

Kenton C. Ward, CFM
Surveyor of Hamilton County
Phone (317) 776-8495
Fax (317) 776-9628

Suite 188
One Hamilton County Square
Noblesville, Indiana 46060-2230

February 5, 2018

To: Hamilton County Drainage Board

Re: John Underwood Drain Reconstruction Project

Attached are reconstruction plans, drainage map, and drainage shed map for the John Underwood Drain.

The portion of the John Underwood Drain to undergo reconstruction is located within the Thorpe Creek Watershed in Sections 20, 21 and 29 of Township 18 North, Range 6 East in Fall Creek Township of Hamilton County, Indiana.

The project runs upstream from the discharge point to Thorpe Creek at the southwest corner of the Barrington Estates Subdivision, then runs generally north and east, crossing under 136th Street, crossing under Interstate 69 and to the intersection of 146th Street and Atlantic Road at the eastern border of Hamilton County. The ditch continues into Madison County but the project ends at the County line.

HISTORY

The John Underwood Drain is part of the original Millard and Bell Drain. The Millard and Bell Drain was viewed on August 28, 1903 based on a petition recorded in Commissioners Record No. 29 Pages 566-587 of Madison County. The viewer's report is dated October 6, 1903. The drain was 17,700-lf in length consisting of 14,810-lf of various sized tile and 2,890-lf of open ditch. An Arm consisting of 1,686-lf of 8-inch tile starting at Station 80+20 of the main drain was included in the drain. The drain was constructed by order of the Hamilton County Commissioners on December 9, 1903 (See Hamilton County Commissioners Record Book 14, Pages 474-485).

A Viewers Report dated April 5, 1966 indicated that the John Underwood Drain was to be 17,575-lf in length and to consist of 6,795-LF of tiled ditch and 10,780-lf of open ditch. A Plan of the Bell and Humbles/John Underwood Drain dated March 17, 1967 indicated the John Underwood Drain was to be 10,782-lf of open ditch and 6,500-lf of tiled drain. This reconstruction project changed the Bell and Humbles Drain from tile drain to open ditch between Stations 57+50 and 148+10 representing a distance of 9,060-lf. The alignment of the John Underwood Drain in this section was different than the

original Bell and Humbles Drain and resulted in a longer length of 10,782-lf between the same points on the Bell and Humble Drain.

A maintenance report was presented to the Drainage Board at the meeting of April 17, 1972 requesting an assessment for maintenance of the John Underwood Drain stated to be a length of 10,782-lf of open drain (see Hamilton County Drainage Board Minutes Book 1, Page 82).

A petition to reconstruct the John Underwood Drain was presented to the Drainage Board at the meeting of April 16, 1979. The petition represented 72% of the land involved. (See Hamilton County Drainage Board Minutes Book 1, Page 304).

At the meeting of the Drainage Board on January 7, 1980, a report dated December 28, 1979 was presented to the Board based on the April 1979 petition. The report indicates that the petition represented 47% of the landowners in the Drainage Shed. The report requests that a maintenance program be established on the John Underwood Drain and on the Bell and Humbles Drain from Station 0+00 to Station 57+50. The report states that Station 148+10 to 177+00 of the Bell and Humbles Drain was unaffected by the maintenance or reconstruction program. The report also requests the formal vacation of the portion of the Bell and Humbles Drain between Stations 57+50 and 148+10 (approximately 9,060-lf) that was replaced with the 1969 reconstruction of the John Underwood Drain and vacation of the 1,686-LF tributary to the Bell and Humbles Drain. This request reduced the length of the Bell and Humbles Drain by 10,746-lf. (See Hamilton County Drainage Board Minutes Book 1, Page 334).

In a report dated February 4, 1980 presented to the Drainage Board at the meeting of February 4, 1980, a request was presented to increase the length of the John Underwood Drain a distance of 100-lf from Station 107+82. The report states that this distance is along Thorpe Creek and is needed to provide a connection for a continuous legal drain from the end of the John Underwood Drain at Station 107+82 to the Bell and Humbles Drain at Station 148+10. This extension would provide a continuous regulated drain 19,522-lf in length consisting of 13,722-lf of open ditch and 5,750-lf of tile. (See Hamilton County Drainage Board Minutes Book 1, Page 339).

The reconstruction of the John Underwood Drain was approved at hearing at the meeting of the Drainage Board on March 3, 1980. (See Hamilton County Drainage Board Minutes Book 1, Page 342). The project was let for construction to Taylor Excavating, Inc. at the meeting of the Drainage Board on April 7, 1980. (See Hamilton County Drainage Board Minutes Book 1, Page 350).

