

SANITARY SEWER IMPROVEMENT DELAWARE COUNTY OHIO ABBOTT-SHIRE OF LOCH LOMOND 1980

County of Delaware requirements together with the specifications of the State of Ohio, Department of Highways, including all supplements thereto in force on the date of contract, shall govern all materials and workmanship involved in the improvements shown on these plans. At all points of crossing water mains or other sewers the backfill shall be granular material between the deeper and shallower pipe as directed.

Risers shall be placed on all wye branches when the depth of flow line is greater than 10 ft. tops of all risers are to be 9 ft. plus or minus 1 ft. below ground or as directed.

The Contractor shall furnish and place as directed, approved wye poles made of 2" x 2" lumber at all wye branches, risers and at the end of extended services, and the cost of such poles shall be included in the price bid for various sewer items.

Since final grading plans have not been made, manholes top elevation are tentative and subject to adjustments when final grades have been established the contractor shall make allowances in his bid for possible adjustment in level of manhole tops and shall receive no additional compensation because of any such adjustments that are required to be made.

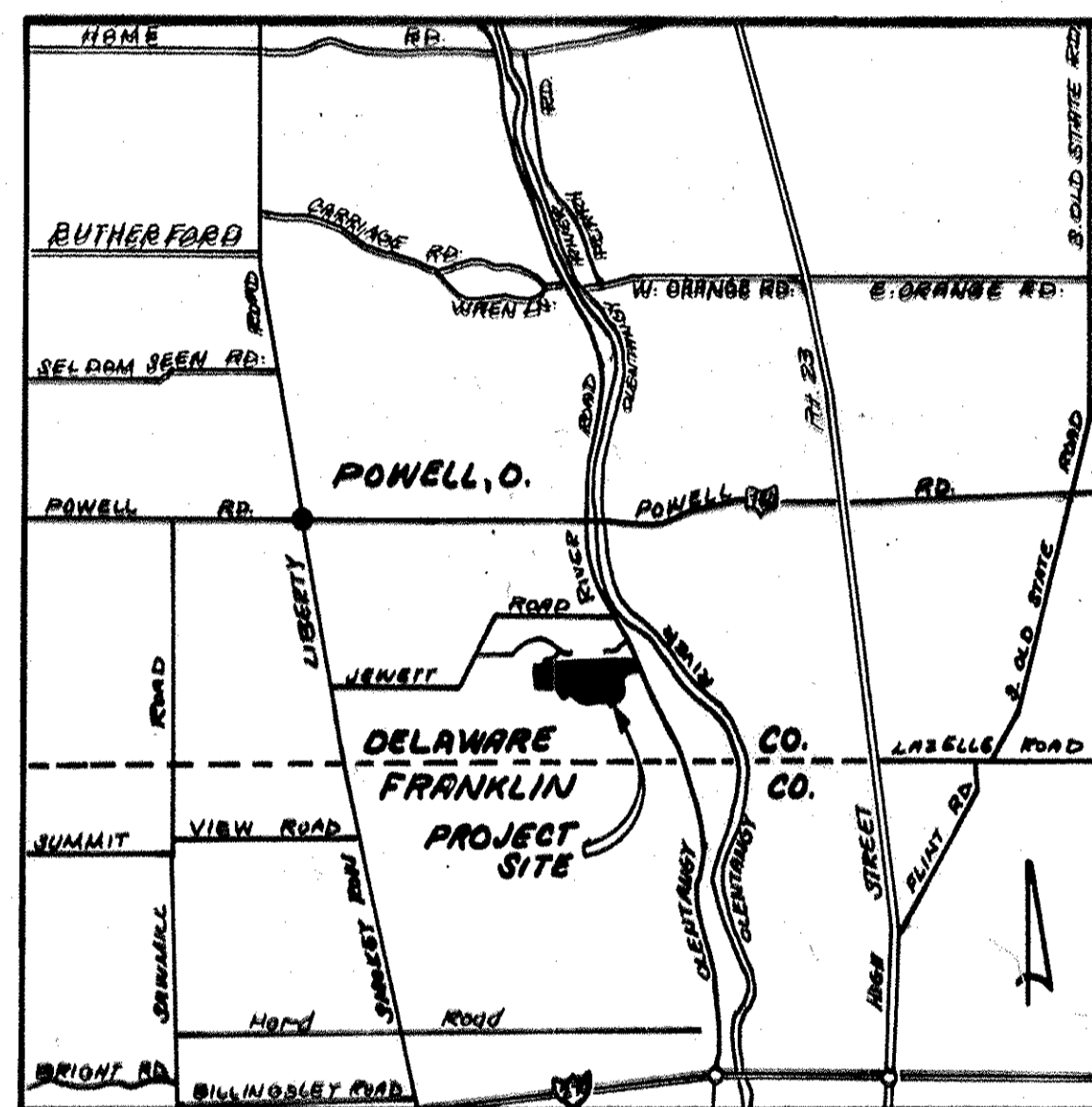
Exact location of wyes to be determined at time of construction.

The Contractor shall investigate and locate all utilities prior to construction.

Sanitary sewers shall be tested by the exfiltration method. Allowable leakage shall not exceed 200 gallons per inch diameter per mile of pipe per 24 hours.

Roof drains, foundation drains and other clean water connections to the sanitary sewer system are prohibited on this project.

All 6-inch services shall be laid at a minimum grade of 100% and shall be backfilled with a compacted granular material where crossing under proposed pavement.



Property Owner: Kenneth Manning - Pres.
LOCH LOMOND FARM CO.

Approved: Samuel Gilbert 3/2/81
Sanitary Engineer Delaware, Ohio Date

Mark J. ... 3-2-81
Delaware County Commissioners Date

J. N. ... 3-2-81

James W. ... 3-2-81

BENCH MARKS

- R.R. Spike in E of S.R. 315 on North Property Line of Loch Lomond. Elev. 780.97
- R.R. Spike in East Side of 30 inch Beech Tree located 65 feet left of E Sta. 316+ on Abbotsford Green Lot. Elev. 895.27
- Chisel Mark on headwall of Culvert on West Side of S.R. 315, 1600 feet South of South Loch Lomond Property Line. Elev. 778.25

AS-BUILT PLANS

FOR SHEETS 3, 4, 5, 6, 10, 11, 12, 2

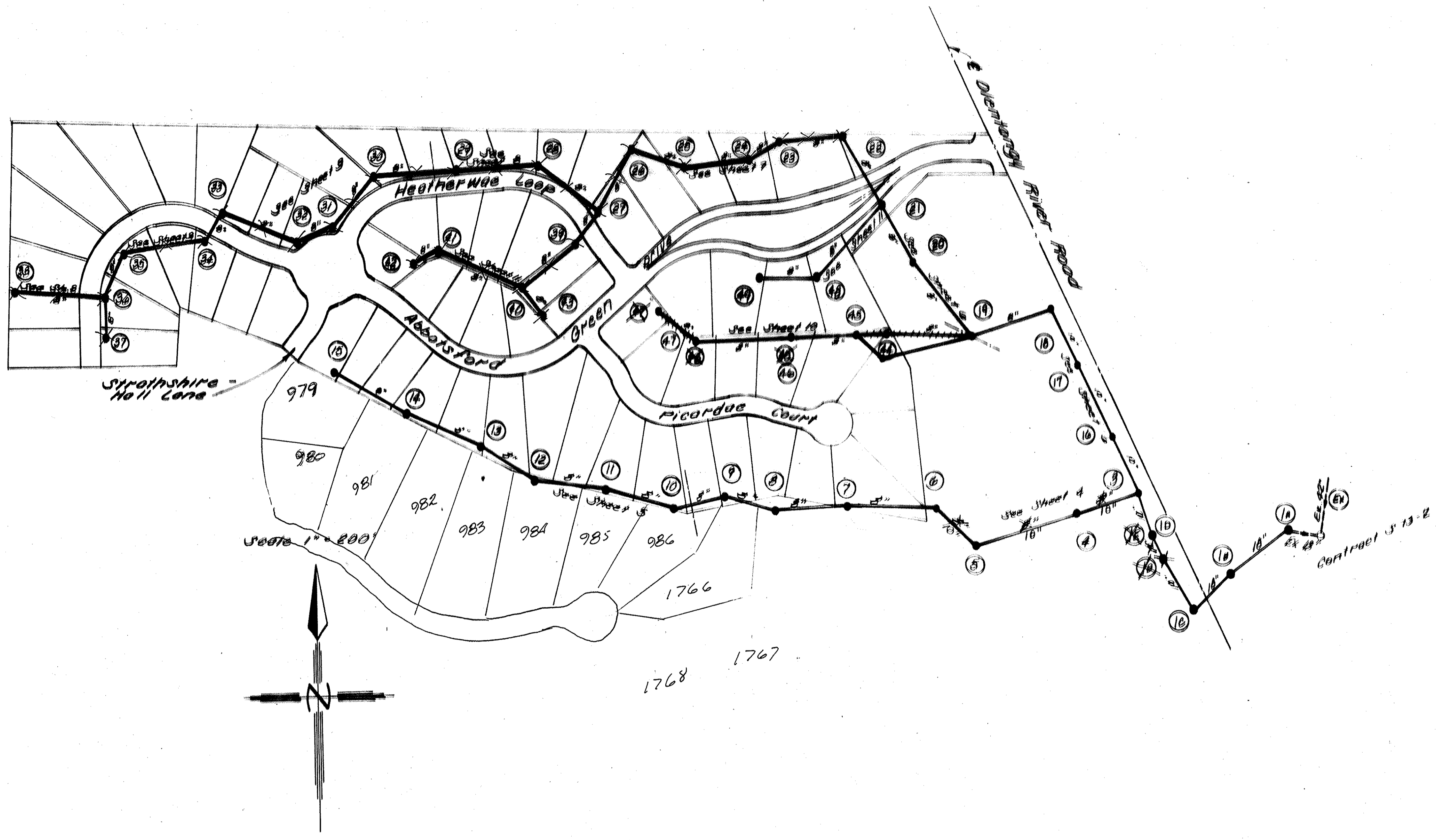
MH's 1A, 1B, 1C, 1D, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 44, 45, 46, 47, 48, 49.

