

Short Range Transit Plan For Manchester, NH FY 2018 – FY 2022



manchester transit

Prepared for the Manchester Transit Authority

By the Southern New Hampshire Planning Commission

August 2017

SHORT RANGE TRANSIT PLAN FOR MANCHESTER, NH

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INTRODUCTION

Background

The FY 2018 – FY 2022 Short Range Transit Plan (S RTP) provides a five-year program for the continuing development of the Manchester Transit Authority's (MTA) fixed-route bus and ADA complementary paratransit services. The document has been designed to provide MTA and Southern New Hampshire Planning Commission (SNHPC) with the necessary information to review all aspects of operation. The SNHPC Unified Planning Work Program (UPWP) includes funding for updates to the S RTP and the work is completed according to a September 26, 1995 agreement between SNHPC and MTA to maintain and update the S RTP. The S RTP includes a description and evaluation of existing transit service and formulates recommendations. The recommendations included in the S RTP will be re-assessed during the each subsequent version of the Plan.

The MTA, in its present form, was established by the City of Manchester on May 1, 1973 for the purpose of providing mass transit service to the community. A five-member Commission appointed by the Board of Mayor and Aldermen governs the Authority. The SNHPC is the designated Metropolitan Planning Organization (MPO) for the area. Transit planning in the MPO area is the responsibility of the SNHPC as MTA operating and capital funding is administered through the SNHPC Transportation Improvement Program (TIP) and Regional Transportation Plan (RTP). In addition, the SNHPC provides planning services to the MTA and conducts short and long-range transit planning activities as included in the UPWP.



Goals and Objectives of the S RTP

It is generally agreed upon that the development and maintenance of a comprehensive public transit system is desirable to provide an attractive and viable transportation alternative to the single-occupant automobile. MTA and SNHPC are committed to the continuing development of public transit in this area to improve mobility, provide access to employment, medical care and other services as well as to improve the environment and promote livable and sustainable communities. In this regard, the following overall goal of the S RTP is

"[T]o assist in the development and provision of an efficient, reliable and cost-effective public transit service that encourages increased use by representing a viable alternative to single-occupant automobile travel."



The following objectives for the SRTP have been identified as necessary to attain this goal:

1. Collect and analyze data on transit system performance and urban development patterns to assess adequacy and efficiency of service and to identify opportunities for new or changed service design.
2. Encourage increased ridership and cost effective service by considering and analyzing input from current riders.
3. Evaluate MTA fare structure so as to encourage ridership while maintaining a minimum 10% farebox recovery rate.
4. Identify alternative sources of revenue in order to diversify MTA's local match stream.
5. Develop specific strategies to encourage use amongst choice riders.

Contents of this Report

The document is divided into two parts, which are summarized below:

1. MTA Today:

- Organization/Management Structure
- Fixed-Route Service
- Fares
- Demand-Response Paratransit
- Ridership Trends
- Revenues & Expenditures
- Evaluation of Existing Service
- Public Transportation Demand

2. MTA Down the Road:

- Measurable Recommendations
 - A - Accomplishments
 - B - Monitoring System Performance
 - C – Service/Schedule Adjustments
 - D – Marketing Practices
 - E – Vehicle Replacement
 - F – Community Support Activities
 - G – System Amenities

PART 1: MTA TODAY

This section provides a comprehensive discussion of MTA transit services currently offered in the SNHPC region and beyond. The discussion includes administration, fixed-route and paratransit service features such as routes, fares, MTA facilities and capital, ridership data and revenues and expenditures.

ORGANIZATION

The Manchester Transit Authority was established by the City of Manchester on May 1, 1973 as a public non-profit agency designed to provide mass transit service for the community. Although the MTA also provides pupil transportation for the Manchester School District, public transit and school transportation funding, operations, and vehicles are administered as completely separate entities. MTA is governed by a five-member Board of Commissioners appointed by the Board of Mayor and Aldermen and a Chairman and Vice-Chairman are elected from the membership. An Executive Director is responsible for the financial and operational oversight of both Transit and School services.

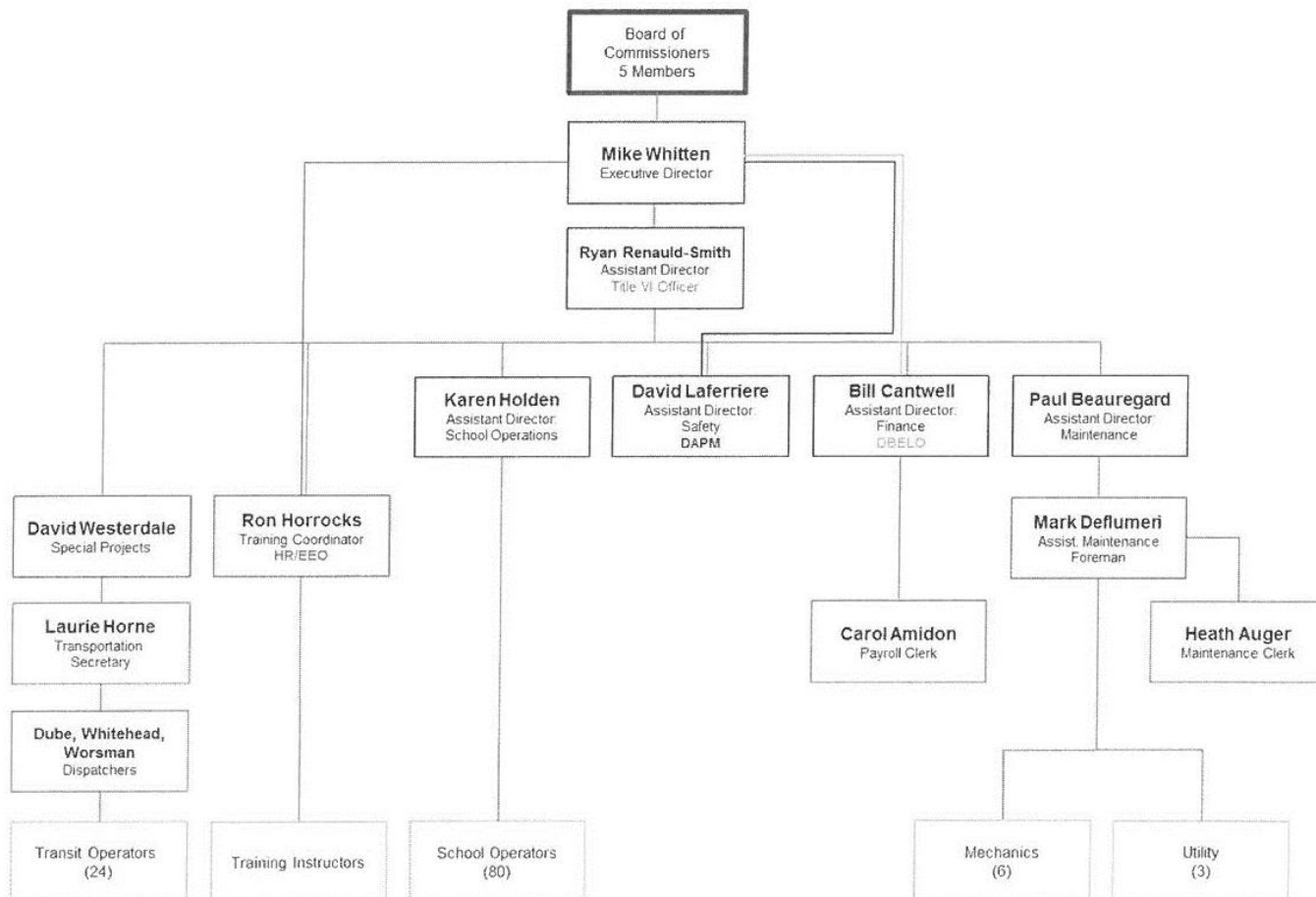
The MTA consists of three main departments.

- *Operations*
 - Daily operations, including driver assignments, vehicle schedules, and dispatching
 - Assistant Executive Director responsible for daily oversight
- *Maintenance*
 - Plans and implements comprehensive programs for vehicle, equipment, and facility maintenance
 - Maintenance Foreman responsible for oversight of maintenance functions
- *Administrative*
 - Plans, directs, and performs the fiscal and administrative duties/activities of the agency
 - Assistant Director of Finance responsible for daily oversight

The current employee roster includes 25 full fill-time drivers, 79 part-time school bus drivers, 9 maintenance workers, 3 dispatchers, 3.5 clerical personnel, 1 safety supervisor, 1 maintenance foreman, 1 assistant maintenance foreman, 1 information technology supervisor, 1 CFO, and 3 Managers. The MTA's organizational structure is outlined in Exhibit 1.

Exhibit 1

Manchester Transit Authority



FIXED-ROUTE SERVICES

The existing MTA fixed-route system (see Exhibit 2) consists of 14 routes providing scheduled service Monday through Friday to Manchester and limited portions of surrounding communities. Saturday service is provided on twelve of these routes, while no Sunday service is provided. Hours of operation on Weekdays are between 5:25 a.m. and 6:25 p.m., while on Saturdays they are reduced slightly to between 9:30 a.m. and 5:00 p.m. Comprehensive service is provided to the central business district, and routes extend outwards to serve other areas of the City. The fixed-route system is confined to the boundaries of the City of Manchester, except for limited service to the following surrounding towns:

1 DARTMOUTH/VA HOSPITAL DOWNTOWN	8 SOUTH WILLOW ST MALL OF NEW HAMPSHIRE
2 HANOVER ST E. INDUSTRIAL PARK	9 NASHUA EXPRESS
2S HANOVER ST E. INDUSTRIAL PARK	10 VALLEY ST MALL OF NEW HAMPSHIRE
3 BROWN AVE AIRPORT	11 FRONT ST HACKETT HILL ROAD
4 CONCORD EXPRESS	12 SOUTH BEECH ST MALL OF NEW HAMPSHIRE
5 RIVER RD SOUTHERN NH UNIVERSITY	13 BEDFORD GROVE PLAZA SECOND STREET
6 BREMER ST MAST ROAD	14 ELLIOT HOSPITAL EAST SIDE PLAZA
7 GREEN DASH FREE Downtown Shuttle	

Bedford

The Bedford Grove Plaza / Second St (Route 13) route extends less than a mile into the adjacent town of Bedford to serve commercial activities.

Goffstown

The Bremer St./Mast Rd. (Route 6) route extends 1.25 miles into Goffstown and serves St. Anselm College and a shopping center.

Londonderry

The Brown Ave./Airport (Route 3) route extends approximately one mile into Londonderry to serve Manchester Boston Regional Airport and immediate areas.

Hooksett

The Front St. / Hackett Hill Rd. (Route 11) route extends less than a mile into Hooksett immediately around Wal-Mart on NH 3A.

Concord

The Concord Express (Route 4) route offers express service to the Stickney Avenue Transportation Center in Concord, allowing connecting service to Concord Area Transit destinations as well as private inter-city operators. A second stop on Main Street provides connection with Downtown Concord.

Nashua

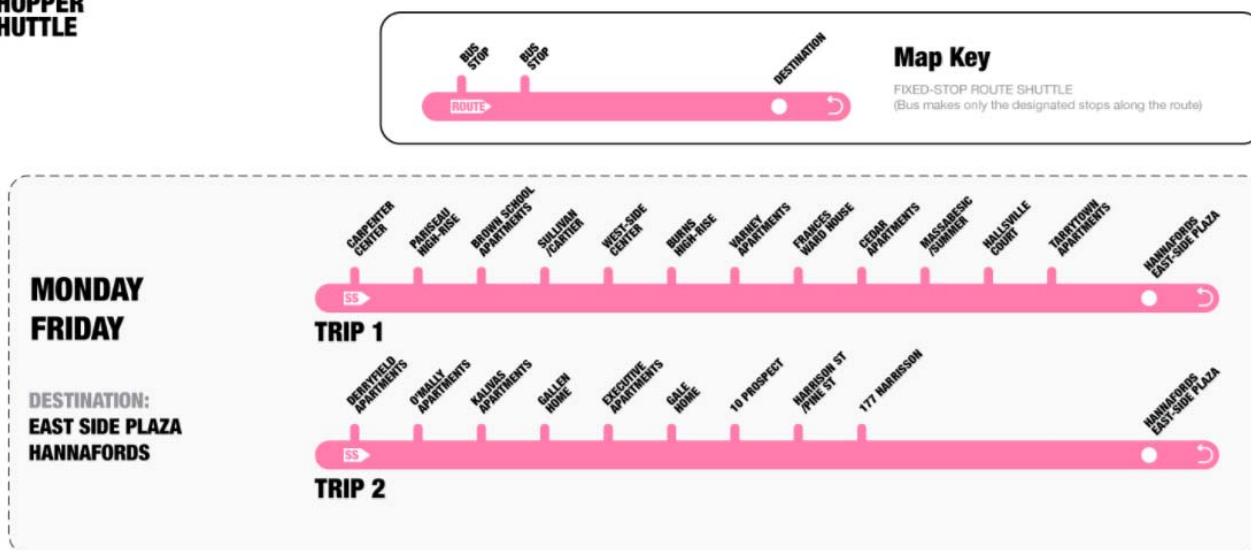
The Nashua Express (Route 9) route offers express service to the Nashua Mall. There, passengers may connect with Nashua Transit System for service throughout Nashua.

