

SURVEYOR'S OFFICE
Hamilton County

Kenton C. Ward, Surveyor

Suite 146

776-8495

One Hamilton County Square

Noblesville, Indiana 46060-2230

April 2, 1993

TO: Hamilton County Drainage Board

RE: Lamplighter Drain

Attached is a petition, plans, drainage shed map and assessment schedule for the Lamplighter Drain. I have reviewed the submittals and petition and have found each to be in proper form.

The schedule of assessments shows the name and address of each owner, the legal description parcel number, as shown by the tax duplicate or record of transfers by the County Auditor wherein the land is situated, which lands, in my opinion, will be affected by the proposed improvement and the public roads or highway owned by the County or by the State of Indiana by name or number and the Right of Ways of railroads by section, township and range.

I have reviewed the submittals and petition which was referred to me on October 19, 1992 and have found each to be in proper form. 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 costs, damages and expenses of the proposed drain will probably be less than the benefits accruing to the owners of land likely to be benefitted.

The plan developed by the SCS office addresses two problem areas. The main area addressed is the poor drainage situation in the Lamplighter and Williams Subdivisions the second is related to the flooding of the VanZant property along State Road 19. The plan addresses both the surface water and the subsurface water.

Surface water will be intercepted and collected so as to prevent drainage running into the Lamplighter Addition from the North. Also, surface water which now ponds along both sides of State Road 19 will be provided an outlet to White River. Subsurface will be addressed by the installation of subsurface tiles which will draw down what is now a high water table within the Lamplighter and Williams Subdivisions and surrounding tracts.

The plan calls for the main tile system to begin at a point along the North line of Lot 11 of the Lamplighter Subdivision. Then run East along the North line of the Lamplighter Subdivision on the Heppner Property (06-24-00-00-011.0000, 20 acres) to the North East corner of the subdivision; Thence South along the East line of Lot 20, of the Lamplighter Subdivision on the Bailey and Haskett properties to a point near the North West corner of the Thomas property; Thence East across the North line of the Thomas property to the East R/W line of State Road 19. Thence South along the East R/W/ line of State Road 19, 15 feet inside of the McMahan property to the Southwest corner of the McMahan property at which point the drain will turn East and run 15 feet North along the South line of the McMahan property to White River.

Lateral A will run North from STA 24+10 of the main line and run 750 feet along and within the East property line of Edens.

Lateral B will run South from STA 22+00 of the main line 390 feet to 196th Street

Lateral C will run West from STA of the main line and run 800 feet between the lots of the Lamplighter subdivision and the Williams subdivision.

The cost estimate for this work is as follows:

1.	Clearing	0.2ac	\$2000.00	\$ 400.00
2.	15" Polyethylene	100LF	25.00	2500.00
3.	15" Animal Guard	1each	35.00	35.00
4.	18" Concrete Tile	960LF	18.00	17280.00
5.	15" Concrete Tile	1150LF	13.00	14950.00
6.	15" Road Bore	100LF	90.00	9000.00
7.	12" Concrete Tile	800LF	11.00	8800.00
8.	10" Concrete Tile	390LF	10.00	3900.00
9.	8" HD Plastic Tile	580LF	8.00	4640.00
10.	6" HD Plastic Tile	1320LF	7.00	9240.00
11.	#8 Gravel	80CY	13.00	1040.00
12.	Tile Risers	7 each	150.00	1050.00
13.	Construct Swale	500LF	3.00	1500.00
14.	8" Road Bore	40LF	55.00	2200.00

15.	Concrete Tees	2 Each	30.00	60.00
16.	Concrete Elbow	1 Each	30.00	30.00
17.	Structures	1 LS	5645.00	5645.00
18.	Grade, Seed and Mulch	1.5ac	3600.00	5400.00
19.	8" CMP	50 FT	30.00	1500.00
20.	Road Cut	1 Each	850.00	850.00
			Subtotal	90020.00
			10% Cont.	9002.00
			Construction Total	99022.00
			Damages	5290.00
			TOTAL	104,312.00

The above costs include road cuts for LaVonne and a bore under State Road 19. The schedule of assessments show not only the per acre assessment for the County Highway and State Highway but also the cost of the road cut and bore. This cost amounts to \$2350.00 for the County Highway Department and \$9000.00 for the State Highway.

The remaining cost is \$87,672.00 to be assessed against the drainage shed which consists of a total of 78.16 acres.

I have reviewed the plans and drainage shed and believe the proposed drain will provide greater benefit to those Tracts West of State Road 19 and North of 191st Street. This included the lot owners in the Lamplighter and Williams Subdivisions and those lot owners along State Road 19. I further believe that each tract within this area will be benefited equally. I recommend that those owners be assessed at a rate of \$1740.00 per tract. I do not believe any damages will result by the construction of the drainage system in this area.

The owners of those tracts South of 191st Street and East of State Road 19 are benefited equally. I believe that the assessment for these tracts be set at a rate established by taking the cost of the system between White River and State Road 19 (\$35,920.) and dividing it by the total number of acres within the drainage shed (78.16). The rate for this area would then be established at \$460.00 per acre. Damages for this section includes the McMahan property. Damages for tract 07-19-00-00-027.000 should be set at \$1150.00 and the damages for tract 07-30-00-00-001.000 should be set at \$4140.00

I recommend the assessment for the Indiana Department of Transportation and the Hamilton County Highway be set at \$500.00 per acre. I do not believe damages to either of the road departments will result from the construction of this drainage system.

I believe this proposed drain meets the requirements for classification as an Urban Drain under IC 36-9-27-67. Therefore, I recommend such classification.

I recommend the Board set the following as the easement for the drain.

1. Drain line East of State Road 19 be seventy-five feet each side of center line.

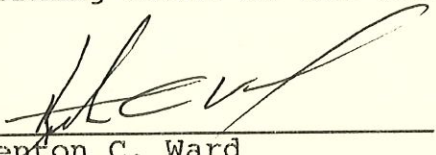
2. Mainline and Lateral A located within the Heppner property be seventy-five (75') feet West and North of the center line, and extend to the Heppner property line South and East of the property line. Further, those properties located adjacent to the Heppner property line should have the following easements:

- A. Fifteen (15') feet off the North line of Lots 11 through 20 of the Lamplighter Subdivision.
- B. Fifteen (15') feet off the West line of the following Tracts 06-24-04-04-014; 014; 015; 016; 017; 018; 019
- C. Fifteen (15') feet off the West and South line of Tract 06-24-04-04-020. Also, 15' off the West and North line of Tract 06-24-04-04-021.
- D. Fifteen (15') feet off the West line of Tracts 06-24-04-04-022 and 023.
- E. Fifteen (15') feet off the East side of Lots 1 and 20 in the Lamplighter Subdivision and Lot 1 of the Williams Subdivision.
- F. Fifteen (15') feet off the South line of Lots 1 through 10 of the Lamplighter Subdivision
- G. Fifteen (15') feet off the North line of Lots 1 through 8 of the Williams Subdivision.

Any existing encroachments into the above easements will be grandfathered. Additional temporary construction easements may also be required.

Upon review of the plans I believe the drain will benefit each tract equally for maintenance purposes. Therefore, I recommend each tract be assessed equally. I recommend a maintenance assessment of \$2.00 per acre, with a \$30.00 minimum. With this assessment the total assessment for the drain this section will be \$1710.00.

The maintenance work required for the said tile drain includes the repairing of tile, structure, maintaining the outlet and any other work necessary which will keep the tile in proper working order as and when needed.



Kenton C. Ward
Hamilton County Surveyor

KCW/no

FILED

OCT 19 1992

IN THE MATTER OF THE LAMPLIGHTER DRAIN HAMILTON COUNTY DRAINAGE BOARD

SECRETARY

Comes now the undersigned landowners of Hamilton County, who petition the Hamilton County Drainage Board as follows:

1. They are the owners of a least 10% or more in acreage within the drainage shed of the proposed drain.
2. That they are the owners of the lands described.
3. That they now desire that a regulated drain be established in Noblesville Township.
4. The names and address of each owner affected by the proposed public drainage are attached hereto, made a part hereof, and marked Exhibit "A", which area of land involved in the proposed drainage area is located in section(s) 24, township 19 north, range 4 east, Hamilton County, Indiana.
5. No other public lands or owners are located in the area which would affect improvement.
6. That the general route of the proposed drain is shown in the attached plan which is marked Exhibit "B" and made a part hereof.
7. That in the opinion of the Petitioner, the costs, damages, and expenses of the proposed improvement will be less than the benefits which will result to the owners of the land to be benefited thereby.
8. That in the opinion of Petitioner, the proposed improvement will benefit a public highway in Hamilton County, Indiana, improve the public health and be of public utility.
9. That Petitioners shall pay the cost of notice and all legal costs if the Petition is dismissed.
10. Petitioner shall post a bond, if required, to pay the cost of notice and all legal costs in the case the improvement is not established.

