

Drain: THORPE CREEK DRAIN **Drain #:** 223
Improvement/Arm: Geist Bay Estates Sec. 1
Operator: JDH **Date:** 6-8-04
Drain Classification: Urban/Rural **Year Installed:** 1987

GIS Drain Input Checklist

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

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

Drain-Improvement: THORPE CREEK DRAIN - Geist Bay Est. - SECTION 2

Drain Type:	Size:	Length <small>SURVEYORS REPORT</small>	Length (DB Query)	Length Reconcile	If Applicable	
					Price:	Cost:
RCP	15"	601'	601'	∅	\$ 9.50	\$ 5,709.50
	21"	500'	∅	-500	∅	∅
	24"	∅	500'	+500	18.00	9,000.00
CMP	21"	285'	∅	-285	∅	∅
	24"	∅	285'	+285	50.00	14,250.00
* OPEN DITCH		1630	∅	-1630	∅	∅

Sum: 3,016' 1,386' -1,630 \$ 28,959.50

Final Report: _____

Comments:
SR AND PUMPS DISABLING ON 21", 24", AND OPEN DITCH.

* OPEN DITCH PLACED IN SECTION 2.



SURVEYOR'S OFFICE

Hamilton County

Kenton C. Ward, Surveyor

773-6110 Ext. 19
776-9626

Noblesville, Ind. 46060 September 10, 1987

FILED
NOV 9 1987

TO: Hamilton County Drainage Board

RE: Geist Bay Estates Drain

Attached are petitions, non-enforcement requests, plans, calculations and assessment roll for the Geist Bay Estates Drain in the Geist Bay Estates and Sheppards Subdivision.

I have reviewed the submittals and petition 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 drain will consist of the following:

15" RCP 601 ft 21" RCP 500 ft 21" CMP 285 ft Open Ditch 1630 ft

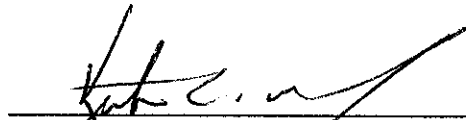
The total length of the drain will be 3016 feet.

The portion of Thorpe Creek abutting Geist Bay Estates and Sheppards Subdivisions shall be part of this drain. The maintenance involved will consist only of the removal of obstructions to flow. Dredging to maintain a navigable channel shall not be part of the maintenance program. Dredging will be done only in order to maintain proper flow within the channel.

I have reviewed the plans and believe the drain will benefit each lot equally. Therefore, I recommend each lot be assessed equally. I recommend a maintenance assessment of \$75.00 per lot, \$5.00 per acre for roadways. With this assessment the total annual assessment for the drain/this section will be \$766.40.

The surface water swale across Lot 2 will not be considered part of the regulated drain.

I recommend a hearing be set for November 1987.



Kenton C. Ward
Hamilton County Surveyor

KCW/no

CERTIFICATE OF COMPLETION AND COMPLIANCE

TO: COUNTY SURVEYOR'S OFFICE, HAMILTON COUNTY
ATTN: Mr. Kenton Ward
FROM: Paul I. Cripe, Inc., Engineers
SUBJECT: Geist Bay Estates Subdivision

I hereby certify that

- 1) I am familiar with the plans and specifications for the above referenced project,
- 2) I have personally observed the completion of the above referenced project, and
- 3) To the best of my knowledge, information and belief, the above referenced project has been performed and completed in conformity with all plans and specifications, except _____

Signature Joseph A. Sharp Date 9-4-87
Type or Printed Name Joseph A. Sharp
Business Address 7172 Graham Road
Indianapolis, IN 46250
Telephone (317) 842-6777

Seal

Indiana Registration Number

15179

No. 15179

STATE OF

INDIANA

PROFESSIONAL ENGINEER

ADM:t1

1/13/84

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SURVEYOR'S OFFICE
Hamilton County

Kenton C. Ward, Surveyor

776-9626

Noblesville, Ind. 46060 July 28, 1988

TO: Hamilton County Drainage Board

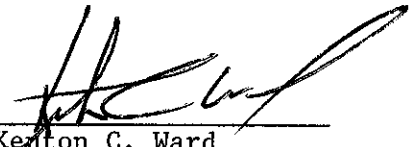
RE: Geist Bay Estates Drain

I have inspected the drainage facilities for the Geist Bay Estates Drain and have found them to be complete and acceptable. The Project Engineer has submitted the Certificate of Completion and Compliance and "As Built" Drawings on reproducible mylar of the drainage system.

The drainage facilities were not changed during construction from the original plan. The length of drain remains at 3016 feet as stated in my report to the Board dated September 10, 1987.

At this time I recommend the Board approve the drainage facilities as constructed. I further recommend that the non-enforcement request for this plat be approved by the Board for both Geist Bay Estates and Sheppard's Subdivision.

KCW/no


Kenton C. Ward
Hamilton County Surveyor

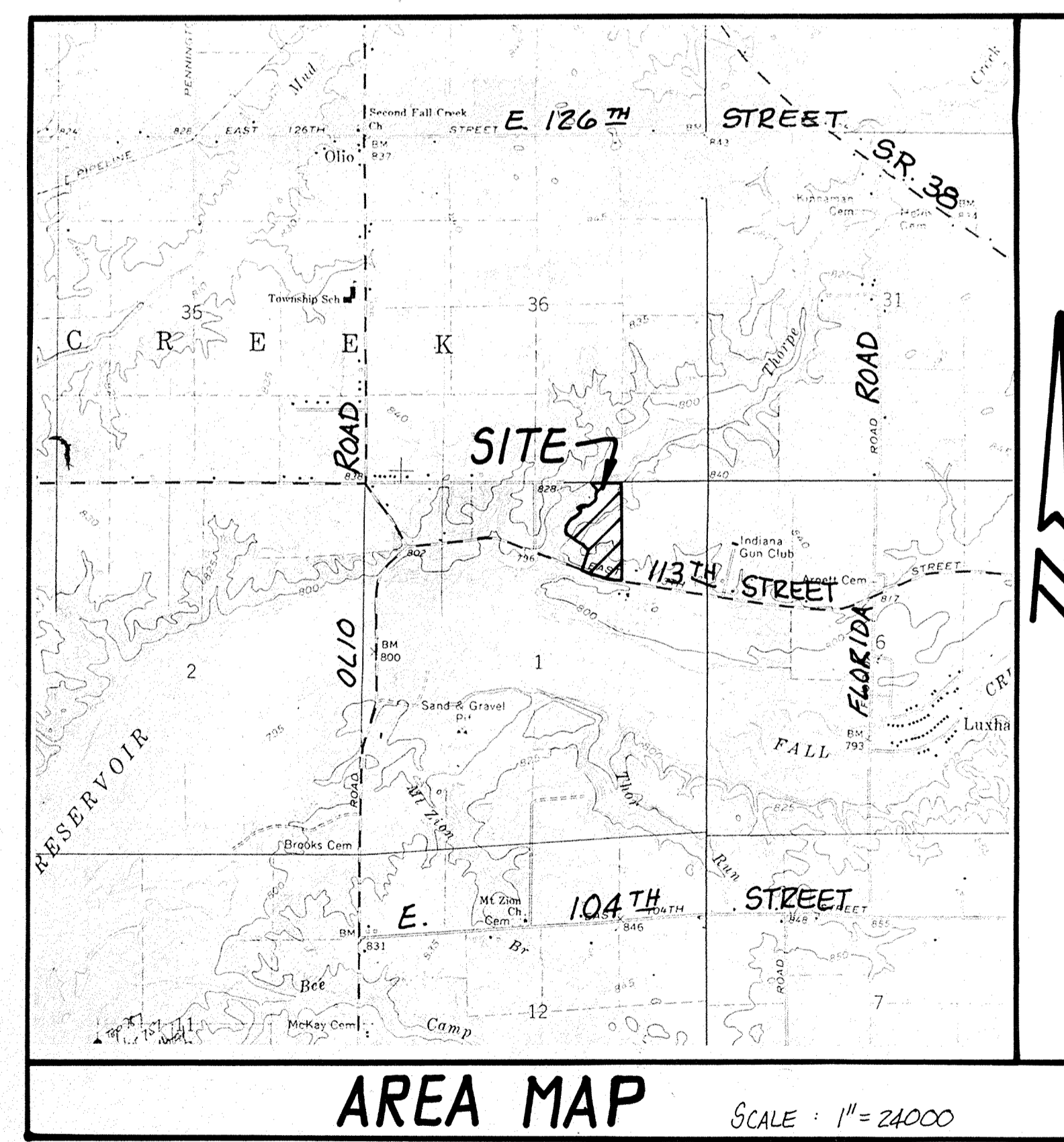
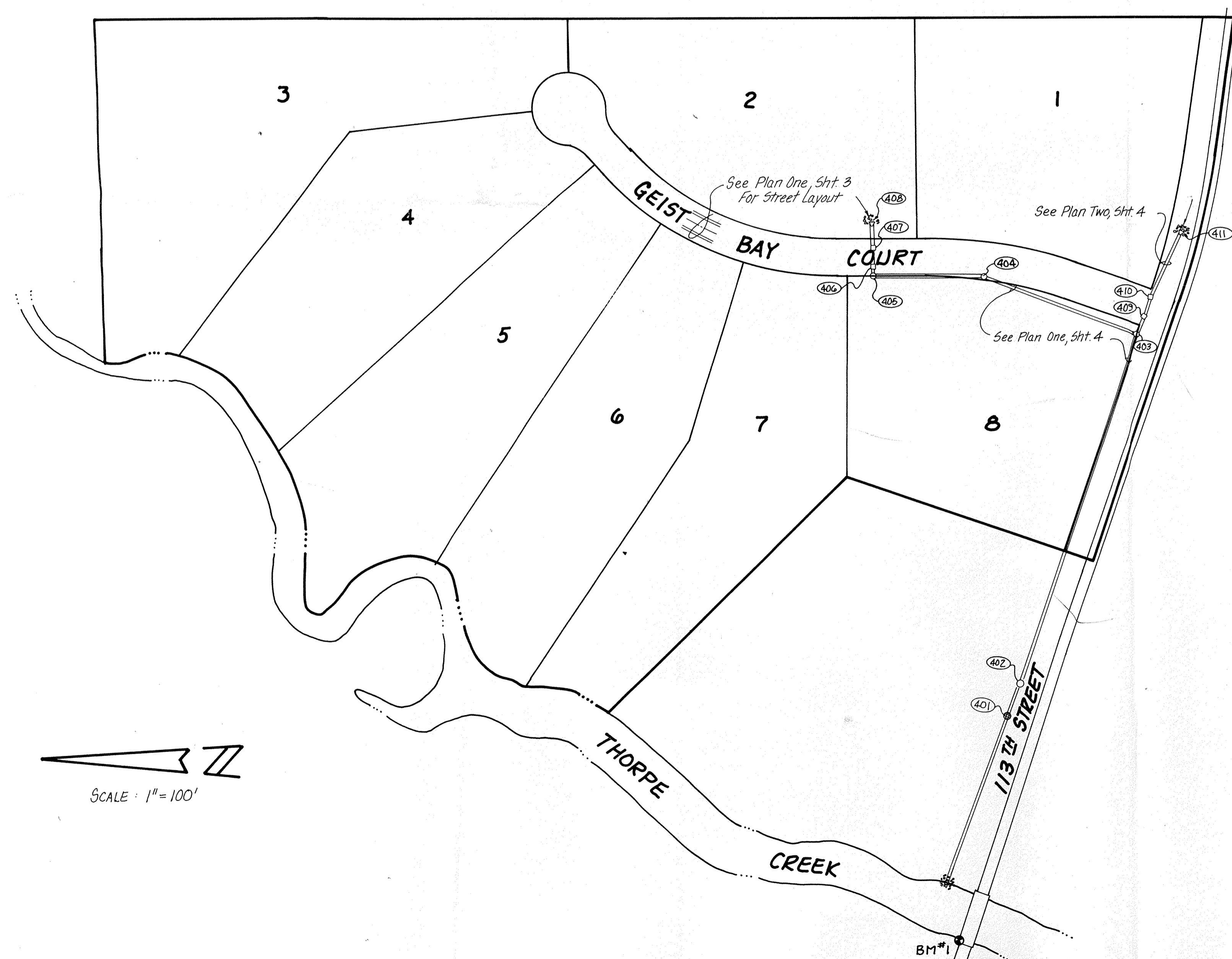
FILED

