

Project Number: EU01
Project Title: New Residential Electric Services and Metering
Department Name: Electric

Asset Type: Electric Utility
CIP Status: Recurring
Project Category: Capital Upgrade

Budget Year: 2019
Category Code: A
Sector: Various

Project Purpose:

This project provides electric service to residential electric utility customers.

Project Narrative:

This project provides customers the means for receiving electrical service from the City. It includes installation of underground electrical cable and metering for services to new residential dwelling units.

External Funding Sources Available:

Projects are funded by developer.

Projected Timetable:

Systematically throughout the fiscal year as necessitated by new customers.

Impact on Operating Budget:

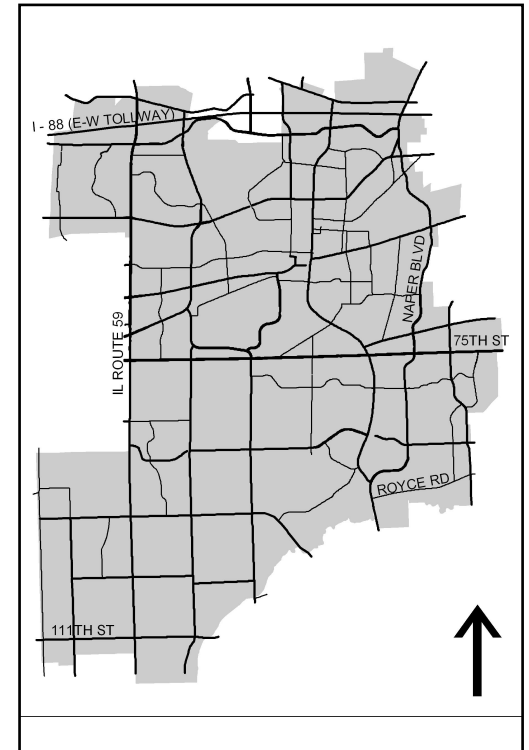
This project will require no additional staffing or resources. There will be no impact on the operating budget.

Funding Source Summary

Funding Source	2019	2020	2021	2022	2023	Total Source
Developer Contribution	250,000	408,000	546,210	557,134	568,277	2,329,621
Totals	250,000	408,000	546,210	557,134	568,277	2,329,621

Project Cost Summary

Expense Category	2018 Budget	2019	2020	2021	2022	2023	Total CIP
Construction	400,000	250,000	408,000	546,210	557,134	568,277	2,329,621
Totals	400,000	250,000	408,000	546,210	557,134	568,277	2,329,621



Project Number: EU02
Project Title: Existing Residential Electric Services and Metering
Department Name: Electric

Asset Type: Electric Utility
CIP Status: Recurring
Project Category: Capital Maintenance

Budget Year: 2019
Category Code: A
Sector: Various

Project Purpose:

This project provides upgrades and relocation of electric service to existing residential electric utility customers.

Project Narrative:

This project provides customers the means for upgrading or relocating their electrical service from the City. It includes installation of underground electrical cable and metering for services to existing residential dwelling units.

External Funding Sources Available:

Projects are funded partially by customer.

Projected Timetable:

Systematically throughout the fiscal year.

Impact on Operating Budget:

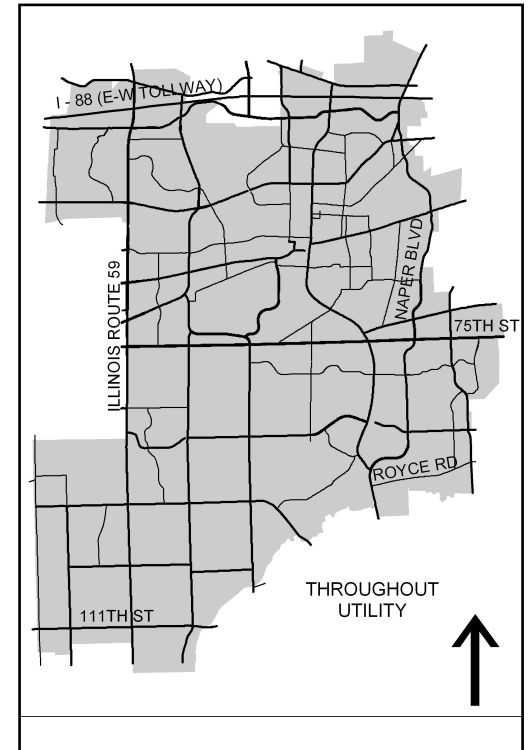
This project will require no additional staffing or resources. There will be no impact on the operating budget.

