

J.S. McCarty Drain Hydraulic Study

Public Meeting
July 29, 2015

Hamilton County Drainage Board
VS Engineering

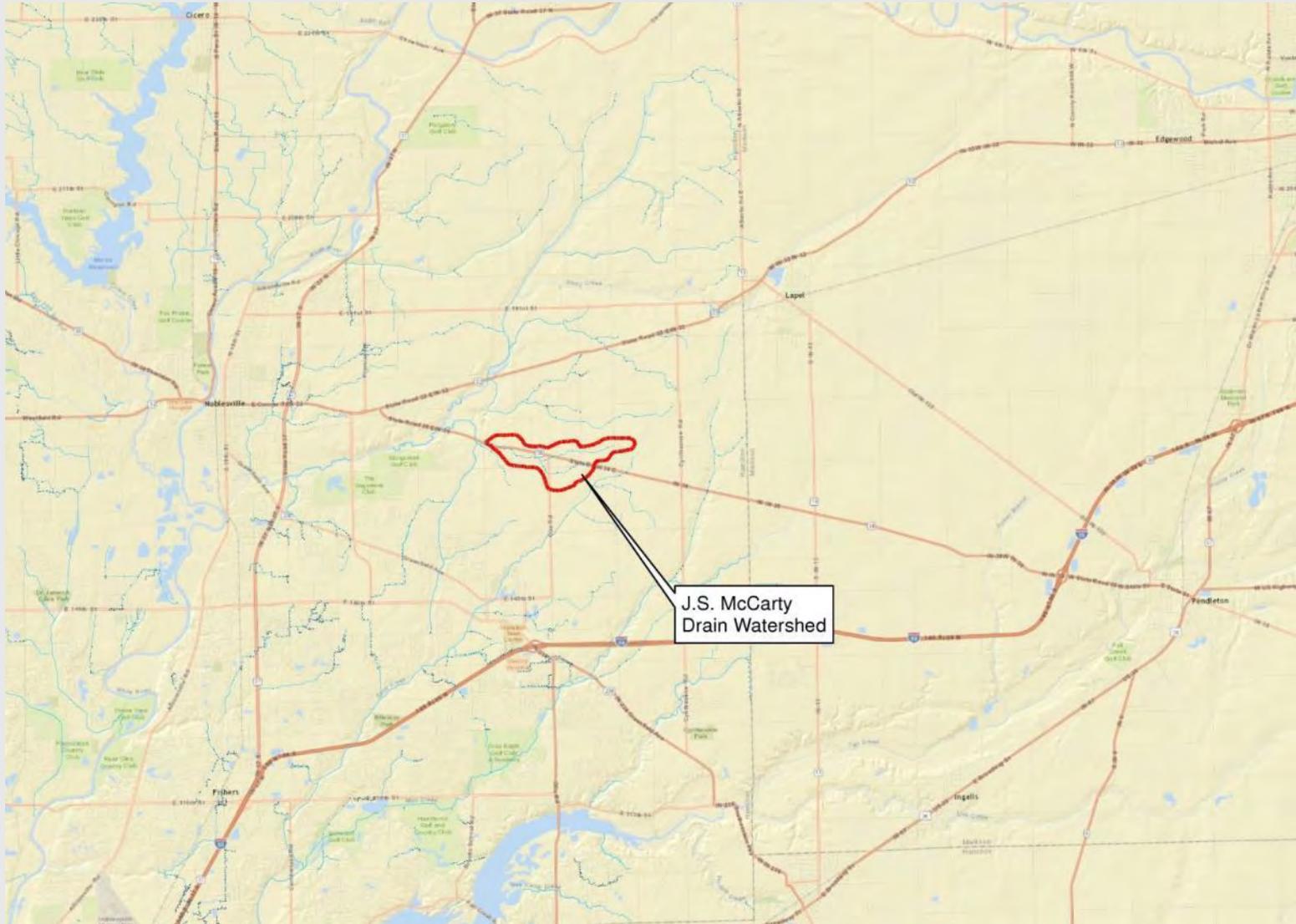
Agenda

1. Introductions
2. Review of Draft Study
3. Group Q&A on Presentation
4. Individual Q&A

Attendees

- Kent Ward, Hamilton County Surveyor
- Gary Duncan, Hamilton County Project Engineer
- Andy Conover, Hamilton County Plan Reviewer
- Naren Patel, VS Engineering
- Sam Weber, VS Engineering

