Source Document Log Source Document Discrepancy Log (Over)

Drain: MERIDIAN SUBURBAN ORAIN

#	Main/Arm Name	Document Name	Document ID	Info From Document
	MERIDIAN SUBONISION - SKOTON I	SR	5-8-02	
2		SR	6-25-03	
3		PLANS	5-5-03	
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			·	

Drain: MKLIOIAN SUBURBAN ORAIN	Drain #:_333
Improvement/Arm: MEROWN SURONI	SON SECTION A
Operator:	Date: 4-21-011
Drain Classification: Urban/Rural	Year Installed: 2002

GIS Drain Input Checklist

•	Pull Source Documents for Scanning	gn. 4-11
•	Digitize & Attribute Tile Drains	NA
•	Digitize & Attribute Storm Drains	978-4-21
•	Digitize & Attribute SSD	Na
•	Digitize & Attribute Open Ditch	MA
•	Stamp Plans	204.Y-V
•	Sum drain lengths & Validate	GDF 421
•	Enter Improvements into Posse	294 4-21
1	Enter Drain Age into Posse	kul 4-23
	Sum drain length for Watershed in Posse	huf 4.22
	Check Database entries for errors	SALTU SALTU

Gasb 34 Footages for Historical Cost Drain Length Log

Drain-Improvement: Meridian Suburban

····					If Applicable	
Drain Type:	Size:	Length	Length (DB Query)	Length Reconcile	Price:	Cost:
Concrete	12"	853'	686'	-167'		
	15"	Ø	6191	+619		
	24"	Ø	224'	224		
· · · · · · · · · · · · · · · · · · ·	30"	705'	704 '	-1		,
PVC	(2"	80'	68'	-12		
SDR 35	12"	Ø	729'	729		
RCP	12"	Ø	46'	46		
Clay Tile	10"	44'	ø	-44		
CMP	15"	30'	ø	- 30		
Concrete	18"	450'	Ø	- 450		· · · · · · · · · · · · · · · · · · ·
Concrete	21"	216'	ø	-216		
<u> </u>						
	Sum:	2378	_3076'	+698		- "

Final Report:	···				
Comments:	Ьy	Reconstruction	Cost.		
			·		



Kenton C. Ward, Surveyor Phone (317) 776-8495 Fax (317) 776-9628

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

ApprovED Suly 14,03

TO: Hamilton County Drainage Board

June 25, 2003

RE: Meridian Suburban Drain # 333 Final Report - Reconstruction

The Hamilton County Surveyor's Office has completed the inspection of the Meridian Suburban drain reconstruction by Van Horn Excavating. At this time the work has been found to be complete and acceptable.

The Surveyor's original reconstruction report dated May 8, 2002 was not approved as presented at hearing by the Drainage Board on June 24, 2002. Estimated Cost per the May 8, 2002 report was \$150,776.00. The reconstruction was requested to be downsized by the Board and new costs were presented at the July 24, 2002 meeting. The revised report with minimum reconstruction, consisting of rehabilitating the existing storm sewer system at a cost estimate of \$56,465.00. This report was approved at the July 24, 2002 Board meeting. The contract was awarded to Van Horn Excavating on August 26, 2002 with a bid amount of \$33,230.30.

The reconstruction project consisted of the clearing of woody vegetation along the southern and western portion of the drain, camera and jetting of entire system, flow line obstruction removal, tile replacement, and structure repair as needed from 111th Street south to the tiles outlet, hauling away of assorted construction debris, street repair and seeding.

The As-built drawings have been completed and are included with the final report.

During reconstruction the tile footages and number of structures indicated on the original plan design was discovered to be inaccurate, resulting in additional costs. Change Order # 1 was approved on October 14, 2002 by the board correcting this issue.

The following is a breakdown of the claim payments paid to Van Horn Excavating for the reconstruction project.

Claim #1	Van Horn Excavating Invoices 4849 and 484 Includes Change Order #1	18
	Approved by board on October 14, 2002	
	Paid: October 29, 2002	
	Check Number: 2000533	\$ 39,008.35
Claim #2	Street cleaning Invoice 4858	, ,
	Approved by board on November 12, 2002	
	Paid: December 10, 2002	
	Check Number: 2003127	\$ 583.43
Claim #3	Van Horn Excavating Invoice 4947	,
	Approved by board on May 12, 2003	
	Paid: May 28, 2003	
	Check Number: 2011654	<u>\$ 7,883.83</u>
Total Paid:		\$47,475.61
The total cost of the recons	truction is as follows:	
Contract		\$ 33,230.30
Change Order #1		\$ 13,661.88
Street Cleaning		\$ 583.43
Total Amount		\$ 47,475.61

The Surveyor's Office received from Van Horn Excavating on November 1, 2002 the County's Form E-1 from the reconstruction contract per IC 36-9-27-82(b). The form stated that all expenses incurred for labor and materials on the Meridian Suburban drain reconstruction project have been paid in full by Van Horn Excavating.

