Drain: LYNNWOOD HILLS DRAIN **Drain #:** 152
Improvement/Arm: LYNNWOOD HILLS - SECTION 2
Operator: JDH **Date:** 4-15-04
Drain Classification: Urban/Rural **Year Installed:** 1983

GIS Drain Input Checklist

- Pull Source Documents for Scanning — JH 4-15
- Digitize & Attribute Tile Drains — N/A
- Digitize & Attribute Storm Drains — JH 4-19
- Digitize & Attribute SSD — JH 4-19
- Digitize & Attribute Open Ditch — JH 4-19
- Stamp Plans — JH 4-19
- Sum drain lengths & Validate — JH 4-19
- Enter Improvements into Posse — JH 4-19
- Enter Drain Age into Posse — JW 4-23
- Sum drain length for Watershed in Posse — JW 4-23
- Check Database entries for errors — JH 4-19

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Gasb 34 Footages for Historical Cost
Drain Length Log

Drain-Improvement: LYNNWOOD HILLS DRAIN - LYNNWOOD HILLS - SECTION 2

Drain Type:	Size:	Length SURVEYOR REPORT	Length (DB Query)	Length Reconcile	If Applicable Price:	If Applicable Cost:
SSD	6"	18,270'	19,677'	+1,407'		
RCP	12"	403'	383'	-20'		
	15"	1,903'	1903'	ø		
	18"	859'	867'	+8'		
	21"	190'	190'	ø		
	24"	41'	41'	ø		
	27"	794'	794'	ø		
	30"	545'	561'	+16'		
* CONC FIELD TILE	15"	1,000'	ø	-1,000'		
CMP	8"	60'	ø	-60'		
	30"	45'	ø	-45'		
OFFSITE OPEN DITCH		651'	626'	-25'		
Sum:		24,761'	25,042'	+281'		

Final Report: 25,501 *

Comments:

SR AND AE DISAGREE ON 6" SSD, 8" AND 30" CMP LENGTHS

* SR AND AE DISAGREE ON 15" CONCRETE TILE LENGTHS * Replaced with Conner Prairie Recon.

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SURVEYOR'S OFFICE

Hamilton County

Kenton C. Ward, Surveyor

773-6110 Ext. 19

Noblesville, Ind. 46060

September 18, 1981

To: Hamilton County Drainage Board

Re: Lynnwood Hills Drain Project

Attached you will find a set of plans and specifications for the Lynnwood Hills Drain Project. Also included in this report is a schedule of assessments for the project.

Upon review of the plans I have suggested several changes which I feel should be made. The following list contains these changes.

The joints of the Class IV concrete pipe (RCP) should not be sealed.

The insurance coverage for property damage on page J-2 be increased to $300,000.00.

On page L-3 under 2.6.08, line b should have the word "written" inserted between Contractor's and estimate. Also line C, numbers 1 through 4 should be eliminated.

Page L-2 under 2.6.04, should be changed to: A claim shall be submitted to the Auditor within thirty days after receipt of a request for payment from the Contractor. Upon such request the owner shall:

On page L-1, section 2.6.02, the retainer shall be increased from 10% to 15% to be retained 60 days after final acceptance by the owner. Also item 4 under this section should be eliminated.

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Details are needed for the 3 Beehive inlets for lots 166, 1 and 44.

A mistake appears on page 10 on the bottom profile. The 4" pipe should be changed to 6" pipe. Also it should be emphasized that the 6" pipe is the flexible perforated plastic type.

Changes needed on the Bid Form are as follows:

Page C-3, line C, Item 3 - change from 27" end section to 30". Item 8 on same page and line change quanity of manholes complete from 1 to 2. Page C-4, Underdrain, change length from 30,157 L.F. to 28,897 L.F. Also add 3-20' lengths of 8" CMP with animal guards and end sections.

Add to this the work needed for Conner Prairie which includes 50 square foot of riprap, 45' of 30" CMP, 2-30" end sections, 651 feet of open ditch regrade and alignment and work necessary for the 15" tile at both inlet and outlet.

Also needed is a Supplemental Bid Form for per foot prices on various pipe sizes for plastic, concrete field tile, CMP and RCP along with various appendages for these pipes; various machines, crane, dozer, etc., which may be needed with operators per hour; and pumps, saws, etc. per hour, labor per hour; concrete per yard and gravel, dirt and sand fill per cubic yard.