J.S. McCarty Drain Location



J.S. McCarty Drain Watershed



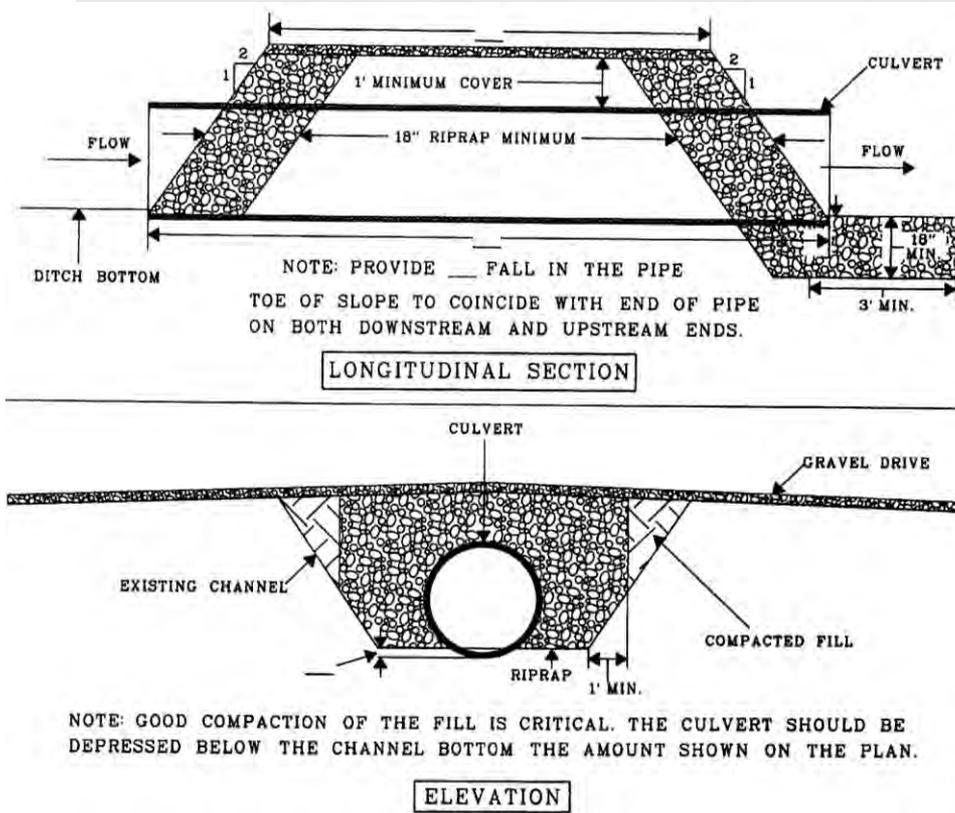
J.S. McCarty Drain Background

- Drain accepts stormwater into a closed storm sewer system (pipe and inlets).
- Pipe installed in late 1800s and early 1900s.
- Mostly butted, clay tile pipe. New pipe (RCP) is much higher quality and performs better than what was installed over 100 years ago.
- Pipe installed through mostly agricultural fields and north and south of Clarksville.

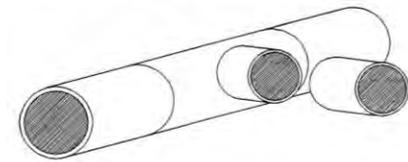
Existing Drainage Problems

- Overtopping of roadways
- Clogging of culverts
- Standing water after rain events
- Flooding of fields
- Erosion of existing banks and culvert inlet/outlets

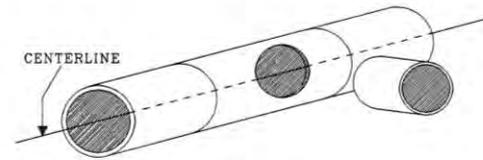
Types of Drainage Infrastructure



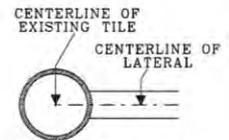
TILE CONNECTION



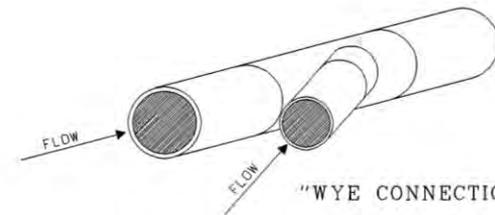
"TEE CONNECTION"



"HOLE IN TILE"

