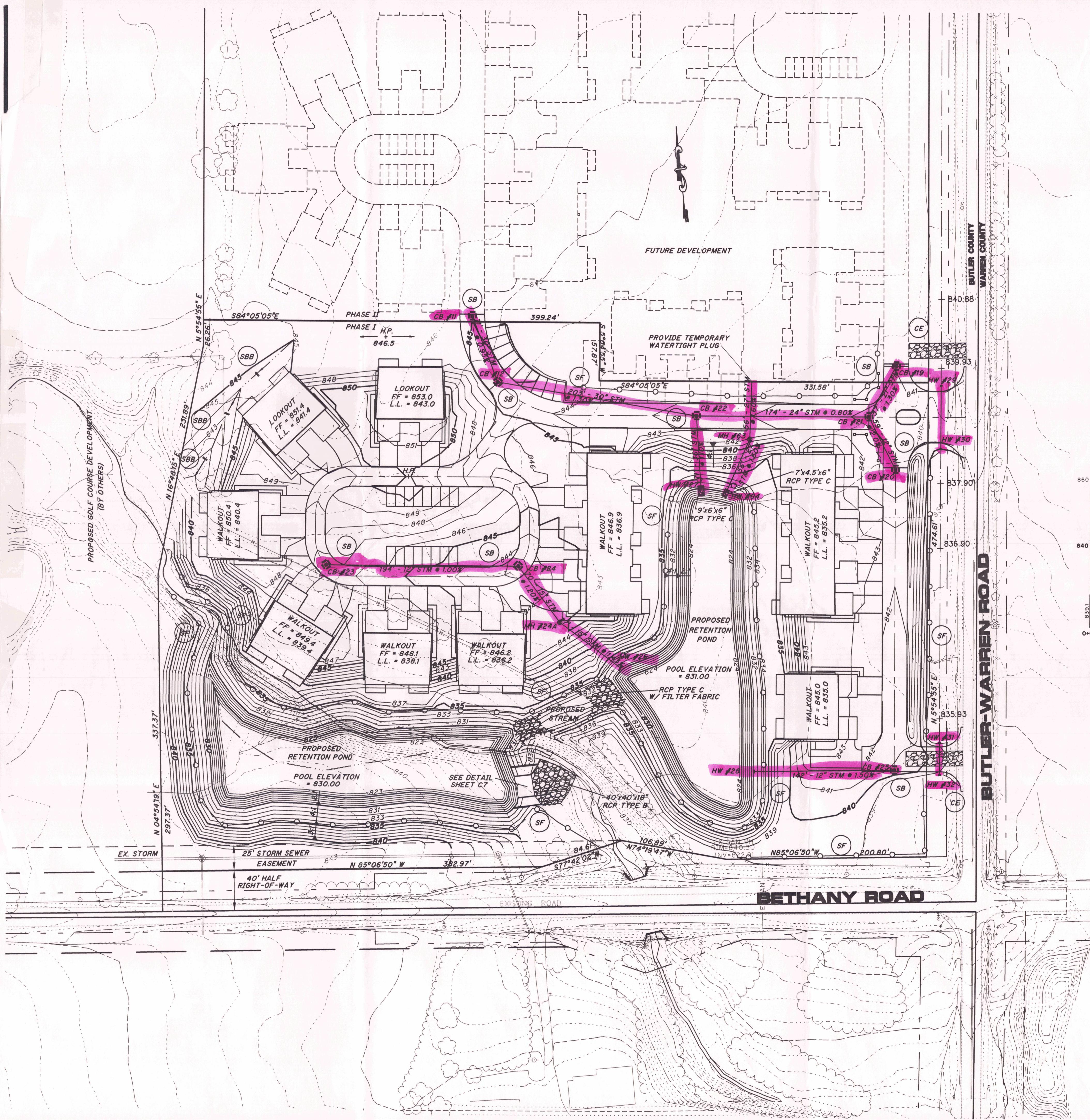
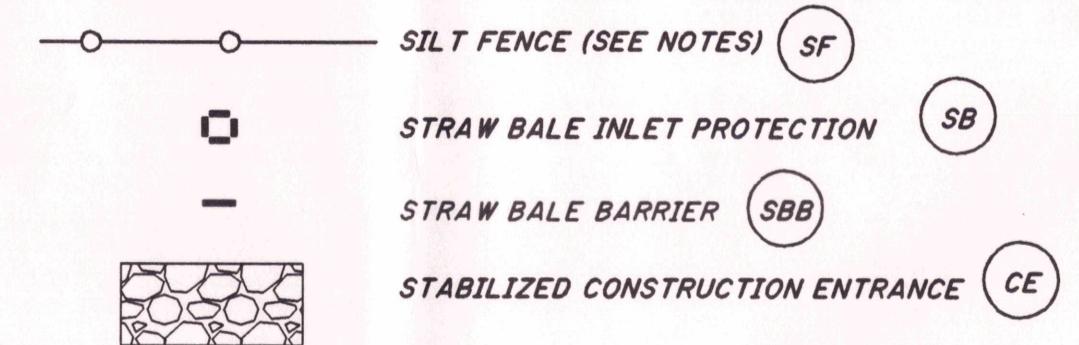


1609=ANI
1702=ANI
1803=ANI
1904=ANI
HN PLS

10/28 10/29 10/30 10/31
12 1/2 in.
100' 100' 100' 100'
C1980 98527 98527 98527 98527



EROSION CONTROL LEGEND



NOTES:

1. BOTH RETENTION PONDS AND STREAM ARE TO BE LINED WITH SILT FENCE. SILT FENCE IS TO REMAIN UNTIL SEEDING IS COMPLETED AND VEGETATION IS GROWN.
2. THE EASTERN POND IS TO BE LINED WITH RCP TYPE D MIN. 6" THICK & FILTER FABRIC FROM ELEV. 832.85 TO ELEV 830.00. THE WESTERN POND IS TO BE LINED WITH RCP TYPE D MIN. 6" THICK & FILTER FABRIC FROM ELEV. 832.85 TO ELEV 831.00. SEE DETAIL SHEET C9. ALTERNATE: REPLACE RCP TYPE D WITH SOD, STAKED IN PLACE.
3. THE STREAM BETWEEN THE TWO PONDS IS TO BE LINED WITH TYPE B FILTER FABRIC MIN. 12" THICK & RCP TYPE C TO ELEVATION 832.85.

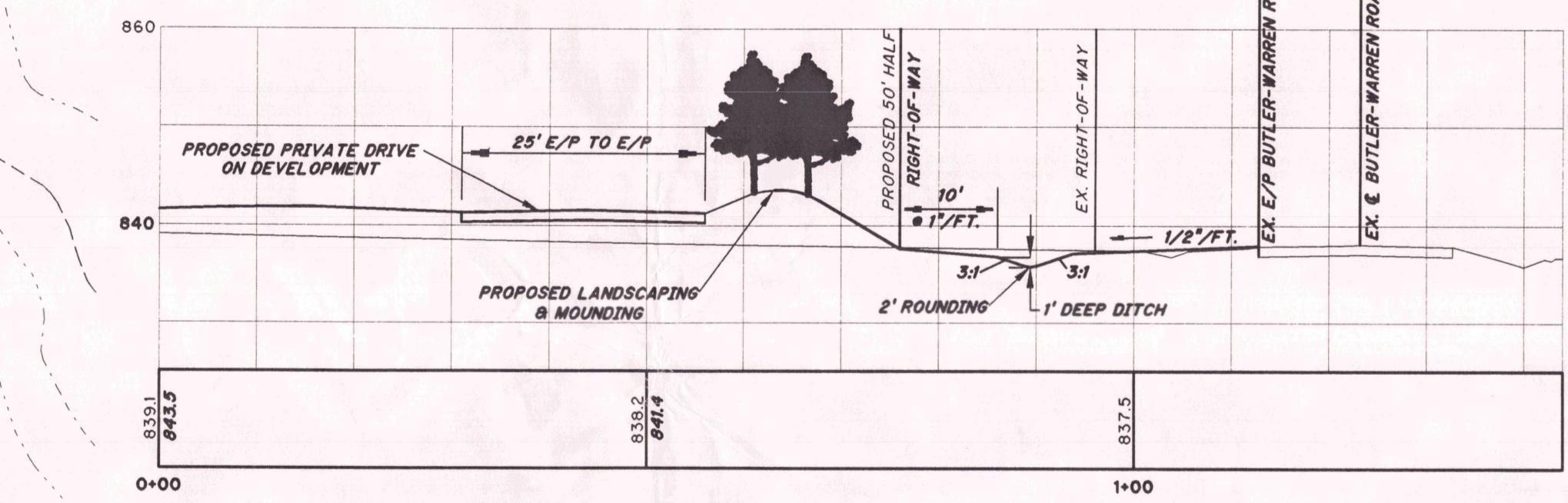
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11120 KENWOOD ROAD
CINCINNATI, OHIO 45242
513 791-1700
513 791-1936 FAX

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FLORENCE, KY 41042
606 525-0544
606 525-0561 FAX

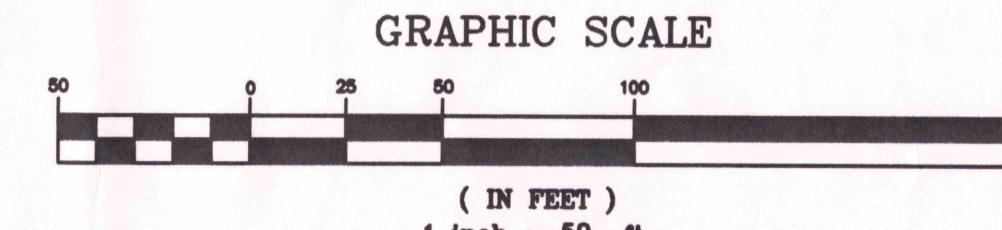
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DRAWING TITLE: GRADING/EROSION CONTROL PLAN-PHASE 1
PROJECT TITLE: THE VILLAS AT FOUR BRIDGES
LIBERTY TOWNSHIP, OHIO
TOWNE DEVELOPMENT GROUP, LTD.



