



Capital Improvement Projects Overview

FY 2022-2026

Capital Improvement Projects Overview

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PLANNING FOR THE FUTURE

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INTRODUCTION

New Braunfels Utilities (NBU) has an aggressive capital improvement projects plan to build and enhance necessary infrastructure over the next five years to meet the needs of a growing community. As New Braunfels and the NBU service territory continue to experience unprecedented growth, NBU has committed to more than \$688 million in capital improvement projects. These improvements will ensure we are well prepared to meet the electric, water, and wastewater needs of our customers for decades to come. While there are 145 capital improvement projects in progress or being planned, the following pages provide a high-level overview of NBU's projects.



Conceptual Rendering, July 2021

NEW BRAUNFELS UTILITIES HEADQUARTERS

The NBU Water Resources Plan calls for doubling the size of Trinity Well Field site. The site also serves as a logical solution for NBU's long term headquarters needs. The site selected for the new campus is a 48.58-acre tract located in west New Braunfels adjacent to Westpointe Drive.

When the NBU Headquarters opens (anticipated 2024), it will consolidate operations of the Main Plaza Offices and Service Center, and will include NBU's fleet. Once completed, the office building complex, maintenance, storage, and the warehouse will comprise approximately 130,000 square feet.

Primary access to the site is anticipated to be from Westpointe Drive. There is potential for secondary and tertiary access points. The new NBU Headquarters will provide an adequate amount of facility space for more than 350 personnel, materials, and vehicles for decades to come.



ELECTRIC - CAPITAL IMPROVEMENT PROJECTS



- E.C. Mornhinweg T2 and Feeders
- System Extensions - Electric
- Sheriff's Posse T3
- Electric Aging Infrastructure
- C014 Kentucky Road Feeder
- Distribution Transformers
- Rivertree UD Conversion
- Industrial Substation
PWT Replacement (TXI T1)
- Electric Meters
- Sheriff's Posse Feeder, 31-inch and 32-inch
- Pole Replacements
- Goodwin and Conrads Adjustments
- Freiheit Feeder 11, Alves Lane
- L023 Loop 337 FM 1863 Extension Phase 2
- Electric Technology Upgrades
- Three-Phase Extensions
- Hueco Springs Substation
- EC23 FM 482 Feeder
- Fiber Optic Extensions
- FR24 Kowald Lane Feeder
- System Equipment Additions
- HE11 Conrads Road Feeder
- HE23 IH-35 Stolte Feeder
- Comal T3 Replacement and Feeder C033
- HW14 to FM 3009 Extension Phase 2
- Sheriff's Posse to Marion, T-340 Upgrade
- Kohlenberg Road Substation
- HW23 Fallen Oak Feeder
- Distribution Feeder Breaker Replacements

Top Five Financial Investments, High-Level Overview

System Extensions/Meters/Transformers – \$40.2M

This investment provides general on-site service and extensions to accommodate system growth. Between FY 2022 and FY 2026 NBU estimates electric meter connections to increase by a total of 30.3 percent. It is estimated that ten miles of distribution overhead primary will be added and 100 miles of underground distribution will be added. Specific system extensions include those within Veramendi, Solms Landing, Mayfair, and many other developments.

Aging Electric Infrastructure and Pole Replacements – \$17.0M

This pair of ongoing projects consists of replacing aging infrastructure within the system. Utility poles, overhead wire, pad-mounted equipment, and underground cable are included and bring NBU infrastructure up to current standards upon completion. In particular, newer and technologically superior materials are anticipated to have a greater lifespan and duty cycle. For example, new underground cable is designed for a minimum 40-year service life. Critical utility poles are designed for a minimum 80-year service life.

Kohlenberg Substation and Feeders – \$7.3M

New Braunfels Utilities has identified the need for additional transformer and distribution feeder capacity along FM 1101, near Kohlenberg Road. Growth within the region includes that of Heatherfield subdivision, the Mayfair Project, and adjacent industrial load. The Substation would require a 3.2 mile transmission extension, and a backside transmission extension at a later time in order to provide looped redundancy. Three distribution feeders would be constructed and energized initially. The Substation is master planned for two power transformers and up to six distribution feeders.