AUG 8 1988

HAMILTON COUNTY DRAINAGE BOARD


SECRETARY

CONSTRUCTION PLANS FOR GEIST BAY ESTATES



INDEX	
SHT.	DESCRIPTION
1	COVER SHEET
2	SITE DEVELOPMENT PLAN
3	STREET - PLAN, PROFILE & DETAILS
4	STORM - PLAN & PROFILE
5	STD. DETAILS & SPECIFICATIONS

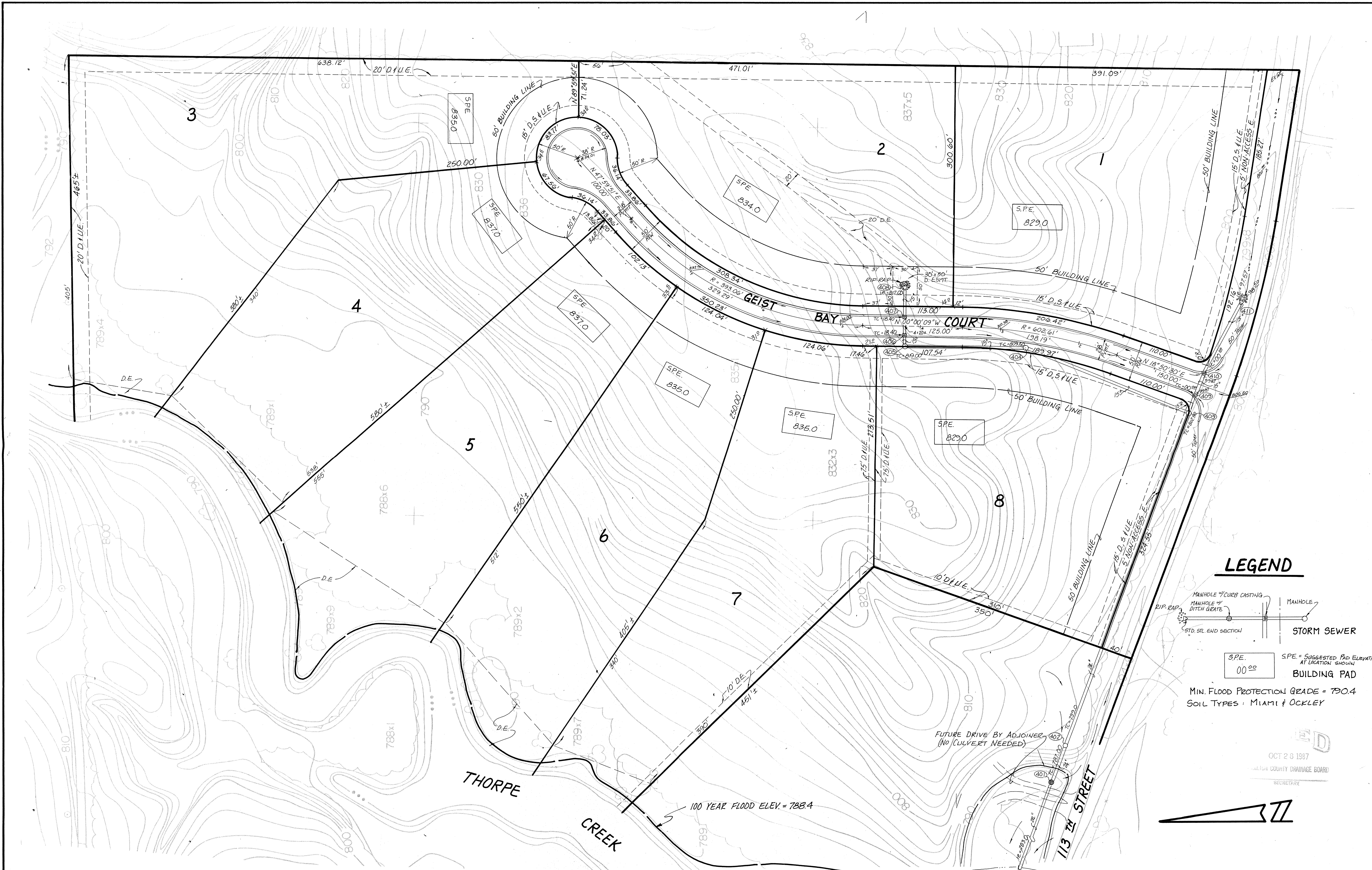
BENCHMARK
 BM#1, CUT "D" IN WEST END, NORTH
 HDWL. @ BRIDGE OVER THORPE
 CREEK ON E. 113TH STREET
 ELEV. = 793.61

