DELAWARE COUNTY, OHIO

EAST ALUM CREEK INTERCEPTOR

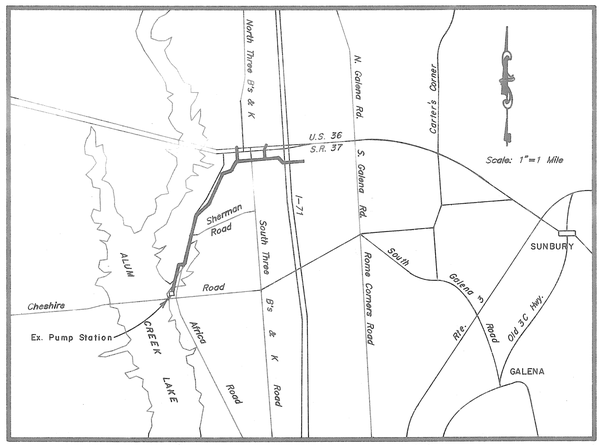
SANITARY SEWER AND PUMP STATION

Sanitary Sewer, Force Main, and Pump Station Improvements

STANDARD DRAWINGS

The Standard Drawings listed in the plans shall be considered a part thereof.

01 SEWER INSTALLATION
02 TYPICAL SERVICE CONNECTION
03 BRANCH CONNECTION AND RISER PIPE
05 MANHOLE CHANNEL DETAIL
06 TYPE "A" PRECAST CONCRETE MANHOLE
13 DROP MANHOLE
14 FORCE MAIN CONNECTION TO MANHOLE DETAIL
16 MANHOLE MARKING DETAIL
18 TYPICAL CONCRETE ENCASEMENT
20 WATERLINE CROSSINGS
21 OPEN CUT OF COUNTY & TOWNSHIP ROADS
22 PAVEMENT REPLACEMENT DETAILS
23 CONCRETE REACTION BACKING DETAILS
24 BACKING FOR VERTICAL BENDS
25 AUTOMATIC AIR RELEASE VALVE
26 TAPPING SLEEVE FOR CLAY PIPE
29 MANHOLE LANDING PLATFORM



LOCATION MAP

PREPARED BY
EVANS, MECHWART, HAMBLETON & TILTON, INC.
CONSULTING ENGINEERS & SURVEYORS
GAHANNA, OHIO

Registered Engineer — *Date* 10/30/91

The signatures below signify only concurrence with the general purposes and general location of the project. All technical details remain the responsibility of the Engineer preparing the plans.

Jack Smelker — *Delaware County Sanitary Engineer* — 12/2/91 *Date*

Rog Jackson — *Delaware County Commissioner* — 12-2-91 *Date*

Delaware County Commissioner — *Date*

Marlin Sheets — *Delaware County Commissioner* — 12-

GENERAL NOTES

The current County of Delaware requirements, together with the Specifications of the State of Ohio, Department of Transportation, including all supplements thereto, in force on the on the date of contract, shall govern all construction items that are a part of this plan. The Contractor shall refer to the "Standard Plans and Specifications for Construction of Sanitary Facilities in Delaware County, Ohio" for all necessary construction details.

Sewer trenches shall be de-watered to 2" below bell of pipe prior to installation of pipe.

Any field tile disturbed during construction shall be replaced as directed by the County, with ABS pipe spanning the trench. The trench shall be filled with Compacted Granular Material. Cost of this work is to be included in the price bid for the various items.

Roof drains, foundation drains and other clean water connections to the Sanitary Sewer are prohibited on this project.

Manhole top of castings shall be field adjusted at the time of construction.

TESTING

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

Force mains shall be tested by a hydrostatic pressure and leakage test. With the main subjected to a hydrostatic pressure of 125 psi at its lowest elevation, allowable leakage shall not exceed 20 gallons per inch diameter per mile per 24 hours.

The Contractor shall cooperate with the Delaware County Engineer and shall provide all necessary equipment to perform all testing.

TREES

All trees, whether shown or not shown on the plans, are to be preserved unless approval to remove is given in writing by the Engineer or their removal has been designated thusly: ⊠ on the plans. The Contractor shall use special precautions to avoid damage to all other trees. When, in the opinion of the Engineer, trunks or branches of trees would be endangered by the use of mechanical excavation devices, hand excavation will be required. The cost of tree removal and disposal and the cost of tree protection shall be included in the price bid for Trees Removed and Disposed of.

SAFETY REQUIREMENTS

The Contractor and Sub-Contractor shall be solely responsible for all federal, state and local safety requirements, together with exercising precautions at all times for the protection of persons (including employees) and property. It is also the sole responsibility of the Contractor and Sub-Contractor to initiate, maintain and supervise all safety requirements, precautions and programs in connection with the work.

WYE POLES

The Contractor shall provide and install wye poles at all wye locations as constructed. Wye poles shall extend above existing or proposed grade whichever is higher a minimum of 2'-0".

EXISTING UTILITIES

The identity and location of the existing underground utility facilities known to be located in the construction area have been shown on the plans as accurately as provided by the Owner of the underground utility. Delaware County and/or the Engineer assume no responsibility as to the accuracy of the underground facilities shown on the plans.

Support, protection and restoration of all existing utilities and appurtenances shall be the responsibility of the Contractor. The cost of this work shall be included in the price bid for the various items.

The Contractor shall cause notice to be given to the Ohio Utilities Protection Service (O.U.P.S.) (Telephone 1-800-362-2764 toll free) and to the Owners of underground utility facilities shown on the plans who are not members of a registered underground protection service in accordance with Section 153.64 of the Revised Code. The above mentioned notice shall be given at least 48 hours prior to start of construction.

The following utilities are located within the work limits of this project and the Owners do not subscribe to a registered underground utility protection service.

UTILITY	OWNER	TELEPHONE
Water Mains	Delco Water Co. 6773 Olentangy River Road Delaware, Ohio 43015	548-7746
Storm Sewers and Sanitary Sewers	Delaware County 50 Channing Street Delaware, Ohio 43015	548-7313
Storm Sewers	Ohio Department of Transportation District 6 400 East William Street Delaware, Ohio 43015	1-363-1251

AREA RESTORATION

All areas within the public right-of-way, including fence, that are disturbed by this project, shall be restored to original or better condition, per Item 659 (Seeding and Mulching), Item 607 (Fence), or other applicable specification.

COUNTY OF DELAWARE APPROVAL

Approval of this plan is contingent upon the granting of any permits which may be deemed necessary by the Ohio Department of Transportation.

STATE PERMIT

In addition to the provisions of the contract, the Contractor shall comply with the provisions of the Permit issued by the Ohio Department of Transportation.

STORAGE OF EQUIPMENT AND MATERIALS

No materials, including pipe, shall be stored within seventy-five (75) feet of the edge of pavement of U.S. 36 and S.R. 37, C.R. 21 (Africa Road), C.R. 35 (3 B's and K Road), C.R. 72 (Cheshire Road) or T.R. 134 (Sherman Road) nor within one hundred (100) feet of any intersecting street or driveway. During non-working hours, storage of equipment shall comply with these same requirements. Compliance with these requirements shall not in any way relieve the Contractor of his legal responsibilities or liabilities for the safety of the public.

EXPOSE

The Contractor shall expose the utility or structure indicated sufficiently in advance of laying the proposed sewer in order to verify the proposed location. Cost to be included in the price bid for the various sewer items.

NON-RUBBER TIRED VEHICLES

No non-rubber tired vehicles shall be moved on public streets. Exceptions may be granted by the Administrator of Construction (with the approval of the District Construction Engineer, Ohio Department of Transportation, where applicable) where short distances and special circumstances are involved. Granting of exceptions must be in writing, and any damage must be repaired to the satisfaction of the County of Delaware and the Ohio Department of Transportation, where applicable.

SERVICE CONNECTIONS

Sanitary services or house connections shall not be connected to the lateral or main line sewers shown hereon until full approval of said lateral and main line sewer has been received.

SIGNS, FENCES, DRAINAGE STRUCTURES, ETC.

All signs, fences, shrubs, drainage structures, or other physical features disturbed or damaged during work under this Contract shall be restored to their original condition by the Contractor. Unless otherwise provided in the Contract, the cost of all such work shall be included in the price bid for the various sewer items.

STATIONING

All stationing refers to sewer line stationing, unless shown otherwise.

MAINTAINING MAIL SERVICE

The Contractor shall be responsible for maintaining mail service in the construction area. Prior to disturbing any mail boxes the Contractor shall contact the postal authorities and shall temporarily relocate mail boxes in accordance with the requirements therefor. The Contractor shall restore mail boxes to their original condition and location. Cost of same shall be included in the unit price bid for the various sewer items.

SANITARY FACILITIES

The Contractor shall furnish and maintain sanitary convenience facilities for the workmen and inspectors for the duration of the work.

EXTRA COMPENSATION

No extra compensation will be paid the Contractor by reason of compliance with any of the requirements indicated on the plans, but payment shall be deemed to be included among the several items, as bid upon, unless otherwise specifically provided.

RIGHTS OF WAY

In addition to direct requirements of the Contract Documents, the Contractor shall observe and conform to the specific requirements of all rights-of-ways including easements, court entries, rights of entry or action filed in court in accordance with the code of the applicable governing agency. The cost of the operations necessary to fulfill such requirements shall be included in the price bid for the various items of the contract unless specific provision is made in the Contract Documents for the measurement of and payment for such cost specific items of the Contract.

TRAFFIC

All traffic control devices shall be furnished, erected, maintained and removed by the Contractor in accordance with the "Ohio Manual of Uniform Traffic Control Devices for Streets and Highways", copies of which are available from the Ohio Department of Transportation, Bureau of Traffic, 25 South Front Street, Columbus, Ohio 43215.

Type C Steady Burn Lights shall be used on all barricades, drums and similar traffic control devices in use at night.

All trenches shall be backfilled or securely plated during non-working hours.

Ingress and egress shall be maintained at all times to public and private property.

PAVEMENT REPLACEMENT

All driveways cut by the Contractor shall be provided with temporary pavement on the same day that the original pavement is cut. Unless otherwise ordered by the Engineer. driveways shall be temporarily replaced with a minimum of 8" crushed stone or gravel. Permanent replacement shall be provided, when ordered by the Engineer, as specified and as shown on Std. Drawing 22 unless otherwise ordered by the Engineer. Payment will be made at contract unit price for Pavement Replacement. Replacement.

MAINTAIN DRAINAGE

The flow in all sewers, drains and watercourses encountered shall be maintained by the Contractor at his own expense, and whenever such watercourses and drains are disturbed or destroyed during the prosecution of the work they shall be restored by the Contractor at his own cost and expense to a condition satisfactory to the Engineer.

BACKFILL

All backfill shall be compacted to a density of 95% of maximum laboratory density unless otherwise noted.

All sanitary trenches under road pavement, starting at a distance of five feet from edges of pavement and extending one foot in distance for each one foot in depth are to be compacted with granular material meeting the requirements of No. 57 size aggregate of Item 304 (April 1 to October 1) or low strength mortar backfill, Class LSM -100 (October 1 to April 1). This backfill shall be compacted to 98% of maximum dry laboratory weight at ±1.5% optimum moisture.

For sanitary sewer trenches which run parallel to the pavement and are in the area of influence of the pavement, the backfill is to meet the requirements of 203.12.

All sewer trenches under existing driveways shall be Compacted Granular Material.

The cost of Compacted Granular Material shall be included in the price bid for Sanitary Sewer Pipe and Force Main.

See Sheet 3 for Detail of Backfill in Right-of-Way.

TEMPORARY GUARDRAIL

Temporary Guardrail shall be maintained at night and during non-working hours. When sewer construction is complete, the Contractor shall rebuild the Guardrail to its original state as directed by the Engineer. Cost of performing all the above work shall be included in the unit prices bid for Sanitary Sewer Pipe and Force Main.

PIPE MATERIALS

All Sanitary Sewers 8" thru 15" diameter shall be Vitrified Clay Pipe meeting the requirements of ASTM C700 or PVC Pipe meeting the requirements of ASTM D-1784 and D-3034, SDR 35.

All Sanitary Sewers 18" in diameter shall be Concrete Pipe meeting the requirements of ASTM C76, Wall B or PVC pipe meeting the requirements of ASTM D-679, Type 1, SDR 35 and ASTM D-1784.

All Sanitary Sewers 24" in diameter shall be Concrete Pipe meeting the requirements of ASTM C76,

All Force Mains shall be Cast Iron Pipe meeting the requirements of ANSI Specifications A21.6 (AWWA C106) or A21.8 (AWWA C108); Ductile Iron Pipe meeting the requirements of ANSI A21.51 (AWWA C151); PE Plastic Pipe meeting the requirements of ASTM Specification D-1248 and D-2837 or PVC Pipe Meeting the requirements of ASTM D-1784 and ASTM D-2241 and shall be a minimum SDR 21. Cast Iron Pipe and Ductile Iron Pipe minimum barrel thickness shall be calculated meeting the requirements of the Standard Plans and Specifications for Construction of Sanitary Facilities in Delaware County, Ohio.

LIMITED ACCESS HIGHWAY

No equipment, materials or personnel shall have access to the project from any limited access highway. Neither equipment nor materials shall be stored within the limited access right-of-way.

ROCK EXCAVATION

The cost of Rock Excavation shall be included in the price bid for the various Sanitary Sewer Pipes, Force Main, Lift Station and Valve Chamber.

