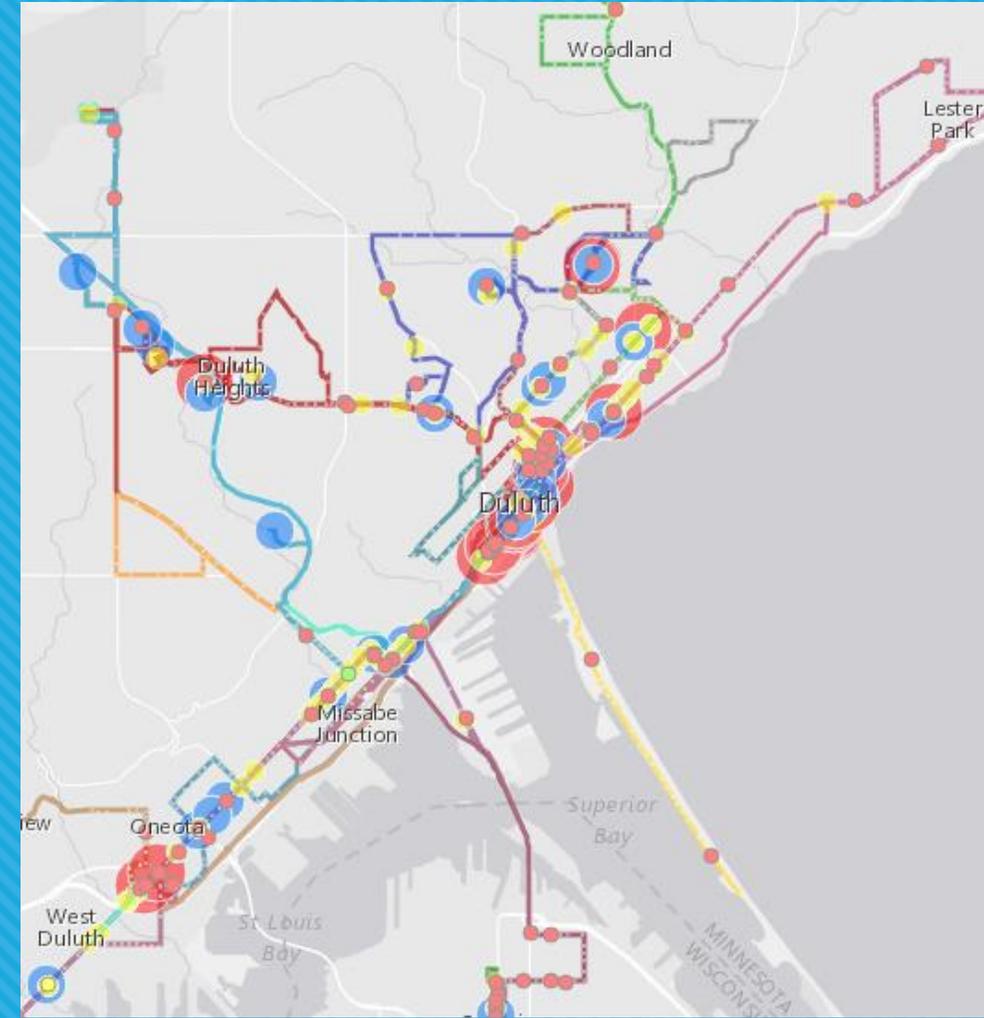


DTA Transit Shelter Audit/Inventory



May, 2017 TAC & MIC Policy Board Meetings

The Idea

- Take an in-depth look at shelters to supplement the **Transit Development Plan**
- Create an **interactive map** including each shelter in the MIC area
- Click on any transit shelter and find out
 - What amenities are at the stop
 - If it is ADA compliant
 - and explore other existing conditions
- Used by local jurisdictions to aid in upcoming projects and decision making

