



Magnolia-Winthrop Storm Drainage Improvement Project

**Public Meeting
June 15, 2023
Planning Phase**

Project Team

CMSWS

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Program Overview

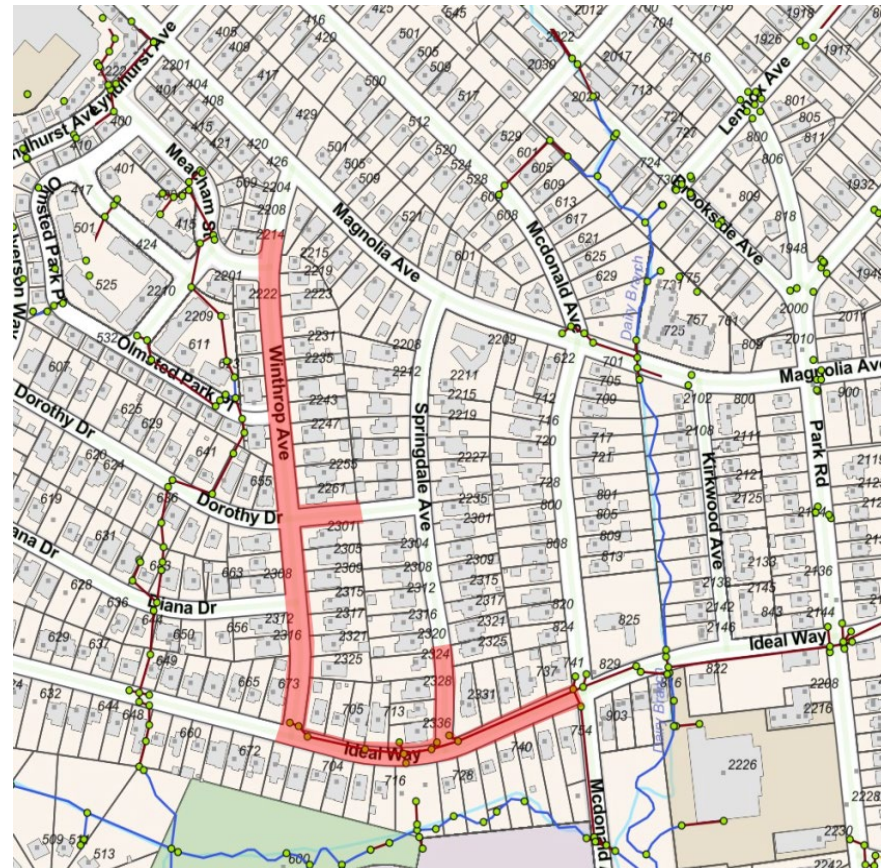
City of Charlotte Storm Water Services

- ◀ Established in 1993 as a joint municipal city county stormwater utility
- ◀ Works year-round to repair and replace aging infrastructure, manage runoff from rainfall, reduce flood risks and protect and improve surface waters
- ◀ Addresses multiple reported drainage concerns within neighborhoods through storm drainage improvement projects

