Specification document for a MetroAccess users' mobile application

February 2019

Funded with support from:

In August 2018, Easterseals DC MD VA (Easterseals) was selected to receive a planning grant from the National Aging and Disability Transportation Center (NADTC). A total of 10 grants were awarded nationwide to test and refine innovative ideas for increasing accessible transportation and to develop community support and commitment to move toward full implementation. Easterseals utilized the grant to develop a document detailing recommendations for the specifications that should be included in a mobile application for Americans with Disabilities Act (ADA) complementary paratransit riders in the Washington, D.C. metro area to support independent mobility for individuals with disabilities and older adults.

The Washington Metropolitan Area Transportation Authority (WMATA) is responsible for the region's paratransit service, MetroAccess. The system has an average weekday ridership of 7,825 daily rides and delivers more than 163,000 rides each month. Approximately 8% of its rides are late and more than 2,700 rides each month arrive more than 20 minutes past the pick-up window and more than 900 times each month the ride never shows up (FY18 MetroAccess Monthly Operations Report).

The goal of this grant was to facilitate the successful development of a mobile app for MetroAccess riders by completing the planning phase of such a project. This report will be presented to WMATA for implementation. When WMATA implements the app with the recommended specifications, it will provide riders with information such that they can have more independence and control over their time and schedule. It will provide them with information such as the location of their van in real time, whether or not the van is on the way to their location, the anticipated length of their trip, and more. At its simplest, this app will provide MetroAccess riders with the same information that we get from our pizza delivery… knowing when the driver will arrive at your location. The app will directly address inefficiency in the time management capability for MetroAccess riders. Riders may better plan their days and make better use of their time with additional information regarding their MetroAccess rides. The app will allow the system to be much more customer-focused with little or no change to current systems or procedures.

To achieve this goal, Easterseals convened a working group of more than two dozen individuals that included:
- Individuals with a wide range of disabilities
- Seniors
- Regional government employees
- Para-transit experts
- Mobile app developers
- WMATA MetroAccess employees

The working group met monthly from October 2018 through January 2019 in four professionally facilitated working sessions. Initially, training was provided on the Americans with Disabilities Act (ADA) requirements for ADA Complementary Paratransit to ensure that recommended specifications would not conflict with federal legal requirements. The group brainstormed and debated what specifications were to be recommended for inclusion in the mobile app, and spent time troubleshooting possible barriers that might be encountered with technology and or specific recommendations with regard to how they may affect current MetroAccess policy and/or procedure. The attached specification document is the result of their hard work.

The final specifications include 42 features in the following categories:
- Passenger Profile
- Scheduling
- Fare Payment
- Pick-Up/Drop-Off
- Cancellations
- Evaluation
- Communication
- Accessibility
- Other

We would like to thank the members of the working group for their tireless efforts and commitment to this project.

MetroAccess Mobile App Working Group
- Tomi Adeleke, Virginia Department of Transportation
- Allison Anderson, WMATA
- Doug Birnie, Mobility & Transportation Committee, Fairfax Area Long Term Care Coordinating Council and Fairfax Area Disabilities Services Board
- Larry Bram, Easterseals DC MD VA; Montgomery County Commission on People with Disabilities
- Sarah Bram, MetroAccess rider
- Shawn Brennan, Montgomery County Maryland
- Jane Carona, American Council of the Blind
- Xavier Castellanos, The ARC of Northern Virginia
- Vencer Cotton, Columbia Lighthouse for the Blind
- Charles Crawford, WMATA Accessibility Advisory Committee; Access for All Committee—Transportation Planning Board, Metropolitan Washington Council of Governments

- Vera Damanka, Easterseals Disability Staffing Network
- Camille Franco, The ARC of Northern Virginia
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- Rochelle Harrod, Independence Now
- Luis Hurtado, Montgomery County Commission on People with Disabilities
- Susan Ingram, Community Support Services
- Nicole Murray, WMATA
- Carl Prather, Montgomery County Commission on People with Disabilities
- Reverend Ray Raysor, Sight n' Vision Disability Talk Radio Show
- Tim Sterns, WMATA
- Lynda Taylor, Prince George's County Commission on Individuals with Disabilities
- Adriana VanDunk, The ARC of Montgomery County
- Robbie Werth, Diamond Transportation Services
- Angela White, National MS Society, Greater DC/Maryland Chapter
- Lynn Winchell-Mendy, Metropolitan Washington Council of Governments
- Steve Yaffe, NADTC/Easterseals Project Action Consulting

NADTC Getting Ready to Innovate Grant Project

MetroAccess App Development Specification Document

ORGANIZATION			
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PROJECT

OVERVIEW | *High-level information describing proposed solution and business reasoning*

The goal of this project is to facilitate the successful development of a mobile app for MetroAccess riders. It will provide riders with information such that they can have more independence and control over their time and schedule.