REVISIONS
 SHT. 2, A EBN PER TAC COMMENTS 5/12/87

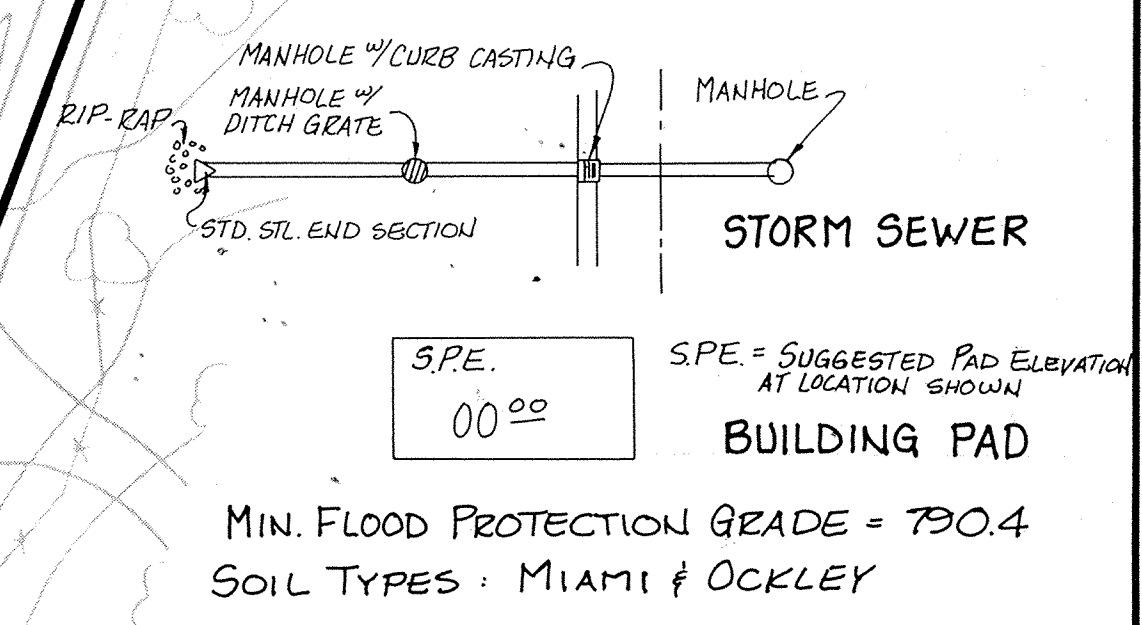
OCT 28 1987
 HAMILTON COUNTY DRAINAGE BOARD
 SECRETARY

CERTIFIED BY	REVISIONS	PAUL I. CRIFE, INC. 7172 GRAHAM ROAD INDIANAPOLIS, INDIANA 46250 (317) 842-6777	TECH. CHK.	DRAWN BY	SCALE	DATE	CLIENT	DWG. TYPE	FILE NUMBER	SHEET
DATE			• CIVIL ENGINEERING • LAND SURVEYING • ARCHITECTURE • LAND PLANNING	DFTNG. CHK.	GSD	NOVE	5-1-87	GEIST BAY ESTATES		
DRAWING TITLE								JOB NUMBER		OF 5
COVER SHEET								86341-00000		