Project Selection

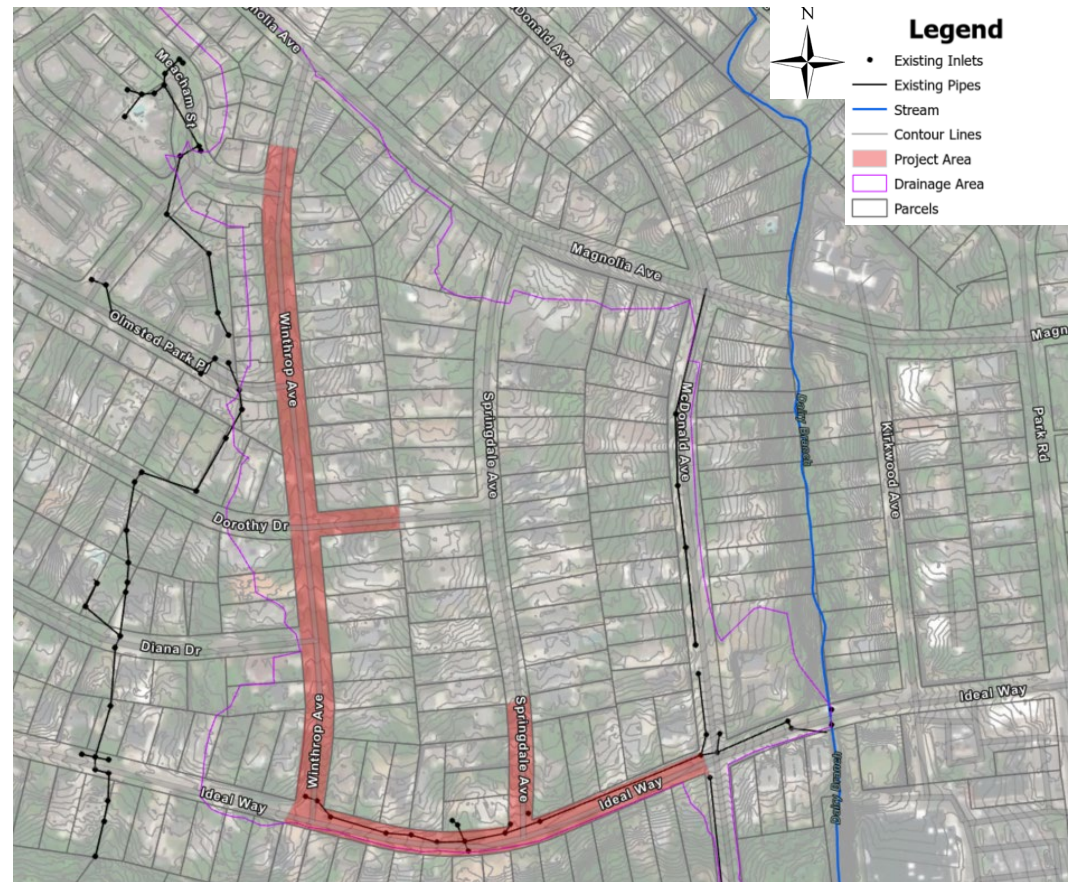
Why are we here:

- ▶ Reported drainage concerns from property owners
- ▶ Observed flooding events
- ▶ Aging and deteriorating infrastructure
- ▶ Lack of drainage infrastructure



Project Area

- ▷ Watershed: 32 Acres +/-
- ▷ 1,520 LF of drainage pipe system
- ▷ 5 drainage concerns reported on Winthrop Ave
- ▷ Ideal Way – Major Collector Road



