

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION

# LAW-7-2.17

## VILLAGE OF CHESAPEAKE VILLAGE OF PROCTORVILLE UNION TOWNSHIP ROME TOWNSHIP LAWRENCE COUNTY

PROJECT DESCRIPTION

THIS PROJECT IS THE THIRD PHASE OF THE LAW-7-2.17 STATE ROUTE 7 RELOCATION PROJECT. THIS PROJECT WILL CONSTRUCT 6.11 MILES OF THE EASTBOUND LANES OF STATE ROUTE 7 BETWEEN STATE ROUTE 527 AND STATE ROUTE 775. THIS PROJECT ALSO INCLUDES A PARTIAL GRADE SEPARATED INTERCHANGE AT STATE ROUTE 527 AND A FULL INTERCHANGE AT STATE ROUTE 775. ALSO INCLUDED WITH THIS PROJECT IS THE CONSTRUCTION OF A ROUNDABOUT AT THE INTERSECTION OF STATE ROUTE 7 AND STATE ROUTE 243. THIS IMPROVEMENT INCLUDES THE RELOCATION OF 1.98 MILES OF STATE ROUTES, COUNTY AND TOWNSHIP ROADS AS WELL AS THE ADDITION OF 1.28 MILES OF RAMP AND ELEVEN (11) DRIVES. A TOTAL OF TEN (10) STRUCTURES WILL BE DEVELOPED WHICH INCLUDE TRAFFIC OVERPASS AND STREAM CROSSING BRIDGES. WORK WILL INCLUDE NEW STORM SEWERS, CULVERTS, NOISE AND RETAINING WALLS, TRAFFIC CONTROL, PAVEMENT MARKING AND LIGHTING.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA: 281 ACRES  
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 77 ACRES  
NOTICE OF INTENT EARTH DISTURBED AREA: 358 ACRES

LIMITED ACCESS

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE OHIO REVISED CODE.

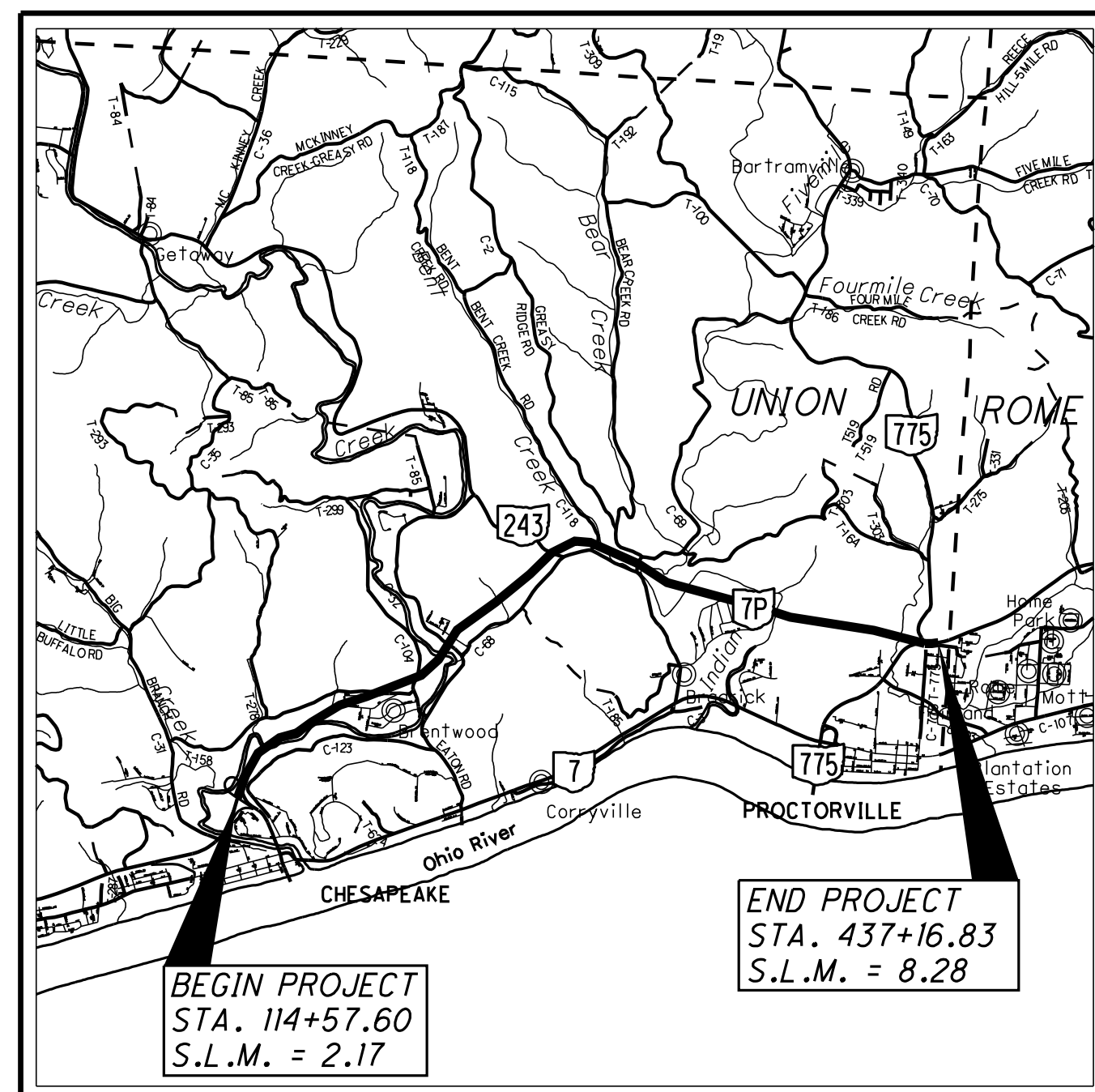
2023 SPECIFICATIONS

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

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT DETOURS WILL BE PROVIDED AS INDICATED ON SHEETS 63-66.

*Michael G. Dombrowski*  
Michael G. Dombrowski  
District 09 Deputy Director

*Jack Marchbanks, PhD*  
Jack Marchbanks, PhD  
Director, Department of Transportation



LOCATION MAP

LATITUDE: N 38°27'16" LONGITUDE: W 82°25'19"



PORTION TO BE IMPROVED	—————
INTERSTATE HIGHWAY	—————
FEDERAL ROUTES	—————
STATE ROUTES	—————
COUNTY & TOWNSHIP ROADS	—————
OTHER ROADS	—————

FOR DESIGN DESIGNATIONS AND DESIGN EXCEPTIONS, SEE SHEET 2.

**UNDERGROUND UTILITIES**  
Contact Two Working Days  
Before You Dig

**OHIO811.org**  
Before You Dig

OHIO811, 8-1-1, or 1-800-362-2764  
(Non-members must be called directly)

PLAN PREPARED BY:

1500 Lake Shore Drive, Suite 100  
Columbus, Ohio 43204  
(614) 486-4383



OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT NINE  
650 EASTERN AVENUE, P.O. BOX 467  
CHILLICOTHE, OHIO 45601

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FEDERAL PROJECT NO.  
E035(921)  
E060(482)

PID NO.  
75923

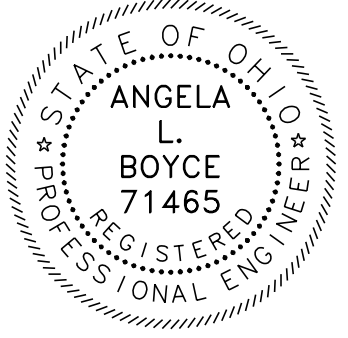



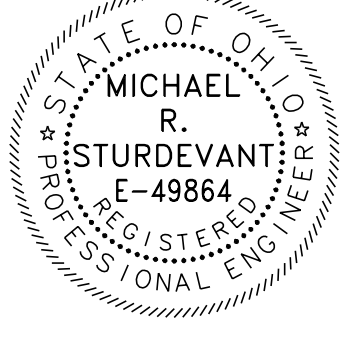
CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT  
NONE

LAW-7-2.17

1  
1247

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FOR THE ENTIRE PLAN EXCEPT AS OTHERWISE NOTED	FOR MOT, TRAFFIC CONTROL AND LIGHTING	FOR GEOTECHNICAL
		
FOR RETAINING WALL FOR NOISE WALL & FOR STRUCTURE OVER 20' SPAN FOR LAW-7-0251, LAW-7-0370, LAW-7-0376, LAW-7-0387, LAW-7-0563	FOR STRUCTURE OVER 20' SPAN FOR LAW-7-0510, LAW-7-0711, LAW-7-0713 L&R & LAW-775-0105	
		

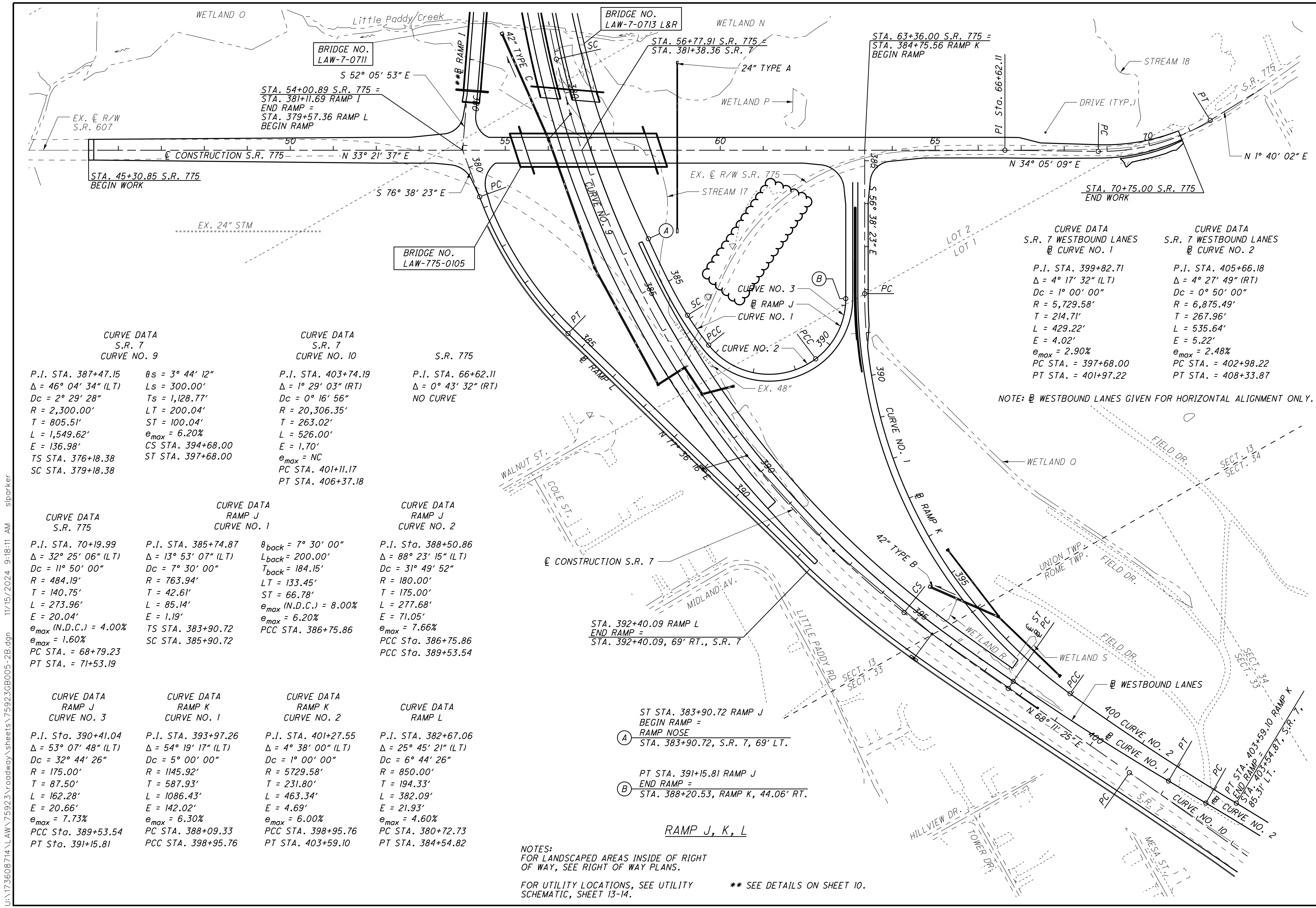
STANDARD CONSTRUCTION DRAWINGS										SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS	
BP-2.1	1/21/22	F-1.1	7/19/13	AS-1-15	1/20/23	MT-95.30	7/19/19	TC-52.20	1/15/21	800-2023	7/19/24	
BP-2.2	1/15/21	F-2.1	7/20/18	AS-2-15	7/21/23	MT-95.45	7/21/23	TC-61.10	4/21/23	813	7/21/23	WATERWAY PERMIT 8/2/24
BP-2.3	7/18/14	F-3.1	7/19/13	EXJ-6-17	1/19/24	MT-95.61	4/19/19	TC-61.30	7/19/24	815	4/16/21	
BP-3.1	1/19/24	F-3.3	7/19/13	GSD-1-19	7/19/24	MT-97.10	4/19/19	TC-64.10	7/21/23	821	4/20/12	
BP-4.1	7/19/13	F-3.4	7/19/13	HW-2.1	7/15/22	MT-97.12	1/20/17	TC-65.10	1/17/14	825	4/21/23	
BP-5.1	7/15/22			HW-2.2	7/20/18	MT-99.20	4/19/19	TC-65.11	1/19/24	832	7/21/23	OIL AND GAS WELL 8/2/24
BP-9.1	1/18/19	LA-1.2	7/19/24	NSB-1-09	7/19/24	MT-99.60	7/19/24	TC-71.10	4/21/23	836	1/19/24	
				PSID-1-13	7/19/24	MT-101.60	4/21/23	TC-72.20	7/21/23	840	7/21/23	
CB-2-2A,2B,2C	7/19/24	MGS-1.1	7/16/21	SBR-1-20	7/19/24	MT-101.70	7/19/24	TC-73.20	7/19/24	863	7/21/23	
CB-2-3,2-4	7/19/24	MGS-2.1	1/19/18	SICD-2-14	1/15/21	MT-101.75	7/21/23	TC-81.11	1/19/24	867	4/15/22	ASBESTOS 8/2/24
CB-3A	7/19/24	MGS-2.3	1/20/23			MT-101.90	7/17/20	TC-83.10	1/17/20	869	10/17/14	
CB-4	7/19/24	MGS-3.1	1/19/18	HL-10.11	7/21/23	MT-105.10	1/17/20	TC-83.20	7/19/24	878	1/21/22	
CB-4A, 5A, 8A	7/19/24	MGS-3.2	1/18/13	HL-10.12	7/21/23	MT-120.00	7/19/24	TC-84.20	1/19/24	902	7/19/19	
CB-5	7/19/24	MGS-4.2	7/19/13	HL-10.13	1/20/23			TC-85.10	1/19/24	908	10/15/20	
CB-8	7/19/24	MGS-4.3	1/18/13	HL-10.31	7/15/22	TC-15.116	1/19/24	TC-85.21	1/19/24	913	4/16/21	
		MGS-5.3	7/15/16	HL-20.11	7/21/23	TC-17.11	1/19/24	TC-85.22	4/21/23	921	4/20/12	
DM-1.1	7/17/20	MGS-6.1	1/19/18	HL-30.11	7/21/23	TC-21.11	7/16/21					
DM-1.2	7/16/21	MGS-6.2	7/19/24	HL-30.21	4/17/20	TC-21.21	1/20/23					
DM-4.1	7/17/20			HL-30.22	1/15/21	TC-22.10	4/21/23					
DM-4.2	7/20/12	RM-1.1	1/20/23	HL-30.31	7/19/24	TC-22.20	1/17/14					
DM-4.3	1/15/16	RM-3.1	7/20/18	HL-30.41	1/21/22	TC-41.10	7/19/13					
DM-4.4	1/15/16	RM-4.2	4/17/20	HL-40.10	7/19/24	TC-41.20	10/18/13					
		RM-4.3	1/21/22	HL-40.20	7/19/24	TC-41.30	4/21/23					
I-3D	7/19/24	RM-4.4	7/15/23	HL-50.21	7/15/22	TC-41.40	10/18/13					
		RM-4.5	7/19/24	HL-60.11	7/21/17	TC-41.41	7/19/19					
MH-3	7/19/24	RM-4.6	7/19/24	HL-60.31	7/19/24	TC-41.50	10/18/13					
		RM-7.1	7/18/14			TC-42.10	10/18/13					
WO-1.1	7/21/23	RM-7.2	7/15/07			TC-42.20	10/18/13					
WO-1.2	1/15/16					TC-51.11	1/15/16					
						TC-52.10	10/18/13					



50  
100  
200  
HORIZONTAL  
SCALE IN FEET

**SCHEMATIC PLAN**

**LAW - 7 - 2.17**



**CURVE DATA**  
S.R. 7  
CURVE NO. 9

P.I. STA. 387+47.15  
 $\Delta = 46^\circ 04' 34''$  (LT)  
 $Dc = 2^\circ 29' 28''$   
 $R = 2,300.00'$   
 $T = 805.51'$   
 $L = 1,549.62'$   
 $E = 136.98'$   
 $TS$  STA. 376+18.38  
 $SC$  STA. 379+18.38

**CURVE DATA**  
S.R. 7  
CURVE NO. 10

P.I. STA. 403+74.19  
 $\Delta = 1^\circ 29' 03''$  (RT)  
 $Dc = 0^\circ 16' 56''$   
 $R = 20,306.35'$   
 $T = 263.02'$   
 $L = 526.00'$   
 $E = 1.70'$   
 $e_{max} = NC$   
 $PC$  STA. 401+11.17  
 $PT$  STA. 406+37.18

S.R. 775

P.I. STA. 66+62.11  
 $\Delta = 0^\circ 43' 32''$  (RT)  
 NO CURVE

**CURVE DATA**  
S.R. 775

P.I. STA. 70+19.99  
 $\Delta = 32^\circ 25' 06''$  (LT)  
 $Dc = 11^\circ 50' 00''$   
 $R = 484.19'$   
 $T = 140.75'$   
 $L = 273.96'$   
 $E = 20.04'$   
 $e_{max}$  (N.D.C.) = 4.00%  
 $e_{max} = 1.60\%$   
 $PC$  STA. = 68+79.23  
 $PT$  STA. = 71+53.19

**CURVE DATA**  
RAMP J  
CURVE NO. 1

P.I. STA. 385+74.87  
 $\Delta = 13^\circ 53' 07''$  (LT)  
 $Dc = 7^\circ 30' 00''$   
 $R = 763.94'$   
 $T = 42.61'$   
 $L = 85.14'$   
 $E = 1.19'$   
 $TS$  STA. 383+90.72  
 $SC$  STA. 385+90.72

**CURVE DATA**  
RAMP J  
CURVE NO. 2

P.I. Sta. 388+50.86  
 $\Delta = 88^\circ 23' 15''$  (LT)  
 $Dc = 31^\circ 49' 52''$   
 $R = 180.00'$   
 $T = 175.00'$   
 $L = 277.68'$   
 $E = 71.05'$   
 $e_{max} = 7.66\%$   
 $PCC$  Sta. 386+75.86  
 $PCC$  Sta. 389+53.54

**CURVE DATA**  
RAMP J  
CURVE NO. 3

P.I. Sta. 390+41.04  
 $\Delta = 53^\circ 07' 48''$  (LT)  
 $Dc = 32^\circ 44' 26''$   
 $R = 175.00'$   
 $T = 87.50'$   
 $L = 162.28'$   
 $E = 20.66'$   
 $e_{max} = 7.73\%$   
 $PCC$  Sta. 389+53.54  
 $PT$  Sta. 391+15.81

**CURVE DATA**  
RAMP K  
CURVE NO. 1

P.I. STA. 393+97.26  
 $\Delta = 54^\circ 19' 17''$  (LT)  
 $Dc = 5^\circ 00' 00''$   
 $R = 1145.92'$   
 $T = 587.93'$   
 $L = 1086.43'$   
 $E = 142.02'$   
 $e_{max} = 6.30\%$   
 $PC$  STA. 388+09.33  
 $PCC$  STA. 398+95.76

**CURVE DATA**  
RAMP K  
CURVE NO. 2

P.I. STA. 401+27.55  
 $\Delta = 4^\circ 38' 00''$  (LT)  
 $Dc = 1^\circ 00' 00''$   
 $R = 5729.58'$   
 $T = 231.80'$   
 $L = 463.34'$   
 $E = 4.69'$   
 $e_{max} = 6.00\%$   
 $PCC$  STA. 398+95.76  
 $PT$  STA. 403+59.10

**CURVE DATA**  
RAMP L

P.I. STA. 382+67.06  
 $\Delta = 25^\circ 45' 21''$  (LT)  
 $Dc = 6^\circ 44' 26''$   
 $R = 850.00'$   
 $T = 194.33'$   
 $L = 382.09'$   
 $E = 21.93'$   
 $e_{max} = 4.60\%$   
 $PC$  STA. 380+72.73  
 $PT$  STA. 384+54.82

**CURVE DATA**  
S.R. 7 WESTBOUND LANES  
@ CURVE NO. 1

P.I. STA. 399+82.71  
 $\Delta = 4^\circ 17' 32''$  (LT)  
 $Dc = 1^\circ 00' 00''$   
 $R = 5,729.58'$   
 $T = 214.71'$   
 $L = 429.22'$   
 $E = 4.02'$   
 $e_{max} = 2.90\%$   
 $PC$  STA. = 397+68.00  
 $PT$  STA. = 401+97.22

**CURVE DATA**  
S.R. 7 WESTBOUND LANES  
@ CURVE NO. 2

P.I. STA. 405+66.18  
 $\Delta = 4^\circ 27' 49''$  (RT)  
 $Dc = 0^\circ 50' 00''$   
 $R = 6,875.49'$   
 $T = 267.96'$   
 $L = 535.64'$   
 $E = 5.22'$   
 $e_{max} = 2.48\%$   
 $PC$  STA. = 402+98.22  
 $PT$  STA. = 408+33.87

NOTE: @ WESTBOUND LANES GIVEN FOR HORIZONTAL ALIGNMENT ONLY.

ST STA. 383+90.72 RAMP J  
 BEGIN RAMP =  
 RAMP NOSE  
 STA. 383+90.72, S.R. 7, 69' LT.

PT STA. 391+15.81 RAMP J  
 END RAMP =  
 STA. 388+20.53, RAMP K, 44.06' RT.

**RAMP J, K, L**

NOTES:  
 FOR LANDSCAPED AREAS INSIDE OF RIGHT  
 OF WAY, SEE RIGHT OF WAY PLANS.

FOR UTILITY LOCATIONS, SEE UTILITY  
 SCHEMATIC, SHEET 13-14.

\*\* SEE DETAILS ON SHEET 10.

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**ENVIRONMENTAL COMMITMENTS**

THE PROJECT IS LOCATED IN A SURFACE WATER SOURCE PROTECTION AREA FOR THE OHIO RIVER/CITY OF IRLINGTON AND IS LOCATED ADJACENT TO A GROUND WATER SOURCE PROTECTION AREA FOR THE VILLAGE OF PROCTORVILLE. USE PROPER CONTAINMENT AND DIKING IN REFUELING AREAS. DO NOT STORE FUELS, TOXIC/HAZARDOUS MATERIALS, AND CHEMICALS WITHIN 50 FEET OF DRAINAGE WAYS, DITCHES, OR STREAMS. MAINTAIN A SPILL KIT ON-SITE THROUGHOUT CONSTRUCTION ACTIVITIES. IMMEDIATELY MITIGATE ANY EVENT, SUCH AS A SPILL OF FUELS, OILS, OR CHEMICALS, THAT COULD THREATEN TO CONTAMINATE THE DRINKING WATER SUPPLY. IF THE SPILL IS A REPORTABLE AMOUNT (PER OHIO EPA'S RELEASE REPORTING REQUIREMENTS), CONTACT THE CITY OF IRLINGTON FIRE DEPARTMENT (740-532-6463), THE CHESAPEAKE-UNION TOWNSHIP VOLUNTEER FIRE DEPARTMENT (740-867-5988), THE PROCTORVILLE COMMUNITY VOLUNTEER FIRE AND RESCUE (740-886-8579), AND/OR THE ROME VOLUNTEER FIRE DEPARTMENT (740-886-6770), AND/OR THE OHIO EPA'S SPILLS HOTLINE (1-800-282-9378) FOR CLEANUP OF THE SPILL.

THE CONTRACTOR SHALL NOT PERFORM ANY WORK WITHIN THE JURISDICTIONAL BOUNDARIES OF ANY WATERWAY, INCLUDING WETLANDS, UNTIL ODOT OBTAINS THE NECESSARY WATERWAY PERMITS. WORK INCLUDES THE PLACEMENT OF ANY TEMPORARY OR PERMANENT FILLS.

TO HELP PROTECT UNDISTURBED WETLANDS AND STREAMS, THE CONTRACTOR SHALL DEMARCATe AVOIDED AREAS IN THE FIELD PRIOR TO CONSTRUCTION PER THE WATERWAY PERMIT SPECIAL PROVISIONS.

TO MINIMIZE IMPACTS TO STATE AND FEDERALLY LISTED BATS, DO NOT REMOVE TREES FROM APRIL 1 THROUGH SEPTEMBER 30. PERFORM ALL NECESSARY TREE REMOVAL FROM OCTOBER 1 THROUGH MARCH 31. DEMARCATe CLEARING LIMITS IN THE FIELD TO AVOID ANY UNAUTHORIZED TREE CLEARING. FOR THE PURPOSES OF THIS NOTE, A TREE IS DEFINED AS A LIVE, DYING, OR DEAD WOODY PLANT, WITH A TRUNK THREE INCHES OR GREATER IN DIAMETER AT A HEIGHT OF 4.5 FEET ABOVE THE GROUND SURFACE, AND WITH A MINIMUM HEIGHT OF 13 FEET.

ANY NECESSARY BLASTING AND/OR EXCAVATION WORK WITHIN AREAS IDENTIFIED AS ROCK OUTCROPS (RO) ON THE CONSTRUCTION PLANS BETWEEN STA 307+00 AND 348+00 MUST OCCUR BETWEEN MAY 15 AND SEPTEMBER 30. BLASTING CAN ONLY BE COMPLETED AFTER ALL TREE CLEARING HAS OCCURRED NEAR THE POTENTIAL HIBERNACULA FOLLOWING THE TIME OF YEAR RESTRICTIONS IN THE TREE CLEARING NOTE. AFTER THE ROCK OUTCROPS (RO) BETWEEN STA. 307+00 AND 348+00 ARE NO LONGER PRESENT FOLLOWING DISTURBANCE, CONSTRAINTS ON THE TIMING OF DISRUPTION OF THESE AREAS WILL NO LONGER APPLY.

THE USFWS WILDLIFE BIOLOGIST, DR. KAREN HALLBERG (614-528-9697; KAREN.HALLBERG@FWS.GOV), MUST BE INVITED TO A PRE-CONSTRUCTION MEETING WITH THE CONTRACTOR PRESENT AND BE NOTIFIED OF THE PROJECT START DATE A MINIMUM OF ONE WEEK PRIOR TO THE COMMENCEMENT OF WORK.

IF ANY HUMAN REMAINS OR NATIVE AMERICAN CULTURAL ITEMS FALLING UNDER THE NATIVE AMERICAN GRAVES PROTECTION AND REPATRIATION ACT (NAGPRA) OR ARCHAEOLOGICAL EVIDENCE IS DISCOVERED DURING ANY PHASE OF THIS PROJECT, THE CONTRACTOR SHALL STOP WORK WITHIN 100 METERS (+330 FEET) OF THE SITE OF DISCOVERY AND AVOID FURTHER DISTURBANCE. CONSTRUCTION PERSONNEL SHALL IMMEDIATELY CONTACT BRANDON BECK, ODOT DISTRICT 9 ENVIRONMENTAL COORDINATOR (740-774-8976) TO INITIATE CONSULTATION. THE DISCOVERING PARTY MUST MAKE A REASONABLE EFFORT TO PROTECT AND SECURE THE REMAINS AND ITEMS. CONSTRUCTION SHALL NOT RESUME WITHIN 100 METERS (+330 FEET) AROUND THE DISCOVERY UNTIL A COURSE OF ACTION IS DETERMINED THROUGH CONSULTATION PROVISIONS.

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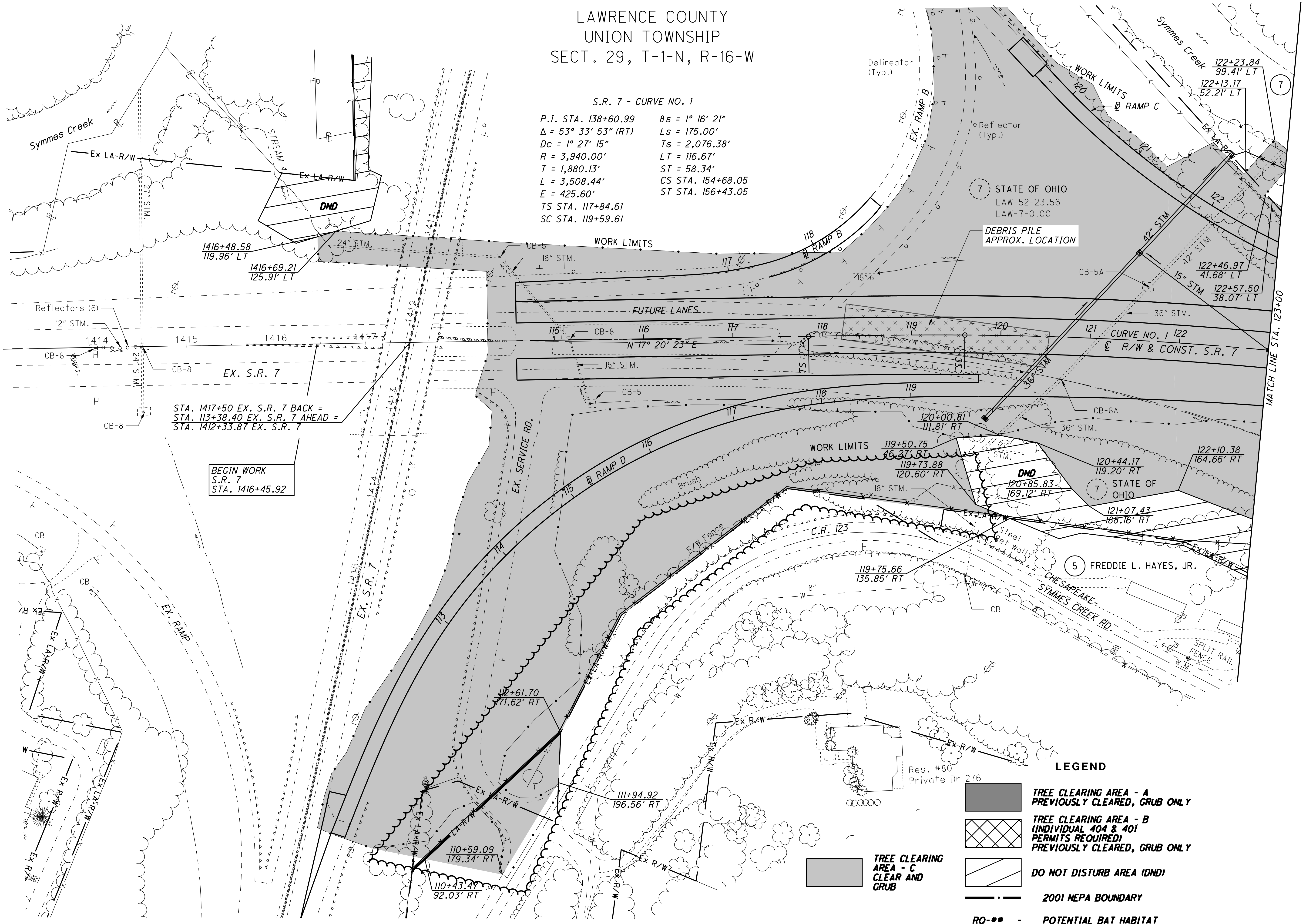
**ENVIRONMENTAL COMMITMENT PLAN  
GENERAL NOTES**

**LAW - 7 - 2.17**

LAWRENCE COUNTY  
UNION TOWNSHIP  
SECT. 29, T-1-N, R-16-W

S.R. 7 - CURVE NO. 1

P.I. STA. 138+60.99     $\theta_s = 1^\circ 16' 21''$   
 $\Delta = 53^\circ 33' 53''$  (RT)     $L_s = 175.00'$   
 $D_c = 1^\circ 27' 15''$      $T_s = 2,076.38'$   
 $R = 3,940.00'$      $LT = 116.67'$   
 $T = 1,880.13'$      $CS = 58.34'$   
 $L = 3,508.44'$      $ST \text{ STA. } 154+68.05$   
 $E = 425.60'$      $ST \text{ STA. } 156+43.05$   
 $TS \text{ STA. } 117+84.61$   
 $SC \text{ STA. } 119+59.61$



STA. 1417+50 EX. S.R. 7 BACK =  
 STA. 113+38.40 EX. S.R. 7 AHEAD =  
 STA. 1412+33.87 EX. S.R. 7

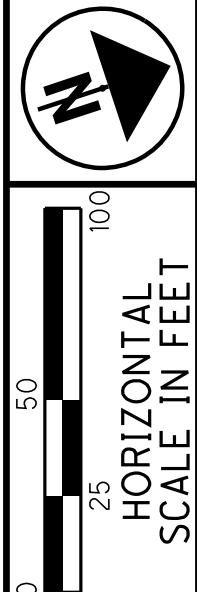
BEGIN WORK  
 S.R. 7  
 STA. 1416+45.92

7 STATE OF OHIO  
 LAW-52-23.56  
 LAW-7-0.00

5 FREDDIE L. HAYES, JR.

**LEGEND**

- TREE CLEARING AREA - A  
PREVIOUSLY CLEARED, GRUB ONLY
- TREE CLEARING AREA - B  
(INDIVIDUAL 404 & 401  
PERMITS REQUIRED)  
PREVIOUSLY CLEARED, GRUB ONLY
- TREE CLEARING AREA - C  
CLEAR AND GRUB
- DO NOT DISTURB AREA (DND)
- 2001 NEPA BOUNDARY
- POTENTIAL BAT HABITAT



PID NO. 120720  
 R/W DESIGNER TDW  
 R/W REVIEWER JDH

TREE CLEARING PLAN - S.R. 7  
 STA. 114+57.60 TO STA. 123+00

LAW-7-2.17  
 TREE CLEARING

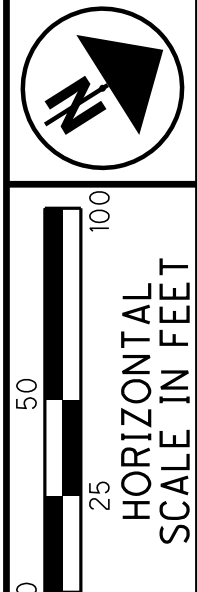
22A  
 1247

U:\173608714\Law\759233\Tree Clearing\Law-120720-CADDFILES-R\RW\Sheets\759233RT001.dgn 11/15/2024 9:18:31 AM sparker

LAWRENCE COUNTY  
UNION TOWNSHIP  
SECT. 29, T-1-N, R-16-W

CURVE DATA  
S.R. 7  
CURVE NO. 1

P.I. STA. 138+60.99  $\theta_s = 1^\circ 16' 21''$   
 $\Delta = 53^\circ 33' 53''$  (RT)  $L_s = 175.00'$   
 $D_c = 1^\circ 27' 15''$   $T_s = 2,076.38'$   
 $R = 3,940.00'$   $LT = 116.67'$   
 $T = 1,880.13'$   $ST = 58.34'$   
 $L = 3,508.44'$   $CS$  STA. 154+68.05  
 $E = 425.60'$   $ST$  STA. 156+43.05  
 $TS$  STA. 117+84.61  
 $SC$  STA. 119+59.61



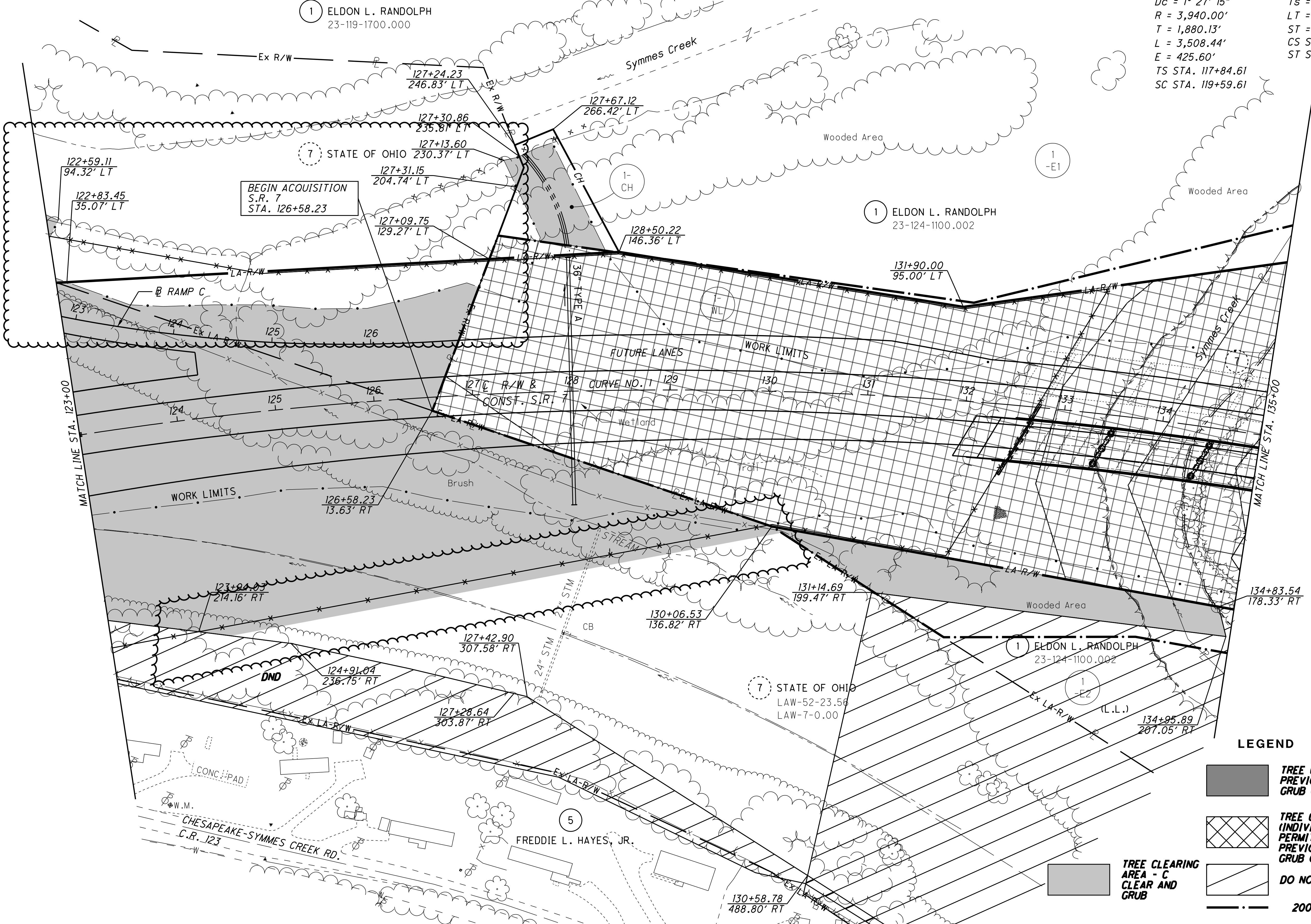
PID NO.  
**120720**

R/W DESIGNER TDW  
R/W REVIEWER JHJ

TREE CLEARING PLAN - S.R. 7  
STA. 123+00 TO STA. 135+00

LAW-7-2.17  
TREE CLEARING

22B  
1247

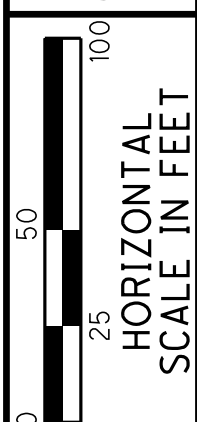


LEGEND

- TREE CLEARING AREA - A PREVIOUSLY CLEARED, GRUB ONLY
- TREE CLEARING AREA - B (INDIVIDUAL 404 & 401 PERMITS REQUIRED) PREVIOUSLY CLEARED, GRUB ONLY
- TREE CLEARING AREA - C CLEAR AND GRUB
- DO NOT DISTURB AREA (DND)
- 2001 NEPA BOUNDARY
- RO-\*\* - POTENTIAL BAT HABITAT

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LAWRENCE COUNTY  
UNION TOWNSHIP  
SECT. 22, T-1-N, R-16-W

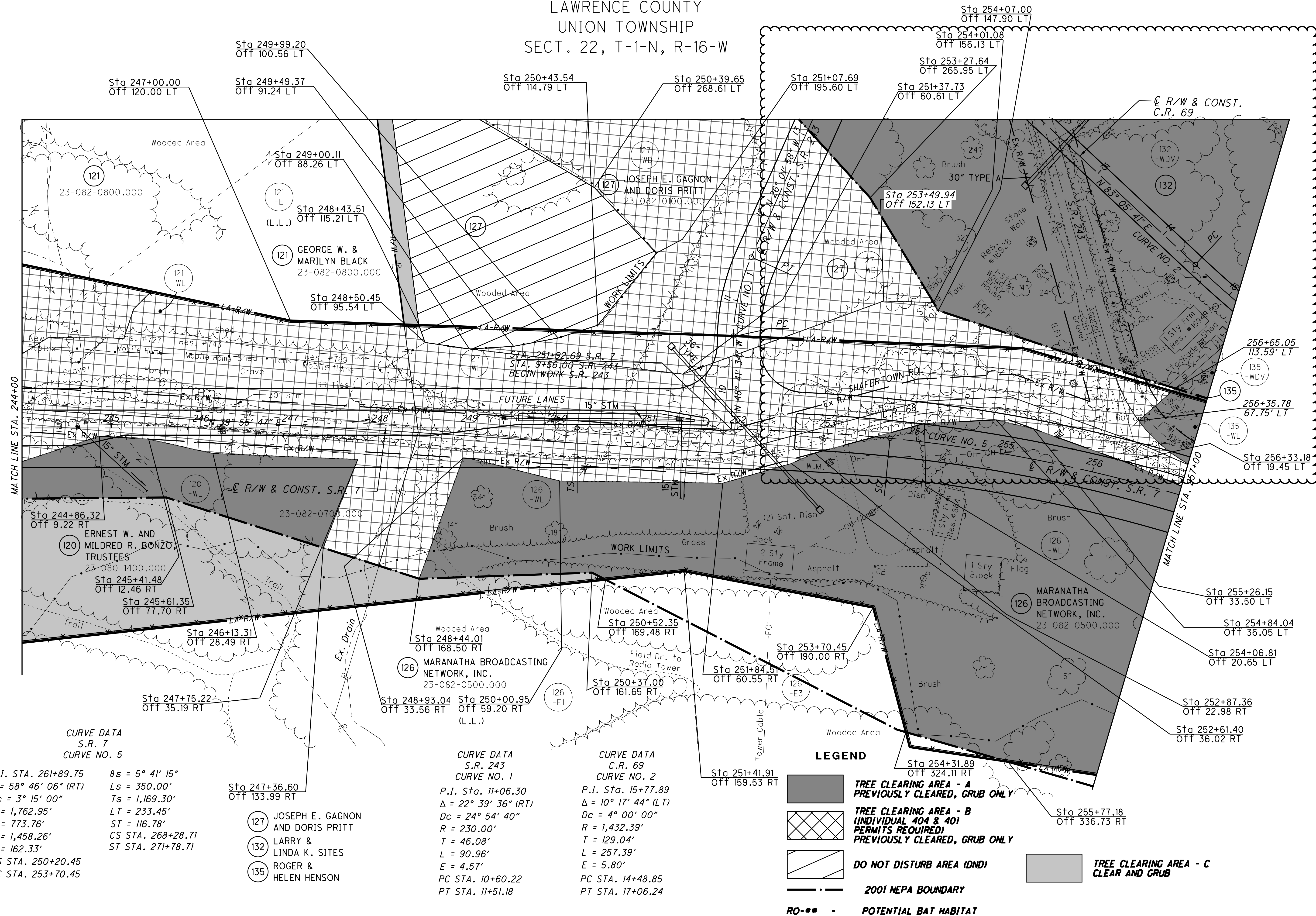


PID NO. **120720**  
R/W DESIGNER TDW  
R/W REVIEWER JQH

**TREE CLEARING PLAN - S.R. 7**  
**STA. 244+00 TO STA. 257+00**

**LAW-7-2.17**  
**TREE CLEARING**

22N  
1247



**CURVE DATA**  
S.R. 7  
CURVE NO. 5

P.I. STA. 261+89.75  
Δ = 58° 46' 06" (RT)  
Dc = 3° 15' 00"  
R = 1,762.95'  
T = 773.76'  
L = 1,458.26'  
E = 162.33'  
TS STA. 250+20.45  
SC STA. 253+70.45

θs = 5° 41' 15"  
Ls = 350.00'  
Ts = 1,169.30'  
LT = 233.45'  
ST = 116.78'  
CS STA. 268+28.71  
ST STA. 271+78.71


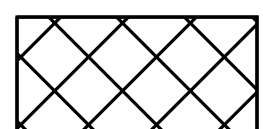

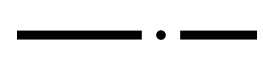


**CURVE DATA**  
S.R. 243  
CURVE NO. 1

P.I. Sta. 11+06.30  
Δ = 22° 39' 36" (RT)  
Dc = 24° 54' 40"  
R = 230.00'  
T = 46.08'  
L = 90.96'  
E = 4.57'  
PC STA. 10+60.22  
PT STA. 11+51.18