ESTIMATE OF QUANTITIES

QUAN.	UNIT	DESCRIPTION
1020	L.F.	24" San. Sewer Pipe 0'-8' Deep
2113	L.F.	24" San. Sewer Pipe 8'-12' Deep
1490	L.F.	24" San. Sewer Pipe 12'-16' Deep
15	L.F.	24" San. Sewer Pipe 16'-20' Deep
330	L.F.	18" San. Sewer Pipe 0'-8' Deep
775	L.F.	18" San. Sewer Pipe 8'-12' Deep
305	L.F.	18" San. Sewer Pipe 12'-16' Deep
160	L.F.	18" San. Sewer Pipe 16'-20' Deep
1104	L.F.	18" San. Sewer Pipe 20'-24' Deep
60	L.F.	18" San. Sewer Pipe w/Tunnel & 54" ø Liner Plates or 18" San. Sewer Pipe w/Bored & Jacked 30"ø Casing Pipe
180	L.F.	15" San. Sewer Pipe 12'-16' Deep
970	L.F.	15" San. Sewer Pipe 16'-20' Deep
1501	L.F.	15" San. Sewer Pipe 20'-24' Deep
315	L.F.	15" San. Sewer Pipe 24'-28' Deep
305	L.F.	15" San. Sewer Pipe w/Tunnel & 54"ø Liner Plates or 15" San. Sewer Pipe w/Bored & Jacked 24"ø Casing Pipe
545	L.F.	10" San. Sewer Pipe 12'-16' Deep
545	L.F.	10" San. Sewer Pipe 16'-20' Deep
248	L.F.	10" San. Sewer Pipe 20'-24' Deep
220	L.F.	10" San. Sewer Pipe w/Tunnel & 54"ø Liner Plates or 10" San. Sewer Pipe w/Bored & Jacked 18"ø Casing Pipe
6040	L.F.	12" Force Main
125	L.F.	Concrete Encasement of 24" Sewer
38	Ea.	Type "A" Precast Concrete Manhole
3	Ea.	Outside Drop Manhole
3	Ea.	1" Automatic Air Release Valve & Manhole
500	C.Y.	Increased or Decreased Earth Excavation
8	Ac.	Seeding and Mulching
81	S.Y.	Pavement Replacement, Type 'A'
13	S.Y.	Pavement Replacement, Type 'C'
427	S.Y.	Pavement Replacement, Type 'D'
1412	S.Y.	Berm Replacement
1	L.S.	Trees Removed and Disposed of
1	L.S.	Lift Station and Valve Chamber, Complete

ADDENDUM 1 REVISIONS
REVISIONS

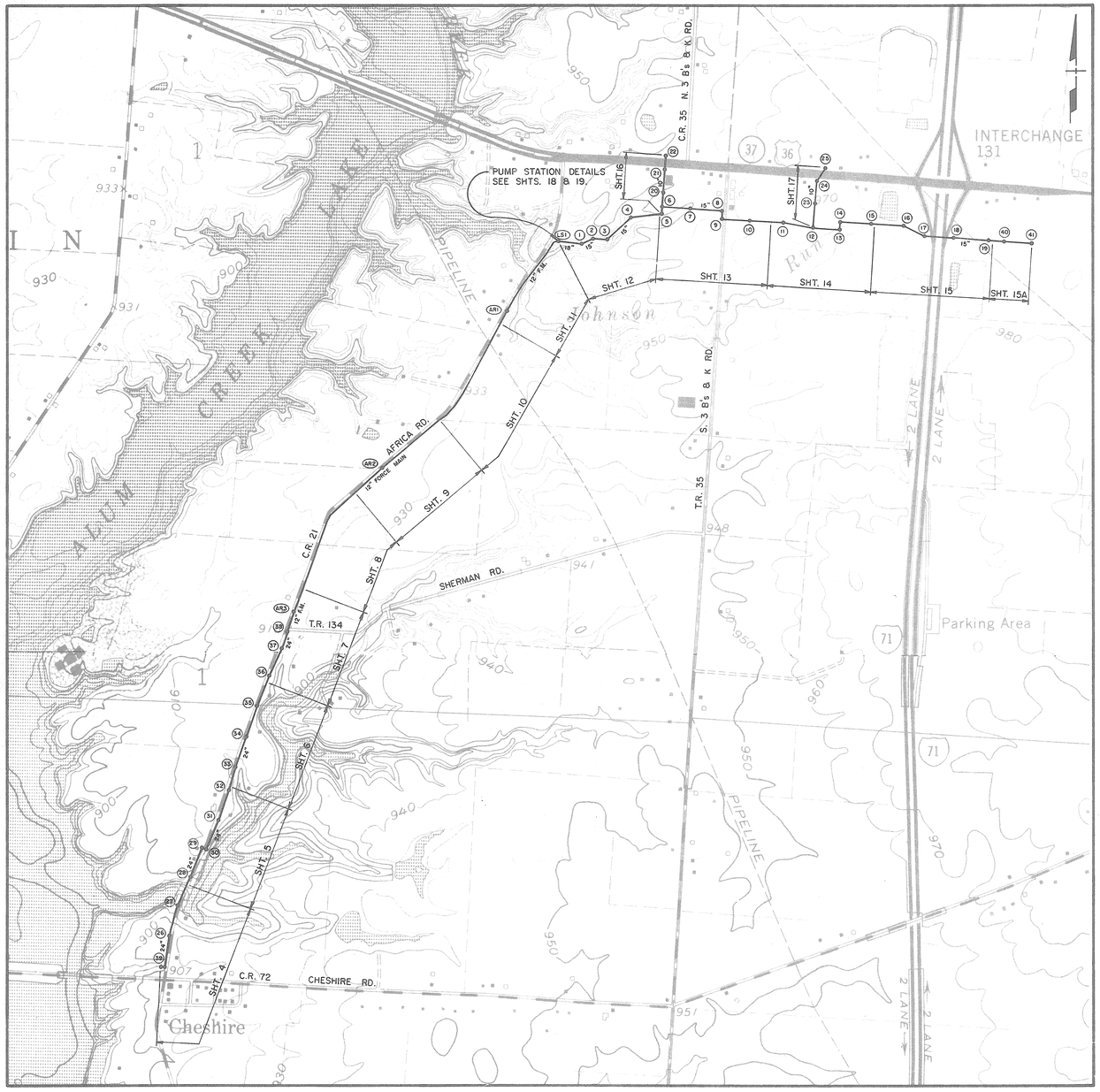
Delaware County, Ohio

EAST ALUM CREEK INTERCEPT
SANITARY SEWER & PUMP ST

Sanitary Sewer, Force Main and Pump Station Improvem

EVANS, MECHWART, HAMBLETON & TILTON, INC.
CONSULTING ENGINEERS & SURVEYORS

\debbie\delfrt 9/25/92



INDEX MAP

BENCH MARKS

B.M. Chiseled square on SE corner of lift station 150'± N of Cheshire Rd. & Africa Rd. intersection, 75'± W of Africa Rd. Delaware County B.M. #109A.
Elev. 901.66

B.M. #1 Spike in E side of utility pole, W side of Africa Rd., 0.25 mi.± N of Cheshire & 400'± S of entrance to boat ramp. Delaware County B.M. #108.
Elev. 903.59

B.M. #2 Spike in W side of utility pole, E side of Africa Rd., 0.40 mi.± N of Cheshire & 200'± N of entrance to boat ramp.
Elev. 914.57

B.M. #3 Spike in W side of utility pole #D102A82, E side of Africa Rd., 0.60 mi.± N of Cheshire. Delaware County B.M. #107.
Elev. 912.96

B.M. #4 Spike in W side of utility pole, E side of Africa Rd., 400'± S of Sherman Rd., 0.80 mi.± N of Cheshire.
Elev. 915.81

B.M. #5 Spike in E side of 18" Hickory 20'± W of Africa Rd. & 400'± N of Sherman Rd.
Elev. 924.03

B.M. Spike in E side of 12" Elm 30'± W of Africa Rd. at S line of residence #1008. Delaware County B.M. #106.
Elev. 926.97

B.M. #6 Spike in W side of 18" Elm 50'± E of Africa Rd. at S line of residence #1008 extended E & 1.3 mi.± N of Cheshire.
Elev. 929.00

B.M. #7 Spike in W side of utility pole on E side of Africa Rd. at N line of residence #1008 extended E & 1.6 mi.± N of Cheshire. Delaware County B.M. #105.
Elev. 928.67

B.M. #8 Spike in E side of utility pole #D121A9, W side of Africa Rd., 1.7 mi.± N of Cheshire.
Elev. 934.40

B.M. #9 Spike in E side of utility pole on W side of Africa Rd. 150'± N of residence #514 & 1.9 mi.± N of Cheshire. Delaware County B.M. #103.
Elev. 934.82

B.M. #10 Top bolt on SE leg of electric tower 100'± W of Africa Rd. & 2.0'± mi.± N of Cheshire, 0.2 mi. S of U.S. 36.
Elev. 901.12

B.M. #11 Spike in NW side of utility pole #D140A44 at the SE corner of U.S. 36 & Africa Rd. Delaware County B.M. #100.
Elev. 943.44

B.M. #12 Spike in NW side of utility pole #D140A70 on S side of U.S. 36, 150'± E of residence #6764.
Elev. 955.40

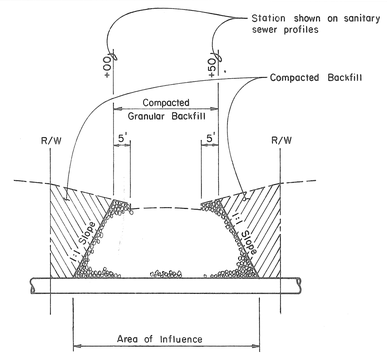
B.M. #13 SW corner of porch of residence #6925 at NE corner of U.S. 36 & N 3 B's & K Rd.
Elev. 959.80

B.M. #14 Chiseled square in NE leg of transmission tower #53 on W side of S 3 B's & K Rd. 800'± S of U.S. 36. Delaware County B.M. #102.
Elev. 954.78

B.M. #15 Spike in NE side of utility pole on S side of U.S. 36, 100'± W of entrance to Wendy's.
Elev. 970.87

B.M. #16 Spike in NW side of utility pole #D140A117 on S side of U.S. 36 at NE corner of McDonald's.
Elev. 975.31

B.M. #17 NW corner of W end of concrete retaining wall at rear of Speedway gas station ("Starvin Marvin's") truck parking on E side of 171 & S side of U.S. 36.
Elev. 975.88



DETAIL OF BACKFILL IN R/W
No Scale

ADDENDUM I REVISIONS	11/02/92
REVISIONS	DATE

Delaware County, Ohio

EAST ALUM CREEK INTERCEPTOR SANITARY SEWER & PUMP STATION

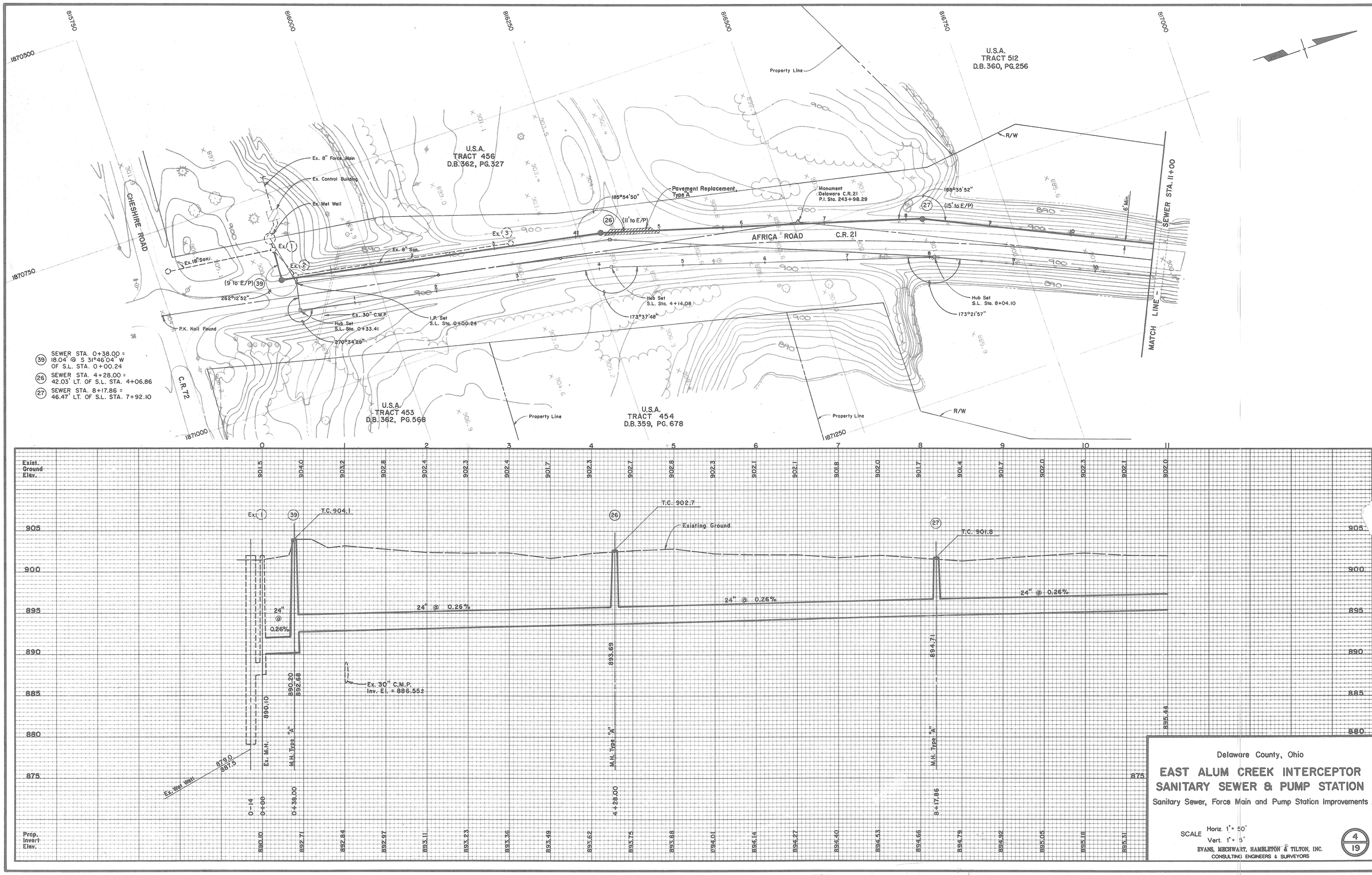
Sanitary Sewer, Force Main and Pump Station Improvements

SCALE 1" = 800'

3
19

EVANS, MECHWART, HAMBLETON & TILTON, INC.
CONSULTING ENGINEERS & SURVEYORS

S-2916



Delaware County, Ohio

EAST ALUM CREEK INTERCEPTOR SANITARY SEWER & PUMP STATION

Sanitary Sewer, Force Main and Pump Station Improvements

SCALE Horiz. 1" = 50'
Vert. 1" = 5'

EVANS, MECHWART, HAMBLETON & TILTON, INC.
CONSULTING ENGINEERS & SURVEYORS

4
19

S-2916

816750 817000 817250 817500 817750 818000 818250

1871000 1871250 1871500 1871750

U.S.A.
TRACT 512
D.B.360, PG.256

U.S.A.
TRACT 513

U.S.A.
TRACT 502

ROBERT E. & HELEN L.
CROSBIE
D.B.353, PG.56

Property Line

SEWER STA. 11+00

SEWER STA. 25+00

MATCH LINE

TEST BORING B-3
STA. 14+40

C.R. 21 AFRICA RD.

