MINETA NATIONAL TRANSIT RESEARCH CONSORTIUM

A Study of Factors that Inhibit and Enable Development of Sustainable Regional Transit Systems in Southeastern Michigan

Funding Structures and Competing Priorities for Regional Transit in Metro Detroit

One of seven final reports resulting from this project.

MNTRC Report 12-22

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MINETA NATIONAL TRANSIT RESEARCH CONSORTIUM

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REPORT 12-22

A Study of Factors that Inhibit and Enable Development of Sustainable Regional Transit Systems in Southeastern Michigan

FUNDING STRUCTURES AND COMPETING PRIORITIES FOR REGIONAL TRANSIT IN METRO DETROIT

One of seven final reports resulting from this project.

Scott Anderson, MACS

March 2014

A publication of

Mineta National Transit Research Consortium

College of Business
San José State University
San José, CA 95192-0219

TECHNICAL REPORT DOCUMENTATION PAGE

1. Report No. CA-MNTRC-14-1136 RC-1599	**2. Government Accession No.**	**3. Recipient's Catalog No.**
4. Title and Subtitle Funding Structures and Competing Priorities for Regional Transit in Metro Detroit		**5. Report Date** March 2014 **6. Performing Organization Code**
7. Authors Scott Anderson, MACS		**8. Performing Organization Report** MNTRC Report 12-22
9. Performing Organization Name and Address Mineta National Transit Research Consortium College of Business San José State University San José, CA 95192-0219 University of Detroit Mercy 4001 McNichols Rd., W Detroit, MI 48221		**10. Work Unit No.** **11. Contract or Grant No.** DTRT12-G-UTC21 2010-0299
12. Sponsoring Agency Name and Address U.S. Department of Transportation Research & Innovative Technology Admin. 1200 New Jersey Avenue, SE Washington, DC 20590 Michigan Department of Transportation Research Administration 8885 Ricks Rd. P.O. Box 30049 Lansing, MI 48909		**13. Type of Report and Period Covered** Final Report **14. Sponsoring Agency Code**
15. Supplemental Notes MDOT Project Manager: Sharon Edgar		

16. Abstract

The Detroit region provides less locally raised funding for transit than other urban areas of the U.S. and Canada, resulting in a transit system that is less effective.

This is exacerbated by the fact that federal funds can be used for capital projects only if a local source of matching funds is available, so Detroit receives less federal money than would be considered its fair share (based on population, geographic area, or similar metrics). Past efforts to improve transit foundered for political and other reasons, but recent developments, such as M-1 Rail and the State's enactment of laws creating a Regional Transit Authority (RTA), represent a positive trend.

This study examines transit financing in four comparable metropolitan regions, compares them with practices and opportunities in the Metro Detroit region, and offers recommendations for the future.

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17. Key Words Transit; Funding; Finance	**18. Distribution Statement** No restrictions. This document is available to the public through The National Technical Information Service, Springfield, VA 22161		
19. Security Classif. (of this report) Unclassified	**20. Security Classif. (of this page)** Unclassified	**21. No. of Pages** 28	**22. Price** $15.00

Form DOT F 1700.7 (8-72)

Library of Congress Catalog Card Number:
2014933456

To order this publication, please contact:

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032014

ACKNOWLEDGMENTS

This material is based upon work supported by the U.S. Department of Transportation's University Transportation Centers Program under Grant Number DTRT12-G-UTC21 and by a grant from the Michigan Department of Transportation.

The author is grateful to the following stakeholders whose interviews and materials were critical resources for the findings of this study of Detroit transit:

- Megan Owens, Executive Director, Transportation Riders United
- Brian Pawlik, Southeast Michigan Council of Governments
- Bill Shea, Crain's Detroit Business
- John Swatosh, Deputy Director, Suburban Mobility Authority for Regional Transportation (SMART)

The author is grateful for the assistance of Dr. Leo Hanifin, Dr. Utpal Dutta, Dr. Alan Hoback, Claudia Bernasconi, Lloyd Semple and Pat Martinico.

The authors also thank MTI staff, including Deputy Executive Director and Research Director Karen Philbrick, Ph.D.; Director of Communications and Technology Transfer Donna Maurillo; Research Support Manager Joseph Mercado; and Webmaster Frances Cherman. Additional editorial and publication support was provided by Editorial Associate Nancy Hannaford.