Twenty foot lengths of 8" CMP with metal end sections and animal guards shall be placed at the outlets of the 6" SSD on lots 157-158 and 27. These should be noted on pages 7, 13 and 14 of the plans. These pipes are to be slipped over approximately 5 feet of the 6" pipe.

Eliminate the 6" SSD along Allisonville Road on lots 165, 166 and 167; along the south side of 132nd Street on lots 157 and 143; along the south

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side of Roses Road on lots 150, 151, 100, 101, 102, 74 and 75; along the south side of Los Robles Road in front of lot 61, stubbing drain about 20' on lot 60; and on the east side of Chevy Chase Drive on lot 131 and 134, stubbing drain on lot 134 from manhole and stubbing about 20 feet on lot 132. These changes need to be made on the area map and on the individual profile sheets. This will eliminate approximately 2070 feet of 6" SSD and still provide each lot with a subsurface drain on at least two sides.

Animal guards should be a flap type so as to allow any debris in the tile to exit.

Details are needed for riprap and outlets on lots 167, 157 and 158 and the northern discharge. Also it should be specified that the depth of the riprap shall be 1.5 feet. Riprap to be 7 or 9 inch graded limestone.

More explanation and detail is needed on sheet 19 which covers work needed on the Conner Prairie Farm. This includes cross sections and profile of the open ditch work on the north and south discharges. The south discharge plan should also show the riprap plan for the corner south of the lane, new pipe under the lane and straightening curve in ditch north of the lane. A note should be placed on the plans stating the Contractor is to locate existing 12" tile so that new 15" can be placed parallel to it on approximately the same grade.

Upon completion of these changes I believe the plans and specifications will be complete. Also needed to be brought out is the fact that the project must be approved by myself before payments are made and final acceptance by the Board. Therefore, I will work closely with Mr. Frazell of Triad Associates, Inc. throughout the length of the project.

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I would like to recommend to the Board that although the entire project will be constructed through the Drainage Board, not all of the project be accepted as a legal drain. I have marked in red on page 2 of the attached plans the portion of the drain which I believe should be included in the legal drain system. This amounts to the entire storm sewer system and the subsurface drainage within the road right-of-way. The short stretch of subsurface drain between lots 165, 166, 167 and lots 44 and 45 including the surface inlet should also be part of the legal drain. Also included on the legal drain system would be the drains shown on page 19 on Conner Prairie Farm. By including the drains along the roads as a legal drain, all lots then will have access to a County Drain.

The balance of the subsurface drains which are in rear and side yards will then become private drains. Because of future maintenance problems caused by fences, outbuildings, playground equiptment, etc., I believe that this would be the best situation for future Drainage Boards, Surveyors, Drainage Board Contractors and Home Owners. Also the Board should note that there are no easements provided for drainage in most side and rear yards.

The proposed legal drain would include the following:

399 sq ft	Riprap
	1-18" metal end section
	2-30" metal end sections
545 ft	30 inch RCP
794 ft	27 inch RCP
41 ft	24 inch RCP
190 ft	21 inch RCP
859 ft	18 inch RCP
1903 ft	15 inch RCP
403 ft	12 inch RCP
11	Manholes
25	Inlets
10	Manholes with inlets
1000 ft	15" Concrete field tile
18270 ft	06" Subsurface drain
60 ft	08" CMP
3	08" Animal guards and end sections
651 ft	Open ditch regrading and realignment
45 ft	30" CMP
2	30" Metal end sections

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The approximate total length of the new legal drain would be 24,761 feet.

The cost estimate for the project is as follows:

Line A	$ 21,561.50
Line B	12,140.00
Line C	43,128.00
Line D	14,137.50
Line E	22,622.50
Line F	10,328.00
Subsurface drains	130,036.50
Conner Prairie Farm	20,058.00
Sub Total	$274,012.00
10% Engineering	27,401.20
Total	$301,413.20

I believe that Conner Prairie should pay a portion of the work proposed on their property. This has been discussed with representatives from Conner Prairie and an amount of $7,352.00 has been established for their share.

The Hamilton County Highway Department has accepted the roads in the older portion of the subdivision which amounts to approximately 29.82 acres. I believe the County's share of the construction cost should be $7,000.00.

