





CHARLOTTE
ENGINEERING & PROPERTY MANAGEMENT

Cutchin Drive Storm Drainage Improvements Project

Existing Conditions Analysis Public Meeting

Sharon Presbyterian Church

October 21, 2014

Charlotte-Mecklenburg STORM WATER Services

PARSONS BRINCKERHOFF

Introduction of Staff

- Charlotte-Mecklenburg Storm Water Service (CMSWS) Staff
  - Adrian Cardenas, PE – *Project Manager*
    - Phone: 704-336-4682
    - E-Mail: acardenas@ci.charlotte.nc.us
  - Doug Lozner, PE – *Watershed Area Manager*
  - Alyssa Dodd – *Public Information Specialist*

- Parsons Brinckerhoff (PB) Staff
  - Karl Dauber, PE – *Project Manager*
  - Rob Green, PE – *Project Engineer*

Housekeeping Items:

- Sign-In Sheet
- Agenda & other handouts
- Customer Service Comment Cards
- Q&A period after the presentation

Meeting Purpose and Agenda

- **Purpose**
  - Summarize findings of the Existing Conditions Analysis
  - Request Input from property owners/residents on the Existing Conditions analysis results.

- **Agenda**
  - CMSWS Services Summary
  - Project Selection and Citizen Involvement
  - Existing Conditions Analysis Summary
  - Future Project Milestones
  - General Questions and Comments
  - Small group break-out sessions

What Storm Water Services Does :

- **Charlotte-Mecklenburg Storm Water Services Established in 1993**
- **Improve the water quality of our creeks, lakes and ponds**
- **Reduce flood risks**
  - Preventing or reducing the loss of life, disruption of services, and property damage caused by floods
  - Installing, upgrading and maintaining storm drains and pipes
  - Mapping floodplains and managing floodplain development
  - Preserving and restoring natural stream channels and the beneficial functions of floodplains
- **Storm Water Services does not provide drinking water or sanitary sewer service. Water and sewer services are provided by the Charlotte-Mecklenburg Utility Department.**

Why the Cutchin Drive Storm Drainage Improvement Project (SDIP) was chosen:

- Requests for Service from Property Owners (79 Calls to 311 within watershed)
  - Inadequate/Undersized Drainage Infrastructure
  - Road Flooding
  - Structure Flooding (Houses, Buildings, Sheds, etc.)
- Larger Watershed-wide issues that cannot be managed by spot repairs or without potentially impacting downstream properties.

What we need from You:

- Feedback on existing conditions modeled results
- Additional information on drainage related concerns
- Support for the project's future phases

Cutchin Drive Storm Drainage Improvement Project

Existing Conditions Analysis Report

CHARLOTTE.