TABLE OF CONTENTS

LIST OF FIGURES

EXECUTIVE SUMMARY

The Detroit region provides less locally-raised funding for transit than other urban areas of the United States and Canada, and therefore has a less adequate transit system than other regions. This is exacerbated by the fact that federal funds for capital projects can only be used if there is a local source of matching funds, so Detroit receives less than would be considered its fair share (based on population, geographic area, or similar metrics) of federal money. It has not always been so; Detroit's transit system fell into disuse during a time when it was experimenting with building automobile-centric communities, natural for the home of automobile production to try. Past efforts to improve transit floundered for political and other reasons, but recent developments such as M-1 Rail and the State's enactment of laws creating a Regional Transit Authority (RTA) represent a positive trend.

The RTA must create a mechanism to fund an adequate transit system. Inexpensive improvements, such as a common farebox mechanism allowing for through-ticketing on all local systems, should be implemented quickly. The bus rapid transit (BRT) system proposed by the RTA should include features that give it sufficient sense of permanence to provide a firm foundation for transit-based redevelopment. Ordinary fixed-route bus service can be rerouted quickly and at near-zero cost as local conditions change, which does not encourage developers to build based on such a service; capital-intensive services such as light rail or fixed-guideway BRT are very expensive and difficult to relocate, which is why developers focus much more on such kinds of facilities.

I. FUNDING MECHANISMS

Funding for transit comes from five sources, generally speaking: federal, state, local, farebox, and miscellaneous (sales of advertising, for example).[1] The miscellaneous category, for nearly every transit provider in the United States and Canada, is insignificant and so will not further be explored here. Federal funding is tightly coupled to the remaining local sources, so in general can be considered dependent upon local funding choices.

Nationally, the most common dedicated source of funding is a locally originated sales tax.[2] All of the peer cities studied (Atlanta, Cleveland, Denver and St. Louis) use this mechanism. However, in Michigan such sales taxation is prohibited by the state constitution (which does not allow for local-option sales taxes for any reason except convention facilities),[3] so can only be considered a long-term option. Sales taxes are not the only form of local revenue used by the peer cities; Denver, for instance, uses sales tax bonds (bonds backed by future sales tax receipts), federally guaranteed loans, and other mechanisms.

Detroit *per se* has no dedicated, local source of transit funding. The city's bus service is operated by a municipal department, the Detroit Department of Transportation (DDOT), which relies on an appropriation from the city's general-fund budget for its operations.[4] As the city's finances have struggled, this appropriation has diminished to where Detroit, with about 40 percent of its peak population, operates less than two percent of the bus service it did in the period immediately following World War II.[5]

In the suburban communities surrounding Detroit, Oakland, Macomb and suburban Wayne Counties, the regional bus operator, Suburban Mobility Authority for Regional Transportation (SMART), relies on a property tax. In two of the three counties (excluding Macomb), individual communities can decide not to collect the tax (or receive service). This "opt out" process leads to odd gaps in the system, as shown in Figure 1,[6] and can lead to chaotic realignment of routes, as in 2006 when the large suburban community of Livonia decided to no longer participate.

Note the gray-shaded areas surrounding Detroit's core, where communities have opted out completely from any Metro Detroit transit services. In particular, note the isolated opt-out community located west of I-75, just south of Michigan State Route 10. This locale has opted out of SMART service, yet has a SMART route running through it to neighboring communities that have opted in. The SMART route has no bus stops within the "opt-out" section, yet has a route traversing the entire community.