Example of Localized Flooding



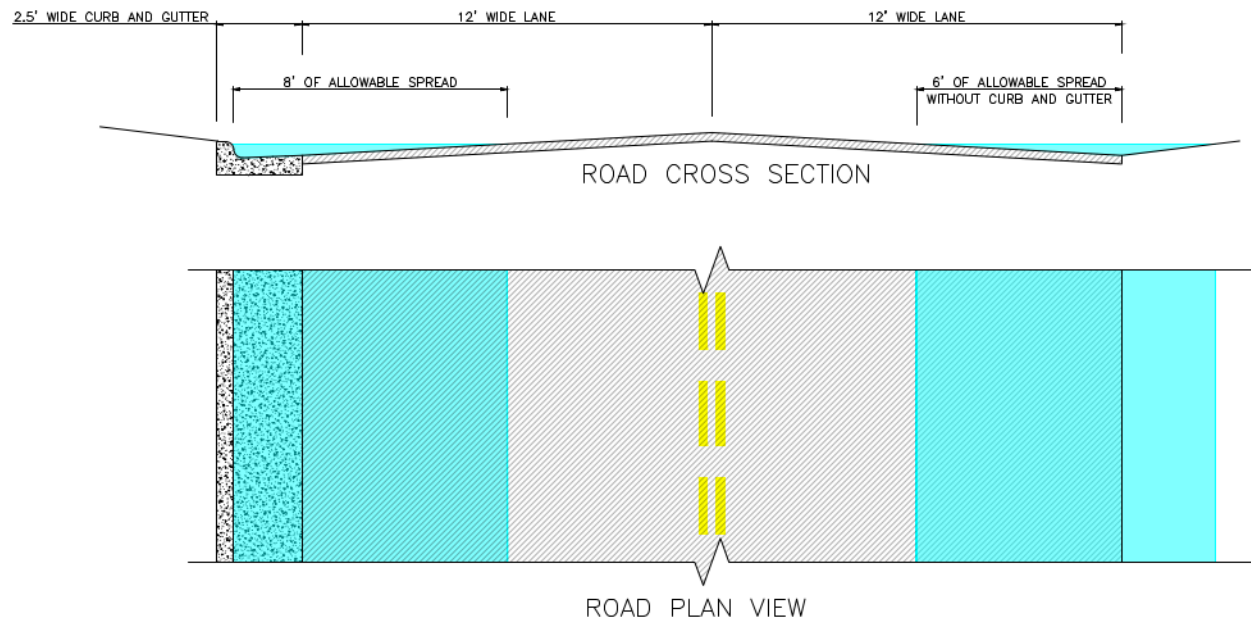
Planning Phase

Process:

- ◁ Survey of topographic and underground data
- ◁ Existing Conditions Analysis to determine sufficiency and structural deficiencies
- ◁ Hydraulic/Hydrologic Analysis to determine multiple proposed alternatives
- ◁ Selection of preferred alternative

Spread

- ◀ “Spread” is the width of water spreading out into the road from the curb or edge of pavement
- ◀ Spread is analyzed at 2 in/hr and 4 in/hr rainfall events



City Storm Water Design Criteria

- Existing inlet spread performance during 2 in/hr event



City Storm Water Design Criteria

- Existing inlet spread performance during 4 in/hr event



City Storm Water Design Criteria

- Existing inlet spread performance during 2 in/hr and 4 in/hr event



Evaluating Alternatives

Determining the recommended solution:

- ◁ Public safety
- ◁ Private property impacts
- ◁ Public cost
- ◁ Long-term maintenance
- ◁ Private utility impacts

Evaluating Alternatives

Alternatives Considered:

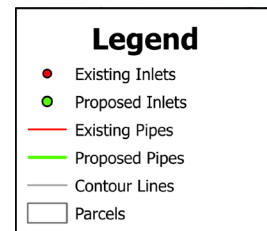
- ◁ Upgrading pipe sizes and materials
- ◁ Adding inlets and pipes in areas with no infrastructure

