Mukilteo Sign Inventory Project

Final Presentation

December 2 | Autumn 2024

CITY OF MUKILTEO

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Project Context

Updating Mukilteo's Database

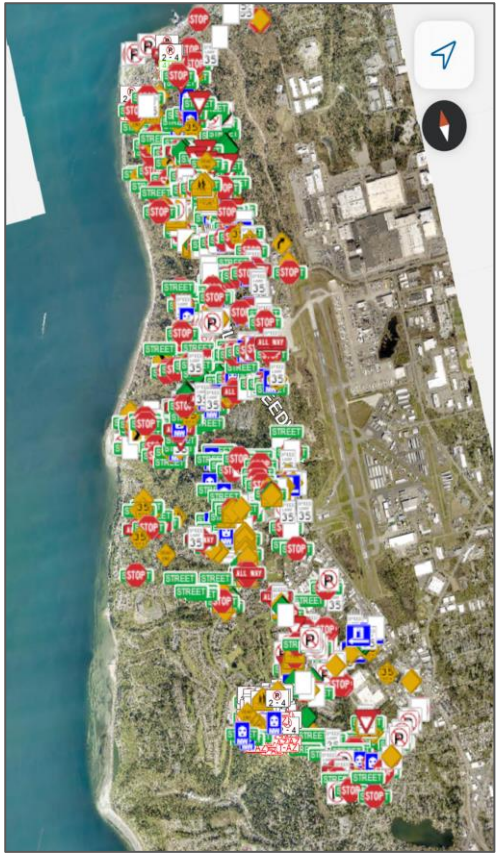
- **Problem identified by client:** Outdated and incomplete database of signs.
- The condition of Mukilteo signs has not been recently or consistently updated to the ArcGIS system.
  - Difficult to track state of signs, including updates and damage, or to determine if a sign has been removed or destroyed.

Site Area

- Mukilteo City Limits
- Divided into 9 operational zones
- Inventory of city-owned signage
    - **Mapping priority:** Begin with Southern zones and move upwards

5 Miles

Map 1: Zone map, provided by City of Mukilteo.



Map 2: ArcGIS Sign Inventory Field Map.

Field Work

Training | *In-person at Mukilteo Public works department*

Briefed on both mapping platforms

Issued equipment for field work (Safety vests and iPads)

- Later issued measuring equipment (tape measures & Rangefinders)

Brought into field for sign mapping activity

Zones 1-5 determined to be recently mapped

Mapping platforms used

ArcGIS Field Maps

- Inventory system
  - Passive, can be edited and viewed
- Lists all inventoried city-owned signs in the Mukilteo area

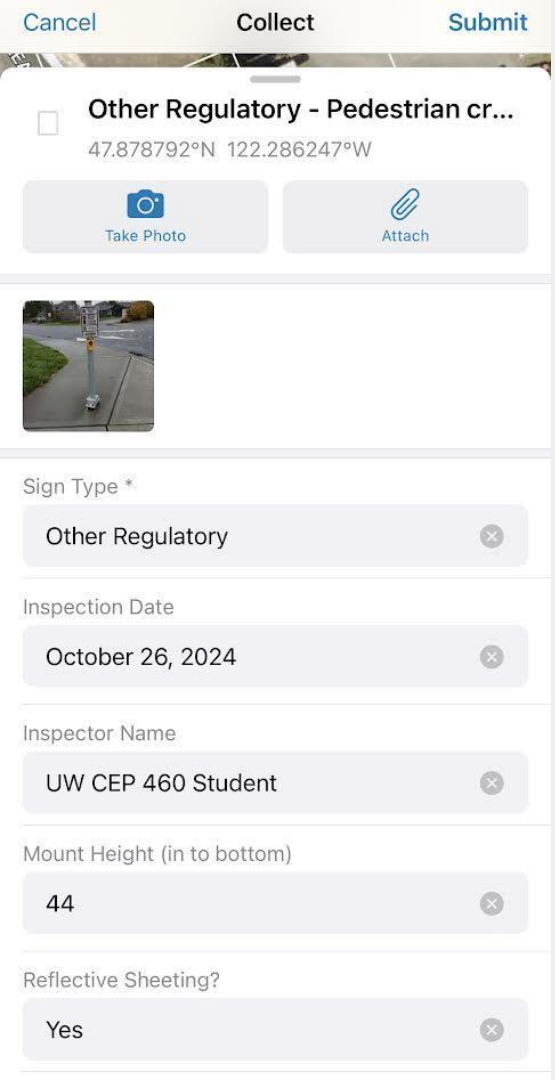
City of Mukilteo

- AKA FixIt Mobile App
- For “Fix it” reports
- More direct method of communication
- “Admin” Status for prioritized reports

Mapping tools were accessible from both City-issued iPads and personal cellular devices.

