Drain: CLARA KNOTTS **Drain #:** 210
Improvement/Arm: MERIDIAN CORPORATE PLAZA
Operator: J. LIVINGSTON **Date:** 2-20-04
Drain Classification: (Urban)/Rural **Year Installed:** 1989

GIS Drain Input Checklist

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

Gasb 34 Footages for Historical Cost
Drain Length Log

Drain-Improvement: CLARA KNOTTS - MERIDIAN CORPORATE PLAZA

Drain Type:	Size:	Length	Length (DB Query)	Length Reconcile	If Applicable Price:	If Applicable Cost:
RCP	12"	1284'	1491'	+207'	7.25/lf	10,809.75
	24"	696'	586'	-110'	18.00/lf	10548.00
	15"	969'	986'	+17'	9.50/lf	9,367.00
	18"	578'	578'	0'	10.50/lf	6,069.00
	30"	320'	0'	-320'	—	
	36"	80'	80'	0'	32.25/lf	2,580.00
	48"	1245'	1546'	+301'	66.55/lf	102,886.30
	66"	822'	823'	+1	129.25/lf	106,372.50
HERCP	53"x83"	150'	150'	0'	217.00/lf	32,550.00
	30"x19"	414'	414'	0'	40.70/lf	16,849.80
Sum:		6558'	6654'	+96'		$298,032.66

Final Report: 6558'

Comments:

Revised June 1997

HAMILTON COUNTY DRAINAGE BOARD
NOBLESVILLE, INDIANA

IN RE: CLARA KNOTTS LEGAL DRAIN)
Hamilton County, Indiana)

PETITION FOR RELOCATION AND RECONSTRUCTION

MCP PARTNERS, LLC (hereinafter Petitioner"), hereby petitions the Hamilton County Drainage Board for authority to relocate and improve a section of the CLARA KNOTTS Drain, and in support of said petition advises the Board that:

1. Petitioner owns real estate through which a portion of the CLARA KNOTTS Drain runs.
2. Petitioner plans to develop its real estate with roads, buildings, utilities, storm drains, sanitary sewers and other structures.
3. Petitioner's proposed development of its real estate will require relocation and reconstruction of a portion of the CLARA KNOTTS Drain, as specifically shown on engineering plans and specifications filed with the Hamilton County Surveyor.
4. The work necessary for the proposed relocation and reconstruction will be undertaken at the sole expense of the Petitioner and such work will result in substantial improvement to the CLARA KNOTTS Drain, without cost to other property owners on the watershed of the CLARA KNOTTS Drain.
5. Proposed relocation and reconstruction will not adversely affect other land owners within the drainage shed.
6. Petitioner requests approval of the proposed relocation and reconstruction under IC 36-9-27-52.5.

WHEREFORE, Petitioner requests that an Order issued from the Hamilton County Drainage Board authorizing relocation and reconstruction of the CLARA KNOTTS Drain, in conformance with applicable law and plans and specifications on file with the Hamilton County Surveyor.

Signed

GREGORY C. GURNIK, MANAGER
Printed

CERTIFICATE OF COMPLETION AND COMPLIANCE

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

SUBJECT: Meridian Corporate Plaza

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 Christopher R White Date 11/22/89

Type or Printed Name Christopher R. White

Business Address 7172 Graham Road
Indianapolis, IN 46250

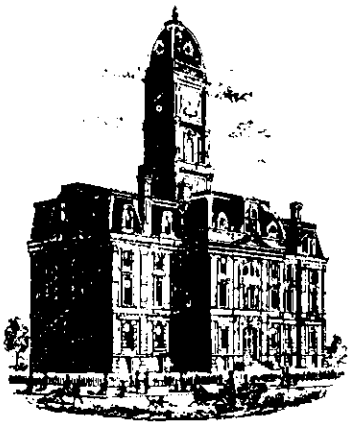
Telephone 842-6777

Seal

Indiana Registration Number

20491

ADM:tl
1/13/84



SURVEYOR'S OFFICE

Hamilton County

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

Suite 146
One Hamilton County Square
Noblesville, Indiana 46060-2230

To: Hamilton County Drainage Board

January 21, 1998

Re: **Clara Knotts Drain: Meridian Corporate Plaza**

Attached are as-builts, certificate of completion & compliance, and other information for Meridian Corporate Plaza. An inspection of the drainage facilities for this section has been made and the facilities were found to be complete and acceptable.

During construction, changes were made to the drain which will alter the plans submitted with my report for this drain dated April 10, 1989. The changes are as follows:

12"RCP - 1284'FT	15"RCP - 969'FT	18"RCP - 578'FT	24"RCP - 696'FT
30"RCP - 320'FT	36"RCP - 80'FT	48"RCP - 1245'FT	
66"RCP - 822'FT	53"x83" - 150'FT	30"x19" - 414FT	

Structures 608,609,610,611,612, and 677 were not constructed.

The length of the drain due to the changes described above is now **6,558' feet.** There was 2200 feet to open ditch vacated. This leaves a net drain length of **4,358' feet.**

Non-enforcements were not issued for this area at the time of construction. As buildings are constructed non-enforcements will be submitted for each site.

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

Sincerely,

Kenton C. Ward,
Hamilton County Surveyor

KCW/slm

Asbuilt Structures

Project: Clara Knotts Drain: Meridian Corporate Plaza

Structure:	T.C.:	I.E.:	Pipe:	Length:	Original Plans:	Difference:
603	834.0	825.09				
602	832.80	823.50	66"	533'	FRM 530'	
602	832.80	823.50				
601	831.50	823.10	66"	289.8'	FRM 290'	
601	831.50	823.10				
600	—	822.50	53"X83" ERCP	150'		
603	834.0	825.09				
604	834.0	827.43	48"	675'		
604	834.0	82.43				
EX.	—	828.50	48"	570'		
608	—	822.95				
609	830.0	824.26	42"	435'		
609	830.0	824.26				
610	831.0	825.52	42"	420'		
610	831.0	825.52				
611	831.80	826.85	42"	444'		
611	831.80	826.85				
612	832.25	827.23	42"	126'		

not constructed

6" SSD Streets:

Total: _____

6" SSD Lots:

Total: _____

RCP Pipe Totals:

Other Drain:	

Total Length of Drain: _____

Asbuilt Structures

Project: Clara Knotts Drain; Meridian Corporate Plaza

Structure:	T.C.:	I.E.:	Pipe:	Length:	Original Plans:	Difference:
612	832.25	827.23				
EX	?	827.95	42"	240'	NOT CONSTRUCTED	
EX	?	833.25				
617	—	834.0	12"	15'		
611	831.80	827.85				
643	—	829.70	12"	15'		
624	832.50	829.66				
622	832.58	829.33	12"	82'		
623	832.77	829.73				
622	832.58	829.72	12"	64'		
622	832.58	829.72				
619	832.20	828.91	18"	140'		
621	834.40	832.31				
620	832.80	829.60	12"	114'		
620	832.80	829.60				
619	832.20	828.90	15"	117'		
619	832.20	828.90				
618	832.04	827.34	18"	238'	FRM 240'	

6" SSD Streets:

Total: _____

6" SSD Lots:

Total: _____

RCP Pipe Totals:

Other Drain:	

Total Length of Drain: _____

Asbuilt Structures

Project: Clara Knotts Drain: Meridian Corporate Plaza

Structure:	T.C.:	I.E.:	Pipe:	Length:	Original Plans:	Difference:
618	832.04	827.34				
617	830.21	827.01	30"x19" ERCP	125'	FRM 128'	
617	830.21	827.01				
616	829.90	826.29	30"x19" ERCP	125'	FRM 128'	
616	829.90	826.29				
615	—	825.86	30"x19" ERCP	164'	FRM 170'	
614	?	824.70				
613	—	823.47	36"	80'		
632	834.10	830.66				
629	831.62	828.33	12"	191'	FRM 195'	
631	831.63	828.48				
628	831.61	828.20	12"	65'	FRM 66'	
630	834.90	830.39				
629	831.62	828.0	15"	171'	FRM 173'	
629	831.62	828.33				
628	831.61	827.79	18"	84'	FRM 80'	
628	831.61	827.79				
627	830.22	827.03	24"	122'	FRM 124'	

6" SSD Streets:

Total: _____

6" SSD Lots:

Total: _____

RCP Pipe Totals:

Other Drain:	

Total Length of Drain: _____

Asbuilt Structures

Project: Clara Knotts Drain: Meridia Corporate Plaza

Structure:	T.C.:	I.E.:	Pipe:	Length:	Original Plans:	Difference:
627	830.22	827.03				
626	829.86	826.40	24"	135'	FRM 131'	
626	829.86	826.40				
625	—	825.84	24"	101'	FRM 100'	
461	—	830.96				
660	833.37	830.34	12"	25'		
460	833.37	830.34				
656	833.23	829.66	12"	80'		
659	834.15	831.48				
658	834.06	830.64	12"	116'		
658	834.06	830.64				
657	833.20	830.17	12"	92'	FRM 94'	
657	833.20	830.17				
656	833.23	828.58	15"	240'	FRM 238'	
656	833.23	828.58				
655	833.0	827.13	18"	116'		
655	833.0	827.13				
606		826.04	24"	228'		

6" SSD Streets:

Total: _____

6" SSD Lots:

Total: _____

RCP Pipe Totals:

Other Drain:	

Total Length of Drain: _____

Asbuilt Structures

Project: Clark Knotts Drain: Meridian Corporate Plaza

Structure:	T.C.:	I.E.:	Pipe:	Length:	Original Plans:	Difference:
654	—	833.34				
653	836.0	831.72	24"	110'	✓	
653	836.0	831.72				
652	836.0	831.49	30"	100'	✓	
652	836.0	831.49				
642		830.75	30"	220'	✓	
673	841.80	838.85				
672	844.06	838.31	12"	26'	✓	
672	844.06	838.20				
671	843.30	838.22	12"	30'	✓	
671	843.30	837.81				
EX	844.70	832.46	15"	73'	✓	
667	838.82	835.11				
666	836.90	833.96	15"	96'	✓ FRM 94'	
666	836.90	833.96				
665	838.04	833.23	15"	71'	✓ FRM 70'	
665	838.04	833.23				
EX	—	832.71	15"	72'	✓	

6" SSD Streets:

Total: _____

6" SSD Lots:

Total: _____

RCP Pipe Totals:

Other Drain:	

Total Length of Drain: _____

Asbuilt Structures – (additional Drain)

Project: Clara Knotts Drain: Meridian Corporate Plaza

Structure:	T.C.:	I.E.:	Pipe:	Length:	Original Plans:	Difference:
682	—	829.76				
681	833.90	829.89	12"	40'		
681	833.90	829.82				
623		829.73	12"	74'		
686	—	834.47				
685	836.5	834.25	12"	40'		
685	836.50	834.25				
684	834.60	832.38	12"	132'		Add
684	834.60	832.28				
683	832.1	830.16	12"	64'		
683	832.1	827.59				
620	—	829.60	15"	45'		
EX						
674	843.94	839.93	12"	34'		
EX						
675	844.12	841.17	15"	44		
655 - 680	833.60	829.15	15"	40		

6" SSD Streets:

Total: _____

6" SSD Lots:

Total: _____

RCP Pipe Totals:

12"	1299'
15"	969'
18"	578'
24"	696'
30"	320'
36"	80'
42"	1665'
48"	1245'

66"	822'
53" x 83"	150'
30" x 19"	414'
Other Drain:	

Total Length of Drain: ~~8198'~~ ~~8238'~~ 6,558'

CONSTRUCTION PLANS FOR MERIDIAN CORPORATE PLAZA

SITE WORK GENERAL NOTES AND SPECIFICATIONS

NOTICES AND PERMITS

A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING, OR VERIFYING, THAT ALL PERMITS AND APPROVALS ARE OBTAINED FROM THE RESPECTIVE CITY, COUNTY AND STATE AGENCIES PRIOR TO STARTING CONSTRUCTION.

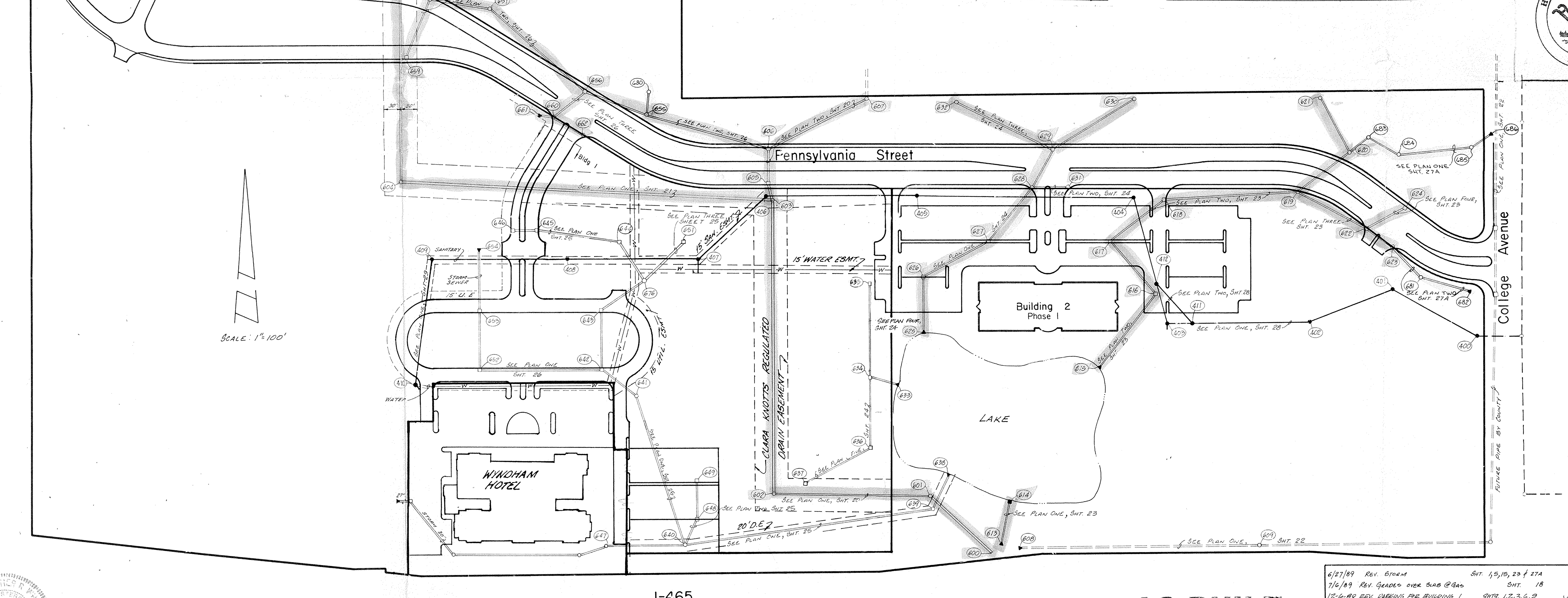
B. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES IN THE VICINITY OF THE CONSTRUCTION AREA PRIOR TO STARTING CONSTRUCTION.

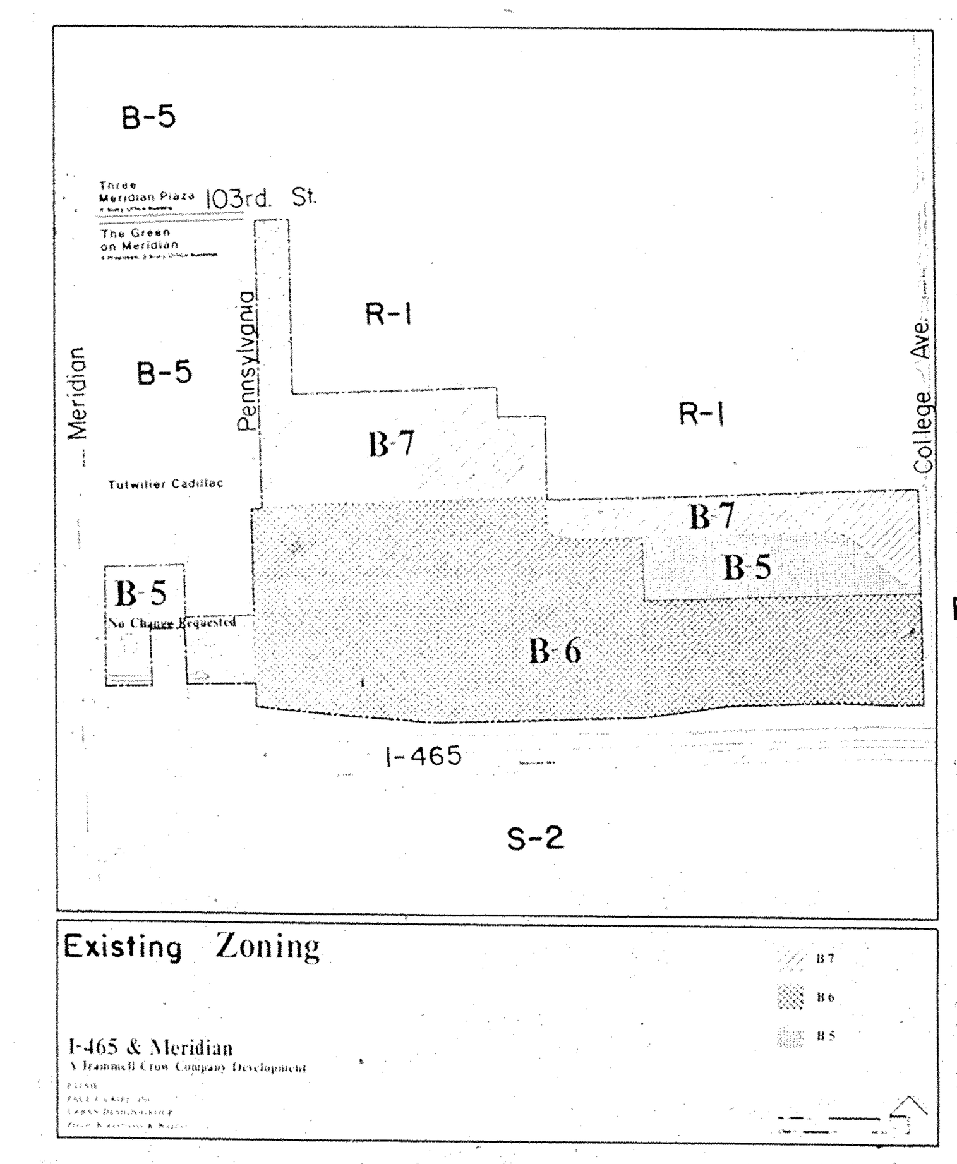
C. IT SHALL BE THE CONTRACTORS RESPONSIBILITY FOR NOTIFICATION AND COORDINATION OF ALL CONSTRUCTION WITH RESPECTIVE UTILITY COMPANIES.