TYPICAL SECTION - BUTLER-WARREN ROAD

STORM SEWER TABLE					
STRUCTURE	NORTHING	EASTING	TOP GRATE	FLOWLINE	TYPE
CB #11	1108.3676	12098.0070	845.1	30" INV. (S) = 835.59	CB 2-2-B
CB #12	11040.3302	12117.3574	844.6	30" INV. (SE) = 834.92	CB 2-2-B
CB #19	11016.9490	12518.3058	841.1	21" INV. (SW) = 835.16	CB 2-2-B
CB #20	10914.5934	12507.7008	840.02	12" INV. (NW) = 836.35	CB 2-2-B
CB #21	10969.5130	12486.1231	840.8	24" INV. (W) = 834.17	CB 2-2-B
				21" INV. (NE) = 834.42	
				12" INV. (SE) = 835.17	
CB #22	10987.4432	12313.0682	842.6	36" INV. (S) = 831.78	CB 2-2-B
				30" INV. (W) = 832.28	
CB #23	10875.5775	11927.4327	845.85	24" INV. (E) = 832.78	CB 2-2-B
CB #24	10855.5141	12120.1114	842.57	12" INV. (W) = 833.19	CB 2-2-B
				15" INV. (SE) = 832.94	
MH #24A	10795.1675	12156.2452	844.6	15" INV. (NW) = 832.10	MH-1
				15" INV. (SE) = 832.10	
CB #25	10615.0162	12476.6715	841.1	12" INV. (W) = 833.13	CB 2-2-B
HW #26	10743.5052	12212.9501	832.25	15" INV. (SW) = 831.00	HW-4B
HW #27	10916.6475	12310.6475	834.0	36" INV. (N) = 831.00	HW-4B
HW #28	10627.6011	12335.5495	832.0	12" INV. (E) = 831.00	HW-4B
HW #29	10993.7366	12561.4994	840.63	12" INV. (S) = 839.63	HW-4B
HW #30	10930.0476	12555.1916	839.49	12" INV. (N) = 838.49	HW-4B
HW #31	10638.2095	12524.8083	836.77	12" INV. (S) = 835.77	HW-4B
HW #32	10605.4367	12521.4128	836.56	12" INV. (N) = 835.56	HW-4B
MH #63	10959.1758	12364.3335	841.8	27" INV. (NE) = 831.90	MH-1
HW #64	10910.4691	12336.5937	833.25	27" INV. (SW) = 831.00	HW-4B



GRAPHIC SCALE

SCALE: 1"=50' DATE: 10/1/98
DRAWN BY: NTOB CHECKED BY: MLAN
PROJECT NO: 98652-21 FILE: FF-12
DRAWING NO:

C4

SHEET 4 OF 9

THE VILLAS AT FOUR BRIDGES

LIBERTY TOWNSHIP, OHIO

GENERAL NOTES

ALL TOPSOIL SHALL BE STRIPPED AND STOCKPILED AT THE DIRECTION OF THE OWNER.

EXTREME CARE SHALL BE EXERCISED AND SEDIMENT PROTECTION SHALL BE INSTALLED AND MAINTAINED AROUND THE PERIMETER OF THE RETENTION PONDS AND STREAMS. THE CONTRACTOR SHALL CLEAN AND DREDGE THE RETENTION FACILITIES UPON COMPLETION OF THE PROJECT AND AFTER ESTABLISHED VEGETATION OF THE SITE.

ALL WORK SHALL BE DONE UNDER THE SUPERVISION OF THE BUTLER COUNTY ENGINEER AND THE AUTHORITY HAVING RESPONSIBILITY FOR UTILITIES IN THE AREA AND IN ACCORDANCE WITH THE RULES AND REGULATIONS FOR SUBDIVISION.

ALL CONSTRUCTION WORK SHALL BE IN ACCORDANCE WITH THE OHIO DEPARTMENT OF TRANSPORTATION "CONSTRUCTION AND MATERIAL SPECIFICATION" OR BUTLER COUNTY REQUIREMENTS AND STANDARDS FOR SUBDIVISION. WHEN IN CONFLICT, THE COUNTY REQUIREMENTS SHALL PREVAIL.

SANITARY SEWER PIPE SHALL BE ARMCO TRUSS PIPE OR SDR 35 (0' - 16' DEEP), SDR 26 (16' - 25' DEEP), SDR 21, SDR 17.

MINIMUM GRADE FOR 8" SANITARY SEWER IS 0.50

ROOF DRAINS, FOUNDATION DRAINS, AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER SYSTEM ARE PROHIBITED.

ALL SANITARY SEWER LATERALS SHALL NOT EXCEED A DEPTH BELOW FINISHED GRADE OF 12 FEET OR 4 FEET BELOW A PROPOSED BASEMENT FLOOR ELEVATION AT THE END OF THE LATERAL, UNLESS SPECIFICALLY AUTHORIZED BY THE COUNTY.

WATERMAIN SHALL HAVE 4' MINIMUM DEPTH TO TOP OF PIPE.

ALL WATER MAINS TO BE DUCTILE IRON PIPE, CL 53 AWWA C-151.

WATER MAIN SHALL HAVE 10' HORIZONTAL, 8 1/2" VERTICAL SEPARATION (OUTSIDE EDGE TO EDGE) WITH ALL OTHER PIPE.

INLETS DESIGNATED AS CB-3 AND CB-3A ARE STATE OF OHIO DEPARTMENT OF TRANSPORTATION STANDARDS. INLETS DESIGNATED AS CB-3 MODIFIED (CB-3M) OR CB-3A MODIFIED (CB-3M) ARE BUTLER COUNTY STANDARDS AVAILABLE AT THE BUTLER COUNTY ENGINEERS OFFICE.

ALL MANHOLES GREATER THAN 4.0' DEPTH SHALL BE PROVIDED WITH STEPS. ALL CATCH BASINS GREATER THAN 4.0' DEPTH SHALL BE PROVIDED WITH STEPS. ALL STORM SEWER PIPE SHALL BE ADS N-12 OR APPROVED EQUAL.

ALL SUMP PUMP DRAINS ARE TO BE TIED INTO CATCH BASINS, STORM MANHOLES, STORM SEWERS, DRAINAGE SWALES, OR PARALLEL COLLECTION LINES. NO SUMP PUMP DRAIN WILL OUTLET TO STREET.

ALL GROUND SURFACE AREAS THAT HAVE BEEN EXPOSED OR LEFT BARE AS A RESULT OF CONSTRUCTION AND ARE TO FINAL GRADE AND ARE TO REMAIN SO, SHALL BE SEEDED AND MULCHED AS SOON AS PRACTICAL IN ACCORDANCE WITH STATE OF OHIO SPECIFICATIONS, ITEM 659.

THE CONTRACTOR SHALL SEED AND MULCH DISTURBED GRASS AREAS WITH:

3 LBS. WHEAT OR RYE PER 1000 SQ. FT.
10 LBS. 12-12-12 FERTILIZER PER 1000 SQ. FT.
2 OR 3 BALES OF STRAW PER 1000 SQ. FT.

THE CONTRACTOR SHALL ALSO PROVIDE OTHER EROSION CONTROL MEASURES AS MAY BE REQUIRED BY BUTLER COUNTY ENGINEER DURING THE CONSTRUCTION PHASE.

ALL DOWNSPOUT LINES SHALL BE ON SPLASHBLOCKS AND MAY NOT BE CONNECTED TO THE STREET.

SEEDING - SPECIFICATIONS AT RETENTION BASIN:
RED FESCUE 1 LB. PER 1000 SQ. FT.

KENTUCKY BLUEGRASS 1/2 LB. PER 1000 SQ. FT.

PERENNIAL RYEGRASS 1/2 LB. PER 1000 SQ. FT.

FERTILIZER: 12 - 12 - 12

MULCH - 3 BALES OF STRAW PER 1000 SQ. FT.

MULCH TIE DOWN: LIQUID ASPHALT (R.C. 70, 25 OR 800) 40 GALS. PER 1000 SQ. YDS. OR PLASTIC MULCH NETTING,

STAPLED IN PLACE.

SOIL (IF REQUIRED): TO BE STAKED IN PLACE.

BUTLER COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES DOES NOT ACCEPT ANY RESPONSIBILITY FOR THE RELOCATION, REPAIR OR REPLACEMENT OF ANY OTHER UTILITY INSTALLED WITHIN FIVE (5) FEET OF THE CENTERLINE OF ANY SANITARY MAIN SEWER OR WATER MAIN.