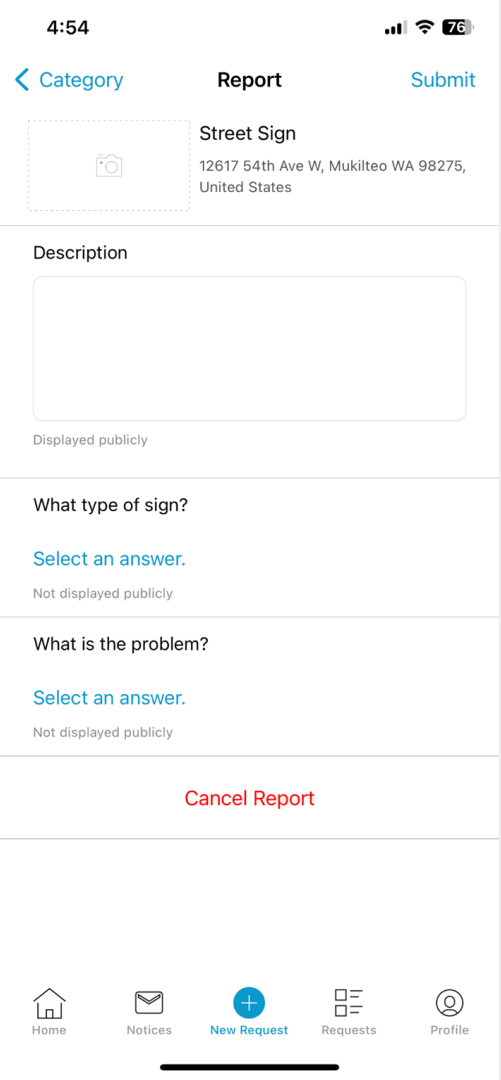
Team Preparations and Challenges:

- Conducted field visits split into teams of 2-3 for maximum efficiency and to accommodate team availability.
- Visit lengths were often **2-4 hours**
  - Cellular battery could be an issue
- Some weather delays during fieldwork
- Manual entries of undocumented signs
  - Additional time required, specifically on documenting uncommon/unknown to us signage



ArcGIS field interface

Signs on the platform had not been updated for 5+ years



FixIt App

Any issue with signage is reported here (missing, damaged, outdated)

Completed Work

Updated zones: 6, 7, 8, 9

Fix It Tickets: ~ 25 work orders

Lessons Learned:

Importance of planning and documentation of field studies and team coordination.

Need for consistent data entry practices and recordkeeping.