R/W

Ex. 114" C.M.P.

(28) (6' to E/P)

177°35'33"

Hub Set
S.L. Sta. 12+03.78

178°59'09"

(29) (14' to E/P)

Pavement Replacement, Type "A"

90°00'00"

90°15'58"

(13' to E/P) (30)

183°07'29"

Hub Set
S.L. Sta. 16+04.41

Monument
Delaware C.R.21
P.I. Sta. 255+17.01

Hub Set
S.L. Sta. 20+04.58

176°52'06"

(31) (21' to E/P)

183°19'56"

R.R. Spike Found

181°12'06"

(32) (23' to E/P)

Hub Set
S.L. Sta. 23+98.78

182°00'26"

Monument
Delaware C.R.21
Sta. 259+60

U.S.A.
TRACT 652
D.B.362, PG.486

North Line - Farm Lot 7,
South Line - Farm Lot 8,
Property Line

U.S.A.
TRACT 651
D.B.364, PG.584

U.S.A.
TRACT 649
D.B.364, PG.697

(28) SEWER STA. 12+17.86 = 36.69' LT. OF S.L. STA. 11+86.73

(29) SEWER STA. 16+17.86 = 52.20' LT. OF S.L. STA. 15+85.77

(30) SEWER STA. 16+77.86 = 7.75' RT. OF S.L. STA. 15+88.14

(31) SEWER STA. 20+77.86 = 14.72' RT. OF S.L. STA. 19+87.67

(32) SEWER STA. 24+77.86 = 20.22' RT. OF S.L. STA. 23+91.84

	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Exist. Ground Elev.	902.0	902.2	902.2	902.1	900.8	900.0	901.0	902.0	903.5	905.7	907.5	910.2	910.1	911.5	911.8
	912.8	913.0	912.8	912.6	910.4	909.9	911.1	912.6	913.6	914.5	915.3	914.0	913.3	913.9	
Prop. Invert Elev.	895.44	895.57	895.70	895.83	895.96	896.09	896.22	896.35	896.48	896.61	896.74	896.87	897.00	897.13	897.26
	897.40	897.53	897.66	897.79	897.92	898.05	898.18	898.31	898.44	898.57	898.70	898.83	898.96	899.09	

Compacted Granular Backfill
See Detail - Sheet 3

+26 +70

T.C. 902.2

T.C. 909.4

T.C. 910.5

Existing Ground

T.C. 910.2

T.C. 914.0

24" @ 0.26%

24" @ 0.26%

24" @ 0.26%

24" @ 0.26%

24" @ 0.26%

M.H. Type "A" 895.75 12+17.86

+90 +15

Concrete Encasement

M.H. Type "A" 896.79 896.99 16+17.86

M.H. Type "A" 897.14 897.34 16+77.86

M.H. Type "A" 898.38 20+77.86

24+77.86 M.H. Type "A" 899.42 899.22 899.35 899.48

Ex. 114" C.M.P.
Inv. El. = 884.96±

Delaware County, Ohio

EAST ALUM CREEK INTERCEPTOR SANITARY SEWER & PUMP STATION

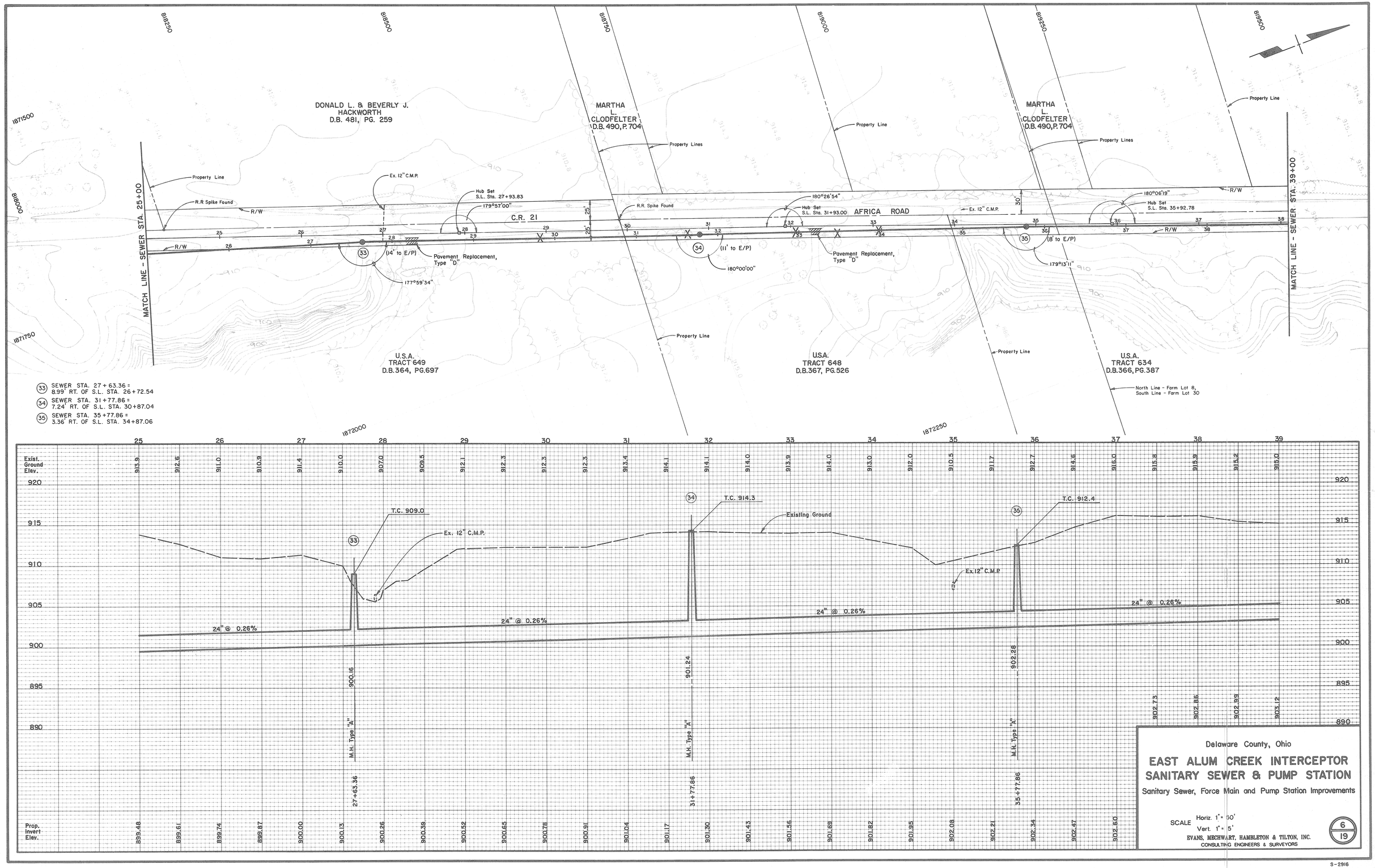
Sanitary Sewer, Force Main and Pump Station Improvements

SCALE Horiz. 1" = 50'
Vert. 1" = 5'

EVANS, MECHWART, HAMBLETON & TILTON, INC.
CONSULTING ENGINEERS & SURVEYORS

5/19

S-2916


818250
818500
818750
819000
819250
819500
1871500
1871750
818000
DONALD L. & BEVERLY J. HACKWORTH D.B. 481, PG. 259
MARTHA L. CLODFELTER D.B. 490, P. 704
MARTHA L. CLODFELTER D.B. 490, P. 704
Property Line
Property Lines
MATCH LINE - SEWER STA. 25+00
MATCH LINE - SEWER STA. 39+00
R.R Spike Found
R/W
Ex. 12" C.M.P.
Hub Set S.L. Sta. 27+93.83
179°57'00"
C.R. 21
AFRICA ROAD
Hub Set S.L. Sta. 31+93.00
180°26'54"
Ex. 12" C.M.P.
30
180°06'19"
Hub Set S.L. Sta. 35+92.78
25
20
(33)
(14' to E/P)
177°59'34"
Pavement Replacement, Type "D"
(34)
(11' to E/P)
180°00'00"
Pavement Replacement, Type "D"
(35)
(8 to E/P)
179°13'11"
U.S.A. TRACT 649 D.B.364, PG.697
U.S.A. TRACT 648 D.B.367, PG.526
U.S.A. TRACT 634 D.B.366, PG.387
North Line - Farm Lot 8, South Line - Farm Lot 30
(33) SEWER STA. 27 + 63.36 = 8.99' RT. OF S.L. STA. 26 + 72.54
(34) SEWER STA. 31 + 77.86 = 7.24' RT. OF S.L. STA. 30 + 87.04
(35) SEWER STA. 35 + 77.86 = 3.36' RT. OF S.L. STA. 34 + 87.06
1872000
1872250
Exist. Ground Elev.
Prop. Invert Elev.
T.C. 909.0
T.C. 914.3
T.C. 912.4
Existing Ground
Ex. 12" C.M.P.
Ex. 12" C.M.P.
24" @ 0.26%
24" @ 0.26%
24" @ 0.26%
24" @ 0.26%
M.H. Type "A"
M.H. Type "A"
M.H. Type "A"
27+63.36
31+77.86
35+77.86
899.48
899.61
899.74
899.87
900.00
900.13
900.26
900.39
900.52
900.65
900.78
900.91
901.04
901.17
901.30
901.43
901.56
901.69
901.82
901.95
902.08
902.21
902.34
902.47
902.60
902.73
902.86
902.99
903.12
913.9
912.6
911.0
910.3
911.4
910.0
907.0
909.5
912.1
912.3
912.3
912.3
913.4
914.1
914.1
914.0
913.9
914.0
913.0
912.0
910.5
911.7
912.7
914.6
916.0
915.8
915.9
915.2
915.0
900.16
901.24
902.28
Delaware County, Ohio
EAST ALUM CREEK INTERCEPTOR SANITARY SEWER & PUMP STATION
Sanitary Sewer, Force Main and Pump Station Improvements
SCALE Horiz. 1" = 50'
Vert. 1" = 5'
EVANS, MECHWART, HAMBLETON & TILTON, INC.
CONSULTING ENGINEERS & SURVEYORS
6
19
S-2916

819500 819750 820000 820250 820500 820750

1872000 1872250 1872500 1872750

Property Line

RICHARD W. & KIMBERLY K. CLARK, JR. D.B. 492, PG. 531

HAZEL MAE SHERMAN D.B.473, PG.677

North Line - Farm Lot 30, South Line - Farm Lot 31, Property Line

MATCH LINE - SEWER STA. 39+00

MATCH LINE - FORCE MAIN STA. 55+00

C.R. 21

AFRICA ROAD

TEST BORING B-7 STA. 41+80

TEST BORING B-8 STA. 58+30

Hub Set S.L. Sta. 39+92.38

179°41'33" W

R.R. Spike Found

Ex. 12" C.M.P.

R/W

EX. 4" WATER MAIN

Hub Set S.L. Sta. 43+92.91

181°16'47"

Hub Set S.L. Sta. 45+33.12

179°16'26"

I.P. Found

R.R. Spike Found

Pavement Replacement, Type "A"

Hub Set S.L. Sta. 49+74.07

179°51'18"

Ex. 6" Field Tile

EXPOSE

(6' to E/P)

(8' to E/P)

180°00'00"

Pavement Replacement, Type "D"

EX. 3" WATER MAIN

EX. 12" C.M.P.

T.R.134

SHERMAN ROAD

EX. 4" WATER MAIN

F.M. Sta. 57+61.70 = 4.84' Lt. of S.L. Sta. 48+76.63 Defl. 2°45'21" Lt. (3' to E/P)

F.M. Sta. 55+71.26 = 0.08' Lt. of S.L. Sta. 50+67.01 Defl. 1°30'32" Rt. (8' to E/P)

Property Line

Sewer Sta. 46+32.86 = F.M. Sta. 60+96.32 = 3.29' Rt. of S.L. Sta. 45+42.11 20' to ℄'s C.R.21 & T.R.134

U.S.A. TRACT 634 D.B.366, PG.387

ROSE MARIE SMITH D.B. 370, PG. 354

HAZEL MAE SHERMAN D.B.473, PG.677

36 SEWER STA. 39+77.86 = 3.55' RT. OF S.L. STA. 38+72.56

37 SEWER STA. 43+67.86 = 5.08' RT. OF S.L. STA. 42+77.05

38 SEWER STA. 46+32.86 = 3.28' RT. OF S.L. STA. 45+42.11

AR3 FORCE MAIN STA. 58+41.26 = 2.91' LT. OF S.L. STA. 47+97.09

39 40 41 42 43 44 45 46 61 60 59 58 57 56 55

Exist. Ground Elev. 915.0 915.4 915.7 915.2 914.2 914.0 914.0 914.4 914.3 915.5 915.8 915.5 915.8 916.0 916.1 916.0 916.0 916.5 917.6 918.2 920.0 921.8 923.2 923.4 922.0 920.5 920.0 919.8 919.2

Prop. Invert Elev. 903.12 903.25 903.38 903.51 903.64 903.77 903.90 904.03 904.16 904.29 904.42 904.55 904.68 904.81 904.94 Prop. F.M. Centerline Elev. 910.81 911.93 913.06 914.18 915.31 915.40 915.28 915.16

M.H. Type "A" 903.32 — 39+77.86

M.H. Type "A" 904.47 — 43+67.86

M.H. Type "A" 24" S. 905.03 8" N. 909.76 — 46+32.86

M.H. Type "A" 24" S. 906.03 8" N. 909.76 See Std. Dwg. I-4 for F.M. connection to M.H. — 60+96.32

Gr. Brk., 1' Air Rel. w/Al.H. 915.50 — 58+41.26

Gr. Brk. 919.00 — 55+41.26

915.03 914.83 914.63 914.43

Existing Ground

T.C. 915.7

T.C. 916.4

T.C 922.3

Ex. 12" C.M.P.