Funding Source Summary

Funding Source	2019	2020	2021	2022	2023	Total Source
Electric Utility	250,000	255,000	260,100	265,302	270,608	1,301,010
Totals	250,000	255,000	260,100	265,302	270,608	1,301,010

Project Cost Summary

Expense Category	2018 Budget	2019	2020	2021	2022	2023	Total CIP
Construction	300,000	250,000	255,000	260,100	265,302	270,608	1,301,010
Totals	300,000	250,000	255,000	260,100	265,302	270,608	1,301,010



Project Number: EU03
Project Title: New Electric System Installations
Department Name: Electric

Asset Type: Electric Utility
CIP Status: Recurring
Project Category: Capital Upgrade

Budget Year: 2019
Category Code: LR
Sector: Various

Project Purpose:

This project provides infrastructure additions to the electrical system to facilitate new commercial and residential development.

Project Narrative:

This project includes the installation of conductors, switch modules, transformers, pedestals, and associated equipment for electric service to new customers.

External Funding Sources Available:

Funded by Developer.

Projected Timetable:

Systematically throughout the fiscal year as necessitated by new customers.

Impact on Operating Budget:

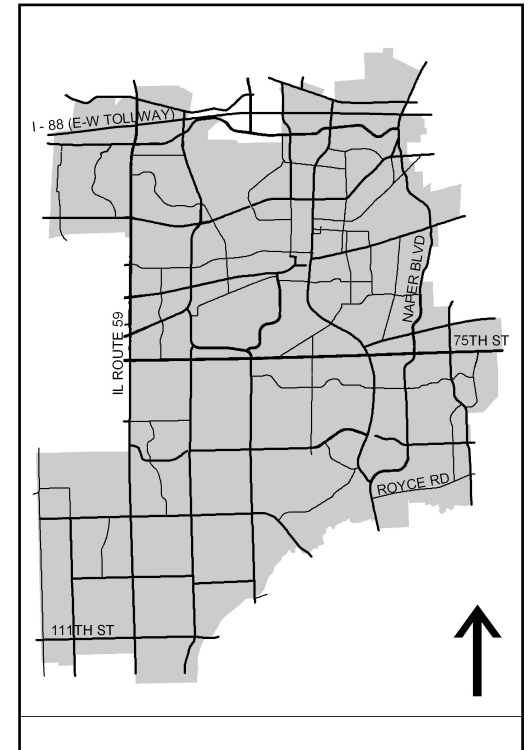
This project will require no additional staffing or resources. There will be no impact on the operating budget.

Funding Source Summary

Funding Source	2019	2020	2021	2022	2023	Total Source
Developer Contribution	500,000	867,000	884,340	902,027	920,067	4,073,434
Totals	500,000	867,000	884,340	902,027	920,067	4,073,434

Project Cost Summary

Expense Category	2018 Budget	2019	2020	2021	2022	2023	Total CIP
Construction	1,000,000	500,000	867,000	884,340	902,027	920,067	4,073,434
Totals	1,000,000	500,000	867,000	884,340	902,027	920,067	4,073,434



Project Number: EU05
Project Title: Overhead Transmission & Distribution
Department Name: Electric

Asset Type: Electric Utility
CIP Status: Recurring
Project Category: Capital Maintenance

Budget Year: 2019
Category Code: A
Sector: Various

Project Purpose:

This project sustains essential and reliable infrastructure by replacing or upgrading aged overhead electrical transmission or distribution facilities.

Project Narrative:

This project also includes overhead work necessitated by new development, to maintain service and reliability, and to increase load capacity to serve customers.

External Funding Sources Available:

None

Projected Timetable:

Systematically throughout the fiscal year.

