

SHEET NUM.																PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	
P.15	P.16	P.17	P.23	P.34	P.75	P.78	P.611	P.613	P.626	P.726	P.727	P.731	P.732	P.733	P.737	01/NHS/03	02/NHS/04						
											418	346				764		611	16200	764	FT	DRAINAGE (CONT.)	
																						36" CONDUIT, TYPE A, 706.02 OR 42" TYPE A, 707.02, (0.064) ALUMINIZED, 707.04 (0.064), 707.07 (0.064) ALUMINIZED, 707.22 (0.064)	
								186								186		611	16400	186	FT	36" CONDUIT, TYPE B	
										249			203			452		611	19200	452	FT	42" CONDUIT, TYPE A, 707.02 (0.064) ALUMINIZED, 707.04 (0.064), 707.07 (0.064) ALUMINIZED, 707.22	
														260		260		611	20700	260	FT	48" CONDUIT, TYPE A, 706.02, OR 54" TYPE A, 707.02 (0.064) ALUMINIZED, 707.04 (0.064), 707.07 (0.064) ALUMINIZED, 707.22	
								256								256		611	21100	256	FT	48" CONDUIT, TYPE C	
								280								280		611	22400	280	FT	54" CONDUIT, TYPE B	
								2								2		611	98180	2	EACH	CATCH BASIN, NO. 3A	
								42								42		611	98230	42	EACH	CATCH BASIN, NO. 4	
								1								1		611	98300	1	EACH	CATCH BASIN, NO. 5	
								2								2		611	98470	2	EACH	CATCH BASIN, NO. 2-2B	
								23								23		611	98505	23	EACH	CATCH BASIN, NO. 2-2C, AS PER PLAN	
								1								1		611	98510	1	EACH	CATCH BASIN, NO. 2-3	
								2								2		611	98570	2	EACH	CATCH BASIN, NO. 2-5	
								1								1		611	99574	1	EACH	MANHOLE, NO. 3	
	44	56							29							129		611	99710	129	EACH	PRECAST REINFORCED CONCRETE OUTLET	
										1			1			2		611	99731	2	EACH	JUNCTION CHAMBER, AS PER PLAN	
										932						1,818		899	10000	1,818	FT	CURED-IN-PLACE PIPE LINER (42" DIAMETER)	
								245.0								245.0		899	10000	245.0	FT	CURED-IN-PLACE PIPE LINER (54" DIAMETER)	
			262													262		251	01000	262	SY	PAVEMENT	
					26,329											26,329		252	01500	26,329	FT	PARTIAL DEPTH PAVEMENT REPAIR (441)	
			1,143													1,143		254	01000	1,143	SY	FULL DEPTH PAVEMENT SAWING	
369																369		255	11000	369	SY	PAVEMENT PLANING, ASPHALT CONCRETE (1.5" THICKNESS)	
2,976																2,976		255	20000	2,976	FT	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, TYPE 1, CLASS QC1	
4																4		301	56000	4	CY	FULL DEPTH PAVEMENT SAWING	
						21,148	52									21,200		302	56000	21,200	CY	ASPHALT CONCRETE BASE, PG64-22, (449)	
10						26,146										24,581	1,565	304	20000	26,156	CY	ASPHALT CONCRETE BASE, PG64-22, (449)	
						7,456	29									29	7,456	407	13900	7,485	GAL	AGGREGATE BASE	
			92			21,657										15,537	6,212	407	20000	21,749	GAL	TACK COAT, 702.13	
				43		550										593		411	10000	593	CY	NON-TRACKING TACK COAT	
			48													48		441	50000	48	CY	STABILIZED CRUSHED AGGREGATE	
			40													40		441	70201	40	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22	
							18									18		441	70500	18	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (449), AS PER PLAN, PG64-22	
						865										570	295	441	70800	865	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), (DRIVEWAYS)	
																						ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (449), (UNDER GUARDRAIL)	
						1,081										1,081		442	10000	1,081	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446)	
						7,509										7,509		442	10080	7,509	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 12.5 MM, TYPE A (446)	
						5,450											5,450	442	10100	5,450	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446)	
						8,498										4,467	4,031.00	442	10300	8,498	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (447)	
					64											64		609	24510	64	FT	CURB, TYPE 4-C	
						29										29		609	60000	29	CY	9" CONCRETE TRAFFIC ISLAND	
						338											338	617	10100	338	CY	COMPACTED AGGREGATE	
						8,550										8,550		617	20000	8,550	SY	SHOULDER PREPARATION	
															18	9	9	618	40600	18	MILE	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)	