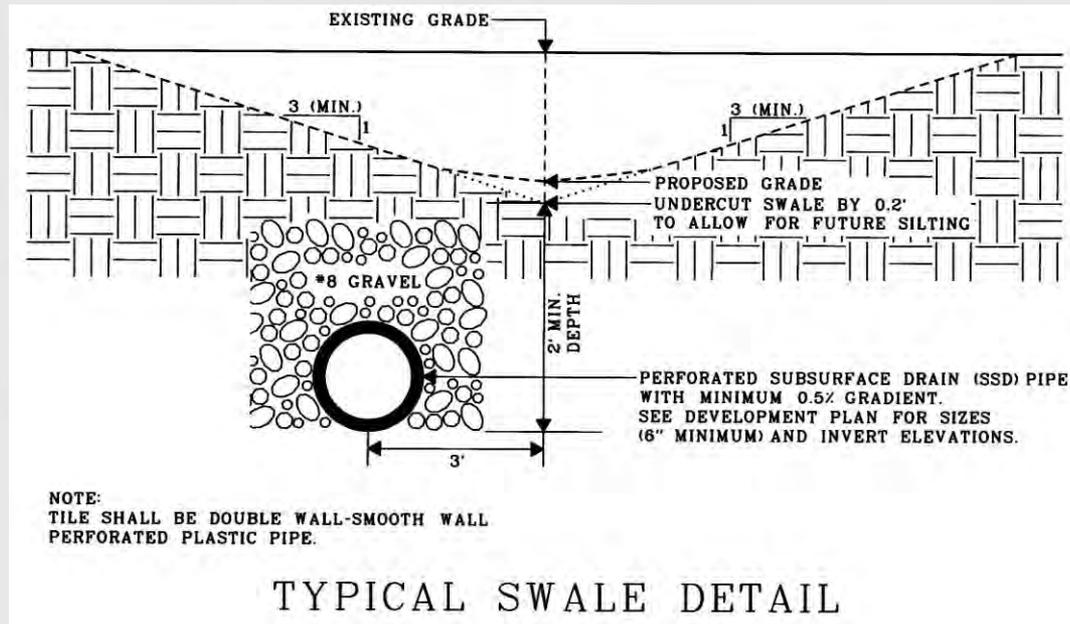
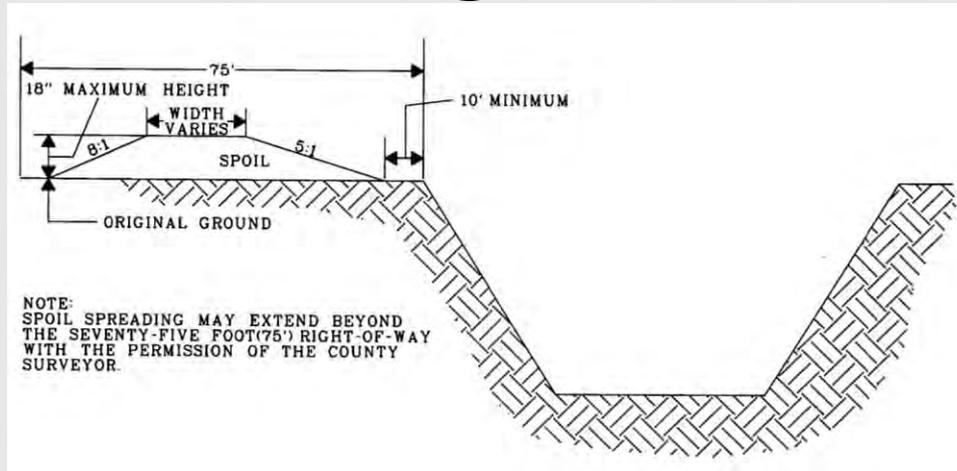


CROSS SECTION



"WYE CONNECTION"

Types of Drainage Infrastructure



Purpose of Hydraulic Study

- Develop a stormwater runoff model
- Define existing and potential flooding problems
- Evaluate regional detention basins
- Develop solutions to prevent flooding
- Identify wetland areas
- Obtain public input
- Identify financing mechanisms to implement solutions

Existing Conditions



South of SR 38 on 143rd St.

03.18.2014

Existing Conditions



South of 166th St. on Olio Rd.

03 18 2014

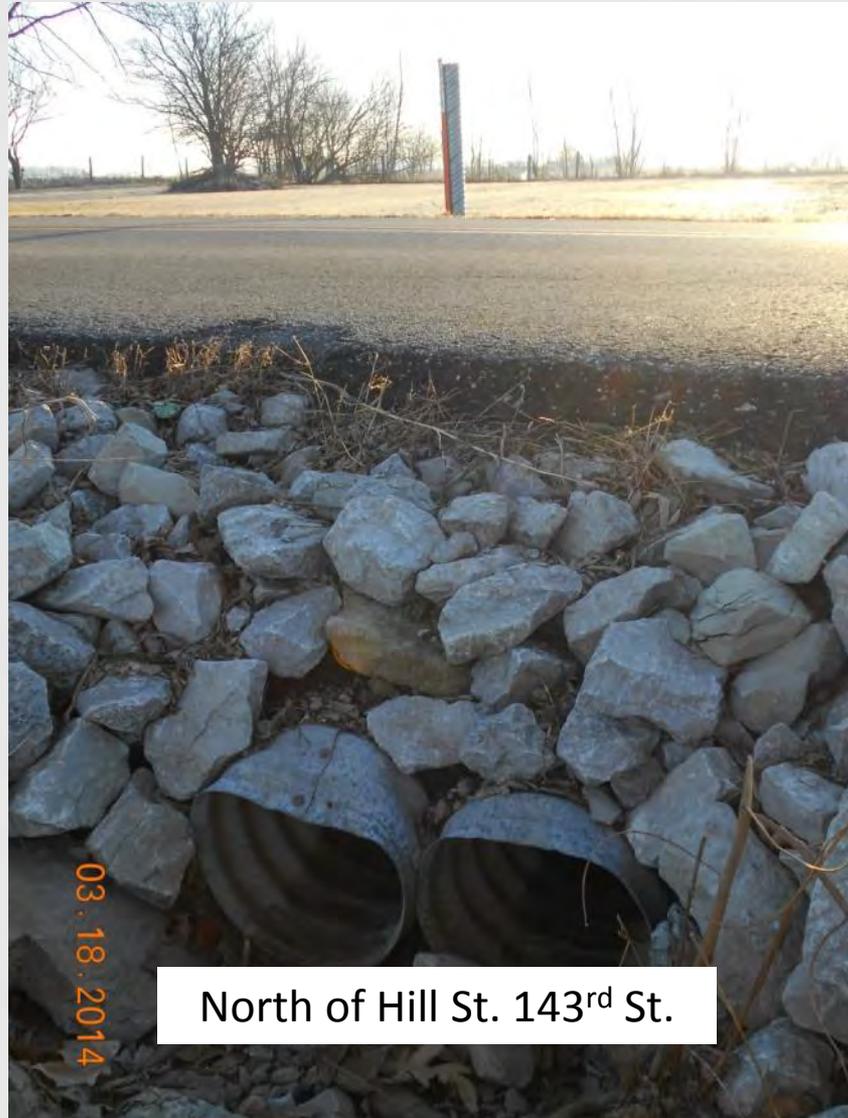
Existing Conditions



Field south of Mason St. and 166 St.

