



# 2018 Street and Utility Improvement Project



Feasibility Report  
August 8, 2017

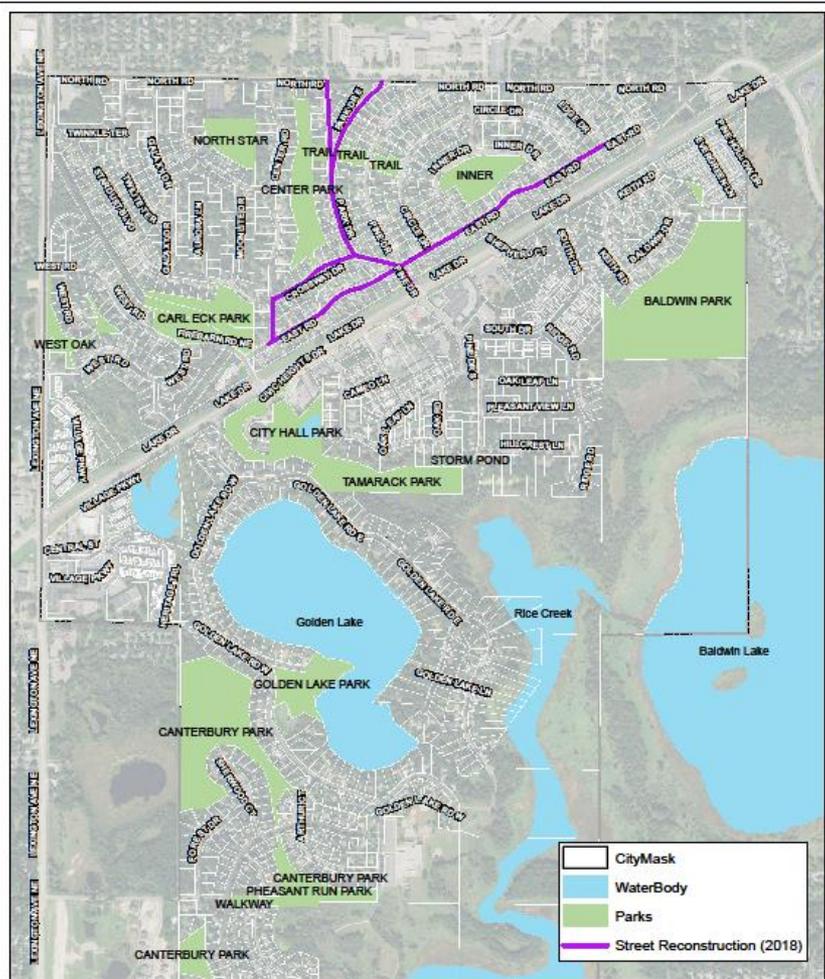
# Overview

- Project Location
- Existing Conditions
- Proposed Improvements
- Discussion Items
- Project Costs
- Assessments / Funding
- Schedule
- Questions and Comments

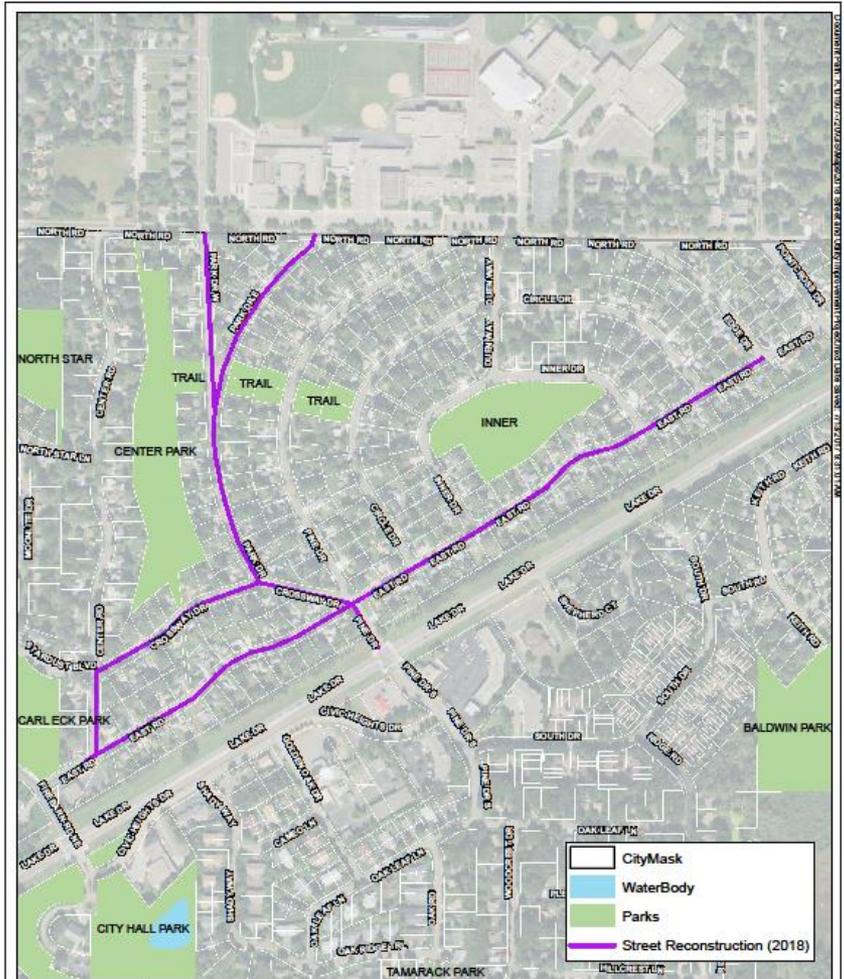
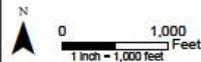