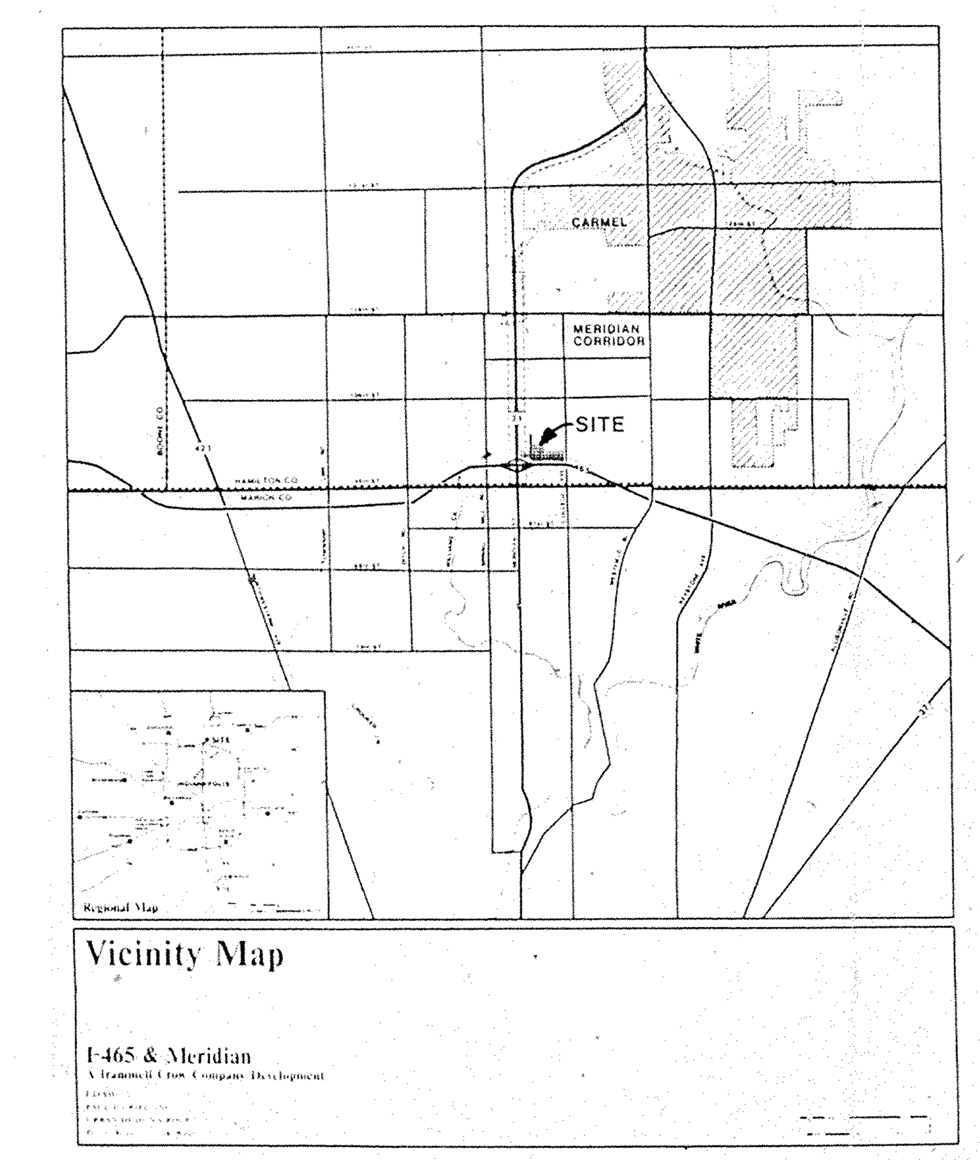
D. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER AND CONTRACTOR TO MAINTAIN QUALITY CONTROL THROUGHOUT THE PROJECT; FAILURE TO DO SO MAY RESULT IN REMOVAL AND REPLACEMENT OF THE DEFECTIVE WORK. IT IS RECOMMENDED THAT THE DEVELOPER HAVE A QUALIFIED INSPECTOR ON THE JOB SITE AT ALL TIMES DURING CONSTRUCTION.

E. IT IS ESSENTIAL THAT THE WORK TO BE DONE IN CONJUNCTION WITH THIS PROJECT SHALL BE INSTALLED ACCORDING TO THESE SPECIFICATIONS. THE ENGINEER WILL BE REQUIRED TO CERTIFY TO CERTAIN PORTIONS OF THIS PROJECT UPON COMPLETION. THEREFORE, IT IS NECESSARY TO OBTAIN APPROVAL AND ACCEPTANCE BY THE CITY THAT CONSTRUCTION WAS DONE IN COMPLIANCE WITH THESE PLANS AND SPECIFICATIONS.

F. SEE BIDDING SUMMARY FOR DESCRIPTION OF PHASE I CONSTRUCTION.







INDEX

SHT.	DESCRIPTION
1	COVER SHEET
2	SITE PLAN ~ OVERALL
3	LIGHTING & SIGNAGE PLAN
4	LIGHTING DETAILS
5	GRADING PLAN @ BUILDING # 2
6	GRADING PLAN @ BUILDING # 1
7	GRADING PLAN
8	UTILITY PLAN @ BUILDING # 2
9	UTILITY PLAN @ BUILDING # 1
10	UTILITY PLAN
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19	SIDEWALK PLAN ~ 103RD. ST.
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39	LANDSCAPE SPECIFICATIONS

HAMILTON COUNTY INDIANA 1823

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: 2-20-04

Entered by: [signature]

BENCHMARKS

T.B.M. #5 N.W. CAP BOLT ON FIRE HYDRANT EAST SIDE OF COLLEGE AVE. 200'± NORTH OF 101ST. ST. ELEV = 832.66

REVISIONS

8/9/88	REVISED LIGHTING	SHTS. 3 & 4
8/21/88	MISC. REVISIONS	SHTS. 5,6,7, & 24
9/27/88	REVISED GRADES & MISC. REVS.	SHTS. 1,5,6,7,8,9,11,12,13,14,15,16,17,20,21,22,23,24,25,26,27,28 & 29
10/4/88	ADDED TEMPORARY PIPES	SHTS. 9 & 10
10/7/88	REVISED GRADES & MISC REV.	SHTS. 5,6,7,8,9,10
12/19/88	LOWERED SAN. SEWER FROM STR. #400-402	SHT. 28
3/4/89	WIDENED 103RD. ST. & MISC. REVISIONS	SHT. 18
3/24/89	MISC. REVISIONS	SHTS. 1,6,9,25 & 29
3/27/89	MISC. REVISIONS	SHTS. 11-19
3/29/89	MISC. REVISIONS	SHTS. 8, 22, & 27
4/3/89	MISC. REVISIONS	SHTS. 6,10,15,18,26,28,29,31
4/11/89	ADDED SIDEWALK ON COLLEGE	SHT. 15
4/17/89	REV. STORM SEWER & SPECS	SHT. 1,6,9,26, & 32
6/19/89	REV. STORM & GRADES	SHT. 1,5,8,15,23, & 27a (NEW SHT)
6/21/89	ADDED SLAB OVER PIPELINE	SHT. 18, & 18a (NEW SHT.)

6/27/89	REV. STORM	SHT. 1,5,15,23 & 27A	
7/6/89	REV. GRADES OVER SLAB @ GAS	SHT. 18	
12-6-89	REV. PARKING FOR BUILDING 1	SHTS. 1,2,3,6,9	BP
1-9-90	REV. PARKING LOTS AND LIGHTING	SHTS. 1,2,3,6,9,35	BP

AS BUILT

date 10-18-89

CHRISTOPHER R. WHITE REGISTERED No. 20491 STATE OF INDIANA PROFESSIONAL ENGINEER

CERTIFIED BY: [signature]

1-17-90 DATE

REVISIONS

9/27/88	ADDED STRUCTURE INFORMATION		
3/24/89	MISC. REVISIONS		
4/17/89	REV. STORM SEWERS		
6/27/89	REV. STORMSEWERS ADD STRS # 684 & 685	RJS	
3/14/91	Added Storm Sewer, Water Line, 15' & 60 U.E.	G.L.	
10/3/89	ADDED SAN. STR'S 411 & 412 SHT. 1 & 28		
12-6-89	REV. PARKING LOTS	BP	
1-9-90	REV. PARKING, INCLUDE NOTE	BP	
2-19-91	REV. R'S; ADD ESMTS; MAKE SEPIA	TRZ	

PAUL I. CRIPE, INC.
7172 GRAHAM ROAD
INDIANAPOLIS, INDIANA 46250
(317) 842-6777

- CIVIL ENGINEERING
- LAND SURVEYING
- ARCHITECTURE
- LAND PLANNING

TECH CHK:	DRAWN BY:	SCALE:	DATE:	CLIENT:
C.R.W.	B.T.	As Noted	7/29/88	TRAMMELL CROW
DRFTNG. CHK:	DRAWING TITLE: COVER SHEET			

DWG. TYPE | FILE NUMBER | SHEET: 1 OF 39

JOB NUMBER: 8 6 3 9 1 2 0 0 0 0

103RD. STREET

MERIDIAN ON THE GREEN OFFICE PARK

TUTWILLER CADILLAC

Meridian

EXISTING R/W

EXISTING BUILDING TO BE DEMOLISHED

Pennsylvania

Delaware

Washington Blvd.

New Jersey

NORTH RIDGE SUBDIVISION

Central Ave

Ruckle

Park Ave

Broadway

College Ave

R/W

EXISTING DRIVE TO BE REMOVED

EXIST. BLDGS. TO BE DEMOLISED

EXISTING DRIVE TO BE REMOVED

100 TAPER

40' DECEL LANE

100 TAPER

PENNSYLVANIA STREET

EDGE OF FUTURE PVMT.

FUTURE PARKING GARAGE PAD

NOT TO BE CONSTRUCTED WITH PHASE 1

FUTURE BUILDING PAD

NOT TO BE CONST. WITH PHASE 1

6 STORY BLDG.

FUTURE BUILDING PAD

TO BE BUILT WITH PHASE 1

HOTEL

FUTURE BLDG. PAD

TO BE BUILT WITH PHASE 1

PLAZA FOUNTAIN

BUILDING #1

3 STORY

150,000 SQ. FT.

BUILDING #2

3 STORY

63,000 SQ. FT.

14'x14' TRASH PAD

FUTURE PARKING GAR

CONSTRUCTION LIMITS

DETENTION LAKE

1.8 AC. LAKE

FUTURE BUILDING PAD

TO BE BUILT WITH PHASE 1

FUTURE PARKING GARAGE

NOT TO BE CONSTRUCTED WITH PHASE 1

EXISTING BUILDINGS TO BE DEMOLISHED

FUTURE BUILDING PAD

TO BE BUILT WITH PHASE 1

Interstate 465

WESTBOUND LANES

4' WIDENING TO E. I-465

LIMITS OF OVERLAY AND WIDENING

Site Plan Notes

1. All radii and street dimensions shall be measured to back of chairback curb or face of integral curb and walk.
2. All radii to be 5 foot unless otherwise noted.
3. Bearings, dimensions and easements are shown for reference only. Boundary information provided by others. See record surveys and plats for exact information.
4. Existing buildings to be demolished and buried on site per the demolition specifications.
5. See architectural plans for details of buildings and building dimensions.
6. All parking areas to be curbed with 2 foot chairback curb or integral curb and walk.
7. All parking stalls shall be 9x20 or 9x18 where adjacent to sidewalk or grass area. Where integral curb and walk is adjacent to a parking stall, 2 feet of sidewalk shall be utilized as parking area overhang.
8. See Landscaping Plans for modular pavement areas and details.

DENOTES HEAVY DUTY PVMT. AREAS

SCALE: 1" = 100'

PARKING TABULATION

BUILDING #1

63,000 SQ. FT. ÷ 250 = 252 PARKING SPACES REQ'D.
REGULAR PARKING SHOWN = 251
HANDICAP PARKING SHOWN = 5
TOTAL PARKING SHOWN = 256

BUILDING #2

150,000 SQ. FT. ÷ 250 = 600 PARKING SPACES REQ'D.
REGULAR PARKING SHOWN = 625
HANDICAP PARKING SHOWN = 8
TOTAL PARKING SHOWN = 633

FILED
SEP 29 1988
HAMILTON COUNTY DRAINAGE BOARD
SECRETARY

CERTIFIED BY

DATE

REVISIONS

PAUL I. CRIPE, INC.
7172 GRAHAM ROAD
INDIANAPOLIS, INDIANA 46250
(317) 842-6777
• CIVIL ENGINEERING
• LAND SURVEYING
• ARCHITECTURE
• LAND PLANNING

TECH. CHK.	DRAWN BY	SCALE	DATE	CLIENT
	B.T.	1" = 100'	7/29/88	TRAMMELL CROW
DFTNG. CHK.	DRAWING TITLE			
	SITE PLAN ~ OVERALL			

DWG. TYPE	FILE NUMBER	SHEET
		2 OF 39
JOB NUMBER		
8 6 3 9 1 — 2 0 0 0 0		

consulting engineers
FENNIG AND WEIR
2825 EAST 56TH STREET, INDIANAPOLIS, INDIANA 46220

SCALE : 1" = 100'

LEGEND

- SINGLE 20' BRONZE POLE PARKING LIGHT
- DOUBLE 20' BRONZE POLE PARKING LIGHT
- BUILDING ACCENT FIXTURE
- 42" BOLLARD LIGHT
- CONDUIT 2" C PVC UNLESS MARKED

NOTE : FOR SIGNAGE DETAILS SEE ARCHITECTURAL PLANS

UNIFIED CENTER SIGN #3 W/GROUND LIGHTS TYPE I

22 BOLLARD LIGHTS

BUILDING I.D. SIGN #3 W/GROUND SIGN TYPE II

8 BOLLARD LIGHTS

22 BUILDING ACCENT LIGHTS

12 BOLLARD LIGHTS

28 BOLLARD LIGHTS

C.P

TO TRANSFORMER

UNIFIED CENTER SIGN # 4 W/GROUND LIGHTS TYPE I

BUILDING I.D. SIGN #6 TYPE II

22 BOLLARD LIGHTS

80 BUILDING ACCENT LIGHTS

UNIFIED CENTER SIGN #2 W/GROUND LIGHTS TYPE I

UNIFIED CENTER SIGN #1 W/GROUND LIGHTS TYPE I

Meridian · Pennsylvania · Delaware · Washington Blvd. · New Jersey · Central Ave · Ruckle · Park Ave. · Broadway · College Ave · Interstate 465

FILED
SEP 29 1988
HAMILTON COUNTY DRAINAGE BOARD
SECRETARY

CERTIFIED BY	REVISIONS		TECH. CHK.	DRAWN BY	SCALE	DATE	CLIENT
DATE	8/9/88 REMOVE NOTE OF SIZE OF WIRE		DFTNG. CHK.	B.T.	1" = 100'	7/29/88	TRAMMELL CROW

PAUL I. CRIPE, INC.
7172 GRAHAM ROAD
INDIANAPOLIS, INDIANA 46250
(317) 842-6777

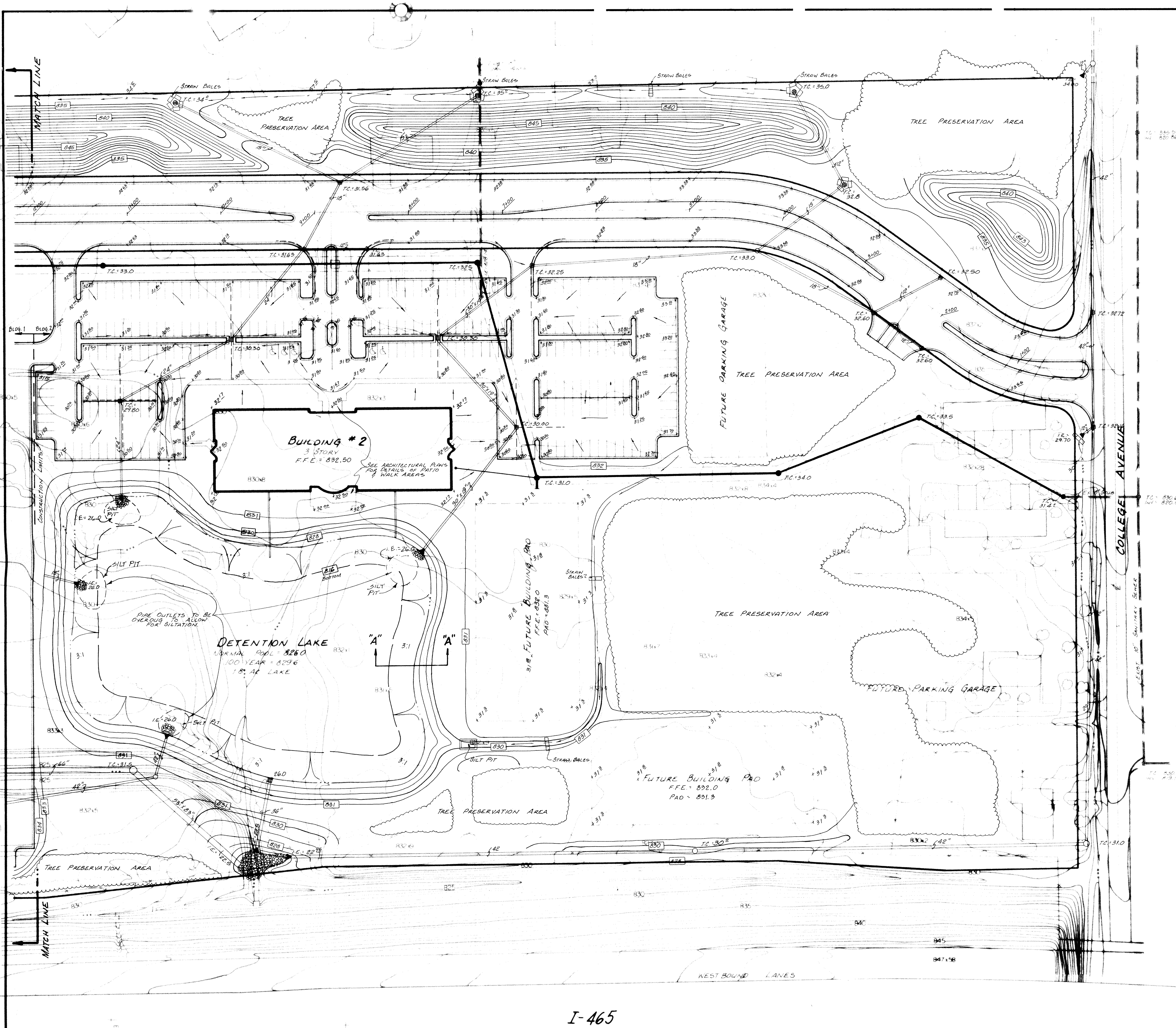
• CIVIL ENGINEERING
• LAND SURVEYING
• ARCHITECTURE
• LAND PLANNING

DRAWING TITLE: LIGHTING & SIGNAGE PLAN

DWG. TYPE	FILE NUMBER	SHEET
	JOB NUMBER 8 6 3 9 1 — 2 0 0 0 0	3 OF 35

3-D
3-B
3-A

McDowell/James Printing, Inc.



SCALE: 1"=50'

LEGEND

STORM SEWER — STREET INLET, CURB INLET, DITCH INLET, MANHOLE, STL. END SECTION

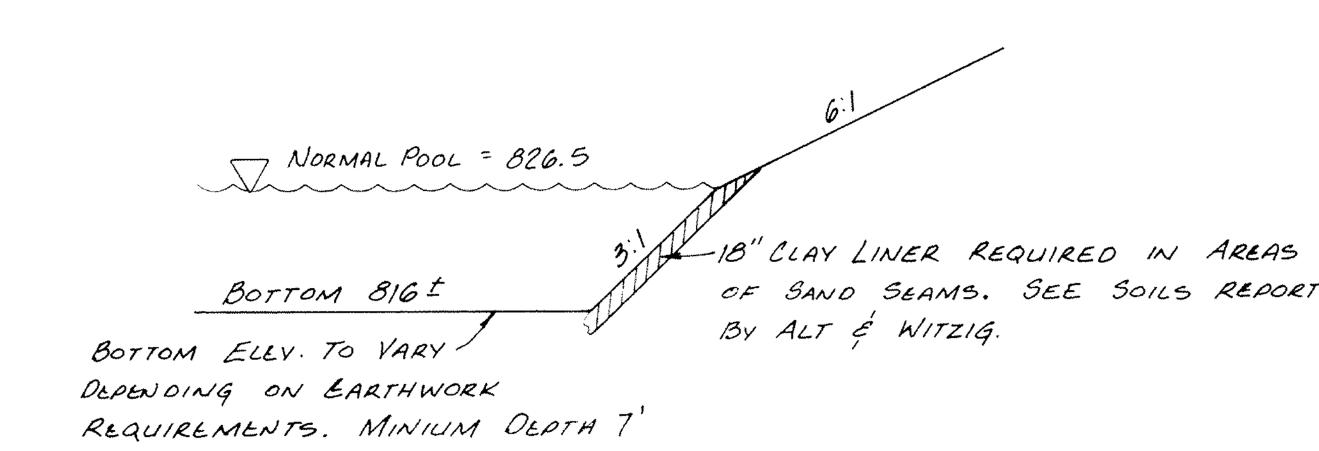
SANITARY SEWER — MANHOLE

PROPOSED SPOT ELEVATION +30⁰

PROPOSED CONTOUR 843

Grading Notes

1. Elevations noted at centerline of street are top of curb elevations at that respective station.
2. Elevations in parking areas are edge of pavement elevations. For top of curb elevations add 0.5 feet.
3. Lake bottom elevations may vary with earthwork requirements. A minimum depth of 8 feet shall be maintained.
4. Topographic and plainmetric information from photographic compilation by others. (Accuracy to National Mapping Standards of plus or minus 1/2 contour interval.)
5. Building pad areas designated for fill for future buildings shall be constructed of suitable fill material and compacted per specifications.
6. Contractor shall preserve existing trees wherever possible. Owner and owner's representative shall be consulted for clearing limits. Clearing limits shall consist of all trees within street areas, utility installation limits and cut and fill areas. Cleared trees shall be buried onsite at the direction of the owner's representative.
7. All topsoil shall be placed in mounding areas and nonstructural fill areas. Upon completion of mass earthwork, topsoil shall be spread to a depth of 4 to 6 inches in areas to be seeded such as lake slopes, mound areas, areas between curb and clearing limits, and all disturbed areas outside of building and parking areas.
8. Lake slopes may require 18 inches of clay liner in areas of sand seams. See Soils Report for recommendations.