Impact on Operating Budget:

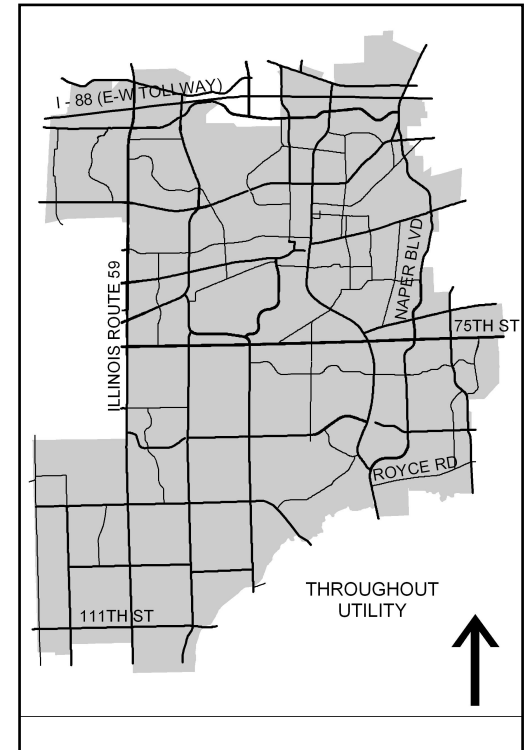
This project will require no additional staffing or resources. There will be no impact on the operating budget.

Funding Source Summary

Funding Source	2019	2020	2021	2022	2023	Total Source
Electric Utility	300,000	306,000	312,120	318,362	324,730	1,561,212
Totals	300,000	306,000	312,120	318,362	324,730	1,561,212

Project Cost Summary

Expense Category	2018 Budget	2019	2020	2021	2022	2023	Total CIP
Construction	300,000	300,000	306,000	312,120	318,362	324,730	1,561,212
Totals	300,000	300,000	306,000	312,120	318,362	324,730	1,561,212



Project Number: EU06
Project Title: Underground Transmission & Distribution
Department Name: Electric

Asset Type: Electric Utility
CIP Status: Recurring
Project Category: Capital Maintenance

Budget Year: 2019
Category Code: A
Sector: Various

Project Purpose:

This project sustains essential and reliable infrastructure by replacing or upgrading aged underground electrical transmission or distribution facilities.

Project Narrative:

This project includes underground work necessitated by new development, to maintain service and reliability, and to increase load capacity to serve customers.

External Funding Sources Available:

None

Projected Timetable:

Systematically throughout the fiscal year.

Impact on Operating Budget:

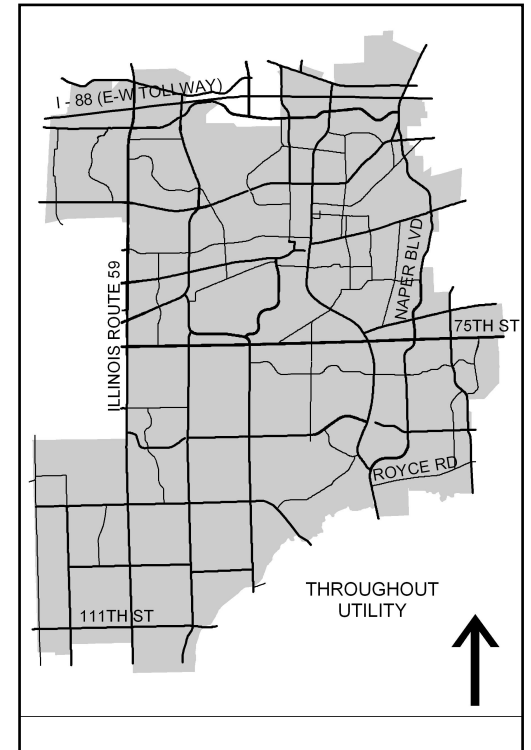
This project will require no additional staffing or resources. There will be no impact on the operating budget.

Funding Source Summary

Funding Source	2019	2020	2021	2022	2023	Total Source
Electric Utility	1,000,000	1,020,000	1,040,400	1,061,208	1,082,432	5,204,040
Totals	1,000,000	1,020,000	1,040,400	1,061,208	1,082,432	5,204,040

Project Cost Summary

Expense Category	2018 Budget	2019	2020	2021	2022	2023	Total CIP
Construction	800,000	1,000,000	1,020,000	1,040,400	1,061,208	1,082,432	5,204,040
Totals	800,000	1,000,000	1,020,000	1,040,400	1,061,208	1,082,432	5,204,040



Project Number: EU12
Project Title: Government Required Electric System Relocations
Department Name: Electric

Asset Type: Electric Utility
CIP Status: Recurring
Project Category: Capital Maintenance

Budget Year: 2019
Category Code: LR
Sector: Various

Project Purpose:

This project supports coordination of intergovernmental projects in joint efforts with the City, County, and the State, (bridges, highways, flood control, storm, and sewer projects) in order to make improvements to the infrastructure and to minimize the impact on the electrical facilities that are to be relocated.