03.18.2014

Existing Conditions

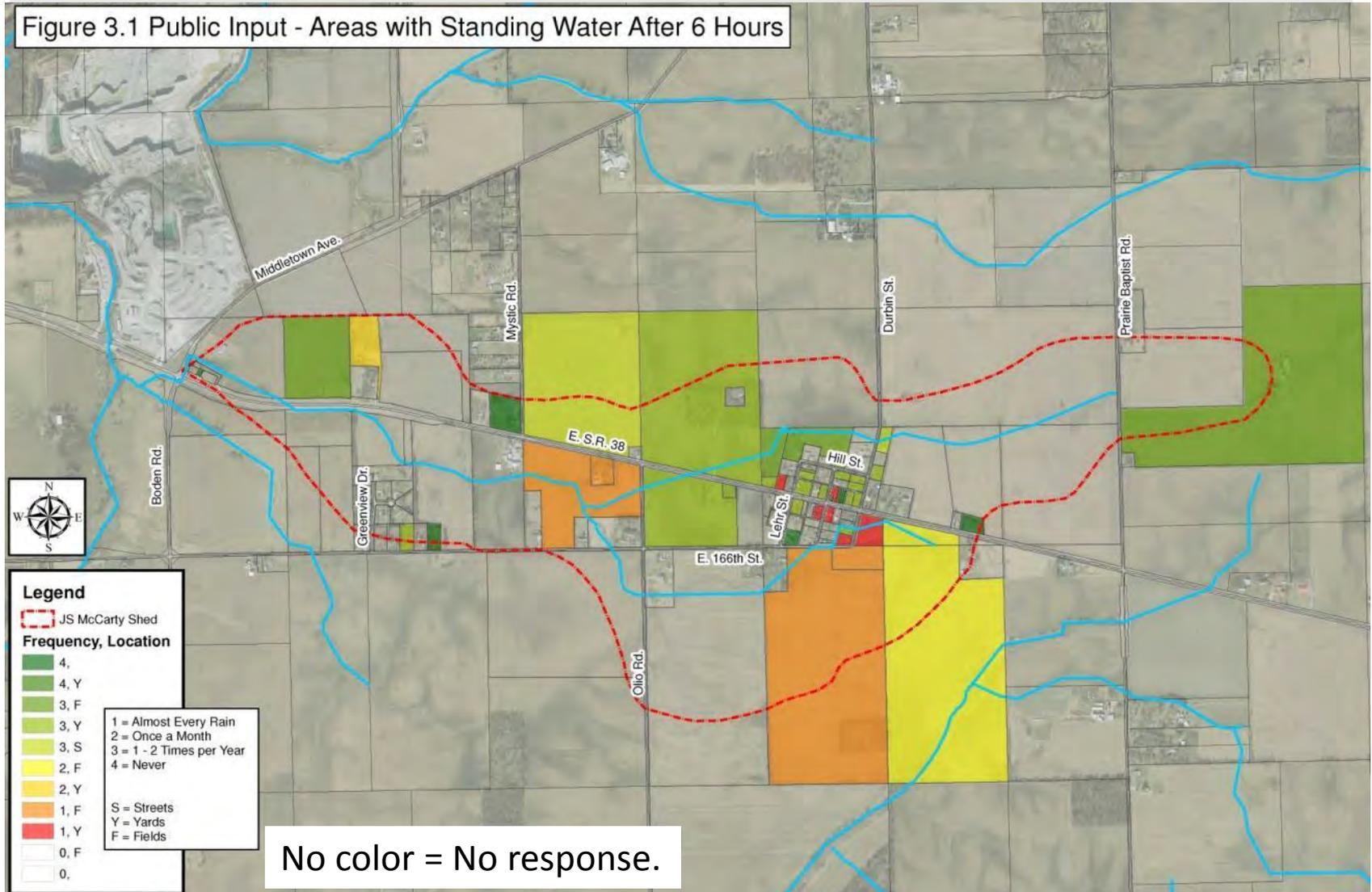


03.18.2014

North of Hill St. 143rd St.