Park Drive East and Park Drive West intersection

# Project Location



**Figure 1 - Layout**  
2018 Street and Utility Improvement Project  
City of Circle Pines



**Figure 1 - Layout**  
2018 Street and Utility Improvement Project  
City of Circle Pines



# Existing Conditions

## ■ Street

- ❖ 1.71 miles of residential streets that were mostly constructed in 1967 (50 years old)
- ❖ Prevalent cracking in pavement (alligator, transverse, longitudinal, and edge)
- ❖ Condition index rated as “Poor” according to 2011 Pavement Management Program



Intersection of Center Road and East Road



Intersection of Pine Drive and East Road

# Existing Sanitary Sewer Conditions

## ■ Sanitary Sewer

- ❖ Root intrusion in mainline and service lines, cracked segments, and mineral deposits at joints
- ❖ Sanitary sewer has multiple sagging segments
- ❖ High infiltration rate
- ❖ Existing Sanitary Sewer is Vitrified Clay Pipe



Image of Sanitary Sewer Segment

# Existing Water Main Conditions

## ■ Water Main

- ❖ Existing main line is cast iron pipe
- ❖ Some hydrant locations are not easily accessible



Hydrant on East Road and Center Drive

# Existing Storm Sewer Conditions

## ■ Storm Sewer

- ❖ Existing storm sewer was sized for design standards at the time of construction
- ❖ Storm sewer discharges directly to ditch which runs to Golden Lake
- ❖ Surface flow can cause surface deterioration of the pavement
- ❖ Existing storm sewer has no treatment for storm water

