

Drain: PARK NORTHWESTERN DRAIN **Drain #:** 136
Improvement/Arm: HAMILTON SWINGS PARK - BLOCK A
Operator: JOH **Date:** 8-13-04
Drain Classification: Urban/Rural **Year Installed:** 1999

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 slm ✓
- Enter Drain Age into Posse slm ✓
- Sum drain length for Watershed in Posse slm ✓
- Check Database entries for errors _____



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

October 27, 1999

Re: Park Northwestern Drain, Hamilton Business Park Arm

Attached is a petition and plans for the proposed relocation of the Park Northwestern Drain, Hamilton Business Park Arm. The relocation is being proposed Glendale Partners of West Carmel Shoppes, LLP. The proposal is to extend the drainage systems originally installed in the Hamilton Business Park in order to develop Block A.

This line will consist of the following:

6"	SSD	160 ft	27"	RCP	110 ft	29x45	RCP	89 ft
12"	RCP	94 ft	30"	RCP	284 ft	42x27	RCP	80 ft
18"	RCP	10 ft	36"	RCP	256 ft	42x30	RCP	75 ft
Open Ditch		130 ft						

This shall consist of the lengths between the following structures:

Outlet and Str. 43; Str. 43 and 41; 42 and 41; 43 and 24; 24 and 25; 24 and 22; 22 and 8; 8 and 9; 8 and 6; 6 and 5. The SSD listed above is the lengths needed to extend the under curb SSD for Commerce Drive to Structures 8 and 9. The open ditch is that part of the East side ditch for US 421 between the outlet of the storm system and the culvert under US 421 taking water into Park Northwestern. The 42x30" RCP is the culvert under the private drive at US 421 and the 42x27" RCP is the culvert outlined above under US 421.

The total length of new drain shall be 1,288 feet. The 652 feet of temporary swale with 4" drain listed on my report dated June 11, 1996 shall be vacated. This proposal will add an additional 636 feet to the drains total length.

The cost of the relocation is to be paid by Glendale Partners of West Carmel Shoppes, LLP. Because the project is to be paid by the petitioner and is within the boundaries of the petitioner's property, the project falls under the requirements as set out in IC 36-9-27-52.5. Therefore, a hearing is not required for the petition.

The petitioner has provided the Performance Bond as follows:

Name of Bonding Co.: Bank One

Bond #: 82003173

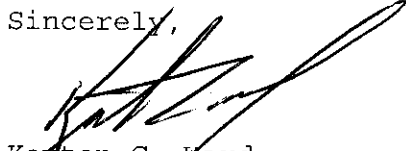
Bond Date: October 14, 1999

Bond Amount: \$77,000.00

Bond Term (1 Year Max): October 14, 2000

I recommend approval by the Board at this time.

Sincerely,



Kenton C. Ward
Hamilton County Surveyor

KCW/kkw



DATE: OCTOBER 14, 1999

STANDBY CREDIT

BOARD OF HAMILTON COUNTY
COMMISSIONERS, HAMILTON COUNTY
INDIANA
ONE HAMILTON COUNTY SQUARE
NOBLESVILLE, IN 46060

DRAFTS DRAWN MUST BE MARKED:
WITH OUR REF NO. 82003173
OPENER'S REFERENCE NO:
82003173

GENTLEMEN:

BY THE ORDER OF:
GLENDALE PARTNERS
OF WEST CARMEL SHOPPES, LLC
320 NORTH MERIDIAN ST., SUITE 700
INDIANAPOLIS, IN 46204

WE HEREBY ISSUE IN YOUR FAVOR OUR IRREVOCABLE CREDIT NO: 82003173 FOR THE ACCOUNT OF GLENDALE PARTNERS OF WEST CARMEL SHOPPES, LLC FOR AN AMOUNT OR AMOUNTS NOT TO EXCEED IN THE AGGREGATE US DOLLARS 77,000.00 (SEVENTY-SEVEN THOUSAND AND NO/100 US DOLLARS) AT SIGHT ON BANK ONE, INDIANA, N.A., CHICAGO, ILLINOIS, USA EFFECTIVE OCTOBER 14, 1999 AND EXPIRING AT OUR COUNTERS ON OCTOBER 14, 2000.

FUNDS UNDER THIS CREDIT ARE AVAILABLE AGAINST YOUR DRAFT (S) MENTIONING OUR CREDIT NUMBER.

THE BELOW-MENTIONED DOCUMENT(S) MUST BE PRESENTED AT SIGHT ON OR BEFORE THE EXPIRY DATE ON THIS INSTRUMENT IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THIS LETTER OF CREDIT.

YOUR SIGNED AND DATED STATEMENT, READING AS FOLLOWS:
"GLENDALE PARTNERS OF WEST CARMEL SHOPPES, LLC (THE DEVELOPER) HAS NOT SATISFACTORILY COMPLETED ALL IMPROVEMENTS RELATED TO THE CONSTRUCTION OF A STORM SEWER IN WEST CARMEL CENTER, BLOCK A, FOR THE HAMILTON BUSINESS PARK ARM OF THE PARK NORTHWESTERN DRAIN."

WE ENGAGE WITH YOU THAT DRAFT(S) DRAWN UNDER AND IN CONFORMITY WITH THE TERMS OF THIS CREDIT WILL BE DULY HONORED ON PRESENTATION IF PRESENTED ON OR BEFORE THE EXPIRY DATE. THE ORIGINAL LETTER OF CREDIT MUST ACCOMPANY THE DOCUMENT(S) REQUIRED UNDER THIS CREDIT.

CONTINUED

PAGE 1

** Note: The engineers estimate is located on the last page.*



REFERENCE NO. 82003173

DATE: OCTOBER 14, 1999

THE CREDIT IS SUBJECT TO THE UNIFORM CUSTOMS AND PRACTICE FOR DOCUMENTARY CREDITS (1993 REVISION), INTERNATIONAL CHAMBER OF COMMERCE-PUBLICATION 500.

PLEASE ADDRESS ALL CORRESPONDENCE REGARDING THIS LETTER OF CREDIT TO THE ATTENTION OF OUR STANDBY LETTER OF CREDIT UNIT, GLOBAL TRADE SERVICES, MENTIONING OUR REFERENCE NUMBER AS IT APPEARS ABOVE.

YOURS VERY TRULY,
BANK ONE, INDIANA, N.A.

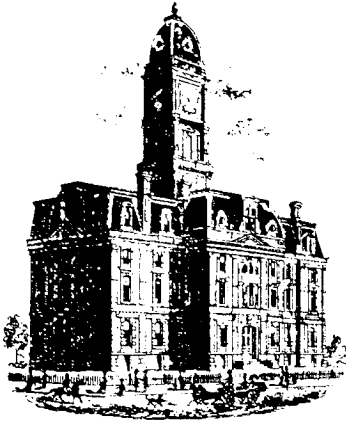


AUTHORIZED SIGNER



AUTHORIZED SIGNER SVP

PAGE 2



SURVEYOR'S OFFICE
Hamilton County

Kenton C. Ward, CFM
Surveyor of Hamilton County

Phone (317) 776-8495
Fax (317) 778-9028

Suite 188
One Hamilton County Square
Noblesville, Indiana 46060-2230
February 2, 2009

To: Hamilton County Drainage Board

Re: Park Northwestern Drain: Hamilton Business Park – Block A

Attached are the approved plans and other information for Hamilton Business Park – Block A. 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 October 27, 1999. The report was approved by the Board at the hearing held November 8, 1999. (See Drainage Board Minutes Book 5, Pages 275-276) The changes are as follows:

The outlet for this drain was modified with the 2007 road improvements for US 421. These improvements removed 130 feet of open drain, 75 feet of 42 x30 RCP, 80 feet of 42x27 RCP, and 42 feet of 29x45 RCP.

The length of the drain due to the changes described above is now **961 feet**.

The non-enforcement for Hamilton Business Park was approved by the Board on October 28, 1996 and recorded under instrument number #19966051861.

The following sureties were guaranteed by Bank One and expired on October 14, 2000.

Bond-LC No: 82003173

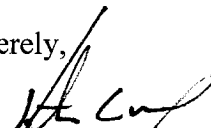
Insured For: Storm Sewers

Amount: \$77, 0000

Issue Date: October 14, 1999

I recommend the Board approve the drain's construction as complete and acceptable.

Sincerely,



Kenton C. Ward, CFM
Hamilton County Surveyor

KCW/slm

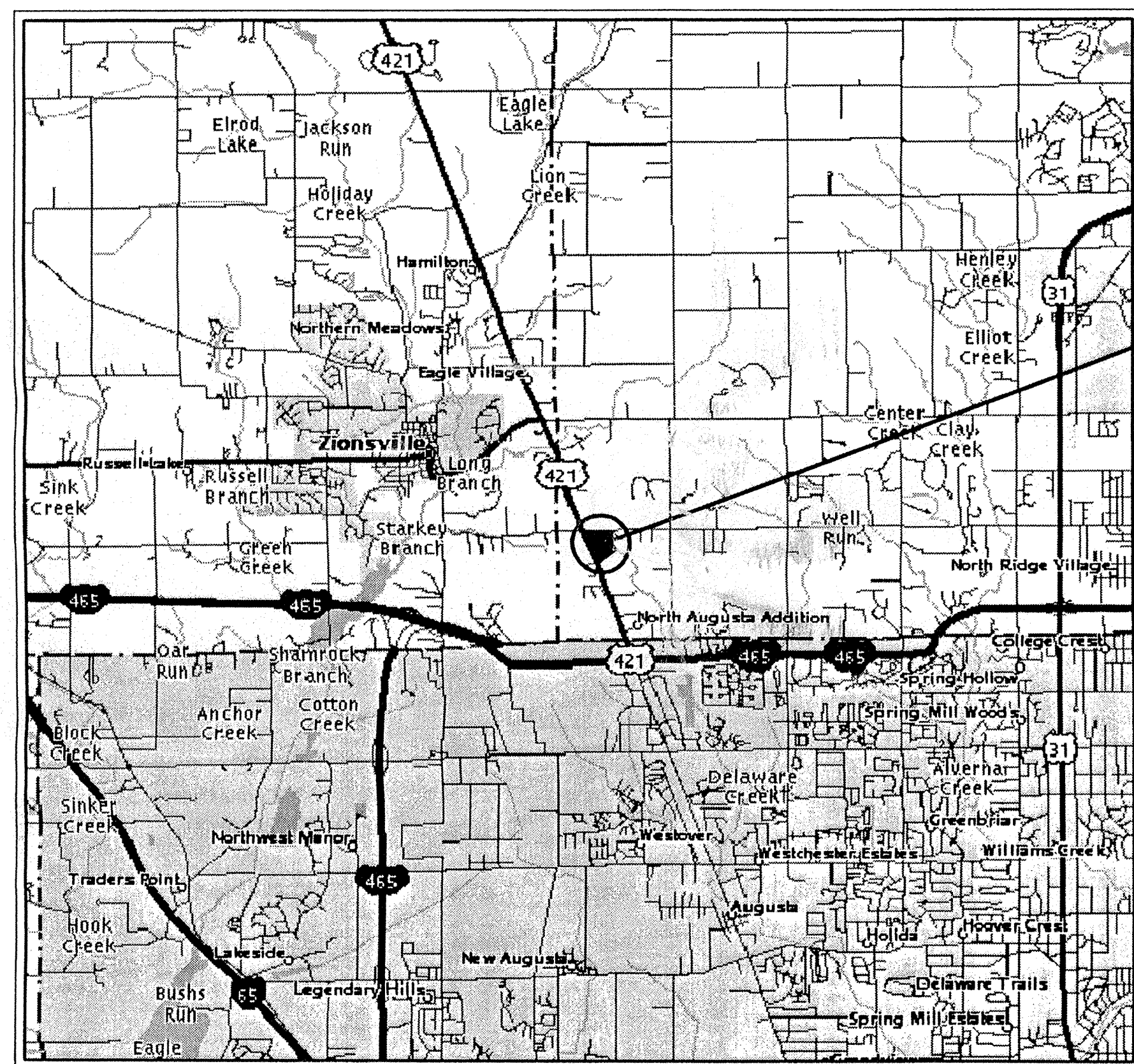
CONSTRUCTION PLANS

FOR

WEST CARMEL CENTER - BLOCK "A"

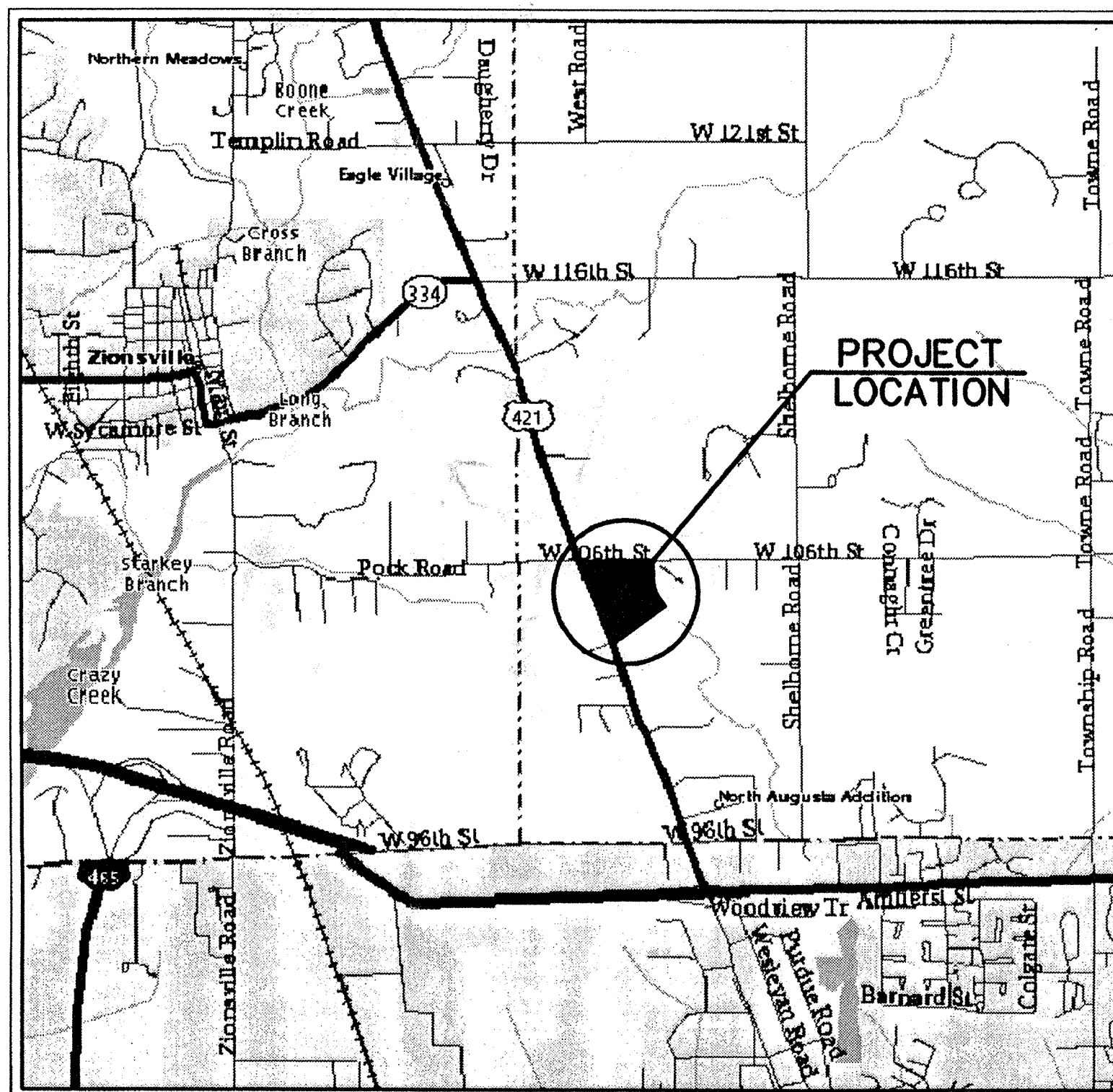
106TH STREET & U.S. 421 (MICHIGAN ROAD)

CARMEL, INDIANA



LOCATION MAP
NOT TO SCALE

PROJECT LOCATION



VICINITY MAP
NOT TO SCALE

INDEX	
DESCRIPTION	SHEET No.
TITLE SHEET	C0.1
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SITE PLAN (EAST)	C2.3
GRADING PLAN (WEST)	C3.1
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PLAN DATE: 04/16/99

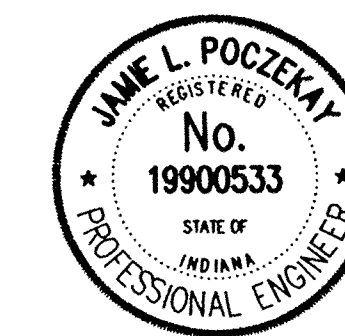
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△	05/18/99	CARMEL T A C																	
△	06/02/99	CARMEL T A C																	
△	06/11/99	GENERAL																	
△	09/30/99	RE-ISSUE																	
△	10/11/99	RE-ISSUE																	
△	10/19/99	RE-ISSUE																	

PLANS PREPARED FOR:

GLENDALE PARTNERS / OLYMPIA PROPERTIES
320 N. MERIDIAN STREET, SUITE 700
INDIANAPOLIS, INDIANA

PLANS PREPARED BY:

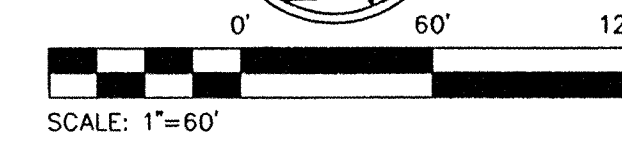
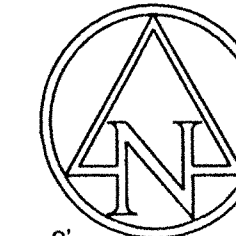
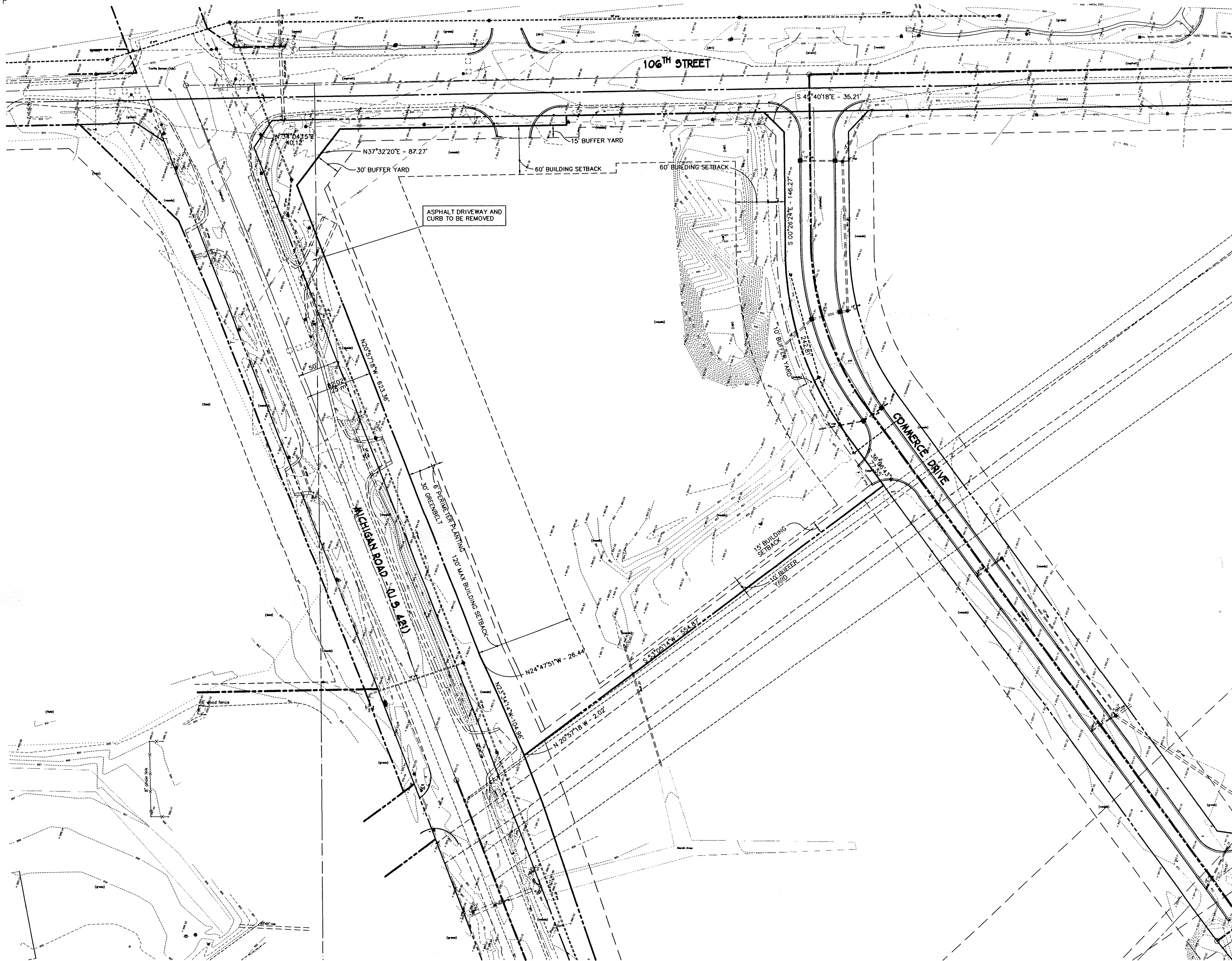
AMERICAN CONSULTING ENGINEERS, INC.
ARCHITECTS ENGINEERS
4165 MILLERSVILLE ROAD
INDIANAPOLIS, INDIANA 46205 (317) 547-5580
Copyright (C) 1966-1997 by American Consulting Engineers, Inc.



Jamie L. Pockekay
JAMIE L. POCEKAY, P.E.

FILED
OCT 28 1999
OFFICE OF HAMILTON COUNTY SURVEYOR

C0.1
9200



- EXISTING LEGEND**
- 733.42 --- SPOT ELEVATION
 - 780 --- CONTOUR
 - W --- WATER LINE
 - otel --- OVERHEAD TELEPHONE
 - btel --- BURIED TELEPHONE LINES
 - G --- GAS LINES
 - OHE --- OVERHEAD ELECTRIC
 - FLOW LINE --- FLOW LINE
 - GUY WIRE --- GUY WIRE
 - POWER POLE --- POWER POLE
 - REBAR FOUND --- REBAR FOUND
 - TELEPHONE PEDESTAL --- TELEPHONE PEDESTAL
 - TELEPHONE POLE --- TELEPHONE POLE
 - SIGN --- SIGN
 - TREE --- TREE

GLENDALE PARTNERS / OLYMPIA PROPERTIES
 320 N MERIDIAN STREET SUITE 700
 INDIANAPOLIS INDIANA

AMERICAN CONSULTING ENGINEERS, INC.
 ARCHITECTS
 4165 MILLERSVILLE ROAD INDIANAPOLIS, INDIANA 46205 (317) 547-5580
 Copyright (C) 1986-1997 by American Consulting Engineers, Inc.

CERTIFIED BY

**EXISTING TOPOGRAPHY
 RETAIL A**
WEST CARMEL CENTER
 106th STREET & US 421
 CARMEL, INDIANA

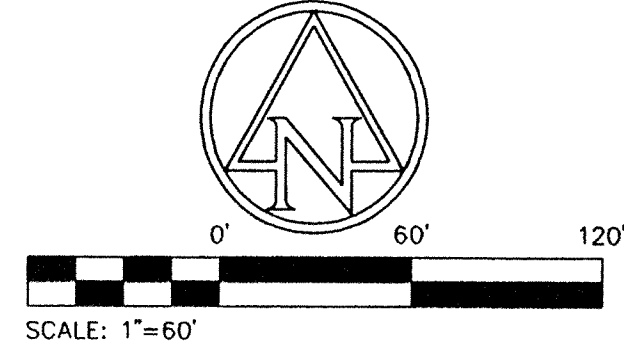
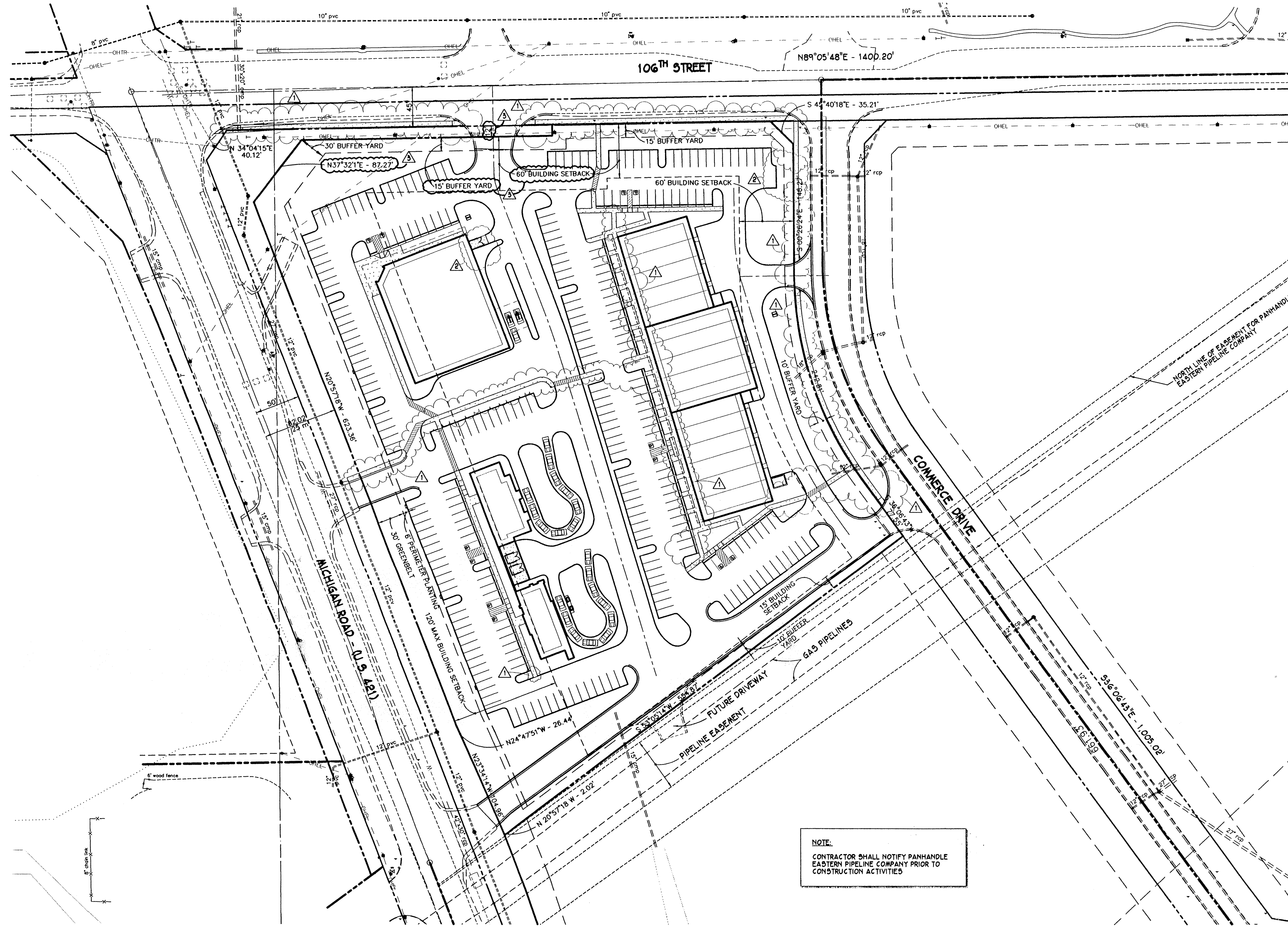
BENCHMARK:
 ACE TBM #500:
 R.R. SPIKE IN W. SIDE POWER POLE, S. SIDE
 OF 106TH STREET, FIRST POLE WEST OF
 COMMERCE DRIVE. EL. 897.26

CAUTION !!
 THE LOCATIONS OF ALL EXISTING UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE BASED UPON ABOVE GROUND EVIDENCE (including, but not limited to, manholes, inlets, valves, and marks made upon the ground by others) AND ARE SPECULATIVE IN NATURE. THERE MAY ALSO BE OTHER EXISTING UNDERGROUND UTILITIES FOR WHICH THERE IS NO ABOVE GROUND EVIDENCE OR FOR WHICH NO ABOVE GROUND EVIDENCE WAS OBSERVED. THE EXACT LOCATIONS OF SAID EXISTING UNDERGROUND UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO ANY AND ALL CONSTRUCTION.
 1-800-382-5544
 CALL TOLL FREE
 - INDIANA UNDERGROUND -

DATE: 04/16/99
SCALE: 1"=60'
DRAWN BY: PED
CHK'D BY: JLP
JOB NO.: 99-513

NO.	REVISIONS
1	04/16/99
2	08/11/99
3	08/11/99

SHEET NO.
C11
 OF



- PROPOSED LEGEND**
- LIGHT DUTY ASPHALT
 - HEAVY DUTY ASPHALT
 - RIGHT OF WAY ASPHALT
 - CONCRETE
 - 6" CONCRETE CURB
 - 6" CONCRETE CURB & WALK
 - CURB RAMP TYPE "H"
 - HANDICAP RAMP TYPE "K"
 - HANDICAP RAMP TYPE "G"
 - HANDICAP ACCESSIBLE PARKING SPACE

- SITE NOTES**
1. ALL WORK TO CONFORM TO STATE AND LOCAL REGULATIONS.
 2. ALL PARKING STRIPES ARE TO BE 4" PAINTED, (WHITE). HANDICAPPED ACCESS AISLES SHALL BE 4" PAINTED, (BLUE).
 3. ALL DIMENSIONS ARE TO EDGE OF PAVEMENT OR FACE OF CURB, UNLESS NOTED OTHERWISE.
 4. ALL DIMENSIONS ARE TO FACE OF BRICK OR FACING MATERIAL, WHERE APPLICABLE.
 5. ALL DIMENSIONS ARE PARALLEL WITH, OR PERPENDICULAR TO BASE LINES, PROPERTY LINES OR BUILDING LINES UNLESS NOTED OTHERWISE.
 6. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD PRIOR TO START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FIELD DIMENSIONS. IF ANY DISCREPANCIES ARE FOUND IN THESE PLANS FROM ACTUAL FIELD CONDITIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.
 7. PROVIDE SMOOTH TRANSITIONS FROM NEW AREAS TO EXISTING FEATURES AS NECESSARY.
 8. ALL EXCAVATED AREAS SHALL BE SEEDED AFTER FINISH GRADING UNLESS OTHERWISE NOTED. ALL NEW SEEDED AREAS SHALL HAVE A MINIMUM OF 4" OF TOP SOIL.
 9. RESURFACE OR RECONSTRUCT AT LEAST TO ORIGINAL CONDITIONS. ALL AREAS WHERE THE EXISTING PAVEMENT OR LAWNS ARE DAMAGED DURING CONSTRUCTION FROM TRAFFIC BY CONTRACTORS, SUBCONTRACTORS OR SUPPLIERS AFTER CONSTRUCTION WORK IS COMPLETE.
 10. THE EDGE OF EXISTING ASPHALT PAVEMENT SHALL BE PROPERLY SEALED WITH A TACK COAT MATERIAL IN ALL AREAS WHERE NEW ASPHALT PAVEMENT IS INDICATED TO JOIN EXISTING ASPHALT.
 11. ALL UTILITY TRENCHES WITHIN 5 FEET OF PAVEMENT SHALL BE COMPLETELY BACKFILLED WITH GRANULAR MATERIAL.
 12. ALL ASPHALT TO BE IN ACCORDANCE WITH I.N.D.O.T. STANDARD SPECIFICATIONS RELATIVE TO MATERIAL, MIX, PLACEMENT AND WORKMANSHIP.
 13. CHAMFER ENDS OF ALL CURBS.
 14. SEE ARCHITECTURAL PLANS FOR BUILDING DIMENSIONS.
 15. ALL SIDEWALKS SHALL COMPLY WITH A.D.A. STANDARDS. MAX. CROSS SLOPE OF 1/4" FT. & MAX. SLOPE OF 1:20.

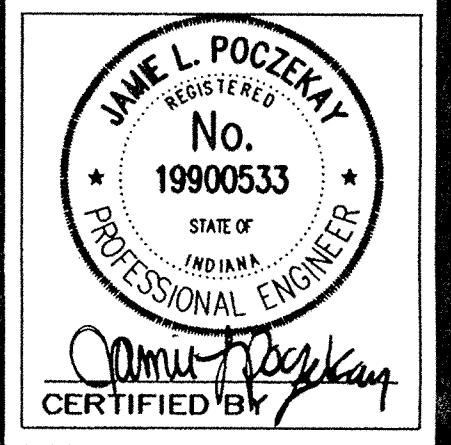
PARKING ANALYSIS

RETAIL BUILDING #1 TOTAL S.F. =	28,400
BUILDING #2 TOTAL S.F. =	(15,000)
BUILDING #3: 65 SEATS + 5 EMPLOYEES	
BUILDING #4: 60 SEATS + 4 EMPLOYEES	
BUILDING #1 AND #2	
REQUIRED RATIO = 1 SPACE/200 S.F.	
BUILDING #3 AND #4	
REQUIRED RATIO = 1 SPACE/2.5 SEATS + MAX. EMPLOYEES	
TOTAL SPACES REQUIRED =	276
STANDARD PARKING (10' X 20')	266 SPACES
HANDICAP PARKING PROVIDED (INCLUDES 8 VAN ACCESSIBLE)	12 SPACES
TOTAL PROPOSED PARKING	278 SPACES

NOTE:
CONTRACTOR SHALL NOTIFY PANHANDLE EASTERN PIPELINE COMPANY PRIOR TO CONSTRUCTION ACTIVITIES

GLENDALE PARTNERS / OLYMPIA PROPERTIES
320 N. MERIDIAN STREET SUITE 700
INDIANAPOLIS, INDIANA

AMERICAN CONSULTING ENGINEERS, INC.
ARCHITECTS
4165 MILLERSVILLE ROAD INDIANAPOLIS, INDIANA 46205 (317) 547-5590
REGISTERED PROFESSIONAL ENGINEERS IN INDIANA
LICENSE NO. 1888-1987-12



OVERALL SITE PLAN
RETAIL A

WEST CARMEL CENTER
106th STREET & US 421
CARMEL, INDIANA

DATE: 04/16/99
SCALE: 1"=60'
DRAWN BY: PED
CHK'D BY: JLP
JOB NO. 99-513

REVISIONS

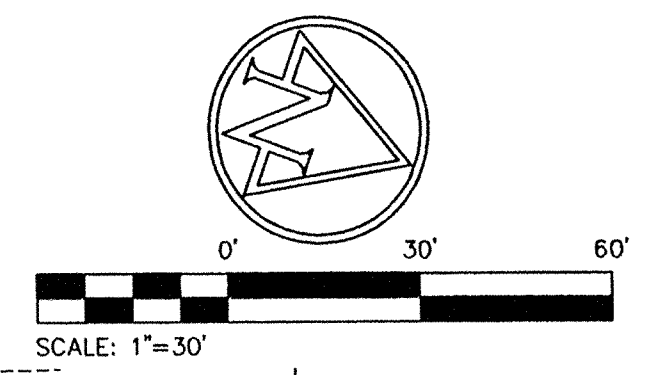
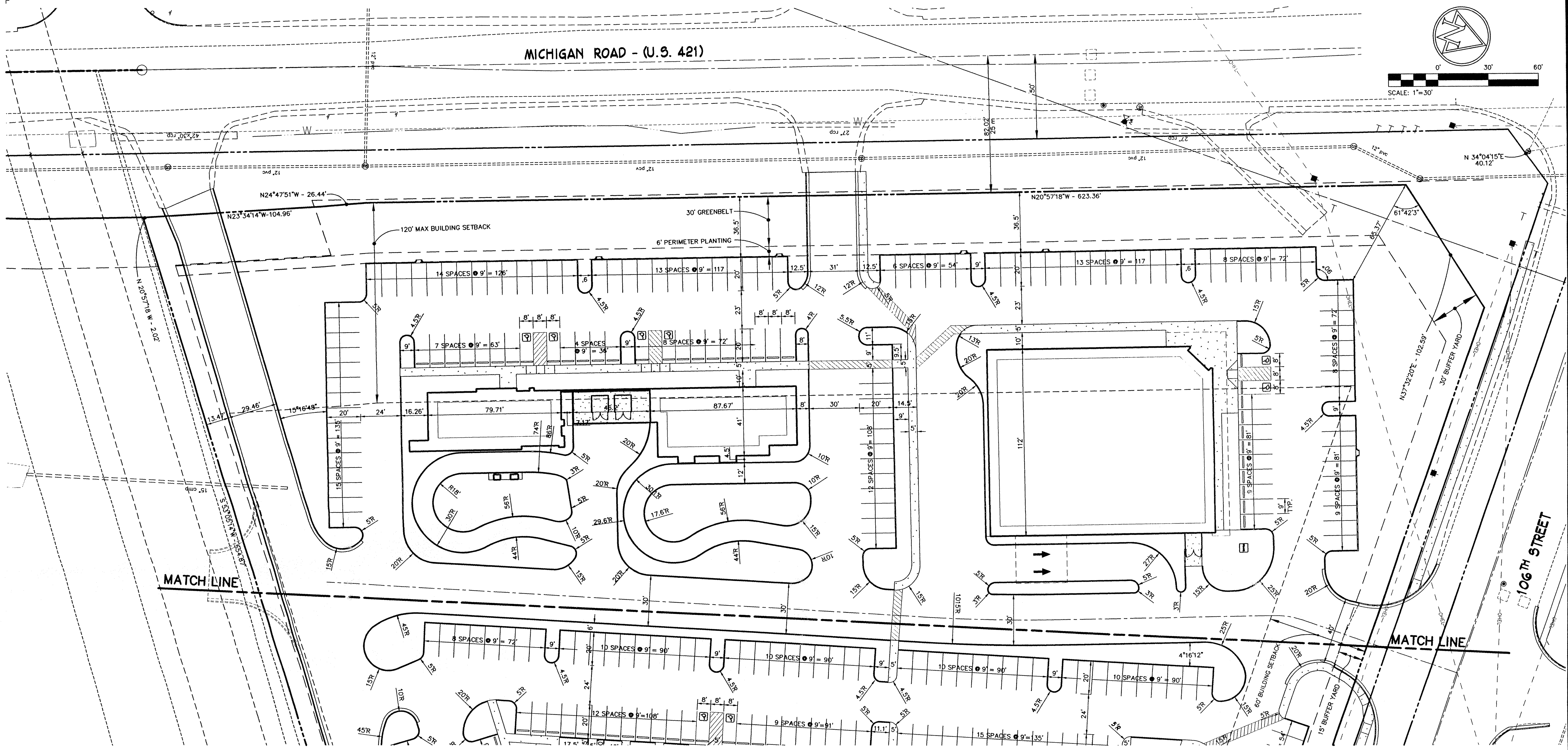
AMMEL TAC	05/18/99
CARMEL TAC	06/02/99
RE-ISSUE	10/11/99

CAUTION !!

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1-800-382-5544
CALL TOLL FREE
- INDIANA UNDERGROUND -

SHEET NO.
C2.1
OF



SITE NOTES

1. ALL WORK TO CONFORM TO STATE AND LOCAL REGULATIONS.
2. ALL PARKING STRIPES ARE TO BE 4" PAINTED, (WHITE). HANDICAPPED ACCESS AISLES SHALL BE 4" PAINTED, (BLUE).
3. ALL DIMENSIONS ARE TO EDGE OF PAVEMENT OR FACE OF CURB, UNLESS NOTED OTHERWISE.
4. ALL DIMENSIONS ARE TO FACE OF BRICK OR FACING MATERIAL, WHERE APPLICABLE.
5. ALL DIMENSIONS ARE PARALLEL WITH, OR PERPENDICULAR TO BASE LINES, PROPERTY LINES OR BUILDING LINES UNLESS NOTED OTHERWISE.
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13. CHAMFER ENDS OF ALL CURBS.
14. SEE ARCHITECTURAL PLANS FOR BUILDING DIMENSIONS.
15. ALL SIDEWALKS SHALL COMPLY WITH A.D.A. STANDARDS, MAX. CROSS SLOPE OF 1/4" FT. & MAX. SLOPE OF 1:20.
16. EXISTING PAVEMENT TO BE SAWCUT IN ALL AREAS WHERE INDICATED NEW PAVEMENT TO JOIN EXISTING.