Ex. 4" W.M.

24" @ 0.26%

5.0' MIN.

-2.25%

+0.25%

+0.40%

℄ PROP 12" FORCE MAIN

Delaware County, Ohio

EAST ALUM CREEK INTERCEPTOR SANITARY SEWER & PUMP STATION

Sanitary Sewer, Force Main and Pump Station Improvements

SCALE Horiz. 1" = 50'
Vert. 1" = 5'

EVANS, MECHWART, HAMBLETON & TILTON, INC.
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820750 820000 821250 821500 821750 822000

Property Line

GEORGE E. & CHRIS L. HADDAD D.B 453, PG.797

DAVID A. JAMES

DAVID A. JAMES D.B.475, PG.46

Property Lines

DAVID A. JAMES

Hub Set S.L. Sta. 60+17.64

188°16'32"

Hub Set S.L. Sta. 61+09.01

197°50'30"

Property Line

DAVID A. JAMES D.B.475, PG.46

Property Line

Hub Set S.L. Sta. 62+88.42

182°43'36"

EX. 4" WATER MAIN

EX. 20" C.M.P.

EX. 4" WATER MAIN

EX. 3" WATER MAIN

R/W

AFRICA ROAD

C.R. 21

EXPOSE

EXPOSE

MATCH LINE - FORCE MAIN STA. 55+00

MATCH LINE - FORCE MAIN STA. 41+00

Survey Line Stationing

Force Main Stationing

10' o/o Min. Clearance

F.M. Sta. 45+31.54 =
6.58' Lt. of S.L. Sta. 61+05.92
Defl. 14°13'03" Lt.
Use 11¼° Bend
(1' to E/P)

F.M. Sta. 45+57.08 =
9.22' Lt. of S.L. Sta. 60+80.52
Defl. 14°13'02" Lt.
Use 11¼° Bend
(1' to E/P)

8' to E/P

GEORGE E. & CHRIS L. HADDAD D.B. 478, PG. 43

DAVID A. JAMES D.B. 475, PG. 17

North Line - Farm Lot 31,
South Line - Farm Lot 32,
Property Line

1872500 1872750 1873000 1873250 1873500

55 54 53 52 51 50 49 48 47 46 45 44 43 42 41

Exist. Ground Elev.

919.3 919.9 920.0 920.0 920.1 920.2 919.9 919.7 919.3 919.8 919.8 917.8 917.8 917.0 917.0 917.5 918.0 919.0 920.0 921.0 920.8 920.6 920.2 920.2 922.0 922.0 923.8 924.2 924.0

925 920 915 910

Existing Ground

Ex. 20" C.M.P.

Ex. 4" W.M.

18" o/o Min. Clearance

5.0' MIN.

+0.40%

-0.56%

-1.20%

℄ PROP. 12" FORCE MAIN

911.80

Gr. Brk.

48+41.26

914.88

Gr. Brk.

42+91.26

915.98 916.58 917.18

Prop. F.M. Centerline Elev.

914.43 914.23 914.03 913.83 913.63 913.43 913.23 913.03 912.83 912.63 912.43 912.23 912.03 911.83 912.03 912.31 912.59 912.87 913.15 913.43 913.71 913.99 914.27 914.55 914.83 915.38

Delaware County, Ohio

EAST ALUM CREEK INTERCEPTOR SANITARY SEWER & PUMP STATION

Sanitary Sewer, Force Main and Pump Station Improvements

SCALE Horiz. 1" = 50'
Vert. 1" = 5'

EVANS, MECHWART, HAMBLETON & TILTON, INC.
CONSULTING ENGINEERS & SURVEYORS

8/19

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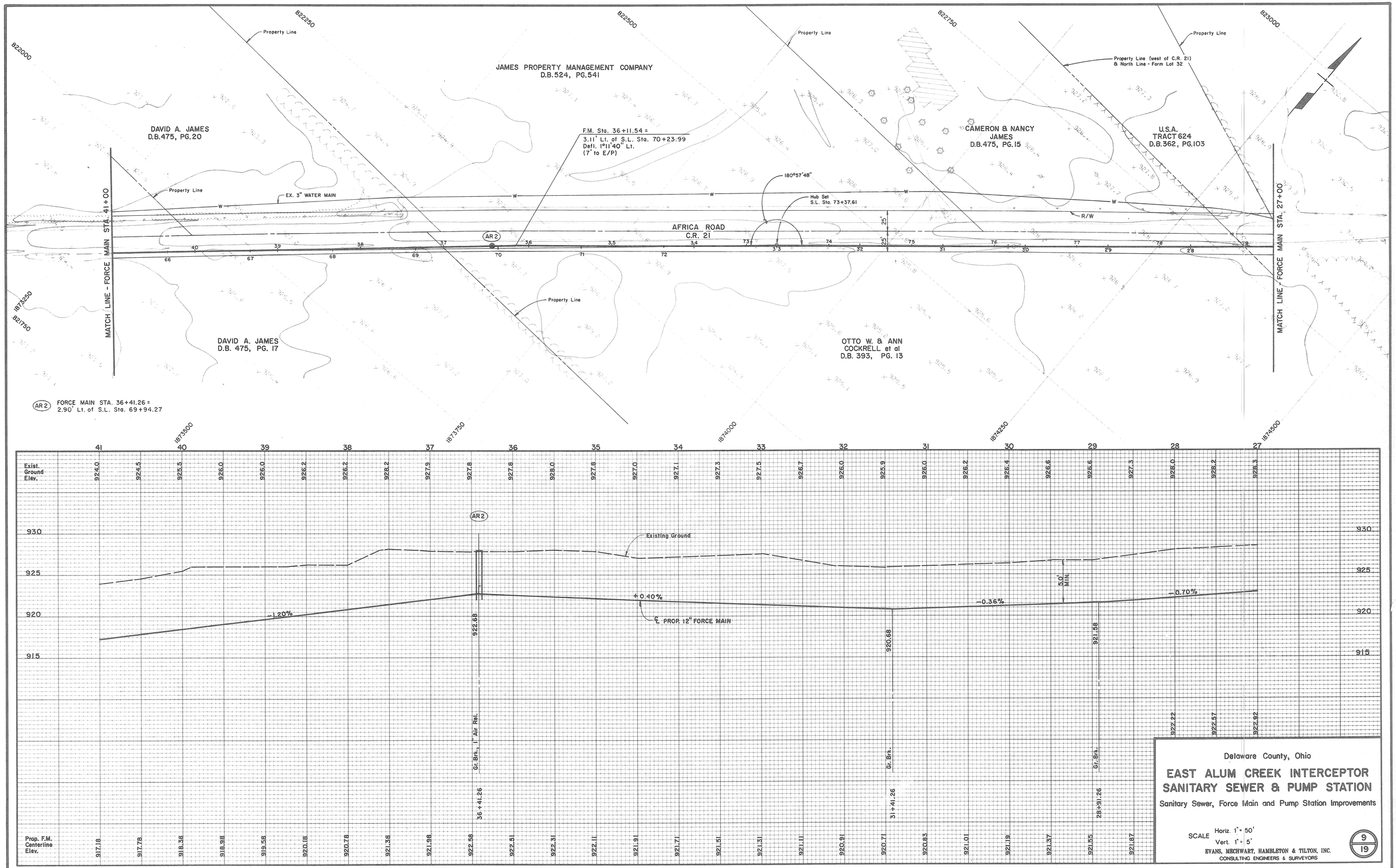


Delaware County, Ohio

EAST ALUM CREEK INTERCEPTOR SANITARY SEWER & PUMP STATION

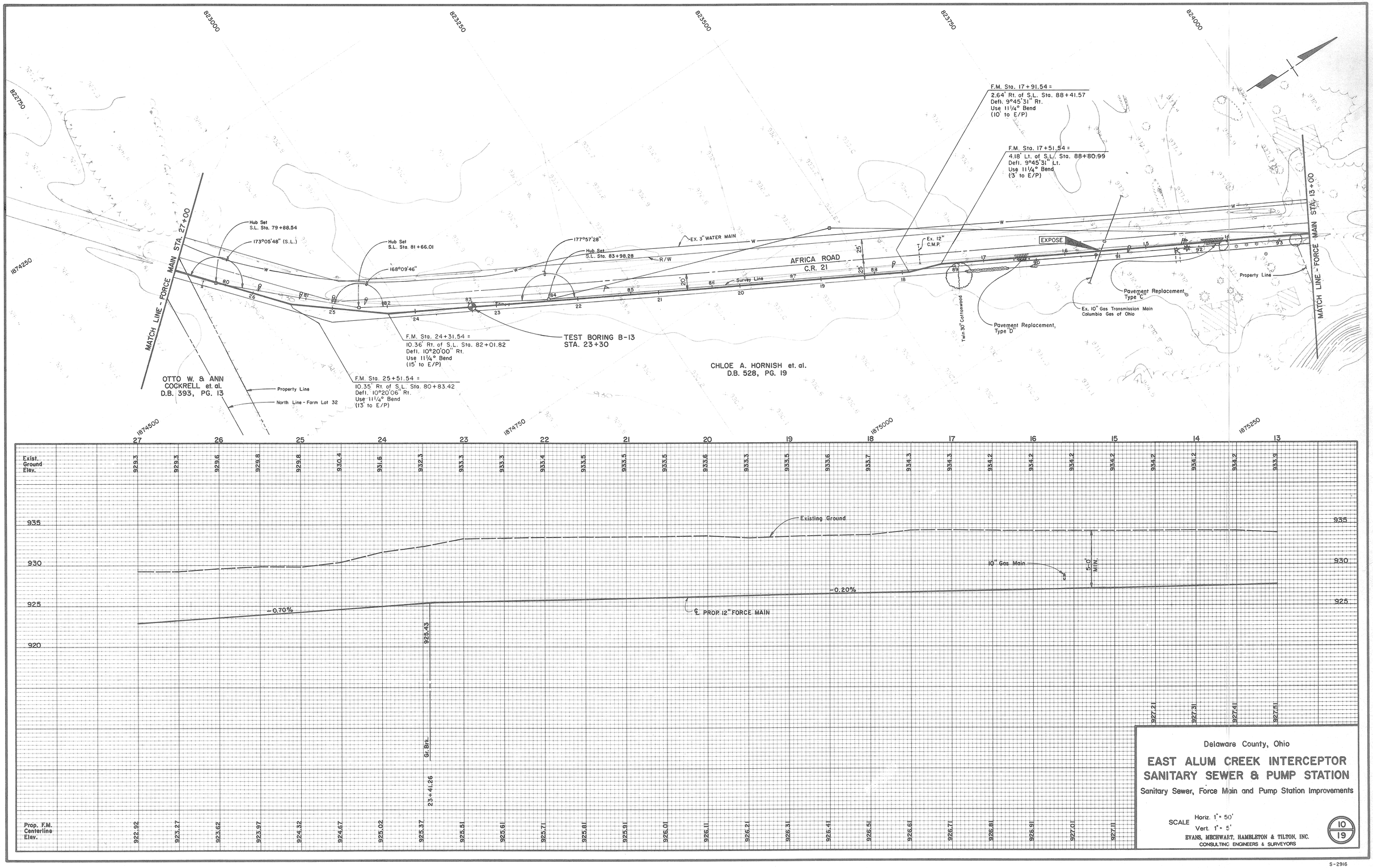
Sanitary Sewer, Force Main and Pump Station Improvements

SCALE Horiz. 1" = 50'
Vert. 1" = 5'

EVANS, MECHWART, HAMBLETON & TILTON, INC.
CONSULTING ENGINEERS & SURVEYORS

9/19

S-2916



Delaware County, Ohio

EAST ALUM CREEK INTERCEPTOR SANITARY SEWER & PUMP STATION

Sanitary Sewer, Force Main and Pump Station Improvements

SCALE Horiz. 1" = 50'
Vert. 1" = 5'

