

community

mobility

environment

Chapter 8: Fiscally Constrained Plan

CHAPTER 8: FISCALLY CONSTRAINED PLAN

Since there were more projects identified through the alternatives development process than available revenue, a screening process was used to develop a financially feasible plan. The plan was used to determine how to spend the anticipated revenues over the next 25 years.

8.1 ALTERNATIVES SELECTED

The AAMPO used scorecards developed for each alternative project, feedback received in the Visioning and Issues meetings, comments received in the Transportation Concept Evaluation meetings, information on project timing and consistency with previous or other plans, as well as other factors, to develop the LRTP project list. The following sections summarize the alternatives selected.

PLAN ROADWAY PROJECTS

The roadway projects chosen to be in the LRTP were selected to address the issues and deficiencies identified through the Needs Assessment and the Issue and Vision process. The Plan Roadway Projects are shown in **FIGURE 8.1** and **TABLE 8.1**.

FIGURE 8.1. PLAN ROADWAY MAP

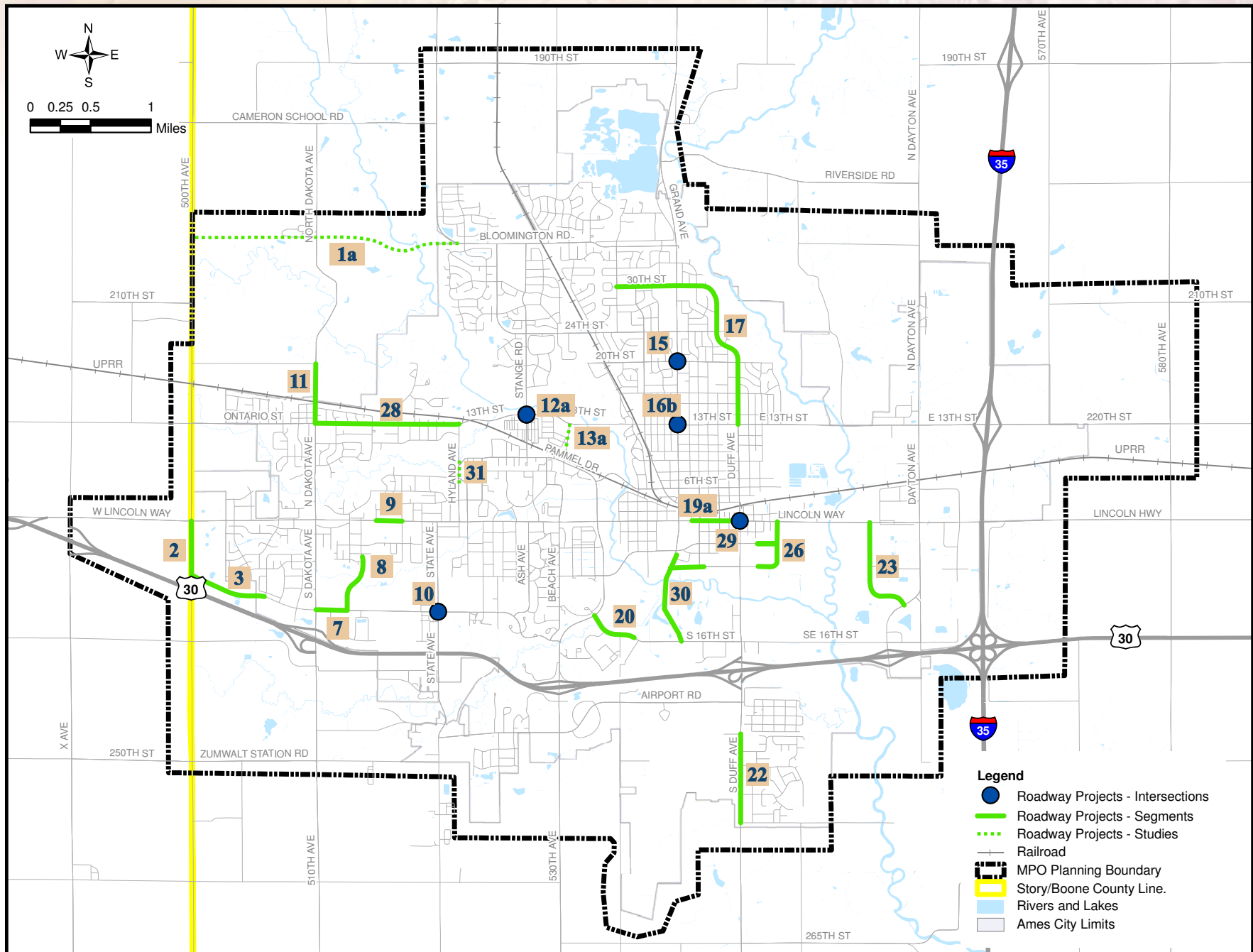


TABLE 8.1. PLAN ROADWAY PROJECTS

ALTERNATIVE PROJECT NUMBER	PROJECT DESCRIPTION	COST (IN 2010 DOLLARS)
1a	Bloomington Road Extension Study (West). EA or EIS	\$500,000
2	500th Avenue Reconstruction - W. Lincoln Way to Mortensen Road	\$1,503,000
3	Mortensen Road Extension - 500th Ave. to Miller Ave.	\$2,826,000
7	Mortensen Rd. Widening - S. Dakota Ave. to Dotson Dr.	\$286,000
8	Dotson Dr. Connection - Lincoln Way to Mortensen Road **	\$1,354,000
9	Lincoln Way Widening - Marshall Ave. to Franklin Ave.	\$1,849,000
10	State Ave. / Mortensen Rd. Roundabout	\$638,000
11	N. Dakota Widening - Ontario Street to 215th Street **	\$5,231,000
12a*	Stange Rd. / 13th Street Intersection Improvements - Roundabout	\$916,000
13a	Haber Rd. Study	\$200,000
15	Grand Ave. / 20th Street Intersection Improvements	\$1,485,000
16b	Grand Ave. / 13th Street Intersection Improvements - Add Left-Turn Lanes	\$2,817,000
17	30th Street / Duff Ave. Lane Reductions - Hoover Ave. to 13th Street	\$61,000
19a	Lincoln Way Lane Reduction - Gilchrist Ave to Duff Avenue **	\$32,000
20	S. 16th Street Widening - University Blvd. to Vet Med Trail **	\$1,405,000
22	S. Duff Ave. Widening - Kitty Hawk Dr. to Ken Maril Rd. **	\$2,331,000