# Proposed Improvements

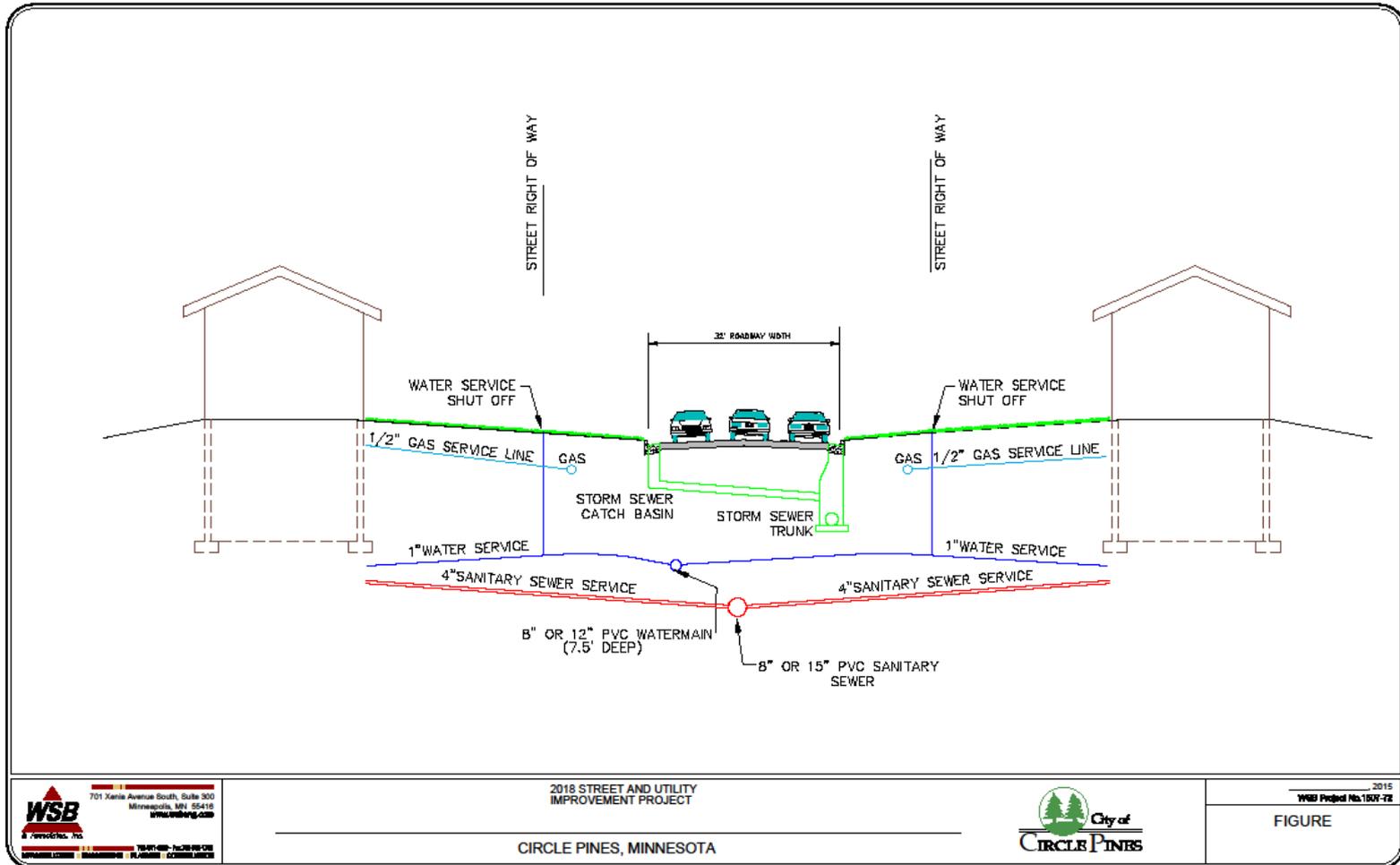
## ■ Street Reconstruction

- ❖ Existing Widths 33-34 feet
  - Proposed 32 foot street widths
  - Complete reconstruction including curb and gutter, bituminous pavement, and subgrade preparation



Park Drive and Crossway Drive Intersection

# Proposed Improvements



Typical Cross Section

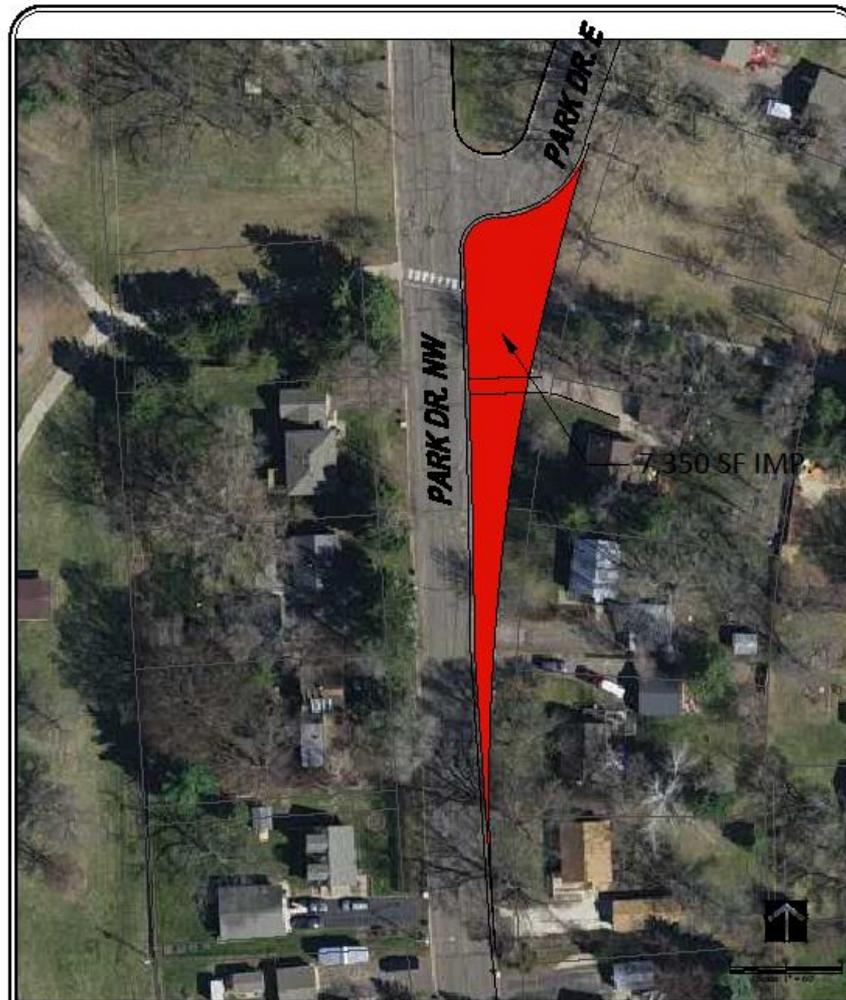
# Discussion Items

- Realign intersection of Park Drive West and Park Drive East
  - Option 1- Maintain existing alignment
  - Option 2- Realign Park Drive East to connect with Park Drive West at close to a 90° angle



