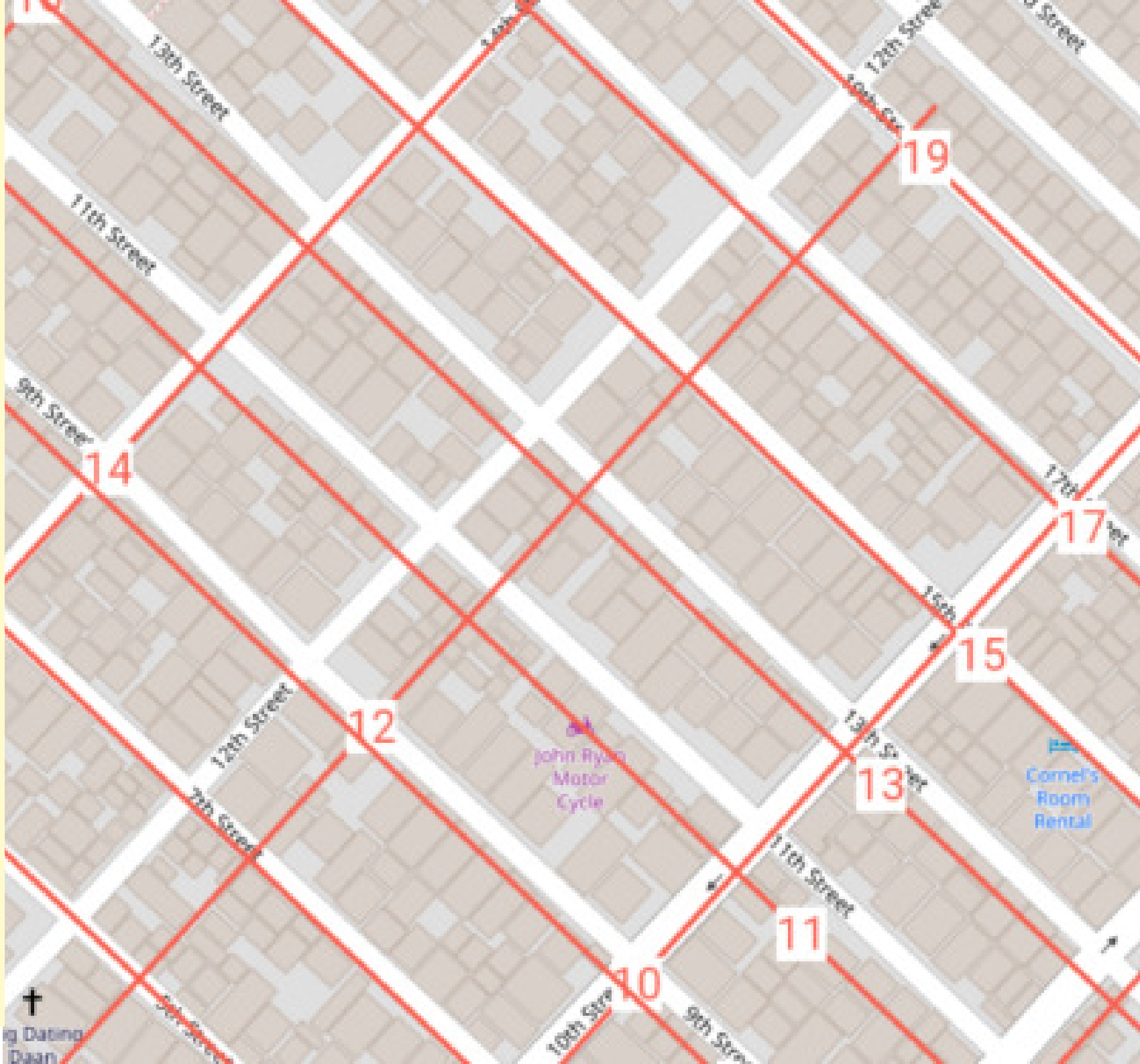


- Manila South Cemetery(1)
- Ordered non-overlapping street names.
- All streets: no "street" vs. "avenue" dependence.



- Manila South Cemetery(2): *single axis* analysis.

- Pasay street name grid
- Odd going NW, even going NE.
- Only streets, no avenues: no danger of confusion.
- How to coordinate house addresses to street names?