ALTERNATIVE PROJECT NUMBER	PROJECT DESCRIPTION	COST (IN 2010 DOLLARS)
23	Freel Dr. Reconstruction / Extension to Dayton Ave.	\$3,217,000
26	Cherry Ave. Extension - Lincoln Way to SE 5th Street	\$2,340,000
28	Ontario St. Left-Turn Lane - Hyland Ave. to N. Dakota Ave.	\$44,000
29	Lincoln Way / Duff Avenue Intersection Improvements	\$95,000
30	Grand Ave. Extension - Squaw Creek Dr. to S. 16th / 5th Street Extension- Grand Ave. to Duff Ave.	\$10,583,000
31	Hyland Ave. Study - Pammel Drive to Sheldon Avenue **	\$100,000

*Depending on more detailed analysis, this project may be switched with Project 12b

** Projects were either modified or added based on input from AAMPO staff



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Alternative project numbers 8, 11, 20 and 22 were updated based on discussions with AAMPO staff. The updated concepts for these projects are presented in Appendix A. Also, two new projects were developed based on input from AAMPO staff. The new projects are Lincoln Way Lane Reduction – Gilchrist Ave to Duff Avenue (Project 19a) and Hyland Ave. Corridor Study – Pammel Drive to Sheldon Avenue (Project 31).

Additionally, coordination with Iowa DOT District Office has taken place through this plan development process. The Iowa DOT has a couple of projects that are currently planned and a couple of projects that they anticipated over the next 25 years. These projects are funded through the Iowa DOT Commission program. The Iowa DOT Roadway Projects are shown in **TABLE 8.2**.

TABLE 8.2. IOWA DOT ROADWAY PROJECTS WITHIN MPO BOUNDARY

PROJECT DESCRIPTION	STATUS	YEAR	YEAR OF EXPENDITURE (YOE) COST
Reconstruct US 30 – 230th Street to Bike Trail (formerly CNW RR) Bridge	Planned	2011	21,700,000
Resurface US 30 – Bike Trail Bridge to Dayton Ave. Interchange	Planned	2013	N/A
Interstate 35/US 30 Interchange Reconstruction	Anticipated	N/A	N/A
Interstate 35 Widening – 13th Street to Southern MPO Boundary	Anticipated	N/A	N/A

PLAN BICYCLE/PEDESTRIAN PROJECTS

The bicycle/pedestrian projects chosen to be in the LRTP were selected to address the issues and deficiencies identified through the Needs Assessment and the Issue and Vision process. Some of the bicycle/pedestrian projects were updated and some additional projects were added based on comments received during the Transportation Concept Evaluation Workshop. The Plan Bicycle/Pedestrian Projects are shown in **FIGURE 8.2** and **TABLE 8.3**.