EVANS, MECHWART, HAMBLETON & TILTON, INC.
CONSULTING ENGINEERS & SURVEYORS

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19

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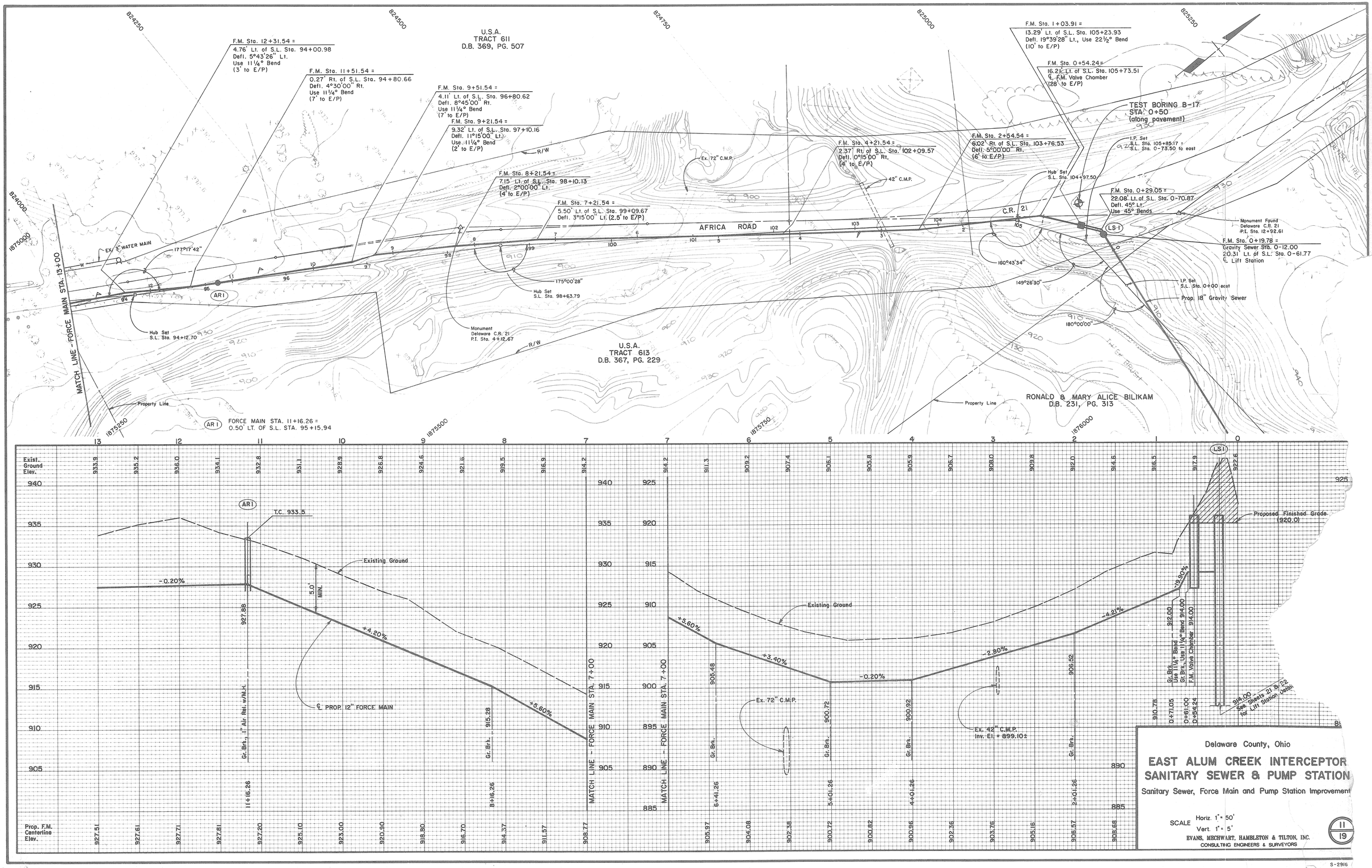

Delaware County, Ohio

EAST ALUM CREEK INTERCEPTOR SANITARY SEWER & PUMP STATION

Sanitary Sewer, Force Main and Pump Station Improvement

SCALE Horiz. 1" = 50'
Vert. 1" = 5'

EVANS, MECHWART, HAMBLETON & TILTON, INC.
CONSULTING ENGINEERS & SURVEYORS

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LS 1 825001.17943/1875837.47411
SEWER STA. 0+12.00 =
20.31' LT. OF S.L. STA. 0+61.77

1 824960.74557/1876138.19896
SEWER STA. 2+91.43 =
38.00' RT. OF S.L. STA. 2+36.00

2 825028.05384/1876275.42724
SEWER STA. 4+44.28 =
21.00' LT. OF S.L. STA. 3+77.00

3 825008.04862/1876460.28069
SEWER STA. 6+30.21 =
10.00' RT. OF S.L. STA. 5+60.33 BACK

4 825275.41971/1876757.79152
SEWER STA. 10+30.21 =
13.00' LT. OF S.L. STA. 9+53.97

825250

825000

DENSE TREE COVER

RONALD & MARY ALICE BILIKAM
D.B. 231, PG. 313

C.R. 21

R/W

AFRICA ROAD

LS1

I.P. Set
S.L. Sta. 0+00

146°12'54"

180°00'00"

180°00'00"

THICK BRUSH

U.S.A.
TRACT 613
D.B. 367
PG. 229

2

1

3

I.P. Set
S.L. Sta. 3+91.73

214°18'14"

144°30'15"

I.P. Set
S.L. Sta. 5+60.33

228°07'21"

THICK BRUSH

50' Construction Easements
D.B. Pg.

20' Permanent Easement
D.B. Pg.

TRANSMISSION TOWERS

RONALD & MARY ALICE BILIKAM
D.B. 283, PG. 151

4

223°36'34"

I.P. Set
S.L. Sta. 10+38.49

179°10'52"

I.P. Set
S.L. Sta. 13+30.36

142°50'25"

MATCH LINE - SEWER STA. 14+00

15" Walnut
15" Maple
12" Maple
15" Hickory
12" Beech
12" Walnut
24" Maple
12" Beech
9" Walnut
9" Maple
12" Beech
8" Maple
9" Maple

951.4
952.2
950
946.9
949.2
948.9
949.3
949.7
949.7
949.3
949.8
948.9
947.6
947.0
953.2
951.4

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14

1875750 1876000 1876250 1876500 1876750 1877000

933.9

Exist. Ground Elev.
927.0 908.0 907.9 904.3 907.3 910.1 909.1 910.2 911.7 912.2 913.3 917.3 919.0 918.2 919.8 922.9 924.1 921.5 925.0 926.4 929.2 927.5 932.7 937.0 933.8 936.4 944.5 945.0

Prop. Invert Elev.
897.59 897.87 898.15 898.43 898.71 898.98 901.66 902.66 903.46 904.76 905.56 906.36 907.16 910.46 911.26 912.06 912.86 913.66 914.45 915.26 916.06 919.36 920.16 920.96 921.76 922.56

LS 1

Proposed Finished Grade (920.0)

T.C. 910.0

T.C. 913.5

T.C. 918.0

Existing Ground

T.C. 951.0

18" @ 0.56%

18" @ 1.60%

18" @ 1.60%

18" @ 1.60%

18" @ 1.60%

897.59 18" E See Sheets 21 & 22 for Lift Station Details 0+12.00

M.H. Type "H"
893.22
901.72
2+91.43

M.H. Type "A"
904.17
904.67
4+44.28

M.H. Type "A"
907.64
910.14
6+30.21

M.H. Type "A"
916.54
919.04
10+30.21

MATCH LINE
SEWER STA. 11+00

930 925 920 915 910 905 900 895 890

945 940 935 930 925 920 915 910 905

Delaware County, Ohio

EAST ALUM CREEK INTERCEPTOR SANITARY SEWER & PUMP STATION

Sanitary Sewer, Force Main and Pump Station Improvements

SCALE Horiz. 1" = 50'
Vert. 1" = 5'

EVANS, MECHWART, HAMBLETON & TILTON, INC.
CONSULTING ENGINEERS & SURVEYORS

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RONALD & MARY ALICE BILIKAM
D.B. 231, Pg. 313

BLANK'S AGRI-SERVICE, INC.
D.B. 441, Pg. 749

THE DEPARTMENT OF HIGHWAYS
STATE OF OHIO
D.B. 282, Pg. 76

DORCY OIL COMPANY
D.B. 478, Pg. 565

CLIFFORD E. HILL
D.B. 418, Pg. 686

10" San. Sewer See Sheet 16
Property Line
I.P. Found
Woven Wire Fence
10' Gravel Drive
I.P. Set S.L. Sta. 16+35.95 E-W
18" San. Sewer See Sheet 16
TEST BORING B-19 STA. 14+13 (46' south)
TEST BORING B-21 STA. 21+10
20' Permanent Easement - Typ. D.B. Pg.
50' Construction Easement - Typ. D.B. Pg.
Hub Set S.L. Sta. 17+02.64
Survey Line
Gravelled Area
TANKS
Pony Spike - 0.12' west of ℄
Pavement Replacement Type "D"
CAUTION Gas Line in this area
R.R. Spike
Monument Found
6' Cyclone Fence
Property Lines
20' Permanent Easement D.B. Pg.
P.K. Nail Set S.L. Sta. 21+48.91
180°00'00" (S.L. & Sewer)
50' Construction Easement D.B. Pg.
C.R. 35
3 B's & K ROAD
EX. 6" WATER MAIN
R/W
MATCH LINE - SEWER STA. 14+00
MATCH LINE - SEWER STA. 29+00
Survey Line Stationing
Sewer Stationing

98°36'20"
89°51'20"
180°00'00"
51°00'29"
62.78'
90°03'47"
89°58'43"

825500
825250
950
955
960
965

(5) 825307.33552/1877138.97472
SEWER STA. 14+12.73 FROM WEST =
SEWER STA. 0+00 TO NORTH =
13.92' LT. OF S.L. STA. 13+45.81 =
S.L. STA. 8+11.61 FROM NORTH

(6) 825385.07976/1877144.16499
SEWER STA. 14+06.46 TO EAST =
SEWER STA. 0+77.92 TO NORTH =
91.83' LT. OF S.L. STA. 13+45.73 =
S.L. STA. 7+33.69 FROM NORTH

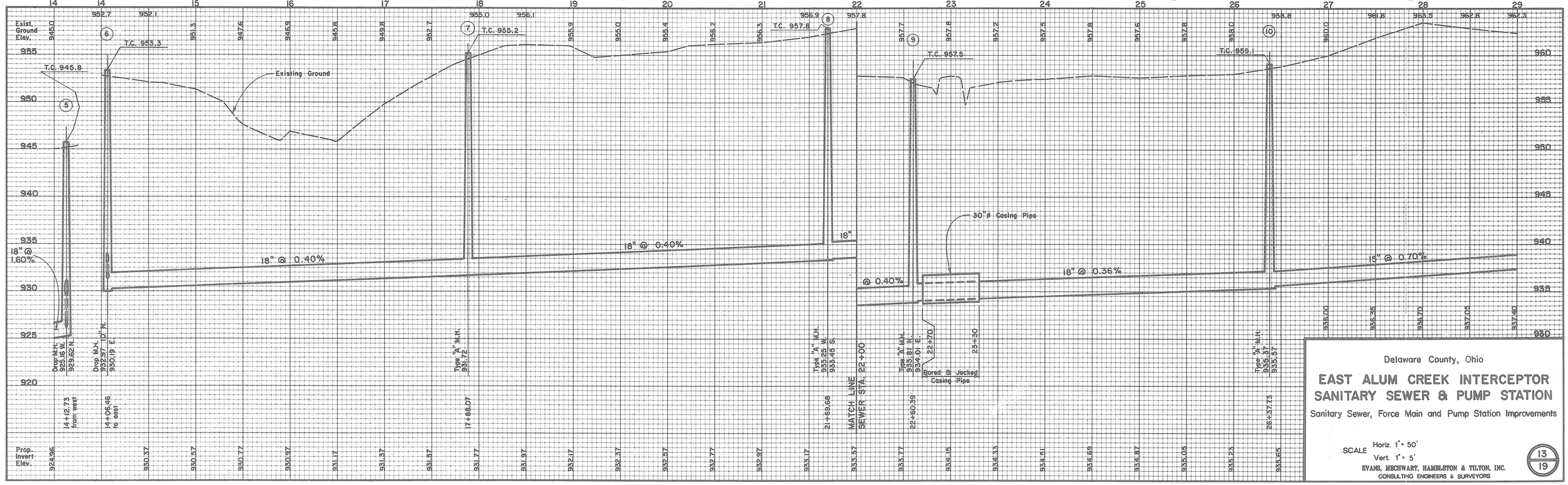
(7) 825358.69992/1877524.86210
SEWER STA. 17+88.07 =
91.27' LT. OF S.L. STA. 17+27.34

(8) 825332.32152/1877905.55707
SEWER STA. 21+69.68 =
90.71' LT. OF S.L. STA. 21+08.95

(9) 825241.82086/1877899.38598
SEWER STA. 22+60.39 =
S.L. STA. 21+08.91

(10) 825216.29102/1878275.86135
SEWER STA. 26+37.73 =
S.L. STA. 24+86.25

1877250 1877500 1877750 1878000 1878250 1878500



Delaware County, Ohio

EAST ALUM CREEK INTERCEPTOR SANITARY SEWER & PUMP STATION

Sanitary Sewer, Force Main and Pump Station Improvements

SCALE Horiz. 1" = 50'
Vert. 1" = 5'

EVANS, MECHWART, HAMBLETON & TILTON, INC.
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825250

825000

MATCH LINE - SEWER STA. 29+00

MATCH LINE - SEWER STA. 43+00

"Broken-Down" Woven Wire Fence

20' Permanent Easement D.B. Pg.

50' Construction Easement D.B. Pg.

Property Line

Prop. 10" San. Sewer (See Sheet 17)

Survey Line

I.P. Set S.L. Sta. 31+30.65

I.P. Found 9.4'± Rt. of S.L. Sta. 32+75.83

I.P. Set S.L. Sta. 34+25.83 to east

I.P. Set S.L. Sta. 34+25.83 from west

I.P. Found 9.7' Rt. of S.L. Sta. 34+25.83

Hub Set S.L. Sta. 35+80.49

177°10'06"

182°40'41"

180°00'00"

90°09'15"

90°08'03"

90°08'02"

270°00'00"

80°00'00"

N.R. CHABRIA

WENDY'S INTERNATIONAL, INC.
D.B. 464, PG. 173

DORCY OIL COMPANY
D.B. 478, PG. 565

McDONALD'S CORPORATION
D.B. 460, PGS. 619, 622 & 626

(11) 825189.90277/1878664.96758
SEWER STA. 30+27.73 =
S.L. STA. 28+76.25

(12) 825144.32436/1879052.29978
SEWER STA. 34+17.73 =
19.27' RT. OF S.L. STA. 32+65.77

(13) 825117.94804/1879426.37101
SEWER STA. 37+92.73 =
45.22' RT. OF S.L. STA. 36+40.73

(14) 825217.70037/1879433.40469
SEWER STA. 38+92.73 =
54.78' LT. OF S.L. STA. 36+40.96

(15) 825190.49813/1879832.47866
SEWER STA. 42+92.73 =
54.78' LT. OF S.L. STA. 40+40.96

1878500 1878750 1879000 1879250 1879500 1879750 1880000

Exist. Ground Elev.

