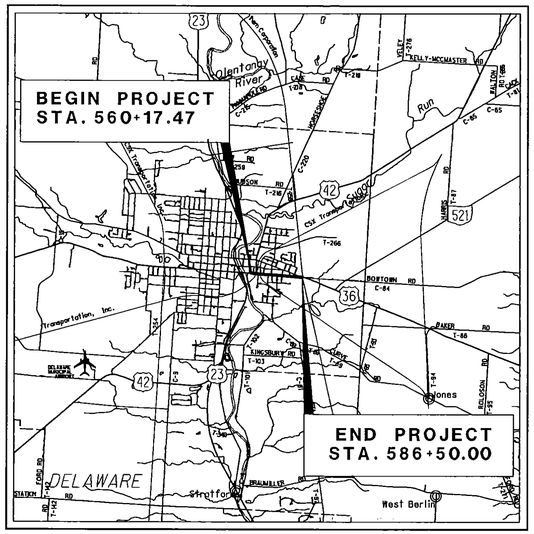
CITY OF DELAWARE, OHIO

E. WILLIAM ST. (U.S. 36) IMPROVEMENTS

DEL-36-10.59

CITY OF DELAWARE

DELAWARE COUNTY



LOCATION MAP

LATITUDE: 40° 17' 54" LONGITUDE: 83° 03' 25"

SCALE IN MILES

0 1 2 3 4

N

PORTION TO BE IMPROVED _____

INTERSTATE HIGHWAY _____

FEDERAL ROUTES _____

STATE ROUTES _____

COUNTY & TOWNSHIP ROADS _____

OTHER ROADS _____

DESIGN DESIGNATION

CURRENT ADT (2017)	16490
DESIGN YEAR ADT (2037)	24800
DESIGN HOURLY VOLUME (2037)	2470
DIRECTIONAL DISTRIBUTION	.55
TRUCKS (24 HOUR B&C)	6%
DESIGN SPEED	35
LEGAL SPEED	35
DESIGN FUNCTIONAL CLASSIFICATION:	MAJOR URBAN ARTERIAL
NHS PROJECT	YES

DESIGN EXCEPTIONS

DESIGN FEATURE	APPROVAL DATE	SHEET NUMBERS
VERTICAL CLEARANCE		54
VERTICAL ALIGNMENT		54 - 55

UNDERGROUND UTILITIES

CONTACT BOTH SERVICES
CALL TWO WORKING DAYS
BEFORE YOU DIG

CALL
1-800-362-2764
(TOLL FREE)

OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

OIL & GAS PRODUCERS UNDERGROUND
PROTECTION SERVICE CALL: 1-800-925-0988

DLZ
ARCHITECTURE • ENGINEERING • PLANNING
SURVEYING • CONSTRUCTION SERVICES

PLAN PREPARED BY:
DLZ OHIO, INC.
6121 HUNTLEY RD.
COLUMBUS, OH 43229

ENGINEERS SEAL:

STATE OF OHIO · CHAD S. RUNDLE · E-67475 · REGISTERED PROFESSIONAL ENGINEER

SIGNED: Chad S Rundle
DATE: 1/14/2019

ROADWAY

ENGINEERS SEAL:

STATE OF OHIO · JEFFREY A. MILLER · E-71480 · REGISTERED PROFESSIONAL ENGINEER

SIGNED: Jeffrey Alan Miller
DATE: 1/14/2019

STRUCTURES

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PROJECT DESCRIPTION

WIDENING OF E. WILLIAM ST. (U.S. 36) TO A 3-LANE SECTION FROM THE INTERSECTION OF E. WILLIAM ST. (U.S. 36) WITH LAKE ST (U.S. 42) TO THE INTERSECTION WITH FOLEY ST. REPLACEMENT AND LENGTHENING OF THE EXISTING PEDESTRIAN BRIDGE (OLD RR BRIDGE) AT THE INTERSECTION OF U.S. 36 WITH U.S. 42.

PROJECT EARTH DISTURBED AREA:	3.98 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	0.62 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	4.60 ACRES

2016 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

STANDARD CONSTRUCTION DRAWINGS										SUPPLEMENTAL SPECIFICATIONS		SPECIAL PROVISIONS
RDWD-17.0	1/5/18	SEWD-1.0	3/1/12	HL-10.11	1/15/16	MT-120.00	7/19/13	RM-2.1	7/19/13	800	10/20/17	
RDWD-18.1	3/1/12	SEWD-5.0	3/1/12	HL-10.12	1/15/16			RM-5.2	1/17/14	815	1/19/07	
RDWD-18.2	3/1/12	SEWD-6.0	3/1/12	HL-10.13	1/15/16	TC-21.10	7/21/17			816	1/20/12	
RDWD-18.3	3/1/12	SEWD-7.0	3/1/12	HL-20.11	1/16/15	TC-21.20	7/21/17	DM-1.1	1/5/16	832	1/17/14	
RDWD-19.1	3/1/12	SEWD-8.0	3/1/12	HL-30.11	1/15/16	TC-22.20	1/17/14	DM-1.2	1/18/13	895	4/18/14	
RDWD-19.4	3/1/12	SEWD-9.0	3/1/12	HL-30.22	1/17/14	TC-41.20	10/18/13	DM-4.2	7/20/12	906	10/15/10	
RDWD-19.5	3/1/12	SEWD-14.0	3/1/12	HL-40.10	1/17/14	TC-42.20	10/18/13	DM-4.3	1/15/16	907	1/20/12	
RDWD-22.0	3/1/12			HL-40.20	1/16/15	TC-71.10	1/20/17	DM-4.4	1/15/16			
RDWD-33.0	1/5/18	WTRD-1.1	10/31/12	HL-50.11	1/16/15	TC-81.21	7/15/16					
RDWD-34.1	1/5/18	WTRD-1.2	11/9/12	HL-60.11	1/15/16	TC-83.10	7/15/16	MH-1.2	1/15/16			
RDWD-34.2	1/5/18	WTRD-1.3	11/9/12	HL-60.12	1/17/14	TC-83.20	7/21/17					
RDWD-34.3	1/5/18	WTRD-3.0	11/9/12	HL-60.31	1/17/15	TC-83.20	7/21/17					
RDWD-34.4	1/5/18	WTRD-4.0	11/9/12			TC-85.10	7/21/17					
RDWD-34.5	1/5/18	WTRD-9.0	11/9/12	MT-97.10	1/18/14	TC-85.20	7/21/17					
RDWD-35.1	1/5/18	WTRD-11.0	11/9/12	MT-101.90	7/17/15							
RDWD-35.2	1/5/18	WTRD-15.0	11/9/12	MT-110.10	7/19/13							
RDWD-36.0	1/5/18											

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED Wm Fenyes
DATE 1-16-19 ENGINEER, CITY OF DELAWARE

APPROVED _____
DATE _____ DISTRICT DEPUTY DIRECTOR

APPROVED _____
DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. E 130 (784)

PID NO. 95625

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT CSX

DEL-36-10.59

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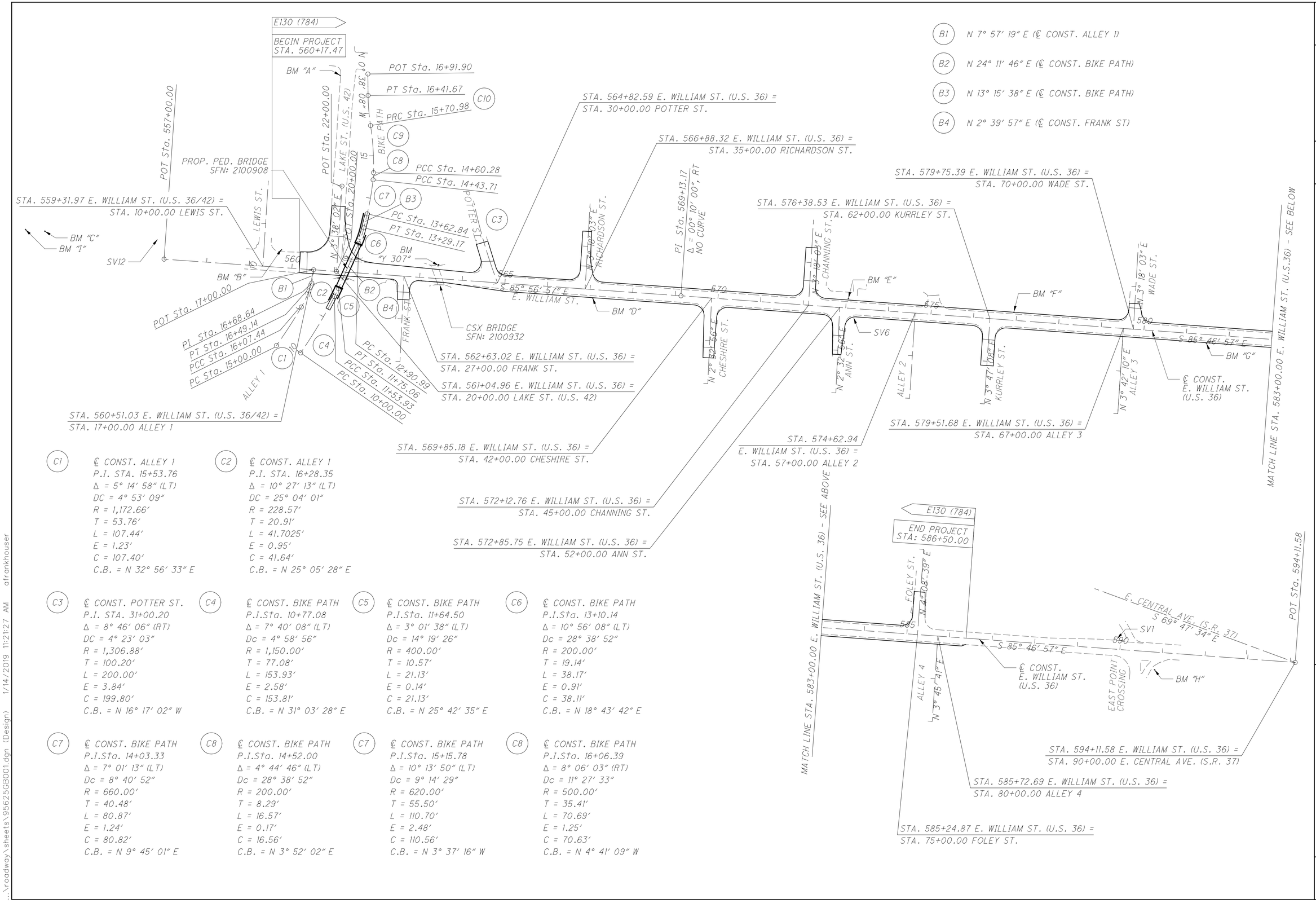


C1 ℄ CONST. ALLEY 1
P.I. STA. 15+53.76
Δ = 5° 14' 58" (LT)
DC = 4° 53' 09"
R = 1,172.66'
T = 53.76'
L = 107.44'
E = 1.23'
C = 107.40'
C.B. = N 32° 56' 33" E

C2 ℄ CONST. ALLEY 1
P.I. STA. 16+28.35
Δ = 10° 27' 13" (LT)
DC = 25° 04' 01"
R = 228.57'
T = 20.91'
L = 41.7025'
E = 0.95'
C = 41.64'
C.B. = N 25° 05' 28" E

C3 ℄ CONST. POTTER ST.
P.I. STA. 31+00.20
Δ = 8° 46' 06" (RT)
DC = 4° 23' 03"
R = 1,306.88'
T = 100.20'
L = 200.00'
E = 3.84'
C = 199.80'
C.B. = N 16° 17' 02" W

C4 ℄ CONST. BIKE PATH
P.I.Sta. 10+77.08
Δ = 7° 40' 08" (LT)
Dc = 4° 58' 56"
R = 1,150.00'
T = 77.08'
L = 153.93'
E = 2.58'
C = 153.81'
C.B. = N 31° 03' 28" E

C5 ℄ CONST. BIKE PATH
P.I.Sta. 11+64.50
Δ = 3° 01' 38" (LT)
Dc = 14° 19' 26"
R = 400.00'
T = 10.57'
L = 21.13'
E = 0.14'
C = 21.13'
C.B. = N 25° 42' 35" E

C6 ℄ CONST. BIKE PATH
P.I.Sta. 13+10.14
Δ = 10° 56' 08" (LT)
Dc = 28° 38' 52"
R = 200.00'
T = 19.14'
L = 38.17'
E = 0.91'
C = 38.11'
C.B. = N 18° 43' 42" E

C7 ℄ CONST. BIKE PATH
P.I.Sta. 14+03.33
Δ = 7° 01' 13" (LT)
Dc = 8° 40' 52"
R = 660.00'
T = 40.48'
L = 80.87'
E = 1.24'
C = 80.82'
C.B. = N 9° 45' 01" E

C8 ℄ CONST. BIKE PATH
P.I.Sta. 14+52.00
Δ = 4° 44' 46" (LT)
Dc = 28° 38' 52"
R = 200.00'
T = 8.29'
L = 16.57'
E = 0.17'
C = 16.56'
C.B. = N 3° 52' 02" E

C7 ℄ CONST. BIKE PATH
P.I.Sta. 15+15.78
Δ = 10° 13' 50" (LT)
Dc = 9° 14' 29"
R = 620.00'
T = 55.50'
L = 110.70'
E = 2.48'
C = 110.56'
C.B. = N 3° 37' 16" W

C8 ℄ CONST. BIKE PATH
P.I.Sta. 16+06.39
Δ = 8° 06' 03" (RT)
Dc = 11° 27' 33"
R = 500.00'
T = 35.41'
L = 70.69'
E = 1.25'
C = 70.63'
C.B. = N 4° 41' 09" W

HORIZONTAL SCALE IN FEET
0 50 100 200
CALCULATED ACF
CHECKED CSR

SCHEMATIC PLAN

DEL-36-10.59

VERTICAL CONTROL POINTS					
STATION	OFFSET	NORTH	EAST	ELEVATION	REMARKS
560+80.79	458.16' (LT)	231,100.0	1,812,637.1	895.89	BENCHMARK A - A CHISELED SQUARE ON THE SOUTHEAST CORNER OF THE CONCRETE LIGHT POLE BASE AT THE SOUTHWEST CORNER OF WINTER STREET AND LAKE STREET
559+72.68	41.15' (LT)	230,691.7	1,812,499.8	879.55	BENCHMARK B - A CHISELED "X" ON THE SOUTH RIM OF THE MANHOLE LOCATED AT THE NORTHEAST CORNER OF LEWIS ST. AND E. WILLIAM ST. (U.S. 36)
		230,735.4	1,811,945.7	868.81	BENCHMARK C - A CHISELED SQUARE ON THE SOUTHEAST CORNER OF THE CONCRETE BASE FOR THE TRAFFIC STRAIN POLE IN FRONT OF EAGLES SIGN AT 127 E. WILLIAM ST. (U.S. 36)
567+07.68	19.92' (RT)	230,578.8	1,813,228.6	907.85	BENCHMARK D - A CHISELED "X" ON THE NORTH FLANGE BOLT OF THE FIRE HYDRANT LOCATED ON THE SOUTH SIDE OF E. WILLIAM ST. (U.S. 36) OPPOSITE RICHARDSON ST.
573+04.76	22.69' (LT)	230,578.0	1,813,827.2	920.08	BENCHMARK E - A CHISELED SQUARE ON THE CORNER CONCRETE BASE FOR THE TRAFFIC SIGNAL POLE ON THE NORTH SIDE OF E. WILLIAM ST. (U.S. 36) OPPOSITE ANN ST.
576+93.53	18.74' (LT)	230,545.5	1,814,214.6	927.21	BENCHMARK F - A RAILROAD SPIKE SET IN THE SOUTH SIDE OF THE POWER POLE LOCATED IN FRONT OF 303 E. WILLIAM ST. (U.S. 36)
581+48.56	20.53' (RT)	230,472.9	1,814,665.5	931.13	BENCHMARK G - A CHISELED "X" ON THE NORTH FLANGE BOLT OF THE FIRE HYDRANT LOCATED IN FRONT OF 342 E. WILLIAM ST. (U.S. 36)
590+84.62	41.20' (RT)	230,383.4	1,815,597.5	932.38	BENCHMARK H - A CHISELED SQUARE ON THE NORTH CORNER OF THE CONCRETE BASE FOR THE TRAFFIC CONTROL BOX LOCATED +/- 50' OF THE EAST POINT CROSSING
		230,739.1	1,811,900.6	868.40	BENCHMARK I - AN ODOT DISK IN THE TOP OF THE NORTH END OF THE EAST ABUTMENT OF THE BRIDGE ON E. WILLIAM ST. (U.S. 36) OVER THE OLENTANGY RIVER
563+42.27	32.40' (LT)	230,656.8	1,812,867.8	902.70	BENCHMARK Y 307 - NGS BENCHMARK DISK "KZ1562" IN THE TOP OF THE EAST END OF THE BRIDGE SEAT OF THE MAIN TRACK OVERPASS OVER E. WILLIAM ST. (U.S. 36)

SURVEY CONTROL POINTS				
POINT	NORTH	EAST	ELEVATION	REMARKS
SV1	230,455.832	1,815,509.921	932.54	TYPE B PRIMARY
SV6	230,532.715	1,813,839.597	920.08	TYPE B AZIMUTH
SV12	230,716.152	1,812,209.551	872.17	TYPE B PRIMARY

℄ R/W ALLEY 1 HORIZONTAL CONTROL POINTS					
STATION	OFFSET	NORTH	EAST	ELEVATION	REMARKS
15+00.00	℄	231,467.8383	1,812,487.9855	--	PC, ℄ R/W ALLEY 1
15+53.76	1.23' (RT)	230,511.5652	1,812,519.2531	--	PI, ℄ R/W ALLEY 1
16+07.44	℄	230,557.9694	1,812,546.3889	--	PT, ℄ R/W ALLEY 1
16+07.44	℄	230,557.9694	1,812,546.3889	--	PC, ℄ R/W ALLEY 1
16+28.35	0.95' (RT)	230,576.0191	1,812,556.9438	--	PI, ℄ R/W ALLEY 1
16+49.14	℄	230,595.6843	1,812,564.0487	--	PT, ℄ R/W ALLEY 1

℄ R/W POTTER ST. HORIZONTAL CONTROL POINTS					
STATION	OFFSET	NORTH	EAST	ELEVATION	REMARKS
30+00.00	℄	230,614.5975	1,813,005.4978	--	PC, ℄ R/W POTTER ST.
31+00.20	3.84' (LT)	230,708.3445	1,812,970.1332	--	PI, ℄ R/W POTTER ST.
32+00.00	℄	230,806.3869	1,812,949.4728	--	PT, ℄ R/W POTTER ST.

STANDARD ABBREVIATION LIST

ATG -	ADJUST TO GRADE
ATGO -	ADJUST TO GRADE BY OTHERS
BL -	BASELINE
BM -	BENCHMARK
BOC -	BACK OF CURB
CB -	CATCH BASIN
CI -	CURB INLET
CL CONST. -	CENTERLINE OF CONSTRUCTION
CL -	CENTERLINE
COMM -	COMMERCIAL
CONST. LIMITS -	CONSTRUCTION LIMITS
DIP -	DUCTILE IRON PIPE
DND -	DO NOT DISTURB
EB -	EASTBOUND
ELEC -	ELECTRIC
EL -	ELEVATION
EOP -	EDGE OF PAVEMENT
EX -	EXISTING
FC -	FACE OF CURB
FDO -	FOR DIRECTION ONLY
FF -	FILTER FABRIC
FH -	FIRE HYDRANT
FL -	FLOW LINE
LT -	LEFT
MH -	MANHOLE
NB -	NORTHBOUND
OHE -	OVERHEAD ELECTRIC
PR -	PROPOSED
RCHP -	ROCK CHANNEL PROTECTION
RCP -	REINFORCED CONCRETE PIPE
RES -	RESIDENTIAL
RT -	RIGHT
RW -	RIGHT OF WAY
SAN -	SANITARY SEWER
SB -	SOUTHBOUND
SH -	STANDARD HIGHWAY EASEMENT
STM -	STORM
TBA -	TO BE ABANDONED
TBRL -	TO BE RELOCATED
TBRLO -	TO BE RELOCATED BY OTHERS
TBR -	TO BE REMOVED
TBRO -	TO BE REMOVED BY OTHERS
TCB -	TOP OF CURB
TC -	TOP OF CASTING
TELE -	TELEPHONE
TR-	TO REMAIN
UD -	UNDERDRAIN
VCP -	VITRIFIED CLAY PIPE
WB -	WESTBOUND
WV -	WATER VALVE

CALCULATED ACF
CHECKED CSR

CONTROL POINTS AND STANDARD ABBREVIATIONS

DEL-36-10.59

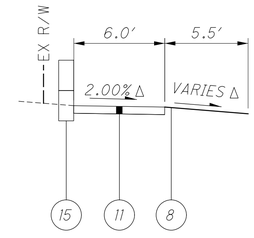
LEGEND

- (A) EXISTING ASPHALT CONCRETE SURFACE COURSE (±1½")
- (B) EXISTING ASPHALT CONCRETE INTERMEDIATE COURSE (±2")
- (C) EXISTING ASPHALT CONCRETE BASE COURSE (±8")
- (D) EXISTING AGGREGATE BASE (±6")
- (E) EXISTING CONCRETE BASE (±8")
- (F) EXISTING CONCRETE BASE (±9")
- (1) ITEM 441 - 1¼" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG70-22M
- (2) ITEM 441 - 1¾" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)
- (3) ITEM 305 - 10" CONCRETE BASE, CLASS QC1
- (4) ITEM 304 - 6" AGGREGATE BASE
- (5) ITEM 407 - NON TRACKING TACK COAT (FOR NEW ASPHALT APPLIED @ 0.06 GAL./S.Y.)
- (6) ITEM 407 - NON TRACKING TACK COAT (FOR MILLED ASPHALT APPLIED @ 0.08 GAL./S.Y.)
- (7) ITEM 204 - SUBGRADE COMPACTION
- (8) ITEM 659 - SEEDING AND MULCHING
- (9) ITEM 605 - 6" BASE PIPE UNDERDRAINS
- (10) ITEM 609 - CURB TYPE 6
- (11) ITEM 608 - 4" CONCRETE WALK, AS PER PLAN
- (12) ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (SEE NOTE "A")
- (13) ITEM 452 - 6" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1
- (14) ITEM 452 - 8" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1
- (15) ITEM 610 - CELLULAR RETAINING WALL
- (16) ITEM 441 - 2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22
- (17) ITEM 511 - CLASS QC 1 CONCRETE
- (18) NOT USED
- (19) ITEM 304 - 8" AGGREGATE BASE
- (20) ITEM 607 - FENCE, MISC.: WOODEN AS PER PLAN, TYP.
- (21) ITEM 608 - 8" CONCRETE WALK
- (22) ITEM 608 - 6" CONCRETE WALK
- (23) ITEM 441 - 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22
- (24) ITEM 301 - 3" ASPHALT CONCRETE BASE COURSE
- (25) ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 4, AS PER PLAN
- (26) ITEM 252 - FULL DEPTH PAVEMENT SAWING

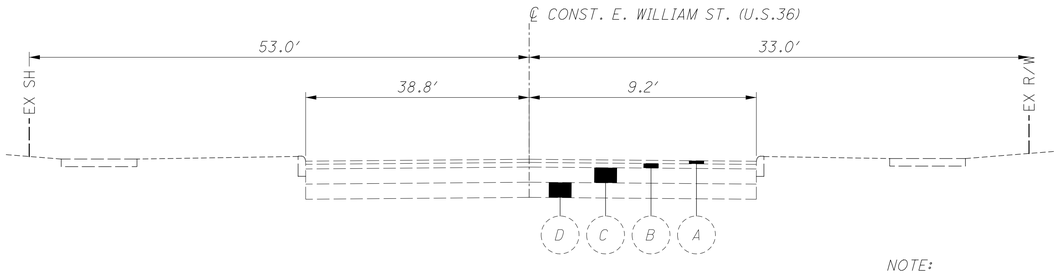
ITEM 610 - CELLULAR RETAINING WALL

FROM				TO				LENGTH (FT)
SHEET	STATION	OFFSET	SIDE	SHEET	STATION	OFFSET	SIDE	
54	560+17.06	49.02	LT	54	560+49.05	59.40	LT	36
54	561+38.25	79.62	LT	54	561+43.67	63.55	LT	17
55	564+23.22	27.48	LT	55	564+35.91	30.19	LT	17
55	564+80.44	42.86	LT	55	564+93.86	32.00	LT	20
55	565+56.46	29.00	RT	55	567+26.01	32.00	RT	170
55	565+75.51	32.00	LT	55	566+62.38	44.55	LT	95
55	567+14.80	42.33	LT	55	567+40.37	32.00	LT	32
55	567+43.67	32.00	LT	55	567+70.00	32.00	LT	27
55	568+20.38	32.00	RT	55	568+40.39	32.00	RT	20
55	568+88.48	32.00	RT	56	569+57.24	41.25	RT	75
56	569+25.00	32.00	LT	56	569+72.52	32.00	LT	48
56	570+12.95	40.33	RT	56	570+20.47	31.93	RT	12
56	571+59.14	32.00	LT	56	571+85.33	43.47	LT	33
56	572+36.94	32.00	RT	56	572+62.35	48.86	RT	69
56	572+40.45	57.24	LT	56	572+72.67	32.00	LT	56
56	573+13.74	40.02	RT	56	573+26.48	31.00	RT	18
57	575+78.68	32.00	LT	57	576+13.68	32.00	LT	35
57	575+78.85	32.00	RT	57	576+08.69	35.01	RT	31
57	576+53.51	32.00	LT	57	577+10.00	32.00	LT	57
57	576+67.08	38.57	RT	57	576+93.27	32.00	RT	30
57	576+93.30	32.00	RT	57	577+12.26	30.00	RT	17
59	585+42.48	33.03	LT	59	585+93.11	32.00	LT	53
TOTAL CARRIED TO GENERAL SUMMARY								968

NOTE "A":
PAVEMENT PLANING SHALL BE A CONSTANT DEPTH OF 1 1/2" AT THE ℄ OF CONSTRUCTION WITH A UNIFORM CROSS SLOPE OF 0.016 ESTABLISHED.

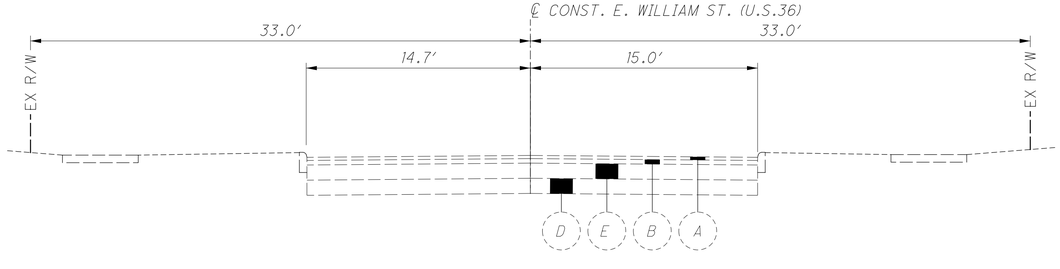


SEE TABLE (ABOVE) FOR LOCATION OF MODULAR BLOCK WALL



EXISTING SECTION - E. WILLIAM ST. (U.S. 36/42)
STA. 560+17.47

NOTE:
EXISTING PAVEMENT DEPTH OBTAINED FROM ODOT'S EAST WILLIAM ST IMPROVEMENT PLANS DEL-36-10.74 DATED 1986, US 36/SR37 "THE POINT" INTERSECTION IMPROVEMENTS PHASE 1 PLANS DATED 2009 AND EAST WILLIAM ST IMPROVEMENT PLANS DEL-36-10.40-10.73 DATED 1951. NO EXISTING PAVEMENT BORING INFORMATION AVAILABLE.

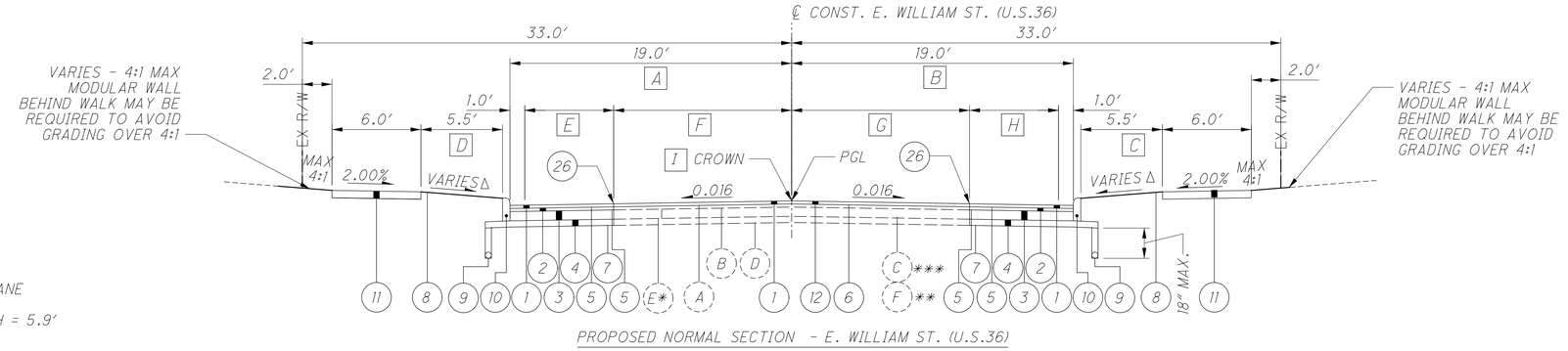


EXISTING SECTION - E. WILLIAM ST. (U.S. 36)
STA. 586+39.12

CALCULATED ACF
CHECKED JGB

TYPICAL SECTIONS - E. WILLIAM ST. (U.S. 36)

DEL-36-10.59



PROPOSED NORMAL SECTION - E. WILLIAM ST. (U.S.36)

STA. 560+17.47 TO STA. 586+39.12

Δ SEE CROSS SECTIONS FOR SLOPES

* ONLY AT LOCATION OF LEFT TURN LANE ADDITION: FROM STA 588+32.15 LT, WIDTH = 0′ TO STA 589+52 LT, WIDTH = 5.9′

** STA 560+17.47 TO STA 565+60

*** STA 565+60 TO STA 589+52

[A] VARIES FROM 40.03′ AT STA. 560+17.47 TO 25.08′ AT STA. 562+00.13
VARIES FROM 25.08′ AT STA. 562+00.13 TO 19.54′ AT STA. 564+15.29
VARIES FROM 19.54′ AT STA. 564+15.29 TO 19.00′ AT STA. 565+00.12
VARIES FROM 19.00′ AT STA. 585+83.11 TO 14.46′ AT STA. 585+93.11

[B] 9.22′ FROM STA. 560+17.47 TO STA.560+35.87
VARIES FROM 9.22′ AT STA. 560+35.87 TO 9.00′ AT STA. 560+68.22
9.00′ FROM STA. 560+68.22 TO STA. 562+35.28
VARIES FROM 9.00′ AT STA. 562+35.28 TO 8.00′ AT STA. 562+98.55
8.00′ FROM STA. 562+98.55 TO STA. 563+58.80
VARIES FROM 8.00′ AT STA. 563+58.80 TO 19.00′ AT STA. 565+02.71
19.00′ FROM STA. 565+02.71 TO STA. 586+29.30
VARIES FROM 19.00′ AT STA. 586+29.30 TO 15.01′ AT STA. 586+39.12

[C] 0.00′ FROM STA. 560+17.47 TO STA. 560+68.22
15.50′ FROM STA. 560+68.22 TO STA. 561+29.59
VARIES FROM 15.50′ AT STA. 561+29.59 TO 3.00′ AT STA. 561+42.09
3.00′ FROM STA. 561+42.09 TO STA. 561+61.28
0.00′ FROM STA. 561+61.28 TO 564+92.25
VARIES FROM 1.21′ AT STA. 564+92.25 TO 2.50′ AT STA. 565+16.34
2.50′ FROM STA. 565+16.34 TO STA. 565+59.24
VARIES FROM 2.50′ AT STA. 565+59.24 TO 5.50′ AT STA. 565+76.77
5.50′ FROM STA. 565+76.77 TO STA. 572+47.22
VARIES FROM 5.50′ AT STA. 572+47.22 TO 4.50′ AT STA. 573+26.10
4.50′ FROM STA. 573+26.10 TO STA. 574+67.31
VARIES FROM 4.50′ AT STA. 574+67.31 TO 5.50′ AT STA. 574+77.32
5.50′ FROM STA. 574+77.32 TO STA. 576+99.60
VARIES FROM 5.50′ AT STA. 576+99.60 TO 3.50′ AT STA. 577+11.59
3.50′ FROM STA. 577+11.59 TO STA. 577+88.59
VARIES FROM 3.50′ AT STA. 577+88.59 TO 5.50′ AT STA. 578+00.59
5.50′ FROM STA. 578+00.59 TO STA. 586+27.06
VARIES FROM 5.50′ AT STA. 586+27.06 TO EXISTING AT STA. 586+39.12

[D] 0.00′ FROM STA. 560+17.47 TO STA. 561+14.97
4.00′ FROM STA. 561+14.97 TO 562+52.87
0.00′ FROM STA. 562+52.87 TO STA. 565+02.42
5.50′ FROM STA. 565+02.42 TO STA. 589+18.06
VARIES FROM 5.50′ AT STA. 585+83.11 TO EXISTING AT STA. 585+93.11

[E] 0.00′ FROM STA. 560+17.47 TO STA. 561+10.38
VARIES FROM 11.81′ AT STA. 561+10.38 TO 0.00′ AT STA. 562+00.11
0.00′ FROM STA. 562+00.11 TO STA. 564+15.29
VARIES FROM 0.00′ AT STA. 564+15.29 TO 3.28′ AT STA. 565+00.10
3.28′ FROM STA. 565+00.10 TO STA. 566+48.73
VARIES FROM 3.28′ AT STA. 566+73.66 TO 4.14′ AT STA. 567+27.71
4.14′ FROM STA. 567+27.71 TO STA. 571+72.35
VARIES FROM 4.14′ AT STA. 571+72.35 TO 3.96′ AT STA. 572+51.00
3.96′ FROM STA. 572+51.00 TO STA. 574+91.52
VARIES FROM 3.96′ AT STA. 574+91.52 TO 4.16′ AT STA. 575+19.69
VARIES FROM 4.16′ AT STA. 575+19.69 TO 4.19′ AT STA. 579+36.26
4.19′ FROM STA. 579+36.26 TO STA. 580+16.32
VARIES FROM 4.19′ AT STA. 580+16.32 TO 4.23′ AT STA. 584+85.12
4.23′ FROM STA. 584+85.12 TO STA. 585+64.38
VARIES FROM 4.23′ AT STA. 585+83.11 TO 0.00′ AT STA. 585+93.11

[F] VARIES FROM 37.77′ AT STA. 560+17.47 TO 38.11′ AT STA. 561+10.38
VARIES FROM 25.63′ AT STA. 561+10.38 TO 24.08′ AT STA. 562+00.11
VARIES FROM 24.08′ AT STA. 562+00.11 TO 18.54′ AT STA. 564+15.29
VARIES FROM 18.54′ AT STA. 564+15.29 TO 14.72′ AT STA. 565+00.10
14.72′ FROM STA. 565+00.10 TO STA. 566+48.73
VARIES FROM 14.72′ AT STA. 566+48.73 TO 13.86′ AT STA. 567+27.71
13.86′ FROM STA. 567+27.71 TO STA. 571+72.35
VARIES FROM 13.86′ AT STA. 571+72.35 TO 14.04′ AT STA. 572+51.00
14.04′ FROM STA. 572+51.00 TO STA. 574+91.52
VARIES FROM 14.04′ AT STA. 574+91.52 TO 13.84′ AT STA. 575+19.69
VARIES FROM 13.84′ AT STA. 575+19.69 TO 13.77′ AT STA. 585+93.11

[G] 8.00′ FROM STA. 560+17.47 TO STA. 562+26.35
VARIES FROM 8.00′ AT STA. 562+26.35 TO 7.00′ AT STA. 562+98.55
7.00′ FROM STA. 562+98.55 TO STA. 563+58.80
VARIES FROM 7.00′ AT STA. 563+58.80 TO 12.74′ AT STA. 565+12.26
12.74′ FROM STA. 565+12.26 TO STA. 569+70.34
VARIES FROM 12.74′ AT STA. 569+70.34 TO 13.91′ AT STA. 569+99.65
13.91′ FROM STA. 569+99.65 TO STA. 572+69.87
VARIES FROM 13.91′ AT STA. 572+69.87 TO 13.39′ AT STA. 572+99.99
13.39′ FROM STA. 572+99.99 TO STA. 576+24.34
VARIES FROM 13.39′ AT STA. 576+24.34 TO 13.88′ AT STA. 576+55.06
13.88′ FROM STA. 576+55.06 TO STA. 586+39.14

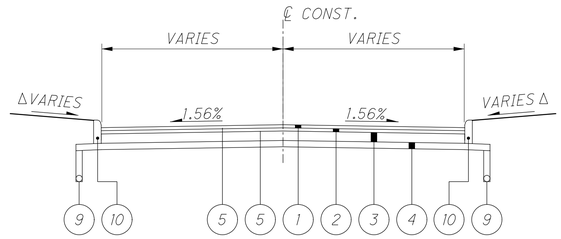
[H] 0.22′ FROM STA. 560+17.47 TO STA. 560+35.87
VARIES FROM 0.22′ AT STA. 560+35.87 TO 0.0′ AT STA. 560+68.22
0.00′ FROM STA. 560+68.22 TO STA. 563+58.80
VARIES FROM 0.00′ AT STA. 563+58.80 TO 5.62′ AT STA. 565+02.71
VARIES FROM 5.62′ AT STA. 565+02.71 TO 5.26′ AT STA. 565+12.26
5.26′ FROM STA. 565+12.26 TO STA. 569+70.34
VARIES FROM 5.26′ AT STA. 569+70.34 TO 4.09′ AT STA. 569+99.65
4.09′ FROM STA. 569+99.65 TO STA. 572+69.87
VARIES FROM 4.09′ AT STA. 572+69.87 TO 4.61′ AT STA. 572+99.99
4.61′ FROM STA. 572+99.99 TO STA. 576+24.34
VARIES FROM 4.61′ AT STA. 576+24.34 TO 4.12′ AT STA. 576+55.06
4.12′ FROM STA. 576+55.06 TO STA. 586+29.30
VARIES FROM 4.12′ AT STA. 586+29.30 TO 0.13′ AT STA. 586+39.12

[I] VARIES FROM 17.17′ (LT) AT STA. 560+17.47 TO 1.36′ (LT) 0.0′ AT STA. 565+61.49
0.0′ FROM STA. 565+61.49 TO STA. 585+93.11

CALCULATED ACF CHECKED JGB

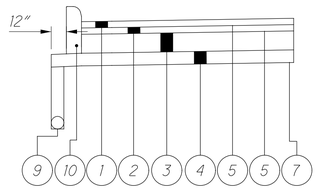
TYPICAL SECTIONS - E. WILLIAM ST. (U.S. 36)

DEL-36-10.59

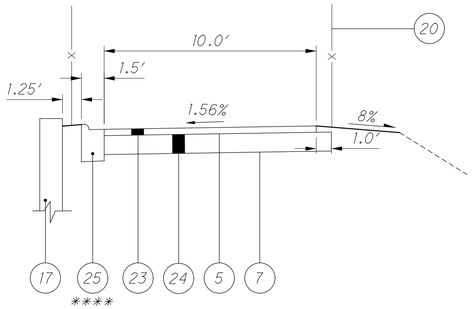


PROPOSED NORMAL SECTION

℄ CONST. FRANK ST. STA. 26+45.00 TO STA. 26+81.11
℄ CONST. POTTER ST. STA. 31+00.00 TO STA. 30+19.26
℄ CONST. RICHARDSON ST. STA. 35+19.00 TO STA. 36+35.00
℄ CONST. CHESHIRE ST. STA. 40+60.00 TO STA. 41+80.99
℄ CONST. CHANNING ST. STA. 45+18.00 TO STA. 46+35.00
℄ CONST. ANN ST. STA. 50+90.00 TO STA. 51+72.00
℄ CONST. KURRLEY ST. STA. 60+90.00 TO STA. 61+81.00
℄ CONST. WADE ST. STA. 70+19.00 TO STA. 70+60.00
℄ CONST. FOLEY ST. STA. 75+19.00 TO STA. 76+00.00

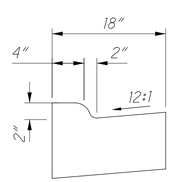


TYPICAL PAVEMENT
EDGE DETAIL

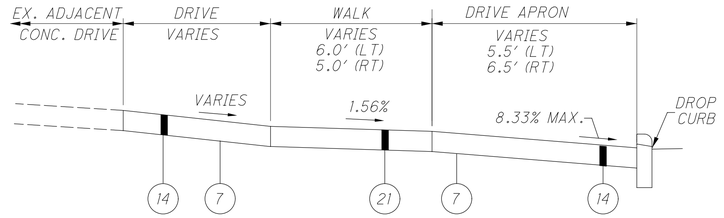


PROPOSED MULTI-USE PATH DETAIL
STA. 11+21.00 TO STA. 13+93.00

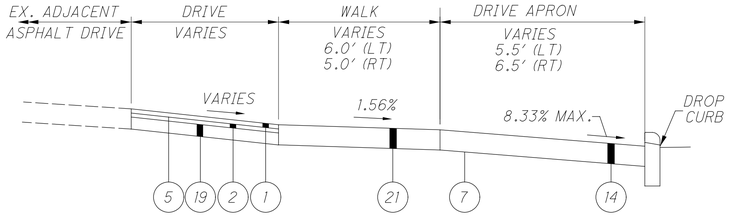
**** CURB AND GUTTER PROVIDED IN
AREAS OF PROPOSED WING WALL.



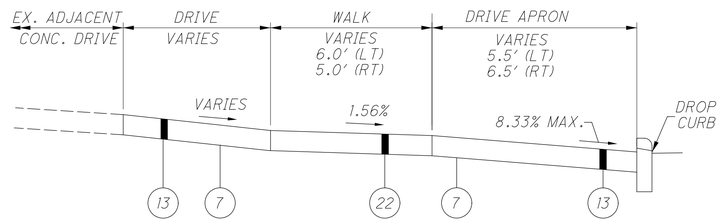
ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 4, AS PER PLAN DETAIL



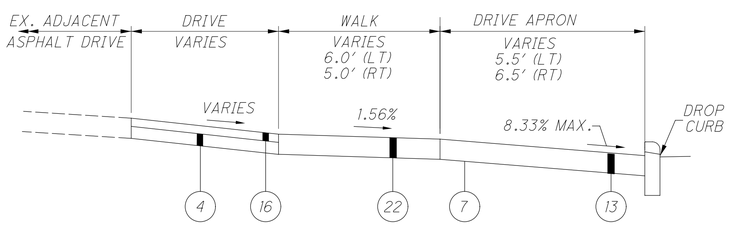
PROPOSED COMMERCIAL CONCRETE DRIVE DETAIL
NOT TO SCALE



PROPOSED COMMERCIAL ASPHALT DRIVE DETAIL
NOT TO SCALE



PROPOSED RESIDENTIAL CONCRETE DRIVE DETAIL
NOT TO SCALE



PROPOSED RESIDENTIAL ASPHALT DRIVE DETAIL
NOT TO SCALE

CALCULATED ACF
CHECKED JGB

TYPICAL SECTIONS - E. WILLIAM ST. (U.S. 36)

DEL-36-10.59

UTILITIES

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

AEP DISTRIBUTION
ATTN: PAUL PAXTON
850 TECH CENTER DR.
GAHANNA, OH 43230
614-883-6381

AEP TRANSMISSION
ATTN: BARBARA DUNLOP
700 MORRISON RD.
GAHANNA, OH 43230
614-552-1893

CITY OF DELAWARE
ATTN: BRAD STANTON
225 CHERRY STREET
DELAWARE, OH 43015
740-203-1750

COLUMBIA GAS OF OHIO
ATTN: DIEGO CATANO
1600 DUBLIN RD., EW2
COLUMBUS, OH 43215
614-481-1057

COLUMBIA GAS OF OHIO
ATTN: MATT SUCHARSKI
200 CIVIC CENTRE DRIVE
8TH FLOOR
COLUMBUS, OH 43215
614-818-2104

CONSOLIDATED ELECTRIC COOPERATIVE
ATTN: TIM APPLEGATE
5255 STATE ROUTE 95
MT. GILEAD, OH 43338
419-949-2932

TIME WARNER CABLE
ATTN: RAY MAURER
2760 INTERCHANGE DR.
COLUMBUS, OH 43204
614-481-5262

BOBB KURTO
LEVEL 3 COMMUNICATIONS
226 NORTH FIFTH ST.,
SUITE 100
COLUMBUS, OH 43215
614-324-4444
614-255-2128

KENTUCKY DATA LINK
ATTN: MIKE SWANK
65 E. WINNERLINE
EATON, OH 45320
937-260-3062

FIRST ENERGY CORPORATION
OHIO EDISON COMPANY
ATTN: CHRIS HARPER
420 SOUTH YORK STREET
SPRINGFIELD, OH 45505
937-327-1283

SUBURBAN NATURAL GAS
ATTN: AARON ROLL
2626 LEWIS CENTER RD.
LEWIS CENTER, OH 43035
740-548-2450

DEL-CO WATER COMPANY
ATTN: SHANE CLARK
6773 OLENTANGY RIVER RD.
DELAWARE, OH 43015
740-548-7746

DELAWARE COUNTY REGIONAL SEWER DISTRICT
ATTN: BILL CLEVENGER
50 CHANNING ST.
DELAWARE, OH 43015
740-833-2240

CHRIS AVERY
FRONTIER COMMUNICATIONS (VERIZON)
1300 COLUM-SANDUSKY RD.
MARION, OH 43302
740-383-0551

DAMON MADDOX
WIDE OPEN WEST (WOW)
3675 CORPORATE DR
COLUMBUS, OH 43231
740-203-1721

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

THE CONTRACTOR AT HIS EXPENSE, IS RESPONSIBLE FOR THE INVESTIGATION, LOCATION, SUPPORT, PROTECTION, AND RESTORATION OF ALL EXISTING UTILITIES AND APPURTENANCES WHETHER SHOWN ON THESE PLANS OR NOT. THE CONTRACTOR SHALL EXPOSE ALL UTILITIES OR STRUCTURES PRIOR TO CONSTRUCTION TO VERIFY THE VERTICAL AND HORIZONTAL EFFECT ON THE PROPOSED CONSTRUCTION. THE CONTRACTOR SHALL CALL, TOLL FREE, THE OHIO UTILITIES PROTECTION SERVICE (OUPS) AT 1-800-362-2764 SEVENTY TWO HOURS PRIOR TO CONSTRUCTION AND SHALL NOTIFY ALL UTILITY COMPANIES AT LEAST FORTY-EIGHT HOURS PRIOR TO WORK IN THE VICINITY OF THEIR UNDERGROUND LINES.

GENERAL

THE CITY OF DELAWARE "CITY" DETAILED SPECIFICATIONS, STANDARD DRAWINGS, AND INFRASTRUCTURE DESIGN MANUAL, TOGETHER WITH THE CITY OF COLUMBUS (COC) AND STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATION (CMS) MANUALS, INCLUDING ALL SUPPLEMENTS THERETO, SHALL GOVERN ALL MATERIAL AND WORKMANSHIP INVOLVED IN THE IMPROVEMENTS SHOWN IN THESE PLANS UNLESS OTHERWISE NOTED. ALL PERTINENT CITY STANDARD CONSTRUCTION DRAWINGS ARE AVAILABLE UPON REQUEST OF THE DEPARTMENT OF ENGINEERING SERVICES.

ALL WORK SHALL BE COMPLETELY ACCEPTABLE TO CITY OFFICIALS. NO WORK SHALL COMMENCE UNTIL ARRANGEMENTS HAVE BEEN COORDINATED WITH THE CITY FOR REQUIRED INSPECTIONS. PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS NECESSARY TO COORDINATE THE PROVISION OF INSPECTION SERVICE BY THE CITY FOR THE PROPOSED WORK. THE COST OF INSPECTION SHALL BE PAID FOR BY THE CITY UNLESS OTHEWISE NOTED.

THE CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION TO THE DEPARTMENT OF ENGINEERING SERVICES AT LEAST 7 DAYS PRIOR TO THE INITIAL START OF ANY PROJECT.

TWENTY-FOUR HOUR ADVANCE NOTIFICATION IS REQUIRED FOR ALL WORK REQUIRING INSPECTION, TESTING, OR APPROVAL BY THE DEPARTMENT OF ENGINEERING SERVICES OR THE BUILDING DEPARTMENT.

THE CONTRACTOR IS RESPONSIBLE TO NOTIFY THE DEPARTMENT OF ENGINEERING SERVICES AND REQUEST A FINAL PUNCH-OUT INSPECTION OF THE PROJECT SITE ONCE ALL ITEMS ON THE APPROVED CONSTRUCTION PLANS HAVE BEEN COMPLETED.

NECESSARY LINE AND GRADE STAKING SHALL BE PROVIDED BY THE CONTRACTOR AT HIS EXPENSE. CUT SHEETS SHALL BE SUBMITTED TO THE DEPARTMENT OF ENGINEERING SERVICES TWO (2) FULL WORKING DAYS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES AND MUST BE APPROVED BY THE CITY PRIOR TO THE BEGINNING OF CONSTRUCTION.

THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE CITY COPIES OF FIELD NOTES, MARK-UP PLANS SETS ETC. TO THE DEPARTMENT OF ENGINEERING SERVICES WITHIN 30 DAYS FOLLOWING THE COMPLETION OF THE PROJECT CONSTRUCTION FOR USE BY THE CITY IN PREPARING AS-BUILT CONSTRUCTION DRAWINGS.

FOR MODIFICATIONS TO THE WORK AS SHOWN ON THE APPROVED CONSTRUCTION DRAWINGS, THE CONTRACTOR SHALL MAKE SUCH REQUESTS IN WRITING TO THE DEPARTMENT OF ENGINEERING SERVICES FOR REVIEW AND APPROVAL.

THE CITY SHALL SECURE AND PAY FOR ALL PERMIT FEES AND INSPECTIONS REQUIRED FOR THE PROPER EXECUTION AND COMPLETION OF THE IMPROVEMENTS AS SHOWN ON THE APPROVED CONSTRUCTION PLANS.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VISIT THE SITE AND VERIFY THE EXTENT OF THE WORK TO BE PERFORMED IN ADVANCE OF MAKING HIS BID, TO IDENTIFY THE NECESSARY CONSTRUCTION MEANS AND METHODS TO ACCOMPISH ALL WORK ITEMS, AND TO NOTIFY THE DEPARTMENT OF ENGINEERING SERVICES OF ANY IDENTIFIED CONFLICTS, ERRORS OR OMMISSIONS FROM THE CONSTRUCTION PLANS.

THE CONTRACTOR OR SUBCONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COMPLYING WITH ALL FEDERAL, STATE, AND LOCAL SAFETY REQUIREMENTS, TOGETHER WITH EXERCISING PRECAUTIONS AT ALL TIMES FOR PROTECTION OF PERSONS (INCLUDING EMPLOYEES) AND PROPERTY. IT IS ALSO THE SOLE RESPONSIBILITY OF THE CONTRACTOR OR SUBCONTRACTOR TO INITIATE, MAINTAIN, AND SUPERVISE ALL SAFETY REQUIREMENTS, PRECAUTIONS, AND PROGRAMS IN CONNECTION WITH THE WORK. THE COST OF THIS WORK SHALL BE CONSIDERED INCIDENTAL TO OTHER ITEMS.

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THE APPROVED CONSTRUCTION PLANS IS BASED ON THE MOST CURRENT AVAILABLE RECORDS, AND AT TIMES FROM MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION PROVIDED IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CITY ASSUMES NO RESPONSIBILITY AS TO THE ACCURACY OR DEPTHS OF THE UNDERGROUND FACILITIES AS SHOWN ON THE PLANS. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST SEVEN DAYS IN ADVANCE OF ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES.

THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE RELOCATION OF ANY PRIVATELY OWNED UTILITY AS REQUIRED BY THE APPROVED CONSTRUCTION PLAN, OR THAT MAY BE DETERMINED BY ADDITIONAL FIELD INVESTIGATION TO BE IN CONFLICT WITH THE CONSTRUCTION OF NEW INFRASTRUCTURE AS SHOWN ON THE PLANS, AND TO COORDINATE THESE EFFORTS WITH THE OWNER OF THE AFFECTED UTILITY AT HIS EXPENSE.

WHERE POTENTIAL GRADE CONFLICTS MIGHT OCCUR WITH EXISTING UTILITIES, THE CONTRACTOR WILL BE REQUIRED TO UNCOVER SUCH UTILITIES AT HIS EXPENSE, IN ADVANCE OF INSTALLING NEW UTILITIES IN ORDER FOR THE ENGINEER OF RECORD TO DETERMINE THE EXACT ELEVATIONS, AND TO MAKE ANY NECESSARY PLAN ADJUSTMENTS.

ALL MATERIALS INCLUDING BUT NOT LIMITED TO PIPING, APPURTENANCES, MANHOLES, GRAVEL, ETC. UTILIZED FOR THE CONSTRUCTION OF NEW PUBLIC INFRASTRUCTURE MUST BE APPROVED BY THE DEPARTMENT OF ENGINEERING SERVICES. IN ADDITION, ALL CONCRETE PIPE, STORM, AND SANITARY SEWER STRUCTURES WILL BE INSPECTED BY THE CITY OF DELAWARE AT THE MANUFACTURING PLANT LOCATIONS FOR CONFORMANCE TO SPECIFICATIONS. PIPE OR STRUCTURES WITHOUT PROPER APPROVAL AS IDENTIFIED BY BEARING THE COC APPROVAL STAMP, SHALL NOT BE PERMITTED FOR INSTALLATION IN THE CITY OF DELAWARE.

THE CONTRACTOR SHALL REPAIR OR REPLACE ANY PROPERTY, UTILITY, STRUCTURE, OR OTHER INFRASTRUCTURE AT HIS EXPENSE, DAMAGED DURING THE EXECUTION OF HIS WORK TO AN EQUAL OR BETTER CONDITION THAN EXISTED PRIOR TO THE DAMAGE. ALL WORK IS TO BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE ENGINEER OF RECORD AND THE CITY. ANY DAMAGE TO PRIVATE UTILITIES CAUSED BY THE CONTRACTOR SHALL BE REPAIRED BY THE APPROPRIATE UTILITY COMPANY AT THE CONTRACTOR'S EXPENSE.

CARE SHALL BE EXERCISED WHEN WORKING IN THE AREA AROUND EXISTING TREES AND SHRUBS. ANY TREES OR SHRUBS NOT MARKED FOR REMOVAL THAT ARE DAMAGED BY THE CONTRACTOR WILL HAVE TO BE REPLACED BY THE CONTRACTOR AT HIS EXPENSE TO THE SATISFACTION OF THE OWNER.

THE CITY IS RESPONSIBLE FOR PROVIDING AND SCHEDULING OF QUALIFIED PERSONNEL FOR CONCRETE, ASPHALT, AND SOILS TESTING SERVICES AS REQUIRED. TESTING SHALL BE PERFORMED UNDER THE DIRECT SUPERVISION OF A REGISTERED TESTING AGENCY APPROVED BY THE DEPARTMENT OF ENGINEERING SERVICES.

ANY PROPERTY CORNER PINS OR PERMANENT SURVEY MARKERS DISTURBED DURING CONSTRUCTION SHALL BE RESET BY A REGISTERED SURVEYOR AT CONTRACTOR'S EXPENSE.

THE OPEN BURNING OF SITE CLEANING DEBRIS, TRASH, ETC. IS PROHIBITED IN THE CITY

THE CONTRACTOR IS RESPONSIBLE FOR THE PROVISION AND MAINTENANCE OF A PORTABLE TOILET ON THE SITE DURING ALL PHASES OF CONSTRUCTION.

ALL EARTHWORK OPERATIONS, ESPECIALLY PAVEMENT SUB-GRADE CONSTRUCTION, SHALL BE INSPECTED BY A REGISTERED SOILS ENGINEER AT THE CITY'S EXPENSE. ADDITIONALLY, ALL FINAL GRADES SHALL BE FIELD CHECKED BY BOTH THE CONTRACTOR AND CITY INPSECTOR FOR CONFORMANCE TO CONSTRUCTION PLAN GRADES.

UTILITY TRENCHES WITHIN THE INFLUENCE OF THE ROADWAY ARE TO BE FILLED AND COMPACTED PER ITEM 912 OF THE COC CMS. UTILITY TRENCHES WITHIN THE RIGHT OF WAY BUT OUTSIDE THE ROADWAY INFLUENCE SHALL BE FILLED AND COMPACTED WITH SUITABLE NATIVE MATERIAL AND COMPACTED TO WITHIN 98% OF THE MAXIMUM DRY DENSITY PER ITEM 911 OF COC CMS. ALL OTHER TRENCHES ARE TO BE FILLED AND COMPACTED WITH NATIVE MATERIAL TO WITHIN 95% OF THE MAXIMUM DRY DENSITY. THE BACKFILL MATERIAL FOR ANY UTILITY TRENCH SHALL BE FREE OF LARGE BOULDERS, TREE BRANCHES, STUMPS, AND OTHER CONSTRUCTION DEBRIS. UTILITY TRENCHES THAT ARE UNDER EXISTING OR PROPOSED PAVEMENT SHALL BE REQUIRED TO HAVE THE BACKFILL TESTED FOR COMPACTION BY AN APPROVED TESTING FIRM AT THE CITY'S EXPENSE.

STORM SEWERS, SANITARY SEWERS, AND WATER MAINS CONSTRUCTED IN FILL AREAS SHALL NOT BE CONSTRUCTED UNTIL AFTER COMPACTED FILL HAS BEEN INSTALLED TO PROPOSED GRADE. THE STORM SEWERS, SANITARY SEWERS, AND WATER MAINS SHALL BE INSTALLED PER SPECIFIED TRENCH INSTALLATION DETAILS.

TOPSOIL SHALL BE STRIPPED AND STOCKPILED SEPERATELY FROM ALL WORK AREAS, AND RESPREAD DURING FINAL GRADING OPERATIONS. THE COST OF RESPREADING THE TOPSOIL SHALL BE CONSIDERED INCIDENTAL TO OTHER GRADING ITEMS.

ALL PAVEMENT JOINTS, PARTICULARLY WHERE A PROPOSED PAVEMENT ABUTS AN EXISTING PAVEMENT, AND ALL PAVEMENT JOINTS ABUTTING THE CURBLINE OR UTILITY STRUCTURES SUCH AS MANHOLES, CATCH BASINS, VALVE BOXES, ETC. SHALL BE SEALED IN ACCORDANCE WITH ITEM 423 TYPE (1) OF THE COC CMS.

AT THE DIRECTION OF THE CITY, THE PLACEMENT OF THE FINAL WEARING COURSE OF ITEM 448 ASPHALT CONCRETE MAY BE DELAYED UNTIL SUCH TIME THAT THE WEATHER PERMITS.

ALL ASPHALT CONCRETE PAVING OPERATIONS SHALL BE REGULATED AS SPECIFIED IN COC CMS ITEM 400 FLEXIBLE PAVEMENT

PAVEMENT CUTS FOR UTILITY LINE INSTALLATIONS ARE SUBJECT TO THE BACKFILL REQUIREMENTS OF ITEM 912. IN LIEU OF COMPACTED GRANULAR MATERIAL, FLOWABLE CONTROLLED DENSITY FILL, ITEM 636 TYPE-II MAY BE USED. PAVEMENT SHALL BE CONSTRUCTED TO MATCH THE EXISTING SECTION OR NINE INCHES OF ASPHALT CONCRETE, WHICHEVER IS GREATER. AS AN ALTERNATIVE, THE CONTRACTOR MAY CHOOSE TO REPAIR THE PAVEMENT WITH A 7" "CLASS "C" CONCRETE BASE EXTENDING 1'-0 BEYOND ALL EDGES OF THE EXCAVATION, AND FINISHED WITH A 2-INCH ITEM 448 ASPHALT WEARING COURSE.

CONSTRUCTION NOISE

ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, DO NOT OPERATE POWER-OPERATED CONSTRUCTION-TYPE DEVICES BETWEEN THE HOURS OF 9:00 PM AND 6:00 AM. IN ADDITION, DO NOT OPERATE AT ANY TIME ANY DEVICE IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY AND NECESSARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT.

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GENERAL NOTES

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GENERAL (CONTINUED)

STEEL PLATES SHALL BE POSITIONED AND SECURED IN PLACE WITH STEEL SPIKES AND COLD PATCH ASPHALT MIX OVER ALL TRENCHES THAT ARE LEFT OPEN ON A TEMPORARY BASIS AND SUBJECT TO TRAFFIC. THE CONTRACTOR IS RESPONSIBLE FOR REPORTING THE LOCATION OF ALL STEEL PLATES DIRECTLY TO THE DEPARTMENT OF PUBLIC WORKS AND PROVIDING 24- HOUR CONTACT INFORMATION IN THE EVENT THE PLATES REQUIRE ADJUSTING OR REPAIR.

PROACTIVE MEASURES SHALL BE TAKEN BY THE CONTRACTOR TO KEEP PUBLIC STREETS CLEAN AND FREE FROM MUD, STONE, DIRT, ETC. AT ALL TIMES. A STABILIZED CONSTRUCTION ENTRANCE, AS SPECIFIED IN THE PLANS, IS TO BE DILIGENTLY MAINTAINED AT THE CONSTRUCTION SITE ENTRANCE(S) THROUGHOUT THE PROJECT. IF THE ENTRANCE IS RENDERED INEFFECTIVE IN THE JUDGEMENT OF THE CITY, WORK ON THE PROJECT MAY BE SUSPENDED UNTIL THE ENTRANCE IS MADE EFFECTIVE.

CONCRETE CURBS ARE TO BE BRANDED DURING PLACEMENT UTILIZING THE STANDARD BRAND SET PROVIDED BY THE DEPARTMENT OF ENGINEERING SERVICES. BRANDS THAT AREM ISSED MUST BE MECHANICALLY GROUND INTO THE CURB AFTER CONCRETE IS SET. BRAND CURBS ARE AS FOLLOWS:

"S" - ON TOP OF CURB FOR SANITARY LATERAL LOCATIONS.
"W" - ON FACE OF CURB FOR WATER SERVICE BOX LOCATIONS.
"WV" - ON FACE OF CURB FOR HYDRANT WATCH VALVE LOCATIONS.
"WM" - ON FACE OF CURB FOR WATER MAIN VALVE LOCATIONS.
"SM" - ON FACE OF CURB FOR SANITARY/STORM MANHOLE LOCATIONS.

THE CURB AND COMBINATION CURB AND GUTTER SHALL BE PLACED CONTINUOUSLY. THE CURB SHALL HAVE CONTROL JOINTS MECHANICALLY CUT AT 10'-0 SPACING WITHIN 24 HOURS FROM BEING POURED. DRIVEWAY CURB CUTS SHALL BE FORMED PER THE APPROVED CONSTRUCTION PLANS.

MONUMENT BOXES SHALL BE INSTALLED AT INTERSECTIONS DESIGNATED ON THE PLAN BY THE CONTRACTOR WITH THE SUPPORT OF HIS SURVEYOR. BOXES SHALL BE NEENAH R-1968, TYPE 36-8 OR EAST JORDAN IRON WORKS NO. 8371. MONUMENTS ARE TO BE SET IN A CONCRETE FILLED 24" DIAMETER CORED HOLE, FLUSH WITH THE TOP OF THE PAVEMENT PER CITY STANDARD.

TACK COAT (ODOT ITEM 407) IS REQUIRED BETWEEN ALL LIFTS OF FLEXIBLE PAVEMENT, BETWEEN CONCRETE BASE AND ASPHALT SURFACE COURSE, AND ALONG THE FACE OF THE CURB. THE TACK COAT APPLICATION MAY BE WAIVED AT THE DISCRETION OF THE DEPARTMENT OF ENGINEERING SERVICES IF THE LIFTS OF ASPHALT ARE INSTALLED WITHIN SEVEN (7) DAYS OF EACH OTHER, THERE HAS BEEN NO WATER OR VEHICLE TRAFFIC ON THE PAVEMENT, AND THE PAVEMENT IS CLEAN AND FREE OF DUST AND DEBRIS.

ALL CONSTRUCTION AND PERMANENT ROADWAY SIGNAGE MUST MEET THE MINIMUM REQUIREMENTS OF OMUTCD TABLE 2A-3 REGARDING RETROREFLECTIVITY LEVELS.

ITEM 204 - PROOF ROLLING

THE FOLLOWING SPECIFICATIONS ARE PUT IN PLACE BY THE CITY OF DELAWARE IN ADDITION TO THE COC CMS ITEM 204, SUBGRADE COMPACTION AND PROOF ROLLING/TEST ROLLING:

FOR AREAS WHERE SUBGRADE APPEARS TO BE STABLE WITHOUT UNDERCUTTING, PROOF ROLL AFTER THE TOP 12 INCHES OF THE SUBGRADE MEETS THE COMPACTION REQUIREMENTS AND AFTER THE SUBGRADE HAS BEEN BROUGHT TO APPROXIMATE SHAPE WITHIN 0.1 TO 0.2 FEET REQUIRED BY PLAN GRADE.

FOR AREAS THAT ARE UNSTABLE AND REQUIRE UNDERCUTTING, IT IS NOT NECESSARY TO COMMENCE A FORMAL PROOF ROLL TO DEMONSTRATE THAT SUBGRADE CORRECTION IS REQUIRED. CORRECTION MUST BE AUTHORIZED BY THE CITY AT THE TIME OF ROUGH GRADING AND MUST BE BASED ON RECOMMENDATION FROM THE SOILS ENGINEER. PROOF ROLLING MUST BE TREATED AS THE FINAL VERIFICATION THAT ALL REPAIRS HAVE BEEN PERFORMED. FAILED PROOF ROLLS FOLLOWING CORRECTIVE ACTION WILL BE AT THE CONTRACTOR'S EXPENSE.

PROOF ROLLING MUST BE DONE IMMEDIATELY AFTER THE SUBGRADE COMPACTION OPERATION, WHEN THE MOISTURE CONTENT OF THE SUBGRADE SOIL IS NEAR OPTIMUM OR AT THE MOISTURE CONTENT THAT ACHIEVED COMPACTION. UNSTABLE OR HARD PAN CONDITIONS ENCOUNTERED DURING PROOF ROLLING OPERATIONS, WHICH RESULT FROM THE FAILURE OF THE CONTRACTOR TO MAINTAIN THE SPECIFIED DENSITY AND MOISTURE REQUIREMENTS, MUST BE CORRECTED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

IF IT BECOMES NECESSARY TO TAKE CORRECTIVE ACTION, SUCH AS BUT NOT LIMITED TO UNDERDRAIN INSTALLATION, UNDERCUT AND BACKFILL OF AN UNSUITABLE MATERIAL, AERATION OF EXCESSIVELY WET MATERIAL IN AREAS THAT HAVE BEEN PROOF ROLLED, OR (IF HARD PAN EXISTS) RECONDITIONING THE UPPER PORTION OF THE SUBGRADE, THESE AREAS SHALL BE PROOF ROLLED AGAIN FOLLOWING THE COMPLETION OF THE NECESSARY CORRECTIONS. IF THE CORRECTIONS ARE NECESSARY DUE TO THE NEGLIGENCE OF THE CONTRACTOR AND/OR WEATHER, THE CORRECTIVE WORK AND ADDITIONAL PROOF ROLLING MUST BE PERFORMED BY THE CONTRACTOR AT NO COST TO THE CITY.

THE CONTRACTOR SHALL BE REQUIRED TO PERFORM A PROOF ROLL ALONG THE CURB LINE TO CONFIRM THAT THERE IS NO UNSUITABLE MATERIAL IN ADVANCE OF INSTALLING CURB DRAIN, STONE OR CONCRETE CURBING. PROOF ROLLING FOR THE PAVEMENT AREA MAY OCCUR EITHER BEFORE OR AFTER PIPE UNDERDRAINS ARE INSTALLED. IF FOLLOWING THE INSTALLATION OF UNDERDRAINS, ROLLING SHOULD NOT OCCUR DIRECTLY OVER THE UNDERDRAINS. IN 204.06, PROOF ROLLING MUST BE PERFORMED AT LEAST 1-1/2 FEET AWAY FROM THE UNDERDRAINS BECAUSE OF THE POTENTIAL DAMAGE TO THE UNDERDRAINS.

THE FOLLOWING QUANTITY IS PROVIDED IN THE GENERAL SUMMARY TO ADDRESS LOCATIONS REQUIRING PROOF ROLLING.

ITEM 204 - PROOF ROLLING 3 HOUR

ITEM 204 - SUBGRADE COMPACTION AND PROOF ROLLING

ALL PAVEMENT SUB-GRADE SHALL BE CONSTRUCTED IN ACCORDANCE WITH ITEM 203 OF THE COC CMS, THE SOILS REPORT AND AS DIRECTED BY THE REGISTERED SOILS ENGINEER PRESENT ON THE SITE. THE CITY WILL STRICTLY ADHERE TO THE COMPACTION REQUIREMENTS SET FORTH IN SECTION 203.07. DENSITY TESTING MUST BE PERFORMED ON MEACH LIFT OF FILL, AND THE SOILS ENGINEER PERFORMING THE TESTING MUST HAVE DETAILED LABORATORY TEST DATA ON SITE TO SUPPORT THE VALUES BEING UTILIZED IN THE DENSITY CALCULATIONS. THE MOISTURE CONTENT OF THE NEW FILL SHALL BE IN THE RANGE OF ±2% OF THE OPTIMUM MOISTURE CONTENT DETERMINED BY ASTM D698. THE CITY RESERVES THE RIGHT TO REQUIRE DENSITY TESTING OF SUB-GRADE IN NEWLY CUT AREAS WHERE TOPSOIL HAS BEEN STRIPPED IN PREPARATION FOR SUB-BASE INSTALLATION OR FILLING OPERATIONS, IN ORDER TO EVALUATE THE NECESSITY FOR ADDITIONAL COMPACTION EFFORT.

CONSTRUCT THE SUBGRADE AS FOLLOWS AND IN THE FOLLOWING SEQUENCE:

1. SHAPE THE SUBGRADE TO WITHIN 0.2 FEET OF THE PLAN SUBGRADE ELEVATION.

2. EXCAVATE AND REPLACE UNSUITABLE SUBGRADE BEFORE PROOF ROLLING. THE EXCAVATION LIMITS ARE SHOWN AND LABELED ON THE CROSS SECTIONS. UNSUITABLE SUBGRADE INCLUDES UNSUITABLE SOIL (A-4B, A-2-5, A-5, A-7-5, AND SOIL WITH A LIQUID LIMIT GREATER THAN 65) AND ANY COAL, SHALE, OR ROCK WHICH NEEDS TO BE REMOVED ACCORDING TO 204.05.

   IF THERE IS UNSUITABLE SUBGRADE IN A SHALLOW FILL LOCATION, EXCAVATE AND REPLACE THE UNSUITABLE SUBGRADE BEFORE CONSTRUCTING THE SHALLOW FILL AND SHAPING THE SUBGRADE.

3. COMPACT THE SUBGRADE ACCORDING TO 204.03.

4. APPROXIMATE LIMITS FOR EXCAVATION OF UNSTABLE SUBGRADE ARE NOT SHOWN ON THE CROSS SECTIONS. THE ENGINEER WILL IDENTIFY THE ACTUAL LIMITS OF EXCAVATION FOR UNSTABLE SUBGRADE BASED ON THE PROOF ROLLING RESULTS AND VISUAL OBSERVATIONS.

   PROOF ROLL THE COMPACTED SUBGRADE ACCORDING TO 204.06.

5. EXCAVATE UNSTABLE SUBGRADE AS DIRECTED BY THE ENGINEER AND STABILIZE BY REPLACING WITH THE SPECIFIED MATERIALS ACCORDING TO 204.07. EXCAVATIONS WILL EXTEND 18 INCHES BEYOND THE EDGE OF THE SURFACE OF THE PAVEMENT, PAVED SHOULDERS, OR PAVED MEDIANS.

6. PROOF ROLL THE STABILIZED AREAS ACCORDING TO 204.06 TO VERIFY STABILITY.

7. FINE GRADE THE SUBGRADE TO THE SPECIFIED GRADE.

THE QUANTITIES FOR EXCAVATING THE UNSUITABLE SUBGRADE AND UNSTABLE SUBGRADE ARE BOTH PAID UNDER ITEM 204 EXCAVATION OF SUBGRADE.

ASBESTOS NOTIFICATION

AN ASBESTOS SURVEY OF THE BRIDGE WAS CONDUCTED BY A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST. THE SURVEY DETERMINED THAT NO ASBESTOS IS PRESENT AT THE BRIDGES.

A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF DEMOLITION AND RENOVATION FORMS, PARTIALLY COMPLETED AND SIGNED BY THE BRIDGE OWNER, WILL BE PROVIDED TO THE SUCCESSFUL BIDDER. THE CONTRACTOR SHALL COMPLETE THE FORM AND SUBMIT IT TO:

OHIO EPA, CDO
50 WEST TOWN ST, SUITE 700
COLUMBUS, OHIO 43215
KELLY TOTH, APC MANAGER
(614) 728-3778
FAX: (614) 728-3898

AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF ANY DEMOLITION AND/OR REHABILITATION. THE CONTRACTOR SHALL PROVIDE A COPY OF THE COMPLETED FORM TO THE ENGINEER.

INFORMATION REQUIRED ON THE FORM WILL INCLUDE: 1) THE CONTRACTORS NAME AND ADDRESS, 2) THE SCHEDULED DATES FOR THE START AND COMPLETION OF THE BRIDGE REMOVAL AND 3) A DESCRIPTION OF THE PLANNED DEMOLITION WORK AND THE METHOD(S) TO BE USED.

THE CONTRACTOR SHALL FURNISH ALL FEES, LABOR, AND MATERIAL NECESSARY TO COMPLETE AND SUBMIT THE OEPA NOTIFICATION FORM.

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE SHEET 3 OF THE PLANS FOR A TABLE CONTAINING PROJECT CONTROL INFORMATION.

USE THE FOLLOWING PROJECT CONTROL, VERTICAL POSITIONING, AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING:

PROJECT CONTROL

POSITIONING METHOD: ODOT VRS
MONUMENT TYPE: B

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD 88
GEOID: GEOID 12A

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD 83(2011)
ELLIPSOID: GRS80
MAP PROJECTION: LAMBERT CONFORMAL CONIC
COORDINATE SYSTEM: OHIO STATE PLANE - NORTH ZONE
COMBINED SCALE FACTOR: 0.99998998
ORIGIN OF COORDINATE SYSTEM: 0,0

USE THE POSITIONING METHODS AND MONUMENT TYPE USED IN THE ORIGINAL SURVEY TO RESTORE ALL MONUMENTS RELATED TO PRIMARY PROJECT CONTROL THAT ARE DAMAGED OR DESTROYED BY CONSTRUCTION ACTIVITIES. RESTORE THE DAMAGED OR DESTROYED MONUMENTS IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 823.

UNITS ARE IN U.S. SURVEY FEET. USE THE FOLLOWING CONVERSION FACTOR: 1 METER = 3.280833333 U.S. SURVEY FEET.

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

CLEARING AND GRUBBING

CLEARING AND GRUBBING IS TO BE PERFORMED FROM RIGHT OF WAY LINE TO RIGHT OF WAY LINE, WITHIN ALL EASEMENTS, OR AS OTHERWISE NOTED IN THE APPROVED CONSTRUCTION PLANS. TREE CHIPPING EQUIPMENT MAY BE USED HOWEVER CHIP PILES SHALL BE STORED IN SEPARATE LOCATIONS AWAY FROM ANY AREA SUBJECT TO FURTHER CONSTRUCTION ACTIVITIES, AND SHALL NOT BE SPREAD OR DISPURSED OVER EXISTING GROUND.

EXISTING TREE AND UNDERGROUND ROOT SYSTEM SHALL BE REMOVED IN ITS ENTIRETY TO A DEPTH OF 4.0'. PAYMENT SHALL BE INCLUDED AS PART OF ITEM 203 EXCAVATION

REMOVE ALL TREES AND STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS UNDER THE LUMP SUM BID FOR ITEM 201, CLEARING AND GRUBBING. THE FOLLOWING IS AN APPROXIMATE ESTIMATE OF THE NUMBER OF TREES AND STUMPS TO BE REMOVED.

SIZES	NO. TREES	NO. STUMPS	TOTAL
18"	20	1	21
30"	4	0	4
48"	0	0	0
60"	0	0	0

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AIRWAY/HIGHWAY CLEARANCE FOR AIRPORTS AND HELIPORTS

THIS PROJECT HAS BEEN IDENTIFIED AS BEING WITHIN THE INFLUENCE AREA OF A PUBLIC USE AIRPORT OR HELIPORT. NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT AT MAXIMUM OPERATING HEIGHT SHALL EXCEED A HEIGHT OF 60 FT. IF ANY TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT WILL EXCEED THIS HEIGHT, FURTHER COORDINATION WITH THE FEDERAL AVIATION ADMINISTRATION (FAA), AND ODOT OFFICE OF AVIATION, WILL BE NECESSARY PRIOR TO ERECTING SUCH TEMPORARY STRUCTURES OR OPERATING SUCH EQUIPMENT ON THE PROJECT. THE CONTRACTOR WILL BE REQUIRED TO FILE A NEW FAA FORM 7460-1, ADVISING THE FAA THAT AERONAUTICAL STUDY NO. ___ IS BEING RESUBMITTED AND THAT AN ALTERATION TO THE ORIGINAL SUBMISSION IS REQUESTED.

NOTIFY THE ODOT OFFICE OF AVIATION WHEN RESUBMITTING AN FAA FORM 7460-1. NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT SHALL EXCEED THE PERMISSIBLE HEIGHT, UNTIL A COPY OF THE FAA APPROVAL AND THE ODOT OFFICE OF AVAITION PERMIT HAS BEEN FURNISHED TO THE PROJECT ENGINEER.

FAA APPROVAL MAY TAKE UP TO 45 DAYS. ALL SUBMISSIONS SHALL BE DIRECTED TO THESE OFFICES:

EXPRESS PROCESSING CENTER
THE FEDERAL AVIATION ADMINISTRATION
SOUTHWEST REGIONAL OFFICE
AIR TRAFFIC AIRSPACE BRANCH ASW-520
2601 MEACHAN BLVD.
FORT WORTH, TX 76137-4298

OHIO DEPARTMENT OF TRANSPORTATION
OFFICE OF AVIATION
2829 WEST DUBLIN-GRANVILLE ROAD
COLUMBUS, OHIO 43235
614-387-2346

SEEDING AND MULCHING

ALL AREAS WITHIN THE RIGHT OF WAY DISTURBED DURING CONSTRUCTION SHALL BE SEEDED AND MULCHED WITHIN 7 DAYS FROM THE DATE WORK IN THE AREA IS COMPLETED. SEED SHALL BE SPREAD AT A RATE OF 14 POUNDS PER 1000 SF AND MEET THE REQUIREMENTS OF COC CMS ITEM 659.09 CLASS 1 LAWN MIXTURE. A 10-20-10 COMMERCIAL FERTALIZER SHALL BE APPLIED AT A RATE OF 20 POUNDS PER 1000 SF TO NEWLY SEEDED AREAS. SEEDING PERFORMED BETWEEN OCTOBER 30TH AND MARCH IST SHALL BE APPLIED AS TEMPORARY SEEDING

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

659, SOIL ANALYSIS TEST - 2 EACH
659, TOPSOIL - 447 CU. YD.
659, SEEDING AND MULCHING - 4023 SQ. YD.
659, REPAIR SEEDING AND MULCHING - 202 SQ. YD
659, INTER-SEEDING - 202 SQ. YD.
659, COMMERCIAL FERTILIZER - 0.63 TON
659, LIME - 0.84 ACRES
659, WATER - 33 M. GAL.
659, MOWING - 10 M. SQ. FT.

ITEM 608 CONCRETE STEPS TYPE A

THE FOLLOWING QUANTITY HAS BEEN INCLUDED TO BE USED AS DIRECTED BY THE ENGINEER

ITEM 608 CONCRETE STEPS TYPE A 40 FT

STORM SEWER

ALL STORM SEWER SHALL BE INSTALLED IN ACCORDANCE WITH THE SPECIFICATIONS CONTAINED WITHIN THE CITY OF COLUMBUS CMS 2012 VERSION, EXCEPT AS MODIFIED WITHIN THE CITY OF DELAWARE GENERAL NOTES, STANDARD DRAWINGS AND INFRASTRUCTURE DESIGN MANUAL. THE MINIMUM REQUIREMENTS FOR STORM SEWER PIPE WITHIN THE CITY RIGHT OF WAY OR EASEMENTS SHALL BE REINFORCED CONCRETE PIPE ASTM C655, ASTM C76, NON-REINFORCED CONCRETE PIPE ASTM C14, OR HDPE PIPE (ADS OR APPROVED EQUAL). ALL PIPE MANUFACTURERS MATERIALS MUST APPEAR ON THE COC LIST OF APPROVED STORM SEWER MATERIALS TO BE USED IN THE CITY OF DELAWARE.

FLEXIBLE STORM SEWERS WITHIN THE RIGHT OF WAY WILL BE DEFLECTION TESTED AND/OR VIDEO INSPECTED AT THE CONTRACTORS EXPENSE. TESTING SHALL BE PERFORMED NO SOONER THAN THIRTY DAYS AFTER THE PIPE TRENCH HAS BEEN BACKFILLED. MAXIMUM DEFLECTION SHALL NOT EXCEED 5% OF THE BASE INSIDE DIAMETER. THE CONTRACTOR IS RESPONSIBLE FOR ARRANGING FOR THE REQUIRED TESTING AND FOR NOTIFYING THE DEPARTMENT OF ENGINEERING SERVICES IN ADVANCE TO WITNESS THE TESTING.

ALL FLEXIBLE PIPE INSTALLATIONS THAT ARE SUBJECT TO CONSTRUCTION LOADING SHALL MAINTAIN A MINIMUM COVER OF 2'-0 AT ALL TIMES DURING THE CONSTRUCTION PROCESS. TESTING SHALL NOT OCCUR UNTIL ALL CONSTRUCTION LOADING ABOVE THE SEWER IS COMPLETE.

HDPE PIPE JOINTS SHALL BE MADE USING WATERTIGHT COUPLERS WITH O-RING GASKET, ADS WT OR APPROVED EQUAL. WHERE RUBBER O-RING GASKET ((ASTM C361) PIPE IS REQUIRED ON THE PLANS. ALL OTHER PIPE SHALL HAVE A BELL AND SPIGOT JOINT WITH RUBBER GASKET MEETING ASTM F477.

ALL STORM MANHOLES SHALL BE MARKED WITH A 4"x 4"x 10'-0 PRESSURE TREATED WOOD WYE-POLE PROJECTING 4'-0" ABOVE THE FINISH GRADE AND WITH THE TOP 1'-0 PAINTED GREEN ON FOUR SIDES. THE COST SHALL BE INCLUDED IN THE VARIOUS SEWER ITEMS.

STORM SEWER PIPE SHALL NOT BE INSTALLED IN ANY TRENCH HOLDING WATER. THE CONTRACTOR IS RESPONSIBLE FOR THE COST OF DEWATERING OPERATIONS REQUIRED FOR THE CONSTRUCTION OF THE STORM SEWER.

IF ROCK MUST BE EXCAVATED WITHIN A PROPOSED TRENCH AREA, THE CONTRACTOR SHALL REMOVE ENOUGH ROCK BELOW THE BELL AND FLOWLINE OF THE PIPE IN ORDER TO INSTALL THE APPROPRIATE AMOUNT OF BEDDING MATERIAL. EXCAVATED ROCK MAY NOT BE USED AS BACKFILL MATERIAL. THE COST OF ANY ROCK EXCAVATION SHALL BE INCLUDED IN THE BID PRICE FOR VARIOUS SEWER ITEMS.

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 CONSTRUCTION, THEY SHALL BE RESTORED BY THE CONTRACTOR TO A CONDITION SATISFACTORY TO THE CITY.

ALL MAJOR FLOOD ROUTES AND STORM WATER BASINS ARE TO BE SURVEYED BY A REGISTERED SURVEYOR AT THE CONTRACTORS EXPENSE TO VERIFY CONFORMANCE TO THE APPROVED GRADING PLANS. SURVEY RESULTS ARE TO BE INCLUDED ON THE AS-BUILT CONSTRUCTION PLANS.

THE CONTRACTOR IS RESPONSIBLE FOR THE PROPER INSTALLATION (PRIOR TO THE START OF CONSTRUCTION), MAINTENANCE, AND REPLACEMENT OF SEDIMENT AND EROSION CONTROL MEASURES PER THE APPROVED SWPPP AND PER THE CURRENT OEPA GENERAL PERMIT FOR CONSTRUCTION STORMWATER REQUIREMENTS, UNDER WHICH THIS PROJECT HAS OBTAINED COVERAGE. THE CONTRACTOR WILL BE RESPONSIBLE FOR PAYING ANY FINE LEVIED BY THE OEPA RESULTING FROM FAILURE TO ADHERE TO THE SWPPP AND/OR THE REQUIREMENTS OF THE OEPA GENERAL PERMIT. THE CONTRACTOR MUST REGISTER AS A CO-PERMITTEE FOR THIS PROJECT (WITH THE OEPA) PRIOR TO THE COMMENCEMENT OF EARTH DISTURBING ACTIVITIES. THE CONTRACTOR AND ALL SUBCONTRACTORS INVOLVED IN THE IMPLEMENTATION AND MAINTENANCE OF THE SWP3 MUST SIGN A DES FORM ACKNOWLEDGING THEY HAVE REVIEWED AND UNDERSTAND THE CONDITIONS AND REQUIREMENTS OF THE SWP3 PRIOR TO COMMENCEMENT OF CONSTRUCITON ACTIVITIES.

SHOP DRAWINGS FOR ALL STORM STRUCTURES MUST BE SUBMITTED BY THE CONTRACTOR AND APPROVED BY THE DEPARTMENT OF ENGINEERING SERVICES BEFORE ORDERING STRUCTURES.

ALL CATCH BASINS, MANHOLES, AND CURB INLETS SHALL HAVE CONCRETE CHANNELS POURED IN PLACE TO ASSURE POSITIVE DRAINAGE THROUGH THESE STRUCTURES.

PUBLIC STORM SEWER MANHOLE LIDS ARE TO BE EAST JORDAN IRON WORKS NO. 1661-A1 OR EQUIVALENT, AND EMBOSSED "CITY OF DELAWARE STORM SEWER".

STORM SEWER CURB INLETS ARE TO BE ADJUSTED WITHIN 1/4" OF PLAN ELEVATION USING STEEL SHIMS. CURB INLET HOODS SHALL BE EMBOSSED WITH THE WORDING "DRAINS TO THE RIVER" PER THE CITY STANDARD DRAWING.

PRE-CAST CONCRETE OR HDPE PREFORMED MANHOLE ADJUSTING RINGS ARE TO BE USED FOR ALL FINAL ADJUSTMENTS OF MANHOLE CASTINGS.

OPENINGS SHALL BE PROVIDED IN CURB INLET DRAINAGE STRUCTURES TO ACCOMMODATE UNDERDRAIN OUTLETS. UNDERDRAINS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH DETAILS GIVEN IN THE PLANS.

RAILROAD RETAINING WALL REMOVAL

CONTRACTOR IS TO CAREFULLY REMOVE ALL CUT BLOCK STONES FROM RAILROAD RETAINING WALLS AND DELIVER THEM TO THE CITY OF DELAWARE PUBLIC WORKS FACILITY AT 440 E WILLIAM STREET, DELAWARE, WHERE THEY SHALL BE NEATLY STACKED IN LOCATIONS AS DIRECTED BY THE CITY.

EXISTING UNDERDRAINS

PROVIDE UNOBSTRUCTED OUTLETS FOR ALL EXISTING UNDER-DRAINS ENCOUNTERED DURING CONSTRUCTION.

PROVIDE AN OUTLET PER STANDARD CONSTRUCTION DRAWING DM-1.1 FOR ALL UNDERDRAINS THAT OUTLET TO A SLOPE.

UNDERDRAINS THAT CAN BE CONNECTED TO THE NEW OR EXISTING UNDERDRAINS AT THE END OF THE PROJECT LIMITS AS WELL AS ALL NECESSARY BENDS OR BRANCHES REQUIRED FOR CONNECTION ARE INCLUDED IN THE BASIS OF PAYMENT FOR UNCLASSIFIED PIPE UNDERDRAINS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

ITEM 601 - TIED CONCRETE BLOCK MAT, TYPE 1	10 SQ. YD.
ITEM 611 - 6" CONDUIT, TYPE F	100 FT.
ITEM 611 - PRECAST REINFORCED CONCRETE OUTLET	50 EACH
ITEM 605 - 6" UNCLASSIFIED PIPE UNDERDRAINS	100 FT.

REVIEW OF DRAINAGE FACILITIES

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE CITY, REPRESENTATIVES OF THE CITY AND THE CONTRACTOR, ALONG WITH LOCAL REPRESENTATIVES, SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCE SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE CITY.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE CITY.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEMS.

CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEM.

MANHOLES, CATCH BASINS AND INLETS REMOVED OR ABANDONED

ALL CASTINGS SHALL BE CAREFULLY REMOVED AND STORED WITHIN THE RIGHT OF WAY FOR SALVAGE BY THE CITY.

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 202 ITEM.

ITEM 611 - CATCH BASIN GRATE

EXISTING CATCH BASINS SHALL BE MODIFIED BY REPLACING THE EXISTING GRATES WITH BICYCLE SAFE GRATES. QUANTITIES AND LOCATIONS ARE SHOWN IN THE PLANS AND SHALL BE PAID FOR AT THE CONTRACT PRICE FOR ITEM 611, EACH, CATCH BASIN GRATE, TYPE 3 OR CATCH BASIN GRATE, TYPE 3A

CALCULATED ACF CHECKED CSR

GENERAL NOTES

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CALCULATED ACF CHECKED CSR

GENERAL NOTES

UNRECORDED STORM WATER DRAINAGE

FURNISH A CONTINUANCE FOR ALL UNRECORDED STORM WATER DRAINAGE, SUCH AS ROOF DRAINS, FOOTER DRAINS, OR YARD DRAINS, DISTURBED BY THE WORK. FURNISH EITHER AN OPEN CONTINUANCE OR AN UNOBSTRUCTED CONTINUANCE BY CONNECTING A CONDUIT THROUGH THE CURB OR INTO A DRAINAGE STRUCTURE. THE LOCATION, TYPE, SIZE AND GRADE OF THE NEEDED CONDUIT TO REPLACE OR EXTEND AN EXISTING DRAIN WILL BE DETERMINED BY THE ENGINEER. ALL SUCH CONTINUANCE REQUIRES A RIGHT OF WAY USE PERMIT.

THE FOLLOWING CONDUIT TYPES MAY BE USED: 707.33, 707.41 NON-PERFORATED, 707.42, 707.43, 707.45, 707.46, 707.47, 707.51, 707.52 SDR35.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR THE WORK NOTED ABOVE:

ITEM 611 - 6" CONDUIT, TYPE B, FOR DRAINAGE CONNECTION	100 FT
ITEM 611 - 6" CONDUIT, TYPE C FOR DRAINAGE CONNECTION	100 FT
ITEM 611 - 6" CONDUIT, TYPE E FOR DRAINAGE CONNECTION	100 FT
ITEM 611 - 6" CONDUIT, TYPE F FOR DRAINAGE CONNECTION	100 FT

REFUSE COLLECTION

CONTRACTOR SHALL MAINTAIN REFUSE COLLECTION AT ALL TIMES THROUGHOUT THE PROJECT BY PROVIDING UNOBSTRUCTED ACCESS TO DRIVEWAY ACCESS DURING DAYS AND TIMES OF SCHEDULED REFUSE COLLECTION. CONTRACTOR SHALL CONTACT THE CITY FOR A SCHEDULE OF REFUSE COLLECTION AND/OR CONTACT INFORMATION FOR LOCAL REFUSE COLLECTION SERVICES. CONTRACTOR SHALL COMBINE PICK-UP LOCATIONS WHEN MOT RESTRICTS ACCESS.

PROTECTION OF RIGHT-OF-WAY LANDSCAPING

PRIOR TO BEGINNING WORK, THE CONTRACTOR, THE PROJECT ENGINEER, AND A REPRESENTATIVE OF THE MAINTAINING AGENCY WILL REVIEW AND RECORD ALL LANDSCAPING ITEMS WITHIN THE RIGHT OF WAY (BOTH WITHIN AND OUTSIDE THE CONSTRUCTION LIMITS) A RECORD OF THIS REVIEW WILL BE KEPT IN THE PROJECT ENGINEER'S FILES. PRIOR TO FINAL ACCEPTANCE, A FINAL REVIEW OF LANDSCAPING ITEMS WILL BE MADE.

CONSTRICT ALL ACTIVITIES, EQUIPMENT STORAGE, AND STAGING TO WITHIN THE CONSTRUCTION LIMITS. UNLESS OTHERWISE IDENTIFIED IN THE PLANS OR PROPOSAL, THE CONSTRUCTION LIMITS ARE IDENTIFIED AS 30 FEET FROM THE EDGE OF PAVEMENT.

SUBMIT A WRITTEN REQUEST TO THE PROJECT ENGINEER TO USE ANY AREA OUTSIDE THESE LIMITS. THE DOCUMENT SUBMITTED MUST CLEARLY IDENTIFY THE AREA AND EXPLAIN THE PROPOSED USE AND RESTORATION OF THE AREA.USE OF THESE AREAS FOR DISPOSAL OF WASTE MATERIAL AND CONSTRUCTION DEBRIS, EXCAVATION OF BORROW MATERIAL AND PLACEMENT OF PORTABLE PLANTS IS PROHIBITED. THE REQUEST MUST BE APPROVED, IN WRITING, BEFORE THE CONTRACTOR HAS PERMISSION TO USE THE AREA.

ANY ITEMS DAMAGED BEYOND THE CONSTRUCTION LIMITS AS DEFINED ABOVE WILL BE REPLACED IN KIND OR AS APPROVED BY THE PROJECT ENGINEER.

UNSUITABLE SOILS

TO ACCOUNT FOR ANY UNSUITABLE SOILS IDENTIFIED DURING CONSTRUCTION, A CONTINGENCY QUANTITY HAS BEEN ADDED TO THE PLAN TO BE USED AS DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL REMOVE THE UNSUITABLE MATERIALS OR SOFT SOILS AND REPLACE THEM WITH GEOTEXTILE FABRIC, GEOGRID, #2 STONE, AND 304 AGGREGATE AS NOTED IN THE SKETCH BELOW. THIS WORK SHALL CONSIST OF FURNISHING, PLACING, AND COMPACTING THE #2 STONE AND 304 AGGREGATE IN PLACE. THE AGGREGATE SHALL MEET THE REQUIREMENTS OF 703.01 AND 703.04.

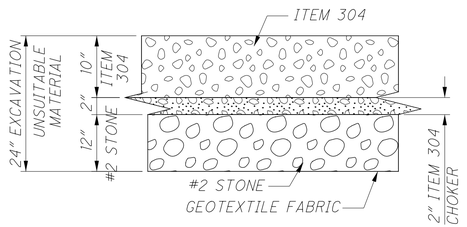
THE AGGREGATE BASE SHALL BE PLACED IN ACCORDANCE WITH THE REQUIREMENTS OF PERTINENT PARTS OF ITEM 304, EXCEPT THAT WHEN VIBRATORY EQUIPMENT IS USED FOR COMPACTION, THE COMPACTED DEPTH OF SINGLE LAYER SHALL NOT EXCEED 12 INCHES.

GEOTEXTILE FABRIC SHALL BE TERRATEX HD, MIRAFI 600X, EXXON GTF300, OR APPROVED EQUAL HAVING A BURST STRENGTH OF 600 PSI. THE MATERIAL SHALL BE PLACED ACCORDING TO THE MANUFACTURE'S REQUIREMENTS AND THEN OVERLAID WITH 12 INCHES OF #2 STONE.

IF REQUESTED BY THE ENGINEER, GEOGRID SHALL BE SIZED FOR #2 STONE; SHALL MEET ODOT SS861; AND SHALL BE TENSAR BX1300, SECUGRID 80/80, ENKAGRID PRO 90, OR APPROVED EQUAL. THE MATERIAL SHALL BE PLACED ACCORDING TO THE MANUFACTURE'S REQUIREMENTS AND THEN OVERLAID WITH 12 INCHES OF #2 STONE. MATERIAL PLACEMENT SHALL BE AS DIRECTED BY THE ENGINEER.

THE FOLLOWING CONTINGENCY QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER:

ITEM 204, EXCAVATION OF SUBGRADE	1,000 CU. YD.
ITEM 204, GEOTEXTILE FABRIC	1,500 SQ. YD.
ITEM 690 GEOGRID	1,500 SQ. YD.
ITEM 204, EMBANKMENT USING #2 STONE	500 CU. YD.
ITEM 204, EMBANKMENT USING ITEM 304	500 CU. YD.



EXISTING PLANS

EAST WILLIAM ST IMPROVEMENT PLANS DEL-36-10.74 DATED 1986, US 36/SR37 "THE POINT" INTERSECTION IMPROVEMENTS PHASE 1 PLANS DATED 2009 AND EAST WILLIAM ST IMPROVEMENT PLANS DEL-36-10.40-10.73 DATED 1951. MAY BE INSPECTED IN THE ODOT DISTRICT 6 OFFICE AT

400 E. WILLIAM STREET
DELAWARE, OHIO 43015

MONUMENT ASSEMBLIES

CONSTRUCT MONUMENT ASSEMBLIES IN ACCORDANCE WITH THE DETAILS SHOWN ON THE STANDARD CONSTRUCTION DRAWINGS AND AT THE LOCATIONS SHOWN ON SHEET NO. 202.

PAVEMENT RESTORATION FOR PIPE INSTALLATIONS AND/OR REMOVALS

THE FOLLOWING QUANTITY HAS BEEN PROVIDED FOR PAVEMENT RESTORATION FOLLOWING INSTALLATION AND/OR REMOVAL OF PIPES.

ITEM 301 ASPHALT CONCRETE BASE, PG64-22 100 CU. YDS.

THE ABOVE QUANTITY IS BASED ON A 301 THICKNESS OF 10 INCHES AND A PAVEMENT RESTORATION WIDTH THAT INCLUDES THE TRENCH WIDTH PLUS TWO FEET ON EACH SIDE OF THE TRENCH.

PROVIDE ANY MATERIALS USED OUTSIDE THE LIMITS STATED ABOVE AT NO ADDITIONAL COST.

POST CONSTRUCTION STORM WATER TREATMENT

THIS PLAN UTILIZES STRUCTURAL BEST MANAGEMENT PRACTICES (BMP'S) FOR POST CONSTRUCTION STORM WATER TREATMENT.

ITEM 608 - 4" CONCRETE WALK, AS PER PLAN

PAYMENT FOR THIS ITEM INCLUDES THE 4" AGGREGATE BASE PER SCD RDWD-19.3

TEMPORARY FENCE

CONTRACTOR SHALL INSTALL TEMPORARY FENCING PRIOR TO CONSTRUCTION ON PARCEL 44, THE CONGER ELEMENTARY SCHOOL.

PAYMENT FOR THE ABOVE WILL BE PAID FOR AT THE CONTRACT PRICE PER FOOT FOR ITEM 607, FENCE, TYPE CL, AS PER PLAN

THE FOLLOWING CONTINGENCY QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER:

ITEM 607, FENCE, TYPE CL, AS PER PLAN 290 FT

ITEM SPECIAL - WORK INVOLVING PETROLEUM CONTAMINATED SOILS

ENVIRONMENTAL STUDIES HAVE SHOWN THAT THERE IS A POTENTIAL OF ENCOUNTERING PETROLEUM-CONTAMINATED MATERIALS DURING EXCAVATIONS FOR THE ROADWAY CONSTRUCTION AND DRAINAGE WORK NEAR THE CERTIFIED OIL CORPORATION PROPERTY (519-431-13-008-000) 181 E. WILLIAM ST., AND THE BIKE PATH (519-431-17-015-000).

IN THE EVENT PETROLEUM-CONTAMINATED MATERIALS ARE ENCOUNTERED, THE CONTRACTOR SHALL MANAGE THIS MATERIAL ACCORDING TO THE FOLLOWING NOTES. THE ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THIS WORK. ALL EXCAVATIONS WITHIN THE AFOREMENTIONED LIMITS SHALL BE PAID FOR UNDER THE ORIGINAL PLAN BID ITEMS.

ALL MATERIAL EXCAVATED BY THE CONTRACTOR BETWEEN THESE LIMITS MAY BE STOCKPILED IN AN AREA PROVIDED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. THE ENGINEER MAY PERMIT TEMPORARY STORAGE OF THE EXCAVATED MATERIAL IN A LINED AND COVERED ROLL-OFF BOX. THE ENGINEER MAY PERMIT TEMPORARY STORAGE OF THE EXCAVATED MATERIAL ON AN IMPERMEABLE MEMBRANE. THE MEMBRANE SHALL BE SURROUNDED BY BALES OF STRAW TO PREVENT THE SUSPECTED SOILS FROM COMING IN CONTACT WITH THE ORIGINAL SOILS. AN IMPERMEABLE MEMBRANE SHALL BE PLACED OVER THE STOCKPILE TO PREVENT CONTACT WITH PRECIPITATION AND/OR SURFACE RUN-OFF. THE ENGINEER MAY PERMIT THE CONTRACTOR TO DIRECT LOAD THE EXCAVATED CONTAMINATED MATERIAL INTO TRUCKS.

THIS MATERIAL SHALL BE PROPERLY TESTED, TRANSPORTED, AND DISPOSED OF IN A LICENSED (BY THE LOCAL HEALTH DEPARTMENT) AND PERMITTED (BY THE OHIO ENVIRONMENTAL PROTECTION AGENCY) SOLID WASTE FACILITY.

THE CONTRACTOR SHALL COMPLETE ALL MANIFEST FOR MATERIAL TO BE TRANSPORTED AND PROVIDE TO THE ENGINEER FOR SIGNATURE. THE CONTRACTOR IS TO OBTAIN ALL NECESSARY PERMITS AND APPROVALS TO TRANSPORT THE MATERIAL TO A LICENSED AND PERMITTED DISPOSAL FACILITY. THE CONTRACTOR IS TO CONTACT THE DISPOSAL FACILITY TO DETERMINE IF ANY ADDITIONAL TESTING IS REQUIRED FOR DISPOSAL. THE CONTRACTOR IS TO PROVIDE ANY ADDITIONAL SAMPLING AND ANALYSIS OF THE MATERIAL AS REQUIRED BY THE DISPOSAL FACILITY. THE CONTRACTOR SHALL OBTAIN ALL SIGNATURES ON THE MANIFEST AFTER TRANSPORTING AND DISPOSAL OF THE MATERIAL AND PROVIDE A FINAL COPY TO THE ENGINEER.

THE CONTRACTOR SHALL FURNISH ALL THE LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO PROPERLY HANDLE, STORE (IF NECESSARY), TEST FOR DISPOSAL, TRANSPORT, AND DISPOSEO F REGULATED MATERIALS, INCLUDING ANY REQUIRED PERMITS, APPROVALS, OR FEES WITHIN THE LIMITS IDENTIFIED ABOVE. PAYMENT FOR THIS WORK SHALL BE MADE AT THE CONTRACT PRICE BID PER TON. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

ITEM 690 - SPECIAL - WORK INVOLVING PETROLEUM CONTAMINATED SOILS	12 TON

BIKE PATH PROTECTION

1. AREAS NOT TO BE IMPROVED BUT THAT ARE DISTURBED BY CONSTRUCTION WILL BE RESTORED AND SEEDED/LANDSCAPED TO MATCH PRE-CONSTRUCTION CONDITIONS

2. THE CONTRACTOR AND ODOT WILL WORK WITH THE PARK TO MAINTAIN ACCESS TO THE BIKE PATH DURING THE INTERSECTION IMPROVEMENT PROJECT'S ASPECTS THAT DO NOT INVOLVE THE REPLACEMENT OF THE BIKE PATH BRIDGE.

3. APPROPRIATE SIGNS WILL BE INSTALLED TO ALERT USERS OF CONSTRUCTION ACTIVITIES IN PROXIMITY TO RECREATIONAL FACILITIES OR FEATURES.

4. NO STAGING AND/OR STORAGE OF CONSTRUCTION MATERIALS WILL OCCUR OUTSIDE THE PROJECT CONSTRUCTION AREA WITHIN THE BIKE PATH PROPERTY.

PAVEMENT REPAIR

THE FOLLOWING QUANTITY HAS BEEN PROVIDED FOR PAVEMENT REPAIR SEPARATE FROM THE PAVEMENT WIDENING.

ITEM 253 - PAVEMENT REPAIR 2,135 SQ. YD.

THE ABOVE QUANTITIES ARE BASED ON A MINIMUM PAVEMENT REPAIR WIDH OF FOUR FEET USING 6" ITEM 304 - AGGREGATE BASE AND 10" ITEM 305 - CONCRETE BASE, CLASS QC1.

ALL PAVEMENT REPAIRS SHALL BE COMPLETE BEFORE PLACEMENT OF SURFACE AND INTERMEDIATE COURSES.

PROVIDE ANY MATERIALS USED OUTSIDE THE LIMITS STATED AT NO ADDITIONAL COST.

MANUFACTURED WATER QUALITY STRUCTURE

THIS PLAN UTILIZES MANUFACTURED WATER QUALITY STRUCTURES FOR WATER QUALITY TREATMENT. AREAS HAVE BEEN SHOWN IN THE PLANS FOR PLACEMENT OF AN OFF-LINE SYSTEM. PAYMENT FOR THESE DEVICES SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR ITEM 895, MANUFACTURED WATER QUALITY STRUCTURE, TYPE 4.

DEL-36-10.59

CALCULATED CEL CHECKED CSR

MAINTENANCE OF TRAFFIC GENERAL NOTES

DEL-36-10.59

ITEM 614, MAINTAINING TRAFFIC AS PER PLAN

IT IS THE INTENT OF THE FOLLOWING SUGGESTED SEQUENCE OF CONSTRUCTION TO PROVIDE A WORK AREA FOR THE CONTRACTOR WHILE ALSO MAINTAINING TRAFFIC IN A MANNER WHICH IS SAFE FOR THE TRAVELING PUBLIC: THEREFORE, ALL PHASES SHALL HAVE A STRICT ADHERENCE. COMPLETE EACH PHASE PRIOR TO ADVANCING TO THE NEXT CONSTRUCTION PHASE. THE CONTRACTOR MAY IN LIEU OF THIS METHOD OF OPERATION, SUBMIT IN WRITING, HIS OWN METHOD OF OPERATION TO THE ENGINEER FOR REVIEW AND APPROVAL. THE CONTRACTOR SHALL PROVIDE AT THE PRECONSTRUCTION CONFERENCE A SET OF REPRODUCIBLE PRINTS (SCALE 1"=40' OR 1"=20') SHOWING HOW HE PLANS TO MAINTAIN TRAFFIC IN ACCORDANCE WITH THE OMUTCD AND THESE TRAFFIC MAINTENANCE NOTES. THESE PLANS WILL HAVE TO BE REVIEWED AND APPROVED BY THE CITY OF DELAWARE, THE CONTRACTOR WILL BE ADVISED AS TO THE REVIEW RESULTS IN WRITING WITHIN THIRTY (30) DAYS.

SEQUENCE OF CONSTRUCTION

PHASE 0

PRIOR TO STARTING PHASE 1, CONSTRUCT THE STORM SEWER CONDUITS AND WATER LINE USING LANE CLOSURES PER SCD RDWD-29.0

PHASE 1

SHIFT TRAFFIC TO THE NORTH SIDE OF E. WILLIAM ST. (U.S. 36) TRAFFIC IS TO BE MAINTAINED ON EXISTING PAVEMENT WITH TWO (2) ELEVEN (11) FOOT LANES, ONE (1) LANE IN EACH DIRECTION.

CONSTRUCT THE PAVEMENT WIDENING, CURB, DRAINAGE FACILIIES, WALK, AND DRIVES ALONG THE SOUTH SIDE OF E. WILLIAM ST. (U.S. 36) FROM THE INTERSECTION OF LAKE ST. (U.S. 42). TO E. POINT CROSSING.

CONSTRUCT PAVEMENT UP TO THE INTERMEDIATE COURSE.

DETOUR PEDESTRIANS TO THE SIDEWALK OF THE OTHER SIDE OF THE STREET IN ACCORDANCE WITH MT-110.10.
CONSTRUCT SIDE STREETS PART-WIDTH, MAINTAINING TWO-WAY ONE LANE TRAFFIC USING FLAGGERS.

PHASE 2

SHIFT TRAFFIC TO THE SOUTH SIDE OF E. WILLIAM ST. (U.S. 36) TRAFFIC IS TO BE MAINTAINED ON PROPOSED AND EXISTING PAVEMENT WITH TWO (2) ELEVEN (11) FOOT LANES, ONE (1) LANE IN EACH DIRECTION.

CONSTRUCT THE PAVEMENT WIDENING, CURB, DRAINAGE FACILIIES, WALK, AND DRIVES ALONG THE NORTH SIDE OF E. WILLIAM ST. (U.S. 26) FROM THE INTERSECTION OF LAKE ST. (U.S. 42) TO E. POINT CROSSING.

CONSTRUCT PAVEMENT UP TO THE INTERMEDIATE COURSE.

DETOUR PEDESTRIANS TO THE SIDEWALK OF THE OTHER SIDE OF THE STREET IN ACCORDANCE WITH MT-110.10.
CONSTRUCT SIDE STREETS PART-WIDTH, MAINTAINING TWO-WAY ONE LANE TRAFFIC USING FLAGGERS.

PHASE 3

PERFORM PAVEMENT PLANING OF THE CENTER LANE AND PLACE SURFACE COURSE ON THE ENTIRE PROJECT USING FLAGGERS IN ACCORDANCE WITH MT-97.11.

IRON MAN COMPETITION

THE BRIDGE SHALL REMAIN IN SERVICE UNTIL 7/28/2019 TO ACCOMODATE THE IRON MAN COMPETITION

DROP-OFFS IN WORK ZONES

THE DROP-OFF ADJACENT TO THE TRAVELED LANE SHALL BE IN ACCORDANCE WITH MT-101.90. THE COST TO MEET THESE REQUIREMENTS SHALL BE INCLUDED IN THE BID PRICE FOR ITEM 614-MAINTENANCE OF TRAFFIC.

ITEM 614, MAINTAINING TRAFFIC (TIME LIMITATION ON A DETOUR)

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES.

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH C&MS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

ITEM 614 - LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS

USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED BELOW WILL NOT BE PERMITTED AT PROJECT COST. LEOS SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF C&MS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHALL BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

* DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.

* DURING A TRAFFIC SIGNAL INSTALLATION WHEN IMPACTING THE NORMAL FUNCTION OF THE SIGNAL OR THE FLOW OF TRAFFIC OR WHEN TRAFFIC NEEDS TO BE DIRECTED THROUGH AN ENERGIZED TRAFFIC SIGNAL CONTRARY TO THE SIGNAL DISPLAY (E.G., DIRECTING MOTORISTS THROUGH A RED LIGHT).

IN ADDITION TO THE REQUIREMENT OF C&MS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHOULD BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

* FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED FOR LONG-TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP). IN GENERAL, LEOS SHOULD BE POSITIONED AT THE POINT OF LANE RESTRICTION OR ROAD CLOSURE AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH INTERSECTIONS IN WORK ZONES.

* WHEN CONSTRUCTION VEHICLES ARE ENTERING/EXITING THE ZONE DIRECTLY FROM/INTO AN OPEN LANE OF TRAFFIC. IF A LANE HAS BEEN CLOSED TO PROVIDE AN ACCELERATION/ DECELERATION LANE FOR THE VEHICLE, THE LEO WILL NOT BE REQUIRED.

LEOS SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO APPREHEND MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF A MOTORIST'S ACTIONS ARE CONSIDERED TO BE RECKLESS, THEN PURSUIT OF THE MOTORIST IS APPROPRIATE.

THE LEOS WORK AT THE DIRECTION OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF THE LEOS WITH THE APPROPRIATE AGENCIES AND COMMUNICATING THE INTENTIONS OF THE PLANS WITH RESPECT TO DUTIES OF THE LEOS. THE ENGINEER SHALL HAVE FINAL CONTROL OVER THE LEOS' DUTIES AND PLACEMENT, AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES.

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING HIS/HER SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF HIS/HER SHIFT. THE LEO SHALL REPORT TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT. ONCE THE LEO HAS COMPLETED THE DUTIES DESCRIBED ABOVE AND STILL HAS TIME REMAINING ON HIS/HER SHIFT, THE LEO MAY BE ASKED TO PATROL THROUGH THE WORK ZONE (WITH FLASHING LIGHTS OFF) OR BE PLACED AT A LOCATION TO DETER MOTORISTS FROM SPEEDING. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHALL NOTIFY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO-WAY COMMUNICATION DEVICE WHICH SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

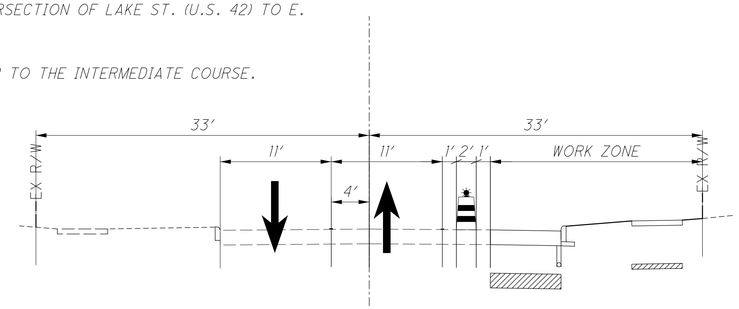
LEOS (WITH PATROL CAR) REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 200 HOURS

THE HOURS PAID SHALL INCLUDE ANY MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

ANY ADDITIONAL COSTS (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF AN LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR

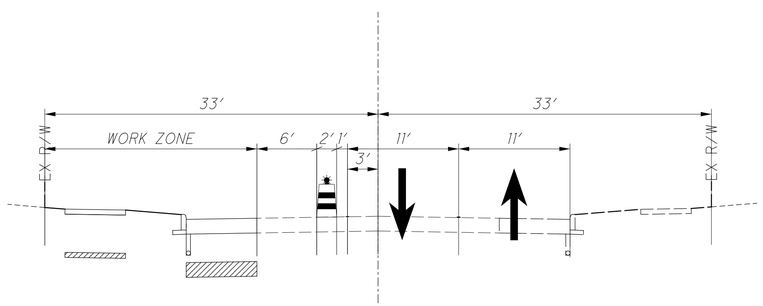
℄ CONST. E. WILLIAM ST. (U.S. 36)
PHASE 1



TYPICAL SECTION
PHASE 1

- WORK ZONE

℄ CONST. E. WILLIAM ST. (U.S. 36)
PHASE 2



TYPICAL SECTION
PHASE 2

- WORK ZONE

EXISTING TRAFFIC SIGN MAINTENANCE

SPECIAL CARE SHALL BE TAKEN TO MAINTAIN EXISTING STREET NAME SIGNS AND STOP SIGNS. IF NECESSARY, THE CONTRACTOR SHALL RELOCATE THESE SIGNS OUT OF THE WAY OF CONSTRUCTION, BUT IN CONFORMANCE WITH OMUTCD. ANY DAMAGED SIGN SHALL BE REPLACED AT THE EXPENSE OF THE CONTRACTOR.

PERMANENT TRAFFIC CONTROL

ALL PERMANENT TRAFFIC CONTROL NOT IN CONFLICT WITH THE CONTROLS SHALL BE MAINTAINED THROUGHOUT THE PROJECT BY THE CONTRACTOR. THE CONTRACTOR SHALL ASSUME ALL LIABILITY FOR MISSING, DAMAGED, AND IMPROPERLY PLACED TRAFFIC CONTROL DEVICES.

PEDESTRIAN ACCESS

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND SAFE MOVEMENT OF PEDESTRIANS THROUGH, AROUND AND AWAY FROM THE CONSTRUCTION SITE. THE SAFETY OF PEDESTRIAN TRAFFIC SHALL BE CONSIDERED AT ALL TIMES IN THE PROVISION OF TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS AND NOTES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE LIGHTS, SIGNS, BARRICADES, AND OTHER WARNINGS TO PHYSICALLY SEPARATE THE PEDESTRIAN FROM HAZARDS INCIDENTAL TO THE CONSTRUCTION OPERATIONS SUCH AS OPEN EXCAVATIONS, ETC. AT ALL TIME, THE PEDESTRIAN MOT SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.

NOTIFICATION OF CONSTRUCTION INITIATION

AT LEAST FOURTEEN DAYS PRIOR TO STARTING INITIAL CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL ADVISE THE DISTRICT OFFICE OF COMMUNICATIONS VIA EMAIL AT D06.PIO@DOT.OHIO.GOV, THE DISTRICT WORK ZONE TRAFFIC MANAGER VIA EMAIL AT D06.MOT@DOT.OHIO.GOV, THE CENTRAL OFFICE SPECIAL HAUL PERMITS SECTION BY FAX AT (614)728-4099, AND THE CITY OF DELAWARE AT (740)203-1810 OF THE ANTICIPATED START DATE OF ANY CONSTRUCTION ACTIVITIES INCLUDING BUT NOT LIMITED TO THE PLACING OF WORK ZONE SIGNS. THE NOTIFICATION SHALL ALSO INCLUDE THE PROJECT NUMBER, PID, NAME AND PHONE NUMBER OF THE CONTRACTOR, A POINT OF CONTACT AND THE ANTICIPATED IMPACT ON TRAFFIC. THE CONTRACTOR WILL IMMEDIATELY INFORM THE DISTRICT OFFICE OF COMMUNICATIONS AND THE DISTRICT WORK ZONE TRAFFIC MANAGER OF ANY AND ALL DELAYS AND/OR CHANGES REGARDING THE CONSTRUCTION INITIATION DATE.

CONTRACTOR WILL CONTACT THE CITY OF DELAWARE, THE PUBLIC INFORMATION OFFICER FOR THE DELAWARE COUNTY ENGINEER'S OFFICE, AND ODOT DISTRICT 6 FOURTEEN DAYS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES. ALL LOCAL SCHOOLS AND EMERGENCY SERVICES WHICH ARE LIKELY TO UTILIZE THE PROJECT ROADWAY ARE TO BE NOTIFIED BY THE CITY OF DELAWARE OF THE DETOUR/ CONSTRUCTION NOT LESS THAN 2 WEEKS PRIOR TO THE ROAD CLOSURE

TRAFFIC CONTROL DEVICES

ALL TRAFFIC CONTROL DEVICES SHALL BE FURNISHED ERECTED, MAINTAINED, AND REMOVED BY THE CONTRACTOR IN ACCORDANCE WITH THE MOST RECENT EDITION OF THE "OHIO MANUAL OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION AND MAINTENANCE OPERATIONS". THE CONTRACTOR MUST PROVIDE THE CITY WITH 24-HOUR CONTACT INFORMATION IN THE EVENT THE MOT ITEMS REQUIRES ADJUSTMENT, REPAIR OR REPLACEMENT.

NOTIFICATION OF TRAFFIC RESTRICTIONS

TRAFFIC LANES SHALL BE FULLY OPEN TO TRAFFIC AT ALL TIMES AND INGRESS AND EGRESS SHALL BE MAINTAINED TO PUBLIC AND PRIVATE PROPERTY. LANE RESTRICTIONS OR CLOSURES REQUIRED DURING CONSTRUCTION MUST BE APPROVED BY THE DEPARTMENT OF ENGINEERING SERVICES AND PUBLIC WORKS DEPARTMENTS A MINIMUM OF TWO-WEEKS IN ADVANCE OF ANY WORK BEING PERFORMED. A MAINTENANCE OF TRAFFIC APPLICATION MUST BE SUBMITTED AND APPROVED PRIOR TO STARTING ANY WORK THAT EFFECTS TRAFFIC FLOWS. WORK REQUIRING PARTIAL OR COMPLETE CLOSURE OF ANY PUBLIC STREET REQUIRES 48-HOUR ADVANCE NOTIFICATION TO ALL AFFECTED RESIDENTS AND BUSINESSES. NOTIFICATIONS SHALL BE PREPARED AND DISTRIBUTED BY THE CONTRACTOR PRIOR TO SCHEDULED WORK. CITY APPROVAL OF ALL NOTIFICATIONS IS REQUIRED IN ADVANCE OF DISTRIBUTION.

THROUGHOUT THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IN WRITING OF ALL TRAFFIC RESTRICTIONS AND UPCOMING MAINTENANCE OF TRAFFIC CHANGES. THE CONTRACTOR SHALL ENSURE THE WRITTEN NOTIFICATION IS SUBMITTED IN A TIMELY MANNER TO ALLOW THE PROJECT ENGINEER TO MEET THE REQUIRED TIME FRAMES SET FORTH IN THE TABLE BELOW. THIS NOTIFICATION SHALL BE RECEIVED BY THE PROJECT ENGINEER PRIOR TO THE PHYSICAL SETUP OF ANY APPLICABLE SIGNS OR MESSAGE BOARDS. INFORMATION SHOULD INCLUDE BUT IS NOT LIMITED TO ALL CONSTRUCTION ACTIVITIES THAT IMPACT OR INTERFERE WITH TRAFFIC AND SHOULD LIST THE SPECIFIC LOCATION, TYPE OF WORK, ROAD STATUS, DATE AND TIME OF RESTRICTION, DURATION OF RESTRICTION, NUMBER OF LANES MAINTAINED, DETOUR ROUTES IF APPLICABLE, AND ANY OTHER INFORMATION REQUESTED BY THE PROJECT ENGINEER.

NOTIFICATION TIME FRAME TABLE

ITEM DURATION OF CLOSURE NOTIFICATION DUE TO DISTRICT 6 COMMUNICATIONS OFFICE

RAMP & ROAD CLOSURES
- >= 2 WEEKS 14 CALENDAR DAYS PRIOR TO CLOSURE
- > 12 HOURS & < 2 WEEKS 7 CALENDAR DAYS PRIOR TO CLOSURE
- < 12 HOURS 2 BUSINESS DAYS PRIOR TO CLOSURE

LANE CLOSURES & RESTRICTIONS
- >= 2 WEEKS 7 CALENDAR DAYS PRIOR TO CLOSURE
- < 2 WEEKS 2 BUSINESS DAYS PRIOR TO CLOSURE

ANY UNFORESEEN CONDITIONS NOT SPECIFIED IN THE PLANS REQUIRING TRAFFIC RESTRICTIONS SHALL ALSO BE REPORTED TO THE PROJECT ENGINEER USING THE NOTIFICATION TIME FRAME TABLE.

PERMANENT TRAFFIC CONTROL

ALL PERMANENT TRAFFIC CONTROL NOT IN CONFLICT WITH THE CONTROLS SHALL BE MAINTAINED THROUGHOUT THE PROJECT BY THE CONTRACTOR. THE CONTRACTOR SHALL ASSUME ALL LIABILITY FOR MISSING, DAMAGED, AND IMPROPERLY PLACED TRAFFIC CONTROL DEVICES.

PUBLIC OUTREACH AND NOTIFICATION

THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE DISTRICT 6 PUBLIC INFORMATION OFFICE VIA EMAIL AT D06.PIO@DOT.OHIO.GOV TO COORDINATE EFFORTS TO NOTIFY ADJACENT RESIDENTS AND BUSINESSES OF THE UPCOMING RESURFACING PROJECT. ADVANCE NOTIFICATION SHALL OCCUR NO LATER THAN FOURTEEN (14) DAYS PRIOR TO THE FIRST DAY OF WORK. ALL NOTIFICATIONS SHALL BE MADE UTILIZING THE TEMPLATE PROVIDED BY THE DISTRICT 6 PUBLIC INFORMATION OFFICE.

LANES OPEN DURING HOLIDAYS AND SPECIAL EVENTS

NO WORK SHALL BE PERFORMED AND THE SAME NUMBER OF LANES AS WERE AVAILABLE AT THE START OF THE PROJECT SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS AND EVENTS:

HOLIDAYS:
CHRISTMAS, FOURTH OF JULY, NEW YEAR'S EVE, LABOR DAY, MEMORIAL DAY, AND THANKSGIVING. THE PERIOD OF TIME THAT THE LANES ARE TO BE OPEN DEPENDS ON THE DAY OF THE WEEK ON WHICH THE HOLIDAY FALLS. THE FOLLOWING SCHEDULE SHALL BE USED TO DETERMINE THIS PERIOD:

DAY OF HOLIDAY	TIME ALL LANES MUST BE OPEN TO TRAFFIC
SUNDAY	12:00 NOON FRIDAY THROUGH 6:00 AM MONDAY
MONDAY	12:00 NOON FRIDAY THROUGH 6:00 AM TUESDAY
TUESDAY	12:00 NOON MONDAY THROUGH 6:00 AM WEDNESDAY
WEDNESDAY	12:00 NOON TUESDAY THROUGH 6:00 AM THURSDAY
THURSDAY	12:00 NOON WEDNESDAY THROUGH 6:00 AM FRIDAY
THANKSGIVING	5:00 AM WEDNESDAY THROUGH 6:00 AM MONDAY
FRIDAY	12:00 NOON THURSDAY THROUGH 6:00 AM MONDAY
SATURDAY	12:00 NOON FRIDAY THROUGH 6:00 AM MONDAY

SPECIAL EVENTS:

DELAWARE COUNTY FAIR - LANE OR SHOULDER CLOSURES ARE NOT PERMITTED DURING THE DELAWARE COUNTY FAIR 6AM-10PM DAILY ON THE FOLLOWING ROUTES:
US 23 BETWEEN SR 750 AND SR 98
US 36 BETWEEN SR 257 AND I-71
SR 37 BETWEEN SR 257 AND I-71
US 42 BETWEEN SR 229 AND SR 745
SR 521 BETWEEN US 36 AND SR 61
NO EXTENSIONS OF TIME SHALL BE GRANTED FOR DELAYS IN MATERIAL DELIVERIES, UNLESS SUCH DELAYS ARE INDUSTRY WIDE, OR FOR LABOR STRIKES, UNLESS SUCH STRIKES ARE AREA WIDE. SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE IN THE AMOUNT OF $100 FOR EACH MINUTE THE ABOVE DESCRIBED LANE CLOSURE RESTRICTIONS ARE VIOLATED.

IRON MAN DATE TBD

USE OF WEIGHTED CHANNELIZERS

THE WEIGHTED CHANNELIZER MAY BE USED IN ACCORDANCE WITH THIS SECTION. THE WEIGHTED CHANNELIZER SHALL BE PREDOMINANTLY ORANGE IN COLOR AND SHALL BE MADE OF LIGHTWEIGHT, FLEXIBLE, AND DEFORMBABLE MATERIAL. THEY SHALL BE AT LEAST 42 INCHES IN HEIGHT WITH A WEIGHTED BASE. THEY MAY HAVE A HANDLE OR LIFTING DEVICE WHICH EXTENDS ABOVE THE 42 INCHES MINIMUM HEIGHT.

THE MARKINGS ON THE WEIGHTED CHANNELIZER SHALL BE HORIZONTAL, CIRCUMFERENTIAL, ALTERNATING ORANGE AND WHITE RETROREFLECTIVE STRIPES 6 INCHES WIDE. EACH WEIGHTED CHANNELIZER SHALL HAVE A MINIMUM OF TWO ORANGE AND TWO WHITE STRIPES. ANY NON-RETROREFLECTIVE SPACES BETWEEN THE HORIZONTAL ORANGE AND WHITE STRIPES SHALL NOT EXCEED 2 INCHES WIDE.

THE WEIGHTED CHANNELIZER SHALL HAVE A 4-INCH MINIMUM WIDTH, REGARDLESS OF ORIENTATION.

USE OF WEIGHTED CHANNELIZERS ON FREEWAYS AND MULTILANE HIGHWAYS SHALL BE LIMITED TO SHORT-TERM OPERATIONS FOR EITHER DAY OR NIGHT.

UPON COMPLETION OF WORK, THE WEIGHTED CHANNELIZERS SHALL BE REMOVED. THE WEIGHTED CHANNELIZERS MAY AGAIN BE PLACED ON THE HIGHWAY WHEN THE WORK IS TO RESUME ON THE FOLLOWING DAY OR NIGHT.

ANY LANE CLOSURE USING CHANNELIZATION DEVICES, EXPECTED TO REMAIN FOR MORE THAN TWELVE HOURS, SHALL REQUIRE THE USE OF DRUMS OR BARRICADES.

WHEN USED AT NIGHT, WEIGHTED CHANNELIZERS SHALL ONLY BE PLACED IN THE TANGENT AREA AND AT A MAXIMUM SPACING OF 40 FEET. THE TANGENT AREA IS DEFINED AS THE AREA AFTER THE TRANSITION TAPER WHERE THE WORK TAKES PLACE. DRUMS SHALL BE USED IN THE TRANSITION TAPERS FOR NIGHT OPERATIONS.

STEPS SHOULD BE TAKEN TO ENSURE THAT THE WEIGHTED CHANNLEIZERS WILL NOT BE BLOWN OVER OR DISPLACED BY WIND OR MOVING TRAFFIC. BALLASTS SHOULD NOT PRESENT A HAZARD IF THE WEIGHTED CHANNELIZERS ARE IN ADVERTENTLY STRUCK, NOR SHOULD THEY AFFECT THE VISIBILITY OF THE WEIGHTED CHANNELIZERS. ALL BALLASTS USED SHOULD BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS. PAYMENT SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614 MAINTAINING TRAFFIC.

ITEM 614 - BUSINESS ENTRANCE (M4-H15) SIGN, AS PER PLAN

THE BUSINESS ENTRANCE (M4-H15) SIGN SHOULD BE PROVIDED AT EACH TEMPORARILY RELOCATED COMMERCIAL DRIVEWAY FOR WHICH THE RELOCATION IS NOT OBVIOUS TO THE MOTORIST. THE PROJECT ENGINEER SHALL DETERMINE WHETHER OR NOT THE DRIVEWAY RELOCATION IS, OR IS NOT, OBVIOUS AND WHETHER OR NOT A SIGN SHOULD BE PROVIDED. ONLY ONE SIGN PER BUSINESS SHALL BE PERMITTED. THE SIGN SHALL BE 36 INCH X 48 INCH IN SIZE WITH TYPE G OR TYPE H ORANGE RETROREFLECTIVE SHEETING. THE SIGN LEGEND SHALL BE PLACED ON BOTH SIDES OF THE SIGN (BACK TO BACK). THE SIGN SHALL HAVE THE STANDARD M4-H15 LEGEND WITH THE WORD "BUSINESS" ON THE TOP LINE, EXCEPT UNDER UNUSUAL CIRCUMSTANCES WHERE IT MAY NOT BE INTUITIVE THAT A DRIVEWAY SERVES A SPECIFIC BUSINESS. IN SUCH UNUSUAL CASES, THE ACTUAL BUSINESS NAME MAY BE SUBSTITUTED FOR THE WORD "BUSINESS".

THE SIGN SHALL BE MOUNTED ON TWO NO. 3 POSTS OR ON TEMPORARY POSTS IN ACCORDANCE WITH SCD MT-105.10 AND IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION. THE SIGN SHALL BE CLEARLY VISIBLE AND SHALL CLEARLY IDENTIFY THE LOCATION OF THE DRIVEWAY. THE SIGN SHOULD BE POSITIONED AT 90 DEGREES TO THE DIRECTION(S) OF TRAFFIC. THE SIGN MAY NEED TO BE MOVED FOR EACH PHASE OF THE MAINTENANCE OF TRAFFIC OPERATIONS.

PAYMENT FOR ALL COSTS ASSOCIATED WITH MANUFACTURING, MOUNTING, RELOCATING, AND REMOVING THE SIGN, INCLUDING ALL LABOR, MATERIALS AND EQUIPMENT SHALL BE INCLUDED IN THE CONTRACT PRICE PER EACH FOR ITEM 614-BUSINESS ENTRANCE SIGN.

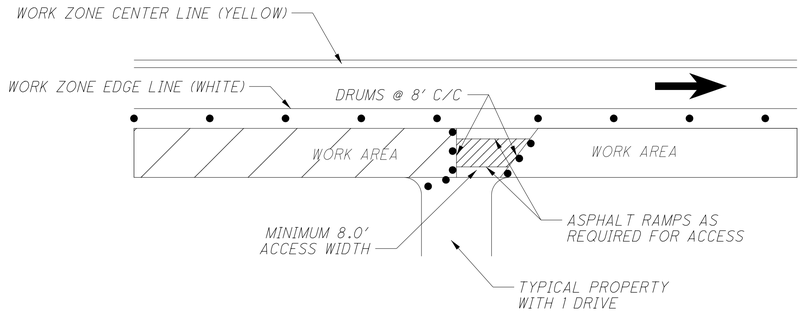
THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR THIS ITEM.

ITEM 614 BUSINESS ENTRANCE SIGN 1 EACH

CALCULATED CEL CHECKED CSR

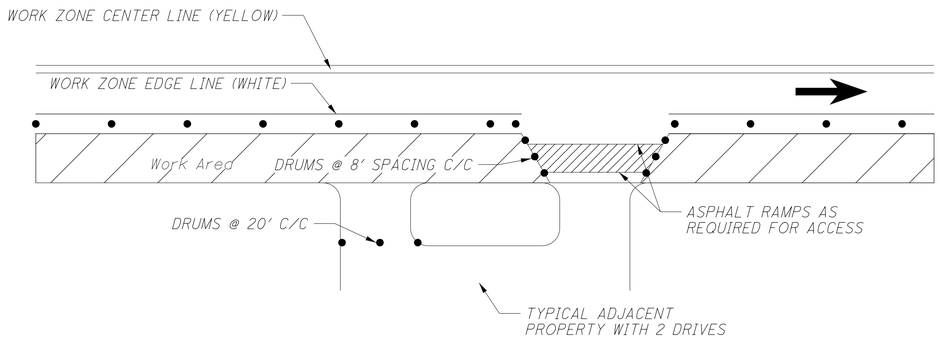
MAINTENANCE OF TRAFFIC GENERAL NOTES

DEL-36-10.59



TYPICAL DRIVEWAY SINGLE ACCESS WITHIN WORK AREA

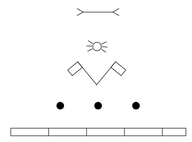
NOT TO SCALE



TYPICAL DRIVEWAY ADJACENT ACESS WITHIN WORK AREA

NOT TO SCALE

LEGEND



TYPE III BARRICADE

TYPE "A" WARNING LIGHT

SAFETY FLAGS

DRUMS

PORTABLE BARRIER

DRUM SPACING CHART	
LOCATION	SPACING
TAPER	15'
WORK AREA WITHOUT DRIVES	25'
CLOSED DRIVEWAY	20'
INTERSECTION RADII	8'

CALCULATED ACF
CHECKED CSR

MAINTENANCE OF TRAFFIC - DRIVEWAY ACCESS DETAILS

DEL-36-10.59

1

M4-8-24
M1-5-30-3

2

M4-8-24
M1-5-30-3
M6-1-21

3

M4-8-24
M1-5-30-3
M5-1-21

4

M4-8-24
M1-5-30-3
M6-1-21

5

M4-8-24
M1-5-30-3
M5-1-21

6

M4-8-24
M1-5-30-3
M6-3-21

7

R11-3-66
M4-10L-48

8

R11-3-66
M4-10R-48

9

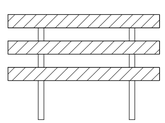
R11-3A-60

10

R11-3A-60

11

R11-2-48 (MODIFIED)



TYPE III BARRICADE

12

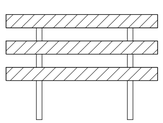
W20-2-36

13

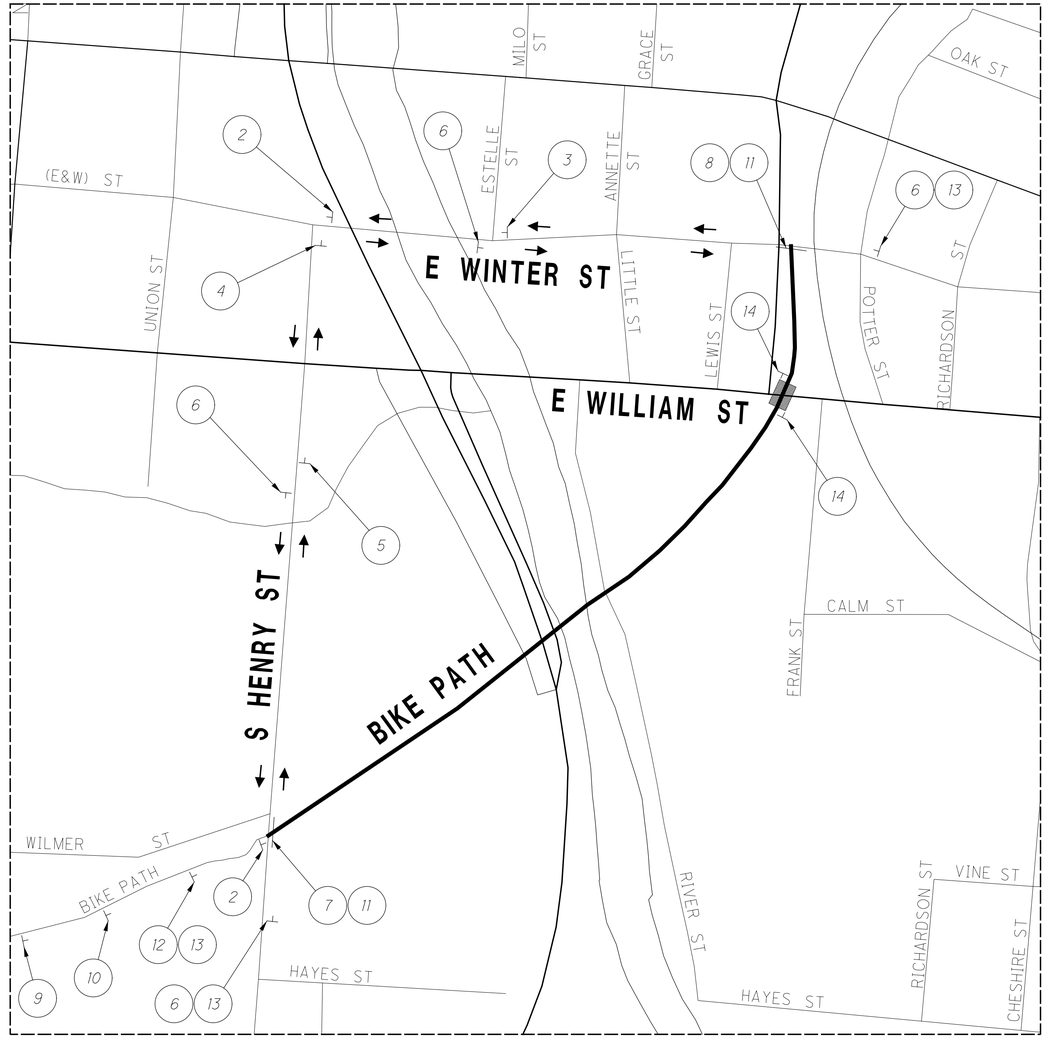
R11-3A-60

14

R11-2-48



TYPE III BARRICADE



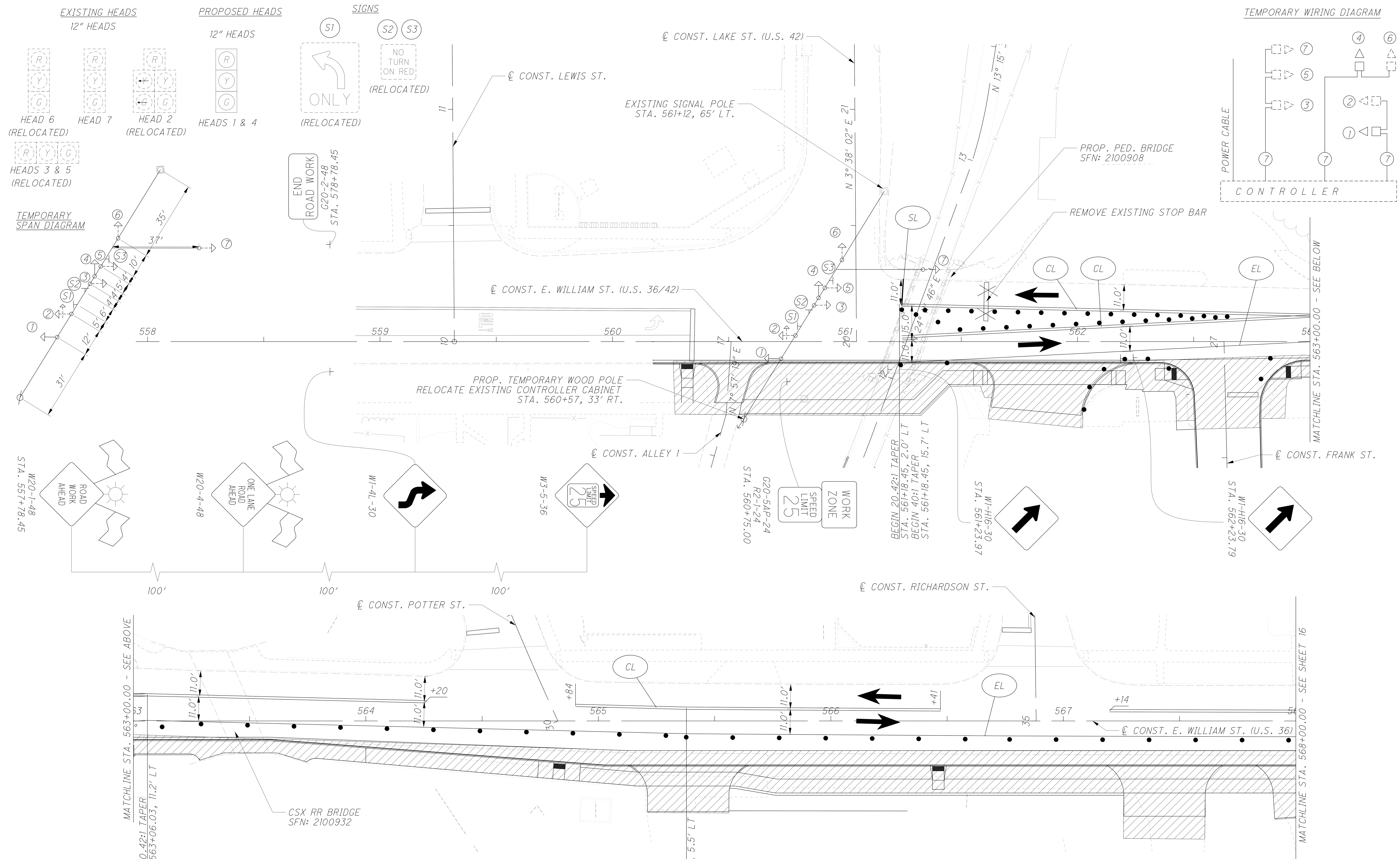
N

HORIZONTAL SCALE IN FEET

CALCULATED JDH
CHECKED CSR

MAINTENANCE OF TRAFFIC
BIKE PATH DETOUR MAP

DEL-36-10.59



EXISTING HEADS
12" HEADS
HEAD 6 (RELOCATED)
HEAD 7
HEAD 2 (RELOCATED)
HEADS 3 & 5 (RELOCATED)
PROPOSED HEADS
12" HEADS
HEADS 1 & 4
SIGNS
S1
ONLY
(RELOCATED)
S2 S3
NO TURN ON RED
(RELOCATED)
END ROAD WORK
G20-2-48
STA. 578+78.45
TEMPORARY SPAN DIAGRAM
℄ CONST. LEWIS ST.
℄ CONST. LAKE ST. (U.S. 42)
EXISTING SIGNAL POLE
STA. 561+12, 65' LT.
N 3° 38' 02" E
N 13° 15'
PROP. PED. BRIDGE
SFN: 2100908
REMOVE EXISTING STOP BAR
℄ CONST. E. WILLIAM ST. (U.S. 36/42)
PROP. TEMPORARY WOOD POLE
RELOCATE EXISTING CONTROLLER CABINET
STA. 560+57, 33' RT.
℄ CONST. ALLEY 1
℄ CONST. FRANK ST.
MATCHLINE STA. 563+00.00 - SEE BELOW
W20-1-48
STA. 557+78.45
ROAD WORK AHEAD
W20-4-48
ONE LANE ROAD AHEAD
W1-4L-30
W3-5-36
SPEED LIMIT 25
G20-5AP-24
R2-1-24
STA. 560+75.00
WORK ZONE
BEGIN 20.42:1 TAPER
STA. 561+18.45, 2.0' LT
BEGIN 40:1 TAPER
STA. 561+18.45, 15.7' LT
W1-H16-30
STA. 561+23.97
W1-H16-30
STA. 562+23.79
100'
TEMPORARY WIRING DIAGRAM
POWER CABLE
CONTROLLER
℄ CONST. POTTER ST.
℄ CONST. RICHARDSON ST.
MATCHLINE STA. 563+00.00 - SEE ABOVE
END 20.42:1 TAPER
STA. 563+06.03, 11.2' LT
CSX RR BRIDGE
SFN: 2100932
END 40:1 TAPER
STA. 565+37.87, 5.5' LT
℄ CONST. E. WILLIAM ST. (U.S. 36)
MATCHLINE STA. 568+00.00 - SEE SHEET 16
SL
CL
EL
HORIZONTAL SCALE IN FEET

NOTES:

1. CONTRACTOR SHALL COORDINATE WITH AEP TO PROVIDE POWER TO TEMPORARY SIGNAL.
2. RELOCATE EXISTING SIGNAL HEADS FROM EXISTING SPAN TO PROPOSED SPAN, INSTALL NEW HEADS AS SHOWN, AND REWIRE SIGNAL HEADS FROM RELOCATED CONTROLLER. ADJUSTMENTS TO SIGNAL HEAD LOCATION SHALL BE DETERMINED IN THE FIELD WITH APPROVAL BY THE ENGINEER.
3. MAINTAIN EXISTING SIGNAL PHASING AND TIMINGS. ANY CHANGES TO PHASING AND/OR TIMINGS SHALL BE APPROVED BY THE ENGINEER.
4. RUN NEW MESSENGER WIRE AND 7/C TO EXISTING SIGNAL HEAD 7 THAT IS ATTACHED TO THE BRIDGE ABUTMENT WALL.

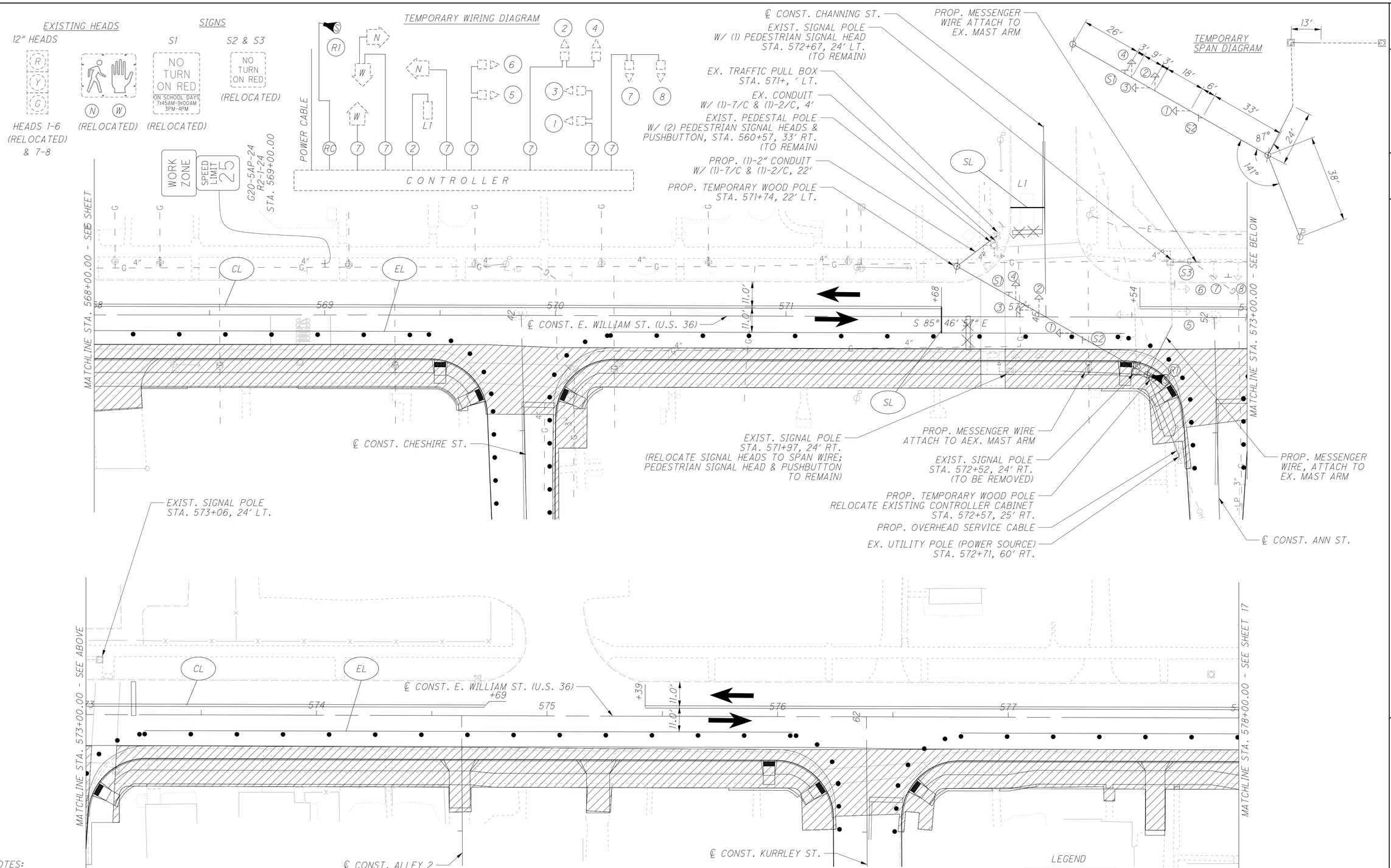
LEGEND

→	TRAFFIC DIRECTION
SL	Work Zone Stop Line, 20"
• • •	DRUMS
(hatched)	WORKZONE
EL	WORK ZONE EDGE LINE (WHITE), 6"
CL	WORK ZONE CENTER LINE, DOUBLE YELLOW, 6"

CALCULATED CEL CHECKED CSR

MAINTENANCE OF TRAFFIC - PHASE 1
STA. 560+00 TO STA. 568+00

DEL-36-10.59



NOTES:

1. CONTRACTOR SHALL COORDINATE WITH AEP TO PROVIDE POWER TO TEMPORARY SIGNAL.
2. RELOCATE EXISTING SIGNAL HEADS FROM EXISTING MAST ARMS TO PROPOSED SPAN, INSTALL NEW HEADS AS SHOWN, AND REWIRE SIGNAL HEADS FROM RELOCATED CONTROLLER. ADJUSTMENTS TO SIGNAL HEAD LOCATION SHALL BE DETERMINED IN THE FIELD WITH APPROVAL BY THE ENGINEER.
3. MAINTAIN EXISTING SIGNAL PHASING AND TIMINGS ANY CHANGES TO PHASING AND/OR TIMINGS SHALL BE APPROVED BY THE ENGINEER. INSTALL RADAR DETECTOR R1 FOR THE NORTHBOUND APPROACH.
4. CONTRACTOR SHALL MAINTAIN A PEDESTRIAN CROSSING (PUSHBUTTONS AND SIGNAL HEADS) TO ELEMENTARY SCHOOL THROUGHOUT CONSTRUCTION. CONTRACTOR SHALL MAINTAIN PEDESTRIAN DETOURS AT ALL TIMES.
5. CONTRACTOR SHALL EXPOSE GAS LINE BEFORE INSTALLING TEMPORARY WOOD POLE AT STA. 571+28, 20' LT.
6. CONTRACTOR SHALL MAINTAIN EXISTING SCHOOL ZONE FLASHER SIGN ASSEMBLIES AT ALL TIMES DURING SCHOOL HOURS. IN THE EVENT THE POWER SUPPLY TO THE SCHOOL FLASHERS IS INTERRUPTED OR DAMAGED BY CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL COORDINATE WITH AEP AND THE ENGINEER TO ENSURE FUNCTIONAL OPERATION OF THE SCHOOL ZONE FLASHERS IS RESTORED IN A TIMELY MATTER.