A report dated September 18, 1980 states that the reconstruction project was finished with the exception of a repair to a 12-inch CMP, seeding at two structures and grading for a rock chute. Notes in documentation in the Surveyors Office indicate that the John Underwood Drain was dredged a distance of 10,782-lf and that work on the open ditch also included various tile outlets and structures. The notes indicate that the length of the drain was not increased by 100-feet (as requested by the report dated February 4, 1980) between the end of the John Underwood Drain and Station 148+10 of the Bell Humbles as this length was part of the Martha Ford Drain.

A report dated April 9, 2002 presented to the Drainage Board at the meeting of May 28, 2002 requested the reconstruction of the Thorpe Creek regulated drain and the addition of the John Underwood Drain, and other Drains, to the Thorpe Creek Drainage Area. The report indicates that the open drain portion of the Bell and Humbles Drain between Stations 53+25 and 177+00 and between Stations 83+50 and 148+10 of the Thorpe Creek Drain are regulated as part of the John Underwood Drain. The report also states that: "The John Underwood Drain was originally constructed as the Bell and Humbles Drain. In 1969, the Bell and Humbles Drain was ordered reconstructed by the Hamilton County Circuit Court and named the John Underwood Drain. In 1980, the drain was again reconstructed and placed on a maintenance program. The drain consists of 10,782-lf of open drain. The open drain replaced approximately 10,746-lf of the Bell and Humbles tile drain." The report also requests work to be completed on the John Underwood Drain in the value of \$1,050.00. A report to the Board dated May 28, 2002 requested that this work be removed from the Thorpe Creek reconstruction project. The petition to reconstruct the Thorpe Creek regulated drain was denied. (See Hamilton County Drainage Board Minutes Book 6, Pages 343-356).

The John Underwood Drain was made an arm to the Thorpe Creek Drainage Area at hearing during the meeting of the Drainage Board on January 22, 2007. (See Hamilton County Drainage Board Minutes Book 10, Pages 35-36).

The following drain complaints and work orders are on file at the Hamilton County Surveyor's Office:

| Drainage Complaints | | |
|---|----------------------|-----------------------|
| <u>Issue</u> | <u>Date Received</u> | <u>Date completed</u> |
| Water Backing Up | 6/2/2006 | 10/5/2006 |
| Holes in Tile | 3/17/2006 | 10/16/2006 |
| Hole | 2/17/2009 | 2/18/2009 |
| Blockage of Flow | 3/11/2014 | 3/11/2014 |
| Blowhole/Broken Outlet Pipe/Washed Area | 3/27/2007 | 9/11/2007 |
| Outlet Eroded | 4/15/2008 | 4/16/2008 |
| Blowhole | 6/4/2010 | 10/12/2010 |
| Hole at Culvert | 6/2/2011 | 6/3/2011 |
| Holes | 5/8/2009 | 5/13/2009 |
| Outlet Washed Out | 3/12/2015 | 5/15/2015 |
| Outlet Washed Out | 4/28/2014 | 5/27/2014 |

There are no open drainage complaints on file.

| Work Orders | | | |
|-------------------|-------------|----------------|-------------|
| Type | Date Issued | Date Completed | Value |
| Holes in Tile | 3/17/2006 | 8/7/2007 | \$ 1,062.00 |
| Outlet Washed Out | 1/2/2015 | 2/25/2016 | \$ 1,425.65 |
| Outlet Washed Out | 5/15/2015 | 2/25/2016 | \$ 1,253.17 |

| | | | |
|------------------|-----------|-----------|-------------|
| Outlet Eroded | 1/5/2009 | 6/9/2009 | \$ 5,921.15 |
| Blockage of Flow | 3/11/2014 | 8/5/2015 | \$ 938.00 |
| Hole | 2/18/2009 | 4/28/2009 | \$ 334.50 |

All the work orders have been completed to date.

EXISTING CONDITIONS

The open ditch portion of the drain has been visually inspected several times since approximately 2014. These inspections identified that the drain is overgrown with vegetation and that sediment has accumulated in the channel. This sediment compromises both the hydraulic capacity of the channel and the road crossings. The condition of the drain also limits (or prohibits) the capacity of private field tiles and the ability of these tiles to effectively drain the root zone of the adjacent agricultural lands. An adequately drained root zone relieves stress on plants and also provides aeration to the root system, which potentially increases production/yield of the acreage.