Prop. Invert Elev.

T.C. 961.7

T.C. 963.9

T.C. 958.5

T.C. 964.5

T.C. 963.3

Existing Ground

15" @ 0.70%

15" @ 0.50%

15" @ 0.50%

15" @ 0.46%

15" @ 0.44%

Type "A" M.H. 958.30

Drop M.H. 941.03 950.16 110' N.

Type "A" M.H. 943.0 943.13 N.

Type "A" M.H. 943.63 S. 943.83 E.

Type "A" M.H. 945.67

945.70

30+27.73

34+17.73

37+92.73

38+92.73

42+92.73

ADDENDUM I REVISIONS	11/02/92
REVISIONS	DATE

Delaware County, Ohio

EAST ALUM CREEK INTERCEPTOR SANITARY SEWER & PUMP STATION

Sanitary Sewer, Force Main and Pump Station Improvements

SCALE Horiz. 1" = 50'
Vert. 1" = 5'

EVANS, MECHWART, HAMBLETON & TILTON, INC.
CONSULTING ENGINEERS & SURVEYORS

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MATCH LINE - SEWER STA. 43+00

8252500

825000

20' Permanent Easement D.B. Pg.

Pavement Replacement Type "D"

Survey Line 144°43'39"

50' Construction Easement D.B. Pg.

180°00'00"

I.P. Set S.L. Sta. 46+84.33

820'± to ℄ U.S. 36 & S.R. 37 (ref.)

734+00

Hub Set S.L. Sta. 48+49.67

180°00'00"

6" Storm Sewer

97°38'47"

250.94' to I.P. at I71 R/W ∠ point

EMRO MARKETING COMPANY D.B. 535, PG. 700

180°00'00"

I.P. Set S.L. Sta. 50+53.02

10" High Pressure/ Petroleum Pipeline in 50' wide pipeline right-of-way. Owner: Ohio River Pipe Line Company

50' Construction Easement D.B. Pg.

20' Permanent Easement D.B. Pg.

I.P. Set S.L. Sta. 54+84.84

Surface Inlet

56°00'06"

61.22' to I71 R/W Monument

732+00

12" Storm Sewer

145°11'55"

Temporary Fence

I71 R/W Monument

125°17'54"

180°57'55"

CAUTION "Hi-Rise" Sign

85°50'33"

125°41'21" Survey Line angle

I.P. Found at Property Corner S.L. Sta. 55+54.35

McDONALD'S CORPORATION D.B. 448, PG. 628

Pavement Replacement Type "D"

Surface Inlet

Temporary Fence

EXPOSE

EXPOSE

℄ I71

730+00

L/A R/W

L/A R/W

910

TEST BORING B-26 STA. 49+60

TEST BORING B-27 STA. 56+50

MATCH LINE - SEWER STA. 58+00

MERLE IGO ET AL D.B. 288, PG. 230

180°59'53" Sewer angle at M.H. (19)

Property Line

1880000

1880250

1880500

1880750

1881000

1881250

(16) 825164.29555/1880216.88666
SEWER STA. 46+78.03 =
54.78' LT. OF S.L. STA. 44+26.26

(17) 824982.21105/1880442.21215
SEWER STA. 49+67.73 =
111.56' RT. OF S.L. STA. 46+6

(18) 824953.66982/1880816.12443
SEWER STA. 53+42.73 =
114.61' RT. OF S.L. STA. 50+38.43

(19) 824912.54114/1881260.46217
SEWER STA. 57+88.97 =
13.96' RT. OF S.L. STA. 55+52.07

Exist. Ground Elev.	963.0	964.5	965.5	965.8	967.2	968.3	969.0	969.7	969.9	970.2	970.5	970.1	970.2	969.5	969.3	975.3	978.0	974.8	977.9	978.0	972.5	974.0	974.0	974.0	978.0	975.8	975.6	974.8	973.8	973.2	972.8
Prop. Invert Elev.	945.70	945.92	946.14	946.36	946.58	946.80	947.02	947.24	947.46	947.68	947.90	948.12	948.34	948.56	948.78	949.00	949.22	949.44	949.66	949.88	950.10	950.32	950.54	950.76	950.98	951.20					

T.C. 970.2 (16) — Existing Ground — T.C. 969.7 (17) — Ex. 12" Storm Inv. El. = 973.46± — Ex. Water Main — T.C. 974.5 (18) — T.C. 973.2 (19)

10" High Pressure Petroleum Pipeline

15" @ 0.44%

24"ø Casing Pipe

Bored & Jacked Casing Pipe

Type "A" M.H. 947.36 — 46+78.03 — +90 — Type "A" M.H. 948.64 — 49+67.73 — +90 — +95 — Type "A" M.H. 950.29 — 53+42.73 — +95 — Type "A" M.H. 952.25 E.&W. 952.08 952.30 — 57+88.97 — 951.86 951.42 951.64

MATCH LINE - SEWER STA. 55+00

REVISIONS	DATE
ADDENDUM 1 REVISIONS	11/02/92

Delaware County, Ohio

EAST ALUM CREEK INTERCEPTOR SANITARY SEWER & PUMP STATION

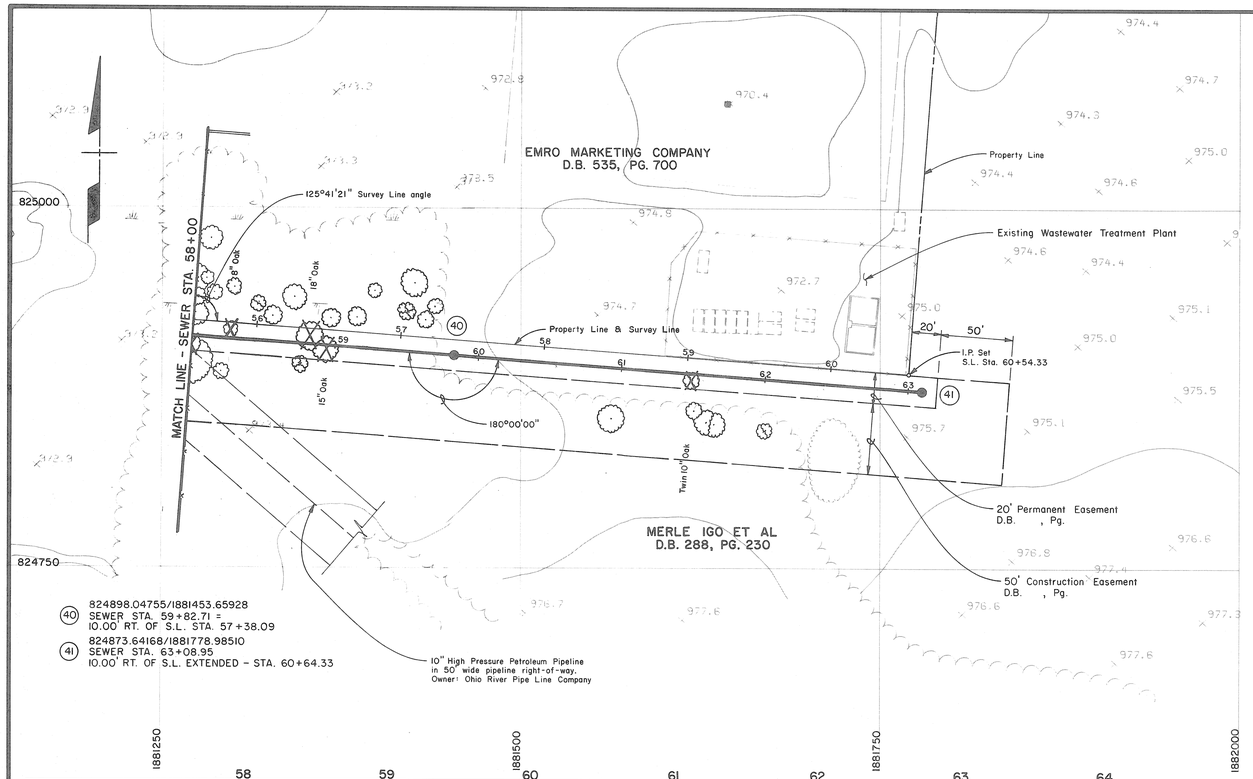
Sanitary Sewer, Force Main and Pump Station Improvements

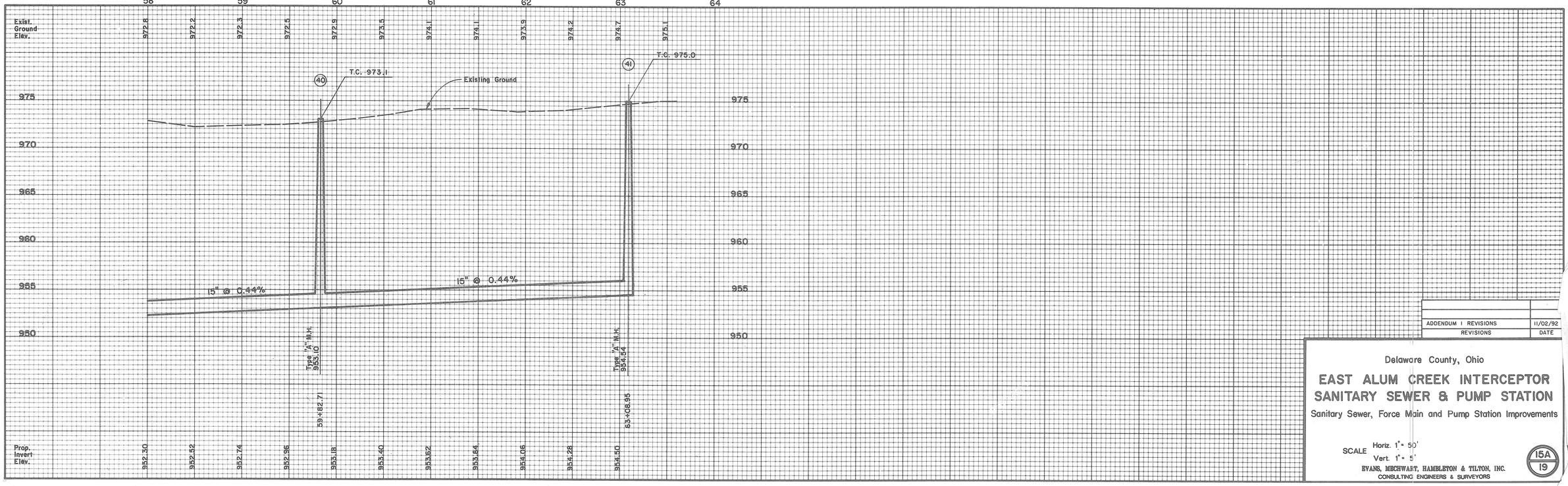
SCALE Horiz. 1"= 50'
Vert. 1"= 5'

EVANS, MECHWART, HAMBLETON & TILTON, INC.
CONSULTING ENGINEERS & SURVEYORS

15/19

S-2916





REVISIONS	DATE
ADDENDUM I REVISIONS	11/02/92

Delaware County, Ohio

EAST ALUM CREEK INTERCEPTOR SANITARY SEWER & PUMP STATION

Sanitary Sewer, Force Main and Pump Station Improvements

SCALE Horiz. 1"= 50'
Vert. 1"= 5'

EVANS, MECHWART, HAMBLETON & TILTON, INC.
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15A
19

S-2916

1877000

1877250

RONALD & MARY ALICE BILIKAM
D.B. 231, Pg. 313

Proposed 18" San. Sewer See Sheets 12 & 13

50' Construction Easement D.B. Pg.

98°36'20"

180°00'00"

90°08'40"

180°00'00"

180°00'00"

EXPOSE

Property Lines

20' Permanent Easement D.B. Pg.

℄ U.S. 36 & S.R. 37

R/W

Survey Line Stationing

Sewer Stationing

(5) 825307.33552/1877138.97472
SEWER STA. 14+12.73 FROM WEST =
SEWER STA. 0+00 TO NORTH =
13.92' LT. OF S.L. STA. 13+45.81 FROM WEST =
S.L. STA. 8+11.61 FROM NORTH

(6) 825385.07976/1877144.16499
SEWER STA. 14+06.46 TO EAST =
SEWER STA. 0+77.92 TO NORTH =
91.83' LT. OF S.L. STA. 13+45.73 FROM WEST =
S.L. STA. 7+33.69 FROM NORTH

(20) 825629.53559/1877160.48506
SEWER STA. 3+22.92 =
S.L. STA. 4+88.69

(21) 825915.58505/1877179.58379
SEWER STA. 6+09.61 =
S.L. STA. 2+02.00

(22) 826107.15860/1877192.37339
SEWER STA. 8+01.61 =
S.L. STA. 0+10.00

BLANK'S AGRI-SERVICE, INC.
D.B. 441, Pg. 749

FRANCIS B. YONTZ & INA C. YONTZ
D.B. 299, Pg. 600

Proposed 18" San. Sewer See Sheet 13

Survey Line

Property Line

3" Water

825250 825500 825750 826000 826250 826500

0 1 2 3 4 5 6 7 8 9

Exist. Ground Elev.

955 950 945 940 935 930 925 920

954.4 958.0 955.0

T.C. 945.8

T.C. 953.3

T.C. 952.5

T.C. 953.2

T.C. 955.2

18"ø Casing Pipe

10" @ 0.28%

10" @ 0.28%

10" @ 0.28%

18" @ 0.48%

6+50

7+50

Bored & Jacked Casing Pipe

Drop M.H. 925.16 W. 929.62 N.

Drop M.H. 928.99 S. 952.97 N.

Type "A" M.H. 933.86

Type "A" M.H. 954.46

Type "A" M.H. 955.00

0+00 to north

0+77.92

3+22.92

6+09.61

8+01.61

Prop. Invert Elev.

