

This improvement has been declared a Limited Access Highway from Station 434+15.00 to Station 539+74.27 by action of the Director of Highways and recorded in Volume 49 Page 549 of the Director's Journal pursuant to Law, dated 7-20-64, First Hearing.

Spiralled Curves indicated on this Plan are Developed as Outlined in "Transition Curves For Highways" by Joseph Barnett, Published in 1940 by U.S. Government Printing Office.

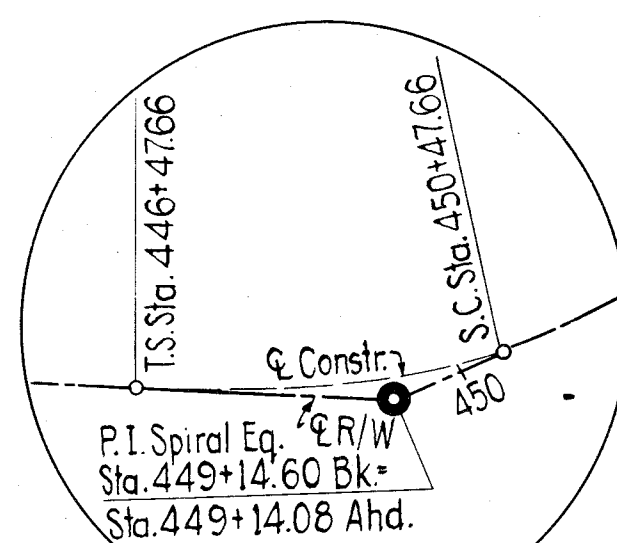
Offsets will be from Tangents on Spiral Curve.

The Bearings established from observation on Polaris.

# CENTER LINE SURVEY PLAT

STA-21-8.40  
STARK COUNTY, OHIO  
CITY OF MASSILLON  
PERRY TWP. R-9, T-10 SEC'S. 17, 20 & 29

Scale in Feet  
200 100 0 200



TYPICAL USE OF TANGENTS ON SPIRAL CURVES (Not To Scale)

● CENTERLINE REFERENCE MONUMENTS AND ● MONUMENT ASSEMBLY BOXES WILL BE SET DURING CONSTRUCTION ON CENTERLINE STATIONS AND OFFSETS AS SHOWN BELOW

| STATION          | LOCATION    | STATION          | LOCATION    |
|------------------|-------------|------------------|-------------|
| 437 + 00.00      | P.O.T.      | 442 + 30.73 Bk.  | P.I. Spiral |
| 443 + 00.00      | P.O.T.      | 443 + 04.41 Bk.  | P.I. Spiral |
| 443 + 14.60 Bk.  | P.I. Spiral | 443 + 04.41 Bk.  | P.I. Spiral |
| 454 + 00.00      | P.O.C.      | 443 + 20.97 Bk.  | P.I. Spiral |
| 458 + 80.70 Bk.  | P.I. Spiral | 454 + 00.00      | P.O.C.      |
| 458 + 80.18 Ahd. | P.I. Spiral | 458 + 00.00      | P.O.C.      |
| 464 + 00.00      | P.O.T.      | 458 + 00.00      | P.O.C.      |
| 469 + 55.77 Bk.  | P.I. Spiral | 464 + 00.00      | P.O.T.      |
| 469 + 55.25 Ahd. | P.I. Spiral | 469 + 55.77 Bk.  | P.I. Spiral |
| 475 + 55.00      | P.O.C.      | 469 + 55.25 Ahd. | P.I. Spiral |
| 481 + 30.00      | P.O.C.      | 475 + 55.00      | P.O.C.      |
| 487 + 30.53 Bk.  | P.I. Spiral | 481 + 30.00      | P.O.C.      |
| 487 + 30.01 Ahd. | P.I. Spiral | 487 + 30.53 Bk.  | P.I. Spiral |

Construction U.S. 21  
Curve Data  
P.I. Sta. 454 + 27.81  
 $\Delta = 43^\circ 58' 42.5''$   
 $D = 4^\circ 00'$   
 $R = 1432.39'$   
 $L_s = 400.00'$   
 $\Theta_s = 8^\circ 00'$   
 $P = 4.65'$   
 $K = 199.87'$   
 $L.T. = 266.94'$   
 $S.T. = 133.58'$   
 $T_s = 780.15'$   
 $E_s = 117.39'$   
 $L.C. = 399.65'$   
 $X_c = 399.22'$   
 $Y_c = 18.59'$   
 $L_c = 699.46'$   
 $\Delta c = 27^\circ 58' 42.5''$

Curve Data RAMP G  
P.I. Sta. 468 + 83.37  
 $\Delta = 15^\circ 30' 00''$   
 $D = 4^\circ 00'$   
 $R = 1432.39'$   
 $L = 194.94'$   
 $T = 387.50'$   
 $E = 13.20'$

Curve Data  
Access Rd. to Treatment Plant  
P.I. Sta. 8 + 89.20  
 $\Delta = 119^\circ 49' 32''$   
 $R = 150.00'$   
 $T = 258.90'$   
 $L = 313.70'$   
 $E = 149.21'$

BEGIN WORK  
Sta. 21 + 40  
Reloc. Erie St.