Hueco Springs Substation and Feeders – \$7.2M

To serve the anticipated growth of the Veramendi development, NBU has identified the need to construct an additional distribution substation along River Road, at Edwards Boulevard. The proposed substation site is adjacent to an existing Lower Colorado River Authority Transmission Services Corporation (LCRA TSC) looped transmission line, and will not require lengthy transmission extension. The Substation is master planned for two power transformers and up to six distribution feeders. It will also create several switching ties to other adjacent substations for system resiliency.

E.C. Mornhinweg T2 and Feeders 21 and 22 – \$4.8M

To serve new commercial and industrial growth along the northwest side of the IH-35 corridor from FM 1103 to Loop 337, NBU is planning to add a second power transformer at the E.C. Mornhinweg Substation. The substation 138kV side will be upgraded to a ring bus. Two new feeders are to be immediately extended from E.C. Mornhinweg, one to the east and one to the west, in order to serve new growth and provide increased distribution reliability and switching capacity to the region.



System Extensions / Meters / Transformers



Electric Aging Infrastructure and Pole Replacements



T1/T2/T3 Feeders



Hueco Springs Substation and Feeders



E.C. Mornhinweg Feeders



WATER – CAPITAL IMPROVEMENT PROJECTS



- 30/24-inch SWTP Discharge Line (Downtown)
- Castell Avenue Rehabilitation with the City of New Braunfels-Water
- FM 306 Pump Station and Discharge Pipeline
- 24-Inch McQueeney Road Parallel Water Line (Downtown)
- 3.0 MG Bretzke Elevated Storage Tank and 24-inch Bretzke Waterline
- Goodwin Lane Water Main
- Grandview Discharge Line Upgrades
- Oakbrook Elevated Storage Tank, Pipeline and Flow Control Valve
- Water Meters
- Well 4 Pump and Discharge Line Upgrades
- Trinity Expansion - Water Supply Facilities
- Water Aging Infrastructure
- Landa Pump Station Phase 2 / Well 5
- FM 1044 Elevated Storage Tank
- Grandview Pump Station Expansion
- Western Downtown to Morningside Pressure Zone Conversion
- SWTP Expansion - Water Supply Facilities
- Weltner Road Repaving
- Goodwin Lane Elevated Storage Tank
- Aquifer Storage and Recovery Project
- Water Technology Upgrades
- 12-Inch Waterline River Crossing Evaluation
- Well 4 Discharge Line
- System Extensions
- 1.0 MG Solms Ground Storage Tank and Flow Control Valve
- Morningside/Solms/Rueckle Road Reconstruction with the City of New Braunfels-Water
- Guadalupe-Blanco River Authority (GBRA) Interconnect Metering Station
- Goodwin/Conrads Water Adjustments
- Veramendi 1.5 MG Elevated Storage Tank
- Klein Road Reconstruction Phase 2
- Infrastructure Replacement Package 1
- I-35 Water Line (Downtown)
- Highway 46 Water Line (Mission) and County Pump Station Expansion
- Mission/Westpointe Connection Waterlines
- 12" River Crossing - Rio to Kuehler
- AC Pipe Replacement - Balcones Phase 2
- Infrastructure Replacement Package 2
- FM 1101 Pump Station and Ground Storage Tank
- FM 1101 Discharge Water Line
- AC Pipe Replacement - Solms
- Infrastructure Replacement Package 3
- Central Downtown to Morningside Pressure Zone Conversion
- Downtown to Loop Pressure Zone Conversion
- Downtown to Kohlenberg Pressure Zone Conversion
- Downtown to Kerlick Pressure Zone Conversion

Top Five Financial Investments, High-Level Overview

Water Meters - \$23.2M

The purpose of this project is to replace water meters that have reached the end of their useful life. This project replaces NBU's existing water meters system-wide and will allow the replacement of all meters every seven to ten years.

Trinity Expansion - Water Supply Facilities - \$22.9M

This project will increase the production and treatment capacity of NBU's Trinity Wellfield and Trinity Water Treatment Plant. It includes the drilling of four new Trinity Aquifer production wells, an expansion of the existing Treatment Plant from 3.75 to 7.5 million gallons per day (MGD), a new 1.5 million gallon (MG) ground storage tank, and an upgrade to the existing pump station. This project is needed to serve current customers as well as future growth.

