CITY OF WEST LAFAYETTE

STORMWATER PROGRAM

Stormwater Program & Service Charge

November 2013

Stormwater Program and Service Charge Approval

- On February 4, 2013, the City Common Council approved City Ordinance 34-12
  - Establishes the Stormwater Service Charge (Effective January 1, 2014)
  - Establishes the Stormwater Fund
  - Establishes the Stormwater Credit Program
  - Allows for the Stormwater Capital Program

Purpose of Stormwater Program

- Purpose
  - Improves quality of service
  - Improves water quality in waterways
  - Compliance with state and federal requirements (Municipal Separate Storm Sewer (MS4) Permit)
- Program Components
  - Stormwater capital improvement projects
  - Ongoing infrastructure operations and maintenance and regulatory compliance

Program Actions

- Complete approximately $14 million capital projects
- Complete annual city-wide project costs of $150,000
- Carryout ongoing operations costs of approximately $375,000 annually

Equivalent Residential Unit

- ERU: Average impervious area on a residential property and equals 3,200 square feet
- Based on sample residential parcel measurements
- ERU establishes a base billing unit

Service Charge Billing Structure

- Monthly assessment is based on Impervious Surface Area (ISA)
- Residential property is billed one ERU
- Non-residential property is billed per total measured ISA

Example: Total measured ISA/3,200 = #ERUs

#ERUs * Rate = Monthly Bill amount

The Stormwater Service Charge

- The utility service charge rate is $8.00 per ERU per month
- Residential property = 1 ERU($8.00)/month

- Residential property impervious surface area

1 ERU = $8.00/month

Proposed Stormwater Service Charge

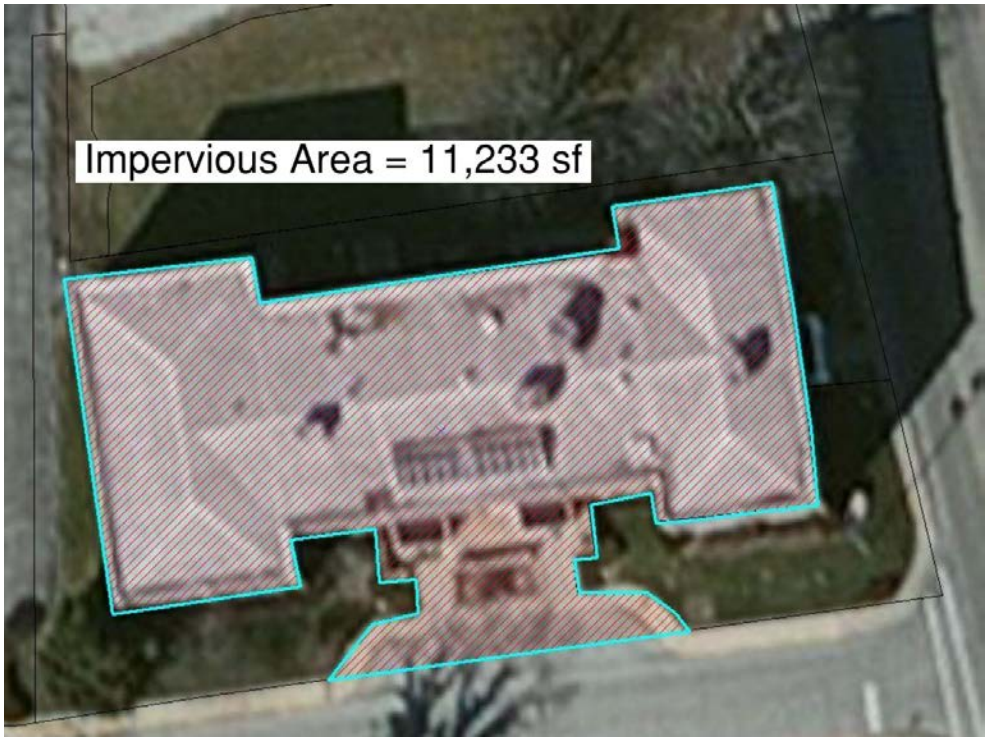
- Non-Residential property bill is based on total measured impervious area
- Non-Residential property = (Measured ISA/3,200*) X $8.00/month