PREPARED 11-12-83 BY ARTHUR D. HERGATT, REG. ENGINEER 30175

HOCKADEN AND ASSOCIATES, INC.
CONSULTING ENGINEERS
883 N. CASSADY AVE.
COLUMBUS, OHIO

George W. Hockaden
REGISTERED ENGINEER

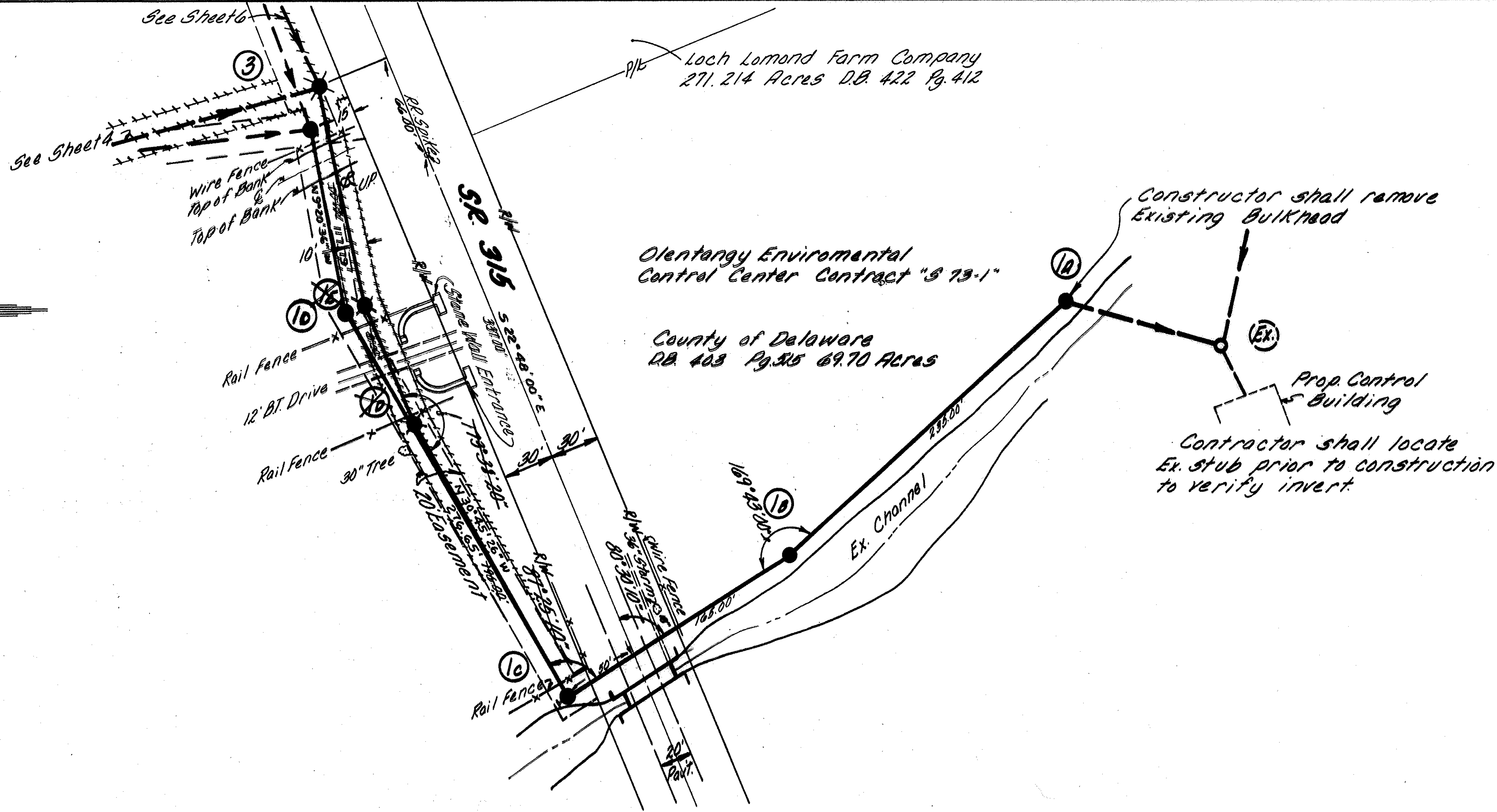
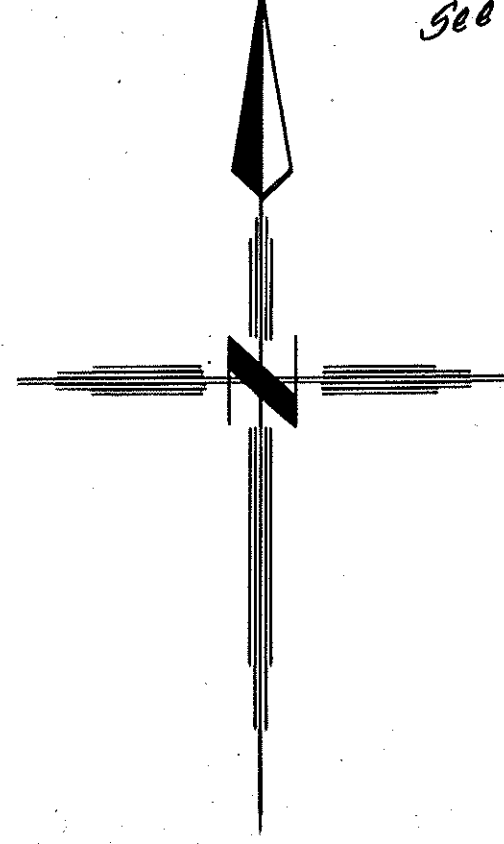
Nov. 24, 1980
DATE



COUNTY OF DELAWARE, OHIO				2/12
ABBOT-SHIRE OF LOCH LOMOND SANITARY SEWER IMPROVEMENTS				
HOCKADEN AND ASSOCIATES, INC. CONSULTING ENGINEERS COLUMBUS, OHIO				
DESIGNED	AHW	SCALE: 1" = 200'	WORK NO. P-591	DATE
DRAWN	LWT			
CHECKED	JWH			

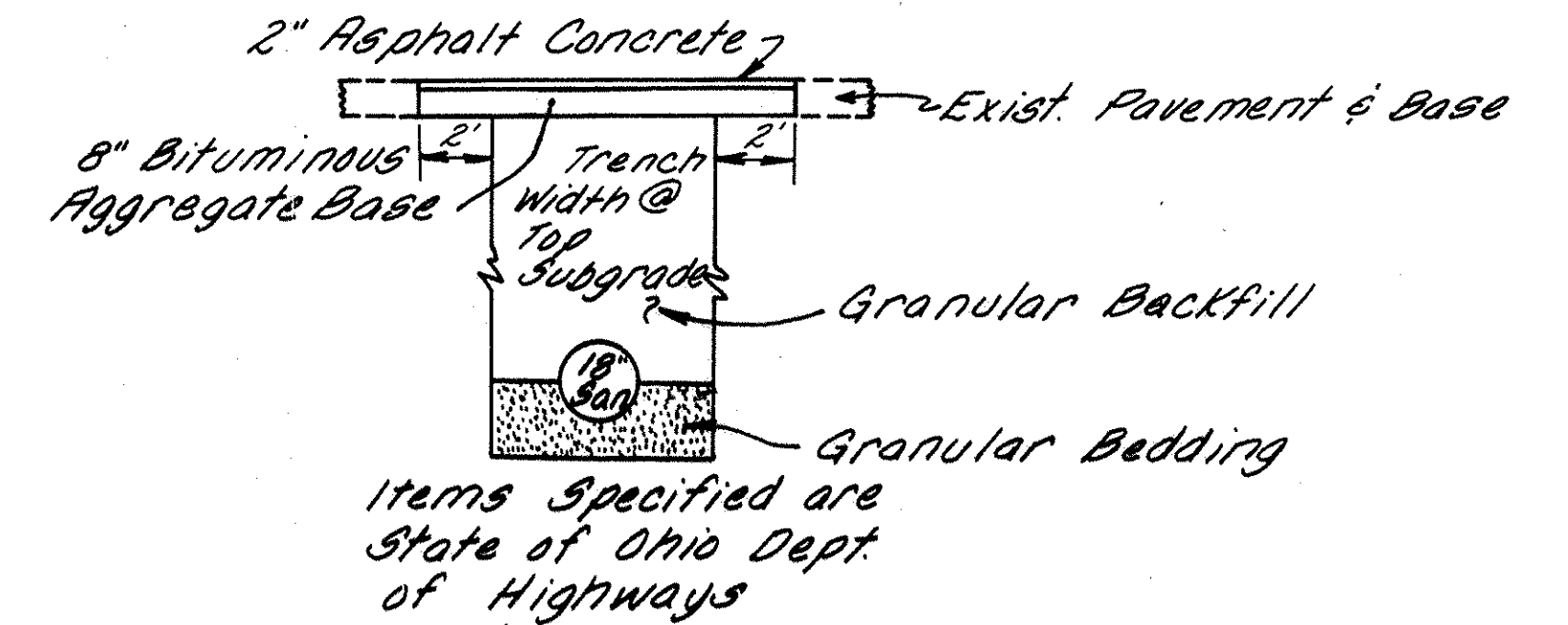
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 NOTE BOOK NO. AREAS CHECKED

ORIGINAL SURVEY PLOTTED BY DATE
 NOTE BOOK NO. AREAS CHECKED

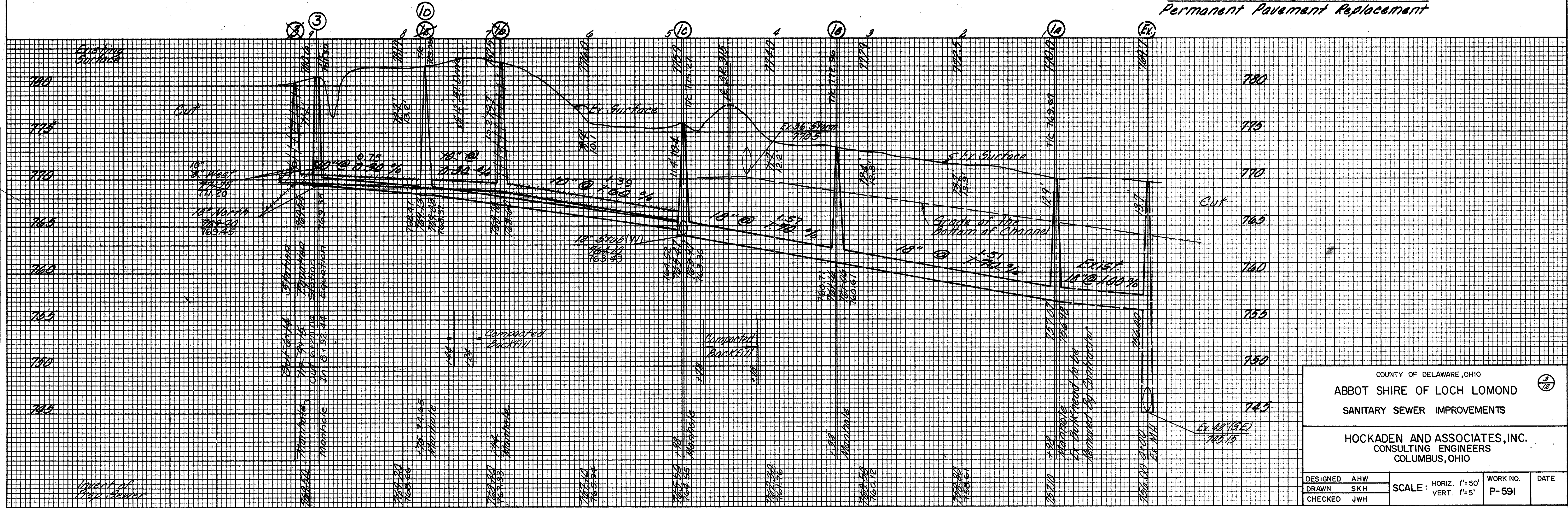


Pavement Replacement:
 The Contractor shall place a temporary pavement in SR 315 immediately after the trench has been properly backfilled, the material used for the temporary pavement shall be 9" of Quarry Run crushed stone or an approved equal. The temporary pavement replacement (See Detail) is ordered in place by the Engineer. Cost of all labor, tools, materials, and equipment necessary for the temporary and permanent pavement replacement are to be included in the price bid for the 18" Sanitary Sewer.

Traffic Note:
 Two-way, one-lane, traffic shall be maintained during construction operation. Two-way, two-lane traffic shall be maintained at all other times. A flagman shall be stationed at each end of the single-lane section to assist traffic. The Contractor shall erect, maintain, and remove all signs, lights, and barriers in accordance with the County Engineers Office.
 All requirements of the above items shall be included in the price bid for various sewer items.

