

BACKGROUND/ OBJECTIVES

- Background:** Inaccessible sidewalks reflect municipal ordinances (“no sidewalk”) and inadequate enforcement (“cracked sidewalks”).
- Objectives:**
- Quantify sidewalk deficiencies in Oradell, NJ.
- Employ a virtual tool, engage with community (National MS Society Community Council, Girl Scout troop).
- Raise local leadership and community awareness.
- Contribute to remedying inaccessibility.
- Improve inclusivity and disability awareness.

METHODS

- Design:** Implementation of Community-based “Project Sidewalk”, a Google Street View based assessment tool.
- Methods:** 35.9 street miles examined
- 81 trained volunteers (medical student, Girl Scouts, NMSS Community Council), produced 11,135 labels of sidewalk characteristics, e.g. missing curb ramps, obstacles, no sidewalks
- Severity grades: (1-5 passable-impassable)
- 14,919 validations of other users’ labels showed >90% accuracy

RESULTS

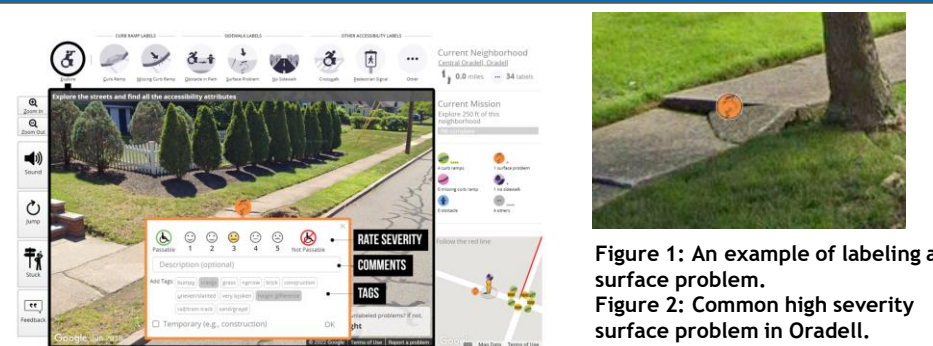
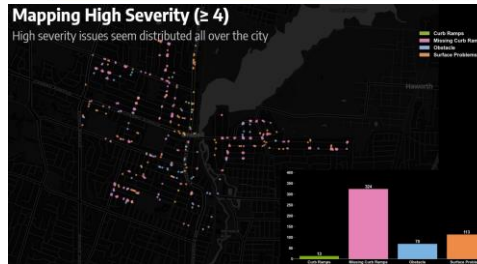


Figure 1: An example of labeling a surface problem.
Figure 2: Common high severity surface problem in Oradell.



High-Severity (>= 4) Label Counts/mile by Neighborhood

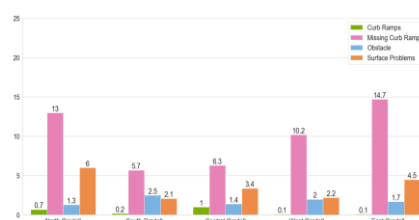


Figure 3: Geographic view of high severity labels being scattered across Oradell.
Figure 4: Bar graph of high severity missing curb ramps across all regions.

Curb Ramp Tags	Count	% of Curb Ramp Tags	Avg. Severity (SD)
Missing tactile warning	225	15.0%	2.38 (0.59)
Surface problem	107	7.0%	2.23 (0.58)
Point into traffic	62	4.0%	2.37 (0.68)

Table 1 & 2: Breakdown of the specific tags for curb ramp and surface problem.

Surface Problem Tags	Count	% of Surface Tags	Avg. Severity (SD)
Height difference	1,455	29.0%	1.96 (0.99)
Cracks	1,256	25.0%	1.71 (0.79)
Uneven/ slanted	1,031	21.0%	2.34 (1.02)
Grass	547	11.0%	1.46 (0.63)
Very broken	235	5.0%	2.44 (1.04)

CONCLUSIONS

- Problematic sidewalks stand to reduce community participation.
- Project Sidewalk is an efficient and effective tool that facilitates community action by producing actionable data and awareness.
- It promotes community inclusivity and educates town leaders and younger people.
- This local success may serve as a model for nationwide implementation.

NEXT STEPS

- Communities should focus on high severity sidewalk barriers.
- Simple first steps may address vegetation obstructions, curb ramps, and additional crosswalks.
- Ultimately add more sidewalks.

LIMITATIONS

- Some outdated Google Street views.
- Inconsistency in user participation.