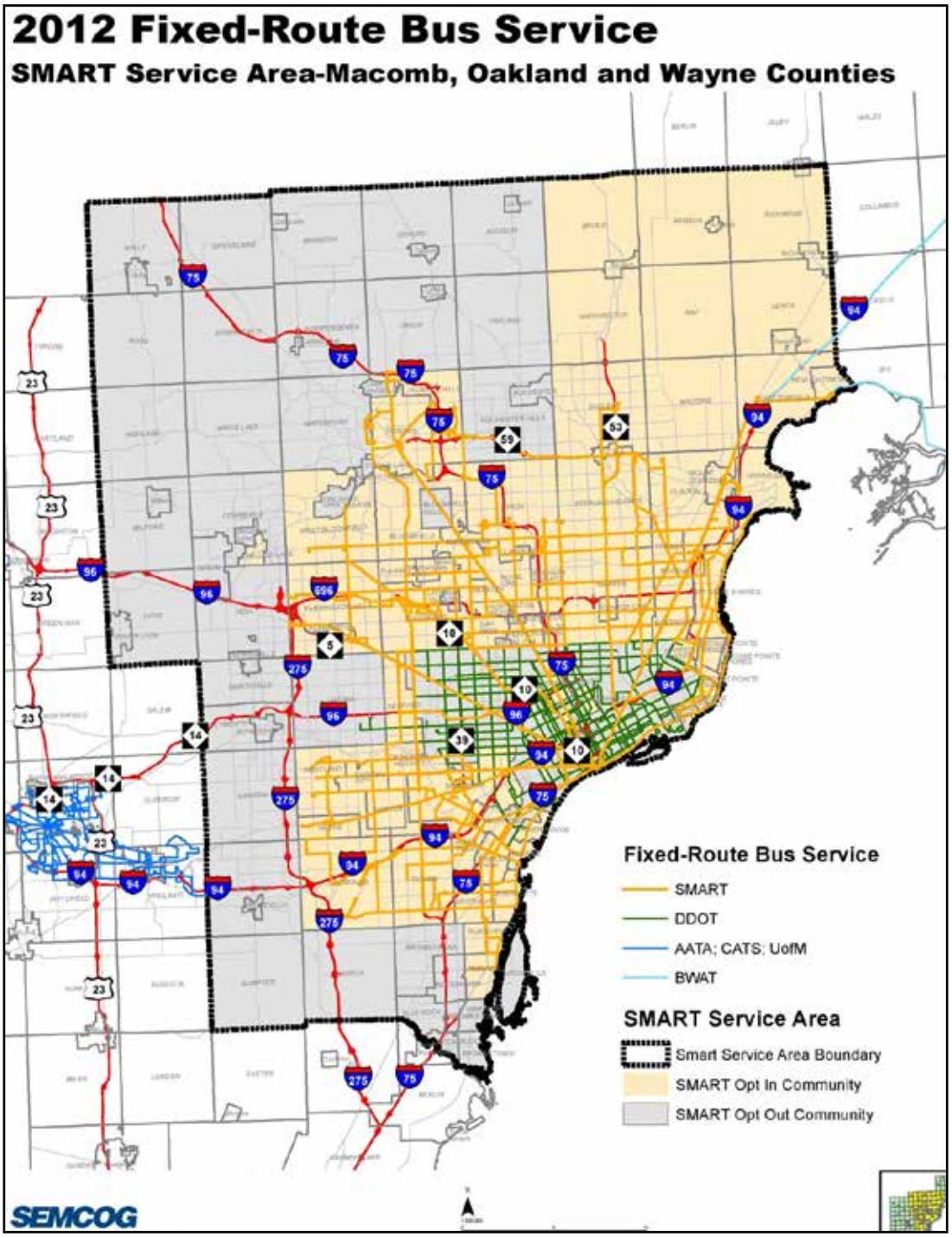

Figure 1. 2012 Fixed-Route Bus Service, Showing Service "Opt-Out" Gaps

Source: Brian Pawlik, "2012 Fixed-Route Bus Service" (map), Southeast Michigan Council of Governments (SEMCOG) (Detroit, MI: SEMCOG, June 2013).

Detroit spends less per capita than the peer cities reviewed, which themselves are representative of typical major urban areas throughout the U.S. and Canada.[7] In Figure 2, note Denver has been omitted because it is an outlier (spending over $400 per capita as compared to just under $140 for St. Louis and Atlanta). Each of the peer region's per capita spending is within the range typical of major urban areas in the U.S. and Canada, at about

$135 per person. However, at $78 per capita, Detroit spends approximately 40 percent less than its peer regions.