PROPOSED LEGEND

- LIGHT DUTY ASPHALT
- HEAVY DUTY ASPHALT
- RIGHT OF WAY ASPHALT
- CONCRETE
- 6" CONCRETE CURB
- 6" CONCRETE CURB & WALK
- CURB RAMP TYPE "1/4"
- HANDICAP RAMP TYPE "1/4"
- HANDICAP RAMP TYPE "1/2"
- HANDICAP ACCESSIBLE PARKING SPACE

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1-800-382-5544
CALL TOLL FREE
- INDIANA UNDERGROUND -

GLENDALE PARTNERS / OLYMPIA PROPERTIES
320 N. MERIDIAN STREET SUITE 700
INDIANAPOLIS, INDIANA

AMERICAN CONSULTING ENGINEERS, INC.
ARCHITECTS
INDIANAPOLIS, INDIANA 46205 (317) 547-5580
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JAMES L. POZDEK
REGISTERED
No. 19900533
STATE OF INDIANA
PROFESSIONAL ENGINEER
James L. Pozdek
CERTIFIED BY

SITE PLAN (WEST) RETAIL A

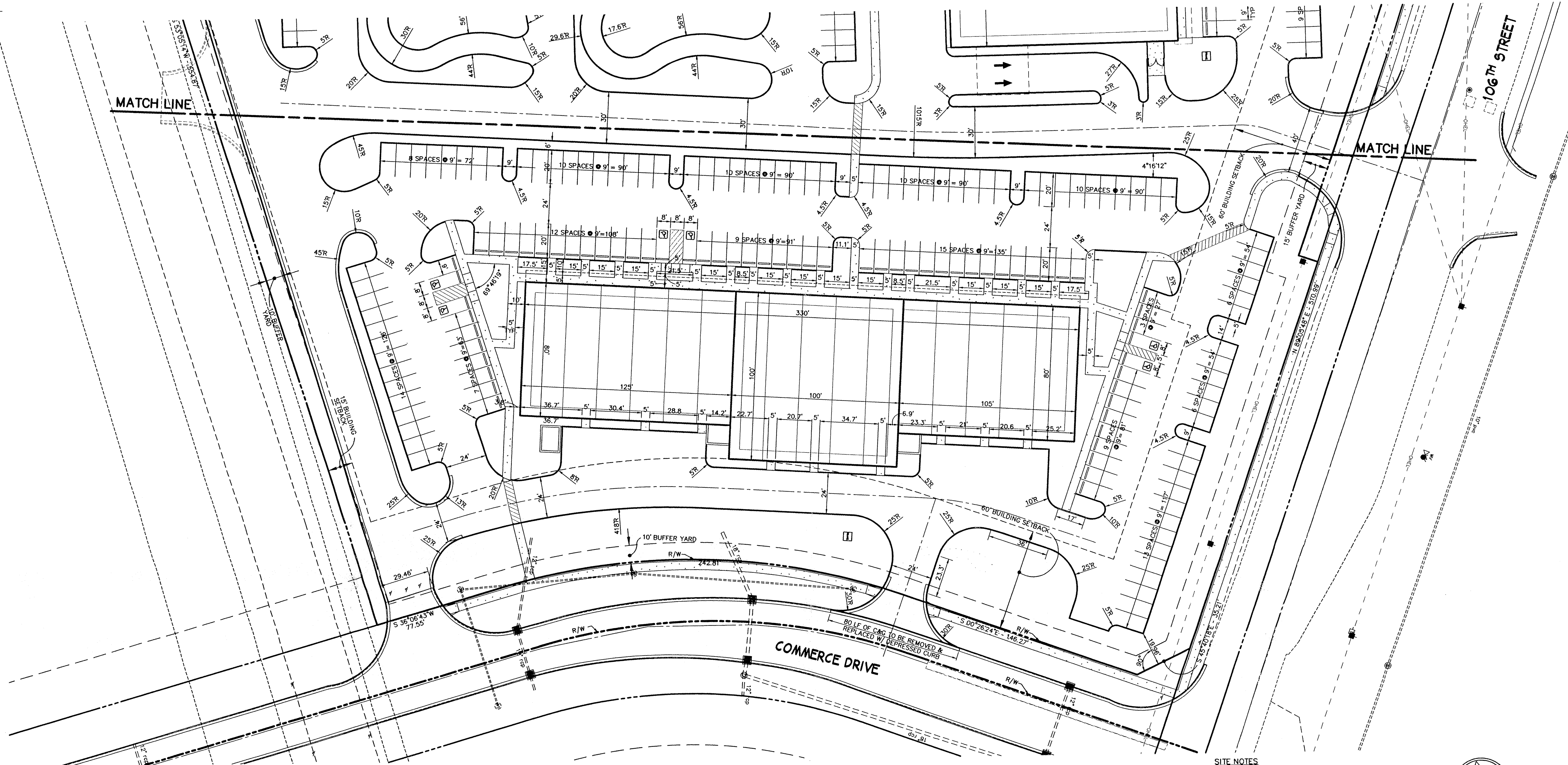
WEST CARMEL CENTER
106th STREET & US 421
CARMEL, INDIANA

DATE: 04/16/99
SCALE: 1"=30'
DRAWN BY: PED
CHK'D BY: JLP
JOB NO. 99-313

REVISIONS

CARMEL TAC	05/18/99
CARMEL TAC	06/02/99
RE-ISSUE	09/30/99

SHEET NO.
C2.2
OF



- SITE NOTES**
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 13. CHAMFER ENDS OF ALL CURBS.
 14. SEE ARCHITECTURAL PLANS FOR BUILDING DIMENSIONS.
 15. ALL SIDEWALKS SHALL COMPLY WITH A.D.A. STANDARDS. MAX. CROSS SLOPE OF 1/4" FT. & MAX. SLOPE OF 1:20.
 16. EXISTING PAVEMENT TO BE SAWCUT IN ALL AREAS WHERE INDICATED NEW PAVEMENT TO JOIN EXISTING.



- PROPOSED LEGEND**
- LIGHT DUTY ASPHALT
 - HEAVY DUTY ASPHALT
 - RIGHT OF WAY ASPHALT
 - CONCRETE
 - 6" CONCRETE CURB
 - 6" CONCRETE CURB & WALK
 - CURB RAMP TYPE "h"
 - HANDICAP RAMP TYPE "h"
 - HANDICAP RAMP TYPE "g"
 - HANDICAP ACCESSIBLE PARKING SPACE

CAUTION !!

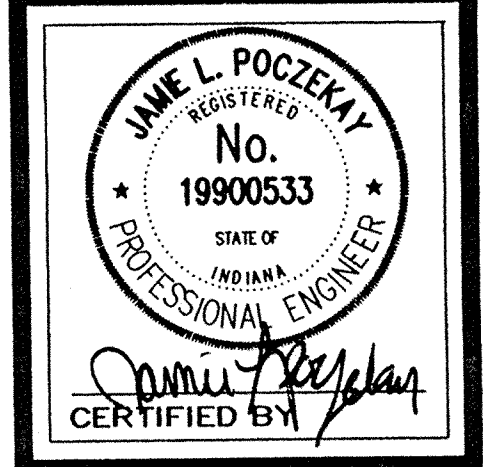
THE LOCATIONS OF ALL EXISTING UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE BASED UPON ABOVE GROUND EVIDENCE (including, but not limited to, manholes, vaults, and marks made upon the ground by others) AND ARE SPECULATIVE IN NATURE. THERE MAY ALSO BE OTHER EXISTING UNDERGROUND UTILITIES FOR WHICH THERE IS NO ABOVE GROUND EVIDENCE OR FOR WHICH NO ABOVE GROUND EVIDENCE WAS OBSERVED. THE EXACT LOCATIONS OF SAID EXISTING UNDERGROUND UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO ANY AND ALL CONSTRUCTION.

1-800-382-5544
CALL TOLL FREE

- INDIANA UNDERGROUND -

GLENDALE PARTNERS / OLYMPIA PROPERTIES
320 N. MERIDIAN STREET SUITE 700
INDIANAPOLIS INDIANA

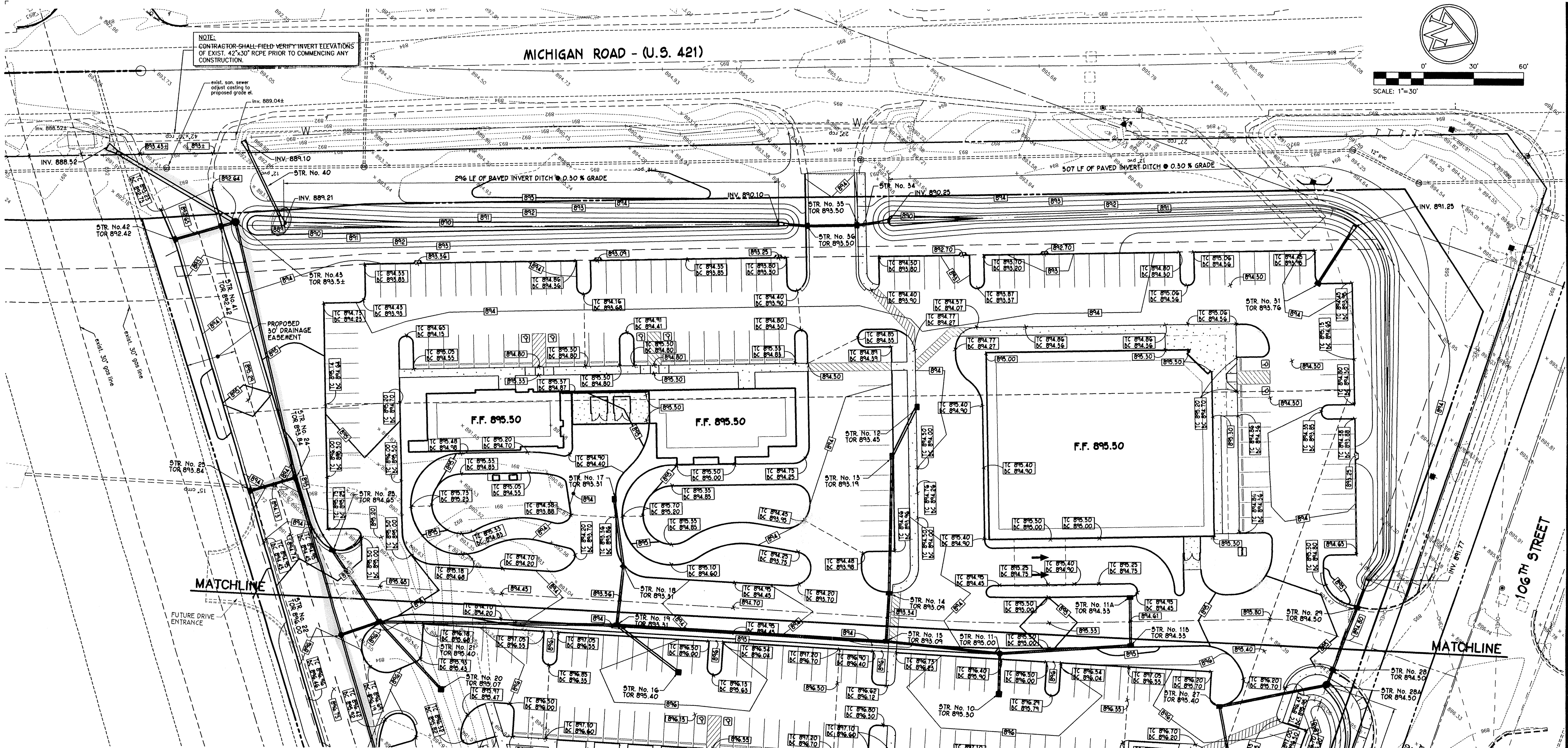
AMERICAN CONSULTING ENGINEERS, INC.
ARCHITECTS
4165 MILLERSVILLE ROAD INDIANAPOLIS, INDIANA 46205 (317) 547-5580
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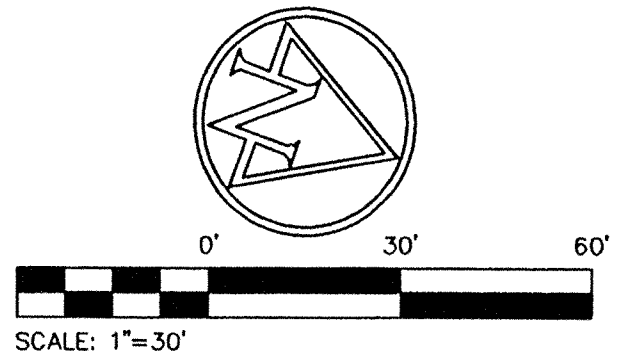
**SITE PLAN (EAST)
RETAIL A**

WEST CARMEL CENTER
106th STREET & US 421
CARMEL INDIANA

DATE:	04/16/99
SCALE:	1"=30'
DRAWN BY:	PEJ
CHK'D BY:	JLP
JOB NO.:	99-313
REVISIONS	
	CARMEL TAC 05/18/99
	CARMEL TAC 06/02/99
	RE-ISSUE 09/30/99
SHEET NO.	
C2.3	
OF	



NOTE:
CONTRACTOR SHALL FIELD VERIFY INVERT ELEVATIONS
OF EXIST. 42"x30" RCPE PRIOR TO COMMENCING ANY
CONSTRUCTION.



MICHIGAN ROAD - (U.S. 421)

NOTE:
PROJECT LIMITS: N. LINE OF PIPE LINE EASEMENT (SEE OVERALL SITE PLAN),
106TH STREET, MICHIGAN ROAD AND COMMERCE DRIVE.

STORM SEWER - STRUCTURE DATA TABLE											
STR. NO.	STRUCTURE TYPE	CASTING TYPE	PIPE		ELEVATIONS		GRADE (%)	CONNECT TO STRUCT.	REMARKS		
			L.F.	SIZE	T.O.C.	DNSTM					
1	Type J Inlet	R-3287-SB10	113	12	RCPE	895.30	892.61	892.05	0.50	2	
2	Type M Inlet	R-3287-SB10	155	18	RCPE	895.30	892.05	891.74	0.20	5	
4	Type J Inlet	R-3287-SB10	7	12	RCPE	895.80	891.77	891.74	0.45	5	
5	Type J Manhole	R-1772-C	110	27	RCPE	897.00	891.74	891.45	0.26	6	Flat top req'd
6A	Type J Inlet	R-3287-10V	10	12	RCPE	895.80	893.46	893.42	0.40	6	
6	Type K Manhole	R-1772-C	96	30	RCPE	897.00	890.32	890.05	0.28	8	
7	Type J Inlet	R-3455-C	38	12	RCPE	895.36	891.17	891.05	0.32	8	
9	Type J Inlet	R-3287-SB10	28	12	RCPE	894.17	890.14	890.05	0.31	8	
8	Type K Manhole	R-3287-SB10	188	30	RCPE	894.17	890.05	889.43	0.33	22	Flat top req'd
11A	Type J Inlet	R-3287-SB10	29	12	RCPE	894.33	891.01	890.89	0.40	11B	
11B	Type M Inlet	R-3287-SB10	78	12	RCPE	894.33	890.89	890.58	0.40	11	
10	Type J Inlet	R-3455-C	24	12	RCPE	895.30	890.68	890.58	0.40	11	
11	Type C Manhole	R-1772-C	68	15	RCPE	895.00	890.58	890.38	0.30	15	Flat top req'd
12	Type J Inlet	R-3287-SB10	32	12	RCPE	893.45	890.92	890.82	0.32	13	
13	Type C Manhole	R-3010	82	12	RCPE	893.19	890.82	890.49	0.40	14	
14	Type C Inlet	R-3287-SB10	29	15	RCPE	893.09	890.49	890.38	0.40	15	
15	Type M Inlet	R-3287-SB10	162	18	RCPE	893.09	890.38	889.83	0.34	19	
16	Type J Inlet	R-3455-C	46	12	RCPE	895.40	889.98	889.83	0.34	19	
17	Type J Inlet	R-3287-SB10	41	12	RCPE	893.31	890.07	889.94	0.32	18	
18	Type C Manhole	R-3010	35	12	RCPE	893.31	889.94	889.83	0.32	19	Flat top req'd
19	Type K Manhole	R-3010	142	21	RCPE	893.31	889.83	889.47	0.25	21	Flat top req'd
20	Type J Inlet	R-3455-C	55	12	RCPE	895.07	892.65	892.47	0.32	21	
21	Type J Manhole	R-3010	25	27	RCPE	895.40	889.47	889.43	0.15	22	

STORM SEWER - STRUCTURE DATA TABLE											
STR. NO.	STRUCTURE TYPE	CASTING TYPE	PIPE		ELEVATIONS		GRADE (%)	CONNECT TO STRUCT.	REMARKS		
			L.F.	SIZE	T.O.C.	UPSTM				DNSTM	
22	Type J Manhole	R-1772-C	98	36	RCPE	896.00	889.43	889.18	0.26	24	
23	Type J Inlet	R-3287-10V	51	12	RCPE	894.65	891.34	891.18	0.32	21	
25	Type J Inlet	R-3287-SB10	28	12	RCPE	893.84	889.27	889.18	0.32	24	
24	Type J Manhole	R-3010	158	36	RCPE	893.84	889.18	888.75	0.27	43	Flat top req'd
26	Type J Inlet	R-3287-SB10	68	12	RCPE	895.60	892.56	892.28	0.40	27	
27	Type C Manhole	R-3010	67	12	RCPE	895.40	892.28	892.05	0.35	28A	
28A	Type E Inlet	R-4215-C	10	15	RCPE	894.53	892.09	892.05	0.40	28	
28	Type M Inlet	R-3287-SB10	40	15	RCPE	894.50	892.05	891.87	0.45	29	Flat top req'd
29	Type M Inlet	R-3287-10V	18	15	RCPE	894.50	891.87	891.77	0.55	swale	End section req'd
31	Type J Inlet	R-3287-SB10	41	12	RCPE	893.78	891.38	891.25	0.32	swale	End section req'd
34	N/A	N/A	19	24	RCPE	N/A	890.25	890.21	0.23	35	End section req'd
35	Type M Inlet	R-3287-SB10	30	24	RCPE	893.50	890.21	890.14	0.23	36	End section req'd
36	Type M Inlet	R-3287-SB10	17	24	RCPE	893.50	890.14	890.10	0.23	swale 2	End section req'd
40	N/A	N/A	55	15	RCPE	N/A	889.21	889.10	0.20	OUT	End section req'd & 6" pvc stub @ U/S end
42	Type J Inlet	R-3287-SB10	29	12	RCPE	892.42	889.62	889.53	0.31	41	
41	Type M Inlet	R-3287-SB10	9	12	RCPE	892.42	889.53	889.50	0.31	43	
43	Type L Manhole	R-1772-C	89	29"x45"	RCPE	893.50	888.75	888.52	0.26	OUT	29"x45" Elliptical top End section req'd & Flat top req'd.

GENERAL GRADING NOTES

- ALL WORK TO CONFORM TO STATE AND LOCAL REGULATIONS.
- SITE GRADING SHALL NOT PROCEED UNTIL EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS (VERTICAL AND HORIZONTAL) IN THE FIELD PRIOR TO STARTING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FIELD DIMENSIONS. IF ANY DISCREPANCIES ARE FOUND IN THESE PLANS FROM THE ACTUAL FIELD CONDITIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.
- THE EXCAVATING CONTRACTOR MUST TAKE PARTICULAR CARE WHEN EXCAVATING IN AND AROUND EXISTING UTILITY LINES AND EQUIPMENT. VERIFY COVER REQUIREMENTS BY UTILITY CONTRACTOR'S AND/OR UTILITY COMPANIES SO AS NOT TO CAUSE DAMAGE.
- THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES 72 HOURS BEFORE CONSTRUCTION IS TO START. TO VERIFY IF ANY UTILITIES ARE PRESENT ON SITE. ALL VERIFICATIONS (location, size and depth) SHALL BE MADE BY THE APPROPRIATE UTILITY COMPANIES. WHEN EXCAVATING IS AROUND OR OVER EXISTING UTILITIES, THE CONTRACTOR MUST NOTIFY THE UTILITY COMPANY SO A REPRESENTATIVE OF THAT UTILITY COMPANY CAN BE PRESENT TO INSTRUCT AND OBSERVE DURING CONSTRUCTION.
- TRENCHES FOR ALL STORM DRAIN LINES SHALL BE BACKFILLED COMPLETELY WITH SELECT GRANULAR MATERIAL IF WITHIN 5 FEET OF PAVEMENT.
- AFTER STRIPPING TOPSOIL MATERIAL, PROOFROLL WITH A MEDIUM WEIGHT ROLLER TO DETERMINE LOCATIONS OF ANY POCKETS OF UNSUITABLE MATERIAL. THE NECESSITY FOR SUBDRAINS AND/OR REMOVAL OF ANY UNSUITABLE MATERIAL WITHIN THE PROPOSED PARKING AREAS WILL BE DETERMINED AT THE TIME OF CONSTRUCTION.
- PROVIDE POSITIVE DRAINAGE WITHOUT PONDING, IN ALL AREAS. AFTER INSTALLATION, CONTRACTOR TO TEST FOR, AND CORRECT, IF ANY, "BIRD BATH" CONDITIONS.
- ALL PROPOSED SPOT ELEVATIONS ARE THE FINAL PAVEMENT AND FINAL GRADE ELEVATIONS.
- SEE APPROPRIATE DETAILS TO DETERMINE SUBGRADE ELEVATIONS BELOW FINISH GRADE ELEVATIONS INDICATED.
- ALL STORM SEWER MATERIALS AND INSTALLATION SHALL CONFORM TO HAMILTON COUNTY STANDARDS.
- INVERTS AT PIPE OUTLETS ARE GIVING AT END OF PIPE END SECTION.
- DEBRIS GUARD TO BE INSTALLED AT ALL OPEN ENDED INLETS.
- DUE TO SITE CONSTRAINTS, THE SITE MAY OR MAY NOT BALANCE. THE CONTRACTOR IS RESPONSIBLE FOR ALL EARTHWORK IMPORT AND EXPORTS.

EXISTING LEGEND

- SPOT ELEVATION
- CONTOUR
- WATER LINE
- OVERHEAD TELEPHONE
- BURIED TELEPHONE LINES
- GAS LINES
- OVERHEAD ELECTRIC
- FLOW LINE
- GUY WIRE
- POWER POLE
- REBAR FOUND
- TELEPHONE PEDESTAL
- TELEPHONE POLE
- SIGN
- TREE

PROPOSED LEGEND

- PROPOSED CONTOURS
- PROPOSED CURB ELEVATIONS
- PROPOSED SPOT ELEVATIONS

CAUTION !!
THE LOCATIONS OF ALL EXISTING UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE BASED UPON ABOVE GROUND EVIDENCE (including, but not limited to, manholes, inlets, valves, and marks made upon the ground by others) AND ARE SPECULATIVE IN NATURE. THERE MAY ALSO BE OTHER EXISTING UNDERGROUND UTILITIES FOR WHICH THERE IS NO ABOVE GROUND EVIDENCE OR FOR WHICH NO ABOVE GROUND EVIDENCE WAS OBSERVED. THE EXACT LOCATIONS OF SAID EXISTING UNDERGROUND UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO ANY AND ALL CONSTRUCTION.

GLENDALE PARTNERS / OLYMPIA PROPERTIES
320 N. MERIDIAN STREET SUITE 700
INDIANAPOLIS, INDIANA

AMERICAN CONSULTING ENGINEERS, INC.
ARCHITECTS
4165 MILLERSVILLE ROAD INDIANAPOLIS, INDIANA 46205 (317) 547-5580
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JANE L. POZDEKAY
REGISTERED PROFESSIONAL ENGINEER
No. 19900533
STATE OF INDIANA
CERTIFIED BY *[Signature]*

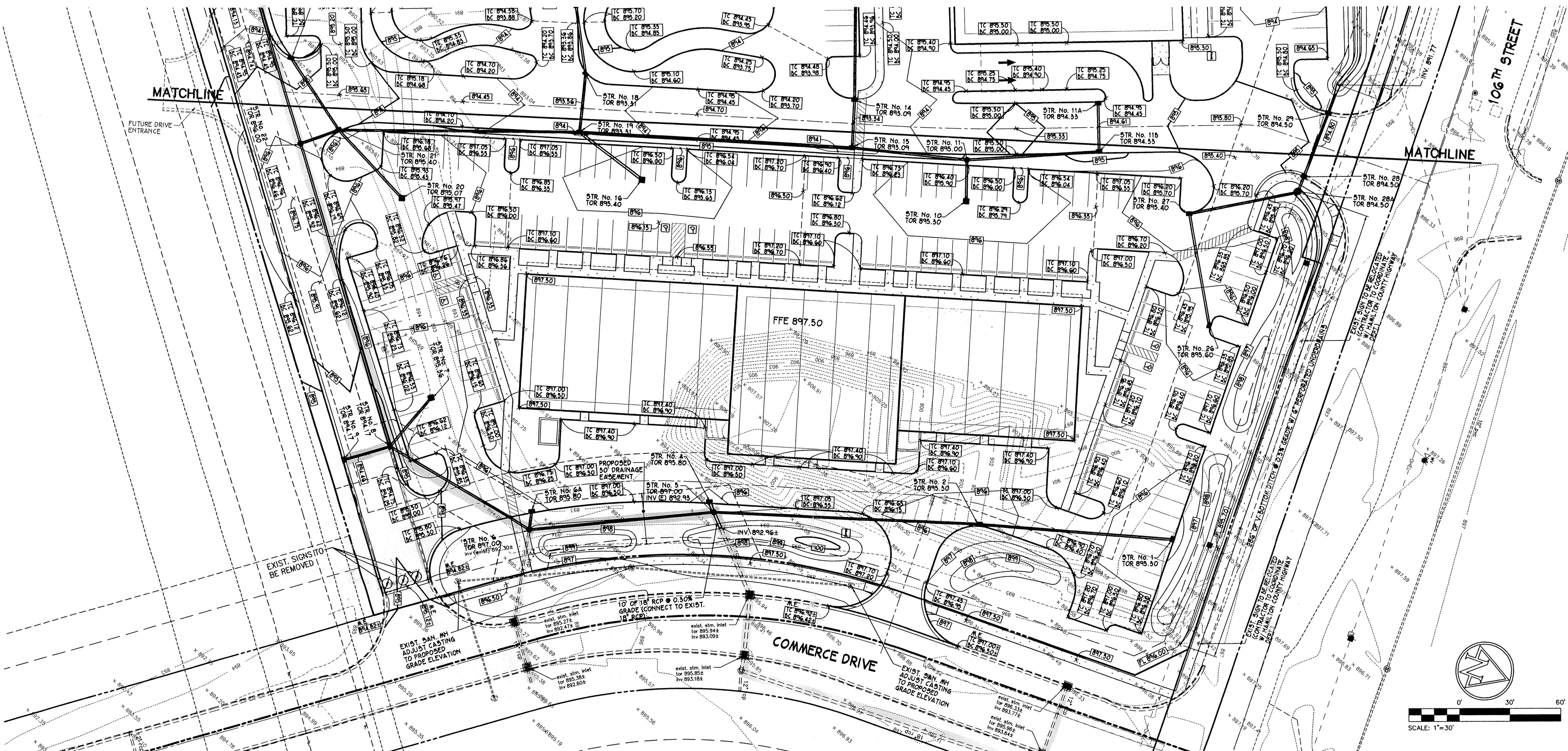
GRADING PLAN (WEST) RETAIL A

WEST CARMEL CENTER
106th STREET & US 421
CARMEL, INDIANA

DATE: 04/16/99
SCALE: 1"=30'
DRAWN BY: PED
CHKD BY: JLP
JOB NO.: 99-313

REVISIONS
PRE-ISSUE 10/19/99

SHEET NO. **C3.1** OF



NOTE:
PROJECT LIMITS: N. LINE OF PIPE LINE EASEMENT (SEE OVERALL SITE PLAN),
106TH STREET, MICHIGAN ROAD AND COMMERCE DRIVE.

NOTE:
CONTRACTOR SHALL FIELD VERIFY INVERT ELEVATIONS
OF EXIST. STORM SEWER & PAVEMENT GRADE ELEVATIONS
EXIST. COMMERCE DRIVE PRIOR TO COMMENCING ANY
CONSTRUCTION

GENERAL GRADING NOTES

- ALL WORK TO CONFORM TO STATE AND LOCAL REGULATIONS.
- SITE GRADING SHALL NOT PROCEED UNTIL EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
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- THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES 72 HOURS BEFORE CONSTRUCTION IS TO START, TO VERIFY IF ANY UTILITIES ARE PRESENT ON SITE. ALL VERIFICATIONS (location, size and depth) SHALL BE MADE BY THE APPROPRIATE UTILITY COMPANIES. WHEN EXCAVATING IS AROUND OR OVER EXISTING UTILITIES, THE CONTRACTOR MUST NOTIFY THE UTILITY COMPANY SO A REPRESENTATIVE OF THAT UTILITY COMPANY CAN BE PRESENT TO INSTRUCT AND OBSERVE DURING CONSTRUCTION.
- TRENCHES FOR ALL STORM DRAIN LINES SHALL BE BACKFILLED COMPLETELY WITH SELECT GRANULAR MATERIAL IF WITHIN 5 FEET OF PAVEMENT.
- AFTER STRIPPING TOPSOIL MATERIAL, PROOFROLL WITH A MEDIUM WEIGHT ROLLER TO DETERMINE LOCATIONS OF ANY POCKETS OF UNSUITABLE MATERIAL. THE NECESSITY FOR SUBDRAINS AND/OR REMOVAL OF ANY UNSUITABLE MATERIAL WITHIN THE PROPOSED PARKING AREAS WILL BE DETERMINED AT THE TIME OF CONSTRUCTION.
- PROVIDE POSITIVE DRAINAGE WITHOUT PONDING, IN ALL AREAS. AFTER INSTALLATION, CONTRACTOR TO TEST FOR, AND CORRECT, IF ANY, "BIRD BATH" CONDITIONS.
- ALL PROPOSED SPOT ELEVATIONS ARE THE FINAL PAVEMENT AND FINAL GRADE ELEVATIONS.
- SEE APPROPRIATE DETAILS TO DETERMINE SUBGRADE ELEVATIONS BELOW FINISH GRADE ELEVATIONS INDICATED.
- ALL STORM SEWER MATERIALS AND INSTALLATION SHALL CONFORM TO HAMILTON STANDARDS.
- INVERTS AT PIPE OUTLETS ARE GIVING AT END OF PIPE END SECTION.
- DEBRIS GUARD TO BE INSTALLED AT ALL OPEN ENDED INLETS.
- DUE TO SITE CONSTRAINTS, THE SITE MAY OR MAY NOT BALANCE. THE CONTRACTOR IS RESPONSIBLE FOR ALL EARTHWORK IMPORT AND EXPORTS.

EXISTING LEGEND

- SPOT ELEVATION
- CONTOUR
- WATER LINE
- OVERHEAD TELEPHONE
- BURIED TELEPHONE LINES
- GAS LINES
- OVERHEAD ELECTRIC
- FLOW LINE
- GUY WIRE
- POWER POLE
- REBAR FOUND
- TELEPHONE PEDESTAL
- TELEPHONE POLE
- SIGN
- TREE

PROPOSED LEGEND

- PROPOSED CONTOURS
- PROPOSED CURB ELEVATIONS
- PROPOSED SPOT ELEVATIONS

CAUTION!!
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1-800-382-5544
CALL TOLL FREE
- INDIANA UNDERGROUND -

STORM SEWER - STRUCTURE DATA TABLE											
STR. NO.	STRUCTURE TYPE	CASTING TYPE	PIPE		ELEVATIONS			GRADE (%)	CONNECT TO STRUCT.	REMARKS	
			L.F.	SIZE	T.O.C.	UPSTM	DNSTM				
1	Type J Inlet	R-3287-SB10	113	12	RCP	895.30	892.61	892.05	0.50	2	
2	Type J Inlet	R-3287-SB10	155	18	RCP	895.30	892.05	891.74	0.20	5	
4	Type J Inlet	R-3287-SB10	7	12	RCP	895.80	891.77	891.74	0.45	5	
5	Type J Manhole	R-1772-C	110	27	RCP	897.00	891.74	891.45	0.26	6	Flat top req'd
6A	Type J Inlet	R-3287-10V	10	12	RCP	895.80	893.46	893.42	0.40	6	
6	Type K Manhole	R-1772-C	96	30	RCP	897.00	890.32	890.05	0.28	8	
7	Type J Inlet	R-3455-C	38	12	RCP	895.36	891.17	891.05	0.32	8	
9	Type J Inlet	R-3287-SB10	28	12	RCP	894.17	890.14	890.05	0.31	8	
8	Type K Manhole	R-3287-SB10	188	30	RCP	894.17	890.05	889.43	0.33	22	Flat top req'd
11A	Type J Inlet	R-3287-SB10	29	12	RCP	894.33	891.01	890.89	0.40	11B	
11B	Type J Inlet	R-3287-SB10	78	12	RCP	894.33	890.89	890.58	0.40	11	
10	Type J Inlet	R-3455-C	24	12	RCP	895.30	890.68	890.58	0.40	11	
11	Type C Manhole	R-1772-C	68	15	RCP	895.00	890.58	890.36	0.30	15	Flat top req'd
12	Type J Inlet	R-3287-SB10	32	12	RCP	893.45	890.92	890.82	0.32	13	
13	Type C Manhole	R-3010	82	12	RCP	893.19	890.82	890.49	0.40	14	
14	Type M Inlet	R-3287-SB10	29	15	RCP	893.09	890.49	890.38	0.40	15	
15	Type M Inlet	R-3287-SB10	162	18	RCP	893.09	890.38	889.83	0.34	19	
16	Type J Inlet	R-3455-C	46	12	RCP	895.40	889.98	889.83	0.34	19	
17	Type J Inlet	R-3287-SB10	41	12	RCP	893.31	890.07	889.94	0.32	18	
18	Type C Manhole	R-3010	35	12	RCP	893.31	889.94	889.83	0.32	19	Flat top req'd
19	Type K Manhole	R-3010	142	21	RCP	893.31	889.83	889.47	0.25	21	Flat top req'd
20	Type J Inlet	R-3455-C	55	12	RCP	895.07	892.65	892.47	0.32	21	
21	Type J Manhole	R-3010	25	27	RCP	895.40	889.47	889.43	0.15	22	

STORM SEWER - STRUCTURE DATA TABLE											
STR. NO.	STRUCTURE TYPE	CASTING TYPE	PIPE		ELEVATIONS			GRADE (%)	CONNECT TO STRUCT.	REMARKS	
			L.F.	SIZE	T.O.C.	UPSTM	DNSTM				
22	Type J Manhole	R-1772-C	98	36	RCP	896.00	889.43	889.18	0.26	24	
23	Type J Inlet	R-3287-10V	51	12	RCP	894.65	891.54	891.18	0.32	21	
25	Type J Inlet	R-3287-SB10	28	12	RCP	893.84	889.27	889.18	0.32	24	
24	Type J Manhole	R-3010	158	36	RCP	893.84	889.18	888.75	0.27	43	Flat top req'd
26	Type J Inlet	R-3287-SB10	68	12	RCP	895.60	892.56	892.28	0.40	27	
27	Type C Manhole	R-3010	67	12	RCP	895.40	892.28	892.05	0.35	28A	
28A	Type E Inlet	R-4215-C	10	15	RCP	894.53	892.09	892.05	0.40	28	
28B	Type M Inlet	R-3287-SB10	40	15	RCP	894.50	892.05	891.87	0.45	29	Flat top req'd
29	Type M Inlet	R-3287-10V	18	15	RCP	894.50	891.87	891.77	0.55	swale	End section req'd
31	Type J Inlet	R-3287-SB10	41	12	RCP	893.76	891.36	891.25	0.32	swale	End section req'd
34	N/A	N/A	19	24	RCP	N/A	890.25	890.21	0.23	35	End section req'd & 6" pvc stub @ U/S end
35	Type M Inlet	R-3287-SB10	30	24	RCP	893.50	890.21	890.14	0.23	36	End section req'd
36	Type M Inlet	R-3287-SB10	17	24	RCP	893.50	890.14	890.10	0.23	swale 2	End section req'd
40	N/A	N/A	55	15	RCP	N/A	889.21	889.10	0.20	OUT	End section req'd & 6" pvc stub @ U/S end
42	Type J Inlet	R-3287-SB10	29	12	RCP	892.42	889.62	889.53	0.31	41	
41	Type M Inlet	R-3287-SB10	9	12	RCP	892.42	889.53	889.50	0.31	43	
43	Type L Manhole	R-1772-C	89	29"x45"	RCPE	893.50	888.75	888.52	0.26	OUT	28" dia' elliptical top End section req'd & Flat top req'd

GLENDALE PARTNERS / OLYMPIA PROPERTIES
320 N. MERIDIAN STREET SUITE 700
INDIANAPOLIS, INDIANA

AMERICAN CONSULTING ENGINEERS, INC.
ARCHITECTS
4165 MILLERSVILLE ROAD INDIANAPOLIS, INDIANA 46205 (317) 547-5580
REGISTERED PROFESSIONAL ENGINEERS

JAMES L. POZDEKAT
REGISTERED
No. 19900533
STATE OF INDIANA
PROFESSIONAL ENGINEER
CERTIFIED BY

**GRADING PLAN (EAST)
RETAIL A**

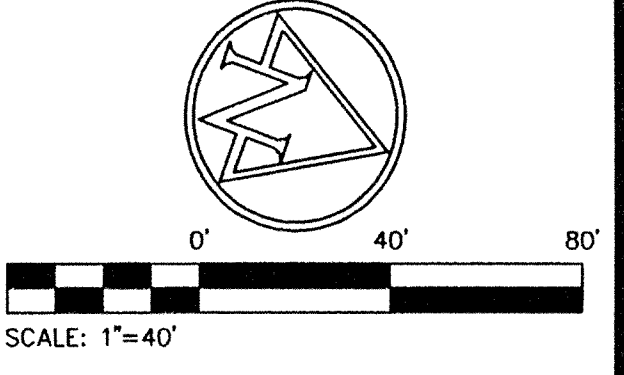
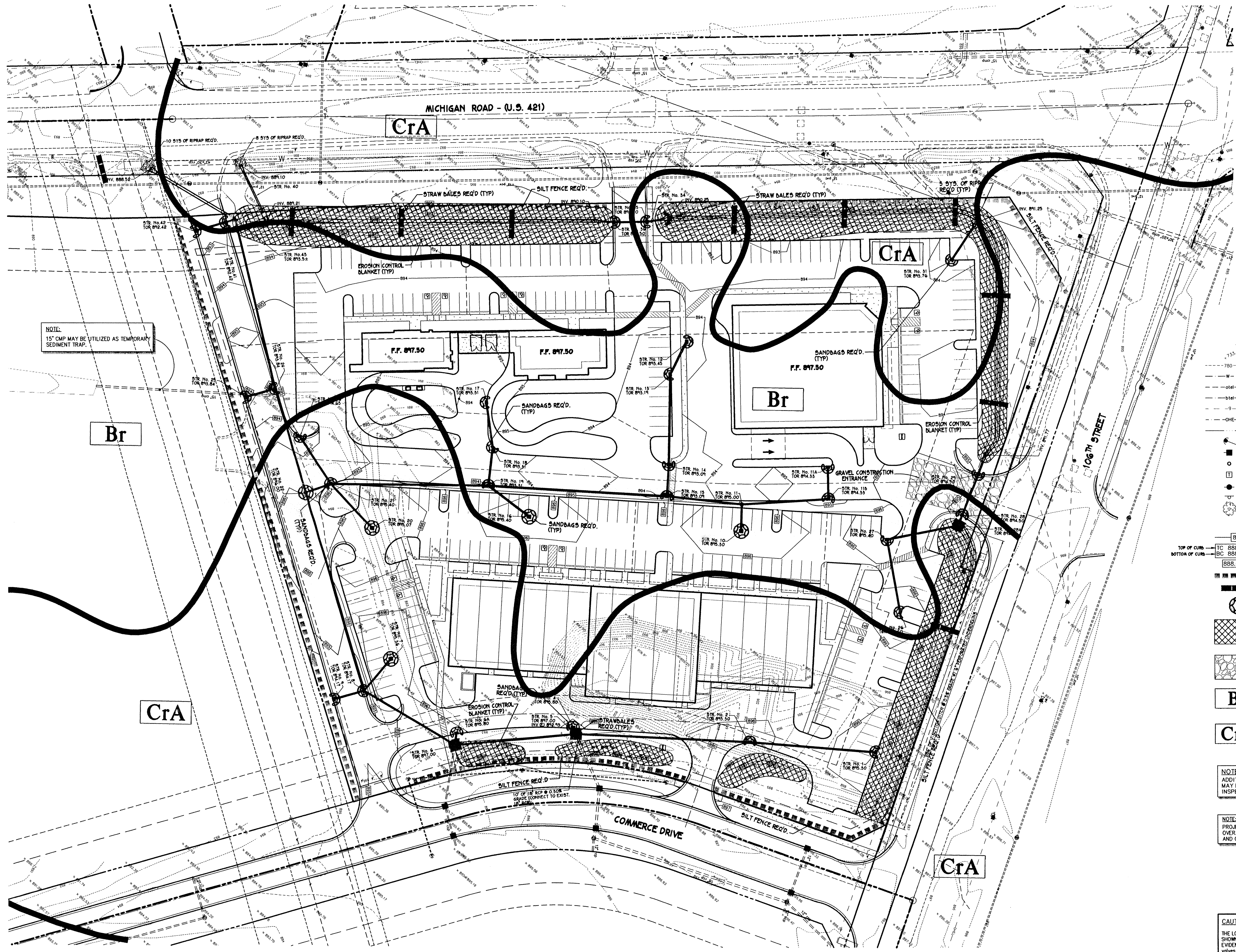
WEST CARMEL CENTER
106th STREET & US 421
CARMEL, INDIANA

DATE: 04/16/99
SCALE: 1"=30'
DRAWN BY: PED
CHK'D BY: JLP
JOB NO.: 99-313

REVISIONS

RE-ISSUE	10/19/99
----------	----------

1000 SHEET NO. C3.2
OF



NOTE:
15" CMP MAY BE UTILIZED AS TEMPORARY
SEDIMENT TRAP.