945.2 951.4 953.5 954.4 954.2 953.9 953.3 950.4 949.2 952.0 953.3 953.7 955.2 955.8 955.2

929.62 929.86 933.03 933.17 933.31 933.45 933.59 933.73 933.87 934.01 934.15 934.29 934.43 934.57 934.71 934.85 934.93

Delaware County, Ohio

EAST ALUM CREEK INTERCEPTOR SANITARY SEWER & PUMP STATION

Sanitary Sewer, Force Main and Pump Station Improvements

SCALE Horiz. 1" = 50'
Vert. 1" = 5'

EVANS, MECHWART, HAMBLETON & TILTON, INC.
CONSULTING ENGINEERS & SURVEYORS

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DORCY OIL COMPANY
D.B. 478, PG. 565

SUN OIL COMPANY
D.B. 342, PG. 366

SERVICE STATION HOLDINGS INC.
D.B. 513, PG. 528

N.R. CHABRIA

℄ U.S. 36 & S.R. 37

EX. 4" WATER MAIN

EX. 6" WATER MAIN

R/W

50' Construction Easement
D.B. Pg.

20' Permanent Easement
D.B. Pg.

Survey Line

Property Line

Survey Line Stationing

CAUTION

Prop. 15" San. Sewer
See Sheet 14

1879000

1879250

182°40'41"

87°19'19"

180°00'00"

214°50'45"

(12) 825144.32436/1879052.29978
SEWER STA. 0+00 =
20.00' RT. OF S.L. STA. 6+44.61

(23) 825503.43274/1879077.62104
SEWER STA. 3+60.00 =
20.00' RT. OF S.L. STA. 2+84.61

(24) 825792.07607/1879097.92370
SEWER STA. 6+49.36 =
20.00' RT. OF S.L. STA. 0-04.75

(25) 825936.79241/1879214.65770
SEWER STA. 8+35.26 =
86.22' RT. OF S.L. STA. -(1+52.56)

825250 825500 825750 826000

0 1 2 3 4 5 6 7 8 9

Exist. Ground Elev.

970 965 960 955 950 945 940

963.6 964.2 964.2 963.3 963.3 963.3 963.8 964.8 966.3 966.7 968.7 968.4 969.2 970.3 970.9 972.2 970.3 970.1

(12) T.C. 963.9

Existing Ground

(23) T.C. 965.6

(24) T.C. 970.4

(25) T.C. 970.1

Ex. 4" W.M.

18"ø Casing Pipe

10" @ 0.28%

10" @ 0.28%

10" @ 0.28%

Drop M.H.
941.05 15"W.
950.16 10"N.

Type "A" M.H.
951.17

Type "A" M.H.
951.98

Type "A" M.H.
952.30

6+49.36

8+35.26

6+90

8+10

Bored & Jacked
Casing Pipe

Prop. Invert Elev.

0+00.00 950.16
950.30 950.44 950.58 950.72 950.86 951.00
3+60.00 951.14 951.28 951.42 951.56 951.70 951.84
6+49.36 951.98 952.12 952.26 952.40
8+35.26

REVISIONS	DATE
ADDENDUM 1 REVISIONS	11/02/92

Delaware County, Ohio

EAST ALUM CREEK INTERCEPTOR SANITARY SEWER & PUMP STATION

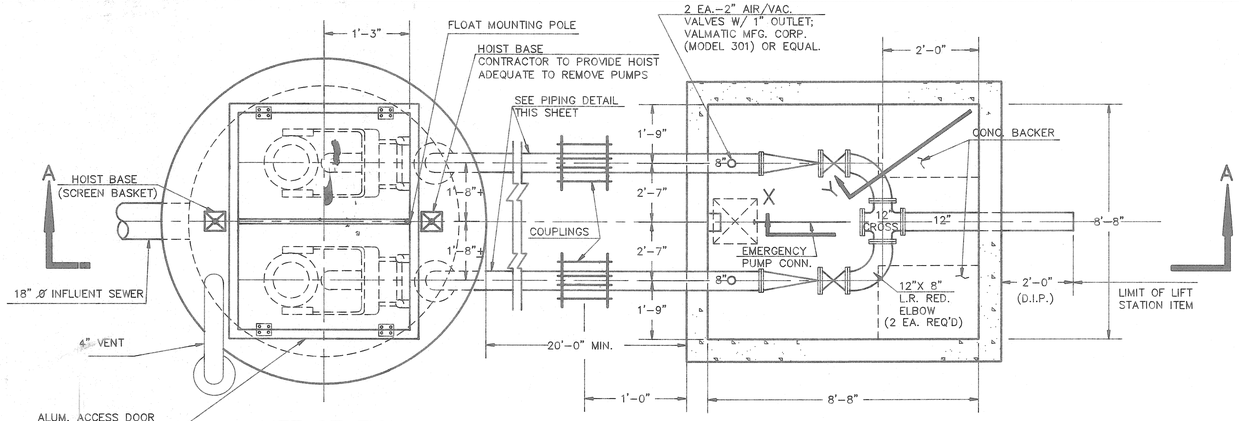
Sanitary Sewer, Force Main and Pump Station Improvements

SCALE Horiz. 1" = 50'
Vert. 1" = 5'

EVANS, MECHWART, HAMBLETON & TILTON, INC.
CONSULTING ENGINEERS & SURVEYORS

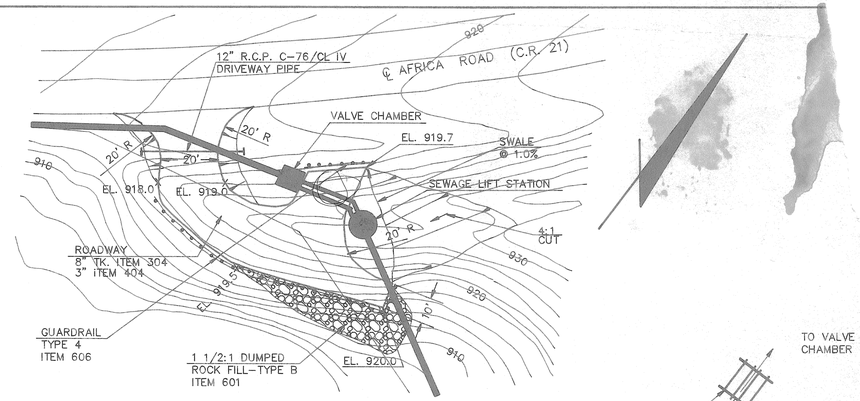
17/19

S-2916



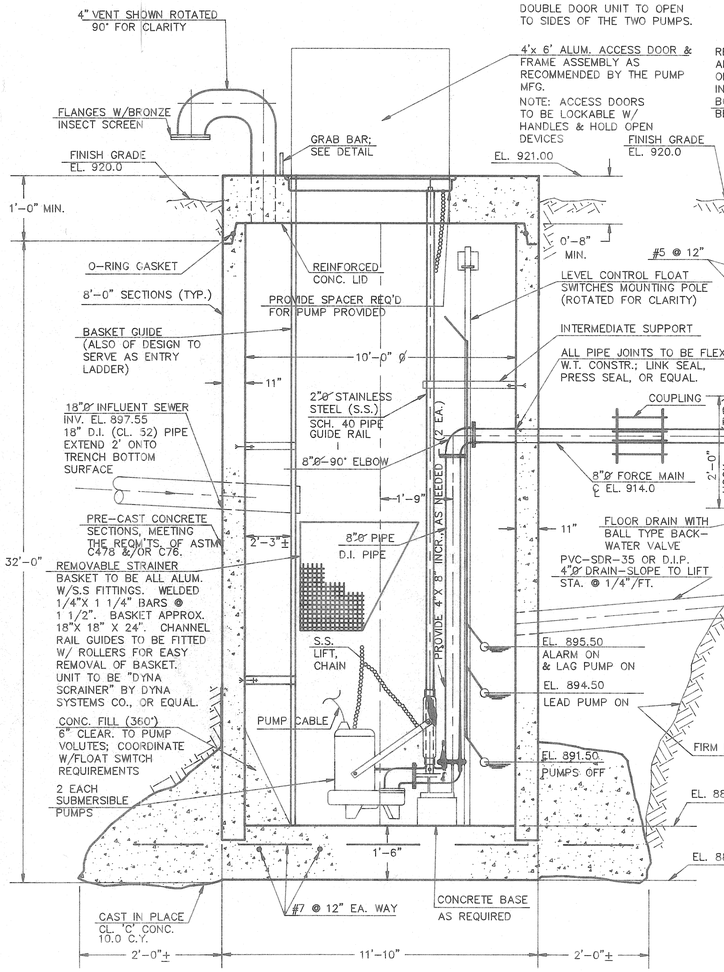
PLAN-LIFT STATION

No Scale



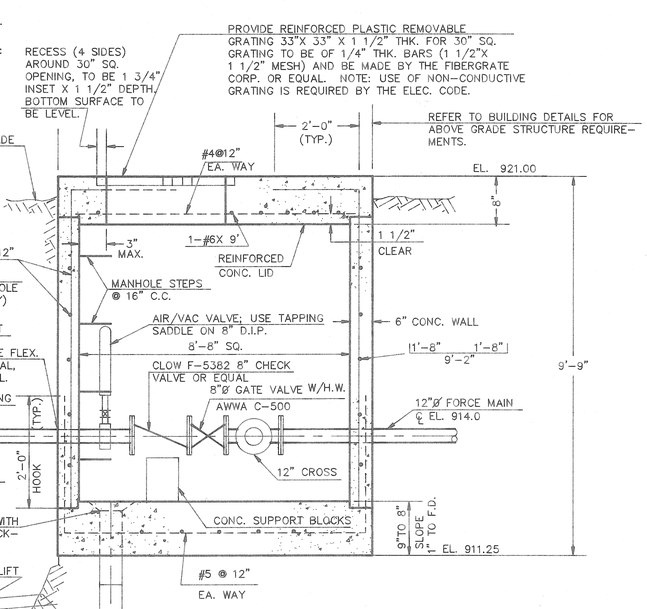
SITE PLAN

Scale: 1"=30'



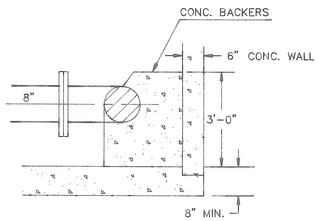
SECTION A-A

No Scale



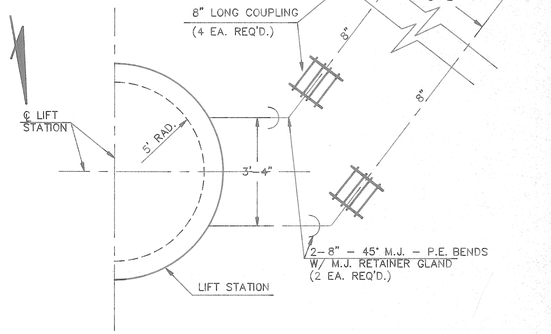
NOTE: ALUM. IN CONTACT WITH CONCRETE SHALL BE COVERED WITH A BITUMASTIC MATERIAL.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANTI-FLOTATION METHODS NEEDED DURING CONSTRUCTION UNTIL EARTH BACKFILL IS PROPERLY PLACED.



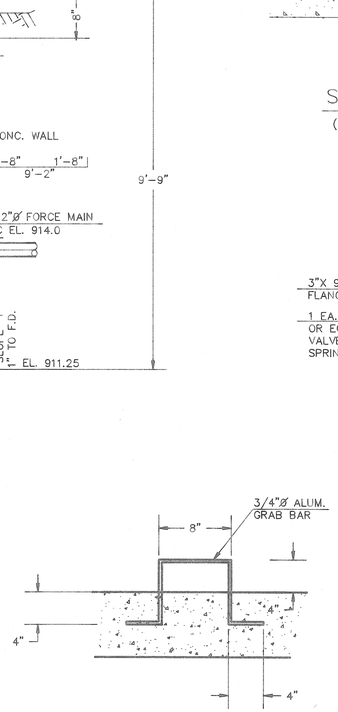
SECTION Y

(2 UNITS REQ'D.)



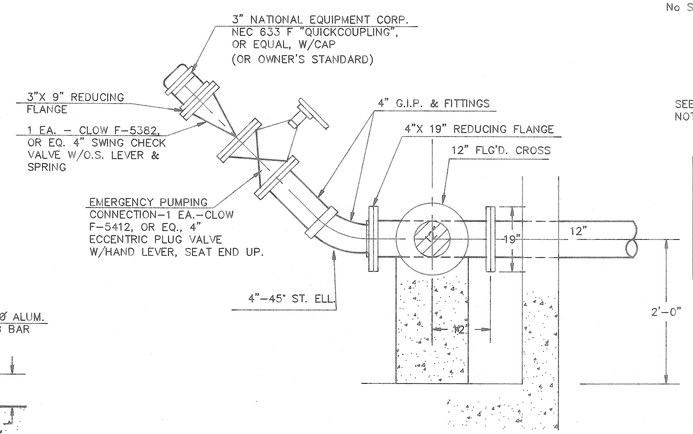
LIFT STATION TO VALVE CHAMBER PIPING DETAILS

No Scale



GRAB BAR DETAIL

No Scale



SECTION X

No Scale

SEE DRAWING NO. 19 FOR LIFT STATION GENERAL NOTES AND SPECIFICATIONS.

NOTE:
THE LIFT STATION STRUCTURE AND PUMP DISCHARGE PIPING HAVE BEEN SIZED TO ACCOMODATE TWO (2) PUMPS EACH OF APPROX. 1,700 G.P.M. CAPACITY. THE 12" DIAM. FORCE MAIN IS SIZED TO SERVE THE DESIGN AREA AT ULTIMATE, FULL DEVELOPMENT.