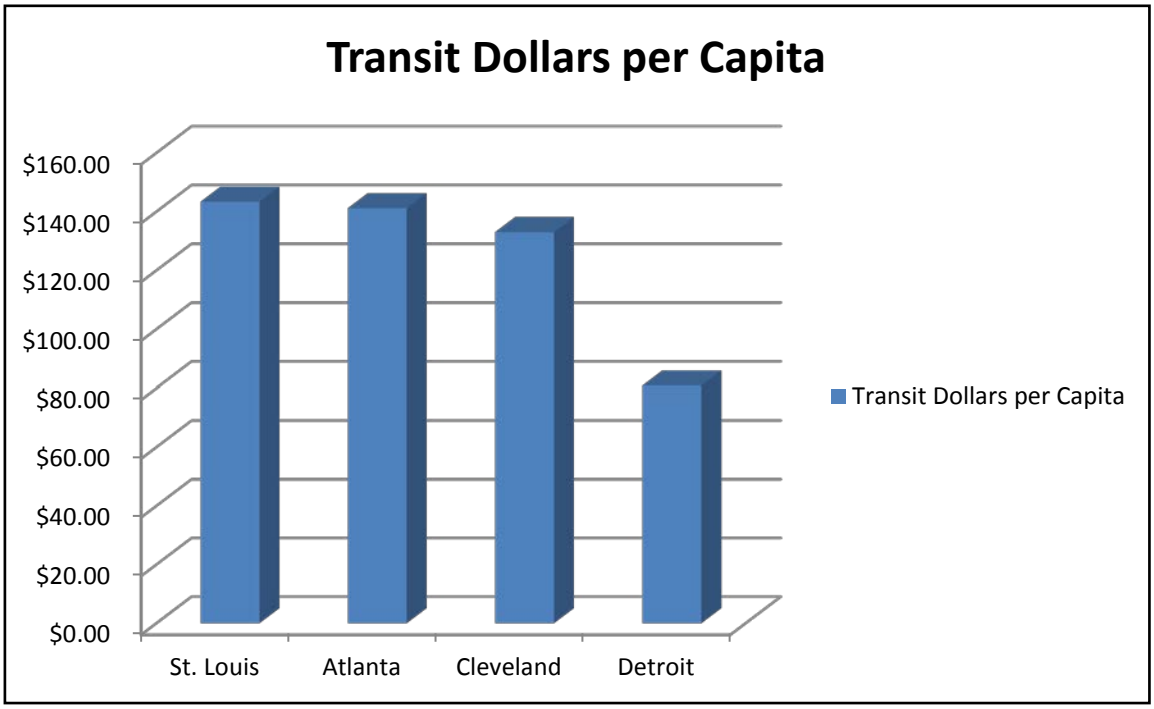

Figure 2. Transit Dollars per Capita, 2011

Source: Federal Transit Authority (FTA), "National Transit Data" (2011) http://www.ntdprogram.gov (accessed September 15, 2013).

Notes: Data used is for 2011, the last year from which it is available for all the systems mentioned. Denver has been omitted from this analysis, since it may be considered an outlier, with per capita transit spending at $400.

II. COMPETING TRANSPORTATION PRIORITIES

Detroit had, at one time, an excellent network of streetcars and buses, and “interurban” trains (somewhat larger and faster than regular streetcars), which provided transportation to areas far beyond the city in all directions.[8] Detroit, as is well known, became a major center of automobile manufacturing, and built the region into an environment that favored its product. Streets were widened, parking was created, and expressways were built on a large scale in the period after World War II.

Detroit has two major east-west expressways: the Jeffries Freeway (I-96), which runs from the western suburbs into downtown; and the Ford Freeway (I-94), which runs from southwest to northeast Detroit and extends in both directions into the suburbs (refer to Figure 1). There are three north-south expressways: the Southfield Freeway (M-39), which runs due north-south in the western part of the city; the Lodge Freeway (M-10), which runs northwest from downtown; and I-75, which runs from south of the city through downtown and then nearly due north into the suburbs. A short connector, M-8, connects I-75 and M-10 a few miles north of downtown.

With this major investment in roads and highways, one can hardly be surprised that automobile use grew and, correspondingly, transit ridership fell. Further, as investment and population left Detroit for the suburbs, beginning in the 1950s (Detroit’s population declined by 34.9 percent from 1950 to 1980, and a further 41.7 percent from 1980 to 2012), people and jobs moved from where transit had been an important piece of transportation infrastructure to where it was less and less important, increasing dependence on automobiles and automobile-centric roads and facilities.[9]

III. IMPROVING TRANSIT IN DETROIT: PAST AND CURRENT EFFORTS

Detroit's current efforts to improve transit are not its first attempt. Over the years, several attempts have been made.[10] One relatively recent effort in the mid-1970s led to the creation of the elevated automatic railroad known as the People Mover, which makes a one-way circuit around downtown Detroit. It was proposed at the time as part of a larger system of rapid transit "spokes" for which it would serve as a hub, but for many reasons none of the rest of the system was ever built.