FIGURE 8.2. PLAN BICYCLE/PEDESTRIAN MAP

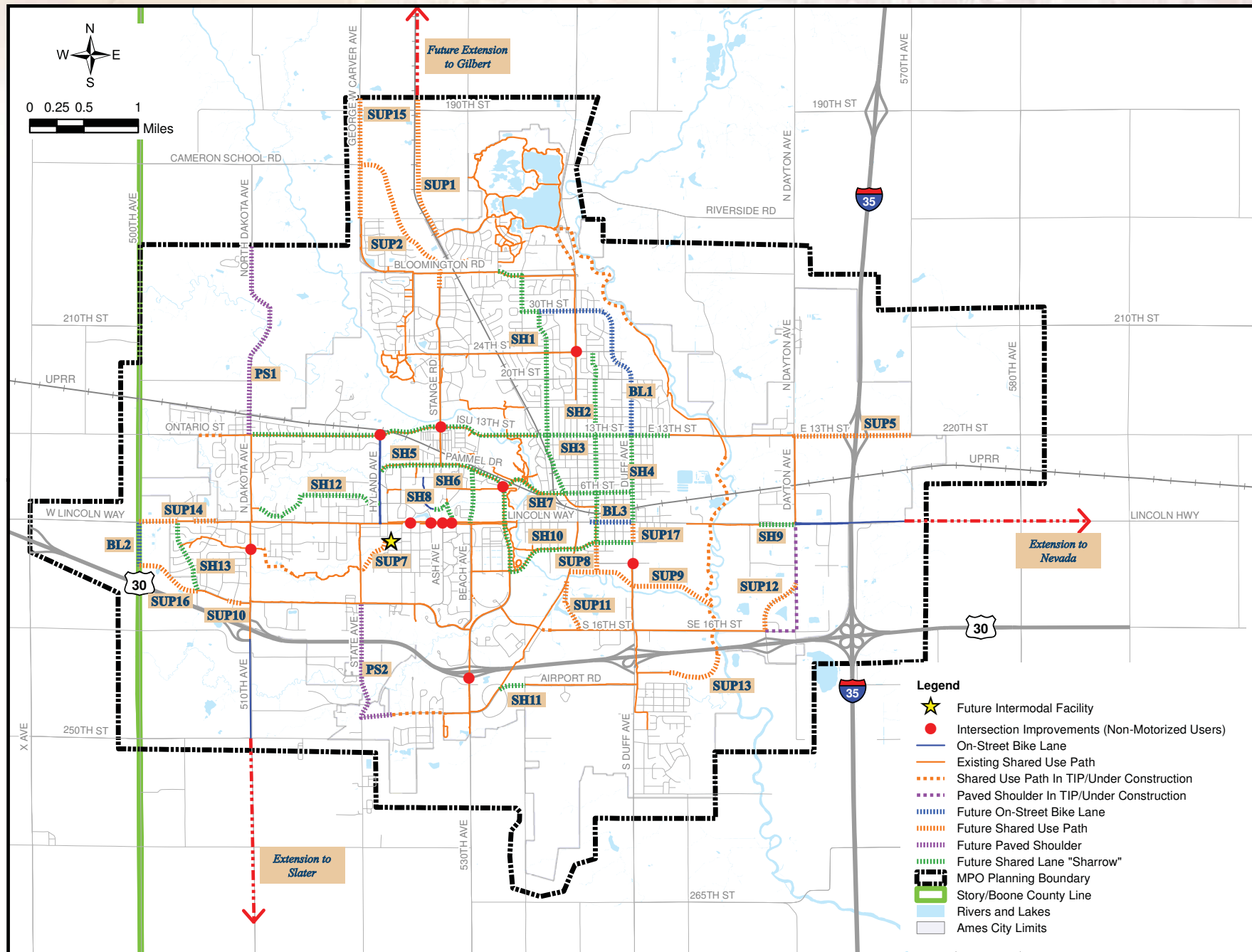


TABLE 8.3. PLAN BICYCLE/PEDESTRIAN PROJECTS

ALTERNATIVE PROJECT NUMBER	PROJECT DESCRIPTION	COST (IN 2010 DOLLARS)
BL1	On-Street Bike Lane On Duff Ave - 30th St / Northwestern Ave to 13th St / Duff Ave	\$69,000
BL2	On-Street Bike Lane On 500th Ave - Lincoln Way to Mortensen Rd Extension	\$22,000
BL3	On Street Bike Lane on Lincoln Way - Gilchrist St to Duff Ave	\$15,000
SUP1	Shared Use Path Along Union Pacific Railroad - North of Bloomington Road	\$562,000
SUP2	Shared Use Path Along Stange Rd - Dalton St to Cameron School Rd.	\$627,000
SUP5	Shared Use Path Along E 13th St - Dayton Ave to 570th Ave	\$456,000
SUP7	Shared Use Path to Proposed Intermodal Facility - East of State Ave	\$166,000
SUP8	Shared Use Path Along Walnut St - S 3rd St to Squaw Creek	\$114,000
SUP9	Shared Use Path Along Squaw Creek - Proposed Grand Ave Extension to Skunk River	\$592,000
SUP10	Shared Use Path Along Mortensen Rd - West of South Dakota	\$54,000
SUP11	Shared Use Path Along Proposed Grand Ave Extension to S 16th St	\$206,000
SUP12	Shared Use Path Along S Dayton Ave - SE 16th Ave to S Dayton Pl	\$240,000
SUP13	Shared Use Path to Recreational Park - East of Duff Ave	\$251,000
SUP 14	Shared Use Path Along Lincoln Hwy - N 500th Ave to Wilder Blvd and Hartford Dr to Thackeray Ave	\$246,000
SUP 15	Shared Use Path Along George Washington Carver Ave. - N of Weston Dr to MPO Planning Boundary N of 190th St	\$469,000
SUP 16	Shared Use Path Along Proposed Mortensen Extension - Miller Ave to Y Ave	\$264,000

ALTERNATIVE PROJECT NUMBER	PROJECT DESCRIPTION	COST (IN 2010 DOLLARS)
SUP 17	Shared Use Path Along S Duff Ave from Lincoln Way to S 3rd St	\$79,000
PS1	Paved Shoulder on N Dakota Ave - North of Ontario St	\$695,000
PS2	Paved Shoulder on State Ave and Oakwood Rd - South of Mortensen Rd	\$503,000
SH1	Sharrow on Hoover Ave and Northwestern Ave - Bloomington Rd to 6th St	\$45,000
SH2	Sharrow on Clark Ave - 24th St to S 3rd St	\$32,000
SH3	Sharrow on 13th St - N Dakota Ave to Meadowland Ave	\$71,000
SH4	Sharrow on Duff Ave - 13th St to Lincoln Way	\$15,000
SH5	Sharrow on Pammel Dr / University Blvd - Hyland Ave to S 4th St	\$37,000
SH6	Sharrow on Beach Rd / Osborn Dr - University Blvd to Lincoln Way	\$9,000
SH7	Sharrow on 6th St - University Blvd to Duff Ave	\$23,000
SH8	Sharrow on Union Drive - Morrill Dr to Lincoln Way	\$6,000
SH9	Sharrow on Lincoln Way - Freel Dr to Dayton Ave	\$6,000
SH10	Sharrow on S 4th St / S 3rd St - University Blvd to Duff Ave	\$22,000
SH11	Sharrow on Airport Rd - N Loop Dr to S Riverside Dr	\$5,000
SH12	Sharrow on Westbrook Dr/ Hickory Dr/Woodland St/West St - N Dakota Ave to Hyland Ave	\$23,000
SH13	Sharrow on Proposed Wilder Blvd - Lincoln Way to Mortensen Rd	\$12,000
II	Intersection Improvements for Non-Motorized Users	\$110,000

DRAFT PLAN TRANSIT PROJECTS

The transit projects chosen to be in the LRTP were selected to address the issues and deficiencies identified through the Needs Assessment and the Issue and Vision process. The cost and description of Alternative Project Number 7 was updated based on input from the Transportation Concept Evaluation Workshop. The Plan Transit Projects are shown in **FIGURE 8.3** and **TABLE 8.4**.