*ERU = 3,200 sq. ft. ISA

- Non-Residential property impervious surface area

11,233/3,200 = 4

4 ERUs X $8.00 = $32/month



Stormwater Rate Reduction

- 50% rate reduction allowed for Residential users if they:
  - Are head of household; and
  - Are either over 65 years of age or permanently and totally disabled as determined by the SSA; and
  - Have a total annual household income which is at or below 150% of the poverty level as determined by the U.S. Health and Human Service Guidelines

Stormwater Fund

- Dedicated stormwater funding
  - Funds stormwater NPDES permit compliance requirements
  - Funds stormwater specific operations, maintenance and capital projects
  - Removes burden from Wastewater Fund

Stormwater Credit Program

- Non-residential user may qualify for
  - Water quality or quantity credit
  - Increased credit for use of green/sustainable practices
  - Education credit
- For more information about eligibility visit http://westlafayette.engneering.stormwater

Program Expectations

- What can you expect
  - Complaint response and continued operations and maintenance
  - Completion of defined stormwater capital projects
  - Identification and completions of annual city-wide projects

Reporting Drainage Complaints

- To report drainage complaints contact the City Engineering Department at:

(765) 775-5130

Defined Capital Projects

- Known area-wide drainage problem areas
- Substantial in scale and cost
- Result in large scale improvements for community

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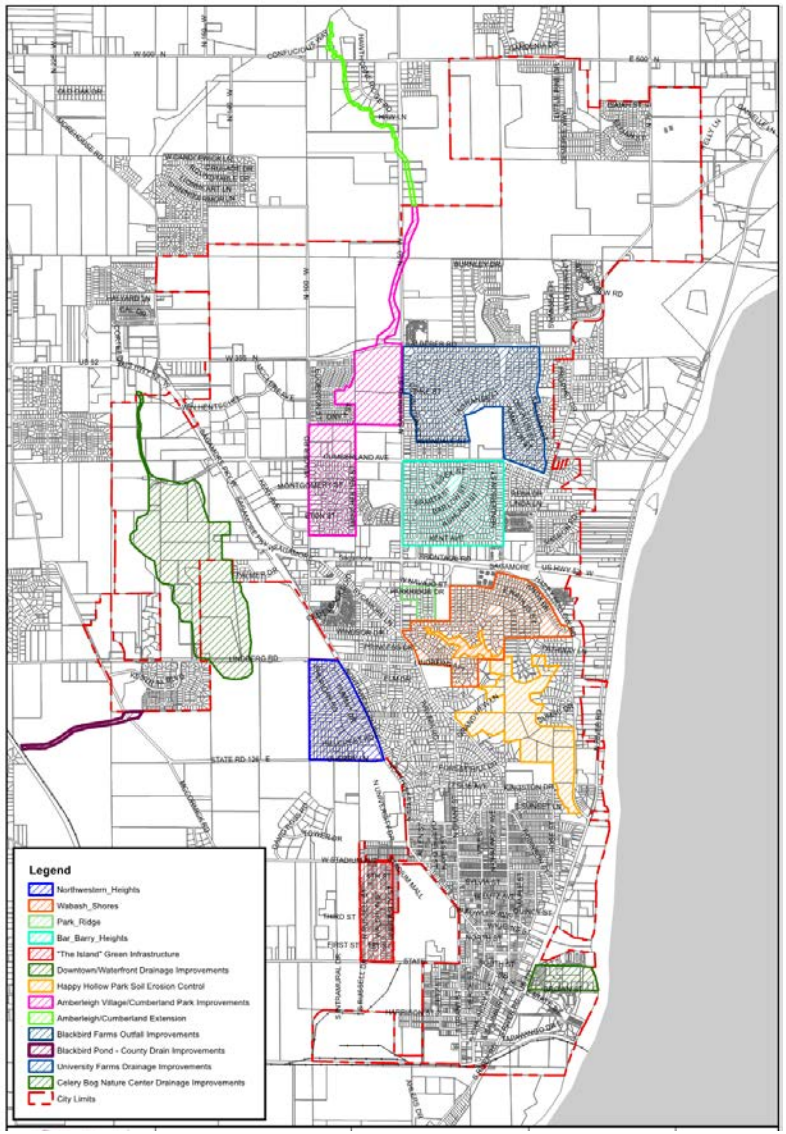
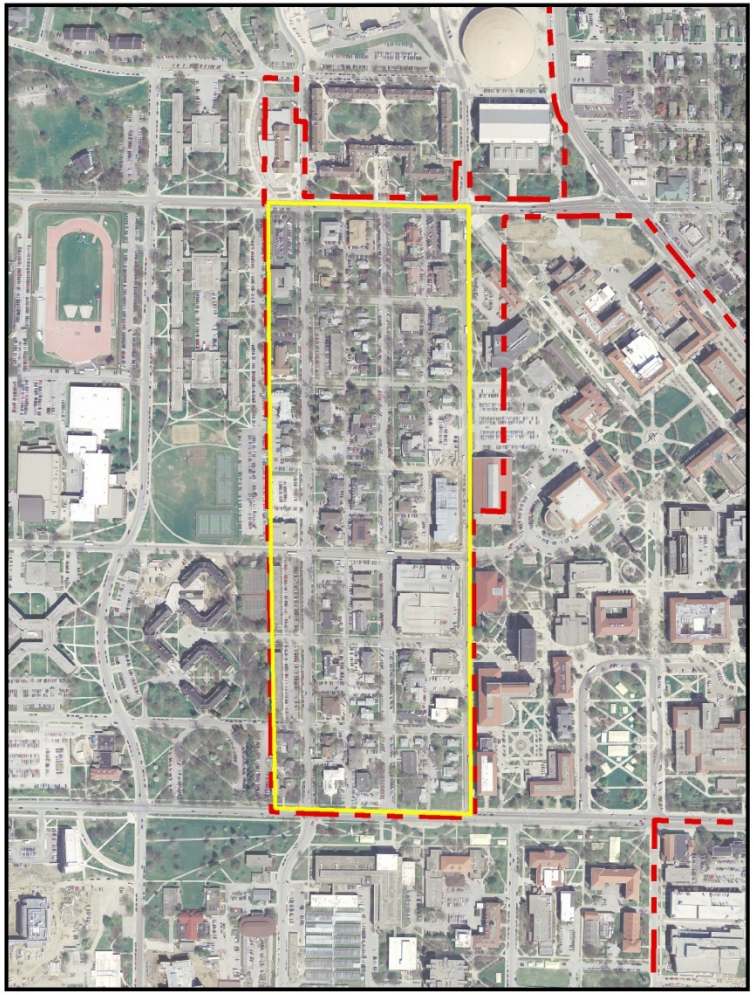


