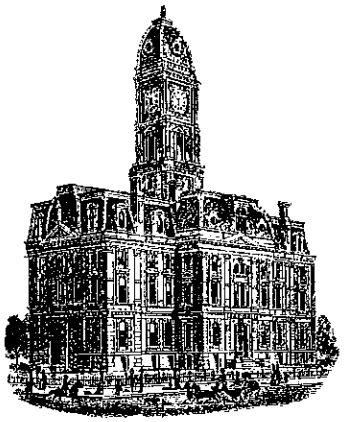

SURVEYOR'S OFFICE

Hamilton County

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

August 20, 2012

To: Hamilton County Drainage Board

Re: Miller Carson Drain Reconstruction – State Rd 19 Crossing @ Tishner Property

On May 14, 2012 the Hamilton County Drainage Board held a public meeting on the Miller-Carson Regulated Drain Reconstruction located within the Town of Atlanta (See Hamilton County Drainage Board Minutes Book 14, Pages 152 to 160).

The Hamilton County Surveyor's Office received one written objection to the project from Larry and Laura Tishner, 8301 E. 286th Street, Atlanta, Indiana, 46031, Parcel No. 03-02-12-00-00-004.001 dated May 7, 2012. Mr. Tishner appeared before the Hamilton County Drainage Board to object to the project. He stated that the increased pipe size (27" to 60" RCP) that outlets upstream of his home into the Miller-Carson open drain will probably flood his house. Mr. Tishner asked that we look closely at this project because the water backs up now waiting to go thru an existing culvert under S.R. 19. Mr. Tishner said he wasn't against the project but felt the S.R.19 box culvert should be bigger to allow more water to pass under S.R. 19.

The Hamilton County Drainage Board approved the project asking the County Surveyor to proceed with a flood analysis on both the existing condition and the proposed upsizing to the Miller-Carson Regulated Drain.

On June 11th, 2012, the Hamilton County Drainage Board approved a contract with Christopher Burke Engineering to prepare a flood study on the Tishner property (see Hamilton County Drainage Board Minutes Book 14, page 179). The County Surveyor's staff performed the field survey for Burke.

Mr. Siavash Beik presented his report to the Hamilton County Drainage Board on July 9, 2012. Mr. Tishner, Mr. Abe Evans and Walter Evans and Ron Buel from the Indiana Department of Transportation (INDOT) were present (see Hamilton County Drainage Board Minutes Book 14, pages 179).

Hydraulics

Existing Q = 24 cfs in a 100 year storm event. Proposed Q-60" flowing full = 119 cfs in a 100 year storm event.

The impact of the upsizing will raise the water elevation about three (3) feet. See attached Drainage analysis dated July 6, 2012 by Christopher B. Burke Engineering. Burke recommends two (2) options to increase the culvert at S.R. 19, downstream of the Tishner property.

Option 1 - Install an additional 66 inch diameter RCP next to the existing box culvert. The engineers estimate is given below and the total cost is $234,500.00.

