

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
HEN-24-10.74
GRADE SEPARATION WITH THE
INDIANA AND OHIO RAILWAY
LIBERTY & WASHINGTON TOWNSHIPS
HENRY COUNTY

PROJECT DESCRIPTION

CONSTRUCT PROPOSED 4-LANE DIVIDED HIGHWAY ON
NEW ALIGNMENT INCLUDING VARIOUS SIDE ROADS AND
AN INTERCHANGE AT SR 109. APPROXIMATE LENGTH IS
5.11 MILES.

PROJECT EARTH DISTURBED AREA: 285.12 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 153.19 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: 438.31 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.

2005 SPECIFICATIONS

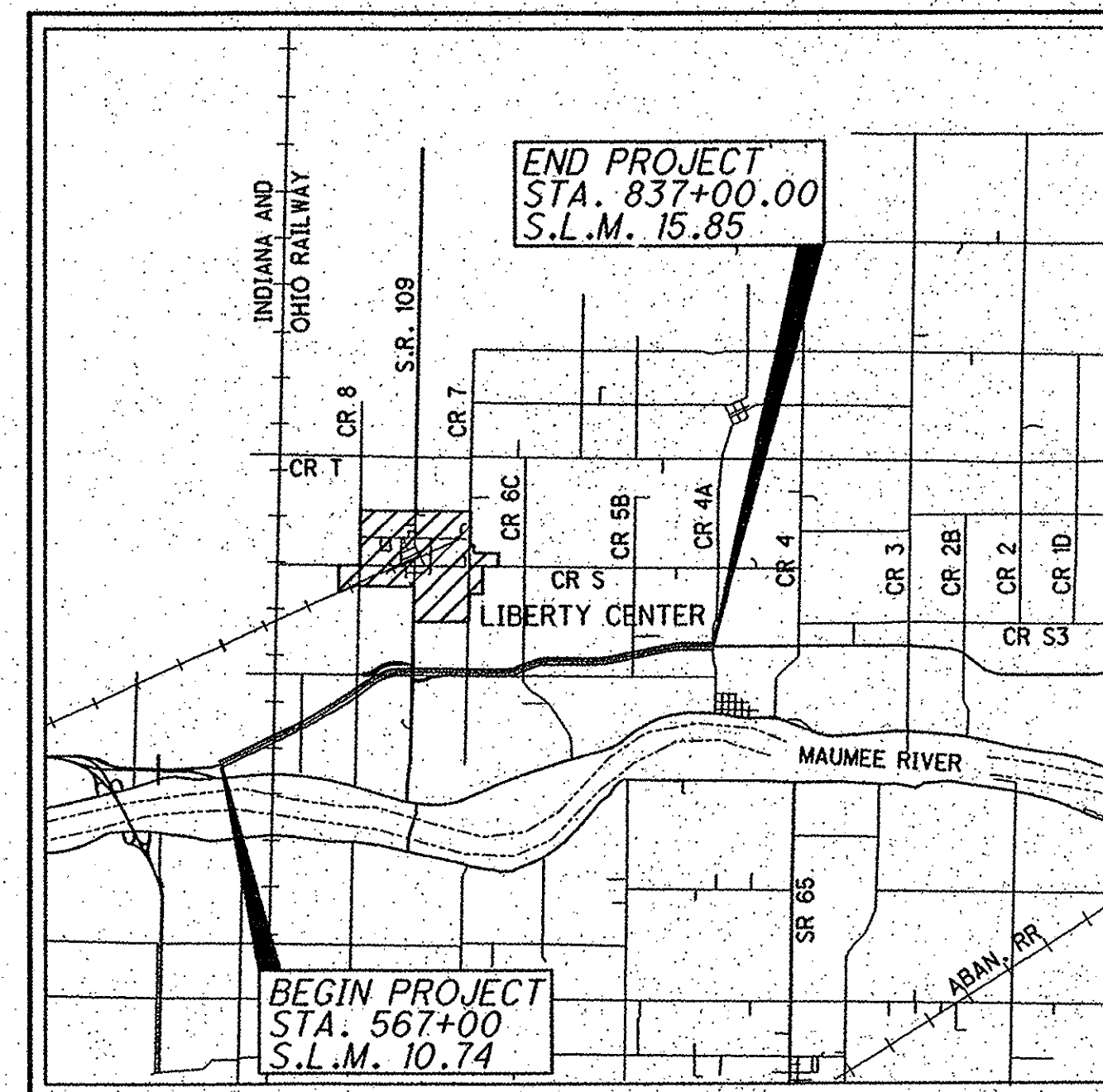
THE STANDARD SPECIFICATIONS OF THE STATE OF
OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING
CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED
IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT
THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE
THE CLOSING TO TRAFFIC OF THE HIGHWAY EXCEPT
FOR THE SIDE ROADS AS DESCRIBED ON SHEET 38
AND THAT PROVISIONS FOR THE MAINTENANCE AND
SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE
PLANS AND ESTIMATES.

UNDER AUTHORITY OF SECTION 4511.21, DIVISION (H)
OF THE OHIO REVISED CODE, THE REVISED PRIMA
FACIE SPEED LIMITS AS INDICATED HEREIN ARE DE-
TERMINED TO BE REASONABLE AND SAFE, AND ARE
HEREBY ESTABLISHED FOR THE DURATION OF THIS
PROJECT. THE PRIMA FACIE SPEED LIMIT OR LIMITS
HEREBY ESTABLISHED SHALL BECOME EFFECTIVE WHEN
APPROPRIATE SIGNS GIVING NOTICE THEREOF ARE
ERECTED.

APPROVED *David Dwyer*
DATE 11-02-07 DISTRICT DEPUTY DIRECTOR

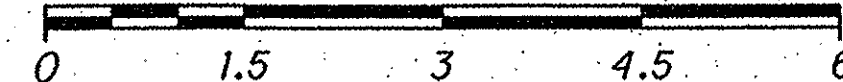
APPROVED *James J. Buckley III*
DATE 12-13-07 DIRECTOR, DEPARTMENT OF
TRANSPORTATION



LOCATION MAP

LATITUDE: 41°25'45" LONGITUDE: 84°00'03"

SCALE IN MILES



PORTION TO BE IMPROVED.....
INTERSTATE & DIVIDED HIGHWAY.....
UNDIVIDED STATE & FEDERAL ROUTES.....
OTHER ROADS.....

DESIGN DESIGNATIONS
SEE SHEET 2

DESIGN EXCEPTIONS
NONE

INDEX OF SHEETS

TITLE SHEET	1	PLAN & PROFILE (CR S)	337
DESIGN DESIGNATION	2	CROSS SECTIONS (CR S)	338-339
SCHEMATIC PLAN	3-6	PLAN & PROFILE (CR 4A)	340-344
BENCHMARKS AND REFERENCES	7-9	CROSS SECTIONS (CR 4A)	345-362
TYPICAL SECTIONS	10-26	SUPERELEVATION TABLES	363-385
GENERAL NOTES	27-36	INTERCHANGE DETAILS	386-390
MAINTENANCE OF TRAFFIC	37-70	INTERSECTION & CUL-DE-SAC DETAILS	391-404
GENERAL SUMMARY	71-75	GRADING PLANS	405-410
SUBSUMMARIES	76-97	DRIVE DETAILS	411-412
PROJECT SITE PLAN	98-100,100A, 100B,100C	U-TURN MEDIAN OPENING & ENERGY PROTECTION AREA DETAILS	413
PLAN & PROFILE (US 24)	101-129	UNDERDRAIN DETAILS	414-415
CROSS SECTIONS (US 24)	130-188	VERTICAL WICK DRAIN DETAILS	416-423,419A
PLAN & PROFILE (EX. US 24)	189-190	CULVERT DETAILS	424-431
CROSS SECTIONS (EX. US 24)	191-192	WATER WORK PLANS	431A,431B,431C, 431D,431E,431F,431G, 431H,431I,431J
PLAN & PROFILE (CR 8)	193	TRAFFIC CONTROL	432-465,432A,437A, 437B,437C,437D, 437E,453A,455A
CROSS SECTIONS (CR 8)	194-196,196A	MSE WALL PLAN AND DETAILS	466-471
PLAN & PROFILE (CR S-W)	197-199	CHANNEL RELOCATION PLANS	472-477
CROSS SECTIONS (CR S-W)	200-215	STRUCTURES (UNDER 20')	478-487
PLAN & PROFILE (CR S-E)	216-220	STRUCTURES (OVER 20')	488-610,565A,574A,574B
CROSS SECTIONS (CR S-E)	221-249	FENCE PLANS	611-625
PLAN & PROFILE (SR 109)	250-255	RIGHT OF WAY	626-775
CROSS SECTIONS (SR 109)	256-284	SOIL PROFILE / FOUNDATION INVESTIGATION	1-32, 1-35
PLAN, PROFILE & CROSS SECTIONS (SR 109 RAMPS)	285-326		
PLAN & PROFILE (MYERS DRIVE)	327		
CROSS SECTIONS (MYERS DRIVE)	328-331		
PLAN & PROFILE (RESIDENTIAL DRIVE)	332		
CROSS SECTIONS (RESIDENTIAL DRIVE)	333-336		

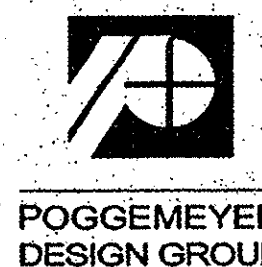
SHEETS NOT USED: 39, 679, 680, 681, 682, 741, 742

STANDARD CONSTRUCTION DRAWINGS										SUPPLEMENTAL SPECIFICATIONS		SPECIAL PROVISION
CB-1.1	7/15/05	DM-5.1	7/19/02	GR-5.2	1/16/04	CS-1-03	4/18/03	TC-42.20	7/16/04	800	1/18/08	OHIO EPA WATER QUALITY CERTIFICATION 9/19/07
CB-1.2	7/15/05			GR-5.3	1/16/04	ICD-1-82	7/19/02	TC-51.11	4/20/01	802	4/15/05	
CB-2.2	7/15/05	BP-3.1	10/19/07	GR-6.1	4/18/03			TC-51.12	4/20/01	832	4/25/06	
CB-3.1	7/15/05	BP-4.1	7/16/04	GR-6.2	4/18/03	PSID-1-99	4/20/07	TC-52.10	1/19/07	840	1/19/07	
		BP-9.1	4/15/05					TC-52.20	1/19/07	880	7/21/06	
HW-2.1	4/21/06			RM-1.1	4/21/06	SBR-1-99	7/19/02	TC-65.10	1/21/05	892	4/15/05	LIBERTY CENTER CORROSION PROTECTION SPECS 3/5/07
HW-2.2	4/21/06	F-2.1	7/28/00	RM-4.2	10/19/07	SICD-1-96	7/19/02	TC-65.11	1/21/05	898	7/21/06	
		F-3.1	7/28/00	RM-4.3	1/19/07			TC-71.10	1/19/07			
MH-1.1	7/19/02	F-3.3	7/28/00	RM-4.4	1/19/07	TC-12.30	1/19/07	TC-72.20	1/21/05			
MH-1.2	1/20/06	F-3.4	7/28/00	RM-4.5	1/19/07	TC-21.10	1/19/07	TC-73.10	1/19/01			
				RM-4.6	1/16/04	TC-21.20	1/19/07					
DM-1.1	4/21/06	GR-1.1	7/16/04	RM-7.1	7/15/05	TC-22.10	1/19/01	MT-97.10	9/05/06			LIBERTY CENTER CORROSION PROTECTION SPECS 3/5/07
DM-1.2	10/21/05	GR-2.1	1/16/04	RM-7.2	7/15/05	TC-22.20	1/19/01	MT-97.12	9/05/06			
DM-3.1	7/19/02	GR-3.1	1/19/07			TC-41.10	10/19/07	MT-101.60	9/20/06			
DM-4.1	7/19/02	GR-3.2	1/19/07	AS-1-81	7/19/02	TC-41.20	1/19/01	MT-105.10	10/18/02			
DM-4.2	1/21/05	GR-4.1	4/18/03			TC-41.40	7/16/04	MT-105.11	10/18/02			
DM-4.3	7/19/02	GR-4.2	1/19/07	CPA-5-94	7/19/02	TC-41.50	1/19/07					
DM-4.4	7/19/02	GR-5.1	4/18/03	CPP-2-94	7/19/02	TC-42.10	1/19/07					