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LEGEND

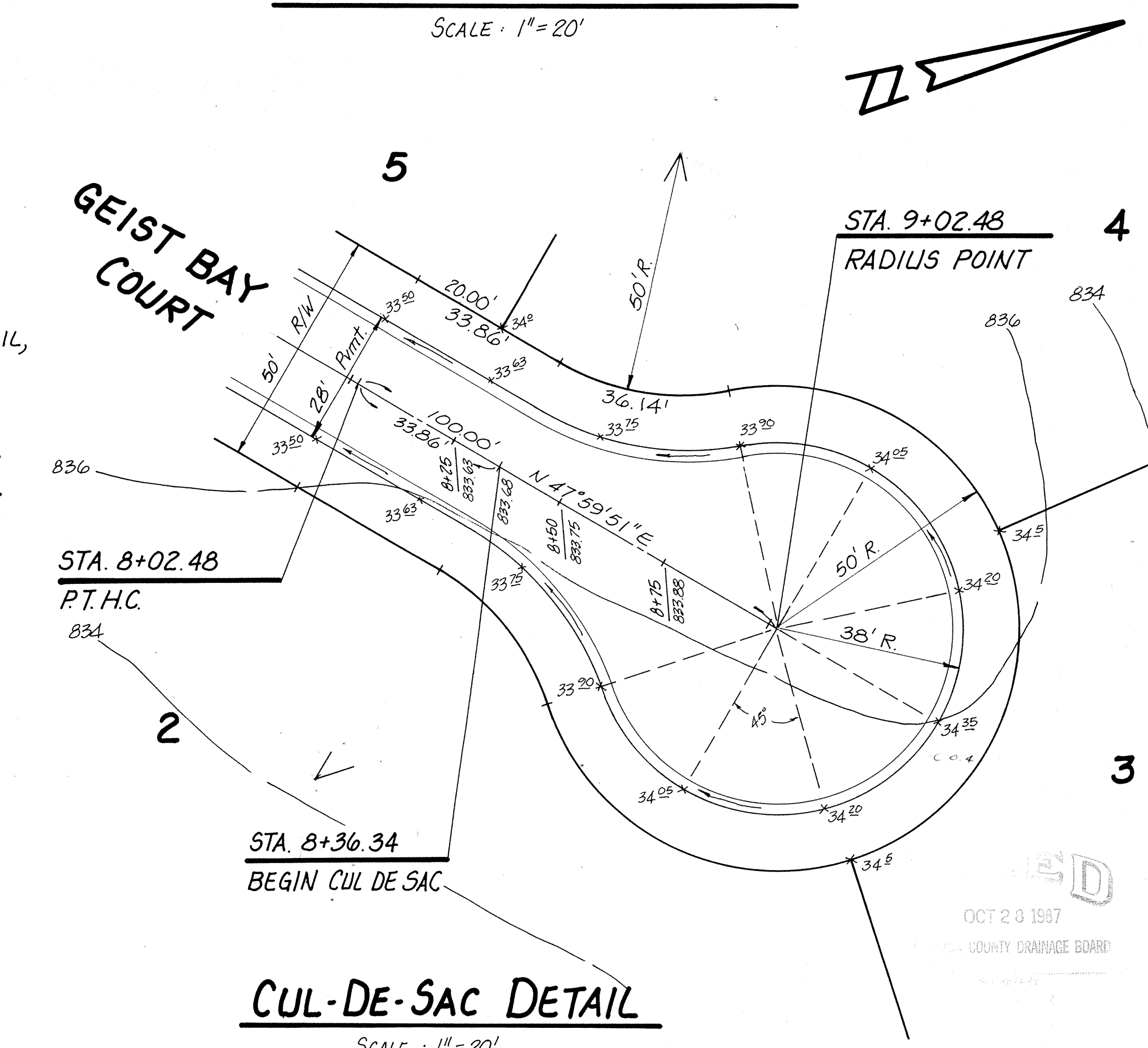
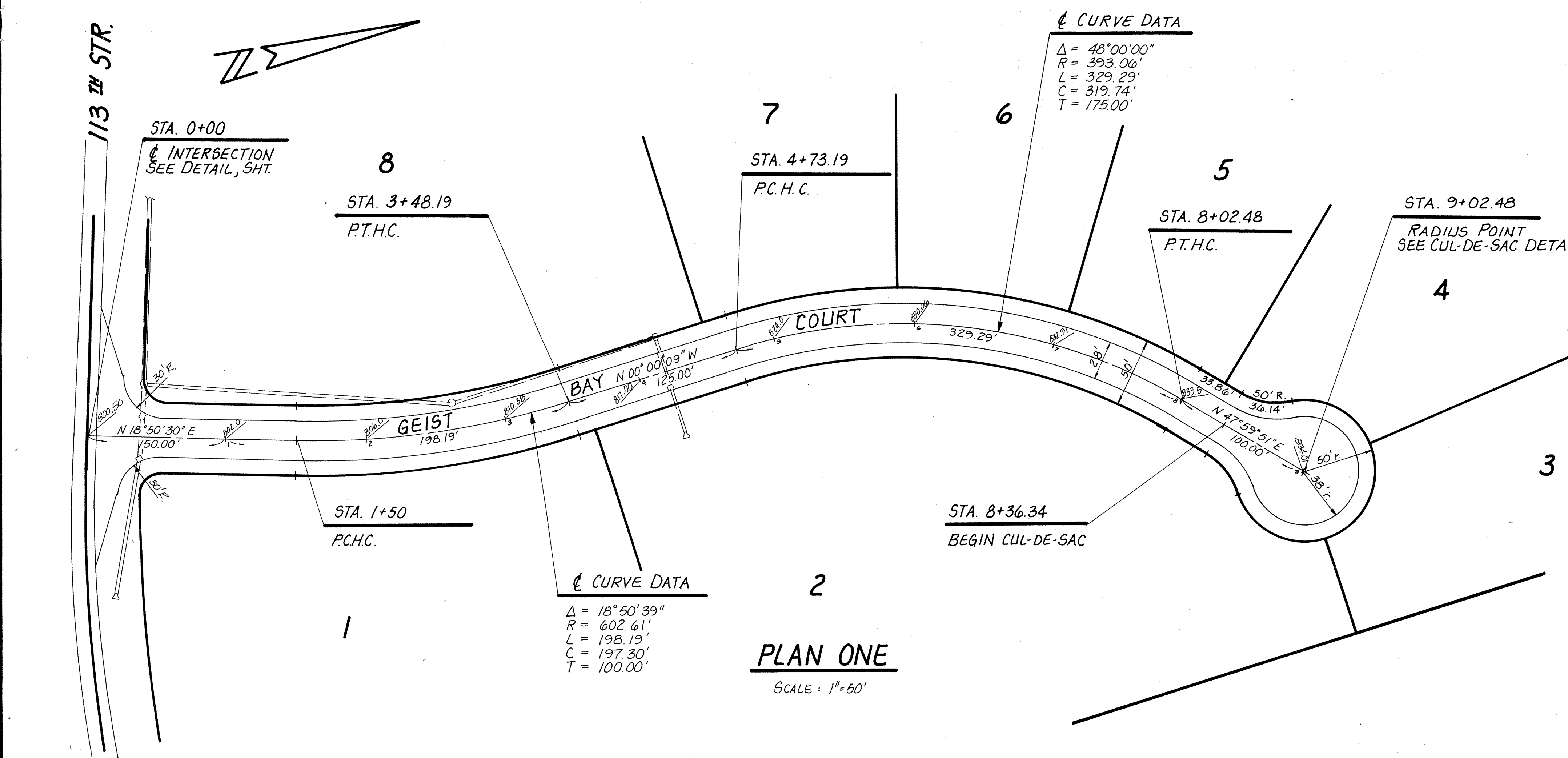
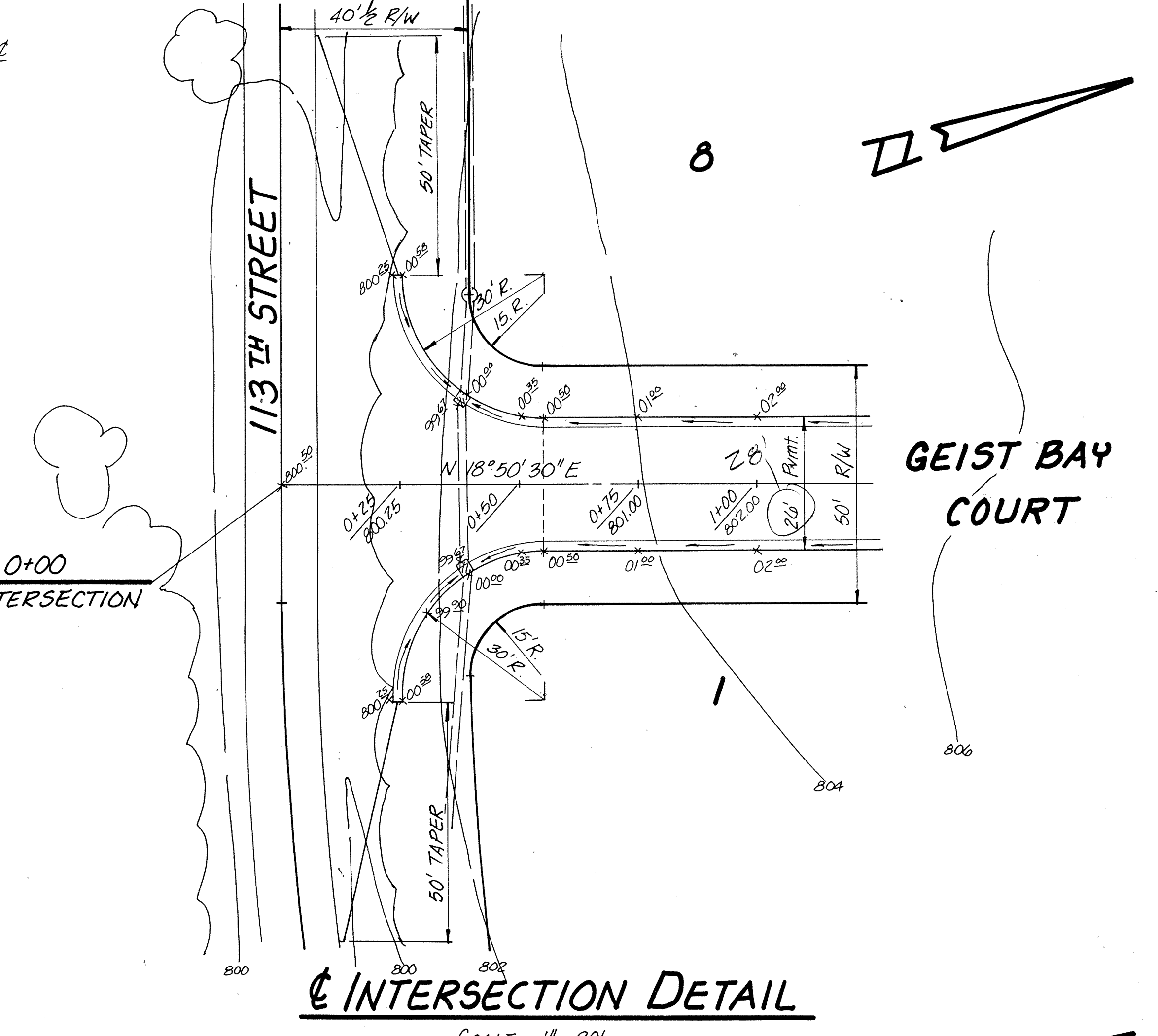
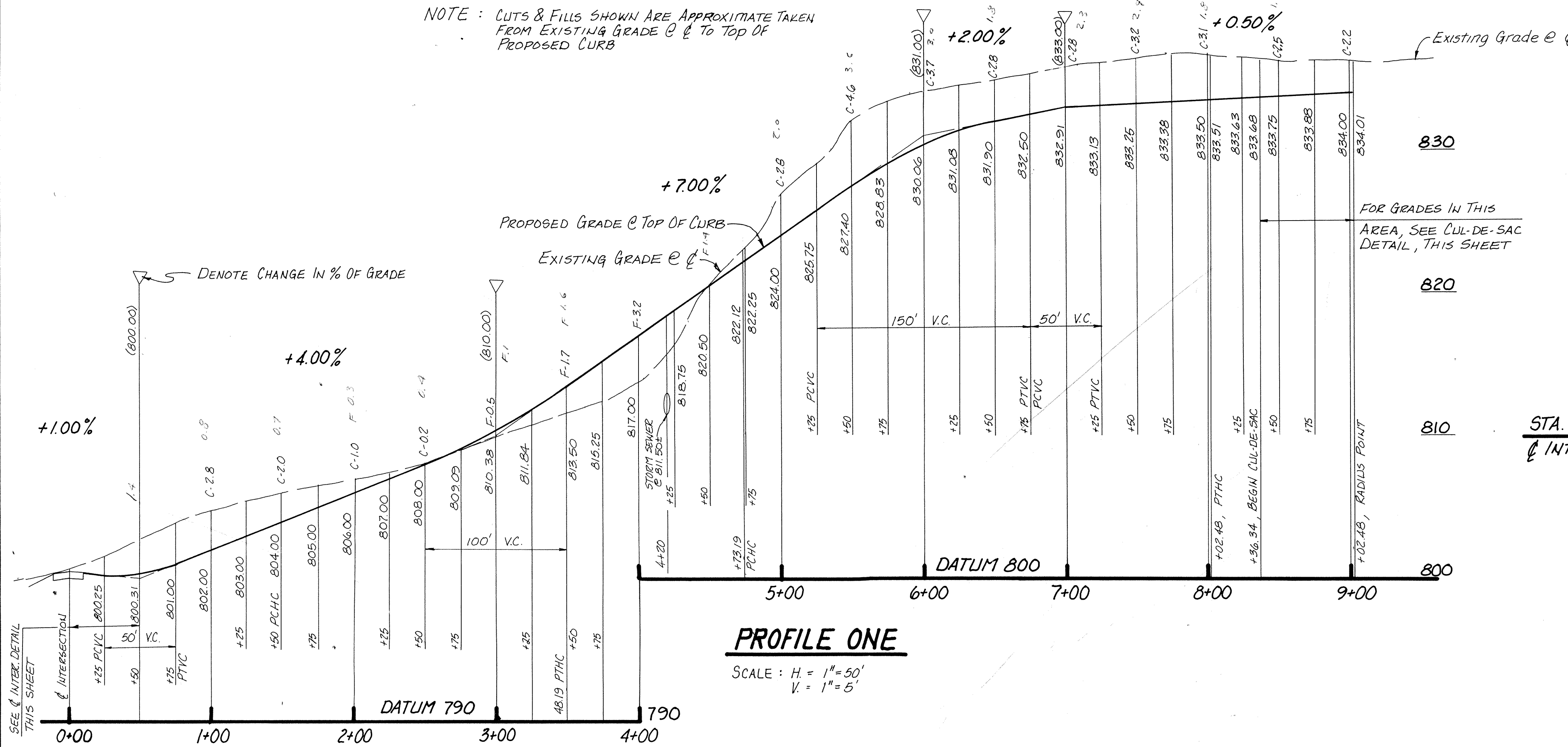