PRIVATE DRIVEWAYS, PARKING LOTS AND OTHER PAVED AREAS OR STRUCTURES SHOULD NOT BE CONSTRUCTED OVER PRIVATE WATER OR SEWER SERVICE LINES WITHIN THE PUBLIC ROAD RIGHT OF WAY OR WITHIN EASEMENT AREAS FOR THE PUBLIC UTILITIES. SHOULD THIS OCCUR, THE PROPERTY OWNER WILL BE HELD RESPONSIBLE FOR THE PROTECTION AND REPAIR OF AND FOR PROVIDING ACCESS TO ANY CURB STOPS, METER PITS, MANHOLES, CLEANOUTS, ETC., INSTALLED IN CONJUNCTION WITH THESE PRIVATE SERVICE LINES AND FOR ANY DAMAGE OR RESTORATION OF THE PAVED SURFACES OR STRUCTURES THAT MAY RESULT FROM THE FUTURE OPERATION, MAINTENANCE, REPAIR OR REPLACEMENT OF SAID SERVICE LINES AND APPURTENANCES.

OWNER: TOWNE DEVELOPMENT GROUP, LTD.
1055 ST. PAUL PLACE
CINCINNATI, OHIO 45202
(513) 381-8696

DEVELOPER: TOWNE DEVELOPMENT GROUP, LTD.
1055 ST. PAUL PLACE
CINCINNATI, OHIO 45202
(513) 381-8696

ARCHITECT: THE MARTIN ARCHITECTURAL GROUP
240 NORTH 22ND STREET
PHILADELPHIA, PA 19103
(215) 663-1080

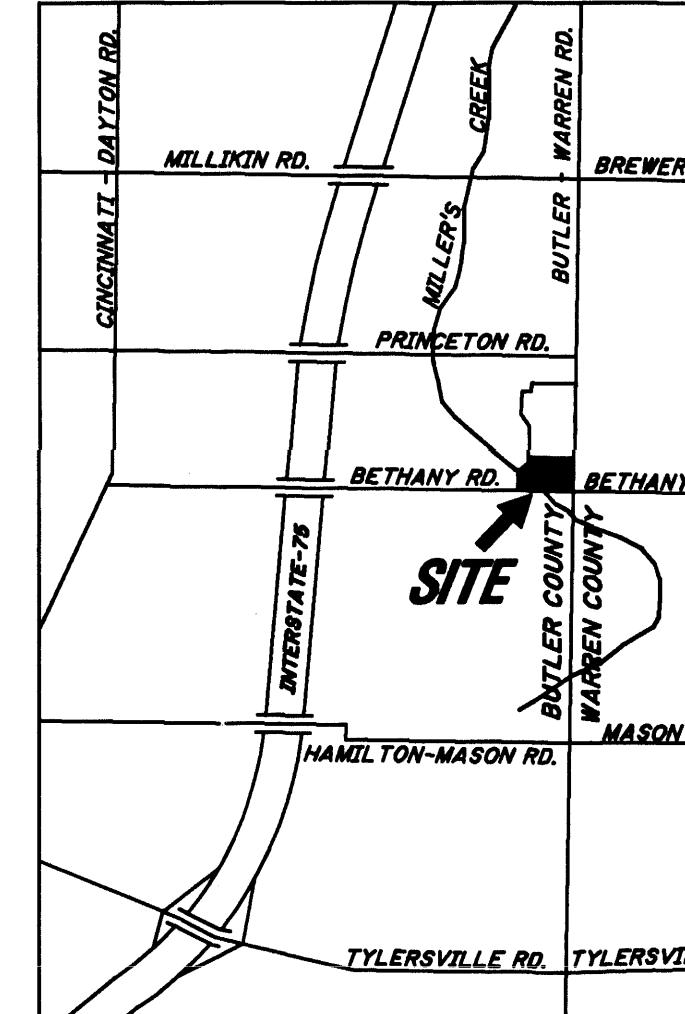
SITE ENGINEER: CDS ASSOCIATES, INC.
11120 KENWOOD ROAD
CINCINNATI, OHIO 45242
(513) 791-1700

EXISTING USE: FIELD

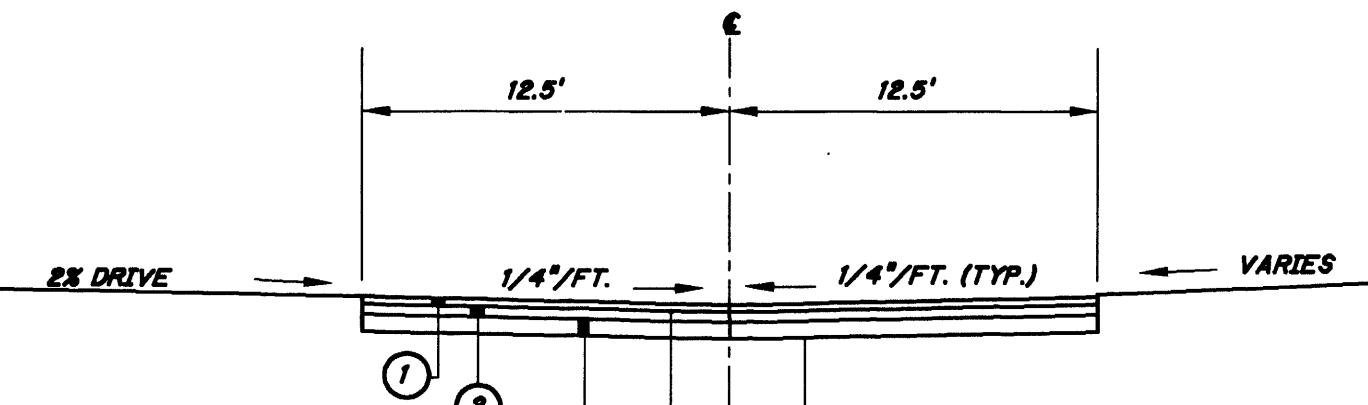
PROPOSED USE: CONDOMINIUM DEVELOPMENT

SITUATED IN:
SECTION 8, TOWN 3, RANGE 3
LIBERTY TOWNSHIP, BUTLER COUNTY, OHIO

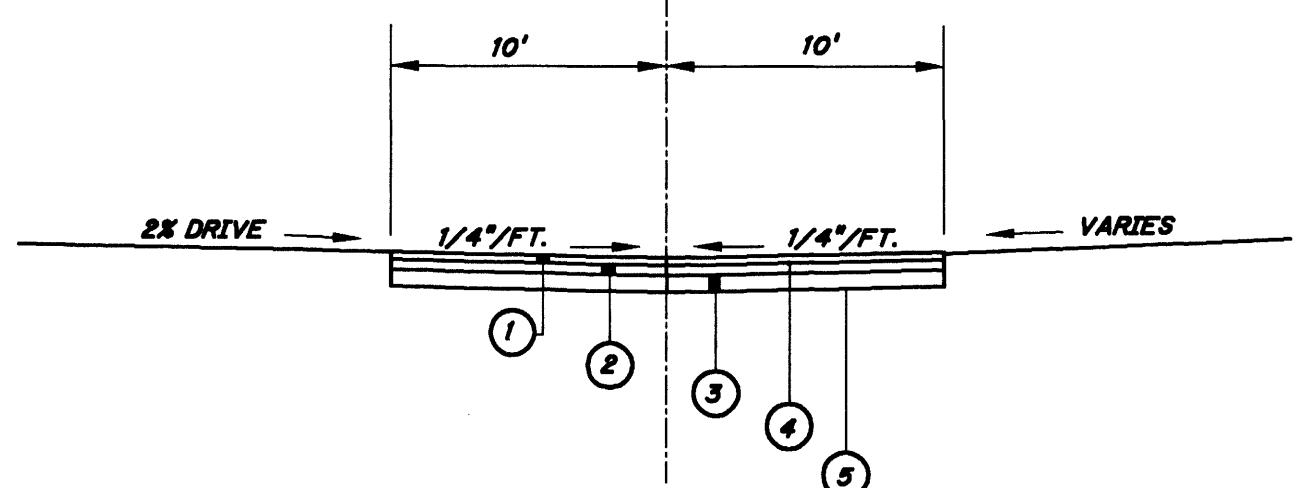
OCTOBER 1998



VICINITY MAP



TYPICAL SECTION
STREETS A & B



UNDERGROUND UTILITIES

2 WORKING DAYS
BEFORE YOU DIG
CALL 1-800-362-2764 (TOLL FREE)
NON-MEMBERS MUST BE CALLED DIRECTLY



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513 791-1700
513 791-1936 FAX

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INDEX TO SHEETS

TITLE, TYPICAL SECTION, & GENERAL NOTES SHEET	CI
SITE LAYOUT SHEET	C2
UTILITY LAYOUT SHEET	C3
GRADING/EROSION CONTROL SHEET	C4
PROFILE SHEETS	C5-C6
DETAIL SHEETS	C7-C8
EROSION CONTROL DETAIL SHEET	C9

LEGEND

EX. BUSH	
EX. TREE	
EX. FENCE	
EX. GUARDRAIL	
EX. UTILITY POLE	
EX. POST	
EX. SIGN POLE	
PROP. CATCH BASIN	
PROP. CLEANOUT	
PROP. FIRE HYDRANT	
PROP. STORM MANHOLE	
PROP. SANITARY MANHOLE	
PROP. WATER SERVICE METER	
PROP. WATER VALVE	
EX. RIGHT-OF-WAY	
EX. SANITARY	
EX. WATER	
— SAN — PROP. SANITARY	
— SAN — PROP. STM	
— SAN — PROP. WATER	