Preliminary Opinion of Probable Cost

Install Additional 66-Inch Diameter RCP Culvert

Line	Description	Estimated Quantities	Units	Unit Price	Esimated Cost (Rounded
1	**Professional Services**				
2	Engineering Design and Project Management	1	LS	$ 25,000	$ 25,000
3	Topo Survey	1	LS	$ 4,000	$ 4,000
4	Geotechnical Engineering Investigation	1	LS	$ 4,000	$ 4,000
5		Estimated Professional Services Costs			$ 33,000
6	**66-Inch Culvert Installation**				
7	Selective Demolition and Clearing	1	LS	$ 5,000	$ 5,000
8	Dewatering	1	LS	$ 3,000	$ 3,000
9	Prepare Jacking Pits	1	LS	$ 10,000	$ 10,000
10	Jack 66-Inch Diameter Class V Concrete Pipe	70	LF	$ 1,000	$ 70,000
11	Reinforced Concrete Headwalls	2	EA	$ 15,000	$ 30,000
12	Channel Excavation and Grading for culvert	1	LS	$ 5,000	$ 5,000
13	Site Restoration	1	LS	$ 5,000	$ 5,000
14	Construction Surveying	1	LS	$ 2,000	$ 2,000
15	Erosion and Sediment Control	1	LS	$ 12,000	$ 12,000
16	Maintenance of Traffic	1	LS	$ 3,000	$ 3,000
17	Mobilization/Demobilization & Administration	1	CY	$ 10,000	$ 10,000
18		Estimated 66-Inch Culvert Installation Cost			$155,000
19	**Construction Contingencies**				
20	Construction Contingencies (30%)	1	LS	$ 46,500	$ 46,500
21		Estimated Construction Contingencies			$ 46,500
22					
23		**Estimated Construction Cost**			$203,500
24					
25		**Estimated Total Cost**			**$234,500**

Notes and Assumptions

Gen. This estimate assumes that a steel casting pipe is NOT required.

Gen. Permitting from IDNR and IDEM is not anticipated due to the watershed size and area of disturbance. An site investigation is recommended to determine potential permitting considerations.

Gen. All costs are estimates based on the engineer's knowledge of common construction methods and Materials. Christopher B. Burke Engineering, LLC does not guarantee that the actual bid price will not vary form the costs used with this estimate.

Gen. All costs are in 2012 dollars.

Gen. Estimated costs have been rounded.

Gen. This estimate does not include unforeseen cost increase that may result from shortages in fuel and Materials as a result of natural or man- made disasters.

Gen. This estimate does not include land acquisition, easements, or utility relocation/coordination.

Option 2 – Install an additional 5 x 5 reinforced concrete box next to the existing box culvert.

The Engineers estimate is given below and the total cost is $233,000.00.

Preliminary Opinion of Probable Cost

Install Additional 5-ft by 5 ft RCP Box Culvert

Line	Description	Estimated Quantities	Units	Unit Price	Esimated Cost (Rounded
1	**Professional Services**				
2	Engineering Design and Project Management	1	LS	$ 30,000	$ 30,000
3	Topo Survey	1	LS	$ 5,000	$ 5,000
4	Geotechnical Engineering Investigation	1	LS	$ 4,000	$ 4,000
5		Estimated Professional Services Costs			$ 39,000
6	**5-ft x 5-ft Culvert Installation**				
7	Clearing & Grubbing	1	LS	$ 5,000	$ 5,000
8	Remove and Reinstall Guardrail	45	LF	$ 30	$ 1,400
9	Asphalt Pavement Removal	100	SY	$ 12	$ 1,200
10	Remove and Reinstall Riprap	1	LS	$ 3,000	$ 3,000
11	Excavation for Culvert installation	500	CY	$ 10	$ 5,000
12	Dewatering	1	LS	$ 5,000	$ 5,000
13	5ft x 5ft Reinforced Concrete Box Culvert	70	LF	$ 400	$ 28,000
14	Reinforced Concrete Headwalls	2	EA	$ 15,000	$ 30,000
15	Grading for New Culvert	1	LS	$ 3,000	$ 3,000
16	Stone Backfill and Bedding material – Place & Compact	250	CY	$ 25	$ 6,300
17	Regular Backfill – Place & Compact	150	CY	$ 10	$ 1,500
18	Haul Spoil Material from Site	350	CY	$ 5	$ 1,800
19	Asphalt Pavement	1	LS	$ 4,000	$ 4,000
20	Site Restoration	1	LS	$ 5,000	$ 5,000
21	Construction Surveying	1	LS	$ 4,000	$ 4,000
22	Erosion and Sediment Control	1	LS	$15,000	$ 15,000
23	Maintenance of Traffic	1	LS	$20,000	$ 20,000
24	Mobilization/Demobilzation & Administration	1	CY	$10,000	$ 10,000
25		Estimated 5-ft x 5-ft Culvert Installation Cost			$149,200
26	**Construction Contingencies**				
27	Construction Contingencies (30%)	1	LS	$44,800	$ 44,800
28		Estimated Construction Contingencies			$ 44,800
29					
30				**Estimated Construction Cost**	$194,000
31				**Estimated Total Cost**	**$ 233,000**
32					

Notes and Assumptions

Gen. This estimate assumes that a steel casting pipe is NOT required.