Legend

- Northwestern_Heights
- Wabash_Shores
- Park_Ridge
- Bar_Barry_Heights
- "The Island" Green Infrastructure
- Downtown/Waterfront Drainage Improvements
- Happy Hollow Park Soil Erosion Control
- Amberleigh Village/Cumberland Park Improvements
- Amberleigh/Cumberland Extension
- Blackbird Farms Outfall Improvements
- Blackbird Pond - County Drain Improvements
- University Farms Drainage Improvements
- Celery Bog Nature Center Drainage Improvements
- City Limits

“The Island” Green Infrastructure



"The Island" Green Infrastructure

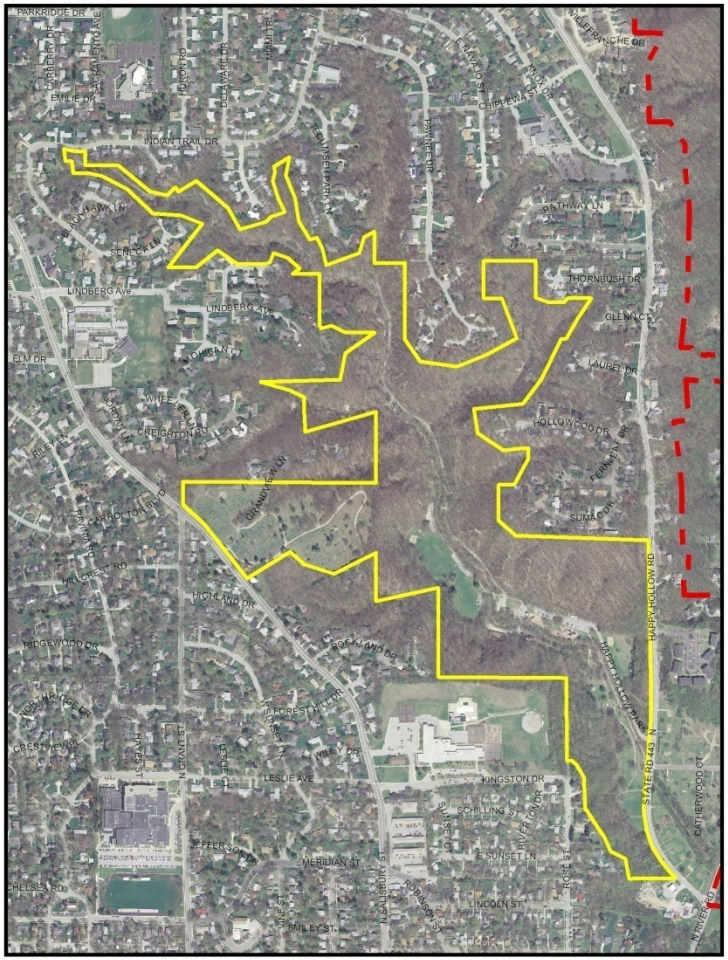
- **Project:** Rain garden and streetscape installations
- **Est. Cost:** $2,400,000
- **Benefits**
  - Improved water quality
  - Enhanced aesthetics with through streetscaping with native plantings
  - Additional storm inlets and curb cuts
  - Trash and silt capture

