



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

To: Hamilton County Drainage Board

Date: October 10, 2006

Re: Brandywine Subdivision Arm of Crooked Creek Drain

The following report is a revision of my report dated June 16, 2006. At the July 24, 2006 meeting of the Hamilton County Drainage Board, the board conducted a hearing for the construction of the proposed Brandywine Subdivision Arm of Crooked Creek Drain. (See Drainage Board Minutes Book 9, pages 325 to 330) At that time, the Drainage Board tabled the proposal in order for a new report to be generated which would modify the reconstruction assessment and reduce the scope of work for this arm.

Attached are plans, specifications, drain map, drainage-shed map, and schedule of assessments for the Reconstruction of the Brandywine Subdivision Regulated Drain located in Clay Township. This drain was petitioned by Marilyn Anderson & Randy Krupshaw on December 20, 2003 and forwarded by the Hamilton County Drainage Board at its January 12, 2004 to the Hamilton County Surveyor's Office for reconstruction.

This project will reconstruct the downstream portions of the pond outlet and regulate existing drainage features in the subdivision. The downstream portions will cover a distance of 1,539 feet that eventually outlets into the Crooked Creek Drain. Also, sub-surface drains are proposed to be regulated within the platted subdivision. The drainage area covers portions of Sections 6, Township 17 North, Range 3 East with a total acreage of approximately 15.6 acres.

Construction Project:

- 1) Clearing trees and brush along the existing drain.
- 2) Dredging the channel of the existing drain at a depth of 1.16 feet.
- 3) Placing 2- 48" HDPE pipe and 1 - 24" RCP over six Eastern Panhandle high pressure gas lines within the drain.

- 4) Replacing the existing 24" CMP a new 24" RCP for the subdivision's pond outlet.

Below is the hydraulic data for the proposed project:

Watershed	= 83.0 acres
Brandywine Subdivision. Q ₂	= 5 cfs
Brandywine Subdivision Q ₁₀	= 50 cfs
Brandywine Subdivision Q ₂₅	= 65 cfs
Brandywine Subdivision. Q ₁₀₀	= 85 cfs
106 th Street Pipe Capacity(48" CMP)	= 87.3 cfs

A 48" dia. CMP will convey the flow of the 100-year storm.

The construction of this drain will require acquisition of new easement from a triangular portion of the Evelyn N. Dunwoody property, Tract #17-13-06-00-00-027.000 west of the existing drain. The new easement will reflect a 30 foot easement from the top of bank of the reconstructed ditch. No construction is to be performed in the new easement. The easement is necessary in order to meet the requirements of IC 36-9-27-33. The easement is described as follows:

Brandywine drainage easement across Evelyn N. Dunwoody, (DR. Bk.353, Pg.7117).

A part of the West half of the Southeast Quarter of Section 6, Township 17 North, Range 3 East, in Clay Township, Hamilton County, Indiana and being more particularly described as follows:

Commencing at the Southeast corner of the West half of the Southwest Quarter of Section 6, Township 17 North, Range 3 East, said point also being the Southeast corner of the lands described in Deed Record Book 353, Page 717; thence North 0 degrees 17 minutes 36 seconds East, along the East line of the said half quarter, also being the East line of the said lands a distance of 231.84 feet to the POINT OF BEGINNING of the easement herein described; thence continuing North along said line, a distance of 118.16 feet to the Northeast corner of the said lands; thence South 89 degrees 43 minutes 05 seconds West, parallel to the South line of the said half quarter section, being along the North line of the said lands a distance of 37.60 feet; thence South 17 degrees 24 minutes 45 seconds East, a distance of 123.64 feet to the POINT OF BEGINNING, said easement containing 0.051 acres more or less.

The description of the drain to be reconstructed is as follows:

Description for the Mainline of the Brandywine Drain.

A part of the Southeast Quarter of Section 6, Township 17 North, Range 3 East, in Clay Township, Hamilton County, Indiana and being described as follows:

Commencing at the Southeast corner of the Southeast Quarter of Section 6, Township 17 North, Range 3 East; thence South 89 degrees 42 minutes 22 seconds West, along the South line of the said Quarter section a distance of 1219.97 feet to a point intersection with the approximate center of the existing Brandywine Drain; thence South 17 degrees 24 minutes 45 seconds East, along the center of the said drain a distance of 25.92 feet to the POINT OF BEGINNING of this description; thence North 17 degrees 24 minutes 45 seconds West, along the center of the said drain a distance of 364.35 feet; thence North 0 degrees 17 minutes 36 seconds East, along the center of the said drain, being parallel to the West line of the East half of the said Quarter section a distance of 314.92 feet to the South line of the Brandywine Section Two Addition, Recorded in Plat Book 7, Pages 155-158, in the Hamilton County Records Office; thence North 51 degrees 04 minutes 14 seconds East, along the center of the said drain and being along the said South line a distance of 633.04 feet; thence North 1 degree 58 minutes 50 seconds East, a distance of 290.11 feet to the POINT OF ENDING

The description of the drains within Brandywine Subdivision which will become regulated drain and to be maintained is as follows:

Description for the Line A of the Brandywine Drain.

A part of the Southeast Quarter of Section 6, Township 17 North, Range 3 East, in Clay Township, Hamilton County, Indiana and being described as follows:

Commencing at the Southeast corner of the Southeast Quarter of Section 6, Township 17 North, Range 3 East; thence South 89 degrees 42 minutes 22 seconds West, along the South line of the said Quarter section a distance of 721.79 feet; thence North 0 degrees 00 minutes 00 seconds East, a distance of 1668.54 feet to the POINT OF BEGINNING of this description; thence North 2 degrees 34 minutes 14 seconds East, a distance of 320.22 feet; thence North 59 degrees 34 minutes 14 seconds East, a distance of 103.74 feet; thence North 11 degrees 40 minutes 46 seconds West, a distance of 271.21 feet; thence North 4 degrees 55 minutes 19 seconds West, a distance of 50.33 feet; thence North 11 degrees 10 minutes 46 seconds West, a distance of 307.81 feet to the POINT OF ENDING. This line runs along the east side of lots 5, 7, 30, 29 and 28 and the west side of lots 4, 8, 17, 16 and 15.

Description for the Line B of the Brandywine Drain.