Park Drive West and Park Drive East Intersection

# Proposed Improvements



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CONCEPTUAL DESIGN • SURVEYING • PLANNING • CONSTRUCTION

2018 STREET  
IMPROVEMENTS  
CIRCLE PINES, MN

WSB Project No. 01507-720 DATE  
JUNE 6, 2017

PARK DR. WYE  
INTERSECTION  
REALIGNMENT

# Proposed Improvements

## ■ Storm Sewer

### ❖ Drainage Improvements

- Redesign storm system to better meet current demands and design standards
  - Adding additional catch basins

### ❖ Utilize existing storm sewer outlet locations

### ❖ Storm Water Treatment

# Proposed Improvements

## ■ **Gas Main Replacement (by Centennial Utilities)**

- ❖ Dual 2" plastic gas main (1 main on each side of street)
- ❖ Gas service replacement from the main to the home meter
- ❖ Completed prior to street and utility construction

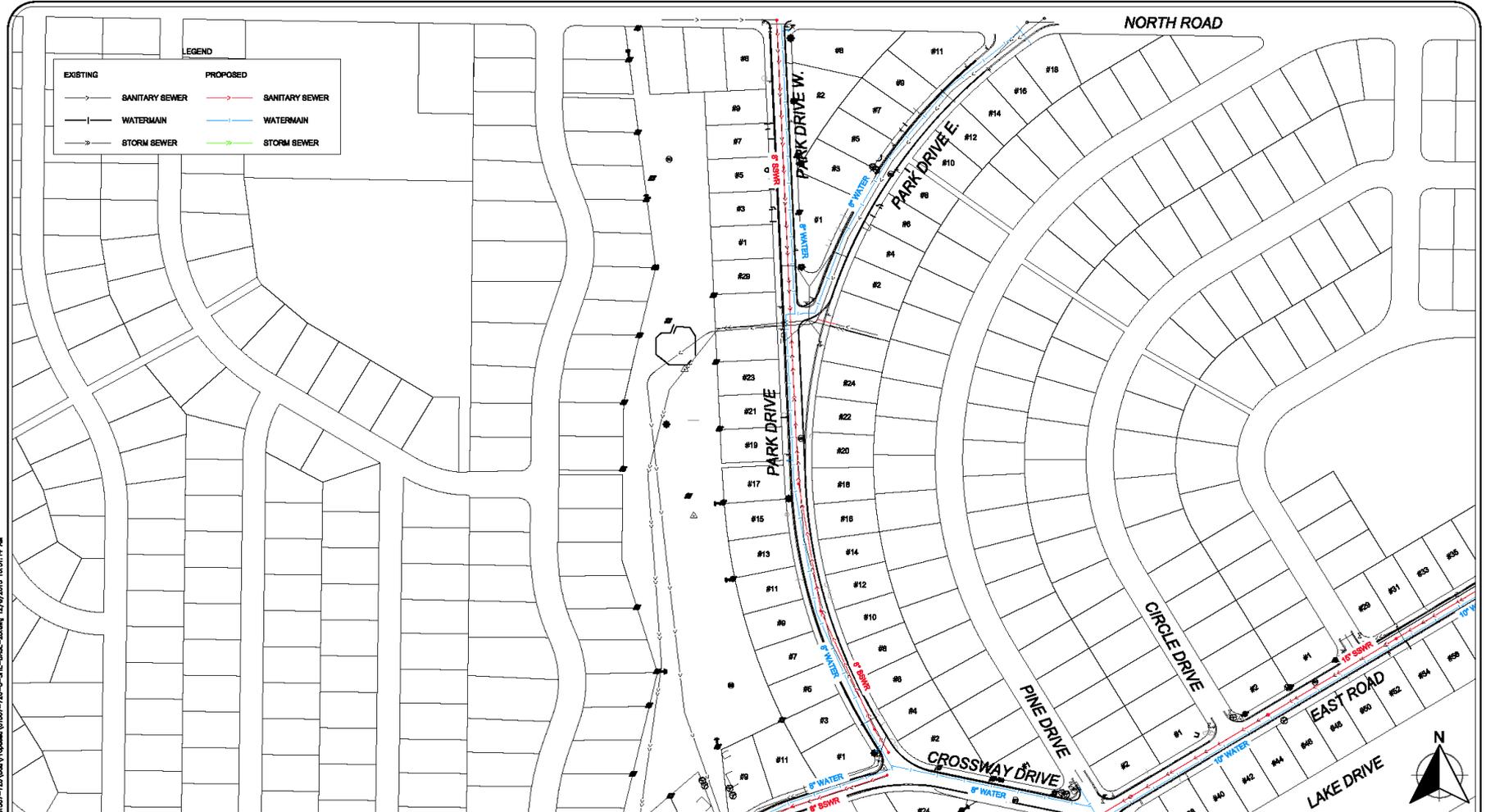
## ■ **Water Main Replacement**

- ❖ 8" - 12" PVC water main
- ❖ 1" HDPE water services replaced to the Right-of-Way
- ❖ New hydrants and gate valves