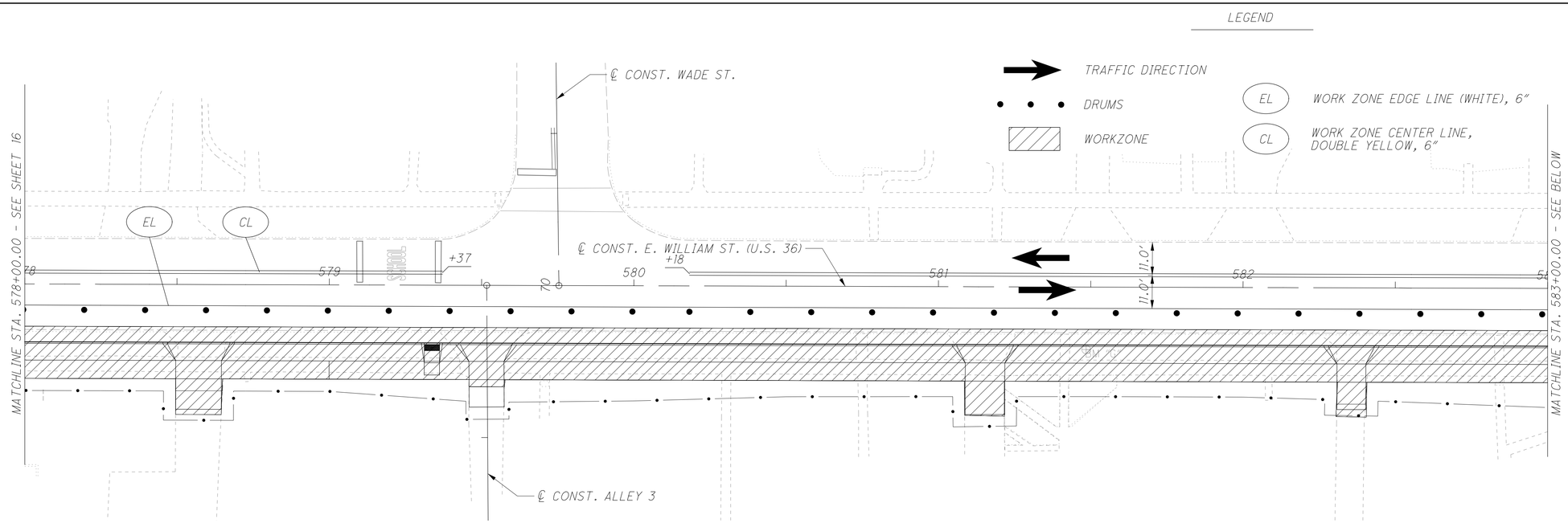
HORIZONTAL SCALE IN FEET: 0, 10, 20, 40

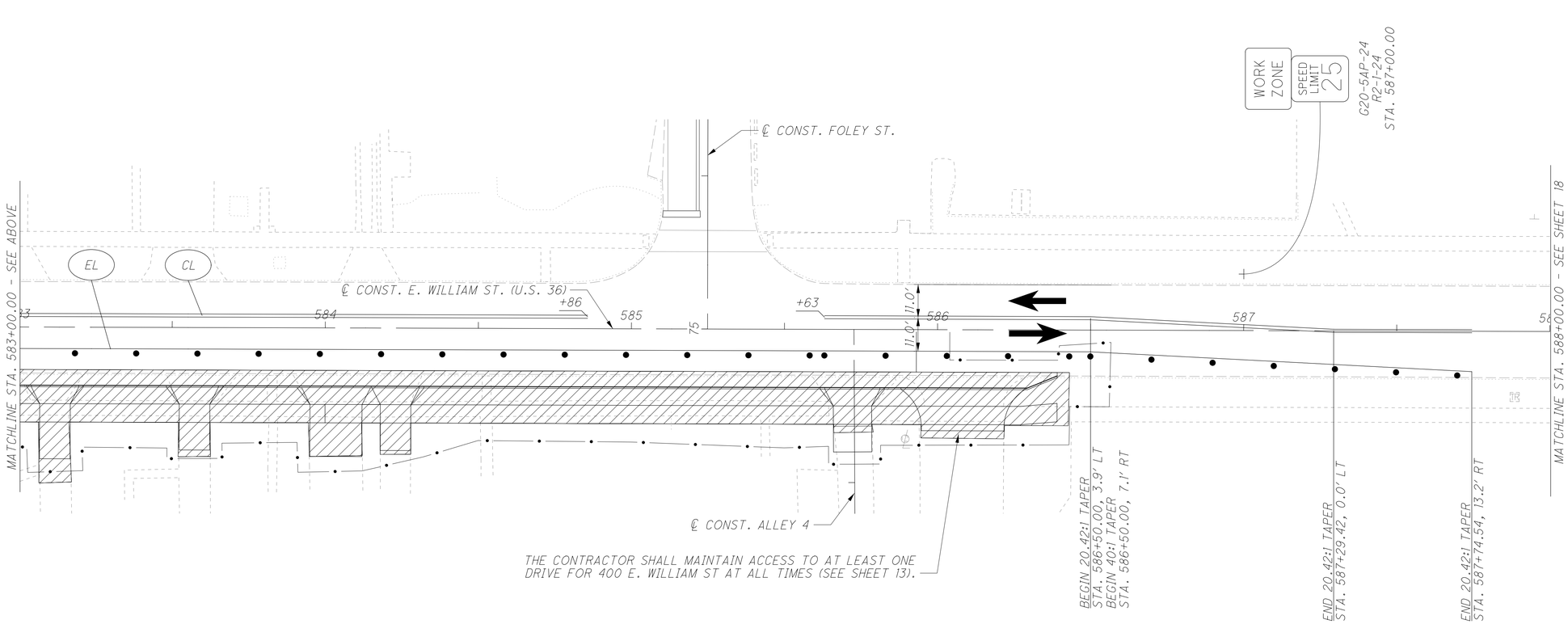
CALCULATED CEL | CHECKED CSR

MAINTENANCE OF TRAFFIC - PHASE 1
STA. 568+00 TO STA. 578+00

DEL-36-10.59

16 / 224





HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED CEL
CHECKED CSR

MAINTENANCE OF TRAFFIC - PHASE 1
STA. 578+00 TO STA. 588+00

DEL-36-10.59

17
224

100'

SPEED LIMIT 25

W3-5-36

W1-4L-30

ONE LANE ROAD AHEAD

W20-4-48

ROAD WORK AHEAD

W20-1-48
STA. 593+29

℄ CONST. E. CENTRAL AVE. (S.R. 37)

87

88

MATCHLINE STA. 588+00.00 - SEE SHEET 17

588

589

590

591

592

℄ CONST. E. WILLIAM ST. (U.S. 36)

ONLY

END ROAD WORK
G20-2-48
STA. 588+00

LEGEND

TRAFFIC DIRECTION

DRUMS

WORKZONE

EL — WORK ZONE EDGE LINE (WHITE), 6"

CL — WORK ZONE CENTER LINE, DOUBLE YELLOW, 6"

N

0 10 20 40
HORIZONTAL SCALE IN FEET

CALCULATED CEL
CHECKED CSR

MAINTENANCE OF TRAFFIC - PHASE 1
STA. 588+00 TO STA. 589+89

DEL-36-10.59

18
224

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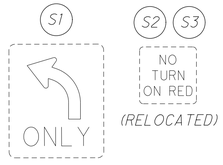
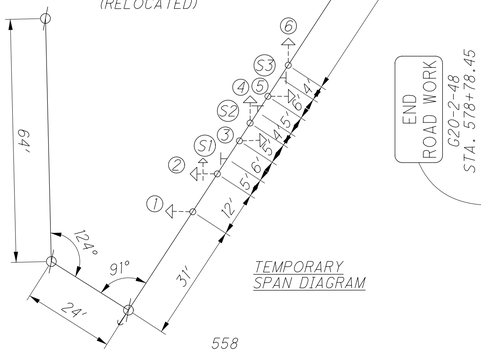
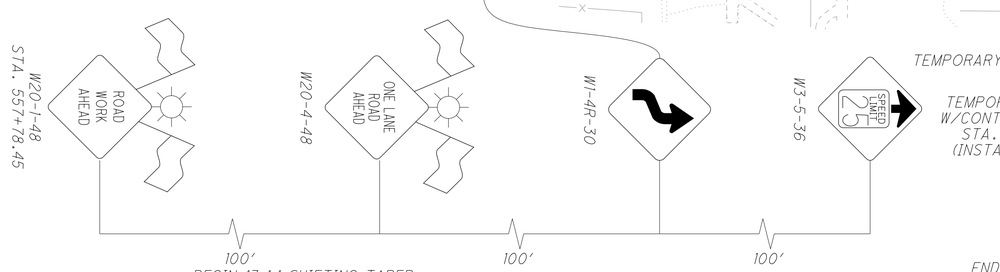
SIGNS

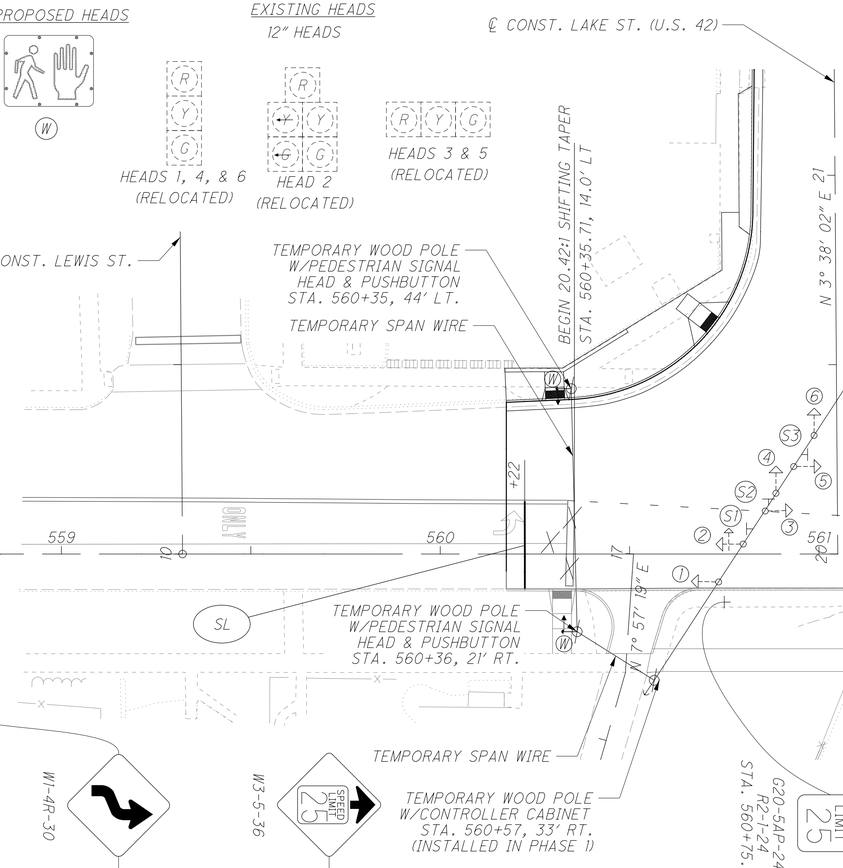


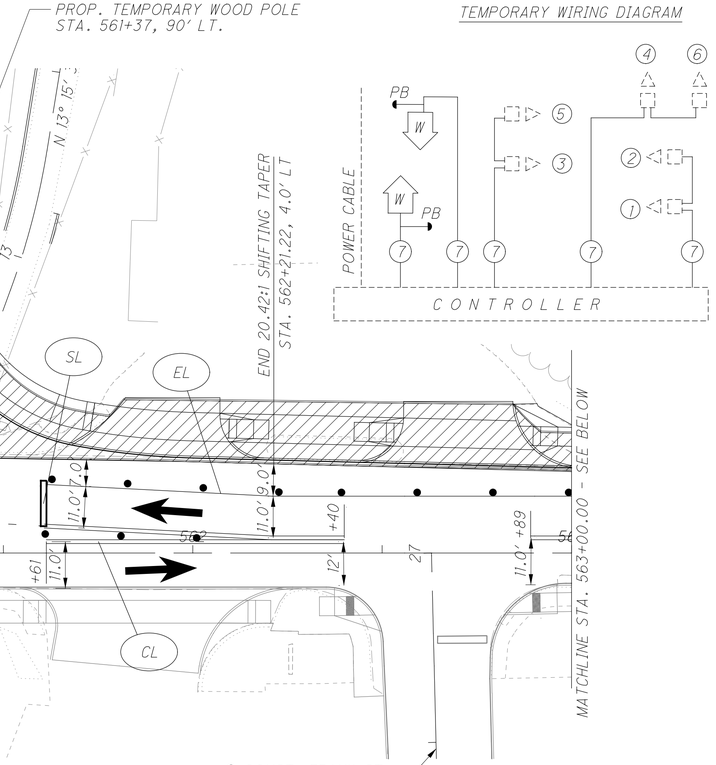
PROPOSED HEADS

EXISTING HEADS
12" HEADS

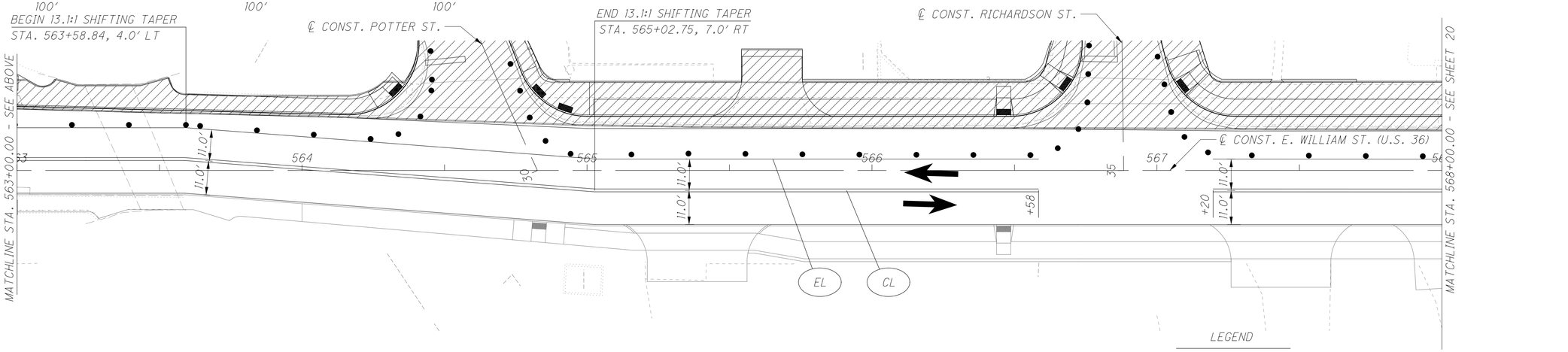








TEMPORARY WIRING DIAGRAM



NOTES:

1. CONTRACTOR SHALL COORDINATE WITH AEP TO PROVIDE POWER TO TEMPORARY SIGNAL.
2. RELOCATE EXISTING SIGNAL HEADS FROM EXISTING SPAN INSTALLED IN PHASE 1 TO PROPOSED SPAN AS SHOWN, AND REWIRE SIGNAL HEADS FROM RELOCATED CONTROLLER. ADJUSTMENTS TO SIGNAL HEAD LOCATION SHALL BE DETERMINED IN THE FIELD WITH APPROVAL BY THE ENGINEER.
3. IMPLEMENT PROPOSED SIGNAL PHASING AND TIMINGS SHOWN IN FINAL SIGNAL PLAN. ANY CHANGES TO PHASING AND/OR TIMINGS SHALL BE APPROVED BY THE ENGINEER.
4. REMOVE EXISTING STOP BAR AND CHANNELIZING LINE AS SHOWN (EASTBOUND APPROACH AT LAKE STREET).

LEGEND

- TRAFFIC DIRECTION
- DRUMS
- WORKZONE
- SL — WORK ZONE STOP LINE, 20"
- EL — WORK ZONE EDGE LINE (WHITE), 6"
- CL — WORK ZONE CENTER LINE, DOUBLE YELLOW, 6"

N

0 10 20 40 HORIZONTAL SCALE IN FEET

CALCULATED CEL CHECKED CSR

MAINTENANCE OF TRAFFIC - PHASE 2
STA. 560+00 TO STA. 568+00

DEL-36-10.59

EXISTING HEADS

12" HEADS

HEADS 1-8 (RELOCATED)

SIGNS

S1

(N) (W) (RELOCATED)

NO TURN ON RED
ON SCHOOL DAYS 7:45AM-9:00AM 3PM-4PM

(RELOCATED)

S2 & S3

NO TURN ON RED

(RELOCATED)

TEMPORARY WIRING DIAGRAM

POWER CABLE

CONTROLLER

WORK ZONE SPEED LIMIT 25

G20-5AP-24
R2-1-24
STA. 560+75.00

MATCHLINE STA. 568+00.00 - SEE SHEET 19

℄ CONST. CHANNING ST.

PROP. TEMPORARY WOOD POLE
STA. 572+41, 25' LT.
RELOCATE PEDESTRIAN SIGNAL HEADS
& PUSHBUTTON, INSTALL DETECTION RADAR

PROP. TEMPORARY WOOD POLE
STA. 573+01, 23' LT.

TEMPORARY WOOD POLE
STA. 571+74, 22' LT.
(INSTALLED IN PHASE 1)
RELOCATE PEDESTRIAN SIGNAL HEAD

568 569 570 571 572 573

11.0' 11.0' 11.0' 11.0'

+41 +30 +80 +45 52

42 45

℄ CONST. E. WILLIAM ST. (U.S. 36)

CL EL SL

MATCHLINE STA. 573+15.00 - SEE BELOW

TEMPORARY SPAN DIAGRAM

47' 10' 4'

26' 3' 12' 17' 6' 14' 16'

19' 41' 11' 19'

70° 43° 141°

℄ CONST. CHESHIRE ST.

TEMPORARY WOOD POLE
WITH CONTROLLER CABINET
STA. 572+57, 25' RT.
RELOCATE PEDESTRIAN SIGNAL
HEAD AND PUSHBUTTON

OVERHEAD SERVICE CABLE

EX. UTILITY POLE (POWER SOURCE)
STA. 572+71, 60' RT.

℄ CONST. ANN ST.

MATCHLINE STA. 573+15.00 - SEE ABOVE

574 575 576 577

11.0' 11.0' 11.0' 11.0'

+26 +73 +41 +06 +72 62

℄ CONST. E. WILLIAM ST. (U.S. 36)

CL EL

MATCHLINE STA. 578+00.00 - SEE SHEET 21

℄ CONST. KURRLEY ST.

NOTES:

1. CONTRACTOR SHALL COORDINATE WITH AEP TO PROVIDE POWER TO TEMPORARY SIGNAL.
2. RELOCATE EXISTING SIGNAL HEADS FROM EXISTING MAST ARMS/SPAN TO PROPOSED SPAN/MAST ARM AS SHOWN, AND REWIRE SIGNAL HEADS FROM RELOCATED CONTROLLER. ADJUSTMENTS TO SIGNAL HEAD LOCATION SHALL BE DETERMINED IN THE FIELD WITH APPROVAL BY THE ENGINEER.
3. MAINTAIN EXISTING SIGNAL PHASING AND TIMINGS. ANY CHANGES TO PHASING AND/OR TIMINGS SHALL BE APPROVED BY THE ENGINEER. INSTALL DETECTION RADAR V2 FOR SOUTHBOUND APPROACH.
4. CONTRACTOR SHALL MAINTAIN A PEDESTRIAN CROSSING (INCLUDING PUSHBUTTONS AND SIGNAL HEADS) TO ELEMENTARY SCHOOL THROUGHOUT CONSTRUCTION. CONTRACTOR SHALL MAINTAIN PEDESTRIAN DETOURS AT ALL TIMES.
5. CONTRACTOR SHALL EXPOSE GAS LINE BEFORE INSTALLING TEMPORARY WOOD POLE AT STA. 572+41, 25' LT.
6. CONTRACTOR SHALL MAINTAIN EXISTING SCHOOL ZONE FLASHER SIGN ASSEMBLIES AT ALL TIMES DURING SCHOOL HOURS. IN THE EVENT THE POWER SUPPLY TO THE SCHOOL FLASHERS IS INTERRUPTED OR DAMAGED BY CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL COORDINATE WITH AEP AND THE ENGINEER TO ENSURE FUNCTIONAL OPERATION OF THE SCHOOL ZONE FLASHERS IS RESTORED IN A TIMELY MATTER.

LEGEND

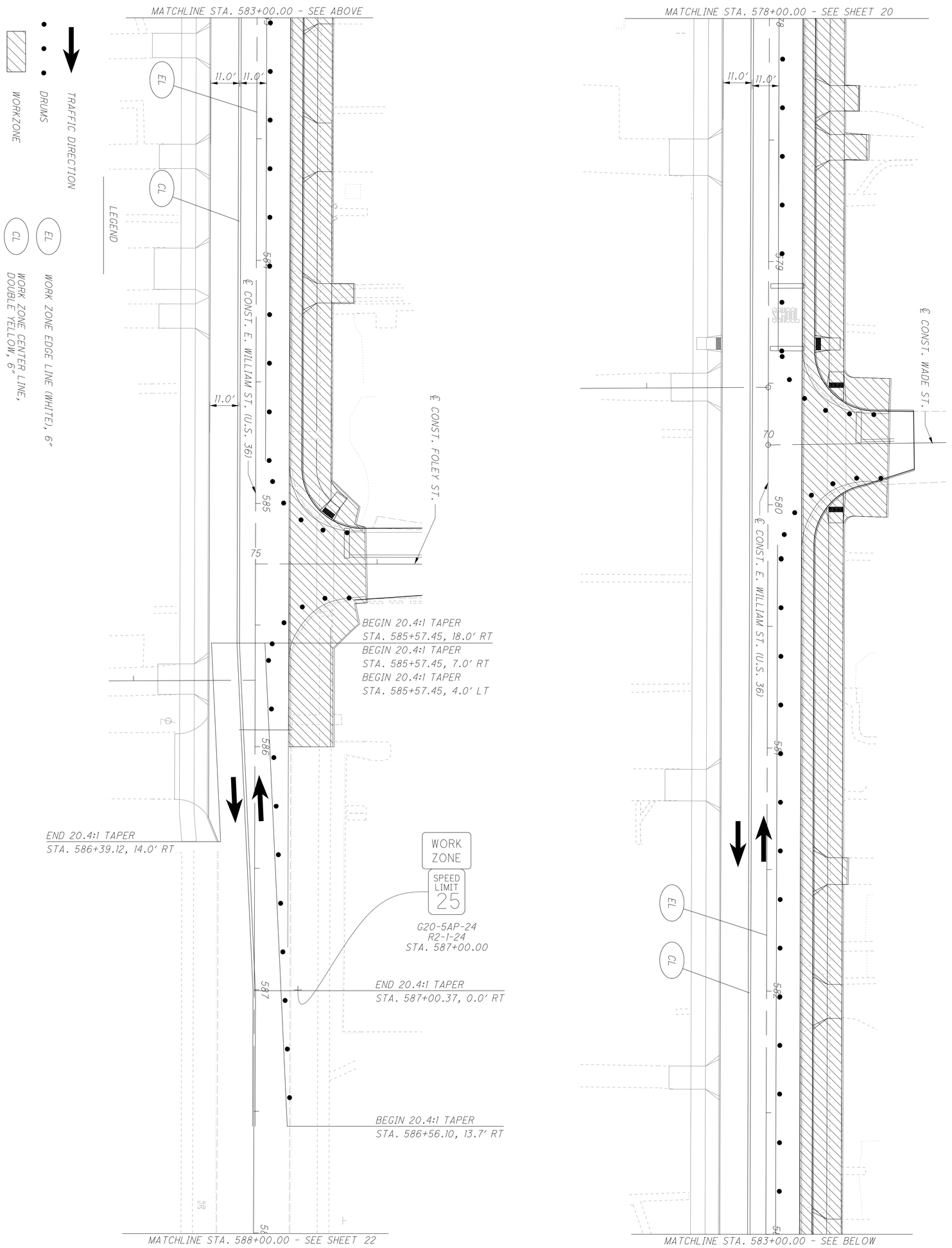
- TRAFFIC DIRECTION
- DRUMS
- WORKZONE
- SL — WORK ZONE STOP LINE, 20"
- EL — WORK ZONE EDGE LINE (WHITE), 6"
- CL — WORK ZONE CENTER LINE, DOUBLE YELLOW, 6"

HORIZONTAL SCALE IN FEET
0 10 20 40

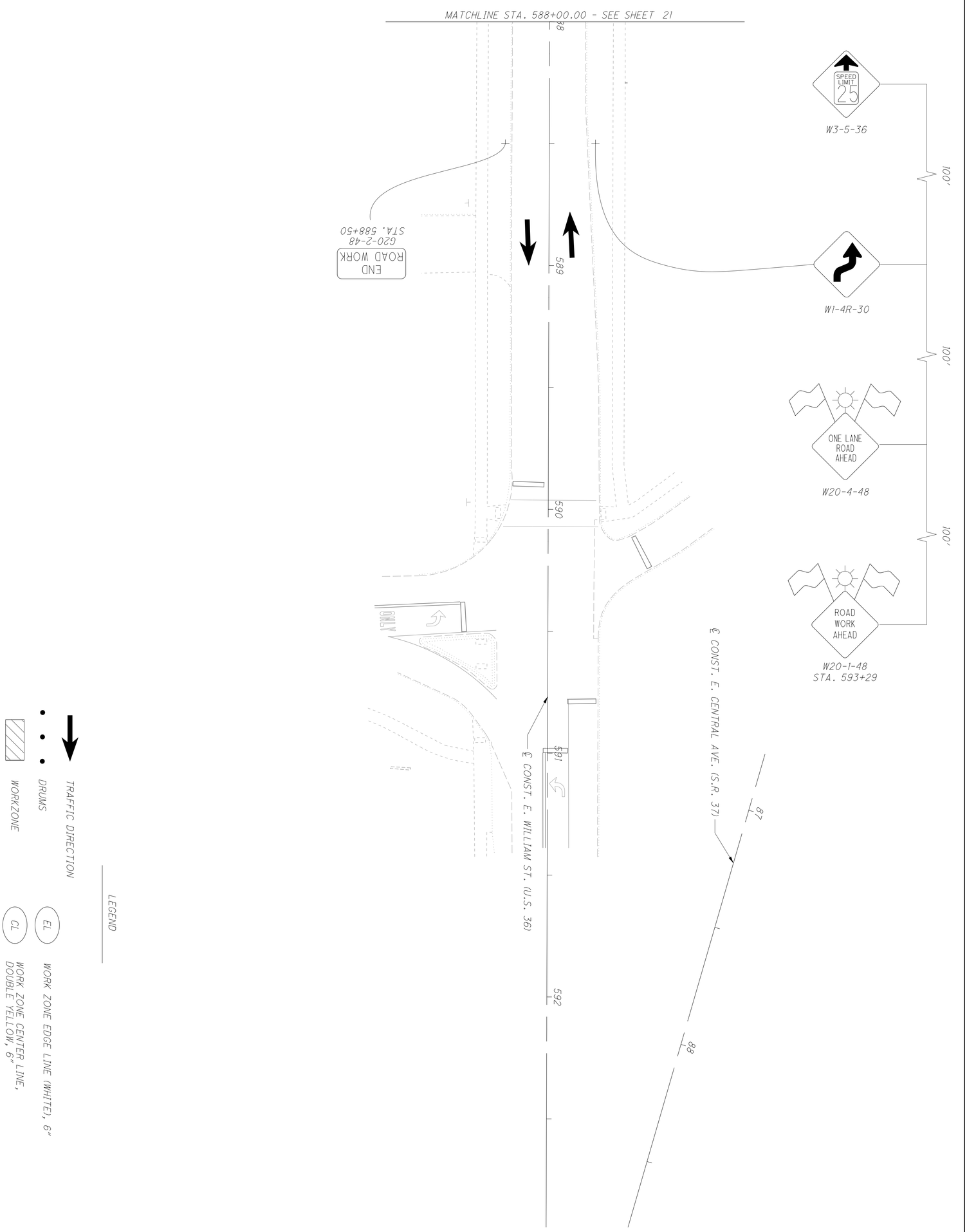
CALCULATED CEL
CHECKED CSR

MAINTENANCE OF TRAFFIC - PHASE 2
STA. 568+00 TO STA. 578+00

DEL-36-10.59



21 / 224	DEL-36-10.59	MAINTENANCE OF TRAFFIC - PHASE 2 STA. 578+00 TO STA. 588+00	CALCULATED CEL CHECKED CSR	0 10 20 40 HORIZONTAL SCALE IN FEET



DEL-36-10.59

MAINTENANCE OF TRAFFIC - PHASE 2
STA. 588+00.00 TO STA. 589+96.27

CALCULATED CEL
CHECKED CSR

0 10 20 40
HORIZONTAL SCALE IN FEET

N

SHEET NUM.													PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
8	9	10	27	28	29	35	36	37	38	39	40	46	01/S>2/PV						
																		ROADWAY	
LS													LS	201	11000	LS		CLEARING AND GRUBBING	
									3,557				3,557	202	23000	3,557	SY	PAVEMENT REMOVED	
			8,078	15,054	1,728								24,860	202	30000	24,860	SF	WALK REMOVED	
			1,845	3,215	444								5,504	202	32000	5,504	FT	CURB REMOVED	
			14	476	107								597	202	35100	597	FT	PIPE REMOVED, 24" AND UNDER	
			6	16	4								26	202	58100	26	EACH	CATCH BASIN REMOVED	
			362										362	202	75000	362	FT	FENCE REMOVED	
			68										68	202	98200	68	FT	REMOVAL MISC.:RETAINING WALL REMOVAL	
			91	159									250	202	98700	250	FT	ABANDON MISC.:12" PIPE TO BE ABANDONED	
													5,647	203	10000	5,647	CY	EXCAVATION	
													60	203	20000	60	CY	EMBANKMENT	
							2,608	3,481		901	341		5,989	204	10000	7,331	SY	SUBGRADE COMPACTION	
		1,000											1,000	204	13000	1,000	CY	EXCAVATION OF SUBGRADE	
		500											500	204	20000	500	CY	EMBANKMENT USING #2 STONE	
		500											500	204	20000	500	CY	EMBANKMENT USING ITEM 304	
3							1						4	204	45000	4	HOUR	PROOF ROLLING	
		1,500											1,500	204	50000	1,500	SY	GEOTEXTILE FABRIC	
		290											290	607	20001	290	FT	FENCE, TYPE CL, AS PER PLAN	
						269							269	607	98000	269	FT	FENCE, MISC.:WOODEN, AS PER PLAN	10
						25,382							25,382	608	10001	25,382	SF	4" CONCRETE WALK, AS PER PLAN	10
										644	711		1,355	608	13000	1,355	SF	6" CONCRETE WALK	
										191	245		436	608	15000	436	SF	8" CONCRETE WALK	
						2,620							2,620	608	52000	2,620	SF	CURB RAMP	
		1,500											1,500	SPECIAL	69012020	1,500	SY	GEOGRID	
		12											12	SPECIAL	69065016	12	TON	WORK INVOLVING PETROLEUM CONTAMINATED SOIL	
																		EROSION CONTROL	
	10												10	601	21050	10	SY	TIED CONCRETE BLOCK MAT, TYPE 1	
	2												2	659	00100	2	EACH	SOIL ANALYSIS TEST	
	447												447	659	00300	447	CY	TOPSOIL	
	4,023												4,023	659	10000	4,023	SY	SEEDING AND MULCHING	
	202												202	659	14000	202	SY	REPAIR SEEDING AND MULCHING	
	202												202	659	15000	202	SY	INTER-SEEDING	
	0.63												0.63	659	20000	0.63	TON	COMMERCIAL FERTILIZER	
	0.84												0.84	659	31000	0.84	ACRE	LIME	
	33												33	659	35000	33	MGAL	WATER	
	10												10	659	40000	10	MSF	MOWING	
													1	832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN	
													80,167	832	30000	80,167	EACH	EROSION CONTROL	
																		DRAINAGE	
						0.6							0.6	602	20000	0.6	CY	CONCRETE MASONRY	
	100												100	605	13300	100	FT	6" UNCLASSIFIED PIPE UNDERDRAINS	
						4,491							4,491	605	14000	4,491	FT	6" BASE PIPE UNDERDRAINS	
		100											100	611	00900	100	FT	6" CONDUIT, TYPE B	
		100											100	611	01100	100	FT	6" CONDUIT, TYPE C	
		100											100	611	01400	100	FT	6" CONDUIT, TYPE E	
	100	100				378							578	611	01500	578	FT	6" CONDUIT, TYPE F	
						1,199							1,199	611	04400	1,199	FT	12" CONDUIT, TYPE B	
						80							80	611	05900	80	FT	15" CONDUIT, TYPE B	
						240							240	611	07400	240	FT	18" CONDUIT, TYPE B	
						301							301	611	08900	301	FT	21" CONDUIT, TYPE B	
												74	74	611	10400	74	FT	24" CONDUIT, TYPE B	
						28							28	611	98150	28	EACH	CATCH BASIN, NO. 3	

CALCULATED AMF
CHECKED CSR

GENERAL SUMMARY

DEL-36-10.59

SHEET NUM.															PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
9	10	35	36	37	39	40	121	166	167	46					01/S>2/PV						
																				DRAINAGE	
		17													17	611	98180	17	EACH	CATCH BASIN, NO. 3A	
		3													7	611	98630	7	EACH	CATCH BASIN ADJUSTED TO GRADE	
		6													6	611	99574	6	EACH	MANHOLE, NO. 3	
										1					1	611	99586	1	EACH	MANHOLE, NO. 3 WITH 108" BASE I.D. AND 12" WEIR	
		12													12	611	99654	12	EACH	MANHOLE ADJUSTED TO GRADE	
50															50	611	99710	50	EACH	PRECAST REINFORCED CONCRETE OUTLET	
										1					1	895	10040	1	EACH	MANUFACTURED WATER QUALITY STRUCTURE, TYPE 4	
																				PAVEMENT	
			5,393												5,393	252	01500	5,393	FT	FULL DEPTH PAVEMENT SAWING	
	2,135														2,135	253	01000	2,135	SY	PAVEMENT REPAIR	10
			8,531	2											8,533	254	01000	8,533	SY	PAVEMENT PLANING, ASPHALT CONCRETE, 6" DEPTH	
	100			12			212								324	301	46000	324	CY	ASPHALT CONCRETE BASE, PG64-22	
			439	555	38	8									817	304	20000	1,040	CY	AGGREGATE BASE	
			2,214	2,699											4,913	305	14010	4,913	SY	10" CONCRETE BASE, CLASS QC1	
			512												512	407	20000	512	GAL	NON-TRACKING TACK COAT (FOR MILLED PAVEMENT, APPLIED @ 0.06 GAL./S.Y.)	
					7	1									8	407	20000	8	GAL	NON-TRACKING TACK COAT (FOR NEW ASPHALT, APPLIED @ 0.05 GAL./S.Y.)	
			266	342											684	407	20000	608	GAL	NON-TRACKING TACK COAT (FOR NEW PAVEMENT, APPLIED @ 0.06 GAL./S.Y.)	
				6	9	3									15	441	50000	18	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22	
			358	82											461	441	50100	440	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG70-22M	
			86	114	7	1	33								271	441	50300	241	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)	
					154	162									302	452	10010	316	SY	6" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1	
					387	38									425	452	12010	425	SY	8" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1	
40															40	608	40000	40	FT	CONCRETE STEPS, TYPE A	9
		115													115	609	23001	115	FT	COMBINATION CURB AND GUTTER, TYPE 4, AS PER PLAN	10
		5,763													5,763	609	26000	5,763	FT	CURB, TYPE 6	
																				WATER WORK	
							11								11	638	00100	11	FT	4" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52, PUSH-ON JOINTS AND FITTINGS	
							535								535	638	00600	535	FT	6" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52, PUSH-ON JOINTS AND FITTINGS	
							2,188								2,188	638	01200	2,188	FT	8" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52, PUSH-ON JOINTS AND FITTINGS	
							980								980	638	04800	980	FT	3/4" COPPER SERVICE BRANCH (LONG)	
							399								399	638	04800	399	FT	3/4" COPPER SERVICE BRANCH (SHORT)	
							17								17	638	07480	17	EACH	6" GATE VALVE	
							7								7	638	07490	7	EACH	8" GATE VALVE	
							9								9	638	10200	9	EACH	6" FIRE HYDRANT	
							1								1	638	98100	LS		WATER WORK, MISC.:SURVEY COORDINATES	
							75								75	638	98600	75	FT	WATER WORK, MISC.:1" WATER SERVICE TRANSFER	
																				LIGHTING	
								54	27						66	625	00450	81	EACH	CONNECTION, FUSED PULL APART	
								48	6						42	625	00480	54	EACH	CONNECTION, UNFUSED PERMANENT	
								17	9						22	625	10481	26	EACH	LIGHT POLE, DECORATIVE, AS PER PLAN	
								17	9						22	625	14000	26	EACH	LIGHT POLE FOUNDATION, 24" X 6' DEEP	
								4,525	4,005						5,830	625	23000	8,530	FT	NO. 4 AWG 600 VOLT DISTRIBUTION CABLE	
								5,233							4,978	625	23304	5,233	FT	NO. 8 AWG 600 VOLT DISTRIBUTION CABLE	
								510	210						600	625	23400	720	FT	NO. 10 AWG POLE AND BRACKET CABLE	
								1,228	463						1,490	625	25400	1,691	FT	CONDUIT, 2", 725.04	
								243	145						313	625	25500	388	FT	CONDUIT, 3", 725.04	
								86							45	625	25902	86	FT	CONDUIT, JACKED OR DRILLED, 725.04 3"	
								1,837	740						1,787	625	25920	2,577	FT	CONDUIT, MISC.: TWO - 4", TWO - 3", & ONE - 1.5" CONDUIT DUCT BANK	
								14	8						18	625	27403	22	EACH	LUMINAIRE, POST TOP, SOLID STATE (LED), AS PER PLAN	
								1,469	538						1,731	625	29000	2,007	FT	TRENCH	
								1,809	740						1,759	625	29001	2,549	FT	TRENCH, AS PER PLAN	
								22	6						21	625	30700	28	EACH	PULL BOX, 725.08, 18"	

CALCULATED AMF
CHECKED CSR

GENERAL SUMMARY

DEL-36-10.59

SHEET NUM.													PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
41	42	43	44	45	163	164	165						01/S>2/PV						
																		LIGHTING	
													2	625	31600	2	EACH	PULL BOX, MISC.:	
													20	625	32000	15	EACH	GROUND ROD	
													2	625	34001	2	EACH	POWER SERVICE, AS PER PLAN	
													3,430	625	36000	3,248	FT	PLASTIC CAUTION TAPE	
																		TRAFFIC CONTROL	
183	198	78											459	630	02100	459	FT	GROUND MOUNTED SUPPORT, NO. 2 POST	
203	121	68											392	630	03100	392	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
32	13	25											70	630	08520	70	FT	STREET NAME SIGN SUPPORT, NO. 3 POST	
13	13												25	630	08530	26	FT	STREET NAME SIGN SUPPORT, NO. 4 POST	
					2								2	630	79100	2	EACH	SIGN HANGER ASSEMBLY, MAST ARM	
					15								15	630	79500	15	EACH	SIGN SUPPORT ASSEMBLY, POLE MOUNTED	
159	142	60			60								419	630	80100	421	SF	SIGN, FLAT SHEET	
6	4	4											14	630	80500	14	EACH	SIGN, DOUBLE FACED, STREET NAME	
					9								9	630	80511	9	EACH	SIGN, STREET NAME, AS PER PLAN	139
	26	13											80	630	84901	39	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL, AS PER PLAN	130
	21	10											52	630	86002	31	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	130
	2												2	631	93250	2	EACH	SCHOOL SPEED LIMIT SIGN ASSEMBLY, MISC.:SCHOOL SPEED LIMIT ASSEMBLY AND ACCESSORIES	
				0.02									0.02	644	00204	0.02	MILE	LANE LINE, 6"	
			0.64	0.56									1.2	644	00300	1.2	MILE	CENTER LINE	
			211	105									316	644	00500	316	FT	STOP LINE	
			1,153	1,074									2,227	644	00600	2,227	FT	CROSSWALK LINE	
			18	54									72	644	00700	72	FT	TRANSVERSE/DIAGONAL LINE	
			1	1									2	644	01100	2	EACH	SCHOOL SYMBOL MARKING, 72"	
			8	8									16	644	01300	16	EACH	LANE ARROW	
			195										195	644	01500	195	FT	DOTTED LINE, 4"	
			171										171	644	30000	171	FT	REMOVAL OF PAVEMENT MARKING	
																		TRAFFIC SIGNALS	
					8								50	625	00480	8	EACH	CONNECTION, UNFUSED PERMANENT	
					2,745								8,575	625	23000	2,745	FT	NO. 4 AWG 600 VOLT DISTRIBUTION CABLE	
					250								850	625	23400	250	FT	NO. 10 AWG POLE AND BRACKET CABLE	
	62				715								2,267	625	25400	777	FT	CONDUIT, 2", 725.04	
					273								586	625	25500	273	FT	CONDUIT, 3", 725.04	
					975								975	625	25900	975	FT	CONDUIT, JACKED OR DRILLED3"	
					16								16	625	27551	16	EACH	LUMINAIRE, DECORATIVE, AS PER PLAN	
	62												1,793	625	29000	62	FT	TRENCH	
					582								2,341	625	29001	582	FT	TRENCH, AS PER PLAN	
					2								23	625	30700	2	EACH	PULL BOX, 725.08, 18"	
					8								8	625	30706	8	EACH	PULL BOX, 725.08, 24"	
					2								2	625	31600	2	EACH	PULL BOX, MISC.:48" POLYMER PULL BOX	
					20								40	625	32000	20	EACH	GROUND ROD	
	2												2	625	34000	2	EACH	POWER SERVICE	
					24								24	632	05007	24	EACH	VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN	140
					2								2	632	05087	2	EACH	VEHICULAR SIGNAL HEAD, (LED), 5-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN	
					14								14	632	20731	14	EACH	PEDESTRIAN SIGNAL HEAD (LED), TYPE D2, COUNTDOWN, AS PER PLAN	140
					21								21	632	25001	21	EACH	COVERING OF VEHICULAR SIGNAL HEAD, AS PER PLAN	140
					14								14	632	25010	14	EACH	COVERING OF PEDESTRIAN SIGNAL HEAD	
						12							12	632	26001	12	EACH	PEDESTRIAN PUSHBUTTON, AS PER PLAN	
						4,465							4,465	632	40700	4,465	FT	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG	
						345							345	632	40900	345	FT	SIGNAL CABLE, 9 CONDUCTOR, NO. 14 AWG	
						8							8	632	64011	8	EACH	SIGNAL SUPPORT FOUNDATION, AS PER PLAN	140
						10							10	632	64021	10	EACH	PEDESTAL FOUNDATION, AS PER PLAN	
						2,150							1,895	632	65300	2,150	FT	LOOP DETECTOR LEAD-IN CABLE, 2 CONDUCTOR, NO. 14 AWG	
						180							180	632	68200	180	FT	POWER CABLE, 2 CONDUCTOR, NO. 6 AWG	
	220												220	632	68300	220	FT	POWER CABLE, 3 CONDUCTOR, NO. 6 AWG	
						2							2	632	70001	2	EACH	POWER SERVICE, AS PER PLAN	140
						1							1	632	70400	1	EACH	CONDUIT RISER, 2" DIAMETER	

CALCULATED AMF
CHECKED CSR

GENERAL SUMMARY

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SHEET NUM.													PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
35	176	141	164	165									01/S>2/PV							
																			TRAFFIC SIGNALS	
			1										1		632	77013	1	EACH	COMBINATION SIGNAL SUPPORT, TYPE TC-81.21 DESIGN 3 POLE, WITH MAST ARMS TC-81.21 DESIGN 2	
																			AND DESIGN 1, AS PER PLAN	
			3										3		632	80971	3	EACH	COMBINATION SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 1, AS PER PLAN	140
			3										3		632	80981	3	EACH	COMBINATION SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 2, AS PER PLAN	140
			1										1		632	80991	1	EACH	COMBINATION SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 3, AS PER PLAN	140
			5										5		632	90001	5	EACH	PEDESTAL, 11', TRANSFORMER BASE, AS PER PLAN	141
			5										5		632	90010	5	EACH	PEDESTAL, MISC.:17', TRANSFORMER BASE	
			2										2		632	90101	2	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN	140
			2										2		633	01551	2	EACH	CONTROLLER UNIT, TYPE TS2/A2, WITH CABINET, TYPE TS2, AS PER PLAN	141
			2										2		633	67101	2	EACH	CABINET FOUNDATION, AS PER PLAN	141
			2										2		633	67201	2	EACH	CONTROLLER WORK PAD, AS PER PLAN	141
			3										3		633	67301	3	EACH	PREEMPTION, AS PER PLAN	141
		1											1		633	67301	1	EACH	PREEMPTION, AS PER PLAN, OPTICOM ALTERNATE BID	
			2										2		633	74001	2	EACH	UNINTERRUPTIBLE POWER SUPPLY (UPS), AS PER PLAN	141
				2									2		633	99000	2	EACH	CONTROLLER ITEM, MISC.:, LAYER 2 ETHERNET SWITCH	
				1,450									1,450		804	15040	1,450	FT	FIBER OPTIC CABLE, 144 FIBER, AS PER PLAN	
				40									40		804	32060	40	FT	DROP CABLE, 24 FIBER	
				2									2		804	34023	2	EACH	FIBER TERMINATION PANEL, 24 FIBER, AS PER PLAN	
				2									2		804	36000	2	EACH	SLACK INSTALLATION	
				2									2		804	37000	2	EACH	SPLICE ENCLOSURE	
				1									1		815	30001	1	EACH	SPREAD SPECTRUM RADIO, AS PER PLAN	147
																			LANDSCAPING	
	157												157		661	14000	157	EACH	PERENNIALS #1 CONTAINER, SEDUM 'AUTUMN JOY', AUTUMN JOY STONECROP	
	83												83		661	14000	83	EACH	PERENNIALS #2 CONTAINER, PANICUM VIRGATUM 'RUBY RIBBONS', RUBY RIBBONS SWITCH GRASS	
	10												10		661	40080	10	EACH	DECIDUOUS TREE, 2" CALIPER CONTINGENCY, TO BE FIELD LOCATED	
	38												38		661	40080	38	EACH	DECIDUOUS TREE, 2" CALIPER PRUNUS SARGENTII 'PINK FLAIR', PINK FLAIR CHERRY	
	19												19		661	40080	19	EACH	DECIDUOUS TREE, 2" CALIPER SYRINGA RETICULATA 'IVORY SILK', IVORY SILK JAPANESE	
	3,024												3,024		SPECIAL	66199000	3,024	FT	LANDSCAPING ROOT BARRIER AT CURB, 24" HEIGHT, AS PER PLAN (ALTERNATIVE 3)	
	3,024												3,024		SPECIAL	66199000	3,024	FT	LANDSCAPING ROOT BARRIER AT SIDEWALK, 19.5" HEIGHT, AS PER PLAN (ALTERNATIVE 3)	
	62												62		SPECIAL	66199000	62	CY	LANDSCAPING ROUND RIVER COBBLE STONES, 1" DIAMETER, AS PER PLAN	
	10												10		SPECIAL	66199000	10	EACH	LANDSCAPING CONTINGENCY, STONE BLOCKS, ROSETTA OUTCROPPING WALL STONE OR APPROVED EQUAL	
	238												238		SPECIAL	66199000	238	FT	LANDSCAPING STONE WALL, AS PER PLAN	
																			RETAINING WALLS	
836													835		610	13200	836	SF	CELLULAR RETAINING WALL	
																			MAINTENANCE OF TRAFFIC	
													LS		614	11000	LS		MAINTAINING TRAFFIC	
													1		614	40050	1	EACH	BUSINESS ENTRANCE SIGN	
													1		SPECIAL	61499000	LS		MAINTAINING TRAFFIC	
																			INCIDENTALS	
													12		619	16010	12	MNTH	FIELD OFFICE, TYPE B	
													LS		623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
													LS		624	10000	LS		MOBILIZATION STRUCTURES	
																			SEE SHEET - 188	

CALCULATED AMF CHECKED CSR

GENERAL SUMMARY

DEL-36-10.59

REF NO.	SHEET NO.	STATION TO STATION				202 WALK REMOVED SF	202 CURB REMOVED FT	202 PIPE REMOVED, 24" AND UNDER FT	202 CATCH BASIN REMOVED EACH	202 FENCE REMOVED FT	611 CATCH BASIN ADJUSTED TO GRADE EACH	202 ABANDON MISC.:12" PIPE TO BE ABANDONED FT	202 REMOVAL MISC.:RETAINING WALL REMOVAL FT
R1	47	560+17.47		21+49.38	LT		152						
R2	47	21+52.71		561+77.99	LT		188						
R3	47	560+17.47		21+21.72	LT	667							
R4	47	560+17.47		561+60.91	RT		150						
R5	47	560+54.55		561+60.91	RT	500							
R6	47	561+14.68			LT				1			33	
R7	47	561+15.40		561+77.99	LT	299							
ATG1	47	561+36.20			RT						1		
R8	47	562+20.54		562+47.10	RT		49						
R9	47	562+21.19		562+47.10	RT	266							
R10	47	562+21.04		562+53.88	LT		66						
R11	47	562+19.46		562+55.61	LT	203							
R12	47	562+78.82		564+00.00	RT		138						
R13	47	562+78.82		564+00.00	RT	698							
ATG2	47	563+00.36			RT						1		
R14	47	563+01.84		564+00.00	LT		98						
R15	47	563+01.84		564+00.00	LT	746							
ATG3	47	563+71.60			LT						1		
ATG4	47	21+27.51		21+27.51	LT						1		
R16	47	11+21.00		12+01.41	LT					80			
R17	47	11+21.00		12+01.37	RT					81			
R18	47	12+53.29		13+53.74	LT					100			
R19	47	12+53.65		13+51.69	RT					101			
R1	48	564+00.00		564+41.04	LT		63						
R2	48	564+00.00		564+41.05	LT	209							
R3	48	564+00.00		565+20.53	RT	641							
R4	48	564+00.00		569+00.00	RT		502						
R5	48	564+42.61			LT				1			33	
R6	48	564+72.59		566+73.00	LT		230						
R7	48	564+72.59		566+70.77	LT	1139							
R8	48	565+02.02			LT				1				
R9	48	565+03.85			RT				1				
R10	48	565+72.67		569+00.00	RT	1664							
R11	48	567+03.88		569+00.00	LT		209						
R12	48	567+04.32			RT				1				
R13	48	567+06.22		569+00.00	LT	1046							
R14	48	567+37.30			LT				1				
R15	48	566+02.31		566+62.75	LT								68
R16	48	567+07.45		567+12.05	LT			14					
TBA1	48	567+07.45		567+37.68	LT							25	
TOTALS CARRIED TO GENERAL SUMMARY						8078	1845	14	6	362	4	91	68

CALCULATED ACF
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REMOVAL SUBSUMMARY

DEL-36-10.59

REF NO.	SHEET NO.	STATION TO STATION				202 WALK REMOVED	202 CURB REMOVED	202 PIPE REMOVED, 24" AND UNDER	202 CATCH BASIN REMOVED	202 FENCE REMOVED	611 CATCH BASIN ADJUSTED TO GRADE	202 ABANDON MISC.:12" PIPE TO BE ABANDONED	202 REMOVAL MISC.:RETAINING WALL REMOVAL
						SF	FT	FT	EACH	FT	EACH	FT	FT
R1	49	569+00.00	TO	46+35.00	LT		406						
R2	49	569+00.00		45+57.39	LT	1820							
R3	49	569+00.00		569+67.44	RT	404							
R4	49	569+00.00		569+70.01	RT		86						
R5	49	570+02.74			RT				1				
TBA1	49	570+00.78			RT							38	
R6	49	570+00.78		570+70.77	RT		301						
R7	49	570+04.11		572+68.36	RT	1500							
R8	49	570+12.85			LT				1				
R9	49	570+32.24			RT				1				
R10	49	572+27.66		574+00.00	LT	1009							
R11	49	46+35.00		574+00.00	LT		283						
R12	49	572+32.42			LT				1				
R13	49	572+57.37			LT				1				
R14	49	573+02.81			RT				1				
R15	49	573+01.46		574+00.00	RT		118						
R16	49	573+03.99		574+00.00	RT	561							
R17	49	573+22.78			RT				1				
TBA2	49	573+09.51		573+22.78	RT							27	
R1	50	574+00.00		574+88.32	LT	489							
R2	50	574+00.00		574+89.88	LT		107						
R3	50	574+00.00		574+55.61	RT	301							
R4	50	574+00.00		576+23.57	RT		240						
R5	50	574+68.78		576+21.06	RT	776							
R6	50	575+16.71		579+00.00	LT		397						
R7	50	575+18.69		579+00.00	LT	2012							
R8	50	576+54.64		579+00.00	RT		261						
R9	50	576+60.33		579+00.00	RT	1311							
R10	50	576+58.52			RT				1				
R11	50	576+87.67			RT				1				
R12	50	576+58.52		576+87.67	RT			31					
R13	50	576+84.86			LT				1			7	
R14	50	578+33.06			RT				1				
TBA1	50	578+33.06		578+32.88	RT							24	
R1	51	579+00.00		579+58.96	LT	288							
R2	51	579+00.00		579+61.03	LT		84						
R3	51	579+00.00		579+43.08	RT	212							
R4	51	579+00.00		584+00.00	RT		500						
R5	51	579+57.67		584+00.00	RT	2341							
R6	51	579+93.65		584+00.00	LT	2030							
R7	51	579+91.96		584+00.00	LT		432						
R8	51	580+02.69			LT				1				
R9	51	580+14.01			RT				1				
R10	51	580+21.92			LT				1				
TBA1	51	580+14.01		580+21.92	RT&LT							31	
R11	51	582+14.65			RT				1				
R12	51	582+25.27			LT				1			32	
R13	51	580+21.80		582+25.27	LT			203					
R14	51	582+25.27		584+67.32	LT			242					
TOTALS CARRIED TO GENERAL SUMMARY						15054	3215	476	16			159	

CALCULATED ACF
CHECKED CSR

REMOVAL SUBSUMMARY

DEL-36-10.59

REF NO.	SHEET NO.	STATION TO STATION				202 WALK REMOVED	202 CURB REMOVED	202 PIPE REMOVED, 24" AND UNDER	202 CATCH BASIN REMOVED	202 FENCE REMOVED	611 CATCH BASIN ADJUSTED TO GRADE	202 ABANDON MISC.:12" PIPE TO BE ABANDONED	202 REMOVAL MISC.:RETAINING WALL REMOVAL
						SF	FT	FT	EACH	FT	EACH	FT	FT
R1	52	584+00.00	TO	585+07.99	LT	561							
R2	52	584+00.00		585+10.11	LT		132						
R3	52	584+00.00		585+64.66	RT	855							
R4	52	584+00.00		586+39.08	RT		240						
R5	52	585+78.51		589+00.00	RT	312							
R6	52	584+67.59			RT				1				
R7	52	584+67.26			LT				1				
R8	52	585+39.95		585+93.11	LT		72						
R9	52	585+48.71			LT				1				
R10	52	585+65.65			LT				1				
R11	52	585+65.65		584+67.26	LT			99					
R12	52	585+48.71		585+43.43	LT			8					
TOTALS CARRIED TO GENERAL SUMMARY						1728	444	107	4				

CALCULATED ACF
CHECKED CSR

REMOVAL SUBSUMMARY

DEL-36-10.59

REF NO.	SHEET NO.	STATION TO STATION					602 CONCRETE MASONRY CY	605 6" BASE PIPE UNDERDRAINS FT	607 FENCE, MISC.:WOODEN, AS PER PLAN FT	608 4" CONCRETE WALK, AS PER PLAN SF	608 CURB RAMP SF	609 COMBINATION CURB AND GUTTER, TYPE 4, AS PER PLAN FT	609 CURB, TYPE 6 FT	610 CELLULAR RETAINING WALL SF	611 6" CONDUIT, TYPE F FT	611 12" CONDUIT, TYPE B FT	611 15" CONDUIT, TYPE B FT	611 18" CONDUIT, TYPE B FT	611 21" CONDUIT, TYPE B FT	611 CATCH BASIN, NO. 3 EACH	611 CATCH BASIN, NO. 3A EACH	611 MANHOLE, NO. 3 EACH	611 CATCH BASIN ADJUSTED TO GRADE EACH	611 MANHOLE ADJUSTED TO GRADE EACH	602 CONCRETE MASONRY CY		
C1	54	560+17.47	RT		562+51.70	RT		66					272.62		22												
C2	54	560+35.87	RT		560+44.35	RT							23.00														
C3	54	560+55.56	RT		560+68.22	RT		22					23.42														
C4	54	561+54.36	RT		561+62.89	RT		28					25.03														
C5	54	562+01.45	RT		562+26.35	RT		71					36.99		22												
C6	54	562+78.87	RT		564+00.00	RT		116					159.63		22												
C7	54	560+17.47	LT		560+82.68	LT							102.72														
C8	54	561+19.76	LT		564+00.00	LT		272					324.65		42												
C9	54	561+67.90	LT		591+72.90	LT							5.92														
C10	54	562+09.62	LT		562+18.71	LT							10.60														
C11	54	562+44.14	LT		562+52.87	LT							10.01														
C12	54	562+84.54	LT		563+02.03	LT							26.65														
D1	54	561+14.51	LT		8561+14.65	LT										122				1							
D2	54	561+14.65	LT		561+35.48	LT										32				1							
D3	54	562+31.50	RT		561+36.14	RT										96					1						
D4	54	562+78.55	RT		563+00.36	RT										36				1							
D5	54	562+37.15	LT		562+26.37	LT										12					1						
D6	54	563+00.36	RT		563+00.36	RT																		1			
D7	54	562+06.00	LT		562+26.37	LT																			3		
D8	54	562+05.42	LT		562+05.42	LT																			1		
D9	54	561+36.14	RT		561+36.14	RT																		1			
D10	54	563+71.55	LT		563+71.55	LT																		1			
D11	54	560+58.71	RT		560+94.29	RT	0.2									37				1							
D12	54	560+94.29	RT		561+10.03	RT										12				1							
D13	54	561+61.26	LT		561+63.67	LT										50				1							
SW1	54	560+54.55	RT		561+63.84	RT				631.17	46.25																
SW2	54	562+07.37	RT		562+50.41	RT				341.72	148																
SW3	54	562+83.36	RT		564+00.00	RT				620.07	78.25																
SW4	54	560+17.10	LT		560+82.01	LT				694.94	115.26			35.00													
SW5	54	561+24.34	LT		561+80.43	LT				527.28	80.28			15.63													
SW6	54	562+07.18	LT		562+55.68	LT				228.84	145.07																
SW7	54	562+84.53	LT		564+00.00	LT				740.92	97.01																
SW8	54	560+28.73	RT		560+35.57	RT					88.32																
TOTALS CARRIED TO SHEET		35					0.2	575		3785	799		1022	51	108	397				6	2		3	4			

CALCULATED ACF
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ROADWAY SUBSUMMARY

DEL-36-10.59

REF NO.	SHEET NO.	STATION TO STATION					602 CONCRETE MASONRY	605 6" BASE PIPE UNDERDRAINS	607 FENCE, MISC.:WOODEN, AS PER PLAN	608 4" CONCRETE WALK, AS PER PLAN	608 CURB RAMP	609 COMBINATION CURB AND GUTTER, TYPE 4, AS PER PLAN	609 CURB, TYPE 6	610 CELLULAR RETAINING WALL	611 6" CONDUIT, TYPE F	611 12" CONDUIT, TYPE B	611 15" CONDUIT, TYPE B	611 18" CONDUIT, TYPE B	611 21" CONDUIT, TYPE B	611 CATCH BASIN, NO. 3	611 CATCH BASIN, NO. 3A	611 MANHOLE, NO. 3	611 CATCH BASIN ADJUSTED TO GRADE	611 MANHOLE ADJUSTED TO GRADE			
							CY	FT	FT	SF	SF	FT	FT	SF	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH			
C1	55	564+00.00	RT		569+00.00	RT		470					500.00		30												
C2	55	564+00.00	LT		564+39.61	LT		58					64.49														
C3	55	564+72.43	LT		566+73.71	LT		200					229.00		20												
C4	55	567+03.00	LT		569+00.00	LT		180					207.07		20												
D1	55	564+39.62	LT		564+42.98	LT										13				1							
D2	55	564+77.03	LT		565+02.50	LT										36				1							
D3	55	564+94.81	LT		565+00.40	LT										10											
D4	55	565+00.40	LT		565+02.50	LT										10					1						
D5	55	565+03.60	RT		565+03.86	RT										10					1						
D6	55	567+03.65	LT		567+07.45	LT										29				1							
D7	55	567+03.59	RT		567+04.75	RT										8					1						
D8	55	564+00.00	LT		569+00.00	LT														16		1		3			
D9	55	568+32.06	LT		568+32.06	LT										10					1						
D10	55	568+32.06	LT		568+32.06	RT										28					1						
SW1	55	564+00.00	RT		565+20.62	RT				658.22	131.06																
SW2	55	565+56.70	RT		567+25.98	RT				982.94	55.55			170.00													
SW3	55	567+61.05	RT		567+90.23	RT				167.59																	
SW4	55	568+20.42	RT		569+00.00	RT				473.77				20.00													
SW5	55	564+00.00	LT		564+35.31	LT				127.29	54.36			17.00													
SW6	55	564+72.95	LT		565+51.95	LT				382.75	203.53			20.00													
SW7	55	565+75.63	LT		566+70.27	LT				564.32	111.48			94.10													
SW8	55	567+03.76	LT		569+00.00	LT				1169.01	56.47			32.90													
TOTALS CARRIED TO SHEET				35				908		4526	613		1001	354	70	154			16	3	5	1		3			

CALCULATED ACF
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ROADWAY SUBSUMMARY

DEL-36-10.59

REF NO.	SHEET NO.	STATION TO STATION					602	605	607	608	608	609	609	610	611	611	611	611	611	611	611	611			
							CONCRETE MASONRY	6" BASE PIPE UNDERDRAINS	FENCE, MISC.:WOODEN, AS PER PLAN	4" CONCRETE WALK, AS PER PLAN	CURB RAMP	COMBINATION CURB AND GUTTER, TYPE 4, AS PER PLAN	CURB, TYPE 6	CELLULAR RETAINING WALL	6" CONDUIT, TYPE F	12" CONDUIT, TYPE B	15" CONDUIT, TYPE B	18" CONDUIT, TYPE B	21" CONDUIT, TYPE B	CATCH BASIN, NO. 3	CATCH BASIN, NO. 3A	MANHOLE, NO. 3	CATCH BASIN ADJUSTED TO GRADE	MANHOLE ADJUSTED TO GRADE			
							CY	FT	FT	SF	SF	FT	FT	SF	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH			
C1	56	569+00.00	RT		569+70.66	RT		82					83.81													
C2	56	570+00.29	RT		572+72.84	RT		298					304.02													
C3	56	573+01.05	RT		574+00.00	RT		175					113.27													
C4	56	569+00.00	LT		571+96.89	LT		307					402.43													
C5	56	572+24.58	LT		574+00.00	LT							279.48													
D1	56	570+08.01	LT		570+17.28	LT										12				1						
D2	56	570+14.27	RT		570+36.85	RT										36					1					
D3	56	570+00.74	RT		570+36.85	RT										42				1						
D4	56	570+26.01	LT		572+32.90	LT										36				1						
D5	56	572+32.90	LT		572+32.98	RT										27					1					
D6	56	572+50.52	LT		572+71.73	LT										22				1						
D7	56	573+09.51	LT		573+31.56	LT										25					1					
D8	56	573+09.51	RT		573+31.56	RT										36				1						
D9	56	573+01.90	RT		573+31.56	RT										35				1						
D10	56	569+00.00	LT		574+00.00	LT																			3	
SW1	56	569+00.00	RT		569+69.75	RT				356.27	108.87			73.8												
SW2	56	570+01.75	RT		572+69.84	RT				1588.85	167.62			35.7												
SW3	56	573+03.21	RT		574+00.00	RT				542.19	56			17.3												
SW4	56	569+00.00	LT		571+88.41	LT				1787.68	111.33			88.3												
SW5	56	572+34.51	LT		574+00.00	LT				1046.42	111.95			48												
TOTALS CARRIED TO SHEET				35				862		5322	556		1184	264		271				6	3			3		

CALCULATED ACF
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ROADWAY SUBSUMMARY

DEL-36-10.59

REF NO.	SHEET NO.	STATION TO STATION					602 CONCRETE MASONRY CY	605 6" BASE PIPE UNDERDRAINS FT	607 FENCE, MISC.:WOODEN, AS PER PLAN FT	608 4" CONCRETE WALK, AS PER PLAN SF	608 CURB RAMP SF	609 COMBINATION CURB AND GUTTER, TYPE 4, AS PER PLAN FT	609 CURB, TYPE 6 FT	610 CELLULAR RETAINING WALL SF	611 6" CONDUIT, TYPE F FT	611 12" CONDUIT, TYPE B FT	611 15" CONDUIT, TYPE B FT	611 18" CONDUIT, TYPE B FT	611 21" CONDUIT, TYPE B FT	611 CATCH BASIN, NO. 3 EACH	611 CATCH BASIN, NO. 3A EACH	611 MANHOLE, NO. 3 EACH	611 CATCH BASIN ADJUSTED TO GRADE EACH	611 MANHOLE ADJUSTED TO GRADE EACH			
C1	57	574+00.00	RT	576+25.29	RT			226					238.34		10												
C2	57	576+53.89	RT	579+00.00	RT			217					260.53		40												
C3	57	574+00.00	LT	579+00.00	LT			460					500		40												
C4	57	574+75.75	LT	574+89.90	LT								29.64														
C5	57	575+16.66	LT	575+41.33	LT								35.25														
D1	57	575+43.17	LT	575+43.15	LT											10					1						
D2	57	575+43.15	LT	575+43.17	RT											28					1						
D3	57	576+84.01	LT	576+85.41	LT											11					1						
D4	57	576+87.01	RT	576+88.34	RT											8				1							
D5	57	576+55.61	RT	576+88.34	RT											37				1							
D6	57	577+79.95	LT	577+79.95	LT											11					1						
D7	57	577+79.95	LT	577+79.95	RT											28					1						
D8	57	577+88.81	LT	577+88.81	LT											8				1							
D9	57	577+88.81	LT	577+88.81	RT											29				1							
D10	57	574+00.00	LT	579+00.00	LT														48				3		2		
SW1	57	574+00.00	RT	574+57.70	RT					346.04																	
SW2	57	574+66.70	RT	575+17.21	RT					303.51																	
SW3	57	575+27.21	RT	576+21.34	RT					496.22	111.5			30.8													
SW4	57	576+57.21	RT	577+58.56	RT					572.69	55.96			45.2													
SW5	57	577+68.08	RT	578+49.65	RT					490.43																	
SW6	57	578+64.65	RT	579+00.00	RT					212.10																	
SW7	57	574+00.00	LT	574+90.13	LT					483.71	57.23																
SW8	57	575+19.99	LT	576+45.49	LT					648.71	128.33			35.00													
SW9	57	576+53.49	LT	577+35.82	LT					494.01				56.00													
SW10	57	577+44.32	LT	578+27.51	LT					499.12																	
SW11	57	578+38.01	LT	578+47.67	LT					57.94																	
SW12	57	578+58.17	LT	579+00.00	LT					251.01																	
TOTALS CARRIED TO SHEET						35		903		4856	354		1064	167	90	170			48	4	5	3		2			

CALCULATED ACF
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ROADWAY SUBSUMMARY

DEL-36-10.59

REF NO.	SHEET NO.	STATION TO STATION					602	605	607	608	608	609	609	610	611	611	611	611	611	611	611	611	611			
							CONCRETE MASONRY	6" BASE PIPE UNDERDRAINS	FENCE, MISC.:WOODEN, AS PER PLAN	4" CONCRETE WALK, AS PER PLAN	CURB RAMP	COMBINATION CURB AND GUTTER, TYPE 4, AS PER PLAN	CURB, TYPE 6	CELLULAR RETAINING WALL	6" CONDUIT, TYPE F	12" CONDUIT, TYPE B	15" CONDUIT, TYPE B	18" CONDUIT, TYPE B	21" CONDUIT, TYPE B	CATCH BASIN, NO. 3	CATCH BASIN, NO. 3A	MANHOLE, NO. 3	CATCH BASIN ADJUSTED TO GRADE	MANHOLE ADJUSTED TO GRADE			
							CY	FT	FT	SF	SF	FT	FT	SF	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH			
C1	58	579+00.00	RT		584+00.00	RT		460					500.00		40											
C2	58	579+00.00	LT		579+61.43	LT		73					91.31													
C3	58	579+85.12	LT		584+00.00	LT		377					440.12		40											
D1	58	579+94.39	LT		580+02.38	LT													8			1				
D2	58	579+93.01	LT		580+06.13	LT										17					1					
D3	58	580+02.38	LT		580+02.39	RT										31				1						
D4	58	580+02.38	LT		580+06.13	LT													8	1						
D5	58	580+06.13	LT		580+87.08	LT													81	1						
D6	58	580+87.08	LT		580+87.13	RT										38				1						
D7	58	580+87.08	LT		582+26.74	LT													140	1						
D8	58	582+13.23	RT		582+26.74	LT										16				1						
D9	58	582+26.74	LT		583+30.01	LT												103								
D10	58	583+30.01	LT		583+30.01	RT										38				1						
D11	58	583+30.01	LT		584+67.33	LT												137			1					
SW1	58	579+00.00	RT		579+45.95	RT				253.03	55.54															
SW2	58	579+57.46	RT		581+08.87	RT				908.67																
SW3	58	581+21.87	RT		582+30.92	RT				654.26																
SW4	58	582+40.41	RT		583+06.79	RT				398.24																
SW5	58	583+16.79	RT		583+52.37	RT				213.51																
SW6	58	583+62.37	RT		583+95.08	RT				196.22																
SW7	58	579+00.00	LT		579+57.61	LT				248.83	120.87															
SW8	58	579+95.00	LT		581+45.05	LT				826.22	65.03															
SW9	58	581+56.05	LT		581+97.14	LT				246.49																
SW10	58	582+11.14	LT		582+93.69	LT				495.30																
SW11	58	583+02.69	LT		583+43.46	LT				244.66																
SW12	58	583+63.46	LT		584+00.00	LT				219.23																
TOTALS CARRIED TO SHEET				35				910		4905	242		1032		80	140		240	237	7	2	1				

CALCULATED ACF
CHECKED CSR

ROADWAY SUBSUMMARY

DEL-36-10.59

REF NO.	SHEET NO.	STATION TO STATION					602 CONCRETE MASONRY CY	605 6" BASE PIPE UNDERDRAINS FT	607 FENCE, MISC.:WOODEN, AS PER PLAN FT	608 4" CONCRETE WALK, AS PER PLAN SF	608 CURB RAMP SF	609 COMBINATION CURB AND GUTTER, TYPE 4, AS PER PLAN FT	609 CURB, TYPE 6 FT	610 CELLULAR RETAINING WALL SF	611 6" CONDUIT, TYPE F FT	611 12" CONDUIT, TYPE B FT	611 15" CONDUIT, TYPE B FT	611 18" CONDUIT, TYPE B FT	611 21" CONDUIT, TYPE B FT	611 CATCH BASIN, NO. 3 EACH	611 CATCH BASIN, NO. 3A EACH	611 MANHOLE, NO. 3 EACH	611 CATCH BASIN ADJUSTED TO GRADE EACH	611 MANHOLE ADJUSTED TO GRADE EACH			
C1	59	584+00.00	RT		586+39.12	RT		219					229.30		20												
C2	59	584+00.00	LT		585+10.11	LT		114					125.19		10												
D1	59	584+67.62	LT		584+67.62	RT										16				1							
D2	59	584+67.33	LT		585+43.34	LT											72					1					
D3	59	585+43.34	LT		585+47.29	LT	0.2									8											
D4	59	585+43.34	LT		585+51.35	LT	0.2										8										
SW1	59	584+12.08	RT		584+18.03	RT				35.74																	
SW2	59	584+28.03	RT		585+66.07	RT				828.05																	
SW3	59	585+78.56	RT		585+94.75	RT				93.54																	
SW4	59	586+21.82	RT		586+39.12	RT				100.23																	
SW5	59	584+00.00	LT		584+09.51	LT				56.88																	
SW6	59	584+17.48	LT		585+06.60	LT				475.63	55.96																
C1	61	21+00.00	LT		21+52.71	LT							52.71														
C2	61	21+00.00	RT		21+52.71	RT							53.02														
SW1	61	21+00.00	RT		21+52.71	RT				397.8																	
D1	61	21+48.64	RT		21+41.73	RT										43				1							
C1	62	11+40.50	LT		11+61.79	LT						21.11															
C2	62	11+52.50	RT		11+61.79	RT						9.41															
C3	62	13+05.71	LT		13+83.00	LT						76.42															
C4	62	13+05.71	RT		13+13.50	RT						8.03															
F1	62	11+21.06	LT		11+76.79	LT			55.19																		
F2	62	11+21.06	RT		11+76.79	RT			56.32																		
F3	62	12+90.99	LT		13+83.00	LT			90.42																		
F4	62	12+90.99	RT		13+55.26	RT			66.44																		
		TOTALS THIS SHEET					0.4	333	269	1988	56	115	460		30	67	80			2		1					
		TOTALS CARRIED FROM 30					0.2	575		3785	799		1022	51	108	397				6	2		3	4			
		TOTALS CARRIED FROM 31						908		4526	613		1001	354	70	154			16	3	5	1		3			
		TOTALS CARRIED FROM 32						862		5322	556		1184	264		271				6	3			3			
		TOTALS CARRIED FROM 33						903		4856	354		1064	167	90	170			48	4	5	3		2			
		TOTALS CARRIED FROM 34						910		4905	242		1032		80	140		240	237	7	2	1					
TOTALS CARRIED TO GENERAL SUMMARY							0.6	4491	269	25382	2620	115	5763	836	378	1199	80	240	301	28	17	6	3	12			

CALCULATED ACF
CHECKED CSR

ROADWAY SUBSUMMARY

DEL-36-10.59

STATION RANGE			TYPICAL SECTION	SIDE	DISTANCE (D)	AVERAGE WIDTH (W)	SURFACE AREA (A) A=DXW/9	CADD GENERATED AREA	204 SUBGRADE COMPACTION	204 PROOF ROLLING	254 PAVEMENT PLANING, ASPHALT CONCRETE	304 AGGREGATE BASE	305 10" CONCRETE BASE, CLASS QC1	407 NON-TRACKING TACK COAT (FOR NEW PAVEMENT, APPLIED @ 0.06 GAL./S.Y.)	407 NON-TRACKING TACK COAT (FOR MILLED PAVEMENT, APPLIED @ 0.06 GAL./S.Y.)	252 FULL DEPTH PAVEMENT SAWING	441 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)	441 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)	441 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG70-22M	441 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22	301 ASPHALT CONCRETE BASE, PG64-22					
					FT	FT	SY	SF	SY	HOUR	SY	CY	SY	GAL	GAL	FT	CY	CY	CY	CY	CY				
RESURFACING																									
20+25.59		20+38.40		RT	12.81		0.00									12.81									
20+38.40		21+52.56		RT	114.16	6.17	78.26				78.26				4.70	114.11			2.72						
20+38.40		20+88.84		LT	50.44	19.66	110.18				110.18				6.61				3.83						
20+38.40		20+88.84		LT	50.44		0.00	595.26			66.14				3.97	95.54			2.30						
20+88.84		21+52.56		LT	63.72	19.10	135.23				135.23				8.11	63.72			4.70						
560+17.47		562+26.35		RT	208.88	8.00	185.67				185.67				11.14	208.88			6.45						
562+26.35		562+98.55		RT	72.20	7.50	60.17				60.17				3.61	72.20			2.09						
562+98.55		563+58.80		RT	60.25	7.00	46.86				46.86				2.81	60.25			1.63						
563+58.80		565+12.26		RT	153.46	9.87	168.29				168.29				10.10	153.46			5.84						
565+12.26		569+70.34		RT	458.08	12.74	648.44				648.44				38.91	458.08			22.52						
569+70.34		569+99.65		RT	29.31	13.33	43.41				43.41				2.60	29.31			1.51						
569+99.65		572+69.87		RT	270.22	13.91	417.64				417.64				25.06	270.22			14.50						
572+69.87		572+99.99		RT	30.12	13.65	45.68				45.68				2.74	30.12			1.59						
572+99.99		576+24.34		RT	324.35	13.39	482.56				482.56				28.95	324.35			16.76						
576+24.34		576+55.06		RT	30.72	13.64	46.56				46.56				2.79	30.73			1.62						
576+55.06		585+93.11		RT	938.05	13.88	1446.68				1446.68				86.80	985.74			50.23						
560+17.47		561+10.38		LT	92.91	38.11	393.42				393.42				23.61				13.66						
561+10.38		562+00.11		LT	89.73	24.86	247.85				247.85				14.87	89.74			8.61						
562+00.11		564+15.29		LT	215.18	21.31	509.50				509.50				30.57	215.25			17.69						
564+15.29		565+00.10		LT	84.81	16.63	156.71				156.71				9.40	84.90			5.44						
565+00.10		566+48.73		LT	148.63	14.72	243.09				243.09				14.59	148.62			8.44						
566+48.73		567+27.71		LT	78.98	14.29	125.40				125.40				7.52	78.99			4.35						
567+27.71		571+72.35		LT	444.64	13.86	684.75				684.75				41.08	444.67			23.78						
571+72.35		572+51.00		LT	78.65	13.95	121.91				121.91				7.31	78.66			4.23						
572+51.00		574+91.52		LT	240.52	14.04	375.21				375.21				22.51	240.52			13.03						
574+91.52		575+19.69		LT	28.17	13.94	43.63				43.63				2.62	28.17			1.52						
575+19.69		585+93.11		LT	1073.42	13.81	1647.10				1647.10				98.83	1073.42			57.19						
FULL DEPTH																									
20+38.40		20+88.84		LT	95.54	2.19	23.25		39.17			6.53	23.25	2.79				1.13	0.81						
20+88.84		21+52.56		LT	63.72	2.06	14.58		25.20			4.20	14.58	1.75											
20+38.40		21+52.56		RT	114.16			1461.60					162.40	19.49				7.89	5.64						
								1582.70	175.86			29.31													
560+17.47		560+35.87		RT	18.40	1.22	2.49		5.56			0.93	2.49	0.30				0.12	0.09						
560+35.87		560+68.22		RT	32.35	1.11	3.99		9.38			1.56	3.99	0.48											
560+68.22		562+26.35		RT	158.13	1.00	17.57		43.92			7.32	17.57	2.11				0.85	0.61						
562+26.35		562+98.55		RT	72.20	1.06	8.50		20.54			3.42	8.50	1.02				0.41	0.30						
562+35.27		562+98.55		RT	63.28			1426.44					158.49	19.02				7.70	5.50						
								1592.25	176.92			29.49													
562+98.55		563+58.80		RT	60.25	1.00	6.69		16.74			2.79	6.69	0.80				0.33	0.23						
563+58.80		565+02.71		RT	143.91	3.81	60.92		84.91			14.15	60.92	7.31				2.96	2.12						
565+02.71		565+12.26		RT	9.55	6.44	6.83		8.43			1.40	6.83	0.82				0.33	0.24						
565+12.26		569+70.34		RT	458.08	6.26	318.62		394.97			65.83	318.62	38.23				15.49	11.06						
569+70.34		569+99.65		RT	29.31	5.68	18.50		23.38			3.90	18.50	2.22											
569+45.68		570+25.28		RT	79.60		0.00	3624.70					402.74	48.33				19.58	13.98						
								3921.80	435.76			72.63													
569+99.65		572+69.87		RT	270.22	5.09	152.82		197.86			32.98	152.82	18.34											
572+69.87		572+99.99		RT	30.12	5.35	17.90		22.92			3.82	17.90	2.15				0.87	0.62						
572+47.22		573+26.10		RT	78.88		0.00	2589.98					287.78	34.53				1.55	1.11						
								2820.88	313.43			52.24													
572+99.99		576+24.34		RT	324.35	5.61	202.18		256.24			42.71	202.18	24.26				9.83	7.02						
576+24.34		576+55.06		RT	30.72	5.37	18.33					3.91	18.33	2.20				0.89	0.64						
575+99.29		576+78.89		RT	79.60		0.00	2957.62					328.62	39.43				15.97	11.41						
								3203.92	355.99			59.33													
								SUBTOTALS	2607.17	0.87	8530.36	438.44	2213.23	265.59	511.82	5392.46		85.92	357.57						
								TOTALS CARRIED TO GENERAL SUMMARY	2608	1	8531	439	2214	266	512	5393		86	358						

CALCULATED AMF
CHECKED CSR

PAVEMENT QUANTITIES

DEL-36-10.59

STATION RANGE			TYPICAL SECTION	SIDE	DISTANCE (D)	AVERAGE WIDTH (W)	SURFACE AREA (A) A=DXW/9	CADD GENERATED AREA	204 SUBGRADE COMPACTION	254 PAVEMENT PLANING, ASPHALT CONCRETE	254 PAVEMENT PLANING, ASPHALT CONCRETE	304 AGGREGATE BASE	305 10" CONCRETE BASE, CLASS QC1	407 NON-TRACKING TACK COAT (FOR NEW PAVEMENT, APPLIED @ 0.06 GAL./S.Y.)	407 NON-TRACKING TACK COAT (FOR MILLED PAVEMENT, APPLIED @ 0.06 GAL./S.Y.)	252 FULL DEPTH PAVEMENT SAWING	441 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)	441 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)	441 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG70-22M	441 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22	301 ASPHALT CONCRETE BASE, PG64-22					
					FT	FT	SY	SF	SY	SY	SY	CY	SY	GAL	GAL	FT	CY	CY	CY	CY	CY					
576+55.06		586+29.30		RT	974.24	5.12	554.23		716.61			119.43	554.23	66.51				26.94	19.24							
586+29.60		586+39.14		RT	9.54	3.13	3.32		4.91			0.82	3.32	0.40				0.16	0.12							
561+10.38		562+00.11		LT	89.73		0.00	708.57					78.73	9.45				3.83	2.73							
								765.97	85.11			14.18														
562+00.11		564+15.29		LT	215.18	1.00	23.91		59.77			9.96	23.91	2.87				1.16	0.83							
564+15.29		565+00.12		LT	84.83	2.64	24.88		39.02			6.50	24.88	2.99												
564+15.29		565+00.12		LT	84.83		0.00	2521.34					280.15	33.62				13.62	9.73							
								2728.24	303.14			50.52														
565+00.12		566+48.73		LT	148.61	5.14	84.87		109.64			18.27	84.87	10.18				4.13	2.95							
566+48.73		567+27.71		LT	78.98	4.71	41.33		54.50			9.08	41.33	4.96												
566+48.73		567+27.71		LT	78.98			3036.03					337.34	40.48				16.40	11.71							
								3295.09	366.12			61.02														
567+27.71		571+72.35		LT	444.64	5.14	253.94		328.05			54.67	253.94	30.47												
571+72.35		572+51.00		LT	78.65	5.05	44.13		57.24			9.54	44.13	5.30												
571+72.35		572+51.00		LT	78.65			3599.27					399.92	47.99				19.44	13.89							
								3976.98	441.89			73.65														
572+51.00		574+91.52		LT	240.52	4.96	132.55		172.64			28.77	132.55	15.91				6.44	4.60							
574+91.52		575+19.69		LT	28.17	5.06	15.84		20.53			3.42	15.84	1.90				0.77	0.55							
575+19.69		579+36.26		LT	416.57	5.18	239.76		309.19			51.53	239.76	28.77				11.65	8.32							
579+36.26		580+16.32		LT	80.06	5.19	46.17		59.51			9.92	46.17	5.54				2.24	1.60							
579+36.26		580+16.32		LT	80.06			1439.37					159.93	19.19				7.77	5.55							
								1664.97	185.00			30.83														
580+16.32		584+85.12		LT	468.80	5.21	271.38		349.52			58.25	271.38	32.57				13.19	9.42							
584+85.12		585+64.38		LT	79.26	5.23	46.06		59.27			9.88	46.06	5.53				2.24	1.60							
584+85.12		585+64.38		LT	79.26			2537.56					281.95	33.83				13.71	9.79							
								2793.32	310.37			51.73														
585+64.38		585+83.11		LT	18.73	5.23	10.88		14.01			2.33	10.88	1.31				0.53	0.38							
585+83.11		585+93.11		LT	10.00	3.12	3.47		5.13			0.86	3.47	0.42				0.17	0.12							
BIKE PATH																										
11+21.00		11+50.51		LT & RT	29.51	10.12	33.18													1.38						
11+21.00		11+50.51		LT & RT	29.51	12.12	39.74		39.74					4.77							2.77					
11+50.51		11+52.50		LT & RT	1.99	10.04	2.22													0.09						
11+50.51		11+52.50		LT & RT	1.99	11.04	2.44		2.44					0.29							0.18					
11+52.50		11+61.79		LT & RT	9.29	10.00	10.32													0.43						
13+05.71		13+13.50		LT & RT	7.79	10.00	8.66		8.66					1.04							0.86					
13+13.50		13+29.17		LT & RT	15.67	10.00	17.41													0.73						
13+13.50		13+29.17		LT & RT	15.67	11.00	19.15		19.15					2.30							1.45					
13+29.17		13+82.99		LT & RT	53.82	10.15	60.70													2.53						
13+29.17		13+82.99		LT & RT	53.82	11.15	66.68		66.68					8.00							5.06					
13+82.99		13+93.00		LT & RT	10.01	10.38	11.54													0.48						
13+82.99		13+93.00		LT & RT	10.01	12.38	13.77		13.77					1.65							0.96					
								SUBTOTALS	3480.07	1.16		554.94	2698.46	341.87				113.47	81.05	5.64	11.28					
								TOTALS CARRIED TO GENERAL SUMMARY	3481	2		555	2699	342				114	82	6	12					

CALCULATED AMF
CHECKED CSR

PAVEMENT QUANTITIES

DEL-36-10.59

STATION RANGE			TYPICAL SECTION	SIDE	DISTANCE (D)	AVERAGE WIDTH (W)	SURFACE AREA (A) A=DXW/9	CADD GENERATED AREA	202 PAVEMENT REMOVED
					FT	FT	SY	SY	SY
ROADWAY									
20+38.40		20+88.84		LT	95.54	1.00	10.62		10.62
20+88.84		21+52.56		LT	63.72	1.00	7.08		7.08
20+38.40		21+52.56		RT	114.16	4.50		56.86	56.86
560+17.47		562+26.35		RT	208.88	1.30	30.17		30.17
562+26.35		562+98.55		RT	72.20			177.68	177.68
562+98.55		563+40.34		RT	41.79	1.59	7.38		7.38
563+40.34		563+58.80		RT	18.46	1.80	3.69		3.69
563+58.80		565+12.26		RT	153.46	1.35	23.02		23.02
565+12.26		569+45.68		RT	433.42	1.68	80.91		80.91
569+45.68		570+25.28		RT	79.60			435.43	435.43
570+25.28		572+47.22		RT	221.94	1.21	29.84		29.84
572+47.22		573+26.10		RT	78.88			310.98	310.98
573+26.10		575+99.29		RT	273.19	1.49	45.23		45.23
575+99.29		576+78.89		RT	79.60			347.08	347.08
576+78.89		586+39.14		RT	960.25	1.21	129.10		129.10
561+10.38		562+00.11		LT	89.73			18.52	18.52
562+00.11		564+15.29		LT	215.18	1.00	23.91		23.91
564+15.29		565+00.10		LT	84.81		0.00	284.15	284.15
565+00.10		566+48.73		LT	148.63	1.53	25.27		25.27
566+48.73		567+27.71		LT	78.98			363.39	363.39
567+27.71		571+72.35			444.64	1.42	70.15		70.15
571+72.35		572+51.00		LT	78.65			417.65	417.65
572+51.00		574+91.52		LT	240.52	1.17	31.27		31.27
574+91.52		575+19.69		LT	28.17	1.15	3.60		3.60
575+19.69		579+36.26		LT	416.57	1.24	57.39		57.39
579+36.26		580+16.32		LT	80.06			191.69	191.69
580+16.32		584+85.12		LT	468.80	1.18	61.46		61.46
584+85.12		585+64.38		LT	79.26			309.19	309.19
585+64.38		585+93.11		LT	28.73	1.09	3.48		3.48
								SUBTOTALS	3556.19
								TOTALS CARRIED TO GENERAL SUMMARY	3557

CALCULATED AMF
CHECKED CSR

PAVEMENT QUANTITIES

DEL-36-10.59

STATION RANGE		TYPICAL SECTION	SIDE	DISTANCE (D)	AVERAGE WIDTH (W)	SURFACE AREA (A) A=DXW/9	CADD GENERATED AREA	204 SUBGRADE COMPACTION	304 AGGREGATE BASE	304 AGGREGATE BASE	407 NON-TRACKING TACK COAT (FOR NEW ASPHALT, APPLIED @ 0.05 GAL./S.Y.)		441 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)	441 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22	441 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22	452 6" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1	452 8" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1	608 6" CONCRETE WALK	608 8" CONCRETE WALK
				FT	FT	SY	SF	SY	CY	CY	GAL		CY	CY	CY	SY	SY	SF	SF
560+51.03	ALLEY - ASPHALT		RT				233.73	25.97		5.77	1.30		1.26	0.90					
561+87.84	COM- ASPHALT		RT				170.01	18.89									18.89		
							277.21	30.80											30.80
							459.08	51.01		11.34	2.55		2.48	1.77					
561+94.55	COM - CONC		LT				163.34	18.15									18.15		
							230.99	25.67											25.67
							91.10	10.12									10.12		
562+70.16	COM - CONC		LT				171.07	19.01									19.01		
							244.54	27.17											27.17
							137.54	15.28									15.28		
565+38.64	COM - CONC		RT				113.24	12.58									12.58		
							232.53	25.84									25.84		25.84
							386.45	42.94									42.94		
565+64.96	RES - ASPHALT		LT				172.19	19.13								19.13	19.13		
							139.09	15.45									15.45	139.09	
							189.27	21.03	3.51						1.17				
567+43.44	COM - CONC		RT				234.33	26.04									26.04		
							217.89	24.21									24.21		24.21
							350.06	38.90									38.90		
568+03.28	COM - CONC		RT				207.48	23.05									23.05		
							188.60	20.96											20.96
							300.69	33.41									33.41		
574+62.94	ALLEY - ASPHALT		RT				57.38	6.38									6.38		
							54.00	6.00											6.00
							90.08	10.01		2.22	0.50		0.49	0.35					
575+03.25	COM - ASPHALT		LT				246.61	27.40									27.40		
							197.36	21.93											21.93
							247.25	27.47		6.10	1.37		1.34	0.95					
575+22.21	RES - CONC		RT				78.37	8.71								8.71			
							60.00	6.67										60.00	
							110.00	12.22								12.22			
576+49.49	RES - ASPHALT		LT				67.36	7.48								7.48			
							47.98	5.33										47.98	
							111.95	12.44	2.07						0.69				
577+40.07	RES - ASPHALT		LT				70.12	7.79								7.79			
							51.00	5.67										51.00	
							59.50	6.61	1.10						0.37				
577+63.81	RES - CONC		RT				41.20	4.58								4.58			
							51.11	5.68										51.11	
							187.18	20.80								20.80			
578+32.76	RES - ASPHALT		LT				72.88	8.10								8.10			
							63.00	7.00										63.00	
							63.00	7.00	1.17						0.39				
578+52.91	RES - ASPHALT		LT				90.62	10.07								10.07			
							63.00	7.00										63.00	
							94.50	10.50	1.75						0.58				
578+57.15	RES - CONC		RT				105.87	11.76								11.76			
							90.00	10.00										90.00	
							150.00	16.67								16.67			
579+51.68	ALLEY - ASPHALT		RT				86.63	9.63									9.63		
							69.00	7.67											7.67
							103.53	11.50		2.56	0.58		0.56	0.40					
581+15.37	RES - CONC		RT				94.87	10.54								10.54			
							78.00	8.67										78.00	
							143.00	15.89								15.89			
							SUBTOTALS	900.75	9.60	27.99	6.30		6.12	4.37	3.20	153.74	386.40	643.18	190.24
							TOTALS CARRIED TO GENERAL SUMMARY	901	10	28	7		7	5	4	154	387	644	191

CALCULATED AMF
CHECKED CSR

DRIVEWAY CALCULATIONS

DEL-36-10.59

STATION RANGE			TYPICAL SECTION	SIDE	DISTANCE (D)	AVERAGE WIDTH (W)	SURFACE AREA (A) A=DXW/9	CADD GENERATED AREA	204 SUBGRADE COMPACTION	304 AGGREGATE BASE	304 AGGREGATE BASE	407 NON-TRACKING TACK COAT (FOR NEW ASPHALT, APPLIED @ 0.05 GAL./S.Y.)		441 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)	441 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22	441 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22	452 6" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1	452 8" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1	608 6" CONCRETE WALK	608 8" CONCRETE WALK
					FT	FT	SY	SF	SY	CY	CY	GAL		CY	CY	CY	SY	SY	SF	SF
581+50.55		RES - CONC		LT				83.87	9.32								9.32			
								66.00	7.33										66.00	
582+04.14		RES - CONC		LT				100.37	11.15								11.15			
								84.00	9.33										84.00	
582+35.68		RES - CONC		RT				75.61	8.40								8.40			
								56.99	6.33										56.99	
								85.48	9.50								9.50			
582+98.18		RES - CONC		LT				72.85	8.09								8.09			
								53.99	6.00										53.99	
583+11.79		RES - ASPHALT		RT				78.37	8.71								8.71			
								60.00	6.67										60.00	
								120.00	13.33	2.22						0.74				
583+53.46		RES - ASPHALT		LT				133.37	14.82								14.82			
								120.00	13.33										120.00	
583+57.37		RES - CONC		RT				78.37	8.71								8.71			
								60.00	6.67										60.00	
								90.00	10.00								10.00			
584+03.58		RES - CONC		RT				112.75	12.53								12.53			
								102.00	11.33										102.00	
								187.00	20.78								20.78			
584+13.48		RES - ASPHALT		LT				67.37	7.49								7.49			
								48.00	5.33										48.00	
								72.00	8.00	1.33						0.44				
584+23.03		RES - CONC		RT				74.22	8.25								8.25			
								59.97	6.66										59.97	
								89.95	9.99								9.99			
585+72.69		ALLEY - ASPHALT		RT				92.16	10.24									10.24		
								75.00	8.33											75.00
								122.48	13.61		3.02	0.68		0.66	0.47					
586+08.28		COM - CONC		RT				190.33	21.15									21.15		
								169.89	18.88											169.89
								54.03	6.00									6.00		
21+06.05		COM - CONC		LT				124.72	13.86								13.86			
							SUBTOTALS		340.13	3.56	3.02	0.68		0.66	0.47	1.19	161.59	37.39	710.95	244.89
							TOTALS CARRIED TO GENERAL SUMMARY		341	4	4	1		1	1	2	162	38	711	245

CALCULATED AMF
CHECKED CSR

DRIVEWAY CALCULATIONS

DEL-36-10.59

STATION RANGE			REF. NO.	SHEET NO.	SIDE	CODE	SIZE	625 CONDUIT, 2", 725.04 FT	625 TRENCH FT	625 POWER SERVICE EACH	630 GROUND MOUNTED SUPPORT, NO. 2 POST FT	630 GROUND MOUNTED SUPPORT, NO. 3 POST FT	630 STREET NAME SIGN SUPPORT, NO. 3 POST FT	630 STREET NAME SIGN SUPPORT, NO. 4 POST FT	630 SIGN, FLAT SHEET SF	630 SIGN, DOUBLE FACED, STREET NAME EACH	630 REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL, AS PER PLAN EACH	630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL EACH	631 SCHOOL SPEED LIMIT SIGN ASSEMBLY, MISC.:SCHOOL SPEED LIMIT ASSEMBLY AND ACCESSORIES EACH	632 POWER CABLE, 3 CONDUCTOR, NO. 6 AWG FT
	TO																			
21+50.00		21+50.00	S1	132	LT	R10-H7A-24	24"x30"				13.00				5.00					
561+75.00		561+75.00	S2	132	LT	M4-5-24	24"x12"					35.50			2.00		3.00	1.00		
						M3-1-24	24"x12"								2.00					
						M1-4-24-2	24"x24"								4.00					
						M1-4-24-2	24"x24"								4.00					
						M6-6-21	21"x15"								2.19					
561+74.00		561+74.00	S3	132	LT	M4-5-24	24"x12"					35.50			2.00		2.00	1.00		
						M3-3-24	24"x12"								2.00					
						M1-4-24-2	24"x24"								4.00					
						M1-4-24-2	24"x24"								4.00					
						M6-1-21	21"x15"								2.19					
563+73.00		563+73.00	S4	132	LT	W3-3-30	30"x30"				13.00	13.00			6.25					
560+20.00		560+20.00	S5	132	RT	R7-1-12	12"x18"				12.00				1.50		1.00	1.00		
560+80.00		560+80.00	S6	132	RT	M1-4-24-2	30"x24"					13.75			5.00		2.00	1.00		
						M6-1-12	21"x15"								2.19					
560+84.00		560+84.00	S7	132	RT	R14-1-24	24"x12"					35.00			2.00		8.00	1.00		
						M1-4-24-2	24"x24"								4.00					
						M6-1-21	24"x12"								2.00					
						M1-4-24-2	30"x24"								5.00					
						M6-1-21	24"x12"								2.00					
560+92.00		560+92.00	S8	132	RT	M1-4-24-2	30"x24"					13.75			5.00					
						M6-1-12	24"x12"								2.19					
561+56.00		561+56.00	S9	132	RT	R9-3-18	18"x18"				12.00				2.25					
562+41.00		562+41.00	S10	132	RT	R5-H2B-24	24"x24"				12.50				4.00		1.00	1.00		
26+78.00		26+78.00	S11	132	RT	R1-1-30	30"x30"						16.00		6.25		1.00	1.00		
						D3-1-72	60"x12"									1.00	1.00			
						D3-1-60	72"x12"									1.00	1.00			
563+05.00		563+05.00	S12	132	RT	R7-1-12	12"x18"				12.00				1.50		1.00	1.00		
562+96.00		562+96.00	S13	132	RT	D3-1-72	60"x12"										1.00	1.00		
						D3-1-60	72"x12"										1.00			
563+15.00		563+15.00	S14	132	RT	M4-5-24	24"x12"				18.00				2.00					
						M1-4-24-2	24"x24"								4.00					
						M3-2-24	24"x12"								2.00		4.00	2.00		
						M1-4-24-2	24"x24"								4.00					
21+33.50		21+33.50	R1	132	LT	R10-6-24	24"x36"										1.00	1.00		
30+65.00		30+65.00	S1	133	LT	R1-1-30	30"x30"						16.00		6.25		1.00	1.00		
						D3-1-60	60"x12"									1.00	2.00	1.00		
						D3-1-72	72"x12"									1.00				
564+20.00		564+20.00	S2	133	LT	M2-1-21	21"x15"					13.75			2.19		2.00	1.00		
						M1-4-24-2	24"x24"								4.00					
565+05.00		565+05.00	S3	133	LT	R3-9DP-30	30"x12"					14.50			2.50					
						R3-9B-30	30"x36"								7.50					
568+85.00		568+85.00	S4	133	LT	R2-1-24	24"x30"				13.00				5.00		1.00	1.00		
35+36.00		35+36.00	S5	133	LT	D3-1-72	72"x12"							12.50		1.00	1.00	1.00		
						D3-1-72	72"x12"									1.00	1.00			
						R1-1-30	30"x30"					13.00			6.25		1.00	1.00		
567+19.00		567+19.00	S6	133	LT	R9-3-18	18"x18"				12.00				2.25					
567+75.00		567+75.00	S7	133	RT	S1-1-30	36"x36"				29.00				9.00		2.00	1.00		
						W16-9P-24	24"x12"								2.00					
567+65.00		567+65.00	S8	133	LT	R7-1-12	12"x18"				12.00				1.50		1.00	1.00		
564+69.00		564+69.00	S9	133	LT	R3-9CP-30	30"x12"					14.50			2.50					
						R3-9B-30	30"x36"								7.50					
566+59.00		566+59.00	S10	133	RT	R7-1-12	12"x18"				12.00				1.50		1.00	1.00		
567+19.00		567+19.00	S11	133	RT	R9-3-18	18"x18"				12.00				2.25					
TOTALS CARRIED TO GENERAL SUMMARY											183	203	32	13	159	6				

CALCULATED ACF
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DEL-36-10.59

STATION RANGE			REF. NO.	SHEET NO.	SIDE	CODE	SIZE	625 CONDUIT, 2", 725.04	625 TRENCH	625 POWER SERVICE	630 GROUND MOUNTED SUPPORT, NO. 2 POST	630 GROUND MOUNTED SUPPORT, NO. 3 POST	630 STREET NAME SIGN SUPPORT, NO. 3 POST	630 STREET NAME SIGN SUPPORT, NO. 4 POST	630 SIGN, FLAT SHEET	630 SIGN, DOUBLE FACED, STREET NAME	630 REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL, AS PER PLAN	630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	631 SCHOOL SPEED LIMIT SIGN ASSEMBLY, MISC.:SCHOOL SPEED LIMIT ASSEMBLY AND ACCESSORIES	632 POWER CABLE, 3 CONDUCTOR, NO. 6 AWG					
								FT	FT	EACH	FT	FT	FT	FT	SF	EACH	EACH	EACH	EACH	EACH	FT					
	TO																									
568+85.00		568+85.00	S12	133	RT	S5-H1-24	24"x48"	51.00	51.00	1.00					8.00				1.00	130						
						S5-3-24	24"x30"				13.00				5.00											
566+25.41		566+25.41	R1	133	LT	R2-1-24	24"x30"										1.00	1.00								
569+66.00		569+66.00	S1	134	LT	S1-1-36	36"x36"				29.00				9.00											
						W16-7PL-24	24"x12"								2.00											
570+06.00		570+06.00	S2	134	LT	R7-1-12	12"x18"				12.00				1.50		1.00	1.00								
45+39.00		45+39.00	S3	134	LT	R10-6-24	24"x36"					13.50			6.00		1.00	1.00								
45+50.00		45+50.00	S4	134	RT	R5-H2B-24	24"x24"				12.50				4.00		1.00	1.00								
572+55.00		572+55.00	S5	134	LT	S1-1-36	36"x36"				29.00				9.00		2.00	1.00								
						W16-7PL-24	24"x12"								2.00											
572+67.00		572+67.00	S6	134	LT	R10-6-24	24"x36"					13.50			6.00											
569+35.00		569+35.00	S7	134	RT	S1-1-36	36"x36"					14.00			9.00		2.00	1.00								
						W16-7PL-24	24"x12"								2.00											
569+10.00		569+10.00	S8	134	RT	R7-1-12	12"x18"				12.00				2.19		1.00	1.00								
41+59.00		41+59.00	S9	134	RT	R10-6-24	24"x36"					13.50			6.00		1.00	1.00								
570+22.00		570+22.00	S10	134	RT	R3-9B-24	24"x36"					13.50			6.00											
572+32.00		572+32.00	S11	134	RT	S1-1-36	36"x36"				29.00				9.00		2.00	1.00								
						W16-7PL-24	24"x12"								2.00											
51+52.00		51+52.00	S12	134	RT	R3-5R-30	30"x36"					13.50			7.50		1.00	1.00								
51+61.00		51+61.00	S13	134	RT	D3-1-48	48"x12"						12.50			1.00	1.00	1.00								
						D3-1-72	72"x12"									1.00										
						R1-1-30	30"x30"					13.00			6.25		1.00									
573+98.00		573+98.00	S14	134	LT	R7-1-12	12"x18"				12.00				1.50		1.00	1.00								
571+00.00		571+00.00	S15	134	LT	R3-9B-24	24"x36"					13.50			6.00											
572+85.00		572+85.00	S16	134	LT	R3-2-24	24"x24"				12.50				4.00		1.00	1.00								
51+53.60		51+53.60	R1	134	RT												1.00	1.00								
41+55.00		41+55.00	R2	134	RT	R1-1-30	30"x30"										1.00	1.00								
575+53.00		575+53.00	S1	135	LT	R7-1-12	12"x18"				12.00				1.50		1.00	1.00								
577+95.00		577+95.00	S2	135	LT	S5-H1-24	24"x48"	11.00	11.00	1.00					8.00				1.00	90						
						S5-3-24	24"x30"								5.00											
576+04.00		576+04.00	S3	135	RT	D3-1-60	60"x12"							12.50		1.00	2.00	1.00								
						D3-1-72	72"x12"									1.00										
61+59.00		61+59.00	S4	135	RT	R1-1-30	30"x30"					13.00			6.25		1.00	1.00								
577+30.00		577+30.00	S5	135	RT	R7-1-12	12"x18"				12.00				1.50		1.00	1.00								
577+97.00		577+97.00	S6	135	RT	R2-1-24	24"x30"				13.00				5.00		1.00	1.00								
577+84.00		577+84.00	R1	135	RT	S5-3-24	24"x30"										1.00	1.00								
																				220.00						
TOTALS CARRIED TO GENERAL SUMMARY								62	62	2	198	121	13	13	142	4	26	21	2	220						

CALCULATED ACF
CHECKED CSR

SIGNING SUBSUMMARY

DEL-36-10.59

STATION RANGE			REF. NO.	SHEET NO.	SIDE	CODE	SIZE	625 CONDUIT, 2", 725.04	625 TRENCH	625 POWER SERVICE	630 GROUND MOUNTED SUPPORT, NO. 2 POST	630 GROUND MOUNTED SUPPORT, NO. 3 POST	630 STREET NAME SIGN SUPPORT, NO. 3 POST	630 STREET NAME SIGN SUPPORT, NO. 4 POST	630 SIGN, FLAT SHEET	630 SIGN, DOUBLE FACED, STREET NAME	630 REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL, AS PER PLAN	630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	631 SCHOOL SPEED LIMIT SIGN ASSEMBLY, MISC.:SCHOOL SPEED LIMIT ASSEMBLY AND ACCESSORIES	632 POWER CABLE, 3 CONDUCTOR, NO. 6 AWG					
								FT	FT	EACH	FT	FT	FT	FT	SF	EACH	EACH	EACH	EACH	EACH	FT					
	TO																									
579+23.00		579+23.00	S1	136	LT	S1-1-30	36"x36"				29.00				9.00		2.00	1.00								
						W16-9P-24	24"x12"								2.00											
579+45.00		579+45.00	S2	136	LT	D3-1-48	48"x12"						12.50			1.00	2.00	1.00								
						D3-1-72	72"x12"									1.00										
70+37.00		70+37.00	S3	136	LT	R1-1-30	30"x30"					13.00			6.25		1.00	1.00								
70+33.00		70+33.00	S4	136	RT	R12-1-24	24"x30"				13.00				5.00		1.00	1.00								
580+57.00		580+57.00	S5	136	LT	R7-1-12	12"x18"				12.00				1.50		1.00	1.00								
580+54.00		580+54.00	S6	136	RT	R7-1-12	12"x18"				12.00				1.50		1.00	1.00								
583+27.00		583+27.00	S7	136	RT	R7-1-12	12"x18"				12.00				1.50		1.00	1.00								
584+97.00		584+97.00	S1	137	LT	D3-1-48	48"x12"						12.50			1.00	2	1.0								
						D3-1-72	72"x12"									1.00										
75+36.00		75+36.00	S2	137	LT	R1-1-30	30"x30"					13.00			6.25		1	1								
584+85.00		584+85.00	S3	137	LT	R3-9DP-30	30"x12"					14.50			2.50											
						R3-9B-30	30"x36"								7.50											
584+85.00		584+85.00	S4	137	RT	R3-9DP-30	30"x12"					14.50			2.50											
						R3-9B-30	30"x36"								7.50											
81+60.00		81+60.00	S5	137	RT	R1-1-30	30"x30"					13.00			6.25		1	1								
TOTALS CARRIED TO GENERAL SUMMARY											78	68	25		60	4	13	10								

CALCULATED ACF
CHECKED CSR

SIGNING SUBSUMMARY

DEL-36-10.59

REF NO.	SHEET NO.	STATION TO STATION			644 LANE LINE, 6" MILE	644 CENTER LINE MILE	644 STOP LINE FT	644 CROSSWALK LINE FT	644 TRANSVERSE/DIAGONAL LINE FT	644 SCHOOL SYMBOL MARKING, 72" EACH	644 LANE ARROW EACH	644 DOTTED LINE, 4" FT	644 REMOVAL OF PAVEMENT MARKING FT
			TO										
CSD1	132	559+00.00		564+00.00		0.09							123
CSD2	132	563+60.00		564+00.00		0.01							
CSD3	132	20+00.00		22+00.00		0.04							48
DL1	132	560+23.00		20+72.00								111	
LA1	132	560+13.00									1		
TLY1	132	563+60.00		564+19.18					18				
SL1	132	560+23.00					23						
SL2	132	561+62.00					21						
SL3	132	20+72.00					26						
SL4	132	26+79.00					17						
XW1	132	560+26.76		560+36.76				234					
XW2	132	20+56.27		20+66.27				278					
XW3	132	26+83.91		26+88.91				80					
CDS1	133	564+00.00		564+19.00		0.01							
CDS2	133	30+00.00		31+00.00		0.02							
CDS3	133	35+00.00		36+35.00		0.03							
CSD1	133	564+19.00		569+00.00		0.09							
CSD2	133	564+19.00		569+00.00		0.09							
DL1	133	564+19.00		565+00.00								84	
LA1	133	565+70.00									1		
LA2	133	565+80.00									1		
LA3	133	568+45.00									1		
LA4	133	568+55.00									1		
SL1	133	30+50.00					21						
SL2	133	35+36.00					13						
SS1	133	567+85.00								1			
XW1	133	30+24.51		30+35.44				99					
XW2	133	564+83.36		564+93.45				186					
XW3	133	566+41.23		566+51.23				184					
XW4	133	35+21.67		35+31.67				92					
CDS1	134	40+60.00		42+00.00		0.03							
CDS2	134	45+00.00		46+35.00		0.03							
CDS3	134	50+90.00		52+00.00		0.02							
CSD1	134	569+00.00		574+00.00		0.09							
CSD2	134	569+00.00		574+00.00		0.09							
LA1	134	570+70.00									1		
LA2	134	570+80.00									1		
LA3	134	51+52.00									1		
SL1	134	569+43.00					25						
SL2	134	41+59.00					15						
SL3	134	570+26.00					25						
SL4	134	571+60.00					25						
TOTALS CARRIED TO GENERAL SUMMARY						0.64	211	1153	18	1	8	195	171

CALCULATED ACF
CHECKED CSR

PAVEMENT MARKING SUBSUMMARY

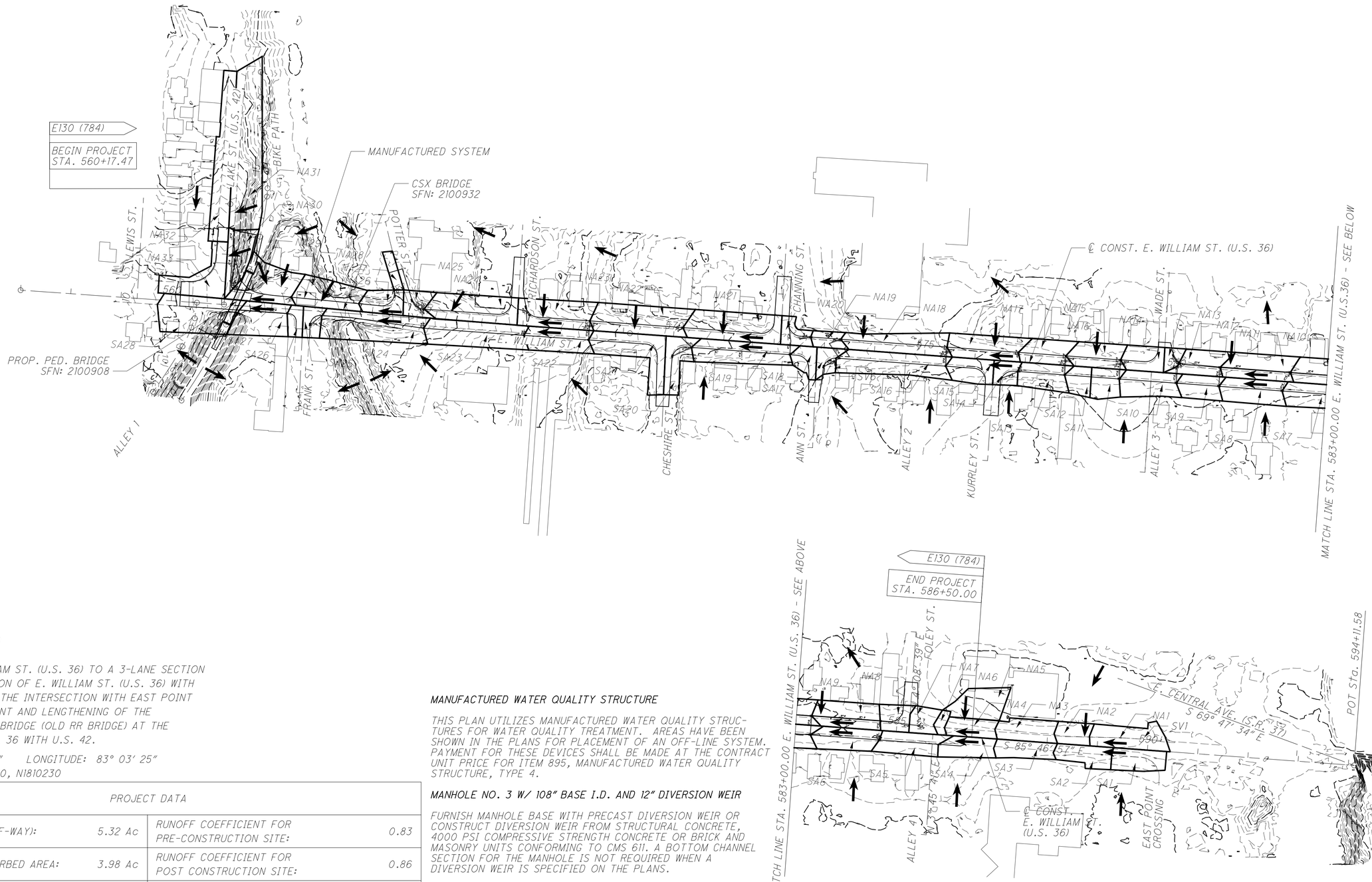
DEL-36-10.59

REF NO.	SHEET NO.	STATION TO STATION			644 LANE LINE, 6" MILE	644 CENTER LINE MILE	644 STOP LINE FT	644 CROSSWALK LINE FT	644 TRANSVERSE/DIAGONAL LINE FT	644 SCHOOL SYMBOL MARKING, 72" EACH	644 LANE ARROW EACH	644 DOTTED LINE, 4" FT	644 REMOVAL OF PAVEMENT MARKING FT
			TO										
SL5	134	45+36.00					16						
SL6	134	572+67.00					25						
SL7	134	51+62.00					16						
XW1	134	569+45.02		569+55.02				188					
XW2	134	41+63.81		41+73.81				77					
XW3	134	45+21.95		45+31.89				91					
XW4	134	572+43.59		572+53.60				186					
XW5	134	51+66.16		51+76.17				83					
CDS1	135	60+90.00		62+00.00		0.02							
CSD1	135	574+00.00		579+00.00		0.09							
CSD1	135	574+00.00		579+00.00		0.09							
LA1	135	574+57.00									1		
LA2	135	574+67.00									1		
LA3	135	577+95.00									1		
LA4	135	578+05.00									1		
SL1	135	61+64.00					17						
XW1	135	575+91.26		576+01.26				183					
XW2	135	61+68.14		61+78.14				93					
CSD1	136	579+00.00		584+00.00		0.09							
CSD1	136	579+00.00		584+00.00		0.09							
CDS1	136	70+00.00		70+60.00		0.01							
LA1	136	581+45.00									1		
LA2	136	581+55.00									1		
LA3	136	583+45.00									1		
LA4	136	583+55.00									1		
SL1	136	70+37.00					15						
SS1	136	579+03.00								1			
XW1	136	70+23.00		70+33.00				88					
CSD1	137	584+00.00		585+53.00		0.03							
CSD2	137	584+00.00		585+53.00		0.03							
CDS1	137	585+53.00		587+50.00		0.07							
CDS1	137	75+00.00		76+00.00		0.02							
ELW1	137	585+57.45		586+39.12	0.02								
XW1	137	75+21.96		75+31.96				85					
SL1	137	75+36.00					16						
TLW 1	137	585+53.00		587+50.00					54				
TOTALS CARRIED TO GENERAL SUMMARY					0.02	0.56	105	1074	54	1	8		

CALCULATED ACF
CHECKED CSR

PAVEMENT MARKING SUBSUMMARY

DEL-36-10.59



PROJECT DESCRIPTION

WIDENING OF E. WILLIAM ST. (U.S. 36) TO A 3-LANE SECTION FROM THE INTERSECTION OF E. WILLIAM ST. (U.S. 36) WITH LAKE ST (U.S. 42) TO THE INTERSECTION WITH EAST POINT CROSSING. REPLACEMENT AND LENGTHENING OF THE EXISTING PEDESTRIAN BRIDGE (OLD RR BRIDGE) AT THE INTERSECTION OF U.S. 36 WITH U.S. 42.

LATITUDE: 40° 17′ 54″ LONGITUDE: 83° 03′ 25″
QUADRANGLES: N1815230, N1810230

PROJECT DATA			
TOTAL AREA (RIGHT-OF-WAY):	5.32 Ac	RUNOFF COEFFICIENT FOR PRE-CONSTRUCTION SITE:	0.83
PROJECT EARTH DISTURBED AREA:	3.98 Ac	RUNOFF COEFFICIENT FOR POST CONSTRUCTION SITE:	0.86
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	0.62 Ac	POST CONSTRUCTION BMP:	MANUFACTURED SYSTEM
NOTICE OF INTENT EARTH DISTURBED AREA:	4.60 Ac	IMMEDIATE RECEIVING WATERS:	OLENTANGY RIVER
IMPERVIOUS (PAVED) AREA FOR PRE-CONSTRUCTION SITE:	3.57 Ac	SUBSEQUENT RECEIVING WATERS:	SCIOTO RIVER
IMPERVIOUS (PAVED) AREA FOR POST CONSTRUCTION SITE:	3.90 Ac		

MANUFACTURED WATER QUALITY STRUCTURE

THIS PLAN UTILIZES MANUFACTURED WATER QUALITY STRUCTURES FOR WATER QUALITY TREATMENT. AREAS HAVE BEEN SHOWN IN THE PLANS FOR PLACEMENT OF AN OFF-LINE SYSTEM. PAYMENT FOR THESE DEVICES SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR ITEM 895, MANUFACTURED WATER QUALITY STRUCTURE, TYPE 4.

MANHOLE NO. 3 W/ 108″ BASE I.D. AND 12″ DIVERSION WEIR

FURNISH MANHOLE BASE WITH PRECAST DIVERSION WEIR OR CONSTRUCT DIVERSION WEIR FROM STRUCTURAL CONCRETE, 4000 PSI COMPRESSIVE STRENGTH CONCRETE OR BRICK AND MASONRY UNITS CONFORMING TO CMS 611. A BOTTOM CHANNEL SECTION FOR THE MANHOLE IS NOT REQUIRED WHEN A DIVERSION WEIR IS SPECIFIED ON THE PLANS.

PLACE DIVERSION WEIR PERPENDICULAR TO FLOW OF INFLOWING TRUNK SEWER. DOWEL CONCRETE OR MASONRY UNITS INTO THE BASE OF THE MANHOLE TO A DEPTH OF 3″ USING EPOXY COATED #4 REINFORCING BARS. START DOWELS AT THE CENTER OF THE DIVERSION WEIR AND SPACE 16″ ON CENTER ACROSS THE ENTIRE WEIR.

ALL MATERIALS AND LABOR, INCLUDING EXCAVATION AND BACKFILL, ARE PAID FOR AT THE PRICE FOR

ITEM 611 - MANHOLE NO. 3 WITH 108″ BASE I.D. AND 12″ DIVERSION WEIR	*1 EACH*
ITEM 611 - 24″ CONDUIT, TYPE B	*74 FT*

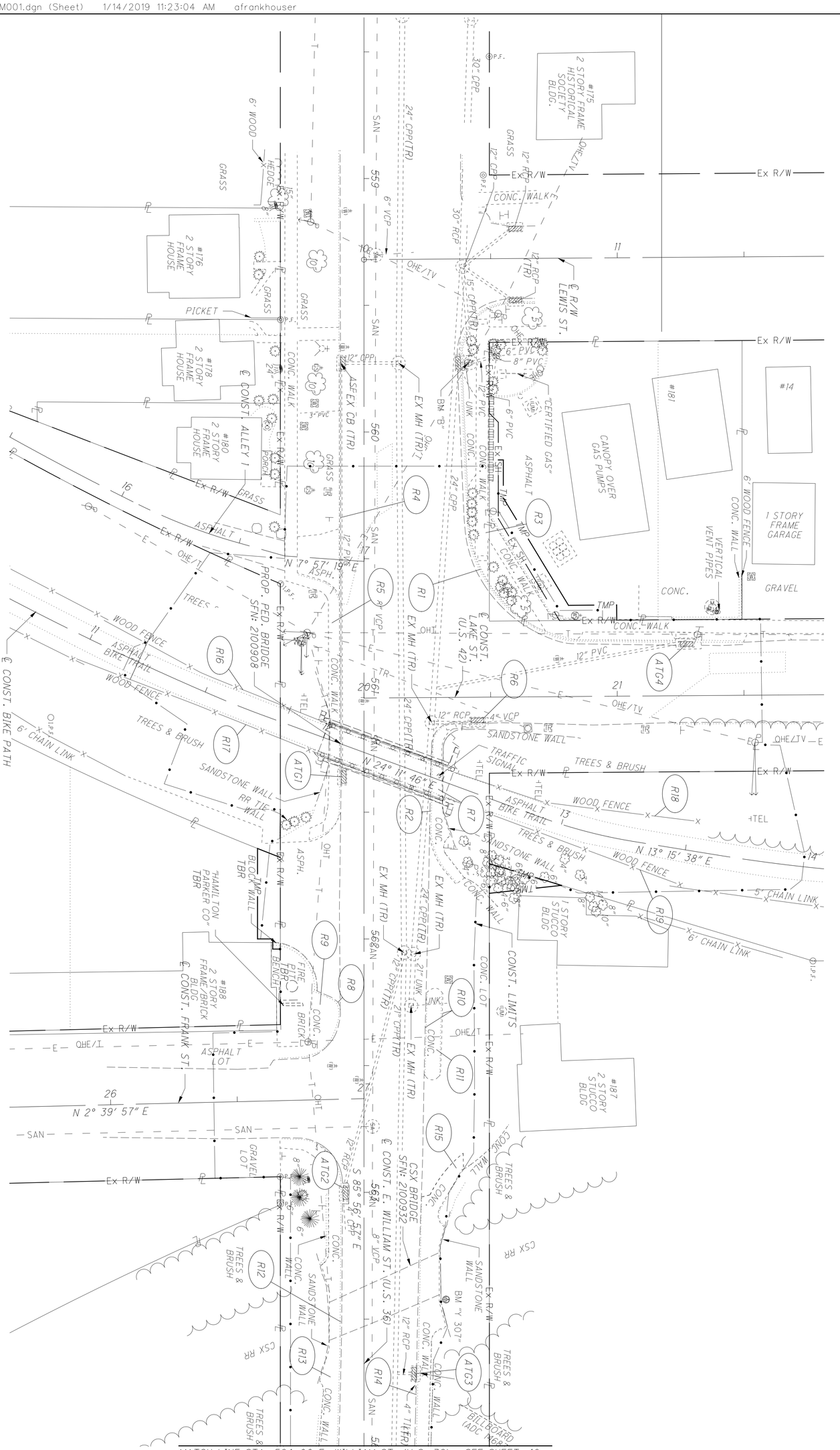
N

0 50 100 200 HORIZONTAL SCALE IN FEET

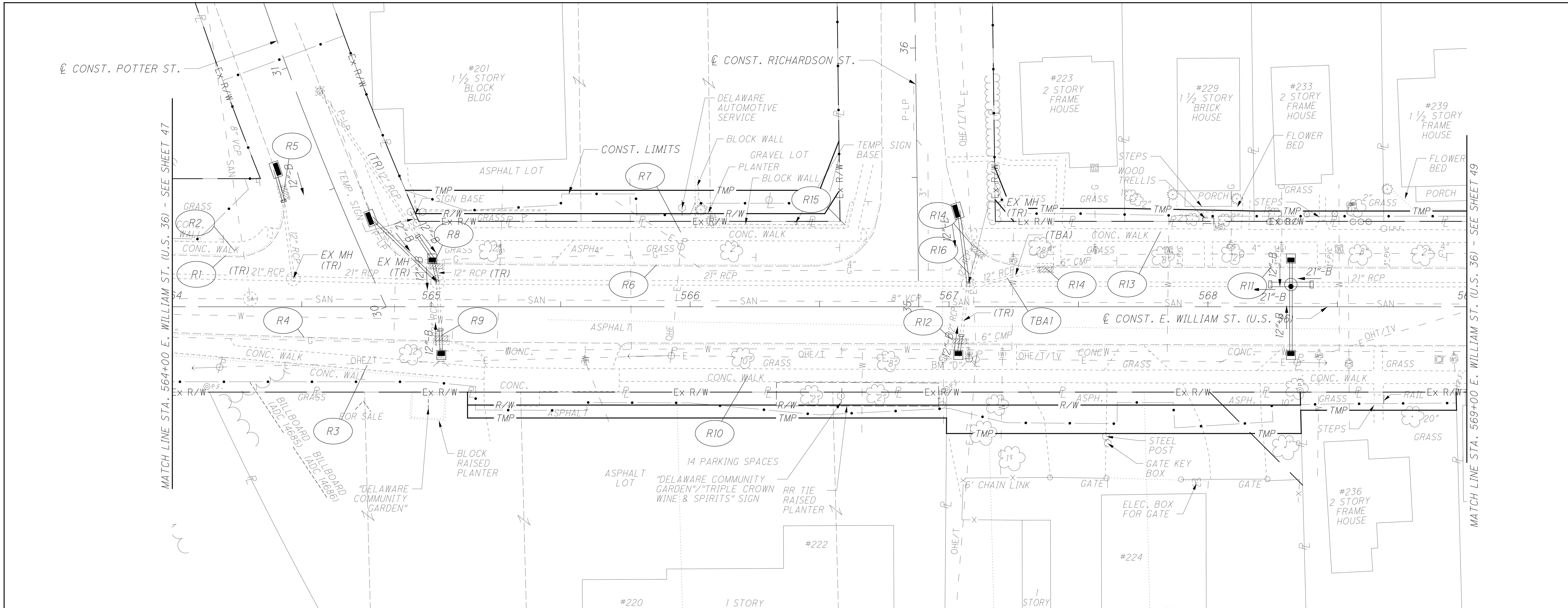
CALCULATED ACF CHECKED CSR

PROJECT SITE PLAN

DEL-36-10.59



47 / 224	**DEL-36-10.59**	**DEMOLITION PLAN** **STA. 559+00 TO STA. 564+00**	CALCULATED AMF CHECKED CSR	0 20 10 40 HORIZONTAL SCALE IN FEET

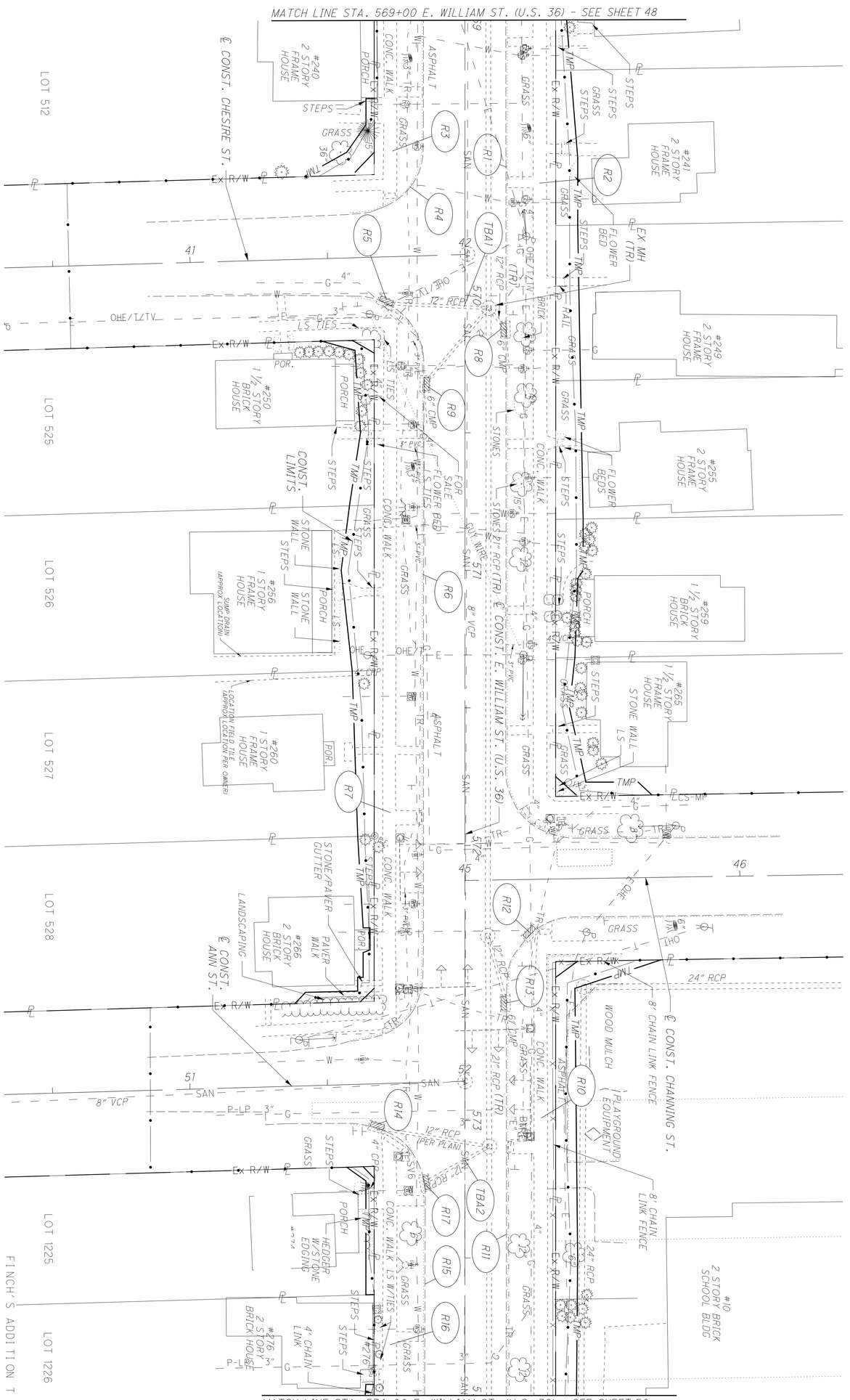

℄ CONST. POTTER ST.
℄ CONST. RICHARDSON ST.
℄ CONST. E. WILLIAM ST. (U.S. 36)
MATCH LINE STA. 564+00 E. WILLIAM ST. (U.S. 36) - SEE SHEET 47
MATCH LINE STA. 569+00 E. WILLIAM ST. (U.S. 36) - SEE SHEET 49
CONST. LIMITS
#201 1 1/2 STORY BLOCK BLDG
ASPHALT LOT
DELAWARE AUTOMOTIVE SERVICE
BLOCK WALL
GRAVEL LOT
PLANTER
TEMP. SIGN BASE
SIGN BASE
#223 2 STORY FRAME HOUSE
#229 1 1/2 STORY BRICK HOUSE
#233 2 STORY FRAME HOUSE
#239 1 1/2 STORY FRAME HOUSE
FLOWER BED
STEPS
WOOD TRELLIS
PORCH
GRASS
CONC. WALK
EX MH (TR)
(TR) 21" RCP
12" RCP (TR)
21" RCP
8" VCP
SAN
ASPHALT
CONC.
R1
R2
R3
R4
R5
R6
R7
R8
R9
R10
R11
R12
R13
R14
R15
R16
TBA1
(TBA)
BILLBOARD (ADC 14685)
BILLBOARD (ADC 14686)
FOR SALE
BLOCK RAISED PLANTER
"DELAWARE COMMUNITY GARDEN"
14 PARKING SPACES
"DELAWARE COMMUNITY GARDEN"/"TRIPLE CROWN WINE & SPIRITS" SIGN
RR TIE RAISED PLANTER
ASPHALT LOT
STEEL POST
GATE KEY BOX
GATE
6' CHAIN LINK
ELEC. BOX FOR GATE
#220
#222
#224
#236 2 STORY FRAME HOUSE
1 STORY
TMP
R/W
Ex R/W
564
565
566
567
568

HORIZONTAL SCALE IN FEET
0 10 20 40

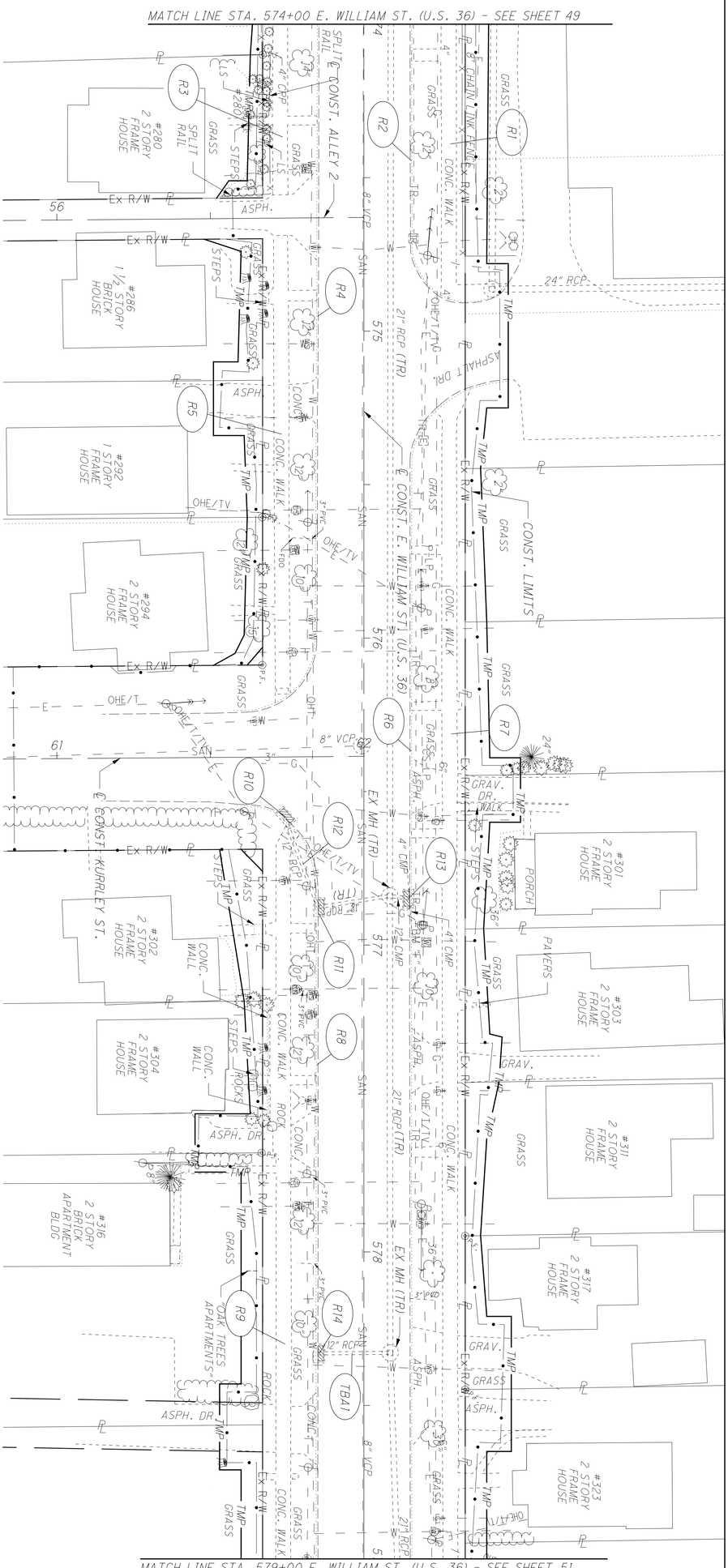
CALCULATED AMF
CHECKED CSR

DEMOLITION PLAN
STA. 564+00 TO STA. 569+00

DEL-36-10.59



49 / 224	**DEL-36-10.59**	**DEMOLITION PLAN** **STA. 569+00 TO STA. 574+00**	CALCULATED AMF CHECKED CSR	0 10 20 40 HORIZONTAL SCALE IN FEET

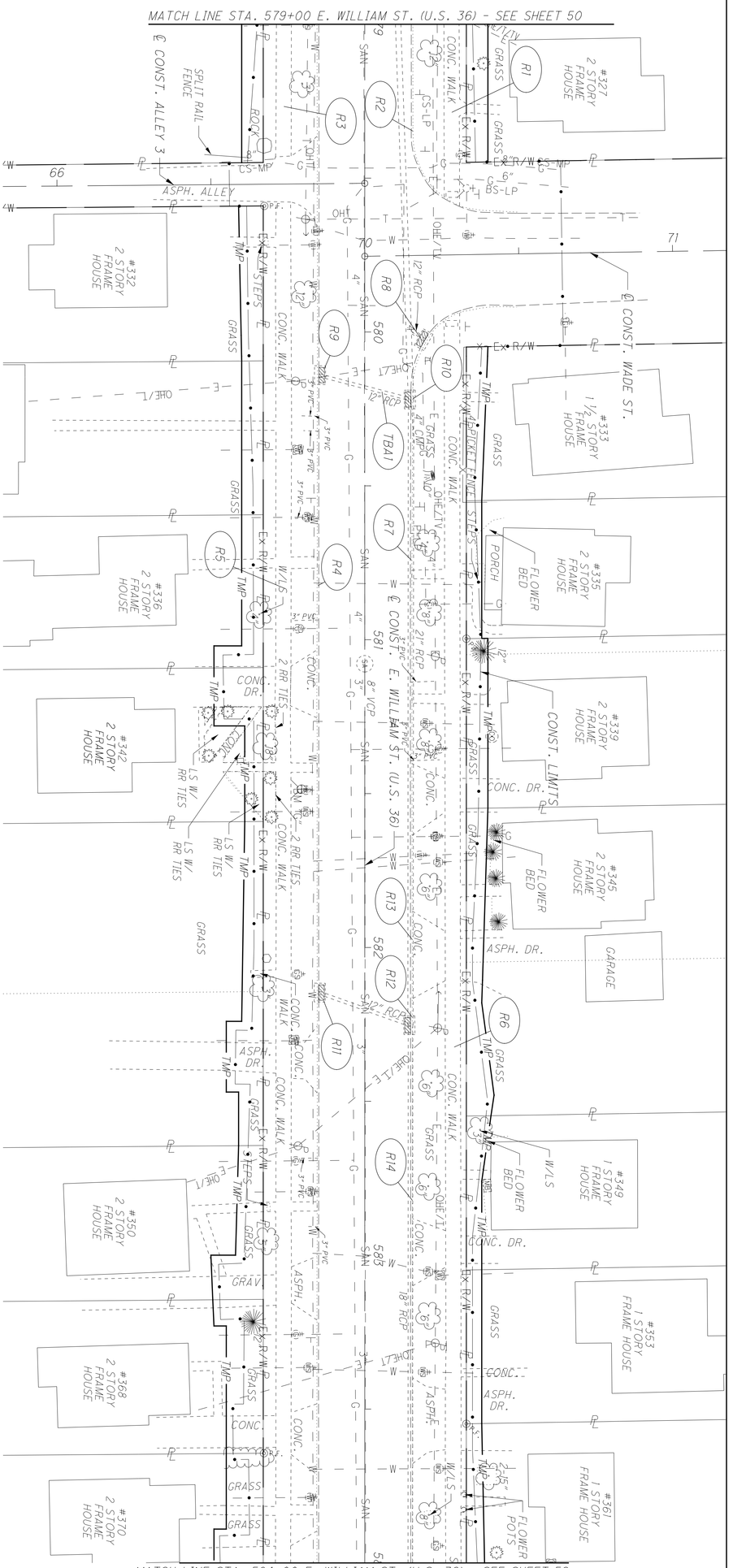


DEL-36-10.59

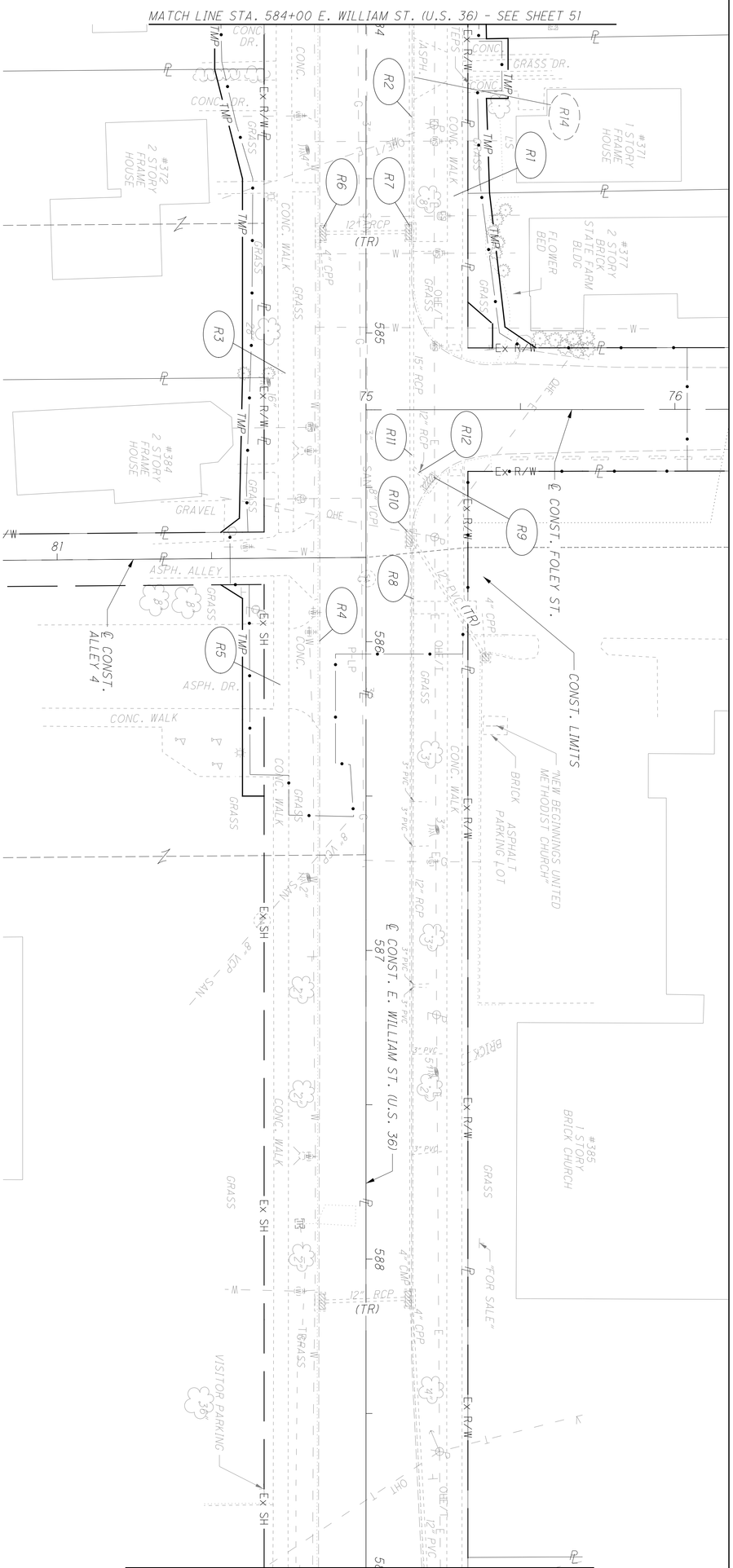
DEMOLITION PLAN
STA. 574+00 TO STA. 579+00

CALCULATED AMF
CHECKED CSR

0 10 20 40
HORIZONTAL SCALE IN FEET



51 / 224	**DEL-36-10.59**	**DEMOLITION PLAN** **STA. 579+00 TO STA. 584+00**	CALCULATED AMF CHECKED CSR	0 20 10 40 HORIZONTAL SCALE IN FEET



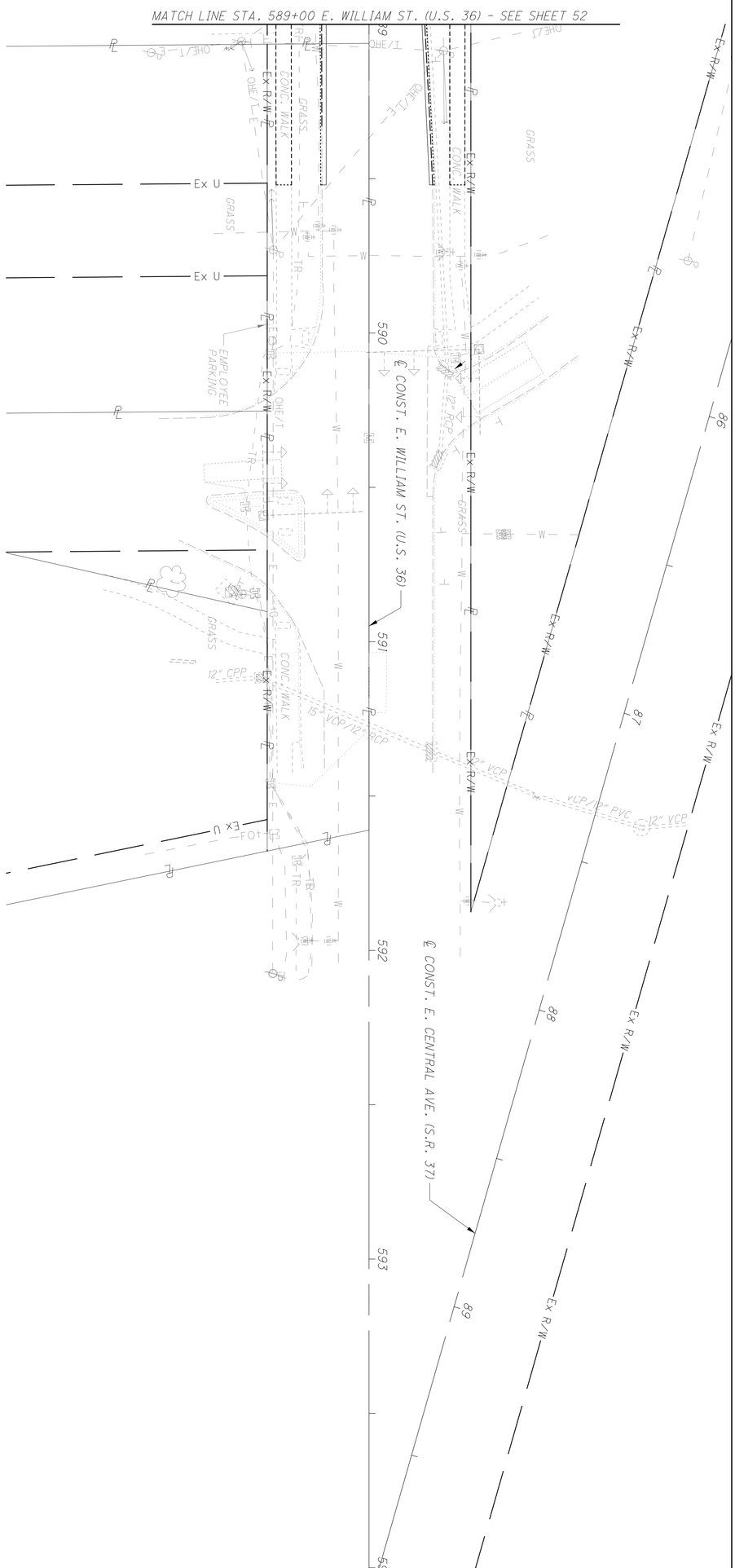
DEL-36-10.59

DEMOLITION PLAN
STA. 584+00 TO STA. 589+00

CALCULATED AMF
CHECKED CSR

0 10 20 40
HORIZONTAL SCALE IN FEET

N

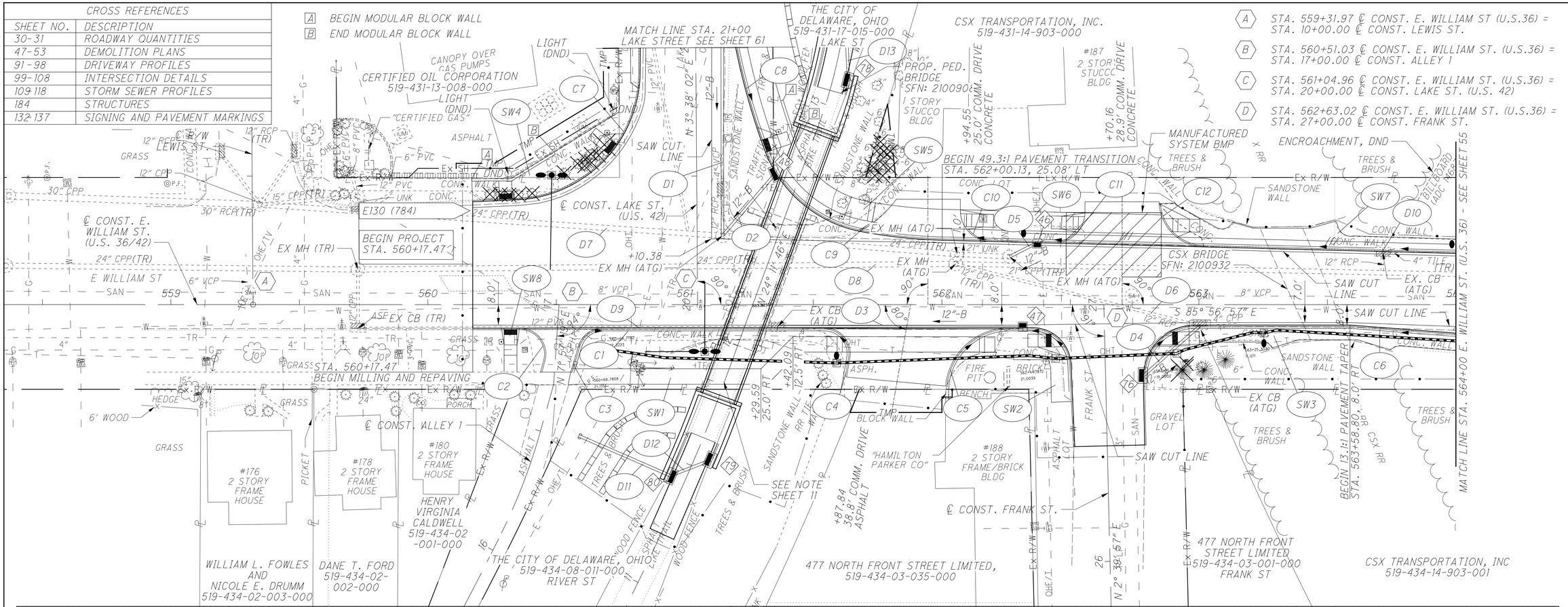


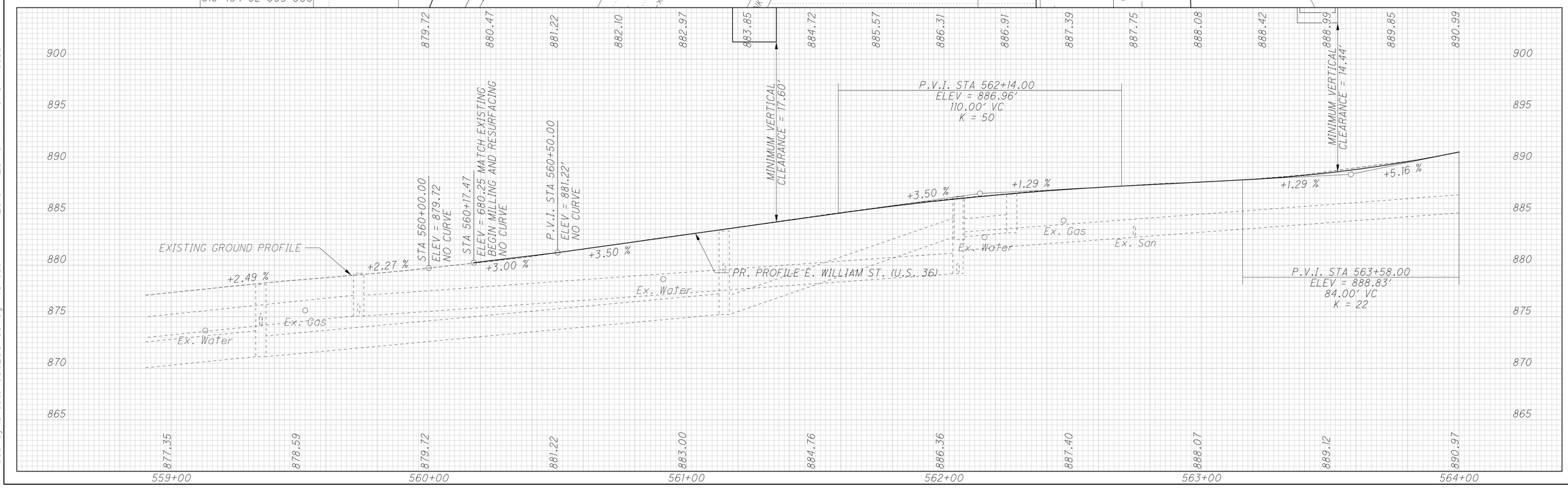
53 / 224	**DEL-36-10.59**	**DEMOLITION PLAN** **STA. 589+00 TO STA. 594+00**	CALCULATED AMF CHECKED CSR	0 20 10 40 HORIZONTAL SCALE IN FEET

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
30-31	ROADWAY QUANTITIES
47-53	DEMOLITION PLANS
91-98	DRIVEWAY PROFILES
99-108	INTERSECTION DETAILS
109-118	STORM SEWER PROFILES
184	STRUCTURES
132-137	SIGNING AND PAVEMENT MARKINGS

A BEGIN MODULAR BLOCK WALL
B END MODULAR BLOCK WALL

A STA. 559+31.97 ℄ CONST. E. WILLIAM ST (U.S.36) = STA. 10+00.00 ℄ CONST. LEWIS ST.
B STA. 560+51.03 ℄ CONST. E. WILLIAM ST. (U.S.36) = STA. 17+00.00 ℄ CONST. ALLEY 1
C STA. 561+04.96 ℄ CONST. E. WILLIAM ST. (U.S.36) = STA. 20+00.00 ℄ CONST. LAKE ST. (U.S. 42)
D STA. 562+63.02 ℄ CONST. E. WILLIAM ST. (U.S.36) = STA. 27+00.00 ℄ CONST. FRANK ST.