**CURVE DATA**  
C.R. 69  
CURVE NO. 2

P.I. Sta. 15+77.89  
Δ = 10° 17' 44" (LT)  
Dc = 4° 00' 00"  
R = 1,432.39'  
T = 129.04'  
L = 257.39'  
E = 5.80'  
PC STA. 14+48.85  
PT STA. 17+06.24

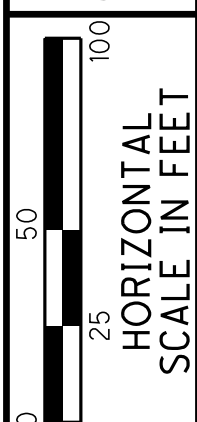
**LEGEND**

-  **TREE CLEARING AREA - A**  
**PREVIOUSLY CLEARED, GRUB ONLY**
-  **TREE CLEARING AREA - B**  
**(INDIVIDUAL 404 & 401 PERMITS REQUIRED)**  
**PREVIOUSLY CLEARED, GRUB ONLY**
-  **DO NOT DISTURB AREA (DND)**
-  **2001 NEPA BOUNDARY**
-  **POTENTIAL BAT HABITAT**
-  **TREE CLEARING AREA - C**  
**CLEAR AND GRUB**

- (127) JOSEPH E. GAGNON AND DORIS PRITT
- (132) LARRY & LINDA K. SITES
- (135) ROGER & HELEN HENSON

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LAWRENCE COUNTY  
UNION TOWNSHIP  
SECT. 22, T-1-N, R-16-W

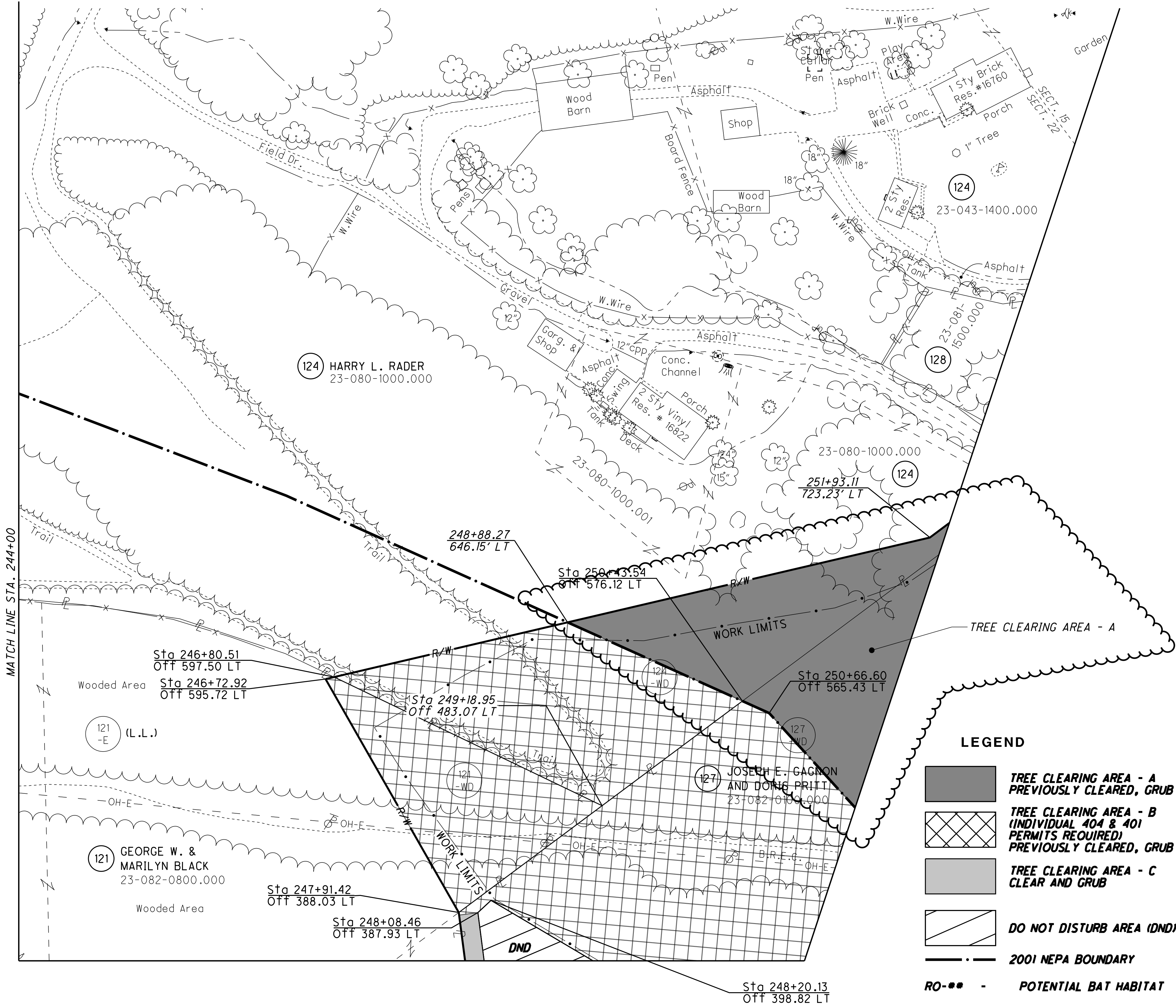


PID NO. **120720**  
R/W DESIGNER TDW  
R/W REVIEWER JQH

**TREE CLEARING PLAN - S.R. 7**  
**STA. 244+00 (NORTH)**

**LAW-7-2.17**  
**TREE CLEARING**

220  
1247



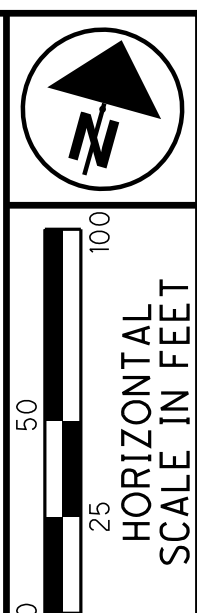
- LEGEND**
- TREE CLEARING AREA - A  
PREVIOUSLY CLEARED, GRUB ONLY
  - TREE CLEARING AREA - B  
(INDIVIDUAL 404 & 401 PERMITS REQUIRED)  
PREVIOUSLY CLEARED, GRUB ONLY
  - TREE CLEARING AREA - C  
CLEAR AND GRUB
  - DO NOT DISTURB AREA (DND)
  - 2001 NEPA BOUNDARY
  - POTENTIAL BAT HABITAT

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LAWRENCE COUNTY  
UNION TOWNSHIP  
SECT. 15 & 22, T-1-N, R-16-W

- (132) LARRY & LINDA K. SITES
- (133) CARL & NANCY DANFORD
- (134) DARRELL HARDY
- (135) ROGER & HELEN HENSON
- (136) CARL & NANCY DANFORD
- (137) STATE OF OHIO
- (138) STATE OF OHIO
- (139) FRED HENSON, JR.
- (140) STATE OF OHIO
- (141) STATE OF OHIO



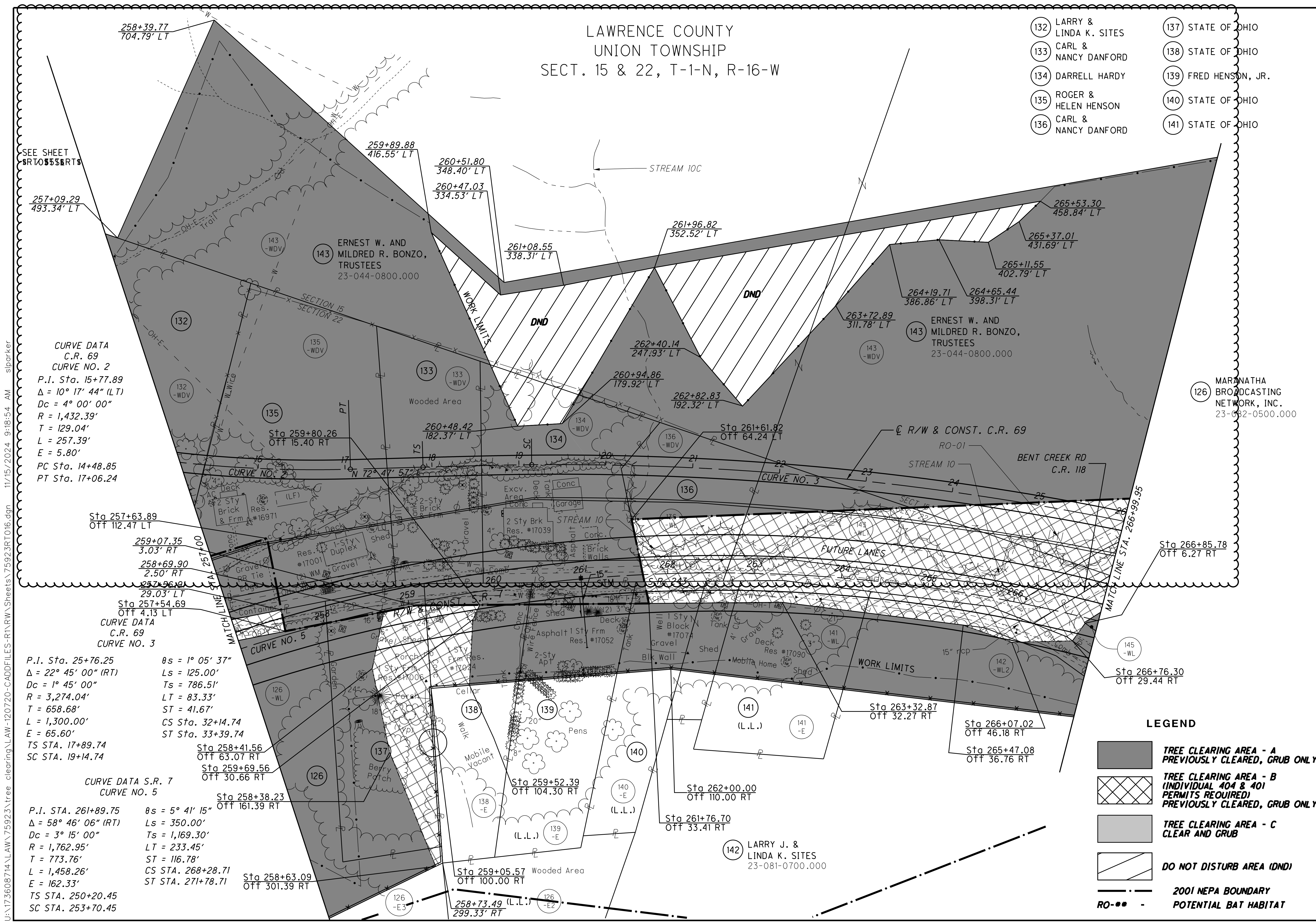
PID NO.  
**120720**

R/W DESIGNER TDW  
R/W REVIEWER JDH

TREE CLEARING PLAN - S.R. 7  
STA. 257+00 TO STA. 266+99.95

LAW-7-2.17  
TREE CLEARING

22P  
1247



SEE SHEET  
S.R. 7-2.17

257+09.29  
493.34' LT

258+39.77  
704.79' LT

259+89.88  
416.55' LT

260+51.80  
348.40' LT

260+47.03  
334.53' LT

261+96.82  
352.52' LT

261+08.55  
338.31' LT

265+53.30  
458.84' LT

265+37.01  
431.69' LT

265+11.55  
402.79' LT

264+19.71  
386.86' LT

264+65.44  
398.31' LT

263+72.89  
311.78' LT

262+40.14  
247.93' LT

260+94.86  
179.92' LT

262+82.83  
192.32' LT

Sta 261+61.82  
Off 64.24 LT

265+37.01  
431.69' LT

265+11.55  
402.79' LT

264+19.71  
386.86' LT

264+65.44  
398.31' LT

263+72.89  
311.78' LT

262+40.14  
247.93' LT

260+94.86  
179.92' LT

262+82.83  
192.32' LT

Sta 261+61.82  
Off 64.24 LT

MARIONATHA  
BROADCASTING  
NETWORK, INC.  
23-082-0500.000

CURVE DATA  
C.R. 69  
CURVE NO. 2  
P.I. Sta. 15+77.89  
 $\Delta = 10^\circ 17' 44''$  (LT)  
Dc = 4° 00' 00"  
R = 1,432.39'  
T = 129.04'  
L = 257.39'  
E = 5.80'  
PC Sta. 14+48.85  
PT Sta. 17+06.24

Sta 257+63.89  
Off 112.47 LT

259+07.35  
3.03' RT

258+69.90  
2.50' RT

257+56.80  
29.03' LT

Sta 257+54.69  
Off 4.13 LT

CURVE DATA  
C.R. 69  
CURVE NO. 3

P.I. Sta. 25+76.25  
 $\Delta = 22^\circ 45' 00''$  (RT)  
Dc = 1° 45' 00"  
R = 3,274.04'  
T = 658.68'  
L = 1,300.00'  
E = 65.60'  
CS Sta. 32+14.74  
TS STA. 17+89.74  
SC STA. 19+14.74

$\theta s = 1^\circ 05' 37''$   
Ls = 125.00'  
Ts = 786.51'  
LT = 83.33'  
ST = 41.67'  
CS Sta. 32+14.74  
ST Sta. 33+39.74

CURVE DATA S.R. 7  
CURVE NO. 5

P.I. STA. 261+89.75  
 $\Delta = 58^\circ 46' 06''$  (RT)  
Dc = 3° 15' 00"  
R = 1,762.95'  
T = 773.76'  
L = 1,458.26'  
E = 162.33'  
TS STA. 250+20.45  
SC STA. 253+70.45

$\theta s = 5^\circ 41' 15''$   
Ls = 350.00'  
Ts = 1,169.30'  
LT = 233.45'  
ST = 116.78'  
CS STA. 268+28.71  
ST STA. 271+78.71

Sta 258+41.56  
Off 63.07 RT

Sta 259+69.56  
Off 30.66 RT

Sta 258+38.23  
Off 161.39 RT

Sta 258+63.09  
Off 301.39 RT

Sta 259+52.39  
Off 104.30 RT

Sta 262+00.00  
Off 110.00 RT

Sta 261+76.70  
Off 33.41 RT

Sta 263+32.87  
Off 32.27 RT

Sta 266+07.02  
Off 46.18 RT

Sta 265+47.08  
Off 36.76 RT

Sta 266+85.78  
Off 6.27 RT

Sta 266+76.30  
Off 29.44 RT

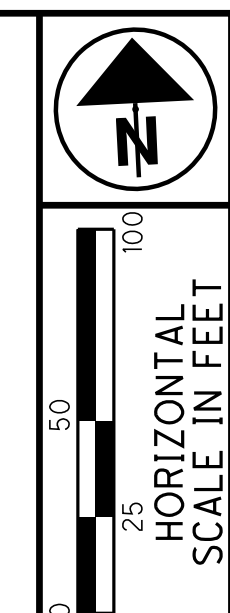
LEGEND

- TREE CLEARING AREA - A PREVIOUSLY CLEARED, GRUB ONLY
- TREE CLEARING AREA - B (INDIVIDUAL 404 & 401 PERMITS REQUIRED) PREVIOUSLY CLEARED, GRUB ONLY
- TREE CLEARING AREA - C CLEAR AND GRUB
- DO NOT DISTURB AREA (DND)
- 2001 NEPA BOUNDARY
- POTENTIAL BAT HABITAT

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LAWRENCE COUNTY  
UNION TOWNSHIP  
SECT. 14, 15 & 22 T-1-N, R-16-W

FOR LOCATION AND TYPE OF LA-R/W FENCE  
SEE THE TABLE IN THE ROADWAY PLAN



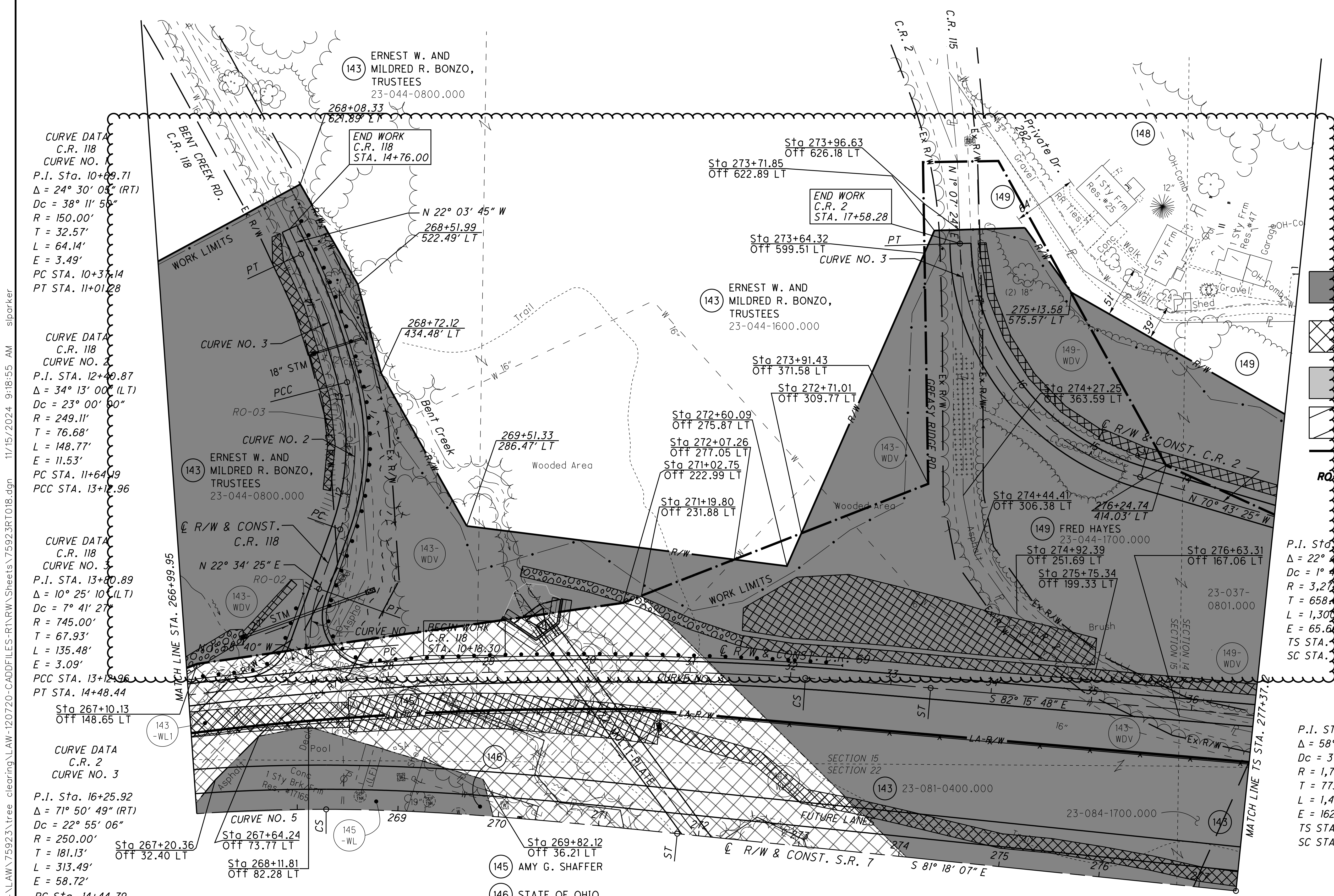
PID NO. 120720

R/W DESIGNER TDW  
R/W REVIEWER JQH

TREE CLEARING PLAN - S.R. 7  
STA. 266+99.95 TO STA. 277+37.12 (NORTH)

LAW-7-2.17  
TREE CLEARING

220  
1247



CURVE DATA  
C.R. 118  
CURVE NO. 1  
P.I. Sta. 10+69.71  
 $\Delta = 24^\circ 30' 03''$  (RT)  
 $Dc = 38^\circ 11' 56''$   
 $R = 150.00'$   
 $T = 32.57'$   
 $L = 64.14'$   
 $E = 3.49'$   
PC STA. 10+37.14  
PT STA. 11+01.28

CURVE DATA  
C.R. 118  
CURVE NO. 2  
P.I. STA. 12+40.87  
 $\Delta = 34^\circ 13' 00''$  (LT)  
 $Dc = 23^\circ 00' 00''$   
 $R = 249.11'$   
 $T = 76.68'$   
 $L = 148.77'$   
 $E = 11.53'$   
PC STA. 11+64.19  
PCC STA. 13+12.96

CURVE DATA  
C.R. 118  
CURVE NO. 3  
P.I. STA. 13+80.89  
 $\Delta = 10^\circ 25' 10''$  (LT)  
 $Dc = 7^\circ 41' 27''$   
 $R = 745.00'$   
 $T = 67.93'$   
 $L = 135.48'$   
 $E = 3.09'$   
PCC STA. 13+12.96  
PT STA. 14+48.44

CURVE DATA  
C.R. 2  
CURVE NO. 3  
P.I. Sta. 16+25.92  
 $\Delta = 71^\circ 50' 49''$  (RT)  
 $Dc = 22^\circ 55' 06''$   
 $R = 250.00'$   
 $T = 181.13'$   
 $L = 313.49'$   
 $E = 58.72'$   
PC Sta. 14+44.79  
PT Sta. 17+58.28

- LEGEND**
- TREE CLEARING AREA - A PREVIOUSLY CLEARED, GRUB ONLY
  - TREE CLEARING AREA - B (INDIVIDUAL 404 & 401 PERMITS REQUIRED) PREVIOUSLY CLEARED, GRUB ONLY
  - TREE CLEARING AREA - C CLEAR AND GRUB
  - DO NOT DISTURB AREA (DND)
  - 2001 NEPA BOUNDARY
  - POTENTIAL BAT HABITAT

CURVE DATA  
C.R. 69  
CURVE NO. 3  
P.I. Sta. 25+76.25  
 $\Delta = 22^\circ 45' 00''$  (RT)  
 $Dc = 1^\circ 45' 00''$   
 $R = 3,271.04'$   
 $T = 658.68'$   
 $L = 1,309.00'$   
 $E = 65.60'$   
TS STA. 27+89.74  
SC STA. 29+14.74

$\theta s = 1^\circ 05' 37''$   
 $Ls = 125.00'$   
 $Ts = 786.51'$   
 $LT = 83.33'$   
 $ST = 41.67'$   
 $CS Sta. 32+14.74$   
 $ST Sta. 33+39.74$

CURVE DATA  
S.R. 7  
CURVE NO. 5  
P.I. STA. 261+89.75  
 $\Delta = 58^\circ 46' 06''$  (RT)  
 $Dc = 3^\circ 15' 00''$   
 $R = 1,762.95'$   
 $T = 773.76'$   
 $L = 1,458.26'$   
 $E = 162.33'$   
TS STA. 250+20.45  
SC STA. 253+70.45

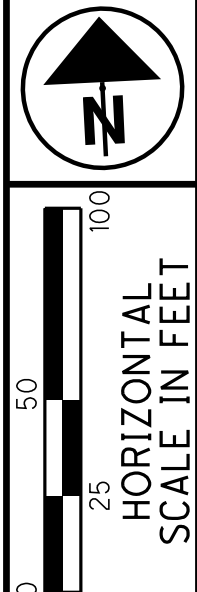
$\theta s = 5^\circ 41' 15''$   
 $Ls = 350.00'$   
 $Ts = 1,169.30'$   
 $LT = 233.45'$   
 $ST = 116.78'$   
 $CS STA. 268+28.71$   
 $ST STA. 271+78.71$

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LAWRENCE COUNTY  
UNION TOWNSHIP  
SECT. 22 & 23, T-1-N, R-16-W

CURVE DATA  
S.R. 7  
CURVE NO. 5

P.I. STA. 261+89.75     $\theta s = 5^{\circ} 41' 15''$   
 $\Delta = 58^{\circ} 46' 06''$  (RT)     $Ls = 350.00'$   
 $Dc = 3^{\circ} 15' 00''$      $Ts = 1,169.30'$   
 $R = 1,762.95'$      $LT = 233.45'$   
 $T = 773.76'$      $ST = 116.78'$   
 $L = 1,458.26'$      $CS STA. 268+28.71$   
 $E = 162.33'$      $ST STA. 271+78.71$   
 $TS STA. 250+20.45$   
 $SC STA. 253+70.45$

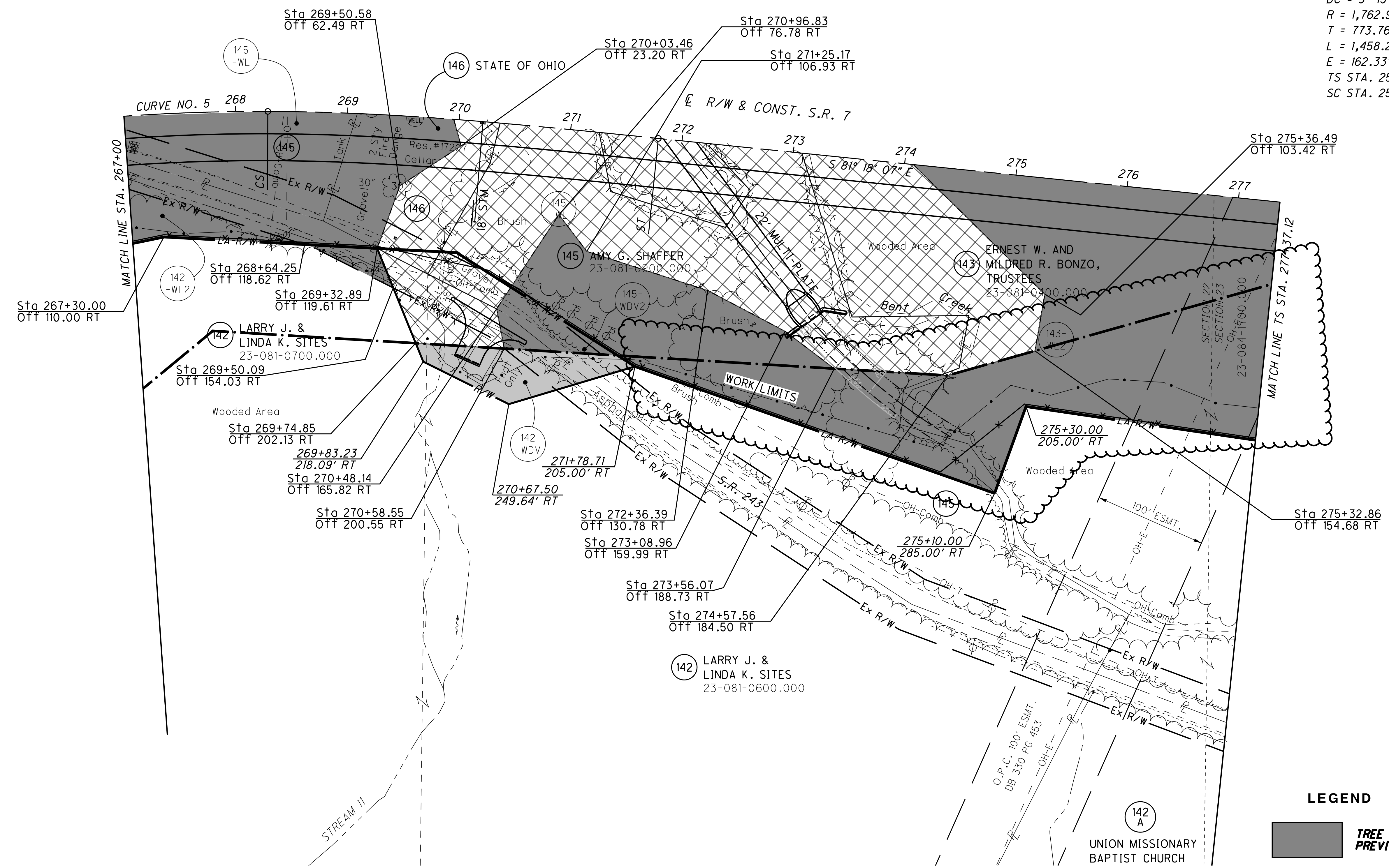


PID NO. **120720**  
 R/W DESIGNER TDW  
 R/W REVIEWER JDH

**TREE CLEARING PLAN - S.R. 7**  
**STA. 267+00 TO STA. 277+37.12 (SOUTH)**

**LAW-7-2.17**  
**TREE CLEARING**

22R  
1247



**LEGEND**

- TREE CLEARING AREA - A  
PREVIOUSLY CLEARED, GRUB ONLY
- TREE CLEARING AREA - B  
(INDIVIDUAL 404 & 401  
PERMITS REQUIRED)  
PREVIOUSLY CLEARED, GRUB ONLY
- TREE CLEARING AREA - C  
CLEARING AND GRUBBING
- DO NOT DISTURB AREA (DND)
- 2001 NEPA BOUNDARY
- RO-\*\*- POTENTIAL BAT HABITAT

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LAWRENCE COUNTY  
UNION TOWNSHIP  
SECT. 14 & 23, T-1-N, R-16-W

CURVE DATA  
C.R. 69  
CURVE NO. 4

P.I. STA. 42+81.74  
 $\Delta = 4^\circ 32' 03''$  (LT)  
 $Dc = 0^\circ 30' 00''$   
 $R = 11,459.16'$   
 $T = 453.67'$   
 $L = 906.86'$   
 $E = 8.98'$   
 $e_{max} = 1.60\%$   
PC STA. 38+28.07  
PT STA. 47+34.93

CURVE DATA  
C.R. 2  
CURVE NO. 1

P.I. Sta. 10+85.37  
 $\Delta = 42^\circ 28' 52''$  (LT)  
 $Dc = 38^\circ 11' 49''$   
 $R = 150.00'$   
 $T = 58.30'$   
 $L = 111.21'$   
 $E = 10.93'$   
PC Sta. 10+27.07  
PCC Sta. 11+38.28

CURVE DATA  
C.R. 2  
CURVE NO. 2

P.I. Sta. 12+19.19  
 $\Delta = 35^\circ 52' 10''$  (LT)  
 $Dc = 22^\circ 55' 06''$   
 $R = 250.00'$   
 $T = 80.91'$   
 $L = 156.51'$   
 $E = 12.77'$   
PCC Sta. 11+38.28  
PT Sta. 12+94.79

CURVE DATA  
C.R. 69  
CURVE NO. 4

P.I. STA. 42+81.74  
 $\Delta = 4^\circ 32' 03''$  (LT)  
 $Dc = 0^\circ 30' 00''$   
 $R = 11,459.16'$   
 $T = 453.67'$   
 $L = 906.86'$   
 $E = 8.98'$   
PC STA. 38+28.07  
PT STA. 47+34.93

- 143 ERNEST W. AND MILDRED R. BONZO, TRUSTEES
- 147 CHARLES MAYENSCHEN AND NORMA MAYENSCHEN
- 148 WILLIAM W. ELDER, JR. & BETTY T. ELDER

- 149 FRED HAYES
- 150 MARY MASSIE

- 153 ROMAINE A. MARTING
- 155 ERNEST W. AND MILDRED R. BONZO, TRUSTEES
- 157 MICHAEL J. RILEY

- 156 CARL & FAYE MAYENSCHEN  
23-038-1000.001

LEGEND

- TREE CLEARING AREA - A PREVIOUSLY CLEARED, GRUB ONLY
- TREE CLEARING AREA - B (INDIVIDUAL 404 & 401 PERMITS REQUIRED) PREVIOUSLY CLEARED, GRUB ONLY
- TREE CLEARING AREA - C CLEAR AND GRUB
- DO NOT DISTURB AREA (DND)
- 2001 NEPA BOUNDARY
- POTENTIAL BAT HABITAT

CURVE DATA  
S.R. 7  
CURVE NO. 6

P.I. STA. 280+92.68  
 $\Delta = 5^\circ 51' 21''$  (RT)  
 $Dc = 1^\circ 00' 00''$   
 $R = 5,729.58'$   
 $T = 230.42'$   
 $L = 460.59'$   
 $E = 4.63'$   
TS STA. 277+37.12  
SC STA. 278+62.12

$\theta s = 0^\circ 37' 30''$   
 $Ls = 125.00'$   
 $Ts = 355.56'$   
 $LT = 83.33'$   
 $ST = 41.67'$   
CS STA. 283+22.71  
ST STA. 284+47.71

**CAUTION:**  
APPROX. LOCATION OF ABANDONED NATURAL GAS WELL. API WELL NUMBER 34087600970000. LOCATION REPORTED AT 38.457105, -82.408853. PLUGGED AND ABANDONED 1952. SEE SPECIAL PROVISION.

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TREE CLEARING PLAN - S.R. 7  
STA. 277+37.12 TO STA. 291+00 (NORTH)

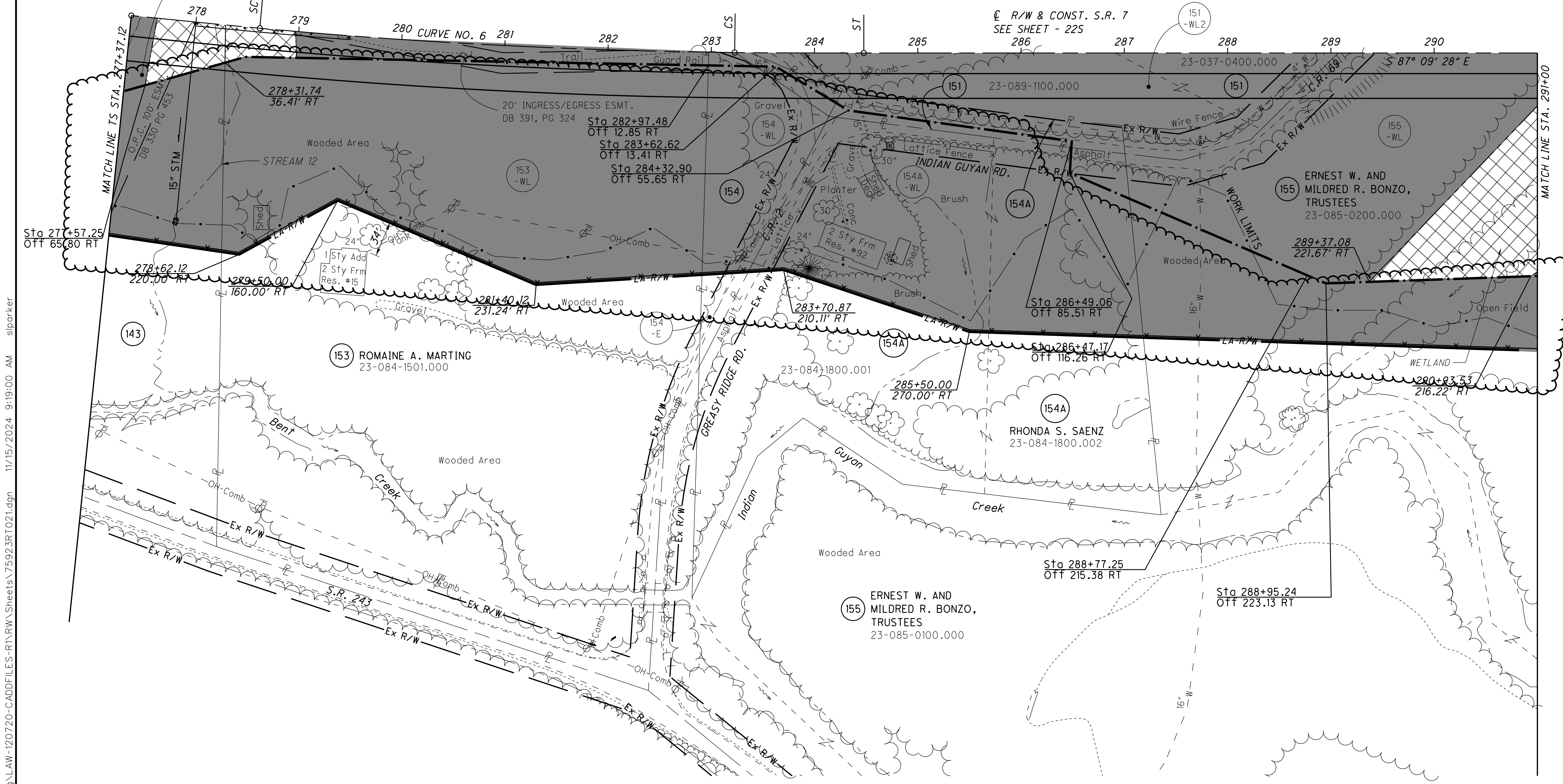
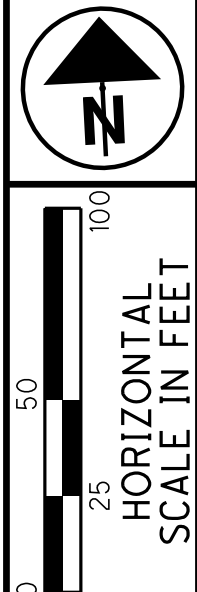
TREE CLEARING

PID NO. 120720

R/W DESIGNER TDW R/W REVIEWER JDH

225  
1247

LAWRENCE COUNTY  
UNION TOWNSHIP  
SECT. 23, T-1-N, R-16-W



CURVE DATA  
S.R. 7  
CURVE NO. 6

P.I. STA. 280+92.68     $\theta_s = 0^\circ 37' 30''$   
 $\Delta = 5^\circ 51' 21''$  (RT)     $L_s = 125.00'$   
 $D_c = 1^\circ 00' 00''$      $T_s = 355.56'$   
 $R = 5,729.58'$      $LT = 83.33'$   
 $T = 230.42'$      $ST = 41.67'$   
 $L = 460.59'$     CS STA. 283+22.71  
 $E = 4.63'$     ST STA. 284+47.71

- (143) ERNEST W. AND MILDRED R. BONZO, TRUSTEES
- (151) ERNEST W. AND MILDRED R. BONZO, TRUSTEES
- (154) DANNY HOLSCHUH

LEGEND

- TREE CLEARING AREA - A PREVIOUSLY CLEARED, GRUB ONLY
- TREE CLEARING AREA - B (INDIVIDUAL 404 & 401 PERMITS REQUIRED) PREVIOUSLY CLEARED, GRUB ONLY
- DO NOT DISTURB AREA (DND)
- 200' NEPA BOUNDARY
- RO-\*\*- POTENTIAL BAT HABITAT

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PID NO.  
**120720**

R/W DESIGNER TDW  
R/W REVIEWER JWH






**TREE CLEARING PLAN - S.R. 7**  
**STA. 277+37.12 TO STA. 291+00 (SOUTH)**

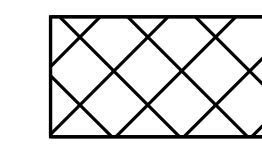
**LAW-7-2.17**  
**TREE CLEARING**

22T  
1247

LAWRENCE COUNTY  
UNION TOWNSHIP  
SECT. 14 & 23, T-1-N, R-16-W

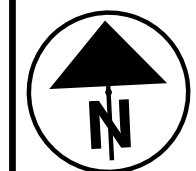
LEGEND

-  TREE CLEARING AREA - A  
PREVIOUSLY CLEARED,  
GRUB ONLY
-  TREE CLEARING AREA - C  
CLEAR AND GRUB
-  DO NOT DISTURB AREA (DND)
-  2001 NEPA BOUNDARY
-  POTENTIAL BAT HABITAT



TREE CLEARING AREA - B  
(INDIVIDUAL 404 & 401  
PERMITS REQUIRED)  
PREVIOUSLY CLEARED,  
GRUB ONLY

CURVE DATA  
C.R. 69  
CURVE NO. 5  
P.I. STA. 56+05.43  
 $\Delta = 56^\circ 46' 59" (RT)$   
 $Dc = 38^\circ 11' 50"$   
 $R = 150.00'$   
 $T = 81.08'$   
 $L = 148.66'$   
 $E = 20.51'$   
PC STA. 55+24.35  
PT STA. 56+73.01



0 50 100  
25  
HORIZONTAL  
SCALE IN FEET

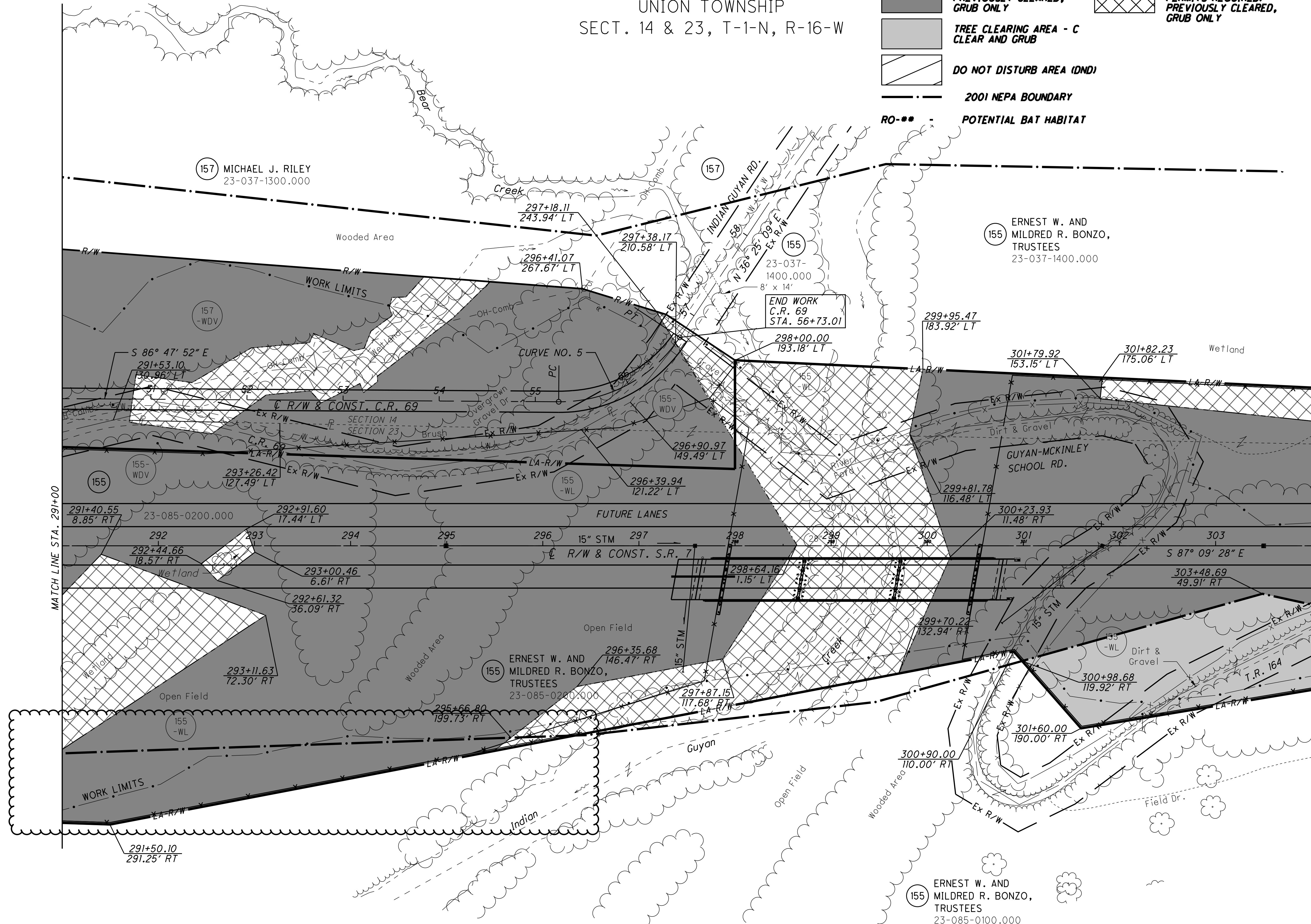
PID NO.  
**120720**

R/W DESIGNER TDW  
R/W REVIEWER JDH

TREE CLEARING PLAN - S.R. 7  
STA. 291+00 TO STA. 304+00

LAW-7-2.17  
TREE CLEARING

22U  
1247



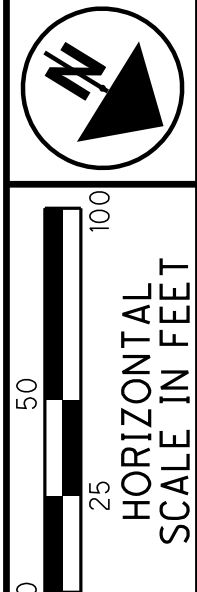
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- 125 LARRY J. SITES, II, ETAL.
- 126 STATE OF OHIO
- 128 LAWRENCE A. & INEZ M. THOMPSON
- 131 STATE OF OHIO
- 132 STATE OF OHIO
- 135 ROGER & HELEN HENSON

I-TR 251+84.51  
60.55' RT

LAWRENCE COUNTY  
UNION TOWNSHIP  
SECT. 15 & 22, T-1-N, R-16-W

CURVE DATA	CURVE DATA	CURVE DATA	CURVE DATA
C.R. 69	C.R. 69	S.R. 243	S.R. 243
CURVE NO. 1	CURVE NO. 2	CURVE NO. 1	CURVE NO. 2
P.I. Sta. 10+33.80	P.I. Sta. 15+77.89	P.I. Sta. 11+06.30	P.I. STA. 15+51.11
$\Delta = 20^\circ 52' 36''$ (RT)	$\Delta = 10^\circ 17' 44''$ (LT)	$\Delta = 22^\circ 39' 36''$ (RT)	$\Delta = 5^\circ 37' 36''$ (LT)
$Dc = 24^\circ 54' 40''$	$Dc = 4^\circ 00' 00''$	$Dc = 24^\circ 54' 40''$	$Dc = 1^\circ 30' 00''$
$R = 230.00'$	$R = 1,432.39'$	$R = 230.00'$	$R = 3,819.72'$
$T = 42.37'$	$T = 129.04'$	$T = 46.08'$	$T = 137.62'$
$L = 83.80'$	$L = 257.39'$	$L = 90.96'$	$L = 275.13'$
$E = 3.87'$	$E = 5.80'$	$E = 4.57'$	$E = 2.48'$
PC STA. 9+91.43	PC STA. 14+48.85	PC STA. 10+60.22	TS STA. 13+13.39
PT STA. 10+75.23	PT STA. 17+06.24	PT STA. 11+51.18	SC STA. 14+13.39
			$\theta_s = 00^\circ 45' 00''$
			$Ls = 100.00'$
			$Ts = 237.72'$
			$LT = 66.67'$
			$ST = 33.33'$
			$CS Sta. 16+88.52$
			$ST Sta. 17+88.52$