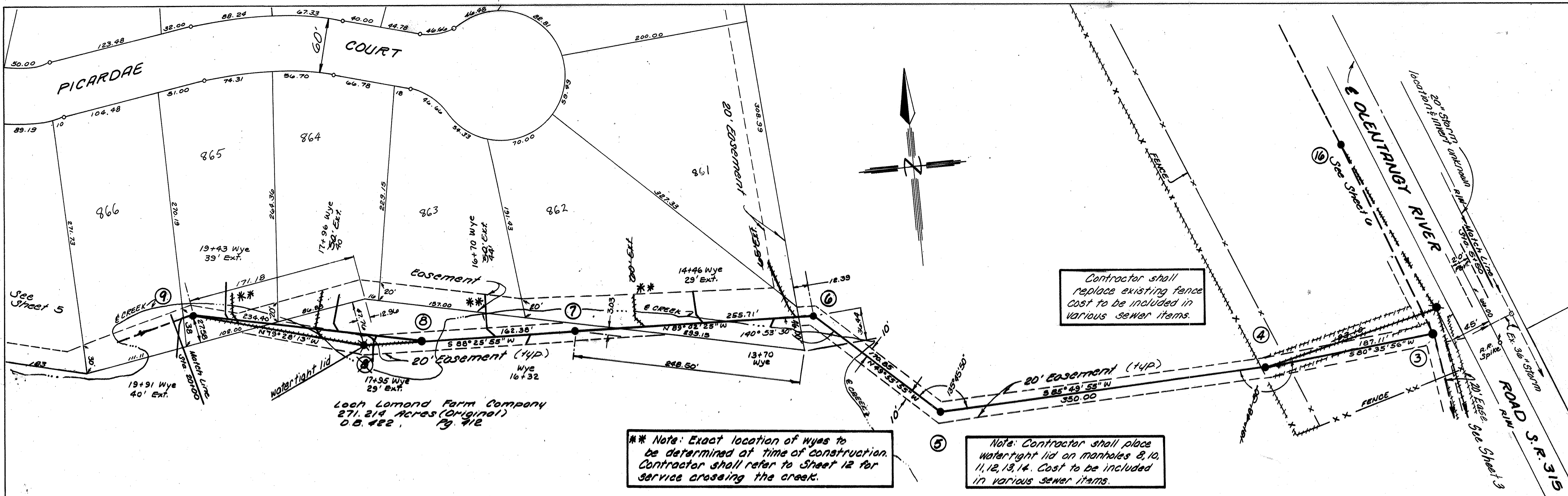


**SR 315
 Permanent Pavement Replacement**

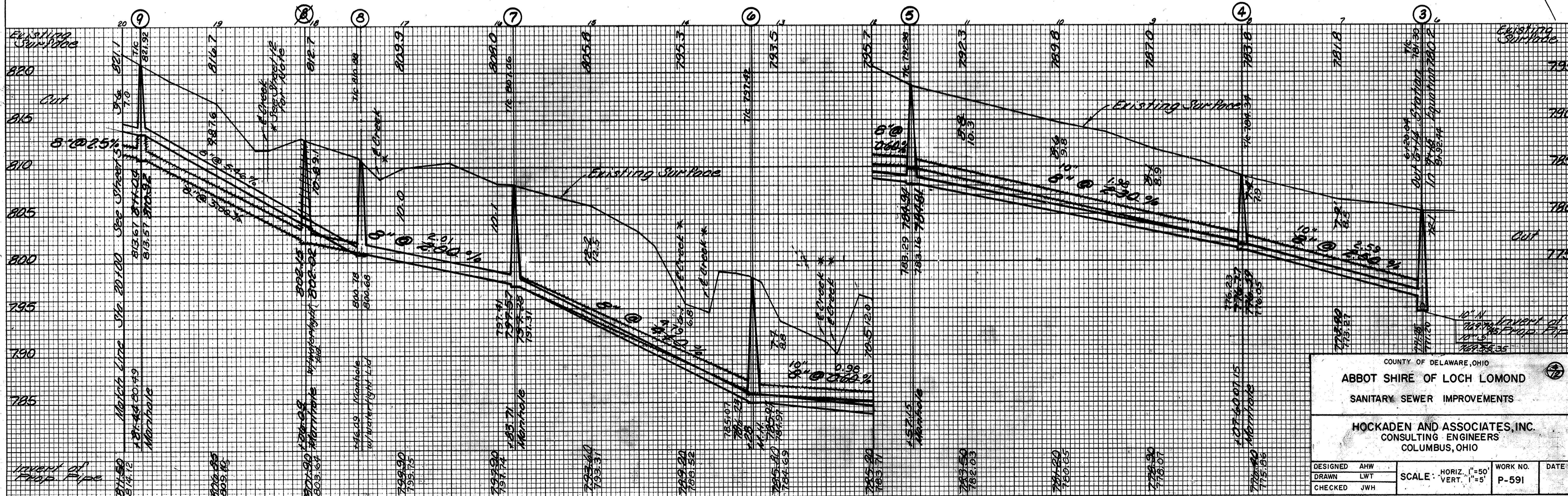


COUNTY OF DELAWARE, OHIO			
ABBOT SHIRE OF LOCH LOMOND			
SANITARY SEWER IMPROVEMENTS			
HOCKADEN AND ASSOCIATES, INC. CONSULTING ENGINEERS COLUMBUS, OHIO			
DESIGNED AHW	SCALE: HORIZ. 1"=50'	WORK NO. P-591	DATE
DRAWN SKH	VERT. 1"=5'		
CHECKED JWH			

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COUNTY OF DELAWARE, OHIO

ABBOT SHIRE OF LOCH LOMOND

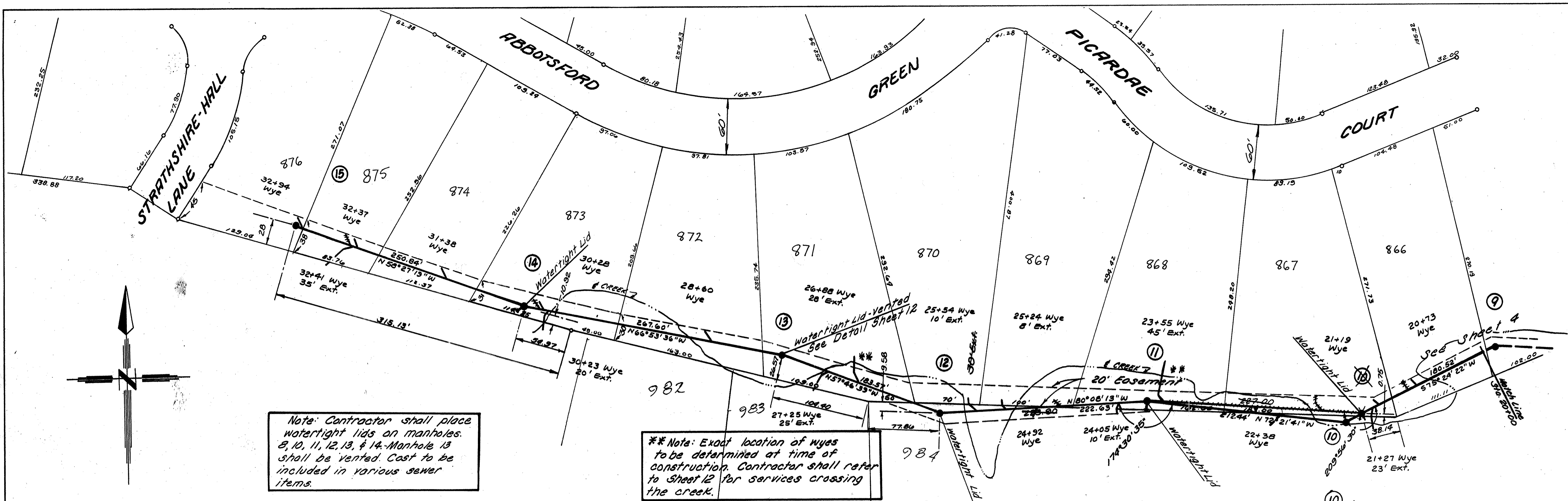
SANITARY SEWER IMPROVEMENTS

HOCKADEN AND ASSOCIATES, INC.
CONSULTING ENGINEERS
COLUMBUS, OHIO

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DRAWN	LWT	VERT. 1"=5'	P-591	
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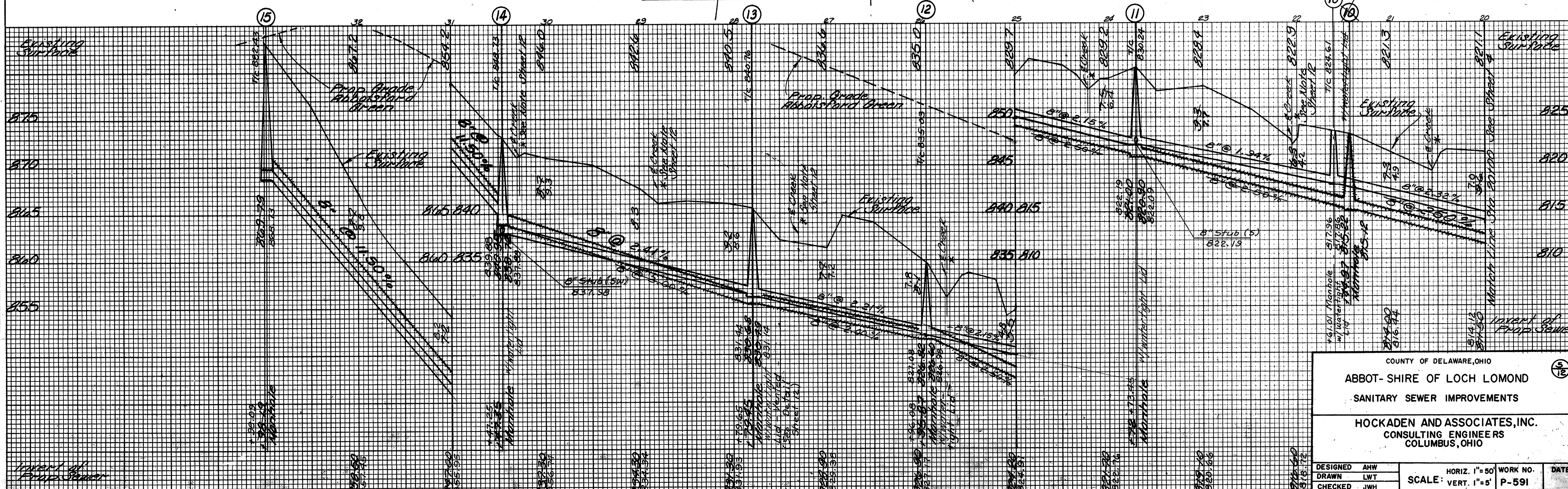
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Note: Contractor shall place watertight lids on manholes 8, 10, 11, 12, 13, & 14. Manhole 13 shall be vented. Cast to be included in various sewer items.

** Note: Exact location of wyes to be determined at time of construction. Contractor shall refer to Sheet 12 for services crossing the creek.



COUNTY OF DELAWARE, OHIO

ABBOT-SHIRE OF LOCH LOMOND

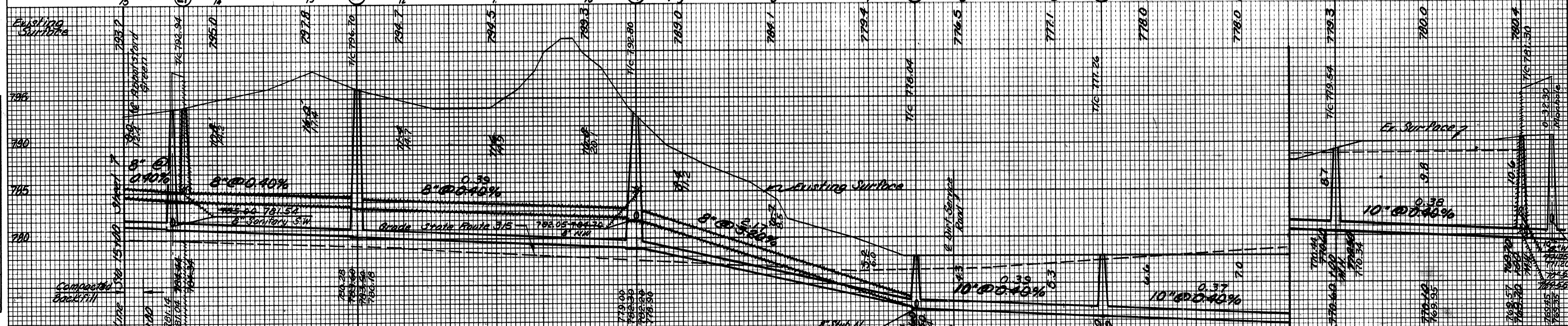
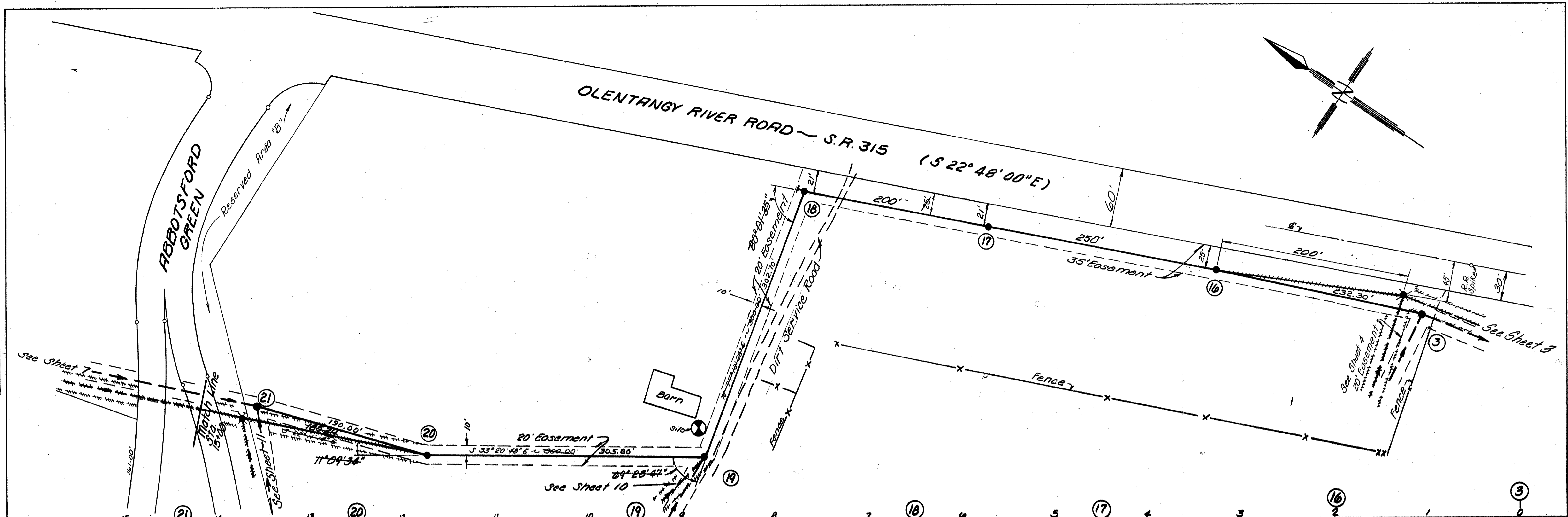
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HOCKADEN AND ASSOCIATES, INC.
CONSULTING ENGINEERS
COLUMBUS, OHIO

DESIGNED	AHW	HORIZ. 1"=50'	WORK NO.	DATE
DRAWN	LWT	VERT. 1"=5'	P-591	
CHECKED	JWH			

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NOTE BOOK	
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COUNTY OF DELAWARE, OHIO

ABBOT-SHIRE OF LOCH LOMOND

SANITARY SEWER IMPROVEMENTS

HOCKADEN AND ASSOCIATES, INC.