CALCULATED ACF CHECKED CSR

HORIZONTAL SCALE IN FEET 0 10 20 40

PLAN AND PROFILE - E. WILLIAM ST. (U.S. 36) STA. 559+00 TO STA. 564+00

DEL-36-10.59

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
30-#GS002B	ROADWAY QUANTITIES
47-53	DEMOLITION PLANS
91-98	DRIVEWAY PROFILES
99-108	INTERSECTION DETAILS
109-118	STORM SEWER PROFILES
132-137	SIGNING AND PAVEMENT MARKINGS
A	BEGIN MODULAR BLOCK WALL
B	END MODULAR BLOCK WALL

HORIZONTAL SCALE IN FEET: 0, 10, 20, 40

CALCULATED ACF | CHECKED CSR

PLAN AND PROFILE - E. WILLIAM ST. (U.S. 36) STA. 564+00 TO STA. 569+00

DEL-36-10.59

55
224

(A) STA. 564+82.59 ℄ CONST. E. WILLIAM ST. (U.S. 36) = STA. 30+00.00 ℄ CONST. POTTER ST.

(B) STA. 566+88.32 ℄ CONST. E. WILLIAM ST. (U.S. 36) = STA. 35+00.00 ℄ CONST. RICHARDSON ST.

\roadway\sheets\95625GP002.dgn (Sheet) 1/14/2019 11:23:47 AM afrankhouser


MICHAEL L. STANLEY AND VIOLET STANLEY 519-431-15-013-000
GENEVIEVE M. BOLEN 519-431-15-014-000
JOHN K. WARD AND CAROL J. WARD 519-431-15-015-000
HELEN M. MAYES 519-431-15-016-000
JULIE A. BARCA AND RANDALL E. HARDENBROOK 519-431-15-017-000
SHANNON MARIE ATKINSON 519-442-22-011-000
BOARD OF EDUCATION OF THE INCORPORATED VILLAGE OF DELAWARE, AKA BOARD OF EDUCATION OF THE CITY OF DELAWARE, AKA BOARD OF EDUCATION OF THE DELAWARE CITY SCHOOLS 519-442-22-008-000
MATCH LINE STA. 569+00 E. WILLIAM ST. (U.S. 36) - SEE SHEET 55
MATCH LINE STA. 574+00 E. WILLIAM ST. (U.S. 36) - SEE SHEET 57
℄ CONST. E. WILLIAM ST (U.S. 36)
S 85° 46' 57" E
℄ CONST. CHANNING ST.
℄ CONST. CHESIRE ST.
℄ CONST. ANN ST.
SAW CUT LINE
JESSE R. MANN 519-434-01-001-000
MELINDA A HASTINGS 519-443-05-004-000
CARLA M. SLATER AND JEFFREY M. PETERSEN 519-443-05-003-000
ALLEN H. SLATER AND MARY R. SLATER 519-443-05-002-000
STAURT M. REISSIG AND ERIN N. REISSIG 519-443-05-001-000
TOMAS L. VANCE SR. AND CARMICHAEL BOWER 519-443-04-006-000
BRIAN J. CAMPBELL 519-443-04-005-000
A BEGIN MODULAR BLOCK WALL
B END MODULAR BLOCK WALL
(A) STA. 569+85.18 ℄ CONST. E. WILLIAM ST. (U.S. 36) = STA. 42+00.00 ℄ CONST. CHESIRE ST.
(B) STA. 572+12.76 ℄ CONST. E. WILLIAM ST. (U.S. 36) = STA. 45+00.00 ℄ CONST. CHANNING ST.
(C) STA. 572+85.75 ℄ CONST. E. WILLIAM ST. (U.S. 36) = STA. 52+00.00 ℄ CONST. ANN ST.
P.V.I. STA 569+00.00 ELEV = 910.36' NO CURVE
P.V.I. STA 569+75.00 ELEV = 911.89' NO CURVE
P.V.I. STA 570+25.00 ELEV = 913.08' NO CURVE
P.V.I. STA 571+25.00 ELEV = 915.37' NO CURVE
P.V.I. STA 572+75. ELEV = 918.59' NO CURVE
2.57 %
+2.04 %
+2.37 %
+2.29 %
+2.15 %
+2.19 %
EXISTING GROUND PROFILE
PR. PROFILE E. WILLIAM ST. (U.S. 36)
Ex. Gas
Ex. Water
8" VCP San
569+00
570+00
571+00
572+00
573+00
574+00

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
30-31	ROADWAY QUANTITIES
47-53	DEMOLITION PLANS
91-98	DRIVEWAY PROFILES
99-108	INTERSECTION DETAILS
109-118	STORM SEWER PROFILES
132-137	SIGNING AND PAVEMENT MARKINGS

HORIZONTAL SCALE IN FEET 0 20 40

CALCULATED ACF
CHECKED CSR

PLAN AND PROFILE - E. WILLIAM ST. (U.S. 36)
STA. 569+00 TO STA. 574+00

DEL-36-10.59

...\roadway\sheets\95625GP003.dgn (Sheet) 1/14/2019 11:23:54 AM afrankhouser

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
30-31	ROADWAY QUANTITIES
47-53	DEMOLITION PLANS
91-98	DRIVEWAY PROFILES
99-108	INTERSECTION DETAILS
109-118	STORM SEWER PROFILES
132-137	SIGNING AND PAVEMENT MARKINGS

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED ACF
CHECKED CSR

BOARD OF EDUCATION OF THE INCORPORATED VILLAGE OF DELAWARE, AKA BOARD OF EDUCATION OF THE CITY OF DELAWARE, AKA BOARD OF EDUCATION OF THE DELAWARE CITY SCHOOLS 519-442-22-008-000

BOARD OF EDUCATION DELAWARE CITY SCHOOLS 519-442-22-012-000

BOARD OF EDUCATION, DELAWARE CITY SCHOOLS 519-442-22-013-000

BRUCE DAVIDSON 519-442-22-014-000

HEATHER RENEE STULTZ 519-442-22-015-000

JUDITH A. KISE 519-442-22-016-000

TOM AMATO 519-442-22-017-000

THOMAS AMATO, JOSEPH AMATO AKA JOSEPH A. AMATO, AND ELAINE AMATO 519-442-22-018-000

MATCH LINE STA. 574+00 E. WILLIAM ST. (U.S. 36) - SEE SHEET 56

MATCH LINE STA. 579+00 E. WILLIAM ST. (U.S. 36) - SEE SHEET 58

℄ CONST. E. WILLIAM ST. (U.S. 36)

℄ CONST. ALLEY 2

℄ CONST. KURRLEY ST.

#280 2 STORY FRAME HOUSE

#286 1 ½ STORY BRICK HOUSE

#292 1 STORY FRAME HOUSE

#294 2 STORY FRAME HOUSE

#301 2 STORY FRAME HOUSE

#303 2 STORY FRAME HOUSE

#311 2 STORY FRAME HOUSE

#317 2 STORY FRAME HOUSE

#302 2 STORY FRAME HOUSE

#304 2 STORY FRAME HOUSE

#316 2 STORY BRICK APARTMENT

"OAK TREES APARTMENTS"

SAMIR JOSE AWAD 519-443-03-016-000

GRACE C. LEWIS 519-443-04-004-000

LOIS ARLENE BARBRO 519-443-04-003-000

CASS A. MATHER 519-443-04-002-000

DAVID A. THOMPSON 519-443-04-001-000

BRUCE D. STARR 519-443-03-019-000

LEE A. ROBINSON AND MELANIE K. SCHELL 519-443-03-018-000

JULIA G. YEAGER AND L. REED YEAGER 519-443-03-017-000

- [A] BEGIN MODULAR BLOCK WALL
- [B] END MODULAR BLOCK WALL
- (A) STA. 574+62.94 ℄ R/W E. WILLIAM ST. (U.S. 36) = STA. 57+00.00 ℄ R/W ALLEY 2
- (B) STA. 576+38.53 ℄ R/W E. WILLIAM ST. (U.S. 36) = STA. 62+00.00 ℄ R/W KURRLEY ST.

P.V.I. STA 574+50.00 ELEV = 922.42' NO CURVE
P.V.I. STA 575+50.00 ELEV = 924.31' NO CURVE
P.V.I. STA 576+00.00 ELEV = 924.99' NO CURVE
P.V.I. STA 576+50.00 ELEV = 925.49' NO CURVE
P.V.I. STA 578+25.00 ELEV = 926.91' NO CURVE

+1.88 % +1.37 % +1.01 % +0.81 %

EXISTING GROUND PROFILE

PR. PROFILE E. WILLIAM ST. (U.S. 36)

Ex. Gas Ex. Water 8" VCP San

574+00 575+00 576+00 577+00 578+00 579+00

PLAN AND PROFILE
DEL-36-10.59
E. WILLIAM ST. (U.S. 36)
STA. 574+00 TO STA. 579+00

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
30-31	ROADWAY QUANTITIES
47-53	DEMOLITION PLANS
91-98	DRIVEWAY PROFILES
99-108	INTERSECTION DETAILS
109-118	STORM SEWER PROFILES
132-137	SIGNING AND PAVEMENT MARKINGS

N

0 10 20 40 HORIZONTAL SCALE IN FEET

CALCULATED ACF | CHECKED CSR

PLAN AND PROFILE - E. WILLIAM ST. (U.S. 36)
STA. 579+00 TO STA. 584+00

DEL-36-10.59

58
224

ALICE E. STEWART
519-442-22-019-000

COLLEEN M. SUCHAN
519-442-23-012-000

JOSHUA N THOMAS AND MICHELLE L. PHILLIPS
519-442-23-013-000

CHERYL B. HOFFMAN
519-442-23-014-000

DORIS M. BAXTER
519-442-23-015-000

GENEVA SHAW
519-442-23-016-000

DAVID A. PETERS SR. AND CLAUDIA PETERS
519-442-23-017-000

JEANNE D. SHAW
519-442-23-018-000

SAMIR JOSE AWAD
519-443-03-016-000

DONALD E. STRUBLER AND KATRINA A. STRUBLER
519-443-03-015-000

CHARLES H. SMITH AND DONNA J. LEAVER
519-443-03-014-000

SMITH FAMILY ENTERPRISES LTD
519-443-03-013-000

RUSSELL H. TROWBRIDGE
519-443-03-012-000

LESTER L. DOANE
519-443-03-011-000

519-443-03-010-000

TERESA J. BAILEY
519-443-03-009-000

SETH J. AND CHELSEA C. TSCHANEN
519-443-03-008-000

PHYLLIS J. PENROD
519-443-03-007-000

MATCH LINE STA. 579+00 E. WILLIAM ST. (U.S. 36) - SEE SHEET 57

MATCH LINE STA. 584+00 E. WILLIAM ST. (U.S. 36) - SEE SHEET 59

℄ CONST. WADE ST.

℄ CONST. ALLEY 3

℄ CONST. E. WILLIAM ST. (U.S. 36)

S 85° 46' 57" E

#327 2 STORY FRAME HOUSE

#333 1 ½ STORY FRAME HOUSE

#335 2 STORY FRAME HOUSE

#339 2 STORY FRAME HOUSE

#345 2 STORY FRAME HOUSE

GARAGE

#349 1 STORY FRAME HOUSE

#353 1 STORY FRAME HOUSE

#361 1 STORY FRAME HOUSE

#332 2 STORY FRAME HOUSE

#336 2 STORY FRAME HOUSE

#342 2 STORY FRAME HOUSE

#350 2 STORY FRAME HOUSE

+50.55 111.0' RES. DRIVE CONCRETE

+04.14 14.0' RES. DRIVE CONCRETE

+98.19 9.0' RES. DRIVE CONCRETE

+53.46 20.0' RES. DRIVE ASPHALT

+15.37 13.0' RES. DRIVE CONCRETE

+35.68 9.5' RES. DRIVE CONCRETE

+11.79 10.0' RES. DRIVE ASPHALT

+57.37 10.0' RES. DRIVE CONCRETE

SAW CUT LINE

SAW CUT LINE

FLOWER BED

FLOWER POTS

PICKET FENCE

SPLIT RAIL FENCE

ROCK

PORCH

STEPS

W/LS

LS W/ RR TIES

2 RR TIES

Ⓐ STA. 579+51.68 ℄ CONST. E. WILLIAM ST. (U.S. 36) = STA. 67+00.00 ℄ CONST. ALLEY 3

Ⓑ STA. 579+75.39 ℄ CONST. E. WILLIAM ST. (U.S. 36) = STA. 70+00.00 ℄ CONST. WADE ST.

EXISTING GROUND PROFILE

PR. PROFILE E. WILLIAM ST. (U.S. 36)

P.V.I. STA 580+25.00 ELEV = 927.71' NO CURVE

P.V.I. STA 581+25.00 ELEV = 928.35' NO CURVE

P.V.I. STA 582+50.00 ELEV = 929.20' NO CURVE

P.V.I. STA 583+75.00 ELEV = 929.89' NO CURVE

+0.40 %

+0.64 %

+0.68 %

+0.55 %

Ex. Gas

Ex. Water

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
30-31	ROADWAY QUANTITIES
47-53	DEMOLITION PLANS
91-98	DRIVEWAY PROFILES
99-108	INTERSECTION DETAILS
109-118	STORM SEWER PROFILES
132-137	SIGNING AND PAVEMENT MARKINGS

A BEGIN MODULAR BLOCK WALL

B END MODULAR BLOCK WALL

(A) STA. 585+24.87 ℄ R/W E. WILLIAM ST. (U.S. 36) = STA. 75+00.00 ℄ R/W FOLEY ST.

(B) STA. 585+72.69 ℄ R/W E. WILLIAM ST. (U.S. 36) = STA. 80+00.00 ℄ R/W ALLEY 4

HORIZONTAL SCALE IN FEET

CALCULATED ACF CHECKED CSR

PLAN AND PROFILE - E. WILLIAM ST. (U.S. 36)
STA. 584+00 TO STA. 589+00

DEL-36-10.59

59 / 224

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CROSS REFERENCES	
SHEET NO.	DESCRIPTION
30-31	ROADWAY QUANTITIES
47-53	DEMOLITION PLANS
91-98	DRIVEWAY PROFILES
99-108	INTERSECTION DETAILS
109-118	STORM SEWER PROFILES
132-137	SIGNING AND PAVEMENT MARKINGS

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED ACF
CHECKED CSR

PLAN AND PROFILE - E. WILLIAM ST. (U.S. 36)
STA. 589+00 TO STA. 594+00

DEL-36-10.59

60
224

Ex R/W
℄
86
87
88
89
S 69° 47' 34" E
℄ CONST. E. CENTRAL AVE. (S.R. 37)
THE CITY OF DELAWARE, OHIO
519-442-24-001-000
E CENTRAL AVE
12" VCP
12" VCP
12" PVC
GRASS
CONC. WALK
EX CB (TR)
12" RCP (TR)
EX CB (TR)
℄ CONST. E. WILLIAM ST. (U.S. 36)
FUTURE EOP
MATCH LINE STA. 589+00 E. WILLIAM ST. (U.S. 36) - SEE SHEET 59
590
591
592
593
S 85° 46' 57" E
CITY OF DELAWARE
519-443-03-001-002
15" VCP
12" RCP
OHE/T
OHE/T E
Ex U
EMPLOYEE PARKING
ONLY
12" CPP
THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION
519-443-03-001-001
E WILLIAM ST
CITY OF DELAWARE, OHIO
999-999-14-000-000
STOP-N-GO STORAGE OF DELAWARE LLC
519-443-03-001-003

945
940
935
930
925
920
915
910
EXISTING GROUND PROFILE
931.86
932.02
932.12
932.24
932.35
589+00
590+00
591+00
592+00
593+00
594+00

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
30-31	ROADWAY QUANTITIES
47-53	DEMOLITION PLANS
91-98	DRIVEWAY PROFILES
99-108	INTERSECTION DETAILS
109-118	STORM SEWER PROFILES
132-137	SIGNING AND PAVEMENT MARKINGS

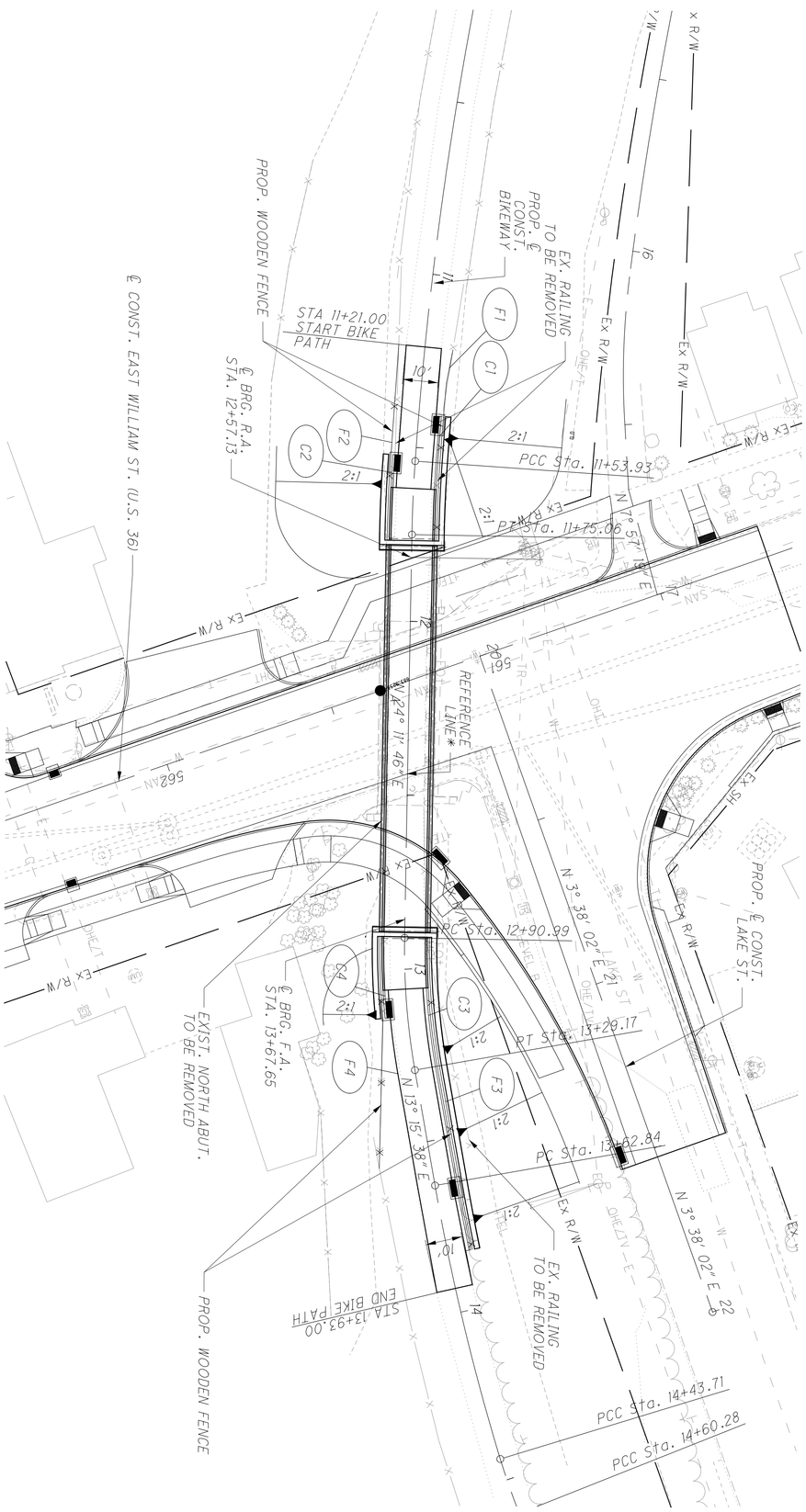
N

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED ACF
CHECKED CSR

PLAN AND PROFILE - LAKE STREET (U.S. 42)
STA. 20+00 TO STA. 22+00

DEL-36-10.59



62 224	**DEL-36-10.59**	**PLAN - BIKEWAY OVER E. WILLIAM ST. (U.S. 36)**	CALCULATED JDH / CHECKED CSR	0 10 20 40 HORIZONTAL SCALE IN FEET

SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED CEL

CHECKED CSR

EX SH

EX R/W

885

880

875

890

24" RCP

12" RCP

Ex. Gas

Ex. Water

8" VCP SAN

879.72

560+00.00

879.72

STA 559+72.64, 42.18' LT
EX. MH, RIM ELEV 879.54'
15" CPP W 876.09
12" PVC N 876.89
12" CPP S 876.87

STA 559+72.77, 13.65' LT
EX. MH, RIM ELEV 879.22'
24" CPP E 875.07
24" CPP W 875.07
12" CPP S 875.32

STA 559+69.98, 52.30' LT
EX. CB, GRATE ELEV 879.94'
8" PVC E 877.46
6" PVC N 877.12
12" PVC S 876.97

STA 559+72.68, 37.75' LT
EX. CB, GRATE ELEV 878.87'
12" CPP N 876.87

STA 559+30.17, 4.67' LT
EX. SAN MH, RIM ELEV 878.19'
8" VCP E 871.34
8" VCP W 871.24
6" VCP N 871.49

STA 559+72.84, 8.92' RT
EX. CB, GRATE ELEV 878.88'
12" CPP N 875.98
12" PVC E 876.13

15" CPP

12" CPP

30" RCP

24" CPP

60 50 40 30 20 10 0 10 20 30 40 50 60

CROSS SECTIONS E. WILLIAM ST. (U.S. 36)
STA. 559+00.00 TO STA. 560+00.00

DEL-36-10.59

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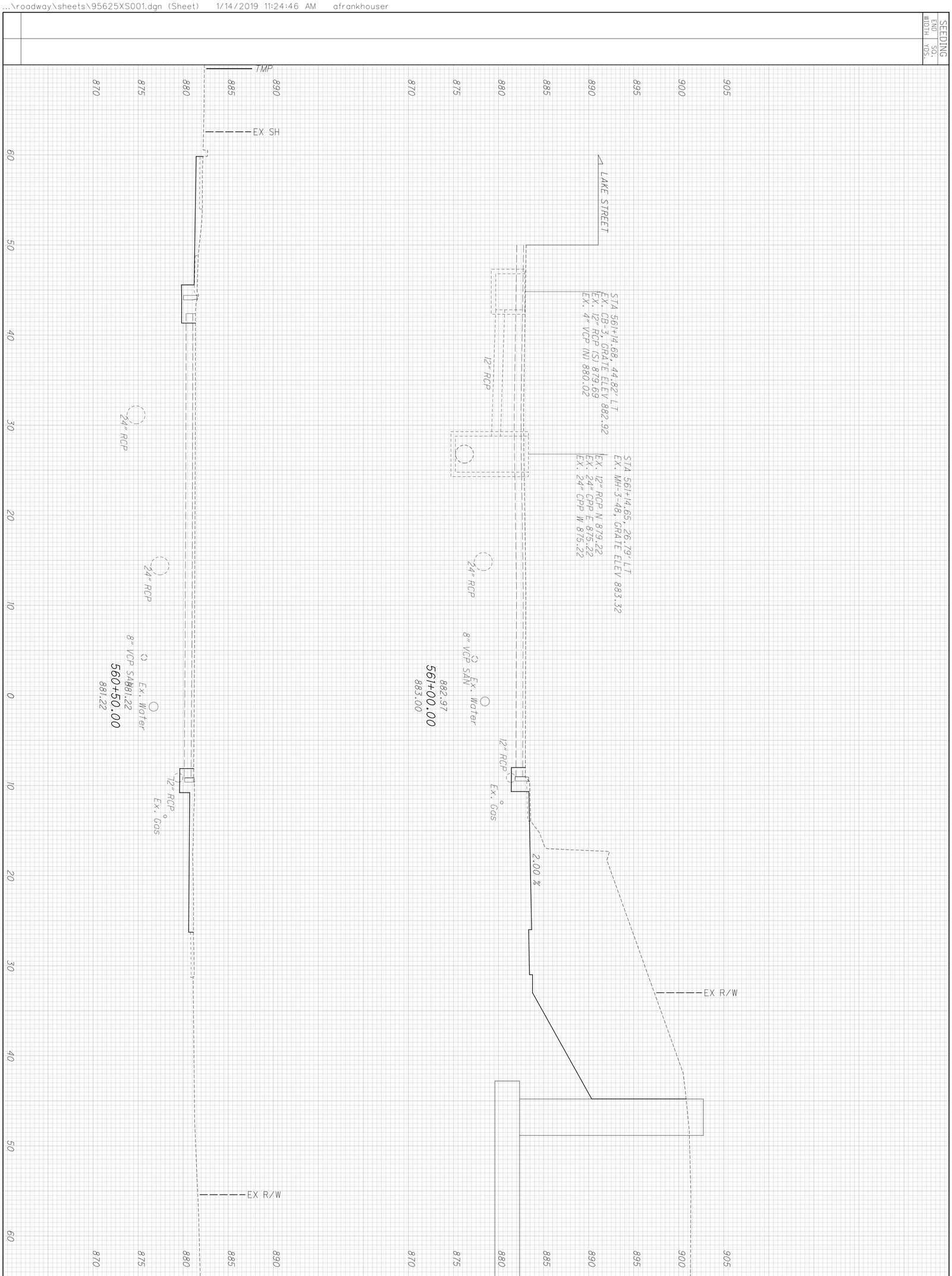


64
224

DEL-36-10.59

CROSS SECTIONS E. WILLIAM ST. (U.S. 36)
STA. 560+50.00 TO STA. 561+00.00

CALCULATED CEL
CHECKED CSR

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CEL

CHECKED CSR

CROSS SECTIONS E. WILLIAM ST. (U.S. 36)
STA. 561+50.00 TO STA. 562+00.00

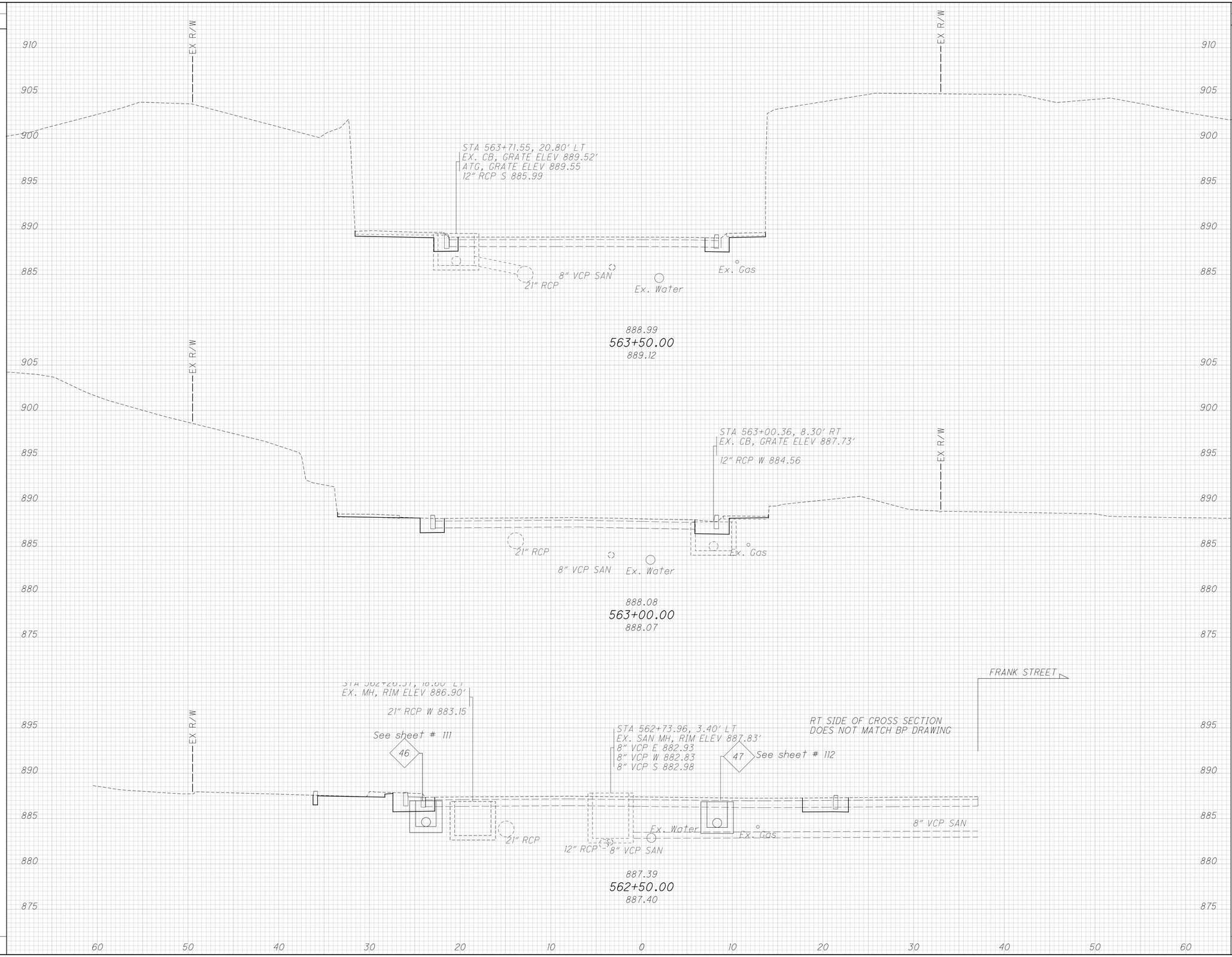
DEL-36-10.59

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

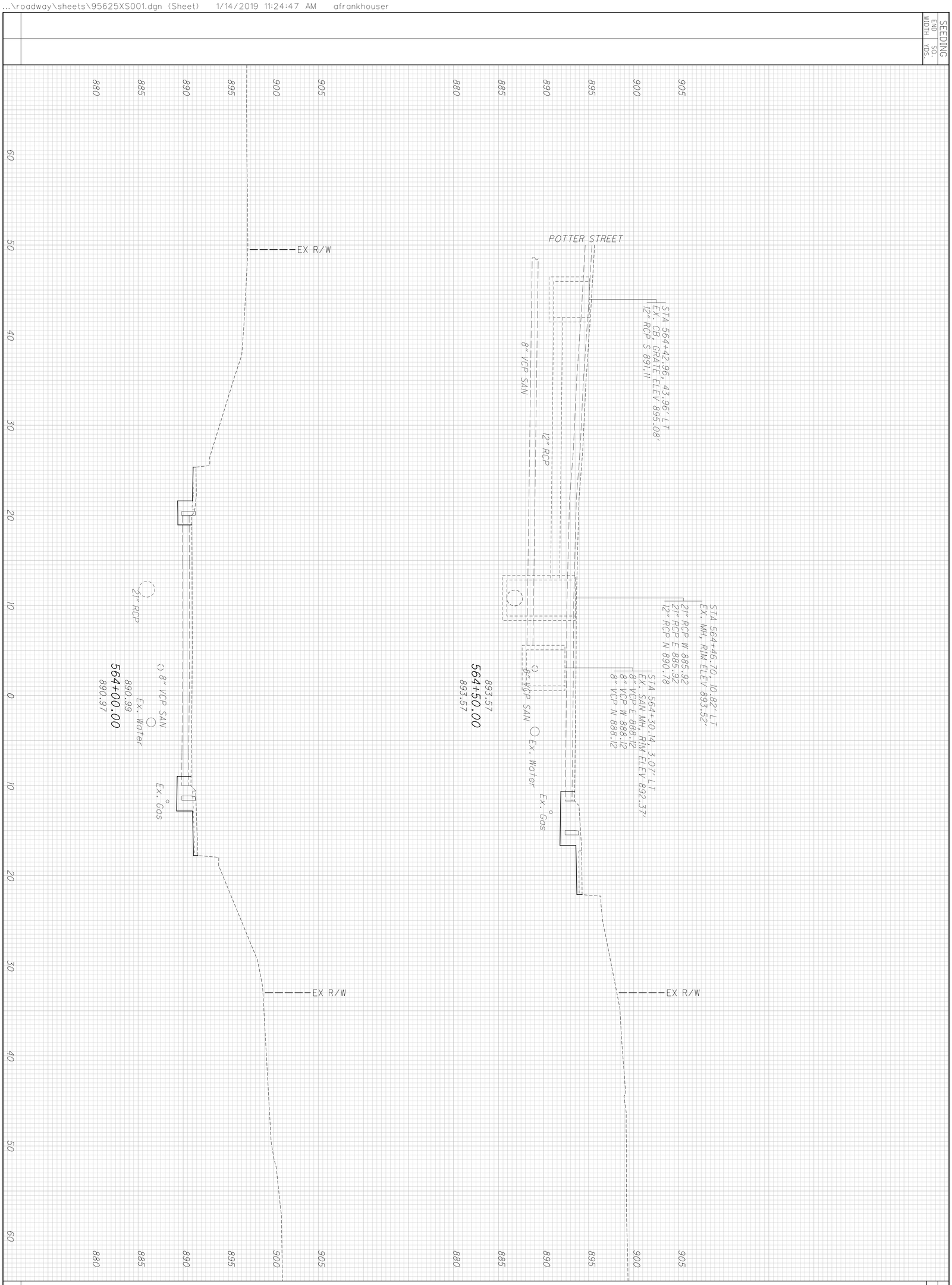
CALCULATED CEL

CHECKED CSR



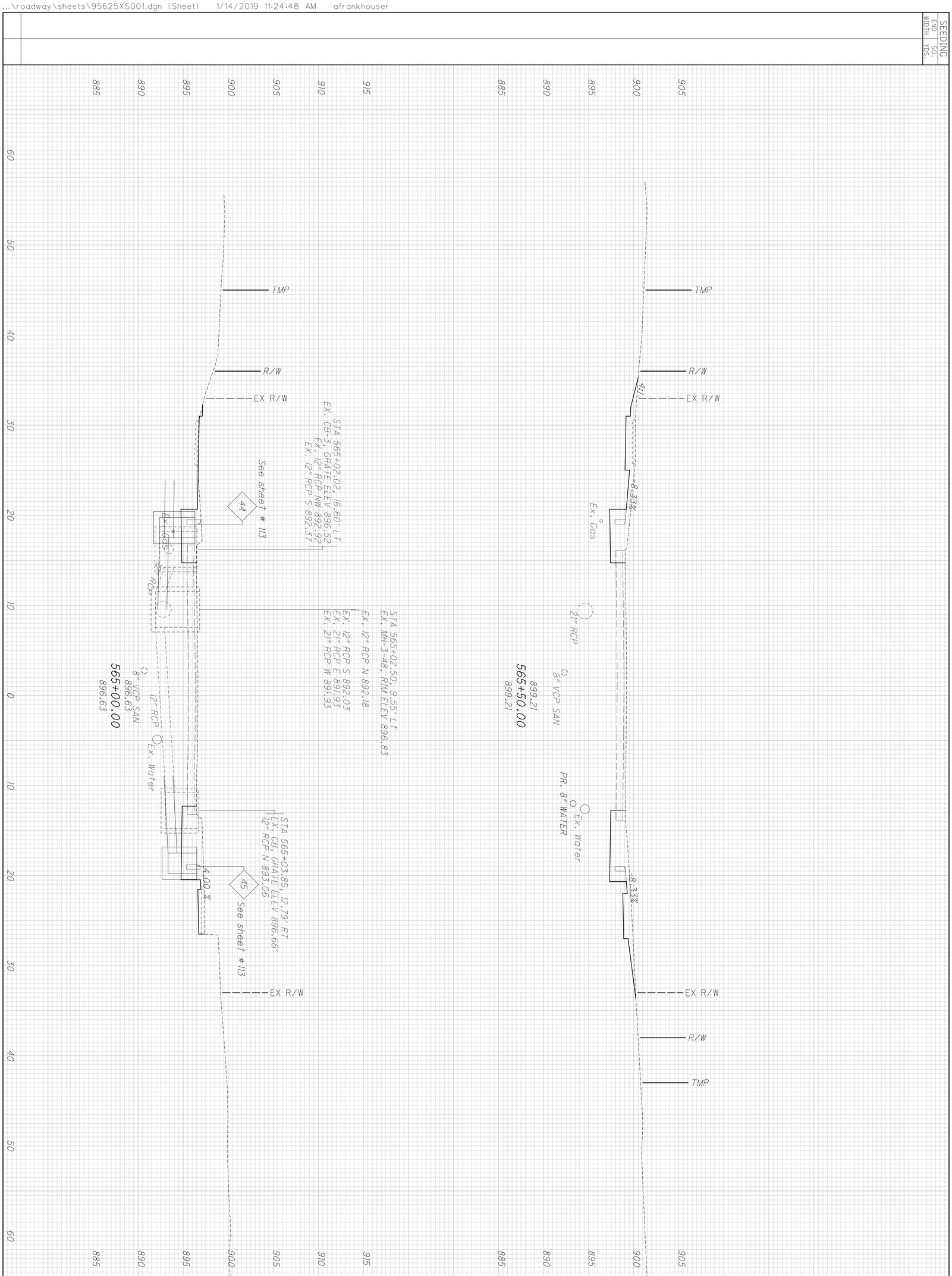
CROSS SECTIONS E. WILLIAM ST. (U.S. 36)
STA. 562+50.00 TO STA. 563+00.00

DEL-36-10.59



67 / 224	**DEL-36-10.59**	**CROSS SECTIONS E. WILLIAM ST. (U.S. 36)** **STA. 564+00.00 TO STA. 564+50.00**

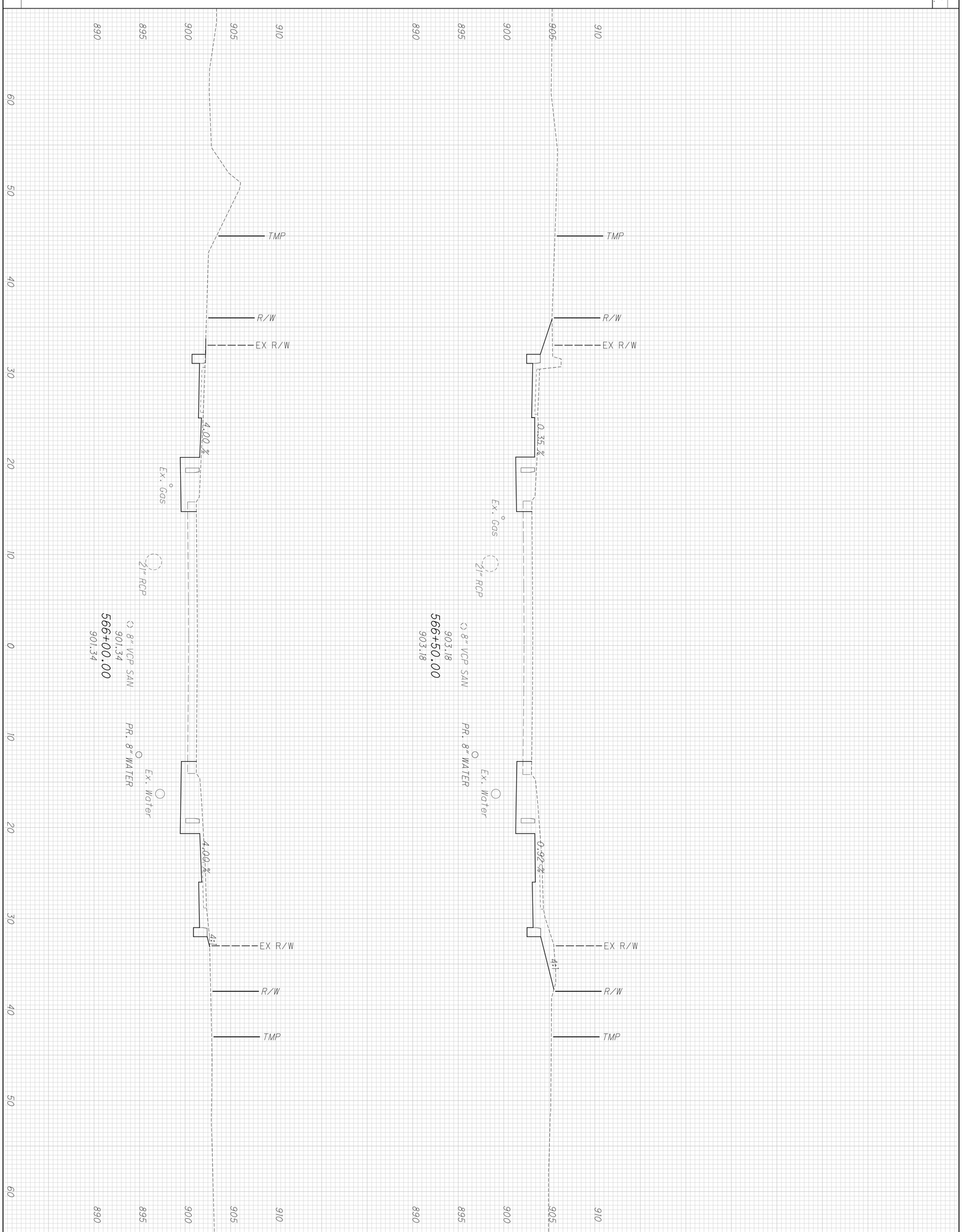
CALCULATED CEL
CHECKED CSR



68 / 224	**DEL-36-10.59**	**CROSS SECTIONS E. WILLIAM ST. (U.S. 36)** **STA. 565+00.00 TO STA. 565+50.00**

CALCULATED CEL
CHECKED CSR

SEEDING
END SQ. WIDTH YDS.



END AREA CUT FILL
VOLUME CUT FILL

69
224

DEL-36-10.59

CROSS SECTIONS E. WILLIAM ST. (U.S. 36)
STA. 566+00.00 TO STA. 566+50.00

CALCULATED CEL
CHECKED CSR

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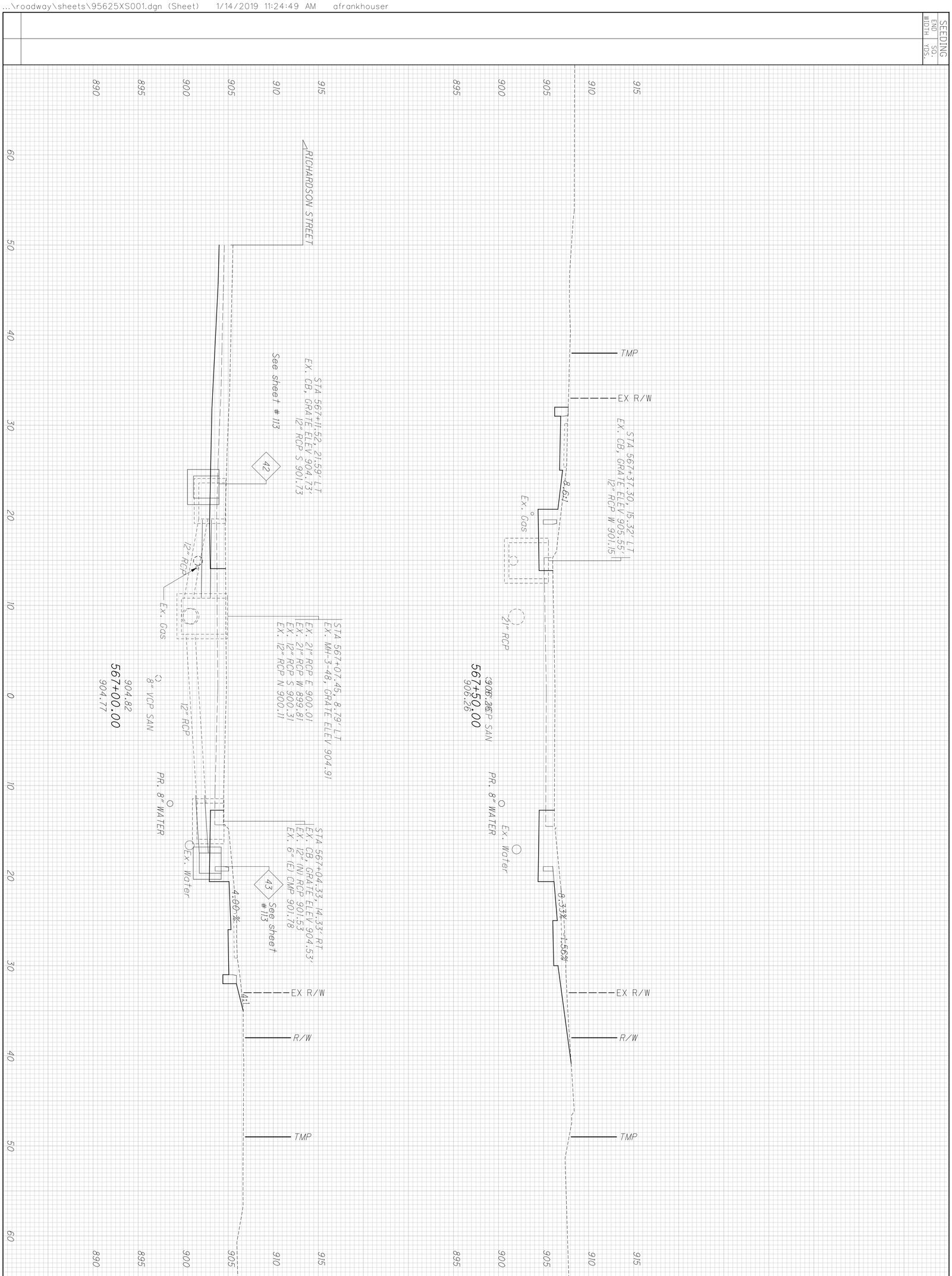
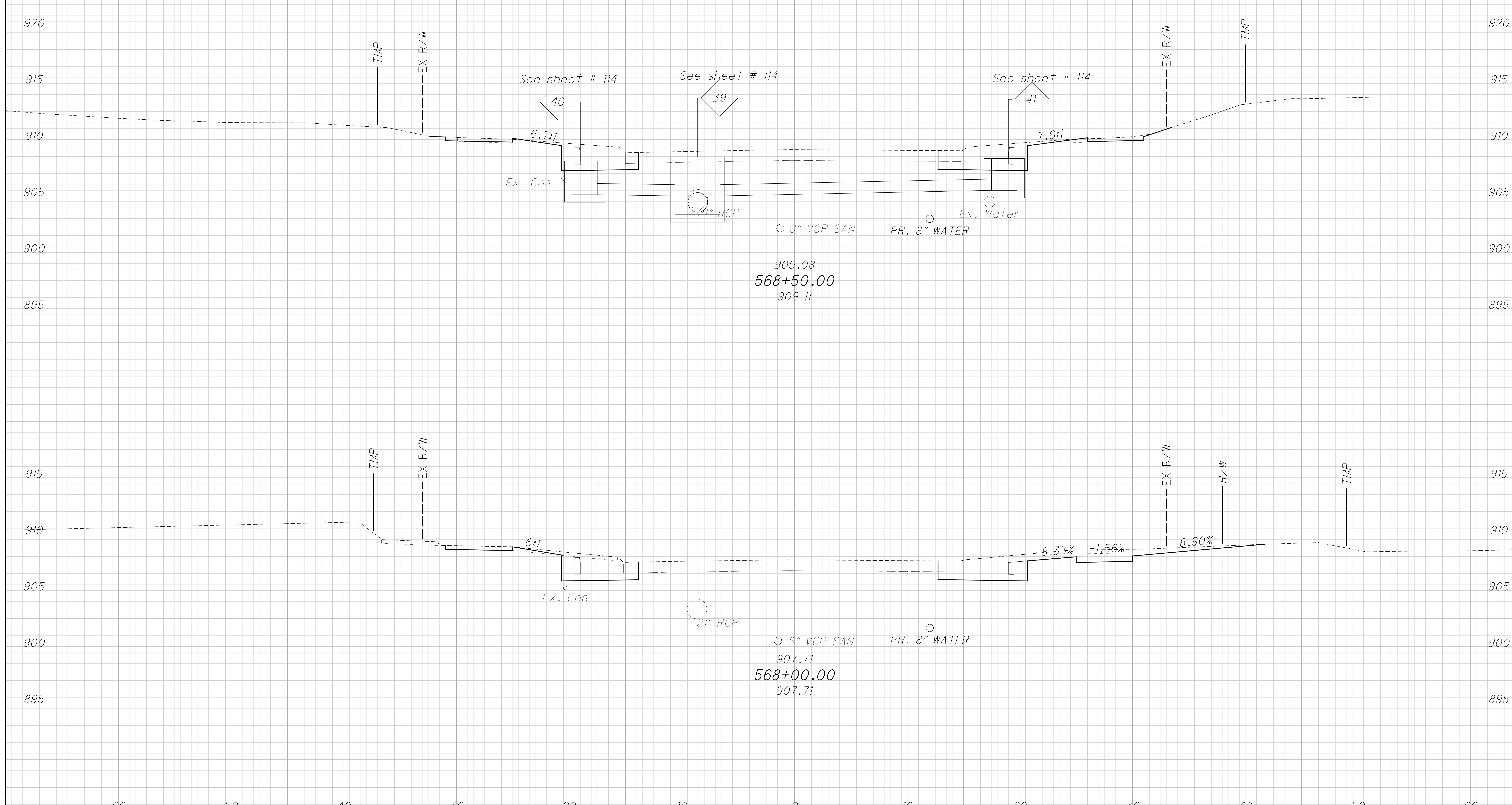


70 / 224	DEL-36-10.59	CROSS SECTIONS E. WILLIAM ST. (U.S. 36) STA. 567+00.00 TO STA. 567+50.00	CALCULATED CEL CHECKED CSR

SEEDING	
END WIDTH	SQ. YDS.



END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CEL
CHECKED CSR

CROSS SECTIONS E. WILLIAM ST. (U.S. 36)
STA. 568+00.00 TO STA. 568+50.00

DEL-36-10.59

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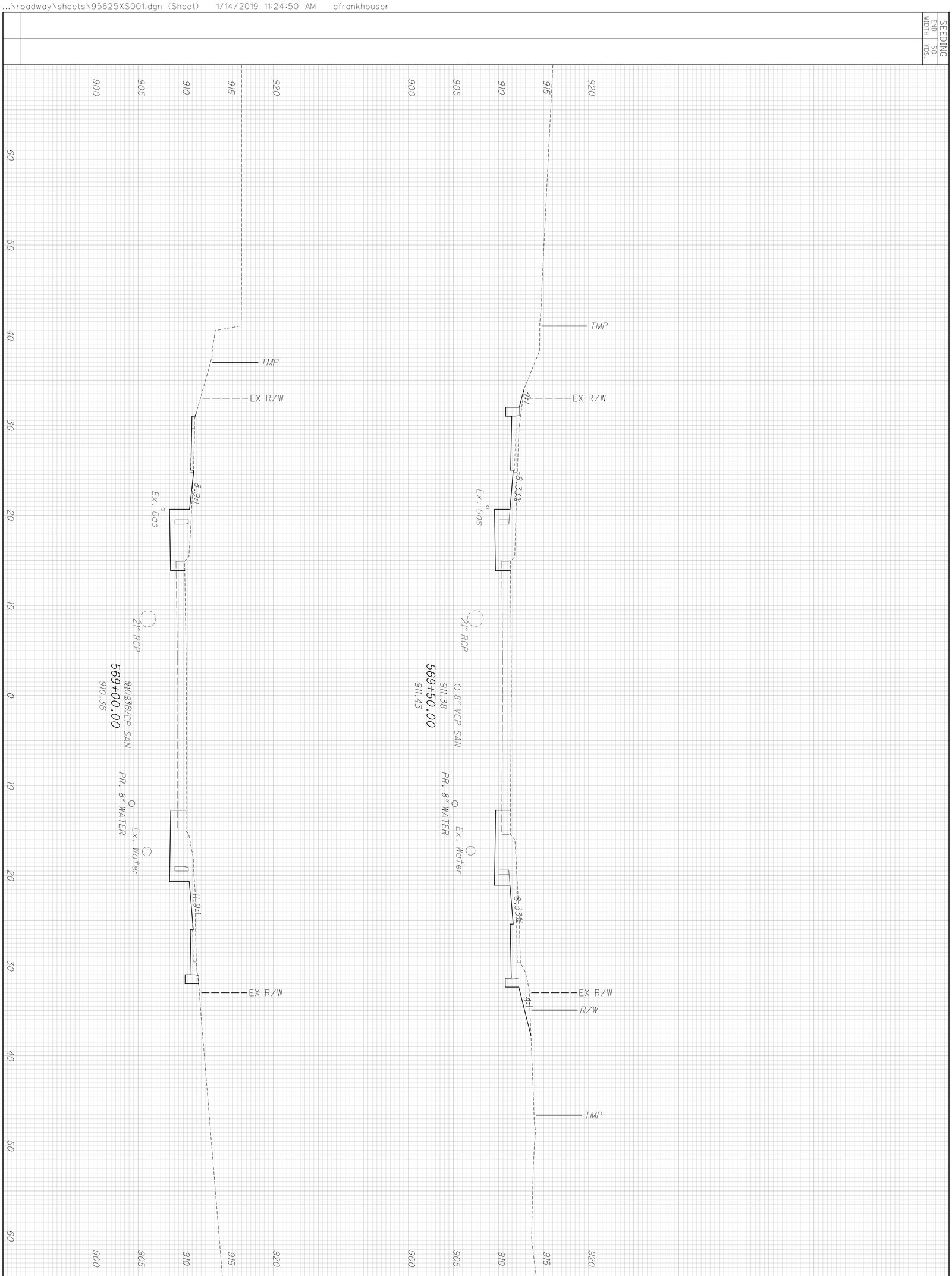
...\roadway\sheets\95625XS001.dgn (Sheet) 1/14/2019 11:24:50 AM afrankhouser



72 / 224	**DEL-36-10.59**	**CROSS SECTIONS E. WILLIAM ST. (U.S. 36)** **STA. 569+00.00 TO STA. 569+50.00**

CALCULATED CEL
CHECKED CSR

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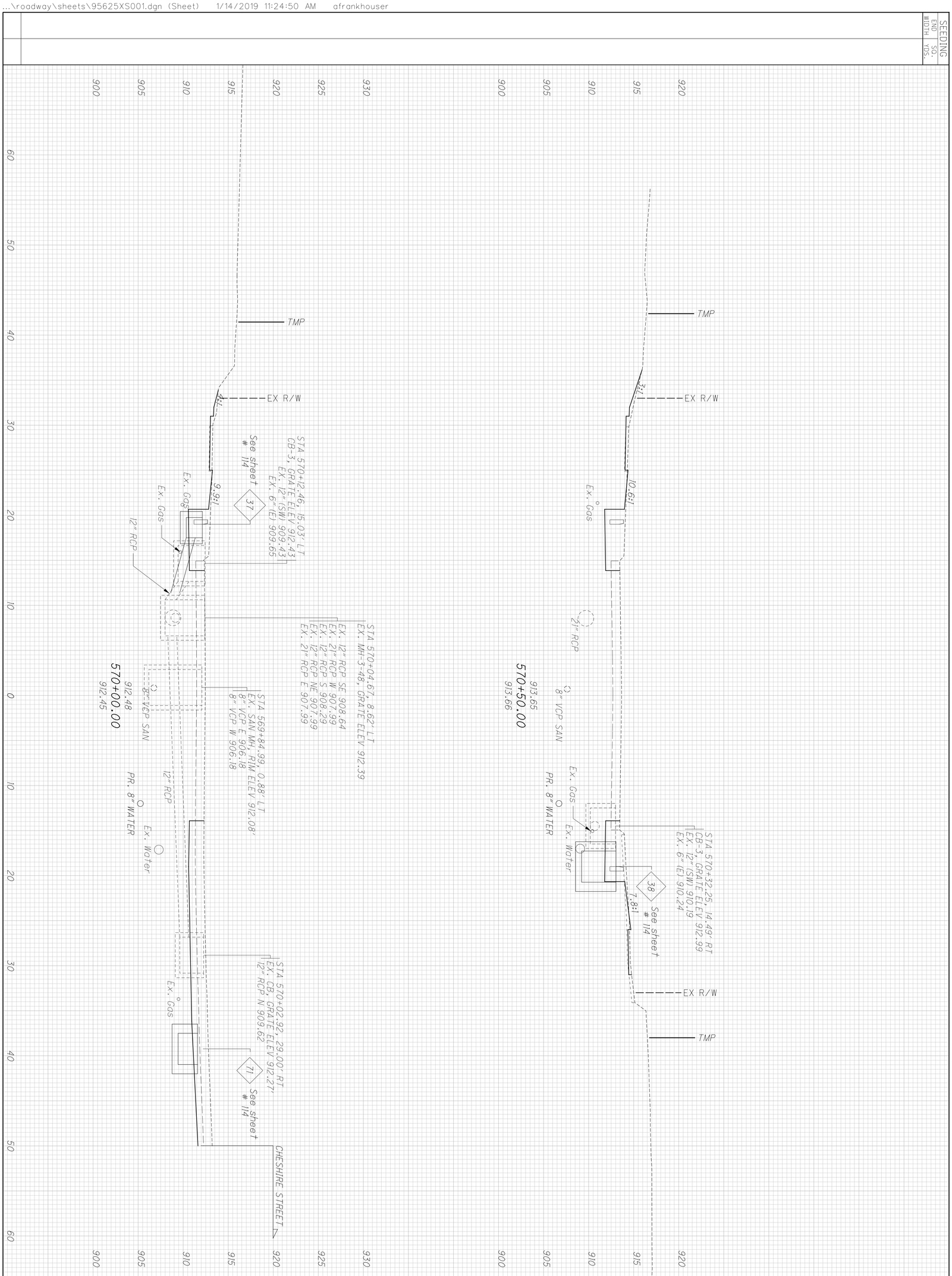
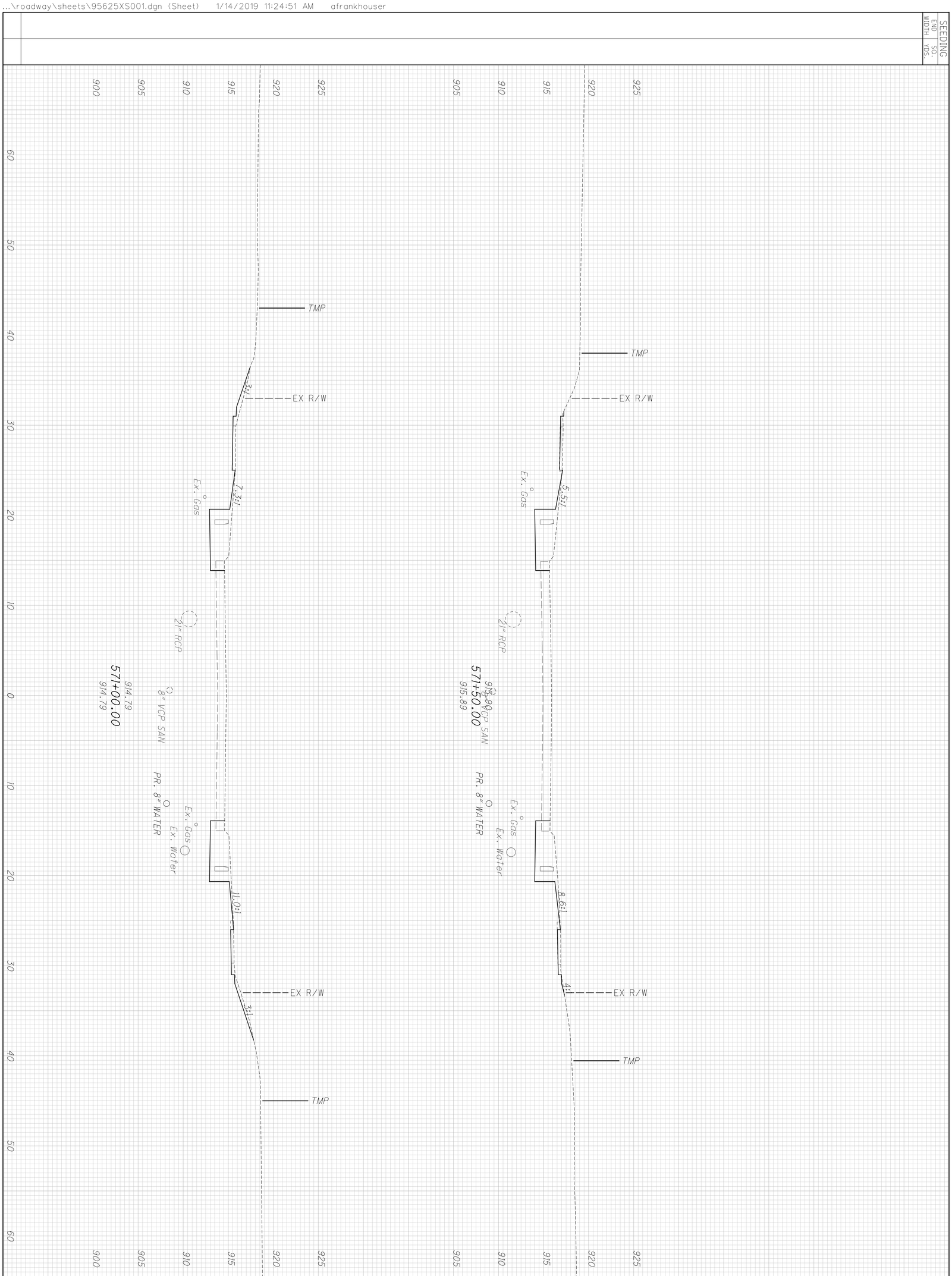


73 / 224	**DEL-36-10.59**	**CROSS SECTIONS E. WILLIAM ST. (U.S. 36)** **STA. 570+00.00 TO STA. 570+50.00**

CALCULATED CEL
CHECKED CSR

SEEDING
END WIDTH | SQ. YDS.



END AREA
CUT | FILL

VOLUME
CUT | FILL

74
224

DEL-36-10.59

CROSS SECTIONS E. WILLIAM ST. (U.S. 36)
STA. 571+00.00 TO STA. 571+50.00

CALCULATED CEL
CHECKED CSR

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CEL
CHECKED CSR

STA 572+32.90, 8.33' LT
EX. MH-3-48, GRATE ELEV 917.47
EX. 21" RCP E 912.30
EX. 21" RCP W 912.30

STA 572+57.38, 14.68' LT
EX. CB, GRATE ELEV 917.80'
12" RCP W 914.80
6" CMP E 914.90

TMP
EX R/W
4:1
8.33%
Ex. Gas
12" RCP
36 See sheet # 114
Ex. Water
8" VCP SAN
918.05
572+50.00
917.97
PR. 8" WATER

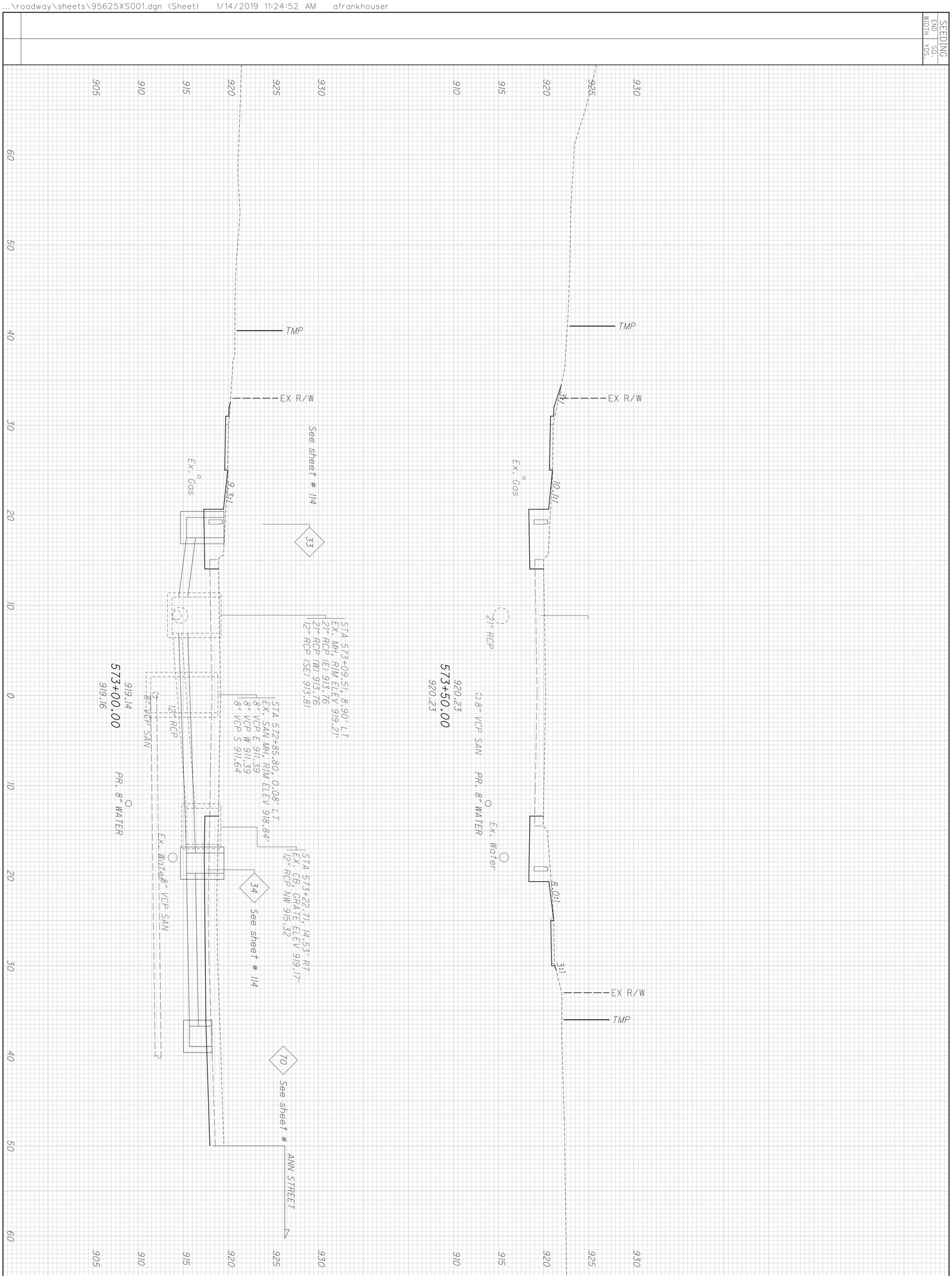
930
925
920
915
910
905

CHANNING STREET
10.9:1
Ex. Gas
Ex. Gas
21" RCP
8" VCP SAN
916.98
572+00.00
916.87
PR. 8" WATER
Ex. Gas
Ex. Water

60 50 40 30 20 10 0 10 20 30 40 50 60

CROSS SECTIONS E. WILLIAM ST. (U.S. 36)
STA. 572+00.00 TO STA. 572+50.00

DEL-36-10.59



76 / 224	DEL-36-10.59	CROSS SECTIONS E. WILLIAM ST. (U.S. 36) STA. 573+00.00 TO STA. 573+50.00	CALCULATED CEL CHECKED CSR

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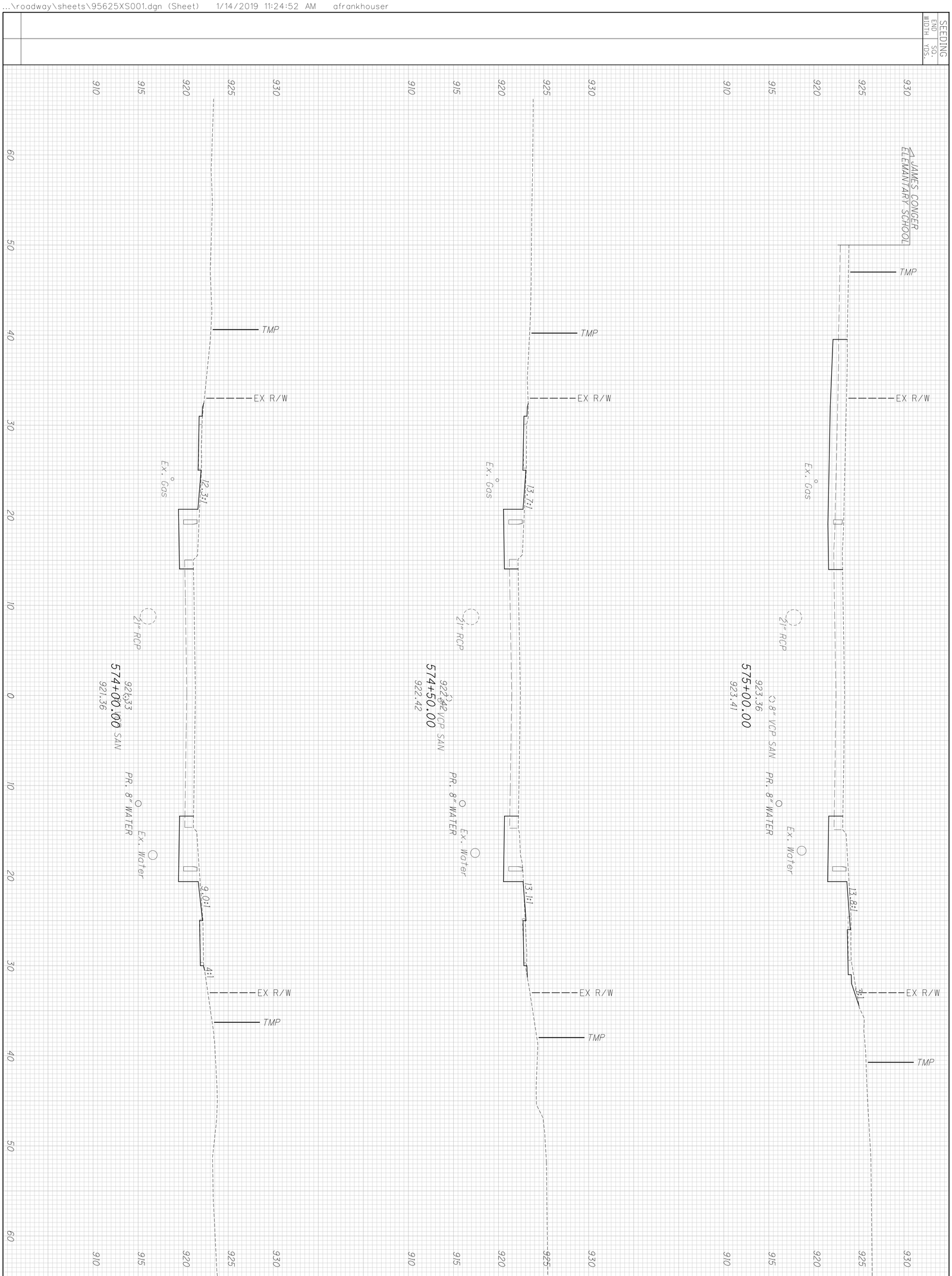
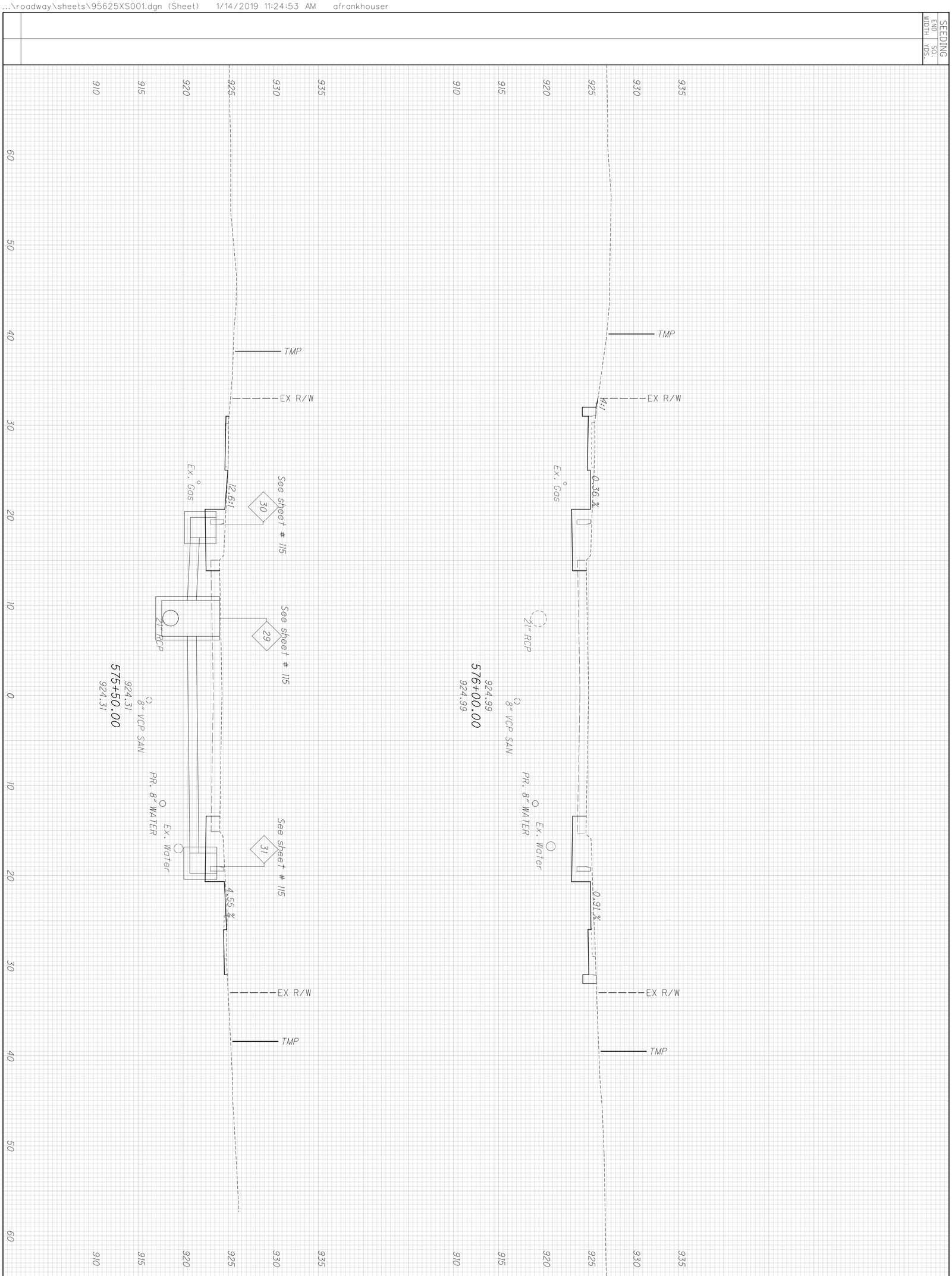


77 / 224	**DEL-36-10.59**	**CROSS SECTIONS E. WILLIAM ST. (U.S. 36)** **STA. 574+00.00 TO STA. 575+00.00**

CALCULATED CEL
CHECKED CSR

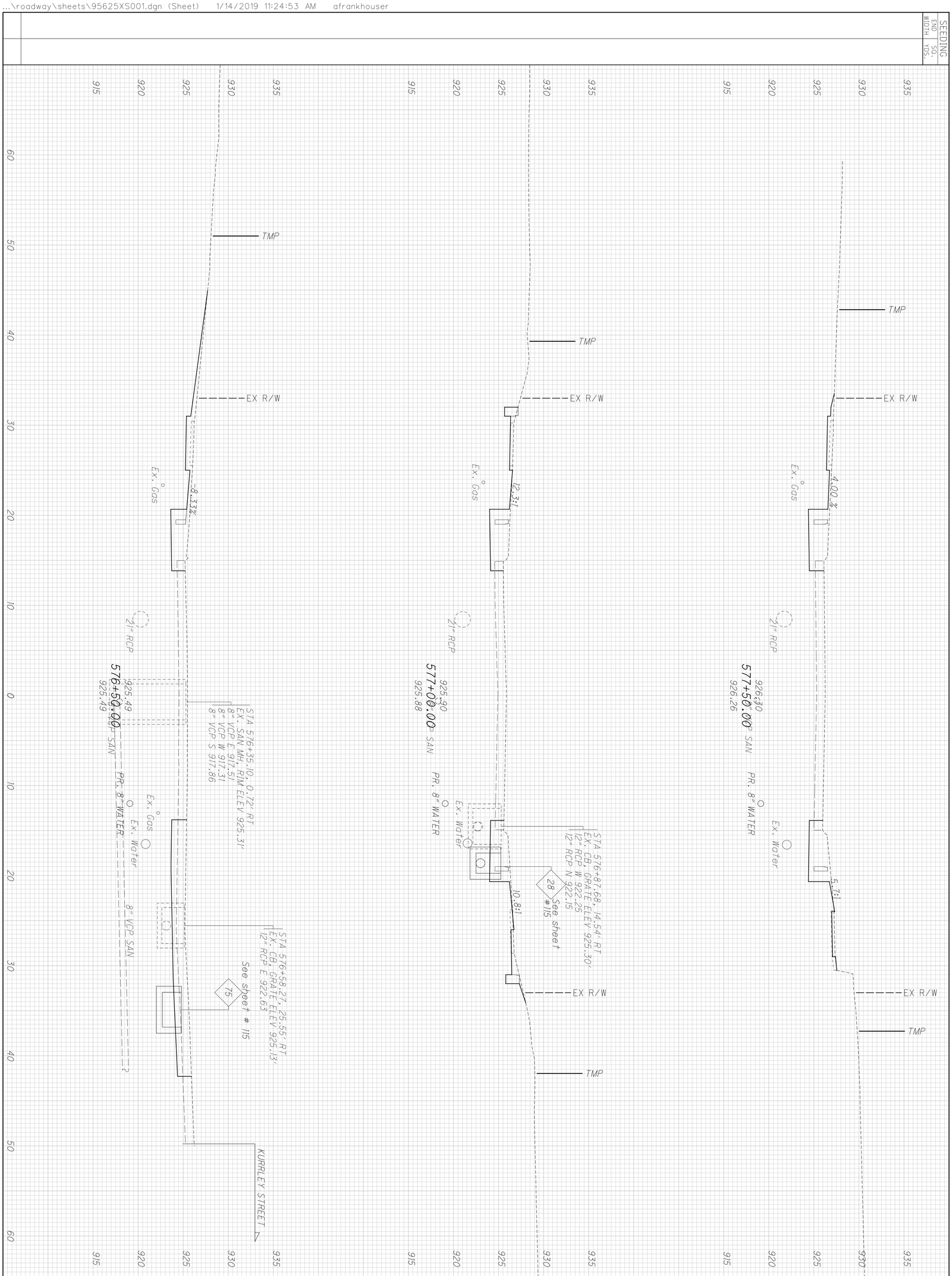


78
224

DEL-36-10.59

CROSS SECTIONS E. WILLIAM ST. (U.S. 36)
STA. 575+50.00 TO STA. 576+00.00

CALCULATED CEL
CHECKED CSR



END AREA CUT FILL | VOLUME CUT FILL

79
224

DEL-36-10.59

CROSS SECTIONS E. WILLIAM ST. (U.S. 36)
STA. 576+50.00 TO STA. 577+50.00

CALCULATED CEL
CHECKED CSR

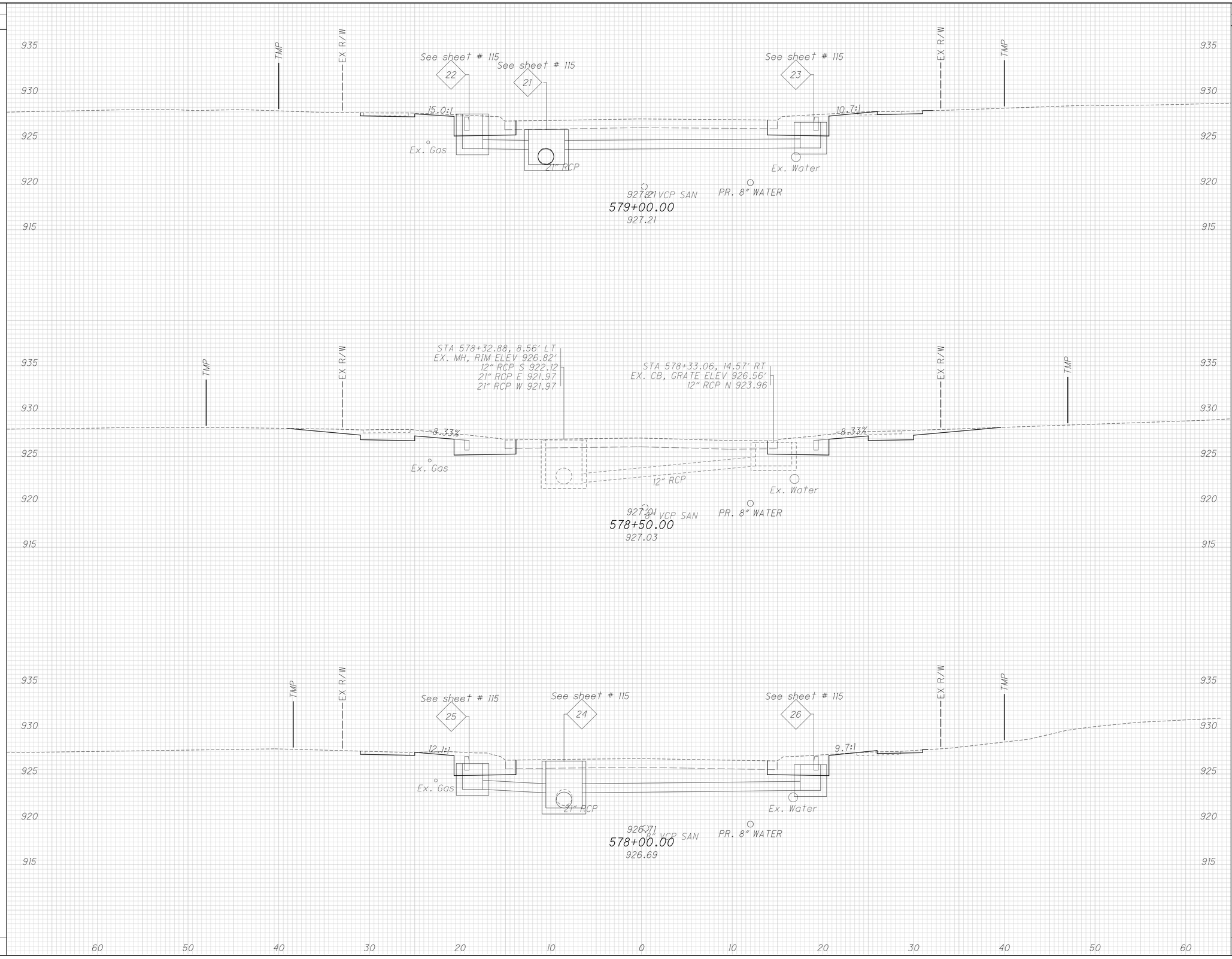
SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CEL
CHECKED CSR

CROSS SECTIONS E. WILLIAM ST. (U.S. 36)
STA. 578+00.00 TO STA. 579+00.00

DEL-36-10.59

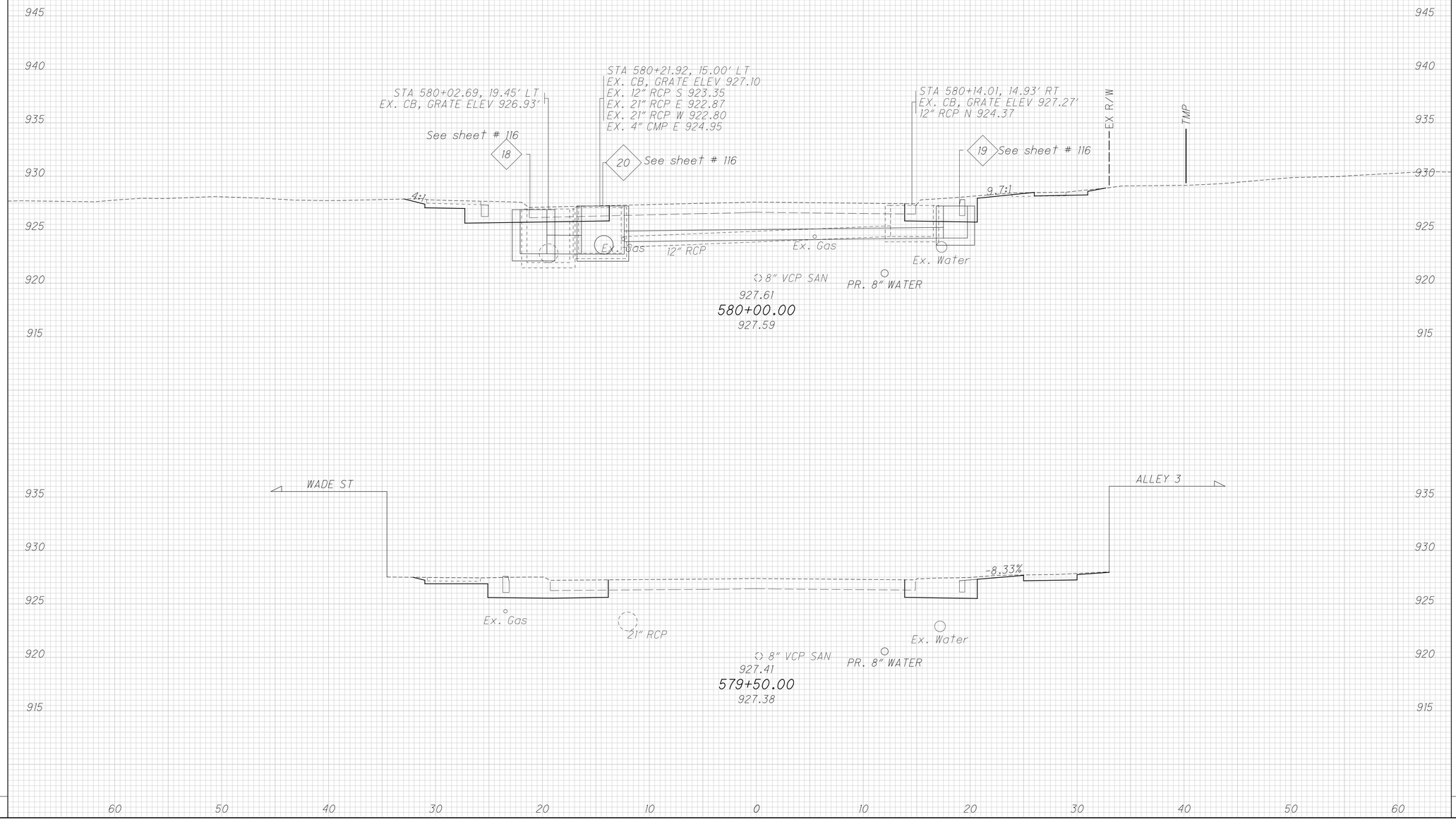


SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

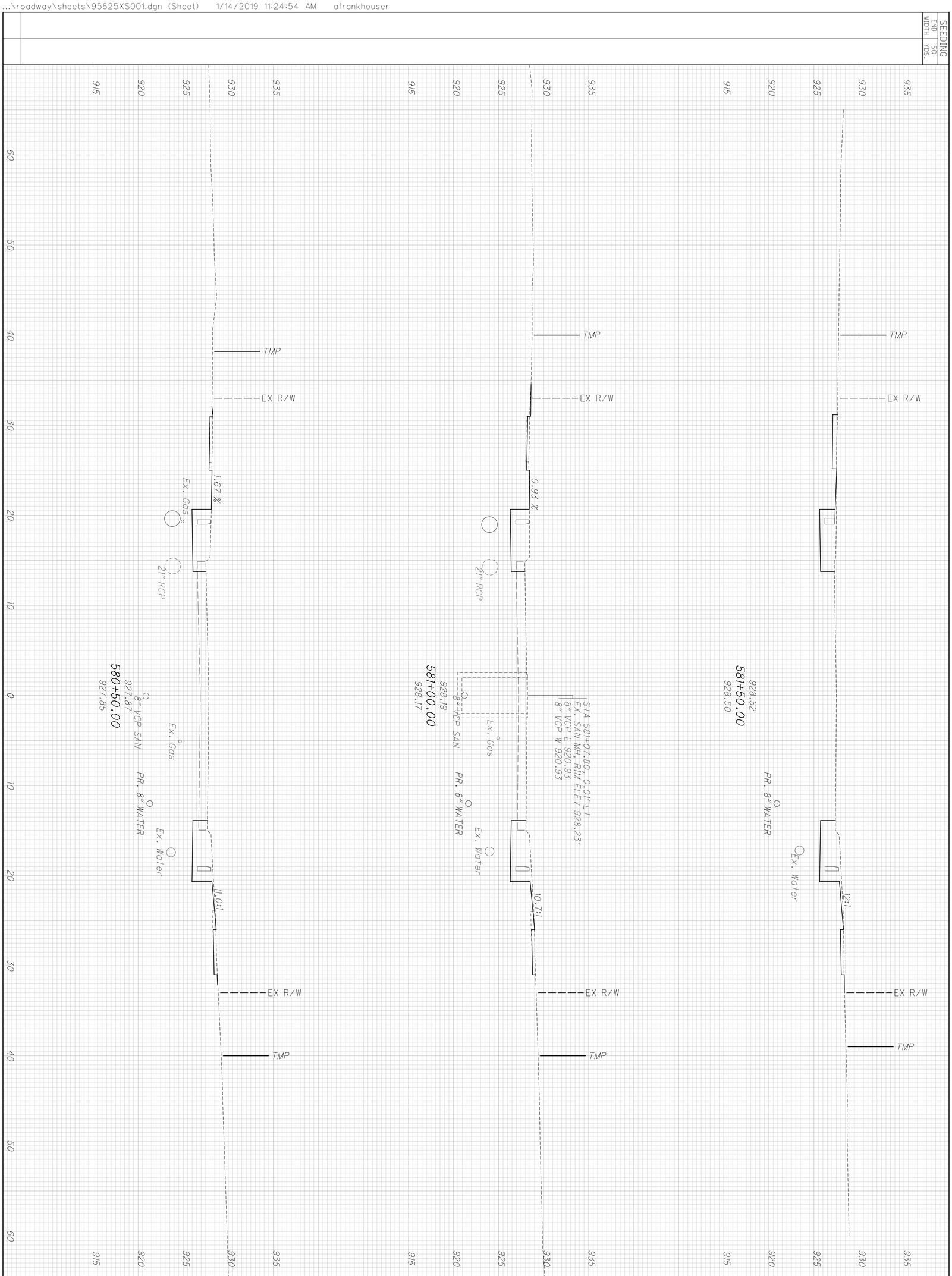
CALCULATED CEL

CHECKED CSR



CROSS SECTIONS E. WILLIAM ST. (U.S. 36)
STA. 579+50.00 TO STA. 580+00.00

DEL-36-10.59

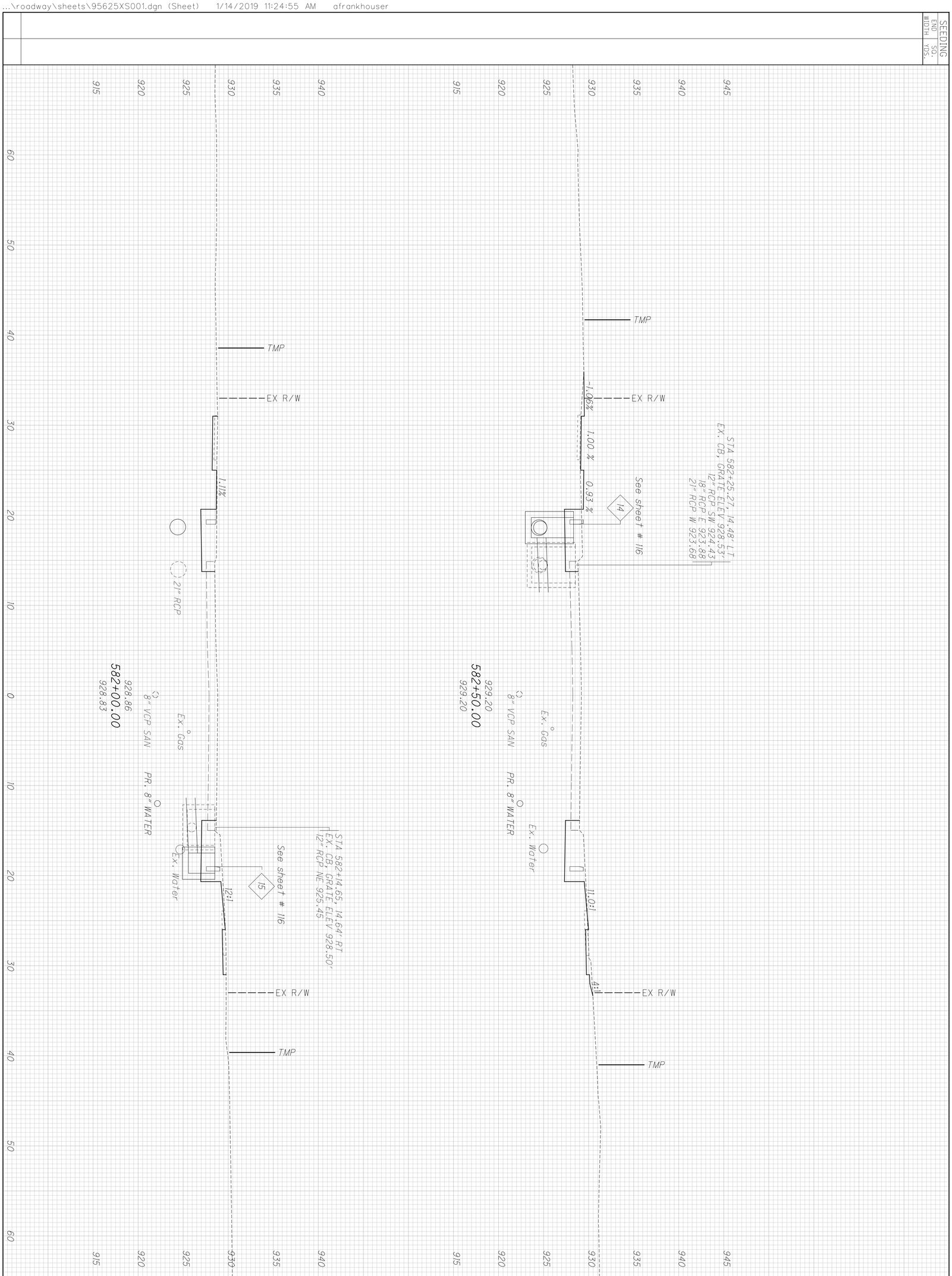


82
224

DEL-36-10.59

CROSS SECTIONS E. WILLIAM ST. (U.S. 36)
STA. 580+50.00 TO STA. 581+50.00

CALCULATED CEL
CHECKED CSR



END AREA CUT | FILL
VOLUME CUT | FILL

83
224

DEL-36-10.59

CROSS SECTIONS E. WILLIAM ST. (U.S. 36)
STA. 582+00.00 TO STA. 582+50.00

CALCULATED CEL
CHECKED CSR

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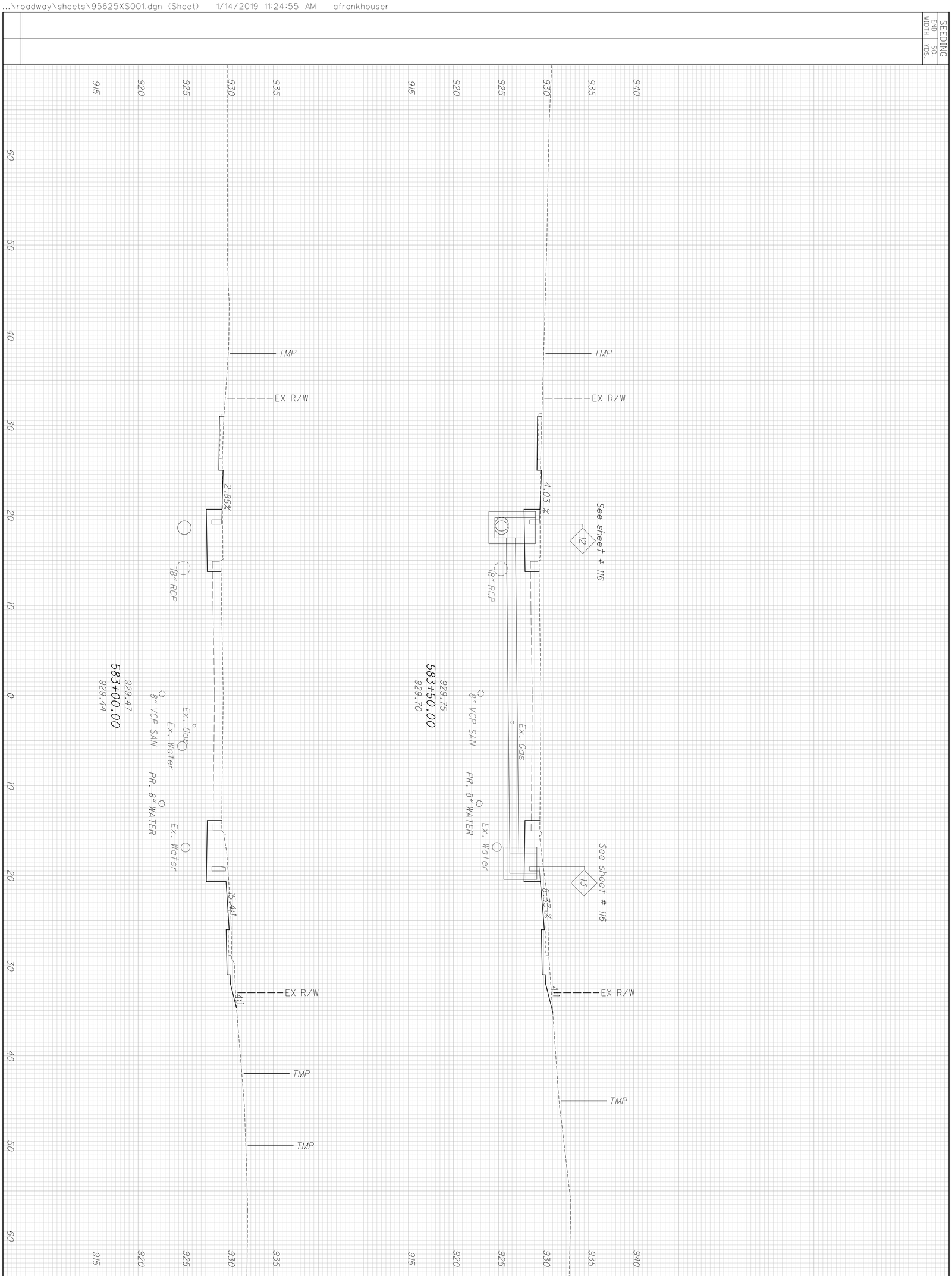

84 / 224	DEL-36-10.59	CROSS SECTIONS E. WILLIAM ST. (U.S. 36) STA. 583+00.00 TO STA. 583+50.00

CALCULATED CEL
CHECKED CSR

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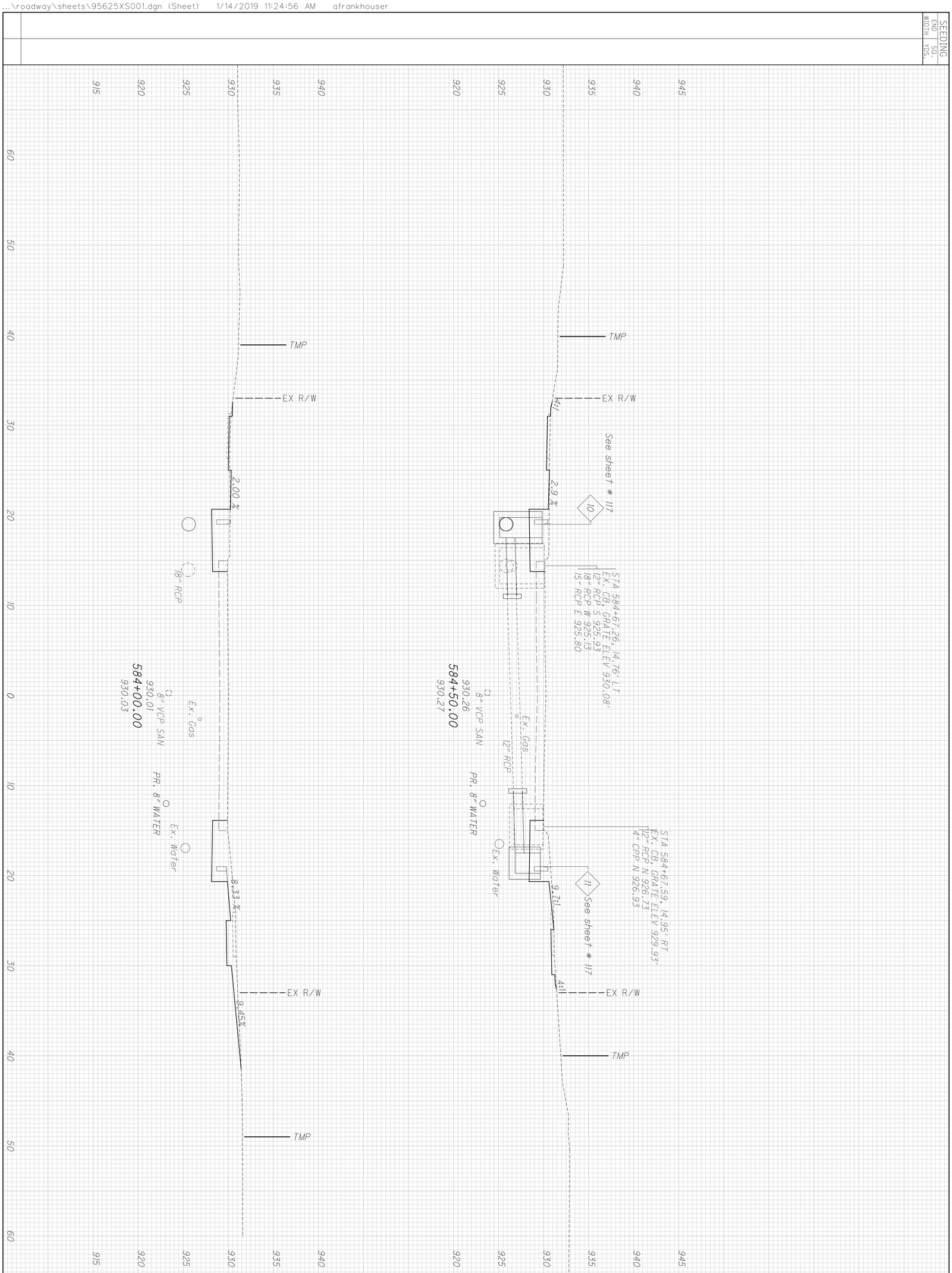


END AREA CUT FILL | VOLUME CUT FILL

85
224

DEL-36-10.59

CROSS SECTIONS E. WILLIAM ST. (U.S. 36)
STA. 584+00.00 TO STA. 584+50.00

CALCULATED CEL
CHECKED CSR

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CEL

CHECKED CSR

945
940
935
930
925
920

EX R/W

STA 585+48.71, 21.09' LT
EX. CB, GRATE ELEV 930.28'
12" RCP SW 926.78

EX R/W

TMP

14.3:1

4:1

Ex. Gas

8" VCP SAN
930.76

Ex. Water

PR. 8" WATER

585+50.00
930.76

945
940
935
930
925
920

TMP

R/W

EX R/W

4:1

2.49 %

11.2:1

4:1

EX R/W

TMP

Ex. Gas

15" RCP

8" VCP SAN
930.51

Ex. Water

PR. 8" WATER

585+00.00
930.50

60 50 40 30 20 10 0 10 20 30 40 50 60

CROSS SECTIONS E. WILLIAM ST. (U.S. 36)
STA. 585+00.00 TO STA. 585+50.00

DEL-36-10.59

SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED CEL

CHECKED CSR

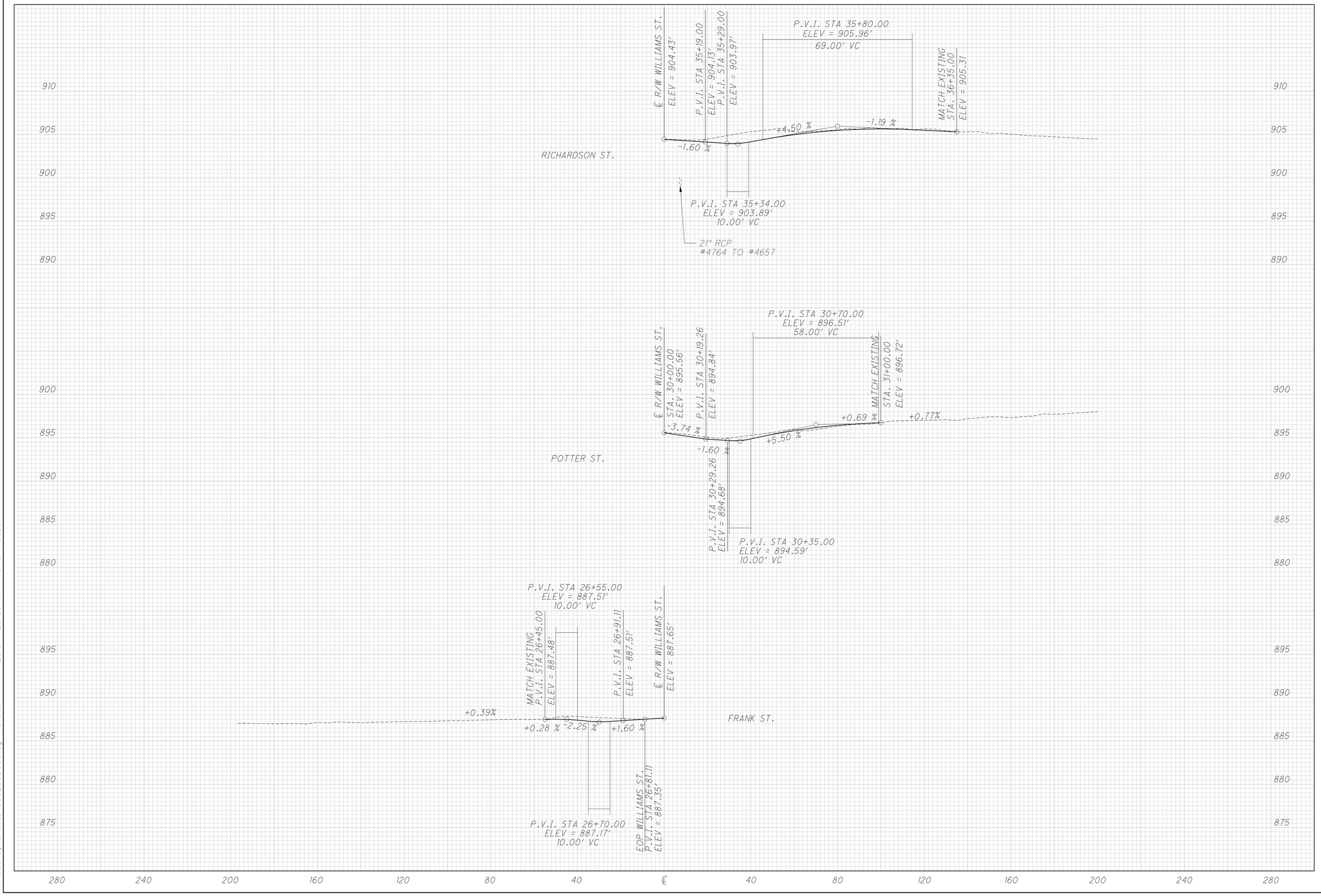
940
935
930
925
920

EX R/W
EX SH
TMP
12" RCP
Ex. Water
587+00.00
931.38
Ex. Gas
931.29
586+50.00
931.29
STA 585+79.55, 0.43' LT
EX. SAN MH, RIM ELEV 930.93'
EX. 8" VCP W 924.38
19.4:1
8.33 %
1.56%
7.50%
PR. 8" WATER
931.03
586+00.00
931.07

60 50 40 30 20 10 0 10 20 30 40 50 60

CROSS SECTIONS E. WILLIAM ST. (U.S. 36)
STA. 586+00.00 TO STA. 587+00.00

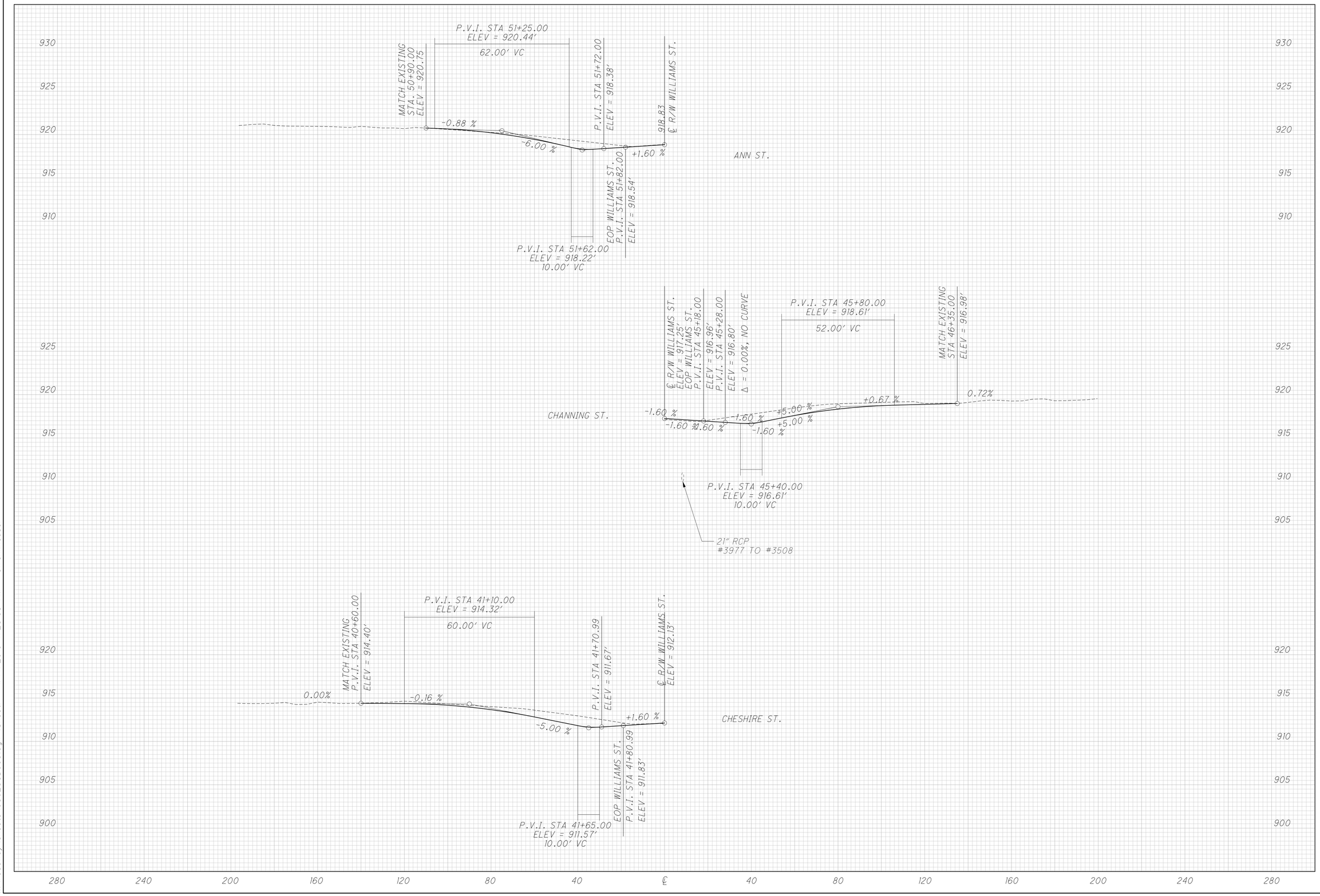
DEL-36-10.59



SIDE STREET PROFILES

CALCULATED ACF
CHECKED CSR

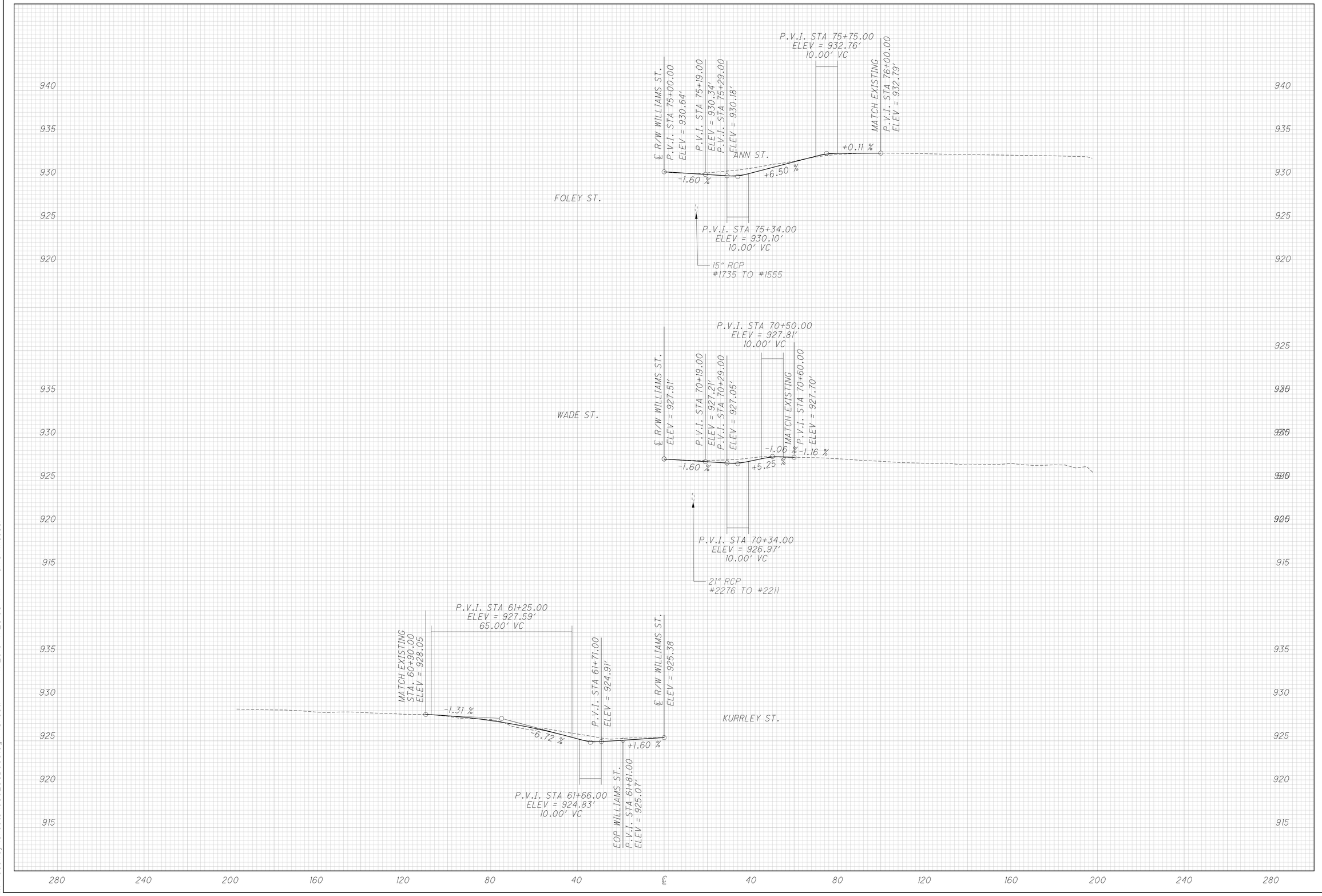
DEL-36-10.59



SIDE STREET PROFILE

CALCULATED ACF
CHECKED CSR

DEL-36-10.59

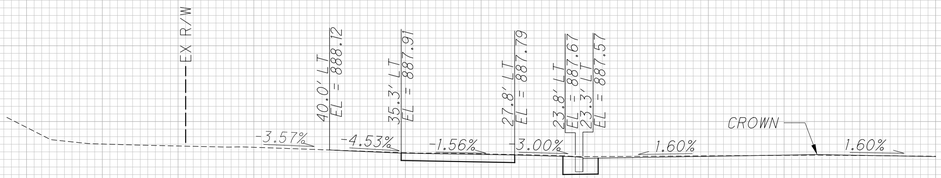


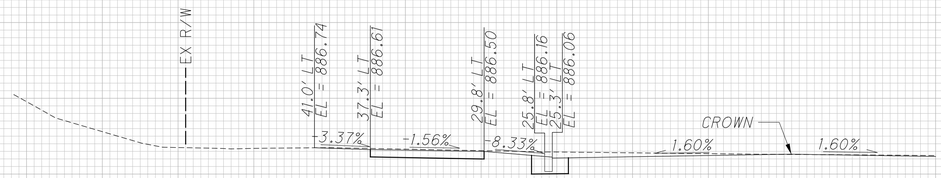
CALCULATED ACF
CHECKED CSR

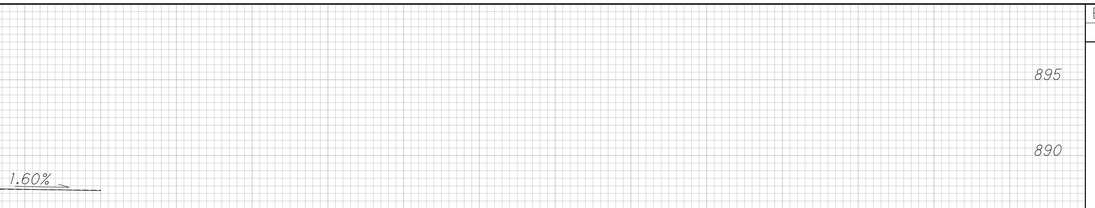
SIDE STREET PROFILE

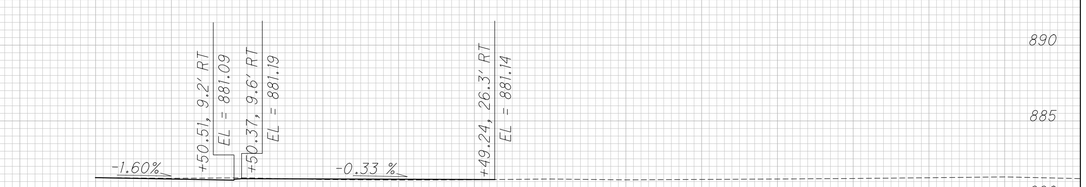
DEL-36-10.59

SEEDING	
END WIDTH	SQ. YDS.









END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED ACF
CHECKED CSR

DRIVE PROFILES - E. WILLIAM ST. (U.S. 36)
STA. 560+51 TO STA. 562+71

DEL-36-10.59

SEEDING
END WIDTH | SQ. YDS.

COMM CONCRETE DRIVE
898.62
898.70
565+38.64

19.0' RT
EL = 898.32
19.5' RT
EL = 898.42
22.0' RT
EL = 898.63
-8.33%
-1.56%
28.0' RT
EL = 898.72
-13.04%
EX R/W
39.0' RT
EL = 900.15
-7.21%
TMP
-1.60%

RES ASPHALT DRIVE
899.85
899.88
565+64.96

TMP
-5.24%
40.0' LT
EL = 901.42
-13.16%
EX R/W
31.0' LT
EL = 900.24
-1.56%
25.0' LT
EL = 900.14
-8.33%
19.5' LT
EL = 899.68
19.0' LT
EL = 899.58
-1.60%
CROWN
-1.60%

COMM CONCRETE DRIVE
906.08
906.07
567+43.44

-1.60%
19.0' RT
EL = 905.78
19.5' RT
EL = 905.88
-8.33%
25.0' RT
EL = 906.34
-1.56%
31.0' RT
EL = 906.44
EX R/W
-13.41%
41.0' RT
EL = 907.92
-6.15%
TMP

COMM CONCRETE DRIVE
907.80
907.80
568+03.28

-1.60%
+04.49, 19.0' RT
EL = 907.54
+04.53, 19.5' RT
EL = 907.64
-8.33%
+04.88, 25.0' RT
EL = 908.10
-1.56%
+05.26, 31.0' RT
EL = 908.19
EX R/W
-8.90%
+05.90, 41.0' RT
EL = 909.10
-3.03%
TMP

END AREA CUT | FILL
VOLUME CUT | FILL

92
224

DEL-36-10.59

DRIVE PROFILES - E. WILLIAM ST. (U.S. 36)
STA. 565+39 TO STA. 568+03

CALCULATED ACF
CHECKED CSR

SEEDING
END WIDTH | SQ. YDS.

ASPHALT ALLEY
922.67
574+62.94
922.68

COMM ASPHALT DRIVE
923.42
575+03.25
923.47

-1.60%
+63.10, 19.0' RT
EL = 922.31
+63.11, 19.5' RT
EL = 922.47
-8.33%
+63.15, 24.0' RT
EL = 922.85
-1.56%
+63.20, 30.0' RT
EL = 922.94
-8.45%
+63.29, 40.0' RT
EL = 923.78
-4.54%

RES CONCRETE DRIVE
923.78
575+22.21
923.84

-1.82%
TMP
40.0' LT
EL = 923.80
-2.30%
EX R/W
31.0' LT
EL = 923.59
-1.56%
25.0' LT
EL = 923.50
-5.00%
19.5' LT
EL = 923.22
19.0' LT
EL = 923.12
-1.60%

-1.60%
19.0' RT
EL = 923.48
19.5' RT
EL = 923.58
-8.33%
25.0' RT
EL = 924.04
-1.56%
31.0' RT
EL = 924.13
EX R/W
-10.01%
42.0' RT
EL = 925.24
-5.15%
TMP

RES ASPHALT DRIVE
925.49
576+49.49
925.49

TMP
-10.03%
45.0' LT
EL = 927.72
-13.44%
EX R/W
31.0' LT
EL = 925.84
-1.56%
25.0' LT
EL = 925.75
-8.33%
19.5' LT
EL = 925.29
19.0' LT
EL = 925.19
-1.60%

END AREA CUT | FILL
VOLUME CUT | FILL

93
224

DEL-36-10.59

DRIVE PROFILES - E. WILLIAM ST. (U.S. 36)
STA. 574+63 TO STA. 576+50

CALCULATED ACF
CHECKED CSR

SEEDING
END WIDTH | SQ. YDS.

RES ASPHALT DRIVE
926.22
577+40.07
926.18

TMP
-6.73%
38.0' LT
EL = 927.39
-11.64%
EX R/W
31.0' LT
EL = 926.57
-1.56%
25.0' LT
EL = 926.48
-8.33%
19.5' LT
EL = 926.02
19.0' LT
EL = 925.92
-1.60%

RES CONCRETE DRIVE
926.41
577+63.81
926.38

-1.60%
19.0' RT
EL = 926.11
19.5' RT
EL = 926.21
-8.33%
23.0' RT
EL = 926.50
-1.56%
29.0' RT
EL = 926.60
EX R/W
-13.46%
51.0' RT
EL = 929.56
TMP

RES ASPHALT DRIVE
926.94
578+32.76
926.98

TMP
-2.98%
37.0' LT
EL = 927.80
-8.52%
EX R/W
31.0' LT
EL = 927.29
-1.56%
25.0' LT
EL = 927.20
-8.33%
19.5' LT
EL = 926.74
19.0' LT
EL = 926.64
-1.60%

RES ASPHALT DRIVE
927.02
578+52.92
927.04

TMP
-1.43%
40.0' LT
EL = 928.20
-9.17%
EX R/W
31.0' LT
EL = 927.37
-1.56%
25.0' LT
EL = 927.28
-8.33%
19.5' LT
EL = 926.82
19.0' LT
EL = 926.72
-1.60%

END AREA CUT | FILL
VOLUME CUT | FILL

94
224

DEL-36-10.59

DRIVE PROFILES - E. WILLIAM ST. (U.S. 36)
STA. 577+40 TO STA. 578+53

CALCULATED ACF
CHECKED CSR

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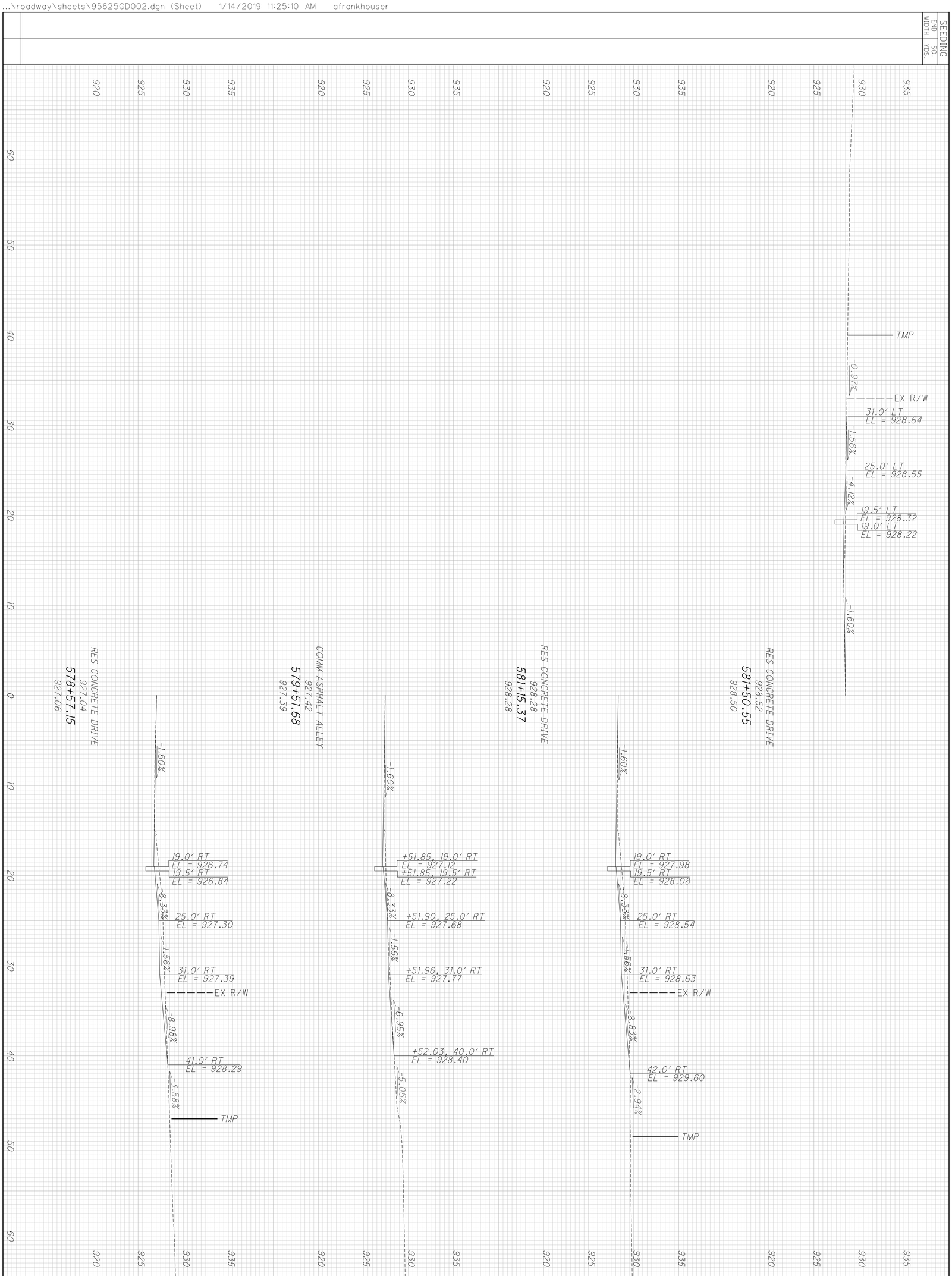

95
224

DEL-36-10.59

DRIVE PROFILES - E. WILLIAM ST. (U.S. 36)
STA. 579+57 TO STA. 581+50

CALCULATED ACF
CHECKED CSR

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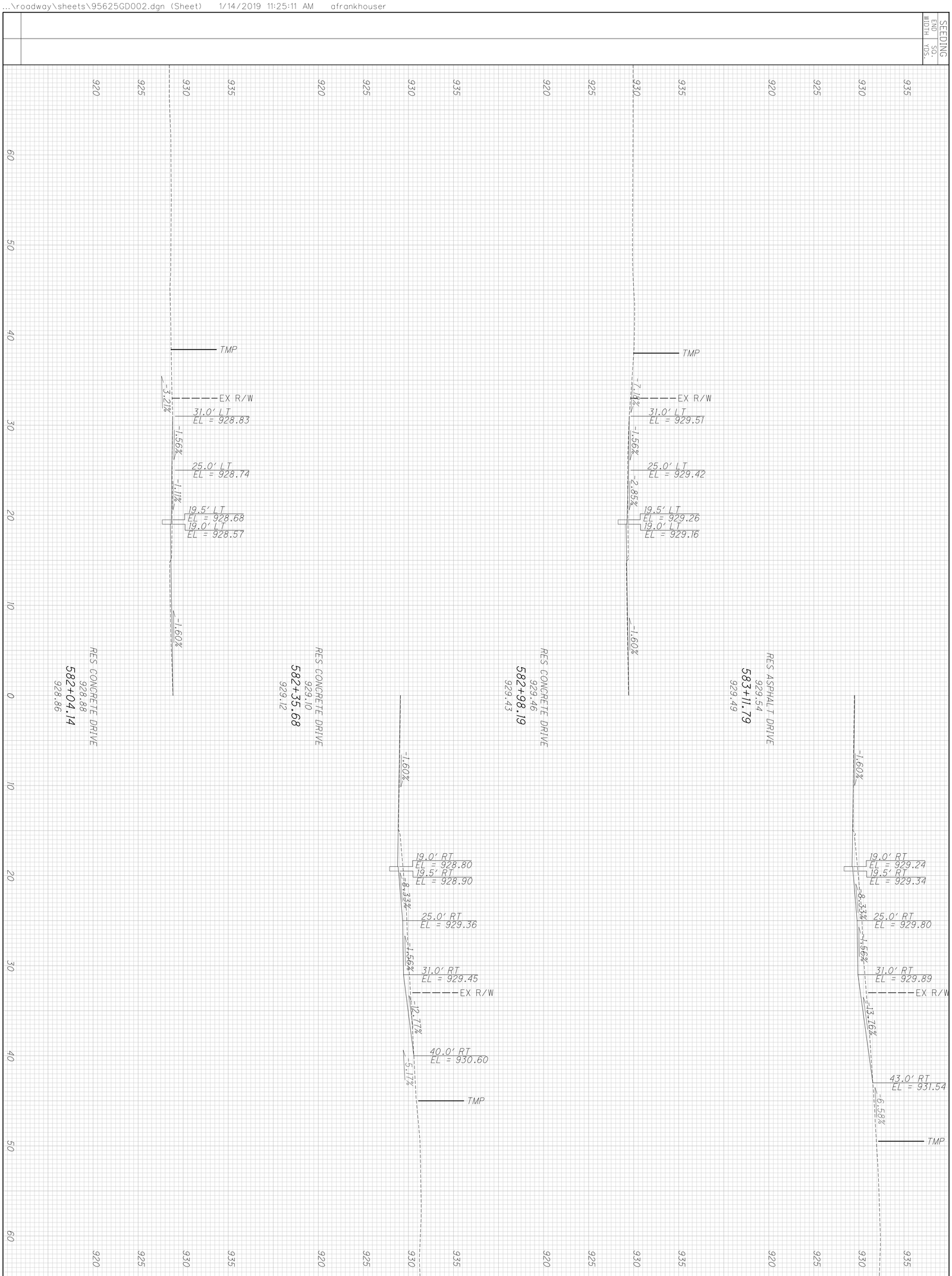


END AREA CUT FILL | VOLUME CUT FILL

96
224

DEL-36-10.59

DRIVE PROFILES - E. WILLIAM ST. (U.S. 36)
STA. 582+04 TO STA. 583+12

CALCULATED ACF
CHECKED CSR

SEEDING
END WIDTH | SQ. YDS.

RES ASPHALT DRIVE
929.77
583+53.46
929.73

RES CONCRETE DRIVE
929.79
583+57.37
929.76

RES CONCRETE DRIVE
930.03
584+03.58
930.05

RES ASPHALT DRIVE
930.08
584+13.48
930.09

TMP
-2.84%
EX R/W
31.0' LT
EL = 929.85
-1.56%
25.0' LT
EL = 929.75
-4.03%
19.5' LT
EL = 929.57
19.0' LT
EL = 929.47
-1.60%

-1.60%
19.0' RT
EL = 929.49
19.5' RT
EL = 929.59
-8.33%
25.0' RT
EL = 930.05
-1.56%
31.0' RT
EL = 930.14
EX R/W
-3.77%
40.0' RT
EL = 931.25
-7.02%
TMP

-1.60%
19.0' RT
EL = 929.73
19.5' RT
EL = 929.83
-8.33%
25.0' RT
EL = 930.29
-1.56%
31.0' RT
EL = 930.38
EX R/W
-9.45%
42.0' RT
EL = 931.42
-3.19%
TMP

TMP
-5.54%
40.0' LT
EL = 931.66
-13.71%
EX R/W
31.0' LT
EL = 930.43
-1.56%
25.0' LT
EL = 930.34
-8.33%
19.5' LT
EL = 929.88
19.0' LT
EL = 929.78
-1.60%

END AREA CUT | FILL
VOLUME CUT | FILL

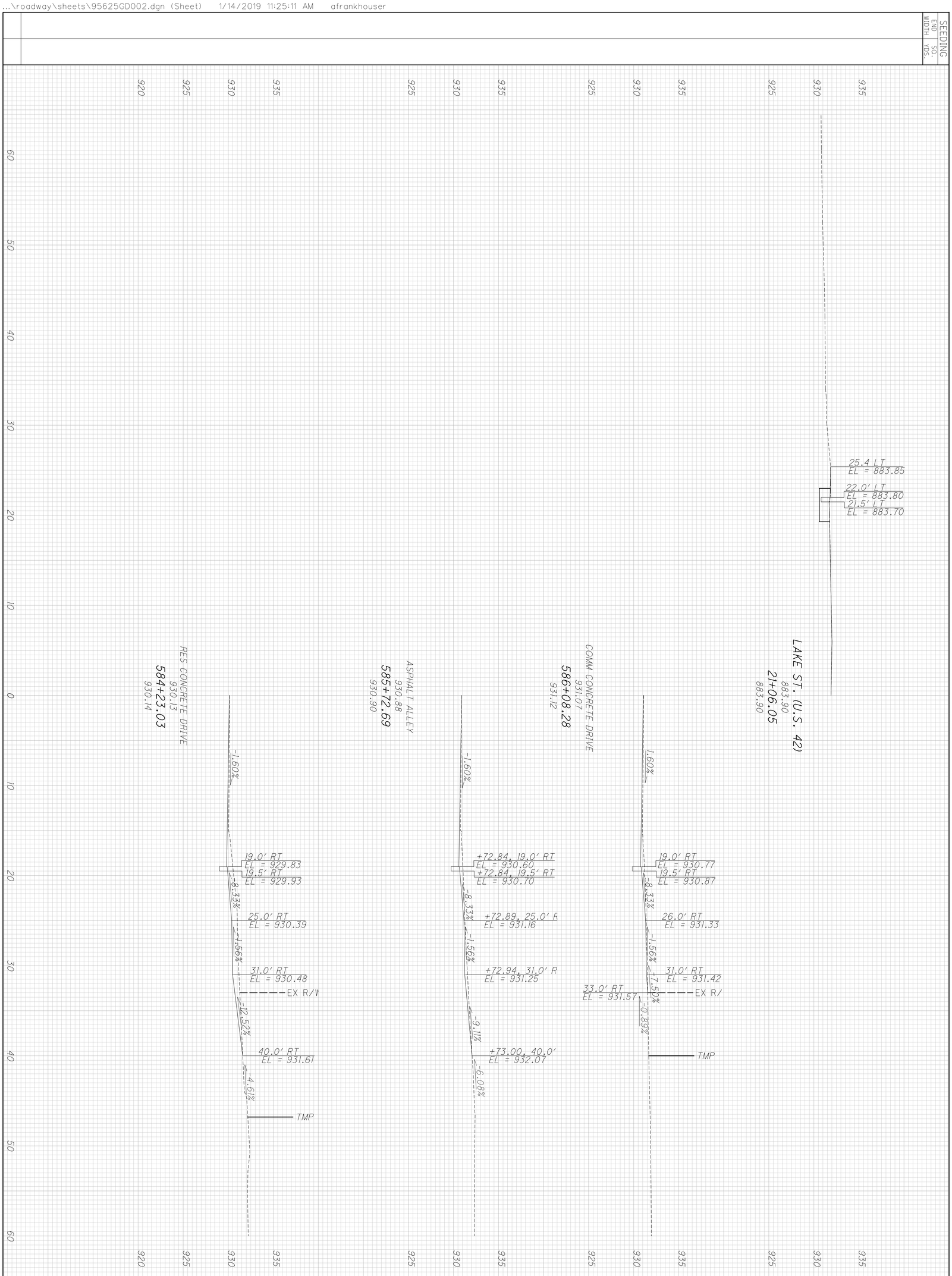
97
224

DEL-36-10.59

DRIVE PROFILES - E. WILLIAM ST. (U.S. 36)
STA. 583+53 TO STA. 584+13

CALCULATED ACF
CHECKED CSR

SEEDING
END AREA
VOLUME



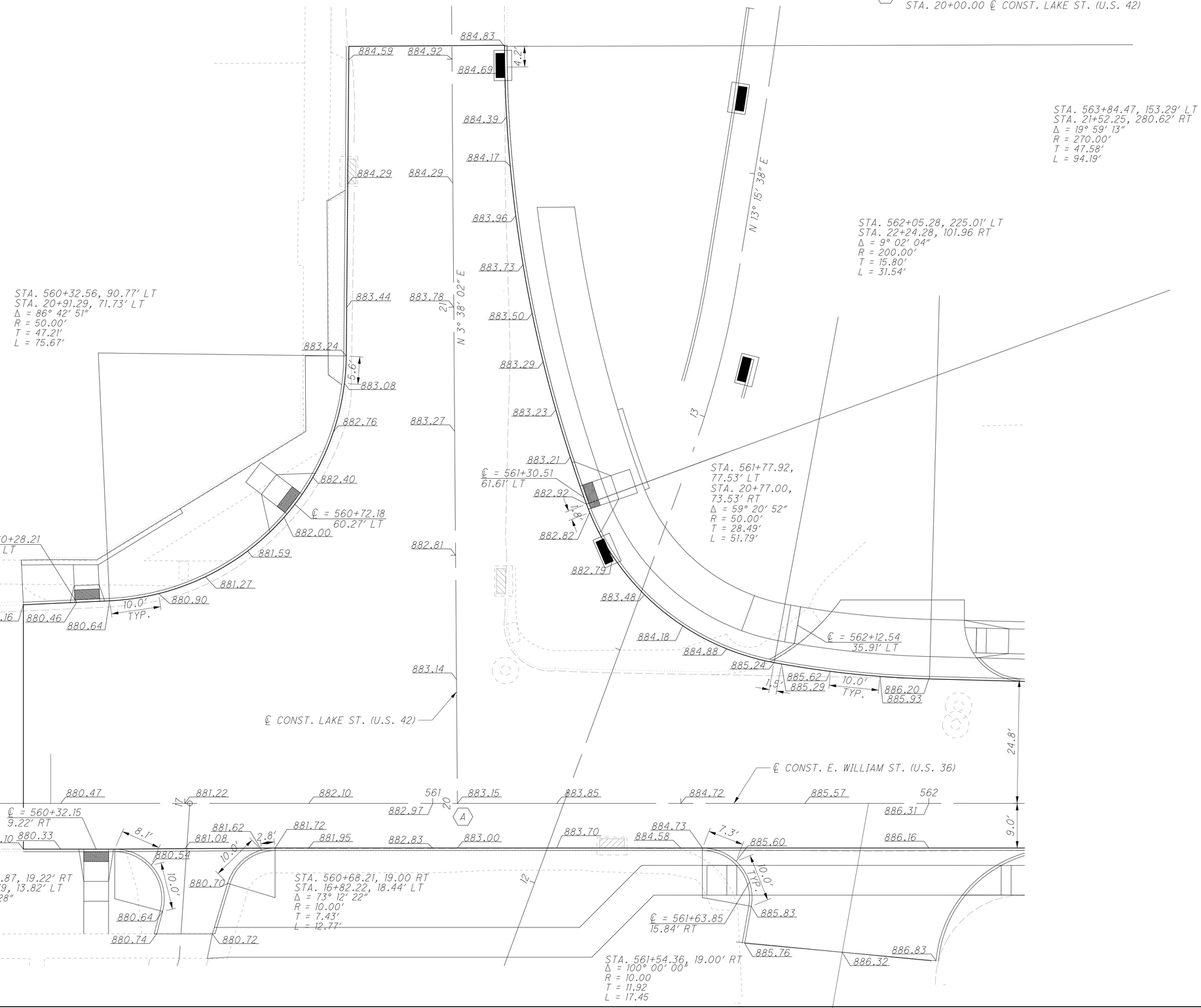
END AREA CUT | FILL
VOLUME CUT | FILL

98
224

DEL-36-10.59

DRIVE PROFILES - E. WILLIAM ST. (U.S. 36), LAKE ST. (U.S. 42)
STA. 585+72 TO STA. 588+91 AND STA. 21+05

CALCULATED ACF
CHECKED CSR



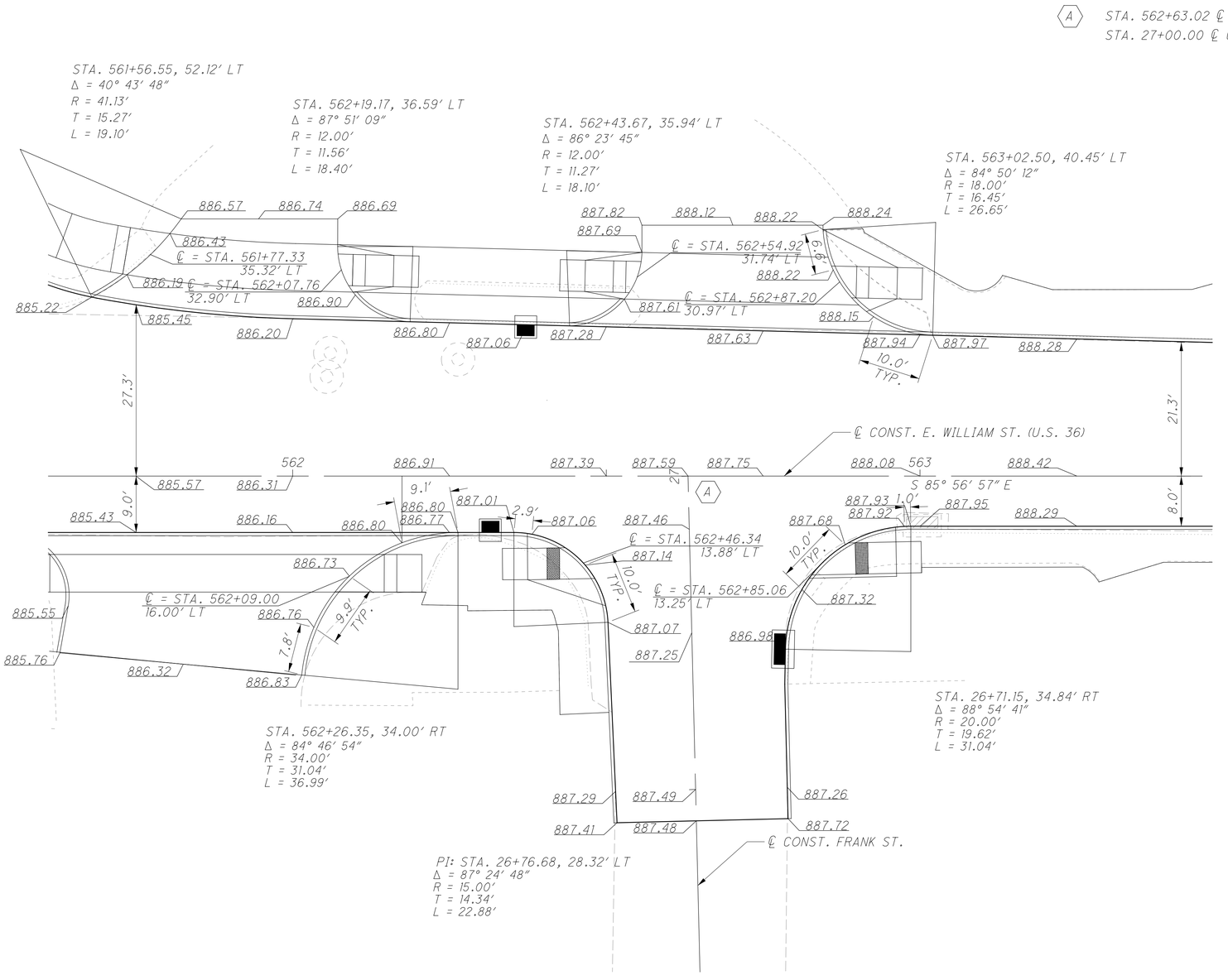
HORIZONTAL SCALE IN FEET
0 5 10 20

CALCULATED ACF
CHECKED CSR

INTERSECTION DETAILS
E. WILLIAM ST. (U.S. 36) AND LAKE ST. (U.S. 42)

DEL-36-10.59

99
224



N

0 5 10 20 HORIZONTAL SCALE IN FEET

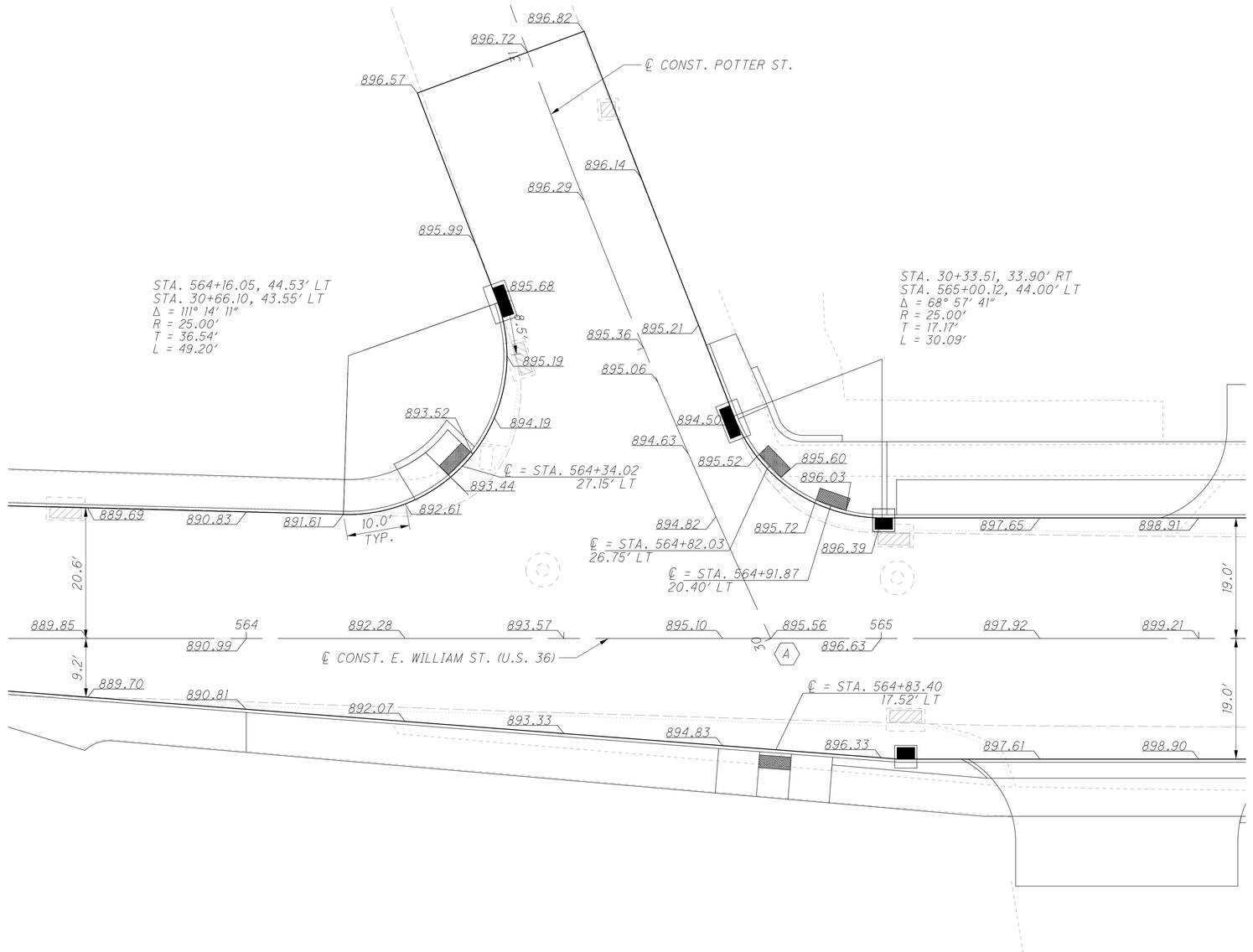
CALCULATED ACF CHECKED CSR

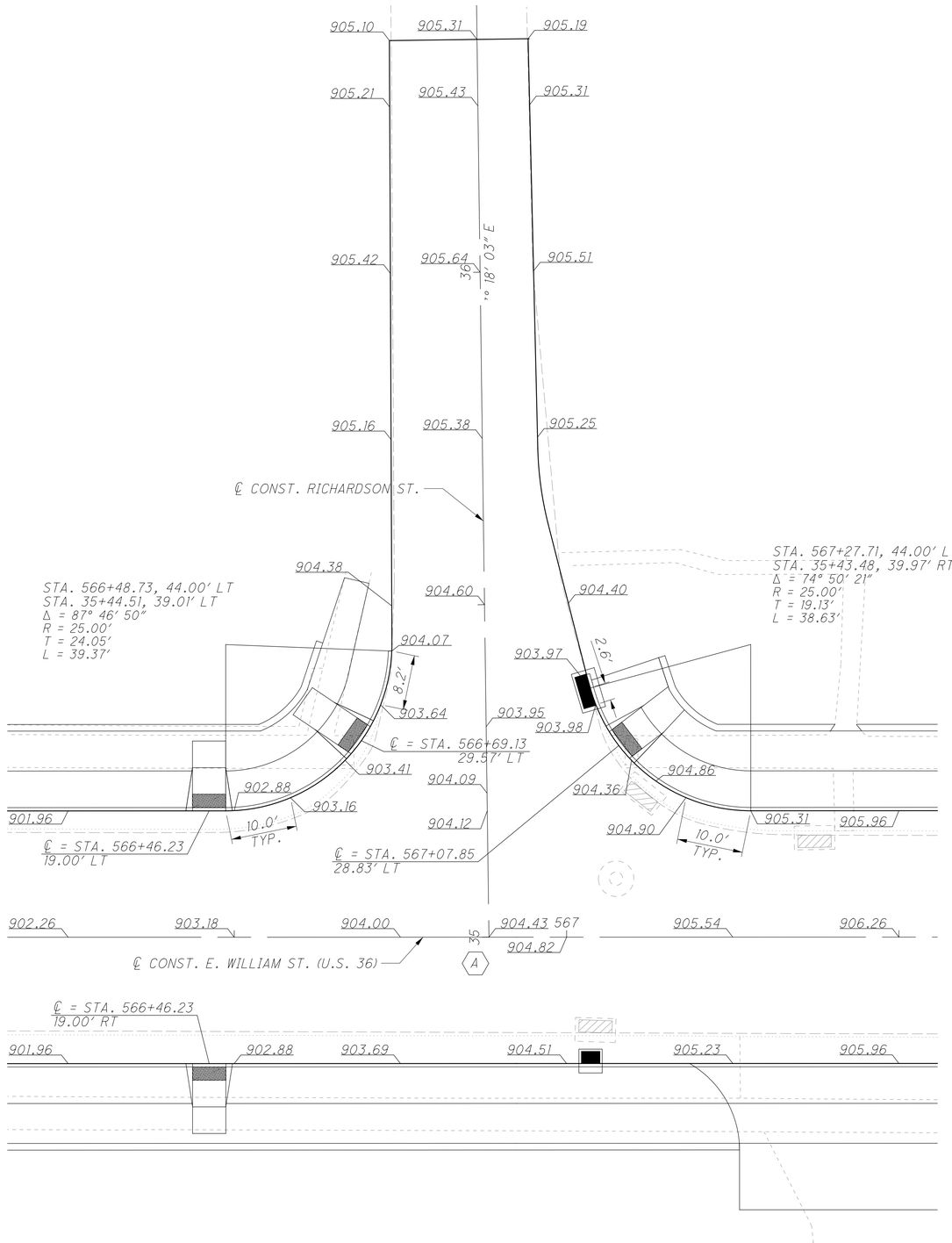
INTERSECTION DETAILS
E. WILLIAM ST. (U.S. 36) AND FRANK ST.

