

September
2019

Amenities Equity Analysis



DETROIT DEPARTMENT OF TRANSPORTATION
Major Service Change and Reconfiguration
September 2019

September 2019 Ad Stop Shelters Analysis

Table of Contents

Introduction	2
Community Engagement	3
Definitions	3
Analysis	4
Conclusion	4
Appendix	5

INTRODUCTION

DDOT initiated an advertising shelter program in 2017, using Chicago Transit Authority's program as inspiration, in order to defray the cost of maintaining bus stop shelters. After putting out a bid, negotiating contracts, parsing through legality questions on advertising in public right-of-ways, designing the program and the shelters, DDOT is finally ready to test out its new three-year, multi-phase pilot ad shelter program. There are no predecessors to this program in Detroit.

Shelters were selected on the basis of:

- Stakeholders
 - District Input
 - Customer input
 - Vendor input
- Physical & service characteristics
 - High service levels and high boarding rates at stop
 - Transfer points or used by multiple routes
 - Distribution of other shelters on route.
 - Physical characteristics such as condition of sidewalk, presence of driveways and other obstacles

The initial costs for the first phase of the program is through FTA formula funds for DDOT's shelters. These funds cover the purchase of shelters, concrete work, engineering, and permitting fees. On-going cleaning and maintenance will be the responsibility of the vendor, Brooklyn Outdoor for the next three years. According to FTA Title VI standards, any transit agency using FTA funds must prove that new amenities and services do not discriminate or cause undue burden on protected populations.

Map 1 the final ad Shelter locations of phase 1.



COMMUNITY ENGAGEMENT

DDOT staff reached out to the City's seven appointed District Managers, requesting input on the need for new shelters in their districts. Shelter requests from DDOT customers were evaluated for inclusion on a case-by-case basis. DDOT then generated a list of twelve potential shelter sites per district (nine new locations and three replacements of existing DDOT shelters). To narrow down the list, the vendor chose between four and nine shelters per district, resulting in 59 shelters for 58 selected sites.

EQUITY ANALYSIS - DEFINITIONS

Due to Metro Detroit's unique racial and economic makeup, the percent of minorities and the percent of people living under the poverty line are higher than the national average. 80% of DDOT's service area population are minorities and 38% are low-income.

The analysis used ArcMap for Desktop, American Community Survey 2016 population characteristics data, and TIGER 2016 block groups.

This methodology relies on these definitions:

- **Service area** – The service area for this analysis is any block group with a centroid within a half-mile of a stop, or intersect DDOT stops with a search distance of 60 meters to account for street width.
- **Minority population** – Minority counts are based on all individuals classified not as “white only” for race in the ACS 2016 block group data.
- **Low-Income population** – Low-income counts are based on all individuals classified as below poverty for income in the 2016 ACS block group data.
- **Minority and low-income averages** – The total minority population and the total low-income population are each divided by the total population in the system service area to find the system average. The population characteristics are based on ACS 2016 data using the race and poverty classifications, respectively. The minority average is 80% and the low-income average is 38%
- **Minority stop** – A bus stop whose service area consists of 33% or more minority classified block groups.
- **Low-Income route** – A bus stop whose service area consists of 33% or more low-income classified block groups.
- **Disparate Impact and Disproportionate Burden** – A facially neutral policy or practice that negatively affects members of FTA protected populations. Disparate impact is based on minority populations and disproportionate burden is based on low-income populations. The impact on these vulnerable populations should be no less than 25% of the impact on non-vulnerable populations. For example, if the percent change in improved service for non-protected populations is 100%, the percent change for protected populations should be no less than 75%. If the percent of change for vulnerable populations is less than the threshold, there may be a disparate impact or disproportionate burden. If either occur, DDOT must present legitimate justification, mitigation efforts, and discuss alternatives that were not pursued.

EQUITY ANALYSIS – ANALYSIS

Classification

Each stop's service area consists of block groups that intersect with a half-mile buffer around each stop. Demographics for each block group originate from the US Census race and poverty ACS 2016 tables. The percentage of the minority and low-income populations for each block group were compared to the system averages of 80% minority and 38% low-income; block groups meeting or exceeding those thresholds received the minority and/or low-income classification.