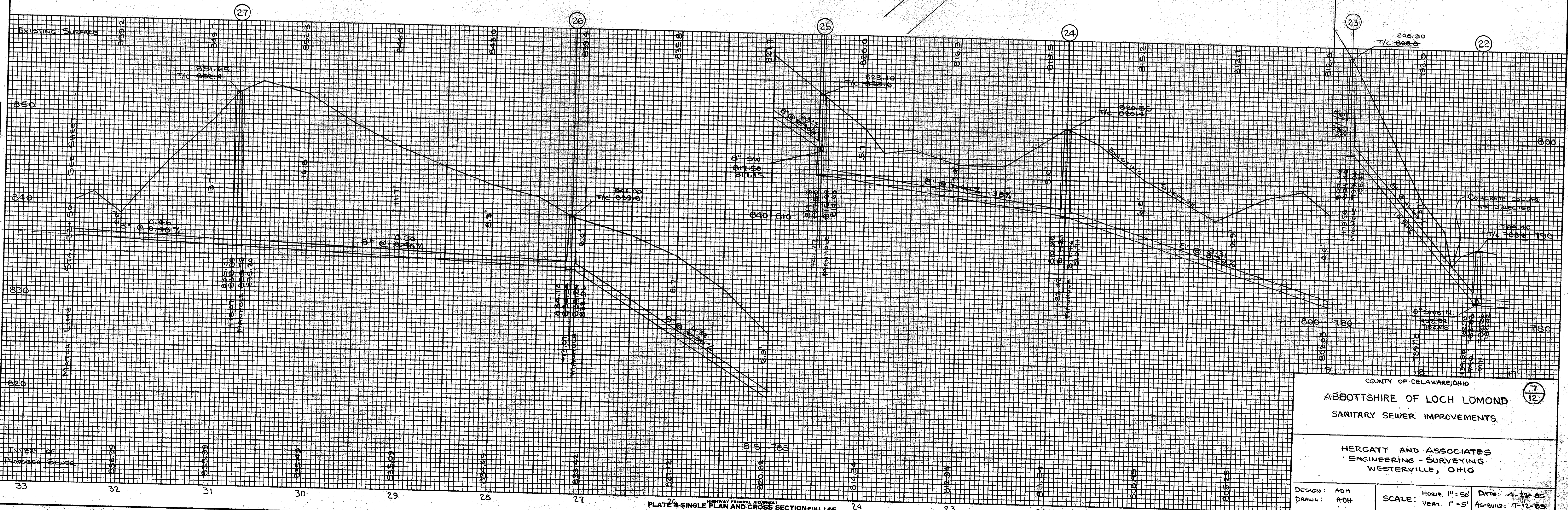
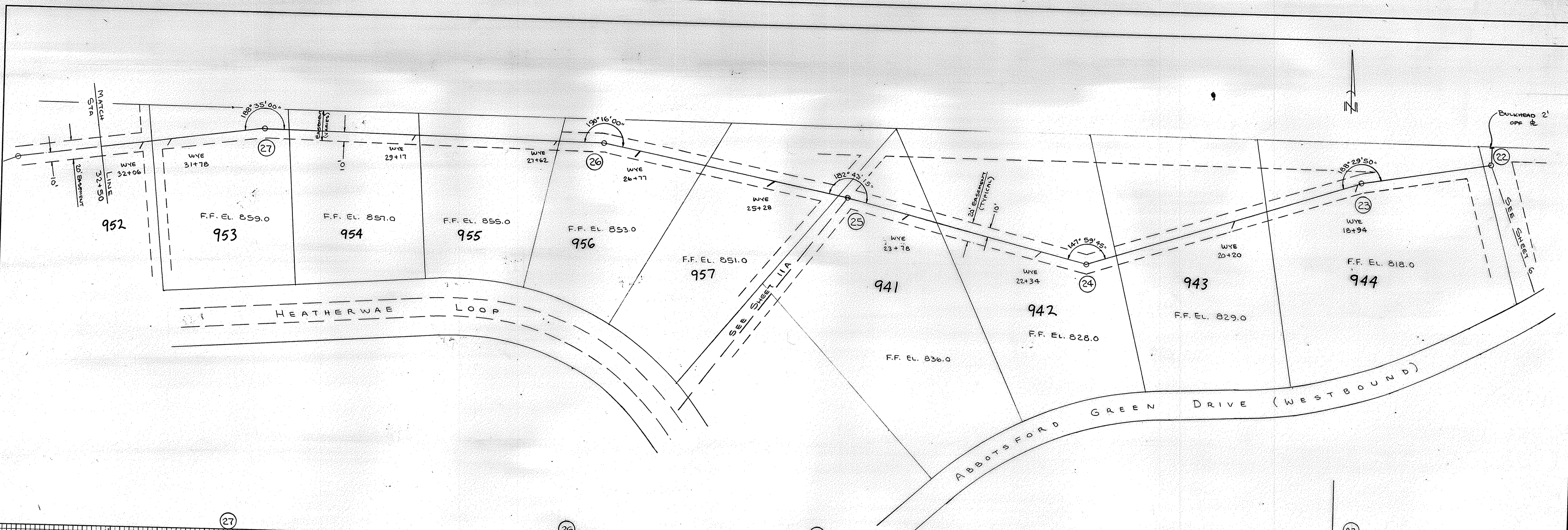
CONSULTING ENGINEERS

COLUMBUS, OHIO

DESIGNED	AHW	SCALE: HORIZ. 1"=50'	WORK NO.	DATE
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CHECKED	JWH			

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COUNTY OF DELAWARE, OHIO

ABBOTTSHIRE OF LOCH LOMOND (7/12)

SANITARY SEWER IMPROVEMENTS

HERGATT AND ASSOCIATES
ENGINEERING - SURVEYING
WESTERVILLE, OHIO

DESIGN: ADH
DRAWN: ADH

SCALE: HORIZ. 1"=50'
VERT. 1"=5'