FIGURE 8.3. TRANSIT PROJECTS MAP

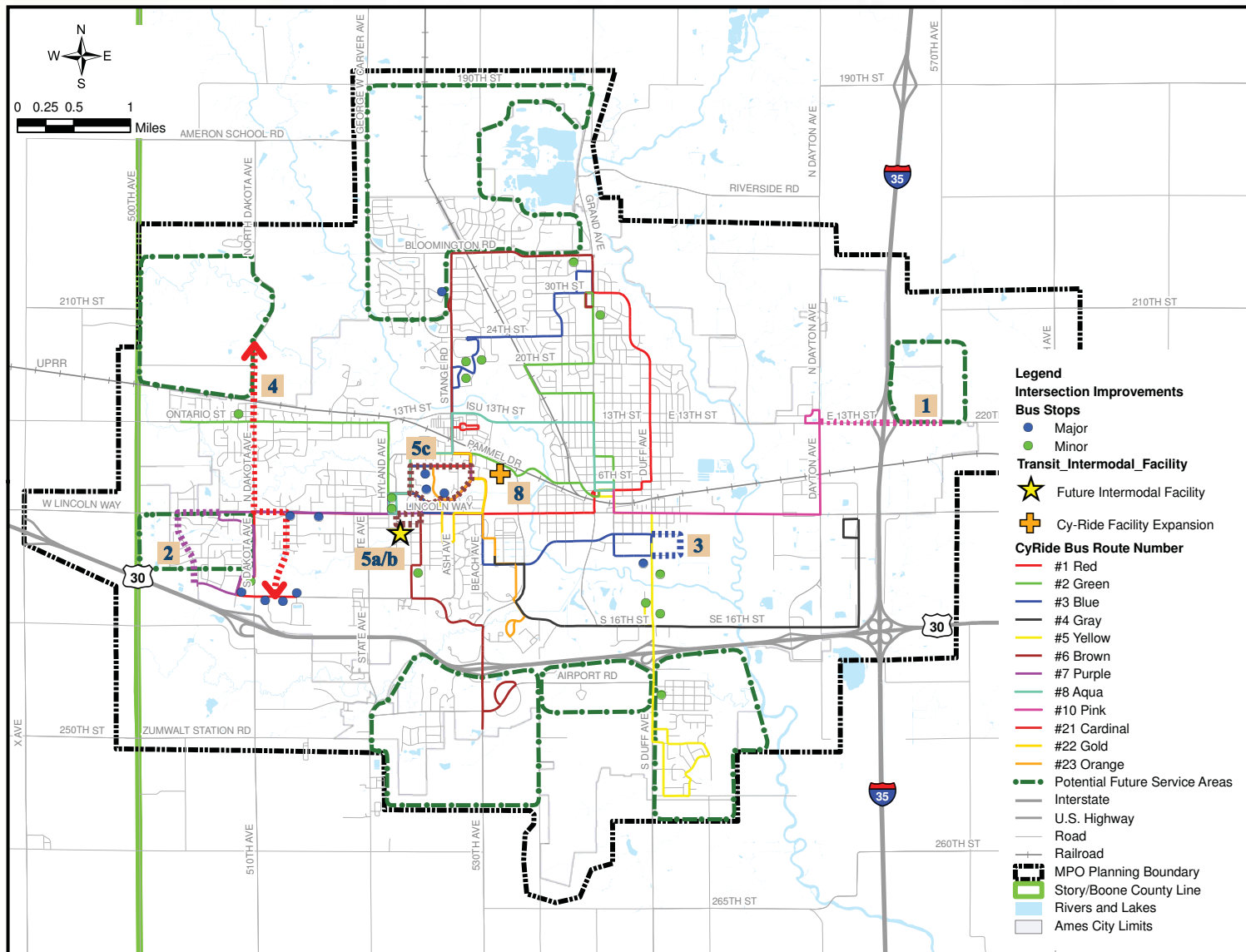


TABLE 8.4. PLAN TRANSIT PROJECTS

ALTERNATIVE PROJECT NUMBER	PROJECT DESCRIPTION	COST* (IN 2010 DOLLARS)
1	Extend Pink Route to Proposed 13th Street Commercial Development	\$416,200
2	Extend Purple Route to Wilder Blvd.	\$230,400
3	Extend Blue Route to Wal-Mart and Target	\$291,300
4	Cross Town Route- Fieldstone Development to Mortensen Road	\$208,100
5a	Intermodal Facility Phase I	\$8,900,500
5b	Intermodal Facility Phase II	\$13,032,500
5c	Intermodal Facility Circulator	\$249,600
6	Bus Stop Improvements	\$50,000
7	Increase Frequencies on Core Routes to 15/30 Minutes from 20/40 Minutes	\$280,000
8	Cy-Ride Facility Expansion	\$10,000,000
9	Alternatives Analysis Study - Orange Route Corridor	\$200,000
10	Des Moines/Ames Commuter Service Study	\$100,000
11	Articulated Buses on Red/Orange Routes	\$2,800,000
12	Automatic Vehicle Location Technology	\$2,000,000

*Cost for project numbers 1, 2, 3, 4, 5c, 6 and 7 are costs which will occur annually.

8.2 FISCALLY CONSTRAINED PLAN

In order to develop a fiscally constrained plan, the anticipated revenues discussed in Chapter 7 and the Plan projects are brought together. Chapter 7 identified all financial resources that are reasonably expected to be made available to implement the plan. These resources will be used to prioritize the Plan projects into either the Short-Term Plan (years 1 - 10) or the Long-Term Plan (years 11 – 25).

The Plan projects will be fiscally constrained in the Short- and Long-Term Plans using an inflation rate to reflect the “year of expenditure dollars”. Base on a lack of rigorously developed inflation rate for the Ames area, a 4% annual inflation for costs will be used based on U.S. DOT guidance.

The Ames area has historically received Direct-Federal Apportionments (Earmarks) for specific projects. These funds are typically for larger highway/bridge projects. The FHWA recommends anticipating an earmark funding level of 40% on projects that would be good earmark candidates. Projects that are considered good earmark candidates are anticipated to receive 40% of the funding from earmarks.

SHORT-TERM PLAN

The Short-Term Plan is for the first 10 years of the plan, year 2011 – 2020. The Short-Term Plan projects were prioritized based on need. In order to develop the revenue projections for the short term plan, the year 2011 – 2020 revenues and costs from TABLES 7.1 - 7.6 were summed for the 10-year period.

ROADWAY AND BICYCLE/PEDESTRIAN

The forecasted revenues from years 2011-2020 were summed from TABLES 7.1 AND 7.2 and the forecasted operations and maintenance costs for years 2011-2020 were summed from TABLE 7.3. The revenues were then separated for roadway and bicycle/pedestrian funding. The local options sales tax and other revenues were split between the roadway and bicycle/pedestrian funding based on historical funding

data. The roadway funding was reduced by the project maintenance/operations costs and the projected rehabilitation/reconstruction costs. It was assumed that 60% of the roadway funds (roadway revenue minus maintenance/operations costs) would be used on rehabilitation/reconstruction projects based on historical data.

