2016-2021

CAPITAL IMPROVEMENTS PLAN

CITY OF AMES, IOWA

DRAFT

CITY OF
Ames

January 20, 2016

Mayor and Members of the Ames City Council:

I am attaching for your review and approval the City Manager's Recommended five-year Capital Improvements Plan (CIP) for fiscal years 2016-17 through 2020-21. This document reflects $188,226,802 of expenditures from various City, State, and Federal revenue sources to accomplish important infrastructure improvements in our community.

Over the years, the citizens of Ames have benefitted from the City Council's commitment to maintaining the City's infrastructure when other communities throughout the country were unable or unwilling to make the type of financial investment needed to accomplish these improvements. As we look to the next five years, this commitment is even more important. Our community has experienced unprecedented growth over the past five years, fueled by Iowa State University's increase in enrollment of 6,114 students, the addition of 6,500 jobs in our metro area, and the physical expansion of our city limits by 672 acres, with its corresponding need for more streets, water lines, sewer lines, and electric lines to accommodate this growth.

Many of the projects reflected in the CIP involve our utilities, which are critical for maintaining the quality of life in Ames, though they are less visible to our citizens. With the recent adoption of our new Long Range Transportation Plan, we now have an updated blueprint to guide implementation of the various street, bridge, and bike path improvements over the next five years.

We have a daunting task before us to meet the obligation to extend City infrastructure into newly-developed areas as well as maintain the existing infrastructure where age has taken its toll on these facilities. Our annual Street Analysis system indicates that 52% of our streets are in need of repair, with an estimated total cost of $158,000,000. Fortunately, during the past session, the State Legislature increased the Road Use Tax by $0.10 per gallon, which will generate approximately an additional $1,000,000 per year to the City. As a result of this action, you will notice in the CIP that this additional funding source has been applied to finance many of the much needed projects.

I have attempted in the following paragraphs to highlight the new projects that have been introduced in the Plan, the increased funding that is being recommended for a particular project, and the most significant projects that are included in the Plan.

PUBLIC SAFETY - $7,044,222

Over the next five years, $251,722 has been earmarked in the CIP for improvements to roofs, driveways, and restrooms at **Fire Stations #1 and #2** (pages 9, 10, and 11).

This Plan also includes a $750,000 commitment by the City to install **Accessibility Enhancements** (page 18) throughout the community in the form of ADA ramp improvements along with upgrades at traffic signals and other publicly-owned parking facilities.

With the approval of the new Long Range Transportation Plan and its greater emphasis on integrating bicyclists and motorists on-street, the CIP reflects a significant increase in funding to $648,500 for **Multi-Modal Roadway Improvements** (page 22) over the next five years.

Included in the Long Range Transportation Plan is a commitment to the Complete Streets concept. Therefore, the **Traffic Engineering Studies** project (page 21) identifies funding in FY 2016/17 to create a Complete Streets Master Plan that will guide the design of our streets/paths in the future.

In an effort to reduce accidents and facilitate traffic movement through one of our busiest corridors, the **US Highway 69 Improvements** project (page 17) identifies a plan to install a median along South Duff from S. 5th to the Squaw Creek bridge and a new signalized intersection at the south end of the Walmart Center. In addition, this project includes an outer-road on the east side of South Duff to provide access to the businesses impacted by the new median. The intersection at South Duff and U.S. Highway 30 will also receive attention under this Plan with the installation of a new traffic signal at the eastbound off ramp.

The **Intelligent Transportation** projects (page 19) that are being introduced in this CIP will result in the installation of traffic adaptive signal systems along Duff Avenue and Lincoln Way. These new systems will allow for real-time optimization of traffic and pedestrian flow at signalized intersections.

UTILITIES - $105,041,950

ELECTRIC UTILITY - $28,275,000

With the completion in FY 2015/16 of the conversion of our Power Plant from a coal-fired to a gas-fired operation, thereby reducing our carbon footprint by 40%, a number of projects remain to be accomplished to maintain our generating units. These projects will require an approximately $11,000,000 investment to **overhaul Unit #7 and Unit #8 (**pages 41 and 45), **reconstruct the precipitator** (page 44), **install a fire protection system** (page 42), **repair boiler tubes** (page 40), and **replace relays and controls** (page 38).

In addition to placing an emphasis on the Power Plant, a major focus in the CIP is directed towards improvements to our distribution system ($3,300,000) and to our transmission system ($5,825,000) over the next five years.

The City Council's sustainability goal is reinforced in this CIP. First, the **Demand Side Management** project (page 29) sets aside $5,000,000 for our electric customers who initiate energy conservation or efficiency measures that reduce the system's peak load demand. This program has yielded sufficient success that the need to develop **New Electric Generation Capacity** (page 39) has been delayed in the CIP. Second, **Retrofitting LED Street Lights** (page 34) is being introduced in the CIP with the expectation that 7,500 roadway and security lights will be replaced by LED fixtures over the next five years, thus reducing our maintenance costs, lowering energy usage, and decreasing glare.

WATER UTILITY - $35,725,300

The City's largest single CIP facility project ever is highlighted in the **New Water Treatment Plant** (page 47). This $71,241,000, 15 million gallon per day plant is projected to satisfy the water needs of our community for the next 20 years. Because the City has committed to design this facility to LEED standards, we have received a $6,600,000 grant for these sustainability efforts.

Along with the new capabilities to meet our treatment needs in the new plant, we have identified sites for new wells to provide much needed water capacity. The **Water Supply Expansion** project (page 48) calls for the construction of three new wells north of 13th Street and west of Stagecoach Road. Each well will have a capacity of 1.5 million gallons per day.

In an effort to improve efficiency and improve customer service, the **Advanced Metering Infrastructure** project (page 49) calls for the conversion to an automated meter reading system over the next eight years.

The distribution lines receive an emphasis in this CIP with the **Water System Improvements** program (page 66). Due to the increasing number of rusty water complaints received this past year, the investment into this initiative has been increased by $200,000 per year for a total of $6,500,000.

Two new initiatives have been added to this five year plan. First, the **Ada Hayden Water Quality Study** (page 51) will assure that the lake is periodically checked to determine if the development practices in the watershed required by the City have been effective in preserving the quality of the lake. Second, a **Lime Lagoon Expansion** project (page 54) will result in the reconfiguration of the largest lime cell, making the operation and clean-out of the cell easier.

SANITARY SEWER UTILITY - $30,827,000

In 2012, we completed a comprehensive evaluation of the structural condition of the buildings and other structures at the treatment plant. Based on the results of this study, numerous projects were added to the CIP. These improvements included: **Residuals Handling** (page 56), **Digester Improvements** (page 57), **Clarifier Maintenance** (page 58), **Co-generation System Maintenance** (page 60), **Electrical Maintenance** (page 61), and **Structural Rehabilitation** (page 62).

In order to meet the projected peak weather flows, the following three strategies will be pursued: 1) operational modifications at the treatment plant, 2) removal of 25% of the infiltration through the rehabilitation of our sanitary sewer lines, and 3) an expansion to the equalization basin capacity. Therefore, the **Flow Equalization Expansion** project (page 64) will add an additional 6 million gallons to the basin, increasing the treatment plant's storage capacity to 10.4 million gallons. In addition, the **Sanitary Sewer Rehabilitation** program (page 69) earmarks $19,120,000 over the next five years to fix deteriorated sewer lines and manholes to decrease infiltration into the system.

In preparation for the Iowa Department of Natural Resources program to require **Nutrient Reduction** (page 63) at our plant for an estimated cost of $35,000,000, this CIP signals the initiation of a preliminary engineering report to advise how to most effectively satisfy this new state mandate.

STORM SEWER UTILITY - $8,313,400

Following the 2010 flood, the City Council established a goal to mitigate the impact of future river flooding. A comprehensive flood mitigation study indicated that channel improvements along Squaw Creek would be the most cost-effective method of mitigating flooding. Therefore, the **Flood Mitigation – River Flooding** project (page 72) commits $1,500,000 towards channel restoration work within 2,000 feet either side of the South Duff Bridge which is projected to reduce flooding on South Duff Avenue by approximately two feet.

During major rainfall events, the community has experienced over-land flooding in neighborhoods. To help reduce street flooding caused by non-functioning storm sewers, the $1,250,000 **Storm Water Improvement Program** (page 73) will replace deteriorated pipes and intakes that will help convey water to peak rain events.

As the City grows, more impervious areas are installed with the corresponding developments. In order to help mitigate the impact of associated storm water runoff, the **Storm Water Erosion Control Program** (page 74), **Low Point Drainage Improvements** (page 75), **Storm Water Facility Rehabilitation Program** (page 76), and **Storm Water Quality Improvements** (page 77) are included in the CIP totaling $4,843,400.

RESOURCE RECOVERY - $1,901,250

Because of our innovative Resource Recovery system, we are one of the most effective communities in reducing the amount of garbage that must be placed in a landfill. Since every ton of material that is rejected from our process and sent to the landfill costs us $61.50, we are constantly exploring ways to become even more effective in our waste processing techniques. The new **Material Handling System** (page 80) will accomplish this goal by improving 1) the air quality in the process area, 2) the Refuse Derived Fuel quality, and 3) the bag house performance resulting in maximum material processing and a reduction in the amount of waste transported to the landfill.

Various other improvements to this utility are included in the **Resource Recovery System Improvements** program (page 81) where $1,676,250 is earmarked for various preventive maintenance projects to replace rollers, belts, chains, conveyors, pumps, and operations software.

TRANSPORTATION - $70,583,130

In keeping with the priorities identified by our Citizen Satisfaction Survey, a great deal of emphasis is being placed on improving our transportation system in this planning document.

Perhaps the most requested street project is the **Grand Avenue Extension** (page 87) from S. 3rd/4th to S. 16th Street. Work on this $20,623,000 project is already underway focusing on the federally mandated environmental analysis of the proposed route. Project design and land acquisition is planned for FY 2016/17 with construction of the roadway and bridge to be accomplished in FY 2017/18 and FY 2018/19. In order to advance this project in the CIP, other projects listed in the previous CIP were delayed in this document.

Approximately $35,000,000 are planned for **Asphalt Street Pavement Improvements** (page 88), **Concrete Pavement Improvements** (page 90), **Arterial Street Pavement Improvements** (page 91), **Downtown Street Pavement Improvements** (page 92), **Seal Coat Street Pavement Improvements** (page 93), **CyRide Route Pavement Improvements** (page 95), **Collector Street Pavement Improvements** (page 96), and **Cherry Avenue Extension** (page 97). In addition, the financial commitment to **Pavement Restoration** (page 102) has been increased from $375,000 to $1,250,000 over the life of the CIP for various maintenance techniques to preserve our City streets.

Our off-street path system receives emphasis in the CIP with $2,654,800 identified for the **Shared Use Path System Expansion** (page 89) and $625,000 for **Shared Use Path Maintenance** (page 104).

In keeping with the City Council's desire to improve the appearance of City infrastructure, the **Right-of-Way Appearance Enhancements** (page 103) and the **Right-of-Way Restoration** (page 94) programs include $1,845,000 to be used on retaining walls, entryways, medians, and right-of-way enhancements.

The latest bridge inspection report has identified the need to repair the concrete end rails and approach pavement on the Dayton Avenue bridge over the Union Pacific Railroad. This work is provided for in the **Bridge Rehabilitation** program (page 100).

In response to our unprecedented growth in ridership and a decrease in federal funding for capital, the **CyRide Vehicle Replacement** program (page 106) includes the purchase of 25 used buses, along with 13 new buses, over the next five years. With the original bus storage building now 32 years old, $2,365,000 is being earmarked to replace the roof, HVAC system, bus hoists, bus wash, and fueling system in the **CyRide Building Expansion & Modernization** program (page 107). In response to one of the most frequently requested service, the **Bus Stop Improvements** program (page 109) will make it possible to install two to three new shelters each year.

COMMUNITY BETTERMENT - $5,557,500

Our park system continues to be one of the top contributors to the quality of life in our community. Therefore, the CIP devotes a significant amount of funds to improve these facilities. The **Park System Improvements** program (page 116) signals removing the wading pool at Brookside Park and replacing it with a new spray pool pad out of the flood plain. In addition, irrigation systems will be installed in the two open sports fields at Inis Grove and River Valley Parks to allow these areas to better accommodate the concentrated use by our recreation programs.

In order to assure that we maintain the fun factor at the **Furman Aquatic Center** (page 120), plans for a new, yet to be determined major feature are included in FY 2017/18. This new attraction could include a speed slide, climbing wall, or swirl slide.

The old house that was moved in to serve as the clubhouse at our municipal golf course has exceeded its projected life span. Therefore, the CIP earmarks $300,000 in the **Homewood Golf Course** (page 121) to construct a new structure to serve as not only the clubhouse, but also a multi-purpose facility for the winter months.

In an effort to further expand our recreational trail system, a new east/west link is envisioned with the construction of the **Moore Memorial Park Pedestrian Bridge** (page 125) that will connect this park to Ontario Street.

In FY 2015/16 an assessment will be made to determine if any of our park system facilities are not in compliance with the standards under the Americans With Disabilities Act. During the following five years, $125,000 has been earmarked in the **ADA Transition Plan Improvements** (page 122) so that we can begin to make modifications where needed.

Finally, as our city continues to develop, this document plans for two new neighborhood parks, **Sunset Ridge** (page 124) and **Rose Prairie** (page 126).

The City Council will continue its commitment to strengthening our neighborhoods by setting aside $1,125,000 for the **Neighborhood Improvement Program** (page 128), **Downtown Facade Improvement Program** (page 130), and the recently approved **Campustown Facade Improvement Program** (page 131).

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I want to offer my special thanks to our Department Heads who have identified the need for the various projects contained in the CIP. This is a very difficult task given that our citizens have varying opinions as to which infrastructure projects they would prefer to have reflected in this document and, no doubt, will not be happy with all of their recommendations. This is particularly true this year with the approval of the new Long Range Transportation Plan. In addition, I want to express my gratitude to Bob Kindred, Assistant City Manager, Duane Pitcher, Finance Director, Nancy Masteller, Budget Officer, Emily Burton, Finance Department Secretary, and Derek Zarn, Printing Services Technician, for their work to help create this five year plan.

Sincerely,

Steven L. Schainker
City Manager

CITY OF AMES, IOWA

FIVE-YEAR CAPITAL IMPROVEMENTS PLAN
2016-2021

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HOW TO USE THE C.I.P. DOCUMENT

The 2016-2021 Capital Improvements Plan for the City of Ames is organized according to the City's program structure of services. This format allows decision makers to consider proposed improvements in much the same manner as the annual operating budget. First-year portions of these projects can also be identified in the annual operating program budget.

1. The **Description/Justification** section outlines the basic work to be done and the intended outcome or result of the project, outlines the reasons behind the proposal of the project, and also the advantages to the City of undertaking the project. The section may also describe the disadvantages to the City of either waiting to do the project, or of disapproving it altogether.

2. The **Comments** section outlines any additional information related to the project, including status changes from a previous year, its relationship to other projects or future developments, impacts on operating budgets and others.

3. The **Location** section will list a street location or various locations for each project. Specific locations for Public Works projects can also be found on the City of Ames website at www.cityofamesgis.maps.arcgis.com

In addition to the above information, the bottom of each page lists the types of costs (planning, construction, etc.) which will be associated with the project for each year of the present C.I.P. Below that is shown the source of financing for the project in each year.

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CITY OF AMES, IOWA

UTILITIES – continued

UTILITIES – continued

TRANSPORTATION:

TRANSPORTATION – continued

COMMUNITY ENRICHMENT / INTERNAL SERVICES:

PROJECTION OF DEBT CAPACITY

	2014/15 ACTUAL	2015/16 BUDGETED	2016/17 PROJECTED	2017/18 PROJECTED	2018/19 PROJECTED	2019/20 PROJECTED	2020/21 PROJECTED
1. Total Actual Valuation	3,604,369,966	3,789,598,226	4,052,418,330	4,173,990,880	4,299,210,606	4,428,186,924	4,561,032,532
2. State Mandated Debt Limit	180,218,498	189,479,911	202,620,917	208,699,544	214,960,530	221,409,346	228,051,627
3. City Reserve (25% of Limit)	45,054,625	47,369,978	50,655,229	52,174,886	53,740,133	55,352,337	57,012,907
Un-Reserved Debt Capacity	135,163,873	142,109,933	151,965,688	156,524,658	161,220,397	166,057,009	171,038,720
4. Outstanding Debt	64,110,000	56,605,000	60,365,000	51,970,000	43,825,000	36,440,000	29,735,000
5. Proposed Issues	-	13,892,990	5,945,000	6,470,000	7,150,000	9,105,000	9,185,000
6. Balance of Proposed Issues	-	-	-	5,526,103	11,108,749	16,840,970	23,844,101
Total Debt Subject to Limit	64,110,000	70,497,990	66,310,000	63,966,103	62,083,749	62,385,970	62,764,101
7. Available Un-Reserved Debt Capacity ($)	71,053,873	71,611,943	85,655,688	92,558,555	99,136,648	103,671,039	108,274,619
8. Available Un-Reserved Debt Capacity (%)	52.57%	50.39%	56.37%	59.13%	61.49%	62.43%	63.30%
9. Total Debt Capacity ($)	116,108,498	118,981,921	136,310,917	144,733,441	152,876,781	159,023,376	165,287,526
10. Total Debt Capacity (%)	64.43%	62.79%	67.27%	69.35%	71.12%	71.82%	72.48%

Notes:

1. *Total assessed valuation plus utility valuation growth assumption is 3.0% per year.*
2. *State of Iowa statutory debt limit is 5% of total actual valuation.*
3. *City Policy reserves 25% percent of available debt capacity.*
4. *Current outstanding debt subject to limit at Fiscal Year End includes all debt in which property taxes are pledged.*
5. *Debt issues subject to limit proposed are part of Capital Improvement Plan.*
6. *Debt Balance on Issues in Capital Improvement Plan.*
7. *Debt capacity available after deducting the reserved capacity.*
8. *Percentage of debt capacity available after deducting the reserved capacity.*
9. *Debt capacity available prior to deducting the reserved capacity.*
10. *Percentage of Debt capacity available prior to deducting the reserved capacity.*

SUMMARY OF MAJOR BOND ISSUES

GENERAL OBLIGATION BONDS	PROJECT TOTAL	CATEGORY TOTAL	% PROJECT G.O. FUNDED	OTHER SOURCES OF FUNDING
2016/17				
STORM SEWER		750,000		
Flood Mitigation - River Flooding	500,000		33%	FEMA Grant
Storm Water Erosion Control Program	250,000		33%	Storm Sewer Utility Fund
STREETS ENGINEERING		4,845,000		
Grand Avenue Extension	1,300,000		65%	Federal/State Grants
Asphalt Street Pavement Improvements	1,250,000		100%	
Concrete Pavement Improvements (Dawes Drive)	1,050,000		91%	Road Use Tax/Electric
Arterial Street Pavement Improvements (West Lincoln Way)	345,000		100%	
Downtown Street Improvements (Shermon Avenue)	375,000		100%	
CyRide Route Pavement Improvements (South 3rd/4th)	525,000		22%	Road Use Tax/Electric/MPO
STREETS MAINTENANCE		350,000		
Bridge Rehabilitation Program (Dayton Avenue Bridge)	350,000		100%	
2016/17 TOTAL		**5,945,000**		

SUMMARY OF MAJOR BOND ISSUES, continued

GENERAL OBLIGATION BONDS	PROJECT TOTAL	CATEGORY TOTAL	% PROJECT G.O. FUNDED	OTHER SOURCES OF FUNDING
2017/18				
STREETS ENGINEERING		6,470,000		
Grand Avenue Extension	4,000,000		52%	MPO/STP Funds/Grants
Asphalt Street Pavement Improvements	850,000		100%	
Arterial Street Pavement Improvements (13th Street)	420,000		28%	MPO/STP Funds
Downtwon Street Improvements (Main Street Alley)	250,000		83%	Electric Utility Fund
Collector Street Pavement Improvements (Meadowlane)	950,000		95%	Electric Utility Fund
2017/18 TOTAL		**6,470,000**		
2018/19				
STREETS ENGINEERING		7,150,000		
Grand Avenue Extension	3,700,000		48%	MPO/STP Funds/Grants
Asphalt Street Pavement Improvements	1,400,000		100%	
Downtown Pavement Improvements (Market Avenue)	300,000		100%	
Collector Street Pavement Improvements (Hickory Drive)	1,750,000		97%	Electric Utility Fund
2018/19 TOTAL		**7,150,000**		

SUMMARY OF MAJOR BOND ISSUES, continued

GENERAL OBLIGATION BONDS	PROJECT TOTAL	CATEGORY TOTAL	% PROJECT G.O. FUNDED	OTHER SOURCES OF FUNDING
2019/20				
UTILITIES		1,150,000		
Campustown Public Improvements	1,150,000		74%	Water/Sewer/Electric
STREETS ENGINEERING		7,955,000		
Asphalt Street Pavement Improvements	1,000,000		100%	
Concrete Pavement Improvements	2,450,000		94%	Road Use Tax/Electric
Arterial Street Pavement Improvements (North Dakota)	1,000,000		100%	
Downtown Pavement Improvements (Lincoln Way Alley)	475,000		100%	
Collector Street Pavement Improvements (East 20th Street)	1,200,000		96%	Electric Utility Fund
CyRide Route Pavement Improvements (9th Street)	600,000		100%	
Seal Coat Pavement Improvements	930,000		65%	Road Use Tax
Cherry Avenue Extension	300,000		100%	
2019/20 TOTAL		**9,105,000**		

SUMMARY OF MAJOR BOND ISSUES, continued

GENERAL OBLIGATION BONDS	PROJECT TOTAL	CATEGORY TOTAL	% PROJECT G.O. FUNDED	OTHER SOURCES OF FUNDING
2020/21				
STREETS ENGINEERING		9,185,000		
Asphalt Street Pavement Improvements	1,400,000		100%	
Concrete Pavement Improvements	3,650,000		97%	Road Use Tax
Arterial Street Pavement Improvements (East Lincoln Way)	1,250,000		93%	Electric Utility Fund
Downtown Pavement Improvements (Kellogg Avenue Alley)	125,000		100%	
Collector Street Pavement Improvements (Hoover Avenue)	1,200,000		94%	Electric Utility Fund
Seal Coat Pavement Improvements	1,050,000		68%	Road Use Tax
Cherry Avenue Extension	510,000		20%	Grants/Electric Utility
2019/20 TOTAL		**9,185,000**		
GRAND TOTAL GENERAL OBLIGATION BONDS		**37,855,000**		

City-Wide Program Summary

TOTAL CAPITAL IMPROVEMENTS PLAN EXPENDITURES AND FUNDING SOURCES

	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21	Page
EXPENDITURES BY PROGRAM:							
Public Safety	7,044,222	2,051,000	1,317,722	1,514,000	1,092,500	1,069,000	7
Utilities	105,041,950	40,835,100	16,739,350	17,993,100	16,230,500	13,243,900	25
Transportation	70,583,130	12,592,040	15,280,690	16,207,000	11,950,800	14,552,600	83
Community Enrichment	5,557,500	1,172,500	1,265,000	1,060,000	1,170,000	890,000	113
TOTAL EXPENDITURES	**188,226,802**	**56,650,640**	**34,602,762**	**36,774,100**	**30,443,800**	**29,755,500**	
FUNDING SOURCES:							
Debt	75,373,000	27,797,000	11,080,000	10,720,000	12,789,000	12,987,000	
City	86,590,888	23,052,658	16,558,360	17,674,350	15,621,460	13,684,060	
Other	26,262,914	5,800,982	6,964,402	8,379,750	2,033,340	3,084,440	
TOTAL FUNDING SOURCES	**188,226,802**	**56,650,640**	**34,602,762**	**36,774,100**	**30,443,800**	**29,755,500**	

CAPITAL IMPROVEMENTS PLAN EXPENDITURE SUMMARY BY PROGRAM

	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21	Page
EXPENDITURES BY PROGRAM:							
Public Safety:							
Fire	251,722	47,000	30,722	124,000	50,000	-	8
Electric	40,000	-	40,000	-	-	-	13
Traffic	6,752,500	2,004,000	1,247,000	1,390,000	1,042,500	1,069,000	15
Total Public Safety	**7,044,222**	**2,051,000**	**1,317,722**	**1,514,000**	**1,092,500**	**1,069,000**	
Utilities:							
Electric Services	28,275,000	7,255,000	6,790,000	6,470,000	5,340,000	2,420,000	27
Water Production/Treatment	27,675,300	21,854,500	498,000	1,161,000	1,437,000	2,724,800	46
Water Pollution Control	11,582,000	3,342,000	2,225,000	3,563,000	1,135,000	1,317,000	55
Water Distribution	8,050,000	1,300,000	1,300,000	1,300,000	2,850,000	1,300,000	65
Sanitary Sewer System	19,245,000	3,629,000	3,735,000	3,845,000	3,959,000	4,077,000	68
Storm Water Control	8,313,400	2,900,000	1,830,000	1,305,000	1,198,400	1,080,000	71
Resource Recovery	1,901,250	554,600	361,350	349,100	311,100	325,100	79
Total Utilities	**105,041,950**	**40,835,100**	**16,739,350**	**17,993,100**	**16,230,500**	**13,243,900**	

CAPITAL IMPROVEMENTS PLAN EXPENDITURE SUMMARY BY PROGRAM, continued

	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21	Page
EXPENDITURES, continued:							
Transportation:							
Streets/Engineering	56,611,800	9,202,000	12,701,000	12,320,000	9,428,000	12,960,800	85
Streets/Maintenance	2,820,000	830,000	480,000	550,000	480,000	480,000	98
Transit	10,475,330	2,560,040	1,933,690	3,337,000	1,632,800	1,011,800	105
Airport	676,000	-	166,000	-	410,000	100,000	111
Total Transportation	**70,583,130**	**12,592,040**	**15,280,690**	**16,207,000**	**11,950,800**	**14,552,600**	
Community Enrichment/Internal Services:							
Parks and Recreation	4,352,500	767,500	1,065,000	860,000	970,000	690,000	114
City Manager	250,000	50,000	50,000	50,000	50,000	50,000	127
Planning and Housing	500,000	100,000	100,000	100,000	100,000	100,000	129
Public Works	70,000	70,000	-	-	-	-	132
Internal Services/Facilities	385,000	185,000	50,000	50,000	50,000	50,000	134
Total Community Enrichment	**5,557,500**	**1,172,500**	**1,265,000**	**1,060,000**	**1,170,000**	**890,000**	
TOTAL EXPENDITURES	**188,226,802**	**56,650,640**	**34,602,762**	**36,774,100**	**30,443,800**	**29,755,500**	

CAPITAL IMPROVEMENTS PLAN FUNDING SOURCE SUMMARY

	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
Debt:						
G.O. Bonds	37,855,000	5,945,000	6,470,000	7,150,000	9,105,000	9,185,000
State Revolving Fund Loans	37,518,000	21,852,000	4,610,000	3,570,000	3,684,000	3,802,000
Total Debt Funding	**75,373,000**	**27,797,000**	**11,080,000**	**10,720,000**	**12,789,000**	**12,987,000**
City:						
Road Use Tax	10,196,450	2,581,750	1,988,000	1,688,400	2,015,500	1,922,800
Local Option Sales Tax	8,191,022	1,854,500	1,731,722	1,509,000	1,518,000	1,577,800
Electric Utility Fund	28,113,500	7,257,850	6,652,350	6,329,600	5,342,100	2,531,600
Water Utility Fund	16,177,300	5,365,250	1,848,000	1,877,250	3,012,000	4,074,800
Sewer Utility Fund	11,340,750	3,025,750	1,350,000	3,838,000	1,535,000	1,592,000
Storm Sewer Utility Fund	5,742,000	1,200,000	1,534,000	998,000	880,000	1,130,000
Resource Recovery Fund	1,901,250	554,600	361,350	349,100	311,100	325,100
Transit Fund	4,344,666	1,179,208	936,338	1,065,000	744,160	419,960
Airport Construction Fund	80,200	-	16,600	-	53,600	10,000
Ice Arena Reserve	190,000	-	60,000	20,000	10,000	100,000
Park Construction Fund	280,000	-	80,000	-	200,000	-
Fleet Reserve Fund	33,750	33,750	-	-	-	-
Total City Funding	**86,590,888**	**23,052,658**	**16,558,360**	**17,674,350**	**15,621,460**	**13,684,060**

CAPITAL IMPROVEMENTS PLAN FUNDING SOURCE SUMMARY, continued

	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
Other:						
MPO/STP Funds	7,685,000	1,532,000	3,220,000	2,700,000	140,000	93,000
Federal/State Grants	13,958,134	4,026,832	3,332,352	3,797,350	540,400	2,261,200
Federal Transit Administration	3,032,480	-	-	1,632,000	848,640	551,840
Federal Aviation Administration	595,800	-	149,400	-	356,400	90,000
Iowa State University	761,500	97,150	237,650	190,400	147,900	88,400
Ames Community School District	75,000	25,000	25,000	25,000	-	-
Private Funds	155,000	120,000	-	35,000	-	-
Total Other Funding	**26,262,914**	**5,800,982**	**6,964,402**	**8,379,750**	**2,033,340**	**3,084,440**
TOTAL FUNDING SOURCES	**188,226,802**	**56,650,640**	**34,602,762**	**36,774,100**	**30,443,800**	**29,755,500**

Public Safety

PUBLIC SAFETY

	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21	Page
EXPENDITURES:							
Fire	251,722	47,000	30,722	124,000	50,000	-	8
Electric	40,000	-	40,000	-	-	-	13
Traffic	6,752,500	2,004,000	1,247,000	1,390,000	1,042,500	1,069,000	15
TOTAL EXPENDITURES	**7,044,222**	**2,051,000**	**1,317,722**	**1,514,000**	**1,092,500**	**1,069,000**	
FUNDING SOURCES:							
City:							
Road Use Tax	3,742,700	863,000	908,000	473,400	835,500	662,800	
Local Option Sales Tax	666,722	122,000	145,722	199,000	125,000	75,000	
Sub-Total City Funding	4,409,422	985,000	1,053,722	672,400	960,500	737,800	
Other:							
MPO/STP Funds	400,000	-	-	400,000	-	-	
Federal/State Grants	2,114,800	946,000	264,000	441,600	132,000	331,200	
Private Funds	120,000	120,000	-	-	-	-	
Sub-Total Other Funding	2,634,800	1,066,000	264,000	841,600	132,000	331,200	
TOTAL FUNDING SOURCES	**7,044,222**	**2,051,000**	**1,317,722**	**1,514,000**	**1,092,500**	**1,069,000**	

PUBLIC SAFETY - FIRE

PROJECT/FUNDING SOURCE	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21	Page
PROJECT:							
Fire Station #2 Roof Replacement	47,000	47,000	-	-	-	-	9
Fire Station #2 Restroom	30,722	-	30,722	-	-	-	10
Fire Station #1 Concrete Replacement	124,000	-	-	124,000	-	-	11
Fire Station #1 Emergency Generator	50,000	-	-	-	50,000	-	12
TOTAL PROJECT EXPENDITURES	**251,722**	**47,000**	**30,722**	**124,000**	**50,000**	**-**	
FUNDING SOURCES							
City:							
Local Option Sales Tax	251,722	47,000	30,722	124,000	50,000	-	
TOTAL FUNDING SOURCES	**251,722**	**47,000**	**30,722**	**124,000**	**50,000**	**-**	

FIRE STATION #2 ROOF REPLACEMENT **PROJECT STATUS:** Advanced
Cost change

DESCRIPTION/JUSTIFICATION
Fire Station #2 is approximately 49 years old. The building was designed with a flat structure roof comprised of a rubber membrane mechanically fastened roofing system. The existing roof was installed in 1992. Since the roof was installed, roof top mechanical systems have been added, which required penetrations to the roof's membrane. This has created additional areas where water can leak into the structure.