Aquifer Storage and Recovery Project - \$18.3M

The purpose of this project is to implement an Aquifer Storage and Recovery (ASR) system as a management strategy for NBU's water supply. The ASR will store a blend of groundwater from our Edwards Aquifer wells and treated surface water from our water treatment facilities into the brackish portion of the Edwards Aquifer which benefits our community on multiple fronts. Primarily, it will offer NBU the opportunity to recharge the ASR with water directly from our public water distribution system in times of plenty and to pull water from storage during times of drought. New Braunfels Utilities has constructed a full-scale ASR demonstration well and three monitoring wells near the New Braunfels Regional Airport. The goal is to ultimately store 14,000 acre-feet of water in an ASR wellfield, which will require up to nine additional ASR wells. This strategy will allow NBU to more-fully and efficiently use its existing water rights from the Texas Commission on Environmental Quality, its contract for stored water in the Canyon Reservoir, and its groundwater permits from the Edwards Aquifer Authority and the Comal Trinity Groundwater Conservation District.

FM 1044 Elevated Storage Tank - \$13.4M

This project will include a new 2.00 MG elevated storage tank near the intersection of FM 1044 and Old Marion Road, and approximately 1,500 feet of 24-inch main to connect to the existing 18-inch main within Old Marion Road. This is needed to maintain compliance with the Texas Commission of Environmental Quality for elevated storage in NBU's Morningside Pressure Zone.

Castell Avenue Rehabilitation with the City of New Braunfels-Water - \$13.2M

This project replaces approximately 4,165 feet of water main on Castell Avenue between San Antonio and Nacogdoches Streets. This project will coincide with the City of New Braunfels' Castell Avenue Rehabilitation Project. The segments of pipe that will be replaced have a high incidence of failure and have reached the end of their service life based on age, condition, and material. The project will increase reliability, decrease maintenance along the project limits, and increase transmission capacity to the County Line Tank and Pump Station. The additional transmission capacity will also enable more efficient operation of the County Line Pump Station that feeds the Morningside Pressure Zone.



Water Meter



Trinity Expansion



Aquifer Storage and Recovery



FM 1044 Elevated Storage Tank (Photo by Mikala Compton)



Castell Avenue Rehabilitation



WASTEWATER – CAPITAL IMPROVEMENT PROJECTS



- North Kuehler 30-inch and 33-inch Interceptor Upgrade
- McKenzie Water Reclamation Facility Expansion
- North Kuehler 42-inch Interceptor Upgrade
- Castell Avenue Rehabilitation with the City of New Braunfels-Wastewater
- North and South Kuehler Rehabilitation
- Wastewater Aging Infrastructure
- Manhole Rehabilitation
- Rio Lift Station Expansion
- McKenzie Interceptor Upgrade
- I-35 Interceptor Upgrade
- Nautilus Off-Site Sewer Extension
- Gruene Road Sewer Main Rehabilitation/Relocation
- Sewer Infrastructure Replacement Package 2
- Gruene Water Reclamation Facility Relocation and Expansion
- North Kuehler Interceptor – Segment 3
- Veramendi Sewer Lines 1-6 Project – Easement Purchase
- Morningside/Solms/Rueckle Road Reconstruction with the City of New Braunfels-Wastewater
- System Extensions-Wastewater
- Saengerhalle North Interceptor
- South Kuehler Sanitary Interceptor SK-20 Relocation/Expansion
- Solms Lift Station Expansion
- Goodwin/Conrads Sewer Adjustments
- North and South Kuehler Water Reclamation Facility Major Permit Amendment
- Sewer Infrastructure Replacement Package 1
- Gruene Lift Station Improvements
- Gruene Water Reclamation Facility Expansion
- Infrastructure Replacement Package 3
- Infrastructure Replacement Package 1
- Infrastructure Replacement Package 2
- Sewer Rehabilitation Package 1

Top Five Financial Investments, High-Level Overview

McKenzie Water Reclamation Facility Expansion - \$62.4M

This project includes expansion of the plant's treatment capacity from 2.5 MGD to 5 MGD, including: construction of a new flow splitter box, expansion of headworks facilities, construction of new biological treatment basins, construction of new secondary clarifiers, expansion of tertiary filters, expansion of Ultraviolet (UV) disinfection equipment, expansion of aerobic digestions, expansion of solids dewatering system, and construction of new electrical equipment, site piping, and miscellaneous site civil improvements. The project will increase treatment capacity to serve current and future growth in the area.