Downtown/Waterfront Drainage Improvements

Downtown/Waterfront Drainage Improvements

- **Project:** Drainage improvements
- **Est. Cost:** $500,000
- **Benefits**
  - Reduced stormwater runoff through green infrastructure implementation – treatment wetlands and rain gardens
  - Improved drainage capacity in vicinity for future development with addition of storm sewer and water quality units

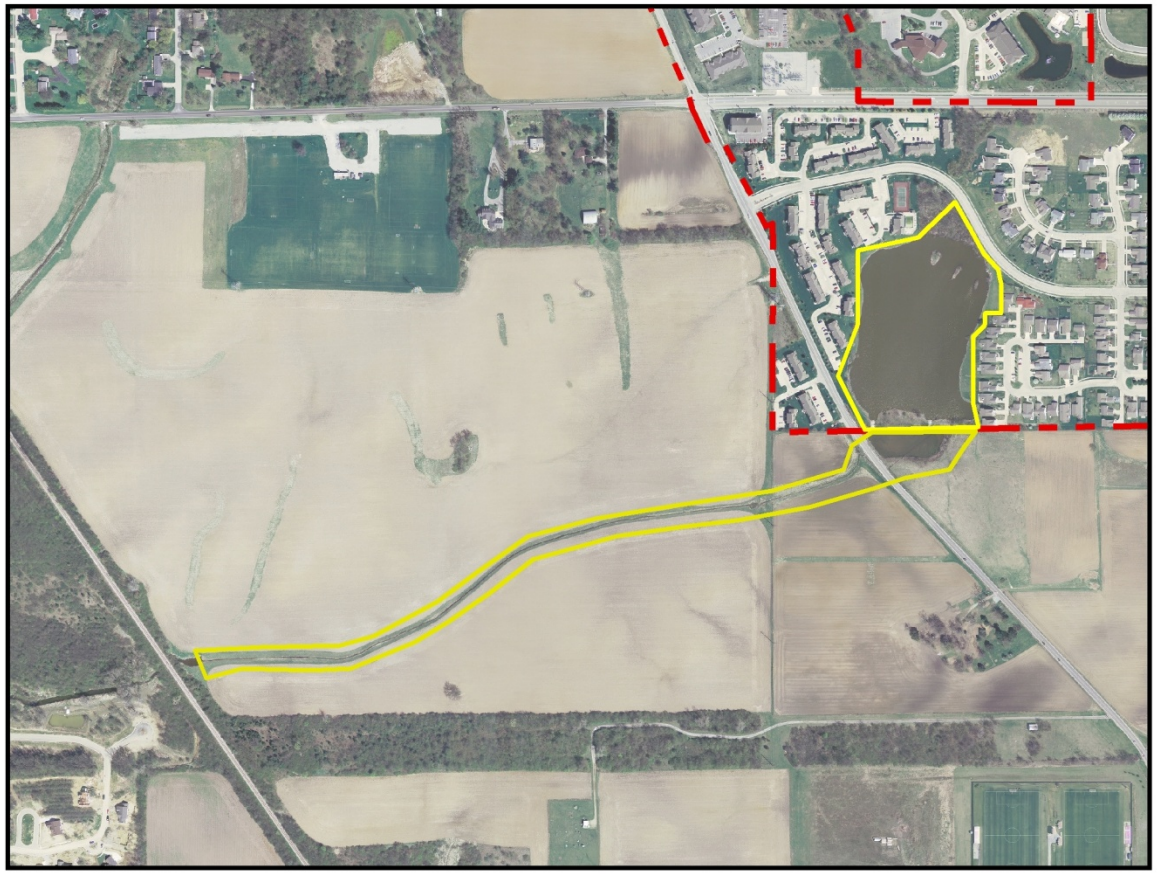
Happy Hollow Park Erosion Control



Happy Hollow Park Erosion Control

- **Project:** Slope stabilization and erosion control
- **Est. Cost:** $4,600,000
- **Benefits**
  - Systematic approach to Happy Hollow ravine erosion control
  - Improved drainage in park and neighborhoods with new channelization and piping
  - Ongoing slope stabilization in areas most likely to fail
  - Reduced sediment laden runoff flowing into Wabash River

Blackbird Pond Stormwater Improvements



Blackbird Pond Stormwater Improvements

- **Project:** Detention basin retrofit, bank stabilization
- **Est. Cost:** $800,000
- **Benefits**
  - Enhanced dissolved nitrogen and phosphorus pollutant removal
  - Stream bank area stabilization, wetland grading and native wetland plantings
  - Channel lining for drain stabilization west of McCormick Road

Plaza Parks/Cumberland Park Drainage Improvements

Plaza Parks/Cumberland Park Improvements

- **Project:** Water quality, drainage improvements
- **Est. Cost:** $2,800,000
- **Benefits**
  - Improved runoff conveyance capacity of Boes Ditch
  - Stabilization of wooded drainageways through Cumberland Park
  - Reduced standing water, flooding in Plaza Parks neighborhood

University Farms Drainage Improvements

University Farms Drainage Improvements

- **Project:** Drainage improvements
- **Est. Cost:** $1,200,000
- **Benefits**
  - Reduced occurrences of standing water in backyards and flooded basements
  - Improved drainage throughout
  - Water quality enhancements through infiltration practices

Celery Bog Drainage Improvements

Celery Bog Drainage Improvements

- **Project:** Drainage improvements
- **Est. Cost:** $1,000,000
- **Benefits**
  - Water quality enhancements through vegetative filters and wetland grading
  - Improved flow control with drainage structures placed along northern edge of project area
  - Improved access for nature center recreational users

Annual City-Wide Projects

- Mainly complaint driven
- Perpetual problems that can be solved with minimal design & funds
- Additional projects added yearly as they are encountered

Proposed City Wide Maintenance Projects

Bar Barry Heights – Maintenance Projects

Bar Barry Heights – Resident Yard Flooding

- Drainage patterns cause floods and holds water during rain events
- Health hazard during summers
- Estimated Project Cost: $105,000

George Lummel Park Flooding

- Property line holds water after rain events
- Health hazard
- Estimated Project Cost: $130,000

Bar Barry Heights – Sump Pump Discharge

- Residential sump pump discharges into road
- Hazardous driving conditions
- Public hazard
- Estimated Project Cost: $46,000

Park Ridge & Wabash Shores – Maintenance Projects

Indian Trail Drive Street Flooding

- Clogged inlet causes street flooding
- Routine maintenance required
- Estimated Project Cost: $19,500

Wabash Shores Resident Yard Flooding

- Poor drainage patterns
- Yard floods and holds water during rain events
- Church construction contributes to runoff towards surrounding residents
- Health hazards