Delaware County, Ohio

EAST ALUM CREEK INTERCEPTOR SANITARY SEWER AND PUMP STATION

Sanitary Sewer, Force Main and Pump Station Improvements

PUMP STATION DETAILS

SCALE: As Noted

18
19

EVANS, MECHWART, HAMBLETON and TILTON, INC.
Consulting Engineers and Surveyors

S-2916

LIFT STATION GENERAL NOTES

The Contractor shall comply with material and construction requirements of the Delaware County Board of Health. The Contractor shall obtain any and all permits required by the Board of Health and pay cost for any and all fees.

The Contractor shall furnish all materials, labor, tools, transportation, incidentals and appurtenances to complete in every detail and leave in working order all items of work called for and/or shown on the accompanying drawings. Any material or work not specifically mentioned or shown on the drawings, but necessary to complete the work, shall be furnished.

The Contractor is required to visit the site and fully inform himself concerning all conditions affecting the scope of the work. Failure to visit the site shall not relieve him from any responsibility in the performance of this Contract.

The Contractor shall investigate and locate all existing utilities and notify all utility companies a minimum of 48 hours prior to construction.

The Contractor shall provide 4" to 6" sand or grit leveling base under each concrete structure and shall place granular fill as required, dependent on soil conditions.

Contractor shall grade area to drain surface water away from station.

All disturbed areas shall be seeded and mulched after final grading by Contractor.

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

All General Notes shown on Drawing No. 2 are to be hereby considered for the construction work of the sewage lift station, where applicable.

ELECTRICAL NOTES

The Contractor shall provide all electrical components and devices to properly serve electrical requirements for the completed facility. All workmanship, materials and equipment shall conform to the Ohio Basic Building Code, the National Electrical Code, Local Building Code(s) and other regulations by authorities having jurisdictional rights for enforcement of construction and safety standards. The pumping station Contractor shall pay the costs or fees associated with any permits or agency inspection charges associated with this work.

Electric service shall be provided to within approximately ten (10) feet of the proposed sewage pumping station, terminating at the "customer's" pole. All electrical connection work shall be performed by the sewage pumping station Contractor. The cost for purchasing and installing the electric meter shall be at the Contractor's expense. Also, the Contractor shall make all the arrangements and pay all fees required for making the proper connections to the Columbus Southern Power Company's service wiring.

Provide emergency generator connection with double throw switches at Electric Control Panel. Connection and electrical devices shall be compatible for use with the Owner's portable generator. Contractor to coordinate with the Owner prior to purchasing these items. Also, provide emergency power outage connection.

Provide and install a lightning arrestor per Delaware County Standards.

Pump float switches to be mounted in the pump wet well in a manner to prevent twisting or fouling of cables. Intermediate support of cables will be required.

The Contractor shall furnish an automatic telephone dialer system, including maintenance free 4 hour battery back-up, and all other necessary appurtenances as required to meet the requirements of the Delaware County Sanitary Engineer. The unit shall be Model No. MSC-500 with FAX talk communications as manufactured by Microtel, Inc. capable of sensing as many as eight (8) alarms and reporting alarm condition(s) to the telephone number receiving locations now used for other Microtel units of the existing system. This equipment shall either be placed in a NEMA 4X S.S. box near the pump controls enclosure or it shall be included inside a pump controls enclosure of adequate size.
All auto dialer and telephone work is to be provided by the pump station Contractor. The Contractor shall make all arrangements, and pay all fees and costs necessary for obtaining an operable telephone service meeting all code requirements. Motor starters shall be of the solid state type and be "SMC" by Allen-Bradley.

LIFT STATION SPECIFICATIONS REFERENCE NUMBER 6

6.01 GENERAL

A. Scope of Work

Work under this section includes furnishing and installing the lift station, complete as shown on the Drawings and as specified herein.

6.02 WET WELL AND VALVE VAULT

A. The lift station and valve vault shall be constructed of pre-cast concrete sections meeting the requirements of ASTM C478.

B. All rubber ring joints shall comply with ASTM C443.

6.03 ACCESS LID AND FRAME ASSEMBLY

A. The wet well top shall be fitted with a double door access lid and frame assembly.

B. Each door is to have a handle, a latch to hold it in the open position, and a hasp for padlocking.

C. The frame shall be of 3" x 3" x 1/4" angle.

D. The frame assembly shall be placed in the concrete wet well when it is poured.

6.04 PIPING

A. The Contractor shall supply and install all piping and valving required in the concrete wet well and valve vault as shown on the Drawings. Flanged Joints – Ductile Iron shall be Class 52 (min.) conforming to AWWA C-110, C-150 & C-151 w/ rubber gaskets per C-111.

6.05 PUMPS – (Explosion proof motors & electrical items are required per Class 1, Div. 1, Group D requirements.)

A. Furnish and install two submersible pumps as manufactured by Flygt Corp., (CP 3127/ 462), or equal by Gorman-Rupp Company.

B. Pump impellers to be non-clog design capable of passing 3" diameter solids.

C. Each pump shall have a capacity of 350 GPM at a total dynamic head of 41 feet. Motors shall be 7.5 HP, 1750 RPM (max.), designed for operation on 230/460 volt, three phase, 60 hertz power. Pump shut off head shall be 57' (min.). Motor shall be non-overloading over full range of curve. Pump eff. at 350 GPM shall exceed 52%.

D. The volute casing, impeller, and motor enclosure shall be cast iron. The motor shaft shall be stainless steel with double mechanical seal assembly with leak sensor.

6.06 PUMP INSTALLATION

A. The installation and removal system for each pump shall consist of a stationary cast iron discharge base elbow with 125 lb. discharge flange connection and two guide rail connections. This elbow shall be attached to a support base that is connected to the wet well bottom. The guide pipes shall be secured at the top with a guide rail cap attached to the access frame.

B. A slide assembly with yoke shall attach to each pump and slide freely between the guide rails.

C. The design shall be arranged so that a minimum force shall be exerted between the stationary base elbow and the pump discharge to provide a positive seal without bolting or fastening. The lever action shall provide for easy breakaway when raising the pump.

6.07 PORTABLE HOIST

A. The Contractor shall provide one (1) portable, hand-winch hoist of adequate design to set into place or remove any submersible pump furnished.

B. Appropriate sleeve for mounting the hoist in the proper location shall be provided as shown on the Drawings. An additional sleeve shall be provided and mounted in an appropriate location at the strainer basket.

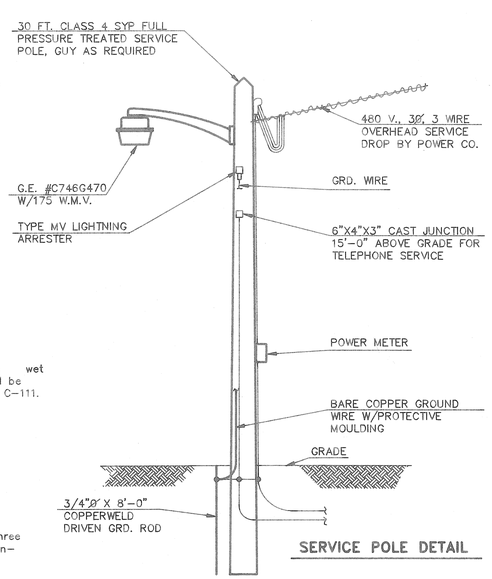
6.08 PUMP CONTROLS

A. Level Controls

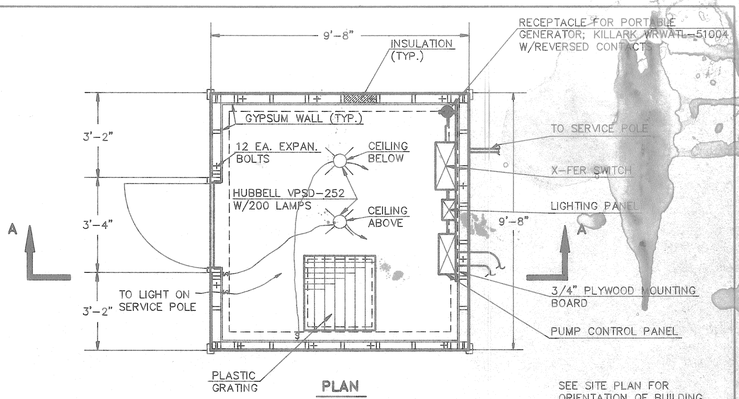
1. Three mercury float switches shall be mounted inside the wet well.
2. The floats shall be suspended at the proper depths to control the Off Level, On Level, Emergency Level (both pumps on) and High Water Alarm Level.

B. Control Panel

1. A duplex pump controller in a NEMA 4X, stainless steel enclosure shall be mounted at the wet well. It shall contain a circuit breaker, magnetic starter, hand-off-auto selector switch, time elapse meter, and seal leak indicating light for each pump. It shall alternate the pumps on successive cycles and turn on the second pump if the first fails or the inflow exceeds one pump. Float switches shall be equipped with intrinsically safe isolator relays appropriate for Class 1, Division 1, Group D location. Each pump's power cable shall be supported from the wet well by stainless steel, basket weave, cable support grips (Kellum grips).
2. A 115 VAC duplex convenience outlet shall be provided on the panel with ground fault interruption protection.
3. A horn and red flashing High Water Alarm light shall be mounted on the electric service pole or on the controller enclosure as called for or approved.
4. Pump and level control cables shall pass through the top of the wet well and into the bottom of the control panel in sealed cable grips, employing use of strain relief devices.



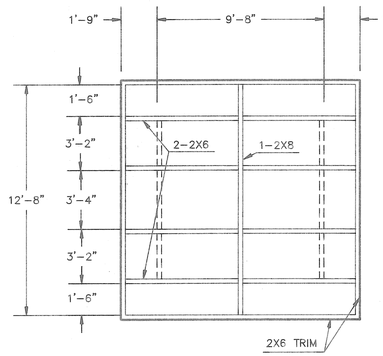
SERVICE POLE DETAIL



PLAN

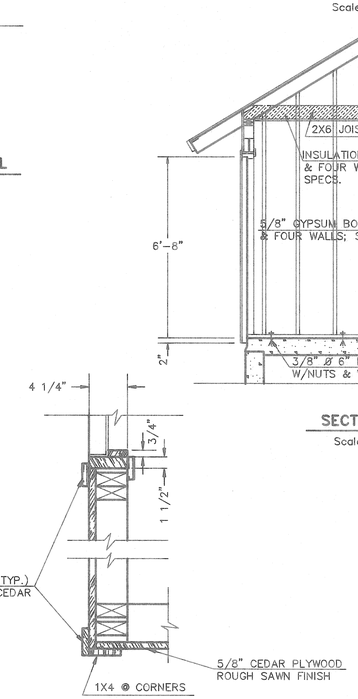
Scale: 3/8"=1'

SEE SITE PLAN FOR ORIENTATION OF BUILDING



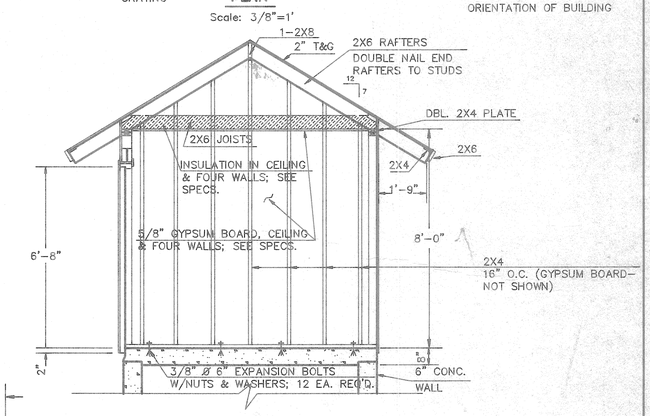
ROOF FRAMING PLAN

Scale: 1/4"= 1'



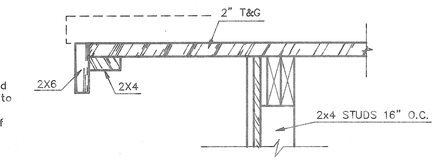
TYPICAL CORNER

Scale: 1 1/2"= 1'



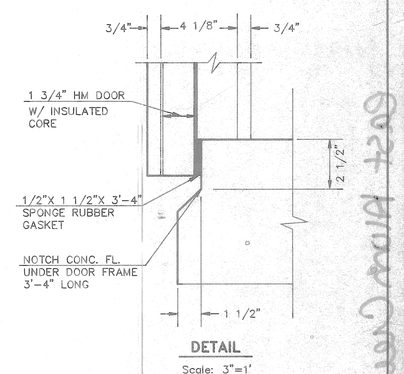
SECTION A-A

Scale: 3/8"=1'



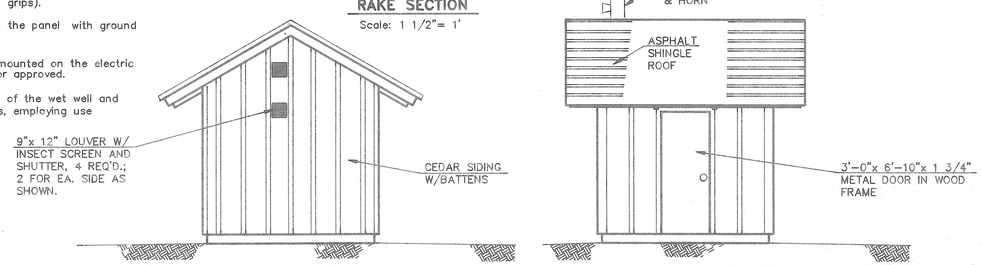
RAKE SECTION

Scale: 1 1/2"= 1'



DETAIL

Scale: 3"=1'



SIDE

ELEVATIONS

Scale: 1/4"= 1'

FRONT

Delaware County, Ohio

EAST ALUM CREEK INTERCEPTOR SANITARY SEWER AND PUMP STATION

Sanitary Sewer, Force Main and Pump Station Improvements

Pump Station, Electrical Notes & Valve Chamber Superstructure Details

SCALE: As Noted

EVANS, MECHWART, HAMBLETON & TILTON, INC.
Consulting Engineers / Surveyors

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19

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