The estimated funds available for roadway and bicycle/pedestrian facilities by source for the Short-Term Plan are presented in **TABLE 8.5**. As presented in **TABLE 8.5**, the total estimated project funds for the 10-year analysis period for Roadway projects are approximately \$24 million and for Bicycle/Pedestrian projects are approximately \$4 million.

TABLE 8.5. SHORT-TERM PLAN ROADWAY AND BICYCLE PEDESTRIAN AVAILABLE FUNDING

FUNDING SOURCE	YEARS 2011 - 2020 REVENUE
Roadway and Bicycle/Pedestrian	
Surface Transportation Program (STP)	\$14,470,000
Transportation Enhancements (TE)	\$997,000
Traffic Safety Improvement Program (TSIP)	\$900,000
Safe Routes to School Program (SRTS)	\$250,000
General Obligation Bonds (GOB)	\$68,436,000
Local Options Sales Tax (LOST)	\$5,146,000
Road Use Tax Fund (RUTF)	\$51,376,000
Other	\$9,855,000
Subtotal	\$151,429,000
Roadway	
STP + TSIP	\$15,370,000
GOB + RUTF	\$119,812,000
LOST (60%)	\$3,088,000
Other (95%)	\$9,362,000
Subtotal	\$147,631,000
Less - Maintenance / Operations	\$84,223,000
Less - Rehabilitation / Reconstruction	\$38,045,000
Total	\$25,363,000
Bicycle/Pedestrian	
TE + SRTS	\$1,247,000
LOST (40%)	\$2,059,000
Other (5%)	\$493,000
Total	\$3,798,000

Roadway projects from **TABLE 8.1** have been selected to for the Short-Term Plan. The project cost for these projects have been inflated to year-of-expenditure dollars by grouping projects in year 1 through year 10 and selecting year 5 (2016) as the year-of-expenditure. The costs were inflated by 4% per year based on U.S. DOT guidance. The Grand Avenue Extension Project from Squaw Creek to S. 16th Street (Project 30) is a potential earmark project and is anticipated to receive 40% of the funding from earmarks. The roadway projects for the Short-Term Plan are presented in **TABLE 8.6**. As presented in **TABLE 8.6**, the total estimated cost for the short-term roadway projects are approximately \$25 million. The short-term Plan roadway projected funding of \$25,363,000 exceeds the projected roadway project cost of \$24,895,000.

TABLE 8.6. SHORT-TERM ROADWAY PROJECTS

ALTERNATIVE PROJECT NUMBER	PROJECT DESCRIPTION	YOE COST (YEAR 2011 - 2020)*	POTENTIAL EARMARKS
7	Mortensen Rd. Widening - S. Dakota Ave. to Dotson Dr.	\$348,000	
8	Dotson Dr. Connection - Lincoln Way to Mortensen Road	\$1,647,000	
9	Lincoln Way Widening - Marshall Ave. to Franklin Ave.	\$2,250,000	
10	State Ave. / Mortensen Rd. Roundabout	\$776,000	
11	N. Dakota Widening - Ontario Street to 215th Street	\$6,364,000	
13a	Haber Road Study	\$243,000	
16b	Grand Ave. / 13th Street Intersection Improvements- Add Left-Turn Lanes	\$3,427,000	
17	30th Street / Duff Ave. Lane Reductions - Hoover Ave. to 13th Street	\$74,000	
19a	Lincoln Way Lane Reduction - Gilchrist Ave to Duff Avenue	\$39,000	
20	S. 16th Street Widening - University Blvd. to Vet Med Trail	\$1,709,000	
28	Ontario St. Left-Turn Lane - Hyland Ave. to N. Dakota Ave.	\$54,000	
29	Lincoln Way / Duff Avenue Intersection Improvements	\$116,000	
30	Grand Ave. Extension - Squaw Creek Dr. to S. 16th / 5th Street Extension- Grand Ave. to Duff Ave.	\$7,726,000	\$5,150,000
31	Hyland Ave. Study - Pammel Drive to Sheldon Avenue	\$122,000	
Total		\$24,895,000	\$5,150,000

* Costs in this column for potential earmark projects were reduced by 40%

Bicycle/Pedestrian projects from **TABLE 8.3** have been selected for the Short-Term Plan. The project cost for these projects have been inflated to year-of-expenditure dollars by grouping projects in year 1 through year 10 and selecting year 5 (2016) as the year-of-expenditure. The costs were inflated by 4% per year. There are no costs shown for project BL1 and BL2 since they are included in the roadway projects 17 and 19a, respectively. The bicycle/pedestrian projects for the Short-Term Plan are presented in **TABLE 8.7**. As presented in **TABLE 8.7**, the total estimated cost for the short-term bicycle/pedestrian projects is approximately \$4 million.

TABLE 8.7. SHORT-TERM BICYCLE/PEDESTRIAN PROJECTS

ALTERNATIVE PROJECT NUMBER	PROJECT DESCRIPTION	YOE COST (YEAR 2011 - 2020)
BL1	On-Street Bike Lane On Duff Ave - 30th St / Northwestern Ave to 13th St / Duff Ave	See Roadway Project 17
BL2	On-Street Bike Lane On 500th Ave - Lincoln Way to Mortensen Rd Extension	See Roadway Project 19a
BL3	On Street Bike Lane on Lincoln Way - Gilchrist St to Duff Ave	\$18,000
SUP2	Shared Use Path Along Stange Rd - Dalton St to Cameron School Rd.	\$763,000
SUP5	Shared Use Path Along E 13th St - Dayton Ave to 570th Ave	\$555,000
SUP7	Shared Use Path to Proposed Intermodal Facility - East of State Ave	\$202,000
SUP10	Shared Use Path Along Mortensen Rd - West of South Dakota	\$66,000
SUP11	Shared Use Path Along Proposed Grand Ave Extension to S 16th St	\$251,000
SUP12	Shared Use Path Along S Dayton Ave - SE 16th Ave to S Dayton Pl	\$292,000
SUP13	Shared Use Path to Recreational Park - East of Duff Ave	\$305,000
SUP 14	Shared Use Path Along Lincoln Hwy - N 500th Ave to Wilder Blvd and Hartford Dr to Thackeray Ave	\$299,000