EXISTING LEGEND

- 753.42- SPOT ELEVATION
- - - - - CONTOUR
- W- WATER LINE
- otel- OVERHEAD TELEPHONE
- btel- BURIED TELEPHONE LINES
- G- GAS LINES
- CHE- OVERHEAD ELECTRIC
- - - - - FLOW LINE
- - - - - GUY WIRE
- - - - - POWER POLE
- - - - - REBAR FOUND
- - - - - TELEPHONE PEDESTAL
- - - - - TELEPHONE POLE
- - - - - SIGN
- - - - - TREE

PROPOSED LEGEND

- 889 CONTOURS
- TC 888.50 CURB ELEVATIONS
- BR 888.00 BOTTOM OF CURB
- 888.65 SPOT ELEVATIONS
- SILT FENCE
- STRAW BALES
- SAND BAGS
- EROSION CONTROL BLANKET
- GRAVEL CONSTRUCTION ENTRANCE
- Br BROOKSTON
- CrA CROSSBY

NOTE:
ADDITIONAL EROSION CONTROL MEASURES
MAY BE REQUIRED IN THE FIELD, BY THE
INSPECTOR.

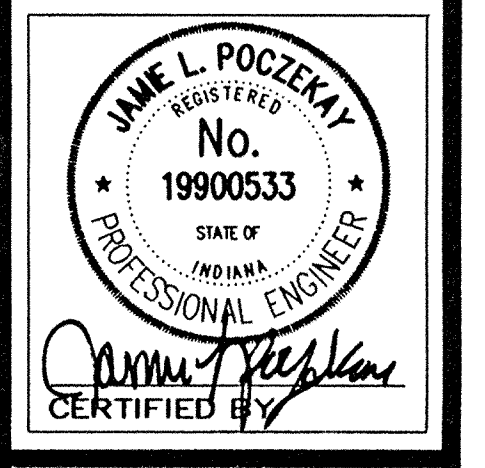
NOTE:
PROJECT LIMITS: N. LINE OF PIPE LINE EASEMENT (SEE
OVERALL SITE PLAN), 106TH STREET, MICHIGAN ROAD
AND COMMERCE DRIVE.

ADDITIONAL REVISIONS	
RE-155UE	10/11/99
RE-155UE	10/19/99

CAUTION !!
THE LOCATIONS OF ALL EXISTING UNDERGROUND UTILITIES
SHOWN ON THIS PLAN ARE BASED UPON ABOVE GROUND
EVIDENCE (including, but not limited to, manholes, inlets,
valves, and marks made upon the ground by others) AND
ARE SPECULATIVE IN NATURE. THERE MAY ALSO BE OTHER
EXISTING UNDERGROUND UTILITIES FOR WHICH THERE IS NO
ABOVE GROUND EVIDENCE OR FOR WHICH NO ABOVE GROUND
EVIDENCE WAS OBSERVED. THE EXACT LOCATIONS OF SAID
EXISTING UNDERGROUND UTILITIES SHALL BE VERIFIED BY
THE CONTRACTOR PRIOR TO ANY AND ALL CONSTRUCTION.
CALL TOLL FREE
1-800-382-5544
- INDIANA UNDERGROUND -

GLENDALE PARTNERS / OLYMPIA PROPERTIES
320 N. MERIDIAN STREET SUITE 700
INDIANAPOLIS INDIANA

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ARCHITECTS
ENGINEERS
INDIANAPOLIS, INDIANA 46205 (317) 547-5580
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EROSION CONTROL PLAN
RETAIL A

WEST CARMEL CENTER
106th STREET & US 421
CARMEL, INDIANA

DATE:	04/16/99
SCALE:	1"=40'
DRAWN BY:	PEP
CHK'D BY:	JLP
JOB NO.	99-313

REVISIONS	
RE-155UE	05/18/99
RE-155UE	06/02/99
RE-155UE	09/30/99

SHEET NO.
C3.3
OF

SOIL AND DRAINAGE CHARACTERISTICS

Predominate Soil Types
 CrA - Crosby Silt Loam
 br - Brookston Silty Clay Loam

Predominate Vegetation
 The project site is currently developed farmland.

Adjacent Land Uses
 East - vacant lot
 West - vacant lot
 North - commercial
 South - vacant lot

100-Year Floodplains, Floodway Fringes and Floodways
 The project does not lie within any floodplains, floodway fringes or floodways.

Drainage Features
 1. There are no lakes or wetlands on or adjacent to the project site.
 2. Locations within the project site where storm water may enter ground water include the dry detention area.

Construction Limits
 106th Street / Michigan Road / Commerce Drive / Pipeline (See Overall Site Plan)

Note: No soil stockpiles or borrow areas.

MAINTENANCE REQUIREMENTS FOR EROSION CONTROL MEASURES

STRAW DALE DAM MAINTENANCE REQUIREMENTS

1. INSPECT STRAW DALE DAMS AFTER EACH STORM EVENT AND PROMPTLY REMOVE ANY SEDIMENT DEPOSITS TO ENSURE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN. TAKING CARE NOT TO UNDERMINE THE ENTRENCHED DALES.
2. INSPECT PERIODICALLY FOR DETERIORATION OR DAMAGE FROM CONSTRUCTION ACTIVITIES AND REPAIR IMMEDIATELY.
3. AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED REMOVE ALL STRAW DALES AND SEDIMENT, BRING THE DISTURBED AREA TO GRADE AND STABILIZE IT.

SILT FENCE MAINTENANCE REQUIREMENTS

1. INSPECT THE SILT FENCE PERIODICALLY AND AFTER EACH STORM EVENT.
2. IF FABRIC TEARS, STARTS TO DECOMPOSE, OR IN ANY WAY BECOMES INEFFECTIVE, REPLACE THE AFFECTED PORTION IMMEDIATELY.
3. REMOVE DEPOSITED SEDIMENT WHEN IT REACHES HALF THE HEIGHT OF THE FENCE AT ITS LOWEST POINT OR IS CAUSING THE FABRIC TO BULGE.
4. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEAN OUT.
5. AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED REMOVE THE FENCE AND SEDIMENT DEPOSITS, BRING THE DISTURBED AREA TO GRADE AND STABILIZE.

EROSION CONTROL BLANKET (SURFACE APPLIED) MAINTENANCE REQUIREMENTS

1. DURING VEGETATIVE ESTABLISHMENT INSPECT AFTER STORM EVENTS FOR ANY EROSION BELOW THE BLANKET.
2. IF ANY AREA SHOWS EROSION PULL BACK THAT PORTION OF THE BLANKET COVERING IT, ADD SOIL, RE-SEED THE AREA, AND RE-LAY AND STAPLE THE BLANKET.
3. AFTER VEGETATIVE ESTABLISHMENT CHECK THE TREATED AREA PERIODICALLY.

TEMPORARY GRAVEL CONSTRUCTION ENTRANCE MAINTENANCE REQUIREMENTS

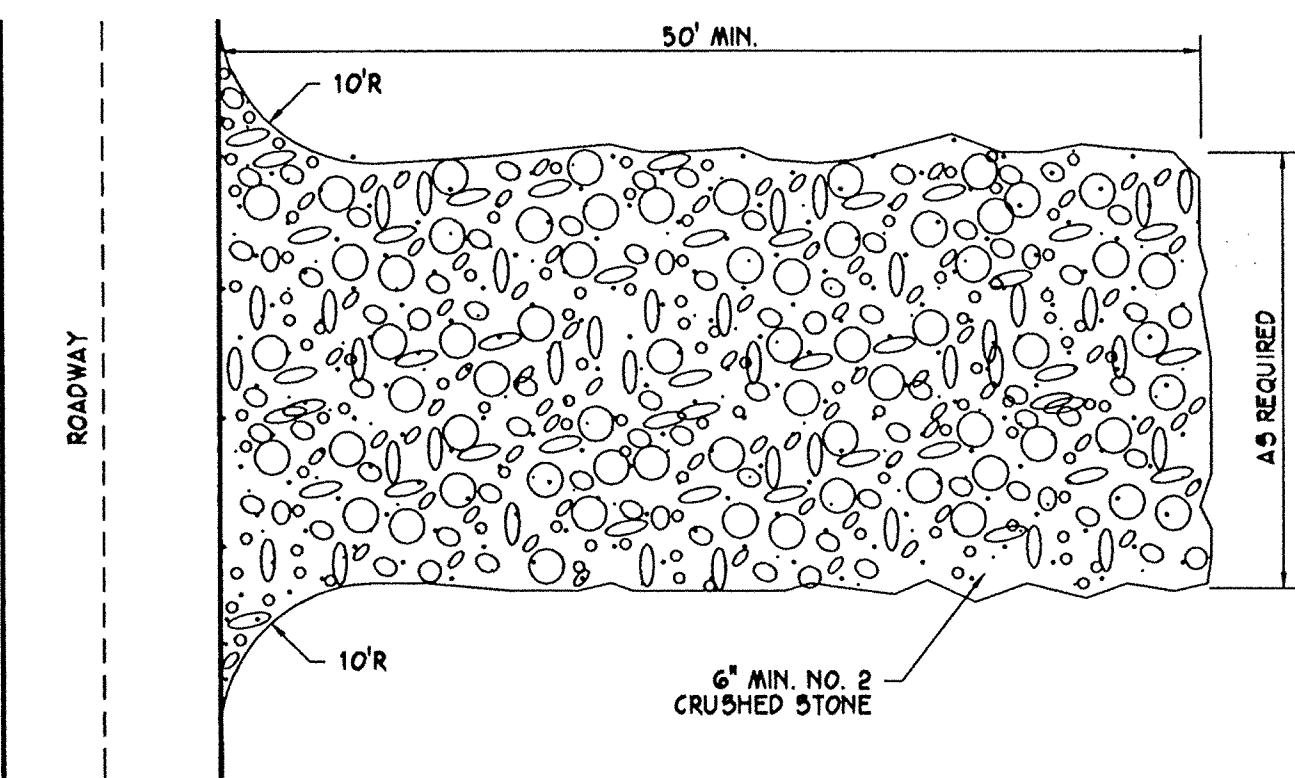
1. INSPECT ENTRANCE PAD AND SEDIMENT AREA WEEKLY AND AFTER STORM EVENTS OF HEAVY USE.
2. RE-SHAPE PAD AS NEEDED FOR DRAINAGE AND RUNOFF CONTROL.
3. TOP DRESS WITH CLEAN STONE AS NEEDED.
4. IMMEDIATELY REMOVE MUD AND SEDIMENT TRACKED OR WASHED ONTO PUBLIC ROADS BY BRUSHING OR SWEEPING. FLUSHING SHOULD ONLY BE USED IF THE WATER IS CONVEYED INTO A SEDIMENT TRAP OR BASIN.
5. REPAIR ANY BROKEN ROAD PAVEMENT IMMEDIATELY.

SAND BAG MAINTENANCE REQUIREMENTS

1. INSPECT SAND BAGS AFTER EACH STORM EVENT AND PROMPTLY REMOVE ANY SEDIMENT DEPOSITS.
2. AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED AND/OR PAVED, REMOVE ALL SAND BAGS AND SEDIMENT.

EROSION CONTROL NOTES

1. CONSTRUCTION ACTIVITY SHALL CONSIST OF DRIVEWAY, PARKING LOT AND TRUCK DOCK CONSTRUCTION, BUILDING CONSTRUCTION, AND UTILITY CONSTRUCTION.
2. PRELIMINARY CONSTRUCTION SCHEDULE: EARTHWORK SHALL BEGIN IN JULY 1999. INSTALLATION OF STORM DRAINAGE STRUCTURES SHALL BE CONCURRENT WITH EARTHWORK. SANITARY SEWER LATERAL INSTALLATION SHALL COMMENCE UPON COMPLETION OF ROUGH GRADING. REMAINING UTILITY INSTALLATION SHALL COMMENCE UPON COMPLETION OF SANITARY SEWER LATERAL INSTALLATION. FINAL GRADING AND PAVING SHALL OCCUR CONCURRENT WITH UTILITY INSTALLATION. COMPLETION OF THE PROJECT IS ANTICIPATED BY JULY 2000. THIS SCHEDULE IS SUBJECT TO CHANGE.
3. LAND ALTERATION WHICH STRIPS THE LAND OF VEGETATION, INCLUDING REGRADING, SHALL BE DONE IN A WAY THAT WILL MINIMIZE EROSION.
4. CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL ORDINANCES THAT APPLY.
5. THIS PLAN SHALL NOT BE CONSIDERED ALL INCLUSIVE AS THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT SOIL SEDIMENT FROM LEAVING THE SITE.
6. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IF DEEMED NECESSARY BY ON SITE INSPECTION.
7. SEDIMENT LADEN WATER SHALL BE OBTAINED BY EROSION CONTROL PRACTICES AS NEEDED TO MINIMIZE SEDIMENTATION IN THE RECEIVING STREAM. NO STORM WATER SHALL BE DISCHARGED FROM THE SITE IN A MANNER THAT CAUSES EROSION AT THE POINT OF DISCHARGE.
8. WASTES AND UNUSED BUILDING MATERIALS SHALL NOT BE ALLOWED TO BE CARRIED FROM THE SITE BY STORM WATER RUNOFF. PROPER DISPOSAL OF ALL WASTES AND UNUSED BUILDING MATERIALS IS REQUIRED.
9. SEDIMENT BEING TRACKED ONTO PUBLIC OR PRIVATE ROADWAYS SHALL BE MINIMIZED. CLEARED SEDIMENT SHALL BE RETURNED TO THE SITE FOR DISPOSAL.
10. SOIL WHICH HAS ACCUMULATED NEXT TO EROSION CONTROL DEVICES SHALL BE COLLECTED AND RE-DISTRIBUTED ON SITE AFTER EACH RAINFALL EVENT, AND AT LEAST ONCE A WEEK.
11. IF INSTALLATION OF STORM DRAINAGE SYSTEM SHOULD BE INTERRUPTED BY WEATHER OR NIGHTFALL, THE PIPE ENDS SHALL BE COVERED WITH FILTER FABRIC.
12. EXISTING VEGETATION SHALL BE PRESERVED IN AREAS NOT DISTURBED BY CONSTRUCTION ACTIVITY.
13. ALL APPLICABLE EROSION CONTROL MEASURES SHALL BE PLACED BEFORE ANY LAND DISTURBING ACTIVITIES.
14. SCHEDULE OF EROSION CONTROL ACTIVITIES:
 - a) INSTALL GRAVEL CONSTRUCTION ENTRANCE, PLACE SAND BAGS OR STRAW DALES AROUND EXISTING INLETS, AND INSTALL SILT FENCE BEFORE COMMENCING ANY EARTHMOVING ACTIVITY.
 - b) INSTALL STRAW DALE CHECK DAMS IMMEDIATELY UPON COMPLETION OF ROUGH GRADING. REPLACE CHECK DAMS AFTER FINAL GRADING AND TOPSOIL REPLACEMENT. CHECK DAMS SHALL REMAIN IN PLACE UNTIL VEGETATION IS ESTABLISHED ON ALL AREAS DRAINED BY THE DITCH.
 - c) INSTALL STRAW DALES AROUND INLETS IMMEDIATELY UPON COMPLETION OF THE STRUCTURE. REMOVE STRAW DALES FOR PAVING OPERATION. REPLACE STRAW DALES AFTER PAVING IS COMPLETE. STRAW DALES SHALL REMAIN IN PLACE UNTIL VEGETATION IS ESTABLISHED ON SEEDD AREAS BEHIND THE CURB.
 - d) THE DURATION OF TIME WHICH AN AREA REMAINS EXPOSED SHALL BE KEPT TO A PRACTICAL MINIMUM. THE AREA SHALL BE STABILIZED AS SOON AS POSSIBLE. TEMPORARY VEGETATION OR MULCHING SHALL BE USED TO PROTECT EXPOSED AREAS IF PERMANENT VEGETATION CANNOT BE SEEDD WITHIN 14 DAYS OR ACTIVITY CEASES FOR MORE THAN 21 DAYS OR AS DIRECTED BY THE ENGINEER.
 - e) TOPSOIL REPLACEMENT SHALL TAKE PLACE FROM MARCH 1 TO OCTOBER 31. STOCKPILE TOPSOIL AT ALL OTHER TIMES OF THE YEAR. PERMANENT AND FINAL VEGETATION AND STRUCTURAL EROSION CONTROL DEVICES SHALL BE INSTALLED WITHIN SEVEN (7) DAYS AFTER FINAL GRADING OR AS SOON AS POSSIBLE.

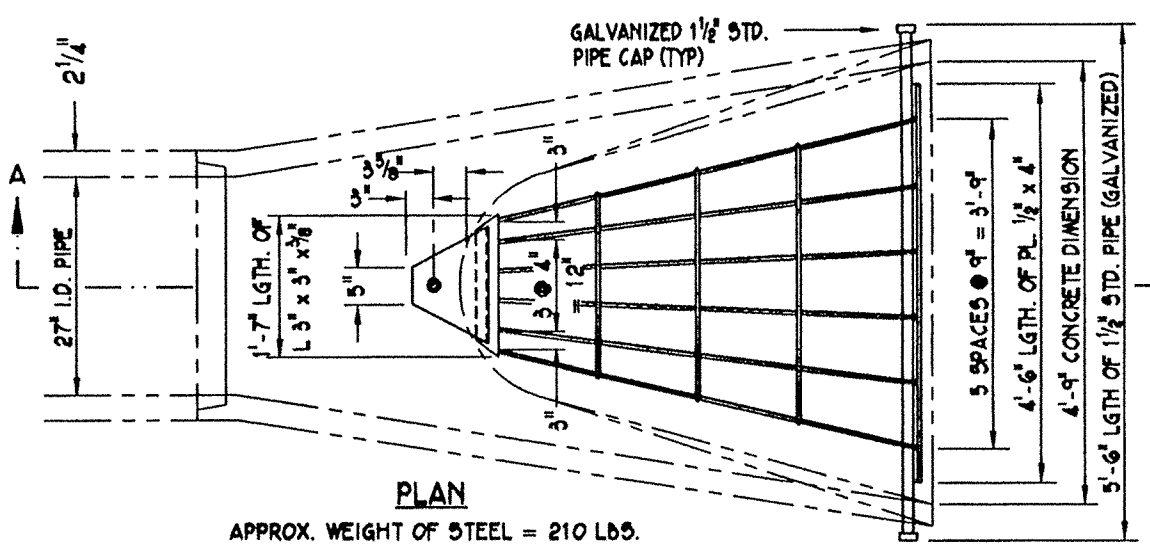


GRAVEL CONSTRUCTION ENTRANCE
NOT TO SCALE

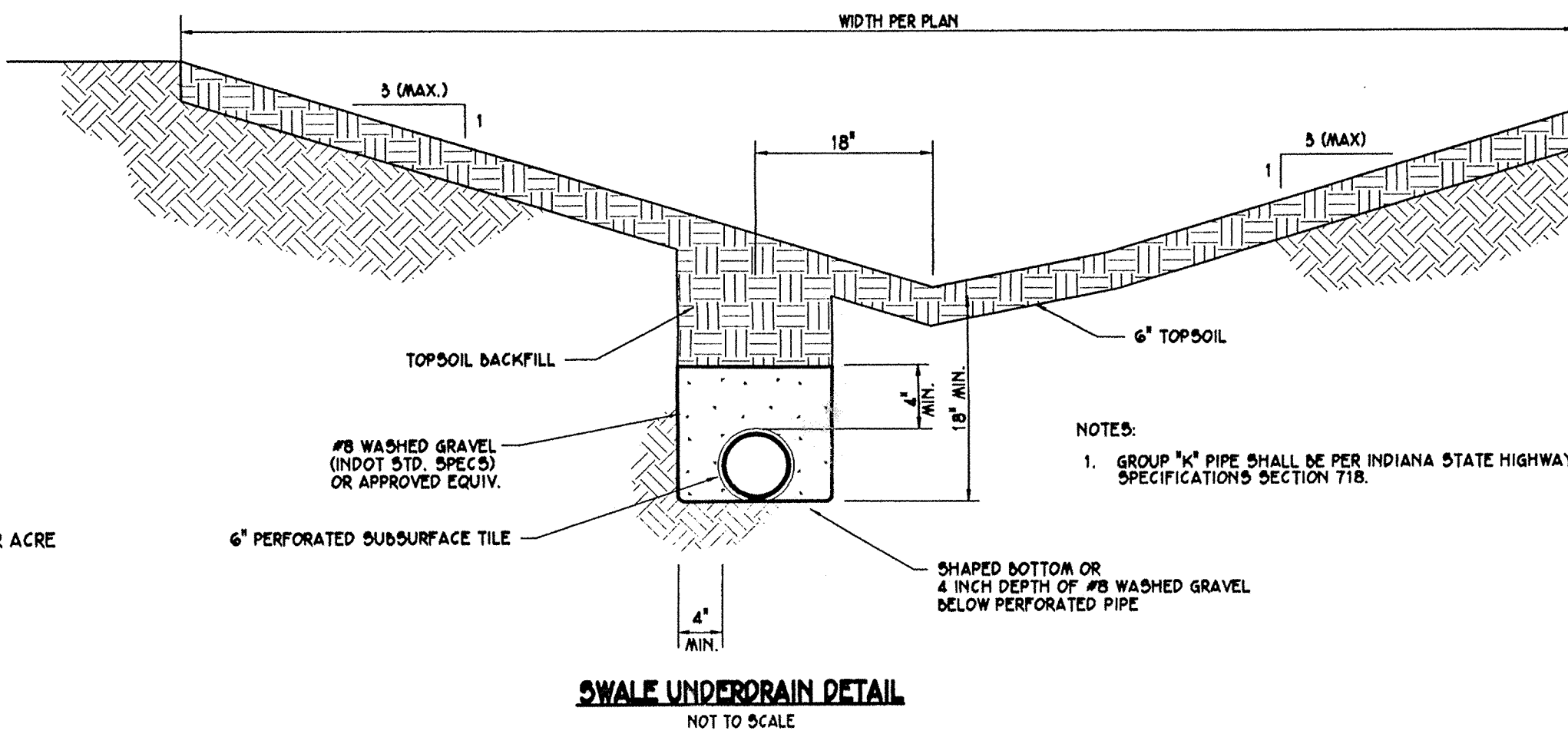
SEASONAL SOIL PROTECTION CHART

STABILIZATION PRACTICE	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
PERMANENT SEEDING SUN TO PARTIAL SHADE		A										
PERMANENT SEEDING PARTIAL SHADE TO SHADE		B										
PERMANENT SEEDING NON-IRRIGATED AREAS		C										
TEMPORARY SEEDING		D	F									
MULCHING		G										

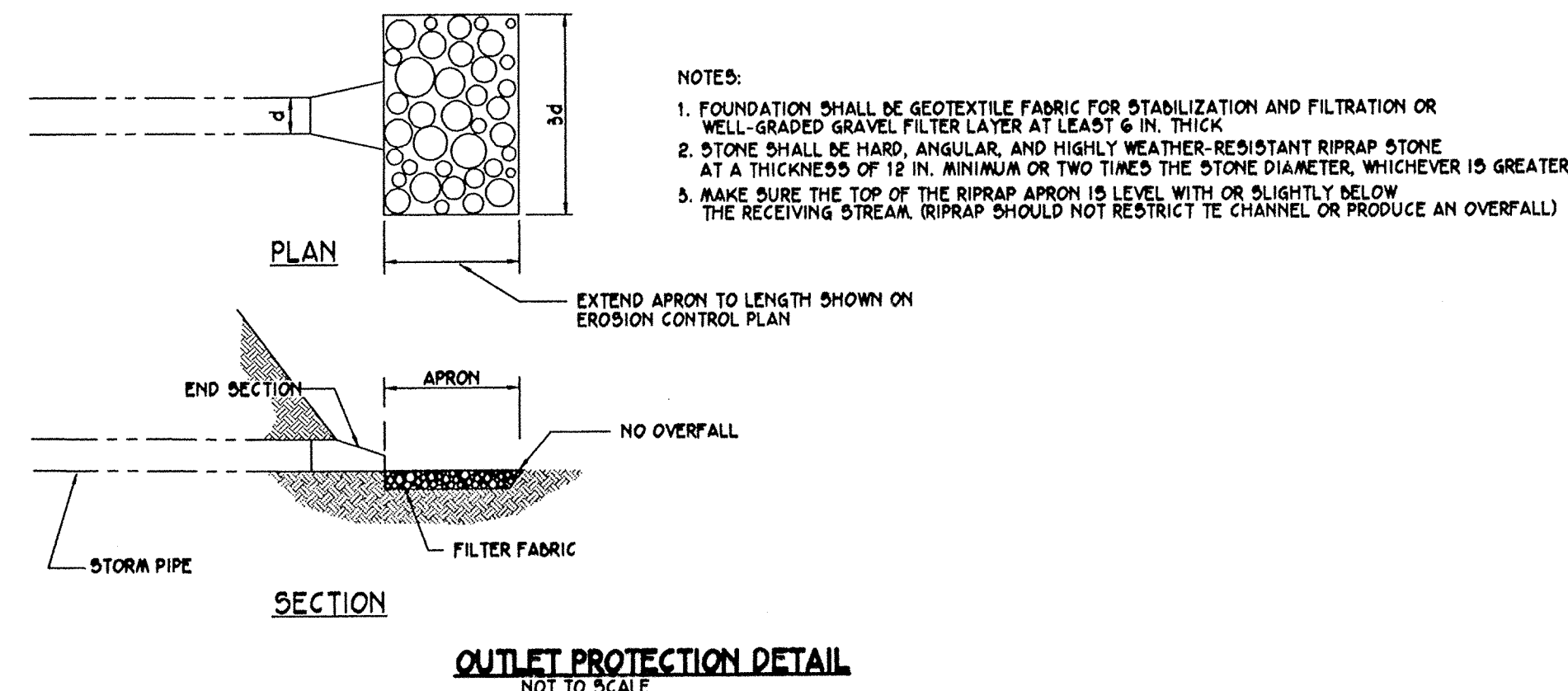
- A = PERMANENT SEEDING - SUN TO PARTIAL SHADE
 KENTUCKY BLUEGRASS 35 LBS./ACRE, CREEPING RED FESCUE 70 LBS./ACRE, FINE TEXTURED RYE (PERENNIAL) 105 LBS./ACRE PLUS 2 TONS STRAW MULCH/ACRE, OR ADD ANNUAL RYEGRASS 20 LBS./ACRE
- B = PERMANENT SEEDING - PARTIAL SHADE TO SHADE
 KENTUCKY BLUEGRASS 35 LBS./ACRE, CREEPING RED FESCUE 210 LBS./ACRE, FINE TEXTURED RYE (PERENNIAL) 105 LBS./ACRE PLUS 2 TONS STRAW MULCH/ACRE, OR ADD ANNUAL RYEGRASS 20 LBS./ACRE
- C = PERMANENT SEEDING - NON-IRRIGATED AREAS
 KENTUCKY BLUEGRASS 35 LBS./ACRE, CREEPING RED FESCUE 70 LBS./ACRE, FINE TEXTURED RYE (PERENNIAL) 193 LBS./ACRE PLUS 2 TONS STRAW MULCH/ACRE, OR ADD ANNUAL RYEGRASS 20 LBS./ACRE
- D = SPRING OATS 3 BUSHELS/ACRE
 E = WHEAT OR RYE 2 BUSHELS/ACRE
 F = ANNUAL RYEGRASS 40 LBS./ACRE (1 LB/1000 SQ. FT.)
 G = STRAW MULCH 2 TONS/ACRE ANCHOR WITH ASPHALT EMULSION AT A RATE OF 300/GAL. PER ACRE FOR SLOPES GREATER THAN 4:1 USE EROSION CONTROL BLANKET ACCEPTABLE TO LOCAL AUTHORITIES.
- *|||* = IRRIGATION NEEDED DURING JUNE, JULY, AUGUST AND/OR SEPTEMBER
- NOTE:
 CONTRACTOR IS RESPONSIBLE FOR PROVIDING TEMPORARY SEEDING TO CONTROL EROSION AS REQUIRED BY INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT.



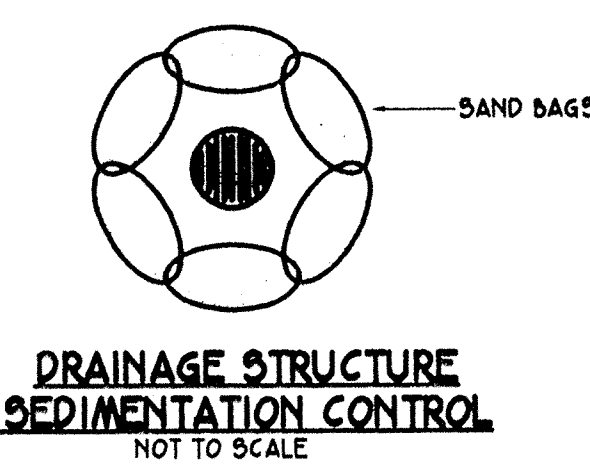
GRATING DETAIL
FOR CONCRETE FLARED END SECTION FOR 27" PIPE



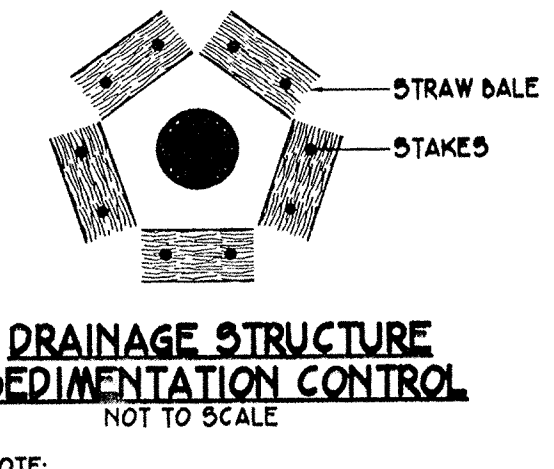
SWALE UNDERDRAIN DETAIL
NOT TO SCALE



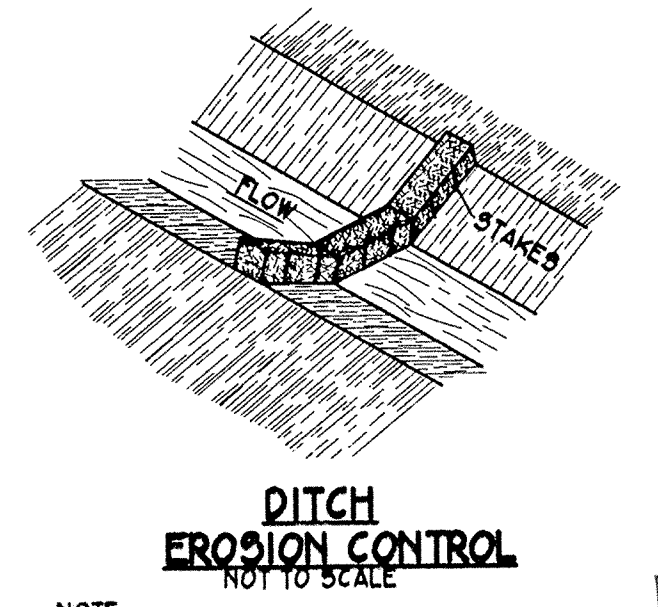
OUTLET PROTECTION DETAIL
NOT TO SCALE



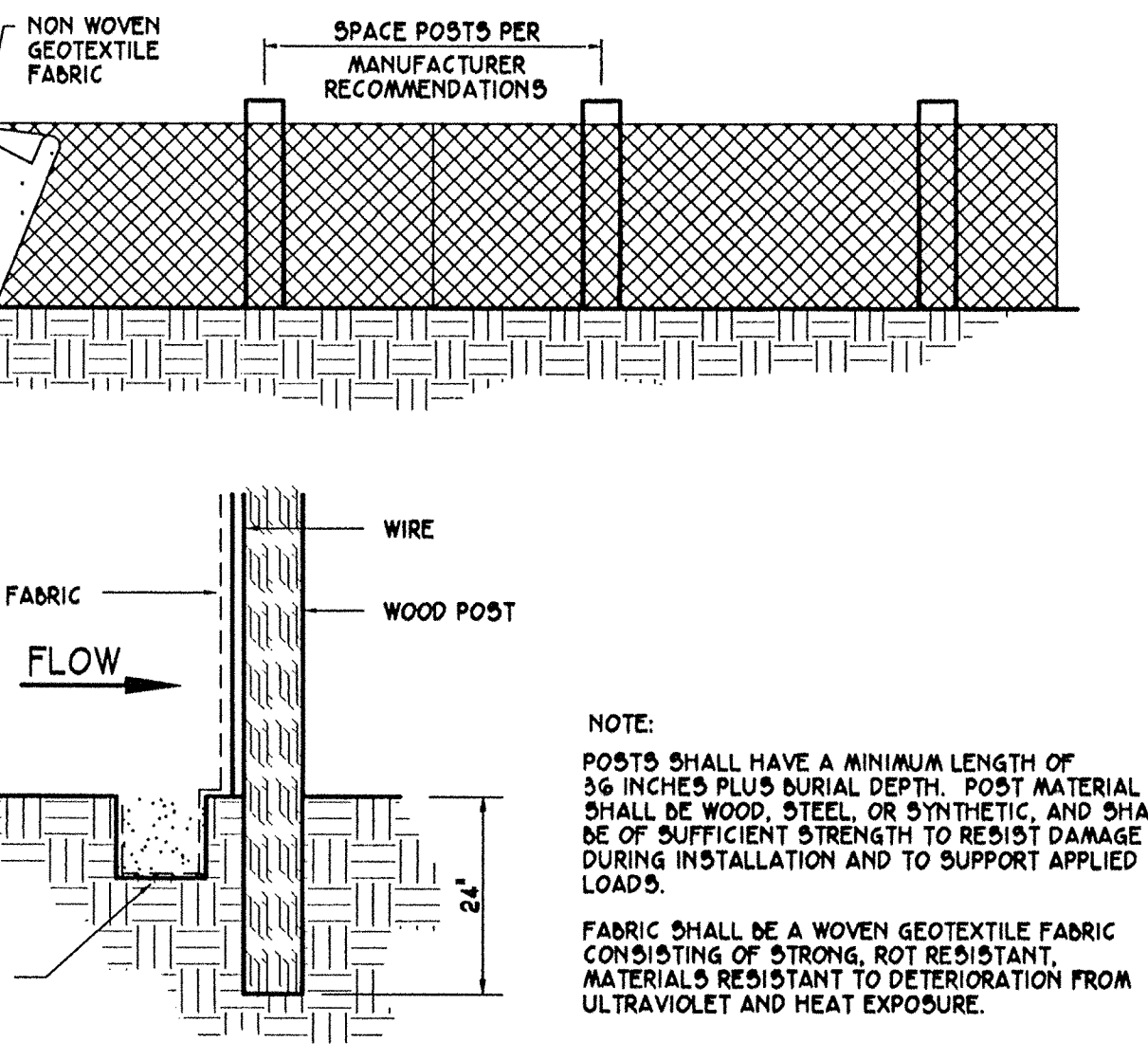
DRAINAGE STRUCTURE SEDIMENTATION CONTROL
NOT TO SCALE



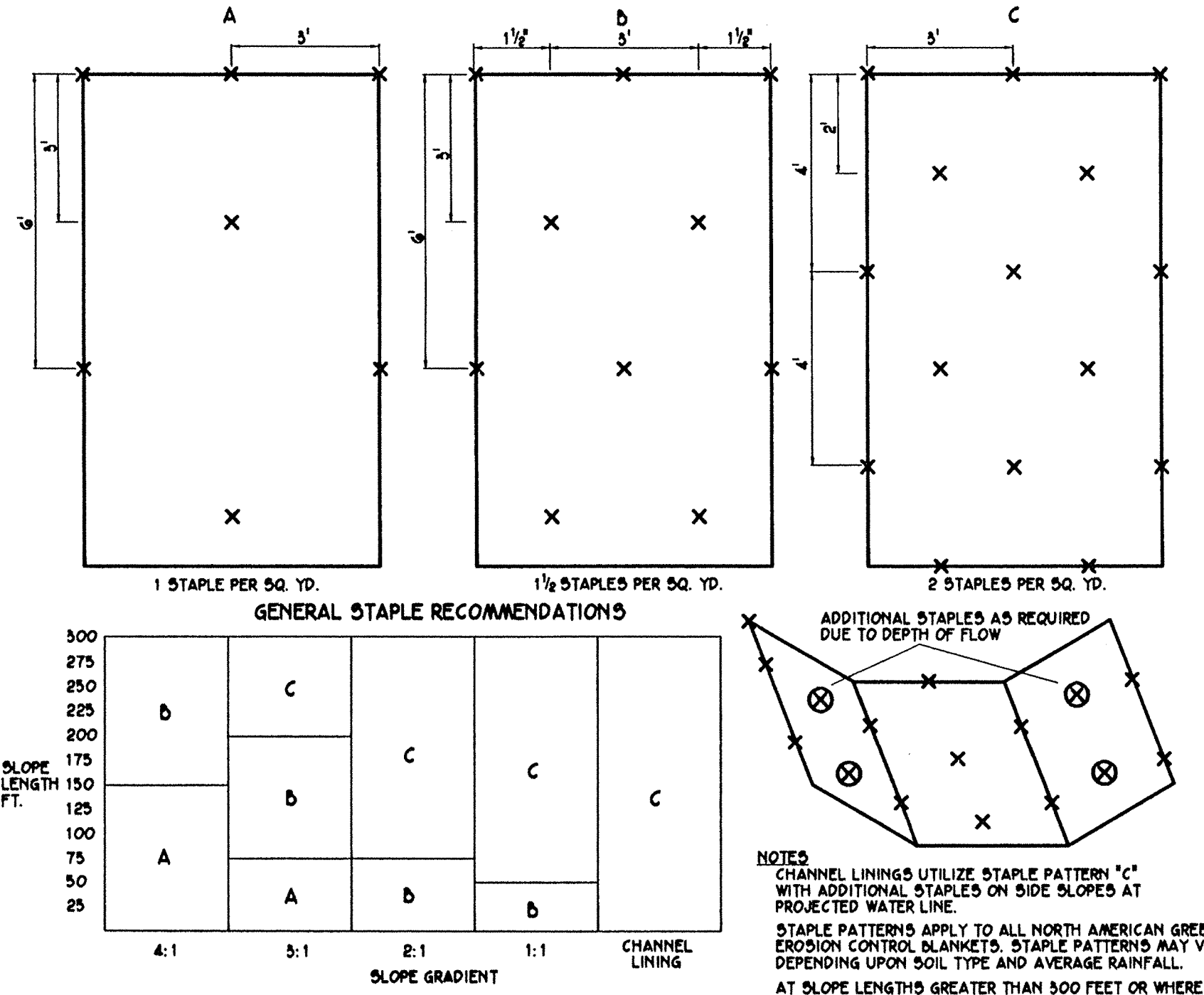
DRAINAGE STRUCTURE SEDIMENTATION CONTROL
NOT TO SCALE



DITCH EROSION CONTROL
NOT TO SCALE



SILT FENCE CONSTRUCTION
NOT TO SCALE



EROSION CONTROL MAT INSTALLATION GUIDE DETAIL
NOT TO SCALE

GLENDALE PARTNERS / OLYMPIA PROPERTIES
 320 N. MERIDIAN STREET SUITE 700
 INDIANAPOLIS, INDIANA

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 ARCHITECTS
 4165 MILLERSVILLE ROAD INDIANAPOLIS, INDIANA 46205 (317) 547-5580
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JAMES L. POCEJKA
 REGISTERED PROFESSIONAL ENGINEER
 No. 19900533
 STATE OF INDIANA
James L. Pocejka
 CERTIFIED BY

EROSION CONTROL DETAILS
RETAIL A

WEST CARMEL CENTER
 106th STREET & US 421
 CARMEL, INDIANA

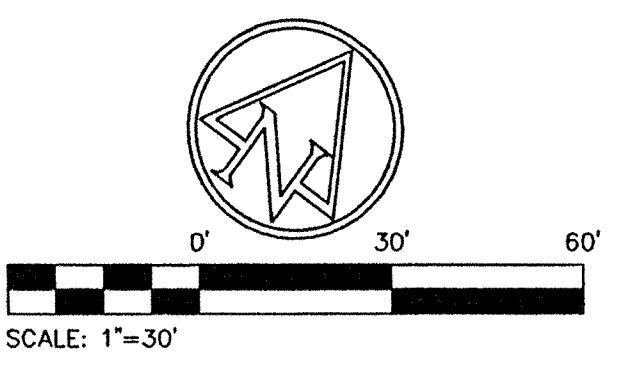
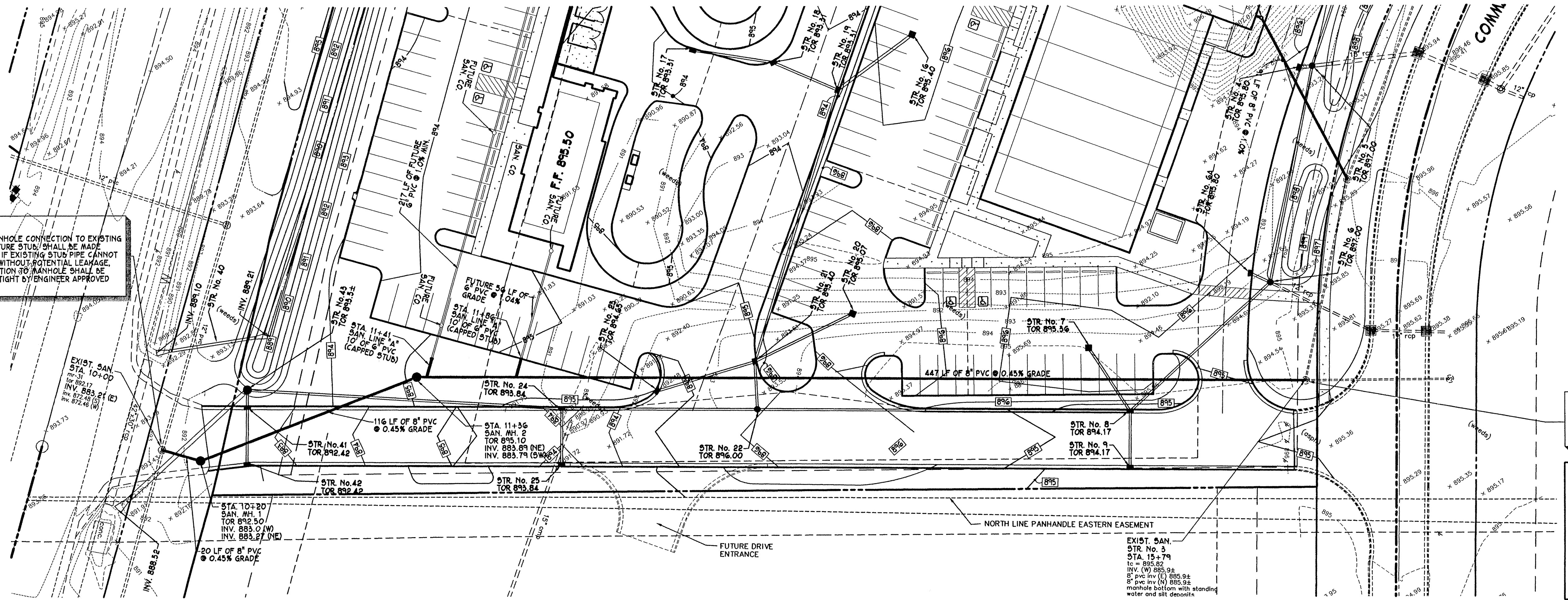
DATE:	04/16/99
SCALE:	AS NOTED
DRAWN BY:	PEJ
CHK'D BY:	JLP
JOB NO.:	98-475

REVISIONS	
RE-155UE	10/11/99
RE-155UE	10/19/99

FILED
 OCT 28 1999
 OFFICE OF HAMILTON COUNTY SURVEYOR

SHEET NO. C3.4
 OF

NOTE:
EXISTING MANHOLE CONNECTION TO EXISTING DROP STRUCTURE STUB SHALL BE MADE WATERTIGHT. IF EXISTING STUB PIPE CANNOT BE UTILIZED WITHOUT POTENTIAL LEAKAGE, NEW CONNECTION TO MANHOLE SHALL BE MADE WATERTIGHT BY ENGINEER APPROVED METHOD.