Charlotte-Mecklenburg STORM WATER Services

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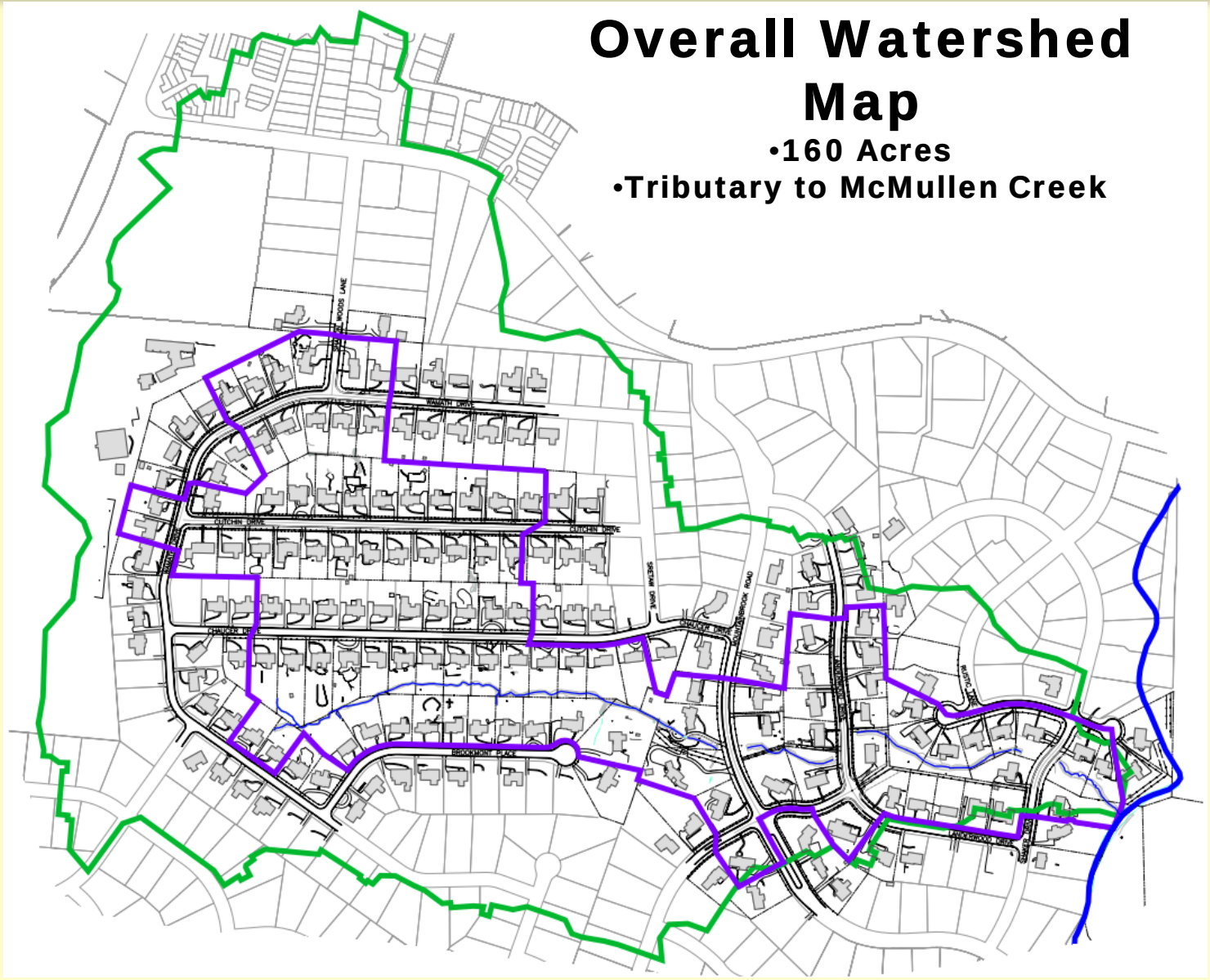
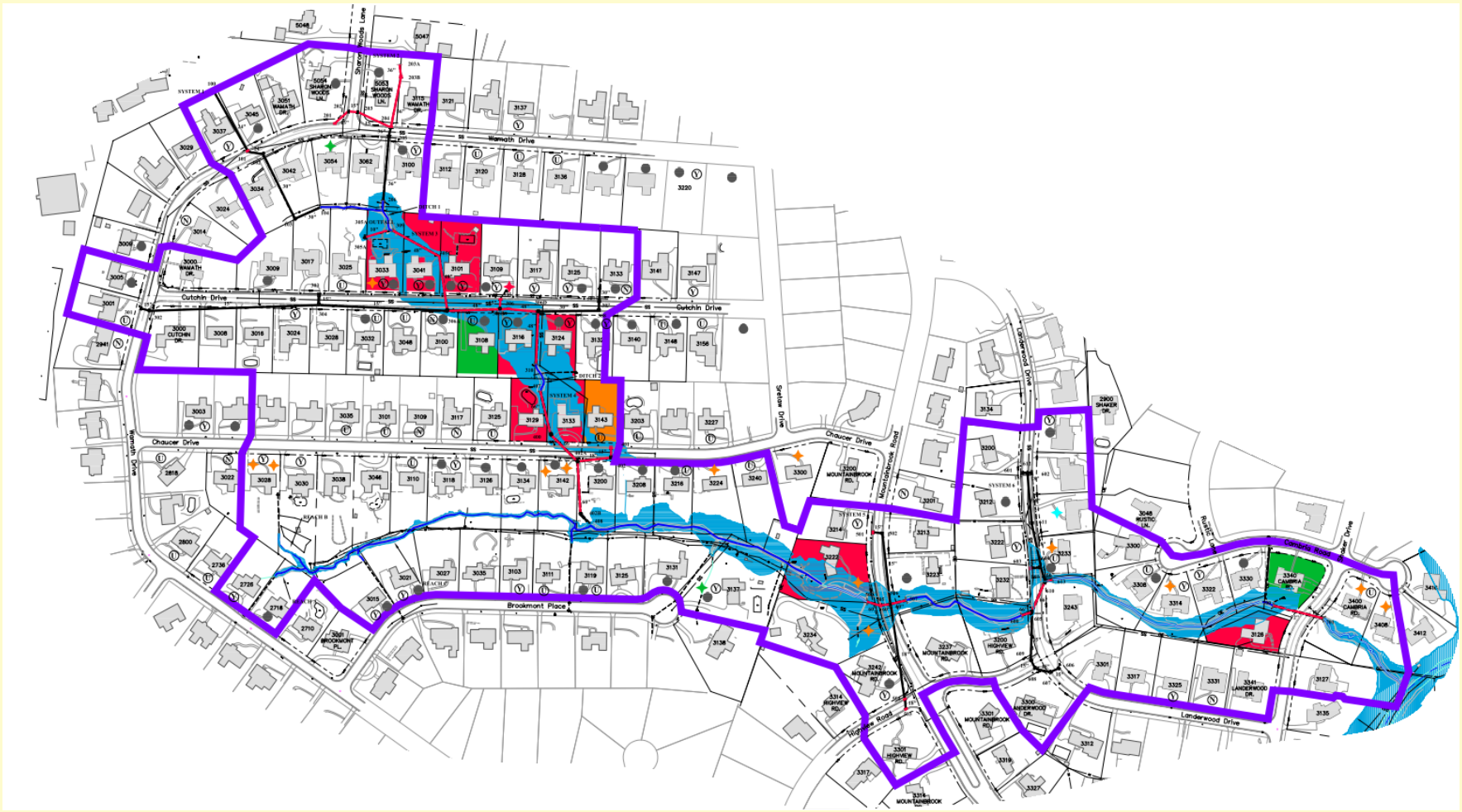
Overall Watershed Map