North and South Kuehler Rehabilitation - \$44.6M

The project includes replacing existing aeration equipment, walkways, and gates in all aerations basins except the new basins at South Kuehler, replacing the existing clarifiers including the addition of a submerged effluent launder system at South Kuehler, replacing all existing blowers at North and South Kuehler, replacing the existing Microcrystalline cellulose (MCC) in the sludge pump buildings, replacing the MCCs in the admin building at South Kuehler, rehabilitation of the existing buried Return Activated Sludge (RAS) piping at South Kuehler, replacing the existing drain return pumps at North Kuehler, addition of a new digester blower at North Kuehler, replacing the existing screening and grit treatment structures at both plants with a new common headworks with screens, aerated grit chambers, lift station, and elevated flow split structure, and constructing a new access road from FM-725 and a private vehicular traffic bridge across the North tributary. This project is needed to upgrade equipment that has reached the end of its service life in order to maintain adequate treatment processes, reduce maintenance activities, increase safety, and increase reliability.

McKenzie Interceptor Upgrade - \$35.2M

This project includes approximately 35,000 feet of new 30-inch wastewater main that will replace existing 21-inch and 24-inch interceptors conveying flow to the McKenzie Water Reclamation Facility. The existing lines are near their maximum capacity and must be replaced. This project will increase transmission capacity to serve current and future growth in the area.

Gruene Water Reclamation Facility Expansion - \$28.3M

This project includes expansion of the Plant's treatment capacity from 2.5 MGD to 5 MGD including: construction of a new flow splitter box, expansion of the headworks facilities, construction of new biological treatment basins, construction of new secondary clarifiers, expansion of tertiary filters, expansion of ultra violet disinfection equipment, expansion of aerobic digestions, expansion of solids dewatering system, and construction of new electrical equipment, site piping, and miscellaneous site civil improvements. This project will increase treatment capacity to serve current and future growth in the area.

North Kuehler 30 and 33-inch Interceptor Upgrade - \$24.6M

This project replaces the approximately 14,000 feet of existing 21-inch and 24-inch interceptor in NBU's North Kuehler drainage basin with 30-inch and 33-inch interceptors. The existing lines are at their maximum capacity and must be replaced. This project will increase transmission capacity to serve current customers as well as future growth in the area.



McKenzie Water Reclamation Facility



Kuehler Rehabilitation



Interceptor Upgrade



Gruene Water Reclamation Facility



Kuehler Interceptor

PLANNING FOR THE FUTURE

New Braunfels Utilities is investing \$688 million in capital improvement projects. The following highlighted projects represent those that are currently in design or in progress for FY 2022–2026.