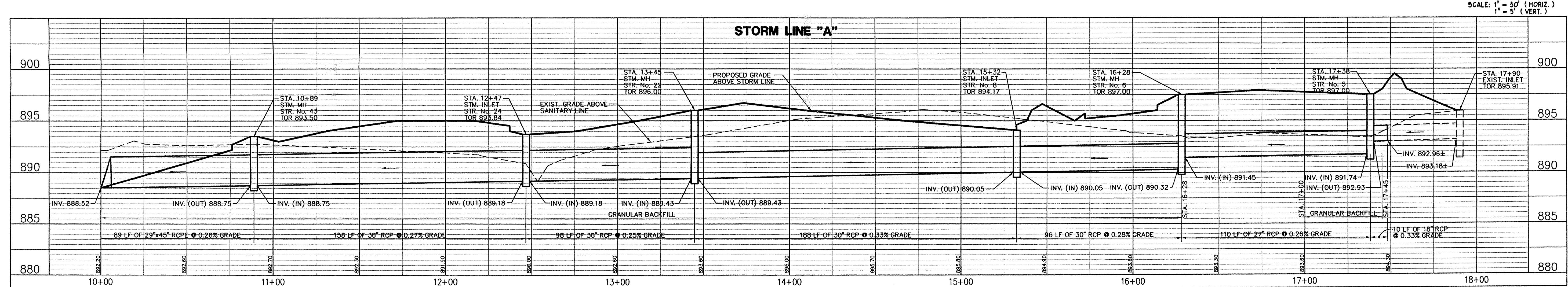


EXISTING LEGEND

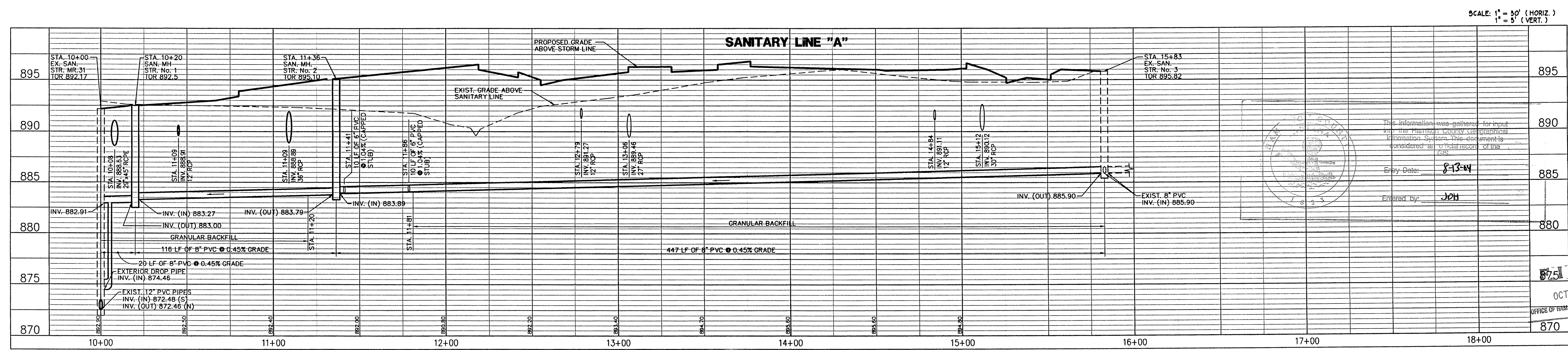
- 733.62 SPOT ELEVATION
- --- CONTOUR
- W --- WATER LINE
- OTEL --- OVERHEAD TELEPHONE
- BTEL --- BURIED TELEPHONE LINES
- G --- GAS LINES
- OHE --- OVERHEAD ELECTRIC
- FL --- FLOW LINE
- GUY --- GUY WIRE
- P --- POWER POLE
- RFB --- REBAR FOUND
- TELPE --- TELEPHONE PEDESTAL
- TELPO --- TELEPHONE POLE
- S --- SIGN
- T --- TREE

NOTE:
CORE DRILL EXISTING MANHOLE CONNECTION TO EXISTING SHALL BE MADE WATERTIGHT BY ENGINEER APPROVED METHOD.

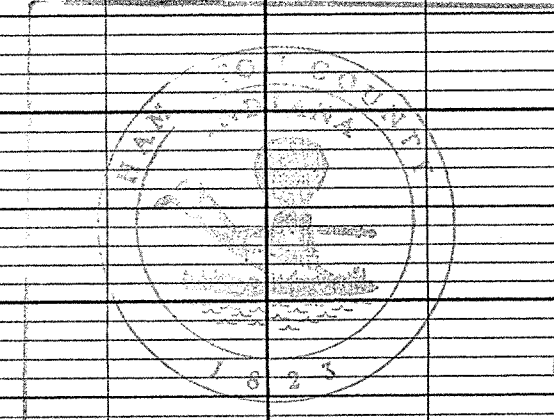
CAUTION !!
THE LOCATIONS OF ALL EXISTING UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE BASED UPON ABOVE GROUND EVIDENCE (including, but not limited to, manholes, inlets, valves, and marks made upon the ground by others) AND ARE SPECULATIVE IN NATURE. THERE MAY ALSO BE OTHER EXISTING UNDERGROUND UTILITIES FOR WHICH THERE IS NO ABOVE GROUND EVIDENCE OR FOR WHICH NO ABOVE GROUND EVIDENCE WAS OBSERVED. THE EXACT LOCATIONS OF SAID EXISTING UNDERGROUND UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO ANY AND ALL CONSTRUCTION.
1-800-382-5544
CALL TOLL FREE
- INDIANA UNDERGROUND -



SCALE: 1" = 30' (HORIZ.)
1" = 5' (VERT.)



SCALE: 1" = 30' (HORIZ.)
1" = 5' (VERT.)



This information was gathered for input into the Hamilton County Geographical Information System. The elements considered are critical components of the GIS.
Entry Date: 8-13-99
Entered by: JPH

GLENDALE PARTNERS / OLYMPIA PROPERTIES
320 N. MERIDIAN STREET, SUITE 700
INDIANAPOLIS, INDIANA

AMERICAN CONSULTING INC
4165 MILLERSVILLE ROAD
INDIANAPOLIS, IN 46206-2998
(317) 547-5580 FAX: (317) 543-0270
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JANE L. POZEKAY
No. 19900533
STATE OF INDIANA
REGISTERED PROFESSIONAL ENGINEER
CERTIFIED BY
Jane L. Pozekay

REGULATED STORM SEWER PLAN AND PROFILE

WEST CARMEL CENTER
106TH STREET & US 421
CARMEL, INDIANA

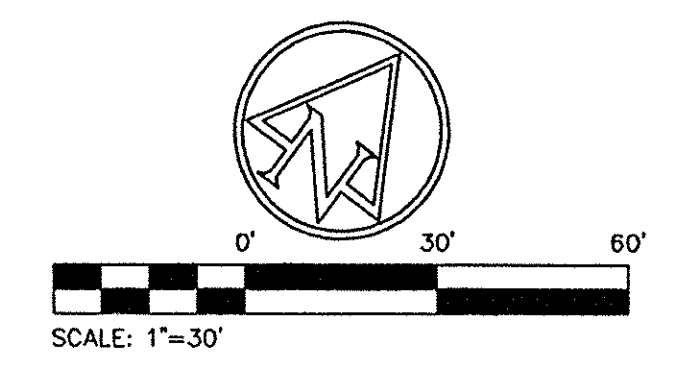
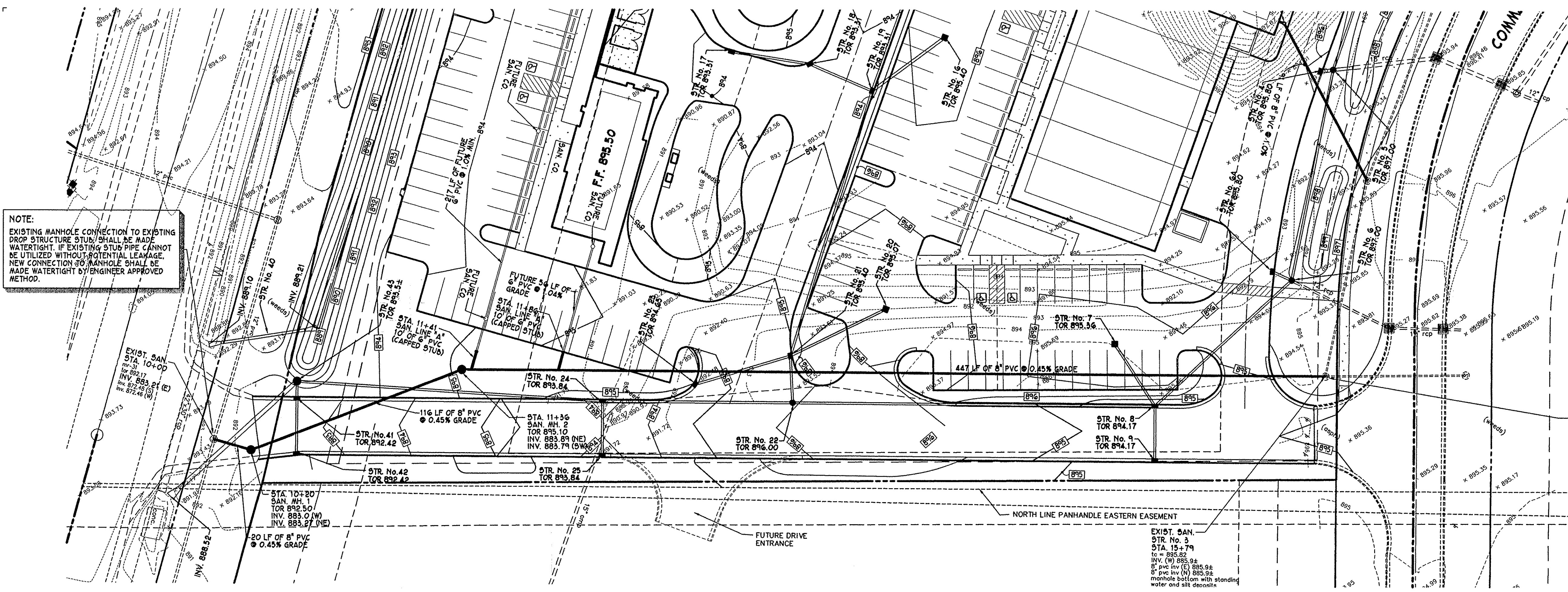
DATE: 09/30/99
DRAWN BY: PED
CHK'D BY: JLP
JOB NO. 99-513

REVISIONS
RE-155UE 10/11/99
RE-155UE 10/19/99

C3.5
OF

OCT 28 1999
OFFICE OF ENGINEERING

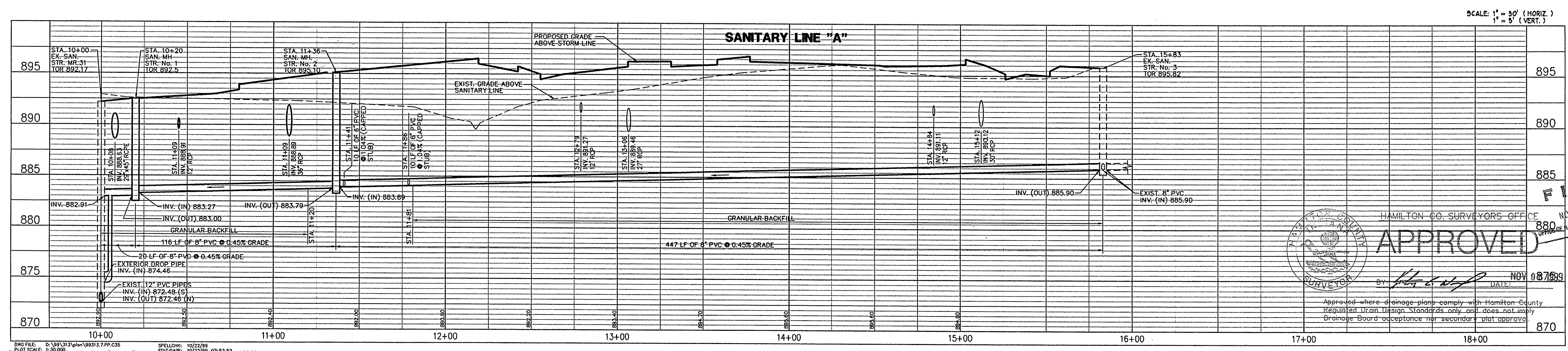
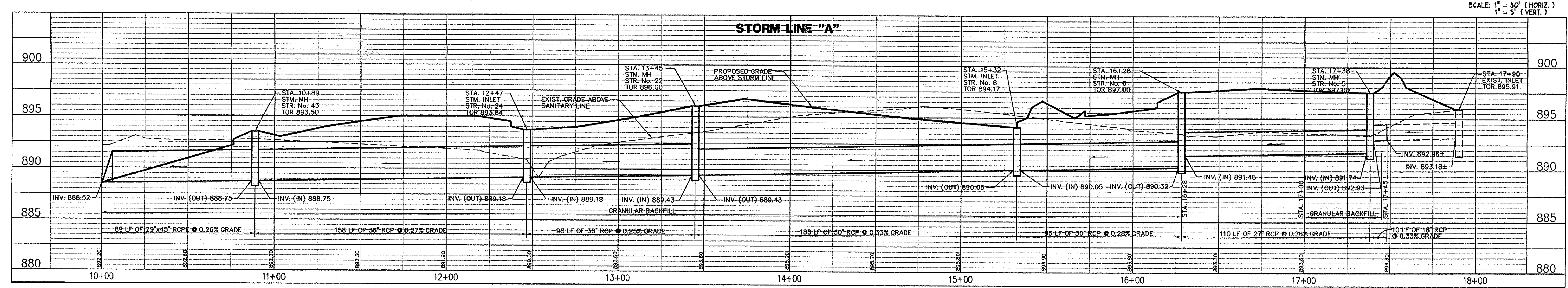
SHEET NO.



- EXISTING LEGEND**
- SPOT ELEVATION
 - CONTOUR
 - WATER LINE
 - OVERHEAD TELEPHONE
 - BURIED TELEPHONE LINES
 - GAS LINES
 - OVERHEAD ELECTRIC
 - FLOW LINE
 - GUY WIRE
 - POWER POLE
 - REBAR FOUND
 - TELEPHONE PEDESTAL
 - TELEPHONE POLE
 - SIGN
 - TREE

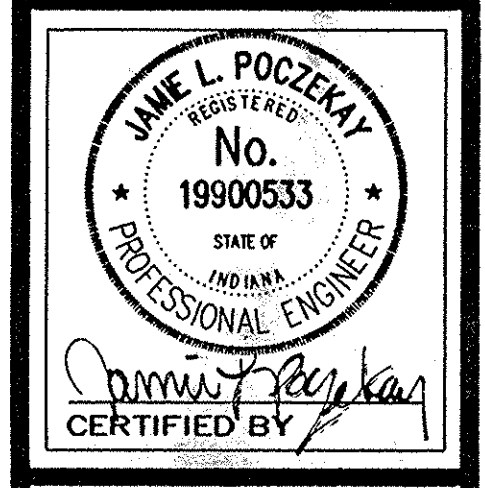
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- INDIANA UNDERGROUND -



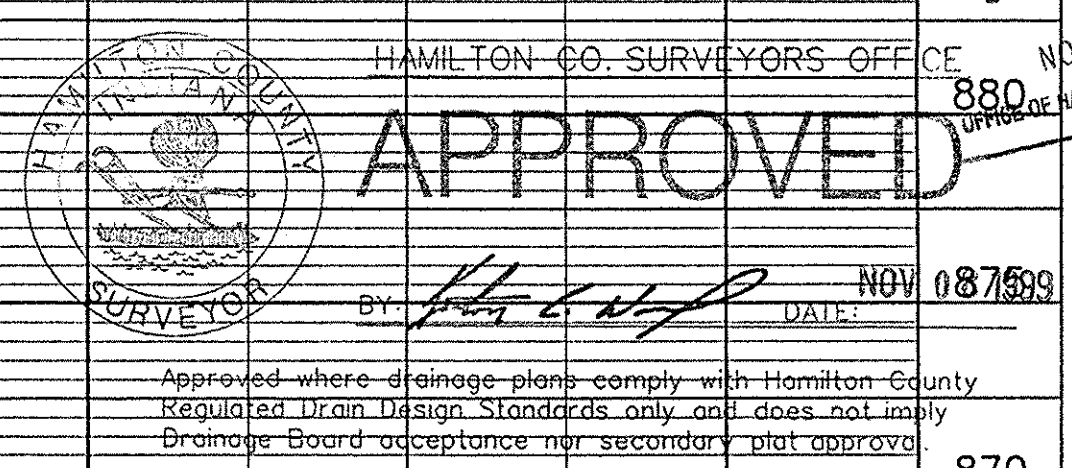
GLENDALE PARTNERS / OLYMPIA PROPERTIES
320 N. MERIDIAN STREET, SUITE 700
INDIANAPOLIS, INDIANA

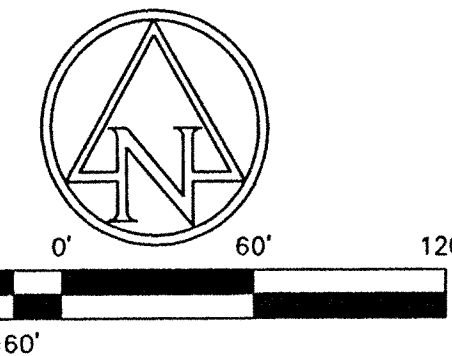
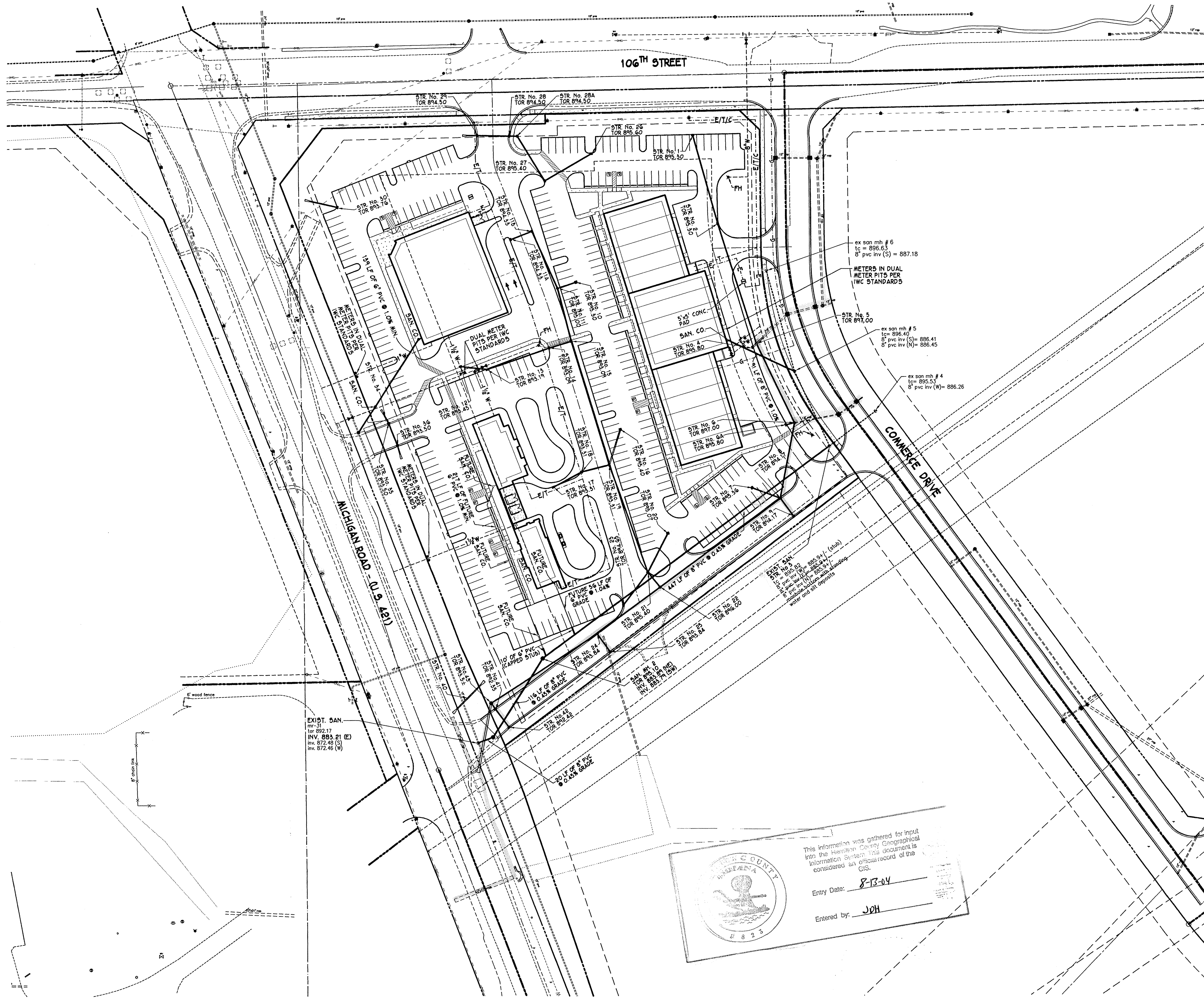
AMERICAN CONSULTING, INC.
4165 MILLERSVILLE ROAD
INDIANAPOLIS, INDIANA 46226-0276
(317) 224-5500 FAX: (317) 224-0276
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REGULATED STORM SEWER PLAN AND PROFILE
WEST CARMEL CENTER
106TH STREET & US 421
CARMEL, INDIANA

DATE:	09/30/99
DRAWN BY:	JP
CHECKED BY:	JLP
JOB NO.:	99-313
REVISIONS	
RE-1506	10/11/99
RE-1506	10/19/99
SHEET NO.	C3.5
OF	





- EXISTING LEGEND**
- W --- WATER LINE
 - G --- GAS LINE
 - OHE --- OVER HEAD ELECTRIC LINE
 - E --- BURIED ELECTRIC LINE
 - E/T --- JOINT TRENCH ELECTRIC & TELEPHONE
 - T --- TELEPHONE LINE
 - F --- FIRE HYDRANT
 - V --- WATER VALVE
- PROPOSED LEGEND**
- G --- GAS LINE
 - E --- ELECTRIC LINE
 - T --- TELEPHONE LINE
 - V --- WATER VALVE

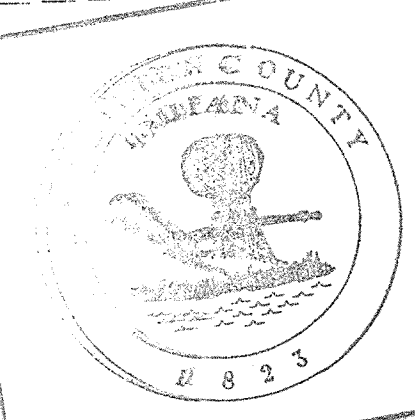
NOTE:
ALL UTILITY TRENCHES, WHERE CROSSING DRIVEWAY ENTRANCES, SHALL BE BACKFILLED WITH GRANULAR BACKFILL.

EXIST. SAN.
for 892.17
INV. 893.21 (E)
inv. 872.48 (S)
inv. 872.46 (W)

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

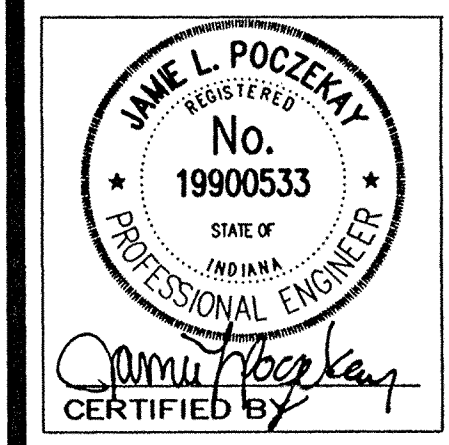
Entry Date: 8-13-04

Entered by: JPH



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INDIANAPOLIS INDIANA

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ARCHITECTS
4165 MILLERSVILLE ROAD INDIANAPOLIS, INDIANA 46205 (317) 547-5580
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**UTILITY PLAN
RETAIL A**