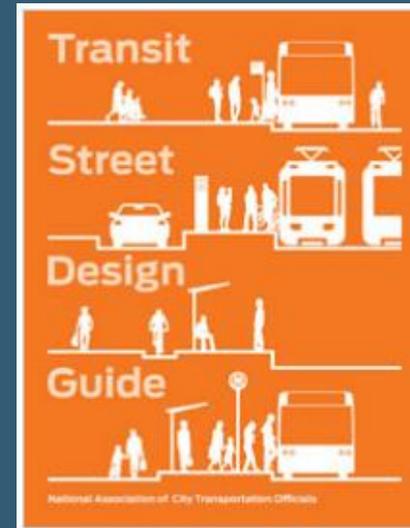
Jason Mozol

- UMD Student – Urban & Regional Studies
- Used Google Street View for initial shelter audit
- Finished by physically checking each one and entering data/photos into ESRI Collector App on an iPad
- 6 Weeks



Resources

- Easter Seals - Toolkit for the assessment of Bus Stop Accessibility and Safety
- United States Access Board - ADA Standards for Transportation Facilities
- Nelson\Nygaard Consulting – Transit Strategies: Better Facilities and Amenities
- FHWA
- NACTO Transit Street Design Guide
- Bob Bourne – Bourne Transit Consulting
- Local Partners
- Existing data from DTA, MIC, and others
 - Shelter locations, Sidewalk Conditions, Average Weekday Boardings



Criteria Used

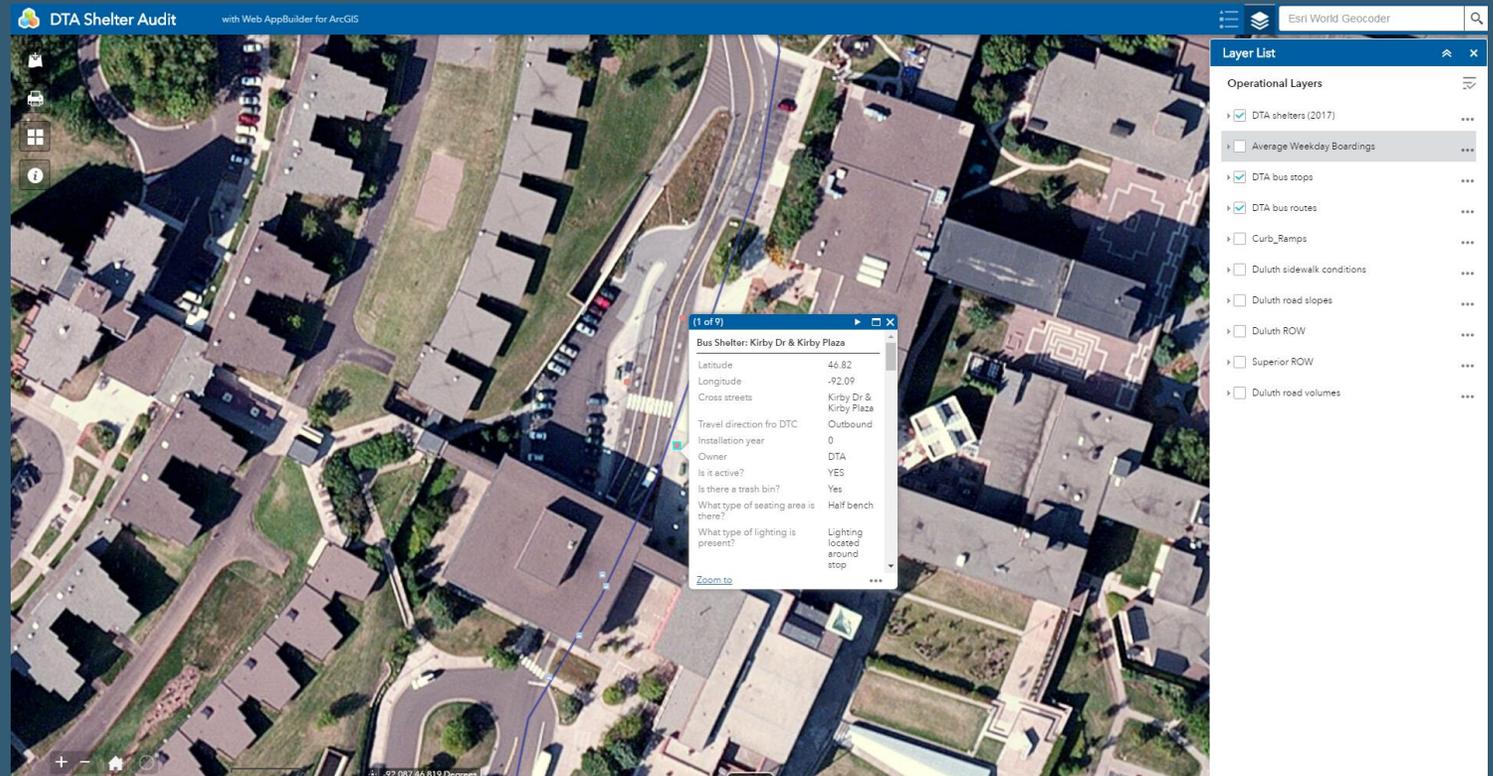
- **Master check list** used at each transit shelter in the MIC area
- **62** total items on the checklist
- Example questions
 - What type of **lighting** is present
 - Does the shelter connect to **sidewalks**
 - Is there a **pull out bay** for the bus
 - Is there **landscaping** nearby
 - Several questions on **ADA** compliancy