ALTERNATIVE PROJECT NUMBER	PROJECT DESCRIPTION	YOE COST (YEAR 2011 - 2020)
SUP 16	Shared Use Path Along Proposed Mortensen Extension - Miller Ave to Y Ave	\$321,000
SUP 17	Shared Use Path Along S Duff Ave from Lincoln Way to S 3rd St	\$96,000
SH1	Sharrow on Hoover Ave and Northwestern Ave - Bloomington Rd to 6th St	\$55,000
SH2	Sharrow on Clark Ave - 24th St to S 3rd St	\$39,000
SH3	Sharrow on 13th St - N Dakota Ave to Meadowland Ave	\$86,000
SH4	Sharrow on Duff Ave - 13th St to Lincoln Way	\$18,000
SH5	Sharrow on Pammel Dr / University Blvd - Hyland Ave to S 4th St	\$45,000
SH6	Sharrow on Beach Rd / Osborn Dr - University Blvd to Lincoln Way	\$11,000
SH7	Sharrow on 6th St - University Blvd to Duff Ave	\$28,000
SH8	Sharrow on Union Drive - Morrill Dr to Lincoln Way	\$7,000
SH9	Sharrow on Lincoln Way - Freel Dr to Dayton Ave	\$7,000
SH10	Sharrow on S 4th St / S 3rd St - University Blvd to Duff Ave	\$27,000
SH11	Sharrow on Airport Rd - N Loop Dr to S Riverside Dr	\$6,000
SH12	Sharrow on Westbrook Dr/ Hickory Dr/Woodland St/West St - N Dakota Ave to Hyland Ave	\$28,000
SH13	Sharrow on Proposed Wilder Blvd - Lincoln Way to Mortensen Rd	\$15,000
II	Intersection Improvements for Non-Motorized Users	\$134,000
Total		\$3,674,000

The Short-Term Plan bicycle/pedestrian available projected funding of \$3,798,000 exceeds the projected bicycle/pedestrian project cost of \$3,674,000.

TRANSIT

The estimated funds available for transit operations by source for the Short-Term Plan are presented in **TABLE 8.8**. As presented in **TABLE 8.8**, the total estimated operating net revenues for the 10-year analysis period are approximately \$15 million.

TABLE 8.8. SHORT-TERM PLAN TRANSIT OPERATIONS NET REVENUE

FUNDING SOURCE	YEARS 2011 - 2020 REVENUE
Farebox Revenue	\$4,692,000
Tax Levy	\$5,972,000
Other Transportation Revenue	\$18,821,000
Government of Student Body	\$39,584,000
Iowa State University	\$7,237,000
Miscellaneous Revenue	\$2,584,000
Iowa DOT Operating Assistance	\$6,493,000
FTA Operating Assistance	\$22,608,000
Subtotal	\$107,991,000
Operating Expense	\$92,797,000
Net Operating Revenue	\$15,194,000

All of the operations related transit projects from **TABLE 8.4** have been selected to for the Short-Term Plan. The operating cost for these projects has been inflated to year of expenditure dollars using an inflation rate of 4% per year. It is assumed that the projects will be implemented incrementally over the 10-year period, so an average of 5 years of service was used for each project to estimate the costs between years 2011 and 2020. The operations related transit projects for the Short-Term Plan are presented in **TABLE 8.9**. As presented in **TABLE 8.9**, the total estimated cost for the short-term operations related transit projects are approximately \$11 million.

TABLE 8.9. SHORT-TERM PLAN OPERATIONS RELATED TRANSIT PROJECTS

ALTERNATIVE PROJECT NUMBER	PROJECT DESCRIPTION	YOE COST (YEAR 2011 - 2020)
1	Extend Pink Route to Proposed 13th Street Commercial Development	\$2,622,000
2	Extend Purple Route to Wilder Blvd.	\$1,452,000
3	Extend Blue Route to Wal-Mart and Target	\$1,835,000
4	Cross Town Route- Fieldstone Development to Mortensen Road	\$1,311,000
5c	Intermodal Facility Circulator	\$1,573,000
6	Bus Stop Improvements	\$315,000
7	Increase Frequencies on Core Routes to 15/30 Minutes from 20/40 Minutes	\$1,764,000
Total		\$10,872,000

The Short-Term Plan projected operations related transit projects net revenue of \$15,194,000 exceeds the projected operations related transit projects cost of \$10,872,000. This would allow for the operations related transit projects to be implemented at a faster rate over the 10-year period and/or would allow for additional services to be added during the 10-year period.

The estimated funds available for non-operating related transit projects by source for the Short-Term Plan are presented in **TABLE 8.10**. As presented in **TABLE 8.10**, the total estimated non-operating revenues for the 10-year analysis period for buses is approximately \$13 million and for other projects is \$22 million.

TABLE 8.10. SHORT-TERM PLAN NON-OPERATIONS RELATED TRANSIT PROJECTS

FUNDING SOURCE	YEARS 2011 - 2020 REVENUE
Bus Revenues	\$13,207,000
Other Capital Revenues	\$21,611,000
Total Non-Operating Revenues	\$34,818,000

All of the non-operations related transit projects from **TABLE 8.4** have been selected for the Short-Term Plan. The Intermodal Facility Phase I (Project 5a) has been funded through a TIGER grant, so project costs are not being shown for this project. The CyRide Facility Expansion (Project 8) costs have been reduced by \$4.9 million that has already been funded through SAFETEA-LU. The Bus Stop Improvements (Project 6) are an annual expense, so costs have been assumed for all 10-years of the Short-Term Plan. The non-operating cost for these projects has been inflated to year of expenditure dollars by grouping projects in year 1 through year 10 and selecting year 5 (2016) as the year-of-expenditure. The costs were inflated by 4% per year. The non-operations related transit projects for the Short-Term Plan are presented in **TABLE 8.11**. As presented in **TABLE 8.11**, the total estimated cost for the short-term non-operations related transit projects is approximately \$29 million with bus costs totaling approximately \$3 million and other capital costs totaling approximately \$26 million.