TOWNSHIP TRUSTEES

BOB SHELLEY
MARGY CONDITT
SHELDON STRAND
BARB JONES, CLERK

TOWNSHIP ZONING COMMISSIONERS

NORRIS DAHLSTROM, CHAIRPERSON
GAYLE KEETON
BOB HEL SINGER
GARY ARNOLD
CAM HEGER

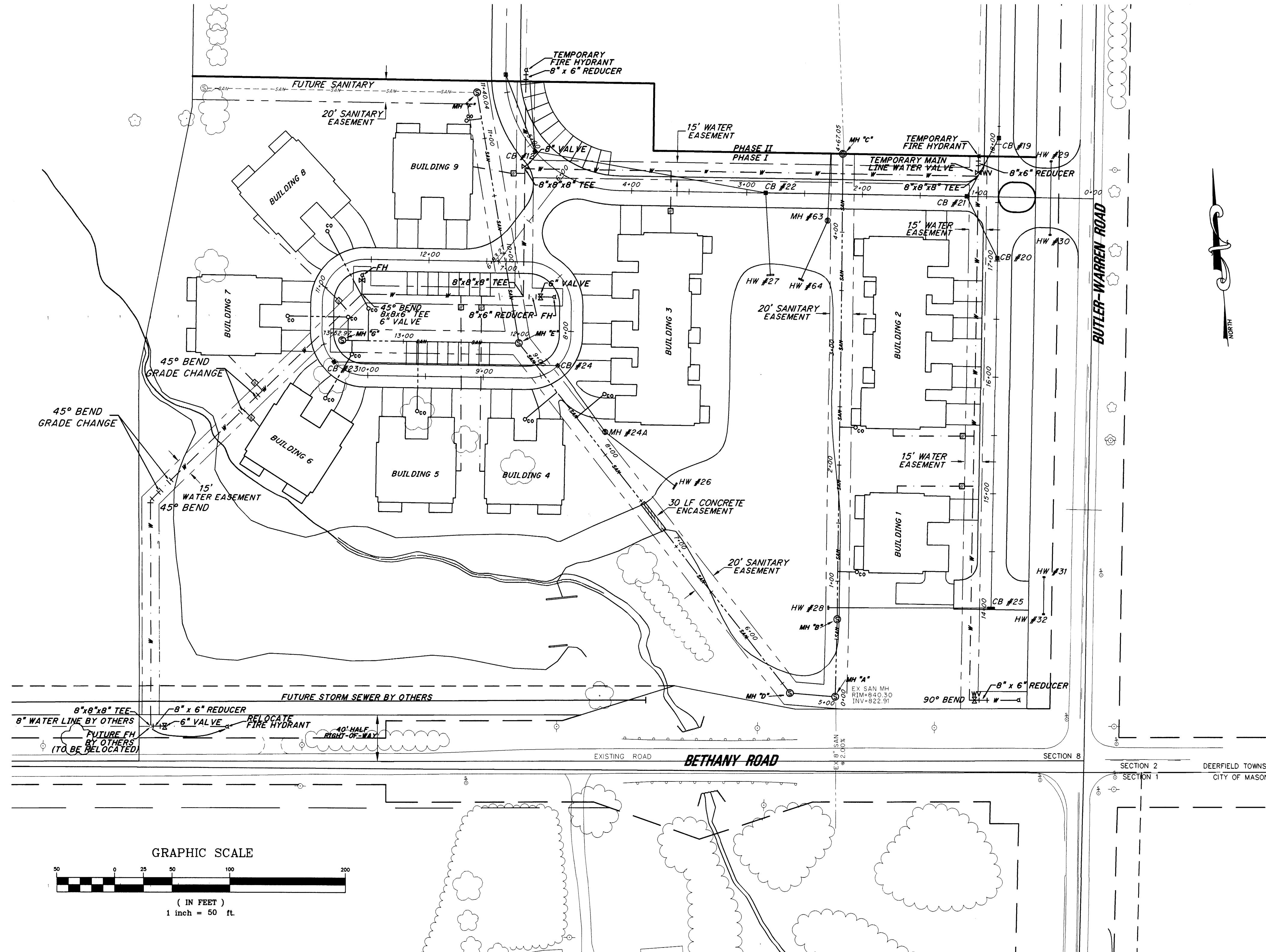
IRENE DUNNE, ZONING ADMINISTRATOR

APPROVED-BUTLER COUNTY ENGINEER
DATE

DATE

J. FREDERICK GOSSMAN, P.E. 37931 (OHIO)

DATE

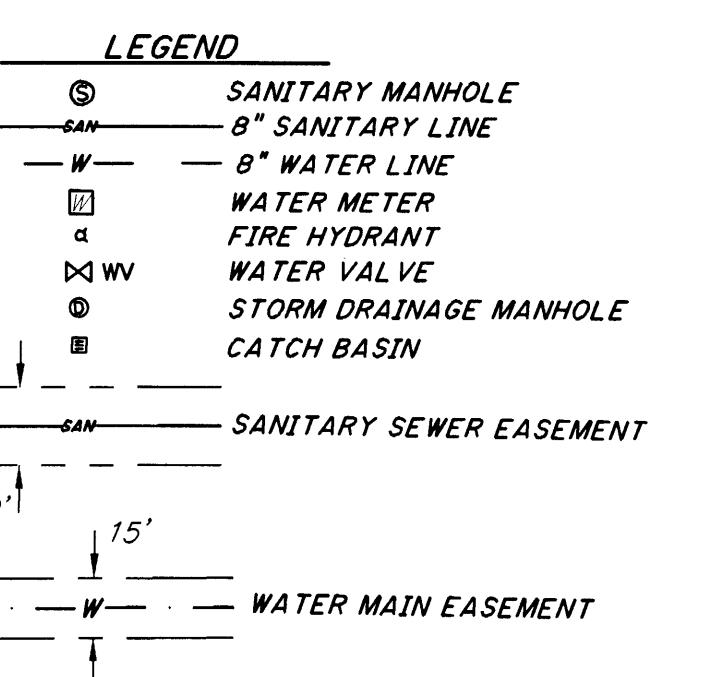


SANITARY SEWER TABLE						
STRUCTURE	NORTHING	EASTING	STATION	TOP ELEV.	INVERT	TYPE
(A) (EXISTING)	10550.3775	12335.3674	STA. 0+00 (N)	EX. TOP = 840.30	8" IN (N) = 826.76	EX. MH TO
			STA. 5+00 (W)		8" IN (W) = 826.95	REMAIN
					EX 8" OUT (S) = 822.91	
(B)	10617.0100	12342.8506	STA. 0+67.05	833.08	8" IN (N) = 827.30	MH-1
					8" OUT (S) = 827.30	
(C)	11015.0369	12382.5315	STA. 4+67.27	842.19	8" OUT (S) = 830.50	MH-1
(D)	10556.9680	12296.6041	STA. 5+39.32	838.77	8" IN (E) = 827.26	MH-1
					8" OUT (NW) = 827.26	
(E)	10887.9340	12088.2434	STA. 9+21.99 (N)	844.69	8" IN (N) = 831.50	MH-1
			STA. 12+00 (W)		8" IN (W) = 832.40	
					8" OUT (SE) = 830.32	
(F)	11095.3713	12071.8971	STA. 11+40.04	845.83	8" OUT (S) = 833.24	MH-1
(G)	10893.6989	11396.0889	STA. 13+52.97	847.41	8" OUT (E) = 833.62	MH-1

WATER SERVICE INFORMATION		
UNITS/BLDG	WATER METER SIZE	PIPE SIZE
2	1" WM	1 1/2"
3	1" WM	1 1/2"
4	1 1/2" WM	2"
5	1 1/2" WM	2"

STATIONING INFORMATION	
SANITARY SEWER EQUATIONS	STREET CENTERLINE EQUATIONS
0+00 = 5+00	0+82.50 = 17+54.83
9+21.99 = 12+00	4+60.59 = 6+00

SANITARY RUN TABULATION	
RUN	PIPE
A-B	67.05' - 8" SAN • 0.80%
B-C	400' - 8" SAN • 0.80%
A-D	39.32' - 8" SAN • 0.80%
D-E	382.67' - 8" SAN • 0.80%
E-F	218.05' - 8" SAN • 0.80%
E-G	150' - 8" SAN • 0.80%



SITE UTILITY PLAN

THE VILLAS AT FOUR BRIDGES
LIBERTY TOWNSHIP, OHIO
TOWNE DEVELOPMENT GROUP, LTD.

