AGENDA
SPECIAL MEETING OF THE AMES CITY COUNCIL
COUNCIL CHAMBERS - CITY HALL
JANUARY 15, 2019

CALL TO ORDER: 5:15 p.m.

1. 2019-2024 Capital Improvements Plan*
   a. Staff presentation on recommended five-year Capital Improvements Plan

COUNCIL COMMENTS:

DISPOSITION OF COMMUNICATIONS TO COUNCIL:

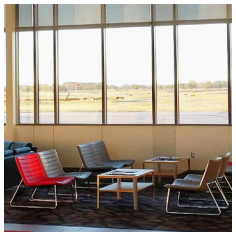
CLOSED SESSION:

2. Motion to hold Closed Session as provided by Section 20.17(3), *Code of Iowa*, to discuss collective bargaining strategy

ADJOURNMENT:

*Note: Public input on this item is scheduled to occur at the January 22, 2019, Council meeting.

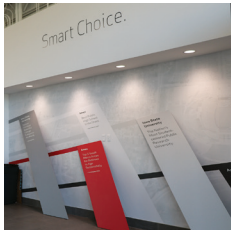
CITY OF
Ames™



CITY OF AMES, IOWA

CAPITAL IMPROVEMENTS PLAN

DRAFT 2019-2024



CITY OF Ames™

The theme for this year's Budget is the Ames Municipal Airport. The current airport located at 2520 Airport Road is the third incarnation of an airport in Ames. It was established in 1943 using $5,340 in Municipal Bonds near the site of the old Billy Sunday Farmstead. As the first municipally owned airport it began on a property of just under 300 acres along the south side of Airport Road with two grass runways approximately 3,800 feet in length. Over the years the airport has grown, more than doubling in size in the 1980's to about 700 acres, now with two paved runways 01/19 (5,700') and 13/31 (3,492') capable of supporting medium to large jet aircraft. Starting in 2016, the City, with help from private donations, has constructed a new 7,000 square foot Executive Airport Terminal Building and a new 95' x 100' Itinerant Hangar. These investments have helped modernize the Ames Municipal Airport as it serves as a gateway to the central Iowa region supporting more than 33,000 flights each year.

January 15, 2019

Mayor and Members of the Ames City Council:

It is interesting to note that after many years of bickering at the federal level, there is talk that the members of both parties in Congress might be able to come together to agree on at least one initiative for their upcoming legislative session and that is a comprehensive infrastructure bill. Fortunately for the citizens of Ames, our City Council members have always understood the importance of maintaining, upgrading, and expanding our municipal infrastructure and, therefore, have continuously placed a high priority on this important responsibility.

In keeping with local priority, I am attaching the City Manager's Recommended Capital Improvements Plan (CIP) for FY 2019/20 through FY 2024/25. This plan calls for $207,602,498 to be expended over the next five years with revenue support coming from General Obligation Bonds ($54,202,000), Road Use Tax ($7,798,650), Local Option Sales Tax ($9,280,550), Water Utility Fund ($14,846,500), Sewer Utility Fund ($5,163,500), Storm Water Utility Fund ($7,392,000), Electric Utility Fund ($30,716,600), and Federal/State/other miscellaneous funds ($78,202,698). **The following are highlights of the proposed CIP.**

PUBLIC SAFETY - $3,202,000

The new **City-Wide Radio System** project (page 9) is progressing as scheduled. The estimated $2,000,000 expenditure will assure 1) interoperability among the various city departments as well as with other Story County government agencies, 2) an upgrade in radio technology, and 3) an improved reliability to increase safety for our employees – both emergency and non-emergency. Discussions are underway with Story County, Iowa State University, and other communities in the county to finalize a partnership agreement to pay for the buildout and ongoing operations for a new

County-wide system. Once the partnership is finalized a consulting firm will review proposals submitted by interested parties and assist in negotiating a contract with a preferred service provider. I must stress that the amount shown in the CIP for this project may change based upon the best proposal that is submitted. In addition, the City Council should understand that the decision to purchase or lease individual radios will be left to each governmental entity and the amounts reflected in this CIP only represent the City's portion of this county-wide initiative.

Our goal is to keep front line fire apparatus for a minimum of fifteen years. Depending on the availability of replacement parts or condition of the vehicle, this timeframe can be extended. We have now reached the point where **Fire Apparatus Replacement** (page 11) is needed. In the next five years, a new $1,250,000 ladder truck will be purchased, the existing truck will be renovated for $125,000 and be available as a backup unit, and a $747,000 pumper will replace an existing front line unit.

A recently completed coverage study has indicated the need to add two new outdoor warning devices: one to serve the newly annexed industrial area along East Lincoln Way and one to serve the newest phases of the Iowa State Research Park. Therefore, the **Outdoor Storm Warning System** project (page 14) allocates $40,000 for a new siren in FY 2019/20. The second siren has been programmed into the FY 2018/19 adjusted budget, along with funding for updated software to control the automatic system.

UTILITIES - $109,420,650

ELECTRIC SERVICES - $ 31,325,000

In order to assure the continued reliability of our Power Plant operations and increase its output, a number of projects have been advanced to the first year of the CIP or the budget has been increased significantly to accomplish the project. For example, three projects that have been advanced to the first year include $2,000,000 for the **Unit #8 Superheat Replacement** (page 44), $1,000,000 for the **Unit #8 Precipitator Reconstruction** (page 45), and $3,000,000 for the **Unit #8 Turbine Generator Overhaul** (page 46). In addition, the **Unit #7 Boiler Tube Repair** project (page 43) was increased to $8,400,000 in FY 2019/20 to reflect the updated cost of the project.

In order to avoid a major rate increase caused by advancing these critical projects, you will note that the implementation of a number of transmission, distribution, and Power Plant maintenance projects in this utility are being delayed. After reviewing the previous CIP, we do not believe this switch in priorities will jeopardize our electric system.

While the projects reflected in this five-year plan are basically the same as those that were included in last year's document, there are $1,650,000 of new improvements earmarked for the Power Plant (pages 29, 34, 38, 40, and 42).

We will continue to appropriate $1,200,000 each year for various energy rebates as a cost effective strategy to reduce consumption and avoid a more costly expansion of our Power Plant to meet growing demand. However, you will note that our **Demand Side Management** program is no longer highlighted in the CIP. After a review of the program, Finance staff determined that this initiative should be transferred to the Electric Administration operating budget since this grant program does not meet the technical definition of a capital improvement.

WATER UTILITY - $25,413,000

Now that our new Water Treatment Plant is operational, it is time to move ahead with the **Demolition Of The Old Water Treatment Plant** (page 52). This $3,485,000 project will be accomplished over two years beginning in FY 2019/20. While the filter building, chemical feed building, external treatment basins, 750,000 gallon storage reserve, and administrative offices will be removed, the two-story Technical Services Complex that houses our Water Meter and Laboratory Divisions will remain.

With the expected completion of water and sanitary sewer extensions in the coming year to serve the newly annexed industrial area along Lincoln Way east of Highway 35, this Plan anticipates enough growth in the area to warrant the **East Industrial Elevated Tank** (page 58). This new $4,610,000 water tank project will be delayed should the buildout in the area be slower than anticipated.

The **SAM Pump Station Improvements** project (page 59) will add a fourth pump and standby power to the facility at State Avenue and Mortensen Road. This new $300,000 expenditure is designated in the last year of the Plan in recognition of anticipated growth in the area.

The CIP reflects our ongoing commitment to replace water distribution lines predominantly in the older neighborhoods in our community. The $8,150,000 investment over the next five years in **Water System Improvements** (page 69) will reduce rusty water situations and improve fire-fighting capacity in the lines.

One project that deserves special attention from our citizens is the **Campustown Public Improvements** project (page 70). The importance of this project is not the amount of money that will be spent on it ($2,750,000), but rather the extent of disruption that will be caused in this highly congested area commercial/residential district in FY 2019/20 as we replace water lines, storm sewer lines, sanitary sewer lines, streets, and sidewalks.

SANITARY SEWER UTILITY - $38,249,000

We anticipate spending $21,206,000 over the life of the Plan for **Sanitary Sewer System Improvements** (page 72). The goal of this program is to identify and remove major sources of inflow/infiltration as a means to decrease wet weather flow of clean water through our WPC plant. This can be accomplished through the rehabilitation/reconstruction of deficient sanitary sewers and deteriorated manholes at various locations throughout the city.

The financial commitment to the **Clear Water Diversion** program (page 73) is being increased to $300,000 in this CIP in response to a growing number of complaints about ice and algae blooms where footing drains are discharging directly to the streets. We currently have a waiting list from residents who have requested collector lines in the right-of-way in front of their homes.

With the assistance of our consulting team we appear to have settled on a strategy for meeting the Iowa Department of Natural Resources' nutrient removal requirements. This costly state mandate will be accomplished with approximately $40,000,000 ($5,650,000 in this CIP) earmarked for the **Nutrient Reduction Modifications** program (page 66). This implementation plan calls for a three phase approach over the next twenty years that will involve the removal of the existing trickling filters and conversion to an activated sludge/biological nutrient removal process. The first phase of this strategy does not occur until FY 2022/23.

In additional to mechanical changes planned at the WPC facility to meet State requirements, a new **Watershed-Based Nutrient Reduction** program (page 63) has been incorporated into the CIP. This $1,000,000 program will provide

funding to implement best land management practices upstream that could yield the additional benefits of flood risk reduction, drinking water protection, increased wildlife habitat, and recreational opportunities.

A new project in the CIP is the **WPC Headworks Modifications project** (page 62). Scheduled for the last year of the Plan, this $10,618,000 project calls for the complete replacement of the area where the first treatment steps take place.

STORM WATER UTILITY - $12,862,000

As the City continues to expand and develop, more impervious surfaces are being constructed. Because of this trend, there is growing need to address storm water issues. In previous CIPs, there was a focus on protecting the City's infrastructure. This CIP includes projects that are more geared to protecting homes from erosion and overland flooding. The **Storm Water Erosion Control** (page 75), **Low Point Drainage Improvements** (page 76), **Storm Water Improvements** (page 77), and **Storm Water Facility Rehabilitation** (page 79) programs will help us address this need with an investment of $7,722,000 over the next five years.

The **Storm Water Quality Improvements** program (page 80) will allow us to spend $500,000 to install best management practices such as bioretention cells, vegetated swales, native landscape, rain gardens, and soil quality restoration in connection with public improvement projects.

The **Storm Water System Analysis** (page 78) will provide us with accurate GIS storm sewer system data and hydraulic modeling of the network. Ultimately, this data will allow us to identify deficiencies in the storm water system and future corrective projects for the CIP.

RESOURCE RECOVERY - $1,571,650

Our Resource Recovery Plant continues to receive attention in the five year plan with $1,571,650 being earmarked in the **Resource Recovery System Improvements** project (page 83) for preventive maintenance to replace rollers and chains,

conveyors, armored teeth/combs, pumps, air knives, belts, compressors, breakers, and motors in our waste processing system.

TRANSPORTATION - $89,139,098

The **Grand Avenue Extension** project (page 89) continues to headline the Transportation section of the CIP. Due to construction cost increases related to materials and the bridges, this project is now estimated to cost $20,153,000. In order to accommodate this additional $1,400,000 you will note that some projects in **Arterial Street Pavement Improvements** (page 92), **CyRide Route Pavement Improvements** (page 97), and **Seal Coat Street Pavement Improvements** (page 98) are being delayed.

Once again the Citizen Satisfaction Survey indicated that the highest rated category for expending city funds for capital improvements is for street projects. Therefore, in addition to the Grand Avenue Extension project, the CIP earmarks an additional $51,735,000 for improvements throughout our street system over the next five years.

With the recently completed agreement with Iowa State University, the **Research Park Phase IV** project (page 90) has been introduced in the CIP. This project calls for $3,487,116 to be expended for street, utility, and electric extensions to serve this latest addition to the Park.

A review of bike facility projects in **Shared Use Path System Expansion** (page 102), **Multi-Modal Roadway Improvements** (page 103), and **Shared Use Path Maintenance** (page 104), as well as other specific segments incorporated into various street projects, will show that $8,732,800 has been designated over the next five years for this City Council priority. This annual average of $1,746,560 exceeds the City Council's goal of $1,200,000 per year.

An allocation of $1,889,250 to the **Traffic Signal** program (page 108) will allow us to replace outdated signals as well as install signals at new locations that warrant them. In addition, the **Bridge Rehabilitation** program (page 114) includes funding of $1,555,000 for work that needs to be done on the 6th Street, East 13th, South 4th, and Lincoln Way bridges.

Even though ridership on CyRide has begun to stabilize and the introduction of CyRide 2.0 has reduced the number of buses needed to service the routes, the existence of an aging fleet necessitates a substantial investment in new buses. With the assistance of state and federal funding, our **CyRide Vehicle Replacement** program (page 121) will allow us to

replace seventeen buses. The **CyRide Building Expansion & Modernization** project (page 121) will result in the replacement of the bus wash system, air conditioning system, and concrete around the existing building, as well as begin the construction over time of a new facility to house our fleet. During the life of this Plan $1,230,000 will be spent on **CyRide Technology Improvements** (page 122) to install a new automated annunciator system and upgrade our radios, WiFi system, automated passenger counters, and maintenance software. In response to customer demand, the **Bus Stop Improvements** program (page 123) will result in two to three shelters being built each year.

Airport Improvements will continue as reflected in the CIP (page 128). It is planned that $1,597,300 will be directed to demolish the old terminal building, rehabilitate the South Apron, and repair the T hangars.

COMMUNITY ENRICHMENT - $5,840,750

While many of our citizens will focus on the infrastructure improvements required in our various utilities to maintain the basic human needs, we must not neglect other projects that truly enrich our lives. The $1,990,000 earmarked in the **Park System/Facility Improvements** (page 132) will assure that needed maintenance issues will be addressed in our park system. A more aggressive strategy to replace older equipment is highlighted in the **Playground Equipment Improvements** program (page 133) where $795,750 has been allocated.

The development of two new parks in our system, **Edwards Park** (page 134) and **Rose Prairie Park** (page 142), is included in this CIP through the use of $280,000 from our Park Development Fund. An on-going commitment is being made to our major facilities as well with $760,000 in improvements planned for the **Municipal Pool** (page 136), **Ames/ISU Ice Arena** (page 138), **Homewood Golf Course** (page 139), and **Furman Aquatics Center** (page 141).

In anticipation of the completion of an assessment of our park system and facilities, $125,000 in the **ADA Transition Plan Improvements** program (page 137) is being allocated for any recommended improvements identified in the assessment that are needed to bring our system in compliance with the Americans With Disabilities Act (ADA) standards.

Ames Municipal Cemetery (page 144) is scheduled to receive $75,000 in the CIP to construct a funeral pavilion that will allow families to conduct a ceremony when weather conditions make it difficult to access the grave site.

NEIGHBORHOOD IMPROVEMENTS - $2,575,000

For some time, the Ames City Council has placed a high priority on strengthening our neighborhoods, both commercial and residential. Towards this end, the CIP incorporates eight programs that help accomplish this goal. The **Downtown Façade** (page 148), **Campustown Façade** (page 149), and **Main Street Sidewalk Paver Replacement** programs (page 116) designate $873,000 over the next five years to bolster our retail centers. In addition, $1,702,000 has been devoted to the **Accessibility Enhancements** (page 109), **Traffic Calming** (page 111), **Right-of-Way Appearance Enhancements** (page 117), **Neighborhood Curb Replacement** (page 118), and **Neighborhood Improvement** (page 146) programs to enrich our residential neighborhoods.

I want to express my appreciation for our department heads and their staff members who have the vision to identify those projects that are needed to maintain our excellent quality of life in Ames; and to Duane Pitcher, Finance Director, Nancy Masteller, Budget Officer, Emily Johnson, Finance Department Secretary, Brian Phillips, Assistant City Manager, and Bob Kindred Assistant City Manager who helped guide the completion of this Plan.

Sincerely,

Steven L. Schainker
City Manager

CITY OF AMES, IOWA

FIVE-YEAR CAPITAL IMPROVEMENTS PLAN
2019-2024

TABLE OF CONTENTS

HOW TO USE THE C.I.P. DOCUMENT

The 2019-2024 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.

INDEX TO 2019-2024 CAPITAL IMPROVEMENTS PLAN

CITY OF AMES, IOWA

INDEX TO 2019-2024 CAPITAL IMPROVEMENTS PLAN

CITY OF AMES, IOWA

UTILITIES - continued

INDEX TO 2019-2024 CAPITAL IMPROVEMENTS PLAN

CITY OF AMES, IOWA

INDEX TO 2019-2024 CAPITAL IMPROVEMENTS PLAN

CITY OF AMES, IOWA

TRANSPORTATION - continued

INDEX TO 2019-2024 CAPITAL IMPROVEMENTS PLAN

CITY OF AMES, IOWA

PROJECTION OF DEBT CAPACITY

	2017/18 ACTUAL	2018/19 BUDGETED	2019/20 PROJECTED	2020/21 PROJECTED	2021/22 PROJECTED	2022/23 PROJECTED	2023/24 PROJECTED
1. Total Actual Valuation	4,180,898,134	4,632,139,435	4,837,411,018	4,982,533,349	5,132,009,349	5,285,969,629	5,444,548,718
2. State Mandated Debt Limit	209,044,907	231,606,972	241,870,551	249,126,667	256,600,467	264,298,481	272,227,436
3. City Reserve (25% of Limit)	52,261,227	57,901,743	60,467,638	62,281,667	64,150,117	66,074,620	68,056,859
Un-Reserved Debt Capacity	156,783,680	173,705,229	181,402,913	186,845,000	192,450,350	198,223,861	204,170,577
4. Outstanding Debt	65,480,000	63,290,000	54,390,000	46,025,000	38,705,000	31,835,000	25,425,000
5. Proposed Issues	-	-	10,634,204	11,190,000	11,895,000	11,422,000	9,375,000
6. Balance of Proposed Issues	-	-	-	9,884,896	19,514,638	28,964,425	37,063,038
Total Debt Subject to Limit	65,480,000	63,290,000	65,024,204	67,099,896	70,114,638	72,221,425	71,863,038
7. Available Un-Reserved Debt Capacity ($)	91,303,680	110,415,229	116,378,709	119,745,104	122,335,712	126,002,436	132,307,539
8. Available Un-Reserved Debt Capacity (%)	58.24%	63.56%	64.15%	64.09%	63.57%	63.57%	64.80%
9. Total Debt Capacity ($)	143,564,907	168,316,972	176,846,347	182,026,771	186,485,829	192,077,056	200,364,398
10. Total Debt Capacity (%)	68.68%	72.67%	73.12%	73.07%	72.68%	72.67%	73.60%

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
2019/20:				
POLICE		1,000,000		
City-Wide Radio System	1,000,000		100%	
UTILITIES		1,000,000	61%	Water/Sewer Utility Funds
Campustown Public Improvements	1,000,000			
STREETS ENGINEERING		8,200,000		
Grand Avenue Extension	2,000,000		100%	
Cherry Avenue Extension	300,000		100%	
Arterial Street Pavement Improvements (13th Street)	1,600,000		64%	MPO/STP Funds
Collector Street Pavement Improvements (Bloomington Rd)	500,000		100%	
Concrete Pavement Improvements	2,800,000		100%	
Asphalt Street Pavement Improvements	1,000,000		100%	
STREET MAINTENANCE		120,000		
Bridge Rehabilitation Program (6th Street; Minnesota Ave)	120,000		100%	
2019/20 TOTAL		**10,320,000**		

SUMMARY OF MAJOR BOND ISSUES, continued

2020/21:				
FIRE		1,375,000		
Fire Apparatus Replacement	1,375,000		100%	
STREETS ENGINEERING		9,210,000		
Cherry Avenue Extension	510,000		17%	Water Utility Fund/Grants
Arterial Street Pavement Improvements (East 13th Street)	900,000		36%	Grants
Collector Street Pavement Improvements (E 20th Street)	1,400,000		100%	
Concrete Pavement Improvements	3,650,000		97%	Road Use Tax
Asphalt Street Pavement Improvements	1,400,000		100%	
Seal Coat Pavement Improvements	750,000		100%	
CyRide Route Pavement Improvements (9th Street)	600,000		100%	
TRAFFIC ENGINEERING		230,000		
US Highway 69 Improvements	230,000		32%	Road Use Tax/Grants
STREET MAINTENANCE		375,000		
Bridge Rehabilitation Program (Lincoln Way/Squaw Creek)	375,000		100%	
2020/21 TOTAL		**11,190,000**		

SUMMARY OF MAJOR BOND ISSUES, continued

GENERAL OBLIGATION BONDS	PROJECT TOTAL	CATEGORY TOTAL	% PROJECT G.O. FUNDED	OTHER SOURCES OF FUNDING
2021/22:				
FIRE		40,000		
Fire Station #3 Concrete Patching	40,000		100%	
STREETS ENGINEERING		11,095,000		
Arterial Street Pavement Improvements (N Dakota/Onatrio)	1,700,000		100%	
Collector Street Pavement Improvements (Hoover Avenue)	2,400,000		96%	Road Use Tax
Concrete Pavement Improvements	3,500,000		68%	MPO/STP Funds/Road Use Tax
Asphalt Street Pavement Improvements	2,500,000		100%	
Seal Coat Pavement Improvements	750,000		100%	
Downtown Street Improvements (Lincoln Way Alley)	245,000		100%	
			97%	Road Use Tax
STREET MAINTENANCE		760,000		
Bridge Rehabilitation Program (South 4th Street))	760,000		100%	
2021/22 TOTAL		**11,895,000**		

SUMMARY OF MAJOR BOND ISSUES, continued

GENERAL OBLIGATION BONDS	PROJECT TOTAL	CATEGORY TOTAL	% PROJECT G.O. FUNDED	OTHER SOURCES OF FUNDING
2022/23				
FIRE SAFETY		747,000	100%	
Fire Apparatus Replacement	747,000			
STREETS ENGINEERING		10,375,000		
Arterial Street Pavement Improvements (Airport Road)	750,000		100%	
Collector Street Pavement Improvements (Woodland Street)	1,500,000		90%	Road Use Tax
CyRide Route Pavement Improvements (Lincoln Way)	1,725,000		100%	
Concrete Pavement Improvements	1,700,000		100%	
Asphalt Street Pavement Improvements	3,700,000		100%	
Seal Coat Pavement Improvements	750,000		100%	
Downtown Street Improvements (Duff to Douglas Alley)	250,000		100%	
PARKS AND RECREATION		300,000		
Park Maintenance Facilities Consolidation	300,000			
2022/23 TOTAL		**11,422,000**		

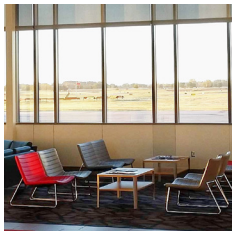
SUMMARY OF MAJOR BOND ISSUES, continued

GENERAL OBLIGATION BONDS	PROJECT TOTAL	CATEGORY TOTAL	% PROJECT G.O. FUNDED	OTHER SOURCES OF FUNDING
2023/24				
UTILITIES		1,200,000		
Campustown Public Improvements	1,200,000		100%	
STREETS ENGINEERING		7,875,000		
Arterial Street Pavement Improvements (24th Street)	1,125,000			
Collector Street Pavement Improvements (6th Street)	1,200,000		100%	
CyRide Rte Pavement Improvements (Dickinson/Steinbeck)	1,200,000		100%	
Concrete Pavement Improvements	400,000		100%	
Asphalt Street Pavement Improvements	3,200,000		100%	
Seal Coat Pavement Improvements	750,000		100%	
STREET MAINTENANCE		300,000		
Bridge Rehabilitation Program (East 13th St/Skunk River)	300,000			
2023/24 TOTAL		**9,375,000**		
GRAND TOTAL GENERAL OBLIGATION BONDS		**54,202,000**		

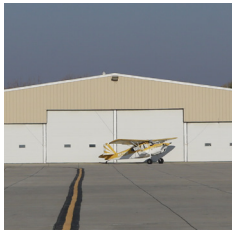
SUMMARY OF MAJOR BOND ISSUES, continued

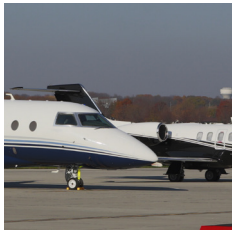
ABATED GENERAL OBLIGATION BONDS

2019/20				
STREETS ENGINEERING		314,204		
ISU Research Park Phase IV (TIF Abated)	314,204		9%	RISE/EDA Grants
2019/20 TOTAL		**314,204**		



CITY-WIDE PROGRAM SUMMARY





TOTAL CAPITAL IMPROVEMENTS PLAN EXPENDITURES AND FUNDING SOURCES

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24	Page
EXPENDITURES BY PROGRAM:							
Public Safety	3,202,000	1,040,000	1,375,000	40,000	747,000	-	7
Utilities	109,420,650	29,683,100	20,148,100	12,918,850	21,256,100	25,414,500	15
Transportation	89,139,098	19,815,169	20,302,200	19,226,418	15,890,358	13,904,953	84
Community Enrichment	5,840,750	1,258,000	1,129,750	880,000	1,345,500	1,227,500	129
TOTAL EXPENDITURES	**207,602,498**	**51,796,269**	**42,955,050**	**33,065,268**	**39,238,958**	**40,546,953**	
FUNDING SOURCES:							
Debt	96,640,204	16,068,204	16,727,000	15,817,000	21,875,000	26,153,000	
City	83,009,599	28,437,191	14,834,370	12,577,164	14,714,964	12,445,910	
Other	27,952,695	7,290,874	11,393,680	4,671,104	2,648,994	1,948,043	
TOTAL FUNDING SOURCES	**207,602,498**	**51,796,269**	**42,955,050**	**33,065,268**	**39,238,958**	**40,546,953**	