- 160 Acres
- Tributary to McMullen Creek

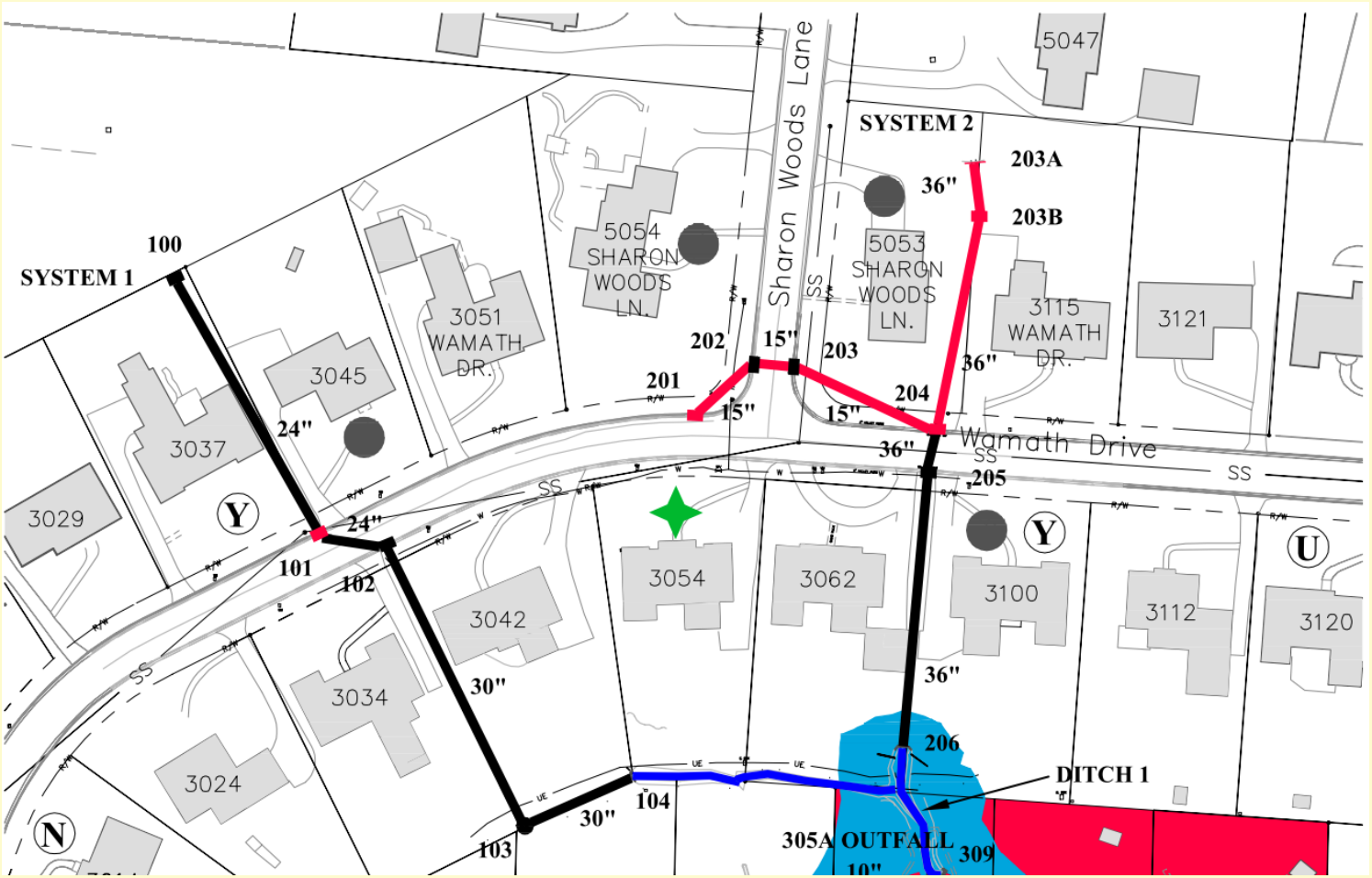


Existing Conditions Floodplain Map

- **Illustrates the Predicted Extent of Flooding**
- **100-Year Storm Event:**
  - **1 percent chance of storm occurring in any given year**