A part of the Southeast Quarter of Section 6, Township 17 North, Range 3 East, in Clay Township, Hamilton County, Indiana and being described as follows:

Commencing at the Southeast corner of the Southeast Quarter of Section 6, Township 17 North, Range 3 East; thence South 89 degrees 42 minutes 22 seconds West, along the South line of the said Quarter section a distance of 441.61 feet; thence North 0 degrees 00 minutes 00 seconds East, a distance of 1566.89 feet to the POINT OF BEGINNING of this description; thence North 54 degrees 13 minutes 25 seconds East, a distance of 160.25 feet; thence North 50 degrees 04 minutes 14 seconds East, a distance of 336.99 feet; thence North 0 degrees 03 minutes 20 seconds East, a distance of 788.29 feet to the POINT OF ENDING. This line runs along the east side of lots 1, 10, 11 and the south side of lots 12, 13 and 14.

Description for the Line "C" of the Brandywine Drain.

A part of the Southeast Quarter of Section 6, Township 17 North, Range 3 East, in Clay Township, Hamilton County, Indiana and being described as follows:

Commencing at the Southeast corner of the Southeast Quarter of Section 6, Township 17 North, Range 3 East; thence South 89 degrees 42 minutes 22 seconds West, along the South line of the said Quarter section a distance of 756.15 feet; thence North 0 degrees 00 minutes 00 seconds East, a distance of 1520.11 feet to the POINT OF BEGINNING of this description; thence North 87 degrees 25 minutes 46 seconds West, along the projection of the South line of lot #27 of the Brandywine Addition Section Two, Recorded in Plat Book 7, Pages 155-158, in the Hamilton County Records Office a distance of 299.34 feet; thence North 2 degrees 34 minutes 14 seconds East, parallel with and 12.00 feet East of the East line of lot #22 a distance of 135.00 feet to the POINT OF ENDING. This line runs between lots 26 and 27 and along the east side of lots 9 and 10.

Description for the Line "D" of the Brandywine Drain.

A part of the Southeast Quarter of Section 6, Township 17 North, Range 3 East, in Clay Township, Hamilton County, Indiana and being described as follows:

Commencing at the Southeast corner of the Southeast Quarter of Section 6, Township 17 North, Range 3 East; thence South 89 degrees 42 minutes 22 seconds West, along the South line of the said Quarter section a distance of 566.24 feet; thence North 0 degrees 00 minutes 00 seconds East, a distance of 1601.49 feet to the POINT OF BEGINNING of this description; thence North 34 degrees 50 minutes 27 seconds East, along the projection of the East line of lot #15 of the Brandywine Addition Section One, Recorded in Plat Book 6, Pages 52-56, in the Hamilton County Records Office a distance of 190.46 feet to the mid point of a curve, being a non-tangent curve, concave to the North, having a radius of 38.00 feet, with the bearing to the radius being North 34 degrees 50 minutes 27 seconds East, a central angle of 127 degrees 01 minutes 39 seconds, and a chord of 68.02 feet bearing South 55 degrees 22 minutes 42 seconds East and being the POINT OF ENDING. This line runs between lots 14 and 15.

The Mainline consists of 1593 feet of open ditch.

Line "A" consists of 597 feet of open ditch (swale), 236 feet of 18" X 28" RCP and 205 feet of open ditch (swale).

Line "B" consists of 340 feet of two (2)- variable diameter (12"-18") PVC pipe, 513 feet of open ditch (swale), and 61 feet of two (2)- 18"X28" RCP.

Line "C" consists of 258 feet of 18" RCP and 153 feet of 6" SSD.

Line "D" consists of 183 feet of 15" CMP.

No construction is to be performed on Lines A, B, C and D under this report. These portions of the drain are to be accepted into the regulated drain system under current conditions. Improvements to these lines will be done under maintenance.

COST ESTIMATE

The cost estimate for this work shall be as follows:

Mainline Work

Clearing (Debrushing) (17+10 – 31+89) .86 Acres @ \$30,000.00	\$25,800.00
36" Dia. HDPE Pipe – 96 LF @ \$50.00 per foot	\$ 4,800.00
24" Dia. RCP – 80 LF @ \$35.00 per foot	\$ 2,800.00
Excavation (Mainline 16+45 - 31+89) 1544 LF @ \$35.00	\$54,040.00
24" Dia. RCP – 20 LF @ \$70.00	\$ 1,400.00
Rip Rap, 1 Lump Sum @ \$1,500.00	\$1,500.00
Erosion Control (Erosion Control Blankets, Permanent Seeding), 1 Lump Sum @ \$15,000.00	\$ 15,000.00
Sub Total (Mainline Work)	\$105,340.00
+ 15% contingencies	\$ 15,801.00
Damages (30' Easement on Dunwoody parcel)	<u>\$ 3,500.00</u>
Mainline Total	\$124,641.00

I have reviewed the drainage shed for Brandywine Subdivision Drain and upon considering all parcels individually; I believe that each parcel within the drainage shed will have equal benefits by land use as provided by the drain. Therefore I recommend each tract be assessed on the same basis equally by land use. I recommend that each tract within Brandywine be assessed as residential at a reconstruction assessment of \$2,689.00 per lot. For Highways and Roads, I recommend a reconstruction assessment of \$20,000.00 lump sum. For the Pilgrim Lutheran Church of Indianapolis Parcel # 17-13-06-04-05-001.000, I recommend an assessment of \$20,000.00. For Parcels # 17-13-06-04-05-001.001 and 17-13-06-04-05-001.004 owned by the Corporation of the Presiding Bishop, I recommend an assessment of \$2,000.00 for each parcel.

The landowners are currently being assessed for maintenance in the Crooked Creek Drain shed. Therefore, the maintenance rates will not change.

I believe that there will be damages on the parcel owned by Evelyn Dunwoody. (Parcel # 17-13-06-00-00-027.000) on this project. Based on the market value of \$70,000 per acre and .05 acres of easement on this land, damages to be given to Evelyn Dunwoody will total \$3,500.00.

I believe that there will no damages on the parcel owned by Pilgrim Lutheran Church of Indianapolis Inc. (Parcel # 17-13-06-04-05-001.000) on this project. The improvements on this tract are on the existing open ditch which crosses the tract. Also, the improvements required on the proposed easement of this property would be required for any future building project for this parcel.

An existing 30' drainage easement is located in Park at Weston Place Section 1, P.C.#1, Slide Number 58, Instrument #9537316, June 2, 1995 recorded by the Hamilton County Recorder adjoins this drain. Therefore, additional easement will not be required.