- Caloocan(1)


9th Avenue
6th
Merriam
tan
KJJKJ
7th Street
A. de Jesus Street
Mandarin
Sky
C-Cube
Complex
DBP
McDonald's
Starbucks
79
78
77
76
Barangay 104
8th Street
Caloocan
City Hall
9th Street
8th Avenue
8th Avenue
8th Avenue
100 m

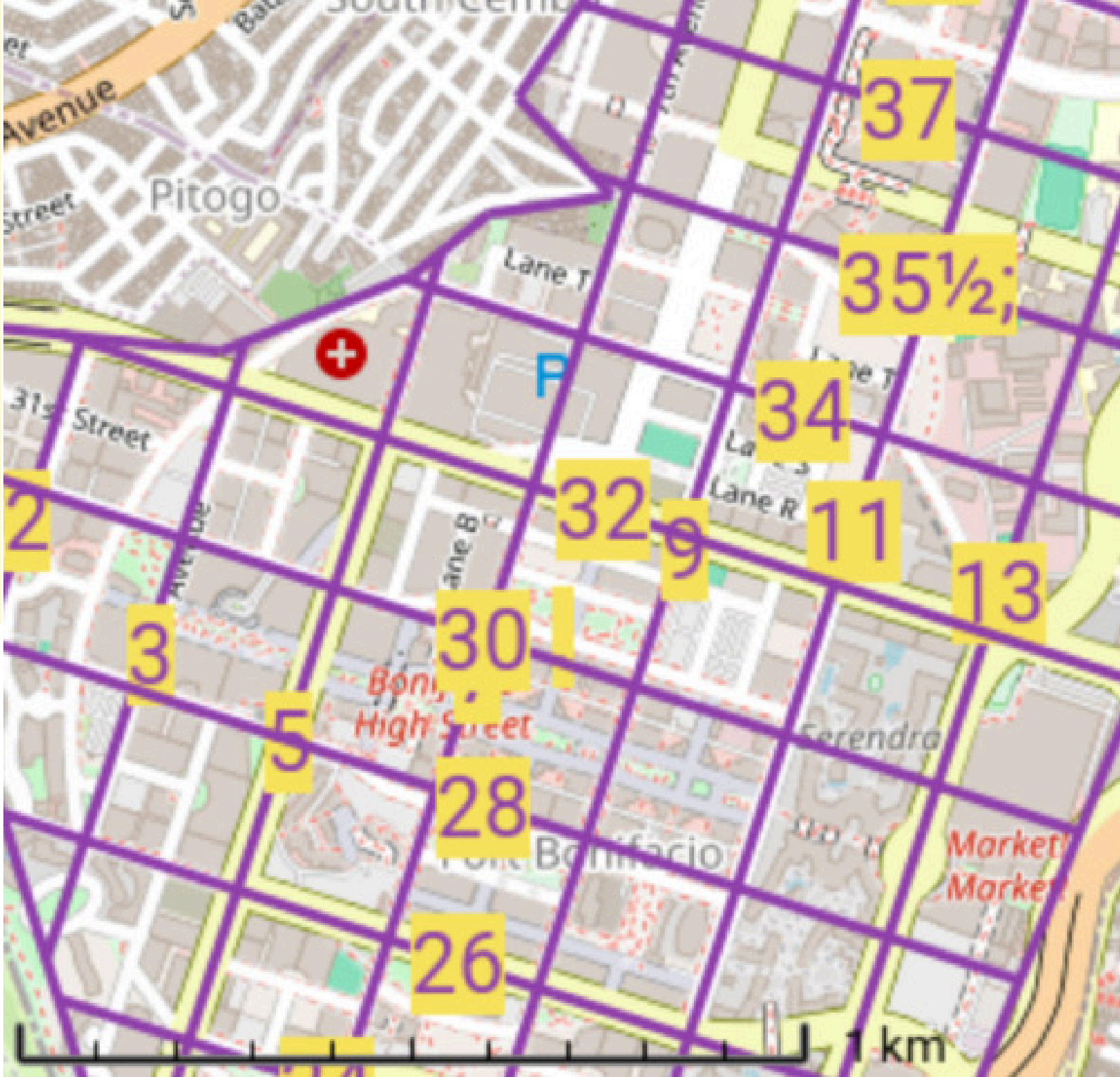
- Caloocan(2)
- Before: "Officer needs assistance, corner of 9th Ave. and 7th St."
- Or was that 7th Ave. and 9th St.?
- Proposed fix: 7 → 77, A. De Jesus → 78, 9 → 79; 8th St. → 8½th Ave.
- After: "Officer needs assistance, corner of 9th and 79th **Streets**".
- Only possible thanks to non-overlapping road numbers.

- BGC(1)

Why can't we just have sequential numbers for street names? (V. Sarne / VISOR 2019/8/14)