ED
 OCT 23 1987
 HAMILTON COUNTY DRAINAGE BOARD
 SECRETARY

CERTIFIED BY	REVISIONS		PAUL I. CRIFE, INC. 7172 GRAHAM ROAD INDIANAPOLIS, INDIANA 46250 (317) 842-6777	TECH. CHK.	DRAWN BY	SCALE	DATE	CLIENT	DWG. TYPE	FILE NUMBER	SHEET
	DATE	5/12/87		REV. PER TAC COMMENTS	DFTNG. CHK.	45D	1"=50'	5-1-87	GEIST BAY ESTATES		
				DRAWING TITLE			SITE DEVELOPMENT PLAN		JOB NUMBER		OF 5
									86341-00000		

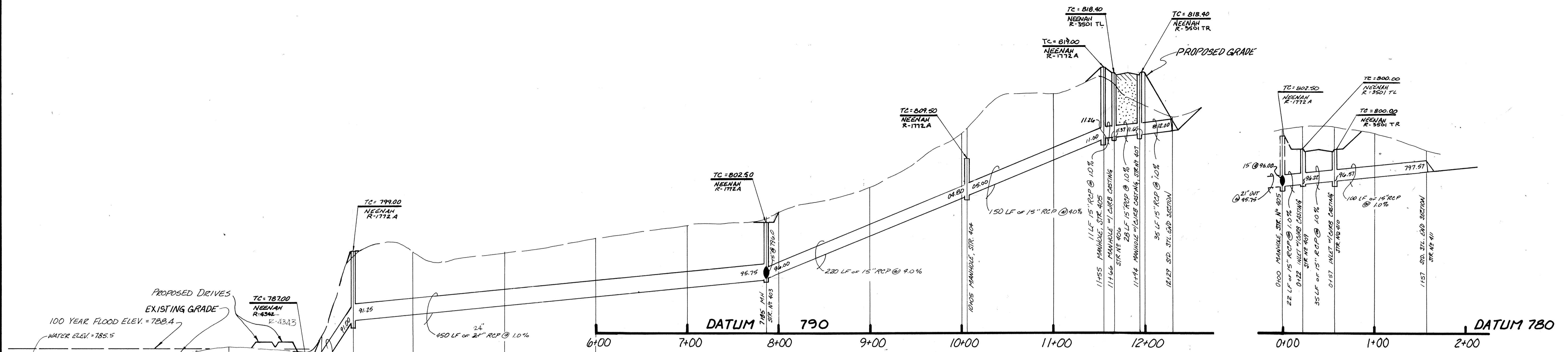
19230 EASTMAN ENGINEERING AND SURVEYING CO., INC. 1987

NOTE: CUTS & FILLS SHOWN ARE APPROXIMATE TAKEN FROM EXISTING GRADE @ & TO TOP OF PROPOSED CURB



CERTIFIED BY	REVISIONS	PAUL I. CRIPE, INC. 7172 GRAHAM ROAD INDIANAPOLIS, INDIANA 46250 (317) 842-6777	TECH. CHK.	DRAWN BY	SCALE	DATE	CLIENT	DWG. TYPE	FILE NUMBER	SHEET
			DFTNG. CHK.	66D	AS NOTED	5-1-87	GEIST BAY ESTATES			3
DATE			DRAWING TITLE				JOB NUMBER		OF 5	
			STREET ~ PLAN, PROFILE & DETAILS				86341-00000			

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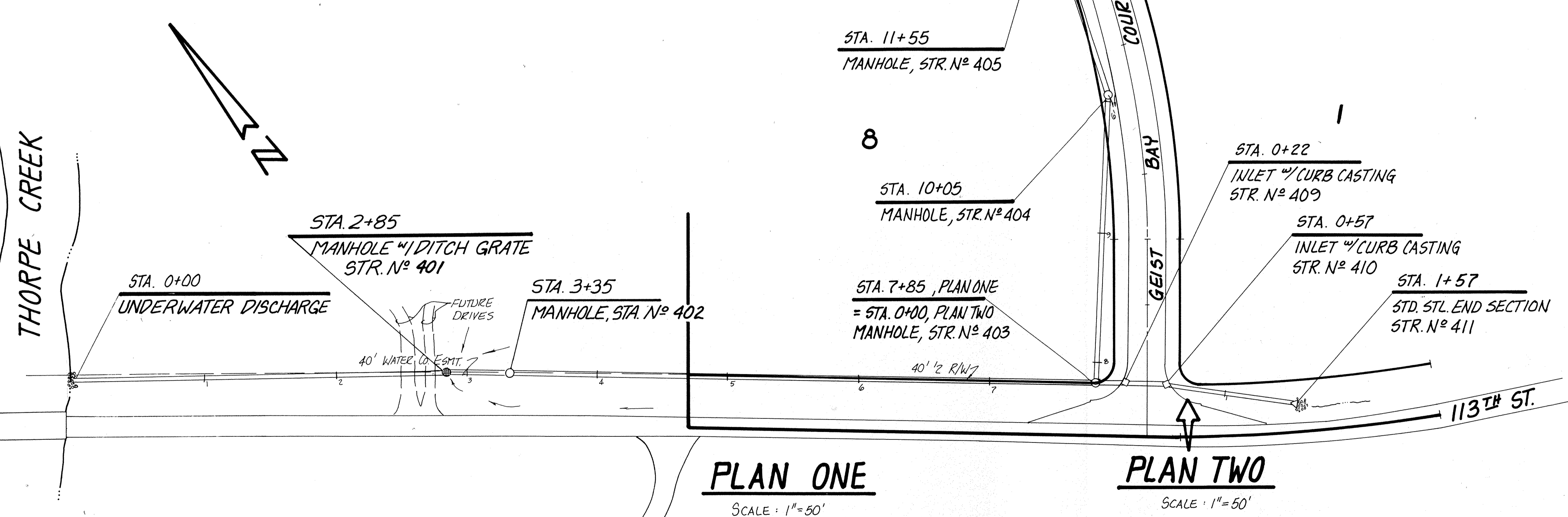


PROFILE ONE

SCALE: H: 1"=50'
V: 1"=5'

PROFILE TWO

SCALE: H: 1"=50'
V: 1"=5'



PLAN ONE

SCALE: 1"=50'

PLAN TWO

SCALE: 1"=50'

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: 6-8-04

Entered by: JOH

FILED
OCT 28 1987
HAMILTON COUNTY DRAINAGE BOARD
SECRETARY

CERTIFIED BY	REVISIONS	PAUL I. CRIPE, INC. 7172 GRAHAM ROAD INDIANAPOLIS, INDIANA 46250 (317) 842-6777	TECH. CHK.	DRAWN BY GSD	SCALE AS NOTED	DATE 5-1-87	CLIENT GEIST BAY ESTATES	DWG. TYPE	FILE NUMBER	SHEET
										4
DATE	5/12/87 REV. PER TAC COMMENTS		DFTNG. CHK.	DRAWING TITLE	STORM ~ PLAN AND PROFILE			JOB NUMBER		OF 5
					86341	00000				

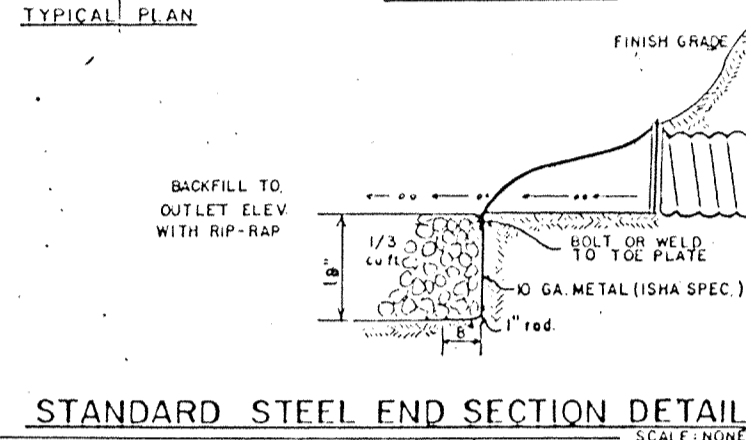
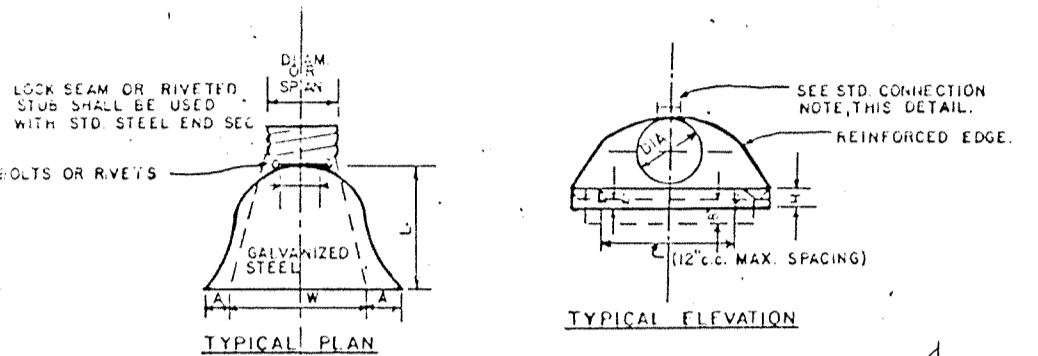
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DIMENSIONS OF GALVANIZED STEEL END SECTIONS FOR ROUND PIPE