Two parcels in the Brandywine Subdivision will have work done in existing easements. Those easements are shown on the the plat of Brandywine Subdivision as recorded by the Hamilton County Recorder, Book 6, Page Nos.52-56, Instrument #4653, November 12,1976. Those parcels are shown in the following table. I believe no damages will be incurred by these parcels as a result of this proposal.

Property Owner	Parcel #	Parcel Acreage
Allen, James N. & Monica M.	17-13-06-04-04-006.000	2.63
Jordan, S Anita	17-13-06-04-04-007.000	3.76

Since this area is an urbanized area, the Brandywine Subdivision Drain will be designated an urban drain per IC 36-9-27-67.

This project requires working in three gas pipeline easements and two pipeline companies. On October 28, 2005, our office requested permission to work in Eastern Panhandle's easement. In an e-mail dated November 21, 2005, Teresa McGee requested some additional details and text which have since been made to the plan. Later that day, Ms. McGee per phone conversation with the Project Engineer verbally agreed that these conditions would meet their requirements to work in Eastern Panhandle's easement. An approval email was sent on September 12, 2006 by Eastern Panhandle.

The second company, Buckeye Pipe Line Company, requested an application be made to work in their easement. Plans were submitted to their office on January 26, 2006 and February 13, 2006. In a letter dated March 18, 2006, Buckeye Pipe Line Company approved the plans for this project and granted permission to work in their easement.

This project will require a Rule 5 NPDES permit since the area of disturbed land will be more than 1 acre. This NPDES plan was deemed sufficient on May 5, 2006. A letter to the Army Corps of Engineers was sent on May 8, 2006 to determine if a Section 404 permit would be required for this project. In a letter dated July 11, 2006, the Corps of Engineers responded that no permit would be required. Due to this, a 401 Water Quality Certification will not be required by IDEM. Because the drainage area upstream of this construction is less than 1 square mile, a permit from IDNR will not be required.

A letter was sent to the Joel Thurman with the County Highway department on September 12, 2006 to address an existing surface water problem in the right-of-way on 3862 Brandywine Court.

I recommend that the Board set a hearing for this reconstruction for November 27, 2006.



Walter A. Evans, P.E.
Project Engineer
Hamilton County Surveyor's Office

wae

STATE OF INDIANA)
) ss:
COUNTY OF HAMILTON)

BEFORE THE HAMILTON COUNTY
DRAINAGE BOARD
NOBLESVILLE, INDIANA

IN THE MATTER OF THE
RECONSTRUCTION OF THE
Crooked Creek Drain, Brandywine Subdivision Reconstruction

FINDINGS AND ORDER FOR RECONSTRUCTION

The matter of the proposed Reconstruction of the *Crooked Creek Drain, Brandywine Subdivision Reconstruction* came before the Hamilton County Drainage Board for hearing on *November 27, 2006*, on the Reconstruction Report consisting of the report and the Schedule of Damages and Assessments. The Board also received and considered the written objection of an owner of certain lands affected by the proposed Reconstruction, said owner being:

Evidence was heard on the Reconstruction Report and on the aforementioned objections.

The Board, having considered the evidence and objections, and, upon motion duly made, seconded and unanimously carried, did find and determine that the costs, damages and expenses of the proposed Reconstruction will be less than the benefits accruing to the owners of all land benefited by the Reconstruction.

The Board having considered the evidence and objections, upon motion duly made, seconded and unanimously carried, did adopt the Schedule of Assessments as proposed, subject to amendment after inspection of the subject drain as it relates to the lands of any owners which may have been erroneously included or omitted from the Schedule of Assessments.

The Board further finds that it has jurisdiction of these proceedings and that all required notices have been duly given or published as required by law.

Wherefore, it is ORDERED, that the proposed Reconstruction of the *Crooked Creek Drain, Brandywine Subdivision Reconstruction* be and is hereby declared established.

Thereafter, the Board made inspection for the purpose of determining whether or not the lands of any owners had been erroneously included or excluded from the Schedule of Assessments. The Board finds on the basis of the reports and findings at this hearing as follows:

HAMILTON COUNTY DRAINAGE BOARD

Sam C. Dellinger
PRESIDENT

[Signature]
Member

[Signature]
Member

ATTEST: *[Signature]*
Executive Secretary



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

March 25, 2008

To: Hamilton County Drainage Board

Re: Brandywine Arm to Crooked Creek Regulated Drain Reconstruction
Final Inspection Report

FINAL INSPECTION REPORT

Please regard this letter as the inspector's final report on the Brandywine Arm to Crooked Creek Regulated Drain construction, located in Section 6 Township 17 North, Range 3 East, Clay Township in Hamilton County, Indiana.

The construction installed a new arm, the Brandywine Arm, to Crooked Creek Drain. The new arm consisted of 1544 feet of open ditch and 96' of 36" HDPE pipe. The as-built plans have been completed and are attached.

The date of the Surveyor's Report for the Brandywine Arm to Crooked Creek Drain was October 10, 2006. The Reconstruction Hearing was held on November 27, 2006. (Drainage Board Minutes Book 9, Pages 547 -556).

The Hamilton County Drainage Board awarded the contract on January 22, 2007 to Valenti Held Contractor / Developer. Valenti Held Contractor / Developer bid amount was \$68,381.00 (Drainage Board Minute Book 10, Page 35).

Statement of All Incurred Expenses Paid signed by the contractor as required in IC 36-9-27-82(b) was received on October 29, 2007. The contractors claim for release of retainage was submitted on July 5, 2007.

On 4-10-2008, during the preparation of the final report of the project, it was discovered that the contractor had received payment of \$2,352.00 for 80 feet of 24" HDPE pipe that had been deleted from the project. The contractor was notified of this error and on 4-29-2008 a check was received from the contractor, Valenti-Held, for the amount of \$2,352 to reimburse for the overpayment. The amount was placed into the reconstruction account for the Brandywine Arm to Crooked Creek.

There was one change order for this project Change Order #1 Dated March 25, 2008.