CAPITAL IMPROVEMENTS PLAN EXPENDITURE SUMMARY BY PROGRAM

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24	Page
EXPENDITURES BY PROGRAM:							
Public Safety:							
Police	1,000,000	1,000,000	-	-	-	-	8
Fire Safety	2,162,000	-	1,375,000	40,000	747,000	-	10
Outdoor Storm Warning System	40,000	40,000	-	-	-	-	13
Total Public Safety	**3,202,000**	**1,040,000**	**1,375,000**	**40,000**	**747,000**	**-**	
Utilities:							
Electric Services	31,325,000	17,760,000	4,815,000	3,030,000	3,785,000	1,935,000	17
Water Production/Treatment	14,513,000	2,461,000	3,075,000	2,058,000	2,562,000	4,357,000	48
Water Pollution Control	16,743,000	445,000	533,000	200,000	6,842,000	8,723,000	60
Water Distribution	10,900,000	2,950,000	1,500,000	1,600,000	1,750,000	3,100,000	68
Sanitary Sewer System	21,506,000	4,034,000	4,102,000	4,322,000	4,450,000	4,598,000	71
Storm Water Management	12,862,000	1,680,000	5,790,000	1,342,000	1,550,000	2,500,000	74
Resource Recovery	1,571,650	353,100	333,100	366,850	317,100	201,500	82
Total Utilities	**109,420,650**	**29,683,100**	**20,148,100**	**12,918,850**	**21,256,100**	**25,414,500**	

CAPITAL IMPROVEMENTS PLAN EXPENDITURE SUMMARY BY PROGRAM, continued

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24	Page
EXPENDITURES, continued:							
Transportation:							
Streets Engineering	58,712,116	12,777,116	13,675,000	13,200,000	10,860,000	8,200,000	87
Shared Use Path System	5,324,800	1,446,000	845,000	1,003,800	905,000	1,125,000	100
Traffic Engineering	5,859,250	682,750	1,990,500	1,057,000	992,000	1,137,000	105
Street Maintenance	3,778,000	740,000	893,000	1,190,000	280,000	675,000	113
Transit	13,007,632	4,169,303	2,498,700	1,938,318	2,673,358	1,727,953	119
Parking	860,000	-	-	-	-	860,000	125
Airport	1,597,300	-	400,000	837,300	180,000	180,000	127
Total Transportation	**89,139,098**	**19,815,169**	**20,302,200**	**19,226,418**	**15,890,358**	**13,904,953**	
Community Enrichment/Internal Services:							
Parks and Recreation	4,465,750	808,000	879,750	680,000	1,070,500	1,027,500	130
Cemetery	75,000	-	-	-	75,000	-	143
City Manager	250,000	50,000	50,000	50,000	50,000	50,000	145
Planning and Housing	500,000	100,000	100,000	100,000	100,000	100,000	147
Facilities/Internal Services	550,000	300,000	100,000	50,000	50,000	50,000	150
Total Community Enrichment	**5,840,750**	**1,258,000**	**1,129,750**	**880,000**	**1,345,500**	**1,227,500**	
TOTAL EXPENDITURES	**207,602,498**	**51,796,269**	**42,955,050**	**33,065,268**	**39,238,958**	**40,546,953**	

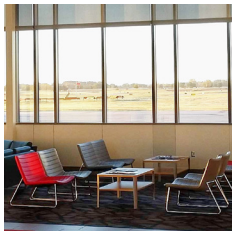
CAPITAL IMPROVEMENTS PLAN FUNDING SOURCE SUMMARY

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
Debt:						
G.O. Bonds	54,202,000	10,320,000	11,190,000	11,895,000	11,422,000	9,375,000
G.O. Bonds (abated)	314,204	314,204	-	-	-	-
State Revolving Fund Loans	42,124,000	5,434,000	5,537,000	3,922,000	10,453,000	16,778,000
Total Debt Funding	**96,640,204**	**16,068,204**	**16,727,000**	**15,817,000**	**21,875,000**	**26,153,000**
City:						
Local Option Sales Tax	9,280,550	2,140,000	1,715,750	1,601,800	1,920,500	1,902,500
Road Use Tax	7,798,650	1,532,750	1,806,700	1,448,400	1,455,000	1,555,800
Electric Utility Fund	30,716,600	17,666,400	4,604,400	2,909,400	3,601,400	1,935,000
Water Utility Fund	14,846,500	2,636,000	2,737,000	3,364,500	3,834,000	2,275,000
Sewer Utility Fund	5,163,500	1,020,000	958,000	1,043,500	1,467,000	675,000
Storm Water Utility Fund	7,392,000	1,362,000	1,680,000	1,000,000	1,200,000	2,150,000
Resource Recovery Fund	1,571,650	353,100	333,100	366,850	317,100	201,500
Transit Capital Reserve Fund	4,656,419	1,461,941	884,420	758,984	889,964	661,110
Parking Reserve Fund	860,000	-	-	-	-	860,000
Airport Construction Fund	183,730	-	40,000	83,730	30,000	30,000
Park Development Fund	280,000	80,000	-	-	-	200,000
Ice Arena Capital Reserve	85,000	10,000	75,000	-	-	-
Fleet Reserve Fund	175,000	175,000	-	-	-	-
Total City Funding	**83,009,599**	**28,437,191**	**14,834,370**	**12,577,164**	**14,714,964**	**12,445,910**

CAPITAL IMPROVEMENTS PLAN FUNDING SOURCE SUMMARY, continued

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
Other:						
MPO/STP Funds	2,977,000	1,059,000	159,000	1,759,000	-	-
Federal/State Grants	23,178,725	6,113,274	10,639,080	2,012,934	2,465,394	1,948,043
Federal Aviation Administration	1,113,570	-	360,000	753,570	-	-
Iowa State University	608,400	93,600	210,600	120,600	183,600	-
Ames Community School District	75,000	25,000	25,000	25,000	-	-
Total Other Funding	**27,952,695**	**7,290,874**	**11,393,680**	**4,671,104**	**2,648,994**	**1,948,043**
TOTAL FUNDING SOURCES	**207,602,498**	**51,796,269**	**42,955,050**	**33,065,268**	**39,238,958**	**40,546,953**

This page intentionally left blank



PUBLIC SAFETY

PUBLIC SAFETY

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24	Page
EXPENDITURES:							
Police	1,000,000	1,000,000	-	-	-	-	8
Fire Safety	2,162,000	-	1,375,000	40,000	747,000	-	10
Outdoor Storm Warning System	40,000	40,000	-	-	-	-	13
TOTAL EXPENDITURES	**3,202,000**	**1,040,000**	**1,375,000**	**40,000**	**747,000**	**-**	
FUNDING SOURCES:							
Debt:							
G.O. Bonds	3,162,000	1,000,000	1,375,000	40,000	747,000	-	
City:							
Local Option Sales Tax	40,000	40,000	-	-	-		
TOTAL FUNDING SOURCES	**3,202,000**	**1,040,000**	**1,375,000**	**40,000**	**747,000**	**-**	

PUBLIC SAFETY - POLICE

PROJECT/FUNDING SOURCE	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24	Page
PROJECT:							
City-Wide Radio System	1,000,000	1,000,000	-	-	-	-	9
TOTAL PROJECT EXPENDITURES	**1,000,000**	**1,000,000**	**-**	**-**	**-**	**-**	
FUNDING SOURCES:							
Debt:							
G.O. Bonds	1,000,000	1,000,000	-	-	-	-	
TOTAL FUNDING SOURCES	**1,000,000**	**1,000,000**	**-**	**-**	**-**	**-**	

CITY-WIDE RADIO SYSTEM **PROJECT STATUS:** No Change

DESCRIPTION/JUSTIFICATION
The City currently uses an analog 800 Mhz trunked voice radio system for all departments. Although the system provides a high degree of county-wide interoperability, it is based on very old technology. Performance and coverage issues have begun to create significant problems for radio users.

A study is currently underway to evaluate the replacement of the county-wide radio system. A professional consulting firm, hired by the Story County 911 Board, has provided a preliminary cost estimate of $8,000,000 for a new system. This page reflects the City's anticipated share of the total project cost. However, the City's share of the project and revenue source may change after further study.

COMMENTS
There are approximately 446 radios currently used by the City across all departments. Radio users are placed in one of two categories – Public Safety (Fire and Police with 165 radios) and Public Service (all other departments with 281 radios). Broken down by funding source, departments are supported by the General Fund (200 radios) and Road Use Tax Fund, Utility or Enterprise funds (246 radios).

The project anticipates that the City of Ames, Story County, Iowa State University, and the rural communities in Story County will enter into a partnership to fund a new county-wide radio system. The project is still under review and may have changes prior to finalizing the budget.

2017/18	Radio Study	11,469
2018/19	Radio Study	22,531
2018/19	Shared System Infrastructure	1,000,000
2019/20	Shared System Infrastructure/COA Radios	1,000,000
	Total	2,034,000

LOCATION
City Hall, 515 Clark Ave.

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Infrastructure/Radios		1,000,000	1,000,000				
	TOTAL	**1,000,000**	**1,000,000**				
FINANCING:							
G.O. Bonds		1,000,000	1,000,000				
	TOTAL	**1,000,000**	**1,000,000**				

PROGRAM - ACTIVITY:	DEPARTMENT:	ACCOUNT NO.
Public Safety - Police	Police	380-2511-429

PUBLIC SAFETY - FIRE

PROJECT/FUNDING SOURCE	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24	Page
PROJECT:							
Fire Apparatus Replacement	2,122,000	-	1,375,000	-	747,000	-	11
Fire Station #3 Concrete Patching	40,000	-	-	40,000	-	-	12
TOTAL PROJECT EXPENDITURES	**2,162,000**	**-**	**1,375,000**	**40,000**	**747,000**	**-**	
FUNDING SOURCES							
Debt:							
G.O. Bonds	2,162,000	-	1,375,000	40,000	747,000	-	
TOTAL FUNDING SOURCES	**2,162,000**	**-**	**1,375,000**	**40,000**	**747,000**	**-**	

FIRE APPARATUS REPLACEMENT **PROJECT STATUS:** Advanced New

DESCRIPTION/JUSTIFICATION

Fire apparatus are essential for structural firefighting. The Fire Apparatus Replacement Program ensures replacement of fire apparatus at the end of their operational life. The City maintains two frontline engines (Engine 1 and Engine 2) and one ladder truck (Truck 3). The City maintains its current fleet very well, which facilitates keeping front line fire apparatus for a maximum of 15 years. Our goal is to then retain one engine and one truck as reserve apparatus for an additional 10-15 years each. However, sometimes parts availability, metal fatigue, and corrosion will take an apparatus out-of-service sooner than expected, making continued use impractical. Before being placed in reserve status, fire apparatus are typically refurbished.

Truck 3 was purchased new in 2002. Replacement cost (including new equipment) is $1,250,000. Reserve Engine 3 (purchased new in 1989) will be disposed of or sold and Truck 3 will be refurbished to serve as a reserve truck. Estimated cost is $125,000.

Engine 1 (purchased new in 2005) is not aging well and needs to be replaced. Replacement cost (including new equipment) is $747,000.

COMMENTS

Truck 3 is the City's only aerial firefighting apparatus. When out-of-service, a neighboring volunteer Fire Department is typically called to place its ladder truck on stand-by. Truck 3 is 20 years old and due for replacement. Retaining Truck 3 as a reserve will limit the necessity to call other agencies for unit stand-by.

Engine 1 is experiencing heavy corrosion and metal fatigue. The manufacturer of Engine 1 went out-of-business in 2014, making parts nearly impossible to find. Engine 1 will not be eligible for reserve status since refurbishment costs and limited parts availability are not economically feasible.

LOCATION

Fire Station #3, 2400 S. Duff Ave. (Truck 3)
Fire Station #1, 1300 Burnett Ave. (Engine 1)

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:						
Replace Truck 3	1,250,000		1,250,000			
Refurbish Truck 3 for Reserve Status	125,000		125,000			
Replace Engine 1	747,000				747,000	
TOTAL	**2,122,000**		**1,375,000**		**747,000**	
FINANCING:						
G.O. Bonds	2,122,000		1,375,000		747,000	
TOTAL	**2,122,000**		**1,375,000**		**747,000**	

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

FIRE STATION #3 CONCRETE PATCHING **PROJECT STATUS:** Delayed

DESCRIPTION/JUSTIFICATION
Fire Station #3 was constructed in 2002. Since its construction, the concrete driveway has continued to deteriorate around the structure. Public Works engineers have evaluated the driveway and recommended repair options which range from patching to complete reconstruction. Based on further input from Public Works, the project will include initial patching, rather than complete removal and replacement.

COMMENTS
The engineers have cautioned that there is a strong likelihood that the joint deterioration will spread from the patching. However, they believe that the patching should last long enough for the rest of the concrete to age to a point where complete reconstruction makes more sense.

LOCATION
Fire Station #3, 2400 S. Duff Ave.

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Construction		40,000			40,000		
	TOTAL	**40,000**			**40,000**		
FINANCING:							
G.O. Bonds		40,000			40,000		
	TOTAL	**40,000**			**40,000**		

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

PUBLIC SAFETY - STORM WARNING SYSTEM

PROJECT/FUNDING SOURCE	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24	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:** Advanced Cost Increase

DESCRIPTION/JUSTIFICATION

The City's outdoor storm warning system is made up of 18 individual sirens with a central controller in the Police Department dispatch center. Geographic expansions of the City and building density growth have created a need for additional outdoor sirens. The FY 2019/20 program provides $40,000 to purchase and install an additional siren in the Research Park area.

COMMENTS

Staff from the Police and Electric Departments have analyzed the sound propagation maps for the current siren system and compared it to recent and expected growth in the City. Two locations for additional outdoor warning sirens were identified. For FY 2018/19, $40,000 has been allocated to purchase and install a new siren in the recently annexed area east of Interstate 35. In addition, $10,330 has been allocated to upgrade the system controller software to current standards. This upgrade will also prevent outside siren system interference by encrypting the siren activation signal.

LOCATION

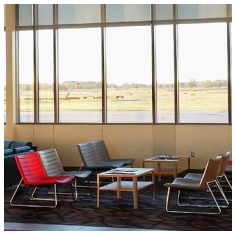
FY 2018/19: Controller software upgrade ($10,330) – City Hall, 515 Clark Avenue
FY 2018/19: New siren installation ($40,000) – East annexation area, exact location to be determined
FY 2019/20: New siren installation ($40,000) – Research Park area, exact location to be determined

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
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 Services	030-4802-429


Smart Choice.


Ames
Municipal
Airport




N650JS
Central Iowa Air Service
N245

UTILITIES

UTILITIES

EXPENDITURES:	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24	Page
Electric Services	31,325,000	17,760,000	4,815,000	3,030,000	3,785,000	1,935,000	17
Water Production/Treatment	14,513,000	2,461,000	3,075,000	2,058,000	2,562,000	4,357,000	48
Water Pollution Control	16,743,000	445,000	533,000	200,000	6,842,000	8,723,000	60
Water Distribution	10,900,000	2,950,000	1,500,000	1,600,000	1,750,000	3,100,000	68
Sanitary Sewer System	21,506,000	4,034,000	4,102,000	4,322,000	4,450,000	4,598,000	71
Storm Water Management	12,862,000	1,680,000	5,790,000	1,342,000	1,550,000	2,500,000	74
Resource Recovery	1,571,650	353,100	333,100	366,850	317,100	201,500	82
TOTAL EXPENDITURES	**109,420,650**	**29,683,100**	**20,148,100**	**12,918,850**	**21,256,100**	**25,414,500**	

FUNDING SOURCES:

Debt:						
G.O. Bonds	2,200,000	1,000,000	-	-	-	1,200,000
State Revolving Fund Loans	42,124,000	5,434,000	5,537,000	3,922,000	10,453,000	16,778,000
Total Debt Funding	44,324,000	6,434,000	5,537,000	3,922,000	10,453,000	17,978,000

UTILITIES, CONTINUED

PROJECT/FUNDING SOURCE	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
FUNDING SOURCES, continued:						
City:						
Electric Utility Fund	30,716,600	17,666,400	4,604,400	2,909,400	3,601,400	1,935,000
Water Utility Fund	13,896,500	2,536,000	2,112,000	3,289,500	3,759,000	2,200,000
Sewer Utility Fund	4,763,500	920,000	883,000	968,500	1,392,000	600,000
Storm Water Utility Fund	7,142,000	1,312,000	1,630,000	950,000	1,150,000	2,100,000
Resource Recovery Fund	1,571,650	353,100	333,100	366,850	317,100	201,500
Total City Funding	58,090,250	22,787,500	9,562,500	8,484,250	10,219,500	7,036,500
Other:						
Iowa State University	608,400	93,600	210,600	120,600	183,600	-
Federal/State Grants	6,398,000	368,000	4,838,000	392,000	400,000	400,000
Total Other Funding	7,006,400	461,600	5,048,600	512,600	583,600	400,000
Total Funding Sources	**109,420,650**	**29,683,100**	**20,148,100**	**12,918,850**	**21,256,100**	**25,414,500**

UTILITIES - ELECTRIC SERVICES

PROJECT/FUNDING SOURCE	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24	Page
PROJECT:							
Transmission:							
69 kV Transmission Reconstruction	2,080,000	520,000	520,000	520,000	520,000	-	19
Ontario Substation 69 kV Breaker Addition	1,300,000	-	1,300,000	-	-	-	20
Distribution:							
Street Light LED Retrofits	750,000	250,000	250,000	250,000	-	-	21
Street Light and Line Relocations	975,000	250,000	225,000	125,000	150,000	225,000	22
Dayton Avenue Substation Upgrade	1,150,000	-	200,000	950,000	-	-	23
Mortensen Road Transformer Protection	650,000	-	-	150,000	500,000	-	24
Vet Med Substation Switchgear Upgrade	975,000	-	-	-	125,000	850,000	25
Power Plant Capital:							
Power Plant Relay/Control Replacement	425,000	125,000	125,000	175,000	-	-	26
Ash Pond Modifications	2,200,000	2,200,000	-	-	-	-	27
Underground Storage Tank Removal	250,000	15,000	235,000	-	-	-	28
Waste Water Treatment	1,000,000	-	1,000,000	-	-	-	29
Unit 7 Surface Condenser Tube Replacement	800,000	-	800,000	-	-	-	30
Combustion Turbine 2 Controls Upgrade	100,000	-	100,000	-	-	-	31
Power Plant Building Modifications	800,000	-	-	500,000	300,000	-	32
Unit 7 Main Steam Line Insulation	210,000	-	-	210,000	-	-	33

UTILITIES - ELECTRIC SERVICES, continued

PROJECT/FUNDING SOURCE	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24	Page
Power Plant Capital, continued:							
Gas Turbine 2 Building	150,000	-	-	150,000	-	-	34
Unit 7 Closed Loop Cooling Water System	800,000	-	-	-	800,000	-	35
Coal Yard Reclamation	500,000	-	-	-	500,000	-	36
Unit 7 Exciter Replacement	250,000	-	-	-	250,000	-	37
Maintenance Management Software Upgrade	250,000	-	-	-	250,000	-	38
Power Plant Fire Protection System	250,000	-	-	-	250,000	-	39
GT 1 Remote Terminal/Meters/Relays	140,000	-	-	-	140,000	-	40
Units 5 and 6 Boiler Removal	750,000	-	-	-	-	750,000	41
Unit 7 Electrostatic Precipitator Enclosure	110,000	-	-	-	-	110,000	42
Power Plant Maintenance:							
Unit 7 Boiler Tube Repair	8,400,000	8,400,000	-	-	-	-	43
Unit 8 Superheat Replacement	2,000,000	2,000,000	-	-	-	-	44
Unit 8 Precipitator Reconstruction	1,000,000	1,000,000	-	-	-	-	45
Unit 8 Turbine Generator Overhaul	3,000,000	3,000,000	-	-	-	-	46
Unit 8 Stack Exterior Refinishing	60,000	-	60,000	-	-	-	47
TOTAL PROJECT EXPENDITURES	**31,325,000**	**17,760,000**	**4,815,000**	**3,030,000**	**3,785,000**	**1,935,000**	
FUNDING SOURCES:							
City:							
Electric Utility Fund	30,716,600	17,666,400	4,604,400	2,909,400	3,601,400	1,935,000	
Other:							
Iowa State University	608,400	93,600	210,600	120,600	183,600	-	
TOTAL FUNDING SOURCES	**31,325,000**	**17,760,000**	**4,815,000**	**3,030,000**	**3,785,000**	**1,935,000**	

69KV TRANSMISSION RECONSTRUCTION **PROJECT STATUS:** Cost Increase

DESCRIPTION/JUSTIFICATION
This is a multi-year project that will reconstruct the deteriorated portions of 69kV transmission pole lines. This project will replace 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. Line replacement candidates include the original MidAmerican 69kV tie line that connects the Ames Plant Switchyard to the MidAmerican 69kV source point located south of Ames on Highway 69, the Ames Plant to the Top-O-Hollow line, the Top-O-Hollow line to the Stange Road Substation Line, and the Vet Med line to the Mortensen Road Substation line. The total project will require at least five years and will reconstruct approximately 11 miles of deteriorated 69kV line. Capacity and reliability improvements will include the reconstruction of distribution lines which are underbuilt on existing transmission lines and/or adding new distribution underbuild along the same construction route line.

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 18%.

LOCATION
Various

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Engineering		280,000	70,000	70,000	70,000	70,000	
Construction		1,800,000	450,000	450,000	450,000	450,000	
	TOTAL	**2,080,000**	**520,000**	**520,000**	**520,000**	**520,000**	
FINANCING:							
Electric Utility Fund		1,705,600	426,400	426,400	426,400	426,400	
Iowa State University		374,400	93,600	93,600	93,600	93,600	
	TOTAL	**2,080,000**	**520,000**	**520,000**	**520,000**	**520,000**	

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

ONTARIO SUBSTATION 69KV BREAKER ADDITION **PROJECT STATUS:** Delayed

DESCRIPTION/JUSTIFICATION

This project will add 69kV line, replace the existing 13.8kV switchgear, add transformer breakers, replace all 13.8kV and 69kV relays and controls, upgrade the station service and feeders, replace fuses, upgrade the obsolete 69kV bus potential transformers, replace the lightning arresters, and upgrade the grounding and shielding to the Ontario Road Substation.

This project will improve the reliability of transmission service to the Ontario distribution substation. This will also improve service for customers served by this substation by shortening the duration of unexpected outages.

Electric utility engineering practices recommend the use of 69kV transmission breakers and the use of switchgear main breakers at distribution substations.

COMMENTS

Cost change to the estimated ISU share of this project.

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 9%. This estimate is based on an 18% load-ratio-share (estimated 50% of the project cost) of the 69kV facilities.

LOCATION

Ontario Substation, Delaware Avenue and Utah Drive

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Construction		1,300,000		1,300,000			
	TOTAL	**1,300,000**		**1,300,000**			
FINANCING:							
Electric Utility Fund		1,183,000		1,183,000			
Iowa State University		117,000		117,000			
	TOTAL	**1,300,000**		**1,300,000**			

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Utilities - Electric Transmission	Electric Services	

STREET LIGHT LED RETROFITS **PROJECT STATUS:** Cost Decrease

DESCRIPTION/JUSTIFICATION

This project will transition nearly all existing High Pressure Sodium (HPS) and Mercury Vapor (MV) street light fixtures to Light Emitting Diode (LED) fixtures. This transition will take place over a 6-year period while performing routine maintenance activities. This project is expected to replace all lights within the City of Ames electric system and approximately 7,500 roadway and security lights. In comparison to HPS and MV fixtures, LED lights have a longer life expectancy and consume significantly less energy. LED fixtures have a life expectancy of at least 20 years whereas the HPS fixtures only have a life expectancy of 5-10 years. LED fixtures will contribute to a more sustainable Ames by decreasing the City's carbon footprint, lowering maintenance costs, and are predicted to generate a return investment within 10 years. LED lights provide instant illumination, reduce light glare distraction for nighttime drivers, and the downward directed light will reduce night sky light contamination.

COMMENTS

The purpose of this project is to allow the street light maintenance workers to retrofit LED lights during routine maintenance on HPS and MV lights in order to minimize labor costs. Since this effort will be based on routine maintenance, specific streets or areas will not be targeted. Beginning in FY2022/23, street light replacement will move to the Operations & Maintenance budget.

FY 2016/17	Material - Actual	169,429
FY 2017/18	Material - Actual	234,136
FY 2018/19	Material	250,000
FY 2019/20	Material	250,000
FY 2020/21	Material	250,000
FY 2021/22	Material	250,000
	Total	$1,403,565

LOCATION

City of Ames & Ames Electric Service Territory

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:						
Materials	750,000	250,000	250,000	250,000		
TOTAL	**750,000**	**250,000**	**250,000**	**250,000**		
FINANCING:						
Electric Utility Fund	750,000	250,000	250,000	250,000		
TOTAL	**750,000**	**250,000**	**250,000**	**250,000**		

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

STREET LIGHT AND LINE RELOCATIONS **PROJECT STATUS:** Delayed

DESCRIPTION/JUSTIFICATION

This work is being coordinated with Public Works' road improvement projects and will require the relocation of various electric facilities, including street lights, services, and distribution lines.