Because the County has not accepted the roads in the latter portion of the development, Mr. Robert Sowerwine, the Developer, still has responsibility for these roads. These roads represent approximately 15.15 acres. I believe that his portion of the construction cost should be $5,000.00.

This then leaves $282,061.20 to be borne by the lot owners within the subdivision. There are 165 lots in the development which are assessed. This figures out to be an assessment of $1709.46 per lot for the construction of the new drain.

The maintenance cost should be $2.00 an acre and $20.00 per lot annually. This will generate a yearly total of $3467.94.

The Board must consider the sell of bonds for this particular project. There is presently not enough money in the General Drain Improvement Fund to finance

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such a project. Furthermore, I cannot forsee a time in the near future when the General Drain Improvement Fund could have the money needed for a project this size. Until recently the Board has been limited to an interest rate of 12%. As of September 1, this limitation has been eliminated. However, the rate must still be attractive enough to the individuals who will be paying for the project for them to agree to the project. At this time the City of Carmel could not sell bonds to finance a sanitary sewer at a rate of 13% and are trying again at a rate of 15.5%. The landowners should be told of this and possibly have a limit on the rate of the bonds set at possibly 16% to 17% for at least a 5 year period.

Also the Board has two options on the method of arriving at the amount of the Bond. The Board could set the amount of the bond at the Engineers estimate given in the report or could take bids on the project with the understanding that project construction would not begin until Bonds were sold. Using the latter method a 10% contingency should be added in case extra work would be needed. This should be considered before the public hearing.

The hearing for this drain should be set for December 7, 1981. The construction on the drain could begin in the Spring of 1982 barring any serious complications.

Kenton C. Ward

Kenton C. Ward, Surveyor

KCW/jg

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SURVEYOR'S OFFICE

Hamilton County

Kenton C. Ward, Surveyor

773-6110 Ext. 19

Noblesville, Ind. 46060 December 7 1981

TO: Hamilton County Drainage Board

RE: Lynnwood Hills

Because of the County Health and State Health Department ordinances regarding the separation distances between drain tiles and septic absorption fields I would recommend to the Drainage Board that all rear lot subsurface tiles be omitted from the proposed drain plan. THis pertains to those drains refered to in my report of September 18.1981, page 4, paragraph two. Because of this the following changes should be made to the plans and specifications.

Swale in rear lot lines as shown with red arrows on plan

Place 6" SSD between Lots 81 & 82 , Lots 106 & 107 and lots 5 & 6 with inlet at back of lots

Place inlets at Southeast corner of Lot 61, Northwest corner of LOT 143, Southwest corner of Lot 145 and the Southwest corner of Lot 128

At this time I believe that he cost estimate remain at its current amount. Also a mistake has been made on addendum #1, page C-7 line 2. It should read 1000 LF of 15" Concrete pipe, not 100 LF.

Kenton C. Ward

KCW/no

Kenton C. Ward-County Surveyor

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GUARD CASUALTY & SURETY INSURANCE COMPANY

GENERAL FORM STATUS INQUIRY

Hamilton County Drainage Board
Owner, Obligee or Originating Co.

February 8 19 83

Address
Noblesville, IN 46060

Our Bond No. SP 2198

Contractor: Eastern Indiana Asphalt, Inc.

Address: P.O. Box 296, Winchester, IN 47394

Description of Contract: storm sewer construction, Noblesville, IN.
(Include Location and Owner's Contract Number)

Owner: Hamilton County Drainage Board

Contract Price $ _____ Bond(s) $ 181,896.48 Effective Date 5-17-82

Without prejuding your right or affecting our liability under our bond(s) described above, we would appreciate such of the following information as is now available.

Very truly yours,

By Steve Kuykendall
Steve Kuykendall, Bond Department

1. IF CONTRACT COMPLETED, PLEASE STATE:
   Approximate date of completion of work (or final delivery) _____
   Approximate acceptance date _____
   Final Contract Price $ _____

2. IF CONTRACT UNCOMPLETED, PLEASE STATE:
   Approximate percentage or dollar amount of contract completed or delivered 85%