GENERAL SUMMARY

DESIGN AGENCY



DESIGNER

NRE

REVIEWER

KKP 09/18/24

PROJECT ID

119141

SHEET

P.70

TOTAL

P.907

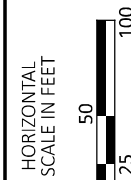
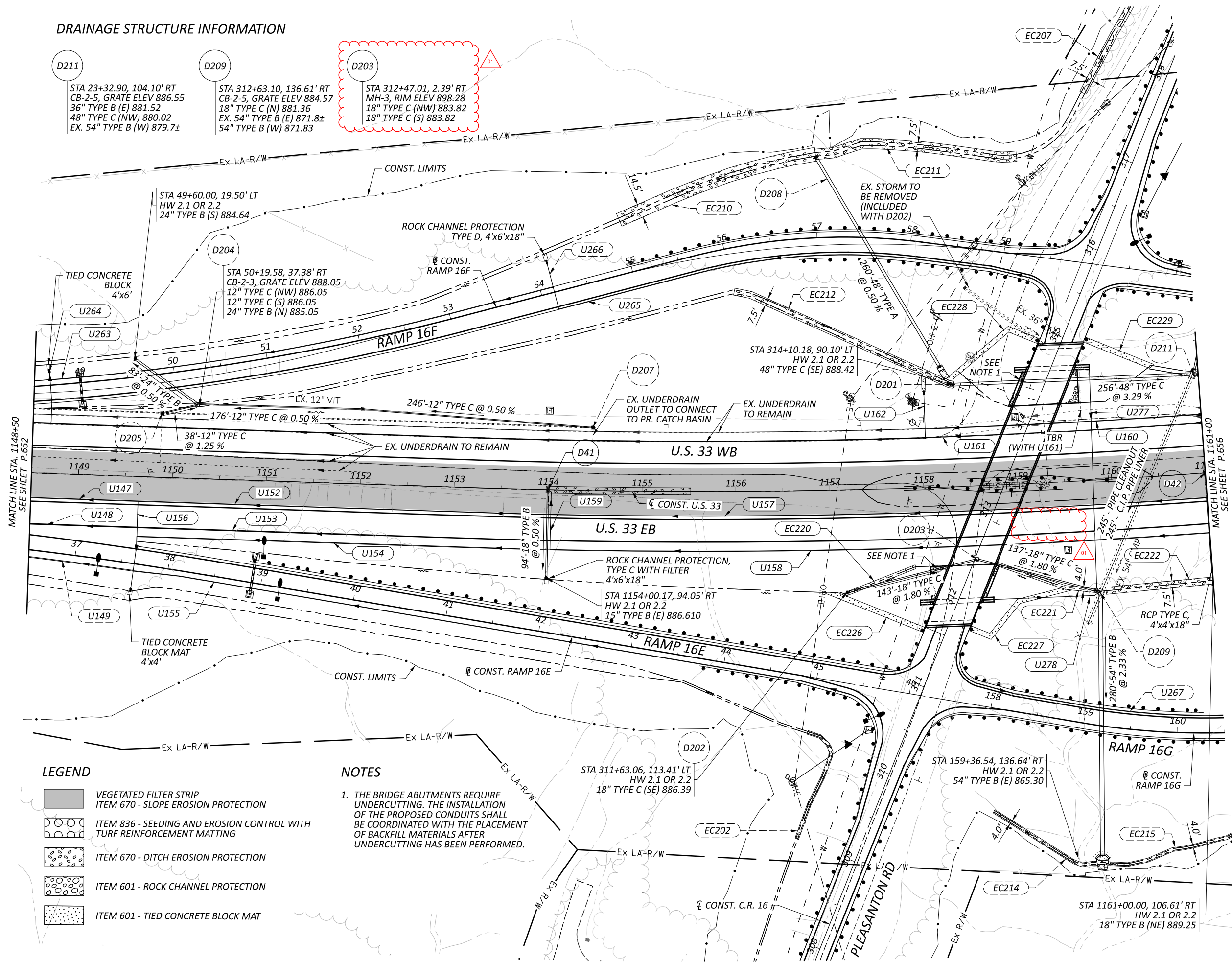
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[illegible]