Once all the block groups were classified, each ad shelter needed classification. Following a similar methodology for classifying routes as minority or low-income in major service changes, the percentage of minority or low-income block groups for each service determine the classification. If the shelter's service area consists of 1/3 (33%) or more of minority or low-income block groups, it receives that classification.

Of the 58 stops, 52 meet the classification for a minority stop, and 51 meet the classification of a low-income stop. See table A 1, Map A 1, and Map A 2 in the Appendix.

Stops	Existing Shelter Sites	New Shelter Sites	% New Shelter Sites	Total Sites	% Total Sites
Minority	13	38	90%	52	90%
Non-Minority	3	4	10%	6	10%
Low-Income	12	39	93%	51	88%
Non-Low-Income	4	3	7%	7	12%
Total Stops	16	42	-	58	-

Analysis

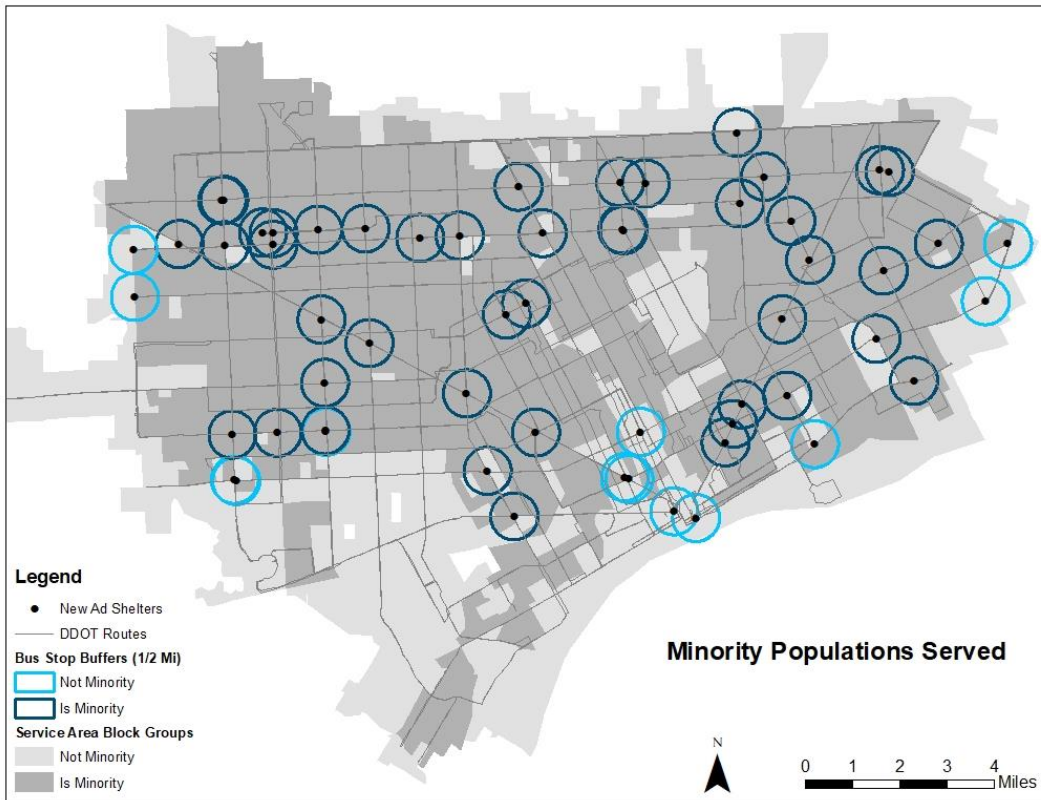
All shelter sites will get new structures. Sixteen of the 58 sites already have structures and the benefit to riders will not change by much, however, 42 sites will get new shelters, giving riders who use those stops a significantly better experience. Minority and low-income populations will receive the most benefit from this program, 90% to 88% of the stops serve those protected populations, respectively.

CONCLUSION

DDOT's new ad shelter program does not impose a disparate impact or disproportionate burden on the FTA Title VI protected populations. The new and updated shelters will enhance the transit experience of those populations who use the ad-funded bus stops. By trading ad space for shelter maintenance, DDOT hopes lessen the costs of bus stop maintenance and improve the user experience.

APPENDIX

Map A 1 Selected sites who's service area consist of at least 1/3 minority classified block groups are classified as a minority stop.