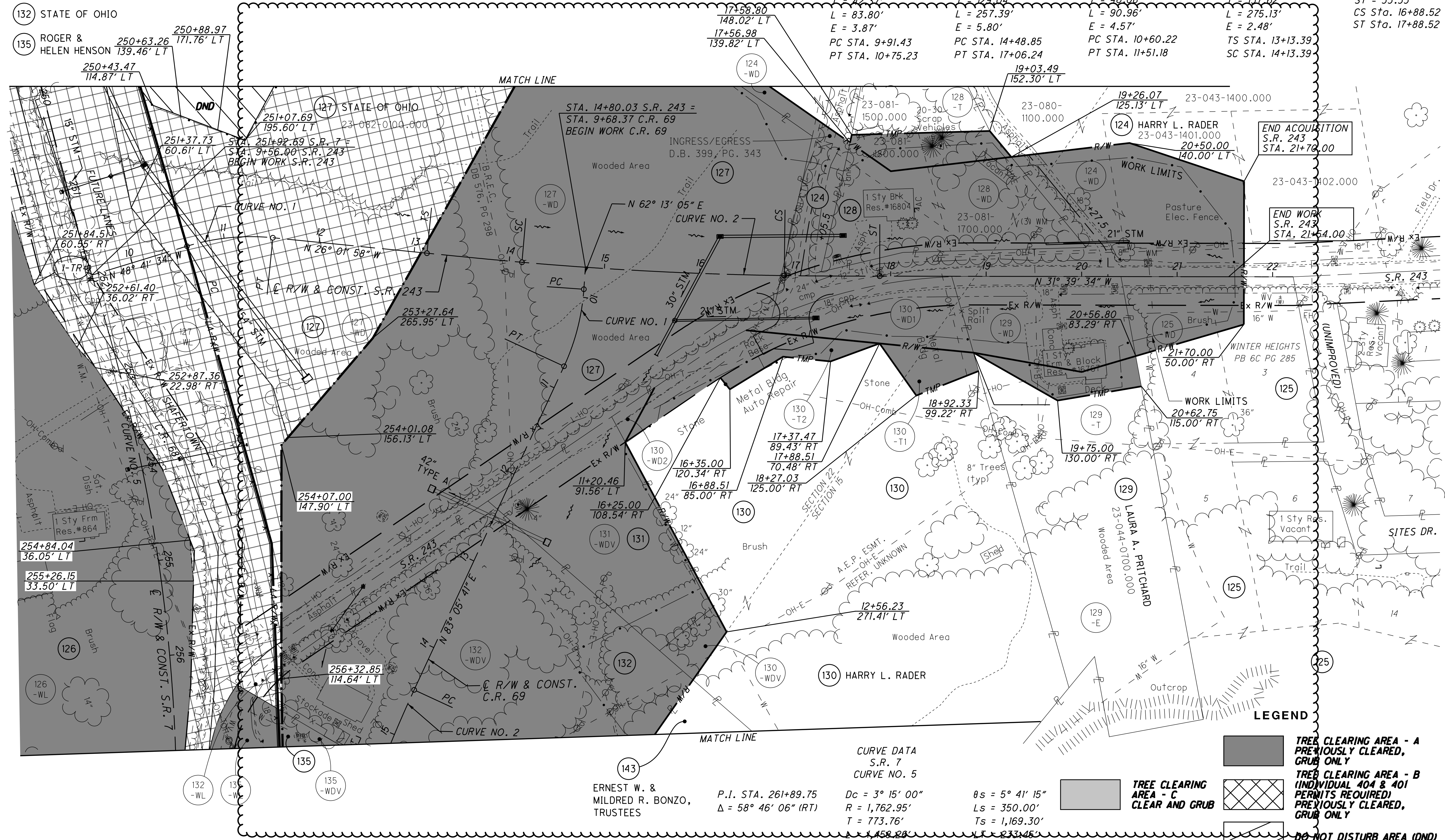


PID NO. 120720  
R/W DESIGNER TDW  
R/W REVIEWER JDH

TREE CLEARING PLAN - S.R. 243  
S.R. 243

LAW-7-2.17  
TREE CLEARING

22HH  
1247

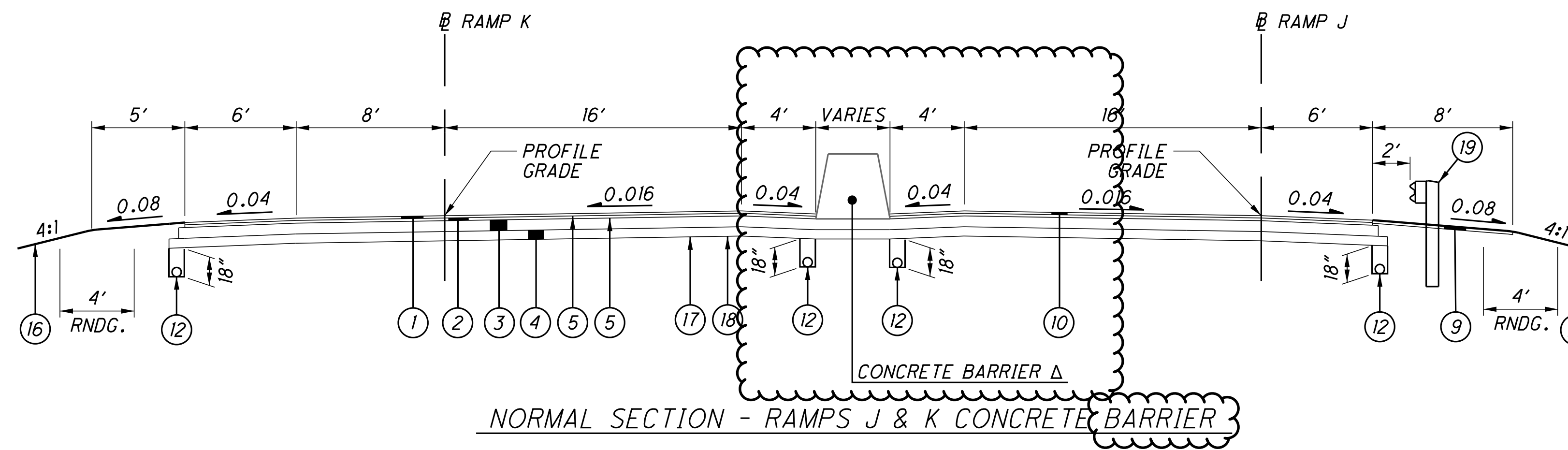


**LEGEND**

- TREE CLEARING AREA - A PREVIOUSLY CLEARED, GRUB ONLY
- TREE CLEARING AREA - B (INDIVIDUAL 404 & 401 PERMITS REQUIRED) PREVIOUSLY CLEARED, GRUB ONLY
- TREE CLEARING AREA - C CLEAR AND GRUB
- DO NOT DISTURB AREA (DND)
- 2001 NEPA BOUNDARY
- POTENTIAL BAT HABITAT

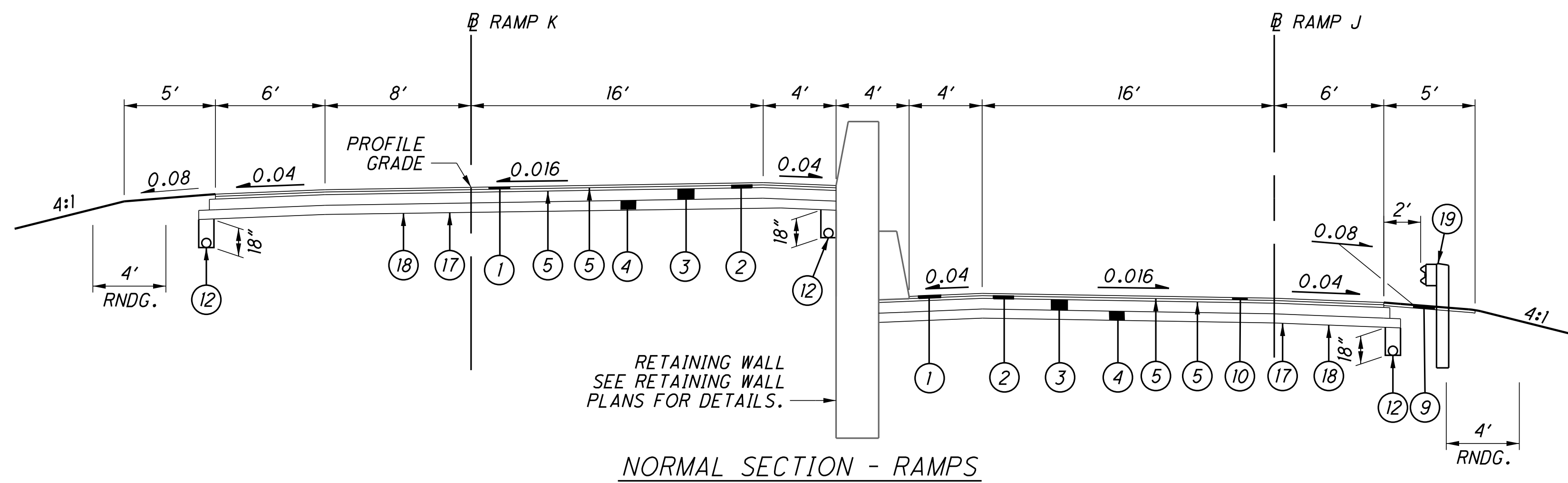
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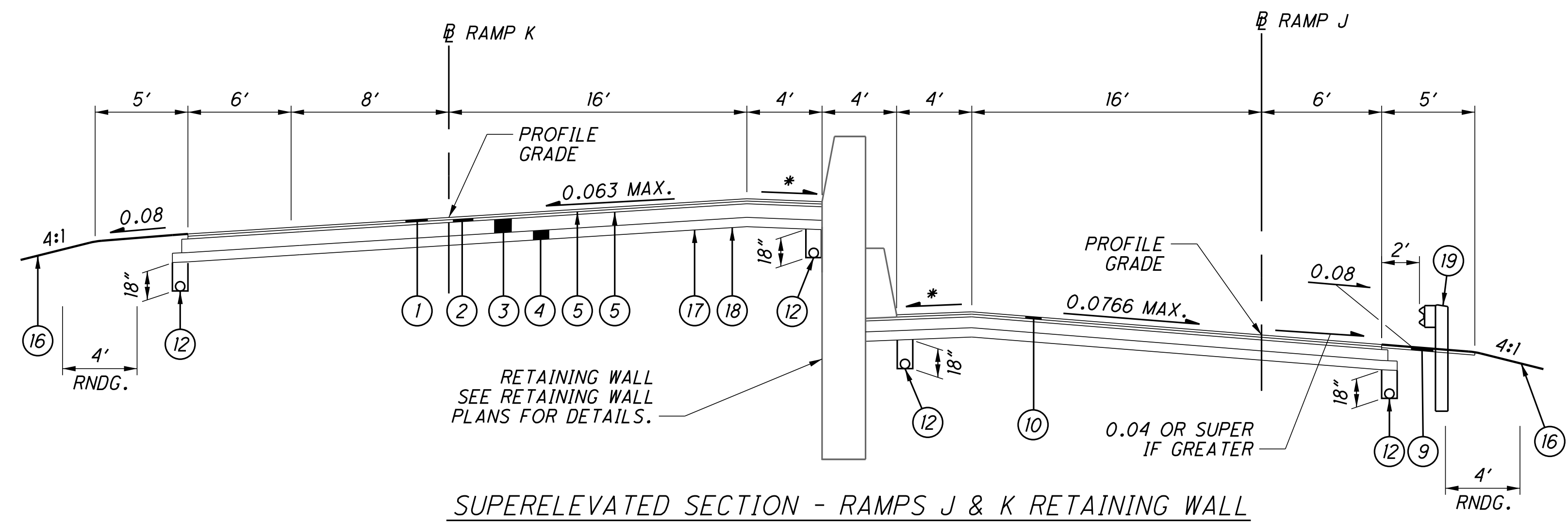
NORMAL SECTION - RAMPS J & K CONCRETE BARRIER

SECTION APPLIES:  
 STA. 384+09.45 TO STA. 386+08.27  
 Δ STA. 385+45.00 TO STA. 386+08.27  
 BALLOON 10 APPLIES TO RAMP J ONLY. SEE PAVEMENT CALCULATIONS FOR ADDITIONAL DETAILS.



NORMAL SECTION - RAMPS

SECTION APPLIES:  
 STA. 386+08.27 TO STA. 387+63.83  
 BALLOON 10 APPLIES TO RAMP J ONLY. SEE PAVEMENT CALCULATIONS FOR ADDITIONAL DETAILS.



SUPERELEVATED SECTION - RAMPS J & K RETAINING WALL

SECTION APPLIES:  
 STA. 387+63.83 TO STA. 388+65.84  
 BALLOON 10 APPLIES TO RAMP J ONLY. SEE PAVEMENT CALCULATIONS FOR ADDITIONAL DETAILS.

NOTES:  
 + SUPERELEVATION TO BE OPPOSITE HAND TO TYPICAL SHOWN FOR LEGEND, SEE SHEET 23  
 FOR DITCH DETAILS, SEE SHEET 32  
 FOR EDGE COURSE DETAILS, SEE SHEET 33  
 \* FOR SUPERELEVATED SHOULDER DETAILS, SEE DETAIL A, SHEET 33  
 FOR EXACT LOCATION OF UNDERDRAINS, SEE UNDERDRAIN TABLE SHEETS 674-678



**ROUNDING**

THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLIES TO ALL CROSS-SECTIONS EVEN THOUGH OTHERWISE SHOWN.

**UTILITIES**

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

FRONTIER COMMUNICATIONS  
1315 ALBERT STREET  
PORTSMOUTH, OHIO 45662  
PHONE: (740) 354-0521  
MS. DENA MARTIN

AMERICAN ELECTRIC POWER (DISTRIBUTION)  
38831 STATE ROUTE 7  
REEDSVILLE, OHIO 45772  
PHONE: (740) 985-3054  
MR. CLARKE SAUNDERS

AMERICAN ELECTRIC POWER (TRANSMISSION)  
8600 SMITHS HILL ROAD  
NEW ALBANY, OHIO 43054  
PHONE: (380) 205-5072  
MR. MICHAEL CARR

BUCKEYE RURAL ELECTRIC CO-OP, INC.  
P.O. BOX 200  
RIO GRANDE, OHIO 45674  
PHONE: (740) 379-9659  
MR. WESTON CLARY

HECLA WATER ASSOCIATION, INC.  
3190 SR 141  
IRONTON, OHIO 45638  
PHONE: (740) 533-0526, EXT. 5  
MR. TIM DALTON

AQUA OHIO (FORMERLY OHIO-AMERICAN WATER COMPANY)  
5481 BUENOS ARIES BLVD.  
WESTERVILLE, OHIO 43081  
PHONE: (614) 882-6586, EXT. 50546  
MR. VINNY LUPICA

COLUMBIA GAS OF OHIO  
215 N. 7TH STREET  
IRONTON, OHIO 45638  
PHONE: (740) 513-8529  
MS. TORI PIERCE

MYERS DRILLING COMPANY  
826 20TH STREET  
HUNTINGTON, WV. 25703-1850  
PHONE: (304) 736-7431  
MR. JOHN DIAL

ARMSTRONG CABLE SERVICES  
9651 COUNTY ROAD 1  
SOUTH POINT, OHIO 45680  
PHONE: (740) 451-1827  
MR. JARAN BARTOE

UNION-ROME TOWNSHIPS  
SUBSEWER DISTRICT  
5481 BUENOS ARIES BLVD.  
WESTERVILLE, OHIO 43081  
PHONE: (614) 882-6586, EXT. 50546  
MR. VINNY LUPICA

CHARTER COMMUNICATIONS  
(AKA SPECTRUM FKA TIME WARNER CABLE)  
1617 FOXHAVEN DRIVE  
RICHMOND, KENTUCKY 40475  
PHONE: (859) 626-4829  
MR. GREG RUSSELL

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.

**BENCHING OF FOUNDATION SLOPES**

ALTHOUGH CROSS-SECTIONS INDICATE SPECIFIC DIMENSIONS FOR PROPOSED BENCHING OF THE EMBANKMENT FOUNDATIONS IN CERTAIN AREAS, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. BENCH ALL OTHER SLOPED EMBANKMENT AREAS AS SET FORTH IN SECTION 203.05 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS (C&MS). NO ADDITIONAL PAYMENT WILL BE MADE FOR BENCHING REQUIRED UNDER THE PROVISIONS OF SECTION 203.05.

**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: STATIC GPS (201)  
MONUMENT TYPE: TYPE A

**VERTICAL POSITIONING**

ORTHOMETRIC HEIGHT DATUM: NAVD88  
GEOID: GEOID09

**HORIZONTAL POSITIONING**

REFERENCE FRAME: NAD83 (CORS 96)  
ELLIPSOID: GRS80  
MAP PROJECTION: LAMBERT CONFORMAL CONIC  
COORDINATE SYSTEM: OHIO STATE PLANE, SOUTH ZONE  
COMBINED SCALE FACTOR: 1.000044500000  
(FROM GROUND TO SPC)

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 CMS 623.

UNITS ARE IN U.S. SURVEY FEET.

**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 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.

WHERE CONSTRUCTION ACTIVITIES ARE WITHIN 500 FEET OF RESIDENTIAL AREAS, CONSTRUCTION ACTIVITIES WILL BE LIMITED TO DAYTIME HOURS ONLY. THE FOLLOWING AREAS GIVE LOCATIONS WHERE WORK SHALL BE LIMITED TO DAYTIME HOURS ONLY:

- AREA 1: SR 7 STATION 165+00 TO STATION 220+00
- AREA 2: SR 7 STATION 381+00 TO STATION 409+00
- AREA 3: SR 775 STATION 45+30 TO STATION 70+75

**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.

NO WORK SHALL OCCUR IN THE DO NOT DISTURB AREAS AS SHOWN IN THE PLANS.

**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 144.23 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 SUBMIT FORM 7460-1 TO THE FAA. NOTIFY THE ODOT OFFICE OF AVIATION WHEN SUBMITTING 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 AVIATION PERMIT HAS BEEN FURNISHED TO THE PROJECT ENGINEER.

FEDERAL AVIATION ADMINISTRATION SOUTHWEST REGIONAL OFFICE OBSTRUCTION EVALUATION GROUP 1010 HILLWOOD PARKWAY FORT WORTH, TX 76177 FAX: (817) 222-5920  
HTTP://CEAAA.FAA.GOV

OHIO DEPARTMENT OF TRANSPORTATION OFFICE OF AVIATION  
2829 WEST DUBLIN-GRANVILLE ROAD COLUMBUS, OHIO 43235  
OHIO.AIRPORT.PROTECTION@DOT.OHIO.GOV

**RIGHT-OF-WAY FENCE CONSTRUCTION**

ALTHOUGH NOT SHOWN IN THE PLANS, THE CONTRACTOR HAS A 15' WORK AREA FOLLOWING ALONG AND INSIDE OF THE RIGHT-OF-WAY TO CONSTRUCT THE PROPOSED FENCE.

**CLEARING AND GRUBBING**

THE DEPARTMENT HAS AWARDED A SEPARATE CONTRACT (PID-120720) FOR TREE CLEARING ON A PORTION OF THE PROJECT. THE CONSTRUCTION PLANS FOR THAT CONTRACT ARE AVAILABLE AS A REFERENCE DOCUMENT ON THE DEPARTMENTS FTP SITE. THAT CONTRACT ONLY REQUIRED THE CUTTING AND REMOVAL OF TREES AND TREE TOPS FROM THE PROJECT LIMITS AND DID NOT REQUIRE GRUBBING OF STUMPS OR ROOTS.

THE LIMITS OF THAT CONTRACT WERE RESTRICTED BY A PRIOR 2001 NEPA FOOTPRINT, THEREFORE NOT ALL AREAS WITHIN THE CONSTRUCTION LIMITS WERE AVAILABLE TO RELEASE TO THAT CONTRACTOR.

THE TREE CLEARING CONTRACTOR WILL INSTALL SOIL AND EROSION BMP'S FOR THEIR WORK AND LEAVE THEM IN-PLACE FOR THIS CONTRACT TO USE. THIS CONTRACT SHALL ACCEPT THEM AS-IS.

DUE TO WATERWAY PERMITTING REQUIREMENTS, THE TREE CLEARING CONTRACTOR IS REQUIRED TO REMOVE TEMPORARY ACCESS FILLS AND CULVERTS THAT WERE INSTALLED FOR ANY TEMPORARY STREAM CROSSINGS, THEREFORE THIS CONTRACT SHOULD NOT ANTICIPATE THEM TO BE IN PLACE.

THE DEPARTMENT HAS NOT MARKED INDIVIDUAL TREES AND STUMPS FOR REMOVAL. UNLESS SPECIFICALLY DESIGNATED AS "DO NOT DISTURB" IN THE PLANS, REMOVE ALL TREES AND STUMPS WITHIN THE CONSTRUCTION LIMITS UNDER THE LUMP SUM BID FOR ITEM 201 - CLEARING AND GRUBBING, AS PER PLAN.

UNLESS OTHERWISE INCLUDED IN THE PLANS, THE CONTRACTOR SHALL REMOVE ANY EXISTING ORANGE PLASTIC CONSTRUCTION FENCE, WITHIN THE WORK AREA. THESE ITEMS ARE TO BE REMOVED PER CMS 202. ALL COSTS ASSOCIATED WITH THIS WORK INCLUDING DISPOSAL SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 201 - CLEARING AND GRUBBING, AS PER PLAN.

SEE ENVIRONMENTAL COMMITMENT PLAN NOTES ON SHEET 15 FOR TREE CLEARING RESTRICTION TIME FRAMES.

FOR INFORMATION ONLY:

THE FOLLOWING AREA IS TO BE CLEARED AND GRUBBED WITH THIS CONTRACT ..... 65.5 ACRES  
(AREAS SHOWN ON SHEETS 16-22 AND TREE CLEARING AREAS A AND B SHOWN ON SHEETS 22A-22JJ)

THE FOLLOWING AREA IS TO BE GRUBBED ONLY WITH THIS CONTRACT ..... 321.9 ACRES  
(TREE CLEARING AREAS A AND B SHOWN ON SHEETS 22A-22JJ)

**ITEM SPECIAL - PIEZOMETER**

INSTALL PIEZOMETERS AT SPECIFIED LOCATIONS TO MONITOR PORE WATER PRESSURES OF THE FOUNDATION SOILS PER THE GEOTECHNICAL DESIGN MANUAL (GDM) SECTION 502 (2024). INITIAL GROUNDWATER LEVELS SHOULD BE RECORDED PRIOR TO EMBANKMENT CONSTRUCTION. DURING EMBANKMENT CONSTRUCTION, IF ELEVATED GROUNDWATER LEVELS ARE OBSERVED, NO ADDITIONAL FILL SHOULD BE PLACED UNTIL WATER LEVELS RETURN TO PRE-EMBANKMENT ELEVATIONS.

ALL LABOR, EQUIPMENT AND MATERIALS NEEDED TO COMPLETE THE WORK, SHALL BE INCLUDED IN THE PRICE BID FOR ITEM SPECIAL - PIEZOMETER.

THE FOLLOWING TABLE HAS IDENTIFIED THE LOCATIONS AND QUANTITIES WHERE THESE SHALL BE INSTALLED.

STATION	OFFSET (FT)	ELEVATION OF PIEZOMETER TIP	ITEM 203 SPECIAL -PIEZOMETER (EACH)
136+00	60 LEFT	520	1
160+00	60 RIGHT	550	1
219+00	190 RIGHT	575	1
293+00	60 LEFT	525	1
297+68	CENTERLINE	520	1
300+81	CENTERLINE	525	1
322+00	60 RIGHT	570	1
322+00	190 RIGHT	535	1
329+00	190 RIGHT	570	1
340+00	160 LEFT	580	1
371+00	120 LEFT	568	1
377+00	25 LEFT	530	1
TOTAL CARRIED TO GENERAL SUMMARY			12

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**SEEDING AND MULCHING**

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

ITEM 659 - SOIL ANALYSIS TEST .....	14 EACH
ITEM 659 - REPAIR SEEDING AND MULCHING .....	59221 SY
ITEM 659 - INTER-SEEDING .....	59221 SY
ITEM 659 - COMMERCIAL FERTILIZER .....	166 TON
ITEM 659 - LIME .....	244.71 AC
ITEM 659 - WATER .....	6556 M GAL
ITEM 659 - MOWING .....	2665 M SF

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT- OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

**POST CONSTRUCTION STORM WATER TREATMENT**

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

**VEGETATED FILTER STRIP**

THIS PLAN UTILIZES VEGETATED FILTER STRIP(S) FOR POST CONSTRUCTION STORM WATER TREATMENT. PLACE EITHER ITEM 660 SODDING OR ITEM 659 SEEDING AND MULCHING WITH A 4-INCH LIFT OF TOPSOIL AND ITEM 670, SLOPE EROSION PROTECTION TO ALL DISTURBED AREAS DESIGNATED AS VEGETATED FILTER STRIPS, THE EDGE OF SHOULDER, AND THE FORESLOPE AS SPECIFIED IN THE PLANS.

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR PROVIDING THE VEGETATED FILTER STRIPS AS SHOWN ON SHEET 87.

ITEM 659 - TOPSOIL .....	468 CY
ITEM 670 - SLOPE EROSION PROTECTION .....	4207 SY

**VEGETATED BIOFILTER**

THIS PLAN UTILIZES VEGETATED BIOFILTER(S) FOR POST CONSTRUCTION STORM WATER TREATMENT. PLACE EITHER ITEM 660 SODDING OR ITEM 659 SEEDING AND MULCHING WITH A 4-INCH LIFT OF TOPSOIL AS SHOWN IN THE PLANS TO ANY DISTURBED AREA ON THE SHOULDER AND FORESLOPE DRAINING TO A VEGETATED BIOFILTER. THE DITCH FOR EACH VEGETATED BIOFILTER SHALL BE TRAPEZOIDAL, AS SHOWN IN THE PLAN CROSS SECTIONS. PROVIDE ITEM 670 AS SPECIFIED IN THE PLANS.

**EXTENDED DETENTION BASIN**

THIS PLAN UTILIZES EXTENDED DETENTION BASIN(S) FOR POST CONSTRUCTION STORM WATER TREATMENT. DETENTION BASINS MAY BE USED AS SEDIMENT CONTROL DEVICES DURING CONSTRUCTION. FOLLOWING STABILIZATION OF THE TRIBUTARY AREA, FINAL GRADING OF THE DETENTION BASIN MUST MATCH THE PLANS. THE DETENTION BASIN OUTLET STRUCTURE FOR CONSTRUCTION SEDIMENT CONTROL MUST BE REMOVED AND THE OUTLET STRUCTURE MUST BE MADE TO MATCH THE DESIGN SHOWN IN THE PLANS.

**ITEM 659 - TOPSOIL, AS PER PLAN**

THE CONTRACTOR SHALL EXCAVATE FOR AND PLACE 12" OF TOPSOIL IN THE AREAS OF THE VEGETATED BIOFILTERS THAT HAVE BEEN IDENTIFIED IN THE PLANS.

ALL LABOR, EQUIPMENT AND MATERIALS NEEDED TO COMPLETE THE WORK, INCLUDING EXCAVATION AND DISPOSAL, SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 659 - TOPSOIL, AS PER PLAN.

THE FOLLOWING TABLE HAS IDENTIFIED THE LOCATIONS AND QUANTITIES WHERE THE WORK ABOVE APPLIES.

STATION	TO	STATION	SIDE	ITEM 659 - TOPSOIL, AS PER PLAN (CY)
175+00.00	-	180+30.00	LT.	197
223+50.00	-	226+50.00	LT.	78
307+00.00	-	315+00.00	LT.	297
327+00.00	-	334+50.00	LT.	278
343+00.00	-	351+00.00	LT.	297
351+00.00	-	360+00.00	RT.	300
64+74.00	-	391+50.00	LT.	294
TOTAL CARRIED TO GENERAL SUMMARY				1741

**MATCH LINES ON CROSS SECTIONS**

THE INTENT OF THE MATCH LINE IS TO SHOW THE RELATIONSHIP OF THE PROPOSED GRADING BETWEEN TWO PROPOSED ROADS. ADJUSTMENTS IN THE FIELD MAY BE NECESSARY.

**ITEM 605 - AGGREGATE DRAINS**

AGGREGATE DRAINS SHALL BE PLACED AT 50 FOOT INTERVALS ON EACH SIDE OF NORMAL CROWNED SECTIONS, STAGGERED SO THAT EACH DRAIN IS 25 FEET FROM THE ADJACENT DRAIN ON THE OPPOSITE SIDE, AND AT 25 FOOT INTERVALS ON THE LOW SIDE ONLY OF SUPERELEVATED SECTIONS. AN AGGREGATE DRAIN SHALL BE PLACED AT THE LOW POINT OF EACH SAG VERTICAL CURVE.

ROAD NAME	NUMBER OF AGG. DRAINS	AVG. LENGTH (FT.)	TOTAL (FT.)
BRENTWOOD EMERGENCY ACCESS	37	8	296
HENSON HOLLOW EMERGENCY ACCESS	10	11	110
LYNN LANE	16	10	160
DOGWOOD LANE EXTENSION	14	8	112
C.R. 69	184	11	2024
C.R. 118	19	11	209
C.R. 2	30	16	480
TOTAL CARRIED TO THE GENERAL SUMMARY			3391

**ITEM 611 - CATCH BASIN, NO. 5A, AS PER PLAN  
ITEM 611 - CATCH BASIN, NO. 8A, AS PER PLAN**

THE CONTRACTOR IS TO PROVIDE CATCH BASINS IN ACCORDANCE WITH ITEM 611 IN THE CONSTRUCTION AND MATERIALS SPECIFICATIONS EXCEPT THE CATCH BASIN SHALL BE PROVIDED WITH THE BASE WIDTH AS INDICATED IN THE PLANS. THE CONTRACTOR SHALL FURNISH ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY AND SHALL BE INCLUDED IN THE UNIT PRICE BID PER ITEM 611 - CATCH BASIN, NO. 5A, AS PER PLAN OR ITEM 611 - CATCH BASIN NO. 8A, AS PER PLAN.

**ITEM 601 - SLOPE PROTECTION, MISC.: SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 3 AND PERCUSSION DRIVEN EARTH ANCHORS**

THE SLOPE PROTECTION SHALL CONSIST OF SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 3 WITH THE FOLLOWING ADDITIONAL REQUIREMENTS, FURNISHED AND INSTALLED ACCORDING TO ITEM 836.

- TENSILE STRENGTH (MARV) OF 4,000 X 3,000 LB/FT PER ASTM D 6818
- UV RESISTANCE % STRENGTH RETAINED OF 90% AT 6000 HR PER ASTM D 4355
- LIGHT PENETRATION MAX 10% PER ASTM D 6567

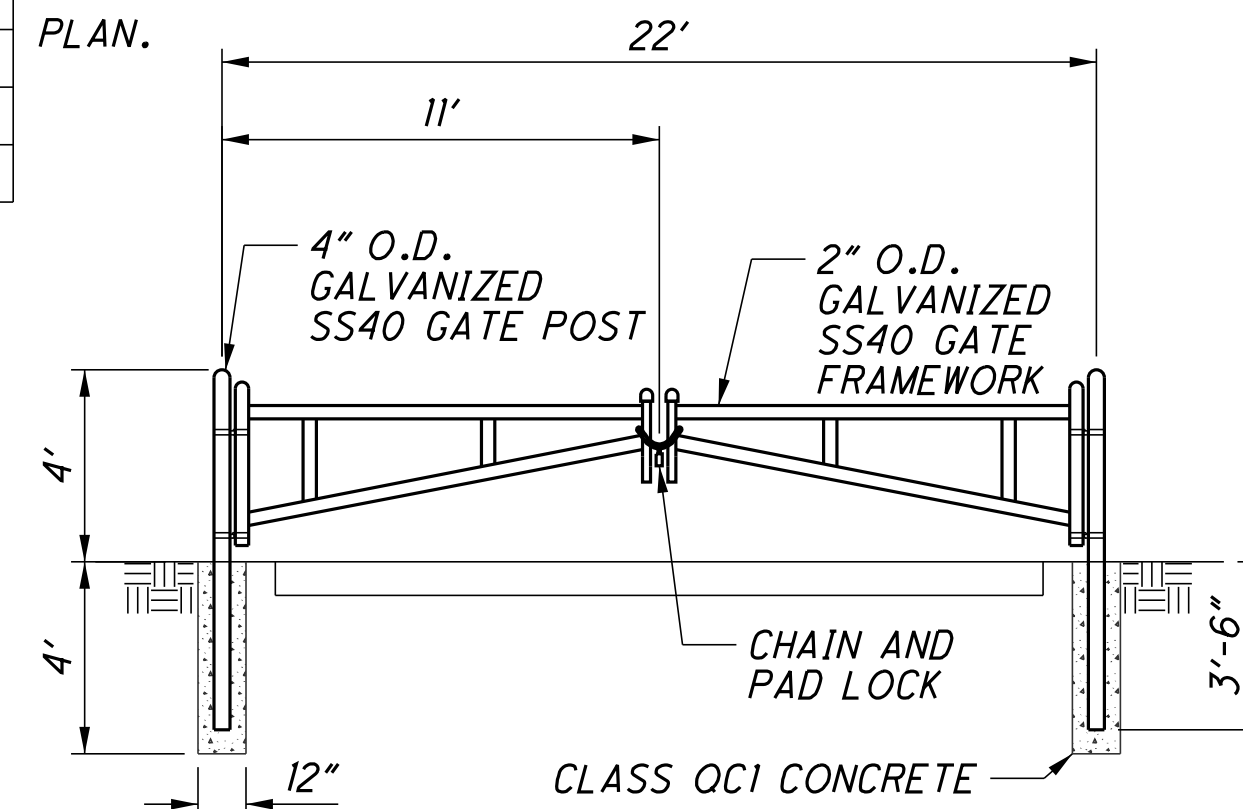
PERCUSSION DRIVEN EARTH ANCHORS AND SECURING PINS SHALL BE FURNISHED AND INSTALLED OVER TOP OF THE REINFORCING MAT. THE PERCUSSION DRIVEN EARTH ANCHORS AND SECURING PINS SHOULD HAVE THE FOLLOWING MINIMUM PROPERTIES AND REQUIREMENTS:

- TYPICAL ANCHOR WORKING LOAD UP TO 2,000 LBS.
- LOAD BEARING PLATE/HPTRM PULL-THROUGH STRENGTH OF 2,800 LB.
- PERCUSSION DRIVEN EARTH ANCHORS: VERTICAL ANCHOR SPACING OF 4 FEET (ALONG THE SLOPE FACE) AND 4 FEET HORIZONTAL (ACROSS THE SLOPE FACE).
- ANCHOR EMBEDMENT DEPTH 9 FT.
- SECURING PIN SHOULD BE A MINIMUM OF 0.2 INCH DIAMETER STEEL WITH A 1.5 INCH STEEL WASHER AT THE HEAD OF THE PIN.
- SECURING PINS: VERTICAL PIN SPACING OF 2 FEET (ALONG THE SLOPE FACE) AND 2 FEET HORIZONTAL (ACROSS THE SLOPE FACE).
- SECURING PIN LENGTH OF 18 INCHES.

PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE PER SQUARE YARD FOR ITEM 601 - SLOPE PROTECTION, MISC.: SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 3 AND PERCUSSION DRIVEN EARTH ANCHORS AND SHALL INCLUDE ALL LABOR, MATERIAL, EQUIPMENT AND INCIDENTALS NECESSARY TO PERFORM THE WORK.

**ITEM 607 - FENCE, MISC.: GATE, AS PER PLAN**

THE GATE AND ALL APPURTENANCES INCLUDING EXCAVATION AND CONCRETE SHALL BE CONSTRUCTED WHERE SPECIFIED IN THE PLANS, PER MISCELLANEOUS DETAIL BELOW AND AS DIRECTED BY THE ENGINEER. KEYS SHALL BE PROVIDED TO THE ODOT, DISTRICT 9 OFFICE. PAYMENT FOR ALL WORK SHALL BE INCLUDED IN THE PRICE BID PER ITEM 607 - FENCE, MISC.: GATE, AS PER PLAN.



**BARRICADE GATE DETAIL**  
N.T.S.

STA. 13+80.00 AND STA. 22+85.54 (CENTERED ALONG BIRCH LANE), BRENTWOOD EMERGENCY ACCESS DRIVE  
STA. 10+40.00 AND STA. 12+26.00 HENSON HOLLOW EMERGENCY ACCESS

**ROCK OR SHALE BLASTING OPERATIONS**

SHOULD THE CONTRACTOR ELECT TO USE BLASTING AS A MEANS FOR EXCAVATION PER C&MS 203.04, BLASTING SHALL CONFORM TO ITEM C&MS 208 ROCK BLASTING EXCEPT FOR PRE-SPLITTING. NO PRE-SPLITTING SHALL BE PERFORMED, PRIMARILY BECAUSE OF THE PRESENCE OF VERY WEAK BEDROCK AND A LANDSLIDE-PRONE GEOLOGY. THE CONTRACTOR SHALL ENSURE THAT BLASTING DOES NOT RESULT IN OVER-EXCAVATION, OVERBREAK, OR LANDSLIDES. THE CONTRACTOR SHALL DESCRIBE IN THE BLASTING PLAN THEIR UNDERSTANDING OF THE VERY WEAK AND LANDSLIDE-PRONE BEDROCK GEOLOGY AND THE MEASURES THEY PLAN TO TAKE TO AVOID CAUSING OVER-EXCAVATION, OVERBREAK, OR LANDSLIDES. CONTRARY TO C&MS 208.05, THE BLASTING PLAN SHALL BE SUBMITTED AT LEAST FOUR (4) WEEKS PRIOR TO THE START OF ANY DRILLING OR BLASTING OPERATIONS.

IN ADDITION TO THE REQUIREMENTS FOR COMMUNICATION WITH THE PUBLIC IN C&MS 107.09 AND 208.19, THE CONTRACTOR SHALL RECEIVE, RECORD AND LOG ALL BLASTING COMPLAINTS FROM THE PUBLIC AND PERFORM ALL SUBSEQUENT INVESTIGATION, FOLLOW UP AND RESPONSE TO COMPLAINANT IN A TIMELY MANNER. THE BLASTING COMPLAINT LOG SHALL BE MADE AVAILABLE TO THE ENGINEER UPON REQUEST AND REVIEWED WITH THE ENGINEER MONTHLY.

IN ADDITION TO THE VIDEO RECORDING OF BLASTS IN C&MS 208.20.D., THE CONTRACTOR SHALL ALSO PERFORM A VIDEO RECORDING OF EACH BLAST BY AERIAL DRONE PRODUCING AT LEAST 4K ULTRA-HIGH RESOLUTION VIDEO AT 60 FRAMES PER SECOND. THE DRONE SHALL HAVE WIDE-ANGLE AND A TELEPHOTO LENS. THE DRONE SHALL BE PREPOSITIONED SO ITS FIELD OF VIEW COVERS THE BLAST AND SURROUNDING AREA ADJACENT TO THE BLAST SITE. PROVIDE A COPY OF THE UNEDITED RAW VIDEO RECORDING IN MP4 FORMAT TO THE ENGINEER WITHIN 48 HOURS OF THE BLAST EVENT.

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY AND SHALL BE USED AS DIRECTED BY THE ENGINEER.

ITEM 208 - PRE-BLAST CONDITION SURVEY .....	LS
ITEM 208 - BLASTING CONSULTANT .....	LS
ITEM 208 - AIR BLAST NOISE CONTROL .....	LS
ITEM 208 - VIBRATION CONTROL AND MONITORING .....	LS
ITEM 208 - HYDROLOGIST .....	LS

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**GENERAL NOTES**  
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**ASBESTOS INSPECTION AND ABATEMENT**

THIS CONTRACT DOES NOT INCLUDE ANY ASBESTOS INSPECTION OR ABATEMENT. THE DEPARTMENT IS PERFORMING ASBESTOS INSPECTION OF ALL STRUCTURES THAT ARE REMAINING TO BE DEMOLISHED AND INCLUDED IN THIS CONTRACT FOR DEMOLITION BY ITEM 202 BUILDING DEMOLITION, AS PER PLAN. ANY UNKNOWN REGULATED ASBESTOS FOUND ON A RIGHT-OF-WAY PARCEL ARE TO BE REMOVED IN ACCORDANCE WITH 202 AND OHIO LAW AS EXTRA WORK IN ACCORDANCE WITH 109.04 AND 109.05.

**OEPA NOTIFICATION OF DEMOLITION AND RENOVATION**

A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF DEMOLITION AND RENOVATION FORM, PARTIALLY COMPLETED BY THE ASBESTOS HAZARD EVALUATION SPECIALIST, HAS BEEN INCLUDED AS A SPECIAL PROVISION. THE CONTRACTOR SHALL COMPLETE AND SIGN THE FORMS AND SUBMIT IT TO THE ADDRESS BELOW OR ONLINE AT EBIZ.EPA.OHIO.GOV.

ASBESTOS PROGRAM  
OHIO EPA, DAPC  
P.O. BOX 1049  
COLUMBUS, OH 43216-1049

THE FORM MUST BE SUBMITTED AT LEAST 10 WORKING DAYS PRIOR TO THE START OF ANY DEMOLITION WORK. THE CONTRACTOR SHALL PROVIDE A COPY OF THE COMPLETED AND SIGNED FORMS TO THE ENGINEER AS WELL AS THE ASBESTOS HAZARD EVALUATION SPECIALIST.

BASIS FOR PAYMENT: THE CONTRACTOR SHALL FURNISH ALL FEES, LABOR, AND MATERIAL NECESSARY TO COMPLETE AND SUBMIT THE OEPA NOTIFICATION FORMS. PAYMENTS FOR THIS WORK SHALL BE INCIDENTAL TO EACH OF THE ITEM 202 BUILDING DEMOLISHED, AS PER PLAN ITEMS.

**COOPERATION BETWEEN CONTRACTORS**

AT ANY TIME, THE DEPARTMENT MAY CONTRACT FOR OTHER WORK ON OR NEAR THE PROJECT.

SEPARATE CONTRACTORS WORKING WITHIN THE LIMITS OF THE PROJECT SHALL CONDUCT THEIR WORK WITHOUT INTERFERING WITH OR HINDERING THE PROCESS OR COMPLETION OF WORK BEING PERFORMED BY OTHER CONTRACTORS AND SHALL COOPERATE WITH EACH OTHER AS DIRECTED BY THE ENGINEER.

**BUILDING DEMOLISHED, AS PER PLAN**

BUILDINGS AND APPURTENANCES SUCH AS, BUT NOT LIMITED TO FENCES, SEPTIC TANKS, CISTERNS, WELLS, BASEMENTS, POOLS, DRIVEWAYS, DRIVE PIPES, PLANTERS, DECORATIVE WALLS ON EACH RIGHT-OF-WAY PARCEL SHALL BE DEMOLISHED IN THEIR ENTIRETY IN ACCORDANCE WITH 202 AND DEBRIS/MATERIAL FROM THE DEMOLITION SHALL BE DISPOSED OF IN ACCORDANCE WITH 105.17 AND ALL AREAS DISTURBED SHALL BE RESTORED IN ACCORDANCE WITH 104.04 TO THE SATISFACTION OF THE ENGINEERS.

ANY UNKNOWN REGULATED UNDERGROUND STORAGE TANKS FOUND ON A RIGHT-OF-WAY PARCEL ARE TO BE REMOVED IN ACCORDANCE WITH 202.08 AS EXTRA WORK IN ACCORDANCE WITH 109.04 AND 109.05.

BURNING IS NOT A PERMISSIBLE METHOD OF REMOVAL UNLESS DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL NOTIFY OWNERS OF WATER, ELECTRIC, OR GAS METERS WHEN THE METERS ARE READY FOR REMOVAL AND SHALL BE RESPONSIBLE FOR DISCONNECTION/REMOVAL OF SERVICE LINES FROM PUBLIC AND/OR PRIVATE UTILITY LINES IN COMPLIANCE WITH LOCAL REQUIREMENTS.

**ITEM SPECIAL - MAILBOX SUPPORT**

THIS WORK SHALL CONSIST OF FURNISHING AND ERECTING MAILBOX SUPPORTS AND ANY ASSOCIATED MOUNTING HARDWARE IN ACCORDANCE WITH PLAN DETAILS, AND ATTACHING AN OWNER-SUPPLIED MAILBOX AT LOCATIONS SPECIFIED IN THE PLAN, OR OTHERWISE ESTABLISHED BY THE ENGINEER.

WOOD POSTS SHALL BE NOMINAL 4 INCHES BY 4 INCHES SQUARE OR 4.5 INCHES DIAMETER ROUND, AND CONFORM TO 710.14.