The change order details are as follows:

Change Order #1

The following items were deleted from the Brandywine Arm to Crooked Creek Reconstruction Project:

19" x 30" ERCP 20 LF @ \$75.10 per LF	\$1,502.00
19" x 30" Elliptical End Section 2 @ \$1,555.00 each	\$3,110.00
24: HDPE Dual Wall Non-perforated pipe 80 LF @ \$29.40 per LF	\$2,352.00
Reno Mattress 16' x 12' x 9' - 1 each @ \$1,650.00	<u>\$1,650.00</u>
Change Order #1 Total (deduct)	\$8,614.00
Contractor's Bid	\$68,381.00
Less Change Order #1 (deduct)	<u>-\$8,614.00</u>
Reconstruction Total	\$59,767.00
Payment for N.O.I.	<u>\$100.00</u>
Total construction cost	\$59,867.00

As of April 29, 2008, I hereby attest to and agree that the construction was installed according to the specified plans and change orders and have approved such work under IC 36-9-27-82(a). All inspections have been completed. Final inspection was on October 17, 2007 for the work.

Pay Requests for this project submitted and paid as allowed in IC 36-9-27-81 are as follows:

Pay Request #1 submitted 4-16-07	\$1,935.00
15% Retainage withheld	<u>\$290.25</u>
Claim Paid 5-15-2007	\$1,644.75
Pay Request #2 submitted 5-10-07	\$4515.00
15% Retainage withheld	<u>\$677.25</u>
Claim Paid 5-30-2007	\$3,837.75

Pay Request #3 submitted 6-12-07	\$55,669.00
15% Retainage withheld	<u>\$8,350.35</u>
Claim Paid 7-10-2007	\$47,318.65
Retainage Request submitted 7-5-07	\$9,317.85
Claim Paid 11-14-2007	\$9,317.85
Contractor's Bid	\$68,381.00
Total paid to Valenti Held Contractor	\$62,119.00
Returned from Valenti Held Contractor	\$2,352.00
Reconstruction Total	\$59,767.00
Payment for N.O.I.	<u>\$100.00</u>
Total construction cost	\$59,867.00
Engineer's Estimate	\$124,641.00
Reconstruction Assessment	\$124,641.00
Total Reconstruction Cost	\$59,867.00
Unexpended Funding	\$64,774.00

Per Indiana Code 36-9-27-85(d), I recommend that the unexpended construction funds be transferred to the periodic maintenance fund for the Brandywine Arm to Crooked Creek Regulated Drain. This would allow some of the work on lines A, B, C, and D as shown on the plan to be done. This was outline in my report.

I recommend the Board approve the construction as complete and acceptable.

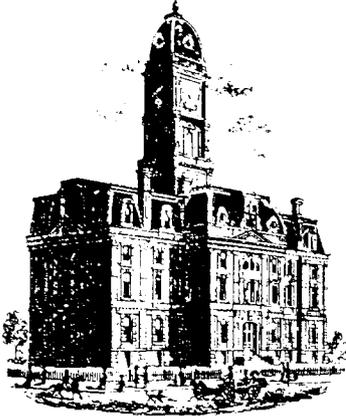
Respectfully,



Andrew Conover

Brandywine Asbuilt 6-4-07

STA	DESCRIPTION	ELEVATION
0+00	FE 48" CMP	888.71
0+18	FE Direct	889.33
0+72	FE 36" Poly	889.67
1+22	FE 36" Poly	890.24
1+27	FE 12" Cmp	890.19
4+12	FE 36" Poly	891.31
4+62	FE 36" Poly	891.57
13+00	FE D. 724	894.23
13+16	FE Concrete	894.78
14+97	FE 24" Cmp	895.50
15+17	FE 24" Cmp	895.39
15+17	OVER FLOW	897.52
18'	0+00 - 0+18 = 3.44%	open
54'	0+18 - 0+72 = 10.63%	open
50'	0+72 - 1+22 = 1.14%	36" Poly
290'	1+22 - 4+12 = 0.37%	open
50'	4+12 - 4+62 = 0.52%	36" Poly
838'	4+62 - 13+00 = 0.32%	open
16'	13+00 - 13+16 = 3.44%	open Taper
181'	13+16 - 14+97 = 0.40%	Concrete Swale
20'	14+97 - 15+17 = -0.55%	24" Cmp



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Suite 188
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Map Correction-Field Verification

Drain Number: #250

Drain Length: 2546

Drain Name: Crooked Creek: Brandywine Arm

Change +/-: +24

Date: 05-29-09

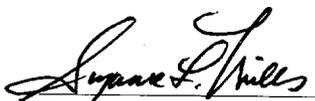
New Length: 2570

Verified By: SLM

Notes & Sketch:

A report was written on Oct. 10, 2006 and approved by the Board on Nov. 27, 2006. This outlined the pipe for the Brandywine Arm of the Crooked Creek Drain. In mapping this arm two changes should be made to the drain. 1) The 6" SSD on Line "C" was never installed and therefore, it was mapped as 153' of 4" SSD. 2) Line "C" also contains 24' of 12" RCP between str. 1 & 2. This was never listed on the original report.

* See attached Plans.


Suzanne L. Mills
GIS Specialist

**Gasb 34 Asset Price &
Drain Length Log**

Drain-Improvement: Crooked Creek Drain: Brandywine Arm

Drain Type:	Size:	Length	Length (DB Query)	Length Reconcile	If Applicable	
					Price:	Cost:
SUBDIVISION DRAIN						
Open		802	802		\$19.55 LF	\$15,679.10
RCP	18" x 28"	236	236		\$40.70 LF	\$9,605.20
PVC (Variable Size)	12" / 18"	*680	340		\$13.00 LF	\$8,840.00
Open		513	513		\$19.55 LF	\$10,029.15
RCP	18" x 28"	*122	61		\$40.70 LF	\$4,965.40
SSD	4"	153	153		\$0.75 LF	\$114.75
CMP	15"	183	183		\$18.00 LF	\$3,294.00
RCP	12"	24	24		\$7.25 LF	\$174.00
RCP	18"	258	258		\$10.50 LF	\$2,709.00
OFFSITE DRAIN	OPEN	1640	1640**		\$19.55 LF	\$32,062.00