3. Do you know of any unpaid bills for labor or material (Check) Yes ✓ No _____

4. Remarks: (If any) WILL FINISH THIS SPRING

Date 2-9 19 83

Signature Kenton C. Ward

PLEASE RETURN ORIGINAL OF THIS INQUIRY TO

Title SURVEYOR

ADDRESS COURT HOUSE, NOBLESVILLE

ATTENTION _____

GCSI # 106

The Guard Corporation
129 East Market Street, Suite 400
Indianapolis, Indiana 46204

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SURVEYOR'S OFFICE

Hamilton County

Kenton C. Ward, Surveyor

776-9626

Noblesville, Ind. 46060 July 5 1983

TO: Hamilton County Drainage Board

RE: Lynnwood Hills Drain

On June 14, 1983 I made the final inspection on the Lynnwood Hills Drain. At that time I found the project to be complete and acceptable. A claim for the final retainage for $1,999.99 has been submitted for payment and should be approved. The final cost of the project is as follows:

Contract Price	$181,896.48
Extra Work	$ 14,074.98
Engineering	$ 19,597.15
TOTAL	$215,568.61

This is below the estimated cost of $301,413.20,

The lenght of the drain was increased from the proposed 24761 feet to 25501feet.

The contractor has submitted a statement indicating all expenses have been paid.

The Board needs to release the Contractors Bond at this time.

Kenton C. Ward

KCW/no

Kenton C. Ward-County Surveyor

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WO 90-025

DRAWING NUMBER
LYNNWOOD HILLS
#152

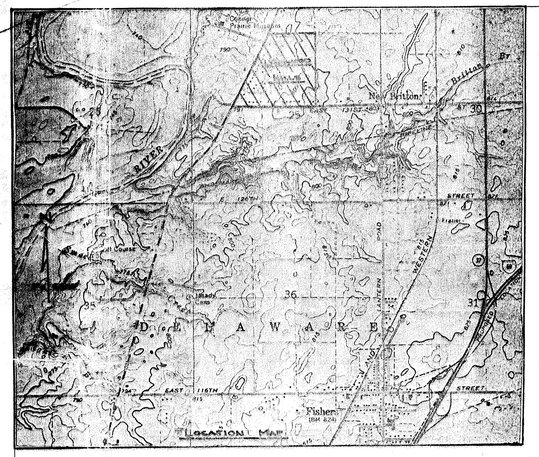
PLAN HOLD CORPORATION • IRVINE CALIFORNIA
— POSITIVE EDGE OF PRINT ON THIS LINE —

DRAWING NUMBER

PLAN HOLD CORPORATION • IRVINE CALIFORNIA
— POSITIVE EDGE OF PRINT ON THIS LINE —

DRAWING NUMBER

PLAN HOLD CORPORATION • IRVINE CALIFORNIA
— POSITIVE EDGE OF PRINT ON THIS LINE —



LYNNWOOD HILLS

THAD ASSOCIATES, INC.
INDIANAPOLIS, INDIANA

PHOTO DATE 3 / 86
CONTOUR INTERVAL

SCALE 1" = 100'

LEGEND

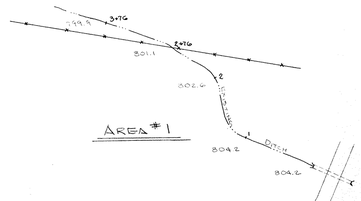
- ■ – NEW CURB INLET
- ● – NEW COMBINATION INLET & MANHOLE
- ● – NEW MANHOLE
- —— – NEW STORM SEWER
- - - - – NEW SUBSURFACE DRAIN
- ○ – EXISTING MANHOLE
- ▬▬ – EXISTING STORM SEWER
- □ – EXISTING CURB INLET
- —G— – EXISTING GAS MAIN
- —T— – EXISTING TELEPHONE
- — — – EXISTING STONE DRIVEWAY
- CMA – EXISTING CONC. OR ASPH. DRIVEWAY
- ⬡ – SHEET NO.
- ⊡ – ESC RISER

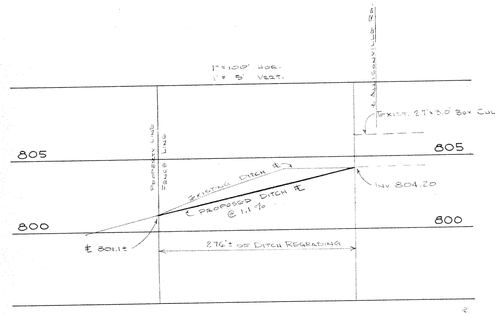
CONVERSION FORMULA TO U.S.G.S.: SUBTRACT 2012 FEET FROM ELEVATIONS SHOWN.