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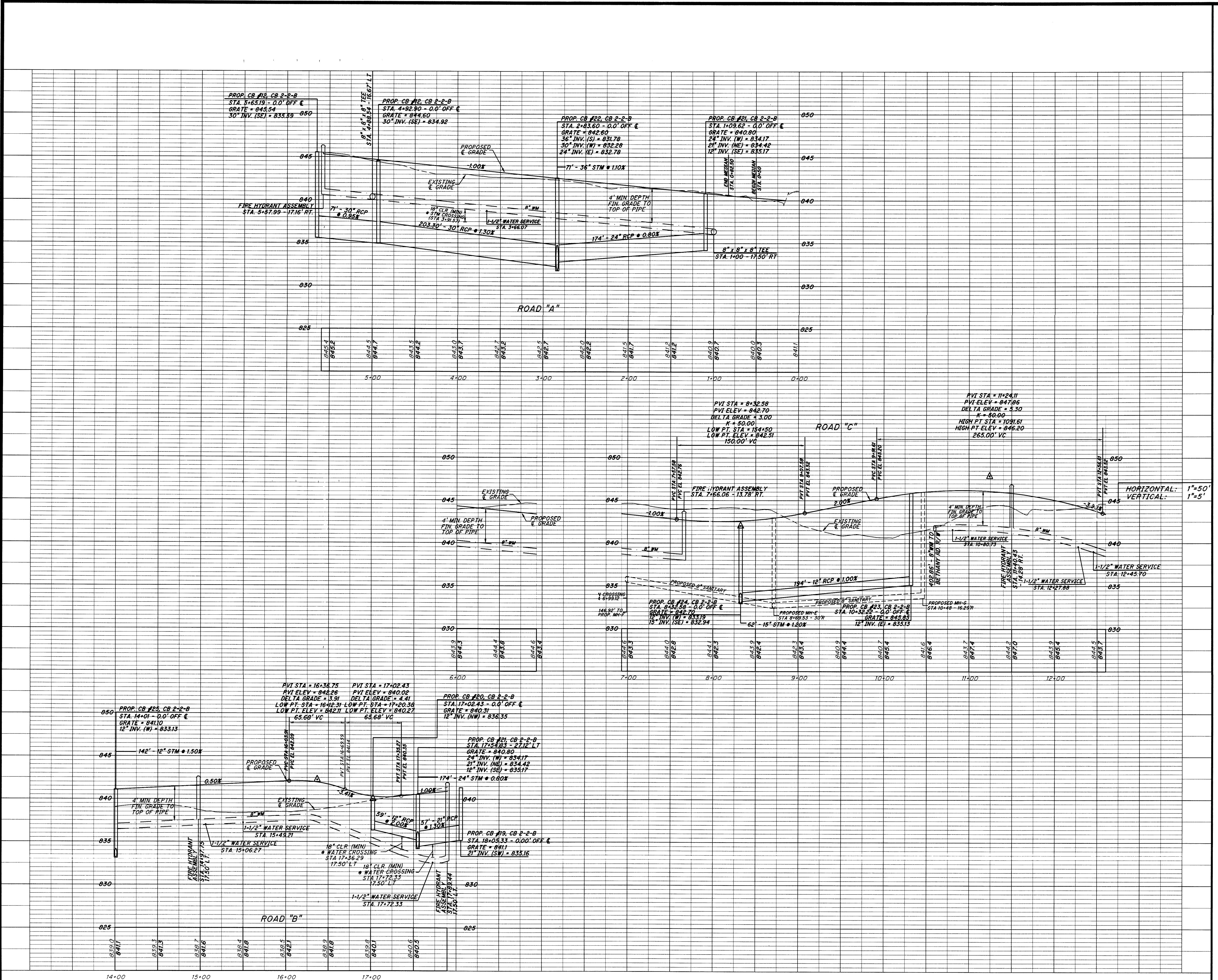
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REVISIONS	DESCRIPTION	DATE
1	1 = 50'	10/1/98

SCALE DATE
1" = 50' 10/1/98
DRAWN BY CHECKED BY
MATH
PROJECT NO. FILE
98652-21 FF-12
DRAWING NO.

C3

3 OF 9



SEAL

The logo for CDS (Consultant Designers) is displayed. It features the letters 'CDS' in a large, bold, black, sans-serif font. Below 'CDS', the words 'engineers', 'architects', 'planners', and 'surveyors' are stacked vertically in a smaller, black, sans-serif font. To the left of the logo, the word 'CONSULTANT' is written vertically in a smaller, black, sans-serif font.

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513 791-1700
513 791-1936 FAX

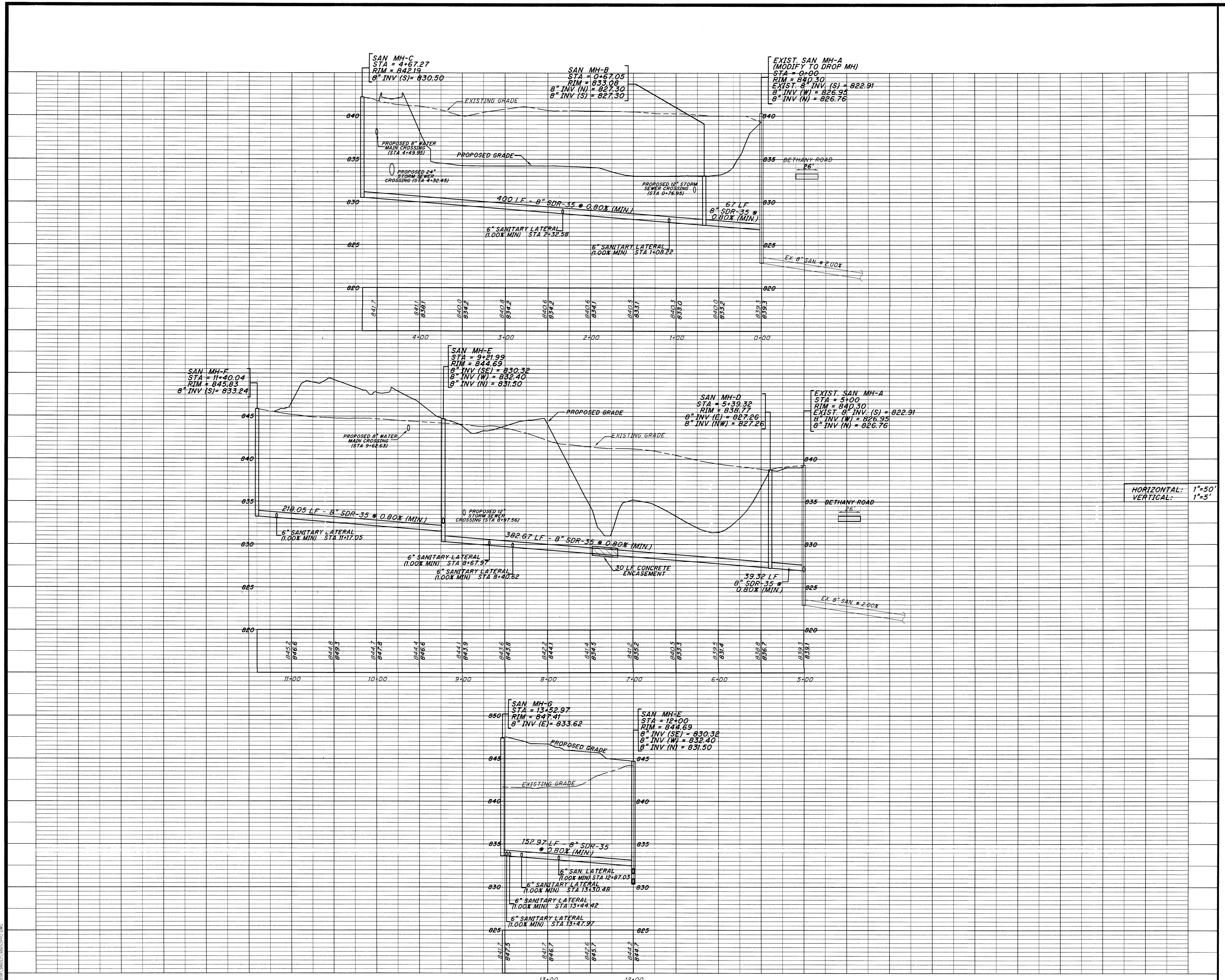
240 MAIN ST.
FLORENCE, KY 41042
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606 525-0561 FAX

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STREET PROFILE

THE VILLAS AT FOUR BRIDGES
LIBERTY TOWNSHIP, OHIO
TOWNE DEVELOPMENT GROUP, L

DRAWING TITLE		PROJECT TITLE		7		TO	
REVISIONS		DESCRIPTION					
NO	DATE	BY					
SCALE		DATE					
1"=50'		10/1/98					
DRAWN BY		CHECKED BY					
MATH							
PROJECT NO.		FILE					
98652-21		FF-12					
DRAWING NO.							



DRAWING TITLE SANITARY SEWER PROFILE
PROJECT TITLE THE VILLAS AT FOUR BRIDGES
LIBERTY TOWNSHIP, OHIO
TOWNE DEVELOPMENT GROUP, LTD.