The failed initiatives abound, but here are a few exemplary failures. In 1919, the Detroit Rapid Transit Commission proposed a multi-modal Rapid Transit Plan; the following year the City Council adopted it, but Mayor Couzens vetoed the measure and an override attempt failed by one vote. In 1933, Detroit voters approved a plan for a subway, but the State refused to recommend its funding to the federal government. In 1953, the *Detroit Metropolitan Area Transportation Study* called for a balanced system of highways and mass transit; its recommendations (at least in regard to mass transit) were ignored.[11]

The current situation has improved, based on two related efforts. Beginning in 2007, the Regional Transit Coordinating Council (RTCC) embarked on an effort to develop a starter light rail line along the Woodward Avenue corridor between downtown and midtown Detroit, a distance of approximately 3.5 miles.[12] This attracted a great deal of interest and investment from private industrial concerns, nonprofits and the academic community, and has led to what is now known as M-1 Rail, a streetcar-style light rail line that is expected to break ground in fall 2013 and be operational in 2015.

At the same time, the RTCC's main effort was to produce a regional transit plan and to have it approved by the RTCC board, consisting of the mayor of Detroit and the heads of the three counties.[13] This effort was completed in December 2008, and provided the foundation for the additional work that culminated in a white paper describing a possible, initial bus rapid transit system for the tri-county area, which formed the basis for the package of bills that led to the creation of the area's first Regional Transit Authority (RTA) in late 2012. Significantly, this is the first time that Metro Detroit has ever had a regionally approved transit plan, and the first time an organization has ever existed that has the charter to implement such a plan.

The RTA differs from the earlier RTCC in three fundamental ways. First, the RTCC had no charter to raise any revenue, whereas that is explicitly authorized in the State Act that allowed for the creation of the RTA. Second, the RTCC had no charter to operate any transit service at all (its purpose was clear from the "Coordinating Council" portion of its name), all it could do was attempt to coordinate service and to plan. Third, while the RTCC could *ask* the transit operators to do various things, it had in its toolbox neither carrot nor stick to persuade them to take action, but the RTA has the ability to withhold some funding if operators ignore or flout its suggestions.

IV. FUNDING STRATEGIES FOR THE NEW RTA

The Suburban Mobility Authority for Regional Transportation (SMART) bus service is funded by property taxes, and the recent major recession (worsened in Detroit by the bankruptcies of General Motors and Chrysler in 2009) shone a spotlight on a weakness of this single-source method. As jobs were lost and the need for transit grew, property values – and, hence, taxes – plummeted. In Oakland County, for example, residential property values fell 36 percent from 2007 to 2011.[14] Sales taxes, alternatively, are collected over a broad range of products and, though susceptible to changes in economic activity over time, would not appear to be subject to such drastic changes as quickly.

As mentioned above, a sales tax for the region to support transit, popular in other places, is difficult to implement in the short-term for Southeast Michigan because it likely requires a change to the Michigan constitution, not a quick (or easy) process. In hearings conducted in Lansing during the process of enacting the Regional Transit Authority (RTA) legislation, an option of funding by a vehicle registration fee was discussed; this was made legal by tie-bar legislation enacted simultaneously with passage of the RTA bills.[15]

A vehicle registration can be collected if the public in the region approves such a fee. This can be done in much less time than it would take to pass a constitutional amendment. A vehicle registration is also less of a regressive tax than a general sales tax.

The RTA-defining Act 387 does not specify how much money the RTA should raise, and only assigns it three tasks.[16] The first is to accept the two existing regional transit plans (Ann Arbor and the metropolitan tri-county RTCC Plan) as its initial regional plan. This has been done. Second, the RTA must plan for and then construct and operate the bus rapid transit system (BRT), referred to in the Act as “rolling rapid transit,” once it has funding capacity to do so. Third, it must coordinate service among local providers.

Nothing in the Act prohibits the RTA from raising more money, though, and it has the opportunity to merge the second and third tasks by raising enough money to operate both BRT and local bus service in the eastern three counties, including Detroit. There are several advantages to this. First, this gives the RTA the opportunity to present the transit funding plan as a replacement for the existing SMART tax in the communities where that tax is now collected, rather than a new tax. A dedicated transit tax in the city of Detroit would relieve the pressure from the general fund of having to provide the entire subsidy for local bus service. Some opponents might suggest that such a plan would lead to suburban taxpayers paying for Detroit’s bus system. However, the flow of any significant funds from the suburbs to Detroit is prohibited by the “85% rule” in the RTA legislation.[17] It requires that 85 percent of the funds be spent where it is collected. This option should be explored as an option as the RTA proceeds with its planning and funding of regional transit. The 85 percent rule was politically necessary to assure passage of the laws, but it also decreases operational flexibility and may lead the RTA to have to operate service in a less than optimal manner, following funding source requirements rather than rider trip needs.