DEL-36-10.59

100
224

(A) STA. 564+82.59 ℄ CONST. E. WILLIAM ST. (U.S. 36) =
STA. 30+00.00 ℄ CONST. POTTER ST.





STA. 566+48.73, 44.00' LT
STA. 35+44.51, 39.01' LT
Δ = 87° 46' 50"
R = 25.00'
T = 24.05'
L = 39.37'

STA. 567+27.71, 44.00' LT
STA. 35+43.48, 39.97' RT
Δ = 74° 50' 21"
R = 25.00'
T = 19.13'
L = 38.63'

(A) STA. 566+88.32 ℄ CONST. E. WILLIAM ST. (U.S. 36) = STA. 35+00.00 ℄ CONST. RICHARDSON ST.

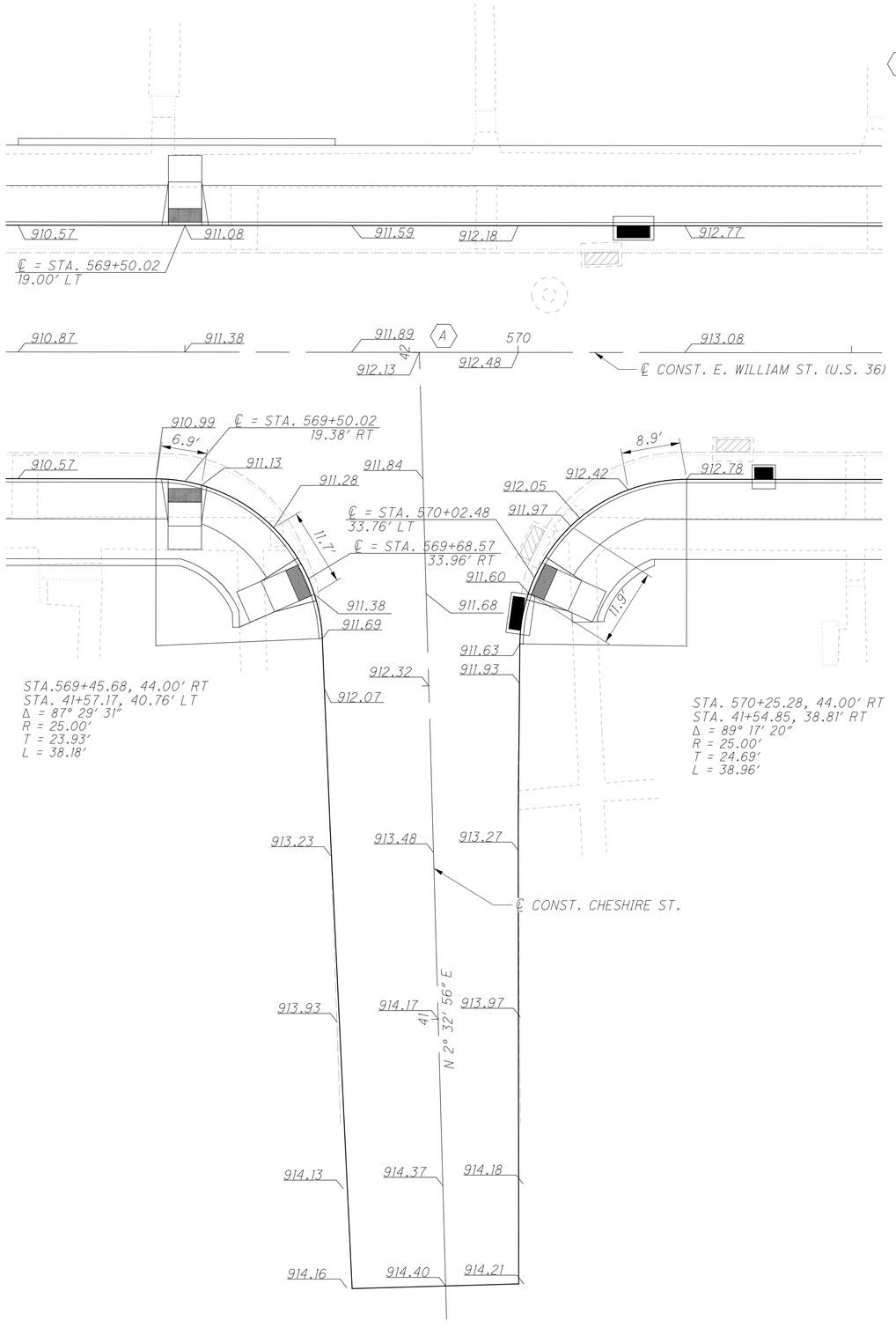
HORIZONTAL SCALE IN FEET
0 5 10 20

CALCULATED ACF
CHECKED CSR

INTERSECTION DETAILS
E. WILLIAM ST. (U.S. 36) AND RICHARDSON ST.

DEL-36-10.59

102
224

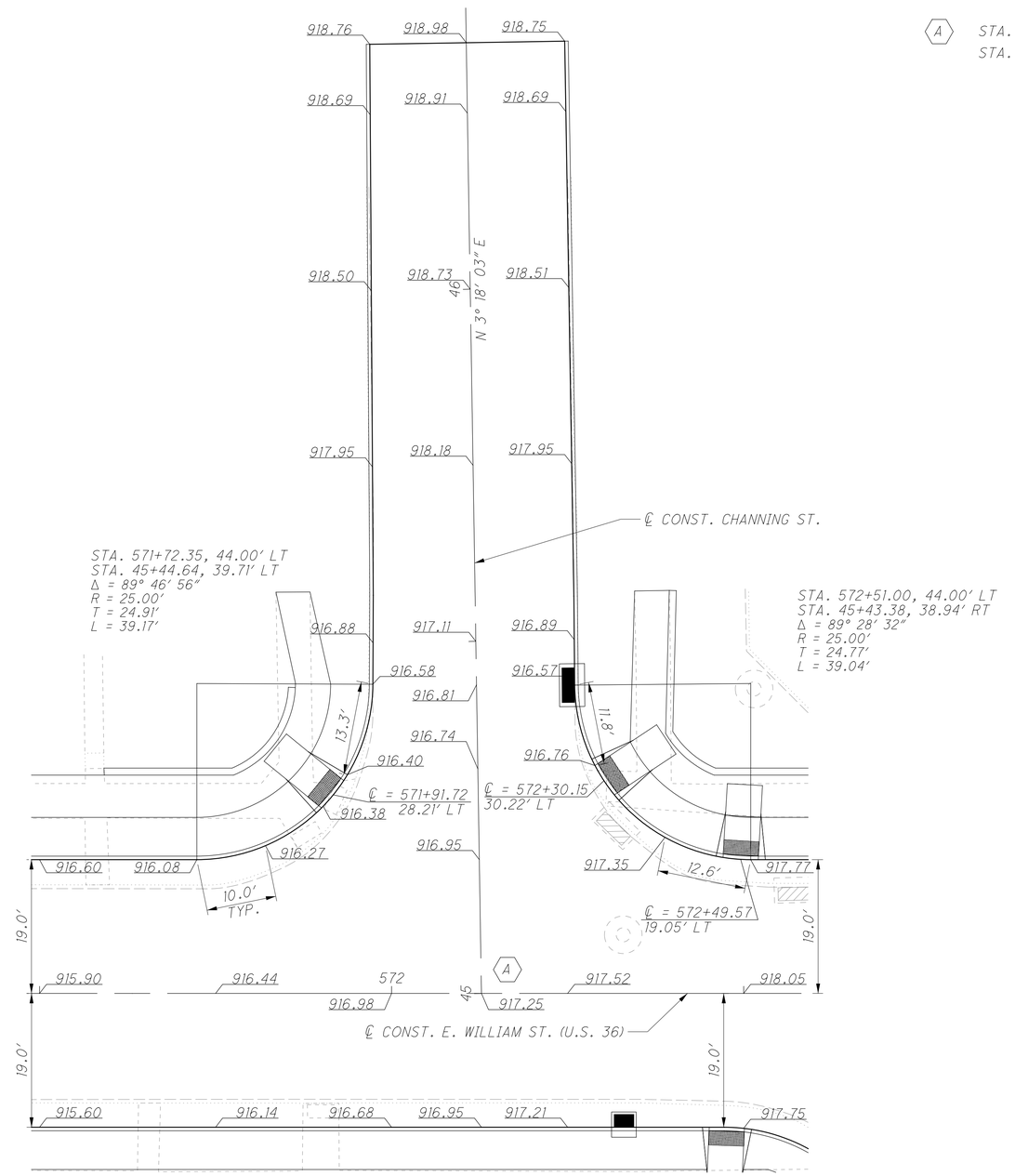


HORIZONTAL SCALE IN FEET
0 5 10 20

CALCULATED ACF
CHECKED CSR

INTERSECTION DETAILS
E. WILLIAM ST. (U.S. 36) AND CHESHIRE ST.

DEL-36-10.59



A STA. 572+12.76 ℄ CONST. WILLIAM ST (U.S. 36) = STA. 45+00.00 ℄ CONST. CHANNING ST.

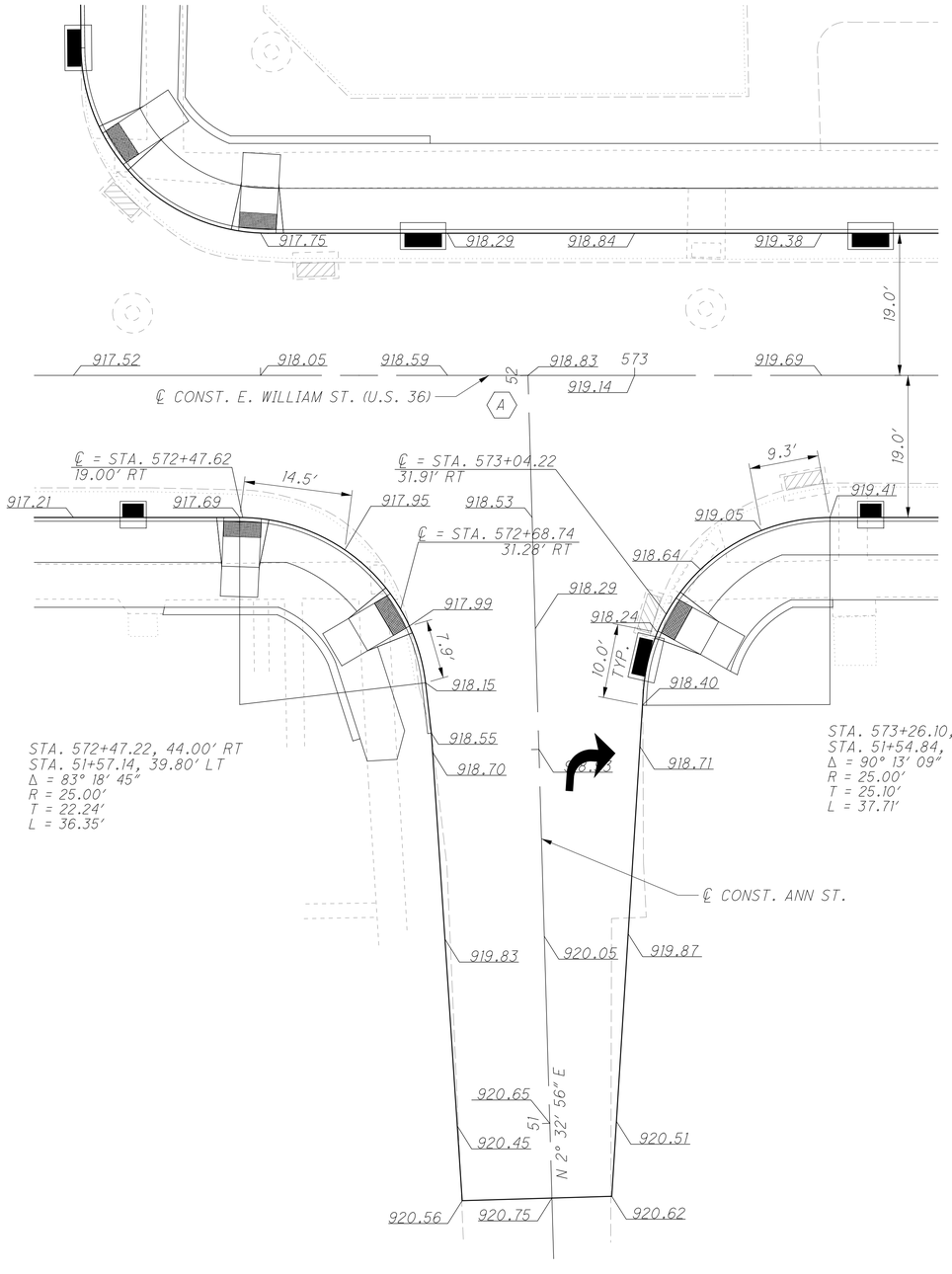
HORIZONTAL SCALE IN FEET
0 5 10 20

CALCULATED ACF
CHECKED CSR

INTERSECTION DETAILS
E. WILLIAM ST. (U.S. 36) AND CHANNING ST.

DEL-36-10.59

104
224



HORIZONTAL SCALE IN FEET
0 5 10 20

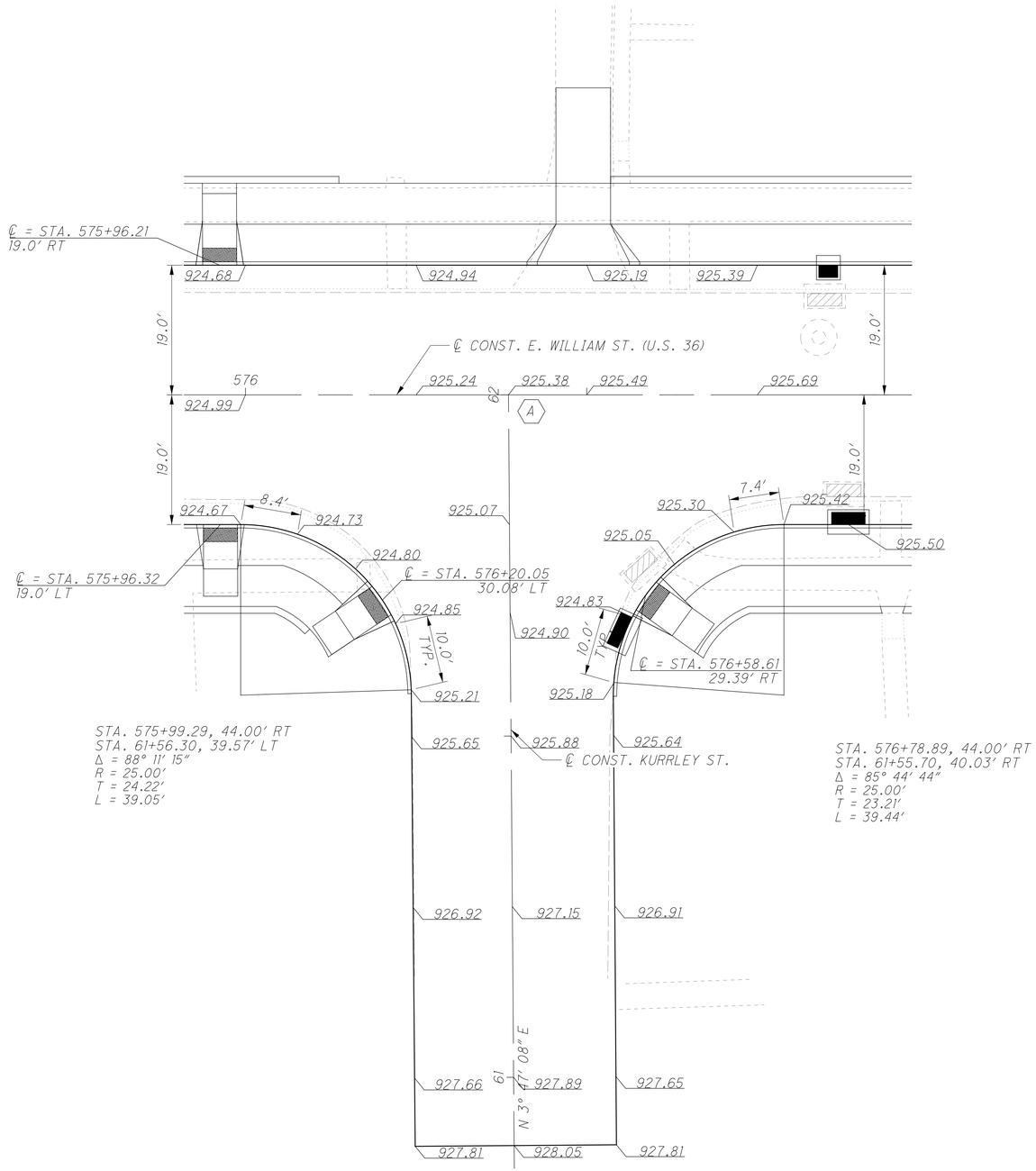
CALCULATED ACF
CHECKED CSR

INTERSECTION DETAILS
E. WILLIAM ST. (U.S. 36) AND ANN ST.

DEL-36-10.59

105
224

(A) STA. 576+38.53 CONST. WILLIAM ST (U.S. 36) = STA. 62+00.00 ℄ CONST. KURRLEY ST.



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INTERSECTION DETAILS
E. WILLIAM ST. (U.S. 36) AND KURRLEY ST.

DEL-36-10.59

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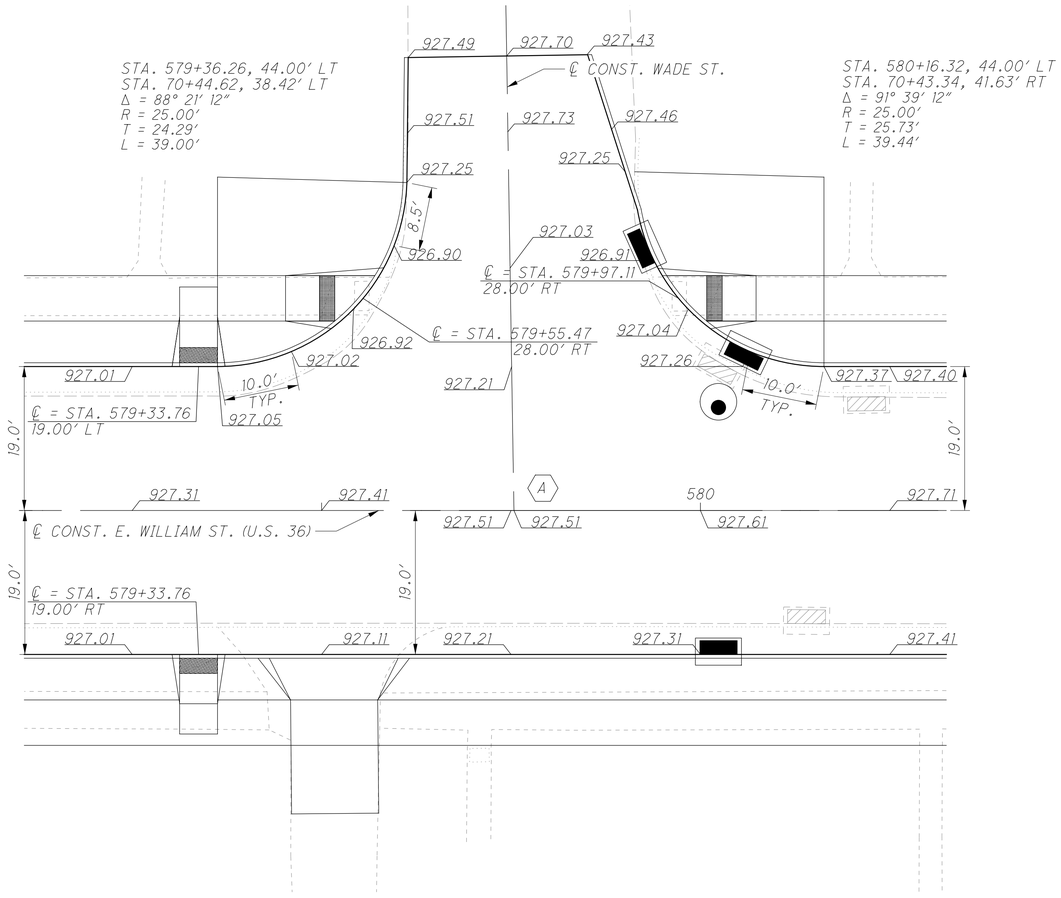

A STA. 579+75.39 CONST. WILLIAM ST (U.S. 36) = STA. 70+00.00 ℄ CONST. WADE ST.

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INTERSECTION DETAILS
E. WILLIAM ST. (U.S. 36) AND WADE ST.

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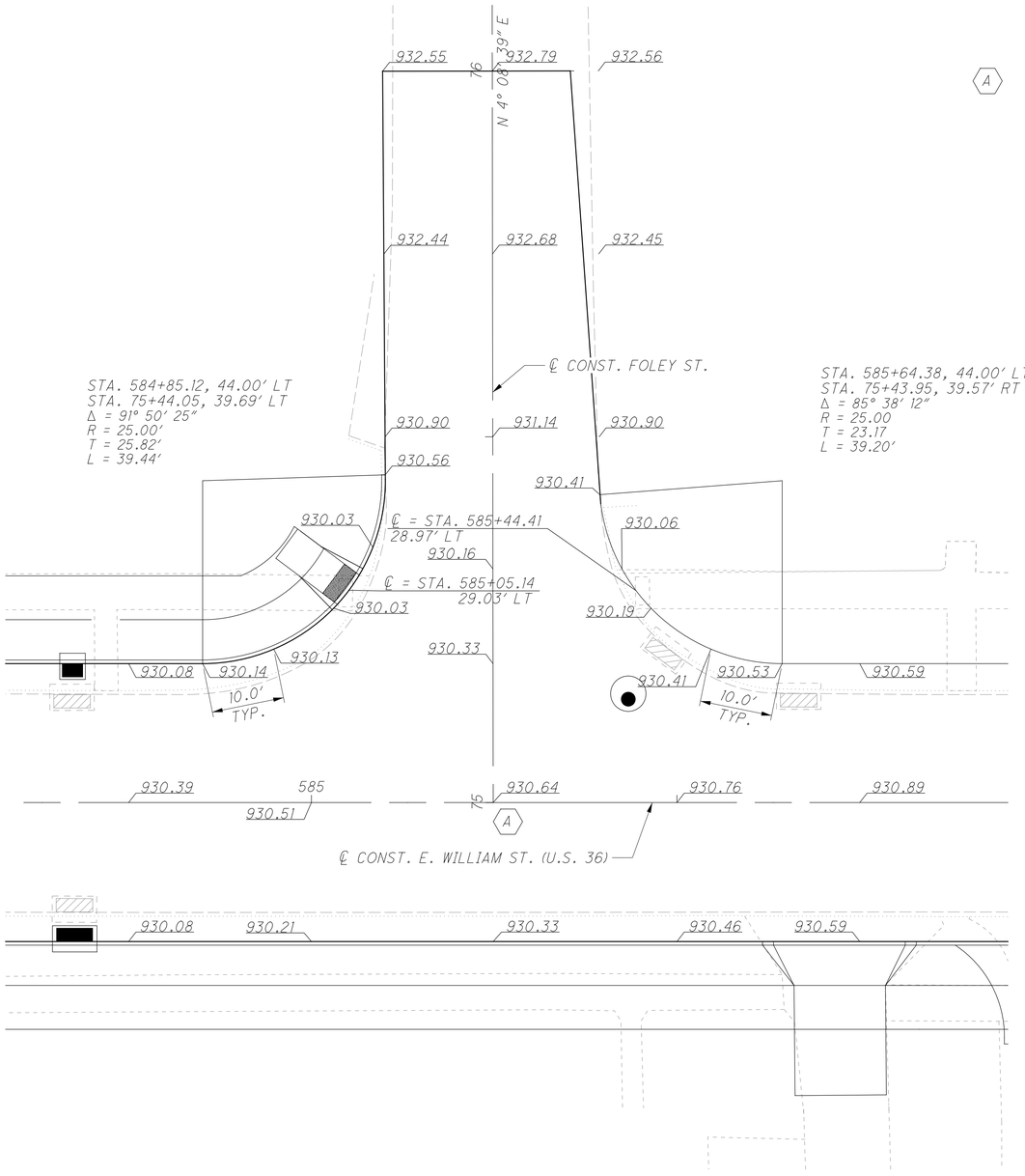

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INTERSECTION DETAILS
E. WILLIAM ST. (U.S. 36) AND FOLEY ST.

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STORM SEWER PROFILES

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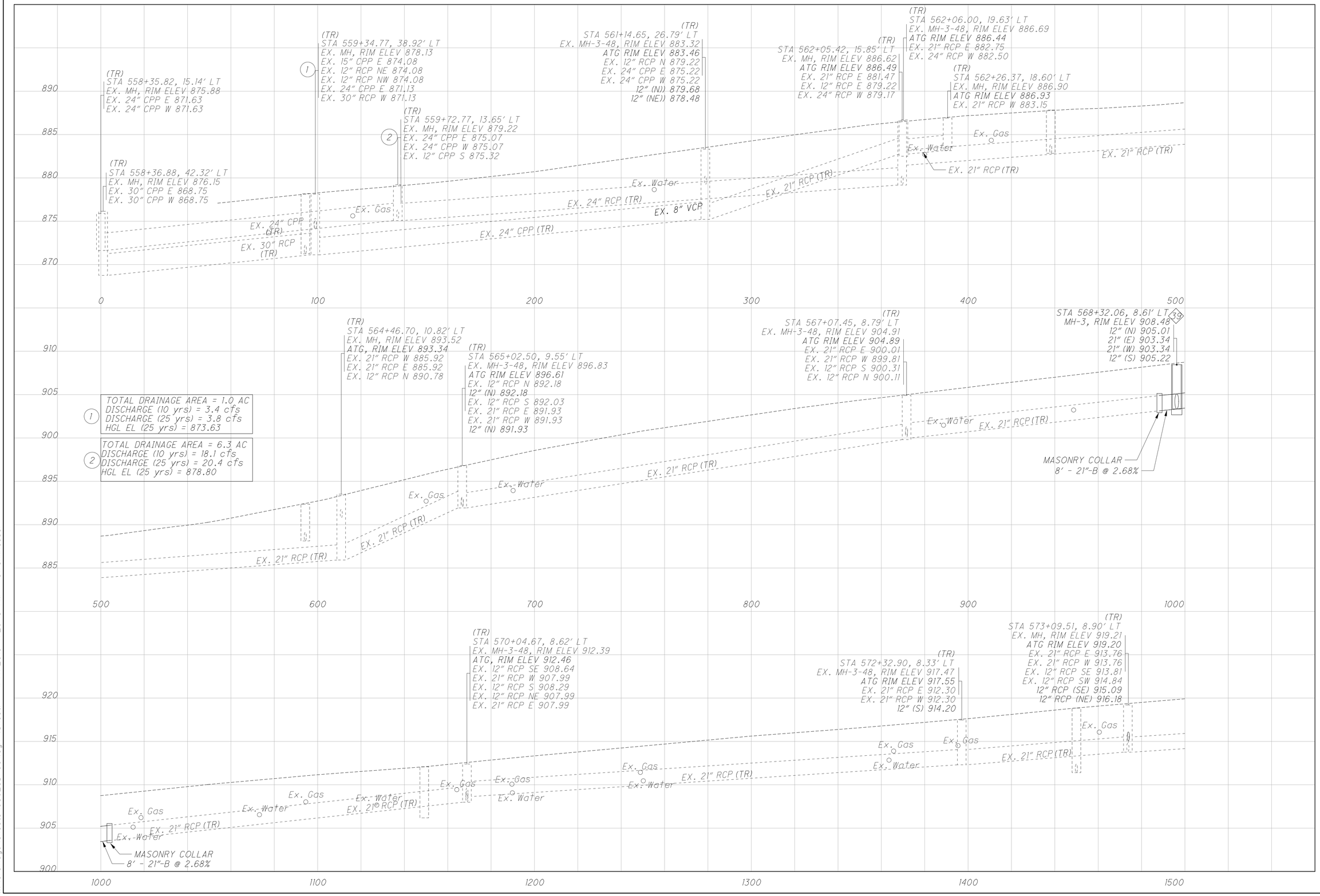

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STORM SEWER PROFILES

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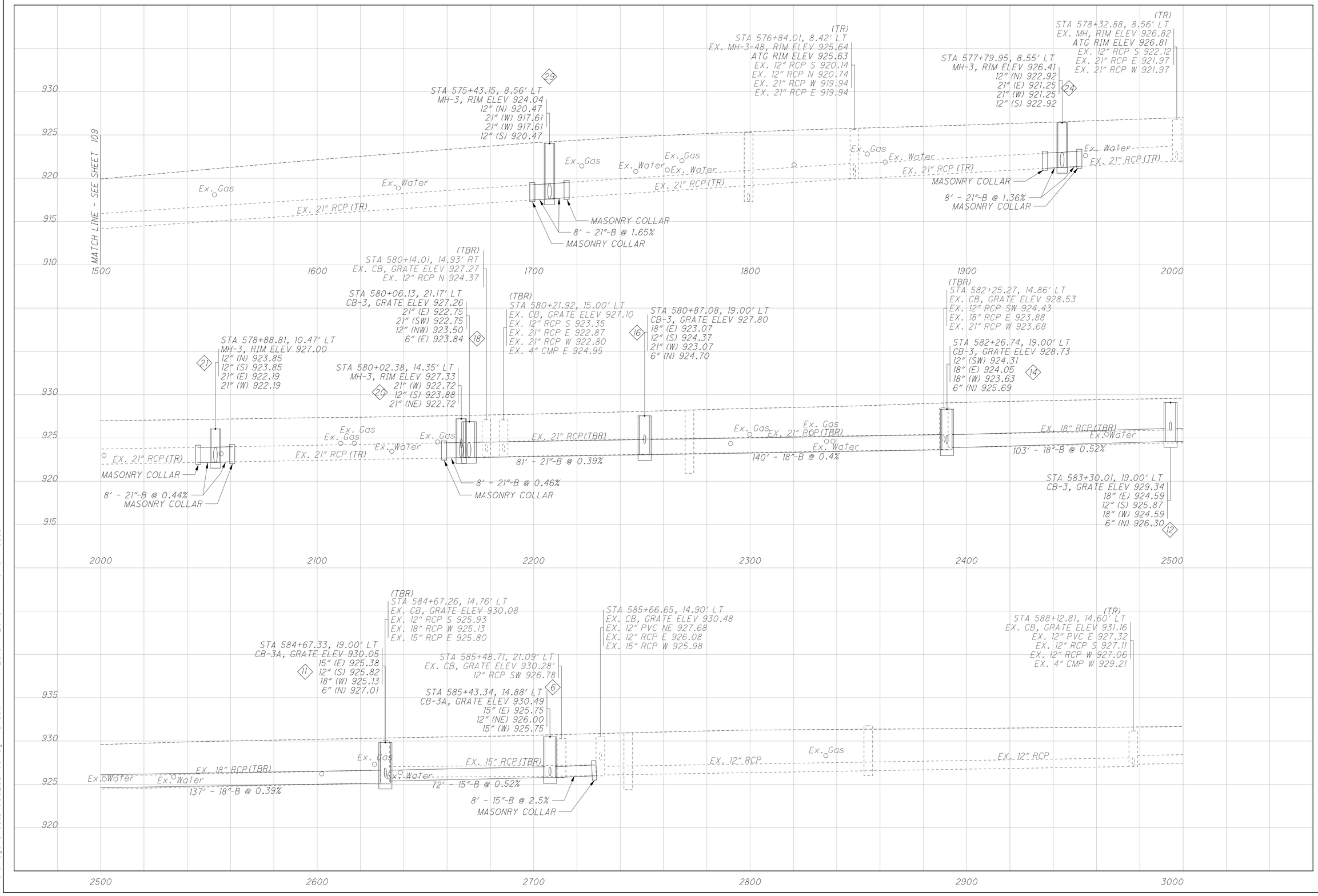

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STORM SEWER PROFILES

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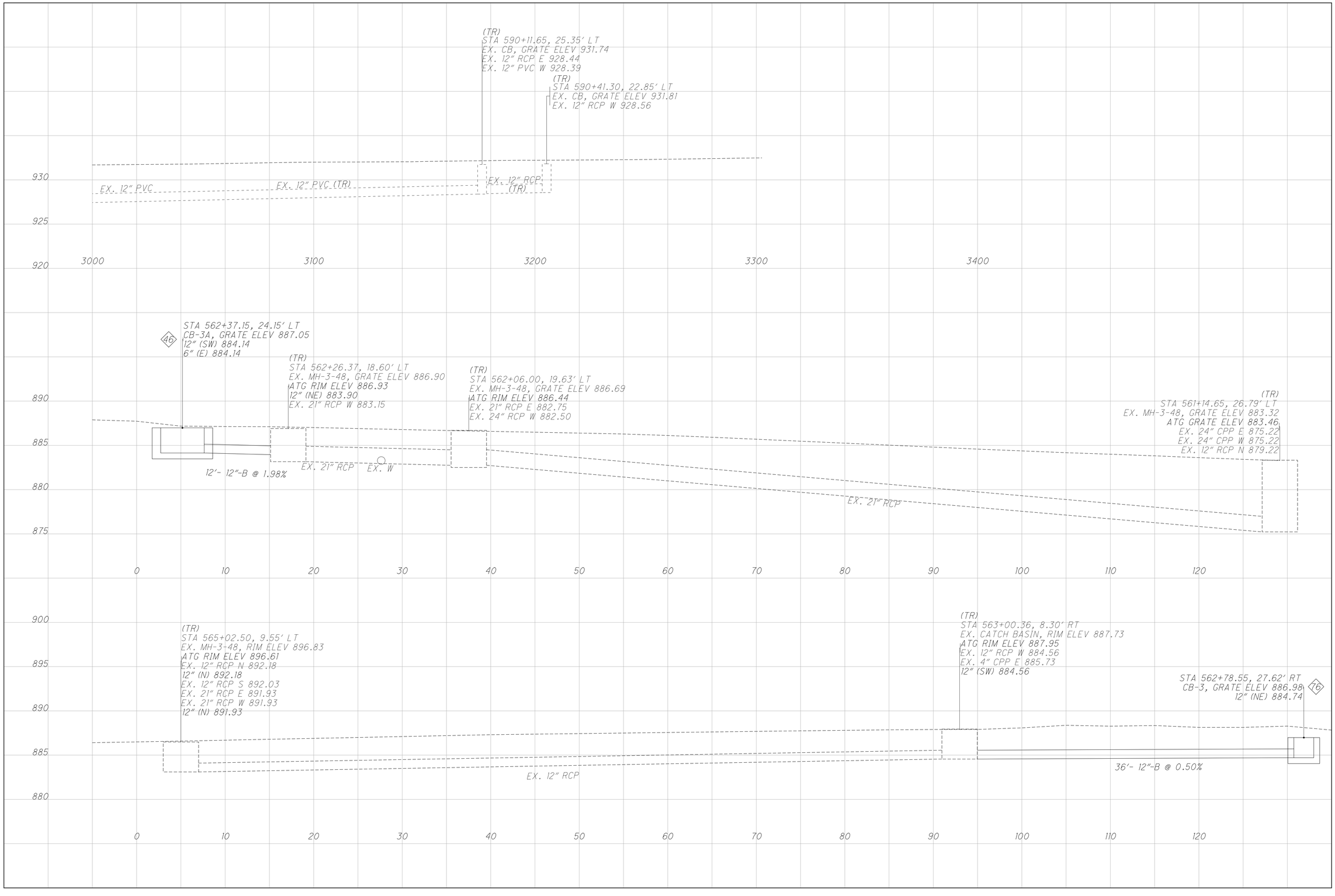

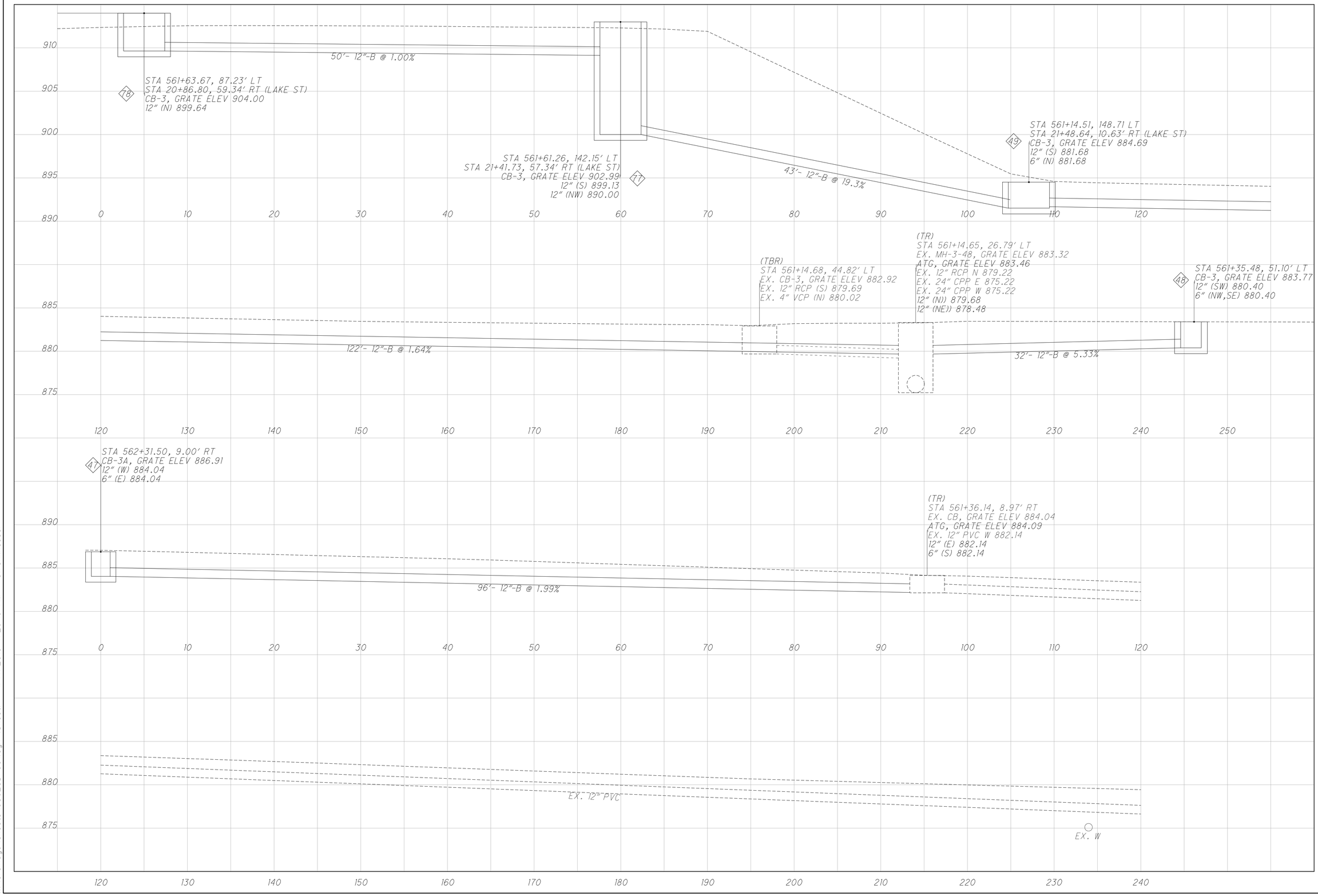

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STORM SEWER PROFILES

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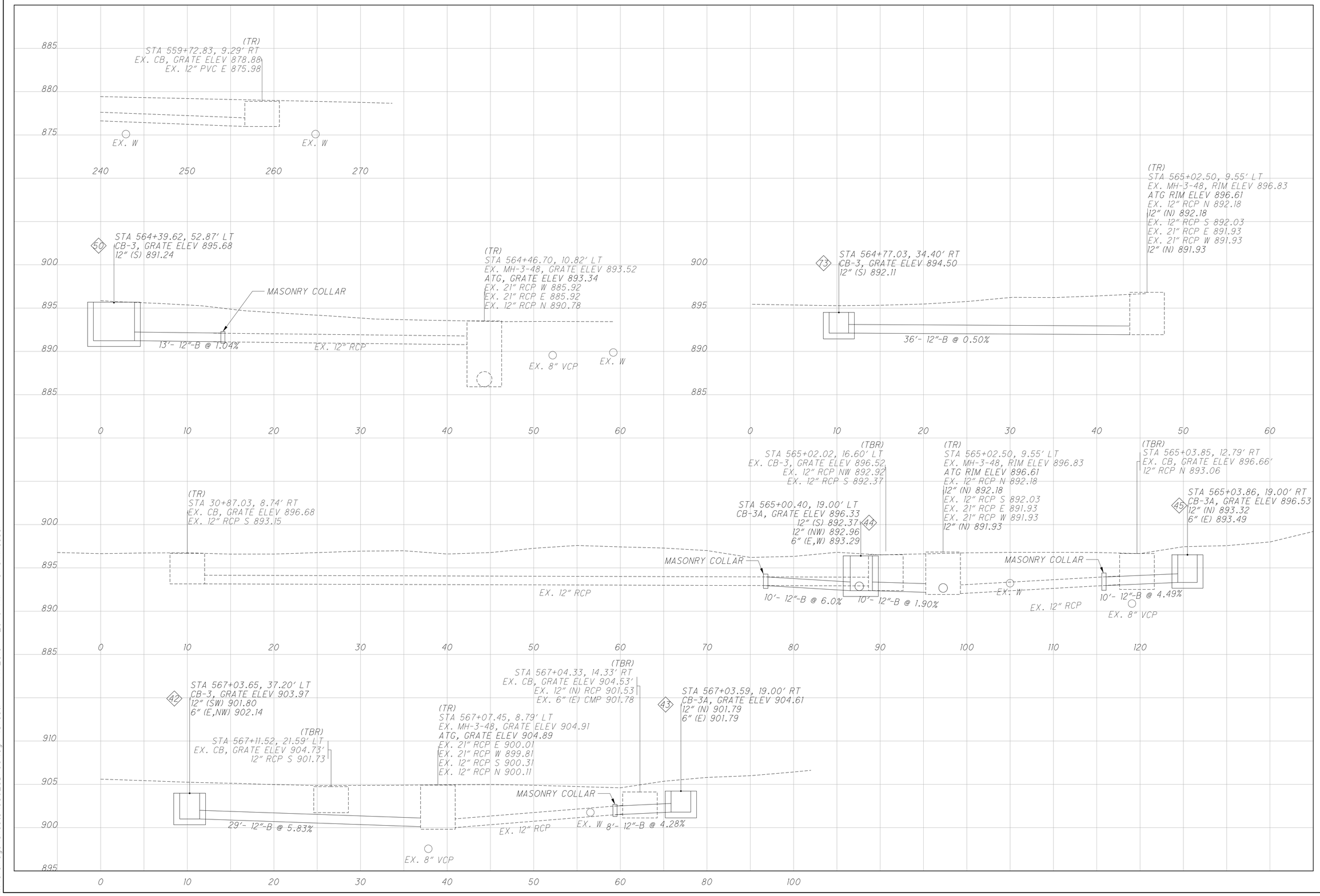

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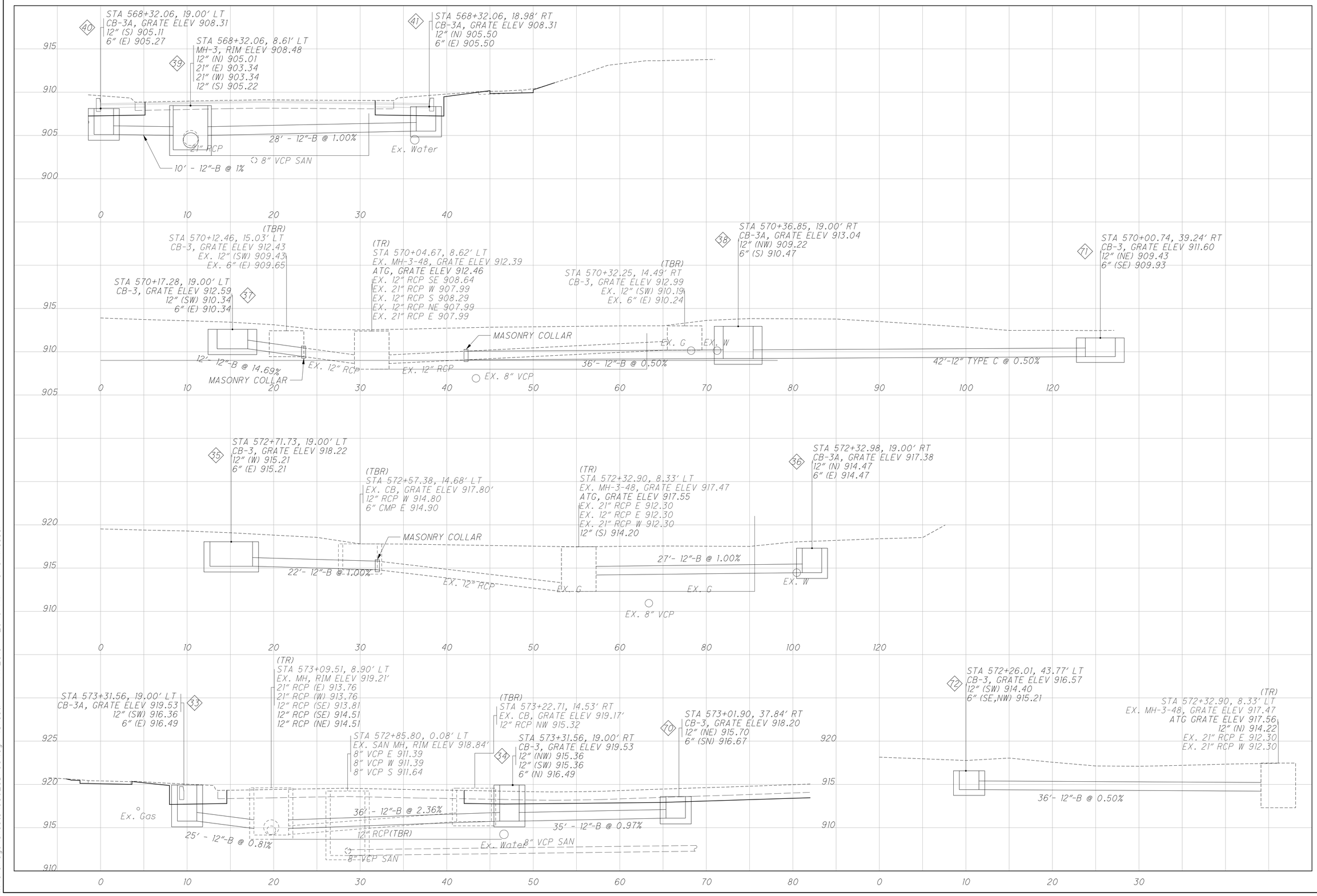

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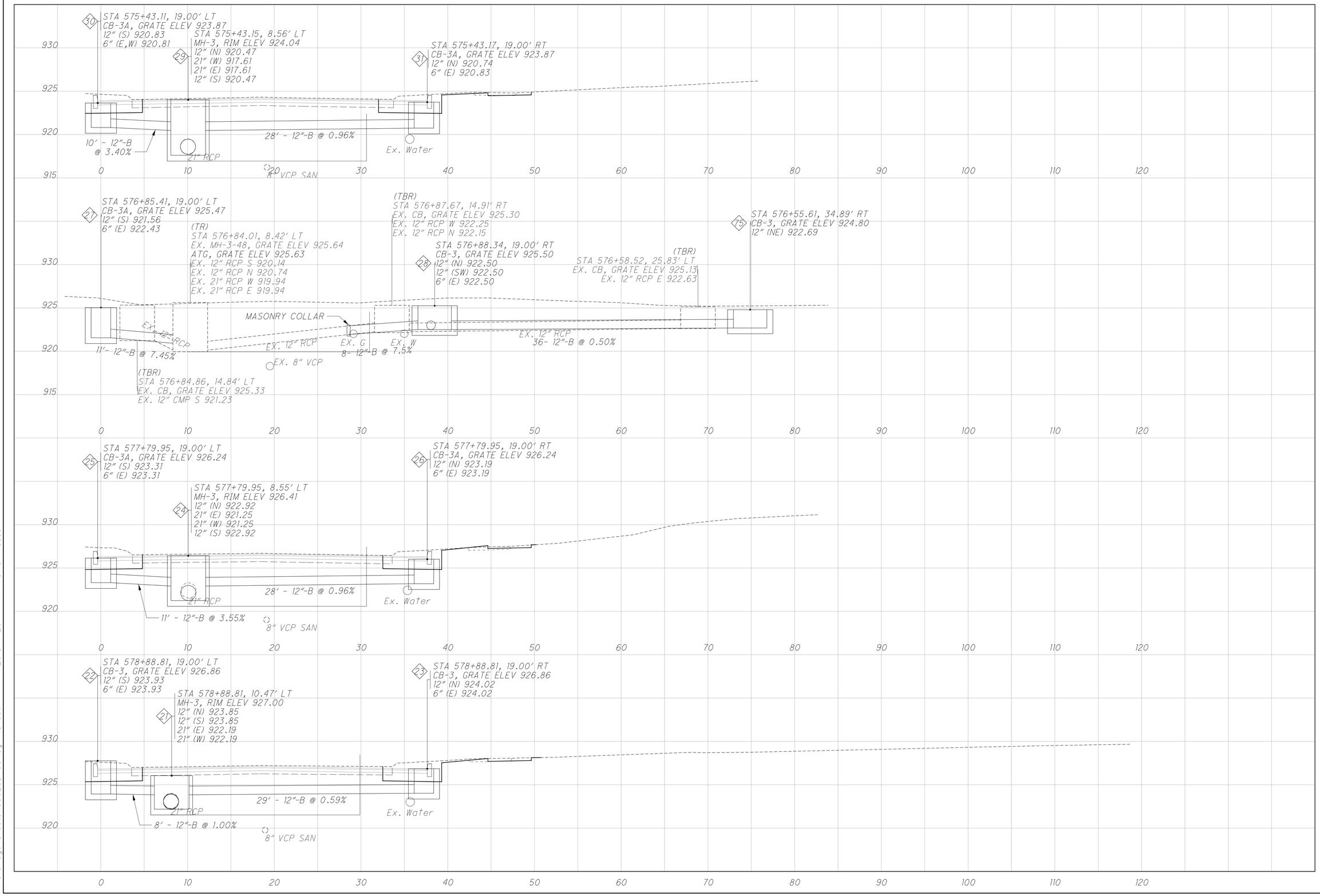

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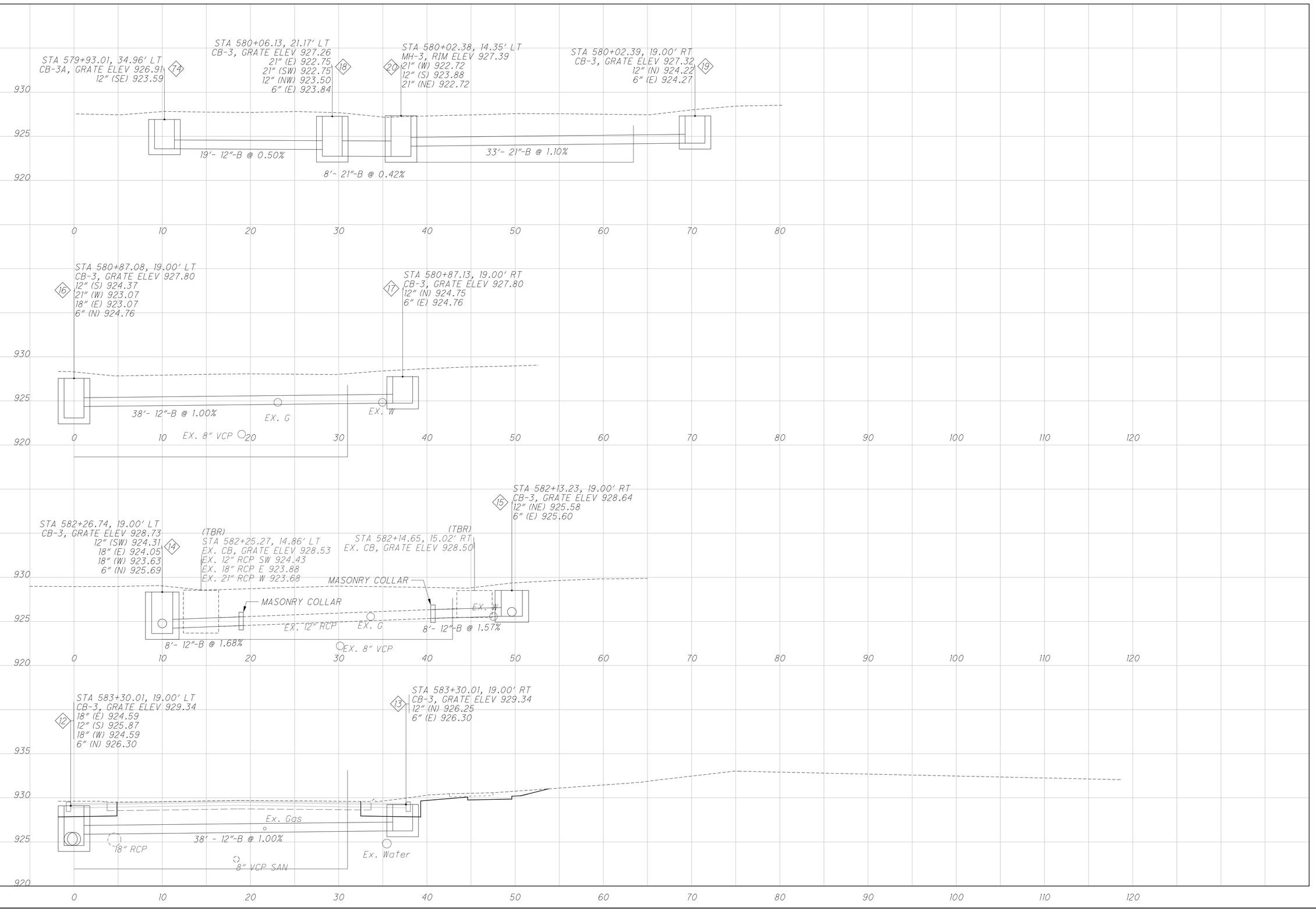

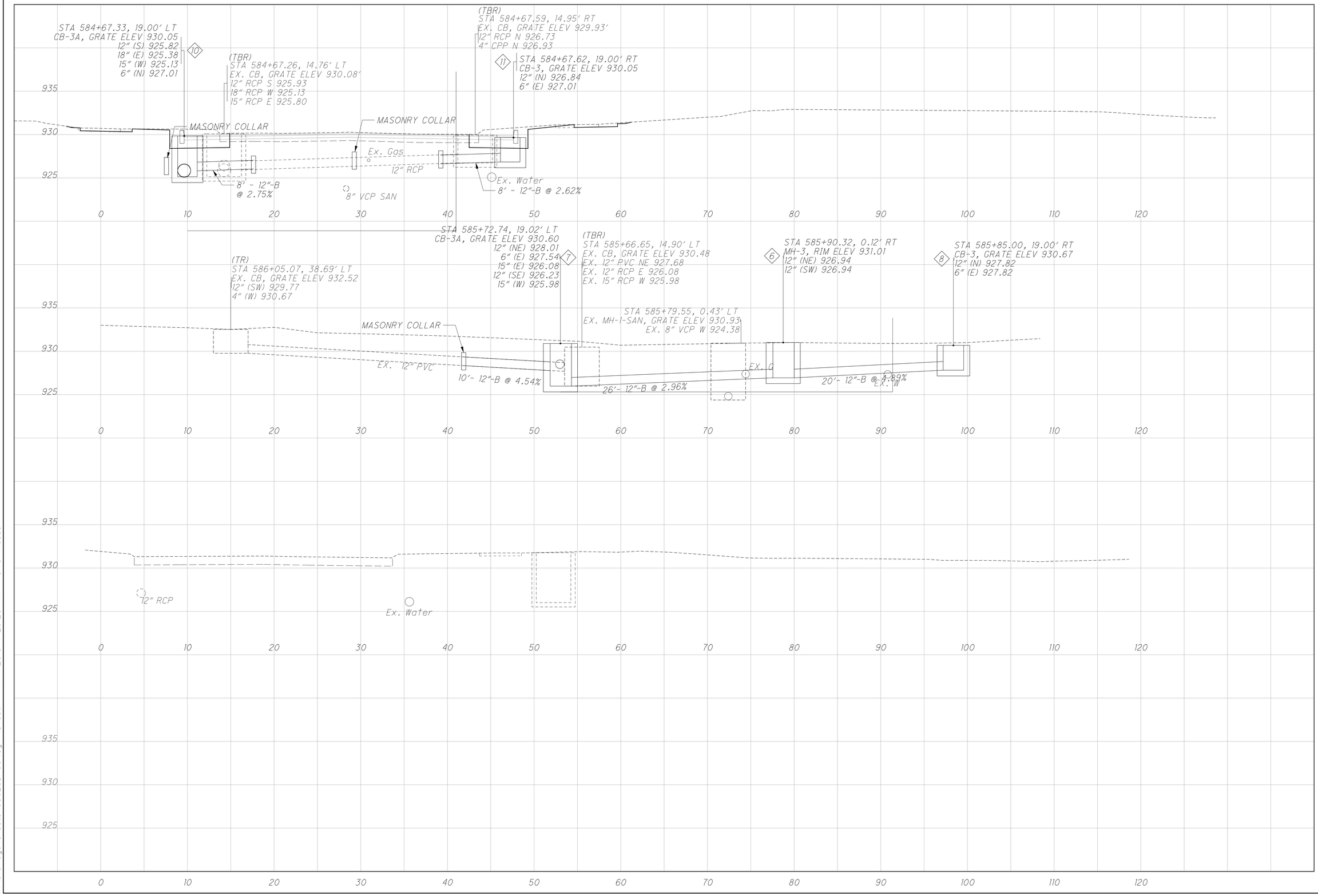

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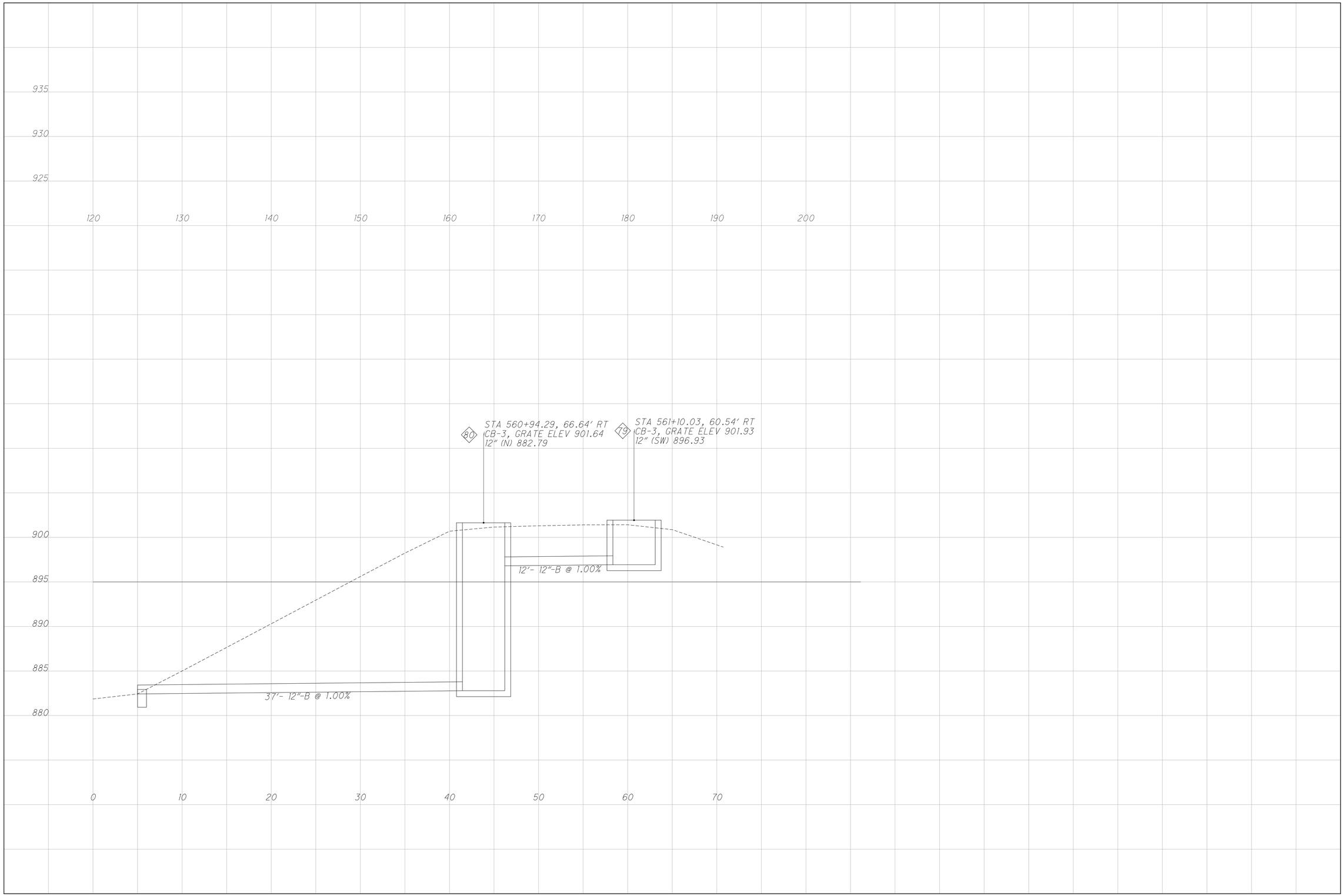

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REFERENCE SPECIFICATIONS

THE CITY OF COLUMBUS CONSTRUCTION AND MATERIALS SPECIFICATIONS (CMSC), 2012 EDITION INCLUDING ALL REVISIONS AND SUPPLEMENTS THERETO, SHALL GOVERN ALL CONSTRUCTION ITEMS THAT ARE A PART OF THE PLANS UNLESS NOTED OTHERWISE.

ALL WATER LINE MATERIALS AND INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE CURRENT APPROVED MATERIALS LIST AND RULES AND REGULATIONS OF THE CITY OF COLUMBUS, DIVISION OF WATER, UNLESS OTHERWISE SHOWN ON THE PLANS OR ORDERED BY THE ENGINEER. ONLY PRODUCTS LISTED ON THE CURRENT APPROVED MATERIALS LIST WILL BE PERMITTED TO BE INSTALLED.

STANDARD DRAWINGS

ALL ODOT AND CITY OF DELAWARE STANDARD DRAWINGS SHALL BE CONSIDERED A PART OF THESE PLANS, UNLESS OTHERWISE NOTED.

WATER LINE EMERGENCIES

FOR ANY EMERGENCIES INVOLVING THE WATER DISTRIBUTION SYSTEM, PLEASE CONTACT THE DIVISION OF WATER DISTRIBUTION MAINTENANCE OFFICE AT 614-645-7788.

PERMITS

WHEN EXCAVATING WITHIN DELAWARE PUBLIC RIGHT OF WAY LIMITS, THE CONTRACTOR SHALL OBTAIN AN EXCAVATION PERMIT FROM DELAWARE

SAFETY REQUIREMENTS

THE CONTRACTOR AND SUB-CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COMPLYING WITH 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-CONTRACTORS TO INITIATE, MAINTAIN AND SUPERVISE ALL SAFETY REQUIREMENTS, PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK.

RIGHTS OF WAY

IN ADDITION TO THE DIRECT REQUIREMENTS OF THE CONTRACT SPECIFICATIONS, THE CONTRACTOR SHALL OBSERVE AND CONFORM TO THE REQUIREMENTS OF ALL RIGHTS-OF-WAY 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 SPECIFICATIONS FOR SUCH COST UNDER SPECIFIC ITEMS OF THE CONTRACT.

EXISTING UTILITIES

THE IDENTITY AND LOCATION OF THE EXISTING 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. THE CITY OF COLUMBUS AND/OR THE ENGINEER ASSUMES NO RESPONSIBILITY AS TO THE ACCURACY OR THE DEPTHS OF THE UNDERGROUND FACILITIES SHOWN ON THE PLANS. LOCATION, SUPPORT, PROTECTION AND RESTORATION OF ALL EXISTING UTILITIES AND APPURTENANCES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, PRIOR TO CONSTRUCTION, TO DETERMINE IN THE FIELD THE ACTUAL LOCATION AND ELEVATIONS OF ALL EXISTING UTILITIES WHETHER SHOWN ON THE PLAN OR NOT. COST TO BE INCLUDED IN THE PRICE BID FOR THE VARIOUS WATER MAIN ITEMS. THE CONTRACTOR SHALL CAUSE NOTICE TO BE GIVEN TO THE OHIO UTILITIES PROTECTION SERVICE (TELEPHONE 1-800-362-2764 TOLL FREE) AND TO THE OWNERS OF THE UNDERGROUND UTILITY FACILITIES SHOWN ON THE PLANS WHO ARE NOT MEMBERS OF A REGISTERED 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.

EXPOSE

THE CONTRACTOR SHALL EXPOSE ALL EXISTING UNDERGROUND UTILITIES, SERVICES, AND STRUCTURES SUFFICIENTLY IN ADVANCE OF LAYING THE PROPOSED WATER LINE IN ORDER TO VERIFY THE PROPOSED LOCATION, ELEVATION, SIZE, AND MATERIAL TYPE. COST TO BE INCLUDED IN THE PRICES BID FOR THE VARIOUS WATER MAIN ITEMS.

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.

STATIONING

ALL STATIONING REFERS TO WATER LINE STATIONING AND CENTER LINE OF WILLIAM ST. UNLESS OTHERWISE NOTED ON THE PLANS.

NON-RUBBER TIRE VEHICLES

NON-RUBBER TIRED VEHICLES SHALL NOT BE MOVED ON PUBLIC STREETS. THE CITY ENGINEER MAY GRANT EXCEPTIONS WHEN 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 CITY OF DELAWARE AND THE DELAWARE COUNTY ENGINEER WHERE COUNTY AND/OR TOWNSHIP ROADS ARE INVOLVED.

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 ON THE PLANS. TREES REMOVED AS DESIGNATED BY EITHER OF THE TWO PRECEDING AUTHORITIES SHALL BE COMPLETED AS SPECIFIED IN ITEM 201. THE CONTRACTOR SHALL USE SPECIAL PRECAUTIONS TO AVOID DAMAGE TO ALL OTHER TREES. WHEN, IN THE OPINION OF THE ENGINEER, TRUNKS OR BRANCHES WOULD BE ENDANGERED BY THE USE OF MECHANICAL DEVICES, HAND EXCAVATION WILL BE REQUIRED. UNLESS OTHERWISE SPECIFICALLY PROVIDED, THE COST OF TREE PROTECTION, REMOVAL, AND ANY REQUIRED REPLACEMENT SHALL BE INCLUDED IN THE PRICE BID FOR THE VARIOUS WATER MAIN ITEMS.

SAWING PAVEMENT

WHERE NECESSARY TO DISTURB PAVEMENTS OR DRIVES, THE PAVEMENT SHALL BE SAW CUT TO FULL DEPTH OF PAVEMENT AND IN NEAT STRAIGHT LINES NO MORE THAN 1/8" WIDE. IF THE PAVEMENT IS DAMAGED BEYOND THE ORIGINAL SAW CUT DURING CONSTRUCTION, THE PAVEMENT SHALL BE RE-CUT TO NEAT LINES. COST TO BE INCLUDED IN THE PRICE BID FOR THE VARIOUS PAVEMENT REPLACEMENT ITEMS.

SAW CUTTING WILL BE PERMITTED IN ADVANCE OF THE REQUIRED EXCAVATION WORK UNDER THE CONDITION THAT THE CONTRACTOR ASSUMES THE RISK THAT THE ALIGNMENT MAY CHANGE AS A RESULT OF AN UNFORESEEN CONIDTION OR FIELD ORDER. CONTRACTOR WILL RECEIVE NO ADDITIONAL COMPENSATION IF IT IS NECESSARY TO RESAW PAVEMENT DUE TO AN ALIGNMENT CHANGE. WITH THE EXCEPTION OF SAW CUTTING LINES, DISTURBING OR REMOVING THE PAVEMENT WILL NOT BE PERMITTED PRIOR TO THE EXCAVATION WORK.

TEMPORARY PAVEMENT

ALL STREETS AND DRIVEWAYS CUT BY THE CONTRACTOR SHALL BE PROVIDED WITH TEMPORARY PAVEMENT ON THE SAME DAY THAT ORIGINAL PAVEMENT IS CUT. IN GENERAL, STREETS SHALL BE PROVIDED WITH TEMPORARY PAVEMENT PER ITEM 615 AND STANDARD DRAWING 2161, EXCEPT AS HEREIN MODIFIED. LIMITING LINES FOR MEASUREMENT OF TEMPORARY PAVEMENT SHALL BE THE DIAMETER OF THE WATER MAIN PLUS TWO FEET (D+2). PRIVATE DRIVEWAYS SHALL BE TEMPORARILY REPLACED WITH A MINIMUM OF 8 INCHES OF CRUSHED STONE OR GRAVEL AS PER ITEM 815. TRENCH SHALL BE BACKFILLED TO THE TOP OF THE PAVEMENT SUBGRADE USING GRANULAR MATERIAL MEETING THE REQUIREMENTS OF ITEMS 304.02 OR 703.11. PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE BID FOR ITEMS 301 AND 441.

CURBS AND SIDEWALKS

SIDEWALK SHALL BE REMOVED FROM EXISTING JOINTS AND REPLACED AS PER STANDARD DRAWING 2300. CURB OR CURB AND GUTTER WILL BE REMOVED PER STANDARD DRAWING 1441 AND REPLACED PER ITEM 609 AND STANDARD DRAWINGS 2000 AND 2010. COST FOR REPLACEMENT OF SIDEWALKS SHALL BE INCLUDED IN THE PRICE BID FOR ITEMS 608. CONTRACTOR SHALL MATCH THE FINISH OF EXISTING CONCRETE WHEN INSTALLING NEW SIDEWALK. COST FOR REMOVAL AND REPLACEMENT OF CURB SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 801 (FOR REPAIRS DUE TO HYDRANT INSTALLATION) AND ITEM 805 (FOR REPAIRS DUE TO SERVICE TRANSFERS). ANY CURB OR SIDEWALK BEYOND THE STANDARD TRENCH WIDTH (D+2) THAT IS DISTURBED OR DAMAGED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. NO ADDITIONAL COMPENSATION WILL BE PAID AS A RESULT. A CONTINGENCY ITEM FOR CURB AND/OR CUTTER REPLACEMENT HAS BEEN INCLUDED IN THE QUANTITIES FOR AREAS IN WHICH CURB REPLACEMENT SHALL BE PERFORMED OUTSIDE OF THE STANDARD TRENCH WIDTH AS DIRECTED AND APPROVED BY THE ENGINEER.

RESTORATION LIMITS FOR WATER LINE WORK

THE CONTRACTOR IS REQUIRED TO RESTORE ALL DISTURBED AREAS OF THE PROJECT AS INDICATED IN THE PLANS, STANDARD DRAWINGS, AND SPECIFICATIONS. PAYMENT FOR THE RESTORATION OF THE AREAS LISTED BELOW SHALL BE PER THE APPROPRIATE BID ITEM. ANY AREAS DISTURBED OUTSIDE OF THE DESIGNATED PAYMENT LIMITS SHALL BE RESTORED AT NO ADDITIONAL COST TO THE CITY. IN ADDITION TO THE AREAS DENOTED BY THE PLANS, STANDARD DRAWINGS AND SPECIFICATIONS, THE FOLLOWING AREAS SHALL BE UTILIZED FOR RESTORATION QUANTITIES:

VALVE BOX REMOVAL - 5 FT X 5 FT. AREA
FIRE HYDRANT REMOVAL - 5 FT. X 5 FT. AREA
CUT AND PLUG OF EXISTING WATER LINE - 5 FT. X 5 FT. AREA
SHORT WATER SERVICE TRENCH INSTALLATION

- (D+2)-FT FOR ASPHALT, GRAVEL, AND BRICK/PAVERS (PAVEMENT AND DRIVEWAY REPAIR)
- (D+2)-FT FOR GRASS AREAS
- NEAREST JOINT (TBD BY ENGINEER) FOR CONCRETE PAVEMENT AND DRIVEWAY REPAIR
- ASSUME 5-FT X 5-FT PANEL AREA FOR SIDEWALK REPAIR. PAYMENT TO BE MADE AT ACTUAL PANEL DIMENSIONS

EXISTING WATER SERVICE VALVE BOX REMOVAL (WHEN LOCATION IS DIFFERENT THAN TIE-IN LOCATION)

- 5 FT. X 5 FT. FOR ASPHALT, GRAVEL, BRICK/PAVERS
- NEAREST JOINT (TBD BY ENGINEER) FOR CONCRETE PAVEMENT AND DRIVEWAY REPAIR
- ASSUME 5 FT. X 5 FT. PANEL AREA FOR SIDEWALK REPAIR. PAYMENT TO BE MADE AT ACTUAL

PANEL DIMENSIONS.

- 5 FT. X 5 FT. AREA FOR GRASS AREAS

LONG WATER SERVICE BORE PITS - 5 FT. X 5 FT. AREA

BACKFILL

ALL CLEANUP AND BACKFILL OPERATIONS SHALL BE DONE WITHIN 300' OF PIPE LAYING OPERATIONS DURING THE WEEK. ON THE WEEKENDS, BACKFILL SHALL BE WITHIN 20' OF THE END OF THE LAST PIPE LAID. DURING NON-CONSTRUCTION HOURS, ALL EXCAVATIONS SHALL BE FILLED, PLATED OR PROTECTED (BARRELS AND FENCING) IN SUCH A MANNER AS TO POSITIVELY SEPARATE VEHICLES OR PEDESTRIANS FROM THE WORK.

LONG AND SHORT WATER SERVICE INSTALLATIONS

WHERE LONG WATER SERVICE TRANSFERS ARE SPECIFIED, I.E., TAPS ON THE OPPOSITE SIDE OF THE STREET FROM THE WATER MAIN, THE SERVICES SHALL BE INSTALLED BY TRENCHLESS METHODS UNLESS OTHERWISE APPROVED BY THE ENGINEER. WATER SERVICE TRANSFERS SPECIFIED AS SHORT MAY BE INSTALLED BY OPEN-CUT METHODS.

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 WATER MAIN ITEMS.

TRACKING OF MUD

ANY MUD TRACKED OR DEPOSITION OF BUILDING MATERIALS OR DEBRIS UPON PUBLIC RIGHT-OF-WAY SHALL BE CLEANED OFF IMMEDIATELY. ANY WORK DONE BY THE CITY TO CLEAN STREETS AS A RESULT OF NEGLIGENCE BY THE CONTRACTOR SHALL BE AT THE CONTRACTOR'S EXPENSE.

SEWER LINES

ALL EXISTING SEWER LINES MAY OR MAY NOT BE SHOWN ON THE PLAN. INDIVIDUAL SERVICE LINES ARE NOT SHOWN AND SHOULD BE LOCATED BY THE CONTRACTOR PRIOR TO COMMENCING ANY WORK.

LOCATION, SUPPORT, PROTECTION AND RESTORATION OF ALL SEWER LINES, SERVICES AND APPURTENANCES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. IF A FACILITY IS DAMAGED BY THE CONTRACTOR, ALL REPAIRS SHALL BE MADE IN ACCORDANCE WITH THE CITY OF COLUMBUS' CONSTRUCTION AND MATERIAL SPECIFICATIONS, AT THE CONTRACTOR'S EXPENSE.

MAINTAIN EIGHTEEN (18) INCHES VERTICAL AND TEN (10) FEET HORIZONTAL SEPARATION BETWEEN ANY EXISTING SANITARY OR STORM SEWER PIPING AND STRUCTURES AND ALL PROPOSED WATER MAINS.

THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL SERVICE LATERALS WHETHER SHOWN ON THE PLAN OR NOT. ANY DAMAGE TO MAIN SEWER LINES OR SERVICE LATERALS IS THE RESPONSIBILITY OF THE CONTRACTOR. ALL REPAIRS MUST BE PERFORMED BY A LICENSED SEWER CONTRACTOR, UNDER A SEPARATE SEWER PERMIT.

IN CASE OF ANY CONFLICT BETWEEN THE PROPOSED WATER MAINS AND/OR SERVICES AND THE EXISTING SANITARY MAINS AND/OR SERVICES, THE WATER LINES SHALL BE RAISED OR LOWERED AS DIRECTED BY THE ENGINEER.

HYDROSTATIC TESTING

ALL WATER MAINS SHALL BE PRESSURE TESTED IN ACCORDANCE WITH SECTION 801.14 OF THE CITY OF COLUMBUS CONSTRUCTION AND MATERIAL SPECIFICATIONS, WITH THE FOLLOWING EXCEPTION: 150 PSI OF PRESSURE SHALL BE MAINTAINED FOR AT LEAST TWO HOURS IN ANY TESTED SECTION. THE CITY OF DELAWARE MAY NOT APPROVE ANY TEST LASTING LESS THAN TWO HOURS REGARDLESS OF THE AMOUNT OF LEAKAGE.

EXISTING PLUGS, CAPS, ETC.

PLUGS AND CAPS REMOVED FROM EXISTING WATER LINES SHALL BE DELIVERED TO THE WATER SERVICES CENTER, 910 DUBLIN ROAD, COLUMBUS, OHIO, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. NO ADDITIONAL PAYMENT WILL BE MADE FOR THIS DELIVERY.

FIRE HYDRANT REPLACED OR RELOCATED

NO EXISTING FIRE HYDRANTS TO BE REPLACED OR RELOCATED SHALL BE REMOVED, OR TAKEN OUT OF SERVICE, UNTIL THE NEW WATER LINES ARE IN SERVICE AND THE NEW FIRE HYDRANTS ARE ACCEPTED BY THE FIRE DEPARTMENT. THE CONTRACTOR SHALL CONTACT THE DIVISION OF FIRE AT 645-7641 EXT. 5658 TO SCHEDULE THE INSPECTION OF THE NEW FIRE HYDRANTS. ALL COORDINATION AND WORK REQUIRED TO TEST AND ACCEPT NEW FIRE HYDRANTS SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 809.

SPECIAL - MAINTAINING TRAFFIC

UNLESS OTHERWISE PROVIDED FOR IN THE CONTRACT, THE COST OF ALL WORK ASSOCIATED WITH MAINTAINING TRAFFIC SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 614-MAINTAINING TRAFFIC.

CALCULATED ACF CHECKED CSR

WATER LINE - GENERAL NOTES

WATER

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SERVICE TRANSFER AND WATER LINE ABANDONMENT

WHERE INDICATED ON PLANS, THE EXISTING WATER LINES SHALL BE ABANDONED AND EXISTING WATER SERVICES OFF THESE LINES, INDICATED ON THE PLANS, SHALL BE TRANSFERRED TO THE NEW WATER LINE. CONTRACTOR SHALL VERIFY THE SIZE AND LOCATION OF ALL EXISTING WATER SERVICES PRIOR TO BEGINNING THE TAP INSTALLATIONS ON THE NEW MAIN. CURB BOXES SHALL BE PROVIDED FOR ALL WATER SERVICE BOXES LOCATED WITHIN TRAVELED AREAS AS PER WTRD-1.1. CURB BOXES WILL BE PAID FOR UNDER ITEM 638 X INCH COPPER SERVICE BANCH. CURB VALVE BOX AND COVER. PRIOR TO ABANDONMENT OF EXISTING WATER LINES, THE PROPOSED NEW WATER LINES SHALL BE TESTED AND CHLORINATED AND THEN THE EXISTING SERVICES, INDICATED ON THE PLANS AND SHOWN BY HOUSE NUMBER, SHALL BE TRANSFERRED TO THE NEW WATER LINES. THE CONTRACTOR SHALL MAINTAIN WATER SERVICE TO ALL WATER CUSTOMERS AFFECTED BY TRANSFER OF SERVICE. PAYMENT FOR THE WATER SERVICE TRANSFER WILL NOT BE MADE UNTIL FINAL GRADING AND RESTORATION HAS OCCURRED.

ALL OTHER EXISTING SERVICES SHOWN ON THE PLANS AND NOT INDICATED AS TRANSFERS SHALL BE ABANDONED IN PLACE.

EXCAVATION PITS LOCATED OUTSIDE OF THE PAVEMENT FOR WATER SERVICE LINE AND CURB BOX INSTALLATION SHALL BE BACKFILLED IMMEDIATELY. BACKFILL MATERIAL SHALL MEET THE REQUIREMENTS OF THE SPECIFICATIONS AND STANDARD DRAWINGS. ALL OTHER SPOILS SHALL BE HAULED OFF SITE. CONTRACTOR IS NOT PERMITTED TO LEAVE THESE PITS OPEN, NOR WILL THE CONTRACTOR BE PERMITTED TO MOUND DIRT ADJACENT TO THE PIT. STEEL PLATES, PLYWOOD, AND/OR OTHER BARRICADES ARE NOT AN ACCEPTABLE ALTERNATE FOR BACKFILLING. THE PITS SHALL BE RE-EXCAVATED WHEN THE WATER SERVICE TRANSFER IS TO BE MADE. THE PIT SHALL THEN BE BACKFILLED IMMEDIATELY AFTER PERFORMING THE WATER SERVICE TRANSFER. TO ENSURE THAT ALL EXISTING WATER SERVICES ARE TRANSFERRED TO THE NEW WATER LINE, NO WATER LINE SHALL BE ABANDONED UNTIL ALL AFFECTED WATER SERVICES HAVE BEEN TRANSFERRED; THE NEW WATER LINE IS PUT IN SERVICE; AND THE EXISTING WATER LINE TO BE ABANDONED HAS BEEN SHUT DOWN FOR 24 HOURS.

WATER SERVICE TRANSFERS ARE NOT PERMITTED ON FRIDAYS (OR THURSDAYS IF CONTRACTOR IS ONLY WORKING MONDAY THROUGH THURSDAY) UNLESS THE CONTRACTOR CAN CONFIRM THAT THE CUSTOMER HAS WATER. THIS INCLUDES VERBAL CONFIRMATION WITH THE CUSTOMER AND SHOULD BE ORGANIZED PRIOR TO MAKING THE WATER SERVICE TRANSFER. ON FRIDAYS (OR THURSDAYS IF THE CONTRACTOR IS ONLY WORKING MONDAY THROUGH THURSDAY), CONFIRMING WATER SERVICE TRANSFER BY MEANS OF A HOSE BIB ONLY IS NOT PERMITTED.

ALL VISIBLE VALVES BOXES, FIRE HYDRANTS, AND SERVICE BOXES ON THE WATER LINE TO BE ABANDONED, WHICH WILL NO LONGER BE IN SERVICE, SHALL BE REMOVED. FIRE HYDRANTS SHALL BE DELIVERED TO THE DEPARTMENT OF ENGINEERING SERVICES. ALL WATER MAINS TO BE ABANDONED SHALL BE MADE WATERTIGHT. THE COST TO REMOVE ABANDONED VALVE AND SERVICE BOXES, REMOVE HYDRANTS AND DELIVER HYDRANTS TO THE DIVISION OF WATER IS TO BE INCLUDED IN THE PRICE BID UNDER ITEM 638. THE REQUIRED SURFACE RESTORATION SHALL BE PAID FOR UNDER THE APPROPRIATE BID ITEM(S).

EXTREME CARE SHALL BE TAKEN BY THE CONTRACTOR WHEN INSTALLING WATER SERVICES NEAR TREES THAT ARE TO REMAIN. PRIOR TO INSTALLING ANY SERVICE NEAR A TREE A LICENSED ARBORIST SHALL EVALUATE THE TREE AND RECOMMEND PROPER INSTALLATION METHODS. ANY DAMAGE TO THE TREE DURING THE INSTALLATION OF THE WATER SERVICE SHALL ALSO BE EVALUATED BY A LICENSED ARBORIST. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF THE LICENSED ARBORIST AND ANY RECOMMENDATIONS MADE BY THE LICENSED ARBORIST. ALL WORK SHALL BE APPROVED BY THE DEPARTMENT OF ENGINEERING SERVICES PRIOR TO COMMENCING.

HYDRANT USAGE

THE CONTRACTOR SHALL OBTAIN THE PROPER HYDRANT PERMIT(S), AND PAY ANY APPLICABLE FEES, FOR ANY APPROVED HYDRANT USAGE DEEMED NECESSARY FOR WORK UNDER THIS IMPROVEMENT. PERMITS MAY BE OBTAINED THROUGH THE PERMIT OFFICE. CONTRACTOR SHALL ADHERE TO ALL RULES & REGULATIONS GOVERNING SAID PERMIT AND MUST HAVE THE ORIGINAL PERMIT ON SITE ANYTIME IN WHICH THE HYDRANT IS IN USE. COST TO BE INCLUDED IN THE VARIOUS BID ITEMS.

CONSTRUCTION SEQUENCING

THE CONTRACTOR SHALL SEQUENCE CONSTRUCTION AS TO MINIMIZE THE NUMBER OF TIMES THAT CUSTOMERS ARE WITHOUT WATER SERVICE. THE MAXIMUM NUMBER OF SERVICE INTERRUPTIONS TO ANY ONE CUSTOMER DURING THE CONSTRUCTION OF THE PROJECT SHALL BE TWO (2). THE SERVICE INTERRUPTION SHALL LAST NO LONGER THAN 4 HOURS UNLESS APPROVED IN WRITING BY THE CITY. THE CONTRACTOR SHALL GIVE WRITTEN NOTICE TO ALL AFFECTED PROPERTY OWNERS AT LEAST 24 HOURS, BUT NOT MORE THAN 72 HOURS, PRIOR TO ANY DISRUPTION OF WATER SERVICE.

THE CONTRACTOR IS REQUIRED TO SUBMIT A SEQUENCE OF CONSTRUCTION TO THE ENGINEER AT THE PRECONSTRUCTION CONFERENCE. THIS SEQUENCE OF CONSTRUCTION SHOULD ALSO DETAIL THE CONTRACTOR'S PLANS FOR TESTING AND CHLORINATION OF NEW MAINS INCLUDING THE SOURCE OF WATER AND LOCATION OF TEMPORARY CHLORINATION AND BLOW-OFF TAPS. THE ENGINEER SHALL HAVE THE RIGHT TO APPROVE, REJECT OR MODIFY THE CONSTRUCTION SEQUENCE TO ENSURE THAT THE INTERRUPTIONS ARE HELD TO A MINIMUM. NOTE: THE CITY MAY TAKE UP TO 10 WORKING DAYS TO RESPOND TO THIS SUBMITTAL.

WATER LINE CONNECTIONS

ONLY ONE CONNECTION TO AN EXISTING WATER LINE IS PERMITTED BEFORE DISINFECTION OF A NEW WATER LINE HAS BEEN COMPLETED. ALL OTHER CONNECTIONS MUST BE MADE AFTER THE LINE HAS BEEN DISINFECTED.

FIRE HYDRANT MAINTENANCE

THE BARREL OF ANY FIRE HYDRANT USED BETWEEN THE DATES OF SEPTEMBER 15 AND APRIL 15 SHALL BE PUMPED DRY TO THE FOOT VALVE OF THE HYDRANT OR A MINIMUM OF 5 FEET BELOW SURFACE OF EXISTING GROUND, BY THE CONTRACTOR, IMMEDIATELY AFTER EACH TIME THE HYDRANT IS OPERATED.

ITEM SPECIAL - PERMANENT PAVEMENT

UNLESS OTHERWISE SHOWN ON THE PLANS, OR WHEN ORDERED BY THE ENGINEER, PERMANENT PAVEMENT REPLACEMENT SHALL BE PROVIDED, FOR ALL STREETS CUT BY THE CONTRACTOR. A QUANTITY OF 0.15 GALLONS OF TACK COAT SHALL BE APPLIED PER SQUARE YARD OF PAVEMENT RESURFACING (IF APPLICABLE TO THE PROJECT). LIMITING LINES FOR MEASUREMENT OF PERMANENT PAVEMENT SHALL BE THE DIAMETER OF THE WATER MAIN PLUS TWO FEET (D+2') FOR WATER MAINS LESS THAN OR EQUAL TO 36 INCHES IN DIAMETER. FOR WATER MAINS LARGER THAN 36 INCHES IN DIAMETER, LIMITING LINES FOR MEASUREMENT OF PERMANENT PAVEMENT SHALL BE THE DIAMETER OF THE WATER MAIN PLUS FOUR FEET (D+4'). TRENCH SHALL BE BACKFILLED TO THE TOP OF THE PAVEMENT SUBGRADE USING GRANULAR MATERIAL MEETING THE REQUIREMENTS OF ITEMS. ALL PERMANENT PAVEMENT MARKINGS (STRIPING, RAISED PAVEMENT MARKERS, ETC.) 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, WITH THE EXCEPTION OF HEAT WELDING, SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 301 AND 441.

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 MAILBOXES IN ACCORDANCE WITH THE REQUIREMENTS THEREFORE. THE CONTRACTOR SHALL RESTORE MAILBOXES TO THEIR ORIGINAL CONDITION AND LOCATION. COST TO BE INCLUDED IN THE PRICE BID FOR THE VARIOUS WATER MAIN ITEMS.

BRASS FITTINGS

ALL BRASS FITTINGS ASSOCIATED WITH WATER WORK, INCLUDING REPAIRS TO THE EXISTING SYSTEM, SHALL CONFORM TO THE REVISED ALLOWABLE LEAD EXTRACTION LIMIT PER THE UPDATED NSF/ANSI 61 STANDARD.

ITEM SPECIAL - SURVEY COORDINATES

"ITEM SPECIAL SURVEY COORDINATES" SHALL INCLUDE ALL MATERIAL, EQUIPMENT, AND LABOR NECESSARY TO OBTAIN HORIZONTAL AND VERTICAL (NORTHING, EASTING, AND ELEVATION) SURVEY COORDINATES FOR THE WATER MAIN IMPROVEMENTS. THE SURVEY COORDINATES SHALL BE OBTAINED FOR THE COMPLETED WATER MAIN CONSTRUCTION AND SHALL INCLUDE ALL VALVES, TEES, CROSSES, BENDS, DEFLECTIONS, PLUGS, REDUCERS, TAPPING SLEEVES, BLOW OFFS, CHLORINATION TAPS, FIRE HYDRANTS, AIR RELEASES, CURB STOPS, CASING PIPE TERMINI, AND OTHER FITTINGS. ADDITIONAL SURVEY COORDINATES ARE REQUIRED ON THE WATER MAIN EVERY 500' WHERE NO FITTING OR OTHER WATER MAIN STRUCTURE IS BEING INSTALLED WITHIN THAT LENGTH OF THE IMPROVEMENT.

ALL SURVEY COORDINATES SHALL BE REFERENCED TO THE APPLICABLE COUNTY ENGINEER'S MONUMENTS, AND SHALL BE BASED ON THE NORTH AMERICAN DATUM OF 1983 (NAD 83) WITH THE (NSRS2007) ADJUSTMENT, WITH FURTHER REFERENCE MADE TO THE OHIO STATE PLANE SOUTH COORDINATE SYSTEM, SOUTH ZONE, WITH ELEVATIONS BASED ON NAVD 88 DATUM. ALL COORDINATES (NORTHING, EASTING, ELEVATION) SHALL BE REFERENCED TO THE NEAREST HUNDREDTH (N XXXXXX.XX, E XXXXXX.XX, ELEV. XXX.XX). ALL SURVEY COORDINATES SHALL BE ACCURATE TO WITHIN 1.0 FOOT HORIZONTAL AND A TENTH OF A FOOT (0.10) OR LESS VERTICAL.

THE COORDINATES SHALL BE DOCUMENTED TO THE ENGINEER IN DIGITAL SPREADSHEET FORM AND SHALL INCLUDE THE APPLICABLE ITEM, STATION, NORTHING, EASTING, AND ELEVATION. COORDINATES SHALL BE SUBMITTED TO THE ENGINEER ON A BI-WEEKLY BASIS. COORDINATES SHALL ALSO BE REQUIRED TO BE SUBMITTED TO THE DIVISION OF WATER AS PART OF THE REQUEST FOR CHLORINATION.

LUMP SUM PAYMENT IS FULL COMPENSATION FOR ALL WORK INVOLVED IN OBTAINING AND DOCUMENTING THE SURVEY COORDINATES AS DESCRIBED IN THIS SPECIFICATION.

CONTRACTOR SUBMITTALS

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THE FOLLOWING SUBMITTALS EITHER AT THE PRE-CONSTRUCTION MEETING OR PRIOR TO BEGINNING CONSTRUCTION, INCLUDING BUT NOT LIMITED TO:

DUE AT PRE-CONSTRUCTION MEETING

- PROJECT SCHEDULE
- SUB-CONTRACTOR AND SUPPLIER LIST
- EMERGENCY CONTACTS LIST
- STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

DUE PRIOR TO BEGINNING CONSTRUCTION

- CONSTRUCTION SEQUENCING PLAN
- ALL PERTINENT MATERIALS AS LISTED ON THE DIVISION OF WATER'S APPROVED MATERIALS LIST
- ANY SPECIAL MATERIALS OR ITEMS REQUIRED BY THE PROJECT SPECIFICATIONS (HORIZONTAL DIRECTIONAL DRILLING ITEMS, CURED IN PLACE PIPING ITEMS, TEMPORARY WATER MAIN ITEMS, ETC.

ITEM SPECIAL - 1 INCH COPPER TUBING & FITTINGS

ALL PROPOSED 1-INCH WATER MAINS SHALL BE COPPER TUBING, TYPE K, SOFT TEMPER CONFORMING TO ASTM B88 AND IN ACCORDANCE WITH THE CITY OF COLUMBUS CONSTRUCTION AND MATERIALS SPECIFICATIONS. USE FITTINGS OF HIGH QUALITY COPPER BRASS WITH APPROVED COMPRESSION TYPE JOINTS. MATERIAL DIMENSIONS SHALL BE COPPER TUBING SIZE (CTS).

1-INCH WATER MAINS SHALL BE HAVE 4' MINIMUM COVER AND BE INSPECTED AND CHLORINATED.

REPLACEMENT OF DRAIN TILE AND STORM SEWERS

ALL DRAIN TILE AND STORM SEWERS DAMAGED, DISTURBED OR REMOVED AS A RESULT OF THE CONTRACTORS OPERATIONS SHALL BE REPLACED WITH THE SAME QUALITY PIPE OR BETTER, MAINTAINING THE SAME GRADIENT AS EXISTING. REPLACED DRAIN TILE SHALL BE LAID ON COMPACTED GRANULAR BEDDING. COST TO BE INCLUDED IN THE PRICE BID FOR THE VARIOUS WATER MAIN ITEMS.

SUPPORT OF EMBEDDED POLES

PROPOSED EXCAVATION MUST MAINTAIN 5' FROM EMBEDDED POLES. CONTRACTOR SHALL TEMPORARILY SUPPORT EMBEDDED POLES WHEN EXCAVATING WITHIN 8 5/32 OF EMBEDDED POLE. THE COST SHALL BE INCORPORATED INTO ITEM 801 & ITEM 805.

NOTICE OF WORK

ANY ACTIVITY RELATED TO THE MODIFYING, UPGRADING, OR EXPANDING THE PUBLIC WATER SYSTEM MUST HAVE PRE-APPROVAL OF THE DEPARTMENT OF ENGINEERING SERVICES AND UTILITY DEPARTMENT. WORK REQUIRING THE SHUTDOWN OF EXISTING WATER MAINS IS TO BE COORDINATED WITH THESE TWO DEPARTMENTS FORTY-EIGHT OURS PRIOR TO THE SCHEDULED WORK BEING PERFORMED. ALL EFFECTED CUSTOMERS SHALL BE NOTIFIED, IN WRITING, BY THE CONTRACTOR AT LEAST TWENTY-FOUR HOURS PRIOR TO SHUT DOWN. CITY APPROVAL OF ALL CUSTOMER NOTIFICATIONS IS REQUIRED IN ADVANCE OF DISTRIBUTION.

WATER MAINS

WATER MAINS SHALL BE DUCTILE IRON PIPE, CLASS 53 FOR SIZES 3" TO 10" AND CLASS 54 FOR SIZES 12" TO 48" (AWWA C151) WITH CEMENT MORTAR LINING AND SEAL COATING (AWWA C104) IN ACCORDANCE WITH CITY SPECIFICATIONS, UNLESS CALLED OUT OTHERWISE BY THESE PLANS. JOINTS MUST BE RUBBER GASKET PUSH-ON MECHANICAL (AWWA C111). WATER MAIN FITTINGS MUST BE DUCTILE IRON WITH CEMENT MORTAR LINING AND SEAL COATING WITH MECHANICAL JOINTS AND MUST CONFORM TO AWWA C153.

HORIZONTAL AND VERTICAL DEFLECTIONS AND CLEARANCES

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE HORIZONTAL AND VERTICAL DEFLECTIONS OR BEND IN THE WATER LINE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS. WATER LINES ARE TO MAINTAIN 1'-6" VERTICAL, AND 10'-0 HORIZONTAL CLEARANCE FROM SANITARY SEWERS AND STORM SEWERS.

PAINT COLOR

THE VALVE COVERS AND INSIDE OF ALL MAINLINE WATER VALVE BOXES SHALL BE PAINTED BLUE, AND THE VALVE COVERS AND INSIDE OF ALL FIRE HYDRANT WATCH VALVE BOXES SHALL BE PAINTED RED WITH 2 COATS OF RUST INHIBITIVE PAINT. PUBLIC FIRE HYDRANTS ARE TO BE PAINTED WITH TWO COATS OF FEDERAL SAFETY YELLOW. PRIVATE FIRE HYDRANTS ARE TO BE PAINTED FEDERAL SAFETY RED, WITH WHITE BONNETS AND NOZZLE COVERS.

FITTINGS

ALL FITTINGS SHALL BE ADEQUATELY RESTRAINED WITH SOLID OR POURED IN PLACE CONCRETE BLOCKING PER THE CITY STANDARD DRAWINGS. ALL FITTINGS TO BE BACKED MUST BE THOROUGHLY WRAPPED IN PLASTIC SHEETING PRIOR TO PLACING CONCRETE.

HYDRANTS

FIRE HYDRANTS SHALL MEET AWWA STANDARDS AND ARE TO BE MUELLER "SUPER CENTURION 250" A-423 OR "CLOW MEDALLION" ON TYPE "A" SETTING WITH NATIONAL STANDARD THREADS FOR THE 2-1/2" HOSE NOZZLES AND WATCH VALVE DIRECTLY MOUNTED TO ANCHOR TEE. TYPE "B" SETTINGS SHALL NOT BE USED UNLESS APPROVED BY THE CITY. ALL PIPING BETWEEN THE WATCH VALVE AND HYDRANT SHALL BE MECHANICAL JOINT FITTINGS. THE CONNECTION TO THE HYDRANT SHALL BE A 5" STORTZ FITTING WITH A QUICK RELEASE LOCKING COUPLING. ALL SAFETY CHAINS ARE TO BE REMOVED FROM HYDRANTS.

ALL FIRE DEPARTMENT CONNECTIONS (STANDPIPES) SHALL HAVE A 45° DOWNTURN FITTING TO REDUCE KINKING IN THE FIRE HOSE. THE CONNECTION TO THE STANDPIPE SHALL BE A 5" STORTZ FITTING WITH A LOCKING COUPLING.

ALL NEW MAIN LINE AND HYDRANT WATCH VALVES ARE TO BE DIRECTLY BOLTED TO THE ANCHOR TEE WITH ANCHOR TYPE FITTINGS.

CALCULATED ACF
CHECKED CSR

WATER LINE - GENERAL NOTES

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GATE VALVES

ALL GATE VALVES MUST BE DUCTILE IRON RESILIENT WEDGE 250 PSI AS MANUFACTURED BY AMERICAN FLOW CONTROL OR APPROVED EQUIVALENT WHICH MEETS OR EXCEEDS THE REQUIREMENTS OF ANSI/AWWA C515. CLOW VALVE COMPANY, MODEL NUMBER 2638 APPROVED FOR 16". 6" AND 8" MUST BE DUCTILE IRON AND EPOXY COATED.

SERVICE TAPS

FOR WATER SERVICE TAPS; THE WATER MAIN CONNECTION SHALL BE MADE USING A MUELLER 300 BALL TYPE B-25008 OR FORD FB1000-Q BALLCORP CORPORATION STOP. CONTROL VALVES SHALL BE MUELLER 300 BALL CURB VALVE B-25209 OR FORD B44-Q BALL VALVE CURB STOPS (QUARTER TURN ONLY).

CLEANING

THE CONTRACTOR AT HIS EXPENSE, SHALL CLEAN ALL WATER MAINS 12" AND LARGER BY PASSING A PROPERLY SIZED POLY PIG THROUGH THE PIPE.

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
301	ASPHALT CONCRETE BASE	212	CY
441	ASPHALT CONCRETE INTERMEDIATE COURSE	33	CY
638	4-INCH WATER MAIN, DUCTILE IRON PIPE, ANSI CLASS 52, PUSH ON JOINTS AND FITTINGS	11	FT
638	6-INCH WATER MAIN, DUCTILE IRON PIPE, ANSI CLASS 52, PUSH ON JOINTS AND FITTINGS	535	FT
638	8-INCH WATER MAIN, DUCTILE IRON PIPE, ANSI CLASS 52, PUSH ON JOINTS AND FITTINGS	2188	FT
638	3/4-INCH COPPER SERVICE BRANCH (SHORT)	399	FT
638	3/4-INCH COPPER SERVICE BRANCH (LONG)	980	FT
638	6-INCH GATE VALVE AND VALVE BOX	17	EA
638	8-INCH GATE VALVE AND VALVE BOX	7	EA
638	6-INCH FIRE HYDRANT	9	EA
SPECIAL 614	MAINTENANCE OF TRAFFIC	1	LUMP
SPECIAL	1" WATER SERVICE TRANSFER	75	FT
SPECIAL	SURVEY COORDINANTS	1	LUMP

STATE PLANE COORDINATE (OHIO NORTH ZONE)					
SHEET #	WATERLINE STA.	DESCRIPTION	AS-BUILT		
			NORTHING	EASTING	C/L ELEV
123	9+98.57	8" x 8" TAPPING SLEEVE			
123	10+03.57	8"x6" ANCHORING TEE			
123	10+03.57	FIRE HYDRANT			
123	10+08.58	45⌖ HORIZONTAL BEND			
123	10+18.00	45⌖ HORIZONTAL BEND			
123	10+23.00	3/4" WATER SERVICE (LONG)			
123	10+26.00	8" VALVE			
123	10+31.00	JOINT DEF (VERT)			
123	10+76.00	3/4" WATER SERVICE (LONG)			
123	11+57.00	3/4" WATER SERVICE (SHORT)			
123	11+85.00	8"x6" ANCHORING TEE			
123	11+85.00	FIRE HYDRANT			
123	12+11.00	3/4" WATER SERVICE (SHORT)			
123	12+21.00	3/4" WATER SERVICE (LONG)			
123	12+75.00	3/4" WATER SERVICE (LONG)			
123	13+39.00	3/4" WATER SERVICE (SHORT)			
123	13+41.00	3/4" WATER SERVICE (LONG)			
123	13+90.00	3/4" WATER SERVICE (SHORT)			
124	14+00.00	JOINT DEF (VERT)			
124	14+06.45	JOINT DEF (HORIZ)			
124	14+09.00	3/4" WATER SERVICE (LONG)			
124	14+30.00	8"x6" ANCHORING TEE			
124	14+30.00	FIRE HYDRANT			
124	14+62.00	3/4" WATER SERVICE (LONG)			
124	14+85.49	8"x6" TEE			
124	15+00.00	JOINT DEF (VERT)			
124	15+23.00	3/4" WATER SERVICE (LONG)			
124	15+38.00	3/4" WATER SERVICE (SHORT)			
124	15+70.00	3/4" WATER SERVICE (LONG)			
124	15+38.00	3/4" WATER SERVICE (SHORT)			
124	15+70.00	3/4" WATER SERVICE (LONG)			
124	15+77.00	3/4" WATER SERVICE (SHORT)			
124	15+86.00	3/4" WATER SERVICE (LONG)			
124	16+20.00	JOINT DEF (VERT)			
124	16+36.00	3/4" WATER SERVICE (SHORT)			
124	16+75.00	8" VALVE			
124	16+97.49	8"x6" ANCHORING TEE			
124	17+12.00	3/4" WATER SERVICE (SHORT)			
124	17+35.00	8" VALVE			
124	17+65.49	8"x6" TEE			
124	17+85.00	11.25⌖ VERTICAL BEND			
124	17+96.00	11.25⌖ VERTICAL BEND			
124	18+10.00	8" VALVE			
124	18+20.49	3/4" WATER SERVICE (SHORT)			
124	18+21.00	JOINT DEF (VERT)			
124	18+53.00	8"x6" ANCHORING TEE			
124	18+53.00	FIRE HYDRANT			
124	18+66.00	3/4" WATER SERVICE (SHORT)			
124	18+72.00	JOINT DEF (VERT)			
125	19+38.00	3/4" WATER SERVICE (SHORT)			
125	19+62.00	8"x6" ANCHORING TEE			
125	19+95.00	3/4" WATER SERVICE (SHORT)			
125	20+24.00	3/4" WATER SERVICE (SHORT)			
125	20+67.00	3/4" WATER SERVICE (SHORT)			
125	20+74.00	3/4" WATER SERVICE (LONG)			
125	20+80.00	8"x6" ANCHORING TEE			
125	20+80.00	FIRE HYDRANT			
125	20+94.00	3/4" WATER SERVICE (LONG)			
125	21+00.00	8" VALVE			
125	21+12.00	8"x6" TEE			
125	21+18.00	22.5⌖ VERTICAL BEND			

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WATER LINE - GENERAL NOTES

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STATE PLANE COORDINATE (OHIO NORTH ZONE)					
SHEET #	WATERLINE STA.	DESCRIPTION	AS-BUILT		
			NORTHING	EASTING	C/L ELEV
125	21+27.00	22.5° VERTICAL BEND			
125	21+33.00	22.5° VERTICAL BEND			
125	21+42.00	22.5° VERTICAL BEND			
125	21+54.00	3/4" WATER SERVICE (LONG)			
125	21+74.49	3/4" WATER SERVICE (SHORT)			
125	21+95.00	3/4" WATER SERVICE (LONG)			
125	22+12.00	3/4" WATER SERVICE (SHORT)			
125	22+19.00	3/4" WATER SERVICE (SHORT)			
125	22+35.00	8"x6" ANCHORING TEE			
125	22+35.00	FIRE HYDRANT			
125	22+81.00	3/4" WATER SERVICE (SHORT)			
125	22+87.00	3/4" WATER SERVICE (LONG)			
125	23+33.00	3/4" WATER SERVICE (LONG)			
125	23+88.00	3/4" WATER SERVICE (LONG)			
125	23+96.00	3/4" WATER SERVICE (SHORT)			
126	24+67.49	8"x6" TEE			
126	24+69.00	3/4" WATER SERVICE (SHORT)			
126	25+34.00	3/4" WATER SERVICE (SHORT)			
126	25+56.00	3/4" WATER SERVICE (SHORT)			
126	25+72.00	3/4" WATER SERVICE (LONG)			
126	26+17.00	3/4" WATER SERVICE (LONG)			
126	26+96.00	8"x6" ANCHORING TEE			
126	26+96.00	FIRE HYDRANT			
126	26+52.00	3/4" WATER SERVICE (SHORT)			
126	26+61.00	3/4" WATER SERVICE (LONG)			
126	26+70.00	3/4" WATER SERVICE (LONG)			
126	27+20.00	3/4" WATER SERVICE (SHORT)			
126	27+70.00	3/4" WATER SERVICE (SHORT)			
126	28+01.00	3/4" WATER SERVICE (LONG)			
126	28+33.00	3/4" WATER SERVICE (SHORT)			
126	28+34.00	3/4" WATER SERVICE (LONG)			
126	28+65.00	3/4" WATER SERVICE (LONG)			
126	28+70.00	3/4" WATER SERVICE (SHORT)			
127	29+26.00	3/4" WATER SERVICE (SHORT)			
127	29+29.00	3/4" WATER SERVICE (LONG)			
127	29+70.00	3/4" WATER SERVICE (LONG)			
127	29+90.00	8"x6" ANCHORING TEE			
127	29+90.00	FIRE HYDRANT			
127	30+00.00	1" WATER SERVICE (LONG)			
127	30+21.00	3/4" WATER SERVICE (SHORT)			
127	30+59.49	8"x8" TEE			
127	30+90.00	JOINT DEF (VERT)			
127	30+94.00	8" VALVE			
127	31+02.54	45° HORIZONTAL BEND			
127	31+10.69	45° HORIZONTAL BEND			
124	32+00.00	45° HORIZONTAL BEND			
124	32+10.52	45° HORIZONTAL BEND			
124	32+56.70	6" VALVE			
128	33+10.00	JOINT DEF (VERT)			
128	33+22.00	JOINT DEF (VERT)			
128	33+30.00	JOINT DEF (VERT)			
124	33+45.00	6" VALVE			
124	33+55.15	6"x6" ANCHORING TEE			
124	33+55.15	FIRE HYDRANT			
124	33+81.31	3/4" WATER SERVICE (SHORT)			
124	34+12.89	45° HORIZONTAL BEND			
124	34+19.83	45° HORIZONTAL BEND			
124	35+00.00	45° HORIZONTAL BEND			
124	35+09.36	45° HORIZONTAL BEND			

STATE PLANE COORDINATE (OHIO NORTH ZONE)					
SHEET #	WATERLINE STA.	DESCRIPTION	AS-BUILT		
			NORTHING	EASTING	C/L ELEV
124	35+44.98	6" VALVE			
128	35+62.00	22.5° VERTICAL BEND			
125	36+00.00	45° HORIZONTAL BEND			
125	36+12.70	45° HORIZONTAL BEND			
125	36+17.70	6" VALVE			
129	37+10.68	JOINT DEF (VERT)			
129	37+28.00	22.5° VERTICAL BEND			
129	37+38.00	22.5° VERTICAL BEND			
126	37+45.00	6" VALVE			
126	37+50.00	6"x6" ANCHORING TEE			
126	37+50.00	FIRE HYDRANT			
126	37+57.29	45° HORIZONTAL BEND			
126	37+63.83	45° HORIZONTAL BEND			
127	38+00.00	45° HORIZONTAL BEND			
127	38+04.30	45° HORIZONTAL BEND			
127	38+09.30	8" VALVE			
129	38+13.00	JOINT DEF (VERT)			

CALCULATED ACF
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WATER LINE - GENERAL NOTES

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WATER

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
30-31	ROADWAY QUANTITIES
47-53	DEMOLITION PLANS
91-98	DRIVEWAY PROFILES
99-108	INTERSECTION DETAILS
109-118	STORM SEWER PROFILES
132-137	SIGNING AND PAVEMENT MARKINGS

HORIZONTAL SCALE IN FEET
0 10 20 40

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R FLETCHER LLC
519-431-14-007-000
519-431-14-008-000
519-431-14-009-000
ROBERT P. BRODE AND MARK A. WALLACE AND MEGAN E. BRODE 519-431-15-010-000
ATHEA L. WALLACE 519-431-15-011-000
DAVID M. BAXTER 519-431-15-012-000
236 TM LLC 519-434-01-002-000
DINCO ENTERPRISES 519-434-01-008-000
MR HOLDINGS OF DUBLIN, LLC 519-434-01-004-000
519-434-01-003-000
519-434-01-009-000
519-434-01-010-000

℄ CONST. POTTER ST.
℄ CONST. RICHARDSON ST.
℄ CONST. E. WILLIAM ST. (U.S. 36)
MATCH LINE STA. 14+00 E. WILLIAM ST. (U.S. 36) - SEE SHEET $UP001
MATCH LINE STA. 14+00 E. WILLIAM ST. (U.S. 36) - SEE SHEET 124

CUT OUT AND CONNECT TO EX. 8" WITH SLEEVE
E. WILLIAM ST. STA. 565+08.15, 5.0' RT
WATER LINE STA. 9+98.57, 0.0' RT

45° HORIZONTAL BEND
E. WILLIAM ST. STA. 565+18.16, 5.2' RT
WATER LINE STA. 10+08.58, 0.0' RT
Δ=45°00'00"

TYPE A HYDRANT SETTING
E. WILLIAM ST. STA. 565+12.73, 28.7' RT
WATER LINE STA. 10+03.57, 23.6' RT

45° HORIZONTAL BEND
E. WILLIAM ST. STA. 565+24.70, 12.0' RT
WATER LINE STA. 10+18.00, 0.0' RT
Δ=45°00'00"

8" VALVE
E. WILLIAM ST. STA. 565+32.70, 12.0' RT
WATER LINE STA. 10+26.00, 0.0' RT

TYPE A HYDRANT SETTING
E. WILLIAM ST. STA. 566+91.70, 21.5' RT
WATER LINE STA. 11+85.00, 9.5' RT

PR. 8" WATER 11
S 85° 56' 57" E EX. 8" WM TBA

NOTES:
1. * - 18" OUTSIDE TO OUTSIDE CLEARANCE
2. ** - 12" OUTSIDE TO OUTSIDE CLEARANCE
3. ALL WATER MAINS SHALL MAINTAIN A MINIMUM OF 4.5' OF COVER

EXISTING GROUND PROFILE
PR. 8" WATER
PR. 12" STM ELEV = 901.51'
PR. 12" STM ELEV = 905.39'
STA 9+98.57 8" SLEEVE CONNECT TO EXISTING ℄ = 891.97
STA 10+03.57 8"x6" ANCHORING TEE ℄ = 891.97
STA 10+08.58 45° HORIZONTAL BEND ℄ = 891.97
STA 10+18.00 45° HORIZONTAL BEND ℄ = 893.15'
STA 10+26.00 8" VALVE ℄ = 891.97
STA 10+31.00 GRADE BREAK ℄ = 891.97
STA 11+85.00 8"x6" ANCHORING TEE ℄ = 899.00'
STA 14+00.00 GRADE BREAK ℄ = 905.00'
+0.00 %
+4.57 %
+2.79 %
+2.79 %
915 910 905 900 895 890 885 880
9+00 10+00 11+00 12+00 13+00 14+00

WATERLINE PLAN AND PROFILE
STA. 14+00 TO STA. 19+00

DEL-36-10.59

123
224

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CROSS REFERENCES	
SHEET NO.	DESCRIPTION
30-31	ROADWAY QUANTITIES
47-53	DEMOLITION PLANS
91-98	DRIVEWAY PROFILES
99-108	INTERSECTION DETAILS
109-118	STORM SEWER PROFILES
132-137	SIGNING AND PAVEMENT MARKINGS

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED ACF
CHECKED CSR

WATERLINE PLAN AND PROFILE
STA. 19+00 TO STA. 24+00

DEL-36-10.59

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
30-31	ROADWAY QUANTITIES
47-53	DEMOLITION PLANS
91-98	DRIVEWAY PROFILES
99-108	INTERSECTION DETAILS
109-118	STORM SEWER PROFILES
132-137	SIGNING AND PAVEMENT MARKINGS

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED ACF
CHECKED CSR

WATERLINE PLAN AND PROFILE
STA. 24+00 TO STA. 29+00

DEL-36-10.59

125
224

BOARD OF EDUCATION OF THE INCORPORATED VILLAGE OF DELAWARE, AKA BOARD OF EDUCATION OF THE CITY OF DELAWARE, AKA BOARD OF EDUCATION OF THE DELAWARE CITY SCHOOLS
519-442-22-008-000
6" WS

BOARD OF EDUCATION DELAWARE CITY SCHOOLS
519-442-22-012-000
¾" WS (L)

BOARD OF EDUCATION, DELAWARE CITY SCHOOLS
519-442-22-013-000
¾" WS (L)

BRUCE DAVIDSON
519-442-22-014-000
¾" WS (L)

HEATHER RENEE STULTZ
519-442-22-015-000
¾" WS (L)

JUDITH A. KISE
519-442-22-016-000
¾" WS (L)

TOM AMATO
519-442-22-017-000
¾" WS (L)

THOMAS AMATO, JOSEPH AMATO AKA JOSEPH A. AMATO, AND ELAINE AMATO
519-442-22-018-000
¾" WS (L)

MATCH LINE STA. 19+00 E. WILLIAM ST. (U.S. 36) - SEE SHEET 124

MATCH LINE STA. 24+00 E. WILLIAM ST. (U.S. 36) - SEE SHEET 126

6" VALVE
STA. 574+68.74, 20.5' LT
STA. 19+62.00, 32.5' LT

8"x6" TEE
STA. 576+18.74, 12.0' RT
STA. 21+12.00, 0.0' RT

8" VALVE
STA. 576+06.74, 12.0' RT
STA. 21+00.00, 0.0' RT

24" RCP

PR. 8" WATER

8"x6" TEE
STA. 574+68.74, 12.0' RT
STA. 19+62.00, 0.0' RT

TYPE A HYDRANT SETTING
STA. 575+86.74, 21.5' RT
STA. 20+80.00, 9.5' RT

℄ CONST. ALLEY 2

℄ CONST. KURRLEY ST.

EX. 8" SAN

℄ CONST. E. WILLIAM ST. (U.S. 36)

8" VALVE
STA. 576+18.74, 36.9' RT
STA. 36+17.70, 0.0' RT

45° BEND (RT)
STA. 576+18.74, 41.9' RT
STA. 36+12.70, 0.0' RT
Δ=45°00'00"

45°BEND (LT)
CONNECT TO EX.
STA. 576+27.72, 50.8' RT
STA. 36+00.00, 0.0' RT
Δ=45°00'00"

TBA

TYPE A HYDRANT SETTING
STA. 577+41.74, 21.5' RT
STA. 22+35.00, 9.5' RT

EX. 8" WM TBA

S 85° 46' 57" E

N 3° 43' 25" E

N 3° 47' 08" E

GRACE C. LEWIS
519-443-04-004-000
¾" WS (S)

LOIS ARLENE BARBRO
519-443-04-003-000
¾" WS (S)

CASS A. MATHER
519-443-04-002-000
¾" WS (S)

DAVID A. THOMPSON
519-443-04-001-000
¾" WS (S)

BRUCE D. STARR
519-443-03-019-000
¾" WS (S)

LEE A. ROBINSON AND MELANIE K. SCHELL
519-443-03-018-000
¾" WS (S)

JULIA G. YEAGER AND L. REED YEAGER
519-443-03-017-000
¾" WS (S)

SAMIR JOSE AWAD
519-443-03-016-000
¾" WS (S)

NOTES:
1.* - 18" OUTSIDE TO OUTSIDE CLEARANCE
2.** - 12" OUTSIDE TO OUTSIDE CLEARANCE
3.ALL WATER MAINS SHALL MAINTAIN A MINIMUM OF 4.5' OF COVER

MATCH LINE STA. 19+00 E. WILLIAM ST. (U.S. 36) - SEE SHEET 124

STA 19+62.00
8"x6" ANCHORING TEE
℄ = 917.25'

PR. 12" STM
ELEV = 920.68'

STA 20+80.00
8"x8" ANCHORING TEE
& GRADE BREAK
℄ = 919.40'

STA 21+00.00
8" VALVE
ELEV = 919.40'

STA 21+18.00
22.5°VERTICAL BEND
ELEV = 919.40'

STA 21+42.00
22.5°VERTICAL BEND
℄ = 919.40'

PR. 12" STM
ELEV = 922.11'

PR. 12" STM
ELEV = 923.13'

PR. 12" STM
ELEV = 923.98'

EXISTING GROUND PROFILE

+2.22 %
+1.90 %
+1.82 %
+0.00 %
+0.00 %
+41.42 %
+0.00 %
0.80 %

PR. 8" WATER

STA 21+12.00
8"x6" TEE
℄ = 919.40'

STA 21+27.00
22.5°VERTICAL BEND
℄ = 915.67'

STA 21+33.00
22.5°VERTICAL BEND
℄ = 915.67'

STA 22+35.00
8"x6" ANCHORING TEE
& GRADE BREAK
℄ = 919.40'

MATCH LINE STA. 24+00 E. WILLIAM ST. (U.S. 36) - SEE SHEET 126

940 935 930 925 920 915 910 905

19+00 20+00 21+00 22+00 23+00 24+00

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
30-31	ROADWAY QUANTITIES
47-53	DEMOLITION PLANS
91-98	DRIVEWAY PROFILES
99-108	INTERSECTION DETAILS
109-118	STORM SEWER PROFILES
132-137	SIGNING AND PAVEMENT MARKINGS

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED ACF
CHECKED CSR

ALICE E. STEWART
519-442-22-019-000

COLLEEN M. SUCHAN
519-442-23-012-000

JOSHUA N THOMAS AND MICHELLE L. PHILLIPS
519-442-23-013-000

CHERYL B. HOFFMAN
519-442-23-014-000

DORIS M. BAXTER
519-442-23-015-000

GENEVA SHAW
519-442-23-016-000

DAVID A. PETERS SR. AND CLAUDIA PETERS
519-442-23-017-000

JEANNE D. SHAW
519-442-23-018-000

℄ CONST. WADE ST.

TYPE A HYDRANT SETTING
STA. 579+57.95, 38.0' LT
STA. 37+50.00, 16.3' LT

45°BEND (RT)
CONNECT TO EX.
STA. 579+69.61, 49.9' LT
STA. 37+63.83, 0.0' LT
Δ=45°00'00"

45°BEND (LT)
STA. 579+74.23, 45.3' LT
STA. 37+57.29, 0.0' LT
Δ=45°00'00"

6" VALVE
STA. 579+74.23, 33.0' LT
STA. 37+45.00, 0.0' LT

#361
1 STORY FRAME HOUSE

SWITCH TO MP

MATCH LINE STA. 24+00 E. WILLIAM ST. (U.S. 36) - SEE SHEET 125

MATCH LINE STA. 29+00 E. WILLIAM ST. (U.S. 36) - SEE SHEET 127

PR. 8" WATER

EX. 8" WM TBA

℄ CONST. E. WILLIAM ST. (U.S. 36)

TYPE A HYDRANT SETTING
STA. 582+02.74, 21.5' RT
STA. 26+96.00, 9.5' RT

8"x6" TEE
STA. 579+74.23, 12.0' RT
STA. 24+67.49, 0.0' RT

℄ CONST. ALLEY 3

¾" WS (S)
SAMIR JOSE AWAD
519-443-03-016-000

¾" WS (S)
DONALD E. STRUBLER AND KATRINA A. STRUBLER
519-443-03-015-000

¾" WS (S)
CHARLES H. SMITH AND DONNA J. LEAVER
519-443-03-014-000

¾" WS (S)
SMITH FAMILY ENTERPRISES LTD
519-443-03-013-000

¾" WS (S)
RUSSELL H. TROWBRIDGE
519-443-03-012-000

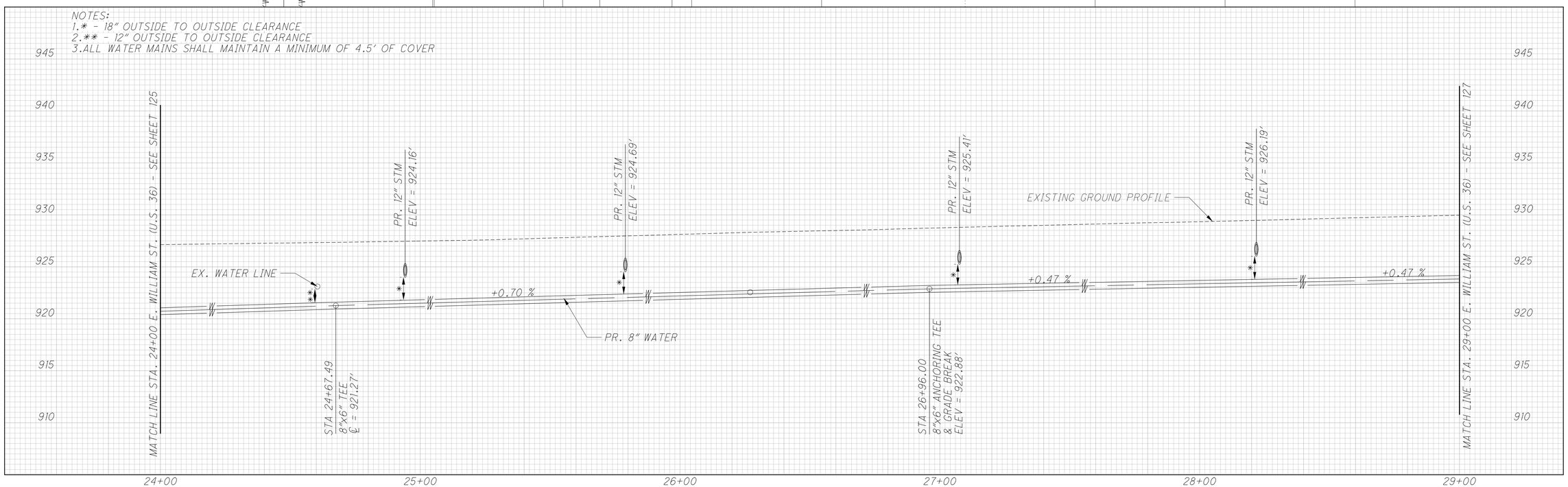
¾" WS (S)
LESTER L. DOANE
519-443-03-011-000
519-443-03-010-000

¾" WS (S)
TERESA J. BAILEY
519-443-03-009-000

¾" WS (S)
SETH J. AND CHELSEA C. TSCHANEN
519-443-03-008-000

¾" WS (S)
PHYLLIS J. PENROD
519-443-03-007-000

NOTES:
1.* - 18" OUTSIDE TO OUTSIDE CLEARANCE
2.** - 12" OUTSIDE TO OUTSIDE CLEARANCE
3.ALL WATER MAINS SHALL MAINTAIN A MINIMUM OF 4.5' OF COVER



WATERLINE PLAN AND PROFILE
STA. 29+00 TO STA. 34+00

DEL-36-10.59

126
224

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CROSS REFERENCES	
SHEET NO.	DESCRIPTION
30-31	ROADWAY QUANTITIES
47-53	DEMOLITION PLANS
91-98	DRIVEWAY PROFILES
99-108	INTERSECTION DETAILS
109-118	STORM SEWER PROFILES
132-137	SIGNING AND PAVEMENT MARKINGS

NICOLE E. BARKELOO
519-442-23-019-000

LF INVESTMENTS, LLC
519-442-23-020-000

NEW BEGINNINGS UNITED METHODIST CHURCH
519-442-24-002-000

MATCH LINE STA. 29+00 E. WILLIAM ST. (U.S. 36) - SEE SHEET 126

E130 (784)

END PROJECT
STA. 586+50.00

℄ CONST. FOLEY ST.

℄ CONST. E. WILLIAM ST. (U.S. 36)

℄ CONST. ALLEY

ASPHALT PARKING LOT

1" SERVICE TRANSFER

¾" WS (L)

¾" WS (S)

N 4° 08' 39" E

S 85° 46' 57" E

N 3° 45' 41" E

STA. 585+66.23, 12.0' RT
STA. 30+59.49, 0.0' RT

PR. 8" WATER

TBA

EX. 8" WM TBA

TYPE A HYDRANT SETTING
STA. 584+96.74, 21.5' RT
STA. 29+90.00, 9.5' RT

8" VALVE
STA. 585+66.23, 33.0' RT
STA. 38+09.30, 0.0' RT

45°BEND (RT)
STA. 585+66.23, 38.0' RT
STA. 38+04.30, 0.0' RT
Δ=45°00'00"

45°BEND (LT)
CONNECT TO EX.
STA. 585+69.27, 41.0' RT
STA. 38+00.00, 0.0' RT
Δ=45°00'00"

45°BEND (LT)
CONNECT TO EX.
STA. 586+15.04, 17.8' RT
STA. 31+10.69, 0.0' RT
Δ=45°00'00"

45°BEND (RT)
STA. 586+09.28, 12.0' RT
STA. 31+02.54, 0.0' RT
Δ=45°00'00"

8" VALVE
STA. 586+00.74, 12.0' RT
STA. 30+94.00, 0.0' RT

JAMES E. BALCH
519-443-03-006-000

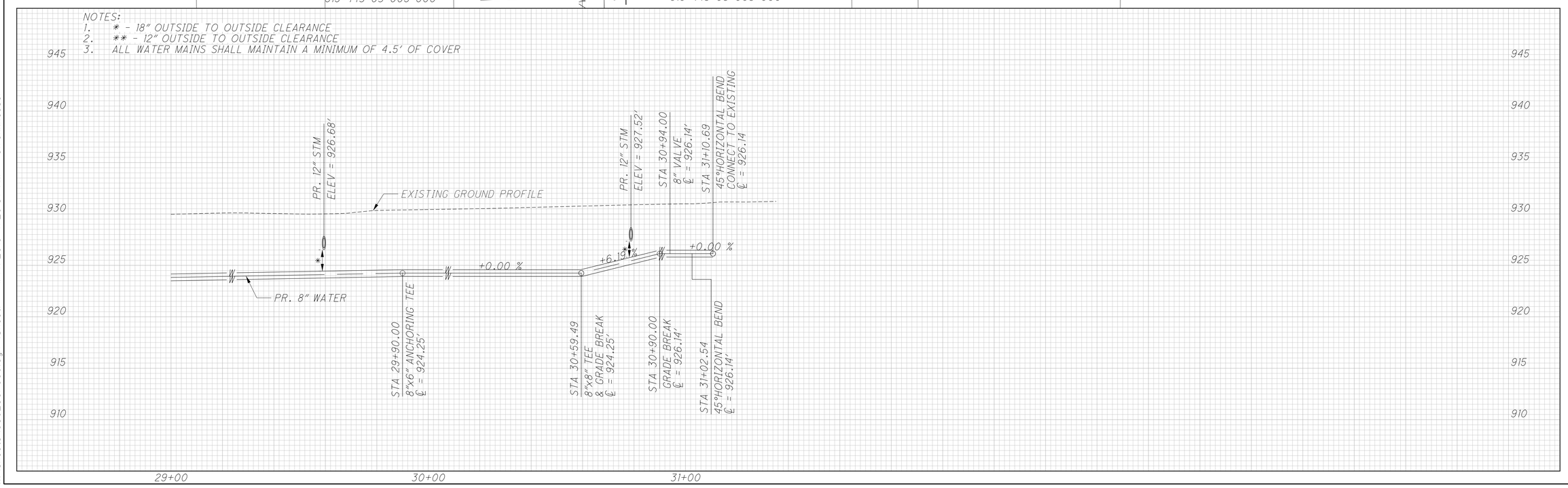
TIMOTHY S. ELKINS
519-443-03-004-000

519-443-03-005-000

519-443-03-003-000

THE STATE OF OHIO
519-443-03-002-000

NOTES:
1. * - 18" OUTSIDE TO OUTSIDE CLEARANCE
2. ** - 12" OUTSIDE TO OUTSIDE CLEARANCE
3. ALL WATER MAINS SHALL MAINTAIN A MINIMUM OF 4.5' OF COVER



HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED ACF
CHECKED CSR

WATERLINE PLAN AND PROFILE
STA. 34+00 TO STA. 35+44.91

DEL-36-10.59

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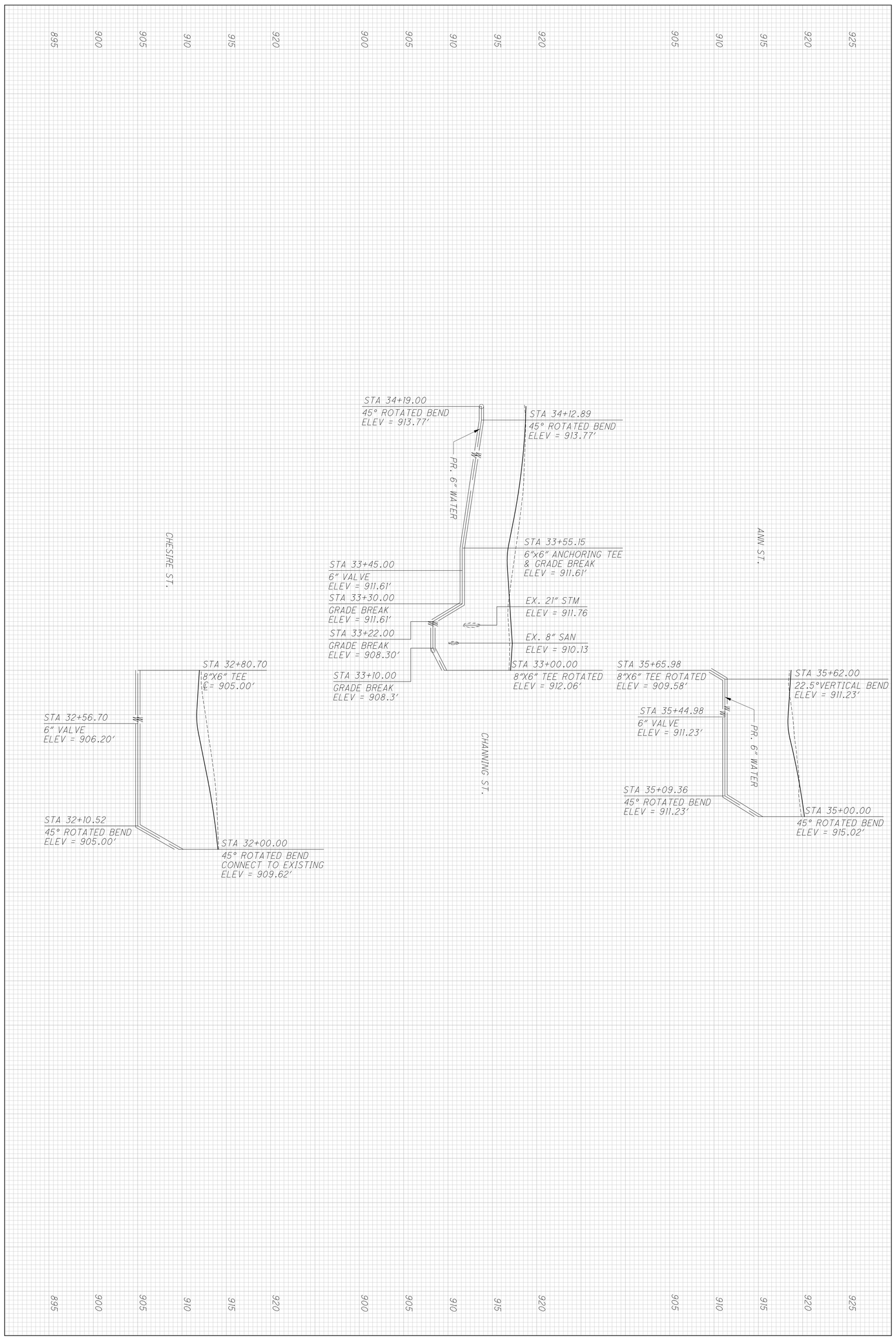

128
224

DEL-36-10.59

WATER LINE PROFILES

CALCULATED ACF
CHECKED CSR

CALCULATED ACF
CHECKED CSR

WATER LINE PROFILES

DEL-36-10.59

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224

ITEM 630 - REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL:
ITEM 630 - REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL, AS PER PLAN:

THESE ITEMS HAVE BEEN PROVIDED IN THE PLANS TO REMOVE ALL CONTRADICTING SIGNING AT EACH WARNING LOCATION. THE CONTRADICTING SIGNING SHALL NOT BE REMOVED UNTIL AFTER THE INSTALLATION OF NEW WARNING SIGNS AND FLASHER ASSEMBLIES. FLASHER ASSEMBLIES MUST BE FULLY OPERATIONAL PRIOR TO REMOVING EXISTING SIGNS.

ITEM 630 REMOVAL OF MISCELLANEOUS TRAFFIC CONTROL ITEM: POLE SUPPORT WITH BEACONS AND COMPONENTS:

THIS ITEM SHALL INCLUDE THE REMOVAL OF THE POLE SUPPORT AND SIGNS WITH TRANSFORMER BASE, BEACONS, CABLE, PEDESTAL/POLE FOUNDATIONS, MESSENGER WIRE, WOOD POLES AND RISERS, POWER SERVICES, CONDUIT RISERS, CONTROLLER CABINET AND ALL CONTENTS, AND PULL BOXES. EXISTING UNDERGROUND CONDUIT MAY BE ABANDONED. THE REMOVAL OF THE PEDESTAL/POLE FOUNDATIONS SHALL BE PER CMS 625.21.
INCIDENTAL TO THIS ITEM SHALL BE THE DISCONNECTION OF THE WIRING IN THE BASE OF THE SCHOOL FLASHER ASSEMBLIES AND THE REMOVAL OF ANY OVERHEAD OR UNDERGROUND WIRING TO THE SCHOOL FLASHER ASSEMBLIES. SEE LOCATION DETAILS FOR ITEMS TO BE DISPOSED OF OR DELIVERED TO ODOT D-6 TRAFFIC AT 400 EAST WILLIAM STREET, DELAWARE, OH 43015.

THIS ITEM SHALL ALSO INCLUDE CONTACTING AND COORDINATING WITH THE SCHOOL AND LOCAL POWER COMPANY TO DISCONNECT POWER TO THE SCHOOL FLASHER ASSEMBLIES.

PAYMENT FOR THIS ITEM SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR EACH ASSEMBLY.

ITEM 631 SCHOOL SPEED LIMIT SIGN ASSEMBLY, MISC: SCHOOL SPEED LIMIT ASSEMBLY AND ACCESSORIES:

THIS ITEM SHALL INCLUDE ONE SCHOOL FLASHER ASSEMBLY WHICH INCLUDES SCHOOL SIGN WITH CONTROLS AND POLE THAT CONSISTS OF 24" X 48" SIGN WITH TWO (2) FORWARD FACING 12" AMBER LED BEACONS MOUNTED OUTSIDE OF THE SIGN, ONE REAR FACING 12" AMBER LED BEACON, PEDESTAL MOUNTING HARDWARE, AND CONTROL CABINET WITH FLASHER REGULATION. MOUNT A S5-3-24 SIGN ON THE BACK.

THE RTC-AP22 TIME SWITCH SHALL BE FURNISHED AND THE TIME SWITCH SHALL BE INSTALLED IN THE CABINET. THE TIME SWITCH SHALL USE DAY PLAN PROGRAMMING WITH THE ANNUAL EXCEPTION METHOD FOR EASE OF PROGRAMMING. THE TIME SWITCH SHALL HAVE THE OPTION OF 2-WAY PROGRAMMING OVER A 2-WAY RADIO NETWORK, A WI-FI NETWORK, CELLULAR M2M NETWORKS, OR AN ETHERNET NETWORK. THE TIME SWITCH SHALL HAVE THE OPTION OF UPDATING ITS TIME-OF-DAY FROM A GPS RECEIVER. THE TIME SWITCH SHALL BE EQUIPPED WITH A MEANS FOR MOUNTING TO A SUITABLE BACK PLANE. MOUNTING HOLES THAT PROVIDE CLEARANCE FOR AT LEAST A NO. 10 SCREW WILL BE ACCEPTABLE. THE TIME SWITCH SHALL NOT EXCEED 8-3/8"H X 4-7/8"D WITHOUT HARNESS AND 10-3/8"H X 4-7/8"D WITH HARNESS. A CASE SHALL BE PROVIDED TO PROTECT THE TIME SWITCH CIRCUITRY FROM DUST. THE UNIT SHALL FASTEN SECURELY TO THE CASE AND MUST BE EASILY REMOVABLE FROM THE CASE WITH THE USE OF SIMPLE TOOLS. INTERFACE TOO THE POWER SOURCE AND TO THE CONTROLLED DEVICE SHALL BE PROVIDED BY MEANS OF A 48"QUICK MATING HARNESS. THE DC POWER INPUTS SHALL BE PROTECTED WITH A FUSE AND MOV.

THE RTC M2M MODEM WITH A FIVE (5) YEAR COMMUNICATION PLAN SHALL BE PURCHASED, AND THE MODEM INSTALLED IN EACH CABINET.

THE POLE SHALL CONSIST OF A 16 FOOT NATURAL TAPERED ALUMINUM PEDESTAL POLE WITH TRANSFORMER BASE WITH ONE END THREADED AND SCREW-IN FOUNDATION. THIS ITEM SHALL INCLUDE ALL INCIDENTALS AND MATERIALS TO INSTALL THE SCREW-IN FOUNDATION AND INSTALL THE POLE TO THE FOUNDATION.

SOFTWARE SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR'S REPRESENTATIVE TO RUN THE COMPATIBLE PROGRAM OF THE RTC-AP22. TRAINING FOR THE PROGRAM SHALL BE PROVIDED BY THE CONTRACTOR'S REPRESENTATIVE FOR EIGHT (8) HOURS AT THE LOCATION AGREED UPON BY THE VILLAGE OF GROVEPORT ENGINEER, WHICH MAY INCLUDE SITE LOCATIONS. THE SOFTWARE SHALL HAVE UNLIMITED USE AND NO RESTRICTIONS ON THE NUMBER OF USERS.

ALL COMPONENTS SHALL BE MADE AVAILABLE TO THE PURCHASER FOR SERVICING FOR FIVE (5) YEARS AFTER EXPIRATION OF THE MANUFACTURER'S WARRANTY, OR SHALL BE SO IDENTIFIED THAT THEY MAY BE PURCHASED FROM INDUSTRIAL ELECTRONICS SUPPLIERS. EACH UNIT SHALL BE WARRANTED TO BE FREE FROM DEFECTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF TWO (2) YEARS FROM INSTALLATION DATE, OR FIFTEEN (15) MONTHS FROM THE DATE OF SHIPMENT FROM THE FACTORY, WHICHEVER OCCURS FIRST.

ANY WARRANTY SERVICE REQUIRED SHALL BE PROMPTLY PERFORMED AT THE MANUFACTURER'S FACILITY OR THE MANUFACTURER'S AUTHORIZED SERVICE AGENCY. THE PURCHASER WILL PAY THE TRANSPORTATION COSTS TO SUCH SERVICE POINT, AND THE MANUFACTURER WILL PAY THOSE COSTS TO RETURN THE UNIT BY NORMAL SURFACE TRANSPORTATION MEANS.

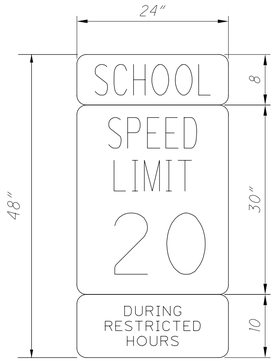
ALL PROGRAMMING CABLES AND CONNECTORS ARE TO BE FURNISHED UNDER THIS ITEM.

ITEM 631 SCHOOL SPEED LIMIT SIGN ASSEMBLY, MISC: SCHOOL SPEED LIMIT ASSEMBLY AND ACCESSORIES SHALL BE MADE AT THE CONTRACT UNIT PRICE BID PER EACH. PAYMENT SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, TESTING, CERTIFICATIONS AND OTHER INCIDENTALS NECESSARY TO FURNISH THE SOLAR POWERED SCHOOL ZONE FLASHER COMPLETE IN PLACE, INCLUDING THE SIGN, ALL CONNECTIONS MADE, WIRING COMPLETE, TESTED AND ACCEPTED.