Preferred Alternative

- Proposing to add roughly 2000 feet of pipe and 19 inlets



Preferred Alternative



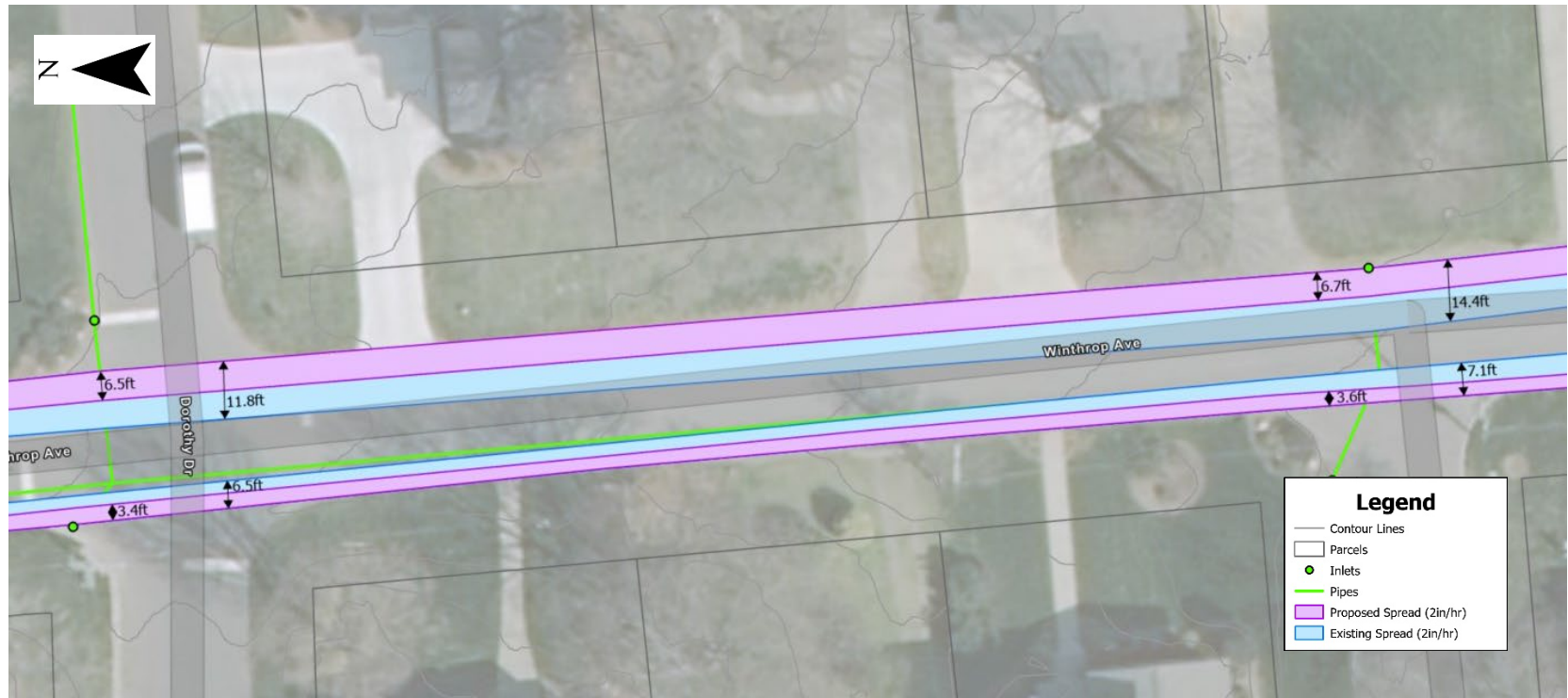
City Storm Water Design Criteria

- Proposed inlet spread performance during 2 in/hr event



City Storm Water Design Criteria

- ▷ Proposed inlet spread performance during 2 in/hr event
- ▷ Roughly a 50% reduction in spread