TABLE 8.11. SHORT-TERM NON-OPERATIONS RELATED TRANSIT PROJECTS

ALTERNATIVE PROJECT NUMBER	PROJECT DESCRIPTION	YOE COST (YEAR 2011 - 2020)
5a	Intermodal Facility Phase I	Funded Through TIGER Grant
5b	Intermodal Facility Phase II	\$15,856,000
6	Bus Stop Improvements	\$624,000
8	CyRide Facility Expansion	\$6,205,000
9	Alternatives Analysis Study - Orange Route Corridor	\$243,000
10	Des Moines/Ames Commuter Service Study	\$122,000
11	Articulated Buses on Red/Orange Routes	\$3,407,000
12	Automatic Vehicle Location Technology	\$2,433,000
Total		\$28,890,000

The Short-Term Plan projected revenue for buses of \$13,207,000 exceeds the projected bus cost (Project 11) of \$3,407,000. This would allow for approximately \$1 million annually available for additional bus replacement over the 10-year period. This would allow for less than 3 busses per year for replacement and expanding the fleet. There is a need for 5-6 buses per year just for replacements. Additional funding will be pursued to meet this need.

The Short-Term Plan projected costs, excluding Project 11, for other capital projects of \$25,483,000 exceeds the projected other capital projects revenues of \$21,611,000. The CyRide Facility Expansion will be constructed in phases. The parts of expansion that are not funded in the Short-Term Plan will be funded in the Long-Term Plan.

LONG-TERM PLAN

The Long-Term Plan is for the last 15 years of the plan, year 2021 – 2035. In order to develop the revenue projections for the Long-Term Plan, the year 2021 – 2035 revenues were summed for the 15-year period.

ROADWAY AND BICYCLE/PEDESTRIAN

The estimated funds available for roadway and bicycle/pedestrian facilities by source for the Long-Term Plan are presented in **TABLE 8.12**. As presented in **TABLE 8.12**, the total estimated project funds for the 15-year analysis period for Roadway projects are approximately \$30 million and for Bicycle/Pedestrian projects are approximately \$7 million.

TABLE 8.12. LONG-TERM PLAN ROADWAY AND BICYCLE PEDESTRIAN AVAILABLE FUNDING

FUNDING SOURCE	YEARS 2021 - 2035 REVENUE
Roadway and Bicycle/Pedestrian	
Surface Transportation Program (STP)	\$27,857,000
Transportation Enhancements (TE)	\$1,919,000
Traffic Safety Improvement Program (TSIP)	\$1,350,000
Safe Routes to School Program (SRTS)	\$375,000
General Obligation Bonds (GOB)	\$131,754,000
Local Options Sales Tax	\$9,908,000
Road Use Tax	\$98,910,000
Other	\$18,973,000
Subtotal	\$291,045,000
Roadway	
STP + TSIP	\$29,207,000
GOB + RUTF	\$230,664,000
LOST (60%)	\$5,945,000
Other (95%)	\$18,024,000
Subtotal	\$283,839,000
Less - Maintenance / Operations	\$207,923,000
Less - Rehabilitation / Reconstruction	\$45,550,000
Total	\$30,366,000
Bicycle/Pedestrian	
TE + SRTS	\$2,294,000
LOST (40%)	\$3,963,000
Other (5%)	\$949,000
Total	\$7,206,000

The remaining roadway projects from **TABLE 8.1** have been selected for the Long-Term Plan. The project cost for these projects have been inflated to year of expenditure dollars by grouping projects in year 11

through year 25 and selecting year 18 (2028) as the year-of-expenditure. The costs were inflated by 4% per year. The roadway projects for the Long-Term Plan are presented in **TABLE 8.13**. As presented in **TABLE 8.13**, the total estimated cost for the Long-Term roadway projects are approximately \$76 million.

TABLE 8.13. LONG-TERM ROADWAY PROJECTS

ALTERNATIVE PROJECT NUMBER	PROJECT DESCRIPTION	YOE COST (YEAR 2021 - 2035)
1a	Bloomington Road Extension Study (West).	\$1,013,000
2	500th Avenue Reconstruction - W. Lincoln Way to Mortensen Road	\$3,045,000
3	Mortensen Road Extension - 500th Ave. to Miller Ave.	\$5,725,000
12a	Stange Rd. / 13th Street Intersection Improvements - Roundabout	\$1,856,000
15	Grand Ave. / 20th Street Intersection Improvements	\$3,008,000
22	S. Duff Ave. Widening - Kitty Hawk Dr. to Ken Maril Rd. (now 3 lane)	\$4,722,000
23	Freel Dr. Reconstruction / Extension to Dayton Ave.	\$6,517,000
25	Cherry Ave. Extension - Lincoln Way to SE 5th Street	\$4,740,000
Total		\$30,626,000

The Long-Term Plan roadway projected costs of \$30,626,000 exceeds the projected revenues of \$30,366,000; however, there was a net surplus revenue of \$468,000 from the Short-Term Plan Roadway projects which more than covers this cost difference.

The remaining Bicycle/Pedestrian projects from **TABLE 8.3** have been selected to for the Long-Term Plan. The project cost for these projects

have been inflated to year of expenditure dollars by grouping projects in year 11 through year 25 and selecting year 18 (2028) as the year-of-expenditure. The costs were inflated by 4% per year. As presented in **TABLE 8.14**, the total estimated cost for the Long-Term bicycle/pedestrian projects are approximately \$5 million.

TABLE 8.14. LONG-TERM BICYCLE/PEDESTRIAN PROJECTS

ALTERNATIVE PROJECT NUMBER	PROJECT DESCRIPTION	YOE COST (YEAR 2021 - 2035)
SUP1	Shared Use Path Along Union Pacific Railroad - North of Bloomington Road	\$1,139,000
SUP8	Shared Use Path Along Walnut St - S 3rd St to Squaw Creek	\$231,000
SUP9	Shared Use Path Along Squaw Creek - Proposed Grand Ave Extension to Skunk River	\$1,199,000
PS1	Paved Shoulder on N Dakota Ave - North of Ontario St	\$1,408,000
PS2	Paved Shoulder on State Ave and Oakwood Rd - South of Mortensen Rd	\$1,019,000
Total		\$4,996,000

The Long-Term Plan bicycle/pedestrian projected revenue of \$7,206,000 exceeds the projected bicycle/pedestrian project cost of \$4,996,000.