OBJECTIVE | *What does the project work to achieve?*

With this app, MetroAccess riders will be empowered with information they need to be more productive in their daily lives thus providing increased independent mobility for people with disabilities and older adults. The information contained in this specification document was gathered through a professionally facilitated in-person series of meetings attended by MetroAccess riders and other stakeholders of the MetroAccess system.

BUSINESS CASE | *What is the problem being solved? Who/what is impacted? What are the business benefits?*

The proposed project will directly address an inefficiency in the time management capability for MetroAccess riders. Riders may better plan their days and make better use of their time with additional information regarding their MetroAccess rides. The app would allow the system to be much more customer-focused with little or no change to current systems or procedures.

TECHNICAL SPECIFICATION RECOMMENDATIONS

The following specifications are recommended for inclusion in the MetroAccess Mobile App

	PASSENGER PROFILE	
1	Access to profile	Passengers should have access to their rider profile including address, mobility aid use, service animal use, personal care attendant approval, etc.
2	Ability to update profile	Passengers should be able to update their profile prior to scheduling a trip to indicate the use of different mobility aids, a change of address, or other pertinent change
		Comments: While profile changes such as address and contact information on file may not be able to be changed via the app, it is suggested that prior to scheduling trips using the app, that information such as mobility aid, service animal, personal care attendant and companion use are able to be identified for the particular trip being scheduled. It is understood that this may not officially update a person's rider profile.
	SCHEDULING	
3	In-app scheduling	Passengers should have the ability to schedule rides via the mobile app.
4	Scheduling confirmation	Confirmation of rides should be available via the mobile app.
5	Removal of refused trips	If/when ride options are refused, the refused trip should not appear as a scheduled trip.
6	Visitor ride requests	Visitors should be able to schedule rides via the mobile app.
		Comments: It is understood that visitors will not be able to register via the mobile app.
7	Ride history	Passengers' ride history should be saved and available for future reference.
8	Scheduling time options	When scheduling via the app, passengers should be provided a list of alternate available trip time options.
		Comments: Must comply with ADA negotiation time requirements. It is understood that there may be a need to reject the first trip prior getting to seeing alternate pick-up time options.
9	Frequent trips	Passengers should be able to save frequent and/or favorite trips for future reference.

		Comments: Passengers should have the ability to save more than 3 favorite/frequent trips (three is the current limit when scheduling for MetroAccess online). There should be a list of options provided when scheduling based on past trips.
FARE PAYMENT		
10	**Reloading fare**	Passengers should have the ability to reload fare via EZPay on the mobile app.
11	**Push notifications**	Passengers should receive push notifications to alert them to a low fare balance on their EZPay.
PICK-UP/DROP-OFF		
12	**Map availability**	Passengers should have access to a real-time map showing the location of their scheduled vehicle.
		Comments: It is understood that even if a map is available, passengers will only have access to their own pick-up information which will be available a pre-determined amount of time ahead of their scheduled pick-up. It is recommended though that the map continue to provide real-time information while the passenger is on the vehicle.
13	**Specific location information**	Passengers should be provided detailed information on their specific pick-up/drop-off locations (including accessibility information of the surrounding paths of travel.)
		Comments: It is understood that this recommendation relies heavily on the availability of such data and may not be possible in the first iteration of the mobile app.
14	**Path of travel information**	Passengers should have access to path of travel information, including walking directions, to closest bus/train stop/station or transfer point with a focus on the accessibility of the path of travel and the availability of amenities at the bus stop/station such as shelters, elevators, etc.
		Comments: It is understood that this recommendation relies heavily on the availability of such data and may not be possible in the first iteration of the mobile app.
15	**Ride information**	Passengers should have information regarding the specific driver, vehicle number and vehicle type scheduled to pick them up.
		Comments: It is understood that there may be a limit to how much in advance this information may be shared because of changing the vehicle for which a person is scheduled.
16	**ETA**	Passengers should have an approximate ETA of their scheduled vehicle that updates if there are changes that occur in real-time.
17	**Image or GPS coordinate**	Passengers should have the ability to share photos and/or GPS coordinates with the driver to facilitate a pick-up if the driver is having a difficult time finding the passenger.
		Comments: It is understood that there are safety concerns regarding the sharing of information with drivers both in them receiving information while driving and how they may use the information once received. Other technologies may need to be explored to implement this recommendation safely.
CANCELLATIONS		
18	**Simple cancellation**	Passengers should have the ability to simply (few clicks or steps) cancel upcoming MetroAccess rides.
		Comments: It is understood that a policy would need to be developed regarding cancellation time using the app because of additional steps needing to occur for WMATA. If possible, allowing the passenger to see how many no shows have been accrued would be helpful information for passengers as well.
EVALUATION		
19	**Evaluation of service**	Passengers should have the ability to evaluate their MetroAccess rides by leaving comments.
		Comments: Providing a link on the app to WMATA's customer service online complaint form will satisfy this recommendation.
COMMUNICATION		
20	**Push notifications**	The mobile app should provide push notifications for important occasions (e.g. a pick-up time delay).
21	**Traffic alerts**	Information should be available to passengers regarding traffic alerts, changes to trip details, etc.
		Comments: The focus should be on delayed trip pick-up or drop-offs. Focus on delayed trips. It is understood that WMATA will need to discuss what information is appropriate to share and with how much advanced notice.
22	**Policy changes**	Provide information on updates/changes to WMATA policy and procedure.
		Comments: Providing a link to the WMATA rider's guide (where updates would be posted) would satisfy this recommendation.
23	**Real-time notifications**	Pertinent rider updates (including cancellation of subscription trips for holidays, changes in service for weather, etc.) should be available vial real-time application notifications.
		Comments: Passengers should be able to opt-in/out of receiving such notifications.
24	**Text notifications**	In addition to in-app and push notifications, text notifications should be available as an option to passengers.