The drain is in close proximity to existing roadways at two locations. To increase safety to the motoring public, the drain should be moved away from the roadway at these two locations as part of the reconstruction project. The two areas are described in the "Reconstruction Project" section of this report.

A wetland delineation was performed by Aqua Terra for Banning Engineering and a report dated September 2015 was provided to the HCSO. The delineation identified two wetland areas within the vicinity of the project. The wetlands are indicated on the Construction Plans and are not impacted by the project.

A report by Banning Engineering dated November 2016 was provided to the HCSO. The report is on file with the HCSO. The report recommends that the open drain be dredged. The NOAA Atlas 14 hydraulic analysis performed by Banning determined that (1) the 136th Street Crossing will only pass runoff from the 5-year storm before overtopping; (2) that the Atlantic Road crossing will only pass runoff from the 10-year storm before overtopping; (3) that the open ditch generally passes runoff from between the 10-year and 25-year storm upstream of Interstate 69; (4) that the open ditch generally passes runoff from the 5-year storm between Interstate 69 and 136th Street; and (5) that the open ditch generally passes runoff from the 50-year storm downstream of 136th Street.

RECONSTRUCTION PROJECT

Banning Engineering has completed plans for the reconstruction of the John Underwood Drain. The project proposes to dredge the entire length of the open ditch from Station 0+00 to Station 107+82 of the 1967 description.

The length of the open ditch as surveyed by Banning Engineering and represented in the Reconstruction Plans is 10,553.25-feet in length. The field survey is used for the basis of developing the construction plans and may not have identified the true length of the drain. The difference of 228.75-feet between the field survey and the length of the drain on record represents approximately 2% of the 10,782-foot length of drain and the difference is considered negligible.

For the purposes of this report, the Reconstruction Plans are the basis for the referenced stationing.

The project will return the ditch to its original depth and configuration, restore the capacity of the ditch and open the drains from the adjacent agricultural fields. Reconstruction of the open ditch will consist of removing the accumulated sediment; the depths of which vary from several inches to almost 2-feet with the average being approximately 1-foot. With this work, the bottom of the ditch will be widened to consistent widths varying from 5-7 feet and 2:1 side slopes. Station 0+00 to Station 41+00 shall be 7-foot bottom width; Station 41+00 to 77+00 shall be 6-foot bottom width; and Station 77+00 to 105+33 shall be 5-foot bottom width. A consistent centerline grade (generally 0.14% - 0.15% slope with a segment where the grade will be 0.075%) will be established as work progresses. The excavated soil and debris will be side cast on the operational side, spread and leveled outside the limits of the proposed top of bank but within the limits of the regulated drain easement. All disturbed areas will be stabilized with seeding.

The project will include tree removal and clearing of debris. Clearing of trees will take place to facilitate an operational side for equipment access for the project and for future maintenance. The operational area will be planted with a 20-foot wide grass filter strip. Looking upstream, the operational side is proposed as follows:

1. Left side (North and West sides): Station 0+00 to approximately Station 40+40 [At the south right-of-way line of Interstate 69]
2. Each Side: Approximately Station 43+25 [At the north right-of-way line of Interstate 69] to the end of the open drain at Station 105+33.25.

Looking upstream, clearing is needed as follows:

1. Left side (West side) between Stations 81+00 and 81+75. Along this segment of the drain, all vegetation within the limits of the regulated drain easement on each side of the drain will be cleared in accordance with HCSO Detail OD-2.
2. Left Side (West side) between Stations 31+25 and 40+40. Along this segment of the drain, clearing will be Conservation Clearing in accordance with HCSO Detail OD-3 between the tops of bank and a distance of 30-feet from the top of bank on the operational side.
3. Left Side (West side) of the drain between Stations 0+00 and 7+25 and between Stations 12+75 and 13+00. Along this segment, there may be limited clearing on the operational side of the drain. Such clearing along this segment of the drain shall be Conservation Clearing in accordance with HCSO Detail OD-3 between the tops of bank and a distance of 30-feet from the top of bank on the operational side

Rip-Rap armoring will be placed at five locations along the drain. Two of the locations are where concentrated surface flows enter the drain from adjacent fields. Three are at bends in the drain. Rip-rap will also be placed at the outlet of the culverts that are being replaced.