LOCATION

2019/20: Grand Avenue Extension ($100,000); Campustown Public Improvements ($100,000), Hickory Drive (Westbrook Drive to Woodland Street) ($50,000)

2020/21: Campustown Public Improvements ($50,000); East 20th Street (Duff Avenue to Meadowlane Avenue) ($50,000); Lincoln Way Alley (Duff Avenue to Sherman Avenue) ($50,000); 9th Street (Grand Avenue to Clark Avenue) ($25,000) and various locations associated with Asphalt Street Pavement Improvements ($50,000) and Concrete Pavement Improvements ($50,000)

2021/22: Cherry Avenue Extension ($100,000); and various locations associated with Asphalt Street Pavement Improvements ($25,000)

2022/23: Woodland Street (Hickory Drive to Forest Glen Street) ($75,000); 13th Street (Wilson Avenue to Duff Avenue) ($50,000); and various locations associated with Asphalt Street Pavement Improvements ($25,000)

2023/24: Airport Road (University Boulevard to South Riverside Drive) ($100,000); Lincoln Way (Marshall Avenue to Franklin Avenue) ($50,000); and various locations associated with Asphalt Street Pavement Improvements ($25,000) and Concrete Pavement Improvements ($50,000)

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:						
Construction	975,000	250,000	225,000	125,000	150,000	225,000
TOTAL	**975,000**	**250,000**	**225,000**	**125,000**	**150,000**	**225,000**
FINANCING:						
Electric Utility Fund	975,000	250,000	225,000	125,000	150,000	225,000
TOTAL	**975,000**	**250,000**	**225,000**	**125,000**	**150,000**	**225,000**

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Utilities - Electric Extension/Improvements	Electric Services	530-4823-489

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

DESCRIPTION/JUSTIFICATION

This project will upgrade two existing 13.8kV 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 Avenue Substation, Pullman Street

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
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:	**DEPARTMENT:**	**ACCOUNT NO.**
Utilities - Electric Distribution	Electric Services	

MORTENSEN ROAD SUBSTATION 69KV TRANSFORMER PROTECTION

PROJECT STATUS: Delayed

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

The 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 while providing 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 2021/22	Engineering	150,000
FY 2022/23	Construction	500,000
	Total	$ 650,000

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 18%.

LOCATION

Mortensen Road Substation, 3040 Mortensen Road

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:						
Engineering	150,000			150,000		
Construction	500,000				500,000	
TOTAL	**650,000**			**150,000**	**500,000**	
FINANCING:						
Electric Utility Fund	533,000			123,000	410,000	
Iowa State University	117,000			27,000	90,000	
TOTAL	**650,000**			**150,000**	**500,000**	

PROGRAM - ACTIVITY: Utilities - Electric Distribution

DEPARTMENT: Electric Services

ACCOUNT NO.

VET MED SUBSTATION SWITCHGEAR REPLACEMENT **PROJECT STATUS:** Cost Increase Delayed

DESCRIPTION/JUSTIFICATION

This project will replace the original 13.8kV metal clad distribution switchgear at the Vet Med Substation. This is a change from a previous CIP project where staff was considering the upgrade of existing equipment. The Vet Med expansion in 2011 installed two new transformers and switchgear but the metal clad switchgear was not upgraded at that time. This project will replace the metal clad switchgear to add a main breaker and update older existing relays to current standards. The original "stacked" formation switchgear will be replaced with a much safer "single-row" formation. The addition of a main breaker will improve safety for workers and improve system reliability. The use of low maintenance breakers and relays will provide protection that operates quickly and selectively.

These upgrades are consistent with electric utility industry engineering practices.

FY 2022/23	Engineering	125,000
FY 2023/24	Construction	850,000
	Total	$ 975,000

LOCATION

Vet Med Substation, South Riverside Drive

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Engineering		125,000				125,000	
Construction		850,000					850,000
	TOTAL	**975,000**				**125,000**	**850,000**
FINANCING:							
Electric Utility Fund		975,000				125,000	850,000
	TOTAL	**975,000**				**125,000**	**850,000**

PROGRAM - ACTIVITY: **DEPARTMENT:** **ACCOUNT NO.**

Utilities - Electric Distribution Electric Services

POWER PLANT RELAY/CONTROL REPLACEMENT **PROJECT STATUS:** Delayed

DESCRIPTION/JUSTIFICATION

This project will replace existing electro-mechanical 13.8kV feeders and 4.160kV bus differential relays in the Power Plant. The existing relays are obsolete electro-mechanical devices which are becoming difficult to maintain and repair since the 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, maintenance-intensive, electro-mechanical relays. This project will likely take three years to complete.

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

COMMENTS

2019/20	Engineering, Materials and Labor (estimated)	125,000
2020/21	Materials and Labor (estimated)	125,000
2021/22	Materials and Labor (estimated)	175,000
	Total	$ 425,000

LOCATION

Power Plant, 200 East 5th Street

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Construction		425,000	125,000	125,000	175,000		
	TOTAL	**425,000**	**125,000**	**125,000**	**175,000**		
FINANCING:							
Electric Utility Fund		425,000	125,000	125,000	175,000		
	TOTAL	**425,000**	**125,000**	**125,000**	**175,000**		

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

ASH POND MODIFICATIONS **PROJECT STATUS:** Delayed Cost Increase

DESCRIPTION/JUSTIFICATION

In response to the United States Environment Protection Agency's (EPA) Coal Combustion Residuals (CCR) regulation and the ash handling requirements of the City of Ames Steam Electric Plant (COA-SEP), the ash site impoundment will be undergoing significant changes and modifications, especially in this fiscal year (2018-19) and (2019-20). The CCR regulation was officially published in the *Federal Register* in April 2015 and included a series of compliance milestones, several which have passed and been met. Some of the compliance milestones, especially the initial ones, are primarily documentation of engineering assessments of various features and aspects of the ash site. The delay in this project is a result of changes to the EPA's CCR regulation and the City's development of a plan to meet the regulation.

The current ash site impoundment has been in service since Unit 8 became operational back in 1982. From 1982 to 2016, the impoundment received ash from burning coal and co-firing refuse derived fuel (RDF). In 2016, the City's Steam Electric Plant (Units 7 & 8) was converted to burn natural gas (and co-fire RDF). Currently, the ash site impoundment contains ash from both coal and RDF. This site has filled up to the point that under certain conditions the usable volume and surface area of the impoundment are marginally adequate. The current usable volume and surface area of the ash impoundment is estimated to be 1/3 (1/2 of the original design).

By October 2020, the City plans to reclaim and restore as much of the original ash site impoundment's configuration as possible. We plan on doing this by dewatering, excavating, and moving the ash material from approximately 2/3 of impoundment before filling in the remaining 1/3 of the impoundment. This 1/3 fill will contain CCR and RDF ash that will be permanently closed-in-place. The 2/3 area cleaned of all ash will be re-lined with clay and/or a composite material so that it can hold RDF ash in the future. This work will increase the current impoundment volume (as compared to the original) from 1/3 to 2/3 and the surface area from 1/2 to 2/3, respectively.

The cost, schedule for work, and recent history of the project are as follows:

FY 2017/18	Engineering - Actual	68,598
FY 2018/19	Engineering	231,402
FY 2019/20	Engineering	200,000
FY 2019/20	Excavation & Re-lining	2,000,000
	Total	$ 2,500,000

LOCATION

Ash Pond, 13th Street

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Engineering		200,000	200,000				
Construction		2,000,000	2,000,000				
	TOTAL	**2,200,000**	**2,200,000**				
FINANCING:							
Electric Utility Fund		2,200,000	2,200,000				
	TOTAL	**2,200,000**	**2,200,000**				

PROGRAM - ACTIVITY:	DEPARTMENT:	ACCOUNT NO.
Utilities - Electric Production	Electric Services	530-4879-489

UNDERGROUND STORAGE TANK REMOVAL **PROJECT STATUS:** No Change

DESCRIPTION/JUSTIFICATION
There are two 42,000 gallon underground tanks in service that store #2 fuel oil for Units #7 and #8. These original tanks were installed during the construction of Unit #8. They have been in the ground for 30 years and are functional with no operational issues at this time. Testing completed in 2011 indicated that there are no problems. However, due to the age of these tanks (30 years is the expected safe life) it is possible that an oil leak could occur, causing an expensive cleanup. Now that the plant has been converted to natural gas, these tanks are no longer needed and should be removed from the ground.

COMMENTS
It is prudent to plan to remove these tanks rather than leave them in the ground.

LOCATION
Power Plant, 200 East 5th Street

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Engineering		15,000	15,000				
Equipment and Labor		235,000		235,000			
	TOTAL	**250,000**	**15,000**	**235,000**			
FINANCING:							
Electric Utility Fund		250,000	15,000	235,000			
	TOTAL	**250,000**	**15,000**	**235,000**			

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Utilities - Electric Production	Electric Services	530-4883-489

WASTE WATER TREATMENT **PROJECT STATUS:** New

DESCRIPTION/JUSTIFICATION

The recent National Pollutant Discharge Elimination System (NPDES) permit requires the Power Plant to perform a much greater degree of treatment to the water discharged to the storm sewer from the cooling towers. The Power Plant is currently performing an effluent monitoring study as a part of the permit as well as exploring options for treatment. The price for implementing such treatment equipment could be very high. The amount reflected in this project will have to be adjusted as a detailed design is determined.

COMMENTS

2020/21	Engineering, Materials, and Labor	$1,000,000
		$1,000,000

LOCATION

Power Plant, 200 East 5th Street

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:						
Engineering	1,000,000		1,000,000			
Construction						
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 7 SURFACE CONDENSER TUBE REPLACEMENT **PROJECT STATUS:** Delayed

DESCRIPTION/JUSTIFICATION

Unit 7 surface condenser tubes were replaced in 2007 with Original Equipment Manufacturer materials of admiralty brass. The main alloys in admiralty brass are Copper and Zinc, both of which are now regulated metals on our National Pollutant Discharge Elimination System permit that was issued by the Iowa Department of Natural Resources in July of 2017. These tubes need to be replaced with stainless steel to maintain compliance with the permit by April 2022.

COMMENTS

2020/21	Engineering	$ 50,000
2020/21	Materials and Labor	750,000
		$800,000

LOCATION

Power Plant, 200 East 5th Street

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Materials and Labor		800,000		800,000			
	TOTAL	**800,000**		**800,000**			
FINANCING:							
Electric Utility Fund		800,000		800,000			
	TOTAL	**800,000**		**800,000**			

PROGRAM - ACTIVITY: **DEPARTMENT:** **ACCOUNT NO.**

Utilities - Electric Production Electric

COMBUSTION TURBINE 2 CONTROLS UPGRADE **PROJECT STATUS:** Advanced Cost Decrease

DESCRIPTION/JUSTIFICATION

This project is to replace the current outdated controls on Combustion Turbine 2 (CT2) with updated controls. The current control hardware and software is over 11 years old and is no longer supported by GE. This project will also integrate the Balance of Plant (BOP) control system that is currently run on a separate system. The BOP control system is a unique system that was created specifically for the Ames site when CT2 was built. It is used to operate all of the balance of plant equipment on the Combustion Turbine. It is also used to remotely run the Combustion Turbine by allowing the Operator to control it from the Power Plant control room. The BOP system does not allow the Operator to see all of the Combustion Turbine controls and is supported by a system that is not able to be run on new computers.

This project will replace the BOP system software and hardware, replace the outdated Combustion Turbine control software and hardware, and allow for remote operation from the Power Plant control room through a reliable connection with full view of all controls.

COMMENTS

LOCATION

Power Plant, 200 East 5th Street

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Engineering/Design/Construction		100,000		100,000			
	TOTAL	**100,000**		**100,000**			
FINANCING:							
Electric Utility Fund		100,000		100,000			
	TOTAL	**100,000**		**100,000**			

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Utilities - Electric Production	Electric Services	

POWER PLANT BUILDING MODIFICATIONS **PROJECT STATUS:** No Change

DESCRIPTION/JUSTIFICATION

This project will bring much needed improvements to the Power Plant. The Power Plant is a City building that has gone through several changes over the last 50 years. This project is a multi-year effort to make the building more energy efficient, meet current building requirements, and install security features.

2017/18	Repair/replace block windows and install card reader security system	350,000
2018/19	HVAC replacement for old relay room	150,000
2021/22	Office: design and build new ADA compliant entrance	500,000
2022/23	Turbine Deck Improvements: clean and paint walls, replace south windows, and epoxy the floor	300,000
	Total	$ 1,300,000

LOCATION

Power Plant, 200 East 5th Street

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Engineering		50,000			50,000		
Construction		750,000			450,000	300,000	
	TOTAL	**800,000**			**500,000**	**300,000**	
FINANCING:							
Electric Utility Fund		800,000			500,000	300,000	
	TOTAL	**800,000**			**500,000**	**300,000**	

PROGRAM - ACTIVITY: **DEPARTMENT:** **ACCOUNT NO.**

Utilities - Electric Production Electric Services

UNIT 7 MAIN STEAM LINE INSULATION REPLACEMENT **PROJECT STATUS:** No Change

DESCRIPTION/JUSTIFICATION

The entire main steam line on Unit 7, from the boiler to the turbine, is insulated with asbestos insulation. The asbestos has caused issues with performing repairs around the line as well as performing high energy pipe testing. The asbestos will be entirely removed prior to the installation of new insulation and lagging.

COMMENTS

2021/22	Engineering	$ 10,000
2021/22	Materials and Labor	200,000
	Total	$210,000

LOCATION

Power Plant, 200 East 5th Street

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Engineering		10,000			10,000		
Construction		200,000			200,000		
	TOTAL	**210,000**			**210,000**		
FINANCING:							
Electric Utility Fund		210,000			210,000		
	TOTAL	**210,000**			**210,000**		

PROGRAM - ACTIVITY: Utilities - Electric Production

DEPARTMENT: Electric Services

ACCOUNT NO.

GAS TURBINE #2 BUILDING **PROJECT STATUS:** New

DESCRIPTION/JUSTIFICATION

Currently there are multiple small enclosures housing different auxiliary equipment for Gas Turbine #2 (GT2). The enclosures are outfitted with individual unit heaters to keep equipment from reaching freezing temperatures. There is also piping between the enclosures that are heat traced to keep from freezing. If one of the enclosure heaters malfunctions and the temperature drops below freezing, equipment will be damaged and require costly repairs or replacement. This unit is located at a remote site so keeping all of the individual heating systems maintained and constantly monitoring the climate status has proved to be a difficult task. In order to remove a majority of this risk, an insulated building will be erected to enclose this equipment and heating will be used to maintain a proper climate.

COMMENTS

2021/22	Engineering, Materials, and Labor	$150,000
		$150,000

LOCATION

Power Plant, 200 East 5th Street

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Engineering		150,000			150,000		
Construction							
	TOTAL	**150,000**			**150,000**		
FINANCING:							
Electric Utility Fund		150,000			150,000		
	TOTAL	**150,000**			**150,000**		

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Utilities - Electric Production	Electric Services	

UNIT 7 CLOSED LOOP COOLING WATER SYSTEM **PROJECT STATUS:** Cost Increase

DESCRIPTION/JUSTIFICATION

This project is to install a new closed loop glycol cooling system on Unit 7. Currently all of the equipment on Unit 7 that needs to be cooled (boiler feed pumps, hydrogen coolers, air heater, force draft fan bearings, and the exciter) are cooled with open loop systems from well water, cooling tower water, or City water. These waters are difficult to treat and cause equipment to get dirty quickly. This prevents a good heat exchange and higher running temperatures. A closed loop glycol system will be more economical and allow for better cooling efficiency.

COMMENTS

2022/23	Engineering, Material and Labor	$800,000
		$800,000

LOCATION
Power Plant, 200 East 5th Street

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Engineering		50,000				50,000	
Construction		750,000				750,000	
	TOTAL	**800,000**				**800,000**	
FINANCING:							
Electric Utility Fund		800,000				800,000	
	TOTAL	**800,000**				**800,000**	

PROGRAM - ACTIVITY: **DEPARTMENT:** **ACCOUNT NO.**
Utilities - Electric Production Electric Services

COAL YARD RECLAMATION **PROJECT STATUS:** Delayed

DESCRIPTION/JUSTIFICATION
In the spring of 2016, the Power Plant was converted from coal-fired to natural gas-fired. This project is to reclaim the area used for coal storage by transforming it into a green space.

COMMENTS

LOCATION
Power Plant, 200 East 5th Street

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Engineering		50,000				50,000	
Construction		450,000				450,000	
	TOTAL	**500,000**				**500,000**	
FINANCING:							
Electric Utility Fund		500,000				500,000	
	TOTAL	**500,000**				**500,000**	

PROGRAM - ACTIVITY: **DEPARTMENT:** **ACCOUNT NO.**
Utilities - Electric Production Electric Services

UNIT 7 EXCITER REPLACEMENT **PROJECT STATUS:** Delayed

DESCRIPTION/JUSTIFICATION

This project is to replace the Unit 7 exciter. The current exciter is water-cooled by copper tubes that run through the electronics. These tubes are fouled and plugged; efforts to clear the tubes have not been successful. To reduce the temperature, the exciter must constantly have the cabinet doors open with a large fan blowing air across the hardware. The replacement will install new updated controls and a new cooling system. This will allow for better cooling, more control, and better exciter monitoring.

COMMENTS

2022/23	Engineering, materials, and labor	$250,000
		$250,000

LOCATION

Power Plant, 200 East 5th Street

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:						
Engineering	50,000				50,000	
Construction	200,000				200,000	
TOTAL	**250,000**				**250,000**	
FINANCING:						
Electric Utility Fund	250,000				250,000	
TOTAL	**250,000**				**250,000**	

PROGRAM - ACTIVITY: Utilities - Electric Production

DEPARTMENT: Electric Services

ACCOUNT NO.

MAINTENANCE MANAGEMENT SOFTWARE UPDATE **PROJECT STATUS:** New

DESCRIPTION/JUSTIFICATION

The current Computerized Maintenance Management Software (CMMS) is outdated and very difficult to use. It has limited abilities and is not able to perform tasks that the management team has recognized as a priority. These tasks include implementing operating data into work orders, performing operator rounds, generating work orders from findings, and easily navigating work status. A current, up-to-date, and user friendly CMMS will serve as the backbone of a Power Plant maintenance program.

COMMENTS

2022/23	Engineering, Materials, and Labor	$250,000
		$250,000

LOCATION

Power Plant, 200 East 5th Street

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Engineering		250,000				250,000	
Construction							
	TOTAL	**250,000**				**250,000**	
FINANCING:							
Electric Utility Fund		250,000				250,000	
	TOTAL	**250,000**				**250,000**	

PROGRAM - ACTIVITY: **DEPARTMENT:** **ACCOUNT NO.**

Utilities - Electric Production Electric Services

POWER PLANT FIRE PROTECTION SYSTEM **PROJECT STATUS:** No Change

DESCRIPTION/JUSTIFICATION
The City's insurance carrier has made several loss prevention recommendations for the Power Plant. The cost, schedule for installation, and recent history of the recommendations are as follows:

FY 2011/12	Engineering for Plant Fire Plan	30,000
FY 2014/15	Gas Turbine 2	45,997
FY 2015/16	Gas Turbine 1	204,003
FY 2017/18	GT Fire Protection	782,005
FY 2022/23	Turbine Generator #8	250,000
	Total	$ 1,312,005

COMMENTS
A serious fire in any one of the systems can force the outage of unit 7, unit 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	2019/20	2020/21	2021/22	2022/23	2023/24
COST:						
Construction	250,000				250,000	
TOTAL	**250,000**				**250,000**	
FINANCING:						
Electric Utility Fund	250,000				250,000	
TOTAL	**250,000**				**250,000**	

PROGRAM - ACTIVITY: Utilities - Electric Production

DEPARTMENT: Electric Services

ACCOUNT NO.

GAS TURBINE #1 REMOTE TERMINAL UNIT, METERS, AND PROTECTIVE RELAYS

PROJECT STATUS: New

DESCRIPTION/JUSTIFICATION

The current remote terminal unit, meters, and protective relays are original to the 1972 unit and need to be updated to more modern equipment.

COMMENTS

2022/23	Engineering, Materials, and Labor	$140,000
		$140,000

LOCATION

Power Plant, 200 East 5th Street

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Engineering		140,000				140,000	
Construction							
	TOTAL	**140,000**				**140,000**	
FINANCING:							
Electric Utility Fund		140,000				140,000	
	TOTAL	**140,000**				**140,000**	

PROGRAM - ACTIVITY: Utilities - Electric Production

DEPARTMENT: Electric Services

ACCOUNT NO.

UNITS 5 AND 6 BOILER REMOVAL **PROJECT STATUS:** Delayed Cost Increase

DESCRIPTION/JUSTIFICATION

This project is to remove the unit 5 boiler, the unit 5 turbine/generator, and the unit 6 Boiler since they were decommissioned in 1986. The equipment is very outdated and unusable in its current condition. The area this equipment occupies can be used to serve the plant by providing expanded maintenance shop space.

COMMENTS

2022/23	Engineering, demolition and removal	$750,000
		$750,000

LOCATION
Power Plant, 200 East 5th Street

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Engineering		50,000					50,000
Demolition and Removal		700,000					700,000
	TOTAL	**750,000**					**750,000**
FINANCING:							
Electric Utility Fund		750,000					750,000
	TOTAL	**750,000**					**750,000**

PROGRAM - ACTIVITY: **DEPARTMENT:** **ACCOUNT NO.**
Utilities - Electric Production Electric Services

UNIT 7 ELECTROSTATIC PRECIPITATOR ENCLOSURE **PROJECT STATUS:** New

DESCRIPTION/JUSTIFICATION

The bottom of the unit 7 precipitator is currently open to the outside. During cold weather, the fly ash in the hoppers and transport lines fall below the dew point temperature and result in plugging. Operators must manually rod these plugs to get the material to move again. The bottom section needs to be enclosed and heated so that the fly ash material will maintain constant flow.

COMMENTS

2023/24	Engineering, Materials, and Labor	$110,000
		$110,000

LOCATION

Power Plant, 200 East 5th Street

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Engineering		110,000					110,000
Construction							
	TOTAL	**110,000**					**110,000**
FINANCING:							
Electric Utility Fund		110,000					110,000
	TOTAL	**110,000**					**110,000**

PROGRAM - ACTIVITY:	DEPARTMENT:	ACCOUNT NO.
Utilities - Electric Production	Electric Services	

UNIT 7 BOILER TUBE REPAIR **PROJECT STATUS:** Cost Increase

DESCRIPTION/JUSTIFICATION

This project is to replace the tubing in the water wall and superheat sections of the unit 7 boiler. 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 this unit through maintenance, engineering, and re-tubing of the boiler. After switching from coal to natural gas, the tubes were found to be degrading much faster than anticipated. The high moisture created during the combustion of natural gas combined with chlorides and acidic gases from RDF combustion cause the metal tube surface to corrode very quickly. The current boiler tube section thicknesses have been dramatically reduced and need to be replaced. An Inconel coating will be added to the new tubes to help them stand-up-to the harsh environment. The cost estimates include labor and materials.

COMMENTS

2015/16	Engineering	5,150
2016/17	Engineering	125,796
2017/18	Engineering	50,000
2019/20	Materials/labor	8,400,000
	Total	$ 8,580,946

LOCATION

Power Plant, 200 East 5th Street

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Construction		8,400,000	8,400,000				
	TOTAL	**8,400,000**	**8,400,000**				
FINANCING:							
Electric Utility Fund		8,400,000	8,400,000				
	TOTAL	**8,400,000**	**8,400,000**				

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

UNIT 8 SUPERHEAT REPLACEMENT **PROJECT STATUS:** Cost Increase

DESCRIPTION/JUSTIFICATION

This project is to replace the tubing in the superheats section of the unit 8 boiler. After switching from coal to natural gas, the tubes were found to be degrading much faster than anticipated. The high moisture created during the combustion of natural gas combined with chlorides and acidic gases from RDF combustion cause the metal tube surface to corrode very quickly. The current superheat tube thicknesses have been dramatically reduced and need to be replaced. An Inconel coating will be added to the new tubes to help them stand-up-to the harsh environment.

COMMENTS

2017/18	Engineering	$ 50,000
2018/19	Materials and Labor – Superheat	4,500,000
2019/20	Materials and Labor – Superheat	2,000,000
	Total	$6,550,000

LOCATION

Power Plant, 200 East 5th Street

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Construction - Superheat		2,000,000	2,000,000				
	TOTAL	**2,000,000**	**2,000,000**				
FINANCING:							
Electric Utility Fund		2,000,000	2,000,000				
	TOTAL	**2,000,000**	**2,000,000**				

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Utilities - Electric Production	Electric Services	530-4864-489

UNIT 8 PRECIPITATOR RECONSTRUCTION **PROJECT STATUS:** Advanced

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. The precipitator is nearly 20,000 square feet and has an approximate height of 155 to 210 feet. Due to the precipitator's large size, this project will require scaffolding and will be a costly repair.

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

LOCATION
Power Plant, 200 East 5th Street

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
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:	**DEPARTMENT:**	**ACCOUNT NO.**
Utilities - Electric Production	Electric Services	530-4884-489

UNIT 8 TURBINE GENERATOR OVERHAUL **PROJECT STATUS:** Advanced

DESCRIPTION/JUSTIFICATION

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

COMMENTS

During the last overhaul/inspection of unit 8 in FY 2012/13, the contractor was able to repair or rebuild most of the worn parts but noted that some parts will need to be replaced during the next overhaul. Turbine generator parts have long delivery lead 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 at the beginning of the year and then installing them at the end of the same fiscal year. Parts to be ordered include: a first stage nozzle, several blading stages, and one diaphragm. Other parts to be procured include: a 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.