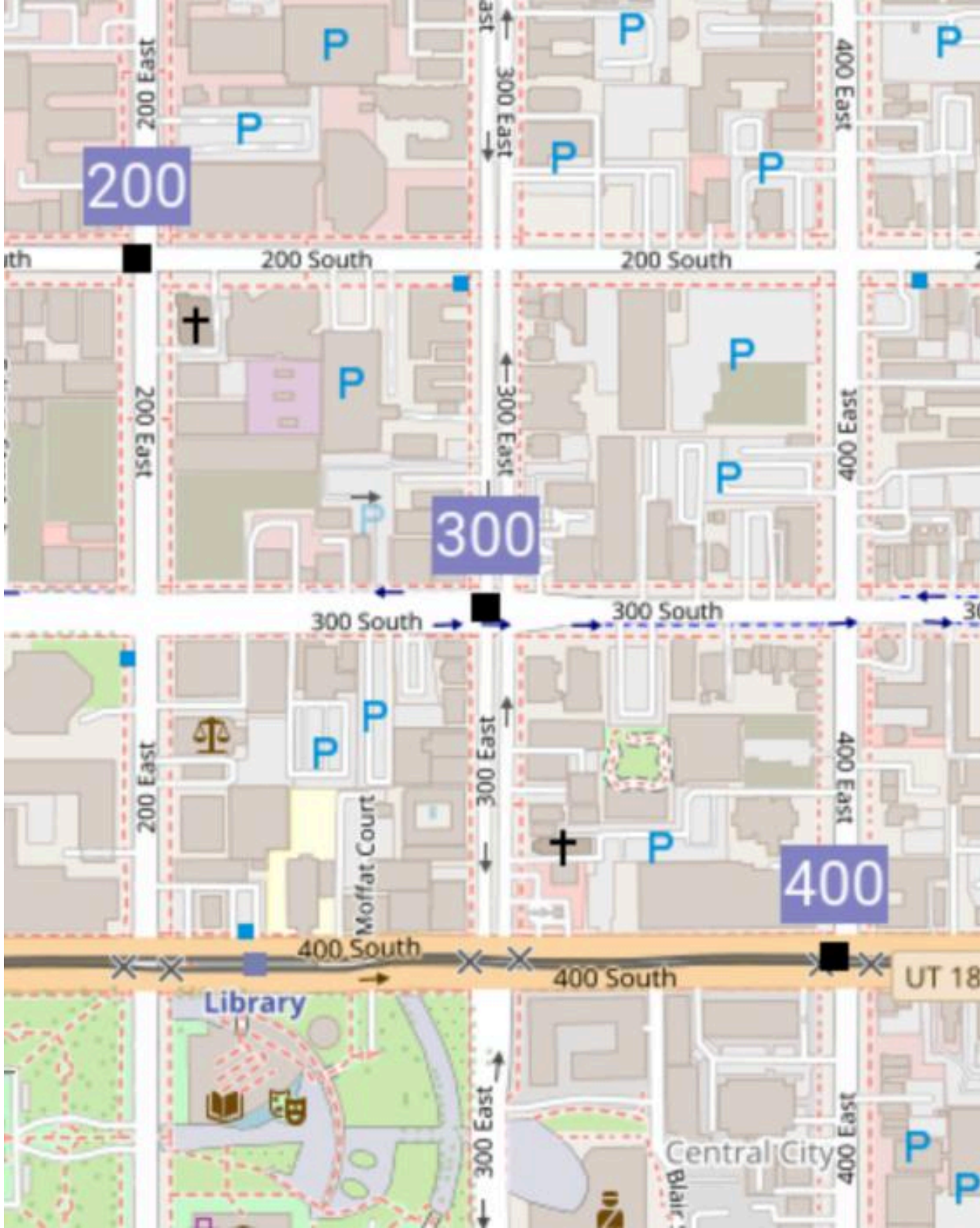
> Or any nomenclature that provides an orderly sequence so motorists and pedestrians have a clear sense of where they are even without the aid of Google Maps…
>
> Anyone who has been to **Manhattan** in **New York City** should be familiar with the ease of walking around the borough, because the roads are laid out on a well-organized grid that has numbered streets intersecting numbered avenues. Which is essentially the same street-naming system you'll find in **BGC**.

- BGC(2)
- Non-overlapping E/W street vs. N/S avenue numbers.
- Irregularity observed at 35½.



- BGC(3)
- A virtual 18th Boulevard *single folded axis*.
- House address integration: NYC, SFO: **disaster**; BGC: will be easy, just append "00", if done with care!

- Salt Lake City, Utah, USA
- House number grid values directly used as street names!
- (I would instead have centered it on the corner of Road 25000 and Road 75000. Room to grow! (Smaller towns: 2500 & 7500.) No more N/S/E/W nor common points: "300" becomes corner of Roads 25300 & 74700.)



- **Conclusions**

1. Due to E-911, etc. house numbering is coming to all Philippines cities. Let's help them get it right from the start.

2. Paper maps have address grids. How about electronic maps? Time for OSM to start storing grid definitions, one per city (not one per street!)

3. Think of OSM website's transportation layer: bus route overlay. Now address grid overlays would be possible. Or just use unobtrusive ticks on a general (e.g., Mapnik) layer.

- So what is your role as a mapper?
  1. Just keep your mouth shut and passively map the good, the bad, and the ugly? Or,
  2. At the same time let the city planning commission know how to do a better job next time? Well, personally…

> I Let Em Know

--Young MC lyrics

- Dan Jacobson (`www.jidanni.org`)