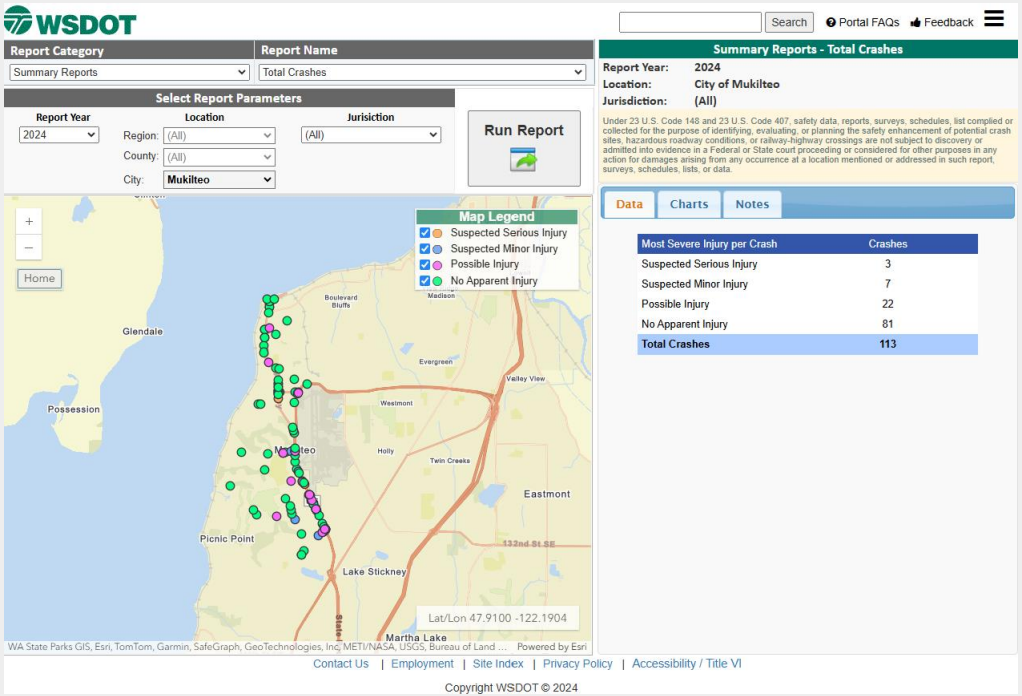
Case Studies

Mukilteo Traffic Safety Data

In the past ten years, there are no recorded traffic fatalities in Mukilteo!

(Washington Traffic Safety Commission)

Most crashes are centered around the Speedway.



WSDOT

Mukilteo Speedway

- 45,000 vehicles per day northbound
  - Recorded at Beverly Park Road
- 5.2 miles (Ferry to city limit)
- 114 reported crashes in 2023

Aurora Avenue

- 58,000 vehicles per day northbound
  - Recorded at Roy St & Aurora
- 5.0 miles (N 145th St to N 46th St)
- 145 reported crashes in 2023

Making Mukilteo Speedway Safer

- Comparable to Aurora Ave through Seattle (both are highways)
- Balance needed between through traffic and intercity traffic

- **Proposed solutions:**
  - Add more concrete barriers / curbs
  - Add more signalized crosswalks for pedestrian safety
  - Reduce speed limits
  - Safety beyond signage

Aurora Reimagined Coalition

City of Mukilteo

Community Identity Signs

San Diego, CA

Solution: Signs as a public expression of a place's identity

Recommendations: Identification of 1-3 additional landmark sites in Mukilteo and the development of an RFP and public commentary process for sign development on these proposed sites.

Current Mukilteo welcome sign

Source: sddesignweek.org

Traffic Calming

Seattle, WA

Solution: Adding physical barrier that encourages drivers to slow down and be aware of their surroundings.

Recommendations: Identify high collisions locations and propose traffic calming strategies to reduce speeds and collisions

Source(s) City of Seattle

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Neighborhood Yard Sign Program

Redmond, WA

Solution: City's Traffic and Pedestrian Safety Program providing two signs per household to residents who request them via the "Report an Issue" tool

Recommendations: City to design neighborhood safe driving sign templates for Mukilteo residents to request via an online portal.

Source: Redmond.gov

Analysis

Conditions Assessment:

Findings:
Each sign took roughly **2 minutes** to complete.

Many of the signs that had previously been flagged for repairs in the original field map had been replaced/cleaned without updates to the database.

Concentrations of outdated parking signs on residential streets

- Example: 47th Pl. West off Beverly Park Rd.

Main issue was lack of documentation for added signs or removed signs rather than signs in need of repair

Future Recommendations:

For the City of Mukilteo:
Add new signs to database when they are installed.

For **greater efficiency** in the field, skip sign measurement for previously documented and unharmed signs

Progress map – overlay with ARCGis to better determine recently updated zones

Thank you!

Questions?

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Works Cited

“Crash Data Portal.” WSDOT. Accessed December 1, 2024. https://remoteapps.wsdot.wa.gov/highwaysafety/collision/data/portal/public/.

“Traffic Calming - Transportation | Seattle.gov.” n.d. *City of Seattle,* https://www.seattle.gov/transportation/projects-and-programs/programs/home-zone-program/traffic-calming.

Rubric

Rubric:

Slide Submission (3 points)

- Slides uploaded on time
- Slides consistently and clearly formatted
- Slides include a logical organization or structure
- Slides are spell-checked and data and illustrations are cited

Preparation + Research (3 points)

- Work is placed in professional and/or academic context of the relevant topics
- Work is situated within the recent project developments and larger history of the community

Analysis + Recommendations (3 points)

- The team has presented case studies or other research and drawn effective comparisons to the project work
- The team has presented any unique data collected or tools created to help the client use this material going forward
- The team makes clear and succinct recommendations for the client

Presentation Materials (3 points)

- Illustrations are used effectively and cited (when not original)
- Data is presented clearly in tables, charts, or diagrams
- Slides are not overly wordy, but convey key findings

Presentation Delivery + Style (3 points)

- Speakers' clarity in delivering points
- Explaining concepts rather than reading data or slides