TRINITY EXPANSION - WATER SUPPLY FACILITIES - \$22.9M

NEW BRAUNFELS UTILITIES HEADQUARTERS - \$64M

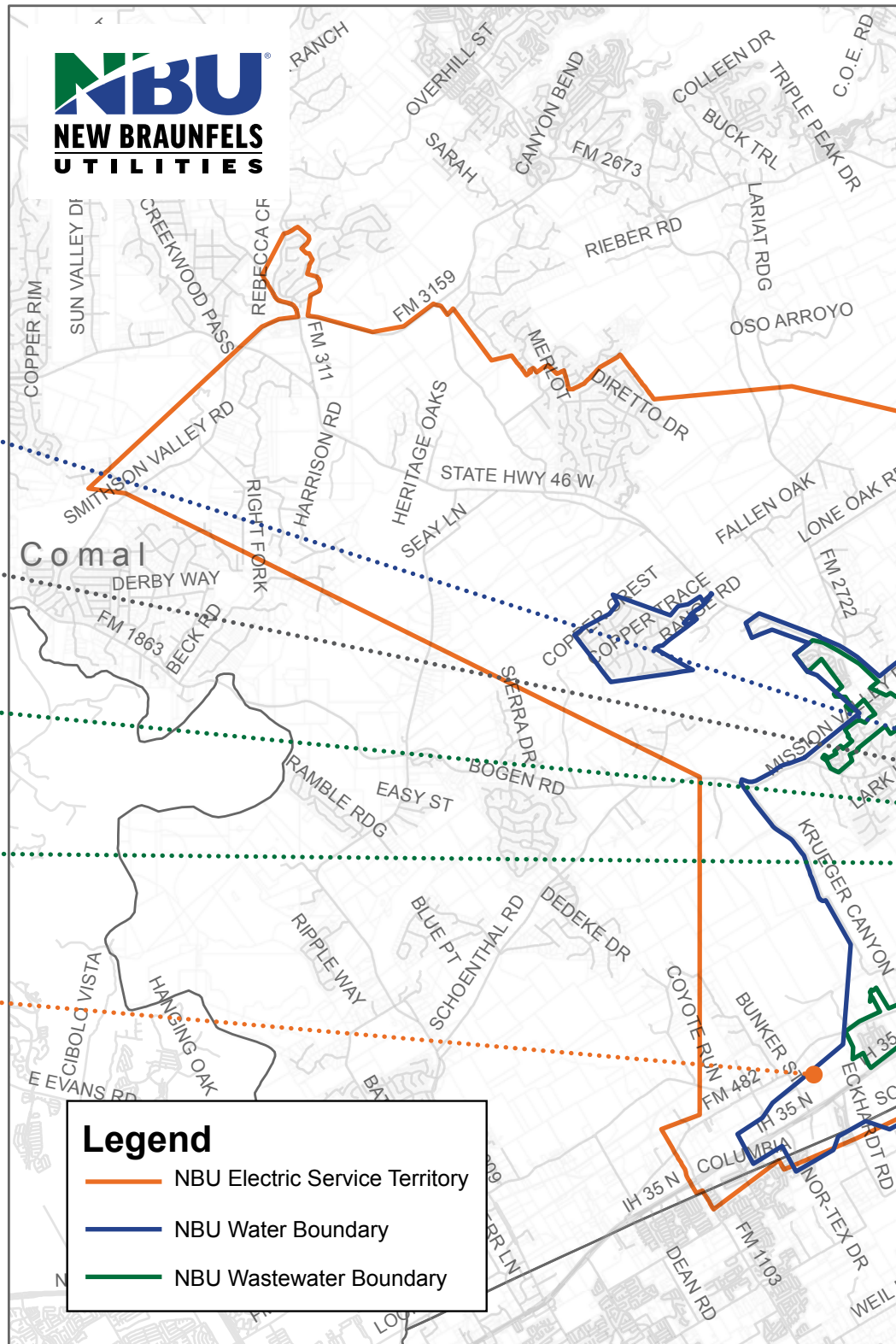
NORTH KUEHLER 30 AND 33-INCH INTERCEPTOR UPGRADE - \$24.6M