SEAL

CONSULTANTS

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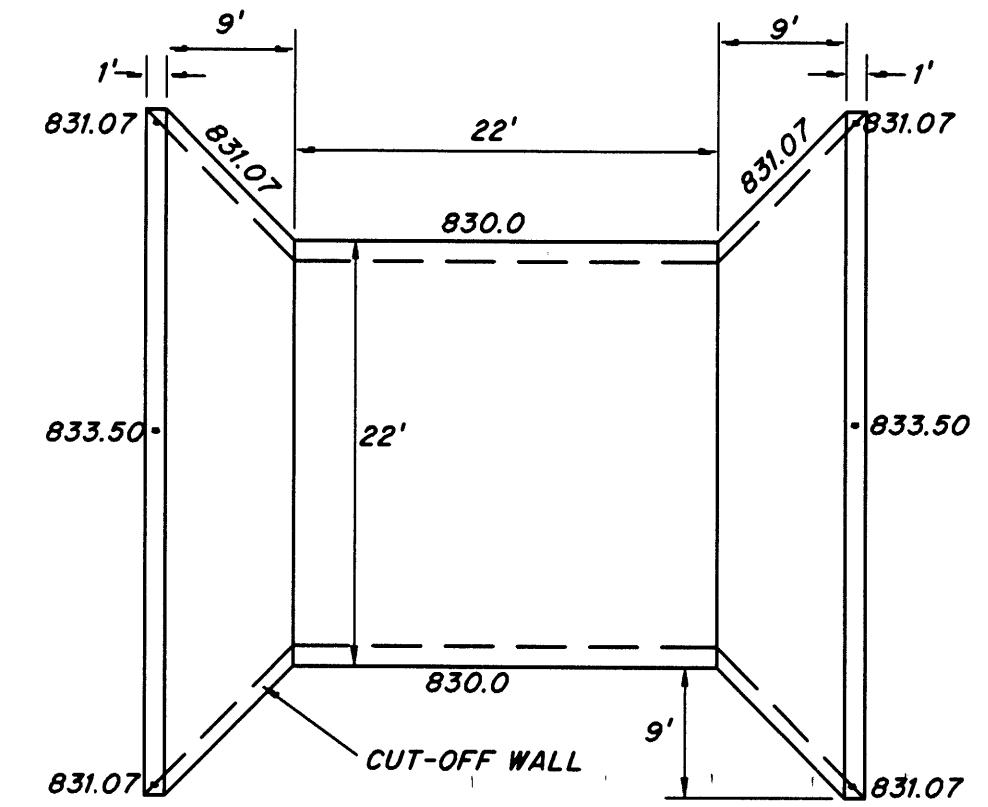
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NO.	DATE	BY	DESCRIPTION

SCALE
1"=50'
DRAWN BY
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PROJECT NO.
98652-21
FILE
FF-12
DRAWING NO.

C6

6 OF 9



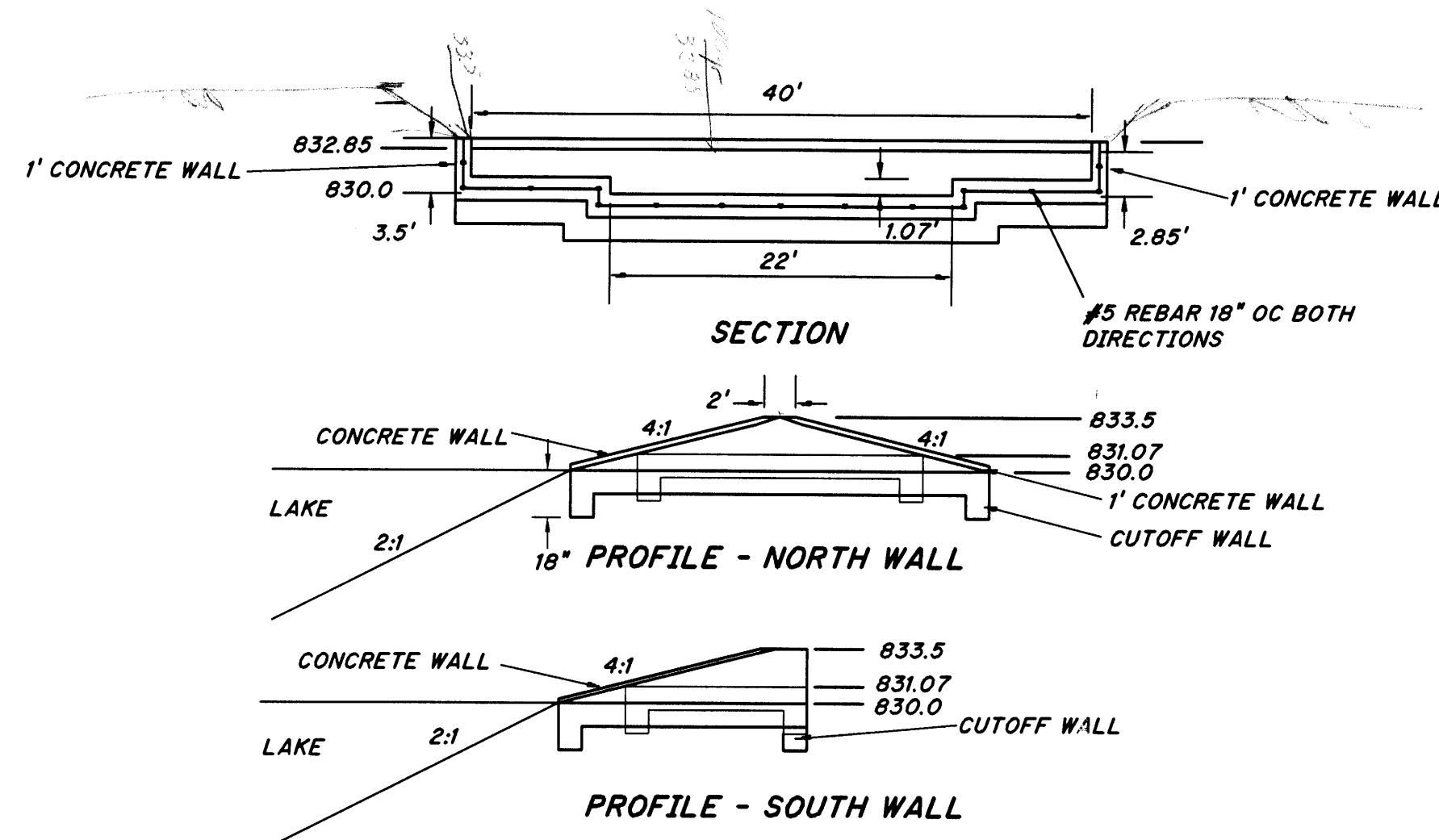
NOTE: CONCRETE SHALL BE 3000 PSI MINIMUM 28 DAYS
STRENGTH (4" SLUMP).

IF A SINGLE POUR METHOD OF ENCASEMENT IS USED,
THE WIRE TIES MAY BE ELIMINATED.

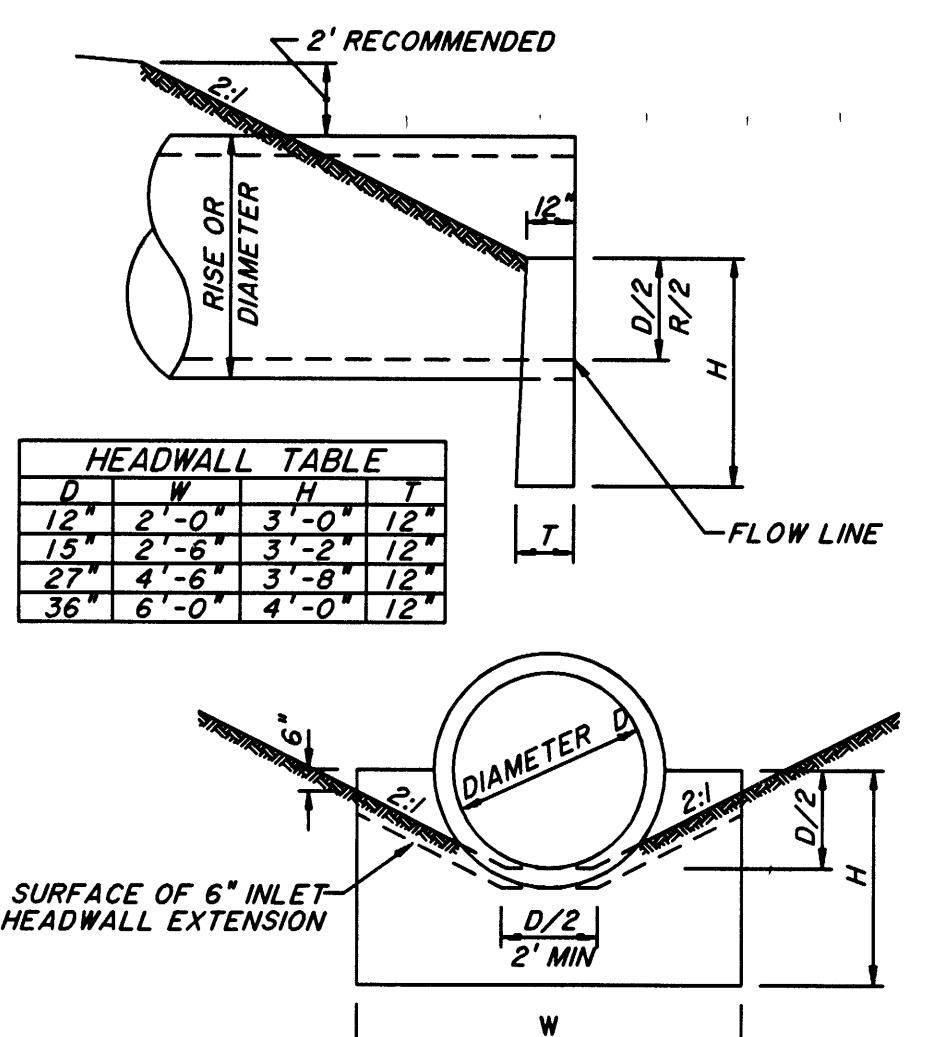
SUPPORT PIPES ON CHIPS OR MASONARY BRICK @ L & G.