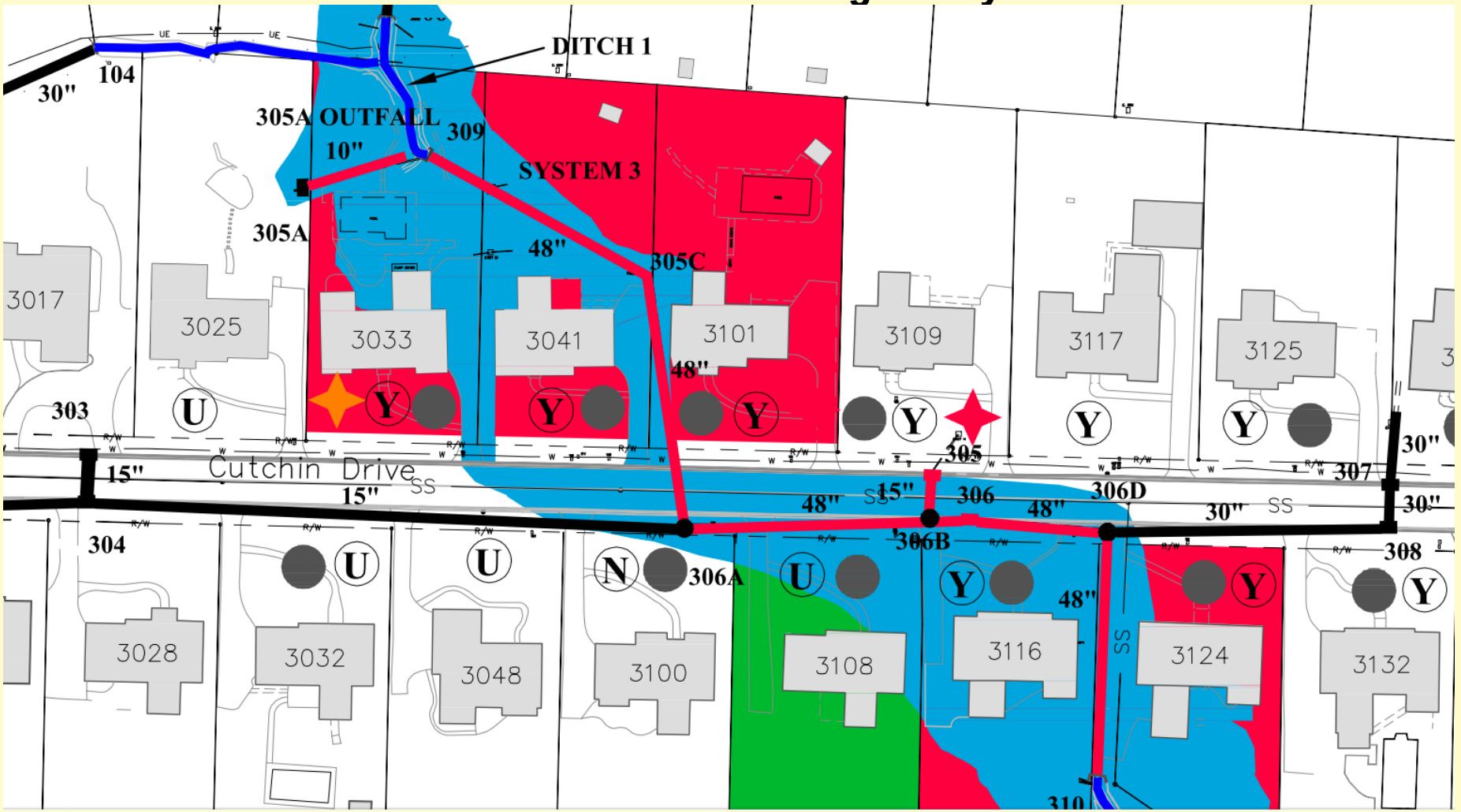


Wamath Drive - Systems #1 & #2



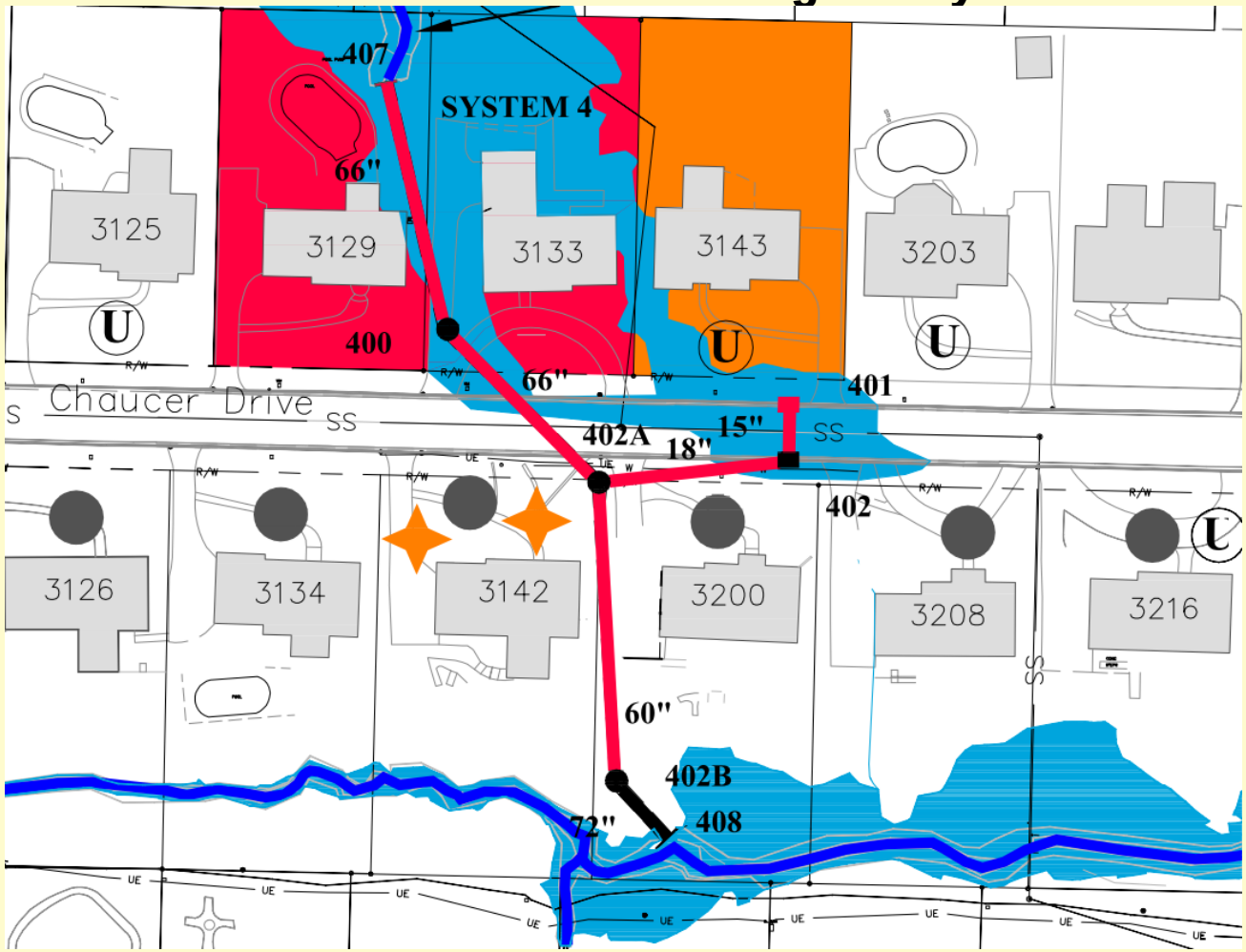
- System #1 – Additional inlets needed
- System #2 – Additional inlets needed & system undersized for 10yr storm event.