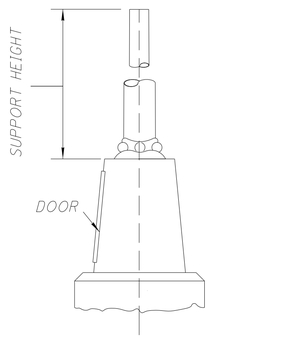
CALCULATED ACF
CHECKED CSR

TRAFFIC CONTROL NOTES

DEL-36-10.59

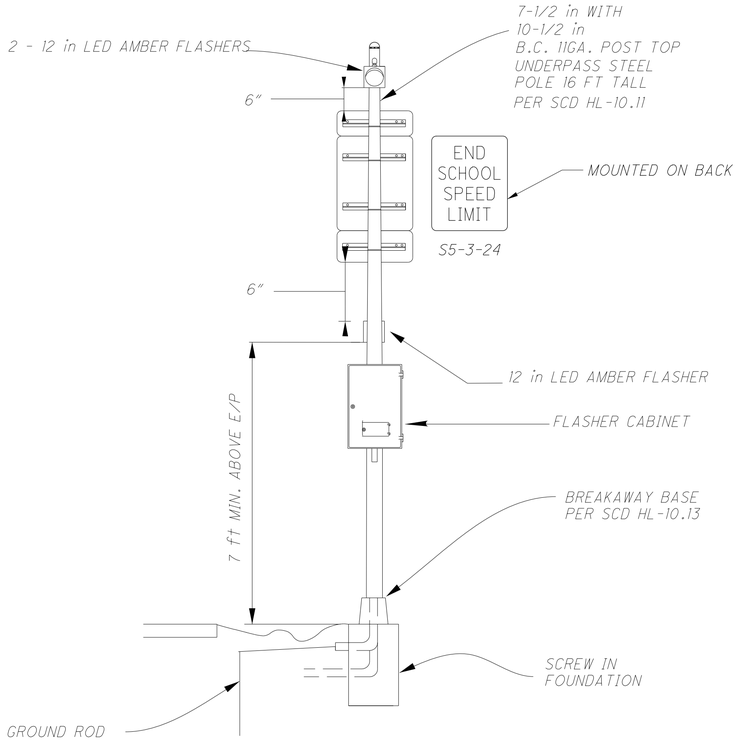


PROPOSED SIGNS



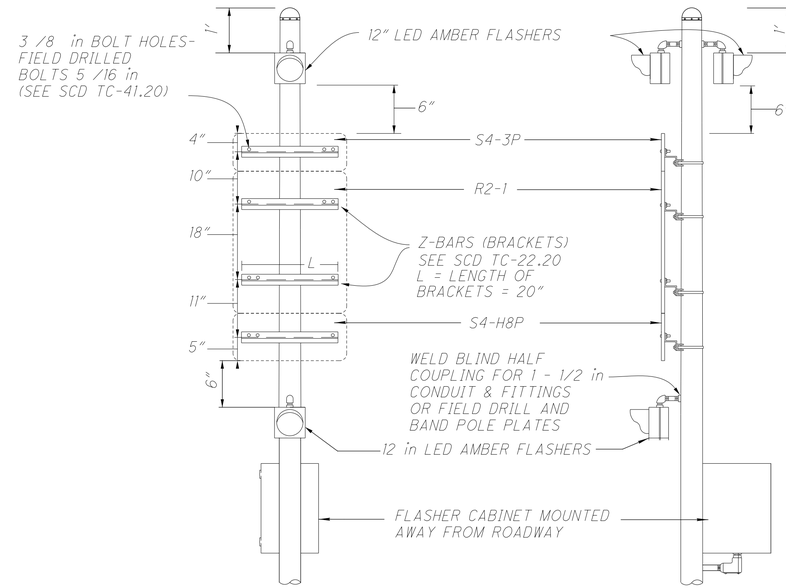
LIGHT POLE STYLE AND
BREAK AWAY BASE DETAIL
PER SCD HL- 10.11 AND HL-10.13

NOT TO SCALE



PROPOSED ASSEMBLY 1
DETAIL 1 - BACK VIEW

NOT TO SCALE



PROPOSED ASSEMBLY 1
DETAIL 2 - FRONT VIEW

NOT TO SCALE

PROPOSED ASSEMBLY 1
DETAIL 3 - SIDE VIEW

NOT TO SCALE

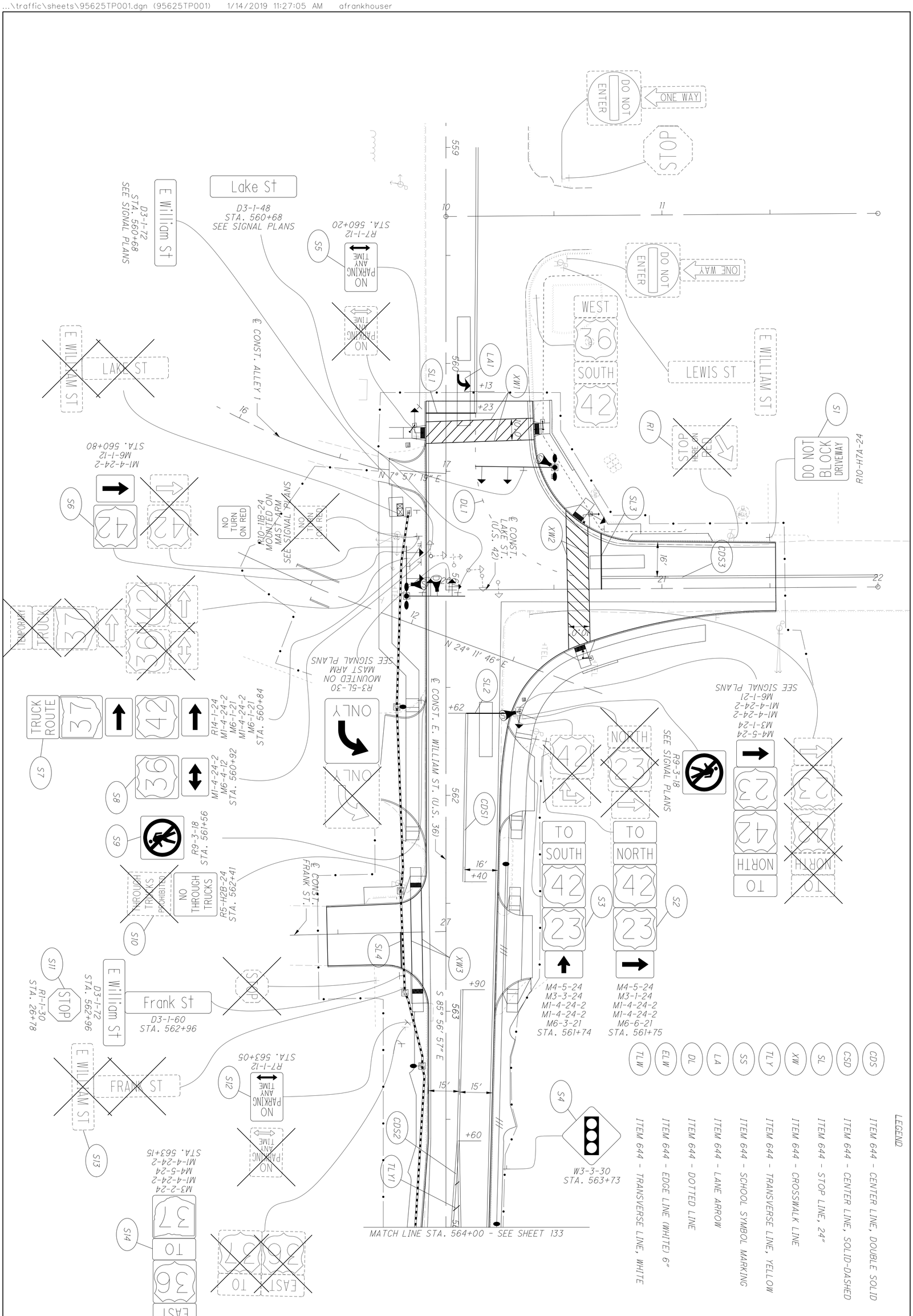
E/P = EDGE OF PAVEMENT

SCREW IN FOUNDATION DIMENSIONS:
DEPTH = 56″
WIDTH = 4″

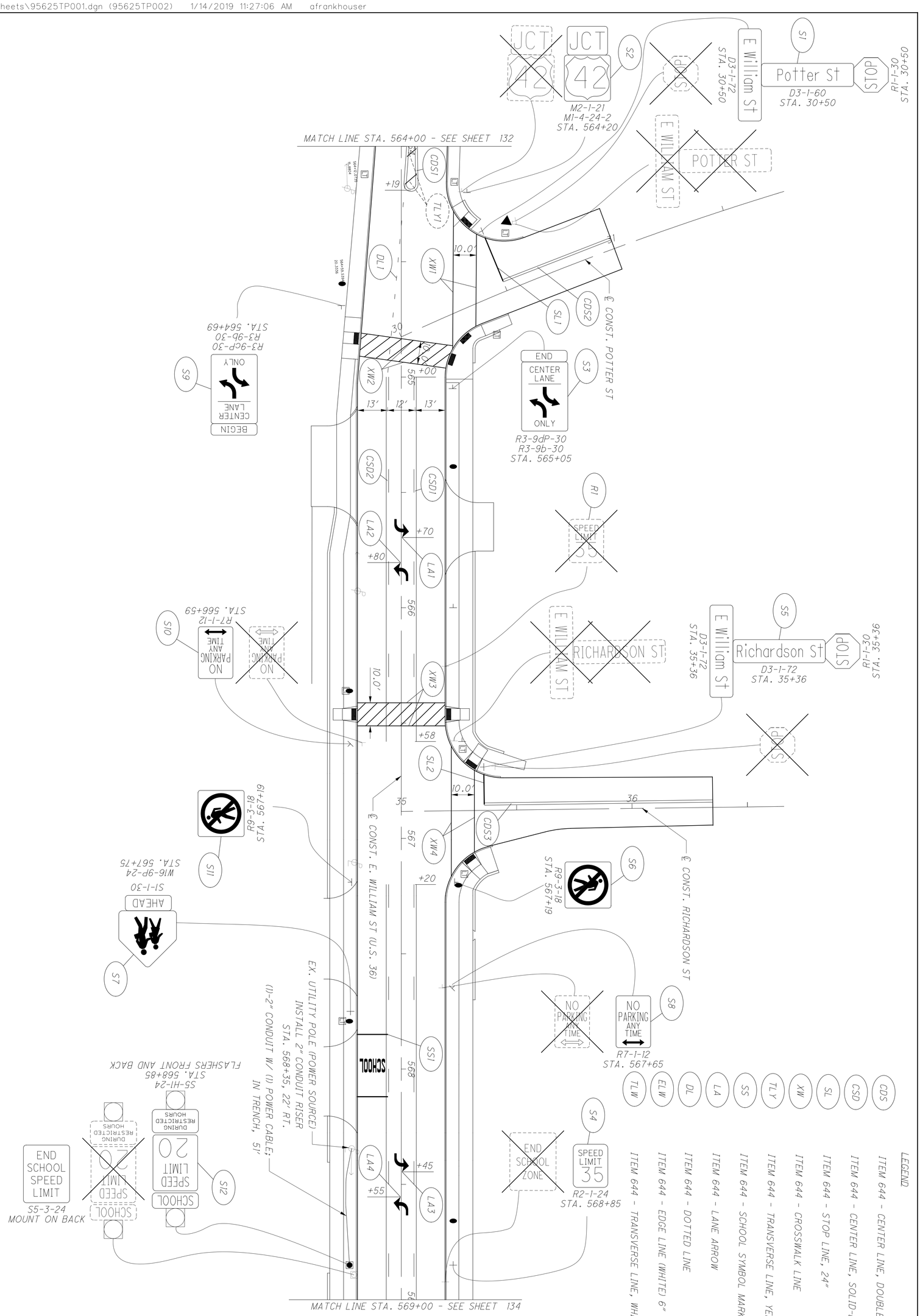
CALCULATED ACF
CHECKED CSR

SCHOOL SPEED LIMIT SIGN ASSEMBLY DETAIL

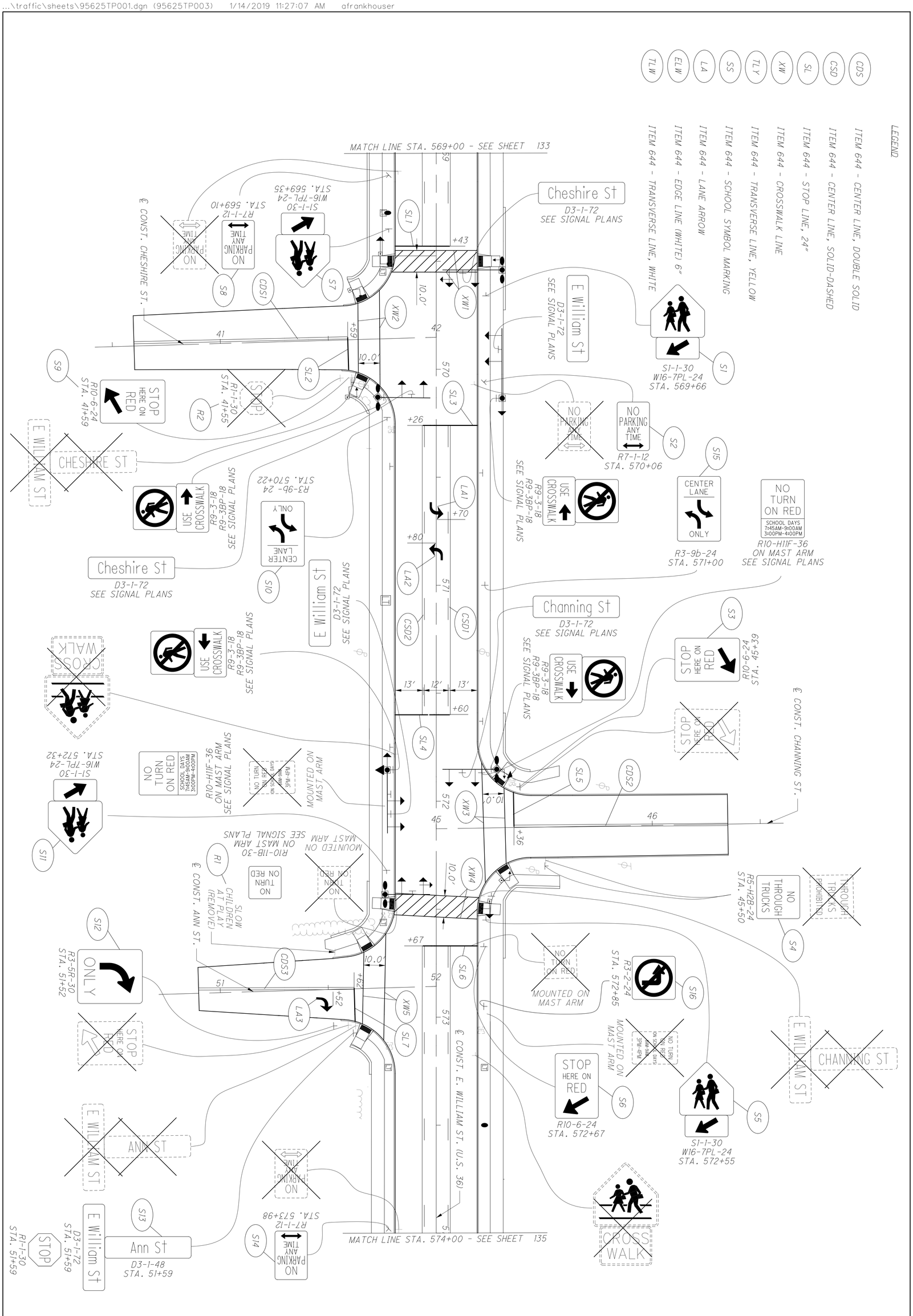
DEL-36-10.59



132 / 224	DEL-36-10.59	SIGNING AND PAVEMENT MARKING PLAN STA. 559+00 TO 564+00	CALCULATED ACF CHECKED CSR	0 20 10 40 HORIZONTAL SCALE IN FEET



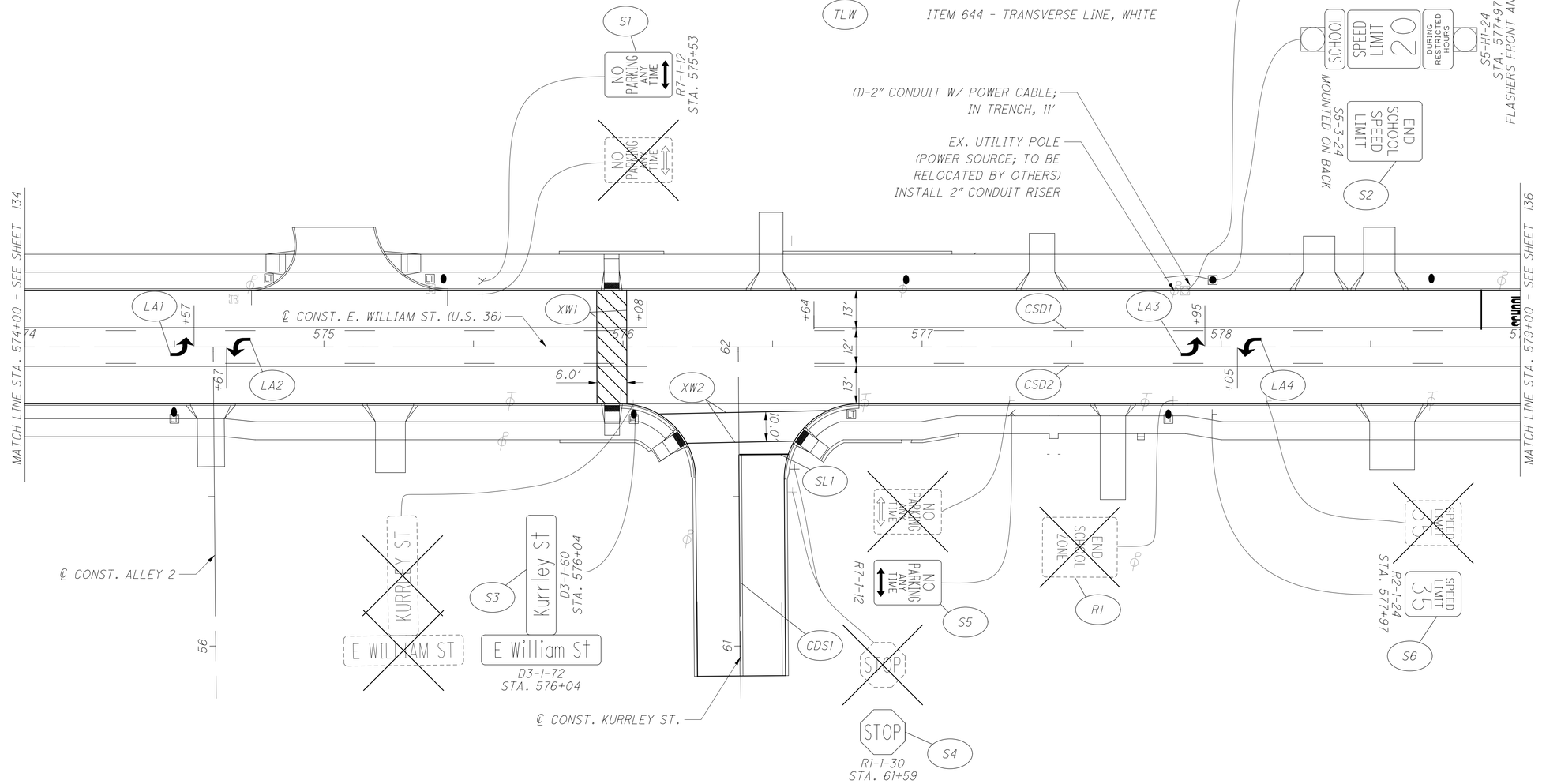
133 224	DEL-36-10.59	SIGNING AND PAVEMENT MARKING PLAN STA. 564+00 TO STA. 569+00	CALCULATED ACF / CHECKED CSR	0 20 10 40 HORIZONTAL SCALE IN FEET



134 / 224	DEL-36-10.59	SIGNING AND PAVEMENT MARKING PLAN STA. 569+00 TO STA. 574+00	CALCULATED ACF CHECKED CSR	0 20 10 40 HORIZONTAL SCALE IN FEET

LEGEND

CDS	ITEM 644 - CENTER LINE, DOUBLE SOLID
CSD	ITEM 644 - CENTER LINE, SOLID-DASHED
SL	ITEM 644 - STOP LINE, 24"
XW	ITEM 644 - CROSSWALK LINE
TLY	ITEM 644 - TRANSVERSE LINE, YELLOW
SS	ITEM 644 - SCHOOL SYMBOL MARKING
LA	ITEM 644 - LANE ARROW
ELW	ITEM 644 - EDGE LINE (WHITE) 6"
TLW	ITEM 644 - TRANSVERSE LINE, WHITE

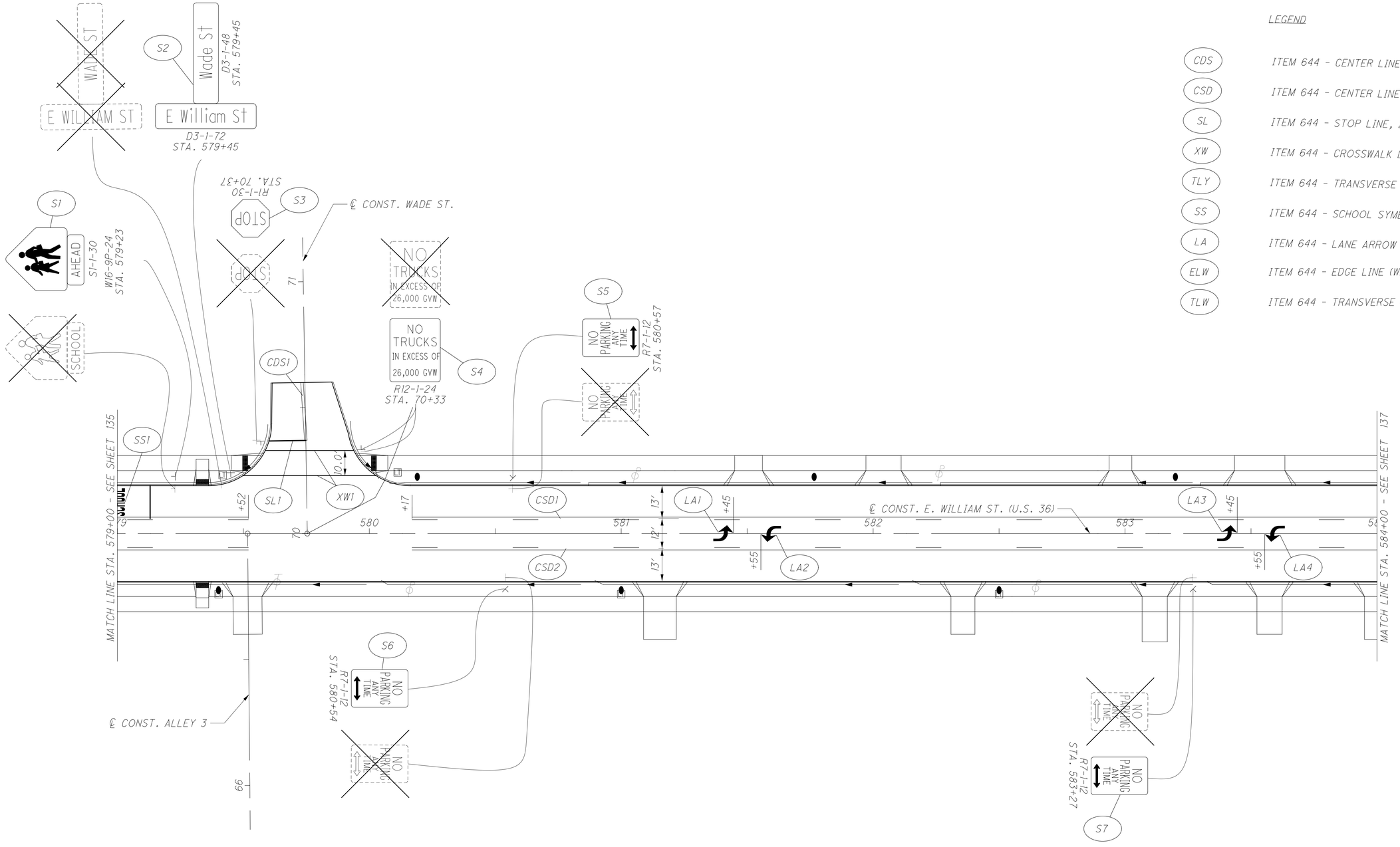


HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED ACF
CHECKED CSR

SIGNING AND PAVEMENT MARKING PLAN
STA. 574+00 TO STA. 579+00

DEL-36-10.59



HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED ACF
CHECKED CSR

SIGNING AND PAVEMENT MARKING PLAN
STA. 579+00 TO STA. 584+00

DEL-36-10.59

136
224

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LEGEND

CDS	ITEM 644 - CENTER LINE, DOUBLE SOLID
CSD	ITEM 644 - CENTER LINE, SOLID-DASHED
SL	ITEM 644 - STOP LINE, 24"
XW	ITEM 644 - CROSSWALK LINE
TLY	ITEM 644 - TRANSVERSE LINE, YELLOW
SS	ITEM 644 - SCHOOL SYMBOL MARKING
LA	ITEM 644 - LANE ARROW
ELW	ITEM 644 - EDGE LINE (WHITE) 6"
TLW	ITEM 644 - TRANSVERSE LINE, WHITE

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED ACF
CHECKED CSR

SIGNING AND PAVEMENT MARKING PLAN
STA. 584+00 TO STA. 589+00

DEL-36-10.59

137
224

S1 Foley St D3-1-48 STA. 584+97
E William St D3-1-72 STA. 584+97
FOLEY ST
E WILLIAM ST
S2 STOP R1-1-30 STA. 75+36
STOP
S3 BEGIN CENTER LANE ONLY R3-9cP-24 R3-9b- 24 STA. 584+85
℄ CONST. FOLEY ST.
CDS2
SL1
76
10.0
CSD1
XW1
+00
+53
13.0
12.0
13.0
584
585
586
587
588
75
MATCH LINE STA. 584+00 - SEE SHEET 136
CSD2
TLW1
CDS1
8" VCP
ELW1
℄ CONST. ALLEY 4
18'
S4 CENTER LANE ONLY END R3-9dP-24 R3-9b- 24 STA. 584+85
STOP R1-1-30 STA. 81+60
S5
"NEW BEGINNINGS UNITED METHODIST CHURCH"
BRICK
#385 1 STORY BRICK CHURCH
PRIVATE SIGN DND "FOR SALE"
MATCH EXISTING CENTERLINE
℄ CONST. E. WILLIAM ST. (U.S. 36)
OHE/T
NO PARKING
8" VCP - SAN
VISITOR PARKING
VISITOR PARKING
STOP
OHE
SEE SHEET 138

GENERAL

THE CONTRACTOR SHALL FURNISH AND INSTALL SIGNAL EQUIPMENT, IN CONFORMANCE TO THESE PLANS AND SPECIFICATIONS, AND THE 2016 STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS AND ALL SUPPLEMENTAL SPECIFICATIONS. THEY SHALL INSTALL ALL TRAFFIC SIGNAL EQUIPMENT IN CONFORMANCE TO THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS LATEST REVISION, AND IN CONFORMANCE TO THE OHIO DEPARTMENT OF TRANSPORTATION STANDARD CONSTRUCTION DRAWINGS.

EACH BIDDER, WITH THIS BID, SHALL SUBMIT (2) COMPLETE SETS OF CATALOG CUTS, DIAGRAMS, BROCHURES, OR OTHER DESCRIPTIVE DATA FOR FOR EACH ITEM WITH THE STATED SPECIFICATIONS. ANY BIDDER SHALL ALSO PROVIDE A DETAILED LIST OF ALL VARIANCES FROM ODOT SPECIFICATIONS AND FROM THE SPECIFICATIONS CONTAINED HEREIN FOR EACH ITEM WITH THE STATED SPECIFICATIONS. ANY BIDDER THAT DOES NOT COMPLY 100% WITH THIS REQUIREMENT MAY BE RULED INELIDGIBLE AND MAY NOT BE AWARDED A CONTRACT. UNLESS OTHERWISE STATED BY THE BIDDER, THE PROPOSAL WILL BE CONSIDERED AS BEING IN STRICT ACCORDANCE WITH THE SPECIFICIATIONS.

PLAN AND SPECIFICATION COMPLIANCE

THE CONTRACTOR SHALL FURNISH AND INSTALL TRAFFIC SIGNAL DEVICES IN COMPLIANCE WITH THESE PLANS AND SPECIFICATIONS, THE 2016 ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS INCLUDING ALL SUPPLEMENTAL SPECIFICATIONS, THE ODOT MANUAL OF TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, AND THE "TC" AND "HL" STANDARD CONSTRUCTION DRAWINGS ISSUED BY ODOT. THESE SPECIFICATIONS SET FORTH THE MINIMUM DESIGN AND OPERATING REQUIREMENTS FOR TRAFFIC SIGNAL AND HIGHWAY LIGHTING EQUIPMENT.

TRAFFIC SIGNAL CONTROL AND HIGHWAY LIGHTING EQUIPMENT SHALL MEET OR EXCEED THE STANDARDS SPECIFIED IN THE FOLLOWING DOCUMENTS:

1. SPECIFICATIONS LISTED IN THIS PLAN.

2. NEMA STANDARDS PUBLICATION NO. TS1-1989 AND/OR TS2-2003 (OR CURRENT NEMA ISSUE) SECTIONS 1, 2, 5, 6, 8, 11, 13, AND 14.

3. 2016 ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS 625, 632, 633, 725, 732, 733 AND 815.

IN CASE OF A CONFLICTING SPECIFICATION STATEMENT, THE SPECIFICATION DOCUMENT HIERARCHY SHALL BE IN THE ORDER LISTED FROM (1), HIGHEST, TO (3), LOWEST.

GUARANTEE

THE CONTRACTOR SHALL GUARANTEE THAT THE TRAFFIC CONTROL SYSTEMS INSTALLED AS PART OF THIS CONTRACT SHALL OPERATE SATISFACTORILY FOR A PERIOD OF (1) YEAR FOLLOWING COMPLETION OF THE 10-DAY PERFORMANCE TEST. IN THE EVENT OF UNSATISFACTORY OPERATION THE CONTRACTOR SHALL CORRECT FAULTY INSTALLATIONS, MAKE REPAIRS AND REPLACE DEFECTIVE PARTS WITH NEW PARTS OF EQUAL OR BETTER QUALITY. EQUIPMENT, MATERIAL AND LABOR COSTS INCURRED IN CORRECTING AN UNSATISFACTORY OPERATION SHALL BE BORNE BY THE CONTRACTOR.

THE GUARANTEE SHALL COVER THE FOLLOWING ITEMS OF THE TRAFFIC CONTROL SYSTEM: CONTROLLERS AND ASSOCIATED EQUIPMENT, DETECTOR UNITS, INTERCONNECTION ITEMS AND MASTER CONTROL EQUIPMENT.

CUSTOMARY MANUFACTURER'S GUARANTEES FOR THE FOREGOING ITEMS SHALL BE TURNED OVER TO THE STATE OR THE MAINTAINING AGENCY FOLLOWING ACCEPTANCE OF THE EQUIPMENT.

THE COST OF GUARANTEEING THE TRAFFIC CONTROL SYSTEM WILL BE INCIDENTAL TO AND INCLUDED IN THE CONTRACT UNIT PRICE OF THE VARIOUS ITEMS MAKING UP THE SYSTEM.

POWER SUPPLY FOR TRAFFIC SIGNALS

ELECTRIC POWER SHALL BE OBTAINED FROM AEP AT THE LOCATIONS INDICATED ON THE PLANS. POWER SUPPLIED SHALL BE 120 VOLTS.

WIRING DIAGRAMS

TWO (2) WIRING DIAGRAMS AND TWO (2) EACH SERVICE/OPERATION MANUALS FOR EACH DIFFERENT PIECE OF EQUIPMENT SHALL BE PROVIDED. A HEAVY CLEAR PLASTIC ENVELOPE ATTACHED TO THE INSIDE OF THE CABINET DOOR SHALL BE PROVIDED FOR STORING WIRING DIAGRMS, (MINIMUM OF 9-INCHES BY 12-INCHES IN SIZE).

TEN DAY TEST REQUIREMENTS

THE CITY OF DELAWARE REQUIRES A TEN (10) DAY TEST TO START AFTER SIGNAL INSTALLATION IS 100% COMPLETE WHICH INCLUDES ESTABLISHING DATA COMMUNICATION IF PRESENT. NO PARTIAL TESTS WILL BE CONDUCTED. THE CITY SHALL MONITOR THE TEST AND SHALL BE THE SOLE AGENCY TO ACCEPT THE SINGAL INSTALLATION. IF LESS THAN 100% COMPLETION IS DETECTED UPON INSPECTION BY THE CITY OR ANY MALFUNCTION IS DETECTED, THE TEN (10) DAY TEST SHALL BE COMPLETELY RESTARTED.

SIGNAL ACTIVATION

PRIOR TO ACTIVATING THE NEW TRAFFIC SIGNAL TO STOP AND GO MODE AND/OR REMOVING THE EXISTING TRAFFIC SIGNAL FROM SERVICE, ALL ITEMS IN THE PROPOSED SIGNAL PLAN SHALL BE FULLY COMPLETED, (I.E., VEHICLE DETECTION, PEDESTRIAN SIGNAL HEADS, ETC). IF THERE ARE CONSTRUCTABILITY ISSUES (I.E., ROADWAY WIDENING, ETC.) THAT PREVENT THE SIGNAL FROM BEING COMPLETED PRIOR TO ACTIVATION, IT SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT ENGINEER. THE PROJECT ENGINEER WILL THEN REVIEW, APPROVE OR REJECT PROPOSALS TO ACTIVATE THE TRAFFIC SIGNAL PRIOR TO COMPLETION.

THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AT LEAST 10 WORKING DAYS PRIOR TO SCHEDULING THE FINAL INSPECTION OF THE SIGNAL INSTALLATION. FINAL INSPECTION IS NOT CONSIDERED COMPLETE UNTIL CITY OF DELAWARE DESIGNATED PERSONNEL INSPECT THE TRAFFIC SIGNAL AND ISSUE WRITTEN APPROVAL. IF ISSUES ARE FOUND DURING THE FINAL INSPECTION THAT EFFECT THE SAFETY OF THE TRAVELING PUBLIC AND/OR THE EFFICIENCY OF THE INTERSECTION, THE SIGNAL SHALL NOT BE ACTIVATED ON THE PROPOSED DATE. ANY PUNCH LIST ITEMS THAT ARE FOUND SHALL BE CORRECTED AND REINSPECTED BY CITY OF DELAWARE PERSONNEL PRIOR TO FINAL ACCEPTANCE. CITY OF DELAWARE FORCES SHALL ONLY ASSUME DAY TO DAY MAINTENANCE OF THE TRAFFIC SIGNAL AFTER FINAL WRITTEN ACCEPTANCE HAS BEEN ISSUED.

TRANSITION TO SIGNAL CONTROL

THE CONTRACTOR SHALL NOTIFY THE CITY OF DELAWARE FORTY-EIGHT (48) HOURS PRIOR TO THE SIGNAL TURN-ON, THE TURN-ON SHALL NOT BEGIN UNTIL REPRESENTATIVES FROM THE CITY, CONTRACTOR, AND SIGNAL EQUIPMENT SUPPLIER ARE ON-SITE TO OBSERVE THE TURN-ON.

THE SIGNALS WILL NOT BE PLACED ON FLASH UNTIL THE PERMANENT PAVEMENT MARKINGS AND LANE CONTROL SIGNS HAVE BEEN INSTALLED WITH THE EXCEPTION OF THE INTERSECTION STOP LINES. TEMPORARY PAVEMENT MARKINGS MAY BE USED IN LIEU OF PERMANENT MARKINGS IF THEY REFLECT THE PERMANENT PAVEMENT MARKING LAYOUT. THE STOP LINES SHALL BE IN PLACE PRIOR TO THE SIGNAL BEING PLACED ON REGULAR OPERATION.

STANDARD CONSTRUCTION DRAWING MT-120.00 BY THE OHIO DEPARTMENT OF TRANSPORTATION SHALL BE INVOKED FOR TRANSITION TO SIGNAL CONTROL. EXISTING STOP CONTROLLED APPROACHES SHALL BE EXEMPT FROM ALL SIGNAGE.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY TO COMPLETE THIS ITEM OF WORK SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614, MAINTAINING TRAFFIC.

MAINTENANCE OF TRAFFIC SIGNAL/FLASHER INSTALLATION

THE CONTRACTOR SHALL BE RESPONSBLE FOR MAINTAINING TRAFFIC SIGNAL/FLASHER INSTALLATIONS WITHIN THE PROJECT UNDER THE FOLLOWING CONDITIONS:

1. EXISTING SIGNAL/FLASHER INSTALLATIONS WHICH THE PLANS REQUIRE THE CONTRACTOR TO ADJUST, MODIFY, ADD ONTO OR REMOVE, OR WHICH THE CONTRACTOR ACTUALLY ADJUSTS, MODIFIES OR OTHERWISE DISTURBS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ENTIRE INSTALLATION (AT AN INTERSECTION) FROM THE TIME HIS OPERATIONS FIRST DISTURB THE INSTALLATION UNTIL THE INSTALLATION HAS BEEN SUBSEQUENTLY REMOVED OR MODIFIED AND THE WORK ACCEPTED.

2. NEW OR REUSED SIGNAL/FLASHER INSTALLATIONS OR DEVICES, INSTALLED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSBILE FOR MAINTENANCE OF THESE FROM THE TIME OF INSTALLATION UNTIL THE WORK IS ACCEPTED.

THE CONTRACTOR SHALL CORRECT AS QUICKLY AS POSSIBLE ALL OUTAGES OR MALFUNCTIONS. HE SHALL PROVIDE THE ENGINEER SUCH ADDRESSES AND PHONE NUMBERS WHERE HIS MAINTENANCE FORCES CAN BE CONTACTED. THE CONTRACTOR SHALL PROVIDE ONE OR MORE PERSONS TO RECEIVE ALL CALLS AND DISPATCH THE NECESSARY MAINTENANCE FORCES TO CORRECT OUTAGES. SUCH A PERSON OR PERSONS MAY BE USED TO PERFORM OTHER DUTIES AS LONG AS PROMPT ATTENTION IS GIVEN TO THESE CALLS AND A PERSON IS READILY AVAILABLE CONTINUOUSLY 24 HOURS A DAY, 7 DAYS A WEEK. ALL LAMP OUTAGES, CABLE OUTAGES, ELECTRICAL FAILURES, EQUIPMENT MALFUNCTIONS AND MISALIGNED SIGNAL HEADS SHALL BE CORRECTED TO THE SATISFACTION OF THE ENGINEER WITH THE SIGNAL BACK TO SERVICE WITHIN FOUR (4) HOURS AFTER THE CONTRACTOR HAS BEEN NOTIFIED OF THE OUTAGE.

IN THE EVENT NEW SIGNALS ARE DAMAGED PRIOR TO ACCEPTANCE, ALL DAMAGED EQUIPMENT EXCEPT POLES AND CONTROL EQUIPMENT SHALL BE REPLACED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER WITH THE SIGNAL BACK IN SERVICE WITHIN 8 HOURS AFTER THE CONTRACTOR'S NOTIFICATION OF THE OUTAGE. THE CONTRACTOR SHALL ARRANGE FOR FULL TRAFFIC CONTROL UNTIL THE SIGNAL IS BACK IN OPERATION.

IF POLES AND/OR CONTROL EQUIPMENT ARE DAMAGED AND MUST BE REPLACED, THE CONTRACTOR SHALL MAKE TEMPORARY REPAIRS AS NECESSARY TO BRING THE SIGNAL BACK INTO FULL OPERATION WITHIN THE ALLOWED 8-HOUR PERIOD, AND SHALL MAKE PERMANENT REPAIRS OR REPLACEMENT AS SOON THEREAFTER AS POSSIBLE.

NONE OF THE ABOVE SHALL BE CONSTRUED AS COLLECTIVE OR CONSECUTIVE OUTAGE TIME PERIODS AT ANY ONE LOCATION. THAT IS, WHERE MORE THAN ONE OUTAGE OCCURS AT ANY ONE LOCATION THEN THE ALLOTTED TIME LIMIT SHALL BE FOR THE WORST SINGLE OUTAGE.

WHERE OUTAGES ARE THE DIRECT RESULT OF A VEHICLE ACCIDENT, THE RESPONSE OF THE CONTRACTOR SHALL BE AS OUTLINED ABOVE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COLLECTION OF ANY COMPENSATION FOR THIS WORK FROM THOSE PARTIES RESPONSIBLE FOR THE DAMAGE.

WHERE THE CONTRACTOR HAS FAILED TO, OR CANNOT RESPOND TO, AN OUTAGE OR SIGNAL EQUIPMENT MALFUNCTION, AT THESE LOCATIONS WITHIN HIS RESPONSIBILITY, WITHIN PERIODS AS SPECIFIED ABOVE, THE ENGINEER MAY INVOKE THE PROVISIONS OF SECTION 105.15 AND ANY SUBSEQUENT BILLINGS TO THE CITY OF DELAWARE FOR POLICE SERVICES AND MAINTENANCE SERVICES BY CITY FORCES SHALL BE DEDUCTED FROM MONIES DUE OR TO BECOME DUE THE CONTRACTOR IN ACCORDANCE WITH PROVISIONS OF SECTION 105.15.

THE CONTRACTOR SHALL PROVIDE THE MAINTENANCE SERVICE ENTIRELY WITH HIS FORCES OR HE MAY CHOOSE TO ENTER INTO A COOPERATIVE UNDERSTANDING WITH THE LOCAL MAINTAINING AGENCY TO PROVIDE THE MAINTENANCE. THE CONTRACTOR SHALL INFORM THE DEPARTMENT OF ENGINEERING SERVICES, IN WRITING, OF THE MAINTENANCE METHOD SELECTED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY TRAFFIC SIGNAL COMPONENTS REQUIRED TO BE HANDLED DURING THE RELOCATION OF POLES AND REVISIONS TO THE SIGNAL SYSTEM.

WHEN A TRAFFIC SIGNAL MUST BE TAKEN OUT OF SERVICE BY THE CONTRACTOR, DUE TO CONSTRUCTION PROCEDURES, THIS OUTAGE SHALL NOT EXCEED 2 HOURS AND SHALL NOT INCLUDE THE HOURS OF 7-9 AM & 3-6 PM. ANY SIGNALIZED INTERSECTION, WHERE THE SIGNAL IS OUT OF SERVICE DUE TO CONSTRUCTION PROCEDURES, OR DUE TO AN OUTAGE OR MALFUNCTION OF EQUIPMENT AS DESCRIBED ABOVE, SHALL BE PROTECTED, BY THE CONTRACTOR, BY THE INSTALLATION OF TEMPORARY "STOP" SIGNS.

ANY VEHICULAR TRAFFIC SIGNAL HEAD, EITHER NEW OR EXISTING WHICH WILL BE OUT OF OPERATION SHALL BE COVERED IN THE MANNER DESCRIBED IN 632.25.

THE CONTRACTOR SHALL MAINTAIN COMPLETE RECORDS OF MALFUNCTIONS INCLUDING:

1. TIME OF NOTIFICATION OF MALFUNCTION;
2. TIME OF WORK CREWS ARRIVAL TO CORRECT THE MALFUNCTION;
3. ACTIONS TAKEN TO CORRECT THE MALFUNCTION, INCLUDING A LIST OF PARTS REPAIRED OR REPLACED;
4. A DIAGNOSIS OF REASON FOR THE MALFUNCTION AND PROBABILITY OF REOCCURRENCE;
5. TIME OF COMPLETION OF THE REPAIR AND SYSTEM RESTORED TO FULL SERVICE.

A COPY OF THESE RECORDS SHALL BE PROVIDED TO THE ENGINEER WITHIN THREE (3) WORKING DAYS FOLLOWING COMPLETION OF EACH REPAIR.

ALL COSTS RESULTING FROM THE ABOVE REQUIREMENTS SHALL BE CONSIDERED TO BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614, MAINTAINING TRAFFIC.

CALCULATED DKA
CHECKED DWB

TRAFFIC SIGNAL GENERAL NOTES

DEL-36-10.59

GROUNDING AND BONDING

THE REQUIREMENTS OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS (CMS) AND THE TC SERIES OF STANDARD CONSTRUCTION DRAWINGS ARE MODIFIED AS FOLLOWS:

1. ALL METALLIC PARTS CONTAINING ELECTRICAL CONDUCTORS SHALL BE PERMANENTLY JOINED TO FORM AN EFFECTIVE GROUND FAULT CURRENT PATH BACK TO THE GROUNDED CONDUCTOR IN THE POWER SERVICE DISCONNECT SWITCH.

   A. PROVIDE AN EQUIPMENT GROUNDING CONDUCTOR IN METALLIC CONDUITS (725.04) IN ADDITION TO THE CONDUCTORS SPECIFIED AND BOND THE CONDUIT TO THIS GROUNDING CONDUCTOR.

   B. WHEN AN EQUIPMENT GROUNDING CONDUCTOR IS REQUIRED IN PLASTIC CONDUIT (725.05), THE INSTALLATION SHALL INCLUDE A SEPARATE EQUIPMENT GROUNDING CONDUCTOR IN ADDITION TO THE CONDUCTORS SPECIFIED.

   C. METALLIC CONDUIT CARRYING THE LOOP WIRES FROM IN THE PAVEMENT TO THE PULL BOX SPLICE LOCATION WILL ONLY BE BONDED AT THE PULL BOX END, AND WILL NOT CONTAIN AN EQUIPMENT GROUNDING CONDUCTOR.

   D. IF MULTIPLE CONDUIT RUNS BEGIN AND END AT THE SAME POINTS, ONLY ONE EQUIPMENT GROUNDING CONDUCTOR IS REQUIRED.

   E. IF AN EQUIPMENT GROUNDING CONDUCTOR IS NEEDED IN CONDUIT BETWEEN SIGNALIZED INTERSECTIONS FOR UNDERGROUND INTERCONNECT CABLE, THE GROUNDING SYSTEM FOR EACH SIGNALIZED INTERSECTION WILL BE SEPARATED ABOUT MIDWAY BETWEEN THE INTERSECTIONS.

   F. THE MESSENGER WIRE AT SIGNALIZED INTERSECTIONS WILL BE USED AS THE CONDUCTIVE PATH FROM CORNER TO CORNER IF CONDUIT IS NOT PROVIDED UNDER THE ROADWAY. WHEN CONDUIT CONNECTS THE CORNERS OF AN INTERSECTION, AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE USED IN THE CONDUIT.

2. CONDUITS.

   A. THE 725.04 CONDUIT SHALL HAVE GROUNDING BUSHINGS INSTALLED AT ALL TERMINATION POINTS. THE BUSHING MATERIAL SHALL BE COMPATIBLE WITH GALVANIZED STEEL CONDUIT AND THE GROUNDING LUG MATERIAL SHALL BE COMPATIBLE FOR USE WITH COPPER WIRE. THREADED OR COMPRESSION TYPE BUSHINGS MAY BE USED.

   B. THE 725.05 CONDUIT SHALL HAVE THE INSIDE AND OUTSIDE DIAMETERS OF THE CONDUIT DEBURRED AT ALL TERMINATION POINTS.

   C. BOTH ENDS OF METALLIC CONDUIT SHALL BE BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR.

   D. METALLIC CONDUIT MAY BE BONDED TO METALLIC BOXES THROUGH THE USE OF CONDUIT FITTINGS UL APPROVED FOR THIS TYPE OF CONNECTION, WITH THE BOX BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR.

3. WIRE FOR GROUNDING AND BONDING.

   A. USE INSULATED, COPPER WIRE FOR THE EQUIPMENT GROUNDING CONDUCTOR. BONDING JUMPERS IN BOXES AND ENCLOSURES MAY BE BARE OR INSULATED COPPER WIRE. WIRE SIZE SHALL BE AS FOLLOWS:

      I. USE 4 AWG BETWEEN THE POWER SERVICE AND SUPPORTS, POLES, PEDESTALS, CONTROLLER OR FLASHER CABINETS.

      II. USE A MINIMUM 8 AWG BETWEEN LOOP DETECTOR PULL BOXES AND THE FIRST CONDUIT THAT REQUIRES A LARGER SIZE AS SPECIFIED IN 3.A.I ABOVE.

      III. USE A MINIMUM 8 AWG BETWEEN THE "PREPARE TO STOP WHEN FLASHING" INSTALLATION (INCLUDING SUPPORT) AND THE FIRST CONDUIT THAT REQUIRES A LARGER SIZE AS SPECIFIED IN 3.A.I ABOVE.

   B. IN A HIGHWAY LIGHTING SYSTEM, THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE THE SAME WIRE SIZE AS THE DUCT CABLE OR DISTRIBUTION CABLE CIRCUIT CONDUCTORS, WITH THE MINIMUM CONDUCTOR SIZE OF 4 AWG. BONDING JUMPERS WILL BE MINIMUM SIZE 4 AWG.

4. GROUND ROD.
   A. A ¾ INCH SCHEDULE 40 PVC CONDUIT WILL BE USED IN FOUNDATIONS AND CONCRETE WALLS FOR THE GROUNDING CONDUCTOR (GROUND WIRE) RACEWAY TO THE GROUND ROD. SHOULD METALLIC CONDUIT BE USED, BOTH ENDS OF THE CONDUIT SHALL BE BONDED TO THE GROUNDING CONDUCTOR.

   B. THE TYPICAL GROUNDING CONDUCTOR (GROUND WIRE) SHALL BE 4 AWG INSULATED, COPPER.

5. ALL WIRING FOR THE SIGNAL CONTROLLER AND SIGNAL HEADS MUST BE PER NEMA STANDARDS. UNUSED CONDUCTORS SHALL BE GROUNDED IN THE CABINET.

   TYPICAL USE OF CONDUCTORS IS AS FOLLOWS:

COND. NO.	COLOR	VEHICLE SIGNAL	PEDESTRIAN SIGNAL
1	BLACK	LEFT RED ARROW	SOUTH WALK
2	WHITE	AC NEUTRAL	AC NEUTRAL
3	RED	RED BALL	WEST DW/FDW
4	GREEN	GREEN BALL	WEST WALK
5	ORANGE	YELLOW BALL	SOUTH DW/FDW
6	BLUE	LEFT GREEN ARROW	NORTH WALK
7	WHITE/BLACK TRACER	LEFT YELLOW ARROW	NORTH DW/FDW
8	RED/BLACK TRACER	RIGHT YELLOW ARROW	EAST DW/FDW
9	GREEN/BLACK TRACER	RIGHT GREEN ARROW	EAST WALK

6. POWER SERVICE AND DISCONNECT SWITCH.

   A. AT THE POWER SERVICE LOCATION, THE GROUNDING CONDUCTOR (GROUND WIRE) FROM THE DISCONNECT SWITCH NEUTRAL (AC-) BAR TO THE GROUND ROD SHALL BE A CONTINUOUS, UNSPLICED CONDUCTOR. IF SPLICED, IT SHALL BE AN EXOTHERMIC WELD BUTT SPLICE.

   B. THE SERVICE NEUTRAL (AC-) SHALL ONLY BE CONNECTED TO GROUND AT THE PRIMARY POWER SERVICE DISCONNECT SWITCH.

      I. NEMA CONTROLLER CABINETS: IF A POWER SERVICE DISCONNECT SWITCH IS LOCATED BEFORE THE CONTROLLER CABINET, THE NEUTRAL (AC-) AND THE GROUNDING BARS IN THE CONTROLLER CABINET SHALL NOT BE CONNECTED TOGETHER AS SHOWN IN NEMA TS-2, FIGURE 5-4.

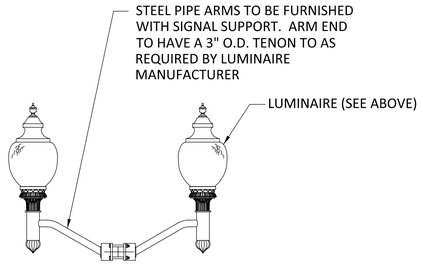
      II. IF SECONDARY DISCONNECT SWITCHES ARE CONNECTED AFTER THE PRIMARY DISCONNECT SWITCH, THE NEUTRAL (AC-) SHALL ONLY BE GROUNDED AT THE PRIMARY SWITCH. EQUIPMENT GROUNDING CONDUCTORS SHALL BE BROUGHT TO THE PRIMARY SWITCH, BUT SHALL BE GROUNDED AT BOTH SECONDARY AND PRIMARY SWITCHES.

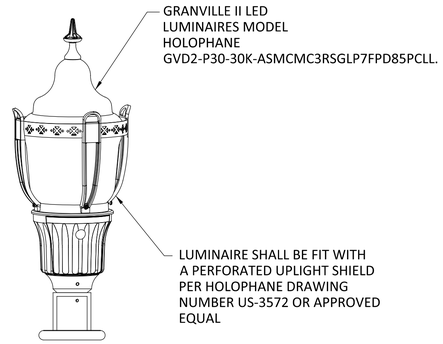
      III. STRICTER GROUNDING - HL-50.21 SHOWS A 1/0 AWG STRANDED COPPER CABLE USED FOR STRUCTURE GROUNDING. ADDITIONALLY, THIS CABLE SHALL BE INSULATED AND ANY CONNECTION TO BARE COPPER STRANDS EXPOSED TO CONCRETE SHALL BE COVERED WITH MASTIC TO PREVENT CONTACT WITH THE CONCRETE.

7. PAYMENT - ALL MATERIALS AND WORK REQUIRED TO COMPLETE THE EFFECTIVE GROUND FAULT CURRENT PATH SYSTEM ARE INCIDENTAL TO THE CONDUCTORS INSTALLED BY CONTRACT.

ITEM 625 - LUMINAIRE, DECORATIVE, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF ODOT CMS 625.08, THE LUMINAIRES SHALL BE GRANVILLE II LED LUMINAIRES WITH LEAF-STYLE HOUSING, MODEL HOLOPHANE GVD2-P30-30K-AS-M-CMC-3-R-S-GL-P7-FPD85-PCLL. HOUSING, RIBS, AND BANDS SHALL BE PAINTED WITH A FINISH COAT TO MATCH THE PROPOSED SIGNAL SUPPORT POLE COLOR, WHICH IS SIMILAR TO FEDERAL SPECIFICATION 595-B COLOR #27038 BLACK.



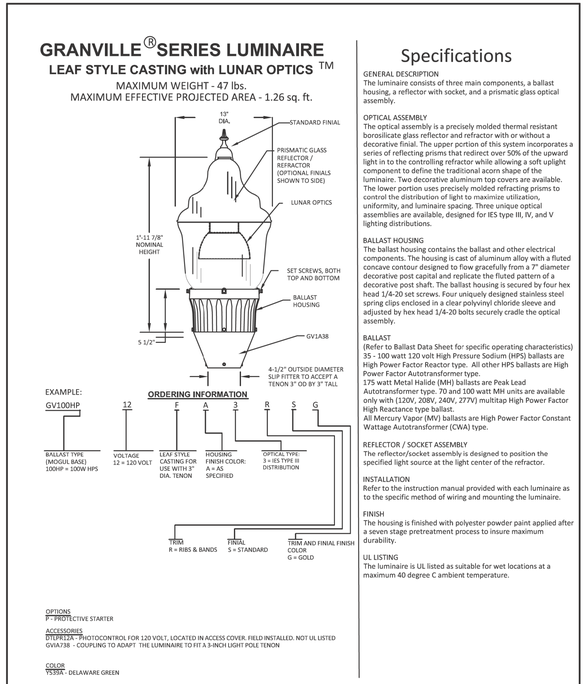


ITEM 625 - SIGN, STREET NAME, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF ODOT CMS 630 AND 730, THE SIGNS SHALL CONFORM TO CITY OF DELAWARE STANDARDS AND HAVE THE FOLLOWING SPECIFICATIONS:

HIGH INTENSITY REFLECTIVITY WHITE LETTERS
HIGH INTENSITY REFLECTIVITY BLUE SHEETING

STREET NAME SIGN LETTERING HEIGHTS SHALL FOLLOW OMUTCD GUIDELINES OF 12" INITIAL UPPERCASE AND 9" SUBSEQUENT LOWERCASE LETTERING, AS APPROVED BY THE ENGINEER.



ITEM 625 - TRENCH, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF ODOT CMS 625.13 AND THE STANDARD CONSTRUCTION DRAWINGS, WITHIN EACH TRENCH, THE LOCATION OF UNDERGROUND CABLE OR CONDUIT SHALL BE MARKED BY THE USE OF A CONTINUOUS IDENTIFYING TAPE BURIED IN THE TRENCH ABOVE THE LINE. ONE STRIP OF MARKING TAPE SHALL BE PLACED BETWEEN 6-INCHES AND 12-INCHES BELOW FINISHED GRADE WITH A TAPE LENGTH EQUAL TO LENGTH OF THE CONDUIT OR CABLE. THE TAPE SHALL BE PLACED PARALLEL WITH THE FINISHED SURFACE. THE CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO INSURE THAT THE TAPE IS NOT PULLED, DISTORTED, OR OTHERWISE MISPLACED IN COMPLETION OF THE TRENCH BACKFILL.

THE TAPE SHALL BE AN INERT MATERIAL HIGHLY RESISTANT TO ALKALIS, ACIDS, AND OTHER CHEMICAL COMPONENTS LIKELY TO BE ENCOUNTERED IN SOILS. THE TAPE SHALL BE 3-INCHES TO 6-INCHES WIDE, AND A HIGH VISIBILITY COLOR SUCH AS ORANGE OR RED. THE TAPE SHALL BE PRINTED WITH THE WORD "ELECTRIC" APPROXIMATELY EVERY SIX (6) FEET IN BLACK LETTERS WITH INK THAT WILL NOT CHANGE WHEN EXPOSED TO ACIDS AND OTHER DESTRUCTIVE SUBSTANCES COMMONLY FOUND IN SOIL. THE TAPE SHALL BE SUPPLIED IN CONTINUOUS ROLLS WITH THE IDENTIFYING LETTERING REPEATED CONTINUOUSLY THE FULL LENGTH OF THE TAPE.

THIS ITEM SHALL BE PAID FOR PER LINEAR FOOT OF ITEM 625, TRENCH, AS PER PLAN, COMPLETE AND IN PLACE.

CALCULATED DKA
CHECKED DWB

TRAFFIC SIGNAL GENERAL NOTES

DEL-36-10.59

ITEM 632 - VEHICULAR SIGNAL HEAD, (LED), BLACK, (BY TYPE), 12" LENS, 1-WAY, POLYCARBONATE, WITH BACKPLATE, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF CMS 632 AND 732, THE FOLLOWING REQUIREMENTS SHALL ALSO APPLY:

1. SIGNAL HEADS AND VISORS SHALL BE CONSTRUCTED OF BLACK POLYCARBONATE PLASTIC WITH VISORS AS SPECIFIED AND MEET ITE SPECIFICATIONS.

2. PROPER EXTERIOR COLORS SHALL BE OBTAINED BY USE OF COLORED PLASTIC MATERIAL RATHER THAN PAINTING.

3. ALL UPPER SIGNAL SUPPORT HARDWARE AND PIPING UP TO AND INCLUDING THE WIRE INLET FITTING SHALL BE FERROUS METAL AND BLACK.

4. THE ENTRANCE FITTING SHALL BE OF THE TRI-STUD DESIGN WITH SERRATED RINGS IN ORDER TO ACHIEVE POSITIVE LOCKING.

5. ALL SIGNAL HEADS SHALL BE RIGIDLY MOUNTED TO THE MAST ARM WITH THE YELLOW LENS LOCATED IN FRONT OF THE MAST ARM.

6. ALUMINUM BACKPLATES SHALL BE IN ACCORDANCE WITH THE CMS AND INCLUDE A FLUORESCENT YELLOW REFLECTIVE BORDER.

7. THE LIGHT EMITTING DIODE (LED) SIGNAL LAMP UNITS SHALL MEET THE REQUIREMENTS OF CMS 732.04-C. THE CONTRACTOR SHALL PROVIDE THE CITY OF DELAWARE, IN WRITING, WITH THE LED MANUFACTURER NAME, SERIAL NUMBER, PART NUMBER, DESCRIPTION OF LAMP, AND DATE OF MANUFACTURE FOR ALL LED UNITS THAT ARE TO BE USED IN THE SIGNAL HEAD PRIOR TO INSTALLATION, FOR ACCEPTANCE AND WARRANTY PURPOSES.

8. SIGNAL HEADS SHALL HAVE A MINIMUM WALL THICKNESS OF 0.117 INCHES.

9. SIGNAL HEADS SHALL INCLUDE CUTAWAY TYPE VISORS UNLESS OTHERWISE SPECIFIED IN THE PLANS.

10. APPLY A BEAD OF SILICONE TO THE SIGNAL HEAD, WASHER, AND ENTRANCE ADAPTER SERRATIONS TO PREVENT WATER INTRUSION. ALSO, FILL THE SPACE BETWEEN CONCENTRIC SERRATION RINGS ON THE TOP OF THE SIGNAL HEAD TO COMPLETELY EXCLUDE WATER FROM THE SPACE BETWEEN THE CONCENTRIC RINGS.

11. BALANCE ADJUSTERS SHALL NOT BE USED ON ONE-WAY HEADS.

PAYMENT FOR ITEM 632 VEHICULAR SIGNAL HEAD, LED, BLACK, 12" LENS, 1-WAY, POLYCARBONATE, WITH BACKPLATE, AS PER PLAN SHALL BE MADE FOR COMPLETE SIGNAL HEAD FURNISHED AND INSTALLED, INCLUDING ALL LABOR, EQUIPMENT, MATERIALS, AND NEW ATTACHMENT HARDWARE.

ITEM 632 - COVERING OF VEHICULAR SIGNAL HEAD, AS PER PLAN

COVER VEHICULAR SIGNAL HEADS IF ERECTED AT INTERSECTIONS WHERE TRAFFIC IS MAINTAINED BEFORE ENERGIZING THE SIGNALS. USE A STURDY OPAQUE COVERING MATERIAL SPECIFICALLY MADE FOR USE WITH TRAFFIC SIGNALS, AND ENSURE THAT THE COLOR OF THE COVER IS DIFFERENT THAN THE SIGNAL HEAD, TAN OR BEIGE, SO THAT IT IS CLEAR TO DRIVERS THE HEADS ARE COVERED, NOT DARK. USE A METHOD OF COVERING TO COVER ATTACHMENT AND MATERIALS, INCLUDING BACKPLATES, AS APPROVED BY THE ENGINEER. COVERS ARE TO BE FREE OF TEXT, PICTURES, OR ANY TYPE OF ADVERTISING. MAINTAIN COVERS, AND REMOVE THEM WHEN DIRECTED BY THE ENGINEER.

ITEM 632 - PEDESTRIAN SIGNAL HEAD (LED), (COUNTDOWN), TYPE D2, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF CMS 632 AND 732 THE FOLLOWING SHALL APPLY:

1. SIGNAL HEADS AND VISORS SHALL BE CONSTRUCTED OF BLACK POLYCARBONATE PLASTIC AND MEET ITE SPECIFICATIONS.

2. PROPER EXTERIOR COLORS SHALL BE OBTAINED BY USE OF COLORED PLASTIC MATERIAL RATHER THAN PAINTING.

3. PIPE, SPACERS AND FITTINGS CONSTRUCTED OF BLACK POLYCARBONATE PLASTIC MAY BE USED IN LIEU OF GALVANIZED STEEL OR ALUMINUM.

4. THE PEDESTRIAN SIGNAL HEAD SHALL BE OF THE LED COUNTDOWN TYPE.

5. NEW ATTACHMENT HARDWARE AND FITTINGS SHALL BE USED

6. THE LIGHT EMITTING DIODE (LED) SIGNAL LAMP UNITS SHALL MEET THE REQUIREMENTS OF CMS 732.04-C. THE CONTRACTOR SHALL PROVIDE THE CITY OF DELAWARE, IN WRITING, WITH THE LED MANUFACTURER NAME, SERIAL NUMBER, PART NUMBER, DESCRIPTION OF LAMP, AND DATE OF MANUFACTURE FOR ALL LED UNITS THAT ARE TO BE USED IN THE SIGNAL HEAD PRIOR TO INSTALLATION, FOR ACCEPTANCE AND WARRANTY PURPOSES.

PAYMENT FOR ITEM 632 - PEDESTRIAN SIGNAL HEAD, (LED), (COUNTDOWN), TYPE D2, AS PER PLAN SHALL BE MADE FOR THE NUMBER OF COMPLETE SIGNAL HEAD FURNISHED AND INSTALLED, INCLUDING ALL LABOR, EQUIPMENT, MATERIALS AND NEW ATTACHMENT HARDWARE.

ITEM 632 - PEDESTRIAN PUSHBUTTON, AS PER PLAN

PEDESTRIAN PUSHBUTTONS SHALL BE NAVIGATOR APS FOUR-WIRE CONFIGURATION MANUFACTURED BY POLARA INC., INTELLICROSS APS MANFUCATURED BY PELCO PRODUCTS, OR APPROVED EQUAL.

OPTIONS TO BE INCLUDED SHALL BE VOICE MESSAGE WHEN EXTENDED BUTTON PUSH IS ACTIVATED. THE VOICE MESSAGE SHALL BE PROGRAMMED TO SAY "WALK SIGN IS ON TO CROSS WILLIAM/CHANNING/CHESHIRE STREET". MOUNT THE CENTER OF THE PUSHBUTTON 42 INCHES ABOVE PEDESTRIAN PATHWAY SURFACE UNLESS OTHERWISE NOTED IN THE PLANS. THIS PAY ITEM SHALL INCLUDE MOUNTING THE PUSHBUTTON TO THE POLE, INCLUDING ANY MOUNTING HARDWARE. THE PAY ITEM SHALL ALSO INCLUDE WIRING OF THE PUSHBUTTON TO THE NEW WIRES, AND ANY OTHER ITEMS TO MAKE THE PUSHBUTTON FUNCTIONAL.

IN ADDITION, THE CITY STANDARD SIGN "R10-3A" AND ALL MOUNTING HARDWARE, EQUIPMENT, AND MATERIALS ARE INCLUDED IN THIS PAY ITEM.

ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO PERFORM THE REQUIRED WORK SHALL BE INCLUDED IN THE CONTRACT BID PRICE FOR EACH ITEM 632 - PEDESTRIAN PUSHBUITTON, AS PER PLAN.

ITEM 632 - SIGNAL SUPPORT FOUNDATION, AS PER PLAN
ITEM 632 - PEDESTAL FOUNDATION, AS PER PLAN

PRIOR TO ORDERING THE SIGNAL SUPPORTS AND/OR PEDESTALS, THE CONTRACTOR SHALL CONTACT OUPS TO HAVE ALL THE UTILITIES LOCATED IN THE FIELD THEN MEET WITH THE ENGINEER TO LOCATE THE PROPOSED SUPPORT LOCATIONS TO INSURE THERE ARE NO CONFLICTS WITH UTILITIES. IF THERE ARE ISSUES, PROJECT ENGINEER SHALL PROVIDE GUIDANCE AS TO THE RELOCATION OF THE SUPPORT POLES AND/OR PEDESTALS.

THE ANCHOR BASE POLE FOUNDATION SIDES SHALL BE ORIENTED PARRALLEL TO THE SIDEWALK OR BACK OF CURB, OR EDGE OF PAVEMENT AS SHOWN ON THE SIGNAL PLANS. THE TOP OF THE FOUNDATION SHALL BE FLUSH WITH ANY ADJACENT SIDEWALK OR CONCRETE EXCEPT WHERE THE GROUND RISES STEEPLY BEHIND THE SIDEWALK OR CONCRETE AREA. THE BACK SIDE OF THE FOUNDATION SHALL MATCH THE GROUND SLOPE AND THE STREET SIDE OF THE FOUNDATION SHALL BE ABOVE THE SIDEWALK OR CONCRETE AREA AND COMPLETELY OUT OF THE SIDEWALK OR CONCRETE AREA. A MINIMUM OF TWO - 2 INCH CONDUIT ELS, USED OR UNUSED, SHALL BE INSTALLED IN EACH POLE FOUNDATION. SEE POLE ORIENTATION SHART FOR ANGULAR POSITION. THE ANCHOR BOLTS AND CONDUIT ELS ARE INCIDENTAL TO THIS ITEM. THE POLE FOUNDATION TOP SHALL BE EDGED USING A 1/2 INCH SIDEWALK EDGER AND NOT CHAMFERED.

PAYMENT WILL BE AT THE CONTRACT UNIT PRICE AND WILL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, TOOLS, EQUIPMENT AND OTHER INCIDENTALS NECESSARY FOR EACH SUPPORT FURNISHED, IN PLACE, COMPLETE AND ACCEPTED.

ITEM 632 - POWER SERVICE, AS PER PLAN

ELECTRICAL SERVICE SHALL BE OBTAINED FROM AEP AT THE LOCATIONS INDICATED IN THESE PLANS. POWER SUPPLIED SHALL BE 120/240 VOLTS SINGLE PHASE AND SHALL BE METERED.

IN ADDITION TO CMS 632, THE FOLLOWING SHALL ALSO APPLY:

1. ONE (1) METER SHALL BE PROVIDED FOR THE SIGNAL POWER AND THE STREET LIGHTING POWER. THE METER AND DISCONNECT SWITCH SHALL BE EXTERNALLY MOUNTED ON THE NEAREST SIGNAL POLE TO THE CABINET AS ILLUSTRATED WITHIN. SUPPLY AN ADDITONAL DISCONNECT SWITCH FOR THE LIGHTING CIRCUIT. 2" CONDUIT SHALL BE PROVIDED TO MAKE THE CONNECTION FROM THE METER BASE TO THE CONDUIT INSTALLED UP TO THE FOUNDATION OF THE CONTROLLER. THIS INCLUDES ANY HARDWARE AND CONDUIT ELLS NECESSARY TO EXTERNALLY MOUNT THE CONDUIT TO THE CABINET.

2. A THIRD CIRCUIT BREAKER (30 AMPS) SHALL BE INSTALLED IN THE CONTROLLER CABINET FOR LIGHTING, AND A 2-POLE LIGHTING CONTACTOR WITH A HAND-OFF AUTO SELECTOR SWITCH ON THE CABINET SIDE PANEL (ELECTRONICALLY HELD, OPEN STYLE).

3. A PHOTO CELL SHALL BE INSTALLED AT THE CONTOLLER.

THE CONTRACTOR SHALL CORDINATER WITH AEP FOR ALL RELATED INSPECTIONS AND WORK. THE CONTRACTOR SHALL CONTACT AEP TO MAKE ELECTRICAL SERVICE CONNECTION WHEN THE POWER CABLE IS IN PLACE FOR A NEW INSTALLATION THAT IS READY FOR SERVICE. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR SPLICE POWER CABLE INTO AEP'S CIRCUITS. THE COST FOR ALL NECESSARY ITEMS AND ASSOCIATED LABOR SHALL BE INCLUDED IN THE CONTRACT BID PRICE FOR EACH ITEM 632 - POWER SERVICE, AS PER PLAN.

ITEM 632 - REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN

TRAFFIC SIGNAL INSTALLATIONS, INCLUDING SIGNAL HEADS, CABLE, MESSENGER WIRE, STRAIN POLES, CABINETS, CONTROLLERS, SUPPORT POLES, PEDESTALS, PULL BOXES, SIGNS, PUSHBUTTONS, ETC., SHALL BE REMOVED IN ACCORDANCE WITH CMS 632.26 AND AS INDICATED ON THE PLANS.

ALL SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS, PEDESTRIAN PUSHBUTTONS, AND SUPPORT POLES REMOVED MUST BE SALVAGED AND OFFERED TO THE CITY OF DELAWARE PUBLIC WORKS DEPARTMENT LOCATED AT 440 E. WILLIAM STREET, DELAWARE, OH 43015. PAYMENT FOR THIS ITEM SHALL BE AT THE CONTRACT BID PRICE FOR EACH.

ITEM 632 - COMBINATION SIGNAL SUPPORT, TYPE TC-81.21 (BY DESIGN), AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF CMS 632, ALL SIGNAL SUPPORTS SHALL CONFORM TO THE SIGNAL SUPPORT DETAILS AND TYPICALS INCLUDED IN THE PLANS.

POLES AND ARMS, INCLUDING BASE AND FLANGE PLATES, BOLT COVERS HANDHOLES, AND WIRE ENTRANCES SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH CMS 711.02. ALL VISIBLE ELEMENTS OF THE SIGNAL SUPPORT, AND ANY OTHER PARTS REQUIRED TO BE COATED, SHALL BE GALVANIZED AND THEN POWDER-COATED. ALL PAINTING SHALL BE PERFORMED UNDER CONTROLLED ENVIRONMENTAL CONDITIONS AND IN ACCORDANCE WITH THE PAINT MANUFACTURER'S RECOMMENDATIONS PERTAINING TO SURFACE PREPARATION MATERIAL HANDLING, AND APPLICATION. THE TOP FINISH COAT OF PAINT SHALL BE SIMILAR TO FEDERAL SPECIFICATION 595-B #27038, BLACK. PAINT SAMPLES SHALL BE SUBMITTED WITH THE SIGNAL SUPPORT SHOP DRAWINGS FOR REVIEW.

THE MANUFACTURER SHALL BE RESPONSIBLE FOR BUFFING THE VERTICAL WELD SEAM TO COSMETICALLY BLEND WITH ADJACENT PARENT MATERIAL.

THE INSIDE OF EACH SIGNAL SUPPORT POLE ASSEMBLY, EACH MAST ARM ASSEMBLY, AND OTHER SIGNAL SUPPORT ACCESSORIES SHALL BE COATED WITH GALVANIZING MATERIAL. THE INSIDE AREA FORMED BY THE GUSSETS, POLE, AND POLE FLANGE PLATE SHALL BE COATED TO PROTECT THE AREA FROM CORROSION. IT IS TO BE NOTED THAT SOME TYPE OF OPENING SHALL BE REQUIRED TO COAT THE GUSSET AREA. THIS OPENING SHALL NOT HAMPER THE STRUCTURAL INTEGRITY OF THE FLANGE ASSEMBLY.

ALL EXTERIOR SURFACES OF THE SIGNAL SUPPORT POLE SHAFT ASSEMBLY, MAST ARM ASSEMBLY, ALL BOLT COVERS, ALL CLAMPS, CLEVIS-TO-CLEVIS UNIVERSAL, WIRE ENTRANCE, ALL HANDHOLE COVERS, LUMINAIRE AND BRACKETS, POLE AND ARM CAPS, SIGNAL HEAD HANGERS, AND WEATHER-HEADS SHALL HAVE A COATING PROPERLY APPLIED TO THEM. EXTERIOR SURFACES OF ALL FASTENER BOLTS/SCREWS, WASHERS, NUTS, AND OTHER ATTACHMENT HARDWARE SHALL HAVE A COATING APPLIED TO THEM. FASTENER THREADS SHALL NOT BE CLOGGED WITH COATING MATERIAL.

ALL COATED ITEMS SHALL BE SHIPPED IN A MANNER TO MINIMIZE DAMAGE IN TRANSIT. SURFACES SHOULD BE PROTECTED WITH FOAM PADDING, BY WRAPPING IN CARDBOARD, BY SPIRAL WRAPPING WITH WAX PAPER, BY CRATING, BY A COMBINATION OF METHODS, OR BY ANY OTHER METHOD SELECTED BY THE MANUFACTURER WHICH WILL INSURE DELIVERY OF UNDAMAGED MATERIALS. MATERIALS DAMAGED IN TRANSIT CAUSED BY IMPROPER PACKAGING OR IMPROPER TRANSIT HANDLING SHALL BE REJECTED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING MATCHING PAINT COATING MATERIAL FOR TOUCH-UP WORK IDENTICAL TO THE ORIGINAL COATING PLACED ON THE SURFACE.

EACH COATING LAYER SHALL BE PROPERLY CURED BEFORE THE APPLICATION OF THE NEXT COAT. THE APPLICATION PROCEDURE SHALL BE SUCH TO GUARANTEE A FINISH THAT WILL NOT SCALE, FLAKE OR PEEL, AND WILL RETAIN ITS COLOR BRIGHTNESS AND FRESH, ATTRACTIVE APPEARANCE FOR FIVE (5) YEARS WITHOUT DULLING OR FADING. THE FIVE (5) YEAR WARRANTY SHALL INCLUDE A REPAIR WARRANTY OF COATING DELAMINATION, BLISTERING, OR CORROSION. POWDER COATED UNION METAL STRUCTURES SHALL HAVE THE THOMARIOS COATING WARRANTY REVISION DATE JULY 17 2007 OR LATER. POWDER COATED VALMONT STEEL STRUCTURES SHALL BE COATED WITH FINISH SPECIFICATION F-573 DATED 4-11-07 OR LATER, WHICH INCLUDES EPOXY POWDER PRIME COAT AND PENTABOND POWDER FINISH COAT.

CALCULATED DKA CHECKED DWB

TRAFFIC SIGNAL GENERAL NOTES

DEL-36-10.59

ITEM 632 - COMBINATION SIGNAL SUPPORT, TYPE TC-81.21 (BY DESIGN), AS PER PLAN (CONTINUED)

PAINT CHIP SAMPLES AND SHOP DRAWINGS FOR ALL COMPONENTS MUST BE SUBMITTED TO THE CITY OF DELAWARE FOR REVIEW AND APPROVAL AT LEAST SEVEN (7) DAYS PRIOR TO ORDERING MATERIALS.

CAST ALUMINUM TOP ORNAMENT (89-J3) ASSEMBLED WITH POLE TOP, LUMINAIRE ARM WITH ALUMINUM ORNAMENT AND PROJECTED TENONS MUST BE INCLUDED WITH SIGNAL SUPPORT AS SHOWN IN THE PLANS AND SHALL BE INCLUDED IN THE COST FOR THE SIGNAL SUPPORTS.

ITEM 632 - PEDESTAL, 11', TRANSFORMER BASE, AS PER PLAN
ITEM 632 - PEDESTAL, MISC.: 17', TRANSFORMER BASE

IN ADDITION TO THE REQUIREMENTS OF CMS 632, ALL PEDESTAL EXTERIOR SURFACES SHALL BE PREPARED IN ACCORDANCE WITH THE FINISH REQUIREMENTS OF ITEM 632 - COMBINATION SIGNAL SUPPORT, TYPE TC-81.21 (DY DESIGN), AS PER PLAN. ALL PEDESTAL ATTACHED ACCESSORIES SHALL BE PAINTED INCLUDING SIGNAL HEAD ATTACHMENT HARDWARE, TRANSFORMER BASE, AND MISCELLANEOUS BRACKETS. ALL SIGNAL CABLES SHALL BE RUN INSIDE THE POLES.

ITEM 633 - CABINET FOUNDATION, AS PER PLAN

THE FOUNDATION AREA SHALL BE EXTENDED TO ACCOMMODATE THE CABINET FOR THE BATTERY BACK-UP SYSTEM. THE ORIENTATION OF THE BATTERY BACK-UP CABINET IN RELATION TO THE CONTROLLER CABINET IS SHOWN ON THE PLAN SHEET. THE FOUNDATION SHALL BE CONSTRUCTED IN ACCORDANCE WITH NEMA CABINET FOUNDATIONS SHOWN ON TC-83.20.

PAYMENT FOR THIS ITEM SHALL BE AT THE CONTRACT BID PRICE PER EACH, AND INCLUDES ALL EQUIPMENT, LABOR, MATERIALS, AND INCIDENTALS TO INSTALL THE FOUNDATION, INCLUDING CONDUIT ELLS AND ANCHOR BOLTS. RESTORATION OF ANY DISTURBED AREA AND DISPOSAL OF SURPLUS MATERIAL PER CMS 104.04

ITEM 633 - CONTROLLER WORK PAD, AS PER PLAN

IN ADDITION TO TC-83.20, THE CONTROLLER WORK PAD SHALL EXTEND 36-INCHES FROM THE FRONT OF THE CABINET AND EXTEND THE ENTIRE WIDTH OF THE FOUNDATION AS DETAILED IN THE PLANS.

PAYMENT FOR THIS ITEM SHALL BE AT THE UNIT PRICE BID FOR EACH, AND INCLUDES ALL EQUIPMENT, LABOR, MATERIALS, AND INCIDENTALS TO INSTALL THE WORK PAD.

ITEM 633 - UNINTERRUPTIBLE POWER SUPPLY (UPS), AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF C&MS 633 AND 733, A BATTERY BACKUP SYSTEM SHALL BE PROVIDED THAT MEETS THE FOLLOWING:

THE UNIT SHALL BE AN ALPHA TECHNOLOGIES BRAND ALPHA FXM UNINTERRUPTIPLE POWER SUPPLY MODULE FXM 1100, A MEYERS BRAND POWER BACK/BC 100 UPS BATTERY BACKUP CABINET PBM-2000ITS UPS MODULE, OR APPROVED EQUAL. IN ALL CASES THIS ITEM SHALL MEET ODOT SPECIFICATIONS.

A MANUAL BY-PASS/DISCONNECT SWITCH INTERNAL TO THE CABINET SHALL BE INCLUDED.

THE BATTERY BACKUP CABINET SHALL BE ATTACHED TO THE LEFT SIDE OF THE CONTROLLER CABINET (TO THE LEFT OF THE THE CABINET DOOR), AND THE EXTERIOR OF THE CABINET SHALL MATCH THE COLOR OF THE CONTROLLER CABINET. ALL HOOKUPS, CABLE, ATTACHMENT HARDWARE, AND MISCELLANEOUS MATERIALS FOR BOTH ATTACHING THE CABINETS AND FOR FULL OPERATION OF THE BATTERY BACKUP SYSTEM SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THIS ITEM.

THE BACKUP CABINET SHALL BE MOUNTED ON A FOUNDATION PAD TO MATCH THE HEIGHT ABOVE GRADE OF THE ADJACENT CONTROLLER CABINET. THE WORK PAD IN FRONT OF THE FOUNDATION SHALL MATCH THE 35-INCH DIMENSION FOR THE CONTROLLER WORK PAD. THE FOUNDATION AND WORK PADS SHALL BE PAID SEPERATELY.

PAYMENT SHALL BE MADE AT THE CONTRACT BID PRICE FOR EACH, COMPLETE AND IN PLACE, ALL CONNECTIONS TESTED AND ACCEPTED.

ITEM 633 - CONTROLLER UNIT, TYPE TS2/A2, WITH CABINET, TYPE TS2, AS PER PLAN

THE TRAFFIC SIGNAL CONTROL EQUIPMENT PROVIDED AS PART OF THIS CONTRACT SHALL MEET THE FOLLOWING SPECIFICATIONS AND BE MANUFACTURERED BY SIEMENS TRAFFIC CONTROL SYSTEMS. THE EQUIPMENT PROVIDED SHALL BE THE LATEST MODEL CURRENTLY UNDER PRODUCTION AND NEW. THE CONTROLLER CABINET AND ACCESSORIES SHALL MEET THE NEMA TS2 STANDARD FOR ACTUATED CONTROLLER UNITS. THE CABINET SHALL BE A 36-INCH WIDE "M" CABINET. THE CABINET SHALL BE ALUMINUM, WITH THE NATURAL ALLUMINUM FINISH ON THE INSIDE. THE OUTSIDE OF THE CABINET SHALL BE POWDER COATED TO MATCH THE COLOR OF THE SIGNAL SUPPORTS. A PAINT CHIP SHALL BE SUBMITTED TO THE CITY OF DELAWARE DEPARTMENT OF ENGINEERING SERVICES FOR APPROVAL.

THE LOAD BAY SHALL BE THE TF5012 OR NEWER, WITH 12 LOAD SWITCH POSITIONS AND 12 LOAD SWITCHES PROVIDED (UNLESS LOAD SWITCHES SHALL BE IN A SEPERATE BOX IN THE CABINET). EACH LOAD SWITCH SHALL HAVE LIGHT EMITTING DIODES (LEDS) FOR THE CONTROLLER OUTPUT AND LOAD SWITCH OUTPUT, 8 FLASH RELAY POSITIONS (UNUSED FLASH RELAYS SHALL BE IN A SEPERATE BOX IN THE CABINET). ONE (1) NEMA 2-CIRCUIT FLASHER AND A MALFUNCTION MANAGEMENT UNIT (EBERLY DESIGN MMU16LE).

THERE SHALL BE NO LAG LEFT-TURN OPERATION. PHASE OMIT SHALL BE ACHIEVED THROUGH OMMITTED CALL PROGRAMMING TO PREVENT A LAG LEFT-TURN SIGNAL OPERATION.

A POWER/BC 100 UPS BATTERY BACKUP CABINET PBM-2000ITS UPS MODULE IS TO BE INSTALLED PER ODOT SPECIFICATIONS. THE BATTERY BACKUP SHALL BE PAID FOR SEPERATELY.

A GENERATOR POWER PANEL AND ENCLOSURE SHALL BE MOUNTED ON THE OUTSIDE OF THE UPPER SECTION OF THE CONTROLLER CABINET, ON THE SAME SIDE AS THE CIRCUIT BREAKERS. THE STANDARD DRAWING FOR THE GENERATOR POWER PANEL IS INCLUDED IN THIS PLAN AND SHALL MEET THOSE SPECIFICATIONS.

THE POLICE PANEL ON THE INSIDE OF THE CABINET DOOR SHALL HAVE VEHICLE DETECTOR AND PEDESTRIAN DETECTOR PUSHBUTTONS TO CALL PHASES 1 TO 8 INDIVIDUALLY. A STOP TIMING SWITCH, CABINET LIGHT SWITCH, AND AN AUTO FLASH SWITCH SHALL ALSO BE SUPPLIED ON THE POLICE PANEL ON THE OUTSIDE OF THE CABINET DOOR.

A CABINET DOOR OPEN SWITCH AND A CABINET LIGHT ON/OFF SWITCH SHALL ALSO BE SUPPLIED.

THE CONTROLLER SHALL HAVE A LIQUID CRYSTAL DISPLAY (LCD) WITH ADJUSTABLE BACKLIGHT. THE DISPLAY SHALL BE OF SUFFICIENT SIZE TO DISPLAY A MINIMUM OF FOUR (4) LINES OF TEXT WITH A MINIMUM OF 20 CHARACTERS PER LINE. THE DISPLAY SHALL BE READABLE IN DIRECT LIGHT OR DARKNESS.

THE FOLLOWING INFORMATION SHALL BE ON ALL LABELS IN THE CONTROLLER CABINET TO IDENTIFY WIRING FUNCTIONS:

A. LOOP DETECTOR LEAD-IN CABLE: PHASE NUMBER SERVICED, DIRECTION, MOVEMENT TYPE.

B. SIGNAL HEAD FIELD WIRING: PHASE NUMBER SERVICED, DIRECTION, MOVEMENT TYPE AND COLOR (RED, YELLOW, GREEN, YELLOW ARROW, GREEN ARROW), OR PEDESTRIAN MOVEMENT.

THE CONTROLLER SHALL BE THE SIEMENS MODEL EPAC M60 WITH INTEGRAL LATEST SEPAC LOCAL CONTROLLER SOFTWARE AND SHALL HAVE A BUILT-IN EXTERNAL, 10 BASE T ETHERNET PORT WITH CONFIGURABLE I.P. EACH CONTROLLER TIMER SHALL HAVE SIX (6) MODES OF COORDINATION, ADAPTIVE SPLIT TRAFFIC CONTROL, REPORTS, PREEMPTION/PRIORITY, DIAGNOSTICS, AND INTERNAL TIME BASE CONTROL.

EACH CONDUIT ENTRANCE TO THE CABINET SHALL BE SEALED WITH A RUBBER PIPE/CONDUIT SEAL GASKET. THE SEAL SHALL BE OF A MATERIAL AND TYPE TIGHTLY FITTING AND BE ABLE TO SEAL OUT WATER, INSECTS, RODENTS, AND DIRT. THE SEAL SHALL BE EASILY REMOVED FOR SERVICE INSTALLATIONS OR CABLE REPLACEMENT.

PAYMENT FOR ITEM 633 - CONTROLLER UNIT, TYPE TS2/A2, WITH CABINET, TYPE T2-2, AS PER PLAN SHALL BE AT THE CONTRACT BID PRICE PER EACH, COMPLETE AND IN PLACE, INCLUDING ALL CONNECTIONS, SPARE COMPONENTS, TESTED AND ACCEPTED.

ITEM 633 - PREEMPTION, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING AND INSTALLING PREEMPTION EQUIPMENT IN THE LOCATIONS AND LOCAL CONTROLLERS AS SHOWN IN THE PLANS. THE PREEMPTION SHALL CONFORM TO ODOT SPECIFICATION 633 AND SHALL UTILIZE COMMUNICATIONS TO IDENTIFY THE PRESENCE OF AN EMERGENCY PRIORITY VEHICLE. IT SHALL CAUSE THE TRAFFIC SIGNAL CONTROLLER TO SELECT A PRE-PROGRAMMED PREEMPTION PLAN THAT WILL DISPLAY AND HOLD THE DESIRED SIGNAL PHASE FOR THE DIRECTION OF THE EMERGENCY VEHICLE.

THE COMMUNICATIONS MEDIUM SHALL EMPLOY RADIO/GPS DETECTION TECHNIQUES TO DETERMINE AND LOG THE PRESENCE OF THE EMERGENCY VEHICLE. THE SYSTEM SHALL DETECT THE PRESENCE OF THE APPRROACHING VEHICLE THROUGH THE RF/GPS EMITTING DEVICE LOCATED ON THE EMERGENCY VEHICLE. THE SYSTEM SHALL ACTIVATE THE PREEMPTION SEQUENCE BY APPLYING A SIGNAL TO ONE OF THE CONTROLLER'S PREEMPT DISCRETE INPUTS. THE SYSTEM SHALL BE COMPLETELY COMPATIBLE WITH NEMA CONTROLLERS AND BE COMPLETELY WIRED AND TESTED. THE SYSTEM SHALL BE ABLE TO DETECT THE DIRECTION AND ETA OF APPROACHING VEHICLES FROM A DISTANCE OF 2,500 FEET OR MORE.

EACH INTERSECTION SHOWN IN THE PLANS SHALL BE SUPPLIED WITH THE FOLLOWING COMPONENTS, INCLUDED IN THIS ITEM:

1. PREEMPTION ANTENNA.
2. PREEMPTION ANTENNA WIRING.
3. PREEMPT PHASE SELECTOR UNIT AND INTERFACE WIRING PANEL.
4. CONFIRMATION LIGHT AND WIRING.

THE DETECTION ANTENNA AND CONFIRMATION LIGHTS SHALL BE RIGID MOUNTED TO THE MAST ARMS WITH MOUNTING HARDWARE AS RECOMMENDED BY THE EQUIPMENT SUPPLIER. THE SYSTEM SHALL BE CAPABLE OF DETECTING ALL EQUIPPED VEHICLES BY DIRECTION, ETA, SPEED, AND TURN SIGNAL STATUS. THE CONFIRMATION LIGHTS SHALL HAVE LED BULBS.

THE CONFIRMATION LIGHTS SHALL BE RIGID MOUNTED TO THE MAST ARMS AND ARE FOR THE PURPOSE OF PROVIDING MOTORISTS A VISUAL INDICATION THAT AN EMERGENCY VEHICLE IS APPROACHING THE INTERSECTION. THE CONFIRMATION LIGHT FACING THE APPROACH FROM WHICH THE VEHICLE HAS BEEN DETECTED SHALL BE A FLASHING WHITE LIGHT WHILE THE CONFIRMATION LIGHTS FOR ALL OTHER APPROACHES SHALL DISPLAY A STEADY WHITE LIGHT DURING PREEMPTION.

THE LIGHT FIXTURES SHALL BE A DUAL INDICATION, WEATHERPROOF FIXTURE UTILIZING A STANDARD OUTDOOR SPOTLIGHT.

THE CONTRACTOR SHALL THOROUGHLY INSPECT THE INSTALLED SYSTEM. AT A MINIMUM THE CONTRACTOR SHALL VERIFY THAT ALL CONNECTIONS ARE PROPERLY MADE TO THE CONTROLLER CABINET. THE CONTRACTOR SHALL CHECK THAT THE PHASE SELECTOR STATUS LIGHTS FOR RADIO AND GPS ARE CORRECT, AND THE CONTRACTOR SHALL ENSURE THAT THE PHASE SELECTOR IS SELECTING THE PROPER PHASE AND TIMING.

THE PREEMPTION SYSTEM SHALL BE RADIO/GPS. THE SYSTEM SHALL INCLUDE: RADIO/GPS POWER SUPPLY (IF NEEDED), PHASE SELECTOR, AND RADIO/GPS ANTENNA.

PAYMENT FOR ITEM 633 - PREEMPTION, AS PER PLAN, SHALL BE AT THE CONTRACT BID PRICE PER EACH, INCLUDING ALL MOUNTING HARDWARE, LABOR, EQUIPMENT, MATERIALS, TOOLS, AND INCIDENTALS TO FURNISH AND INSTALL THE SYSTEM, TESTED AND ACCEPTED.

ITEM 633 - PREEMPTION, AS PER PLAN, OPTICOM, ALTERNATE BID

THIS ITEM REPLACES ITEM 633 - PREEMPTION, AS PER PLAN, WITH THE OPTICOM EQUIPMENT SPECIFIED BELOW.

- OPTICOM MODEL 1010 GPS RADIO UNIT CONTAINING A GPS RECEIVER WITH ANTENNA AND A 2.4 GHZ SPREAD SPECTRUM TRANSCEIVER WITH ANTENNA.

- OPTICOM MODEL 764 MULTIMODE PHASE SELECTOR.

- OPTICOM MODEL 1070 GPS INSTALLATION CABLE.

- OPTICOM MODEL 575 CONFIRMATION LIGHTS.

- OPTICOM MODEL 764 MULTIMODE PHASE SELECTOR.

PAYMENT FOR ITEM 633 - PREEMPTION, AS PER PLAN, OPTICOM SHALL BE AT THE CONTRACT BID PRICE PER EACH, COMPLETE AND IN PLACE, INCLUDING ALL MOUNTING HARDWARE, LABOR, EQUIPMENT, MATERIALS, TOOLS, PROCESSOR CARD(S), CABLES AND CONNECTIONS TESTED AND ACCEPTED, SETUP, SUPPORT, AND SYSTEM TRAINING, AND INCIDENTALS TO FURNISH AND INSTALL THE SYSTEM.

SCHOOL FLASHER SUPPORT AND STREET LIGHT FINISH

SCHOOL FLASHER SUPPORT AND STREET LIGHTS SHALL BE MATTE FINISH BLACK

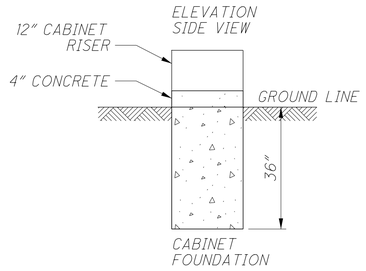
CALCULATED DKA CHECKED DWB

TRAFFIC SIGNAL GENERAL NOTES

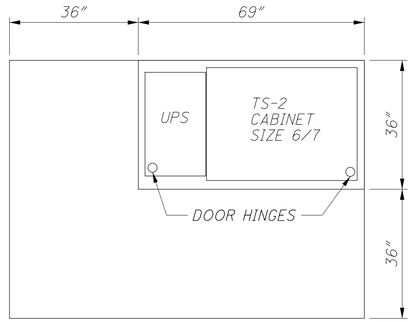
DEL-36-10.59

TS-2 SIZE 6/7 CABINET DETAIL (TYP.)

CABINET FOUNDATION DETAIL



CABINET & WORK PAD DETAIL



PLAN VIEW

NOTES:

1) THE SIZE OF THE UPS FOUNDATION MAY VARY BASED ON THE CABINET SIZE PROVIDED.

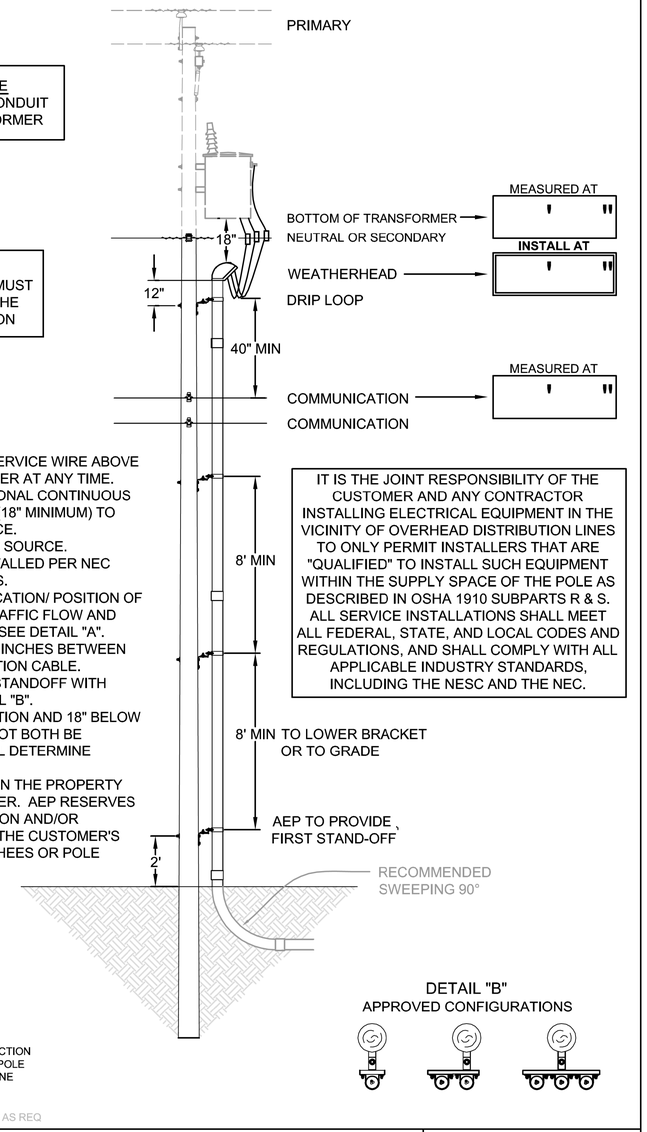
2) UPS FOUNDATION ELEVATION SHOULD MATCH CABINET FOUNDATION ELEVATION.

3) THE UPS CABINET SHALL BE MOUNTED FLUSH UP AGAINST THE SIGNAL CABINET AND SEALED.

4) CONDUIT AND WIRING FROM THE SIGNAL CABINET TO THE UPS SHALL BE INSTALLED THROUGH THE CABINET RISER.

DANGER - HIGH VOLTAGE
DO NOT CLIMB OR EXTEND CONDUIT ABOVE BOTTOM OF TRANSFORMER

CAUTION
UNQUALIFIED PERSONNEL MUST REMAIN 10 FEET BELOW THE WEATHERHEAD ELEVATION

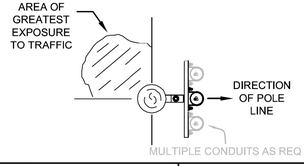


IT IS THE JOINT RESPONSIBILITY OF THE CUSTOMER AND ANY CONTRACTOR INSTALLING ELECTRICAL EQUIPMENT IN THE VICINITY OF OVERHEAD DISTRIBUTION LINES TO ONLY PERMIT INSTALLERS THAT ARE "QUALIFIED" TO INSTALL SUCH EQUIPMENT WITHIN THE SUPPLY SPACE OF THE POLE AS DESCRIBED IN OSHA 1910 SUBPARTS R & S. ALL SERVICE INSTALLATIONS SHALL MEET ALL FEDERAL, STATE, AND LOCAL CODES AND REGULATIONS, AND SHALL COMPLY WITH ALL APPLICABLE INDUSTRY STANDARDS, INCLUDING THE NESC AND THE NEC.

NOTES:

1. DO NOT EXTEND CONDUIT OR SERVICE WIRE ABOVE THE BOTTOM OF THE TRANSFORMER AT ANY TIME.
2. CUSTOMER TO PROVIDE ADDITIONAL CONTINUOUS CABLE WITH SUFFICIENT LENGTH (18" MINIMUM) TO CONNECT WITH OVERHEAD SOURCE.
3. AEP TO MAKE CONNECTIONS TO SOURCE.
4. CONDUIT ASSEMBLY TO BE INSTALLED PER NEC AND STATE/LOCAL REQUIREMENTS.
5. AEP SHALL DETERMINE THE LOCATION/ POSITION OF RISER ON THE POLE BASED ON TRAFFIC FLOW AND COMMUNICATION ATTACHMENTS. SEE DETAIL "A".
6. MAINTAIN A MINIMUM OF THREE INCHES BETWEEN RISER CONDUIT AND COMMUNICATION CABLE.
7. MULTIPLE CONDUITS REQUIRE STANDOFF WITH T-SLOT FOR SUPPORT. SEE DETAIL "B".
8. WHERE 40" ABOVE COMMUNICATION AND 18" BELOW BOTTOM OF TRANSFORMER CANNOT BOTH BE OBTAINED, AEP ENGINEERING WILL DETERMINE NECESSARY REMEDY
9. THE SERVICE RISER WILL REMAIN THE PROPERTY AND RESPONSIBILITY OF CUSTOMER. AEP RESERVES THE RIGHT TO REQUIRE RELOCATION AND/OR TRANSFER OF SERVICE RISER AT THE CUSTOMER'S EXPENSE, DUE TO FUTURE ATTACHEES OR POLE REPLACEMENT

DETAIL "A"
PREFERRED ORIENTATION



DETAIL "B"
APPROVED CONFIGURATIONS

AEP OHIO
A unit of American Electric Power

SPECIFICATION FOR PRIVATE RISER INSTALLED ON AEP POLE

CREATED: 6/11/12
REF: DS2007-B, DS2007-C

CALCULATED DKA
CHECKED DWB

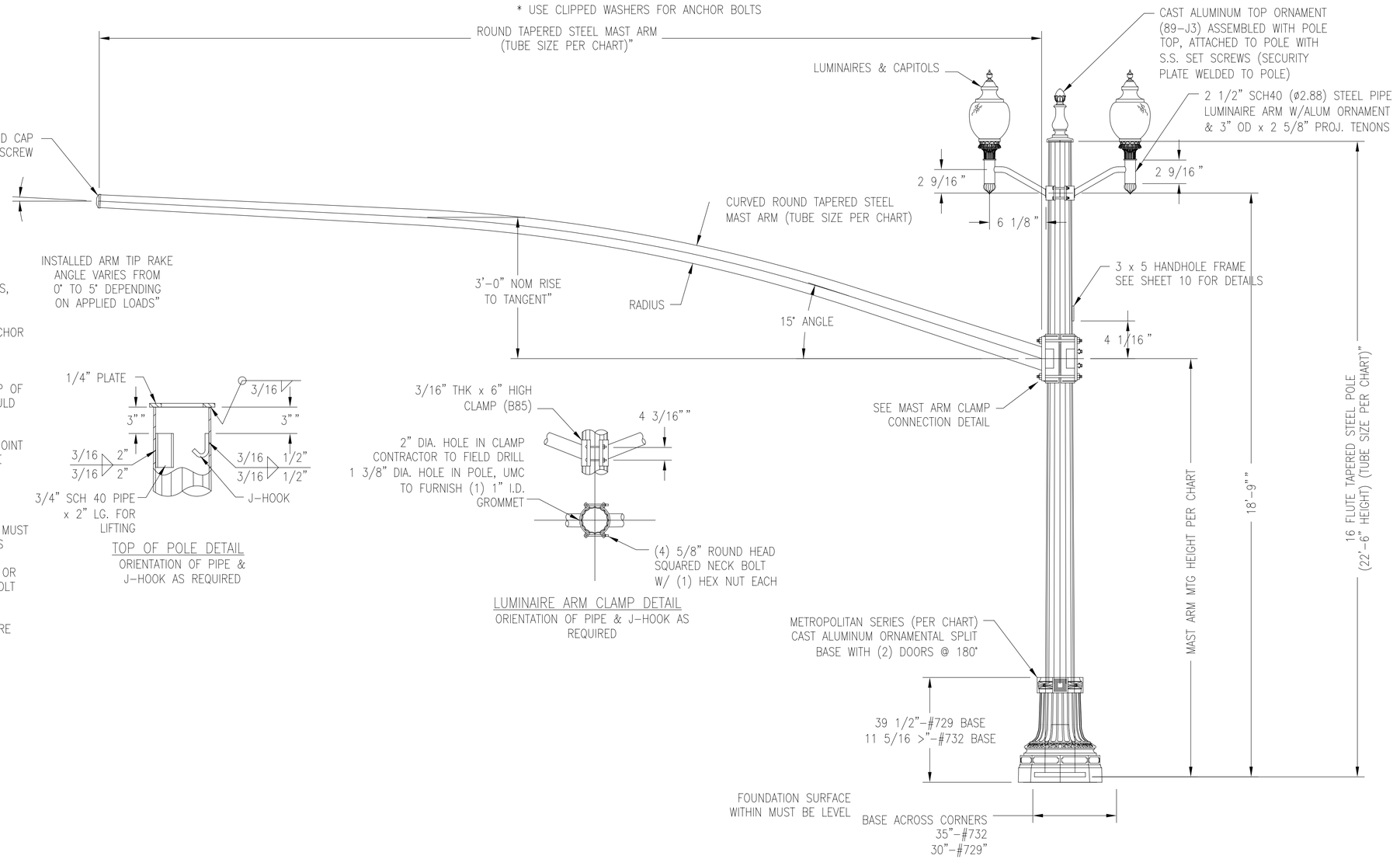
TRAFFIC

DEL-36-10.59

TC-81.21 COMBINATION SIGNAL SUPPORT DETAIL

7 GA = 0.179" WALL THICKNESS
3 GA = 0.250" WALL THICKNESS
E = ROUND STEEL TUBE @ 0.14 in/ft TAPER
F = 16-FLUTE STEEL TUBE @ 0.14 in/ft TAPER

* USE CLIPPED WASHERS FOR ANCHOR BOLTS



DESIGN CRITERIA:

1. DESIGNED IN ACCORDANCE WITH 2009 AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS" FOR 90 M.P.H. WIND ZONE.
2. ANCHOR BOLTS ANALYZED FOR STEEL STRENGTH ONLY. THE ANCHOR BOLT EMBEDMENT LENGTH SHOWN ON THIS DRAWING SHALL BE VERIFIED BY THE FOUNDATION ENGINEER.
3. THE EXPOSED LENGTH OF THE ANCHOR BOLT BETWEEN THE TOP OF THE FOUNDATION AND THE BOTTOM OF THE LEVELING NUT SHOULD NOT EXCEED ONE BOLT DIAMETER.
4. PER AASHTO THE MINIMUM LENGTH OF ANY TELESCOPIC FIELD JOINT SHALL BE 1.5 TIMES THE INSIDE DIAMETER OF THE END OF THE FEMALE SECTION.
5. VIBRATION IS MORE LIKELY TO OCCUR WHEN STRUCTURES ARE INSTALLED WITHOUT ATTACHING THE SIGNALS AND OR SIGNS. THEREFORE, THE INTENDED EQUIPMENT OR DAMPENING DEVICES MUST BE INSTALLED AT THE TIME OF ERECTION. BECAUSE VIBRATION IS GENERALLY UNPREDICTABLE, A MAINTENANCE PROGRAM SHOULD INCLUDE INSPECTION FOR INDICATIONS OF EXCESSIVE VIBRATION OR FATIGUE AND EXAMINATION FOR ANY STRUCTURAL DAMAGE OR BOLT LOOSENING.
6. CUSTOMER TO CONFIRM ALL DIMENSIONS & ORIENTATIONS BEFORE RELEASING ORDER FOR MANUFACTURING.

TOP OF POLE DETAIL
ORIENTATION OF POLE & J-HOOK AS REQUIRED

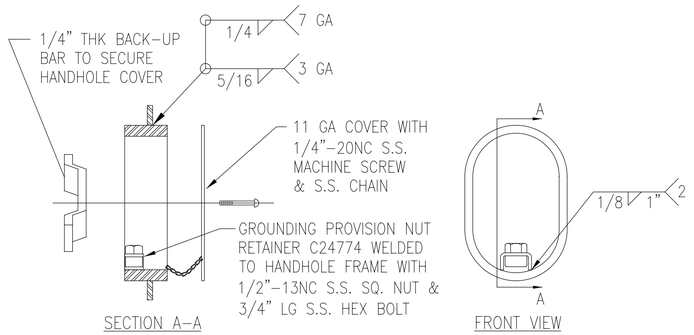
LUMINAIRE ARM CLAMP DETAIL
ORIENTATION OF PIPE & J-HOOK AS REQUIRED

MATERIAL SPECIFICATIONS	
TAPERED TUBE	ASTM A595 GR. A
PLATE	ASTM A36
ORNAMENTAL DECORATIVE BASE	ASTM B26 (356.0F)
HANDHOLE FRAME	ASTM A529 GR. 50 (PREFERRED) or ASTM A572 GR. 50 or ASTM A709 GR. 50
HANDHOLE COVER	ASTM A36 or A1011
ARM CONNECTION STUDS	ASTM A449
ARM CONNECTION NUTS	ASTM A563 GR. DH
FLAT WASHERS	ASTM F436
ARM JOINT STUD	ASTM A36
"ANCO" LOCK NUTS	ASTM A563 GR. DH
ARM END CAP	ASTM A1011
DECORATIVE POLE TOP	ASTM B26 (356.0F)
ANCHOR BOLTS	ASTM F1554 GR 105
ANCHOR BOLT NUTS	ASTM A563 GR DH
PIPE	ASTM A501 or A53 GR B
S.S. HARDWARE	AISI-300 SERIES (18-8)
HARDWARE FINISH	PER SALES ORDER
HARDWARE FINISH	HD GALV TO ASTM A153

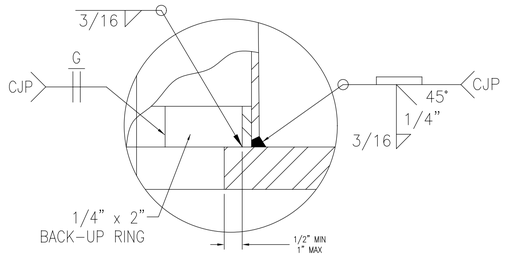
CALCULATED DKA
CHECKED DWB

TRAFFIC SIGNAL GENERAL NOTES

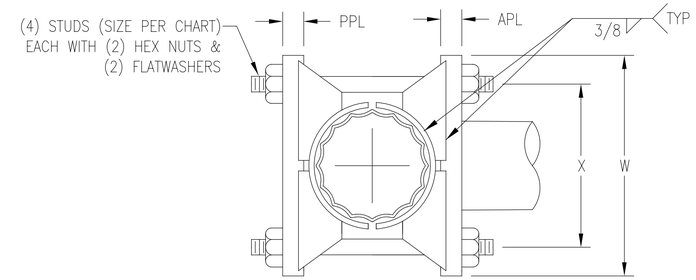
DEL-36-10.59

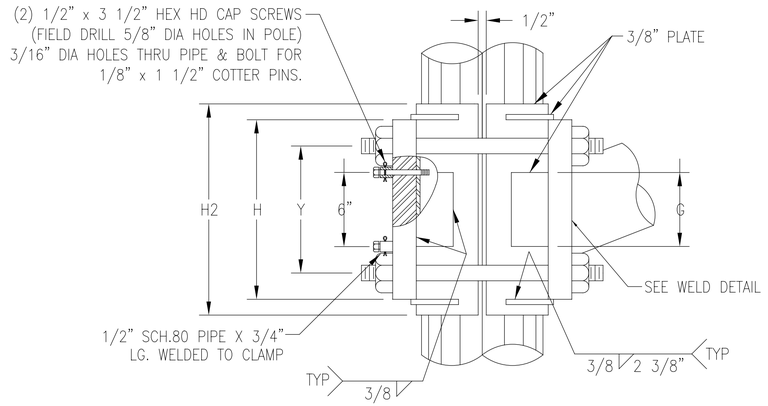


4" x 8" HANDHOLE FRAME DETAIL

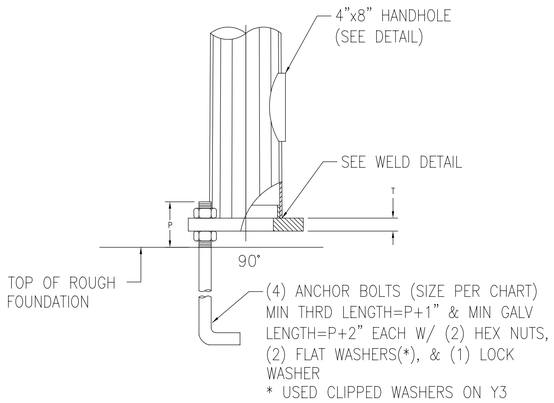


ARM FLANGE WELD DETAIL

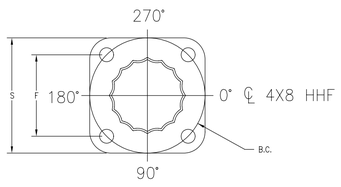




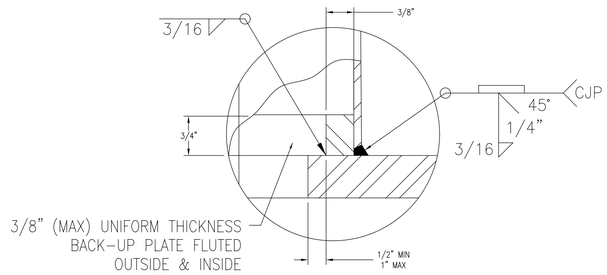
MAST ARM CLAMP CONNECTION DETAIL



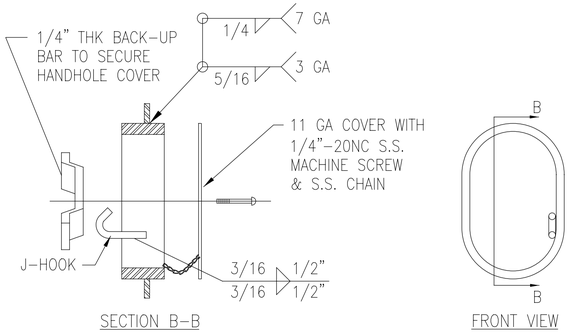
BASE CONNECTION DETAIL



BASE PLATE DETAIL



POLE BASE FLANGE WELD DETAIL



3" x 5" HANDHOLE FRAME DETAIL

CALCULATED DKA
CHECKED DWB

TRAFFIC SIGNAL GENERAL NOTES

DEL-36-10.59

MATERIAL SPECIFICATIONS FOR BBS GENERATOR POWER PANEL EQUIPMENT

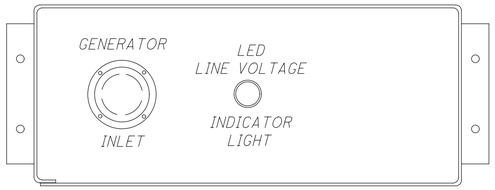
GENERATOR INLET - The inlet shall be 30 amp, 125/250V, locking, four (4) wire grounding and meet the NEMA configuration number L14-30-P 30A 125/250V specification. The inlet shall be a Hubbell catalog #2715.

LINE VOLTAGE GENERATOR SWITCH - The switch shall be 30 amp, 125/250V AC, two (2) pole, three (3) position (On, Off, On). The switch shall be a Hubbell catalog #1388.

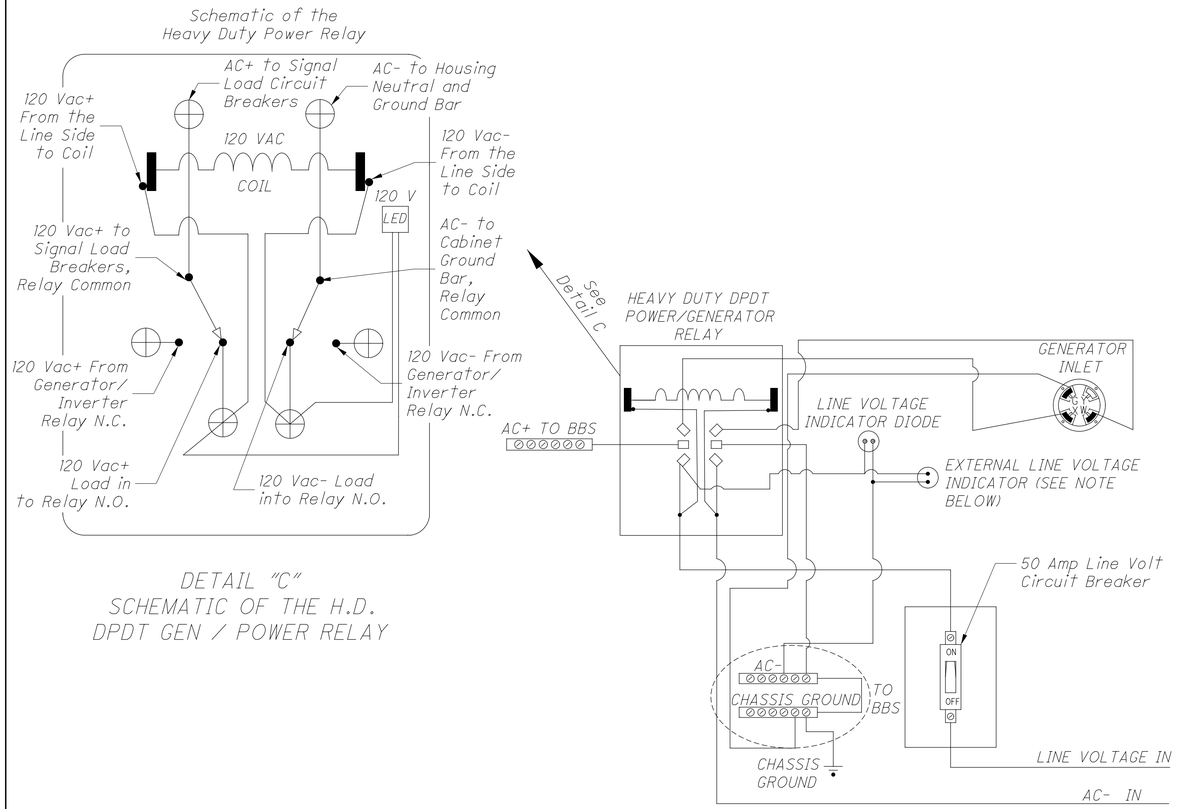
LINE VOLTAGE INDICATOR LIGHT - The indicator light shall be 125V AC light emitting diode with a red lens.

LINE VOLTAGE CIRCUIT BREAKER - The circuit breaker shall be single pole single throw and a minimum of 30 amps. The amperage shall be increased to accomodate greater loads, if necessary. The gauge of the power cable shall be of proper size per N.E.C.

EXTERNAL LINE VOLTAGE INDICATOR LIGHT - The indicator light shall be a 1" waterproof NEMA 4X or IP66 LED lamp with a green lens.



FRONT VIEW OF GENERATOR POWER PANEL

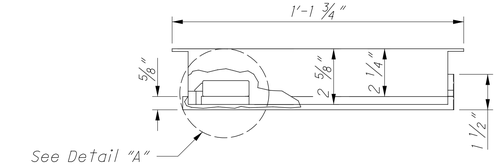


DETAIL "C"
SCHEMATIC OF THE H.D.
DPDT GEN / POWER RELAY

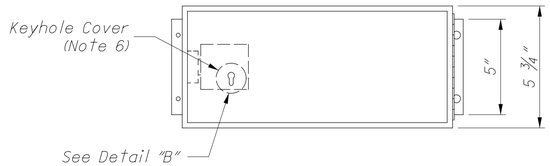
ELECTRICAL HOOKUP DETAIL FOR THE BBS GENERATOR POWER PANEL

NOTE: EXTERNAL LINE VOLTAGE INDICATOR LIGHT required when called for in the plans. EXTERNAL LINE VOLTAGE INDICATOR LIGHT shall be located on the enclosure exterior for visibility from the adjacent roadway when all cabinet, and generator panel doors are closed.

GENERATOR POWER PANEL ENCLOSURE



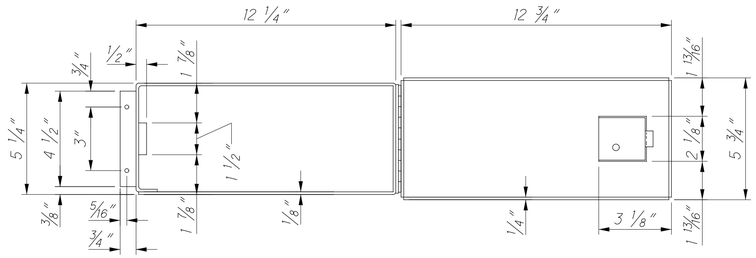
TOP VIEW



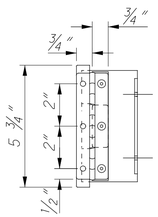
FRONT VIEW CLOSED DOOR

NOTES:

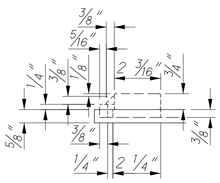
1. The enclosure shall be constructed of 1/8" thick alumimum.
2. The lock shall be the standard police door type, keyed with the standard flasher door skeleton key.
3. The door shall be sealed with a foam rubber gasket to prevent moisture from entering the enclosure.
4. The enclosure shall be mounted onto the outside of the controller cabinet with non-accessible bolts and sealed with a high quality silicon caulk at all surfaces touching the cabinet.
5. The hinge shall be of stainless steel or equivalent corrosive-resistant material.
6. Keyhole shall be covered with a movable circular aluminum or brass cover with top pivot pin.



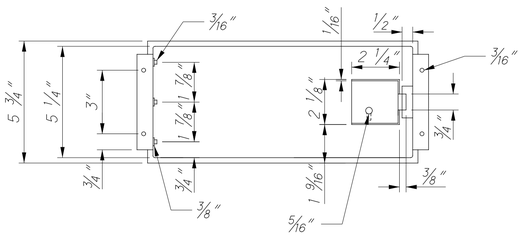
FRONT VIEW OPEN DOOR



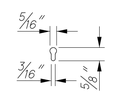
RIGHT SIDE VIEW
CLOSED DOOR



DETAIL "A"



BACK VIEW CLOSED DOOR



DETAIL "B"

THIS DRAWING REPLACES PIS 203012 DATED 04-20-2012.

PLAN INSERT SHEET

BATTERY BACKUP SYSTEM (BBS)
GENERATOR POWER PANEL

PIS 203012

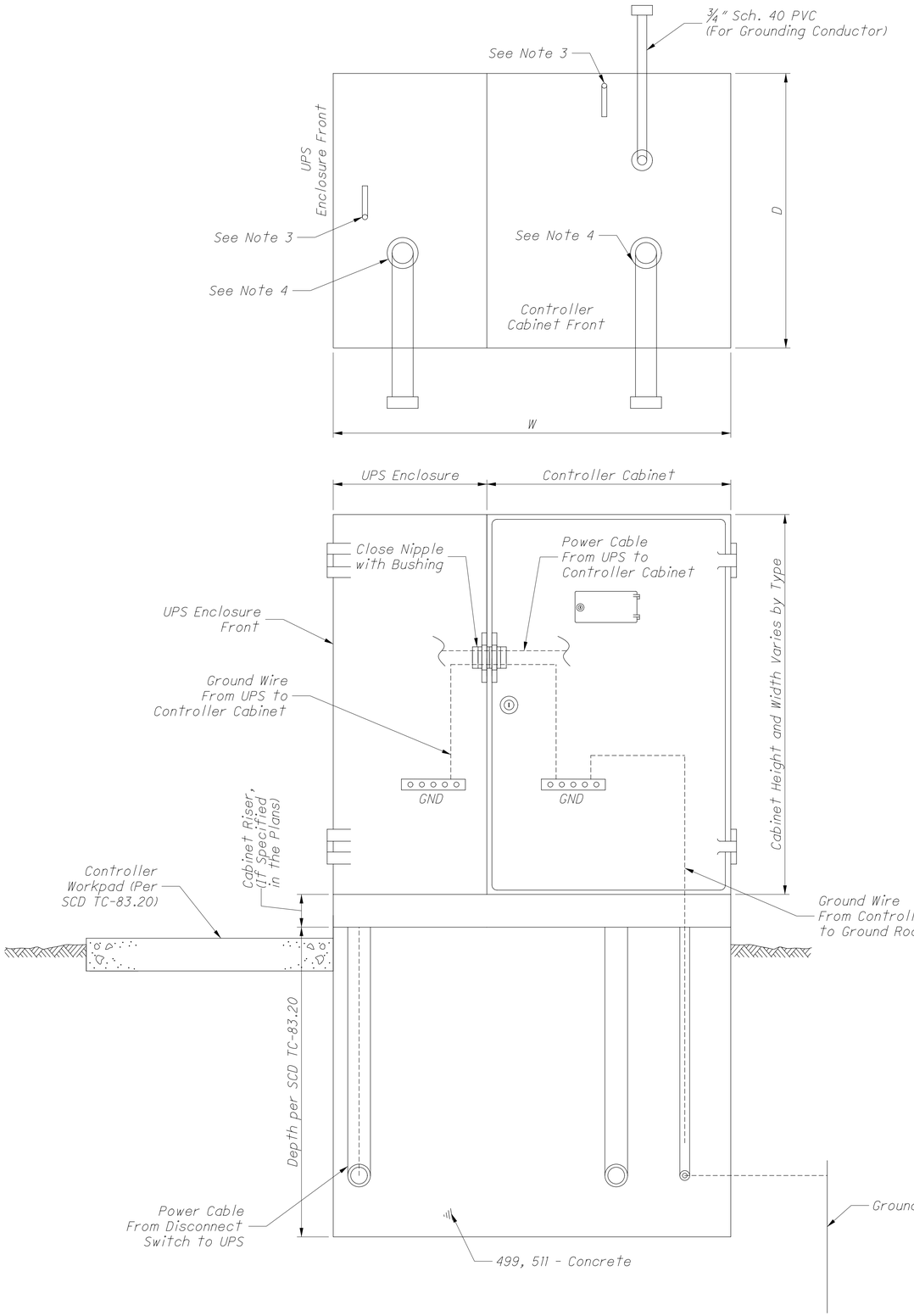
OFFICE OF ROADWAY ENGINEERING

DESIGNED XXX | REVIEWED XXX

REVISION DATE 07-18-2014 | CHECKED CHECKED

1 / 1

145
224



NOTES:

1. The Uninterruptible Power Supply (UPS) enclosure shall be mounted flush up against the traffic signal cabinet and sealed with silicone. The Contractor shall be responsible for providing the necessary power cable between the UPS unit and signal cabinet.
2. The UPS should be placed on the opposite side of the pull box on a 332/336 cabinet (per Standard Construction Drawing (SCD) TC-83.20). The UPS placement for a NEMA cabinet varies, placement should provide adequate access with respect to slope, guardrail spacing, etc.
3. The size, number, and location of anchor bolts shall be in accordance with the manufacturer's recommendations.
4. The size, number, and orientation of conduit ells shall be as shown in the plan, except that a ¾" schedule 40 PVC shall be installed in each foundation.
5. 1/2" preformed joint filler as per CMS 705.03 shall be used between foundations and adjacent paved areas.
6. See SCD TC-83.20 for further details.

TYPE	W (IN.)	D (IN.)	FOUNDATION CONCRETE (CU. YD.)
TS-1	60	24	1.23
TS-2	70	36	2.16
2070/170	50	36	1.54

THIS DRAWING REPLACES PIS 208320 DATED 04-20-2012.

OFFICE OF ROADWAY ENGINEERING

DESIGNED XXX REVIEWED XXX

REVISION DATE 07-18-2014 CHECKED CHECKED

PLAN INSERT SHEET

UNINTERRUPTIBLE POWER SUPPLY (UPS) AND CONTROLLER CABINET FOUNDATION

PIS 208320

1 / 1

146
224

CALCULATED DKA
CHECKED DWB

TRAFFIC SIGNAL INTERCONNECT NOTES

DEL-36-10.59

ITEM 815 - SPRED SPECTRUM RADIO, AS PER PLAN

A SPREAD SPECTRUM RADIO COMMUNICATION SYSTEM SHALL BE INSTALLED AT THE SPECIFIED LOCATIONS ON THE PLANS INCLUDING BUT NOT LIMITED TO THE FOLLOWING EQUIPMENT:

1. UBIQUITI NANOSTATION M5, NSM5, 5 GHZ
2. CAT5E CABLE, SHIELDED, PE OUTDOOR RATED, WEATHERPROOF JACKET, UBIQUITI TOUGH CABLE TC-PRO OR EQUIVALENT.
3. CAT5E CONNECTORS, SHIELDED, WITH CRIMP CONNECTION FOR CABLE DRAIN WIRE, UBIQUITI TC-CONN-100 OR EQUIVALENT.
4. ETHERNET SURGE PROTECTION THAT SUPPORTS POE (POWER OVER ETHERNET), AND SHALL BE THE UBIQUITI TOUGH SWITCH TS-8-PRO.
5. DIN RAIL MOUNTING BRACKET FOR MOUNTING NSM5 POWER SUPPLY IN SIGNAL CABINET OR SOLAR POWERED DEVICE ENCLOSURE.

THE RADIO/ANTENNA SHALL BE MOUNTED WITH NO LESS THAN 24" ABOVE THE TOP OF THE POLE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE AIMING AND PROPER LOCATION OF THE RADIO ANTENNA FOR ACHIEVING FULL COMMUNICATION WITH THE OVERHEIGHT DETECTION SYSTEM AND SIGNS. THE RADIO ANTENNAS SHALL BE PLACED ON THE POLES AS SPECIFIED IN THE PLANS.

ANY ITEM NOT USED IN THE COMPLETED INSTALLATION SHALL BECOME THE PROPERTY OF THE CITY OF DELAWARE. ITEMS SHALL BE CAREFULLY TRANSPORTED TO A LOCATION WITHIN THE CITY AS DIRECTED BY THE DEPARTMENT OF ENGINEERING SERVICES AND CAREFULLY UNLOADED AND STORED AS DIRECTED. THE CONTRACTOR SHALL CALL THE DEPARTMENT OF TRAFFIC & ENGINEERING SERVICES AT (740) 203-1700 TO IDENTIFY THE DELIVERY LOCATION WITHIN THE CITY. ANY ITEMS SPECIFICALLY DESIGNATED AS UNUSABLE BY THE CITY SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR.

THE CONTRACTOR SHALL FURNISH THREE (3) ADDITIONAL RADIOS/ANTENNAS AND ALL HARDWARE LISTED ABOVE, AND PROVIDE THE EQUIPMENT TO THE CITY OF DELAWARE. THIS QUANTITY HAS BEEN CARRIED FORWARD TO THE GENERAL SUMMARY.

THE CONTRACTOR SHALL DEMONSTRATE RADIO COMMUNICATION IS WORKING PROPERLY. PAYMENT SHALL BE MADE AT THE CONTRACT PRICE BID FOR ITEM 815 - SPREAD SPECTRUM RADIO, AS PER PLAN AND SHALL INCLUDE ALL CABLES, MOUNTING HARDWARE, LABOR, MATERIALS, TOOLS, EUIPMENT, AND INCIDENTALS TO FURNISH AND INSTALL THE SYSTEM, COMPLETE AND IN PLACE, ALL CONNECTIONS TESTED AND ACCEPTED.

ITEM 804 - FIBER OPTIC CABLE, 144 FIBER, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF ODOT SS 804 AND SS 904, THE FOLLOWING SHALL ALSO APPLY:

NOTES FOR AERIAL INSTALLATION:

1. FOR AERIAL CONSTRUCTION, INCORPORATE A SLACK LOOP EVERY SEVEN SPANS, AND AT LOGICAL LOCATIONS TO SPLICE OFF THE MAIN FIBER LINE AS DETERMINED BY THE PUBLIC WORKS DEPARTMENT AND THE DEPARTMENT OF INFORMATION TECHNOLOGIES.

2. VENDOR MUST INSTALL RISER U-GUARDS WHEN ASCENDING OR DESCENDING FROM A SUPPORT POLE.

3. SUBSURFACE - FOR SUBSURFACE CONSTRUCTION, THE CONDUIT SHALL BE:

   A. THREE, 1-1/4 INCH (MINIMUM) SDR 11 HDPE CONDUITS UNLESS OTHERWISE SPECIDIED.
   B. CONDUITS ARE TO BE BLUE, ORANGE ,AND GREEN, UNLESS OTHERWISE SPECIDIED.
   C. PULL-BOXES ARE TO BE 48 X 30 X 36 DEEP, POLYMER CONCRETE BOX W/20K METAL OR METAL CLAD LID, BOLT DOWN.
   D. SHOP DRAWINGS OF PULL-BOX AND LID TO BE APPROVED BY THE PUBLIC WORKS DEPARTMENT PRIOR TO INSTALLATION.
   E. PULL-BOX SPACING OF NO MORE THAN 1000 FEET BETWEEN BOXES AND WHERE SPECIFIED AT LOGICAL PLACES TO SPLICE INTO THE FIBER.
   F. TRACE WIRE MUST BE USED THROUGHOUT SYSTEM AND IS TO BE PLACED IN THE SOLID ORANGE CONDUIT.
   G. IF TRENCHING, PLASTIC CAUTION TAPE IS TO BE PLACED OVER THE CONDUIT AT A DEPTH OF 18 INCHES. NEWLY INSTALLED PULL-BOXES MUST BE MARKED WITH 4 X 4 WYE POLES PAINTED ORANGE AT THE TOP - TO REMAIN UNTIL FIBER IS INSTALLED (WITH TRACER WIRE).
   H. CONCRETE ENCASE CONDUIT AT ALL ROAD CROSSINGS TO THE TOP OF SUBGRADE.
   I. MINIMUM VERTICAL SEPARATION SHALL BE 1.5 FEET BETWEEN FIBER CONDUIT AND ALL OTHER UTILITIES.

NOTES REGARDING THE FIBER:

1. FIBER TO BE INSTALLED IS 144 STRAND FIBER OPTIC CABLE.

2. ALL SPLICING MUST BE COLOR CODED BETWEEN DIFFERENT CABLES. I.E., RED TUBE FIBERS MUST BE SPLICED TO RED TUBE FIBERS, ETC.

3. ALL CONTRACTORS THAT ARE TO INSTALL FIBER LINE THAT ARE TO BE APPROVED BY THE CITY.

NOTES ALL PROJECTS:

1. CONTRACTOR SHALL PROVIDE RECORD DRAWINGS IN THE FORMAT SPECIFIED BY THE CITY OF DELAWARE GIS DEPARTMENT WHEN CONSTRUCTION IS COMPLETE, AND ACCEPTED.

ITEM 633 - CONTROLLER ITEM, MISC.: LAYER 2 ETHERNET SWITCH

IN ADDITION TO THE REQUIREMENTS OF ODOT SS 804 AND SS 904, THE CONTRACTOR SHALL SUPPLY A NETRONIX 12 PORT ETHERNET SWITCH, MODEL WS-12-250-AC.

ITEM 625 - PULL BOX, MISC.: 48" POLYMER PULL BOX

IN ADDITION TO THE REQUIREMENTS OF CMS 625 AND 725, THE PULL BOXES ARE TO BE 48 X 30 X 36 DEEP, POLYMER CONCRETE BOX W/20K METAL OR METAL CLAD LID, BOLT DOWN.

PEDESTRIAN SIGNS

R10-3A-9
1 - LEFT ARROW
1 - RIGHT ARROW

R9-3-18
1 EACH

R9-3BP-18
1 - LEFT ARROW

R10-3A-9
2 - LEFT ARROWS

POLYCARBONATE SIGNAL HEADS

12" L.E.D. LENSES W/ BACKPLATES

PEDESTRIAN HEADS (LED, COUNTDOWN, TYPE D2)
PED A1, PED A2
PED B1, PED B2

1, 2, 3, 4, 5, 7, 8, & 9

6

SIGNS

D3-1
84" X 24"
1 EACH

D3-1
60" X 24"
2 EACH

R3-5L-30
1 EACH

M4-5-24
M3-1-24
M1-4-24-2
M1-4-24-2
M6-1-21

POLE A - PROPOSED PEDESTAL SUPPORT W/(1)-VEHICULAR SIGNAL HEAD, (1)-PEDESTRIAN SIGNAL HEAD, & (1)- APS PEDESTRIAN PUSH BUTTON; STA. 560+70, 67' LT.

(1)-2" CONDUIT W/(3)-7/C, (1)-2/C, & (1)-GND.; IN TRNECH = 25'

(1)-3" CONDUIT W/(1)-7/C, (1)-PREEMPTION CABLE, (1)-RADAR CABLE, & (1)-GND; (1)-2" CONDUIT W/(1)-LIGHTING CABLE; IN TRENCH = 4'

POLE B - PROPOSED COMBINATION SIGNAL SUPPORT W/(1)-MAST ARM, (1)-STOP BAR DETECTION RADAR, (1)-PREEMPTION CONFIRMATION LIGHT, & (2)-LUMINAIRES STA. 560+48, 50' LT.

(1)-2" CONDUIT W/(1)-7/C, (1)-2C, & (1)-GND.; IN TRENCH = 27'

POLE C - PROPOSED PEDESTAL SUPPORT W/(1)-PEDESTRIAN SIGNAL HEAD & (1)- APS PEDESTRIAN PUSH BUTTON; STA. 560+26, 45' LT.

EXISTING O-H POWER CABLE (REUSE*)

EXISTING UTILITY POLE (POWER SOURCE); STA. 559+53, 53' LT.

EX. PULL BOX (TO BE REMOVED)

POLE D - PROPOSED PEDESTAL SUPPORT W/(1)-VEHICULAR SIGNAL HEAD, (1)-PEDESTRIAN SIGNAL HEAD, & (1)- APS PEDESTRIAN PUSH BUTTON; STA. 560+29, 15' RT.

(1)-2" CONDUIT W/(2)-7/C, (1)-2/C, & (1)-GND.; IN TRENCH = 12'

PB2

(1)-2" CONDUIT W/(2)-7/C, (1)-2/C, & (1)-GND.; IN TRENCH = 32'

(1)-3" CONDUIT W/(4)-7/C, (3)-2/C, (1)-PREEMPTION CABLE, (2)-RADAR CABLES, & (1)-GND. (1)-3" CONDUIT W/ PULL WIRE; (1)-3" CONDUIT W/(1)-LIGHTING CABLE; JACK OR DRILLED UNDER PAVEMENT = 69'

PROPOSED GROUND MOUNTED CONTROLLER & UPS W/ WORKPAD; STA. 560+69, 21' RT.

(1)-3" CONDUIT W/(8)-7/C, (4)-2/C, (3)-PREEMPTION CABLES, (4)-RADAR CABLES, & (1)-GND.; (1)-3" CONDUIT W/ (1)-FIBER OPTIC INTERCONNECT CABLE (SEE INTERCONNECT PLANS); (1)-3" CONDUIT W/(1)-LIGHTING CABLE; IN TRENCH = 4'

(1)-2" CONDUIT W/ (1)-POWER CABLE; IN TRENCH = 39'

NEW UTILITY POLE IN VICINITY* STA. 560+79, 22' RT. INSTALL (1)-2" CONDUIT RISER AS PART OF POWER SERVICE

(1)-3" CONDUIT W/ (2)-7/C, (1)-2/C, (1)-RADAR CABLE, & (1)-GND.; (1)-3" CONDUIT W/ WITH PULL WIRE; JACK OR DRILLED UNDER PAVEMENT = 105'

PED B2

POLE G - PROPOSED PEDESTAL SUPPORT W/(1)-PEDESTRIAN SIGNAL HEAD, & (1)- APS PEDESTRIAN PUSH BUTTON; STA. 561+36, 67' LT.

(1)-2" CONDUIT W/(1)-7/C, (1)-2/C, & (1)-GND.; IN TRENCH = 37'

PB4

(1)-2" CONDUIT W/(1)-7/C, (1)-RADAR CABLE, & (1)-GND.; IN TRENCH = 6'

POLE F - PROPOSED PEDESTAL SUPPORT W/(1)- VEHICULAR SIGNAL HEAD & (1) - STOP BAR DETECTION RADAR STA. 561+61, 34' LT.

PROP. LIGHTING (SEE LIGHTING PLANS)

POLE E - PROPOSED COMBINATION SIGNAL SUPPORT W/(2)-MAST ARMS, (1)-STOP BAR DETECTION RADAR , (1)-ADVANCE DETECTION RADAR, (2)-PREEMPTION CONFIRMATION LIGHTS, (2)-LUMINAIRES, (2)-DISCONNECT SWITCHES & (1)-UTILITY METER; STA. 561+07, 18' RT.

PROP. CONDUIT W/ FIBER OPTIC CABLE; (SEE INTERCONNECT PLANS)

(1)-2" CONDUIT W/(1)-POWER CABLE; IN TRENCH = 29'

(1)-3" CONDUIT W/(2)-7/C, (2)-PREEMPTION CABLES, (2)-RADAR CABLES, & (1)-GND.; (1)-2" CONDUIT W/ (2) LIGHTING CABLES; IN TRENCH = 39'

PROP. LIGHTING (SEE LIGHTING PLANS)

PROP. CONDUIT W/ FFIBER OPTIC CABLE (SEE INTERCONNECT PLANS)

*NOTE: EXISTING POWER SOURCE TO BE REUSED. CONNECT EXISTING OVERHEAD SERVICE CABLE TO NEW UTILITY POLE AND SPLICE IN POWER CABLES. CONTRACTOR SHALL CORDINATE WITH AEP TO PERFORM THIS WORK.

PULLBOX TABLE

PULL BOX #	STATION	SIDE	OFFSET	SIZE (IN.)
PB1	560+52	LT.	50'	24
PB2	560+38	RT.	18'	18
PB3	560+69	RT.	17'	48
PB4	561+55	LT.	36'	24

LEGEND

	PROP	EXIST		PROP	EXIST
TRAFFIC SIGNAL, 3 UNIT HEAD, 12"			CONTROLLER CABINET AND WORK PAD (TS-2)		
TRAFFIC SIGNAL, 5 UNIT HEAD, 12"			TRAFFIC PULL BOX		
SIGNAL SUPPORT POLE			STOP BAR RADAR DETECTOR		
PEDESTRIAN SIGNAL			ADVANCE RADAR DETECTOR		
PEDESTRIAN PUSH BUTTON			DETECTOR ZONE		
PEDESTAL SUPPORT			PREEMPTION CONFIRMATION LIGHT		
LUMINAIRE			LIGHTING PULL BOX		

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED DK.A
CHECKED DWB

TRAFFIC SIGNAL PLAN
E. WILLIAM ST. (U.S. 36) AT LAKE ST.

DEL-36-10.59

148
224

...\signals\sheets\95625CP001 (Sheet) 1/14/2019 11:28:01 AM afrankhouser

SIGNAL TIMING CHART (TEM FORM 496-3)

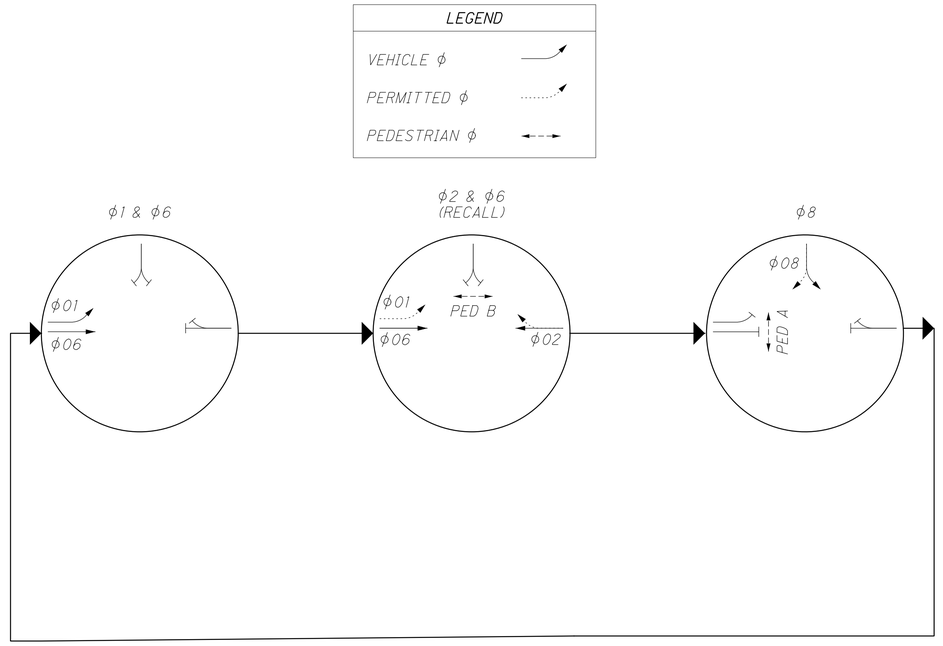
INTERSECTION: E. WILLIAM ST. (U.S. 36) AT LAKE ST. MAINTAINING AGENCY: CITY OF DELAWARE									
START UP START IN: ϕ2/ϕ6 YELLOW/ϕ8 RED FLASH TIME FOR FLASH OR ALL RED: 3 SEC. FIRST PHASE(S): 2 & 6 COLOR DISPLAYED: GREEN			DUAL ENTRY: YES REST IN RED:		PHASES: RING 1 -			2 & 6 RING 2 -	
			OVERLAP			A	B	C	D
			PHASES			-	-	-	-
INTERVAL OR FEATURE			CONTROLLER MOVEMENT NO.						
INTERSECTION MOVEMENT (PHASE)			1	2	3	4	5	6	7	8
DIRECTION			EB LT	WB	-	-	-	EB	-	SB
MINIMUM GREEN (INITIAL)		(SEC.)	7	20	-	-	-	20	-	10
ADDED INITIAL		*(SEC./ACTUATION)	-	-	-	-	-	-	-	-
MAXIMUM INITIAL		(SEC.)	-	-	-	-	-	-	-	-
PASSAGE TIME (PRESET GAP)		(SEC.)	3	3	-	-	-	3	-	3
TIME BEFORE REDUCTION		*(SEC.)	-	-	-	-	-	-	-	-
MINIMUM GAP		*(SEC.)	-	-	-	-	-	-	-	-
TIME TO REDUCE		*(SEC.)	-	-	-	-	-	-	-	-
MAXIMUM GREEN I		(SEC.)	20	45	-	-	-	55	-	25
MAXIMUM GREEN II		(SEC.)	20	45	-	-	-	55	-	25
YELLOW CHANGE		(SEC.)	3.5	4	-	-	-	4	-	3.5
ALL RED CLEARANCE		(SEC.)	2.5	2	-	-	-	2	-	2.5
WALK		(SEC.)	-	7	-	-	-	7	-	7
PEDESTRIAN CLEARANCE		(SEC.)	-	14	-	-	-	14	-	12
RECALL	MAXIMUM	(ON/OFF)	OFF	OFF	-	-	-	OFF	-	OFF
	MINIMUM	(ON/OFF)	OFF	ON	-	-	-	ON	-	OFF
	PEDESTRIAN	(ON/OFF)	OFF	ON	-	-	-	ON	-	OFF
MEMORY		(ON/OFF)	OFF	OFF	-	-	-	OFF	-	OFF

*VOLUME DENSITY CONTROLS

NOTES:

- ALL MOVEMENTS SHALL BE ACTUATED. THE PRIMARY THRU MOVEMENT SHOULD HAVE MIN RECALL ACTIVE TO REST IN GREEN.
- FOR PROTECTED/PERMISSIVE PHASES, IMPLEMENT CALL OMITS TO AVOID YELLOW BALL TRAP.
- COUNTDOWN PEDESTRIAN SIGNALS SHALL GO TO ZERO ON YELLOW PER OMUTCD FIGURE 4E-2.
- ALL DETECTOR DELAYS SHALL BE PLACED IN THE CONTROLLER.

PHASING DIAGRAM



TRAFFIC SIGNAL DETECTOR CHART (TEM FORM 496-4)

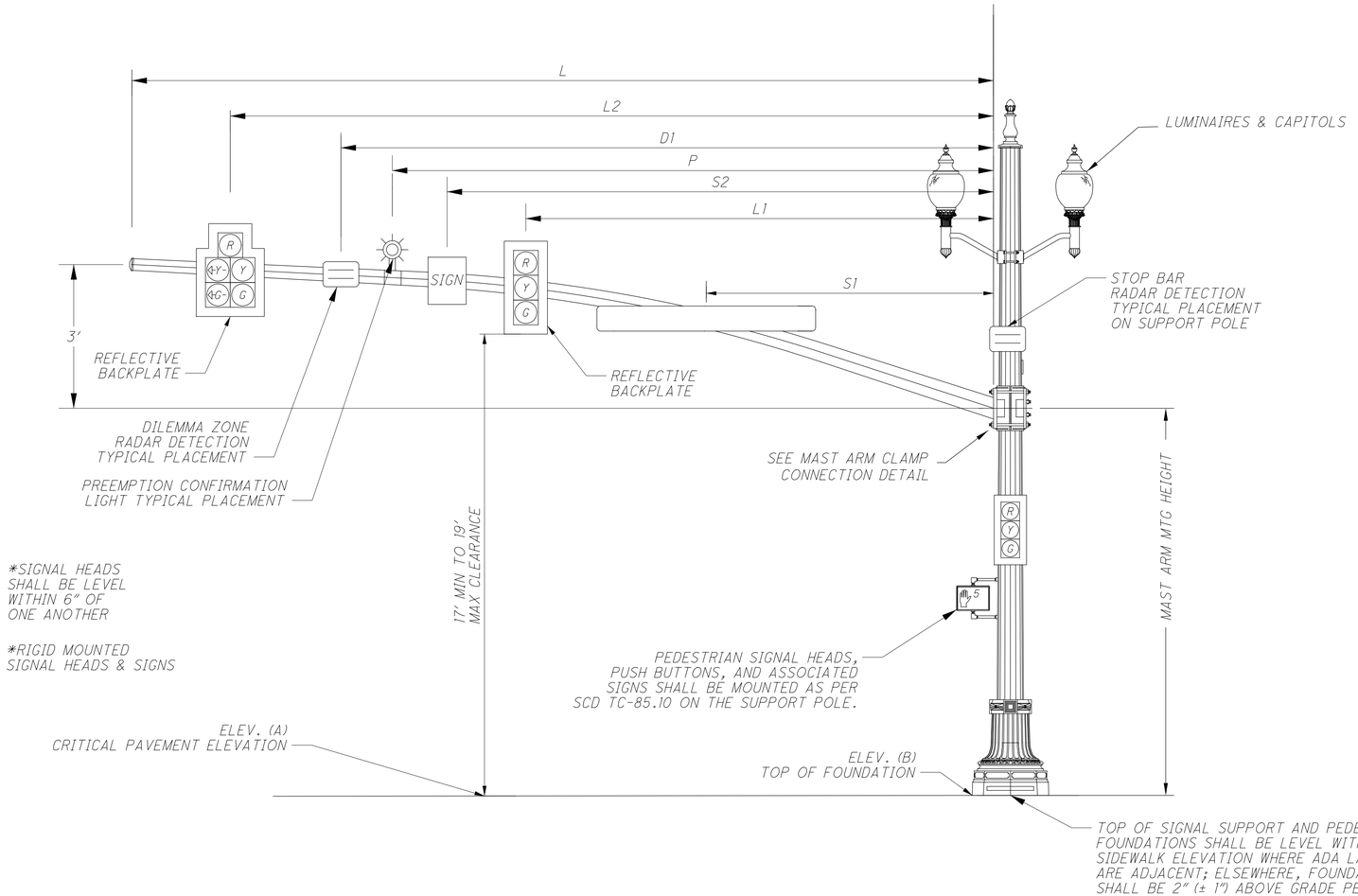
DETECTION ZONE	MOVEMENT	PULSE OR PRESENCE	ASSOCIATED PHASE	DELAY IN CONTROLLER (SEC)	DELAY INHIBIT PHASE	PURPOSE	DETECTION ZONE LENGTH (FT)
D-1	EB THRU	PRESENCE	6	3	6	CALL/EXTEND PHASE 6	25
D-2	EB LT	PRESENCE	1	-	-	CALL/EXTEND PHASE 1	25
D-3	WB THRU	PRESENCE	2	-	-	CALL/EXTEND PHASE 2	25
D-4	SB THRU	PRESENCE	8	-	-	CALL/EXTEND PHASE 8	25
D-5	EB THRU	PRESENCE	6	-	-	DILEMMA ZONE	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

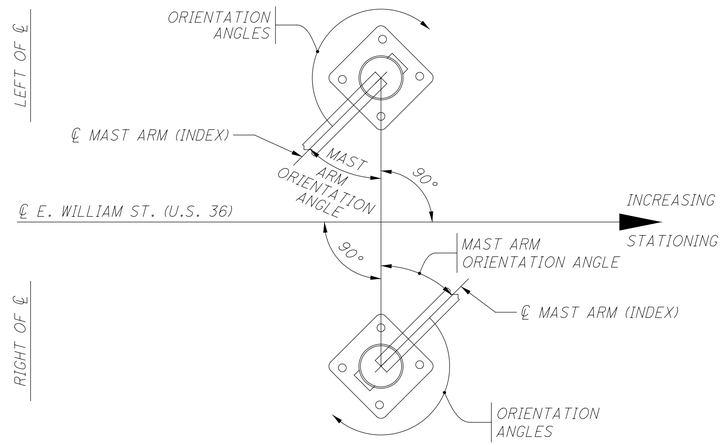
NOTE: DILEMMA ZONE SPEED THRESHOLD >30 MPH

CALCULATED DKA
CHECKED DWB

TRAFFIC SIGNAL PLAN DETAILS
E. WILLIAM ST. (U.S. 36) AT LAKE ST.