Van Horn Excavating did not post a surety for the reconstruction project. Instead the Board received a letter from Wells Fargo Bank in Rochester, Indiana, stating Van Horn Excavating had a \$100,000.00 line of credit with the bank and as of September 26, 2002 had an available balance of \$80,000.00. Therefore, no surety needs to be released.

The estimated reconstruction cost was \$56,465.00 and the total contract cost was \$47,475.61 which leaves an unexpended balance for reconstruction of \$8,989.39. The current maintenance fund balance for the Meridian Suburban Drain is \$0.00. The annual drain assessment is \$7,098.10. The Surveyor's Office recommends the Board place the unused reconstruction funds in the amount of \$8,989.39 in the maintenance fund for this drain per IC 36-9-27-85(a).

The Surveyor's Office recommends the Board approve the reconstruction of this drain as complete and acceptable.

Sundam)

Submitted

Kenton C. Ward

Hamilton County Surveyor



Kenton C. Ward, Surveyor Phone (317) 776-8495 Fax (317) 776-9628

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

DATE: May 8, 2002

To: Hamilton County Drainage Board

Re: Meridian Suburban Subdivision Drainage Area

Attached are plans, specifications, drain map, drainage-shed map, and schedule of assessments for the new construction of Meridian Suburban Subdivision Drain. Meridian Suburban Subdivision was built in 1965. In the fall of 1996, the Hamilton County Highway Department completed an investigation of the drainage problems at Meridian Suburban due to a high volume of complaints from the homeowners. After the investigation of the existing conditions of the drainage system, the Hamilton County Highway Department recommended to the Board of Commissioners to petition this area to become a regulated drain. The Board of Commissioners of Hamilton County petitioned the Hamilton County Drainage Board on October 28, 1996. I have reviewed the submittals and petition and have found each to be in proper form. The drainage area covers portions of Clay Township in Hamilton County and benefits properties in Section 2, Township 17 North, Range 3 East with a total acreage of approximately 181 acres.

I have made a personal inspection of the land described in the petition. Upon doing so, I believe that the drain is practicable, will improve the public health, benefit a public highway and be of public utility and that the cost, damages and expenses of the proposed drain will probably be less than the benefits accruing to the owners of land likely to be benefited.

The drainage-shed area includes areas to the west and to the east of U.S. 31. Hydraulically, the drainage area consists of approximately 40 percent commercial development, approximately 20 percent residential development, approximately 20 percent forested undeveloped area and approximately 20 percent highway right-of-way. The area to the west of U.S. 31 starts approximately 1200 feet west of U.S. 31 on 116th Street and runs south to the southern edge of Meridian Suburban Subdivision then east to U.S. 31 then north to 116th Street. The area to the east of U.S. 31 starts approximately 600 feet south of 116th Street than south to 111th Street with Pennsylvania Street as the eastern border. The Vernon W. Asher Drainage Shed borders the Meridian Suburban Subdivision Shed on the east and the Spring Mill Place Drainage Shed borders it on the west. The entire shed terminates in an open ditch, which runs to Williams Creek at a point south of 106th Street, and west of Springmill Road.