STEEL POSTS SHALL BE NOMINAL PIPE SIZE 2 INCHES I.D., AND CONFORM TO AASHTO M 181.

ALL HARDWARE INCLUDING BUT NOT LIMITED TO PLATES, SCREWS, BOLTS, AND ETC. SHALL BE COMMERCIAL-GRADE GALVANIZED STEEL.

POSTS SHALL BE SET PER THE FIRST PARAGRAPH OF 606.03, AND SHALL IN NO INSTANCE BE ENCASED IN CONCRETE.

SUPPORT HARDWARE SHALL ACCOMMODATE EITHER A SINGLE OR A DOUBLE MAILBOX INSTALLATION, AND NO MORE THAN TWO BOXES MAY BE MOUNTED ON A SINGLE POST.

THE MAILBOX SHALL BE SECURELY AND NEATLY ATTACHED BY THE CONTRACTOR TO THE NEW SUPPORT. THE CONTRACTOR SHALL FURNISH ALL NECESSARY ATTACHMENT HARDWARE (NUTS, BOLTS, PLATES, SPACERS, AND WASHERS) AS NECESSARY TO ACCOMMODATE THE COMPLETE INSTALLATION.

IN THE ABSENCE OF A NEW BOX SUPPLIED BY THE OWNER, THE CONTRACTOR SHALL SALVAGE THE EXISTING BOX AND PLACE IT ON THE NEW SUPPORT. DUE CARE SHALL BE EXERCISED IN SUCH AN OPERATION, AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING ANY BOX DAMAGED BY IMPROPER HANDLING ON HIS PART, AS JUDGED AND DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE LOCAL POST MASTER REGARDING THE TIMING OF THE MOVEMENT OF ANY MAILBOX TO A NEW LOCATION.

PAYMENT UNDER THIS ITEM SHALL BE LIMITED TO FINAL PERMANENT INSTALLATIONS. TEMPORARY INSTALLATIONS SHALL BE IN ACCORDANCE WITH 107.10. HOWEVER, THE SAME MATERIAL AND SIZE LIMITATIONS AS FOR PERMANENT INSTALLATIONS SHALL APPLY.

MAILBOX SUPPORTS, COMPLETE IN PLACE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH, FOR ITEM SPECIAL MAILBOX SUPPORT SYSTEM, (SINGLE) (DOUBLE).

**ITEM 619 FIELD OFFICE, TYPE C, AS PER PLAN**

THE FOLLOWING REQUIREMENTS SHALL BE PROVIDED IN ADDITION TO ITEM 619 FIELD OFFICE, TYPE C:

THE FIELD OFFICE FOR THE DEPARTMENT SHALL BE LOCATED WITHIN 1 MILE OF THE PROJECT RIGHT-OF-WAY AND WITHIN THE STATE OF OHIO. THE DEPARTMENTS FIELD OFFICE SHALL BE CO-LOCATED IN SAME AREA AS CONTRACTORS FIELD OFFICE.

IN ADDITION TO THE FLOOR SPACE FOR OFFICES CITED IN ITEM 619, AN ENCLOSED 800 SQ FEET CONFERENCE ROOM PROVIDED TO ACCOMMODATE AT LEAST 25 PEOPLE WITH CONFERENCE TABLE SUFFICIENT TO SEAT ALL THE CHAIRS FOR EACH PERSON. INCLUDE ONE 70" (MIN) WALL MOUNTED HDTV WITH HDMI INPUT FOR MEETINGS AND PRESENTATIONS. CONFERENCE ROOM SHALL INCLUDE ONE 4FT BY 6FT DRY ERASE WHITEBOARD WITH TRAY AND MARKERS. NETWORK WIRING IN THE ROOM FOR DEDICATED CONFERENCE PHONE. THIS CONFERENCE ROOM WILL BE USED FOR PRESENTATIONS, MEETINGS, DRB AND OTHER COMMON USES BETWEEN THE DEPARTMENT AND CONTRACTOR, BUT ITS USE IS PRIMARILY FOR THE DEPARTMENT UNLESS APPROVED BY THE ENGINEER.

BREAK ROOM INCLUDING MICROWAVE OVEN AND ONE 20 CF REFRIGERATOR.

ONE 25 SF LOCKABLE CLOSET FOR EQUIPMENT.

AT LEAST 5 OFFICES (120 SF MIN) WITH DOORS AND NETWORK WIRING COMING FROM A SEPARATE AND LOCKING DATA CLOSET. DEPARTMENT WILL PROVIDE A NETWORK SWITCH TO CONNECT ITS COMPUTERS AND PHONES TO THE INTERNET FEED PROVIDED BY CONTRACTOR. CONTRACTOR TO PROVIDE TWO DUPLEX ELECTRIC RECEPTICALS AN TWO DATA PORTS INTO EACH OFFICE AND EACH COMMON AREAS, EACH WITH A HOMERUN CAT 5E NETWORK CABLE TO EACH DATA PORT.

PORTABLE RESTROOMS FOR THE FIELD OFFICE ARE NOT ALLOWED AND THEY SHALL BE FLUSHABLE AND SEPARATE FACILITIES PROVIDED FOR MEN AND WOMEN AND EACH INCLUDE HOT AND COLD RUNNING WATER.

OFFICE SPACES AND RESTROOMS SHALL BE SANITIZED, CLEANED, SWEEP AND VACUUMED THREE TIMES PER WEEK AND SHALL OCCUR OUTSIDE OF NORMAL WORKING HOURS.

INTERNET SPEED SHALL BE MINIMUM 300MBPS DOWNLOAD AND 50MBPS UPLOAD.

THE ALL WEATHER PARKING SPACES FOR THE DEPARTMENTS VEHICLES SHALL BE ENCLOSED WITH A 6 FT CHAIN LINK FENCE PER CMS ITEM 710 WITH TWO LOCKING DOUBLE LEAF 8 FT GATES. PARKING AREA AND EXTERIOR OF FIELD OFFICE SHALL HAVE EXTERIOR SECURITY LIGHTING THAT IS AUTOMATICALLY ACTIVATED FOR LOW LIGHT CONDITIONS.

**DURABLE MATERIAL**

DURABLE SANDSTONE AND SILTSTONE ENCOUNTERED DURING EXCAVATION SHOULD FIRST BE USED FOR AREAS REQUIRING ITEM 203 - EMBANKMENT, AS PER PLAN (TYPE C) SHOULD IT MEET THE CRITERIA IDENTIFIED IN THE PLANS. ANY EXCESS DURABLE MATERIAL CAN BE USED FOR REGULAR ITEM 203 - EMBANKMENT AND NOT WASTED.

**ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE C, AS PER PLAN**

THE CONTRACTOR SHALL VARY THE BARRIER WIDTH BETWEEN STATIONS 385+75 (RAMP K) AND 386+08.27 (RAMP K) TO TIE INTO THE BARRIER END SECTION AND THE RETAINING WALL.

ALL LABOR, EQUIPMENT AND MATERIALS NEEDED TO COMPLETE THE WORK SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE C, AS PER PLAN.

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GENERAL NOTES

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**EMBANKMENTS - PERMISSIBLE RATES OF CONSTRUCTION**

EMBANKMENTS AT THE FOLLOWING LOCATIONS SHALL BE CONSTRUCTED USING NORMAL RATES OF CONSTRUCTION UP THE TO ELEVATIONS LISTED IN THE TABLE BELOW. ABOVE THESE MAXIMUM ELEVATIONS, THE SPECIFIED RATES OF CONSTRUCTION ARE REQUIRED TO INCREASE SHORT TERM SLOPE STABILITY FACTORS OF SAFETY TO ACCEPTABLE LEVELS:

STATION ANALYZED	MAX EMBANKMENT ELEVATION USING NORMAL CONSTRUCTION RATES (FEET)	PERMISSIBLE CONSTRUCTION RATE (FEET/WEEK)	APPROX. STATION INTERVAL FOR RATE CONSTRUCTION
136+00	548	13	136+25 to 146+00
160+00	578	10.7	148+00 to 162+00
219+00	605	3.2	215+00 to 228+50
293+00	545	5	289+00 to 295+00
322+00	609	3.6	316+00 to 324+00
329+00	590	1.3	324+50 to 332+50
340+00	623	11.2	338+50 to 342+00
371+00	593	4.6	342+00 to 374+00
REINFORCED SLOPES			
198+00	565	6.1	196+75 to 199+87
297+68	549	16.4	296+75 to 298+58
300+81	549	16.3	300+06 to 301+00
377+50	573	8.2	376+60 to 378+34, Ramp 1 376+35 to 377+94

**ITEM 203 - EMBANKMENT, AS PER PLAN (TYPE C)**

THIS ITEM SHALL CONSIST OF PROVIDING AND PLACEMENT OF THE DRAINAGE LAYER AS SHOWN ON THE CROSS-SECTIONS. THE DRAINAGE LAYER MUST BE CONSTRUCTED TO PREVENT INTERNAL EROSION OR PIPING OF THE EMBANKMENT DURING OR AFTER A FLOOD EVENT. ON-SITE SANDSTONE OR SILTSTONE MAY BE USED IF THE MATERIAL HAS A SLAKE DURABILITY INDEX GREATER THAN 90 PERCENT ACCORDING TO ASTM D 4644-87. MATERIAL DESIGNATED FOR THE DRAINAGE LAYER SHALL BE TESTED PRIOR TO PLACEMENT FOR SLAKE DURABILITY INDEX AT A MINIMUM OF ONE TEST EVERY 20,000 CY OR CHANGE IN MATERIAL, AS DIRECTED BY THE ENGINEER. ITEM 712.09 TYPE A GEOTEXTILE FABRIC WITH AN AOS LESS THAN OR EQUAL TO 0.3 MM SHALL BE PLACED ABOVE THE DRAINAGE LAYER TO ASSIST SEPARATION OF THE EMBANKMENT SOIL FROM THE DRAINAGE MATERIAL. THE DRAINAGE LAYER SHALL BE CONSTRUCTED TO A TOP ELEVATION OF 557 WHERE SHOWN ON THE CROSS-SECTIONS. SEE THE DETAIL BELOW FOR ADDITIONAL INFORMATION REGARDING MATERIAL SIZE AND DRAINAGE LAYER BUILDUP. ROCK SPALLS AND ROCK FINES ARE ACCEPTABLE UP TO AN AVERAGE OF 20% OF THE MATERIAL AS DETERMINED BY VOLUME AND VISUAL INSPECTION. AREAS OF PLACED MATERIALS WITH EXCESS FINES MAY BE REJECTED BY THE ENGINEER. SOIL AND NON-DURABLE ROCK SHALL BE LIMITED TO LESS THAN 5% OF THE MATERIAL AS DETERMINED BY VOLUME AND VISUAL INSPECTION.

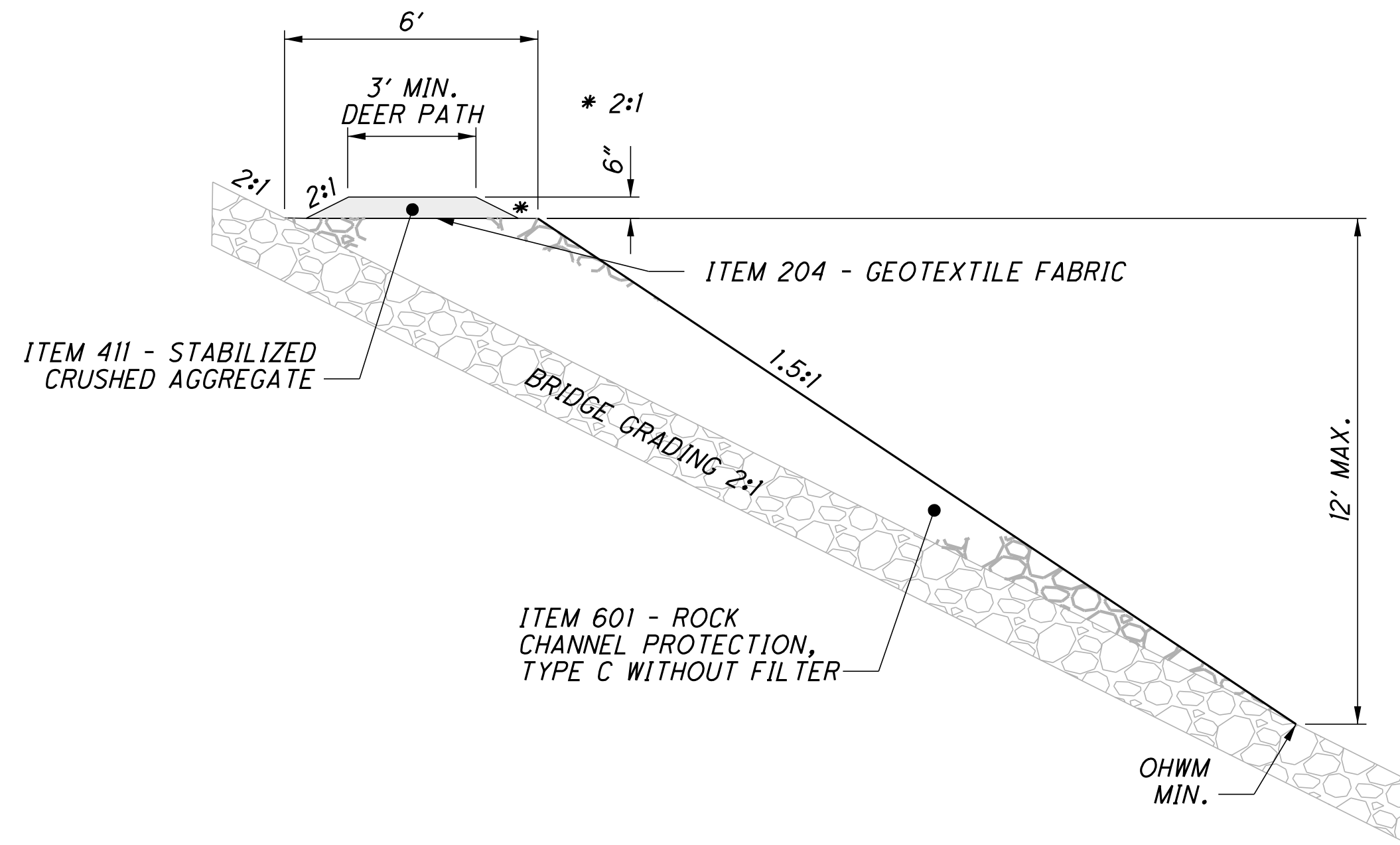
557	GEOTEXTILE FABRIC	FILL HEIGHT
555	MATERIAL PROVIDED SHOULD BE LARGE ENOUGH TO CHOK OFF THE VOIDS IN THE UNDERLYING LAYER AND SMALL ENOUGH TO PROVIDE A SMOOTH SURFACE FOR THE GEOTEXTILE FABRIC.	
550	MATERIAL SHALL CONSIST PREDOMINANTLY OF ROCK CONSISTENT TO THE SIZE OF TYPE C OR D DUMPED ROCK PER 703.19.	
	MATERIAL SHALL CONSIST PREDOMINANTLY OF ROCK CONSISTENT TO THE SIZE OF TYPE A, B, C OR D DUMPED ROCK PER 703.19.	

PAYMENT FOR THE ABOVE WORK INCLUDING ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE PAID FOR AT THE CONTRACT PRICE PER CUBIC YARD OF ITEM 203 - EMBANKMENT, AS PER PLAN (TYPE C).

**CONSTRUCTED DEER PATH**

THE CONTRACTOR IS TO CONSTRUCT A PROPOSED DEER PATH AT THE LOCATIONS LISTED IN THE TABLE BELOW AND ACCORDING TO THE DETAIL BELOW. THE PATH HAS NOT BEEN SHOWN IN IT'S ENTIRETY IN THE PLANS, BUT QUANTITIES HAVE BEEN INCLUDED TO PROVIDE A DEER PATH THAT EXTENDS TO THE LIMITS OF THE ROCK CHANNEL PROTECTION AT THE BRIDGE ABUTMENTS AND TRANSITIONED DOWN TO NATURAL GROUND.

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO COMPLETE THIS WORK.



**DEER PASSAGE THROUGH RCP**

LOCATION	LENGTH	TOP OF ROCK CHANNEL PROTECTION ELEVATION	204	411	601
			GEOTEXTILE FABRIC SY	STABILIZED CRUSHED AGGREGATE CY	ROCK CHANNEL PROTECTION, TYPE C WITHOUT FILTER CY
S.R. 7 - BRIDGE LAW-7-0711P REAR ABUTMENT	200	561	111.11	14.81	266.67
S.R. 7 - BRIDGE LAW-7-0711P FORWARD ABUTMENT	157	561	87.22	11.63	209.33
S.R. 7 - BRIDGE LAW-7-0713L/R REAR ABUTMENT	248	561	137.78	18.37	330.67
S.R. 7 - BRIDGE LAW-7-0713L/R FORWARD ABUTMENT	330	561	183.33	24.44	440.00
TOTALS			519.44	69.26	1246.67
TOTALS CARRIED TO GENERAL SUMMARY			520	70	1247

**EMBANKMENTS - REINFORCED SOIL SLOPES**

CONSTRUCT REINFORCED SOIL SLOPE ACCORDING TO SUPPLEMENTAL SPECIFICATION 863.

PRIMARY REINFORCEMENT TO BE ITEM 863 UNIAXIAL OR BIAXIAL GEOGRID TYPE P1 AND P3.

SECONDARY REINFORCEMENT TO BE ITEM 863 BIAXIAL GEOGRID TYPE S1.

SECONDARY REINFORCEMENT SPACING OF 1 FOOT AND WIDTH OF 6 FEET.

REINFORCEMENT NOT WRAPPED AT SLOPE FACE.

ESTIMATED GEOGRID QUANTITIES WERE BASED ON THE MAXIMUM FILL SECTION. GEOGRID LAYERS CAN BE DISCONTINUED WHEN EXITING GROUND IS HIGHER THAN THE GEOGRID LAYER ELEVATION. ACTUAL GEOGRID QUANTITIES WILL DEPEND ON THE AMOUNT OF UNDERCUTTING, BENCHING, AND SURFACE PREPARATION PERFORMED.

EMBANKMENTS AT THE FOLLOWING LOCATIONS SHALL BE REINFORCED WITH GEOGRID AS INDICATED IN THE FOLLOWING TABLES.

ELEVATION	GEOGRID TYPE	EMBEDMENT LENGTH FT	STA. 134+56 TO STA. 136+25, RT/LT/BRIDGE SPILL THROUGH*	
			863 GEOGRID, TYPE P1 SY	863 GEOGRID, TYPE S1 SY
525	P1	90	5280	
526	P1	90	5280	
527	P1	90	5280	
528	P1	85	4987	
529	P1	85	4987	
530	S1	6		352
531	S1	6		352
532	P1	50	2933	
533	S1	6		352
534	S1	6		352
535	P1	50	2933	
536	S1	6		352
537	S1	6		352
538	P1	50	2933	
539	S1	6		352
540	S1	6		352
541	P1	50	2933	
542	S1	6		352
543	S1	6		352
544	S1	6		352
545	S1	6		352
546	S1	6		352
547	P1	40	2347	
548	S1	6		352
549	S1	6		352
550	S1	6		352
551	S1	6		352
552	S1	6		352
553	P1	40	2347	
554	S1	6		352
555	S1	6		352
556	S1	6		352
557	S1	6		352
558	S1	6		352
559	P1	40	2347	
560	S1	6		352
561	S1	6		352
562	S1	6		352
563	S1	6		352
TOTALS CARRIED TO SHEET 41			44587	9504

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**GENERAL NOTES**

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SHEET NUM.											PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.	
35	36	72	73	81	82	83	84	629	774		01/NHS/01	EXT	TOTAL					
	796											796	441	70801	796	CY	PAVEMENT (CONT.) ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (449), (UNDER GUARDRAIL), AS PER PLAN	36
					21,728	3,419						25,147	442	00100	25,147	CY	ANTI-SEGREGATION EQUIPMENT	
7					13,273	2,054		9				15,343	442	10100	15,343	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446)	
5					8,456	1,224		6				9,691	442	10300	9,691	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (447)	
					280	143						423	443	12000	423	CY	STONE MATRIX ASPHALT CONCRETE, 12.5 MM, PG76-22M, (446)	
							455					455	452	12010	455	SY	8" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC IP	
							2,656					2,656	609	12000	2,656	FT	COMBINATION CURB AND GUTTER, TYPE 2	
							204					2,126	609	26000	2,126	FT	CURB, TYPE 6	
												382	609	31000	382	FT	COMBINATION CURB AND GUTTER, TYPE 9	
							42					778	609	72000	778	SY	CONCRETE MEDIAN	
																	LIGHTING	777
																	TRAFFIC CONTROL	713
		115	65									180	626	00102	180	EACH	BARRIER REFLECTOR, TYPE 1, BIDIRECTIONAL	
		126	32									158	626	00102	158	EACH	BARRIER REFLECTOR, TYPE 1, UNIDIRECTIONAL	
																	TRAFFIC SIGNALS	766
																	LANDSCAPING	
									7			7	661	20080	7	EACH	DECIDUOUS SHRUB, 4' HEIGHT, RHUS AROMATICA	
									796			796	661	99930	796	SY	PLANTING, MISC.; 10" GRAY WASHED RIVER STONE MULCH	774
									49			49	662	31000	49	GAL	LANDSCAPE WATERING	
																	RETAINING WALLS (001)	707
																	NOISE BARRIERS	684
																	BUILDING DEMOLITION	
				LS								LS	202	56001	LS		BUILDING DEMOLISHED, AS PER PLAN, 1.5 - STORY FRAME HOUSE, POOL	37A
				LS								LS	202	56001	LS		BUILDING DEMOLISHED, AS PER PLAN, (2) 1 - STORY FRAME HOUSES, 2 SHEDS	37A
				LS								LS	202	56001	LS		BUILDING DEMOLISHED, AS PER PLAN, ABANDONED 1 - STORY FRAME HOUSE, 2 SHEDS, PROPANE TANK	37A
				LS								LS	202	56001	LS		BUILDING DEMOLISHED, AS PER PLAN, 1 - STORY FRAME HOUSE, POOL, DECK	37A
				LS								LS	202	56001	LS		BUILDING DEMOLISHED, AS PER PLAN, WOOD SHED, BARN	37A
				LS								LS	202	56001	LS		BUILDING DEMOLISHED, AS PER PLAN, 1 - STORY FRAME HOUSE, 2 - STORY BARN, GARAGE, 2 SHEDS, TRAILER PORT, DOG HOUSE, STEEL BRIDGE	37A
				LS								LS	202	56001	LS		BUILDING DEMOLISHED, AS PER PLAN, SEPTIC TANK, WELL, LEACH FIELD	37A
				LS								LS	202	56001	LS		BUILDING DEMOLISHED, AS PER PLAN, 1.5 - STORY FRAME HOUSE, POOL	37A
				LS								LS	202	56001	LS		BUILDING DEMOLISHED, AS PER PLAN, SHED	37A
				LS								LS	202	56001	LS		BUILDING DEMOLISHED, AS PER PLAN, 2 - STORY METAL BUILDING	37A
				LS								LS	202	56001	LS		BUILDING DEMOLISHED, AS PER PLAN, 2 - STORY BRICK FRAME HOUSE, 1 - STORY DUPLEX, SHED	37A
				LS								LS	202	56001	LS		BUILDING DEMOLISHED, AS PER PLAN, 2 - STORY BRICK FRAME HOUSE, GARAGE, PROPANE TANK	37A
				LS								LS	202	56001	LS		BUILDING DEMOLISHED, AS PER PLAN, 1.5 - STORY FRAME HOUSE, (2) METAL OUT BUILDINGS, PROPANE TANK	37A
				LS								LS	202	56001	LS		BUILDING DEMOLISHED, AS PER PLAN, GARAGE, CAR PORT	37A
				LS								LS	202	56001	LS		BUILDING DEMOLISHED, AS PER PLAN, (2) 1-STORY FRAME HOUSE, WELL, 1-STORY BLOCK GARAGE	37A
																	STRUCTURE OVER 20 FOOT SPAN (LAW-7-0251)	796
																	STRUCTURE OVER 20 FOOT SPAN (LAW-7-0370)	820, 844
																	STRUCTURE OVER 20 FOOT SPAN (LAW-7-0376)	849
																	STRUCTURE OVER 20 FOOT SPAN (LAW-7-0387)	873, 897
																	STRUCTURE OVER 20 FOOT SPAN (LAW-7-0510)	899
																	STRUCTURE OVER 20 FOOT SPAN (LAW-7-0563)	910
																	STRUCTURE OVER 20 FOOT SPAN (LAW-7-0711)	935
																	STRUCTURE OVER 20 FOOT SPAN (LAW-7-0713L)	964
																	STRUCTURE OVER 20 FOOT SPAN (LAW-7-0713R)	993
																	STRUCTURE OVER 20 FOOT SPAN (LAW-775-0105)	1018

GENERAL SUMMARY

LAW - 7 - 2.17

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SHEET NUM.								PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.	CALCULATED	SLP	CHECKED	ALB
							01/NHS/01											
													MAINTENANCE OF TRAFFIC	45				
													INCIDENTALS					
								145,000	100	51100	145,000	EACH	DEPARTMENT'S SHARE OF THE DISPUTE RESOLUTION BOARD					
								LS	103	05000	LS		PREMIUM FOR CONTRACT PERFORMANCE BOND AND FOR PAYMENT BOND					
								LS	108	10000	LS		CPM PROGRESS SCHEDULE					
								7,750	SPECIAL	11110100	7,750	EACH	DEPARTMENTS SHARE FACILITATED PARTNERING COSTS					
								LS	614	11000	LS		MAINTAINING TRAFFIC					
								42	619	16021	42	MNTH	FIELD OFFICE, TYPE C, AS PER PLAN					
								LS	623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	37A				
								LS	623	11000	LS		PROVIDING ELECTRONIC INSTRUMENTATION					
								LS	624	10000	LS		MOBILIZATION					

GENERAL SUMMARY

LAW - 7 - 2.17

70A  
1247



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REF NO.	SHEET NO.	STATION		SIDE	203		601						606	622		659	670		836																							
		FROM	TO		EXCAVATION CY	EMBANKMENT CY	ARTICULATING CONCRETE BLOCK REVETMENT SYSTEM, TYPE 1 SY	ROCK CHANNEL PROTECTION, TYPE B WITH FILTER CY	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER CY	ROCK CHANNEL PROTECTION, TYPE D WITH FILTER CY	DUMPED ROCK FILL, TYPE C CY	TIED CONCRETE BLOCK MAT WITH TYPE 1 UNDERLAYMENT SY	SLOPE PROTECTION, MISC.: SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 3 AND PERCUSSION DRIVEN EARTH AND/OR SY	IMPACT ATTENUATOR, TYPE 2 (BIDIRECTIONAL) EACH	CONCRETE BARRIER, SINGLE SLOPE, TYPE C, AS PER PLAN FT	CONCRETE BARRIER END SECTION, TYPE B EACH	SEEDING AND MOWING, CLASS 3C SY	DITCH EROSION PROTECTION SY	DITCH EROSION PROTECTION MAT, TYPE B SY	SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1 SY	SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 2 SY	SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 3 SY																				
RAMP K																																										
1-EC	442	386+00.00	390+00.00	RT					77.78																																	
2-EC	442	65+50.00 (S.R. 775)	391+50.00	LT													1277.61																									
3-EC	442	391+50.00	396+00.00	LT														725																								
2-R	442	385+45.00	386+08.27	RT/LT									1	34	1																											
1-EC	444	396+00.00	396+50.00	LT														80.56																								
2-EC	444	396+50.00	398+50.00	LT															322.22																							
LYNN LANE																																										
1-EC	482	10+53.33	11+00.00	RT					38.39																																	
2-EC	482	11+00.00	13+50.00	RT																386.67																						
3-EC	482	12+50.00	13+00.00	LT					15.28																																	
DOGWOOD LANE EXTENSION																																										
1-EC	486	10+14.56	13+00.00	LT																270.83																						
2-EC	486	10+47.73	11+00.00	RT														105																								
S.R. 243																																										
1-EC	490	12+55.74	16+80.44	LT														694.39																								
2-EC	490	17+50.00	19+62.61	LT																343.17																						
3-EC	490	20+50.00	21+54.00	LT																	130.78																					
4-EC	490	17+23.45	21+50.00	RT																526.78																						
C.R. 69																																										
1-EC	502	10+46.28	12+50.00	LT																344.78																						
2-EC	502	10+27.58	12+70.61	RT					73.67																																	
3-EC	502	12+50.00	13+00.00	LT																																						
4-EC	502	13+50.00	19+50.00	LT													733.33																									
5-EC	502	19+50.00	20+50.00	LT																167.56																						
6-EC	502	22+00.00	22+50.00	LT																80.56																						
7-EC	502	23+50.00	24+00.00	LT																80.56																						
8-EC	502	22+50.00	24+00.00	LT								1278.42																														
1-EC	504	24+00.00	25+00.00	LT								914.64																														
2-EC	504	24+00.00	26+00.00	LT																325.44																						
3-EC	504	26+00.00	26+60.57	LT					56.83																																	
4-EC	504	29+34.29	31+50.00	LT					134.75																																	
5-EC	504	31+50.00	37+00.00	LT																673.44																						
6-EC	504	31+50.00	35+00.00	LT																																						
1-EC	506	45+00.00	49+00.00	LT																644.44																						
2-EC	506	49+00.00	50+00.00	LT					75																																	
1-EC	507	54+50.00	56+73.01	LT																165.83																						
C.R. 118																																										
1-EC	547	10+54.46	11+00.00	LT																61.67																						
2-EC	547	12+00.00	13+50.00	LT																125																						
3-EC	547	13+50.00	14+76.00	LT																154																						
4-EC	547	13+42.91	14+01.46	RT																																						
C.R. 2																																										
1-EC	553	10+50.00	15+00.00	RT																343.44																						
2-EC	553	15+00.00	17+58.28	RT																195																						
S.R. 775																																										
1-EC	559	48+90.78	53+33.17	RT																																						
2-EC	559	50+80.65	53+00.00	LT																																						
1-EC	560	62+50.00	64+00.00	LT					57.75																																	
2-EC	560	69+50.00	69+77.95	LT					6.67																																	
3-EC	560	59+00.00	60+00.00	LT					58.5																																	
4-EC	560	68+50.00	69+25.00	RT																64.17																						
<b>TOTALS THIS SHEET</b>					0	0	0	0	516.84	77.78	13.83	0	9810.25	1	34	1	0	2010.94	2355.06	3655.72	871.56	194.95																				
<b>TOTALS FROM SHEET 75</b>					0	0	174.67	180.56	1013.85	0	0	132.5	0	0	0	0	1365.44	2525.99	2209.72	1790.83	441.44																					
<b>TOTALS FROM SHEET 76</b>					267	1932	283	519.17	1134.76	0	0	0	0	0	0	0	4342	2347.23	3825.89	6814.22	3855.55	5649.67																				
<b>TOTALS FROM SHEET 77</b>					0	0	2182.83	1237.59	417.17	0	0	0	0	0	0	0	4855.84	4571.55	5667.67	2673.78	119.44																					
<b>TOTALS CARRIED TO GENERAL SUMMARY</b>					267	1932	2641	1938	3083	78	14	133	9811	1	34	1	4342	10580	13279	18348	9192	6406																				

CALCULATED	SLP	CHECKED	ALB
<b>SUBSUMMARY</b>			
<b>LAW - 7 - 2.17</b>			
78			
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REF NO.	SHEET NO.	STATION (APPROX.)		SIDE	AUDITOR'S PARCEL NO.	PHYSICAL ADDRESS	659	202	STRUCTURE DESCRIPTION
		FROM	TO				SEEDING AND MULCHING, CLASS 3C SY	BUILDING DEMOLISHED, AS PER PLAN LS	
		S.R. 7							
12-R	103	165+95	167+32	RT	23-112-0744.012, 23WL	32 TWP RD 1389	81	LS	1.5-STORY FRAME HOUSE, POOL
5-R	105	174+75	177+64	LT/RT	23-078-1200.000, 46AWL	1485 TWP RD 158		LS	(2) 1-STORY FRAME HOUSES, 2 SHEDS
6-R	105, 107	173+07	183+16	LT/RT	23-079-0100.001, 46WL	1485 TWP RD 158	1268	LS	ABANDONED 1-STORY FRAME HOUSE, 2 SHEDS, PROPANE TANK
7-R	105	178+22	180+84	RT	23-078-1300.001, 49WL	1529 TWP RD 158	1086	LS	1-STORY FRAME HOUSE, POOL, DECK
3-R	105, 107	179+07	184+83	LT/RT	23-078-1300.000, 50WL	1599 TWP RD 158	160	LS	WOOD SHED, BARN
4-R	107, 109	191+82	196+39	LT/RT	23-079-1500.002, 60WL	465 CO RD 104	434	LS	1-STORY FRAME HOUSE, 2-STORY BARN, GARAGE, 2 SHEDS, TRAILER PORT, DOG HOUSE, STEEL BRIDGE
5-R	109	194+58	196+50	LT	23-079-1500.003, 61WL	475 CO RD 104		LS	SEPTIC TANK, WELL, LEACH FIELD
6-R	109, 111	205+34	208+45	LT/RT	23-079-0200.002, 69WL	1322 CO RD 32	374	LS	1.5-STORY FRAME HOUSE, POOL
4-R	111	210+65	210+85	RT	23-083-0900.002, 82	132 TWP RD 1347	45	LS	SHED
2-R	114	221+60	223+20	LT	23-083-1200.000, 99WL	277 CO RD 68	330	LS	2-STORY METAL BUILDING
5-R	122	256+29	259+23	LT	23-081-1200.002, 135WL	17001 ST RT 243		LS	2-STORY BRICK FRAME HOUSE, 1-STORY DUPLEX, SHED
6-R	122	259+88	261+97	LT/RT	23-081-1200.001, 134WL	17039 ST RT 243		LS	2-STORY BRICK FRAME HOUSE, GARAGE, PROPANE TANK
3-R	127	281+09	282+79	LT	23-085-0500.000, 147WL	44 CO RD 2		LS	1.5-STORY FRAME HOUSE, (2) METAL BUILDINGS, PROPANE TANK
		LYNN LANE							
5-R	482	12+51	13+88	LT	23-079-0200.013, 72WL	229 TWP RD 1347	93	LS	GARAGE, CAR PORT
		S.R. 775							
4-R	560	65+56	66+93	LT	25-062-0200.000 25-062-0600.000, 256WL	911 SR RT 775 929 ST RT 775	1092	LUMP	(2) 1-STORY FRAME HOUSE, WELL, 1-STORY BLOCK GARAGE
							4963	LS	

NOTE:  
SEEDING AND MULCHING AREA SHOWN WAS GENERATED IN CADD OF THE AREA NOT OTHERWISE INCLUDED IN THE CROSS SECTION QUANTITY.

ALTHOUGH A PORTION OF THESE PARCELS ARE IN THE DO NOT DISTURB AREA SHOWN IN THE PLANS, THE CONTRACTOR IS TO REMOVE THE EXISTING STRUCTURE ONLY. NO TREES SHALL BE DISTURBED OR CUT DURING DEMOLITION.

TOTALS CARRIED TO GENERAL SUMMARY

CALCULATED SLP CHECKED ALB  
**SUBSUMMARY**  
 LAW - 7 - 2.17  
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CURVE DATA  
S.R. 7  
CURVE NO. 9

P.I. STA. 387+47.15  $\theta_s = 3^\circ 44' 12''$   
 $\Delta = 46^\circ 04' 34''$  (LT)  $L_s = 300.00'$   
 $D_c = 2^\circ 29' 28''$   $T_s = 1,128.77'$   
 $R = 2,300.00'$   $LT = 200.04'$   
 $T = 805.51'$   $ST = 100.04'$   
 $L = 1,549.62'$   $e_{max} = 6.20\%$   
 $E = 136.98'$   $CS STA. 394+68.00$   
 $TS STA. 376+18.38$   $ST STA. 397+68.00$   
 $SC STA. 379+18.38$

CURVE DATA  
S.R. 7 WESTBOUND LANES  
CURVE NO. 1

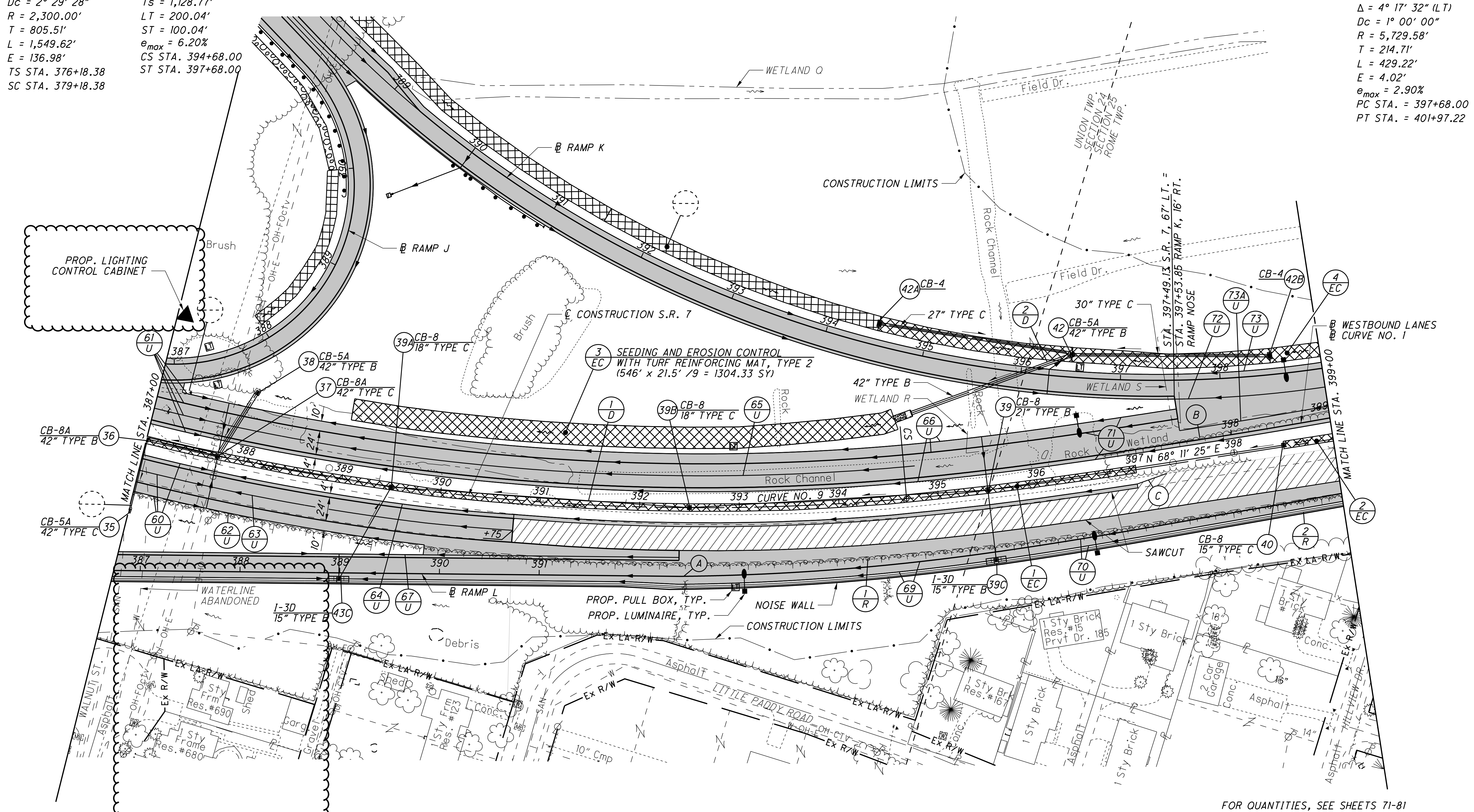
P.I. STA. 399+82.71  
 $\Delta = 4^\circ 17' 32''$  (LT)  
 $D_c = 1^\circ 00' 00''$   
 $R = 5,729.58'$   
 $T = 214.71'$   
 $L = 429.22'$   
 $E = 4.02'$   
 $e_{max} = 2.90\%$   
 $PC STA. = 397+68.00$   
 $PT STA. = 401+97.22$



CALCULATED SLP CHECKED ALB

PLAN - S.R. 7  
STA. 387+00 STA. 399+00

LAW-7-2.17  
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- (A) STA. 392+40.09 S.R. 7  
BEGIN PAVEMENT TAPER, 69' RT. =  
STA. 392+40.09 RAMP L  
RAMP NOSE  
END RAMP
- (B) P.C. STA. 397+68.00  
BEGIN WESTBOUND LANES =  
S.T. STA. 397+68.00, S.R. 7, 20' LT.
- (C) 5:1 SAWCUT TAPER TO MEET  
EXISTING SHOULDER WIDTH.
- (1) DITCH EROSION PROTECTION  
MAT, TYPE B  
(1000' x 7.5' / 9 = 833.33 SY)
- (2) DITCH EROSION PROTECTION  
MAT, TYPE B  
(50' x 7.5' / 9 = 41.67 SY)
- (3) SEEDING AND EROSION CONTROL  
WITH TURF REINFORCING MAT, TYPE 2  
(546' x 21.5' / 9 = 1304.33 SY)
- (4) SEEDING AND EROSION CONTROL  
WITH TURF REINFORCING MAT, TYPE 2  
(50' x 14.5' / 9 = 80.56 SY)

- PROPOSED PAVEMENT  
 - 3-1/4" MILL/FILL

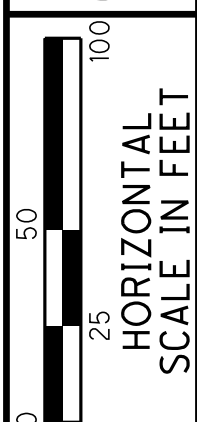
FOR QUANTITIES, SEE SHEETS 71-81  
 FOR PROFILE, SEE SHEET 147  
 FOR RAMP J PLAN & PROFILE, SEE SHEET 437  
 FOR RAMP K PLAN & PROFILE, SEE SHEETS 442-444  
 FOR RAMP L PLAN & PROFILE, SEE SHEET 457  
 FOR PAVEMENT DETAILS, SEE SHEETS 613-614  
 FOR INTERCHANGE DETAILS, SEE SHEETS 619-621  
 FOR STORM SEWER PROFILE, SEE SHEETS 388, 645-648  
 FOR UNDERDRAIN TABLES, SEE SHEETS 674-678  
 FOR NOISE WALL, SEE SHEETS 679-705  
 FOR TRAFFIC CONTROL PLAN, SEE SHEETS 713-773A  
 FOR FENCE TABLES, SEE SHEETS 1039-1041

NOTE: WESTBOUND LANES SHOWN FOR HORIZONTAL ALIGNMENT ONLY

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CURVE DATA  
RAMP K  
CURVE NO. 1

P.I. STA. 393+97.26  
 $\Delta = 54^\circ 19' 17''$  (LT)  
 $Dc = 5^\circ 00' 00''$   
 $R = 1145.92'$   
 $T = 587.93'$   
 $L = 1086.43'$   
 $E = 142.02'$   
 $e_{max} = 6.30\%$   
 PC STA. 388+09.33  
 PCC STA. 398+95.76

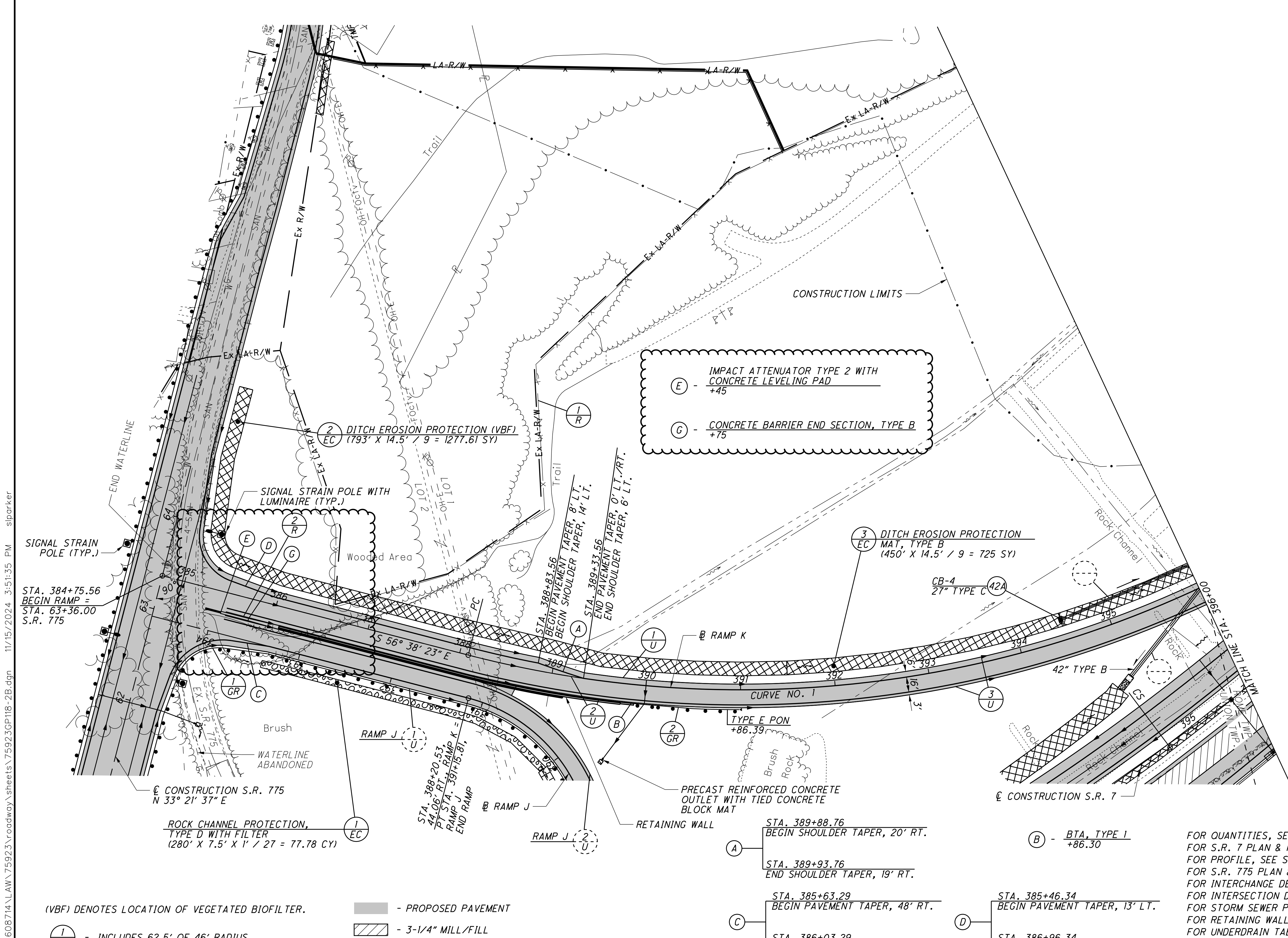


CALCULATED SLP  
 CHECKED ALB

PLAN - RAMP K  
 STA. 384+75.56 TO STA. 396+00.00

LAW-7-2.17

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(E) - IMPACT ATTENUATOR TYPE 2 WITH CONCRETE LEVELING PAD +45  
 (G) - CONCRETE BARRIER END SECTION, TYPE B +75

(2) DITCH EROSION PROTECTION (VBF)  
 (793' X 14.5' / 9 = 1277.61 SY)

(3) DITCH EROSION PROTECTION  
 MAT, TYPE B  
 (450' X 14.5' / 9 = 725 SY)

ROCK CHANNEL PROTECTION,  
 TYPE D WITH FILTER  
 (280' X 7.5' X 1' / 27 = 77.78 CY)

(A) STA. 389+88.76  
 BEGIN SHOULDER TAPER, 20' RT.  
 STA. 389+93.76  
 END SHOULDER TAPER, 19' RT.