Map A 2 Selected sites who's service area consist of at least 1/3 low-income classified block groups are classified as a low-income stop.

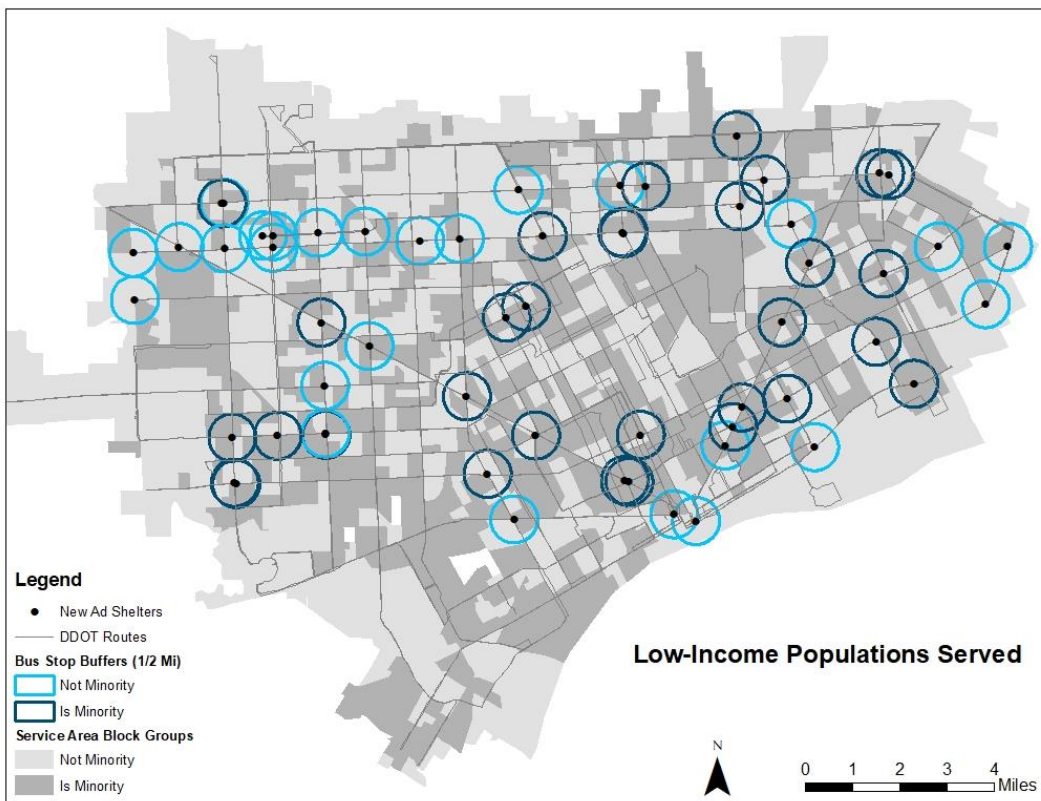


Table A 1 – Ad Shelter Demographics. Each stop’s service area consists of block groups that intersect with a half-mile buffer around each stop.