V. OPERATING STRUCTURE

Having reviewed the structures implemented in the peer regions, funding and operational characteristics make evident that Wayne, Oakland and Macomb Counties, should use a single bus operator to provide all bus service, local and rapid, within that portion of the region. The existing two-operator system is inefficient and is not justified by any transit needs, but rather exist due to historical developments and jurisdictional issues. The two systems require two sets of non-operating employees, an unnecessary multiplicity of maintenance facilities, and run buses along several of the same roads in the same parts of the region for portions of the day. The jurisdictional convenience of ending most Detroit Department of Transportation (DDOT) service at or near the Detroit city limit and most Suburban Mobility Authority for Regional Transportation (SMART) service on the other side of the same lines does not provide any benefit to passengers. To the author's knowledge, nobody has ever tried to point out how this structure benefits the riding public, or provided any justification for it at all beyond the passive justification ("this is how it's always been"). It may or may not be possible to accomplish this in the short term, but at the very least it should be considered for the medium term.

Without the jurisdictional and historic baggage of the existing systems, a single transit operator (whether an existing bus operator or private third-party) could completely redesign a local bus system to take advantage of the bus rapid transit (BRT) lines and M-1 Rail, focused on current employment and housing densities and transit needs. The RTA would be responsible for overseeing the route redevelopment.

The type of local transit service provided should vary by density, as is done today in Macomb County. Densely populated centers in Detroit and its suburbs, including areas of residential density and areas of employment density, deserve to be served by frequent fixed-route service. As density diminishes, service can be provided by less frequent community circulators using smaller buses, or paratransit-type vehicles in an on-demand service mode. Unlike today, where most bus routes are very long, with slow traveling speeds and high frequency of stops, the BRT service will allow for shorter local routes using the BRT to serve long-distance travel.

The transit system and funding in Ann Arbor is sufficiently different, and the service does not overlap as do the two bus systems in the eastern three counties, so there does not seem to be any benefit to adding Ann Arbor's bus system to a consolidation plan. However, coordination with the regional BRT should be a priority of the RTA, especially with regard to any new BRT service to Ann Arbor and the airport, and any commuter rail service instituted between Detroit and Ann Arbor.

VI. CONCLUSION

Detroit's transit system fell into disuse over time, for a variety of reasons relating to growth of automobile-centric communities and the region's love of the automobile, generally. Past efforts to improve transit floundered for political and other reasons, but recent developments such as M-1 Rail and the State's enactment of laws creating a Regional Transit Authority represent a positive trend. The question as to how much development will happen around BRT stations has a great deal to do with the specifics of BRT implementation.

VII. RECOMMENDATIONS

NEAR-TERM RECOMMENDATIONS (1-2 YEARS)

1. In the near term, the Regional Transit Authority (RTA) should propose a vehicle registration fee or another local funding mechanism, sufficient to fund bus rapid transit (BRT) and improved coordination and improvement of local bus operations across the four-county region.

2. In order to increase efficiency and rider service in the three eastern counties, the RTA should move quickly to implement a redesigned route system based on current population and job locations that more effectively utilize the assets of Suburban Mobility Authority for Regional Transportation (SMART) and Detroit Department of Transportation (DDOT).

3. Full consolidation of the five systems in the eastern counties should be studied in depth and given serious consideration. (The five systems are the RTA (BRT), DDOT, SMART, M-1 and People Mover.)

4. The RTA should direct the service providers to implement a common fare currency (transit card, etc.) and compatible farebox equipment, such that each provider can accept transfers from others (each within its own rules for such transfers) so that travelers can complete a trip without having to repeatedly pay single-operator fares. Service providers should also integrate their information systems to provide current, region-wide route and travel time information.