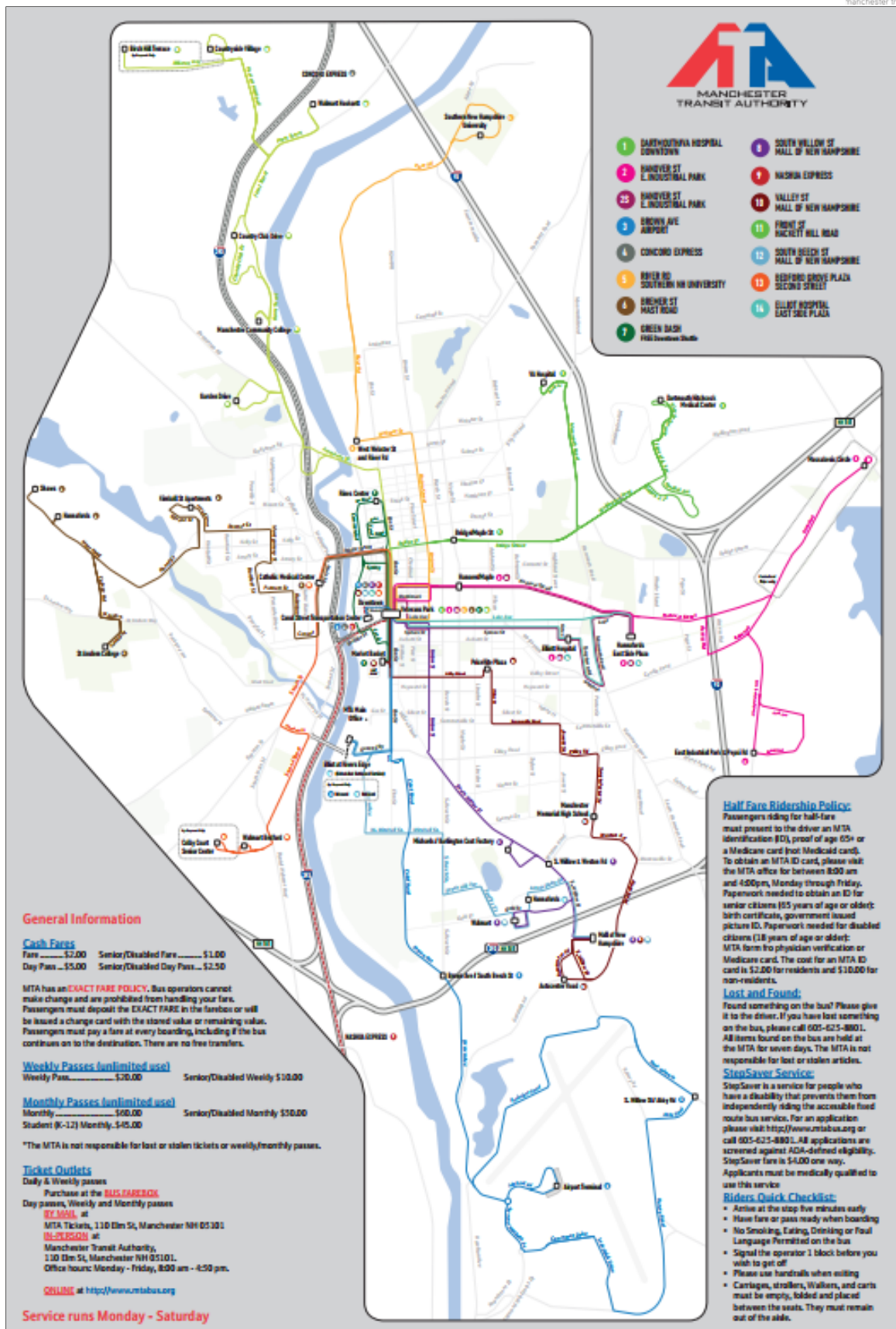
Shopper Shuttle

This free fare fixed-route service connects residents with area food shopping. The shuttle runs to Manchester grocery stores on Mondays, Wednesdays and Fridays, Goffstown on Tuesdays, and Hooksett on Thursdays.

All of the MTA's routes are linked together into "schedules" that are given schedule numbers. Drivers are then assigned to individual schedules. When a bus completes one outbound and inbound trip, it commences an outbound trip via another route, and so forth. There are 21 such "schedules", each weekday. Frequency of service, or headway, varies with the time of day. Peak hours are defined as before 9:30 a.m. (morning) and after 1:30 p.m. (afternoon). The midday period runs from 9:30 a.m. to 1:30 p.m. Headways are sometimes shorter during peak hours and longer during midday periods. Headways do, however, vary by route, time of day, weekday, or Saturday.

SS SHOPPER SHUTTLE







MTA service operates Monday through Friday and offers Saturday service on 12 of 14 routes. The 10 holidays during which no fixed-route service is available are New Year's Day, Martin Luther King Jr. Day, Presidents Day, Memorial Day, Independence Day, Labor Day, Columbus Day, Veterans Day, Thanksgiving, and Christmas. This schedule results in approximately 52 operating Saturdays and 252 weekdays of scheduled service, equaling about 304 operating days annually. Tables 1 and 2 below show the frequency of service for weekday and Saturday operations.

Table 1. Weekday Frequency of Service			
Route	Before 9:30 AM	9:30 AM to 1:30 PM	After 1:30 PM
1 Dartmouth/VA Hospital	45 min. - 75 min.*	45 min. - 75 min.*	45 min. - 75 min.*
2 Hanover St/E. Industrial Park	60 min.	60 min.	60 min.
3 Brown Ave/Airport	60 min.	No Service	60 min.
4 Concord Express	Round trips to Concord @ 5:30, 6:30, 7:30, 11:30 AM, 2:00, 4:30, and 5:30 PM.		
5 SNHU/River Road	45 min. - 75 min.*	45 min. - 75 min.*	45 min. - 75 min.*
6 Bremer St/Mast Road	60 min.	60 min.	60 min.
7 Downtown Circulator (Green DASH)	30 min.	30 min.	30 min.
8 South Willow St/Mall of NH	60 min.	60 min.	60 min.
9 Nashua Express**	120 min.	No Service	Two trips
10 Valley St/Mall of NH	60 min.	60 min.	60 min.
11 Front St/Hackett Hill Road***	60 min.	60 min.	60 min.
12 South Beech St/Mall of NH	60 min.	60 min.	60 min.
13 Bedford Grove Plaza/Second St	45 min. - 75 min.*	45 min. - 75 min.*	45 min. - 75 min.*
14 Elliot Hospital/East Side Plaza	60 min.	60 min.	60 min.

*Service from 7:00 am - 5:45 pm alternating from 45 min-75 min frequency

**Service six trips a day, 5:30 AM, 7:30 AM, 9:30 AM, 12:30 PM, 1:30 PM, 4:30 PM

Return trips @ 6 AM, 8 AM, 10 AM, 2 PM, and 6 PM

***9:30, 11:30, and 1:30 are Express runs: Veterans Park to MCC

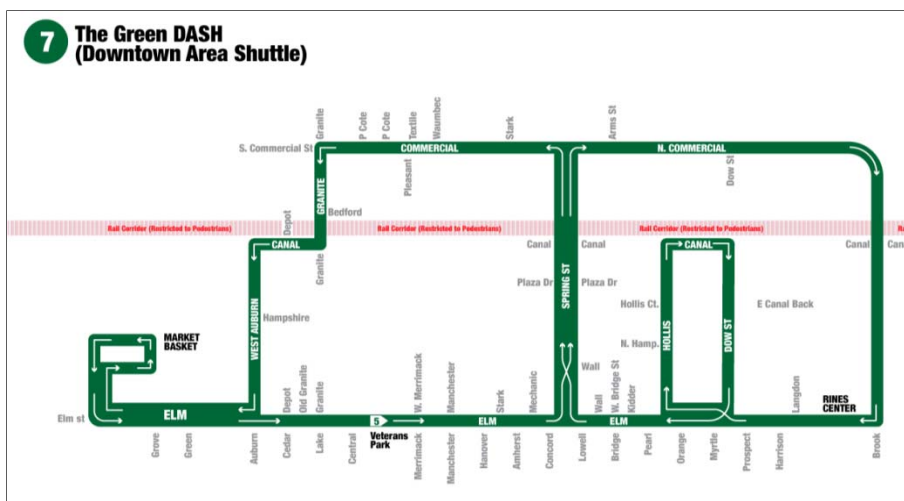
Updated Jan. 2017

Table 2. Saturday Frequency of Service

Route	Frequency	Hours
1 Dartmouth/VA Hospital	45 min. - 75 min.*	9:45a-3:45p
2 Hanover St/E. Industrial Park	60 min.	9:30a-4:30p
4 Concord Express	10:00, 12:30, 4:30	10:00a-4:30p
5 SNHU/River Road	45 min. - 75 min.*	9:45a-3:45p
6 Bremer St/Mast Road	60 min.	9:30a-4:30p
8 South Willow St/Mall of NH	60 min.	9:30a-4:30p
9 Nashua Express	120 min.	9:30a-3:30p
10 Valley St/Mall of NH	60 min.	9:30a-4:30p
11 Front St/Hackett Hill Road	120 min.	10:30a-4:30p
12 South Beech St/Mall of NH	60 min.	10:00a-5:00p
13 Bedford Grove Plaza/Second St	45 min. - 75 min.*	10:30a-4:30p
14 Elliot Hospital/East Side Plaza	45 min. - 75 min.*	10:30a-4:30p

Updated Jan. 2017

In July 2010, MTA initiated service on the "Green DASH" circulator service providing transportation throughout downtown and the Millyard in an area bounded by West Brook Street to the north, Granite Street to the south, Commercial Street to the west and Elm Street to the east. The service is operated



as MTA Route #7 and has a 30-minute frequency from 9:20 AM – 4:50 PM. Service operates Monday through Friday using two hybrid electric buses, the first hybrid buses placed in service for public transportation in New Hampshire. Green DASH is an acronym for Green Downtown Area Shuttle.

FARES

A listing of MTA fares for fixed route service, last increased in July 2014, is shown below. Fares vary by age of rider and ticket type. MTA passes can be purchased in person or by mail at 110 Elm Street, Manchester NH, 03101. Day/week passes may be purchased directly from the bus driver and all MTA passes are available online at www.mtabus.org. To qualify for the senior discount passengers must be at least 65 years of age.



The farebox will not make cash change. An MTA fare card will be issued by the farebox as change for a future ride. Bus operators cannot make change and are prohibited from handling riders' fares. Passengers must deposit cash into the farebox. A day pass is valid for all MTA routes, all day.

Cash Fare (Fixed Route)

Fare \$2.00

Senior/Disabled Fare* \$1.00

Cash Fares (Concord/Nashua to Manchester):

Day Pass \$5.00

Senior/Disabled Day Pass* \$2.50

Weekly Passes (7 Days):

Weekly \$20.00

Senior/Disabled Weekly \$10.00

Monthly Passes (31 Days):

Monthly 60.00

Student (K-Grade 12) Monthly \$45.00


Senior/Disabled Monthly \$30.00

HALF FARE RIDER POLICY

Passengers riding for half-fare must present (to the driver) an MTA identification card (ID), Medicare card OR a state issued ID with proof of age (older than 65). Half-Fare ID photos can be taken at the MTA main office, Monday through Friday, from 8:00 AM to 4:00 PM.

*Cost is \$2.00 for
Manchester residents and
\$10.00 for non-residents.*

REDUCED FARE IDENTIFICATION



Show at Each Boarding

*Passengers 65 years of age or older as well as those with a Medicare or MTA Half Fare ID card are eligible.