WEST CARMEL CENTER
108th STREET & US 421
CARMEL, INDIANA

ADDITIONAL REVISIONS	
RE-155UE	10/11/99
RE-155UE	10/19/99

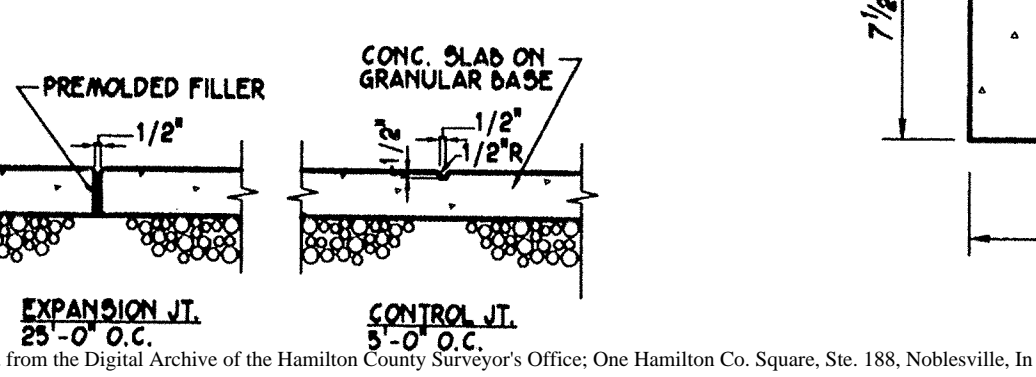
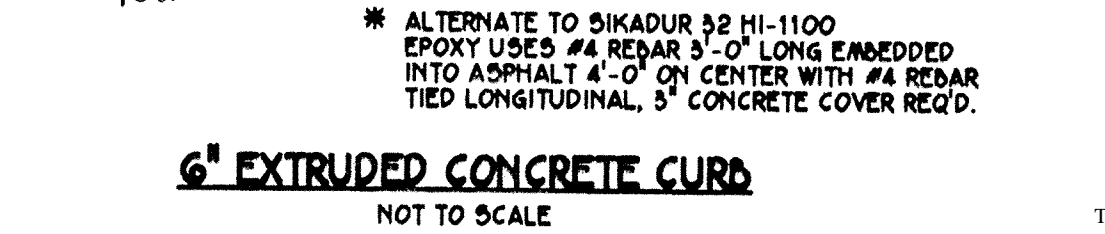
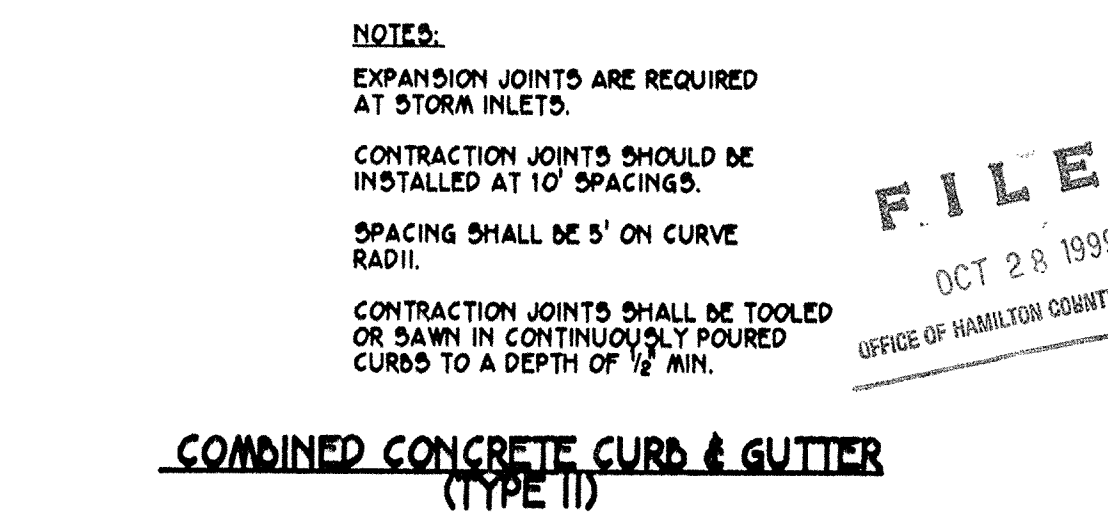
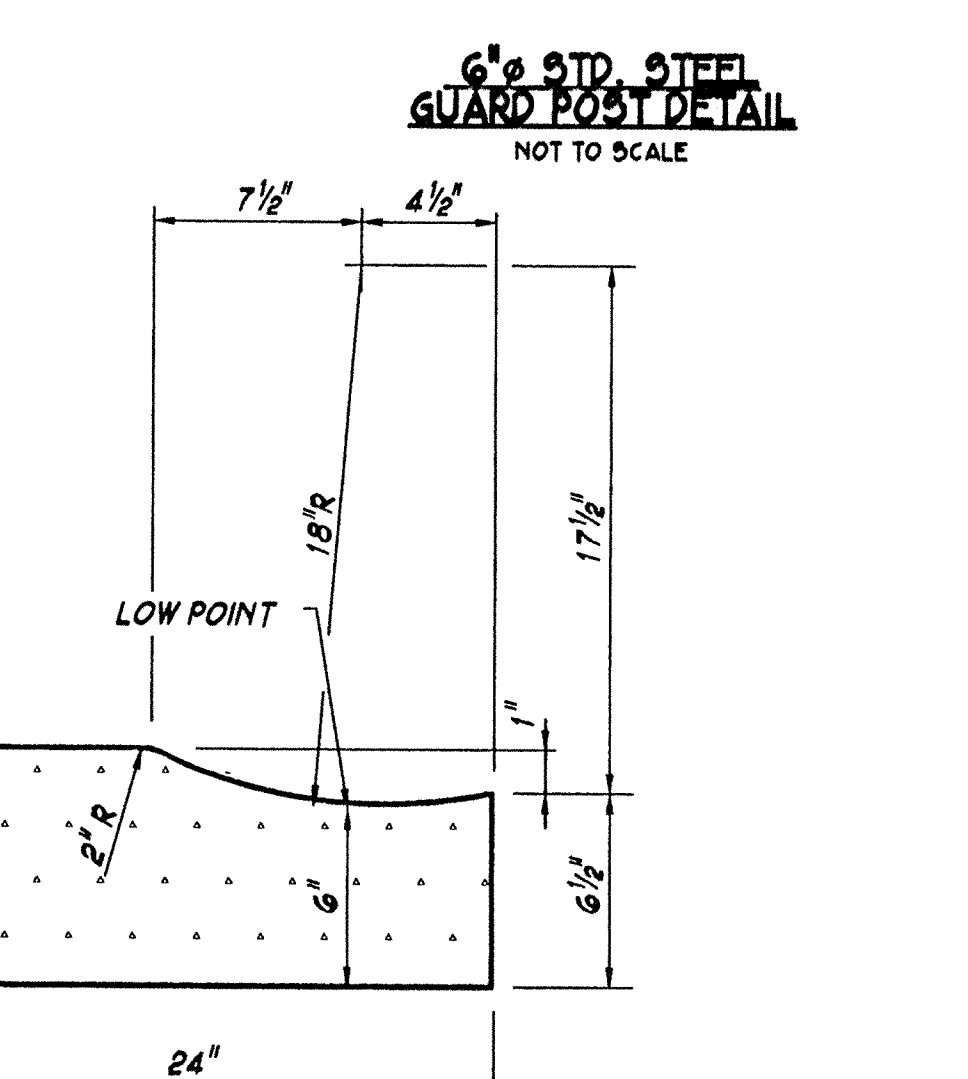
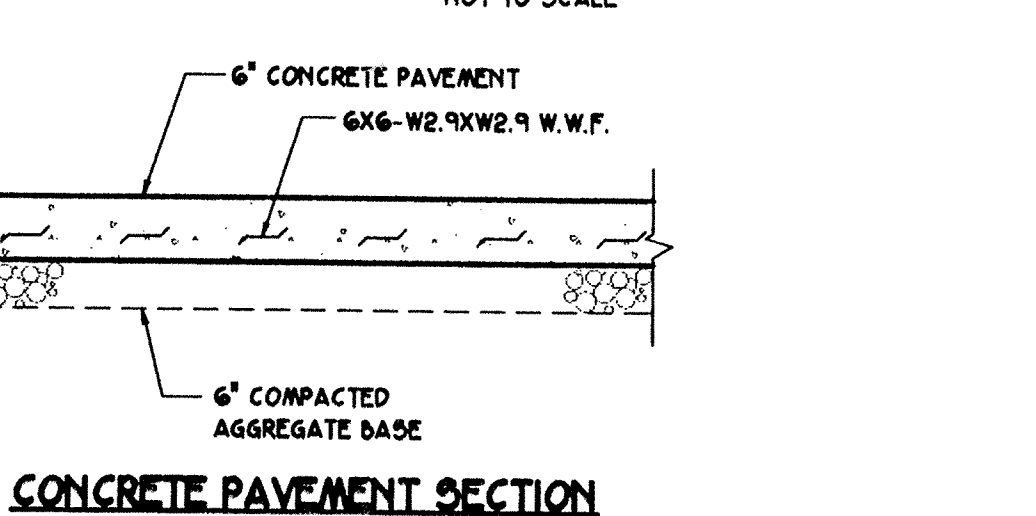
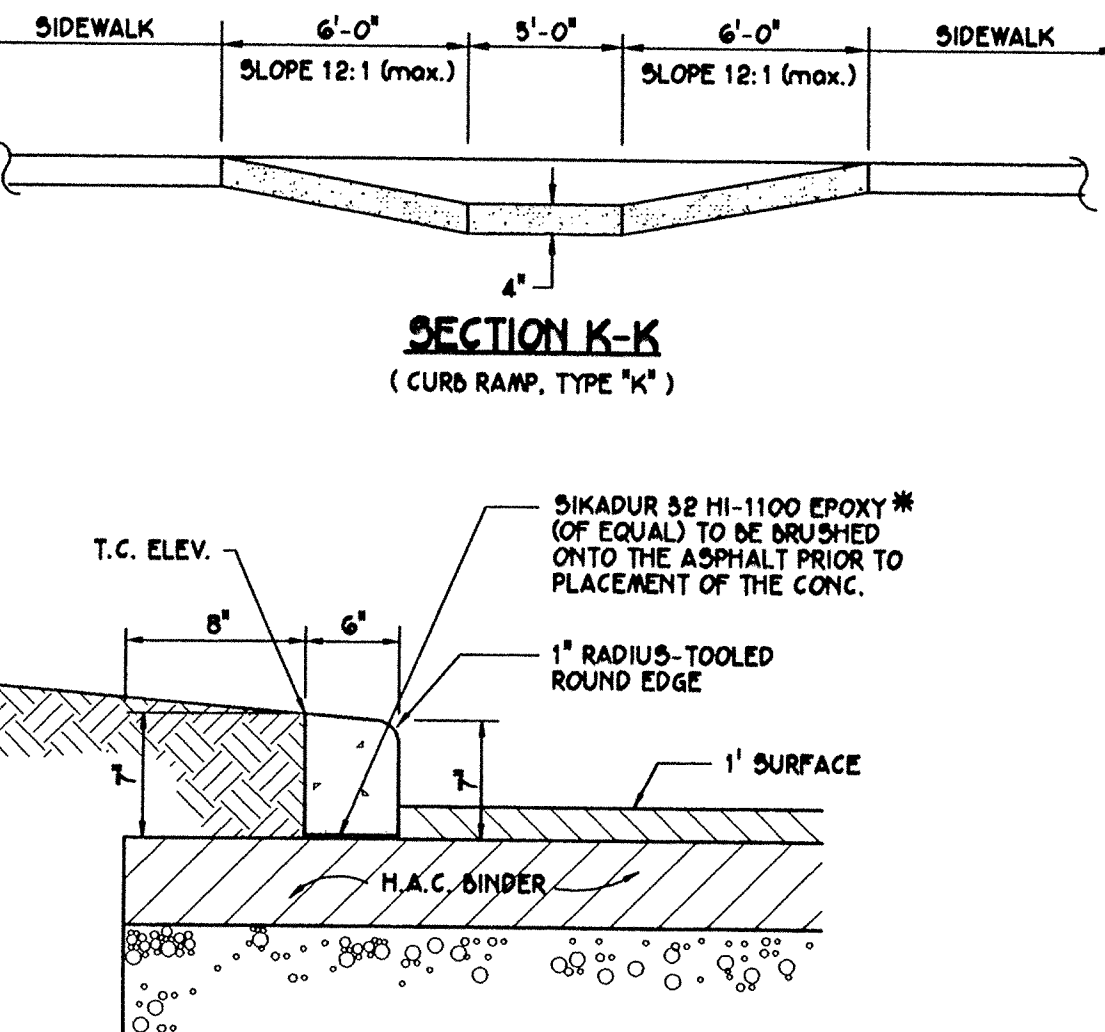
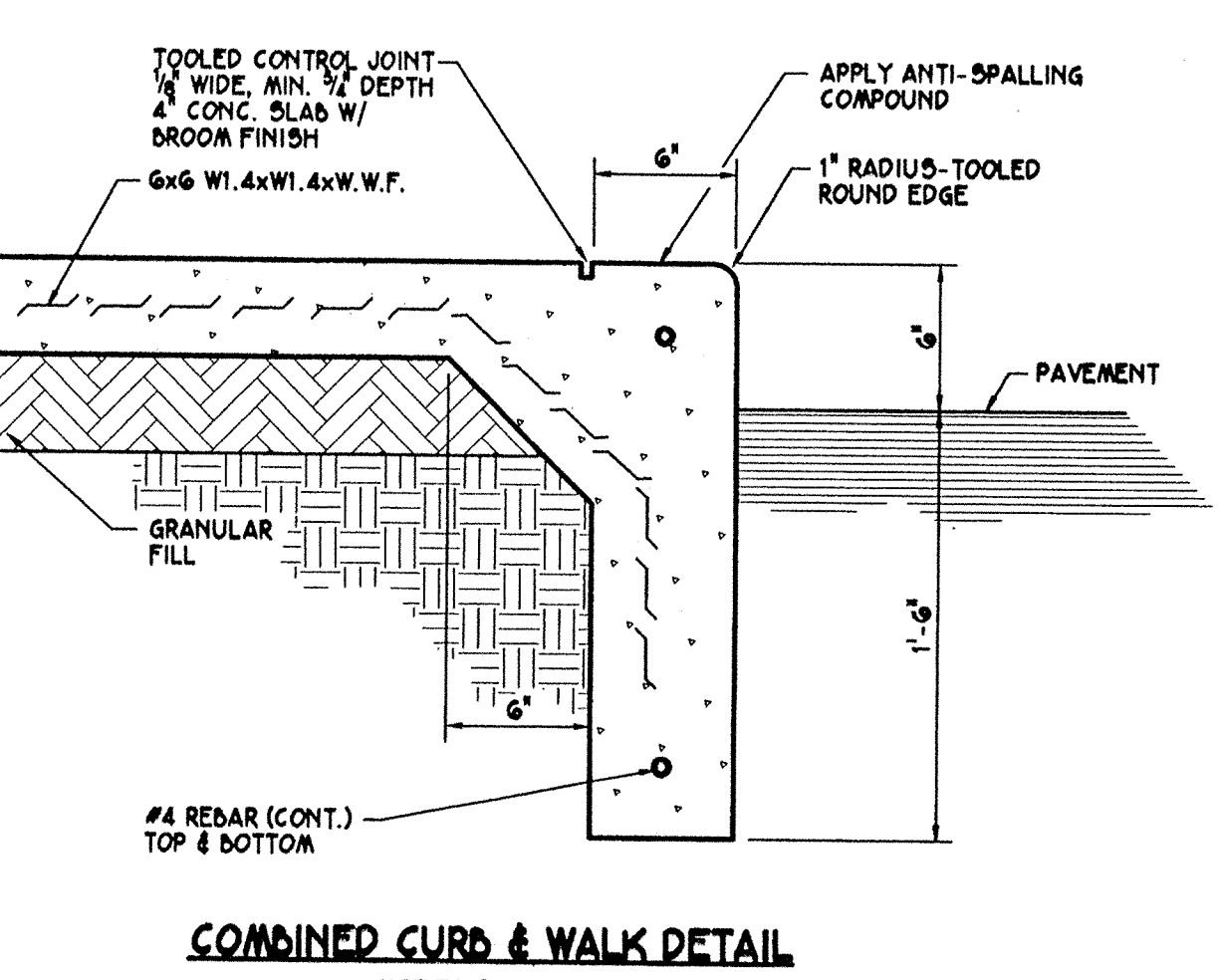
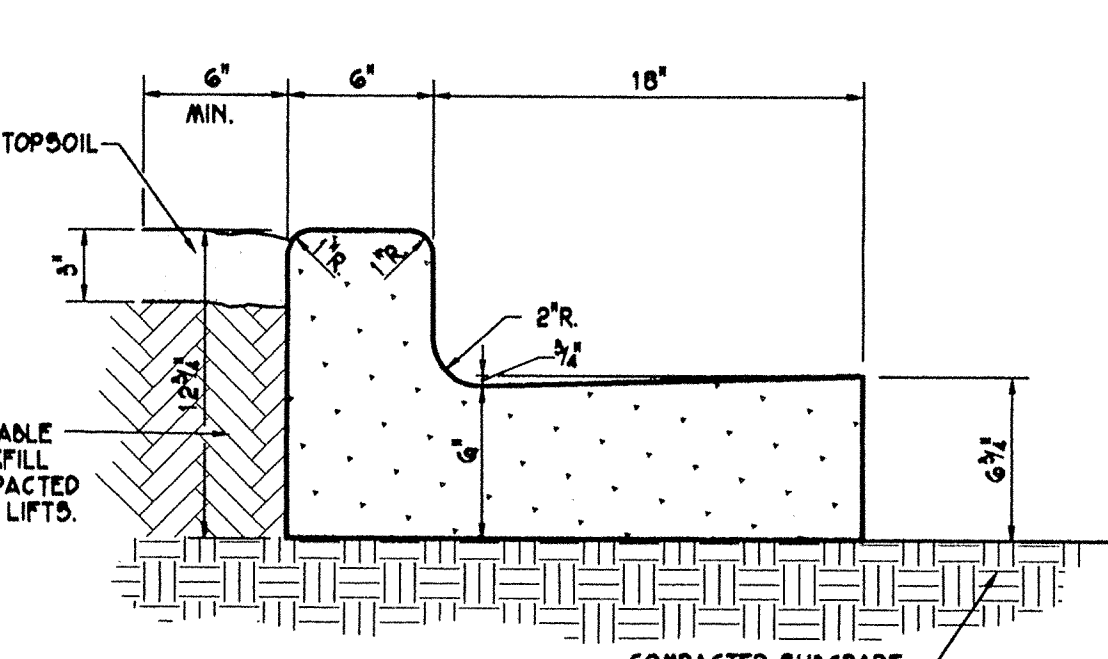
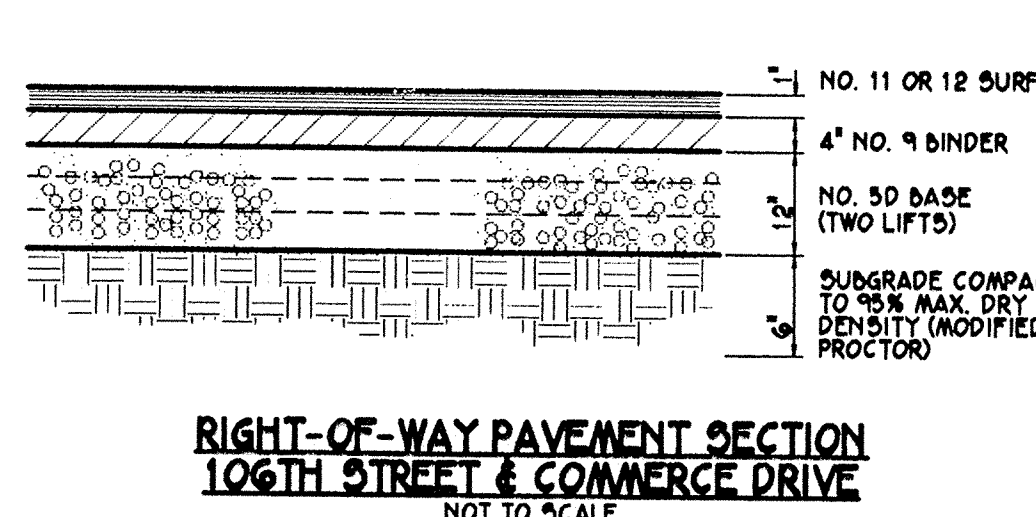
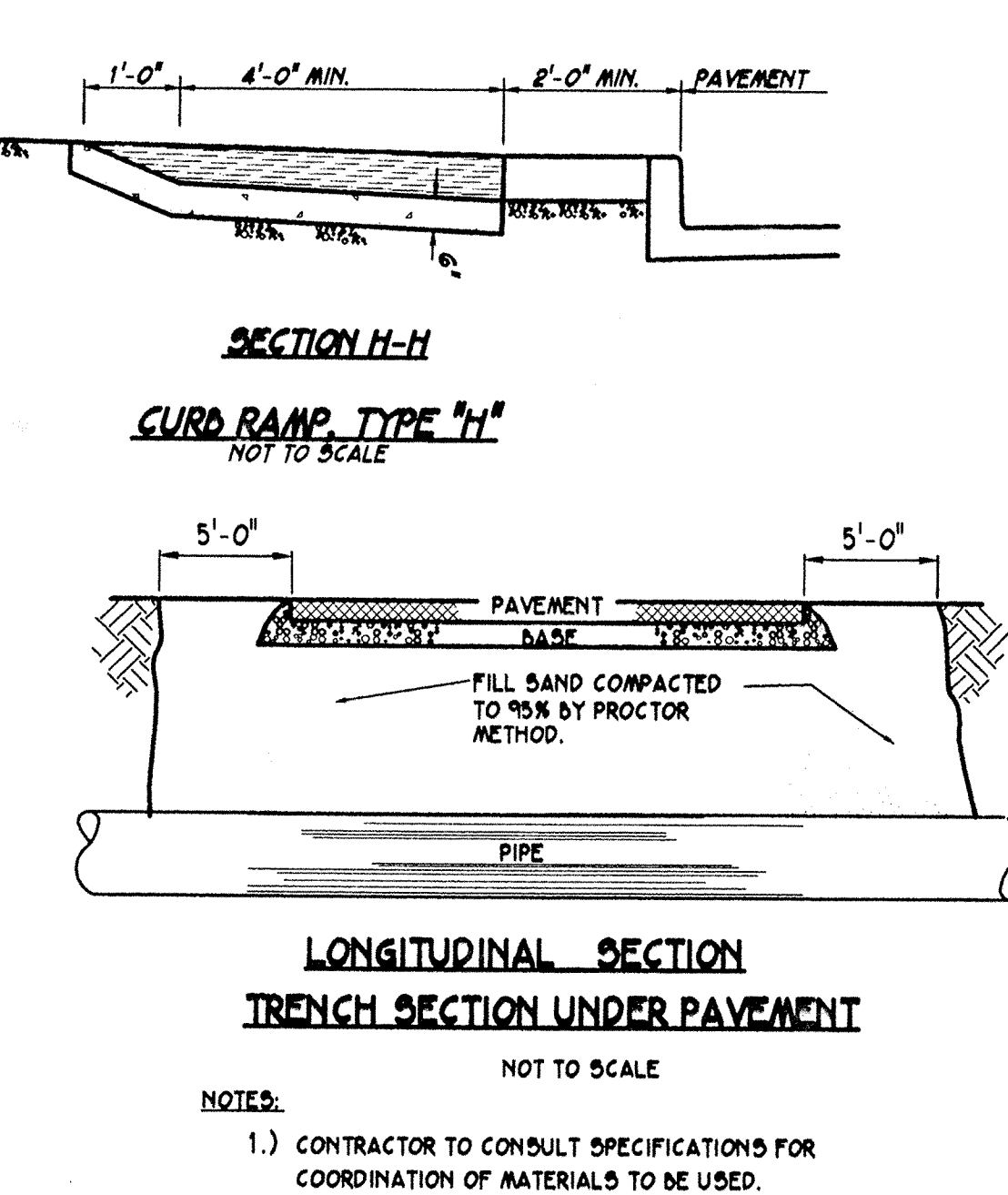
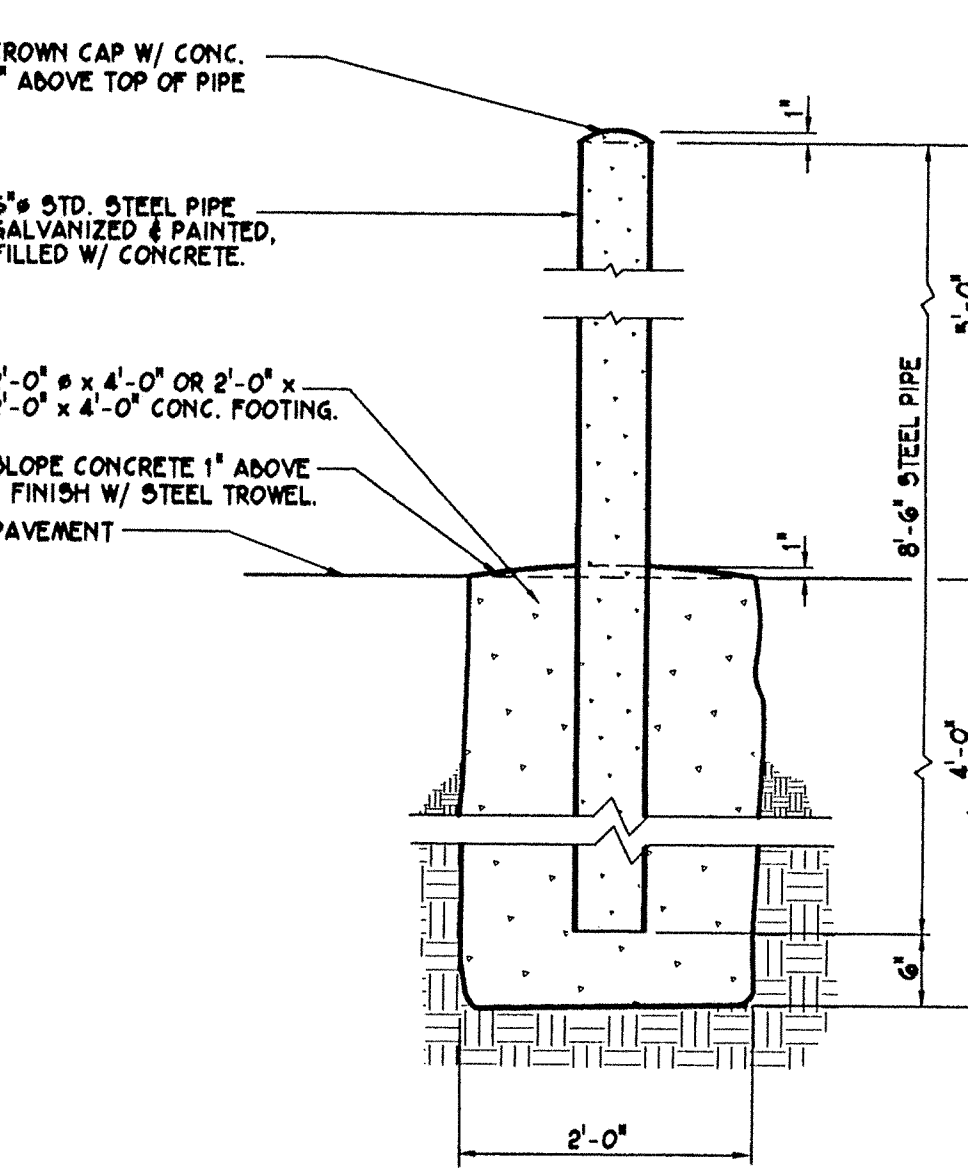
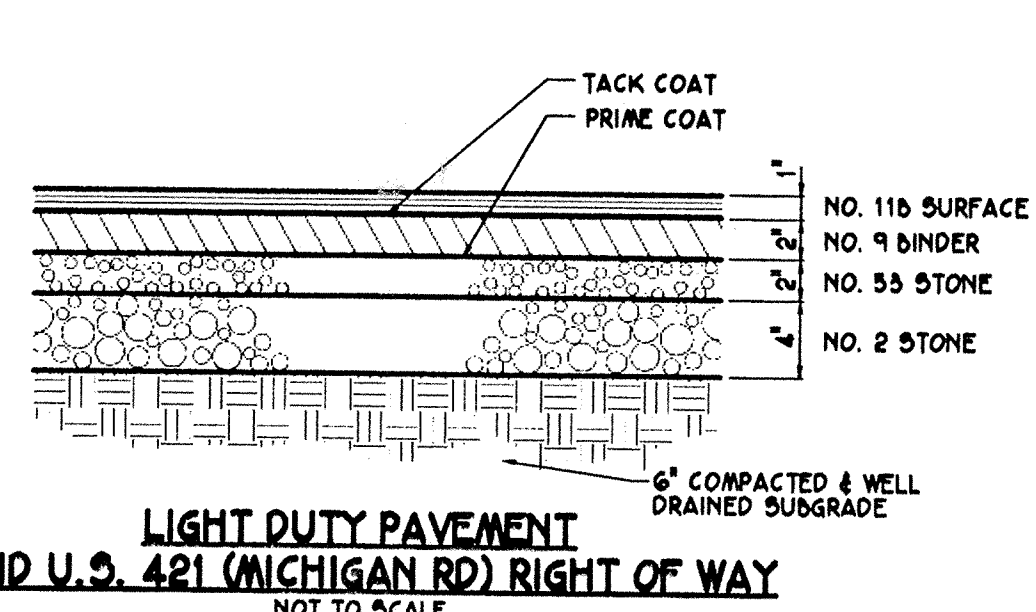
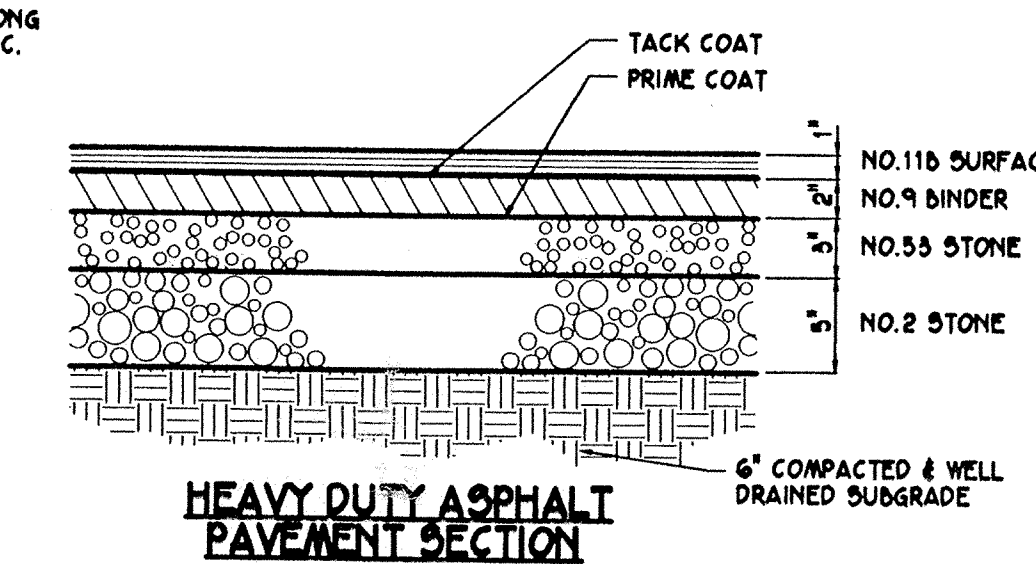
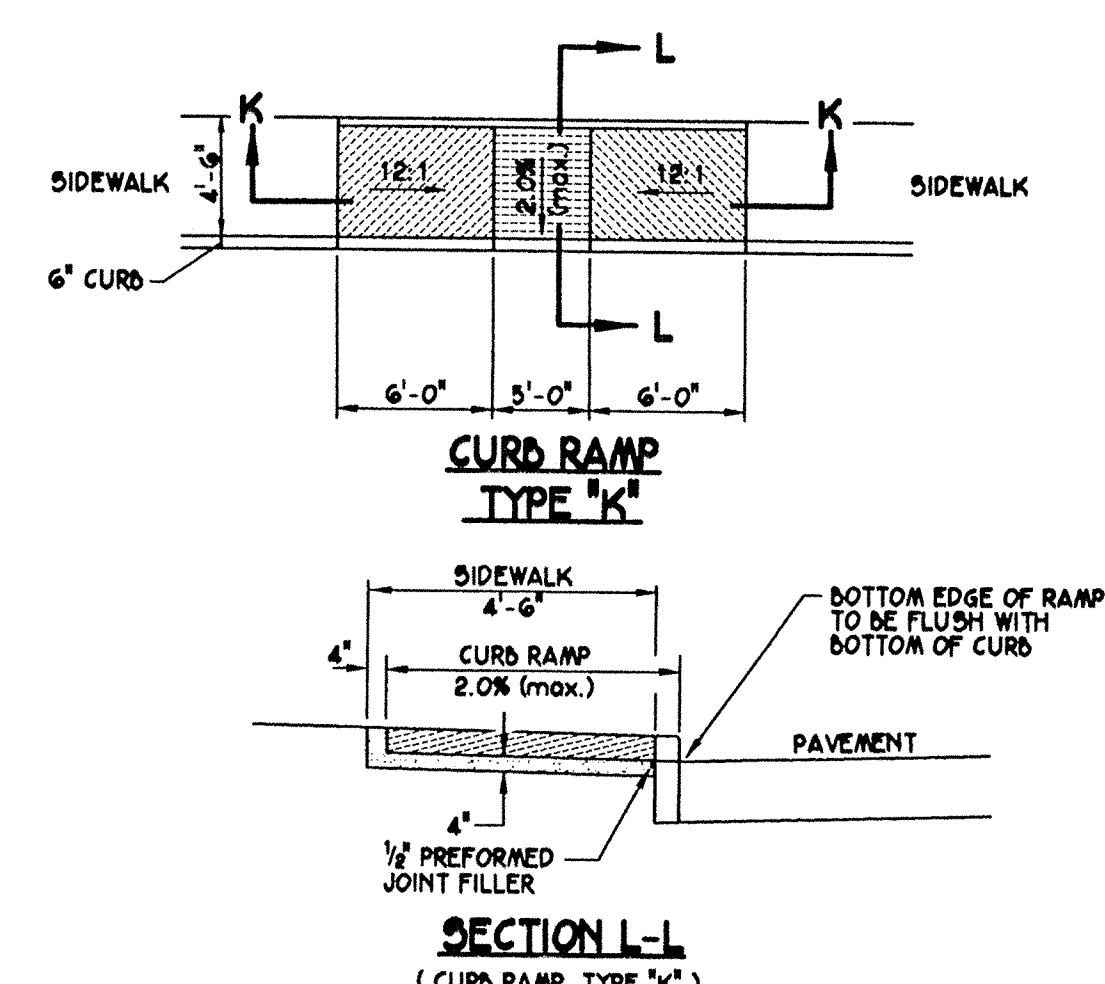
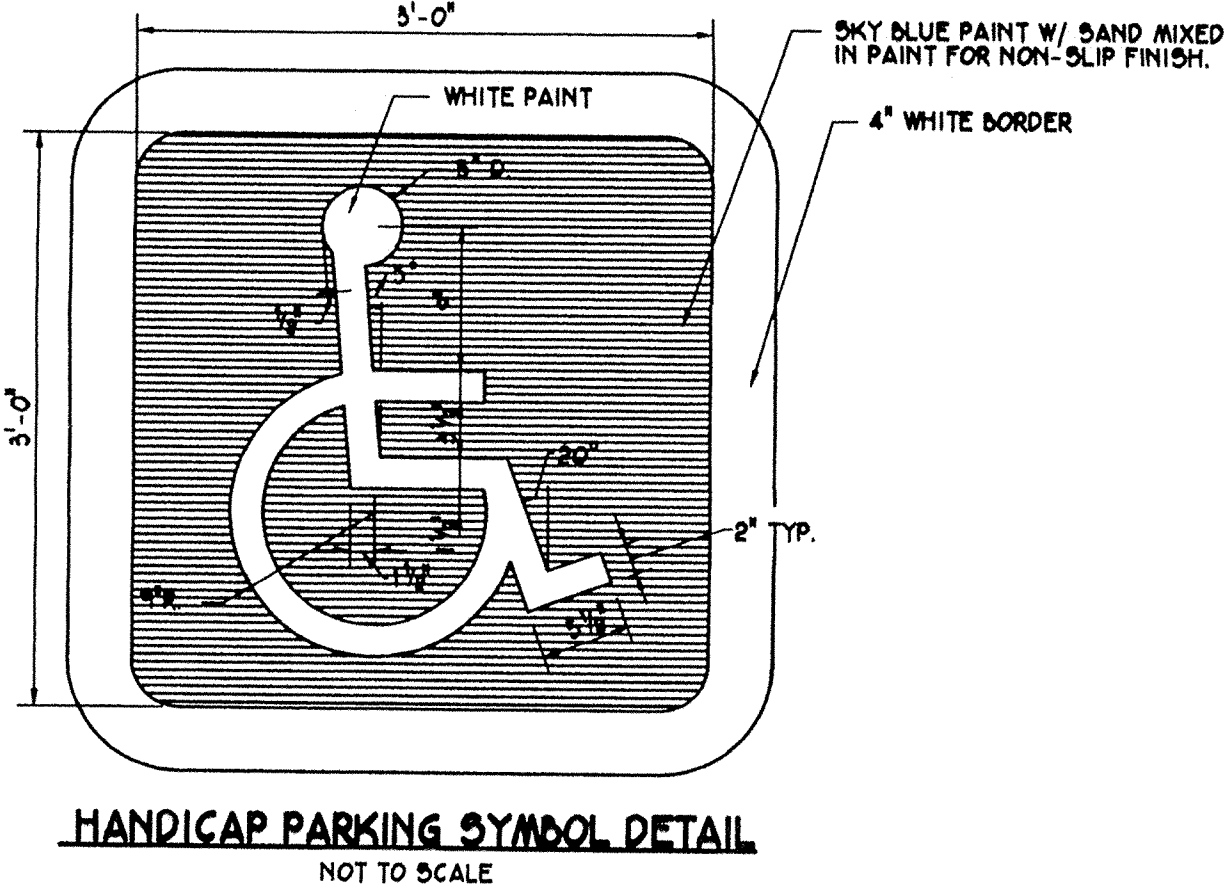
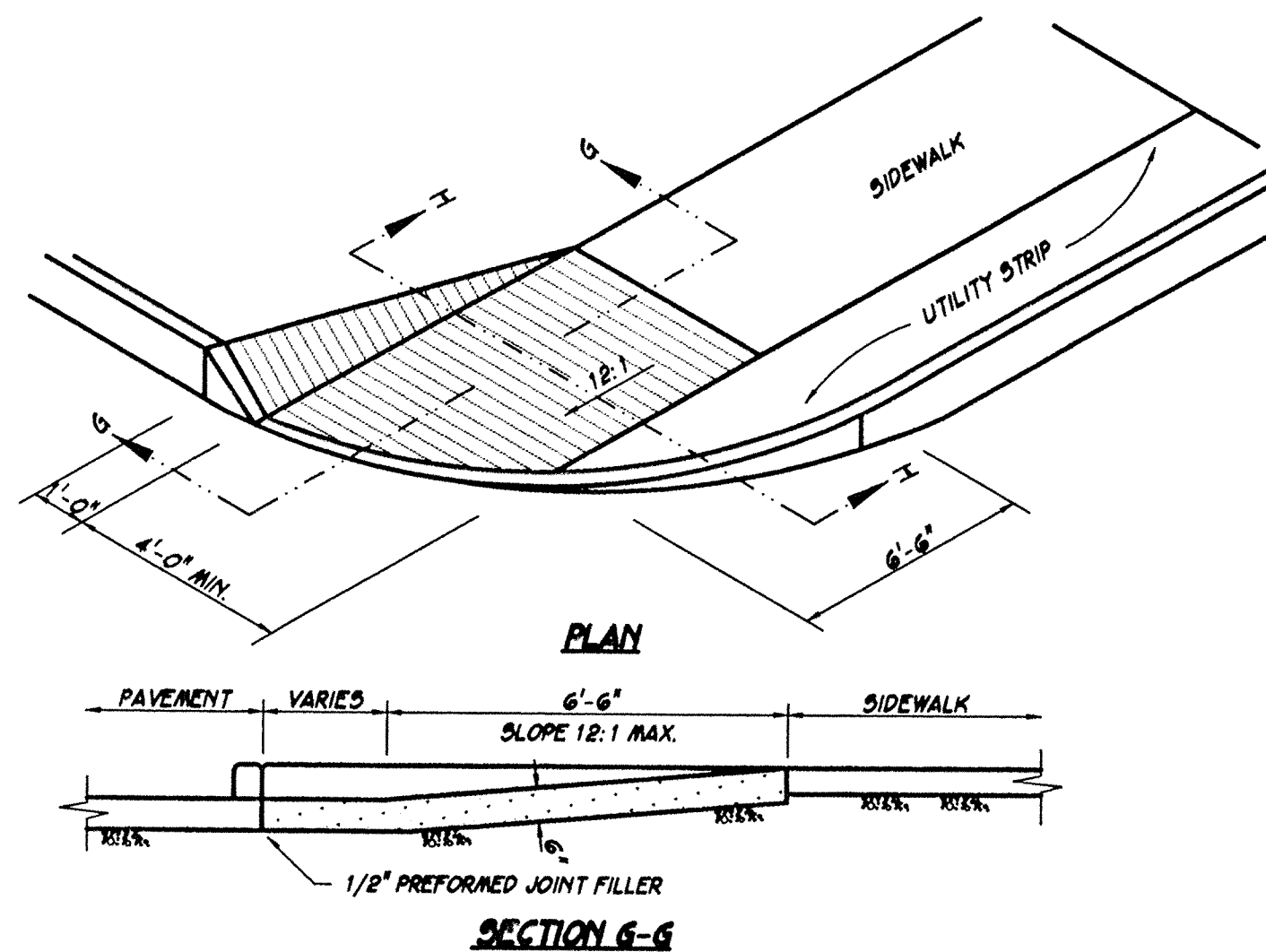
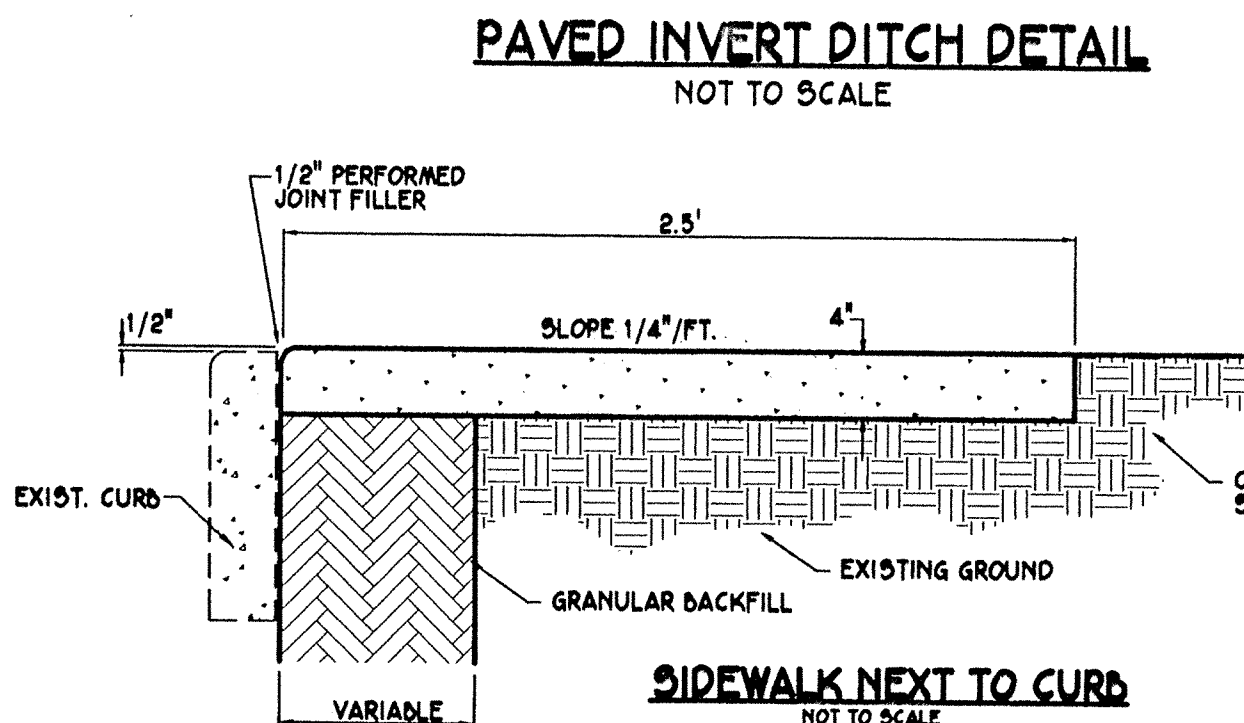
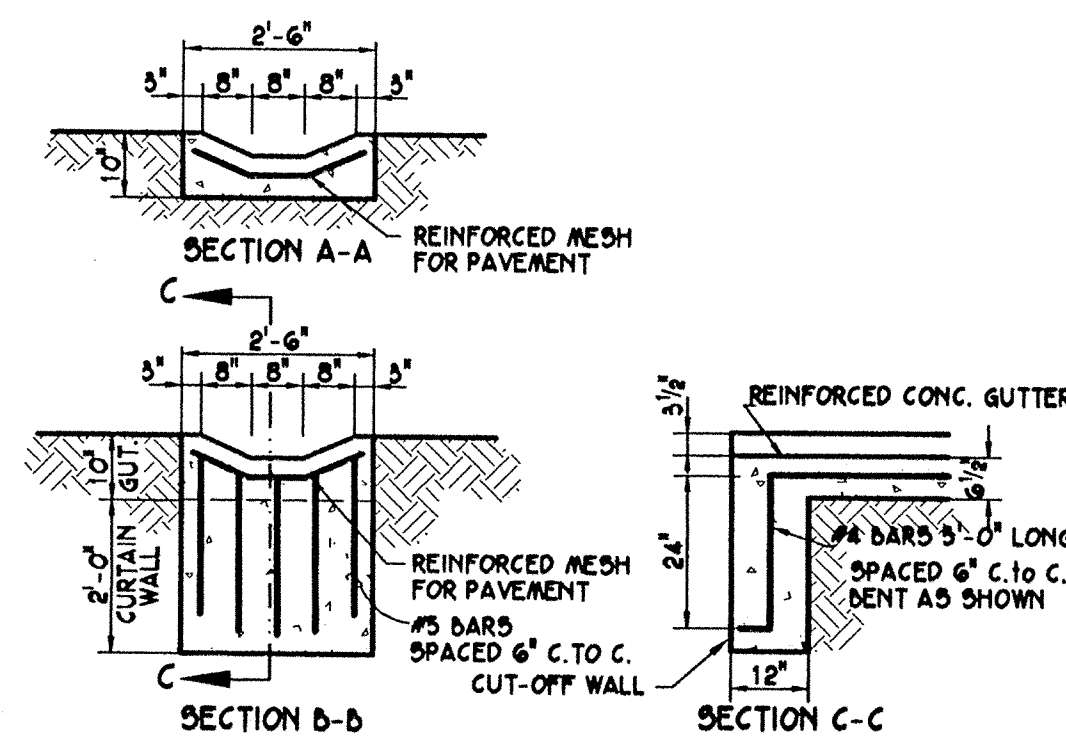
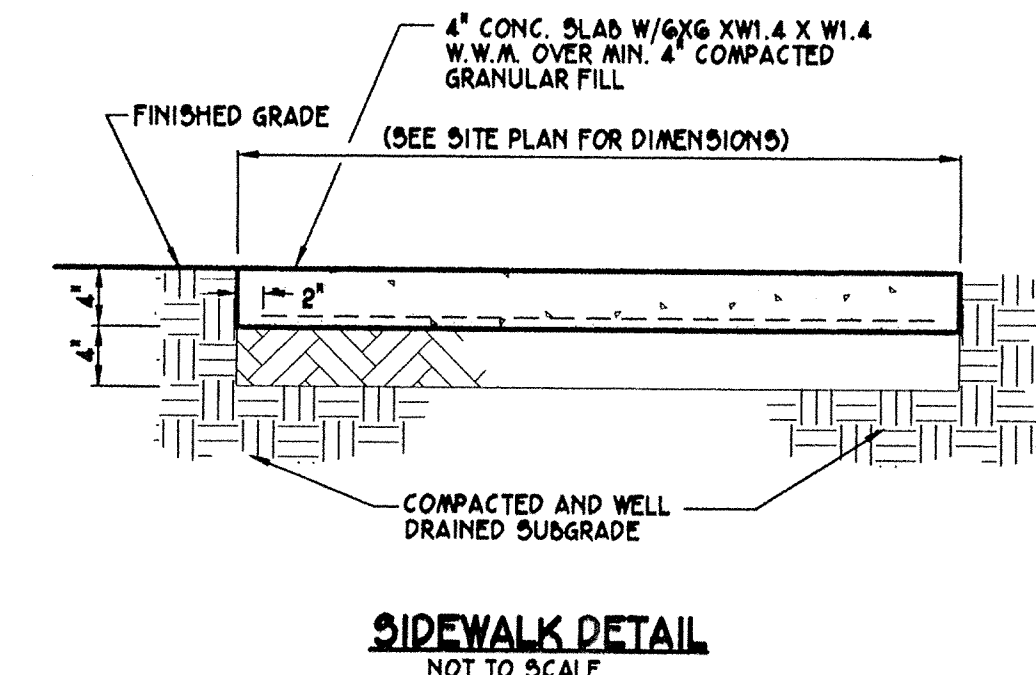
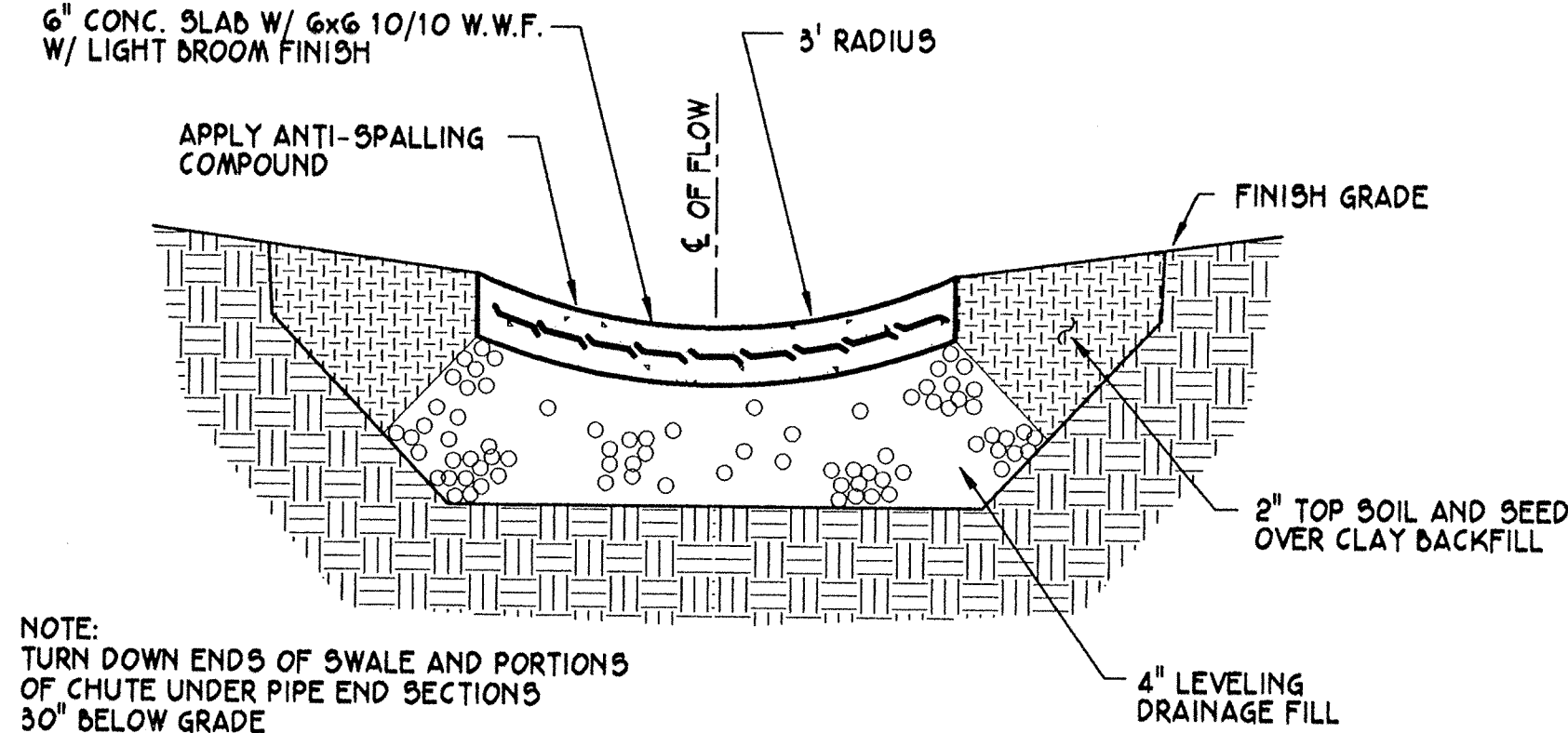
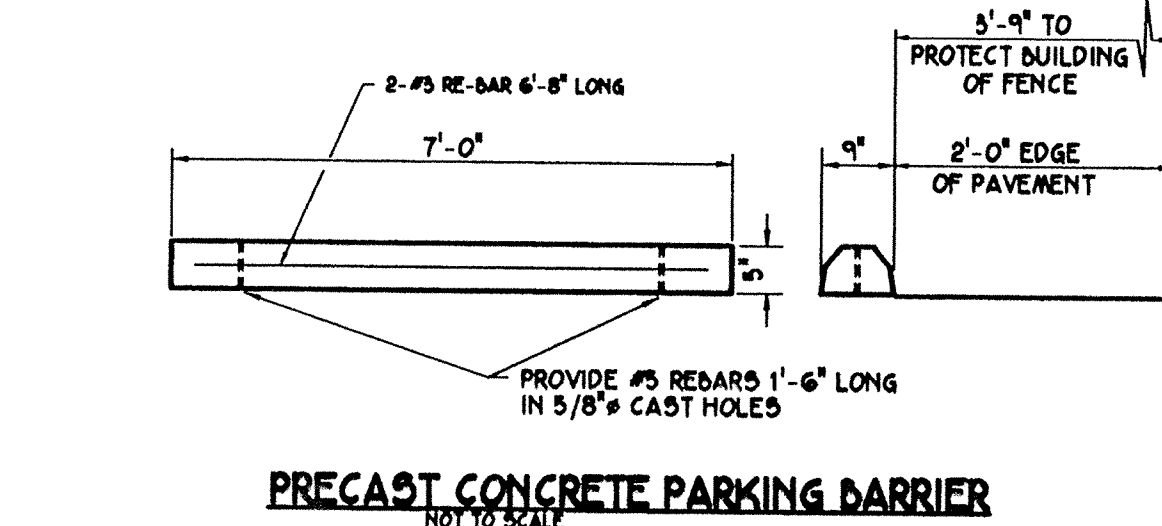
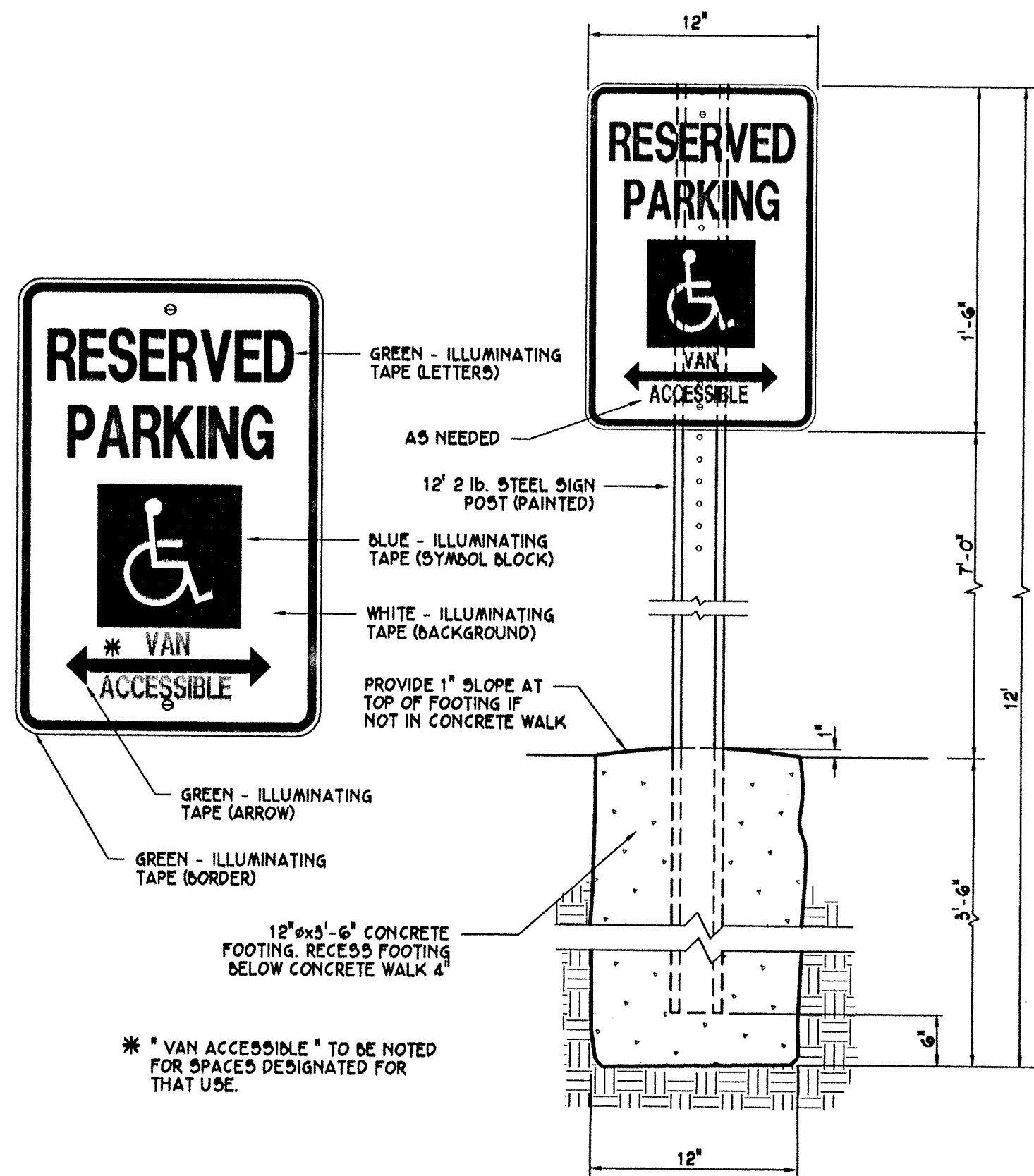
DATE: 04/16/99
SCALE: 1"=60'
DRAWN BY: PED
CHK'D BY: JLP
JOB NO. 98-475