DEL-36-10.59





POLE ORIENTATION

MAST ARM TABLE (TEM FIGURE 498-37 & 38)

SUPPORT NO.	STATION	OFFSET	ELEVATION		SIGNAL SUPPORT DETAILS										ORIENTATION ANGLES FROM MAST ARM								
			A	B	DESIGN TYPE	DESIGN NO.	POLE HEIGHT	ARM HEIGHT	L	L1	L2	S1	S2	D1	P	MAST ARM A ANGLE	MAST ARM B ANGLE	PEDESTRIAN SIGNAL	PEDESTRIAN BUTTON	POWER SERVICE	SUPPLEMENTAL HEAD	BRACKET ARM	HANDHOLE	CABLE ENTRANCE 12" FROM TOP
							FT	FT	FT	FT	FT	FT	FT	FT	FT	DEG	DEG	DEG	DEG	DEG	DEG	DEG	DEG	DEG
POLE B	560+48	50' LT.	881.3	881.7	TC-81.21	3	22.5	16	36	21	33	15	-	-	27	0	-	-	-	-	-	-	180	-
POLE E-A	561+07	18' RT.	883.5	883.5	TC-81.21	3	22.5	16	26	10	20	5	23	13	16	0	-	-	-	-	-	-	180	-
POLE E-B	561+07	18' RT.	883.5	883.5			22.5	16	22	7	19	12	-	4	17	-	270	-	-	-	-	-	-	-
POLE A	560+70	67' LT.	-	883	-	PED	17	-	-	-	-	-	-	-	-	-	-	0	180	-	214	-	180	-
POLE C	560+27	45' LT.	-	883.1	-	PED	11	-	-	-	-	-	-	-	-	-	-	270	270	-	-	-	180	-
POLE D	560+29	15' RT.	-	880.8	-	PED	17	-	-	-	-	-	-	-	-	-	-	90	135	-	270	-	180	-
POLE F	561+61	34' LT.	-	885.5	-	PED	17	-	-	-	-	-	-	-	-	-	-	-	-	-	278	-	180	-
POLE G	561+36	67' LT.	-	883.8	-	PED	11	-	-	-	-	-	-	-	-	-	-	0	0	-	-	-	180	-

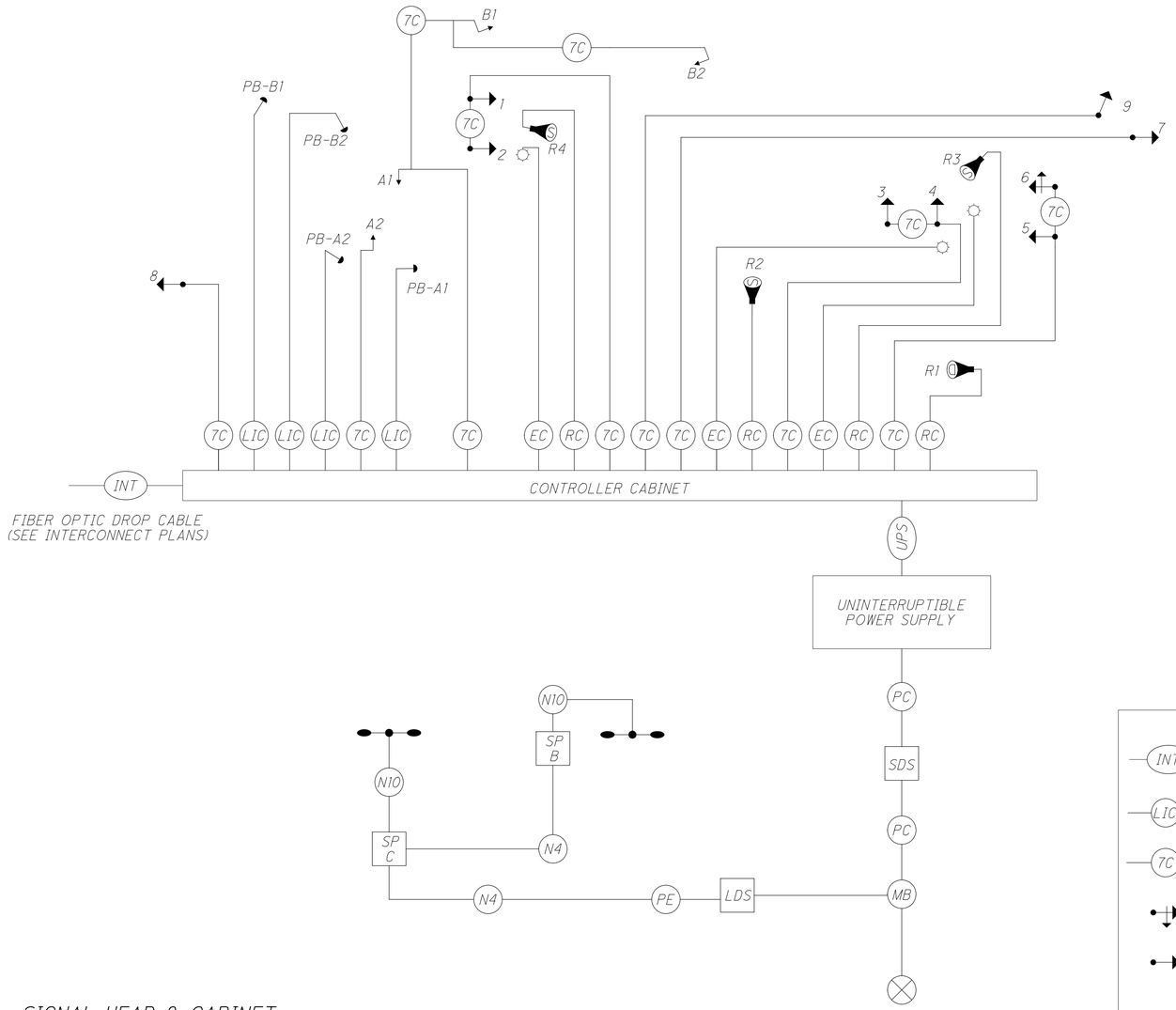
* MAST ARM MOUNTING HEIGHT SUBJECT TO CHANGE. CONTRACTOR TO COORDINATE WITH THE ENGINEER AND POLE MANUFACTURER TO DETERMINE FINAL MOUNTING HEIGHT.

CALCULATED DKA
CHECKED DWB

TRAFFIC SIGNAL PLAN DETAILS
E. WILLIAM ST. (U.S. 36) AT LAKE ST.

DEL-36-10.59

WIRING DIAGRAM (TYPICAL)
(NOT TO SCALE)



FIELD WIRING HOOK-UP CHART (TEM FORM 496-16)

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
1, 2, & 7 (WB)	R	ϕ2 R	Y
	Y	ϕ2 Y	
	G	ϕ2 G	
3, 4, & 9 (SB)	R	ϕ8 R	R
	Y	ϕ8 Y	
	G	ϕ8 G	
5 & 8 (EB)	R	ϕ6 R	Y
	Y	ϕ6 Y	
	G	ϕ6 G	
6 (EB LT)	R	ϕ6 R	Y
	Y	ϕ6 Y	
	G	ϕ6 G	
	<--Y---	ϕ1 Y	
	<--G---	ϕ1 G	
LS = LOAD SWITCH			

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
PEDESTRIAN MOVEMENTS			
PED A1	W	ϕ8 PED/ LS 10 G	OUT
	DW	ϕ8 PED/ LS 10 R	
PED A2	W	ϕ8 PED/ LS 11 G	OUT
	DW	ϕ8 PED/ LS 11 R	
PED B1	W	ϕ2/ϕ6 PED/ LS 12 G	OUT
	DW	ϕ2/ϕ6 PED/ LS 12 R	
PED B2	W	ϕ2/ϕ6 PED/ LS 13 G	OUT
	DW	ϕ2/ϕ6 PED/ LS 13 R	

SIGNAL HEAD & CABINET FIELD WIRING HOOK-UP

SIGNAL DISPLAY	WIRE COLOR PER APPROACH
THRU R	RED
THRU Y	ORANGE
THRU G	GREEN
L/T R	BLACK
L/T ~~Y~~	WHITE W/BLACK TRACER
L/T ~~G~~	BLUE
R/T R	NOT USED BY CITY
R/T ~~Y~~	RED W/BLACK TRACER
R/T ~~G~~	GREEN W/BLACK TRACER

PED UNIT FIELD WIRING HOOKUP

PED UNIT LOCATION	CROSSWALK DISPLAY	WIRE COLOR
SOUTH CROSSWALK	WALK	BLACK
	DONT WALK	ORANGE
WEST CROSSWALK	WALK	GREEN
	DONT WALK	RED
NORTH CROSSWALK	WALK	BLUE
	DONT WALK	WHITE W/BLACK TRACER
EAST CROSSWALK	WALK	GREEN W/BLACK TRACER
	DONT WALK	RED W/BLACK TRACER

WHITE SHALL BE USED FOR THE COMMON. SPLICE ALL WIRES IN THE SIGNAL HEAD OR PED UNIT. USE A #14 AWG 2 WIRE SPADE TERMINAL FOR EVERY 2 WIRES PER CONNECTION AND A #14 AWG 1 WIRE SPADE TERMINAL FOR EACH SINGLE WIRE CONNECTION TO CONNECT ALL WIRES TO ALL FIELD TERMINALS. USE BUTT SPLICES ON ALL THROUGH WIRES. ALL UNUSED WIRES SHALL BE SPLICED THROUGH AND SHALL HAVE A DEAD-END TERMINAL AT THE END OF THE WIRE.

LEGEND

- INT — FIBER OPTIC DROP CABLE
- LIC — 2/C NO. 14 AWG (LEAD-IN CABLE)
- 7C — SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG
- 5 SECTION VEHICULAR SIGNAL HEAD, 1-WAY
- 3 SECTION VEHICULAR SIGNAL HEAD, 1-WAY
- PEDESTRIAN SIGNAL HEAD
- PEDESTRIAN PUSH BUTTON
- EC — PREEMPTION CABLE
- RC — RADAR DETECTION CABLE
- DILEMMA ZONE RADAR DETECTION UNIT
- STOP BAR RADAR DETECTION UNIT
- PREEMPTION CONFIRMATION LIGHT
- PE — PHOTOELECTRIC CELL
- LUMINAIRE, DECORATIVE, AS PER PLAN
- POWER SOURCE
- PC — POWER CABLE, 2 CONDUCTOR, NO. X AWG
- SP X — SIGNAL SUPPORT POLE NO. __
- MB — METER BASE
- NX — NO. X AWG DISTRIBUTION CABLE
- NXX — NO. XX AWG POLE & BRACKET CABLE
- SDS — SIGNAL DISCONNECT SWITCH
- LDS — LIGHTING DISCONNECT SWITCH

CALCULATED DKA
CHECKED DWB

TRAFFIC SIGNAL PLAN DETAILS
E. WILLIAM ST. (U.S. 36) AT LAKE ST.

DEL-36-10.59

PEDESTRIAN SIGNS

R10-3A-9
2 - RIGHT ARROWS

R10-3A-9
1 - RIGHT ARROW
1 - LEFT ARROW

(S4) (S5)
R9-3-18

R9-3BP-18
1 - LEFT ARROW
1 - RIGHT ARROW

SIGNS

(S1) (S2)

D3-1
90" X 24"
2 EACH

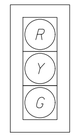
(S3)

D3-1
84" X 24"
1 EACH

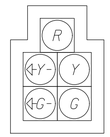
POLYCARBONATE SIGNAL HEADS

12" L.E.D. LENSES
W/ BACKPLATES

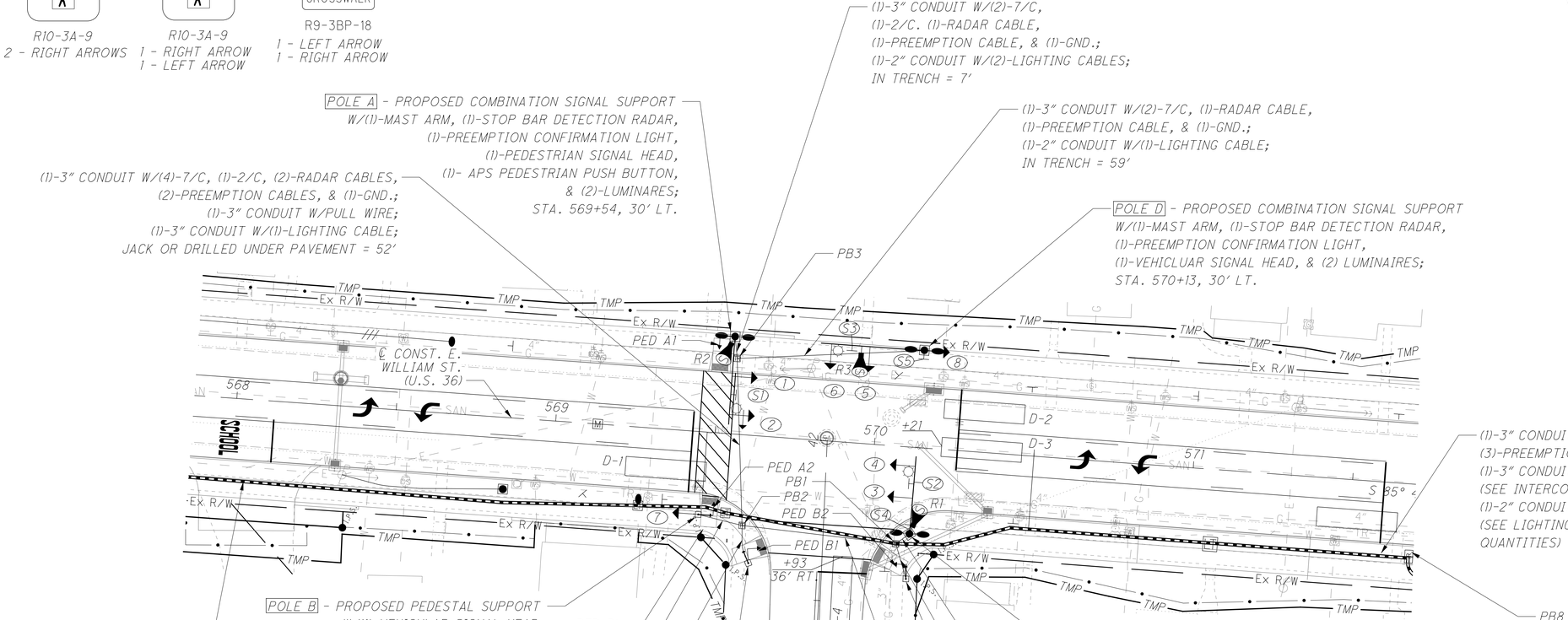
PEDESTRIAN HEADS
(LED, COUNTDOWN,
TYPE D2)
PED A1, PED A2
PED B1, PED B2



1, 3, 4, 5,
6, 7, & 8



2



PULLBOX TABLE

PULL BOX #	STATION	SIDE	OFFSET	SIZE (IN.)
PB1	570+09	RT.	30.5'	24
PB2	569+61	RT.	28'	24
PB3	569+55	LT.	24'	24

PULL BOXES 4-8 SHOWN ON SHEET 156 .

NOTE:
SIGNAL IS CONTROLLED BY THE CONTROLLER LOCATED AT WILLIAM STREET & SHANNING STREET. SEE SHEET 156 .

LEGEND

	PROP	EXIST
TRAFFIC SIGNAL, 3 UNIT HEAD, 12"	●	
TRAFFIC SIGNAL, 5 UNIT HEAD, 12"	●	
SIGNAL SUPPORT POLE	●	
PEDESTRIAN SIGNAL	●	
PEDESTRIAN PUSH BUTTON	●	
PEDESTAL SUPPORT	▪	
LUMINAIRE, CONVENTIONAL	●	
TRAFFIC PULL BOX	PB	
STOP BAR RADAR DETECTOR	S	
DETECTOR ZONE	▭	
PREEMPTION CONFIRMATION LIGHT	○	

N

0 10 20 40 HORIZONTAL SCALE IN FEET

CALCULATED DKA CHECKED DWB

TRAFFIC SIGNAL PLAN
E. WILLIAM ST. (U.S. 36) AT CHESHIRE ST.

DEL-36-10.59

TRAFFIC SIGNAL DETECTOR CHART (TEM FORM 496-4)

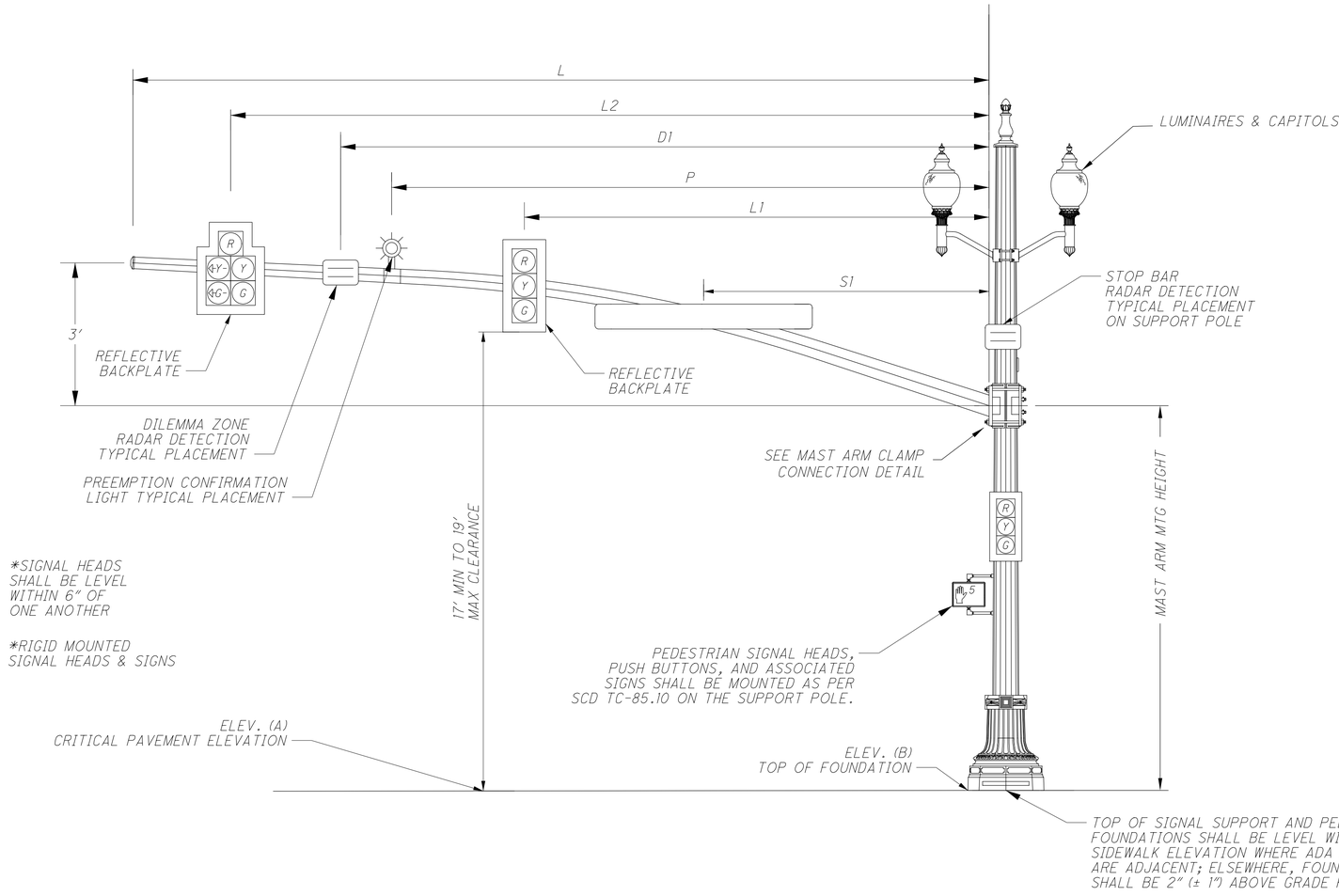
DETECTION ZONE	MOVEMENT	PULSE OR PRESENCE	ASSOCIATED PHASE	DELAY IN CONTROLLER (SEC)	DELAY INHIBIT PHASE	PURPOSE	DETECTION ZONE LENGTH (FT)
D1	EB THRU	PRESENCE	6	-	-	CALL/EXTEND PHASE 6	25
D2	WB LT	PRESENCE	5	-	-	CALL/EXTEND PHASE 5	25
D3	WB THRU	PRESENCE	2	-	-	CALL/EXTEND PHASE 2	25
D4	NB THRU	PRESENCE	4	8	4	CALL/EXTEND PHASE 4	25
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

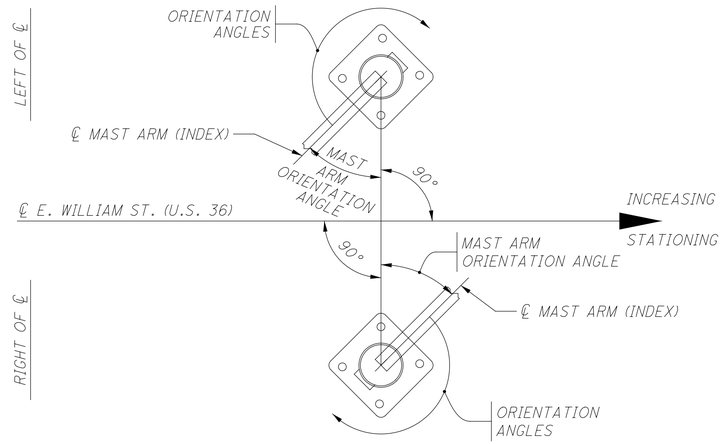
NOTE: DILEMMA ZONE SPEED THRESHOLD >35 MPH

DEL-36-10.59

TRAFFIC SIGNAL PLAN DETAILS
E. WILLIAM ST. (U.S. 36) AT CHESHIRE ST.

CALCULATED DKA
CHECKED DWB





POLE ORIENTATION

MAST ARM TABLE (TEM FIGURE 498-37 & 38)

SUPPORT NO.	STATION	OFFSET	ELEVATION		SIGNAL SUPPORT DETAILS									ORIENTATION ANGLES FROM MAST ARM								
			A	B	DESIGN TYPE	DESIGN NO.	POLE HEIGHT	ARM HEIGHT	L	L1	L2	S1	D1	P	MAST ARM A ANGLE	MAST ARM B ANGLE	PEDESTRIAN SIGNAL	PEDESTRIAN BUTTON	POWER SERVICE	SUPPLEMENTAL HEAD	BRACKET ARM	HANDHOLE	CABLE ENTRANCE 12" FROM TOP
							FT	FT	FT	FT	FT	FT	FT	FT	DEG	DEG	DEG	DEG	DEG	DEG	DEG	DEG	DEG
POLE A	569+54	30' LT.	911.78	911.8	TC-81.21	2	22.5	16	26	11	23	16	-	20	0	-	90	90	-	-	-	180	-
POLE C	570+13	27' RT.	912.73	913.4	TC-81.21	1	22.5	16	23	10	20	15	-	19	0	-	-	-	-	-	-	180	-
POLE D	570+13	30' LT.	912.46	912.5	TC-81.21	2	22.5	16	31	16	28	22	18	26	90	-	-	-	-	180	-	90	-
POLE B	569+46	26' RT.	-	911.6	PED	-	17	-	-	-	-	-	-	-	-	-	90	90	-	270	-	180	-
POLE E	569+63	40' RT.	-	912.9	PED	-	11	-	-	-	-	-	-	-	-	-	0	315	-	-	-	180	-
POLE F	570+13	41' RT	-	914.2	PED	-	11	-	-	-	-	-	-	-	-	-	0	0	-	-	-	180	-

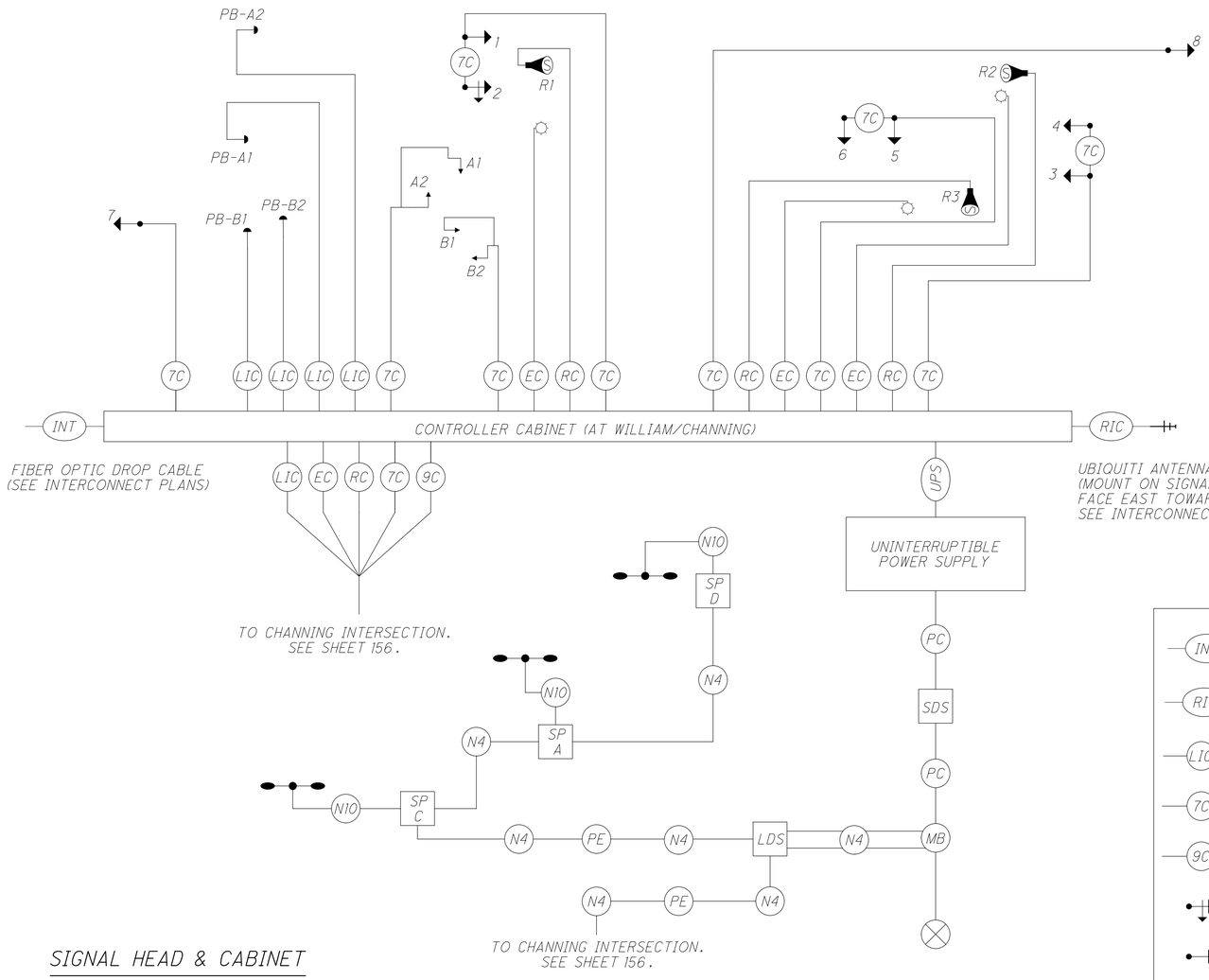
* MAST ARM MOUNTING HEIGHT SUBJECT TO CHANGE. CONTRACTOR TO COORDINATE WITH THE ENGINEER AND POLE MANUFACTURER TO DETERMINE FINAL MOUNTING HEIGHT.

CALCULATED DKA
CHECKED DWB

TRAFFIC SIGNAL PLAN DETAILS
E. WILLIAM ST. (U.S. 36) AT CHESHIRE ST.

DEL-36-10.59

WIRING DIAGRAM
(NOT TO SCALE)



NOTE:

-OVERLAPS SHALL BE WIRED TO THE APROPRIATE LOAD SWITCHES AS PER THE FIELD WIRING HOOKUP CHART AND CONFIGURED IN THE CONTROLLER SOFTWARE PER THE SIGNAL TIMING CHART.

-CONTROLLER IS LOCATED AT THE INTERSECTION OF WILLIAM STREET AND CHANNING STREET. SEE SHEET 156.

SIGNAL HEAD & CABINET FIELD WIRING HOOK-UP

SIGNAL DISPLAY	WIRE COLOR PER APPROACH
THRU R	RED
THRU Y	ORANGE
THRU G	GREEN
L/T R	BLACK
L/T ~~Y~~	WHITE W/BLACK TRACER
L/T ~~G~~	BLUE
R/T R	NOT USED BY CITY
R/T ~~Y~~	RED W/BLACK TRACER
R/T ~~G~~	GREEN W/BLACK TRACER

PED UNIT FIELD WIRING HOOKUP

PED UNIT LOCATION	CROSSWALK DISPLAY	WIRE COLOR
SOUTH CROSSWALK	WALK	BLACK
	DONT WALK	ORANGE
WEST CROSSWALK	WALK	GREEN
	DONT WALK	RED
NORTH CROSSWALK	WALK	BLUE
	DONT WALK	WHITE W/BLACK TRACER
EAST CROSSWALK	WALK	GREEN W/BLACK TRACER
	DONT WALK	RED W/BLACK TRACER

WHITE SHALL BE USED FOR THE COMMON. SPLICE ALL WIRES IN THE SIGNAL HEAD OR PED UNIT. USE A #14 AWG 2 WIRE SPADE TERMINAL FOR EVERY 2 WIRES PER CONNECTION AND A #14 AWG 1 WIRE SPADE TERMINAL FOR EACH SINGLE WIRE CONNECTION TO CONNECT ALL WIRES TO ALL FIELD TERMINALS. USE BUTT SPLICES ON ALL THROUGH WIRES. ALL UNUSED WIRES SHALL BE SPLICED THROUGH AND SHALL HAVE A DEAD-END TERMINAL AT THE END OF THE WIRE.

LEGEND

- INT — FIBER OPTIC DROP CABLE
- RIC — RADIO INTERCONNECT CABLE
- LIC — 2/C NO. 14 AWG (LEAD-IN CABLE)
- 7C — SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG
- 9C — SIGNAL CABLE, 9 CONDUCTOR, NO. 14 AWG
- 5 SECTION VEHICULAR SIGNAL HEAD, 1-WAY
- 3 SECTION VEHICULAR SIGNAL HEAD, 1-WAY
- PEDESTRIAN SIGNAL HEAD
- PEDESTRIAN PUSH BUTTON
- EC — PREEMPTION CABLE
- RC — RADAR DETECTION CABLE
- DILEMMA ZONE RADAR DETECTION UNIT
- STOP BAR RADAR DETECTION UNIT
- RADIO ANTENNA
- PE — PHOTOELECTRIC CELL
- LUMINAIRE, DECORATIVE, AS PER PLAN
- POWER SOURCE
- PC — POWER CABLE, 2 CONDUCTOR, NO. X AWG
- SP X — SIGNAL SUPPORT POLE NO. __
- MB — METER BASE
- N4 — NO. 4 AWG DISTRIBUTION CABLE
- N10 — NO. 10 AWG POLE & BRACKET CABLE
- SDS — SIGNAL DISCONNECT SWITCH
- LDS — LIGHTING DISCONNECT SWITCH
- PREEMPTION CONFIRMATION LIGHT

CALCULATED DKA | CHECKED DWB

TRAFFIC SIGNAL PLAN DETAILS
E. WILLIAM ST. (U.S. 36) AT CHESHIRE ST.

DEL-36-10.59

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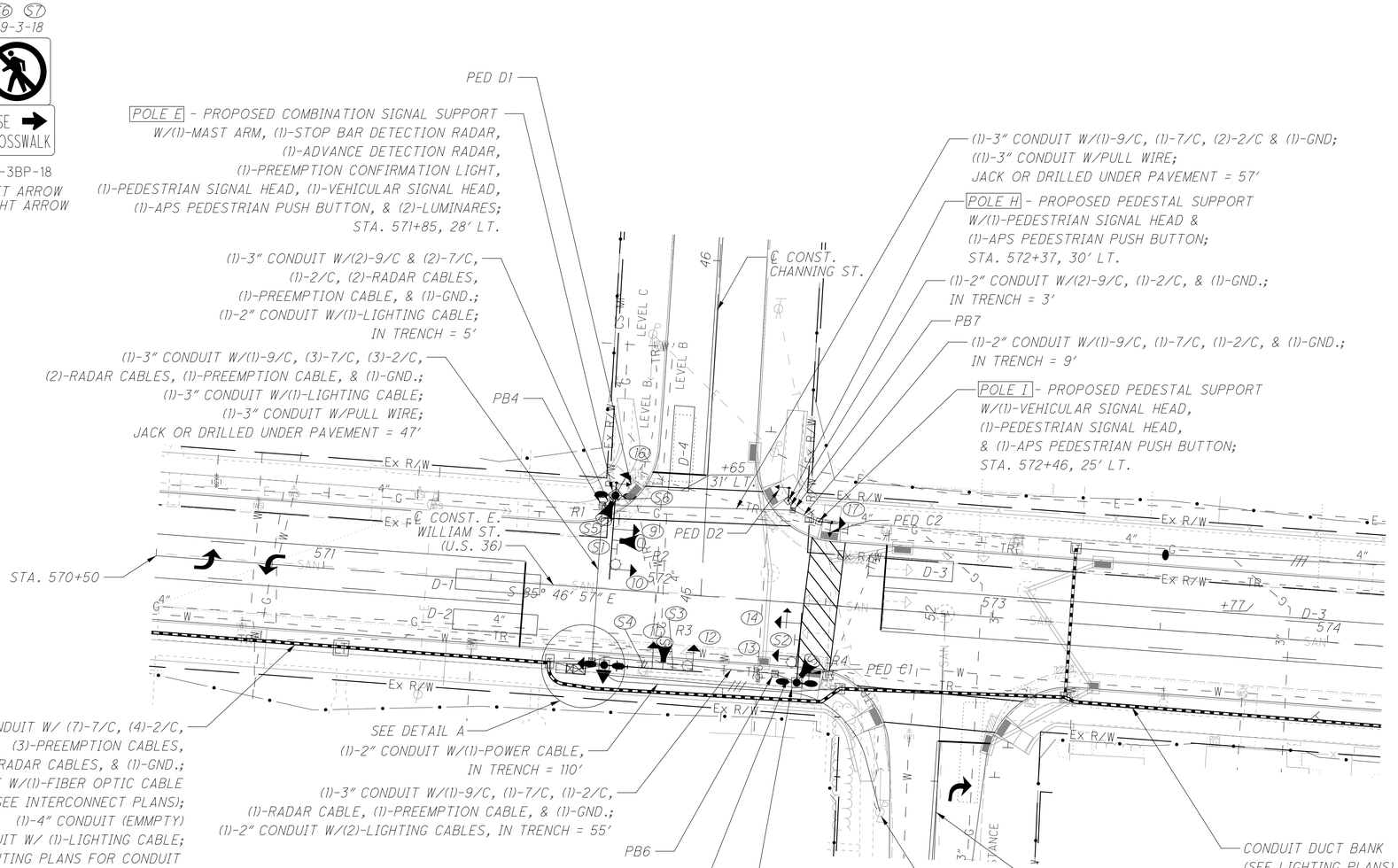
PEDESTRIAN SIGNS

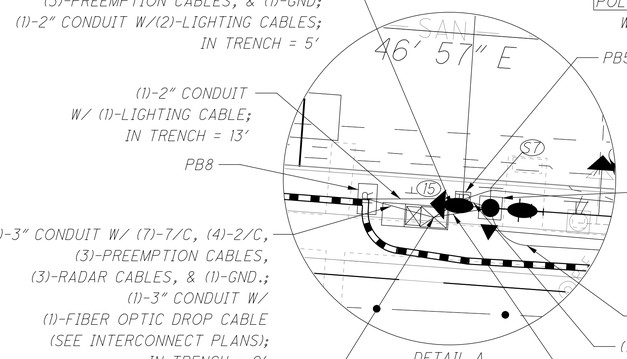
R10-3A-9
1 - LEFT ARROW
1 - RIGHT ARROW

S6 S7
R9-3-18

R9-3BP-18
1 - LEFT ARROW
1 - RIGHT ARROW

R10-3A-9
1 - LEFT ARROW
1 - RIGHT ARROW





POLE F - PROPOSED COMBINATION SIGNAL SUPPORT W/(1)-MAST ARM, (1)-STOP BAR DETECTION RADAR, (1)-PREEMPTION CONFIRMATION LIGHT, (2) LUMINARES, (2)-DISCONNECT SWITCHES, & (1)-UTILITY METER. INSTALL (1) - UBIQUITI RADIO (SEE INTERCONNECT PLANS) STA. 571+86, 23' RT.

CONDUIT W/ POWER CABLE

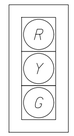
(1)-3" CONDUIT W/(1)-7/C, (1)-RADAR CABLE, (1)-PREEMPTION CABLE, (1)-RADIO INTERCONNECT CABLE (CAT 5E), & (1)-GND.; (1)-2" CONDUIT W/(2)-LIGHTING CABLES; IN TRENCH = 4'

(1)-2" CONDUIT W/ (1)-POWER CABLE & (2)-LIGHTING CABLES; IN TRENCH = 8'

POLYCARBONATE SIGNAL HEADS

12" L.E.D. LENSES W/ BACKPLATES

PEDESTRIAN HEADS (LED, COUNTDOWN, TYPE D2)
PED C1, PED C2
PED D1, PED D2



9-17

SIGNS

S1 S2

D3-1
90" X 24"
2 EACH

S3

D3-1
84" X 24"
1 EACH

S4 S5

R10-11F
36" X 36"
2 EACH

NOTE:

POWER SOURCE TO BE VERIFIED IN THE FIELD BY CONTRACTOR WITH CITY OF DELAWARE APPROVAL.

LEGEND

	PROP	EXIST
TRAFFIC SIGNAL, 3 UNIT HEAD, 12"	●→	○-▷
SIGNAL SUPPORT POLE	◉	◎
PEDESTRIAN SIGNAL	⌐↓	⌐↓
PEDESTRIAN PUSH BUTTON	→	-→
PEDESTAL SUPPORT	⊡	⊡
LUMINAIRE, CONVENTIONAL	●—	○—
CONTROLLER CABINET AND WORK PAD (TS-2)	⊠	⊠
TRAFFIC PULL BOX	TR	TR
STOP BAR RADAR DETECTOR	S	
ADVANCE RADAR DETECTOR	D	
RADIO ANTENNA	⊣⊢	
DETECTOR ZONE	▭	
PREEMPTION CONFIRMATION LIGHT	☼	

PULLBOX TABLE

PULL BOX #	STATION	SIDE	OFFSET	SIZE (IN.)
PB4	571+82	LT.	25'	24
PB5	571+82	RT.	22'	24
PB6	572+37	RT.	24'	24
PB7	572+38	LT.	27'	18
PB8	571+69	RT.	23'	48

N

0 10 20 40 HORIZONTAL SCALE IN FEET

CALCULATED DK.A CHECKED DWB

DEL-36-10.59

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SIGNAL TIMING CHART (TEM FORM 496-3)

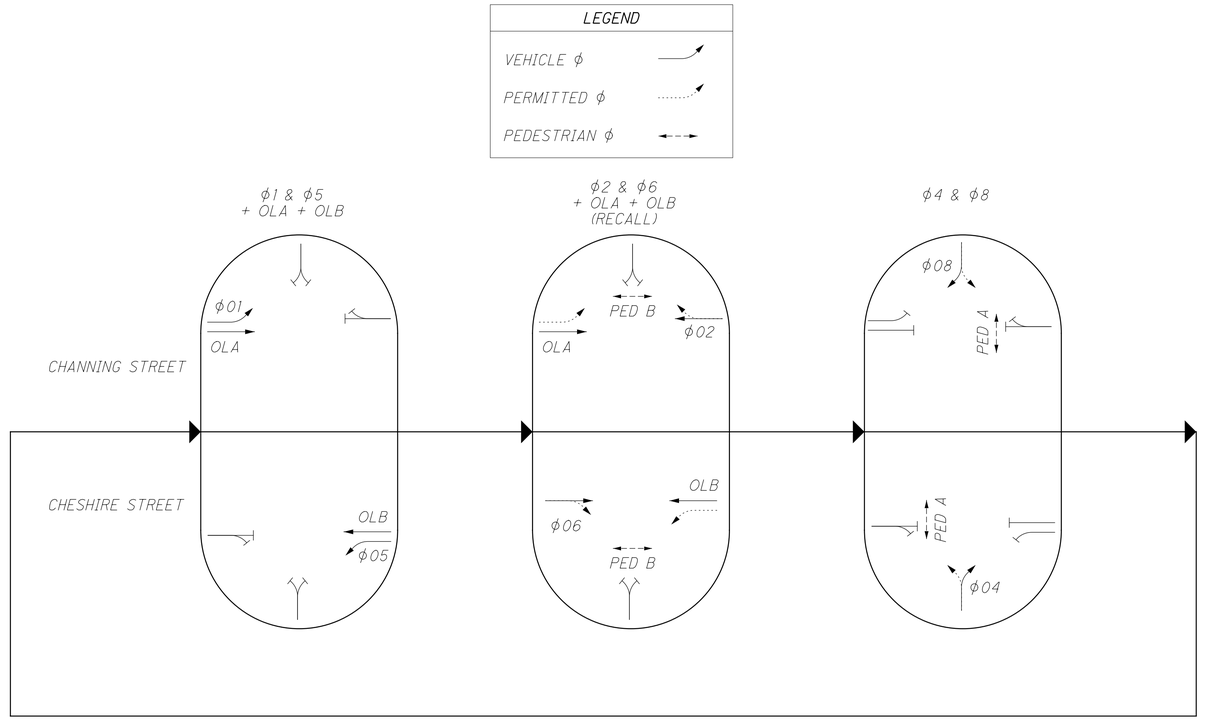
INTERSECTION: E. WILLIAM ST. (U.S. 36) AT CHANNING ST./CHESHIRE ST. MAINTAINING AGENCY: CITY OF DELAWARE									
START UP START IN: ϕ2,ϕ6,OLA,OLB YELLOW/ ϕ4,ϕ8 RED FLASH TIME FOR FLASH OR ALL RED: 2 SEC. FIRST PHASE(S): 2, 6, OLA, OLB COLOR DISPLAYED: GREEN			DUAL ENTRY: YES		PHASES:		2 & 6, 4 & 8		
			REST IN RED:		RING 1 -		RING 2 -		
			OVERLAP			A	B	C	D
			PHASES			1 & 2	5 & 6	-	-
INTERVAL OR FEATURE			CONTROLLER MOVEMENT NO.						
INTERSECTION MOVEMENT (PHASE)			1	2	3	4	5	6	7	8
DIRECTION			EB LT	WB	-	NB	WB LT	EB	-	SB
MINIMUM GREEN (INITIAL)		(SEC.)	7	20	-	10	7	20	-	10
ADDED INITIAL		*(SEC./ACTUATION)	-	-	-	-	-	-	-	-
MAXIMUM INITIAL		(SEC.)	-	-	-	-	-	-	-	-
PASSAGE TIME (PRESET GAP)		(SEC.)	3	3	-	3	3	3	-	3
TIME BEFORE REDUCTION		*(SEC.)	-	-	-	-	-	-	-	-
MINIMUM GAP		*(SEC.)	-	-	-	-	-	-	-	-
TIME TO REDUCE		*(SEC.)	-	-	-	-	-	-	-	-
MAXIMUM GREEN I		(SEC.)	20	50	-	25	20	50	-	25
MAXIMUM GREEN II		(SEC.)	20	50	-	25	20	50	-	25
YELLOW CHANGE		(SEC.)	3.0	4.5	-	3.0	3.0	4.5	-	3.0
ALL RED CLEARANCE		(SEC.)	1.5	1.0	-	2.0	1.5	1.0	-	1.0
WALK		(SEC.)	-	7	-	7	-	7	-	7
PEDESTRIAN CLEARANCE		(SEC.)	-	9	-	9	-	9	-	9
RECALL	MAXIMUM	(ON/OFF)	OFF	OFF	-	OFF	OFF	OFF	-	OFF
	MINIMUM	(ON/OFF)	OFF	ON	-	OFF	OFF	ON	-	OFF
	PEDESTRIAN	(ON/OFF)	OFF	ON	-	OFF	OFF	ON	-	OFF
MEMORY		(ON/OFF)	OFF	OFF	-	OFF	OFF	OFF	-	OFF

*VOLUME DENSITY CONTROLS

NOTES:

- ALL MOVEMENTS SHALL BE ACTUATED. THE PRIMARY THRU MOVEMENT SHOULD HAVE MIN RECALL ACTIVE TO REST IN GREEN.
- COUNTDOWN PEDESTRIAN SIGNALS SHALL GO TO ZERO ON YELLOW PER OMUTCD FIGURE 4E-2.
- ALL DETECTOR DELAYS SHALL BE PLACED IN THE CONTROLLER.

PHASING DIAGRAM



TRAFFIC SIGNAL DETECTOR CHART (TEM FORM 496-4)

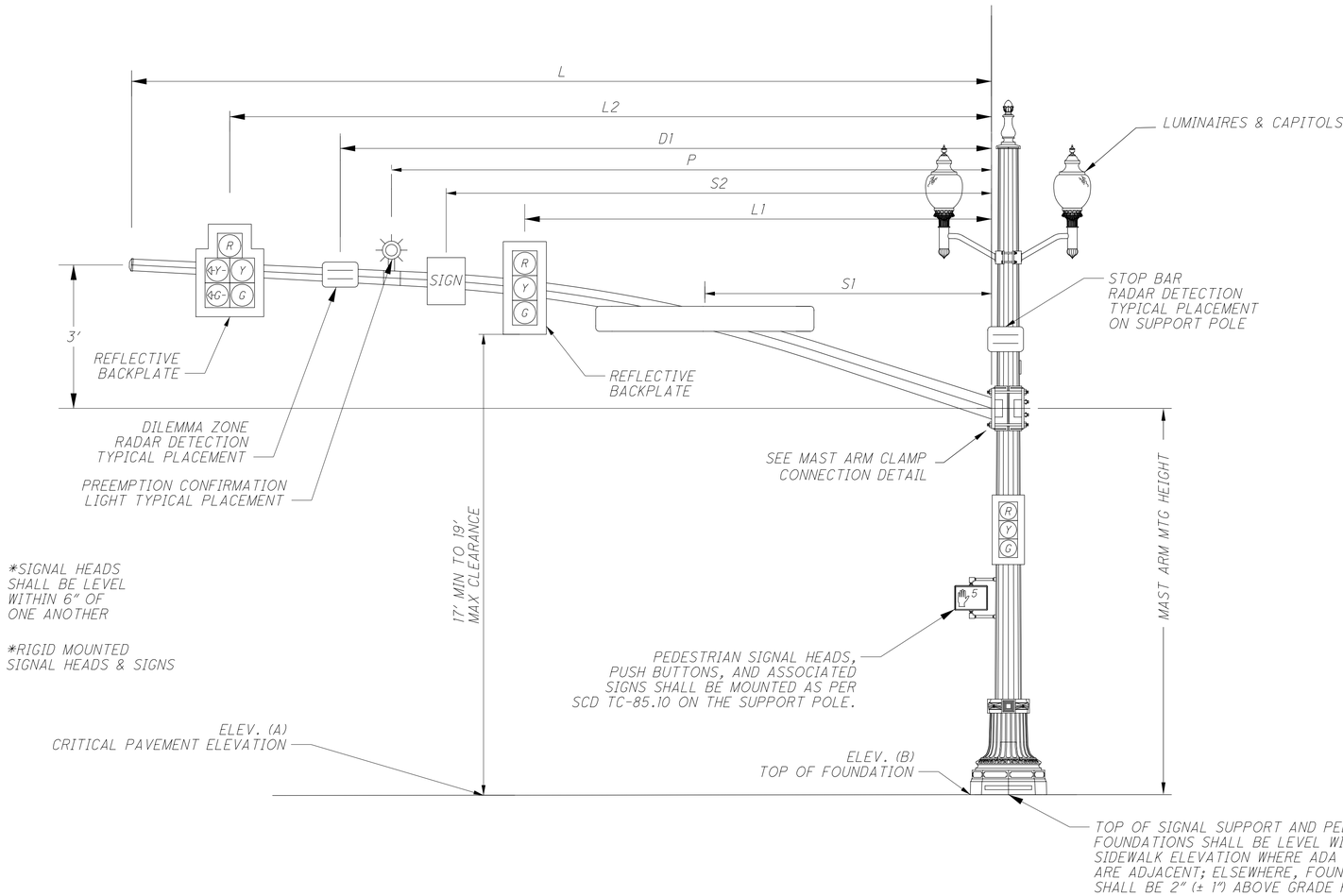
DETECTION ZONE	MOVEMENT	PULSE OR PRESENCE	ASSOCIATED PHASE	DELAY IN CONTROLLER (SEC)	DELAY INHIBIT PHASE	PURPOSE	DETECTION ZONE LENGTH (FT)
D-1	EB LT	PRESENCE	1	3	1	CALL/EXTEND PHASE 1	25
D-2	EB THRU	PRESENCE	6	-	-	CALL/EXTEND PHASE 6	25
D-3	WB THRU	PRESENCE	2	-	-	CALL/EXTEND PHASE 2	25
D-4	SB THRU	PRESENCE	8	8	8	CALL/EXTEND PHASE 8	25
D-5	WB THRU	PRESENCE	2	-	-	DILEMMA ZONE	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

NOTE: DILEMMA ZONE SPEED THRESHOLD >35 MPH

CALCULATED DKA
CHECKED DWB

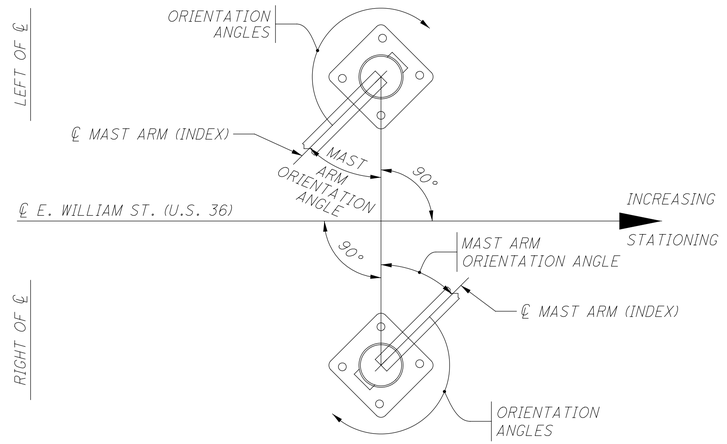
TRAFFIC SIGNAL PLAN DETAILS
E. WILLIAM ST. (U.S. 36) AT CHANNING ST.

DEL-36-10.59



*SIGNAL HEADS SHALL BE LEVEL WITHIN 6" OF ONE ANOTHER

*RIGID MOUNTED SIGNAL HEADS & SIGNS



POLE ORIENTATION

MAST ARM TABLE (TEM FIGURE 498-37 & 38)

SUPPORT NO.	STATION	OFFSET	ELEVATION		SIGNAL SUPPORT DETAILS											ORIENTATION ANGLES FROM MAST ARM								
			A	B	DESIGN TYPE	DESIGN NO.	POLE HEIGHT	ARM HEIGHT	L	L1	L2	S1	S2	D1	P	MAST ARM A ANGLE	MAST ARM B ANGLE	PEDESTRIAN SIGNAL	PEDESTRIAN BUTTON	POWER SERVICE	SUPPLEMENTAL HEAD	BRACKET ARM	HANDHOLE	CABLE ENTRANCE 12" FROM TOP
							FT	FT	FT	FT	FT	FT	FT	FT	FT	DEG	DEG	DEG	DEG	DEG	DEG	DEG	DEG	DEG
POLE A	571+85	28' LT.	916.5	917	TC-81.21	1	22.5	16	24	9	21	6	15	11	19.5	0	-	180	180	-	195	-	180	-
POLE B	571+86	23' RT.	917.8	916.7	TC-81.21	2	22.5	16	28	13	25	10	19	15	23	90	-	-	-	90/180	270	-	180	-
POLE C	572+43	24' RT.	918.2	918.2	TC-81.21	1	22.5	16	20	6.5	16.5	11.5	-	-	5	0	-	90	90	-	-	-	180	-
POLE D	572+33	36' LT.	-	918.3	PED	-	11	-	-	-	-	-	-	-	-	-	-	180	180	-	-	-	180	-
POLE E	572+53	26' LT.	-	918.3	PED	-	17	-	-	-	-	-	-	-	-	-	-	270	270	-	270	-	180	-

* MAST ARM MOUNTING HEIGHT SUBJECT TO CHANGE. CONTRACTOR TO COORDINATE WITH THE ENGINEER AND POLE MANUFACTURER TO DETERMINE FINAL MOUNTING HEIGHT.

CALCULATED DKA
CHECKED DWB

TRAFFIC SIGNAL PLAN DETAILS
E. WILLIAM ST. (U.S. 36) AT CHANNING ST.

DEL-36-10.59

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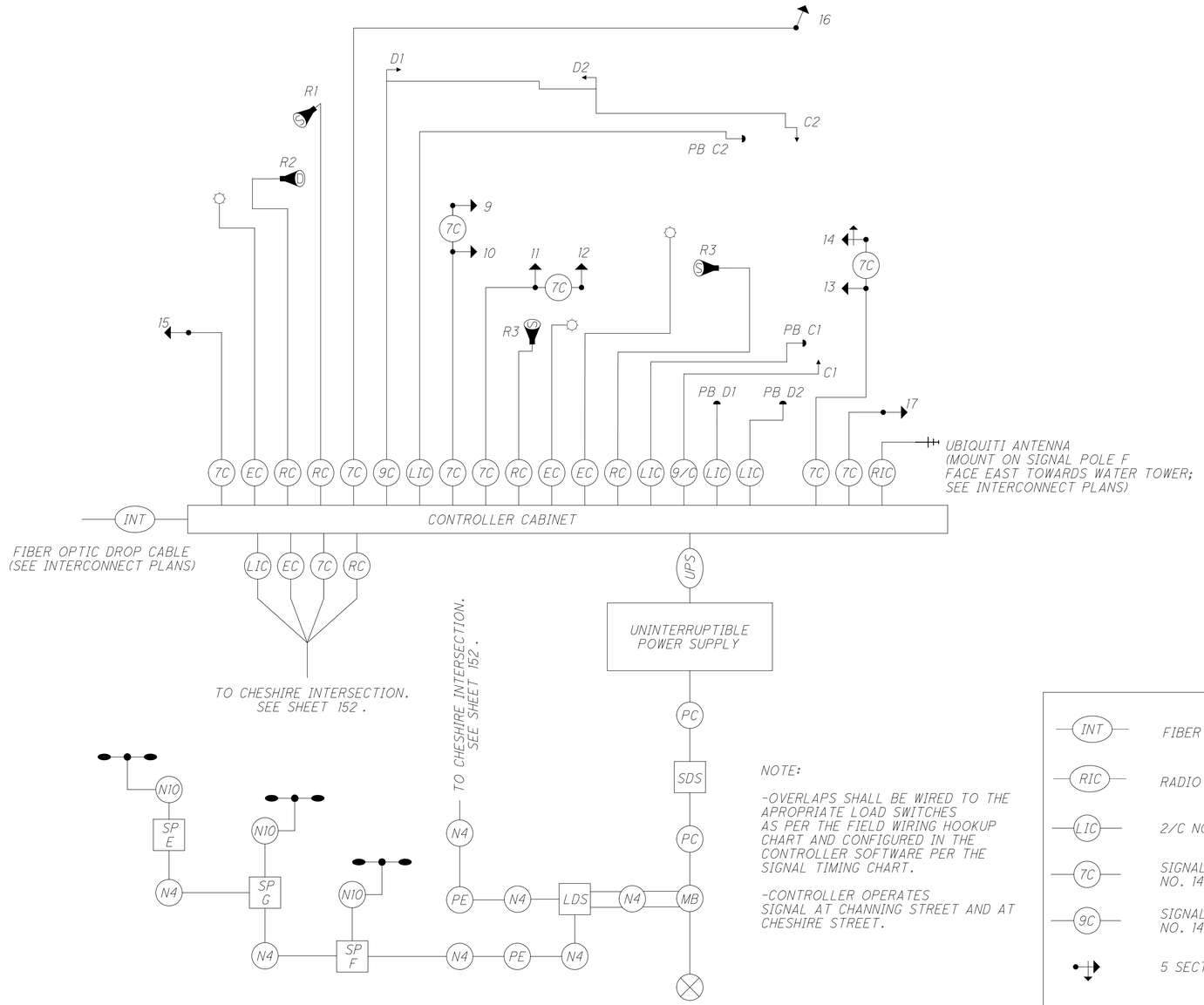
WIRING DIAGRAM



NOTE:

-OVERLAPS SHALL BE WIRED TO THE APROPRIATE LOAD SWITCHES AS PER THE FIELD WIRING HOOKUP CHART AND CONFIGURED IN THE CONTROLLER SOFTWARE PER THE SIGNAL TIMING CHART.

-CONTROLLER OPERATES SIGNAL AT CHANNING STREET AND AT CHESHIRE STREET.

SIGNAL HEAD & CABINET FIELD WIRING HOOK-UP

SIGNAL DISPLAY	WIRE COLOR PER APPROACH
THRU R	RED
THRU Y	ORANGE
THRU G	GREEN
L/T R	BLACK
L/T ~~Y~~	WHITE W/BLACK TRACER
L/T ~~G~~	BLUE
R/T R	NOT USED BY CITY
R/T ~~Y~~	RED W/BLACK TRACER
R/T ~~G~~	GREEN W/BLACK TRACER

PED UNIT FIELD WIRING HOOKUP

PED UNIT LOCATION	CROSSWALK DISPLAY	WIRE COLOR
SOUTH CROSSWALK	WALK	BLACK
	DONT WALK	ORANGE
WEST CROSSWALK	WALK	GREEN
	DONT WALK	RED
NORTH CROSSWALK	WALK	BLUE
	DONT WALK	WHITE W/BLACK TRACER
EAST CROSSWALK	WALK	GREEN W/BLACK TRACER
	DONT WALK	RED W/BLACK TRACER

WHITE SHALL BE USED FOR THE COMMON. SPLICE ALL WIRES IN THE SIGNAL HEAD OR PED UNIT. USE A #14 AWG 2 WIRE SPADE TERMINAL FOR EVERY 2 WIRES PER CONNECTION AND A #14 AWG 1 WIRE SPADE TERMINAL FOR EACH SINGLE WIRE CONNECTION TO CONNECT ALL WIRES TO ALL FIELD TERMINALS. USE BUTT SPLICES ON ALL THROUGH WIRES. ALL UNUSED WIRES SHALL BE SPLICED THROUGH AND SHALL HAVE A DEAD-END TERMINAL AT THE END OF THE WIRE.

FIELD WIRING HOOK-UP CHART (TEM FORM 496-16)

CHANNING

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
9, 10, & 17	R	ϕ2 R	Y
	Y	ϕ2 Y	
(WB)	G	ϕ2 G	
11, 12, & 16	R	ϕ8 R	R
	Y	ϕ8 Y	
(SB)	G	ϕ8 G	
13	R	ϕ6 R	Y
	Y	ϕ6 Y	
	G	ϕ6 G	
(EBLT)	<--Y---	ϕ1 Y	
	<--G---	ϕ1 G	
14 & 15	R	ϕ6 R	Y
	Y	ϕ6 Y	
(EB)	G	ϕ6 G	

LS = LOAD SWITCH

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
PEDESTRIAN MOVEMENTS			
PED C1	W	ϕ8 PED/ LS 12 G	OUT
	DW	ϕ8 PED/ LS 12 R	
PED C2	W	ϕ8 PED/ LS 12 G	OUT
	DW	ϕ8 PED/ LS 12 R	
PED D1	W	ϕ2/ϕ6 PED/ LS 13 G	OUT
	DW	ϕ2/ϕ6 PED/ LS 13 R	
PED D2	W	ϕ2/ϕ6 PED/ LS 13 G	OUT
	DW	ϕ2/ϕ6 PED/ LS 13 R	
OVERLAPS			
OLA	Y	ϕ1/ϕ2 Y/LS 14 Y	Y
	G	ϕ1/ϕ2 G/LS 14 G	

OLA = LS 14

CHESHIRE

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
1 & 8	R	ϕ2 R	Y
	Y	ϕ2 Y	
(WB)	G	ϕ2 G	
2	R	ϕ2 R	Y
	Y	ϕ2 Y	
	G	ϕ2 G	
(WB LT)	<--Y---	ϕ5 Y	
	<--G---	ϕ5 G	
3, 4, & 7	R	ϕ6 R	Y
	Y	ϕ6 Y	
(EB)	G	ϕ6 G	
5 & 6	R	ϕ4 R	R
	Y	ϕ4 Y	
(NB)	G	ϕ4 G	

LS = LOAD SWITCH

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
PEDESTRIAN MOVEMENTS			
PED A1	W	ϕ4 PED/ LS 10 G	OUT
	DW	ϕ4 PED/ LS 10 R	
PED A2	W	ϕ4 PED/ LS 10 G	OUT
	DW	ϕ4 PED/ LS 10 R	
PED B1	W	ϕ2/ϕ6 PED/ LS 11 G	OUT
	DW	ϕ2/ϕ6 PED/ LS 11 R	
PED B2	W	ϕ2/ϕ6 PED/ LS 11 G	OUT
	DW	ϕ2/ϕ6 PED/ LS 11 R	
OVERLAPS			
OLB	Y	ϕ2/ϕ6 Y/LS 15 Y	Y
	G	ϕ2/ϕ6 G/LS 15 G	

OLB = LS 15

LEGEND

- INT — FIBER OPTIC DROP CABLE
- RIC — RADIO INTERCONNECT CABLE
- LIC — 2/C NO. 14 AWG (LEAD-IN CABLE)
- 7C — SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG
- 9C — SIGNAL CABLE, 9 CONDUCTOR, NO. 14 AWG
- 5 SECTION VEHICULAR SIGNAL HEAD, 1-WAY
- 3 SECTION VEHICULAR SIGNAL HEAD, 1-WAY
- PEDESTRIAN SIGNAL HEAD
- PEDESTRIAN PUSH BUTTON
- EC — PREEMPTION CABLE
- RC — RADAR DETECTION CABLE
- DILEMMA ZONE RADAR DETECTION UNIT
- STOP BAR RADAR DETECTION UNIT
- RADIO ANTENNA
- PE — PHOTOELECTRIC CELL
- LUMINAIRE, DECORATIVE, AS PER PLAN
- POWER SOURCE
- PC — POWER CABLE, 2 CONDUCTOR, NO. X AWG
- SP X — SIGNAL SUPPORT POLE NO. __
- MB — METER BASE
- N4 — NO. 4 AWG DISTRIBUTION CABLE
- N10 — NO. 10 AWG POLE & BRACKET CABLE
- SDS — SIGNAL DISCONNECT SWITCH
- LDS — LIGHTING DISCONNECT SWITCH
- PREEMPTION CONFIRMATION LIGHT

CALCULATED DKA CHECKED DWB

TRAFFIC SIGNAL PLAN DETAILS E. WILLIAM ST.(U.S.36) AT CHANNING ST.

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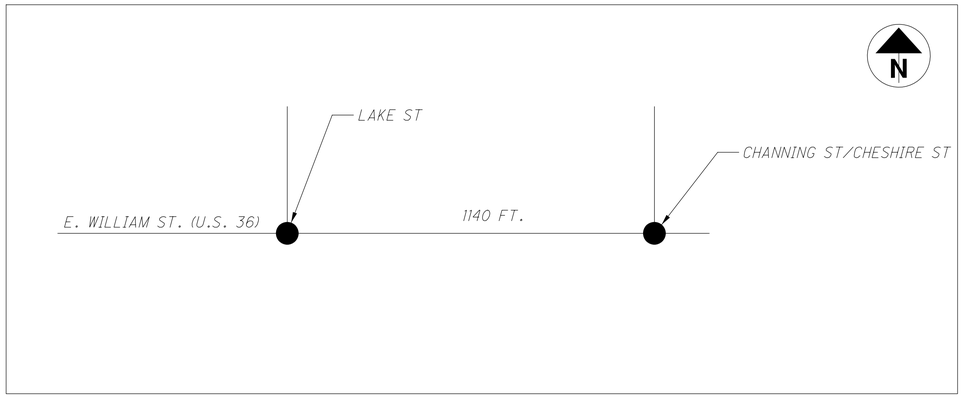
COORDINATION TIMING CHART (TEM FORM 496-5)

	SPLITS (G+Y+AR) IN SECONDS								OFFSET 1 (SEC)	OFFSET 2 (SEC)
PHASE	1	2	3	4	5	6	7	8		
DIRECTION	EB LT	WB	-	-	-	EB	-	SB		
PLAN NO.	E. WILLIAM ST. (U.S. 36) AT LAKE ST.									
PLAN 1	14	51	-	-	-	65	-	35	9	-
PLAN 2	23	52	-	-	-	75	-	25	7	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

	SPLITS (G+Y+AR) IN SECONDS								OFFSET 1 (SEC)	OFFSET 2 (SEC)
PHASE	1	2	3	4	5	6	7	8		
DIRECTION	-	WB	-	NB	WBLT	EB	-	SB		
PLAN NO.	E. WILLIAM ST. (U.S. 36) AT CHANNING ST./CHESHIRE ST.									
PLAN 1	-	72	-	28	14	72	-	28	28	-
PLAN 2	-	75	-	25	23	75	-	25	32	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

CORRIDOR LAYOUT



COORDINATION TIMING PLANS

DAY(S) OF WEEK	PLAN NAME	HOURS	CYCLE/SPLIT/OFFSET	CYCLE LENGTH (SEC)
MON-FRI	-	0000-0620	0/0/4	FREE
MON-FRI	PLAN 1	0620-1610	2/1/1	100
MON-FRI	PLAN 2	1610-1830	2/2/1	100
MON-FRI	PLAN 1	1830-2200	2/1/1	100
MON-FRI	-	2200-0000	0/0/4	FREE
-	-	-	-	-
SAT-SUN	-	0000-1000	0/0/4	FREE
SAT-SUN	PLAN 1	1000-1800	2/1/1	100
SAT-SUN	-	1800-0000	0/0/4	FREE
-	-	-	-	-

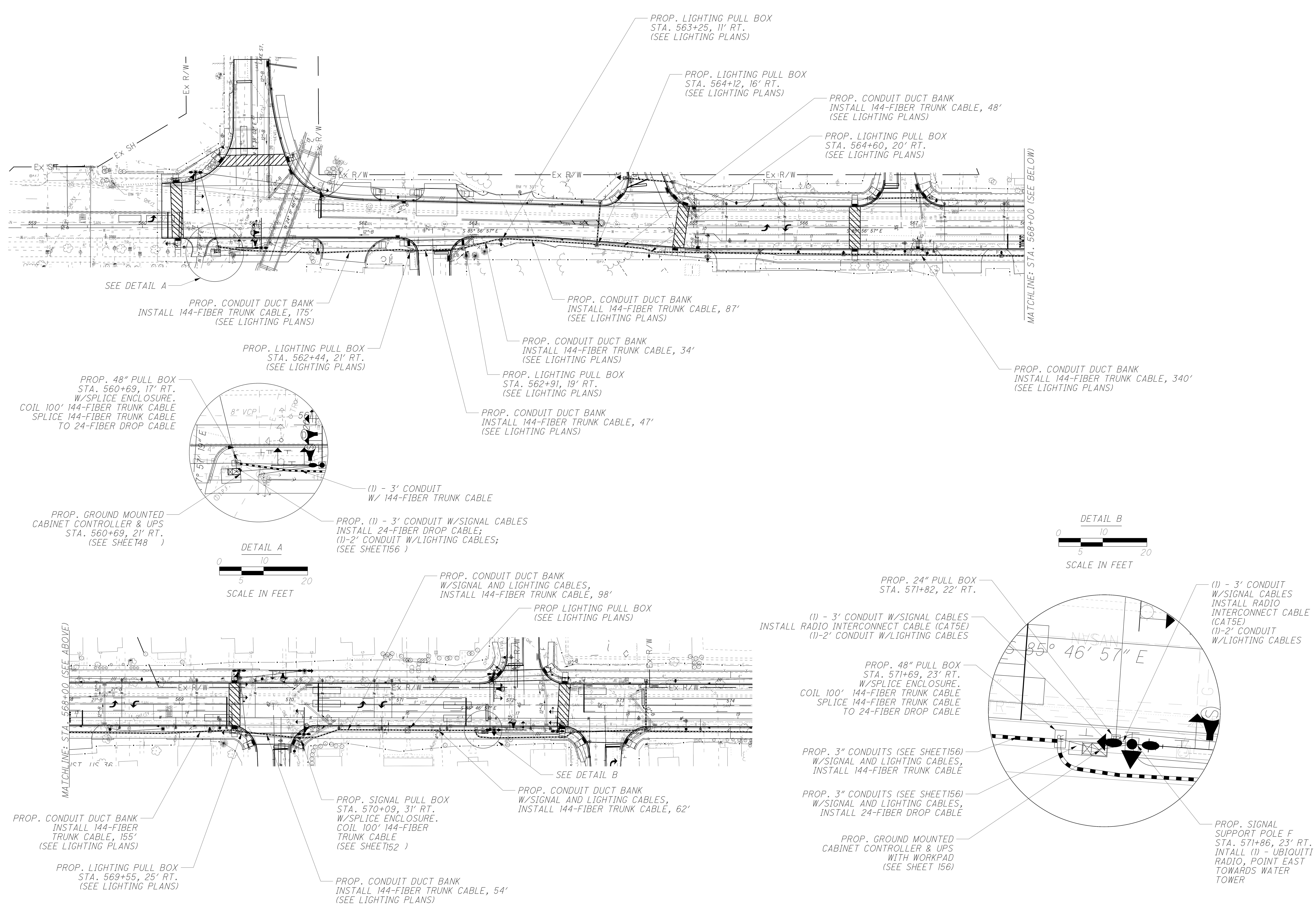
NOTES:

- OFFSETS ARE MEASURED FROM REFERENCE PHASE(S) NUMBERED ϕ2/ϕ6 "END OF GREEN/BEGINNING OF YELLOW."
- THESE TIMING PLANS MATCH THE EXISTING TIMING PLANS AT THE U.S. 23 RAMP INTERSECTIONS.

CALCULATED DKA
CHECKED DWB

TRAFFIC SIGNAL COORDINATION PLAN

DEL-36-10.59



N
0 20 40 80
HORIZONTAL SCALE IN FEET

CALCULATED DKA
CHECKED DWB

INTERCONNECT PLAN - E. WILLIAM ST. (U.S. 36)

DEL-36-10.59

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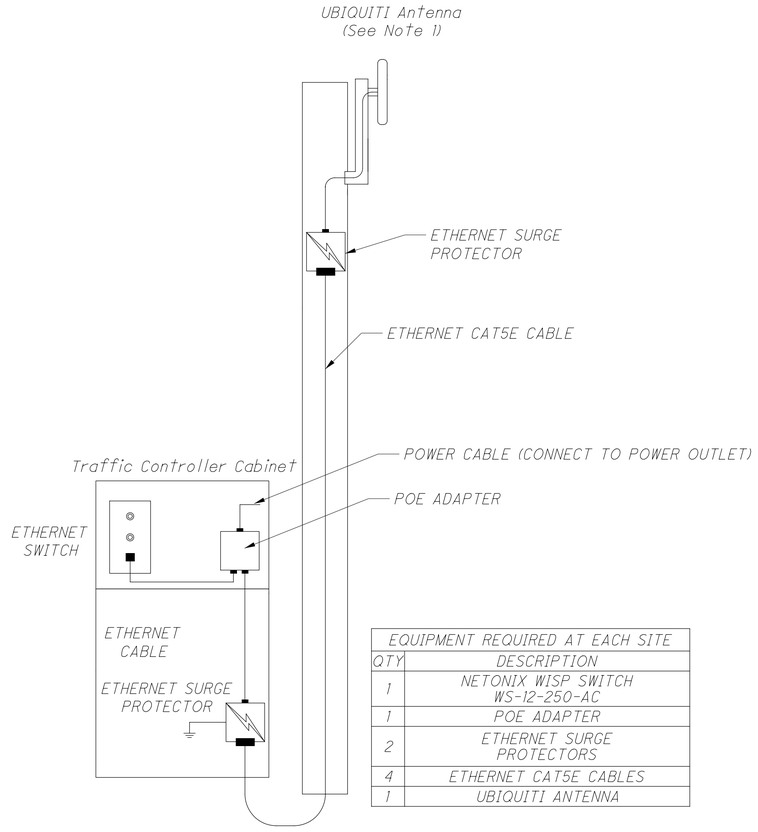
CALCULATED DKA
CHECKED DWB

RADIO INTERCONNECT DETAILS

NOTES:

1. ALL ANTENNA LINKS SHALL USE VERTICAL POLARIZATION, UNLESS OTHERWISE AUTHORIZED BY THE ENGINEER.
2. COORDINATE WITH THE ENGINEER TO INSTALL ANTENNA ON SIGNAL SUPPORT POLE AT WILLIAM/CHANNING



EQUIPMENT REQUIRED AT EACH SITE	
QTY	DESCRIPTION
1	NETONIX WISP SWITCH WS-12-250-AC
1	POE ADAPTER
2	ETHERNET SURGE PROTECTORS
4	ETHERNET CAT5E CABLES
1	UBIQUITI ANTENNA

UBIQUITI ANTENNA

DEL-36-10.59

TRAFFIC SIGNAL & INTERCONNECT SUBSUMMARY

CALCULATED DKA
CHECKED DWB

DEL-36-10.59

REF NO.	SHEET NO.	LOCATION	625 CONNECTION, UNFUSED PERMANENT EACH	625 NO. 4 AWG 600 VOLT DISTRIBUTION CABLE FT	625 NO. 10 AWG POLE AND BRACKET CABLE FT	625 CONDUIT, 2", 725.04 FT	625 CONDUIT, 3", 725.04 FT	625 CONDUIT, JACKED OR DRILLED3" FT	625 LUMINAIRE, DECORATIVE, AS PER PLAN EACH	625 TRENCH, AS PER PLAN FT	625 PULL BOX, 725.08, 18" EACH	625 PULL BOX, 725.08, 24" EACH	625 PULL BOX, MISC.:48" POLYMER PULL BOX EACH	625 GROUND ROD EACH	630 SIGN HANGER ASSEMBLY, MAST ARM EACH	630 SIGN SUPPORT ASSEMBLY, POLE MOUNTED EACH	630 SIGN, FLAT SHEET SF	630 SIGN, STREET NAME, AS PER PLAN EACH	632 VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN EACH	632 VEHICULAR SIGNAL HEAD, (LED), 5-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN EACH	632 PEDESTRIAN SIGNAL HEAD (LED), TYPE D2, COUNTDOWN, AS PER PLAN EACH	632 COVERING OF VEHICULAR SIGNAL HEAD, AS PER PLAN EACH	632 COVERING OF PEDESTRIAN SIGNAL HEAD EACH
	148	POLE A - 560+70, LT.												1					1			1	1	1
	148	POLE B - 560+48, LT.	1		50				2					1				1	2				2	
	148	POLE C - 560+26, LT.												1								1		1
	148	POLE D - 560+29, RT.												1					1			1	1	1
	148	POLE E - 561+07, RT.	1		50				2					1	1		7.5	2	3	1				
	148	POLE F - 561+61, LT.												1		7	18		1					
	148	POLE G - 561+36, LT.												1								1		1
	148	CONTROLLER TO PB3					12			4			1											
	148	PB3 TO POLE E				39	39			39														
	148	PB3 TO PB2				32				32														
	148	PB2 TO POLE D				12				12	1													
	148	PB3 TO PB1						207																
	148	PB1 TO POLE A				25				25														
	148	PB1 TO POLE B				4	4			4														
	148	PB1 TO POLE C				27				27														
	148	PB1 TO PB4						210				1												
	148	PB4 TO POLE F				6				6		1												
	148	PB4 TO POLE G				37				37														
	148	CONTROLLER - 560+69												2										
	148	CONTROLLER TO POLE E (POWER)				39				39														
	148	POLE E TO UTILITY POLE (POWER)				29				29														
	148	POLE E TO CONTROLLER (LIGHTING)		355																				
	148	POLE E TO POLE B (LIGHTING)		385																				
	152	POLE A - 569+54, LT.	1		50				2					1				1	1	1	1	1	2	1
	152	POLE B - 569+47, RT.												1					1			2	1	2
	152	POLE C - 570+13, RT.	1		50				2					1		2	4	1	2			1	2	1
	152	POLE D - 570+13, LT.	1		50				2					1		2	4	1	3				3	
	152	POLE E - 569+63, RT.												1								1		1
	152	POLE F - 570+13, RT.												1								1		1
	152	570+50 TO PB1		130								1												
	152	PB1 TO PB2		165				147				1												
	152	PB2 TO PB3		175				156				1												
	152	PB1 TO POLE C		60		5	5			5														
	152	PB1 TO POLE F				12				12														
	152	PB2 TO POLE B				14				14														
	152	PB2 TO POLE E				12				12														
	152	PB3 TO POLE A				7	14			7														
	152	PB3 TO POLE D				59	118			59														
	156	POLE E - 571+85, LT.	1			50			2					1	1	2	13	1	3			1	3	1
	156	POLE F - 571+86, RT.	1			50			2					1		2	13	1	3				3	
	156	POLE G - 572+43, RT.	1			50			2					1				1	2			1	2	1
	156	POLE H - 572+37, LT.												1								1		1
	156	POLE I - 572+46, LT.												1					1			1	1	1
	156	PB4 TO POLE E		30		5	5			5														
	156	PB4 TO PB5		145				141				2												
	156	PB5 TO CONTROLLER		90		5	10			5														
	156	PB5 TO POLE F		55		4	4			4														
	156	PB5 TO PB6		390		55	55			55		1												
	156	PB6 TO POLE G		105		7	7			7														
	156	PB4 TO PB7						114			1													
	156	PB7 TO POLE H				3				3														
	156	PB7 TO POLE I				9				9														
	156	CONTROLLER TO POLE F		230		8				8														
	156	POLE F TO UTILITY POLE (POWER)				110				110														
	156	PB5 TO PB8		55						13			1											
	156	PB8 TO STA. 570+50		375																				
	156																							
TOTALS CARRIED TO GENERAL SUMMARY			8	2745	250	715	273	975	16	582	2	8	2	20	2	15	60	9	24	2	14	21	14

REF NO.	SHEET NO.	LOCATION	632 PEDESTRIAN PUSHBUTTON, AS PER PLAN	632 SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG	632 SIGNAL CABLE, 9 CONDUCTOR, NO. 14 AWG	632 SIGNAL SUPPORT FOUNDATION, AS PER PLAN	632 PEDESTAL FOUNDATION, AS PER PLAN	632 LOOP DETECTOR LEAD-IN CABLE, 2 CONDUCTOR, NO. 14 AWG	632 CONDUIT RISER, 2" DIAMETER	632 POWER CABLE, 2 CONDUCTOR, NO. 6 AWG	632 POWER SERVICE, AS PER PLAN	632 COMBINATION SIGNAL SUPPORT, TYPE TC-81.21 DESIGN 3 POLE, WITH MAST ARMS TC-81.21 DESIGN 2 AND DESIGN 1, AS PER PLAN	632 COMBINATION SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 1, AS PER PLAN	632 COMBINATION SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 2, AS PER PLAN	632 COMBINATION SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 3, AS PER PLAN	632 PEDESTAL, 11', TRANSFORMER BASE, AS PER PLAN	632 PEDESTAL, MISC.:17', TRANSFORMER BASE	632 REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN	633 CONTROLLER UNIT, TYPE TS2/A2, WITH CABINET, TYPE TS2, AS PER PLAN	633 CABINET FOUNDATION, AS PER PLAN	633 CONTROLLER WORK PAD, AS PER PLAN	633 PREEMPTION, AS PER PLAN	633 UNINTERRUPTIBLE POWER SUPPLY (UPS), AS PER PLAN
			EACH	FT	FT	EACH	EACH	FT	EACH	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
	148	POLE A - 560+70, LT.	1				1											1					
	148	POLE B - 560+48, LT.				1										1							
	148	POLE C - 560+26, LT.	1				1										1						
	148	POLE D - 560+29, RT.	1				1											1					
	148	POLE E - 561+07, RT.				1						1											
	148	POLE F - 561+61, LT.					1											1					
	148	POLE G - 561+36, LT.	1				1										1						
	148	CONTROLLER - 560+69																	1	1	1	1	1	1
	148	CONTROLLER TO POLE E (POWER)								80													
	148	POLE E TO UTILITY POLE (POWER)							1	100	1												
	148	SH-2 TO SH-1 TO CONTROLLER		165																			
	148	SH-3 TO SH-4 TO CONTROLLER		115																			
	148	SH-6 TO SH-5 TO CONTROLLER		115																			
	148	SH-7 TO CONTROLLER		240																			
	148	SH-8 TO CONTROLLER		90																			
	148	SH-9 TO CONTROLLER		140																			
	148	PED A1 - PED B1 - PED B2 TO CONTROLLER		435																			
	148	PED A2 TO CONTROLLER		90																			
	148	PB-A1 TO CONTROLLER						130															
	148	PB-A2 TO CONTROLLER						85															
	148	PB-B1 TO CONTROLLER						135															
	148	PB-B2 TO CONTROLLER						255															
	152	POLE A - 569+54, LT.	1			1									1								
	152	POLE B - 569+47, RT.	1				1											1					
	152	POLE C - 570+13, RT.				1								1									
	152	POLE D - 570+13, LT.				1									1								
	152	POLE E - 569+63, RT.	1				1										1						
	152	POLE F - 570+13, RT.	1				1										1						
	152	SH-2 TO SH-1 TO 570+50		225																			
	152	SH-4 TO SH-3 TO 570+50		110																			
	152	SH-6 TO SH-5 TO 570+50		285																			
	152	SH-7 TO 570+50		145																			
	152	SH-8 TO 570+50		245																			
	152	PED-A1 - PED-A2 TO 570+50		255																			
	152	PED-B1 - PED-B2 TO 570+50		200																			
	152	PB-A1 TO 570+50						185															
	152	PB-A2 TO 570+50						130															
	152	PB-B1 TO 570+50						130															
	152	PB-B2 TO 570+50						75															
	156	POLE E - 571+85, LT.	1			1								1									
	156	POLE F - 571+86, RT.				1									1								
	156	POLE G - 572+43, RT.	1			1								1									
	156	POLE H - 572+37, LT.	1				1										1						
	156	POLE I - 572+46, LT.	1				1											1					
	156	570+70 TO PB8 (SH FROM CHESHIRE)		870				500															
	156	PB8 TO CONTROLLER (FROM CHESHIRE)		65				30															
	156	CONTROLLER (571+78)									1								1	1	1	1	2	1
	156	SH-10 TO SH-9 TO CONTROLLER		135																			
	156	SH-12 TO SH-11 TO CONTROLLER		85																			
	156	SH-14 TO SH-13 TO CONTROLLER		140																			
	156	SH-15 TO CONTROLLER		50																			
	156	SH-16 TO CONTROLLER		100																			
	156	SH-17 TO CONTROLLER		165																			
	156	PED C1 TO CONTROLLER			95																		
	156	PED-C2 - PED-D2 - PED-D1 TO CONTROLLER			250																		
	156	PB-C1 TO CONTROLLER						100															
	156	PB-C2 TO CONTROLLER						155															
	156	PB-D1 TO CONTROLLER						90															
	156	PB-D2 TO CONTROLLER						150															
TOTALS CARRIED TO GENERAL SUMMARY			12	4465	345	8	10	2150	1	180	2	1	3	3	1	5	5	2	2	2	2	3	2

CALCULATED DKA
CHECKED DWB

TRAFFIC SIGNAL & INTERCONNECT SUBSUMMARY

DEL-36-10.59

REF NO.	SHEET NO.	LOCATION	633 CONTROLLER ITEM, MISC.:; LAYER 2 ETHERNET SWITCH EACH	804 FIBER OPTIC CABLE, 144 FIBER, AS PER PLAN FT	804 DROP CABLE, 24 FIBER FT	804 FIBER TERMINATION PANEL, 24 FIBER, AS PER PLAN EACH	804 SLACK INSTALLATION EACH	804 SPLICE ENCLOSURE EACH	815 SPREAD SPECTRUM RADIO, AS PER PLAN EACH
	161	CONTROLLER - 560+69	1			1			
	161	CONTROLLER - 560+69 TO PULL BOX - 560+69			20				
	161	PULL BOX - 560+69 TO PULL BOX - 562+44		280					
	161	PULL BOX - 562+44 TO PULL BOX - 562+91		55					
	161	PULL BOX - 562+91 TO PULL BOX - 563+25		40					
	161	PULL BOX - 563+25 TO PULL BOX - 564+12		95					
	161	PULL BOX - 564+12 TO PULL BOX - 564+60		55					
	161	PULL BOX - 564+60 TO PULL BOX - 569+55		505					
	161	PULL BOX - 569+55 TO PULL BOX - 570+09		160					
	161	PULL BOX - 570+09 TO PULL BOX - 571+07		98					
	161	PULL BOX - 571+07 TO PULL BOX - 571+69		162					
	161	PULL BOX - 571+69 TO CONTROLLER - 571+78			20				
	161	CONTROLLER - 571+78	1			1			
	161	SIGNAL POLE - 571+86							1
	161	PULL BOX - 560+69					1	1	
	161	PULL BOX 570+09							
	161	PULL BOX 571+69					1	1	
		TOTALS CARRIED TO GENERAL SUMMARY	2	1450	40	2	2	2	1

CALCULATED DKA
CHECKED DWB

TRAFFIC SIGNAL & INTERCONNECT SUBSUMMARY

DEL-36-10.59

REF NO.	SHEET NO.	STATION TO STATION					625 CONNECTION, FUSED PULL APART EACH	625 CONNECTION, UNFUSED PERMANENT EACH	625 LIGHT POLE, DECORATIVE, AS PER PLAN EACH	625 LIGHT POLE FOUNDATION, 24" X 6' DEEP EACH	625 NO. 8 AWG 600 VOLT DISTRIBUTION CABLE FT	625 NO. 4 AWG 600 VOLT DISTRIBUTION CABLE FT	625 NO. 10 AWG POLE AND BRACKET CABLE FT	625 CONDUIT, 2", 725.04 FT	625 CONDUIT, 3", 725.04 FT	625 CONDUIT, JACKED OR DRILLED, 725.04 3" FT	625 CONDUIT, MISC.: TWO - 4", TWO - 3", & ONE - 1.5" CONDUIT DUCT BANK FT	625 LUMINAIRE, POST TOP, SOLID STATE (LED), AS PER PLAN EACH	625 TRENCH FT	625 TRENCH, AS PER PLAN FT	625 TRENCH IN PAVED AREA FT	625 PULL BOX, 725.08, 18" EACH	625 PULL BOX, MISC.: EACH	625 GROUND ROD EACH	625 POWER SERVICE, AS PER PLAN EACH	625 PLASTIC CAUTION TAPE FT	
L1	169	560+68.85	RT	TO	562+44.20	RT	3		1	1	285		30	10			176	1		176		1		1		180	
L2	169	562+31.79	LT		563+98.46	LT	3		1	1	531		30	167				1	167					1		170	
L3	169	562+44.20	RT		562+91.44	RT		3			156						47			47		1				50	
L4	169	562+91.44	RT		563+25.30	RT		3			120						35			35		1				35	
L5	169	563+25.30	RT		563+25.30	RT	3		1	1			30					1				1		1			
L6	169	563+98.46	LT		564+00.00	LT	3		1	1	36		30	2				1	2					1		5	
L7	169	563+25.30	RT		564+00.00	RT		3			225						75			75		1					
L8	170	564+00.00	RT		564+12.07	RT		3			55						12			12		1					
L9	170	564+12.07	RT/LT		564+15.39	RT/LT		3			140					41						1				45	
L9A	170	564+00.00	LT		564+15.39	LT					60			15					15							15	
L10	170	564+32.72	LT		564+37.59	LT					560			3					3						1	5	
L11	170	564+15.39	LT		564+37.59	LT		3			110			31					31			1				35	
L12	170	564+81.67	LT		564+37.59	LT		3			150				49				49			1				50	
L13	170	565+38.80	LT		564+81.67	LT	3		1	1	195		30	60					60					1		60	
L14	170	564+59.61	RT		564+59.61	RT	3		1	1	60		30	10				1	5			1		1		5	
L14A	170	564+12.07	RT		564+59.61	RT		3									48			48			1			50	
L15	170	565+38.8	LT		566+61.24	LT					385			123					123							125	
L16	170	564+59.61	RT		566+35.93	RT	3		1	1	550		30	10			177			177		1		1		180	
L17	170	566+35.93	RT		567+79.27	RT	3		1	1	480		30	10			144		5	144		1		1		150	
L18	170	567+79.27	RT		569+00.00	RT					365						121			121						125	
L19	170	566+61.24	LT		567+15.46	LT		6			180				54				54			2				55	
L20	170	567+15.46	LT		567+20.35	LT	3		1	1	35		30	6				1	6							10	
L21	170	567+20.35	LT		568+65.86	LT	3		1	1	455		30	146				1	146							150	
L22	171	569+27.58	RT		569+27.58	RT	3		1	1	100		30				28	1	28					1		30	
L23	171	569+27.58	RT		569+55.01	RT											27			27		1				30	
L24	171	569+55.01	RT		570+08.94	RT											54			54						55	
L25	171	570+08.94	RT		572+56.14	RT											253			253						253	
L26	171	571+85.56	RT		571+85.56	RT																			1		
L27	171	571+85.56	RT		572+70.72	RT						500															
L28	171	571+85.56	RT		572+56.14	RT						260		71					71							75	
L29	171	572+56.14	RT		576+23.26	RT		3									67			67		1				70	
L30	171	573+23.26	RT		574+00.00	RT	3					235					77			77		1				80	
L31	171	573+23.26	LT/RT		573+23.26	LT/RT		3				150				45						1				45	
L32	171	573+23.26	LT		573+50.00	LT	3		1	1		100	30	27				1	27					1		30	
L33	171	573+50.00	LT		574+00.00	LT						150		50					50							50	
L34	172	574+00.00	RT		575+49.26	RT						150					50			50						50	
L35	172	574+49.26	RT		576+03.62	RT	3		1	1		525	30				154	1		154		1		1		155	
L36	172	574+00.00	LT		574+81.61	LT		3				260			81				81			1				85	
L37	172	574+81.61	LT		575+35.45	LT		3				60			59				59			1				60	
L38	172	575+35.45	LT		575+39.96	LT	3		1	1		30	30	5				1	5					1		5	
L39	172	576+03.62	RT		576+12.54	RT		3				45					9			9		1				10	
L40	172	576+12.54	RT		576+76.33	RT		3				210		116			64		116	64			1			65	
L41	172	576+76.33	RT		577+82.35	RT						380					101			101						110	
L42	172	575+39.96	LT		576+94.65	LT	3		1	1		480	30	155				1	155					1		155	
L43	172	577+82.35	RT		579+00.00	RT	3		1	1		355	30	5			118	1	5	118				1		125	
L44	172	576+94.65	LT		578+70.32	LT	3		1	1		545	30	176				1	176					1		180	
L45	172	578+70.32	LT		579+00.00	LT						90		30					30							30	
TOTALS CARRIED TO GENERAL SUMMARY							54	48	17	17	5233	4525	510	1228	243	86	1837	14	1469	1809		22	2	15	2	3248	

CALCULATED CEL CHECKED CSR

LIGHTING SUBSUMMARY

DEL-36-10.59

REF NO.	SHEET NO.	STATION TO STATION					625 CONNECTION, FUSED PULL APART EACH	625 CONNECTION, UNFUSED PERMANENT EACH	625 LIGHT POLE, DECORATIVE, AS PER PLAN EACH	625 LIGHT POLE FOUNDATION, 24" X 6' DEEP EACH	625 NO. 8 AWG 600 VOLT DISTRIBUTION CABLE FT	625 NO. 4 AWG 600 VOLT DISTRIBUTION CABLE FT	625 NO. 10 AWG POLE AND BRACKET CABLE FT	625 CONDUIT, 2", 725.04 FT	625 CONDUIT, 3", 725.04 FT	625 CONDUIT, JACKED OR DRILLED, 725.04 3" FT	625 CONDUIT, MISC.: TWO - 4", TWO - 3", & ONE - 1.5" CONDUIT DUCT BANK FT	625 LUMINAIRE, POST TOP, SOLID STATE (LED), AS PER PLAN FT	625 TRENCH FT	625 TRENCH, AS PER PLAN FT	625 TRENCH IN PAVED AREA FT	625 PULL BOX, 725.08, 18" EACH	625 PULL BOX, MISC.: EACH	625 GROUND ROD EACH	625 POWER SERVICE, AS PER PLAN EACH	625 PLASTIC CAUTION TAPE FT	
L46	173	579+00.00	RT		579+40.13	RT	3		1	1		135	30	5	70		40		5	40		1		1		45	
L47	173	579+00.00	LT		579+41.79	LT		3				145		47					47			1				50	
L48	173	579+41.79	LT		580+11.25	LT		3				325			75				75			1				75	
L49	173	580+11.25	LT		580+19.02	LT	3		1	1		40	30	8				1	8					1		10	
L50	173	579+40.13	RT		581+00.00	RT	3		1	1		525	30	5			160	1	5	160				1		165	
L51	173	581+00.00	RT		581+85.76	RT											86			86						90	
L52	173	581+85.76	RT		582+50.43	RT	3		1	1		255	30	5			65	1	5	65		1		1		70	
L53	173	582+50.43	RT		584+00.00	RT						450					150			150						150	
L54	173	580+19.02	LT		581+76.6	LT	3		1	1		490		158				1	158					1		160	
L55	173	581+76.6	LT		583+35.00	LT	3		1	1		495		160				1	160					1		160	
L56	173	583+35.00	LT		584+00.00	LT						195		65					65							65	
L57	174	584+00.00	RT		584+35.00	RT	3		1	1		165	30	5			35	1	5	35		1		1		35	
L58	174	584+35.00	RT		585+85.49	RT	3		1	1		515	30	5			151	1	5	151		1		1		160	
L59	174	585+85.49	RT		586+38.21	RT											53			53			1			53	
L60	174	584+00.00	LT		584+94.8	LT	3		1	1		270	30					1						1			
TOTALS CARRIED TO GENERAL SUMMARY							27	6	9	9	0	4005	210	463	145	0	740	8	538	740	0	6					

CALCULATED CEL
CHECKED CSR

LIGHTING SUBSUMMARY

DEL-36-10.59

167
224

LIGHTING NOTES:

THE STREET LIGHTING SHALL BE IN ACCORDANCE WITH THE 2016 OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS TOGETHER WITH THE REQUIREMENT OF THE CITY OF DELAWARE, INCLUDING ALL SUPPLEMENTS THERETO, IN FORCE ON THE DATE OF THE CONTRACT, SHALL GOVERN ALL MATERIAL AND WORKMANSHIP INVOLVED IN THE IMPROVEMENTS SHOWN ON THESES PLANS, EXCEPT AS SUCH SPECIFICATIONS ARE MODIFIED BY THE FOLLOWING SPECIFICATIONS OR BY THE CONSTRUCTION DETAILS SET FORTH HEREIN.

THE CONTRACTOR SHALL INSTALL STREET LIGHTS AT THE LOCATIONS SHOWN ON THESE PLANS, INCLUDING ALL CABLE AND DISCONNECTS AND PROVIDE A COMPLETE, OPERATING LIGHTING SYSTEM, THAT COMPLIES WITH CITY OF DELAWARE SPECIFICATIONS.

THE CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS TO AN EQUAL OR BETTER CONDITION THAN EXISTED PRIOR TO CONSTRUCTION.

WHERE EXCAVATIONS OCCUR ALONGSIDE OF CURBS OR SIDEWALKS, THE CONTRACTOR SHALL SHORE, BRACE, OR SUPPORT PIECES IN PLACE SO THAT THEY WILL NOT BECOME DISLODGED OR DAMAGED. ANY DAMAGED CURB OR SIDEWALK SHALL BE REPLACED BY THE CONTRACTOR AT HIS OWN EXPENSE. THE COST OF THE WORK SHALL BE INCLUDED IN THE VARIOUS ITEM BID.

MAINTAIN A MINIMUM OF 3-FT HORIZONTAL AND 1-FT VERTICAL CLEARANCE FROM ALL WATER AND SEWER LINES.

CIRCUIT VOLTAGE SHALL BE 120 / 240 VOLT, 3 WIRE, WITH GROUNDED NEUTRAL.

NO SPLICES SHALL BE MADE IN CIRCUIT CABLES, EXCEPT AT NOTED LOCATIONS. SPLICES CAN BE MADE IN PULL BOXES ONLY WHERE CIRCUIT BRANCHES OR WHERE CIRCUIT CROSSES THE STREET TO A LIGHT POLE.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE POWER UTILITY FOR THE PRECISE LOCATION OF THE CONTROL CENTER AND POWER FEED TO THE CONTROL CENTER. ALL COST ASSOCIATED WITH MAKING THE CONNECTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE COST OF THE WORK SHALL BE INCLUDED IN THE VARIOUS ITEMS BID.

THE CONTRACTOR SHALL PERFORM THE NECESSARY CONSTRUCTION STAKING AND MAINTENANCE OF STAKING FOR LOCATION OF CABLE ROUTING AND STREET LIGHTING EQUIPMENT (LIGHT STANDARDS, PULL BOXES, CONTROL SITE, ETC.). THE COST OF THE WORK SHALL BE INCLUDED IN THE VARIOUS ITEM BID.

CONDUIT LOCATION MAY BE DEFLECTED AND LIGHT POLE FOUNDATIONS MAY BE RELOCATED AROUND OBSTACLES OR UTILITIES AS APPROVED BY DES.

PULL BOXES SHALL BE LOCATED APPROXIMATELY WHERE SHOWN ON PLANS WITH EXACT LOCATION TO BE DETERMINED IN THE FIELD AFTER CONSIDERATION IS GIVEN TO THE LOCATION OF UTILITIES, PAVEMENTS, AND GRADES.

LIGHT STANDARDS- ALL LIGHT STANDARDS SHALL BE ALIGNED ALONG THE ROADWAY, UNLESS OTHERWISE NOTED, WITH FOUNDATION CENTERLINES LOCATED EQUAL DISTANCE FROM EDGE OF CURB. PRIOR TO PLACEMENT OF ANY FOUNDATION, THE CONTRACTOR SHALL CHECK AND VERIFY THE LOCATION OF EXISTING UTILITIES AND ACTUAL MARKINGS AND NOTIFY THE ENGINEER OF ANY CONFLICT ON THE PLANS. ALL PROPOSED LIGHT STANDARDS AND EQUIPMENT LOCATIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR IN REGARDS TO PROPER CLEARANCES FOR EXISTING OVERHEAD AND UNDERGROUND UTILITIES PRIOR TO PERFORMING ANY CONSTRUCTION WORK. UPON APPROVAL OF THE ENGINEER, FOUNDATIONS MAY BE MOVED SLIGHTLY IN A DIRECTION PARALLEL WITH THE CENTERLINE OF OFFSET TO AVOID POTENTIAL CONFLICT WITH OTHER FACILITIES.

ITEM 625, LUMINAIRE, POST TOP, SOLID STATE (LED), AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF ODOT'S CONSTRUCTION AND MATERIAL SPECIFICATIONS, LUMINAIRES FOR POST TOP LED LIGHTING UNITS SHALL BE AS FOLLOWS:

LUMINAIRES SHALL MATCH THE CITY OF DELAWARE STANDARD POST TOP FIXTURES FOR COLLECTOR STREETS EXCEPT THAT THEY SHALL BE AS FOLLOWS:

LIGHT FIXTURE:
GRANVILLE II LED WITH LEAF STYLE HOUSING

MODEL:
HOLOPHANE GVD2-P30-3KASMCMC3RSGL-P7-FPDB85PCLL

PAINT:
POWDER COATED BLACK, 37031

PAYMENT WILL BE MADE AT THE UNIT PRICE BID UNDER CMS ITEM 625, "LUMINAIRE, POST TOP, SOLID STATE (LED), AS PER PLAN" FOR EACH LUMINAIRE AND DOUBLE LUMINAIRE WHICH SHALL BE FULL COMPENSATION OR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM 625 - LIGHT POLE, DECORATIVE, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF ODOT'S CONSTRUCTION AND MATERIAL SPECIFICATIONS, LIGHT POLE UNITS SHALL BE AS FOLLOWS:

LIGHT POLES SHALL MATCH THE CITY OF DELAWARE STANDARD FOR COLLECTOR STREETS FIXTURE POST TYPE B - SINGLE LUMINAIRE AND SHALL BE AS FOLLOWS:

SINGLE LUMINAIRE. THE POST SHALL BE POWDER COATED BLACK, 37031 (UNLESS OTHERWISE SPECIFIED BY THE CITY) AND MATCH THE HOLOPHANE FIXTURE. THE TOTAL LENGTH OF THE LIGHT POLE SHALL BE 15-FEET, NOT INCLUDING THE LUMINAIRE. THE LIGHT POLE SHALL BE MODEL # AATF1515 MANUFACTURED BY MAIN STREET LIGHTING COMPANY.

AN ACCESS DOOR OVER THE HAND HOLE WITH THE INTERIOR HAVING A PERMANENT LABEL MARKER NOTING THE VOLTAGE.

A CAST BRASS FLAG BRACKET (INSTALLED PERPENDICULAR TO THE CURB AND POSITIONED STREETSIDE). THE BRACKET SHALL BE PERMANENTLY INSTALLED 10" FROM THE TOP OF THE POLE.

A 1.25" O.D. TUBE SLEEVE WELDED TO THE BACK SIDE (DIRECTLY OPPOSITE CURB AND FLAG BRACKET) TO HOLD BANNER ARMS PER CITY OF DELAWARE STANDARDS.

THE BASE SHALL BE CONSTRUCTED OF CAST ALUMINUM.

THE POLE SHALL HAVE AN APPROVED CABLE GRIP ON THE TOP INTERIOR OF THE POLE TO SUPPORT THE WEIGHT OF THE WIRING CABLES.

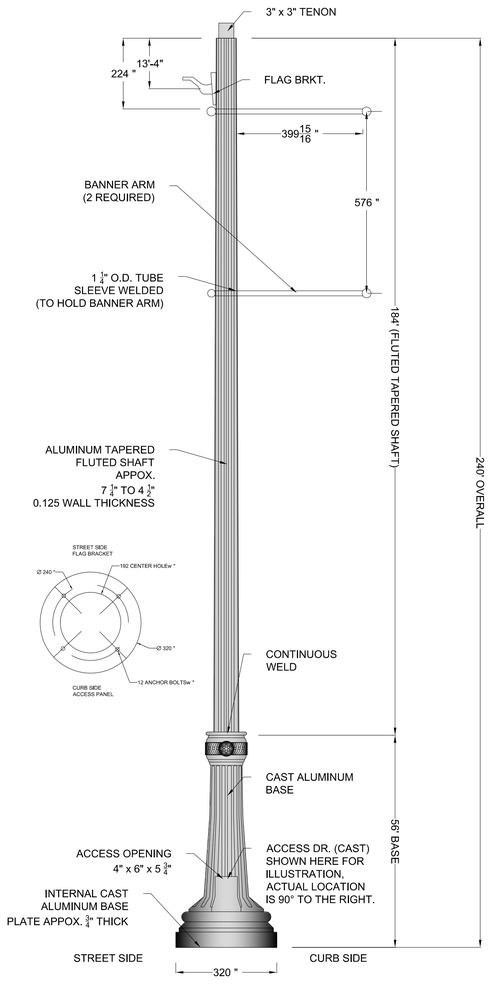
THE SHAFT SHALL BE A FORMED TAPERED FLUTED SHAFT, TAPERING FROM APPROXIMATELY 7-1/4" TO 4-1/2".

PAYMENT WILL BE MADE AT THE UNIT PRICE BID UNDER CMS ITEM 625 - LIGHT POLE, DECORATIVE, AS PER PLAN FOR EACH LIGHT POLE WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM 625 - TRENCH, AS PER PLAN - B

IN ADDITION TO CMS 625, THE TRENCH DIMENSIONS SHALL BE AS NOMIALLY SHOWN IN THE CONDUIT DUCT BANK DETAIL ON THIS PAGE.

CITY OF DELAWARE LIGHT POLE DETAIL (TYPICAL)



ITEM 625 - POWER SERVICE, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF THE SPECIFICATIONS, THE FOLLOWING IS ADDED.

THE POWER SUPPLYING AGENCY FOR THIS PROJECT IS:

AEP DISTRIBUTION
ATTN: PAUL PAXTON
850 TECH CENTER DR.
GAHANNA, OH 43230
614-883-6381

THE ENGINEER SHALL ENSURE THAT EACH POWER SERVICE ELECTRICAL ENERGY ACCOUNT IS IN THE NAME OF AND THAT THE BILLING ADDRESS IS TO THE MAINTAINING AGENCY NOTED IN THE PLANS. THIS SHALL BE DONE NOT ONLY FOR EACH NEW POWER SERVICE ESTABLISHED BY THIS PROJECT BUT ALSO FOR EACH EXISTING POWER SERVICE, SINCE THERE MAY BE A REASSIGNMENT OF THE RESPONSIBILITY FOR AN EXISTING SERVICE AS A RESULT OF THE WORK PERFORMED BY THIS PROJECT.

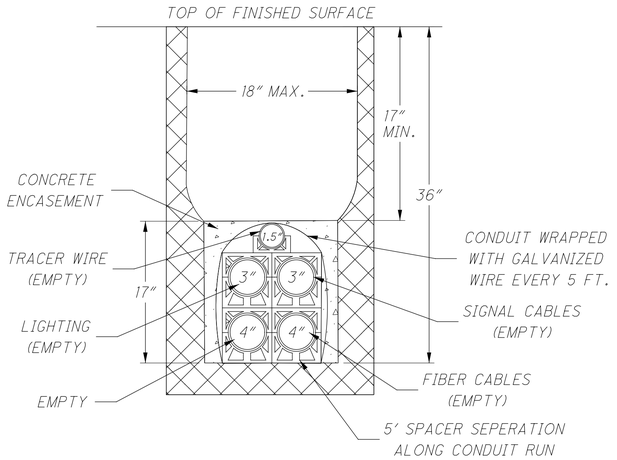
PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR EACH CMS ITEM 625, "POWER SERVICE, AS PER PLAN" WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM 625 - CONDUIT, MISC.:TWO - 4" CONDUITS, TWO - 3" CONDUITS, & ONE - 1.5" CONDUIT DUCT BANK

IN ACCORDANCE WITH CMS 625 AND 725, THE CONDUIT DUCT BANK SHALL BE INSTALLED AS SHOWN IN THE PLANS AND DETAILED BELOW. COORDINATE WITH THE CITY OF DELAWARE TRAFFIC DEPARTMENT FOR INSTALLATION OF DUCT BANK, SIGNAL CABLES, FIBER CABLES, AND LIGHTING CABLES.

SECTION A-A

TWO - 4" CONDUITS, TWO - 3" CONDUITS, & ONE - 1.5" CONDUIT BANK DETAIL
(5 1/2" CENTER-CENTER CONDUIT SEPERATION)



CALCULATED CEL CHECKED JMZ

LIGHTING GENERAL NOTES

DEL-36-10.59

168
224

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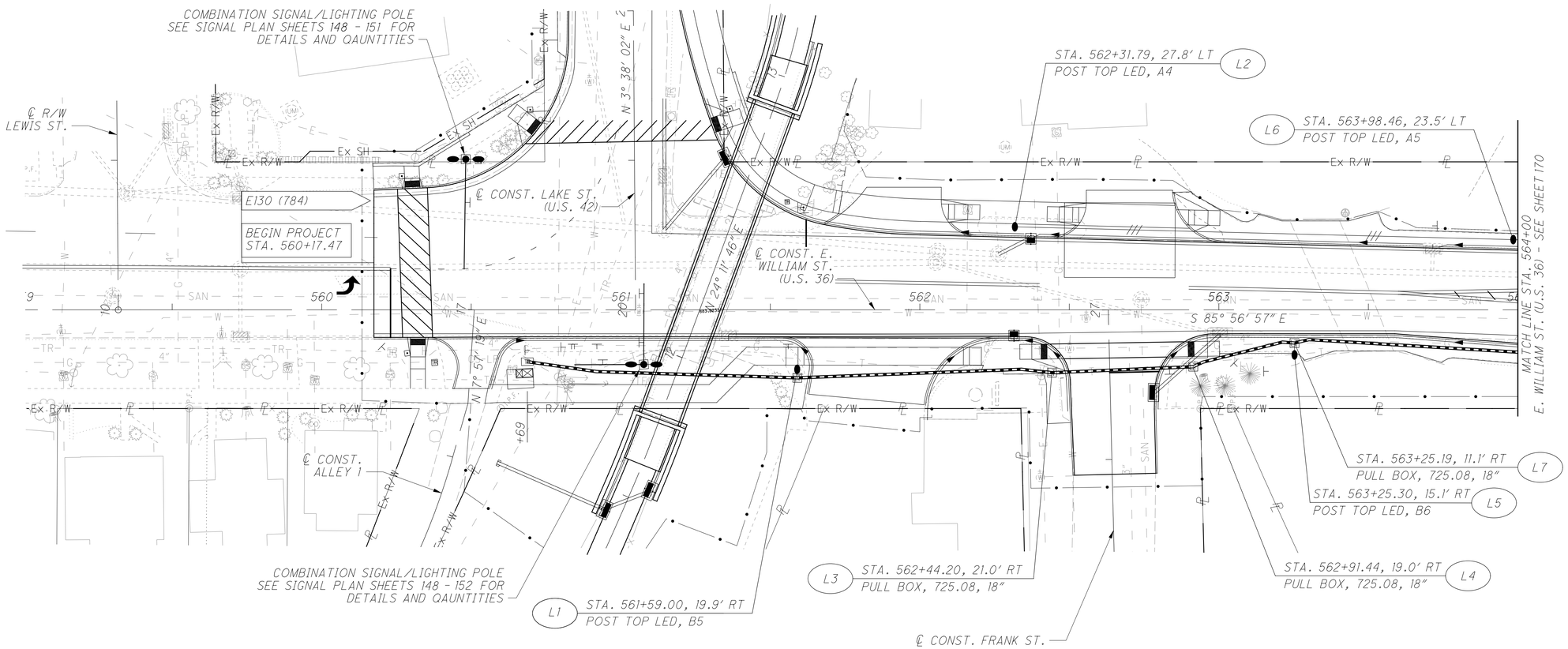
NOTES:

1. INSTALL LIGHTING CIRCUIT B - NO 8 AWG DISTRIBUTION CABLE IN CONDUIT DUCT BANK.
2. INSTALL LIGHTING CIRCUIT C - NO 4 AWG DISTRIBUTION CABLE IN CONDUIT DUCT BANK.
3. SEE SIGNAL PLANS AND INTERCONNECT PLANS FOR ADDITIONAL CABLES INSTALLED IN CONDUIT DUCT BANK.



LEGEND

- LUMINAIRE, POST-TOP, LED, AS PER PLAN
- COMBINATION SIGNAL/LIGHTING POLE
  LUMINAIRE, DOUBLE, LED, AS PER PLAN
- LIGHTING CONTROL CENTER
- PULL BOX, 725.08, 18"
- CIRCUIT A: NO 8 AWG DISTRIBUTION CABLE IN CONDUIT, 2", 725.051
  CIRCUIT D: NO 4 AWG DISTRIBUTION CABLE IN CONDUIT, 2", 725.051
- CONDUIT, 3", 725.04
- CONDUIT DUCT BANK
- PULL BOX, MISC.: 48" POLYMER PULL BOX

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED CEL
CHECKED JMZ

LIGHTING PLAN - E. WILLIAM ST. (U.S. 36)
STA. 559+00 TO STA. 564+00

DEL-36-10.59

169
224

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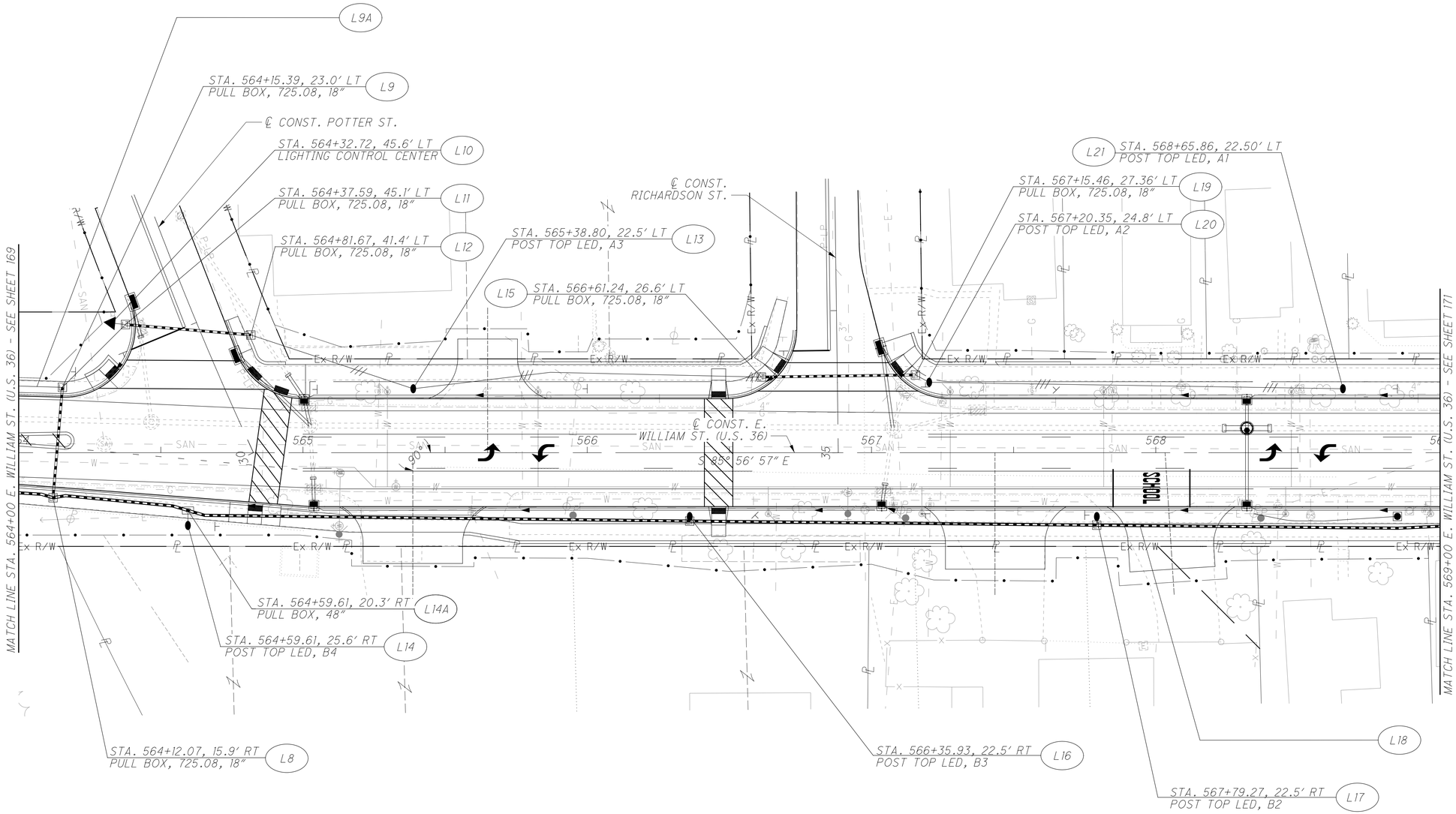


LEGEND

- LUMINAIRE, POST-TOP, LED, AS PER PLAN
- COMBINATION SIGNAL/LIGHTING POLE
  LUMINAIRE, DOUBLE, LED, AS PER PLAN
- LIGHTING CONTROL CENTER
- PULL BOX, 725.08, 18"
- CIRCUIT A: NO 8 AWG DISTRIBUTION CABLE IN CONDUIT, 2", 725.051
  CIRCUIT D: NO 4 AWG DISTRIBUTION CABLE IN CONDUIT, 2", 725.051
- CONDUIT, 3", 725.04
- CONDUIT DUCT BANK
- PULL BOX, MISC.: 48" POLYMER PULL BOX

NOTES:

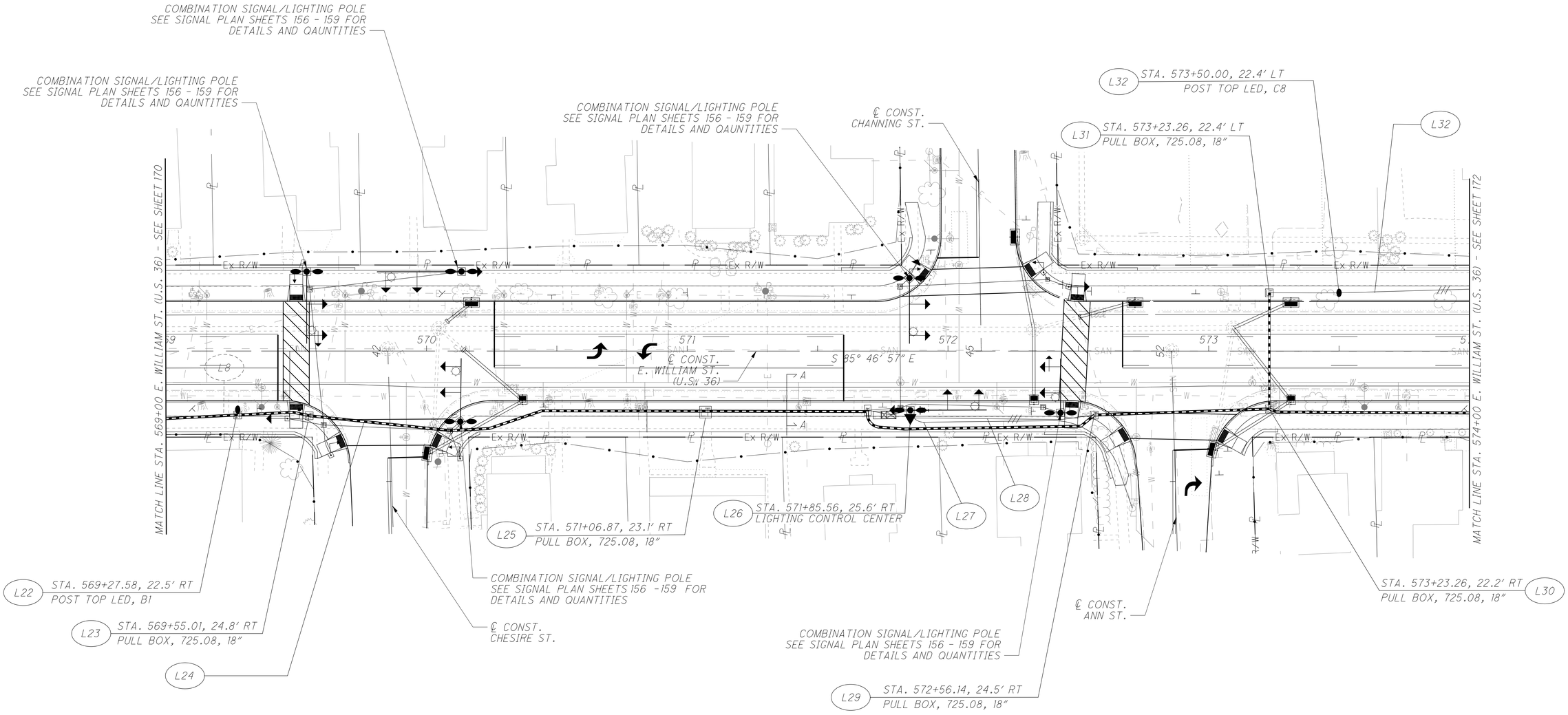
1. INSTALL LIGHTING CIRCUIT B - NO 8 AWG DISTRIBUTION CABLE IN CONDUIT DUCT BANK.
2. INSTALL LIGHTING CIRCUIT C - NO 4 AWG DISTRIBUTION CABLE IN CONDUIT DUCT BANK.
3. SEE SIGNAL PLANS AND INTERCONNECT PLANS FOR ADDITIONAL CABLES INSTALLED IN CONDUIT DUCT BANK.

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED HM
CHECKED JMZ

LIGHTING PLAN - E. WILLIAM ST. (U.S. 36)
STA. 564+00 TO STA. 569+00

DEL-36-10.59



LEGEND

- LUMINAIRE, POST-TOP, LED, AS PER PLAN
- COMBINATION SIGNAL/LIGHTING POLE LUMINAIRE, DOUBLE, LED, AS PER PLAN
- LIGHTING CONTROL CENTER
- PULL BOX, 725.08, 18"
- CIRCUIT A: NO 8 AWG DISTRIBUTION CABLE IN CONDUIT, 2", 725.051
  CIRCUIT D: NO 4 AWG DISTRIBUTION CABLE IN CONDUIT, 2", 725.051
- CONDUIT, 3", 725.04
- CONDUIT DUCT BANK
- PULL BOX, MISC.: 48" POLYMER PULL BOX

SECTION A-A

SEE SECTION A-A ON SHEET 168.

NOTES:

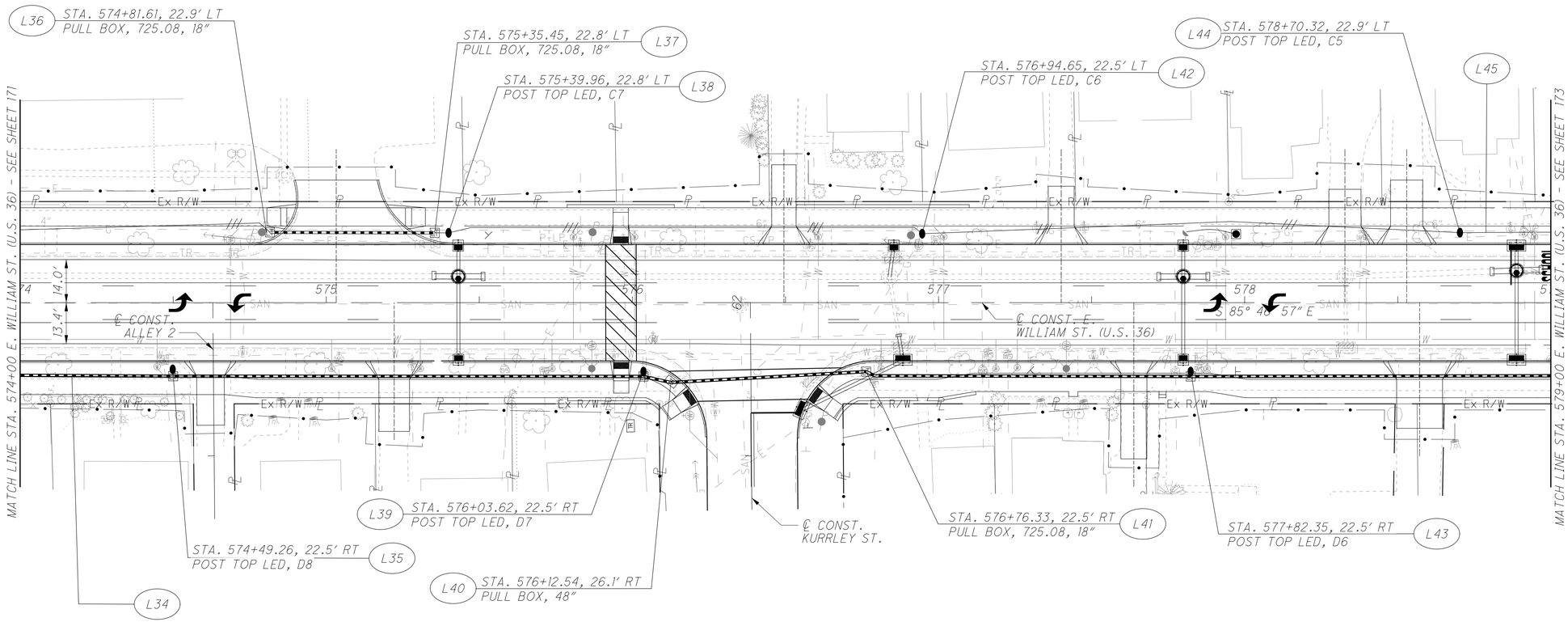
1. INSTALL LIGHTING CIRCUIT B - NO 8 AWG DISTRIBUTION CABLE IN CONDUIT DUCT BANK.
2. INSTALL LIGHTING CIRCUIT C - NO 4 AWG DISTRIBUTION CABLE IN CONDUIT DUCT BANK.
3. SEE SIGNAL PLANS AND INTERCONNECT PLANS FOR ADDITIONAL CABLES INSTALLED IN CONDUIT DUCT BANK.
4. FOR L27, SEE SIGNAL PLANS FOR CONDUIT QUANTITY. INSTALL DISTRIBUTION CABLE FROM POWER SOURCE AT STA. 572+70.72, 60.28' RT TO LIGHTING CONTROL CENTER.

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED HM
CHECKED JMZ

LIGHTING PLAN - E. WILLIAM ST. (U.S. 36) STA. 569+00 TO STA. 574+00

DEL-36-10.59



LEGEND

- LUMINAIRE, POST-TOP, LED, AS PER PLAN
- COMBINATION SIGNAL/LIGHTING POLE
  LUMINAIRE, DOUBLE, LED, AS PER PLAN
- LIGHTING CONTROL CENTER
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  CIRCUIT D: NO 4 AWG DISTRIBUTION CABLE IN CONDUIT, 2", 725.051
- CONDUIT, 3", 725.04
- CONDUIT DUCT BANK
- PULL BOX, MISC.: 48" POLYMER PULL BOX

NOTES:

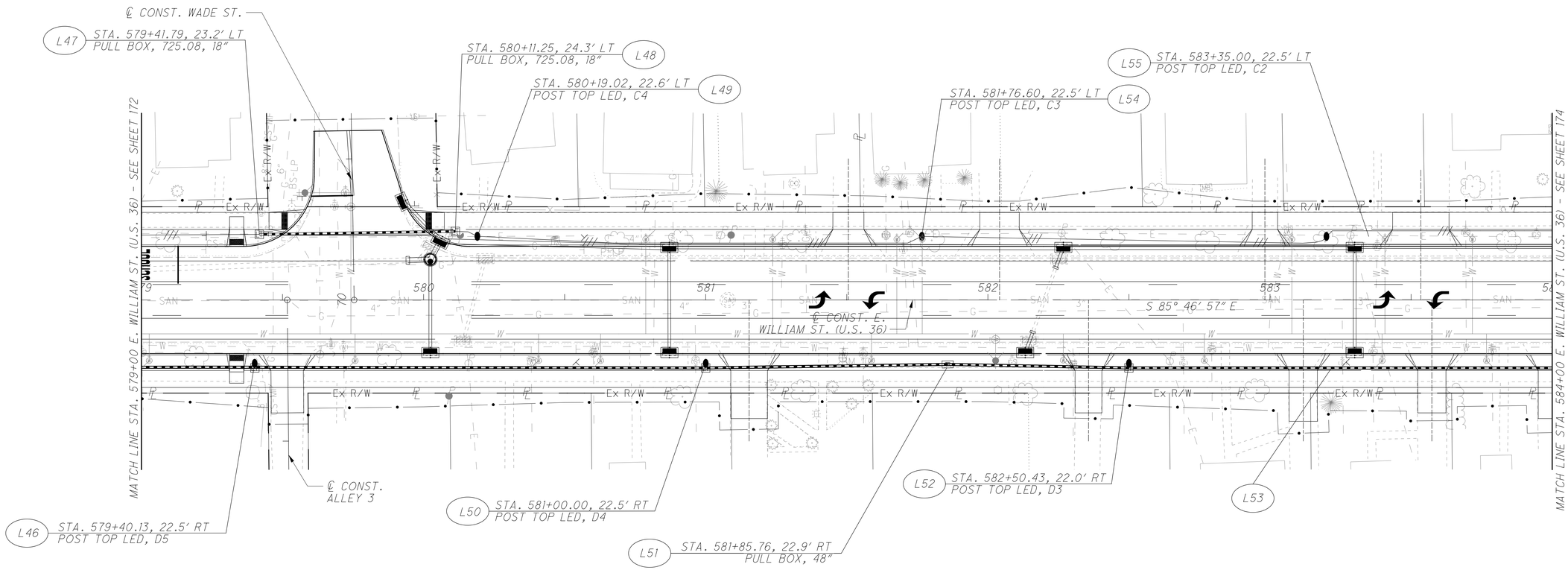
1. INSTALL LIGHTING CIRCUIT B - NO 8 AWG DISTRIBUTION CABLE IN CONDUIT DUCT BANK.
2. INSTALL LIGHTING CIRCUIT C - NO 4 AWG DISTRIBUTION CABLE IN CONDUIT DUCT BANK.
3. SEE SIGNAL PLANS AND INTERCONNECT PLANS FOR ADDITIONAL CABLES INSTALLED IN CONDUIT DUCT BANK.

HORIZONTAL SCALE IN FEET
0 10 40

CALCULATED CEL
CHECKED JMZ

LIGHTING PLAN - E. WILLIAM ST. (U.S. 36)
STA. 574+00 TO STA. 579+00

DEL-36-10.59



LEGEND

- LUMINAIRE, POST-TOP, LED, AS PER PLAN
- COMBINATION SIGNAL/LIGHTING POLE
  LUMINAIRE, DOUBLE, LED, AS PER PLAN
- LIGHTING CONTROL CENTER
- PULL BOX, 725.08, 18″
- CIRCUIT A: NO 8 AWG DISTRIBUTION CABLE IN CONDUIT, 2″, 725.051
  CIRCUIT D: NO 4 AWG DISTRIBUTION CABLE IN CONDUIT, 2″, 725.051
- CONDUIT, 3″, 725.04
- CONDUIT DUCT BANK
- PULL BOX, MISC.: 48″ POLYMER PULL BOX

NOTES:

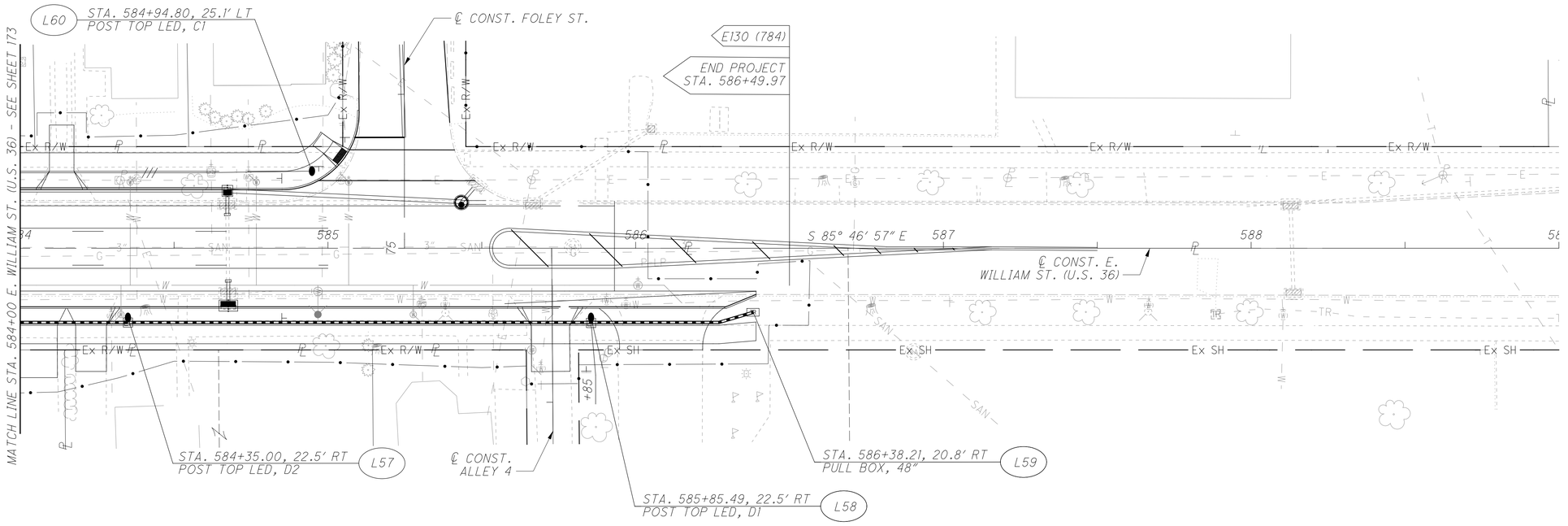
1. INSTALL LIGHTING CIRCUIT B - NO 8 AWG DISTRIBUTION CABLE IN CONDUIT DUCT BANK.
2. INSTALL LIGHTING CIRCUIT C - NO 4 AWG DISTRIBUTION CABLE IN CONDUIT DUCT BANK.
3. SEE SIGNAL PLANS AND INTERCONNECT PLANS FOR ADDITIONAL CABLES INSTALLED IN CONDUIT DUCT BANK.

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED CEL
CHECKED JMZ

LIGHTING PLAN - E. WILLIAM ST. (U.S. 36)
STA. 579+00 TO STA. 584+00

DEL-36-10.59



LEGEND

- LUMINAIRE, POST-TOP, LED, AS PER PLAN
- COMBINATION SIGNAL/LIGHTING POLE
  LUMINAIRE, DOUBLE, LED, AS PER PLAN
- LIGHTING CONTROL CENTER
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  CIRCUIT D: NO 4 AWG DISTRIBUTION CABLE IN CONDUIT, 2", 725.051
- CONDUIT, 3", 725.04
- CONDUIT DUCT BANK
- TR PULL BOX, MISC.: 48" POLYMER PULL BOX

NOTES:

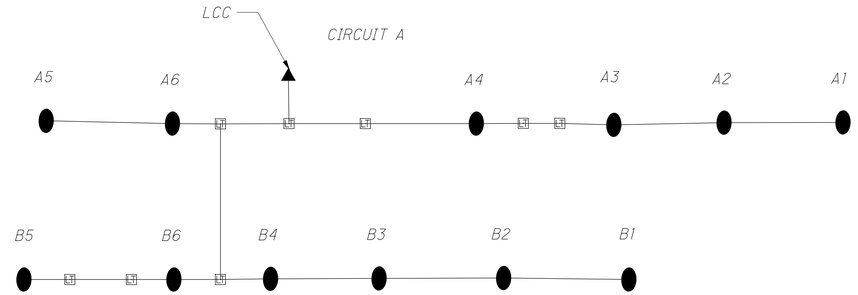
1. INSTALL LIGHTING CIRCUIT B - NO 8 AWG DISTRIBUTION CABLE IN CONDUIT DUCT BANK.
2. INSTALL LIGHTING CIRCUIT C - NO 4 AWG DISTRIBUTION CABLE IN CONDUIT DUCT BANK.
3. SEE SIGNAL PLANS AND INTERCONNECT PLANS FOR ADDITIONAL CABLES INSTALLED IN CONDUIT DUCT BANK.

HORIZONTAL SCALE IN FEET
0 10 40

CALCULATED CEL
CHECKED JMZ

LIGHTING PLAN - E. WILLIAM ST. (U.S. 36)
STA. 584+00 TO STA. 586+49.97

DEL-36-10.59

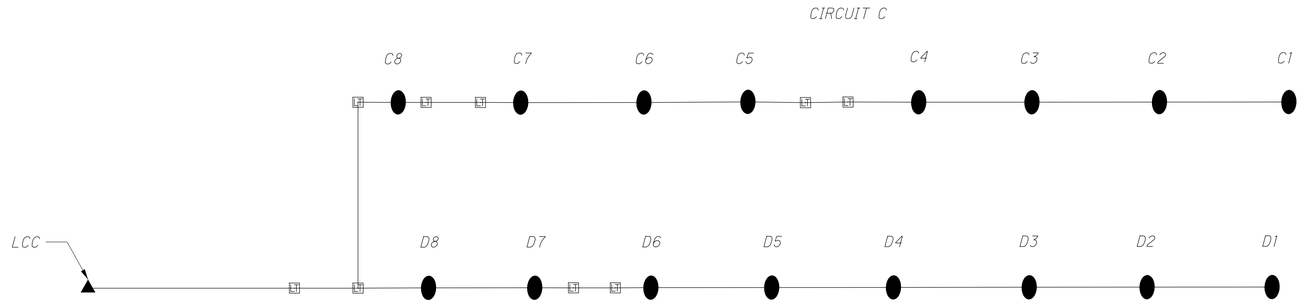


CIRCUIT B

LEGEND

- LUMINAIRE, POST-TOP, LED, AS PER PLAN
- COMBINATION SIGNAL/LIGHTING POLE
  LUMINAIRE, DOUBLE, LED, AS PER PLAN
- LIGHTING CONTROL CENTER
- PULL BOX, 725.08, 18"
- CIRCUIT A: NO 8 AWG DISTRIBUTION CABLE IN CONDUIT, 2", 725.051
  CIRCUIT B: NO 8 AWG DISTRIBUTION CABLE IN CONDUIT DUCT BANK
  CIRCUIT C: NO 4 AWG DISTRIBUTION CABLE IN CONDUIT DUCT BANK
  CIRCUIT D: NO 4 AWG DISTRIBUTION CABLE IN CONDUIT, 2", 725.051

POWER SERVICE, 120/240 VOLT, SINGLE PHASE, 3-WIRE									
POWER SERVICE	LINE VOLTAGE (VOLTS)	CONNECTED LOAD (kVA)	SERVICE ENTRANCE CABLE (AWG)	ENCLOSURE RATING (AMPS)	CIRCUIT NO.	PROP CIRCUIT LOAD (AMPS)	CIRCUIT FUSE SIZE (AMPS)	CIRCUIT CABLE SIZE (AWG)	MAINTAINING AGENCY
LIGHTING	120	0.64	BY OTHERS	100	A	5.30	20 (2-P)	8	CITY OF DELAWARE
	120	0.74			B	6.19	20 (2-P)	8	



CIRCUIT D

POWER SERVICE, 120/240 VOLT, SINGLE PHASE, 3-WIRE									
POWER SERVICE	LINE VOLTAGE (VOLTS)	CONNECTED LOAD (kVA)	SERVICE ENTRANCE CABLE (AWG)	ENCLOSURE RATING (AMPS)	CIRCUIT NO.	PROP CIRCUIT LOAD (AMPS)	CIRCUIT FUSE SIZE (AMPS)	CIRCUIT CABLE SIZE (AWG)	MAINTAINING AGENCY
LIGHTING	120	0.85	BY OTHERS	100	C	7.07	20 (2-P)	4	CITY OF DELAWARE
	120	0.85			D	7.07	20 (2-P)	4	

CALCULATED HM
CHECKED JMZ

LIGHTING CIRCUIT DIAGRAM

DEL-36-10.59

LANDSCAPING GENERAL NOTES:

1. THE CITY OF DELAWARE RESERVES THE RIGHT TO DENY ANY TREE THAT IS NOT DEEMED SUITABLE FOR PLANTING. ALL TREES SHALL MEET THE ANSI A 300 STANDARDS.

2. CONTRACTOR SHALL FIELD STAKE AND VERIFY ALL TREE LOCATIONS WITH THE CITY OF DELAWARE PRIOR TO INITIATING PLANTING INSTALLATION.

3. CONTRACTOR SHALL NOTIFY ALL PERTINENT UTILITY COMPANIES 48 HOURS MINIMUM PRIOR TO DIGGING FOR VERIFICATION OF ALL UNDERGROUND UTILITIES. PLANS ARE PREPARED ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARING THESE DOCUMENTS.

4. THE CONTRACTOR SHALL BECOME COMPLETELY FAMILIAR WITH EXISTING SITE CONDITIONS PRIOR TO BEGINNING INSTALLATION. ALL EXISTING SITE IMPROVEMENTS, PAVING, LANDSCAPE, LIGHTING, AND OTHER SITE ELEMENTS TO REMAIN SHALL BE PROTECTED FROM DAMAGE UNLESS OTHERWISE NOTED.

5. THE CONTRACTOR SHALL REPORT ANY DISCREPANCIES BETWEEN THE CONSTRUCTION DRAWINGS AND ACTUAL FIELD CONDITIONS TO THE OWNER'S REPRESENTATIVE IMMEDIATELY.

6. THE CONTRACTOR SHALL BEAR ALL COST ASSOCIATED WITH SOIL TESTING AND SOIL AMENDMENTS AS REQUIRED AS A RESULT OF THE SOIL TESTING LABORATORY'S RECOMMENDATIONS. PRIOR TO INITIATING INSTALLATION, THE CONTRACTOR SHALL PROVIDE SOIL TESTS FOR AT LEAST TWO ON-SITE LOCATIONS.

7. ALL PLANT SIZES NOTED ON THE PLANT LIST/MATERIAL SCHEDULE ARE MINIMUM. INCREASE SIZE IF NECESSARY TO CONFORM TO THE PLANT SIZE AND SPECIFICATIONS.

8. ALL LANDSCAPING SHALL BE GUARANTEED FOR ONE (1) YEAR AFTER FINAL ACCEPTANCE. ANY PLANTINGS NEEDING REPLACEMENT WILL BE GUARANTEED FROM THE TIME OF REPLACEMENT IF AFTER FINAL ACCEPTANCE.

9. CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING AS REQUIRED TO MAINTAIN AND ESTABLISH ALL PLANTINGS, INCLUDING THROUGH THE ONE (1) YEAR WARRANTY PERIOD. WATERING SHALL OCCUR AT LEAST ONCE A WEEK UNLESS DIRECTED OTHERWISE BY OWNER.

10. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING, IN FULL, ALL PLANTING AREAS (INCLUDING WATERING, SPRAYING, MULCHING, MOWING, FERTILIZING, AND WEEDING, ETC.) UNTIL THE JOB IS ACCEPTED.

11. CONTRACTOR SHALL ASSURE DRAINAGE AND PERCOLATION OF ALL PLANTING PITS PRIOR TO INSTALLATION OF PLANT MATERIAL. CORRECT IF REQUIRED TO ASSURE PERCOLATION. CONTRACTOR IS RESPONSIBLE FOR REPLACEMENT OF ALL PLANTS LOST DUE TO INADEQUATE DRAINAGE CONDITIONS.

12. ALL PLANT MATERIALS SHALL COMPLY WITH THE LATEST EDITION OF A.N.A. STANDARDS FOR NURSERY STOCK.

13. ALL PLANTS ARE TO BE REMOVED FROM CONTAINERS, CAGES AND OTHER NON-BIODEGRADABLE MATERIALS.

14. SEED ALL AREAS NOT IDENTIFIED ON THESE DRAWINGS DISTURBED BY CONSTRUCTION/ INSTALLATION ACTIVITIES IN ACCORDANCE WITH SPECIFICATIONS. ALL DISTURBED AREAS NOT COVERED BY BUILDINGS OR PAVING SHALL BE SEEDED AND WATERED UNTIL A HEALTHY STAND OF GRASS IS OBTAINED.

15. CONTRACTOR SHALL PROVIDE AND INSTALL 3" DEPTH OF WASHED ROUND RIVER COBBLE STONES AT LOCATIONS SHOWN IN THE PLANS IN LEIU OF SHREDDED HARDWOOD MULCH. ROUND RIVER COBBLE STONES SHALL HAVE AN AVERAGE SIZE OF 1" DIAMETER AND SHALL BE SHADES OF BEIGE AND GRAY IN COLOR. COORDINATE LIMITS OF COBBLE STONES WITH CITY REPRESENTATIVE.

16. INSTALL ROOT BARRIER SYSTEM PER MANUFACTURER'S SPECIFICATIONS ALONG EDGE OF CURB AND EDGE OF SIDEWALK IN TREE LAWNS WHERE INDICATED ON PLANS. ROOT BARRIER SHALL BE BIOBARRIER ROOT CONTROL SYSTEM BY TYPAR OR APPROVED EQUAL. ROOT BARRIER AT CURB SHALL BE 24" IN HEIGHT. ROOT BARRIER AT SIDEWALK SHALL BE 19.5" IN HEIGHT.

17. PLANT QUANTITIES HAVE BEEN PROVIDED FOR CONVENIENCE ONLY. THE CONTRACTOR IS RESPONSIBLE FOR HIS OWN "TAKE-OFFS". DRAWING PREVAILS OVER WRITTEN QUANTITIES.

18. CONTRACTOR SHALL PLANT ALL PERENNIALS PER ODOT ITEM 661.

19. CONTRACTOR SHALL PLANT ALL DECIDUOUS TREES PER ODOT ITEM 661 AND CITY OF DELAWARE STANDARD DRAWINGS RDWD-33.1 AND RDWD-33.2. WHERE CONFLICTS EXIST BETWEEN ODOT ITEM 661 AND THE ABOVE REFERENCED CITY OF DELAWARE STANDARD DRAWINGS, THE CITY OF DELAWARE STANDARD DRAWINGS SHALL PREVAIL. TREES AT THE BRIDGE ABUTMENTS SHALL NOT RECEIVE 3" OF HARDWOOD MULCH AS SHOWN ON CITY OF DELAWARE STANDARD DRAWING RDWD-33.2.

20. A CONTINGENCY QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR TREES TO BE FIELD LOCATED WITHIN THE ROW ONCE THE IMPROVEMENTS ARE COMPLETE. EXACT SPECIES OF TREES AND FINAL PLANTING LOCATIONS SHALL BE DETERMINED BY THE CITY. THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 661 CONTINGENCY, DECIDUOUS TREE, 2" CALIPER, 10 EACH.

21. A CONTINGENCY QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR STONE BLOCKS TO BE FIELD LOCATED IF A SUITABLE NUMBER OF EXISTING ABUTMENT STONES ARE NOT AVAILABLE TO CONSTRUCT THE WALLS AS SHOWN ON THE PLANS. STONE BLOCKS SHALL BE ROSETTA OUTCROPPING WALL STONE OR APPROVED EQUAL, COLOR TO BE SHADES OF TAN, BROWN AND GRAY. SIZE TO BE APPROXIMATELY 12" H x 42"-54" L x 24" D. THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM SPECIAL CONTINGENCY, STONE BLOCKS, MODEL ROSETTA OUTCROPPING WALL STONE OR APPROVED EQUAL, 10 EACH.

PLANTING SCHEDULE

DECIDUOUS TREES

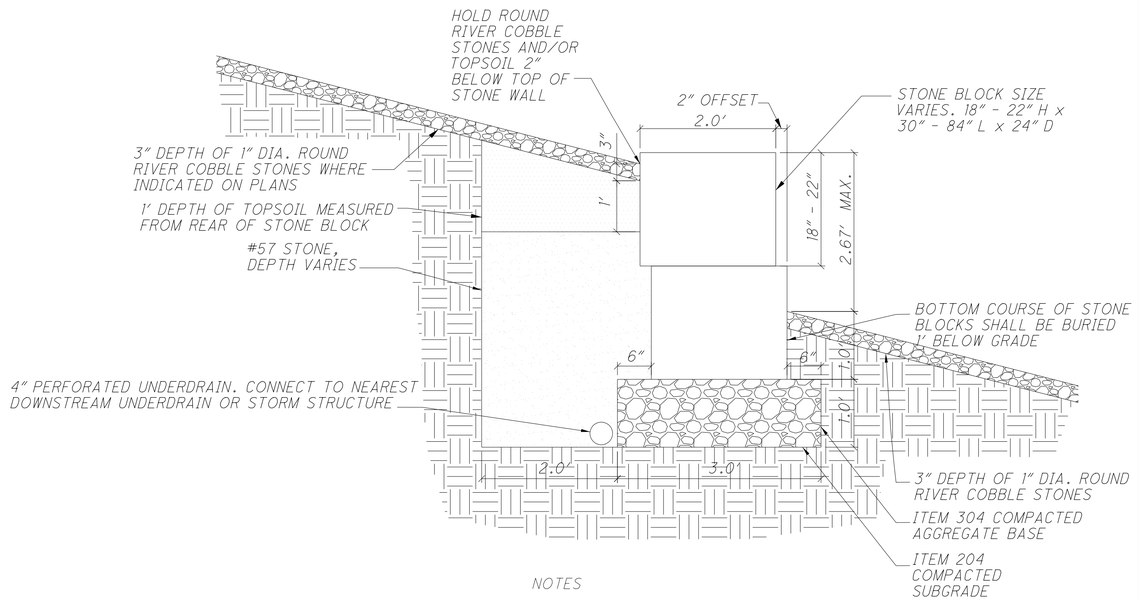
QTY	CODE	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION
37	PS	PRUNUS SARGENTII 'PINK FLAIR'	PINK FLAIR CHERRY	2" CAL.	B&B, SINGLE STEM
25	SR	SYRINGA RETICULATA 'IVORY SILK'	IVORY SILK JAPANESE TREE LILAC	2" CAL.	B&B, SINGLE STEM

PERENNIALS

QTY	CODE	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION
83	PV	PANICUM VIRGATUM 'RUBY RIBBONS'	RUBY RIBBONS SWITCH GRASS	NO. 2	CONTAINER
157	SA	SEDUM 'AUTUMN JOY'		NO. 1	CONTAINER

LANDSCAPE SUB-SUMMARY

ITEM #	QUANTITY	UNIT	DESCRIPTION
661	38	EA	DECIDUOUS TREE, 2" CALIPER, PRUNUS SARGENTII 'PINK FLAIR', PINK FLAIR CHERRY
661	19	EA	DECIDUOUS TREE, 2" CALIPER, SYRINGA RETICULATA 'IVORY SILK', IVORY SILK JAPANESE TREE LILAC
661	83	EA	PERENNIALS, #2 CONTAINER, PANICUM VIRGATUM 'RUBY RIBBONS', RUBY RIBBONS SWITCH GRASS
661	157	EA	PERENNIALS, #1 CONTAINER, SEDUM 'AUTUMN JOY', AUTUMN JOY STONECROP
661	10	EA	CONTINGENCY, DECIDUOUS TREE, 2" CALIPER, TO BE FIELD LOCATED
SPECIAL	62	CY	ROUND RIVER COBBLE STONES, 1" DIAMETER, AS PER PLAN
SPECIAL	3024	LF	ROOT BARRIER AT CURB, 24" HEIGHT, AS PER PLAN (ALTERNATIVE 3)
SPECIAL	3024	LF	ROOT BARRIER AT SIDEWALK, 19.5" HEIGHT, AS PER PLAN (ALTERNATIVE 3)
SPECIAL	238	LF	STONE WALL, AS PER PLAN
SPECIAL	10	EA	CONTINGENCY, STONE BLOCKS, ROSETTA OUTCROPPING WALL STONE OR APPROVED EQUAL



NOTES

A. CONTRACTOR SHALL ADJUST LENGTH OF WALLS AS NECESSARY BASED UPON THE AVAILABILITY OF SALVAGED ABUTMENT STONE BLOCKS. CONTACT ENGINEER PRIOR TO CONSTRUCTION IF PROPOSED LAYOUT OF WALL DIFFERS FROM THAT SHOWN ON PLANS.
B. IN NO CASE SHALL STONE BLOCKS BE SET MORE THAN TWO COURSES HIGH.
C. CONTRACTOR SHALL SET STONE BLOCKS SO THAT BLOCKS OF DIFFERENT HEIGHTS ARE ARRANGED TO CREATE A RELATIVELY LEVEL TOP OF WALL.

1/176 ABUTMENT STONE WALL SECTION N.T.S.

CALCULATED ES CHECKED CSR

LANDSCAPING GENERAL NOTES

DEL-36-10.59

176/224

(A) STA. 559+31.97 ℄ CONST. E. WILLIAM ST (U.S.36) = STA. 10+00.00 ℄ CONST. LEWIS ST.

(B) STA. 560+51.03 ℄ CONST. E. WILLIAM ST. (U.S.36) = STA. 17+00.00 ℄ CONST. ALLEY 1

(C) STA. 561+04.96 ℄ CONST. E. WILLIAM ST. (U.S.36) = STA. 20+00.00 ℄ CONST. LAKE ST. (U.S. 42)

(D) STA. 562+63.02 ℄ CONST. E. WILLIAM ST. (U.S.36) = STA. 27+00.00 ℄ CONST. FRANK ST.