Project Narrative:

Project provides for the relocation of overhead and underground transmission and distribution electrical facilities in the public way that are required to be relocated to remove a conflict and to facilitate and accommodate improvements to the infrastructure. Projects include North Aurora Road Widening Project, and other locations as required.

External Funding Sources Available:

None

Projected Timetable:

Systematically throughout the fiscal year.

Impact on Operating Budget:

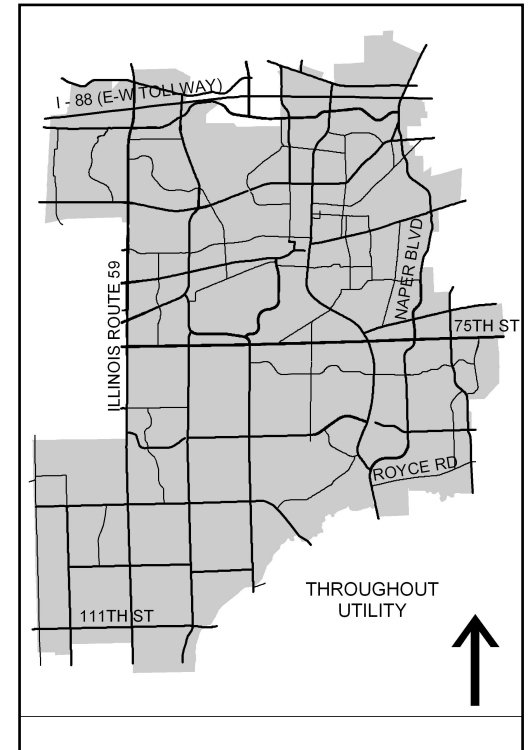
This project will require no additional staffing. There will be no impact on the operating budget.

Funding Source Summary

Funding Source	2019	2020	2021	2022	2023	Total Source
Electric Utility	960,000	683,400	728,280	530,604	541,216	3,443,500
Totals	960,000	683,400	728,280	530,604	541,216	3,443,500

Project Cost Summary

Expense Category	2018 Budget	2019	2020	2021	2022	2023	Total CIP
Construction	875,000	960,000	683,400	728,280	530,604	541,216	3,443,500
Totals	875,000	960,000	683,400	728,280	530,604	541,216	3,443,500



Project Number: EU13
Project Title: Underground Conduit (Duct Banks)
Department Name: Electric

Asset Type: Electric Utility
CIP Status: Recurring
Project Category: Capital Maintenance

Budget Year: 2019
Category Code: A
Sector: Various

Project Purpose:

This project is to install and maintain duct bank systems for the electrical and communication infrastructure.

Project Narrative:

Projects provide routing for new and replaced feeders in order to provide for load growth, improved distribution of existing load and replacement of aged and failing cables.

External Funding Sources Available:

None

Projected Timetable:

Systematically throughout the fiscal year.

Impact on Operating Budget:

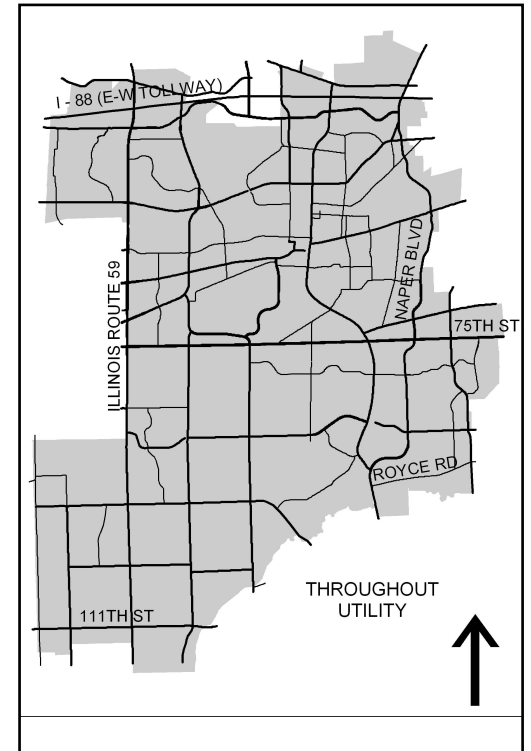
This project will require no additional staffing or resources. There will be no impact on the operating budget.