## ■ **Sanitary Sewer Replacement**

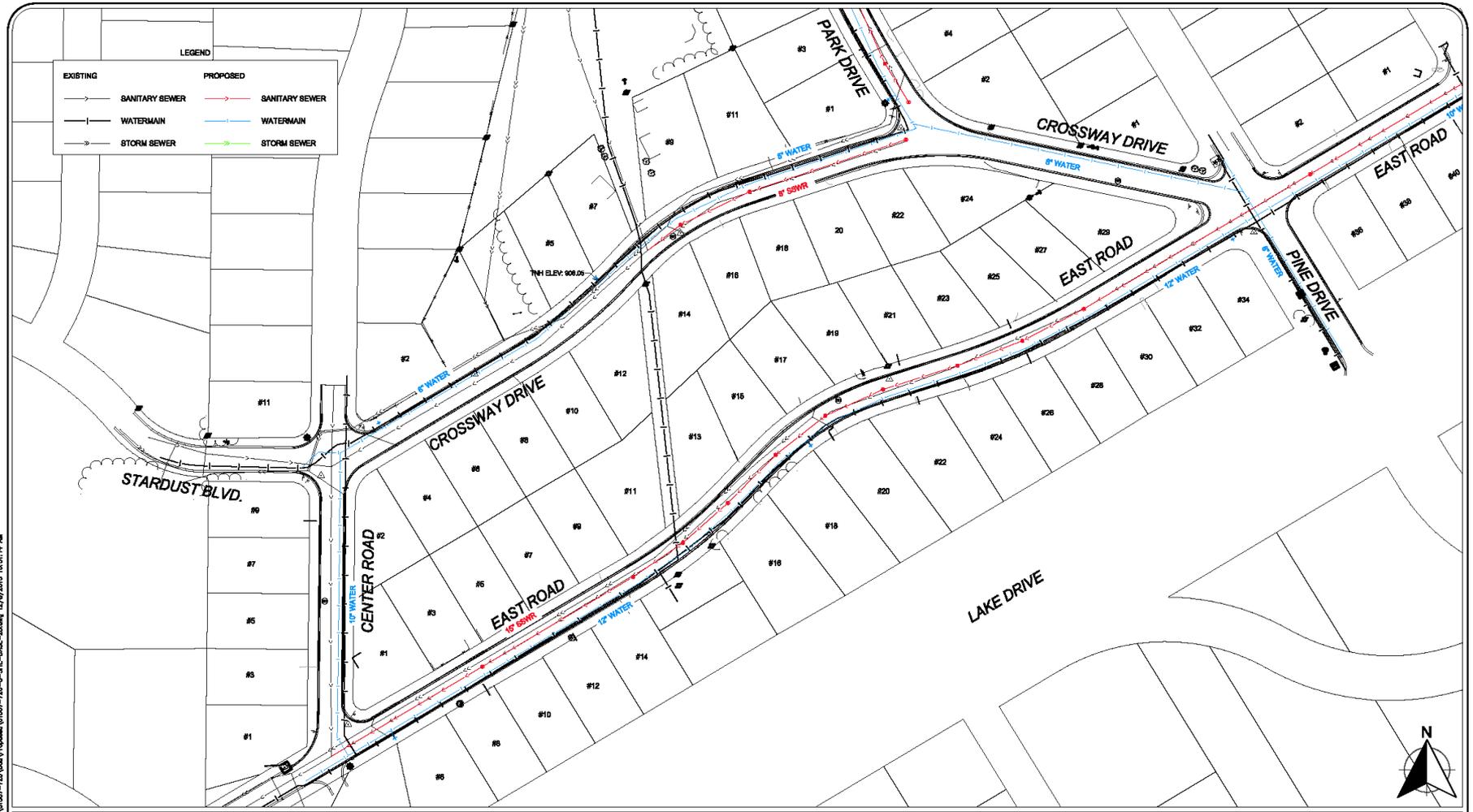
- ❖ 8" and 15" PVC sanitary sewer main
- ❖ 4" PVC sanitary sewer services replaced to the Right-of-Way
- ❖ Replace all sanitary sewer services that connect to Metropolitan Council sanitary lines