TRANSIT

All of the proposed operations related transit projects were incorporated in the Short-Term Plan. It is anticipated that additional transit services will be added in the Long-Term Plan (year 2021-2035); however, at this

time to is too difficult to identify these services.

The estimated funds available for non-operating related transit projects by source for the Long-Term Plan are presented in **TABLE 8.15**. As presented in **TABLE 8.15**, the total estimated non-operating revenues for the 15-year analysis period for buses is approximately \$33 million and for other projects is \$86 million.

TABLE 8.15. LONG-TERM NON-OPERATIONS RELATED TRANSIT PROJECTS

FUNDING SOURCE	YEARS 2021 - 2035 REVENUE
Bus Revenues	\$32,604,000
Other Capital Revenues	\$85,955,000
Total Non-Operating Revenues	\$118,559,000

All of the proposed non-operating projects were included in the Short-Term Plan.

The Long-Term Plan projected revenue for buses of \$32,604,000 would allow for the approximately \$2 million annually available for additional bus replacement and expansion over the 15-year period.

The Long-Term Plan projected revenue for other capital projects of \$85,955,000 would allow for any additional phases of the CyRide Facility Expansion (Project 8) to be completed, as well as other capital projects which have not been identified at this time.



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community

mobility

environment

Chapter 9: Other Modal Facilities and Considerations

CHAPTER 9: OTHER MODAL FACILITIES AND CONSIDERATIONS

Reliable transportation systems depend on efficient connections between all modes of travel. Other modal planning activities and ongoing improvements that address freight and other needs will help to maintain the region's economy and competitiveness. This chapter describes travel considerations for moving freight and personal inter-regional travel via truck, rail, pipeline, and air.

9.1 TRUCK

Several industrial and manufacturing facilities in the Ames area depend on trucking for the movement of goods. A majority of the trucks accessing the area are accessing businesses in the Dayton Avenue area. The major routes for hauling goods in and out of the area are U.S. 69, U.S. 30 and Interstate 35.

The periodic designation and update of truck routes and implementation of additional limited-access roadway facilities is key for corridors utilized by truck traffic. Truck trips will avoid traveling into a large urbanized area unless that is its origin or destination.

9.2 RAIL

Bulk commodities such as grain, coal, chemicals, fertilizer, stone and food products are the primary freight for rail carriers throughout Iowa. The railroad routes that traverse the Ames area were shown in **FIGURE 1.1**. As shown in this figure, one rail corridor runs in a north-south direction and two mainline tracks in an east-west direction.

United Pacific Railroad (UPRR) is the rail service carrier in Ames. The east-west mainline track carries over 70 trains per day. This railroad has daily switching service. There are no piggyback ramps (incline loading and unloading trailers from a flat car) available locally. There are also no intermodal facilities within the MPO boundary.



There are currently at-grade rail crossings with the UPRR mainline in the MPO boundary. They occur at the following roads:

- North Dakota Avenue
- Scholl Road
- N. Hazel Avenue
- Clark Avenue
- Kellogg Avenue
- Duff Avenue
- 580th Avenue

In 2002, the City of Ames completed the “Duff Avenue/UPRR Crossing Study”. This study addressed the feasibility of relocating the UPRR mainline either north or south of the city. Moving the tracks would reduce delays, but the cost and potential environmental impacts were considered too great to further pursue the project.

9.3 PIPELINES

Pipelines are included in transportation infrastructure as a means to deliver oil, natural gas, and other products. The U.S. Department of

Transportation, Pipeline and Hazardous Materials Safety Administration (PHMSA) compiles pipeline mileage. In 2008, Iowa's transmission mileage totalled to 12,113 miles. Approximately 65% of these pipelines contain natural gas.

Story County has 60 miles of gas pipeline. Awareness of pipelines and preparation to deal with any type of pipeline incident is important in the planning process.

9.4 AIR

The Ames Municipal Airport is located within the corporate boundaries of the City of Ames. This site is located south of U.S. Highway 30 and west of U.S. Highway 69. Access to the terminal area is provided via Airport Road.

In 2007, the City of Ames leased the municipal airport to Hap's Air Service, the current Fixed Base Operator. The City of Ames owns and operates the airport. The airport is included in the National Plan of Integrated Airport Systems (NPIAS) as a general aviation airport. The Iowa Aviation Plan identifies the Ames Municipal Airport as an Enhanced Service Airport. The Ames Municipal Airport serves the general aviation needs of Story County and provides an important means of accessing the area.



Airport operation statistics include:

- 86 aircraft based on field
- 119 aircraft operations per day on average
- Single engine airplanes: 62 (60% transient general aviation)
- Multi-engine airplanes: 12 (34% local general aviation)
- Jet airplanes: 3 (5% air taxi)
- Gliders: 6 (1% military)
- Ultralights: 3

The Ames Municipal Airport includes the following services:

- Aviation fuel sale
- Charters
- Parking and Hangars (for transient aircraft)
- Aircraft maintenance
- Passenger terminal and lounge
- Car rentals
- Flight school/flight training
- Crew Cars
- Hangar Rental
- Pilot lounge/snooze room
- Aircraft rentals
- Public telephone
- Restrooms

TABLE 9.1 illustrates the current and forecast demand for the Ames Municipal Airport.

TABLE 9.1. AMES MUNICIPAL AIRPORT CURRENT AND FUTURE DEMAND

Operational Activity	2003	2007	2012	2022
Based Aircraft	72	75	75	80
Annual Operations	35,064	38,135	40,556	43,007
Itinerant Operations	19,916	22,884	24,334	25,804
Local Operations	15,130	15,254	16,223	17,203

Source: Iowa Aviation System Plan Airport Summary Report - Ames Municipal Airport (2004)



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