SECTION "A-A"

NO SCALE

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CERTIFIED BY	REVISIONS						
	8-21-88 INCREASED DETENTION AREA						
DATE	9/27/88 REVISED GRADES						

PAUL I. CRIPE, INC. • CIVIL ENGINEERING • LAND SURVEYING • ARCHITECTURE • LAND PLANNING
7172 GRAHAM ROAD
INDIANAPOLIS, INDIANA 46250
(317) 842-6777

TECH. CHK.	DRAWN BY	SCALE	DATE	CLIENT	DWG. TYPE	FILE NUMBER	SHEET
	B.T.	1"=50'	7/29/88	TRAMMELL CROW			5
DFTNG. CHK.	DRAWING TITLE: GRADING PLAN @ BUILDING #2				JOB NUMBER: 8 6 3 9 1 — 2 0 0 0 0		OF 39

(1-G) (1-F) (1-D) (1-B) (1-A)

SCALE: 1"=50'

LEGEND

STORM SEWER — STREET INLET, CURB INLET, DITCH INLET, MANHOLE, STL. END SECTION

SANITARY SEWER — MANHOLE

PROPOSED SPOT ELEVATION × 30.0

PROPOSED CONTOUR 840

Grading Notes

1. Elevations noted at centerline of street are top of curb elevations at that respective station.
2. Elevations in parking areas are edge of pavement elevations. For top of curb elevations add 0.5 feet.
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8. Lake bottom may require 18 inches of clay liner in areas of sand seams. See Soils Report for recommendations.

MATCH LINE

TREE PRESERVATION AREA

FILL AREA

STRAW BALES

SILT PIT

FUTURE BUILDING PAD
PAD: 837.4
TO BE CONSTRUCTED WITH PHASE I

BUILDING # 1
6 STORY
FFE = 836.00
PAD = 835.3

DETENTION LAKE
NORMAL POOL 826.0
100 YEAR 829.5
4 AC. LAKE

TREE PRESERVATION LIMITS

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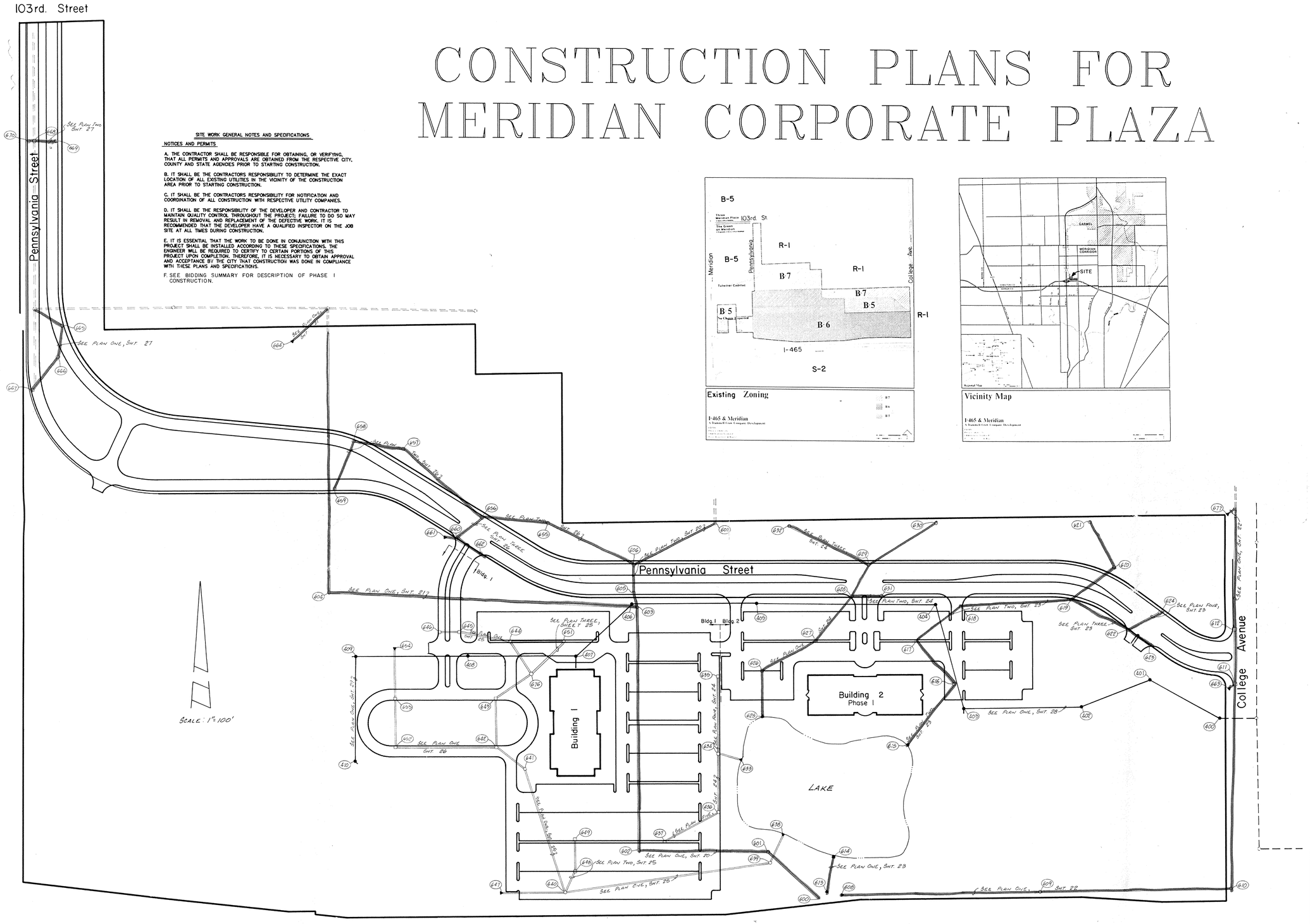
	8-2-88 CHANGED TREE AREA, GRADES & DETENTION AREA	7172 GRAHAM ROAD INDIANAPOLIS, INDIANA 46250 (317) 842-6777		B.T	1"=50'	7/29/88	TRAMMELL CROW		JOB NUMBER	6
DATE	9/27/88 REVISED GRADE	• CIVIL ENGINEERING • LAND SURVEYING • ARCHITECTURE • LAND PLANNING	DFTNG. CHK.	DRAWING TITLE	GRADING PLAN @ BUILDING #1				8 6 3 9 1 — 2 0 0 0 0	OF 39

CONSTRUCTION PLANS FOR MERIDIAN CORPORATE PLAZA



SITE WORK GENERAL NOTES AND SPECIFICATIONS

NOTICES AND PERMITS

A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING, OR VERIFYING, THAT ALL PERMITS AND APPROVALS ARE OBTAINED FROM THE RESPECTIVE CITY, COUNTY AND STATE AGENCIES PRIOR TO STARTING CONSTRUCTION.

B. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES IN THE VICINITY OF THE CONSTRUCTION AREA PRIOR TO STARTING CONSTRUCTION.

C. IT SHALL BE THE CONTRACTORS RESPONSIBILITY FOR NOTIFICATION AND COORDINATION OF ALL CONSTRUCTION WITH RESPECTIVE UTILITY COMPANIES.

D. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER AND CONTRACTOR TO MAINTAIN QUALITY CONTROL THROUGHOUT THE PROJECT; FAILURE TO DO SO MAY RESULT IN REMOVAL AND REPLACEMENT OF THE DEFECTIVE WORK. IT IS RECOMMENDED THAT THE DEVELOPER HAVE A QUALIFIED INSPECTOR ON THE JOB SITE AT ALL TIMES DURING CONSTRUCTION.

E. IT IS ESSENTIAL THAT THE WORK TO BE DONE IN CONJUNCTION WITH THIS PROJECT SHALL BE INSTALLED ACCORDING TO THESE SPECIFICATIONS. THE ENGINEER WILL BE REQUIRED TO CERTIFY TO CERTAIN PORTIONS OF THIS PROJECT UPON COMPLETION. THEREFORE, IT IS NECESSARY TO OBTAIN APPROVAL AND ACCEPTANCE BY THE CITY THAT CONSTRUCTION WAS DONE IN COMPLIANCE WITH THESE PLANS AND SPECIFICATIONS.

F. SEE BIDDING SUMMARY FOR DESCRIPTION OF PHASE I CONSTRUCTION.

INDEX

BENCHMARKS

T.B.M. #5 N.W. CAP BOLT ON FIRE HYDRANT EAST SIDE OF COLLEGE AVE. 200'± NORTH OF 101ST. ST. ELEV.= 832.66

REVISIONS

8/9/88	REVISED LIGHTING	SHTS. 3 & 4
8/21/88	MISC. REVISIONS	SHTS. 5,6,7, & 24
9/27/88	REVISED GRADES & MISC. REVS.	SHTS. 1, 5, 6, 7, 8, 9, 11, 12, 13, 14, 15, 16, 17, 20, 21, 22, 23, 24, 25, 26, 27, 28 & 29

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SEP 29 1988
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CERTIFIED BY:

DATE

REVISIONS
9/27/88 ADDED STRUCTURAL INFORMATION

PAUL I. CRIPE, INC.
7172 GRAHAM ROAD
INDIANAPOLIS, INDIANA 46250
(317) 842-6777

- CIVIL ENGINEERING
- LAND SURVEYING
- ARCHITECTURE
- LAND PLANNING

TECH CHK:	DRAWN BY:	SCALE:	DATE:	CLIENT:
DRFTNG. CHK:	DRAWING TITLE:	As Noted	7/29/88	TRAMMELL CROW

COVER SHEET

DWG. TYPE	FILE NUMBER	SHEET:
JOB NUMBER 8 6 3 9 1 1 2 0 0 0 0		1 OF 39

Grading Notes

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CERTIFIED BY	REVISIONS
	8-21-88 CHANGED GRADES & TREE AREAS
DATE	9/27/88 REVISED GRADES

PAUL I. CRIPE, INC.
7172 GRAHAM ROAD
INDIANAPOLIS, INDIANA 46250
(317) 842-6777

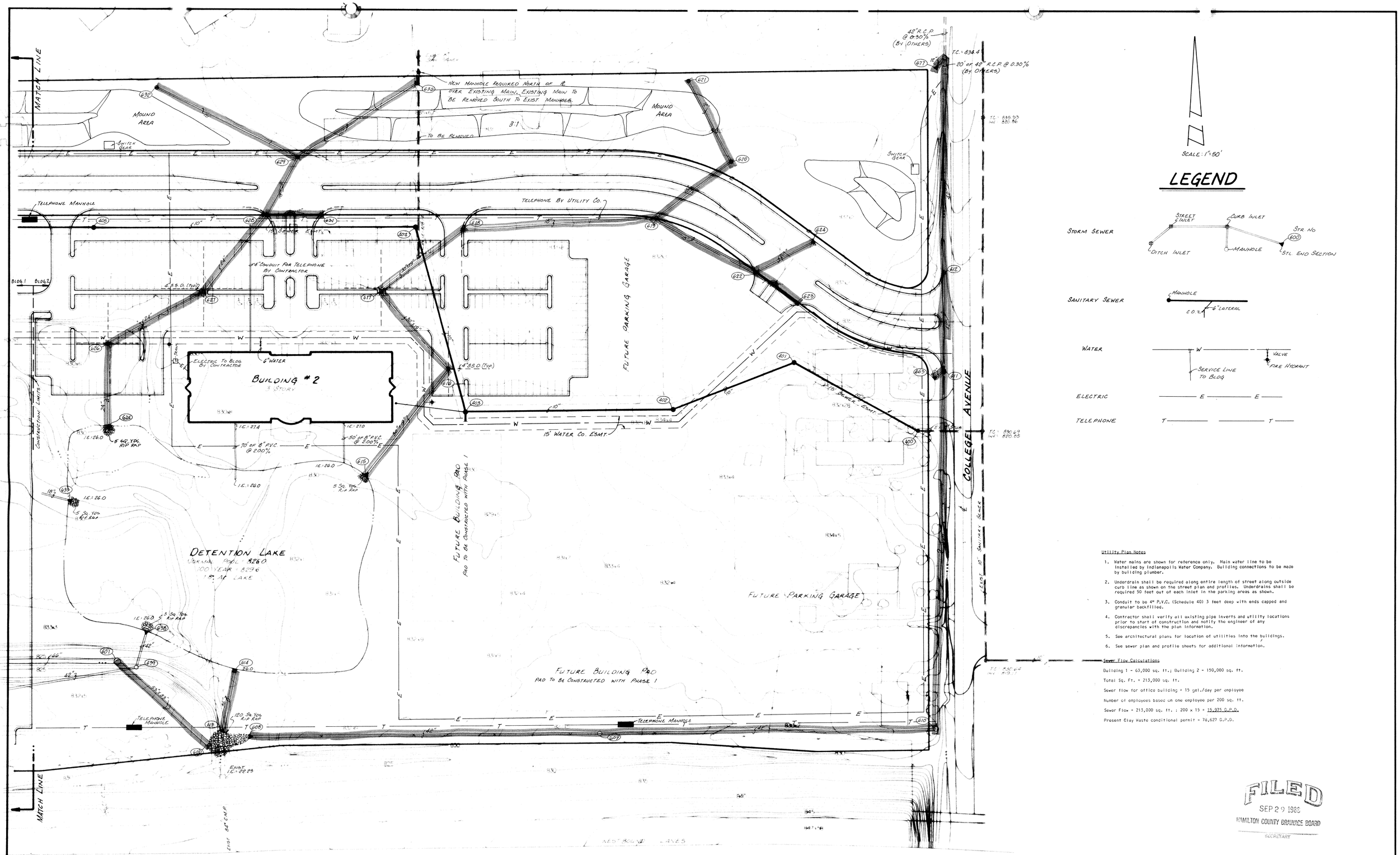
- CIVIL ENGINEERING
- LAND SURVEYING
- ARCHITECTURE
- LAND PLANNING

TECH. CHK.	DRAWN BY	SCALE	DATE	CLIENT
	B.T.	1"=50'	7/29/88	TRAMMELL CROW
DFTNG. CHK.	DRAWING TITLE			
	GRADING PLAN			

DWG. TYPE	FILE NUMBER	SHEET
	[redacted]	7

JOB NUMBER

McDowell/James Printing, Inc.



SCALE: 1" = 50'

LEGEND

STORM SEWER — STREET INLET, CURB INLET, STR NO 600, DITCH INLET, MANHOLE, STL END SECTION

SANITARY SEWER — MANHOLE, C.O. 6" LATERAL

WATER — W, VALVE, FIRE HYDRANT, SERVICE LINE TO BLDG

ELECTRIC — E — E

TELEPHONE — T — T

Utility Plan Notes

1. Water mains are shown for reference only. Main water line to be installed by Indianapolis Water Company. Building connections to be made by building plumber.
2. Underdrain shall be required along entire length of street along outside curb line as shown on the street plan and profiles. Underdrains shall be required 50 feet out of each inlet in the parking areas as shown.
3. Conduit to be 4" P.V.C. (Schedule 40) 3 feet deep with ends capped and granular backfilled.
4. Contractor shall verify all existing pipe inverts and utility locations prior to start of construction and notify the engineer of any discrepancies with the plan information.
5. See architectural plans for location of utilities into the buildings.
6. See sewer plan and profile sheets for additional information.

Sewer Flow Calculations

Building 1 - 63,000 sq. ft.; Building 2 - 150,000 sq. ft.

Total Sq. Ft. = 213,000 sq. ft.

Sewer flow for office building = 15 gal./day per employee

Number of employees based on one employee per 200 sq. ft.

Sewer Flow = 213,000 sq. ft. : 200 x 15 = 15,975 G.P.D.

Present Clay Waste conditional permit = 76,627 G.P.D.

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CERTIFIED BY	REVISIONS		PAUL I. CRIPE, INC.	TECH. CHK.	DRAWN BY	SCALE	DATE	CLIENT	DWG. TYPE	FILE NUMBER	SHEET
	9/27/88 Misc Revisions		7172 GRAHAM ROAD INDIANAPOLIS, INDIANA 46250 (317) 842-6777		B.T.	1"=50'	7/29/88	TRAMMELL CROW			8
DATE			• CIVIL ENGINEERING • LAND SURVEYING • ARCHITECTURE • LAND PLANNING	DFTNG. CHK.	DRAWING TITLE	UTILITY PLAN @ BUILDING #2			JOB NUMBER	8 6 3 9 1 — 2 0 0 0 0	OF 39

SCALE: 1"=50'

LEGEND

STORM SEWER — STREET INLET, CURB INLET, STR. NO. 600, DITCH INLET, MANHOLE, STL END SECTION

SANITARY SEWER — MANHOLE, CO., 6" LATERAL

WATER — W, VALVE, SERVICE LINE TO BLDG., FIRE HYDRANT

ELECTRIC — E — E

TELEPHONE — T — T

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TELEPHONE MANHOLE

MATCH LINE

EXISTING SANITARY TO REMAIN. EXISTING LATERALS TO BE CAPED AT EDGE OF EASEMENT.

CONNECT TO FUTURE PIPE FOR CLARA KNOTTS PHASE II

MANHOLE CASTING TO BE RAISED TO 838.0

15' SAN ESMT

MOUND AREA

EDGE OF FUTURE PVMT.

TELEPHONE BY UTILITY CO.

4" CONDUIT FOR TELEPHONE BY CONTRACTOR

TELEPHONE MANHOLE

WATER MAIN BY WATER CO.

15' WATER CO. ESMT

15' SEWER ESMT

FUTURE BUILDING PAD TO BE CONSTRUCTED WITH PHASE I

BUILDING # 1 6 STORY

FUTURE BUILDING PAD TO BE CONSTRUCTED WITH PHASE I

DETENTION LAKE

EXISTING TELEPHONE

TELEPHONE MANHOLE

TELEPHONE BY UTILITY CO.

MATCH LINE

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DATE

REVISIONS

9/27/88 Misc. Revisions

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INDIANAPOLIS, INDIANA 46250
(317) 842-6777

- CIVIL ENGINEERING
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- LAND PLANNING

TECH. CHK.	DRAWN BY	SCALE	DATE	CLIENT
DFTNG. CHK.	B.T.	1"=50'	7/29/88	TRAMMELL CROW

DRAWING TITLE: UTILITY PLAN @ BUILDING #1

DWG. TYPE	FILE NUMBER	SHEET
	JOB NUMBER 8 6 3 9 1 — 2 0 0 0 0	9 OF 39

LEGEND

STORM SEWER

STREET INLET — CURB INLET — STR. NO. 600 — STL. END SECTION

DITCH INLET — MANHOLE

WATER — W — VALVE

SERVICE LINE TO BLDG. — FIRE HYDRANT

SCALE : 1"=50'

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Present Clay Waste conditional permit = 78,627 G.P.D.