Within the last few years additional leaks have caused water damage to the ceiling tile and soaked insulation. A contractor has made several repairs but leaks continue to appear. The contractor has suggested that the entire roof should be replaced within five years of original estimate (completed in 2014).

COMMENTS
Included in this cost is an additional $5,000 to cover the costs to replace rotten wood under the roof membrane on the west-facing entryway. The estimated total cost is between $45,100 and $47,000 (with added contingency). Estimates will be updated as needed.

LOCATION
Fire Station #2, 132 Welch Ave.

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Construction		47,000	47,000				
	TOTAL	**47,000**	**47,000**				
FINANCING:							
Local Option Sales Tax		47,000	47,000				
	TOTAL	**47,000**	**47,000**				

PROGRAM - ACTIVITY: Public Safety – Fire
DEPARTMENT: Fire
ACCOUNT NO. 030-2252-429

FIRE STATION #2 RESTROOM

PROJECT STATUS: Delayed
Cost Change

DESCRIPTION/JUSTIFICATION
Fire Station #2 is approximately 49 years old. The building was designed during a time when no consideration was given to accommodate female firefighters. The current fire station has two restrooms; the main one is equipped with two showers, a stool and a urinal. The second one is located next to the truck room and is considered a half-bath (stool and lavatory).

This project calls for adding an additional 3/4 restroom (stool, lavatory, and shower), to better accommodate female firefighters and conform to ADA requirements. Fire Station #2 restrooms are often used by firefighters, the public, and other city/county/ISU agencies, especially during events.

The construction of the additional restroom requires relocation of an existing storage closet that is used to store firefighting gear and maintenance equipment. To help offset the loss of this storage space, an additional $5,387 to purchase storage and gear racks has been added. The estimated cost for the total project is $30,722.

COMMENTS
A plan will be developed by a designer working with the Inspections Division to ensure the addition is code compliant. Estimates will be updated as needed.

LOCATION
Fire Station #2, 132 Welch Ave.

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Construction		30,722		30,722			
	TOTAL	**30,722**		**30,722**			
FINANCING:							
Local Option Sales Tax		30,722		30,722			
	TOTAL	**30,722**		**30,722**			

PROGRAM - ACTIVITY: Public Safety – Fire
DEPARTMENT: Fire
ACCOUNT NO.

FIRE STATION # 1 CONCRETE REPLACEMENT **PROJECT STATUS:** Delayed

DESCRIPTION/JUSTIFICATION – Fire Station #1 was constructed in 1979. Underground fuel tanks were originally installed underneath the rear drive. The tanks were removed and the void was filled, but settling of the pavement has occurred, causing accelerated damage. Public works engineers evaluated the concrete and agreed the concrete will need to be replaced within five years, estimated at $124,000.

LOCATION
Fire Station #1, 1300 Burnett Ave.

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Construction		124,000			124,000		
	TOTAL	**124,000**			**124,000**		
FINANCING:							
Local Option Sales Tax		124,000			124,000		
	TOTAL	**124,000**			**124,000**		

PROGRAM - ACTIVITY: Public Safety – Fire

DEPARTMENT: Fire

ACCOUNT NO.

FIRE STATION # 1 EMERGENCY GENERATOR **PROJECT STATUS:** New

DESCRIPTION/JUSTIFICATION – Fire Station #1 was constructed in 1979, and the current emergency generator was installed at that time. As problems have arisen with this equipment, parts have become hard to acquire. There is an increasing need to upgrade this obsolete emergency facility generator originally installed at this station to provide backup power during times of electrical outages.

The Fire Department is requesting funds to purchase a fixed emergency power generator, applicable for supplying continuous electrical power (at variable load) in the event of a utility power failure at Station #1.

COMMENTS
This $50,000 requested also includes a sound attenuated, industrial grade, weather-proof enclosure that reduces noise levels to below industry standards. Total costs will include the items, permitting, installation, and other associated fees.

LOCATION
Fire Station #1, 1300 Burnett Ave.

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Equipment and installation		50,000				50,000	
	TOTAL	**50,000**				**50,000**	
FINANCING:							
Local Option Sales Tax		50,000				50,000	
	TOTAL	**50,000**				**50,000**	

PROGRAM - ACTIVITY: Public Safety – Fire
DEPARTMENT: Fire
ACCOUNT NO.

PUBLIC SAFETY - ELECTRIC

PROJECT/FUNDING SOURCE	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21	Page
PROJECT:							
Outdoor Storm Warning System	40,000	-	40,000	-	-	-	14
TOTAL PROJECT EXPENDITURES	**40,000**	**-**	**40,000**	**-**	**-**	**-**	
FUNDING SOURCES:							
City:							
Local Option Sales Tax	40,000	-	40,000	-	-	-	
TOTAL FUNDING SOURCES	**40,000**	**-**	**40,000**	**-**	**-**	**-**	

OUTDOOR STORM WARNING SYSTEM **PROJECT STATUS:** New

DESCRIPTION/JUSTIFICATION

The City's outdoor storm warning system is made up of a central controller in the Police Department dispatch center and 18 radio-controlled individual storm sirens. This program allows the City to acquire new, larger sirens to augment and eventually replace the smaller, older sirens, and fill in gap areas.

LOCATION

The location for the siren being purchased in FY 2017/18 will be determined at the time of purchase.

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Equipment and Installation		40,000		40,000			
	TOTAL	**40,000**		**40,000**			
FINANCING:							
Local Option Sales Tax		40,000		40,000			
	TOTAL	**40,000**		**40,000**			

PROGRAM – ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Public Safety – Electric	Electric	030-4802-429

PUBLIC SAFETY - TRAFFIC

PROJECT/FUNDING SOURCE	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21	Page
PROJECT:							
U.S. Highway 69 Improvements	1,180,000	1,180,000	-	-	-	-	17
Accessibility Enhancements Program	750,000	150,000	150,000	150,000	150,000	150,000	18
Intelligent Transportation System Program	2,014,000	220,000	552,000	552,000	276,000	414,000	19
Traffic Signal Program	1,300,000	325,000	325,000	-	325,000	325,000	20
Traffic Engineering Studies	550,000	50,000	-	500,000	-	-	21
Multi-Modal Roadway Improvements	648,500	29,000	110,000	138,000	241,500	130,000	22
Regional Transportation Count Program	250,000	50,000	50,000	50,000	50,000	50,000	23
Traffic Calming Program	60,000	-	60,000	-	-	-	24
TOTAL PROJECT EXPENDITURES	**6,752,500**	**2,004,000**	**1,247,000**	**1,390,000**	**1,042,500**	**1,069,000**	
FUNDING SOURCES:							
City:							
Road Use Tax	3,742,700	863,000	908,000	473,400	835,500	662,800	
Local Option Sales Tax	375,000	75,000	75,000	75,000	75,000	75,000	
Sub-Total City Funding	4,117,700	938,000	983,000	548,400	910,500	737,800	

PUBLIC SAFETY - TRAFFIC, continued

PROJECT/FUNDING SOURCE	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
FUNDING SOURCES, continued:						
Other:						
MPO/STP Funds	400,000	-	-	400,000	-	-
Federal/State Grants	2,114,800	946,000	264,000	441,600	132,000	331,200
Private Funds	120,000	120,000	-	-	-	-
Sub-Total Other Funding	2,634,800	1,066,000	264,000	841,600	132,000	331,200
TOTAL FUNDING SOURCES	**6,752,500**	**2,004,000**	**1,247,000**	**1,390,000**	**1,042,500**	**1,069,000**

US HIGHWAY 69 IMPROVEMENTS **PROJECT STATUS:** Site Change Scope Change Cost Change

DESCRIPTION/JUSTIFICATION
Intersection improvement projects along US Highway 69 within and just outside the City limits are targeted to alleviate congestion and reduce accidents.

LOCATIONS

2016/17 Intersection Improvements and Traffic Signal (S. Duff Avenue and US Hwy 30 EB Off-Ramp (Planning and Engineering) ($100,000); Grand Avenue (US 69) Rehabilitation (Construction) ($50,000); S. Duff Avenue Safety Improvements (Squaw Creek to S 5th Street - $1,030,000)

The 2040 Long Range Transportation Plan (LRTP), effective in October 2015, has reprioritized the 13th Street and Grand Avenue planning study until the midterm of the plan, and therefore the previously-shown 2016/17 project has been removed and replaced with an intersection improvement project.

In 2016/17, the Iowa Department of Transportation will be resurfacing Grand Avenue between Murray Drive and 28th Street. The City of Ames is responsible to pay for curb and gutter and storm sewer repairs in the corridor as part of the project. ($50,000 Road Use Tax)

As part of a traffic impact study for a proposed residential development along S. Duff Avenue, east of the Ames Airport property, unacceptable delays were identified at the eastbound off-ramp of US Highway 30 and S. Duff Avenue. Queuing on the ramp may be a significant safety issue on S. Duff Avenue and on US Highway 30 alike. Therefore, an engineering analysis ($100,000 Road Use Tax) will be performed in 2016/17 to look at possibly realigning Billy Sunday Road with the ramp/signal improvements. Construction of improvements would be programmed in a later CIP along with matching funding sources.

A project is included in 2016/17 to construct a median on S. Duff Avenue from Squaw Creek to S. 5th Street and install a signal and relocated entrance at the south line of the Super Walmart property. This is to enhance safety and provide improved, controlled access along this portion of S. Duff Avenue. A rear property access drive for the properties south of Walmart will be included to provide access to the new signal for these properties. ($60,000 Road Use Tax)

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Engineering		200,000	200,000				
Construction		980,000	980,000				
	TOTAL	**1,180,000**	**1,180,000**				
FINANCING:							
Road Use Tax		210,000	210,000				
Federal/State Grant Funds		850,000	850,000				
Private (Property Owners)		120,000	120,000				
	TOTAL	**1,180,000**	**1,180,000**				

PROGRAM - ACTIVITY:
Public Safety - Traffic

DEPARTMENT:
Public Works

ACCOUNT NO.
060-7570-429
060-7571-429
060-7572-429
320-7572-429

ACCESSIBILITY ENHANCEMENT PROGRAM **PROJECT STATUS:** No Change

DESCRIPTION/JUSTIFICATION

This annual program combines sidewalk and ADA ramp improvements with additional accessibility upgrades at traffic signals and other publicly owned parking facilities. This program will provide for removing and replacing sidewalk intersection crosswalk panels and handicap ramps at locations that fail to meet the Americans with Disabilities Act (ADA) requirements to have truncated dome warning panels installed. It also includes retrofitting existing signalized traffic control devices with audible and vibrotactile push-buttons, and upgrading parking stalls to current accessible standards in any on-street location or parking lot owned by the City of Ames. This program may be combined with and used in conjunction with roadway, traffic signal replacement, or shared use path improvement projects for pedestrian ramp reconstruction.

This program provides safer pedestrian facilities and limits the City's liability for injury to residents using public sidewalks that are in a deteriorated condition. The program also improves ADA accessibility at municipal facilities.

COMMENTS

In 2015/16, the City Manager's Office facilitated a survey of individuals who are affected by some sort of visual impairment to help prioritize the retrofitting of existing traffic signals that currently do not have audible and vibrotactile operation. These locations will be prioritized along with other ADA improvement needs that are identified throughout the year.

	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:						
Engineering	150,000	30,000	30,000	30,000	30,000	30,000
Construction	600,000	120,000	120,000	120,000	120,000	120,000
TOTAL	**750,000**	**150,000**	**150,000**	**150,000**	**150,000**	**150,000**
FINANCING:						
Road Use Tax	375,000	75,000	75,000	75,000	75,000	75,000
Local Option Sales Tax	375,000	75,000	75,000	75,000	75,000	75,000
TOTAL	**750,000**	**150,000**	**150,000**	**150,000**	**150,000**	**150,000**

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Public Safety - Traffic	Public Works	030-7510-429 060-7510-429

INTELLIGENT TRANSPORTATION SYSTEM PROGRAM **PROJECT STATUS:** New

DESCRIPTION/JUSTIFICATION

The 2040 Ames Area Long Range Transportation Plan (LRTP), which is effective starting October 12, 2015, identifies a wide range of transportation improvements including those projects that utilize technology that are referred to as Intelligent Transportation Systems (ITS) projects. In the 2040 LRTP one of the highest priority corridors for installing traffic adaptive signal systems is along S. Duff Avenue and Lincoln Way arterial corridors respectively.

COMMENTS

2016/17	Ames Traffic Network Master Plan and Systems Engineering Analysis for Traffic Adaptive Signal Systems
2017/18	Traffic Adaptive System (S. Duff Avenue – S 3rd Street to Airport Road) (LRTP Project 66)
2018/19	Traffic Adaptive System (Lincoln Way – Beach Avenue to Hyland Avenue) (LRTP Project 65)
2019/20	Traffic Adaptive System (Lincoln Way – Grand Avenue to Duff Avenue) (LRTP Project 69)
2020/21	Traffic Adaptive System (University Blvd – Lincoln Way to US Highway 30) (LRTP Project 67)

In preparation for these projects there needs to be an evaluation of the current traffic communication network. Therefore, 2016/17 includes a traffic network master plan that will create a detailed inventory and evaluation of the communication network used along the City's signalized corridors. This plan will then identify the upgrades necessary to support the modern technologies used to manage transportation. Also included in 2016/17 is the Systems Engineering Analysis for Traffic Adaptive Signal Systems that will establish needs and functional requirements for traffic adaptive corridors throughout Ames. The study will create standards and specifications along with evaluation criteria for the various traffic adaptive systems that are currently available on the market. This process is following the FHWA guide for conducting systems engineering evaluation.

The projects included in 2017/18 through 2020/21 are Traffic Adaptive Systems, which is a form of Intelligent Transportation System (ITS) infrastructure that conducts real-time optimization of traffic and pedestrian flow at signalized intersections. Traffic adaptive systems provide significant improvement in efficiency and will provide reliable travel times during all times of the day.

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Engineering		454,000	220,000	72,000	72,000	36,000	54,000
Construction		1,560,000		480,000	480,000	240,000	360,000
	TOTAL	**2,014,000**	**220,000**	**552,000**	**552,000**	**276,000**	**414,000**
FINANCING:							
Road Use Tax		749,200	124,000	288,000	110,400	144,000	82,800
Federal/State Grants		1,264,800	96,000	264,000	441,600	132,000	331,200
	TOTAL	**2,014,000**	**220,000**	**552,000**	**552,000**	**276,000**	**414,000**

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Public Safety - Traffic	Public Works	060-7513-429
		320-7513-429

TRAFFIC SIGNAL PROGRAM **PROJECT STATUS:** Cost Change

DESCRIPTION/JUSTIFICATION

The Traffic Signal Program is the annual program that provides for replacing older traffic signals and for constructing new traffic signals in the City. This program will result in improved visibility, reliability, and appearance of signals. Although recent advances in technology have elongated the normal, useful life for traffic signal installations well past the previously expected 25 years, some of the older-generation traffic signals still in use exceed their functional age. Components at those installations (including conduits, wiring, signal heads, and poles) need to be completely replaced. This program also provides funding for those maintenance needs. In addition, this program provides for the necessary upgrading of the traffic signal system as technology continues to change. In recent years, traffic signal replacements have included radar detection systems instead of in-pavement loop detection systems that had previously been used (and that were frequently the point of vehicle detection failure). Another advantage of the radar detection system is that it detects bicycles in addition to vehicles.

LOCATIONS

2016/17	Lincoln Way/Hyland Avenue signal replacement
2017/18	Dayton Avenue/East Lincoln Way signal replacement
2018/19	No project
2019/20	Lincoln Way/Beach Avenue signal replacement
2020/21	6th Street/Hazel Avenue signal replacement

A continued trending in increasing material costs (specifically for copper wiring and steel for the poles and mast arms) and additional Federal design requirements (such as additional ADA facilities) have resulted in an increased cost of a standard traffic signal. That coupled with the current state of the construction industry has seen significant increases in traffic signal replacement cost.

	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:						
Engineering	180,000	45,000	45,000		45,000	45,000
Construction	1,120,000	280,000	280,000		280,000	280,000
TOTAL	**1,300,000**	**325,000**	**325,000**		**325,000**	**325,000**
FINANCING:						
Road Use Tax	1,300,000	325,000	325,000		325,000	325,000
TOTAL	**1,300,000**	**325,000**	**325,000**		**325,000**	**325,000**

PROGRAM - ACTIVITY:	DEPARTMENT:	ACCOUNT NO.
Public Safety - Traffic	Public Works	060-7566-429

TRAFFIC ENGINEERING STUDIES **PROJECT STATUS:** Scope Change Cost Change

DESCRIPTION/JUSTIFICATION

The studies planned for this annual program will focus on examining the traffic signal system, the bicycle path (shared use path) system, and accident data to provide traffic information used for planning future capital improvement projects. These studies will identify those projects that will improve the efficiency, effectiveness, and safety of those systems.

COMMENTS

2015/16 Complete Streets Plan – Phase I $50,000 (establish scope, form committees, develop evaluation criteria)
2016/17 Complete Streets Plan – Phase II (corridor prioritization)
2017/18 No project
2018/19 2045 Long Range Transportation Plan Update

The 2016/17 project will provide a detailed plan for the implementation of a complete streets network for bicyclists and pedestrians. The plan will provide design information on treatments, identify corridors, potential costs and impacts, and the suitability of various transportation improvements based upon the function and context of the route. The plan will also make recommendations on signage and other supportive features to enhance the safety and usability of the transportation network for non-motorized users. It is also anticipated that this plan will incorporate City of Ames Complete Streets principles into project identification and selection. Phase I of the Complete Streets Plan development was completed with the 2015/16 program year. Work included developing a project toolbox.

The project shown in 2018/19 will be an update to the Long Range Transportation Plan (LRTP) for the Ames region. Typically an update to the LRTP takes approximately 24 months to complete. The LRTP is federally required to be updated every 5-years, and therefore the anticipated date for approving this update is October 12, 2020.

The recent adoption of the 2040 LRTP has reprioritized the projects shown in the Traffic Engineering Studies program to better align with community goals.

	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:						
Engineering	550,000	50,000		500,000		
TOTAL	**550,000**	**50,000**		**500,000**		
FINANCING:						
Road Use Tax	150,000	50,000		100,000		
MPO Planning Funds	400,000			400,000		
TOTAL	**550,000**	**50,000**		**500,000**		

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Public Safety - Traffic	Public Works	060-7531-429

MULTI-MODAL ROADWAY IMPROVEMENTS **PROJECT STATUS:** Scope Change Cost Change

DESCRIPTION/JUSTIFICATION

Multi-modal transportation refers to the various modes used by Ames residents to travel around the transport system. The modes specifically addressed in this program include bicycling and automobiles. This program is aimed at improving the roadway to create a safer interaction between these modes using alternatives such as improved crossing visibility at intersections, bike detection, and on-street facilities (e.g. bike lanes, sharrows). Bike lanes consist of a portion of the roadway designated by striping, signing, and pavement markings for the preferential or exclusive use of bicyclists. Sharrows, also known as shared lane markings, are markings used in lanes shared by bicycles and motor vehicles when a travel lane is too narrow to provide a standard width bike lane. Bike detection improvements include retrofitting signalized intersections to radar detection to facilitate the movement of bicycles. These improvements retrofit the existing street to provide a useful and appropriate route of travel for these popular modes used by Ames residents. The proposed locations and treatments are identified in the Long-Range Transportation Plan (LRTP) and the noted project numbers (e.g. ON15) are from the LRTP.

LOCATIONS

2016/17 **On-Street:** Clark Avenue (6th Street to 24th Street)

2017/18 **On-Street:** Duff Avenue (Lincoln Way to 6th Street) and Northwestern Avenue (6th Street to 30th Street)

2018/19 **On-Street:** Clark Avenue/S. Walnut Avenue (ON15: S. 3rd Street to 6th Street)

2019/20 **On-Street:** 16th Street & Meadowlane Avenue (ON24: Ridgewood Avenue to E. 13th Street)

2020/21 **Enhanced Intersection Crossing:** Intersection Grand Avenue/6th Street (CR5: improve crossing visibility)

As of October 12, 2015, the new Ames Area LRTP went into effect. The plan update has changed the naming of bicycle and pedestrian projects to either on-street or off-street improvements. This allows for greater flexibility to work with users and adjacent property owners during the design stage for incorporation of specific treatments that are appropriate to the project corridor. Scope and cost changes are also related to the LRTP update.

	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:						
Engineering	81,900	2,900	11,000	18,000	31,500	18,500
Construction	566,600	26,100	99,000	120,000	210,000	111,500
TOTAL	**648,500**	**29,000**	**110,000**	**138,000**	**241,500**	**130,000**
FINANCING:						
Road Use Tax	648,500	29,000	110,000	138,000	241,500	130,000
TOTAL	**648,500**	**29,000**	**110,000**	**138,000**	**241,500**	**130,000**

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Public Safety - Traffic	Public Works	060-7521-429

REGIONAL TRANSPORTATION COUNT PROGRAM **PROJECT STATUS:** No Change

DESCRIPTION/JUSTIFICATION

This program is the result of an ongoing need for transportation-related data in the Ames regional area. This program will be to collect and manage travel demand data from all transportation modes: walking, biking, and various forms of motorized travel. Data from this program will be used to track critical transportation system performance measures which are used to analyze and forecast transportation system needs and priorities. Each year consists of an annual base for data collections services. Additional data collection hardware will be identified a on a year-by-year basis. The City of Ames has already invested $175,000 to install 26 (of a planned total of 36) permanent count stations that were brought into service in 2015.

COMMENTS

2016/17	Data collection base ($50,000)
2017/18	Data collection base ($50,000)
2018/19	Data collection base ($50,000)
2019/20	Data collection base ($50,000)
2020/21	Data collection base ($50,000)

The data collectors continuously record traffic volumes, speeds, and classification on arterial and collector streets throughout the network. This data supports Long Range Transportation Planning and Modeling efforts, as well as Pavement Management, Safety Analysis, and other system performance measures as needed.

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Engineering		250,000	50,000	50,000	50,000	50,000	50,000
	TOTAL	**250,000**	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**
FINANCING:							
Road Use Tax		250,000	50,000	50,000	50,000	50,000	50,000
	TOTAL	**250,000**	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**

PROGRAM - ACTIVITY: Public Safety – Traffic

DEPARTMENT: Public Works

ACCOUNT NO. 060-7515-429

TRAFFIC CALMING PROGRAM **PROJECT STATUS:** Cost Change Site Change

DESCRIPTION/JUSTIFICATION

This program is the result of completing the Neighborhood Traffic Calming Handbook. This handbook is meant to serve as a technical guide, compiling nationally recognized best practices in the field of traffic calming, and then modifying those methods and their application to fit the context of the Ames community.

LOCATIONS

2017/18 Various Locations in the area of the College Creek/Old Ames Middle School Neighborhood

The 2017/18 location is part of a City Council referral of a request by the neighborhoods to evaluate traffic safety in anticipation of development on the Old Ames Middle School properties in southwest Ames.

	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:						
Engineering	10,000		10,000			
Construction	50,000		50,000			
TOTAL	**60,000**		**60,000**			
FINANCING:						
Road Use Tax	60,000		60,000			
TOTAL	**60,000**		**60,000**			

PROGRAM - ACTIVITY: Public Safety - Traffic

DEPARTMENT: Public Works

ACCOUNT NO.

Utilities

UTILITIES

EXPENDITURES:	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21	Page
Electric Services	28,275,000	7,255,000	6,790,000	6,470,000	5,340,000	2,420,000	27
Water Production/Treatment	27,675,300	21,854,500	498,000	1,161,000	1,437,000	2,724,800	46
Water Pollution Control	11,582,000	3,342,000	2,225,000	3,563,000	1,135,000	1,317,000	55
Water Distribution	8,050,000	1,300,000	1,300,000	1,300,000	2,850,000	1,300,000	65
Sanitary Sewer System	19,245,000	3,629,000	3,735,000	3,845,000	3,959,000	4,077,000	68
Storm Sewer System	8,313,400	2,900,000	1,830,000	1,305,000	1,198,400	1,080,000	71
Resource Recovery	1,901,250	554,600	361,350	349,100	311,100	325,100	79
TOTAL EXPENDITURES	**105,041,950**	**40,835,100**	**16,739,350**	**17,993,100**	**16,230,500**	**13,243,900**	

FUNDING SOURCES:

Debt:						
G.O. Bonds	1,900,000	750,000	-	-	1,150,000	-
State Revolving Fund Loans	37,518,000	21,852,000	4,610,000	3,570,000	3,684,000	3,802,000
Sub-Total Debt Funding	39,418,000	22,602,000	4,610,000	3,570,000	4,834,000	3,802,000

UTILITIES, CONTINUED

PROJECT/FUNDING SOURCE	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
FUNDING SOURCES, continued:						
City:						
Electric Utility Fund	27,563,500	7,157,850	6,552,350	6,279,600	5,242,100	2,331,600
Water Utility Fund	15,893,550	5,281,500	1,798,000	1,827,250	2,962,000	4,024,800
Sewer Utility Fund	11,307,000	2,992,000	1,350,000	3,838,000	1,535,000	1,592,000
Storm Water Utility Fund	5,492,000	1,150,000	1,484,000	948,000	830,000	1,080,000
Resource Recovery Fund	1,901,250	554,600	361,350	349,100	311,100	325,100
Sub-Total City Funding	62,157,300	17,135,950	11,545,700	13,241,950	10,880,200	9,353,500
Other:						
Iowa State University	761,500	97,150	237,650	190,400	147,900	88,400
Federal/State Grants	2,705,150	1,000,000	346,000	990,750	368,400	-
Sub-Total Other Funding	3,466,650	1,097,150	583,650	1,181,150	516,300	88,400
Total Funding Sources	**105,041,950**	**40,835,100**	**16,739,350**	**17,993,100**	**16,230,500**	**13,243,900**

UTILITIES - ELECTRIC SERVICES

PROJECT/FUNDING SOURCE	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21	Page
PROJECT:							
Electric Services:							
Demand Side Management Program	5,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	29
Transmission:							
69 kV Transmission Reconstruction	2,600,000	520,000	520,000	520,000	520,000	520,000	30
Top-O-Hollow Substation Expansion	2,075,000	125,000	1,950,000	-	-	-	31
Ontario Substation 69 kV Breaker Addition	1,150,000	-	150,000	1,000,000	-	-	32
Distribution:							
Mortensen Road Feeder Reconstruction	1,130,000	610,000	520,000	-	-	-	33
Street Light LED Retrofits	2,000,000	400,000	400,000	400,000	400,000	400,000	34
Dayton Avenue Substation Upgrade	1,150,000	-	200,000	950,000	-	-	35
Mortensen Road Transformer Protection	450,000	-	-	100,000	350,000	-	36
Vet Med Substation Switchgear Upgrade	570,000	-	-	-	70,000	500,000	37
Power Plant Capital:							
Power Plant Relay/Control Replacement	500,000	250,000	250,000	-	-	-	38
New Electric Generation Capacity	500,000	-	-	-	500,000	-	39

UTILITIES - ELECTRIC SERVICES, continued

PROJECT/FUNDING SOURCE	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21	Page
PROJECT, continued:							
Power Plant Maintenance:							
Unit #7 Boiler Tube Repair	3,850,000	3,850,000	-	-	-	-	40
Unit #7 Turbine Generator Overhaul	1,250,000	250,000	-	-	1,000,000	-	41
Power Plant Fire Protection System	500,000	250,000	250,000	-	-	-	42
Power Plant Roof Replacement	550,000	-	550,000	-	-	-	43
Unit #8 Precipitator Reconstruction	1,000,000	-	1,000,000	-	-	-	44
Unit #8 Turbine Generator Overhaul	4,000,000	-	-	2,500,000	1,500,000	-	45
TOTAL PROJECT EXPENDITURES	**28,275,000**	**7,255,000**	**6,790,000**	**6,470,000**	**5,340,000**	**2,420,000**	
FUNDING SOURCES:							
City:							
Electric Utility Fund	27,513,500	7,157,850	6,552,350	6,279,600	5,192,100	2,331,600	
Other:							
Iowa State University	761,500	97,150	237,650	190,400	147,900	88,400	
TOTAL FUNDING SOURCES	**28,275,000**	**7,255,000**	**6,790,000**	**6,470,000**	**5,340,000**	**2,420,000**	

DEMAND SIDE MANAGEMENT (DSM)
ENERGY CONSERVATION PROGRAMS

PROJECT STATUS: No Change

DESCRIPTION/JUSTIFICATION

This project is to develop and administer programs aimed at reducing demand for electricity. Reductions in the demand for electricity positively impact future energy production/supply costs. Demand Side Management (DSM) programs are utility programs aimed at reducing consumer use of energy through conservation or efficiency measures. Ongoing programs are:

- Residential energy audits
- Residential high efficiency air conditioner rebates
- Residential low income weatherization
- Residential high efficiency lighting rebates
- Residential and commercial efficient appliance rebates
- Commercial custom rebates
- Solar installation rebates
- Residential new construction rebates
- Commercial high efficiency lighting rebates
- Commercial audits
- Power Watch education
- Green Choices alternative energy contribution
- Commercial/industrial power factor correction rebates

Load Management (LM) programs control energy consumption at any instant through the use of mechanical or electronic devices. Ongoing programs are:

- Prime Time Power air conditioner load control

New Demand Side Management (DSM) program changes are:

- Added a rebate for air conditioner tune up, a rebate for WiFi thermostats, and raised the minimum rating on qualifying air conditioners to 15 SEER in the High Efficiency Air Conditioner Rebate program
- Removed compact fluorescent lamps (CFL) from Residential Efficient Lighting Rebate program and removed the electronic ballast T8 rebate in new construction situations in both the residential and commercial lighting rebate programs
- Added a rebate for Energy Star qualified dehumidifiers and electric dryers to the Appliance Rebate program

New Load Management programs under consideration are:

- Interruptible rates for industrial customers
- Time of use (TOU) rates – Beginning June, 2015 we are conducting a TOU rate pilot for Amcor Rigid Plastics

LOCATION

Electric Administration

	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:						
Program development and administration	5,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
TOTAL	**5,000,000**	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
FINANCING:						
Electric Utility Fund	5,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
TOTAL	**5,000,000**	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000

PROGRAM – ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Utilities – Electric Administration	Electric Services	530-4815-489

69KV TRANSMISSION RECONSTRUCTION **PROJECT STATUS:** No Change

DESCRIPTION/JUSTIFICATION

This is a multi-year project which will reconstruct the older, deteriorated portions of 69kV pole lines in project increments of between one and two line-miles of 69kV transmission line per year. The actual length and cost per mile will vary by terrain, accessibility, and attachments. Candidate portions of line include the original MidAmerican 69kV tie line that connects the Ames Plant Switchyard to MidAmerican's 69kV source point south of Ames on Highway 69, the Ames Plant to Top-O-Hollow line, the Top-O-Hollow to Stange Road Substation Line, and the Vet Med to Mortensen Road Substation line. The total project will require at least five years and will reconstruct approximately 11 miles of deteriorated 69kV line. Related work will include the reconstruction of those portions of distribution line that are underbuilt on existing transmission lines and/or new distribution underbuild that are needed for capacity and/or reliability improvements and are a logical part of construction along the same line route.