PLAN PREPARED BY:

Mannik & Smith
1800 INDIAN WOOD CIRCLE
MAUMEE, OHIO 43537
TEL: (419) 891-2222
FAX: (419) 891-1595



ENGINEERS SEAL: FOR ENTIRE PLAN EXCEPT STRUCTURES OVER 20' HEN-24-1383 (L&R)	ENGINEERS SEAL: STRUCTURES OVER 20' HEN-24-1572 (L&R)
SIGNED: <i>Michael Smith</i> DATE: <u>3-19-07</u>	SIGNED: <i>James P. Moore</i> DATE: <u>3-19-07</u>
ENGINEERS SEAL: STRUCTURES OVER 20' HEN-24-1383 (L&R)	ENGINEERS SEAL: STRUCTURES OVER 20' HEN-109, WASHINGTON HEN-24-1565
SIGNED: <i>Scota Morehouse</i> DATE: <u>3-19-07</u>	SIGNED: <i>Jeffrey Thomas</i> DATE: <u>3-19-07</u>

\$DATE\$ \$TIME\$

\$FILE\$

ESTIMATED QUANTITIES										CALCULATED BY: AEH 5-19-06 CHECKED BY: SAM 6-2-06				
ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	EASTBOUND STRUCTURE									
					ABUT.	PIERS	SUPER.	GEN.	SHEET NO.					
503	11100	LUMP		COFFERDAMS, CRIBS AND SHEETING				LUMP						
503	21301	LUMP		UNCLASSIFIED EXCAVATION, AS PER PLAN				LUMP	2					
505	11100	LUMP		PILE DRIVING EQUIPMENT MOBILIZATION				LUMP						
507	00500	1000	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	1000									
507	00550	1100	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED	1100									
507	00700	630	FT	16" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN		630								
507	00750	700	FT	16" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED		700								
509	10000	91421	POUND	EPOXY COATED REINFORCING STEEL	9439	6331	75651							
512	10100	321	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	52	11	258							
518	21230	LUMP		POROUS BACKFILL WITH FILTER FABRIC	LUMP									
518	40000	142	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	142									
518	40010	48	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	48									
518	42300	6	FT	8" NON-PERFORATED CORRUGATED STEEL PIPE, INCLUDING SPECIALS, 707.01	6									
523	20000	2	EACH	DYNAMIC LOAD TESTING	1	1								
601	32200	750	CU YD	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	750									
892	10201	307	CU YD	QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (DECK) WITH WARRANTY, AS PER PLAN			307		2					
898	10705	250	SQ YD	QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (APPROACH SLAB), 15", AS PER PLAN				250	2					
898	11000	32	CU YD	QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (PARAPET)			32							
898	20000	125	CU YD	QC/QA CONCRETE, CLASS QSCI, SUBSTRUCTURE	92	33								

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS:
AS-1-81 REVISED 7-19-02
CPA-5-94 REVISED 7-19-02
CPP-2-94 REVISED 7-19-02
CS-1-03 DATED 4-18-03
SBR-1-99 REVISED 7-19-02

AND TO SUPPLEMENTAL SPECIFICATIONS:
892 DATED 4-15-05
898 DATED 7-21-06

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2002 AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING: HS25 AND THE ALTERNATE MILITARY LOADING
FUTURE WEARING SURFACE = 60 PSF

DESIGN DATA:
CONCRETE, CLASS QSC2 CONCRETE FOR SUPERSTRUCTURE
COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)

CONCRETE, CLASS QSCI CONCRETE FOR SUBSTRUCTURE
COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)

REINFORCING STEEL - ASTM A615 OR A996 GRADE 60 MINIMUM
YIELD STRENGTH 60,000 PSI
SPIRAL REINFORCMENT MAY BE PLAIN BARS, ASTM A82 OR A615

DECK PROTECTION METHOD:
EPOXY COATED REINFORCING STEEL
2½" CONCRETE COVER
SEALING CONCRETE SURFACES

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. 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.

PILE DESIGN LOADS (ULTIMATE BEARING VALUE): THE ULTIMATE BEARING VALUE IS 61 TONS PER PILE FOR THE 12" CIP REINFORCED CONCRETE ABUTMENT PILES. THE ULTIMATE BEARING VALUE IS 120 TONS PER PILE FOR THE 16" CIP REINFORCED CONCRETE PIER PILES.

ABUTMENT PILES:
40 PILES 55 FEET LONG, ORDER LENGTH
1 DYNAMIC LOAD TESTING ITEM (EACH STRUCTURE)

PIER PILES:
28 PILES 50 FEET LONG, ORDER LENGTH
1 DYNAMIC LOAD TESTING ITEM (EACH STRUCTURE)

ITEM 503, UNCLASSIFIED EXCAVATION, AS PER PLAN: THE BACKFILL BEHIND THE ABUTMENT SHALL CONFORM TO SECTION 703.17 OF THE CMS AND BE PLACED AND COMPACTED IN 6" LIFTS AS PER 304.04 & 304.05.

ITEM 898 QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (APPROACH SLAB), AS PER PLAN: FURNISH APPROACH SLABS CONFORMING TO CMS 526 EXCEPT CONCRETE SHALL BE IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 898, QC/QA CONCRETE, CLASS QSC2. THE ACCEPTED QUANTITIES SHALL INCLUDE: CONCRETE, CURBS, REINFORCING STEEL, JOINT FILLERS, JOINT SEALERS, JOINT SEALS AND WATERPROOFING. THE DEPARTMENT WILL MEASURE APPROACH SLABS BY THE NUMBER OF SQUARE YARDS. THE DEPARTMENT WILL INITIALLY PAY THE FULL BID PRICE TO THE CONTRACTOR UPON COMPLETING THE WORK. THE DEPARTMENT WILL CALCULATE THE FINAL ADJUSTED PAYMENT ACCORDING TO 898.17 AND INCLUDE APPROACH SLAB CONCRETE AND DECK CONCRETE IN THE SAME LOT TO DETERMINE PAY FACTORS.

ITEM 892 QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (DECK) WITH WARRANTY, AS PER PLAN: THE DEPARTMENT WILL CALCULATE THE FINAL ADJUSTED PAYMENT ACCORDING TO 898.17 AND INCLUDE APPROACH SLAB CONCRETE AND DECK CONCRETE IN THE SAME LOT TO DETERMINE FINAL PAY FACTORS.

FOR EMBANKMENT CONSTRUCTION AND MONITORING SEE ROADWAY PLANS SHEETS 27/625 TO 36/625.

DESIGN AGENCY
DGL Consulting Engineers, LLC
3455 Briarfield Blvd, Suite E
Maumee, Ohio 43537
(419) 535-1015

DATE
1-06

REVIEWED
SAM

DRAWN
SAM

DESIGNED
SAM

STRUCTURE FILE NUMBER
3501582R

REVISED

AEH

ESTIMATED QUANTITIES & GENERAL NOTES

BRIDGE No. HEN-24-1383R
US 24 OVER DRY CREEK

HEN-24-10.74
PID No. 80443

2 / 13

565
775

ESTIMATED QUANTITIES

CALCULATED BY: AEH 5-19-06
CHECKED BY: SAM 6-2-06

ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	WESTBOUND STRUCTURE				
					ABUT.	PIERS	SUPER.	GEN.	SHEET NO.
503	11100	LUMP		COFFERDAMS, CRIBS AND SHEETING				LUMP	
503	21301	LUMP		UNCLASSIFIED EXCAVATION, AS PER PLAN				LUMP	2
505	11100	LUMP		PILE DRIVING EQUIPMENT MOBILIZATION				LUMP	
507	00500	1000	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	1000				
507	00550	1100	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED	1100				
507	00700	630	FT	16" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN		630			
507	00750	700	FT	16" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED		700			
509	10000	91461	POUND	EPOXY COATED REINFORCING STEEL	9490	6320	75651		
512	10100	325	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	56	11	258		
518	21230	LUMP		POROUS BACKFILL WITH FILTER FABRIC	LUMP				
518	40000	140	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	140				
518	40010	48	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	48				
518	42300	6	FT	8" NON-PERFORATED CORRUGATED STEEL PIPE, INCLUDING SPECIALS, 707.01	6				
523	20000	2	EACH	DYNAMIC LOAD TESTING	1	1			
601	32200	655	CU YD	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	655				
892	10201	307	CU YD	QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (DECK) WITH WARRANTY, AS PER PLAN			307		2
898	10705	250	SQ YD	QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (APPROACH SLAB), 15", AS PER PLAN				250	2
898	11000	32	CU YD	QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (PARAPET)			32		
898	20000	130	CU YD	QC/QA CONCRETE, CLASS QSC1, SUBSTRUCTURE	95	35			

\$DATE\$ \$TIME\$

\$FILE\$

DESIGN AGENCY
DGL Consulting Engineers, LLC
3455 Briarfield Blvd. Suite E
Maumee, Ohio 43537 (419) 635-1015