CONNECT TO EXIST END SECTION

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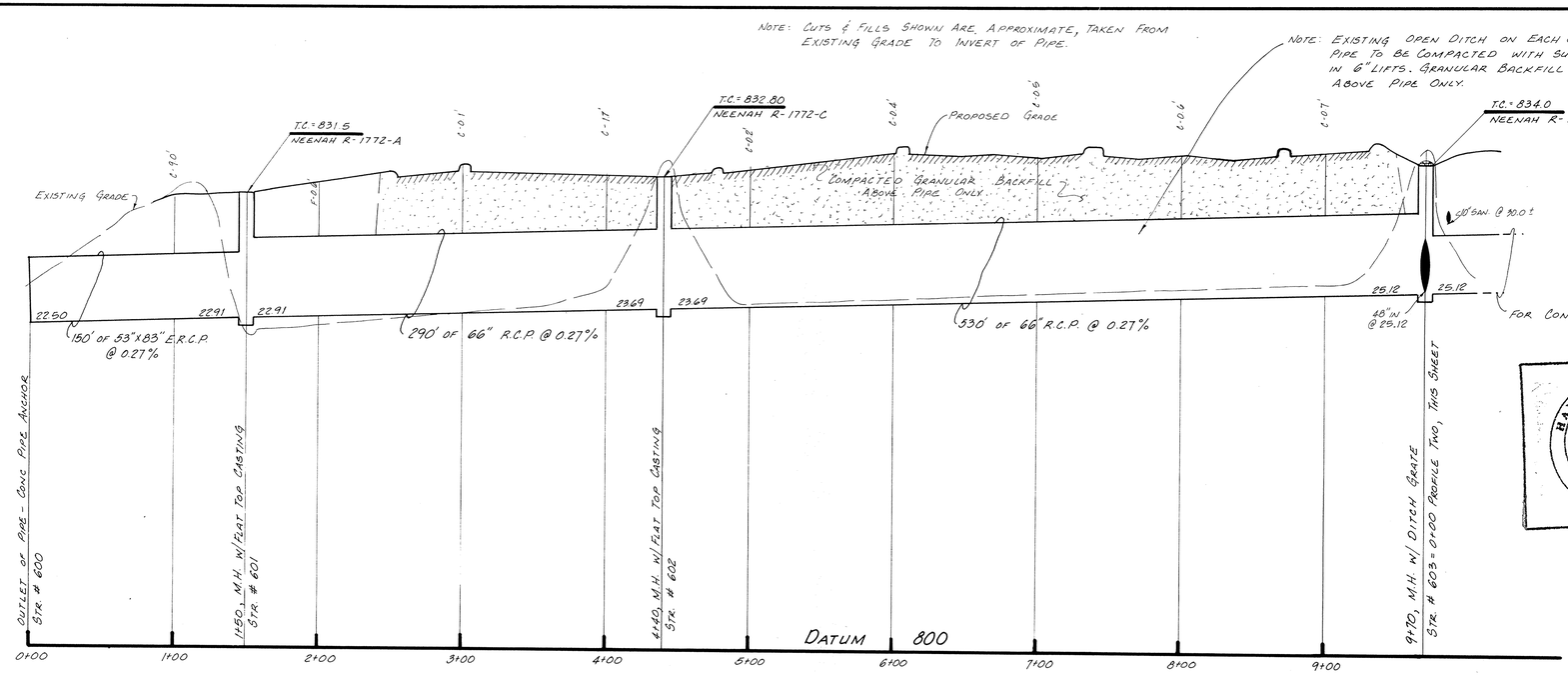
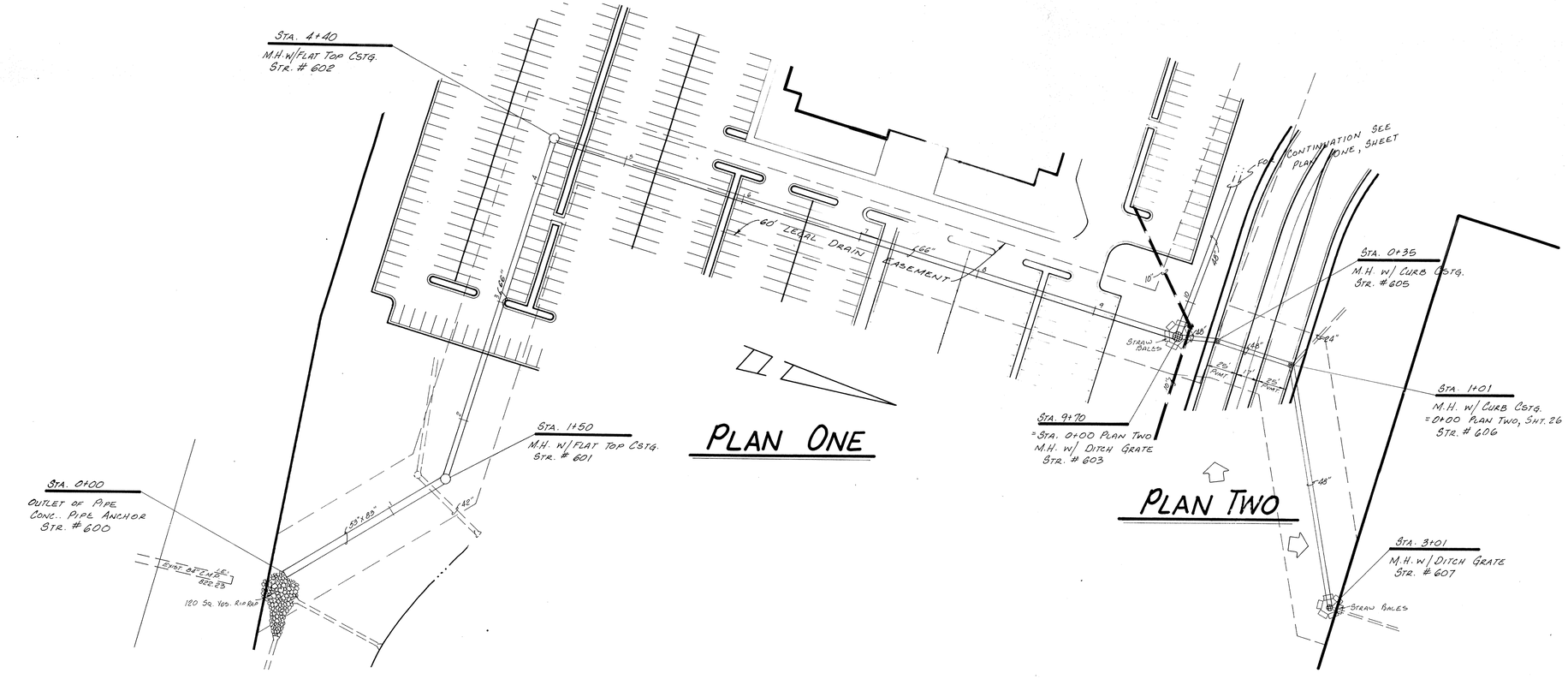
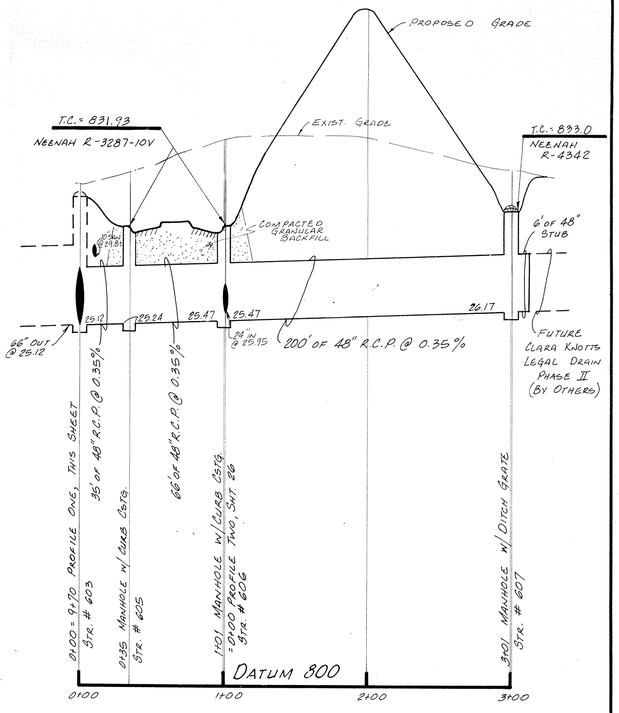
DATE			DFTNG. CHK.	DRAWING TITLE UTILITY PLAN				JOB NUMBER 8 6 3 9 1 — 2 0 0 0 0 OF 39



PROFILE ONE

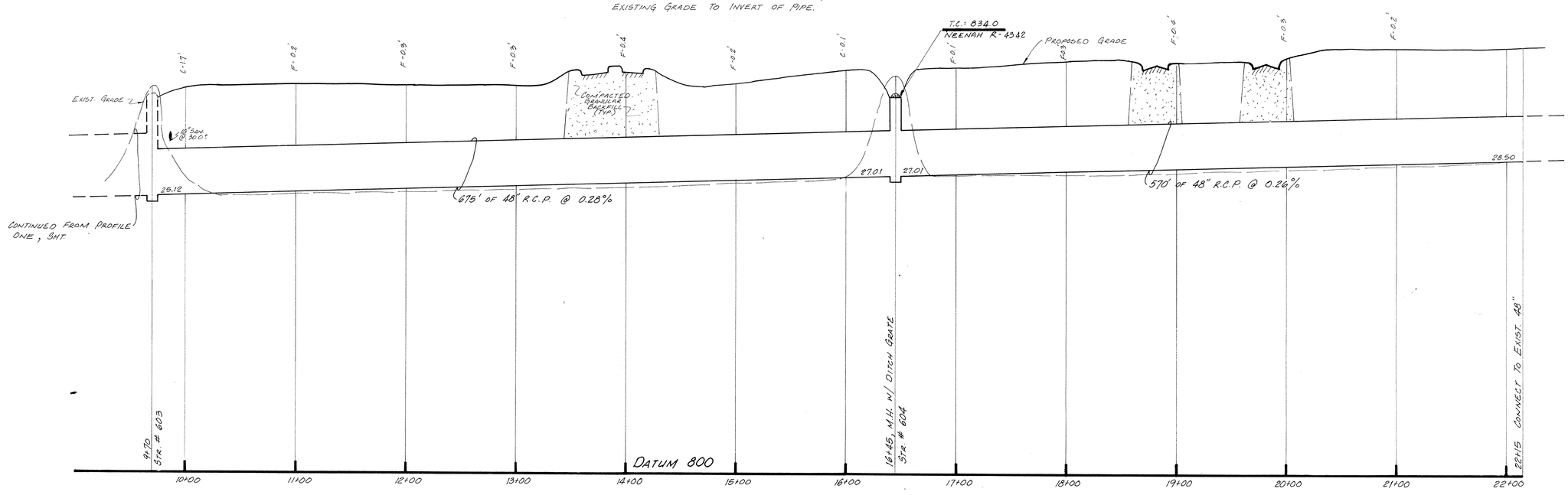




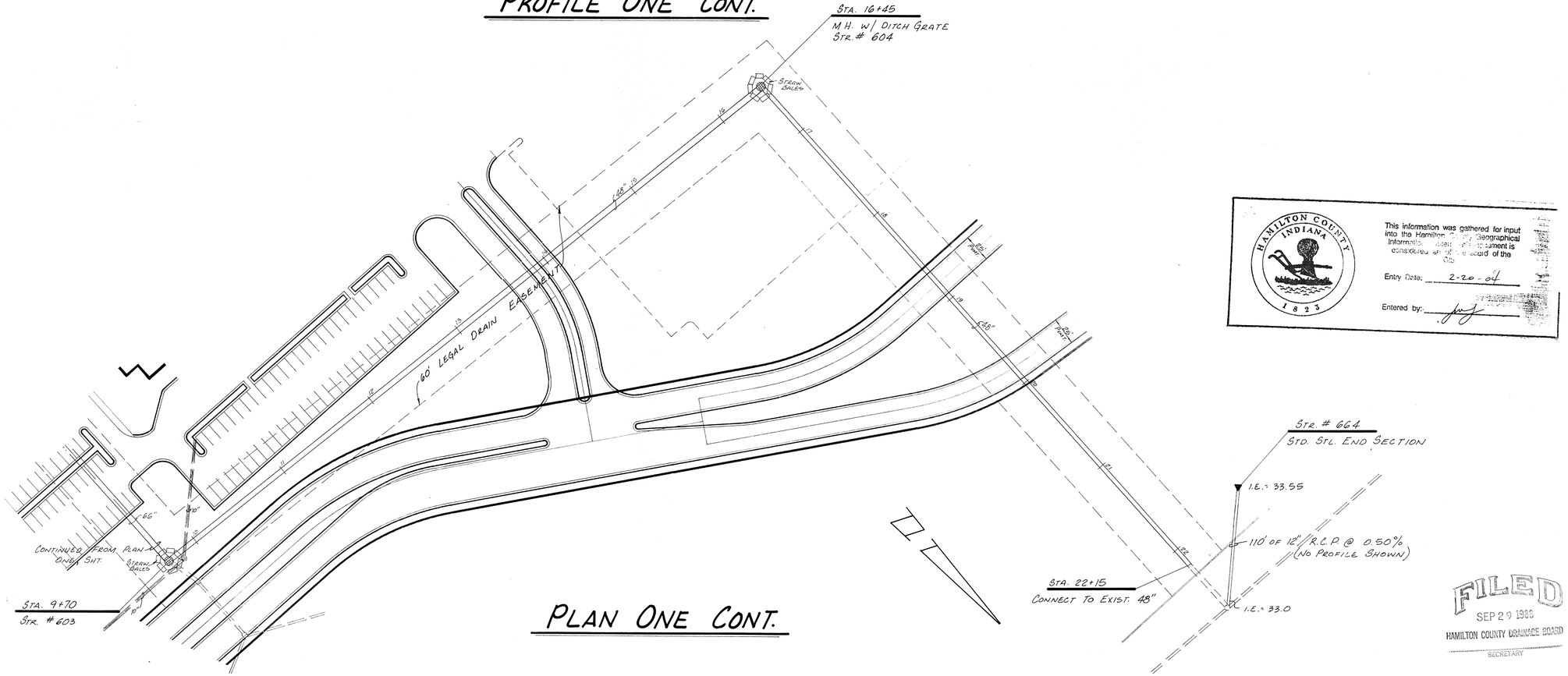
PROFILE TWO

CERTIFIED BY	REVISIONS	PAUL I. CRIPE, INC. • CIVIL ENGINEERING • LAND SURVEYING • ARCHITECTURE • LAND PLANNING 7172 GRAHAM ROAD INDIANAPOLIS, INDIANA 46250 (317) 842-6777	TECH. CHK.	DRAWN BY B.T.	SCALE 1"=50' HORIZ. 1"=5' VERT.	DATE 7/29/88	CLIENT TRAMMELL CROW	DWG. TYPE	FILE NUMBER / SHEET
DATE	1/27/88 MISC. REVISIONS		DFTNG. CHK.	DRAWING TITLE STORM SEWER PLAN & PROFILE - CLARA KNOTS LEGAL DRAIN				JOB NUMBER 8 6 3 9 1 — 2 0 0 0 0	20 OF 39

Note: Cuts & Fills Shown Are Approximate, Taken From Existing Grade To Invert Of Pipe.



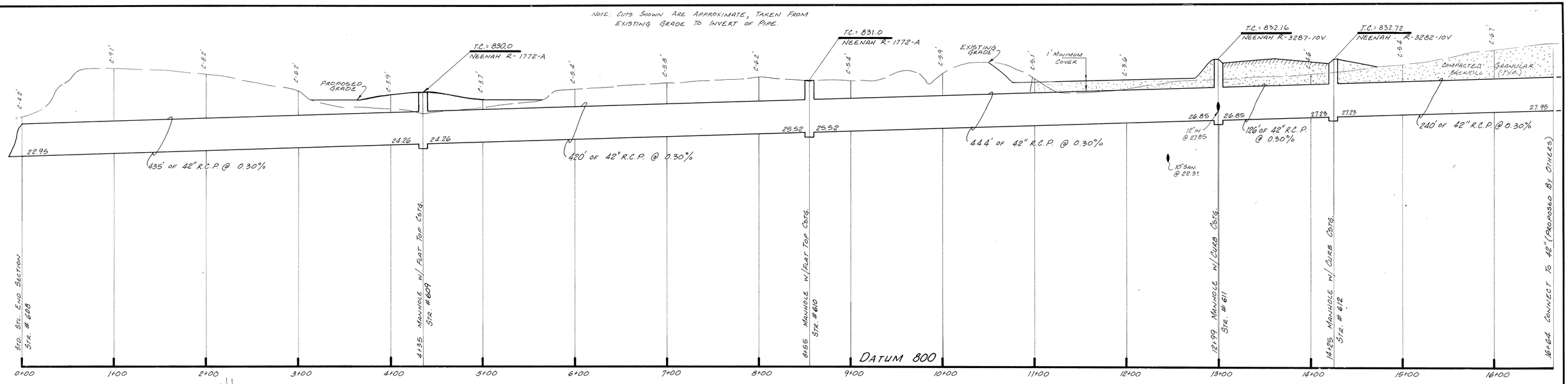
PROFILE ONE CONT.



PLAN ONE CONT.

CERTIFIED BY	REVISIONS	PAUL I. CRIPE, INC.	TECH. CHK.	DRAWN BY	SCALE	DATE	CLIENT	DWG. TYPE	FILE NUMBER	SHEET
DATE	9/27/88 MISC. REVISIONS	7172 GRAHAM ROAD INDIANAPOLIS, INDIANA 46250 (317) 842-6777 • CIVIL ENGINEERING • LAND SURVEYING • ARCHITECTURE • LAND PLANNING	DFTNG. CHK.	B.T.	1"=50' HOR.; 1"=5' VERT.	7/29/88	TRAMMELL CROW		JOB NUMBER	21
				DRAWING TITLE	STORM SEWER PLAN & PROFILE ~ CLARA KNOTS LEGAL DRAIN				8 6 3 9 / — 2 0 0 0 0	OF 39

NOTE: CUTS SHOWN ARE APPROXIMATE, TAKEN FROM EXISTING GRADE TO INVERT OF PIPE.



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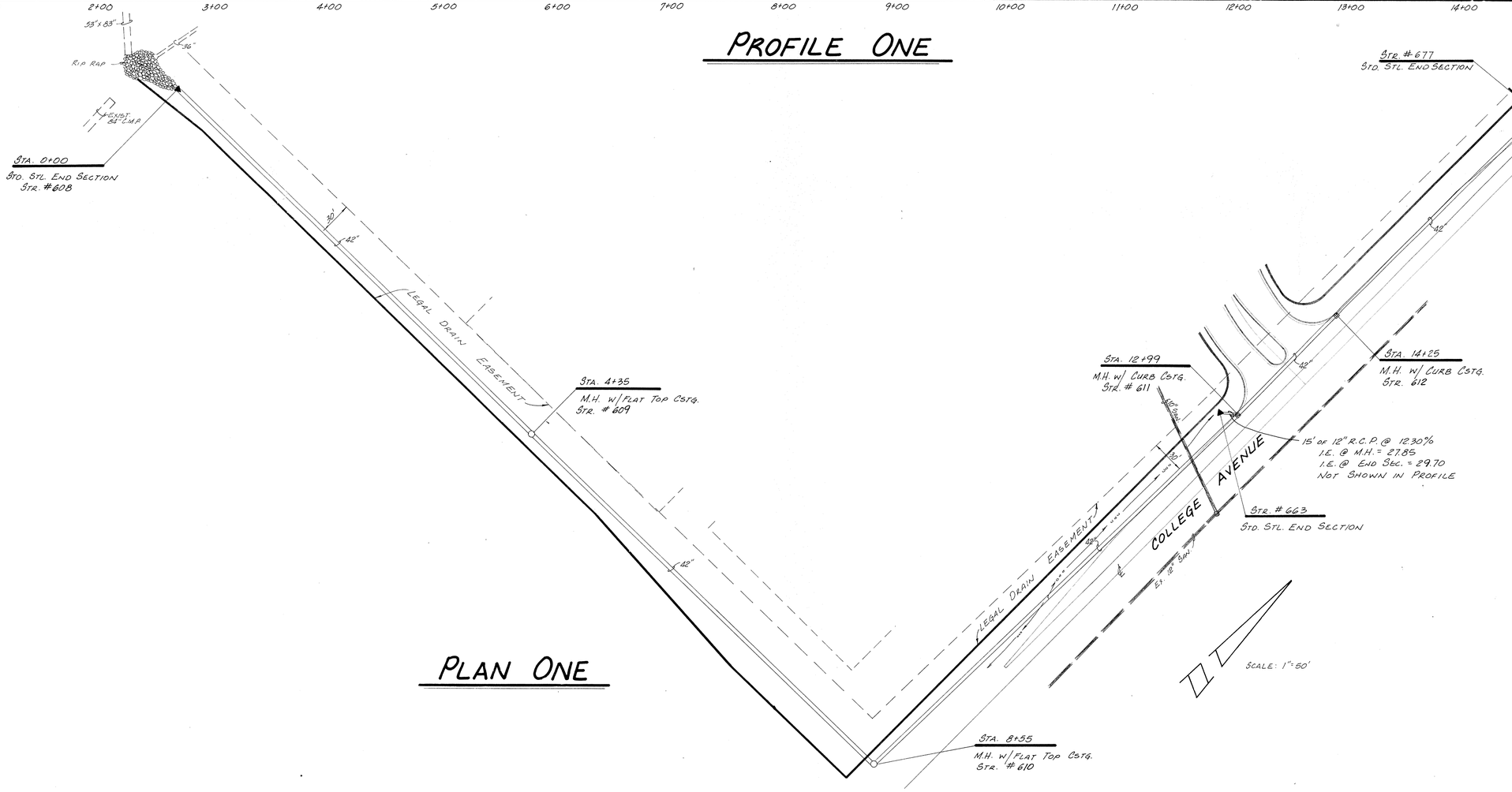

PLAN ONE

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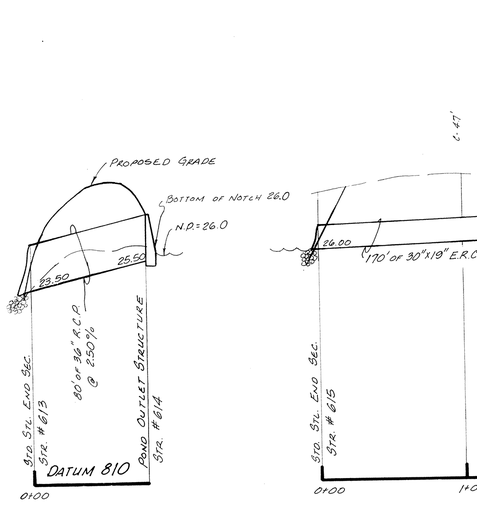
CERTIFIED BY	REVISIONS	PAUL I. CRIPE, INC. • CIVIL ENGINEERING • LAND SURVEYING • ARCHITECTURE • LAND PLANNING	TECH. CHK.	DRAWN BY B.T.	SCALE 1"=50' HOR. 1"=5' VERT.	DATE 7/29/88	CLIENT TRAMMELL CROW	DWG. TYPE / FILE NUMBER / SHEET 22
DATE	9/27/88 MISC. REVISIONS	7172 GRAHAM ROAD INDIANAPOLIS, INDIANA 46250 (317) 842-6777	DFTNG. CHK.	DRAWING TITLE STORM SEWER PLAN & PROFILE - LEGAL DRAIN				JOB NUMBER 8639-2000 OF 39

NOTE: CUTS SHOWN ARE APPROXIMATE, TAKEN FROM EXISTING GRADE TO INVERT OF PIPE.