COMMENTS

Iowa State University's (ISU) share of the project is based on a load-ratio-share at the time of implementation. For budgetary purposes, staff is assuming the ISU load-ratio-share to be 17%.

LOCATION

Various

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Engineering		350,000	70,000	70,000	70,000	70,000	70,000
Construction		2,250,000	450,000	450,000	450,000	450,000	450,000
	TOTAL	**2,600,000**	**520,000**	**520,000**	**520,000**	**520,000**	**520,000**
FINANCING:							
Electric Utility Fund		2,158,000	431,600	431,600	431,600	431,600	431,600
Iowa State University		442,000	88,400	88,400	88,400	88,400	88,400
	TOTAL	**2,600,000**	**520,000**	**520,000**	**520,000**	**520,000**	**520,000**

PROGRAM – ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Utilities – Electric Distribution	Electric Services	530-4856-489

TOP-O-HOLLOW SUBSTATION EXPANSION AND BREAKER ADDITION

PROJECT STATUS: No Change

DESCRIPTION/JUSTIFICATION

This project will convert the existing direct-buried underground 69kV transmission tap connection at the Top-O-Hollow substation to a more reliable dual-source overhead transmission connection, including the necessary relaying and breakers for high-speed/selective line and transformer protection. The scope of this project includes the replacement and expansion of the existing 13.8kV metalclad switchgear to provide the addition of a main breaker, upgrade obsolete air-blast breakers and electromechanical relays with vacuum interrupter breakers and microprocessor based relaying equipment, and expand the battery and charger system to replace undersized batteries. The addition of the dual 69 KV transmission source and upgraded 69kV and 13.8 kV relay protection will improve reliability of the 69kV transmission system, improve service to the customers served by this substation, improve worker safety and provide improved protection to electrical assets from fault damage. The land for this project has been purchased previously to allow for the expansion of the existing substation. Use of breakers for transmission line, transformer, and 13.8kV main breaker protection is consistent with recommended engineering practices in the electric utility industry.

COMMENTS

Iowa State University's (ISU) share of the project is based on a load-ratio-share at the time of implementation. For budgetary purposes, staff is assuming the ISU load ratio share to be a conservative 7% of the total project cost (17% of the 69kV portion of this project, which is estimated to be approximately 40% of the total project cost).

FY 2008/09	Land Purchase	$ 24,883
FY 2015/16	Engineering	250,000
FY 2016/17	Engineering	125,000
FY 2017/18	Construction	1,950,000
	Total	$ 2,349,883

LOCATION

Top-O-Hollow Road west of Calhoun Avenue

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Engineering		125,000	125,000				
Construction		1,950,000		1,950,000			
	TOTAL	**2,075,000**	**125,000**	**1,950,000**			
FINANCING:							
Electric Utility Fund		1,929,750	116,250	1,813,500			
Iowa State University		145,250	8,750	136,500			
	TOTAL	**2,075,000**	**125,000**	**1,950,000**			

PROGRAM – ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Utilities – Electric Transmission	Electric Services	530-4882-489

ONTARIO SUBSTATION 69KV BREAKER ADDITION **PROJECT STATUS:** No Change

DESCRIPTION/JUSTIFICATION
This project will add 69kV line and transformer breakers, a main breaker upgrade to the 13.8kV switchgear, and all new 13.8 kV and 69kV relaying and controls to the Ontario Road Substation.

The addition of 69kV line and transformer breakers, 13.8kV main breaker, and relaying equipment at Ontario Substation will improve the reliability of transmission service to the substation. This will also improve service provided to customers served by this substation by shortening the duration of outages which may occur.

The use of breakers for 69kV transmission service and for switchgear main breakers for distribution substations is consistent with recommended electric utility industry engineering practices.

COMMENTS
Iowa State University's (ISU) share of the project is based on a load-ratio-share at the time of implementation. ISU's load-ratio-share decreases as the City's load increases, so the City will likely pay a larger share as the project is delayed. For budgetary purposes, staff is assuming the ISU load ratio share to be 8.5% (based on a 17% share of 69kV facilities, which are estimated to be 50% of the cost of this project).

LOCATION
Ontario Substation, Delaware Avenue and Utah Drive

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Engineering		150,000		150,000			
Construction		1,000,000			1,000,000		
	TOTAL	**1,150,000**					
FINANCING:							
Electric Utility Fund		1,052,250		137,250	915,000		
Iowa State University		97,750		12,750	85,000		
	TOTAL	**1,150,000**		**150,000**	**1,000,000**		

PROGRAM – ACTIVITY: Utilities – Electric Transmission
DEPARTMENT: Electric Services
ACCOUNT NO.

FEEDER RELOCATE AND EXTENSION (MORTENSEN ROAD AND STATE AVENUE)

PROJECT STATUS: No Change

DESCRIPTION/JUSTIFICATION

This project will extend a 13.8kV double-circuit overhead pole line approximately ½ mile north of Mortensen Road along the west side of State Avenue and approximately ¼ mile east to connect to two existing feeders. Construction will also include approximately ¼ mile of underground 13.8kV feeder west of State Avenue along Tripp Street to provide service to new development, and to connect to an existing 13.8kV line that exists on Tripp Street west of the planned new development. The developer will offset the excess costs of the underground portion of this feeder by installing the substructures for the necessary feeder extension through its development. This overhead route effectively relocates approximately 0.4 miles of a double circuit overhead line that currently runs north from Mortensen Road through the ISU athletic fields. ISU has requested that these lines be relocated in conjunction with this new construction in order to avoid redundant overhead lines in close proximity to each other.

ISU will provide the necessary easement for crossing its property along the west side of State Avenue north of Mortensen Road and for the relocated portion of line east of State Avenue to reconnect the existing feeders. Additionally, this project will reconstruct approximately ½ mile of deteriorated overhead distribution line along the north side of Mortensen Road between State Avenue and Welch Avenue. The Substation feeder exits are currently deteriorated, direct-buried underground cables that have experienced failures; these will all be replaced and rerouted as part of the new construction plans for these feeder projects. This will include the addition of padmounted switchgear to create necessary feeder ties to facilitate emergency and planned outage switching.

FY 2015/16	Engineering	$50,000
FY 2016/17	Engineering	$90,000
FY 2016/17	Construction	520,000
FY 2017/18	Construction	520,000
	Total	1,180,000

LOCATION

3040 Mortensen Road

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Engineering		90,000	90,000				
Construction		1,040,000	520,000	520,000			
	TOTAL	**1,130,000**	**610,000**	**520,000**			
FINANCING:							
Electric Utility Fund		1,130,000	610,000	520,000			
	TOTAL	**1,130,000**	**610,000**	**520,000**			

PROGRAM - ACTIVITY:	DEPARTMENT:	ACCOUNT NO.
Utilities – Electric Distribution	Electric Services	530-4858-489

LED STREET LIGHTS – MAINTENANCE RETROFITS **PROJECT STATUS:** New

DESCRIPTION/JUSTIFICATION

This project will provide for the replacement of nearly all existing High Pressure Sodium (HPS) and Mercury Vapor (MV) Street Light fixtures with Light Emitting Diode (LED) fixtures during routine maintenance activities. This project is expected to replace approximately 7,500 roadway and security lights over a 5 year period, which includes all lights within the City of Ames electric system. LED lights have a longer life and use significantly less energy than existing HPS and MV fixtures. They are instant on, result in lower ongoing maintenance costs, reduce energy usage, decrease the City's carbon footprint, contribute to a more sustainable Ames, and direct light downward to avoid light contamination of the night sky while reducing the glare that can negatively affect drivers. By performing retrofits during routine maintenance activities, this effort is expected to generate a return on investment within 10 years, based on projected energy and maintenance savings. LED fixtures have an expected life of at least 20 years compared to between 5 and 10 years for HPS.

COMMENTS

The purpose of this project is to allow for the existing street light maintenance workers to retrofit LED lights during routine maintenance on HPS and MV lights in order to minimize retrofit labor costs. Since this effort will be routine-maintenance-based, it will not target specific streets or areas.

LOCATION

City of Ames & Ames Electric Service Territory

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Materials		2,000,000	400,000	400,000	400,000	400,000	400,000
	TOTAL	**2,000,000**	**400,000**	**400,000**	**400,000**	**400,000**	**400,000**
FINANCING:							
Electric Utility Fund		2,000,000	400,000	400,000	400,000	400,000	400,000
	TOTAL	**2,000,000**	**400,000**	**400,000**	**400,000**	**400,000**	**400,000**

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Utilities- Electric Distribution	Electric Services	530-4844-489

DAYTON AVE SUBSTATION SWITCHGEAR UPGRADES **PROJECT STATUS:** No Change

DESCRIPTION/JUSTIFICATION

This project will upgrade two existing 13.8 kV distribution metal clad switchgear lineups at the Dayton Avenue Substation. The oldest switchgear has obsolete air blast breakers, no main breaker, and electro-mechanical relays. This switchgear needs to be replaced with all new switchgear with vacuum interrupter breakers, a main breaker, and microprocessor relays. The second switchgear has vacuum interrupter feeder breakers, which do not need to be replaced, but it has no main breaker and uses older style relays. This project will provide for the addition of a main breaker and replacement of existing distribution relays with modern microprocessor based relays.

The addition of a main breaker will improve safety for workers and improve system reliability through the use of low maintenance breakers and relays.

These upgrades are consistent with recommended electric utility industry engineering practices.

LOCATION

Dayton Ave Substation, Pullman Street

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Engineering		200,000		200,000			
Construction		950,000			950,000		
	TOTAL	**1,150,000**		**200,000**	**950,000**		
FINANCING:							
Electric Utility Fund		1,150,000		200,000	950,000		
	TOTAL	**1,150,000**		**200,000**	**950,000**		

PROGRAM – ACTIVITY: Utilities – Electric Distribution

DEPARTMENT: Electric Services

ACCOUNT NO.

MORTENSEN ROAD SUBSTATION 69KV TRANSFORMER PROTECTION

PROJECT STATUS: Cost Increase

DESCRIPTION/JUSTIFICATION

This project is for the addition of a 69kV breaker, relays and controls to replace the fuse protection on the distribution transformer. This project also includes replacement of two obsolete oil circuit breakers with low-maintenance SF6 gas breakers.

COMMENTS

Use of breakers for transformer protection is consistent with recommended engineering practice in the electric utility industry and will minimize damage to the transformer and surrounding facilities and provide better worker safety in the event of a fault. Oil circuit breakers are obsolete and require increased maintenance; the use of SF6 gas breakers represents best current practices for utility substations for reduced maintenance and fast/reliable operation.

FY 2018/19	Engineering	$ 150,000
FY 2019/20	Construction	500,000
	Total	$ 650,000

LOCATION

Mortensen Road Substation, 3040 Mortensen Road

	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:						
Engineering	150,000			150,000		
Construction	500,000				500,000	
TOTAL	**650,000**			**150,000**	**500,000**	
FINANCING:						
Electric Utility Fund	539,500			124,500	415,000	
Iowa State University	110,500			25,500	85,000	
TOTAL	**650,000**			**150,000**	**500,000**	

PROGRAM - ACTIVITY: Utilities – Electric Distribution

DEPARTMENT: Electric Services

ACCOUNT NO.

VET MED SUBSTATION SWITCHGEAR UPGRADE **PROJECT STATUS:** Cost Change

DESCRIPTION/JUSTIFICATION

This project will upgrade the original 13.8 kV distribution metalclad switchgear at Vet Med Substation. The Vet Med expansion in 2011 installed two new transformers and switchgear, but the existing metalclad switchgear was not upgraded at that time. This project upgrades the metalclad switchgear to add a main breaker and replace older existing relays to current standards. The addition of a main breaker will improve safety for workers and improve system reliability, since the use of low maintenance breakers and relays provide protection that operates more quickly and selectively.

These upgrades are consistent with good electric utility industry engineering practices.

FY 2019/20	Engineering	$ 70,000
FY 2020/21	Construction	500,000
	Total	$ 570,000

LOCATION

Vet Med Substation, South Riverside Drive

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Engineering		70,000				70,000	
Construction		500,000					500,000
	TOTAL	**70,000**				**70,000**	**500,000**
FINANCING:							
Electric Utility Fund		570,000				70,000	500,000
	TOTAL	**570,000**				**70,000**	**500,000**

PROGRAM – ACTIVITY: Utilities – Electric Distribution

DEPARTMENT: Electric Services

ACCOUNT NO.

POWER PLANT RELAY/CONTROL REPLACEMENT **PROJECT STATUS:** No Change

DESCRIPTION/JUSTIFICATION

This project will replace existing electro-mechanical 13.8kV feeders and 4160kv bus differential relays in the Power Plant. The existing relays are obsolete electro-mechanical devices which are becoming difficult to maintain/repair as replacement parts are no longer manufactured. By installing modern, programmable relays and updated controls in this location, long-term reliability can be improved by eliminating the obsolete and maintenance-intensive electro-mechanical relays. This project will likely take three to four years to complete.

These upgrades are consistent with recommended electric utility industry engineering practices.

2015/16	Engineering, Materials and Labor (estimated)	175,000
2016/17	Materials and Labor (estimated)	250,000
2017/18	Materials and Labor (estimated)	250,000
		675,000

LOCATION

Ames Power Plant at 5th Street/Carroll Avenue

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Construction		500,000	250,000	250,000			
	TOTAL	**500,000**	**250,000**	**250,000**			
FINANCING:							
Electric Utility Fund		500,000	250,000	250,000			
	TOTAL	**500,000**	**250,000**	**250,000**			

PROGRAM – ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Utilities – Electric Production	Electric Services	530-4862-489

NEW ELECTRIC GENERATION CAPACITY **PROJECT STATUS:** Delayed

DESCRIPTION/JUSTIFICATION

As the City of Ames grows, demand for electricity rises. To provide reliable electricity, utilities are required to maintain enough generating capacity to meet its peak usage plus a small margin for reserves. The City has 145 megawatts of generation capacity. The utility's current peak was set on July 25, 2012, at 130.7 megawatts. Since then, the City has avoided setting a new peak through targeted Demand Side Management, voluntary customer control, "peak alert" media, a pilot Interruptible rate for industrial customers, and favorable weather. To meet the City's needs in FY 2016/17 and beyond, the City will continue using these measures in an effort to keep its demand below the all-time peak. In addition, a pilot program may be developed with the utility's largest customers to reduce load on the hottest days and use the markets to buy short-term capacity. By 2023, it is projected that the capacity market will become constrained due to plant retirements caused by the Environmental Protection Agency's new environmental rules. The long term solution is to build or jointly own new generating capacity. A study will begin in FY 2019/20 to determine options to meet the City's long-term demand growth.

COMMENTS

2019/20	Engineering (estimated)	500,000
2021/22	Materials and Labor (estimated)	10,000,000
2022/23	Materials and Labor (estimated)	16,000,000
		26,500,000

The projected cost is $1,300 per kilowatt. Generation is typically added in incremental steps. A 20 MW generator is assumed for this project and projections indicate this new capacity would be enough to meet our future needs to 2029.

LOCATION

To be determined

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Engineering		500,000				500,000	
Equipment and Construction							
	TOTAL	**500,000**				**500,000**	
FINANCING:							
Electric Utility Fund		500,000				500,000	
	TOTAL	**500,000**				**500,000**	

PROGRAM - ACTIVITY: Utilities- Electric Production

DEPARTMENT: Electric Services

ACCOUNT NO.

UNIT #7 BOILER TUBE REPAIR **PROJECT STATUS:** Delayed

DESCRIPTION/JUSTIFICATION

The Unit #7 boiler is 40 years old and in need of tube repairs. Staff has devised a long-term plan to maintain the operation of the unit through maintenance, engineering, and re-tubing of the boiler. The cost estimates include labor and materials. The bottom throat of the boiler also needs to be enlarged to allow for an increased rate of refuse derived fuel (RDF) for burning.

This is being delayed for one year in order to not conflict with the planned conversion of Unit #7 from coal to natural gas in FY 2015/16.

COMMENTS

2014/15	Engineering	$ 150,000
2016/17	Material and labor for installation	3,850,000
	Total	$4,000,000

LOCATION

Power Plant, 200 East 5th Street

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Materials and Installation		3,850,000	3,850,000				
	TOTAL	**3,850,000**	**3,850,000**				
FINANCING:							
Electric Utility Fund		3,850,000	3,850,000				
	TOTAL	3,850,000	**3,850,000**				

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Utilities – Electric Production	Electric Services	530-4873-489

UNIT #7 TURBINE GENERATOR OVERHAUL **PROJECT STATUS:** No Change

DESCRIPTION/JUSTIFICATION

The Unit #7 turbine generator will be disassembled and necessary repairs made after 20,000 hours of operation. An inspection was last done in 2007 and the unit is now due for an overhaul in FY 2016/17. However, based on current levels of operation of the unit, the overhaul scheduled for FY 2016/17 will only be a minor overhaul to inspect the bearings and generator. This work will then allow for a major overhaul to be delayed until FY 2019/20.

COMMENTS

This work is required to inspect the turbine and generator for repairs that may be needed to avoid catastrophic failure of equipment. This overhaul is recommended by boiler and machinery insurance carriers and follows accepted industry standards. Repairs and replacement of worn parts will be done as problems are located during the inspection. The budget covers the inspection process and normal repair/replacement work that should be expected after 20,000 hours of operation.

LOCATION

Power Plant, 200 East 5th Street

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Construction		1,250,000	250,000			1,000,000	
	TOTAL	**1,250,000**	**250,000**			**1,000,000**	
FINANCING:							
Electric Utility Fund		1,250,000	250,000			1,000,000	
	TOTAL	**1,250,000**	**250,000**			**1,000,000**	

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Utilities – Electric Production	Electric Services	530-4874-489

POWER PLANT FIRE PROTECTION SYSTEM **PROJECT STATUS:** Delay Project Change

DESCRIPTION/JUSTIFICATION

The City's insurance carrier has made several loss prevention recommendations for the Power Plant. These recommendations are for fire suppression systems for the coal conveying equipment, coal pulverizers, and related coal processing and conveyor equipment. The cost and schedule for installation of the recommendations is as follows.

FY 2004/05	Upgrading City Water Service (in plant)	$ 475,000
FY 2008/09	Coal Handling Sprinkler System phase 1	650,000
FY 2011/12	Engineering for plant fire plan	30,000
FY 2012/13	Coal Handling Sprinkler System Ph 2 & Ph 3/mill inerting	820,000
FY 2013/14	Cooling Tower	500,000
FY 2014/15	Gas Turbine 2	45,997
FY 2015/16	Gas Turbine 1 (carryover from 2014/15 $204,003)	204,003
FY 2016/17	Turbine Generator #8	250,000
FY 2017/18	Turbine Generator #7	250,000
		$ 3,225,000

COMMENTS

A serious fire in any one of the systems can force the outage of either Unit #7 or #8 or the entire Power Plant. Replacement power during an extended period of time can be very expensive.

LOCATION

Power Plant, 200 East 5th Street

	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:						
Construction						
Turbine Generator #8	250,000	250,000				
Turbine Generator #7	250,000		250,000			
TOTAL	**500,000**	**250,000**	**250,000**			
FINANCING:						
Electric Utility Fund	500,000	250,000	250,000			
TOTAL	**500,000**	**250,000**	**250,000**			

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Utilities – Electric Production	Electric Services	530-4876-489

POWER PLANT ROOF REPLACEMENT **PROJECT STATUS:** No Change

DESCRIPTION/JUSTIFICATION

The Power Plant is executing a multi-year roof replacement and repair plan to address roof maintenance in the Plant. Leaking roofs can cause equipment failure if water penetrates electrical cabinet enclosures. Phases I and II of the plan were completed in FY 2008/09 and FY 2009/10 and addressed the roof sections over the turbine room and auxiliary bay. These phases were included in the operating budget of the Plant. This project is Phase III of the plan.

The roof at Gas Turbine 1 (GT1) was replaced 12 years ago with a rubber roof. There is an area in the last couple of years that has been attacked by oil vapors and needs to be replaced. Staff is planning on repairing the affected areas if possible and not replacing the whole roof.

In the Power Plant, there are also some leaks on the 4th level roof at the base of #8 stack that need repairs. These repairs are for a flat roof with aggregate on top. This area of roof is just above the electric control cabinets for #8 precipitators. The leaks on this section are likely due to the amount of work and stress on the roof from recent stack work.

COMMENTS

2015/16 – Repair the roof at the bottom of the #8 stack and a section of roof below #9 coal conveyor, and at the GT-1 site.
2017/18 - The roof sections over the boiler equipment.

LOCATION

Power Plant, 200 East 5th Street
Gas Turbine 1, Pullman Avenue

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Unit #7 Boiler Roof		550,000		550,000			
	TOTAL	**550,000**		**550,000**			
FINANCING:							
Electric Utility Fund		550,000		550,000			
	TOTAL	**550,000**		**550,000**			

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Utilities – Electric Production	Electric Services	530-4836-489

UNIT #8 ELECTROSTATIC PRECIPITATOR LAGGING, INSULATION AND SUPPORT SYSTEM REPLACEMENT

PROJECT STATUS: New

DESCRIPTION/JUSTIFICATION

This project will provide for the replacement of the lagging, insulation and support steel of a 33-year-old precipitator. There have been numerous repairs done over the years, but the outer lagging and insulation are now in need of a complete replacement. Over time, the support steel has failed due to rusting and fatigue with the breaking of attachment tabs. Due to the precipitator's height of approximately 155 to 210 feet in the air and approximately 20,000 square feet, it will require scaffolding and be costly to repair. Failure to repair all four sides from top to bottom could result in a catastrophic failure. If the lagging were to let go, the "skin" could fall on people, equipment, or the railroad track.

COMMENTS

The entire lagging insulation and support steel need to be replaced for the safe continued operation of the precipitator.

LOCATION

Power Plant, 200 East 5th street

		TOTAL	2016/17	2017/18	2018/19	2019/20	20120/21
COST:							
Engineering		45,000		45,000			
Materials and Labor		955,000		955,000			
	TOTAL	**1,000,000**		**1,000,000**			
FINANCING:							
Electric Utility Fund		1,000,000		1,000,000			
	TOTAL	1,000,000		1,000,000			

PROGRAM - ACTIVITY: Utilities- Electric Production

DEPARTMENT: Electric Services

ACCOUNT NO.

UNIT #8 TURBINE GENERATOR OVERHAUL **PROJECT STATUS:** Delayed

DESCRIPTION/JUSTIFICATION

The Unit #8 turbine generator will be disassembled and inspected after 20,000 hours of operation. An overhaul/inspection was done in FY 2012/13 and is due again in FY 2018/19. This work is required to replace worn parts and inspect the turbine and generator for repairs that may be needed to avoid catastrophic failure of equipment. This overhaul is recommended by boiler and machinery insurance carriers and follows accepted industry standards.

COMMENTS

During the last overhaul/inspection of the unit in FY 2012/13, the contractor was able to repair/rebuild most of the worn parts, but noted that some of these will need to be replaced during the next overhaul. Turbine generator parts have long lead delivery times and need to be ordered well in advance of the generator repair process to prevent unnecessary delays in the assembly of the unit. This project involves procuring parts for the Unit #8 turbine generator overhaul, and then installing them in the following fiscal year. Parts to be ordered include first stage nozzle, several blading stages, and one diaphragm. Other parts to be procured will include pilot valve and cylinder, main operating valve, shaft and piston, speed relay valve shaft, cylinder and linkage, shaft packing sets, shaft and thrust bearings, and hydrogen seals.

2018/19	Material/Parts		$ 2,500,000
2019/20	Construction		1,500,000
		Total	$4,000,000

LOCATION

Power Plant, 200 East 5th Street

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Material/Parts		2,500,000			2,500,000		
Construction		1,500,000				1,500,000	
	TOTAL	**4,000,000**			**2,500,000**	**1,500,000**	
FINANCING:							
Electric Utility Fund		4,000,000			2,500,000	1,500,000	
	TOTAL	**4,000,000**			**2,500,000**	**1,500,000**	

PROGRAM - ACTIVITY: Utilities – Electric Production

DEPARTMENT: Electric Services

ACCOUNT NO.

UTILITIES - WATER PRODUCTION/TREATMENT

PROJECT/FUNDING SOURCE	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21	Page
PROJECT:							
New Water Treatment Plant	18,448,000	18,448,000	-	-	-	-	47
Water Supply Expansion	2,818,000	2,818,000	-	-	-	-	48
Advanced Metering Infrastructure	1,483,800	277,000	286,000	296,000	307,000	317,800	49
Water Plant Facility Improvements	463,500	291,500	172,000	-	-	-	50
Ada Hayden Water Quality Study	80,000	20,000	40,000	20,000	-	-	51
Well Field Standby Power	845,000	-	-	845,000	-	-	52
Old Water Treatment Plant Demolition	2,470,000	-	-	-	1,020,000	1,450,000	53
Lime Lagoon Expansion	1,067,000	-	-	-	110,000	957,000	54
TOTAL PROJECT EXPENDITURES	**27,675,300**	**21,854,500**	**498,000**	**1,161,000**	**1,437,000**	**2,724,800**	
FUNDING SOURCES:							
Debt:							
State Revolving Fund Loans	17,873,000	17,873,000	-	-	-	-	
City:							
Water Utility Fund	9,168,550	3,981,500	498,000	527,250	1,437,000	2,724,800	
Other:							
FEMA Hazard Mitigation Grant	633,750	-	-	633,750	-	-	
TOTAL FUNDING SOURCES	**27,675,300**	**21,854,500**	**498,000**	**1,161,000**	**1,437,000**	**2,724,800**	

NEW WATER TREATMENT PLANT **PROJECT STATUS:** Cost Change

DESCRIPTION/JUSTIFICATION

The existing Water Treatment Plant utilizes components that date back to the mid-1920s. Concern over the structural condition of the facility, along with a projected need for additional capacity, triggered an Infrastructure and Capacity Assessment to determine the most appropriate, cost-effective course to meeting the community's drinking water needs over the next 20 years. The assessment quantified the numerous structural, mechanical, and electrical challenges with trying to renovate the existing facility. The final conclusion of the assessment, endorsed by City Council in July 2009, resulted in a plan to construct a new 15-million-gallon per day (mgd) lime softening facility on a new site.