Sum: _____ 0 _____ \$87,472.60

Final Report: 2570***

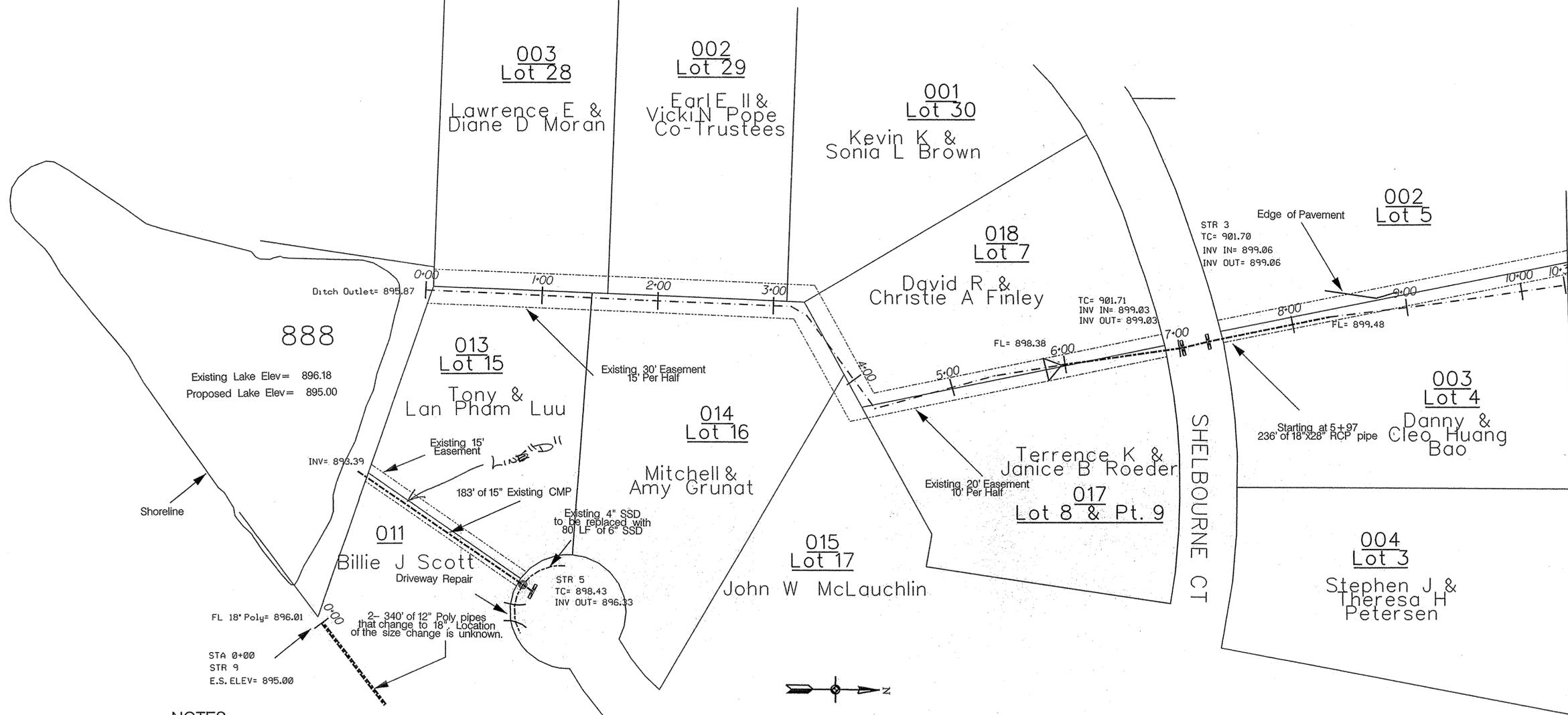
Comments:

*ParallelPipe

** PIPES INSTALLED WITH RECONSTRUCTION MAKES TOTAL LINEAR FOOTAGE OF DRAIN 1640.

*** DOES NOT INCLUDE OFFSITE FOOTAGE

NO WORK ITEMS THIS SHEET



- NOTES:
1. SPOILS TO BE PLACED ON EAST SIDE OF DITCH
 2. CONCRETE CHANNEL TO BE REMOVED (PAID FROM EXCAVATION COSTS)
 3. HYDROSEED SLOPES AND TOP OF BANKS FOR SOIL STABILIZATION.

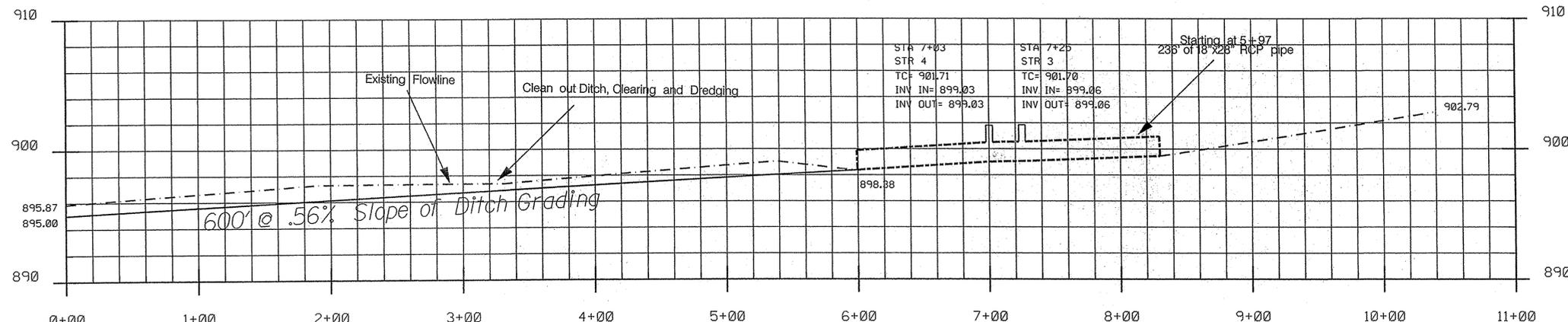
PLAN VIEW
SCALE 1" = 50'

PROFILE VIEW
HORIZONTAL SCALE 1" = 50'
VERTICAL SCALE 1" = 5'