The project consists of approximately 675 feet of excavating and redefining the roadside ditch on the north side of 111th Street from Station 0+88.42 to Station 7+61.00. At Station 7+61, a proposed 24-inch reinforced concrete pipe (RCP) encased with a 30-inch steel casing would be bored under 111th Street. A bore permit will be required from the Hamilton County Highway to cross under 111th Street. This permit has not been applied for at this time. The 24-inch RCP would continue for approximately 300 feet then flow into a proposed open ditch. The open ditch would be constructed in the existing right-of-way for Liverpool Drive for approximately 865 feet south to the existing 12-inch RCP at an existing manhole structure in the unimproved road rightof-way. The Liverpool Drive right-of-way is currently undeveloped and overgrown. The rightof-way exists per the plat of Meridian Suburban, as recorded in the office of the Hamilton County Recorder in Plat Book 2, pages 174 - 175. Illinois Street is proposed to extend from 106th Street to 116th Street, which would be constructed in the Liverpool Road right-of-way per the Hamilton County Thoroughfare Plan. This was added to the plan by Hamilton County ordinance 8-28-00A as approved by the Hamilton County Commissioners on August 8, 2000. Due to the fact that construction plans are not complete for the proposed road improvement, an open ditch is recommended so as to reduce cost and allow easier relocation in the future. The clearing of the open ditch located in the Liverpool Drive right-of-way will be challenging due to the mature tree growth and debris remaining from the construction of the Meridian Suburban Subdivision. It is proposed that the clearing debris be ground and either removed from site, burned and buried or buried. Also, the existing drainage system in Meridian Suburban will be cleaned-out and any collapsed pipes will be replaced. The outfall structure would be cleaned-out and debris removed from the channel for approximately 30 feet. Riprap is proposed for all pipe inlet and outlet areas.

The approximate lengths of the existing drainage facilities for the Meridian Suburban Subdivision are as follows:

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10" clay tile – 44 ft. 15" CMP – 30 ft. 30" Concrete tile – 705 ft. 12" PVC – 80 ft. 18" Concrete – 450 ft. 21" concrete tile – 216 ft.
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The approximate total length of the existing drainage facility is 2,378 feet.

The existing drainage system is described as follows:

Beginning on the north side of 111th Street between Lot 30 and 31 of Meridian Suburban Subdivision with a 15 inch CMP which heads south approximately 30 feet to a manhole with curb inlet thence a 12-inch RCP heads east within the existing right-of-way along the south side of 111th Street to the northwest corner of Lot 1 of Meridian Suburban Subdivision; thence a 12-inch concrete tile runs south along the east side of the existing right-of-way of Tottenham Drive to approximately 176 feet north of the southwest corner of Lot 12 of the Meridian Suburban Subdivision thence south for approximately 216 feet as a 21-inch concrete tile to a point south of the southwest corner of Lot 12. At that point a 30-inch concrete tile heads south approximately 450 feet then angles to the southeast and travels approximately 260 feet to the outfall pipe to the unnamed tributary of Williams Creek. Also included in the existing drainage system is a 12-inch PVC pipe that starts at the southeast corner of Lot 34 heading south in the existing Mersey Court right-of-way to the northeast corner of Lot 40 thence heading east to the southwest corner of Lot 4. Also, a 10-inch CMP which starts at drive near the southeast corner of Lot 44, thence south under Manchester Court to the northeast corner of Lot 13; thence east to a structure near the northwest corner of Lot 11. Another arm begins north of the southeast corner of Lot 18 and runs east through the platted right-of-way for Liverpool Drive to a point north of the southwest corner of Lot 17; thence south to a point near the southwest corner of Lot 17; thence east to a point near

the southeast corner of Lot 17; thence in a southeasterly direction to a point near the southwest corner of Lot 14; thence east to the afore described mainline terminating in a structure south of the southwest corner of Lot 12.

The new drain will consist of the following:

Open Ditch - 1,540 ft.

24" RCP - 300 ft.

The length of the proposed new facility is 1,840 feet. The total length of the proposed Meridian Suburban Subdivision Drain, which will be on maintenance, is 4,218 feet.

Easements will be required for the construction of the proposed drainage system. Those additional easements are as follows:

Valley Development Company Inc. 16-13-02-00-00-005.000

55 feet north of the south line of the parcel

JEC Partnership LP 17-13-02-00-00-010.000

55 feet north of the south line of the parcel from the southeast corner of the parcel to a point approximately 180 feet west of said corner.

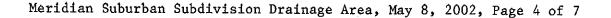
Valley Development Company Inc. Lots 18 – 26 of the Meridian Suburban Subdivision, parcels 17-13-02-03-01-002.000 through 17-13-02-03-01-010.000 35 feet west of the east line of referenced lots/parcels

Valley Development Company, Inc. Lots 17, 47, 48, 53, 54, 55, 56 and 57 of the Meridian Suburban Subdivision, Parcels 17-13-03-02-023.000 through 025.000, 17-13-03-02-031.000 to 035.000

35 feet east of the west line of referenced lots/parcels

Below are the parcel numbers and property owners of the affected parcels that will have the 35 foot easement that is east of and parallel to the existing east right-of-way line of Tottenham Drive.