Funding Source Summary

Funding Source	2019	2020	2021	2022	2023	Total Source
Electric Utility	850,000	663,000	1,144,440	530,604	541,216	3,729,260
Totals	850,000	663,000	1,144,440	530,604	541,216	3,729,260

Project Cost Summary

Expense Category	2018 Budget	2019	2020	2021	2022	2023	Total CIP
Construction	400,000	850,000	663,000	1,144,440	530,604	541,216	3,729,260
Totals	400,000	850,000	663,000	1,144,440	530,604	541,216	3,729,260



Project Number: EU14
Project Title: Underground Cable (Feeders) & Equipment
Department Name: Electric

Asset Type: Electric Utility
CIP Status: Recurring
Project Category: Capital Maintenance

Budget Year: 2019
Category Code: B
Sector: Various

Project Purpose:

Projects designed to install and replace 12 kV feeder systems for the electrical distribution system.

Project Narrative:

Sections of feeders that have multiple outages will be replaced to maintain reliability of service to customers. In future years, additional feeders will be planned in anticipation of load growth and improved distribution of existing load.

External Funding Sources Available:

None

Projected Timetable:

Systematically throughout the fiscal year.

Impact on Operating Budget:

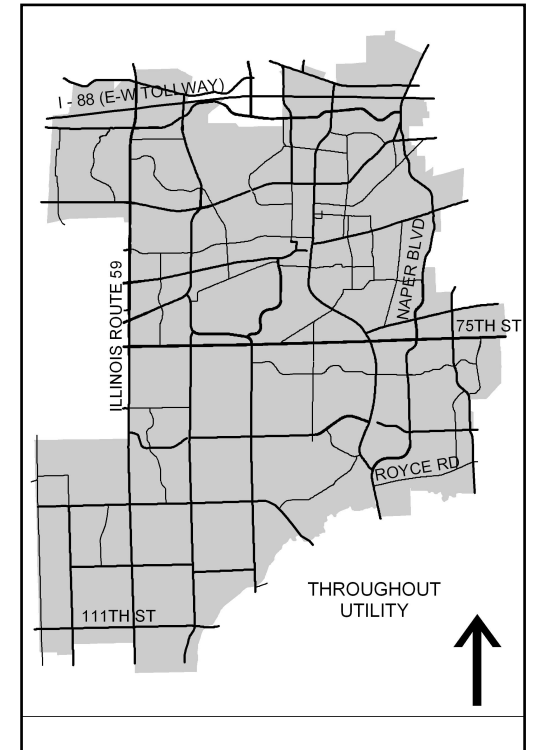
This project will require no additional staffing or resources. There will be no impact on the operating budget.

Funding Source Summary

Funding Source	2019	2020	2021	2022	2023	Total Source
Electric Utility	670,000	561,000	676,260	795,906	811,824	3,514,990
Totals	670,000	561,000	676,260	795,906	811,824	3,514,990

Project Cost Summary

Expense Category	2018 Budget	2019	2020	2021	2022	2023	Total CIP
Construction	100,000	670,000	561,000	676,260	795,906	811,824	3,514,990
Totals	100,000	670,000	561,000	676,260	795,906	811,824	3,514,990



Project Number: EU29
Project Title: Sub-transmission Circuits
Department Name: Electric

Asset Type: Electric Utility
CIP Status: Recurring
Project Category: Capital Maintenance

Budget Year: 2018
Category Code: B
Sector: Various

Project Purpose:

The projects include the installation and replacement of underground and overhead sub-transmission 34 kV cable and conductor line capacity for major upgrades and additions to the system with related switching and associated equipment.

Project Narrative:

The 34 kV cable system provides a path to move large portions of electrical energy to meet the customers' demands throughout the City at an efficient cost. The work is required throughout the system to meet system load growth and maintain high levels of reliability. Specific projects include feeders to connect Pebblewood Substation to Westside Substation.

External Funding Sources Available:

None

Projected Timetable:

Systematically throughout the fiscal year.