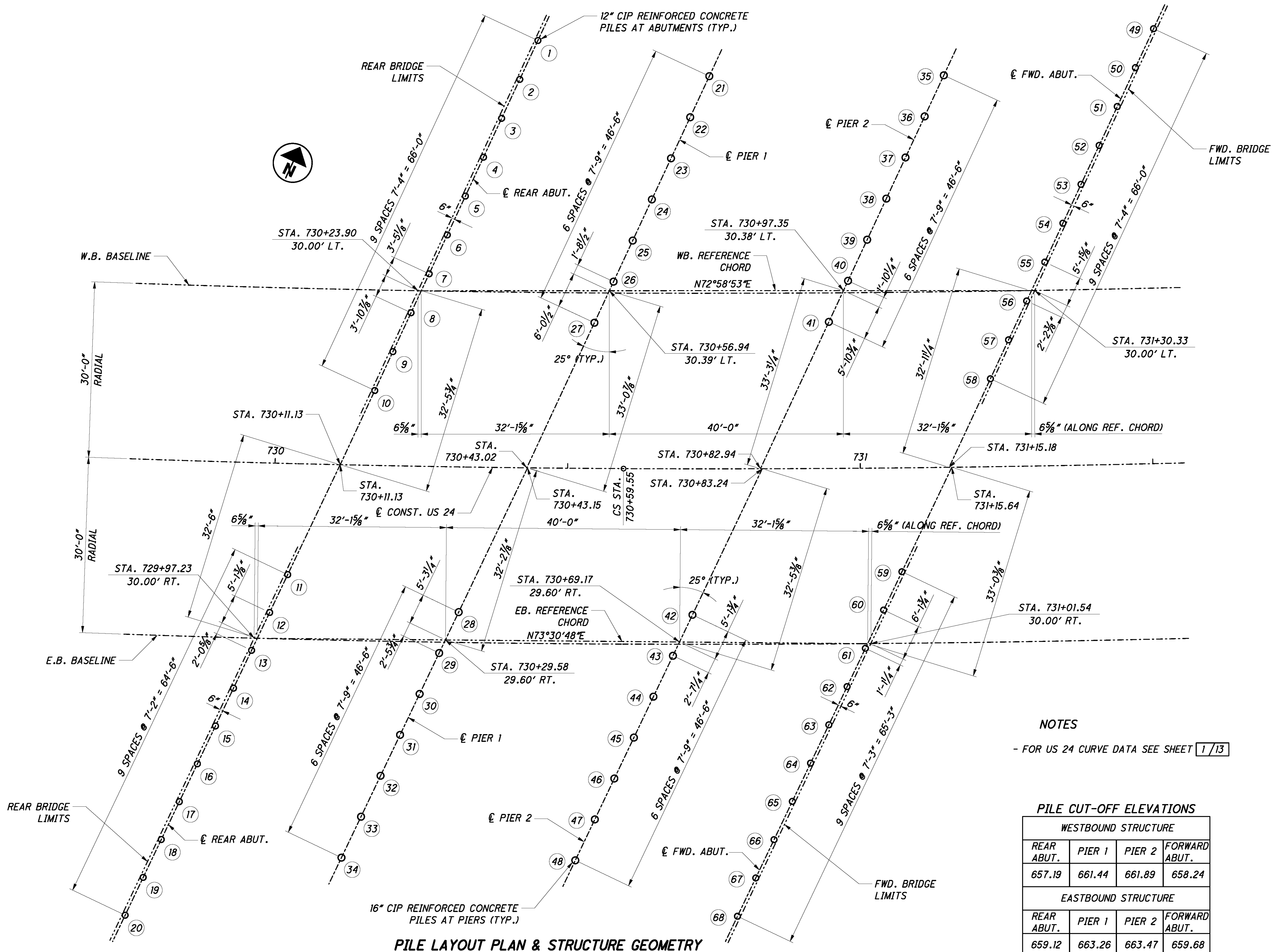
DATE
1-06
REVIEWED
SMW
DRAWN
SAM
DESIGNED
SAM
CHECKED
AEH
STRUCTURE FILE NUMBER
3501574L

ESTIMATED QUANTITIES & GENERAL NOTES
BRIDGE No. HEN-24-1383L
US 24 OVER DRY CREEK

HEN-24-10.74
PID No. 80443

2A / 13
565A
775

S:\PROJECTS\projects k-e\ohdr\80443\Structures\HEN024_1383C\05/20/2007 12:52:00 PM

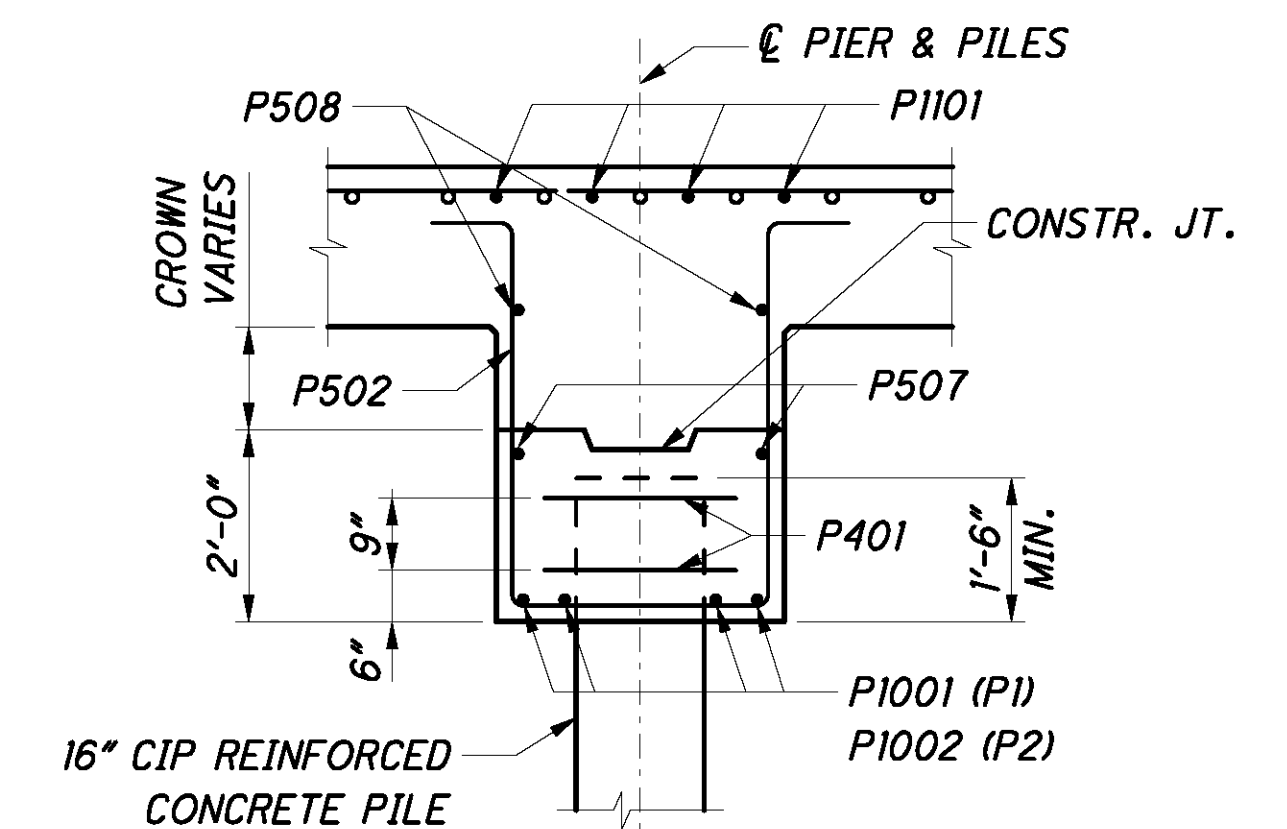
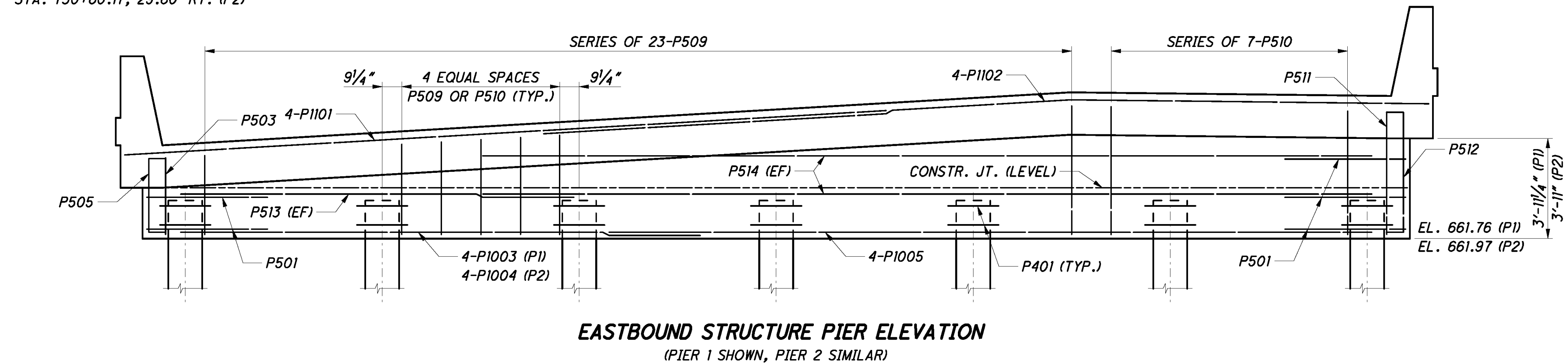
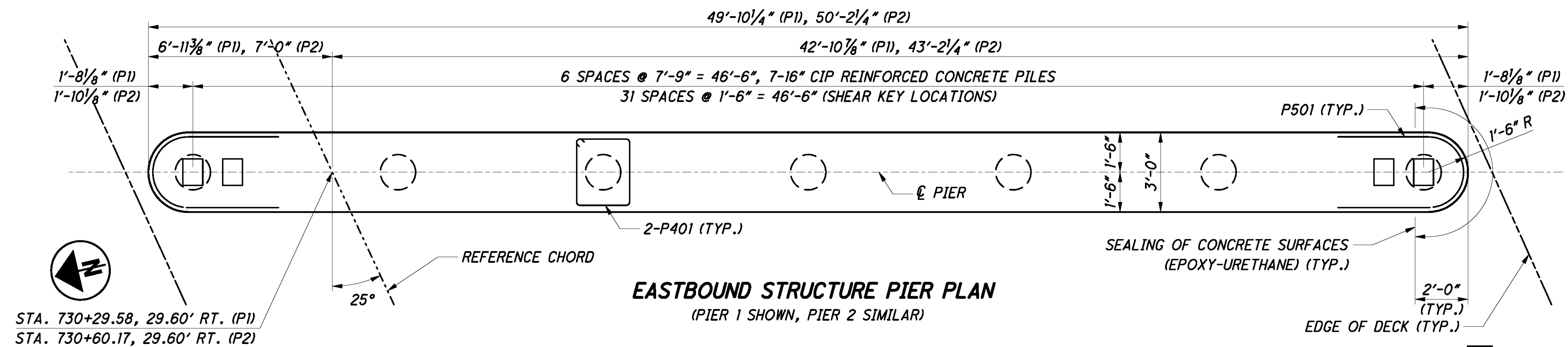
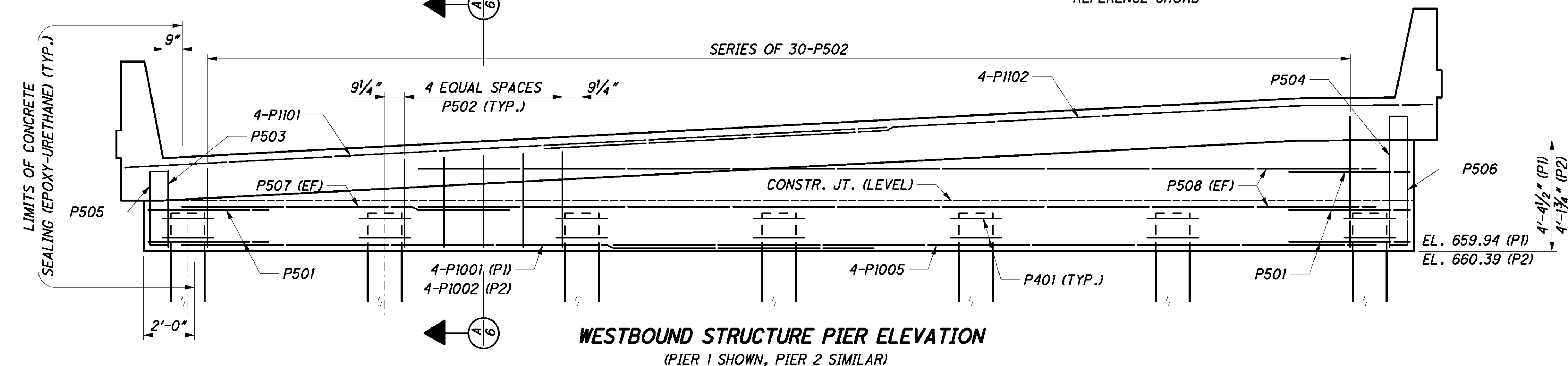
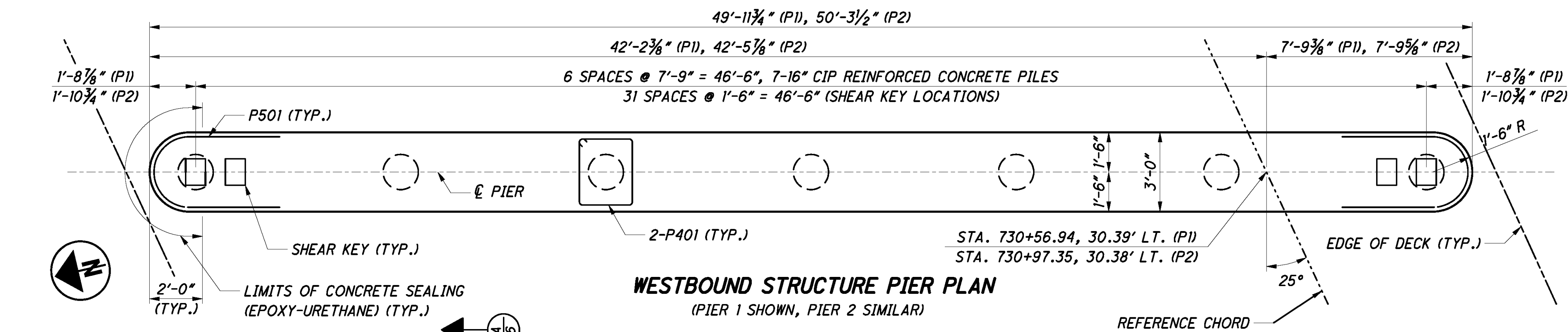