COMMENTS

The cost estimate shown below now reflects actual bid prices for all major contracts. A 5% contingency is included for the main plant construction contract, and a 10% contingency for the pipeline contract. The greatest portion of the project is being funded through loans from the Iowa Drinking Water State Revolving Fund (DWSRF). These loans are offered at 1.75% interest and will be repaid over 20 years out of water revenues. The project has been awarded a loan forgiveness of approximately $6,598,000 for constructing the facility to a LEED (Leadership in Energy and Environmental Design) certified standard. A small portion of the expenses for smaller movable equipment with a useful life shorter than the 20 year loan (furniture, a/v equipment, telephones, maintenance equipment) is shown coming from the Water Fund.

The anticipated project schedule and budget are as follows:

2008/09	$ 774,000	Alternative analysis and pre-design
2009/10 – 2013/14	$ 899,000	Land acquisition and easements
2012/13 – 2016/17	$ 8,900,000	Final design and construction inspection
2013/14 – 2016/17	$ 59,534,000	Construction phase
2013/14 – 2016/17	$ 1,134,000	LEED registration and commissioning, permits, special inspections, equipment allowances, SRF origination fees
Total	$ 71,241,000	

LOCATION

New Water Plant, 1800 E. 13th Street

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Engineering/Legal/Administrative		1,729,000	1,729,000				
Construction		16,719,000	16,719,000				
	TOTAL	**18,448,000**	**18,448,000**				
FINANCING:							
Water Utility Fund		575,000	575,000				
Drinking Water State Revolving Fund		11,275,000	11,275,000				
DWSRF Forgivable Loan		6,598,000	6,598,000				
	TOTAL	**18,448,000**	**18,448,000**				

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Utilities – Water Treatment	Water & Pollution Control	510-3933-489
		512-3933-489

WATER SUPPLY EXPANSION **PROJECT STATUS:** Cost Change Scope Change

DESCRIPTION/JUSTIFICATION

As old wells fail and need to be replaced and as demand for treated water increases, additional wells must be drilled. This project will provide new and replacement source water capacity. The currently developed water supply is adequate to meet normal demands until at least 2020. Under drought conditions, however, the yield of the aquifer is reduced, requiring additional wells to achieve the same source water capacity.

COMMENTS

The oldest well field still in use was developed in the 1950s and 1960s. Many of these wells are losing capacity, and the effectiveness of rehabilitating them is decreasing. Site separation constraints make it impossible to re-drill replacement wells in the same well field. Additionally, summer demands during the recent droughts suggest that the source water capacity should be increased in conjunction with the increased treatment capacity that will be available in the new Water Plant. The location for the next well field has been revised using a detailed ground water hydraulic model. New wells are now proposed to be constructed on City-owned land north of East 13th Street and east of the Skunk River. Development of the well field will consist of an interconnecting pipeline and three new wells, each with a capacity of 1,000 gallons per minute (~1.5 million gallons per day). The cost increase ($1,105,000) is primarily associated with updated construction costs and the significant upfront cost to bring three phase power to the wells. Timing of the project would bring the new wells on-line concurrently with the start-up of the new Water Plant. Further into the future, additional source water supplies are planned along I-35 south of Ames. Staff also plans to do some additional test drilling as part of the development of a 50-year Source Water Plan.

FY 2012/13; 2015/16	$ 60,000	Test Drilling
FY 2014/15 – 2016/17	$ 518,000	Design/Engineering/Easements
FY 2015/16 – 2016/17	$ 2,804,000	Pipeline Construction
FY 2015/16 – 2016/17	$ 2,179,000	Well Construction
	$ 5,561,000	

LOCATION

North River Valley Well Field – North of E. 13th and east of Skunk River

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Construction		2,818,000	2,818,000				
	TOTAL	**2,818,000**	**2,818,000**				
FINANCING:							
Water Utility Fund		2,818,000	2,818,000				
	TOTAL	**2,818,000**	**2,818,000**				

PROGRAM - ACTIVITY: Utilities - Water Production

DEPARTMENT: Water & Pollution Control

ACCOUNT NO. 510-3943-489

ADVANCED METERING INFRASTRUCTURE **PROJECT STATUS:** Cost Change Schedule Change Delayed

DESCRIPTION/JUSTIFICATION
This is a multi-year project to convert the water meter reading system from the existing generator/remote technology to the current industry standard of Automated Meter Reading / Advanced Metering Infrastructure (AMR/AMI). While the project includes water meter reading only, the system that will be implemented will accommodate electric meters as well, should that be desired in the future.

COMMENTS
The water meter reading system installed prior to 2015 is a mechanical system that transmits the meter reading from the water meter (located inside the property) to a remote register on the outside of the property using a low-voltage cable. This technology is obsolete and is no longer available. A cross-departmental team evaluated multiple technology platforms utilizing various combinations of "walk-by" or "drive-by" reads, radio reads, cellular reads, and other methods of obtaining meter readings. The team concluded that an AMR walk-by or drive-by system would be the most cost-effective, short term solution to replace the old technology. The City has entered into a contract with Itron, Inc. to provide the radio read system, reading equipment and software; and Badger Meter, Inc. to provide water meters for this project. This system is capable of being upgraded to a more sophisticated AMI system in the future that could provide more detailed data collection and could allow meter reading from the office without the need to send a meter reader out into the field.

The cost to convert the entire inventory of water meters to the new reading technology is estimated at approximately $3,274,000 (in 2015 dollars) for equipment (19,200 meters @ $167 per meter) and the necessary field equipment, software, and training ($68,000). Improved efficiencies with staff and equipment have allowed for more installations than originally anticipated.

The replacement program began in FY 2014/15. During the first few months, staff realized that the time required per installation was less than had been previously estimated. As a result, the cost to have a portion of the project completed by an outside contractor has been removed from the project. The cost to replace 1,000 meters per year is budgeted in the Water Meter Division's operating budget, and the cost for an additional 1,600 replacements included in this project. The implementation schedule will be accomplished over seven to eight years depending on the Meter Division's workload from new construction in Ames.

LOCATION
Various locations

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Equipment		1,483,000	277,000	286,000	296,000	307,000	317,000
	TOTAL	**1,483,000**	**277,000**	**286,000**	**296,000**	**307,000**	**317,000**
FINANCING:							
Water Utility Fund		1,483,000	277,000	286,000	296,000	307,000	317,000
	TOTAL	**1,483,000**	**277,000**	**286,000**	**296,000**	**307,000**	**317,800**

PROGRAM - ACTIVITY: Utilities – Water Meter
DEPARTMENT: Water & Pollution Control
ACCOUNT NO. 510-3947-489

WATER PLANT FACILITY IMPROVEMENTS **PROJECT STATUS:** Scope Change Cost Change

DESCRIPTION/JUSTIFICATION
This project involves annual equipment repairs, major maintenance activities, replacement, and upgrades at the Water Treatment Plant and associated remote facilities such as wells, elevated tanks, and booster pump stations.

COMMENTS
The schedule for these improvements is as follows:

2016/17	$ 135,000	Lime pond security improvements
	$ 100,000	Remote site access control
	$ 56,500	30” valve actuator generator and controls
2017/18	$ 141,000	Construct maintenance building at new treatment plant site
	$ 31,000	Technical Services Complex (TSC) HVAC Controls Upgrade

Because of the planned replacement of the Water Treatment Plant, no major facility improvements are planned for the existing plant. The only maintenance and repairs being performed are those necessary to keep the facility operational until the new plant comes online in three years. The projects identified are stand-alone improvements separate from the treatment plant. Additional improvements may be identified in future years. The schedule may change in response to impending failures, regulatory agency requirements, etc.

The Lime Pond Security Improvements and Remote Site Access Control projects will be timed to ensure compatibility with the security system to be installed at the new Water Treatment Plant. In the event of a power failure the 30” valve from the 5 million gallon reservoir must be closed in order to prevent the high service pump station from flooding. Staff can currently do this manually; however, when staff relocate to the new plant, the operator will lose the ability to manually close the valve in a timely manner. The Maintenance Building at the new treatment plant site will provide storage for lubricating grease and oils separate from the main building, reducing the potential for a large dollar value loss due to fire. Additionally, it will house the facility’s tractor and mowers. The TSC HVAC controls are outdated and no longer being supported by the manufacturer, therefore repair parts are no longer available.

LOCATION
Various locations

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Construction		463,500	291,500	172,000			
	TOTAL	**463,500**	**291,500**	**172,000**			
FINANCING:							
Water Utility Fund		463,500	291,500	172,000			
	TOTAL	**463,500**	**291,500**	**172,000**			

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Utilities - Water Treatment	Water & Pollution Control	510-3911-489 510-3912-489 510-3913-489

ADA HAYDEN WATER QUALITY STUDY **PROJECT STATUS:** New

DESCRIPTION/JUSTIFICATION
Since the mid-1970's, the lakes at Ada Hayden Park have been used by the Ames Water Plant as a source for augmenting alluvial groundwater recharge during periods of low flows in the South Skunk River. In addition to the drinking water use, the lakes are a defining feature of Ada Hayden Heritage Park, providing a wide array of water-based recreational opportunities for the community. This project is part of an on-going effort to monitor the health of the lakes as development occurs in and around the lake's watershed. In addition to being a valuable tool for City staff, the continued monitoring of the lakes is of interest to many members of the community as well.

COMMENTS
A preliminary water quality evaluation was made in 2000 as part of the City's 'due diligence' effort prior to purchasing the former Hallet's Quarry property. This evaluation focused primarily on potential contamination of the lakes that could have resulted from the former industrial use of the property. Follow-up investigations were performed in 2004-2005 and again in 2009-2010. These latter investigations were focused on the overall "health" and water quality in the lakes, looking at parameters such as: dissolved oxygen; nitrogen and phosphorus; algae and microcystins; suspended solids and turbidity; and bacteria.

As the watershed has developed, the City has made efforts to encourage land use practices that will not have a negative impact on the water quality in the lakes. The long-term intent behind the monitoring effort has been to periodically recheck the lakes to determine if the existing land practices have been effective in preserving the in-lake water quality. The repeat monitoring is intended to recur at intervals of five to seven years.

The project is proposed as a two-year monitoring effort that would take place during the summers of 2017 and 2018 at an estimated cost of $40,000 per summer.

LOCATION
Ada Hayden Heritage Park

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Contracted Monitoring		80,000	20,000	40,000	20,000		
	TOTAL	**80,000**	**20,000**	**40,000**	**20,000**		
FINANCING:							
Water Utility Fund		80,000	20,000	40,000	20,000		
	TOTAL	**80,000**	**20,000**	**40,000**	**20,000**		

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Utilities – Water Production	Water & Pollution Control	510-3901-489

WELL FIELD STANDBY POWER **PROJECT STATUS:** Delayed Cost Change

DESCRIPTION/JUSTIFICATION
This project will provide standby electrical power to select wells located in the Hunziker Youth Sports Complex.

COMMENTS
Iowa's Water Supply Design Standards require that a water system have redundant electrical power available. Redundancy may be provided either through "connection to at least two independent public power sources" or by "portable or in-place internal-combustion engines." Redundant power is provided at the Water Treatment Plant and in the High Service Pump Station. Currently, however, none of the city wells are connected to a redundant power supply. Installing standby power was one of the recommendations contained in the utility's 2005 Vulnerability Assessment and Emergency Response Plan. Now that immediate priority recommendations in those documents have been addressed, standby power is now being proposed.

The wells located in the Hunziker Youth Sports Complex are among the highest capacity wells in the City's inventory. Installing standby power to at least some of these wells would allow the water utility to continue to produce treated water, at a reduced capacity, in the event of a prolonged power outage. As future well fields are developed, standby power will become a standard design element.

The most recent update to the Story County Hazard Mitigation Plan specifically included the need for standby power for existing wells. This makes the project eligible for Pre-Hazard Mitigation Grants. The funding source has been changed from Drinking Water SRF loans to a FEMA Hazard Mitigation Grant with a 25% local match from the Water Utility Fund. The project may be accelerated should grant funding become available sooner. The cost change in the project is solely the inflationary cost increase from delaying the project by one year.

LOCATION
300 E 5th Street

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Engineering		101,000			101,000		
Construction		744,000			744,000		
	TOTAL	**845,000**			**845,000**		
FINANCING:							
Water Utility Fund		211,250			211,250		
FEMA Hazard Mitigation Grant		633,750			633,750		
	TOTAL	**845,000**			**845,000**		

PROGRAM - ACTIVITY: Utilities - Water Production
DEPARTMENT: Water & Pollution Control
ACCOUNT NO.

DEMOLITION OF OLD WATER TREATMENT PLANT

PROJECT STATUS: No Change

DESCRIPTION/JUSTIFICATION
This project will demolish the treatment structures at the old Water Treatment Plant site.

COMMENTS
The timeline for the new Water Treatment Plant anticipates the facility beginning operation during the summer of 2017. Once the facility has been fully commissioned and is performing reliably, the treatment structures at the old plant can be torn down. This project will demolish the filter building, chemical feed building, external treatment basins, administrative offices, and ¾ million gallon ground storage reservoir. The two-story Technical Services Complex that houses the department's Water Meter and Laboratory Services Divisions will remain. Demolition will take place over a period of three years beginning in FY 2019/20.

FY 2019/20	$ 1,020,000	Demolish ¾ million gallon reservoir, maintenance building, and cold storage buildings
FY 2020/21	$ 1,450,000	Demolish clarifiers, mix tanks, recarbonation tanks, lime feed, CO_2 feed, pipe galleries
FY 2021/22	$ 1,050,000	Demolish treatment building
Total	$ 3,520,000	

LOCATION
300 E. 5th Street

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Engineering / Admin		267,000				110,000	157,000
Construction		2,203,000				910,000	1,293,000
	TOTAL	**2,470,000**				**1,020,000**	**1,450,000**
FINANCING:							
Water Utility Fund		2,470,000				1,020,000	1,450,000
	TOTAL	**2,470,000**				**1,020,000**	**1,450,000**

PROGRAM - ACTIVITY: Utilities - Water Treatment

DEPARTMENT: Water & Pollution Control

ACCOUNT NO.

LIME LAGOON EXPANSION **PROJECT STATUS:** New

DESCRIPTION/JUSTIFICATION
This project will construct a new lime sludge storage cell inside the existing large Cell 4. The timing for constructing additional cells is staggered over time to match growth in demand.

COMMENTS
As a part of the conceptual design for the new Water Treatment Plant, a reconfiguration of the large Cell 4 was proposed. This reconfiguration will sub-divide the large cell into a series of smaller cells that are easier to operate and clean out. A total of five smaller interior cells was originally proposed. Later in the design process, the timeline for constructing the smaller cells was altered to include only the first cell as part of the construction of the new treatment facility. The additional cells will be added at five to seven year intervals; keeping pace with anticipated growth in demand.

This project includes: the construction of a new interior berm; underdrains; a decant/drain structure; inlet, outlet, and telescoping valves; and the associated engineering activities. The project does not include the necessary lime removal from the existing large cell; funding for lime removal will be included in the operating budget with the annual lime disposal activities.

LOCATION
Water Plant lime lagoons south of East 13th Street west of the Skunk River

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Engineering		110,000				110,000	
Construction		957,000					957,000
	TOTAL	**1,067,000**				**110,000**	**957,000**
FINANCING:							
Water Utility Fund		1,067,000				110,000	957,000
	TOTAL	**1,067,000**				**110,000**	**957,000**

PROGRAM - ACTIVITY: Utilities – Water Treatment
DEPARTMENT: Water & Pollution Control
ACCOUNT NO.

UTILITIES - WATER POLLUTION CONTROL

PROJECT/FUNDING SOURCE	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21	Page
PROJECT:							
Residuals Handling Improvements	625,000	625,000	-	-	-	-	56
Digester Improvements	3,513,000	883,000	505,000	1,740,000	385,000	-	57
Clarifier Maintenance	1,254,000	744,000	-	510,000	-	-	58
WPC Plant Facility Improvements	639,000	389,000	50,000	200,000	-	-	59
Cogeneration System Maintenance	1,275,000	290,000	235,000	-	750,000	-	60
Electrical System Maintenance	103,000	103,000	-	-	-	-	61
Structural Rehabilitation	2,738,000	308,000	-	1,113,000	-	1,317,000	62
Nutrient Reduction Modifications	285,000	-	285,000	-	-	-	63
Flow Equalization Expansion	1,150,000	-	1,150,000	-	-	-	64
TOTAL PROJECT EXPENDITURES	**11,582,000**	**3,342,000**	**2,225,000**	**3,563,000**	**1,135,000**	**1,317,000**	
FUNDING SOURCES:							
Debt:							
State Revolving Fund Loans	1,775,000	625,000	1,150,000	-	-	-	
City:							
Sewer Utility Fund	9,807,000	2,717,000	1,075,000	3,563,000	1,135,000	1,317,000	
TOTAL FUNDING SOURCES	**11,582,000**	**3,342,000**	**2,225,000**	**3,563,000**	**1,135,000**	**1,317,000**	

RESIDUALS HANDLING IMPROVEMENTS **PROJECT STATUS:** Delayed Cost Change Scope Change

DESCRIPTION/JUSTIFICATION

The Water Pollution Control Facility generates approximately 30,000 gallons of treated solids, or residuals, each day. Throughout the year, these solids are held in the facility's storage lagoon and secondary digester, and are ultimately disposed of in the fall as fertilizer on City-owned farm ground adjacent to the facility. A comprehensive review of the solids handling portion of the facility took place in FY 2009/10. The study quantified a shortage in storage capacity, and recommended other modifications to the residuals handling process.

In 2015, bids were received for a new biosolids tank with improved load out facilities. However, bids came in nearly a million dollars over the initial budget. Despite efforts to redesign and reduce construction costs, a cost-effective solution was not found for the tank, and staff has indefinitely postponed the full project for now. A small portion of that project, to replace a plugged decant line, will be pursued in FY 15/16 to allow for continued plant operations. Staff will re-evaluate the facility's storage needs when a plan is developed for achieving the requirements of the Iowa Nutrient Reduction Strategy. Until that time, staff is recommending the City invest in purchasing more tillable acres of farm ground outside the floodplain. This will allow greater flexibility in land application throughout the entire year, postponing the need for additional storage capacity. Land acquisition for the purpose of biosolids application is an eligible project for Clean Water State Revolving Fund.

COMMENTS

FY 2013/14	$ 104,418	Engineering
FY 2014/15	1,568	Engineering
FY 2015/16	$ 201,600	Engineering ($41,600), Decant Line Repairs ($160,000)
FY 2016/17	$ 625,000	Land Purchase for Biosolids Application (approximately 50 acres)
	$ 932,586	

LOCATION

WPC Plant; four miles south of Highway 30, east of I-35

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Land Acquisition		625,000	625,000				
	TOTAL	**625,000**	**625,000**				
FINANCING:							
Clean Water State Revolving Fund		625,000	625,000				
	TOTAL	**625,000**	**625,000**				

PROGRAM - ACTIVITY: Utilities – WPC Plant

DEPARTMENT: Water & Pollution Control

ACCOUNT NO. 522-3446-489

DIGESTER IMPROVEMENTS **PROJECT STATUS:** Delayed Cost Change

DESCRIPTION/JUSTIFICATION

The WPC Facility uses anaerobic digestion as a core treatment process for wastewater solids. The digestion process stabilizes the waste, reduces the volume of the solids, and provides a measure of pathogen destruction. The process also generates methane gas as a by-product. This gas is captured and used as a fuel source for on-site electrical generation.

Cleaning of the digesters is a major routine maintenance task necessary to ensure that adequate storage volume remains available for the treatment process to be effective. During the previous round of digester cleaning work, it was revealed that the interior piping's protective paint coat needs addressed. Recent process evaluations (Residuals Handling Study, 2010; Long-Range Facility Plan, 2012) identified a series of maintenance needs and improvements to the digesters to maintain the facility's solids handling capacity over the next 20 years. These activities include designing and replacing digester mixing systems, repainting the failing protective paint coatings on the exterior steel digester lids, and replacing piping and valves associated with digester pumping. In FY 2013/14 and 2014/15, the necessary engineering design work was completed and maintenance on the primary digesters was initiated. Improvements to the mixing systems and interior painting of the digesters have continued into FY 2015/16. This work must be completed first before painting of the lids can commence so that portion of the project has been delayed a year.

COMMENTS

The anticipated project schedule and budget are as follows:

2016/17	$ 883,000	Repaint exterior lids on all three digesters ($536,000); replace associated pump room piping and valves ($347,000)
2017/18	$ 505,000	Repaint pump room ($340,000); Replace three waste activated sludge pumps ($55,000 each)
2018/19	$ 1,740,000	Replace methane gas piping and safety equipment ($1,404,000); replace 2 secondary digester sludge pumps ($336,000)
2019/20	$ 385,000	Replace 5 primary digester sludge pumps ($385,000)
Total	$ 3,513,000	

LOCATION

WPC Facility; four miles south of Highway 30, east of I-35

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Engineering		175,500	10,000	20,500	100,000	45,000	
Construction & Equipment		3,337,500	873,000	484,500	1,640,000	340,000	
	TOTAL	**3,513,000**	**883,000**	**505,000**	**1,740,000**	**385,000**	
FINANCING:							
Sewer Utility Fund		3,513,000	883,000	505,000	1,740,000	385,000	
	TOTAL	**3,513,000**	**883,000**	**505,000**	**1,740,000**	**385,000**	

PROGRAM - ACTIVITY: Utilities – WPC Plant

DEPARTMENT: Water & Pollution Control

ACCOUNT NO. 520-3450-489

WPC CLARIFIER MAINTENANCE **PROJECT STATUS:** Scope Change Cost Change

DESCRIPTION/JUSTIFICATION
This project includes major structural and mechanical maintenance activities for the eight clarifiers at the WPC facility.

COMMENTS
The clarifier drives and mechanisms were inspected in 2012. Replacement of the drives was originally recommended to begin in FY 2016/17, with priority given to the intermediate and final clarifiers. Staff has increasingly noticed issues with the intermediate and final clarifier drives and recommends advancing repairs so rehabilitation of the drives can be completed at a lower cost than total replacement. No significant structural concerns were identified with the metal mechanisms, and total replacement is not believed to be needed at this time. When the drives are replaced, the mechanisms will be re-evaluated and a replacement schedule prepared, if appropriate.

A troublesome coating system on the primary clarifiers was being carefully monitored and in recent months has begun to fail. Large sheets of coatings are sloughing off, creating the potential to plug the primary sludge pump pits. As a result, the failed coating system is now scheduled to be removed in FY 16/17. To accommodate this, the drive replacement on two of the primary clarifiers is being delayed until FY 18/19, when all four primary clarifier drives are now scheduled for replacement.

2015/16	Replace one intermediate and one final clarifier drive ($200,000)
2016/17	Replace one intermediate and one final clarifier drive ($210,000); Remove the primary clarifier coatings ($534,000)
2018/19	Replace four primary clarifier drives ($510,000)

LOCATION
WPC Facility; four miles south of Highway 30, east of I-35

	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:						
Replace Intermediate/Final Clarifier Drives	210,000	210,000				
Remove Failed Primary Coatings	534,000	534,000				
Replace Primary Clarifier Drives	510,000			510,000		
TOTAL	**1,254,000**	**744,000**		**510,000**		
FINANCING:						
Sewer Utility Fund	1,254,000	744,000		510,000		
TOTAL	**1,254,000**	**744,000**		**510,000**		

PROGRAM - ACTIVITY:	DEPARTMENT:	ACCOUNT NO.
Utilities – WPC Plant	Water & Pollution Control	520-3429-489

WPC PLANT FACILITY IMPROVEMENTS **PROJECT STATUS:** Advanced Cost Change Scope Change

DESCRIPTION/JUSTIFICATION

It is necessary to plan for the orderly repair, replacement, and upgrade of the Water Pollution Control Facility equipment in order to continue high-quality treatment and comply with environmental regulations. This project involves annual equipment repairs, maintenance, replacement, and upgrades at the plant. This facility became fully operational in November 1989. Life expectancies for plant equipment vary from five to six years to more than ten years.

COMMENTS

The scope of this project has been updated following the completion of the Long-Range Facility Plan in late 2012. Individual projects have been prioritized to gradually increase to the level of re-investment recommended by the study. A more specific study on grease production and handling is ongoing and will impact the ultimate scope and cost of the grease receiving station upgrade. The plant phone/paging system has been advanced due to increasing issues with the current system and the availability of a fiber optic connection to the rest of the City phone network. The security improvements project is to replace outdated/failed cameras and controls.

2016/17	Trickling filter pump station repainting ($59,000)\
	Grease receiving station upgrade ($300,000)
	Replace plant phone/paging system ($30,000)
017/18	Security Camera Replacement ($50,000)
2018/19	Screw Pump Drives ($200,000)

LOCATION

WPC Plant; four miles south of Highway 30, east of I-35

	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:						
Engineering	38,000	38,000				
Construction and Equipment	601,000	351,000	50,000	200,000		
TOTAL	**639,000**	**389,000**	**50,000**	**200,000**		
FINANCING:						
Sewer Utility Fund	639,000	389,000	50,000	200,000		
TOTAL	**639,000**	**389,000**	**50,000**	**200,000**		

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Utilities - WPC Plant	Water & Pollution Control	520-3454-489
		520-3411-489
		520-3412-489

COGENERATION SYSTEM MAINTENANCE **PROJECT STATUS:** Cost Change

DESCRIPTION/JUSTIFICATION

The WPC Facility uses anaerobic digestion as a core treatment process for wastewater solids. The digestion process stabilizes the waste, reduces the volume of the solids, and provides a measure of pathogen destruction. The process also generates methane "bio-gas" as a by-product. This gas is captured and used as a fuel source for on-site electrical generation. The facility has three gas-fired engines capable of operating on either the bio-gas or natural gas. Each engine drives a dedicated electric generator. A heat recovery system on the engines uses the waste heat to warm the digesters.

COMMENTS

This project plans for the regular repair and replacement of the cogeneration system. An engineering study is ongoing to ensure the continued cost effectiveness of the methane generator (MG) system prior to undertaking significant maintenance and equipment replacement costs in the upcoming years.

The engines require regular overhauls approximately every 25,000 hours of run time. MG #1 is too small to be used by itself to heat the digesters, making it impractical to use for routine electrical generation. This engine will be replaced with a boiler system in FY 2016/17. This system will provide backup heating capability for the digesters that is considerably less maintenance intensive than an engine/generator set, which can be used should the larger engines be out of service. MG #2 is scheduled for replacement in FY 2019/20 based on the projected end of its useful life.

The anticipated schedule of activities is as shown below.

2015/16	$ 60,000	Engineering Study
2016/17	$ 290,000	Replace MG #1 with boiler system
2017/18	$ 235,000	Overhaul MG #3
2019/20	$ 750,000	Replace MG #2
Total	$1,335,000	

LOCATION

WPC Facility; four miles south of Highway 30, east of I-35

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Engineering		80,000				80,000	
Construction		1,195,000	290,000	235,000		670,000	
	TOTAL	**1,275,000**	**290,000**	**235,000**		**750,000**	
FINANCING:							
Sewer Utility Fund		1,275,000	290,000	235,000		750,000	
	TOTAL	**1,275,000**	**290,000**	**235,000**		**750,000**	

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Utilities – WPC Plant	Water & Pollution Control	520-3447-489

WPC ELECTRICAL SYSTEM MAINTENANCE **PROJECT STATUS:** Scope Change Cost Change

City of Ames, Iowa
Capital Improvements Plan

DESCRIPTION/JUSTIFICATION
A dependable method of receiving and distributing power throughout the Water Pollution Control Facility campus is essential to provide necessary protection of the environment and public health. A planned program of major preventive maintenance is recommended to ensure the electrical system is reliable. This project also includes planned repair or replacement of electrical components.

COMMENTS
The main plant switchgear is cleaned and tested on a five year cycle. This ensures that these important safety interlock devices function to protect workers and equipment. A spare breaker is also planned for the new disinfection equipment. Additional electrical maintenance projects may be added in future years as equipment ages and additional work becomes necessary.

FY 2016/17	$ 63,000	Main switchgear preventive maintenance (every five years)
	$ 40,000	Spare breaker for disinfection
Total	$ 103,000	

LOCATION
WPC Facility; four miles south of Highway 30, east of I-35

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Construction & Equipment		103,000	103,000				
	TOTAL	**103,000**	**103,000**				
FINANCING:							
Sewer Utility Fund		103,000	103,000				
	TOTAL	**103,000**	**103,000**				

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Utilities – WPC Plant	Water & Pollution Control	520-3438-489

STRUCTURAL REHABILITATION **PROJECT STATUS:** No Change

DESCRIPTION/JUSTIFICATION
In order to preserve the significant investment in infrastructure at the Water Pollution Control Facility, periodic structural rehabilitation of buildings and structures is necessary. Because of the value and significance of the structures identified in this project, it is essential that rehabilitation be made prior to a structural failure.

COMMENTS
A comprehensive evaluation of the structural condition of the buildings and structures was performed in 2012. Based on that assessment, the facility is generally in good condition; however, the facility is about 25 years old and is showing signs of age-related deterioration. As a part of the condition assessment, a schedule for structural rehabilitation was developed. The drivers for the schedule are the estimated remaining useful life in each structure and coordination with future improvements to the facility.

The cost and scope change are due to the work elements shown in FY 20/21. These Year 5 tasks had already been included in the ten-year rate projections presented to Council in early 2015.