REVISIONS	
CARMEL TAC	05/18/99
CARMEL TAC	06/02/99
GENERAL	09/30/99

CAUTION !!
THE LOCATIONS OF ALL EXISTING UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE BASED UPON ABOVE GROUND EVIDENCE (including, but not limited to, manholes, intakes, valves, and marks made upon the ground by others) AND ARE SPECULATIVE IN NATURE. THERE MAY ALSO BE OTHER EXISTING UNDERGROUND UTILITIES FOR WHICH THERE IS NO ABOVE GROUND EVIDENCE OR FOR WHICH NO ABOVE GROUND EVIDENCE WAS OBSERVED. THE EXACT LOCATIONS OF SUBURBAN COAST EXISTING UNDERGROUND UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO ANY AND ALL CONSTRUCTION.

1-800-382-5544
CALL TOLL FREE
- INDIANA UNDERGROUND -

SHEET NO.
C4.1
OF



GLENDALE PARTNERS / OLYMPIA PROPERTIES
320 N. MERIDIAN STREET SUITE 700
INDIANAPOLIS, INDIANA

AMERICAN CONSULTING ENGINEERS, INC.
ARCHITECTS
4165 MILLERSVILLE ROAD INDIANAPOLIS, INDIANA 46205 (317) 547-5580
REGISTERED PROFESSIONAL ENGINEERS

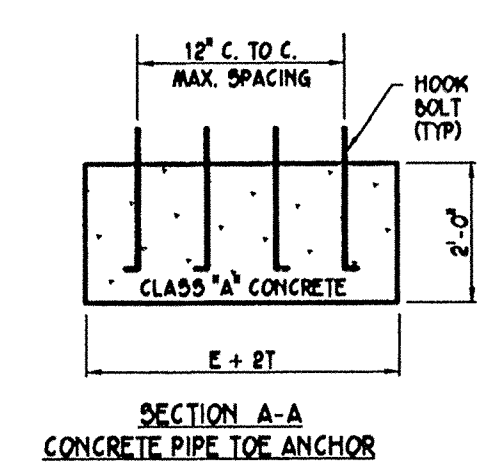
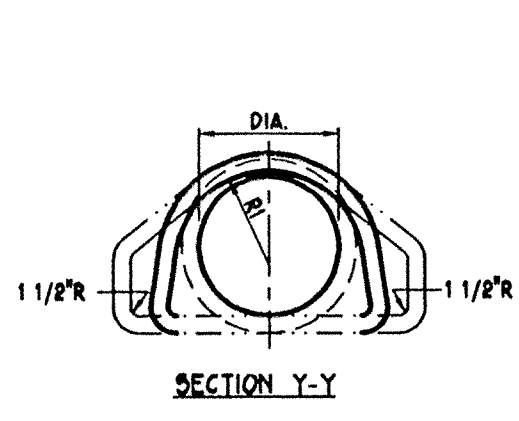
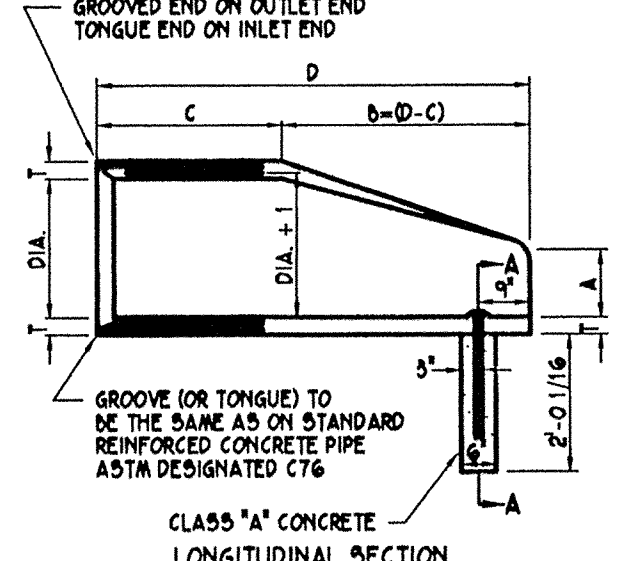
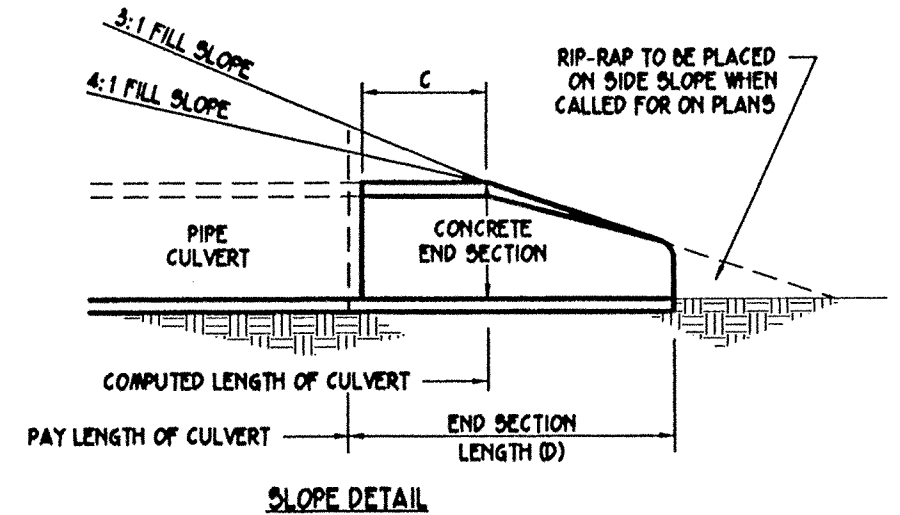
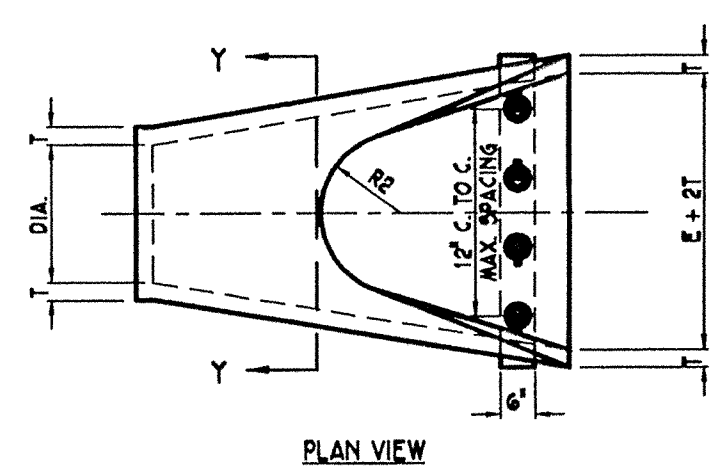
JAMES L. POZLEYK
REGISTERED
No. 19900533
STATE OF INDIANA
PROFESSIONAL ENGINEER
CERTIFIED BY

DETAILS RETAIL A

WEST CARMEL CENTER
106th STREET & US 421
CARMEL, INDIANA

DATE:	04/16/99
SCALE:	AS NOTED
DRAWN BY:	PEO
CHK'D BY:	JLP
JOB NO.:	99-515
REVISIONS	
RE-155UE	10/11/99
RE-155UE	10/19/99
SHEET NO. C5.1 OF	

FILED
OCT 28 1999
OFFICE OF HAMILTON COUNTY SURVEYOR



CONCRETE IN THESE END SECTIONS SHALL BE THE SAME GRADE AND STRENGTH AS SPECIFIED FOR REINFORCED CONCRETE PIPE, A.S.T.M. DESIGNATION C-76 (as set out in standard specifications.)

REINFORCEMENT IN THE "C" PORTION SHALL BE THE SAME AS SPECIFIED FOR REINFORCED CONCRETE, A.S.T.M. DESIGNATION C-76 FOR THE SIZE OF CONNECTING PIPE. (as set out in standard specifications.)

REINFORCEMENT IN THE "D" PORTION SHALL HAVE A CROSS SECTIONAL AREA EQUAL TO THAT OF ONE LAYER OF STEEL IN THE "C" PORTION.

THE END OF THE PIPE CULVERT SHALL BE PLACED IN THE CONCRETE END SECTION SO THAT THE FLOW LINES ARE FLUSH. THE JOINT SHALL BE COMPLETELY FILLED WITH MORTAR.

IN 3:1 OR 4:1 FILL SLOPE, CHANGE TO THE SLOPE OF THE END SECTION IN A SMOOTH, PLEASING TRANSITION APPROXIMATELY 10' IN LENGTH.

VARIATIONS IN DIMENSIONS - THE THICKNESS OR THE POSITION OF STEEL, AND THE INTERNAL DIAMETER OF THE PIPE SHALL CONFORM WITH THE VARIATIONS IN DIMENSIONS AS PROVIDED IN THE SPECIFICATIONS FOR REINFORCED CONCRETE CULVERT, STORM DRAIN, AND SEWER PIPE, A.S.T.M. DESIGNATION C-76.

WHERE VITRIFIED CLAY CULVERT OR CAST IRON CULVERT PIPE IS USED, A PIPE END SECTION COMPATIBLE TO THAT AS SHOWN FOR METAL OR CONCRETE SHALL BE FURNISHED AND SHALL BE AS APPROVED BY THE ENGINEER. EXCEPT IN AREAS OF ACID OR RING WATER, THEN THE USE OF METAL END SECTION IS PROHIBITED.

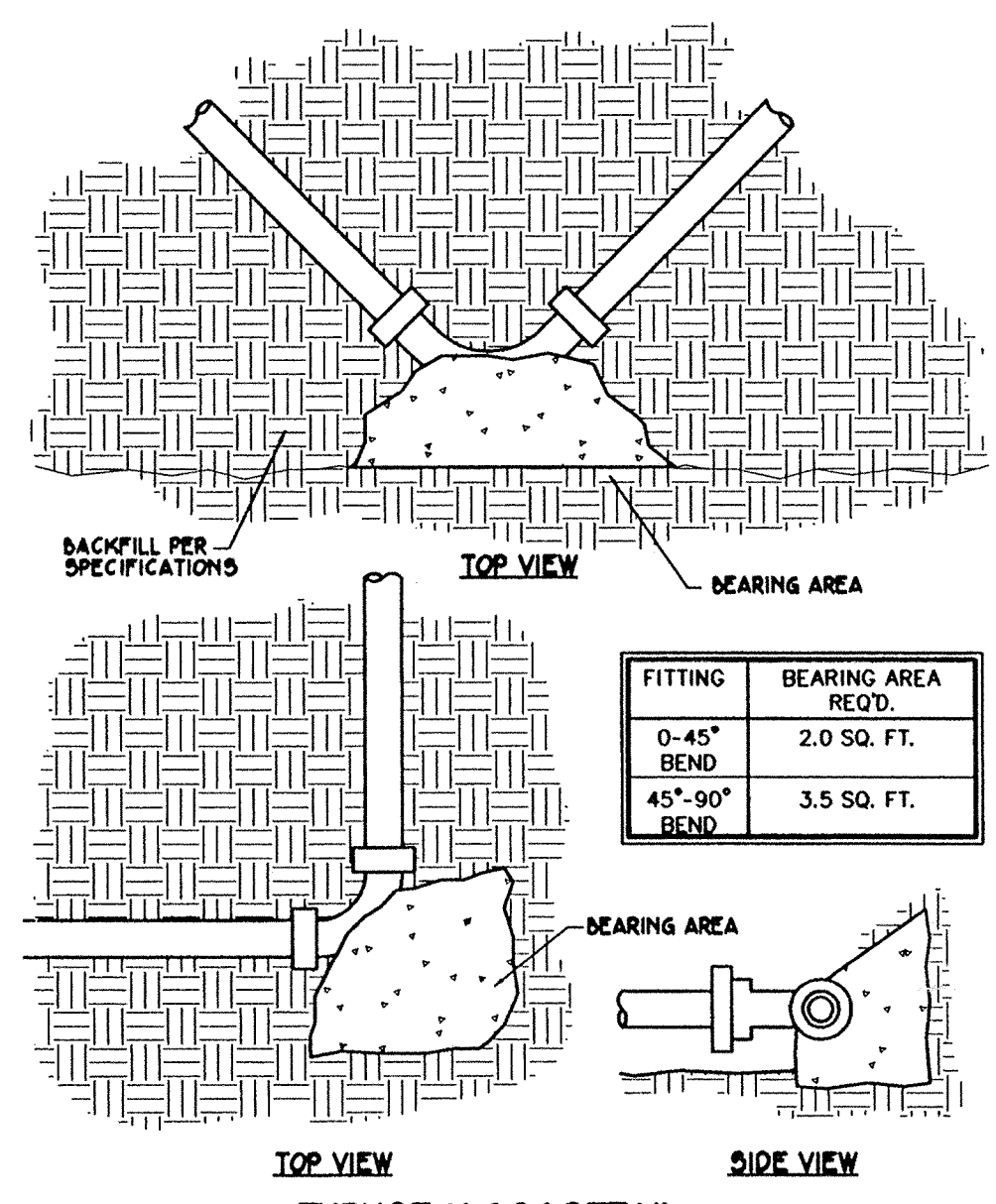
CONCRETE PIPE TOE ANCHORS SHALL BE REQUIRED ON ALL CONCRETE PIPE END SECTIONS.

PRECAST CONCRETE END SECTION

NOTE: METAL PIPE END SECTIONS MAY BE USED WITH CONCRETE PIPE PROVIDING THE METHOD IS APPROVED BY THE ENGINEER PRIOR TO INSTALLATION OF PIPE.

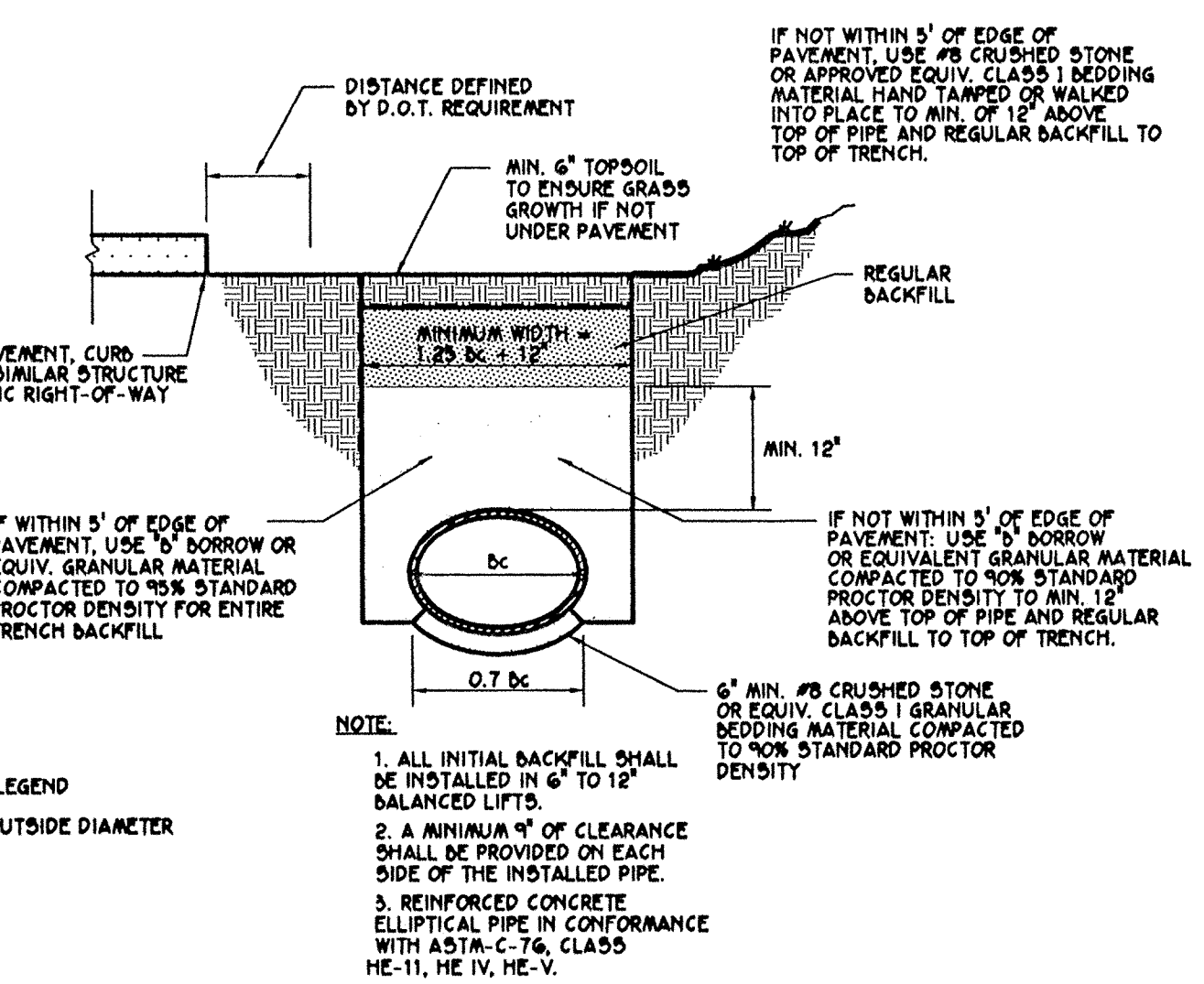
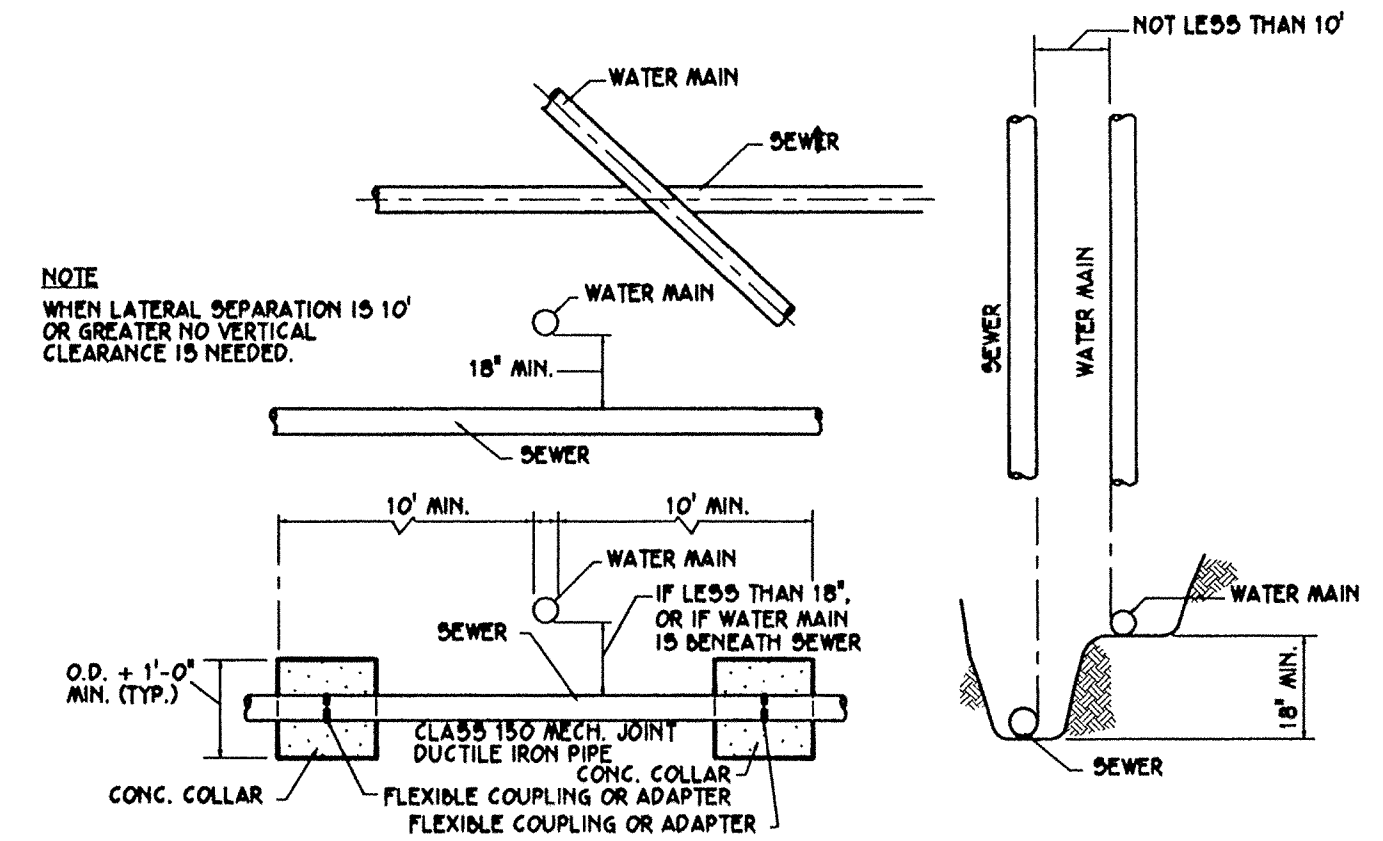
DIA.	T	A*	C*	D*	E*	K	R1	R2	APPROX. WEIGHT
12"	2"	5"	4'-3"	6'-2"	2'-0"	1.3	10 1/8"	9"	800
15"	2 1/4"	7"	4'-0"	6'-3"	2'-6"	1.5	12 1/2"	11"	1100
18"	2 1/2"	11"	4'-1"	6'-2"	3'-0"	1.8	15 1/2"	12"	1300
21"	2 3/4"	11"	3'-6"	6'-3"	3'-6"	2.1	16 1/8"	13"	1500
24"	3"	12"	2'-8"	6'-3"	4'-0"	2.3	16 3/16"	14"	1800
27"	3 1/4"	13"	2'-5"	6'-3"	4'-6"	2.6	18 3/16"	14 1/2"	2100
30"	3 1/2"	14"	1'-10"	6'-3"	5'-0"	2.9	18 1/2"	15"	2400
33"	3 3/4"	15"	3'-6"	6'-3"	5'-6"	3.1	23 3/4"	17 1/2"	4100
36"	4"	17"	3'-1"	6'-3"	6'-0"	3.4	24 3/16"	20"	4200

* TOLERANCE ±1"



FITTING	BEARING AREA REQ'D.
0-45° BEND	2.0 SQ. FT.
45°-90° BEND	3.5 SQ. FT.

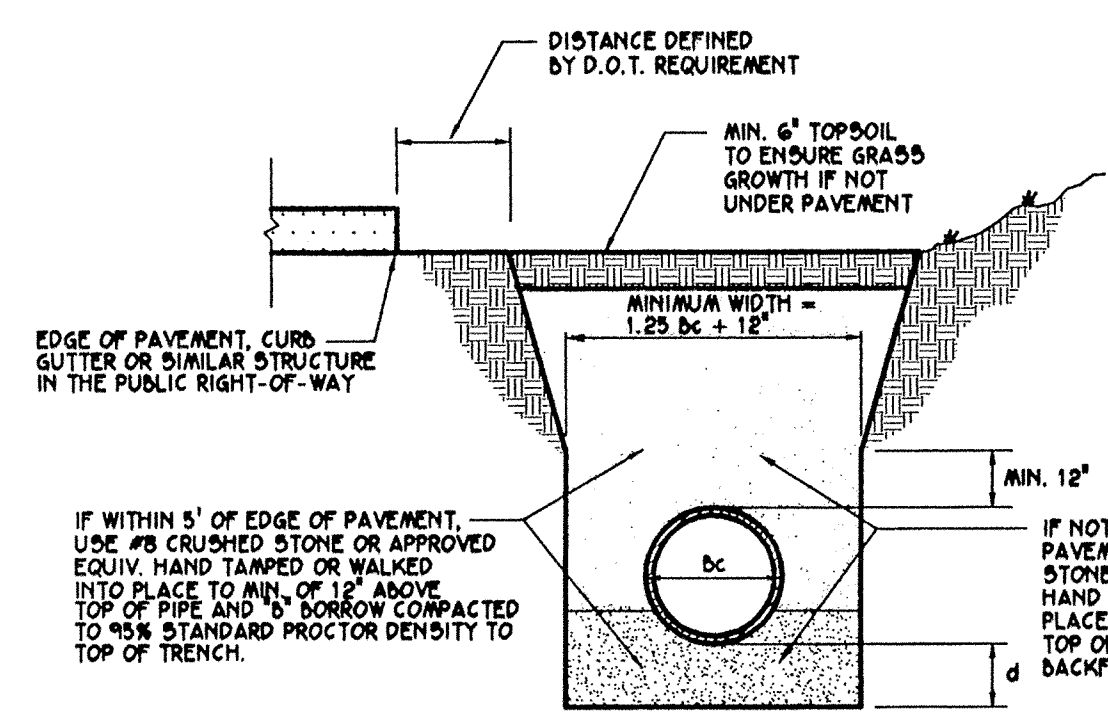
MIN. CROSSOVER & SEPARATION REQUIREMENTS FOR WATER MAINS & SEWERS



REINFORCED CONCRETE HORIZ. ELLIPTICAL PIPE BEDDING DETAIL

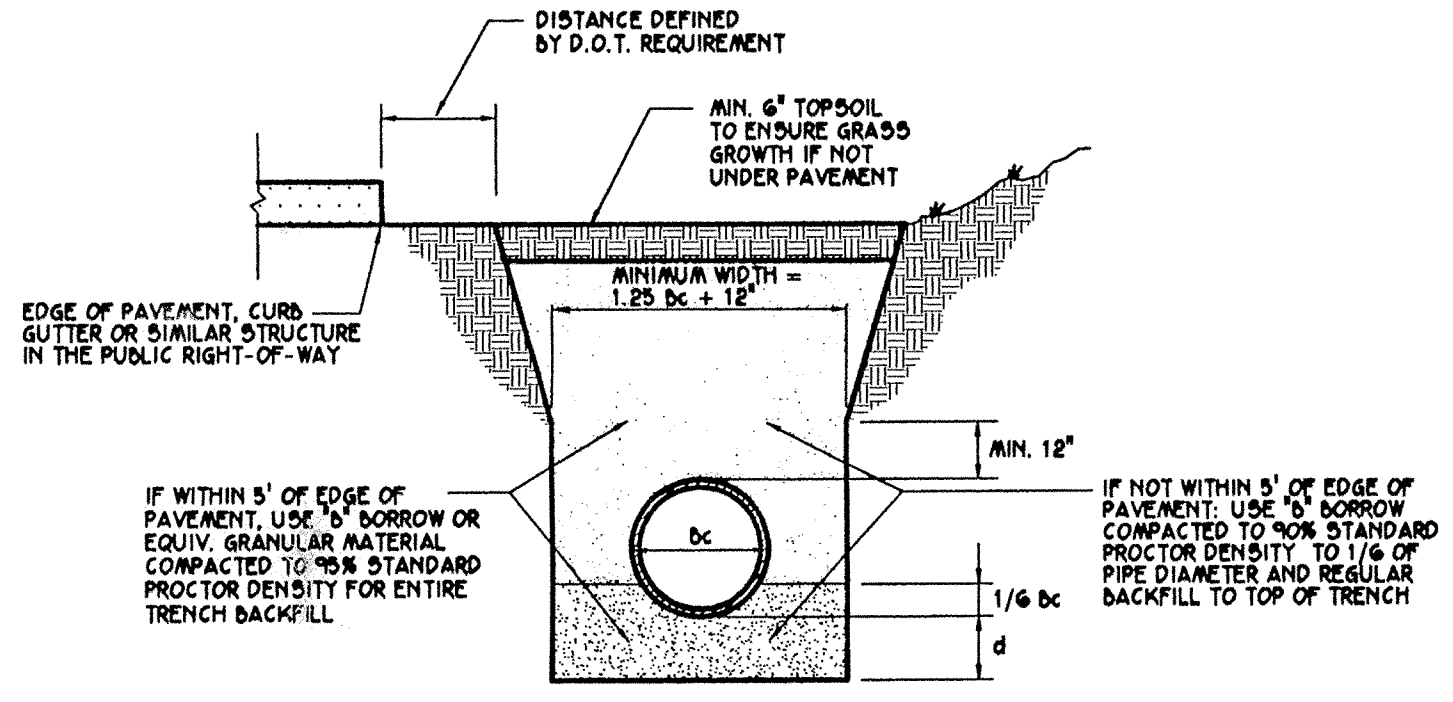
NOTE:

1. ALL INITIAL BACKFILL SHALL BE INSTALLED IN 6" TO 12" BALANCED LIFTS.
2. A MINIMUM 9" OF CLEARANCE SHALL BE PROVIDED ON EACH SIDE OF THE INSTALLED PIPE.
3. REINFORCED CONCRETE ELLIPTICAL PIPE IN CONFORMANCE WITH ASTM-C-76, CLASS ME-11, HE IV, HE-V.



PLASTIC PIPE (PVC & HDPE) BEDDING DETAIL

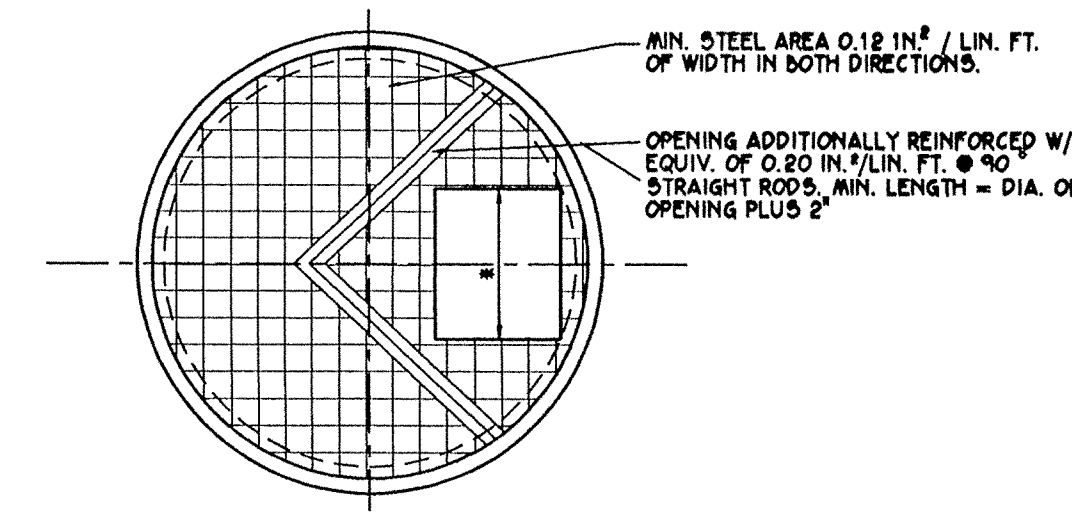
D	d (MIN)
24" & SMALLER	6"
30" TO 60"	6"
66" & LARGER	6"



REINFORCED CONCRETE PIPE (RCP) BEDDING DETAIL

D	d (MIN)
24" & SMALLER	5"
30" TO 60"	4"
66" & LARGER	6"

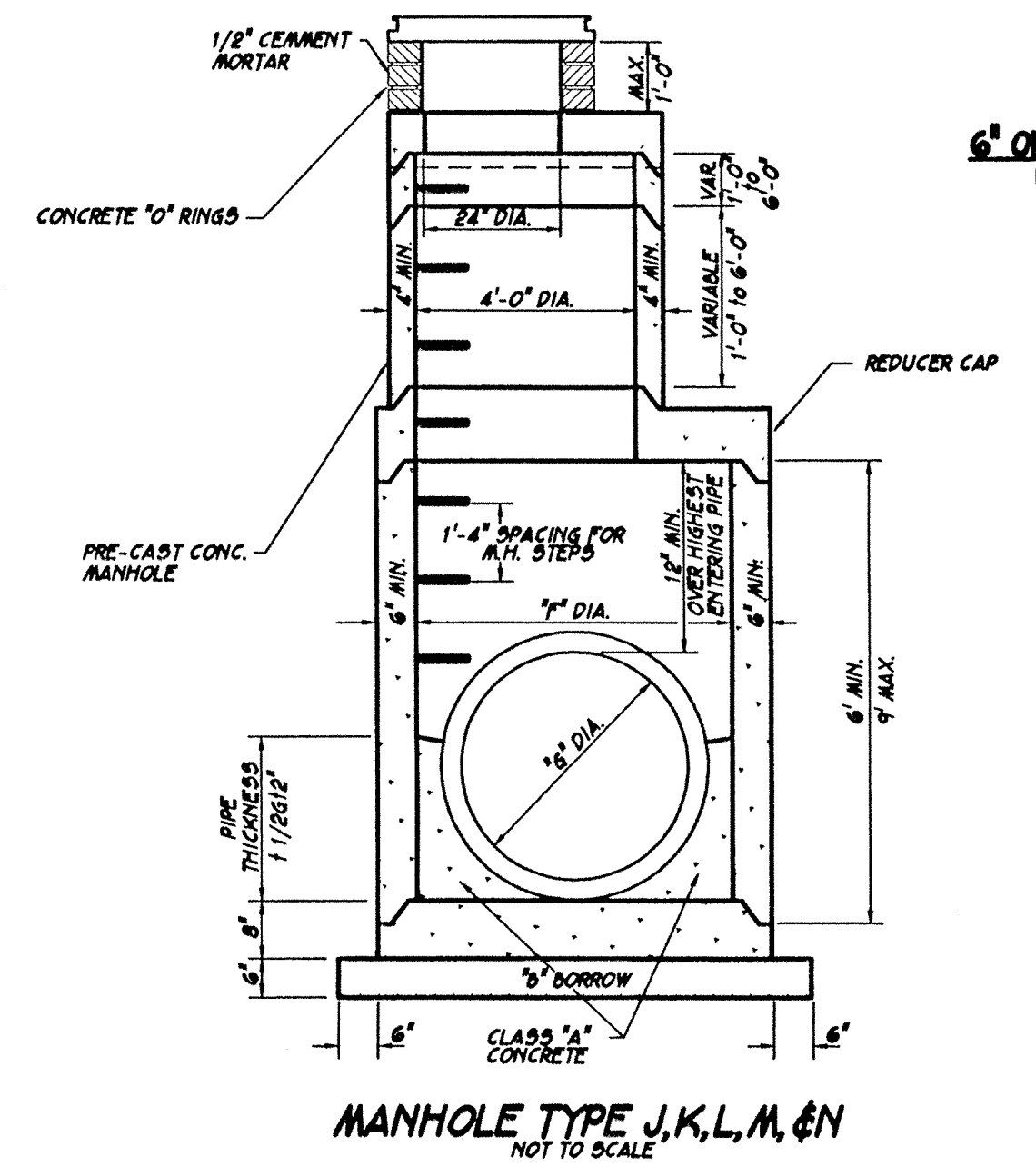
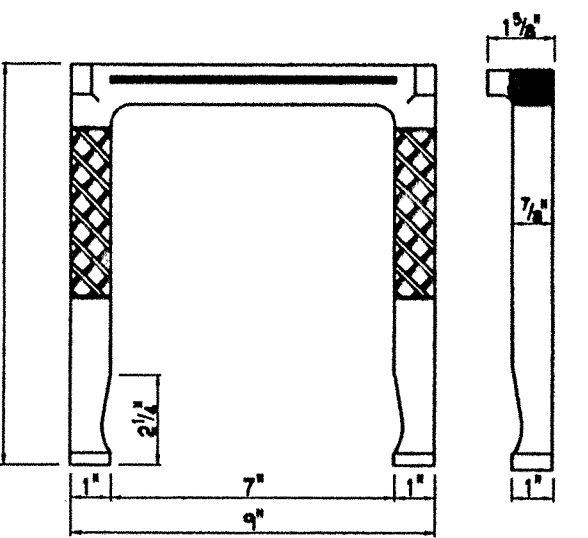
SEC. DIA.	H ¹
48"	5'-0"
60"	6'-0"
72"	7'-2"
84"	8'-6"
102"	10'-11"
108"	10'-8"



COVER CAP FOR PRE-CAST CONCRETE MANHOLE COVER

- 22" x 35" OPENING FOR CASTINGS TYPE R-5287-5010
- 24" DIA. OPENING FOR CASTINGS TYPE R-3010, R-1772-C

MANHOLE STEP I.S.D. 1980-C

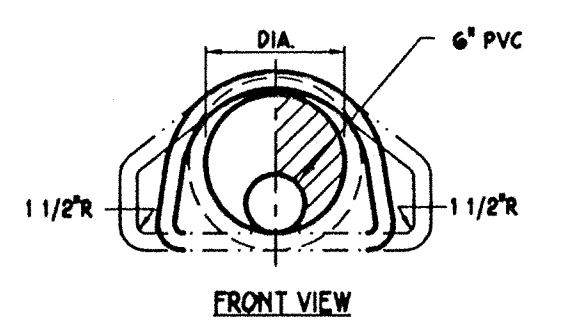


MANHOLE TYPE J, K, L, M, & N

TYPE	"G"	"H"	MAXIMUM PIPE SIZE RT. D. TO MAINLINE	MAXIMUM PIPE SIZE FOR MAINLINE
J	24"x36"	60"	33"	36"
K	36"x48"	72"	36"	48"
L	48"x54"	96"	48"	54"
M	54"x72"	102"	66"	72"
N	72"x84"	108"	72"	84"

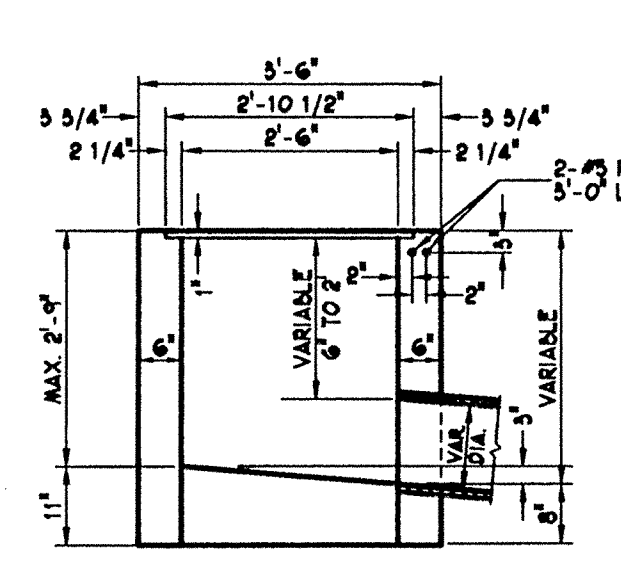
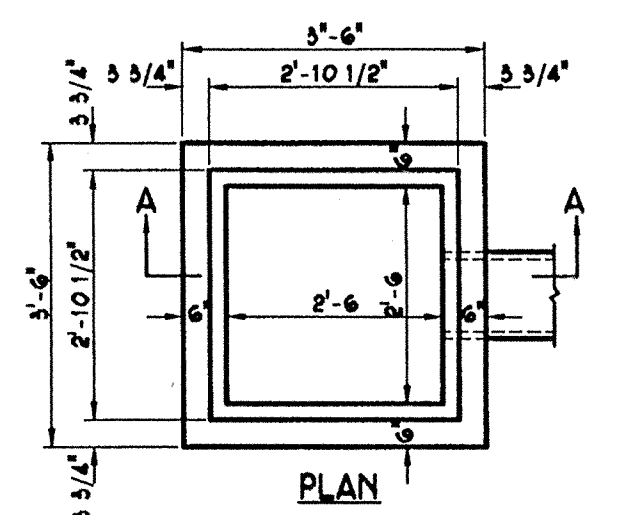
NOTE: DROP PIPE MAY BE USED WITH MANHOLE'S TYPE J THRU N AND SHALL BE REFERRED TO AS DROP MANHOLE TYPE J THRU N.