PILE LAYOUT PLAN & STRUCTURE GEOMETRY

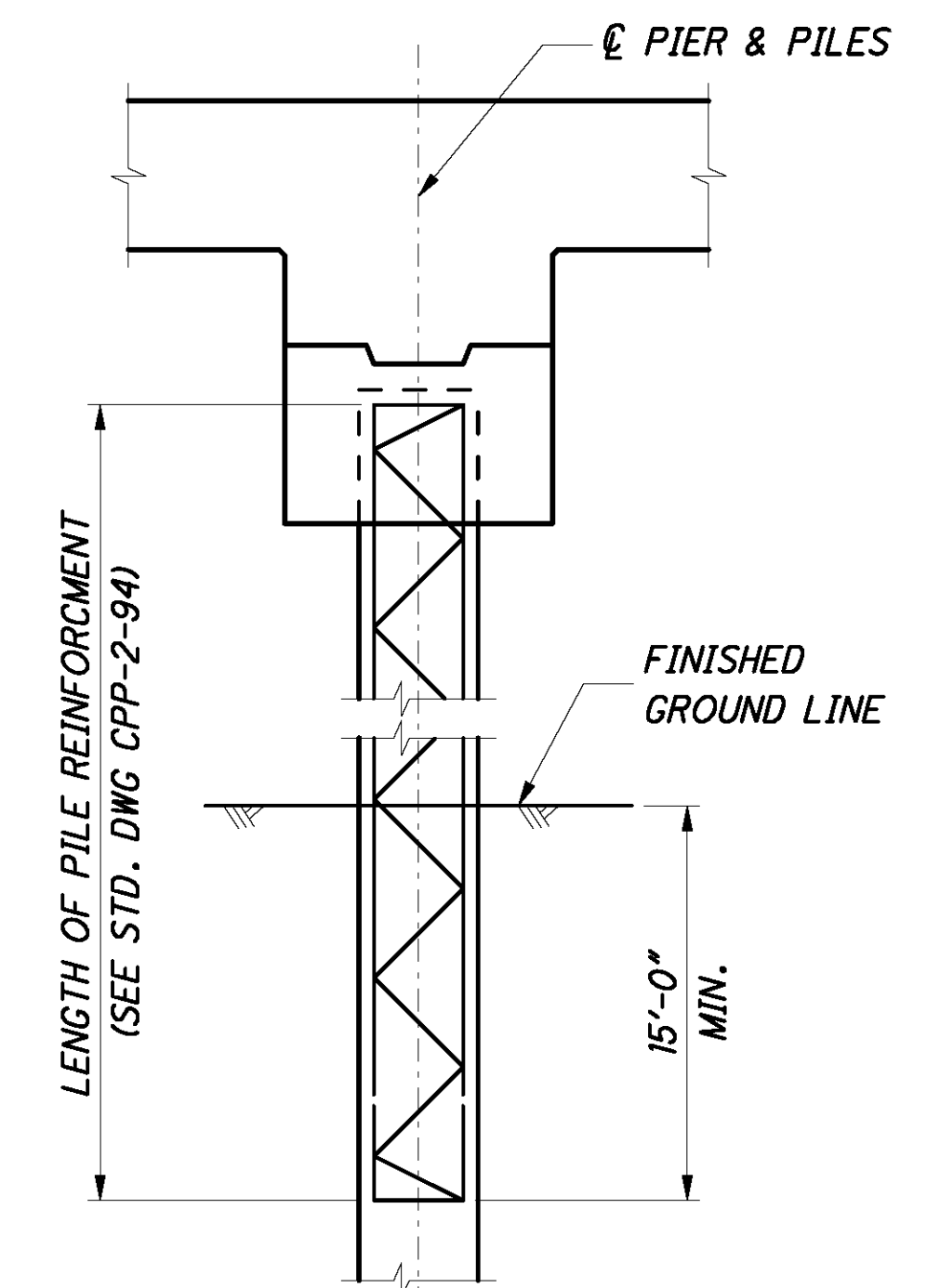
PILE CUT-OFF ELEVATIONS

WESTBOUND STRUCTURE			
REAR ABUT.	PIER 1	PIER 2	FORWARD ABUT.
657.19	661.44	661.89	658.24

EASTBOUND STRUCTURE			
REAR ABUT.	PIER 1	PIER 2	FORWARD ABUT.
659.12	663.26	663.47	659.68



SECTION A-A



CONCRETE PILE REINFORCEMENT

NOTES

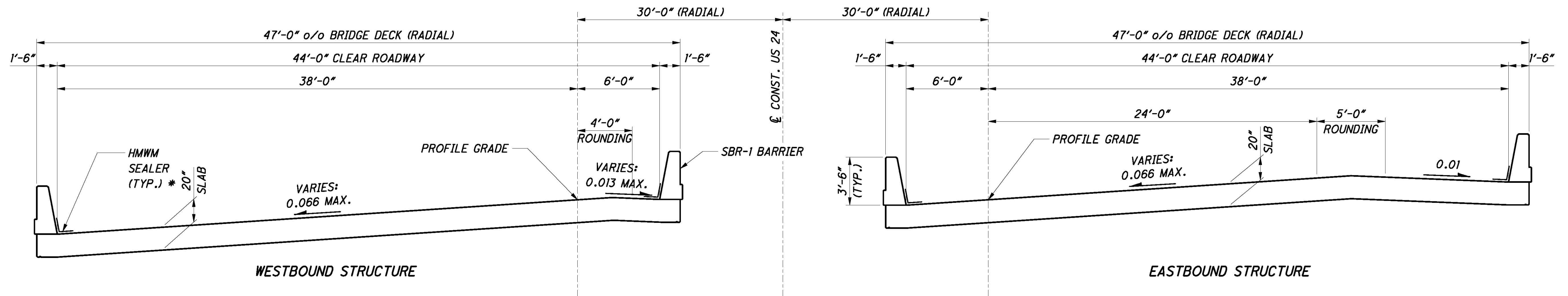
- REINFORCING SPLICE LENGTHS SHALL BE AS FOLLOWS
UNLESS OTHERWISE NOTED:

- #11 BARS - 13'-6"
#10 BARS - 10'-3"
#5 BARS - 3'-7"

- FOR ADDITIONAL DETAILS SEE STD. DWG. CPP-2-94.

LEGEND

- P1 = PIER 1
P2 = PIER 2
EF = EACH FACE
CIP = CAST-IN-PLACE



TRANSVERSE SECTION (GEOMETRY)

NOTES

- REINFORCING SPLICE LENGTHS SHALL BE AS FOLLOWS UNLESS OTHERWISE NOTED:

#9 BARS - 9'-2"
#6 BARS - 4'-1"
#5 BARS - 2'-5"
#4 BARS - 2'-9"

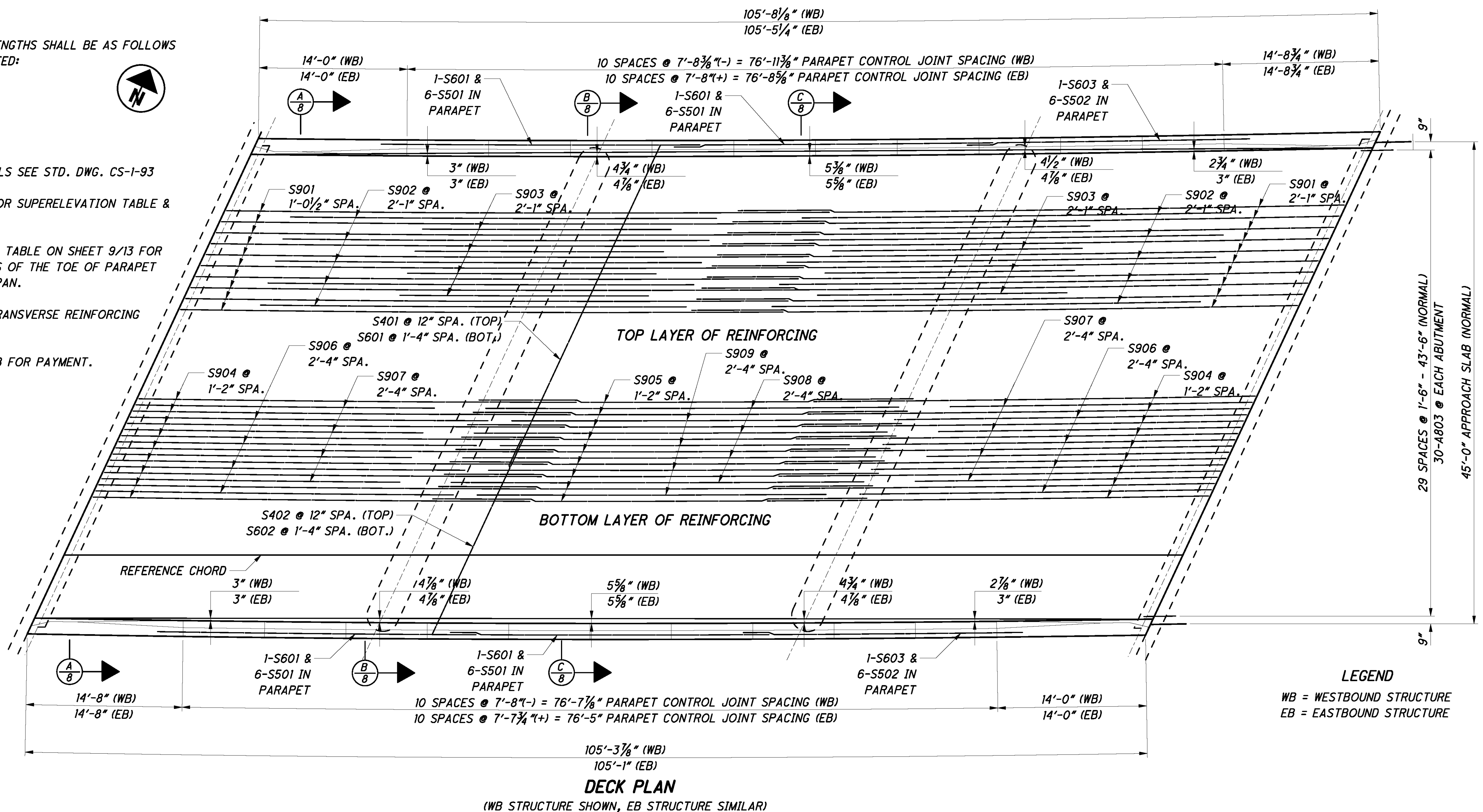
- FOR ADDITIONAL DETAILS SEE STD. DWG. CS-1-93

- SEE ROADWAY PLANS FOR SUPERELEVATION TABLE & TYPICAL SECTIONS.