2016/17	$ 308,000	Joint repairs at sludge pumping building ($46,000); clean and seal precast and cast-in-place concrete ($262,000)
2018/19	$ 1,113,000	Repairs to the Administration Building entrance slab ($184,000); repairs to joints in precast wall panels (all structures except trickling filters) ($450,000); stair support and sidewalk at SW clarifier stair ($18,000); repair drainage and moisture issues around multiple structures ($461,000)
2020/21	$1,317,000	Repairs to the precast and concrete masonry at the Raw Water Pump Station Building

LOCATION
WPC Facility; four miles south of Highway 30, east of I-35

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Engineering		349,500	33,000		119,000		197,500
Construction		2,388,500	275,000		994,000		1,119,500
	TOTAL	**2,738,000**	**308,000**		**1,113,000**		**1,317,000**
FINANCING:							
Sewer Utility Fund		2,738,000	308,000		1,113,000		1,317,000
	TOTAL	**2,378,000**	**308,000**		**1,113,000**		**1,317,000**

PROGRAM - ACTIVITY:	DEPARTMENT:	ACCOUNT NO.
Utilities – WPC Plant	Water & Pollution Control	520-3455-489

NUTRIENT REDUCTION MODIFICATIONS **PROJECT STATUS:** Delayed Cost Change

DESCRIPTION/JUSTIFICATION

In early 2013, the Iowa Department of Natural Resources released the Iowa Nutrient Reduction Strategy. This strategy will require the State's 102 largest municipal wastewater facilities to install "technically and economically feasible process changes for nutrient removal." This project would convert the WPC facility to a "Simultaneous Nitrification/Denitrification" treatment scheme to achieve the new numeric nutrient limits.

COMMENTS

The Iowa Nutrient Reduction Strategy lays out a schedule for point source discharges based on the National Pollutant Discharge Elimination System (NPDES) permit renewal cycle for each facility. The current NPDES permit for Ames has expired. It will remain in effect until a new one is issued; hopefully in 2016. Within two years of that permit reissuance, Ames must submit to IDNR a preliminary engineering report that evaluates the cost and feasibility of installing nutrient reduction at the facility. The facility will then receive a compliance schedule requiring the construction of nutrient reduction facilities during the term of the following NPDES permit (2020 to 2025).

2017/18	$ 285,000	Preliminary Engineering Report
2021/22	4,368,000	Final Design
2022/23 – 2023/24	31,216,000	Construction
Total	$ 35,869,000	

Construction of the nutrient removal facility will also achieve compliance with an anticipated reduction in ammonia limits, and would also eliminate the need for a substantial rehabilitation of the trickling filters. If the project is not needed due to changes in nutrient standards or other alternative solutions presented, then this project will change. The Simultaneous Nitrification/Denitrification treatment project could be replaced with an Integrated Fixed-film Activated Sludge (IFAS) modification to the solids contact units to achieve the lower ammonia limits ($3,160,000) and the trickling filter rehabilitation ($8,130,000).

LOCATION

WPC Facility; four miles south of Highway 30, east of I-35

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Engineering		285,000		285,000			
	TOTAL	**285,000**		**285,000**			
FINANCING:							
Sewer Utility Fund		285,000		285,000			
	TOTAL	**285,000**		**285,000**			

PROGRAM - ACTIVITY: Utilities – WPC Plant

DEPARTMENT: Water & Pollution Control

ACCOUNT NO.

FLOW EQUALIZATION EXPANSION **PROJECT STATUS:** Delayed Cost Change City of Ames, Iowa Capital Improvements Plan

DESCRIPTION/JUSTIFICATION

The Ames WPC Facility uses an advanced secondary (i.e. biological) treatment process. The biological processes are designed to operate within a range of flow rates. If the flows increase too high or too rapidly, the biomass can be washed out of the treatment basins, negatively impacting the treatment effectiveness for several days or weeks to follow. Facilities like Ames' are commonly constructed with flow equalization basins. Ames currently has an effective flow equalization storage capacity of 4.4 million gallons.

When flows coming in to the plant exceed the hydraulic capacity of the biological process, the excess flow is diverted to the equalization basins and is later brought back through the treatment process, once the incoming flow rate drops below the capacity of the plant. On those rare occasions when the basins are completely filled and the influent flow rate has not yet dropped below capacity, the equalization basins begin a controlled overflow. The overflow is recombined with the treated plant effluent prior to discharge to the receiving stream, with the combined flow meeting all numeric discharge limits in the NPDES permit.

COMMENTS

Based on a capacity evaluation conducted by the City's consultant as a part of the Long-Range Facility Plan, it has been determined that peak wet-weather flows can be appropriately processed through a combination of:

1. Operational modifications at the treatment plant;
2. Removal of 25% of the Inflow and Infiltration (I/I) reaching the WPC Facility through the Sanitary Sewer Rehabilitation Project; and
3. A 6-million gallon expansion to the equalization basin capacity.

The proposed project would add an additional 6.0 million gallons, increasing the plant's effective storage capacity to 10.4 million gallons. It is now delayed two years due to delays in the issuance of a new NPDES permit for the facility. The cost has been adjusted due to the delay.

LOCATION

WPC Plant; four miles south of Highway 30, east of I-35

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Engineering		95,000		95,000			
Construction		1,055,000		1,055,000			
	TOTAL	**1,150,000**		**1,150,000**			
FINANCING:							
Clean Water State Revolving Fund		1,150,000		1,150,000			
	TOTAL	**1,150,000**		**1,150,000**			

PROGRAM - ACTIVITY: Utilities - WPC Plant

DEPARTMENT: Water and Pollution Control

ACCOUNT NO.

UTILITIES - WATER DISTRIBUTION

PROJECT/FUNDING SOURCE	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21	Page
PROJECT:							
Water System Improvements	6,500,000	1,300,000	1,300,000	1,300,000	1,300,000	1,300,000	66
Campustown Public Improvements	1,550,000	-	-	-	1,550,000	-	67
TOTAL PROJECT EXPENDITURES	**8,050,000**	**1,300,000**	**1,300,000**	**1,300,000**	**2,850,000**	**1,300,000**	
FUNDING SOURCES:							
Debt:							
G.O. Bonds	1,150,000	-	-	-	1,150,000	-	
City:							
Water Utility Fund	6,725,000	1,300,000	1,300,000	1,300,000	1,525,000	1,300,000	
Sewer Utility Fund	125,000	-	-	-	125,000	-	
Electric Utility Fund	50,000	-	-	-	50,000	-	
Sub-Total City Funding	6,900,000	1,300,000	1,300,000	1,300,000	1,700,000	1,300,000	
TOTAL FUNDING SOURCES	**8,050,000**	**1,300,000**	**1,300,000**	**1,300,000**	**2,850,000**	**1,300,000**	

WATER SYSTEM IMPROVEMENTS **PROJECT STATUS:** Cost change

DESCRIPTION/JUSTIFICATION

This program provides for replacing water mains in areas that experience rusty water problems. It also provides for installing larger distribution mains in areas that have 4" supply lines, transferring water services from 4" water mains in streets where larger water mains exist, and abandoning 4" water mains. Eliminating duplicate water mains, where possible, improves water flow and helps reduce rusty water. Installing larger distribution lines in areas that have a high concentration of 4" supply lines and less than desirable fire-fighting capacity (predominantly in the older areas of the community) provides larger supply quantities in relation to the current and proposed land uses, in accordance with the Land Use Policy Plan. This program may also include the replacement of leaking valves on larger water mains along major roadways where the complexity of the project encourages replacement by a contractor.

COMMENTS

Water system improvements and water service transfers will be completed at various locations in the community. Project locations will be coordinated with upcoming roadway improvement projects to minimize construction impacts to neighborhoods.

The cost increase ($200,000 per year) is due to an increasing number of rusty water complaints over the past year along with the continuing need to replace the 4" water mains in order to provide fire-fighting capacity and improved water quality in the system. The system currently has 11.7 miles of active 4" water main. Improvements to these water mains will result in reduced maintenance costs.

LOCATION

2016/17 Water Main Replacement:
Northwood Drive (Duff Avenue west to 2729 Northwood Drive), Trail Ridge Road, Trail Ridge Circle, Westbrook Drive, and various other locations to be determined

2016/17 Water Service Transfer:
8th Street (Northwestern Avenue to Duff Avenue) and various other locations to be determined

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Engineering		925,000	185,000	185,000	185,000	185,000	185,000
Construction		5,575,000	1,115,000	1,115,000	1,115,000	1,115,000	1,115,000
	TOTAL	**6,500,000**	**1,300,000**	**1,300,000**	**1,300,000**	**1,300,000**	**1,300,000**
FINANCING:							
Water Utility Fund		6,500,000	1,300,000	1,300,000	1,300,000	1,300,000	1,300,000
	TOTAL	**6,500,000**	**1,300,000**	**1,300,000**	**1,300,000**	**1,300,000**	**1,300,000**

PROGRAM – ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Utilities – Water Distribution	Public Works	510-8461-489

CAMPUSTOWN PUBLIC IMPROVEMENTS **PROJECT STATUS:** Delayed

DESCRIPTION/JUSTIFICATION
This project identifies public improvements that will complement the current revitalization projects in Campustown.

COMMENTS
The water mains, storm sewers, and sanitary sewers along a portion of Welch Avenue (Lincoln Way to Hunt Street) date back to the early 1900s. Considering the age of the infrastructure as well as the increased demand from redevelopment, updated water, storm, and sanitary mains will be constructed. These improvements will be coupled with new pavement improvements in the area.

LOCATION
Welch Avenue (Lincoln Way to Hunt Street)

Overall, this project has been delayed to level G.O. Bond expenditures.

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Engineering		300,000				300,000	
Construction		1,200,000				1,200,000	
Electric		50,000				50,000	
	TOTAL	**1,550,000**				**1,550,000**	
FINANCING:							
G.O. Bonds		1,150,000				1,150,000	
Water Utility Fund		225,000				225,000	
Sewer Utility Fund		125,000				125,000	
Electric Utility Fund		50,000				50,000	
	TOTAL	**1,550,000**				**1,550,000**	

PROGRAM - ACTIVITY: **DEPARTMENT:** **ACCOUNT NO.**
Utilities – Water Distribution, Storm Sewer, and Sanitary Sewer Public Works

UTILITIES - SANITARY SEWER SYSTEM

PROJECT/FUNDING SOURCE	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21	Page
PROJECT:							
Sanitary Sewer System Improvements	19,120,000	3,604,000	3,710,000	3,820,000	3,934,000	4,052,000	69
Clear Water Diversion	125,000	25,000	25,000	25,000	25,000	25,000	70
TOTAL PROJECT EXPENDITURES	**19,245,000**	**3,629,000**	**3,735,000**	**3,845,000**	**3,959,000**	**4,077,000**	
FUNDING SOURCES:							
Debt:							
State Revolving Fund Loans	17,870,000	3,354,000	3,460,000	3,570,000	3,684,000	3,802,000	
City:							
Sewer Utility Fund	1,375,000	275,000	275,000	275,000	275,000	275,000	
TOTAL FUNDING SOURCES	**19,245,000**	**3,629,000**	**3,735,000**	**3,845,000**	**3,959,000**	**4,077,000**	

SANITARY SEWER REHABILITATION PROGRAM **PROJECT STATUS:** Cost Change

DESCRIPTION/JUSTIFICATION

This is the annual program for rehabilitation/reconstruction of deficient sanitary sewers and deteriorated manholes at various locations throughout the City. Most of the problem areas are in sewers that can be bundled into a construction package for cost efficiency, or in problem areas deeper than City crews are equipped to handle. This program, therefore, provides for those repairs by outside firms.

COMMENTS

System improvement locations have been identified through the Sanitary Sewer System Evaluation (SSSE) field investigation completed over the last several years. Through manhole inspections, smoke testing, and televising, severe structural defects (ratings of 4 or 5) have been identified as priorities within this program. It is highly recommended by national standards to fix structural defects with ratings of "5" within 12 months. According to national standards, structural defects with ratings of "4" are necessary to be fixed within five years. It is estimated that there are $25.7 million in improvements to be made in the system. It is estimated that improvements may take 10 years to complete. This program does not reflect any capacity issues that may be identified. Suggested work activities include rehabilitating or replacing manholes, repairing or lining pipe, and similar work. City maintenance crews are continuing to also complete projects identified by the SSSE, as equipment and staffing enables. The goal of the SSSE was to identify and remove major sources of inflow/infiltration as a means of lowering the peak wet weather flow at the treatment plant.

Cost change increase by $50,000 per year in the Sewer Utility Fund is the result of updated project estimates being coordinated with pavement improvement projects and also reflecting current bid environment.

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Engineering		3,420,000	684,000	684,000	684,000	684,000	684,000
Construction		15,700,000	2,920,000	3,026,000	3,136,000	3,250,000	3,368,000
	TOTAL	**19,120,000**	**3,604,000**	**3,710,000**	**3,820,000**	**3,934,000**	**4,052,000**
FINANCING:							
Sewer Utility Fund		1,250,000	250,000	250,000	250,000	250,000	250,000
State Revolving Fund (SRF)		17,870,000	3,354,000	3,460,000	3,570,000	3,684,000	3,802,000
	TOTAL	**19,120,000**	**3,604,000**	**3,710,000**	**3,820,000**	**3,934,000**	**4,052,000**

PROGRAM – ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Utilities - Sanitary Sewer	Public Works	520-8542-489 522-8542-489

CLEAR WATER DIVERSION **PROJECT STATUS:** No Change

DESCRIPTION/JUSTIFICATION
This is the annual program providing for diversion of footing drain discharge from sanitary sewers to storm sewers.

Clear water from footing drains causes overloading and backups in the sanitary sewer as well as increases in the volume of clean water that is treated at the sewage treatment facility. The Clear Water Diversion program historically involved diverting footing drain discharge from sanitary sewers to storm sewers. This diversion results in lower volumes of clean water needing treatment at the sewage treatment facility, thereby decreasing operating and maintenance costs of that facility. In addition, customers should experience fewer, less severe sewer backups.

COMMENTS
The Inflow and Infiltration Study, undertaken in 1995, showed that in order for clear water diversion to be cost effective, an individual sump pump must discharge in excess of 1,000 gallons per day. To encourage participation in the footing drain grant program, City Council authorized grants to participating property owners. In all, 2,334 footing drain grants were paid to property owners under this program through July 1, 2011, when the grant program was suspended.

After 2010/11, **the footing drain grant portion of this program was suspended and construction of collector lines to eliminate icing on streets has been reduced**. Through completion of the Sanitary Sewer System Evaluation, the future need of the footing drain grant program will be analyzed.

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Construction		125,000	25,000	25,000	25,000	25,000	25,000
	TOTAL	**125,000**	**25,000**	**25,000**	**25,000**	**25,000**	**25,000**
FINANCING:							
Sewer Utility Fund		125,000	25,000	25,000	25,000	25,000	25,000
	TOTAL	**125,000**	**25,000**	**25,000**	**25,000**	**25,000**	**25,000**

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Utilities - Sanitary Sewer	Public Works	520-8585-489

UTILITIES - STORM WATER CONTROL

PROJECT/FUNDING SOURCE	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21	Page
PROJECT:							
Flood Mitigation - River Flooding	1,500,000	1,500,000	-	-	-	-	72
Storm Water Improvement Program	1,250,000	250,000	250,000	250,000	250,000	250,000	73
Storm Water Erosion Control Program	2,843,400	750,000	1,000,000	475,000	368,400	250,000	74
Low Point Drainage Improvements	1,000,000	200,000	200,000	200,000	200,000	200,000	75
Storm Water Facility Rehabilitation Program	500,000	100,000	100,000	100,000	100,000	100,000	76
Storm Water Quality Improvements	500,000	100,000	100,000	100,000	100,000	100,000	77
Storm Water System Analysis	720,000	-	180,000	180,000	180,000	180,000	78
TOTAL PROJECT EXPENDITURES	**8,313,400**	**2,900,000**	**1,830,000**	**1,305,000**	**1,198,400**	**1,080,000**	
FUNDING SOURCES:							
Debt:							
G.O. Bonds	750,000	750,000	-	-	-	-	
City:							
Storm Sewer Utility Fund	5,492,000	1,150,000	1,484,000	948,000	830,000	1,080,000	
Other:							
Grant Funds	2,071,400	1,000,000	346,000	357,000	368,400	-	
TOTAL FUNDING SOURCES	**8,313,400**	**2,900,000**	**1,830,000**	**1,305,000**	**1,198,400**	**1,080,000**	

FLOOD MITIGATION – RIVER FLOODING **PROJECT STATUS:** Cost Change

DESCRIPTION/JUSTIFICATION
Following the floods of 2010, the City Council established a goal of mitigating the impact of future flooding in Ames. A comprehensive Flood Mitigation Study was completed in late 2013 that considered many possible mitigation alternatives across a wide range of factors, including: degree of reduction of flood water elevation, estimated annual damage reduction, construction costs, ongoing operations and maintenance costs, environmental impacts, and likelihood of obtaining federal grant funding.

COMMENTS
On December 10, 2013, the City Council approved a series of flood mitigation measures. These included discrete elements targeted at: A.) Undertaking a 'stream restoration' of Squaw Creek; B.) Working with IDOT to improve the conveyance capacity of the US Highway 30 bridge; C.) Working through the Squaw Creek Watershed Management Authority to pursue flood mitigation alternatives in the upper reaches of the watershed; and D.) Conducting a workshop to review and discuss the range of possible floodplain regulatory approaches.

This project involves a 'restoration' of the Squaw Creek channel. A central component of the project is conveyance improvements within the channel approximately 2,000 feet either side of the South Duff Avenue bridge. This is estimated to reduce the water surface elevation of a 1% annual chance flood (i.e. – a "100-year" flood) by approximately 2 feet on South Duff Avenue, a major damage center. As part of this project design, staff will evaluate alternatives for providing natural stabilization and restoration options. A consultant was retained in FY 2015/16 to begin the detailed design work. Outside grant funding through FEMA, REAP, WIRB, and other possible sources will be pursued.

A possible future conveyance improvement activity (not included in the five-year CIP) is the lengthening of the Highway 30 bridge by the Iowa Department of Transportation. That work would involve extending the span of the bridge by approximately 430' to the west, at an estimated cost of $7,740,000 (in 2013 dollars).

Consideration of upstream measures within the greater Squaw Creek watershed should continue in order to further reduce flood impacts to the community.

The cost change for this project is due to updated project estimates.

LOCATION
South Duff Avenue and Squaw Creek

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Engineering		150,000	150,000				
Construction		1,350,000	1,350,000				
	TOTAL	**1,500,000**	**1,500,000**				
FINANCING:							
General Obligation Bonds		500,000	500,000				
Federal/State Grants		1,000,000	1,000,000				
	TOTAL	**1,500,000**	**1,500,000**				

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Utilities – Storm Water	Public Works	377-8612-489 560-8612-489

STORM WATER IMPROVEMENT PROGRAM **PROJECT STATUS:** No Change

DESCRIPTION/JUSTIFICATION

This annual program is to repair or replace deteriorated storm sewer pipes and intakes. Areas of concentration for storm sewer repairs will be those locations programmed for street improvements and those areas where structural deficiencies are identified.

Many intakes are brick or concrete and have experienced repeated "freeze/thaw" conditions during winters and springs. This repeated freeze/thaw action causes bricks and mortar to deteriorate, resulting in collapsed intakes. This program provides for a proactive response by contractually repairing/replacing intakes on a scheduled basis. In addition to the contractual work provided in this program, City crews provide immediate repair of those intakes that pose an immediate concern for life, health, or safety.

COMMENTS

Maintenance crews, through citizen inquiries and/or storm sewer inspections, have identified storm sewer structural deficiencies within the system. These include areas where the pipe has cracked or is missing sections or pieces of pipe. This program will provide funding to correct these deficiencies.

Completion of the Storm Sewer System Analysis may identify the need for additional improvements as part of the program.

LOCATIONS

2016/17: Various locations as determined

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Engineering		175,000	35,000	35,000	35,000	35,000	35,000
Construction		1,075,000	215,000	215,000	215,000	215,000	215,000
	TOTAL	**1,250,000**	**250,000**	**250,000**	**250,000**	**250,000**	**250,000**
FINANCING:							
Storm Sewer Utility Fund		1,250,000	250,000	250,000	250,000	250,000	250,000
	TOTAL	**1,250,000**	**250,000**	**250,000**	**250,000**	**250,000**	**250,000**

PROGRAM - ACTIVITY: Utilities - Storm Water

DEPARTMENT: Public Works

ACCOUNT NO. 560-8642-489

STORM WATER EROSION CONTROL PROGRAM **PROJECT STATUS:** Delayed Cost Change Site Change Revenue Change

DESCRIPTION/JUSTIFICATION

This annual program provides for stabilization of areas that have become eroded in streams, channels, swales, gullies, or drainage ways that are part of the storm water system. This program provides a more permanent control of the erosion and will reduce recurring maintenance costs in these areas.

COMMENTS

An inventory of drainage ways within the City has been established based on National Pollution Discharge Elimination System (NPDES) Phase II requirements. Following the floods of 2010, an Urban Stream Assessment was updated, which rated the stream banks of each tributary of Ada Hayden, College Creek, Clear Creek, Onion Creek, Worle Creek, Squaw Creek, and the South Skunk River. This assessment identified areas where stabilization is a priority. As monitoring activities associated with the NPDES permit requirements continue, further locations for future improvements will be identified.

LOCATION

2016/17: South Skunk River watershed (Carr Park, Homewood Golf Course, and Inis Grove)
2017/18: South Skunk River bank stabilization (Southeast 16th Street to East Lincoln Way)
2018/19: Creek bank stabilization (Kinyon-Clark Subdivision south of Kinyon Circle)
2019/20: Squaw Creek (near Orchard Drive)
2020/21: Clear Creek bank stabilization (north of Oakland Street) (coordinated with Parks & Recreation)

The changes noted above are due to the 2017/18 project (South Skunk River bank stabilization) having been delayed from 2016/17 in the previous CIP due to the increasing priority to stabilize (fix existing failed sheet piling) the eroding river bank of South Skunk River at Carr Park/Homewood Golf Course/Inis Grove in 2016/17. This increasing erosion is negatively impacting the existing shared use path in the area (settlement) and is putting into jeopardy the existing sanitary sewer in the same location.

The 2017/18 South Skunk River bank stabilization project will still be coordinated with construction of a segment of the Skunk River Trail (Shared Use Path System Expansion). The South Skunk River continues to erode toward the existing raw well line on the east side of the river. The new trail is being planned on the west side of the river which is also continuing to meander/erode rapidly during high flow events.

The State Revolving Fund (SRF) Sponsored Project funding for this program is a grant connected with SRF funding for the Sanitary Sewer Rehabilitation Program (page 50).

	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:						
Engineering	524,000	150,000	200,000	67,000	67,000	40,000
Construction	2,319,000	600,000	800,000	408,000	301,400	210,000
TOTAL	**2,843,400**	**750,000**	**1,000,000**	**475,000**	**368,400**	**250,000**
FINANCING:						
G.O. Bonds	250,000	250,000				
Storm Sewer Utility Fund	1,522,000	500,000	654,000	118,000		250,000
State Revolving Fund Grant Program	1,071,400		346,000	357,000	368,400	
TOTAL	**2,843,400**	**750,000**	**1,000,000**	**475,000**	**368,400**	**250,000**

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Utilities - Storm Water	Public Works	377-8633-489 560-8633-489

LOW POINT DRAINAGE IMPROVEMENTS **PROJECT STATUS:** Site Change Cost Change

DESCRIPTION/JUSTIFICATION

This is the annual program for drainage improvements to decrease flooding at low points. Low point drainage improvements are not only focused on residential street locations, but rather on those locations most in need of the improvements as affected by standing water, flooding, and insufficient pipe capacity. The program identifies core locations for improvements each year. In addition, improvements are made at miscellaneous locations identified throughout the year.

During heavy rain, some areas become flooded and damage to private property occasionally occurs. This program provides for installation of drainage improvements to decrease this flooding at low points. In 1994, the following criteria were established for evaluating and prioritizing drainage situations: 1) Potential damage from storm runoff; 2) Emergency vehicle access limitations created by runoff; 3) Number of people affected; 4) Number of structures affected; 5) Street classification; 6) Land use; and 7) Benefits of a project to adjacent areas. Based on these criteria, target areas for improvements are established. These improvements may include construction of detention areas, new pipe systems, and replacement systems to increase the ability to control the runoff so it can be carried by downstream systems.

COMMENTS

Addressing these drainage issues will reduce flooding problems on both public and private property. The amount of time spent setting out barricades in areas that flood during heavy rains will also be reduced.

The site change is due to moving Little Bluestem Court project from this program to the Storm Water Facility Rehabilitation Program to more accurately reflect the work to be done at that location. The other locations already identified for improvements as part of this program, in addition to new complaints received over the past year, have been prioritized as shown below. The cost change (additional $50,000 per year) is due to the need to address an increasing number of drainage complaints in older neighborhoods where standing water/flooding continues to be a concern.

LOCATION

2016/17	15th Street (Wilson Avenue to Clark Avenue) and Wilson Avenue (15th Street south)
2017/18	Northridge Parkway Subdivision 18th Addition (GW Carver/Bloomington Road/Almond Road)
2018/19	Crystal Street (200 block)
2019/20	Airport Road and South Riverside Drive area
2020/21	Freel Drive (E. Lincoln Way south)

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Engineering		200,000	40,000	40,000	40,000	40,000	40,000
Construction		800,000	160,000	160,000	160,000	160,000	160,000
	TOTAL	**1,000,000**	**200,000**	**200,000**	**200,000**	**200,000**	**200,000**
FINANCING:							
Storm Sewer Utility Fund		1,000,000	200,000	200,000	200,000	200,000	200,000
	TOTAL	**1,000,000**	**200,000**	**200,000**	**200,000**	**200,000**	**200,000**

PROGRAM - ACTIVITY:	DEPARTMENT:	ACCOUNT NO.
Utilities - Storm Water	Public Works	560-8655-489

STORM WATER FACILITY REHABILITATION PROGRAM **PROJECT STATUS:** Delayed Site Change

City of Ames, Iowa
Capital Improvements Plan

DESCRIPTION/JUSTIFICATION

In accordance with *Municipal Code*, new developments within the community are required to provide storm water management quantity control. This means maintaining storm water runoff discharge at pre-developed conditions through use of extended detention and/or retention. Through establishment of developers' agreements, the City of Ames has accepted responsibility for the long-term maintenance of many of these facilities. As these facilities age, sediment accumulates, volunteer vegetation becomes more prevalent, erosion occurs, and structures need to be improved. This annual program addresses those concerns.

COMMENTS

As part of the new post-construction storm water management ordinance adopted in April 2014, commercial and industrial land owners are responsible to maintain their own storm water facilities. This ordinance also outlines that the homeowner's association/owner for residential development will maintain all water quality features. However, the City is responsible for long-term maintenance of the regional detention facilities providing water quantity control.

Delay is due to increasing the priority for improvements to the Spring Valley Subdivision 7th Addition facility. Staff has been working with the residents in this area, which is not properly draining. This delay will enable the completion of the survey and hydraulic analysis of Pete Cooper's Subdivision (started in 2015/16) to further clarify what work should then be completed as part of the 2017/18 project.

The site change is due to moving Little Bluestem Court project into this program from the Low Point Drainage Improvements program to more accurately reflect the work to be done at that location.

LOCATION

2016/17	Spring Valley Subdivision 7th Addition (detention area north of 4811 Idaho Circle)
2017/18	Pete Cooper's Subdivision (SE 5th Street/South Dayton Avenue) (construction and design)
2018/19	Little Bluestem Court (Gateway Hills Lots W, X, Y, and Z as owned by the City of Ames)
2019/20	Bloomington Heights West Subdivision (west of Hyde Avenue)
2020/21	Northridge Heights Subdivision (near GW Carver)

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Engineering		100,000	20,000	20,000	20,000	20,000	20,000
Construction		400,000	80,000	80,000	80,000	80,000	80,000
	TOTAL	**500,000**	**100,000**	**100,000**	**100,000**	**100,000**	**100,000**
FINANCING:							
Storm Sewer Utility Fund		500,000	100,000	100,000	100,000	100,000	100,000
	TOTAL	**500,000**	**100,000**	**100,000**	**100,000**	**100,000**	**100,000**

PROGRAM - ACTIVITY:	DEPARTMENT:	ACCOUNT NO.
Utilities – Storm Water	Public Works	560-8623-489

STORM WATER QUALITY IMPROVEMENTS **PROJECT STATUS:** No Change

DESCRIPTION/JUSTIFICATION

Improvement/treatment of water quality for new development and re-development in the Ames community has been incorporated into the newly adopted Post Construction Stormwater Management Ordinance. This addresses removal of sediment and nutrients before they enter waterways such as Squaw Creek and South Skunk River. This program includes treatment of the water quality volume from public impervious areas (e.g. streets and parking lots).

COMMENTS

This new program includes installation of bioretention cells, vegetated swales, native landscape, and rain gardens, soil quality restoration, and other approved best management practices at various locations in the community. These best management practices may be combined with a street improvement project, where the neighborhood/adjacent land owners agree to help with day-to-day maintenance.

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Engineering		75,000	15,000	15,000	15,000	15,000	15,000
Construction		425,000	85,000	85,000	85,000	85,000	85,000
	TOTAL	**500,000**	**100,000**	**100,000**	**100,000**	**100,000**	**100,000**
FINANCING:							
Storm Sewer Utility Fund		500,000	100,000	100,000	100,000	100,000	100,000
	TOTAL	**500,000**	**100,000**	**100,000**	**100,000**	**100,000**	**100,000**

PROGRAM - ACTIVITY: Utilities – Storm Water

DEPARTMENT: Public Works

ACCOUNT NO. 560-8601-489

STORM WATER SYSTEM ANALYSIS **PROJECT STATUS:** Delayed

DESCRIPTION/JUSTIFICATION

In recent years, localized flash flooding has occurred at various locations around the City of Ames during high rainfall events. The City does not currently have as accurate a method of mapping the storm sewer system within the Geographic Information System (GIS) as it does with other utility systems. As the Sanitary Sewer System Evaluation continues to progress and rehabilitation of the sanitary sewer system is completed to remove infiltration/inflow, additional pressure is added to the storm sewer system. Localized flooding could potentially increase. Therefore, this project includes establishment of an accurate GIS storm sewer system and hydraulic modeling of the network.