Gen. Permitting from IDNR and IDEM is not anticipated due to the watershed size and area of disturbance. An site investigation is recommended to determine potential permitting considerations.

Gen. All costs are estimates based on the engineer's knowledge of common construction methods and Materials. Christopher B. Burke Engineering, LLC does not guarantee that the actual bid price will not vary form the costs used with this estimate.

Gen. All costs are in 2012 dollars.
Gen. Estimated costs have been rounded.
Gen. This estimate does not include unforeseen cost increase that may result from shortages in fuel and Materials as a result of natural or man-made disasters.
Gen. This estimate does not include land acquisition, easements, or utility relocation/coordination.

Mr. Evans spoke on behalf of INDOT. He asked to have their hydrologist Crystal Weaver look at the project from a hydraulics standpoint. Mr. Evans said INDOT will have to determine if this project is funded out of their maintenance budget or out of their capitol improvements budget.

On August 13, 2012 Mr. Tishner and Mr. Watkins addressed the Drainage Board. They had concerns that the new 60 inch RCP was being installed and INDOT had not addressed their flooding concerns and the existing crossing at S.R. 19 was undersized to take the flow. At that time the Board set the hearing date for a new structure under S.R.19 for September 26, 2012.

The Hamilton County Surveyor's Office recommends going forward with the additional 66" steel directional bore for a total cost of $234,500.00. This work will begin at the west right of way line of S.R. 19, Sta 48+00 of the Miller- Carson Drain, and extend across the S.R.19 right of way to the east line of said right of way. All of the work will be performed within INDOT right of way and existing regulated drainage easement for the Miller- Carson Drain.

In addition to the new structure under S.R. 19 will be bank armoring and ditch clean out of obstructions for a distance of six hundred seven (607) feet downstream from the S.R. 19 right of way. This work will be done on parcel 03-02-12-00-00-005.00 owned by Waltz Ena Farms LLC. This is the same length of regulated open ditch cleared and cleaned with the 1981 reconstruction of the Miller-Carson Drain.

Although mapped as regulated drain at the time, during the 2005 mapping project the map was changed to show the drain stopping at the west right of way of S.R. 19. I believe that even if the map was incorrect prior 1981, the fact the Board at the time included this portion as part of the reconstruction in 1981 that this section is indeed part of the regulated drain.

The cost for the additional 66" steel directional bore under S.R. 19 will be a special assessment of $234,500.00 to the Indiana Department of Transportation per IC 36-9-27-71.

No additional easements are required for the project. I believe no damages will result to the landowners. Damages are set at zero (0).

A hearing for this item has been set by the Board for September 26, 2012.

Sincerely,

Christie Kallio

Christie Kallio, P.E.
Hamilton County Surveyor's Office

CK/pll

Miller-Carson Drain Reconstruction

SR19 Crossing at Tishner Property
Hearing: 09/26/12
*No change in current maintenance assessment.

Parcel	Owner	Description	Benefit	MntAsmt	Reconst	Percent
03-02-12-00-00-004.001	Tishner, Larry J & Laura L	S12 T20 R4 7.00 Ac	n/a	*	*	n/a
03-02-12-00-00-005.000	Waltz Ena Farms LLC	S12 T20 R4 82.00 Ac	n/a	*	*	n/a
99-99-99-99-99-999.002	Indiana Department Of Transportation	S12T20R4 SR19 structure between Tishner & Waltz	n/a	*	$234,500.00	100.00%

work.rdl 8/21/2012 3:43:52 PM