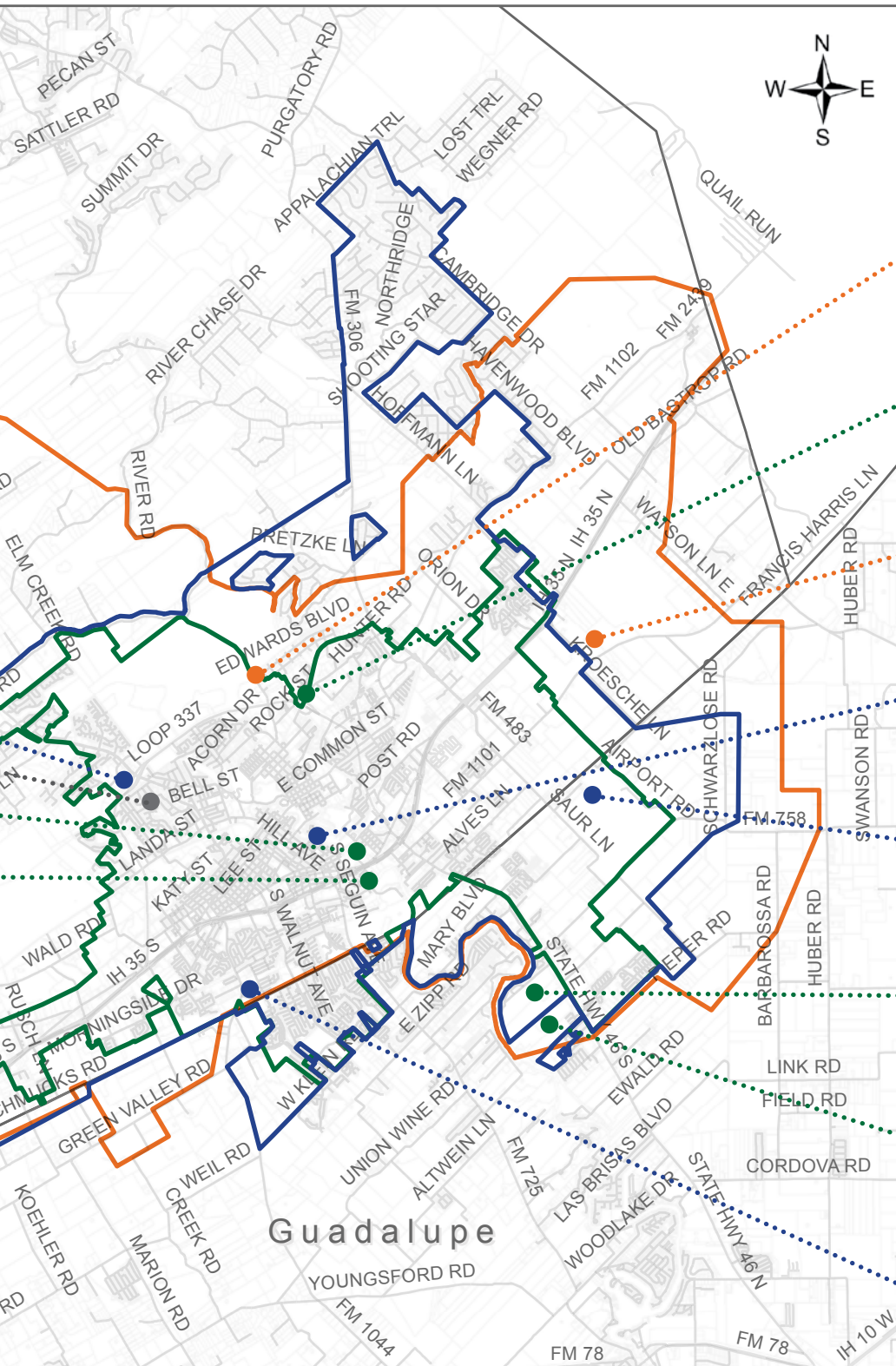
NORTH AND SOUTH KUEHLER REHABILITATION - \$44.6M

E.C. MORNHINWEG T2 AND FEEDERS 21 AND 22 - \$4.8M

SYSTEM EXTENSIONS / METERS / TRANSFORMERS - \$40.2M

ELECTRIC AGING INFRASTRUCTURE AND POLE REPLACEMENTS - \$17.0M





WATER METERS - \$23.2M

HUECO SPRINGS SUBSTATION AND FEEDERS - \$7.2M

GRUENE WATER RECLAMATION FACILITY EXPANSION - \$28.3M

KOHLBERG SUBSTATION AND FEEDERS - \$7.3M

CASTELL AVENUE REHABILITATION WITH THE CITY OF NEW BRAUNFELS-WATER - \$13.2M

AQUIFER STORAGE AND RECOVERY PROJECT - \$18.3M

MCKENZIE INTERCEPTOR UPGRADE - \$35.2M

MCKENZIE WATER RECLAMATION FACILITY EXPANSION - \$62.4M

FM 1044 ELEVATED STORAGE TANK - \$13.4M



OUR MISSION:

Enhancing the quality of our community by providing innovative essential services.

For more information visit,
nbutexas.com/planning-for-the-future-of-new-braunfels.

