

FINANCIAL ANALYSIS

SAFETEA-LU requires that all LRTP be constrained by the amount of revenue available. The following analysis presents a summary of the NATS revenue estimates versus its planned expenditures to demonstrate financial constraint.

Sources of Transportation Funding

Federal

The primary source of funding for the nation's roadways is through the fuel tax. This funding is deposited into the Federal Highway Trust Fund and routed to each state according to programs authorized under the existing transportation bill (SAFETEA-LU). In Michigan, the funding programs include Surface Transportation (STP), National Highway System, Highway Bridge Replacement and Rehabilitation, Interstate Maintenance, CMAQ, and Safe Routes to School (SRTS). In addition, some of the STP funds are specifically allocated to fund projects that qualify as Transportation Enhancement, Safety, and Highway and Rail/Highway Crossing. These STP funds require a twenty percent local match in order to become eligible.

State

In addition to the fuel tax, in the State of Michigan, transportation dollars also come from vehicle registration fees. These dollars are deposited into the Michigan Transportation Fund (MTF) and are then distributed to local agencies for projects by a formula as decided by the State Act 51 of 1951. In the NATS area, state funds that have most often been used include those allocated for safety and economic development. State funds are also commonly used by transit agencies to match their federal allocations.

Local

In Michigan, cities, villages, and counties are not permitted to assess gasoline taxes or vehicle registration fees. Therefore, most local dollars used for transportation include general fund dollars, dedicated millages, tax increment financing, special assessments, or general obligation bonds. Private sector organizations may also contribute to transportation projects. This most often occurs with the construction of private roads

connected to commercial/industrial or residential developments. In other areas, the private sector has contributed to large transportation projects by taking ownership of bridges or funding the construction of portions of highway, but this has not occurred within the NATS communities. State law allows cities and villages to transfer up to 100 percent of their major street fund to their local system if they have adopted an asset management process for their major and local street system.

Details of Federal Highway Projected Revenues

Surface Transportation Program (STP)

STP is used by state and local jurisdictions for road and transit projects. Local projects are eligible for funding from the annual allocation of STP funds to the MPO. Road projects must be located on roads functionally classified as a rural major collector or higher. Ten percent of the STP fund is set aside for the Transportation Enhancement program. The remaining funds are used statewide or distributed to the MPO for use in the urbanized areas (Surface Transportation Program Urban), rural areas (Surface Transportation Program Rural), and small cities in rural areas with a population of 5,000 to 50,000 people (Surface Transportation Program Small Urban).

Transportation Enhancement Activities (STE)

Ten percent of Michigan's STP funding is set aside for STE. These monies are designated specifically for the enhancement of the intermodal transportation network on projects such as landscaping, installing bicycle paths, historic preservation, and mitigation of stormwater run-off. Once these projects are selected they will be amended into the TIP.

Highway Safety Improvement Program (HSIP)

SAFETEA-LU represents a change in the way safety funds are distributed as previous legislation (TEA-21) allocated ten percent of STP funds for local safety projects statewide. The safety program (HSIP), which is now a stand-alone core program, allows for items such as the upgrade of traffic signs and signals, replacement of guardrail or elimination of the need for guardrail, replacement of bridge railing and approach guardrail, removal of roadside obstacles, and small intersection improvements.

Congestion Mitigation/Air Quality (CMAQ)

The U.S. Congress created the CMAQ program in 1991. The primary purpose of this program is to fund improvements to the transportation system which reduce vehicle exhaust emissions in non-attainment and maintenance areas. This federal-aid program funds projects that improve the flow of traffic on the existing roadway system or transit and related projects that reduce the demand for the roadway system. Eligible transit projects include the purchase of buses for expanded service and operation of new programs for up to 3 years. In most cases, the CMAQ program provides 80 percent of the project cost; the applicant is responsible for the balance. CMAQ funding is awarded based on a regional competitive application process. Projects are evaluated on a benefit/cost ratio based on the reduction of emissions, as well as the overall quality of the project.

Table 6.0 displays federal and state transportation funding revenues estimated to the year 2035, separated by air conformity years. Revenue estimates are based on forecast from MDOT. **Table 6.1** represents local transportation funding revenues obtained federally. NATS federal revenues were derived from the average of the funds received in the TIP from the years 2006 to 2008. The averages were applied to MDOT’s forecast estimates and separated by air conformity years to get the fund totals shown below.