COMMENTS

This analysis will aid in identifying deficient storm water capacity and future improvements. The length of this program will be updated based on progress being made for the whole system being analyzed.

This project has been delayed for staff to focus on more immediate storm water priorities.

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Engineering		720,000		180,000	180,000	180,000	180,000
	TOTAL	**720,000**		**180,000**	**180,000**	**180,000**	**180,000**
FINANCING:							
Storm Sewer Utility Fund		720,000		180,000	180,000	180,000	180,000
	TOTAL	**720,000**		**180,000**	**180,000**	**180,000**	**180,000**

PROGRAM - ACTIVITY: Utilities – Storm Water

DEPARTMENT: Public Works

ACCOUNT NO.

UTILITIES - RESOURCE RECOVERY

PROJECT/FUNDING SOURCE	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21	Page
PROJECT:							
Material Handling System	225,000	225,000	-	-	-	-	80
Resource Recovery System Improvements	1,676,250	329,600	361,350	349,100	311,100	325,100	81
TOTAL PROJECT EXPENDITURES	**1,901,250**	**554,600**	**361,350**	**349,100**	**311,100**	**325,100**	
FUNDING SOURCES:							
City:							
Resource Recovery Fund	1,901,250	554,600	361,350	349,100	311,100	325,100	
TOTAL FUNDING SOURCES	**1,901,250**	**554,600**	**361,350**	**349,100**	**311,100**	**325,100**	

RESOURCE RECOVERY MATERIAL HANDLING SYSTEM **PROJECT STATUS:** New

DESCRIPTION/JUSTIFICATION

This project will provide a material handling system to separate light fraction material and dust. This will effectively improve air quality in the process area, RDF quality, and bag house performance, increasing landfill diversion and useful life of the filter bags. With increased separation, air flow through the air knife is controlled for maximum recovery and landfill diversion. Every ton diverted from a landfill is a $61.50 savings of hauling and disposal fees. Payback on this project is expected within 34 months.

COMMENTS

The current system configuration is handling both the air knife and the dust control system. The system was originally designed to handle only dust and not a material handling system. Separating these systems improves overall efficiency of each process and the quality of RDF, and increases landfill diversion.

LOCATION

Arnold O. Chantland Resource Recovery Plant, 110 Center Avenue

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Engineering		25,000	25,000				
Purchase/Installation		200,000	200,000				
	TOTAL	**225,000**	**225,000**				
FINANCING:							
Resource Recovery Fund		225,000	225,000				
	TOTAL	**225,000**	**225,000**				

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Utilities – Resource Recovery	Public Works	590-9004-489

RESOURCE RECOVERY SYSTEM IMPROVEMENTS **PROJECT STATUS:** Cost Change

DESCRIPTION/JUSTIFICATION

This program is to purchase new and replacement components and equipment at the Resource Recovery Plant. Also included is funding for materials for two annual preventive maintenance projects (replacement of the rotary disc screen rollers (RDS) and chains, and rebuilding C-1 conveyor). Resource Recovery personnel perform the work to complete the preventive maintenance projects.

COMMENTS

Proposed projects:

2016/17	Preventive Maintenance materials for the replacement of the RDS rollers and chains ($31,250); rebuild C-1 conveyor ($12,550); and #1 mill armored teeth and combs ($39,300); dust collection vessel ($205,000); replace tipping floor scale house ($15,000); replacement conveyor belts ($7,000); glass/recyclables storage area ($15,000); CCTV improvements ($4,500)
2017/18	Preventive Maintenance materials for the replacement of the RDS rollers and chains ($30,000); rebuild C-1 conveyor ($10,550); and #1 mill armored teeth and combs ($39,300); fire system air compressor ($15,000); #1 mill replacement hydraulic pumps ($50,000); #1 mill replacement rotor ($36,000); scale software upgrade ($20,500); 2nd dust collection vessel (final of 4 new) ($135,000); baler room roof ($25,000)
2018/19	Preventive Maintenance materials for the replacement of the RDS rollers and chains ($46,250); rebuild C-1 conveyor ($19,550); and #1 mill armored teeth and combs ($39,300); replace Atlas Copco compressor ($60,000); locker room remodel ($20,000); replace spark detection system ($37,000); process area roof replacement ($60,000); maintenance/inventory control software ($18,000); #2 mill grates ($25,000); replace C-2 belt ($24,000)
2019/20	Preventive Maintenance materials for the replacement of the RDS rollers and chains ($46,250); rebuild C-1 conveyor ($19,550); #1 mill armored teeth and combs ($39,300); #1 mill planetary gear drives ($141,000); replace floor drains in the process area and tipping floor ($50,000); replace in-plant air knives ($8,000), replacement conveyor belts ($7,000)
2020/21	Preventive Maintenance materials for the replacement of the RDS rollers and chains ($46,250); rebuild C-1 conveyor ($19,550); #1 mill armored teeth and combs ($39,300); dust pipe replacement ($200,000); conveyor chutes ($20,000)

LOCATION

Arnold O. Chantland Resource Recovery Plant, 110 Center Avenue

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
System Improvements		1,676,250	329,600	361,350	349,100	311,100	325,100
	TOTAL	**1,676,250**	**329,600**	**361,350**	**349,100**	**311,100**	**325,100**
FINANCING:							
Resource Recovery Fund		1,676,250	329,600	361,350	349,100	311,100	325,100
	TOTAL	**1,676,250**	**329,600**	**361,350**	**349,100**	**311,100**	**325,100**

PROGRAM - ACTIVITY:	DEPARTMENT:	ACCOUNT NO.
Utilities – Resource Recovery	Public Works	590-9003-489

Transportation

TRANSPORTATION

	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21	Page
EXPENDITURES:							
Streets/Engineering	56,611,800	9,202,000	12,701,000	12,320,000	9,428,000	12,960,800	85
Streets/Maintenance	2,820,000	830,000	480,000	550,000	480,000	480,000	98
Transit	10,475,330	2,560,040	1,933,690	3,337,000	1,632,800	1,011,800	105
Airport	676,000	-	166,000	-	410,000	100,000	111
TOTAL EXPENDITURES	**70,583,130**	**12,592,040**	**15,280,690**	**16,207,000**	**11,950,800**	**14,552,600**	
FUNDING SOURCES:							
Debt:							
G.O. Bonds	35,955,000	5,195,000	6,470,000	7,150,000	7,955,000	9,185,000	
City:							
Road Use Tax	6,420,000	1,685,000	1,080,000	1,215,000	1,180,000	1,260,000	
Local Option Sales Tax	2,646,800	720,000	486,000	295,000	433,000	712,800	
Electric Utility Fund	550,000	100,000	100,000	50,000	100,000	200,000	
Water Utility Fund	250,000	50,000	50,000	50,000	50,000	50,000	
Storm Sewer Utility Fund	250,000	50,000	50,000	50,000	50,000	50,000	
Transit Fund	4,344,666	1,179,208	936,338	1,065,000	744,160	419,960	
Airport Construction Fund	80,200	-	16,600	-	53,600	10,000	
Sub-Total City Funding	14,541,666	3,784,208	2,718,938	2,725,000	2,610,760	2,702,760	

TRANSPORTATION, continued

	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
FUNDING SOURCES, continued						
Other:						
MPO/STP Funds	7,285,000	1,532,000	3,220,000	2,300,000	140,000	93,000
Federal/State Grants	9,138,184	2,080,832	2,722,352	2,365,000	40,000	1,930,000
Private Funds	35,000	-	-	35,000	-	-
Federal Transit Administration	3,032,480	-	-	1,632,000	848,640	551,840
Federal Aviation Administration	595,800	-	149,400	-	356,400	90,000
Sub-Total Other Funding	20,086,464	3,612,832	6,091,752	6,332,000	1,385,040	2,664,840
TOTAL FUNDING SOURCES	**70,583,130**	**12,592,040**	**15,280,690**	**16,207,000**	**11,950,800**	**14,552,600**

TRANSPORTATION - STREET ENGINEERING

PROJECT/FUNDING SOURCE	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21	Page
PROJECT:							
Grand Avenue Extension	17,450,000	2,000,000	7,725,000	7,725,000	-	-	87
Asphalt Street Pavement Improvements	5,900,000	1,250,000	850,000	1,400,000	1,000,000	1,400,000	88
Shared Use Path System Expansion	2,654,800	835,000	521,000	170,000	448,000	680,800	89
Concrete Pavement Improvements	7,500,000	1,150,000	-	-	2,600,000	3,750,000	90
Arterial Street Pavement Improvements	4,175,000	345,000	1,480,000	-	1,000,000	1,350,000	91
Downtown Street Pavement Improvements	1,575,000	375,000	300,000	300,000	475,000	125,000	92
Seal Coat Pavement Improvements	4,480,000	500,000	500,000	500,000	1,430,000	1,550,000	93
Right-of-Way Restoration	1,625,000	325,000	325,000	325,000	325,000	325,000	94
CyRide Route Pavement Improvements	3,022,000	2,422,000	-	-	600,000	-	95
Collector Street Pavement Improvements	5,330,000	-	1,000,000	1,800,000	1,250,000	1,280,000	96
Cherry Avenue Extension	2,900,000	-	-	100,000	300,000	2,500,000	97
TOTAL PROJECT EXPENDITURES	**56,611,800**	**9,202,000**	**12,701,000**	**12,320,000**	**9,428,000**	**12,960,800**	

TRANSPORTATION - STREET ENGINEERING, continued

PROJECT/FUNDING SOURCE	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
FUNDING SOURCES:						
Debt:						
G.O. Bonds	35,605,000	4,845,000	6,470,000	7,150,000	7,955,000	9,185,000
City:						
Road Use Tax	4,610,000	1,330,000	725,000	825,000	825,000	905,000
Local Option Sales Tax	2,021,800	595,000	361,000	170,000	308,000	587,800
Electric Utility Fund	550,000	100,000	100,000	50,000	100,000	200,000
Water Utility Fund	250,000	50,000	50,000	50,000	50,000	50,000
Storm Sewer Utility Fund	250,000	50,000	50,000	50,000	50,000	50,000
Sub-Total City Funding	7,681,800	2,125,000	1,286,000	1,145,000	1,333,000	1,792,800
Other:						
MPO/STP Funds	7,285,000	1,532,000	3,220,000	2,300,000	140,000	93,000
Federal/State Grants	6,040,000	700,000	1,725,000	1,725,000	-	1,890,000
Sub-Total Other Funding	13,325,000	2,232,000	4,945,000	4,025,000	140,000	1,983,000
TOTAL FUNDING SOURCES	**56,611,800**	**9,202,000**	**12,701,000**	**12,320,000**	**9,428,000**	**12,960,800**

GRAND AVENUE EXTENSION **PROJECT STATUS:** Advanced Cost Change

DESCRIPTION/JUSTIFICATION

This project is for the extension of Grand Avenue from Lincoln Way to South 16th Street. Included is South 5th Street (Grand Avenue to South Duff Avenue) as well as improvement to the South Duff Avenue (US 69)/South 16th Street intersection. Extending Grand Avenue to South 16th Street will divert traffic from the US Highway 69 corridor (Grand Avenue to Lincoln Way to South Duff Avenue) to the new extension. It will help alleviate the existing congestion and allow for easier access to businesses along US Highway 69. In addition, through traffic on the Grand Avenue extension will also encounter less traffic congestion.

COMMENTS

This roadway will include turn lanes, a bridge over Squaw Creek, a golf cart underpass at Coldwater Golf Course, and a bike path along the west side of the roadway. Street lighting has also been included in the project costs.

LOCATION

2013/14	South Grand Avenue (Squaw Creek Drive to S 16th St) and S 5th St (S Grand Ave to S Duff Ave) (Planning and NEPA Phase I) ($423,000)
2015/16	South Grand Avenue (Squaw Creek Drive to S 16th St) and S 5th St (S Grand Ave to S Duff Ave) (NEPA Phase II) ($280,000)
2016/17	South Grand Avenue (Squaw Creek Drive to S 16th St) and S 5th St (S Grand Ave to S Duff Ave) (NEPA Phase II, planning, engineering, and land acquisition)
2017/18	South Grand Avenue (Squaw Creek Drive to S 16th St) and S 5th St (S Grand Ave to S Duff Ave) (engineering, grading, bridge, and box culverts/golf cart passage)
2018/19	South Grand Avenue (Squaw Creek Drive to S 16th St) and S 5th St (S Grand Ave to S Duff Ave) (engineering and paving); and S Duff Ave (S 16th St intersection improvements)

A Transportation Funding Study in 2012/13 identified federal and state grants that may be available for funding this project.

The status changes (advanced and cost change) are due to Grand Avenue Extension being a transportation priority.

	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:						
Planning	300,000	300,000				
Engineering	2,450,000	1,000,000	725,000	725,000		
Land Acquisition	700,000	700,000				
Construction	14,000,000		7,000,000	7,000,000		
TOTAL	**17,450,000**	**2,000,000**	**7,725,000**	**7,725,000**		
FINANCING:						
G. O. Bonds	9,000,000	1,300,000	4,000,000	3,700,000		
Federal/State Grants	4,150,000	700,000	1,725,000	1,725,000		
MPO/STP Funds	4,300,000		2,000,000	2,300,000		
TOTAL	**17,450,000**	**2,000,000**	**7,725,000**	**7,725,000**		

PROGRAM – ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Transportation – Streets Engineering	Public Works	320-8181-439
		377-8181-439

ASPHALT STREET PAVEMENT IMPROVEMENTS **PROJECT STATUS:** Site Change Cost Change City of Ames, Iowa Capital Improvements Plan Delayed

DESCRIPTION/JUSTIFICATION

This is the annual program for reconstruction and resurfacing (rehabilitation) asphalt streets, typically located within residential neighborhoods. Streets within residential subdivisions have been installed using full-depth asphalt pavement since mid-1970. Full-depth replacement of these streets has become necessary due to structural pavement failure. Rehabilitation of existing asphalt streets is possible where the base asphalt layer is solid, but the surface course has failed. This program was created in accordance with City Council's goal of strengthening our neighborhoods.

COMMENTS

2016/17 Northwood Drive (Duff Avenue west); Thompson Drive (Northwood Drive north to end); Trail Ridge Road/Circle; and Idaho Avenue (Ontario Street north to end)

2017/18 Pierce Avenue; Pierce Circle; and Tyler Avenue

2018/19 Reliable Street (Florida Avenue to North Dakota Avenue); Florida Avenue (Ontario Street to Reliable Street); Delaware Avenue (Ontario Street to Reliable Street); and Hutchison Street (Georgia Avenue to Florida Avenue)

2019/20 14th Street (Burnett Avenue to Duff Avenue); and 15th Street (Clark Avenue to Duff Avenue)

2020/21 McKinley Drive (Hayes to Northwestern Avenue); Jensen Drive (24th Street to Luther Drive); and Luther Drive (Kellogg Avenue to 28th Street)

Reconstructing these streets will reduce maintenance costs.

The cost changes are due to updated project estimates reflecting current bid conditions. Site changes and delay are due to current condition (rate of deterioration) that reflects faster than anticipated pavement failure on Northwood Drive, Thompson Drive, Trail Ridge Road/Circle, and Idaho Avenue. These changes are supported by the pavement management data and the Sanitary Sewer System Evaluation results for future sanitary sewer rehabilitation/replacement.

	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:						
Engineering	860,000	185,000	125,000	200,000	150,000	200,000
Construction	5,040,000	1,065,000	725,000	1,200,000	850,000	1,200,000
TOTAL	**5,900,000**	**1,250,000**	**850,000**	**1,400,000**	**1,000,000**	**1,400,000**
FINANCING:						
G.O. Bonds	5,900,000	1,250,000	850,000	1,400,000	1,000,000	1,400,000
TOTAL	**5,900,000**	**1,250,000**	**850,000**	**1,400,000**	**1,000,000**	**1,400,000**

PROGRAM - ACTIVITY: Transportation – Streets Engineering

DEPARTMENT: Public Works

ACCOUNT NO. 377-8110-439

SHARED USE PATH SYSTEM EXPANSION **PROJECT STATUS:** Cost Change Revenue Change Delayed Site Change

DESCRIPTION/JUSTIFICATION

This program provides for construction of shared use paths on street rights-of-way, adjacent to streets, and through greenbelts. The Long Range Transportation Plan (LRTP) identifies those paths that separate bicycle traffic from higher-speed automobile traffic.

COMMENTS

The projects included in this program are subject to acquiring voluntary easements from property owners.

Shared use path maintenance costs will increase due to new shared use path construction.

2016/17	Skunk River Trail (Southeast 16th Street to East Lincoln Way) (bridge construction and bank stabilization at Squaw Creek)
2017/18	Skunk River Trail (Southeast 16th Street to East Lincoln Way) (trail paving)
2018/19	Skunk River Trail (River Valley Park north) (planning, land acquisition, and engineering) and Trail Connection south of Lincoln Way (Beedle Drive to Intermodal Facility) (OFF 5 from Long Range Transportation Plan) (planning, land acquisition, and engineering)
2019/20	Skunk River Trail (River Valley Park north) (construction)
2020/21	Squaw Creek (South Skunk River to South Duff Avenue)

The Skunk River Trail (Southeast 16th Street to East Lincoln Way) trail paving project will be coordinated with the Storm Water Erosion Control Program in year 2017/18.

The delay is due to splitting the Skunk River Trail (River Valley Park north) into two fiscal years to enable an alignment to be planned and designed in one year with construction to follow the next year. This resulted in the Squaw Creek shared use path (South Skunk River to South Duff Avenue) being delayed until 2020/21. The site change includes the addition of planning/land acquisition/engineering in 2018/19 for a Trail Connection south of Lincoln Way (Beedle Drive to Intermodal Facility) (OFF 5 from LRTP). Construction of this section is not included in the CIP at this time.

Construction of these 2018/19 segments are contingent upon acquisition of land.

	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:						
Engineering	413,000	95,000	75,000	85,000	40,000	118.000
Land Acquisition	220,800	47,000		85,000		88,800
Construction	2,021,000	693,000	446,000		408,000	474,000
TOTAL	**2,654,800**	**835,000**	**521,000**	**170,000**	**448,000**	**680,800**
FINANCING:						
Local Option Sales Tax	2,021,800	595,000	361,000	170,000	308,000	587,800
MPO/STP Funds	633,000	240,000	160,000		140,000	93,000
TOTAL	**2,654,800**	**835,000**	**521,000**	**170,000**	**448,000**	**680,800**

PROGRAM – ACTIVITY: Transportation – Streets Engineering

DEPARTMENT: Public Works

ACCOUNT NO. 030-8177-439
320-8177-439

CONCRETE PAVEMENT IMPROVEMENTS **PROJECT STATUS:** Cost Change Delayed

DESCRIPTION/JUSTIFICATION

This annual program is to rehabilitate or reconstruct concrete street sections that have deteriorated, including joint sealing, in order to prevent premature breakdown of the pavement. This work will provide enhanced rideability to residents and visitors.

COMMENTS

2016/17: Dawes Drive

2017/18: No project

2018/19: No project

2019/20: Des Moines Avenue (Lincoln Way to East 3rd Street); Center Avenue (Lincoln Way to East 2nd Street); East 3rd Street (Duff Avenue to East Avenue); East 2nd Street (Duff Avenue to Center Avenue); 5th Street (Northwestern Avenue to Allan Drive); Douglas Avenue (7th Street to 10th Street); Gaskill Drive (250 feet south of Friley Road to Country Club Boulevard); and Crawford Avenue (end to East 9th Street)

2020/21: S 17th Street (S Kellogg Avenue to end); S Kellogg Avenue (S 17th Street to S 16th Street); 8th Street (Northwestern Avenue to Duff Avenue); Ford Street (South Dayton Avenue to Bell Avenue); and Bell Avenue (East Lincoln Way to Ford Street)

Repair of these streets will reduce maintenance and repairs needed for them.

The cost change is due to updated cost estimates for the projects. The delay is due to 8th Street, Ford Street, Bell Avenue, Douglas Avenue, Gaskill Drive, and Crawford Avenue being moved to level GO Bond expenditures.

	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:						
Engineering	1,095,000	150,000			300,000	545,000
Construction	6,405,000	950,000			2,250,000	3,205,000
Electric Relocation	100,000	50,000			50,000	
TOTAL	**7,500,000**	**1,150,000**			**2,600,000**	**3,750,000**
FINANCING:						
G.O. Bonds	7,150,000	1,050,000			2,450,000	3,650,000
Road Use Tax	250,000	50,000			100,000	100,000
Electric Utility Fund	100,000	50,000			50,000	
TOTAL	**7,500,000**	**1,150,000**			**2,600,000**	**3,750,000**

PROGRAM – ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Transportation - Streets Engineering	Public Works	377-8164-439
		060-8164-439
		530-8164-439

ARTERIAL STREET PAVEMENT IMPROVEMENTS **PROJECT STATUS:** Site Change Delayed Cost Change

DESCRIPTION/JUSTIFICATION

This annual program utilizes current repair and reconstruction techniques to improve arterial streets with asphalt or concrete. These pavement improvements are needed to restore structural integrity, serviceability, and rideability. Targeted streets are reaching a point of accelerated deterioration. By improving these streets prior to excessive problems, the service life will be extended.

COMMENTS

2016/17	West Lincoln Way (County Line Road to west corporate limits)
2017/18	13th Street (UPRR to Harding Avenue)
2018/19	No project
2019/20	North Dakota Avenue (UPRR to Ontario Street)
2020/21	East Lincoln Way (South Duff Avenue to Skunk River)

Improving these streets will reduce maintenance costs. This reduction will allow for additional and earlier maintenance of other streets.

The site change and delay are due to the addition of the 13th Street project (UPRR to Harding Avenue) in 2017/18, delaying E. Lincoln Way to 2020/21, and delaying North Dakota Avenue to 2019/20. Re-prioritization considered pavement management data and future sanitary sewer rehabilitation identified in the Sanitary Sewer System Evaluation. Cost changes are due to updated project estimates.

	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:						
Engineering	585,000	45,000	210,000		150,000	180,000
Construction	3,490,000	300,000	1,270,000		850,000	1,070,000
Street Lighting	100,000					100,000
TOTAL	**4,175,000**	**345,000**	**1,480,000**		**1,000,000**	**1,350,000**
FINANCING:						
G. O. Bonds	3,015,000	345,000	420,000		1,000,000	1,250,000
Electric Utility Fund	100,000					100,000
MPO/STP Funds	1,060,000		1,060,000			
TOTAL	**4,175,000**	**345,000**	**1,480,000**		**1,000,000**	**1,350,000**

PROGRAM – ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Transportation - Streets Engineering	Public Works	377-8148-439

DOWNTOWN STREET PAVEMENT IMPROVEMENTS **PROJECT STATUS:** Cost Change

City of Ames, Iowa
Capital Improvements Plan

DESCRIPTION/JUSTIFICATION
This annual program is for the rehabilitation/reconstruction of streets and alleys within the downtown area (Lincoln Way to 7th Street and Grand Avenue to Duff Avenue). These projects involve pavement reconstruction, rehabilitation of storm and sanitary sewers, and streetscapes. This program will meet the recommendations of the Downtown Improvements Study for the side streets in the downtown area.

COMMENTS
Improvements to the streets in the downtown area will enhance the Main Street Cultural District.

The cost change is due to updated cost estimates for the 2018/19 and 2019/20 projects.

LOCATION

2016/17	Sherman Avenue
2017/18	Main Street Alley (Duff Avenue to Douglas Avenue); and Main Street Alley (Kellogg Avenue to Burnett Avenue)
2018/19	Market Avenue
2019/20	Lincoln Way Alley (Duff Avenue to Kellogg Avenue)
2020/21	Kellogg Avenue Alley (Gilchrist to Lincoln Way)

	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:						
Engineering	210,000	50,000	35,000	45,000	65,000	15,000
Construction	1,315,000	325,000	215,000	255,000	410,000	110,000
Electric	50,000		50,000			
TOTAL	**1,575,000**	**375,000**	**300,000**	**300,000**	**475,000**	**125,000**
FINANCING:						
G. O. Bonds	1,525,000	375,000	250,000	300,000	475,000	125,000
Electric Utility Funds	50,000		50,000			
TOTAL	**1,575,000**	**375,000**	**300,000**	**300,000**	**475,000**	**125,000**

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Transportation – Streets Engineering	Public Works	377-8150-439

SEAL COAT STREET PAVEMENT IMPROVEMENTS **PROJECT STATUS:** No Change

DESCRIPTION/JUSTIFICATION

This is the annual program for removal of built-up seal coat from streets with asphalt surface. This program restores surface texture, corrects structural deficiencies, removes built-up seal coat, and prevents deterioration of various streets. This resurfacing process results in better riding surfaces, increased safety with improved surface texture, and increased life expectancy of streets. Built-up seal coat on streets causes excess crown which results in vehicles dragging at driveway entrances. Complete removal of this built-up seal coat allows for repair to curb and gutter and placement of 4" of asphalt surface.

COMMENTS

The areas to be resurfaced are chosen each spring based on the current street condition inventory and funding availability. Funding for this program varies from year to year in order to maintain a consistent overall bond issue each year over five years. Cost estimates include funding for concrete curb and gutter repairs that need to be made prior to street asphalt being placed and also include pedestrian improvements to meet the most recent state and federal accessibility requirements.

Street maintenance operation costs for patching will be reduced for the streets involved in this program.

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Engineering		658,000	75,000	75,000	75,000	200,000	233,000
Construction		3,822,000	425,000	425,000	425,000	1,230,000	1,317,000
	TOTAL	**4,480,000**	**500,000**	**500,000**	**500,000**	**1,430,000**	**1,550,000**
FINANCING:							
G.O. Bonds		1,980,000				930,000	1,050,000
Road Use Tax		2,500,000	500,000	500,000	500,000	500,000	500,000
	TOTAL	**4,480,000**	**500,000**	**500,000**	**500,000**	**1,430,000**	**1,550,000**

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Transportation – Streets Engineering	Public Works	060-8101-439

RIGHT-OF-WAY RESTORATION **PROJECT STATUS:** Cost Change

DESCRIPTION/JUSTIFICATION
In recent years, staff has continued to observe and analyze restoration of the Right-of-Way areas associated with CIP projects. Some areas have been restored with sod, while other areas have been restored using seed or dormant seed. Restoration success is inconsistent and appears to depend on the weather at the time of installation. In areas where vegetation is not anticipated to be successful, other forms of restoration have been used (such as pervious pavement or standard concrete). This program will enable better restoration through a separate contract with a contractor specializing in vegetation establishment (instead of having this as a subcontract in each CIP contract as has been past practice).

COMMENTS
Conditions for each restoration area will be considered independently to select the appropriate and sustainable alternative. Restoration examples include sod, native turf, and pervious and standard colored/stained concrete. Learning from the first implemented contract under this new approach, the cost and respective Road Use Tax funding has been increased for additional bid items such as surface preparation, stabilization, and weed control.

LOCATION
Various locations (coordinated with Public Works streets and utility projects)

The cost change is financed by increasing the Road Use Tax funding by $50,000 per year.

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Engineering		200,000	40,000	40,000	40,000	40,000	40,000
Construction		1,425,000	285,000	285,000	285,000	285,000	285,000
	TOTAL	**1,625,000**	**325,000**	**325,000**	**325,000**	**325,000**	**325,000**
FINANCING:							
Road Use Tax		1,125,000	225,000	225,000	225,000	225,000	225,000
Water Utility Fund		250,000	50,000	50,000	50,000	50,000	50,000
Storm Sewer Utility Fund		250,000	50,000	50,000	50,000	50,000	50,000
	TOTAL	**1,625,000**	**325,000**	**325,000**	**325,000**	**325,000**	**325,000**

PROGRAM - ACTIVITY:
Transportation – Streets Engineering

DEPARTMENT:
Public Works

ACCOUNT NO.
060-8194-439
510-8194-439
560-8194-439

CYRIDE ROUTE PAVEMENT IMPROVEMENTS **PROJECT STATUS:** Cost Change Revenue Change

DESCRIPTION/JUSTIFICATION

This is the annual program for pavement improvements to streets that are or were bus routes.

These streets were designed and built for light residential traffic. With these streets now designated as bus routes, accelerated deterioration of the street surface has occurred. Pavement improvements will restore street sections that will carry higher traffic volumes.

COMMENTS

2016/17 South 3rd Street (Grand Avenue to South Duff Avenue) and South 4th Street (Squaw Creek to Grand Avenue) – Cost change and Revenue Change due to including ON 11 for addition of on-street bike improvements on S. 3rd Street (Grand Avenue to S. Duff Avenue) ($555,000 Road Use Tax)

2019/20 9th Street (Grand Avenue to Clark Avenue)

Improving these streets will reduce maintenance needs for them. This reduction will allow for additional and earlier maintenance of other streets, which will prolong their useful life.

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Engineering		505,000	420,000			85,000	
Construction		2,467,000	1,952,000			515,000	
Electric		50,000	50,000				
	TOTAL	**3,022,000**	**2,422,000**			**600,000**	
FINANCING:							
G. O. Bonds		1,125,000	525,000			600,000	
Electric Utility Fund		50,000	50,000				
MPO/STP Funds		1,292,000	1,292,000				
Road Use Tax		555,000	555,000				
	TOTAL	**3,022,000**	**2,422,000**			**600,000**	

PROGRAM - ACTIVITY:
Transportation - Streets Engineering

DEPARTMENT:
Public Works

ACCOUNT NO.
377-8120-439
060-8120-439
530-8120-439
320-8120-439

COLLECTOR STREET PAVEMENT IMPROVEMENTS **PROJECT STATUS:** Cost Change Delayed

DESCRIPTION/JUSTIFICATION

This is the annual program for reconstruction or rehabilitation of collector streets. Locations are chosen in accordance with the most current street condition inventory.