Signature

Printed Name

Printed Address

<u>Alinda A. Edens</u>	<u>Alinda Edens</u>	<u>8612 E. 196th St.</u>
<u>Tim Haskett</u>	<u>TIM HASKETT</u>	<u>2111 N CICERO RD.</u>
<u>Michael A. White</u>	<u>MICHAEL A. WHITE</u>	<u>8622 E. 196th ST.</u>
<u>Dan R. Thomas</u>	<u>DAN R. THOMAS</u>	<u>8670 LUANN DR.</u>
<u>Ronald E. Gentry</u>	<u>RONALD E. GENTRY</u>	<u>8650 LUANN DR.</u>
<u>Victor E. Harber</u>	<u>VICTOR E. HARBER</u>	<u>8675 LUANN DR.</u>
<u>Roy K. Bittinger</u>	<u>ROY K. BITTINGER</u>	<u>8750 E 196 ST</u>
<u>Philip H. Shelby</u>	<u>Philip H. Shelby</u>	<u>8710 Luann</u>
<u>Julia A. Bailey</u>	<u>JULIA A. BAILEY</u>	<u>2123 CICERO RD</u>
<u>Gerald & Patricia Swinford</u>	<u>GERALD SWINFORD</u>	<u>19610 LAVONNIE AVE</u> <u>Home - 11428 E 196th St</u>
<u>Michael & Cynthia Wire</u>	<u>MICHAEL M. WIRE</u>	<u>(Property Affected) 2033 Cicero Rd.</u>
<u>Jo Lynn Sowers</u>	<u>Jo Lynn Sowers</u>	<u>1811 Cicero Rd.</u>

IN THE MATTER OF THE LAMPLIGHTER DRAIN

Comes now the undersigned landowners of Hamilton County, who petition the Hamilton County Drainage Board as follows:

1. They are the owners of a least 10% or more in acreage within the drainage shed of the proposed drain.
2. That they are the owners of the lands described.
3. That they now desire that a regulated drain be established in N' Township.
4. The names and address of each owner affected by the proposed public drainage are attached hereto, made a part hereof, and marked Exhibit "A", which area of land involved in the proposed drainage area is located in section(s) _____, township __ north, range _ east, Hamilton County, Indiana.
5. No other public lands or owners are located in the area which would affect improvement.
6. That the general route of the proposed drain is shown in the attached plan which is marked Exhibit "B" and made a part hereof.
7. That in the opinion of the Petitioner, the costs, damages, and expenses of the proposed improvement will be less than the benefits which will result to the owners of the land to be benefited thereby.
8. That in the opinion of Petitioner, the proposed improvement will benefit a public highway in Hamilton County, Indiana, improve the public health and be of public utility.
9. That Petitioners shall pay the cost of notice and all legal costs if the Petition is dismissed.
10. Petitioner shall post a bond, if required, to pay the cost of notice and all legal costs in the case the improvement is not established.

Signature

Printed Name

Printed Address

X Joan R. Woloshin Joan R. Woloshin 8688 E. 196th St.

Mr. & Mrs. L. Glen Higginbotham L. GLEN HIGGINBOTHAM 8750 Luann Dr.

+ Mr. & Mrs. Oscar & Hesper Kinnyaman OSCAR & HESPER KINNYAMAN 8730 Luann Dr.

+ Sheryl C. Kendall SHERYL C. KENDALL 8725 LUANN DR.

Mr. & Mrs. Mike Burns Mike Burns 8655 LUANN DR.

Glenn L. Russell GLENN L. RUSSELL 8666 E. 196th ST.

James & Patricia Hoffman JIM & PATRICIA HOFFMAN 8630 LUANN

Thomas Rich THOMAS RICH 8615 LUANN DR.

Juanita Nosler JUANITA NOSLER 8690 LUANN ST.

Phyllis Morris PHYLLIS MORRIS 8610 LUANN DR.

James Bowman JAMES BOWMAN 8644 E 196th

7606

IN THE MATTER OF THE LAMPLIGHTER DRAIN

Comes now the undersigned landowners of Hamilton County, who petition the Hamilton County Drainage Board as follows:

1. They are the owners of a least 10% or more in acreage within the drainage shed of the proposed drain.
2. That they are the owners of the lands described.
3. That they now desire that a regulated drain be established in W. Township.
4. The names and address of each owner affected by the proposed public drainage are attached hereto, made a part hereof, and marked Exhibit "A", which area of land involved in the proposed drainage area is located in section(s) _____, township __ north, range _ east, Hamilton County, Indiana.
5. No other public lands or owners are located in the area which would affect improvement.
6. That the general route of the proposed drain is shown in the attached plan which is marked Exhibit "B" and made a part hereof.
7. That in the opinion of the Petitioner, the costs, damages, and expenses of the proposed improvement will be less than the benefits which will result to the owners of the land to be benefited thereby.
8. That in the opinion of Petitioner, the proposed improvement will benefit a public highway in Hamilton County, Indiana, improve the public health and be of public utility.
9. That Petitioners shall pay the cost of notice and all legal costs if the Petition is dismissed.
10. Petitioner shall post a bond, if required, to pay the cost of notice and all legal costs in the case the improvement is not established.

Signature	Printed Name	Printed Address
<u>Jim Myers</u>	<u>JIM J. MYERS</u>	<u>1933 Cicero Rd.</u>
<u>Dewey Vanzant</u>	<u>Dewey Vanzant</u>	<u>1865 Cicero Rd.</u>
<u>Lorety J Brown</u>	<u>BLEND DOESTHY</u>	<u>1977 Cicero RD</u>
<u>Betty S. VanWinkle</u>	<u>Betty S. VanWinkle</u>	<u>8635 Luann St.</u>
<u>Darrell Jones</u>	<u>DARRELL JONES</u>	<u>8755 LUANN ST.</u>
<u>Darrell Jones</u>	<u>DARRELL JONES</u>	<u>BOARD MEMBER</u>
<u>Edmond E Jones</u>	<u>EDMOND E. JONES</u>	<u>BOARD MEMBER-VICTORY BAPT.</u>
<u>Mr. & Mrs Dallas Hancock</u>	<u>MR. & MRS. DALLAS HANCOCK</u>	<u>8740 Luann St.</u>
<u>Mr & Mrs Stanley N Horn</u>	<u>Mr & MRS Stanley N. Horn</u>	<u>8730 E 196 St</u>
<u>James D. Tomlinson</u>	<u>JAMES D. TOMLINSON</u>	<u>8760 E 196 St</u>
<u>Donald J. Henry</u>	<u>Donald J. Henry</u>	<u>8755 East 196 St</u>

**Gasb 34 Footages for Historical Cost
Drain Length Log**

Drain-Improvement: Lamp Lighter

Drain Type:	Size:	Length	Length (DB Query)	Length Reconcile	If Applicable	
					Price:	Cost:
SSD - Plastic	6"	570'	570'			
	8"	590'	590'			
Concrete Tile	10"	393'	393'			
	12"	588'	588'			
	15"	1135'	1135'			
	18"	880'	880'			
STEEL CASING Pipe	8"	50'	50'			
	16"	90'	90'			
	20"	110'	110'			

Sum: 4406 4406 _____

Final Report: 4406

Comments:

This is a correction to the work done by Woolpert. Asbuilts
found & entered 7-20-05. (SLM)



SURVEYOR'S OFFICE

Hamilton County

Kenton C. Ward, Surveyor

Suite 146

776-8495

One Hamilton County Square

August 29, 1995

Noblesville, Indiana 46060-2230

TO: Hamilton County Drainage Board

RE: Lamplighter Drain

I recently found that the final report for the Drain had not been submitted.


During construction, changes were made to the drain which will alter the plans submitted with my report for this drain dated April 2, 1993. The changes are as follows: Change order #1 was the installation of 4156 feet of utility marking tape with a total cost of \$623.40. Change order #2 was the alteration of STR #1 to its outlet at White River. This was Hoosier Pride Excavating Inc.'s option #1. The total cost of this change order was \$10,450.00. Change order #3 was the deletion of the animal guard with a total reduction of cost being \$30.00. Change order #4 totaled \$1961.75 and was for septic finger repairs. In the April 2, 1993 report the total estimated cost was listed at \$104,312.00. That estimate was reduced in the June 23, 1993 admendment to the original report. In light of that admendment, the estimate was reduced by \$5250.00. This brought the total estimated cost as of June 23, 1993 to \$99,062.00. The project was contracted to Hoosier Pride Excavating Inc. with a bid of \$85,279.50. The total final cost of the reconstruction was \$83,039.30. This made the project \$2240.20 under bid.

The length of the drain due to the changes described above is now 4406 feet.

The payments to the Contractor are as follows:

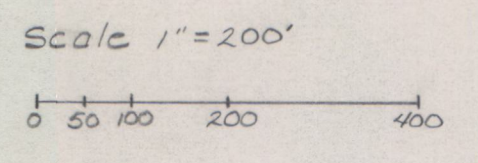
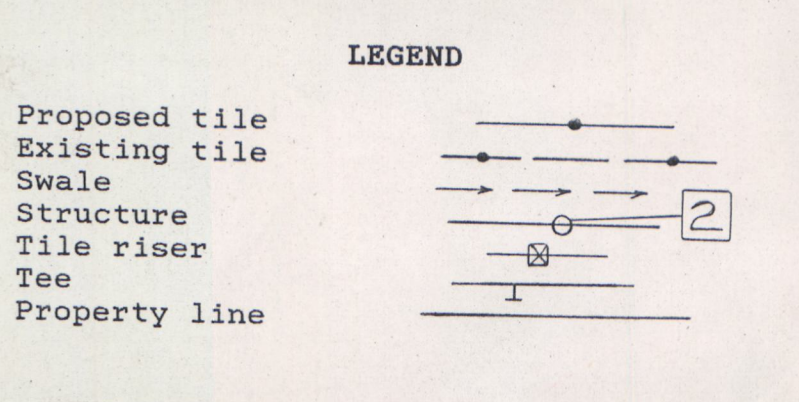
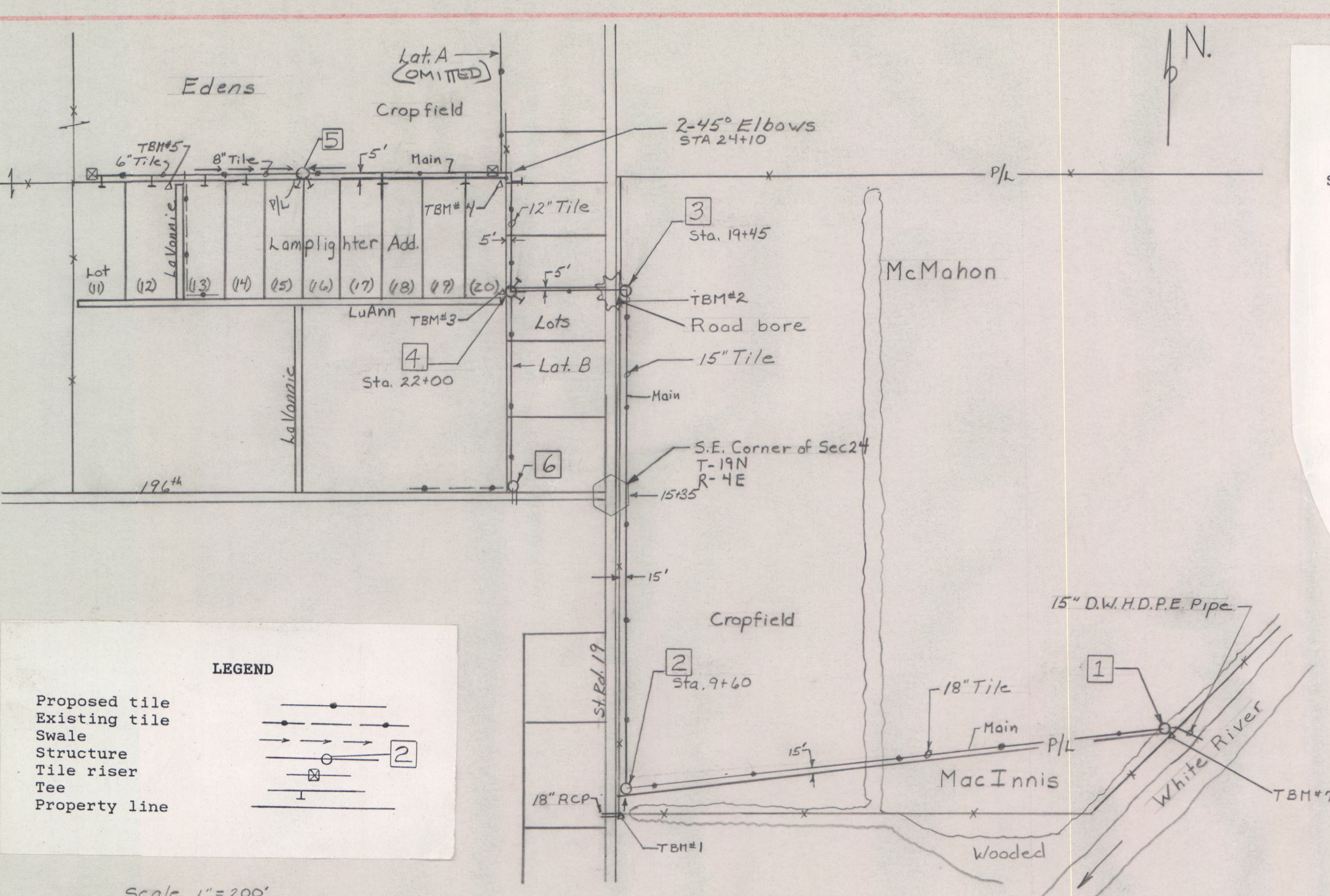
Claim #1	April 4, 1994	\$23,650.06
Claim #2	May 6, 1994	\$35,575.86
Claim #3	September 14, 1994	\$23,813.38

The Board should approve the claims and accept the work as complete.



 Kenton C. Ward
 Hamilton County Surveyor

SLM



Gravel Bedding - Station 22+00 to 32+00 on Main
See Detail Sheet #4

STRUCTURE CHART

Structure #	Type	Casting	T.C.	Inverts
1	A w/steps	R-2535A	796.5	E. 786.0 15" Pl Tile W. 786.0 18" Con Tile
2	C	R-4215C	791.6	E. 787.9 18" Con Tile N. 787.9 15" Con Tile
3	A w/steps	R-2535A	797.3	S. 790.0 15" Con Tile W. 790.0 15" Con Tile
4	C	R-4215C	795.2	E. 790.5 15" Con Tile N. 790.5 12" Con Tile S. 790.5 10" Con Tile
5	B	R-4342	795.3	E. 791.6 12" Con Tile W. 791.6 8" Pl Tile
6	B	R-4342	792.9	N. 791.3 10" Con Tile
7	B	R-4342	797.0	E. 793.2 8" Pl Tile W. 793.2 8" Steel Casing

SEE SHEET #4 FOR DETAILS

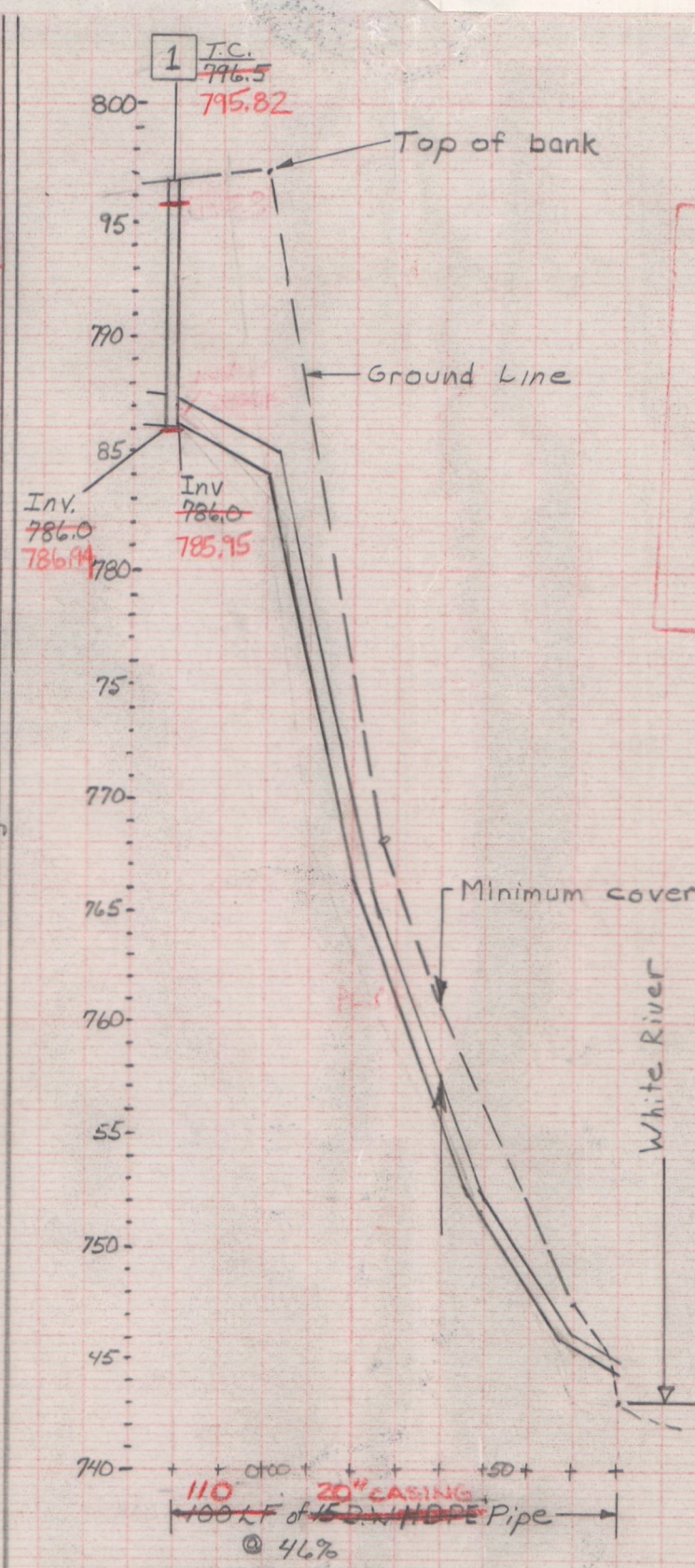
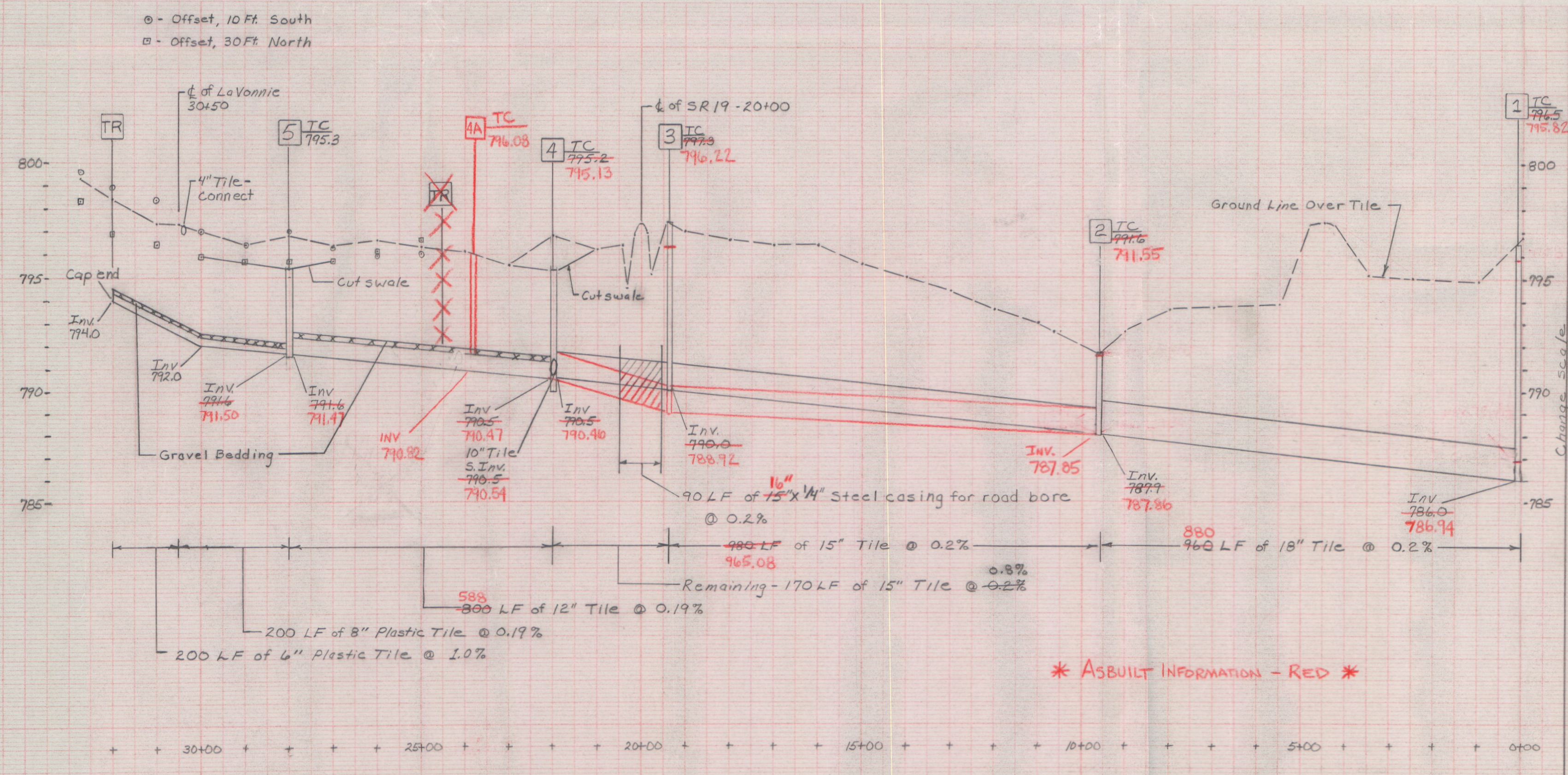
TEMPORARY BENCHMARK DESCRIPTIONS