**The MTA is not responsible for lost or stolen tickets or monthly passes.

Ticket Outlets:

Day/Weekly Passes can be purchased:

- on the bus (farebox)

All passes can be purchased:

- by MAIL at: MTA Tickets
110 Elm St. Manchester, NH 03101
- IN PERSON at:
MTA- 110 Elm Street
- ONLINE at: www.mtabus.org

DEMAND-RESPONSE PARATRANSIT

StepSaver

Since November 1978, MTA has provided origin to destination service for individuals unable to use fixed-route transit service due to a disability. StepSaver is a

transportation program offered by the MTA as required under the Americans with Disabilities Act (ADA) of 1990. ADA requires designated FTA recipients to provide a “complementary paratransit program” to individuals who are prevented from using the fixed route bus service due to their disability. Prospective StepSaver clients complete applications administered by the MTA in compliance with the ADA. Certification by a physician or health care agency is required to verify that an individual has a disability that prevents them from accessing the fixed route system.

StepSaver provides transportation on an advance reservation basis. Customers eligible for the service may call the MTA dispatch office and schedule their rides up to a week in advance. Reservation hours are 5:25 am to 7:00 pm, Monday through Friday. Saturday reservation hours are 9:30 am to 5:30 pm and Sunday reservations may be left via voicemail for dispatch as MTA offices and service are closed on Sundays. Transportation is provided six days a week from 5:30 am to 6:30 pm Monday through Friday and from 9:30 am to 5:30 pm on Saturday. The StepSaver service area is limited to an area within .75 mile of existing fixed-route service. During FY2016, the MTA StepSaver Service carried 9,109 passengers, utilizing five lift-equipped vehicles. A fare of \$4.00 is charged for each one-way trip. Current StepSaver service is operated on an origin to destination basis.

More information on StepSaver can be found at:

<http://www.mtabus.org/services/stepsaver/>

Goffstown Shuttle

Since 2015 MTA has partnered with the Town of Goffstown to provide curb-to-curb transportation for its residents. The service is available every Monday, Wednesday, and Friday between the hours of 9:00 AM and 2:00 PM. There is no charge for rides.

Priority Bookings will be provided to those passengers that are 62+ years old and for those going to medical appointments. Passenger destinations are permitted within Goffstown and for medical appointments in Goffstown, Manchester and Bedford only. This may require the MTA to call back passengers the day prior when a schedule conflict occurs with priority bookings. (Example: A passenger booking 7 days prior for grocery shopping may need to be cancelled or rescheduled when a passenger, even one day prior, books for a medical appointment or the passenger is 62+ years old.)

TRANSPORTATION FOR GOFFSTOWN RESIDENTS



603-623-8801

Curb to Curb Service



Manchester Transit Authority
110 Elm St.
Manchester, NH 03101
603.623.8801
www.mtabus.org

MONDAY, WEDNESDAY, FRIDAY
9AM TO 2 PM

General Information:

- ✓ Make a reservation as soon as 1 week prior, no later than 24 hours prior
- ✓ Priority rides for age 62+
- ✓ Priority rides for medical appointments
- ✓ Rides available to all Goffstown Residents
- ✓ Connect with MTA Route #6 at Shaw's for Manchester, Concord, Nashua service
- ✓ All buses accessible for disabled passengers

For Appointments:

- Call 603-623-8801 ext. 623
- Will need the address for pickup & drop-off location.
- Date & Time requested, will be provided with a 30 minute pick-up window.
- May ride with a companion, please specify.
- Will need to provide purpose of ride.

FREE
TRANSPORTATION

The MTA will take reservations for those passengers looking to travel within Manchester for non-medical appointments (where space is available). The Goffstown Shuttle will transport passengers to the Shaw's Plaza in Goffstown where passengers can board MTA's #6 Bremer St. bus. This allows passengers to travel throughout Manchester.

Facilities and Equipment

The MTA offices, maintenance facilities, and bus storage complex is located at 110 Elm Street in Manchester. This facility, completed in January 1976, contains separate office, storage, and maintenance spaces. The office area provides space for supervisory and clerical personnel, a conference room, and an operators' lounge with locker rooms. The bus storage section, consisting of seven lanes with overhead doors, contains enough space for 35 full-sized transit coaches. The maintenance area contains five bays with hydraulic lifts, a ventilated booth for spray painting and bodywork, machine shop area, and a spare parts storage room. An auxiliary building on the premises houses the automatic gantry-type washer used to clean bus exteriors. A fueling island with diesel and gasoline pumps and an overhead canopy is situated outside the main building.



Current MTA rolling stock (as of January 2017) includes 15 transit coaches, 8 lift-equipped StepSaver vehicles, 80 school buses, 3 supervisory vehicles, 1 pickup, 1 dump truck and 1 front-loader.

Table 3. MTA Bus and Van Inventory

Quantity	Year	Make	Model	Seats
2	2004	Orion	7.502	35
6	2006	Gillig	G29E102R2	28
3	2007	Gillig	G29E102R2	28
3	2008	Gillig	G29E102R2	28
2	2009	IC Bus	Hybrid BOC	36
2	2010	Ford	Aerotech	16
3	2011	StarTrans	Senator E-Lo	12
1	2014	Chevrolet	Glaval LF	12
2	2014	Dodge	Entervan	4

Table 4. MTA Supervisory/Service Vehicle Inventory

Quantity	Year	Make	Model
1	1998	Caterpillar	924F
1	2001	International	4700 4x2
1	2003	Chevrolet	Silverado
1	2003	Chevrolet	Astro
1	2010	Ford	Explorer
1	2016	Ford	Explorer

RIDERSHIP

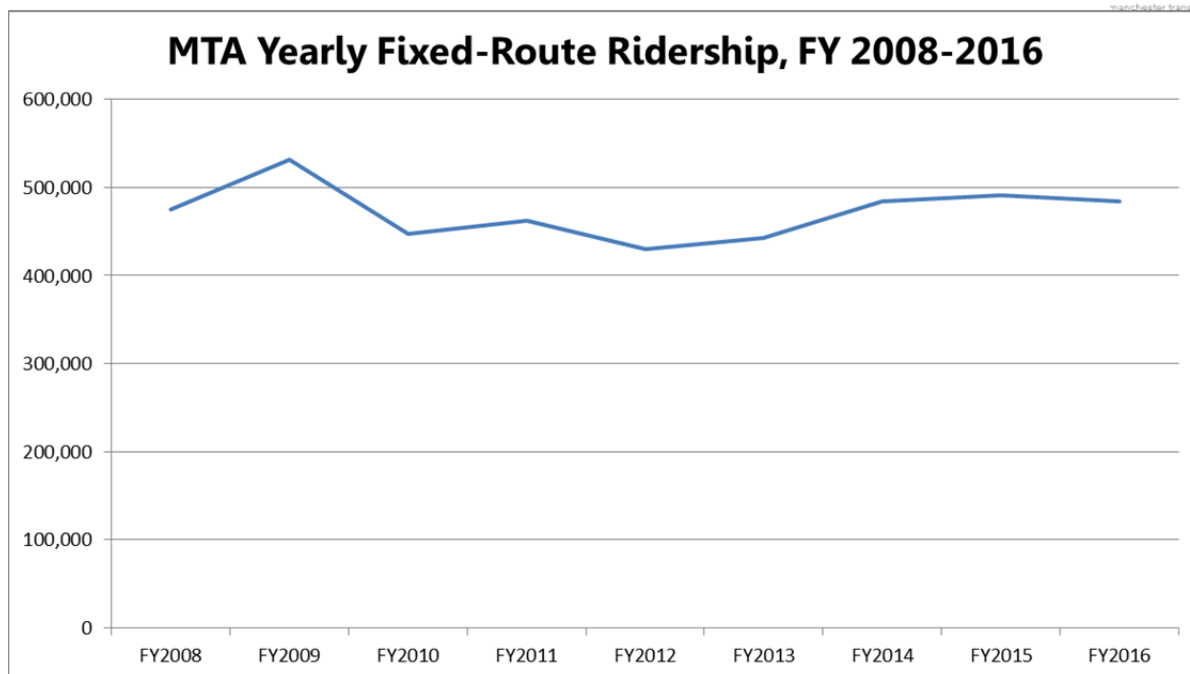
Table 5 indicates that since 2008, annual ridership on the MTA system has increased by approximately two percent. After a major increase in FY2009 due to the national recession, ridership dropped off sharply in FY2010; however, it then returned to levels above those of FY2004-08. FY2014 saw another considerable increase, largely due to the introduction of line instead of loop service. Ridership has remained steady at 483-492,000 riders per year since then.



Table 5: MTA Yearly Fixed Route Ridership, FY 2008-2016		
FY Year	Ridership	% Change
FY2008	475,210	15.42
FY2009	531,961	11.94
FY2010	446,902	-15.99
FY2011	462,109	3.40
FY2012	430,404	-7.37
FY2013	442,233	2.67
FY2014	483,959	8.62
FY2015	491,571	10.04
FY2016	484,474	-1.44
Change, 2008-2016		1.95
Source: NTD, MTA		

Table 6. High and Low Months for MTA Fixed Route Ridership, FY 2008-2016				
FY Year	Highest Month and Ridership		Lowest Month and Ridership	
FY2008	May	44,799	July	33,747
FY2009	October	50,329	November	40,198
FY2010	October	40,365	January	33,163
FY2011	March	42,517	January	32,912
FY2012	April*	39,613	July	32,425
FY2013	April	40,673	November	33,261
FY2014	October	44,665	February	34,633
FY2015	October	46,345	February	35,250
FY2016	October	45,755	January	35,402
Source: Manchester Transit Authority				

*Includes Public Specials/MTA Excursions



Review of annual ridership statistics (Table 6) indicates that ridership tends to be highest in the fall (October) and spring (April/May). Ridership tends to be lowest in winter (November to February) or during summer (July).

Every month, MTA gathers weekday and Saturday ridership data by run assignment. The data comes directly from the farebox reports on each run. Weekday ridership has increased slightly since FY 2008, as shown in Table 7.

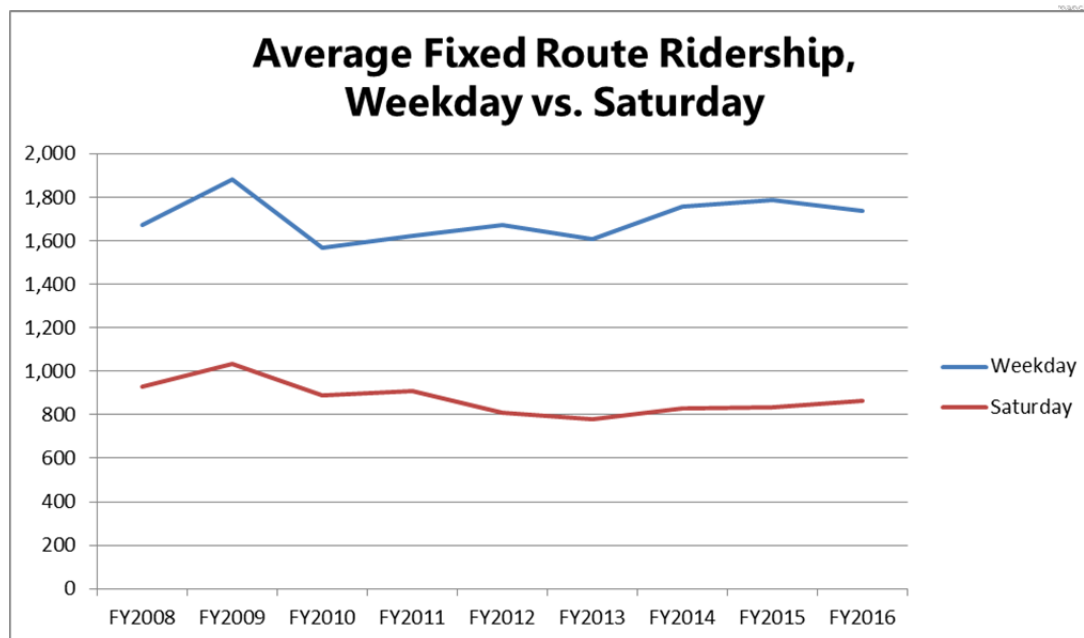
While Saturday ridership has declined since its FY 2008 peak, it has been steadily increasing again since FY 2012.