Three existing culverts are being replaced. The existing dual 58"x75" CMP pipes at 136th Street are being replaced with a single 91"x142" CMP Pipe Arch. The existing 48" CMP culvert at Atlantic Road is being replaced with a 60" CMP. These culverts are undersized and need to be increased in size to reduce potential for roadway overtopping and to match the new grade of the bottom of the drain. The culvert under Interstate 69 will not be affected by this project.

Approximately 83-LF of existing regulated drain between the end of the open ditch and under 146th Street on the east side of Atlantic Road will be replaced with new 24-inch RCP and a breather installed at the end of the 24-inch RCP on the north side of 146th Street.

The work between Station 43+00 and Station 52+00 shall be limited to clearing and filter strip installation only. There shall be no dredging or ditch work between Station 43+00 and 52+00.

Between Station 52+00 and 55+00 the work shall include installation of filter strip and widening of the channel bottom to 6-feet with associated bank work. The grade of the channel bottom between these stations shall not be altered by this project.

The construction plans include the installation of a filter strip on the western side of the drain between Station 43+00 and Station 60+25. The existing riparian buffer between these stations will remain in place at this time. In the event that this area is cleared in the future by the HCSO or the property owner the filter strip will be installed at that time.

Two segments of the regulated drain will be relocated to improve the clear zone available from the adjacent roadways. The first segment is on the north side of 136th Street between Stations 15+98.22 and 25+93.48. The current length of this segment of the drain is 995.26-feet which will be reduced 8.24-feet to 987.02-feet by the relocation. The second segment is on the south side of 146th Street between Stations 94+89.03 and 105+33.25. The current length of this segment of the drain is 1,044.22-feet which will be reduced 12.86-feet to 1,031.36-feet by the relocation. Soil from the excavation of the new channel will be placed within the limits of the former channel.

With the exception of the two locations noted above, the drain is being reconstructed in place.

The hydraulic analysis by Banning outlined in the November 2016 report indicates that the proposed project will generally carry the runoff from the 10-year storm.

PERMITS

Per a letter dated June 25, 2015 from the IDNR, an IDNR Construction in the Floodway permit is not required as the Drain is less than 10 miles in length.

Per a letter dated June 25, 2015 from the IDNR, an IDNR Ditch Reconstruction permit is not required as the work is not within one half (1/2) mile or a freshwater lake 10-acres or more in size.

Per a letter dated May 16, 2017 from the IDNR, there are no endangered, threatened or rare (ETR) species, high quality natural communities or natural areas within ½-mile of the project area.

A Rule 5 permit is not required as the project is exempt based on the work being maintenance activity.

Per a letter dated August 21, 2017 from the U.S. Army Corps of Engineers, the project is not subject to regulation under Section 404 of the Clean Water Act and is authorized under the Regional General Permit issued December 15, 2014.

An IDEM Individual Section 401 Water Quality Certification was issued in a letter dated August 15, 2017.

EASEMENTS

The reconstruction project of this drain will not require acquisition of new easement. All work will occur within the existing 75 foot easement from the top of bank per IC 36-9-27-33.

CHANGES TO THE DRAIN

The John Underwood Drain currently consists of 10,782-lf of open drain and the Bell and Humbles Arm consisting of 2,900-lf of 10-inch tile and 2,867-lf of 12-inch tile and is a total length of 16,549-lf.

Due to the two relocations, the length of the drain will be reduced by 21.10-feet.

83-lf of the existing 12-inch tile on the Bell and Humbles Arm will be replaced with 83-lf of 24-inch RCP.

The final length of the drain will be 16,528-feet consisting of 10,761-feet of open drain; 83-feet of 24-inch RCP; 2,784-feet of 12-inch tile; and 2,900-feet of 10-inch tile.

QUANTITIES & COST ESTIMATE

Banning Engineering, PC was hired by approval of a Professional Services Agreement in the amount of \$39,900.00 for design, construction staking and as-built drawings on November 24, 2014 per Hamilton County Drainage Board Book 16 Page 48-49. Banning Engineering, PC was also hired to provide a wetland delineation in the amount of \$4,500.00 on August 24, 2015 per Hamilton County Drainage Board Book 16 Page 288-289. Banning was also hired to provide design services for the two ditch relocations in the amount of \$12,900.00 on January 25, 2016 per Hamilton County Drainage Board Book 16 Page 426-427. The total for professional services is \$57,300.00.