DATE: 4-22-85
AS-BUILT: 7-12-85

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NOTE BOOK	
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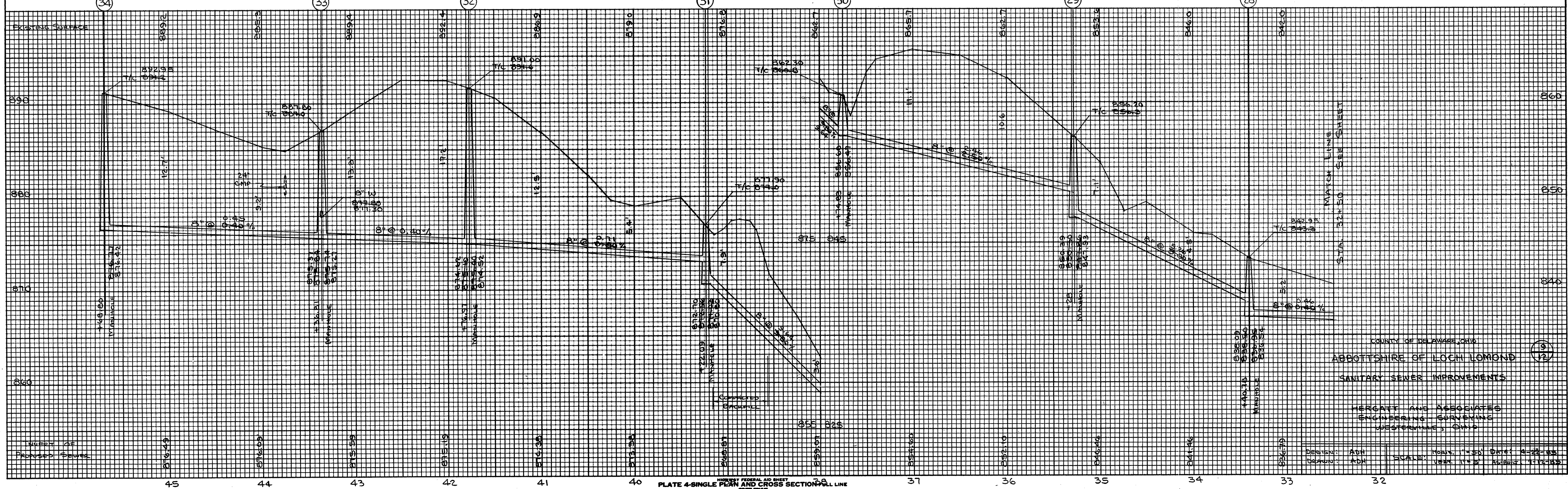
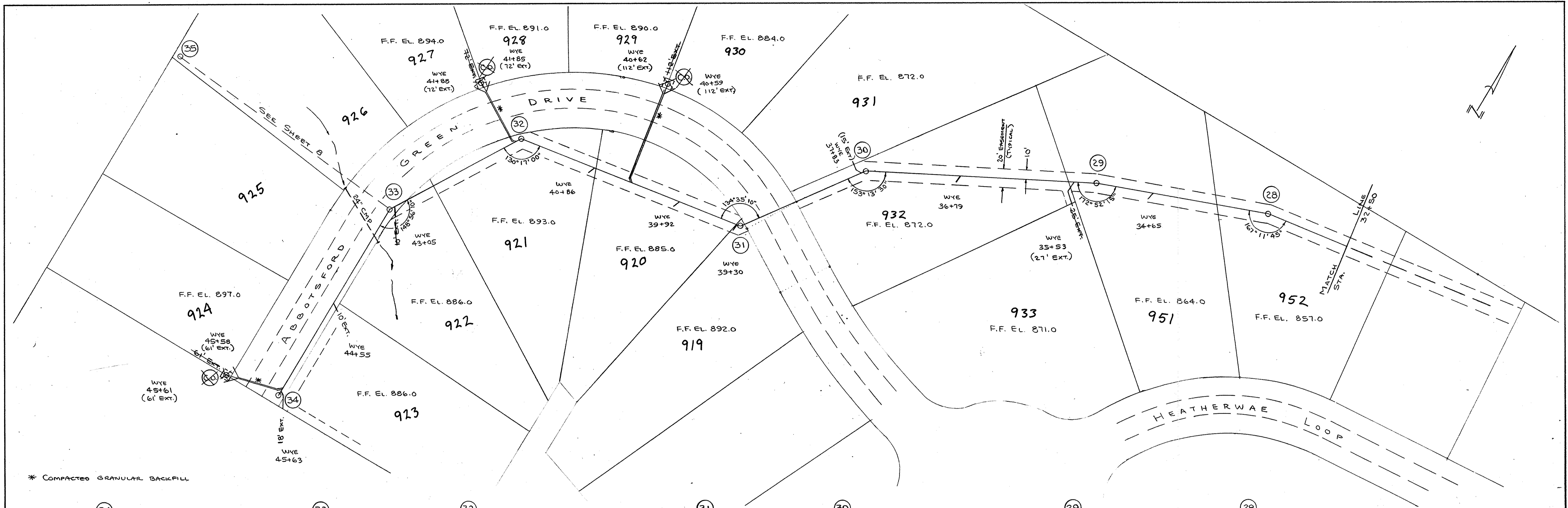
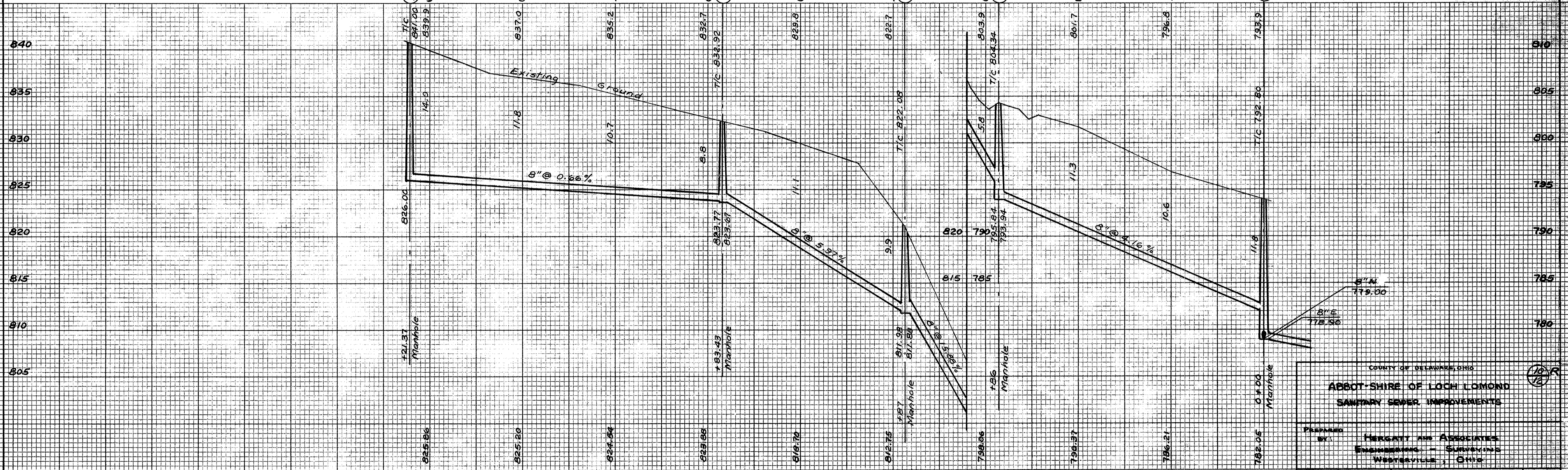
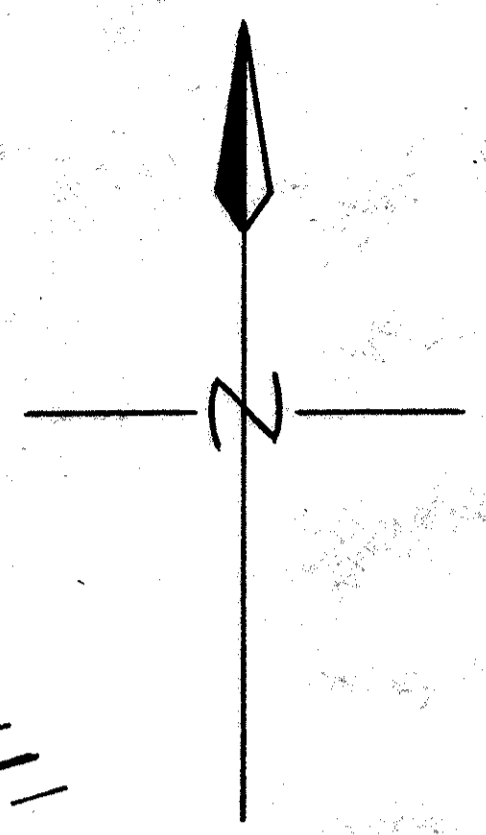
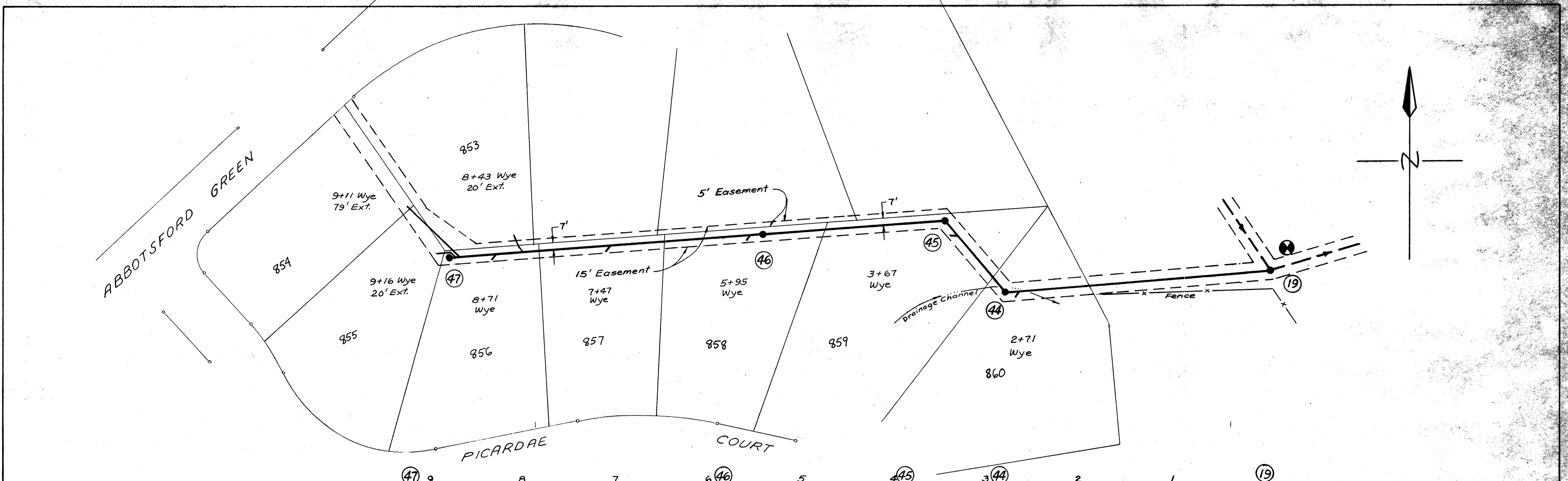


PLATE 4-SINGLE PLAN AND CROSS SECTION-FULL LINE
 COUNTY OF DELAWARE, CRID
 ABBOTTSHIRE OF LOCH LOMOND
 SANITARY SEWER IMPROVEMENTS
 HERGATT AND ASSOCIATES
 ENGINEERS SURVEYORS
 WESTERVILLE, OHIO
 DESIGN: ADH
 DRAWING: ADH
 SCALE: HORIZ. 1"=50' VERT. 1"=5'
 DATE: 8-22-88
 SHEET: 112-125



COUNTY OF DELAWARE, OHIO

ABBOT SHIRE OF LOCH LOMOND

SANITARY SEWER IMPROVEMENTS

PREPARED BY: **HERGATT AND ASSOCIATES**
ENGINEERING - SURVEYING
WESTERVILLE, OHIO

SCALE: HORIZ. 1"=50'
VERT. 1"=5'

SHEET REVISED FROM ORIGINAL HEGGADEN & ASSOC. DATED 11-24-90

DATE: 5-26-93

TRADE STANDARD MARK
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CROSS SECTION 10 X 10
PRINTED IN U. S. A.

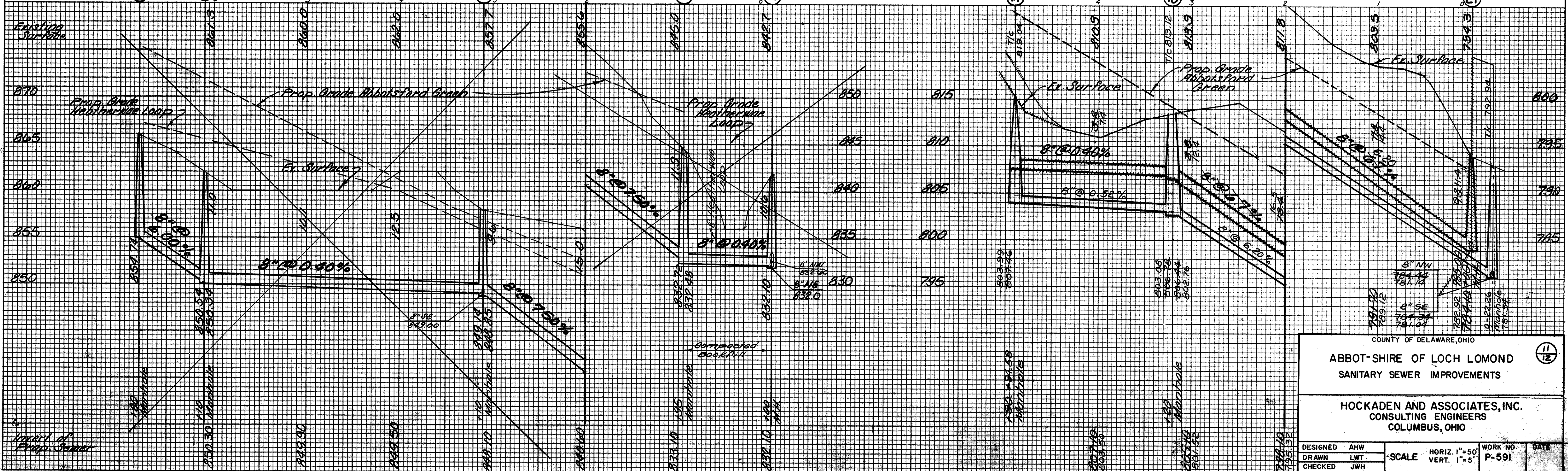
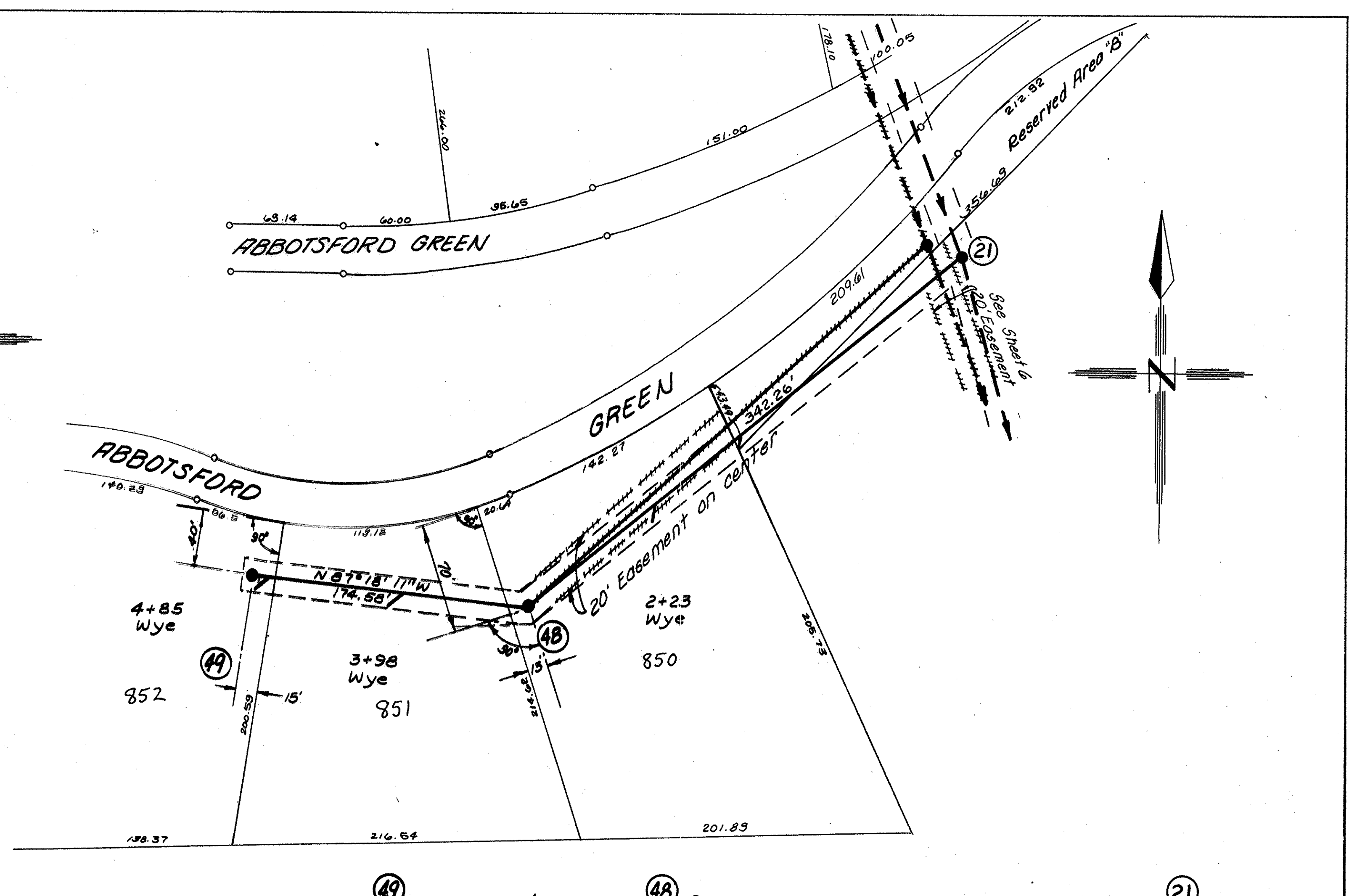
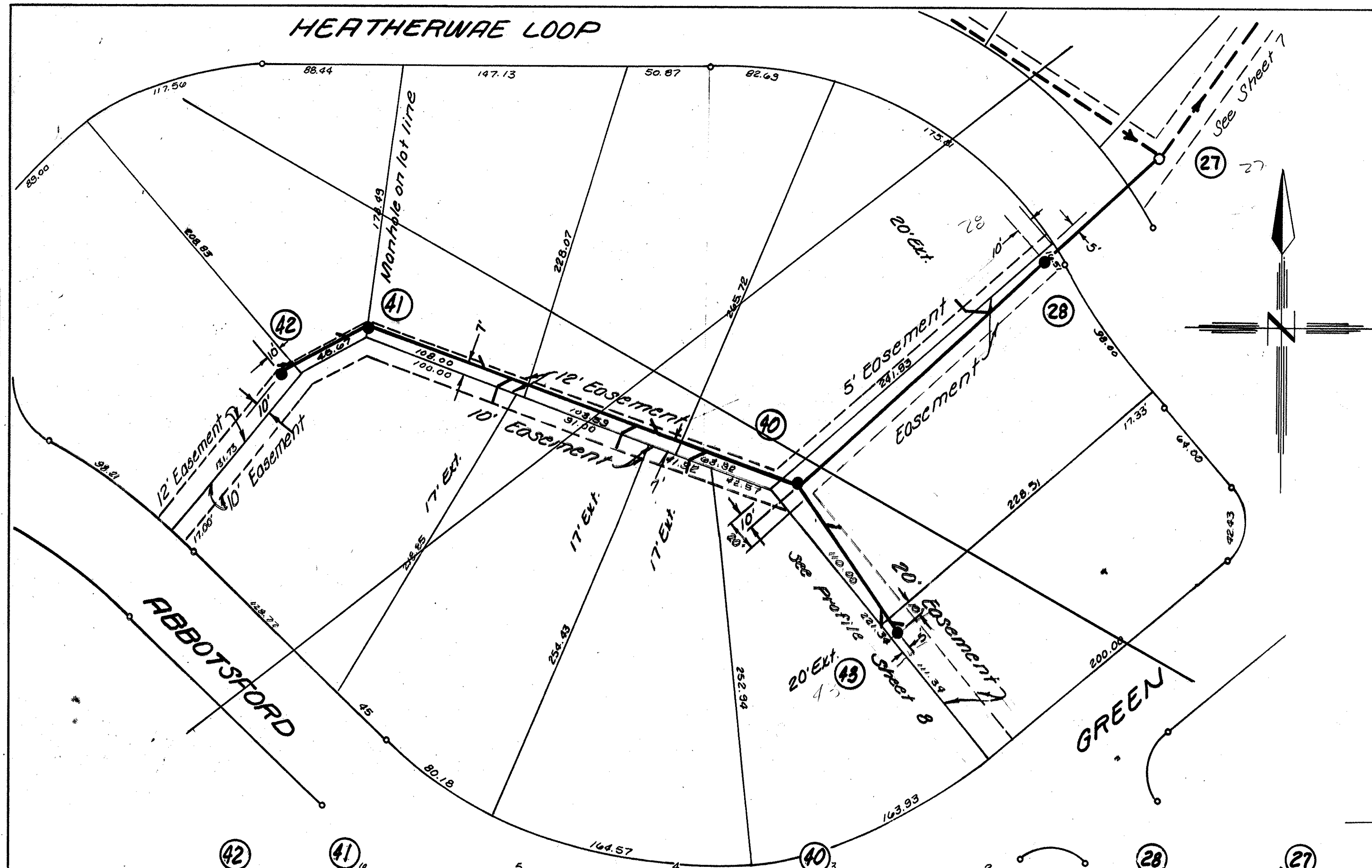
KEUFFEL & ESSER CO.
NEW YORK.