BEGIN OR END ENCASEMENT AT JOINT ONLY.

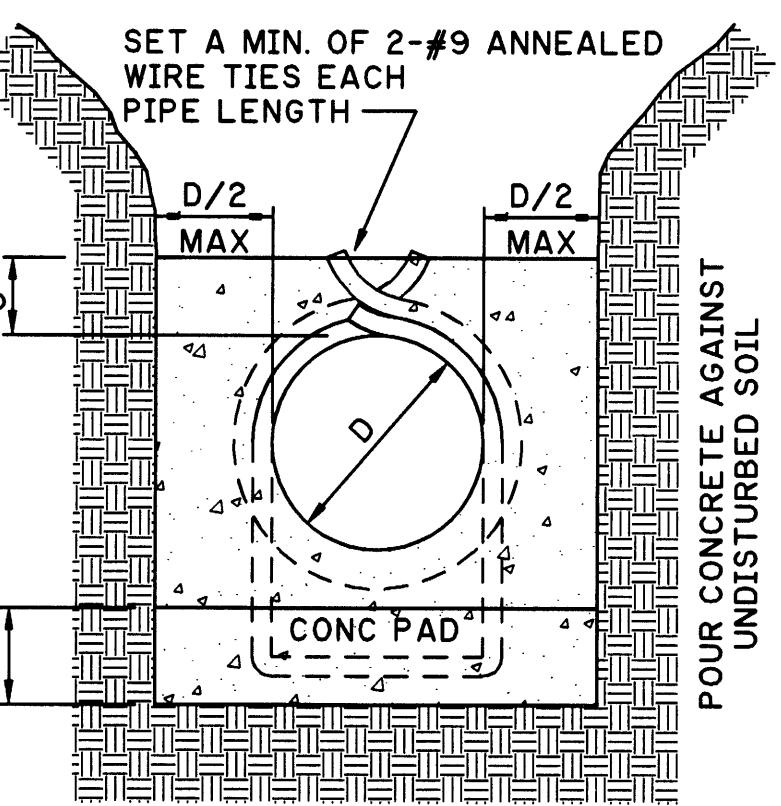
FULL CONCRETE ENCASEMENT



OUTLET CONTROL STRUCTURE DETAILS
NTS



ODOT HW-4B



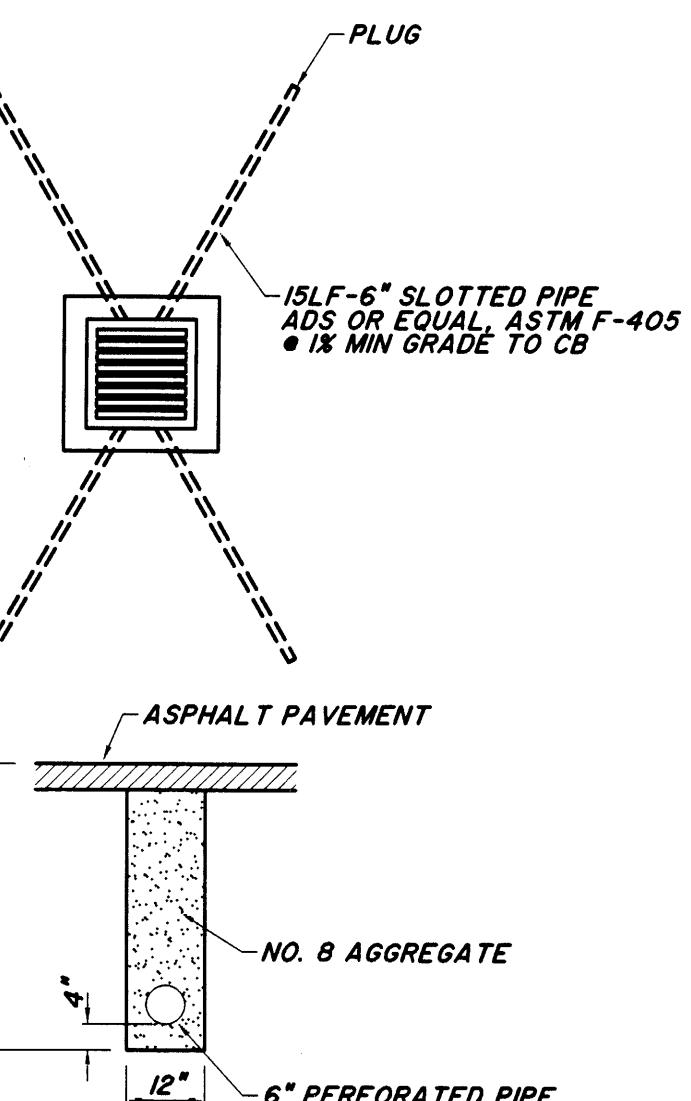
NOTE: CONCRETE SHALL BE 3000 PSI MINIMUM 28 DAYS
STRENGTH (4" SLUMP).

IF A SINGLE POUR METHOD OF ENCASEMENT IS USED,
THE WIRE TIES MAY BE ELIMINATED.

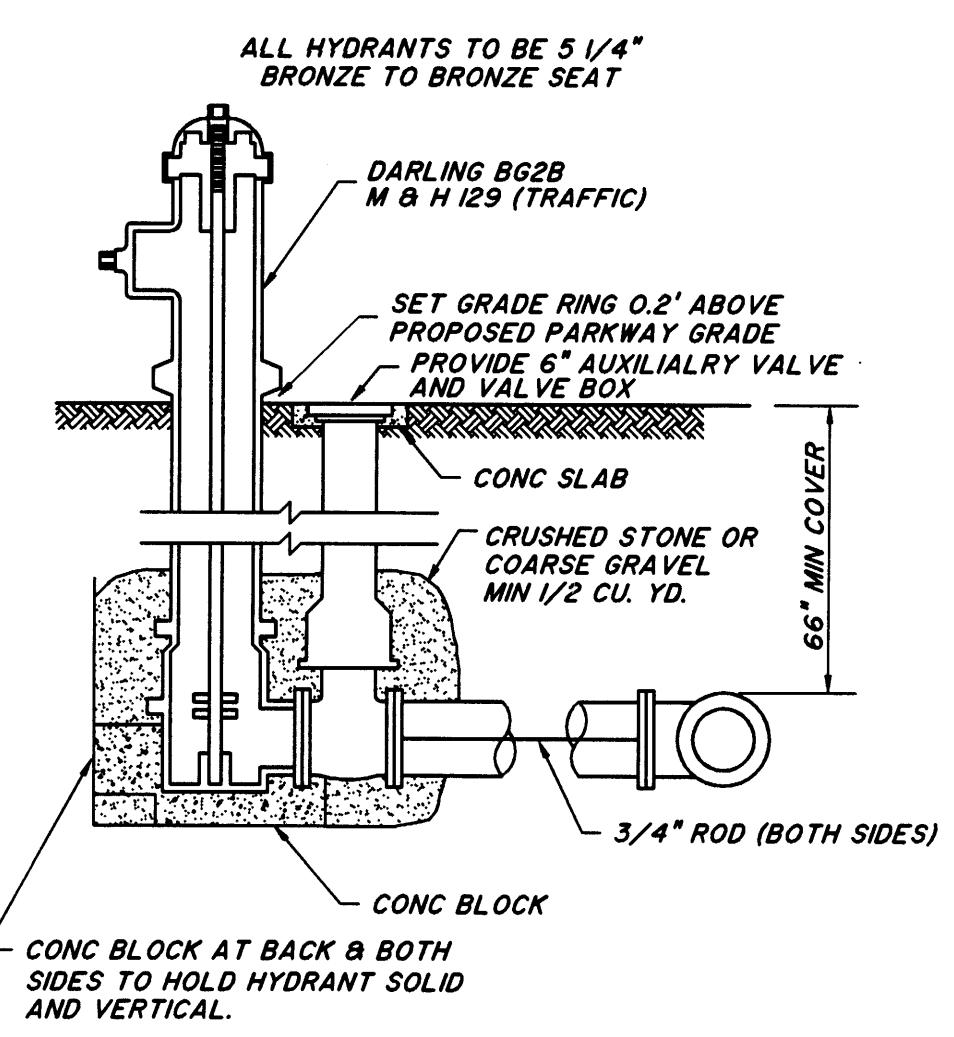
SUPPORT PIPES ON CHIPS OR MASONARY BRICK @ L & G.

BEGIN OR END ENCASEMENT AT JOINT ONLY.