Impact on Operating Budget:

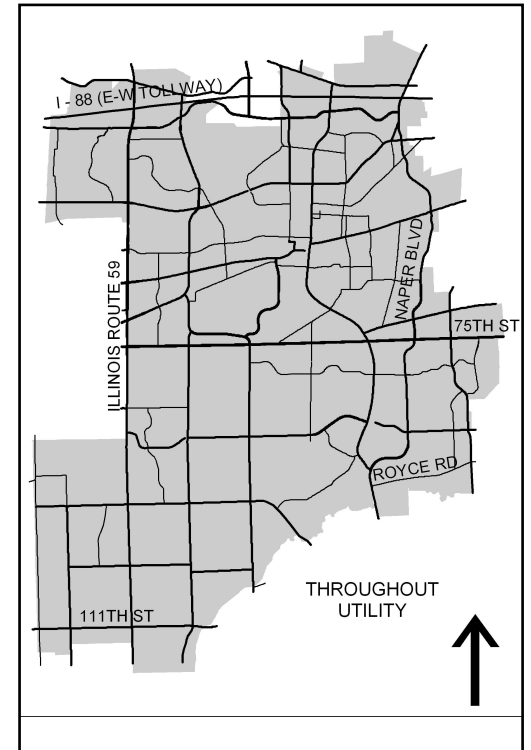
This project will require no additional staffing or resources. There will be no impact on the operating budget.

Funding Source Summary

Funding Source	2018	2019	2020	2021	2022	Total Source
Electric Utility	1,000,000	1,020,000	1,560,600	795,906	811,824	5,188,330
Totals	1,000,000	1,020,000	1,560,600	795,906	811,824	5,188,330

Project Cost Summary

Expense Category	2017 Budget	2018	2019	2020	2021	2022	Total CIP
Construction	250,000	1,000,000	1,020,000	1,560,600	795,906	811,824	5,188,330
Totals	250,000	1,000,000	1,020,000	1,560,600	795,906	811,824	5,188,330



Project Number: EU44
Project Title: Fiber Optic Cable for Relay Protection and Communication
Department Name: Electric

Asset Type: Electric Utility
CIP Status: Recurring
Project Category: Capital Maintenance

Budget Year: 2019
Category Code: B
Sector: Various

Project Purpose:

Design and installation of fiber optic cable and equipment needed to create communication paths between the Electric Service Center and all electrical substations for protective relay and SCADA communication.

Project Narrative:

Fiber optic cable and communication equipment installations will provide a major backbone for all utility communication needs such as relay protection, supervisory control and data acquisition (SCADA), distribution automation (DA), substation automation systems (SAS), advanced metering infrastructure (AMI), and substation/infrastructure security (alarming, CCTV cameras, etc.).

External Funding Sources Available:

None

Projected Timetable:

Systematically throughout fiscal year.

Impact on Operating Budget:

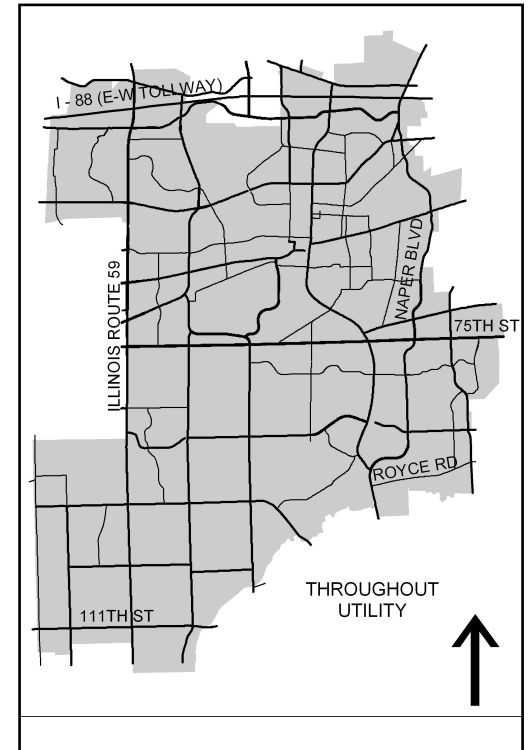
This project will require no additional staffing or resources. There will be no impact on the operating budget.

Funding Source Summary

Funding Source	2019	2020	2021	2022	2023	Total Source
Electric Utility	904,000	807,840	915,552	1,666,097	1,688,594	5,982,083
Totals	904,000	807,840	915,552	1,666,097	1,688,594	5,982,083

Project Cost Summary

Expense Category	2018 Budget	2019	2020	2021	2022	2023	Total CIP
Construction	405,000	904,000	807,840	915,552	1,666,097	1,688,594	5,982,083
Totals	405,000	904,000	807,840	915,552	1,666,097	1,688,594	5,982,083



Project Number: EU52
Project Title: Cable Replacement Program
Department Name: Electric

Asset Type: Electric Utility
CIP Status: Recurring
Project Category: Capital Maintenance

Budget Year: 2019
Category Code: B
Sector: Various

Project Purpose:

This project includes replacing aging single and three-phase feeder cables and equipment through boring and cable injection.