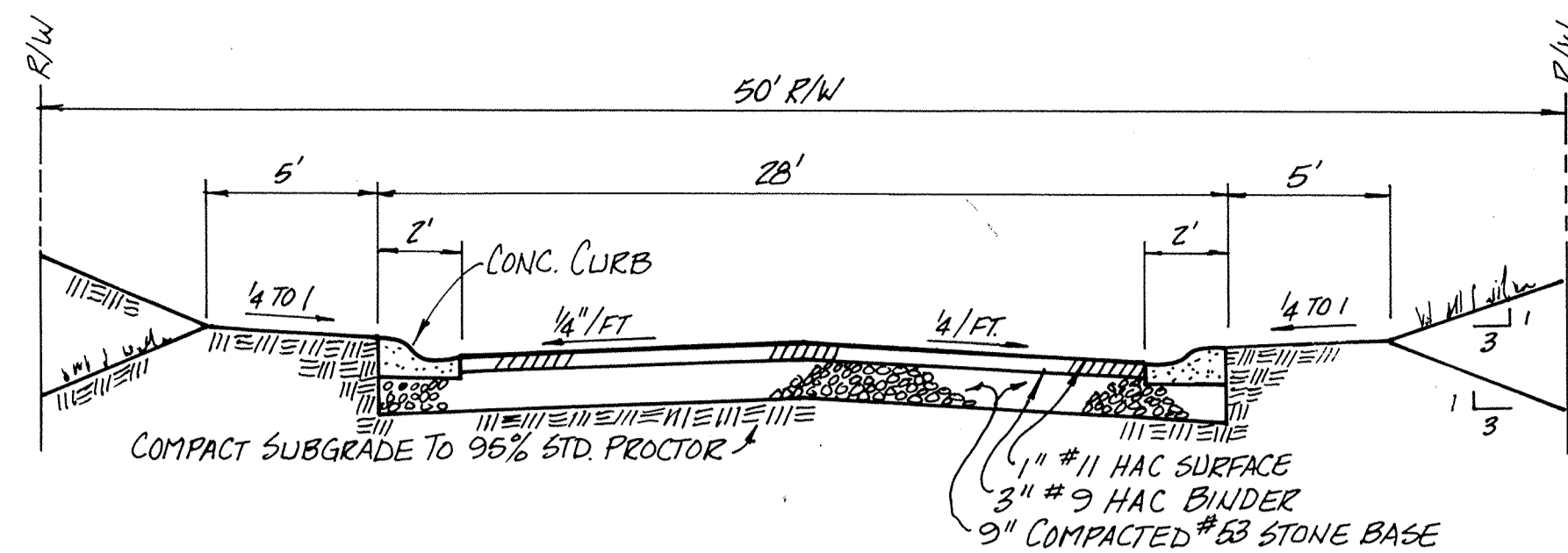
DIMENSIONS IN INCHES				APPROXIMATE SLOPE			
PIPE DIA. IN INCHES	GAGE	A	B	1/2"	3/4"	1"	1 1/2"
12	16	6	6	2 1/2	1 1/2	1 1/2	1 1/2
15	16	7	6	2 1/2	1 1/2	1 1/2	1 1/2
18	16	8	10	2 1/2	1 1/2	1 1/2	1 1/2
21	16	9	12	2 1/2	1 1/2	1 1/2	1 1/2
24	16	10	14	2 1/2	1 1/2	1 1/2	1 1/2
30	14	12	16	2 1/2	1 1/2	1 1/2	1 1/2
36	14	14	19	2 1/2	1 1/2	1 1/2	1 1/2
42	12	16	22	2 1/2	1 1/2	1 1/2	1 1/2
48	12	18	27	2 1/2	1 1/2	1 1/2	1 1/2
54	12	18	30	2 1/2	1 1/2	1 1/2	1 1/2
60	12	18	33	2 1/2	1 1/2	1 1/2	1 1/2
66	12	18	36	2 1/2	1 1/2	1 1/2	1 1/2
72	12	18	39	2 1/2	1 1/2	1 1/2	1 1/2
78	12	18	42	2 1/2	1 1/2	1 1/2	1 1/2
84	12	18	45	2 1/2	1 1/2	1 1/2	1 1/2

STANDARD CONNECTIONS: TYPE M 1 SHALL BE CONNECTOR LUG WITH THREADED ROD. TYPE M 2 SHALL BE THREADED ROD WITH ROD HOLDERS. TYPE M 3 SHALL BE RIVETED OR BOLTED CONNECTION.

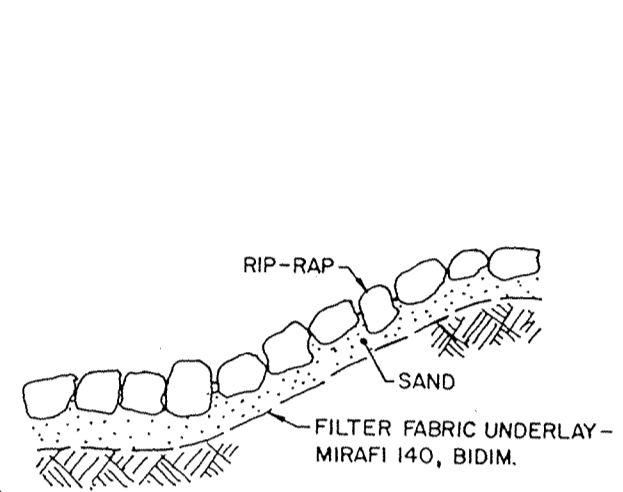
NOTE: STANDARD DIMENSIONS FOR GALVANIZED STEEL END SECTIONS FOR PIPE-ARCH MAY BE FOUND ON MISC. STANDARDS SHEET E₂, DATED JULY, 1972, OF THE INDIANA STATE HIGHWAY STANDARD SPECIFICATIONS.



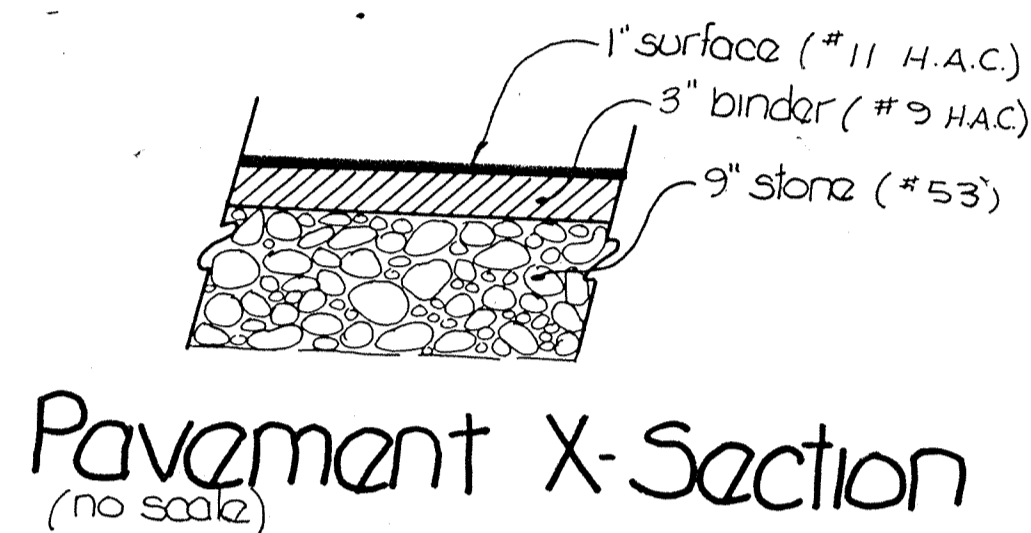
STANDARD STEEL END SECTION DETAIL
SCALE: NONE