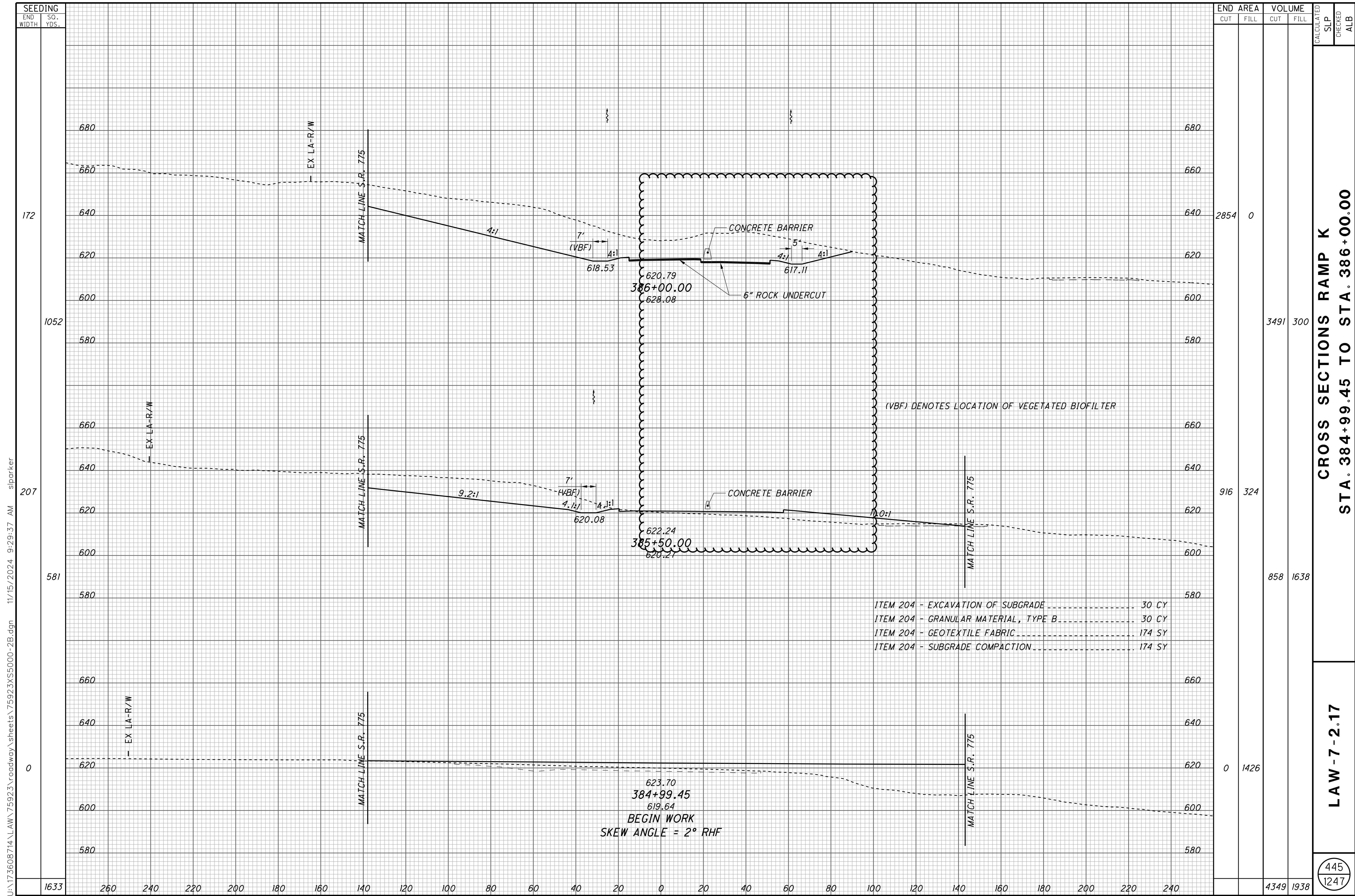
(C) STA. 385+63.29  
 BEGIN PAVEMENT TAPER, 48' RT.  
 STA. 386+03.29  
 END PAVEMENT TAPER, 44' RT.

(B) - BTA, TYPE 1 +86.30  
 STA. 385+46.34  
 BEGIN PAVEMENT TAPER, 13' LT.  
 STA. 386+96.34  
 END PAVEMENT TAPER, 8' LT.

(VBF) DENOTES LOCATION OF VEGETATED BIOFILTER.  
 (1/GR) - INCLUDES 62.5' OF 46' RADIUS SHOP CURVED GUARDRAIL  
 - PROPOSED PAVEMENT  
 - 3-1/4" MILL/FILL

FOR QUANTITIES, SEE SHEETS 71-81  
 FOR S.R. 7 PLAN & PROFILE, SEE SHEETS 146-147  
 FOR PROFILE, SEE SHEET 443  
 FOR S.R. 775 PLAN & PROFILE, SEE SHEETS 559-560  
 FOR INTERCHANGE DETAILS, SEE SHEETS 619-621  
 FOR INTERSECTION DETAILS, SEE SHEET 628  
 FOR STORM SEWER PROFILE, SEE SHEET 648  
 FOR RETAINING WALL DETAILS, SEE SHEETS 706-712  
 FOR UNDERDRAIN TABLES, SEE SHEETS 674-678  
 FOR TRAFFIC CONTROL PLAN, SEE SHEETS 713-773A  
 FOR FENCE TABLES, SEE SHEETS 1039-1041

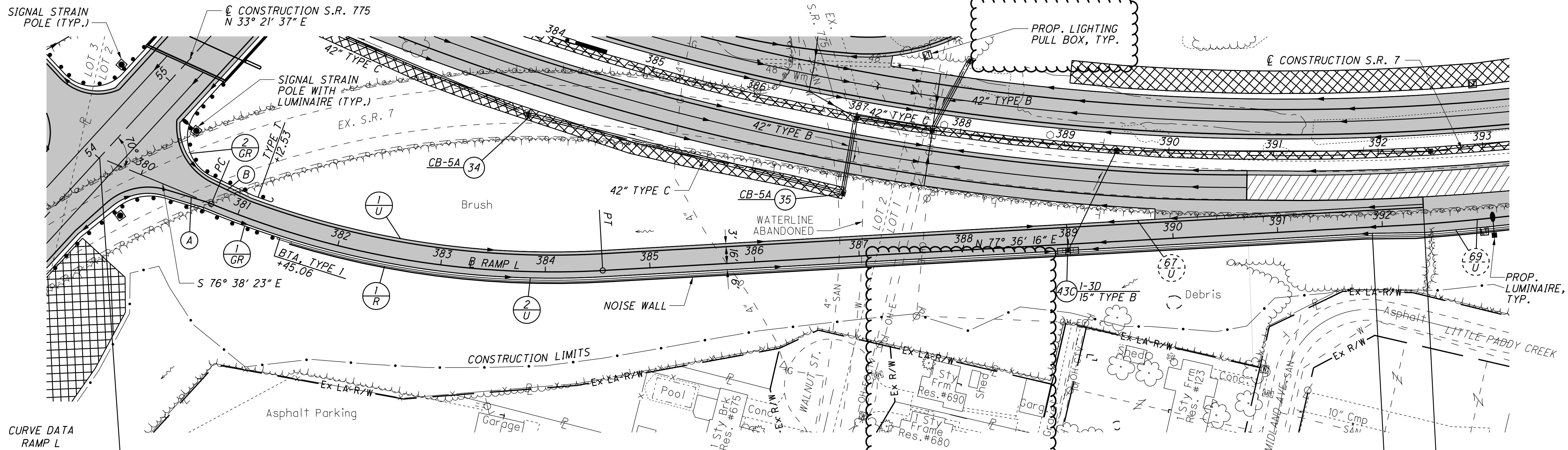
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CROSS SECTIONS RAMP K  
STA. 384+99.45 TO STA. 386+00.00

LAW - 7 - 2.17

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**CURVE DATA**  
RAMP L

P.I. STA. 382+67.06  
 $\Delta = 25^\circ 45' 21''$  (LT)  
 $D_c = 6^\circ 44' 26''$   
 $R = 850.00'$   
 $T = 194.33'$   
 $L = 382.09'$   
 $E = 21.93'$   
 $e_{max} = 4.60\%$   
 PC STA. 380+72.73  
 PT STA. 384+54.82

STA. 379+57.36  
 BEGIN RAMP =  
 STA. 54+00.89 S.R. 775 =  
 STA. 381+12.92 RAMP I

- PROPOSED PAVEMENT  
 - 3-1/4" MILL/FILL

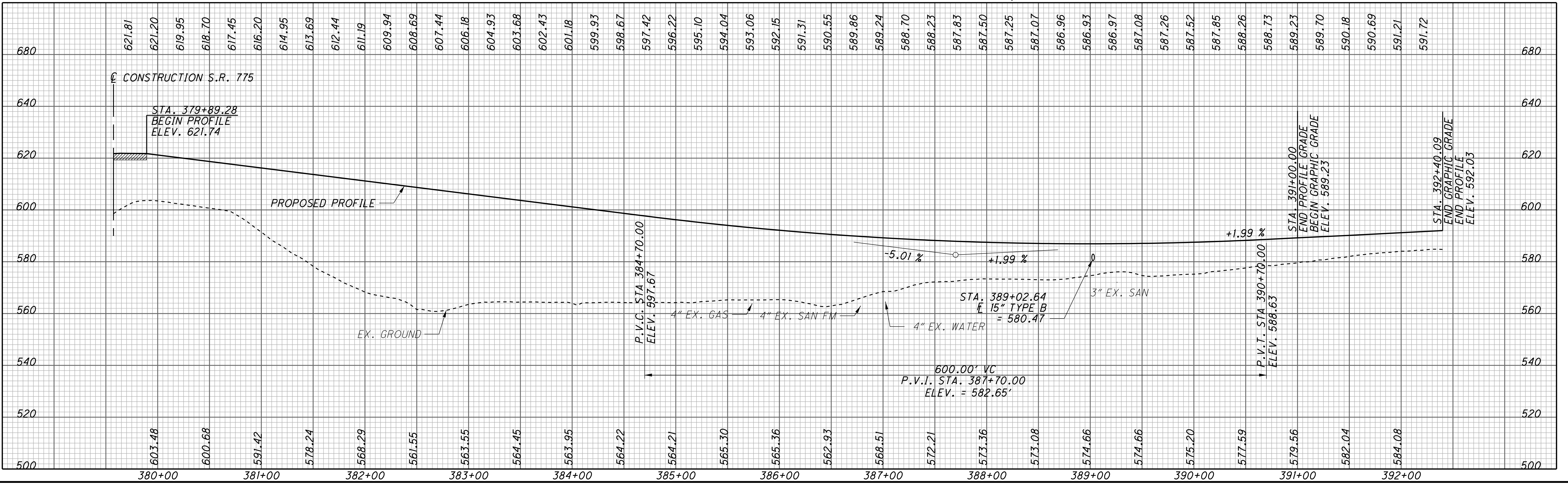
- INCLUDES 50' OF 50' RADIUS SHOP CURVED GUARDRAIL
- INCLUDES 75' OF 41' RADIUS SHOP CURVED GUARDRAIL

- (A) STA. 380+27.92  
 BEGIN PAVEMENT TAPER, 4' RT.
- STA. 380+67.92  
 END PAVEMENT TAPER, 0' LT./RT.
- (B) STA. 380+65.49  
 BEGIN PAVEMENT TAPER, 19.07' LT.
- STA. 381+06.26  
 END PAVEMENT TAPER, 16' LT.

FOR QUANTITIES, SEE SHEETS 71-81  
 FOR S.R. 7 PLAN & PROFILE, SEE SHEETS 144-147  
 FOR S.R. 775 PLAN & PROFILE, SEE SHEET 559-560  
 FOR INTERCHANGE DETAILS, SEE SHEETS 619-621  
 FOR INTERSECTION DETAILS, SEE SHEETS 627  
 FOR STORM DETAILS, SEE SHEETS 645-647  
 FOR UNDERDRAIN TABLES, SEE SHEETS 674-678  
 FOR TRAFFIC CONTROL PLAN, SEE SHEETS 713-773A  
 FOR FENCE TABLES, SEE SHEETS 1039-1041

STA. 391+90.09  
 BEGIN SHOULDER TAPER, 6' RT.

STA. 392+40.09  
 END SHOULDER TAPER, 8' RT.  
 END RAMP  
 RAMP NOSE =  
 STA. 392+40.09, 69' RT. S.R. 7



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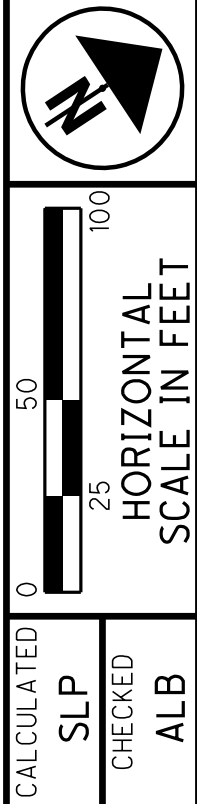
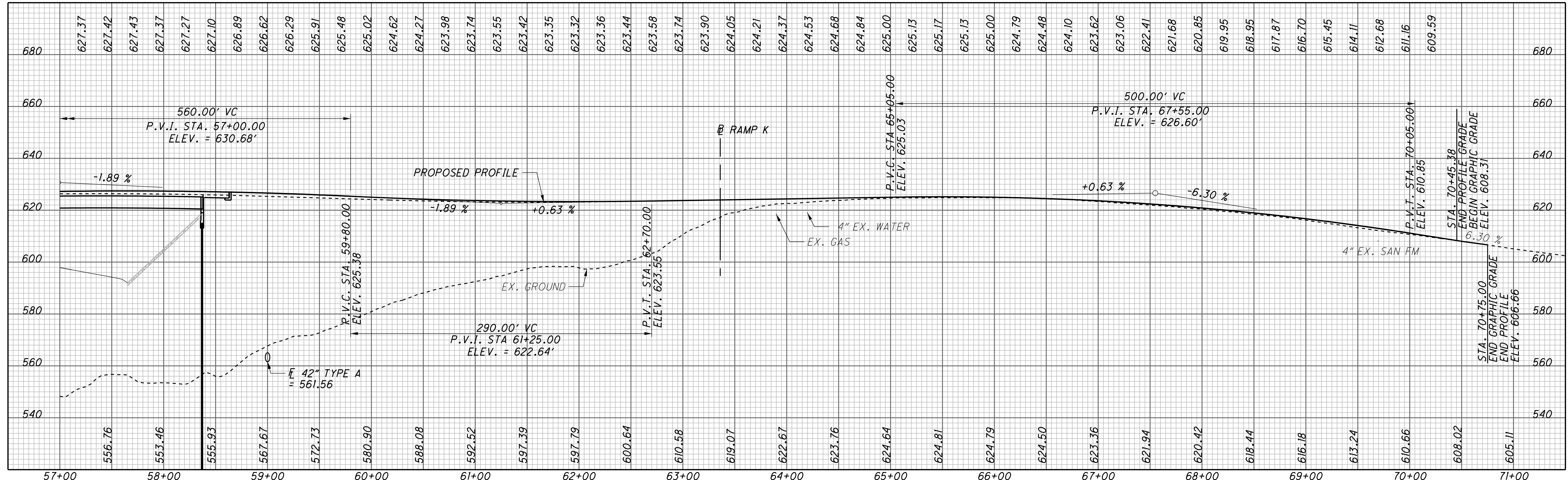
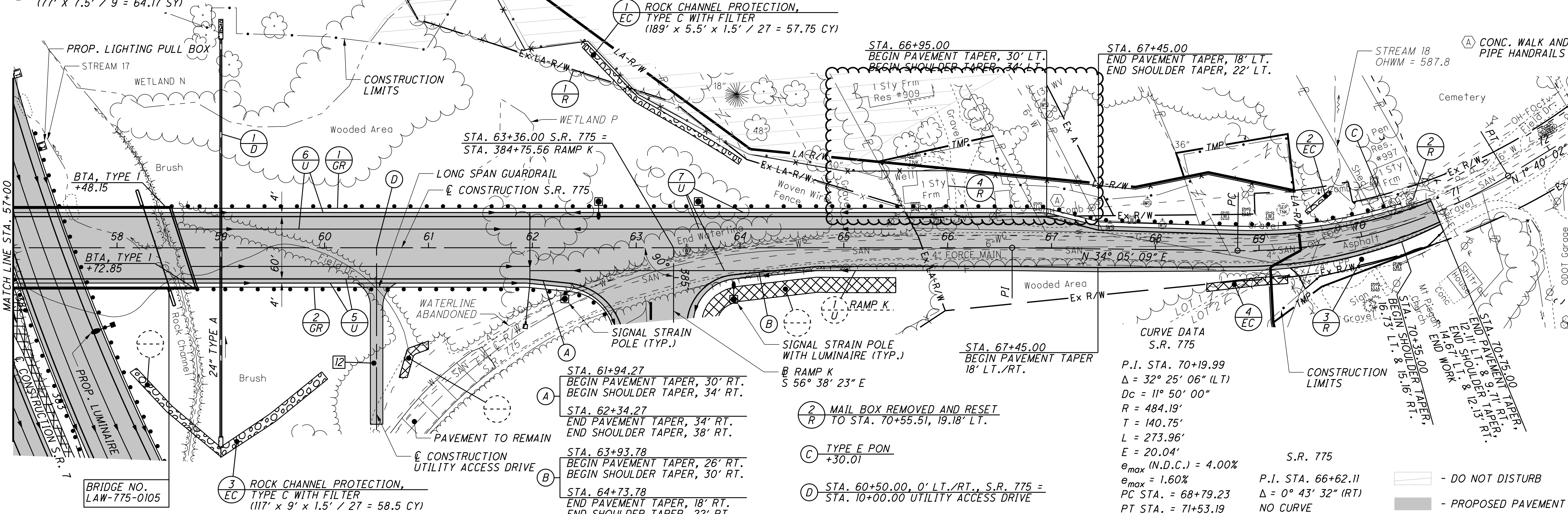
2 ROCK CHANNEL PROTECTION,  
TYPE C WITH FILTER  
(130' x 4' x 1.5' / 27 = 6.67 CY)

4 SEEDING AND EROSION CONTROL  
WITH TURF REINFORCING MAT, TYPE 3  
(77' x 7.5' / 9 = 64.17 SY)

QUANTITIES ARE INCLUDED IN REFERENCE  
NUMBER 3-R FOR THE REGRADING OF THE  
EXISTING GRAVEL PARKING IN THE AREA SHOWN.

FOR QUANTITIES, SEE SHEETS 71-81  
FOR S.R. 7 PROFILE, SEE SHEETS 144-145  
FOR RAMP K PLAN & PROFILE, SEE SHEETS 442-444  
FOR INTERSECTION DETAILS, SEE SHEET 628  
FOR DRIVE DETAIL, SEE SHEET 633  
FOR CULVERT DETAILS, SEE SHEET 664

FOR UNDERDRAIN TABLES, SEE SHEETS 674-678  
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 713-773A  
FOR STRUCTURE DETAILS, SEE SHEETS 1015-1038  
FOR FENCE TABLES, SEE SHEETS 1039-1041



CALCULATED SLP  
CHECKED ALB

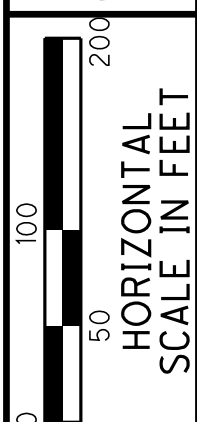
PLAN AND PROFILE - S.R. 775  
STA. 57+00.00 TO STA. 70+75.00

LAW-7-2.17

560  
1247

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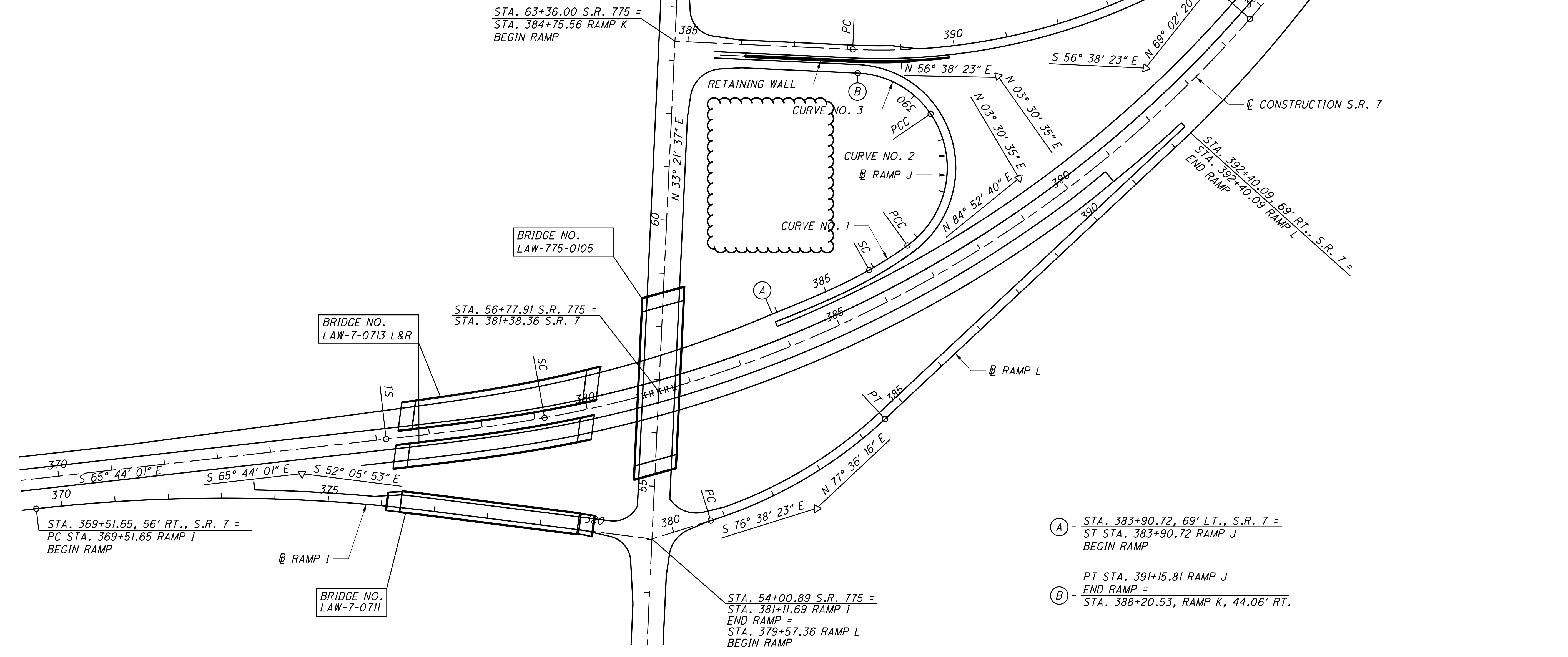
CALCULATED SLP CHECKED ALB

INTERCHANGE DETAILS  
GEOMETRIC LAYOUT - S.R. 775

LAW - 7 - 2.17

CURVE DATA RAMP I CURVE NO. 1	CURVE DATA RAMP I CURVE NO. 2	CURVE DATA RAMP J CURVE NO. 1	CURVE DATA RAMP J CURVE NO. 2
P.I. STA. 374+16.34 Δ = 16° 54' 53" (RT) Dc = 2° 02' 47" R = 2800.00' T = 416.33' L = 826.61' E = 30.78' e <sub>max</sub> = 3.89% PC STA. 370+00.01 PT STA. 378+26.62	P.I. STA. 379+75.71 Δ = 7° 49' 16" (LT) Dc = 7° 09' 43" R = 800.00' T = 54.69' L = 109.20' E = 1.87' e <sub>max</sub> (N.D.C.) = 4.77% e <sub>max</sub> = 1.60% PC STA. 379+21.02 PT STA. 380+30.23	P.I. STA. 385+74.87 Δ = 13° 53' 07" (LT) Dc = 7° 30' 00" R = 763.94' T = 42.61' L = 85.14' E = 1.19' TS STA. 383+90.72 SC STA. 385+90.72	θ <sub>back</sub> = 7° 30' 00" L <sub>back</sub> = 200.00' T <sub>back</sub> = 184.15' LT = 133.45' ST = 66.78' e <sub>max</sub> (N.D.C.) = 8.00% e <sub>max</sub> = 6.20% PCC STA. 386+75.86

CURVE DATA RAMP K CURVE NO. 1	CURVE DATA RAMP K CURVE NO. 2	CURVE DATA RAMP L
P.I. STA. 393+97.26 Δ = 54° 19' 17" (LT) Dc = 5° 00' 00" R = 1145.92' T = 587.93' L = 1086.43' E = 142.02' e <sub>max</sub> = 6.30% PC STA. 388+09.33 PCC STA. 398+95.76	P.I. STA. 401+27.55 Δ = 4° 38' 00" (LT) Dc = 1° 00' 00" R = 5729.58' T = 231.80' L = 463.34' E = 4.69' e <sub>max</sub> = 6.00% PCC STA. 398+95.76 PT STA. 403+59.10	P.I. STA. 382+67.06 Δ = 25° 45' 21" (LT) Dc = 6° 44' 26" R = 850.00' T = 194.33' L = 382.09' E = 21.93' e <sub>max</sub> = 4.60% PC STA. 380+72.73 PT STA. 384+54.82



STA. 403+54.87, 85.31' LT., S.R. 7 =  
PT STA. 403+59.10 RAMP K  
END RAMP

STA. 63+36.00 S.R. 775 =  
STA. 384+75.56 RAMP K  
BEGIN RAMP

STA. 56+77.91 S.R. 775 =  
STA. 381+38.36 S.R. 7

STA. 369+51.65, 56' RT., S.R. 7 =  
PC STA. 369+51.65 RAMP I  
BEGIN RAMP

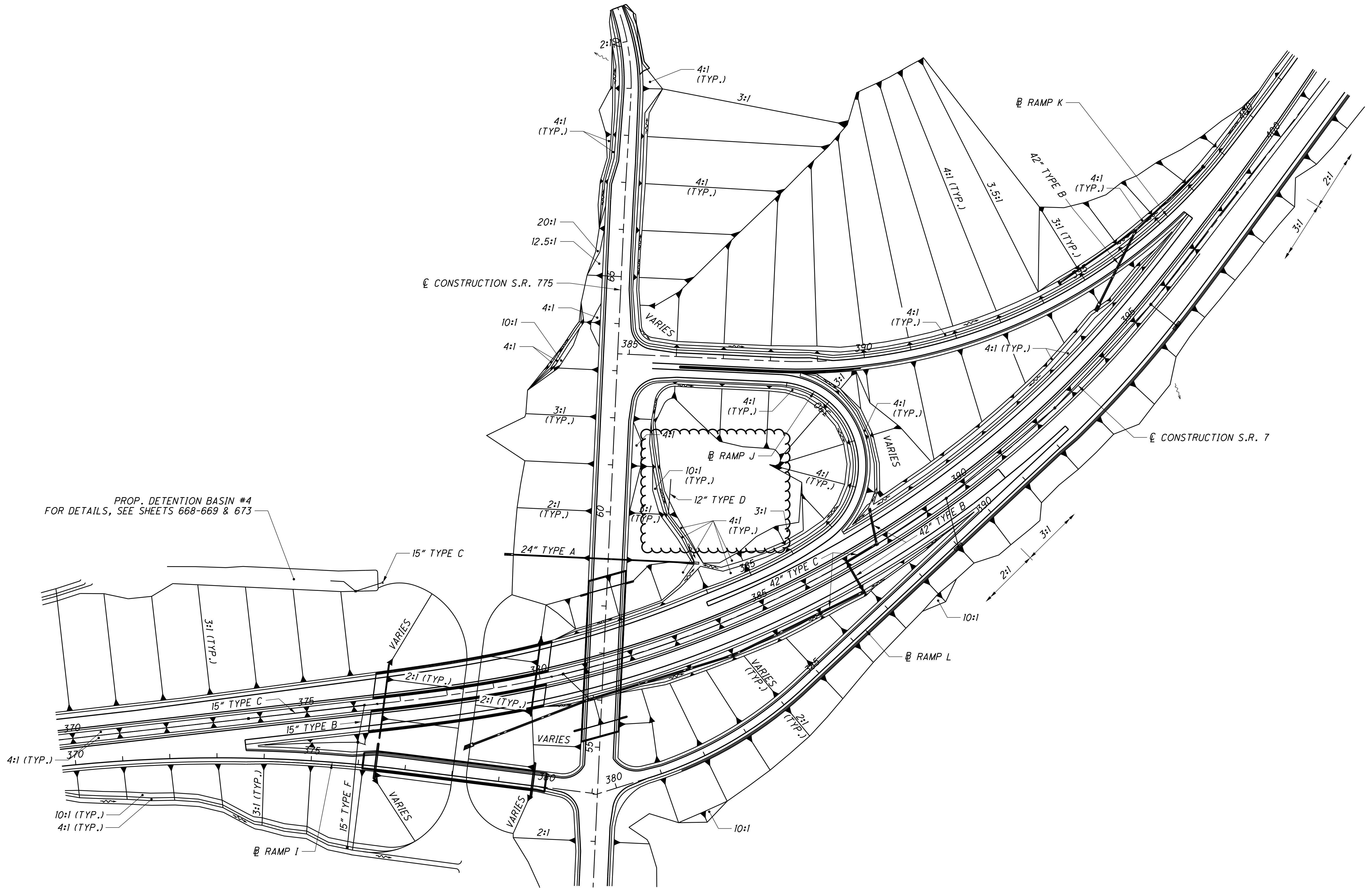
STA. 54+00.89 S.R. 775 =  
STA. 381+11.69 RAMP I  
END RAMP =  
STA. 379+57.36 RAMP L  
BEGIN RAMP

(A) STA. 383+90.72, 69' LT., S.R. 7 =  
ST STA. 383+90.72 RAMP J  
BEGIN RAMP

PT STA. 391+15.81 RAMP J  
END RAMP =  
(B) STA. 388+20.53, RAMP K, 44.06' RT.

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CALCULATED SLP CHECKED ALB

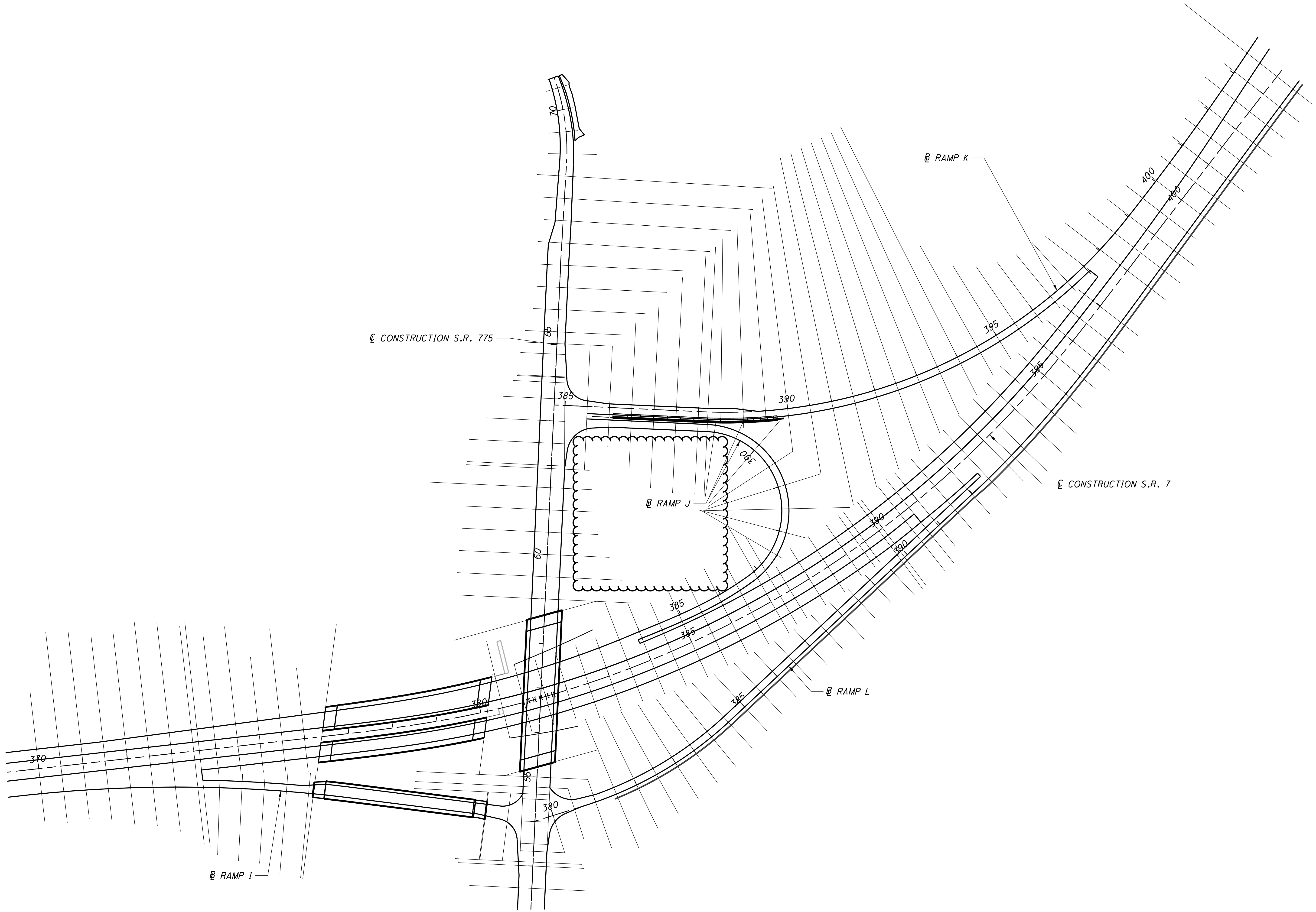
0 100 200

HORIZONTAL SCALE IN FEET

INTERCHANGE DETAILS  
GRADING PLAN - S.R. 775

LAW - 7 - 2.17

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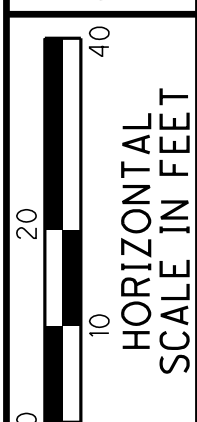
CALCULATED	SLP
CHECKED	ALB

0 100 200  
HORIZONTAL  
SCALE IN FEET

**INTERCHANGE DETAILS**  
**CROSS SECTION LAYOUT - S.R. 775**

**LAW - 7 - 2.17**

621  
1247



CALCULATED SLP CHECKED ALB

INTERSECTION DETAILS  
S.R. 775 / RAMP J / RAMP K

LAW - 7 - 2.17

628  
1247

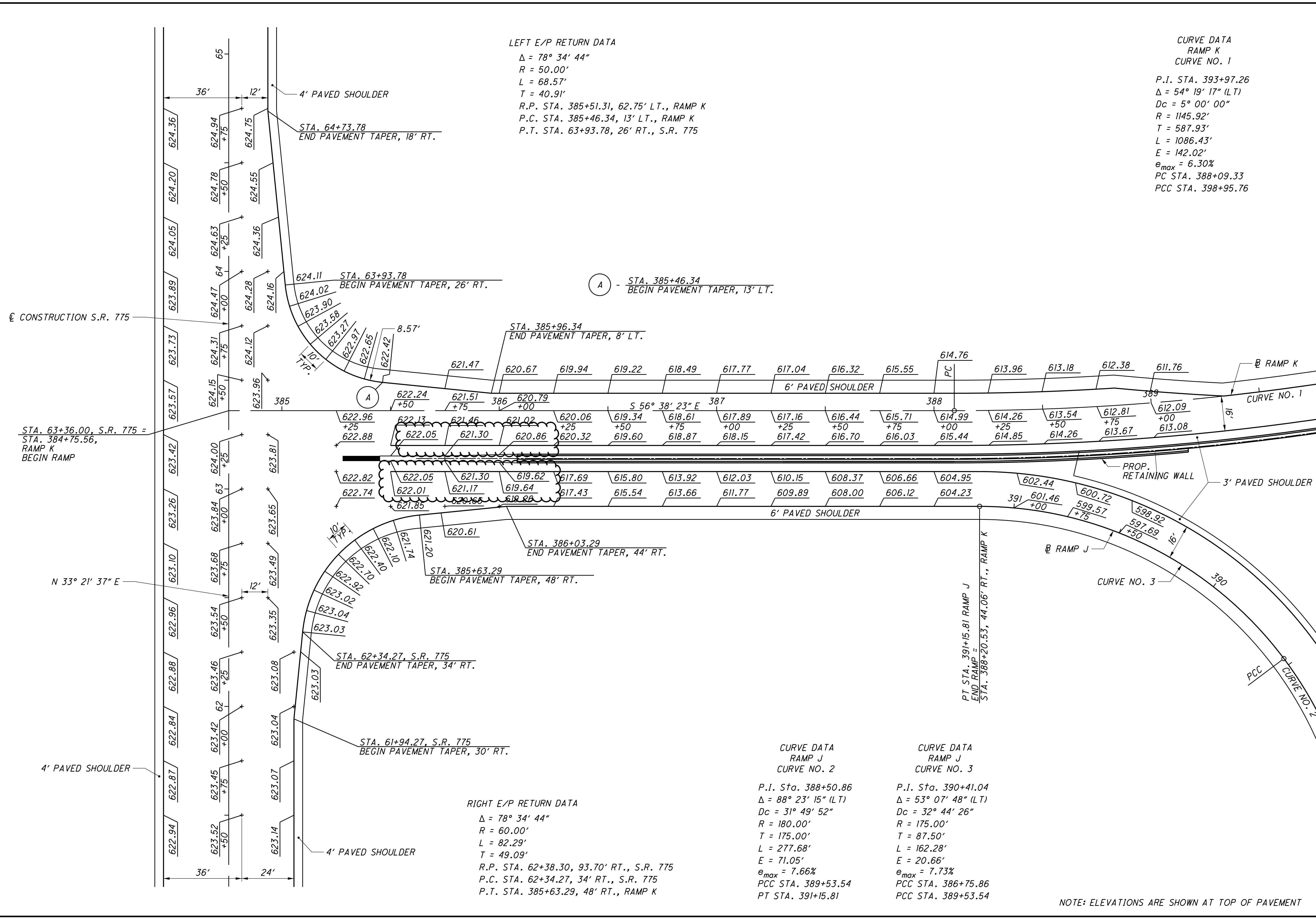
CURVE DATA  
RAMP K  
CURVE NO. 1  
P.I. STA. 393+97.26  
 $\Delta = 54^\circ 19' 17''$  (LT)  
Dc = 5° 00' 00"  
R = 1145.92'  
T = 587.93'  
L = 1086.43'  
E = 142.02'  
 $e_{max} = 6.30\%$   
PC STA. 388+09.33  
PCC STA. 398+95.76

LEFT E/P RETURN DATA  
 $\Delta = 78^\circ 34' 44''$   
R = 50.00'  
L = 68.57'  
T = 40.91'  
R.P. STA. 385+51.31, 62.75' LT., RAMP K  
P.C. STA. 385+46.34, 13' LT., RAMP K  
P.T. STA. 63+93.78, 26' RT., S.R. 775

RIGHT E/P RETURN DATA  
 $\Delta = 78^\circ 34' 44''$   
R = 60.00'  
L = 82.29'  
T = 49.09'  
R.P. STA. 62+38.30, 93.70' RT., S.R. 775  
P.C. STA. 62+34.27, 34' RT., S.R. 775  
P.T. STA. 385+63.29, 48' RT., RAMP K

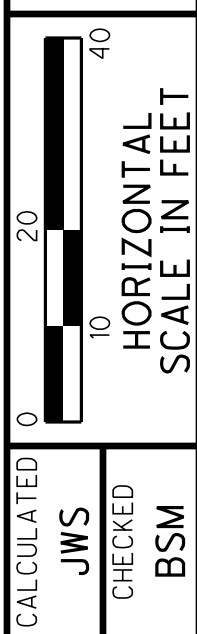
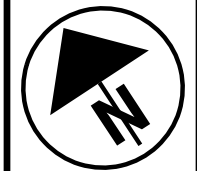
CURVE DATA  
RAMP J  
CURVE NO. 2  
P.I. Sta. 388+50.86  
 $\Delta = 88^\circ 23' 15''$  (LT)  
Dc = 31° 49' 52"  
R = 180.00'  
T = 175.00'  
L = 277.68'  
E = 71.05'  
 $e_{max} = 7.66\%$   
PCC STA. 389+53.54  
PT STA. 391+15.81

CURVE DATA  
RAMP J  
CURVE NO. 3  
P.I. Sta. 390+41.04  
 $\Delta = 53^\circ 07' 48''$  (LT)  
Dc = 32° 44' 26"  
R = 175.00'  
T = 87.50'  
L = 162.28'  
E = 20.66'  
 $e_{max} = 7.73\%$   
PCC STA. 386+75.86  
PCC STA. 389+53.54



NOTE: ELEVATIONS ARE SHOWN AT TOP OF PAVEMENT

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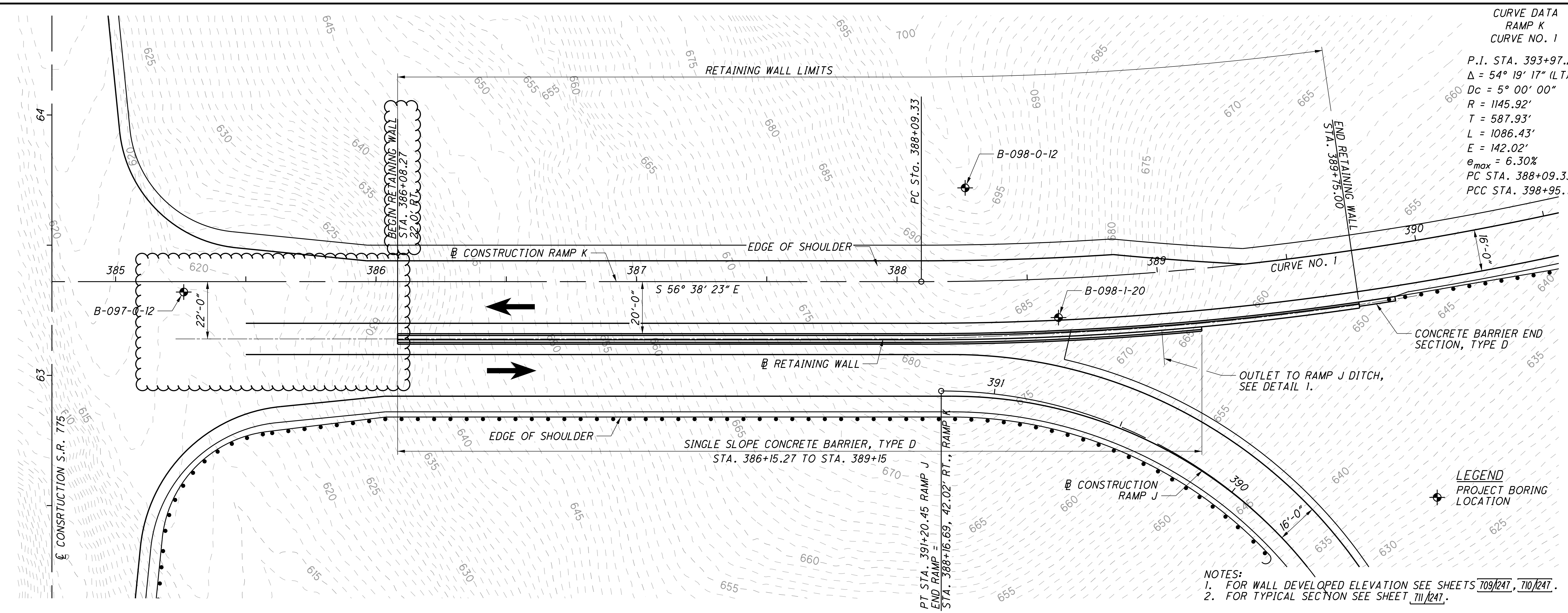
**RAMP J AND RAMP K RETAINING WALL  
SITE PLAN**

**LAW-7-2.17**

706  
1247

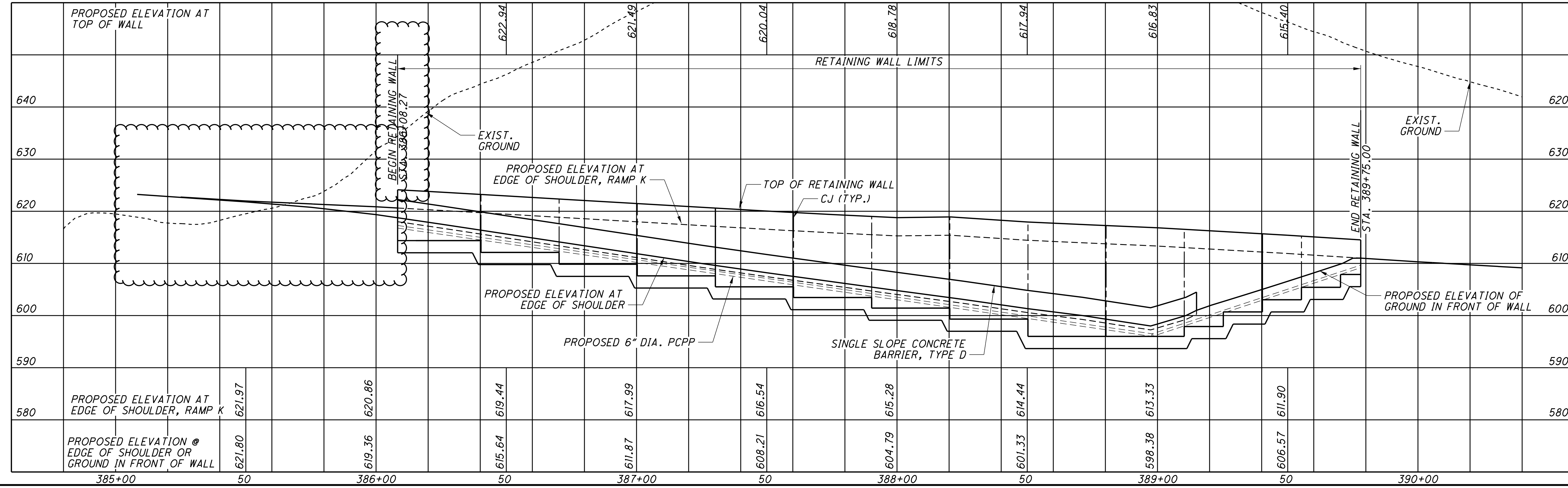
**CURVE DATA  
RAMP K  
CURVE NO. 1**

P.I. STA. 393+97.26  
 $\Delta = 54^\circ 19' 17''$  (LT)  
 $D_c = 5^\circ 00' 00''$   
 $R = 1145.92'$   
 $T = 587.93'$   
 $L = 1086.43'$   
 $E = 142.02'$   
 $e_{max} = 6.30\%$   
 PC STA. 388+09.33  
 PCC STA. 398+95.76



**NOTES:**

- FOR WALL DEVELOPED ELEVATION SEE SHEETS 709/247, 710/247.
- FOR TYPICAL SECTION SEE SHEET 711/247.