COMMENTS

2016/17	No project
2017/18	Meadowlane Avenue (Carr Drive to East 20th Street)
2018/19	Hickory Drive (Westbrook Drive to Woodland Street)
2019/20	East 20th Street (Duff Avenue to Meadowlane Avenue)
2020/21	Hoover Avenue (24th Street to 30th Street)

Collector street pavement improvements should result in lower street maintenance costs.

The cost change is due to updated project estimates and re-prioritization due to current pavement conditions.

The Meadowlane Avenue (Carr Drive to East 20th Street) project has been re-prioritized due to quicker than anticipated pavement deterioration. Sanitary sewer improvements will be made while the pavement is removed.

Hoover Avenue (24th Street to 30th Street) has been delayed due to rapid pavement failure on Meadowlane Avenue. Hoover Avenue will be coordinated with Long Range Transportation Plan project ON 4 (on-street bike treatment with estimated cost of $80,000).

Hickory Drive area has an increasing number of water main breaks. Water main replacement in this project limit will be coordinated with pavement improvements.

	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:						
Engineering	730,000		140,000	250,000	150,000	190,000
Construction	4,450,000		810,000	1,500,000	1,050,000	1,090,000
Street Lighting	150,000		50,000	50,000	50,000	
TOTAL	**5,330,000**		**1,000,000**	**1,800,000**	**1,250,000**	**1,280,000**
FINANCING:						
G. O. Bonds	5,100,000		950,000	1,750,000	1,200,000	1,200,000
Electric Utility Fund	150,000		50,000	50,000	50,000	
Road Use Tax	80,000					80,000
TOTAL	**5,330,000**		**1,000,000**	**1,800,000**	**1,250,000**	**1,280,000**

PROGRAM – ACTIVITY: Transportation – Streets Engineering

DEPARTMENT: Public Works

ACCOUNT NO.

CHERRY AVENUE EXTENSION **PROJECT STATUS:** Delayed Revenue Change

DESCRIPTION/JUSTIFICATION

The Long Range Transportation Plan identifies the extension of Cherry Avenue south of East Lincoln Way as an important transportation connection for the community. By extending Cherry Avenue south and connecting both Southeast 3rd Street and Southeast 5th Street, traffic congestion is further relieved from the South Duff Avenue corridor. This project may open opportunities for multi-modal transportation connections to the South Duff Avenue commercial district. Planning in 2015/16 will include roadway alignment and traffic signal analysis.

COMMENTS

A Transportation Funding Study in 2012/13 identified federal and state grants that may be available for funding this project.

The addition of this street extension will result in increased snow removal and ice control costs.

2018/19 Cherry Avenue (Southeast 5th Street to East Lincoln Way) and Southeast 3rd Street and Southeast 5th Street (Cherry Avenue west to end) (planning and environmental analysis)

2019/20 Cherry Avenue (Southeast 5th Street to East Lincoln Way) and Southeast 3rd Street and Southeast 5th Street (Cherry Avenue west to end) (land acquisition and engineering)

2020/21 Cherry Avenue (Southeast 5th Street to East Lincoln Way) and Southeast 3rd Street and Southeast 5th Street (Cherry Avenue west to end) (engineering and construction)

Overall, this project has been delayed to level G.O. Bond expenditures. The Revenue Change is due to funding land acquisition and engineering in 2019/20 with G.O. Bonds rather than federal and state grants.

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Planning		100,000			100,000		
Land Acquisition		150,000				150,000	
Engineering		350,000				150,000	200,000
Construction		2,200,000					2,200,000
Electric		100,000					100,000
	TOTAL	**2,900,000**			**100,000**	**300,000**	**2,500,000**
FINANCING:							
G.O. Bonds		810,000				300,000	510,000
Road Use Tax		100,000			100,000		
Electric Utility Fund		100,000					100,000
Federal/State Grants		1,890,000					1,890,000
	TOTAL	**2,900,000**			**100,000**	**300,000**	**2,500,000**

PROGRAM - ACTIVITY: Transportation - Streets Engineering

DEPARTMENT: Public Works

ACCOUNT NO.

TRANSPORTATION - STREET MAINTENANCE

	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21	Page
PROJECT:							
Bridge Rehabilitation Program	350,000	350,000	-	-	-	-	100
Neighborhood Curb Replacement Program	375,000	75,000	75,000	75,000	75,000	75,000	101
Pavement Restoration	1,250,000	250,000	250,000	250,000	250,000	250,000	102
Right-of-Way Appearance Enhancements	220,000	30,000	30,000	100,000	30,000	30,000	103
Shared Use Path Maintenance	625,000	125,000	125,000	125,000	125,000	125,000	104
TOTAL PROJECT EXPENDITURES	**2,820,000**	**830,000**	**480,000**	**550,000**	**480,000**	**480,000**	
FUNDING SOURCES:							
Debt:							
G.O. Bonds	350,000	350,000	-	-	-	-	

TRANSPORTATION - STREET MAINTENANCE, continued

PROJECT/FUNDING SOURCE	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
FUNDING SOURCES, continued:						
City:						
Road Use Tax	1,810,000	355,000	355,000	390,000	355,000	355,000
Local Option Sales Tax	625,000	125,000	125,000	125,000	125,000	125,000
Sub-Total City Funding	2,435,000	480,000	480,000	515,000	480,000	480,000
Other:						
Private Funds	35,000	-	-	35,000	-	-
TOTAL FUNDING SOURCES	**2,820,000**	**830,000**	**480,000**	**550,000**	**480,000**	**480,000**

BRIDGE REHABILITATION PROGRAM **PROJECT STATUS:** Site Change

City of Ames, Iowa
Capital Improvements Plan

DESCRIPTION/JUSTIFICATION
This program provides funding for necessary repairs recommended by the biennial Iowa Department of Transportation (IDOT) bridge inspections. The IDOT requires these inspections for bridges within the City of Ames.

COMMENTS
The 2014 Bridge Inspection and Maintenance Reports conducted on the Dayton Avenue Bridge over the Union Pacific Railroad indicated the need to evaluate and repair the concrete end rails and approach pavement. The bridge approach pavement has continued to deteriorate and is in need of replacement to restore the rideability to the pavement and to protect the rest of the bridge structure from further damage.

LOCATION
2016/17 Dayton Avenue Bridge over the UPRR Approach Pavement and End Rails (construction/engineering) ($350,000)

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Engineering		45,000	45,000				
Construction		305,000	305,000				
	TOTAL	**350,000**	**350,000**				
FINANCING:							
G.O. Bonds		350,000	350,000				
	TOTAL	**350,000**	**350,000**				

PROGRAM - ACTIVITY: Transportation – Streets Maintenance
DEPARTMENT: Public Works
ACCOUNT NO. 377-7754-439

NEIGHBORHOOD CURB REPLACEMENT PROGRAM **PROJECT STATUS:** No Change

DESCRIPTION/JUSTIFICATION
This is the annual program for replacement of deteriorated curb and gutter in selected neighborhood areas. Curb and gutter replacement enhances neighborhood and right-of-way aesthetics.

Areas to receive curb and gutter replacement are selected by staff using input of neighborhoods, the condition of the curb, and the extent of needed repairs.

COMMENTS
Neighborhood Curb Replacement Program decision criteria approved by City Council include the extent of curb deterioration, the number of residential structures in the block, and the longitudinal grade. Locations are coordinated with other pavement improvement locations in the CIP.

LOCATION

2016/17	South 2nd Street (South Maple Avenue to South Oak Avenue)
2017/18	South 2nd Street (South Maple Avenue to South Hazel Avenue)
2018/19	South 3rd Street (South Russell Avenue to South Hazel Avenue)
2019/20	South 3rd Street (South Hazel Avenue to South Maple Avenue)
2020/21	To be determined

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Engineering		62,500	12,500	12,500	12,500	12,500	12,500
Construction		312,500	62,500	62,500	62,500	62,500	62,500
	TOTAL	**375,000**	**75,000**	**75,000**	**75,000**	**75,000**	**75,000**
FINANCING:							
Road Use Tax		375,000	75,000	75,000	75,000	75,000	75,000
	TOTAL	**375,000**	**75,000**	**75,000**	**75,000**	**75,000**	**75,000**

PROGRAM – ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Transportation – Streets Maintenance	Public Works	060-7770-439

PAVEMENT RESTORATION **PROJECT STATUS:** Cost Change

City of Ames, Iowa
Capital Improvements Plan

DESCRIPTION/JUSTIFICATION

This annual program is for preventive and proactive maintenance of the streets. This allows for a large variety of possible maintenance activities including, but not limited to, slurry seal, full-depth concrete paving, milling and patching of asphalt, joint sealing, diamond grinding, partial depth patching, and new maintenance techniques to preserve and enhance City streets. Locations will be coordinated with street construction to gain the best possible life cycle of streets.

COMMENTS

This program is being increased from $75,000 to $250,000 annually help extend the longevity of the pavement system and supplement the current pavement restoration activities, utilizing the increase in Road Use Tax funding.

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Construction		1,250,000	250,000	250,000	250,000	250,000	250,000
	TOTAL	**1,250,000**	**250,000**	**250,000**	**250,000**	**250,000**	**250,000**
FINANCING:							
Road Use Tax		1,250,000	250,000	250,000	250,000	250,000	250,000
	TOTAL	**1,250,000**	**250,000**	**250,000**	**250,000**	**250,000**	**250,000**

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Transportation – Streets Maintenance	Public Works	060-7723-439

RIGHT-OF-WAY APPEARANCE ENHANCEMENTS **PROJECT STATUS:** Delayed

DESCRIPTION/JUSTIFICATION
This project provides for the enhancement of the rights-of-way in the City of Ames. The funding could be used for a number of elements including retaining walls, entryway enhancements, median enhancements, and right-of-way restoration.

COMMENTS
In addition to retaining wall repairs, the right-of-way restoration portion will be used to replant or revitalize parking areas and medians. This program could also be used to complete entryway improvements in the City.

The Lincoln Way Medians project shown below is for design activities only. Formalizing agreements with partners such as Iowa State University and the Ames Foundation is vital for the success of this project. Once these agreements are reached, the project design may begin as programmed and the construction will be budgeted in a future Capital Improvement Plan year.

LOCATION

2016/17 Various locations
2017/18 Various locations
2018/19 Various locations; Lincoln Way Medians (Beach Avenue to Sheldon Avenue - Engineering) ($70,000)
2019/20 Various locations
2020/21 Various locations

The delay is due to waiting for the Lincoln Way Corridor Plan to be completed and to coordinate with the Campustown Public Improvements project along Welch Avenue. This delay will allow for more coordination between projects.

	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:						
Engineering	70,000			70,000		
Right-of-Way Restoration	150,000	30,000	30,000	30,000	30,000	30,000
TOTAL	**220,000**	**30,000**	**30,000**	**100,000**	**30,000**	**30,000**
FINANCING:						
Road Use Tax	185,000	30,000	30,000	65,000	30,000	30,000
Private Funds	35,000			35,000		
TOTAL	**220,000**	**30,000**	**30,000**	**100,000**	**30,000**	**30,000**

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Transportation – Streets Maintenance	Public Works	060-7731-439

SHARED USE PATH MAINTENANCE **PROJECT STATUS:** Cost Change

DESCRIPTION/JUSTIFICATION
The shared use path recreational and transportation system has continued to expand throughout the community. The shared use paths have typically been constructed with five inches of asphalt or concrete pavement. Structural failure, drainage problems, and vegetation infringement are several causes for the need to improve the pavement. This annual program provides for those improvements.

COMMENTS
A completed pavement management system for shared use paths provided information to identify segments of the shared use path system that are in need of repair. This inventory aids in prioritizing those segments throughout the community.

Spot repairs that are identified will be prioritized by severity of the repair that is needed and then addressed in the operations budget.

Improvement to the shared use path pavement will enhance the safety and usability of the transportation/recreational system and improve the aesthetics of the right-of-way.

LOCATIONS
Various locations throughout Ames

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Engineering		90,000	18,000	18,000	18,000	18,000	18,000
Construction		535,000	107,000	107,000	107,000	107,000	107,000
	TOTAL	**625,000**	**125,000**	**125,000**	**125,000**	**125,000**	**125,000**
FINANCING:							
Local Option Sales Tax		625,000	125,000	125,000	125,000	125,000	125,000
	TOTAL	**625,000**	**125,000**	**125,000**	**125,000**	**125,000**	**125,000**

PROGRAM - ACTIVITY:	DEPARTMENT:	ACCOUNT NO.
Transportation – Streets Maintenance	Public Works	030-7711-439

TRANSPORTATION - TRANSIT

PROJECT/FUNDING SOURCE	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21	Page
PROJECT:							
Vehicle Replacement	6,458,330	1,531,040	601,690	2,245,000	1,225,800	854,800	106
Building Expansion and Modernization	2,365,000	525,000	755,000	835,000	250,000	-	107
CyRide Shop/Office Equipment	512,000	144,000	182,000	62,000	62,000	62,000	108
Bus Stop Improvements	250,000	50,000	50,000	50,000	50,000	50,000	109
Technology Improvements	890,000	310,000	345,000	145,000	45,000	45,000	110
TOTAL PROJECT EXPENDITURES	**10,475,330**	**2,560,040**	**1,933,690**	**3,337,000**	**1,632,800**	**1,011,800**	
FUNDING SOURCES:							
City:							
Transit Fund	4,344,666	1,179,208	936,338	1,065,000	744,160	419,960	
Other:							
Federal Transit Administration	3,032,480	-	-	1,632,000	848,640	551,840	
Federal/State Grants	3,098,184	1,380,832	997,352	640,000	40,000	40,000	
Sub-Total Other Funding	6,130,664	1,380,832	997,352	2,272,000	888,640	591,840	
TOTAL FUNDING SOURCES	**10,475,330**	**2,560,040**	**1,933,690**	**3,337,000**	**1,632,800**	**1,011,800**	

CYRIDE VEHICLE REPLACEMENT **PROJECT STATUS:** Scope Change

DESCRIPTION/JUSTIFICATION

CyRide will replace/expand its bus fleet by five buses each year to meet ridership demand and replace vehicles that can no longer be operated in daily service. Additionally, CyRide received two federal grants for a total of three 40-foot buses, which should be delivered in FY 2016/2017. Also CyRide has a pending grant application for one additional 40' bus, which could be delivery in 2017-2018, if approved. CyRide has four vehicles used for administrative support and in the operations division for drivers to switch shifts. These vehicles are on a four- to six-year replacement schedule, ultimately replaced when they no longer are mechanically sound. The two maintenance trucks are on a ten-year replacement cycle. Dial-A-Ride vehicles are replaced every 4-6 years.

In total, these purchases are programmed as follows:

2016/17: Purchase five used 40' buses ($125,000); purchase three new 40' buses ($1,301,040); replace maintenance truck 999 ($75,000); replace administrative vehicle 294 – Escape ($30,000)

2017/18: Purchase five used 40' buses ($125,000); purchase one new 40' bus ($446,690); replace administrative vehicle - Terrain ($30,000)

2018/19: Purchase five used 40' buses ($125,000); purchase four new 40' buses ($2,040,000), replace administrative vehicle ($30,000); replace maintenance truck 007 ($50,000)

2019/20: Purchase five used 40' buses ($135,000); purchase two new 40' buses ($1,060,800); replace administrative vehicle ($30,000)

2020/21: Purchase five used 40' buses ($135,000); purchase one new 40' bus ($530,400); replace the Dial-A-Ride bus and van ($100,857 and $58,543, respectively); replace administrative vehicle Prius/Fusion - ($30,000)

COMMENTS

All vehicles, except the new buses, will be 100% locally funded. The new buses will be funded with 80-85% federal funding, including the State of Iowa's Iowa Clean Air Attainment Program (ICAAP) funds that are a distribution of federal dollars.

LOCATION

CyRide, 1700 University Boulevard

	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:						
Large Buses - 40' New	5,378,930	1,301,040	446,690	2,040,000	1,060,800	530,400
Used Buses	645,000	125,000	125,000	125,000	135,000	135,000
Administrative Vehicles	150,000	30,000	30,000	30,000	30,000	30,000
Shop Vehicles	125,000	75,000		50,000		
Dial-A-Ride Bus/Van	159,400					159,400
TOTAL	**6,458,330**	**1,531,040**	**601,690**	**2,245,000**	**1,225,800**	**854,800**
FINANCING:						
Transit Fund	2,027,666	490,208	244,338	613,000	377,160	302,960
				1,632,000	848,640	551,840
ICAAP Funds	4,430,664	1,040,832	357,352			
TOTAL	**6,458,330**	**1,531,040**	**601,690**	**2,245,000**	**1,225,800**	**854,800**

PROGRAM - ACTIVITY: Transportation – Transit

DEPARTMENT: CyRide

ACCOUNT NO. 552-1159-439
552-1171-439

CYRIDE BUILDING EXPANSION & MODERNIZATION **PROJECT STATUS:** Scope Change

DESCRIPTION/JUSTIFICATION

CyRide's original bus storage building is 32 years old and major components of the building are at the end of their useful lives. Additionally, the facility is housing more vehicles than it was originally designed for, creating higher wear and tear on the facility. As a result, this plan has been developed to keep the facility in a state of good repair, as is required by the Federal Transit Administration:

2016/17: Replace CyRide's original bus storage roof ($375,000); replace portable electric bus hoists ($45,000); replace deteriorated concrete in parking area ($75,000); A & E contract services ($30,000)
2017/18: Replace permanent bus hoists ($430,000); rehabilitate bus wash ($325,000)
2018/19: Replace CyRide's HVAC system in the original portion of the building ($810,000); replace EIFS coating ($25,000)
2019/20: Replace fueling system with a high-speed fueling system ($250,000)
2020/21: No projects re programmed at this time

COMMENTS

The HVAC units and permanent bus hoists are original to the building; the portable hoists are 37 years old and past their useful life. The warranty on CyRide's current bus storage roofs expired in 1994 on the oldest section and in 2010 on the newest section. CyRide's current bus washer will be 13 years old at the time of replacement, which is past the expected 10-year life for this type of equipment. A portion of the concrete parking lot is crumbling under the weight of the buses. The A & E services would provide technical expertise during the various construction projects as well as assisting with the preparation of bid documents. The EIFS coating is up to twenty years old and is in deteriorating condition. The new high speed fueling system would allow current employees to fuel each bus in the same amount of time as CyRide's continues to expand its fleet, alleviating the current need for a second fueling bay or additional staff.

This plan does not include bus storage expansion and assumes that 16-20 buses will be housed outdoors. However, the 2014/15 Capital Improvement Plan included a $200,000 commitment to a state grant that was not approved. This funding will be retained in a reserve account for local share to match a grant until funding is secured for a building expansion project.

LOCATION

CyRide, 1700 University Boulevard

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Architectural/Engineering		30,000	30,000				
Equipment		1,985,000	45,000	755,000	835,000	250,000	
Construction		450,000	450,000				
	TOTAL	**2,465,000**	**525,000**	**755,000**	**835,000**	**250,000**	
FINANCING:							
Transit Fund		965,000	225,000	155,000	235,000	250,000	
State of Iowa - PTIG		1,500,000	300,000	600,000	600,000		
	TOTAL	**2,465,000**	**525,000**	**755,000**	**835,000**	**250,000**	

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Transportation – Transit	CyRide	552-1159-439 552-1175-439

CYRIDE SHOP AND OFFICE EQUIPMENT **PROJECT STATUS:** Scope Change

DESCRIPTION/JUSTIFICATION

This project is to address replacement of shop and office equipment used for CyRide operations. While a majority of the FY 2016/17 – FY 2020/21 shop purchases in this category are smaller items where replacement need is less predictable, they have been generally described in this CIP. Specific shop needs will be identified annually to efficiently operate CyRide and address OSHA, Department of Natural Resources, and other federal requirements as they are implemented at a total cost of approximately $50,000 per year. Additionally, four to seven computers and equipment will be funded each year at an estimated cost of $12,000-$14,000 per year.

FY2016/17 – FY2020/21 larger equipment purchases include:

- FY2016/17 and FY2017/18 – Flood Pumps (one pump at $80,000 each year)
- FY2017/18 – Replace CyRide's current forklift ($40,000)

COMMENTS

The FY 2016/17 smaller shop and office equipment expenditures include the replacement of three computers and the following shop equipment:

- Six Trash Pumps ($12,000)
- Air Jack ($1,600)
- Tire Machine ($20,000)
- Railing Replacement ($6,400)
- Storage Racks ($10,000)

The flood pumps are new and are required to complete flood-proofing of CyRide's facility, upon completion of CyRide's flood wall in 2014.

CyRide's forklift is 38 years old and has become unreliable and expensive to repair.

LOCATION

CyRide, 1700 University Boulevard

	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:						
Computers	62,000	14,000	12,000	12,000	12,000	12,000
Shop Equipment	450,000	130,000	170,000	50,000	50,000	50,000
TOTAL	**512,000**	**144,000**	**182,000**	**62,000**	**62,000**	**62,000**
FINANCING:						
Transit Fund	512,000	144,000	182,000	62,000	62,000	62,000
TOTAL	**512,000**	**144,000**	**182,000**	**62,000**	**62,000**	**62,000**

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Transportation – Transit	CyRide	552-1159-439

BUS STOP IMPROVEMENTS **PROJECT STATUS:** No Change

DESCRIPTION/JUSTIFICATION

One of the most frequently requested customer suggestions received by CyRide is regarding the condition or lack of amenities at its more than 435 bus stop locations throughout the city. Therefore, over the next five-year period (FY 2016/17 through FY 2020/21), CyRide will install two to three new bus shelters and move existing bus shelters to new locations each year, thereby increasing the total number of bus shelters for CyRide's customers. The specific locations will be identified each year based on CyRide's ability to complete installation at sites that year and the bus stop priority list based on a previous bus stop improvements study. In addition to shelters, concrete pads, amenities and connections to sidewalks will be included to make using the bus easier for customers. In total, approximately $50,000 per year in improvements will be completed.

COMMENTS

Funding for these improvements will be provided by 80% federal dollars administered under a grant from the State of Iowa and 20% local funding from CyRide's budget.

LOCATION

Various locations throughout Ames

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Pads, Benches, Shelters		250,000	50,000	50,000	50,000	50,000	50,000
	TOTAL	**250,000**	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**
FINANCING:							
Transit Fund		50,000	10,000	10,000	10,000	10,000	10,000
Federal 5310 Grants		200,000	40,000	40,000	40,000	40,000	40,000
	TOTAL	**250,000**	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Transportation – Transit	CyRide	552-1174-439

CYRIDE TECHNOLOGY IMPROVEMENTS **PROJECT STATUS:** Scope Change

DESCRIPTION/JUSTIFICATION

CyRide has equipped its bus fleet with video camera technology that has improved customer safety and information regarding the daily operation of service. As a result, CyRide has developed a bus video replacement system that replaces the video system on 15 buses in 2016/17 ($180,000) and then five buses ($45,000 per year) each year. These systems must be replaced periodically as the existing equipment has become obsolete and is not supported by the vendor. CyRide currently has four different video systems on its bus fleet, which are used to investigate customer complaints and identify operational issues.

CyRide will also upgrade its current office building security camera system and add this security system into the bus storage facility over a two year period, FY1016/17 and FY2017/18 ($30,000 and $200,000, respectively). CyRide would also replace its radio system ($100,000), as part of the citywide emergency radio replacement program, anticipated in 2018/19.

A new federal requirement will require CyRide to maintain detailed asset management records for CyRide's fleet of 97 buses, plus support equipment and its building, which will require a software package to monitor and maintain these records beginning in the FY2016/17 fiscal year ($100,000).

In the 2017/18 fiscal year, CyRide would purchase a human resources package that would allow staff to document employee actions, various federal checks that are required and maintain an overall accurate work history of its more than 145 bus operators. The number of drivers employed at CyRide has grown by more than 1/3 in the last five-ten years and has become unmanageable without software designed to track this information ($100,000).

COMMENTS

The FY2016/17 camera replacement funds will purchase several new cameras to complete camera systems in all CyRide buses due to fleet expansion that occurred during the last several fiscal years.

CyRide's administrative offices are the only portion of the facility currently equipped with a video surveillance system. This system is eight years old, not capable of expansion, and experiencing reliability issues. CyRide's maintenance shop and bus storage areas would be added to a new system to complete coverage of the facility. This new system would be completed over the two-year period of FY 2016/17 and FY 2017/18.

Adequate safety and security of federal assets is a priority and has been a recommendation in federal reviews completed of CyRide's operations.

LOCATION

CyRide, 1700 University Boulevard

	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:						
Bus Security Cameras	360,000	180,000	45,000	45,000	45,000	45,000
Building Security System	230,000	30,000	200,000			
Asset Management/ HR Software	200,000	100,000	100,000			
Radio System Upgrade				100,000		
TOTAL	**790,000**	**310,000**	**345,000**	**145,000**	**45,000**	**45,000**
FINANCING:						
Transit Fund	790,000	310,000	345,000	145,000	45,000	45,000
TOTAL	**790,000**	**310,000**	**345,000**	**145,000**	**45,000**	**45,000**

PROGRAM - ACTIVITY:	DEPARTMENT:	ACCOUNT NO.
Transportation – Transit	CyRide	552-1159-439

TRANSPORTATION - AIRPORT

PROJECT/FUNDING SOURCE	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21	Page
PROJECT:							
Airport Improvements	676,000	-	166,000	-	410,000	100,000	112
TOTAL PROJECT EXPENDITURES	**676,000**	**-**	**166,000**	**-**	**410,000**	**100,000**	
FUNDING SOURCES:							
City:							
Airport Construction Fund	80,200	-	16,600	-	53,600	10,000	
Other:							
Federal Aviation Administration	595,800	-	149,400	-	356,400	90,000	
TOTAL FUNDING SOURCES	**676,000**	**-**	**166,000**	**-**	**410,000**	**100,000**	

AIRPORT IMPROVEMENTS **PROJECT STATUS:** Cost Change Delayed

DESCRIPTION/JUSTIFICATION
Airport improvement projects are accomplished through this program.

COMMENTS
The projects included in this program are determined by the Airport Master Plan which details Airport development needs for a ten-year period. The Master Plan Update that was completed in 2007 identifies projects that qualify for Federal Aviation Administration (FAA) funding.

2016/17	No Project
2017/18	Master Plan partial update and runway extension justification
2018/19	No Project
2019/20	Electric Vault and Old Terminal Building Demolition; Runway Justification Report
2020/21	Environmental Assessment (Runway 01/19 Extension)

The projects shown beginning in FY 2017/18 represent the steps necessary to extend the main runway 01/19 from approximately 6,000 feet to 8,000 feet. The purpose is to accommodate future growth of the airport by making it possible for larger aircraft to land in Ames year-round. FY 2019/20 includes a new project for the relocation of the electrical equipment to an above-ground vault and demolition of the existing terminal. The cost changes in FY 2019/20 and 2020/21 are due to updated project estimates for the runway justification and environment assessment, respectively. These projects have been delayed to help with funding for the new Ames Terminal Building.

LOCATION
Ames Municipal Airport

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Engineering		340,400		166,000		74,400	100,000
Construction		335,600				335,600	
	TOTAL	**676,000**		**166,000**		**410,000**	**100,000**
FINANCING:							
Airport Construction Fund		80,200		16,600		53,600	10,000
FAA Funding		595,800		149,400		356,400	90,000
	TOTAL	**676,000**		**166,000**		**410,000**	**100,000**

PROGRAM – ACTIVITY: Transportation – Airport
DEPARTMENT: Public Works
ACCOUNT NO.

Community Enrichment

COMMUNITY ENRICHMENT

	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21	Page
EXPENDITURES:							
Parks and Recreation	4,352,500	767,500	1,065,000	860,000	970,000	690,000	114
City Manager	250,000	50,000	50,000	50,000	50,000	50,000	127
Planning and Housing	500,000	100,000	100,000	100,000	100,000	100,000	129
Public Works	70,000	70,000	-	-	-	-	132
Internal Services/Facilities	385,000	185,000	50,000	50,000	50,000	50,000	134
TOTAL EXPENDITURES	**5,557,500**	**1,172,500**	**1,265,000**	**1,060,000**	**1,170,000**	**890,000**	
FUNDING SOURCES:							
City:							
Local Option Sales Tax	4,877,500	1,012,500	1,100,000	1,015,000	960,000	790,000	
Ice Arena Capital Reserve	190,000	-	60,000	20,000	10,000	100,000	
Park Construction Fund	280,000	-	80,000	-	200,000	-	
Road Use Tax	33,750	33,750	-	-	-	-	
Water Utility Fund	33,750	33,750	-	-	-	-	
Sewer Utility Fund	33,750	33,750	-	-	-	-	
Fleet Reserve Fund	33,750	33,750	-	-	-	-	
Sub-Total City Funding	5,482,500	1,147,500	1,240,000	1,035,000	1,170,000	890,000	
Other:							
Ames Community School District	75,000	25,000	25,000	25,000	-	-	
TOTAL FUNDING SOURCES	**5,557,500**	**1,172,500**	**1,265,000**	**1,060,000**	**1,170,000**	**890,000**	

COMMUNITY ENRICHMENT - PARKS AND RECREATION

PROJECT/FUNDING SOURCE	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21	Page
PROJECT:							
Park System Improvements	1,792,500	467,500	320,000	395,000	285,000	325,000	116
Playground Equipment Improvements	265,000	60,000	-	35,000	60,000	110,000	117
Municipal Pool	150,000	50,000	50,000	50,000	-	-	118
Ada Hayden Heritage Park	110,000	75,000	-	-	5,000	30,000	119
Furman Aquatic Center	575,000	50,000	500,000	-	25,000	-	120
Homewood Golf Course	480,000	40,000	30,000	300,000	10,000	100,000	121
ADA Transition Plan Improvements	125,000	25,000	25,000	25,000	25,000	25,000	122
Ames/ISU Ice Arena	190,000	-	60,000	20,000	10,000	100,000	123
Sunset Ridge Park Development	80,000	-	80,000	-	-	-	124
Moore Memorial Park Pedestrian Bridge	385,000	-	-	35,000	350,000	-	125
Rose Prairie Park Development	200,000	-	-	-	200,000	-	126
TOTAL PROJECT EXPENDITURES	**4,352,500**	**767,500**	**1,065,000**	**860,000**	**970,000**	**690,000**	

COMMUNITY ENRICHMENT - PARKS AND RECREATION, continued

PROJECT/FUNDING SOURCE	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
FUNDING SOURCES:						
City:						
Local Option Sales Tax	3,807,500	742,500	900,000	815,000	760,000	590,000
Ice Arena Capital Reserve	190,000	-	60,000	20,000	10,000	100,000
Park Construction Fund	280,000	-	80,000	-	200,000	-
Sub-Total City Funding	4,277,500	742,500	1,040,000	835,000	970,000	690,000
Other:						
Ames Community School District	75,000	25,000	25,000	25,000	-	-
TOTAL FUNDING SOURCES	**4,352,500**	**767,500**	**1,065,000**	**860,000**	**970,000**	**690,000**

PARK SYSTEM IMPROVEMENTS **PROJECT STATUS:** Scope Change Cost Change

DESCRIPTION/JUSTIFICATION

To maintain City parks in a safe and quality manner, the projects listed below address maintenance issues and improvements at various locations.