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KEUFFEL & ESSER CO.
NEW YORK.

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COUNTY OF DELAWARE, OHIO

ABBOT-SHIRE OF LOCH LOMOND
SANITARY SEWER IMPROVEMENTS

HOCKADEN AND ASSOCIATES, INC.
CONSULTING ENGINEERS
COLUMBUS, OHIO

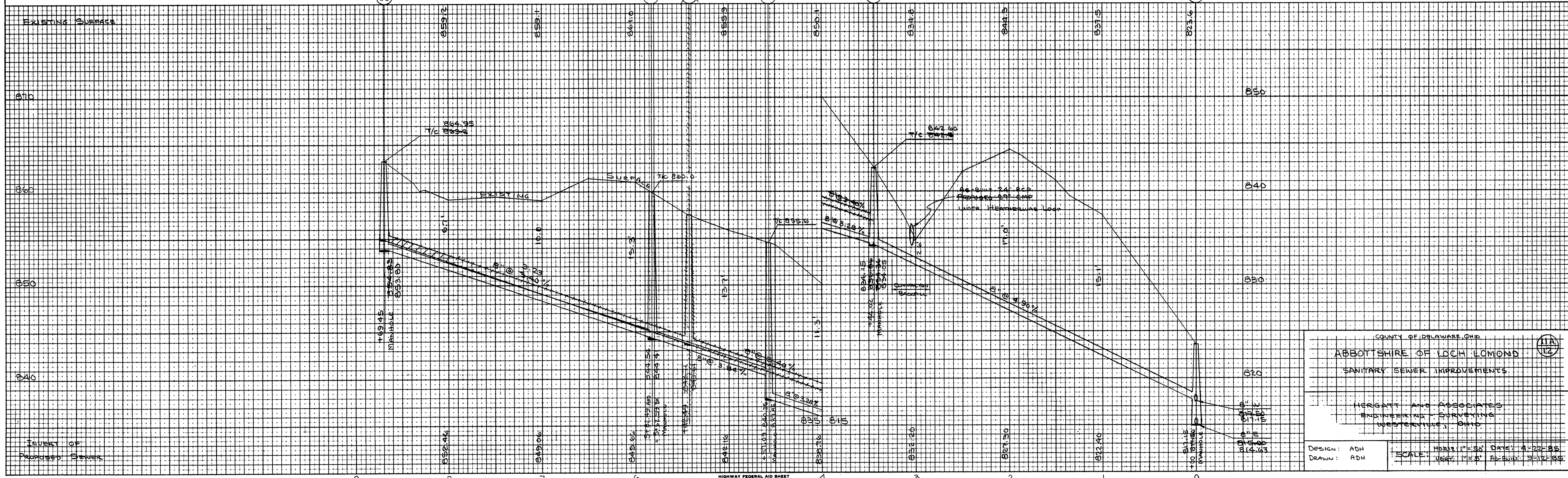
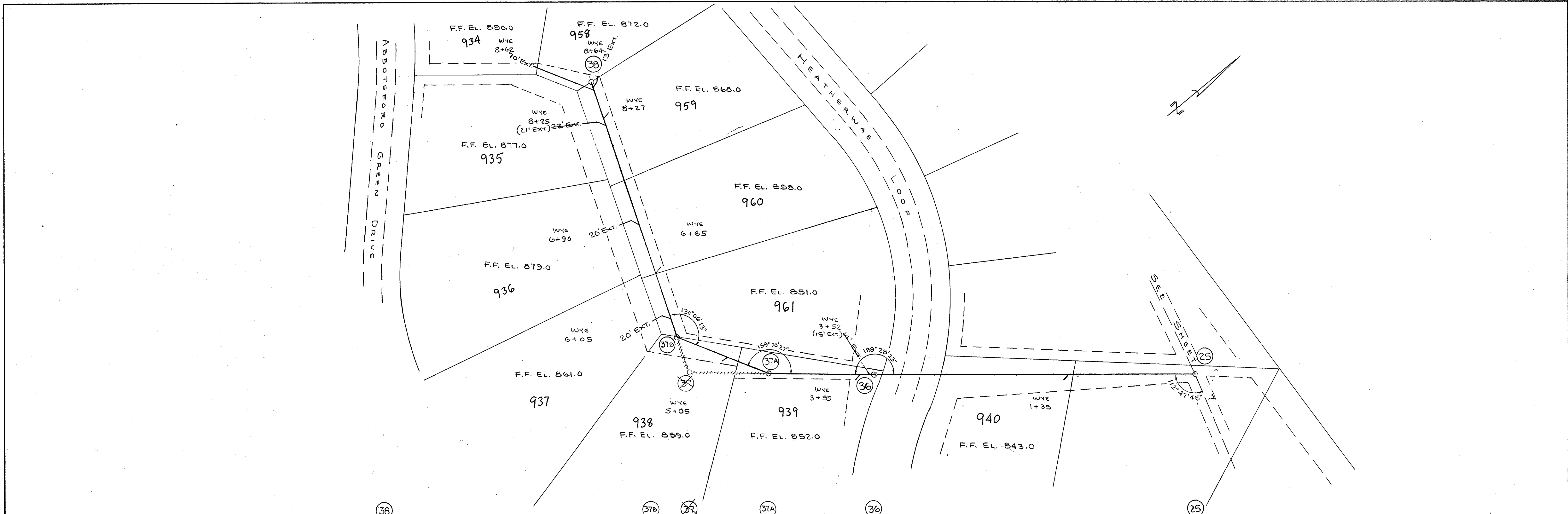
DESIGNED AHW
DRAWN LWT
CHECKED JWH

SCALE HORIZ. 1"=50'
VERT. 1"=5'