- SEE SCREED ELEVATION TABLE ON SHEET 9/13 FOR STATIONS AND OFFSETS OF THE TOE OF PARAPET AT $\frac{1}{2}$ PIERS AND MID SPAN.

- SEE SHEET 9/13 FOR TRANSVERSE REINFORCING LAYOUT.

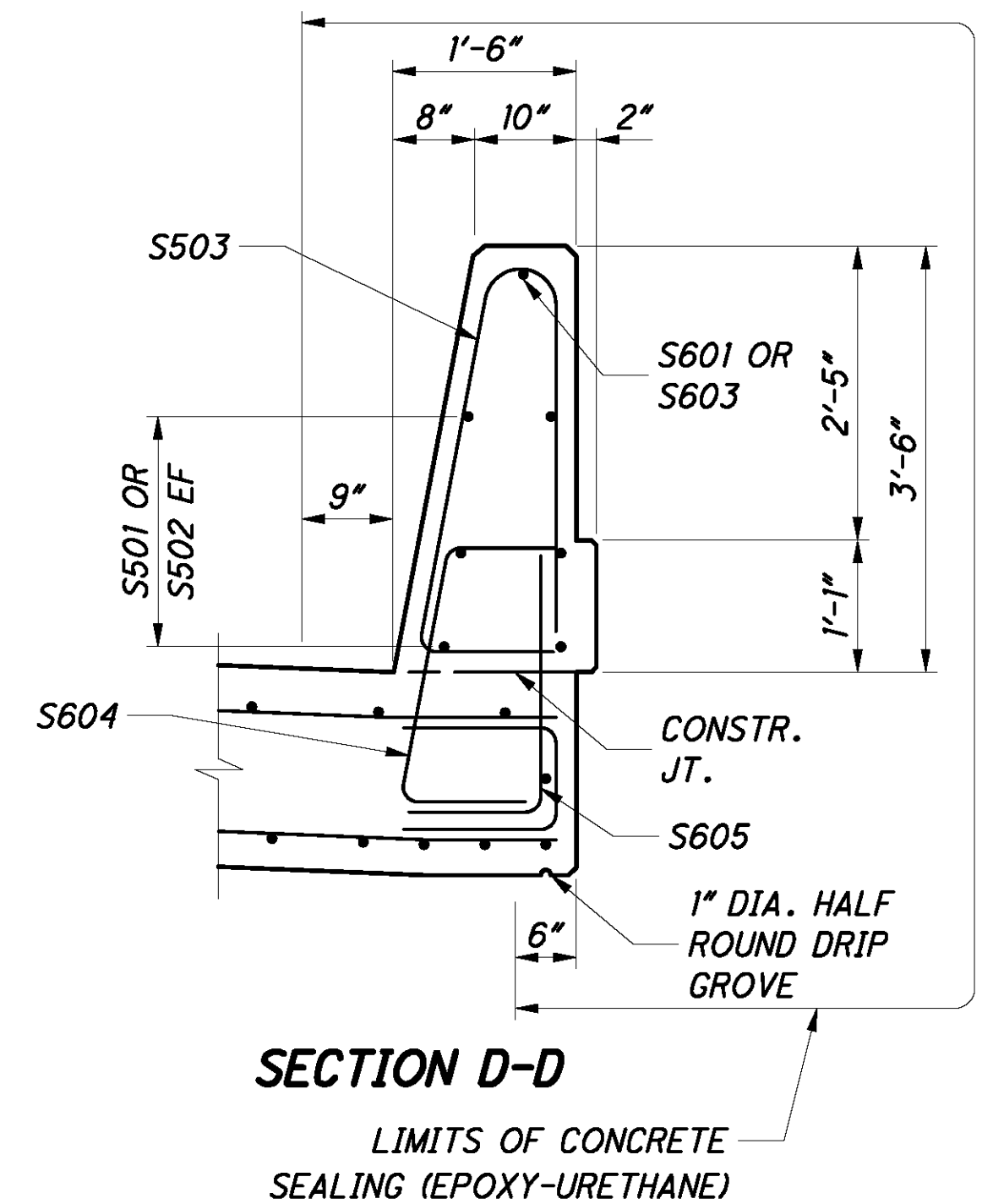
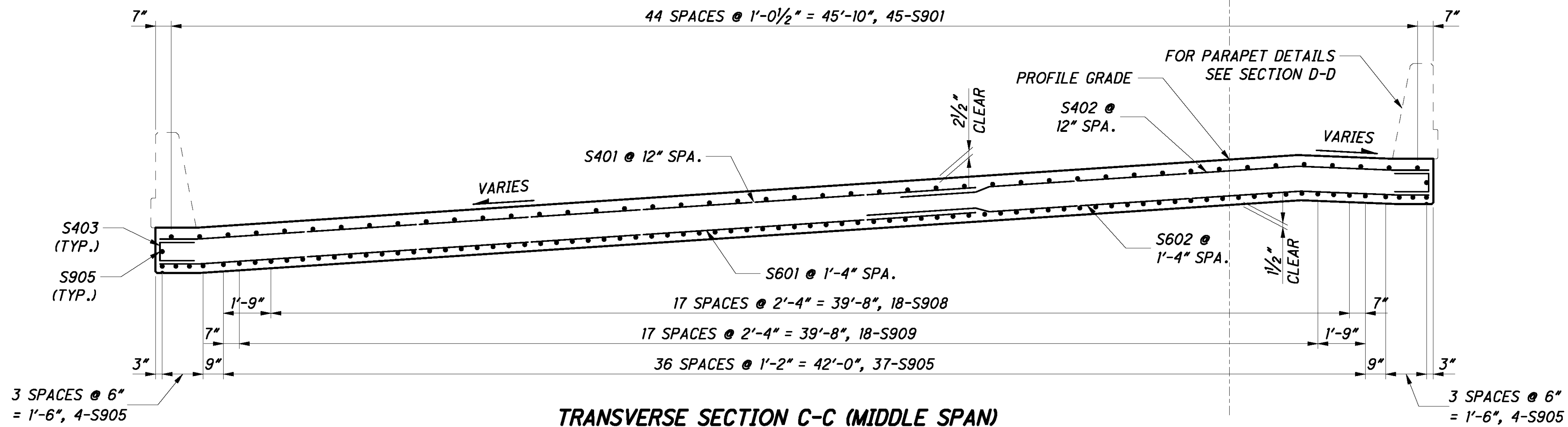
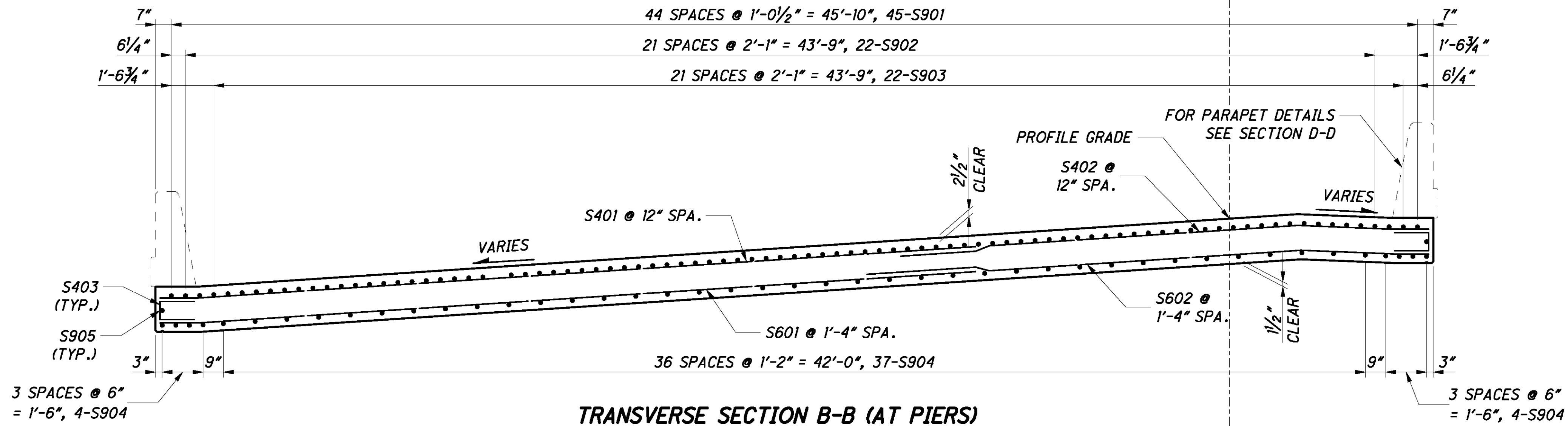
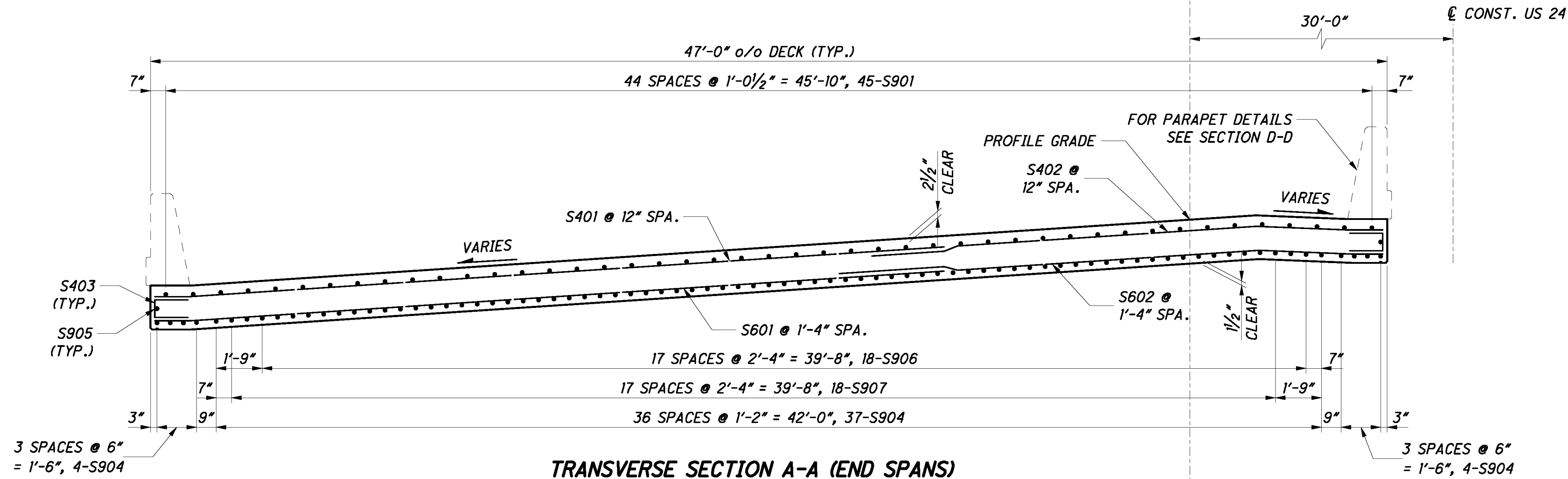
* INCLUDE WITH ITEM 898 FOR PAYMENT.