STR. NO.	TC/RIM ELEV.	INV. IN	INV. OUT	DEPTH	STR. SIZE	STR. CASTING TYPE	PIPE SIZE	DIRECTION OF PIPE IN/OUT
• STR 1	898.62	895.74	895.92	2.7'	BRICK	CAST IN PLACE	12"	E
• STR 2	898.34	895.64	895.64	2.7'	BRICK	CAST IN PLACE	12"/18"	W/E
• STR 3	901.70	899.06	899.06	2.64'	BRICK	CAST IN PLACE	18"x28"	N/S
• STR 4	901.71	899.03	899.03	2.68'	BRICK	CAST IN PLACE	18"x28"	N/S
• STR 5	898.43	898.33	898.33	2.1'	BRICK	CAST IN PLACE	15"	S
STR 6	899.99		897.49	2.5'	24"x24"	TYPE A	6" SSD	S
STR 7	898.06		896.06	2.0'	24"x24"	TYPE A	6" SSD	S
STR 8	897.47	895.54	895.54	1.93'	24"x24"	TYPE A	6" SSD	S
STR 9	895.00		895.00	N/A	6" DIA.	HDPE END SECTION		
STR 10	TBD		896.13				6" SSD	S
STR 11	898.43	896.08	895.98	2.35'				

Not Constructed SLM 5-28-09

* STRUCTURES 1-5 HAVE BEEN CONSTRUCTED IN PLACE. ONLY STRUCTURES 1 AND 4 WILL NEED HOLES TO BE DRILLED WHEN CONSTRUCTING SUB-SURFACE DRAIN. STRUCTURES 2,3 AND 5 ARE FOR REFERENCE ONLY.

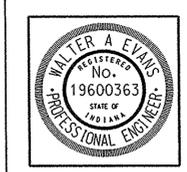


This information was gathered for input into the Hamilton County Geographic Information System (GIS). This document is considered an official record of the GIS.
Entry Date: 5-28-09
Entered By: SLM

HAMILTON COUNTY, INDIANA
Hamilton County Surveyor's Office
Hamilton County Government and Judicial Center
One Hamilton County Square, Suite 188
Noblesville, IN 46060
(O) 776-8495
(F) 776-9628
surveyor@co.hamilton.in.us

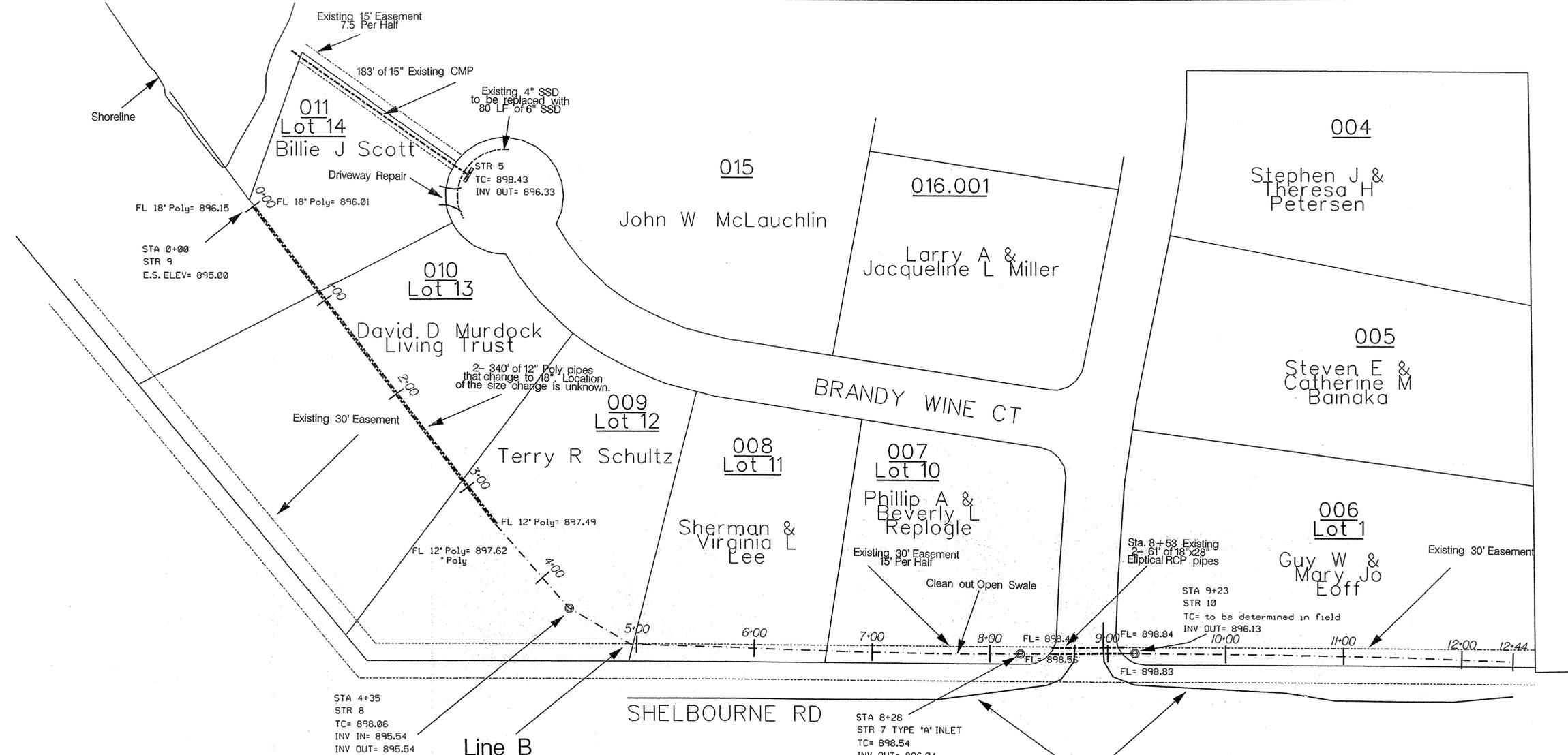


Project No:	Watershed No:
By:	Dgn Name: Brandywine
Date:	Field By: RAE
Revisions:	Drawn By: RAE
	Checked By:
	Date:



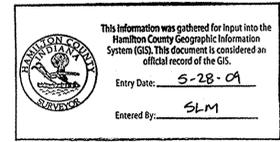
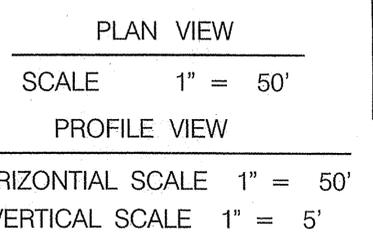
Certified By:
Walter A. Evans P.E.