WORK NO. P-591
DATE 11/12

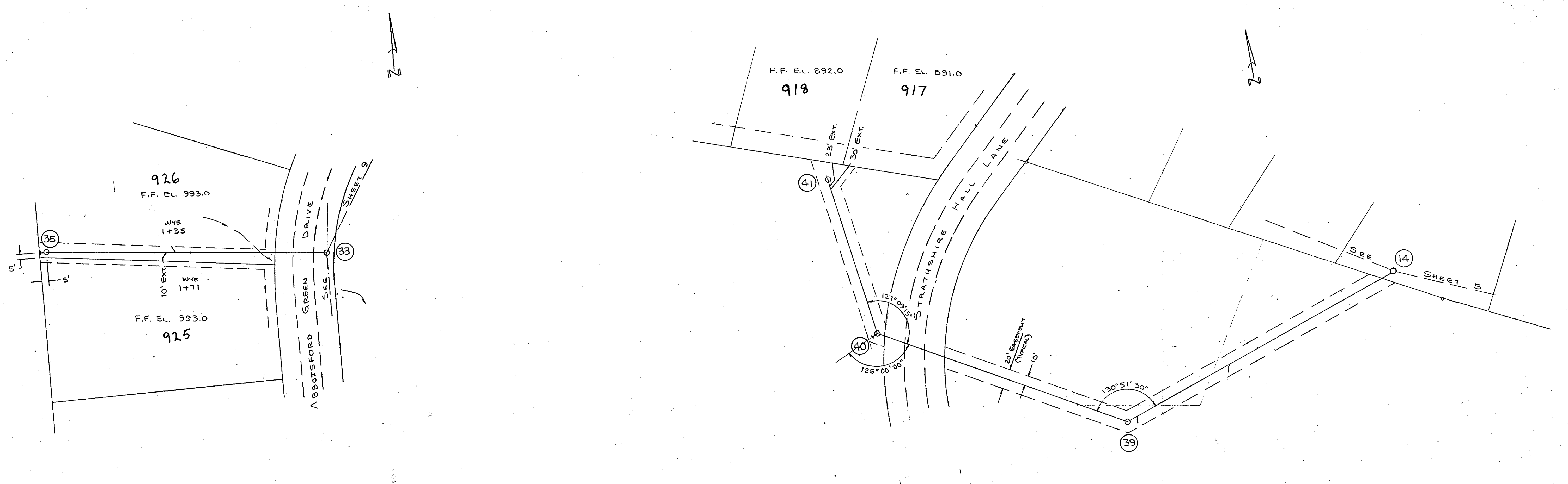
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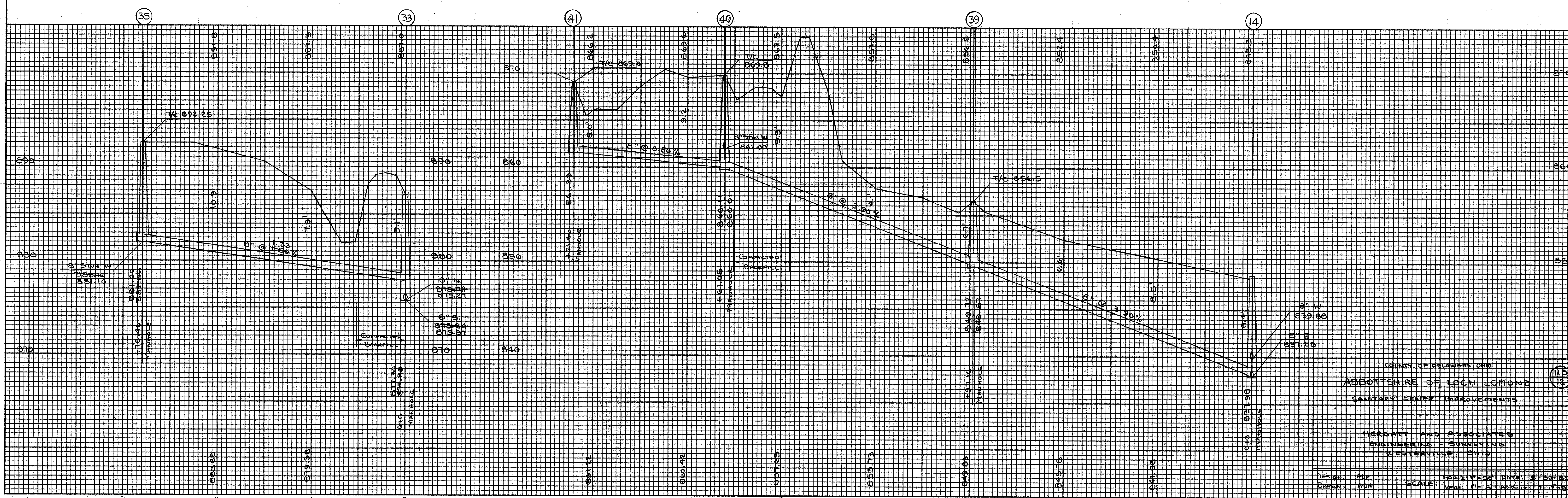


COUNTY OF DELAWARE, OHIO
 ABBOTTSHIRE OF LOCH LOMOND
 SANITARY SEWER IMPROVEMENTS
 HERGATT AND ASSOCIATES
 ENGINEERS - SURVEYORS
 WESTERNUS, OHIO
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 DRAWN: ADH
 SCALE: HORIZONTAL 1"=50' DATE: 4-22-85
 VERTICAL 1"=5' ASSESSMENT: 9-12-85

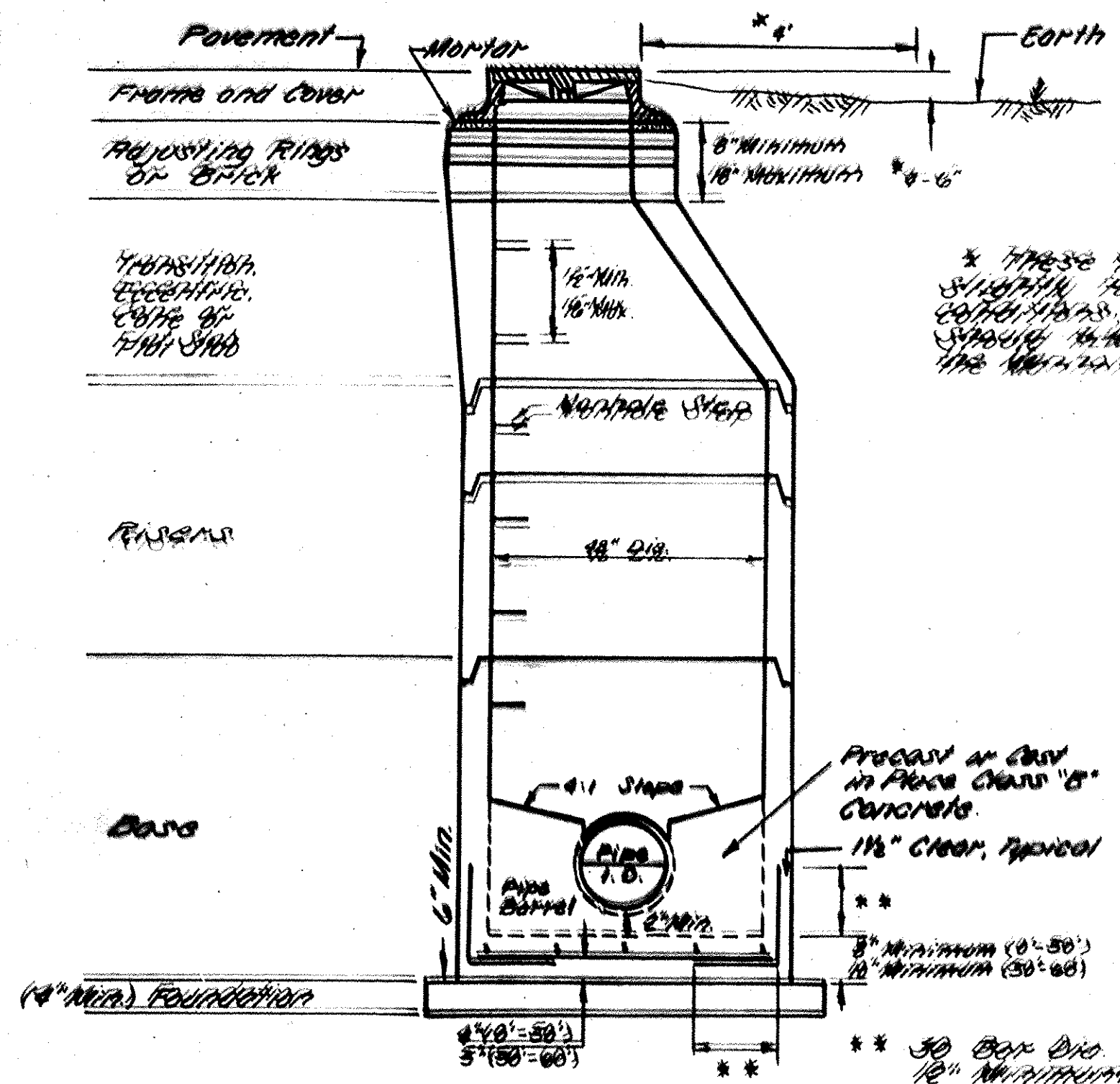
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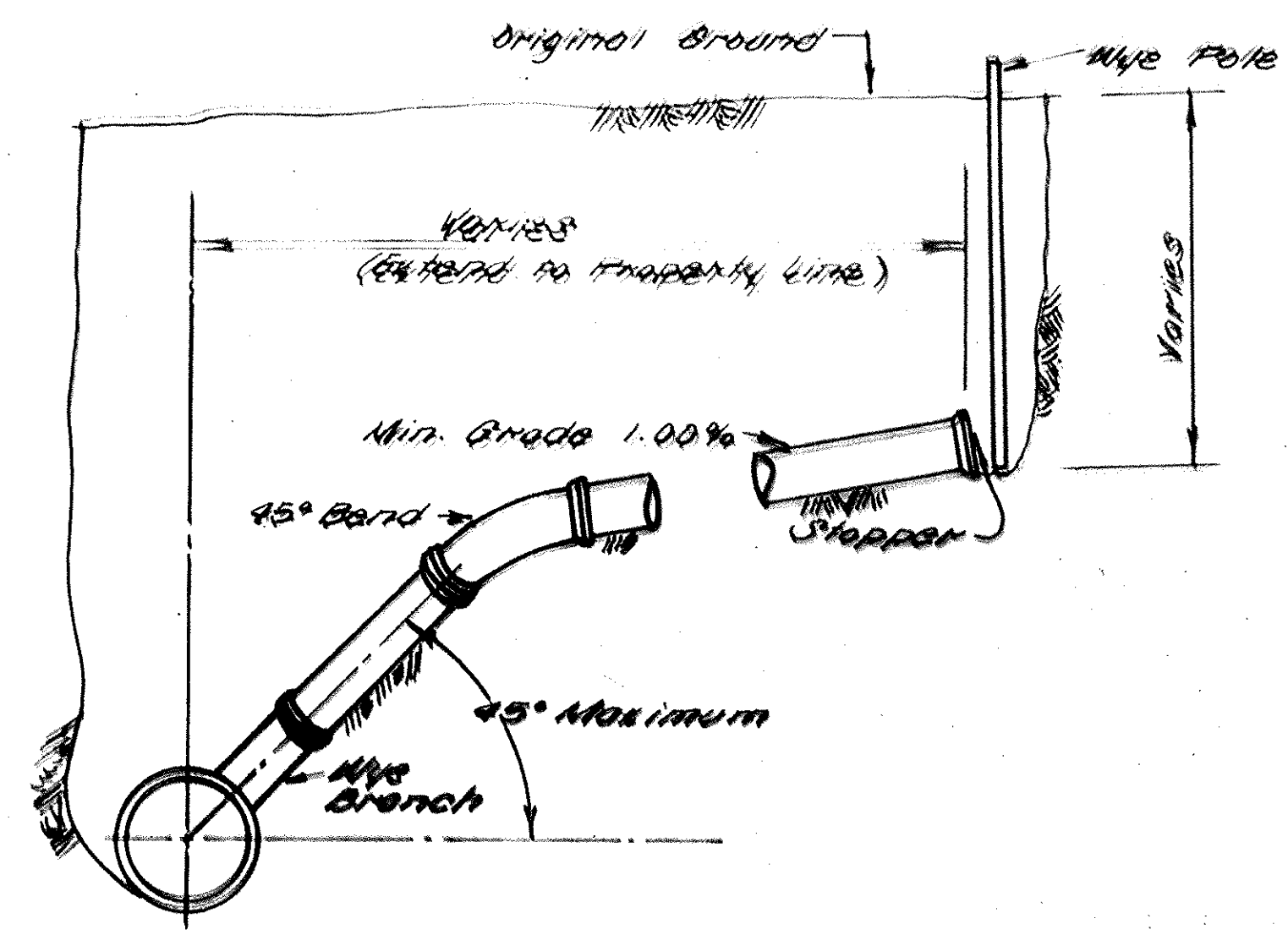
COUNTY OF DELAWARE AND
 ABBOTTSHIRE OF LOCH LOMOND
 SANITARY SEWER IMPROVEMENTS
 HERSHBY AND ASSOCIATES
 ENGINEERING SURVEYING
 WILMINGTON, OHIO
 DESIGN: ADH
 DRAWN: ADH
 SCALE: HORIZ. 1" = 50' VERT. 1" = 5'
 DATE: 11-1-55