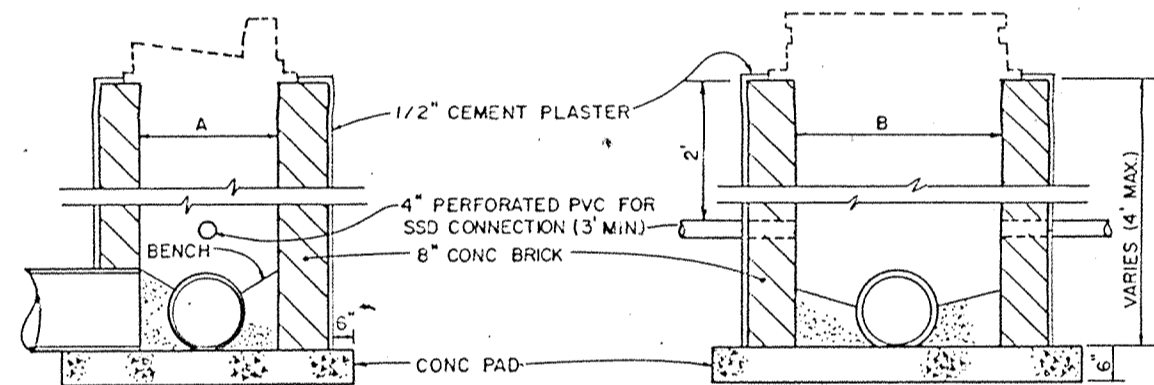
TYPICAL STREET CROSS SECTION
NO SCALE



TYPICAL RIP-RAP DETAIL

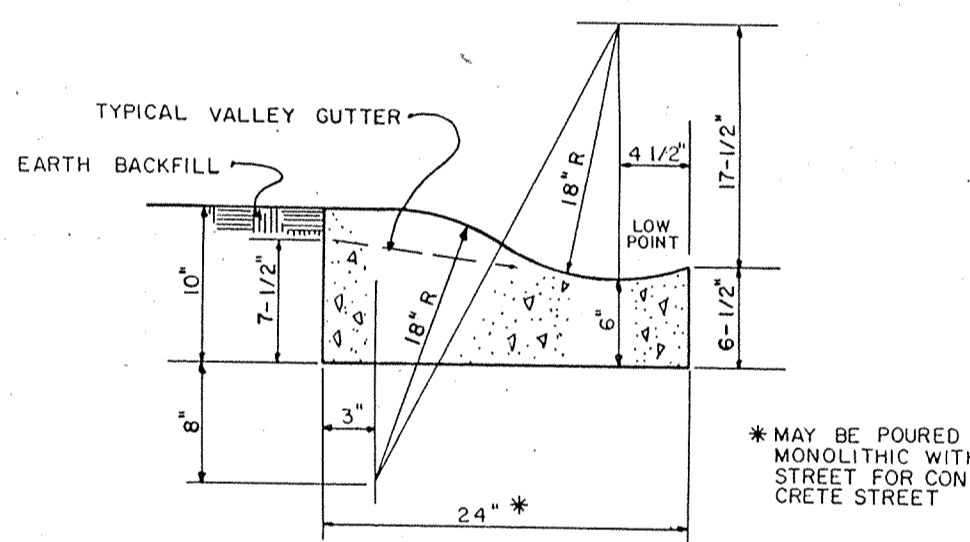


Pavement X-Section
(no scale)



NOTE: ALL JOINTS, HORIZONTAL & VERTICAL TO BE MORTARED WITH INTERIOR JOINTS STRUCK FLUSH.
BACKFILL w/ No. 7 WASHED GRAVEL

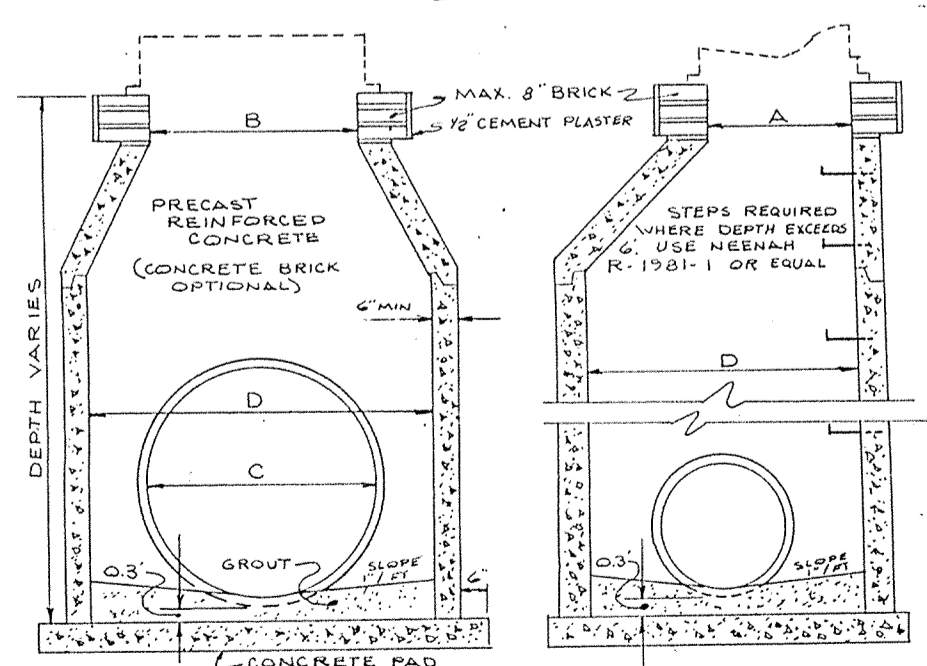
SHALLOW CURB INLET
NO SCALE



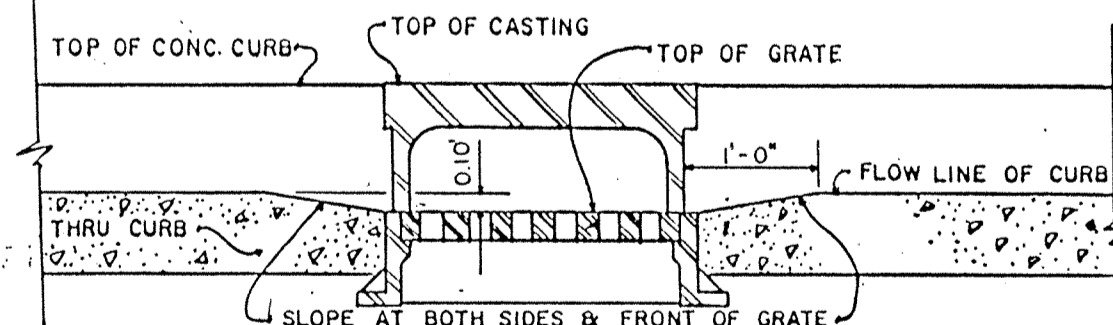
ROLL CURB DETAIL WITH VALLEY GUTTER
SCALE: NONE

CASTING	A	B	C	D
R-1772-A	25"	4'-0"	21"	4'-0"
R-4342	25"	4'-0"	30"	4'-0"
			42"	4'-0"
			48"	4'-0"
			54"	4'-0"

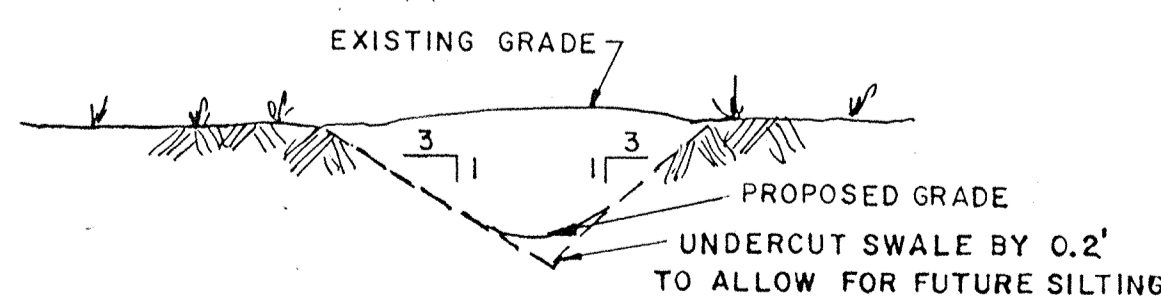
NOTE: STRUCTURES TO BE CIRCULAR UNLESS OTHERWISE SPECIFIED.



STORM MANHOLE & DEEP INLET
N.T.S.