Table 7. MTA Average Weekday Ridership, FY 2008-2016

FY Year	Ridership	% Change
FY2008	1,675	14.3
FY2009	1,884	12.5
FY2010	1,568	-16.8
FY2011	1,621	3.4
FY2012	1,672	3.1
FY2013	1,607	-3.9
FY2014	1,756	9.3
FY2015	1,786	1.7
FY2016	1,740	-2.6
Change, 2008-2016		3.9%
Source: MTA		

Table 8. MTA Average Saturday Ridership, FY 2008-2016

Year	Ridership	% Change
FY2008	929	9.6
FY2009	1,034	11.3
FY2010	890	-13.9
FY2011	909	2.1
FY2012	809	-11.0
FY2013	778	-3.8
FY2014	831	6.8
FY2015	833	0.2
FY2016	866	4.0
Change, 2008-2016		-6.8
Source: MTA		



StepSaver ridership increased annually until FY2011, when it began decreasing gradually until FY2014. In FY 2015, MTA began its travel training program, which enabled a considerable portion of StepSaver riders to transition to fixed-route service. This is reflected in a 32% decrease that year. Having reached diminishing returns, StepSaver ridership ticked up slightly in FY 2016. Overall, StepSaver ridership has decreased 25 percent from 12,160 riders in FY 2008 to 9,109 in FY 2016 as shown in Table 9.

**Table 9. MTA StepSaver
Ridership, FY 2008-2016**

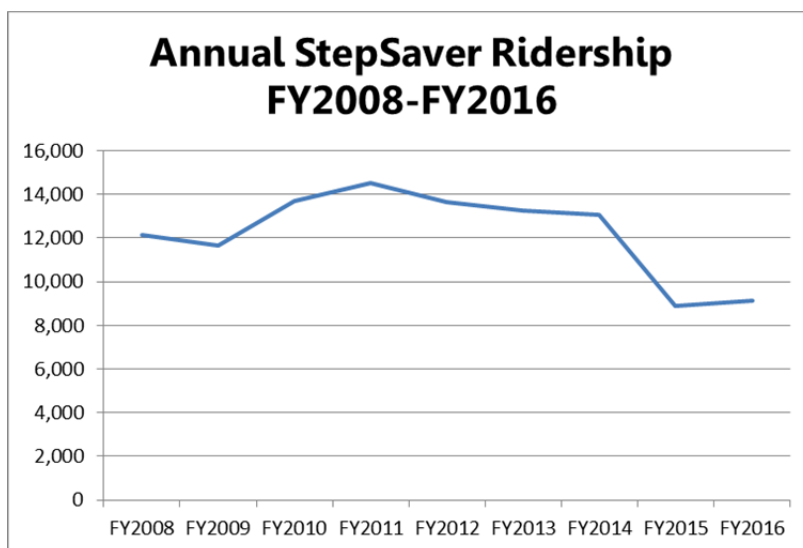
FY Year	Ridership	% Change
FY2008	12,160	7.61
FY2009	11,645	-4.24
FY2010	13,709	17.72
FY2011	14,544	6.09
FY2012	13,663	-6.06
FY2013	13,260	-2.95
FY2014	13,049	-1.59
FY2015	8,876	-31.98
FY2016	9,109	2.63
Change, 2008-2016		-25.09%
Source: NTD, MTA		

Monthly ridership patterns for StepSaver are similar to those identified for MTA fixed route service. Since FY 2008, there is not much of a pattern to highest ridership months, as it has fallen in six of the 12 months. Lowest ridership, however, fairly predictably occurs during winter months. Monthly StepSaver ridership data is summarized in Table 10 below.

**Table 10. High and Low Months for MTA
StepSaver Ridership, FY 2008-2016**

FY Year	Highest Month	Lowest Month
FY2008	October	December
FY2009	April	August
FY2010	April	August
FY2011	September	February
FY2012	March	February
FY2013	November	January
FY2014	October	February
FY2015	June	February
FY2016	June	January

Source: Manchester Transit Authority



REVENUES & EXPENDITURES

Major sources of revenues used by the MTA to provide transit service include FTA funding, local assistance, farebox revenues, advertising and other revenues from non-transportation sources. Non-transportation revenues include those derived from the sale of maintenance services, rental of buildings and other properties, investment income, and sale of vehicles.

The MTA receives Section 5307 funding directly from the FTA for operating subsidies and for capital costs. Local match is a requirement for these funds, and the MTA receives its local share funding for Section 5307 funds and other programs primarily from an annual General Fund appropriation from the City of Manchester. The City currently provides a local match for capital maintenance funds and for operation of the MTA's StepSaver service at a rate of 80% Federal and 20% City. The City also provides the required 50 percent match for operating subsidies. In addition, the City contributes to the local 20% match for the system's bus-related capital costs. Table 11 shows the local match funding contributed by the City of Manchester for the period FY 2008- FY 2016.

Table 11. Source of Local Contribution FY08-FY16

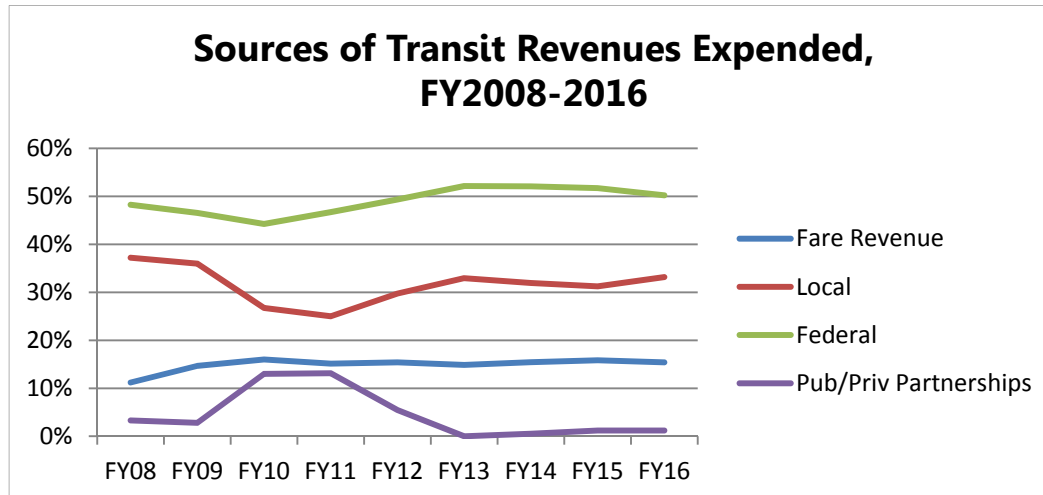
FY Year	City Contributions
FY2008	\$1,176,714
FY2009	\$900,000
FY2010	\$900,000
FY2011	\$886,500
FY2012	\$1,073,825
FY2013	\$1,073,825
FY2014	\$1,080,536
FY2015	\$1,108,560
FY2016	\$1,153,560

Source: MTA

Expenditure and Revenue Trends

Data describing system revenues and expenditures for the years FY 2008 to FY 2016 is presented in Exhibits 3 and 4. Exhibit 3 shows variations in the individual sources of transit revenue for this period. As a percentage of total revenues, Federal funding varied from a low of 44 percent in FY 2010 to a high of 52 percent from FY 2013 to FY 2015, while local funding varied from a low of 25 percent in FY 2011 to a high of 37 percent in FY 2008. As a percentage of total revenues, fares varied from a high of 16 percent in FY 2010 and FY 2015 to a low of 11 percent in FY 2008.

Exhibit 3



A detailed breakdown of fare revenues for FY 2016 is shown in Exhibit 4. For FY 2016, 51 percent of total fare revenue came from farebox revenue, 24 percent came from purchase of adult fares, and 8 percent came from adult monthly fares. Disabled rider fares accounted for 7 percent of the total fare revenue.

Exhibit 4

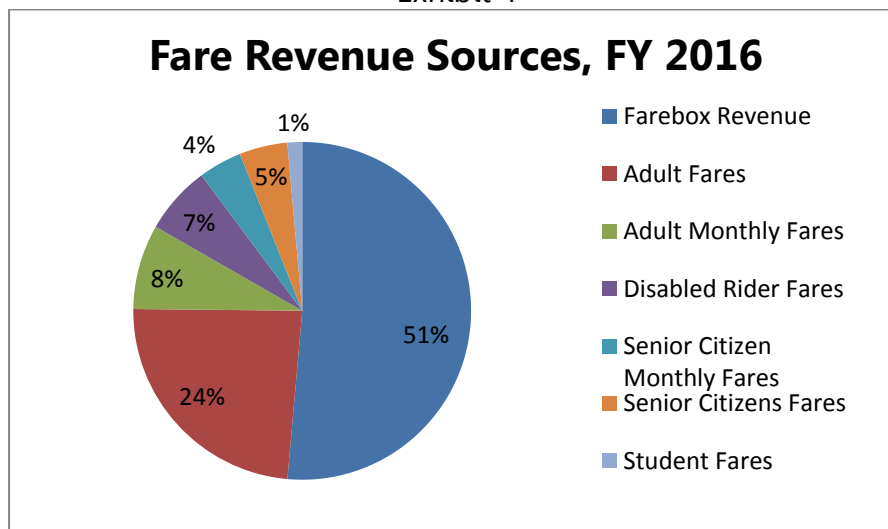
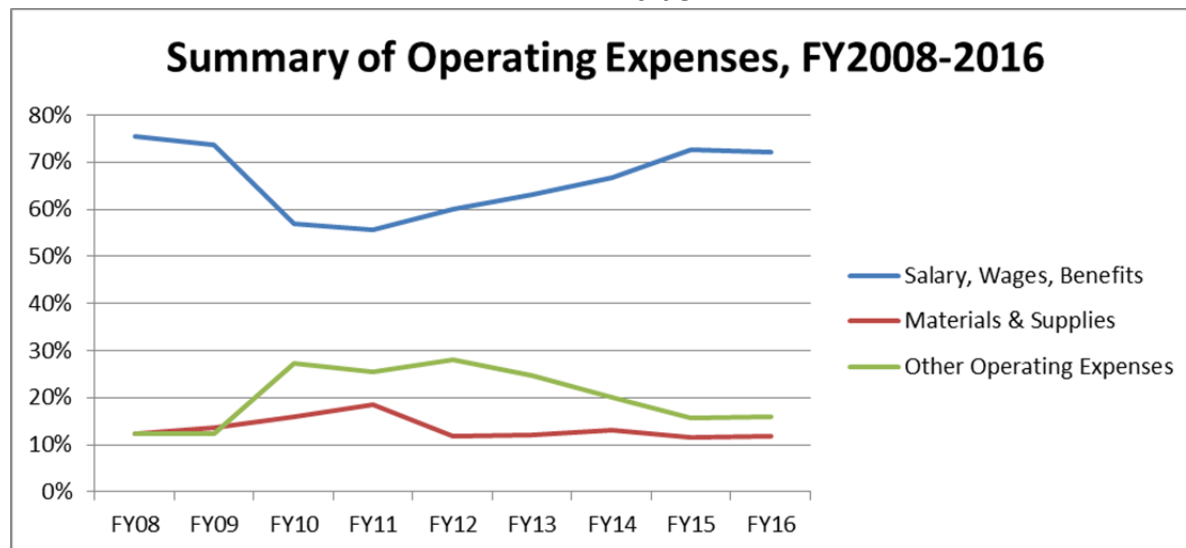


Exhibit 5 shows annual variations in the level of the various sources of operating expenses for the period FY 2008 to FY 2016. Salary, wages and benefits, which, as a percentage of total operating expenses, represent the most significant portion, varied from a low of 56 percent in FY 2011 to a high of 75 percent in FY 2008. For the period FY 2008 to FY 2016, total operating expenses increased by 20 percent from \$3,389,493 to \$4,064,491. By comparison, materials and supplies, which represented the next highest single component of total operating expenses, accounted for only 12 percent of the total for FY 2016.

Exhibit 5



StepSaver expenditures and revenues have seen an overall increase since FY 2008. In 2008, StepSaver total operating expenses were \$441,983 and for FY 2016 these operating expenses were \$560,091, representing an increase of roughly 27%. However, these expenses have *decreased* by roughly 20% in the last two fiscal years. Table 12 depicts StepSaver operating expenses and fare revenues for the period FY 2008- FY 2016.

The MTA also provides other specialized fixed route services. Shopper Shuttle services transport riders to grocery stores in Manchester, Goffstown, and Hooksett.