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**STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS**

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

SBR-1-20 REVISED 07-21-23

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION(S):

800 DATED 01-19-24

**DESIGN SPECIFICATIONS**

THIS STRUCTURE CONFORMS TO THE 9th EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS 2020, AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

**DESIGN DATA**

CONCRETE CLASS OCI:  
COMPRESSIVE STRENGTH 4.0 KSI (RETAINING WALL)

**CONCRETE REINFORCEMENT:**

EPOXY COATED STEEL REINFORCEMENT - MINIMUM YIELD STRENGTH 60-KSI (RETAINING WALL AND FOUNDATION)

**FOUNDATION BEARING RESISTANCE**

RETAINING WALL FOOTINGS, AS DESIGNED, PRODUCE A MAXIMUM SERVICE LOAD PRESSURE OF 3.27 KIPS PER SQUARE FOOT AND A MAXIMUM STRENGTH LOAD PRESSURE OF 7.25 KIPS PER SQUARE FOOT. THE FACTORED BEARING RESISTANCE IS 11.3 KIPS PER SQUARE FOOT.

**FOOTINGS**

FOOTINGS SHALL EXTEND A MINIMUM OF 3 INCHES INTO BEDROCK OR TO THE ELEVATION SHOWN, WHICHEVER IS LOWER.

ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN

LIMITS OF EXCAVATION SHALL BE AS SHOWN IN PLANS. BACKFILL SHALL BE GRANULAR MATERIAL TYPE B.

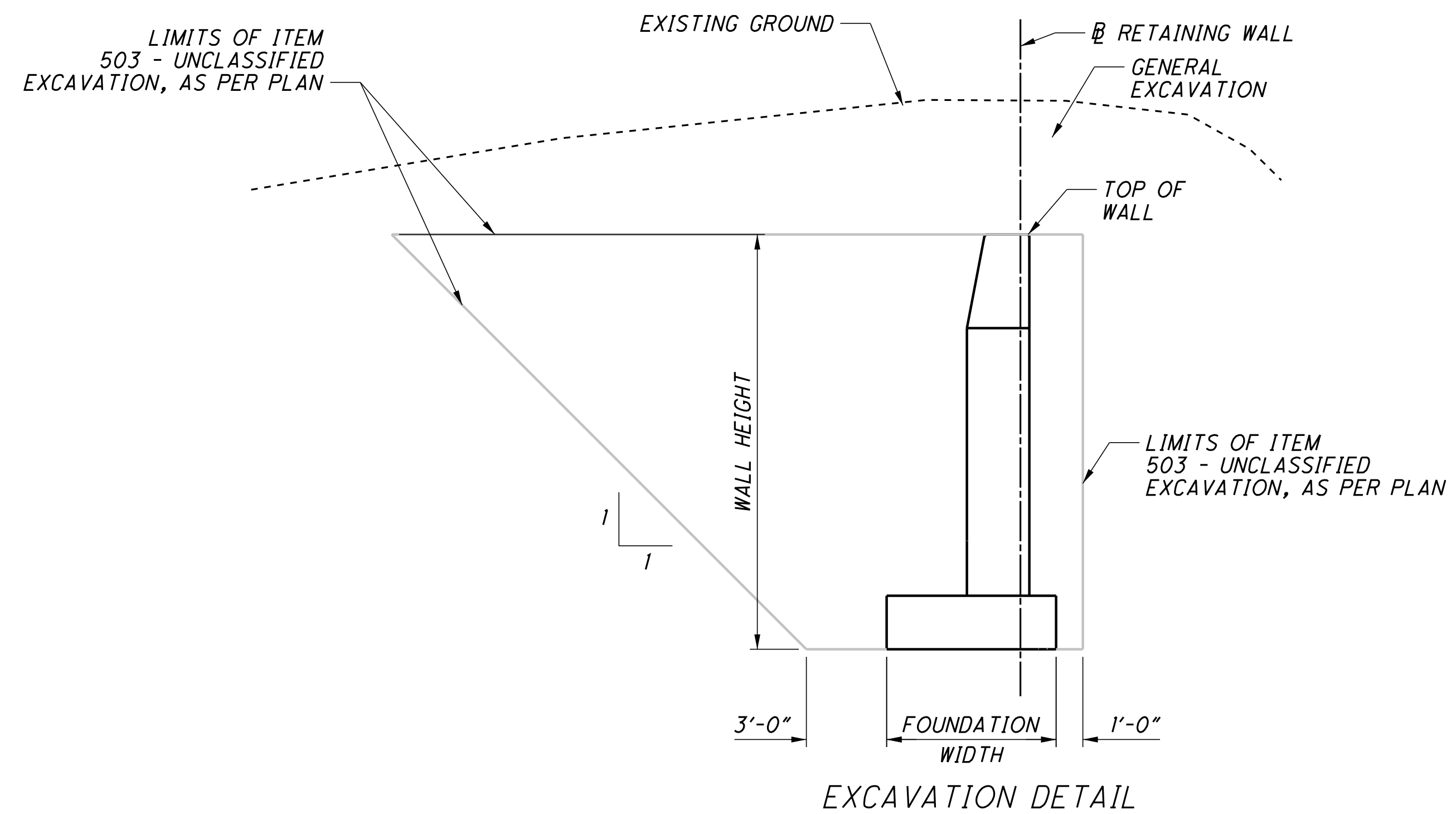
ITEM 509 - EPOXY COATED REINFORCING STEEL, AS PER PLAN

IN ADDITION TO THE PROVISIONS OF ITEM 509, FIELD BEND AND/OR FIELD CUT THE REINFORCING STEEL DESIGNATED IN THE PLANS, AS NECESSARY, IN ORDER TO MAINTAIN THE REQUIRED CLEARANCES AND BAR SPACINGS. REPAIR ALL DAMAGE TO THE EPOXY COATING, AS A RESULT OF THIS WORK, ACCORDING TO C&MS 709.00.

**ABBREVIATIONS**

- ABUT. - ABUTMENT
- APPR. - APPROACH
- APPROX. - APPROXIMATELY
- B/ - BOTTOM OF
- BOT. - BOTTOM
- BRG. - BEARING
- CL - CENTERLINE
- C/C - CENTER TO CENTER
- CJ - CONSTRUCTION JOINT
- CLR. - CLEAR
- CONST. - CONSTRUCTION
- DIA. - DIAMETER
- DWG. - DRAWING
- EF - EACH FACE
- EL. - ELEVATION
- EQ. - EQUAL
- EX. - EXISTING
- EXP. - EXPANSION
- F.A. - FORWARD ABUTMENT
- F.F. - FRONT FACE
- FL - FLOW LINE
- HORIZ. - HORIZONTAL
- H.W. - HIGH WATER
- LT. - LEFT
- MAX. - MAXIMUM
- MIN. - MINIMUM
- N.F. - NEAR FACE
- NO. - NUMBER
- O/O - OUT TO OUT
- OHW - ORDINARY HIGH WATER MARK
- PVMT. - PAVEMENT
- R.A. - REAR ABUTMENT
- REF. - REFERENCE
- RT. - RIGHT
- SHLD. - SHOULDER
- SP - SETTLEMENT PLATFORM
- SPA. - SPACE
- STA. - STATION
- STD. - STANDARD
- T/ - TOP OF
- T/T - TOE TO TOE
- TEMP. - TEMPORARY
- TYP. - TYPICAL
- VERT. - VERTICAL
- YR. - YEAR

						CALCULATED BY: BSM
						CHECKED BY: EDA
01/NHS/01	ITEM	EXT	TOTAL	UNIT	DESCRIPTION	SEE SHEET
STRUCTURE OVER 20 FOOT SPAN (MEG-00033-23994)						
4811	503	21101	4,811	CY	UNCLASSIFIED EXCAVATION, AS PER PLAN	
101808	509	10001	101,808	LB	EPOXY COATED STEEL REINFORCEMENT, AS PER PLAN	
465	511	46012	465	CY	CLASS OCI CONCRETE WITH OC/OA, RETAINING/WINGWALL NOT INCLUDING FOOTING	
371	511	46512	371	CY	CLASS OCI CONCRETE WITH OC/OA, FOOTING	
700	512	10100	700	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
46	512	33000	46	SY	TYPE 2 WATERPROOFING	
440	516	13200	440	SF	1/2" PREFORMED EXPANSION JOINT FILLER	
362	518	20000	362	SY	PREFABRICATED GEOCOMPOSITE DRAIN	
55	518	21200	55	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	
375	518	40000	375	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	
26	518	40010	26	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	
310	622	10160	310	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE D	
1	622	25000	1	EACH	CONCRETE BARRIER END SECTION, TYPE D	



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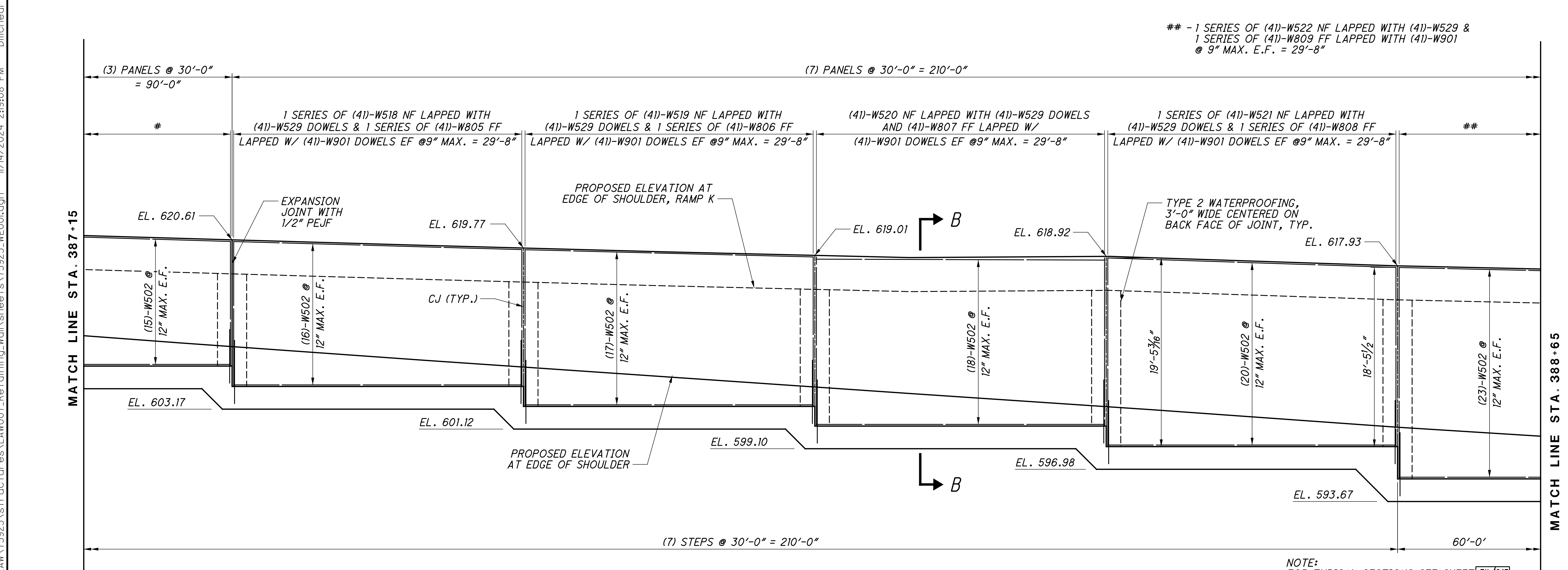
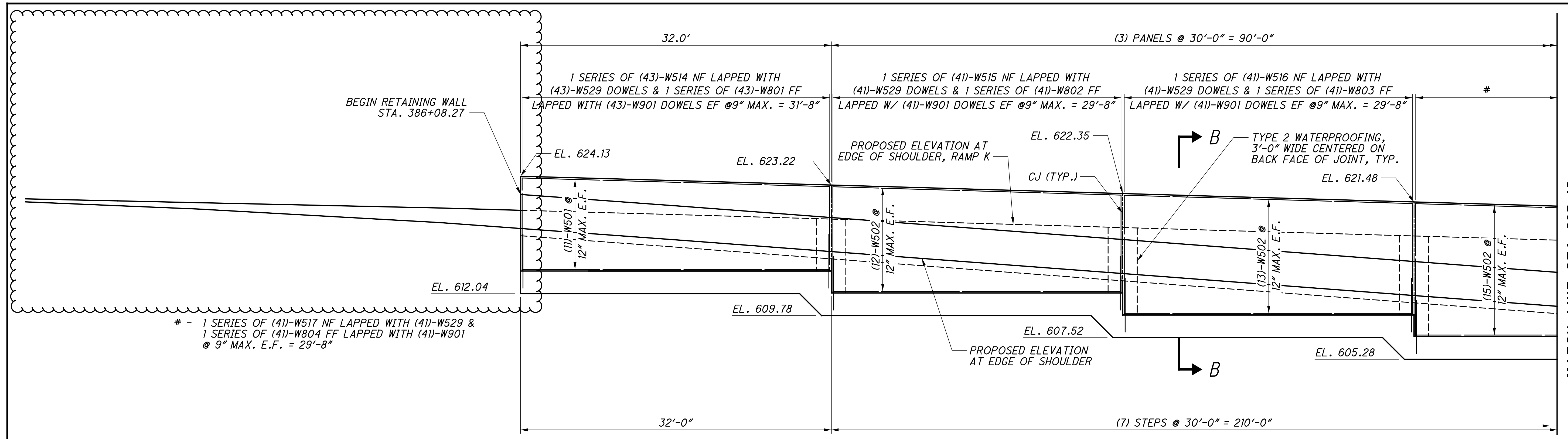
CALCULATED  
JWS  
CHECKED  
BSM

**RAMP J & K RETAINING WALL NOTES AND QUANTITIES**

**LAW - 7 - 2.17**

707  
1247

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## - 1 SERIES OF (41)-W522 NF LAPPED WITH (41)-W529 & 1 SERIES OF (41)-W809 FF LAPPED WITH (41)-W901 @ 9" MAX. E.F. = 29'-8"

NOTE: FOR TYPICAL SECTIONS SEE SHEET 711/247.

LAP LENGTHS  
#5 = 2'-6"  
#8 = 4'-9"  
#9 = 6'-0"

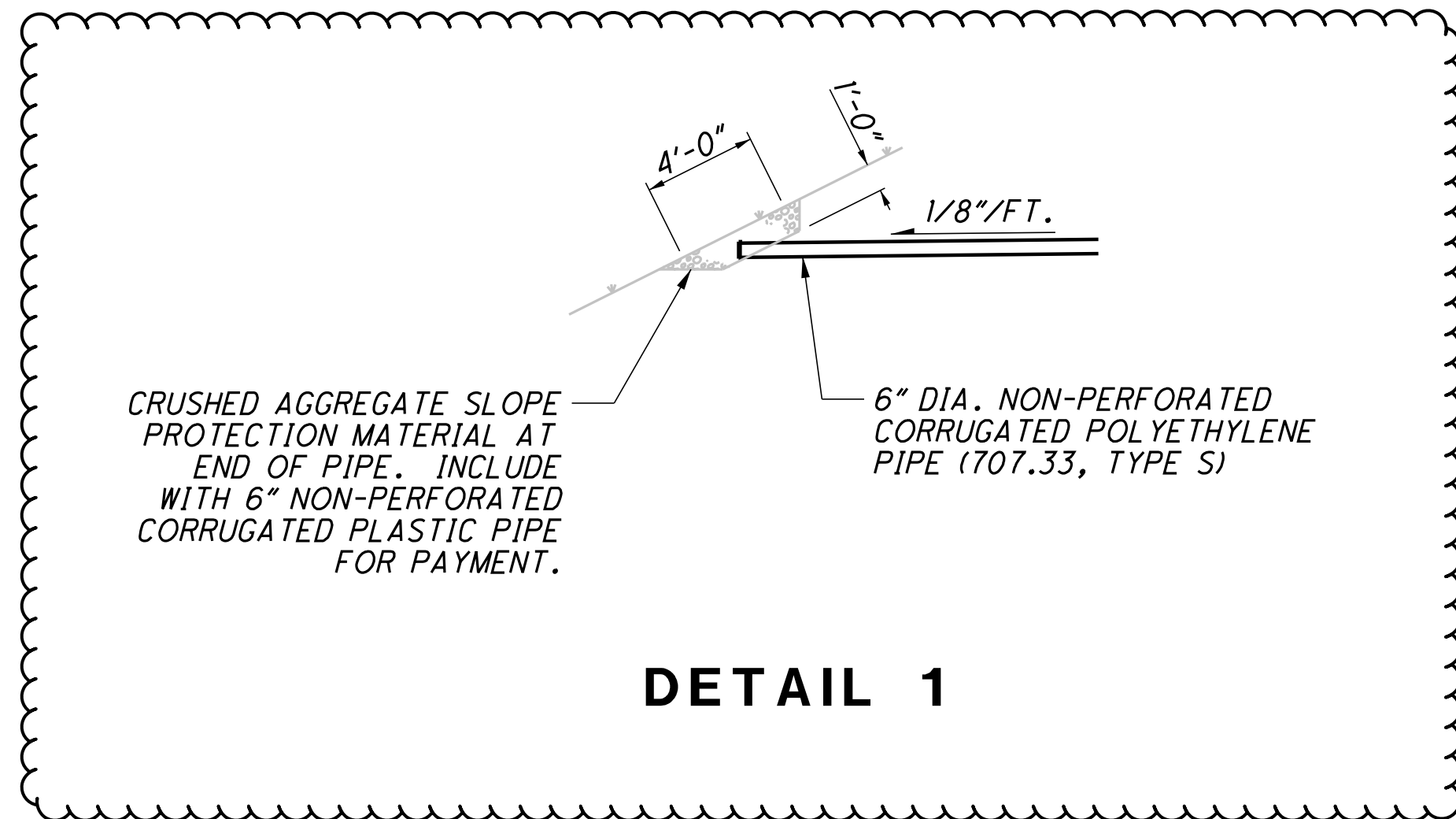
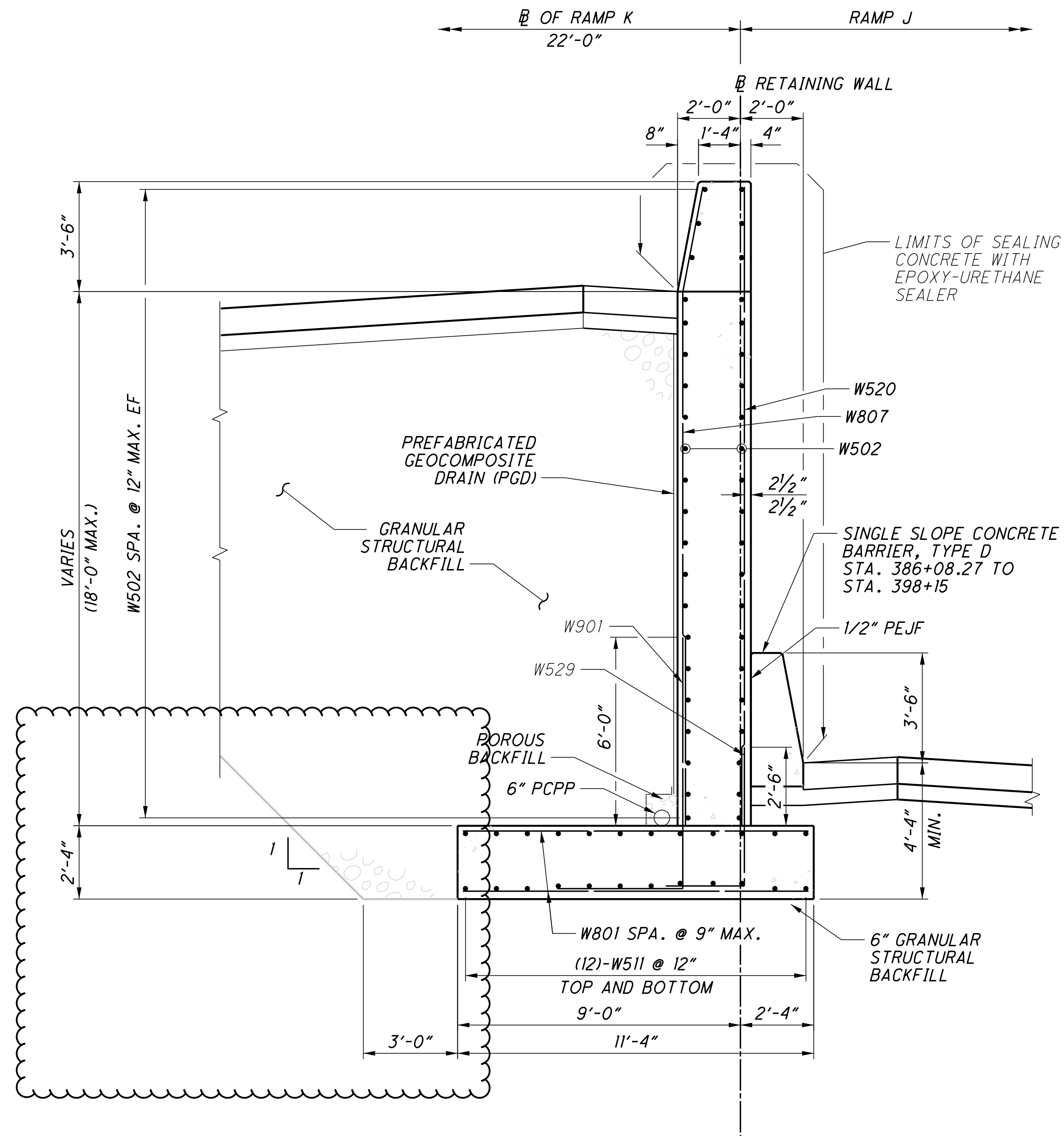
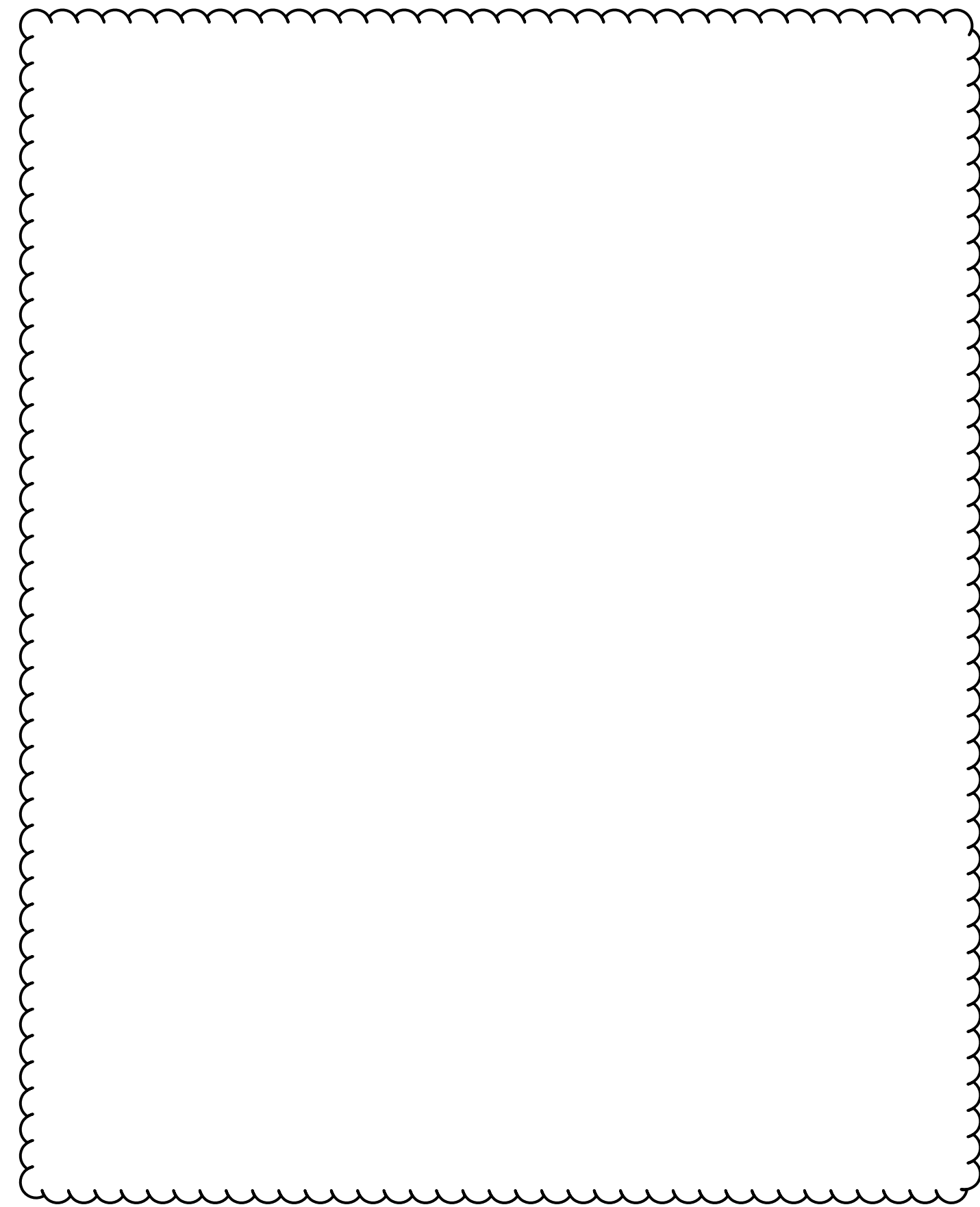
CALCULATED JWS  
CHECKED BSM

RAMP J & K RETAINING WALL ELEVATION

LAW - 7 - 2.17

709  
1247

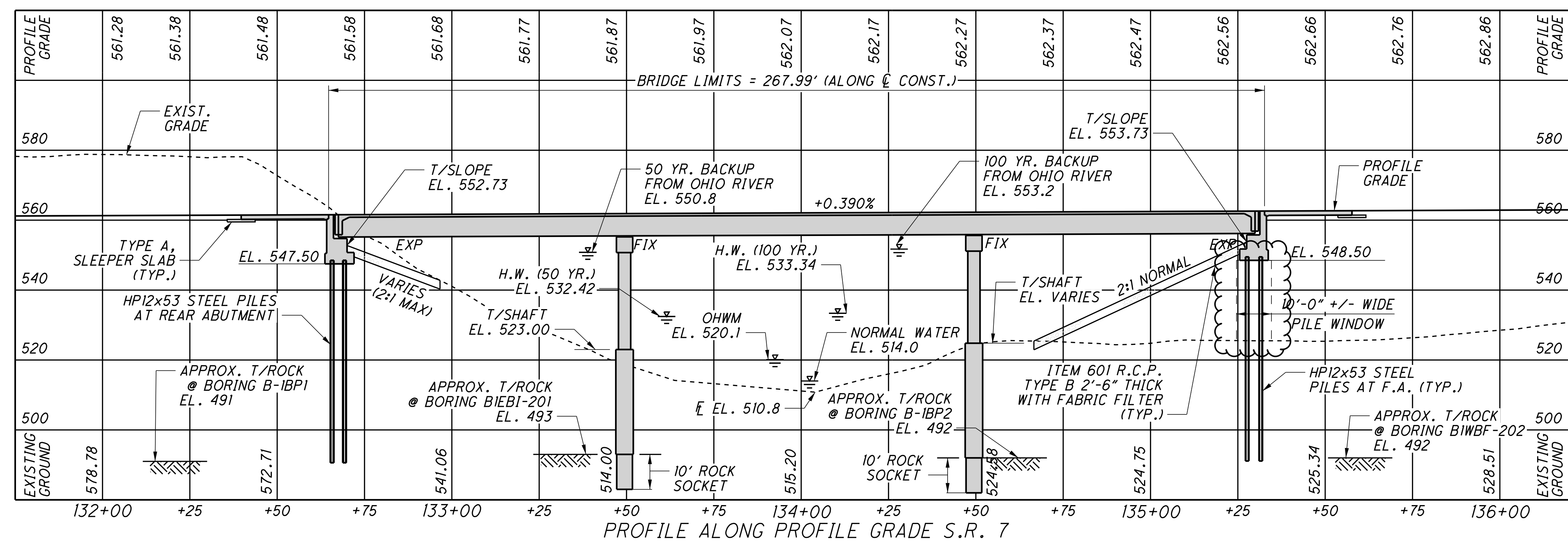
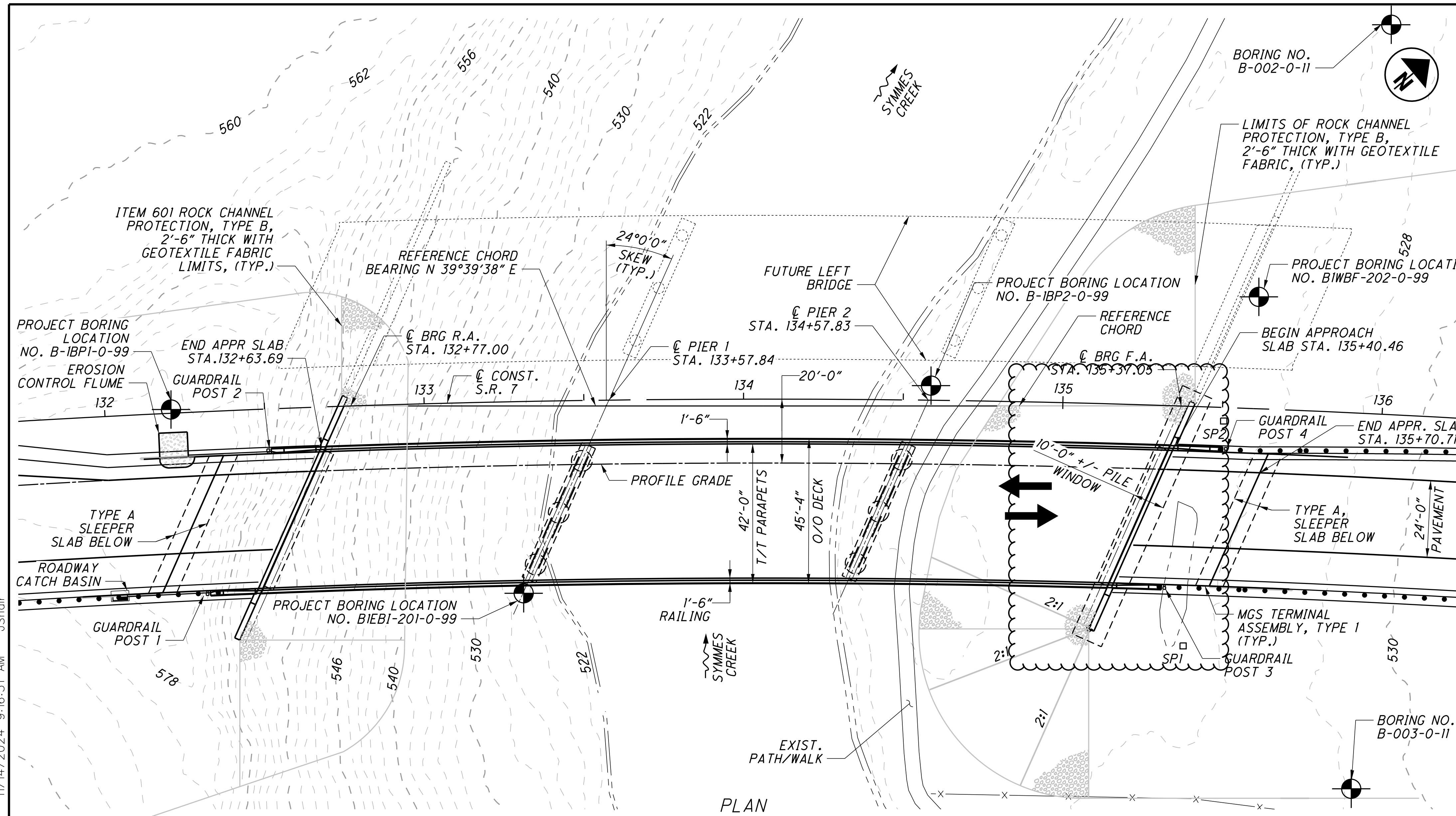
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- NOTES:
1. FOR SITE PLAN, SEE SHEET [706/247].
  2. FOR FOUNDATION PLAN, SEE SHEET [708/247].
  3. FOR WALL ELEVATIONS, SEE SHEETS [709/247], [710/247].



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**NOTES**

- EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
- FOR PRIMARY PROJECT CONTROL INFORMATION TABLE SEE ROADWAY GENERAL NOTES.
- BRIDGE DECK DRAINAGE IS CONTROLLED BY ROADWAY CURBS EXTENDING OFF THE EAST END OF THE BRIDGE TO ROADWAY CATCH BASINS.
- FOR LIST OF ABBREVIATIONS SEE SHEET 4/25.

**DESIGN TRAFFIC:**  
 2028 ADT = 13,400    2028 ADTT = 1,072  
 2048 ADT = 17,500    2048 ADTT = 1,400  
 DIRECTIONAL DISTRIBUTION = 53/47

**LEGEND**

- PROJECT BORING LOCATION
- SETTLEMENT PLATFORM
- PROPOSED RIGHT-OF-WAY MONUMENT

**HYDRAULIC DATA**

DRAINAGE AREA = 351.7 SQ. MILES  
 Q (50) = 17,000 CFS    V (50) = 8.67 FT/S    EL. (50) = 532.42  
 Q (100) = 19,100 CFS    V (100) = 9.06 FT/S    EL. (100) = 533.34  
 STRUCTURE CLEARS THE 50 YEAR DESIGN HW BY 23.2 FEET.

**ESTIMATED PILE LENGTHS**

REAR ABUTMENT HP12x53 = 60 FT.  
 FORWARD ABUTMENT HP12x53 = 60 FT.

**S.R. 7 CURVE NO. 1 DATA**

P.I. STA. 138+60.99	L = 3,508.44'	Ts = 2,076.38'
Δ = 53° 33' 53" (RT)	E = 425.60'	LT = 116.67'
Dc = 1° 27' 15"	TS STA. = 117+84.61	ST = 58.34'
R = 3,940.00'	SC STA. = 119+59.61	e <sub>max</sub> = 4.00%
T = 1,880.13'	θs = 1° 16' 21"	CS STA. 154+68.05
	Ls = 175.00'	ST STA. 156+43.05

POST NUMBER	FIRST GUARDRAIL POST	STATION
1	EASTBOUND R.A.	132+28.76
2	WESTBOUND R.A.	132+50.63
3	EASTBOUND F.A.	135+33.61
4	WESTBOUND F.A.	135+51.46

**PROPOSED STRUCTURE**

TYPE: 3-SPAN PRESTRESSED CONCRETE I-BEAMS (60" MODIFIED TYPE 4) COMPOSITE WITH REINFORCED CONCRETE DECK ON CAP & COLUMN PIERS ON DRILLED SHAFTS & STUB TYPE ABUTMENTS ON STEEL HP PILES

SPANS: 78.93', 97.83', 78.91' C/C BRGS (MEASURED ALONG REF. CHORD)

ROADWAY: 42'-0" TOE/TOE PARAPETS

LOADING: HL-93 AND 60 LBS/FT<sup>2</sup> FUTURE WEARING SURFACE

WEARING SURFACE: 1" MONOLITHIC WEARING SURFACE

SKEW: 24°00'00" L.F. FROM PERPENDICULAR TO REF. CHORD

APPROACH SLABS: AS-1-15 AND APPLICABLE DETAILS FROM AS-2-15, 30'-0" LONG

ALIGNMENT: 01°27'15" CURVE RIGHT

SUPERELEVATION: 0.0400 FT. PER FT.

COORDINATES: LATITUDE 38° 26' 20.82" N  
 LONGITUDE 82° 27' 16.08" W

DESIGN AGENCY: **Stantec**  
 DATE: 04/2024  
 REVIEWED: MRS  
 DRAWN: JWS  
 DESIGNED: BSM  
 CHECKED: EER  
 LAWRENCE COUNTY  
 STA. 132+63.69  
 STA. 135+40.46  
 BRIDGE NO. LAW-7-0251  
 S.R. 7 OVER SYMMES CREEK  
 SITE PLAN  
 LAW-7-2.17  
 PID No. 75923  
 1/25  
 792  
 1247

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

AS-1-15	REVISED	01-20-23
AS-2-15	REVISED	07-21-23
DM-4.1	REVISED	07-17-20
EXJ-6-17	REVISED	01-19-24
PSID-1-13	REVISED	07-19-24
RM-1.1	REVISED	01-20-23
SBR-1-20	REVISED	07-21-23

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION:

800	DATED	07-19-24
832	DATED	07-19-24

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO THE 9TH EDITION OF "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2000 AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

DESIGN LOADING:

HL-93  
FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/FT<sup>2</sup>

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.

DESIGN DATA:

CONCRETE CLASS OC2 - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)  
CONCRETE CLASS OC1 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)  
CONCRETE CLASS OC5 - WITH 1-IN MAX. AGGREGATE SIZE - COMPRESSIVE STRENGTH 4.5 KSI (DRILLED SHAFT)  
REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI

STEEL H-PILES - A572 - YIELD STRENGTH 50 KSI

CONCRETE FOR PRESTRESSED BEAMS:

COMPRESSIVE STRENGTH (FINAL) = 7 KSI  
COMPRESSIVE STRENGTH (RELEASE) = 6 KSI  
WELDED WIRE FABRIC - YIELD STRENGTH = 70 KSI

PRESTRESSING STRAND:

AREA = 0.217 SQ. IN.  
ULTIMATE STRENGTH = 270 K.S.I.  
INITIAL STRESS = 202.5 K.S.I.  
(LOW RELAXATION STRANDS)

MONOLITHIC WEARING SURFACE:

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

PILE DRIVING CONSTRAINTS:

PRIOR TO DRIVING PILES, CONSTRUCT THE SPILL THROUGH SLOPES AND THE BRIDGE APPROACH EMBANKMENT BEHIND THE ABUTMENTS UP TO THE LEVEL OF THE SUBGRADE ELEVATION FOR A MINIMUM DISTANCE OF 200 FEET BEHIND EACH ABUTMENT (SEE FORWARD APPROACH EMBANKMENT CONSTRUCTION THIS SHEET). DO NOT BEGIN THE EXCAVATION FOR THE ABUTMENT FOOTINGS AND THE INSTALLATION OF THE ABUTMENT PILES UNTIL AFTER THE ABOVE REQUIRED EMBANKMENT HAS BEEN CONSTRUCTED.

TO FACILITATE INSTALLATION OF PILES THROUGH THE NEW EMBANKMENT, THE CONTRACTOR SHALL CONSTRUCT AN APPROXIMATE 10 FEET WIDE ZONE OF SOIL FREE OF BEDROCK, COBBLES, BOULDERS, AND AGGREGATE GREATER THAN 2 INCHES IN DIAMETER DIRECTLY BENEATH THE FORWARD ABUTMENT. DO NOT BEGIN THE INSTALLATION OF THE ABUTMENT PILES UNTIL AFTER THE ABOVE REQUIRED EMBANKMENT HAS BEEN CONSTRUCTED AND AN ESTIMATED 180 CALENDAR DAY WAITING PERIOD HAS ELAPSED. THE ENGINEER OF RECORD MAY ADJUST THE LENGTH OF THE WAITING PERIOD BASED ON SETTLEMENT PLATFORM READINGS. AFTER THE ESTIMATED WAITING PERIOD HAS ELAPSED, DRIVE PILES TO REFUSAL ON BEDROCK. ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS REQUIRED TO CONSTRUCT THE PILE WINDOW SHALL BE INCLUDED FOR PAYMENT IN ITEM 203, EMBANKMENT IN THE ROADWAY QUANTITIES.

PILES TO BEDROCK:

DRIVE PILES THROUGH THE EMBANKMENT REINFORCING. DRIVE PILES TO REFUSAL ON BEDROCK. THE DEPARTMENT WILL CONSIDER REFUSAL TO BE OBTAINED WHEN THE PILE PENETRATION IS AN INCH OR LESS AFTER RECEIVING AT LEAST 20 BLOWS FROM THE PILE HAMMER. SELECT THE HAMMER SIZE TO ACHIEVE THE REQUIRED DEPTH TO BEDROCK AND REFUSAL.

THE TOTAL FACTORED LOAD IS 210.6 KIPS PER PILE FOR THE REAR ABUTMENT PILES.

THE TOTAL FACTORED LOAD IS 206.5 KIPS PER PILE FOR THE FORWARD ABUTMENT PILES.

REAR ABUTMENT PILES:

20 PILES 65 FEET LONG, ORDER LENGTH

FORWARD ABUTMENT PILES:

28 PILES 65 FEET LONG, ORDER LENGTH

PILE SPLICES:

IN LIEU OF USING THE FULL PENETRATION BUTT WELDS SPECIFIED IN CMS 507.09 TO SPLICE STEEL H-PILES, THE CONTRACTOR MAY USE A MANUFACTURED H-PILE SPLICER. FURNISH SPLICERS FROM THE FOLLOWING MANUFACTURER:

ASSOCIATED PILE AND FITTING CORPORATION  
8 WOOD HOLLOW RD. PLAZA 1  
PARSIPPANY, NEW JERSEY 07054

INSTALL AND WELD THE SPLICER TO THE PILE SECTIONS IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN ASSEMBLY PROCEDURE SUPPLIED TO THE ENGINEER BEFORE THE WELDING IS PERFORMED.

DRILLED SHAFTS:

PIER 1

THE MAXIMUM FACTORED LOAD TO BE SUPPORTED BY EACH DRILLED SHAFT IS 1,061 KIPS AT PIER 1. THIS LOAD IS RESISTED BY TIP RESISTANCE. ROCK SOCKET DEPTH PROVIDED FOR LATERAL SUPPORT.

PIER 2

THE MAXIMUM FACTORED LOAD TO BE SUPPORTED BY EACH DRILLED SHAFT IS 1,080 KIPS AT PIER 2. THIS LOAD IS RESISTED BY TIP RESISTANCE. ROCK SOCKET DEPTH PROVIDED FOR LATERAL SUPPORT.