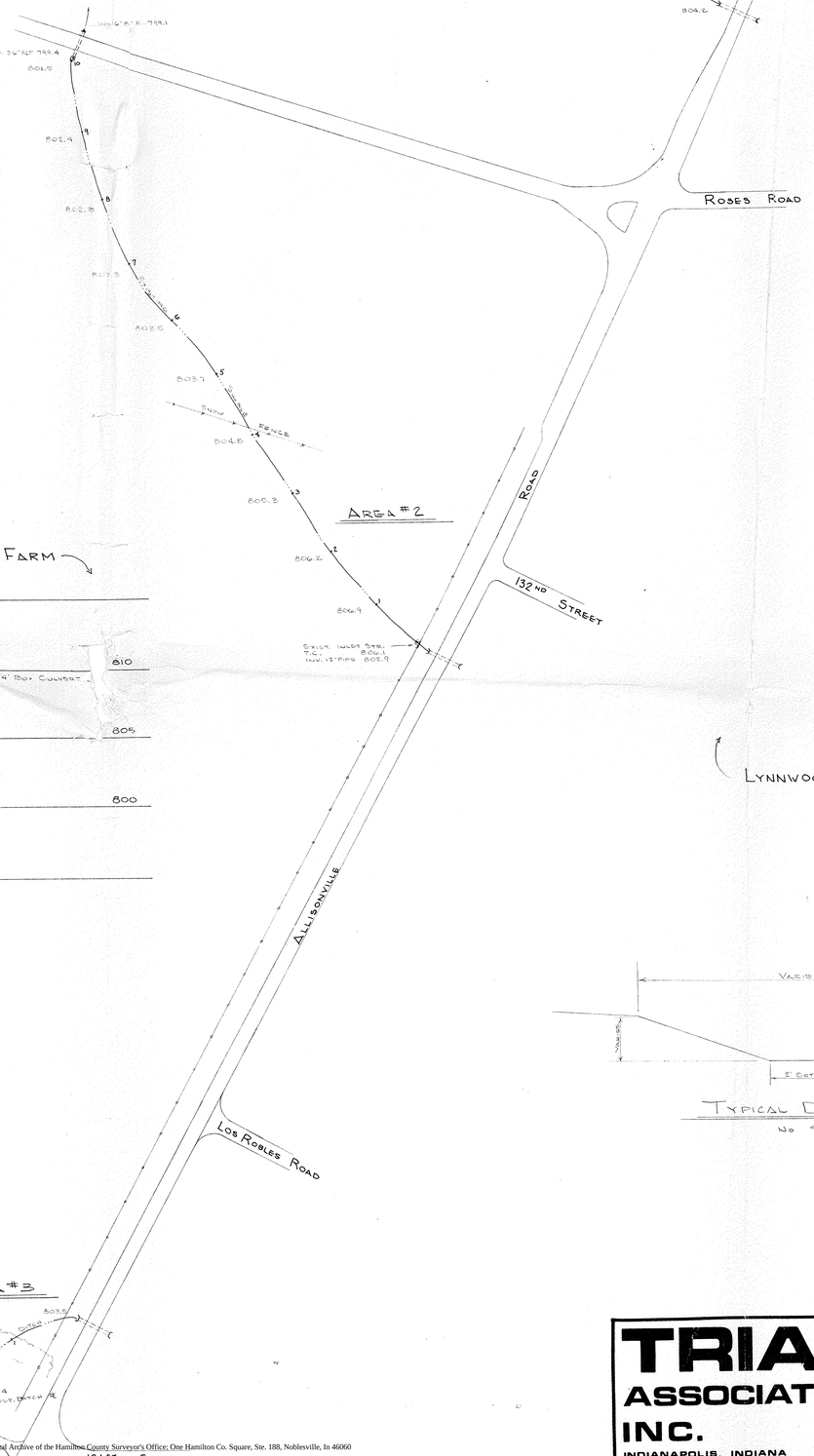
TBM = CENTERLINE MONUMENT EASTSIDE ALLISONVILLE ROAD ELEV. = 833.53