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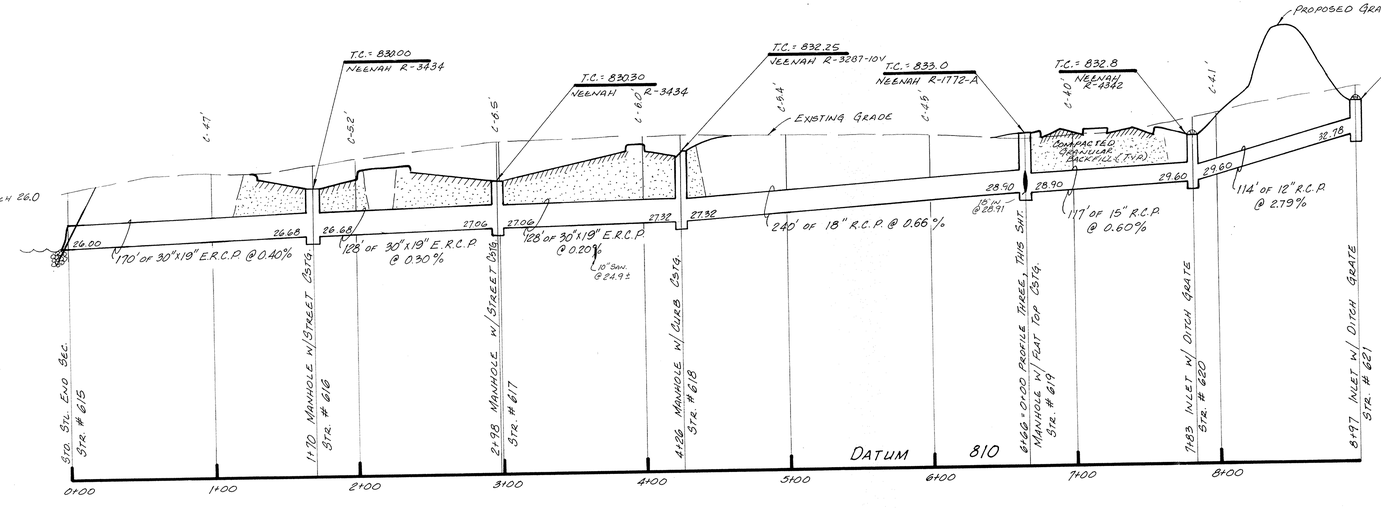

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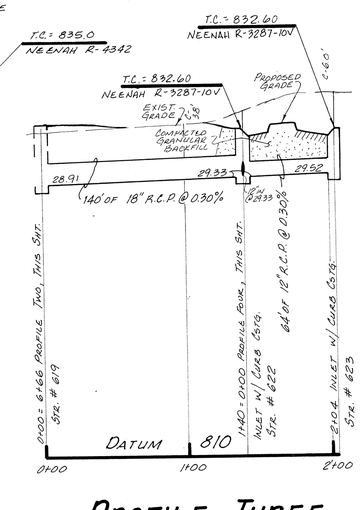

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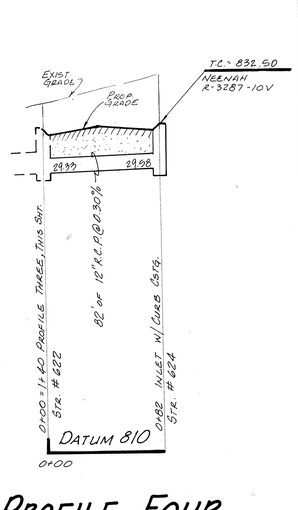

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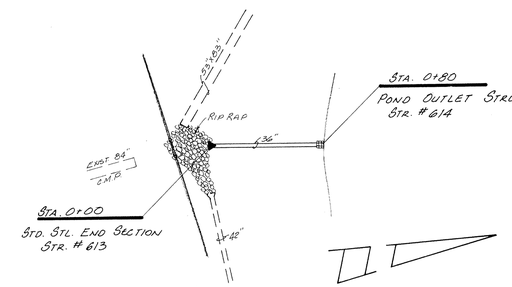

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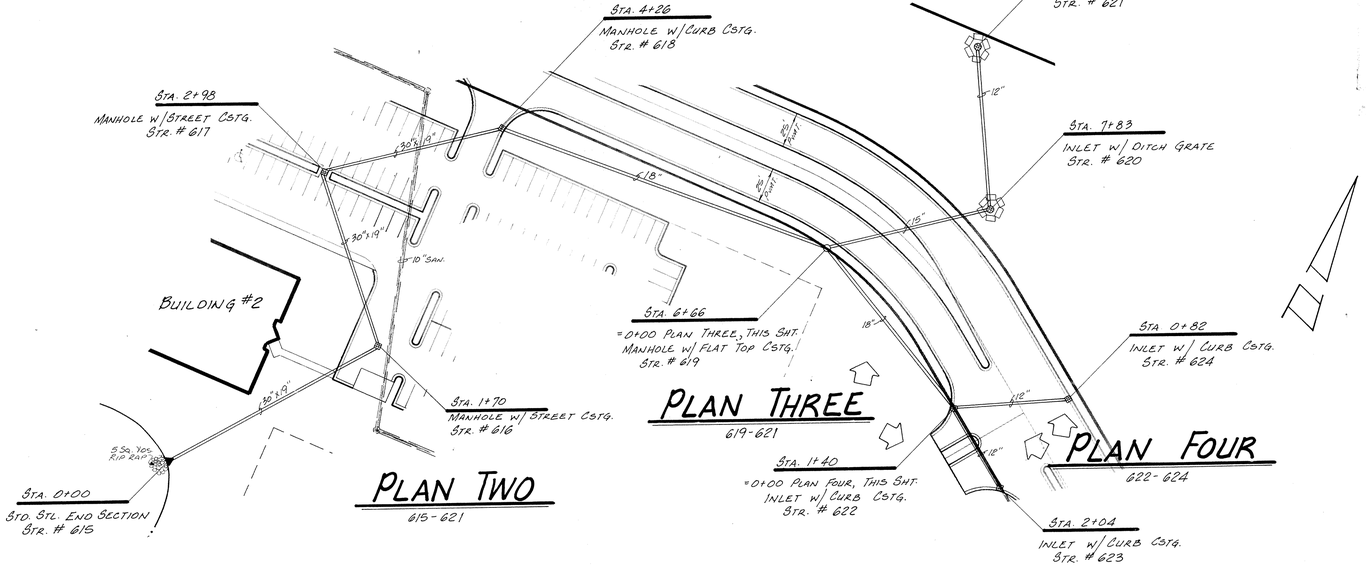

PLAN TWO
615-621

PLAN THREE
619-621

PLAN FOUR
622-624

HAMILTON COUNTY INDIANA 1823

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: 2-20-#04

Entered by: jwj

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SECRETARY

CERTIFIED BY

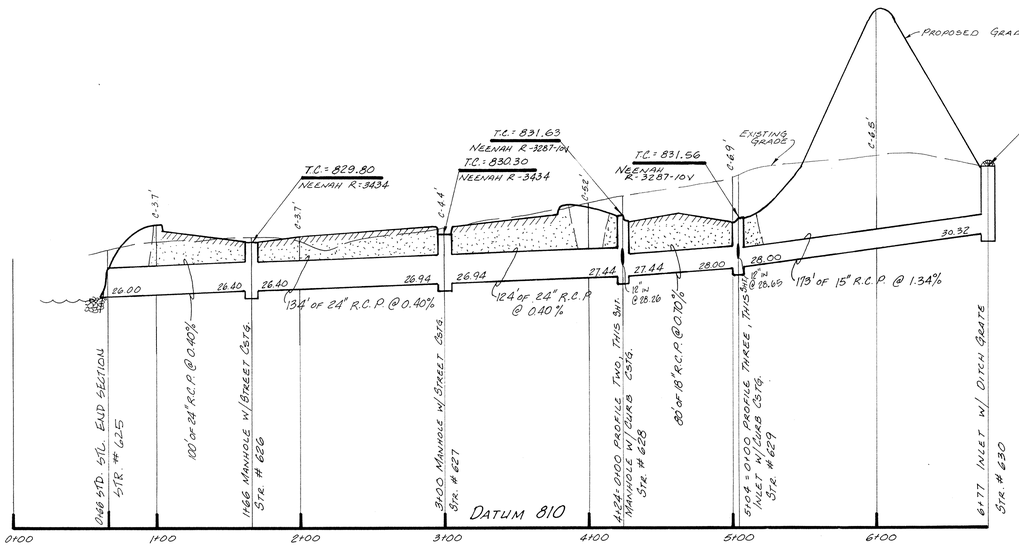
REVISIONS
9/27/88 MISC. REVISIONS

PAUL I. CRIPE, INC.
7172 GRAHAM ROAD
INDIANAPOLIS, INDIANA 46250
(317) 842-6777
• CIVIL ENGINEERING
• LAND SURVEYING
• ARCHITECTURE
• LAND PLANNING

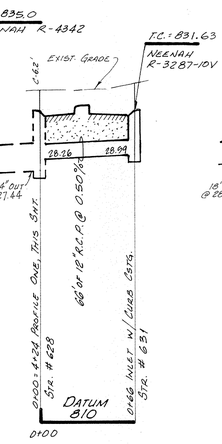
TECH. CHK.	DRAWN BY	SCALE	DATE	CLIENT
	B.T.	1"=50' HORIZ. 1"=5' VERT.	7/29/88	TRAMMELL CROW
DFTNG. CHK.	DRAWING TITLE	STORM SEWER PLAN & PROFILE		

DWG. TYPE	FILE NUMBER	SHEET
	JOB NUMBER	23
	8 6 3 9 1 — 2 0 0 0 0	OF 39

NOTE: CUTS SHOWN ARE APPROXIMATE, TAKEN FROM EXISTING GRADE TO INVERT OF PIPE.



PROFILE ONE



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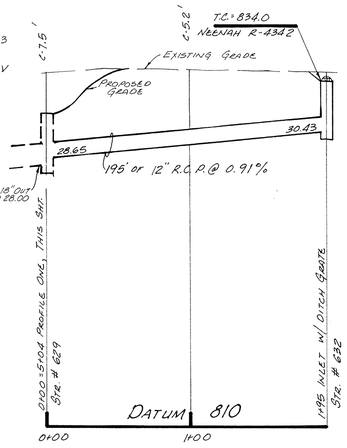

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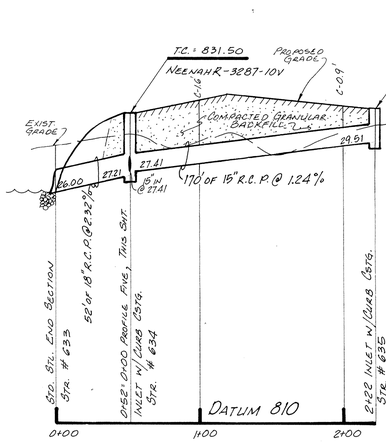

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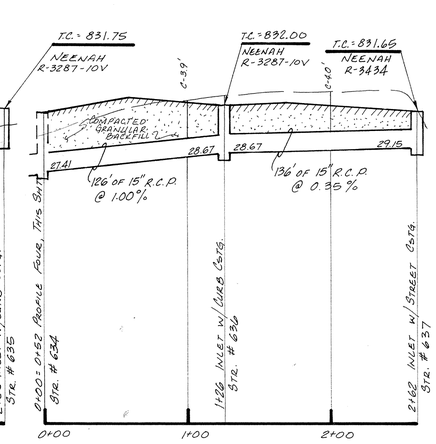
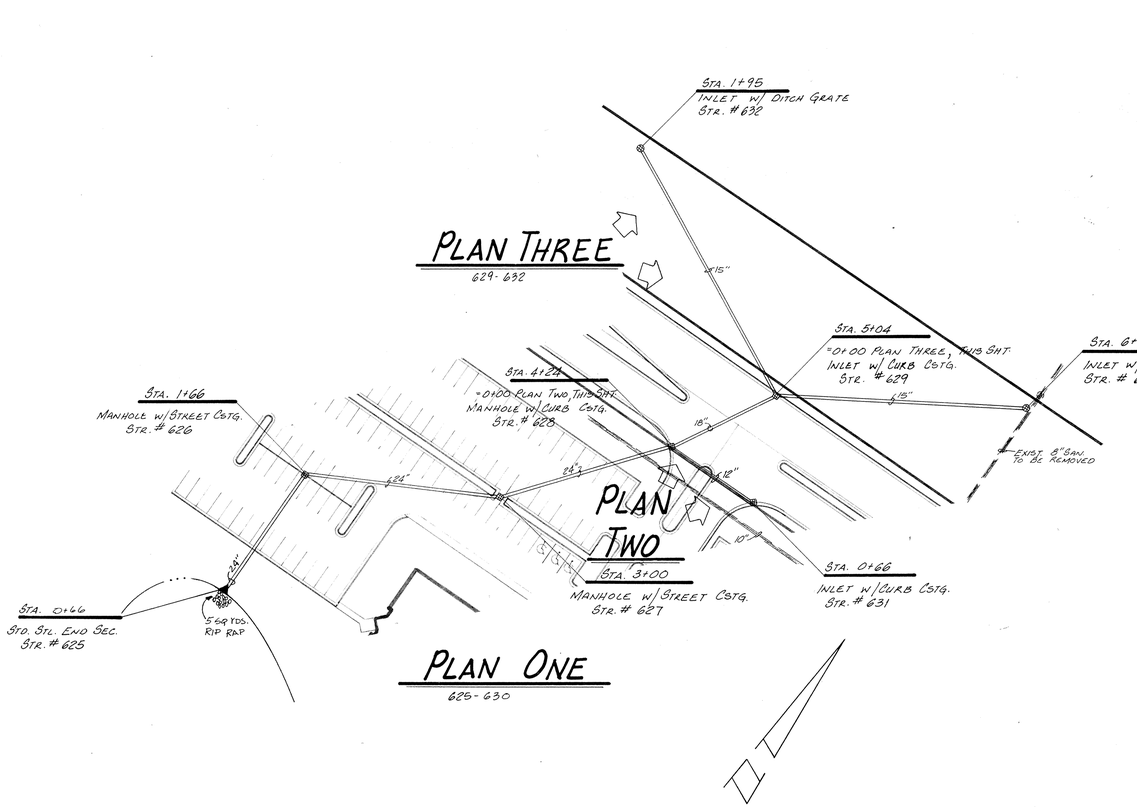
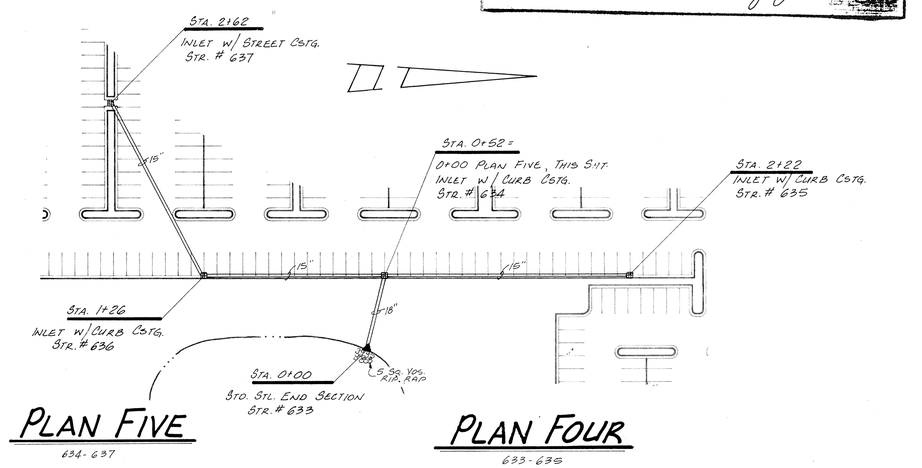


PROFILE FIVE

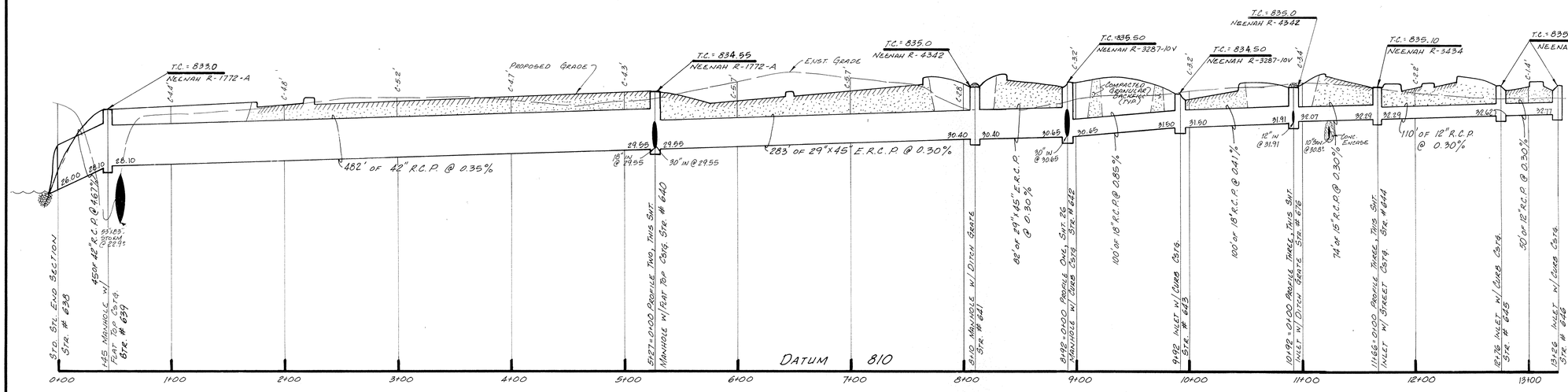




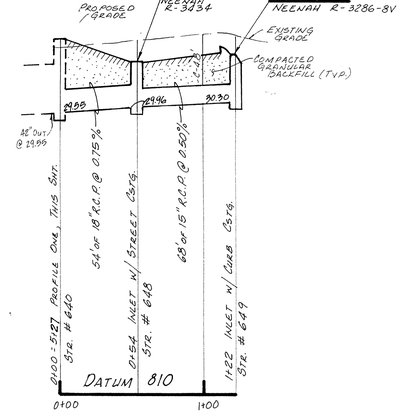
CERTIFIED BY	REVISIONS	PAUL I. CRIPE, INC.	TECH. CHK.	DRAWN BY	SCALE	DATE	CLIENT	DWG. TYPE	FILE NUMBER	SHEET
DATE	8-21-88 CHANGED PIPE LENGTH BETWEEN STR 626 & STR 626 9/27/88 MISC. REVISIONS	7172 GRAHAM ROAD INDIANAPOLIS, INDIANA 46250 (317) 842-6777 • CIVIL ENGINEERING • LAND SURVEYING • ARCHITECTURE • LAND PLANNING	DFTNG. CHK.	B.T.	1"=50' HORIZ. 1"=5' VERT	7/29/88	TRAMMELL CROW	JOB NUMBER 8639-2000		24 OF 39

DRAWING TITLE: STORM SEWER PLAN & PROFILE

NOTE: CUTS SHOWN ARE APPROXIMATE, TAKEN FROM EXISTING GRADE TO INVERT OF PIPE.