- TBM#1- Lower invert of 18" SR 19 culvert, approximately 1/8 mile south of 196th Street. Elev.- 792.10
- TBM#2- Nail in the northeast side of a fence post, 2 rod south of SR19 tile crossing. Elev.- 797.88
- TBM#3- Nail in the west side of a utility pole, 20 feet north of the east end of LuAnn Street. Elev.- 796.45
- TBM#4- Nail in the southwest side of utility pole #8750 Elev.- 796.68
- TBM#5- Nail in the northeast side of utility pole #8630, 20 feet west of the north end of LaVonnie Street. Elev.- 798.84
- TBM#6- Nail in the north side of utility pole, 15 feet west of LaVonnie Street, half way between 196th and LuAnn. Elev.- 798.76
- TBM#7- Nail in the west side of a fence post at the top of the bank of White River, 8 feet north of the property line. Elev.- 796.97

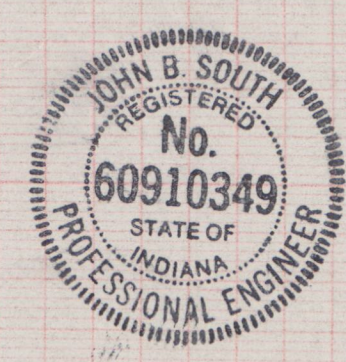
CLEARING

East of St. Rd. 19 - The White River bank and part of an old fence row will be cleared to install the tile. The river bank will be cleared only to the extent needed to install the tile. A path will be chosen to minimize clearing. The fence row will be cleared for a width of thirty feet (30'). Limbs and brush will be chipped or removed from the site. Trunks will be trimmed and left in neat pile; stumps will be buried.

West of St. Rd. 19 - Trees or shrubs cleared to install the tile or swale will be removed from the site. These will be marked prior to construction. Care will be taken to limit any damage to the remaining trees.



Hamilton County, Indiana
This information was gathered for input into the Hamilton County Geographical Information System. This document is considered an official record of the GIS.
Entry Date: 7-20-05
Entered by: SLH



LAMPLIGHTER DRAIN TILE PLAN & PROFILE
U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

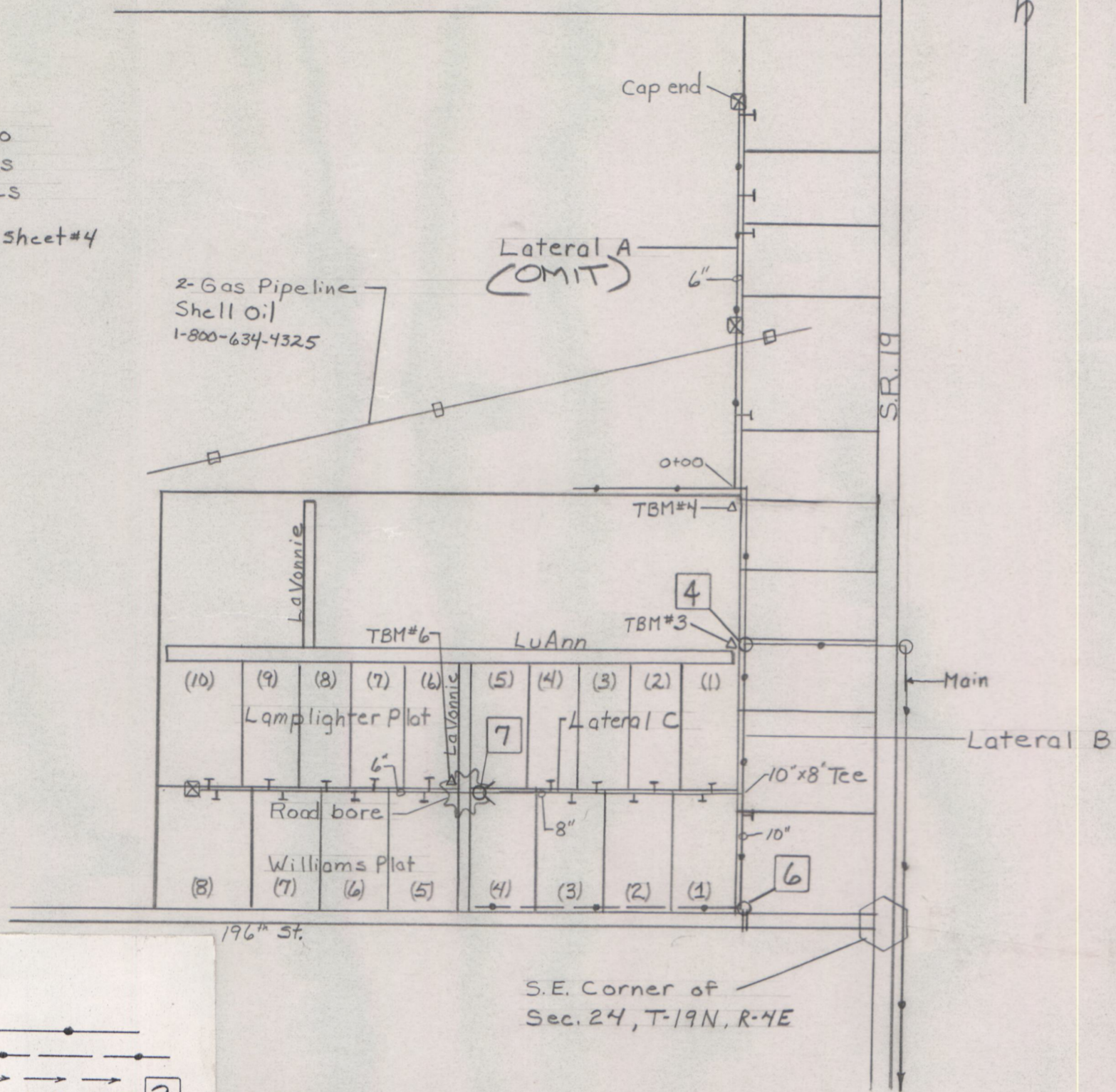
Designed: J. SOUTH 11/92
Drawn: J. SOUTH 11/92
Checked: T. Schellenberger 12/92
Date: 11/92
Approved by: _____
Title: _____
Sheet: No. 2 of 4
Drawing No: _____

Tile Profile - Main

Tile Profile - Main

NOTE - UTILITIES ARE NOT MARKED ON THIS PLAN.