FOR GROUND COVER SEE SHEET 183

N

0 10 20 40 HORIZONTAL SCALE IN FEET

CALCULATED AMF CHECKED CSR

LANDSCAPING PLANS - E. WILLIAM ST. (U.S. 36)
STA. 559+00 TO STA. 564+00

DEL-36-10.59

177
224

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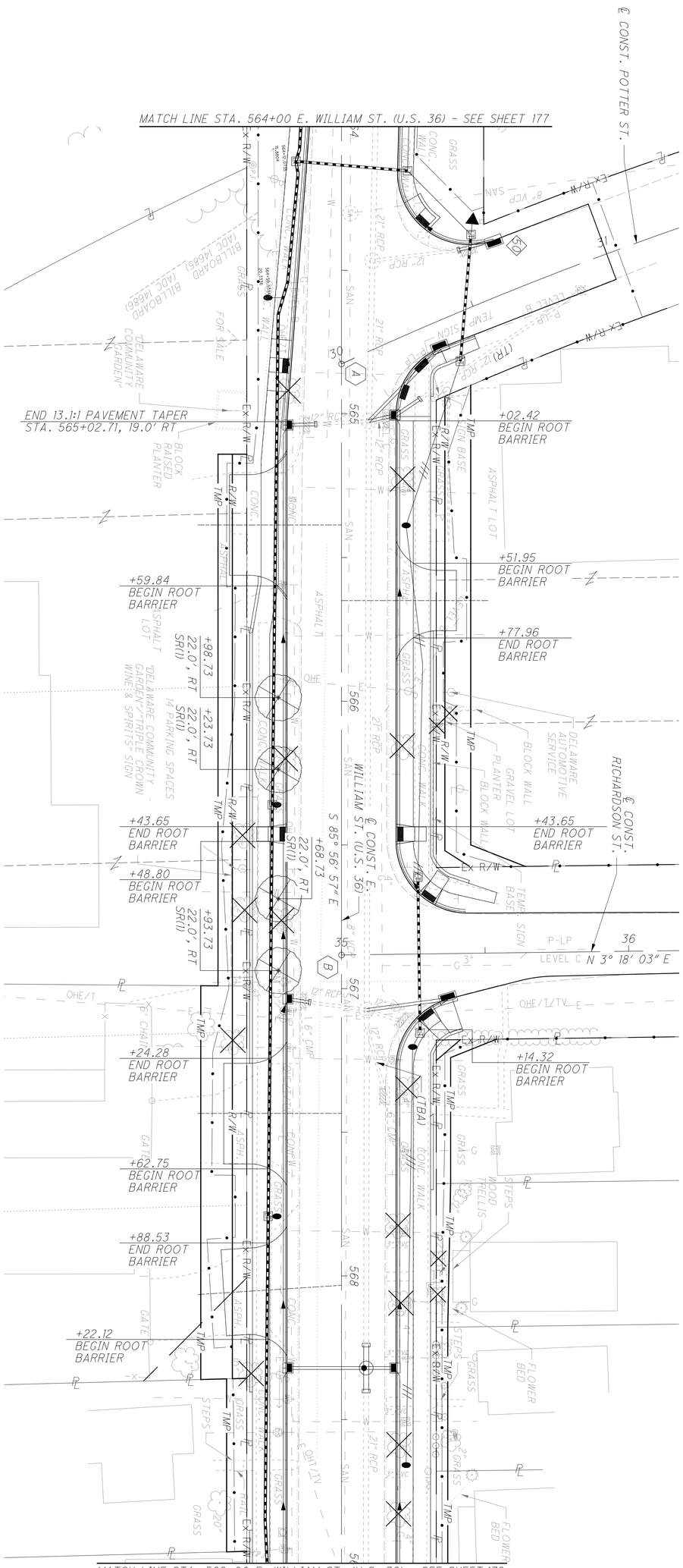
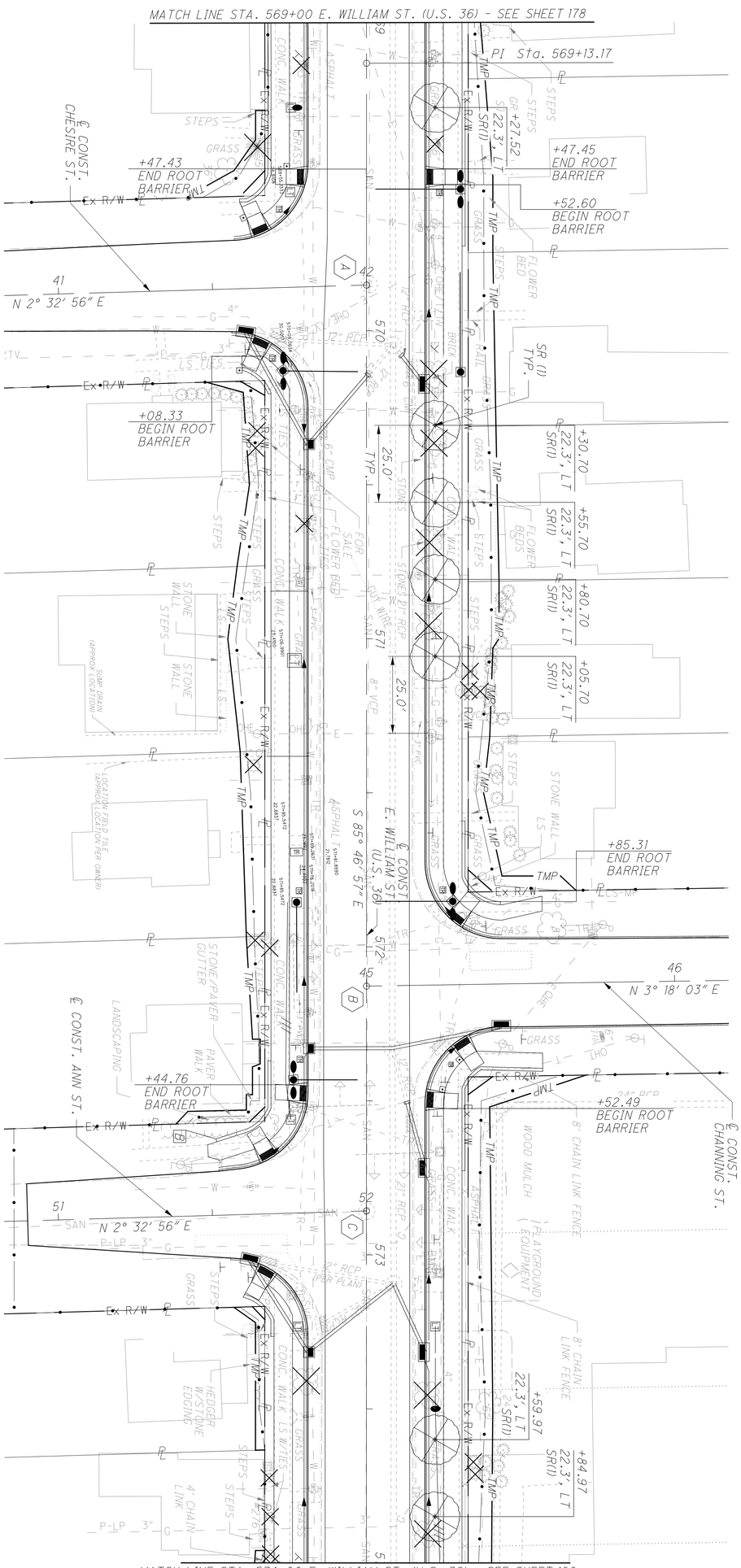


(A) STA. 564+82.59 ℄ CONST. E. WILLIAM ST. (U.S. 36) =
STA. 30+00.00 ℄ CONST. POTTER ST.

(B) STA. 566+88.32 ℄ CONST. E. WILLIAM ST. (U.S. 36) =
STA. 35+00.00 ℄ CONST. RICHARDSON ST.

178 / 224	DEL-36-10.59	LANDSCAPING PLAN - E. WILLIAM ST. (U.S. 36) STA. 564+00 TO STA. 569+00	CALCULATED AMF / CHECKED CSR	0 10 20 40 HORIZONTAL SCALE IN FEET



A STA. 569+85.18 ℄ CONST. E. WILLIAM ST. (U.S. 361 = STA. 42+00.00 ℄ CONST. CHESIRE ST.

B STA. 572+12.76 ℄ CONST. E. WILLIAM ST. (U.S. 361 = STA. 45+00.00 ℄ CONST. CHANNING ST.

C STA. 572+85.75 ℄ CONST. E. WILLIAM ST. (U.S. 361 = STA. 52+00.00 ℄ CONST. ANN ST.

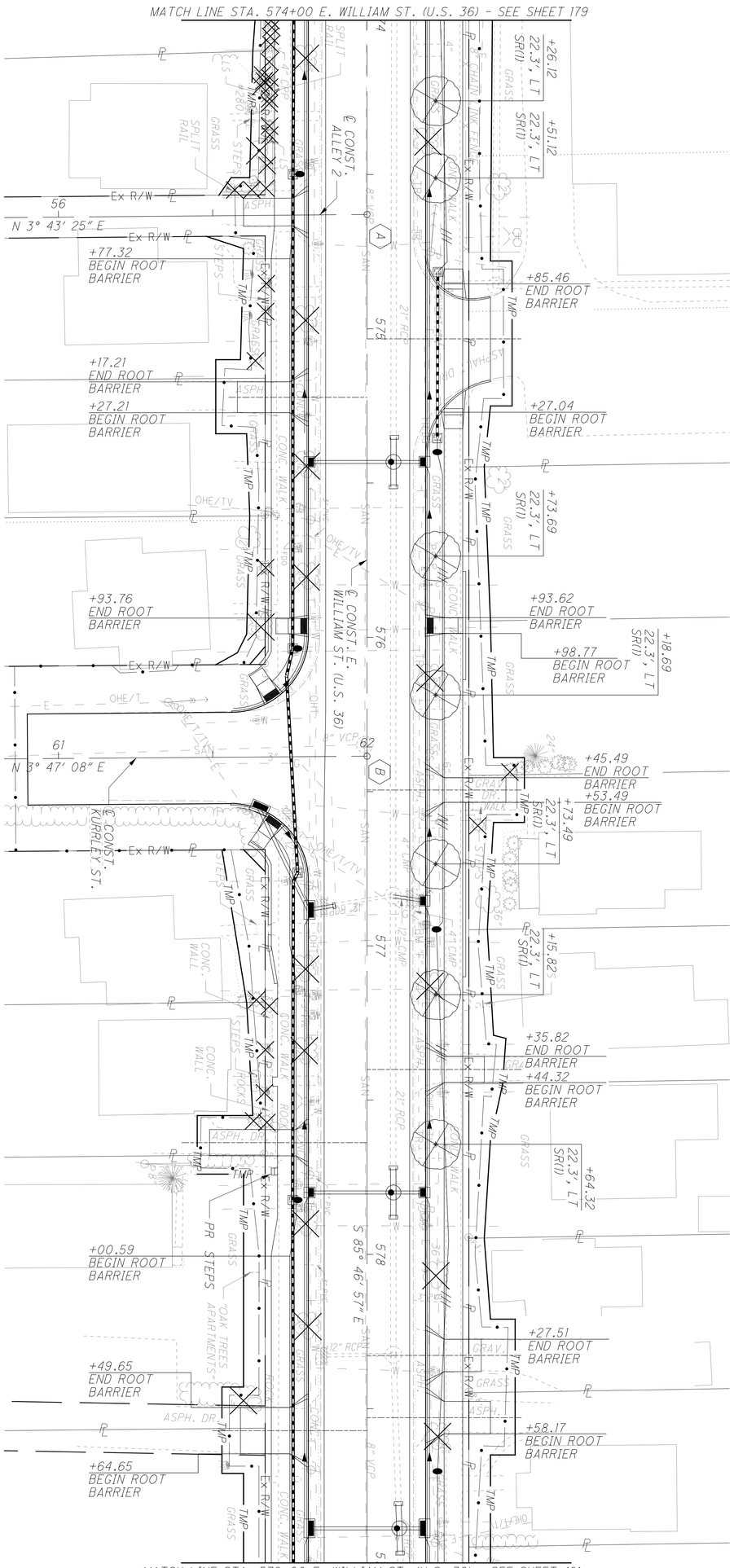
179
224

DEL-36-10.59

LANDSCAPING PLAN - E. WILLIAM ST. (U.S. 36)
STA. 569+00 TO STA. 574+00

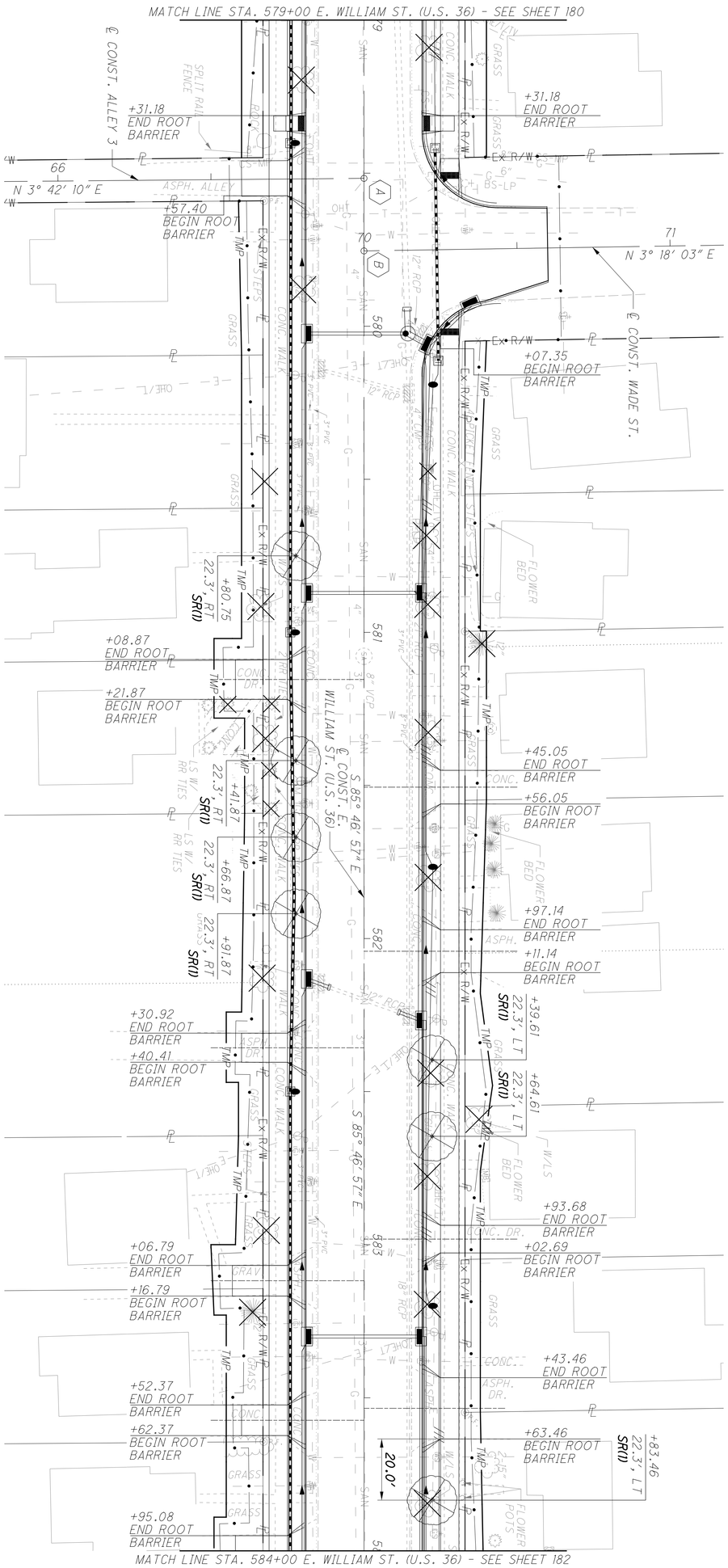
CALCULATED AMF
CHECKED CSR

0 10 20 40
HORIZONTAL SCALE IN FEET

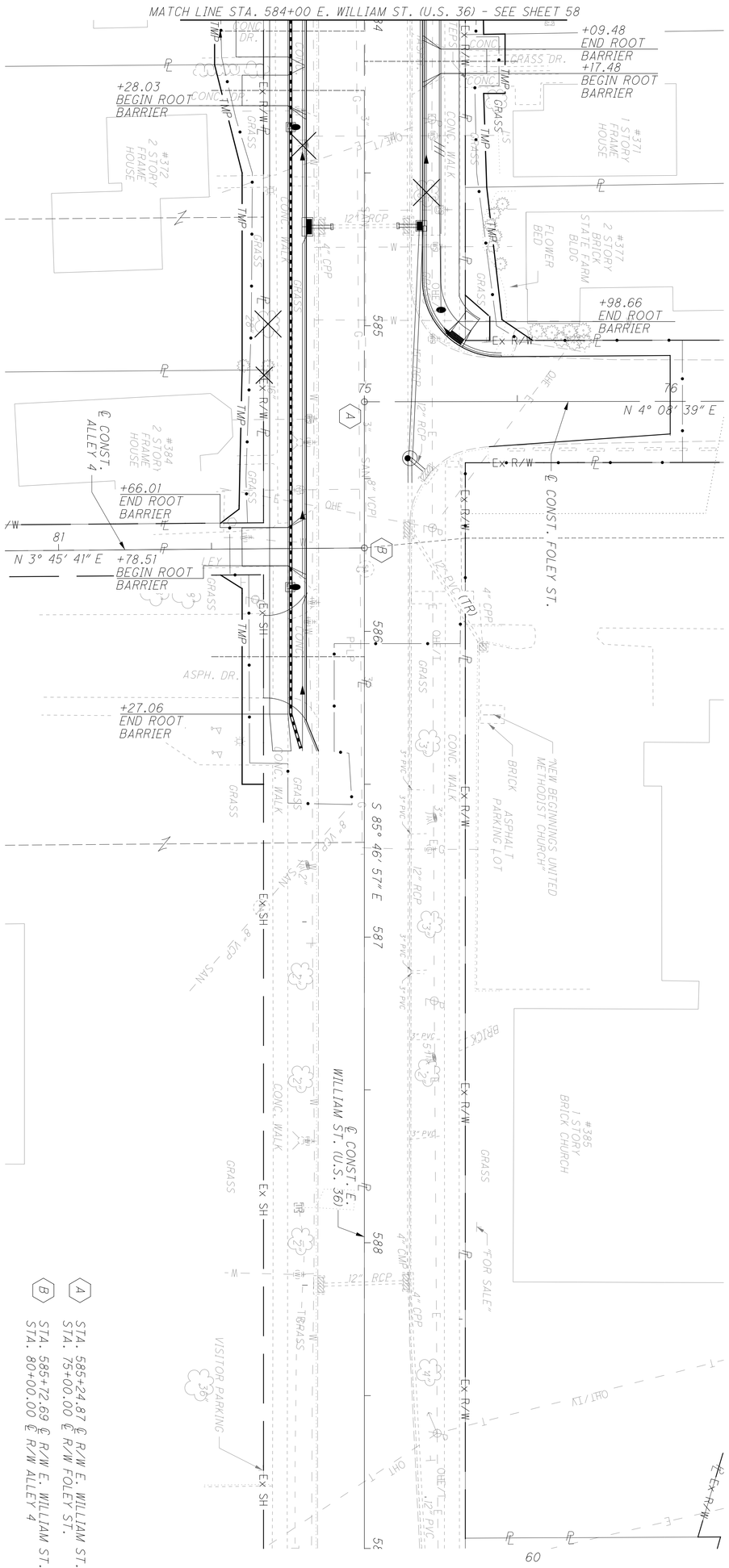


(A) STA. 574+62.94 ℄ R/W E. WILLIAM ST. (U.S. 36) = STA. 57+00.00 ℄ R/W ALLEY 2

(B) STA. 576+38.53 ℄ R/W E. WILLIAM ST. (U.S. 36) = STA. 62+00.00 ℄ R/W KURRLEY ST.



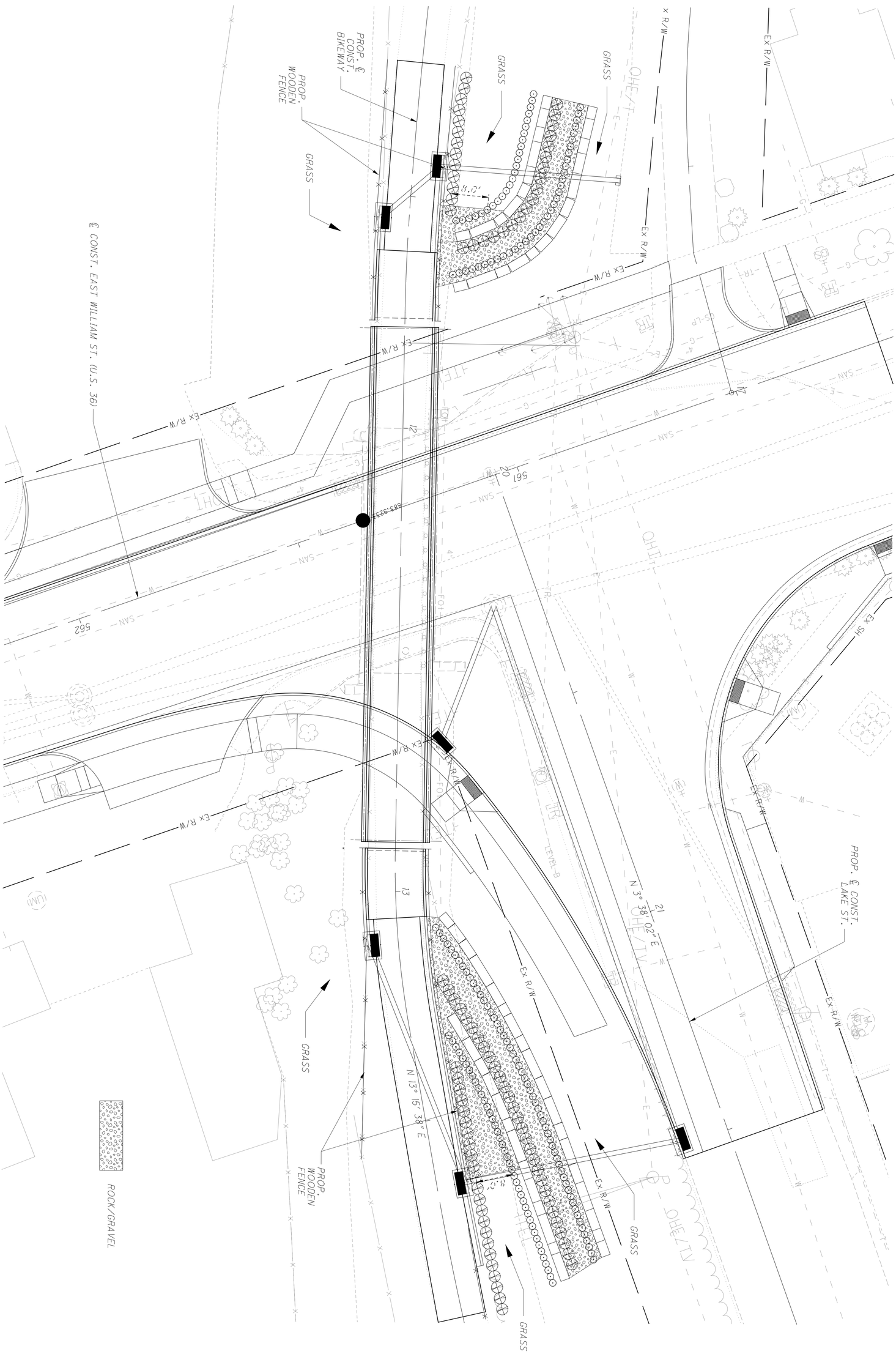
181 / 224	DEL-36-10.59	LANDSCAPING PLAN - E. WILLIAM ST. (U.S. 36) STA. 579+00 TO STA. 584+00	CALCULATED AMF CHECKED CSR	0 20 10 40 HORIZONTAL SCALE IN FEET



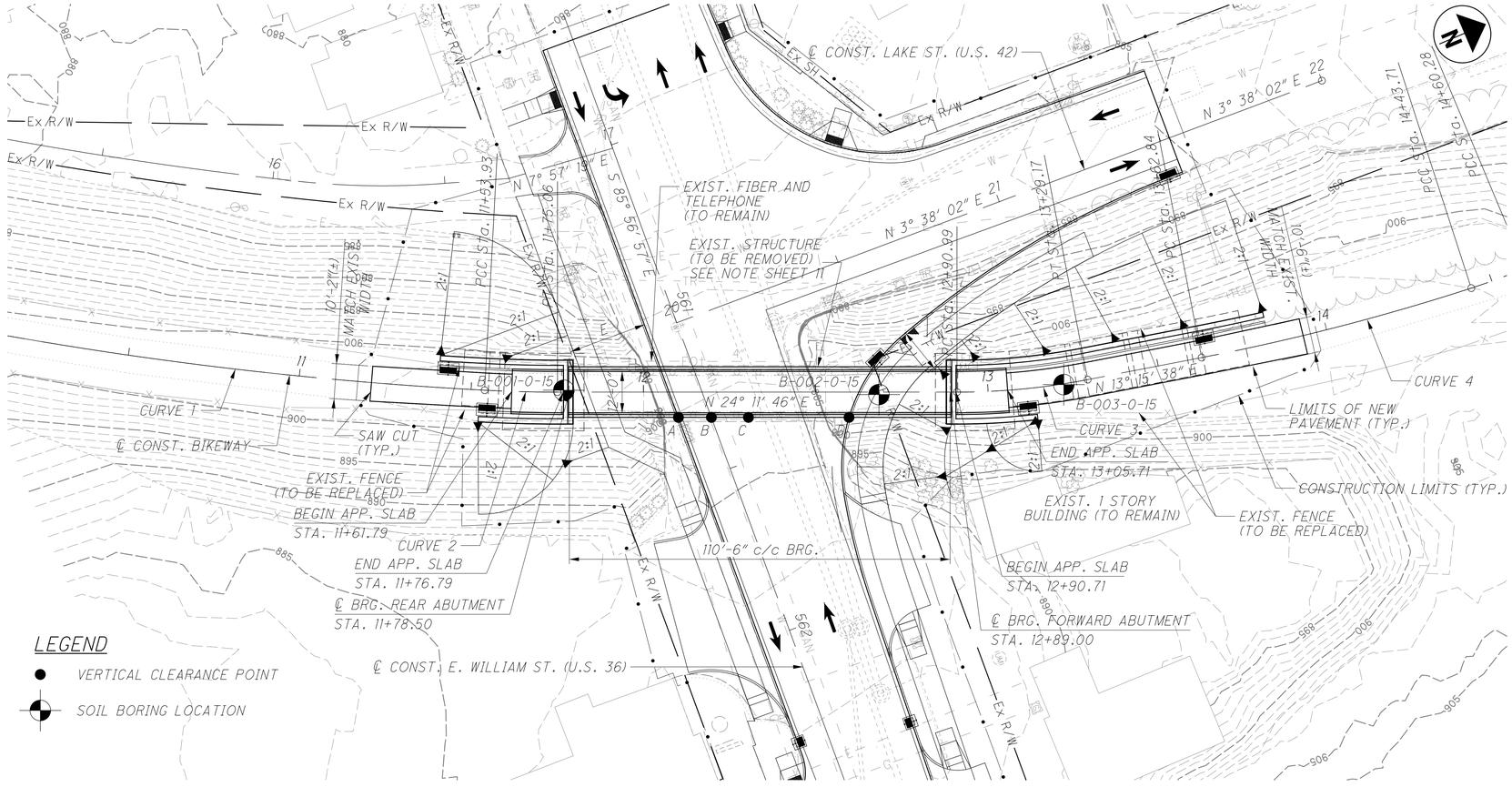
(A) STA. 585+24.87 ℄ R/W E. WILLIAM ST. (U.S. 36) = STA. 75+00.00 ℄ R/W FOLEY ST.

(B) STA. 585+72.69 ℄ R/W E. WILLIAM ST. (U.S. 36) = STA. 80+00.00 ℄ R/W ALLEY 4

182 / 224	DEL-36-10.59	LANDSCAPING PLAN - E. WILLIAM ST. (U.S. 36) STA. 584+00 TO STA. 589+00	CALCULATED AMF / CHECKED CSR	0 10 20 40 HORIZONTAL SCALE IN FEET



183 224	**DEL-36-10.59**	**LANDSCAPING PLAN - E. WILLIAM ST. (U.S. 36) GROUND COVER**	CALCULATED JDH / CHECKED CSR	0 5 10 20 HORIZONTAL SCALE IN FEET



PLAN

LEGEND

- VERTICAL CLEARANCE POINT
- SOIL BORING LOCATION

NOTES

1. FOR BENCHMARK INFORMATION, SEE CONTROL POINTS ON SHEET 3 OF 224.
2. EXISTING UTILITIES TO REMAIN UNLESS NOTED OTHERWISE.
3. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

VERTICAL CLEARANCE

POINT	EXIST.	PROP.	REQ'D
A	15.1'(±)	17.75'	17.50'
B	14.9'(±)	17.63'	17.50'
C	14.8'(±)	17.60'	17.50'
D	NONE	18.41'	17.50'

HORIZONTAL CLEARANCE

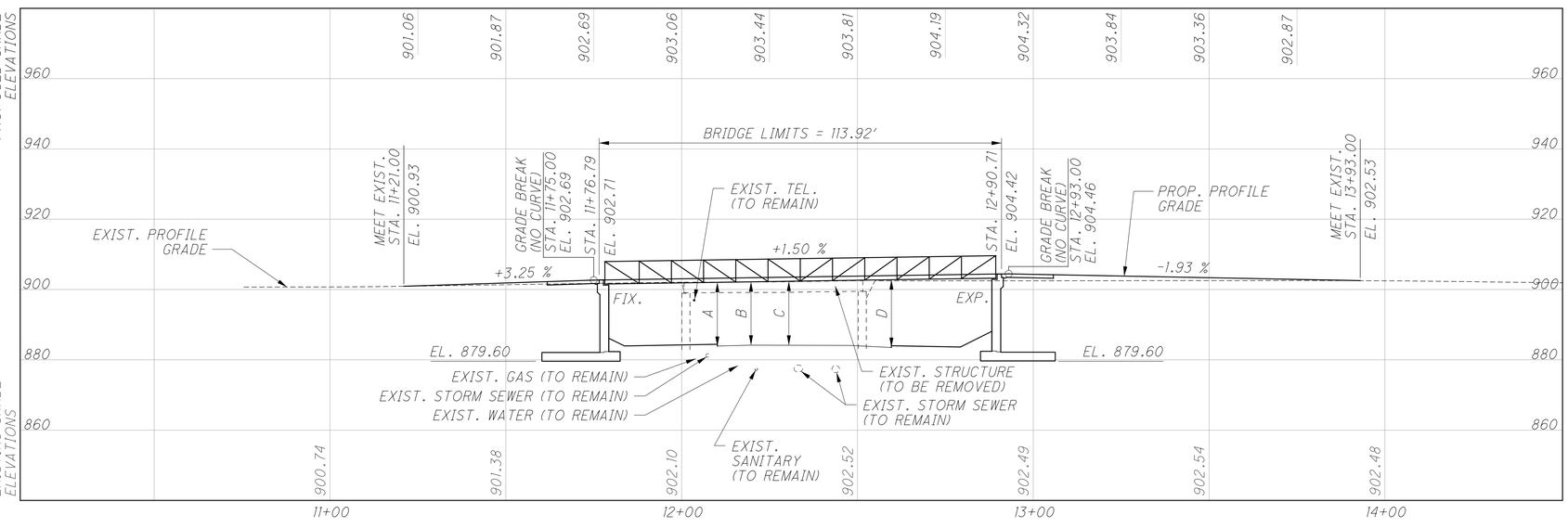
E = 13'-0" REQUIRED CLEARANCE
22'-8" ACTUAL CLEARANCE

F = 13'-0" REQUIRED CLEARANCE
13'-3½" ACTUAL CLEARANCE

HORIZONTAL CURVE DATA (℄ CONST. BIKEWAY)

CURVE 1	CURVE 2
P.I. Sta. 10+77.08	P.I. Sta. 11+64.50
Δ = 7° 40' 08" (LT)	Δ = 3° 01' 38" (LT)
Dc = 4° 58' 56"	Dc = 14° 19' 26"
R = 1,150.00'	R = 400.00'
T = 77.08'	T = 10.57'
L = 153.93'	L = 21.13'
E = 2.58'	E = 0.14'
C = 153.81'	C = 21.13'
C.B. = N 31° 03' 28" E	C.B. = N 25° 42' 35" E

CURVE 3	CURVE 4
P.I. Sta. 13+10.14	P.I. Sta. 14+03.33
Δ = 10° 56' 08" (LT)	Δ = 7° 01' 13" (LT)
Dc = 28° 38' 52"	Dc = 8° 40' 52"
R = 200.00'	R = 660.00'
T = 19.14'	T = 40.48'
L = 38.17'	L = 80.87'
E = 0.91'	E = 1.24'
C = 38.11'	C = 80.82'
C.B. = N 18° 43' 42" E	C.B. = N 9° 45' 01" E



PROFILE ALONG ℄ CONST. BIKEWAY

EXISTING STRUCTURE

TYPE: SINGLE SPAN STEEL THROUGH-TYPE GIRDER ON STONE ABUTMENTS
SPANS: 50'-6"(±)
LOADING: PEDESTRIAN LOADING
SKEW: 25°00'00"(±)
APPROACH SLABS: NONE
ALIGNMENT: CURVE
DATE BUILT: 1906
STRUCTURE FILE NUMBER: 2100908

PROPOSED STRUCTURE

PROPOSED WORK: REMOVE EXISTING SUPERSTRUCTURE AND ABUTMENTS, CONSTRUCT NEW WALL-TYPE ABUTMENTS, AND INSTALL PREFABRICATED STEEL TRUSS BRIDGE
TYPE: SINGLE SPAN PREFABRICATED STEEL TRUSS ON REINFORCED CONCRETE WALL-TYPE ABUTMENTS
SPANS: 110'-6" c/c BEARINGS
BIKEWAY: 12'-0" TOE/TOE CURB
LOADING: H15, 90 PSF PEDESTRIAN LOADING
SKEW: NONE
WEARING SURFACE: 1" MONOLITHIC CONCRETE
APPROACH SLABS: AS-1-15 (15'-0" LONG)
ALIGNMENT: TANGENT
CROWN: 0.01 FT/FT
LATITUDE: 40°17'54" LONGITUDE: 83°03'32"

DLZ
601 MONTLEY ROAD • COLUMBUS, OHIO 43229

DESIGNED	DRAWN	REVIEWED	DATE
IMF	IMF	CJS	11/6/2017
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JAM		TO BE ASSIGNED	

DELAWARE COUNTY
STA. 11+76.79
STA. 12+90.71

SITE PLAN
BRIDGE NO. DEL-036-1063
BIKEWAY OVER U.S. 36

DEL-36-10.59
PID No. 95625

1 / 17

184
224

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REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

AS-1-15 DATED (REVISED) 07-17-15

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION:

800 DATED 04-21-17

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 7TH EDITION WITH 2015 INTERIM REVISIONS, AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

OPERATIONAL IMPORTANCE:

A LOAD MODIFIER OF 1.00 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

DESIGN LOADING:

THE BRIDGE DESIGN SHALL BE BASED ON COMBINATIONS OF THE FOLLOWING LOADS WHICH WILL PRODUCE MAXIMUM CRITICAL MEMBER STRESSES:

A. ONE AASHTO H15 TRUCK LOADING.

B. A PEDESTRIAN LIVE LOAD OF 90 PSF NOT TO BE USED IN CONJUNCTION WITH THE H15 TRUCK LOADING.

C. 50 PSF WIND LOAD ON THE FULL HEIGHT OF THE BRIDGE, AS IF ENCLOSED.

D. 20 PSF VERTICAL WIND FORCE APPLIED TO THE WIDTH OF THE DECK.

DESIGN DATA:

CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)
CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)
REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI
STRUCTURAL STEEL - ASTM A709 GRADE 50 - YIELD STRENGTH 50 KSI

DECK PROTECTION METHOD:

EPOXY COATED REINFORCING STEEL
2½" CONCRETE COVER

MONOLITHIC WEARING SURFACE:

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1" THICK.

MAINTENANCE OF TRAFFIC:

MAINTENANCE OF TRAFFIC FOR THE STRUCTURE WORK SHALL BE COORDINATED WITH THE OVERALL PROJECT. REFER TO THE MAINTENANCE OF TRAFFIC NOTES AND DETAILS ELSEWHERE IN THE PLANS.

ITEM 202 - STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN:

THE EXISTING STRUCTURE SHALL BE REMOVED WITH THE CONCURRENCE OF THE ENGINEER. REMOVE THE EXISTING FENCE AND SUPERSTRUCTURE IN THEIR ENTIRETY. REMOVE EXISTING ABUTMENTS AS REQUIRED BY CMS SECTION 202. THE USE OF EXPLOSIVES AND/OR HEADACHE BALLS WILL NOT BE PERMITTED.

PAYMENT: THIS WORK SHALL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE BID, WHICH PRICE AND PAYMENT SHALL BE FULL COMPENSATION FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK IN CONFORMANCE WITH THESE REQUIREMENTS, WITH PERTINENT PROVISIONS OF 202, AND TO THE SATISFACTION OF THE ENGINEER.

SPREAD FOOTING FOUNDATIONS:

REAR ABUTMENT
FOUNDATION BEARING RESISTANCE: THE REAR ABUTMENT FOOTINGS, AS DESIGNED, PRODUCES A MAXIMUM SERVICE LOAD PRESSURE OF 4.11 KIPS PER SQUARE FOOT AND A MAXIMUM STRENGTH LOAD PRESSURE OF 5.71 KIPS PER SQUARE FOOT. THE FACTORED BEARING RESISTANCE IS 8.76 KIPS PER SQUARE FOOT.

FORWARD ABUTMENT - STA. 12+84.75 TO STA. 13+07.00
FOUNDATION BEARING RESISTANCE: THE FORWARD ABUTMENT FOOTINGS BETWEEN THE ABOVE STATIONS, AS DESIGNED, PRODUCES A MAXIMUM SERVICE LOAD PRESSURE OF 4.11 KIPS PER SQUARE FOOT AND A MAXIMUM STRENGTH LOAD PRESSURE OF 5.71 KIPS PER SQUARE FOOT. THE FACTORED BEARING RESISTANCE IS 8.76 KIPS PER SQUARE FOOT.

FORWARD ABUTMENT - STA. 13+07.00 TO STA. 13+41.50
FOUNDATION BEARING RESISTANCE: THE FORWARD ABUTMENT FOOTINGS BETWEEN THE ABOVE STATIONS, AS DESIGNED, PRODUCES A MAXIMUM SERVICE LOAD PRESSURE OF 3.15 KIPS PER SQUARE FOOT AND A MAXIMUM STRENGTH LOAD PRESSURE OF 4.41 KIPS PER SQUARE FOOT. THE FACTORED BEARING RESISTANCE IS 5.99 KIPS PER SQUARE FOOT.

FORWARD ABUTMENT - STA. 13+41.50 TO STA. 13+76.00
FOUNDATION BEARING RESISTANCE: THE FORWARD ABUTMENT FOOTINGS BETWEEN THE ABOVE STATIONS, AS DESIGNED, PRODUCES A MAXIMUM SERVICE LOAD PRESSURE OF 1.76 KIPS PER SQUARE FOOT AND A MAXIMUM STRENGTH LOAD PRESSURE OF 2.42 KIPS PER SQUARE FOOT. THE FACTORED BEARING RESISTANCE IS 2.59 KIPS PER SQUARE FOOT.

ITEM 509 REINFORCING STEEL, AS PER PLAN:

THIS ITEM REFERS TO THE WWF (WELDED WIRE FABRIC, 6x6 W7xW7) SPECIFIED AND INSTALLED TO THE LIMITS SHOWN IN THE PLANS, AND IS NOT INCLUDED IN THE REINFORCING STEEL LIST. IN GENERAL, WELDED WIRE FABRIC SHALL BE PLACED IN THE ABUTMENT FACES BETWEEN THE COLUMN CORNERS AND IN THE WINGWALL FACES OUTSIDE OF THE COLUMN CORNERS BELOW THE PROPOSED VENEER. FOR THE WINGWALLS, WWF SHALL EXTEND LATERALLY TO THE "BUMP OUT" LIMITS SHOWN IN THE WINGWALL ELEVATION DIMENSION VIEWS. TWO INCH CONCRETE CLEAR COVER SHALL BE MAINTAINED OVER THE WWF AT ALL LOCATIONS. AT THE CONTRACTOR'S OPTION AND EXPENSE, WWF WITH A GREATER AREA OF STEEL PER FOOT IN EITHER DIRECTION CAN BE SUBSTITUTED, PROVIDED THE WIRE SPACING PER FOOT IN EITHER DIRECTION DOES NOT EXCEED TWELVE INCHES AND THE PROPOSED SUBSTITUTION IS ACCEPTABLE TO THE CITY. PAYMENT WILL BE MADE FOR THE TOTAL WEIGHT QUANTIFIED IN THE PLANS.

ITEM 511 - CLASS QC2 CONCRETE, SUPERSTRUCTURE, AS PER PLAN:

CONCRETE DECK SHALL BE DESIGNED BY THE SELECTED PREFABRICATED BRIDGE MANUFACTURER.

ALL MATERIAL, LABOR, AND EQUIPMENT REQUIRED TO PLACE THE CONCRETE DECK WITH TYPE 4-A CURBS AND EPOXY COATED REINFORCING STEEL WITHIN THE DECK SHALL BE PAID FOR AT THE CUBIC YARD BID PRICE FOR ITEM 511 - CLASS QC2 CONCRETE, SUPERSTRUCTURE, AS PER PLAN.

PAYMENT FOR THE STAY-IN-PLACE GALVANIZED FLOOR DECK IS INCLUDED WITH ITEM 530 - SPECIAL- STRUCTURE MISC.: PREFABRICATED STEEL TRUSS BRIDGE.

ITEM 511 - CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT INCLUDING FOOTING, AS PER PLAN (ALTERNATE 1):

IN ADDITION TO THE REQUIREMENTS OF ITEM 511, INSTALL REFERENCE MONUMENTS IN THE ABUTMENT FOOTINGS AT THE LOCATIONS SHOWN ON SHEET 4/17 .

THE REFERENCE MONUMENT SHALL CONSIST OF A #8, OR LARGER, EPOXY COATED REBAR EMBEDDED AT LEAST 6" INTO THE FOOTING AND EXTENDED VERTICALLY 4 TO 6 INCHES ABOVE THE TOP OF THE FOOTING. INSTALL A SIX INCH DIAMETER, SCHEDULE 40, PLASTIC PIPE AROUND THE REFERENCE MONUMENT. CENTER THE PIPE ON THE REFERENCE MONUMENT AND PLACE THE PIPE VERTICAL WITH ITS TOP AT THE FINISHED GRADE. THE PIPE SHALL HAVE A REMOVABLE, SCHEDULE 40, PLASTIC CAP. PERMANENTLY ATTACH THE BOTTOM OF THE PIPE TO THE TOP OF THE FOOTING.

ESTABLISH A BENCHMARK TO DETERMINE THE ELEVATIONS OF THE REFERENCE MONUMENTS AT VARIOUS MONITORING PERIODS THROUGHOUT THE LENGTH OF THE CONSTRUCTION PROJECT. THE BENCHMARK SHALL BE THE SAME THROUGHOUT THE PROJECT AND SHALL BE INDEPENDENT OF ALL STRUCTURES.

RECORD THE ELEVATION OF EACH REFERENCE MONUMENT AT EACH MONITORING PERIOD SHOWN IN THE REFERNCE MONUMENT TABLES BELOW.

THE ORIGINAL COMPLETED TABLES WILL BECOME PART OF THE CITY'S PROJECT PLAN RECORDS.

ALSO, IN ADDITION TO THE REQUIREMENTS OF ITEM 511, THE CONTRACTOR SHALL CONSTRUCT ARCHITECTURAL TEST PANELS AS DEFINED IN THE ARCHITECTURAL TEST PANEL NOTE.

ITEM 511 CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT INCLUDING FOOTING, AS PER PLAN (ALTERNATE 2):

THIS ITEM SHALL BE SIMILAR TO ALTERNATE 1, WITH THE FOLLOWING ADDITION: AN APPROVED STAIN SHALL BE APPLIED TO THE EXPOSED PLAIN CONCRETE PRIOR TO SEALING. THE STAIN SHALL BE AS DESCRIBED IN THE CONCRETE STAIN NOTE.

ITEM 511 CONCRETE, MISC.: ARCHITECTURAL STONE VENEER, AS PER PLAN:

THE INSTALLATION OF THE ARCHITECTURAL STONE VENEER SHALL BE IN ACCORDANCE TO THE MANUFACTURER'S SPECIFICATIONS TO THE LIMITS SHOWN ON THE PLANS. VENEER SHALL BE PROVIDED BY THE FOLLOWING, OR STRUCTURAL EQUIVALENT, AS APPROVED BY THE CITY:

OBERFIELDS LLC
528 LONDON ROAD
P.O. BOX 362
DELAWARE, OHIO 43015
(740) 369-7644
WWW.OBERFIELDS.COM
MATERIAL: HERITAGE STONE, SANDUSKY SHORE LIMESTONE

HAMILTON PARKER
188 EAST WILLIAM STREET
DELAWARE, OHIO 43015
(740) 363-1196
WWW.HAMILTONPARKER.COM
MATERIAL: LIMESTONE BLUE ASH

ARCHITECTURAL TEST PANELS:

TWO 6' X6' CONCRETE TEST PANELS SHALL BE CONSTRUCTED BY THE CONTRACTOR FOR APPROVAL BY THE CITY IN ADVANCE OF SEALING THE EXPOSED PLAIN SUBSTRUCTURE CONCRETE SURFACES. THE PANELS SHALL DUPLICATE AN AREA OF THE ABUTMENT WHERE ONE VERTICAL FACE OF THE PLAIN CONCRETE "CORNER COLUMN" MEETS THE ADJACENT ARCHITECTURAL STONE VENEER TO ONE SIDE AND THE PLAIN PORTON OF THE ABUTMENT BENEATH IT. THE CONCRETE PANEL SHALL HAVE ENOUGH THICKNESS TO ACCURATELY CREATE THE REVEALS AND ACCOMMODATE THE INSET DEPTH OF THE STONE VENEER AS SHOWN IN THE PLANS. ONCE THE CONCRETE PANELS HAVE CURED, THE EXPOSED PLAIN CONCRETE PORTION OF THE FIRST PANEL SHALL BE SEALED AS SPECIFIED PER ITEM 512, AS PER PLAN.
AN APPROVED STAIN SHALL BE APPLIED TO THE EXPOSED PLAIN CONCRETE OF THE SECOND TEST PANEL PRIOR TO SEALING. THE STAIN SHALL BE AS DESCRIBED IN THE CONCRETE STAIN NOTE.

BASIS OF PAVEMENT: THE ARCHITECTURAL TEST PANELS WILL BE INCLUDED WITH ITEM 511 CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT INCLUDING FOOTING, AS PER PLAN (ALTERNATE 2), FOR PAYMENT. THE WORK SHALL INCLUDE FABRICATION, FORMWORK, CONSTRUCTION AND REMOVAL OF THE TEST PANELS, LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM.

DLZ
6121 HUNTLEY ROAD • COLUMBUS, OHIO 43229

DESIGNED	DRAWN	REVIEWED	DATE
JAM	JAM	CJS	11/6/17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JMF		TO BE ASSIGNED	

GENERAL NOTES - 1
BRIDGE NO. DEL-036-1063
BIKEWAY OVER U.S. 36

DEL-36-10.59
PID No. 95625

2 / 17

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CONCRETE STAIN:

CONCRETE STAIN SHALL BE ACID-BASED, CONTAINING WETTING AGENTS AND HIGH-GRADE UV-STABLE METALLIC SALTS THAT REACT WITH CALCIUM CHLORIDE IN CURED CONCRETE TO PRODUCE PERMANENT, VARIEGATED COLOR EFFECTS. THE STAIN SHALL BE COMPATIBLE WITH THE CONCRETE SEALER AS SPECIFIED IN ITEM 512, AS PER PLAN.

STAIN SHALL BE PROVIDED BY THE FOLLOWING, OR EQUIVALENT, AS APPROVED BY THE CITY:

BOMANITE
8777 AUBURN FOLSOM ROAD
GRANITE BAY, CA 95746
(303) 369-1115
WWW.BOMANITE.COM

BRICKFORM
1371 LAUREL AVENUE
RIALTO, CA 92376
(800) 483-9628
WWW.BRICKFORM.COM

SIKA SCOFIELD
4155 SCOFIELD ROAD
DOUGLASVILLE, GA 30134
(800) 800-9900
WWW.SCOFIELD.COM

THE COLOR OF THE STAIN WILL BE DETERMINED BY THE CITY AFTER THE CONTRACT HAS BEEN AWARDED AND PROVIDED TO THE CONTRACTOR.

BASIS OF PAVEMENT: CONCRETE STAINING OF THE SECOND TEST PANEL WILL BE INCLUDED WITH ITEM 511 CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT INCLUDING FOOTING, AS PER PLAN (ALTERNATE 1 AND ALTERNATE 2), FOR PAYMENT. CONCRETE STAINING OF THE PLAIN EXPOSED ABUTMENT CONCRETE SHALL BE INCLUDED WITH ITEM 511 CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT INCLUDING FOOTINGS, AS PER PLAN (ALTERNATE 2) FOR PAYMENT. THE WORK SHALL ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM.

ITEM 512 - SEALING OF CONCRETE SURFACES (NON-EPOXY), AS PER PLAN:

SEALING OF EXPOSED SUBSTRUCTURE CONCRETE SHALL BE PERFORMED ACCORDING TO 512 TO THE LIMITS SHOWN ON THE PLANS WITH THE FOLLOWING MODIFICATIONS:

SEALER SHALL BE CLEAR WITH A MATTE FINISH WHEN CURED. SEALER SHALL BE UV-STABLE AND CONTAIN A PENETRATING, INORGANIC, POTASSIUM SILICATE MODIFIED MATERIAL, SUITABLE FOR USE ON CAST-IN-PLACE CONCRETE IN BRIDGE APPLICATIONS TO REPEL WATER, OIL, GAS, GREASE, AND SALTS. SEALER SHALL BE V-SEAL CONCRETE SEALER 102 AS PROVIDED BY THE FOLLOWING, OR EQUIVALENT AS APPROVED BY THE CITY:

V-SEAL
9042 COTTER STREET
LEWIS CENTER, OH 43035
1-877-738-7325
WWW.VSEAL.COM

ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=12"), AS PER PLAN:

DESCRIPTION: THIS ITEM SHALL CONSIST OF CONSTRUCTING REINFORCED CONCRETE APPROACH SLABS WITH TYPE 4-A CURBS IN ACCORDANCE WITH THE PROVISIONS OF CMS 526 AND THE DETAILS OF ODOT STANDARD DRAWINGS AS-1-15 AND BP-5.1.

METHOD OF MEASUREMENT: THE AREA MEASURED WILL BE THE NUMBER OF SQUARE YARDS COMPLETE IN PLACE.

BASIS OF PAYMENT: ACCEPTED QUANTITIES WILL BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER SQUARE YARD COMPLETE IN PLACE. THIS PRICE SHALL INCLUDE FULL COMPENSATION FOR ALL CONCRETE, INCLUDING EPOXY COATED REINFORCING STEEL AND OTHER INCIDENTAL MATERIALS, LABOR, AND EQUIPMENT NECESSARY TO CONSTRUCT REINFORCED CONCRETE APPROACH SLABS WITH TYPE 4-A CURBS. PAYMENT WILL BE MADE UNDER ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=12"), AS PER PLAN.

ITEM 530 - SPECIAL - STRUCTURE, MISC.: PREFABRICATED STEEL TRUSS BRIDGE:

THIS ITEM OF WORK SHALL CONSIST OF DESIGN, SHOP DRAWING PREPARATION AND APPROVAL PROCESS, FABRICATION, DELIVERY TO SITE, AND ERECTION OF STEEL TRUSS BRIDGE SUPERSTRUCTURES INCLUDING BEARINGS, AS SHOWN IN THE PLANS AND DESCRIBED BY THE FOLLOWING.

THE SUPERSTRUCTURES SHALL BE PREFABRICATED STEEL TRUSSES WITH A CONCRETE DECK, ACCORDING TO THE FOLLOWING SPECIFICATIONS, AND AS MANUFACTURED BY:

CONTECH ENGINEERED SOLUTIONS
9025 CENTRE POINTE DRIVE
WEST CHESTER, OH 45069
(800) 338-1122

BIG R BRIDGE
P.O. BOX 1290
GREELY, CO 80632
(888) 339-1684

THE BRIDGE SHALL BE FABRICATED FROM HIGH STRENGTH, LOW ALLOY, ASTM A500 GRADE C COLD-FORMED WELDED SQUARE ANR RECTANGULAR TUBING AND/OR ASTM A709 PLATE AND STRUCTURAL STEEL SHAPES. PROVIDE A SHOP APPLIED THREE COAT PAINT SYSTEM IN ACCORDANCE WITH CMS ITEM 514.

ALL PAINTING SHALL BE COMPLETED IN A DEDICATED INDOOR OSHA APPROVED PAINT FACILITY THAT IS OWNED AN OPERATED BY THE BRIDGE FABRICATOR. THE FABRICATOR MUST HOLD A "SOPHISTICATED PAINT ENDORSEMENT" AS SET FORTH BY AISC. THE BRIDGE FABRICATOR MUST EMPLOY A SSPC BCI INSPECTOR LEVEL 1 OR HIGHER.

ALL STRUCTURAL TRUSS STEEL SHALL BE PAINTED IN ACCORDANCE WITH ITEM 514. THE COLOR OF THE FINISH COAT FOR ALL SURFACES SHALL BE FEDERAL COLOR NUMBER 595C-25052 (BLUE, SEMI-GLOSS).

FENCING: VINYL COATED CHAIN LINK FENCE 1" MESH 8 GA CORE WIRE SHALL BE INSTALLED ON THE INTERIOR FACE OF THE BRIDGE TRUSS AND BE INTEGRAL WITH THE STRUCTURE AT THE TIME OF DELIVERY. THE COLOR OF THE FENCE SHALL MATCH THE COLOR OF THE TRUSS. THE FENCE MUST BE STRETCHED AND SECURELY ATTACHED WITH NO WRINKLES, BULGES, OR ENDS THAT CREATE SNAG POINTS. THE FENCE MUST BE ATTACHED AT ALL ENDS WITH TENSION BARS AND TENSION BANDS, AND MUST BE TIED TO ALL STEEL FRAMING AT A MAXIMUM SPACING OF 2'-0".

RUBRAILS: THE BRIDGE SHALL BE PROVIDED WITH NOMINAL 1¼" x 6" CONTINUOUS WOOD RAILS.

THE BRIDGE MANUFACTURER SHALL DESIGN THE PREFABRICATED BRIDGES AND PREPARE SHOP DRAWINGS IN ACCORDANCE WITH THE MINIMUM REQUIREMENTS. ALL DESIGN CALCULATIONS AND STRUCTURAL SHOP DRAWINGS SHALL BE SEALED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER RESPONSIBLE FOR THEIR PREPARATION.

WORKMANSHIP, FABRICATION, AND SHOP CONNECTIONS SHALL BE IN ACCORDANCE WITH AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS SPECIFICATIONS (AASHTO). WELDING OPERATORS SHALL BE PROPERLY ACCREDITED, EXPERIENCED OPERATORS, EACH OF WHOM SHALL SUBMIT SATISFACTORY EVIDENCE OF EXPERIENCE AND SKILL IN WELDING STRUCTURAL STEEL WITH THE KIND OF WELDING TO BE USED IN THE WORK AND WHO HAS DEMONSTRATED THE ABILITY TO MAKE UNIFORM GOOD WELDS OF THE TYPE REQUIRED.

THE BRIDGE MANUFACTURER SHALL BE ON THE ODOT PRE-APPROVED LIST PRIOR TO BID AND SHALL BE ODOT SHOP TEST LEVEL 6 CERTIFIED. THE BRIDGE MANUFACTURER SHALL HAVE BEEN IN THE BUSINESS OF DESIGN AND FABRICATION OF THESE TYPES OF BRIDGES FOR A MINIMUM OF THREE (3) YEARS. PROVIDE A LIST OF FIVE (5) SUCCESSFUL PROJECTS, OF SIMILAR CONSTRUCTION, EACH OF WHICH HAS BEEN IN SERVICE AT LEAST TWO (2) YEARS. THE BRIDGE MANUFACTURER SHALL BE THE DESIGNER AND FABRICATOR OF THE BRIDGE. THE BRIDGE MANUFACTURER SHALL NOT ASSIGN, SUBLET, OR SUBCONTRACT ANY PART OF THE BRIDGE FABRICATION. TWO (2) REGISTERED PROFESSIONAL ENGINEERS, CURRENTLY LICENSED TO PRACTICE IN THE STATE OF OHIO, SHALL CERTIFY THE BRIDGE DESIGN AND FABRICATION.

THE BRIDGE MANUFACTURER SHALL PREPARE AND SUBMIT SHOP DRAWINGS AND STRUCTURAL CALCULATIONS FOR APPROVAL PRIOR TO BEGINNING FABRICATION. SHOP DRAWINGS SHALL BE UNIQUE DRAWINGS PREPARED TO ILLUSTRATE THE SPECIFIC PORTION OF THE WORK TO BE DONE. ALL RELATIVE DESIGN INFORMATION, INCLUDING BUT NOT LIMITED TO GOVERNING CODES, DESIGN PARAMETERS, MEMBER SIZES, BRIDGE REACTIONS, SHOP AND FIELD CONNECTION DETAILS, DECK DETAILS, DIMENSIONS RELATED TO SUBSTRUCTURES AND GENERAL NOTES SHALL BE CLEARLY SPECIFIED ON THE DRAWINGS. SHOP DRAWINGS SHALL BE ACCURATELY PREPARED BY SKILLED DRAFTERS TO BE COMPLETE IN EVERY RESPECT. DRAWINGS SHALL HAVE CROSS-REFERENCED DETAILS AND SHEET NUMBERS.

THE CONTRACTOR SHALL COORDINATE WITH THE BRIDGE MANUFACTURER IN THE DELIVERY AND ERECTION SCHEDULE.

THIS WORK SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 530 - SPECIAL - STRUCTURE, MISC.: PREFABRICATED STEEL TRUSS BRIDGE, WHICH PRICE SHALL INCLUDE COMPLETE SUPERSTRUCTURE DESIGN, SHOP DRAWING PREPARATION AND APPROVAL PROCESS, FABRICATION, PAINTING, DELIVERY TO THE SITE AND ERECTION INCLUDING CONTINGENCIES.

ITEM 613 - LOW STRENGTH MORTAR BACKFILL:

THIS ITEM OF WORK SHALL CONSIST OF LOW STRENGTH MORTAR BACKFILL IN ACCORDANCE WITH CMS 613.

METHOD OF MEASUREMENT: THE VOLUME MEASURED WILL BE THE NUMBER OF CUBIC YARDS COMPLETE IN PLACE.

BASIS OF PAYMENT: ACCEPTED QUANTITIES WILL BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER CUBIC YARD COMPLETE IN PLACE. THIS PRICE SHALL INCLUDE FULL COMPENSATION FOR ALL MATERIALS, LABOR, EQUIPMENT, AND OTHER INCIDENTALS NECESSARY TO BACKFILL EXCAVATIONS WITH LOW STRENGTH MORTAR BACKFILL. A QUANTITY OF 5 CY IS INCLUDED IN THE ESTIMATED QUANTITIES FOR USE AS DIRECTED BY THE CITY.

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DESIGNED	DRAWN	REVIEWED	DATE
JAM	JAM	CJS	11/6/17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
IMF		TO BE ASSIGNED	

GENERAL NOTES - 2
BRIDGE NO. DEL-036-1063
BIKEWAY OVER U.S. 36

DEL-36-10.59
PID No. 95625

REFERENCE MONUMENT TABLES:

PROJECT NUMBER: DEL-36-10.59, PID: 95625	MAXIMUM FACTORED BEARING PRESSURE: 5.71 KIPS PER SQUARE FOOT		
BRIDGE NUMBER: DEL-036-1063	STRUCTURE FILE NUMBER:		
BENCHMARK LOCATION:			
FOOTING LOCATION: REAR ABUTMENT			
MONITORING PERIOD	STA. 11+48.50, LT.	STA. 11+81.75, LT.	STA. 11+81.75, RT.
AFTER FOOTING CONCRETE IS PLACED			
BEFORE PLACEMENT OF TRUSS BRIDGE			
BEFORE DECK PLACEMENT			
AFTER DECK PLACEMENT			
PROJECT COMPLETION			

PROJECT NUMBER: DEL-36-10.59, PID: 95625	MAXIMUM FACTORED BEARING PRESSURE: 5.71 KIPS PER SQUARE FOOT					
BRIDGE NUMBER: DEL-036-1063	STRUCTURE FILE NUMBER:					
BENCHMARK LOCATION:						
FOOTING LOCATION: FORWARD ABUTMENT						
MONITORING PERIOD	STA. 12+85.75, LT.	STA. 12+85.75, RT.	STA. 13+08.00, LT.	STA. 13+25.25, LT.	STA. 13+42.50, LT.	STA. 13+75.00, LT.
AFTER FOOTING CONCRETE IS PLACED						
BEFORE PLACEMENT OF TRUSS BRIDGE						
BEFORE DECK PLACEMENT						
AFTER DECK PLACEMENT						
PROJECT COMPLETION						

PLAN ABBREVIATIONS:

@	= AT
APP.	= APPROACH
BOT.	= BOTTOM
BRG.	= BEARING
c/c	= CENTER-TO-CENTER
℄	= CENTERLINE
C.J.	= CONSTRUCTION JOINT
CLR.	= CLEARANCE/CLEAR
CONST.	= CONSTRUCTION
CONT.	= CONTINUED
DIA.	= DIAMETER
E.F.	= EACH FACE
EL.	= ELEVATION
EXIST.	= EXISTING
EXP.	= EXPANSION
F.A.	= FORWARD ABUTMENT
F.F.	= FAR FACE
FIX.	= FIXED
INC.	= INCREMENT
MAX.	= MAXIMUM
MIN.	= MINIMUM
N.F.	= NEAR FACE
N.P.C.P.P.	= NON-PERFORATED CORRUGATED PLASTIC PIPE
P.C.P.P.	= PERFORATED CORRUGATED PLASTIC PIPE
P.E.J.F.	= PREFORMED EXPANSION JOINT FILLER
PROP.	= PROPOSED
R.A.	= REAR ABUTMENT
REF.	= REFERENCE
REQ'D.	= REQUIRED
SER.	= SERIES
SPA.	= SPACED/SPACING
STA.	= STATION
TEL.	= TELEPHONE/TELECOM
TYP.	= TYPICAL

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DESIGNED	DRAWN	REVIEWED	DATE
JAM	JAM	MJL	02/05/16
CHECKED	REVISED	STRUCTURE FILE NUMBER	
IMF		TO BE ASSIGNED	

GENERAL NOTES - 3
BRIDGE NO. DEL-036-1063
BIKEWAY OVER U.S. 36

DEL-36-10.59
PID No. 95625

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ESTIMATED QUANTITIES

CALC. BY: IMF/CJS DATE: 2/5/16 / 11/11/17
CHKD. BY: JAM/IMF DATE: 2/7/16 / 11/3/17

ALT (X)	ITEM	ITEM EXTENSION	TOTAL	UNIT	DESCRIPTION	REAR ABUTMENT	FORWARD ABUTMENT	SUPER-STRUCTURE	GENERAL	REF. SHEET NUMBER
	202	11003	LS		STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				LS	2
	202	23500	90	SY	WEARING COURSE REMOVED				90	
	203	10000	183	CY	EXCAVATION	42	141			
	503	21100	1,872	CY	UNCLASSIFIED EXCAVATION	650	1,222			
	509	10000	111,590	LB	EPOXY COATED REINFORCING STEEL	46,669	64,921			
	509	25001	756	LB	REINFORCING STEEL, AS PER PLAN	203	553			2
	511	34011	27	CY	CLASS QC2 CONCRETE, SUPERSTRUCTURE, AS PER PLAN			27		2, 15
X	511	43513	479	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT INCLUDING FOOTING, AS PER PLAN (ALTERNATE 1)	170	309			2
X	511	43513	479	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT INCLUDING FOOTING, AS PER PLAN (ALTERNATE 2)	170	309			2
	511	71200	1,568	SF	CONCRETE, MISC.: ARCHITECTURAL STONE VENEER, AS PER PLAN	581	987			2
	512	10051	167	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY), AS PER PLAN	64	103			3
	512	33000	28	SY	TYPE 2 WATERPROOFING	7	21			
	516	13600	130	SF	1" PREFORMED EXPANSION JOINT FILLER	31	99			
	518	21200	203	CY	POROUS BACKFILL WITH FILTER FABRIC	79	124			
	518	40000	174	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	59	115			
	518	40010	64	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	41	23			
	526	10001	43	SY	REINFORCED CONCRETE APPROACH SLABS (T=12"), AS PER PLAN				43	3, 16
	530	00200	LS		SPECIAL - STRUCTURE, MISC.: PREFABRICATED STEEL TRUSS BRIDGE			LS		3, 15
	605	13410	158	FT	6" UNCLASSIFIED PIPE UNDERDRAINS WITH FABRIC WRAP		158			7
	613	41200	5	CY	LOW STRENGTH MORTAR BACKFILL				5	3

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DESIGNED IMF | DRAWN IMF | REVIEWED CJS | DATE 11/6/17
CHECKED JAM | REVISED | STRUCTURE FILE NUMBER TO BE ASSIGNED

ESTIMATED QUANTITIES
BRIDGE NO. DEL-036-1063
BIKEWAY OVER U.S. 36

DEL-36-10.59
PID No. 95625

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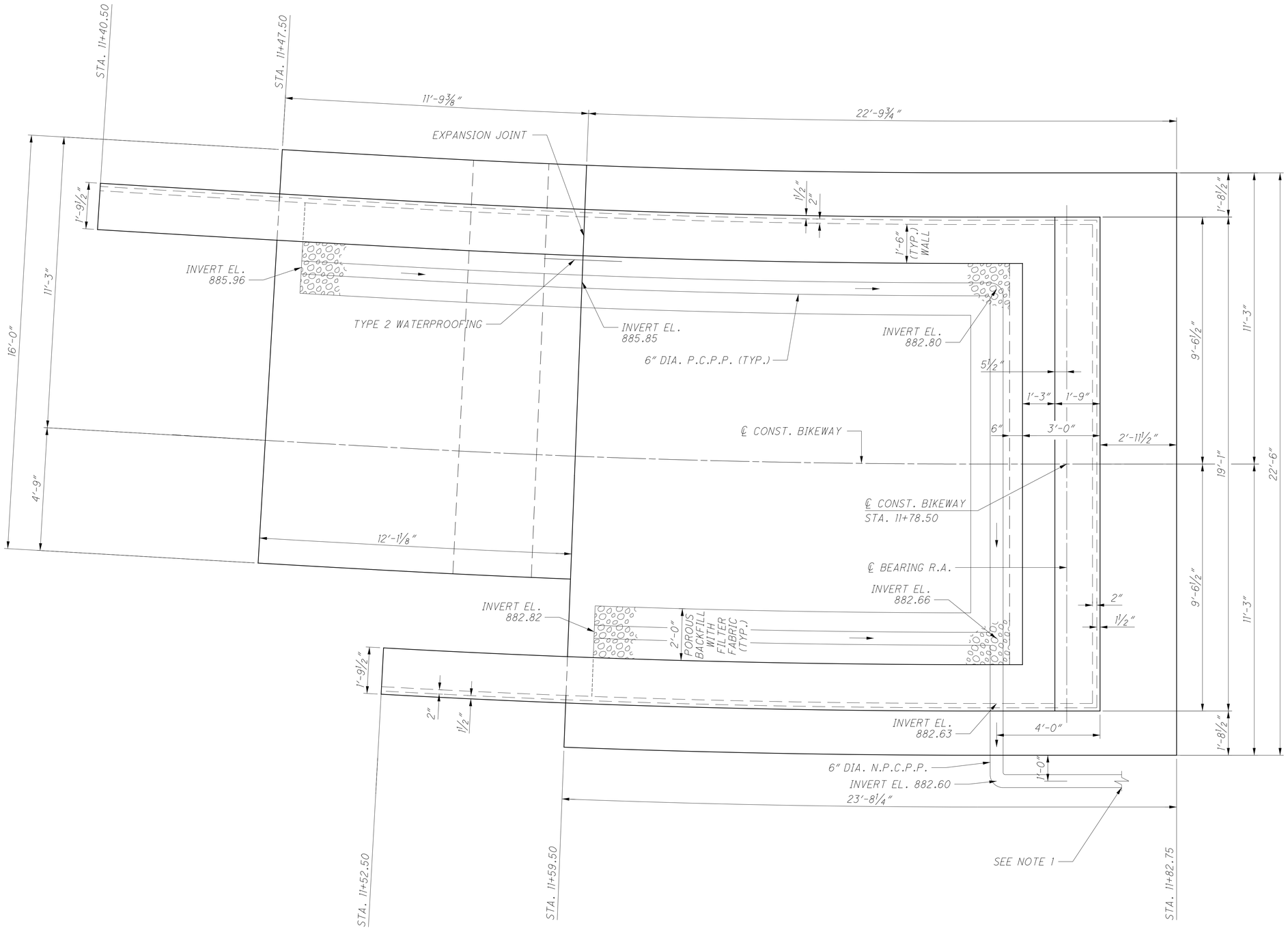

PLAN

N

NOTES

1. N.P.C.P.P. TO EXTEND AND CONNECT TO CATCH BASIN AT ℄ CONST. E. WILLIAM ST. STA. 561+36.14, 8.97' RT.

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DESIGNED	DRAWN	REVIEWED	DATE
IMF	IMF	CJS	11/6/17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JAM		TO BE ASSIGNED	

REAR ABUTMENT PLAN
BRIDGE NO. DEL-036-1063
BIKEWAY OVER U.S. 36

DEL-36-10.59
PID No. 95625

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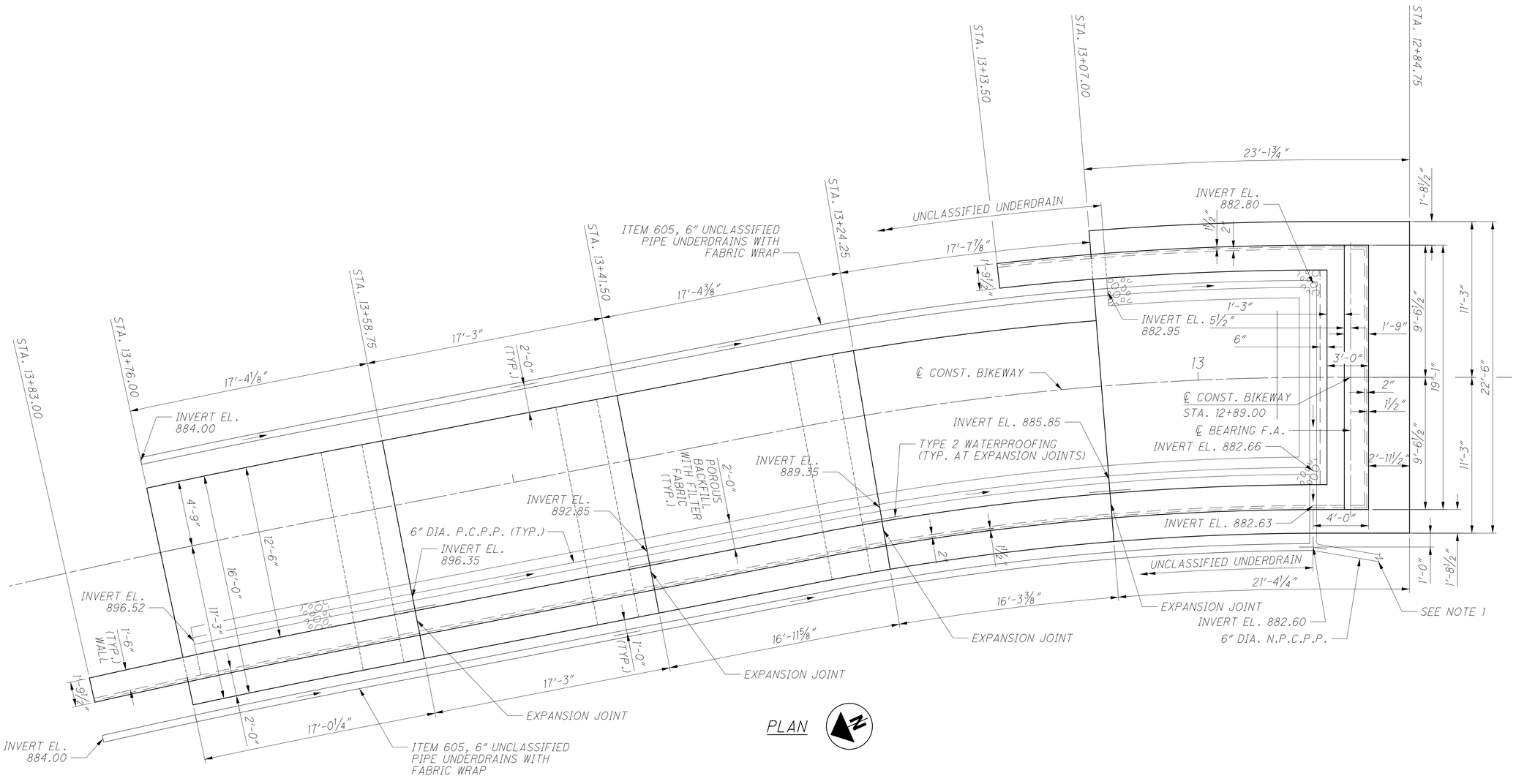

NOTES

1. N.P.C.P.P. TO EXTEND AND CONNECT TO CATCH BASIN AT ℄ CONST. E. WILLIAM ST. STA. 561+35.48, 51.10' LT.

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DESIGNED	DRAWN	REVIEWED	DATE
IMF	IMF	CJS	11/6/17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JAM		TO BE ASSIGNED	

FORWARD ABUTMENT PLAN
BRIDGE NO. DEL-036-1063
BIKEWAY OVER U.S. 36

DEL-36-10.59
PID No. 95625

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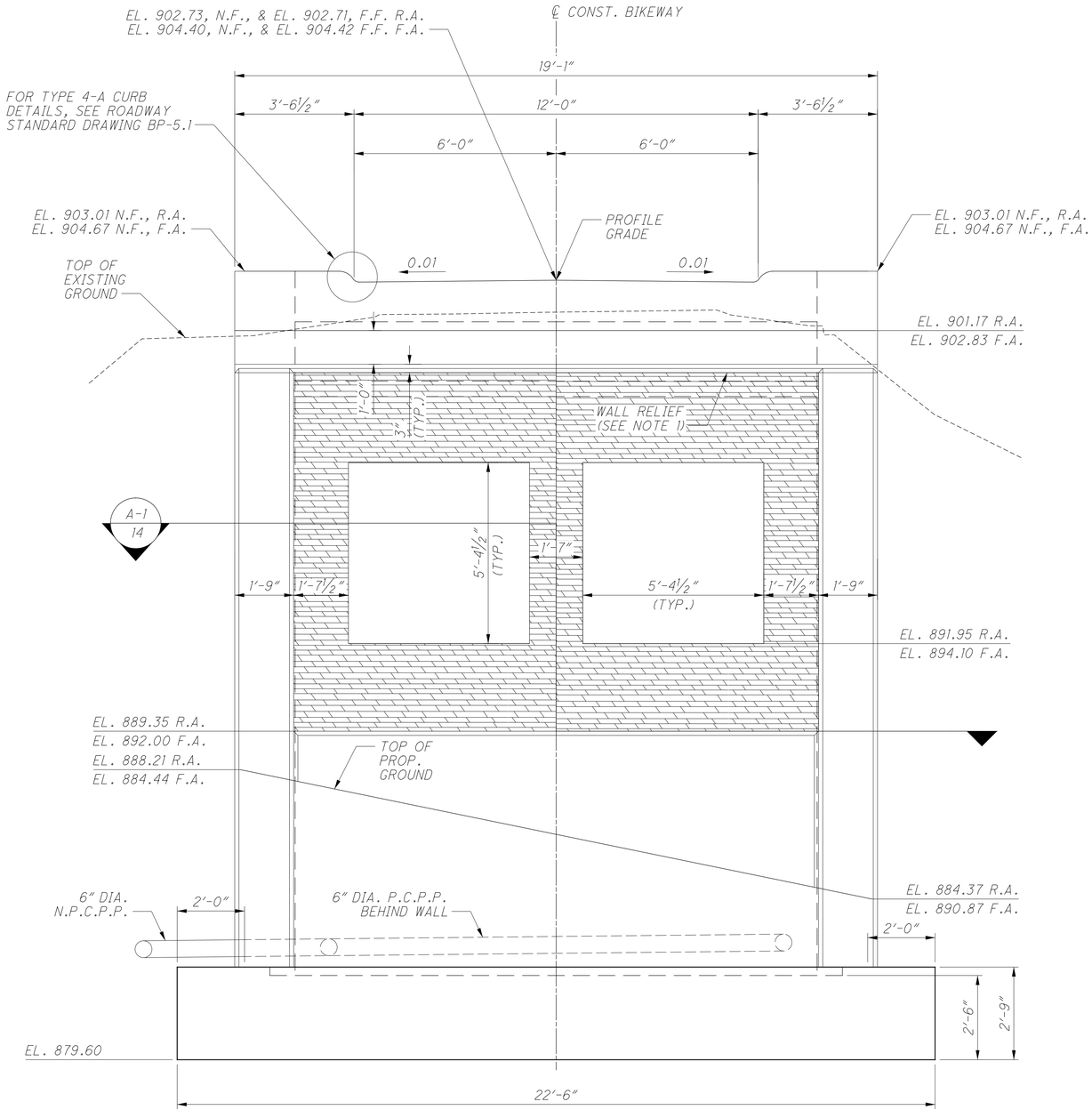
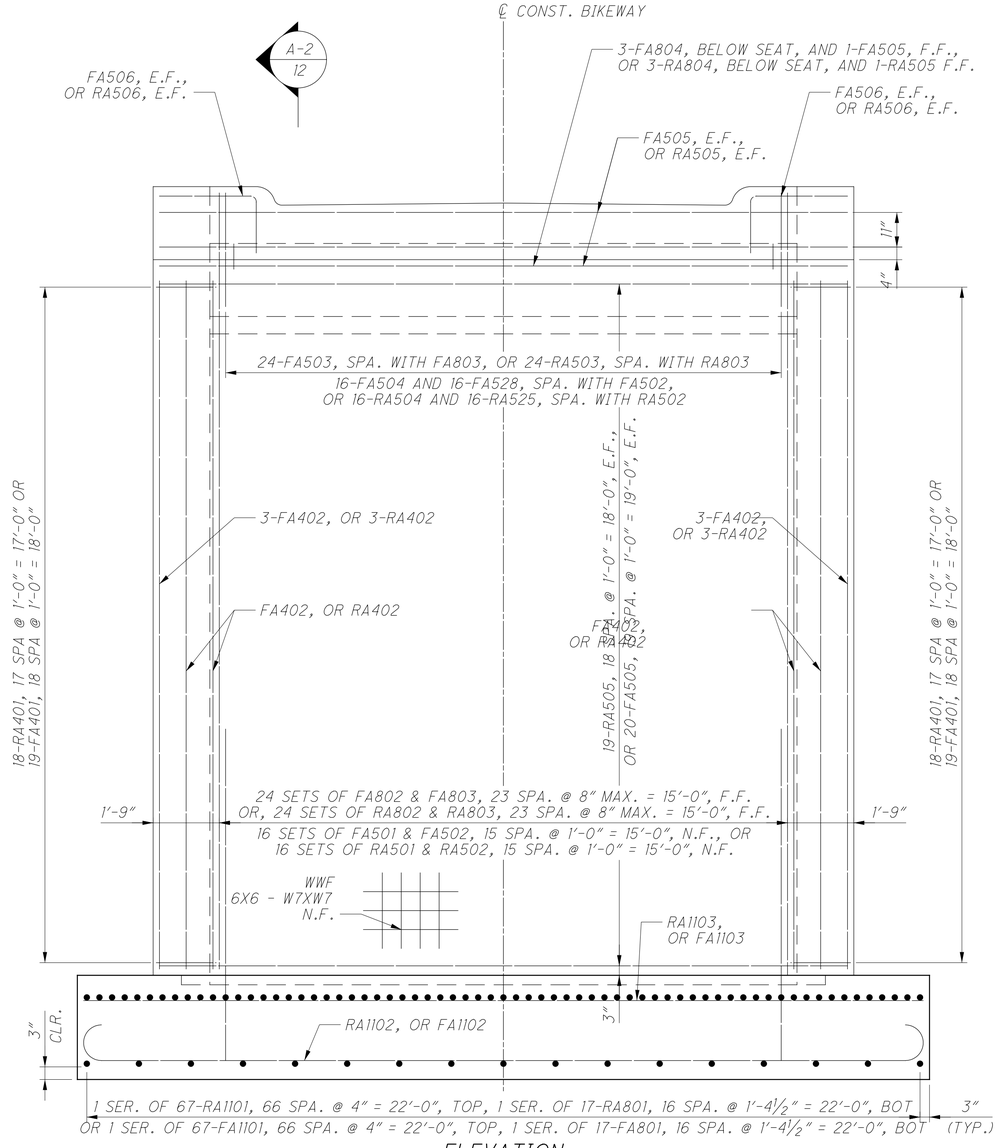


ELEVATION

SHOWING DIMENSIONS, AESTHETICS
REAR ABUTMENT SHOWN,
FORWARD ABUTMENT OPPOSITE HAND

SEAL ALL EXPOSED BRIDGE CONCRETE
SURFACES NOT COVERED BY VENEER
OR ADJACENT PROPOSED GROUND



ELEVATION

SHOWING REINFORCING
AESTHETICS NOT SHOWN

NOTES

1. FOR TYPICAL WALL RELIEF ELEVATION DETAIL, SEE SHEET 14/17
2. STONE VENEER TO EXTEND FROM BOTTOM OF 3" WALL RELIEF TO THE LOWER LIMITS SHOWN ON THE PLANS. SEE VENEER GENERAL NOTE ON SHEET 2/17
3. FOR THE ABUTMENT REINFORCEMENT, THE MINIMUM LAP LENGTHS ARE AS FOLLOWS: #5 BARS = 2'-0", #8 BARS = 5'-0"
4. SEE SHEET 14/17 FOR ADDITIONAL COLUMN REINFORCING DETAILS

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DESIGNED	DRAWN	REVIEWED	DATE
IMF	IMF	CJS	11/6/17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JAM		TO BE ASSIGNED	

ABUTMENT ELEVATION
BRIDGE NO. DEL-036-1063
BIKEWAY OVER U.S. 36

DEL-36-10.59
PID No. 95625

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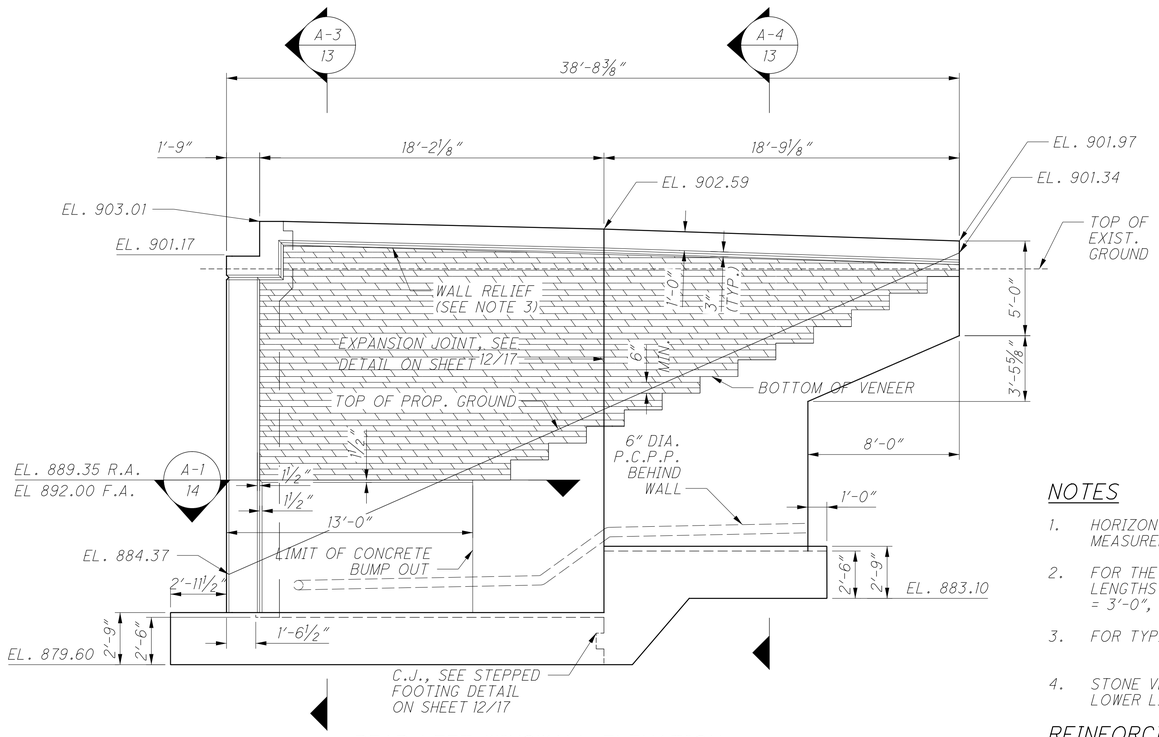
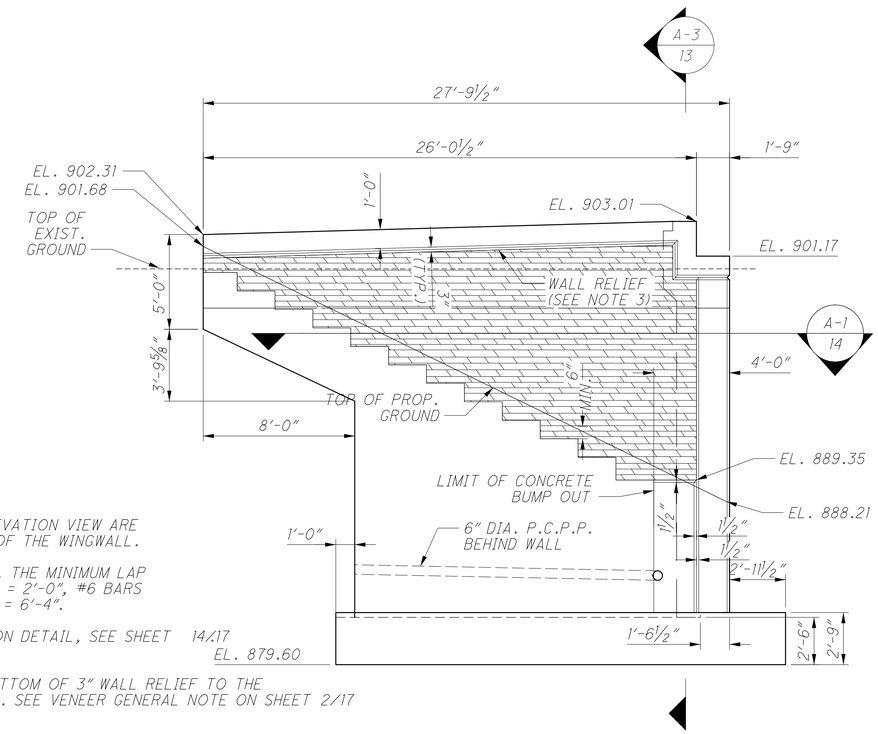


REAR LEFT WINGWALL ELEVATION

SHOWING DIMENSIONS, AESTHETICS



REAR RIGHT WINGWALL ELEVATION

SHOWING DIMENSIONS, AESTHETICS

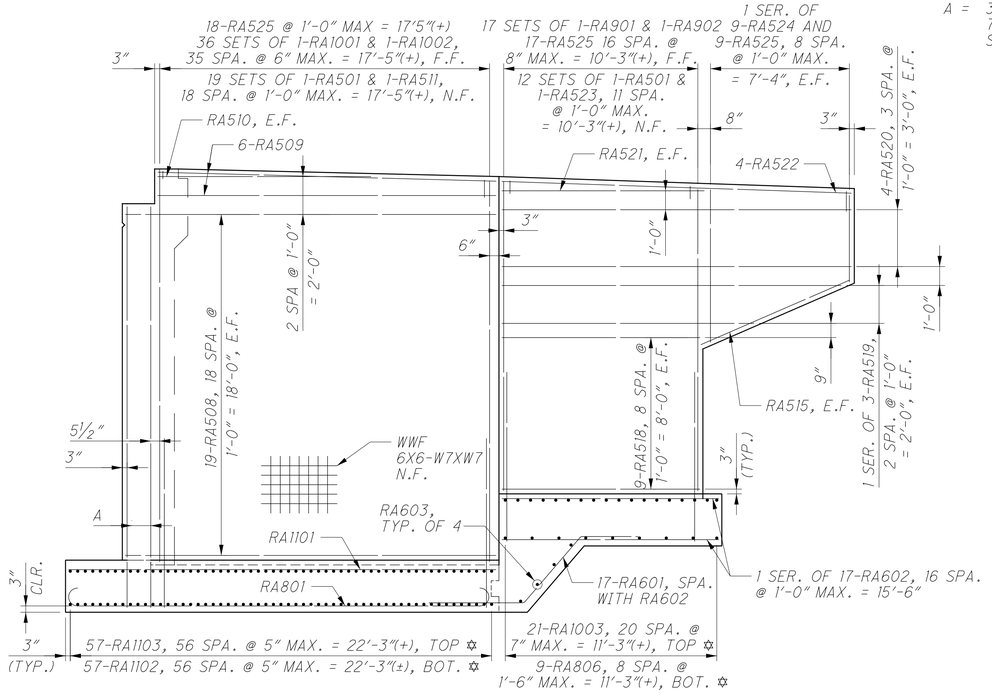
NOTES

1. HORIZONTAL DIMENSIONS IN THE ELEVATION VIEW ARE MEASURED ALONG THE FRONT FACE OF THE WINGWALL.
2. FOR THE ABUTMENT REINFORCEMENT, THE MINIMUM LAP LENGTHS ARE AS FOLLOWS: #5 BARS = 2'-0", #6 BARS = 3'-0", #9 BARS = 6'-2", #10 BARS = 6'-4".
3. FOR TYPICAL WALL RELIEF ELEVATION DETAIL, SEE SHEET 14/17
4. STONE VENEER TO EXTEND FROM BOTTOM OF 3" WALL RELIEF TO THE LOWER LIMITS SHOWN ON THE PLANS. SEE VENEER GENERAL NOTE ON SHEET 2/17

REINFORCING LEGEND

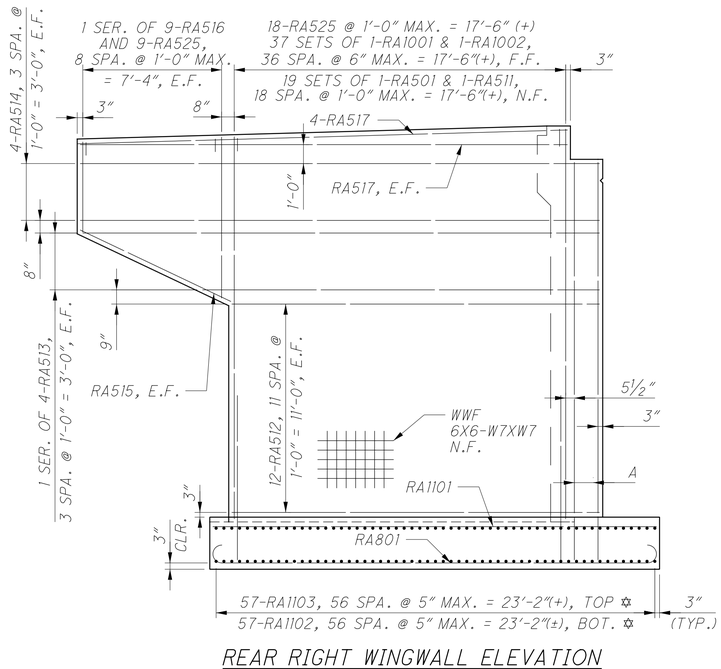
✡ OVERALL DIMENSIONS MEASURED ALONG FRONT OF FOOTING, FAN FOOTING REINFORCING BARS

A = 3 SETS OF 1-RA1001 & 1-RA1004, 2 SPA. @ 7½" = 1'-3", F.F.; 2 SETS OF 1-RA501 & 1-RA507, SPA. @ 1'-3", N.F.



REAR LEFT WINGWALL ELEVATION

SHOWING REINFORCING, AESTHETICS NOT SHOWN



REAR RIGHT WINGWALL ELEVATION

SHOWING REINFORCING, AESTHETICS NOT SHOWN

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DESIGNED	DRAWN	REVIEWED	DATE
IMF	IMF	CJS	11/6/17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JAM		TO BE ASSIGNED	

REAR ABUTMENT WINGWALL ELEVATIONS
BRIDGE NO. DEL-036-1063
BIKEWAY OVER U.S. 36

DEL-36-10.59
PID No. 95625

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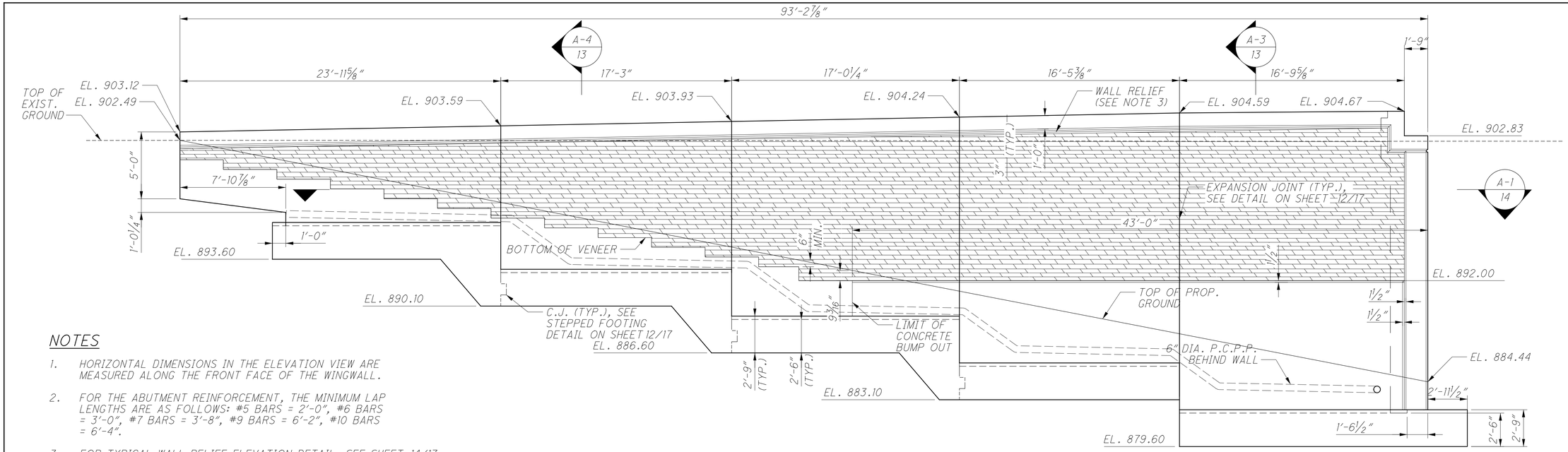
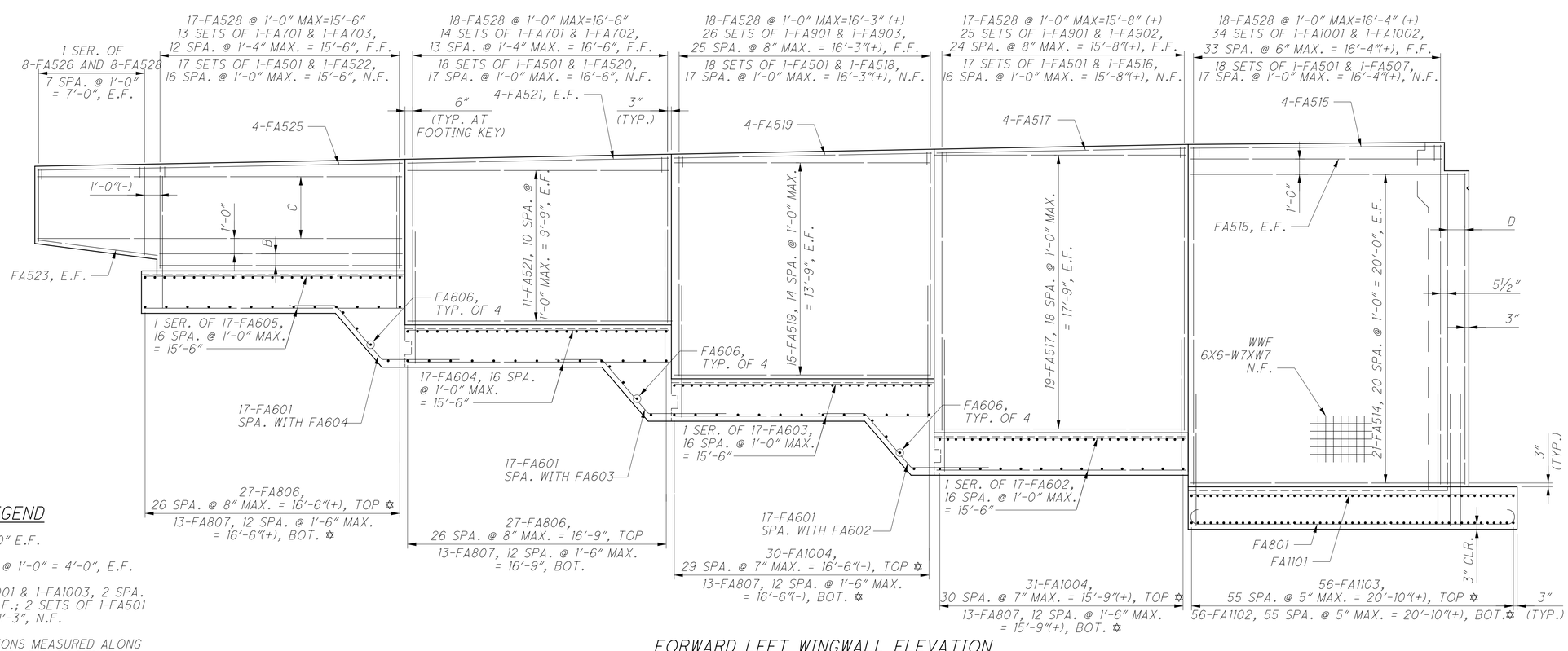


NOTES

1. HORIZONTAL DIMENSIONS IN THE ELEVATION VIEW ARE MEASURED ALONG THE FRONT FACE OF THE WINGWALL.
2. FOR THE ABUTMENT REINFORCEMENT, THE MINIMUM LAP LENGTHS ARE AS FOLLOWS: #5 BARS = 2'-0", #6 BARS = 3'-0", #7 BARS = 3'-8", #9 BARS = 6'-2", #10 BARS = 6'-4".
3. FOR TYPICAL WALL RELIEF ELEVATION DETAIL, SEE SHEET 14/17.
4. STONE VENEER TO EXTEND FROM BOTTOM OF 3" WALL RELIEF TO THE LOWER LIMITS SHOWN ON THE PLANS. SEE VENEER GENERAL NOTE ON SHEET 2/17

FORWARD LEFT WINGWALL ELEVATION

SHOWING DIMENSIONS, AESTHETICS



REINFORCING LEGEND

B = 2-FA524 SPA.@ 10" E.F.

C = 5-FA525, 4 SPA. @ 1'-0" = 4'-0", E.F.

D = 3 SETS OF 1-FA1001 & 1-FA1003, 2 SPA. @ 7½" = 1'-3", F.F.; 2 SETS OF 1-FA501 & 1-FA511 SPA @ 1'-3", N.F.

✡ OVERALL DIMENSIONS MEASURED ALONG FRONT OF FOOTING, FAN FOOTING REINFORCING BARS

FORWARD LEFT WINGWALL ELEVATION

SHOWING REINFORCING, AESTHETICS NOT SHOWN

DLZ
6121 HUNTLEY ROAD ▪ COLUMBUS, OHIO 43229

DESIGNED	DRAWN	REVIEWED	DATE
IMF	IMF	CJS	11/6/17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JAM		TO BE ASSIGNED	

FORWARD ABUTMENT WINGWALL ELEVATION - 1

BRIDGE NO. DEL-036-1063
BIKEWAY OVER U.S. 36

DEL-36-10.59
PID No. 95625

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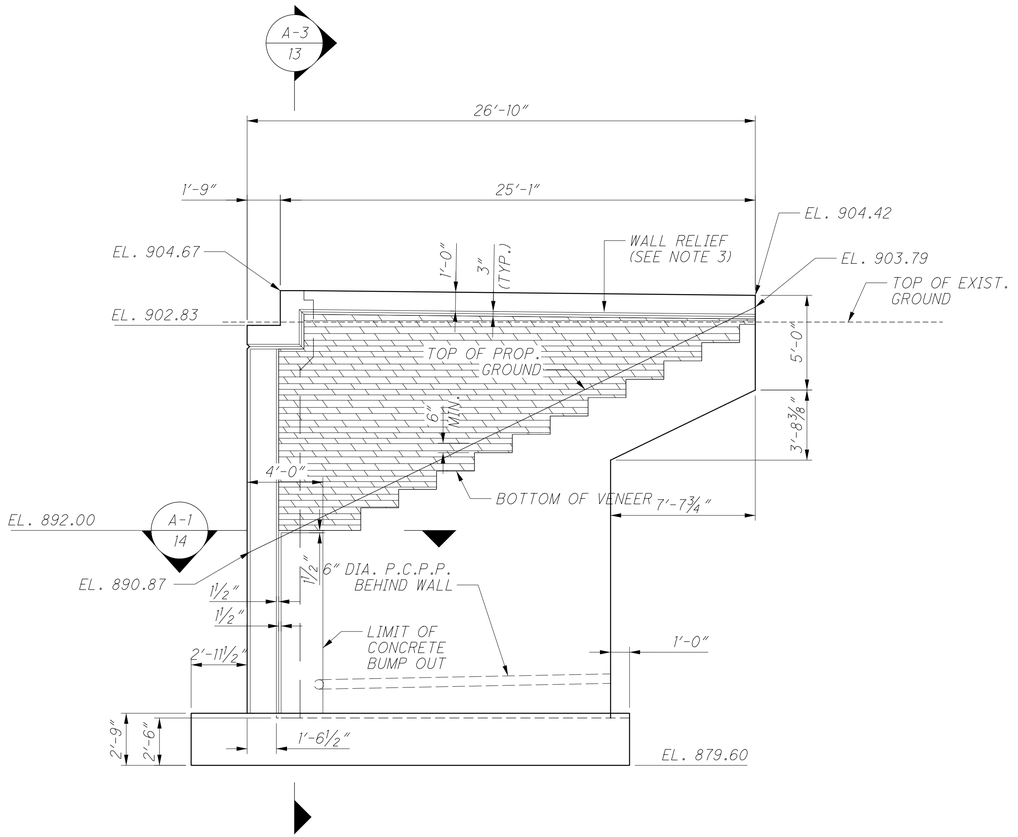
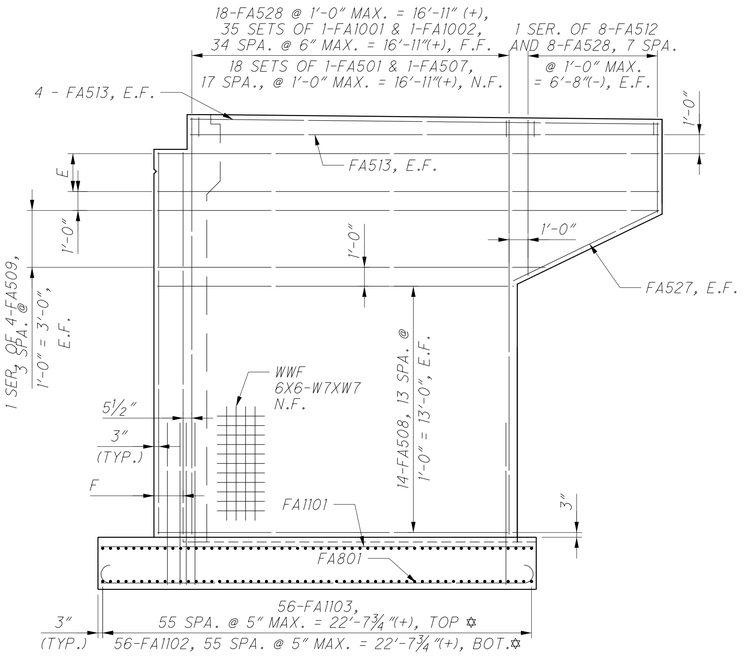


FORWARD RIGHT WINGWALL ELEVATION

SHOWING DIMENSIONS, AESTHETICS



FORWARD RIGHT WINGWALL ELEVATION

SHOWING REINFORCING
AESTHETICS NOT SHOWN

REINFORCING LEGEND

E = 3-FA510, 2 SPA.@ 1'-0" = 2'-0", E.F.

F = 3 SETS OF 1-FA1001 & 1-FA1003, 2 SPA. @ 7 1/2" = 1'-3", F.F.; 2 SETS OF 1-FA501 & 1-FA511, SPA. @ 1'-3", N.F.

✡ OVERALL DIMENSIONS MEASURED ALONG FRONT OF FOOTING, FAN FOOTING REINFORCING BARS

NOTES

1. HORIZONTAL DIMENSIONS IN THE ELEVATION VIEW ARE MEASURED ALONG THE FRONT FACE OF THE WINGWALL.
2. FOR THE ABUTMENT REINFORCEMENT, THE MINIMUM LAP LENGTHS ARE AS FOLLOWS: #5 BARS = 2'-0", #10 BARS = 6'-4".
3. FOR TYPICAL WALL RELIEF ELEVATION DETAIL, SEE SHEET 14/17.
4. STONE VENEER TO EXTEND FROM BOTTOM OF 3" WALL RELIEF TO THE LOWER LIMITS SHOWN ON THE PLANS. SEE VENEER GENERAL NOTE ON SHEET 2/17.

DLZ
6121 HUNTLEY ROAD • COLUMBUS, OHIO 43229

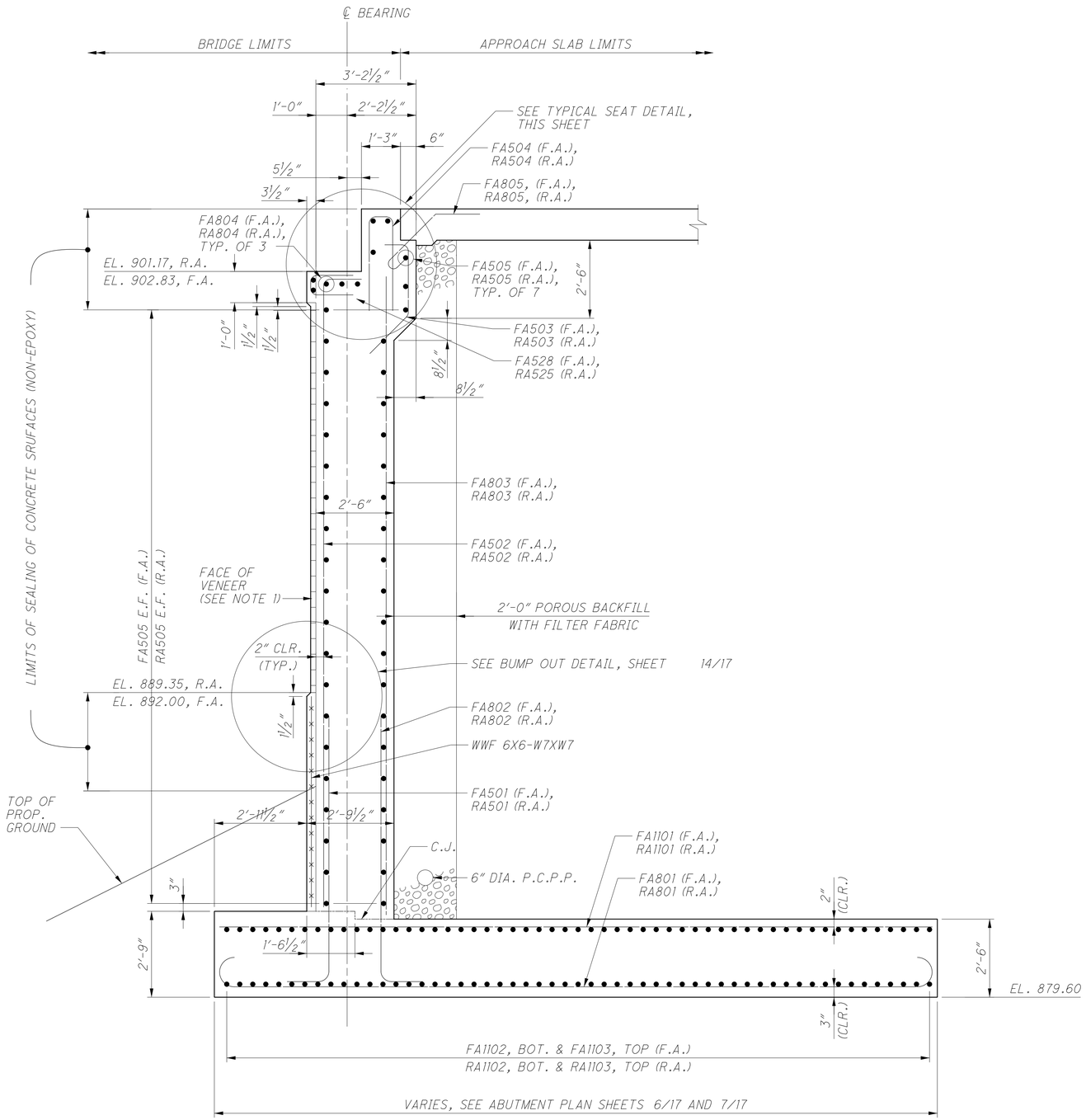
DESIGNED	DRAWN	REVIEWED	DATE
IMF	IMF	CJS	11/6/17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JAM		TO BE ASSIGNED	

FORWARD ABUTMENT WINGWALL ELEVATION - 2
BRIDGE NO. DEL-036-1063
BIKEWAY OVER U.S. 36

DEL-36-10.59
PID No. 95625

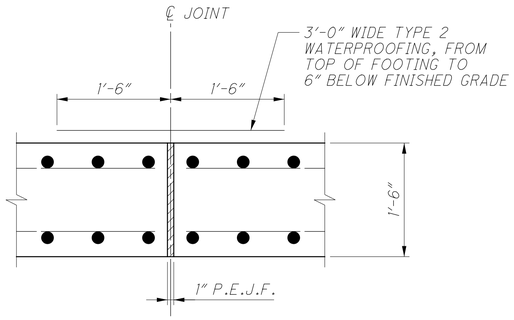
11 / 17

194
224

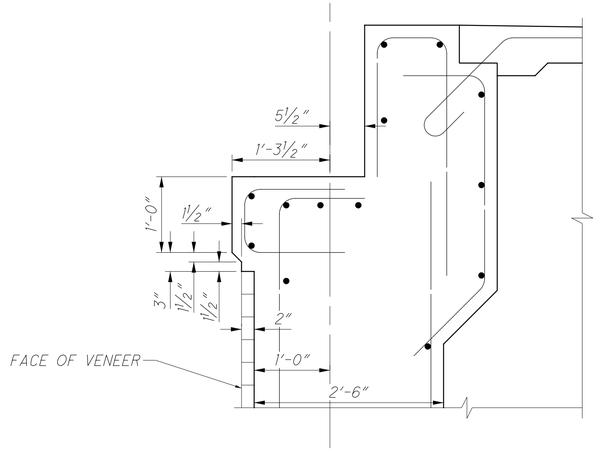


SECTION A-2 / 8

ABUTMENT TYPICAL SECTION



EXPANSION JOINT DETAIL



TYPICAL SEAT DETAIL

NOTES

1. STONE VENEER TO EXTEND FROM BOTTOM OF 3" WALL RELIEF TO THE LOWER LIMITS SHOWN ON THE PLANS. SEE VENEER GENERAL NOTE ON SHEET 2/17.

DLZ
8121 HUNTLEY ROAD • COLUMBUS, OHIO 43229

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JAM		TO BE ASSIGNED	

ABUTMENT TYPICAL SECTION & DETAILS

BRIDGE NO. DEL-036-1063
BIKEWAY OVER U.S. 36

DEL-36-10.59
PID No. 95625

12 / 17

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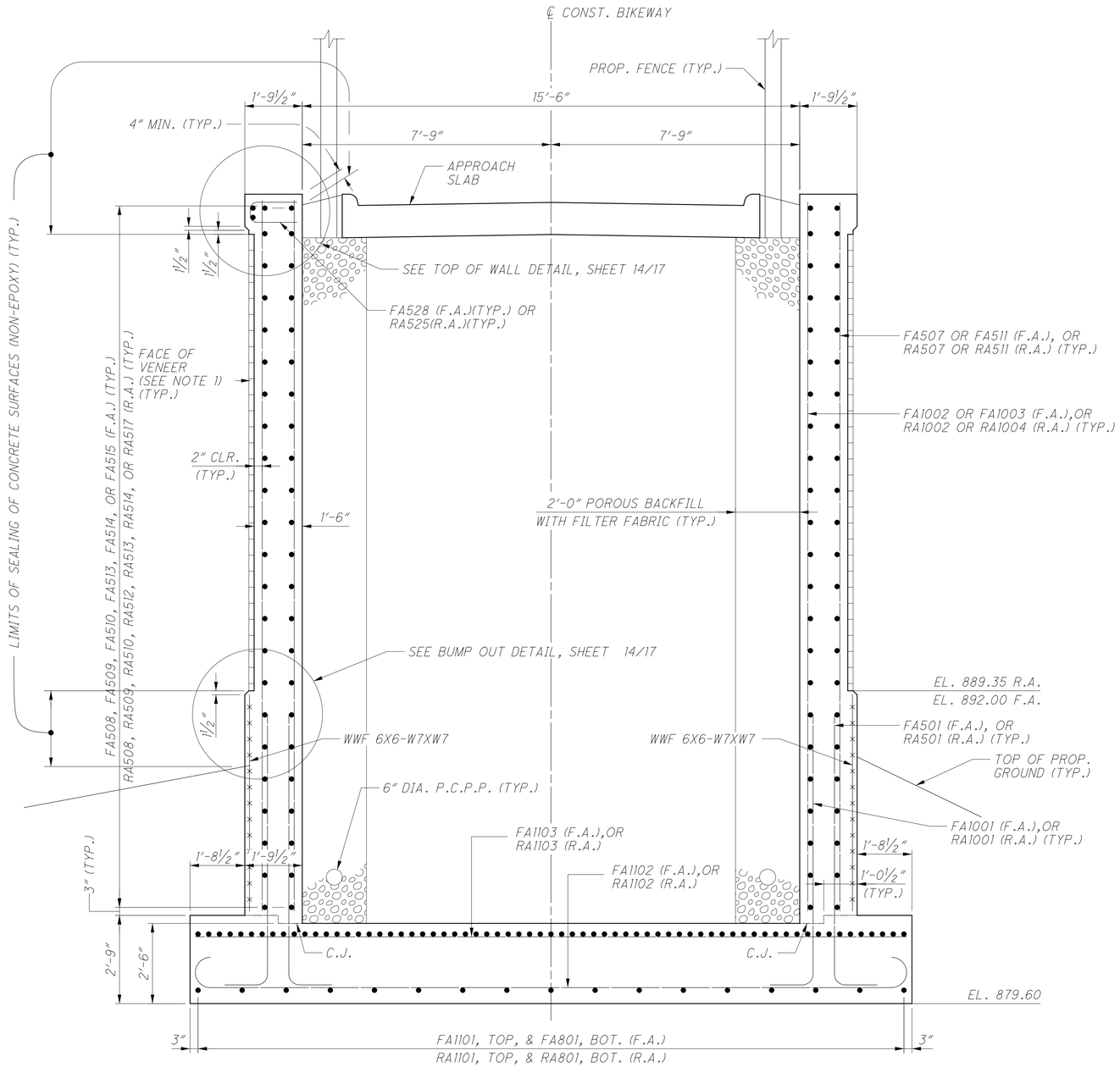
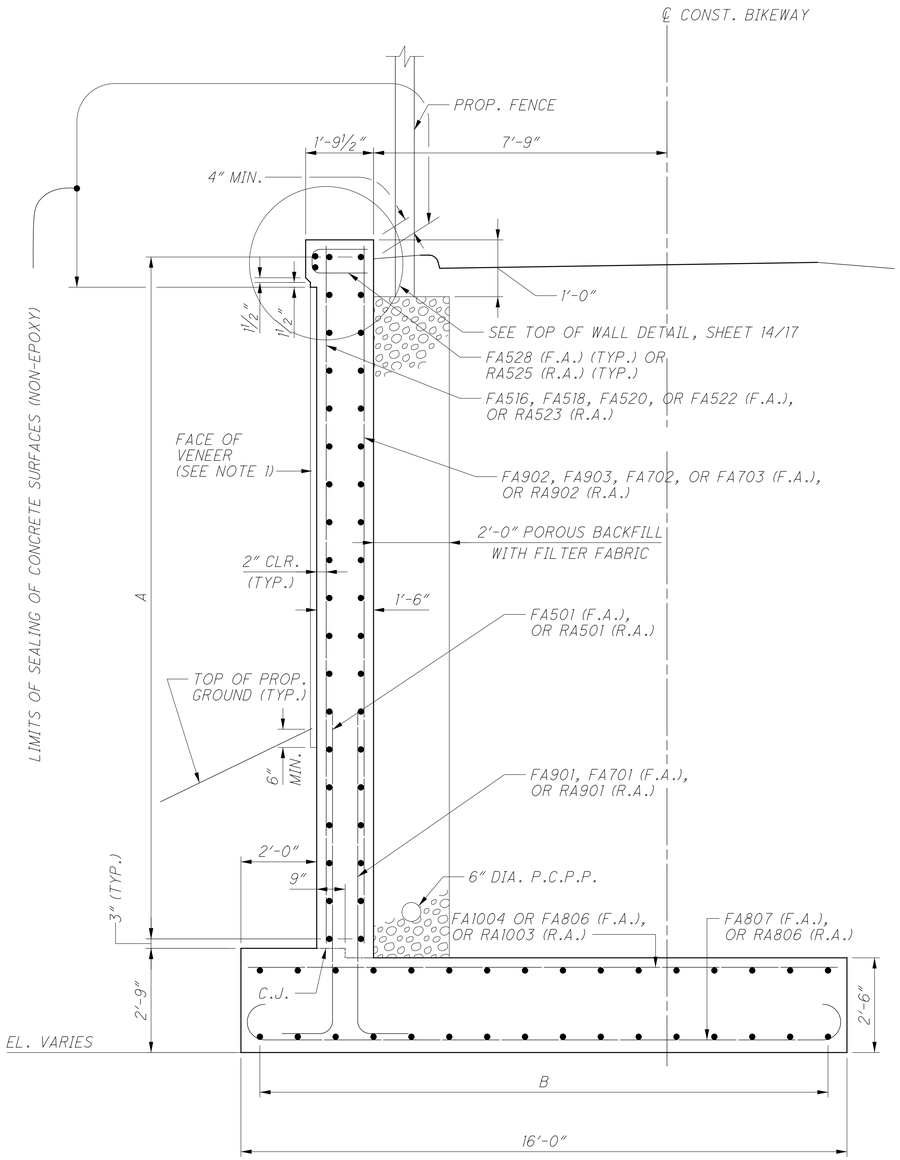


SECTION A-3 9 / A-3 10 / A-3 11

TYPICAL WINGWALL SECTION AT ABUTMENT FOOTING



SECTION A-4 9 / A-4 10

TYPICAL WINGWALL SECTION AT STEPPED FOOTING

REINFORCING LEGEND

A = FA517, FA519, FA521, FA524 OR FA525, E.F.(F.A.), OR RA518, RA519, RA520, RA521, RA522 E.F. (R.A.)

B = FA602, FA603, FA604, OR FA605 (F.A.), OR, RA602 (R.A.), TOP & BOT.

NOTES

1. STONE VENEER TO EXTEND FROM BOTTOM OF 3" WALL RELIEF TO THE LOWER LIMITS SHOWN ON THE PLANS. SEE VENEER GENERAL NOTE ON SHEET 2/17

DLZ
6121 HUNTLEY ROAD • COLUMBUS, OHIO 43229

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ABUTMENT WINGWALL TYPICAL SECTIONS
BRIDGE NO. DEL-036-1063
BIKEWAY OVER U.S. 36

DEL-36-10.59
PID No. 95625

13 / 17

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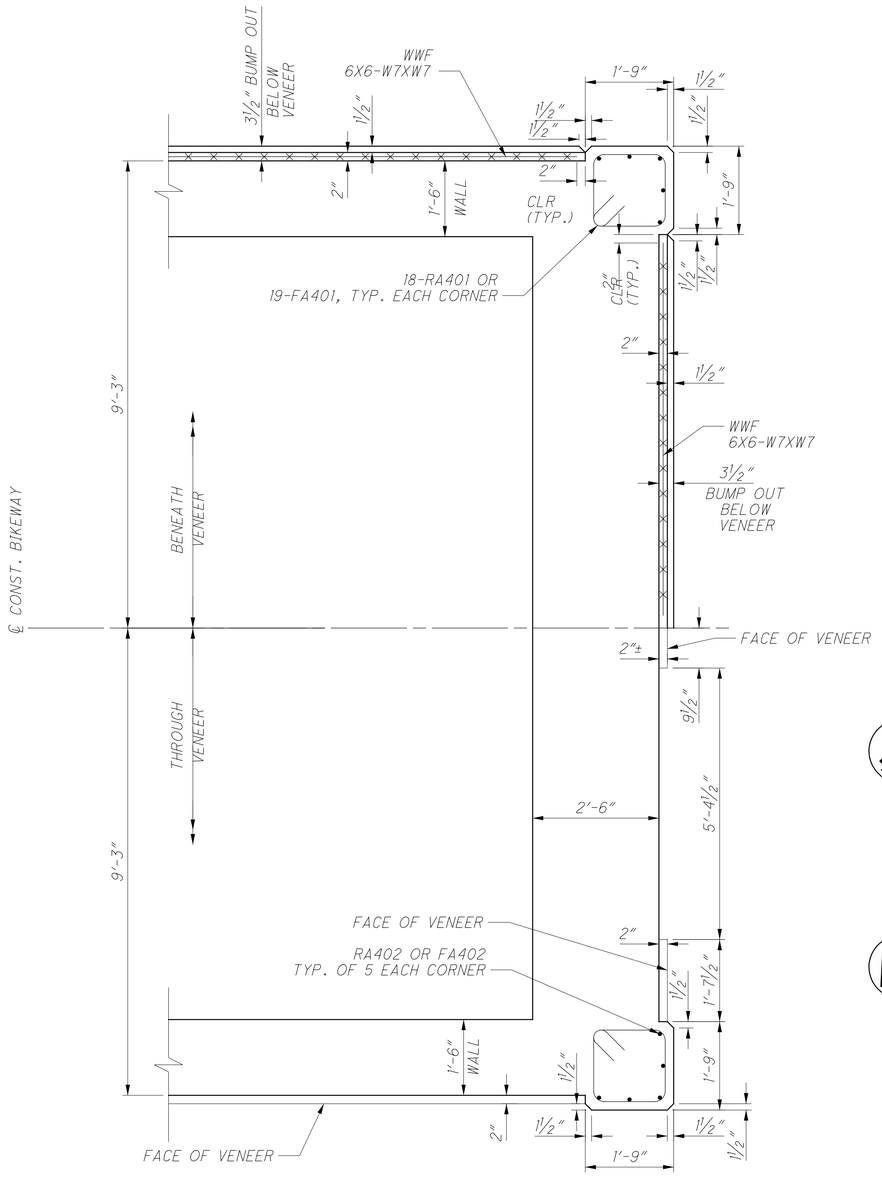


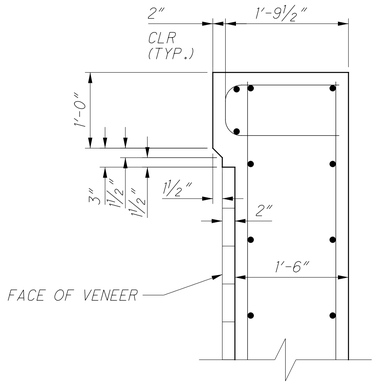
TYP. BELOW BEAM SEAT
REAR ABUTMENT SHOWN, FORWARD ABUTMENT SIMILAR
ADDITIONAL REINFORCEMENT IN THICKENED CONCRETE AREAS SHOWN
SEE WINGWALL ELEVATION VIEWS FOR LIMITS OF CONCRETE BUMP-OUTS

ABUTMENT SECTION

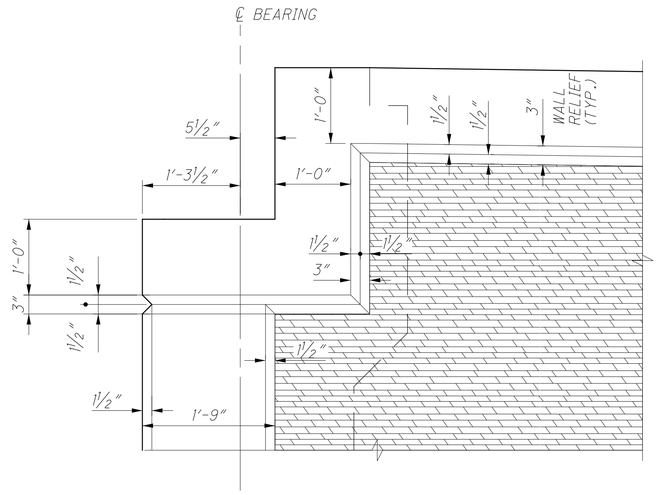
A-1 / 8 — A-1 / 9

REAR ABUTMENT

FORWARD ABUTMENT

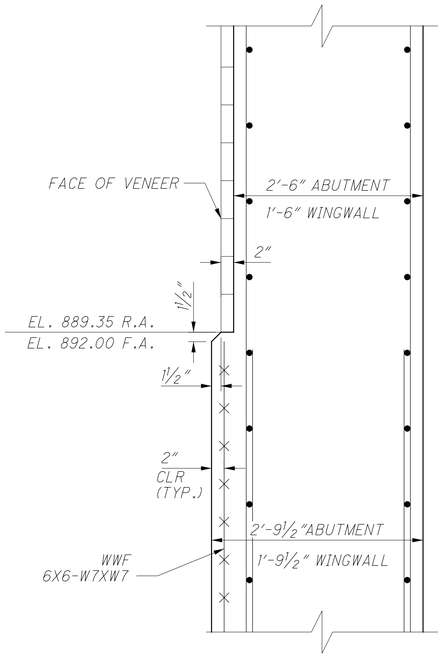


TOP OF WALL DETAIL



TYPICAL WALL RELIEF ELEVATION DETAIL

SHOWN ON WINGWALL FACE AT ABUTMENT CORNER



BUMP OUT DETAIL

DLZ
6121 HUNTLEY ROAD • COLUMBUS, OHIO 43229

DESIGNED	DRAWN	REVIEWED	DATE
IMF	IMF	CJS	11/6/17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JAM		TO BE ASSIGNED	

ABUTMENT AND WINGWALL DETAILS
BRIDGE NO. DEL-036-1063
BIKEWAY OVER U.S. 36

DEL-36-10.59
PID No. 95625

14 / 17

197 / 224

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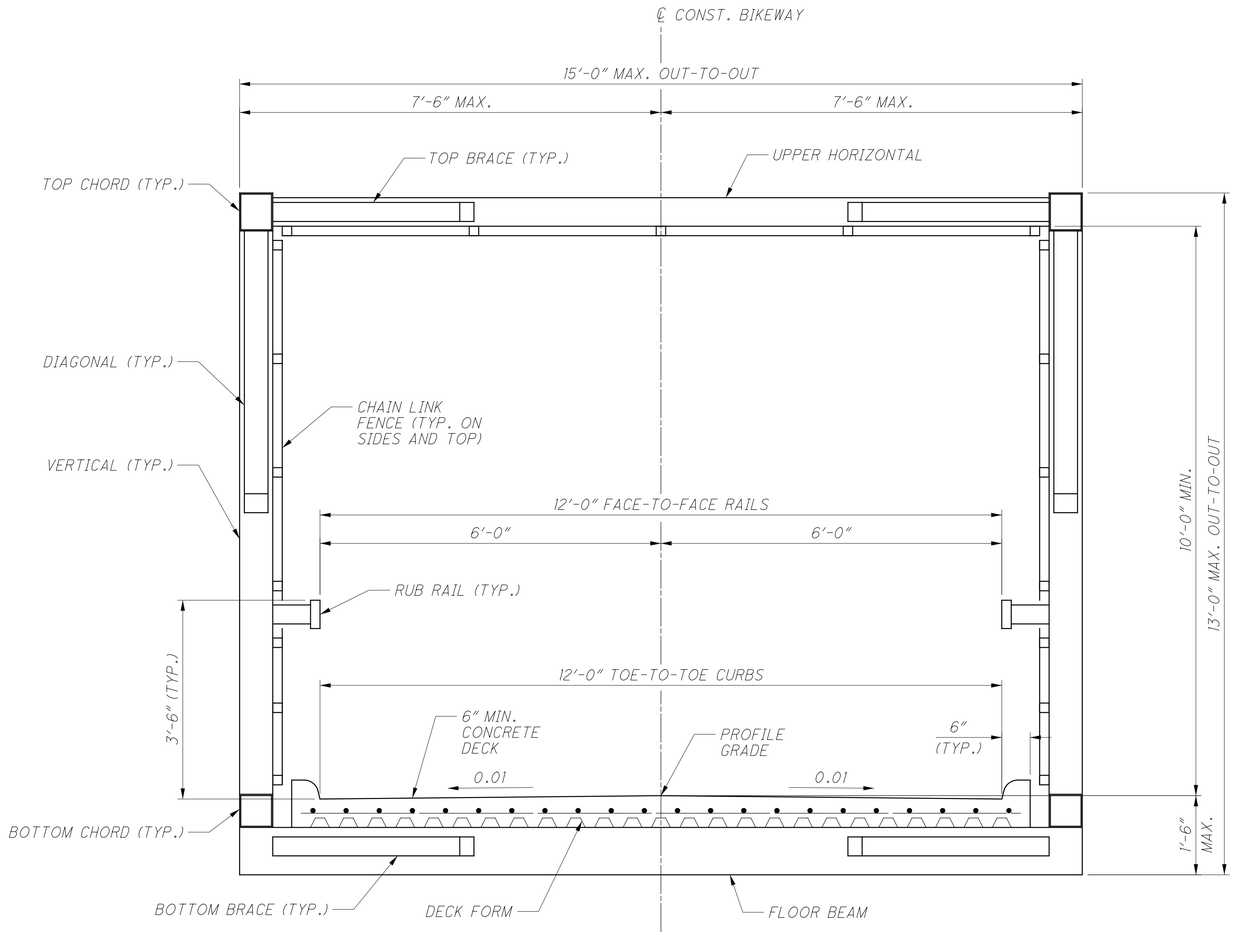


TRANSVERSE SECTION
PREFABRICATED BRIDGE

NOTES

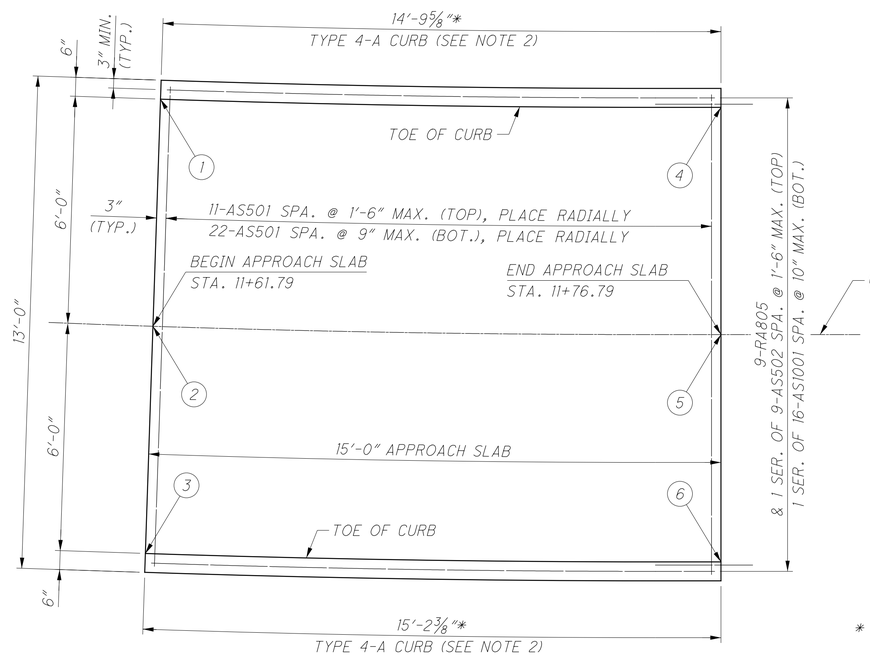
1. CONCRETE DECK REINFORCEMENT PER PREFABRICATED BRIDGE MANUFACTURER'S APPROVED SHOP DRAWINGS.

DLZ
6121 HUNTLEY ROAD • COLUMBUS, OHIO 43229

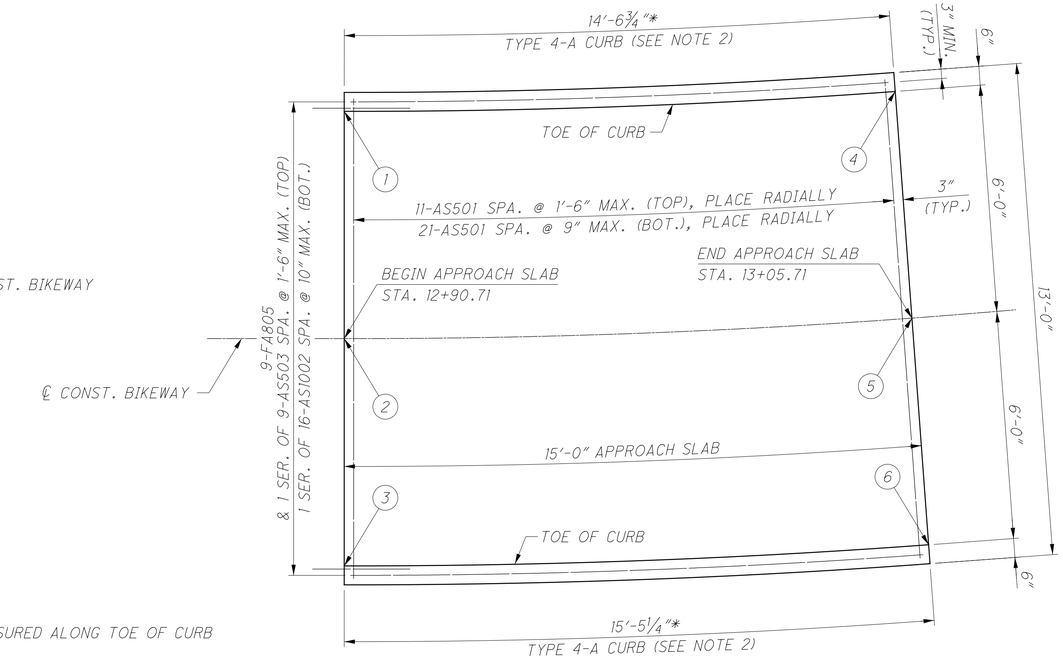
DESIGNED	DRAWN	REVIEWED	DATE
JAM	JAM	CJS	11/6/17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
IMF		TO BE ASSIGNED	

TRANSVERSE SECTION
BRIDGE NO. DEL-036-1063
BIKEWAY OVER U.S. 36

DEL-36-10.59
PID No. 95625



REAR APPROACH SLAB PLAN



FORWARD APPROACH SLAB PLAN

* - MEASURED ALONG TOE OF CURB

APPROACH SLAB SURFACE ELEVATIONS		
LOCATION	REAR	FORWARD
(1)	902.10	904.36
(2)	902.26	904.42
(3)	902.35	904.36
(4)	902.65	904.05
(5)	902.71	904.21
(6)	902.65	904.31

NOTES

1. FOR APPROACH SLAB DETAILS NOT SHOWN, SEE STANDARD DRAWING AS-1-15.
2. CURB HEIGHT SHALL BE TRANSITIONED UNIFORMLY ON THE APPROACH SLABS BETWEEN BRIDGE CURB HEIGHT AND BIKEWAY CURB HEIGHT.

DLZ
6121 HUNTLEY ROAD • COLUMBUS, OHIO 43229

DESIGNED	DRAWN	REVIEWED	DATE
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JAM		TO BE ASSIGNED	

APPROACH SLAB DETAILS
BRIDGE NO. DEL-036-1063
BIKEWAY OVER U.S. 36

DEL-36-10.59
PID No. 95625

16 / 17

199
224

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REINFORCING STEEL LIST

MARK	NO.	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	SERIES INC.
REAR ABUTMENT										
RA401	36	6'-2"	148	3	1'-5"	1'-5"				
RA402	10	17'-4"	116	STR						
RA501	70	5'-8"	414	1	0'-10"	5'-0"				
RA502	16	19'-10"	331	1	1'-6"	18'-6"				
RA503	24	4'-7"	115	10	1'-3"	1'-3"	2'-2"	0'-10"		
RA504	16	7'-2"	120	2	3'-3"	0'-11"	3'-3"			
RA505	45	18'-2"	853	STR						
RA506	4	3'-10"	16	1	2'-7"	1'-5"				
RA507	4	18'-5"	77	STR						
RA508	38	19'-3"	763	STR						
RA509	6	17'-9"	111	STR						
RA510	2	11'-3"	23	STR						
RA511	38	19'-10"	786	STR						
RA512	24	19'-2"	480	STR						
	2	20'-8"								
RA513	SER OF	TO	199	STR						25.25"
	4	27'-0"								
RA514	8	27'-2"	227	STR						
RA515	4	8'-10"	37	STR						
	2	4'-9"								
RA516	SER OF	TO	124	STR						5.75"
	9	8'-6"								
RA517	6	25'-8"	161	STR						
RA518	18	10'-5"	196	STR						
	2	13'-3"								
RA519	SER OF	TO	98	STR						28"
	3	17'-11"								
RA520	8	18'-4"	153	STR						
RA521	2	10'-10"	23	STR						
RA522	4	18'-4"	76	STR						
RA523	12	16'-0"	200	STR						
	2	4'-9"								
RA524	SER OF	TO	121	STR						5.25"
	9	8'-2"								
RA525	87	3'-3"	295	2	1'-5"	0'-8"	1'-5"			
RA601	17	12'-7"	321	25	5'-1"	3'-0"	3'-0"	3'-5"	0'-0"	
	2	11'-5"								
RA602	SER OF	TO	592	STR						0.25"
	17	11'-9"								
RA603	4	15'-8"	94	STR						
	1	24'-3"			22'-5"					
RA801	SER OF	TO	1122	17	TO					0.75"
	17	25'-2"			23'-4"					
RA802	24	8'-11"	571	1	1'-4"	7'-10"				
RA803	24	18'-9"	1202	STR						
RA804	3	18'-2"	146	STR						
RA805	9	4'-6"	108	18	2'-3"	1'-0"	1'-0"			
RA806	9	17'-6"	421	17	15'-8"					
RA901	17	10'-5"	602	1	1'-7"	9'-2"				
RA902	17	16'-0"	925	STR						
RA1001	79	10'-10"	3683	1	1'-10"	9'-4"				
RA1002	73	19'-10"	6230	STR						
RA1003	21	15'-8"	1416	STR						
RA1004	6	18'-5"	475	STR						
	1	22'-5"								
RA1101	SER OF	TO	8143	STR						0.25"
	67	23'-4"								
RA1102	57	25'-4"	7672	17	22'-2"					
RA1103	57	22'-2"	6713	STR						
		TOTAL	46699	LBS						

REINFORCING STEEL LIST

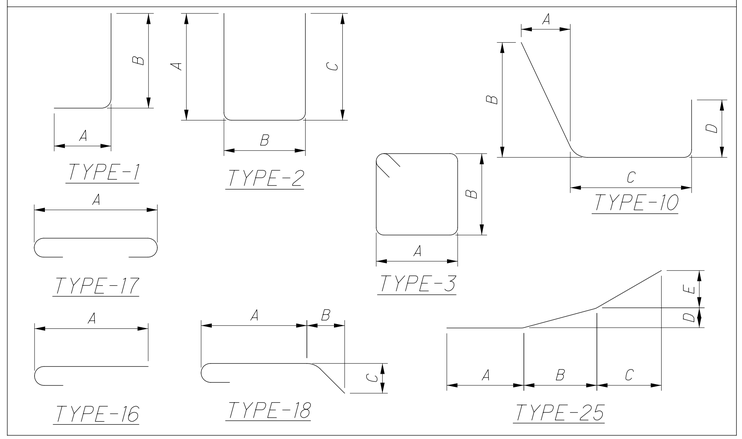
MARK	NO.	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	SERIES INC.
FORWARD ABUTMENT										
FA401	38	6'-2"	157	3	1'-5"	1'-5"				
FA402	10	19'-0"	127	STR						
FA501	126	5'-8"	745	1	0'-10"	5'-0"				
FA502	16	21'-6"	359	1	1'-6"	20'-2"				
FA503	24	4'-6"	113	10	1'-3"	1'-3"	2'-2"	0'-10"		
FA504	16	7'-2"	120	2	3'-3"	0'-11"	3'-3"			
FA505	47	18'-2"	891	STR						
FA506	4	3'-10"	16	1	2'-7"	1'-5"				
FA507	36	21'-10"	820	STR						
FA508	28	18'-6"	540	STR						
	2	20'-2"								
FA509	SER OF	TO	193	STR						24"
	4	26'-2"								
FA510	6	26'-2"	164	STR						
FA511	4	20'-1"	84	STR						
	2	4'-9"								
FA512	SER OF	TO	107	STR						5.75"
	8	8'-1"								
FA513	6	24'-8"	154	STR						
FA514	42	17'-8"	774	STR						
FA515	6	16'-2"	101	STR						
FA516	17	18'-0"	319	STR						
FA517	42	16'-0"	701	STR						
FA518	18	14'-2"	266	STR						
FA519	34	16'-7"	588	STR						
FA520	18	10'-4"	194	STR						
FA521	26	16'-10"	456	STR						
FA522	17	6'-7"	117	STR						
FA523	2	7'-10"	16	STR						
FA524	4	15'-8"	65	STR						
FA525	14	23'-7"	344	STR						
	2	4'-8"								
FA526	SER OF	TO	86	STR						1.75"
	8	5'-8"								
FA527	2	8'-6"	18	STR						
FA528	138	3'-3"	468	2	1'-5"	0'-8"	1'-5"			
FA601	51	12'-7"	964	25	5'-1"	3'-0"	3'-0"	3'-5"	0'-0"	
	2	15'-11"								
FA602	SER OF	TO	847	STR						1"
	17	17'-3"								
	2	16'-7"								
FA603	SER OF	TO	858	STR						0.25"
	17	17'-0"								
FA604	34	16'-11"	864	STR						
	2	16'-8"								
FA605	SER OF	TO	860	STR						0.25"
	17	17'-0"								
FA606	12	15'-8"	282	STR						
FA701	27	7'-8"	423	1	1'-2"	6'-8"				
FA702	14	10'-4"	296	STR						
FA703	13	6'-7"	175	STR						
	1	22'-10"			21'-0"					
FA801	SER OF	TO	1076	17	TO					1.25"
	17	24'-7"			22'-9"					
FA802	24	8'-11"	571	1	1'-4"	7'-10"				
FA803	24	20'-5"	1308	STR						
FA804	3	18'-2"	146	STR						
FA805	18	4'-6"	216	18	2'-3"	1'-0"	1'-0"			
FA806	54	15'-8"	2259	STR						
FA807	52	17'-6"	2430	17	15'-8"					
FA901	51	10'-5"	1806	1	1'-7"	9'-2"				
FA902	25	18'-0"	1530	STR						

REINFORCING STEEL LIST

MARK	NO.	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	SERIES INC.
FORWARD ABUTMENT (CONT.)										
FA903	26	14'-2"	1252	STR						
FA1001	75	10'-10"	3496	1	1'-10"	9'-4"				
FA1002	69	21'-10"	6482	STR						
FA1003	6	20'-1"	519	STR						
FA1004	61	15'-8"	4112	STR						
	1	24'-2"			21'-0"					
FA1101	SER OF	TO	8914	17	TO					0.25"
	67	25'-11"			22'-9"					
FA1102	56	25'-4"	7537	17	22'-2"					
FA1103	56	22'-2"	6595	STR						
		TOTAL	64921	LBS						
APPROACH SLABS										
AS501	65	12'-8"	859	STR						
	1	14'-5"								
AS502	SER OF	TO	137	STR						0.75"
	9	14'-10"								
	1	14'-2"								
AS503	SER OF	TO	137	STR						1.5"
	9	15'-1"								
	1	15'-10"			14'-5"					
AS1001	SER OF	TO	1104	16	TO					0.25"
	16	16'-3"			14'-10"					
	1	15'-7"			14'-2"					
AS1002	SER OF	TO	1104	16	TO					0.75"
	16	16'-6"			15'-1"					
		TOTAL	3341	LBS						

NOTE: APPROACH SLAB REINFORCING STEEL LISTED ABOVE IS SHOWN FOR INFORMATION ONLY. REINFORCING STEEL FOR APPROACH SLABS IS INCLUDED FOR PAYMENT UNDER ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=12"), AS PER PLAN.

BENDING DIAGRAMS



REINFORCING STEEL NOTES

1. SERIES BARS - EACH BAR VARIES BY TABULATED AMOUNT.
2. ALL DIMENSIONS ARE OUT TO OUT.
3. TYPE 'STR' INDICATES A STRAIGHT BAR.
4. THE BAR SIZE NUMBER IS INDICATED IN THE 'MARK' COLUMN. THE FIRST ONE OR TWO DIGITS OF EACH MARK INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, RA501 IS A #5 BAR SIZE AND RA1101 IS A #11 BAR SIZE.
5. ALL REINFORCING STEEL SHALL BE EPOXY COATED.

DLZ
6121 HUNTLEY ROAD • COLUMBUS, OHIO 43229

DESIGNED IMF | DRAWN IMF | REVIEWED CJS | DATE 11/6/17
CHECKED JAM | REVISED | STRUCTURE FILE NUMBER TO BE ASSIGNED

REINFORCING STEEL LIST
BRIDGE NO. DEL-036-1063
BIKEWAY OVER U.S. 36

DEL-36-10.59
PID No. 95625

17 / 17

200
224

E. WILLIAM ST. (U.S. 36) IMPROVEMENTS

DEL-36-10.59

DELAWARE COUNTY
DELAWARE TOWNSHIP
CITY OF DELAWARE
SEC. 4, T-5-N, R-19-W
FARM LOTS 11-12 & 15-16, U.S. MILITARY LANDS

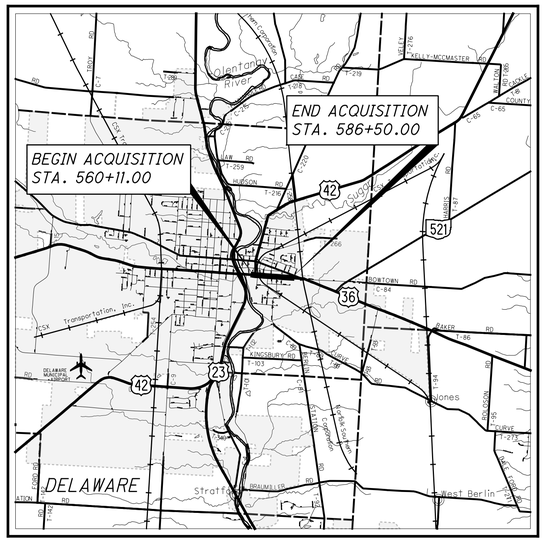
RIGHT OF WAY

PROJECT DESCRIPTION

WIDENING OF E. WILLIAM ST. (U.S. 36) TO A 3-LANE SECTION FROM THE INTERSECTION OF E. WILLIAM ST. (U.S. 36) WITH LAKE ST (U.S. 42) TO THE INTERSECTION WITH EAST POINT CROSSING. REPLACEMENT AND LENGTHENING OF THE EXISTING PEDESTRIAN BRIDGE (OLD RR BRIDGE) AT THE INTERSECTION OF U.S. 36 WITH U.S. 42.

PROJECT CONTROL

STATE PLANE GROUND, NORTH ZONE, NAD 83(2011)
COMBINED SCALE FACTOR: 0.99998998



LOCATION MAP

LATITUDE: N40°17'54" LONGITUDE: W83°03'25"

SCALE IN MILES

0 1 2 3 4

N

MONUMENT LEGEND

- MONUMENT BOX FOUND
- MINE SPIKE FOUND
- I.R.F. IRON PIN FOUND
- I.R.F. IRON PIN FOUND W/ ID CAP
- P.F. IRON PIPE FOUND
- RAILROAD SPIKE FOUND
- I.R.S. IRON PIN SET W/ ID CAP
- PROPOSED MONUMENT BOX

TYPES OF TITLE LEGEND:
WD = WARRANTY DEED
T = TEMPORARY EASEMENT

STRUCTURE KEY

- RESIDENTIAL
- COMMERCIAL
- OUT-BUILDING

CONVENTIONAL SYMBOLS

Subdivision Line
Section Line
Corporation Line or
Fence Line (Ex) (Pr)
Center Line
Right of Way (Ex) Ex R/W
Right of Way (Pr) R/W
Standard Highway Ease.(Ex) Ex SH
Temporary Right of Way TMP
General Ease. (Ex)
Utility Ease. (Ex) Ex U
Guardrail (Ex) (Pr)
Construction Limits
Edge of Pavement (Ex)
Edge of Pavement (Pr)
Edge of Shoulder (Ex)
Edge of Shoulder (Pr)
Ditch / Creek (Ex)
Ditch / Creek (Pr)

Tree Line (Ex)
Ownership Hook Symbol , Example
Property Line Symbol , Example
Break Line Symbol , Example
Tree (Pr) , Tree (Ex) , Shrub (Ex)
Tree (Remove) , Shrub (Remove)
Evergreen (Ex) , Stump
Evergreen (Remove) , Stump (Remove)
Wetland (Pr) , Grass (Pr) , Aerial Target
Post (Ex) , Mailbox (Ex) MB , Mailbox (Pr) MB
Light (Ex) , Telephone Marker (Ex) HTEL
Fire Hydrant (Ex) , Water Meter (Ex) W
Water Valve (Ex) , Utility Valve Unknown (Ex.)
Telephone Pole (Ex) , Power Pole (Ex)
Light Pole (Ex)

INDEX OF SHEETS:

LEGEND SHEET	1
CENTERLINE PLAT	2-3
PROPERTY MAP	4-5
SUMMARY OF ADDITIONAL R/W	6-12
R/W TOPO SHEETS	13,15,17,19,21,23
R/W BOUNDARY SHEETS	14,16,18,20,22,24

PLANS PREPARED BY:

FIRM NAME : DLZ OHIO, INC.
R/W DESIGNER: RAYLEEN LEE
R/W REVIEWER: RUSSELL KOENIG
FIELD REVIEWER: RUSSELL KOENIG
PRELIMINARY FIELD REVIEW DATE: 2/3/16
FINAL FIELD REVIEW DATE: 2/20/17
TRACINGS FIELD REVIEW DATE: 7/26/17
OWNERSHIP UPDATED BY: TIM STADT
DATE COMPLETED: 7/25/17
PLAN COMPLETION DATE: 7/28/17

UTILITY OWNERS

AEP DISTRIBUTION
ATTN: PAUL PAXTON
850 TECH CENTER DR.
GAHANNA, OH 43230
614-883-6381

AEP TRANSMISSION
ATTN: BARBARA DUNLOP
700 MORRISON RD.
GAHANNA, OH 43230
614-552-1893

CITY OF DELAWARE
ATTN: BRAD STANTON
225 CHERRY STREET
DELAWARE, OH 43015
740-203-1750

COLUMBIA GAS OF OHIO
ATTN: DIEGO CATANO
1600 DUBLIN RD., EW2
COLUMBUS, OH 43215
614-481-1057

COLUMBIA GAS OF OHIO
ATTN: MATT SUCHARSKI
200 CIVIC CENTRE DR
8TH FLOOR
COLUMBUS, OH 43215
614-818-2104

CONSOLIDATED ELECTRIC COOPERATIVE
ATTN: TIM APPLEGATE
5255 STATE ROUTE 95
MT. GILEAD, OH 43338
419-949-2932

TIME WARNER CABLE
ATTN: RAY MAURER
3760 INTERCHANGE DR
COLUMBUS, OH 43204
614-255-6349

BOBB KURTO
LEVEL 3 COMMUNICATIONS
226 NORTH FIFTH ST, STE 100
COLUMBUS, OH
614-324-4444
614-255-2128

KENTUCKY DATA LINK
ATTN: MIKE SWANK
65 E. WINNERLINE RD
EATON, OH 45320
937-260-3062

FIRST ENERGY CORPORATION
OHIO EDISON COMPANY
ATTN: CHRIS HARPER
420 SOUTH YORK ST
SPRINGFIELD, OH 45505
937-327-1283

SUBURBAN NATURAL GAS
ATTN: AARON ROLL
2626 LEWIS CENTER RD
LEWIS CENTER, OH 43035
740-548-2450

DEL-CO WATER COMPANY
ATTN: SHANE CLARK
6773 OLENTANGY RIVER RD
DELAWARE, OH 43015
740-548-7746

DELAWARE COUNTY REGIONAL SEWER DISTRICT
ATTN: BILL CLEVENGER
50 CHANNING ST
DELAWARE, OH 43015
740-833-2240

TIME WARNER CABLE
ATTN: RAY MAURER
2760 INTERCHANGE DR
COLUMBUS, OH 43204
614-481-5262

CHRIS AVERY
FRONTIER COMMUNICATIONS
1300 COLUM-SANDUSKY RD
MARION, OH 43302
740-383-0551

NOTES: THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE OBTAINED FROM THE OWNER OF THE UTILITIES AS REQUIRED BY SECTION 153.64 O.R.C.