Bus Shelter: Kirby Dr & Kirby Plaza

Latitude	46.82
Longitude	-92.09
Cross streets	Kirby Dr & Kirby Plaza
Travel direction fro DTC	Outbound
Instellation year	0
Owner	DTA
Is it active?	YES
Is there a trash bin?	Yes
What type of seating area is there?	Half bench
What type of lighting is present?	Lighting located around stop
Is there bike parking?	Yes
Is the bus stop sign within 10ft of the shelter?	No sign
Is there room for the bus to pullout from traffic parallel to curb?	Yes
Are there green features or is there landscaping?	Yes
What size of landing pad is there at the shelter?	Bus size
Is there an obstruction to the line of sight?	No
Is the bus stop area signed 'No Parking'?	Yes
Is there a physical barrier between rider and traffic?	No
What type of schedule signage is there?	Dynamic
How much of the shelter walls are transparent?	Fully Transparent
What street crossing features are there?	Crosswalk
How does the shelter connect to sidewalks?	Both sides
Does the landing pad cover the boulevard?	Yes
Does the bus stop share space with another street use?	No
What part of the block is the stop located on?	Mid-block
Is there a pull out bay for the bus?	Yes
Is there a system or route map displayed?	No
How is the shelter oriented to the roadway?	Building side, open to curb
Is the shelter in the right of way?	No
Back support is present and, at minimum, 42" long (903.4)	Yes
Back support is no more than 2.5" behind the back of the seating surface (903.4)	Yes
Back support must fall within a space 2" above the seating surface to 18" above (903.4)	Yes
If mounted in an unprotected location, seating surface is slip resistant and doesn't accumulate water (903.7)	Yes
Benches are a minimum 42" in length (903.3)	Yes
Benches are between 20" to 24" deep (903.4)	No
Seat height is between 17" and 19" from the ground (903.5)	Yes
Ground and floor spaces of stop and shelter are firm and stable (810.2.1)	Yes
The floor around the stop and in the shelter don't have openings that would allow passage to a ½" or greater sphere (302.3)	Yes
Walking surfaces of stop area have no more than a 1:20 slope (402.2 & 403.3)	Yes

The Interactive Map

- <http://arrowhead.maps.arcgis.com/apps/webappviewer/index.html?id=6219af757782479ab166460ba6012e30>



Initial Findings

- Bus shelters varied more widely than anticipated
 - Unique shelters on Tower Ave, Grand Ave, Superior St, the City of Superior and Proctor
 - Great for placemaking
- Shelters are mostly just functional and don't provide extra amenities
 - The shelters, especially older ones, feel very utilitarian
 - Adding green space, like a tree, or setting the shelter back from the roadway seemed to make the vibe of the shelter more enjoyable. Simple additions go a long way.
- A lot of pavement, especially in Superior, is in rough shape and hurt shelters on ADA standards, aesthetics and function
- When visiting shelters, a lot had trash left at them. Trash cans would help.

Initial Findings

- ADA assessment became a big part of the project and had many interesting findings
 1. Only two shelters were fully compliant in the whole system but many preformed quite well.
 2. No single bench was fully compliant and that feature doomed many shelters.
 3. ADA requirements seemed tough to comply with. An example:
 - No drops or cracks greater than a 1/4"
 4. Shelters need bus stop signs on them. Many don't have them and they should to designate it as a stop.

Questions/Comments?