Table 12. StepSaver Operating Expense vs. Fare Revenue

FY Year	Operating Expense	Fare Revenue
FY2008	\$441,983	\$23,214
FY2009	\$508,277	\$29,013
FY2010	\$473,828	\$40,158
FY2011	\$630,459	\$41,955
FY2012	\$623,682	\$34,938
FY2013	\$597,684	\$37,737
FY2014	\$703,226	\$28,500
FY2015	\$612,403	\$32,796
FY2016	\$560,091	\$36,364

Source: MTA

EVALUATION OF EXISTING SERVICE

This SRTP includes an evaluation of existing MTA services as determined through information presented earlier in this report and from additional data and system monitoring currently being carried out by MTA. The MTA currently maintains a complaint log and investigates all complaints received in relation to transit service. Additionally, MTA maintains monthly ridership data by assignment for weekday and Saturday operations and performs regular schedule adherence checks. Data gathered from these sources will be used in the evaluation of existing service contained in this section.



Reliability

MTA performed schedule adherence checks whenever practicable throughout fiscal years 2014-2016. Previously, the schedule check procedure consisted of an MTA employee assigned a particular stop, at which (s)he compared actual performance of a vehicle to the route schedule. Beginning in 2012, schedule adherence check forms are kept in a supervisor vehicle; any time the supervisor is out, (s)he will conduct a random poll across the service day. MTA's goal is to have a minimum of 50 checks performed per month; most are performed at the Center of New Hampshire and Veterans Park stops. They are also conducted on Saturdays, but to a much smaller degree. Results of the schedule checks are published on a monthly basis.

Below (Table 13) are results of these checks, as measured by percentage of on-time performance. Monthly performance ranged from a low of 85% in August of 2015 to



100% in June 2015 and June 2016. Overall on-time performance has remained consistently over 92% in each of the last three fiscal years.

Table 13

MTA On-time performance rate, FY2014-FY2016														
		Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Avg
FY2014	On time	120	93	41	48	72	92	84	117	108	121	94	21	1011
	Sampled	138	94	47	52	75	98	89	125	120	122	105	23	1088
	Percentage	0.87	0.99	0.87	0.92	0.96	0.94	0.94	0.94	0.90	0.99	0.90	0.91	92.92%
FY2015	On time	208	122	108	93	186	180	172	68	168	178	26	62	1571
	Sampled	223	134	111	105	197	186	195	72	181	183	28	62	1677
	Percentage	0.93	0.91	0.97	0.89	0.94	0.97	0.88	0.94	0.93	0.97	0.93	1.00	93.68%
FY2016	On time	108	52	89	51	66	106	41	126	73	115	53	63	943
	Sampled	110	61	98	55	72	111	44	133	76	123	59	63	1005
	Percentage	0.98	0.85	0.91	0.93	0.92	0.95	0.93	0.95	0.96	0.93	0.90	1.00	93.83%

PUBLIC TRANSPORTATION DEMAND

The purpose of this section is to identify potential demand for public transportation in the MTA service area. The SRTP has identified patterns of current ridership on existing MTA fixed-route and StepSaver paratransit systems. This section, in attempting to identify potential demand for MTA services in excess of current ridership levels, will evaluate MTA services relative to the following criteria:

1) Service Coverage

Those areas of Manchester in excess of one quarter (.25) mile from existing fixed-route transit are identified, including the number of dwelling units and population within these areas. This is completed using Census 2010 block level data.

2) Service in Relation to Transit-Dependent Populations

Geographic areas in Manchester having significant numbers of elderly residents, low income populations, low rates of automobile ownership, and areas of high density housing is identified and a comparative analysis with MTA routes is completed.

3) Service in Relation to Major Trip Attractors/Development Factors

Existing MTA routes are analyzed in relation to factors related to demand for transit service. In an effort to determine the adequacy of general accessibility to transit services, each portion of the City as defined by traffic analysis zones (TAZ) from the SNHPC regional travel demand model is compared with current MTA routes.

4) StepSaver Service

While demand for StepSaver Service is somewhat unpredictable, there have been significant decreases in ridership since FY 2008. In FY 2015, MTA began its travel



training program, which enabled a considerable portion of StepSaver riders to transition to fixed-route service. This is reflected in a 32% decrease that year. Having reached diminishing returns, StepSaver ridership ticked up slightly in FY 2016.

Service Coverage

Corridors for transit service are considered to extend one-quarter mile from each established route, thereby limiting a resident's walk to four blocks, or approximately between five (5) and eight (8) minutes. Upon inspection of MTA's routes, it has been calculated that MTA routes are accessible, on foot, to approximately eighty-five (85) percent of the population. Some areas of the city lie beyond existing transit service; they are located in the northwest, northeast, and southeast fringe areas of Manchester. These areas are indicated in Exhibit 6.

StepSaver Service

During FY 2016, the MTA StepSaver Service carried 9,109 passengers, utilizing five lift-equipped vehicles. Population estimates and projections developed by SNHPC for the City of Manchester were utilized to determine the estimated ADA paratransit population. Two distinct demographic categories, citizens under the age of 65 and citizens age 65 or older, exhibit different paratransit trip making patterns. Elderly persons have a much higher incidence of transportation disability than the rest of the population; therefore, a higher percentage of senior citizens are eligible for paratransit service. Effective coverage of StepSaver routes is shown in Exhibit 6a.

In an effort to more accurately measure the community not served by current MTA fixed-route service (lying more than .25 mile from bus routes), population and dwelling unit estimates for traffic analysis zones (TAZ) not well-served by transit were identified. Traffic Analysis Zones 3, 13, 22, 52, 55, 119, 265, and 269 were recognized as not well-served by transit. Exhibit 7 shows the location of Traffic Analysis Zones in Manchester.