Stop Attributes			Block Group Counts			Service Area		Stop Classification	
ID	Existing Shelters	Location	Minority	Low-Income	Total	% Minority	% Low-Income	Minority	Low-Income
44	0	Harper & Chalmers	17	12	17	100%	71%	Yes	Yes
139	1	Conant & 7 Mile	16	7	16	100%	44%	Yes	Yes
212	0	W Outer Dr & Southfield	11	5	11	100%	45%	Yes	Yes
230	1	Livernois & McNichols	10	4	12	83%	33%	Yes	Yes
256	0	Fenkell & Dale	5	2	8	63%	25%	Yes	No
351	1	Grand River & Schaefer	11	5	11	100%	45%	Yes	Yes
359	0	Greenfield & Grand River	16	8	16	100%	50%	Yes	Yes
362	0	Greenfield & Joy	8	7	10	80%	70%	Yes	Yes
376	1	Greenfield & Plymouth	14	6	14	100%	43%	Yes	Yes
425	0	Jefferson & Dickerson	8	6	10	80%	60%	Yes	Yes
452	0	Joy & Greenfield	10	5	10	100%	50%	Yes	Yes
493	0	Livernois & Warren	10	7	12	83%	58%	Yes	Yes
494	0	Livernois & Grand River	13	6	13	100%	46%	Yes	Yes
497	1	Mack & Cadieux	1	1	9	11%	11%	No	No
499	1	Mack & Conner	5	4	6	83%	67%	Yes	Yes
513	1	McNichols & Southfield	10	3	10	100%	30%	Yes	No
521	0	7 Mile & E Outer Dr	13	6	13	100%	46%	Yes	Yes
530	0	McNichols & Gunston	12	4	12	100%	33%	Yes	Yes
536	0	McNichols & Woodward	9	6	11	82%	55%	Yes	Yes
545	1	Gratiot & Chene	8	5	9	89%	56%	Yes	Yes
560	0	Gratiot & Mack	10	8	10	100%	80%	Yes	Yes
591	0	Michigan & Livernois	6	5	10	60%	50%	Yes	Yes
689	0	7 Mile & Evergreen	14	5	14	100%	36%	Yes	Yes
729	0	MLK & Grand River	5	9	10	50%	90%	Yes	Yes
737	1	W Grand Bl & Grand River	11	9	11	100%	82%	Yes	Yes
754	0	Van Dyke & 8 Mile	7	8	11	64%	73%	Yes	Yes
756	1	Van Dyke & Nevada	9	4	9	100%	44%	Yes	Yes
844	0	Evergreen & Warren	6	7	14	43%	50%	Yes	Yes
850	0	W Outer Dr & Schaefer	14	9	14	100%	64%	Yes	Yes
1102	0	Michigan & Cass	1	4	8	13%	50%	No	Yes
1202	0	Gratiot & Mt Elliott	11	8	11	100%	73%	Yes	Yes
1229	0	Gratiot & McClellan	10	8	10	100%	80%	Yes	Yes
3168	0	Joy & Southfield	11	7	12	92%	58%	Yes	Yes

Stop			Block Group Counts			Service Area		Stop Classification	
ID	Existing Shelters	Location	Minority	Low-Income	Total	% Minority	% Low-Income	Minority	Low-Income
3411	0	Cass & Warren	3	8	10	30%	80%	No	Yes
3963	0	Harper & Whittier	12	6	13	92%	46%	Yes	Yes
4176	1	McNichols & Wisconsin	14	6	14	100%	43%	Yes	Yes
4443	0	Grand River & Lahser	12	5	13	92%	38%	Yes	Yes
4610	0	7 Mile & Woodward	7	3	8	88%	38%	Yes	Yes
4653	0	Ryan & 7 Mile	13	7	14	93%	50%	Yes	Yes
4734	1	7 Mile & Hayes	11	7	11	100%	64%	Yes	Yes
5011	0	Joseph Campau & McNichols	13	7	13	100%	54%	Yes	Yes
5012	0	McNichols & Joseph Campau	12	6	12	100%	50%	Yes	Yes
5247	2	Larned & Woodward	1	2	6	17%	33%	No	Yes
5846	0	Grand River & Trumbull	4	7	8	50%	88%	Yes	Yes
6056	1	Greenfield & W Outer Dr	13	4	13	100%	31%	Yes	No
6273	0	Davison & Linwood	13	9	13	100%	69%	Yes	Yes
6335	0	Van Dyke & Mack	11	7	12	92%	58%	Yes	Yes
6548	0	Warren & Mack	3	3	11	27%	27%	No	No
7141	0	Warren & Evergreen	4	7	13	31%	54%	No	Yes
7233	0	Evergreen & McNichols	10	4	11	91%	36%	Yes	Yes
8144	1	Jefferson & Parker	4	2	9	44%	22%	Yes	No
8320	0	Davison & Rosa Parks	11	8	12	92%	67%	Yes	Yes
8984	0	Morang & 7 Mile	12	7	12	100%	58%	Yes	Yes
9568	1	Gratiot & Gunston	15	7	15	100%	47%	Yes	Yes
9860	0	McNichols & Telegraph	5	4	9	56%	44%	Yes	Yes
10019	1	Evergreen & 7 Mile	13	5	13	100%	38%	Yes	Yes
60026	0	Evergreen & Joy	12	9	14	86%	64%	Yes	Yes
60083	1	W Outer Dr @ WCCCD	9	3	10	90%	30%	Yes	No