# Proposed Improvements



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# Proposed Improvements



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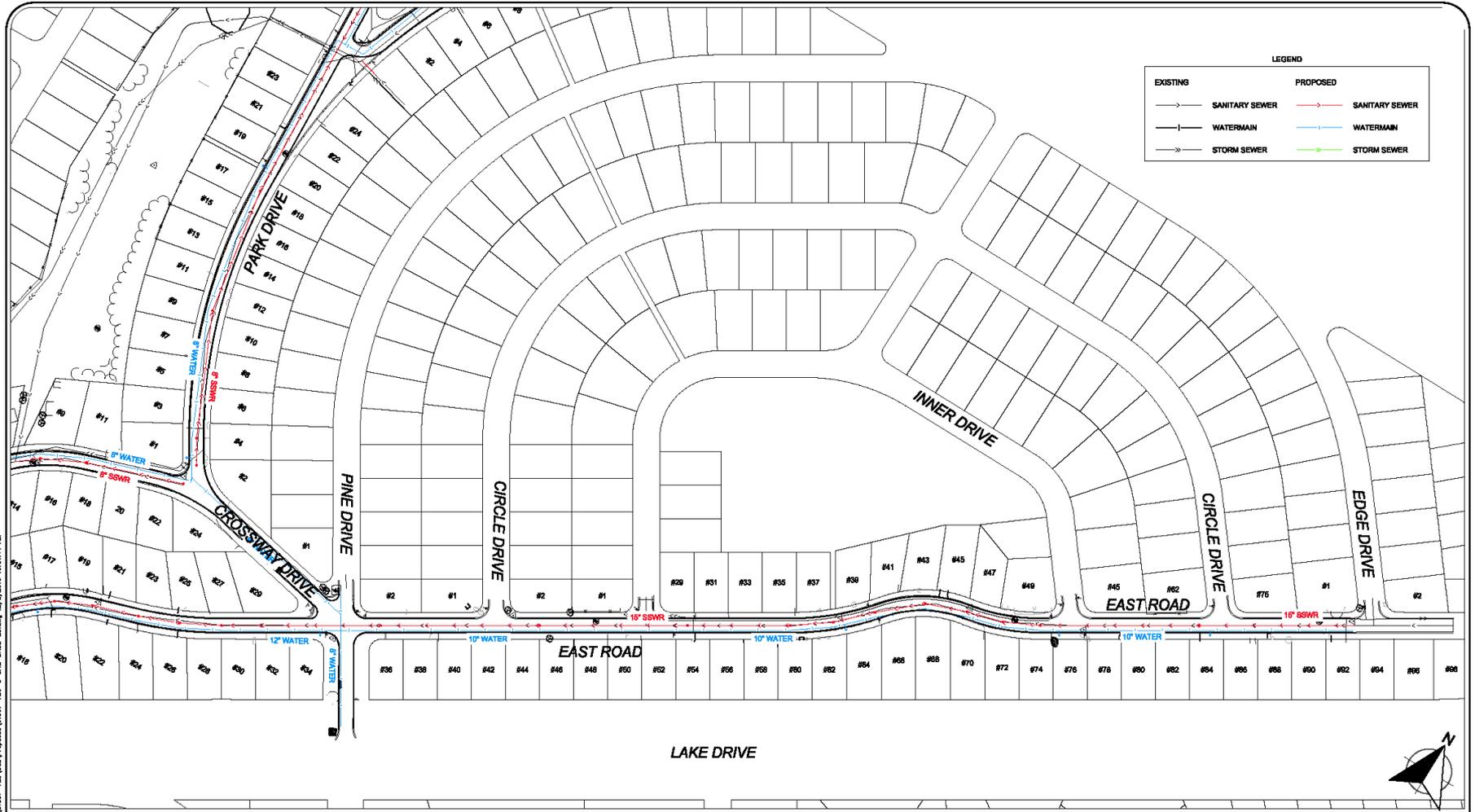
2018 STREET & UTILITY IMPROVEMENT PROJECT  
 CONCEPT WATER & SANITARY SEWER PLAN