Table 6.0 Federal Transportation Funding Revenue Estimates for MDOT Projects					
Year	STP (MDOT)	CMAQ	Enhancement (STE)	Safety (HSIP)	Bridge
2009-13	\$3,116,000	\$5,177,400	\$365,700	\$423,600	\$5,814,500
2014-18	\$3,080,900	\$5,374,800	\$405,400	\$469,700	\$6,443,200
2019-25	\$4,851,000	\$9,136,800	\$764,000	\$885,300	\$12,146,600
2026-35	\$7,292,100	\$13,859,300	\$1,172,200	\$1,357,900	\$18,633,300
Total	\$18,340,000	\$33,548,300	\$2,707,300	\$3,136,500	\$43,037,600

Year	Local (STP)	CMAQ	Enhancement (STE)	Safety (HSIP)	Bridge
2009-13	\$2,436,000	\$5,177,400	\$294,500	\$718,727	\$435,812
2014-18	\$2,184,000	\$5,374,800	\$324,747	\$792,544	\$480,572
2019-25	\$2,948,400	\$9,136,800	\$567,982	\$1,386,160	\$840,521
2026-35	\$4,344,300	\$13,859,300	\$1,048,680	\$2,559,300	\$1,551,875
Total	\$11,912,700	\$33,548,300	\$2,235,909	\$5,456,730	\$3,308,780

Details of Federal Transit Projected Revenues

5307 Funding (urbanized areas)

The formula grant program for urbanized areas (over 50,000 population) provides capital, operating (for agencies under 200,000 population), and planning assistance for mass transportation. The amount allocated to each urbanized area is determined by formula with half based on population and population density and the other half on vehicle miles and passenger miles. The funding provides for capital and planning at 80 percent and for operating at up to 50 percent.

Table 6.2 displays federal transit revenue estimates to the year 2035, separated by air conformity years. The revenue estimates were derived from the average of the funds received in the TIP from the years 2006 to 2008. The averages were applied to MDOT's forecast estimates and separated by air conformity years to get the fund totals shown below.

Year	Transit Operation	Transit Capital
2009-13	\$3,462,008	\$549,088
2014-18	\$3,817,575	\$605,482
2019-25	\$6,676,944	\$1,058,989
2026-35	\$12,327,801	\$1,955,236
Total	\$26,284,328	\$4,168,795

Details of Local Transportation Fund Revenue

Local transportation funding revenue comes from a variety of sources including federal funds such as enhancement, safety, bridge, 5307 transit funds, and CMAQ. State and local jurisdictions also provide transportation funding revenue through MTF, taxes, license and permit fees, interest, and rent. **Table 6.3** represents local jurisdiction transportation revenue, which were taken from the individual local agencies’ Act 51 reports and applied to MDOT’s forecast estimates. The years were separated by air conformity years to get the figures shown below.

Table 6.3 NATS Local Jurisdiction Transportation Funding Revenues				
Year	BCRC	CCRC	Niles	Buchanan
2009-13	\$8,293,185	\$2,829,510	\$2,816,800	\$3,025,010
2014-18	\$9,144,939	\$3,120,116	\$3,106,100	\$3,335,695
2019-25	\$15,994,510	\$5,457,087	\$5,432,573	\$5,834,134
2026-35	\$29,531,047	\$10,075,550	\$10,030,290	\$10,771,701
Total	\$62,963,681	\$21,482,263	\$21,385,764	\$22,966,540

Detail of Planned Expenditure

Local Jurisdiction Expenditures

The NATS area including BCRC, the Cass County Road Commission (CCRC), and the Cities of Niles and Buchanan are responsible for the maintenance and operation of the NATS transportation network. The cost for the maintenance and operation of the transportation network is listed in the local agencies’ Act 51 report as expenditures. For the NATS LRTP the expenditures were broken down into three categories: construction, maintenance/heavy maintenance, and other.

- Construction – includes construction of streets and bridges.
- Maintenance/Heavy Maintenance – includes preservation of streets and bridges, traffic services, and winter maintenance.

- Other – includes administration, engineering, record keeping, and miscellaneous expenditures.

In **Table 6.4** the expenditures were taken from the local agencies Act 51 reports and estimated through the year 2035 based on MDOT’s forecast. The years are separated by the designated air conformity years.

Table 6.4 NATS Jurisdiction Expenditures			
Year	Construction	Maintenance/Heavy Maintenance	Other
2009-13	\$1,601,661	\$11,865,218	\$2,231,001
2014-18	\$1,766,160	\$13,083,839	\$2,460,137
2019-25	\$3,089,016	\$22,883,651	\$4,302,782
2026-35	\$5,703,324	\$42,250,633	\$7,944,330
Total	\$12,160,161	\$90,083,342	\$16,938,251

Local Road Projects

In order to be eligible for STP funding, a project must be located on a federal-aid eligible road (transit projects are excluded from this requirement), cited in the current LRTP, and the project must be listed in the most current TIP. The great majority of federally funded projects within the NATS area are resurfacing, reconstruction, safety, and bridge replacement projects. During the next 25 years (through the 2035 horizon year of this plan), most roads in the NATS area will require resurfacing, rehabilitation and/or reconstruction. Therefore, it should be expected that all federal-aid eligible roads will, at some time during the next 25 years, be programmed into the TIP for maintenance and repair. With the exception of projects programmed into the current TIP (FY 2008-2011) the details of these projects will not be specifically listed in this plan. Significant changes to a roadway are considered relevant to the LRTP. These projects involving capacity expansion or new construction in the urban area are specifically detailed in the LRTP.