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AS A PART OF THIS PROJECT I HAVE REESTABLISHED THE LOCATIONS OF THE EXISTING BOUNDARY AND RIGHT OF WAY LINES FOR PROPERTY TAKES CONTAINED HEREIN. I HAVE ESTABLISHED THE PROPOSED BOUNDARY LINES, CALCULATED THE GROSS TAKE, PRESENT ROADWAY OCCUPIED (PRO), NET TAKE, AND NET RESIDUE. I HAVE ALSO PREPARED THE LEGAL DESCRIPTIONS NECESSARY TO ACQUIRE THE PARCELS AS SHOWN HEREIN.

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THE WORDS "I" AND "MY" AS USED HEREIN ARE TO MEAN EITHER MYSELF OR SOMEONE WORKING UNDER MY DIRECT SUPERVISION.

_____
RUSSELL KOENIG, OHIO REGISTERED PROFESSIONAL SURVEYOR, S-8358 DATE:

SURVEYOR'S SEAL

FEDERAL PROJECT NO. E130784
PID NO. 95625
CALCULATED RKL CHECKED RAK

RIGHT OF WAY
LEGEND SHEET

DEL-36-10.59

1 / 24

201 / 224

DELAWARE COUNTY

DELAWARE TOWNSHIP
CITY OF DELAWARE
SEC. 4, T-5-N, R-19-W
FARM LOTS 11,12,15,16
U.S. MILITARY LANDS

CURVE DATA
ALLEY 1

P.I. Sta. 16+28.35
Δ = 10° 27′ 13″ (LT)
Dc = 25° 04′ 01″
R = 228.57′
T = 20.91′
L = 41.70′
E = 0.95′
C = 41.64′
C.B. = N 25° 05′ 28″ E

P.I. Sta. 15+53.76
Δ = 5° 14′ 58″ (LT)
Dc = 4° 53′ 09″
R = 1,172.66′
T = 53.76′
L = 107.44′
E = 1.23′
C = 107.40′
C.B. = N 32° 56′ 33″ E

CURVE DATA
℄ R/W POTTER ST

P.I. Sta. 31+00.20
Δ = 8° 46′ 06″ (RT)
Dc = 4° 23′ 03″
R = 1,306.88′
T = 100.20′
L = 200.00′
E = 3.84′
C = 199.80′
C.B. = N 16° 17′ 02″ W
PC 30+00.00
PT 32+00.00

MONUMENT LEGEND

- M — MONUMENT BOX FOUND
- MINE SPIKE FOUND
- I.P.F. — IRON PIN FOUND
- I.P.F. — IRON PIN FOUND W/ ID CAP
- P.F. — IRON PIPE FOUND
- RAILROAD SPIKE FOUND
- I.P.S. — IRON PIN SET W/ ID CAP
- M — PROPOSED MONUMENT BOX

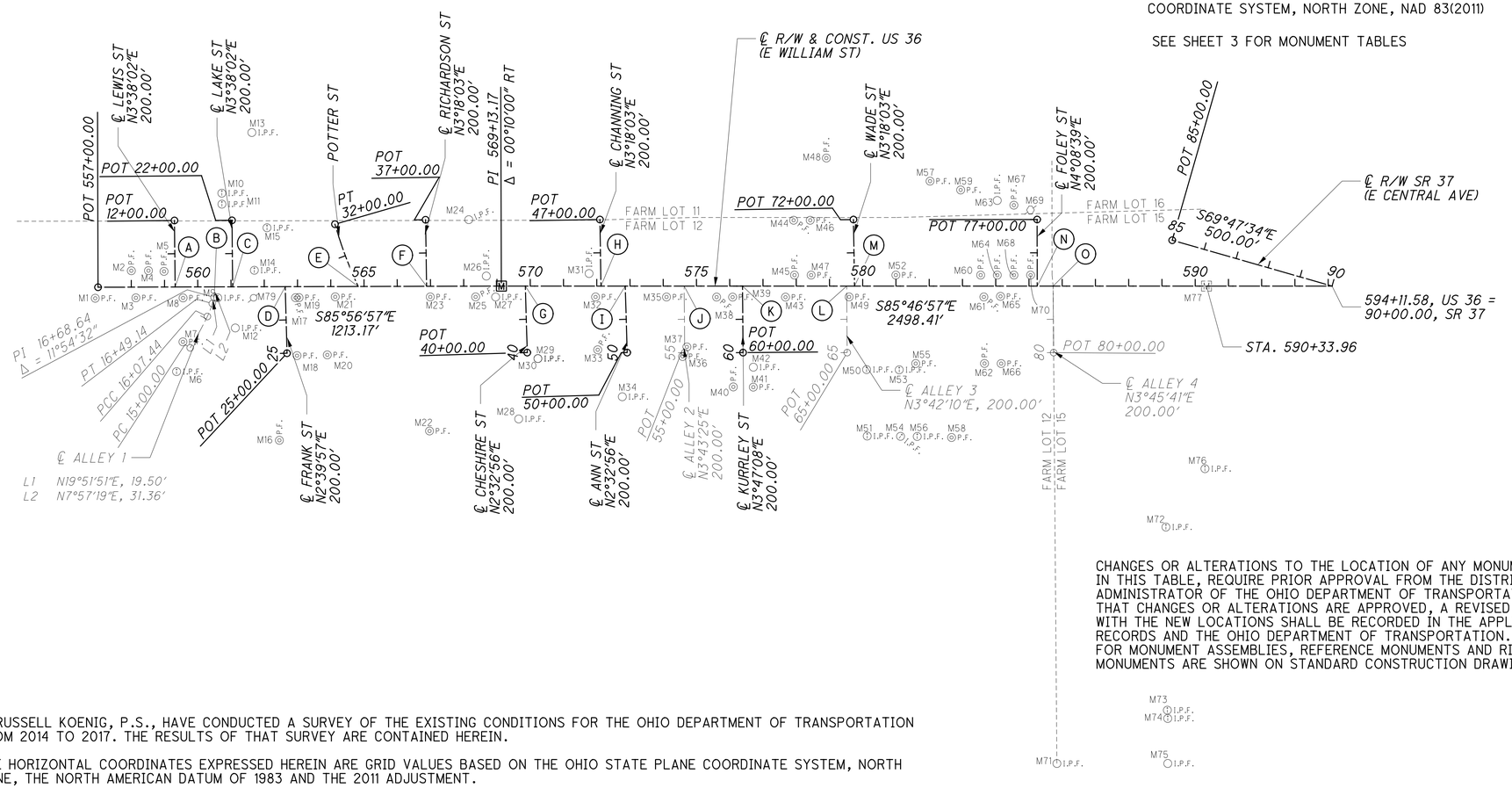
BASIS OF EXISTING ℄ OF R/W AND R/W WIDTH:

THE EXISTING RIGHT OF WAY WIDTHS AND LOCATIONS WERE DETERMINED USING FOUND MONUMENTATION, OHIO DEPARTMENT OF TRANSPORTATION RIGHT OF WAY PLANS KNOWN AS DEL-36-7.28, AND THE RECORDS OF DELAWARE COUNTY, INCLUDING THE SUBDIVISION PLATS KNOWN AS:

PB 1, PG 80 - FINCH AND LAMB'S ADDITION
PB 2, PG 47 - HENRY LAMB AND LEWIS G. STURDERANT'S ADDITION
PB 2, PG 65 - I.J. RICHARDSON'S ADDITION
PB 2, PG 128 - I.J. RICHARDSON AND M.D. PETTIBONE'S ADDITION
PB 2, PG 153 - FINCH'S ADDITION
PB 2, PG 155 - PETTIBONE'S ADDITION
PB 2, PG 188 - GEORGE W. LITTLE'S ADDITION
PB 2, PG 220 - RESUBDIVISION OF GEORGE W. LITTLE'S ADDITION
PB 2, PG 232 - KURRLEY'S ADDITION
PB 2, PG 235 - JAMES A. BARNES' ADDITION
PB 3, PG 40 - EMERSON'S ADDITION
PB 4, PG 233 - MRS. MARGARET GAY BRAWLEY SUBDIVISION
PB 7, PG 297 - MRS. MARGARET GAY BRAWLEY SUBDIVISION NO. 1

BASIS FOR BEARINGS:
BEARINGS ARE BASED ON THE OHIO STATE PLANE COORDINATE SYSTEM, NORTH ZONE, NAD 83(2011)

SEE SHEET 3 FOR MONUMENT TABLES



(A) STA 559+31.97, ℄ R/W US 36 = STA 10+00.00, ℄ R/W LEWIS ST

(B) STA 560+51.03, ℄ R/W US 36 = STA 17+00.00, ℄ R/W ALLEY 1

(C) STA 561+04.96, ℄ R/W US 36 = STA 20+00.00, ℄ R/W LAKE ST

(D) STA 562+63.02, ℄ R/W US 36 = STA 27+00.00, ℄ R/W FRANK ST

(E) STA 564+82.59, ℄ R/W US 36 = PC STA 30+00.00, ℄ R/W POTTER ST

(F) STA 566+88.32, ℄ R/W US 36 = STA 35+00.00, ℄ R/W RICHARDSON ST

(G) STA 569+85.18, ℄ R/W US 36 = STA 42+00.00, ℄ R/W CHESHIRE ST

(H) STA 572+12.76, ℄ R/W US 36 = STA 45+00.00, ℄ R/W CHANNING ST

(I) STA 572+85.75, ℄ R/W US 36 = STA 52+00.00, ℄ R/W ANN ST

(J) STA 574+62.94, ℄ R/W US 36 = STA 57+00.00, ℄ R/W ALLEY 2

(K) STA 576+38.53, ℄ R/W US 36 = STA 62+00.00, ℄ R/W KURRLEY ST

(L) STA 579+51.68, ℄ R/W US 36 = STA 67+00.00, ℄ R/W ALLEY 3

(M) STA 579+75.39, ℄ R/W US 36 = STA 70+00.00, ℄ R/W WADE ST

(N) STA 585+24.87, ℄ R/W US 36 = STA 75+00.00, ℄ R/W FOLEY ST

(O) STA 585+72.69, ℄ R/W US 36 = STA 80+00.00, ℄ R/W ALLEY 4

CHANGES OR ALTERATIONS TO THE LOCATION OF ANY MONUMENTS SHOWN IN THIS TABLE, REQUIRE PRIOR APPROVAL FROM THE DISTRICT REAL ESTATE ADMINISTRATOR OF THE OHIO DEPARTMENT OF TRANSPORTATION. IN THE EVENT THAT CHANGES OR ALTERATIONS ARE APPROVED, A REVISED CENTERLINE PLAT WITH THE NEW LOCATIONS SHALL BE RECORDED IN THE APPLICABLE COUNTY RECORDS AND THE OHIO DEPARTMENT OF TRANSPORTATION. SPECIFICATIONS FOR MONUMENT ASSEMBLIES, REFERENCE MONUMENTS AND RIGHT OF WAY MONUMENTS ARE SHOWN ON STANDARD CONSTRUCTION DRAWING RM-1.1.

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RECEIVED _____, 20____
RECORDED _____, 20____
BOOK _____ PAGE _____
COUNTY RECORDER

RUSSELL KOENIG, OHIO REGISTERED PROFESSIONAL SURVEYOR, S-8358 DATE:

SURVEYOR'S SEAL

HORIZONTAL SCALE IN FEET
0 100 200 400

PID NO. 95625

R/W DESIGNER RKL
R/W REVIEWER RAK

PLAT
CENTERLINE PL
DEL-36-10.59

MONUMENTS FOUND			℄ R/W US 36		PROJECT GROUND	
ID	TYPE	DESCRIPTION	STATION	OFFSET	NORTHING (Y)	EASTING (X)
M1	IRON PIPE	3/4"	556+91.62	33.05' RT	230637.51	1812214.15
M2	IRON PIPE	1"	558+00.33	49.25' LT	230711.92	1812328.42
M3	IRON PIPE	1/2"	558+13.81	32.11' RT	230629.81	1812336.12
M4	IRON PIPE	3/4"	558+51.84	49.44' LT	230708.47	1812379.81
M5	IRON PIPE	1/2"	558+98.63	47.09' LT	230702.82	1812426.32
M6	IRON PIN W/ID	FBA	559+35.56	254.34' RT	230399.53	1812441.87
M7	IRON PIPE	3/4"	559+54.92	164.80' RT	230487.48	1812467.50
M8	IRON PIPE	3/4"	559+55.68	32.95' RT	230618.95	1812477.57
M9	IRON PIN W/ID	FBA	560+59.90	32.91' RT	230611.63	1812581.54
M10	IRON PIN W/ID	STULTS	560+73.17	281.66' LT	230924.48	1812617.00
M11	IRON PIN W/ID	STULTS	560+73.28	248.66' LT	230891.55	1812614.77
M12	IRON PIN	5/8"	561+12.63	123.62' RT	230517.42	1812627.73
M13	IRON PIN	5/8" BENT	561+63.98	463.66' LT	231099.61	1812720.44
M14	IRON PIN W/ID	FBA	561+70.32	49.58' LT	230686.11	1812697.51
M15	IRON PIN W/ID	FBA	562+08.69	177.23' LT	230810.73	1812744.80
M16	IRON PIPE	6579	562+44.14	461.70' RT	230170.89	1812735.03
M17	IRON PIPE	6579	562+93.83	33.06' RT	230594.95	1812814.87
M18	IRON PIPE	6579	562+98.04	207.38' RT	230420.77	1812806.76
M19	IRON PIPE	6579	563+04.62	32.95' RT	230594.30	1812825.64
M20	IRON PIPE	6579	563+88.94	205.29' RT	230416.44	1812897.58
M21	IRON PIPE	#6612	564+13.35	30.88' RT	230588.69	1812934.25
M22	IRON PIPE	SLSS	566+95.85	435.03' RT	230165.59	1813187.49
M23	IRON PIPE	3/4"	566+99.14	32.01' RT	230567.37	1813219.24
M24	IRON PIN	SQUARE	568+15.70	199.90' LT	230790.47	1813351.90
M25	IRON PIPE	3/4" BENT	568+35.64	32.43' RT	230557.31	1813355.37
M26	IRON PIN	1/2"	568+67.98	30.22' LT	230617.52	1813392.06
M27	IRON PIN	1"	568+95.84	32.78' RT	230552.71	1813415.40
M28	IRON PIN	1"	569+65.31	399.45' RT	230181.98	1813457.62
M29	IRON PIN	5/8"	570+23.03	217.94' RT	230358.75	1813528.53
M30	IRON PIN	5/8"	570+23.04	218.03' RT	230358.66	1813528.54
M31	IRON PIN	3/8" IN CONC	571+77.02	37.69' LT	230602.36	1813700.91
M32	IRON PIPE	1/2"	571+96.56	32.77' RT	230530.66	1813715.21
M33	IRON PIPE	1/2" BENT	572+02.86	191.59' RT	230371.80	1813709.82
M34	IRON PIN	3/4"	572+76.89	332.82' RT	230225.51	1813773.26
M35	IRON PIPE	3/4"	574+09.95	32.92' RT	230514.82	1813928.01
M36	IRON PIPE	3/4"	574+58.36	211.74' RT	230332.92	1813963.14
M37	IRON PIPE	3/4"	574+71.19	182.95' RT	230360.69	1813978.05
M38	IRON PIPE	3/4" BENT	575+60.63	33.12' RT	230503.53	1814078.27
M39	IRON PIPE	1/2"	576+08.78	33.09' RT	230500.02	1814126.29
M40	IRON PIPE	3/4"	576+10.81	303.14' RT	230230.55	1814108.46
M41	IRON PIPE	3/4"	576+70.84	303.84' RT	230225.44	1814168.27
M42	IRON PIN	5/8"	576+71.04	243.80' RT	230285.30	1814172.89
M43	IRON PIPE	1"	577+67.71	33.32' RT	230488.11	1814284.78
M44	IRON PIPE	3/4"	577+92.22	197.78' LT	230716.78	1814326.22
M45	IRON PIPE	1/2"	577+94.78	32.95' LT	230552.20	1814316.65
M46	IRON PIPE	3/4"	578+42.13	197.77' LT	230713.10	1814375.99
M47	IRON PIPE	3/4"	578+44.86	32.96' LT	230548.53	1814366.59
M48	IRON PIPE	1/2"	578+90.68	384.85' LT	230896.10	1814438.17
M49	IRON PIPE	1/2"	579+59.03	32.64' RT	230474.71	1814475.63
M50	IRON PIN W/ID	SLSS	580+11.64	251.12' RT	230252.96	1814512.03
M51	IRON PIN W/ID	SLSS	580+13.51	450.90' RT	230053.58	1814499.20
M52	IRON PIPE	1/2"	580+99.67	33.00' LT	230529.83	1814620.71
M53	IRON PIN W/ID	CSC 7616	581+09.85	251.77' RT	230245.08	1814609.92
M54	IRON PIN W/ID	CSC 7616	581+13.67	451.67' RT	230045.45	1814599.03
M55	IRON PIPE	1/2"	581+59.38	232.85' RT	230260.31	1814660.71
M56	IRON PIN W/ID	CSC 7616	581+63.98	452.14' RT	230041.28	1814649.17
M57	IRON PIPE	3/4"	582+02.53	315.29' LT	230803.79	1814744.06
M58	IRON PIPE	1/2"	582+67.19	455.13' RT	230030.70	1814751.88
M59	IRON PIPE	1/2"	582+94.61	288.81' LT	230770.61	1814833.94
M60	IRON PIPE	1/2"	583+54.79	32.99' LT	230511.06	1814875.14
M61	IRON PIPE	1/2"	583+64.37	32.76' RT	230444.78	1814879.86
M62	IRON PIPE	1/2"	583+66.31	232.65' RT	230245.29	1814867.10
M63	IRON PIN	5/8"	584+04.64	257.30' LT	230731.10	1814941.35
M64	IRON PIPE	1/2"	584+04.76	32.94' LT	230507.34	1814924.97
M65	IRON PIPE	1/2"	584+14.43	30.97' RT	230442.89	1814929.92
M66	IRON PIPE	1/2"	584+16.49	232.90' RT	230241.35	1814917.12
M67	IRON PIPE	1/2"	584+54.66	243.04' LT	230713.20	1814990.19
M68	IRON PIPE	1/2" #6612	584+54.76	32.92' LT	230503.64	1814974.84
M69	RR SPIKE	PAVED OVER	585+04.57	228.52' LT	230695.04	1815038.90
M70	IRON PIPE	1/2"	585+04.82	32.98' LT	230500.02	1815024.77
M71	IRON PIN	3/4"	585+84.12	1435.12' RT	229030.06	1814995.88
M72	IRON PIN W/ID	HLG	589+11.94	724.45' RT	229714.70	1815375.08
M73	IRON PIN W/ID	HLG	589+16.27	1274.90' RT	229165.42	1815338.92
M74	IRON PIN W/ID	ODOT	589+17.41	1299.76' RT	229140.54	1815338.22
M75	IRON PIN	3/4"	589+17.60	1435.10' RT	229005.55	1815328.46
M76	IRON PIN W/ID	HLG	590+29.38	548.97' RT	229881.06	1815505.11
M77	MONUMENT BOX	1" PIN	590+33.96	℄	230428.21	1815550.05
M78	IRON PIN	5/8"	590+89.71	567.07' RT	229858.58	1815563.94
M79	MINE SPIKE		561+67.78	33.08' RT	230603.84	1812689.14

MONUMENT TABLE

℄ R/W US 36		PROJECT GROUND COORDINATES		MONUMENTS TO BE SET DURING CONSTRUCTION		R/W MON. EXPECTED TO BE DISTURBED	
STATION	OFFSET	NORTH (Y)	EAST (X)	MON. ASSY.	REF. MON.	R/W MON.	DESCRIPTION
569+13.17	*℄*	*230584.18*	*1813435.00*	*1*			*MON. BOX SET AT PI STA. 569+13.17*
564+93.88	*36.00' LT*	*230649.71*	*1813019.30*			*1*	*IP SET WITHIN CONST. LIMITS*
566+52.00	*36.00' LT*	*230638.54*	*1813177.03*			*1*	*IP SET WITHIN CONST. LIMITS*
566+57.73	*45.00' LT*	*230647.11*	*1813183.37*			*1*	*IP SET WITHIN CONST. LIMITS*
566+99.09	*38.00' RT*	*230561.40*	*1813218.77*			*1*	*IP SET WITHIN CONST. LIMITS*
567+17.78	*41.39' LT*	*230639.27*	*1813243.02*			*1*	*IP SET WITHIN CONST. LIMITS*
567+25.00	*33.00' LT*	*230630.39*	*1813249.63*			*1*	*IP SET WITHIN CONST. LIMITS*
568+35.78	*38.00' RT*	*230551.74*	*1813355.12*			*1*	*IP SET WITHIN CONST. LIMITS*
569+48.00	*33.00' RT*	*230548.71*	*1813467.31*			*1*	*IP SET WITHIN CONST. LIMITS*
569+56.36	*41.00' RT*	*230540.12*	*1813475.06*			*1*	*IP SET WITHIN CONST. LIMITS*
570+16.38	*41.00' RT*	*230535.70*	*1813534.92*			*1*	*IP SET WITHIN CONST. LIMITS*
570+21.00	*33.00' RT*	*230543.34*	*1813540.11*			*1*	*IP SET WITHIN CONST. LIMITS*
571+75.00	*33.00' LT*	*230597.84*	*1813698.55*			*1*	*IP SET WITHIN CONST. LIMITS*
571+82.10	*41.00' LT*	*230605.29*	*1813706.22*			*1*	*IP SET WITHIN CONST. LIMITS*
572+42.11	*41.00' LT*	*230600.88*	*1813766.07*			*1*	*IP SET WITHIN CONST. LIMITS*
572+48.00	*33.00' LT*	*230592.47*	*1813771.35*			*1*	*IP SET WITHIN CONST. LIMITS*
572+52.00	*33.00' RT*	*230526.35*	*1813770.49*			*1*	*IP SET WITHIN CONST. LIMITS*
572+56.85	*38.00' RT*	*230521.01*	*1813774.95*			*1*	*IP SET WITHIN CONST. LIMITS*
573+16.84	*37.00' RT*	*230517.59*	*1813834.86*			*1*	*IP SET WITHIN CONST. LIMITS*
573+21.00	*33.00' RT*	*230521.28*	*1813839.30*			*1*	*IP SET WITHIN CONST. LIMITS*
576+03.00	*33.00' RT*	*230500.54*	*1814120.54*			*1*	*IP SET WITHIN CONST. LIMITS*
576+08.81	*38.00' RT*	*230495.12*	*1814125.97*			*1*	*IP SET WITHIN CONST. LIMITS*
576+68.83	*40.00' RT*	*230488.72*	*1814185.67*			*1*	*IP SET WITHIN CONST. LIMITS*
576+76.00	*33.00' RT*	*230495.17*	*1814193.34*			*1*	*IP SET WITHIN CONST. LIMITS*
584+90.00	*33.00' LT*	*230501.13*	*1815009.99*			*1*	*IP SET WITHIN CONST. LIMITS*
584+97.00	*41.00' LT*	*230508.59*	*1815017.56*			*1*	*IP SET WITHIN CONST. LIMITS*
585+04.81	*41.00' LT*	*230508.01*	*1815025.35*			*1*	*IP SET WITHIN CONST. LIMITS*
585+44.81	*41.00' LT*	*230505.07*	*1815065.24*			*1*	*IP SET WITHIN CONST. LIMITS*
585+52.00	*41.00' LT*	*230504.54*	*1815072.41*			*1*	*IP SET WITHIN CONST. LIMITS*
585+61.00	*33.00' LT*	*230495.90*	*1815080.80*			*1*	*IP SET WITHIN CONST. LIMITS*
TOTAL CARRIED TO GENERAL SUMMARY SHEET				*1*		*29*	

ALIGNMENT GEOMETRY COORDINATES (PROJECT GROUND)			
GEOMETRY POINT	NORTHING (Y)	EASTING (X)	℄ OF R/W
POT 10+00.00	230653.49	1812456.25	LEWIS ST
POT 12+00.00	230853.09	1812468.93	LEWIS ST
POT 20+00.00	230641.27	1812628.81	LAKE ST
POT 22+00.00	230840.87	1812641.48	LAKE ST
POT 25+00.00	230430.32	1812777.17	FRANK ST
POT 27+00.00	230630.11	1812786.47	FRANK ST
PC 30+00.00	230614.60	1813005.50	POTTER ST
PT 32+00.00	230806.39	1812949.47	POTTER ST
POT 35+00.00	230600.06	1813210.71	RICHARDSON ST
POT 37+00.00	230799.73	1813222.23	RICHARDSON ST
POT 40+00.00	230379.08	1813497.92	CHESIRE ST
POT 42+00.00	230578.89	1813506.81	CHESIRE ST
POT 45+00.00	230562.15	1813733.78	CHANNING ST
POT 47+00.00	230761.82	1813745.30	CHANNING ST
POT 50+00.00	230356.98	1813797.68	ANN ST
POT 52+00.00	230556.78	1813806.57	ANN ST
POT 60+00.00	230331.27	1814145.19	KURRLEY ST
POT 62+00.00	230530.84	1814158.39	KURRLEY ST
POT 70+00.00	230506.06	1814494.34	WADE ST
POT 72+00.00	230705.73	1814505.86	WADE ST
POT 75+00.00	230465.65	1815042.33	FOLEY ST
POT 77+00.00	230665.13	1815056.79	FOLEY ST
POT 557+00.00	230669.88	1812224.86	US 36
PI 569+13.17	230584.18	1813435.00	US 36
POT 594+11.58	230400.44	1815926.64	US 36
POT 85+00.00	230573.15	1815457.42	SR 37
POT 90+00.00	230400.44	1815926.64	SR 37

RECEIVED _____, 20____
RECORDED _____, 20____
BOOK _____ PAGE _____

COUNTY RECORDER

R/W DESIGNER RKL
R/W REVIEWER RAK

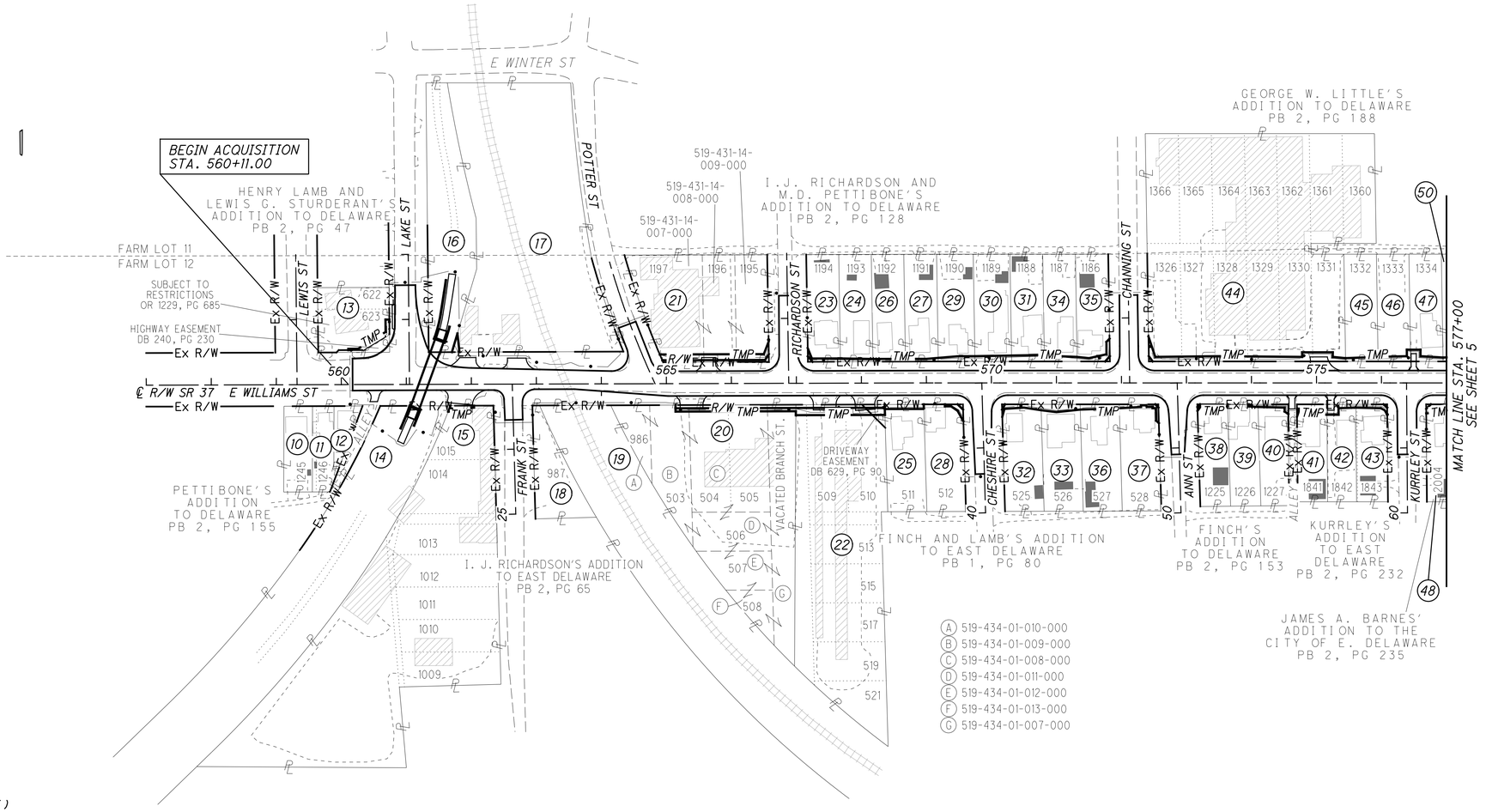
PID NO. 95625

CENTERLINE PLAT

DEL-36-10.59

DELAWARE COUNTY
DELAWARE TOWNSHIP
CITY OF DELAWARE
SEC. 4, T-5-N, R-19-W
FARM LOTS 11 & 12
U.S. MILITARY LANDS

(1-9) NOT USED
(10) WILLIAM L. FOWLES AND NICOLE E. DRUMM
(11) DANE T. FORD
(12) HENRY CALDWELL AND VIRGINIA CALDWELL
(13) CERTIFIED OIL CORPORATION
(14) THE CITY OF DELAWARE, OHIO
(15) 477 NORTH FRONT STREET LIMITED
(16) THE CITY OF DELAWARE, OHIO
(17) CSX TRANSPORTATION, INC.
(18) 477 NORTH FRONT STREET LIMITED
(19) CSX TRANSPORTATION, INC.
(20) DINCO ENTERPRISES
(21) R FLETCHER LLC
(22) MR HOLDINGS OF DUBLIN, LLC
(23) ROBERT P. BRODE AND MEGAN E. BRODE
(24) MARK A. WALLACE AND ATHEA L. WALLACE
(25) 236 TM, LLC
(26) DAVID M. BAXTER
(27) MICHAEL L. STANLEY AND VIOLET STANLEY
(28) JESSE R. MANN
(29) GENEVIEVE M. BOLEN
(30) JOHN K. WARD AND CAROL J. WARD
(31) HELEN M. MAYES
(32) MELINDA A HASTINGS
(33) CARLA M. SLATER AND JEFFREY M. PETERSEN
(34) JULIE A. BARCA AND RANDALL E. HARDENBROOK
(35) SHANNON MARIE ATKINSON
(36) ALLEN H. SLATER AND MARY R. SLATER
(37) STAURT M. REISSIG AND ERIN N. REISSIG
(38) THOMAS L. VANCE SR.
(39) BRIAN J. CAMPBELL
(40) GRACE C. LEWIS
(41) LOIS ARLENE BARBRO
(42) CLAYTON PARSLEY AND TANISHA PARSLEY
(43) DAVID A. THOMPSON
(44) BOARD OF EDUCATION OF THE INCORPORATED VILLAGE OF DELAWARE, AKA BOARD OF EDUCATION OF THE CITY OF DELAWARE, AKA BOARD OF EDUCATION OF THE DELAWARE CITY SCHOOLS
(45) BOARD OF EDUCATION DELAWARE CITY SCHOOLS
(46) BOARD OF EDUCATION, DELAWARE CITY SCHOOLS
(47) BRUCE DAVIDSON
(48) BRUCE D. STARR
(49) LEE A. ROBINSON AND MELANIE K. SCHELL (SEE SHEET 5)
(50) NICHOLAS DAVID GLASSBURN



REV. BY	DATE	DESCRIPTION

DATE COMPLETED: 7/28/17

HORIZONTAL SCALE IN FEET
0 50 100 200

PID NO. 95625

R/W DESIGNER RKL
R/W REVIEWER RAK

PROPERTY MAP

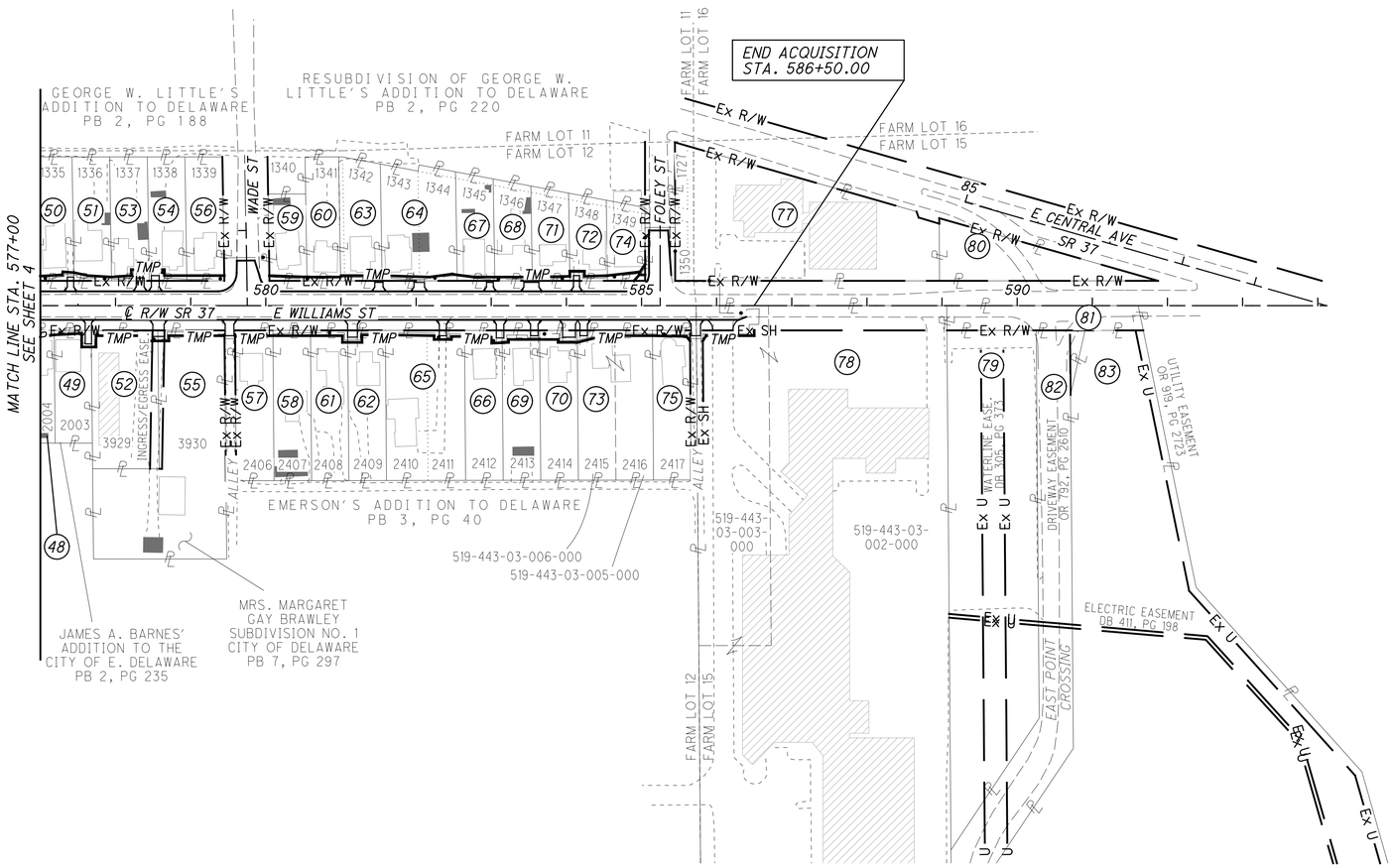
DEL-36-10.59

4 / 24

204 / 224

DELAWARE COUNTY
DELAWARE TOWNSHIP
CITY OF DELAWARE
SEC. 4, T-5-N, R-19-W
FARM LOTS 11, 12, 15, 16
U.S. MILITARY LANDS

(48) BRUCE D. STARR
(49) LEE A. ROBINSON AND MELANIE K. SCHELL
(50) NICHOLAS DAVID GLASSBURN
(51) JUDITH A. KISE
(52) JULIA G. YEAGER AND L. REED YEAGER
(53) TOM AMATO
(54) THOMAS AMATO, JOSEPH AMATO AKA JOSEPH A. AMATO, AND ELAINE AMATO
(55) MARK D. REED AND JENNIFER M. REED
(56) ALICE E. STEWART
(57) DONALD E. STRUBLER AND KATRINA A. STRUBLER
(58) CHARLES H. SMITH AND DONNA J. LEAVER
(59) COLLEEN M. SUCHAN
(60) JOSHUA N THOMAS AND MICHELLE L. PHILLIPS
(61) SMITH FAMILY ENTERPRISES LTD
(62) RUSSELL H. TROWBRIDGE
(63) CHERYL B. HOFFMAN
(64) DORIS M. BAXTER, TRUSTEE OF THE DORIS M. BAXTER REVOCABLE LIVING TRUST, DATED OCTOBER 16, 2014
(65) LESTER L. DOANE
(66) TERESA J. BAILEY
(67) GENEVA SHAW
(68) DAVID A. PETERS SR. AND CLAUDIA PETERS
(69) CHELSEA C TSCHANEN AND SETH J TSCHANEN
(70) PHYLLIS J. PENROD
(71) JEANNE D. SHAW
(72) NICOLE E. BARKELOO
(73) JAMES E. BALCH
(74) LF INVESTMENTS, LLC
(75) TIMOTHY S. ELKINS
(76) NOT USED
(77) NEW BEGINNINGS UNITED METHODIST CHURCH
(78) THE STATE OF OHIO
(79) THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION
(80) THE CITY OF DELAWARE, OHIO
(81) CITY OF DELAWARE
(82) CITY OF DELAWARE, OHIO
(83) STOP-N-GO STORAGE OF DELAWARE LLC



RKL	5/21/18	REMOVED 77WD & 77T
REV. BY	DATE	DESCRIPTION

DATE COMPLETED: 7/28/17

HORIZONTAL SCALE IN FEET
0 50 100 200

PID NO. 95625

R/W DESIGNER RKL
R/W REVIEWER RAK

PROPERTY

DEL-36-10.59

5 / 24

205 / 224

TOTAL NUMBER OF :

60 OWNERSHIPS 0 TOTAL TAKES

73 PARCELS 0 OWNERSHIPS W/ STRUCTURES INVOLVED

NET RESIDUE = RECORD AREA - TOTAL PRO - NET TAKE

ALL AREAS IN ACRES

GRANTEE:

ALL RIGHT OF WAY ACQUIRED IN THE NAME OF THE CITY OF DELAWARE, OHIO UNLESS OTHERWISE SHOWN.

PARCEL NO.	OWNER	SHEET NO.	OWNER'S RECORD	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUCTURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS	AS ACQUIRED INSTRUMENT NO.
1-9	NOT USED												FEDERAL		
10	WILLIAM L. FOWLES AND NICOLE E. DRUMM	4,13,14	OR 922, PG 2153	519-434-02-003-000	0.133									NO TAKE REQUIRED	
														*TREE	
11	DANE T. FORD	4,13,14	OR 1052, PG 2707	519-434-02-002-000	0.000									NO TAKE REQUIRED	
														*TREE	
12	HENRY CALDWELL AND VIRGINIA CALDWELL	4,13,14	DB 634, PG 542	519-434-02-001-000	0.066									NO TAKE REQUIRED	
														*TREE,*2-ROCKS,*SHRUB	
13-T	CERTIFIED OIL CORPORATION	4,13,14	DB 384, PG 187	519-431-13-008-000	6.252	0.018	0.010	0.000	0.010					TO CONSTRUCT WALK	
														*14-SHRUBS,*TREE	
14	THE CITY OF DELAWARE, OHIO	4,13,14	OR 584, PG 928	519-434-08-011-000	7.452									NO TAKE REQUIRED	
														*3-SHRUBS	
15-T	477 NORTH FRONT STREET LIMITED	4,13,14	DB 627, PG 297	519-434-03-035-000	2.637	0.000	0.007	0.000	0.007					TO CONSTRUCT DRIVE APPROACH	
														*BLOCK WALL,*FIRE PIT,*SIGN	
														+BENCH	
16	THE CITY OF DELAWARE, OHIO	4,13,14	OR 584, PG 928	519-431-17-015-000	0.547									NO TAKE REQUIRED	
														*2-TREES	
17-T	CSX TRANSPORTATION, INC.	4,13-16	OR 816, PG 2439	519-431-14-903-000	1.812	0.000	0.004	0.000	0.004					TO CONSTRUCT WALK	
														*BILLBOARD (ADC 14687)	
														+11-TREES	
18	477 NORTH FRONT STREET LIMITED	4,13,14	DB 622, PG 792	519-434-03-001-000	0.122									NO TAKE REQUIRED	
														*3-TREES,*2-SHRUBS	
19	CSX TRANSPORTATION, INC.	4,13-16	OR 816, PG 2439	519-434-14-903-001	2.318 (C)									NO TAKE REQUIRED	
20-WD	DINCO ENTERPRISES	4,15,16	DB 629, PG 87	519-434-01-007-000	0.389	0.000	0.005	0.000	0.005			0.384		*2-RAISED PLANTERS,*3-TREES,*SIGN	
			DB 629, PG 87	519-434-01-008-000	0.455	0.000	0.014	0.000	0.014			0.441		*BILLBOARD (ADC 14685)	
			DB 629, PG 87	519-434-01-009-000	0.222	0.000	0.002	0.000	0.002			0.220		+2-TREES, +FLAGPOLE	
			DB 629, PG 87	519-434-01-010-000	0.097	0.000	0.000	0.000	0.000			0.097			
				TOTAL:	1.163	0.000	0.021	0.000	0.021			1.142			
20-T		4,15,16		519-434-01-007-000			0.005	0.000	0.005					TO CONSTRUCT WALK	
				519-434-01-008-000			0.014	0.000	0.014						
				519-434-01-009-000			0.002	0.000	0.002						
				TOTAL:			0.021	0.000	0.021						

NOTE: UNDER NO CIRCUMSTANCES ARE TEMPORARY EASEMENTS TO BE USED FOR STORAGE OF MATERIAL OR EQUIPMENT BY THE CONTRACTOR UNLESS NOTED OTHERWISE.

NOTE: ALL TEMPORARY PARCELS TO BE OF 24 MONTH DURATION.

TYPES OF TITLE LEGEND:
WD = WARRANTY DEED
T = TEMPORARY EASEMENT

(c) = CALCULATED AREA

DB = DEED BOOK
OR = OFFICIAL RECORD

* DENOTES RIGHT OF WAY ENCROACHMENT
+ DENOTES REMOVAL ITEMS

REV. BY	DATE	DESCRIPTION
RKL	5/21/18	REVISED OWNERSHIP & PARCEL TOTALS
FIELD REVIEW BY RUSSELL KOENIG		DATE: 7/26/17
OWNERSHIP VERIFIED BY TIM STADT		DATE: 7/25/17
DATE COMPLETED: 7/28/17		

FEDERAL PROJECT NO. E130784

PID NO. 95625

STATE JOB NO. 467331

R/W DESIGNER RKL

R/W REVIEWER RAK

SUMMARY OF ADDITIONAL RIGHT OF WAY (PARCELS 1-20)

DEL-36-10.59

6 / 24

206 / 224

NET RESIDUE = RECORD AREA - TOTAL PRO - NET TAKE

GRANTEE:
ALL RIGHT OF WAY ACQUIRED IN THE NAME OF THE CITY OF DELAWARE, OHIO UNLESS OTHERWISE SHOWN.

ALL AREAS IN ACRES

PARCEL NO.	OWNER	SHEET NO.	OWNER'S RECORD	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUC-TURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS	AS ACQUIRED INSTRUMENT NO.
21-WD	R FLETCHER LLC	4,15,16	OR 1044, PG 110	519-431-14-007-000	0.303	0.000	0.004	0.000	0.004		0.299		FEDERAL	*2-TREES,*BLOCK WALL,*PLANTER, *TEMP SIGN	
			OR 1044, PG 110	519-431-14-008-000	0.189	0.000	0.004	0.000	0.004		0.185			+FLAG POLE,+SIGN BASE,+2-SHRUBS	
			OR 1044, PG 110	519-431-14-009-000	0.189	0.000	0.004	0.000	0.004		0.185				
				TOTAL:	0.681	0.000	0.012	0.000	0.012		0.669				
21-T		4,15,16		519-431-14-007-000			0.014	0.000	0.014					TO CONSTRUCT DRIVE APPROACH AND WALK	
				519-431-14-008-000			0.010	0.000	0.010						
				519-431-14-009-000			0.011	0.000	0.011						
				TOTAL:			0.035	0.000	0.035						
22-WD	MR HOLDINGS OF DUBLIN, LLC	4,15,16	OR 1258, PG 1701	519-434-01-003-000	1.465	0.000	0.016	0.000	0.016			1.449		*TREE,+TREE	
22-T		4,15,16					0.035	0.000	0.035					TO CONSTRUCT DRIVE APPROACHS AND WALK	
23-WD	ROBERT P. BRODE AND MEGAN E. BRODE	4,15,16	OR 946, PG 264	519-431-15-010-000	0.189	0.000	0.001	0.000	0.001		0.188			*TREE,*HEDGE	
23-T		4,15,16					0.006	0.000	0.006					TO CONSTRUCT WALK	
24-T	MARK A. WALLACE AND ATHEA L. WALLACE	4,15,16	OR 960, PG 876	519-431-15-011-000	0.189	0.000	0.005	0.000	0.005					TO CONSTRUCT WALK	
														*2-TREES	
														+2-TREES,+WOOD TRELLIS	
25-T	236 TM, LLC	4,15,16	OR 873, PG 1924	519-434-01-002-000	0.227	0.000	0.010	0.000	0.010					TO CONSTRUCT WALK	
26-T	DAVID M. BAXTER	4,15,16	OR 1343, PG 1566	519-431-15-012-000	0.189	0.000	0.005	0.000	0.005					TO CONSTRUCT WALK	
														*TREE	
27-T	MICHAEL L. STANLEY AND VIOLET STANLEY	4,15-18	OR 608, PG 1388	519-431-15-013-000	0.189	0.000	0.005	0.000	0.005					TO CONSTRUCT WALK	
														*TREE	
28-WD	JESSE R. MANN	4,15-18	OR 1121, PG 1631	519-434-01-001-000	0.227	0.000	0.001	0.000	0.001			0.226		*PORCH,*STUMP	
														+TREE	
28-T		4,15-18					0.005	0.000	0.005					TO CONSTRUCT WALK	
29-T	GENEVIEVE M. BOLEN	4,17,18	OR 949, PG 1509	519-431-15-014-000	0.212	0.000	0.009	0.000	0.009					TO CONSTRUCT WALK	
														*STUMP	
30-T	JOHN K. WARD AND CAROL J. WARD	4,17,18	DB 648, PG 803	519-431-15-015-000	0.212	0.000	0.011	0.000	0.011					TO CONSTRUCT WALK	
														*TREE	
31-T	HELEN M. MAYES	4,17,18	DB 586, PG 647	519-431-15-016-000	0.189	0.000	0.011	0.000	0.011					TO CONSTRUCT WALK	
														*2-TREES, +2-FLOWER BEDS	

NOTE: UNDER NO CIRCUMSTANCES ARE TEMPORARY EASEMENTS TO BE USED FOR STORAGE OF MATERIAL OR EQUIPMENT BY THE CONTRACTOR UNLESS NOTED OTHERWISE.

NOTE: ALL TEMPORARY PARCELS TO BE OF 24 MONTH DURATION.

TYPES OF TITLE LEGEND:
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T = TEMPORARY EASEMENT

(c) = CALCULATED AREA

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OR = OFFICIAL RECORD

* DENOTES RIGHT OF WAY ENCROACHMENT
+ DENOTES REMOVAL ITEMS

REV. BY	DATE	DESCRIPTION
FIELD REVIEW BY RUSSELL KOENIG		DATE: 7/26/17
OWNERSHIP VERIFIED BY TIM STADT		DATE: 7/25/17
DATE COMPLETED: 7/28/17		

FEDERAL PROJECT NO. E130784
PID NO. 95625
STATE JOB NO. 467331
R/W DESIGNER RKL
R/W REVIEWER RAK

SUMMARY OF ADDITIONAL RIGHT OF WAY (PARCELS 21-31)

DEL-36-10.59

7/24

207/224

NET RESIDUE = RECORD AREA - TOTAL PRO - NET TAKE

GRANTEE:
ALL RIGHT OF WAY ACQUIRED IN THE NAME OF THE CITY OF DELAWARE, OHIO UNLESS OTHERWISE SHOWN.

ALL AREAS IN ACRES

PARCEL NO.	OWNER	SHEET NO.	OWNER'S RECORD	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUCTURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS	AS ACQUIRED INSTRUMENT NO.
32-WD	MELINDA A HASTINGS	4,17,18	OR 115, PG 1993	519-443-05-004-000	0.227	0.000	0.000	0.000	0.000			0.227	FEDERAL	*HEDGE,*1-STUMP,*2-FLOWER BEDS	
														TAKE AREA IS 19 SQ. FT	
32-T		4,17,18					0.009	0.000	0.009					TO CONSTRUCT WALK	
														+2-SHRUBS, *SIGN	
33-T	CARLA M. SLATER AND JEFFREY M. PETERSEN	4,17,18	OR 866, PG 1067	519-443-05-003-000	0.227	0.000	0.014	0.000	0.014					TO CONSTRUCT WALK	
34-T	JULIE A. BARCA AND	4,17,18	OR 815, PG 2380	519-431-15-017-000	0.189	0.000	0.010	0.000	0.010					TO CONSTRUCT WALK	
	RANDALL E. HARDENBROOK													*TREE,*2-ROCKS,+2-ROCKS, +1-SHRUB	
35-WD	SHANNON MARIE ATKINSON	4,17,18	OR 881, PG 1445	519-442-22-011-000	0.189	0.000	0.001	0.000	0.001		0.188				
35-T		4,17,18					0.011	0.000	0.011					TO CONSTRUCT WALK	
36-T	ALLEN H. SLATER AND MARY R. SLATER	4,17,18	OR 987, PG 2355	519-443-05-002-000	0.227	0.000	0.010	0.000	0.010					TO CONSTRUCT WALK	
														+SHRUB	
37-WD	STUART M. REISSIG AND ERIN N. REISSIG	4,17,18	OR 1184, PG 290	519-443-05-001-000	0.227	0.000	0.000	0.000	0.000			0.227		*1-SHRUB,*HEDGE, TAKE AREA IS 12 SQ. FT	
														+SHRUB	
37-T		4,17,18					0.008	0.000	0.008					TO CONSTRUCT WALK	
38-WD	THOMAS L. VANCE SR.	4,17,18	OR 1448, PG 1376	519-443-04-006-000	0.166	0.000	0.000	0.000	0.000			0.166		*TREE, TAKE AREA IS 9 SQ. FT	
38-T		4,17,18					0.003	0.000	0.003					TO CONSTRUCT WALK	
39-T	BRIAN J. CAMPBELL	4,17-20	OR 1481, PG 2660	519-443-04-005-000	0.166	0.000	0.001	0.000	0.001					TO CONSTRUCT WALK	
														*5-SHRUBS, +2 FLOWER BEDS W/STONE WALL	
40-T	GRACE C. LEWIS	4,19,20	OR 1326, PG 2689	519-443-04-004-000	0.166	0.000	0.006	0.000	0.006					TO CONSTRUCT WALK	
														*51' OF FENCE,*8-SHRUBS	
														+14' OF FENCE,+2-SHRUBS, +HEDGE	
41-T	LOIS ARLENE BARBRO	4,19,20	DB 598, PG 209	519-443-04-003-000	0.162	0.000	0.010	0.000	0.010					TO CONSTRUCT DRIVE APPROACH AND WALK	
														*2-STUMPS,*TREE	
														+SHRUB	
42-T	CLAYTON PARSLEY AND TANISHA PARSLEY	4,19,20	OR 1494, PG 801	519-443-04-002-000	0.162	0.000	0.010	0.000	0.010					TO CONSTRUCT DRIVE APPROACH AND WALK	
														*TREE	
43-WD	DAVID A. THOMPSON	4,19,20	OR 1142, PG 354	519-443-04-001-000	0.166	0.000	0.000	0.000	0.000			0.166		*TREE,*SHRUB	
														+TREE, TAKE AREA IS 14 SQ. FT	
43-T		4,19,20					0.007	0.000	0.007					TO CONSTRUCT WALK	

NOTE: UNDER NO CIRCUMSTANCES ARE TEMPORARY EASEMENTS TO BE USED FOR STORAGE OF MATERIAL OR EQUIPMENT BY THE CONTRACTOR UNLESS NOTED OTHERWISE.

NOTE: ALL TEMPORARY PARCELS TO BE OF 24 MONTH DURATION.

TYPES OF TITLE LEGEND:
WD = WARRANTY DEED
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DB = DEED BOOK
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* DENOTES RIGHT OF WAY ENCROACHMENT
+ DENOTES REMOVAL ITEMS

REV. BY	DATE	DESCRIPTION
		FIELD REVIEW BY RUSSELL KOENIG DATE: 7/26/17
		OWNERSHIP VERIFIED BY TIM STADT DATE: 7/25/17
		DATE COMPLETED: 7/28/17

FEDERAL PROJECT NO. E130784
PID NO. 95625
STATE JOB NO. 467331
R/W DESIGNER RKL
R/W REVIEWER RAK

SUMMARY OF ADDITIONAL RIGHT OF WAY (PARCELS 32-43)

DEL-36-10.59

NET RESIDUE = RECORD AREA - TOTAL PRO - NET TAKE

GRANTEE:
ALL RIGHT OF WAY ACQUIRED IN THE NAME OF THE CITY OF DELAWARE, OHIO UNLESS OTHERWISE SHOWN.

ALL AREAS IN ACRES

PARCEL NO.	OWNER	SHEET NO.	OWNER'S RECORD	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUCTURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS	AS ACQUIRED INSTRUMENT NO.
44-WD	BOARD OF EDUCATION OF THE INCORPORATED	4,17-20	DB 60, PG 66	519-442-22-008-000	2.634	0.000	0.001	0.000	0.001		2.633		FEDERAL	+7' OF CHAIN LINK FENCE	
	VILLAGE OF DELAWARE, AKA BOARD OF		DB 61, PG 609 (2)											DB 61, PG 609 CONTAINS TWO SEPARATE INSTRUMENTS	
	EDUCATION OF THE CITY OF DELAWARE,		DB 61, PG 614												
	AKA BOARD OF EDUCATION OF THE DELAWARE		DB 61, PG 618												
	CITY SCHOOLS		DB 61, PG 619												
			DB 63, PG 325												
			DB 68, PG 235												
			DB 77, PG 231												
			DB 443, PG 339												
44-T		4,17-20					0.061	0.000	0.061					TO CONSTRUCT DRIVE APPROACH AND WALK	
														*230' OF CHAIN LINK FENCE,*3-TREES	
														+41' OF CHAIN LINK FENCE	
45-T	BOARD OF EDUCATION DELAWARE	4,19,20	OR 244, PG 737	519-442-22-012-000	0.189	0.000	0.007	0.000	0.007					TO CONSTRUCT WALK	
	CITY SCHOOLS														
46-T	BOARD OF EDUCATION, DELAWARE	4,19,20	DB 606, PG 60	519-442-22-013-000	0.189	0.000	0.010	0.000	0.010					TO CONSTRUCT DRIVE APPROACH AND WALK	
	CITY SCHOOLS													*TREE,+SHRUB	
47-T	BRUCE DAVIDSON	4,19,20	OR 156, PG 397	519-442-22-014-000	0.189	0.000	0.012	0.000	0.012					TO CONSTRUCT DRIVE APPROACH AND WALK	
														+SHRUB	
48-WD	BRUCE D. STARR	4,19,20	OR 1139, PG 1888	519-443-03-019-000	0.172	0.000	0.001	0.000	0.001			0.171		*HEDGE,*TREE, +SHRUB	
48-T		4,19,20					0.011	0.000	0.011					TO CONSTRUCT WALK	
49-T	LEE A. ROBINSON AND MELANIE K. SCHELL	5,19,20	OR 803, PG 985	519-443-03-018-000	0.172	0.000	0.011	0.000	0.011					TO CONSTRUCT DRIVE APPROACH AND WALK	
														*2-CONC WALLS,*1-SHRUBS, *TREE, *ROCK, *2-STUMPS	
														+SHRUB	
50-T	NICHOLAS DAVID GLASSBURN	4,19,20	OR 1474, PG 2483	519-442-22-015-000	0.189	0.000	0.010	0.000	0.010					TO CONSTRUCT DRIVE APPROACH AND WALK	
														*TREE, +PAVERS	
51-T	JUDITH A. KISE	5,19,20	OR 443, PG 1616	519-442-22-016-000	0.189	0.000	0.008	0.000	0.008					TO CONSTRUCT DRIVE APPROACH AND WALK	
			DB 553, PG 718												
52-T	JULIA G. YEAGER AND L. REED YEAGER	5,19,20	OR 104, PG 1588	519-443-03-017-000	0.370	0.000	0.019	0.000	0.019					TO CONSTRUCT DRIVE APPROACH AND WALK	
														*2-TREES	
														+2-HEDGES,+ROCK,+3-SHRUBS	
53-T	TOM AMATO	5,19,20	DB 460, PG 765	519-442-22-017-000	0.189	0.000	0.012	0.000	0.012					TO CONSTRUCT DRIVE APPROACH AND WALK	
														*TREE	

NOTE: UNDER NO CIRCUMSTANCES ARE TEMPORARY EASEMENTS TO BE USED FOR STORAGE OF MATERIAL OR EQUIPMENT BY THE CONTRACTOR UNLESS NOTED OTHERWISE.

NOTE: ALL TEMPORARY PARCELS TO BE OF 24 MONTH DURATION.

TYPES OF TITLE LEGEND:
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(c) = CALCULATED AREA

DB = DEED BOOK
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* DENOTES RIGHT OF WAY ENCROACHMENT
+ DENOTES REMOVAL ITEMS

REV. BY	DATE	DESCRIPTION
FIELD REVIEW BY RUSSELL KOENIG		DATE: 7/26/17
OWNERSHIP VERIFIED BY TIM STADT		DATE: 7/25/17
DATE COMPLETED: 7/28/17		

FEDERAL PROJECT NO. E130784
PID NO. 95625
STATE JOB NO. 467331
R/W DESIGNER RKL
R/W REVIEWER RAK

SUMMARY OF ADDITIONAL RIGHT OF WAY (PARCELS 44-53)

DEL-36-10.59

9/24

209/224

NET RESIDUE = RECORD AREA - TOTAL PRO - NET TAKE

GRANTEE:
ALL RIGHT OF WAY ACQUIRED IN THE NAME OF THE CITY OF DELAWARE, OHIO UNLESS OTHERWISE SHOWN.

ALL AREAS IN ACRES

PARCEL NO.	OWNER	SHEET NO.	OWNER'S RECORD	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUCTURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS	AS ACQUIRED INSTRUMENT NO.
54-T	THOMAS AMATO, JOSEPH AMATO	5,19,20	OR 694, PG 355	519-442-22-018-000	0.189	0.000	0.012	0.000	0.012				FEDERAL	TO CONSTRUCT DRIVE APPROACH AND WALK	
	AKA JOSEPH A. AMATO, AND ELAINE AMATO		OR 631, PG 2578											*TREE	
			OR 520, PG 255												
			OR 520, PG 252												
55-T	MARK D. REED AND JENNIFER M. REED	5,19-22	OR 1507, PG 388	519-443-03-016-000	0.858	0.000	0.017	0.000	0.017					TO CONSTRUCT DRIVE APPROACH AND WALK	
														*TREE,*ROCK	
56-T	ALICE E. STEWART	5,19-22	DB 439, PG 406	519-442-22-019-000	0.189	0.000	0.008	0.000	0.008					TO CONSTRUCT WALK	
			DB 312, PG 640											*TREE	
57-T	DONALD E. STRUBLER AND	5,21,22	DB 641, PG 1	519-443-03-015-000	0.230	0.000	0.009	0.000	0.009					TO CONSTRUCT WALK	
	KATRINA A. STRUBLER													*TREE	
58-T	CHARLES H. SMITH AND DONNA J. LEAVER	5,21,22	OR 1105, PG 848	519-443-03-014-000	0.230	0.000	0.008	0.000	0.008					TO CONSTRUCT WALK	
59-T	COLLEEN M. SUCHAN	5,21,22	OR 891, PG 726	519-442-23-012-000	0.138	0.000	0.007	0.000	0.007					TO CONSTRUCT WALK	
														*STUMP,*43' OF FENCE	
														+3' OF FENCE	
60-T	JOSHUA N THOMAS AND	5,21,22	OR 728, PG 1606	519-442-23-013-000	0.170	0.000	0.005	0.000	0.005					TO CONSTRUCT WALK	
	MICHELLE L. PHILLIPS													*2-TREES	
61-T	SMITH FAMILY ENTERPRISES LTD	5,21,22	OR 62, PG 1828	519-443-03-013-000	0.230	0.000	0.009	0.000	0.009					TO CONSTRUCT DRIVE APPROACH AND WALK	
														*TREE	
62-T	RUSSELL H. TROWBRIDGE	5,21,22	OR 676, PG 2465	519-443-03-012-000	0.230	0.000	0.011	0.000	0.011					TO CONSTRUCT DRIVE APPROACH AND WALK	
														*TREE,*3-SHRUBS, *4 RR TIES	
														+SHRUB	
63-T	CHERYL B. HOFFMAN	5,21,22	OR 1318, PG 1344	519-442-23-014-000	0.202	0.000	0.009	0.000	0.009					TO CONSTRUCT DRIVE APPROACH AND WALK	
														+TREE	
64-T	DORIS M. BAXTER, TRUSTEE OF THE DORIS	5,21,22	OR 1485, PG 2488	519-442-23-015-000	0.357	0.000	0.015	0.000	0.015					TO CONSTRUCT DRIVE APPROACH AND WALK	
	M. BAXTER REVOCABLE LIVING TRUST,													*2-TREES	
	DATED OCTOBER 16, 2014														
65-T	LESTER L. DOANE	5,21,22	OR 1299, PG 2472	519-443-03-011-000	0.483	0.000	0.019	0.000	0.019					TO CONSTRUCT DRIVE APPROACH AND WALK	
														*POST,+TREE	
66-T	TERESA J. BAILEY	5,21,22	OR 766, PG 2797	519-443-03-009-000	0.230	0.000	0.012	0.000	0.012					TO CONSTRUCT DRIVE APPROACH AND WALK	
														*TREE	

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* DENOTES RIGHT OF WAY ENCROACHMENT
+ DENOTES REMOVAL ITEMS

REV. BY	DATE	DESCRIPTION
FIELD REVIEW BY RUSSELL KOENIG		DATE: 7/26/17
OWNERSHIP VERIFIED BY TIM STADT		DATE: 7/25/17
DATE COMPLETED: 7/28/17		

FEDERAL PROJECT NO. E130784
PID NO. 95625
STATE JOB NO. 467331
R/W DESIGNER RKL
R/W REVIEWER RAK

SUMMARY OF ADDITIONAL RIGHT OF WAY (PARCELS 54-66)

DEL-36-10.59

10 / 24

210 / 224

NET RESIDUE = RECORD AREA - TOTAL PRO - NET TAKE

GRANTEE:
ALL RIGHT OF WAY ACQUIRED IN THE NAME OF THE
CITY OF DELAWARE, OHIO
UNLESS OTHERWISE SHOWN.

ALL AREAS IN ACRES

PARCEL NO.	OWNER	SHEET NO.	OWNER'S RECORD	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUCTURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS	AS ACQUIRED INSTRUMENT NO.
67-T	GENEVA SHAW	5,21,22	OR 1364, PG 333	519-442-23-016-000	0.152	0.000	0.006	0.000	0.006				FEDERAL	TO CONSTRUCT DRIVE APPROACH AND WALK	
														*TREE	
														+TREE	
68-T	DAVID A. PETERS SR. AND CLAUDIA PETERS	5,21,22	OR 1077, PG 372	519-442-23-017-000	0.155	0.000	0.006	0.000	0.006					TO CONSTRUCT DRIVE APPROACH AND WALK	
														*TREE	
69-T	CHELSEA C TSCHANEN AND	5,21,22	OR 1419, PG 2808	519-443-03-008-000	0.230	0.000	0.015	0.000	0.015					TO CONSTRUCT DRIVE APPROACH AND WALK	
	SETH J TSCHANEN													*TREE	
70-T	PHYLLIS J. PENROD	5,21-24	DB 623, PG 532	519-443-03-007-000	0.230	0.000	0.016	0.000	0.016					TO CONSTRUCT DRIVE APPROACH AND WALK	
			DB 615, PG 109											+HEDGE	
71-T	JEANNE D. SHAW	5,21-24	DB 424, PG 49	519-442-23-018-000	0.130	0.000	0.006	0.000	0.006					TO CONSTRUCT DRIVE APPROACH AND WALK	
														*TREE W/LS	
														+FLOWER POTS	
72-T	NICOLE E. BARKELOO	5,23,24	OR 712, PG 1292	519-442-23-019-000	0.131	0.000	0.010	0.000	0.010					TO CONSTRUCT DRIVE APPROACH AND WALK	
73-T	JAMES E. BALCH	5,23,24	DB 367, PG 161	519-443-03-005-000	0.230	0.000	0.008	0.000	0.008					TO CONSTRUCT DRIVE APPROACH AND WALK	
			OR 917, PG 670	519-443-03-006-000	0.230	0.000	0.012	0.000	0.012					*TREE,*YARD LIGHT,*SHRUB	
				TOTAL:	0.460	0.000	0.020	0.000	0.020					+HEDGE, +STUMP	
74-WD	LF INVESTMENTS, LLC	5,23,24	OR 1181, PG 1019	519-442-23-020-000	0.109	0.000	0.002	0.000	0.002		0.107			*TREE	
74-T		5,23,24					0.010	0.000	0.010					TO CONSTRUCT DRIVE APPROACH AND WALK	
75-T	TIMOTHY S. ELKINS	5,23,24	OR 60, PG 838	519-443-03-004-000	0.230	0.000	0.009	0.000	0.009					TO CONSTRUCT WALK	
														*STUMP, +POST	
76	NOT USED														
77	NEW BEGINNINGS UNITED METHODIST CHURCH	5,23,24	OR 1405, PG 488	519-442-24-002-000	0.477									NO TAKE REQUIRED	
														*4-TREES,*4-STUMPS	
78-T	THE STATE OF OHIO	5,23-24	DB 182, PG 316	519-443-03-002-000	10.000	0.191	0.011	0.000	0.011					TO CONSTRUCT WALK	
			DB 303, PG 107	519-443-03-003-000	1.000	0.155	0.000	0.000	0.000					*3-TREES,*STUMP	
				TOTAL:	11.000	0.346	0.011	0.000	0.011						

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* DENOTES RIGHT OF WAY ENCROACHMENT
+ DENOTES REMOVAL ITEMS

REV. BY	DATE	DESCRIPTION
RKL	5/21/18	REMOVED 77WD & 77T

FIELD REVIEW BY RUSSELL KOENIG DATE: 7/26/17
OWNERSHIP VERIFIED BY TIM STADT DATE: 7/25/17
DATE COMPLETED: 7/28/17

FEDERAL PROJECT NO. E130784
PID NO. 95625
STATE JOB NO. 467331
R/W DESIGNER RKL
R/W REVIEWER RAK

SUMMARY OF ADDITIONAL RIGHT OF WAY (PARCELS 67-78)

DEL-36-10.59

NET RESIDUE = RECORD AREA - TOTAL PRO - NET TAKE

GRANTEE:
ALL RIGHT OF WAY ACQUIRED IN THE NAME OF THE CITY OF DELAWARE, OHIO UNLESS OTHERWISE SHOWN.

ALL AREAS IN ACRES

PARCEL NO.	OWNER	SHEET NO.	OWNER'S RECORD	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUC-TURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS	AS ACQUIRED INSTRUMENT NO.
79	THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION	5	OR 520, PG 944	519-443-03-001-001	1.650								FEDERAL	NO TAKE REQUIRED	
80	THE CITY OF DELAWARE, OHIO	5,23-24	DB 329, PG 64 DB 169, PG 176	519-442-24-001-000	0.755									NO TAKE REQUIRED	
81	CITY OF DELAWARE	5	OR 633, PG 2591	519-443-03-001-002	0.196									NO TAKE REQUIRED	
82	CITY OF DELAWARE, OHIO	5	OR 920, PG 478	999-999-14-000-000	1.592									NO TAKE REQUIRED	
83	STOP-N-GO STORAGE OF DELAWARE LLC	5	OR 1358, PG 251	519-443-03-001-003	11.138									NO TAKE REQUIRED	

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REV. BY	DATE	DESCRIPTION
FIELD REVIEW BY RUSSELL KOENIG		DATE: 7/26/17
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DATE COMPLETED: 7/28/17		

FEDERAL PROJECT NO. E130784

PID NO. 95625

STATE JOB NO. 467331

R/W DESIGNER RKL
R/W REVIEWER RAK

SUMMARY OF ADDITIONAL RIGHT OF WAY (PARCELS 79-83)

DEL-36-10.59

DELAWARE COUNTY
DELAWARE TOWNSHIP
CITY OF DELAWARE
SEC. 4, T-5-N, R-19-W
FARM LOTS 12, U.S. MILITARY LANDS

A 559+31.97, ℄ US 36 = 10+00.00, ℄ LEWIS ST

B 560+51.03, ℄ US 36 = 17+00.00, ℄ ALLEY 1

C 561+04.96, ℄ US 36 = 20+00.00, ℄ LAKE ST

D 562+63.02, ℄ US 36 = 27+00.00, ℄ FRANK ST

BIKE PATH

16
THE CITY OF DELAWARE, OHIO
519-431-17-015-000
LAKE ST

17
CSX TRANSPORTATION, INC.
519-431-14-903-000
RAILROAD

13
CERTIFIED OIL CORPORATION
519-431-13-008-000
181 E WILLIAM ST
GAS STATION

BEGIN WORK
STA. 560+13.47

BEGIN ACQUISITION
STA. 560+11.00

℄ R/W & CONST. US 36/US 42
E WILLIAM ST

℄ R/W LEWIS ST

℄ R/W LAKE ST

CONST. LIMITS

PROP. PED. BRIDGE

EX. CSX BRIDGE

MATCH LINE STA. 564+00
SEE SHEET 15

HIGHWAY EASEMENT
DB 240, PG 230

SUBJECT TO RESTRICTIONS
OR 1229, PG 685

CANOPY OVER GAS PUMPS

#175
2 STORY FRAME HISTORICAL SOCIETY BLDG.

#176
2 STORY FRAME HOUSE

#178
2 STORY FRAME HOUSE

#180
2 STORY FRAME HOUSE

#187
2 STORY STUCCO BLDG

#188
2 STORY FRAME/BRICK BLDG

I STORY FRAME GARAGE

CURVE DATA
℄ ALLEY 1
P.I. Sta. 16+28.35
Δ = 10° 27' 13" (LT)
Dc = 25° 04' 01"
R = 228.57'
T = 20.91'
L = 41.70'
E = 0.95'
C = 41.64'
C.B. = N 25° 05' 28" E

10
RES.
WILLIAM L. FOWLES AND NICOLE E. DRUMM
519-434-02-003-000
176 E WILLIAM ST

11
RES.
DANE T. FORD
519-434-02-002-000
178 E WILLIAM ST

12
RES.
HENRY CALDWELL AND VIRGINIA CALDWELL
519-434-02-001-000
180 E WILLIAM ST

14
BIKE PATH
THE CITY OF DELAWARE, OHIO
519-434-08-011-000
RIVER ST

15
COMM. RETAIL
477 NORTH FRONT STREET LIMITED
519-434-03-035-000
188 E WILLIAM ST

18
COMM.
477 NORTH FRONT STREET LIMITED
519-434-03-001-000
FRANK ST

19
RAILROAD
CSX TRANSPORTATION, INC.
519-434-14-903-001

DND = DO NOT DISTURB
TBR = TO BE REMOVED

REV. BY	DATE	DESCRIPTION

DATE COMPLETED: 7/28/17

HORIZONTAL SCALE IN FEET
0 10 20 40

PID NO. 95625

R/W DESIGNER RKL
R/W REVIEWER RAK

RIGHT OF WAY TOPO SHEET
STA. 559+00 TO STA. 564+00

DEL-36-10.59

13 / 24

213 / 224

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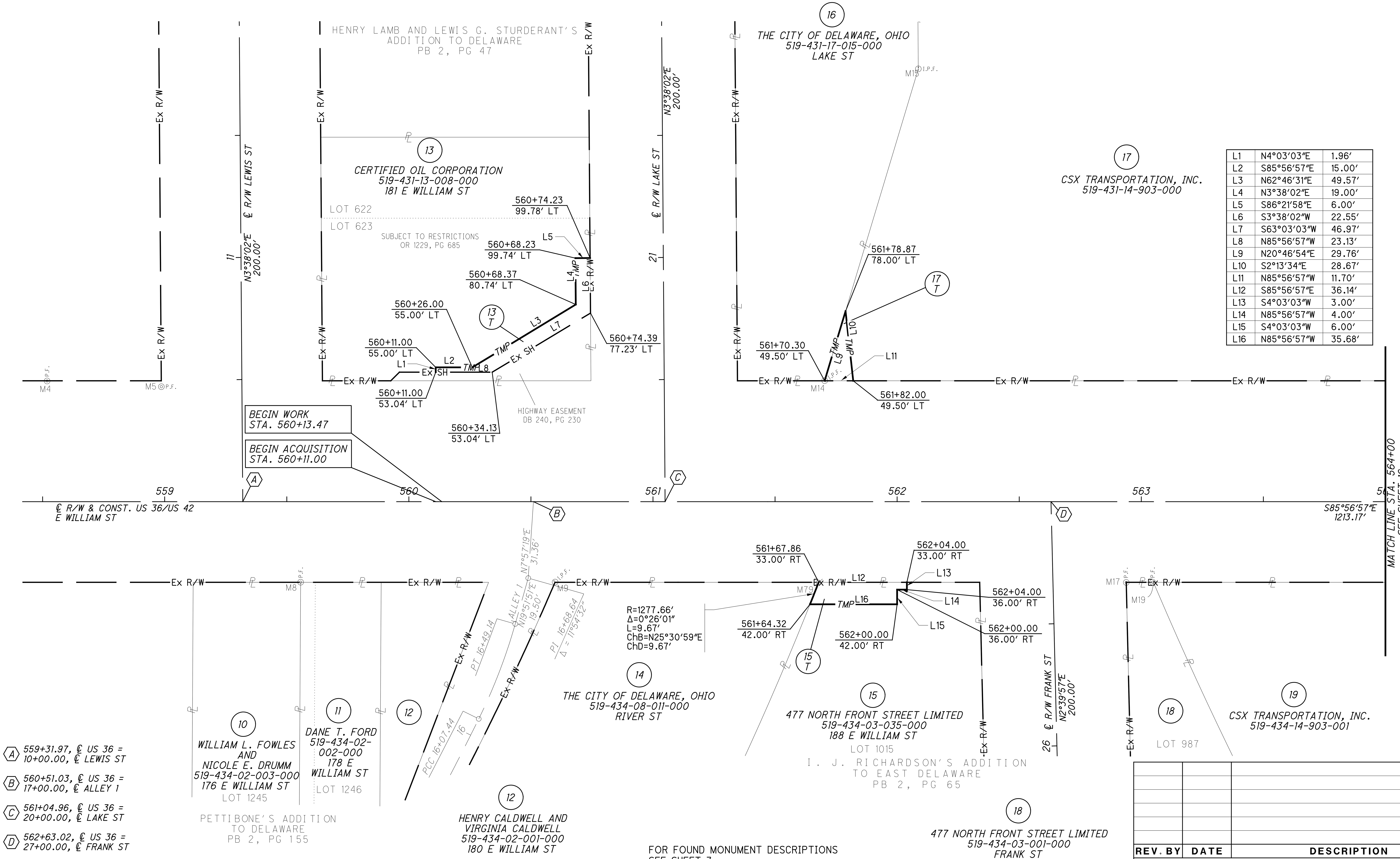
DELAWARE COUNTY
DELAWARE TOWNSHIP
CITY OF DELAWARE
SEC. 4, T-5-N, R-19-W
FARM LOTS 12, U.S. MILITARY LANDS



HENRY LAMB AND LEWIS G. STURDERANT'S ADDITION TO DELAWARE PB 2, PG 47
13 CERTIFIED OIL CORPORATION 519-431-13-008-000 181 E WILLIAM ST
LOT 622
LOT 623
SUBJECT TO RESTRICTIONS OR 1229, PG 685
HIGHWAY EASEMENT DB 240, PG 230
16 THE CITY OF DELAWARE, OHIO 519-431-17-015-000 LAKE ST
17 CSX TRANSPORTATION, INC. 519-431-14-903-000
℄ R/W LEWIS ST
N3°38'02"E 200.00'
℄ R/W LAKE ST
N3°38'02"E 200.00'
560+74.23 99.78' LT
560+68.23 99.74' LT
560+68.37 80.74' LT
560+26.00 55.00' LT
560+11.00 55.00' LT
560+11.00 53.04' LT
560+34.13 53.04' LT
560+74.39 77.23' LT
561+78.87 78.00' LT
561+70.30 49.50' LT
561+82.00 49.50' LT
BEGIN WORK STA. 560+13.47
BEGIN ACQUISITION STA. 560+11.00
℄ R/W & CONST. US 36/US 42 E WILLIAM ST
S85°56'57"E 1213.17'
MATCH LINE STA. 564+00 SEE SHEET 16
561+67.86 33.00' RT
561+64.32 42.00' RT
562+00.00 42.00' RT
562+04.00 33.00' RT
562+04.00 36.00' RT
562+00.00 36.00' RT
R=1277.66' Δ=0°26'01" L=9.67' ChB=N25°30'59"E ChD=9.67'
ALLEY 1 N19°51'51"E 19.50'
N7°57'19"E 31.36'
PT 16+49.14
PI 16+68.64 Δ = 11°54'32"
PCC 16+07.44
℄ R/W FRANK ST N2°39'57"E 200.00'
10 WILLIAM L. FOWLES AND NICOLE E. DRUMM 519-434-02-003-000 176 E WILLIAM ST
LOT 1245
PETTIBONE'S ADDITION TO DELAWARE PB 2, PG 155
11 DANE T. FORD 519-434-02-002-000 178 E WILLIAM ST
LOT 1246
12 HENRY CALDWELL AND VIRGINIA CALDWELL 519-434-02-001-000 180 E WILLIAM ST
14 THE CITY OF DELAWARE, OHIO 519-434-08-011-000 RIVER ST
15 477 NORTH FRONT STREET LIMITED 519-434-03-035-000 188 E WILLIAM ST
LOT 1015
I. J. RICHARDSON'S ADDITION TO EAST DELAWARE PB 2, PG 65
18 477 NORTH FRONT STREET LIMITED 519-434-03-001-000 FRANK ST
LOT 987
19 CSX TRANSPORTATION, INC. 519-434-14-903-001
A 559+31.97, ℄ US 36 = 10+00.00, ℄ LEWIS ST
B 560+51.03, ℄ US 36 = 17+00.00, ℄ ALLEY 1
C 561+04.96, ℄ US 36 = 20+00.00, ℄ LAKE ST
D 562+63.02, ℄ US 36 = 27+00.00, ℄ FRANK ST

L1	N4°03'03"E	1.96'
L2	S85°56'57"E	15.00'
L3	N62°46'31"E	49.57'
L4	N3°38'02"E	19.00'
L5	S86°21'58"E	6.00'
L6	S3°38'02"W	22.55'
L7	S63°03'03"W	46.97'
L8	N85°56'57"W	23.13'
L9	N20°46'54"E	29.76'
L10	S2°13'34"E	28.67'
L11	N85°56'57"W	11.70'
L12	S85°56'57"E	36.14'
L13	S4°03'03"W	3.00'
L14	N85°56'57"W	4.00'
L15	S4°03'03"W	6.00'
L16	N85°56'57"W	35.68'

FOR FOUND MONUMENT DESCRIPTIONS SEE SHEET 3

REV. BY	DATE	DESCRIPTION

DATE COMPLETED: 7/28/17

HORIZONTAL SCALE IN FEET 0 10 20 40

PID NO. 95625

R/W DESIGNER RKL
R/W REVIEWER RAK

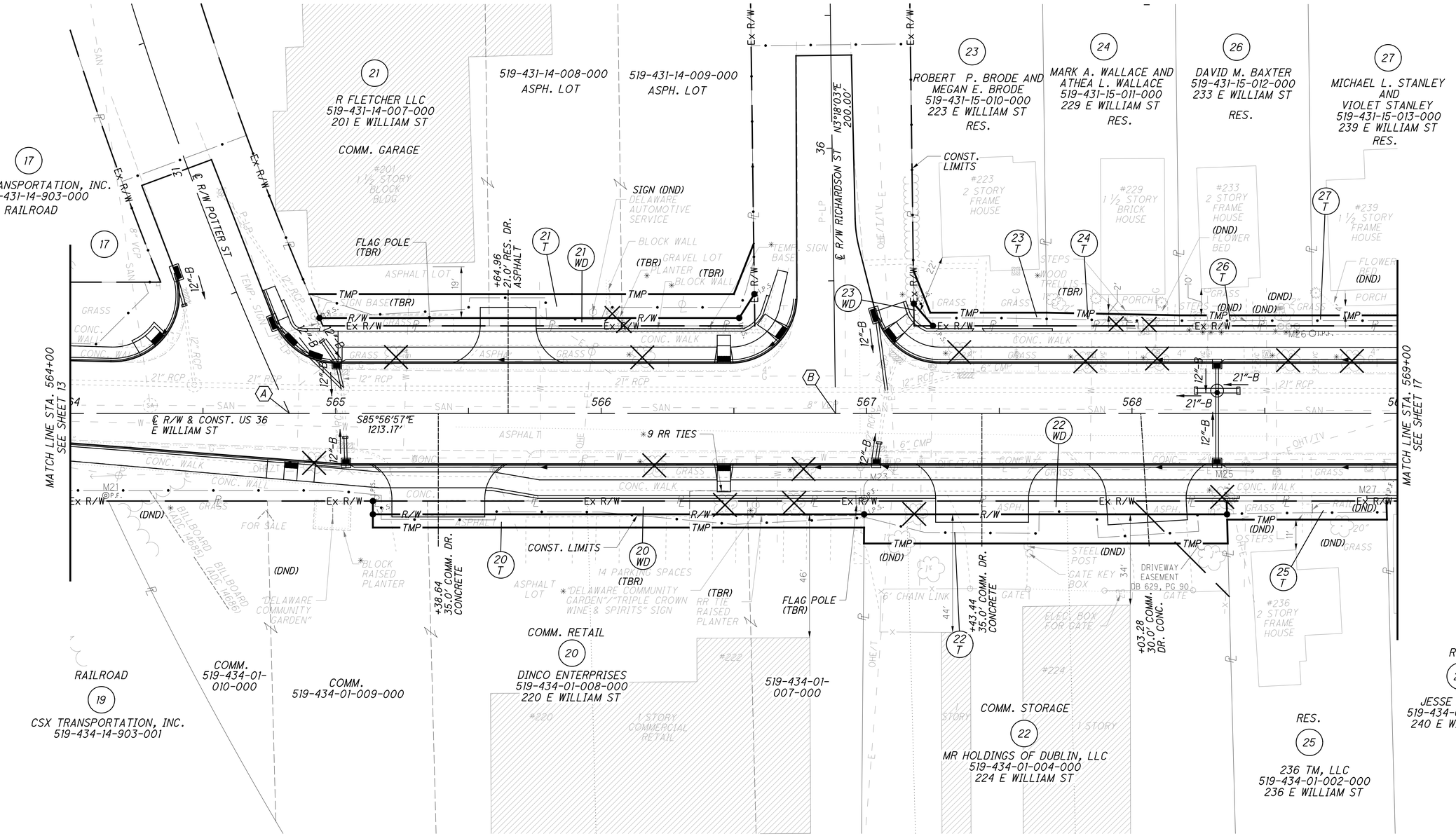
RIGHT OF WAY BOUNDARY SHEET
STA. 559+00 TO STA. 564+00

DEL-36-10.59

Ⓐ 564+82.59, ℄ US 36 = 30+00.00, ℄ POTTER ST

Ⓑ 566+88.32, ℄ US 36 = 35+00.00, ℄ RICHARDSON ST

DELAWARE COUNTY
DELAWARE TOWNSHIP
CITY OF DELAWARE
SEC. 4, T-5-N, R-19-W
FARM LOT 12, U.S. MILITARY LANDS



DND = DO NOT DISTURB
TBR = TO BE REMOVED

REV. BY	DATE	DESCRIPTION

DATE COMPLETED: 7/28/17

HORIZONTAL SCALE IN FEET
0 10 20 40

PID NO. 95625

R/W DESIGNER RKL
R/W REVIEWER RAK

RIGHT OF WAY TOPO SHEET
STA. 564+00 TO STA. 569+00

DEL-36-10.59

15 / 24

215 / 224

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DELAWARE COUNTY
DELAWARE TOWNSHIP
CITY OF DELAWARE
SEC. 4, T-5-N, R-19-W
FARM LOT 12, U.S. MILITARY LANDS

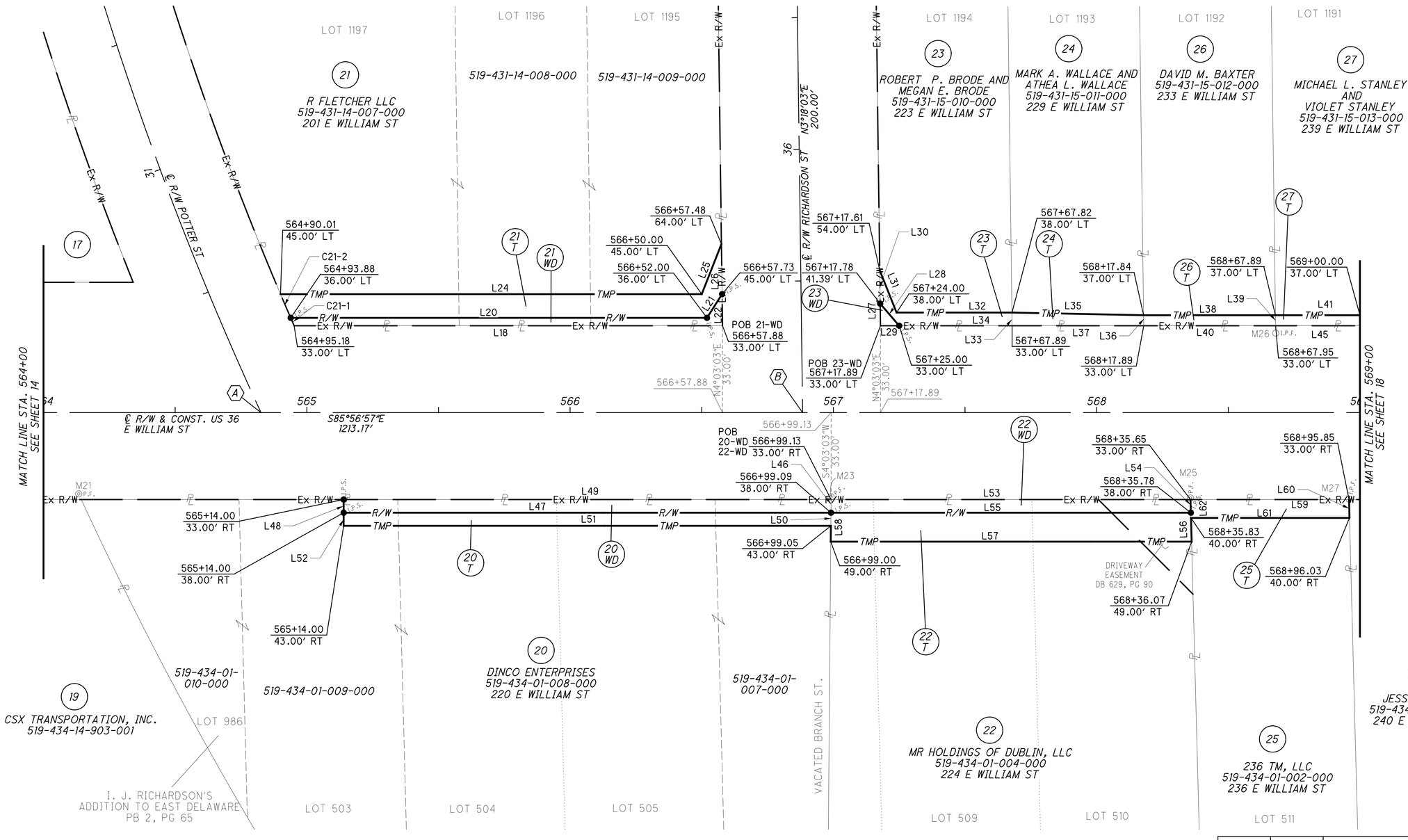
(A) 564+82.59, ℄ US 36 = 30+00.00, ℄ POTTER ST

(B) 566+88.32, ℄ US 36 = 35+00.00, ℄ RICHARDSON ST

COMMENCEMENT CALLS

PARCEL	POC	LEAD IN	TO STA.	LEAD IN	TO STA.
20-WD	POC-1	N85°46'57"W, 2120.80'	569+13.17	S85°56'57"E, 214.04'	566+99.13
21-WD	POC-1	N85°46'57"W, 2120.80'	569+13.17	S85°56'57"E, 255.28'	566+57.88
22-WD	POC-1	N85°46'57"W, 2120.80'	569+13.17	S85°56'57"E, 214.04'	566+99.13
23-WD	POC-1	N85°46'57"W, 2120.80'	569+13.17	S85°56'57"E, 195.28'	567+17.89

L18	N85°56'57"W	162.70'
L19	NOT USED	
L20	S85°56'57"E	158.12'
L21	N36°31'13"E	10.67'
L22	S3°18'03"W	12.00'
L23	NOT USED	
L24	S85°56'57"E	159.99'
L25	N25°32'06"E	20.42'
L26	S3°18'03"W	19.00'
L27	N3°18'03"E	8.39'
L28	S36°40'07"E	11.07'
L29	N85°56'57"W	7.11'
L30	N3°18'03"E	12.61'
L31	S17°42'24"E	17.23'
L32	S85°56'57"E	43.82'
L33	S3°18'03"W	5.00'
L34	N85°56'57"W	42.89'
L35	S84°48'14"E	50.02'
L36	S3°18'03"W	4.00'
L37	N85°56'57"W	50.00'
L38	S85°56'57"E	50.06'
L39	S3°18'03"W	4.00'
L40	N85°56'57"W	50.06'
L41	S85°56'57"E	32.11'
L40-L44	NOT USED	
L45	N85°56'57"W	45.27'
L46	S4°31'06"W	5.00'
L47	N85°56'57"W	185.09'
L48	N4°03'03"E	5.00'
L49	S85°56'57"E	185.13'
L50	S4°31'06"W	5.00'
L51	N85°56'57"W	185.05'
L52	N4°03'03"E	5.00'
L53	S85°56'57"E	136.52'
L54	S2°32'56"W	5.00'
L55	N85°56'57"W	136.70'
L56	S2°32'56"W	11.00'
L57	N85°56'57"W	137.07'
L58	N4°31'06"E	11.00'
L59	S85°56'57"E	60.20'
L60	S2°32'56"W	7.00'
L61	N85°56'57"W	60.20'
L62	N2°32'56"E	7.00'



RIGHT OF WAY CURVE DATA

CURVE	RADIUS	DELTA	ARC LENGTH	CHORD BEARING	CHORD LENGTH
C21-1	1281.88'	0°08'47"	3.27'	N19°29'26"W	3.27'
C21-2	1281.88'	0°26'16"	9.80'	N19°11'54"W	9.80'

POC = POINT OF COMMENCEMENT
POB = TRUE POINT OF BEGINNING
FOR FOUND MONUMENT DESCRIPTIONS SEE SHEET 3

REV. BY	DATE	DESCRIPTION

DATE COMPLETED: 7/28/17

HORIZONTAL SCALE IN FEET (0, 10, 20, 40)

PID NO. 95625

R/W DESIGNER RKL
R/W REVIEWER RAK

RIGHT OF WAY BOUNDARY SHEET
STA. 564+00 TO STA. 569+00

DEL-36-10.59

16 / 24

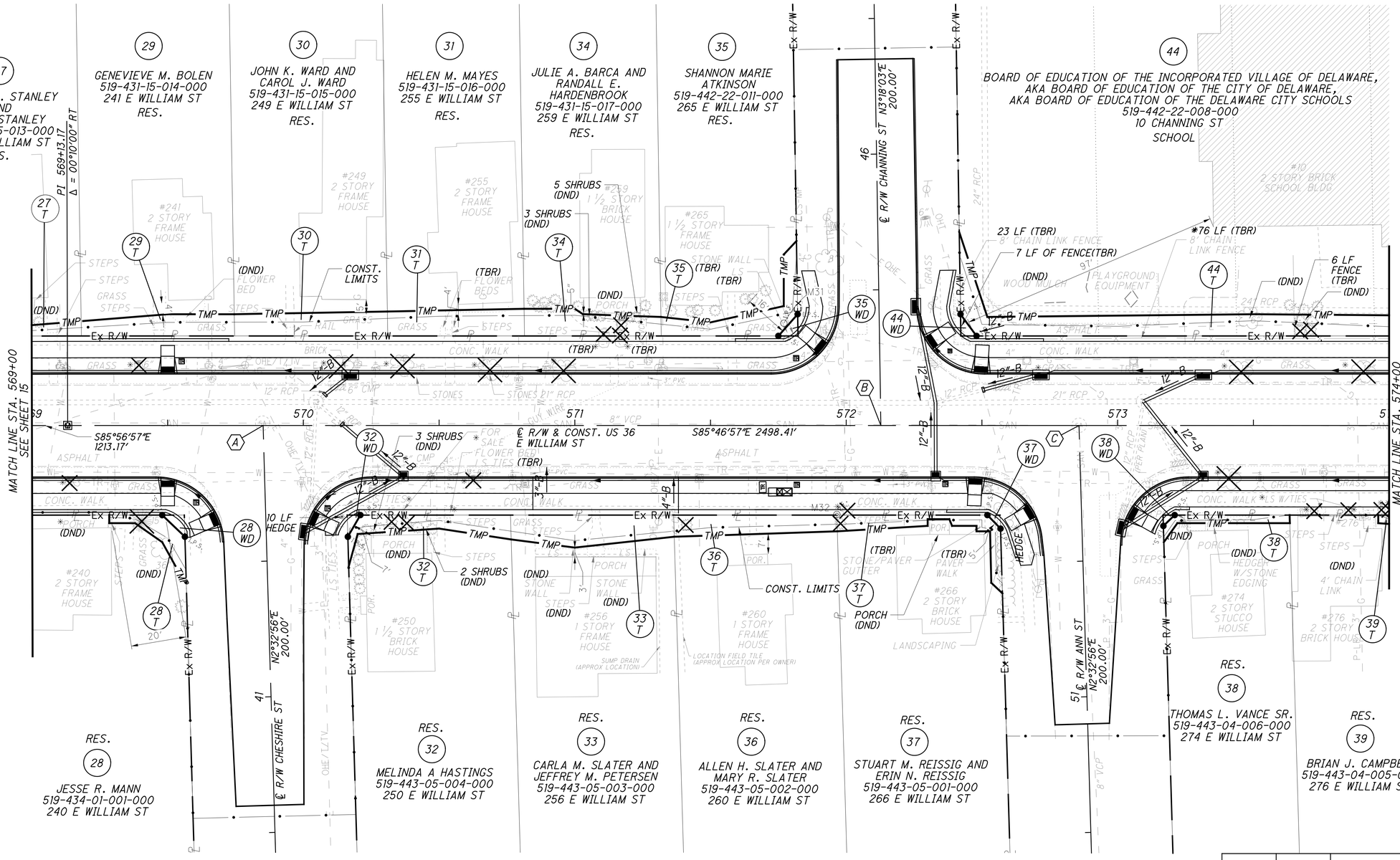
216 / 224

Ⓐ 569+85.18, ℄ US 36 = 42+00.00, ℄ CHESHIRE ST

Ⓑ 572+12.76, ℄ US 36 = 45+00.00, ℄ CHANNING ST

Ⓒ 572+85.75, ℄ US 36 = 52+00.00, ℄ ANN ST

DELAWARE COUNTY
DELAWARE TOWNSHIP
CITY OF DELAWARE
SEC. 4, T-5-N, R-19-W
FARM LOT 12, U.S. MILITARY LANDS



DND = DO NOT DISTURB
TBR = TO BE REMOVED

REV. BY	DATE	DESCRIPTION
RKL	5/24/18	36 ADDED EX. FIELD TILE
RKL	5/24/18	33 ADDED EX. SUMP DRAIN

DATE COMPLETED: 7/28/17

HORIZONTAL SCALE IN FEET 0 10 20 40

PID NO. 95625

R/W DESIGNER RKL
R/W REVIEWER RAK

RIGHT OF WAY TOPO SHEET
STA. 569+00 TO STA. 574+00

DEL-36-10.59

17 / 24

217 / 224

DELAWARE COUNTY
DELAWARE TOWNSHIP
CITY OF DELAWARE
SEC. 4, T-5-N, R-19-W
FARM LOT 12, U.S. MILITARY LANDS

(A) 569+85.18, ℄ US 36 = 42+00.00, ℄ CHESHIRE ST

(B) 572+12.76, ℄ US 36 = 45+00.00, ℄ CHANNING ST

(C) 572+85.75, ℄ US 36 = 52+00.00, ℄ ANN ST

I.J. RICHARDSON AND M.D. PETTIBONE'S ADDITION TO DELAWARE PB 2, PG 128

GEORGE W. LITTLE'S ADDITION TO DELAWARE PB 2, PG 188

LOT 1190 | LOT 1189 | LOT 1188 | LOT 1187 | LOT 1186 | LOT 1326 | LOT 1327 | LOT 1328

(27) MICHAEL L. STANLEY AND VIOLET STANLEY 519-431-15-013-000 239 E WILLIAM ST RES.

(29) GENEVIEVE M. BOLEN 519-431-15-014-000 241 E WILLIAM ST

(30) JOHN K. WARD AND CAROL J. WARD 519-431-15-015-000 249 E WILLIAM ST

(31) HELEN M. MAYES 519-431-15-016-000 255 E WILLIAM ST

(34) JULIE A. BARCA AND RANDALL E. HARDENBROOK 519-431-15-017-000 259 E WILLIAM ST

(35) SHANNON MARIE ATKINSON 519-442-22-011-000 265 E WILLIAM ST

(44) BOARD OF EDUCATION OF THE INCORPORATED VILLAGE OF DELAWARE, AKA BOARD OF EDUCATION OF THE CITY OF DELAWARE, AKA BOARD OF EDUCATION OF THE DELAWARE CITY SCHOOLS 519-442-22-008-000 10 CHANNING ST

PI 569+13.17 Δ = 00°10'00" RT

℄ R/W CHANNING ST N3°18'03"E 200.00'

569+18.14 38.43' LT | 569+50.00 41.00' LT | 569+74.53 41.00' LT | 570+30.94 42.00' LT | 570+81.31 43.00' LT | 571+81.67 68.00' LT | 571+82.10 41.00' LT | 572+41.63 71.28' LT | 572+42.11 41.00' LT | 572+52.00 40.00' LT | 573+50.00 41.00' LT

569+18.23 33.00' LT | 569+74.66 33.00' LT | 570+31.09 33.00' LT | 570+81.47 33.00' LT | 571+31.85 33.00' LT | 571+75.00 33.00' LT | POB 35-WD 571+82.23 33.00' LT | POB 44-WD 572+42.24 33.00' LT | 572+48.00 33.00' LT

569+13.22 (BT) 33.00' LT

MATCH LINE STA. 569+00 SEE SHEET 16

MATCH LINE STA. 574+00 SEE SHEET 20

569 | 570 | 571 | 572 | 573

S85°56'57"E 213.17'

℄ R/W & CONST. US 36 E WILLIAM ST S85°46'57"E 2498.41'

569+28.50 33.00' RT | 569+56.13 | 569+48.00 33.00' RT | POB 28-WD 569+56.13 33.00' RT | 569+28.50 36.00' RT | 569+38.00 36.00' RT | 569+48.00 43.00' RT | 569+56.36 41.00' RT | 569+56.88 59.00' RT

570+16.15 | POB 32-WD 570+16.15 33.00' RT | 570+16.38 41.00' RT | 570+16.70 52.00' RT | 570+20.00 40.00' RT | 570+50.00 38.00' RT | 570+76.29 33.00' RT | 570+76.55 42.00' RT

571+36.43 33.00' RT | 571+00.00 45.00' RT | 571+36.66 41.00' LT | 571+96.56 33.00' RT | 571+96.74 39.00' RT

572+52.00 33.00' RT | POB 37-WD 572+56.70 33.00' RT | 572+56.85 38.00' RT | 572+57.54 61.85' RT

573+16.73 | POB 38-WD 573+16.73 33.00' RT | 573+16.84 37.00' RT | 573+17.02 43.00' RT | 573+21.00 33.00' RT | 573+22.00 36.00' RT | 573+63.34 33.00' RT | 573+63.42 36.00' RT | 573+96.00 33.00' RT | 573+96.00 36.00' RT

S4°13'03"W 33.00'

N2°32'56"E 200.00'

℄ R/W CHESHIRE ST

℄ R/W ANN ST

LOT 512 RES. (28) JESSE R. MANN 519-434-01-001-000 240 E WILLIAM ST

(32) MELINDA A HASTINGS 519-443-05-004-000 250 E WILLIAM ST

(33) CARLA M. SLATER AND JEFFREY M. PETERSEN 519-443-05-003-000 256 E WILLIAM ST

(36) ALLEN H. SLATER AND MARY R. SLATER 519-443-05-002-000 260 E WILLIAM ST

(37) STUART M. REISSIG AND ERIN N. REISSIG 519-443-05-001-000 266 E WILLIAM ST

(38) THOMAS L. VANCE SR. 519-443-04-006-000 274 E WILLIAM ST

(39) BRIAN J. CAMPBELL 519-443-04-005-000 276 E WILLIAM ST

FINCH AND LAMB'S ADDITION TO EAST DELAWARE PB 1, PG 80

FINCH'S ADDITION TO DELAWARE PB 2, PG 153

LOT 525 | LOT 526 | LOT 527 | LOT 528 | LOT 1225 | LOT 1226

L42	N89°36'35"E	18.31'
L43	S3°18'03"W	5.43'
L44	N85°46'57"W	5.11'
L45	N85°56'57"W	45.27'
L46-L62	NOT USED	
L63	N89°36'35"E	31.96'
L64	S85°46'57"E	24.53'
L65	S3°18'03"W	8.00'
L66	N85°46'57"W	56.43'
L67	S86°47'53"E	56.42'
L68	S3°18'03"W	9.00'
L69	N85°46'57"W	56.43'
L70	S86°55'12"E	50.38'
L71	S3°18'03"W	10.00'
L72	N85°46'57"W	50.38'
L73	S85°46'57"E	18.69'

L74	S52°05'33"E	3.61'
L75	S83°47'23"E	28.76'
L76	S3°18'03"W	7.00'
L77	N85°46'57"W	50.38'
L78	N85°46'57"W	7.23'
L79	N45°49'09"E	10.70'
L80	S3°18'03"W	8.00'
L81	S79°31'55"E	18.37'
L82	N81°41'20"E	27.66'
L83	N4°13'03"E	19.00'
L84	N47°16'11"E	6.84'
L85	S3°18'03"W	27.00'
L86	N85°46'57"W	43.15'
L87	N3°18'03"E	8.00'
L88	S32°08'28"E	9.93'
L89	N85°46'57"W	5.76'
L90	S2°32'56"W	8.00'
L91	N42°02'16"W	11.57'
L92	S85°46'57"E	8.13'
L93	N85°46'57"E	4.85'
L94	S34°12'11"W	9.24'
L95	N2°32'56"E	8.00'
L96	S2°32'56"W	5.00'
L97	N39°53'23"W	6.96'
L98	S85°46'57"E	4.70
L99	S85°46'57"E	4.27'
L100	S50°19'16"W	5.77'
L101	N2°32'56"E	4.00'
L102	S85°46'57"E	19.50'
L103	S2°32'56"W	18.01'
L104	N24°49'14"W	18.30'
L105	N50°47'26"W	12.21'
L106	N85°46'57"W	9.50'
L107	N4°13'03"E	3.00'
L108	S85°46'57"E	55.29'
L109	S2°32'56"W	9.00'
L110	N77°12'54"W	26.85'
L111	N89°35'47"W	30.07'
L112	S19°34'28"W	12.44'
L113	N2°32'56"E	11.00'
L114	S85°46'57"E	60.14'
L115	S2°32'56"W	8.00'
L116	S87°59'26"W	36.88'
L117	N78°29'31"W	23.64'
L118	S85°46'57"E	60.14'
L119	S2°32'56"W	6.00'
L120	N87°41'21"W	60.11'
L121	S85°46'57"E	55.44'
L122	S2°32'56"W	23.86'
L123	N42°27'04"W	5.66'
L124	N2°55'45"E	18.97'
L125	N85°46'57"W	5.00'
L126	N4°13'03"E	2.00'
L127	N85°46'57"W	9.00'
L128	N17°35'02"W	2.69'
L129	N85°46'57"W	8.00'
L130	S4°13'03"W	2.50'
L143	N89°13'24"W	33.32'
L144	S85°46'57"E	42.34'
L145	S2°32'56"W	3.00'
L146	N85°46'57"W	41.42'
L147	S39°39'33"W	8.59'
L148	N2°32'56"E	6.00'
L149	N3°18'03"E	30.28'
L150	S14°07'50"E	32.95'
L151	S86°22'01"E	98.01'
L152	S85°20'05"E	128.00'
L153-L157	NOT USED	
L158	N85°46'57"W	296.78'
L159	S85°46'57"E	13.95'
L160	NOT USED	
L161	N81°42'56"W	14.10'
L162	N4°13'03"E	3.00'

S1	571+00.00	43.00' LT
S2	571+03.00	41.00' LT
S3	571+31.74	40.00' LT
S4	571+50.00	38.00' LT
S5	571+77.00	44.00' LT
S6	571+77.00	63.00' LT
S7	572+53.43	57.97' RT
S8	572+53.00	39.00' RT
S9	572+48.00	39.00' RT
S10	572+48.00	37.00' RT
S11	572+39.00	37.00' RT
S12	572+38.00	34.50' RT
S13	572+30.00	34.50' RT
S14	572+30.00	37.00' RT

COMMENCEMENT CALLS

PARCEL	POC	LEAD IN	TO STA.
28-WD	POC-1	N85°46'57"W, 2077.84'	569+56.13
32-WD	POC-1	N85°46'57"W, 2017.81'	570+16.15
35-WD	POC-1	N85°46'57"W, 1851.73'	571+82.23
37-WD	POC-1	N85°46'57"W, 1777.26'	572+56.70
38-WD	POC-1	N85°46'57"W, 1717.24'	573+16.73
44-WD	POC-1	N85°46'57"W, 1791.72'	572+42.24

BT = STATION AND OFFSET PROJECTED FROM BACK TANGENT

POC = POINT OF COMMENCEMENT
POB = TRUE POINT OF BEGINNING

FOR FOUND MONUMENT DESCRIPTIONS SEE SHEET 3

REV. BY	DATE	DESCRIPTION

DATE COMPLETED: 7/28/17

HORIZONTAL SCALE IN FEET 0 10 20 40

PID NO. 95625

R/W DESIGNER RKL | R/W REVIEWER RAK

RIGHT OF WAY BOUNDARY SHEET
STA. 569+00 TO STA. 574+00

DEL-36-10.59

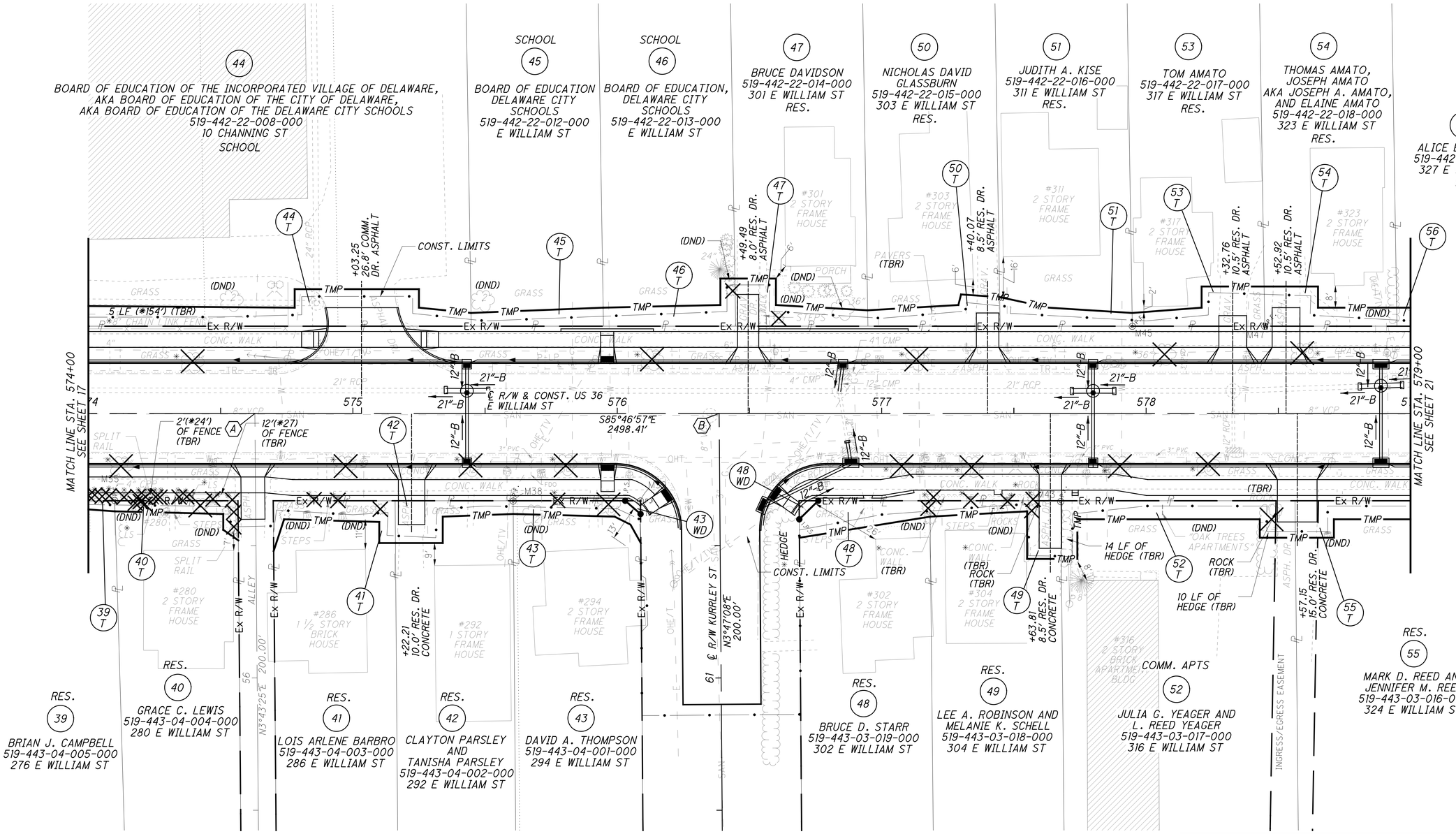
18 / 24

218 / 224

Ⓐ 574+62.94, ℄ US 36 = 57+00.00, ℄ ALLEY 2

Ⓑ 576+38.53, ℄ US 36 = 62+00.00, ℄ KURRLEY ST

DELAWARE COUNTY
DELAWARE TOWNSHIP
CITY OF DELAWARE
SEC. 4, T-5-N, R-19-W
FARM LOT 12, U.S. MILITARY LANDS



DND = DO NOT DISTURB
TBR = TO BE REMOVED

REV. BY	DATE	DESCRIPTION

DATE COMPLETED: 7/28/17

HORIZONTAL SCALE IN FEET 0 10 20 40

PID NO. 95625

R/W DESIGNER RKL
R/W REVIEWER RAK

RIGHT OF WAY TOPO SHEET
STA. 574+00 TO STA. 579+00

DEL-36-10.59

19 / 24

219 / 224

DELAWARE COUNTY
DELAWARE TOWNSHIP
CITY OF DELAWARE
SEC. 4, T-5-N, R-19-W
FARM LOT 12, U.S. MILITARY LANDS

(A) 574+62.94, ℄ US 36 = 57+00.00, ℄ ALLEY 2

(B) 576+38.53, ℄ US 36 = 62+00.00, ℄ KURRLEY ST

GEORGE W. LITTLE'S ADDITION TO DELAWARE PB 2, PG 188

GEORGE W. LITTLE'S ADDITION TO DELAWARE PB 2, PG 188

LOT 1329 | LOT 1330 | LOT 1331 | LOT 1332 | LOT 1333 | LOT 1334 | LOT 1335 | LOT 1336 | LOT 1337 | LOT 1338

(44) BOARD OF EDUCATION OF THE INCORPORATED VILLAGE OF DELAWARE, AKA BOARD OF EDUCATION OF THE CITY OF DELAWARE, AKA BOARD OF EDUCATION OF THE DELAWARE CITY SCHOOLS
519-442-22-008-000
10 CHANNING ST
SCHOOL

(45) BOARD OF EDUCATION DELAWARE CITY SCHOOLS
519-442-22-012-000
E WILLIAM ST

(46) BOARD OF EDUCATION, DELAWARE CITY SCHOOLS
519-442-22-013-000
E WILLIAM ST

(47) BRUCE DAVIDSON
519-442-22-014-000
301 E WILLIAM ST

(50) NICHOLAS DAVID GLASSBURN
519-442-22-015-000
303 E WILLIAM ST

(51) JUDITH A. KISE
519-442-22-016-000
311 E WILLIAM ST

(53) TOM AMATO
519-442-22-017-000
317 E WILLIAM ST

(54) THOMAS AMATO, JOSEPH AMATO AKA JOSEPH A. AMATO, AND ELAINE AMATO
519-442-22-018-000
323 E WILLIAM ST

(56) ALICE E. STEWART
519-442-22-019-000
327 E WILLIAM ST
RES.

574+78.00 47.00' LT (44 T) | 574+78.00 40.00' LT | L153 | L154 TMP | 575+25.00 47.00' LT | L155 | L156 TMP | 575+44.70 38.00' LT | 575+94.67 40.00' LT (45 T) | L207 TMP | L209 | L208 | 575+94.78 33.00' LT | 575+44.78 33.00' LT | L157 | L158 | L152 | Ex R/W | 575+25.00 40.00' LT | L210 TMP | L214 | 576+39.00 41.00' LT (46 T) | L211 | 576+39.00 51.00' LT | L212 | 576+44.49 51.00' LT | L213 | 576+44.78 33.00' LT | L215 TMP | L219 | L216 | 576+60.00 41.00' LT | 576+60.00 51.00' LT (47 T) | L217 TMP | L218 | 576+94.78 33.00' LT | 577+30.00 45.00' LT | 576+94.69 39.00' LT | L221 | 577+29.00 41.00' LT | L220 TMP | L222 TMP | L223 | L224 | 577+44.78 33.00' LT | 577+44.61 44.00' LT | L225 TMP | L228 | 577+94.78 33.00' LT | 577+63.00 40.00' LT | L226 | L227 | 577+94.70 38.00' LT | L229 | L230 | 578+21.00 40.00' LT | 578+44.62 48.00' LT | 578+21.00 48.00' LT | L231 TMP | L233 | 578+44.86 33.00' LT | L232 | L234 | L235 | L238 | 578+65.00 40.00' LT | L239 | 578+94.75 40.00' LT | 578+65.00 48.00' LT | L236 TMP | L237 | 578+94.86 33.00' LT | L241 | 56 T

MATCH LINE STA. 574+00 SEE SHEET 18

℄ R/W & CONST. US 36 E WILLIAM ST

575 | 576 | 577 | 578

MATCH LINE STA. 579+00 SEE SHEET 22

S85°46'57"E 2498.41'

574+09.95 33.00' RT | 574+56.56 33.00' RT | L159 | L160 | L161 | L163 | L164 | L167 TMP | 574+51.00 38.00' RT | 574+51.00 44.00' RT | L165 | 574+10.06 37.00' RT | 574+56.69 48.00' RT | (39 T) | (40 T) | (40) GRACE C. LEWIS 519-443-04-004-000 280 E WILLIAM ST

574+69.89 33.00' RT | 575+16.00 33.00' RT | L174 | L173 | L172 TMP | 575+10.00 41.00' RT | L171 | 574+74.00 40.00' RT | 574+70.06 52.00' RT | (41 T) | 575+10.00 49.00' RT | L170 | L169 | L179 | 575+16.12 49.00' RT | (42 T) | (41) LOIS ARLENE BARBRO 519-443-04-003-000 286 E WILLIAM ST | (42) CLAYTON PARSLEY AND TANISHA PARSLEY 519-443-04-002-000 292 E WILLIAM ST

575+60.63 33.00' RT | L176 | 575+60.67 38.00' RT | L177 TMP | 575+34.00 39.00' RT | L178 | 575+34.00 49.00' RT | (43 T) | L182 | 576+03.00 33.00' RT | L183 TMP | L187 TMP | 575+99.00 39.00' RT | L186 | 576+05.00 42.00' RT | L185 | 576+08.90 49.00' RT | L184 | L181 | POB 43-WD 576+08.78 33.00' RT | 576+08.81 38.00' RT | (43 WD) | L180 | (43) DAVID A. THOMPSON 519-443-04-001-000 294 E WILLIAM ST

576+08.78

61 ℄ R/W KURRLEY ST N3°47'08"E 200.00'

56 ALLEY N3°43'25"E 200.00'

POB 48-WD 576+68.78 33.00' RT | (48 WD) | L190 | 576+68.83 40.00' RT | L194 | L189 | L188 | 576+76.00 33.00' RT | L191 | L192 TMP | L193 | 577+18.30 39.00' RT | 576+68.88 47.00' RT | (48 T) | (48) BRUCE D. STARR 519-443-03-019-000 302 E WILLIAM ST

576+68.78

S4°13'03"W 33.00'

577+18.24 33.00' RT | L195 | L199 TMP | 577+55.00 37.00' RT | 577+55.00 55.00' RT | (49 T) | 577+67.93 55.00' RT | (49) LEE A. ROBINSON AND MELANIE K. SCHELL 519-443-03-018-000 304 E WILLIAM ST

577+67.71 33.00' RT | L196 | L198 | L197 TMP | L205 TMP | 577+74.00 40.00' RT | 577+74.00 55.00' RT | L206 | L200 | L204 | 578+43.00 40.00' RT | 578+43.00 47.00' RT | (52 T) | L203 | (52) JULIA G. YEAGER AND L. REED YEAGER 519-443-03-017-000 316 E WILLIAM ST

578+56.31 33.00' RT | L242 | Ex R/W | L201 | L202 | L246 | TMP | L244 | 578+71.00 40.00' RT | L245 | 578+71.00 47.00' RT | 578+56.45 47.00' RT | (55 T) | RES. (55) MARK D. REED AND JENNIFER M. REED 519-443-03-016-000 324 E WILLIAM ST

INGRESS/EGRESS EASEMENT

(56) RES. BRIAN J. CAMPBELL 519-443-04-005-000 276 E WILLIAM ST

FINCH'S ADDITION TO DELAWARE PB 2, PG 153

KURRLEY'S ADDITION TO EAST DELAWARE PB 2, PG 232

JAMES A. BARNES' ADDITION TO THE CITY OF E. DELAWARE PB 2, PG 235

MRS. MARGARET GAY BRAWLEY SUBDIVISION NO. 1 CITY OF DELAWARE PB 7, PG 29.7

LOT 1227 | LOT 1841 | LOT 1842 | LOT 1843 | LOT 2004 | LOT 2003 | LOT 3929 | LOT 3930

COMMENCEMENT CALLS

PARCEL	POC	LEAD IN	TO STA.
43-WD	POC-1	N85°46'57"W, 1425.19'	576+08.78
48-WD	POC-1	N85°46'57"W, 1365.18'	576+68.78

POC = POINT OF COMMENCEMENT
POB = TRUE POINT OF BEGINNING

FOR FOUND MONUMENT DESCRIPTIONS SEE SHEET 3

REV. BY	DATE	DESCRIPTION

DATE COMPLETED: 7/28/17

L152	S85°20'05"E	128.00'
L153	N4°13'03"E	7.00'
L154	S85°46'57"E	47.00'
L155	S4°13'03"W	7.00'
L156	S79°59'11"E	19.80'
L157	S3°18'03"W	5.00'
L158	N85°46'57"W	296.78'
L159	S85°46'57"E	13.95'
L160	S2°32'56"W	4.00'
L161	N81°42'56"W	14.10'

L162	NOT USED	
L163	S85°46'57"E	46.61'
L164	S3°43'25"W	15.00'
L165	N50°39'55"W	6.95'
L166	N4°13'03"E	6.00'
L167	N84°22'59"W	40.95'
L168	S85°46'57"E	46.11'
L169	S3°47'08"W	16.00'
L170	N85°46'57"W	6.12'
L171	N4°13'03"E	8.00'
L172	N84°11'29"W	36.01'

L173	S22°24'39"W	12.63'
L174	N3°43'25"E	19.00'
L175	S85°46'57"E	44.63'
L176	S3°47'08"W	5.00'
L177	N87°55'48"W	26.68'
L178	S4°13'03"W	10.00'
L179	N85°46'57"W	17.88'
L180	S3°47'08"W	5.00'
L181	N45°05'11"W	7.67'
L182	S85°46'57"E	5.78'
L183	S85°46'57"E	42.37'
L184	S3°47'08"W	11.00'
L185	N24°54'01"W	8.01'
L186	N59°13'03"W	6.71'
L187	N84°17'17"W	38.35'
L188	S85°46'57"E	7.22'
L189	S49°54'09"W	10.02'
L190	N3°47'08"E	7.00'
L191	S85°46'57"E	42.24'
L192	S3°38'41"W	6.00'
L193	S85°01'21"W	50.06'
L194	N3°47'08"E	7.00'
L195	S85°46'57"E	49.47'
L196	S3°38'41"W	22.00'
L197	N85°46'57"W	12.93'
L198	N4°13'03"E	18.00'
L199	N88°54'08"W	36.75'
L200	S85°46'57"E	88.60'
L201	S3°38'41"W	14.00'
L202	N85°46'57"W	13.45'
L203	N4°13'03"E	7.00'
L204	N85°46'57"W	69.00'
L205	S4°13'03"W	15.00'
L206	N85°46'57"W	6.07'
L207	S88°4'28"E	50.01'
L208	S3°18'03"W	7.00'
L209	N85°46'57"W	50.00'
L210	S87°04'29"E	44.34'
L211	N4°13'03"E	10.00'
L212	S85°46'57"E	5.49'
L213	S3°18'03"W	18.00'
L214	N85°46'57"W	50.00'
L215	S85°46'57"E	15.51'
L216	S4°13'03"W	10.00'
L217	S82°28'57"E	34.74'
L218	S3°18'03"W	6.00'
L219	N85°46'57"W	50.00'
L220	S89°07'06"E	34.37'
L221	N18°15'14"E	4.12'
L222	S81°51'58"E	14.64'
L223	S3°18'03"W	11.00'
L224	N85°46'57"W	50.00'
L225	S73°30'47"E	18.82'
L226	S82°10'22"E	31.77'
L227	S3°18'03"W	5.00'
L228	N85°46'57"W	50.00'
L229	N89°52'06"E	26.37'
L230	N4°13'03"E	8.00'
L231	S85°46'57"E	23.62'
L232	S3°18'03"W	15.00'
L233	N85°46'57"W	50.07'
L234	S85°46'57"E	20.38'
L235	S4°13'03"W	8.00'
L236	S85°46'57"E	29.75'
L237	S3°18'03"W	7.00'
L238	N85°46'57"W	50.00'
L239	S85°46'57"E	50.00'
L240	NOT USED	
L241	N85°46'57"W	50.00'
L242	S85°46'57"E	88.60'
L243	NOT USED	
L244	N85°46'57"W	73.98'
L245	S4°13'03"W	7.00'
L246	N85°46'57"W	14.55'

HORIZONTAL SCALE IN FEET 0 10 20 40

PID NO. 95625

R/W DESIGNER RKL | R/W REVIEWER RAK

RIGHT OF WAY BOUNDARY SHEET
STA. 574+00 TO STA. 579+00

DEL-36-10.59

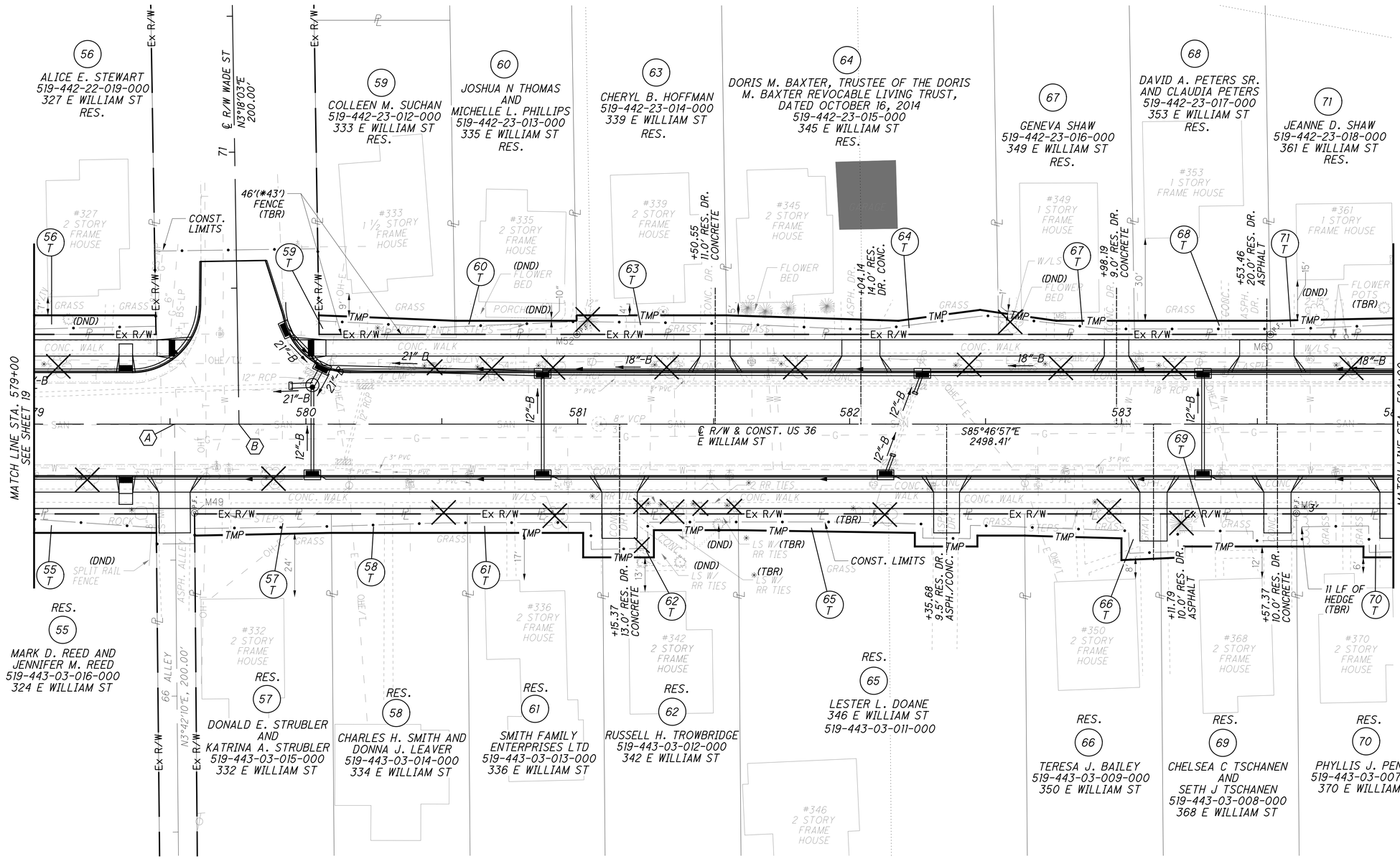
20/24

220/224

Ⓐ 579+51.68, ℄ US 36 = 67+00.00, ℄ ALLEY 3

Ⓑ 579+75.39, ℄ US 36 = 70+00.00, ℄ WADE ST

DELAWARE COUNTY
DELAWARE TOWNSHIP
CITY OF DELAWARE
SEC. 4, T-5-N, R-19-W
FARM LOT 12, U.S. MILITARY LANDS



DND = DO NOT DISTURB
TBR = TO BE REMOVED

REV. BY	DATE	DESCRIPTION

DATE COMPLETED: 7/28/17

HORIZONTAL SCALE IN FEET
0 10 20 40

PID NO. 95625

R/W DESIGNER RKL
R/W REVIEWER RAK

RIGHT OF WAY TOPO SHEET
STA. 579+00 TO STA. 584+00

DEL-36-10.59

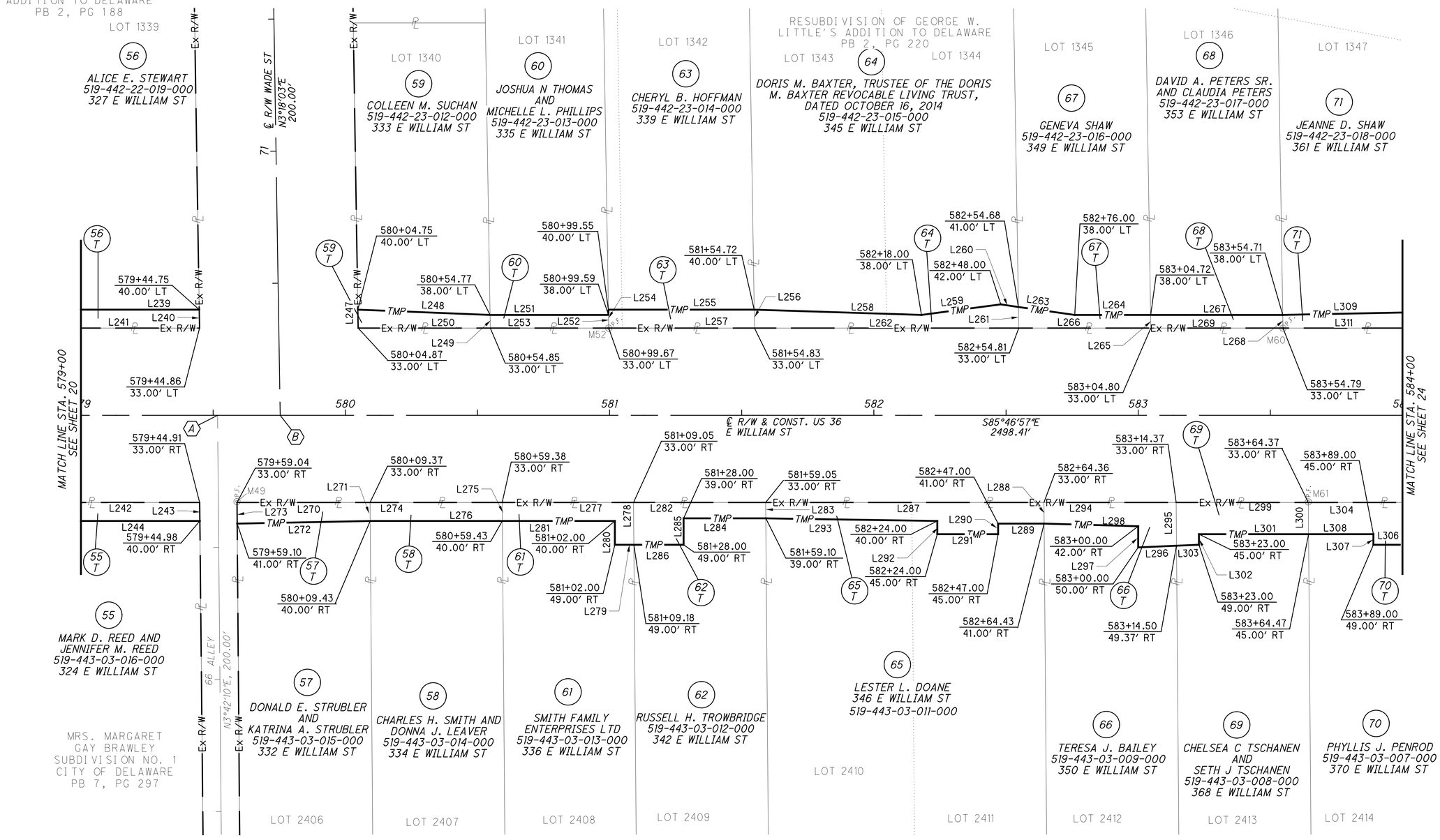
21 / 24

221 / 224

DELAWARE COUNTY
DELAWARE TOWNSHIP
CITY OF DELAWARE
SEC. 4, T-5-N, R-19-W
FARM LOT 12, U.S. MILITARY LANDS

(A) 579+51.68, ℄ US 36 = 67+00.00, ℄ ALLEY 3

(B) 579+75.39, ℄ US 36 = 70+00.00, ℄ WADE ST



L239	S85°46'57"E	50.00'
L240	S3°18'03"W	7.00'
L241	N85°46'57"W	50.00'
L242	S85°46'57"E	88.60'
L243	S3°38'41"W	7.00'
L244	N85°46'57"W	73.98'
L245-L246	NOT USED	
L247	N3°18'03"E	7.00'
L248	S83°29'34"E	50.06'
L249	S3°18'03"W	5.00'
L250	N85°46'57"W	49.99'
L251	S85°46'57"E	44.81'
L252	S3°18'03"W	5.00'
L253	N85°46'57"W	44.81'
L254	N3°18'03"E	7.00'
L255	S85°46'57"E	55.17'
L256	S3°18'03"W	7.00'
L257	N85°46'57"W	55.17'
L258	S83°58'20"E	63.31'
L259	N86°37'25"E	30.27'
L260	S77°16'12"E	6.76'
L261	S3°18'03"W	8.00'
L262	N85°46'57"W	99.98'
L263	S77°46'20"E	21.53'
L264	S85°46'57"E	28.72'
L265	S3°18'03"W	5.00'
L266	N85°46'57"W	49.99'
L267	S85°46'57"E	49.99'
L268	S3°18'03"W	5.00'
L269	N85°46'57"W	49.99'
L270	S85°46'57"E	50.34'
L271	S3°45'41"W	7.00'
L272	N86°55'15"W	50.34'
L273	N3°45'41"E	8.00'
L274	S85°46'57"E	50.00'
L275	S3°45'41"W	7.00'
L276	N85°46'57"W	50.00'
L277	S85°46'57"E	49.67'
L278	S3°45'41"W	16.00'
L279	N85°46'57"W	7.18'
L280	N4°13'03"E	9.00'
L281	N85°46'57"W	42.57'
L282	S85°46'57"E	50.00'
L283	S3°45'41"W	6.00'
L284	N85°46'57"W	31.10'
L285	S4°13'03"W	10.00'
L286	N85°46'57"W	18.82'
L287	S85°46'57"E	105.31'
L288	S3°45'41"W	8.00'
L289	N85°46'57"W	17.43'
L290	S4°13'03"W	4.00'
L291	N85°46'57"W	23.00'
L292	N4°13'03"E	5.00'
L293	N84°53'59"W	64.91'
L294	S85°46'57"E	50.00'
L295	S3°45'41"W	16.37'
L296	N88°16'19"W	14.51'
L297	N4°13'03"E	8.00'
L298	N84°10'20"W	35.59'
L299	S85°46'57"E	50.00'
L300	S3°45'41"W	12.00'
L301	N85°46'57"W	41.47'
L302	S4°13'03"W	4.00'
L303	N88°16'19"W	8.51'
L304	S85°46'57"E	50.08'
L305	NOT USED	
L306	N85°46'57"W	25.58'
L307	N4°13'03"E	4.00'
L308	N85°46'57"W	24.53'
L309	S86°55'45"E	49.96'
L310	NOT USED	
L311	N85°46'57"W	49.97'

FOR FOUND MONUMENT DESCRIPTIONS SEE SHEET 3

REV. BY	DATE	DESCRIPTION

DATE COMPLETED: 7/28/17

HORIZONTAL SCALE IN FEET 0 10 20 40

PID NO. 95625

R/W DESIGNER RKL
R/W REVIEWER RAK

RIGHT OF WAY BOUNDARY SHEET
STA. 579+00 TO STA. 584+00

DEL-36-10.59

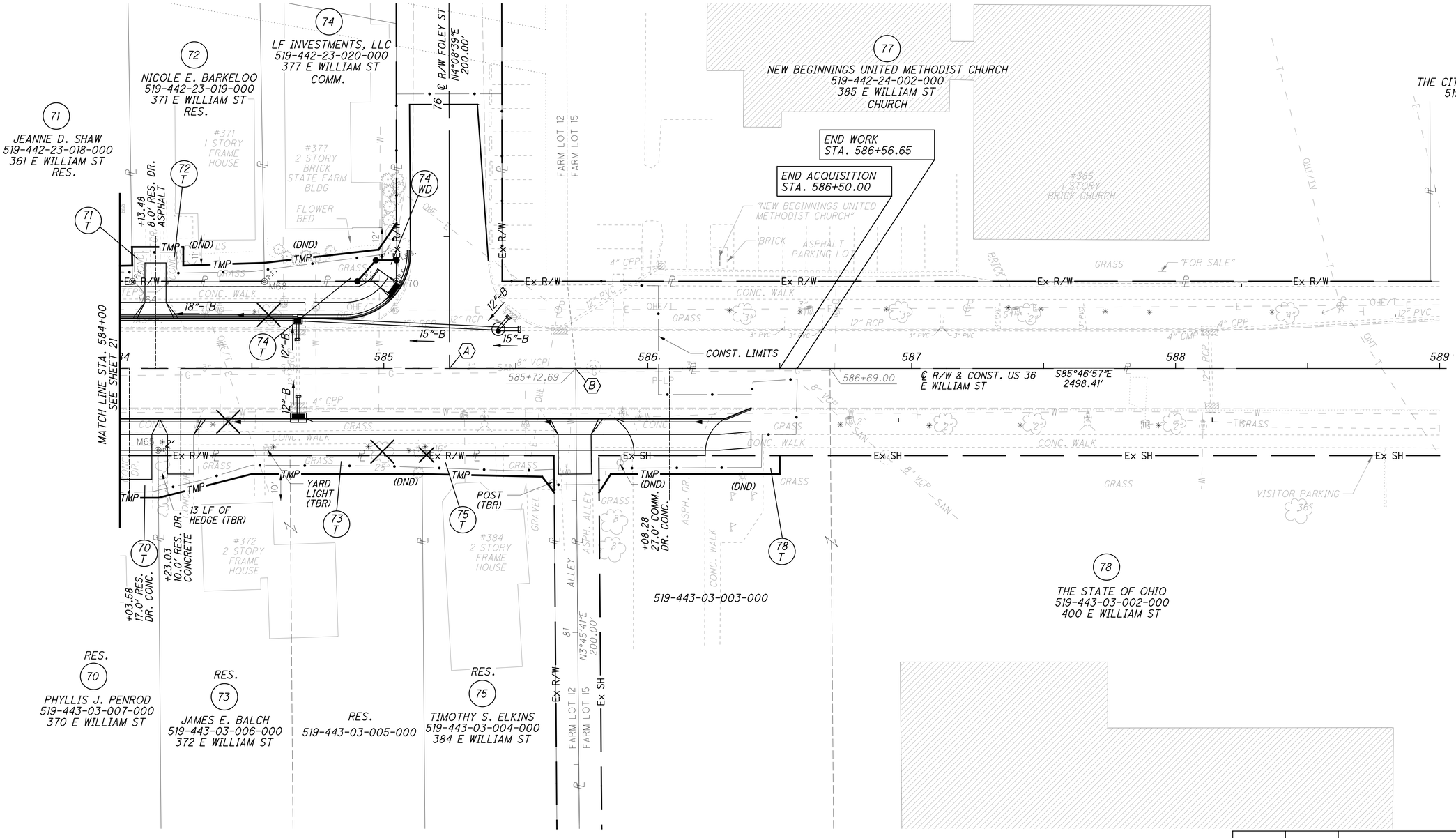
22 / 24

222 / 224

DELAWARE COUNTY
DELAWARE TOWNSHIP
CITY OF DELAWARE
SEC. 4, T-5-N, R-19-W
FARM LOTS 12 & 15, U.S. MILITARY LANDS

(A) 585+24.87, ℄ US 36 = 75+00.00, ℄ FOLEY ST

(B) 585+72.69, ℄ US 36 = 80+00.00, ℄ ALLEY 4



DND = DO NOT DISTURB
TBR = TO BE REMOVED

REV. BY	DATE	DESCRIPTION
RKL	5/21/18	78T ADDED DND TO LIGHTPOLE
RKL	5/21/18	REMOVED 77WD & 77T

DATE COMPLETED: 7/28/17

HORIZONTAL SCALE IN FEET
0 10 20 40

PID NO. 95625

R/W DESIGNER RKL
R/W REVIEWER RAK

RIGHT OF WAY TOPO SHEET
STA. 584+00 TO STA. 589+00

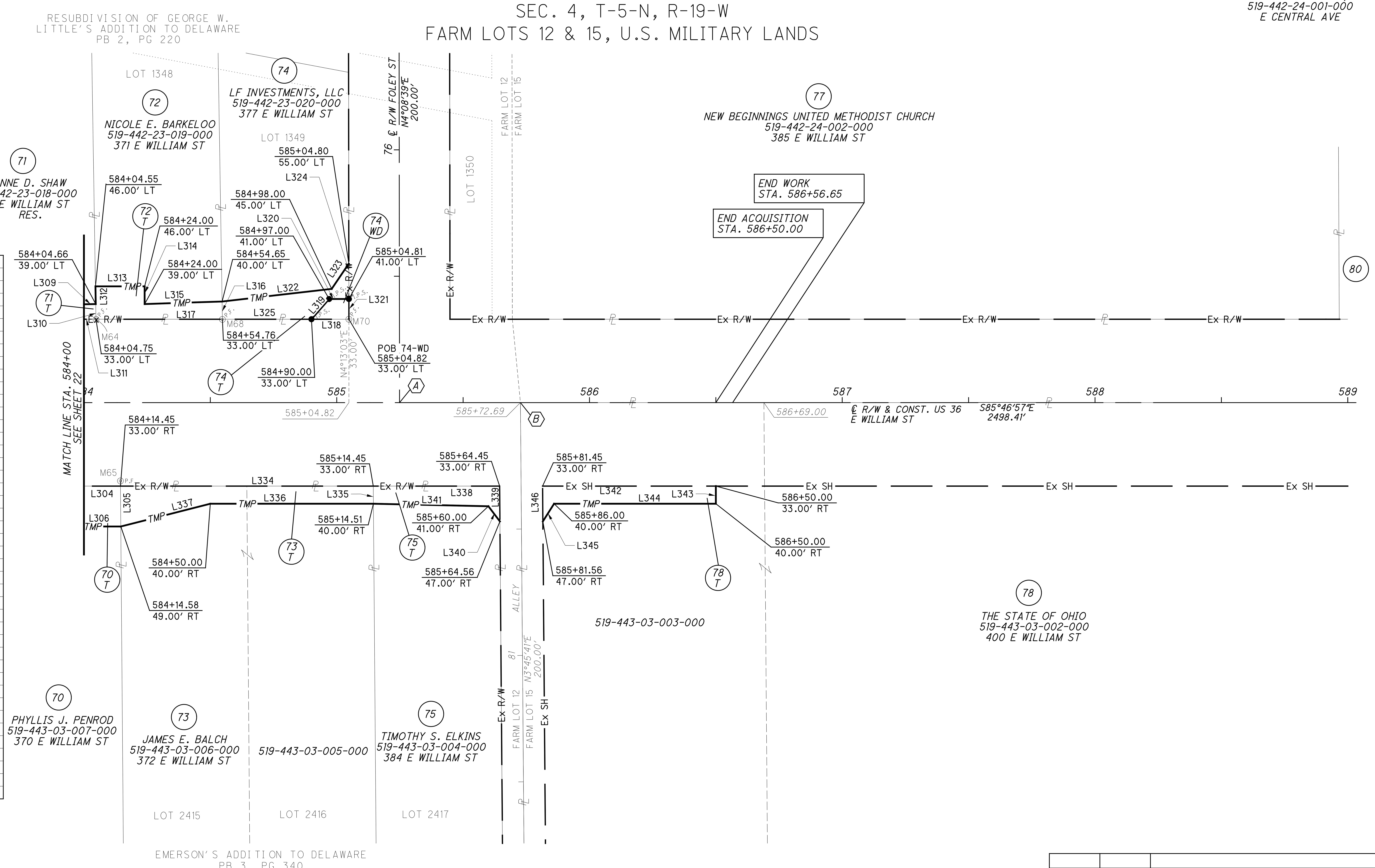
DEL-36-10.59

23 / 24

223
224

DELAWARE COUNTY
DELAWARE TOWNSHIP
CITY OF DELAWARE
SEC. 4, T-5-N, R-19-W
FARM LOTS 12 & 15, U.S. MILITARY LANDS

(A) 585+24.87, ℄ US 36 = 75+00.00, ℄ FOLEY ST
(B) 585+72.69, ℄ US 36 = 80+00.00, ℄ ALLEY 4



RESUBDIVISION OF GEORGE W. LITTLE'S ADDITION TO DELAWARE PB 2, PG 220
LOT 1348
LOT 1349
LOT 1350
72 NICOLE E. BARKELOO 519-442-23-019-000 371 E WILLIAM ST
74 LF INVESTMENTS, LLC 519-442-23-020-000 377 E WILLIAM ST
71 JEANNE D. SHAW 519-442-23-018-000 361 E WILLIAM ST RES.
77 NEW BEGINNINGS UNITED METHODIST CHURCH 519-442-24-002-000 385 E WILLIAM ST
80 THE CITY OF DELAWARE, OHIO 519-442-24-001-000 E CENTRAL AVE
76 ℄ R/W FOLEY ST N4°08'39"E 200.00'
FARM LOT 12
FARM LOT 15
END WORK STA. 586+56.65
END ACQUISITION STA. 586+50.00
MATCH LINE STA. 584+00 SEE SHEET 22
POB 74-WD 585+04.82 33.00' LT
℄ R/W & CONST. US 36 E WILLIAM ST
S85°46'57"E 2498.41'
ALLEY
N3°45'41"E 200.00'
519-443-03-003-000
78 THE STATE OF OHIO 519-443-03-002-000 400 E WILLIAM ST
70 PHYLLIS J. PENROD 519-443-03-007-000 370 E WILLIAM ST
73 JAMES E. BALCH 519-443-03-006-000 372 E WILLIAM ST
519-443-03-005-000
75 TIMOTHY S. ELKINS 519-443-03-004-000 384 E WILLIAM ST
LOT 2415
LOT 2416
LOT 2417
EMERSON'S ADDITION TO DELAWARE PB 3, PG 340

L304	S85°46'57"E	50.08'
L305	S3°45'41"W	16.00'
L306	N85°46'57"W	25.58'
L307	NOT USED	
L308	NOT USED	
L309	S86°55'45"E	49.96'
L310	S3°18'03"W	6.00'
L311	N85°46'57"W	49.97'
L312	N3°18'03"E	13.00'
L313	S85°46'57"E	19.45'
L314	S4°13'03"W	7.00'
L315	S87°39'04"E	30.67'
L316	S3°18'03"W	7.00'
L317	N85°46'57"W	50.01'
L318	N85°46'57"W	14.82'
L319	N45°24'13"E	10.63'
L320	S85°46'57"E	7.81'
L321	S4°08'39"W	8.00'
L322	N87°38'18"E	43.64'
L323	N38°24'56"E	12.09'
L324	S4°08'39"W	14.00'
L325	N85°46'57"W	35.24'
L326	NOT USED	
L327	NOT USED	
L328	NOT USED	
L329	NOT USED	
L330	NOT USED	
L331	NOT USED	
L332	NOT USED	
L333	NOT USED	
L334	S85°46'57"E	100.00'
L335	S3°45'41"W	7.00'
L336	N85°46'57"W	64.51'
L337	S79°57'45"W	36.55'
L338	S85°46'57"E	50.00'
L339	S3°45'41"W	14.00'
L340	N33°02'05"W	7.54'
L341	N84°31'24"W	45.50'
L342	S85°46'57"E	68.55'
L343	S4°13'03"W	7.00'
L344	N85°46'57"W	64.00'
L345	S36°35'03"W	8.29'
L346	N3°45'41"E	14.00'

COMMENCEMENT CALLS

PARCEL	POC	LEAD IN	TO STA.
74-WD	POC-1	N85°46'57"W, 529.14'	585+04.82

POC = POINT OF COMMENCEMENT
POB = TRUE POINT OF BEGINNING

FOR FOUND MONUMENT DESCRIPTIONS SEE SHEET 3

REV. BY	DATE	DESCRIPTION
RKL	5/21/18	REMOVED 77WD & 77T

DATE COMPLETED: 7/28/17

HORIZONTAL SCALE IN FEET 0 10 20 40

PID NO. 95625

R/W DESIGNER RKL
R/W REVIEWER RAK

RIGHT OF WAY BOUNDARY SHEET
STA. 584+00 TO STA. 589+00

DEL-36-10.59