MID-TERM RECOMMENDATIONS (3-5 YEARS)

1. The RTA should propose a local funding mechanism, ideally a local sales tax, sufficient to fund BRT and local bus operations in the eastern three counties, and to fund BRT and supplement local bus operations in Washtenaw County. This will replace the SMART property tax and create a more stable source of funding. As has been discussed, real estate values have in recent years shown their volatility. Any system, whose income relies on such an unstable regressive tax, cannot plan easily future operations. The RTA should consider some other non-regressive, source of funding, less subject to such spikes and troughs, such as vehicle registrations.

2. If not yet accomplished in the short-term (first two years), the RTA should absorb the operations of SMART, DDOT and the People Mover.

3. Washtenaw County's local operations should be left to Ann Arbor Transportation Authority (AATA,) and discussions should take place to decide how to supplement that organization's local service with the BRT service (and any eventual other services) to be provided regionally through the RTA.

4. If a purpose of BRT is to create opportunities for redevelopment of underused land, the specifics of BRT implementation must be perceived as sufficiently permanent

to enable redevelopment and overcome developers' fears that such a system can cheaply and easily be relocated away from their planned developments.

LONG-TERM RECOMMENDATIONS (6-10 YEARS)

1. A local-option sales tax should be developed, as this has proven successful in funding transit in many communities nationwide.

2. The operations of M-1 Rail should be absorbed by the RTA during this period.

ABBREVIATIONS AND ACRONYMS

AATA	Ann Arbor Transportation Authority
BRT	Bus Rapid Transit
DDOT	Detroit Department of Transportation
M-1 Rail	Streetcar line along Woodward Avenue in Detroit Michigan
MDOT	Michigan Department of Transportation
RTA	Regional Transit Authority
RTCC	Regional Transit Coordinating Council
SMART	Suburban Mobility Authority for Regional Transportation
US DOT	United States Department of Transportation

ENDNOTES

1. Federal Transit Authority (FTA), "National Transit Data" (2011) http://www.ntdprogram.gov (accessed September 15, 2013). Data used is for 2011, the last year from which it is available for all the systems mentioned.

2. Ibid.

3. Citizens' Research Council of Michigan (CRC), *Michigan Constitutional Issues: Finance and Taxation*, Report No. 313-10 (October 1994), (Detroit, MI: CRC, 1994), 2-3 http://www.crcmich.org/PUBLICAT/1990s/1994/rpt313.htm [choose Report 313-10].

4. City of Detroit, *City of Detroit Annual Budget, Budget Year 2011-12* (Detroit, MI: City of Detroit, 2011).

5. Author's comparison of transit timetables, 1956, 1960, and 2012. Unit used for comparison is number of scheduled bus trips per week on all regular revenue-service routes. Detroit Department of Street Railways (DSR), *Timetables*, 1956 and 1960 (Detroit, MI: City of Detroit, 1956, 1960); Detroit Department of Transportation (DDOT), *Timetables*, 2012 (Detroit, MI: City of Detroit, 2012).

6. Brian Pawlik, "2012 Fixed-Route Bus Service" (map), Southeast Michigan Council of Governments (SEMCOG) (Detroit, MI: SEMCOG, June 2013).

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8. Jack E. Schramm and William H. Henning, *Detroit's Street Railways, Vol. 1: City Lines 1863-1922* (Central Electric Railfans' Association Bulletin (CERA) No. 117) (Chicago, IL: CERA, 1978).

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17. Ibid., sec. 10.4.

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Scott Anderson taught mathematics and computer science for many years at the University of Detroit Mercy. He has a master's degree in Computer Science from the University of Detroit and a bachelor's degree in Computer Science from the State University of New York (Albany). Scott was a member of the team that developed the initial concept of the "Woodward Transit Catalyst Project," now M-1 Rail, and assisted with the visioning of bus rapid transit in metro Detroit that formed part of the basis for the 2012 RTA legislation. His interest in logistics generally, and transit in particular, goes back many years, and he is co-author of the paper Walking and Transit with Dr. Hoback. He consulted to private industry for many years, specializing in freight logistics systems.

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San José State University, of the California State University system, and the MTI Board of Trustees have agreed upon a peer review process required for all research published by MNTRC. The purpose of the review process is to ensure that the results presented are based upon a professionally acceptable research protocol.

Research projects begin with the approval of a scope of work by the sponsoring entities, with in-process reviews by the MTI Research Director and the Research Associated Policy Oversight Committee (RAPOC). Review of the draft research product is conducted by the Research Committee of the Board of Trustees and may include invited critiques from other professionals in the subject field. The review is based on the professional propriety of the research methodology.

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