CONCRETE ENCASEMENT



TYPICAL UNDERDRAIN AT CATCH BASINS

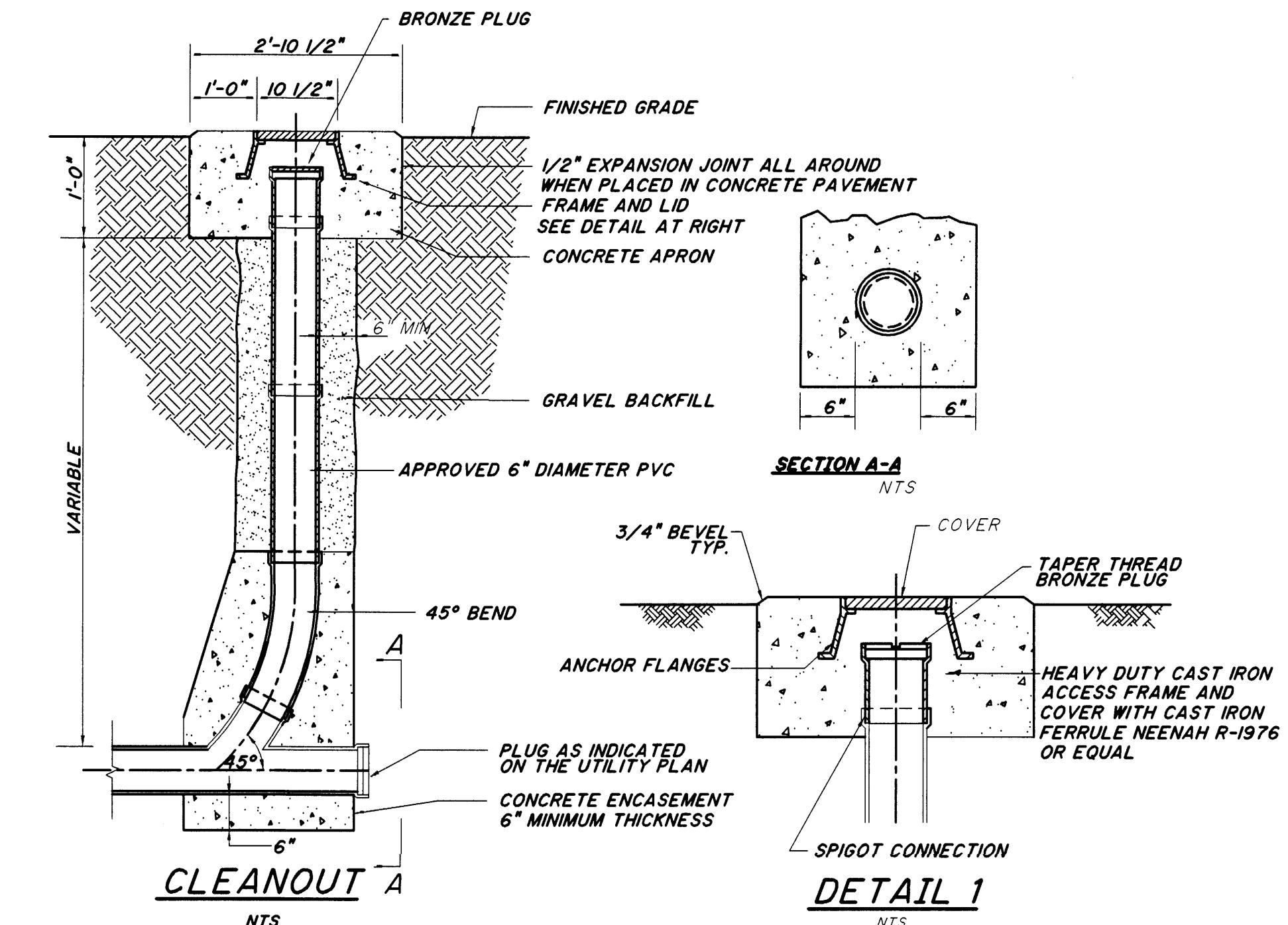


NOTE: ALL VALVES MUST BE RESILIENT SEADED.

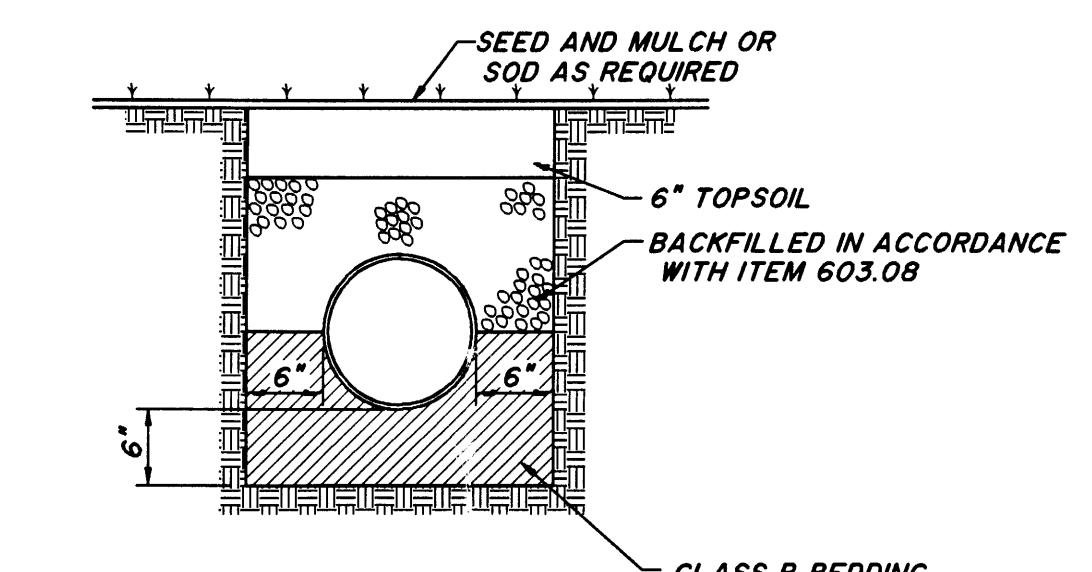
**APPROVED VALVE TYPES: CLOW, DRESSER
AND AMERICAN DARLING.**

**RODDING SHALL NOT BE REQUIRED IF ANCHOR
FLANGES ARE USED.**

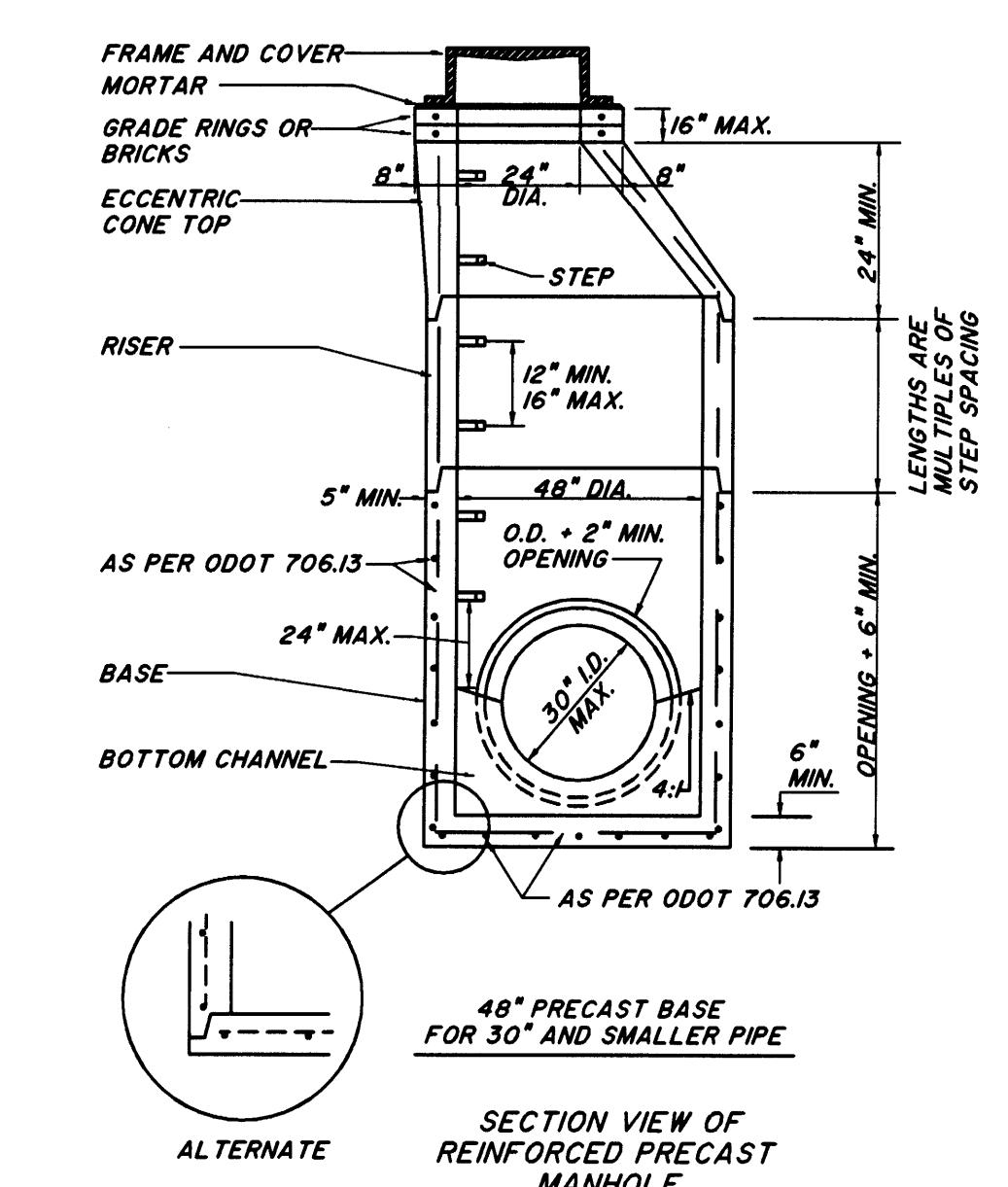
HYDRANT SETTING



STORM AND SANITARY SEWER CLEANOUT DETAIL



TYPICAL TRENCH RESTORATION



ODOT MH-3 MANHOLE F