2019/20	Material/Parts	1,000,000
2019/20	Construction	2,000,000
	Total	$ 3,000,000

LOCATION

Power Plant, 200 East 5th Street

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Materials/Parts		1,000,000	1,000,000				
Construction		2,000,000	2,000,000				
	TOTAL	**3,000,000**	**3,000,000**				
FINANCING:							
Electric Utility Fund		3,000,000	3,000,000				
	TOTAL	**3,000,000**	**3,000,000**				

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Utilities - Electric Production	Electric Services	530-4852-489

UNIT 8 STACK EXTERIOR REFINISHING **PROJECT STATUS:** Advanced Cost Decrease

DESCRIPTION/JUSTIFICATION

The coating on the outside of the unit 8 stack has delaminated and needs to be repaired. The exterior of the stack will be prepped prior to a new coating application.

COMMENTS

2020/21	Engineering, Materials, and Labor	$60,000
		$60,000

LOCATION

Power Plant, 200 East 5th Street

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Engineering		10,000		10,000			
Construction		50,000		50,000			
	TOTAL	**60,000**		**60,000**			
FINANCING:							
Electric Utility Fund		60,000		60,000			
	TOTAL	**60,000**		**60,000**			

PROGRAM - ACTIVITY: **DEPARTMENT:** **ACCOUNT NO.**

Utilities - Electric Production Electric Services

UTILITIES - WATER PRODUCTION/TREATMENT

PROJECT/FUNDING SOURCE	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24	Page
PROJECT:							
Advanced Metering Infrastructure	859,000	204,000	211,000	218,000	226,000	-	50
Water Plant Facility Improvements	1,215,000	457,000	-	-	758,000	-	51
Old Water Treatment Plant Demolition	3,485,000	1,750,000	1,735,000	-	-	-	52
Wellhead Rehabilitation	50,000	50,000	-	-	-	-	53
Well Field Standby Power	904,000	-	904,000	-	-	-	54
Lime Lagoon Expansion	1,268,000	-	125,000	118,000	1,025,000	-	55
TSC Improvements	837,000	-	100,000	737,000	-	-	56
Distribution System Monitoring Network	985,000	-	-	985,000	-	-	57
East Industrial Elevated Tank	4,610,000	-	-	-	553,000	4,057,000	58
SAM Pump Station Improvements	300,000	-	-	-	-	300,000	59
TOTAL PROJECT EXPENDITURES	**14,513,000**	**2,461,000**	**3,075,000**	**2,058,000**	**2,562,000**	**4,357,000**	
FUNDING SOURCES:							
Debt:							
State Revolving Fund Loans	8,095,000	1,750,000	1,735,000	-	553,000	4,057,000	

UTILITIES - WATER PRODUCTION/TREATMENT, continued

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
FUNDING SOURCES, continued						
City:						
Water Utility Fund	5,321,500	711,000	612,000	1,689,500	2,009,000	300,000
Sewer Utility Fund	418,500	-	50,000	368,500	-	-
Total City Funding	5,740,000	711,000	662,000	2,058,000	2,009,000	300,000
Other:						
FEMA Hazard Mitigation Grant	678,000	-	678,000	-	-	-
TOTAL FUNDING SOURCES	**14,513,000**	**2,461,000**	**3,075,000**	**2,058,000**	**2,562,000**	**4,357,000**

ADVANCED METERING INFRASTRUCTURE **PROJECT STATUS:** No Change

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 being implemented will accommodate electric meters as well, should that be desired in the future.

COMMENTS
The water meter reading system installed prior to 2015 was 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 replacement program began in FY 2014/15, focusing initially on meter locations that were problematic for the Meter Readers to access. Much of the next two years focused on replacing meters in areas that are not served by the Ames Municipal Electric System, which, as a result, are locations that are more expensive to read on a per-meter basis. The final years will pick up the balance of the meter inventory.

The cost to replace 1,400 meters per year is budgeted in the Water Meter Division's operating budget (400 meters for new construction and 1,000 for routine meter replacement). The cost for an additional 1,100 replacements is included annually as a part of this CIP project. This is the same number of meters per year as was shown in last year's CIP. The work shown in FY 2022/23 is the final year of this multi-year project. The total cost for this work, including previous years, is $1,914,000.

LOCATION
City-wide

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Equipment		859,000	204,000	211,000	218,000	226,000	
	TOTAL	**859,000**	**204,000**	**211,000**	**218,000**	**226,000**	
FINANCING:							
Water Utility Fund		859,000	204,000	211,000	218,000	226,000	
	TOTAL	**859,000**	**204,000**	**211,000**	**218,000**	**226,000**	

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

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

DESCRIPTION/JUSTIFICATION

This project involves annual equipment repairs, major maintenance activities, replacement, and upgrades at the Water Treatment Plant, Technical Services Complex (TSC), and associated remote facilities such as wells, elevated tanks, and booster pump stations. Each of the identified items are stand-alone projects.

COMMENTS

The schedule for these improvements is as follows:

2019/20	457,000	SCADA / Security Modifications ($100,000); Distributed Antenna System ($357,000)
2022/23	758,000	Add (2) High Service Pumps at E 13th St. Pump Station ($370,000); Yard Piping Improvements ($107,000); Switchgear Preventative Maintenance ($81,000); Supervisory Control and Data Acquisition (SCADA) Server Replacement ($200,000)
Total	$1,215,000	

Supervisory Control and Data Acquisition (SCADA) & Security Modifications (FY 2019/20) are to address modifications and improvements to these systems that come to light after utilizing them for approximately two years. The **Distributed Antenna System** (FY 2019/20) for the new Water Plant is partly to address a code requirement to extend public safety radio coverage throughout the facility, and partly to extend cellular phone coverage to the interior of the facility to meet both operational and safety needs. The new Water Plant was initially constructed with **two high service pumps**, with provisions to add four additional pumps over time. Two of the four additional pumps are planned to be added in FY 2022/23, along with the **necessary yard piping improvements**. The **main electrical switchgear** at the new plant is scheduled for routine preventative maintenance every five years. The **SCADA Server Replacement** (FY 2022/23) is a planned replacement of the critical computer components of the plant's control system. Additional improvements may be identified in future years. The schedule may change in response to impending failures, regulatory agency requirements, etc.

LOCATION

Technical Services Complex, 300 E 5th Street; Water Treatment Plant, 1800 E 13th Street

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Engineering		71,500	50,500			21,000	
Construction		943,500	406,500			537,000	
Equipment		200,000				200,000	
	TOTAL	**1,215,000**	**457,000**			**758,000**	
FINANCING:							
Water Utility Fund		1,215,000	457,000			758,000	
	TOTAL	**1,215,000**	**457,000**			**758,000**	

PROGRAM - ACTIVITY:	DEPARTMENT:	ACCOUNT NO.
Utilities - Water Treatment	Water and Pollution Control	510-3915-489 510-3916-489

DEMOLITION OF OLD WATER TREATMENT PLANT **PROJECT STATUS:** Schedule Change

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

COMMENTS
The new Water Treatment Plant began operation during the summer of 2017. Now that 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. The schedule has been adjusted to show the work taking place over a period of two years beginning in FY 2019/20.

LOCATION
300 E. 5th Street

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:						
Engineering/Admin	382,000	250,000	132,000			
Construction	3,103,000	1,500,000	1,603,000			
TOTAL	**3,485,000**	**1,750,000**	**1,735,000**			
FINANCING:						
Drinking Water State Revolving Fund	3,485,000	1,750,000	1,735,000			
TOTAL	**3,485,000**	**1,750,000**	**1,735,000**			

PROGRAM - ACTIVITY:	DEPARTMENT:	ACCOUNT NO.
Utilities - Water Production	Water and Pollution Control	512-3960-489

WELLHEAD REHABILITATION **PROJECT STATUS:** Scope Change Cost Change

DESCRIPTION/JUSTIFICATION
This project involves the rehabilitation of the above-ground components of seven existing municipal supply wells.

COMMENTS
Each year the Water Plant's operating budget includes funds to rehabilitate four or five of the twenty-two wells. The routine well rehabilitation focuses on the below-ground portions of the wells such as the screens, casings, and pumps. In general, it does not address the condition of the above-ground parts of a well.

This project will focus primarily on replacing and updating the well controls in seven wells. It will involve replacing the existing control panels with two panels for each well, separating the high voltage power from the low voltage controls. It will also replace the outdated programmable logic controllers (PLC's) that are obsolete and no longer have replacements available. The project will also sandblast and repaint the above-ground discharge heads of 10 wells, preventing corrosion that could lead to contamination and a premature well failure.

The scope change comes from adding an additional component to the controls rehabilitation. The antennas used to communicate between the wells and the Water Plant will now be replaced to address episodic communication failures.

The schedule for these improvements is as follows:

2018/19	370,000	Already included in the current year adopted CIP
2019/20	50,000	Additional amount needed to include antenna replacements
Total	$420,000	

LOCATION
Southeast Well Field and Hunziker Youth Sports Complex

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Construction - Antennas		50,000	50,000				
	TOTAL	**50,000**	**50,000**				
FINANCING:							
Water Utility Fund		50,000	50,000				
	TOTAL	**50,000**	**50,000**				

PROGRAM - ACTIVITY:	DEPARTMENT:	ACCOUNT NO.
Utilities - Water Production	Water and Pollution Control	510-3950-489

WELL FIELD STANDBY POWER **PROJECT STATUS:** No 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. Installing standby power for a portion of the wells was one of the recommendations contained in the utility's 2005 Vulnerability Assessment and Emergency Response Plan. Now that higher priority recommendations in that planning document 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 five 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 new North River Valley Well Field will include the first standby power on a water source.

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 is shown as a FEMA Hazard Mitigation Grant with a 25% local match from the Water Utility Fund.

LOCATION
Hunzkier Youth Sports Complex

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Engineering		108,000		108,000			
Construction		796,000		796,000			
	TOTAL	**904,000**		**904,000**			
FINANCING:							
Water Utility Fund		226,000		226,000			
FEMA Hazard Mitigation Grant		678,000		678,000			
	TOTAL	**904,000**		**904,000**			

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

LIME LAGOON IMPROVEMENTS **PROJECT STATUS:** Scope Change Cost Change

DESCRIPTION/JUSTIFICATION
This project includes the ongoing major maintenance to the lime lagoons, as well as periodic improvements to increase available working capacity. The timing for constructing additional cells is staggered over time to match growth in demand.

COMMENTS
Lime residuals from the water softening process are stored and dewatered in large storage lagoons. The material is removed annually in the fall and recycled by applying it to farm fields as an agricultural liming agent. The cost of the annual removal and application is budgeted in the operating budget.

A new scope element has been added to the project in FY 20/21 to rebuild the trench drains in the bottoms of the three oldest cells. These drains aid in the dewatering process. Over time, they have plugged with fine lime particles and may have been damaged due to the excavation of lime from the cells using a back hoe.

The project that will partially subdivide the large north cell has been delayed one year, based on both the timing of the anticipated capacity need and the workload of staff to be able to undertake the project. The cost change for this element of the project is solely the inflationary cost increase resulting from delaying the project by one year.

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

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Engineering		133,000		15,000	118,000		
Construction		1,135,000		110,000		1,025,000	
	TOTAL	**1,268,000**		**125,000**	**118,000**	**1,025,000**	
FINANCING:							
Water Utility Fund		1,268,000		125,000	118,000	1,025,000	
	TOTAL	**1,268,000**		**125,000**	**118,000**	**1,025,000**	

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

TECHNICAL SERVICES COMPLEX IMPROVEMENTS **PROJECT STATUS:** Cost Change

DESCRIPTION/JUSTIFICATION

This project adds an elevator to the two story Technical Services Complex, and constructs a new storage building. This project was shown last year as a part of the Water Plant Facility Improvements page.

COMMENTS

The Technical Services Complex (TSC) is adjacent to the old Water Treatment Plant and is home to the Water Meter Division and the Laboratory Services Division. When the building was constructed in the early 1990's, it was designed to accommodate a future elevator. With the old Water Plant's planned demolition, the only access to the second story will be via stairs. (Previously, when ADA access was needed to the second story, a vehicle could drive up to the Water Plant's upper level loading dock.) Adding an elevator will provide increased access to the second floor for both employees and visitors. It will also allow a safer way for the Laboratory staff to move heavy, bulky chemicals and equipment between floors.

A free-standing storage building will also be constructed to the south of the TSC building, in an area currently occupied by the old Water Plant. This will provide additional storage bays for equipment, vehicles. One bay will be heated for use by the Laboratory staff to clean and prepare sampling equipment.

LOCATION

Technical Services Complex, 300 E 5th Street

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Engineering		167,000		100,000	67,000		
		670,000			670,000		
	TOTAL	**837,000**		**100,000**	**737,000**		
FINANCING:							
Water Utility Fund		418,500		50,000	368,500		
Sewer Utility Fund		418,500		50,000	368,500		
	TOTAL	**837,000**		**100,000**	**737,000**		

PROGRAM - ACTIVITY: **DEPARTMENT:** **ACCOUNT NO.**

Utilities - Water Production Water and Pollution Control

DISTRIBUTION SYSTEM MONITORING NETWORK **PROJECT STATUS:** No Change

DESCRIPTION/JUSTIFICATION
This project will install a network of sensors in the drinking water distribution system to monitor pressure fluctuations in real time. The sensors will be connected to the Water Plant's Supervisory Control and Data Acquisition (SCADA) network, allowing both treatment plant staff and distribution system staff access to the information.

COMMENTS
Pressure management in distribution systems is fundamental to providing safe drinking water. The loss of pressure can potentially allow ground water to contaminate the system. Pressure fluctuations can negatively impact the physical integrity of the pipes and result in water main breaks. When a water main breaks, it causes a pressure wave that is carried through the pipe network by the water. These sudden pressure changes, or transients, can be detected by pressure sensing instruments inserted into a water main. By installing and continuously monitoring a network of sensors, treatment plant operators and field crews can pinpoint the location of a water main break much more easily and quickly, improving the response time to isolate and repair a break. It also will provide real-time data to better determine if a boil water advisory is needed and to better delineate the areas that should be covered by a boil advisory.

Currently, pressure monitoring is done only at a very small number of locations that are connected to the Water Plant's SCADA system, such as pump stations and elevated tanks. This project includes the addition of up to 25 monitoring nodes installed at key locations in the distribution system. The data would be monitored by the Water Plant Supervisory Control and Data Acquisition (SCADA) system, serving as an extension of the control system into the distribution system.

LOCATION
Various locations

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Design		105,000			105,000		
Equipment/Installation		880,000			880,000		
	TOTAL	**985,000**			**985,000**		
FINANCING:							
Water Utility Fund		985,000			985,000		
	TOTAL	**985,000**			**985,000**		

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

EAST INDUSTRIAL ELEVATED TANK **PROJECT STATUS:** New

DESCRIPTION/JUSTIFICATION
This project involves the construction of a new one million gallon elevated tank ("water tower") to serve the newly annexed industrial area along Lincoln Way east of Interstate 35.

COMMENTS
In order to meet the anticipated water demands in this new area in east Ames, a new elevated tank is required. The tank will help stabilize pressures at the far eastern edge of the city limits, as well as provide the necessary volume for firefighting purposes in what is envisioned as a moderate to heavy industrial neighborhood.

LOCATION
Intersection of East Lincoln Way and 580th Avenue

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:						
Engineering	922,000				553,000	369,000
Construction	3,688,000					3,688,000
TOTAL	**4,610,000**				**553,000**	**4,057,000**
FINANCING:						
Drinking Water State Revolving Fund	4,610,000				553,000	4,057,000
TOTAL	**4,610,000**				**553,000**	**4,057,000**

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

SAM PUMP STATION IMPROVEMENTS **PROJECT STATUS:** New

DESCRIPTION/JUSTIFICATION
This project will add a fourth pump ($155,000) to the pump station located at State Avenue and Mortensen Road (SAM). It will also add standby power ($145,000) to the SAM pump station.

COMMENTS
In 2003, the water distribution system was split into two separate pressure zones to accommodate growth in the west and southwest portions of the city. To provide the increased pressure to the new western pressure zone, a booster pump station was built at the intersection of State Avenue and Mortensen Road. Initially only three pumps were installed in the station, with accommodations for a fourth future pump. As growth in that area has increased, it now seems prudent to add the fourth pump.

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, but is not currently provided for the booster pump station. This project will add a standby generator to the facility.

LOCATION
Intersection of State Avenue and Mortensen Road

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Engineering		25,000					25,000
Construction		275,000					275,000
	TOTAL	**300,000**					**300,000**
FINANCING:							
Water Utility Fund		300,000					300,000
	TOTAL	**300,000**					**300,000**

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

UTILITIES - WATER POLLUTION CONTROL

PROJECT/FUNDING SOURCE	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24	Page
PROJECT:							
WPC Plant Facility Improvements	940,000	95,000	150,000	-	695,000	-	61
WPC Headworks Mofifications	4,283,000	150,000	-	-	-	4,133,000	62
Watershed-Based Nutrient Reduction	1,000,000	200,000	200,000	200,000	200,000	200,000	63
Digester Improvements	183,000	-	183,000	-	-	-	64
Cogeneration System Maintenance	4,590,000	-	-	-	4,590,000	-	65
Nutrient Reduction Modifications	5,650,000	-	-	-	1,260,000	4,390,000	66
Electrical System Maintenance	97,000	-	-	-	97,000	-	67
TOTAL PROJECT EXPENDITURES	**16,743,000**	**445,000**	**533,000**	**200,000**	**6,842,000**	**8,723,000**	
FUNDING SOURCES:							
Debt:							
State Revolving Fund Loans	14,373,000	-	-	-	5,850,000	8,523,000	
City:							
Sewer Utility Fund	2,370,000	445,000	533,000	200,000	992,000	200,000	
TOTAL FUNDING SOURCES	**16,743,000**	**445,000**	**533,000**	**200,000**	**6,842,000**	**8,723,000**	

WPC PLANT FACILITY IMPROVEMENTS **PROJECT STATUS:** 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 new grain storage bin is needed in conjunction with the anticipated acquisition of additional farm ground needed for biosolids disposal. An upgrade to the samplers at the Raw Water Pump Station are proposed to provide increased safety and improved equipment life. A remote storage building will be constructed north of the treatment plant to protect miscellaneous farm and maintenance equipment. Replacement of the facility's Programmable Logic Controllers (PLC's) is recommended due to their age. Replacement of the Supervisory Control and Data Acquisition (SCADA) servers is scheduled for every five years. The cost and scope change is a result of adding the remote storage building in FY 20/21.

The schedule for these improvements is as follows.

2019/20	95,000	Grain Storage Bin ($45,000); Upgraded Sampler Station for Raw Water Pump Station ($50,000)
2020/21	150,000	Remote Storage Building ($150,000)
2022/23	695,000	Replace PLC's ($635,000) & SCADA Servers ($60,000)
Total	$ 940,000	

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

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:						
Construction & Equipment	940,000	95,000	150,000		695,000	
TOTAL	**940,000**	**95,000**	**150,000**		**695,000**	
FINANCING:						
Sewer Utility Fund	940,000	95,000	150,000		695,000	
TOTAL	**940,000**	**95,000**	**150,000**		**695,000**	

PROGRAM - ACTIVITY:	DEPARTMENT:	ACCOUNT NO.
Utilities - WPC Plant	Water and Pollution Control	520-3416-489 520-3417-489

WPC HEADWORKS MODIFICATIONS **PROJECT STATUS:** New

DESCRIPTION/JUSTIFICATION
This project will perform a temporary lining of the grit "splitter box" in FY 19/20, and a complete replacement of the entire headworks system beginning in FY 23/24.

COMMENTS
The headworks of the Water Pollution Control (WPC) Facility is where the very first treatment steps take place, including the capture and removal of rags and large debris, as well as the removal of heavy sand and grit. These materials can plug downstream valves and equipment, and are extremely abrasive to pumps and piping.

The temporary relining of the splitter box ($150,000) will take place in FY 19/20. The complete replacement project will take place over two years; only the first year is shown on this page. The cost break down for individual elements of the project is as follows.

		Engineering	Construction	Total
FY 19/20	Reline Grit Splitter Box	18,000	132,000	150,000
		18,000	132,000	150,000
FY 23/24 -	Replace Grit Conveyor	346,000	1,689,000	2,035,000
FY 24/25	Bar Screen Improvements	599,000	2,926,000	3,525,000
	Grit Wash Clarifier	74,000	359,000	433,000
	Replace GRU's with New Head Cells	545,000	2,660,000	3,205,000
	RWPS Piping and Supports	241,000	1,179,000	1,420,000
		1,805,000	8,813,000	10,618,000

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

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:						
Engineering	1,122,000	18,000				1,104,000
Construction	3,161,000	132,000				3,029,000
TOTAL	**4,283,000**	**150,000**				**4,133,000**
FINANCING:						
Clean Water State Revolving Fund	4,133,000					4,133,000
Sewer Utility Fund	150,000	150,000				
TOTAL	**4,283,000**	**150,000**				**4,133,000**

PROGRAM - ACTIVITY:	DEPARTMENT:	ACCOUNT NO.
Utilities - WPC Plant	Water and Pollution Control	520-3463-489

WATERSHED-BASED NUTRIENT REDUCTION **PROJECT STATUS:** New

DESCRIPTION/JUSTIFICATION

The Water Pollution Control Facility is being converted to a nutrient removal treatment technology over a period of 20 years. Separate from the work that will occur inside the treatment plant, watershed-based improvements performed by the City can be included in the Iowa Nutrient Reduction Exchange. Staff is currently working with the Iowa League of Cities and other large utilities to encourage the Iowa Department of Natural Resources to allow these off-site nutrient reductions to be "banked" as credit towards any future, more stringent nutrient reduction requirements imposed on the WPC Facility. This project sets aside $200,000 per year that can be put towards urban watershed improvements that have a nutrient reduction component.

COMMENTS

Projects undertaken will not only have a nutrient reduction element, but will also be projects that provide additional, ancillary benefits such as: flood risk reduction, increased recreational opportunities; improved wildlife habitat; urban storm water management; and drinking water source protection. It is possible that a project may not be undertaken every year. Funds may be allowed to accumulate to enable a larger-scale project to be undertaken.

LOCATION

Throughout the community; specific locations will vary by year

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Engineering		150,000	30,000	30,000	30,000	30,000	30,000
Construction		850,000	170,000	170,000	170,000	170,000	170,000
	TOTAL	**1,000,000**	**200,000**	**200,000**	**200,000**	**200,000**	**200,000**
FINANCING:							
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 - WPC Plant	Water and Pollution Control	520-3422-489

DIGESTER IMPROVEMENTS **PROJECT STATUS:** Delayed

DESCRIPTION/JUSTIFICATION

The WPC Facility uses anaerobic digestion as a core process for treating wastewater solids. The digestion process stabilizes waste, reduces the volume of 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.

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.

COMMENTS

This page now shows the final element of a multi-year project that includes replacing pumping, piping, valves, gas safety equipment, and brings the digester complex to current day building codes. This final element will replace the three waste activated sludge pumps. This project is being delayed one year so that the functioning of these pumps can be meshed with the nutrient reduction project.

The project schedule and budget for the full scope of work are as follows:

2017/18	1,239,000	Replace pump room pipes and valves ($543,000); Replace primary pumps ($360,000); replace secondary pumps ($336,000)
2018/19	2,600,000	Replace methane gas piping and safety equipment ($1,404,000); Repaint pump room ($340,000); Fire/Electric code Safety Modifications ($856,000)
2020/21	183,000	Replace three waste activated sludge pumps ($183,000)
Total	$ 4,022,000	

LOCATION

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

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Engineering & Administration		23,000		23,000			
Construction & Equipment		160,000		160,000			
	TOTAL	**183,000**		**183,000**			
FINANCING:							
Sewer Utility Fund		183,000		183,000			
	TOTAL	**183,000**		**183,000**			

PROGRAM - ACTIVITY: **DEPARTMENT:** **ACCOUNT NO.**

Utilities - WPC Plant Water and Pollution Control

COGENERATION SYSTEM MAINTENANCE **PROJECT STATUS:** No Change

DESCRIPTION/JUSTIFICATION

The WPC Facility uses anaerobic digestion as a core treatment process for wastewater solids. The digestion process stabilizes waste, reduces the volume of 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 incorporates the conclusions from the October 17, 2017 workshop with City Council. Work already underway in FY 2018/19 includes the addition of a new dual fuel boiler that will operate alongside the existing cogeneration engines, as well as replacement of the controls and switchgear. The work planned for FY 2022/23 assumes that the level of gas production achieved continues to justify the ongoing use of the cogeneration system, and includes the replacement of Methane Generator 2 with a new engine, the addition of gas conditioning, and construction of a new high strength waste receiving station.

2018/19	$ 1,515,000	Demolition of MG #1 ($115,000), new boiler ($453,000), controls ($370,000), switchgear ($577,000)
2022/23	$ 4,590,000	Demolition of MG #2 ($205,000) new engine ($1,422,000), gas conditioning ($1,688,000), new receiving station ($1,275,000)

LOCATION

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

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:						
Engineering	688,000				688,000	
Construction	3,902,000				3,902,000	
TOTAL	**4,590,000**				**4,590,000**	
FINANCING:						
Clean Water State Revolving Fund	4,590,000				4,590,000	
TOTAL	**4,590,000**				**4,590,000**	

PROGRAM - ACTIVITY: Utilities - WPC Plant

DEPARTMENT: Water and Pollution Control

ACCOUNT NO.