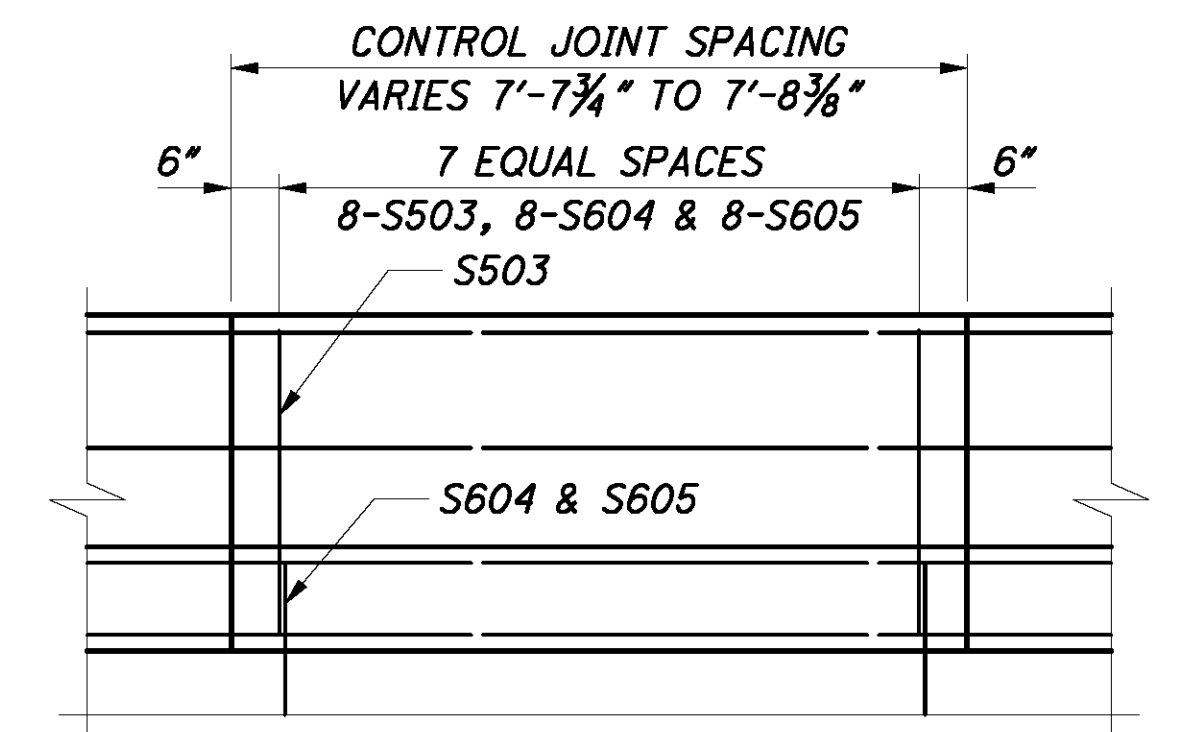
LEGEND

WB = WESTBOUND STRUCTURE
EB = EASTBOUND STRUCTURE

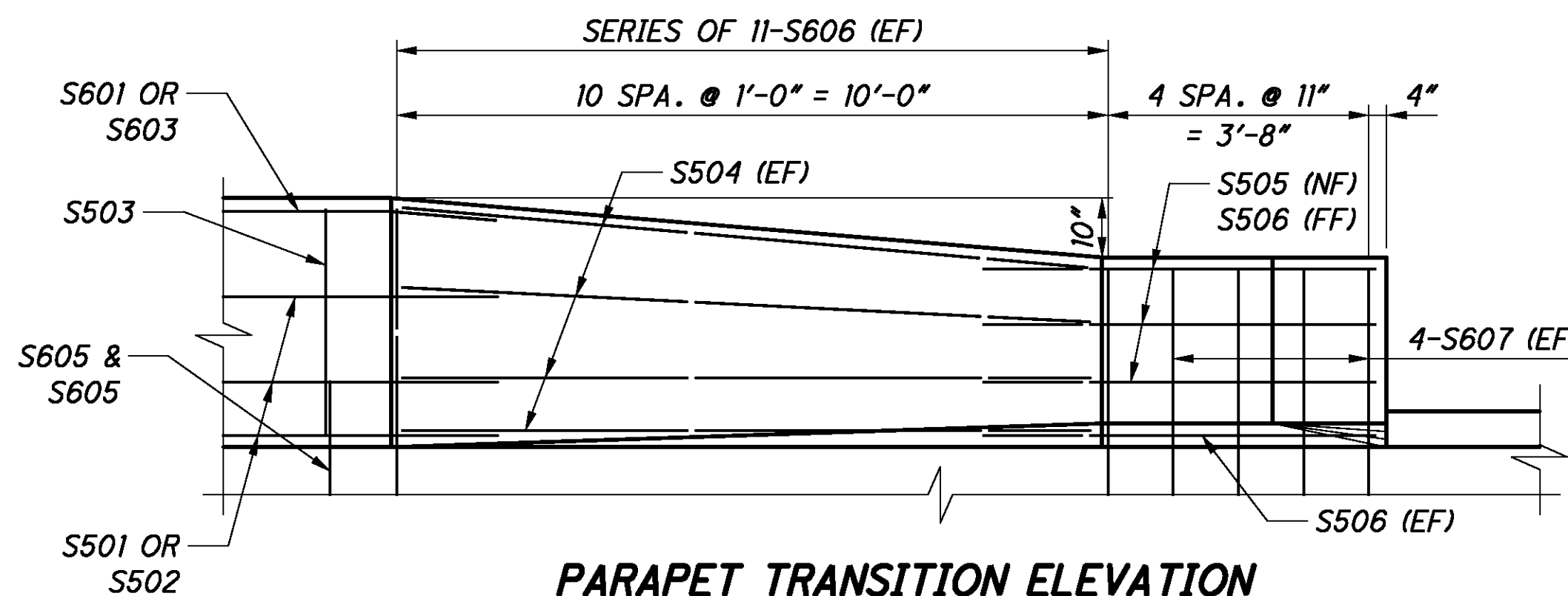
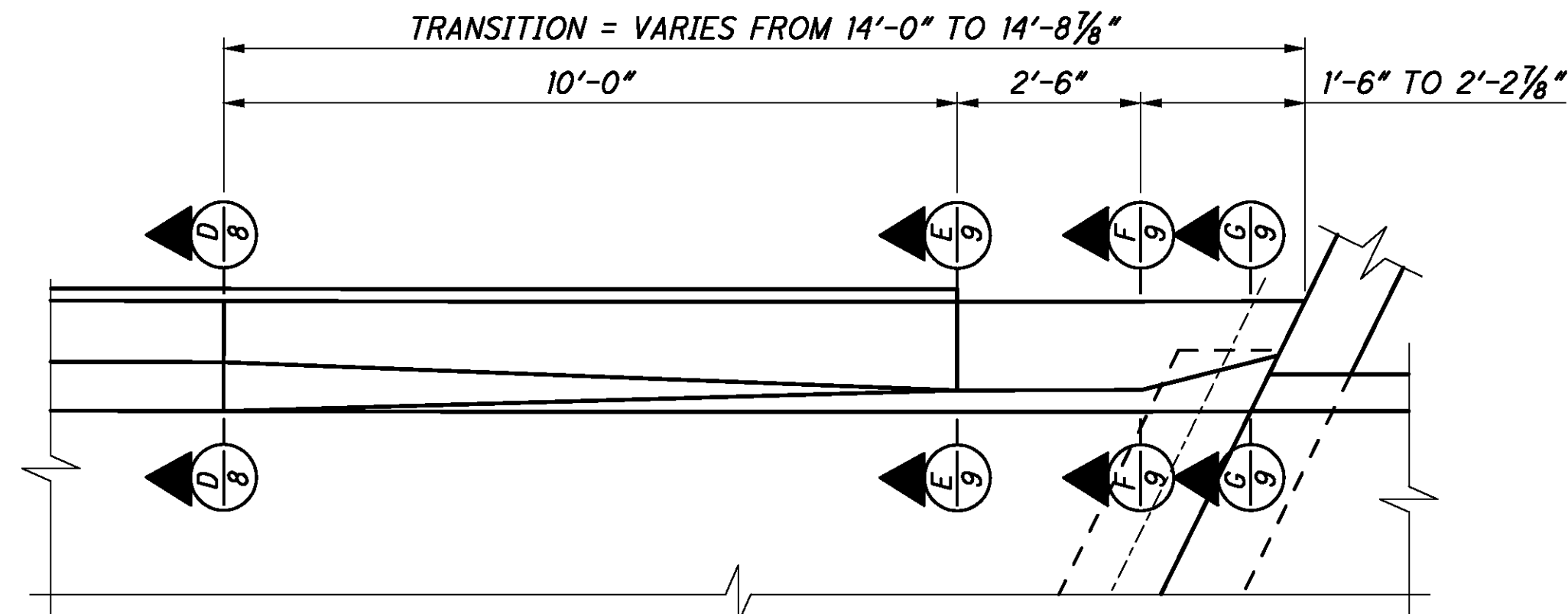
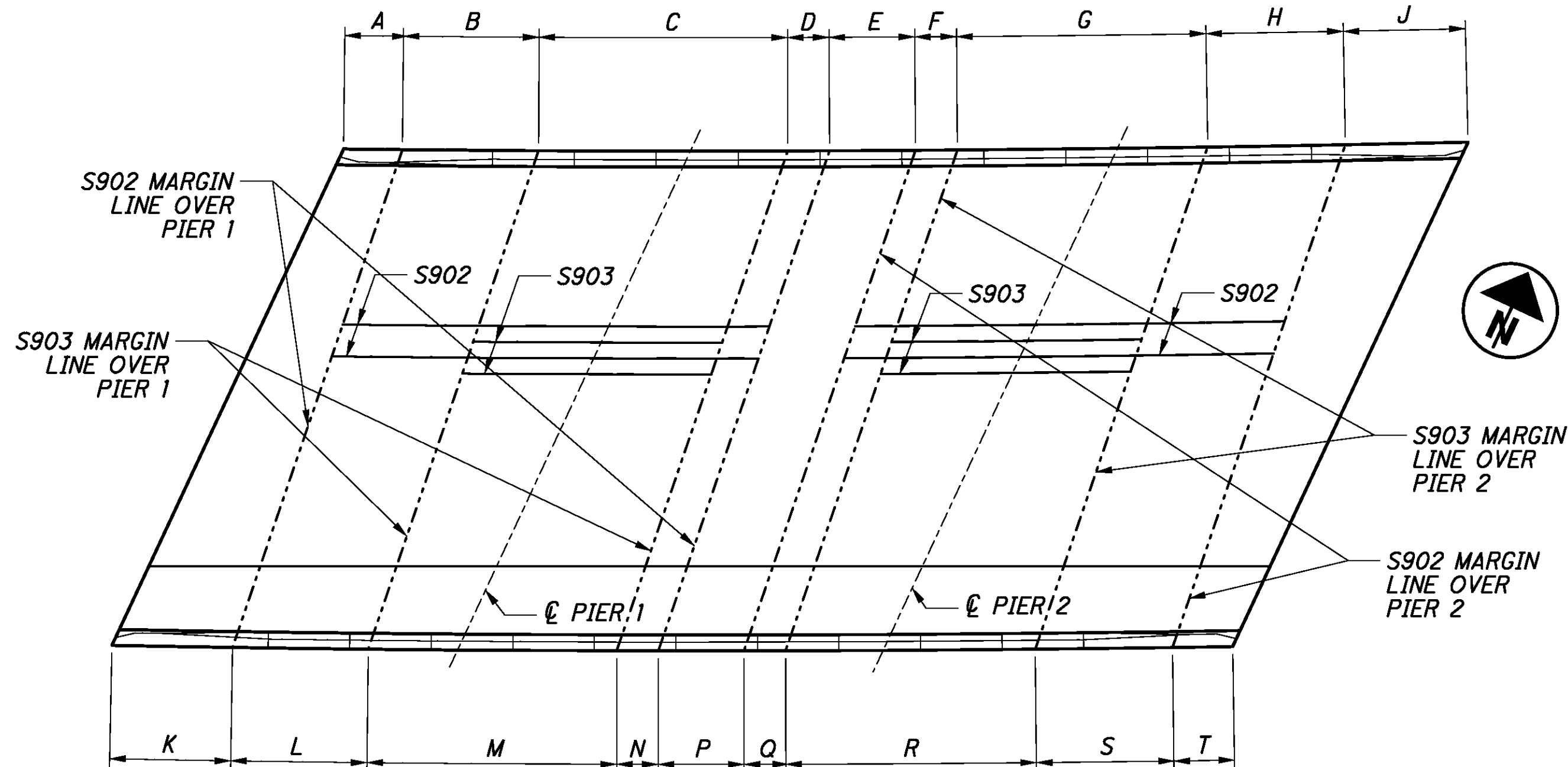
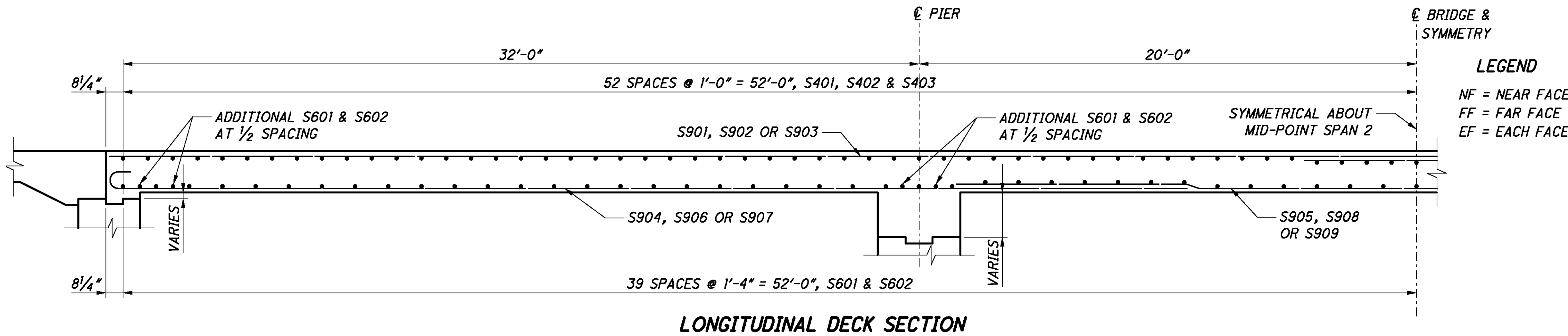
s:\projects\projects k-o\ohd\80443\Structures\HEN024_1383C\Sheets\024_1383C\TS025.dwg 1:22:11 PM