COMMENTS

2016/17: Inis Grove Park: Renovate restroom adjacent to Duff Avenue ($125,000)
Brookside Park: Replace light fixtures and add additional poles with fixtures ($150,000)
River Valley Park: Remove baseball field ($20,000); Renovate six softball infields ($140,000); Engineering/design - irrigation & parking lot at north sports fields ($27,500)
Munn Woods: Engineering/design Munn Woods creek crossing ($5,000)

2017/18: Brookside Park: Engineering/design for spray pad ($30,000)
River Valley Park: Install irrigation on north sports fields ($70,000); Install parking lot at north sports fields ($200,000)
Munn Woods: Install crossing over College Creek in Munn Woods ($20,000)

2018/19: Carr Park: Engineering/design for removing bath house and construct new shelter with restroom ($15,000)
Gateway Hills Park: Engineering/design for adding a restroom ($5,000); Install erosion control at Carroll Marty Disc Golf Course ($75,000)
Brookside Park: Remove wading pool and construct a spray pad out of the flood plain ($300,000)

2019/20: Bandshell: Engineering/design for renovating changing rooms ($5,000)
Carr Park: Remove bath house and construct new shelter with restroom ($140,000)
Gateway Hills Park: Install restroom ($50,000); Exterior building improvements/repairs to administrative office ($35,000)
Inis Grove Park: Install irrigation system at Inis Grove sports fields ($45,000)
River Valley Park: Engineering/design for adding a bathroom at the south softball diamonds ($10,000)

2020/21: Bandshell: Renovate changing rooms ($50,000)
Community Center: Refinish wood gymnasium floor ($30,000); Replace weight room equipment ($75,000)
Inis Grove Park: Replace tennis court fencing ($25,000)
McCarthy Lee Park: Add gutters to the hill drive ($20,000)
Gateway Hills Park: Install new standards, drainage and borders on sand volleyball courts ($25,000)
River Valley Park: Install new restroom at the south softball diamonds ($100,000)

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Engineering		97,500	32,500	30,000	20,000	15,000	
Construction		1,695,000	435,000	290,000	375,000	270,000	325,000
	TOTAL	**1,792,500**	**467,500**	**320,000**	**395,000**	**285,000**	**325,000**
FINANCING:							
Local Option Sales Tax		1,792,500	467,500	320,000	395,000	285,000	325,000
	TOTAL	**1,792,500**	**467,500**	**320,000**	**395,000**	**285,000**	**325,000**

PROGRAM – ACTIVITY: Community Enrichment

DEPARTMENT: Parks and Recreation

ACCOUNT NO:
030-4910-459
030-4940-459
030-4906-459
030-4920-459

PLAYGROUND EQUIPMENT IMPROVEMENTS **PROJECT STATUS:** Cost Change

DESCRIPTION/JUSTIFICATION

During the past 25 years, the City has replaced old play equipment throughout the park system. The life expectancy of play equipment is 20 – 25 years. Therefore, it is necessary to begin replacement of playground equipment that was installed at the beginning of this cycle.

COMMENTS

2016/17: Install new equipment in Teagarden Park ($30,000); Replace equipment in Hutchison Park ($30,000)

2018/19: Replace equipment in Christopher Gartner Park ($35,000)

2019/20: Replace equipment adjacent to Shagbark Shelter in Inis Grove Park ($60,000)

2020/21: Replace equipment in Lloyd Kurtz Park ($40,000); Install new equipment adjacent to Red Oak Shelter in Inis Grove Park ($35,000); Install new equipment in Carr Park ($35,000)

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Construction		265,000	60,000		35,000	60,000	110,000
	TOTAL	**265,000**	**60,000**		**35,000**	**60,000**	**110,000**
FINANCING:							
Local Option Sales Tax		265,000	60,000		35,000	60,000	110,000
	TOTAL	**265,000**	**60,000**		**35,000**	**60,000**	**110,000**

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Community Enrichment	Parks and Recreation	030-4967-459

MUNICIPAL POOL **PROJECT STATUS:** Revenue Change Cost Change

DESCRIPTION/JUSTIFICATION

In 2006, 2009, and 2012, engineering consultants were retained to provide recommendations regarding mechanical, electrical, structural, and any other needed improvements for Municipal Pool. In 2012, consultants were given the goal of keeping this facility operational until approximately 2017. Their 2012 study indicated substantial improvements, totaling $450,000, were needed between 2013 and 2017. It was also suggested these improvements be made as soon as possible. The consultants also stated in their report that following **2017**, further repairs to this facility could be cost prohibitive.

The City and Ames Community School District's joint use agreement for Municipal Pool expires on **June 30, 2017.** All capital costs are shared equally by the City and Ames Community School District. Over a 20-year period (FY 1995/96 and continuing through FY 2015/16), the City and School District will have invested approximately $1,900,000 ($100,000 per year average) in capital improvements at this facility. Even though the agreement expires June 30, 2017, it is unlikely the School District or the City will have a new facility by that time. Therefore, shared funding of capital expenses is being shown through FY 2018/19. A new agreement will be needed for FY 2016/17 and beyond.

COMMENTS

2016/17: Total $50,000 – To be determined
2017/18: Total $50,000 – To be determined
2018/19: Total $50,000 – To be determined

LOCATION

Municipal Pool, 1925 Ames High Drive

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Architects/Engineering		15,000	5,000	5,000	5,000		
Construction		135,000	45,000	45,000	45,000		
	TOTAL	**150,000**	**50,000**	**50,000**	**50,000**		
FINANCING:							
Local Option Sales Tax		75,000	25,000	25,000	25,000		
Ames School District		75,000	25,000	25,000	25,000		
	TOTAL	**150,000**	**50,000**	**50,000**	**50,000**		

PROGRAM – ACTIVITY: Community Enrichment

DEPARTMENT: Parks and Recreation

ACCOUNT NO. 030-4916-459

ADA HAYDEN HERITAGE PARK **PROJECT STATUS:** Scope Change Delayed

DESCRIPTION/JUSTIFICATION

Currently, 45 acres on the north portion of Ada Hayden Heritage Park are comprised of pasture vegetation which is cut for hay every year. The property adjacent to this section of the park (to the north) is beginning to be developed. It is important to establish this area of the park with prairie. Due to its deep root system, prairie will minimize storm water runoff from this housing development, thus reducing potential pollution to the lake. Prairie will also increase wildlife habitat.

By adding a wetland overlook to view wildlife, these portions of the park will be enhanced and able to be enjoyed more fully by park visitors.

COMMENTS

2016/17: Establish prairie on north portion of the park ($75,000)
2019/20: Engineering/design a wetland overlook ($5,000)
2020/21: Construct a wetland overlook ($30,000)

LOCATION

Ada Hayden Heritage Park, 5205 Grand Avenue

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Engineering		10,000	5,000			5,000	
Construction		100,000	70,000				30,000
	TOTAL	**110,000**	**75,000**			**5,000**	**30,000**
FINANCING:							
Local Option Sales Tax		110,000	75,000			5,000	30,000
	TOTAL	**110,000**	**75,000**			**5,000**	**30,000**

PROGRAM - ACTIVITY: Community Enrichment
DEPARTMENT: Parks and Recreation
ACCOUNT NO. 030-4925-459

FURMAN AQUATIC CENTER **PROJECT STATUS:** Scope Change

DESCRIPTION/JUSTIFICATION

This facility opened in May of 2010. It has been operational for six seasons with an average of approximately 100,000 visitors per summer. To ensure it remains a quality facility, structural and mechanical items have been identified and will be addressed in a systematic manner.

Pool consultants have stated that a new, major feature should be installed every five years to ensure admissions remain high. The Master Plan for the site allows for three major features to be added: speed slides adjacent to the Lazy River, a family slide, and water bowl adjacent to the 50-meter pool. When the project was bid in 2007, the speed slides were identified as the first of the three features to be installed and they were included as a bid alternate. Funding at that time did not allow for this alternate to be included.

COMMENTS

2016/17: Engineering/design for an additional feature ($50,000)
2017/18: Install an additional feature ($500,000)
2019/20: Install a shelter adjacent the parking lot ($25,000)

LOCATION

Furman Aquatic Center, 1365 13th Street

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Engineering/Design		50,000	50,000				
Construction		525,000		500,000		25,000	
	TOTAL	**575,000**	**50,000**	**500,000**		**25,000**	
FINANCING:							
Local Option Sales Tax		575,000	50,000	500,000		25,000	
	TOTAL	**575,000**	**50,000**	**500,000**		**25,000**	

PROGRAM - ACTIVITY: Community Enrichment
DEPARTMENT: Parks and Recreation
ACCOUNT NO. 030-4907-459

DESCRIPTION/JUSTIFICATION
To enhance the services provided, the projects listed below will address facility needs.

The cart paths, once completed, will provide a continuous path around the golf course. This will allow carts to be used, even if the ground is too wet, by limiting cart use to the paths. Currently, carts are not rented in wet conditions.

The current clubhouse was moved to the site in 1970, is not energy efficient, and lacks adequate storage in the lower level for carts. This project will replace the current clubhouse, address the above stated deficiencies, and include restrooms. The building will be designed to maximize an open floor plan which would provide program opportunities in the winter months.

The current bridge was designed for walking golfers. Since the demand for motorized carts at Homewood has increased, replacing this bridge with one designed for motorized carts will speed up play and reduce safety concerns for golfers having to drive along hole #8 to get to the 9th green.

COMMENTS
2016/17: Install asphalt cart paths ($40,000)
2017/18: Engineering/design for replacing the current clubhouse with a new building ($30,000)
2018/19: Replace the current clubhouse with a new building ($300,000)
2019/20: Engineering/design for replacing the bridge on Hole #9 so it can accommodate carts ($10,000)
2020/21: Replace the bridge on Hole #9 so it can accommodate carts ($100,000)

LOCATION
Homewood Golf Course, 401 E 20th Street

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Engineering		40,000		30,000		10,000	
Construction		440,000	40,000		300,000		100,000
	TOTAL	**480,000**	**40,000**	**30,000**	**300,000**	**10,000**	**100,000**
FINANCING:							
Local Option Sales Tax		480,000	40,000	30,000	300,000	10,000	100,000
	TOTAL	**480,000**	**40,000**	**30,000**	**300,000**	**10,000**	**100,000**

PROGRAM – ACTIVITY: Community Enrichment
DEPARTMENT: Parks and Recreation
ACCOUNT NO: 030-4917-459

ADA TRANSITION PLAN IMPROVEMENTS **PROJECT STATUS:** New

DESCRIPTION/JUSTIFICATION

To better understand where Parks and Recreation does not comply with the 2010 Americans with Disabilities Act Standards for Accessible Design, an inventory and assessment of the park system and facilities is being conducted in FY 2015/16. Upon conclusion of the inventory and assessment, a transition plan will be developed in order to become compliant. In anticipation of items needing to be corrected, money is being put into each year of the CIP. This is an estimate and could be higher or lower, but will not be known until the transition plan is finalized.

COMMENTS

2016/17: ADA Transition Plan items to be determined ($25,000)

2017/18: ADA Transition Plan items to be determined ($25,000)

2018/19: ADA Transition Plan items to be determined ($25,000)

2019/20: ADA Transition Plan items to be determined ($25,000)

2020/21: ADA Transition Plan items to be determined ($25,000)

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Engineering							
Construction		125,000	25,000	25,000	25,000	25,000	25,000
	TOTAL	**125,000**	**25,000**	**25,000**	**25,000**	**25,000**	**25,000**
FINANCING:							
Local Option Sales Tax		125,000	25,000	25,000	25,000	25,000	25,000
	TOTAL	**125,000**	**25,000**	**25,000**	**25,000**	**25,000**	**25,000**

PROGRAM – ACTIVITY: Community Enrichment

DEPARTMENT: Parks and Recreation

ACCOUNT NO: 030-4902-459

AMES/ISU ICE ARENA **PROJECT STATUS:** Cost Change Scope Change

DESCRIPTION/JUSTIFICATION

The Ames/ISU Ice Arena will be celebrating its 15th anniversary in April of 2016. With the goal of maintaining a quality facility, items need to be replaced.

Funding for capital improvement projects is provided through the Ice Arena Capital Reserve Fund. Each year, the City and Iowa State University each contribute $20,000 to this fund to ensure the facility is well-maintained. As of June 30, 2015, this fund totaled $420,499.

COMMENTS

FY 2017/18: Replace dasher board system ($60,000)
FY 2018/19: Convert to new refrigerant (i.e. Freon) ($20,000)
FY 2019/20: Engineering/design parking lot reconstruction ($10,000)
FY 2020/21: Reconstruct parking lot ($100,000)

LOCATION

Ames/ISU Ice Arena, 1505 Gateway Hills Park Drive

	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:						
Equipment	60,000		60,000			
Construction	120,000			20,000		100,000
Engineering/Design	10,000				10,000	
TOTAL	**190,000**		**60,000**	**20,000**	**10,000**	**100,000**
FINANCING:						
Ice Arena Capital Reserve Funds	190,000		60,000	20,000	10,000	100,000
TOTAL	**190,000**		**60,000**	**20,000**	**10,000**	**100,000**

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Community Enrichment	Parks and Recreation	571-4928-459
		572-4928-459

SUNSET RIDGE PARK DEVELOPMENT **PROJECT STATUS:** New

DESCRIPTION/JUSTIFICATION

Sunset Ridge is a growing development with close to 300 homes when finished. The homeowners association has approached the Parks and Recreation Commission regarding developing a park in the neighborhood and is interested in deeding a two acre parcel to the City for this purpose. The Parks and Recreation Master Plan identifies neighborhood park service areas to cover a 1/4 to 1/2 mile radius. Using the 1/2 mile radius, a portion of Sunset Ridge is covered by Daley Park; however, individuals would need to cross Lincoln Way to get there without a controlled intersection. Standard amenities in neighborhood parks include: basketball pad with goals, a small shelter, a play structure and swings, and utilities. The homeowners association already has a basketball pad on another parcel so this will not be included in this development. The estimated costs for these improvements will total $80,000.

COMMENTS

FY 2017/18: Develop the Sunset Ridge Neighborhood Park ($80,000)

LOCATION

Sunset Ridge Development

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Park Development		80,000		80,000			
	TOTAL	**80,000**		**80,000**			
FINANCING:							
Park Development Fund		80,000		80,000			
	TOTAL	**80,000**		**80,000**			

PROGRAM - ACTIVITY: Community Enrichment

DEPARTMENT: Parks and Recreation

ACCOUNT NO.

MOORE MEMORIAL PARK PEDESTRIAN BRIDGE **PROJECT STATUS:** Delayed

DESCRIPTION/JUSTIFICATION

Moore Memorial Park is 90 acres; 50 acres are located east of Squaw Creek and 40 acres are west of the creek. The 50-acre parcel was developed into a community park in 1991. The 40-acre parcel has been leased to Iowa State as an agricultural research plot for $3,000 per year.

In response to community input to connect parks via hard surface trails, a pedestrian bridge will link these two parcels of City property. This improvement has become viable because ISU recently acquired the YMCA grounds located adjacent the City's 40-acre parcel. In the event ISU allows public access through its parcel, several miles of recreational trails would be linked together. Staff will meet with ISU officials to determine if public access will be allowed through this parcel of land in the future.

COMMENTS

2018/19: Engineering/design for a pedestrian bridge across Squaw Creek at Moore Memorial Park ($35,000)
2019/20: Install a pedestrian bridge across Squaw Creek at Moore Memorial Park ($350,000)

LOCATION

Moore Memorial Park, 3050 Northridge Parkway

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Engineering/Design		35,000			35,000		
Construction		350,000				350,000	
	TOTAL	**385,000**			**35,000**	**350,000**	
FINANCING:							
Local Option Sales Tax		385,000			35,000	350,000	
	TOTAL	**385,000**			**35,000**	**350,000**	

PROGRAM - ACTIVITY: Community Enrichment
DEPARTMENT: Parks and Recreation
ACCOUNT NO.

ROSE PRAIRIE PARK DEVELOPMENT **PROJECT STATUS:** No change

DESCRIPTION/JUSTIFICATION

The Parks and Recreation Master Plan identifies neighborhood park service areas to cover a 1/4 to 1/2 mile radius. As the North Growth development occurs, this plan indicated a need for a neighborhood park to serve residents in this area. Standard amenities in neighborhood parks include a basketball pad with goals, a small shelter, a play structure and swings, and utilities. In addition, this park may require paths and sidewalks. The estimated costs for these improvements will total $200,000.

COMMENTS

FY 2019/20: Develop the Rose Prairie Neighborhood Park ($200,000)

LOCATION

Rose Prairie Development

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Park Development		200,000				200,000	
	TOTAL	**200,000**				**200,000**	
FINANCING:							
Local Option Sales Tax (Park Development Fund)		200,000				200,000	
	TOTAL	**200,000**				**200,000**	

PROGRAM - ACTIVITY: Community Enrichment

DEPARTMENT: Parks and Recreation

ACCOUNT NO.

COMMUNITY ENRICHMENT - CITY MANAGER

PROJECT/FUNDING SOURCE	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21	Page
PROJECT:							
Neighborhood Improvement Program	250,000	50,000	50,000	50,000	50,000	50,000	128
TOTAL PROJECT EXPENDITURES	**250,000**	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**	
FUNDING SOURCES:							
City:							
Local Option Sales Tax	250,000	50,000	50,000	50,000	50,000	50,000	
TOTAL FUNDING SOURCES	**250,000**	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**	

NEIGHBORHOOD IMPROVEMENT PROGRAM **PROJECT STATUS:** No Change

DESCRIPTION/JUSTIFICATION

The Neighborhood Improvement Program was originally designed to enhance the appearance of City neighborhoods with the addition of permanent physical improvements and to promote a greater sense of community through resident participation in neighborhood projects. The program focused solely on providing City grants to help residents accomplish those projects that they have identified as top priorities for their neighborhoods. Competitive proposals are solicited from neighborhood groups and are rated by a Review Panel, which consists of City staff and citizens, according to the following criteria approved by the City Council: public impact, neighborhood participation, safety, environment, housing, and public space. Neighborhood residents are expected to provide a local match to these grants on a dollar-for-dollar basis in the form of labor, materials, and/or cash.

Since the program was initiated in 1996/97, 121 neighborhood projects have been funded by the City, totaling $362,099.95. Projects have included cul-de-sac, right-of-way and median landscaping; playground construction and/or restoration; alleyway beautification; street trees; pond renovation; installation of rain gardens, historic house plaques and medallions; prairie restoration; construction of a neighborhood message center; construction of a shelter house in a neighborhood City park; park sidewalks; neighborhood basketball courts; landscaping of neighborhood entryways; installation of neighborhood barbecue grills; renovating “DZ Triangle,” and neighborhood clean-up days.

With the implementation of the Neighborhood Liaison Program, the City is committed to creating great neighborhoods with a sense of community. To complement this initiative, eligibility for these funds has been expanded beyond the original intent of the Neighborhood Improvement Grant Program to include such projects as sub-area planning elements and other support programs for neighborhood associations. In addition, the application period is now open-ended with the requirement that the funds be expended one year from date of Council approval.

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Construction		250,000	50,000	50,000	50,000	50,000	50,000
	TOTAL	**250,000**	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**
FINANCING:							
Local Option Sales Tax		250,000	50,000	50,000	50,000	50,000	50,000
	TOTAL	**250,000**	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**

PROGRAM – ACTIVITY: Community Enrichment

DEPARTMENT: City Manager’s Office

ACCOUNT NO. 030-0420-459

COMMUNITY ENRICHMENT - PLANNING AND HOUSING

PROJECT/FUNDING SOURCE	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21	Page
PROJECT:							
Downtown Façade Program	250,000	50,000	50,000	50,000	50,000	50,000	130
Campustown Façade Program	250,000	50,000	50,000	50,000	50,000	50,000	131
TOTAL PROJECT EXPENDITURES	**500,000**	**100,000**	**100,000**	**100,000**	**100,000**	**100,000**	
FUNDING SOURCES:							
City:							
Local Option Sales Tax	500,000	100,000	100,000	100,000	100,000	100,000	
TOTAL FUNDING SOURCES	**500,000**	**100,000**	**100,000**	**100,000**	**100,000**	**100,000**	

DOWNTOWN FAÇADE IMPROVEMENT PROGRAM **PROJECT STATUS:** No Change

DESCRIPTION/JUSTIFICATION

This project was introduced in 2001/02 to facilitate private improvements to the façades of the buildings in the Downtown area. For three years, the City did not receive any requests for these funds.

Downtown Design Guidelines were approved by the City Council in 2001 to ensure that financial assistance for façade improvements is consistent with the historical character of Downtown. In order to qualify for these funds, improvements must be made to at least one of the following exterior elements: upper façades, storefronts, transoms, display windows, kick plates, entrances, signs, or awnings/canopies. Beginning in FY 2011/12, the City Council expanded the program guidelines, and implemented a review and award period in spring each year. Additionally, to aid in comparing applications, the City Council also established a scoring process.

Under this program, the City provides up to $15,000 in grant funds to be matched dollar for dollar. In addition, a $1,000 grant is available to subsidize the cost of an architect. Through September 2015, the program has awarded 37 grants for a total amount of $556,337. FY 2016/17 will begin with a new $50,000 allocation.

COMMENTS
This program continues to support the City Council's previous goals for the commercial revitalization of the Downtown. As interest in this program continues, funding can be expanded or City Council may consider appropriating funds to priority projects.

LOCATION
Downtown Ames

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Incentives (Loans or Grants)		250,000	50,000	50,000	50,000	50,000	50,000
	TOTAL	**250,000**	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**
FINANCING:							
Local Option Sales Tax		250,000	50,000	50,000	50,000	50,000	50,000
	TOTAL	**250,000**	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Community Enrichment	Planning & Housing	030-1030-459

CAMPUSTOWN FAÇADE IMPROVEMENT PROGRAM **PROJECT STATUS:** No Change

DESCRIPTION/JUSTIFICATION

This purpose of the Campustown Facade Improvement Program is to improve the Campustown commercial district by providing financial incentives to enhance the appearance and use of existing buildings with commercial uses. The program design is to encourage and maintain the eclectic culture and 'uniqueness' of Campustown, to increase safety, security, and investments by property and business owners and to add to the vitality of Campustown.

The Campustown Facade Improvement Program seeks to encourage the creation of a place that is walkable, transparent, eclectic, sustainable, social, and historic. Beginning in Fiscal Year 2014/15, the first step in the process was to hire a consultant to assist the City in the development of a "Vision Statement," prepare an "Idea Book," review design ideas and guidelines, provide assistance to applicants wanting to apply for the program, determine costs and feasibility, conduct workshops and working meetings with applicants and City staff. The second step is to implement two pilot projects to include construction and evaluation.

In 2015/16, $32,000 was awarded for two pilot projects. Under this program, the City would provide up to $15,000 in grant funds to be matched dollar for dollar. In addition, a $1,000 grant is available to subsidize the cost of an architect. By the end of the year, the program evaluation will be completed.

COMMENTS
This program will address the City Council's goal to revitalize of the Campustown. As interest in this program continues, funding can be expanded or City Council may consider appropriating funds to priority projects.

LOCATION
Downtown Ames

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Incentives (Loans or Grants)		250,000	50,000	50,000	50,000	50,000	50,000
	TOTAL	**250,000**	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**
FINANCING:							
Local Option Sales Tax		250,000	50,000	50,000	50,000	50,000	50,000
	TOTAL	**250,000**	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Community Enrichment	Planning & Housing	030-1031-459

COMMUNITY ENRICHMENT - PUBLIC WORKS

PROJECT/FUNDING SOURCE	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21	Page
PROJECT:							
Municipal Cemetery Improvements	70,000	70,000	-	-	-	-	133
TOTAL PROJECT EXPENDITURES	**70,000**	**70,000**	**-**	**-**	**-**	**-**	
FUNDING SOURCES:							
City:							
Local Option Sales Tax	70,000	70,000	-	-	-	-	
TOTAL FUNDING SOURCES	**70,000**	**70,000**	**-**	**-**	**-**	**-**	

AMES MUNICIPAL CEMETERY IMPROVEMENTS **PROJECT STATUS:** No Change

DESCRIPTION/JUSTIFICATION

This program provides funding to enhance the public appearance at the Cemetery. This is the last project in the five-year program for restoration and improvement maintenance, which began in 2011/12. Funding in 2016/17 will be used to replace water lines in the Cemetery. The water lines are currently galvanized pipe that experience several breaks per year. New piping will allow for consistent water service to Cemetery visitors.

COMMENTS

Beginning in 2008/09, state regulations were enacted that prohibited the use of these funds for certain cemetery costs. As a result of these new regulations, maintenance of the lanes stopped. Continued use created structural and surface deterioration of the lanes. Bumpy rides and messy appearance of the lanes detract from the tranquility and value of this City-owned asset. The Cemetery Focus Group and citizen input have identified the needed improvements. Driveway paving and installation of benches and receptacles have been completed.

2016/17 Water line replacement

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Construction		70,000	70,000				
	TOTAL	**70,000**	**70,000**				
FINANCING:							
Local Option Sales Tax		70,000	70,000				
	TOTAL	**70,000**	**70,000**				

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Community Enrichment	Public Works	030-9525-469

INTERNAL SERVICES - FACILITIES/FLEET SERVICES

PROJECT/FUNDING SOURCE	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21	Page
PROJECT:							
City Hall Improvements	250,000	50,000	50,000	50,000	50,000	50,000	135
City Maintenance Facility Improvements	135,000	135,000	-	-	-	-	136
TOTAL PROJECT EXPENDITURES	**385,000**	**185,000**	**50,000**	**50,000**	**50,000**	**50,000**	
FUNDING SOURCE:							
City:							
Local Option Sales Tax	250,000	50,000	50,000	50,000	50,000	50,000	
Road Use Tax	33,750	33,750	-	-	-	-	
Water Utility Fund	33,750	33,750	-	-	-	-	
Sewer Utility Fund	33,750	33,750	-	-	-	-	
Fleet Reserve Fund	33,750	33,750	-	-	-	-	
TOTAL FUNDING SOURCES	**385,000**	**185,000**	**50,000**	**50,000**	**50,000**	**50,000**	

CITY HALL IMPROVEMENTS **PROJECT STATUS:** No Change

DESCRIPTION/JUSTIFICATION

This City Hall improvements program is focused on major maintenance or replacement of items for the building, Veterans Memorial, and parking lots on the west side of the building and across the street to the east.

City Hall's mechanical, electrical, plumbing, sprinkler, and numerous other support systems were installed in 1990. Funds have been allocated per year for equipment or system failures that may occur and are beyond the funding levels in the maintenance budget.

LOCATION

City Hall, 515 Clark Avenue

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Maintenance		250,000	50,000	50,000	50,000	50,000	50,000
	TOTAL	**250,000**	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**
FINANCING:							
Local Option Sales Tax		250,000	50,000	50,000	50,000	50,000	50,000
	TOTAL	**250,000**	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Internal Services	Facilities	030-2930-419

CITY MAINTENANCE FACILITY ROOF REPLACEMENT **PROJECT STATUS:** No Change

DESCRIPTION/JUSTIFICATION
This project replaces the roof of the City Maintenance Facility on Edison Street in east Ames. This facility is shared by Public Works and Fleet Services.

The current roof was installed in two phases, one in 1986 and one in 1993. Flat roofs have a 20-year life cycle, and these roofs are 27 and 20 years old, respectively. The warranties expired in 1996 and 2003. Holes and rips are now being repaired as they occur. Staff suspects that roofing materials may contain asbestos; therefore, the engineer's estimates include asbestos abatement for these two roofs.

COMMENTS
2016/17 Roof Replacement for Phase III - $135,000

LOCATION
City Maintenance Facility, 2207 Edison Street - East Ames, north of Lincoln Way, just west of Dayton Avenue

		TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:							
Engineering		2,500	2,500				
Construction Administration		2,500	2,500				
Asbestos Abatement							
Construction		130,000	130,000				
	TOTAL	**135,000**	**135,000**				
FINANCING:							
Road Use Tax		33,750	33,750				
Water Utility Fund		33,750	33,750				
Sewer Utility Fund		33,750	33,750				
Fleet Services Fund		33,750	33,750				
	TOTAL	**135,000**	**135,000**				

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Internal Services	Fleet Services	811-2870-529