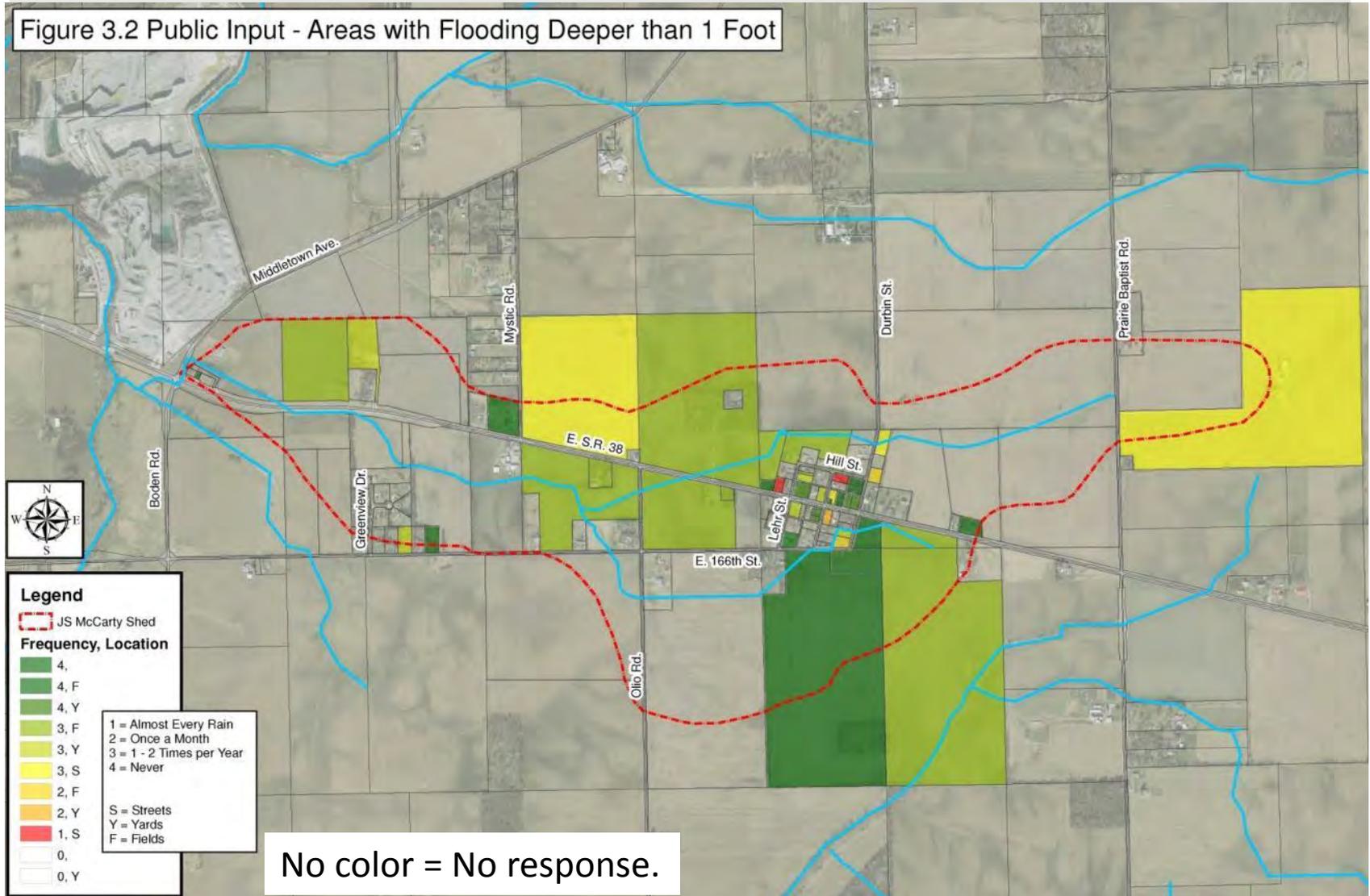
Questionnaire Results

Figure 3.1 Public Input - Areas with Standing Water After 6 Hours



Questionnaire Results

Figure 3.2 Public Input - Areas with Flooding Deeper than 1 Foot

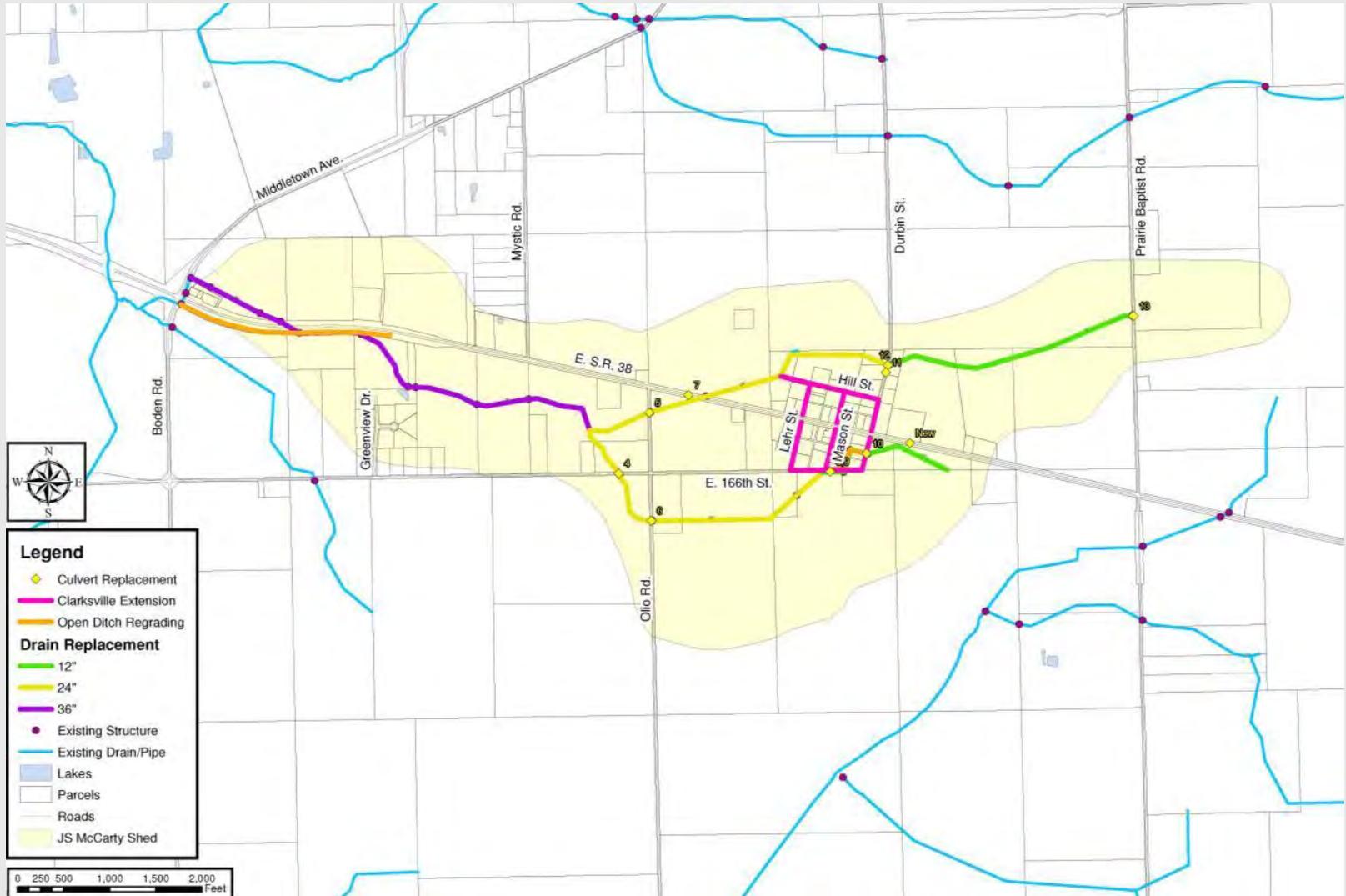


No color = No response.