No. 17-13-02-03-03-010.000 No. 17-13-02-03-03-011.000 No. 17-13-02-03-03-012.000 June A. Courtney Anthony A. & Jeannette Paris No. 17-13-02-03-03-012.000 June A. Courtney Anthony A. & Jeannette Paris	No. 17-13-02-03-03-001.000 No. 17-13-02-03-03-002.000 No. 17-13-02-03-03-003.000 No. 17-13-02-03-03-004.000 No. 17-13-02-03-03-005.000 No. 17-13-02-03-03-006.000 No. 17-13-02-03-03-007.000 No. 17-13-02-03-03-008.000 No. 17-13-02-03-03-009.000	Earl H. & Julia I. Schleicher Marvin E. & Anna Laura Clingman Charles M. & Adrienne Chambers Robert E. & Carol J. Scott Tongchee Y & Pang Vang Yang Bruce H. Stickle Wesley H. Sr. & Carlene E. Bickers Michael E. & Sherry Owens c/o Greg W. Mahler Richard D. Rice
110: 17=13=04=03=03=014:000 JOHU L. DJ. OK JU AUH MUHUV	No. 17-13-02-03-03-009.000 No. 17-13-02-03-03-010.000	Richard D. Rice June A. Courtney



Below are the parcel numbers and property owners of the affected parcels that will have a 15 foot easement that is north of and parallel to their southern property line (which extends 5 feet north of the existing 10 foot utility & drainage easement).

Valley Development Co. Inc.
Valley Development Co. Inc.
Dean C. & Gloria M. Gassman
John C. & Marjorie A. Nickel as Trustees
Douglas R. & Rebecca S. Dearmond

Below is the parcel and property owner of the affected parcel that will have a 15-foot easement south of the existing north property line and runs parallel to the north property line from the west property line to the centerline of Tottenham Drive.

No. 17-13-02-00-00-023.000

Valley Development Co. Inc.

The Meridian Suburban Subdivision Drain offsite easement will effected parcel No. 17-13-02-00-00-023.000 Valley Development Co. Inc. It starts at the southwest corner of Lot 12 of the Meridian Suburban Subdivision heading south approximately 450 feet then angles to the southwest and runs approximately 260 feet to the outfall pipe to the unnamed tributary of Williams Creek and will consist of a 15-foot per half easement (30-foot total easement) from the center line of the 30-inch concrete tile

The drainage area for the 24-inch RCP crossing 111th Street shall be limited to an allowable cfs per acre of 1.02 for future development in sub-basin A (See Attached Map for details). No discharge will be allowed into the existing 15-inch CMP under 111th Street based on the fact that the system is currently at capacity. The sub-basin B for the existing 30-inch CMP crossing under 111th Street just west of U.S. 31 shall be limited to an allowable cfs per acre of 1.61 for future development. The storage volume in the proposed open ditch along Liverpool Drive is approximately 21,000 cubic feet. This storage volume will be adequate to store the difference of the capacities between the 12" outlet to the south of the open ditch and its 24" inlet to the north of the open drain up to a 10-year storm event. At such time that Illinois Street is constructed this drainage shall be extended south to the before mentioned unnamed tributary of Williams Creek.

Cost Estimate

The cost estimate for the proposed construction is as follows:

Clearing 2.5 acres @ \$7000.00 per acre	\$17,500
Replace crushed pipe within existing drainage system	\$30,000
Relocating Existing Fence	\$ 1,000
Channel Excavation − 1,540 feet @ \$10.00 per lineal foot	\$15,400
Seeding Channel - 2.2 acres @ \$2,300.00 per acre	\$ 5,060
Rip Rap – 200 tons @ \$30.00 per ton	\$ 6,000
24-inch RCP – 300 feet @ \$50.00 per lineal foot	\$13,500
30-inch Steel Casing - 35 feet @ \$50.00 per lineal foot	\$ 1,750
Boring under 111 th Street – Lump Sum	\$ 8,000
Connection into existing structure on Liverpool Drive	\$ 3,500
Clean out existing drainage system in Meridian Suburban	\$ 4,000
Erosion Control Mats at \$8.00 per square yard Sub Total + 15% Contingencies	\$25,400 \$131,110 \$ 19,666
Total	\$150,776