PROFILE ONE



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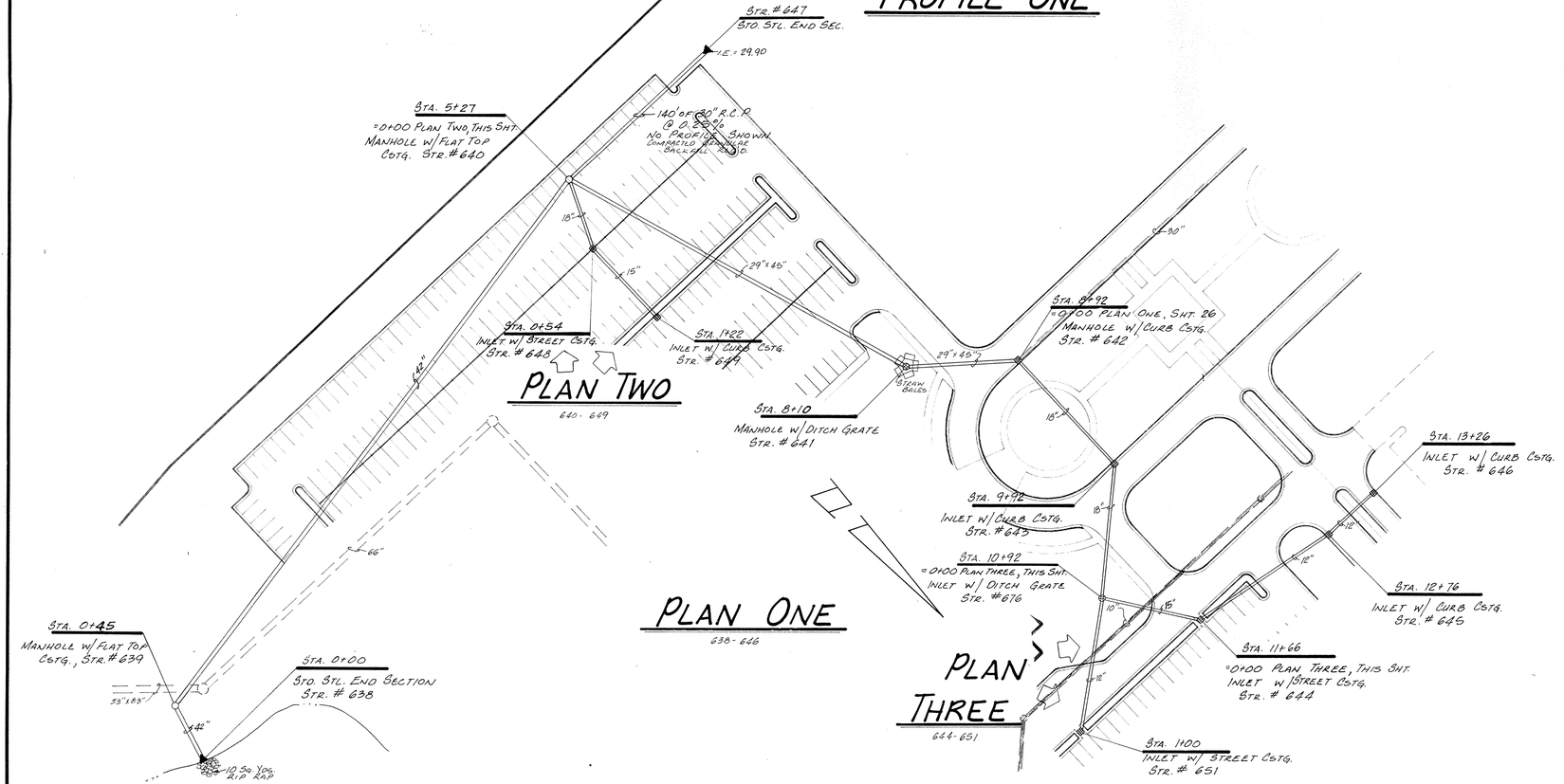
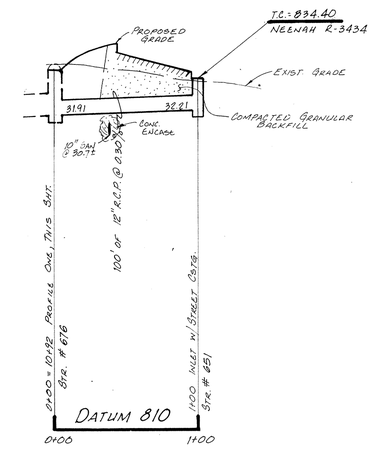




PROFILE THREE

FILED
SEP 29 1988
HAMILTON COUNTY DRAINAGE BOARD
SECRETARY

CERTIFIED BY

DATE

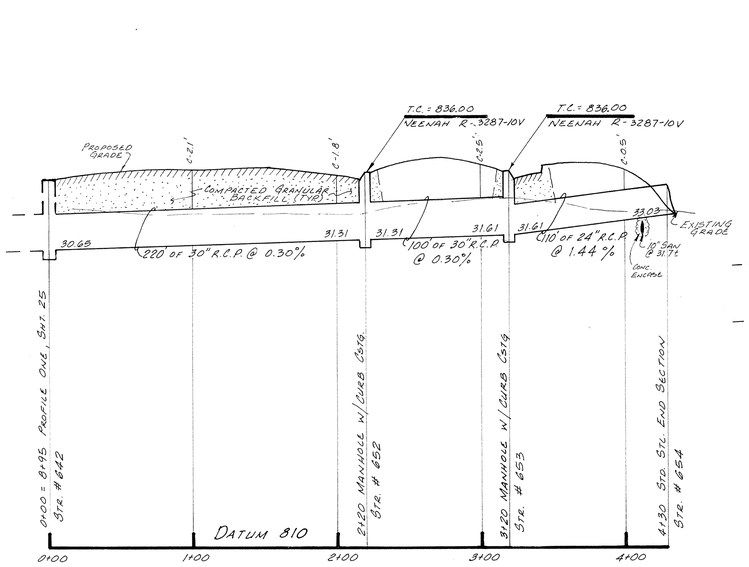
REVISIONS
9/27/88 MISC. REVISIONS

PAUL I. CRIPE, INC. • CIVIL ENGINEERING • LAND SURVEYING • ARCHITECTURE • LAND PLANNING
7172 GRAHAM ROAD
INDIANAPOLIS, INDIANA 46250
(317) 842-6777

TECH. CHK.	DRAWN BY	SCALE	DATE	CLIENT	DWG. TYPE	FILE NUMBER	SHEET
	B.T.	1"=50' HORIZ. 1"=5' VERT.	7/29/88	TRAMMELL CROW			25
DFTNG. CHK.	DRAWING TITLE				JOB NUMBER		OF 39
	STORM SEWER PLAN & PROFILE				8639/-2000		

EASTERN ENGINEERING, 2-86, DPS-3G10 502624

NOTE: CUTS SHOWN ARE APPROXIMATE, TAKEN FROM EXISTING GRADE TO INVERT OF PIPE.



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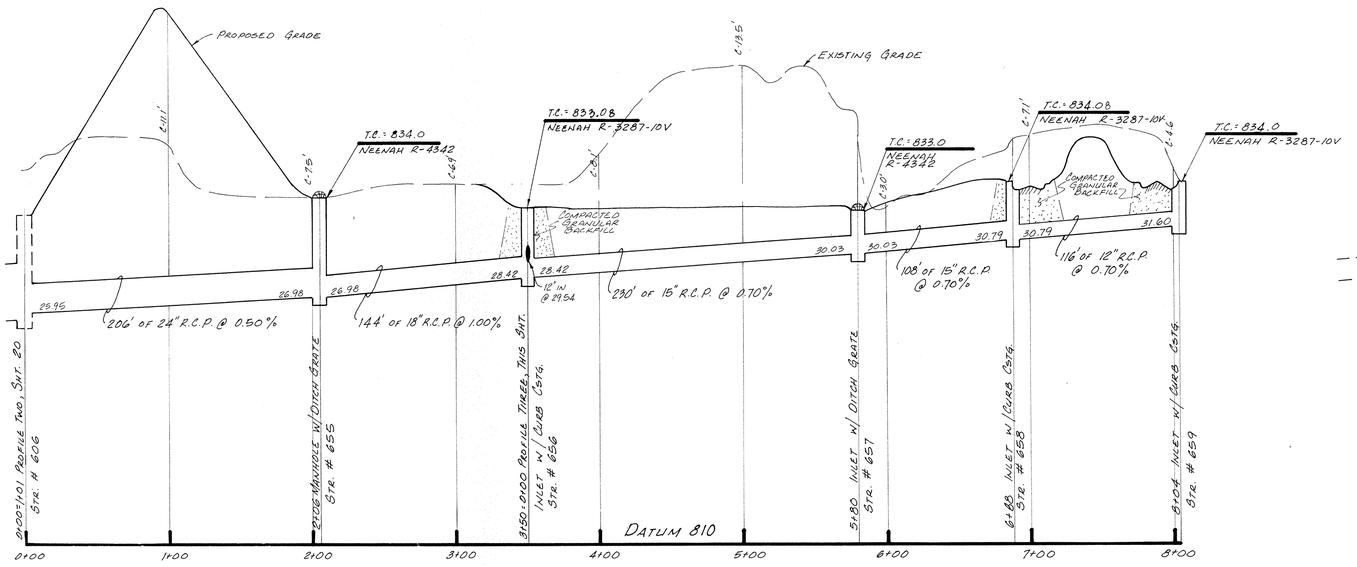

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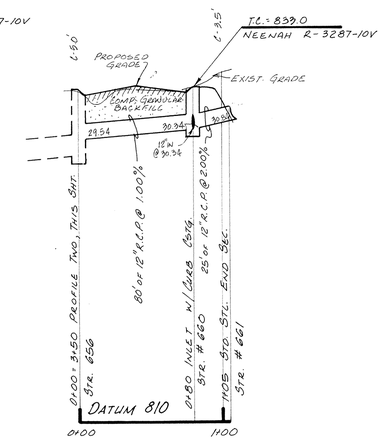

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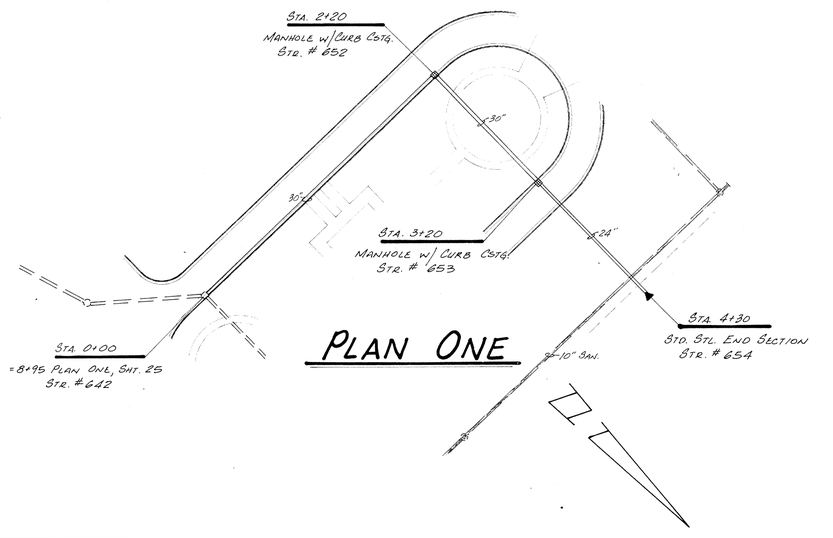
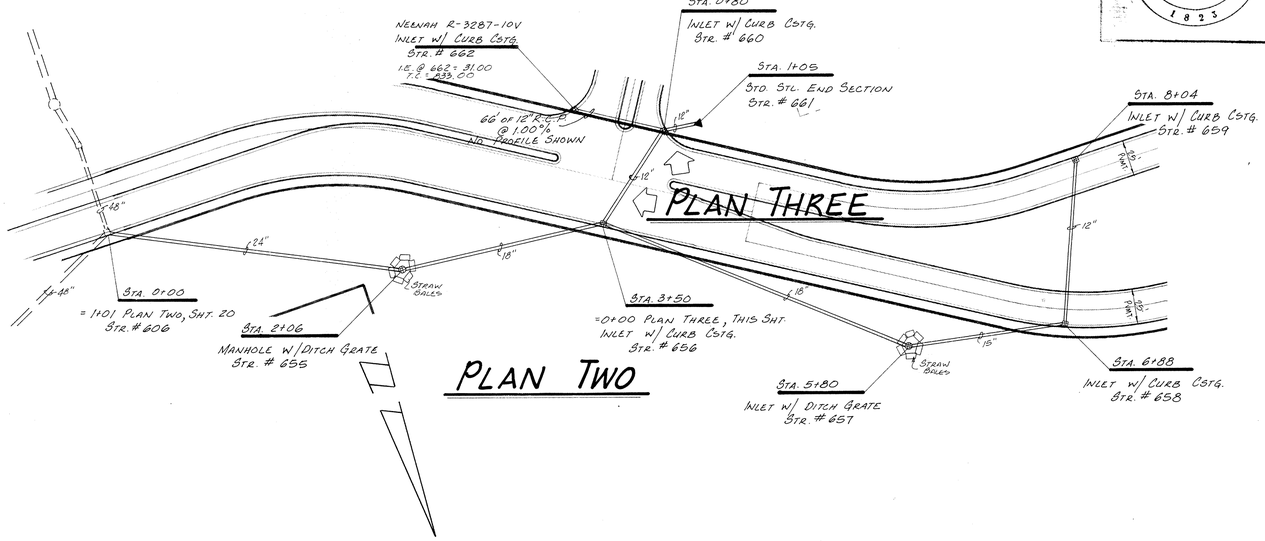


PLAN ONE



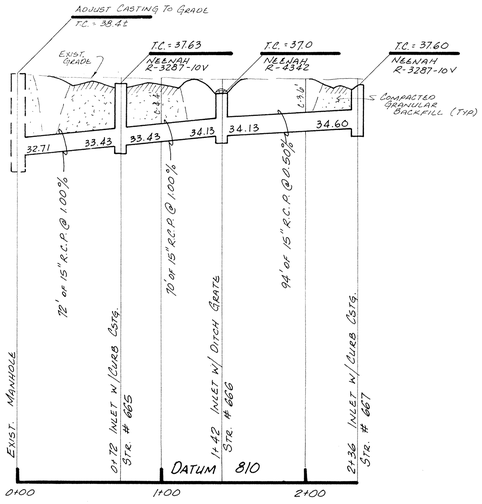
PLAN TWO

PLAN THREE

FILED
SEP 29 1988
HAMILTON COUNTY DRAINAGE BOARD
SECRETARY

CERTIFIED BY	REVISIONS	PAUL I. CRIPE, INC.	TECH. CHK.	DRAWN BY	SCALE	DATE	CLIENT	DWG. TYPE	FILE NUMBER	SHEET
DATE	9/27/88 MISC. REVISIONS	7172 GRAHAM ROAD INDIANAPOLIS, INDIANA 46250 (317) 842-6777	DFTNG. CHK.	B.T.	1"=50' HORIZ. 1"=5' VERT.	7/29/88	TRAMMELL CROW	JOB NUMBER 8 6 3 9 1 — 2 0 0 0 0		26 OF 39
		• CIVIL ENGINEERING • LAND SURVEYING • ARCHITECTURE • LAND PLANNING		DRAWING TITLE	STORM SEWER PLAN & PROFILE					

NOTE: CUTS SHOWN ARE APPROXIMATE, TAKEN FROM EXISTING GRADE TO INVERT OF PIPE.



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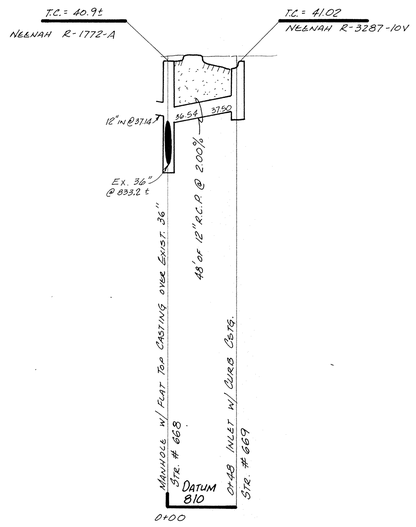

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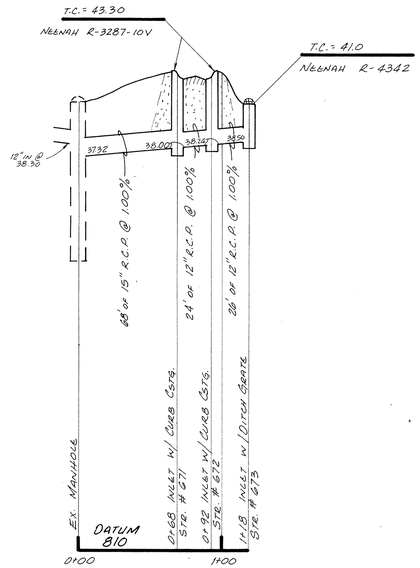

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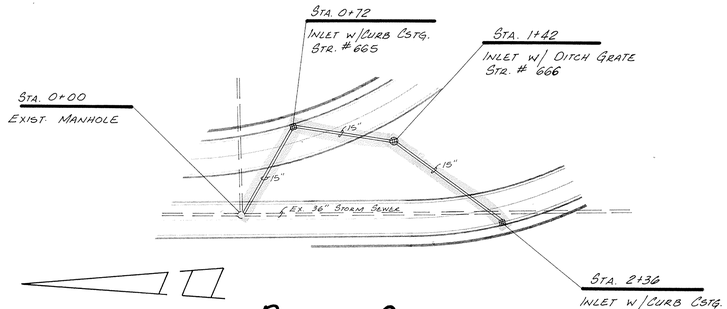
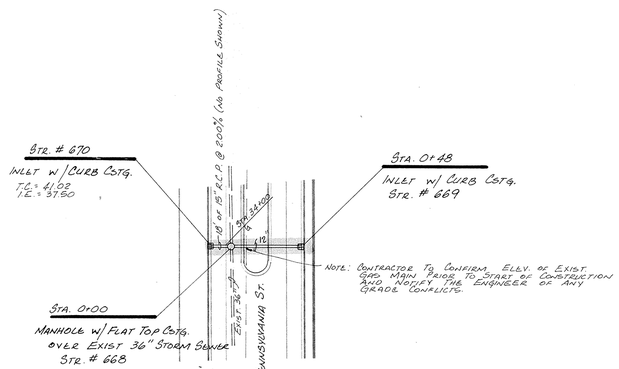
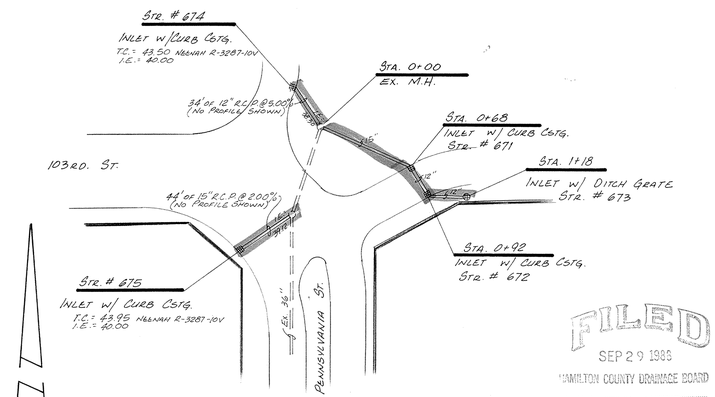