CIRCLE PINES, MINNESOTA

WSB Project No. 01507-720  
 Scale = 60:1  
 7/27/2017

Figure 7

# Proposed Improvements



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Figure 8

# Proposed Improvements



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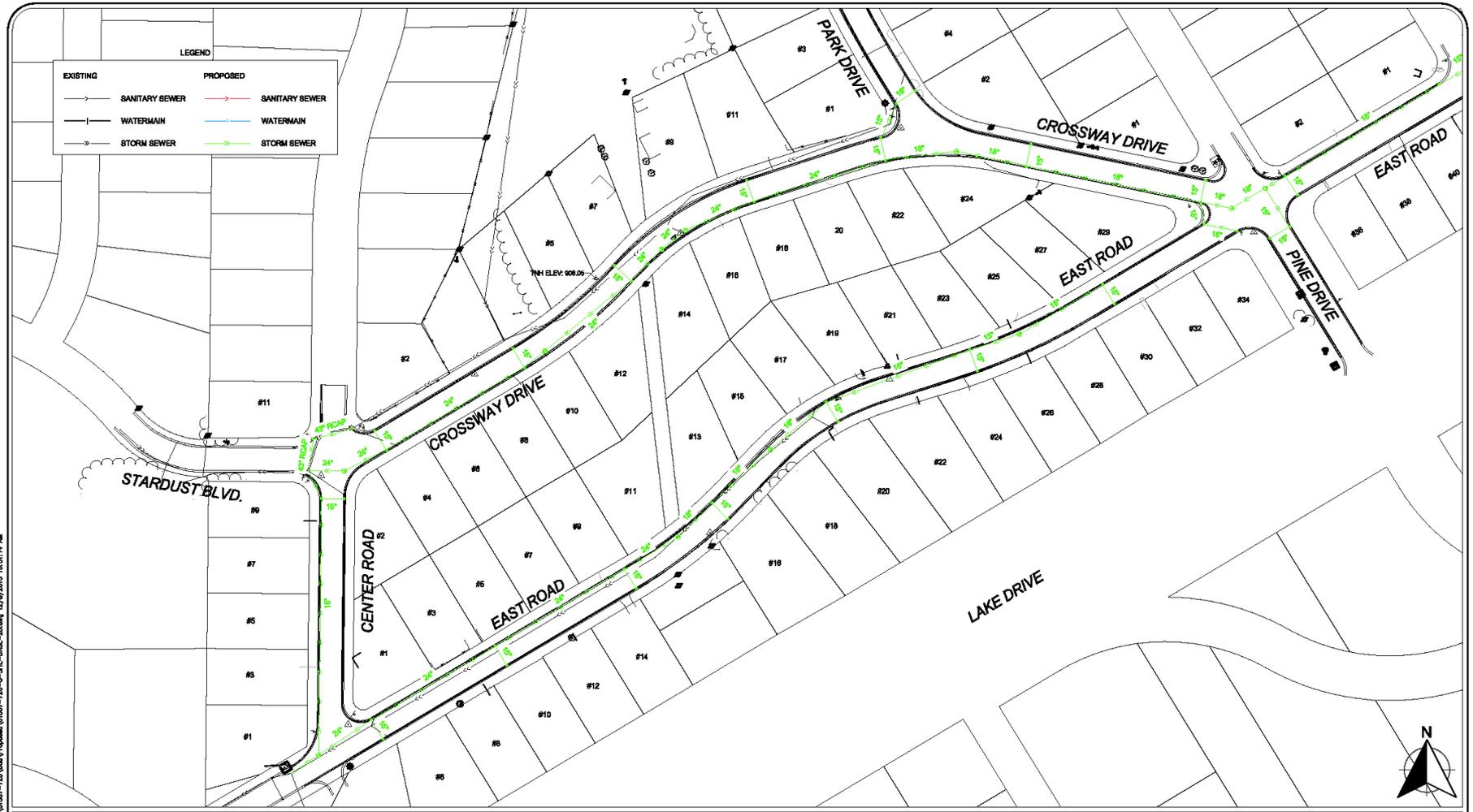
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 STORM SEWER PLAN