DRAINAGE SUBSUMMARY

DESIGN AGENCY 	
DESIGNER CEF	
REVIEWER DMG 12/06/24	
PROJECT ID 119141	
SHEET P.613	TOTAL P.907

DRAINAGE STRUCTURE INFORMATION

DRAINAGE PLAN - U.S. 33
STA 1148+50 TO STA 1161+00

DESIGN AGENCY

CARPENTER
MARTY

DESIGNER

CEF

REVIEWER

DMG 12/06/24

PROJECT ID

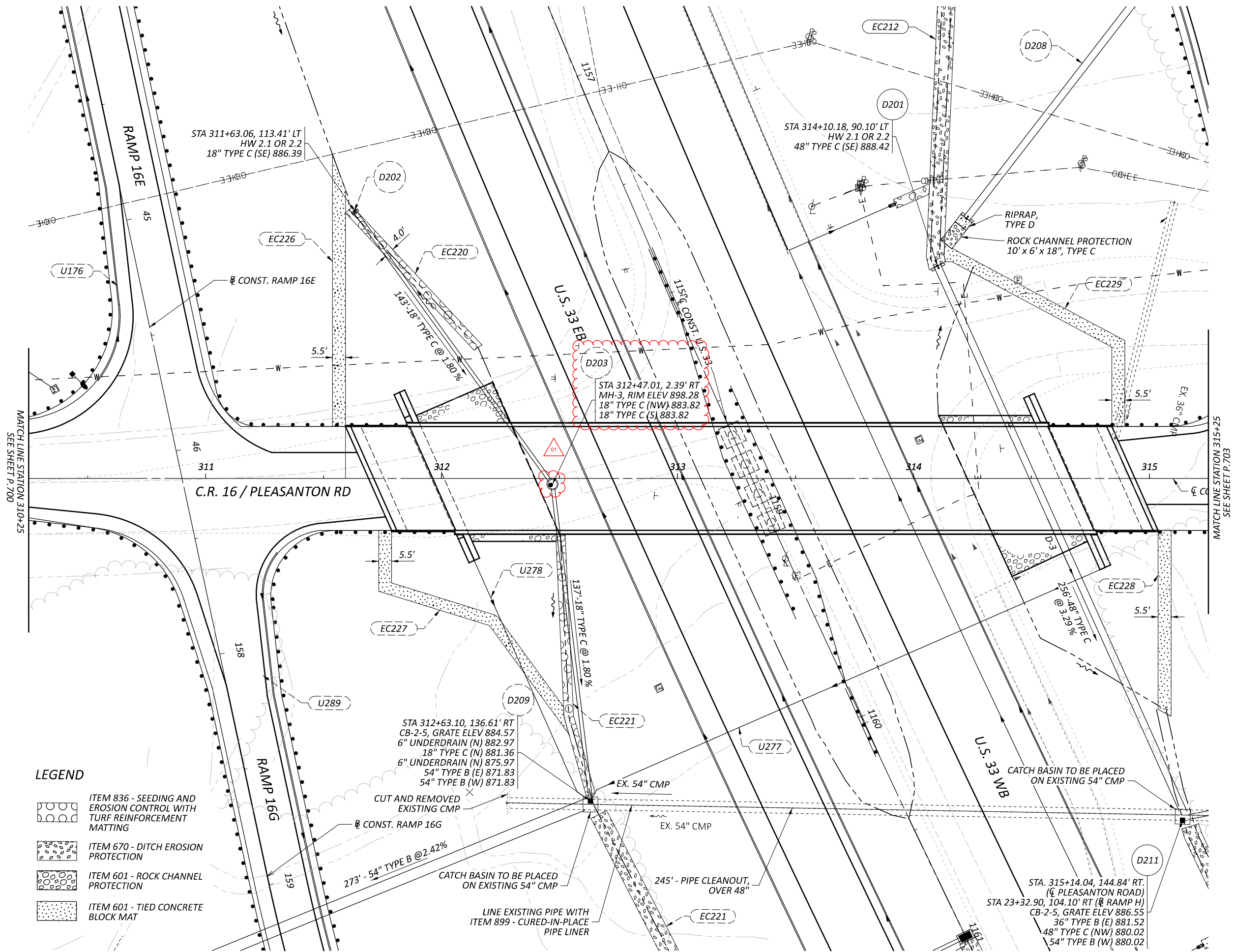
119141

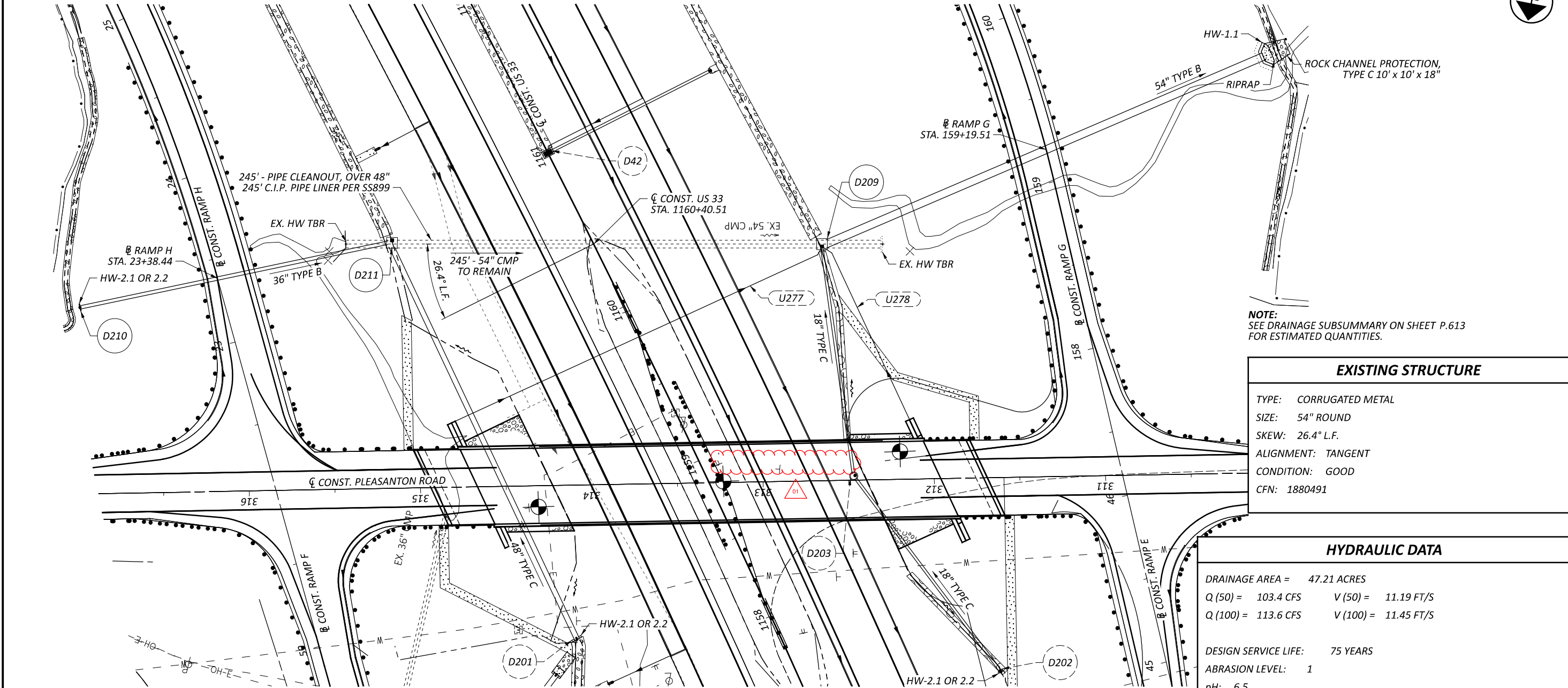
SHEET

P.654

TOTAL

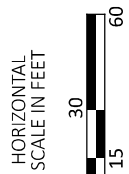
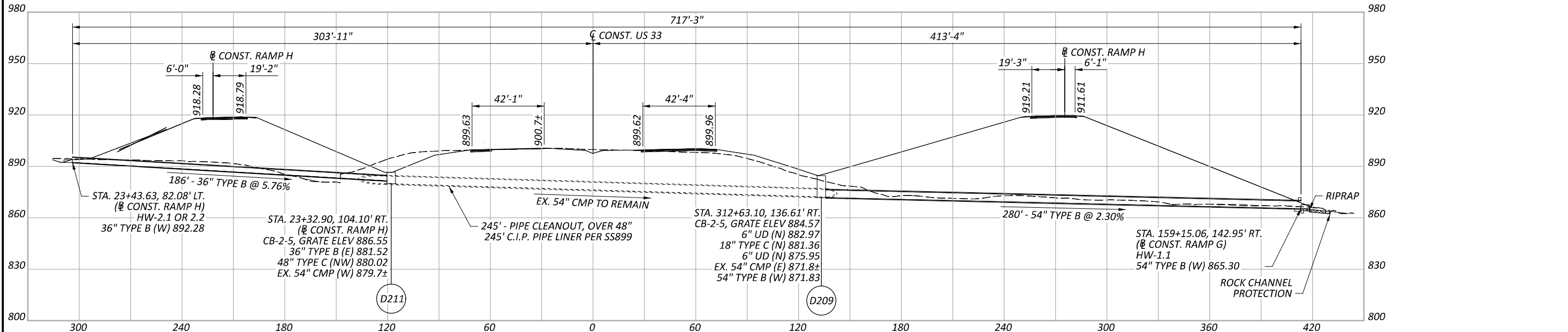
P.907





EXISTING STRUCTURE	
TYPE:	CORRUGATED METAL
SIZE:	54" ROUND
SKEW:	26.4° L.F.
ALIGNMENT:	TANGENT
CONDITION:	GOOD
CFN:	1880491

HYDRAULIC DATA	
DRAINAGE AREA = 47.21 ACRES	
Q (50) = 103.4 CFS	V (50) = 11.19 FT/S
Q (100) = 113.6 CFS	V (100) = 11.45 FT/S
DESIGN SERVICE LIFE: 75 YEARS	
ABRASION LEVEL: 1	
pH: 6.5	



CULVERT DETAIL
US-33 - STA. 1160+40.51

DESIGN AGENCY	
CARPENTER MARTY	
DESIGNER	
CEF	
REVIEWER	
DMG 12/06/24	
PROJECT ID	
119141	
SHEET	
P.734	TOTAL P.907

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS:

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

AS-1-15	REVISED	01/20/2023
AS-2-15	REVISED	07/21/2023
DM-1.1	REVISED	07/17/2020
GSD-1-19	REVISED	01/15/2021
SBR-1-20	REVISED	07/21/2023
SICD-2-14	REVISED	01/15/2021

AND THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

800	DATED	7/19/2024
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DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO THE 9TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATIONS OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 9TH EDITION, 2020, 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 SPECIFICIATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING:

VEHICULAR LIVE LOAD: HL-93
FUTURE WEARING SURFACE (FWS) OF 0.060 KSF

DESIGN DATA:

CONCRETE, CLASS QC2 - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)
CONCRETE, CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)
EPOXY COATED REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI
GFRP REINFORCEMENT (RAILING)
STRUCTURAL STEEL - ASTM A709, GRADE 50, MINIMUM YIELD STRENGTH 50 KSI
STEEL H-PILES - ASTM A572, GRADE 50, MINIMUM YIELD STRENGTH 50 KSI

MONOLITHIC WEARING SURFACE:

IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK

MAINTENANCE OF TRAFFIC:

FOR MAINTENANCE OF TRAFFIC PLANS, SEE ROADWAY SHEETS.