Project Narrative:

Cable meeting the criteria for number of outages in a year and an unacceptable duration time is identified as a likely candidate for the cable replacement program. Significant portions of cable will be refurbished via cable injection, extending cable life for up to 30 years with zero landscaping disturbance. For CY 2019, subdivisions slated for improvement include High Oaks, Green Ridge, Hidden Valley, Walnut Hill, Meadows, Maplebrook East, Hunters Woods, Farmington, River Woods, Naper Carriage Hill, and others.

External Funding Sources Available:

None

Projected Timetable:

Systematically throughout the fiscal year.

Impact on Operating Budget:

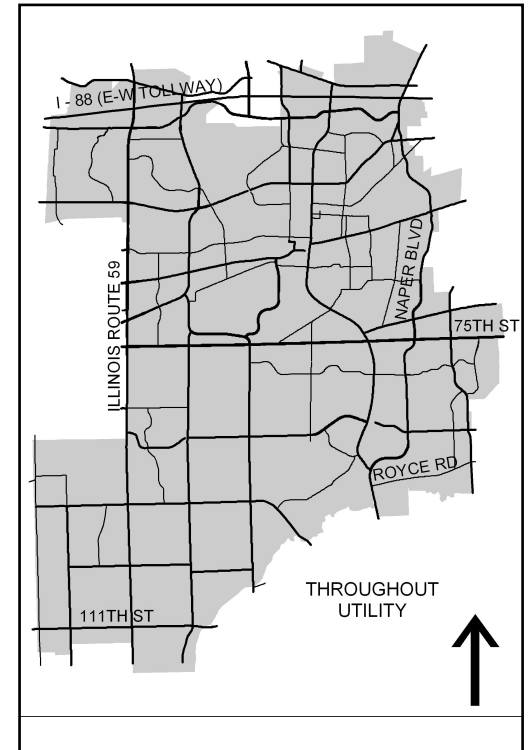
This project will require no additional staffing or resources. There will be no impact on the operating budget.

Funding Source Summary

Funding Source	2019	2020	2021	2022	2023	Total Source
Electric Utility	2,900,000	4,625,700	3,136,806	2,085,274	2,164,864	14,912,644
Totals	2,900,000	4,625,700	3,136,806	2,085,274	2,164,864	14,912,644

Project Cost Summary

Expense Category	2018 Budget	2019	2020	2021	2022	2023	Total CIP
Construction	1,707,000	2,900,000	4,625,700	3,136,806	2,085,274	2,164,864	14,912,644
Totals	1,707,000	2,900,000	4,625,700	3,136,806	2,085,274	2,164,864	14,912,644



Project Number: EU66
Project Title: Fiber Optic Cable for Metropolitan Area Network (MAN)
Department Name: Electric

Asset Type: Electric Utility
CIP Status: Recurring
Project Category: Capital Upgrade

Budget Year: 2019
Category Code: A
Sector: Northeast

Project Purpose:

This project leverages the city's existing electric Metropolitan Area Network (MAN) to provide communication services to other city departments and outside agencies.

Project Narrative:

Projects supported by this project include the Metropolitan Area Network (MAN) servicing all City owned and operated buildings including Naper Settlement, Naperville to Aurora Fiber Optic Communications for Radio System support as well as SCADA for Water network which provides a reliable, high speed communication backbone for DPU-W communication to water and waste water sites.

External Funding Sources Available:

Projects are funded by Customer.

Projected Timetable:

Systematically throughout the fiscal year as necessitated by customers.

Impact on Operating Budget:

This project will require no additional staffing or resources. There will be no impact on the operating budget.

Funding Source Summary

Funding Source	2019	2020	2021	2022	2023	Total Source
Developer Contribution	340,000	178,500	52,020	53,060	54,122	677,702
Totals	340,000	178,500	52,020	53,060	54,122	677,702

Project Cost Summary

Expense Category	2018 Budget	2019	2020	2021	2022	2023	Total CIP
Construction	25,000	340,000	178,500	52,020	53,060	54,122	677,702
Totals	25,000	340,000	178,500	52,020	53,060	54,122	677,702