I recommend the Drainage Board place the proposed Meridian Suburban Subdivision Drain on a maintenance program as set out in IC 36-9-27-38 to 45. The nature of the maintenance work which may be required, but not limited to, is as follows:

- a. Removal and /or prevention of brush within the drainage easement by hand, mechanical or spray methods.
- b. Re-excavating of open ditch to original grade line.
- c. Installation and/or repair of surface water structure as might be required.
- d. Bank erosion protection and/or seeding as might be required.
- e. Repair of regulated and private tile outlets as might be required.
- f. Repair of regulated tile.
- g. Replacement of broken tile outlet ends as might be required.
- h. Cleaning and/or repair of existing catch basins as might be required.
- i. Installation of catch basins or inlets as may be required.
- j. Removal of debris and /or blockage from the existing tile drain including jetting, root cutting, or video work.
- k. Installation or repair of breather pipes.
- 1. Removal of debris and/or blockage from the existing open drain.

m. Any other repairs necessary to restore the drain to it's original intended condition.

The frequency with which maintenance work should be performed annually is as required by the condition of the drain.

I believe this proposed drain meets the requirements for the urban drain classification as set out in IC 36-9-27-67-69. Therefore, this drain shall be designated as an urban drain.

I have reviewed the drainage shed for the proposed Meridian Suburban Subdivision drainage area and upon considering each parcel individually, I believe that each parcel will have varying benefits per category of residential, agricultural, commercial and Highway and/or sub-basins for the purposes of maintenance.

In developing the assessments I have taken into consideration IC 36-9-27-69 and its affects on assessments regarding urban drains. First, all tracts in the drainage shed have been assessed as per sub-section (b) (1) which states "The watershed, or entire land area drained or affected by the urban drain, shall be considered to be benefited and shall be assessed". Also, all tracts within the 3 categories of residential, commercial and highways have been equally assessed within the category as acreage with a minimum. This relates to sub-section (b) (3), which states, "Except for urban land that has extra benefits, all urban land within the watershed shall be considered to be equally benefited, and the benefits shall be computed in proportion to the number of acres in each tract". The streets and highways are being assessed as required in sub-section (b) (5) which states, "Right-of-way of a public highway, railroad company, pipeline company, or public utility that lie within or adjoin urban land shall be considered to be benefited and shall be assessed in the same manner as urban land".

Therefore, I recommend a maintenance assessment be approved at follows:

- 1. Assessment for roads and streets \$10.00 per acre.
- 2. Assessment for commercial areas assessed at \$75.00 per acre, \$75.00 minimum.
- 3. Assessment for platted lots in subdivisions shall be set at \$50.00 per lot/minimum. This rate is for both improved and unimproved platted lots.
- 4. Assessment for agricultural and undeveloped acreage shall be set at \$5.00 per acre with a \$15.00 min.
- 5. Common Areas within platted subdivisions shall be assessed at \$15.00 per acre, \$50.00 minimum.

The proposed annual maintenance assessment for the Meridian Suburban Subdivision Drain is \$7,098.10.

I have reviewed the drainage shed for the proposed construction of Meridian Suburban Subdivision Drainage System and upon considering each parcel individually, I believe that each parcel within the drainage shed will have varying benefits for construction as provided by the drain per the outlined categories and/or sub-basins. Therefore, I recommend each tract be assessed on the same basis equally within category and/or sub-basins. I also believe that no damages will result to landowners by the construction of this drain. I recommend construction assessments as follows:

1. Assessment for roads and streets \$385.00 per acre. In addition the City of Carmel will have additional benefit for the portion of 111th Street west of U.S. 31. This additional benefit shall be \$711.00. Also, the Hamilton County Highway Department will receive additional benefit for those streets within Meridian Suburban Subdivision. This additional benefit shall be assessed at \$4,453.00.

The improvements for the new structure under 111th Street and the RCP under the Liverpool Drive right-of-way will be paid for by the Hamilton County Highway per IC 36-9-27-71. The estimated cost for this work is \$23,500.00.