UTILITIES:

FOR UTILITY NOTES, SEE ROADWAY SHEETS.

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 2.20 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 BEAM TO THE FACE OF THE SAFETY HANDRAIL OF 65".

FOUNDATION BEARING RESISTANCE:

PIER 1 FOOTINGS, AS DESIGNED, PRODUCE A MAXIMUM SERVICE LIMIT STATE BEARING PRESSURE OF 9.8 KIPS PER SQUARE FOOT AND A MAXIMUM STRENGTH LIMIT STATE BEARING PRESSURE OF 11.9 KIPS PER SQUARE FOOT. THE FACTORED BEARING RESISTANCE IS 19.98 KIPS PER SQUARE FOOT.

THE FORWARD ABUTMENT FOOTING, AS DESIGNED, PRODUCE A MAXIMUM SERVICE LIMIT STATE BEARING PRESSURE OF 7.2 KIPS PER SQUARE FOOT AND A MAXIMUM STRENGTH LIMIT STATE BEARING PRESSURE OF 10.2 KIPS PER SQUARE FOOT. THE FACTORED BEARING RESISTANCE IS 19.53 KIPS PER SQUARE FOOT.

PIER AND FORWARD ABUTMENT FOOTINGS:

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

PILES DRIVEN 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 326.0 KIPS PER PILE FOR THE REAR ABUTMENT PILES. THE REAR ABUTMENT PILES INCLUDE AN ADDITIONAL 33.7 KIPS OF FACTORED LOAD PER PILE TO ACCOUNT FOR POSSIBLE DOWNDRAG LOADING.

REAR ABUTMENT PILES (HP14x73):

26 PILES 40 FEET LONG, ORDER LENGTH.

PILE SPLICES

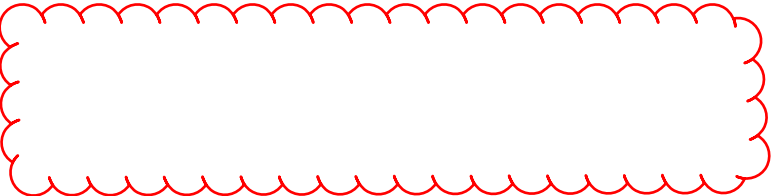
IN LIEU OF USING THE FULL PENETRATION BUTT WELDS SPECIFIED IN C&MS 507.09 TO SPLICE STEEL H-PILES, THE CONTRACTOR MAY USE A MANUFACTURED H-PILE SPLICER.

FURNISH SPLICERS FROM THE FOLLOWING MANUFACTURER:
ASSOCIATED PILE AND FITTING CORPORATION
8 WOOD HOLLOW RD. PLAZA 1
PARSIPPANYM NEW JERSEY 07054

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

TEMPORARY CLOSURE:

A MAXIMUM OF 2 NIGHTLY CLOSURES OF US 33 IS PERMITTED TO FACILITATE THE PLACEMENT OF BEAMS. TRAFFIC SHALL BE DETOURED. SEE MAINTENANCE OF TRAFFIC PLANS FOR ADDITIONAL INFORMATION.



03/27/2025

ITEM 511- CLASS QC2 CONCRETE, SUPERSTRUCTURE, AS PER PLAN:

POLYSTYRENE: FURNISH 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. ALLOWABLE TOLERANCE FOR THE TOTAL THICKNESS OF THE MATERIAL SHALL BE -0", +1/2". DO NOT PLACE MORE THAN TWO LAYERS OF POLYSTYRENE TO ACHIEVE TOTAL THICKNESS.

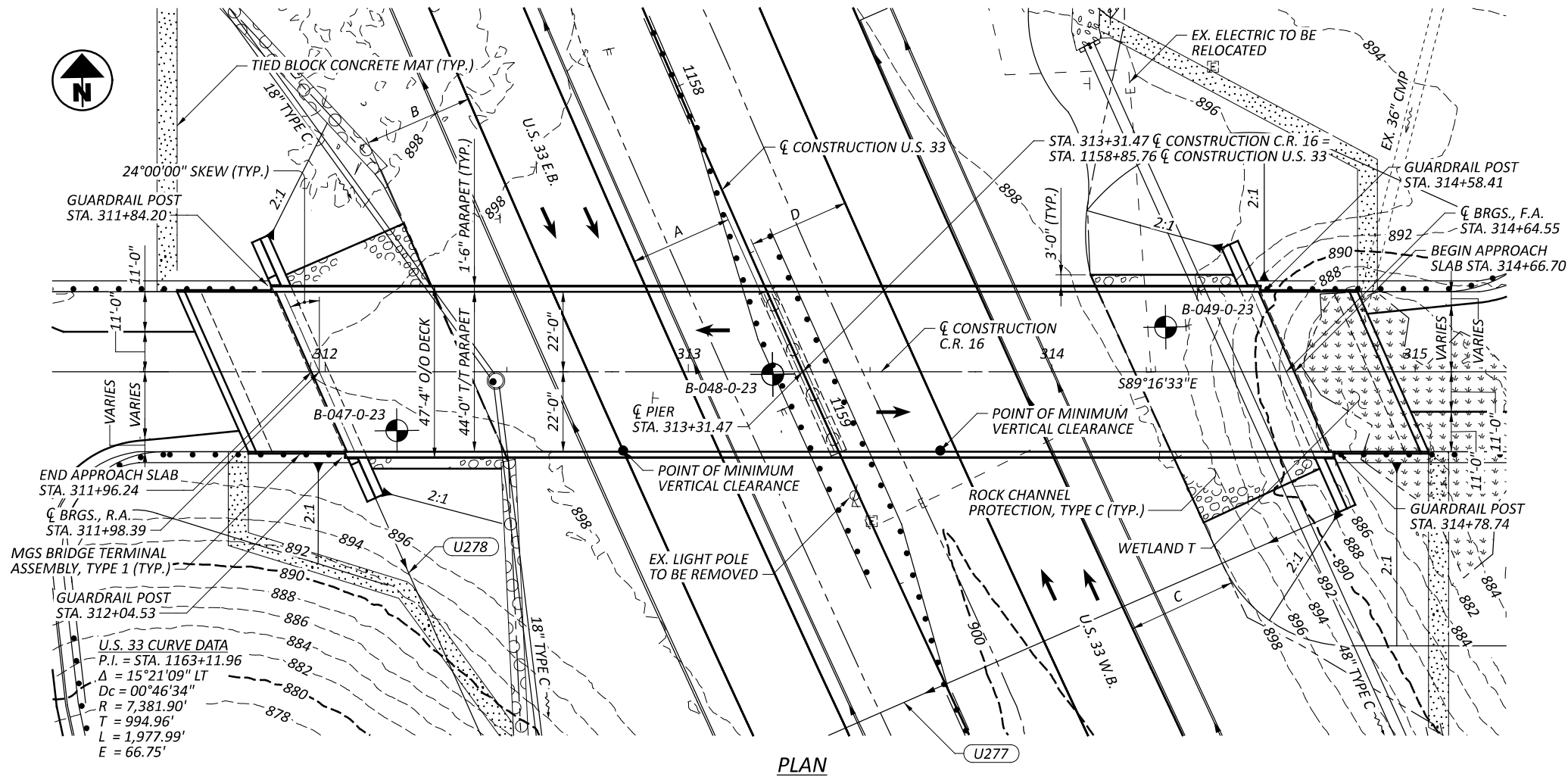
ABBREVIATIONS:

ABUT. - ABUTMENT
ADT - AVERAGE DAILY TRAFFIC
ADTT - AVERAGE DAILY TRUCK TRAFFIC
APPR. - APPROACH
B - BOTTOM
BM - BENCHMARK
BOT. OR BTM. - BOTTOM
BRGS. - BEARINGS
CL - CENTERLINE
C/C - CENTER TO CENTER
C.J. - CONSTRUCTION JOINT
CLR. - CLEAR
CMS - CONSTRUCTION AND MATERIAL SPECIFICATIONS
CONC. - CONCRETE
CONSTR. - CONSTRUCTION
DIA. - DIAMETER
DIM. - DIMENSION
DWG. - DRAWING
E.F. - EACH FACE
EL. OR ELEV. - ELEVATION
E/P - EDGE OF PAVEMENT
EQ. - EQUAL
EST. - ESTIMATED
EX. - EXISTING
F.A. - FORWARD ABUTMENT
F/F - FACE TO FACE
F.F. - FAR FACE
FT. - FOOT OR FEET
FWD. - FORWARD
HW - HIGH WATER
IN. - INCH
INT. - INTEGRAL
JT. - JOINT
LEOD. - LEFT EDGE OF DECK
LT. - LEFT
LTOB. - LEFT TOE OF BARRIER
MAX. - MAXIMUM
MIN. - MINIMUM
MISC. - MISCELLANEOUS

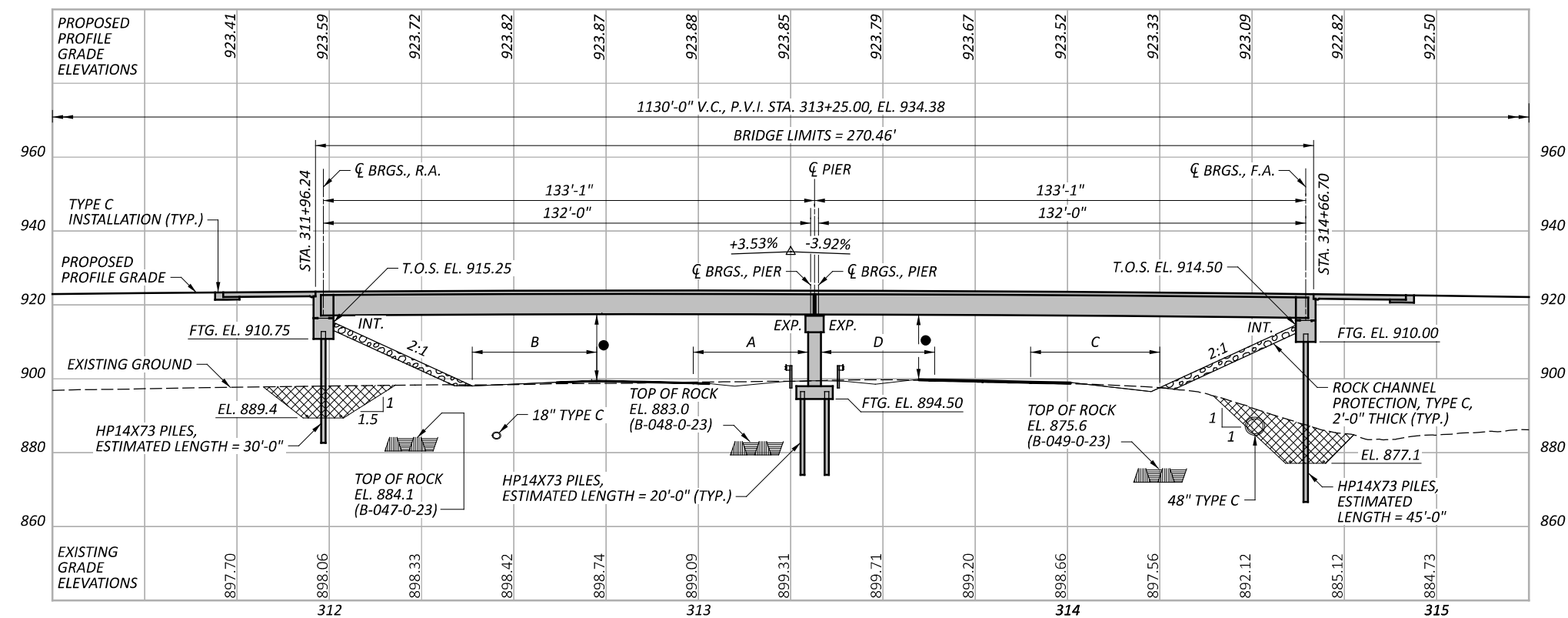
N.F - NEAR FACE
NO. - NUMBER
N.P.C.P.P. - NON-PERFORATED CORRUGATED PLASTIC PIPE
OHWM - ORDINARY HIGH WATER MARK
O/O - OUT TO OUT
P.C.P.P. - PERFORATED CORRUGATED PLASTIC PIPE
P.E.J.F. - PREFORMED EXPANSION JOINT FILLER
PG - PROFILE GRADE
PROP. - PROPOSED
PSF - POUNDS PER SQUARE FOOT
P.V.I. - POINT OF VERTICAL INTERSECTION
Q - FLOW RATE
R - RADIUS
R.A. - REAR ABUTMENT
RCP - ROCK CHANNEL PROTECTION
REOD. - RIGHT EDGE OF DECK
REQD. - REQUIRED
RT. - RIGHT
RTOB. - RIGHT TOE OF BARRIER
R/W - RIGHT OF WAY
SER. - SERIES
SHLDR - SHOULDER
SPA. - SPACE OR SPACES
STA. - STATION
STD. - STANDARD
STR - STRAIGHT
T - TOP
T&B - TOP & BOTTOM
TBR - TO BE REMOVED
TEMP. - TEMPORARY
T.O.S. OR T/S - TOP OF SLOPE
T/T - TOE TO TOE
TYP. - TYPICAL
U.N.O. - UNLESS NOTED OTHERWISE
VAR. - VARIES
V - VELOCITY