Project Name:
Brandywine Arm of Crooked Creek Drain (Pond)
Plan and Profile Sheet



NOTES:

1. SPOILS TO BE PLACED ON EAST SIDE OF DITCH
2. CONCRETE CHANNEL TO BE REMOVED (PAID FROM EXCAVATION COSTS)
3. HYDROSEED SLOPES AND TOP OF BANKS FOR SOIL STABILIZATION.



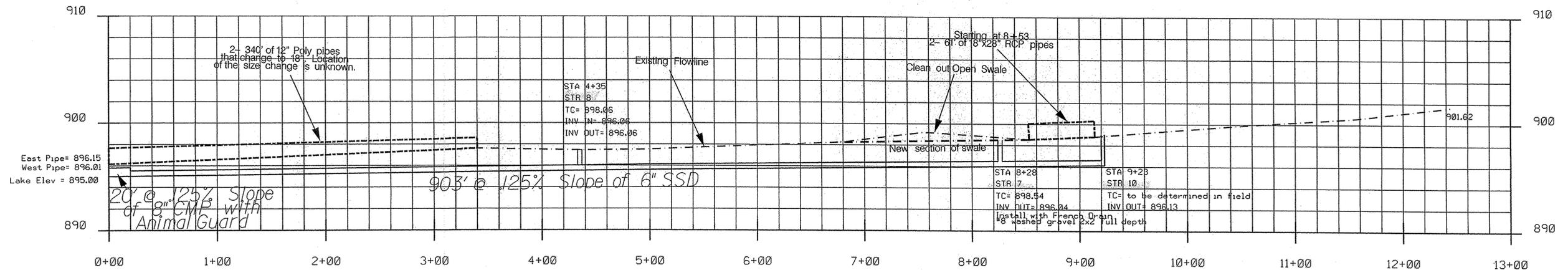
This information was gathered for input into the Hamilton County Geographic Information System (GIS). This document is considered an official record of the GIS.
 Entry Date: 5-28-09
 Entered By: SLM

*No T
 Constructed*

STR. NO.	TC/RIM ELEV.	INV. IN	INV. OUT	DEPTH	STR. SIZE	STR. TYPE	CASTING TYPE	PIPE SIZE	DIRECTION OF PIPE IN/OUT
* STR 1	898.62		895.92	2.7'	BRICK	CAST IN PLACE		12"	E
* STR 2	898.34	895.74	895.64	2.7'	BRICK	CAST IN PLACE		12"x18"	W/E
* STR 3	901.70	899.06	899.06	2.64'	BRICK	CAST IN PLACE		18"x28"	N/S
* STR 4	901.71	899.03	899.03	2.68'	BRICK	CAST IN PLACE		18"x28"	N/S
* STR 5	898.43		896.33	2.1'	BRICK	CAST IN PLACE		15"	S
STR 6	899.99		897.49	2.5'	24"x24"	TYPE A		6" SSD	S
STR 7	898.06		896.06	2.0'	24"x24"	TYPE A		6" SSD	S
STR 8	897.47	895.54	895.54	1.93'	24"x24"	TYPE A		6" SSD	S
STR 9	895.00		895.00	N/A	6" DIA.	HOPE END SECTION			
STR 10	TBD		896.13			RISER		6" SSD	S
STR 11	898.43	896.08	895.98	2.35'					

* STRUCTURES 1-5 HAVE BEEN CONSTRUCTED IN PLACE. ONLY STRUCTURES 1 AND 4 WILL NEED HOLES TO BE DRILLED WHEN CONSTRUCTING SUB-SURFACE DRAIN. STRUCTURES 2,3 AND 5 ARE FOR REFERENCE ONLY.

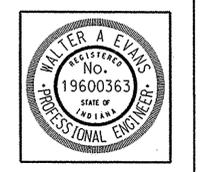
NO WORK ITEMS THIS SHEET



HAMILTON COUNTY, INDIANA
 Hamilton County Surveyor's Office
 Hamilton County Government and
 Judicial Center
 One Hamilton County Square, Suite 188
 Noblesville, IN 46060
 (317) 776-6666
 (317) 776-6660
 survey@co.hamilton.in.us