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Figure 9

# Proposed Improvements



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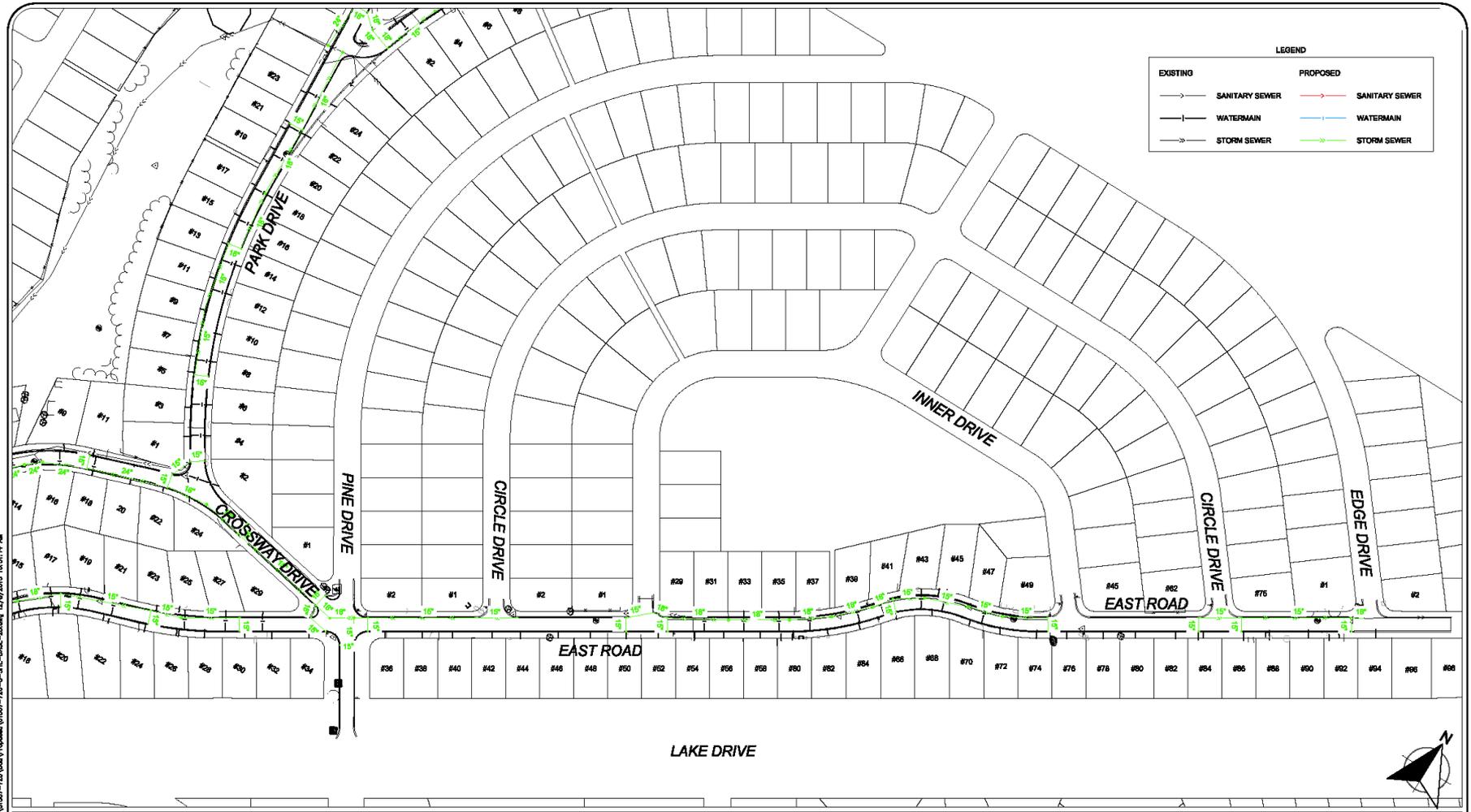
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Figure 10

# Proposed Improvements



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Figure 11

# Proposed Improvements

## ■ Remove trees in Right-Of-Way

- ❖ Increased sight distance on curves and driveways
- ❖ Increased safety for pedestrians and vehicles



2016 East Golden Lake Road Before



2016 East Golden Lake Road After

# Project Costs

## Summary of Cost

|                             | Total              |
|-----------------------------|--------------------|
| Street Improvements         | \$1,953,784        |
| Sanitary Sewer Improvements | \$979,016          |
| Water Main Improvements     | \$982,603          |
| Storm Sewer Improvements    | \$1,025,399        |
| <b>Total</b>                | <b>\$4,940,802</b> |

# Assessment Policy and Funding

- Current Assessment Policy is a flat and equal rate
  - ❖ Current Street Reconstruct Assessment: \$4,380 per unit
    - ❖ 148 assessable properties (139 Residential, 9 City)
    - ❖ Proposed to increase to \$4,600 (5% increase)
- City Funds Remaining Street Improvements
- City Funds 100% of Utility Improvements
- Utilize State Aid funds for Pine Drive and East Road from Pine Drive to Center Road

# Project Assessment

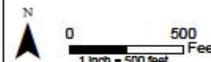
|   |             |
|---|-------------|
| Total Reconstruct Street Improvement Cost | \$1,953,784 |
| Total Assessable Reconstruct Units        | 148         |
| Assessment Rate                           | \$4,600     |
| Total Assessment                          | \$680,800   |

*\*Assessment equates to \$585/yr for 10 years at 5% (estimated- contingent on bond sale) interest rate*

# Assessable Units



**Figure 15 - Assessment Map**  
2018 Street and Utility Improvement Project  
City of Circle Pines



# Funding Scenario

## Proposed Funding

|                            |                    |
|----------------------------|--------------------|
| Special Assessments        | \$680,800          |
| Street Reconstruction Fund | \$1,272,984        |
| Sanitary Sewer Fund        | \$979,016          |
| Water Main Fund            | \$982,603          |
| Storm Water Fund           | \$1,025,399        |
| <b>Total Funding</b>       | <b>\$4,940,802</b> |

*\*Additional funding from State Aid Funding may also be utilized*

# Proposed Schedule

- City Approves Engineering Proposal Apr, 2017
- Survey, Soil Borings, Feasibility May-Aug, 2017
- Public Informational Meeting July 27, 2017
- City Accepts Feasibility Study Aug 8, 2017
- Public Hearing/Authorize Plans Sept 12, 2017
- City Approves Final Plans Dec, 2017
- Receive Bids Jan, 2018
- Award Contract Mar, 2018
- Begin Construction May-Jun, 2018
- Substantial Completion Oct 2018
- Assessment Hearing Oct-Nov 2018
- Final Completion Spring 2019

**Questions and Comments?**