GENERAL NOTES
BRIDGE NO. ATH-00021-02.072
PLEASANT HILL ROAD OVER U.S. 33

SFN	
0500315	
DESIGN AGENCY	
 www.bgggroup.com 5960 WILCOX PLACE, SUITE C DUBLIN, OHIO 43016	
DESIGNER	CHECKER
GA	RG
REVIEWER	
GTB 09/10/24	
PROJECT ID	
119141	
SUBSET	TOTAL
2	29
SHEET	TOTAL
P.774	P.907



PLAN

PROFILE ALONG $\bar{C}$ CONSTRUCTION C.R. 16

PROJECT CONTROL POINTS

SV25 STA.	1153+17.01,	ELEV.	893.07,	OFFSET	0.02',	LT.
SV26 STA.	1162+33.83,	ELEV.	900.31,	OFFSET	0.07',	LT.

FOR ADDITIONAL BENCHMARK INFORMATION SEE ROADWAY PLAN SHEET P.6/907.

NOTES

EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

DESIGN TRAFFIC:

2028 ADT = 800	2028 ADTT = 72
2048 ADT = 970	2048 ADTT = 88
DIRECTIONAL DISTRIBUTION = 0.54	

LEGEND

- 16'-6" REQUIRED MINIMUM VERTICAL CLEARANCE
- 17'-0" ACTUAL MINIMUM VERTICAL CLEARANCE (W.B.)
- 17'-6³/₈" ACTUAL MINIMUM VERTICAL CLEARANCE (E.B.)

A = MIN. HORIZONTAL CLEARANCE = 28'-2"
REQ. HORIZONTAL CLEARANCE = 11'-0"

B = MIN. HORIZONTAL CLEARANCE = 30'-0"
REQ. HORIZONTAL CLEARANCE = 30'-0"

C = MIN. HORIZONTAL CLEARANCE = 30'-0"
REQ. HORIZONTAL CLEARANCE = 30'-0"

D = MIN. HORIZONTAL CLEARANCE = 27'-9"
REQ. HORIZONTAL CLEARANCE = 11'-0"



BORING LOCATION

- LIMITS OF ITEM 203, EXCAVATION & ITEM 203, GRANULAR MATERIAL, TYPE C WITHOUT FILTER



PROPOSED STRUCTURE

TYPE: PRESTRESSED CONCRETE I-BEAMS WITH REINFORCED CONCRETE COMPOSITE DECK SUPPORTED BY INTEGRAL ABUTMENTS; CAP AND COLUMN PIER ON PILES

SPANS: 132'-0", 132'-0" C/C BEARINGS
133'-1", 133'-1" C/C SUBSTRUCTURES

ROADWAY: 44'-0" T/T PARAPET

VEHICULAR LIVE LOAD: HL-93

FUTURE WEARING SURFACE: 0.060 KSF

SKEW: 24°00'00" R.F.

APPROACH SLABS: 25'-0" LONG, 15" THICK (AS-1-15, AS-2-15 TYPE C)

ALIGNMENT: TANGENT

CROWN: 0.016 FT/FT

COORDINATES: LATITUDE 39°14'18.14"N

LONGITUDE 82°04'30.38"W

DECK AREA: 12802 SF

SITE PLAN

BRIDGE NO. ATH-00016-05.908
C.R. 16 (PLEASANTON ROAD) OVER U.S. 33

SFN
0500317

DESIGN AGENCY



DESIGNER
SMH

CHECKER
AMR

REVIEWER
GDJ 12-2-24

PROJECT ID
119141

SUBSET
1

TOTAL
24

SHEET
P.802

TOTAL
P.907

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

AS-1-15	REVISED	1-20-2023
AS-2-15	REVISED	7-21-2023
BP-5-1	REVISED	7-15-2022
PSID-1-13	REVISED	7-19-2024
SBR-1-20	REVISED	7-19-2024

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.

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 LOADING

VEHICULAR LIVE LOAD: HL-93

FUTURE WEARING SURFACE (FWS) OF 0.06 KIPS/FT²

DESIGN DATA

CONCRETE CLASS QC2 WITH QC/QA - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE, PARAPETS, DIAPHRAGMS)

CONCRETE CLASS QC1 WITH QC/QA - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)

CONCRETE REINFORCEMENT:
EPOXY COATED STEEL REINFORCEMENT - MINIMUM YIELD STRENGTH 60 KSI (DECK, APPROACH SLABS, ABUTMENTS, PIER)

GFRP REINFORCEMENT (PARAPETS)

STRUCTURAL STEEL - ASTM A709 GRADE 50 - YIELD STRENGTH 50 KSI

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

CONCRETE FOR PRESTRESSED BEAMS:
COMPRESSIVE STRENGTH (FINAL) - 8 KSI
COMPRESSIVE STRENGTH (RELEASE) - 6 KSI

WELDED WIRE REINFORCEMENT:
YIELD STRENGTH - 70 KSI

PRESTRESSING STRAND:
AREA = 0.217 SQ. IN. 0.6" Ø
ULTIMATE STRENGTH = 270 KSI
INITIAL STRESS = 202.5 KSI (LOW RELAXATION STRANDS)
INITIAL TENSION LOAD = 43.95 KIP/STRAND

DECK PROTECTION METHOD

EPOXY COATED REINFORCING STEEL
2½" CONCRETE COVER
SEALING OF CONCRETE BRIDGE DECK WITH HMWM RESIN

MONOLITHIC WEARING SURFACE

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

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 MAXIMUM WHEEL LOAD OF 2.48 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"

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 FT. BEHIND EACH ABUTMENT.

PILE DRIVING

USE A PILE DRIVING HAMMER WITH A RATED ENERGY OF 44,000 FOOT-POUNDS TO INSTALL THE PILES. ENSURE THAT STRESSES IN THE PILES DURING DRIVING DO NOT EXCEED 40,500 POUNDS PER SQUARE INCH.

PILE SPLICES

IN LIEU OF USING THE FULL PENETRATION BUTT WELDS SPECIFIED IN C&MS 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.