The construction cost estimate for the project is outlined in detail as follows:

Drain Work

| Description | Quantity | Unit | Unit Price | Amount |
|----------------------------|----------|------|--------------|--------------|
| Clearing | 1 | LS | \$ 28,000.00 | \$ 28,000.00 |
| Seeding Channel Banks | 7 | AC | \$ 1,485.00 | \$ 10,395.00 |
| Seeding Filter Strips | 8.5 | AC | \$ 2,400.00 | \$ 20,400.00 |
| Excavate 5' Bottom Channel | 1757 | LF | \$ 6.50 | \$ 11,420.50 |
| Excavate 6' Bottom Channel | 3600 | LF | \$ 7.50 | \$ 27,000.00 |
| Excavate 7' Bottom Channel | 2984 | LF | \$ 8.50 | \$ 25,364.00 |
| 4" Drain Outlet | 5 | EA | \$ 375.00 | \$ 1,875.00 |
| 6" Drain Outlet | 8 | EA | \$ 425.00 | \$ 3,400.00 |
| 8" Drain Outlet | 7 | EA | \$ 560.00 | \$ 3,920.00 |

| | | | | |
|--|-------|-----|-------------|--------------|
| 10" Drain Outlet | 8 | EA | \$ 610.00 | \$ 4,880.00 |
| 12" Drain Outlet | 7 | EA | \$ 660.00 | \$ 4,620.00 |
| 15" Drain Outlet | 2 | EA | \$ 745.00 | \$ 1,490.00 |
| 18" Drain Outlet | 3 | EA | \$ 800.00 | \$ 2,400.00 |
| 21" Drain Outlet | 1 | EA | \$ 955.00 | \$ 955.00 |
| 24" Drain Outlet | 1 | EA | \$ 1,100.00 | \$ 1,100.00 |
| 30" Drain Outlet | 1 | EA | \$ 1,325.00 | \$ 1,325.00 |
| Tile Hole Repair and New Outlet | 1 | LS | \$ 1,075.00 | \$ 1,075.00 |
| Collapse and Plug 20' Existing Tile | 1 | LS | \$ 1,600.00 | \$ 1,600.00 |
| Channel Relocation A (Includes ECB) along 136 th Street | 987 | LF | \$ 37.25 | \$ 36,765.75 |
| Channel Relocation B (Includes ECB) along 146 th Street | 1,031 | LF | \$ 37.25 | \$ 38,404.75 |
| Undistributed Rip-Rap | 1,812 | LF | \$ 47.75 | \$ 86,523.00 |
| Rip-Rap (As Shown on Plans) | 148 | TON | \$ 80.00 | \$ 11,840.00 |
| Subtotal | | | | \$324,753.00 |
| 15% Contingency | | | | \$ 48,712.95 |
| Total | | | | \$373,465.95 |

Highway Work

| Hamilton County Highway [136 th Street] | | | | |
|--|----------|------|------------|---------------|
| Description | Quantity | Unit | Unit Price | Amount |
| 91"H x 142" W CMP Pipe Arch | 136 | LF | \$ 650.00 | \$ 88,400.00 |
| Undistributed Riprap | 295 | LF | \$ 47.75 | \$ 14,086.25 |
| Pavement Repair | 1 | EA | \$ 8000.00 | \$ 8,000.00 |
| Subtotal | | | | \$ 110,486.25 |
| 15% Contingency | | | | \$ 16,572.94 |
| Total | | | | \$ 127,059.19 |
| Noblesville [146 th Street and Atlantic Road] | | | | |
| Description | Quantity | Unit | Unit Price | Amount |
| 60" CMP under Atlantic Road | 45 | LF | \$ 215.00 | \$ 9,675.00 |
| Undistributed Riprap | 493 | LF | \$ 47.75 | \$ 23,540.75 |
| Pavement Repair | 1 | EA | \$ 8000.00 | \$ 8,000.00 |
| Subtotal | | | | \$ 41,215.75 |
| 15% Contingency | | | | \$ 6,182.36 |
| Total | | | | \$ 47,398.11 |
| Town of Lapel [W 700 S] | | | | |
| Description | Quantity | Unit | Unit Price | Amount |
| 24" RCP | 83 | LF | \$ 80.00 | \$ 6,640.00 |
| CMP Breather | 1 | EA | \$ 1000.00 | \$ 1,000.00 |

| | | | | |
|-----------------|---|----|-----------------|--------------|
| Pavement Repair | 1 | EA | \$ 8000.00 | \$ 8,000.00 |
| | | | Subtotal | \$ 15,640.00 |
| | | | 15% Contingency | \$ 2,346.00 |
| | | | Total | \$ 17,986.00 |

The total construction cost for this project is estimated to be \$565,909.25.