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

DESCRIPTION/JUSTIFICATION

In early 2013, the Iowa Department of Natural Resources (IDNR) 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." A feasibility study was completed in early 2019 that identified the City's desired approach to meet the nutrient standards. The cost estimates shown below are built around the "Conventional Activated Sludge – Biological Nutrient Removal" treatment scheme, implemented over a 20 year period. The actual treatment scheme will need to be confirmed closer to construction so that advances in technology and the state of the art can be incorporated.

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. When the next permit is issued, the City will be required to submit a plan to the Iowa Department of Natural Resources 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 subsequent NPDES permits.

2017/18	$ 285,000	Preliminary Engineering Report
2022/23 – 2024/25	10,200,000	Phase 1 Engineering and Construction
2027/28 – 2028/29	14,260,000	Phase 2 Engineering and Construction
2037/38 – 2038/39	15,170,000	Phase 3 Engineering and Construction
Total	$ 39,915,000	

The above schedule would construct back-up capacity for the trickling filters in Phase 1, with engineering beginning in FY 22/23 and construction occurring over the following two years. The second phase would begin in approximately FY 27/28 and would remove the trickling filters and construct additional nutrient removal capacity. The third and final phase would begin in approximately FY 37/38, bringing on-line the full nutrient reduction capacity. This work will replace other major investments that would otherwise be needed, including: an "integrated fixed-film activated sludge" modification to meet the anticipated lower ammonia discharge limits ($3.16 million); and a trickling filter media replacement ($10 million).

LOCATION

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

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:						
Engineering	1,260,000				1,260,000	
Construction	4,390,000					4,390,000
TOTAL	**5,650,000**				**1,260,000**	**4,390,000**
FINANCING:						
Clean Water State Revolving Fund	5,650,000				1,260,000	4,390,000
TOTAL	**5,650,000**				**1,260,000**	**4,390,000**

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Utilities - WPC Plant	Water and Pollution Control	

WPC ELECTRICAL SYSTEM MAINTENANCE **PROJECT STATUS:** No Change

DESCRIPTION/JUSTIFICATION
This project covers the periodic maintenance of the overall electrical system for the facility. It includes routine preventative maintenance projects intended to sustain the safety and functionality of the electrical components at a high level. It also may include periodic major repair or replacement projects not directly associated with other CIP projects.

COMMENTS
A main component of the facility's electrical system is the switchgear, which is a series of electrical cabinets that contain the disconnect switches and circuit breakers used to protect and isolate electrical equipment. Over time, the equipment can build up dust, insects, and other debris. The connections can become loose over time, and the insulation can degrade. These issues can create a reliability problem, and can also pose a serious fire hazard. To help ensure that the equipment performs as needed, a routine schedule of preventative maintenance has been used, with the main switchgear and the Total Energy Building switchgear being cleaned every five years. Both sets of switchgear are planned for routine maintenance in FY 2022/23.

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

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Construction		97,000				97,000	
	TOTAL	**97,000**				**97,000**	
FINANCING:							
Sewer Utility Fund		97,000				97,000	
	TOTAL	**97,000**				**97,000**	

PROGRAM - ACTIVITY: Utilities - WPC Plant
DEPARTMENT: Water and Pollution Control
ACCOUNT NO.

UTILITIES - WATER DISTRIBUTION

PROJECT/FUNDING SOURCE	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24	Page
PROJECT:							
Water System Improvements	8,150,000	1,400,000	1,500,000	1,600,000	1,750,000	1,900,000	69
Campustown Public Improvements	2,750,000	1,550,000	-	-	-	1,200,000	70
TOTAL PROJECT EXPENDITURES	**10,900,000**	**2,950,000**	**1,500,000**	**1,600,000**	**1,750,000**	**3,100,000**	
FUNDING SOURCES:							
Debt:							
G.O. Bonds	2,200,000	1,000,000	-	-	-	1,200,000	
City:							
Water Utility Fund	8,575,000	1,825,000	1,500,000	1,600,000	1,750,000	1,900,000	
Sewer Utility Fund	125,000	125,000	-	-	-	-	
Total City Funding	8,700,000	1,950,000	1,500,000	1,600,000	1,750,000	1,900,000	
TOTAL FUNDING SOURCES	**10,900,000**	**2,950,000**	**1,500,000**	**1,600,000**	**1,750,000**	**3,100,000**	

WATER SYSTEM IMPROVEMENTS **PROJECT STATUS:** No 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.

Rusty water complaints highlight 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 10.4 miles of active 4" water main (estimated $15 million to install a new main and transfer existing services to the new main). Improvements to these water mains will result in reduced maintenance costs. Replacing these mains will also result in improved fire safety and water quality. Annual funding has been increased in this program to accelerate replacement of utilities.

LOCATION

2019/20 Water Main Replacement:
East Avenue, E 3rd Street, Des Moines Street, and various other locations to be determined

2019/20 Water Service Transfer:
E 2nd Street (Duff Avenue to Des Moines Street, Borne Avenue east 600 feet) and various other locations to be determined

The cost of these public infrastructure projects are a high priority need to continue to improve the public water system to provide water quality and fire-fighting capacity to the community.

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:						
Engineering	1,190,000	210,000	225,000	240,000	250,000	265,000
Construction	6,960,000	1,190,000	1,275,000	1,360,000	1,500,000	1,635,000
TOTAL	**8,150,000**	**1,400,000**	**1,500,000**	**1,600,000**	**1,750,000**	**1,900,000**
FINANCING:						
Water Utility Fund	8,150,000	1,400,000	1,500,000	1,600,000	1,750,000	1,900,000
TOTAL	**8,150,000**	**1,400,000**	**1,500,000**	**1,600,000**	**1,750,000**	**1,900,000**

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

CAMPUSTOWN PUBLIC IMPROVEMENTS **PROJECT STATUS:** No Change

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. Water mains along Lincoln Way (Hayward Avenue to Welch Avenue) also date back to the early 1900s, so this program also includes improvements at this location. 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 on Welch Avenue.

LOCATION

2019/20	Welch Avenue (Lincoln Way to Knapp Street) and Lincoln Way (Hayward Avenue to Welch Avenue)
2020/21	No Project
2021/22	No Project
2022/23	No Project
2023/24	Welch Avenue (Chamberlain Avenue to Hunt Street) and Chamberlain Place

Planning funds were included in this project in 2017/18 to coordinate outreach/stakeholder input for the City's project. Design will commence in 2018/19 with the City's construction following in 2019/20.

Bicycle facilities as part of this project (ON 16 Welch Ave. on-street treatment from Mortensen Road to Union Drive) are estimated to cost $120,000 and will be incorporated into the 2019/20 and 2023/24 projects.

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:						
Engineering	410,000	160,000				250,000
Construction	2,340,000	1,390,000				950,000
TOTAL	**2,750,000**	**1,550,000**				**1,200,000**
FINANCING:						
G.O. Bonds	2,200,000	1,000,000				1,200,000
Water Utility Fund	425,000	425,000				
Sewer Utility Fund	125,000	125,000				
TOTAL	**2,750,000**	**1,550,000**				**1,200,000**

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

UTILITIES - SANITARY SEWER SYSTEM

PROJECT/FUNDING SOURCE	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24	Page
PROJECT:							
Sanitary Sewer System Improvements	21,206,000	3,934,000	4,052,000	4,272,000	4,400,000	4,548,000	72
Clear Water Diversion	300,000	100,000	50,000	50,000	50,000	50,000	73
TOTAL PROJECT EXPENDITURES	**21,506,000**	**4,034,000**	**4,102,000**	**4,322,000**	**4,450,000**	**4,598,000**	
FUNDING SOURCES:							
Debt:							
State Revolving Fund Loans	19,656,000	3,684,000	3,802,000	3,922,000	4,050,000	4,198,000	
City:							
Sewer Utility Fund	1,850,000	350,000	300,000	400,000	400,000	400,000	
TOTAL FUNDING SOURCES	**21,506,000**	**4,034,000**	**4,102,000**	**4,322,000**	**4,450,000**	**4,598,000**	

SANITARY SEWER SYSTEM IMPROVEMENTS **PROJECT STATUS:** No 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. The goal of this program is to identify and remove major sources of inflow/infiltration as a means of lowering the peak wet weather flow at the treatment plant.

COMMENTS

System improvement locations have been identified through the Sanitary Sewer System Evaluation 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, which commenced in FY 2015/16. 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 allows.

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Engineering		3,420,000	684,000	684,000	684,000	684,000	684,000
Construction		17,786,000	3,250,000	3,368,000	3,588,000	3,716,000	3,864,000
	TOTAL	**21,206,000**	**3,934,000**	**4,052,000**	**4,272,000**	**4,400,000**	**4,548,000**
FINANCING:							
State Revolving Fund (SRF)		19,656,000	3,684,000	3,802,000	3,922,000	4,050,000	4,198,000
Sewer Utility Fund		1,550,000	250,000	250,000	350,000	350,000	350,000
	TOTAL	**21,206,000**	**3,934,000**	**4,052,000**	**4,272,000**	**4,400,000**	**4,548,000**

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

CLEAR WATER DIVERSION **PROJECT STATUS:** Cost 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.

The Cost Change is due to response of the many citizen requests for collector line to be installed around the community.

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Construction		300,000	100,000	50,000	50,000	50,000	50,000
	TOTAL	**300,000**	**100,000**	**50,000**	**50,000**	**50,000**	**50,000**
FINANCING:							
Sewer Utility Fund		300,000	100,000	50,000	50,000	50,000	50,000
	TOTAL	**300,000**	**100,000**	**50,000**	**50,000**	**50,000**	**50,000**

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

UTILITIES - STORM WATER

PROJECT/FUNDING SOURCE	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24	Page
PROJECT:							
Storm Water Erosion Control Program	4,072,000	800,000	630,000	642,000	750,000	1,250,000	75
Low Point Drainage Improvements	1,300,000	200,000	200,000	200,000	200,000	500,000	76
Storm Water Improvement Program	2,050,000	250,000	250,000	400,000	500,000	650,000	77
Storm Water System Analysis	360,000	180,000	180,000	-	-	-	78
Storm Water Facility Rehabilitation	300,000	150,000	150,000	-	-	-	79
Storm Water Quality Improvements	500,000	100,000	100,000	100,000	100,000	100,000	80
River Flooding Mitigation	4,280,000	-	4,280,000	-	-	-	81
TOTAL PROJECT EXPENDITURES	**12,862,000**	**1,680,000**	**5,790,000**	**1,342,000**	**1,550,000**	**2,500,000**	
FUNDING SOURCES:							
City:							
Storm Water Utility Fund	7,142,000	1,312,000	1,630,000	950,000	1,150,000	2,100,000	
Other:							
Grant Funds	5,720,000	368,000	4,160,000	392,000	400,000	400,000	
TOTAL FUNDING SOURCES	**12,862,000**	**1,680,000**	**5,790,000**	**1,342,000**	**1,550,000**	**2,500,000**	

STORM WATER EROSION CONTROL PROGRAM **PROJECT STATUS:** No 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

2019/20: Squaw Creek (various locations from 6th Street to 13th Street) (coordinated with Parks & Recreation)
2020/21: Clear Creek bank stabilization (north of Oakland Street) (coordinated with Parks & Recreation)
2021/22: Waterway north of Bloomington Townhomes (Eisenhower Lane)
2022/23: Clear Creek bank stabilization (at Utah Drive area) and Inis Grove Park outlet (near north Duff Avenue restroom facilities)
2023/24: Clear Creek bank stabilization (west of British Columbia Avenue), Unnamed tributary east of 4415 Lincoln Way, and College Creek (Clemens Boulevard/Hemingway Drive area)

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

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:						
Engineering	800,000	160,000	120,000	120,000	150,000	250,000
Construction	3,272,000	640,000	510,000	522,000	600,000	1,000,000
TOTAL	**4,072,000**	**800,000**	**630,000**	**642,000**	**750,000**	**1,250,000**
FINANCING:						
Storm Water Utility Fund	2,132,000	432,000	250,000	250,000	350,000	850,000
State Revolving Fund (SRF)	1,940,000	368,000	380,000	392,000	400,000	400,000
TOTAL	**4,072,000**	**800,000**	**630,000**	**642,000**	**750,000**	**1,250,000**

PROGRAM - ACTIVITY:	DEPARTMENT:	ACCOUNT NO.
Utilities - Storm Water	Public Works	560-8636-489 561-8636-489

LOW POINT DRAINAGE IMPROVEMENTS **PROJECT STATUS:** No 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 specifically 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 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.

LOCATION

2019/20 Top O Hollow Road (1100 block), 28th Street (1100 block), and Kennedy Street (1100 block)
2020/21 McKinley Dr (1400/1500 block), Barr Dr, Jensen Ave (2100/2200 block), Stonebrook Rd/Harrison Rd area, and Fletcher Blvd (3700 block)
2021/22 Ferndale Avenue/Hunziker Drive area and Northridge Lane
2022/23 Garnet Drive/Meadow Place and Christofferson Park
2023/24 South of Ken Maril Road (extend earthen berm behind 300/400 block), East Lincoln Way (near 2005/2017 E. Lincoln Way), Hoover Avenue/Adams Street intersection, Garnet Drive/Meadow Place intersection, and S Dayton Avenue/Isaac Newton Drive intersection

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Engineering		260,000	40,000	40,000	40,000	40,000	100,000
Construction		1,040,000	160,000	160,000	160,000	160,000	400,000
	TOTAL	**1,300,000**	**200,000**	**200,000**	**200,000**	**200,000**	**500,000**
FINANCING:							
Storm Water Utility Fund		1,300,000	200,000	200,000	200,000	200,000	500,000
	TOTAL	**1,300,000**	**200,000**	**200,000**	**200,000**	**200,000**	**500,000**

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Utilities - Storm Water	Public Works	560-8658-489

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 Water System Analysis may identify the need for additional improvements as part of the program.

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Engineering		295,000	35,000	35,000	50,000	75,000	100,000
Construction		1,755,000	215,000	215,000	350,000	425,000	550,000
	TOTAL	**2,050,000**	**250,000**	**250,000**	**400,000**	**500,000**	**650,000**
FINANCING:							
Storm Water Utility Fund		2,050,000	250,000	250,000	400,000	500,000	650,000
	TOTAL	**2,050,000**	**250,000**	**250,000**	**400,000**	**500,000**	**650,000**

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Utilities - Storm Water	Public Works	560-8642-489

STORM WATER SYSTEM ANALYSIS **PROJECT STATUS:** No Change

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 an accurate mapping of the storm sewer system within the Geographic Information System (GIS) as it does with other utility systems. As the Sanitary Sewer System Evaluation highlighted, removing clean water from the sanitary sewer system can cause additional pressure 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.

2017/18	$180,000
2018/19	$180,000
2019/20	$180,000
2020/21	$180,000
Total Funding	$720,000

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Engineering		360,000	180,000	180,000			
	TOTAL	**360,000**	**180,000**	**180,000**			
FINANCING:							
Storm Water Utility Fund		360,000	180,000	180,000			
	TOTAL	**360,000**	**180,000**	**180,000**			

PROGRAM - ACTIVITY:	DEPARTMENT:	ACCOUNT NO.
Utilities - Storm Water	Public Works	560-8605-489

STORM WATER FACILITY REHABILITATION PROGRAM **PROJECT STATUS:** No Change

DESCRIPTION/JUSTIFICATION

In accordance with the *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 in residential areas. 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.

LOCATION

2019/20	Bloomington Heights West Subdivision (west of Hyde Avenue)
2020/21	Northridge Heights Subdivision (near GW Carver)
2021/22	No project
2022/23	No project
2023/24	No project

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Engineering		60,000	30,000	30,000			
Construction		240,000	120,000	120,000			
	TOTAL	**300,000**	**150,000**	**150,000**			
FINANCING:							
Storm Water Utility Fund		300,000	150,000	150,000			
	TOTAL	**300,000**	**150,000**	**150,000**			

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Utilities - Storm Water	Public Works	560-8625-489

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 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	2019/20	2020/21	2021/22	2022/23	2023/24
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 Water 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	560-8601-489

FLOOD MITIGATION – RIVER FLOODING **PROJECT STATUS:** Delayed

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, 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.

On November 29, 2016 as part of the Special Meeting of the City Council, direction was provided for staff to work toward Hydraulic Alternative No. 6 (2010 Event), which is for "full build" (channel shaping). This project will increase channel conveyance of Squaw Creek at the South Duff Avenue bridge by removing excess deposition of sediment, establishing a multi-stage channel, reducing steepness and instability of highly eroding streambanks, thawing management, and establishing a vegetated stream buffer to improve the creek/bridge alignment, creek capacity, and hydraulic flows utilizing natural channel design (multi-stage channel to reconnect the creek with the floodplain), streambank toe protection and native vegetation stabilization for more resilience in large storm events.

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. A consultant was retained in FY 2015/16 to begin the detailed design work. Outside grant funding through FEMA are being pursued through a nationally-competitive grant application submitted January 2019. If successful, funding will become available January 2020.Consideration of upstream measures within the greater Squaw Creek watershed should continue in order to further reduce flood impacts to the community.

Total Project Funding

2015/16	$ 644,000
2016/17	$ 504,000
2020/21	$4,280,000
Total	**$5,428,000**

LOCATION

South Duff Avenue and Squaw Creek

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Construction		4,280,000		4,280,000			
	TOTAL	**4,280,000**		**4,280,000**			
FINANCING:							
Storm Water Utility Fund		500,000		500,000			
FEMA Hazard Mitigation Grant		3,780,000		3,780,000			
	TOTAL	**4,280,000**		**4,280,000**			

PROGRAM - ACTIVITY: **DEPARTMENT:** Public Works **ACCOUNT NO.**

UTILITIES - RESOURCE RECOVERY

PROJECT/FUNDING SOURCE	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24	Page
PROJECT:							
Resource Recovery System Improvements	1,571,650	353,100	333,100	366,850	317,100	201,500	83
TOTAL PROJECT EXPENDITURES	**1,571,650**	**353,100**	**333,100**	**366,850**	**317,100**	**201,500**	
FUNDING SOURCES:							
City:							
Resource Recovery Fund	1,571,650	353,100	333,100	366,850	317,100	201,500	
TOTAL FUNDING SOURCES	**1,571,650**	**353,100**	**333,100**	**366,850**	**317,100**	**201,500**	

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

2019/20 Preventive Maintenance materials for the replacement of the RDS rollers and chains ($46,250); conveyor upgrades ($19,550); #1 mill armored teeth and combs ($39,300); #1 mill planetary motor/drum motor ($30,000); replace in-plant air knives ($8,000); replacement conveyor belts ($7,000); DPH Circuit Breaker to Starter Conversion ($78,000); replace scale house on the tipping floor ($25,000); replace C-5 Conveyor ($100,00) - $353,100

2020/21 Preventive Maintenance materials for the replacement of the RDS rollers and chains ($46,250); conveyor upgrades ($19,550); #1 mill armored teeth and combs ($39,300); maintenance/inventory control software ($18,000); dust pipe replacement ($100,000); conveyor chutes ($20,000); replace C-7 belt ($32,000); customer convenience center/household hazardous materials area ($30,000); remodel education area ($10,000); energy efficiency upgrades ($18,000) - $333,100

2021/22 Preventive Maintenance materials for the replacement of the RDS rollers and chains ($75,000); conveyor upgrades ($19,550); #1 mill armored teeth and combs ($39,300); replace concrete on the east side of the process area ($40,000); DPH Circuit Breaker to Starter Conversion ($78,000); fire system air compressor ($15,000); #1 mill planetary ($100,000) - $366,850

2022/23 Preventive Maintenance materials for the replacement of the RDS rollers and chains ($46,250); conveyor upgrades ($19,550); #1 mill armored teeth and combs ($39,300); #1 mill planetary motor/drum motor ($30,000); electrical breaker upgrade ($20,000); replacement conveyor belts ($7,000); #1 mill rotor replacement ($55,000); #1 mill planetary ($100,000) - $317,100

2023/24 Preventive maintenance materials for the replacement of the RDS rollers and chains ($48,250); conveyor upgrades ($21,500); #1 mill armored teeth and combs ($40,250); replace C-2 belt ($28,000); replace in-plant air knives ($10,000); replacement conveyor belts ($3,500); #1 mill hydraulic pump ($50,000) - $201,500

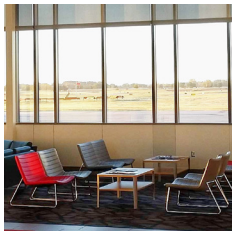
LOCATION

Arnold O. Chantland Resource Recovery Plant, 110 Center Avenue

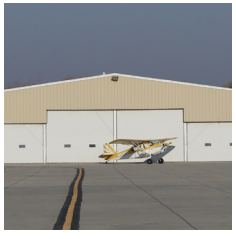
	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:						
System Improvements	1,571,650	353,100	333,100	366,850	317,100	201,500
TOTAL	**1,571,650**	**353,100**	**333,100**	**366,850**	**317,100**	**201,500**
FINANCING:						
Resource Recovery Fund	1,571,650	353,100	333,100	366,850	317,100	201,500
TOTAL	**1,571,650**	**353,100**	**333,100**	**366,850**	**317,100**	**201,500**

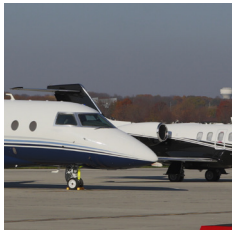
PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Utilities - Resource Recovery	Public Works	590-9003-489

This page intentionally left blank



TRANSPORTATION





TRANSPORTATION

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24	Page
EXPENDITURES:							
Streets Engineering	58,712,116	12,777,116	13,675,000	13,200,000	10,860,000	8,200,000	87
Shared Use Path System	5,324,800	1,446,000	845,000	1,003,800	905,000	1,125,000	100
Traffic Engineering	5,859,250	682,750	1,990,500	1,057,000	992,000	1,137,000	105
Street Maintenance	3,778,000	740,000	893,000	1,190,000	280,000	675,000	113
Transit	13,007,632	4,169,303	2,498,700	1,938,318	2,673,358	1,727,953	119
Parking	860,000	-	-	-	-	860,000	125
Airport	1,597,300	-	400,000	837,300	180,000	180,000	127
TOTAL EXPENDITURES	**89,139,098**	**19,815,169**	**20,302,200**	**19,226,418**	**15,890,358**	**13,904,953**	
FUNDING SOURCES:							
Debt:							
G.O. Bonds	48,540,000	8,320,000	9,815,000	11,855,000	10,375,000	8,175,000	
G.O. Bonds (TIF abated)	314,204	314,204	-	-	-	-	
Total Debt Funding	48,854,204	8,634,204	9,815,000	11,855,000	10,375,000	8,175,000	

TRANSPORTATION, continued

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
FUNDING SOURCES, continued						
City:						
Road Use Tax	7,773,650	1,507,750	1,806,700	1,448,400	1,455,000	1,555,800
Local Option Sales Tax	4,389,800	1,207,000	686,000	746,800	875,000	875,000
Water Utility Fund	925,000	75,000	625,000	75,000	75,000	75,000
Sewer Utility Fund	375,000	75,000	75,000	75,000	75,000	75,000
Storm Water Utility Fund	250,000	50,000	50,000	50,000	50,000	50,000
Transit Fund	4,656,419	1,461,941	884,420	758,984	889,964	661,110
Parking Reserve Fund	860,000	-	-	-	-	860,000
Airport Construction Fund	183,730	-	40,000	83,730	30,000	30,000
Total City Funding	19,413,599	4,376,691	4,167,120	3,237,914	3,449,964	4,181,910
Other:						
MPO/STP Funds	2,977,000	1,059,000	159,000	1,759,000	-	-
Federal/State Grants	16,780,725	5,745,274	5,801,080	1,620,934	2,065,394	1,548,043
Federal Aviation Administration	1,113,570	-	360,000	753,570	-	-
Total Other Funding	20,871,295	6,804,274	6,320,080	4,133,504	2,065,394	1,548,043
TOTAL FUNDING SOURCES	**89,139,098**	**19,815,169**	**20,302,200**	**19,226,418**	**15,890,358**	**13,904,953**

TRANSPORTATION - STREET ENGINEERING

PROJECT/FUNDING SOURCE	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24	Page
PROJECT:							
Grand Avenue Extension	2,000,000	2,000,000	-	-	-	-	89
ISU Research Park Phase iV	3,352,116	3,352,116	-	-	-	-	90
Cherry Avenue Extension	3,250,000	300,000	2,950,000	-	-	-	91
Arterial Street Pavement Improvements	8,575,000	2,500,000	2,500,000	1,700,000	750,000	1,125,000	92
Collector Street Pavement Improvements	7,260,000	500,000	1,400,000	2,500,000	1,660,000	1,200,000	93
Concrete Pavement Improvements	13,830,000	2,800,000	3,750,000	5,180,000	1,700,000	400,000	94
Asphalt Street Pavement Improvements	11,800,000	1,000,000	1,400,000	2,500,000	3,700,000	3,200,000	95
Right-of-Way Restoration	1,625,000	325,000	325,000	325,000	325,000	325,000	96
CyRide Route Pavement Improvements	3,525,000	-	600,000	-	1,725,000	1,200,000	97
Seal Coat Pavement Improvements	3,000,000	-	750,000	750,000	750,000	750,000	98
Downtown Street Pavement Improvements	495,000	-	-	245,000	250,000	-	99
TOTAL PROJECT EXPENDITURES	**58,712,116**	**12,777,116**	**13,675,000**	**13,200,000**	**10,860,000**	**8,200,000**	

TRANSPORTATION - STREET ENGINEERING, continued

PROJECT/FUNDING SOURCE	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
FUNDING SOURCES:						
Debt:						
G.O. Bonds	46,755,000	8,200,000	9,210,000	11,095,000	10,375,000	7,875,000
G.O. Bonds (TIF abated)	314,204	314,204	-	-	-	-
Total Debt Funding	47,069,204	8,514,204	9,210,000	11,095,000	10,375,000	7,875,000
City:						
Road Use Tax	1,065,000	125,000	225,000	305,000	285,000	125,000
Water Utility Fund	925,000	75,000	625,000	75,000	75,000	75,000
Sewer Utility Fund	375,000	75,000	75,000	75,000	75,000	75,000
Storm Water Utility Fund	250,000	50,000	50,000	50,000	50,000	50,000
Total City Funding	2,615,000	325,000	975,000	505,000	485,000	325,000
Other:						
MPO/STP Funds	2,500,000	900,000	-	1,600,000	-	-
Federal/State Grants	6,527,912	3,037,912	3,490,000	-	-	-
Total Other Funding	9,027,912	3,937,912	3,490,000	1,600,000	-	-
TOTAL FUNDING SOURCES	**58,712,116**	**12,777,116**	**13,675,000**	**13,200,000**	**10,860,000**	**8,200,000**

GRAND AVENUE EXTENSION **PROJECT STATUS:** Cost Change Revenue 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 Highway 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. **The total cost of the project is estimated to be $20,153,000.**

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) ($2,000,000)
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) and S Duff Ave (S 16th St intersection improvements) ($7,725,000)
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) ($7,725,000)
2019/20	South Grand Avenue (Squaw Creek Drive to S 16th St) and S 5th St (S Grand Ave to S Duff Ave) (construction) ($2,000,000)

A Transportation Funding Study in 2012/13 identified federal and state grants that may be available for funding this project. Bicycle facilities as part of this project (off-street 10-ft wide shared use path) are estimated to cost $775,000, including related bridge infrastructure.