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 357 KIPS PER PILE FOR THE ABUTMENT PILES. THE TOTAL FACTORED LOAD IS 397 KIPS PER PILE FOR THE PIER PILES.

REAR ABUTMENT PILES:
HP 14X73 PILES 35 FEET LONG, ORDER LENGTH

PIER PILES:
HP 14X73 PILES 25 FEET LONG, ORDER LENGTH

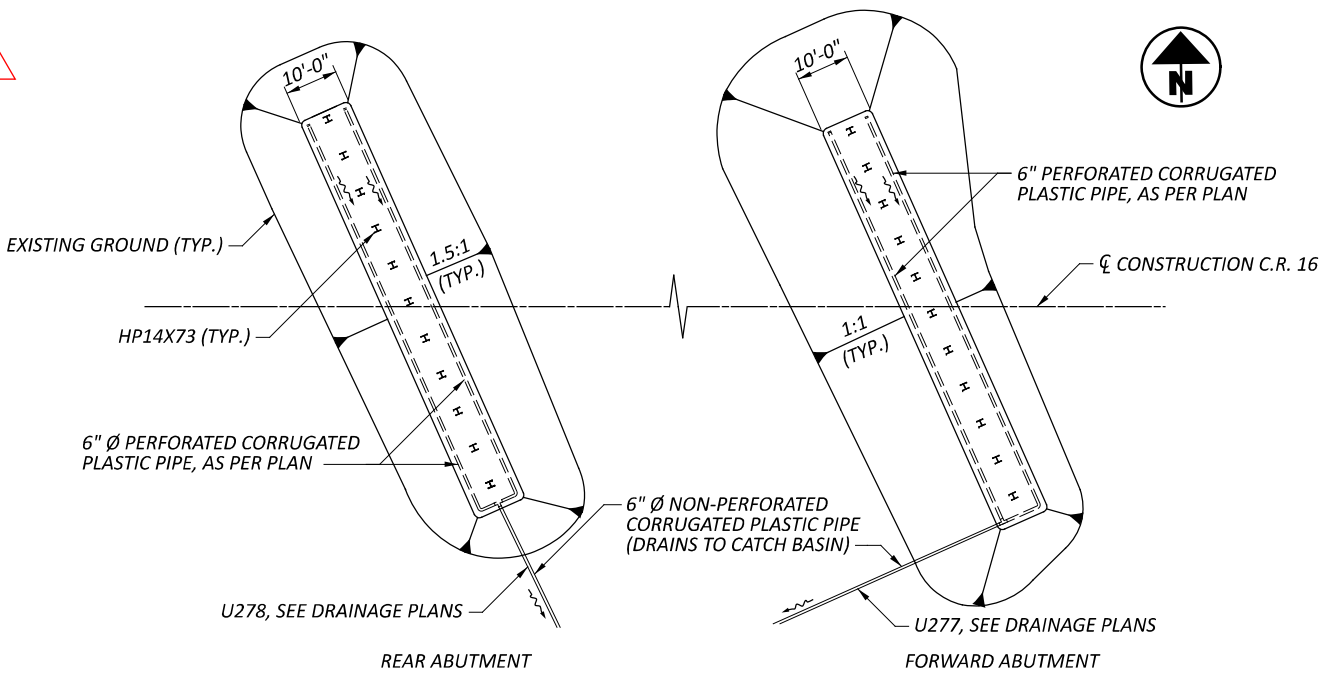
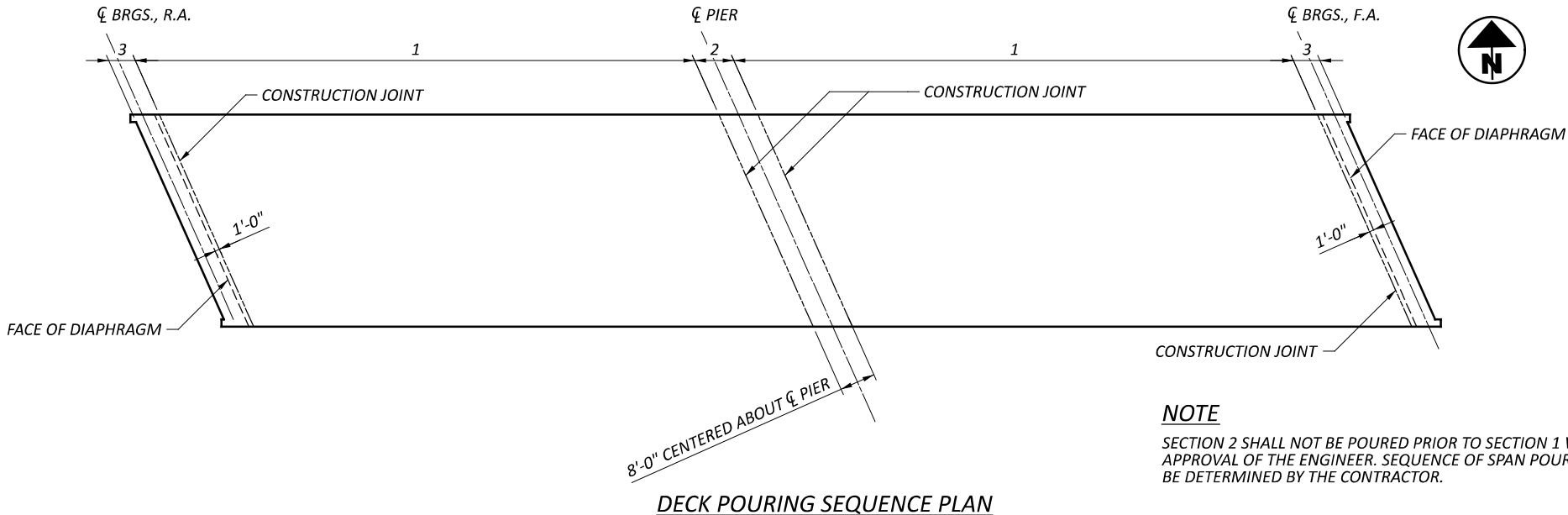
FORWARD ABUTMENT PILES:
HP 14X73 PILES 50 FEET LONG, ORDER LENGTH