Exhibit # 6 Effective Coverage of MTA Routes City of Manchester

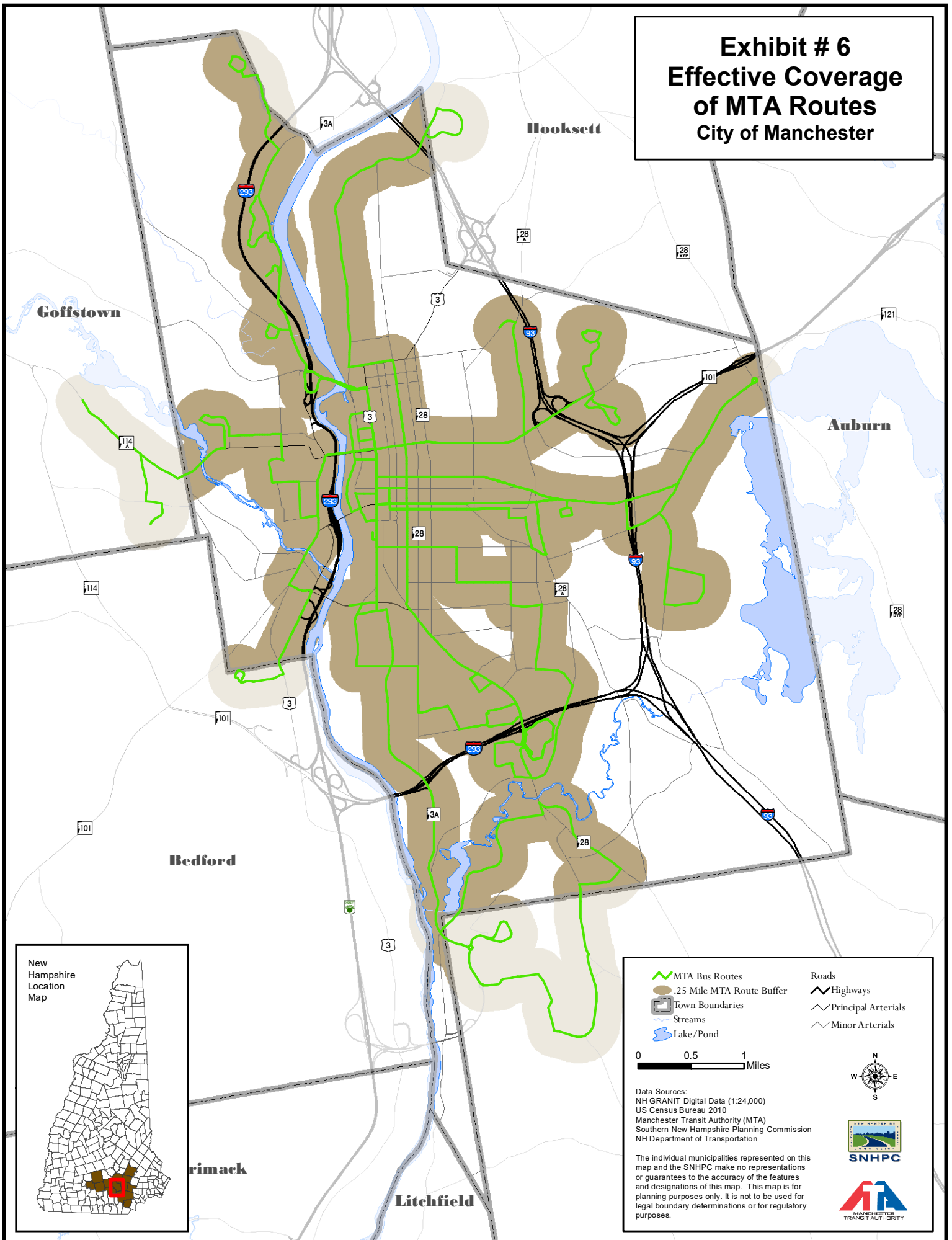


Exhibit # 7 Step Saver Effective Coverage of MTA Routes City of Manchester

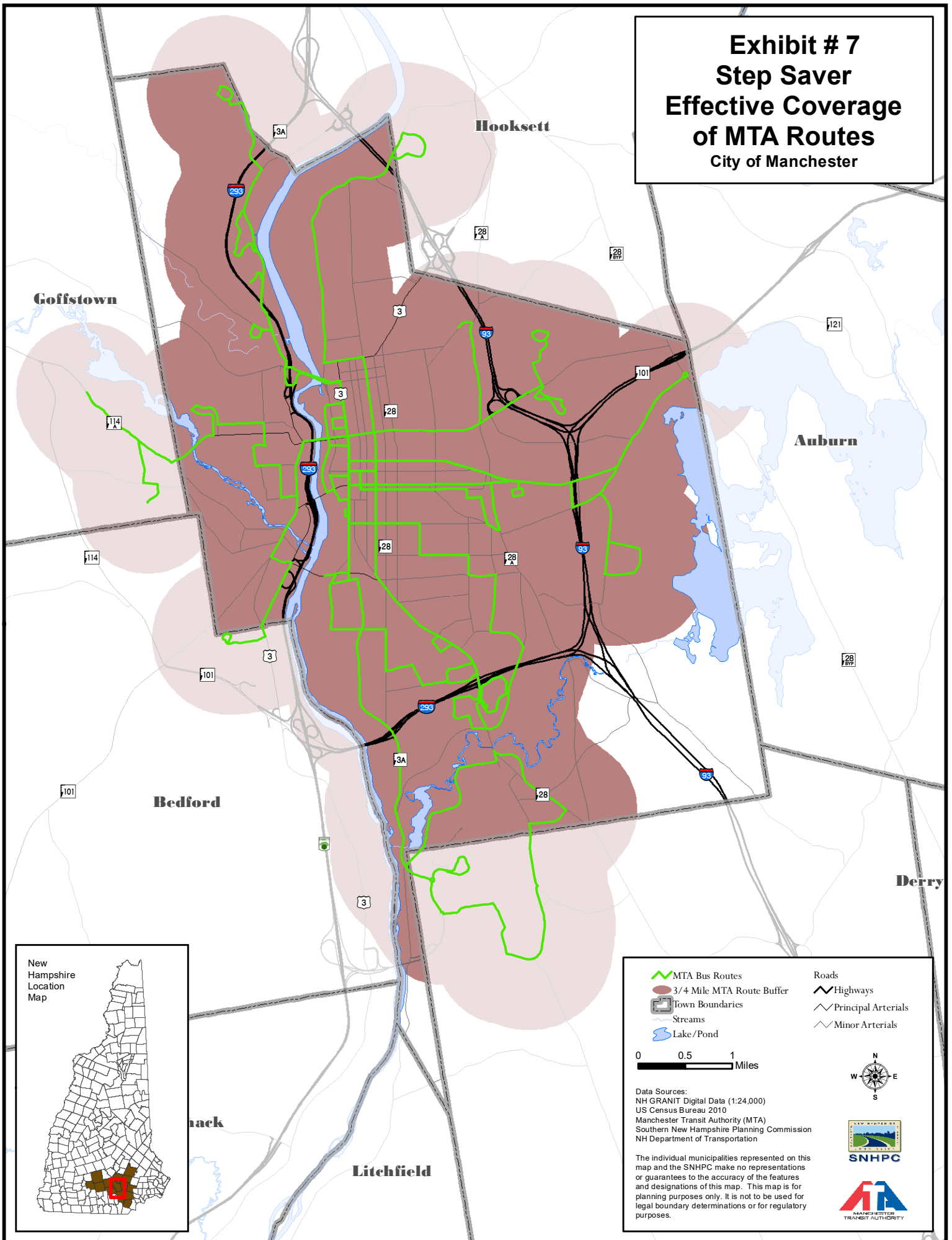
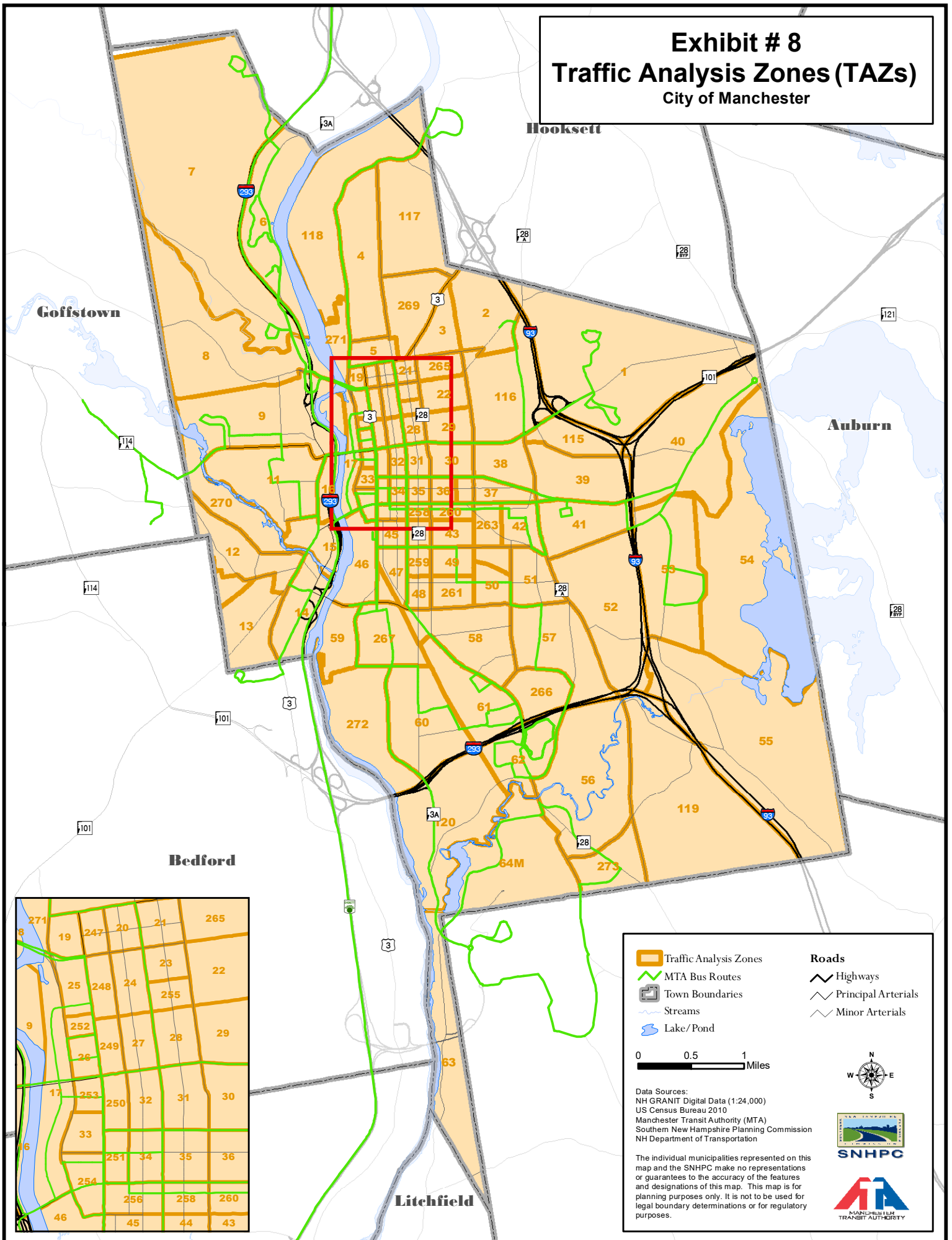


Exhibit # 8 Traffic Analysis Zones (TAZs) City of Manchester



Service in Relation to Elderly Concentrations

The 2010 U.S. Census reported that 11.8% (12,955 persons) of Manchester's population are aged 65 years or older, in comparison to 12.9% (13,825 persons) from the 2000 U.S. Census. Exhibit 9 indicates by 2010 Census Tracts the proportion of the elderly population.

Tract	Description	% 65+
2.03	Vicinity of NH 3A between I-293 & Merrimack R.	24.1%
12	Between Bridge St, Belmont St, Lake Ave, Mammoth Rd	18.8%
8	Between Harrison St, Union St, Bridge St, Belmont St	17.9%
25	Between Cilley Rd, railroad, I-293, Mammoth Rd	17.1%
11	Between Wellington Rd, Mammoth Rd, I-293, I-93	16.5%
22	Between Piscataquog R, Milford St, Goffstown/Bedford TL	16.1%

Collectively, the six above tracts contain 29.39% of Manchester's population aged 65 years or older. The Census Tracts with concentrations of elderly population generally border the downtown area or are on the West Side; both of these areas tend to be well served by MTA routes. Access to shopping centers, recreational facilities, parks, cultural centers, hospitals, and other medical facilities is excellent. Some of the tracts contain public housing sites for the elderly, which are managed and operated by the Manchester Housing Authority. Five such high-rise developments are discussed in the following paragraphs.

The Kalivas and O'Malley buildings are located on Chestnut Street, between Central and Spruce Streets (Census Tract 14). These buildings contain 200 units with approximately 250 residents. Access to all MTA routes is readily available on Elm Street, which is two blocks west of these buildings; these buildings are served directly by the South Willow route (Route 8).

The Pariseau Building is located at 55 Amory Street (Census Tract 3). It has 100 units and approximately 130 residents. This building is served by the Bremer St./ Mast Rd. route (Route 6). Weekday service is provided on an hourly basis.

The Reverend Burns high-rise apartment complex is located at Granite Square, which is the intersection of Granite and Main Streets (Census Tract 20). The building contains 120 units and has approximately 150 residents. The Bremer St./ Mast Rd. route (Route 6) and Bedford/ Bedford Grove route (Route 13) directly serve the complex.





The Governor Hugh J. Gallen apartments are located at 200 Hanover Street (Census Tract 14). They consist of 94 units and have approximately 120 residents. The Hanover St./ East Industrial Park route (Route 2) provides direct service to the site. Access to all other MTA routes is readily available on Elm Street, which lies two blocks to the west.

The travel needs of the elderly have been documented in the Coordinated Public Transit – Human Services Transportation Plan for the SNHPC Region. Factors that play a significant role in the use and non-use of transit by the elderly population include income level, automobile availability, and physical ability. Seniors generally tend to use the bus for shopping purposes as well as for other personal business (medical appointments, etc.). Senior citizens tend to be more dependent on public transportation due to economics (low incomes) and physical impairments, both of which make owning and operating an automobile more difficult. The marital status (widow, widower, etc.) also factors into this transit dependency for senior citizens.

Reduced fares on the fixed-route service (\$1.00 per ride) are available every day to senior citizens and disabled individuals who possess an approved MTA identification card showing that they are age 65+. MTA fixed-route service is completely accessible, i.e. lift-equipped.

StepSaver service is available for mobility-impaired persons who are unable to use the regular fixed-route service due to disability. This service is available Monday through Friday with departures between 5:25AM and 7:00PM, and on Saturday with departures between 9:30AM and 5:30PM. A fare of \$4 is charged for each one-way StepSaver trip.

Service in Relation to Low Income Populations

Previous rider surveys have concluded that the average MTA rider is of relatively low income. Upon an examination of Manchester's census tracts, it is evident that the census tracts which exhibit high poverty rates and low median income are relatively well served by transit. These areas tend to be concentrated close to downtown as shown in Exhibits 10 and 11.

Service in Relation to Population Density

Fixed-route transit service is most viable when it serves areas of high population density. Manchester's densest neighborhoods (i.e. those with relatively high numbers of housing units per acre) are close to downtown and on the West Side. Those downtown areas are well-served, while those on the West Side have a slightly lesser level of service (see Exhibit 12).

Service in Relation to Vehicle Ownership

Again, the central neighborhoods are lower than the norm in terms of vehicles per household and vehicles per person (see Exhibit 13). All of these analyses exhibit the importance of properly and adequately serving the downtown population.