The total cost of this project is estimated to be \$623,209.25.

PROJECT FUNDING

The cost of the new culvert under 136th Street shall be paid by the Hamilton County Highway Department per IC 36-9-27-71. The lump sum cost to be charged to the Hamilton County Highway Department will be \$127,059.19.

The cost for the new culvert under Atlantic Road shall be paid by the City of Noblesville per IC 36-9-27-71. The lump sum cost to be charged to the City of Noblesville will be \$47,398.11.

The cost for the new pipe under 146th Street (W 700 S) and the new breather within Madison County shall be paid by the Town of Lapel per IC 36-9-27-71. The lump sum cost to be charged to the Town of Lapel will be \$17,986.00.

As stated above in this report there are two sections of ditch that is to be relocated out of the right of way. One along 136th Street and one along 146th Street. Upon development of these properties the developer would be responsible for the relocation. I propose the owners of the property affected be billed for this work as a deferred assessment and that the entire payment be made when the first section of any development of that property is recorded. Those properties and costs are as follows:

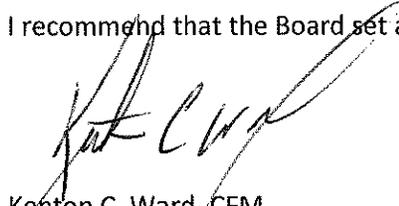
| | | |
|-------------------------------------|------------------------|-------------|
| 15852 136 th Street LLC | 13-12-20-00-00-012.000 | \$42,280.61 |
| Sarah S. Trustee of Sarah Waltigney | 13-12-20-00-00-005.000 | \$44,165.46 |

The remaining \$373,465.95 will be paid from the Thorpe Creek Watershed maintenance fund. The maintenance fund balance for the Thorpe Creek Watershed is currently \$491,651.88. The Thorpe Creek Watershed maintenance fund currently receives \$99,702.54 annually from maintenance assessments. The Martha Ford Drain reconstruction project is a concurrent project that is proposed to be funded from the Thorpe Creek Watershed Maintenance Fund. The hearing for the Martha Ford Drain reconstruction was held during the January 22nd meeting of the Drainage Board at which time the project was tabled. The cost of the Martha Ford project is estimated to be \$247,490.75. If the Martha Ford project is approved at a later date in 2018 or beyond, the funding for the project is planned to be taken from the Thorpe Creek Watershed maintenance fund. Also, the balance in the Thorpe Creek Watershed maintenance fund will be \$244,161.13. This balance is less than the balance needed to fund the balance of the John Underwood Reconstruction project and will be taken from the General Drain Improvement Fund. However, the Thorpe Creek Watershed maintenance fund will receive adequate funds from the maintenance assessments in 2018 and 2019 to fully fund the project.

I have reviewed the benefitted drainage shed and upon considering each parcel individually, I believe each parcel within the drainage shed will have equal benefits as provided by the drain.

No additional easements are required for this project. I believe that no damages will result to the landowners by the reconstruction of this drain. Damages are set a zero (0).

I recommend that the Board set a hearing for this proposal on March 26, 2018.

A handwritten signature in black ink, appearing to read "Kenton C. Ward", written over the printed name below.

Kenton C. Ward, CFM
Hamilton County Surveyor

KCW/pll

John Underwood Drain Reconstruction

Thorpe Creek #223

Open ditch reconstruction from Sta. 0 to 107+82. Operational area to be planted with 20' wide grass filter strip. Two segments to be relocated to improve the clear zone available from the adjacent roadways.

The relocations will reduce the footage of the Underwood Drain by 8.24' + 12.86' for a total reduction of 21.10'.

*Damages are set at zero.

*No change in current maintenance assessment. **Reconstruction cost** at roads to be paid by Hamilton County Highway, Town of Lapel & City of Noblesville. The remainder of the project to be paid from the Thorpe Creek maintenance fund.

There are 2 deferred assessments and the entire assessment is due when the 1st section of any development on the property is recorded.

**The cost estimate for the relocation along 136th is \$36,765.75 with a 15% contingency added the total deferred assessment is \$42,280.61.

***The cost estimate for the relocation along 146th is \$38,404.75 with a 15% contingency added the total deferred assessment is \$44,165.46.