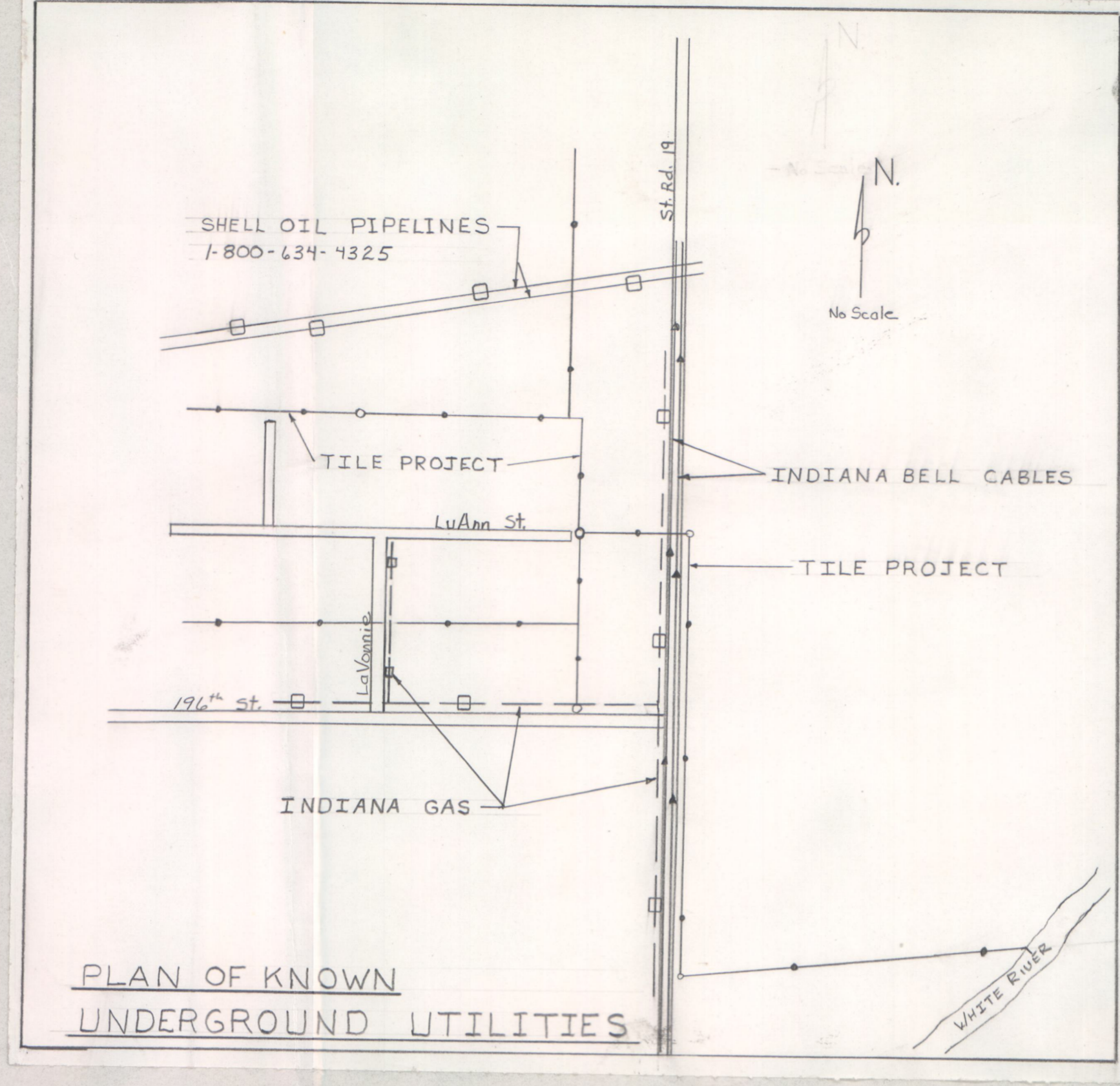
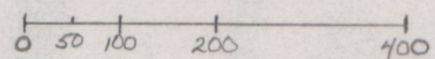
Gravel Bedding
 Lateral A - No
 Lateral B - Yes
 Lateral C - Yes
 Bedding Details- See Sheet #4



LEGEND

- Proposed tile
- Existing tile
- Swale
- Structure
- Tile riser
- Tee
- Property line

PLAN SCALE - 1" = 200'

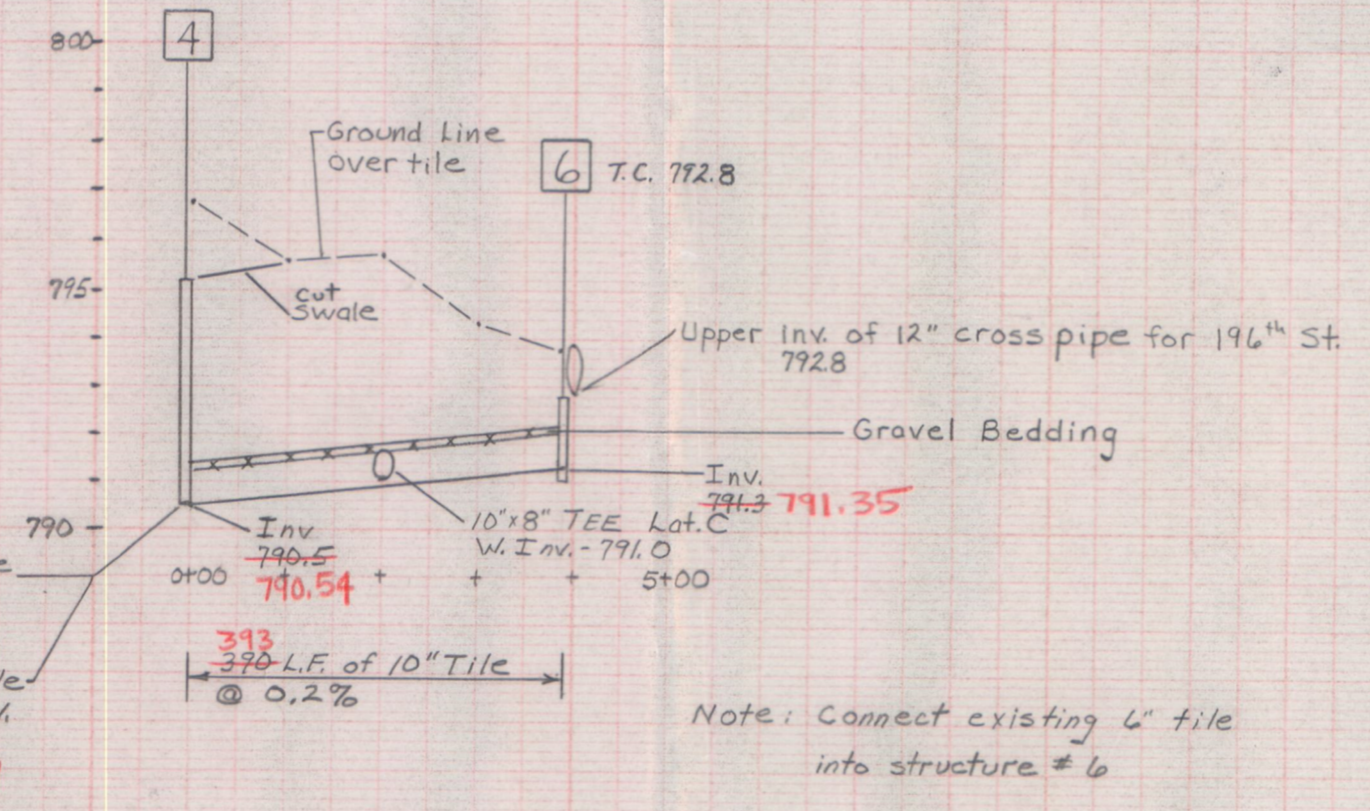
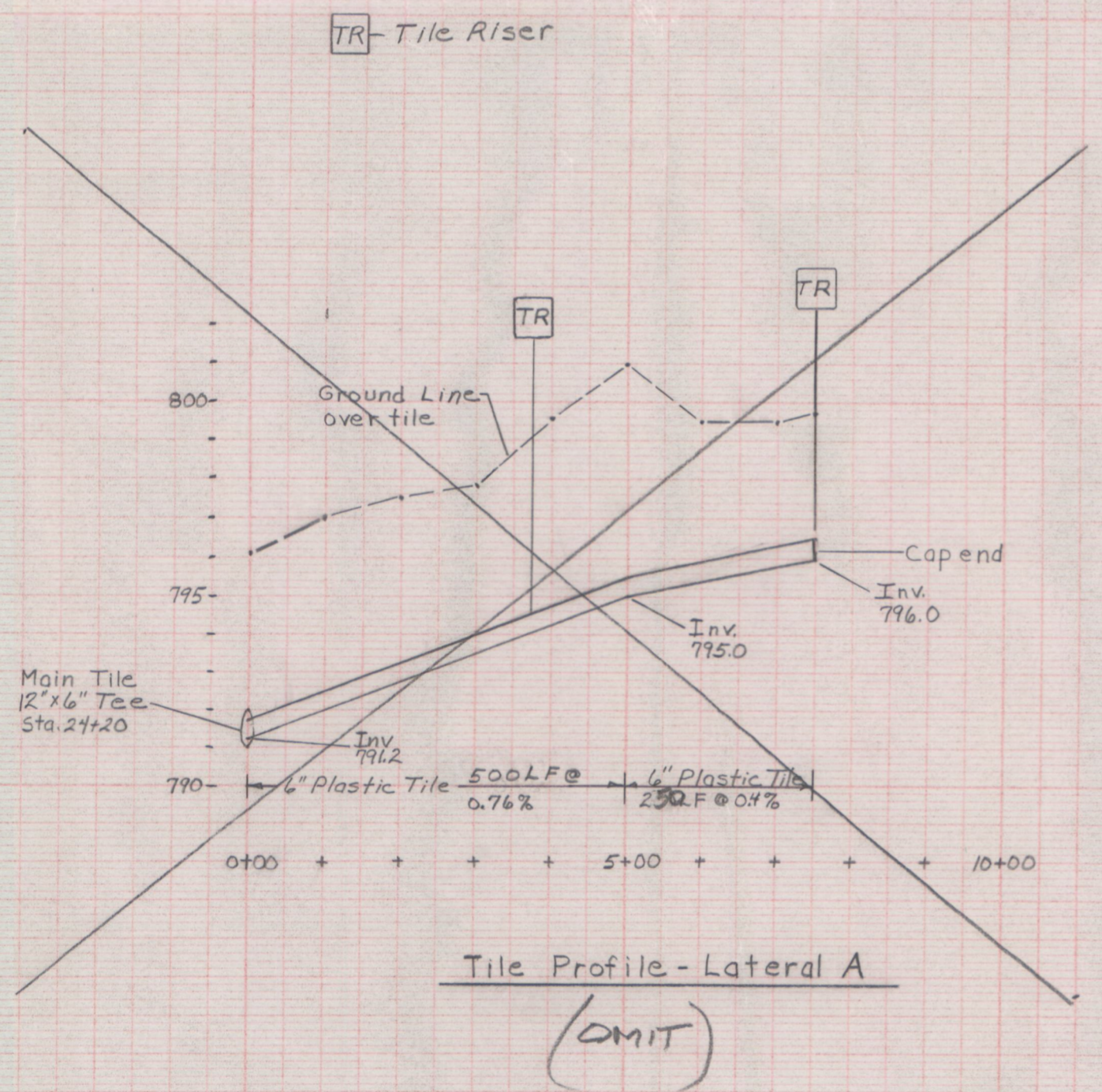