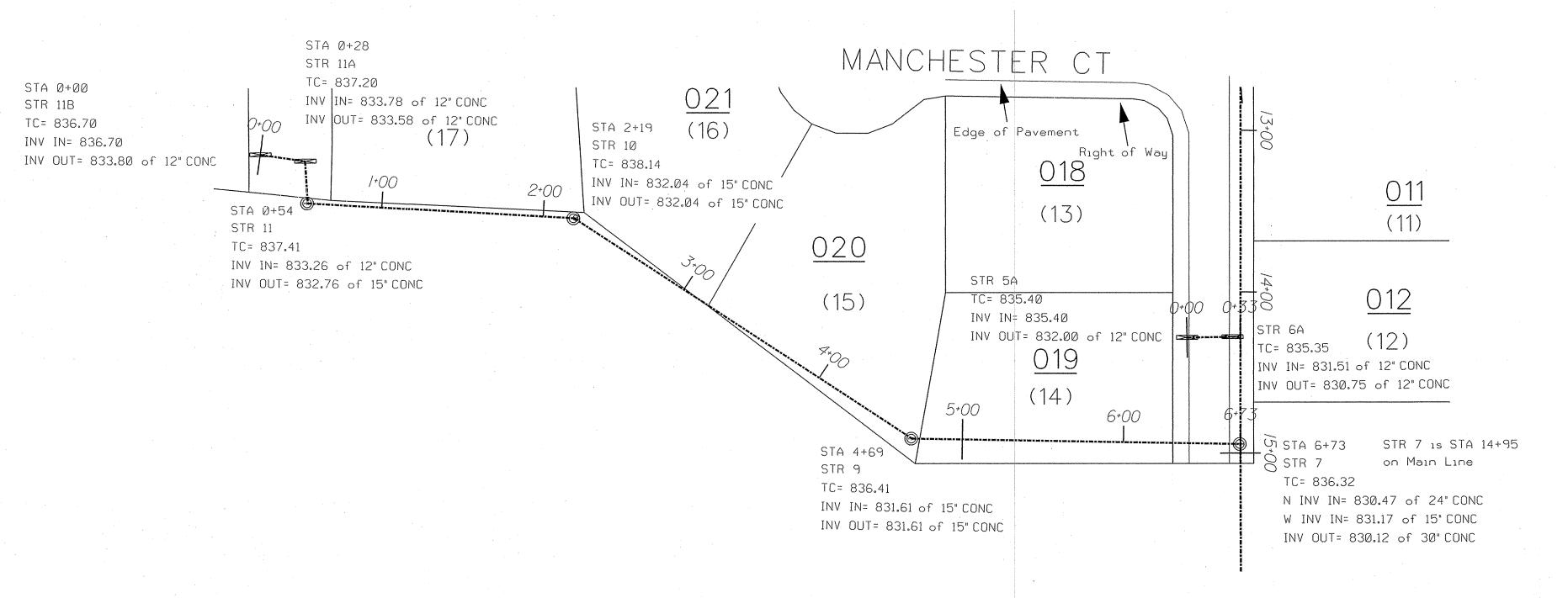
- 2. Assessment for commercial areas assessed at \$1,154.00 per acre.
- 3. Assessment for platted lots in subdivisions shall be set at \$536.00 per lot. This rate is for both improved and unimproved platted lots.
- 4. Assessment for agricultural and undeveloped acreage shall be set at \$385.00 per acre with no minimum.

Parcels within this drainage shed may at sometime in the future be assessed for the Vernon Asher Drain and/or Williams Creek/Collins Osborn Drain.

I recommend the Board set a hearing for this proposed reconstruction and maintenance project for June 24, 2002.

Kenton d. Ward

Hamilton County Surveyor



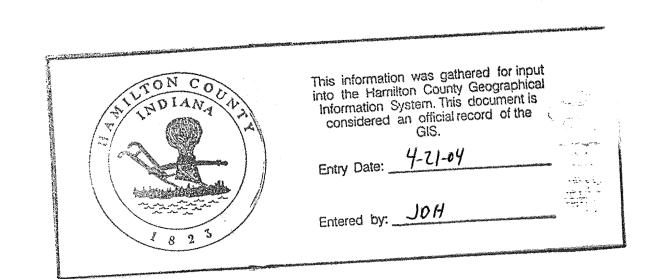
A survey was performed for the location of this drain— the property lines, edge of pavement, and right of way lines are all geographical representations and were not surveyed. Therefore, the drain in relation to these lines is not accurately represented. Although strict accuracy standards have been employed in the compilation of this map, Hamilton County Surveyor's Office does not warrant or guarantee the accuracy of the information contained herein and disclaims any and all liability resulting from any error or omission in this map.