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Engineering		250,000	250,000				
Construction		1,750,000	1,750,000				
	TOTAL	**2,000,000**	**2,000,000**				
FINANCING:							
G.O. Bonds		2,000,000	2,000,000				
	TOTAL	**2,000,000**	**2,000,000**				

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Transportation - Street Engineering	Public Works	380-8181-439

IOWA STATE UNIVERSITY RESEARCH PARK PHASE IV **PROJECT STATUS:** New

DESCRIPTION/JUSTIFICATION

This project is for installation of new street infrastructure, water main, sanitary sewer, and shared use path, as part of the Iowa State University (ISU) Research Park Phase IV Expansion. The roadway improvements will be funded by a Revitalizing Iowa's Sound Economy (RISE) grant and a grant from the Department of Commerce Economic Development Administration (EDA). The EDA grant will fund part of the utility infrastructure and a Tax Increment Financing (TIF) District will be created to finance the remainder of the costs.

The roadway improvements of this project include extending Collaboration Place (with on-street bike lanes) east to South Riverside Drive and paving South Riverside drive (with shared use path connecting to existing trail). Street lights will be installed with both of these street projects. The utilities portion of this project include improvements of water main, sanitary sewer main, and electric distribution to serve developable lots with this new phase of ISU Research Park.

COMMENTS

Engineering will be completed in spring 2019 with construction commencing during the summer of 2019. The general estimate of expenditures and revenue sources are shown below:

Project Element	Cost	Revenue	Source
Streets	$2,588,708	$1,294,354	RISE
		$1,294,354	EDA
Utilities	$898,408	$449,204	EDA
(Water/Storm/		$314,204	TIF
Sanitary/Electric)		$135,000	City of Ames Electric Utility operating budget
Total	$3,487,116	$3,487,116	

Funding for Bike Facilities within this project include: S. Riverside Shared Use Path $128,500 and Collaboration Place Bike Lanes $142,000; total of $270,500.

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:						
Engineering	494,000	494,000				
Construction	2,858,116	2,858,116				
TOTAL	**3,352,116**	**3,352,116**				
FINANCING:						
Department of Commerce(EDA) Grant	1,743,558	1,743,558				
RISE Grant	1,294,354	1,294,354				
G.O. Bonds (TIF Abated)	314,204	314,204				
TOTAL	**3,352,116**	**3,352,116**				

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
	Public Works	320-8193-439 380-8193-439

CHERRY AVENUE EXTENSION **PROJECT STATUS:** Cost Change 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 will be further relieved from the South Duff Avenue corridor. This project will open additional opportunities for transit connections to the South Duff Avenue commercial district.

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.

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, planning, environmental analysis, 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)

Bicycle facilities as part of this project (off-street 10-ft wide shared use path) are estimated to cost $250,000.

Cost and Revenue Change is due to adding Water Utility Funds as Revenue source in replacing the existing 4-inch water main along Cherry Avenue with a new larger water system to loop this part of the community to improve reliability and fire protection.

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:						
Land Acquisition/Planning	150,000	150,000				
Engineering	350,000	150,000	200,000			
Construction	2,750,000		2,750,000			
TOTAL	**3,250,000**	**300,000**	**2,950,000**			
FINANCING:						
G.O. Bonds	810,000	300,000	510,000			
Water Utility Funds	550,000		550,000			
Federal/State Grants	1,890,000		1,890,000			
TOTAL	**3,250,000**	**300,000**	**2,950,000**			

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Transportation - Street Engineering	Public Works	380-8180-439

ARTERIAL STREET PAVEMENT IMPROVEMENTS **PROJECT STATUS:** Site Change Delay 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

2019/20	13th Street (Wilson Avenue to Duff Avenue) ($1,600,000 G. O. Bonds; $900,000 MPO/STBG)
2020/21	E. 13th Street (Duff Avenue to Meadowlane Avenue)
2021/22	North Dakota Avenue (UPRR to Ontario Street) and Ontario Street (North Dakota Avenue to Woodstock Avenue) ($1,700,000 G.O. Bonds)
2022/23	Airport Road (University Boulevard to S. Riverside Drive)
2023/24	24th Street (Grand Avenue each east and west approx. 300 ft)

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

The Site Change and Cost Change are related to 13th Street (Wilson Avenue to Duff Avenue) being re-prioritized to 2019/20 from 2021/22 to coordinate with multi-modal and drainage improvements within the same street pavement corridor.

Bike Facilities as part of this program will include (FY 2020/21: E. 13th Street Duff Avenue to Meadowlane Avenue on-street $250,000) and (FY 2019/2020: 13th Street Wilson Avenue to Duff Avenue on-street $275,000).

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:						
Engineering	1,425,000	425,000	425,000	200,000	150,000	225,000
Construction	7,150,000	2,075,000	2,075,000	1,500,000	600,000	900,000
Street Lighting						
TOTAL	**8,575,000**	**2,500,000**	**2,500,000**	**1,700,000**	**750,000**	**1,125,000**
FINANCING:						
G.O. Bonds	6,075,000	1,600,000	900,000	1,700,000	750,000	1,125,000
MPO/STP Funds	900,000	900,000				
Federal/State Grants	1,600,000		1,600,000			
TOTAL	**8,575,000**	**2,500,000**	**2,500,000**	**1,700,000**	**750,000**	**1,125,000**

PROGRAM - ACTIVITY:	DEPARTMENT:	ACCOUNT NO.
Transportation - Street Engineering	Public Works	320-8140-439

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

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

2019/20	Bloomington Road (Grand Avenue to Hoover Avenue)
2020/21	East 20th Street (Duff Avenue to Meadowlane Avenue)
2021/22	Hoover Avenue (24th Street to Top-O-Hollow Road)
2022/23	Woodland Street (Hickory Drive to Forest Glen)
2023/24	6th Street (Brookridge Avenue to Northwestern Avenue)

The Hoover Avenue project in 2021/22 will include Long Range Transportation Plan projects ON 4 (on-street bike treatment with estimated cost of $80,000) and OFF 23 (on-street bike treatment with estimated cost of $20,000).

The Woodland Street project in 2022/23 will include the City's portion of Long-Range Transportation Plan project ON 21 (on-street bike treatment with estimated cost of $160,000)

Sixth Street project in 2023/24 will include on-street bike facilities with an estimated cost of $75,000.

The Delay and Cost Change are due to Arterial Street Pavement Improvements location originally planned for 2021/22 being re-prioritized into 2019/20 to coordinate with multi-modal and drainage improvements within the same 13th Street (Wilson Avenue to Duff Avenue) corridor. Updated construction cost estimates have also been prepared which reflect in Cost Changes for 2020/21 location (E 20th Street). Collector street pavement improvements should result in lower street maintenance costs.

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:						
Engineering	1,145,000	60,000	160,000	425,000	300,000	200,000
Construction	6,115,000	440,000	1,240,000	2,075,000	1,360,000	1,000,000
TOTAL	**7,260,000**	**500,000**	**1,400,000**	**2,500,000**	**1,660,000**	**1,200,000**
FINANCING:						
G.O. Bonds	7,000,000	500,000	1,400,000	2,400,000	1,500,000	1,200,000
Road Use Tax	260,000			100,000	160,000	
TOTAL	**7,260,000**	**500,000**	**1,400,000**	**2,500,000**	**1,660,000**	**1,200,000**

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Transportation - Street Engineering	Public Works	380-8138-439

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

DESCRIPTION/JUSTIFICATION

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

COMMENTS

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)

2021/22: N. 2nd Street (Maple Avenue to Elm Avenue)($650,000 G.O. Bonds); S Kellogg Avenue (S 2nd Street to S 3rd Street)($250,000 G.O. Bonds and $80,000 Road Use Tax); and 24th Street (Stange Road to UPRR) and Stange Road (Blankenburg Drive to 24th Street) ($2,600,000 G.O. Bonds and $1,600,000 MPO/STP Funds)

2022/23: Ridgewood Avenue/Brookridge Avenue/9th Street area and North Loop Drive ($1,700,000)

2023/24: Prairie View West ($400,000)

Repair of these streets will reduce maintenance and repairs needed for them. The S Kellogg Avenue project in 2021/22 will include the Long Range Transportation Plan project ON 29 (on-street bike treatment with estimated cost of $80,000).

The Cost and Revenue Changes are due to updated construction cost estimates for the 2019/20 locations identified as community priorities.

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:						
Engineering	2,320,000	420,000	545,000	1,000,000	300,000	55,000
Construction	11,510,000	2,380,000	3,205,000	4,180,000	1,400,000	345,000
TOTAL	**13,830,000**	**2,800,000**	**3,750,000**	**5,180,000**	**1,700,000**	**400,000**
FINANCING:						
G.O. Bonds	12,050,000	2,800,000	3,650,000	3,500,000	1,700,000	400,000
Road Use Tax	180,000		100,000	80,000		
MPO/STP Funds	1,600,000			1,600,000		
TOTAL	**13,830,000**	**2,800,000**	**3,750,000**	**5,180,000**	**1,700,000**	**400,000**

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Transportation - Street Engineering	Public Works	380-8165-439

ASPHALT STREET PAVEMENT IMPROVEMENTS **PROJECT STATUS:** No Change

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

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)

2021/22 Opal Drive (Jewel Drive to Crystal Street); Opal Circle; Harcourt Drive (Garnet Drive to Jewel Drive); Turquoise Circle; and Top-O-Hollow Road (Bloomington Road to Dawes Drive)

2022/23 Oakwood Road (State Avenue to University Boulevard), 28th Street (Hoover Avenue to Ferndale Avenue), and Oakland Street (Franklin Avenue to Hawthorne Avenue)

2023/24 Ridgewood Avenue (6th Street to 9th Street), Phoenix Circle, Curtiss Avenue (13th Street to 16th Street), Marston Avenue (13th Street to 16th Street), Prairie View East, N. Riverside Drive, and E. 7th Street (Crawford Avenue east to end)

Reconstructing these streets will reduce maintenance costs.

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:						
Engineering	2,025,000	150,000	200,000	375,000	700,000	600,000
Construction	9,775,000	850,000	1,200,000	2,125,000	3,000,000	2,600,000
TOTAL	**11,800,000**	**1,000,000**	**1,400,000**	**2,500,000**	**3,700,000**	**3,200,000**
FINANCING:						
G.O. Bonds	11,800,000	1,000,000	1,400,000	2,500,000	3,700,000	3,200,000
TOTAL	**11,800,000**	**1,000,000**	**1,400,000**	**2,500,000**	**3,700,000**	**3,200,000**

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Transportation - Street Engineering	Public Works	380-8113-439

RIGHT-OF-WAY RESTORATION **PROJECT STATUS:** No 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 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.

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

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
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	625,000	125,000	125,000	125,000	125,000	125,000
Water Utility Fund	375,000	75,000	75,000	75,000	75,000	75,000
Sewer Utility Fund	375,000	75,000	75,000	75,000	75,000	75,000
Storm Water 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:	**DEPARTMENT:**	**ACCOUNT NO.**
Transportation - Street Engineering	Public Works	Various

CYRIDE ROUTE PAVEMENT IMPROVEMENTS **PROJECT STATUS:** Delayed

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

These streets were not designed or built for continuous bus loading. 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

2019/20	No project
2020/21	9th Street (Grand Avenue to Clark Avenue)
2021/22	No Project
2022/23	Lincoln Way (Marshall Avenue to Franklin Avenue)
2023/24	Dickinson Avenue (Mortensen Road to Steinbeck Street) and Steinbeck Street (Dickinson Avenue to South Dakota 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.

Bike facilities will be included in the 2022/23 project on Lincoln Way from (Marshall Ave to Franklin Ave). The bike facilities will consist of off-street improvements with an estimated cost of $172,500.

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:						
Engineering	460,000		85,000		225,000	150,000
Construction	3,065,000		515,000		1,500,000	1,050,000
TOTAL	**3,525,000**		**600,000**		**1,725,000**	**1,200,000**
FINANCING:						
G.O. Bonds	3,525,000		600,000		1,725,000	1,200,000
TOTAL	**3,525,000**		**600,000**		**1,725,000**	**1,200,000**

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Transportation - Street Engineering	Public Works	

SEAL COAT STREET PAVEMENT IMPROVEMENTS **PROJECT STATUS:** Delayed

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 inches 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 may vary 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. There will not be a program in 2019/20in order to balance the requested G.O. Bond funding increase for Grand Avenue Extension.

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:						
Engineering	450,000		112,500	112,500	112,500	112,500
Construction	2,550,000		637,500	637,500	637,500	637,500
TOTAL	**3,000,000**		**750,000**	**750,000**	**750,000**	**750,000**
FINANCING:						
G.O. Bonds	3,000,000		750,000	750,000	750,000	750,000
TOTAL	**3,000,000**		**750,000**	**750,000**	**750,000**	**750,000**

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Transportation - Street Engineering	Public Works	

DOWNTOWN STREET PAVEMENT IMPROVEMENTS **PROJECT STATUS:** Delayed

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 Downtown Business District.

LOCATION

2019/20 No Project
2020/21 No Project
2021/22 East/West Alley north of Lincoln Way (Duff Avenue to Sherman Avenue)
2022/23 North/South Alley (Duff Avenue/Douglas Avenue behind Adams Funeral Home)
2023/24 No Project

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:						
Engineering	70,000			35,000	35,000	
Construction	425,000			210,000	215,000	
TOTAL	**495,000**			**245,000**	**250,000**	
FINANCING:						
G.O. Bonds	495,000			245,000	250,000	
TOTAL	**495,000**			**245,000**	**250,000**	

PROGRAM - ACTIVITY: **DEPARTMENT:** **ACCOUNT NO.**
Transportation - Street Engineering Public Works

TRANSPORTATION - SHARED USE PATHS

PROJECT/FUNDING SOURCE	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24	Page
PROJECT:							
Shared Use Path System Expansion	3,741,800	1,141,000	620,000	680,800	650,000	650,000	102
Multi-Modal Roadway Improvements	958,000	180,000	100,000	198,000	130,000	350,000	103
Shared Use Path Maintenance	625,000	125,000	125,000	125,000	125,000	125,000	104
TOTAL PROJECT EXPENDITURES	**5,324,800**	**1,446,000**	**845,000**	**1,003,800**	**905,000**	**1,125,000**	
FUNDING SOURCES:							
City:							
Local Option Sales Tax	3,889,800	1,107,000	586,000	646,800	775,000	775,000	
Road Use Tax	958,000	180,000	100,000	198,000	130,000	350,000	
Total City Funding	4,847,800	1,287,000	686,000	844,800	905,000	1,125,000	
Other:							
MPO/STP Funds	477,000	159,000	159,000	159,000	-	-	
TOTAL FUNDING SOURCES	**5,324,800**	**1,446,000**	**845,000**	**1,003,800**	**905,000**	**1,125,000**	

TRANSPORTATION - SHARED USE PATH SUMMARY

PROJECT BY ACTIVITY	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24	Page
WATER DISTRIBUTION:							
Campustown Public Improvements	240,000	120,000	-	-	-	120,000	70
STREET ENGINEERING:							
Grand Avenue Extension	775,000	775,000	-	-	-	-	89
ISU Research Park Phase IV	270,500	270,500					90
Arterial Street Pavement Improvements	525,000	275,000	250,000	-	-	-	93
Cherry Avenue Extension	250,000	-	250,000	-	-	-	92
Collector Street Improvements	335,000	-	-	100,000	160,000	75,000	94
Concrete Pavement Improvements	80,000	-	-	80,000	-	-	95
CyRide Route Pavement Improvements	172,500	-	-	-	172,500	-	98
Total Street Engineering Projects	2,408,000	1,320,500	500,000	180,000	332,500	75,000	
SHARED USE PATH SYSTEM:							
Shared Use Path System Expansion	3,741,800	1,141,000	620,000	680,800	650,000	650,000	102
Multi-Modal Roadway Improvements	958,000	180,000	100,000	198,000	130,000	350,000	103
Shared Use Path Maintenance	625,000	125,000	125,000	125,000	125,000	125,000	104
Total Shared Use Path Projects	5,324,800	1,446,000	845,000	1,003,800	905,000	1,125,000	
STREET MAINTENANCE:							
Bridge Rehabilitation Program	760,000	-	-	760,000	-	-	114
TOTAL SHARED USE PATH PROJECTS	**8,732,800**	**2,886,500**	**1,345,000**	**1,943,800**	**1,237,500**	**1,320,000**	
AVERAGE EXPENDITURE/FISCAL YEAR	**1,746,560**						

SHARED USE PATH SYSTEM EXPANSION **PROJECT STATUS:** Location 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. Construction of the 2018/19, 2019/20, and 2021/22 segments are contingent upon acquisition of land. Shared use path maintenance costs will increase due to new shared use path construction.

- 2019/20 Skunk River Trail (Southeast 16th Street to East Lincoln Way) (trail paving) ($521,000) and Vet Med Trail (S 16th Street to ISU Research Park ($620,000) trail paving
- 2020/21 Vet Med Trail (South 16th Street to South Grand Avenue) ($620,000) trail paving
- 2021/22 Squaw Creek (South Skunk River to South Duff Avenue) ($680,800)
- 2022/23 Grand Ave Path (Lincoln Way to 6th Street) ($650,000)
- 2023/24 E. Lincoln Way Path (S. Duff Ave to S. Dayton Ave) ($650,000)

The Vet Med Trail project has been coordinated with the S. Grand Avenue Extension project that includes the bridge infrastructure as part of this trail alignment (estimated to be completed in 2018/19).

The S. Dayton Trail (E. Lincoln Way to S.E. 16th Street) was previously planned for FY 2022/23; however, requests have been received to redirect these funds to provide better connectivity along Grand Avenue thus the S. Dayton Trail will be delayed until 2024/25.

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:						
Engineering	683,000	295,000	120,000	118,000	75,000	75,000
Land Acquisition	88,800			88,800		
Construction	2,970,000	846,000	500,000	474,000	575,000	575,000
TOTAL	**3,741,800**	**1,141,000**	**620,000**	**680,800**	**650,000**	**650,000**
FINANCING:						
Local Option Sales Tax	3,264,800	982,000	461,000	521,800	650,000	650,000
MPO/STP Funds	477,000	159,000	159,000	159,000		
TOTAL	**3,741,800**	**1,141,000**	**620,000**	**680,800**	**650,000**	**650,000**

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Transportation - Shared Use Paths	Public Works	various

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

DESCRIPTION/JUSTIFICATION

Multi-modal transportation refers to the various modes used by Ames residents to travel 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 that are identified in the Long-Range Transportation Plan (LRTP) will be noted by project numbers (e.g. ON15) from the LRTP.

LOCATIONS

2019/20 **Enhanced Pedestrian Crossing:** Mortensen Road, west of South Dakota Ave ($80,000); 13th Street and Clark Avenue ($100,000)

2020/21 **Enhanced Intersection Crossing:** (CR 15, S. 16th Street Mid-Block Trail Crossing near Vet Med, $100,000)

2021/22 **On-Street:** S. Walnut Avenue (ON15: S. 3rd Street to Lincoln Way) ($138,000) and Wilder Avenue (ON20: Mortensen Road to Lincoln Way) ($60,000)

2022/23 **Enhanced Intersection Crossing:** Intersection Grand Avenue/6th Street (CR5: improve crossing visibility) ($130,000)

2023/24 **Enhanced Intersection Crossing:** (CR 24, 16th and Grand) ($350,000)

The locations for this program have been coordinated with the Shared Use Path System Expansion program.

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:						
Engineering	170,000	40,000	30,000	20,000	30,000	50,000
Construction	788,000	140,000	70,000	178,000	100,000	300,000
TOTAL	**958,000**	**180,000**	**100,000**	**198,000**	**130,000**	**350,000**
FINANCING:						
Road Use Tax	958,000	180,000	100,000	198,000	130,000	350,000
TOTAL	**958,000**	**180,000**	**100,000**	**198,000**	**130,000**	**350,000**

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Transportation - Shared Use Paths	Public Works	060-8821-439

SHARED USE PATH MAINTENANCE **PROJECT STATUS:** No 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

The pavement management system for shared use paths is used to guide maintenance activities to 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.

Newer rehabilitation techniques such as mastic joint repair and micro-surface treatments are being utilized as a part of this program.

LOCATIONS

Various locations throughout Ames will be identified using pavement management data and user feedback.

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
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 - Shared Use Paths	Public Works	030-8811-439

TRANSPORTATION - TRAFFIC ENGINEERING

PROJECT/FUNDING SOURCE	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24	Page
PROJECT:							
U.S. Highway 69 Improvements	780,000	50,000	730,000	-	-	-	107
Traffic Signal Program	1,889,250	370,750	389,500	255,000	426,000	448,000	108
Accessibility Enhancements Program	1,000,000	200,000	200,000	200,000	200,000	200,000	109
Regional Transportation Count Program	275,000	50,000	50,000	50,000	50,000	75,000	110
Traffic Calming Program	52,000	12,000	-	-	40,000	-	111
Intelligent Transportation System Program	1,863,000	-	621,000	552,000	276,000	414,000	112
TOTAL PROJECT EXPENDITURES	**5,859,250**	**682,750**	**1,990,500**	**1,057,000**	**992,000**	**1,137,000**	
FUNDING SOURCES:							
Debt:							
G.O. Bonds	230,000	-	230,000	-	-	-	
City:							
Road Use Tax	3,527,650	582,750	963,700	515,400	760,000	705,800	
Local Option Sales Tax	500,000	100,000	100,000	100,000	100,000	100,000	
Total City Funding	4,027,650	682,750	1,063,700	615,400	860,000	805,800	

TRANSPORTATION - TRAFFIC ENGINEERING, continued

PROJECT/FUNDING SOURCE	TOTAL	2017/18	2018/19	2019/20	2020/21	2021/22
FUNDING SOURCES, continued:						
Other:						
Federal/State Grants	1,601,600	-	696,800	441,600	132,000	331,200
TOTAL FUNDING SOURCES	**5,859,250**	**682,750**	**1,990,500**	**1,057,000**	**992,000**	**1,137,000**

US HIGHWAY 69 IMPROVEMENTS **PROJECT STATUS:** No Change

DESCRIPTION/JUSTIFICATION
Intersection and corridor improvement projects along US Highway 69 are included in this program to alleviate congestion and reduce accidents.

LOCATIONS

2019/20 Lincoln Way (Duff Avenue to Gilchrist Street)
2020/21 Intersection Improvements and Traffic Signal (S. Duff Avenue and US Hwy 30 EB Off-Ramp) - Construction

In FY 2019/20, the Iowa Department of Transportation (IDOT) will be resurfacing Lincoln Way between Duff Avenue and Gilchrist Street. The City of Ames is responsible for paying for curb and gutter repair and storm sewer intake repair in the corridor as part of the project.

As part of a traffic impact study for the Brick Towne 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 both S. Duff Avenue and US Highway 30. Therefore, construction is programmed for FY 2020/21 to realign Billy Sunday Road with the US 30 ramp and install a traffic signal.

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Engineering		30,000		30,000			
Construction			50,000	700,000			
	TOTAL	**780,000**	**50,000**	**730,000**			
FINANCING:							
G.O. Bonds		230,000		230,000			
Road Use Tax		350,000	50,000	300,000			
U-STEP Grant Funds		200,000		200,000			
	TOTAL	780,000	**50,000**	**730,000**			

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Transportation - Traffic	Public Works	060-7574-439

TRAFFIC SIGNAL PROGRAM **PROJECT STATUS:** Location 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. Also, 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

2019/20	Lincoln Way/Beach Avenue signal replacement ($370,750)
2020/21	S. Duff & S. 5th Street signal replacement
2021/22	Various equipment upgrades (modernization) at existing signal locations
2022/23	S. Duff Avenue/Chestnut Street signal replacement
2023/24	S. Duff Avenue/S. 3rd Street

A continued trend 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. The cost for signalized intersection replacements has been increasing by approximately 3% per year based upon historical bid pricing. Staff tracks this trend and will adjust projected funding for this program each annual CIP cycle. When a full replacement is not necessary, staff will identify equipment within existing signal locations that can be replaced to achieve similar operational improvements to a major reconstruction.