Hearing: 03/26/18

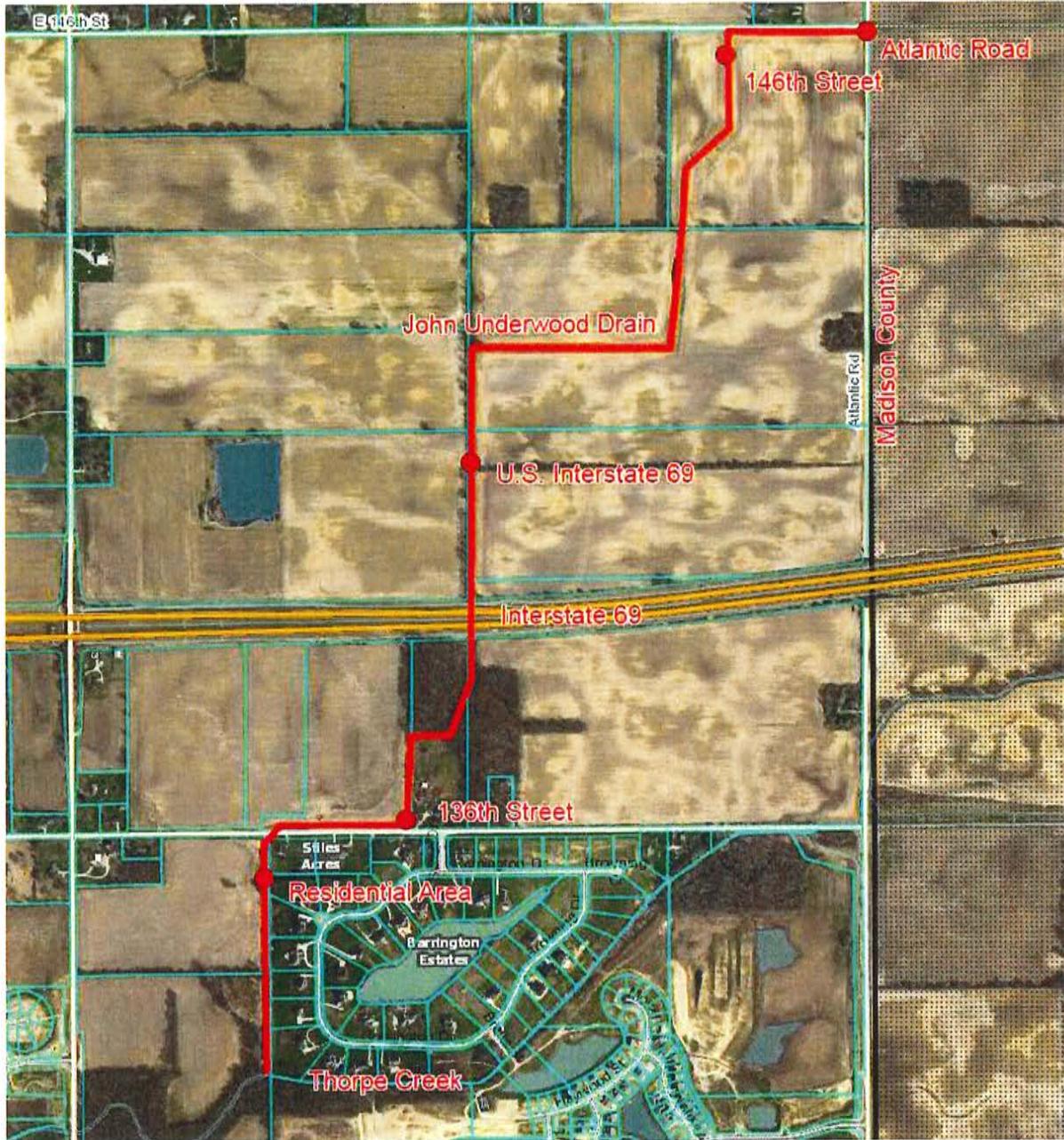
Construction estimate: \$373,465.95
 Banning Engineering: \$ 57,300.00
 Sub-Total: \$430,765.95
 Hamilton Co. portion: \$127,059.19
 City of Noblesville portion: \$47,398.11
 Madison Co. portion: \$17,986.00
 Total Project Cost: \$623,209.25