Cutchin Drive Storm Drainage – System #3



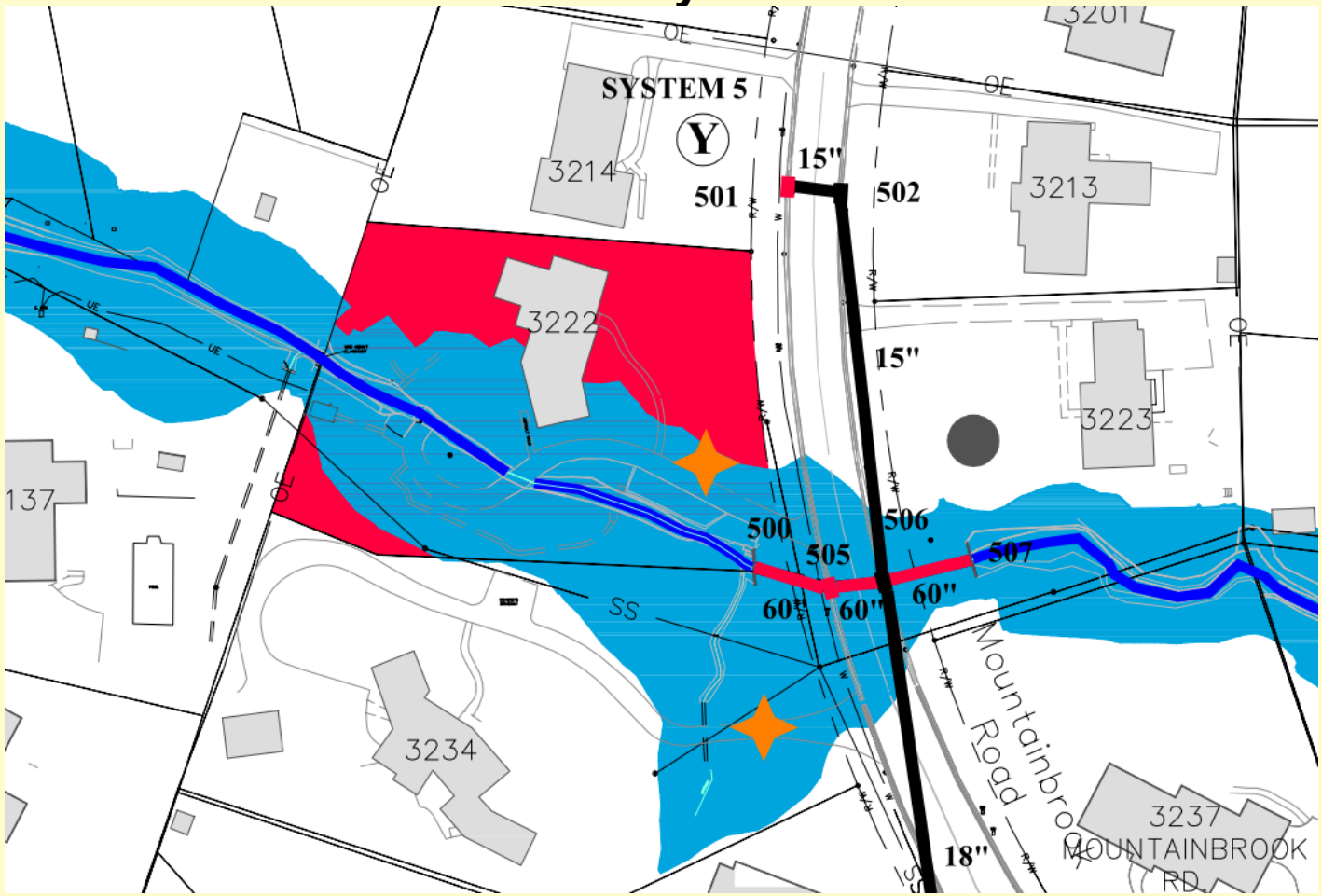
•System #3 - Additional inlets needed & system undersized for 10yr storm event causing flooding at 6 residences.