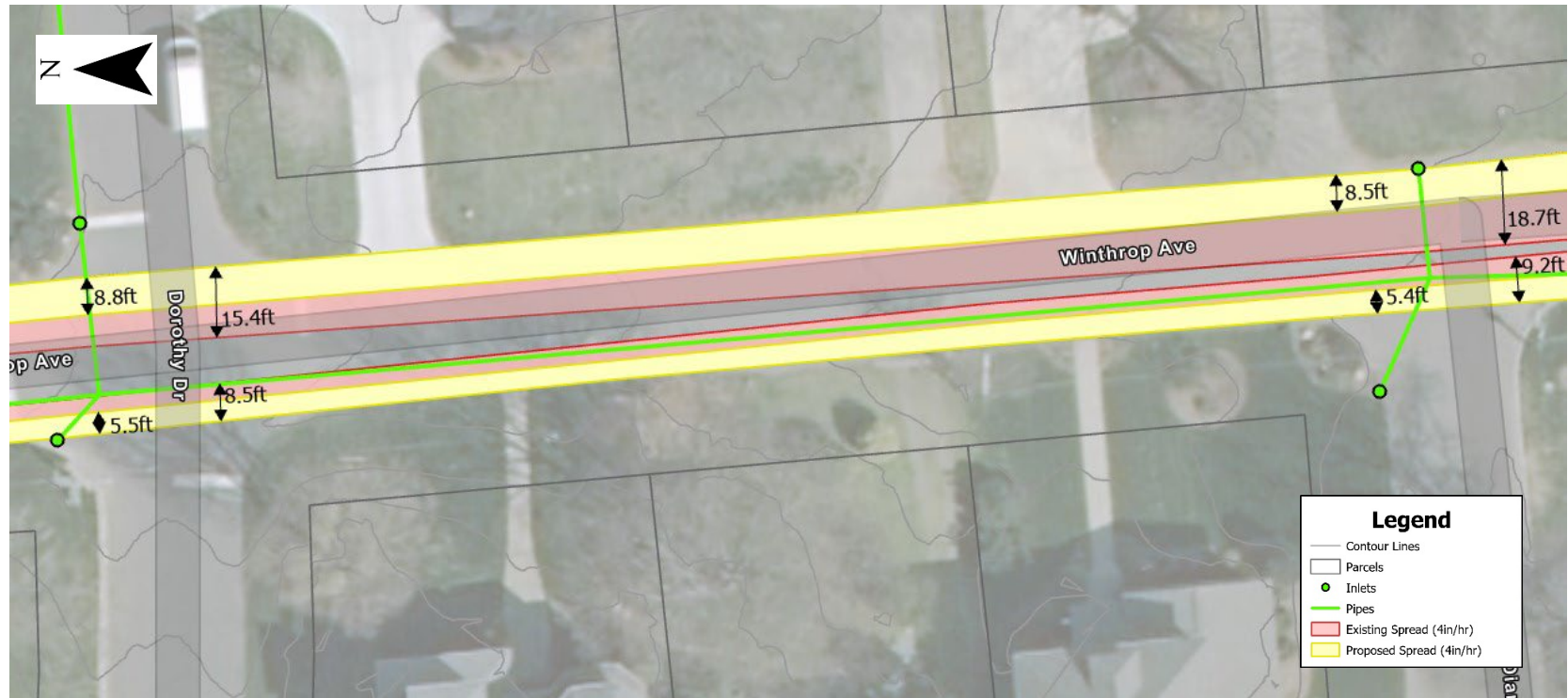
City Storm Water Design Criteria

- Proposed inlet spread performance during 4 in/hr event



City Storm Water Design Criteria

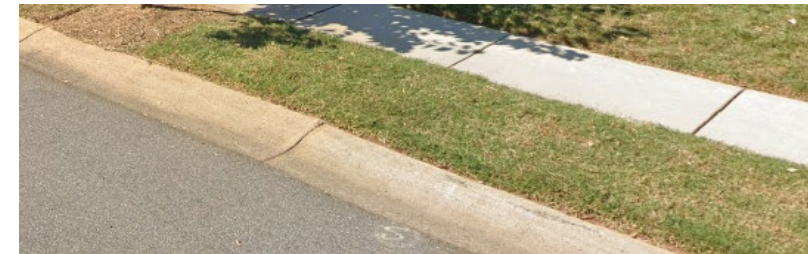
- Proposed inlet spread performance during 2 in/hr event
- Roughly a 50% reduction in spread



Curb Improvements



No Curb



Valley Curb



Full Curb

Next Steps

- ◀ Additional information obtained during this meeting will be considered and incorporated into the proposed alternatives, where applicable
- ◀ The alternative will be finalized
- ◀ Design phase will begin once a design contract is secured
- ◀ Another public meeting will be held once the City has produced design plans that are approximately 75% complete and the real estate phase begins

Questions?

- ◀ Meeting presentation will be posted on the project website:

www.charlottenc.gov/Services/Stormwater/Projects/Magnolia-Winthrop

- ◀ If you have specific property questions email or call:

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