Table 6.5-6.8 illustrates the total number of committed projects in the NATS area including local, state, and transit projects. A more comprehensive description of these projects are located in the public participation section.

Table 6.5 NATS State Project Estimates		
Year	Number of Projects	Total Cost
2009-13	6	\$27,852,581
2014-18	0	\$0
2019-25	0	\$0
2026-35	0	\$0
Total	6	\$27,852,581

Table 6.6 NATS Local Project Estimates		
Year	Number of Projects	Total Cost
2009-13	22	\$3,026,303
2014-18	0	\$0
2019-25	0	\$0
2026-35	0	\$0
Total	22	\$3,026,303

Table 6.7 NATS Transit Project Estimates		
Year	Number of Projects	Total Cost
2009-13	21	\$1,425,545
2014-18	0	\$0
2019-25	0	\$0
2026-35	0	\$0
Total	21	\$1,425,545

Table 6.8 NATS State, Local & Transit Project Estimates		
Year	Number of Projects	Total Cost
2009-13	49	\$32,304,429
2014-18	0	\$0
2019-25	0	\$0
2026-35	0	\$0
Total	49	\$32,304,429

Revenue and Expenditure Summaries

Table 6.9 summarizes federal, transit and local revenues separated by air conformity years.

Table 6.9 NATS Revenue Summary					
Year	Federal Revenue (MDOT)	Federal Revenue (Local)	Transit Revenue	Local Agency Revenue	Total Revenue
2009-13	\$14,897,200	\$9,062,439	\$4,011,096	\$16,964,505	\$44,935,240
2014-18	\$15,774,000	\$9,156,663	\$4,423,057	\$18,706,850	\$48,060,570
2019-25	\$27,783,700	\$14,879,864	\$7,735,933	\$32,718,305	\$83,117,801
2026-35	\$42,314,800	\$23,363,454	\$14,283,037	\$60,408,588	\$140,369,880
Total	\$100,769,700	\$56,462,419	\$30,453,123	\$128,798,249	\$316,483,491

Table 6.10 summarizes MDOT, local and transit expenditures. Local and state preventive maintenance projects are represented in their respective maintenance and heavy maintenance column. The transit column represents total transit projects including projects that receive CMAQ funding.

Table 6.10 NATS Expenditure Summary						
Year	Construction	Maintenance/Heavy Maintenance	Other Expenses	MDOT Maintenance/Heavy Maintenance	Transit Projects	Total Expense
2009-13	\$1,601,661	\$11,865,218	\$2,231,001	\$27,852,581	\$32,304,429	\$75,854,890
2014-18	\$1,766,160	\$13,083,839	\$2,460,137	\$0	\$0	\$17,310,136
2019-25	\$3,089,016	\$22,883,651	\$4,302,782	\$0	\$0	\$30,275,450
2026-35	\$5,703,324	\$42,250,633	\$7,944,330	\$0	\$0	\$55,898,287
Total	\$12,160,161	\$90,083,342	\$16,938,251	\$27,852,581	\$32,304,429	\$179,338,763

Demonstration of Constraint

Table 6.11 compares expenditure totals to revenue totals separated by air conformity years. The revenue total exceeds the expenditure total, therefore the NATS 2035 LRTP is constrained.

Table 6.11 NATS Demonstration of Constraint		
Year	Total Revenue	Total Expense
2009-13	\$44,935,240	\$75,854,890
2014-18	\$48,060,570	\$17,310,136
2019-25	\$83,117,801	\$30,275,450
2026-35	\$140,369,880	\$55,898,287
Total	\$316,483,491	\$179,338,763

Alternatives and Recommendations

Though road construction projects are the most visible actions to the general public, they are not and should not be the only elements of the plan. Programmatic, policy, and legislative alternatives are important elements of the LRTP. They are in keeping with the “long range vision” of the entire transportation planning process. The LRTP is intended to be a predictive vision into the future and provides foreseeable solutions for the region’s transportation system. It is a problem-solving process that tries to anticipate the future problems and alternatives for the decision makers to consider.