Exhibit # 9

Percent of Elderly Population by 2010 Census Tract

City of Manchester

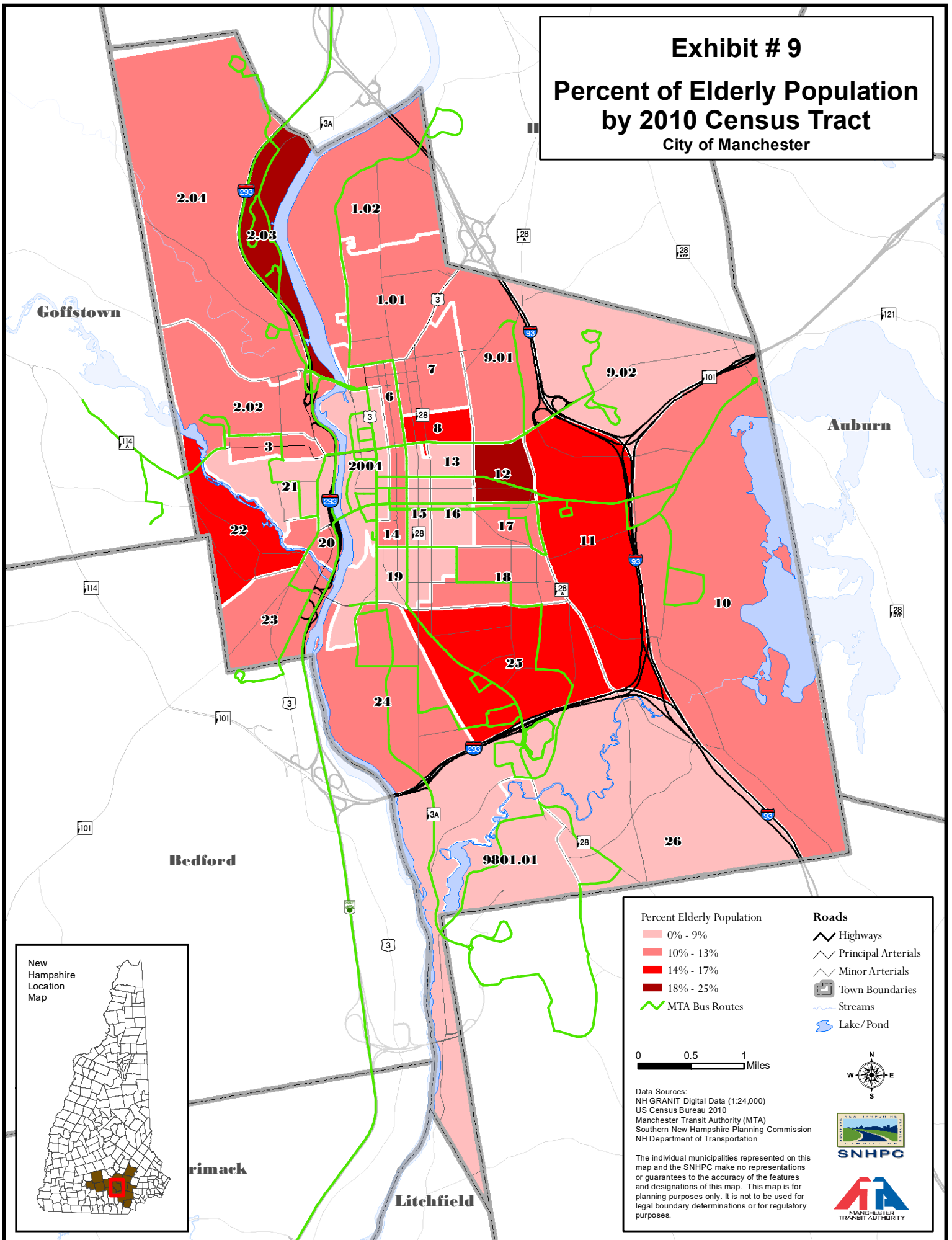


Exhibit # 10 Median Income by 2010 Census Tract City of Manchester

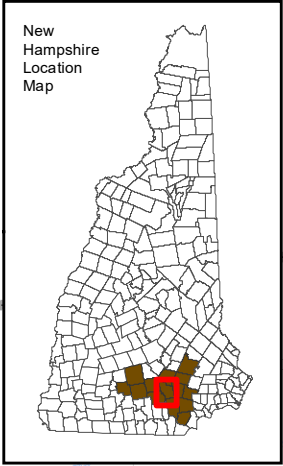
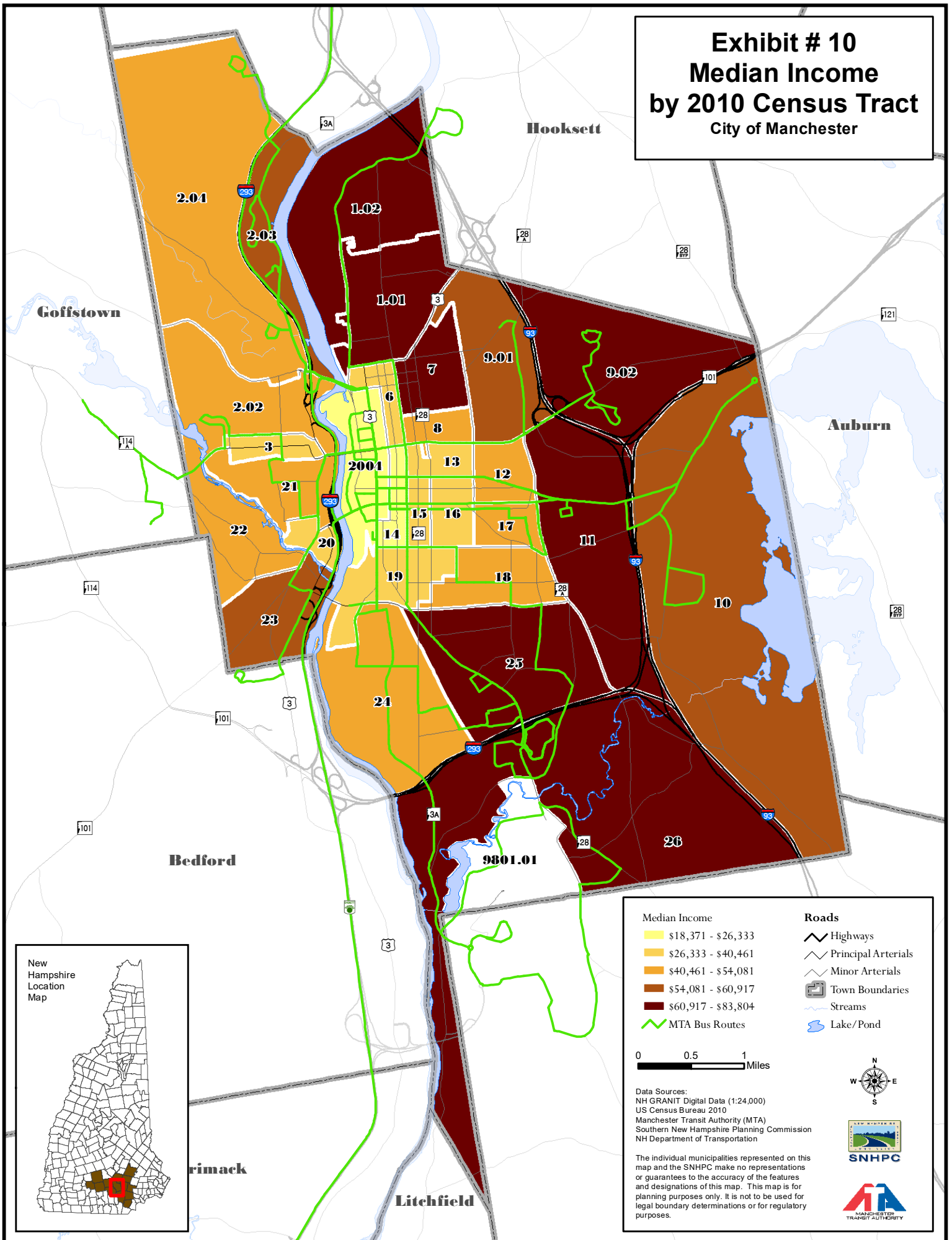