25	Emergency help	Through the app, passengers should have the ability to notify persons/organizations in case of emergency. Persons/organizations may include friends/family, WMATA, and or local police.
	MISCELLANEOUS	
26	Time-out and Refresh	The app should NOT be set up with a time-out or refresh feature (unless needed for the use of other features listed).
27	Sharing info with others	Passengers should have the ability to share trip details with family/friends/colleagues including pick-up time, drop-off time, and driver and vehicle information.
		Comments: Sharing should be available via text.
28	Other devices	The mobile app should be compatible for devices other than smartphones including tablets and computers.
29	Password storing	The mobile app should have the ability to save app information including username and password to prevent the necessity of reentering credentials.
30	App registration process	The registration process for the mobile app should be simple and user-friendly.
31	FREE app	The app should be free and contain no ads.
32	Update Ranger	The Ranger units within the vehicles should be updated for better availability of information and more operational efficiency.
33	Specialized App help	Through the app, passengers should be able to access specialized help (app helpdesk) based on the issue/functional deficiency they are experiencing.
34	Develop Tutorial	An app tutorial or training should be developed to teach passengers the appropriate use and features included on the app.
35	Refreshable braille	The app should include refreshable braille display integration.
	ACCESSIBILITY	
36	Talk to text	The app should have talk-to-text features.
37	Notifications	Notifications need to be made via sound, vibration, and visual mediums for people with different types of disabilities. For all notifications, allow for turning them on and off.
38	Look of app	The app "frame" should be scalable for people with visual impairments. The graphics should not interfere with the text or other aspects of the mobile app information. The graphics all need descriptions. And the color contrast of the app should be compatible with accessible contrast for persons with visual impairments.
39	Label all components	All components and controls on the mobile app should be labeled appropriately so that app readers will accurately identify the controls/components to persons with visual impairments.
40	Map descriptions	If/where maps are provided, audible map descriptions should be provided.
		Comments: It is suggested that the level of detail includes cross street information.
41	Ease of use	The app should be intuitive, customizable, and easy to use. This may mean having advanced features available separately or vial add-on options. Some level of customization is needed. Need to have the ability to shut off features that aren't needed to ensure ease of use. This may be accomplished through app settings or by providing add-on features to the app instead of making all features available with the base app.
42	Translation	The app should be translated into other languages and/or translation should be available as an add-on feature.
	TECHNICAL SPECIFICATIONS IDEAS	
	The following specifications should be considered for inclusion in the MetroAccess Mobile App after consideration of the comments provided and pending the ability of such concerns to be addressed.	
	PASSENGER PROFILE	
	Picture of passenger	Passengers should be able to upload a photo of him/herself so the driver can better identify the passenger upon arrival.
		Comments: It is understood that the concern is that drivers should not have access to passenger photos or other personal and private information as well as whether or not this is technologically possible.
	SCHEDULING	
	Other transit options	Passengers should be provided with the availability of other transit modes/options for their desired trip. If other options area available, passengers should be able to schedule those rides via the mobile app.
		Comments: It is understood that WMATA has a concern this would be seen as steering passengers to other providers. The ability to provide this option would be heavily dependent on agreements between WMATA and other providers.
	FARE PAYMENT	
	Fare info	The fare per ride on multiple modes of transportation for a particular trip should be available to passengers.
		Comments: This feature would only make sense if the other transit options feature is made available on the app. The ability to provide this option would be heavily dependent on agreements between WMATA and