DECK PLACEMENT DESIGN ASSUMPTIONS:

THE FOLLOWING ASSUMPTIONS OF CONSTRUCTION MEANS AND METHODS WERE MADE FOR THE ANALYSIS AND DESIGN OF THE SUPERSTRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE FALSEWORK SUPPORT SYSTEM WITHIN THESE PARAMETERS AND WILL ASSUME RESPONSIBILITY FOR SUPERSTRUCTURE ANALYSIS FOR DEVIATION FROM THESE DESIGN ASSUMPTIONS.

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 2.44 KIPS.

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103".

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 IN.

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65".

ITEM 894 - THERMAL INTEGRITY PROFILER (T.I.P.) TEST

PERFORM INTEGRITY TESTING ON ALL OF THE DRILLED SHAFTS AT THE PIERS BY THERMAL INTEGRITY PROFILING (TIP). PERFORM TIP TESTING PER ASTM D7949, "STANDARD TEST METHODS FOR THERMAL INTEGRITY PROFILING OF CONCRETE DEEP FOUNDATIONS," METHOD B, AND PER THE PROJECT SPECIAL PROVISIONS.

EACH DRILLED SHAFT TO BE TESTED SHALL CONSIST OF 6 WIRE CABLES SPACED AT 60-DEGREES AROUND THE SHAFT. EACH CABLE WILL HAVE EMBEDDED THERMAL SENSORS SPACED AT 12" ALONG THE SHAFT STARTING 6" FROM THE BOTTOM OF THE ROCK SOCKET AND ENDING WITHIN 12" OF THE TOP OF THE DRILLED SHAFT.

APPROACH EMBANKMENT CONSTRUCTION:

THE APPROACH EMBANKMENTS SHALL BE CONSTRUCTED AND THEN UNDERGO AN ESTIMATED WAITING PERIOD OF 180 DAYS PRIOR TO DRIVING PILES.

REFER TO SHEETS 38 THROUGH 41 FOR NOTES REGARDING REINFORCED SLOPE AND EMBANKMENT CONSTRUCTION.

ABBREVIATIONS

APPROX. - APPROXIMATELY  
BRG. - BEARING  
C - CENTERLINE  
CLR. - CLEAR  
CONST. - CONSTRUCTION  
DWG. - DRAWING  
EF - EACH FACE  
EL. - ELEVATION  
EQ. - EQUAL  
EXIST. - EXISTING  
F.A. - FORWARD ABUTMENT  
FF - FAR FACE  
FL - FLOW LINE  
H.W. - HIGH WATER  
NF - NEAR FACE  
NO. - NUMBER  
OHW - ORDINARY HIGH WATER MARK  
R.A. - REAR ABUTMENT  
SP - SETTLEMENT PLATFORM  
SPA. - SPACE  
STA. - STATION  
STD. - STANDARD  
T/ - TOP OF  
TYP. - TYPICAL  
YR. - YEAR



DESIGN AGENCY  
DATE 04/2024  
MRS  
STRUCTURE FILE NUMBER 4400070

DRAWN JWS  
REVISED  
DESIGNED BSM  
CHECKED EER

GENERAL NOTES  
BRIDGE NO. LAW-7-0251  
S.R. 7 OVER SYMMES CREEK

LAW-7-2.17  
PID No. 75923

ESTIMATED QUANTITIES

CALCULATED BY: BSM 03/15/24  
CHECKED BY: MRS 03/25/24

02/NHS/08	ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	R. ABUT.	F. ABUT.	PIER	SUPER.	GEN.	SEE SHEET
2	SPECIAL	20365000	2	EACH	SETTLEMENT PLATFORM					2	4/25
LUMP	503	11100	LUMP	LS	COFFERDAMS AND EXCAVATION BRACING						
LUMP	503	21300	LUMP	LS	UNCLASSIFIED EXCAVATION						
LUMP	505	11100	LUMP	LS	PILE DRIVING EQUIPMENT MOBILIZATION						
3120	507	00200	3120	FT	STEEL PILES HP12X53, FURNISHED	1300	1820				
2880	507	00250	2880	FT	STEEL PILES HP12X53, DRIVEN	1200	1680				
210,079	509	10000	210079	LB	EPOXY COATED STEEL REINFORCEMENT	14,475	12,949	75,347	107,308		
9071	509	30020	9071	FT	NO. 4 DEFORMED GFRP REINFORCEMENT				9071		
454	511	34446	454	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK				454		
80	511	34450	80	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET)				80		
159	511	41012	159	CY	CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS				159		
280	511	43512	280	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT INCLUDING FOOTING	141	139				
1459	512	10100	1459	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	101	104		1254		
44	512	10300	44	SY	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN				44		
54	512	33000	54	SY	TYPE 2 WATERPROOFING	28	26				
5	515	15030	5	EACH	DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, LEVEL 3, TYPE 4 MOD. (60 IN.), 79'-11"				5		
5	515	15030	5	EACH	DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, LEVEL 3, TYPE 4 MOD. (60 IN.), 81'-7"				5		
5	515	15030	5	EACH	DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, LEVEL 3, TYPE 4 MOD. (60 IN.), 99'-8"				5		
36	515	20000	36	EACH	INTERMEDIATE DIAPHRAGMS				36		
100	516	12300	100	FT	STRIP SEAL EXPANSION JOINT ANCHORED WITH ELASTOMERIC CONCRETE				100		
30	516	44100	30	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (2.968x10"x24 1/2")	5	5	20			
225	518	20000	225	SY	PREFABRICATED GEOCOMPOSITE DRAIN	115	110				
33	518	21200	33	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	17	16				
161	518	40000	161	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	83	78				
55	518	40010	55	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	30	25				
60	524	94950	60	FT	DRILLED SHAFTS, 72" DIAMETER, INTO BEDROCK			60			
189	524	94970	189	FT	DRILLED SHAFTS, 78" DIAMETER, ABOVE BEDROCK			189			
302	526	30011	302	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17"), AS PER PLAN					302	22/25
100	526	90010	100	FT	TYPE A INSTALLATION					100	
1376	601	32104	1376	CY	ROCK CHANNEL PROTECTION, TYPE B WITH GEOTEXTILE FABRIC					1376	
6	894	10000	6	EACH	THERMAL INTEGRITY PROFILING (TIP) TEST			6			

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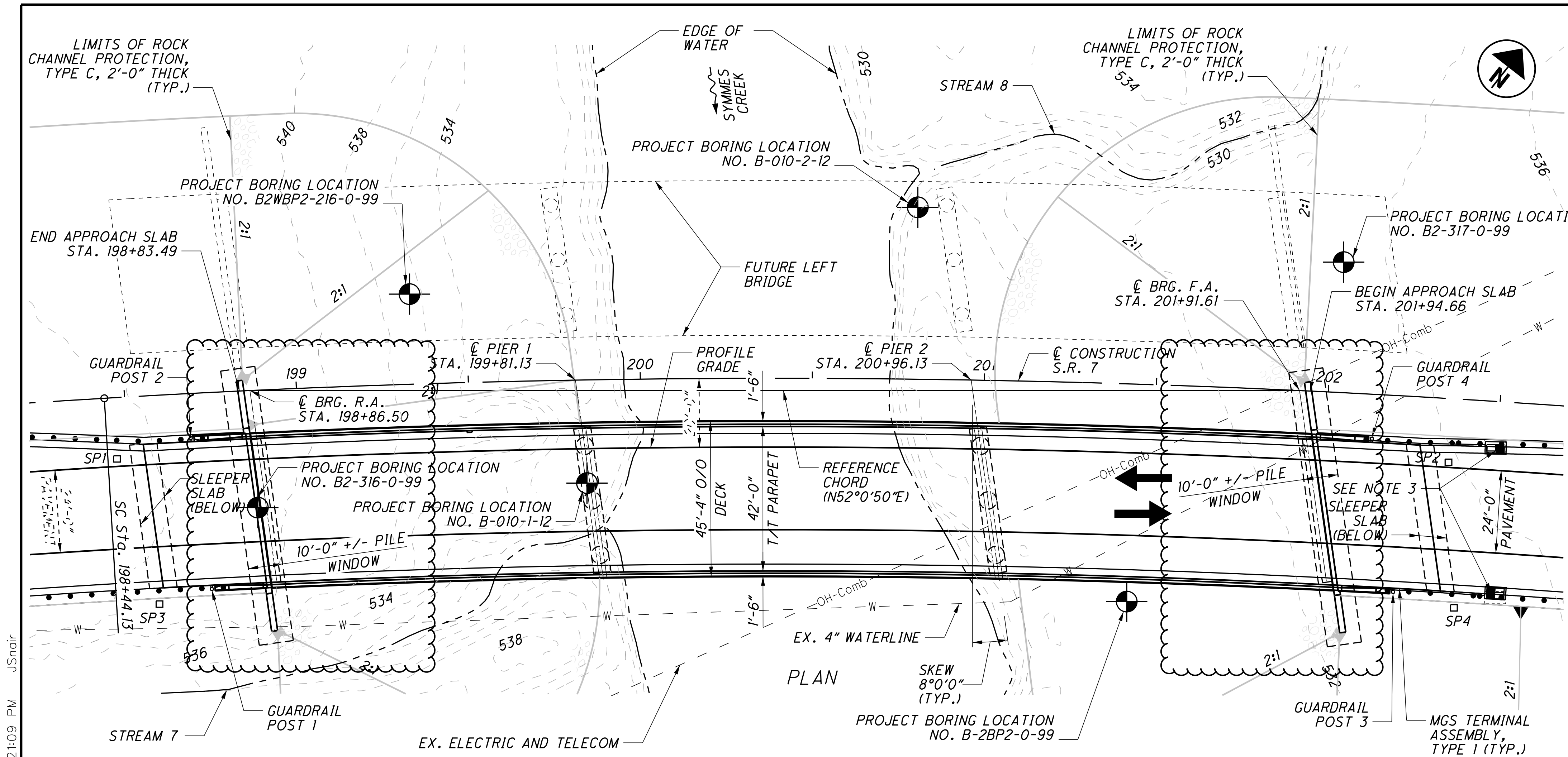


DESIGN AGENCY  
DATE 04/2024  
REVIEWED MRS  
STRUCTURE FILE NUMBER 4400070  
DRAWN JWS  
CHECKED EER

ESTIMATED QUANTITIES  
BRIDGE NO. LAW-7-0251  
S.R. 7 OVER SYMMES CREEK

LAW-7-2.17  
PID No. 75923

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**NOTES**

- EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
- FOR PRIMARY PROJECT CONTROL INFORMATION TABLE SEE ROADWAY GENERAL NOTES.
- BRIDGE DECK DRAINAGE IS CONTROLLED BY 1 BRIDGE SCUPPER, (SEE ITEM 518 NOTE ON SHEET [3/25]) AND DIRECTED BY ROADWAY CURBS EXTENDING OFF THE EAST END OF THE BRIDGE TO ROADWAY CATCH BASINS.

DESIGN TRAFFIC:  
 2028 ADT = 13,400    2028 ADTT = 1,072  
 2048 ADT = 17,500    2048 ADTT = 1,400  
 DIRECTIONAL DISTRIBUTION = 53/47

**LEGEND**

● PROJECT BORING LOCATION    □ SETTLEMENT PLATFORM

**HYDRAULIC DATA**

DRAINAGE AREA = 350.3 SQ. MILES  
 Q (50) = 17,000 CFS    V (50) = 6.46 FT/S    DESIGN YEAR  
 Q (100) = 19,100 CFS    V (100) = 6.67 FT/S  
 STRUCTURE CLEARS THE 50 YEAR DESIGN HW BY 31.22 FEET.

**ESTIMATED PILE LENGTHS**

REAR ABUTMENT HP12x53 = 75 FT  
 FORWARD ABUTMENT HP12x53 = 70 FT

ADDITIONAL PROJECT BORING LOCATIONS		
BORING NUMBER	STATION	OFFSET
B-010-0-11	197+89.00	183' LEFT
B-011-0-11	202+02.00	232' LEFT
B-012-0-11	201+90.00	197' RIGHT

**S.R. 7 CURVE NO. 3 DATA**

P.I. STA. 205+33.31	L = 1,347.14'	Ts = 914.18'
Δ = 27° 30' 45" (RT)	E = 70.53'	LT = 150.01'
Dc = 1° 45' 00"	TS STA. = 196+19.13	ST = 75.01'
R = 3,274.04'	SC STA. = 198+44.13	e <sub>max</sub> = 4.60%
T = 683.24'	θs = 1° 58' 07"	CS STA. 211+91.27
	Ls = 225.00'	ST STA. 214+16.27

POST NUMBER	FIRST POST GUARDRAIL	STATION
1	EASTBOUND R.A.	198+72.52
2	WESTBOUND R.A.	198+68.62
3	EASTBOUND F.A.	202+22.03
4	WESTBOUND F.A.	202+13.35

**VERTICAL CURVE DATA**

LENGTH = 1900'

PVC STA. = 192+75.00	PVC ELEV. = 612.74
PVI STA. = 202+25.00	PVI ELEV. = 555.74
PVT STA. = 211+75.00	PVT ELEV. = 609.67
G1 = -6.00%	G2 = 5.68%

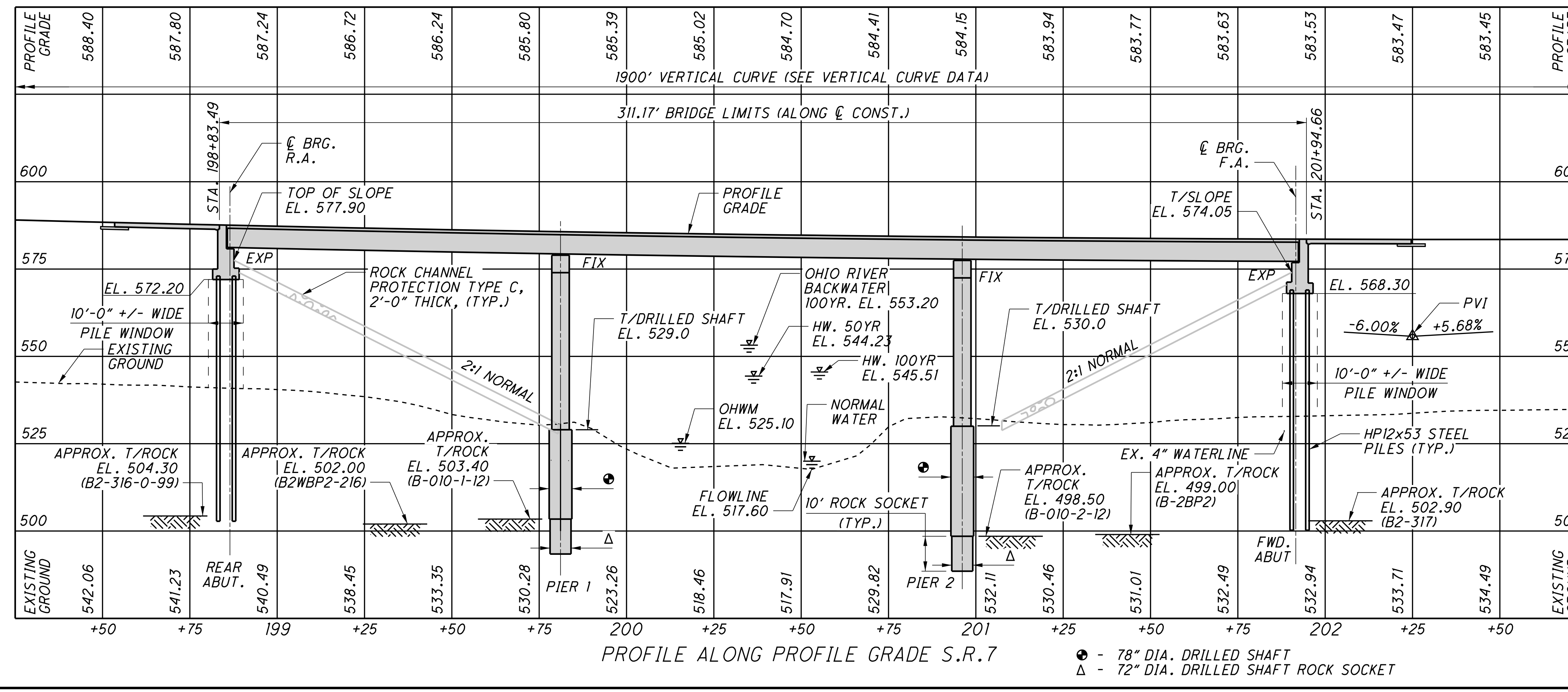
**PROPOSED STRUCTURE**

TYPE: 3-SPAN PRESTRESSED CONCRETE I-BEAM (66" MODIFIED TYPE 4) WITH COMPOSITE REINFORCED CONCRETE DECK SUPPORTED BY STUB TYPE ABUTMENTS ON STEEL PILES AND CAP & COLUMN PIERS ON DRILLED SHAFTS

SPANS: 93.92'-112.83'-93.92', c/c BRGS. (MEASURED ALONG REFERENCE CHORD)

ROADWAY: 42'-0" TOE/TOE PARAPETS  
 LOADING: HL-93 AND 60 PSF FUTURE WEARING SURFACE  
 WEARING SURFACE: 1" MONOLITHIC WEARING SURFACE  
 SKEW: 8°00'00" R.F. FROM PERP. TO REFERENCE CHORD  
 APPROACH SLABS: AS-1-15, 30'-0" LONG (MODIFIED)  
 SUPERELEVATION: 0.0460 FT/FT

COORDINATES: LATITUDE 38°26'53.65" N  
 LONGITUDE 82°26'05.44" W



REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

AS-1-15	REVISED	01-20-23
AS-2-15	REVISED	07-21-23
EXJ-6-17	REVISED	01-19-24
GSD-1-19	REVISED	07-19-24
PSID-1-13	REVISED	07-19-24
SBR-1-20	REVISED	07-21-23

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

800	DATED	07-19-24
832	DATED	07-19-24

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 9TH EDITION AND THE ODOT BRIDGE DESIGN MANUAL, 2021.

DESIGN LOADING:

HL-93  
FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/FT²

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 DATA:

CONCRETE CLASS OC2 - COMPRESSIVE STRENGTH 4.5 K.S.I. (SUPERSTRUCTURE)  
CONCRETE CLASS OC1 - COMPRESSIVE STRENGTH 4.0 K.S.I. (SUBSTRUCTURE)  
CONCRETE CLASS OC5 - WITH 1-IN MAX. AGGREGATE SIZE - COMPRESSIVE STRENGTH 4.5 KSI (DRILLED SHAFT)

REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 K.S.I.

STEEL H-PILES - A572 - YIELD STRENGTH 50 K.S.I.

CONCRETE FOR PRESTRESSED BEAMS:

COMPRESSIVE STRENGTH (FINAL) = 7000 P.S.I.  
COMPRESSIVE STRENGTH (RELEASE) = 6000 P.S.I.

PRESTRESSING STRAND:

AREA = 0.217 SQ. IN.  
ULTIMATE STRENGTH = 270 K.S.I.  
INITIAL STRESS = 202.5 K.S.I.  
(LOW RELAXATION STRANDS)

WELDED WIRE FABRIC

YIELD STRENGTH - 70 K.S.I.

MONOLITHIC WEARING SURFACE:

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

NOISE BARRIER:

DUE TO THE POTENTIAL FUTURE CONSTRUCTION OF A 12 FOOT TALL NOISE BARRIER ALONG THE RIGHT SIDE OF THE BRIDGE THE PRECAST CONCRETE BEAMS AND CONCRETE DECK HAVE BOTH BEEN DESIGNED TO INCLUDE THE VERTICAL AND LATERAL LOAD CONTRIBUTION DUE TO THE NOISE BARRIER. THE ESTIMATED VERTICAL DEAD LOAD WAS SET AS 167 POUNDS PER FOOT. THE CENTER OF GRAVITY FOR THE NOISE BARRIER WAS SET AT 11 INCHES FROM THE BACK EDGE OF THE STANDARD ODOT SINGLE SLOPE BRIDGE RAILING. LATERAL LOADING ASSUMED, WIND LOAD EQUAL TO 30 POUNDS PER SQUARE FOOT OR A VEHICULAR COLLISION FORCE PER AASHTO SECTION 15.8.4.

THE SINGLE SLOPE BRIDGE RAILING SHOWN IN THE PLANS HAS NOT BEEN MODIFIED FROM THE ODOT STANDARD DRAWINGS AND IS NOT DESIGNED TO SUPPORT THE ABOVE DESCRIBED NOISE BARRIER. IF THE NOISE BARRIER IS CONSTRUCTED IN THE FUTURE THE BRIDGE RAILING WILL NEED TO BE REMOVED AND REPLACED WITH A RAILING THAT IS DESIGNED TO SUPPORT A NOISE BARRIER AND PROPERLY TRANSFER ALL LOADS TO THE EXISTING CONCRETE BRIDGE DECK.

PILE DRIVING CONSTRAINTS:

PRIOR TO DRIVING PILES, CONSTRUCT THE SPILL THROUGH SLOPES AND THE BRIDGE APPROACH EMBANKMENT BEHIND THE ABUTMENTS UP TO THE LEVEL OF THE SUBGRADE ELEVATION FOR A MINIMUM DISTANCE OF 200 FEET BEHIND EACH ABUTMENT (SEE FORWARD AND REAR APPROACH EMBANKMENT CONSTRUCTION THIS SHEET). DO NOT BEGIN THE EXCAVATION FOR THE ABUTMENT FOOTINGS AND THE INSTALLATION OF THE ABUTMENT PILES UNTIL AFTER THE ABOVE REQUIRED EMBANKMENT HAS BEEN CONSTRUCTED.

TO FACILITATE INSTALLATION OF PILES THROUGH THE NEW EMBANKMENT, THE CONTRACTOR SHALL CONSTRUCT AN APPROXIMATE 10 FEET WIDE ZONE OF SOIL FREE OF BEDROCK, COBBLES, BOULDERS, AND AGGREGATE GREATER THAN 2 INCHES IN DIAMETER DIRECTLY BENEATH THE BRIDGE ABUTMENTS. DO NOT BEGIN THE INSTALLATION OF THE ABUTMENT PILES UNTIL AFTER THE ABOVE REQUIRED EMBANKMENT HAS BEEN CONSTRUCTED AND AN ESTIMATED 163 CALENDAR DAY WAITING PERIOD HAS ELAPSED. THE ENGINEER OF RECORD MAY ADJUST THE LENGTH OF THE WAITING PERIOD BASED ON SETTLEMENT PLATFORM READINGS. AFTER THE ESTIMATED WAITING PERIOD HAS ELAPSED, DRIVE PILES TO REFUSAL ON BEDROCK. ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS REQUIRED TO CONSTRUCT THE PILE WINDOW SHALL BE INCLUDED FOR PAYMENT IN ITEM 203, EMBANKMENT IN THE ROADWAY QUANTITIES.

PILES TO BEDROCK:

DRIVE PILES TO REFUSAL ON BEDROCK. THE DEPARTMENT WILL CONSIDER REFUSAL TO BE OBTAINED WHEN THE PILE PENETRATION IS AN INCH OR LESS AFTER RECEIVING AT LEAST 20 BLOWS FROM THE PILE HAMMER. SELECT THE HAMMER SIZE TO ACHIEVE THE REQUIRED DEPTH TO BEDROCK AND REFUSAL.

THE TOTAL FACTORED LOAD IS 188 KIPS PER PILE FOR THE REAR ABUTMENT PILES.

THE TOTAL FACTORED LOAD IS 185 KIPS PER PILE FOR THE FORWARD ABUTMENT PILES.

ABUTMENT PILES:

HP12x53 PILES 80 FEET LONG, ORDER LENGTH, REAR ABUTMENT  
HP12x53 PILES 75 FEET LONG, ORDER LENGTH, FORWARD ABUTMENT

PILE SPLICES:

IN LIEU OF USING THE FULL PENETRATION BUTT WELDS SPECIFIED IN CMS 507.09 TO SPLICE STEEL H-PILES, THE CONTRACTOR MAY USE A MANUFACTURED H-PILE SPLICER. FURNISH SPLICERS FROM THE FOLLOWING MANUFACTURER:

ASSOCIATED PILE AND FITTING CORPORATION  
8 WOOD HOLLOW RD. PLAZA 1  
PARSIPPANY, NEW JERSEY 07054

INSTALL AND WELD THE SPLICER TO THE PILE SECTIONS IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN ASSEMBLY PROCEDURE SUPPLIED TO THE ENGINEER BEFORE THE WELDING IS PERFORMED.

ROCK-SOCKETED DRILLED SHAFTS:

PIER 1  
THE MAXIMUM FACTORED LOAD TO BE SUPPORTED BY EACH DRILLED SHAFT IS 1610 KIPS AT THE PIERS. THIS LOAD IS RESISTED BY SIDE RESISTANCE WITHIN A PORTION OF THE BEDROCK SOCKET AND ALSO BY TIP RESISTANCE. THE FACTORED RESISTANCE DEVELOPED BY SIDE RESISTANCE IS 680.1 KIPS, ASSUMED TO ACT ALONG THE BOTTOM 8 FEET OF THE BEDROCK SOCKET FOR THE PIERS. THE FACTORED RESISTANCE PROVIDED BY THE DRILLED SHAFT TIP IS 929.9 KIPS.

PIER 2  
THE MAXIMUM FACTORED LOAD TO BE SUPPORTED BY EACH DRILLED SHAFT IS 1612 KIPS AT THE PIERS. THIS LOAD IS RESISTED BY SIDE RESISTANCE WITHIN A PORTION OF THE BEDROCK SOCKET AND ALSO BY TIP RESISTANCE. THE FACTORED RESISTANCE DEVELOPED BY SIDE RESISTANCE IS 680.1 KIPS, ASSUMED TO ACT ALONG THE BOTTOM 8 FEET OF THE BEDROCK SOCKET FOR THE PIERS. THE FACTORED RESISTANCE PROVIDED BY THE DRILLED SHAFT TIP IS 931.9 KIPS.

LATERALLY LOADED DRILLED SHAFTS:

THE MAXIMUM FACTORED INTERNAL LOAD AND BENDING MOMENT TO BE SUPPORTED BY EACH DRILLED SHAFT ARE 38.42 KIPS, AND 2,113 KIP-Feet, RESPECTIVELY. THESE LOADS PRODUCE A MAXIMUM FACTORED BENDING MOMENT OF 2,691.7 KIP-Feet, AND A MAXIMUM FACTORED SHEAR OF 429.8 KIPS, WITHIN THE DRILLED SHAFT

ITEM 894 - THERMAL INTEGRITY PROFILER (T.I.P.) TEST:

PERFORM INTEGRITY TESTING ON ALL OF THE DRILLED SHAFTS AT PIERS 1 AND PIER 2 BY THERMAL INTEGRITY PROFILING (TIP). PERFORM TIP TESTING PER ASTM D7949, "STANDARD TEST METHODS FOR THERMAL INTEGRITY PROFILING OF CONCRETE DEEP FOUNDATIONS," METHOD B, AND PER THE PROJECT SPECIAL PROVISIONS.

EACH DRILLED SHAFT TO BE TESTED SHALL CONSIST 6 WIRE CABLES SPACED AT 60-DEGREES AROUND THE SHAFT. EACH CABLE WILL HAVE EMBEDDED THERMAL SENSORS SPACED AT 12" ALONG THE SHAFT STARTING 6" FROM THE BOTTOM OF THE ROCK SOCKET AND ENDING WITHIN 12" OF THE TOP OF THE DRILLED SHAFT

ITEM 509 - EPOXY COATED REINFORCING STEEL, AS PER PLAN:  
IN ADDITION TO THE PROVISIONS OF ITEM 509, FIELD BEND AND/OR FIELD CUT THE REINFORCING STEEL DESIGNATED IN THE PLANS, AS NECESSARY, IN ORDER TO MAINTAIN THE REQUIRED CLEARANCES AND BAR SPACINGS. REPAIR ALL DAMAGE TO THE EPOXY COATING, AS A RESULT OF THIS WORK, ACCORDING TO 709.00.

ITEM 518 - SCUPPERS, INCLUDING SUPPORTS, AS PER PLAN:  
REFER TO SHEET 18/25 FOR SCUPPER LOCATION AND SHEET 19/25 FOR DETAILS AND NOTES.

DECK PLACEMENT DESIGN ASSUMPTIONS:

THE FOLLOWING ASSUMPTIONS OF CONSTRUCTION MEANS AND METHODS WERE MADE FOR THE ANALYSIS AND DESIGN OF THE SUPERSTRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE FALSEWORK SUPPORT SYSTEM WITHIN THESE PARAMETERS AND WILL ASSUME RESPONSIBILITY FOR SUPERSTRUCTURE ANALYSIS FOR DEVIATION FROM THESE DESIGN ASSUMPTIONS.

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 2.32 KIPS.

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103".

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 IN.

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65".

APPROACH EMBANKMENT CONSTRUCTION:

THE APPROACH EMBANKMENTS SHALL BE CONSTRUCTED AND THEN UNDERGO AN ESTIMATED WAITING PERIOD OF 163 DAYS PRIOR TO DRIVING PILES.

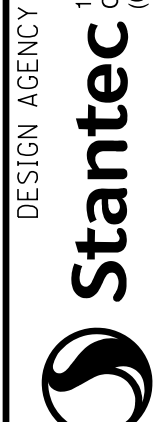
REFER TO SHEETS 38 THRU 41 FOR NOTES REGARDING REINFORCED SLOPE AND EMBANKMENT CONSTRUCTION.

SCOUR ELEVATIONS:

THE DESIGN FLOOD AND CHECK FLOOD SCOUR ELEVATIONS ARE PROVIDED BELOW:

	PIER 1
DESIGN FLOOD	521.42
CHECK FLOOD	519.16

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DESIGN AGENCY  1500 Lake Shore Dr. Columbus, OH 43204 (614) 486-4383

DATE 04/2024

REVIEWED MRS

DRAWN JWS

DESIGNED BSM

GENERAL NOTES 1

BRIDGE NO. LAW-7-0376

S.R. 7 OVER SYMMES CREEK

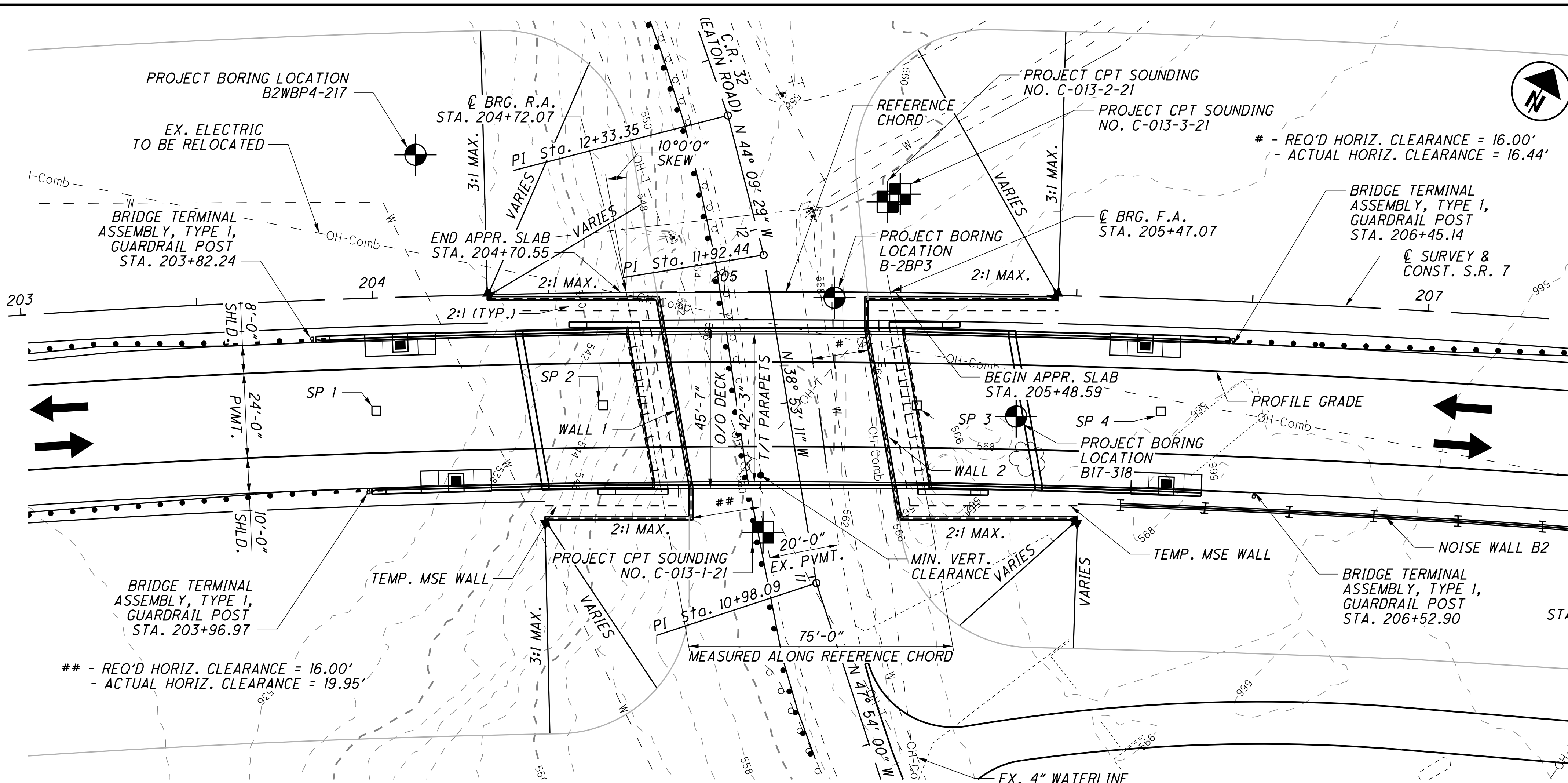
LAW-7-2.17

PID No. 75923

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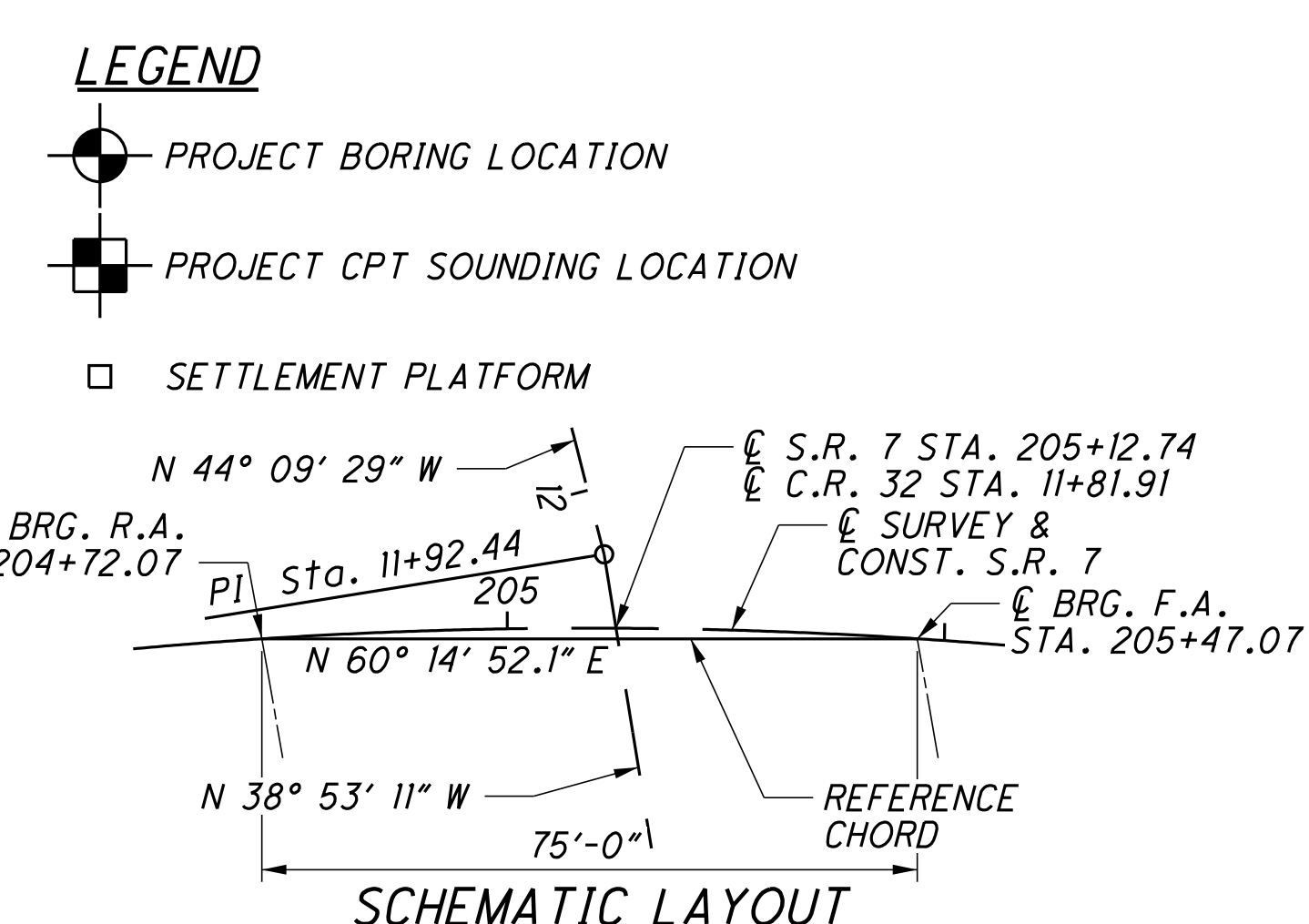


**BENCHMARK DATA**

BM #1 STA. 182+35.75, ELEV. 568.32, OFFSET 560.76' RL  
 BM #2 STA. 207+14.67, ELEV. 575.38, OFFSET 966.60' LL

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEET

- NOTES**
- EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
  - FOR PRIMARY PROJECT CONTROL INFORMATION TABLE SEE ROADWAY GENERAL NOTES.
  - FOR LIST OF ABBREVIATIONS SEE SHEET 2/28.
- DESIGN TRAFFIC:  
 2028 ADT = 13,400    2028 ADTT = 1,072  
 2048 ADT = 17,500    2048 ADTT = 1,400  
 DIRECTIONAL DISTRIBUTION = 53/47



**ESTIMATED PILE LENGTHS**

LOCATION	LENGTH
REAR ABUTMENT	80'
FORWARD ABUTMENT	90'

**VERTICAL CURVE DATA**

LENGTH = 1900'  
 PVC STA. = 192+75.00    PVC ELEV. = 612.74  
 PVI STA. = 202+25.00    PVI ELEV. = 555.74  
 PVT STA. = 211+75.00    PVT ELEV. = 609.67  
 G1 = -6.00%    G2 = 5.68%

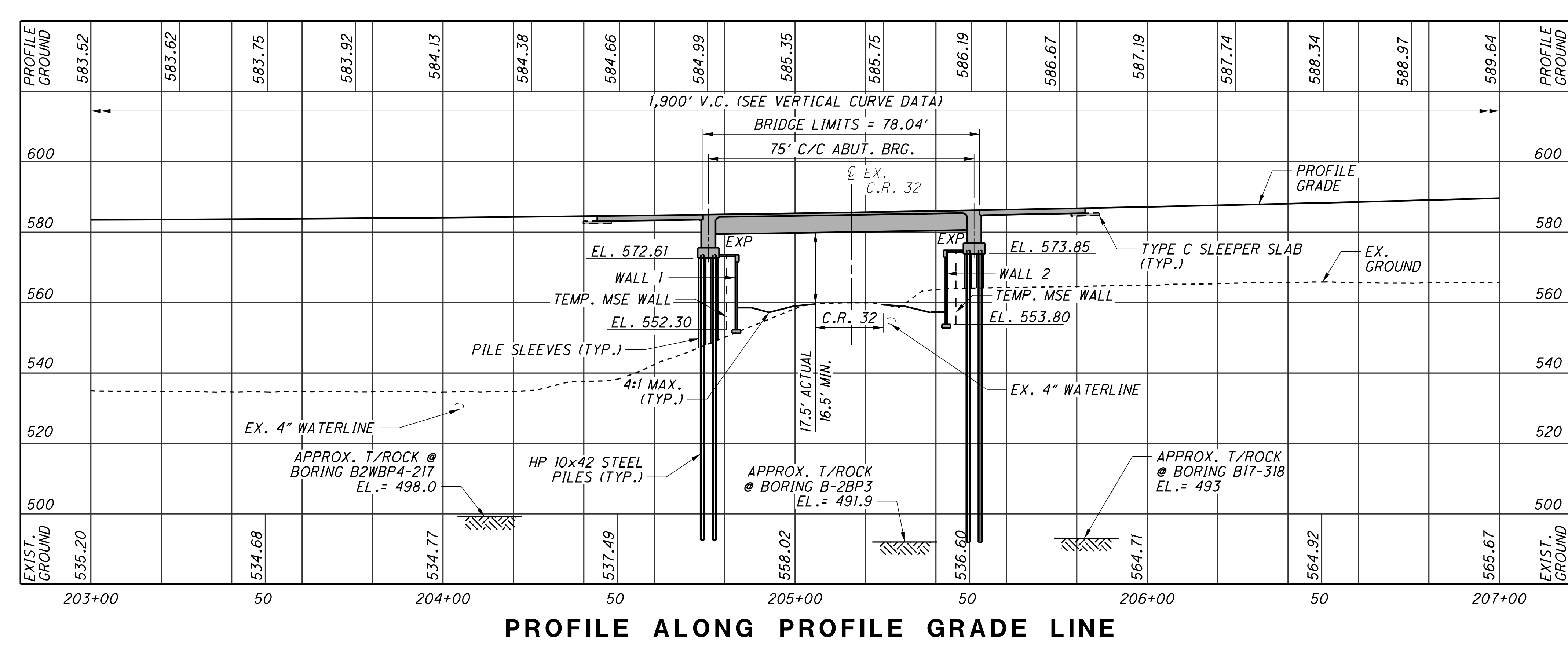
**CURVE (S.R. 7 CURVE NO. 3)**

P.I. STA. 205+33.31    E = 70.53'    LT = 150.01'  
 Δ = 27° 30' 45" (RT)    TS STA. = 196+19.13    ST = 75.01'  
 Dc = 1° 45' 00"    SC STA. = 198+44.13    e<sub>max</sub> = 4.60%  
 R = 3,274.04'    θs = 1° 58' 07"    CS STA. 211+91.27  
 T = 683.24'    Ls = 225.00'    ST STA. 214+16.27  
 L = 1,347.14'    Ts = 914.18'

**PROPOSED STRUCTURE**

TYPE: PRESTRESSED CONCRETE I-BEAMS (AASHTO TYPE 4) WITH COMPOSITE CONCRETE SLAB SUPPORTED BY SEMI-INTEGRAL ABUTMENTS ON SLEEVED PILES THROUGH MSE WALL FILL.

SPANS: 75'-0" C/C ABUTMENT BEARINGS (MEASURED ALONG REFERENCE CHORD)  
 ROADWAY: 42'-3" TOE/TOE PARAPET  
 LOADING: HL-93 AND 60 LBS/FT<sup>2</sup> FUTURE WEARING SURFACE  
 WEARING SURFACE: 1" MONOLITHIC WEARING SURFACE  
 SKEW: 10°00'00" (RF) (MEASURED WITH RESPECT TO REF. CHORD)  
 APPROACH SLABS: AS-1-15 & AS-2-15, 30' LONG  
 ALIGNMENT: 1°45'00" CURVE RIGHT  
 SUPERELEVATION: 0.046 FT/FT  
 COORDINATES: LATITUDE 38°26'56.26" N  
 LONGITUDE 82°26'00.61" W  
 DECK AREA: 3558 SF



**STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS**

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

- AS-1-15 REVISED 01-20-23
- AS-2-15 REVISED 07-21-23
- PSID-1-13 REVISED 07-19-24
- SBR-1-20 REVISED 07-21-23
- SICD-2-14 REVISED 01-15-21

REFER TO THE FOLLOWING STANDARD CONSTRUCTION DRAWING(S):

- I-3D REVISED 07-19-24
- RM-4.5 REVISED 07-19-24
- RM-4.6 REVISED 07-19-24

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

- 800 DATED 07-19-24
- 840 DATED 07-19-24
- 867 DATED 04-15-22

**DESIGN SPECIFICATIONS**

THIS STRUCTURE CONFORMS TO THE 9TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2019 AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

**OPERATIONAL IMPORTANCE**

A LOAD MODIFIER OF 1.0 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**

DESIGN LOADING: HL-93

FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/SQ.FT.