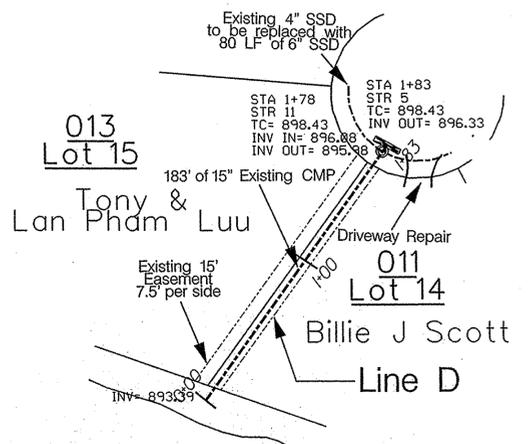
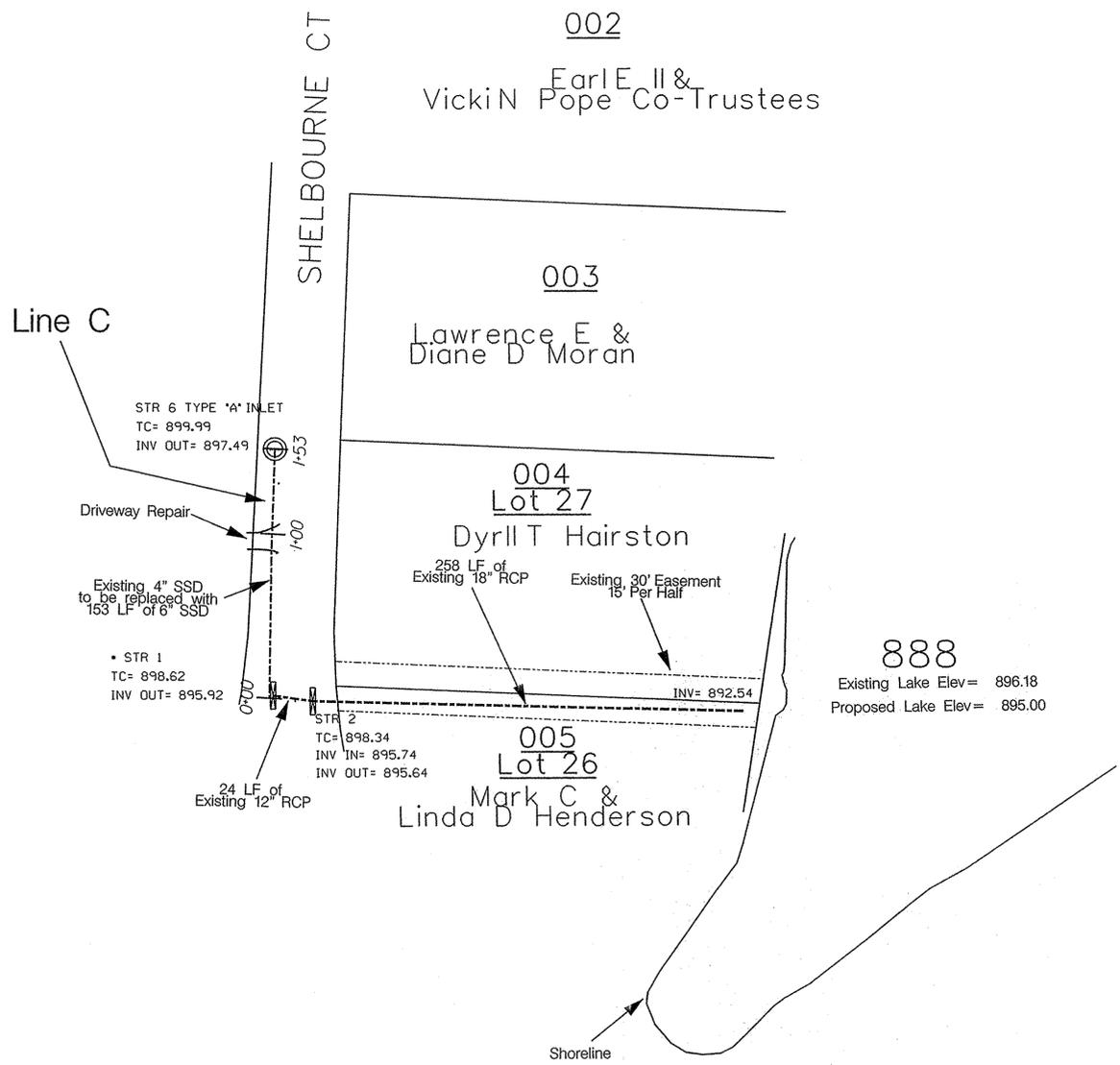
Project No:	Watershed No:
By:	Dgn Name: Brandywine
Date:	Field By: RAE
Revisions:	Drawn By: RAE
	Checked By:
	Date:



Certified By:
 Walter A. Evans P.E.

Project Name: Brandywine Arm of Crooked Creek Drain (Pond)
 Plan and Profile Sheet

SHEET NO.
8 of 15



N
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PLAN VIEW

SCALE 1" = 50'

PROFILE VIEW

HORIZONTAL SCALE 1" = 50'

VERTICAL SCALE 1" = 5'

NO WORK ITEMS THIS SHEET

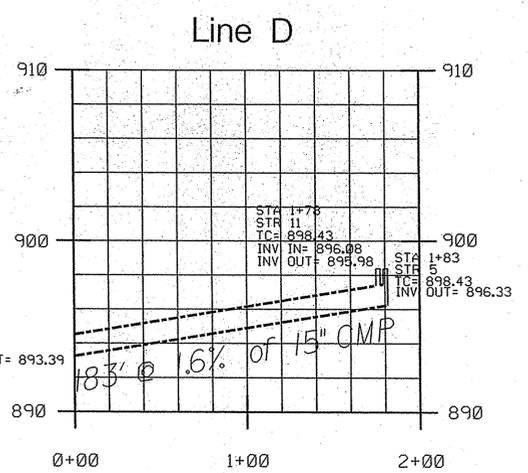
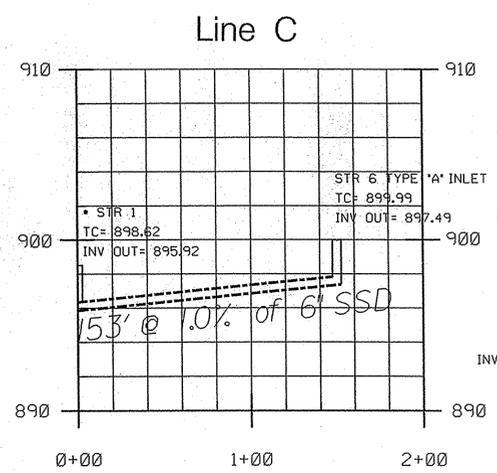
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STR 6	899.99		897.49	2.5'	24"x24"	TYPE A		6" SSD	S
STR 7	898.06		896.06	2.0'	24"x24"	TYPE A		6" SSD	S
STR 8	897.47	895.54	895.54	1.93'	24"x24"	TYPE A		6" SSD	S
STR 9	895.00		895.00	N/A	6" DIA.	HDPE END SECTION			
STR 10	TBD		896.13			RISER		6" SSD	S
STR 11	898.43	896.08	895.98	2.35'					

NOT CONSTRUCTED

• STRUCTURES 1-5 HAVE BEEN CONSTRUCTED IN PLACE. ONLY STRUCTURES 1 AND 4 WILL NEED HOLES TO BE DRILLED WHEN CONSTRUCTING SUB-SURFACE DRAIN. STRUCTURES 2,3 AND 5 ARE FOR REFERENCE ONLY.

NOTES:

1. Str. 5 (Brandy Wine Ct.)- SSD to be at 2' depth. Invert of SSD to be at invert of structure.
2. Str 1 (Shelbourne Ct.)- SSD to be at 2' depth. Invert of SSD to be at invert of structure.
3. Hydroseed slopes and top of banks for soil stabilization.



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Entry Date: 5-28-09

Entered By: SLM

HAMILTON COUNTY, INDIANA

Hamilton County Surveyor's Office
Hamilton County Government and Judicial Center
One Hamilton County Square, Suite 188
Noblesville, IN 46060
(773) 776-8495
surveyor@co.hamilton.in.us



Project No:	Watershed No:
By:	Dgn Name: Brandywine
Date:	Field By: RAE
Revisions:	Drawn By: RAE
	Checked By:
	Date:



Certified By:
Walter A. Evans P.E.

Project Name:
Brandywine Arm of Crooked Creek Drain (Pond)

Plan and Profile Sheet

PLOT DATE: 12/2/2006

SHEET NO.
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