Chaucer Drive Storm Drainage – System #4



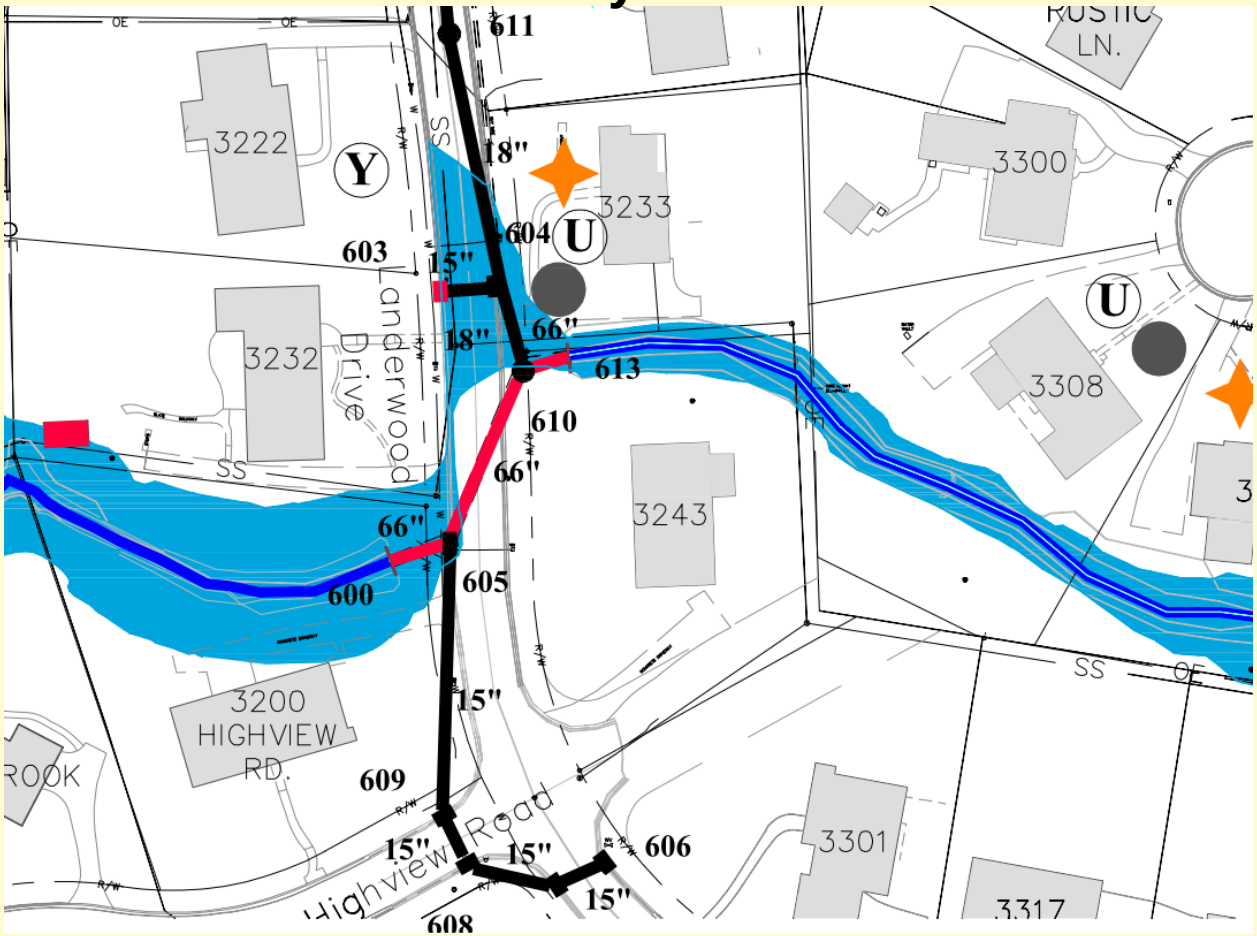
•System #4 - Additional inlets needed & system undersized for 25yr storm event causing flooding at 3 residences.

