

# AN OVERVIEW OF STREET & UTILITY IMPROVEMENTS



January 5, 2024

2024 Neighborhood Infrastructure Improvements



# THE PROBLEM

Street pavement and utility mains (infrastructure) throughout the City are deteriorating. **Brittany Road Pictured Below.**

Deteriorated infrastructure leads to:

- High maintenance costs & Higher probability of costly repairs
- Decreased property values
- Decreased reliability of utility services
- Potholes!



# THE OBJECTIVE

To improve the infrastructure in the neighborhood, thereby:

- Reducing annual maintenance costs
- Preventing costly repairs for years to come
- Providing better drainage
- Improving ride on streets
- Increasing property values
- Upgrading street and utility systems to current City standards



# PRE-CONSTRUCTION EVENTS

There are 9 major steps prior to the start of construction:

1. Evaluate the conditions of the existing infrastructure.
2. Design proposed streets and utility replacements.
3. Estimate costs of proposed improvements.
4. Conduct neighborhood meetings to gather resident input and explain the process.
5. Staff prepares a feasibility study based on cost estimates and proposed assessment amounts.
6. Review of the feasibility study by the City Council.
  - The City Council will order a Public Hearing upon receipt of the feasibility report.
7. The City Council Holds a Public Hearing & Assessment Hearing.
  - The Council receives a summary of the project and costs.
  - The Council hears comments from affected residents and the public at-large.
  - If the City Council orders the proposed improvements, construction plans are finalized.
8. Bids are solicited from interested contractors.
9. The contract is awarded to the qualified contractor who submits the lowest bid.
10. **Construction begins!**



# CONSTRUCTION PHASE EVENTS

There are 13 major steps to the construction phase:

1. Removal of trees and shrubs in the path of construction
2. Removal of existing pavement and curbing
3. Removal of pavement and road base material
4. Replacement/Rehabilitation of existing sanitary sewer mains/services
5. Replacement/Rehabilitation of existing water mains/services
6. Removal and replacement of existing storm sewers as required
7. Grading and/or placement of pavement base materials (gravel)
8. Installation of concrete curb and gutter and/or spot replacement of curb and gutter
9. Placement of base layer of asphalt pavement on streets
10. Installation of concrete driveway aprons and asphalt driveway pavement
11. Replacement of deteriorated sidewalk segments and/or installation of new concrete sidewalk (and/or asphalt paving of trail) segments
12. Restoration of boulevard and seeding
13. Placement of final (wearing) layer of asphalt pavement on streets



# REMOVAL OF TREES & SHRUBS

Trees are an important amenity to neighborhoods. **We will do everything we can to preserve trees as part of this project**, however, some trees must be removed to facilitate the construction process because they are in conflict with required work, or would pose a threat to public safety if not taken down during construction. The city does not replace vegetation or landscaping that is removed from the public right of way as part of our projects.

Note that streets designated for a reclaim procedure as opposed to a full reconstruction will generally see less disturbance in the boulevards as most of the curb will remain in place, and utility work is limited.



# REMOVAL OF EXISTING PAVEMENT & CURBS

The existing asphalt is ground up and removed using a milling machine (shown to right). Concrete curbs, if they are being replaced, are usually picked up with a front-end loader or forklift and removed from the site with dump trucks.



*Most materials removed during reconstruction are capable of being recycled in some way.*



# REPAIR OR REPLACEMENT OF SANITARY SEWER MAINS AND SERVICES



Sanitary sewer mains and services are lined or replaced with new, high strength, longer lasting materials. Deep trenches are often required, which can limit access to residences for parts of the day.



# REPLACEMENT OF WATER SYSTEM COMPONENTS AND SERVICES



Defective and aging parts of the existing water system are removed and replaced. These components include valves, fire hydrants, main lines, and service pipes and connections. The water system is typically placed closer to the surface than the sanitary sewer system, but also requires deep trenching. This activity normally takes place after sanitary sewer work is completed.

# REPLACEMENT OF THE STORM SEWER SYSTEM

Pipes and manholes are installed to convey storm water runoff to nearby water bodies. Many of these systems contain structures and/or ponding areas that assist in removing pollutants from the storm water.



# INSTALLATION OF CONCRETE CURB & GUTTER



After the gravel base has been prepared, concrete curb and gutter is installed. Access by vehicles to driveways is not permitted for 7 days after all concrete has been placed to allow for this material to build adequate strength. Parking in front of homes during the evenings is allowed.

# INITIAL PAVING

Concrete curb & gutter has now had time to build adequate strength to withstand most loads. The gravel area of the street between curbs is finish graded. This is followed by the placement of the first (base) course of asphalt pavement on top of the gravel.



# INSTALLATION OF DRIVEWAYS



Concrete aprons are installed for some driveways. If any portion of the driveway is left to be filled in, it is replaced with the same material (asphalt, concrete, or gravel) as the existing driveway. This step sometimes occurs after the curb has been placed but before any asphalt paving.

# RESTORATION OF BOULEVARDS, SEEDING & TREES

The boulevard is graded to blend into each front yard, topsoil and blown compost seeding are placed behind the curb. The contractor is obligated to water the seeded areas for 30 days after its placement, after that time, it is the resident's responsibility to keep their lawn green and healthy by watering.



# FINAL PAVING



All other major construction tasks have been completed. This leaves only the placement of the final (wearing) course of asphalt pavement. Afterward, the street and utility improvements are then considered substantially complete.

# THE FINISHED PRODUCT





# PROJECT TEAM CONTACTS



**Cody Mathisen, P.E.**

*Principal Engineer*

**Ryan Stempski, P.E.**

*City Engineer/Public Works Director*

**Bo Schuette**

*Engineering Technician*

**Sam Schmidtke**

*Administrative Assistant*

Engineering Department Phone: **(651) 480-2334**

This summer, please look for construction updates, additional project information, and other information about the Engineering Department by visiting

[www.hastingsmn.gov/2024Streets](http://www.hastingsmn.gov/2024Streets)