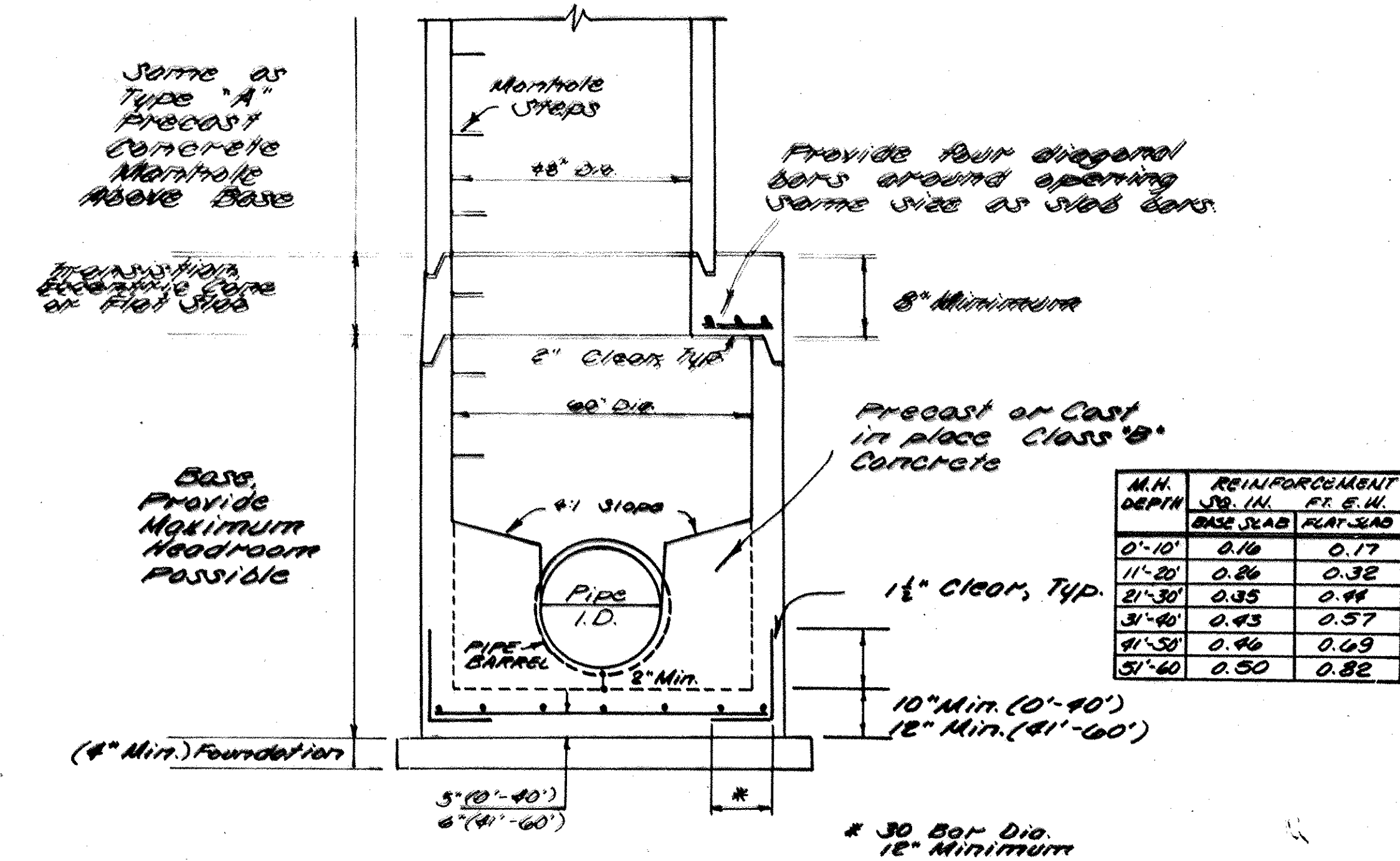
M.H. Depth	Base Size
0'-10"	0.17
1'-20"	0.28
2'-30"	0.37
3'-40"	0.46
4'-50"	0.56
5'-60"	0.66

Reinforcement based on Metal Bars, if Welded Wire Fabric is used Area may be reduced by 13.

Type "A" Precast Concrete Manhole
Dwg. No. 06



Typical Service Connection
Dwg. No. 02



M.H. DEPTH	REINFORCEMENT JO. III.	RE. E. II.
0'-10"	0.16	0.17
1'-20"	0.26	0.32
2'-30"	0.35	0.41
3'-40"	0.43	0.51
4'-50"	0.51	0.61
5'-60"	0.59	0.72

Type "B" Precast Concrete Manhole
Dwg. No. 07

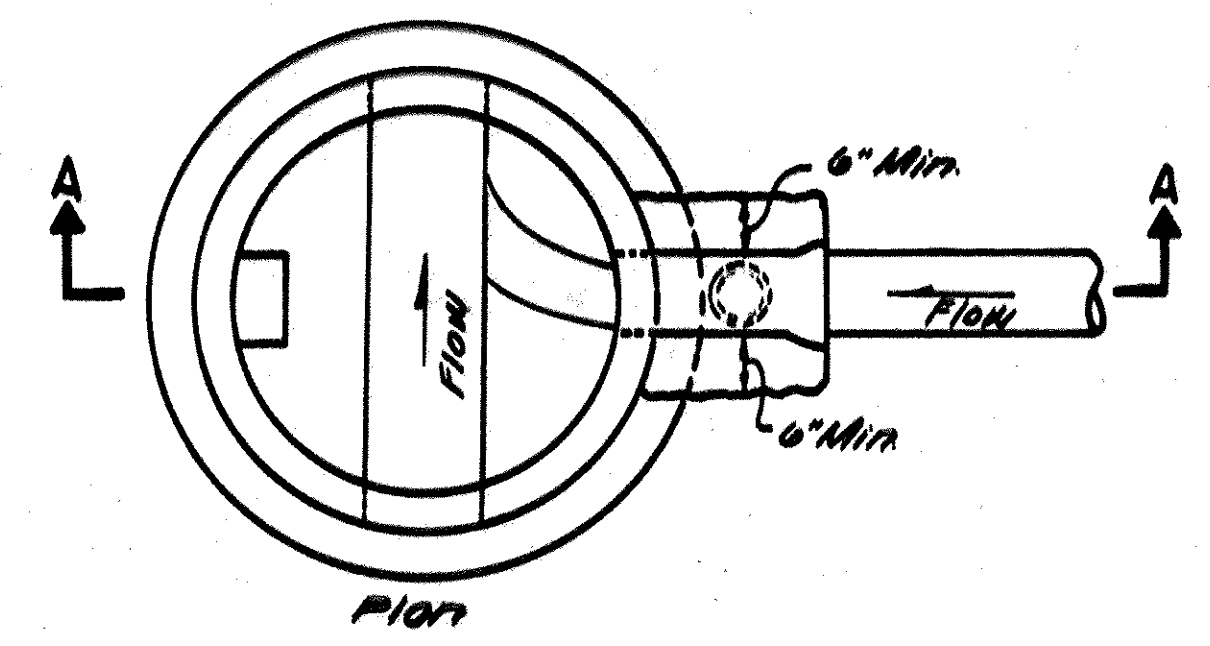
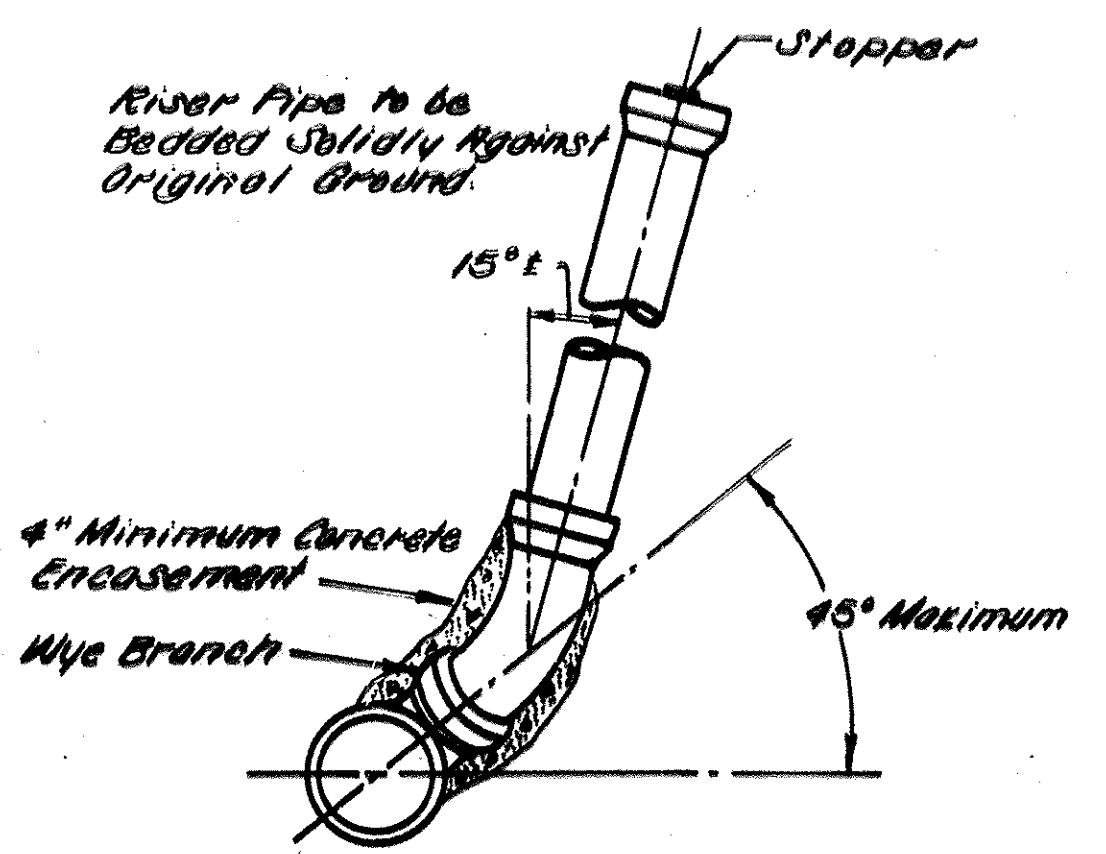


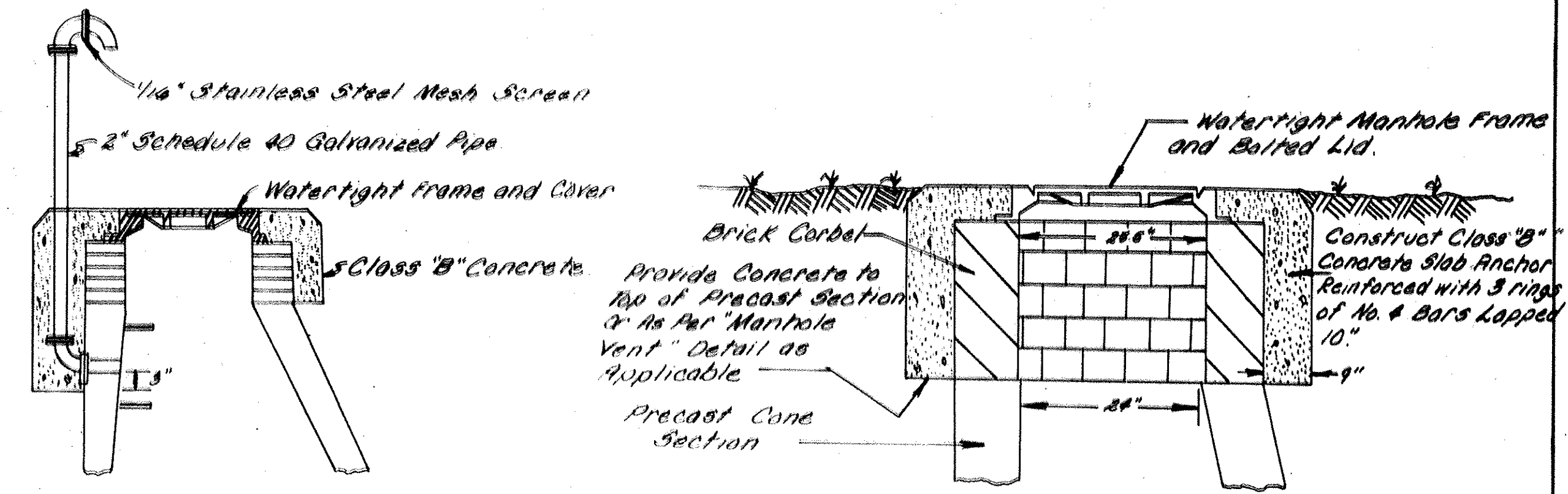
TABLE OF DIMENSIONS	
D1	D2 (MIN.)
6"	6"
10"	6"
12"	6"
15"	6"
18"	6"
21"	6"
24"	6"
27"	6"
30"	6"

Drop Manholes shall be used when the difference in elevation between the inlet of inlet and the outlet exceed 2.5 Feet

Drop Manhole
Dwg. No. 13



Branch Connection and Riser Pipe
Dwg. No. 03



TYPICAL WATERTIGHT MANHOLE CASTING DETAIL

Note: Creek Crossings
* Contractor shall follow Sec. 47 of the Standard Plans and Specifications for construction of sanitary facilities Manual for Delaware County in all sewer crossings of creek.

COUNTY OF DELAWARE, OHIO

ABBOT-SHIRE OF LOCH LOMOND
SANITARY SEWER IMPROVEMENTS

HOCKADEN AND ASSOCIATES, INC.
CONSULTING ENGINEERS
COLUMBUS, OHIO

DESIGNED	AHW	SCALE: NONE	WORK NO.	DATE
DRAWN	LWT		P-591	
CHECKED	JWH			