PLAN VIEW

SCALE 1" = 50'

PROFILE VIEW

HORIZONTIAL SCALE 1" = 50" VERTICAL SCALE 1" = 5'



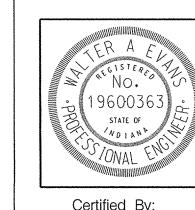
Fourth Arm of Main Line - 840 840 -165' of 15 CONC 0.33% Grade 0.17% Grade 0.22% Grade 830 -26' of 12" CONC -1.23% Grade 28' of 12" CONC 0.36% Grade 820 -2+00 *3+00* 4+00 5+00 *6*+7*3* 6+00 1+00 0+00 Station

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INDIANA

COUNTY

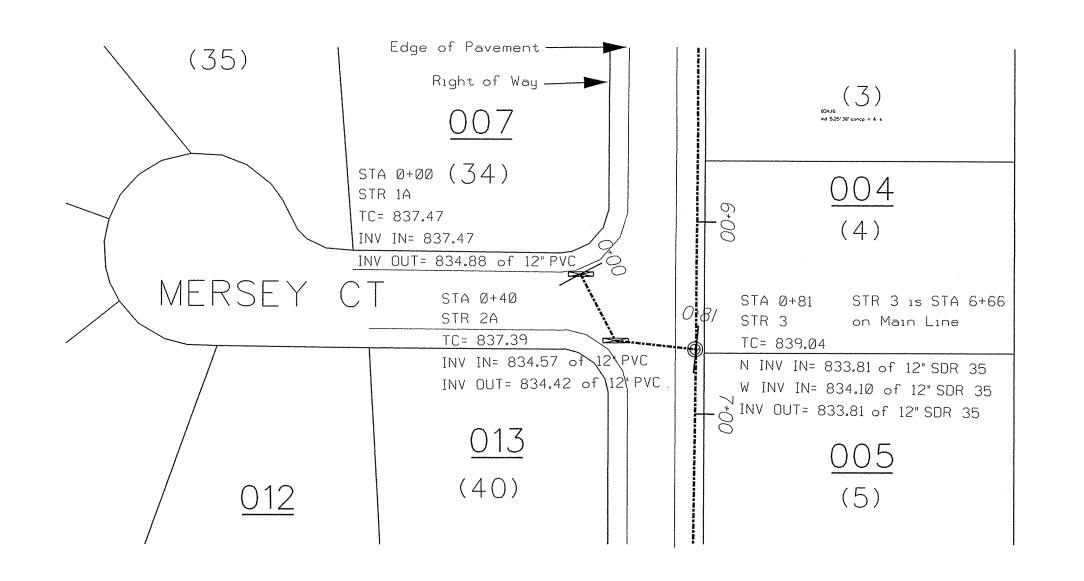


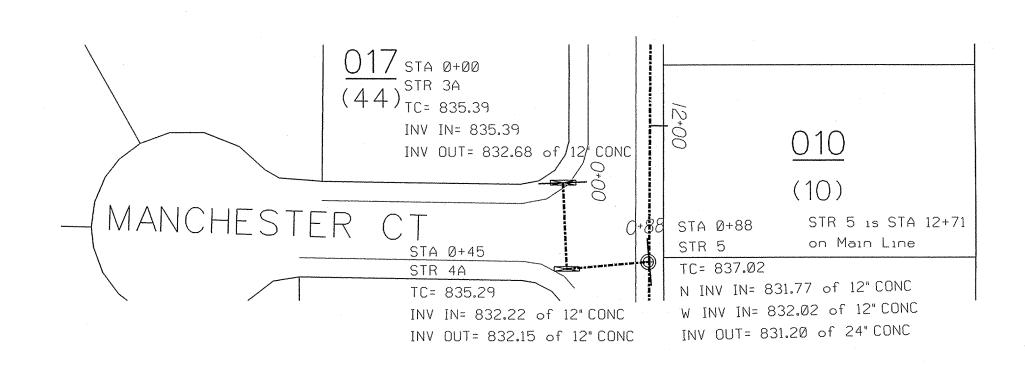


Walter Evans P.E.