PLAN ONE

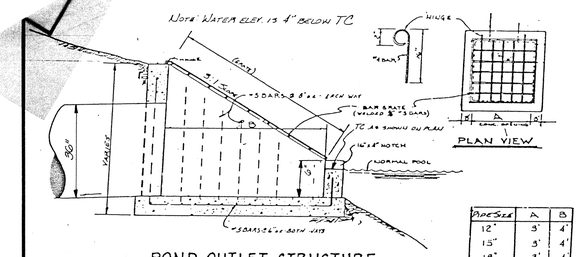


PLAN TWO



PLAN THREE

CERTIFIED BY DATE	REVISIONS 9/27/88 MISC. REVISIONS	PAUL I. CRIPE, INC. 7172 GRAHAM ROAD INDIANAPOLIS, INDIANA 46250 (317) 842-6777 • CIVIL ENGINEERING • LAND SURVEYING • ARCHITECTURE • LAND PLANNING	TECH. CHK. DFTNG. CHK.	DRAWN BY B.T.	SCALE 1"=50' HORIZ. 1"=5' VERT.	DATE 7/29/88	CLIENT TRAMMELL CROW DRAWING TITLE STORM SEWER PLAN & PROFILE	DWG. TYPE FILE NUMBER JOB NUMBER 8 6 3 9 1 — 2 0 0 0 0	SHEET 27 OF 39

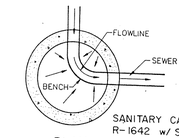


PLAN VIEW

POND OUTLET STRUCTURE

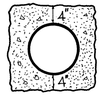
NO SCALE

Pipe Size	A	B
12"	3'	4'
15"	3'	4'
18"	3'	4'
24"	3'	4'
36"	4"	6"

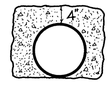


PLAN

SANITARY CASTING TO BE R-1642 w/ STAMPED "SANITARY SEWER"

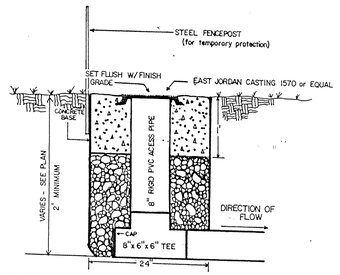


this type of concrete encasement is used when storm sewer is below sanitary sewer



this type of concrete encasement is used when excavating is done just above sanitary sewer

Concrete Encasement no scale
(for sanitary sewers)

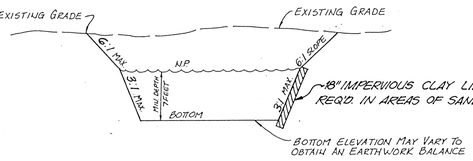


SUBSURFACE DRAIN (SSD) RISER DETAIL

NO SCALE

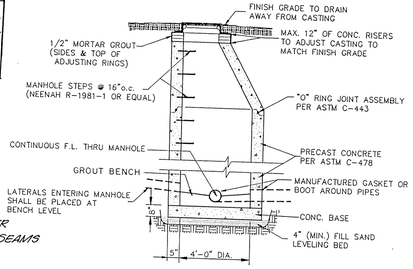
CASTING	A	B
R-1772-A	25" DIAMETER	
R-4342	24" DIAMETER	
R-3287-10V	22"	35"
R-3434	23"	24"
3286-8V	22"	22"

C	D
21"	4'-0"
24"	4'-0"
27"	4'-0"
30"	4'-4"
36"	5'-0"
42"	5'-4"
48"	6'-0"
54"	6'-6"



TYPICAL DETENTION LAKE SECTION

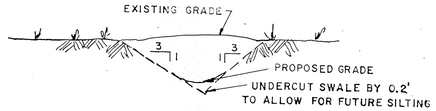
NOTE: MANHOLE CASTINGS SHALL BE AS NOTED ON SANITARY SEWER PROFILES.



STANDARD MANHOLE

FOR SANITARY SEWERS AS ILLUSTRATED

NO SCALE



TYPICAL SWALE DETAIL

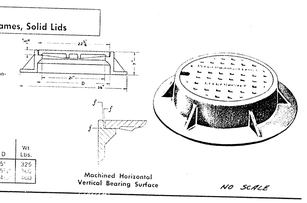
SCALE NONE

R-1772 Series
Manhole Frames, Solid Lids

Heavy Duty

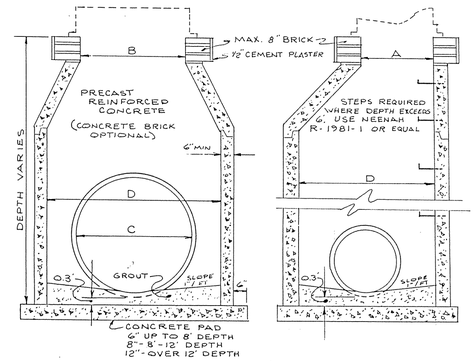
Specify:
1. Catalog number.
2. Ground, machined, or non-rocking bearing surfaces.

Catalog No.				
Standard Design See 2 Above	Machined Horizontal Vertical Bearing	D	Wt. Lbs.
R-1772-A	R-1772-AVH	25"	325
R-1772-B	R-1772-BVH	25"	345
R-1772-C	R-1772-CVH	24"	340



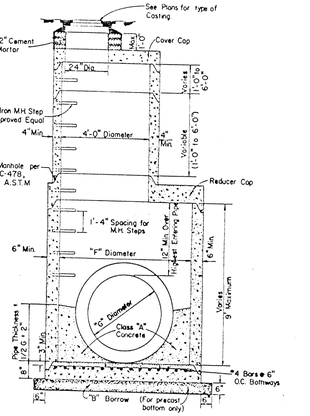
NO SCALE

NOTE: STRUCTURES TO BE CIRCULAR UNLESS OTHERWISE SPECIFIED.



STORM MANHOLE & DEEP INLET

N.T.S.

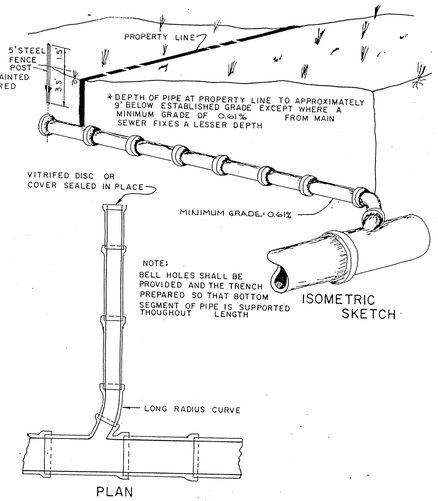


MANHOLE TYPE J,K,L,M&N
(SEE BELOW)

MANHOLE			
TYPE	"G"	"F"	Max. Pipe Size; I.D. to Manhole
H	24" to 36"		30"
J	24" to 36"	60"	33"
K	36" to 40"	72"	36"
L	48" to 54"	96"	48"
M	54" to 72"	102"	66"
N	72" to 84"	108"	72"

ALTERNATE STORM MANHOLE

NO SCALE



PLAN

BLDG. CONNECTION to MAIN SEWER

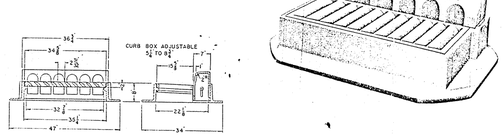
CASTING NOTE:

SEWER CASTINGS SPECIFIED IN THESE PLANS ARE NEENAH FOUNDRY CO. CASTINGS. EQUAL CASTING TYPES BY EAST JORDAN IRON WORKS INC. MAY BE SUBSTITUTED. LISTED BELOW ARE ACCEPTABLE E.J.I.W. SUBSTITUTIONS.

NEENAH	E.J.I.W.
R-1772-A	1022-1
R-3501-TL	7495 LH
R-3501-TR	7495 RH
R-4342	6489
R-3501-N	7490 M-1
R-3287-10V	7505-T1

R-3287-10V Curb Inlet Frame, Grate and Curb Box

Heavy Duty Total Weight 765 Pounds



DIMENSIONS OF GALVANIZED STEEL END SECTIONS FOR ROUND PIPE

PIPE DIA. IN INCHES	GAGE	DIMENSIONS IN INCHES A ± 1	W (min)	H ± 1
12	16	6	6	6
15	16	7	8	6
18	16	8	10	6
21	16	9	12	6
24	16	10	13	6
30	14	12	16	8
36	14	14	19	9
42	12	16	22	11
48	12	18	25	12
54	12	20	30	12
60	12	22	33	12
66	12	24	36	12
72	12	26	39	12
78	12	28	42	12
84	12	30	45	12

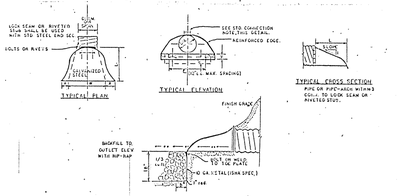
PIPE DIA. IN INCHES	DIMENSIONS IN INCHES L ± 1/2	W ± 1	APPROX. SLOPE
12	21	24	2 1/2 : 1
15	26	30	2 1/2 : 1
18	31	36	2 1/2 : 1
21	36	42	2 1/2 : 1
24	41	48	2 1/2 : 1
30	51	60	2 1/2 : 1
36	60	72	2 1/2 : 1
42	69	84	2 1/2 : 1
48	78	90	2 1/2 : 1
54	84	102	2 : 1
60	87	114	1 3/4 : 1
66	90	126	1 3/4 : 1
72	93	126	1 1/2 : 1
78	96	138	1 1/2 : 1
84	99	138	1 1/2 : 1

STD. PIPE SIZE & CONN. USED GALVANIZED STEEL PIPE	
TYPE CONN.	ROUND
TYPE 1	12" THRU 24"
TYPE 2	30" THRU 36"
TYPE 3	42" THRU 84"
	PIPE — ARCH
TYPE 2	18"x11" THRU 58"x36"
TYPE 3	65"x40" THRU 80"x54"

STANDARD CONNECTIONS*

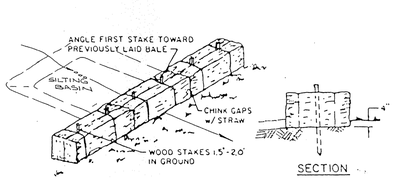
TYPE N-1 SHALL BE CONNECTOR LUG WITH THREADED HOD.
TYPE N-2 SHALL BE CONNECTOR LUG WITH BOLTED ON HOOK.
TYPE N-3 SHALL BE RIVETED OR WELDED CONNECTION.

NOTE: STANDARD DIMENSIONS FOR GALVANIZED STEEL END SECTIONS FOR PIPE-ARCH MAY BE FOUND ON MISC. STANDARDS SHEET E_2, DATED JULY, 1972 OF THE INDIANA STATE HIGHWAY STANDARD SPECIFICATIONS.

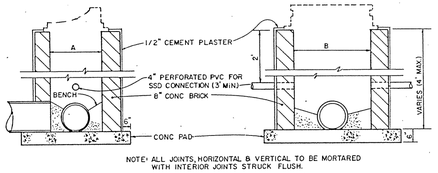


STANDARD STEEL END SECTION DETAIL

SCALE NONE

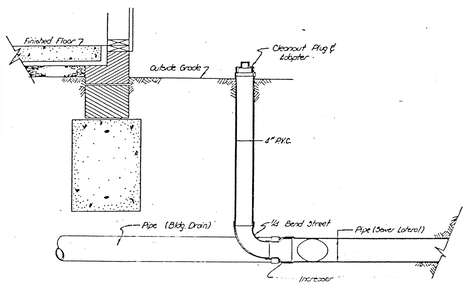


STRAW BALE DAM DETAIL



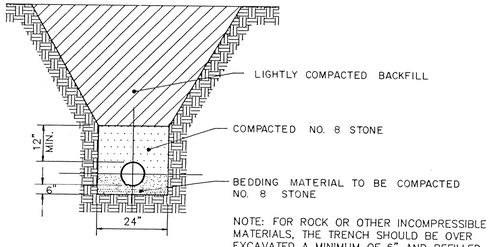
SHALLOW CURB INLET

NO SCALE



SECTION

CLEANOUT

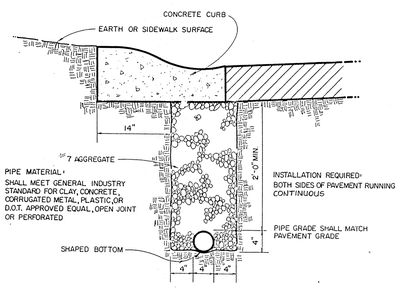


NOTE: FOR ROCK OR OTHER INCOMPRESSIBLE MATERIALS, THE TRENCH SHOULD BE OVER EXCAVATED A MINIMUM OF 6" AND REFILLED W/ GRANULAR MATERIAL.

SANITARY SEWER PIPE BEDDING

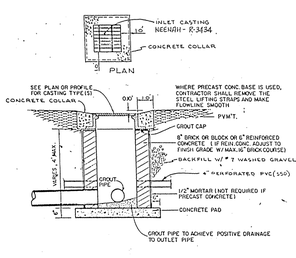
(FOR FLEXIBLE PIPE, INCLUDING LATERALS)

NO SCALE



PIPE UNDERDRAIN

TYPICAL INSTALLATIONS NO SCALE

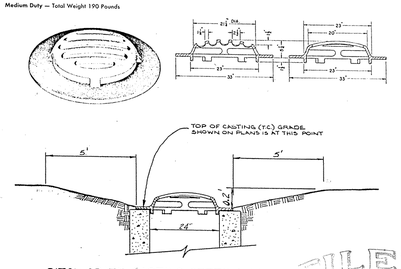


PARKING INLET DETAIL

NO SCALE

R-4342 Ditch Grate, Stool Type

Medium Duty — Total Weight 190 Pounds



DITCH GRATE CASTING SETTING DETAIL

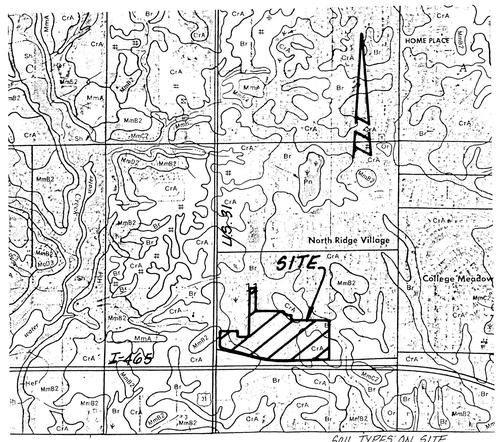
NO SCALE

CERTIFIED BY	REVISIONS	PAUL I. CRIPE, INC. • CIVIL ENGINEERING • LAND SURVEYING • ARCHITECTURE • LAND PLANNING	TECH. CHK.	DRAWN BY	SCALE	DATE	CLIENT
DATE		7172 GRAHAM ROAD INDIANAPOLIS, INDIANA 46250 (317) 842-6777	DFTNG. CHK.	GED	NONE	7/29/88	TRAMMELL CROW

DRAWING TITLE: STANDARD DETAILS

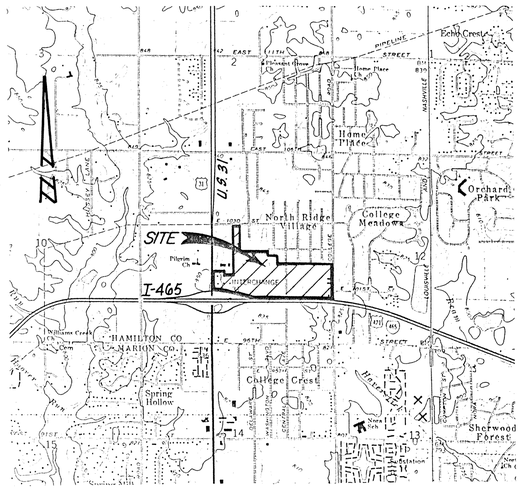
DWG. TYPE	FILE NUMBER	SHEET
	JOB NUMBER 8 6 3 9 1 — 2 0 0 0 0	30 OF 39

EASTERN ENGINEERING: 2-86, DPS-3G10 502624



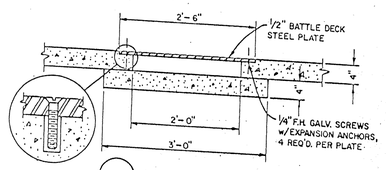
SOIL TYPES ON SITE ARE BROOKSTON & CROSBY

SOILS MAP

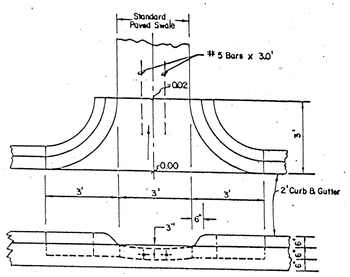


OFF-SITE WATERSHED MAP

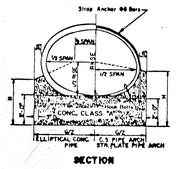
NO SCALE



WALK CULVERT

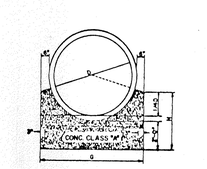


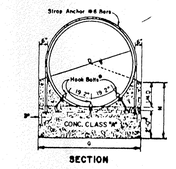
CURB & GUTTER TURNOUT



SECTION

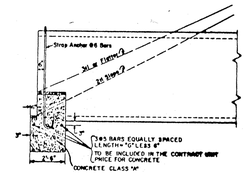
PIPE CULVERT ANCHORS FOR PIPE GROUP A, C, D, E & F			
D	H	G	CU. YDS. CONC. IN ANCHORS
42"	3'-1"	5'-3"	2.20
48"	3'-5"	5'-10"	2.83
54"	3'-7"	6'-3"	3.18
60"	3'-9"	7'-0"	3.55
66"	3'-11"	7'-7"	3.92
72"	4'-1"	8'-3"	4.31
78"	4'-3"	8'-10"	4.71
84"	4'-5"	9'-6"	5.12
90"	4'-7"	9'-10"	5.47
96"	4'-9"	10'-3"	5.90
102"	4'-10"	10'-10"	6.26
108"	5'-0"	11'-5"	6.72

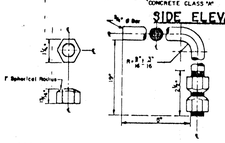




ANCHORS

@ Hook Bolts shall be located 9" in from the end of pipe.



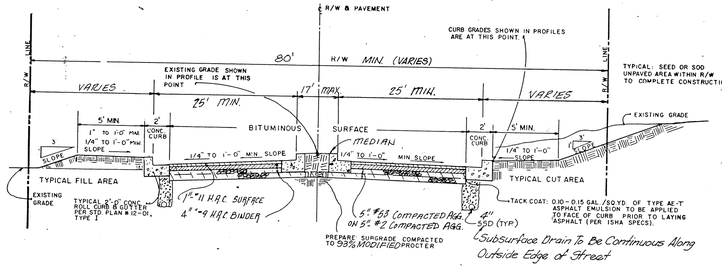


HOOK BOLT AND NUTS

SPECIFICATION FOR HOOK BOLT & NUT:

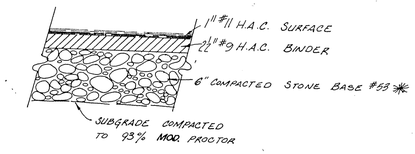
Hook Bolt Material shall meet the current ASTM, A-307. Thread shall be American Standard Coarse Thread Series, Class 2, Free Fit. Bolts shall be galvanized to meet current ASTM specification A-153. The threaded portion shall not prevent turning the nut by hand.

Nuts shall be carbon steel but dry galvanized to meet ASTM specification A-153. Nut threads shall be American Standard Coarse Thread Series 1/4"-20 UNC minimum oversize, allowed after galvanizing to provide a free running fit on the Class 2 bolt. Nuts shall be 1¼" across flats, 13/16" thick, beveled to approximately 1" radius.



TYPICAL STREET CROSS SECTION

SCALE: NONE

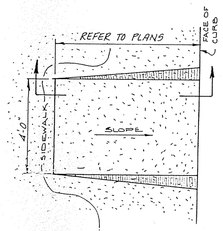


ON-SITE PAVEMENT X-SECTION

PARKING AREAS

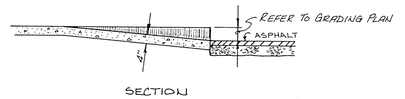
NO SCALE

✱ 6" - #53 COMP STONE BASE REQ'D FOR HEAVY TRAFFIC AREAS. SEE SHEET 2 FOR HEAVY TRAFFIC AREAS.