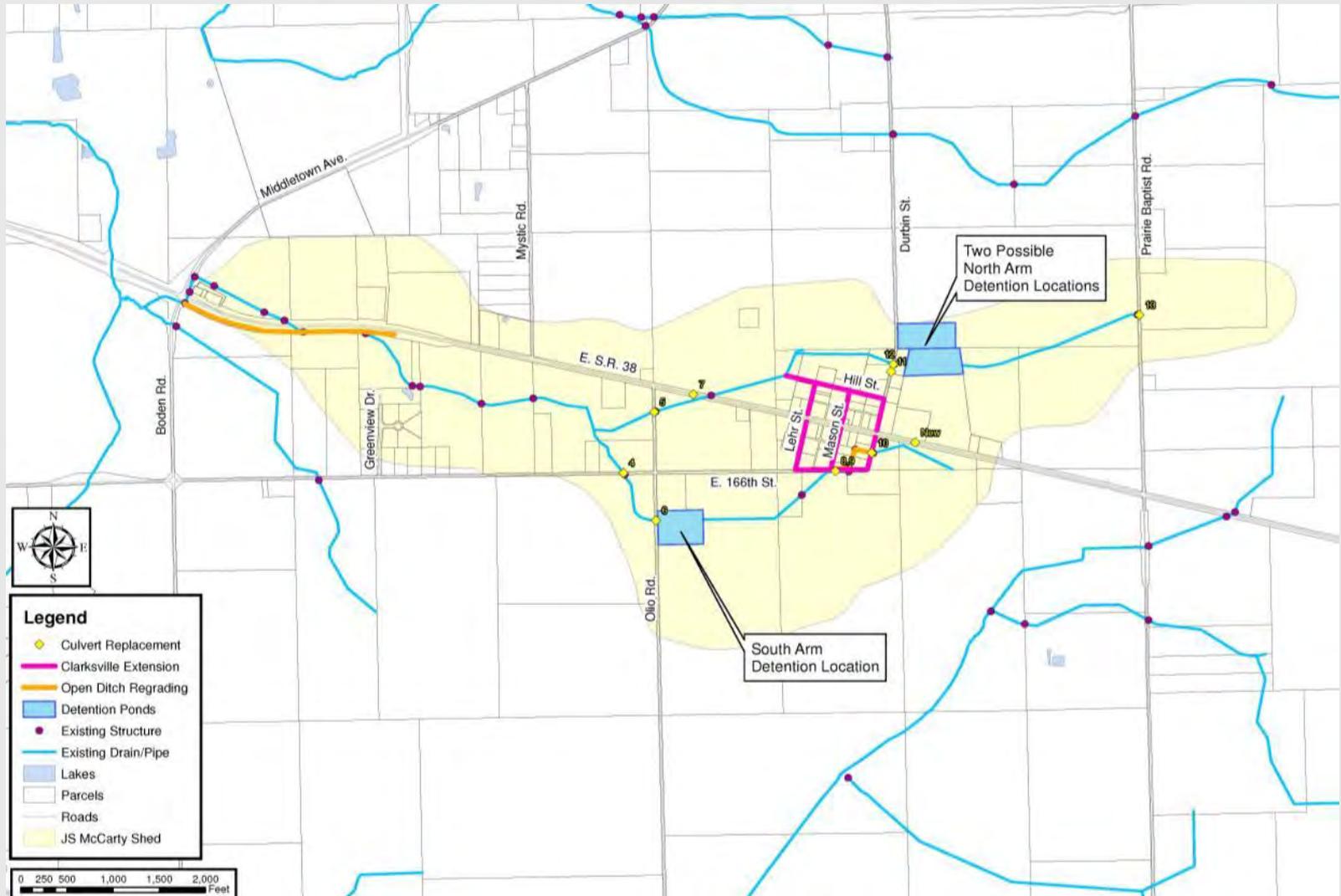
Alt. 1 – Culvert Replacement



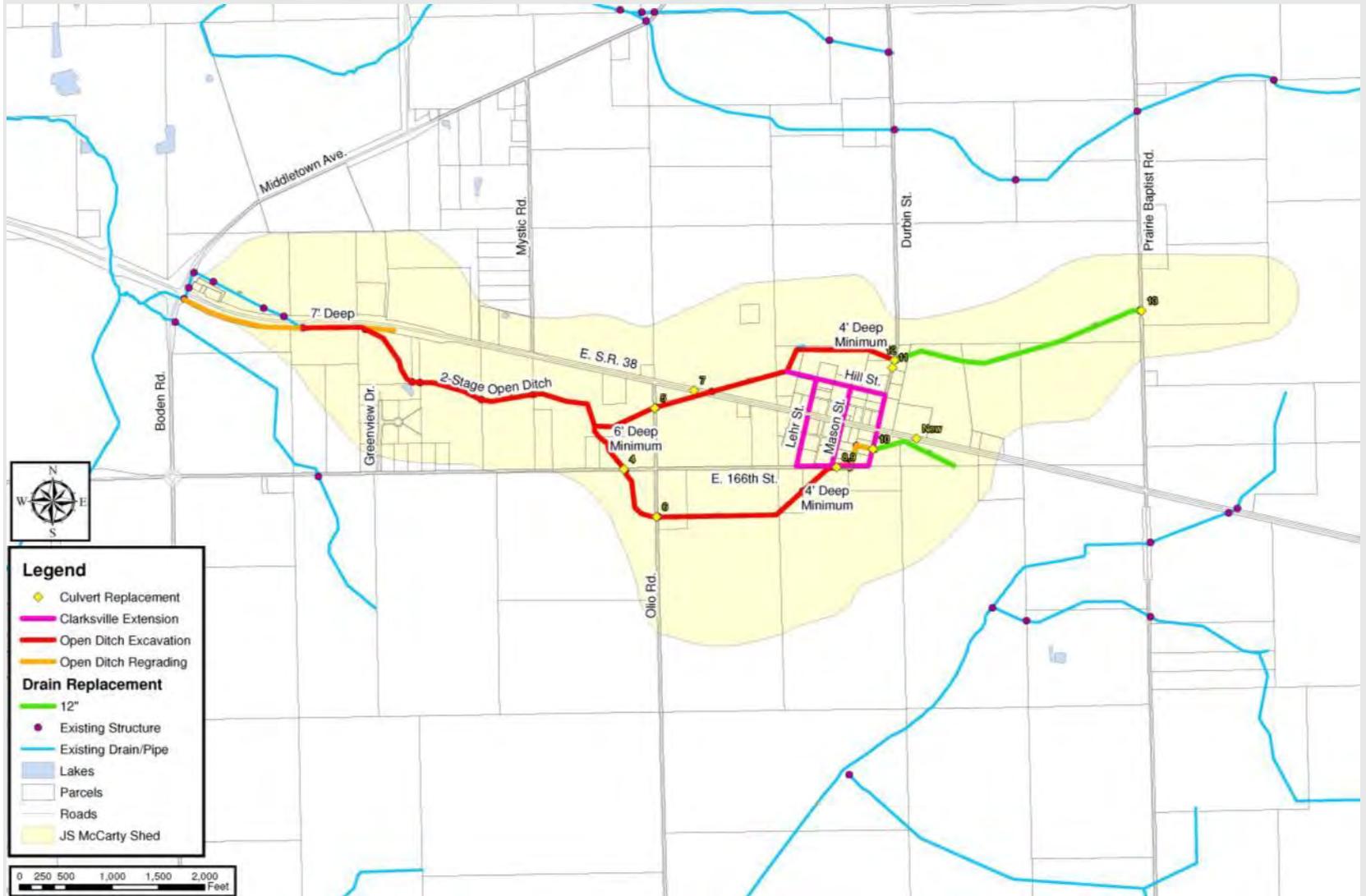
Alt. 2 – Drain Replacement



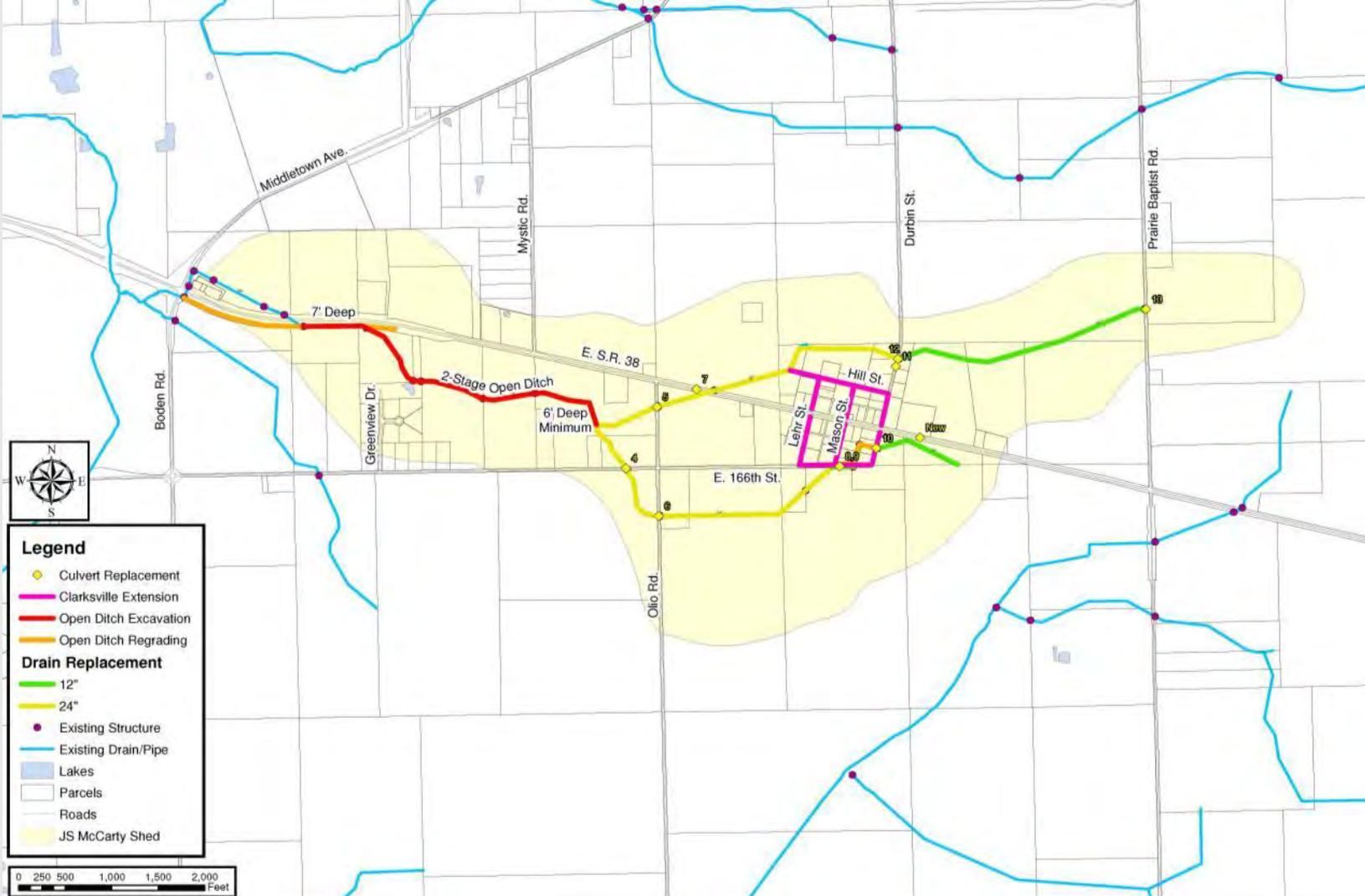
Alt. 3 – Regional Detention



Alt. 4 – Open Ditch



Alt. 5 – Open Ditch and Replacement



Clarksville Improvements – All Alts



Culvert Demand

Culvert No.	Downstream			South Arm						North Arm				
	1	2	3	4	6	8	9	10	New	5	7	11	12	13
Alt	SR 38 at Middletown Rd.	SR 38, east of Middletown Rd.	SR 38, east of Middletown Rd.	E. 166 th St., west of Olio Rd.	Olio Rd., south of E. 166 th St.	E. 166 th St., West of Mason St.	E. 166 th St., East of Mason St.	Durbin Rd., south of SR 38	SR 38, East of Durbin Rd.	Olio Rd., north of E. 166 th St.	SR 38, east of Olio Rd.	Durbin Rd. North, north of SR 38	Durbin Rd. South, north of SR 38	Prairie Baptist Rd., north of SR 38
1	46+	6	25	100	115	15	35	30	8	90	100	90	10	35
2	90+	6	25	75	90	15	25	25	8	75	85	85	10	35
3	45+	6	25	65	80	15	25	25	8	55	55	60	10	35
4	46+	6	25	60	75	15	25	25	8	105	130	105	10	35
5	46+	6	25	75	90	15	25	25	8	75	85	85	10	35

Note: All proposed culvert replacements are for 25-year design storm event, except the proposed INDOT culvert crossings are for 100-year design storm event.

Next Steps

- The study will be finalized after incorporation of comments generated from today's meeting.
- An alternative will be chosen by the Drainage Board for design and construction.
- Design of the chosen alternative will begin. During design, additional coordination with property owners will occur.
- A Drainage Board hearing will occur to authorize construction.
- Construction will begin. Coordination with property owners will continue through construction to ensure concerns are addressed.

Group Q&A

If you have an individual question about a property, we are happy to help after the group Q&A.

Contacts:

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