6" ORIFICE DETAIL



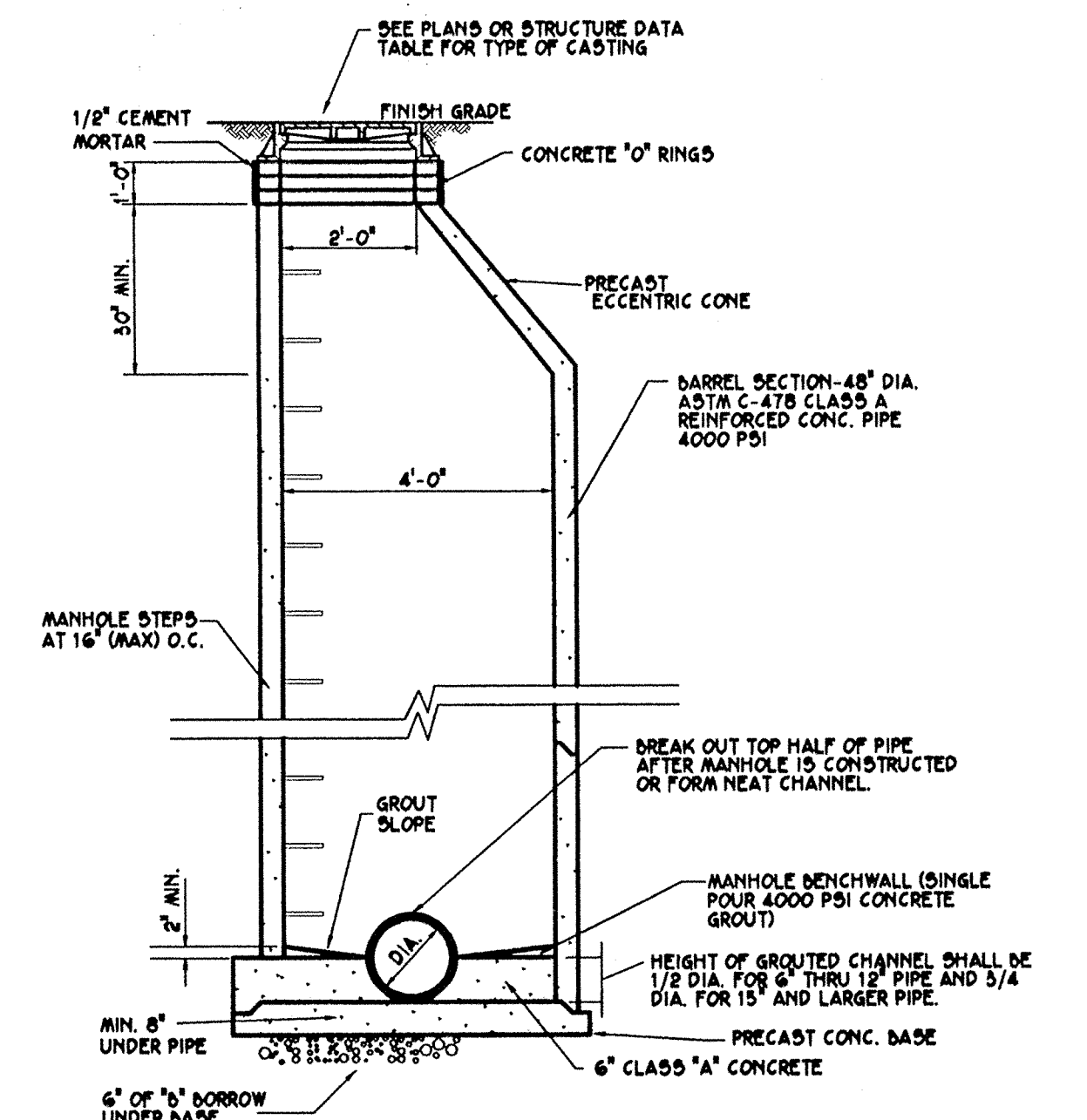
6" ORIFICE DETAIL

NOT TO SCALE



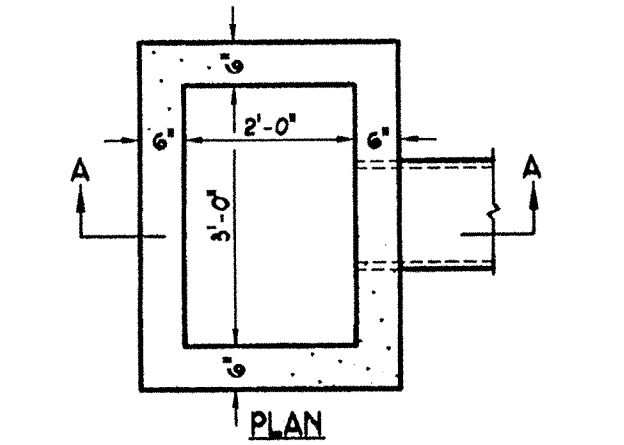
TYPE "N" INLET

NOT TO SCALE



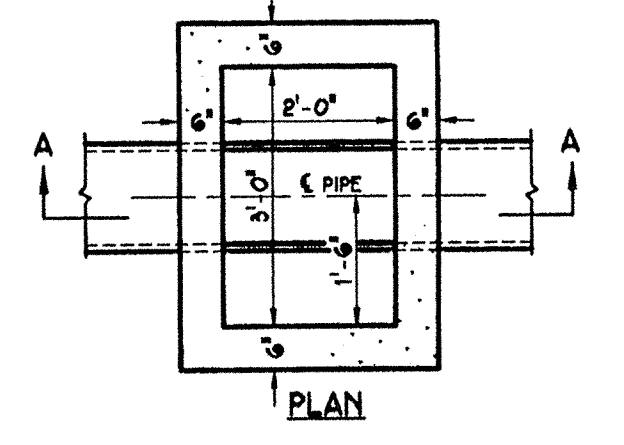
STORM MANHOLE TYPE "C"

NOT TO SCALE



TYPE "J" INLET

NOT TO SCALE



TYPE "M" INLET

NOT TO SCALE

GLENDALE PARTNERS / OLYMPIA PROPERTIES
 320 N MERIDIAN STREET SUITE 700
 INDIANAPOLIS, INDIANA 46205 (317) 547-5580
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JAMES L. POZDEKAT
 REGISTERED
 No. 19900533
 STATE OF INDIANA
 PROFESSIONAL ENGINEER
James L. Pozdek
 CERTIFIED BY

DETAILS RETAIL A

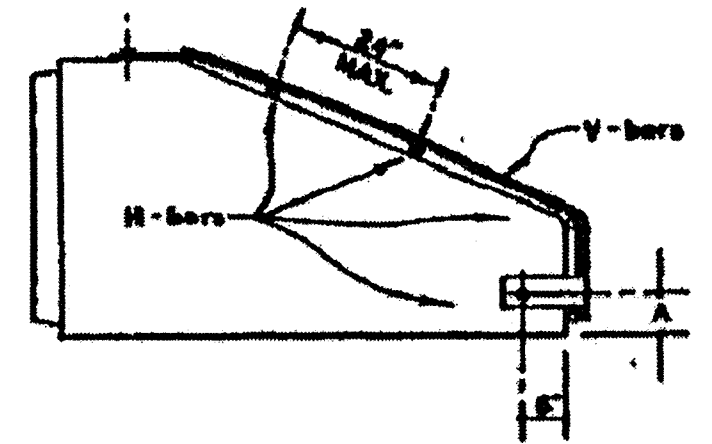
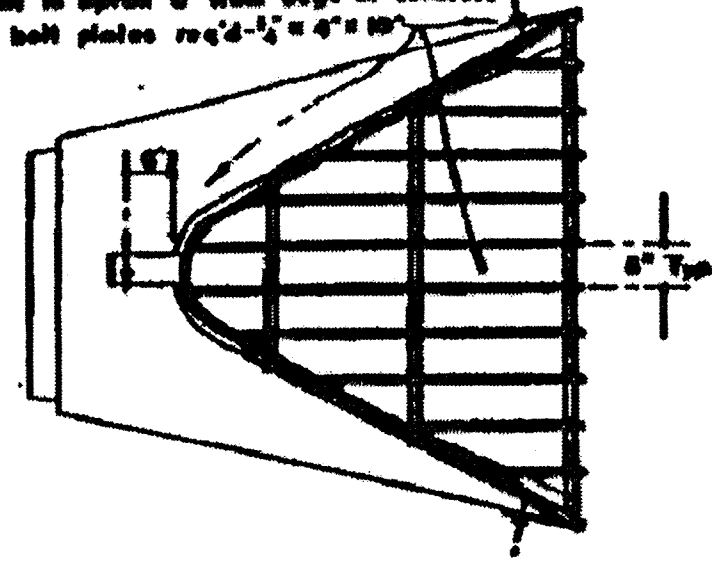
WEST CARMEL CENTER
 106th STREET & US 421
 CARMEL, INDIANA

DATE:	04/16/99
SCALE:	AS NOTED
DRAWN BY:	RED
CHKD BY:	JLP
JOB NO.:	99-315

REVISIONS
RE-189UE 10/19/99

SHEET NO. **C5.2**
 OF

3 bolt plates req'd 4" x 4" x 1/2"



NOTES:

1. BARS & PLATES ARE HOT-ROLLED STEEL.
2. BARS, PLATES & PIPE ARE FINISHED WITH 2 COATS OF ALUMINUM PAINT.
3. BOLTS ARE GALVANIZED.
4. SEE STD. PLATES A-10 & A-11 FOR APRON DIMENSIONS.
5. TRASH GUARDS WITH DIFFERENT DIAMETER BARS ARE AVAILABLE, SPECIAL ORDER.

Apron Size	V-bar Size	H-bar Size	No. of H-bars Req'd	Bolt Dia.	A' Dim.
18	3/4"	3/4"	3	1/2"	5
24	3/4"	3/4"	4	1/2"	7
30	3/4"	3/4"	4	1/2"	7 1/2
36	3/4"	1"	4	1/2"	10 1/2
42	3/4"	1"	4	1/2"	11
48	3/4"	1 1/4"	4	3/4"	12
54	3/4"	1 1/4"	4	3/4"	12
60	3/4"	1 1/4"	5	3/4"	14
72	3/4"	1 1/4"	5	3/4"	14
84	3/4"	1 1/4"	6	3/4"	15

REVISIONS	DATE	BY	DESCRIPTION
1	02-28-99	J.P.L.	ISSUED

TRASH GUARDS FOR CONC. APRONS			
APPROVED BY	SCALE	NONE	MATERIAL
<i>[Signature]</i>	1-27-72		STEEL
	APPR	J.P.L.	A-27

OFFICE OF THE HAMILTON COUNTY SURVEYOR

CURB INLET (Page 1)

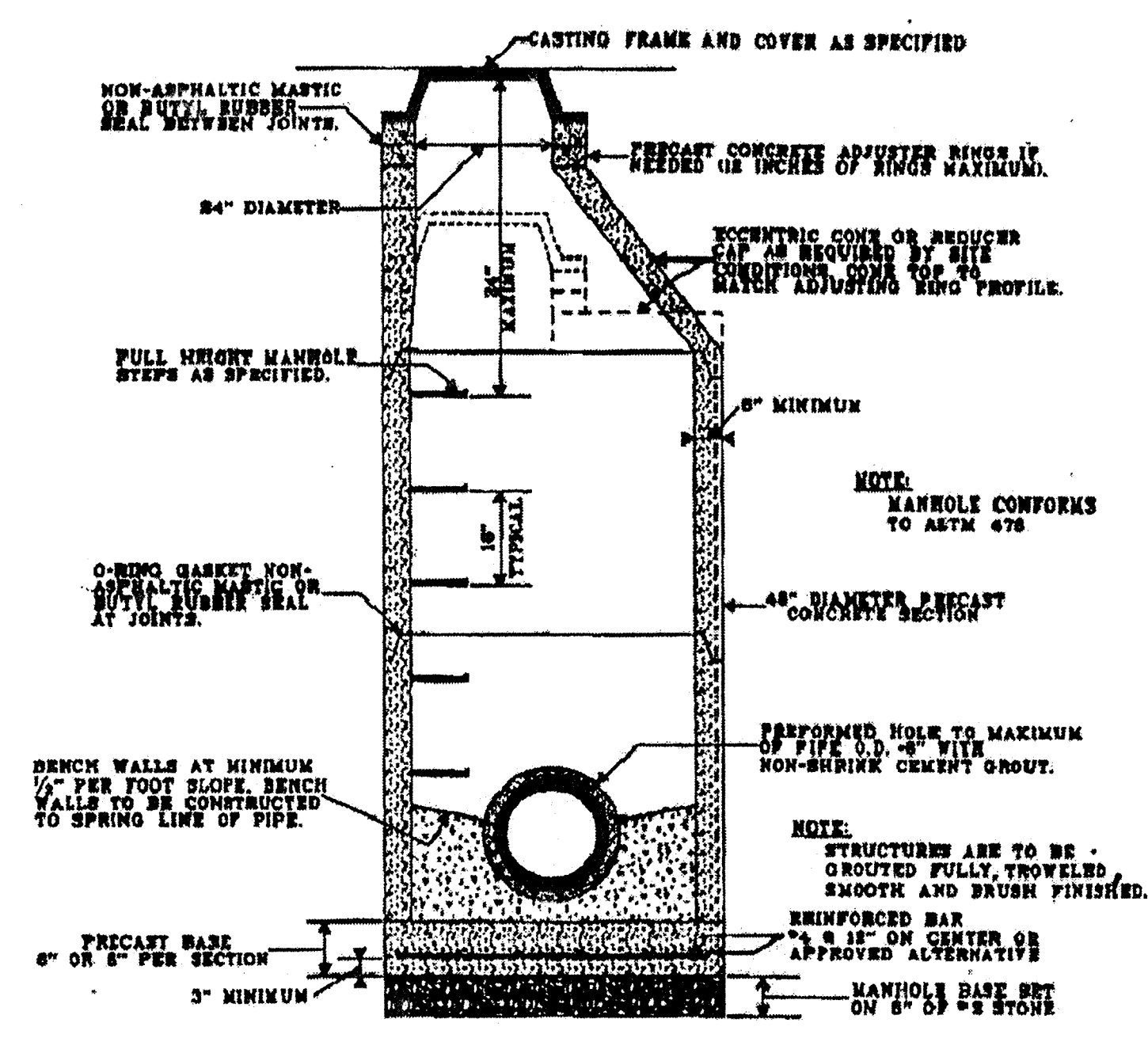
CURB INLET TABLE

PIPE SIZE (INCHES)	STRUCTURES LESS THAN 38" FROM T/C TO INVERT (INCHES)	STRUCTURES GREATER THAN 48" FROM T/C TO INVERT	ANGLE AND QUALITY OF PIPES WILL REQUIRE SPECIAL DESIGN	STEPS REQUIRED	CURB CASTING *R-3501N	CASTING *3501 TL & TR
12 TO 18	24 x 24	***	DESIGN APPROVAL	NO	YES	YES
12 TO 21	30 x 30	***	DESIGN APPROVAL	NO	YES	YES
18 TO 21		MH/BOX	DESIGN APPROVAL	YES	YES	YES
21 TO 27	24 x 36	***	DESIGN APPROVAL	NO	NO	YES
12 TO 24	36 x 36	***	DESIGN APPROVAL	NO	YES	YES
24 OR LARGER	DESIGN APPROVAL	***	DESIGN APPROVAL	NO	NO	YES
24 OR LARGER		MH/BOX	DESIGN APPROVAL	YES **	YES	YES

- * PIPES NO LARGER THAN 18" CAN BE USED IN THE 2' SIDE OF THIS BOX.
- ** INCOMING AND OUT GOING PIPES EFFECT STEPS IN THIS STRUCTURE.
- *** SPECIAL NOTE: STRUCTURES DEEPER THAN 48" FROM T/C TO INVERT WILL BE A M.H. OR A BOX WITH STEPS UNLESS SPECIAL DESIGN IS APPROVED
- SPECIAL NOTE: STRUCTURES WILL BE DESIGNED FOR MAXIMUM FLOW IN PIPES.
- SPECIAL NOTE: COUNTY MAY REQUIRE STEPS TO BE INSTALLED AFTER STRUCTURE IS SET, TO IMPROVE ACCESS

HAMILTON COUNTY SURVEYOR'S OFFICE
STANDARD PLAN

OFFICE OF THE HAMILTON COUNTY SURVEYOR



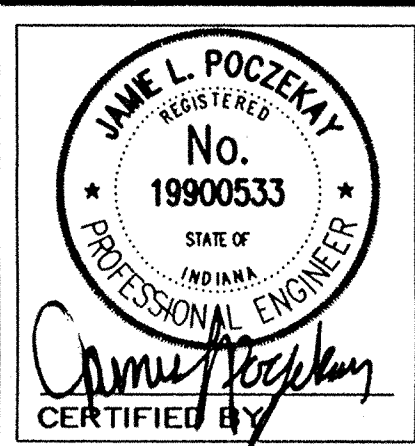
STANDARD MANHOLE
FOR PIPE SIZES 12" THRU 24"

HAMILTON COUNTY SURVEYOR'S OFFICE

DATE: 09/30/99
SCALE: AS NOTED
DRAWN BY: PED
CHK'D BY: JLP
JOB NO.: 99-313

APPROVED: *[Signature]* 10 JAN 95
KENTON C. WARD, HAMILTON COUNTY SURVEYOR

STANDARD PLAN
95-9



DETAILS
RETAIL A

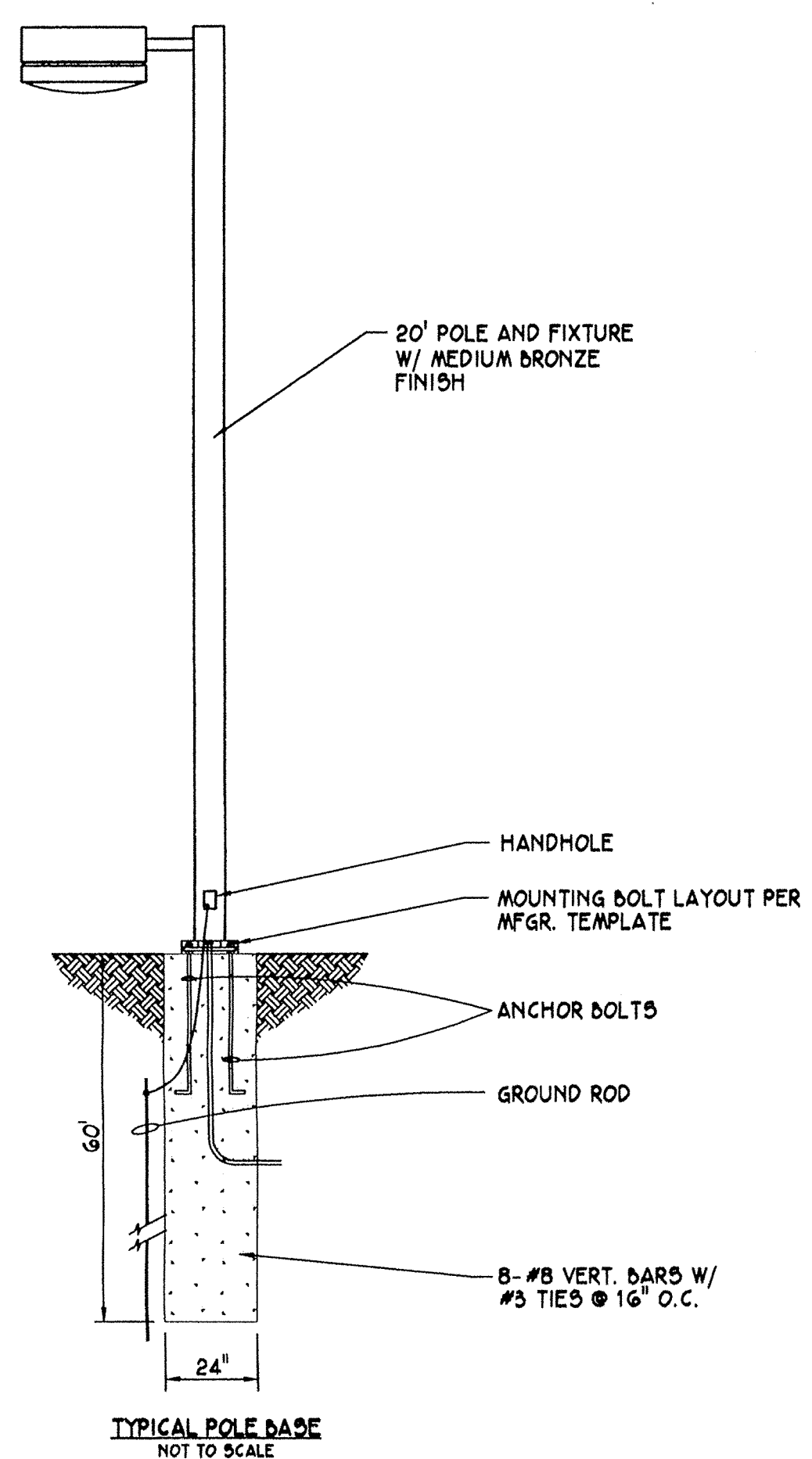
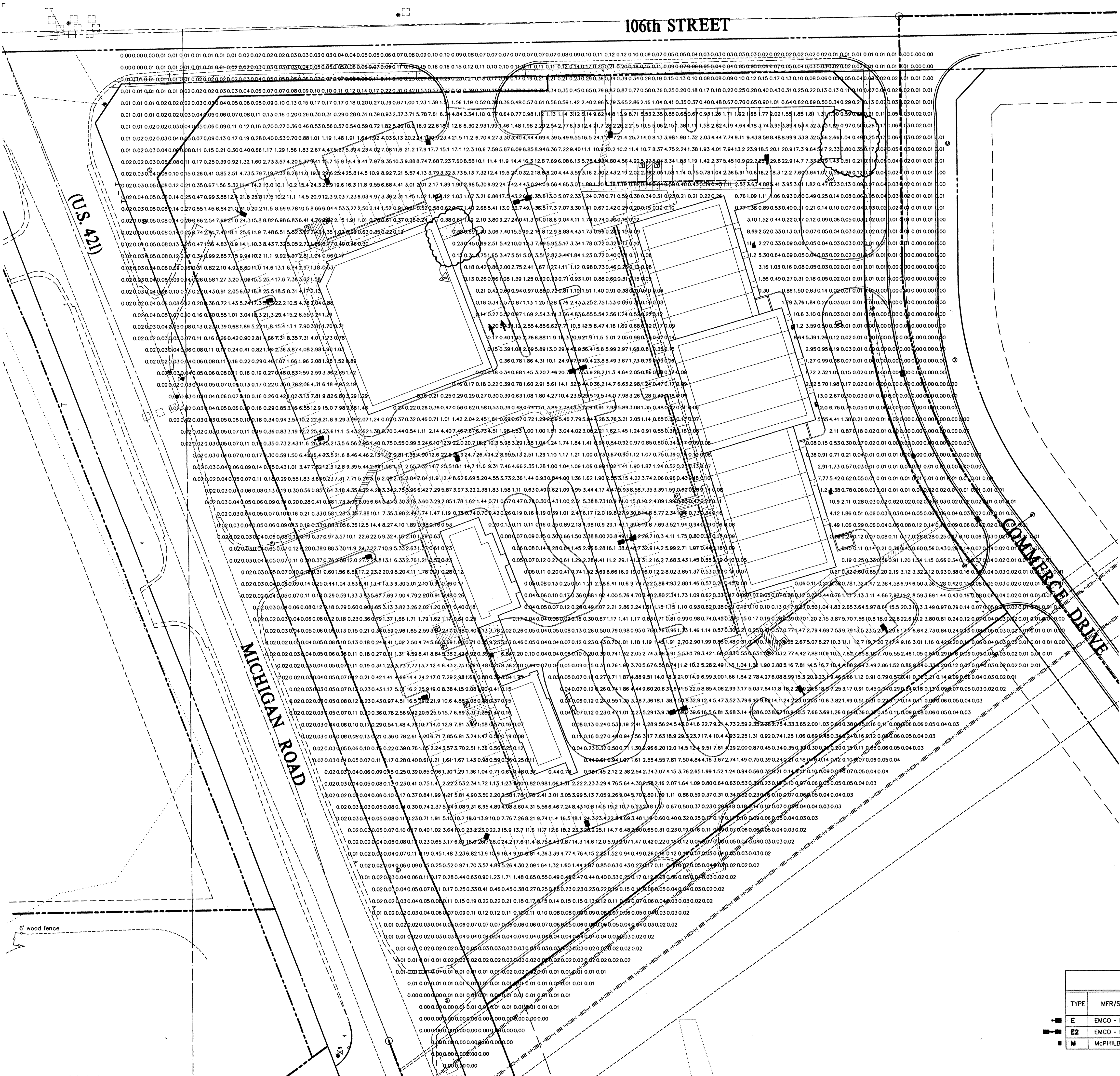
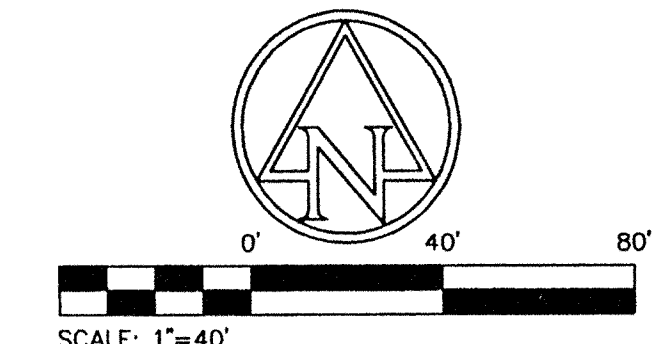
WEST CARMEL CENTER
108th STREET & US 421
CARMEL, INDIANA

DATE	REVISIONS
09/30/99 <td></td>	
AS NOTED <td></td>	
PED <td></td>	
JLP <td></td>	
99-313 <td></td>	

SHEET NO.
C5.3
OF

FILED
OCT 28 1999
OFFICE OF HAMILTON COUNTY SURVEYOR

106th STREET

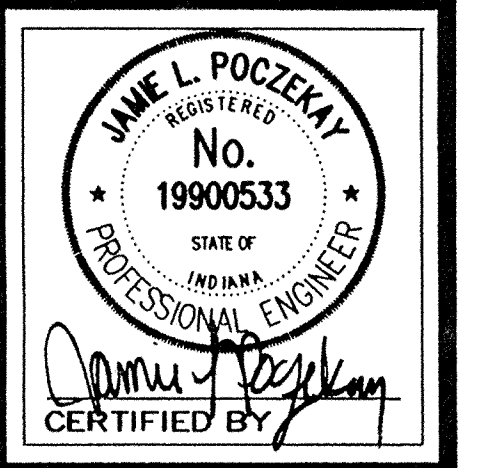


LIGHTING SCHEDULE

TYPE	MFR/STYLE	HEIGHT POLE OVERALL	WATTS/LAMP	DIST	LUMENS	LLF	TILT	QUANTITY PER POLE	TOTAL QUANTITY
E	EMCO - ECOLUME	20'	1000/MH	3 w/ HSS	107,800	1		1	1
E	EMCO - ECOLUME	20'	1000/MH	3	107,800	1		2	2
M	McPHILBEN - 101/102	12'	175/MH	WIDE	14,000	1		1	5

GLENDALE PARTNERS / OLYMPIA PROPERTIES
 320 N. MERIDIAN STREET SUITE 700
 INDIANAPOLIS INDIANA

AMERICAN CONSULTING ENGINEERS, INC.
 ARCHITECTS
 4165 MILLERSVILLE ROAD INDIANAPOLIS, INDIANA 46205 (317) 547-5580
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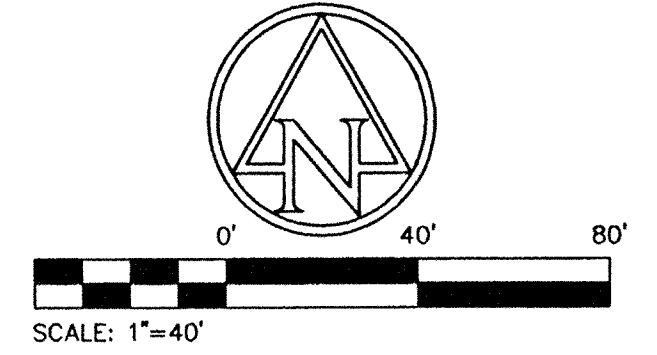
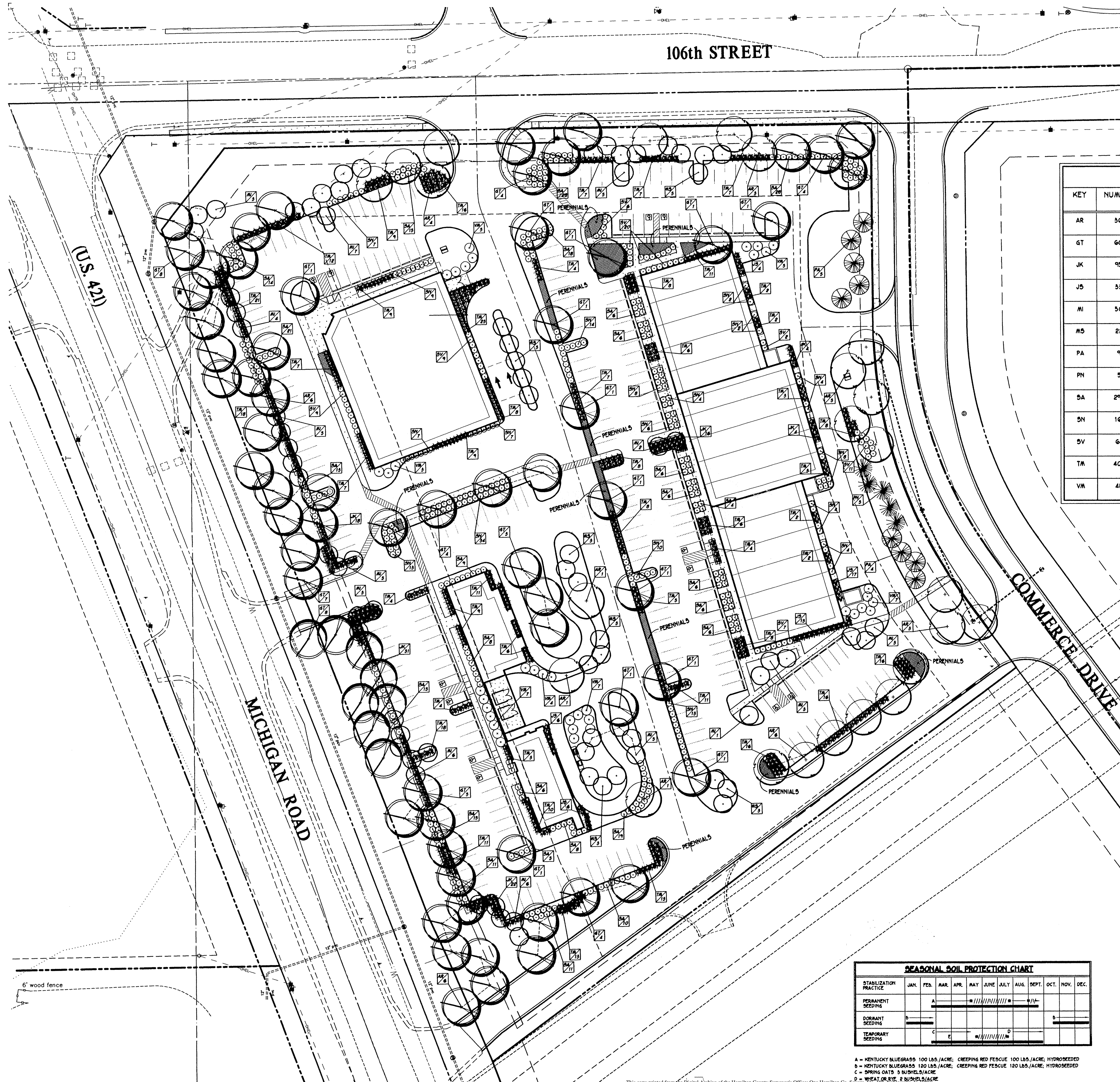
LIGHTING PLAN RETAIL A

WEST CARMEL CENTER
 106th STREET & US 421
 CARMEL, INDIANA

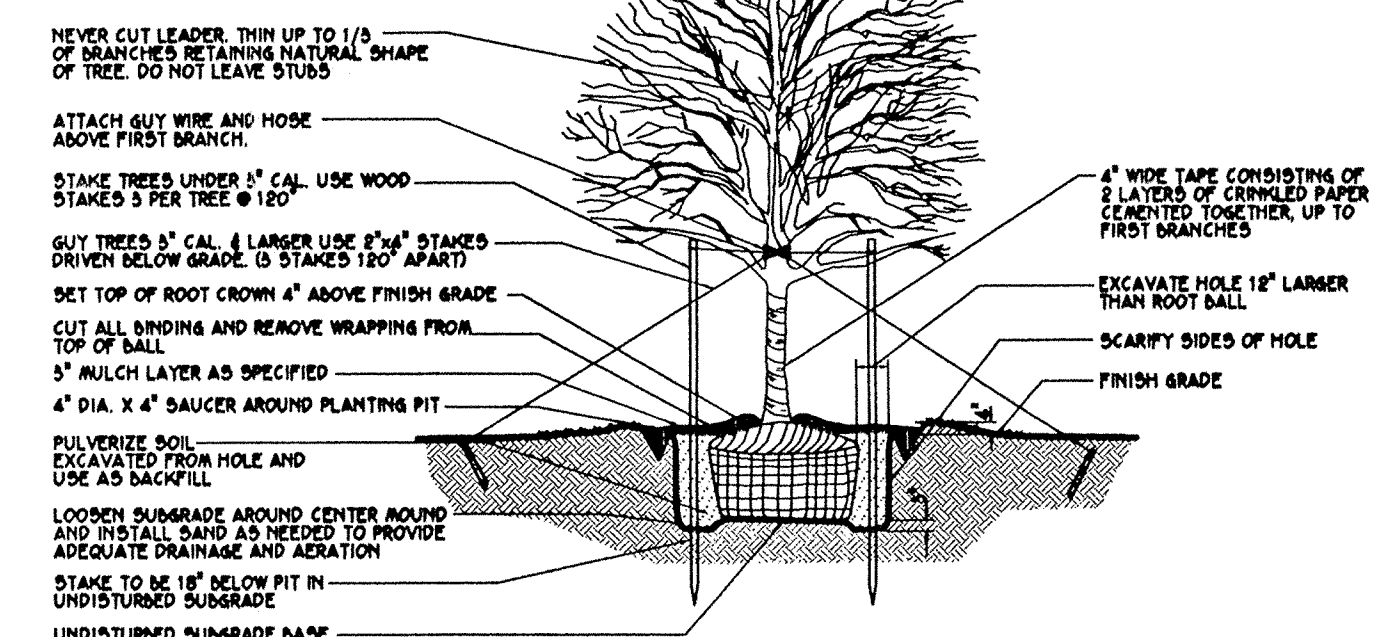
DATE:	04/16/99
SCALE:	1"=40'
DRAWN BY:	PED
CHKD BY:	JLP
JOB NO.	98-475

REVISIONS	
1	CARMEL TAC 05/18/99
2	CARMEL TAC 06/02/99

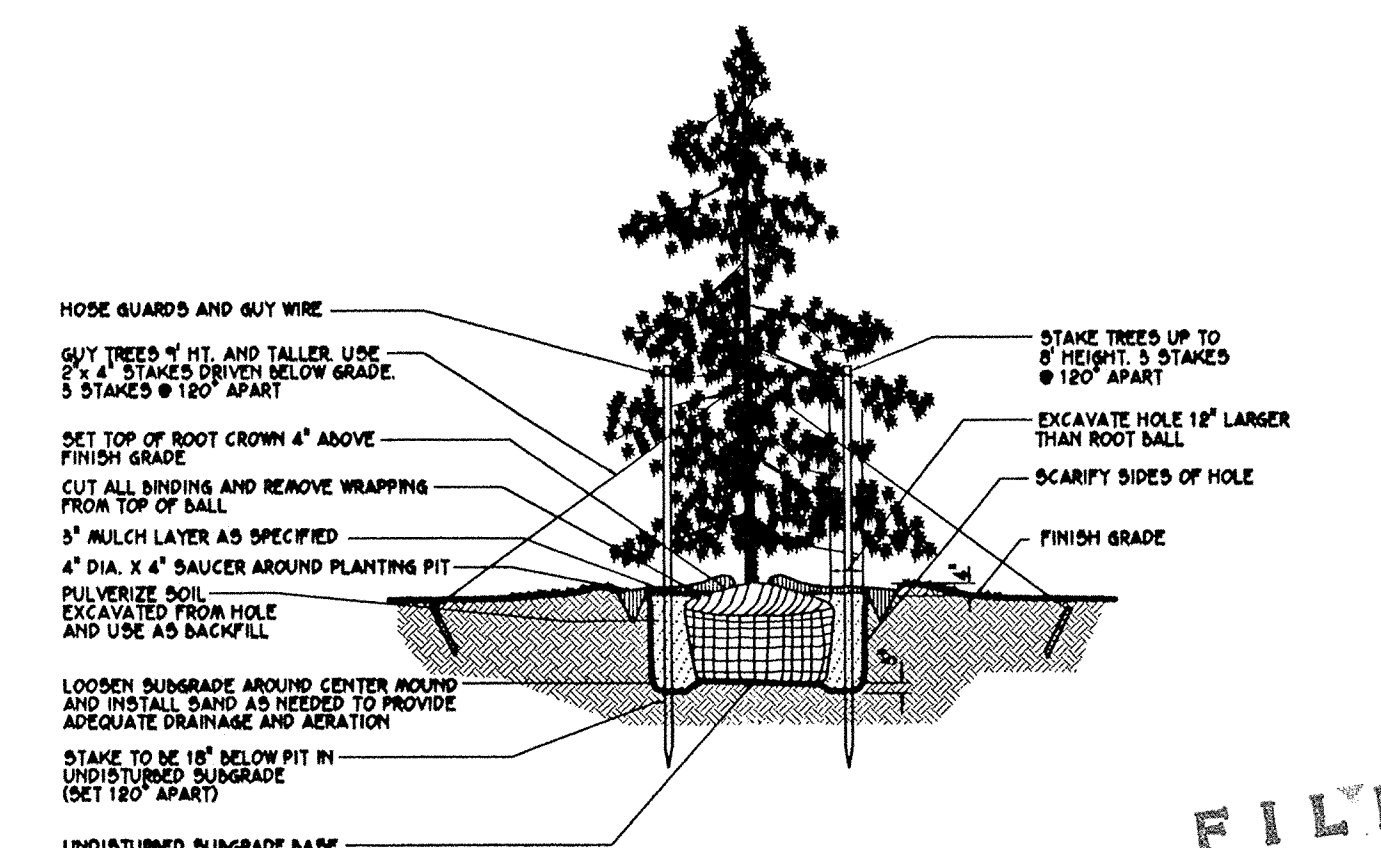
SHEET NO. **C6.1**
 OF



PLANTING SCHEDULE					
KEY	NUMBER	BOTANICAL NAME	COMMON NAME	PLANTING SIZE	REMARKS
AR	36	ACER RUBRUM	RED MAPLE	2 1/2 CAL.	b & b, FULL TOP
GT	60	GLEDITSIA TRIACANTHOS VAR. INERMIS 'SKYLINE'	SKYLINE HONEY LOCUST	2 1/2 CAL.	b & b, FULL TOP
JK	95	JUNIP. CHIN. KALLAY	KALLAY JUNIPER	18"	CONT. PLANT 4' O.C.
JS	33	JUNIP. CHIN. 'SARGENTI'	SARGENT JUNIPER	18"	CONT. OR b & b
MI	56	MALUS 'INDIAN MAGIC'	INDIAN MAGIC CRABAPPLE	1 1/2 CAL.	b & b, FULL TOP
MS	22	MALUS 'SUGAR TYNE'	SUGAR TYNE CRABAPPLE	1 1/2 CAL.	b & b, FULL TOP
PA	9	PICEA ADIES	NORWAY SPRUCE	8' HT.	b & b, BRANCHED FULL TO GROUND
PN	5	PINUS NIAGRA	AUSTRIAN PINE	8' HT.	b & b, BRANCHED FULL TO GROUND
SA	298	SPIRAEA DUM. x 'ANTHONY WATERER'	ANTHONY WATERER SPIREA	18"	CONT. PLANT 4' O.C.
SN	161	SPIRAEA NIPPONICA	SNOWBOUND SPIREA	18"	CONT. PLANT 4' O.C.
SV	64	SYRINGA PAT. 'MISS KIM'	MISS KIM DWARF LILAC	18"	CONT. PLANT 4' O.C.
TM	408	TAXUS x MEDIA	SPREADING YEW	18"	CONT. OR b & b PLAN 4' O.C.
VM	48	VIBURNUM DENTATUM 'CARDINAL'	CARDINAL VIBURNUM	24"	b & b, PLANT 5' O.C.