The Lincoln Way/Beach Avenue signal replacement was accelerated one year based on input from CyRide to provide a dedicated left turn movement.

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:						
Engineering	181,000	40,000	42,000	5,000	46,000	48,000
Construction	1,708,250	330,750	347,500	250,000	380,000	400,000
TOTAL	**1,889,250**	**370,750**	**389,500**	**255,000**	**426,000**	**448,000**
FINANCING:						
Road Use Tax	1,889,250	370,750	389,500	255,000	426,000	448,000
TOTAL	**1,889,250**	**370,750**	**389,500**	**255,000**	**426,000**	**448,000**

PROGRAM - ACTIVITY:	DEPARTMENT:	ACCOUNT NO.
Transportation - Traffic	Public Works	060-7561-439

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) requirement 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

The City Manager's Office facilitated a survey of stakeholders 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	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Engineering		150,000	30,000	30,000	30,000	30,000	30,000
Construction		850,000	170,000	170,000	170,000	170,000	170,000
	TOTAL	**1,000,000**	**200,000**	**200,000**	**200,000**	**200,000**	**200,000**
FINANCING:							
Road Use Tax		500,000	100,000	100,000	100,000	100,000	100,000
Local Option Sales Tax		500,000	100,000	100,000	100,000	100,000	100,000
	TOTAL	**1,000,000**	**200,000**	**200,000**	**200,000**	**200,000**	**200,000**

PROGRAM - ACTIVITY:	DEPARTMENT:	ACCOUNT NO.
Transportation - Traffic	Public Works	030-7510-439 060-7510-439

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 for the collection and management of 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.

COMMENTS

2019/20	Data collection base ($50,000)
2020/21	Data collection base ($50,000)
2021/22	Data collection base ($50,000)
2022/23	Data collection base ($50,000)
2023/24	Data collection base ($75,000)

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.

FY 2023/24 Staff anticipates the need to increase the funding to support this program in the 5th year of this Capital Improvements Plan.

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Engineering		275,000	50,000	50,000	50,000	50,000	75,000
	TOTAL	**275,000**	**50,000**	**50,000**	**50,000**	**50,000**	**75,000**
FINANCING:							
Road Use Tax		275,000	50,000	50,000	50,000	50,000	75,000
	TOTAL	**275,000**	**50,000**	**50,000**	**50,000**	**50,000**	**75,000**

PROGRAM - ACTIVITY:	DEPARTMENT:	ACCOUNT NO.
Transportation - Traffic	Public Works	060-7515-439

TRAFFIC CALMING PROGRAM **PROJECT STATUS:** No Change

DESCRIPTION/JUSTIFICATION

This program is the result of completing the Neighborhood Traffic Calming Handbook. The 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

2019/20 Traffic Calming in the Burnett Avenue area (near Meeker Elementary School)
2022/23 Various locations responding to impacts in residential growth areas

The FY 2019/20 location is in response to a request from the Burnett Avenue neighborhood located near Meeker Elementary School. Additional locations may be added in future years based on public feedback.

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Engineering		6,000	1,000			5,000	
Construction		46,000	11,000			35,000	
	TOTAL	**52,000**	**12,000**			**40,000**	
FINANCING:							
Road Use Tax		52,000	12,000			40,000	
	TOTAL	**52,000**	**12,000**			**40,000**	

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Transportation - Traffic	Public Works	060-7512-439

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

DESCRIPTION/JUSTIFICATION

The 2040 Ames Area Long Range Transportation Plan (LRTP), which became effective on October 12, 2015, identifies a wide range of transportation improvements including those projects that utilize technology that is 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

2019/20	No Project
2020/21	Traffic Adaptive System (S. Duff Avenue – S 3rd Street to Crystal Street) (LRTP Project 66)
2021/22	Traffic Adaptive System (Lincoln Way – Beach Avenue to Hyland Avenue) (LRTP Project 65)
2022/23	Traffic Adaptive System (Lincoln Way – Grand Avenue to Duff Avenue) (LRTP Project 69)
2023/24	Traffic Adaptive System (University Blvd – Lincoln Way to US Highway 30) (LRTP Project 67)

To prepare for these projects, an evaluation of the current traffic communication network is needed. Therefore, 2016/17 included a traffic network master plan that created a detailed inventory and evaluation of the communication network used along the City's signalized corridors. The plan then identifies the upgrades necessary to support the modern technologies used to manage transportation. The City has received authorization from the Iowa DOT and FHWA to begin the master plan, completion is anticipated in spring of 2019.

Traffic Adaptive Systems are 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 a significant improvement in efficiency and will provide reliable travel times during all times of the day. The delay is caused due to coordination with the Iowa DOT to take advantage of potential funding for design. Projects in this program have been delayed a year to allow application for congestion mitigation funds.

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:						
Engineering	243,000		81,000	72,000	36,000	54,000
Construction	1,620,000		540,000	480,000	240,000	360,000
TOTAL	**1,863,000**		**621,000**	**552,000**	**276,000**	**414,000**
FINANCING:						
Road Use Tax	461,400		124,200	110,400	144,000	82,800
Federal/State Grants	1,401,600		496,800	441,600	132,000	331,200
TOTAL	**1,863,000**		**621,000**	**552,000**	**276,000**	**414,000**

PROGRAM - ACTIVITY:	DEPARTMENT:	ACCOUNT NO.
Transportation - Traffic	Public Works	

TRANSPORTATION - STREET MAINTENANCE

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24	Page
PROJECT:							
Bridge Rehabilitation Program	1,555,000	120,000	375,000	760,000	-	300,000	114
Pavement Restoration	1,250,000	250,000	250,000	250,000	250,000	250,000	115
Main Street Sidewalk Paver Replacement	373,000	190,000	88,000	-	-	95,000	116
Right-of-Way Appearance Enhancements	150,000	30,000	30,000	30,000	30,000	30,000	117
Neighborhood Curb Replacement Program	450,000	150,000	150,000	150,000	-	-	118
TOTAL PROJECT EXPENDITURES	**3,778,000**	**740,000**	**893,000**	**1,190,000**	**280,000**	**675,000**	
FUNDING SOURCES:							
Debt:							
G.O. Bonds	1,555,000	120,000	375,000	760,000	-	300,000	
City:							
Road Use Tax	2,223,000	620,000	518,000	430,000	280,000	375,000	
TOTAL FUNDING SOURCES	**3,778,000**	**740,000**	**893,000**	**1,190,000**	**280,000**	**675,000**	

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

DESCRIPTION/JUSTIFICATION

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

COMMENTS

6th Street Bridge over the Union Pacific Railroad and on the Minnesota Avenue Bridge over the Union Pacific Railroad includes work at both locations for footing and concrete joint repairs as noted in the 2018 Bridge Inspection Report. These repairs will help extend the lifespan of the existing structures.

Lincoln Way Bridge over Squaw Creek includes work to replace deteriorated handrail and minor concrete repair. The cost change in this item includes enhancements to pedestrian safety along the sidewalks on the bridge. The 2018 Bridge Inspection revealed an opportunity to construct more substantial concrete barriers between pedestrians and vehicles on the bridge while upgrading the handrails.

South 4th Street Bridge over Squaw Creek includes upgrades to allow pedestrian crossing along the south side of the bridge. This is a heavily trafficked pedestrian and bicycle corridor. The cost change in this item includes additional trail paving to close the gap between existing infrastructure and the new bridge structure.

East 13th Street Bridge over Skunk River includes concrete repairs to the bridge substructure to extend the life of the structure.

LOCATION

2019/20	6th Street Bridge over the UPRR ($85,000) and Minnesota Avenue Bridge over the UPRR ($35,000) (construction/engineering)
2020/21	Lincoln Way Bridge over Squaw Creek (construction/engineering)
2021/22	South 4th Street Bridge over Squaw Creek (construction/engineering)
2022/23	No project
2023/24	East 13th Street Bridge over Skunk River (construction/engineering)

Bicycle facilities will be included in the 2021/22 project on the South 4th Street Bridge Rehabilitation project. The project will widen the bridge to include an off-street, 10-ft wide shared use path. Estimated costs for the project include $760,000.

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:						
Engineering	220,000	20,000	50,000	100,000		50,000
Construction	1,335,000	100,000	325,000	660,000		250,000
TOTAL	**1,555,000**	**120,000**	**375,000**	**760,000**		**300,000**
FINANCING:						
G.O. Bonds	1,555,000	120,000	375,000	760,000		300,000
TOTAL	**1,555,000**	**120,000**	**375,000**	**760,000**		**300,000**

PROGRAM - ACTIVITY:	DEPARTMENT:	ACCOUNT NO.
Transportation - Street Maintenance	Public Works	380-7755-439

PAVEMENT RESTORATION **PROJECT STATUS:** No Change

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 funded at $250,000 annually to help extend the longevity of the pavement system and supplement the current pavement restoration activities. Priorities for this program are identified using information from the pavement management system and input from citizens and maintenance crews.

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
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 - Street Maintenance	Public Works	060-7723-439

MAIN STREET SIDEWALK PAVER REPLACEMENT **PROJECT STATUS:** Delayed

DESCRIPTION/JUSTIFICATION

This project provides for the replacement of the pavers in the Main Street corridor. These pavers were installed with the Main Street Reconstruction project in 1999. At that time, the pavers were an aesthetic upgrade to traditional concrete sidewalks. Over time, the pavers have proven to be a difficult maintenance item. Uneven pavers appear every year, and Public Works Operations crews spend considerable amount of time to level or replace pavers. Additional pavers are now in short supply as the pavers are not produced anymore. Winter ice control chemicals applied by adjacent business owners have led to accelerated deterioration of the pavers, especially on the southern side of Main Street where the building provides continuous shade in the winter and no sunlight reaches to the sidewalk to aid in melting of snow and ice. The replacement technique will be to use colored, stamped concrete to provide better durability, in lieu of pavers.

COMMENTS

The proposed projects would be broken up into block-long segments, and work will be coordinated continually with adjacent business owners to maintain access and safe pedestrian traffic flow through the corridor. This plan will replace the pavers along Main Street in five years.

The Kellogg Avenue and Main Street intersection is still performing well and is being delayed and monitored.

LOCATION

2019/20 Kellogg to Douglas (north side and south side sidewalks and crosswalks and Cynthia Duff Plaza)
2020/21 Douglas to Duff (north side and south side sidewalks and crosswalks)
2021/22 No Project
2022/23 No Project
2023/24 Kellogg Ave/ Main Street Intersection

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:						
Engineering	48,000	25,000	11,000			12,000
Construction	325,000	165,000	77,000			83,000
TOTAL	**373,000**	**190,000**	**88,000**			**95,000**
FINANCING:						
Road Use Tax	373,000	190,000	88,000			95,000
TOTAL	**373,000**	**190,000**	**88,000**			**95,000**

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Transportation - Street Maintenance	Public Works	060-7707-439

RIGHT-OF-WAY APPEARANCE ENHANCEMENTS **PROJECT STATUS:** Cost Change

DESCRIPTION/JUSTIFICATION

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

COMMENTS

In addition to retaining wall repairs, the entryway enhancement portion could be used to enhance or repair other right of way elements such as decorative signs or monuments.

LOCATION

2019/20 Various locations
2020/21 Various locations
2021/22 Various locations
2022/23 Various locations
2023/24 Various locations

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:						
Engineering						
Right-of-Way Enhancements	150,000	30,000	30,000	30,000	30,000	30,000
TOTAL	**150,000**	**30,000**	**30,000**	**30,000**	**30,000**	**30,000**
FINANCING:						
Road Use Tax	150,000	30,000	30,000	30,000	30,000	30,000
Private Funds						
TOTAL	**150,000**	**30,000**	**30,000**	**30,000**	**30,000**	**30,000**

PROGRAM - ACTIVITY:	DEPARTMENT:	ACCOUNT NO.
Transportation - Street Maintenance	Public Works	060-7731-439

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

2019/20	Franklin Avenue (Lincoln Way to Oakland Street)
2020/21	12th Street (Grand Avenue to Kellogg Avenue)
2021/22	Murray Drive (Northwestern Avenue to Grand Avenue)
2022/23	No Project

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:						
Engineering	45,000	15,000	15,000	15,000		
Construction	405,000	135,000	135,000	135,000		
TOTAL	**450,000**	**150,000**	**150,000**	**150,000**		
FINANCING:						
Road Use Tax	450,000	150,000	150,000	150,000		
TOTAL	**450,000**	**150,000**	**150,000**	**150,000**		

PROGRAM - ACTIVITY:	DEPARTMENT:	ACCOUNT NO.
Transportation - Street Maintenance	Public Works	060-7770-439

TRANSPORTATION - TRANSIT

PROJECT/FUNDING SOURCE	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24	Page
PROJECT:							
Vehicle Replacement	6,706,329	2,347,600	1,478,300	557,918	1,623,958	698,553	120
Building Expansion and Modernization	4,386,303	766,303	825,000	1,115,000	840,000	840,000	121
Technology Improvements	1,230,000	860,000	125,000	120,000	75,000	50,000	122
Bus Stop Improvements	295,000	45,000	25,000	75,000	75,000	75,000	123
CyRide Shop/Office Equipment	390,000	150,400	45,400	70,400	59,400	64,400	124
TOTAL PROJECT EXPENDITURES	**13,007,632**	**4,169,303**	**2,498,700**	**1,938,318**	**2,673,358**	**1,727,953**	
FUNDING SOURCES:							
City:							
Transit Fund	4,656,419	1,461,941	884,420	758,984	889,964	661,110	
Other:							
Federal/State Grants	8,351,213	2,707,362	1,614,280	1,179,334	1,783,394	1,066,843	
TOTAL FUNDING SOURCES	**13,007,632**	**4,169,303**	**2,498,700**	**1,938,318**	**2,673,358**	**1,727,953**	

CYRIDE VEHICLE REPLACEMENT **PROJECT STATUS:** Cost Change, Revenue Change Advanced

DESCRIPTION/JUSTIFICATION

CyRide will replace/expand its bus fleet by five used buses each year to meet ridership demand and replace vehicles that can no longer be operated in daily service. Additionally, CyRide anticipates future state funding for new buses through the state's capital funding allocation process. CyRide has five 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:

2019/20: Replace three 40' buses ($1,437,600); replace one 40' bus with a new 60' bus ($850,000); repaint six minibuses ($30,000); replace administrative vehicle ($30,000)
2020/21: Purchase one 40' bus ($493,300); replace one 40' bus with a new 60' bus ($850,000); replace with one, new minibus ($135,000)
2021/22: Replace with three, new minibuses ($334,500); replace with two used minibuses ($135,000); replace administrative vehicle ($30,000); replace the Dial-A-Ride van ($58,418)
2022/23: Replace one 40' bus with a new 60' bus ($850,000); replace one 40' bus ($513,032); replace with one, new minibus ($135,000); replace administrative vehicle ($30,000); replace the Dial-A-Ride bus ($95,926)
2023/24: Replace one 40' bus ($533,553); replace with one, new minibus ($135,000); replace administrative vehicle ($30,000)

COMMENTS

The new buses will be funded with 80% federal funding, including the State of Iowa's Iowa Clean Air Attainment Program (ICAAP) funds that are a distribution of federal dollars. For budget year's 2019/20, 2020/21, and 2021/22 the Ames Area MPO approved $225,000 each year to assist in funding the purchase of new articulated buses.

LOCATION

CyRide, 601 N. University Boulevard

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:						
Large Buses - 40' New	2,977,485	1,437,600	493,300		513,032	533,553
Large Buses - 60' New	2,550,000	850,000	850,000		850,000	
Mini Buses - New	334,500			334,500		
Used Buses	570,000	30,000	135,000	135,000	135,000	135,000
Administrative Vehicles	120,000	30,000		30,000	30,000	30,000
Dial-A-Ride Bus/Van	154,344			58,418	95,926	
TOTAL	**6,706,329**	**2,347,600**	**1,478,300**	**557,918**	**1,623,958**	**698,553**
FINANCING:						
Transit Fund	1,752,158	517,280	464,020	18,584	480,564	271,710
PTMS Funds	4,054,171	1,605,320	789,280	314,334	918,394	426,843
STP Funds	900,000	225,000	225,000	225,000	225,000	
TOTAL	**6,706,329**	**2,347,600**	**1,478,300**	**557,918**	**1,623,958**	**698,553**

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Transportation - Transit	CyRide	552-1159-439
		552-1169-439

DESCRIPTION/JUSTIFICATION

CyRide's original bus storage building is 34 years old and major components of the building are at the end of their useful life. Additionally, the facility is housing more vehicles than it was originally designed for, creating higher wear and tear on the facility and a need to explore expansion options. As a result, this plan has been developed to keep the current facility in a state of good repair, as is required by the Federal Transit Administration:

2019/20: Replace CyRide's bus wash system ($646,303); concrete replacement ($85,000); A & E Services ($35,000)
2020/21: Replace HVAC system ($750,000); concrete replacement ($40,000); A & E Services ($35,000);
2021/22: Replace HVAC system ($250,000); construct an addition onto a new/existing facility ($500,000); concrete replacement ($40,000); A & E Services ($50,000); flooring upgrade ($25,000); replace fueling system with a high-speed fueling system ($250,000)
2022/23: Construct an addition onto a new/existing facility ($750,000); concrete replacement ($40,000); A & E Services ($50,000)
2023/24: Construct an addition onto a new/existing facility ($750,000); concrete replacement ($40,000); A & E Services ($50,000)

COMMENTS

The HVAC units are 34 years old. CyRide's bus washer will be 17 years old at the time of replacement, which is past the expected 10-year life for this type of equipment. The concrete work is for CyRide's bus turnaround at Ames Middle School and CyRide's facility where the pavement is crumbling under the weight of the buses after 12 year of heavy usage. The A & E services would provide technical expertise during the various construction projects, as well as assisting with the preparation of bid documents. The flooring upgrade would replace carpet in the administrative portion of the building. The new high speed fueling system would allow current employees to fuel each bus in less time reducing expenses. This CIP assumes a plan to expand CyRide's facility is developed and funded in a grant over this next year and that this plan/facility will be built in pieces as funding is identified. To-date, CyRide has reserved $715,166 in local match dollars for a grant to begin constructing more facility space.

LOCATION

CyRide, 601 N. University Boulevard

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Architectural/Engineering		220,000	35,000	35,000	50,000	50,000	50,000
Equipment		2,046,303	731,303	790,000	525,000		
Construction		2,120,000			540,000	790,000	790000
	TOTAL	**4,386,303**	**766,303**	**825,000**	**1,115,000**	**840,000**	**840,000**
FINANCING:							
Transit Fund		1,469,261	249,261	225,000	515,000	240,000	240,000
State of Iowa - PTIG		2,917,042	517,042	600,000	600,000	600,000	600,000
	TOTAL	**4,386,303**	**766,303**	**825,000**	**1,115,000**	**840,000**	**840,000**

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Transportation - Transit	CyRide	552-1159-439
		552-1169-439

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

DESCRIPTION/JUSTIFICATION

Over the past several years, advancements in transit technology have grown significantly. As a result, CyRide will incorporate the following:

- **Automated Annunciators/AVL (New)** – Equipment that uses GPS system on bus to automatically call out bus stop locations. This is a multi-year project to equip every bus with this technology that began in 2018/19, the two-year estimated cost is $950,000 (80% federal funding). FY2019/20 - $550,000.
- **Bus Video Systems (Replace)** – Camera system on the inside/outside of the bus. Five to 12 systems replaced each year - $50,000 to $60,000 annually.
- **Radios (Replace/Enhance)** – The City of Ames will be switching to a new emergency radio system and CyRide's radios are a part of this new system. It is estimated that $150,000 will be needed to purchase and/or lease equipment for its 105 total vehicles in 2019/20.
- **Maintenance Software (Replace/Enhance)** – CyRide's current maintenance software is a generic product designed for non-transit fleets and more than 11 yrs. old. Therefore, a transit specific software program will allow CyRide's to better monitor its repairs/identify trends. This is a Federal Transit Administration priority - $50,000 in 2019/20.
- **Automatic Passenger Counters (New)** - Up to 25 Automatic Passenger Counters (APCs) will be purchased each year in 2019/20, 2020/21 and 2022/23 to assist CyRide in counting passengers as they board the bus, thereby decreasing boarding time on its routes ($25,000 per year).
- **Administrative Building Technology (Replace/Enhance)** – CyRide's administrative office building is 12 years old and its conference room technology is outdated/inadequate for current uses. In 2020/21 and 2021/22, CyRide will replace this technology at $50,000 and $20,000 per year, respectively.
- **Building WiFi Upgrade (Enhance)** – CyRide's bus storage area currently has 10 WiFi receivers. A study by the City's IT Department indicated that the bus storage facility needs 35-40 receivers. In 2019/20 and again in 2021/22 and 2022/23, CyRide will increase coverage at a cost of $25,000 per year.

COMMENTS

LOCATION

CyRide, 601 N. University Boulevard

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:						
Bus Security Cameras	260,000	60,000	50,000	50,000	50,000	50,000
Annunciators	450,000	450,000				
Radio System Upgrade	150,000	150,000				
APCs	75,000	25,000	25,000	25,000		
GPS Tracking System	100,000	100,000				
Maintenance Software	50,000	50,000				
WIFI Upgrade	75,000	25,000		25,000	25,000	
Technology	70,000		50,000	20,000		
TOTAL	**1,230,000**	**860,000**	**125,000**	**120,000**	**75,000**	**50,000**
FINANCING:						
Transit Fund	870,000	500,000	125,000	120,000	75,000	50,000
5310 Funds	360,000	360,000				
TOTAL	**1,230,000**	**860,000**	**125,000**	**120,000**	**75,000**	**50,000**

PROGRAM - ACTIVITY:	DEPARTMENT:	ACCOUNT NO.
Transportation - Transit	CyRide	552-1159-439 552-1169-439

BUS STOP IMPROVEMENTS **PROJECT STATUS:** Cost 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 450 bus stop locations throughout the city. Therefore, over the next five-year period (2019/20 through 2023/24), 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 and 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 each year beginning in 2021/22 through 2023/24.

Additionally, a number of these improvements are small improvements, but must now complete a historical and environmental process under new federal regulations. This can take up to four months to document and received federal approval. In order to be more responsive to its customers, CyRide will budget an additional $25,000 each year of the five year CIP in local dollars for these smaller projects so that they can more quickly be accomplished.

In 2019/20, CyRide will design a new bus stop sign and install these at its bus stop locations ($20,000). Current signage is more than 20 years old, with many signs needing to be replaced. This project will allow for a fresh, new image and replace signs that would need to be replaced due to wear from the outdoor elements.

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	2019/20	2020/21	2021/22	2022/23	2023/24
COST:						
Pads, Benches, Shelters	150,000			50,000	50,000	50,000
Concrete	125,000	25,000	25,000	25,000	25,000	25,000
Bus Signs	20,000	20,000				
TOTAL	**295,000**	**45,000**	**25,000**	**75,000**	**75,000**	**75,000**
FINANCING:						
Transit Fund	175,000	45,000	25,000	35,000	35,000	35,000
Federal 5310 Grants	120,000			40,000	40,000	40000
TOTAL	**295,000**	**45,000**	**25,000**	**75,000**	**75,000**	**75,000**

PROGRAM - ACTIVITY:	DEPARTMENT:	ACCOUNT NO.
Transportation - Transit	CyRide	552-1159-439 552-1169-439

CYRIDE SHOP AND OFFICE EQUIPMENT **PROJECT STATUS:** No Change

DESCRIPTION/JUSTIFICATION
This project is to address replacement of shop and office equipment used for CyRide operations. While a majority of the 2019/20 – 2023/24 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 $25,000 to $50,000 per year, plus larger equipment as described below. Additionally, three to six computers, laptops and printers, as well as replacement of office chairs and standup style desks will be funded each year at an estimated cost of $14,400 to $20,400 per year.

2019/20 – 2023/24 larger equipment purchases include:

- 2019/20 – Replace CyRide's current forklift ($60,000); replace an air compressor ($25,000)

COMMENTS
The 2019/20 smaller shop and office equipment expenditures include the replacement of three computers, three chairs and two standup desks, as well as the following shop equipment:

- Shoe Overhead Crane Hoist ($10,200)
- Two 10 Ton Floor Jacks ($2,400)
- Storage Racks and Shelving ($2,600)
- Battery Room Eye Wash & Shower Station ($9,800)
- Tire Spreader ($10,000)
- Diagnostic Scan Tool ($7,500)
- Alternator Mounting Arm Tool ($2,500)

CyRide's Air Compressor will be 36 years old at the time of replacement and will have exceeded its useful life. CyRide's forklift is 36 years old and is becoming unreliable and expensive to repair.