**DESIGN DATA**

CONCRETE CLASS OC2 WITH QC/OA  
-COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)

CONCRETE CLASS OC1 WITH QC/OA  
-COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)

REINFORCING STEEL  
-MINIMUM YIELD STRENGTH 60 KSI

STEEL H-PILES  
-ASTM A572 - YIELD STRENGTH 50 KSI

**DESIGN DATA**

CONCRETE FOR PRESTRESSED BEAMS:  
COMPRESSIVE STRENGTH (FINAL) - 7 KSI  
COMPRESSIVE STRENGTH (RELEASE) - 5 KSI

WELDED WIRE FABRIC:  
YIELD STRENGTH - 70 KSI

PRESTRESSING STRAND:  
AREA = 0.217 SQ.IN.  
ULTIMATE STRENGTH = 270 KSI  
INITIAL STRESS = 202.5 KSI (LOW RELAXATION STRANDS)

**MONOLITHIC WEARING SURFACE**

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

**PILE DRIVING CONSTRAINTS**

PRIOR TO DRIVING ABUTMENT PILES TO REFUSAL ON BEDROCK, CONSTRUCT THE TEMPORARY MSE WALL AND THE BRIDGE APPROACH EMBANKMENT BEHIND THE ABUTMENT UP TO THE BOTTOM OF THE FOOTING FOR A MINIMUM DISTANCE OF 200' BEHIND EACH ABUTMENT, SEE APPROACH EMBANKMENT NOTE. IN THE AREA OF THE MSE WALL PLACE TEMPORARY SOIL FILL OR STACKED NEW JERSEY BARRIERS EQUIVALENT TO THE HEIGHT OF THE PROPOSED FILL ABOVE MSE WALL. THE CONTRACTOR MAY PRE-DRIVE ABUTMENT PILES BEFORE CONSTRUCTING MSE WALLS. PRE-DRIVING CONSISTS OF INSTALLING THE ABUTMENT PILES INTO THE SOIL ONLY AS FAR AS NECESSARY SO THAT THE PILE WILL REMAIN VERTICAL DURING MSE WALL CONSTRUCTION. IF PRE-DRIVING PILES, INSTALL PILE SLEEVES AROUND PILES BEFORE CONSTRUCTING THE MSE WALL. AT LEAST THREE FEET OF PILE MUST EXTEND ABOVE THE TOP OF THE PILE SLEEVE TO MEET THE REQUIREMENTS OF CMS 507.09 REGARDING SPLICES. DO NOT DRIVE ABUTMENT PILES TO REFUSAL ON BEDROCK UNTIL AFTER THE ABOVE REQUIRED MSE WALL AND EMBANKMENT HAVE BEEN CONSTRUCTED AND A 130 CALENDAR DAY WAITING PERIOD HAS ELAPSED. THE ENGINEER MAY ADJUST THE LENGTH OF THE WAITING PERIOD BASED ON SETTLEMENT PLATFORM READINGS. AFTER THE SPECIFIED WAITING PERIOD HAS ELAPSED, DRIVE ABUTMENT PILES TO REFUSAL ON BEDROCK. IN ORDER TO REMOVE ANY NEGATIVE SKIN FRICTION THAT HAS DEVELOPED DURING THE WAITING PERIOD, DRIVE EACH ABUTMENT PILE A DISTANCE OF AT LEAST 0.5 INCH.

IF NOT PRE-DRIVING ABUTMENT PILES, INSTALL THE ABUTMENT PILES THROUGH PILE SLEEVES AFTER THE ABOVE REQUIRED MSE WALL AND EMBANKMENT HAVE BEEN CONSTRUCTED AND THE SPECIFIED WAITING PERIOD HAS ELAPSED.

**PILES TO BEDROCK**

DRIVE PILES TO REFUSAL ON BEDROCK. THE DEPARTMENT WILL CONSIDER REFUSAL TO BE OBTAINED WHEN THE PILE PENETRATION IS AN INCH OR LESS AFTER RECEIVING AT LEAST 20 BLOWS FROM THE PILE HAMMER. SELECT THE HAMMER SIZE TO ACHIEVE THE REQUIRED DEPTH TO BEDROCK AND REFUSAL.

THE TOTAL FACTORED LOAD IS 140 KIPS PER PILE FOR THE REAR ABUTMENT PILES. THE TOTAL FACTORED LOAD IS 140 KIPS PER PILE FOR THE FORWARD ABUTMENT PILES.

REAR ABUTMENT PILES:  
13 PILES 85 FEET LONG, ORDER LENGTH

FORWARD PIER PILES:  
13 PILES 95 FEET LONG, ORDER LENGTH

**PILE SPLICES**

IN LIEU OF USING THE FULL PENETRATION BUTT WELDS SPECIFIED IN CMS 507.09 TO SPLICE STEEL H-PILES, THE CONTRACTOR MAY USE A MANUFACTURED H-PILE SPLICER. FURNISH SPLICERS FROM THE FOLLOWING MANUFACTURER:

ASSOCIATED PILE AND FITTING CORPORATION  
8 WOOD HOLLOW RD. PLAZA 1  
PARSIPPANY, NEW JERSEY 07054

INSTALL AND WELD THE SPLICER TO THE PILE SECTIONS IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN ASSEMBLY PROCEDURE SUPPLIED TO THE ENGINEER BEFORE THE WELDING IS PERFORMED.

**PROPRIETARY RETAINING WALL DATA**

THE PROPRIETARY WALL SUPPLIER SHALL DESIGN THE INTERNAL STABILITY OF A MECHANICALLY STABILIZED EARTH (MSE) WALL IN ACCORDANCE WITH SS840 TO SUPPORT THE ABUTMENT. THE DESIGN FOR INTERNAL STABILITY SHALL INCLUDE A NOMINAL (I.E. UNFACTORED) HORIZONTAL STRIP LOAD DUE TO FRICTION (FR) FROM THE SUPERSTRUCTURE OF 0.40 K/FT APPLIED PERPENDICULAR TO THE FACE OF WALL AT THE BASE OF THE CONCRETE FOOTING. THIS STRIP LOAD DOES NOT INCLUDE EARTH PRESSURE LOADS FROM THE ABUTMENT BACKFILL. HOWEVER, THE PROPRIETARY WALL SUPPLIER SHALL INCLUDE EARTH PRESSURE LOADS FROM THE ABUTMENT BACKFILL IN THE DESIGN CALCULATIONS.

**FOUNDATION BEARING RESISTANCE**

THE WALL 1 REINFORCED SOIL MASS, AS DESIGNED, PRODUCES A MAXIMUM SERVICE LIMIT STATE BEARING PRESSURE OF 5.42 KIPS PER SQUARE FOOT AND A MAXIMUM STRENGTH LIMIT STATE BEARING PRESSURE OF 7.75 KIPS PER SQUARE FOOT. THE FACTORED BEARING RESISTANCE IS 8.02 KIPS PER SQUARE FOOT.

THE WALL 2 REINFORCED SOIL MASS, AS DESIGNED, PRODUCES A MAXIMUM SERVICE LIMIT STATE BEARING PRESSURE OF 5.41 KIPS PER SQUARE FOOT AND A MAXIMUM STRENGTH LIMIT STATE BEARING PRESSURE OF 7.70 KIPS PER SQUARE FOOT. THE FACTORED BEARING RESISTANCE IS 8.02 KIPS PER SQUARE FOOT.

**DECK PLACEMENT DESIGN ASSUMPTIONS**

THE FOLLOWING ASSUMPTIONS OF CONSTRUCTION MEANS AND METHODS WERE MADE FOR THE ANALYSIS AND DESIGN OF THE SUPERSTRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE FALSEWORK SUPPORT SYSTEM WITHIN THESE PARAMETERS AND WILL ASSUME RESPONSIBILITY FOR SUPERSTRUCTURE ANALYSIS FOR DEVIATION FROM THESE DESIGN ASSUMPTIONS.

AN EIGHT WHEEL FINISHING MACHINE WITH A MINIMUM WHEEL LOAD OF 2.32 KIPS.

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103 INCHES.

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 INCHES.

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65 INCHES.

**ABBREVIATIONS**

- ABUT. - ABUTMENT
- APPR. - APPROACH
- APPROX. - APPROXIMATELY
- B/ - BOTTOM OF
- BOT. - BOTTOM
- BRG. - BEARING
- CL - CENTERLINE
- C/C - CENTER TO CENTER
- CJ - CONSTRUCTION JOINT
- CLR. - CLEAR
- CONST. - CONSTRUCTION
- DIA. - DIAMETER
- DWG. - DRAWING
- EF - EACH FACE
- EL. - ELEVATION
- EO. - EQUAL
- EX. - EXISTING
- EXP - EXPANSION
- F.A. - FORWARD ABUTMENT
- F.F. - FRONT FACE
- FL - FLOW LINE
- HORIZ. - HORIZONTAL
- H.W. - HIGH WATER
- LT. - LEFT
- MAX - MAXIMUM
- MIN. - MINIMUM
- N.F. - NEAR FACE
- NO. - NUMBER
- O/O - OUT TO OUT
- OHW - ORDINARY HIGH WATER MARK
- PVMT. - PAVEMENT
- R.A. - REAR ABUTMENT
- REF. - REFERENCE
- RT. - RIGHT
- SHRD. - SHOULDER
- SP - SETTLEMENT PLATFORM
- SPA. - SPACE
- STA. - STATION
- STD. - STANDARD
- T/ - TOP OF
- T/T - TOE TO TOE
- TEMP. - TEMPORARY
- TYP. - TYPICAL
- VERT. - VERTICAL
- YR. - YEAR

DESIGN AGENCY  
Stanlec Consulting Services Inc.  
1900 Lake Shore Drive, Suite 100  
Columbus, Ohio 43224  
(614) 486-4983



DATE 03/2024  
REVIEWED EDA  
DRAWN JWS  
DESIGNED BSM

STRUCTURE FILE NUMBER 4400259  
CHECKED MRS

GENERAL NOTES  
BRIDGE NO. LAW-7-0387  
S.R. 7 OVER C.R. 32 (EATON ROAD)

LAW-7-2.17  
PID No. 75923

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ESTIMATED QUANTITIES

CALCULATED BY: BSM 03/08/24  
CHECKED BY: MRS 03/14/24

02/NHS/08	ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	ABUT	SUPER.	GEN.	SEE SHEET
4	SPEC	20365000	4	EACH	SETTLEMENT PLATFORM			4	3/28
LUMP	503	11100	LUMP	LS	COFFERDAMS AND EXCAVATION BRACING			LUMP	
LUMP	505	11100	LUMP	LS	PILE DRIVING EQUIPMENT MOBILIZATION			LUMP	
2340	507	00100	2340	FT	STEEL PILES HPI0X42, FURNISHED	2340			
2210	507	00150	2210	FT	STEEL PILES HPI0X42, DRIVEN	2210			
59666	509	10000	59666	POUND	EPOXY COATED STEEL REINFORCEMENT	10808	48858		
5475.25	509	30020	5475.25	FT	NO. 4 DEFORMED GFRP REINFORCEMENT		5475.25		
2	511	33500	2	EA	SEMI-INTEGRAL DIAPHRAGM GUIDE	2			
176	511	34446	176	CY	CLASS OC2 CONCRETE WITH OC/OA, BRIDGE DECK		176		
24	511	34450	24	CY	CLASS OC2 CONCRETE WITH OC/OA, BRIDGE DECK (PARAPET)		24		
148	511	43512	148	CY	CLASS OC1 CONCRETE WITH OC/OA, ABUTMENT INCLUDING FOOTING	148			
544	512	10100	544	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	198	346		
5	515	15020	5	EACH	DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, LEVEL 3, TYPE 4, 76'-8"		5		
4	515	20000	4	EACH	INTERMEDIATE DIAPHRAGMS		4		
93	516	10010	93	FT	ARMORLESS PREFORMED JOINT SEAL	93			
254	516	13900	254	SF	2" PREFORMED EXPANSION JOINT FILLER	254			
118	516	14020	118	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	118			
10	516	44100	10	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (2.063"x12"x25")	10			
76	518	21200	76	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	76			
129	518	40000	129	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	129			
14	518	40010	14	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	14			
304	526	30011	304	SY	REINFORCED CONCRETE APPROACH SLABS WITH OC/OA (T=17"), AS PER PLAN			304	18&19/26
93	526	90030	93	FT	TYPE C INSTALLATION			93	
4	611	99114	4	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D			4	
4	622	25000	4	EACH	CONCRETE BARRIER END SECTION, TYPE D			4	
4	622	90200	4	EACH	BARRIER, MISC.: SINGLE SLOPE CONCRETE BRIDGE RAILING WITH MOMENT SLAB			4	

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DESIGN AGENCY  
Stanec Consulting Services Inc.  
1500 Lake Shore Drive, Suite 100  
Columbus, Ohio 43204  
(614) 486-4983



DATE 03/2024  
REVIEWED EDA  
STRUCTURE FILE NUMBER 4400259

DRAWN JWS  
REVISED

DESIGNED BSM  
CHECKED MRS

ESTIMATED QUANTITIES  
BRIDGE NO. LAW-7-0387  
S.R. 7 OVER C.R. 32 (EATON ROAD)

LAW-7-2.17  
PID No. 75923

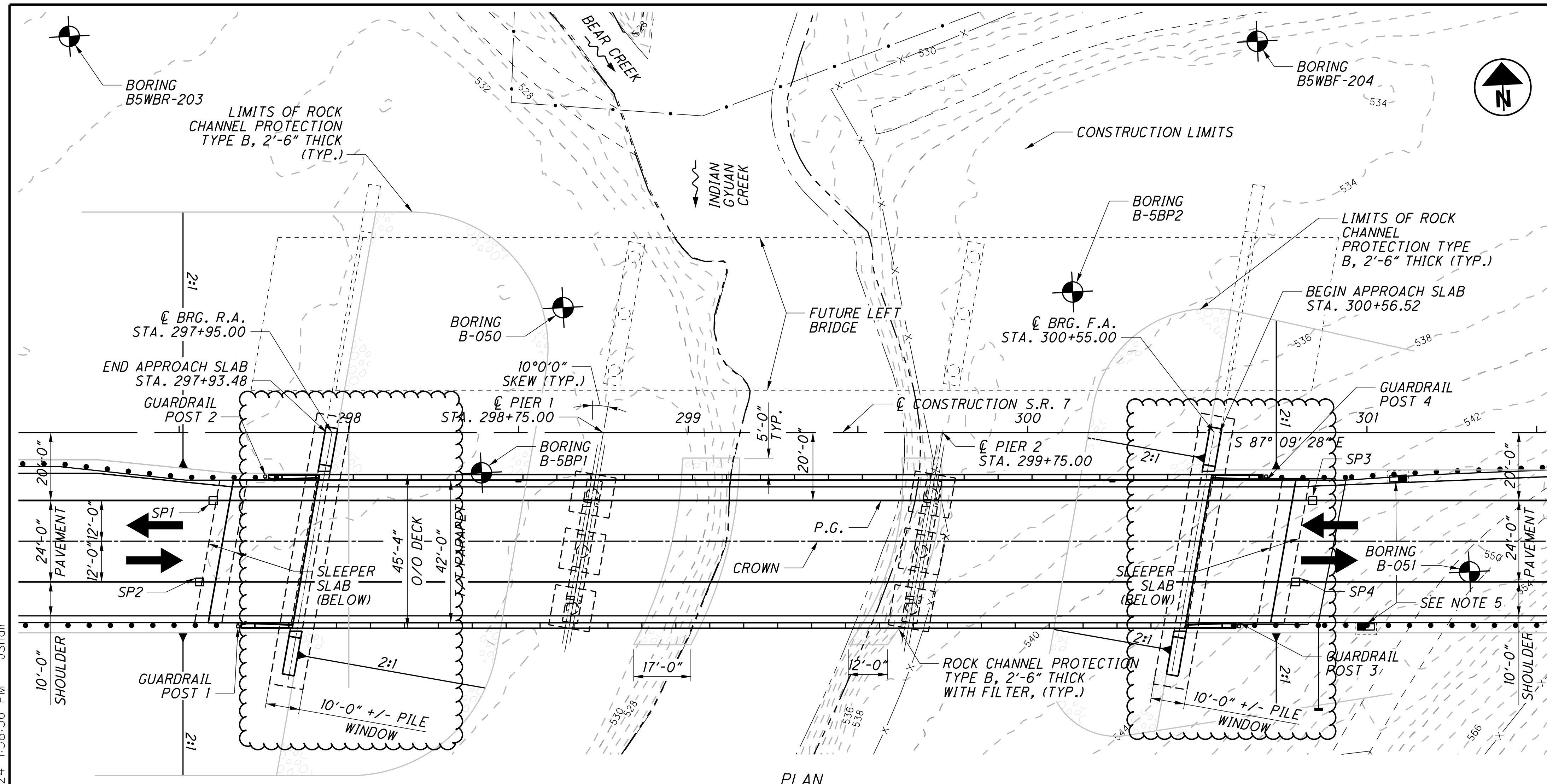
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NOTE:  
FOR MSE WALL QUANTITIES, SEE SHEET 28/28.



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PLAN

**NOTES**

- EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
- FOR PRIMARY PROJECT CONTROL INFORMATION TABLE SEE ROADWAY GENERAL NOTES.
- RESTORE EXISTING GROUND AT PIER 2 INCORPORATING ROCK CHANNEL PROTECTION SHOWN IN THE PLAN AND PROFILE.
- PLACE ROCK CHANNEL PROTECTION AT THE WEST BANK AS SHOWN IN THE PLAN AND PROFILE.
- BRIDGE DECK DRAINAGE IS CONTROLLED BY 2 SCUPPERS ALONG THE LEFT TOE OF PARAPET. TOTAL DECK FLOW IS CONTROLLED BY CATCH BASIN INLETS OFF THE BRIDGE AT THE EAST END.

DESIGN TRAFFIC:  
 2028 ADT = 13,400    2028 ADTT = 1,072  
 2048 ADT = 17,500    2048 ADTT = 1,400  
 DIRECTIONAL DISTRIBUTION = 53/47

**LEGEND**

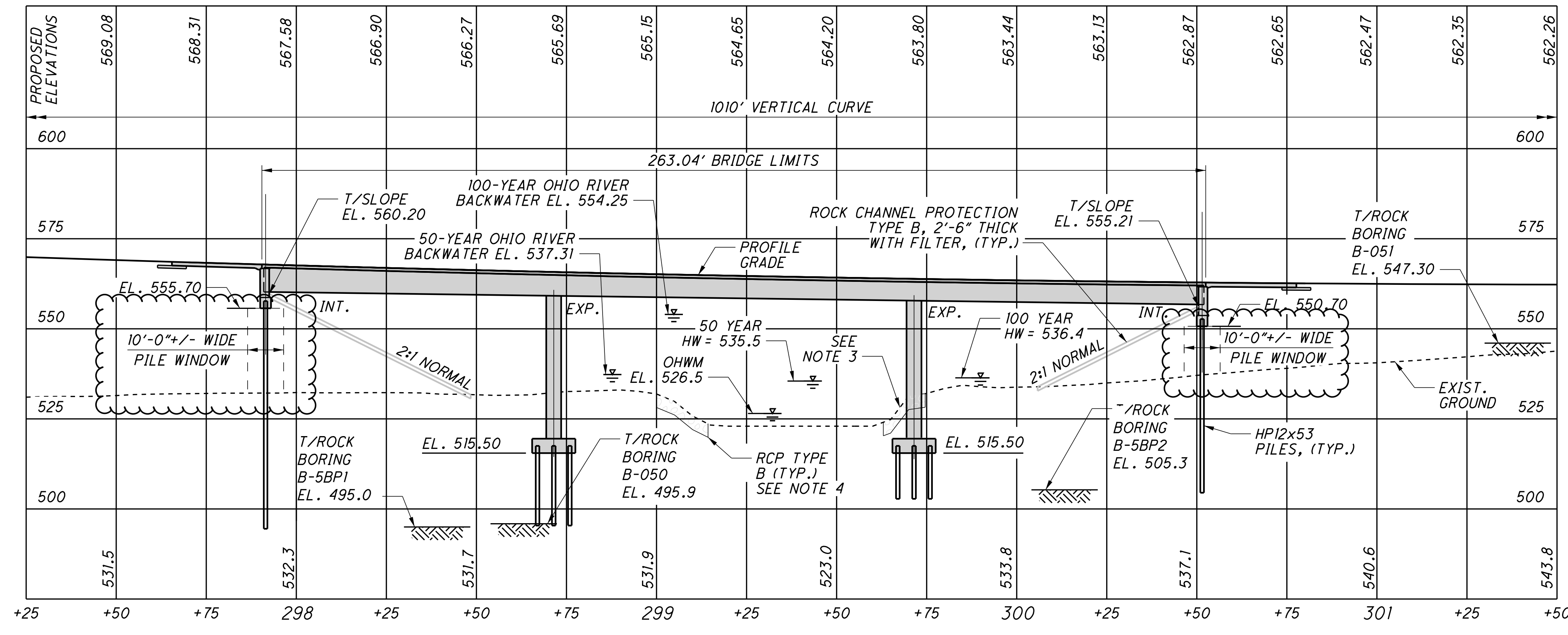
- PROJECT BORING LOCATION
- SETTLEMENT PLATFORM

**HYDRAULIC DATA**

DRAINAGE AREA = 75.2 SQ. MILES  
 Q (50) = 7050 CFS    V (50) = 8.1 FT/S  
 Q (100) = 8010 CFS    V (100) = 8.5 FT/S  
 STRUCTURE CLEARS THE 50 YEAR DESIGN HW BY 21.2 FEET.

**ESTIMATED PILE LENGTHS**

REAR ABUTMENT HP12x53 = 65 FT.  
 PIER 1 HP12x53 = 25 FT.  
 PIER 2 HP12x53 = 25 FT.  
 FORWARD ABUTMENT HP12x53 = 50 FT.



PROFILE ALONG PROFILE GRADE S.R. 7

POST NUMBER	FIRST POST GUARDRAIL	STATION
1	EASTBOUND R.A.	297+67.35
2	WESTBOUND R.A.	297+75.34
3	EASTBOUND F.A.	300+62.31
4	WESTBOUND F.A.	300+70.31

VERTICAL CURVE DATA	
LENGTH = 1010'	
PVC STA. = 297+05.00	PVC ELEV. = 570.58
PVI STA. = 302+10.00	PVI ELEV. = 552.90
PVT STA. = 307+15.00	PVT ELEV. = 572.65
G1 = -3.50%	G2 = 3.91%

**PROPOSED STRUCTURE**

TYPE: 3 SPAN PRESTRESSED CONCRETE I-BEAM (60" MODIFIED TYPE 4) WITH COMPOSITE REINFORCED CONCRETE DECK SUPPORTED ON INTEGRAL ABUTMENTS ON STEEL HP PILES AND CAP & COLUMN PIERS ON STEEL HP PILES.

SPANS: 78.92', 97.833', 78.92' C/C BRGS. (ALONG & CONST.)

ROADWAY: 42'-0" TOE/TOE PARAPET  
 LOADING: HL-93 AND 60 LBS/FT<sup>2</sup> FUTURE WEARING SURFACE  
 WEARING SURFACE: 1" MONOLITHIC WEARING SURFACE  
 SKEW: 10° LT. FWD.  
 APPROACH SLABS: AS-1-15 AND APPLICABLE DETAILS FROM AS-2-15, 25'-0" LONG

ALIGNMENT: TANGENT  
 CROWN: 0.016 FT/FT  
 COORDINATES: LATITUDE 38° 27' 23.09" N  
 LONGITUDE 82° 24' 15.61" W

DESIGN AGENCY: **Stantec**  
 1500 Lake Shore Dr.  
 Columbus, OH 43204  
 (614) 486-4983  
 DATE: 03/2024  
 REVIEWED: MRS  
 DRAWN: JWS  
 DESIGNED: BSM  
 CHECKED: EER  
 LAWRENCE COUNTY  
 STA. 297+93.48  
 STA. 300+56.52  
 BRIDGE NO. LAW-7-0563  
 S.R. 7 OVER INDIAN GUYAN CREEK  
 LAW-7-2.17  
 PID No. 75923  
 1/24  
 907  
 1247

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

AS-1-15	REVISED	01-20-23
AS-2-15	REVISED	07-21-23
GSD-1-19	REVISED	07-19-24
PSID-1-13	REVISED	07-19-24
SBR-1-20	REVISED	07-21-23

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION:

800	DATED	07-19-24
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DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO THE 9TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATION" ADOPTED BY THE AMERICAN ASSOCIATION OF THE STATE HIGHWAY AND TRANSPORTATION OFFICIALS 2020, AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

DESIGN LOADING:

HL-93  
FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/FT<sup>2</sup>

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, 2020.

DESIGN DATA:

CONCRETE CLASS OC2 WITH OC/OA - COMPRESSIVE STRENGTH 4.5 K.S.I. (SUPERSTRUCTURE)  
CONCRETE CLASS OC1 WITH OC/OA - COMPRESSIVE STRENGTH 4.0 K.S.I. (SUBSTRUCTURE)

REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 K.S.I.

STEEL H-PILES - A572 - YIELD STRENGTH 50 K.S.I.

CONCRETE FOR PRESTRESSED BEAMS:

COMPRESSIVE STRENGTH (FINAL) = 7000 P.S.I.  
COMPRESSIVE STRENGTH (RELEASE) = 6000 P.S.I.

PRESTRESSING STRAND:

AREA = 0.217 SQ. IN.  
ULTIMATE STRENGTH = 270 K.S.I.  
INITIAL STRESS = 202.5 K.S.I.  
(LOW RELAXATION STRANDS)

WELDED WIRE FABRIC:

YIELD STRENGTH = 70 K.S.I.

MONOLITHIC WEARING SURFACE:

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

PILE DRIVING CONSTRAINTS:

PRIOR TO DRIVING PILES, CONSTRUCT THE SPILL THROUGH SLOPES AND THE BRIDGE APPROACH EMBANKMENT BEHIND THE ABUTMENTS UP TO THE LEVEL OF THE SUBGRADE ELEVATION FOR A MINIMUM DISTANCE OF 200 FEET BEHIND EACH ABUTMENT (SEE FORWARD AND REAR APPROACH EMBANKMENT CONSTRUCTION THIS SHEET). DO NOT BEGIN THE EXCAVATION FOR THE ABUTMENT FOOTINGS AND THE INSTALLATION OF THE ABUTMENT PILES UNTIL AFTER THE ABOVE REQUIRED EMBANKMENT HAS BEEN CONSTRUCTED.

THE APPROACH EMBANKMENT SHALL BE CONSTRUCTED AND THEN UNDERGO A WAITING PERIOD OF 133 DAYS.

TO FACILITATE INSTALLATION OF PILES THROUGH THE NEW EMBANKMENT, THE CONTRACTOR SHALL CONSTRUCT AN APPROXIMATE 10 FEET WIDE ZONE OF SOIL FREE OF BEDROCK, COBBLES, BOULDERS, AND AGGREGATE GREATER THAN 2 INCHES IN DIAMETER DIRECTLY BENEATH THE BRIDGE ABUTMENTS. DO NOT BEGIN THE INSTALLATION OF THE ABUTMENT PILES UNTIL AFTER THE ABOVE REQUIRED EMBANKMENT HAS BEEN CONSTRUCTED AND AN ESTIMATED 133 CALENDAR DAY WAITING PERIOD HAS ELAPSED. THE ENGINEER OF RECORD MAY ADJUST THE LENGTH OF THE WAITING PERIOD BASED ON SETTLEMENT PLATFORM READINGS. AFTER THE ESTIMATED WAITING PERIOD HAS ELAPSED, DRIVE PILES TO REFUSAL ON BEDROCK. ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS REQUIRED TO CONSTRUCT THE PILE WINDOW SHALL BE INCLUDED FOR PAYMENT IN ITEM 203, EMBANKMENT IN THE ROADWAY QUANTITIES.

PILES TO BEDROCK:

DRIVE PILES TO REFUSAL ON BEDROCK. THE DEPARTMENT WILL CONSIDER REFUSAL TO BE OBTAINED WHEN THE PILE PENETRATION IS AN INCH OR LESS AFTER RECEIVING AT LEAST 20 BLOWS FROM THE PILE HAMMER. SELECT THE HAMMER SIZE TO ACHIEVE THE REQUIRED DEPTH TO BEDROCK AND REFUSAL.

THE TOTAL FACTORED LOAD IS 226 KIPS PER PILE FOR THE REAR ABUTMENT PILES.  
THE TOTAL FACTORED LOAD IS 238 KIPS PER PILE FOR THE FORWARD ABUTMENT PILES.

THE TOTAL FACTORED LOAD IS 243 KIPS PER PILE FOR THE PIER 1 PILES.  
THE TOTAL FACTORED LOAD IS 238 KIPS PER PILE FOR THE PIER 2 PILES.

ABUTMENT PILES:

REAR ABUTMENT PILES:  
10 PILES 70 FEET LONG, ORDER LENGTH.

FORWARD ABUTMENT PILES:

10 PILES 55 FEET LONG, ORDER LENGTH.

PIER PILES:

24 PILES 30 FEET LONG, ORDER LENGTH AT PIER 1.  
24 PILES 30 FEET LONG, ORDER LENGTH AT PIER 2.

PILE SPLICES:

IN LIEU OF USING THE FULL PENETRATION BUTT WELDS SPECIFIED IN CMS 507.09 TO SPLICE STEEL H-PILES, THE CONTRACTOR MAY USE A MANUFACTURED H-PILE SPLICER. FURNISH SPLICERS FROM THE FOLLOWING MANUFACTURER:

ASSOCIATED PILE AND FITTING CORPORATION  
8 WOOD HOLLOW RD. PLAZA 1  
PARSIPPANY, NEW JERSEY 07054

INSTALL AND WELD THE SPLICER TO THE PILE SECTIONS IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN ASSEMBLY PROCEDURE SUPPLIED TO THE ENGINEER BEFORE THE WELDING IS PERFORMED.

ITEM 509 - EPOXY COATED STEEL REINFORCEMENT, AS PER PLAN:

IN ADDITION TO THE PROVISIONS OF ITEM 509, FIELD BEND AND/OR FIELD CUT THE REINFORCING STEEL DESIGNATED IN THE PLANS, AS NECESSARY, IN ORDER TO MAINTAIN THE REQUIRED CLEARANCES AND BAR SPACING. REPAIR ALL DAMAGE TO EPOXY COATING, AS A RESULT OF THIS WORK, ACCORDING TO 709.00.

ITEM 511 - CLASS OC2 CONCRETE WITH OC/OA, SUPERSTRUCTURE, AS PER PLAN:

FURNISH POLYSTYRENE MATERIAL MEETING THE REQUIREMENTS OF ASTM C578 TYPE IV. NEATLY CUT MATERIAL AS NECESSARY TO ALLOW FOR PROPER INSTALLATION. JOINTS AT ABUTTING PIECES SHALL BE SEALED WITH DUCT TAPE.

DECK PLACEMENT DESIGN ASSUMPTIONS:

THE FOLLOWING ASSUMPTIONS OF CONSTRUCTION MEANS AND METHODS WERE MADE FOR THE ANALYSIS AND DESIGN OF THE SUPERSTRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE FALSEWORK SUPPORT SYSTEM WITHIN THESE PARAMETERS AND WILL ASSUME RESPONSIBILITY FOR SUPERSTRUCTURE ANALYSIS FOR DEVIATION FROM THESE DESIGN ASSUMPTIONS.

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 2.37 KIPS.

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103".

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 IN.

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65".

APPROACH EMBANKMENT CONSTRUCTION:

THE APPROACH EMBANKMENT SHALL BE CONSTRUCTIONED AND THEN UNDERGO AN ESTIMATED WAITING PERIOD OF 133 DAYS PRIOR TO DRIVING PILES.

REFER TO SHEETS 38 THROUGH 41 FOR NOTES REGARDING REINFORCED SLOPE AND EMBANKMENT CONSTRUCTION

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<b>Stantec</b> 1500 Lake Shore Dr. Columbus, OH 43204 (614) 486-4383	DESIGN AGENCY
	DATE: 03/2024 REVIEWED: MRS DRAWN: JWS DESIGNED: BSM CHECKED: EER
STRUCTURE FILE NUMBER: 4400372 REVISION:	GENERAL NOTES 1 BRIDGE NO. LAW-7-0563 S.R. 7 OVER INDIAN GUYAN CREEK
LAW-7-2.17 PID No. 75923	2 / 24 908 1247

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ESTIMATED QUANTITIES (PARTICIPATION CODE 02/NHS/08)

ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SHEET NO.
503	11100	LUMP	LS	COFFERDAMS AND EXCAVATION BRACING				LUMP	
503	21300	LUMP	LS	UNCLASSIFIED EXCAVATION				LUMP	
505	11000	LUMP	LS	PILE DRIVING EQUIPMENT MOBILIZATION				LUMP	
507	00200	6840	FT	STEEL PILES HP12X53, FURNISHED	3780	3060			
507	00250	6010	FT	STEEL PILES HP12X53, DRIVEN	3490	2520			
509	10000	317,755	LB	EPOXY COATED STEEL REINFORCEMENT	26,180	102,628	188,947		
509	30020	11,750	FT	NO. 4 DEFORMED GFRP REINFORCEMENT			11,750		
511	34446	718	CY	CLASS OC2 CONCRETE WITH OC/OA, BRIDGE DECK			718		
511	34450	98	CY	CLASS OC2 CONCRETE WITH OC/OA, BRIDGE DECK (PARAPET)			98		
511	43512	313	CY	CLASS OC1 CONCRETE WITH OC/OA, ABUTMENT INCLUDING FOOTING	313				
511	45602	425	CY	CLASS OC4 MASS CONCRETE, SUBSTRUCTURE WITH OC/OA		425			
511	46512	224	CY	CLASS OC1 CONCRETE WITH OC/OA, FOOTING		224			
512	10100	2778	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	249	900	1629		
512	10300	50	SY	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN			50		
512	33000	60	SY	TYPE 2 WATERPROOFING	60				
515	15041	1	EACH	DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, LEVEL 3, TYPE 4 MOD. (66"), AS PER PLAN 120'-4 <sup>3</sup> / <sub>8</sub> "			1		14/28
515	15041	1	EACH	DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, LEVEL 3, TYPE 4 MOD. (66"), AS PER PLAN 119'-11 <sup>3</sup> / <sub>8</sub> "			1		14/28
515	15041	5	EACH	DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, LEVEL 3, TYPE 4 MOD. (66"), AS PER PLAN 119'-0 <sup>5</sup> / <sub>8</sub> "			5		14/28
515	15041	1	EACH	DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, LEVEL 3, TYPE 4 MOD. (66"), AS PER PLAN 100'-2 <sup>1</sup> / <sub>8</sub> "			1		13/28
515	15041	5	EACH	DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, LEVEL 3, TYPE 4 MOD. (66"), AS PER PLAN 99'-9 <sup>3</sup> / <sub>8</sub> "			5		13/28
515	15041	1	EACH	DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, LEVEL 3, TYPE 4 MOD. (66"), AS PER PLAN 102'-5"			1		13/28
515	15041	6	EACH	DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, LEVEL 3, TYPE 4 MOD. (66"), AS PER PLAN 102'-1 <sup>3</sup> / <sub>8</sub> "			6		13/28
515	20000	51	EACH	INTERMEDIATE DIAPHRAGMS			51		
516	12300	120	FT	STRIP SEAL EXPANSION JOINT ANCHORED WITH ELASTOMERIC CONCRETE			120		
516	44100	40	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) 2.468" X 1'-0" X 2'-1"	13	27			
518	20000	204	SY	PREFABRICATED GEOCOMPOSITE DRAIN	204				
518	21200	30	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	30				
518	40000	178	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	178				
518	40011	40	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN	40				7/28
526	25011	319	SY	REINFORCED CONCRETE APPROACH SLABS WITH OC/OA (T=15"), AS PER PLAN				319	24/28
526	90010	115	FT	TYPE A INSTALLATION				115	
601	20000	1949	SY	CRUSHED AGGREGATE SLOPE PROTECTION				1949	
601	32204	634	CY	ROCK CHANNEL PROTECTION, TYPE C WITH GEOTEXTILE FABRIC				634	



DESIGN AGENCY  
 DATE 2/2024  
 REVIEWED BSM  
 DRAWN JWS  
 CHECKED EDA  
 STRUCTURE FILE NUMBER 4400534


ESTIMATED QUANTITIES  
 BRIDGE NO. LAW-7-0713 L  
 S.R. 7 OVER LITTLE PADDY CREEK

LAW-7-2.17  
 PID No. 75923

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ESTIMATED QUANTITIES (PARTICIPATION CODE 02/NHS/08)

ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SHEET NO.
SPECIAL	203E65000	3	EA	SETTLEMENT PLATFORM				3	
503	11100	LUMP	LS	COFFERDAMS AND EXCAVATION BRACING				LUMP	
503	21300	LUMP	LS	UNCLASSIFIED EXCAVATION				LUMP	
505	11100	LUMP	LS	PILE DRIVING EQUIPMENT MOBILIZATION				LUMP	
507	00200	5415	FT	STEEL PILES HP12X53, FURNISHED	3120	2295			
507	00250	4985	FT	STEEL PILES HP12X53, DRIVEN	2960	2025			
509	10000	254,033	LB	EPOXY COATED STEEL REINFORCEMENT	21,360	83,454	149,219		
509	30020	11,871	FT	NO. 4 DEFORMED GFRP REINFORCEMENT			11,871		
511	34446	533	CY	CLASS OC2 CONCRETE WITH OC/OA, BRIDGE DECK			533		
511	34450	98	CY	CLASS OC2 CONCRETE WITH OC/OA, BRIDGE DECK (PARAPET)			98		
511	43512	245	CY	CLASS OC1 CONCRETE WITH OC/OA, ABUTMENT INCLUDING FOOTING	245				
511	45602	331	CY	CLASS OC4 MASS CONCRETE, SUBSTRUCTURE WITH OC/OA		331			
511	48512	142	CY	CLASS OC1 CONCRETE WITH OC/OA, FOOTING		142			
512	10100	2383	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	204	565	1614		
512	10300	39	SY	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN			39		
512	33000	51	SY	TYPE 2 WATERPROOFING	51				
515	15041	5	EACH	DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, LEVEL 3, TYPE 4 MOD. (66"), AS PER PLAN 119'-4 1/2"			5		
515	15041	5	EACH	DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, LEVEL 3, TYPE 4 MOD. (66"), AS PER PLAN 100'-1 1/2"			5		14/26
515	15041	5	EACH	DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, LEVEL 3, TYPE 4 MOD. (66"), AS PER PLAN 101'-7 3/8"			5		14/26
515	20000	36	EACH	INTERMEDIATE DIAPHRAGMS			36		
516	12300	94	FT	STRIP SEAL EXPANSION JOINT ANCHORED WITH ELASTOMERIC CONCRETE			94		
516	44100	30	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) 2.349" X 1'-0" X 2'-1"	10	20			
518	20000	165	SY	PREFABRICATED GEOCOMPOSITE FABRIC	165				
518	21200	26	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	26				
518	40000	154	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	154				
518	40011	50	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN	50				8/26
526	25011	251	SY	REINFORCED CONCRETE APPROACH SLABS WITH OC/OA (T=15"), AS PER PLAN				251	23/26
526	90010	91	FT	TYPE A INSTALLATION	91				
601	20000	1769	SY	CRUSHED AGGREGATE SLOPE PROTECTION				1769	
601	32204	497	CY	ROCK CHANNEL PROTECTION, TYPE C WITH GEOTEXTILE FABRIC				497	


  
 DESIGN AGENCY  
 1500 Lake Shore Dr.  
 Columbus, OH 43204  
 (614) 486-4383

DATE  
 2/2024  
 REVIEWED  
 BSM  
 STRUCTURE FILE NUMBER  
 4400526

DRAWN  
 ALH  
 REVISIONS

DESIGNED  
 MRS  
 CHECKED  
 EDA

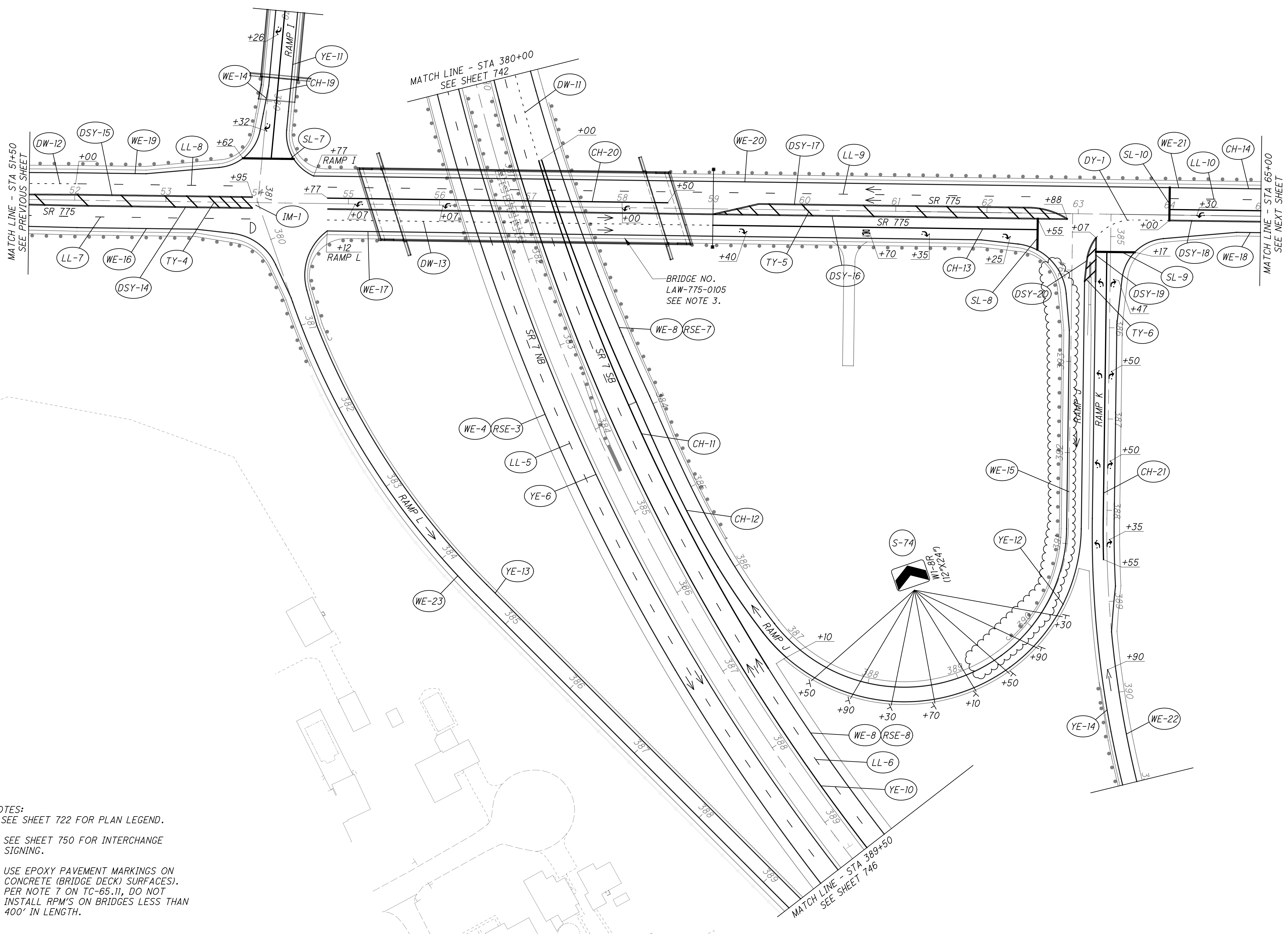
**ESTIMATED QUANTITIES**  
 BRIDGE NO. LAW-7-0713 R  
 S.R. 7 OVER LITTLE PADDY CREEK

**LAW-7-2.17**  
 PID No. 75923

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- NOTES:
- 1) SEE SHEET 722 FOR PLAN LEGEND.
  - 2) SEE SHEET 750 FOR INTERCHANGE SIGNING.
  - 3) USE EPOXY PAVEMENT MARKINGS ON CONCRETE (BRIDGE DECK) SURFACES. PER NOTE 7 ON TC-65.11, DO NOT INSTALL RPM'S ON BRIDGES LESS THAN 400' IN LENGTH.

CALCULATED  
M/JH  
CHECKED  
KAE

0 25 50 100  
HORIZONTAL SCALE IN FEET

**TRAFFIC CONTROL PLAN**  
**MAINLINE - STA 380+50 TO STA 389+50**

**LAW-7-2.17**







(CONTINUED BORING)

PROJECT: LAW-7-2.17		DRILLING FIRM / OPERATOR: NEAS / J. HODGES		DRILL RIG: CME 55X		STATION / OFFSET: 388+62, 15' RT.		EXPLORATION ID			
TYPE: RETAINING WALL		SAMPLING FIRM / LOGGER: NEAS / M. FORRAI		HAMMER: CME AUTOMATIC		ALIGNMENT: RAMP K		B-098-1-20			
PID: 75923 SFN: N/A		DRILLING METHOD: 3.25" HSA		CALIBRATION DATE: 12/5/19		ELEVATION: 681.7 (MSL) EOB: 85.0 ft.		PAGE			
START: 6/16/21 END: 6/18/21		SAMPLING METHOD: SPT		ENERGY RATIO (%): 81.9		LAT / LONG: 38.449686, -82.375614		2 OF 2			
MATERIAL DESCRIPTION AND NOTES		ELEV.		SPT/ RQD		REC SAMPLE (%)		GRADATION (%)		HOLE	
		631.5		N60		ID		GR CS FS SI CL LL PL PI		ODOT CLASS (GI) SEALED	
(CONTINUED BORING)		626.7		27		48 NQ2-9				CORE	
		620.0		30		80 NQ2-11				CORE	
CLAYSTONE, RED, HIGHLY WEATHERED, VERY WEAK TO WEAK, VERY FINE GRAINED, LAMINATED TO THIN BEDDED, ARGILLACEOUS, MODERATELY FRACTURED; RQD 18%, REC 90%.		612.7		13		92 NQ2-12				CORE	
		610.7		57		100 NQ2-13				CORE	
SANDSTONE, BLUIISH GRAY, MODERATELY WEATHERED, WEAK, FINE GRAINED, LAMINATED TO THIN BEDDED, ARGILLACEOUS, MODERATELY FRACTURED; RQD 43%, REC 90%.		601.7		40		97 NQ2-14				CORE	
		596.7		43		90 NQ2-15				CORE	
		51									
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		85									

NOTES: HOLE TERMINATED 5 FT SHORT DUE TO MECHANICAL ISSUES WITH THE RIG. GROUNDWATER NOT ENCOUNTERED DURING DRILLING.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: 100 LB. BENTONITE CHIPS; 100 LB. QUICKCRETE