SHADE TREE PLANTING DETAIL
NOT TO SCALE



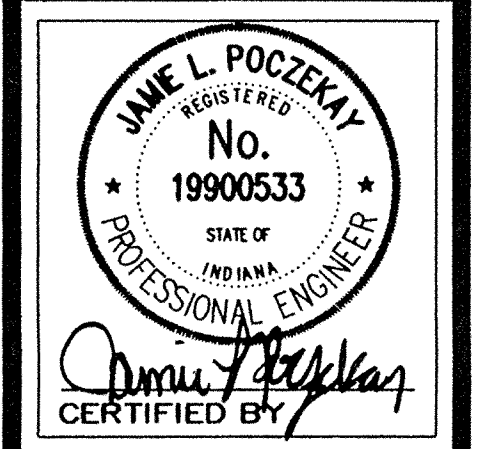
EVERGREEN TREE PLANTING DETAIL
NOT TO SCALE

SEASONAL SOIL PROTECTION CHART												
STABILIZATION PRACTICE	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
PERMANENT SEEDING		A										
ORNBANK SEEDING		B										
TEMPORARY SEEDING		C										

A = KENTUCKY BLUEGRASS 100 LBS./ACRE, CREEPING RED FESCUE 100 LBS./ACRE, HYDROSEEDED
 B = KENTUCKY BLUEGRASS 120 LBS./ACRE, CREEPING RED FESCUE 120 LBS./ACRE, HYDROSEEDED
 C = SPRING OATS 9 BUSHELS/ACRE
 D = WHEAT OR RYE, 2 BUSHELS/ACRE
 E = ANNUAL RYEGRASS 40 LBS./ACRE (1 LB/1000 SQ. FT.)
 //||| = IRRIGATION NEEDED DURING JUNE, JULY, AUGUST AND/OR SEPTEMBER

GLENDALE PARTNERS / OLYMPIA PROPERTIES
 320 N. MERIDIAN STREET SUITE 700
 INDIANAPOLIS, INDIANA

AMERICAN CONSULTING ENGINEERS, INC.
 ARCHITECTS
 4165 MILLERSVILLE ROAD INDIANAPOLIS, INDIANA 46205 (317) 547-5380
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LANDSCAPE PLAN
RETAIL A

WEST CARMEL CENTER
 106th STREET & US 421
 CARMEL, INDIANA

DATE: 04/15/99
 SCALE: 1"=40'
 DRAWN BY: PED
 CHK'D BY: JLP
 JOB NO. 99-313

REVISIONS

SHEET NO.
C7.1
 OF

CAUTION !!
 THE LOCATIONS OF ALL EXISTING UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE BASED UPON ABOVE GROUND EVIDENCE (including, but not limited to, manholes, shafts, valves, and marks made upon the ground by others) AND ARE SPECULATIVE IN NATURE. THERE MAY ALSO BE OTHER EXISTING UNDERGROUND UTILITIES FOR WHICH THERE IS NO ABOVE GROUND EVIDENCE OR FOR WHICH NO ABOVE GROUND EVIDENCE WAS OBSERVED. THE EXACT LOCATIONS OF SAID EXISTING UNDERGROUND UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO ANY AND ALL CONSTRUCTION.

1-800-382-5544
 CALL TOLL FREE
 - INDIANA UNDERGROUND -

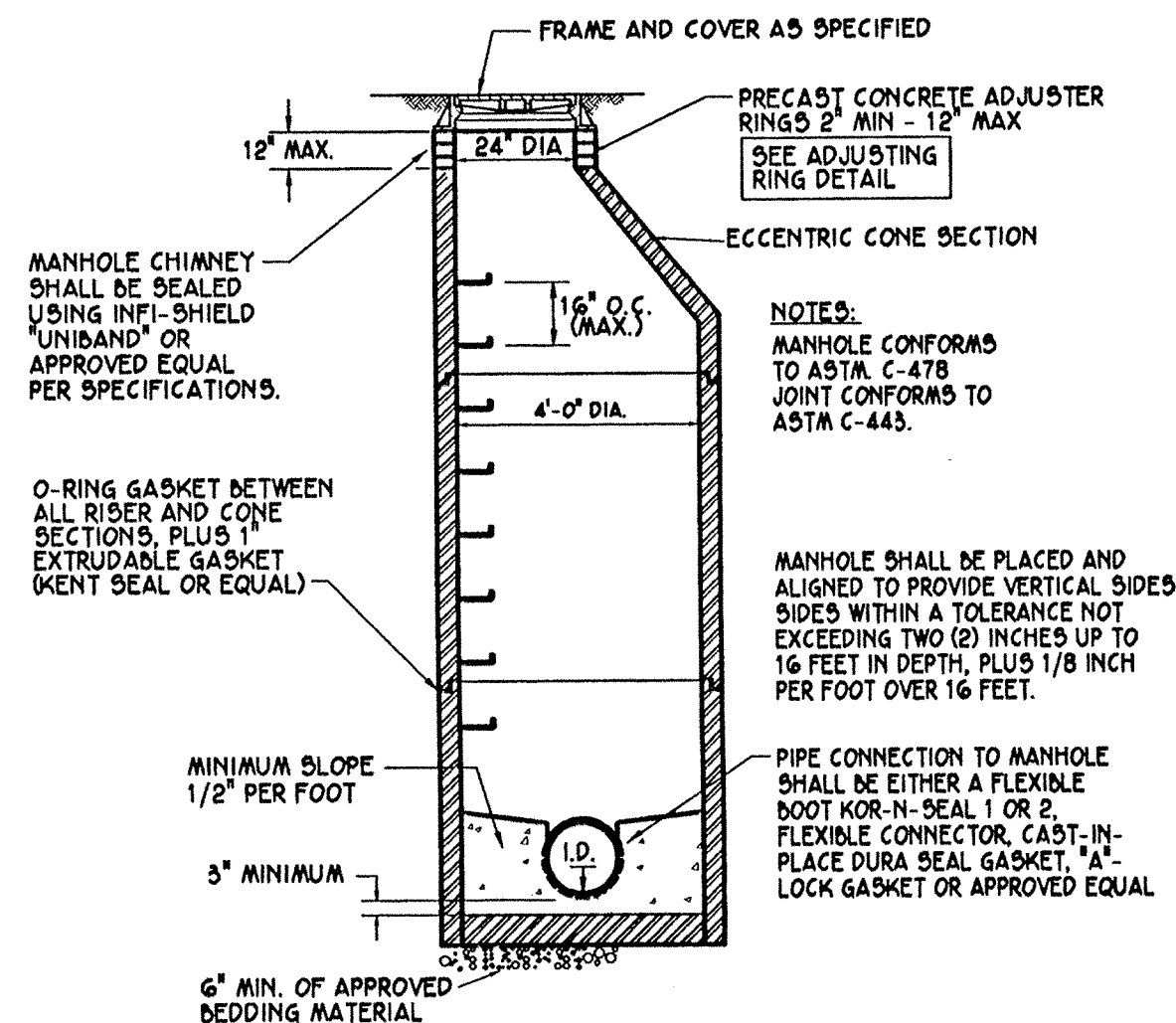
TYPICAL SANITARY SEWER SPECIFICATIONS
TO BE USED FOR PRIVATE SEWER DEVELOPMENT
WITHIN
CLAY TOWNSHIP REGIONAL WASTE DISTRICT
REVISED SEPTEMBER, 1999

- Standard specifications of the Clay Waste District and Indiana Department of Transportation shall apply for all work and materials. Pipe shall be installed in accordance with Section 715.
- Sanitary sewer pipe shall be PVC in accordance with ASTM D-3034 (SDR 35) and ASTM 2321. PVC pipe shall have grooved bell and gasket. The pipe shall be made of PVC plastic having a cell classification of 12454B.
- PVC Sewer fittings shall conform to the requirements of ASTM D-3034-89 specification. Fittings in sizes through 8" shall be molded in one piece with elastomeric joints and minimum socket depths as specified in sections 6.2 and 7.3.2. Fittings 10" and larger shall be molded or fabricated in accordance with section 7.11 with manufacturers standard pipe bells and gaskets. Wall thickness of fittings shall be SDR 26 as defined in section 7.4.1 of the specifications. Gaskets for elastomeric joints shall be molded with a minimum cross-sectional area of 0.20 square inches and conform to ASTM F-477 specification. Fittings shall be manufactured by Harco or equal.
- All sanitary manholes shall be "precast concrete" manholes in accordance with ASTM C-478 and Section 720. O-rings shall conform to C-443. Kent Seal or equivalent shall also be applied to all joints and between riser rings and castings. Manhole step spacing shall be no more than 16-inches.
 - Installation and operation of vacuum equipment and indicating devices must be in accordance with manufacturer's recommendations and performance specifications which have been provided by the manufacturer and accepted by the Engineer.
 - With the vacuum tester in place:
 - Inflate the compression band to forty (40) psi to effect a seal between the vacuum base and the structure.
 - Connect the vacuum pump to the outlet part with the valve open.
 - Draw a vacuum of ten (10) inches of Hg. and close the valve.
 - Accepted standards for leakage will be established from the elapsed time for a negative pressure change from ten (10) inches to nine (9) inches of mercury. The maximum allowable leakage rate for a four (4) foot diameter manhole must be in accordance with the following:

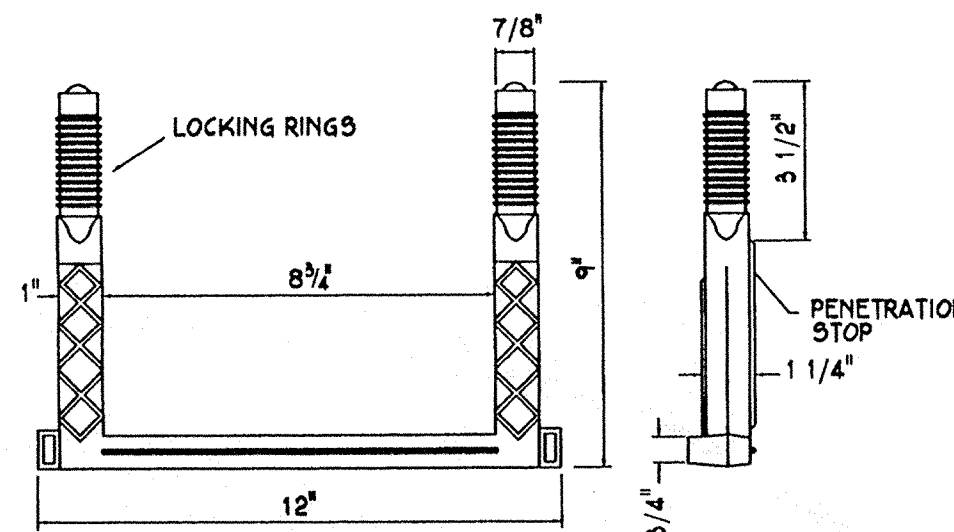
Manhole Depth	Minimum Elapsed Time for a Pressure Change of 1 Inch Hg.
10 feet or less	60 seconds
>10 feet but <15 feet	75 seconds
>15 feet but <25 feet	90 seconds

- For manholes five (5) feet in diameter, add an additional fifteen (15) seconds and for manholes six (6) feet in diameter, add an additional thirty (30) seconds to the time requirements for four (4) foot diameter manholes. For all manholes deeper than twenty-five (25) feet Engineer will determine the applicable minimum elapsed time.
- If the manhole fails the test, necessary repairs must be made and vacuum test and repairs must be repeated until the manhole passes the test.
 - If manhole joint sealants are pulled out during the vacuum test, the manhole must be disassembled and the joint sealants replaced.
 - Manholes will be subject to visual inspection with all visual leaks being repaired.
- Butyl rubber coating shall be applied around each manhole joint from 6-inches above to 6-inches below each joint. The appropriate primer shall be applied prior to applying the rubber coating. Inside joints to be filled with precast plug material.
 - The manhole chimneys including all riser rings shall be sealed using Infil-Shield "Uniband" or approved equal. Prior to placement, the top 4-inches of the manhole cone and casting frame shall be cleaned and primed. The Uniband shall extend from 3-inches below the top of the cone section to 2-inches over the flange of the manhole casting frame.
 - 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 establish grade. Maximum height of adjusting rings shall be 12-inches.
 - 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 works are constructed a minimum of 6 months after backfill has been in place.
 - The Contractor shall be responsible for verifying that all state highways, city, and county permits have been obtained by the developer prior to the start of construction.
 - The Contractor shall be required to furnish the developer's 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.
 - All sanitary sewer lines upon completion will be required to pass an infiltration weir test and a low pressure air test. Said test shall be conducted according to NCP Standard Method, and shall be witnessed by an Engineer and a representative of the Clay Waste District.
 - 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 percent deflection test results. (*The following are considered non-flexible pipes: concrete pipe, ductile iron pipe and cast iron pipe.) The deflection test shall be performed with a nine-point mandrel. Proving rings shall be available.
 - All mandrel testing shall be observed by a Professional Engineer for certification and a representative of the Clay Waste District.
 - The ends of laterals are to be plugged tight with a braced plastic disc or cap capable of withstanding a low pressure air test without leakage.
 - Bedding for flexible pipe shall be No. 8 crushed stone from 6-inches below the pipe to 12-inches above the pipe. Bedding for rigid pipe shall be No. 8 crushed stone from 6-inches below the pipe to the spring line of the pipe and from this point to 12-inches above shall be fill sand or equivalent. Manholes shall be placed on no less than 6-inches of No. 8 crushed stone bedding.
 - Water and sewer line crossings and separations shall be in accordance with Ten States' Standards.
 - Trench shall be opened sufficiently ahead of pipe laying to reveal obstructions, and shall be properly protected and/or barricaded when left unattended.
 - No water shall be permitted to flow into the sanitary sewer system during construction. Contractor shall utilize a pump to keep the water level below the pipe. Pump discharge shall be directed to a storm outlet. Any pipe entering existing sewers shall be plugged with screw-type mechanical broed plug until such time as all tests on the sewers have been completed and the lines have passed all punch lists.
 - All sewer laterals installed by the mainline Contractor shall be bedded the same as the main line sewer.
 - Forty-eight (48) hours notice shall be given to the Clay Regional Waste District prior to the start of sewer construction. Also, 48-hours notice shall be given prior to any testing done on the sewer.
 - Manhole castings shall be stamped "SANITARY SEWER" (Neenah Casting R 1642 or equal) and be self-sealing type. Waterproof castings shall be Neenah R-1916-F1 and stamped "SANITARY SEWER".
 - The minimum slope for sewer acceptance by the Clay Township Regional Waste District are:

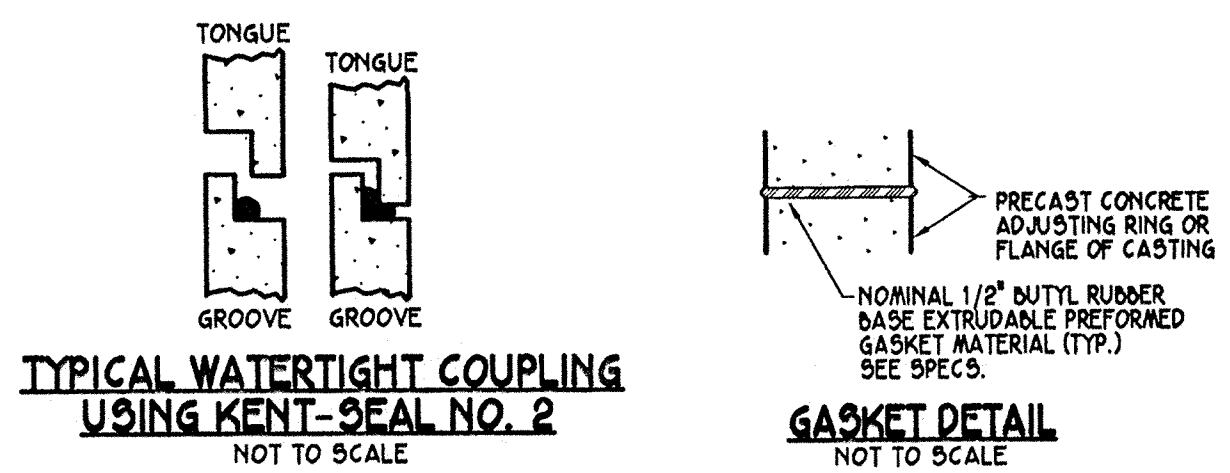
Size of Pipe	Minimum Constructed Slope
8-inch	0.40%
10-inch	0.28%
12-inch	0.22%
15-inch	0.15%
18-inch	0.12%
 - The Contractor shall provide measurements of the slope of the sewer for each manhole section as construction progresses. Such measurements shall be certified by a Registered Land Surveyor or Engineer and be available on-site for observation by the District's Inspector. No more than three manhole sections can be constructed in advance of such measurements.
 - In the event the Contractor does not meet the minimum slopes, the sewer section and any other affected sewer sections shall be reconstructed to meet such minimum slopes.



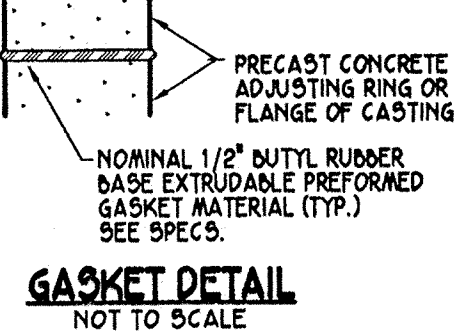
STANDARD 48" DIAMETER MANHOLE
(PIPE SIZES 8" THRU 21")



REINFORCED PLASTIC MANHOLE STEP
NOT TO SCALE



TYPICAL WATERTIGHT COUPLING
USING KENT SEAL NO. 2
NOT TO SCALE

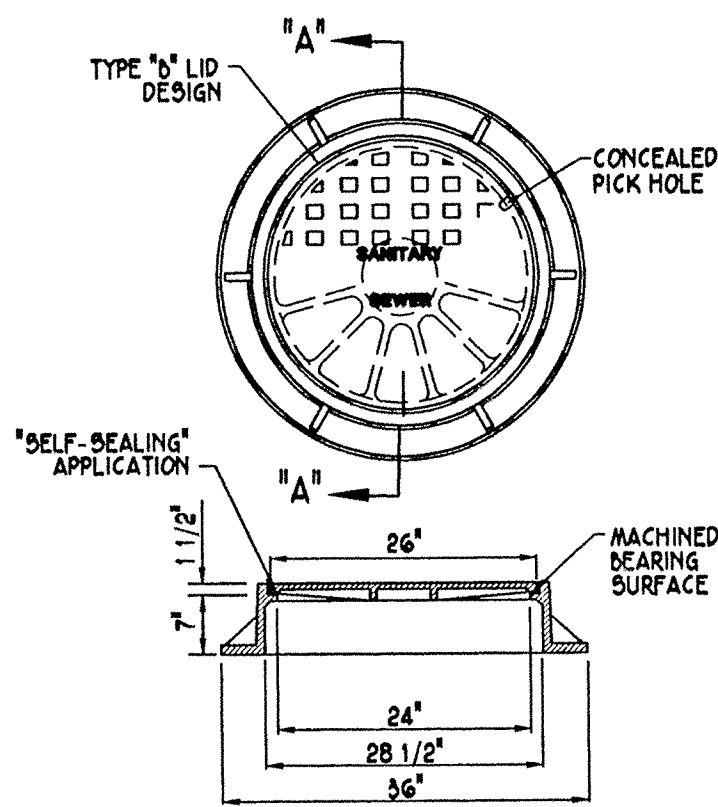


GASKET DETAIL
NOT TO SCALE

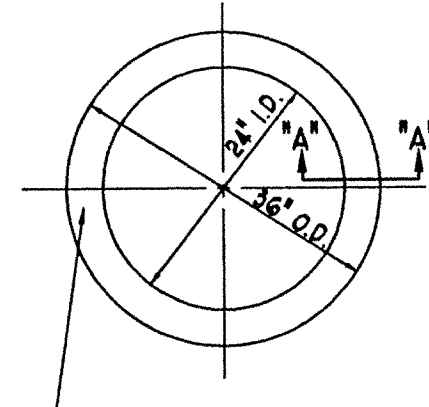
TABLE 1
TIME IN MINUTES AND SECONDS REQUIRED FOR PRESSURE DROP FROM 3.5 PSIG TO 2.5 PSIG
(Based on 0.003 cfm per sq. ft. and 2.0 cfm)

Pipe Diameter D in Inches

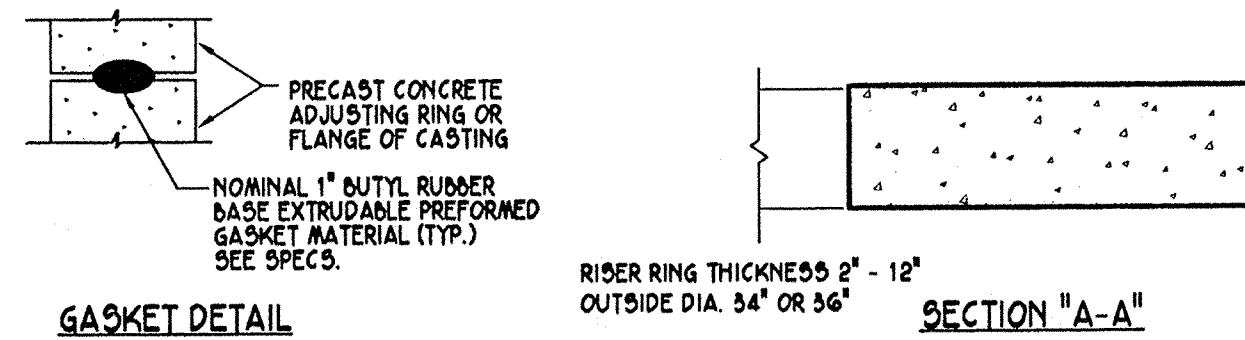
Pipe Diameter D in Inches	4	6	8	10	12	15	18	21	24	27	30	33	36	39	25
25	:04	:10	:18	:28	:40	1:02	1:29	2:01	2:58	3:20	4:08	4:59	5:56	6:58	100
50	:09	:20	:35	:55	1:19	2:04	2:58	4:03	5:17	6:41	8:15	9:59	11:53	13:57	200
75	:13	:30	:53	1:23	1:59	3:06	4:27	6:04	7:55	10:01	12:23	14:58	17:00	18:25	300
100	:18	:40	1:11	1:50	2:38	4:08	5:56	8:05	10:39	12:45	14:11	15:35			400
125	:22	:50	1:28	2:18	3:18	5:09	7:26	9:55	11:20						500
150	:26	:59	1:46	2:45	3:58	6:11	8:30								600
175	:31	1:09	2:03	3:13	4:37	7:05									700
200	:35	1:19	2:21	3:40	5:17										800
225	:40	1:29	2:38	4:08	5:40										900
250	:44	1:39	2:56	4:35											1000
275	:48	1:49	3:14	4:43											1100
300	:53	1:59	3:31												1200
350	1:02	2:19	3:47												1500
400	1:10	2:38													2000
450	1:19	2:50													2500
500	1:28														3000
550	1:37														3500
600	1:46														4000
650	1:53	2:50	3:47	4:43	5:40	7:05	8:30	9:55	11:20	12:45	14:11	15:35	17:00	18:25	5000



SECTION "A-A"
SANITARY SEWER MANHOLE
FRAME AND COVER-NEENAH R-1642, OR EQUAL

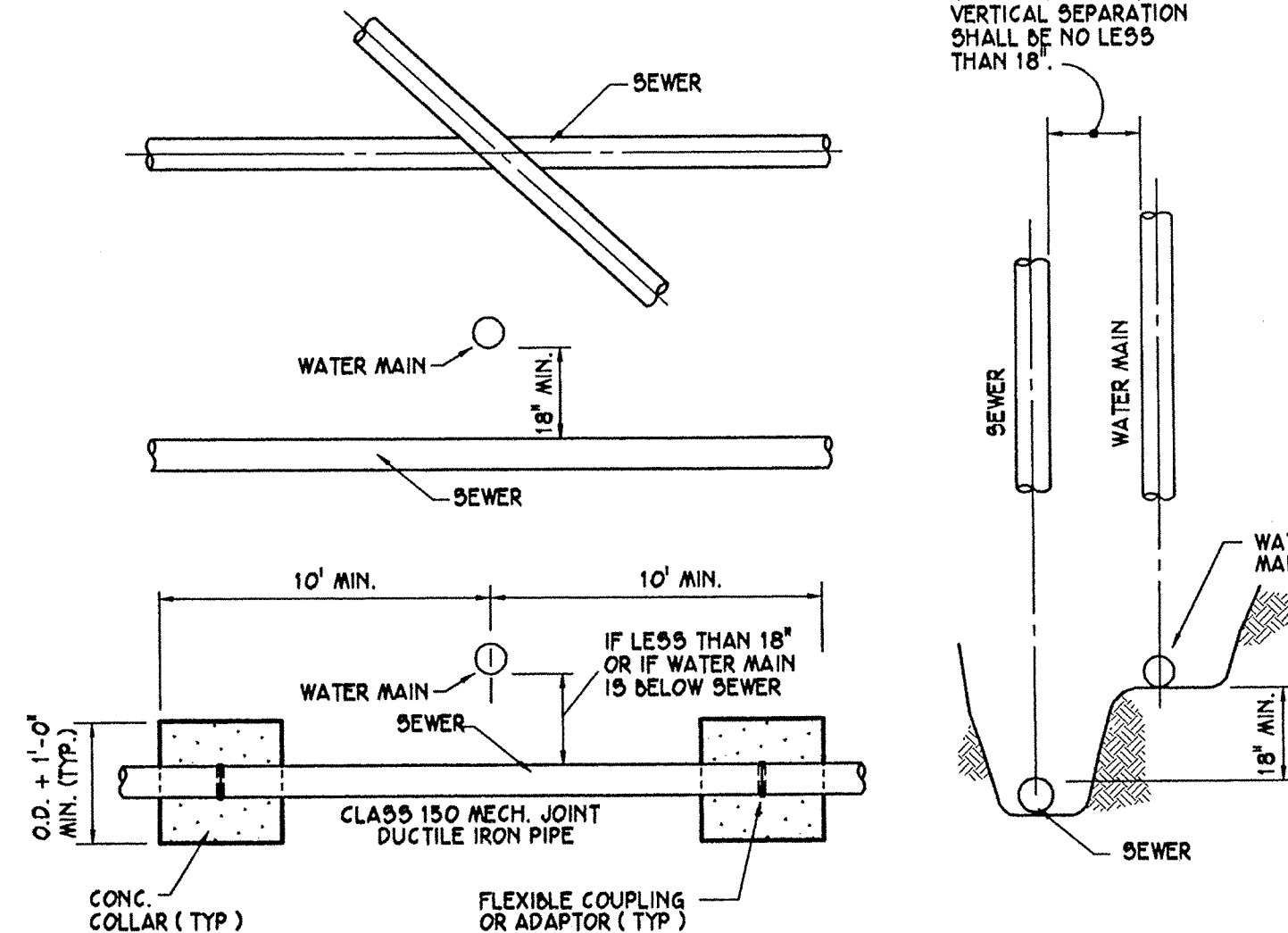


PLAN VIEW
PLACE 1" DIAMETER EXTRUDABLE PREFORMED GASKET MATERIAL BETWEEN ADJUSTING RING AND CONE, AND BETWEEN ADJUSTING RING AND FRAME.

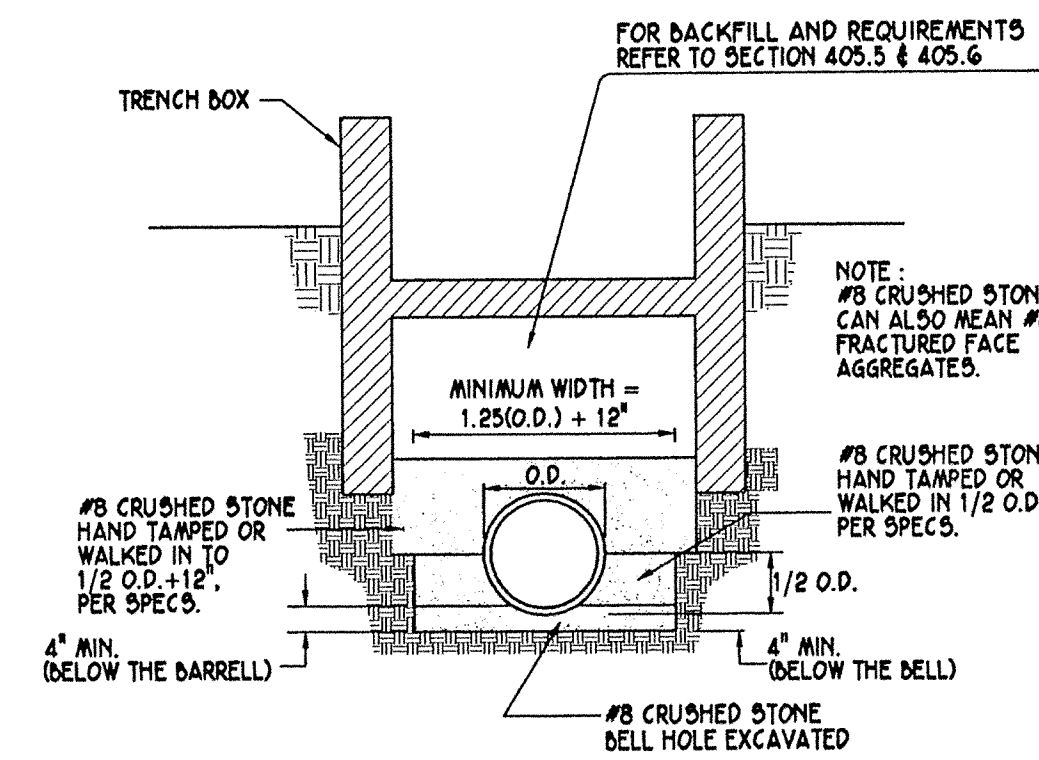


GASKET DETAIL
SECTION "A-A"
RISER RING THICKNESS 2" - 12"
OUTSIDE DIA. 34" OR 36"

ADJUSTING RING DETAIL

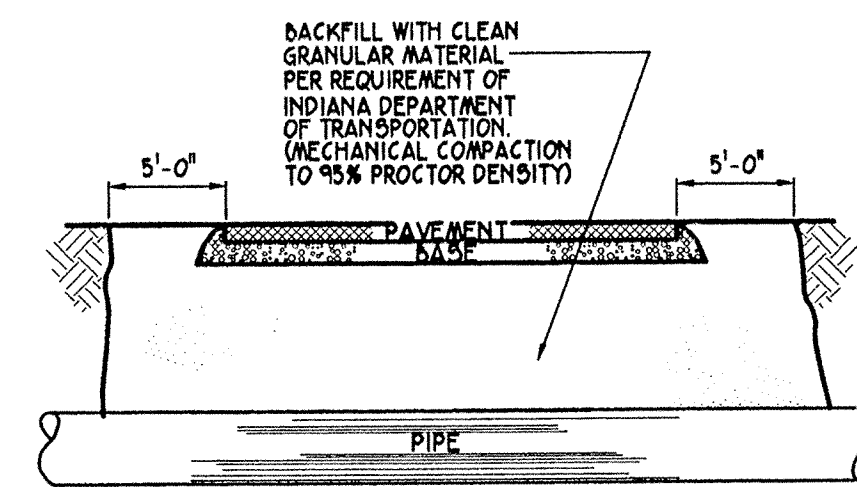


MIN. CROSSOVER & SEPARATION REQUIREMENTS FOR
WATER MAINS & SEWERS
NOT TO SCALE



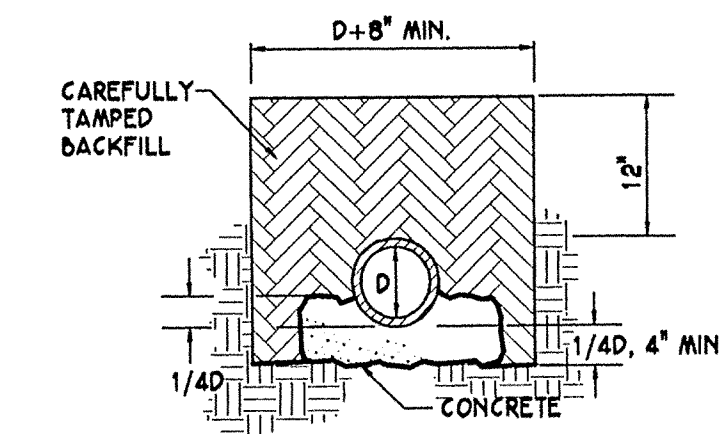
PIPE SIZE	8" TO 15"	18" & OVER
BEDDING BELOW THE PIPE BARREL	O.D./4 MIN. = 6"	O.D./4 MAX. = 8"

FLEXIBLE PIPE BEDDING DETAIL

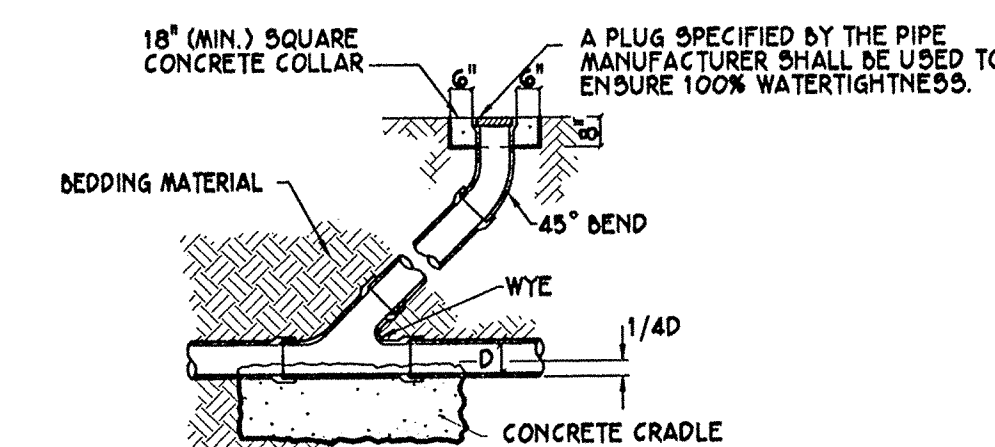


LONGITUDINAL SECTION
TRENCH SECTION UNDER PAVEMENT
NOT TO SCALE

- NOTES:
1.) CONTRACTOR TO CONSULT SPECIFICATIONS FOR COORDINATION OF MATERIALS TO BE USED.



CLASS "A" BEDDING
CONCRETE CRADLE
NOT TO SCALE



CLEANOUT DETAIL
NOT TO SCALE

GLENDALE PARTNERS / OLYMPIA PROPERTIES
320 N. MERIDIAN STREET SUITE 700
INDIANAPOLIS, INDIANA

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ARCHITECTS
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JAMIE L. POCTEK
REGISTERED
No. 19900533
STATE OF INDIANA
PROFESSIONAL ENGINEER
CERTIFIED BY

SANITARY SEWER DETAILS & SPECIFICATIONS - RETAIL A

WEST CARMEL CENTER
106th STREET & US 421
CARMEL, INDIANA

DATE:	10/11/99
SCALE:	AS NOTED
DRAWN BY:	PED
CHK'D BY:	JLP
JOB NO.:	99-313

REVISIONS	
NEW SHEET	10/11/99

SHEET NO.
C8.1
OF

FILED
OCT 28 1999
OFFICE OF HAMILTON COUNTY SURVEYOR