| Parcel | Owner | Desc | Ben | Mnt. Asmt. | Reconst. Asmt. | % of Total | Deferred Asmt. |
|--------------------------|--|--|--------|--------------|----------------|----------------|----------------|
| 13-12-20-00-00-012.000 | 15852 136TH ST LLC | S20 T18 R6 22.60AC | * | * | * | * | \$42,280.61** |
| 13-12-20-00-00-011.000 | Allen, Connie S | S20 T18 R6 11.03AC | * | * | * | * | * |
| 13-12-29-00-04-007.000 | Artz, Sean & Beth | S29 T18 R6 Barrington Estates 1st Lot 7 | 1.30AC | * | * | * | * |
| 13-12-20-00-00-016.000 | BDN LLC | S20 T18 R6 64.85AC | * | * | * | * | * |
| 13-12-20-00-00-018.000 | BDN LLC | S20 T18 R6 39.00AC | * | * | * | * | * |
| 13-12-29-00-04-006.000 | Boso, Fred & Ellen | S29 T18 R6 Barrington Estates 1st Lot 6 | 1.50AC | * | * | * | * |
| 99-99-99-99-99-999.008 | City Of Noblesville Clerk-Treasurer's Office | S20 T18 R6 Atlantic Rd at 146th St. | * | \$47,398.11 | 7.61% | * | * |
| 13-12-29-00-04-008.000 | Crowder, Todd & Melissa | S29 T18 R6 Barrington Estates 1st Lot 8 | 1.34AC | * | * | * | * |
| 13-12-29-00-04-004.000 | Cummings, Kurt & Jody | S29 T18 R6 Barrington Estates 1st Lot 4 | 1.58AC | * | * | * | * |
| 13-12-29-00-02-001.000 | Gainey, Dan | S29 T18 R6 Stiles Acres Lot 1 | 1.94AC | * | * | * | * |
| 13-12-29-00-02-002.000 | Gainey, Dan | S29 T18 R6 Stiles Acres Lot 2 | 2.34AC | * | * | * | * |
| 13-12-29-00-04-005.000 | Hahn, Matthew W & Denise A | S29 T18 R6 Barrington Estates 1st Lot 5 | 1.51AC | * | * | * | * |
| 99-99-99-99-99-999.001 | Hamilton County Highway Department | S20 T18 R6 136th St. | * | \$127,059.19 | 20.39% | * | * |
| 99-99-99-99-99-999.002 | Indiana Department Of Transportation | S20 T18 R6 I-69 | * | * | * | * | * |
| 13-12-29-00-04-009.000 | Irick, Edward W & Sheila L | S29 T18 R6 Barrington Estates 1st Lot 9 | 2.56AC | * | * | * | * |
| Courtesy Notice | Madison County Board of Commissioners | S21 T18 R6 W 700 S, John Underwood Drain | * | * | * | * | * |
| 13-12-29-00-00-019.000 | PAT Enterprises LLC | S29 T18 R6 40.45AC | * | * | * | * | * |
| 13-12-29-00-00-003.000 | Rangeview Land Partners LLC | S29 T18 R6 23.71AC | * | * | * | * | * |
| 48-15-21-200-005.000-014 | Sylvester, Steven | S21 T18 R6 NW NW 40 Ac | * | * | * | * | * |
| W 700 S | Town of Lapel | S21 T18 R6 W 700 S, John Underwood Drain | * | \$17,986.00 | 2.89% | * | * |
| 13-12-20-00-00-006.000 | Underwood Family Limited Partnership | S20 T18 R6 80.44AC | * | * | * | * | * |
| 13-12-20-00-00-007.000 | Underwood Family Limited Partnership | S20 T18 R6 60.23AC | * | * | * | * | * |
| 13-12-20-00-00-008.000 | Underwood Family LP | S20 T18 R6 11.09AC | * | * | * | * | * |
| 13-12-20-00-00-008.002 | Underwood Family LP | S20 T18 R6 71.73AC | * | * | * | * | * |
| 13-12-20-00-00-005.000 | Waltigney, Sarah S Trustee of Sarah S Waltigney Fa | S20 T18 R6 40.47AC | * | * | * | \$44,165.46*** | * |
| 13-12-29-00-04-001.000 | Williams, James H & Karen E | S29 T18 R6 Barrington Estates 1st Lot 1 | 1.51AC | * | * | * | * |

Total Assessment: \$192,443.30 30.88%
 Remainder of cost to be taken from Thorpe Crk maintenance fund.

Parcels: 25

APPENDIX A – Flow Rate Locations



9-7-17

John Underwood Drain - Madison County MCCOG GIS WebMap