- NOTES
- FOR THE LOCATION OF SECTIONS A-A, B-B & C-C SEE SHEET **7/13**
 - FOR THE LOCATION OF SECTION D-D SEE SHEET **9/13**



Dimension	WB Structure	EB Structure
A	5'-6 3/8"	5'-6 1/8"
B	12'-9 5/8"	12'-9 1/4"
C	23'-5"	23'-4 1/2"
D	3'-11 1/8"	3'-11"
E	8'-1"	8'-0 5/8"
F	3'-11 1/4"	3'-11 1/8"
G	23'-6 1/4"	23'-5 3/4"
H	12'-11 1/4"	12'-11"
J	11'-6 3/8"	11'-6 1/8"
K	11'-3 7/8"	11'-3 5/8"
L	12'-9 1/8"	12'-8 3/4"
M	23'-4 1/4"	23'-3 3/4"
N	3'-10 7/8"	3'-10 3/4"
P	8'-0 3/8"	8'-0 1/8"
Q	3'-11"	3'-10 7/8"
R	23'-5 1/2"	24'-0 3/8"
S	12'-10 3/4"	12'-3 1/8"
T	5'-7 7/8"	5'-7 5/8"

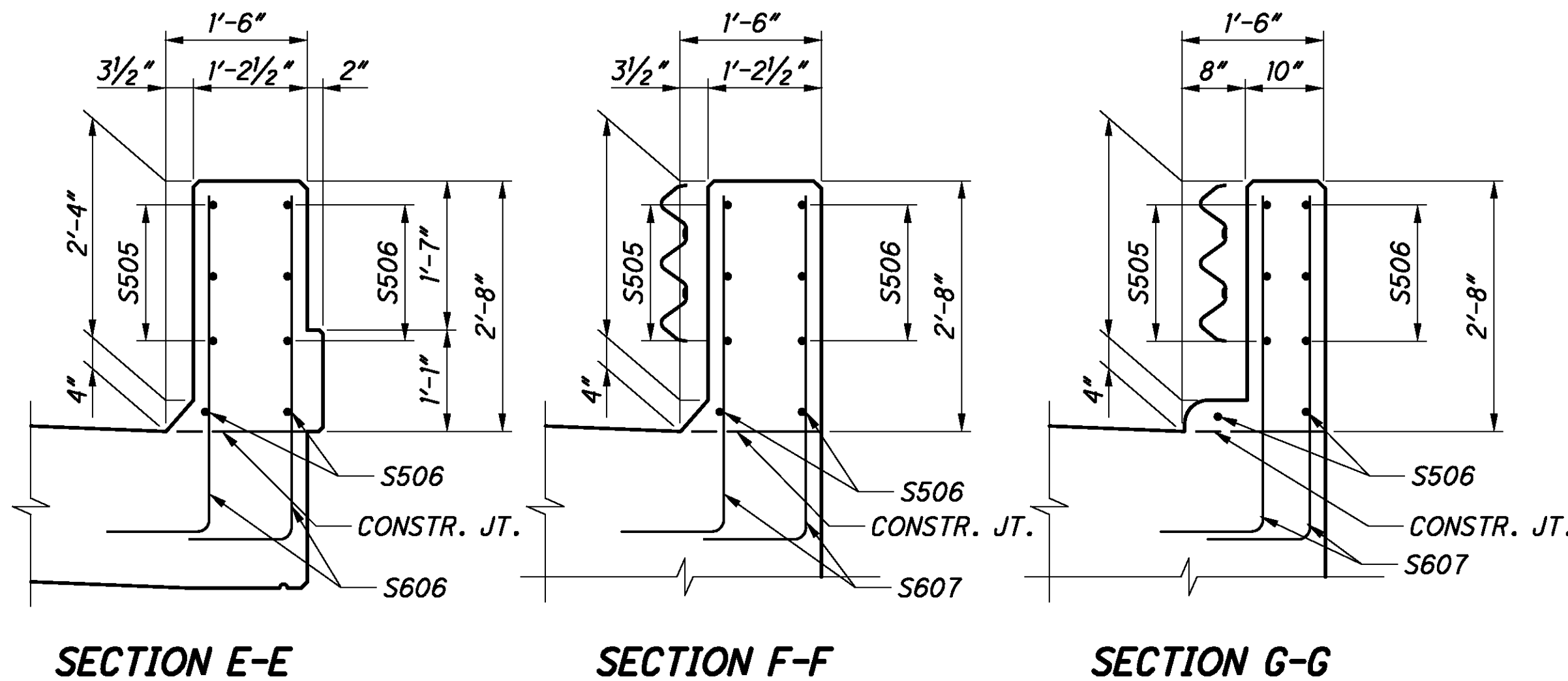


NOTES

- FOR DETAILS OF BRIDGE TERMINAL ASSEMBLY SEE STD. DWG. GR-3.1 & GR-3.2

	SCREED ELEV. BEFORE PLACEMENT OF DECK								
	LT. EDGE			CROWN			RT. EDGE		
	STATION	OFFSET	ELEV.	STATION	OFFSET	ELEV.	STATION	OFFSET	ELEV.
WESTBOUND STRUCTURE									
END APPR. SLAB (RA)	730+41.23	68.00'	663.36	730+22.78	28.00'	665.79	730+21.22	24.00'	665.82
0.50 SPAN 1	730+58.25	68.00'	663.52	730+39.51	28.00'	665.95	730+37.92	24.00'	665.98
C/L PIER 1	730+74.61	68.00'	663.61	730+55.60	28.00'	665.96	730+53.98	24.00'	665.99
0.50 SPAN 2	730+95.09	68.00'	663.92	730+75.76	28.00'	666.16	730+74.11	24.00'	666.19
C/L PIER 2	731+15.61	68.00'	664.05	730+95.97	28.00'	666.18	730+94.29	24.00'	666.21
0.50 SPAN 3	731+32.05	68.00'	664.30	731+12.17	28.00'	666.35	731+10.48	24.00'	666.38
BEGIN APPR. SLAB (FA)	731+49.22	68.00'	664.41	731+29.11	28.00'	666.37	731+27.39	24.00'	666.41
EASTBOUND STRUCTURE									
END APPR. SLAB (RA)	729+99.88	24.00'	665.28	729+85.69	56.50'	667.38	729+80.76	68.00'	667.25
0.50 SPAN 1	730+16.32	24.00'	665.42	730+01.92	56.50'	667.51	729+96.90	68.00'	667.38
C/L PIER 1	730+32.12	24.00'	665.42	730+17.51	56.50'	667.50	730+12.42	68.00'	667.36
0.50 SPAN 2	730+51.93	24.00'	665.61	730+37.05	56.50'	667.68	730+31.87	68.00'	667.54
C/L PIER 2	730+71.81	24.00'	665.64	730+56.66	56.50'	667.69	730+51.39	68.00'	667.55
0.50 SPAN 3	730+87.77	24.00'	665.81	730+72.39	56.50'	667.80	730+67.05	68.00'	667.68
BEGIN APPR. SLAB (FA)	731+04.45	24.00'	665.85	730+88.86	56.50'	667.76	730+83.43	68.00'	667.64