Exhibit #11

Per Capita Annual

Income by 2010 Census Tract

City of Manchester

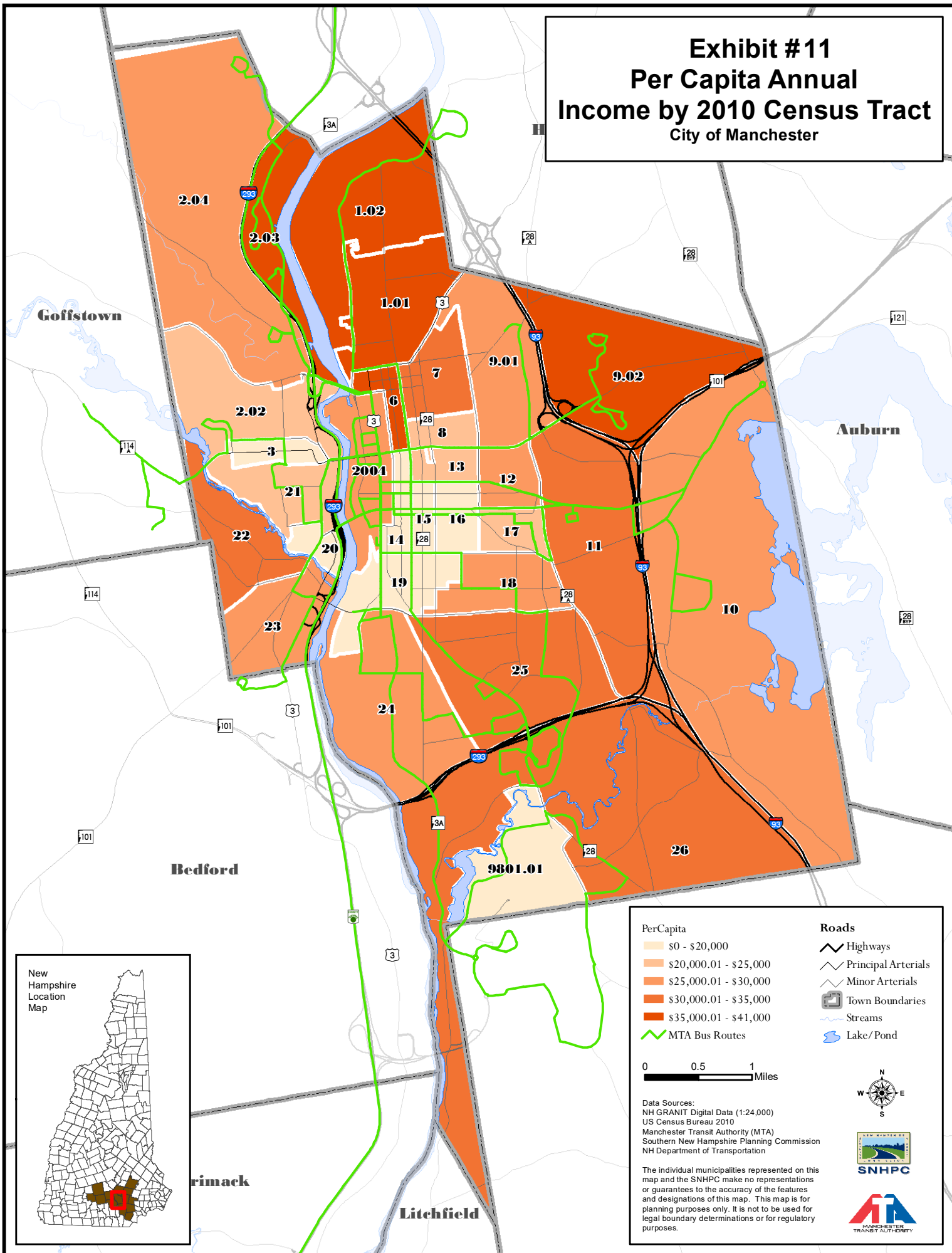


Exhibit # 12 Population Density by 2010 Census Tract City of Manchester

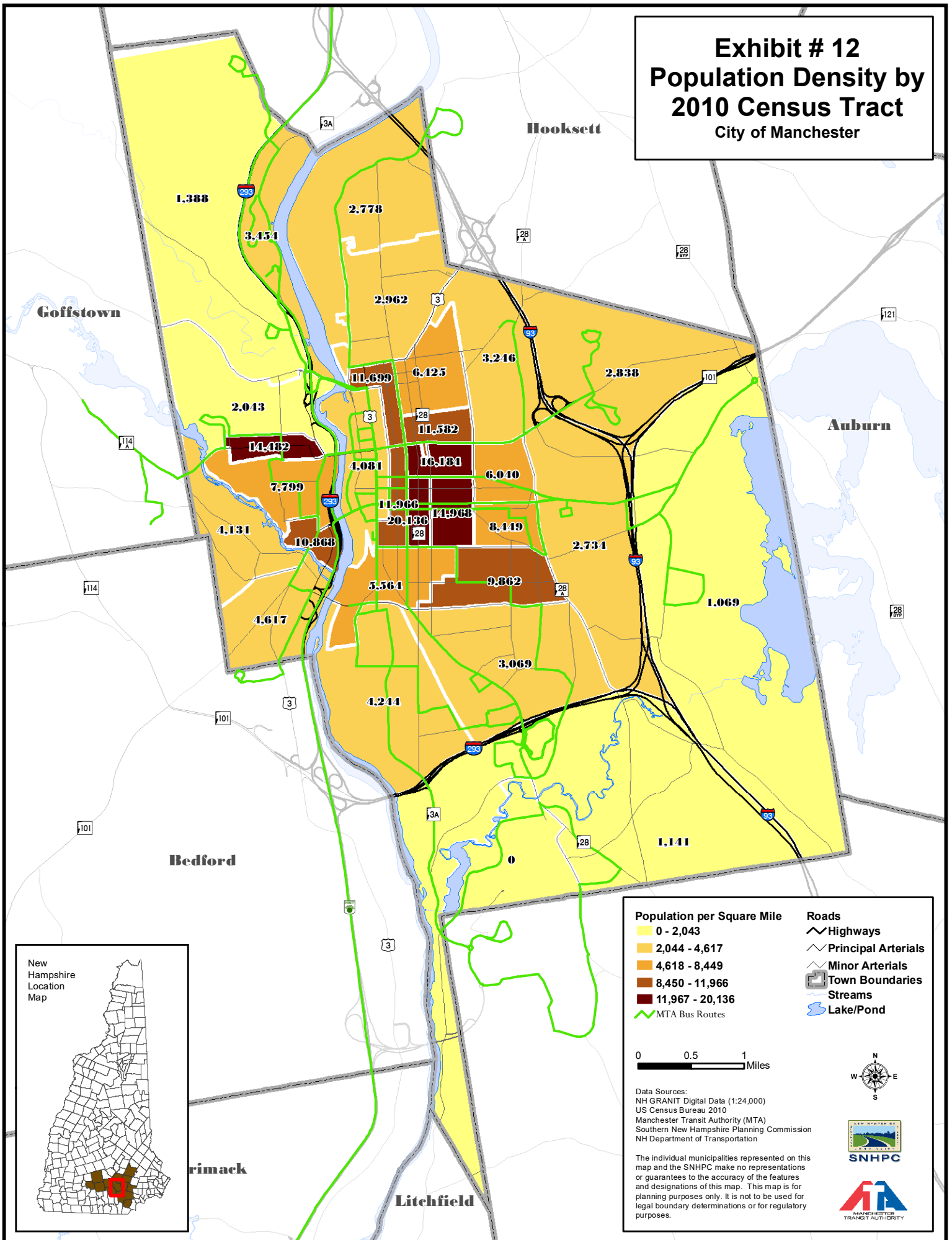
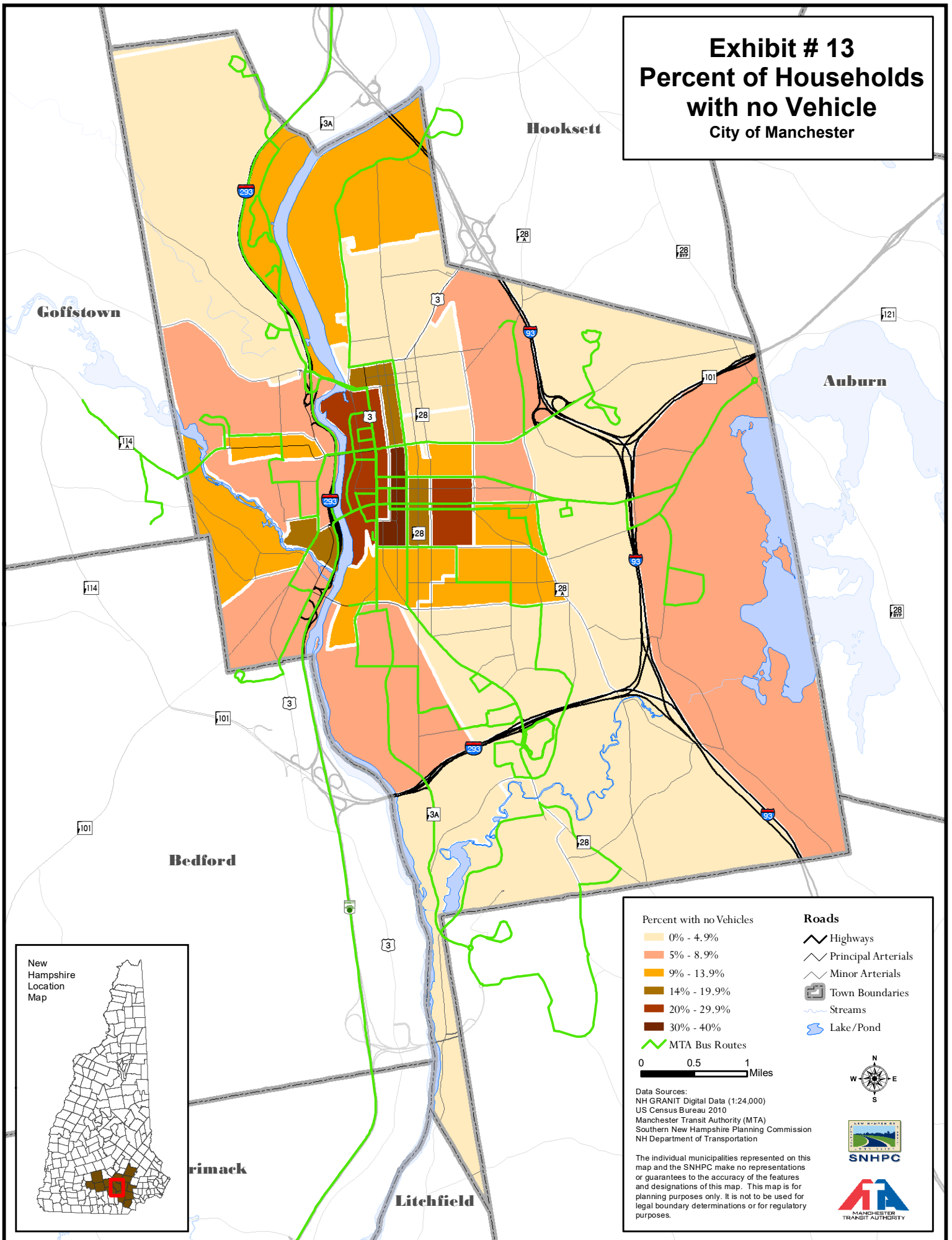


Exhibit # 13

Percent of Households with no Vehicle

City of Manchester



Service in Relation to Major Trip Attractors/Development Factors

Available fixed-route service was analyzed to determine the extent to which it meets current demands created by the following:

- Major shopping facilities
- Government facilities
- Major employers (200 or more employees)
- Population density
- Employment density
- Social and medical services

In order to identify unmet needs, each of Manchester's 95 Traffic Analysis Zones was studied to determine the existence of the above trip generators and/or attractors and access to public transit. Please refer to Exhibit 8 for a display of the Traffic Analysis Zones (TAZs) in relation to the coverage of the existing transit service.

Overall, Manchester's main origin and destination points are well-covered by existing fixed-route transit service. There are two TAZs however, that are completely unserved by existing fixed route transit service (55 and 119).

Apart from the fully-served and fully-unserved TAZs, there are several areas in which TAZs are only partially-served by transit. These TAZs are as follows: 2, 8, 13, 52, 56, 117, and 269; these zones' deficiencies are noted as follows:

Traffic Analysis Zone 2 is served by Route 1 – Healthcare Shuttle/ East Side Plaza, but only along Mammoth and Smyth Roads. Transit service is inconvenient for most of the residences in this zone, which are located outside of .25 mile from the transit route.

Traffic Analysis Zone 8 is served by Route 11 – Front Street/ Hackett Hill Road. The majority of residences are located in the central portion of TAZ 8 which is located beyond the .25 mile of the route. Route 11 travels in the area of the Amoskeag Traffic Circle but hardly serves the remaining portion of TAZ 8.

Traffic Analysis Zone 13 is served by Route 6 – Bremer Street/ Mast Road and Route 13 – Bedford Grove Plaza/ Second Street. Both Route 6 and Route 13 for the most part serve the outlying portions of TAZ 13. There is a significant amount of housing located to the north and south of Boynton Street in TAZ 13 that is unserved by transit and also a significant amount of residences outside of the .25 mile buffer.



Traffic Analysis Zone 52 is served by Route 2 – Hanover Street/E. Industrial Park. This route runs along a portion of Candia Road in the northeast portion of TAZ 52. Aside from this very small portion of Candia Road, TAZ 52 is unserved by the MTA. The majority of the housing in this TAZ is low-density.

Traffic Analysis Zone 56 is served by Routes 3- Brown Ave/ Airport and 10- Valley St/ Mall of NH. The unserved residential area in this TAZ is along Mammoth Road. For the most part there is not a large concentration of housing in this TAZ. Additionally, there are no major zone attractors that are unserved.

Traffic Analysis Zone 117 is served by Route 5- SNHU/ River Road. The majority of residences in this TAZ is unserved by transit and lie outside of .25 mile of transit. Route 5 runs along River Road which serves as the border of TAZ 117. Besides this portion of TAZ 117 there is no other transit service located within a reasonable distance.

Traffic Analysis Zone 269 is served by Route 5 SNHU/ River Road. Similar to TAZ 117, TAZ 269 is relatively underserved by transit. Route 5 runs along W. Clarke Street which serves as the border for TAZ 269. The northern and western portions of TAZ 269 are beyond a reasonable distance to transit.

PART 2: MTA IN THE FUTURE

Transportation system management, capital improvement and operation recommendations for the FY 2018 – FY 2022 Short Range Transit Plan are summarized in this section. System management recommendations cover the following categories:

- A) Accomplishments
- B) Monitoring System Performance
- C) Service/Schedule Adjustments
- D) Marketing Practices
- E) Vehicle Replacement
- F) Community Support Activities
- G) System Amenities



Recommendations for each category are listed below. Recommendations for some of the categories are provided in additional detail through a listing of individual action items.

A) Accomplishments

Recommendation - Develop a community outreach program designed to increase awareness of recent accomplishments. In future SRTP, this first section should be used to highlight successful action item implementation from the previous plan.

Action Items

- Publicize the MTA's transition from Cents A Bill fareboxes to Odyssey fareboxes and the greater functionality afforded riders. Publicize the change beginning with 2017 vehicle deliveries from Odyssey to FastFare fareboxes, an even more robust and passenger-friendly system
- Continue efforts to expand the U-Pass program, building on the success with UNH and SNHU
- Increase advertising availability on rolling stock vehicles through design and capital purchase criteria. Incorporate considerations for advertising into vehicle selection as appropriate.

B) Monitoring System Performance

Recommendation - Continue to generate regular ridership statistics by run and route and evaluate ridership statistics on a regular basis. Utilize data to measure and evaluate system performance and determine the impacts of service changes on ridership and on the system as a whole.



Action Items

- Combine more detailed, period study (i.e. 100% load counts) with the data inputs necessary to constructing individual route profiles and assess ridership on a trip-by-trip basis.
- Analyze each route for productivity to identify low ridership and base recommendations for service changes on this analysis.
- Complete a cost-revenue analysis for each route.
- Perform regular schedule adherence checks (minimum of fifty per month) to ensure reliability of service, publish the data on a monthly basis and provide the data to SNHPC for inclusion in the Congestion Management Process. Transition away from physical observation and towards use of the onboard tablet/GPS functionality to greatly increase sample size while holding cost steady.
- Obtain feedback on service quality and gain input on system expansion and improvements by administering regular surveys to MTA riders to coincide with future SRTP updates.
- Evaluate StepSaver ride time for individual trips, comparing each to the time required to travel between the same destinations via fixed route

C) Service and Schedule Adjustments

Recommendation - Actively elicit input from a wide variety of individuals or parties to identify system deficiencies and make changes.

Action Items

- Reorganize fixed route numbering system to more clearly illustrate which routes are considered Zone 1, 2, or 3.
- Continue to encourage and consider driver input in routing and scheduling.
- Encourage suggestions from the public on routing and scheduling.
- Continue expansion of regional transit such as the expansion of the Shopper Shuttle program including surrounding communities. Strong candidates for service expansion are Bedford and Hooksett though other possibilities also exist.
- Develop a plan for expansion of service hours later during the day. Last buses currently depart Downtown at 5:30 PM on weekdays, this is too early for a City the size of Manchester. Identify strongest routes and begin with one or two to demonstrate demand and learn any lessons needed for running evening service.

D) Marketing Practices

Recommendation – Update the design, look, and feel of the fixed route system to create a modern, inviting and easy-to-understand transportation option.

Action Items

- Rebrand the fixed route buses as part of the approaching fleet replacement. Design new colors and vehicle design and then apply that look to all other outreach materials from literature to bus stop signs in an effort to create a unified system aesthetic. Aim to replicate the success of rebranding the downtown circulator into the Green DASH.
- Develop a new logo to replace the current one which has been used since 1973. Approach area colleges/universities to see if students would work on the project to save costs of design consultants.

E) Vehicle Replacement

Recommendation - Ensure the maintenance of the fleet by adhering to the capital replacement program outlined in the FY 2018 – FY 2027 Ten Year Highway Plan.

Action Items

- Replace aging fixed route fleet with 30' New Flyer Midi vehicles incorporating a new color scheme and design. Evaluate opportunities to make the riding experience more comfortable and enjoyable.



- Replace and expand the low floor cutaway fleet to provide more accessible vehicles for paratransit as well as vehicles capable of operating on fixed route service in order to reduce spare vehicle needs.

F) Community Support Activities

Recommendation – MTA should seek out ways to participate in the community in an effort to be a positive impact on their service area as well as to expand support for public transportation to people who may never ride a bus themselves.

Action Items

- Partner with Bike Manchester to implement bike racks at major transit stops
- Participate in community initiatives to broaden public support. These should include a broad array of industries from the Chamber of Commerce to public health and social service agencies.
- Seek out opportunities to participate on a State and National level to develop new skills and learn successful tips from other areas as well as to shape policy and funding decisions likely to affect MTA.

G) System Amenities

Recommendation – In an effort to attract more choice riders, targeted investment of time and resources should be made in improving system amenities.

Action Items

- Provide Bus route name(s) and number(s) on signs at several key stops, preferably where multiple routes pass and post individual route maps and schedules for the route(s) in proximity to these bus signs.
- Maintain a positive image, ensure system visibility and clearly signify community presence, 1) continue to update placement of all bus stop signs so that they accurately reflect current routes and 2) continuously replace missing /or damaged bus stop signs incorporating a new design and brand.
- Now that MTA owns the former Signal shelters, evaluate placement and potential improvements like lighting and electronic displays.
- Develop single route timetables and maps for electronic availability. Enhance electronic capabilities for passenger through design of an MTA app.