Sta. 22 + 57.43 Reloc. Erie St.  
Sta. 475 + 81.06 RAMP G

P.C. Sta. 6 + 30.30

BEGIN WORK  
Sta. 0 + 00 Access Rd.  
Sta. 22 + 67.48 Reloc. Erie St.

Sta. 473 + 88.80 RAMP H  
Sta. 27 + 30.05 Reloc. Erie St.

Sta. 472 + 71.07 RAMP H  
Sta. 27 + 30.05 Reloc. Erie St.

Curve Data  
Reloc. Erie Street  
P.I. Sta. 38 + 18.10  
 $\Delta = 88^\circ 27' 45''$   
 $D = 4^\circ 00'$   
 $R = 275.00'$   
 $T = 267.72'$   
 $L = 424.53'$

Construction U.S. 21  
Curve Data  
P.I. Sta. 480 + 18.02  
 $\Delta = 76^\circ 19' 30''$   
 $D = 4^\circ 00'$   
 $R = 1432.39'$   
 $L_s = 400.00'$   
 $\Theta_s = 8^\circ 00'$   
 $P = 4.65'$   
 $K = 199.87'$   
 $L.T. = 266.94'$   
 $S.T. = 133.58'$   
 $T_s = 1329.19'$   
 $E_s = 394.98'$   
 $L.C. = 399.65'$   
 $X_c = 399.22'$   
 $Y_c = 18.59'$   
 $L_c = 1508.12'$   
 $\Delta c = 60^\circ 19' 30''$

Curve Data RAMP H  
P.I. Sta. 468 + 48.14  
 $\Delta = 29^\circ 58' 38''$   
 $D = 4^\circ 00'$   
 $R = 1432.39'$   
 $T = 383.50'$   
 $L = 749.43'$   
 $E = 50.45'$

Curve Data  
P.I. Sta. 468 + 48.14  
 $\Delta = 29^\circ 58' 38''$   
 $D = 4^\circ 00'$   
 $R = 1432.39'$   
 $T = 383.50'$   
 $L = 749.43'$   
 $E = 50.45'$

Curve Data  
P.I. Sta. 468 + 48.14  
 $\Delta = 29^\circ 58' 38''$   
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BEGIN PROJECT  
Sta. 434 + 15.00

Construction U.S. 21  
Curve Data  
P.I. Sta. 496 + 21.15  
 $\Delta = 17^\circ 28' 25''$   
 $D = 2^\circ 00'$   
 $R = 2864.79'$   
 $L_s = 300.00'$   
 $\Theta_s = 3^\circ 00'$   
 $P = 1.30'$   
 $K = 149.99'$   
 $L.T. = 200.03'$   
 $S.T. = 100.03'$   
 $T_s = 590.45'$   
 $E_s = 34.95'$   
 $L.C. = 299.96'$   
 $X_c = 299.92'$   
 $Y_c = 5.24'$   
 $L_c = 573.68'$   
 $\Delta c = 11^\circ 28' 25''$

Construction U.S. 21  
Curve Data  
P.I. Sta. 518 + 55.57  
 $\Delta = 36^\circ 08' 15''$   
 $D = 2^\circ 00'$   
 $R = 2864.79'$   
 $L_s = 300.00'$   
 $\Theta_s = 3^\circ 00'$   
 $P = 1.30'$   
 $K = 149.99'$   
 $L.T. = 200.03'$   
 $S.T. = 100.03'$   
 $T_s = 934.63'$   
 $E_s = 148.60'$   
 $L.C. = 299.96'$   
 $X_c = 299.92'$   
 $Y_c = 5.24'$   
 $L_c = 1806.87'$   
 $\Delta c = 30^\circ 08' 15''$

Construction U.S. 21  
Curve Data  
P.I. Sta. 518 + 55.57  
 $\Delta = 36^\circ 08' 15''$   
 $D = 2^\circ 00'$   
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