PLAN OF KNOWN UNDERGROUND UTILITIES

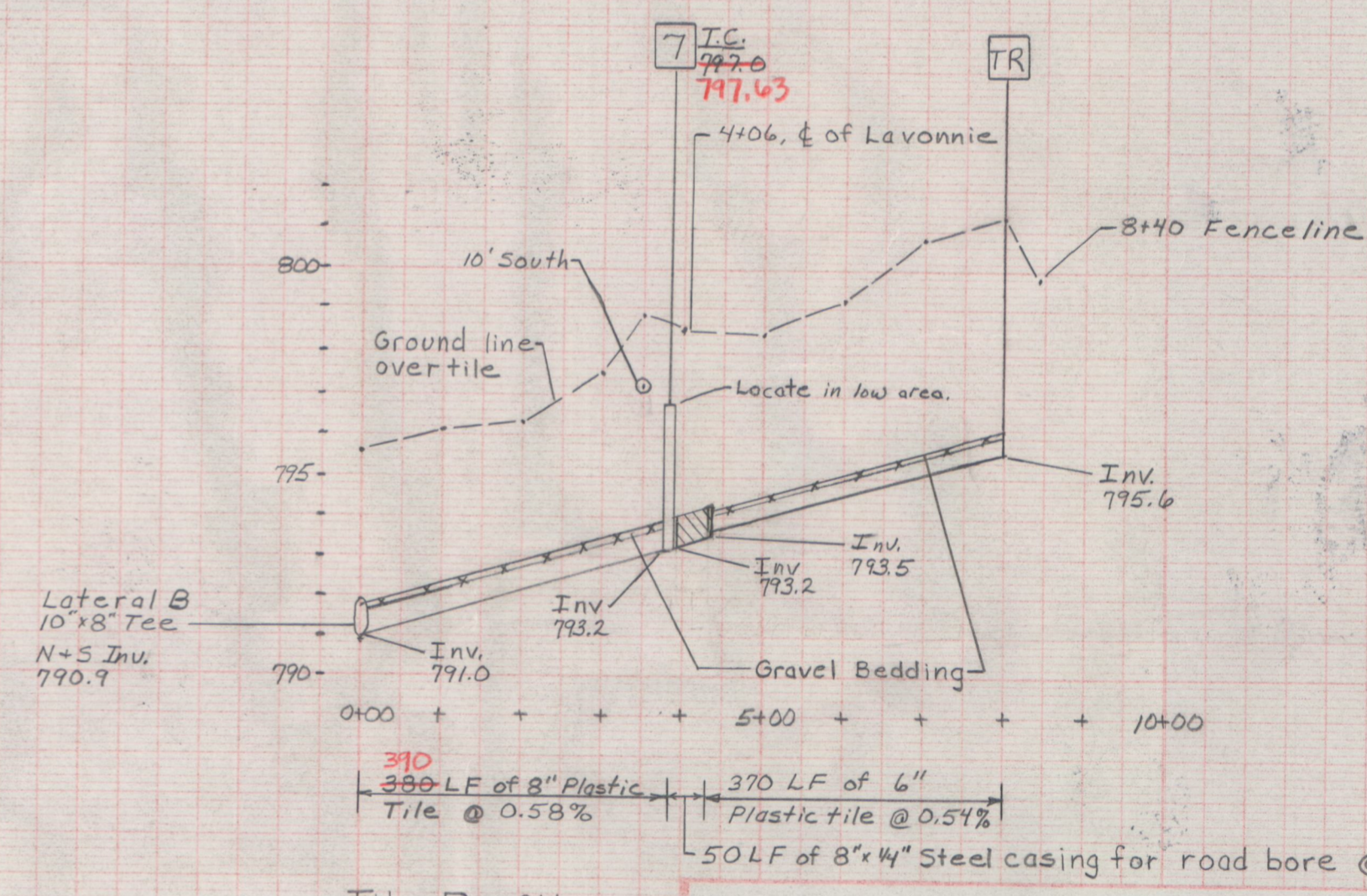
HAMILTON COUNTY INDIANA 1825

This information was gathered for input into the Hamilton County Geographic Information System. This document is considered an official record of the GIS.

Entry Date: 7-20-05
 Entered by: SIM



Tile Profile - Lateral B

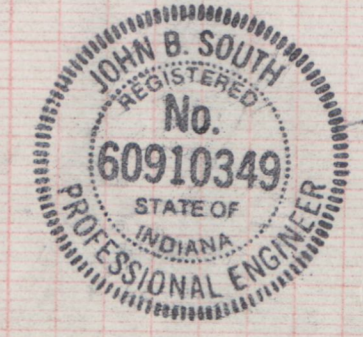


Tile Profile Lateral C

LAMPLIGHTER D TILE PLAN & PRO

U. S. DEPARTMENT OF AGRICULTURE
 SOIL CONSERVATION SERVICE

Designed	J. SOUTH	Date	11/92	Approved by	
Drawn	J. SOUTH	Date	11/92	Title	
Traced		Date		Title	
Checked	T. Schellenberger	Date	12/92	Sheet	3 of 4



John B. South
 Certified 12-18-92

* ASBUILT INFORMATION - RED *

PROFILE SCALE
 V - 1" = 4'
 H - 1" = 200'

NOTE - UTILITIES ARE NOT MARKED ON THIS PLAN

TILE INSTALLATION AND MAINTENANCE SPECIFICATIONS

Trenching. Trench widths must be adequate for proper installation of the conduit; must allow proper joining of sections; and must allow proper placement of filter, envelope, or blinding materials.

The trench width will allow a minimum of 3 to 6 inches on both sides of the tile. The trench bottom shall be constructed to proper grade and shape before placement of the tile.

Where rock is encountered the trench will be over excavated a minimum of 6 inches and refilled to grade with a suitable bedding material.

Provisions for safety during trenching operations shall be in compliance with the applicable safety and health regulations for construction.

Bedding. If unstable soil conditions are encountered, the trench bottom must be stabilized before placement of the tile. Where necessary, the unstable material will be removed and replaced with sand-gravel or a similar material. Where an envelope is not specified, the bottom of the trench shall be shaped to ensure good alignment of the tile.

Filters and envelopes. If a sand-gravel filter is specified, it shall be clean, hard, durable material and of the gradation specified.

Placement. All conduits shall be laid to line and grade and covered with the specified blinding, envelope, or filter material to a depth of not less than 3 inches around the tile. Blinding material shall contain no hard objects larger than 1.5 inches in diameter. Unless otherwise specified, topsoil will be used to blind the tile.

Joints between drain tile shall not exceed 1/8 inch except in sandy soils, where the closest possible fit must be obtained, and in organic soils where some of the fibrous types make it desirable to slightly increase the space between tile.

Construction tolerances. The following guidelines for subsurface drain construction:

Flowline or grade \pm 0.1 foot
There will be no reverse grades.

Backfill. Backfill will be placed in such a manner as to avoid displacement of the conduit. Backfill should be moved into the trench at an angle so that material flows down the front slope of previously placed material. Backfill shall not contain frozen material, stones, clods, or other objects large enough to damage the tile.

Backfill should be backfilled as soon as possible after blinding.

Finish. Work areas shall be restored to their former condition as much as possible. Vegetation or other protective cover shall be established promptly.

Maintenance. A maintenance program shall be established by the landowner/user to maintain the functional capacity of the drain tile. Items to consider are:

1. Keep inlets, trash guards, collection boxes and structures clean and free of materials that can reduce the flow.
2. Repair all broken or crushed lines to insure proper functioning of the drain.
3. Periodically inspect outlet conduit and animal guards for proper functioning.

Tile Specifications The high density polyethylene (HDPE) double wall tubing and fittings will meet the requirements of AASHTO M-252 and M-294 with a minimum pipe stiffness of 34 psi. The concrete tile will meet the requirements of ASTM C-412. The polyethylene tubing and fittings will meet the requirements of ASTM F-404 and ASTM F-667.

VEGETATIVE ESTABLISHMENT

Vegetation should be established on all disturbed areas as soon as possible after construction.