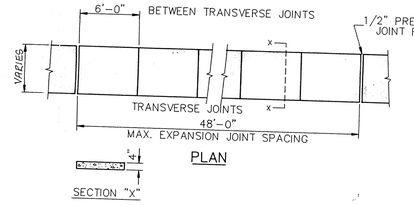


HANDICAP RAMP DETAIL

NO SCALE

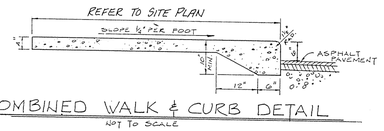


SECTION



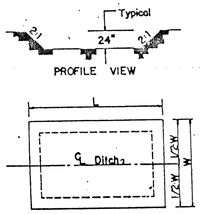
TYPICAL SIDEWALK DETAIL

NO SCALE



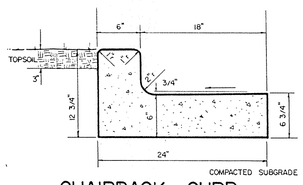
COMBINED WALK & CURB DETAIL

NOT TO SCALE



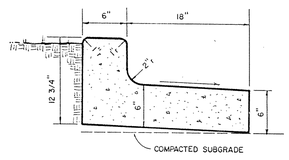
TEMPORARY SILTING PIT

(Periodic Cleaning Required)



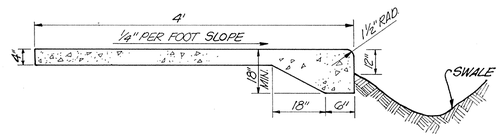
CHAIRBACK CURB

NO SCALE



CHAIRBACK CURB W/ REVERSE SLOPE

NO SCALE



CURB & WALK DETAIL
103RD STREET SIDEWALK

NO SCALE

FILED
SEP 29 1988
HAMILTON COUNTY DRAINAGE BOARD
SECRETARY

CERTIFIED BY	REVISIONS	PAUL I. CRIPE, INC. • CIVIL ENGINEERING • LAND SURVEYING • ARCHITECTURE • LAND PLANNING	TECH. CHK.	DRAWN BY	SCALE	DATE	CLIENT	DWG. TYPE	FILE NUMBER	SHEET
DATE		7172 GRAHAM ROAD INDIANAPOLIS, INDIANA 46250 (317) 842-6774	DFTNG. CHK.	GSD	NONE	7/29/88	TRAMMELL CROW		JOB NUMBER 8 6 3 9 1 — 2 0 0 0 0	31 OF 39
				DRAWING TITLE STANDARD DETAILS						

GENERAL NOTES

1. The Indiana Department of Highways, Standard Specifications 1986, are the basic materials and reference specification. The sections noted below for various items are to clarify the intent of the requirements for this project. Please note that other sections of these Standards Specifications may also be applicable.

2. The American Institute of Architects (AIA Document A201) General Conditions of the contract for construction shall apply.

3. By executing the Contract, Contractor represents that he has acquainted himself with the site and has made all evaluations and investigations necessary to a full understanding of any difficulties which may be encountered in performing the work.

4. Any soil investigation data furnished to Contractor by Owner shall be for the convenience of Contractor, and Owner will not be responsible for any variance in actual conditions with such data or interpretations or conclusions drawn therefrom. Data on subsurface conditions do not constitute a representation or warranty of the continuity of such conditions.

5. Contractor shall check with Engineer prior to start of construction to verify date of plans. Minor changes may be made if all reviewing agency approvals are not granted before bidding. Changes in cost shall be negotiated prior to physical construction based on unit prices submitted on the contract documents.

6. The Contractor shall contact all utility companies to locate all mains, conduits, service lines, etc. in the construction affected area. Existing utility structures are shown here in accordance with available information. The location and protection of utility structures and facilities, their support and maintenance during construction (in cooperation with applicable utility), is the express responsibility of the Contractor in the performance of the Contract and in the preparation of the bid.

QUALITY OF WORK

1. Perform all work in the most workmanlike manner and according to the best standard practices. All work shall be free from faults and defects in workmanship.

2. Contractor shall be solely responsible for quality control of the work and shall maintain quality control over suppliers, manufacturers, products, services, site conditions and workmanship to produce work of specified quality.

3. Required testing and inspection are intended to assist in determination of probable compliances of the work with the Contract Documents but do not relieve Contractor or Subcontractor of responsibility for those compliances. Specified testing and inspection are not intended to limit Contractor's quality control program.

UNCOVERING OF WORK

1. If the work should be covered contrary to the request of the Project Engineer, Contractor shall uncover the work for observation if so directed by the Project Engineer. The cost of uncovering and replacement shall in such instance be at Contractor's expense.

2. If any other work has been covered which the Project Engineer has not specifically requested to observe prior to being covered, the Project Engineer may direct Contractor to uncover such work. If such work is found to be in compliance with the Contract Documents, the cost of uncovering and replacement shall by appropriate change order, be charged to the Owner. If such work is found not to be in compliance, Contractor shall pay such costs.

SAFETY

1. Contractor shall take all necessary precautions for the safety of persons and the protection of the work and adjoining property. Contractor shall comply with all applicable provisions of federal, state and local safety laws and building codes.

2. Contractor shall erect and properly maintain at all times, as required by conditions and the progress of the work, all necessary safeguards for the protection of the employees of Contractor, his subcontractors, Owner and its lessee, Owner's other contractors, members of the public and for the protection of the work and adjoining property.

SUBSTITUTIONS

1. Contractor shall not make substitutions for the materials, equipment and manufacturers specified without the prior written consent of Owner. All requests for substitutions shall be submitted in writing to the Project Engineer. Such requests shall include supporting data and samples, if required to permit a fair evaluation of the quality, serviceability, warranty and other pertinent aspects of the proposed substitute. Requests for substitutions shall also state the effect of the substitute on the cost and schedule of the work. Substitutions will be considered only if Owner receives the advantage of lesser cost with no decrease in quality, or earlier completion date or both. No request for substitutions received later than thirty (30) days after execution of the Contract or the date of written notice to commence the work, whichever is earlier, will be considered.

SHOP DRAWINGS AND SAMPLES

1. Submit all drawings, diagrams, illustrations, schedules, performance charts, instructions, specifications and other project data illustrating portions of the work as required by the specification sections. Such submittals, whether or not referred to as shop drawings herein prescribed. Unless otherwise noted in the specification sections, submit a minimum of five (5) sets of shop drawings to Project Engineer. Two (2) sets will be returned to Contractor unless otherwise requested.

2. Do not commence any portion of the work requiring a shop drawing or sample submittal until the submittal has been approved as prescribed herein. All such portions of the work shall be in accordance with approved shop drawings or samples.

SPECIAL TESTING AND INSPECTION

1. In addition to testing and inspection required by the Contract Document, Project Engineer may require special testing and inspection as provided in the General Conditions. Project Engineer may instruct Contractor to arrange for such special testing and inspection or may arrange for the special testing and inspection directly. If the work so tested or inspected is found to be in compliance with the Contract Documents, the cost of testing or inspection shall, by appropriate change order, be charged to Owner. If the work is found not to be in compliance, Contractor shall pay such costs.

REPLACEMENT AND CORRECTION

1. Promptly replace or correct all work found not to be in compliance with the requirements of the Contract Documents and the requirements of any public authority having jurisdiction so as not to delay the work or the work of other contractors regardless of how such failure to comply may be revealed. Replacement and correction shall be expedited as required to maintain interim contract completion dates and the full completion date.

2. Project Engineer may require additional testing and inspection of work previously found not to be in compliance until such work has been properly replaced.

DEMOLITION

1. The Contractor shall excavate, demolish, remove and dispose of the debris from the areas shown on the site development plan.

   1. Building walls
   2. Foundations
   3. Pavement (concrete, asphalt and brick)
   4. Concrete slabs

2. All material as a result of the general demolition shall be the property of the Contractor. The Contractor's lump sum bid price for the demolition shall take into account the salvageable value of materials and said bid price shall reflect said savings.

3. The Contractor shall be required to demolish and remove designated foundation walls, retaining walls, curbing, concrete slabs, paving, tanks, structures, pipes, manholes as shown on the Contract Documents, and as may be all existing basement floor slabs that are not removed shall be broken up sufficiently to permit drainage through the slab. All existing basement walls, foundations, floor slabs, and etc., shall be removed to an support floor slabs or pavements. Demolished concrete may be placed MOUND AT NORTH PROPERTY LINE.

4. The Contractor shall obtain from the City of Carmel and all other applicable governmental authorities, necessary permits required, a copy of such permits to be furnished to the Owner prior to commencement of any work required herein. The Contractor shall further furnish to the Owner proof that he has complied with the provisions of the Municipal Code of Indianapolis, Indiana.

PAVEMENT CONSTRUCTION

1. The Indiana State Highway Standard specifications and Hamilton County Street Standards shall apply to workmanship and materials in construction of subgrade, pavement, curbs and walks.

   a. Prepare the subgrade in accordance with Section 207. No traffic will be permitted on the prepared subgrade prior to paving.

   b. Bituminous pavement in accordance with Section 403.

   c. Finishing earth graded shoulders, ditches and slopes in accordance with Section 208.

CONCRETE CURB AND WALKS

A. See detail sheet for type and details.

B. Concrete shall be ready mixed Portland cement conforming to A.S.T.M. C-150, and water. Aggregates shall conform to A.S.T.M. C-33. Compressive strength of concrete at 28 days shall be 4000 p.s.i. Where required, reinforcement shall be welded steel wire fabric conforming to A.S.T.M. A-185.

C. Application

   1. Place concrete only on a moist, compacted subgrade or base free from loose material. Place no concrete on muddy or frozen subgrade in accordance with Section 604 and 605.

   2. Concrete shall be deposited so as to require as little rehandling as practicable. When concrete is to be placed at an atmospheric temperature of 35 degrees F or less, Paragraph 702.10 of the I.S.H.C. Specifications shall apply.

   3. Except as otherwise specified, cure all concrete by one of the methods described in Section 501.17 of the I.S.H.C. Specifications.

EARTHWORK

1. Fill material: shall consist of earth obtained from borrow pits or other sources. Earth shall be free from vegetation, debris and other deleterious substances and large rocks. The fill material shall be placed in layers not to exceed six inches following compaction. Moisture content of fill material will be such that compaction to be specified density is possible. All fill beneath paved areas, floor slabs and future buildings shall be compacted to at least 93% of the modified Proctor maximum dry density (ASTM-D-1557). See soil boring report by ALT & WITZIG ENG. soil conditions and fill recommendations.

2. Field compaction tests shall be run on each lift, in fill sections, and the required compaction on each lift shall be attained prior to placing the next lift. The compaction tests shall be in accordance with Section 203.24.

3. Excavate, replace and dispose of site soil materials determined to be unsuitable by Project Engineer if Project Engineer so directs.

4. Replace unsuitable soil materials with Common Fill Materials specified and backfill, compact and grade the replacement materials as specified herein.

5. Dispose of unsuitable soil materials on site in the area designated by Engineer and seed as noted.

6. Contractor will be compensated for excavation, replacement and disposal of unsuitable soil materials based on the volume of excavation times the contract unit price of the specified fill.

7. Perform earthwork operations to establish required elevations and dimensions within the following tolerances, except that no tolerance will be permitted that would allow a lesser size than indicated for footings and foundations or a lesser thickness than indicated for paving, paving base courses and concrete floor slabs-on-grade.
   A. Under buildings (including future) and paving areas: Plus or minus 1/2 inch.
   B. Other Areas: Plus or minus 1 inch.

Soil Erosion Control Summary

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

1. Contractor shall install sediment traps and straw bale filters, as shown.

2. 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 either oats, annual ryegrass, wheat or rye depending on time of year. Disturbed areas should be kept to a minimum at all times.

3. 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.

4. 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 Contractors expense. Payment for additional rip rap (not shown on plans) and seeding shall be paid for on a unit basis.

5. 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).

6. All proposed street areas shall be paved as soon as possible after subgrade is prepared.

7. All disturbed areas shall be seeded and mulched as specified below. This shall include all building pad fill areas.

8. Contractor shall remove all temporary erosion and sediment controls only when there is a sufficient growth of ground cover to prevent further erosion.

STRIPPING OF TOPSOIL

1. The Contractor shall verify that all topsoil has been removed in the areas to be occupied by road, walks and designated building areas. Topsoil shall be removed to a depth of six (6) inches or deeper, if necessary, to remove vegetative matter where required.

2. Topsoil shall be kept separated from suitable fill materials and shall not be used as fill under pavement and/or building areas.

3. Topsoil shall be stored at a location where it does not interfere with construction operations. Excess topsoil shall be removed from the site.

4. Topsoil shall be reasonably free from subsoil debris and stones.

CLEARING AND GRUBBING

1. Clearing and grubbing shall consist of cutting, removal and satisfactory disposal of all trees, down timber, brush, projecting roots, stumps, rubbish, boulders, broken concrete, fencing (as designated), and other material on the project site and within the boundary as shown on the Construction Documents and/or as designated by "construction limits."

2. All "unsuitable material" from clearing operations stated in Item 11-A shall be removed to disposal area(s) off of the project site; unless a "Bury-Pit" shall be utilized in an area where it shall not be beneath building areas and/or pavement areas and shall not be located in an area where storm drainage structures shall be located or where impoundment of surface drainage may occur.

3. Materials shall not be disposed of by burning unless approved by the local Fire Marshall.

TREE REMOVAL AND PROTECTION

1. Trees shall be removed from the project site only where the area is to be occupied by road and surfaced areas in accordance with specifications of the Indianapolis Department of Transportation.

2. Trees shall be removed from the project site as directed by the developer, and so designated.

3. Trees shall be removed from the project site where they interfere directly with the placement of storm or sanitary sewers, and that such excavation is or will be fatal to such adjacent trees.

4. The Contractor shall endeavor to save and protect trees of value and worth which do not impair construction of improvements as designated. In the event cut or fill exceeds 0.5 foot over the root area, the developer shall be consulted with respect to protective measures to be taken, if any, to preserve such trees.

5. The Contractor shall be responsible for determining the method for protection of tops, trunks and roots of existing trees on the project site that are to remain. Existing trees subject to construction damage shall be boxed, fenced or otherwise protected before any adjacent work is started. Earth or material and equipment shall not be stockpiled or stored within the spread of branches. Branches which need to be removed or are broken shall be neatly trimmed and scars shall be covered with tree paint.

STORM SEWER SPECIFICATIONS

1. Standard specifications of the City of Indianapolis, General Ordinance 49, 1972 and Indiana State Highway shall apply for all work and materials. Pipe shall be installed in accordance with Section 715.

2. All storm sewer pipe shall be reinforced concrete pipe conforming to ASTM Designation C-76 Class III, in accordance with Section 906.

3. Backfill around all structures and cuts under paved areas with granular material in accordance with Section 21.1 and 715.

4. See standard detail sheet for construction dimensions of storm structures. Manholes, inlets and catch basins shall be in accordance with Section 720. Precast concrete and steel for manholes and inlets shall be in accordance with ASTM C-478.

5. The Contractor shall provide at least 1' of cover over all storm sewers.

6. Rip rap shall be a minimum of 6" and a maximum of 17" in size and a minimum 18" in depth. Dimensions for rip rap on this plan are for estimating purposes only. Actual best placement of rip rap shall be determined by field conditions and shall be in accordance with Section 616.

7. All drainage pipe and ditch outfalls to receiving streams shall be constructed in accordance with drawings, subject however, to any modification required by Engineer at the time installation is completed and to any adjustments needed for field conditions not adequately anticipated by the design drawings.

8. Castings shall be as shown on detail sheet for manufacturer, type and number. All castings shall be Neenah or East Jordan approved equal.

9. Install gaskets in accordance with manufacturer's recommendations for use of lubricants, cements and other special installation requirements.

10. Place plugs in ends of incomplete piping at end of work day or whenever work stops, and at stubs for future development.

11. Carry depth of trenches for piping to establish indicated flow lines and invert elevations. Notch under pipe bells where applicable to provide solid bearing for entire body of pipe.

SANITARY SEWER SPECIFICATIONS for CLAY TOWNSHIP REGIONAL WASTE DISTRICT

1. Standard specifications of the Clay Waste District and Indiana State Highway shall apply for all work and materials. Pipe shall be installed in accordance with Section 715.

2. Sanitary sewer pipe shall be PVC in accordance with ASTM D-3034 (S.D.R. 35) and ASTM 2321. PVC shall have grooved bell and gasket.

3. All sanitary manholes shall be "precast concrete" manholes in accordance with ASTM C-478 and Section 720.

4. The type of new manhole ring and cover shall be as specified on the standard detail sheet of these plans. Bitmatic Coating shall be applied around each manhole joint from 6" above to 6" below each joint.

5. The casting elevations are set by plan. However, the castings are to be adjusted in the field by the Engineer's representative should a discrepancy occur between plan grade and existing grade. New manhole ring and cover shall be installed to established grade.

6. Backfill around all structures and all cuts under paved areas with granular material. Trenches opening within 5 feet of paved roadways shall be backfilled with granular material in accordance with Section 211. Backfill under sidewalks shall be granular unless the walks are constructed a minimum of 6 month after backfill has been in place.

7. The Contractor shall be responsible for verifying that all State Highways, City and County permits have been obtained by developer prior to start of construction.

8. The Contractor shall be required to furnish the Engineer with a set of prints, marked in red pencil, 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 sanitary sewer laterals and stubs termination shall be indicated on the surface with a metal fence post set immediately above said termination point.

9. All sanitary sewer lines upon completion will be required to pass an infiltration water test and a low pressure air test, unless otherwise directed by the Engineer. Said test shall be conducted according to NCPI Standard Method, and shall be witnessed by an Engineer and Clay Waste District. Infiltration under test shall not exceed 200 gallons per inch of inside diameter of sewer pipe per mile of sewer in 24 hours and inclusive of all appurtenances within the section being tested such as manholes, house connections, etc.

10. Deflection tests shall be performed on all flexible pipe after the final backfill has been in place at least 30 days. No pipe shall exceed a vertical deflection of 5%. Deflection test results. (The following are considered nonflexible pipes: vitrified clay pipe, concrete pipe, ductile iron pipe, cast iron pipe, asbestos cement pipe.)

11. All testing shall be observed by a Professional Engineer for certification and the Clay Waste District.

12. The ends of laterals are to be plugged tight with clay or plastic disc or cap capable of withstanding a low pressure air test without leakage.

13. Bedding as Detailed.

14. Water and sewer line crossings and separations shall be in accordance with Ten States Standards as shown on the detail on this sheet.

15. Trench shall be opened sufficiently ahead of pipe laying to reveal obstructions, and shall be properly protected and/or barricaded when left unattended.

16. No water shall be permitted to flow into the sanitary sewer system during under construction. Contractor shall utilize a pump to keep the water level below the pipe. Pump discharge shall be directed to a storm outlet.

17. All sewer laterals shall be bedded the same as the main line sewer.

18. Forty-eight (48) hour notice shall be given to Clay Regional Waste District prior to the start of sewer construction. Also, 48 hour notice shall be given prior to any testing done on the sewer.

19. Manhole castings shall be stamped "SANITARY SEWER" (Neenah Casting R 1642 or equal).

UTILITIES

1. All water lines from Indianapolis Water Company main to any lot shall be installed of material and workmanship as approved with the Indianapolis Water Company.

2. Conduit shall be required for all electric and telephone lines under paved areas.

3. Granular backfill shall be required for all crossing of paved areas per Indianapolis Department of Transportation specifications.

CERTIFIED BY

DATE

REVISIONS

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• CIVIL ENGINEERING
• LAND SURVEYING
• ARCHITECTURE
• LAND PLANNING

TECH. CHK.	DRAWN BY	SCALE	DATE	CLIENT
	N.B.	NONE	7/29/88	TRAMMELL CROW
DFTNG. CHK.	DRAWING TITLE			
	SPECIFICATIONS			

DWG. TYPE	FILE NUMBER	SHEET
		32
JOB NUMBER		OF 39
8 6 3 9 1 — 2 0 0 0 0		

EASTERN ENGINEERING, 2-86, DPS-3G10