Mountainbrook Road – System #5 & 60” Culvert



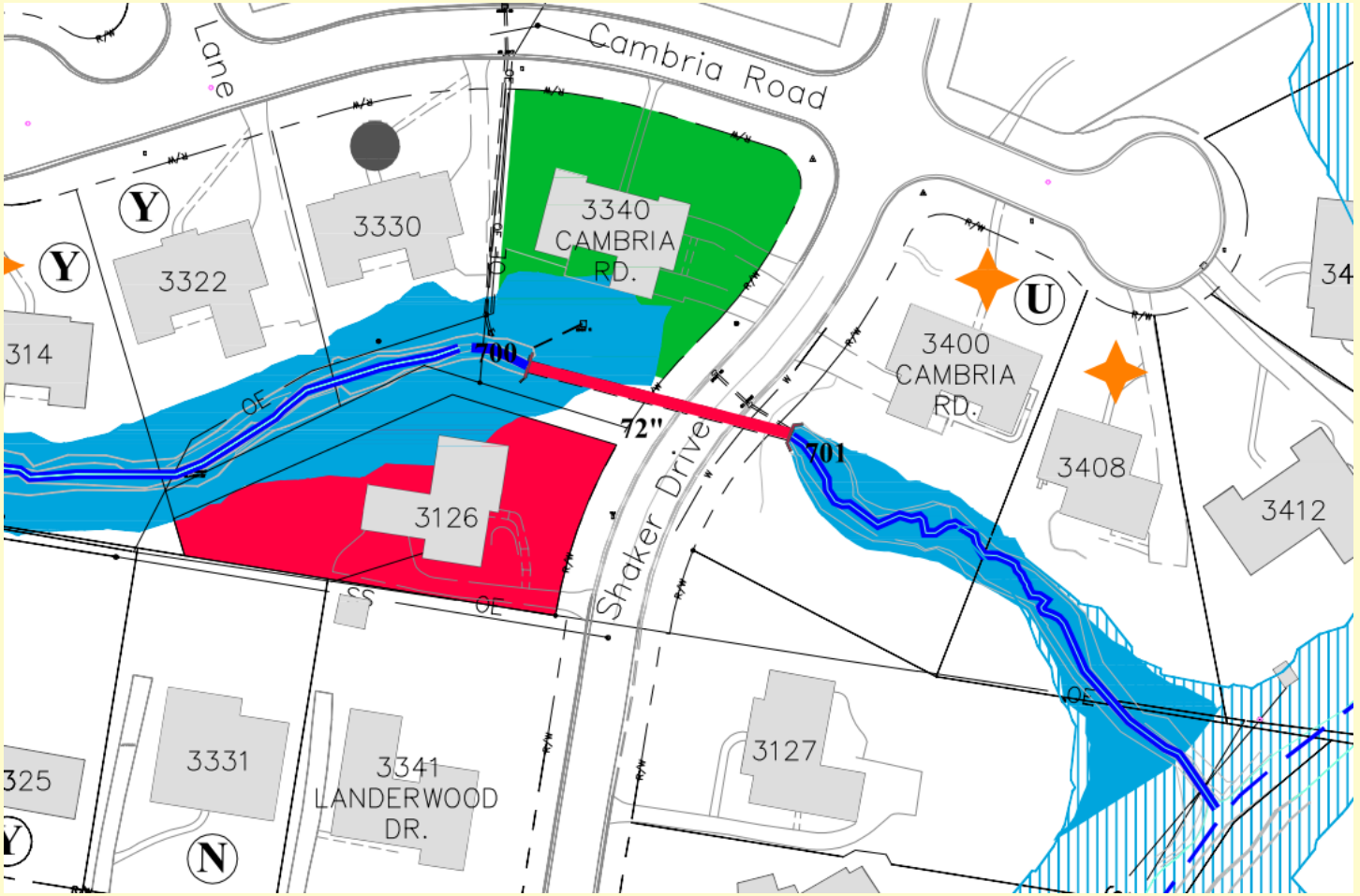
- Mountainbrook Road Culvert (60”):
  - Undersized, overtops in 10-year storm
  - Flooding at 3222 Mountainbrook Road
- System #5 –Additional inlets needed