Apply as indicated:

Dates	Lime	Fertilizer	Mulch	Seed	Temporary Seeding
Mar 1 to May 10	yes	yes	yes	yes	no
May 11 to Aug 9	yes	#	no	no	yes
Aug 10 to Sep 30	yes	yes	yes	yes	no
Oct 1 to Feb 28	yes	yes	yes	*	no

* Apply grass seed at 150% of regular rates between Dec 10 and Feb 28 as a dormant seeding. Do not apply clover seed.

Excess water shall be directed away until vegetation is established, if possible. Any protective works installed shall be removed after vegetation is established and the disturbed area seeded for permanent grass.

LIME: Apply lime as determined by soil tests or at the rate of $\frac{1}{2}$ tons per acre to raise the pH to approximately 6.5.

FERTILIZER: Apply fertilizer as determined by soil tests or at the minimum rate of 1000 pounds of 12-12-12 fertilizer (or its equivalent) per acre.
Use 1/3 recommended rate May 11 to Aug 9.

MULCH: Apply mulch at the rate of $\frac{1}{2}$ tons of straw per acre, or use an equivalent commercial erosion control material. Site conditions may require mulch to be anchored.

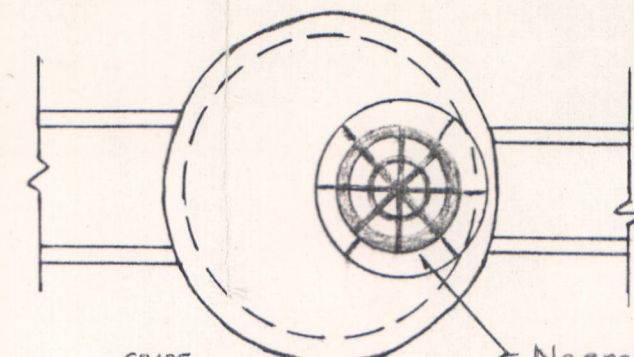
SEED: Apply the following seeds at the rate indicated:
Seed Pounds per acre (pure live seed)

<u>KENTUCKY BLUE GRASS</u>	40
<u>CREeping RED FESCUE</u>	40

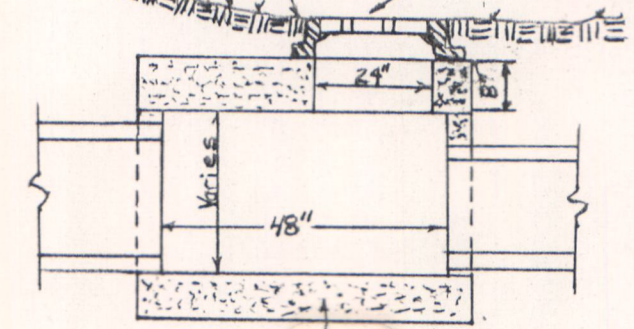
Work the lime and fertilizer into the soil to a depth of 2 to 3 inches with a harrow or disk. Prepare a firm seedbed with a cultipacker or cultipacker type seeder. Work the seed into the soil 1/4 to 1/2 inch. Dormant seeding may be broadcast on top of the mulch.

TEMPORARY SEEDING: Apply 20 pounds of Annual RYE GRASS seed per acre as a temporary cover crop. After August 10, remove or incorporate temporary cover and apply lime fertilizer, mulch and seed in normal manner.

NOTE - ALL TRENCHES CONSTRUCTED WEST OF ST. RD. 19 WILL BE ALLOWED TO SETTLE 30 DAYS PRIOR TO FINAL GRADING AND SEEDING.

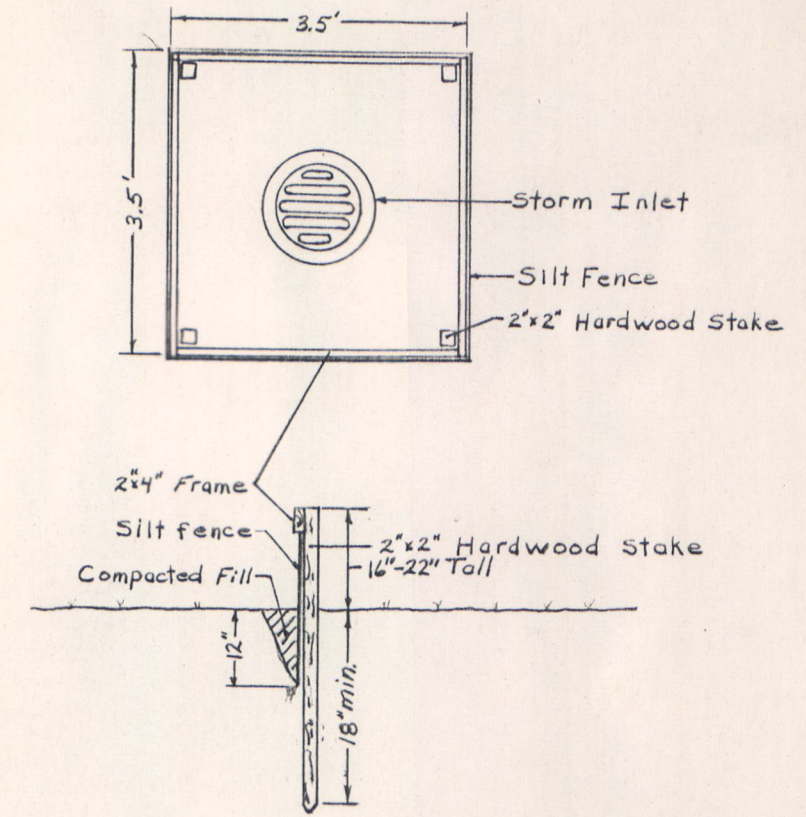


Neenah Type Casting R-2535A or Equal
See chart on Sheet #2

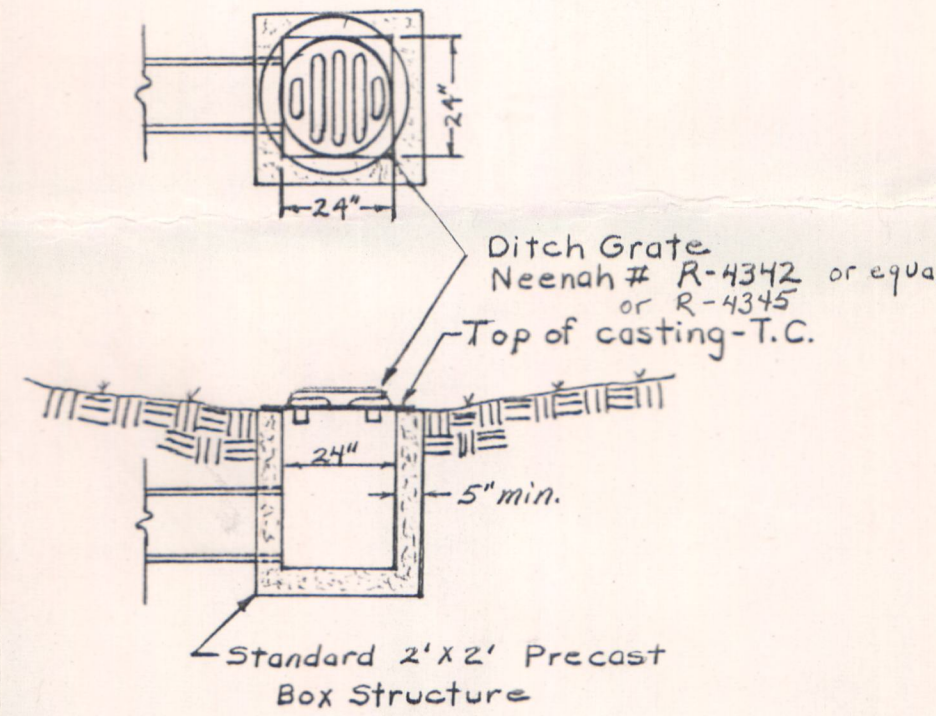


100# Standard Precast 48" Manhole
Benchwalls and flowlines required
Steps required if depth > 4 ft.

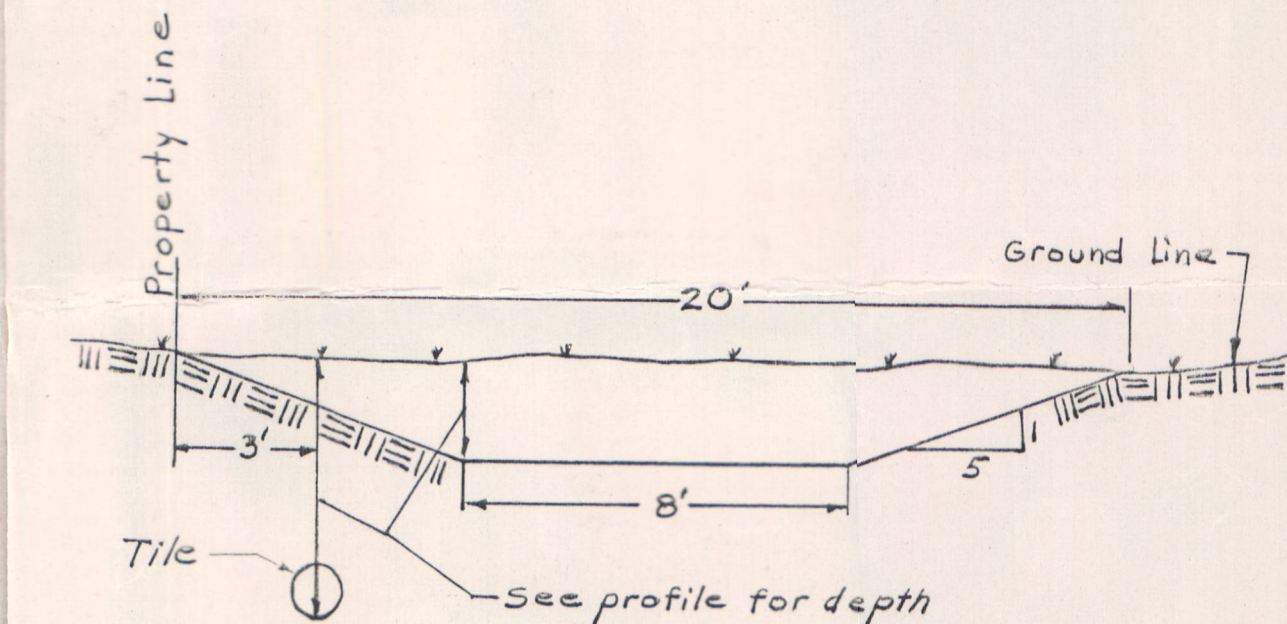
Structure "A"