LOCATION
CyRide, 601 N. University Boulevard

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:						
Computers/ Office Equipment	90,000	20,400	20,400	20,400	14,400	14,400
Forklift	60,000	60,000				
Shop Equipment	215,000	45,000	25,000	50,000	45,000	50,000
Air Compressor	25,000	25,000				
TOTAL	**390,000**	**150,400**	**45,400**	**70,400**	**59,400**	**64,400**
FINANCING:						
Transit Fund	390,000	150,400	45,400	70,400	59,400	64,400
TOTAL	**390,000**	**150,400**	**45,400**	**70,400**	**59,400**	**64,400**

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

TRANSPORTATION - PARKING

PROJECT/FUNDING SOURCE	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24	Page
PROJECT:							
Parking System Improvements	860,000	-	-	-	-	860,000	126
TOTAL PROJECT EXPENDITURES	**860,000**	**-**	**-**	**-**	**-**	**860,000**	
FUNDING SOURCES:							
Parking Reserve Fund	860,000	-	-	-	-	860,000	
TOTAL FUNDING SOURCES	**860,000**	**-**	**-**	**-**	**-**	**860,000**	

PARKING SYSTEM IMPROVEMENTS **PROJECT STATUS:** New

DESCRIPTION/JUSTIFICATION

Starting July 1, 2018, the City increased rates for parking meters and monthly rental spaces alike to cover the capital cost of maintaining the parking system infrastructure (resurfacing or replacement of paved lots) in addition to the ongoing operational cost (staff, equipment, and materials). This program will identify reconstruction or rehabilitation projects using the capital raised from the incremental increase in parking revenues.

LOCATION

2019/20	No Project
2020/21	No Project
2021/22	No project
2022/23	No project
2023/24	Reconstruction of CBD Lot Z

Considering the rate change went into effect at the beginning of FY 2018/19 it is estimated to take a year or two to build a balance of capital large enough to support a project. Staff is monitoring the revenues throughout FY 2018/19 and will proposed adjustments to this program and more data becomes available. The condition of CBD Lot Z makes reconstruction of the lot a high priority location for the first project.

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Engineering		110,000					110,000
Construction		750,000					750,000
	TOTAL	**860,000**					**860,000**
FINANCING:							
Parking Fund		860,000					860,000
	TOTAL	**860,000**					**860,000**

PROGRAM - ACTIVITY: **DEPARTMENT:** **ACCOUNT NO.**

Public Works

TRANSPORTATION - AIRPORT

PROJECT/FUNDING SOURCE	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24	Page
PROJECT:							
Airport Improvements	1,597,300	-	400,000	837,300	180,000	180,000	128
TOTAL PROJECT EXPENDITURES	**1,597,300**	**-**	**400,000**	**837,300**	**180,000**	**180,000**	
FUNDING SOURCES:							
City:							
Airport Construction Fund	183,730	-	40,000	83,730	30,000	30,000	
Other:							
Federal Aviation Administration	1,113,570	-	360,000	753,570	-	-	
Grants	300,000	-	-	-	150,000	150,000	
Total Other Funding	1,413,570	-	360,000	753,570	150,000	150,000	
TOTAL FUNDING SOURCES	**1,597,300**	**-**	**400,000**	**837,300**	**180,000**	**180,000**	

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

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.

2019/20	No project
2020/21	Electric vault and old terminal building demolition
2021/22	South apron rehabilitation
2022/23	Hangar repairs- replace doors (Iowa DOT Funded)
2023/24	Hangar repairs (Iowa DOT Funded)

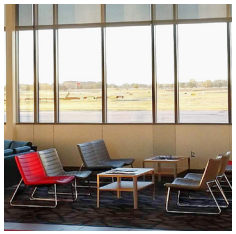
The Airport Master Plan outlines the steps necessary to extend the main runway 01/19 from approximately 6,000 feet to 8,000 feet. The purpose of the runway extension is to accommodate future growth of the airport by making it possible for larger aircraft to land in Ames year-round. The projects to relocate electrical equipment to an above-ground vault, demolish the old terminal building, and to perform the environmental assessment for the runway extension were all delayed one year from last year's CIP. The delay was recommended by FAA Central Region staff to ensure the availability of Federal funds for the projects. Miscellaneous Hangar Repairs will include structural and safety repairs to the City owned hangars.

An update to the Master Plan is currently underway. Future projects may change based on the results of the plan update.

LOCATION
Ames Municipal Airport

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Engineering		333,730		40,000	83,730	180,000	30,000
Construction		1,263,570		360,000	753,570		150,000
	TOTAL	**1,597,300**		**400,000**	**837,300**	**180,000**	**180,000**
FINANCING:							
Airport Construction Fund		183,730		40,000	83,730	30,000	30,000
DOT Funding		300,000				150,000	150,000
FAA Funding		1,113,570		360,000	753,570		
	TOTAL	**1,597,300**		**400,000**	**837,300**	**180,000**	**180,000**

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Transportation - Airport	Public Works	



COMMUNITY ENRICHMENT

COMMUNITY ENRICHMENT

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24	Page
EXPENDITURES:							
Parks and Recreation	4,465,750	808,000	879,750	680,000	1,070,500	1,027,500	130
Cemetery	75,000	-	-	-	75,000	-	143
City Manager	250,000	50,000	50,000	50,000	50,000	50,000	145
Planning and Housing	500,000	100,000	100,000	100,000	100,000	100,000	147
Facilities	550,000	300,000	100,000	50,000	50,000	50,000	150
TOTAL EXPENDITURES	**5,840,750**	**1,258,000**	**1,129,750**	**880,000**	**1,345,500**	**1,227,500**	
FUNDING SOURCES:							
Debt:							
G.O. Bonds	300,000	-	-	-	300,000	-	
City:							
Local Option Sales Tax	4,850,750	893,000	1,029,750	855,000	1,045,500	1,027,500	
Road Use Tax	25,000	25,000	-	-	-	-	
Water Utility Fund	25,000	25,000	-	-	-	-	
Sewer Utility Fund	25,000	25,000	-	-	-	-	
Park Development Fund	280,000	80,000	-	-	-	200,000	
Ice Arena Capital Reserve	85,000	10,000	75,000	-	-	-	
Fleet Reserve Fund	175,000	175,000	-	-	-	-	
Total City Funding	5,465,750	1,233,000	1,104,750	855,000	1,045,500	1,227,500	
Other:							
Ames Community School District	75,000	25,000	25,000	25,000	-	-	
TOTAL FUNDING SOURCES	**5,840,750**	**1,258,000**	**1,129,750**	**880,000**	**1,345,500**	**1,227,500**	

COMMUNITY ENRICHMENT - PARKS AND RECREATION

PROJECT/FUNDING SOURCE	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24	Page
PROJECT:							
Park System/Facility Improvements	1,990,000	440,000	480,000	95,000	695,000	280,000	132
Playground Equipment Improvements	795,750	143,000	64,750	150,000	225,500	212,500	133
Edwards Park Development	80,000	80,000	-	-	-	-	134
Ada Hayden Heritage Park	130,000	60,000	-	10,000	60,000	-	135
Municipal Pool	150,000	50,000	50,000	50,000	-	-	136
ADA Transition Plan Improvements	125,000	25,000	25,000	25,000	25,000	25,000	137
Ames/ISU Ice Arena	85,000	10,000	75,000	-	-	-	138
Homewood Golf Course	315,000	-	150,000	-	15,000	150,000	139
Moore Memorial Park Pedestrian Bridge	385,000	-	35,000	350,000	-	-	140
Furman Aquatic Center	210,000	-	-	-	50,000	160,000	141
Rose Prairie Park Development	200,000	-	-	-	-	200,000	142
TOTAL PROJECT EXPENDITURES	**4,465,750**	**808,000**	**879,750**	**680,000**	**1,070,500**	**1,027,500**	

COMMUNITY ENRICHMENT - PARKS AND RECREATION, continued

PROJECT/FUNDING SOURCE	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
FUNDING SOURCES:						
Debt:						
G.O. Bonds	300,000	-	-	-	300,000	-
City:						
Local Option Sales Tax	3,725,750	693,000	779,750	655,000	770,500	827,500
Ice Arena Capital Reserve	85,000	10,000	75,000	-	-	-
Park Development Fund	280,000	80,000	-	-	-	200,000
Total City Funding	4,090,750	783,000	854,750	655,000	770,500	1,027,500
Other:						
Ames Community School District	75,000	25,000	25,000	25,000	-	-
TOTAL FUNDING SOURCES	**4,465,750**	**808,000**	**879,750**	**680,000**	**1,070,500**	**1,027,500**

PARK SYSTEM/FACILITY IMPROVEMENTS **PROJECT STATUS:** Delayed Scope 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

2019/20: Brookside Park: install railings on stairs west of tennis courts ($15,000)
Gateway Hills Park: exterior improvements/repairs to administrative office ($50,000); improvements at Carroll Marty Disc Golf Course ($75,000)
Inis Grove Park: install fence adjacent to sand volleyball courts ($20,000)
McCarthy Lee Park: install bridge over Clear Creek ($260,000)
River Valley Park: repairs to concession stand and restrooms ($20,000)

2020/21: Bandshell: engineer/design renovations for changing rooms ($5,000)
Inis Grove Park: install shared use paths along 24th Street and Duff Avenue ($150,000); replace tennis court fencing ($25,000)
Site to be determined: remove wading pool and construct a spray pad out of the flood plain ($300,000)

2021/22: Bandshell: renovate changing rooms ($50,000)
Carr Park: engineer/design bath house removal and plan new shelter with restroom ($15,000)
Park Maintenance: engineer/design maintenance facility consolidation ($30,000)

2022/23: Carr Park: remove bath house and construct new shelter with restroom ($225,000)
Gateway Hills Park: engineer/design restroom addition ($10,000)
McCarthy Lee Park: add gutters to the hill drive ($40,000); install irrigation system at McCarthy Lee sports fields ($45,000)
Park Maintenance: consolidate maintenance facilities ($300,000)
River Valley Park: replace Cottonwood shelter ($75,000)

2023/24: Community Center: refinish gymnasium wood floor ($30,000)
Gateway Hills Park: construct restroom ($100,000); install new standards, drainage, and borders on sand volleyball courts ($50,000)
River Valley Park: install additional parking by Cottonwood shelter ($100,000)

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:						
Engineering	110,000	50,000	5,000	45,000	10,000	
Construction	1,880,000	390,000	475,000	50,000	685,000	280,000
TOTAL	**1,990,000**	**440,000**	**480,000**	**95,000**	**695,000**	**280,000**
FINANCING:						
G.O. Bonds	300,000				300,000	
Local Option Sales Tax	1,690,000	440,000	480,000	95,000	395,000	280,000
TOTAL	**1,990,000**	**440,000**	**480,000**	**95,000**	**695,000**	**280,000**

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

PLAYGROUND EQUIPMENT IMPROVEMENTS **PROJECT STATUS:** Cost Increase Scope Change Advanced

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

2019/20: Replace equipment adjacent to Shagbark Shelter in Inis Grove Park ($77,500); install new equipment adjacent to Red Oak Shelter in Inis Grove Park ($65,500)

2020/21: Replace equipment near Hawthorne Shelter in River Valley Park ($64,750)

2021/22: Replace equipment in Country Gables Park ($50,000); replace equipment in Christopher Gartner Park ($50,000); replace equipment in Lloyd Kurtz Park ($50,000)

2022/23: Replace equipment in Christofferson Park ($50,000); replace equipment in Bandshell Park ($63,000); replace equipment adjacent to Cottonwood Shelter in River Valley Park ($62,500); install new equipment in Carr Park ($50,000)

2023/24: Replace equipment in Stuart Smith Park ($50,000); replace equipment adjacent to Hickory Shelter in Brookside Park ($50,000); replace ages 2-5 equipment ($50,000) and ages 5-12 equipment ($62,500) in Moore Memorial Park

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Construction		795,750	143,000	64,750	150,000	225,500	212,500
	TOTAL	**795,750**	**143,000**	**64,750**	**150,000**	**225,500**	**212,500**
FINANCING:							
Local Option Sales Tax		795,750	143,000	64,750	150,000	225,500	212,500
	TOTAL	**795,750**	**143,000**	**64,750**	**150,000**	**225,500**	**212,500**

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Community Enrichment	Parks and Recreation	030-4967-439

EDWARDS PARK DEVELOPMENT **PROJECT STATUS:** No Change

DESCRIPTION/JUSTIFICATION

The old Edwards school site is approximately six acres and is owned by the Ames Community School District. The Old Edwards Neighborhood Association raised funds to offset demolition costs of the school by the District. In exchange for these funds, the School Board agreed to transfer the land to the City to be developed into a neighborhood park. City Council agreed to accept the land in a “clean and green” condition and develop it into a park. This transfer may happen in late FY 2018/19. The site already houses playground equipment which the City helped fund several years ago. In preliminary conversation with the neighborhood association leadership, they indicated the desire for additional amenities such as a shelter, basketball pad, benches, drinking fountain, and picnic tables. Meetings with the neighbors will be held to identify needs prior to site plan development. The association will be asked to raise funds for any additional amenities and features which require funding in excess of $80,000.

COMMENTS

FY 2019/20: Develop the Edwards Neighborhood Park ($80,000)

LOCATION

Corner of Westwood Drive and Woodland Street

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Construction		80,000	80,000				
	TOTAL	**80,000**	**80,000**				
FINANCING:							
Park Development Fund		80,000	80,000				
	TOTAL	**80,000**	**80,000**				

PROGRAM - ACTIVITY	**DEPARTMENT:**	**ACCOUNT NO.**
Community Enrichment	Parks and Recreation	340-4996-459

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

DESCRIPTION/JUSTIFICATION

Over the past year, the accessible fishing pier has shown signs of heaving and sinking. A structural engineer assessed the structure and determined repairs are needed to correct the problem. This includes removing the decking, making corrections to the structure, and installing new decking, posts, and railings.

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

2019/20: Engineer/design/repair accessible fishing pier ($60,000)
2021/22: Engineer/design a wetland overlook ($10,000)
2022/23: Construct a wetland overlook ($60,000)

LOCATION

Ada Hayden Heritage Park, 5205 Grand Avenue

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:						
Engineering	20,000	10,000		10,000		
Construction	110,000	50,000			60,000	
TOTAL	**130,000**	**60,000**		**10,000**	**60,000**	
FINANCING:						
Local Option Sales Tax	130,000	60,000		10,000	60,000	
TOTAL	**130,000**	**60,000**		**10,000**	**60,000**	

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

MUNICIPAL POOL **PROJECT STATUS:** Cost Increase

DESCRIPTION/JUSTIFICATION

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

The City and Ames Community School District's joint use agreement for the Municipal Pool expires on **June 30, 2020.** All capital costs are shared equally by the City and Ames Community School District. The School District is anticipating opening a new pool during the fall of 2022 and the Healthy Life Center could open during that same time frame. A new agreement will be needed for FY 2020/21 and beyond and thus shared funding is shown through FY 2021/22.

COMMENTS

2019/20: Total $50,000 – To be determined
2020/21: Total $50,000 – To be determined
2021/22: Total $50,000 – To be determined

LOCATION

Municipal Pool, 1925 Ames High Drive

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
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:	**DEPARTMENT:**	**ACCOUNT NO.**
Community Enrichment	Parks and Recreation	030-4916-459

ADA TRANSITION PLAN IMPROVEMENTS **PROJECT STATUS:** No Change

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 2018/19. 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, cost will not be known until the transition plan is finalized.

COMMENTS

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

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

2021/22: ADA Transition Plan items to be determined ($25,000)

2022/23: ADA Transition Plan items to be determined ($25,000)

2023/24: ADA Transition Plan items to be determined ($25,000)

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
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:							
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:	**DEPARTMENT:**	**ACCOUNT NO.**
Community Enrichment	Parks and Recreation	030-4908-459

AMES/ISU ICE ARENA **PROJECT STATUS:** No Change

DESCRIPTION/JUSTIFICATION
The Ames/ISU Ice Arena is over 17 years old. The following item needs to be reconstructed to maintain a quality facility.

Funding for capital improvement projects is provided through the Ice Arena Capital Reserve Fund. Every 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, 2018, this fund totaled $185,993.

COMMENTS

FY 2019/20: Engineer/design parking lot reconstruction ($10,000)
FY 2020/21: Reconstruct parking lot ($75,000)

LOCATION
Ames/ISU Ice Arena, 1505 Gateway Hills Park Drive

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Construction		75,000		75,000			
Engineering/Design		10,000	10,000				
	TOTAL	**85,000**	**10,000**	**75,000**			
FINANCING:							
Ice Arena Capital Reserve Funds		85,000	10,000	75,000			
	TOTAL	**85,000**	**10,000**	**75,000**			

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

HOMEWOOD GOLF COURSE **PROJECT STATUS:** Cost Increase Delayed

DESCRIPTION/JUSTIFICATION
The projects listed below will address facility needs and enhance provided services.

To meet code requirements, a shared use path will be installed along Duff Avenue, along 20th Street, and end at the newly constructed clubhouse.

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.

The Homewood Clubhouse is currently in the design phase. This project has $800,000 allocated for design and construction, however, preliminary cost estimates for design, construction, and FFE are approximately $1.05 million. Therefore, $250,000 from the FY 18/19 general fund is being allocated to this project to cover the funding shortfall.

COMMENTS
2020/21: Install shared use path along Duff Avenue, along 20th Street, and to the new clubhouse ($150,000)
2022/23: Engineer/design bridge replacement on Hole #9 for cart accommodation ($15,000)
2023/24: Replace the bridge on Hole #9 so it can accommodate carts ($150,000)

LOCATION
Homewood Golf Course, 401 E 20th Street

	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:						
Engineering	15,000				15,000	
Construction	300,000		150,000			150,000
TOTAL	**315,000**		**150,000**		**15,000**	**150,000**
FINANCING:						
Local Option Sales Tax	315,000		150,000		15,000	150,000
TOTAL	**315,000**		**150,000**		**15,000**	**150,000**

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

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. The plan is to then have a trail from Moore Memorial Park along Scholl Road to Ontario Street. This improvement is viable because ISU owns the land 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

2020/21: Engineer/design a pedestrian bridge to cross Squaw Creek at Moore Memorial Park ($35,000)
2021/22: Install a pedestrian bridge across Squaw Creek at Moore Memorial Park ($350,000)

LOCATION

Moore Memorial Park, 3050 Northridge Parkway

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
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:	**DEPARTMENT:**	**ACCOUNT NO.**
Community Enrichment	Parks and Recreation	

FURMAN AQUATIC CENTER **PROJECT STATUS:** Delayed

DESCRIPTION/JUSTIFICATION

This facility opened in May 2010. It has been operational for nine seasons with an average of approximately 93,000 visitors per summer. To ensure it remains a quality facility, structural and electrical issues have been identified and will be addressed in a systematic manner.

Requests for a gathering space outside of the aquatic center have been received from users of the facility. Daycare providers would like a space to gather children for snack time and check-in. Potential renters of the facility have asked about a place to gather and picnic prior to their rental time. Adding a shelter will address these requests and potentially increase rental revenue.

The current light fixtures allow water to accumulate inside the fixture which has to be drained annually. Replacing with an LED lamp and better fixture will reduce maintenance and energy consumption. The play structure in the Splash Pool is becoming faded and needs to be refurbished.

COMMENTS

2022/23: Refurbish the play structure in the Splash Pool ($50,000)
2023/24: Replace the light fixtures on the pool deck ($100,000); Install a shelter adjacent the parking lot ($60,000)

LOCATION

Furman Aquatic Center, 1365 13th Street

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Construction		210,000				50,000	160,000
	TOTAL	**210,000**				**50,000**	**160,000**
FINANCING:							
Local Option Sales Tax		210,000				50,000	160,000
	TOTAL	**210,000**				**50,000**	**160,000**

PROGRAM - ACTIVITY: Community Enrichment

DEPARTMENT: Parks and Recreation

ACCOUNT NO.

ROSE PRAIRIE PARK DEVELOPMENT **PROJECT STATUS:** Delayed

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. This project is delayed because the private development is not moving as quickly as originally planned.

COMMENTS

FY 2023/24: Develop the Rose Prairie Neighborhood Park ($200,000)

LOCATION

Rose Prairie Development

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Park Development		200,000					200,000
	TOTAL	**200,000**					**200,000**
FINANCING:							
Park Development Fund		200,000					200,000
	TOTAL	**200,000**					**200,000**

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

COMMUNITY ENRICHMENT - CEMETERY

PROJECT/FUNDING SOURCE	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24	Page
PROJECT:							
Municipal Cemetery Improvements	75,000	-	-	-	75,000	-	144
TOTAL PROJECT EXPENDITURES	**75,000**	**-**	**-**	**-**	**75,000**	**-**	
FUNDING SOURCES:							
City:							
Local Option Sales Tax	75,000	-	-	-	75,000	-	
TOTAL FUNDING SOURCES	**75,000**	**-**	**-**	**-**	**75,000**	**-**	

AMES MUNICIPAL CEMETERY IMPROVEMENTS **PROJECT STATUS:** Scope Change

DESCRIPTION/JUSTIFICATION

This program provides funding to enhance the public appearance at the Cemetery.

The Funeral Pavilion will give people a place to conduct a ceremony in the cemetery when weather conditions make it difficult to get to the grave site.

COMMENTS

2022/23 Funeral Pavilion ($75,000)

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Construction		75,000				75,000	
	TOTAL	**75,000**				**75,000**	
FINANCING:							
Local Option Sales Tax		75,000				75,000	
	TOTAL	**75,000**				**75,000**	

PROGRAM - ACTIVITY: **DEPARTMENT:** **ACCOUNT NO.**

Community Enrichment Parks and Recreation

COMMUNITY ENRICHMENT - CITY MANAGER

PROJECT/FUNDING SOURCE	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24	Page
PROJECT:							
Neighborhood Improvement Program	250,000	50,000	50,000	50,000	50,000	50,000	146
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, 124 neighborhood projects have been funded by the City, totaling $367,910.61. 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;” Monarch butterfly habitat restoration, concrete ping pong tables in a City park, 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	2019/20	2020/21	2021/22	2022/23	2023/24
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: **DEPARTMENT:** **ACCOUNT NO.**

Community Enrichment City Manager's Office

COMMUNITY ENRICHMENT - PLANNING AND HOUSING

PROJECT/FUNDING SOURCE	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24	Page
PROJECT:							
Downtown Façade Program	250,000	50,000	50,000	50,000	50,000	50,000	148
Campustown Façade Program	250,000	50,000	50,000	50,000	50,000	50,000	149
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 2018, the program has awarded 43 grants to downtown businesses and has expensed a total of $555,359 on 37 projects. FY 2019/20 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	2019/20	2020/21	2021/22	2022/23	2023/24
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

The 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 FY 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, and conduct workshops and working meetings with applicants and City staff. The second step was 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. Through September 2018, the program has awarded grants to six Campustown businesses and has expensed a total of $96,000 on five projects. FY 2019/20 will begin with a new $50,000 allocation.

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
Campustown Ames

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
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

GENERAL GOVERNMENT - FACILITIES

PROJECT/FUNDING SOURCE	TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24	Page
PROJECT:							
City Hall Improvements	300,000	50,000	100,000	50,000	50,000	50,000	151
Maintenance Facility Fabric Structure	250,000	250,000	-	-	-	-	152
TOTAL PROJECT EXPENDITURES	**550,000**	**300,000**	**100,000**	**50,000**	**50,000**	**50,000**	
FUNDING SOURCE:							
City:							
Local Option Sales Tax	300,000	50,000	100,000	50,000	50,000	50,000	
Fleet Reserve Fund	175,000	175,000	-	-	-	-	
Road Use Tax	25,000	25,000	-	-	-	-	
Water Utility Fund	25,000	25,000	-	-	-	-	
Sewer Utility Fund	25,000	25,000	-	-	-	-	
TOTAL FUNDING SOURCES	**550,000**	**300,000**	**100,000**	**50,000**	**50,000**	**50,000**	

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

DESCRIPTION/JUSTIFICATION
The City Hall Improvements program is focused on major maintenance or replacement of needed items for the City Hall building, the Veterans Memorial, and both east and west City Hall parking lots.

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

Due to the 24/7 Police Department operations, flooring installed during the first remodel needs to be replaced. Currently, the area is carpeted but multiple safe and long-lasting options will be explored and considered.

LOCATION
City Hall, 515 Clark Avenue

2020/21 An additional $50,000 in funding has been added for the replacement of flooring in the Police Department.

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Maintenance		300,000	50,000	100,000	50,000	50,000	50,000
	TOTAL	**300,000**	**50,000**	**100,000**	**50,000**	**50,000**	**50,000**
FINANCING:							
Local Option Sales Tax		300,000	50,000	100,000	50,000	50,000	50,000
	TOTAL	**300,000**	**50,000**	**100,000**	**50,000**	**50,000**	**50,000**

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
General Government	Facilities	030-2930-419

MAINTENANCE FACILITY FABRIC STRUCTURE **PROJECT STATUS:** New

DESCRIPTION/JUSTIFICATION
The Maintenance Facility is currently used by Fleet Services, Public Works Streets, Public Works Utility Maintenance, and Public Works Traffic. The building has reached its capacity to store equipment (especially during the snow season). A fabric structure will free up maintenance facility space by creating snow plow parking and a cold storage area. Currently there are several pieces of equipment that are stored outside during the winter. It is preferred that equipment (such as a leased motor grader) be stored in a covered facility.

LOCATION
Maintenance Facility, 2207 Edison St.

		TOTAL	2019/20	2020/21	2021/22	2022/23	2023/24
COST:							
Fabric Structure		250,000	250,000				
	TOTAL	**250,000**	**250,000**				
FINANCING:							
Fleet Reserve Fund		175,000	175,000				
Road Use Tax		25,000	25,000				
Sewer Utility Fund		25,000	25,000				
Water Utility Fund		25,000	25,000				
	TOTAL	**250,000**	**250,000**				

PROGRAM - ACTIVITY:	**DEPARTMENT:**	**ACCOUNT NO.**
Internal Services	Fleet Services	811-2871-529