Sub Meridian Sheet -Built

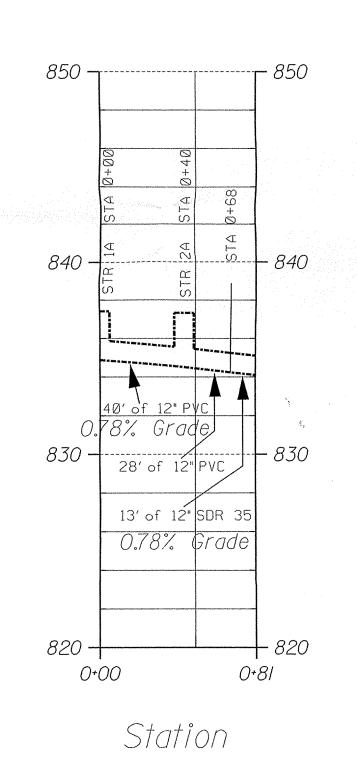
SHEET NO.

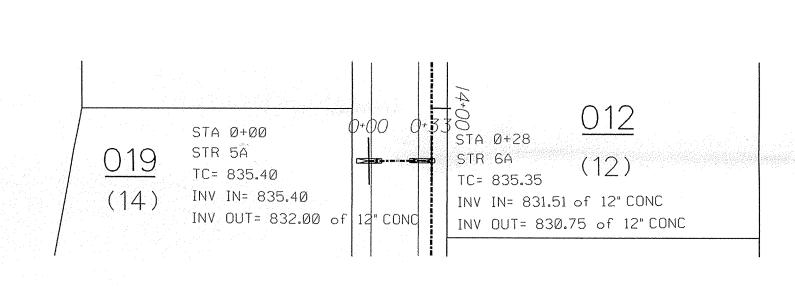




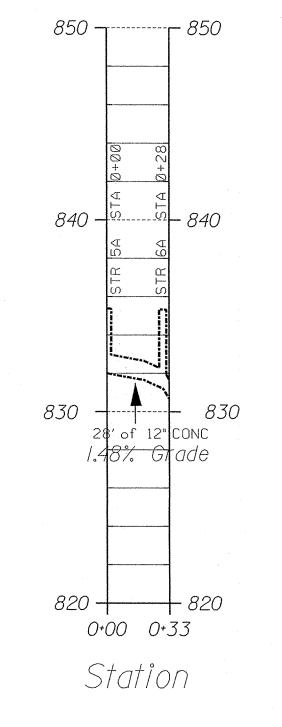
Second Arm of Main Line

First Arm of Main Line



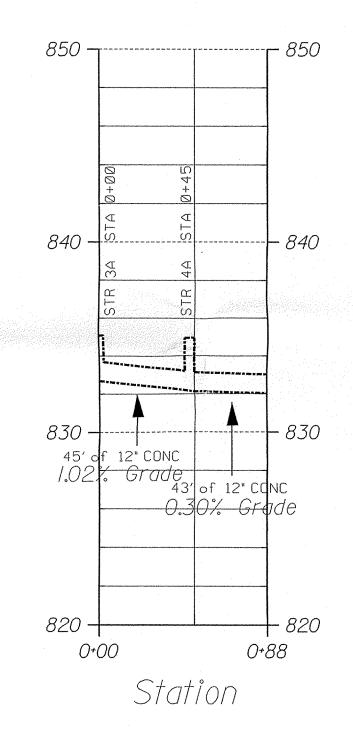


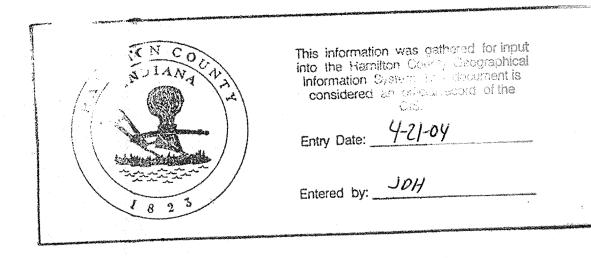
Third Arm of Main Line



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A survey was performed for the location of this drain— the property lines, edge of pavement, and right of way lines are all geographical representations and were not surveyed. Therefore, the drain in relation to these lines is not accurately represented. Although strict accuracy standards have been employed in the compilation of this map, Hamilton County Surveyor's Office does not warrant or guarantee the accuracy of the information contained herein and disclaims any and all liability resulting from any error or omission in this map.





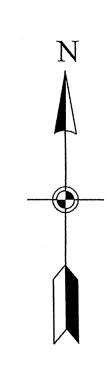
PLAN VIEW

SCALE 1" = 50'

PROFILE VIEW

HORIZONTIAL SCALE 1" = 50'

VERTICAL SCALE 1" = 5'



INDIANA Certified By: Water E. Walter Evans P.E. Sub Meridian Sheet

SHEET NO.

3 of 4