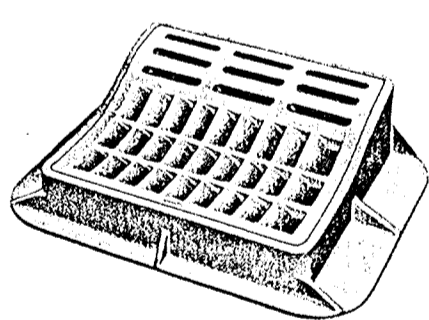
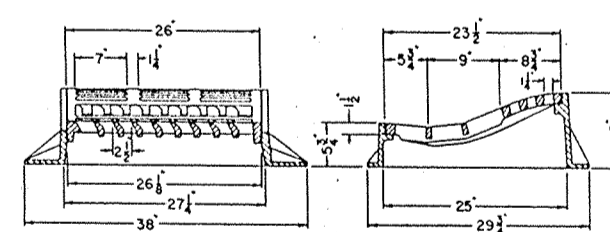
CURB INLET SETTING DETAIL
SCALE: NONE



TYPICAL SWALE DETAIL
SCALE: NONE

R-3501-TR Inlet for Roll Type Curb

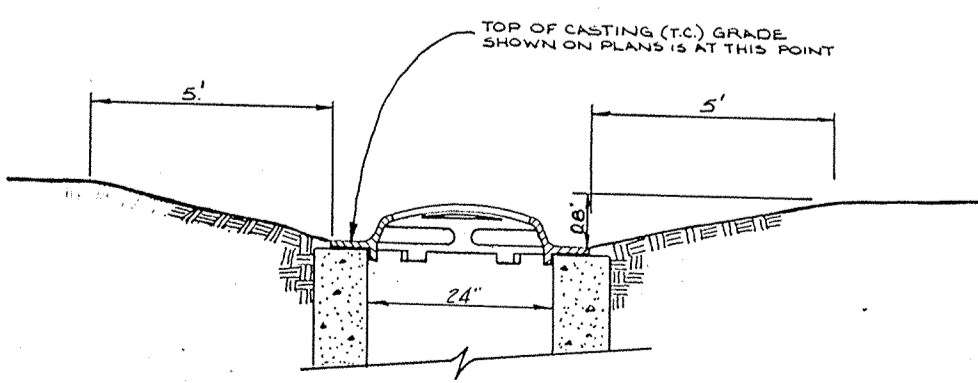
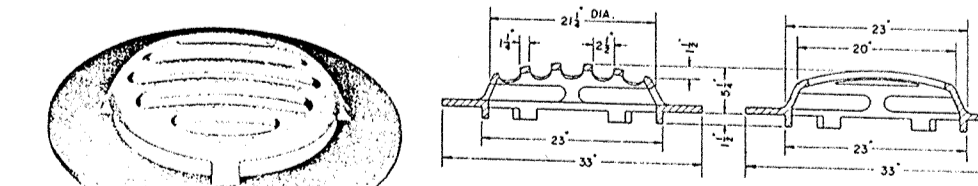
Heavy Duty
Total Weight 330 Pounds



Illustrating R-3501-TR (flow right), if flow left is required, order R-3501-TL.

R-4342 Ditch Grate, Stool Type

Medium Duty - Total Weight 190 Pounds



DITCH GRATE CASTING SETTING DETAIL
NO SCALE

SPECIFICATIONS

The standard specifications for the City of Carmel shall apply for all work and materials.

STORM

- Storm sewer pipes shall be reinforced concrete (R.C.P.) in accordance with ASTM-C-76, or corrugated metal pipe (CMP) one size larger in accordance with AASH spec. M-36.
- Exceptional areas may require additional subsurface drainage. Street and storm sewer contractors shall include in their bids a unit cost per foot of installation of 4" dia. perforated plastic underdrain (see detail sheet 12). Location of such underdrain will be at the direction of the owner, or the engineer.
- Rip-rap shall be installed at pipe inlets or outlets as the owner/engineer directs. Contractor shall include unit price for rip-rap, min 1/3 c.f. rock size, installed.
- Storm sewer discharge areas and inverts are tentative and are subject to field modifications according to the unit prices submitted by the Contractor on the contract documents.
- The Contractor shall provide at least 2' of cover over all storm sewers.
- All drainage pipe and ditch outfalls to receiving streams shall be constructed in accordance with drawings, subject however, to any modification required by City of Carmel at the time installation is completed and to any adjustments needed for field conditions not adequately anticipated by the design drawings.
- Casting Elevations are set by plan. However, the casting elevations are to be adjusted in the field by the Engineer's representative should a discrepancy occur between plan grade and existing grade.
- All structures and all cuts under proposed paved areas shall be backfilled with granular material in addition to areas specifically noted on the plans. The granular material shall completely fill the trench in the area under the proposed pavement, and shall extend at a one-to-one slope from the proposed pavement edge.
- The Contractor shall contact all utility companies before any construction is started. He shall obtain the exact location of any utility lines and shall protect these lines during construction.
- The Contractor shall be responsible for obtaining all State, Highway, City and County permits.
- The Contractor shall be required to furnish the Engineer with a set of prints, marked in red, showing actual sewer location and invert, to include lateral location, depth and length. Such "as built" prints must be received by the Engineer before the final contract payment can be authorized.
- The Contractor will be reimbursed for any additional labor and/or materials arising from the changes other than minor adjustments to manholes authorized by the Engineer. Reimbursement will be in accordance with unit prices submitted by the Contractor on the contract documents.

Soil Erosion Control Summary

The following is a list in sequence of construction activities to control soil erosion:

- Contractor shall install sediment traps and straw bale filters, as shown.
- Mass grade the site (sides of swales, mounds and ponds to be seeded and mulched immediately upon completion). Temporary seeding shall be recommended for all swales and disturbed areas that cannot be final seeded within a time period that will prevent slope erosion. For temporary seeding the contractor shall utilize a fast growing seed of winter oats, annual ryegrass, wheat or rye depending on time of year. Disturbed areas should be kept to a minimum at all times.
- Contractor shall control mud accumulation on all streets surrounding project by installing stone surface at all locations where construction traffic leaves the site. Dust shall be kept to a minimum by utilizing sprinkling, Calcium Chloride, Vegetative cover, spray on adhesives or other approved methods.
- Maintain all filters and traps during construction to prevent any blockages from accumulated sediment. Additional seeding and straw bales may be required during construction as specified by Engineer or Soil Conservation Service. Rip rap shall be placed in areas of high velocity stream flow (minimum size 1/3 cu. ft.). Payment for additional straw bales shall be at the Contractor's expense. Payment for additional rip rap (not shown on plans) and seeding shall be paid for on a unit basis.
- Contractor shall install all sanitary sewers, storm sewers, subsurface drains, and water mains. Straw bale filters shall be installed at all storm inlets (including street inlets).
- All proposed street areas shall be paved as soon as possible after subgrade is prepared.
- All disturbed areas shall be seeded and mulched as specified below. This shall include all building pad fill areas.
- Contractor shall remove all temporary erosion and sediment controls only when there is a sufficient growth of ground cover to prevent further erosion.

Seeding Specifications:

- Swales/Grassed Waterways: Permanent seeding shall take place between March 1 and May 15 or from August 10 to October 15 with the following per acre:
25# Kentucky 31 Fescue
15# Kentucky Blue Grass
1000# 12-12-12 Fertilizer
3000# Mulch (Straw)
- If grades are established between May 15 and August 10, a temporary seeding consisting of 40# of Annual Ryegrass shall be planted per acre.
- If grades are established between October 15 and December 30, either Rye (grain) or Wheat may be used at the rate of 2 bushels/Ac. Oats may be used for early spring planting at the rate of 3 bushels/Ac. All grains should be cut at time of maturing. All grains should be cut prior to seed maturing.
- If temporary seeding is established prior to permanent seeding, the mulch may be eliminated except in "bare" areas.
- If grading occurs during December, January, or February, no seeding to take place till spring planting time; traps are in place prior to bulk earthmoving or clearing.
- All areas along street (approximately 25 foot behind curb) shall be seeded the same as swales.
- All lots where grading has occurred, shall be seeded with the temporary seeding process.
- All dates shown are nominal, and may be varied with concurrence of the Engineer or the Local Soil Conservationist.

FILED
OCT 20 1987
HAMILTON COUNTY DRAINAGE BOARD
SECRETARY

CERTIFIED BY	REVISIONS	PAUL I. CRIFE, INC. 7172 GRAHAM ROAD INDIANAPOLIS, INDIANA 46250 (317) 842-6777	TECH. CHK.	DRAWN BY	SCALE	DATE	CLIENT	DWG. TYPE	FILE NUMBER	SHEET
			DFTNG. CHK.	GSD	NONE	5-1-87	GEIST BAY ESTATES		5	
DATE			DRAWING TITLE				STANDARD DETAILS & SPECIFICATIONS		JOB NUMBER	
							8 6 3 4 1 - 0 0 0 0 0		OF 5	

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