TEMPORARY CLOSURE

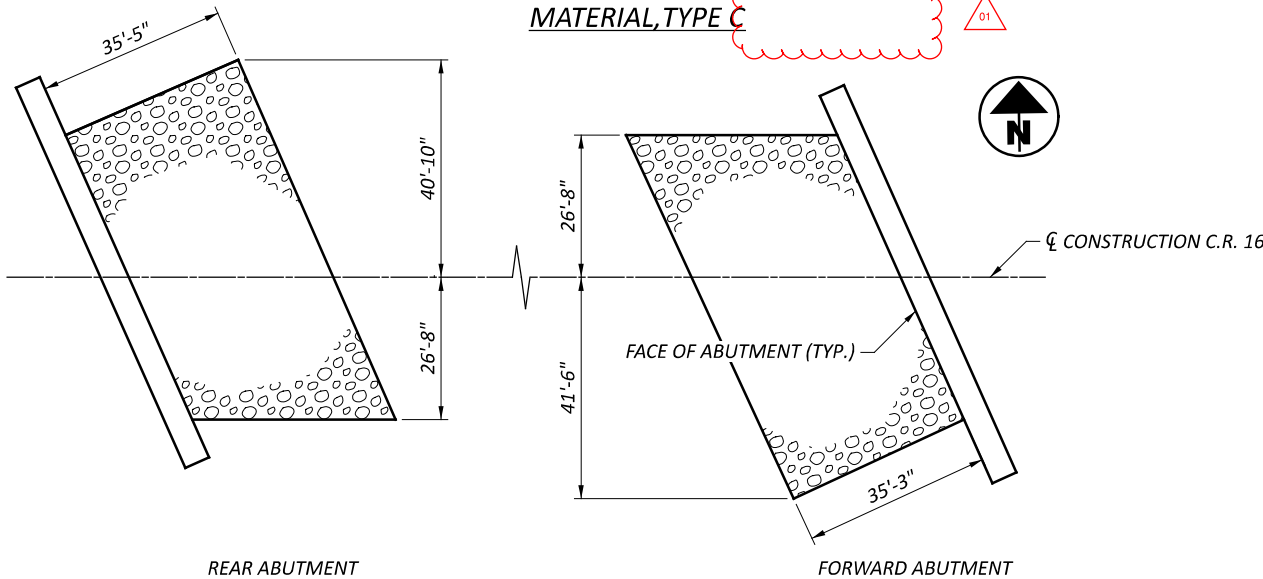
A MAXIMUM OF 2 NIGHTLY CLOSURES OF US 33 IS PERMITTED TO FACILITATE THE PLACEMENT OF BEAMS. TRAFFIC SHALL BE DETOURED VIA THE ENTRANCE AND EXIT RAMPs. SEE MAINTENANCE OF TRAFFIC PLANS FOR ADDITIONAL INFORMATION.

6" PERFORATED CORRUGATED PLASTIC, PIPE AS PER PLAN

WRAP CORRUGATED PERFORATED PLASTIC PIPE WITH GEOTEXTILE FABRIC, TYPE A, PER C&MS 712.09. PIPES SHALL BE SLOPED AT 1% MINIMUM TO ENSURE DRAINAGE.



PLAN - ITEMS 203, EXCAVATION & GRANULAR MATERIAL, TYPE C



PLAN - ITEM 601, ROCK CHANNEL PROTECTION, TYPE C WITHOUT FILTER

NOTE

SECTION 2 SHALL NOT BE POURED PRIOR TO SECTION 1 WITHOUT APPROVAL OF THE ENGINEER. SEQUENCE OF SPAN POURS SHALL BE DETERMINED BY THE CONTRACTOR.

GENERAL NOTES

BRIDGE NO. ATH-00016-05.908
C.R. 16 (PLEASANTON ROAD) OVER U.S. 33

SFN
0500317

DESIGN AGENCY



DESIGNER
JZ

CHECKER
AMR

REVIEWER
GDJ 12-2-24

PROJECT ID
119141

SUBSET
2

TOTAL
24

SHEET
P.803

TOTAL
P.907

ESTIMATED QUANTITIES						DESIGN: JZ DATE: 09-23-24			CHECK: AMR DATE: 09-23-24	
ITEM	EXTENSION	TOTAL	UNIT	PART. 03/NHS/08	DESCRIPTION	ABUT.	PIER	SUPER.	GEN.	SEE SHEET
203	10000	1804	CY	1804	EXCAVATION				1804	2
203	35120	1804	CY	1804	GRANULAR MATERIAL, TYPE C				1804	
503	21300	LS	-	LS	UNCLASSIFIED EXCAVATION					
505	11100	LS	-	LS	PILE DRIVING EQUIPMENT MOBILIZATION					
507	00300	1335	FT	1335	STEEL PILES HP14X73, FURNISHED	935	400			
507	00350	1145	FT	1145	STEEL PILES HP14X73, DRIVEN	825	320			
509	10000	165848	LB	165848	EPOXY COATED STEEL REINFORCEMENT	12173	16668	137007		
509	30020	7801	FT	7801	NO. 4 DEFORMED GFRP REINFORCEMENT			7801		
511	34446	524	CY	524	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK			524		
511	34450	82	CY	82	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET)			82		
511	41012	65	CY	65	CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS		65			
511	43512	174	CY	174	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT INCLUDING FOOTING	174				
511	46512	42	CY	42	CLASS QC1 CONCRETE WITH QC/QA, FOOTING		42			
512	10100	1366	SY	1366	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	67	156	1143		
512	10300	1568	SY	1568	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN			1323	245	
515	15120	12	EACH	12	DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, LEVEL 3, TYPE WF66-49 (LENGTH = 133'-6")			12		
515	20000	30	EACH	30	INTERMEDIATE DIAPHRAGMS			30		
516	10010	98	FT	98	ARMORLESS PREFORMED JOINT SEAL				98	
516	13200	104	SF	104	½" PREFORMED EXPANSION JOINT FILLER	104				
516	13600	104	SF	104	1" PREFORMED EXPANSION JOINT FILLER	104				
516	13900	79	SF	79	2" PREFORMED EXPANSION JOINT FILLER			79		
516	14014	141	FT	141	INTEGRAL ABUTMENT EXPANSION JOINT SEAL	141				
516	44001	12	EACH	12	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (10" X 18" X 1.875" WITH A 11" X 19" X 1.5" LOAD PLATE)	12				18
516	44200	12	EACH	12	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (14" X 19" X 3.128" WITH A 15" X 40" X 2" LOAD PLATE)		12			
518	21200	116	CY	116	POROUS BACKFILL WITH GEOTEXTILE FABRIC	116				
518	40000	157	FT	157	6" PERFORATED CORRUGATED PLASTIC PIPE	157				
518	40001	340	FT	340	6" PERFORATED CORRUGATED PLASTIC PIPE, AS PER PLAN	340				2
518	40011	80	FT	80	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN	80				5, 6
526	25010	250	SY	250	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15")				250	
526	90030	98	FT	98	TYPE C INSTALLATION				98	
601	34200	389	CY	389	ROCK CHANNEL PROTECTION, TYPE C WITHOUT FILTER				389	



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