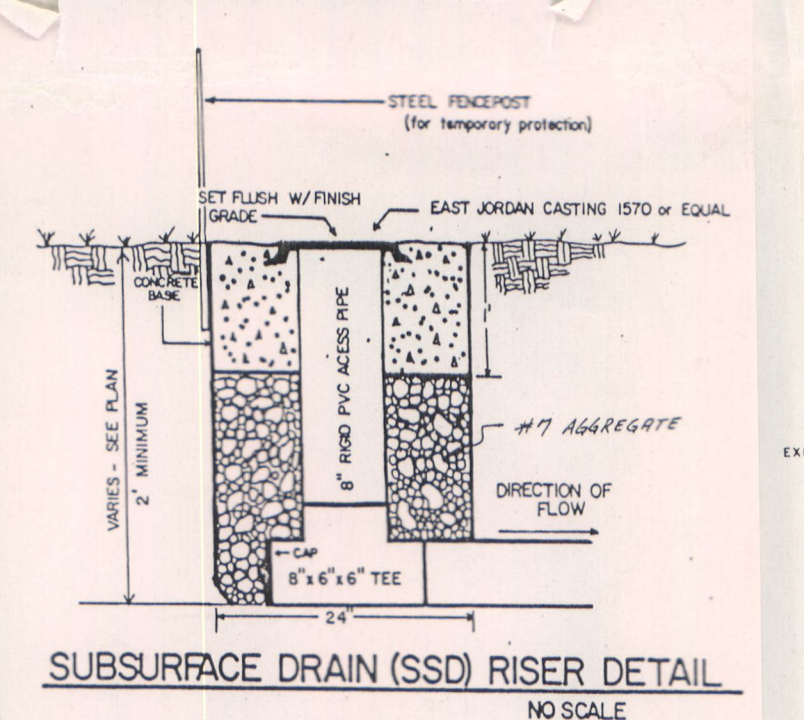
Storm Inlet Erosion Control
Use at all Inlets, Remove as last item of work.



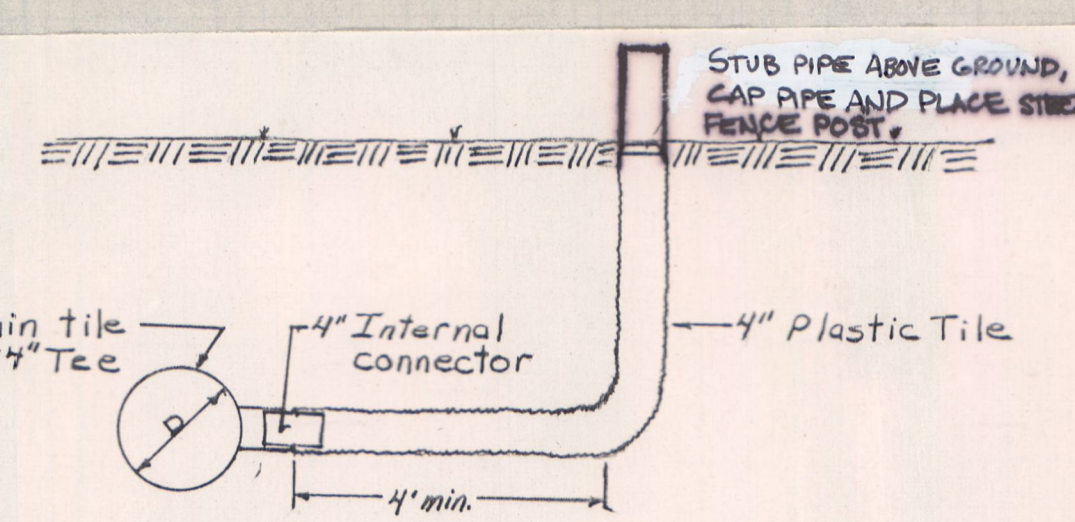
Structure "B"



Swale Detail

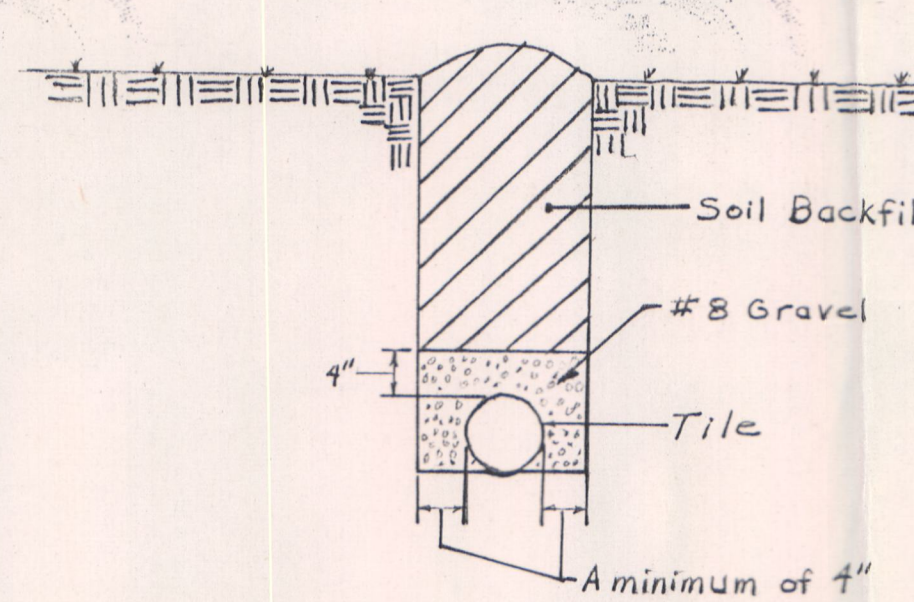


SUBSURFACE DRAIN (SSD) RISER DETAIL
NO SCALE

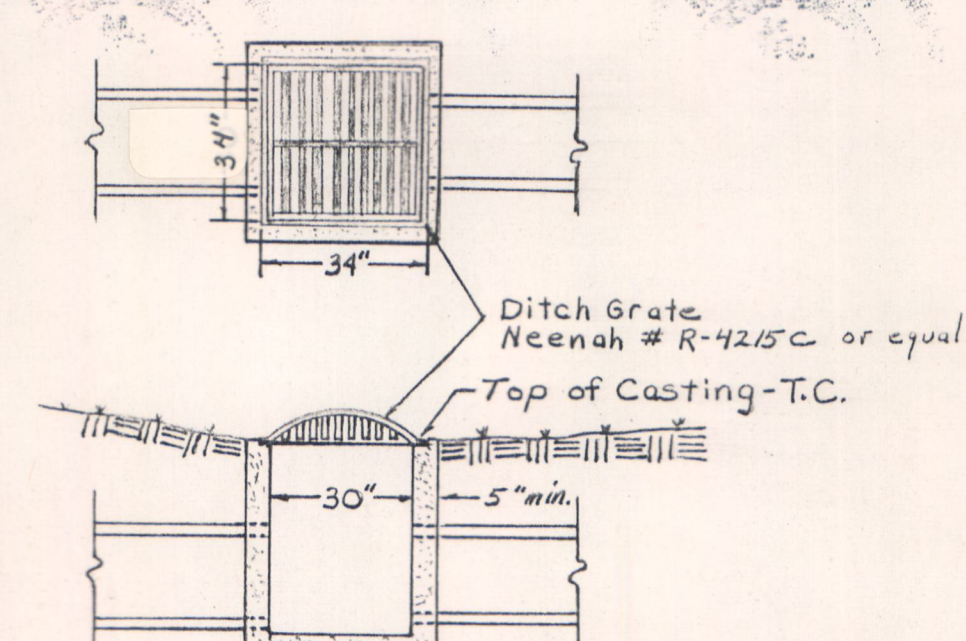


Concrete tees will be located at property lines to serve two lots. Plastic tees will be installed to serve one lot.

Tile Stubs for Individual Lots



Tile Installation w/
Gravel Bedding



Standard 30"x30"
Precast Box Inlet

Structure "C"

John B. South
Certified 12-18-72
No. 60910349
STATE OF INDIANA
PROFESSIONAL ENGINEER

LAMPLIGHTER DRAIN CONSTRUCTION DETAILS
U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Designed: J. South 11/92
Drawn: J. South 11/92
Traced: J. Schellenberger 12/92
Checked: J. Schellenberger 12/92

Date: 11/92
Approved by: J. South, P.E.
Title: District Eng.
Sheet No. 4
Drawing No. 4