Landerwood Drive – System #6 & 66” Culvert



- Landerwood Drive Culvert (66”):
  - Undersized, overtops in the 25-year storm
  - FFE Flooding 3200 Highview Road in Future Conditions 100yr Storm
- System #6 –Additional inlets needed

Shaker Drive Culvert – 72” RCP



- Shaker Drive Culvert (72”):
  - Undersized in future conditions models, overtops in the 25-year storm.
  - Flooding at 3126 Shaker Drive and 3340 Cambria Road
  - Flooding at 3330 Cambria Road in the future conditions model

Existing Conditions Analysis Results

- **Number of properties experiencing FFE flooding in the 100-Year storm event (or less): 9**
- **Number of properties experiencing HVAC, Vent, Crawl Space or L.A.G. flooding during the 100-Year storm event (or less): 3**

Storm Drainage Improvement Project Phases

PLANNING (Typically 16 to 23 months)

- Existing Conditions Analysis – Identifying the Problems (Started April 2014)
- Alternative Analysis – Finding the Solutions

DESIGN (Typically 21 to 34 months)
Designing the Solutions

PERMITTING (Typically 3 to 9 months, but usually overlaps the design phase)

EASEMENT ACQUISITION (Typically 12 months, also overlaps with the design phase)

BID (Typically 4 to 5 months)

CONSTRUCTION (3 months to over 2 years)

What is Next?

1) Survey - COMPLETE
2) Existing Conditions Analysis - COMPLETE
3) Public Meeting #1 – Existing Conditions - NOW
4) Alternative Analysis & Recommended Alternative - NEXT
5) Public Meeting #2 – Recommended Alternative
6) Project Design
7) Public Meeting #3 – Present Design & Real Estate Kick-off
8) Easement Acquisition
9) Permitting
10) Bid
11) Construction

Alternatives Analysis:

Criteria for Alternatives Analysis

- Public Safety
- Impact to homeowners
- Cost to taxpayers

Types of Alternatives Considered

- Replacement of failing pipes
- Different culvert and pipe sizes
- Different culvert and pipe shapes and materials
- Additional pipes and inlets
- New alignments
- Detaining water to reduce flow
- Stream stabilization
- Changing Stream Profiles

Path Forward

- Additional information obtained during this meeting will be considered and incorporated into the existing conditions analysis, where applicable.
- Alternatives will be evaluated, and a recommended alternative will be developed.
- CMSWS will then hold a second public meeting to present and obtain feedback on the recommended alternative.

Wrapping Up

- Please remember to sign-in and fill out a customer service card
- The City and our consultant will stay here to answer any specific questions you may have
- General Discussion

Thank you for coming to the meeting!