- Estimated Project Cost: $91,500

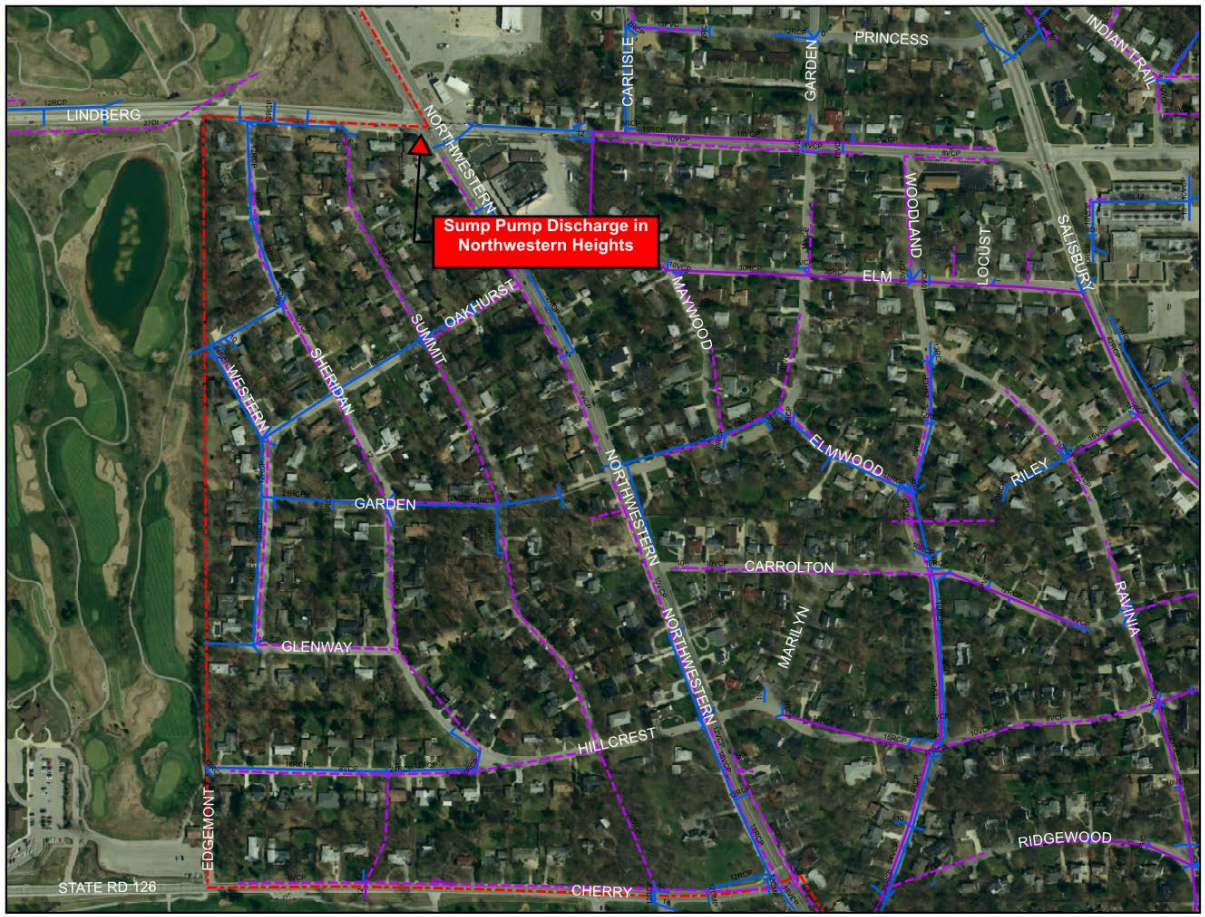
Nighthawk and Navajo Intersection Flooding

- Low point at northwest corner of intersection
- Holds water during rain events
- Estimated Project Cost: $20,500

Salisbury Street – Two Projects

- Failing infrastructure
- Floods during rain events
- Curb and gutter failure
- Breaking pavement
- Lacks proper inlet spacing
- Estimated Project Cost: $51,000*

Northwestern Heights – Maintenance Projects



Northwestern Heights Sump Pump Discharge

- Sump pump discharges into intersection
- Hazardous driving conditions
- Intersection handles 37,000 vehicles per day
- Estimated Project Cost: $65,000

University Farms – Maintenance Projects

University Farms – Benton Street Residential Flooding

- Fences and plantings within drainage easement
- Yards flood and hold water during rain events
- Water reaches electrical box during larger storm events

- Estimated Project Cost: $85,000

University Farms – Sullivan Street Residential Flooding

- Poor drainage
- Yards flood and hold water during rain events
- Water reaches electrical box during larger storm events
- Estimated Project Cost: $25,000

University Farms – Noble Court Residential Flooding

- Poor drainage
- Standing water
- Ground elevation raised with new construction
- Estimated Project Cost: $31,000