Inv. 804.20
3'-0" x 5'-0" Box Culvert
Special Str. # 1
Inv. 805.45
2'-6" x 4'-0" Box Culvert
2'-3" x 5'-0" Box Culvert
Special Structure
Inlet (See Detail)
Inlet (Low Point)
Inlet
Allisonville Road
Los Robles Road
Line "A"
Line "B"
Line "C"
Line "D"
Line "E"
Line "F"
Drive
Circle
Curve
Street
Boulevard
Carthay
La Canada
San Vincente
Boulevard
191st Street
Rosss Road
Inlet
Inlet
Inlet

AREA #1







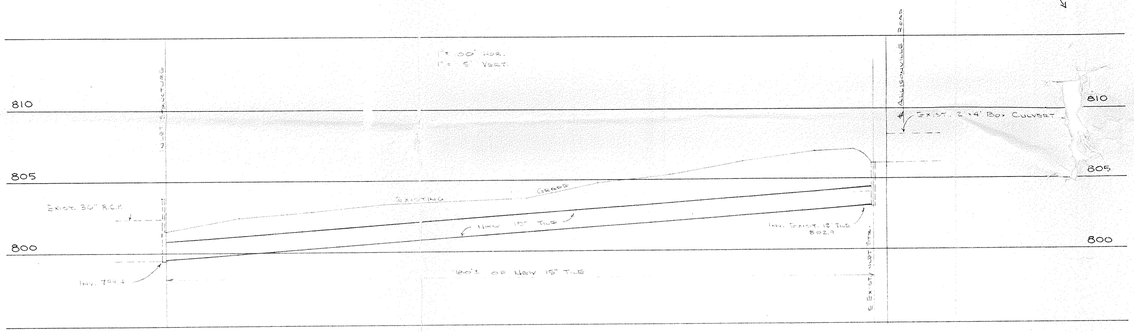
AREA #2

N

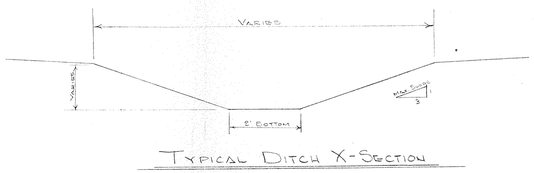
SCALE 1" = 100'

NOTE:
CONTRACTOR TO LOCATE EXISTING 2" TILE PRIOR TO CONSTRUCTION. NEW 15" PIPE IS TO BE PLACED PARALLEL TO EXISTING 12" PIPE.

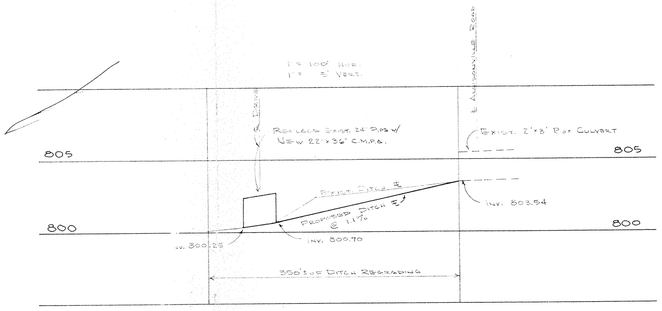
CONNER PRAIRIE FARM



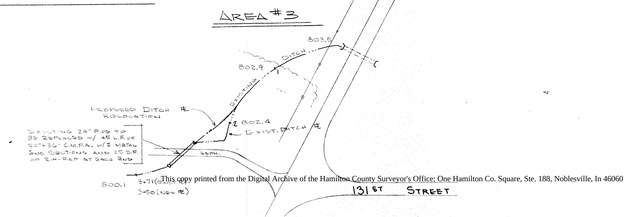
LYNNWOOD HILLS



TYPICAL DITCH X-SECTION
NO SCALE



AREA #3



ASBUILT

TRIAD ASSOCIATES, INC.
INDIANAPOLIS, INDIANA

JAMES W. FITZGELL
REGISTERED
NO. 17243
STATE OF INDIANA
PROFESSIONAL ENGINEER

LYNNWOOD HILLS
OFFSITE DRAINAGE PLAN

DRAWN BY	DATE 7-81	PROJECT Nº 8010	SHEET Nº 19 OF 19
	SCALE 1"=100'		

APPROVED BY James W. Fitzgell

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