SCREED ELEVATIONS SHOWN ARE FOR THE DECK SLAB SURFACE PRIOR TO CONCRETE PLACEMENT. ALLOWANCE HAS BEEN MADE FOR ANTICIPATED CALCULATED MAXIMUM FALSEWORK DEFLECTION AND MAXIMUM DEAD LOAD DEFLECTIONS AFTER FALSEWORK IS REMOVED. (SEE CMS 508.02 FOR MORE INFORMATION)



s:\projects\projects k-o\ohd\80443\Structures\HEN024_1383C\001596007_1:22:21 PM

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
	REAR	FWD	TOTAL				A	B	C	D	E	R	INC
EASTBOUND ABUTMENTS													
A401	20	20	40	8'- 11"	238	3	1'-9"	2'-6"					
A501	12	12	24	30'- 0"	751	STR							
A502	49	49	98	11'- 2"	1141	3	2'-8"	2'-7"					
A503	BAR	NOT	USED	EB									
A504	BAR	NOT	USED	EB									
A505	BAR	NOT	USED	EB									
	1 SR		1 SR	10'- 11"			5'-3"		5'-3"				
A506	OF		OF	TO	54	2	TO	0'-8"	TO				1'-8 1/4"
	4		4	14'- 9"			7'-2"		7'-2"				
A507	4	4	8	24'- 3"	202	STR							
A508		2	2	33'- 0"	69	STR							
A509	BAR	NOT	USED	EB									
A510	2		2	13'- 6"	28	STR							
A511	2	2	4	14'- 11"	62	2	7'-3"	0'-8"	7'-3"				
A512	BAR	NOT	USED	EB									
A513	BAR	NOT	USED	EB									
A514	4	4	8	17'- 9"	148	STR							
A515	6		6	11'- 0"	69	STR							
A516	1		1	7'- 7"	8	19	4'-9"	2'-7 1/2"	1'-2"				
A517	1		1	8'- 1"	8	19	4'-9"	3'-0 3/4"	1'-4"				
A518	1		1	5'- 11"	6	STR							
A519	1		1	6'- 4"	7	STR							
A520	BAR	NOT	USED	EB									
	1 SR		1 SR	11'- 1"			5'-4"		5'-4"				
A521	OF		OF	TO	90	2	TO	0'-8"	TO				1'-3 1/2"
	6		6	17'- 7"			8'-7"		8'-7"				
A522	3		3	18'- 11"	59	2	9'-3"	0'-8"	9'-3"				
A523	6		6	16'- 1"	101	STR							
A524	1		1	6'- 8"	7	STR							
A525	1		1	6'- 3"	7	STR							
A526	1		1	13'- 2"	14	19	9'-3"	3'-6 1/2"	1'-8"				
A527	1		1	12'- 9"	13	19	9'-3"	3'-2"	1'-6"				
	1 SR	1 SR	2 SR	11'- 4"			4'-10"		4'-10"				
A528	OF	OF	OF	TO	973	2	TO	1'-11"	TO				0'-1 1/2"
	35	35	35	15'- 4"			6'-10"		6'-10"				
A529	2		2	29'- 0"	60	STR							
A530		6	6	12'- 1"	76	STR							
A531	BAR	NOT	USED	EB									
A532		6	6	15'- 0"	94	STR							
A533		1	1	6'- 9"	7	STR							
A534		1	1	6'- 3"	7	STR							
A535		1	1	8'- 6"	9	19	4'-9"	3'-5 1/4"	1'-6"				
A536		1	1	8'- 0"	8	19	4'-9"	2'-11 1/2"	1'-4"				
A537		2	2	12'- 3"	26	STR							
A538	BAR	NOT	USED	EB									
A539	BAR	NOT	USED	EB									
A540	BAR	NOT	USED	EB									
A541	BAR	NOT	USED	EB									
A542		1	1	5'- 7"	6	STR							
A543		1	1	6'- 1"	6	STR							

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
	REAR	FWD	TOTAL				A	B	C	D	E	R	INC
EASTBOUND ABUTMENTS													
A544		1	1	11'- 11"	12	19	9'-2"	2'-6"	1'-2"				
A545		1	1	12'- 5"	13	19	9'-2"	2'-11 ½"	1'-4"				
		1 SR	1 SR	10'- 11"			5'-3"		5'-3"				
A546		OF	OF	TO	54	2	TO	0'-8"	TO				1'-4"
		4	4	14'- 11"			7'-3"		7'-3"				
		1 SR	1 SR	11'- 5"			5'-6"		5'-6"				
A547		OF	OF	TO	90	2	TO	0'-8"	TO				1'-2 ½"
		6	6	17'- 5"			8'-6"		8'-6"				
A548		3	3	18'- 5"	58	2	9'-0"	0'-8"	9'-0"				
A549	BAR	NOT	USED	EB									
A801	8	8	16	30'- 0"	1282	STR							
A802	4	4	8	23'- 6"	502	STR							
A803	30	30	60	5'- 11"	948	18	3'-9"	1'-0"	1'-0"				
A1001	4	4	8	40'- 0"	1377	STR							
A1002	4	4	8	21'- 9"	749	STR							
SUB-TOTAL					9,439								

NOTE:
BAR DIMENSIONS SHOWN ARE OUT TO OUT
UNLESS OTHERWISE INDICATED. "R" INDICATES
INSIDE RADIUS, UNLESS OTHERWISE NOTED.
"STD." WRITTEN IN PLACE OF A DIMENSION
INDICATES A STANDARD BEND AT THE END
OF THE BAR.

ALL REINFORCING STEEL TO BE EPOXY COATED.

BAR LEGEND

A506

BAR LOCATION

BAR NUMBER

BAR SIZE

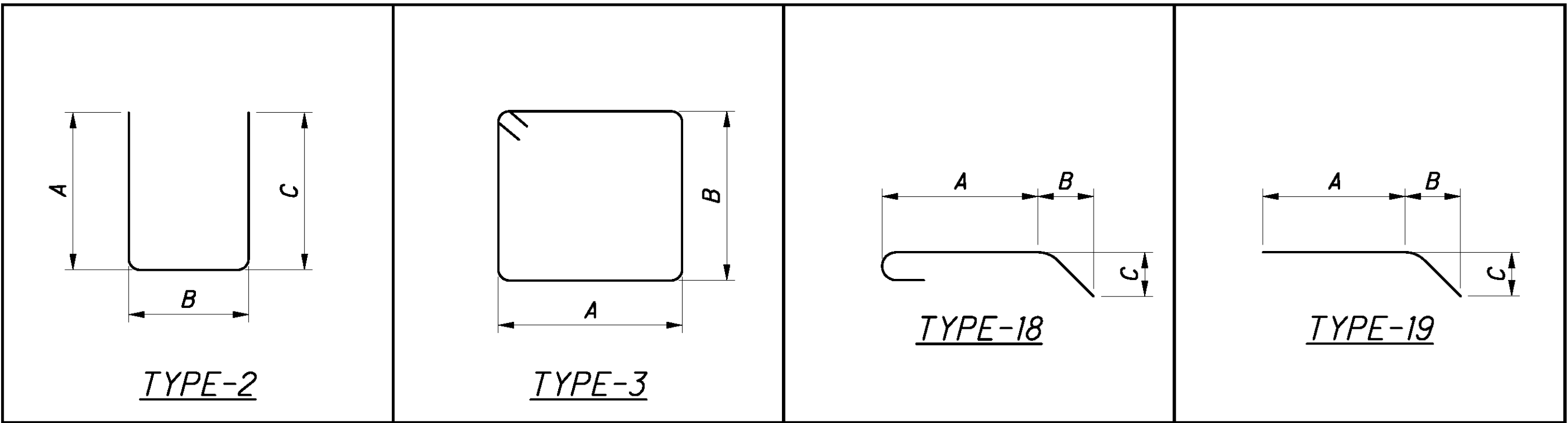
- A - ABUTMENT

- P - PIER

- S - SUPERSTRUCTURE

- SP - SPIRAL BAR

- SR - SERIES



s:\projects\projects k-o\ohd\80443\Structures\HEN024_1383C\0005.dwg007 1:22:24 PM

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
	REAR	FWD	TOTAL				A	B	C	D	E	R	INC
WESTBOUND ABUTMENTS													
A401	20	20	40	8'- 11"	238	3	1'-9"	2'-6"					
A501	12	12	24	30'- 0"	751	STR							
A502	49	49	98	11'- 2"	1141	3	2'-8"	2'-7"					
	1 SR		1 SR	10'- 11"			5'-3"		5'-3"				
A503	OF		OF	TO	109	2	TO	0'-8"	TO				1'-4"
	7		7	18'- 11"			9'-3"		9'-3"				
A504	3		3	19'- 11"	62	2	9'-9"	0'-8"	9'-9"				
	1 SR		1 SR	11'- 4"			4'-10"		4'-10"				
A505	OF		OF	TO	488	2	TO	1'-11"	TO				0'-1 ¾"
	34		34	16'- 2"			7'-3"		7'-3"				
	1 SR		1 SR	10'- 11"			5'-3"		5'-3"				
A506	OF		OF	TO	54	2	TO	0'-8"	TO				1'-8 ¼"
	4		4	14'- 9"			7'-2"		7'-2"				
A507	4	4	8	24'- 3"	202	STR							
A508	2	2	4	33'- 0"	138	STR							
A509	6		6	17'- 6"	110	STR							
A510	2		2	13'- 6"	28	STR							
A511	2	2	4	14'- 11"	62	2	7'-3"	0'-8"	7'-3"				
A512	1		1	14'- 5"	15	19	10'-7"	3'-5 ¾"	1'-7 ½"				
A513	1		1	14'- 0"	15	19	10'-7"	3'-1 ¼"	1'-5"				
A514	4	4	8	17'- 9"	148	STR							
A515	6		6	11'- 0"	69	STR							
A516	1		1	7'- 7"	8	19	4'-9"	2'-7 ½"	1'-2"				
A517	1		1	8'- 1"	8	19	4'-9"	3'-0 ¾"	1'-4"				
A518	1		1	5'- 11"	6	STR							
A519	2		2	6'- 4"	13	STR							
A520	1		1	6'- 9"	7	STR							
		1 SR	1 SR	11'- 1"			5'-4"		5'-4"				
A521		OF	OF	TO	90	2	TO	0'-8"	TO				1'-3 ½"
		6	6	17'- 7"			8'-7"		8'-7"				
A522	BAR	NOT	USED	WB									
A523	BAR	NOT	USED	WB									
A524	BAR	NOT	USED	WB									
A525	BAR	NOT	USED	WB									
A526	BAR	NOT	USED	WB									
A527	BAR	NOT	USED	WB									
		1 SR	1 SR	11'- 4"			4'-10"		4'-10"				
A528		OF	OF	TO	487	2	TO	1'-11"	TO				0'-1 ½"
		35	35	15'- 4"			6'-10"		6'-10"				
A529	BAR	NOT	USED	WB									
A530		6	6	12'- 1"	76	STR							
A531		6	6	15'- 6"	97	STR							
A532	BAR	NOT	USED	WB									
A533		1	1	6'- 9"	7	STR							
A534		1	1	6'- 3"	7	STR							
A535		1	1	8'- 6"	9	19	4'-9"	3'-5 ¼"	1'-6"				
A536		1	1	8'- 0"	8	19	4'-9"	2'-11 ½"	1'-4"				
A537		2	2	12'- 3"	26	STR							
A538		1	1	6'- 0"	6	STR							
A539		1	1	6'- 6"	7	STR							
A540		1	1	12'- 5"	13	19	9'-3"	2'-10"	1'-5"				
A541		1	1	13'- 0"	14	19	9'-3"	3'-4 ¾"	1'-7"				
A542	BAR	NOT	USED	WB									
A543	BAR	NOT	USED	WB									

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
	REAR	FWD	TOTAL				A	B	C	D	E	R	INC
WESTBOUND ABUTMENTS													
A544	BAR	NOT	USED	WB									
A545	BAR	NOT	USED	WB									
		1 SR	1 SR	10'- 11"			5'-3"		5'-3"				
A546		OF	OF	TO	54	2	TO	0'-8"	TO				1'-4"
		4	4	14'- 11"			7'-3"		7'-3"				
A547	BAR	NOT	USED	WB									
A548	BAR	NOT	USED	WB									
A549		3	3	18'- 11"	59	2	9'-3"	0'-8"	9'-3"				
A801	8	8	16	30'- 0"	1282	STR							
A802	4	4	8	23'- 6"	502	STR							
A803	30	30	60	5'- 11"	948	18	3'-9"	1'-0"	1'-0"				
A1001	4	4	8	40'- 0"	1377	STR							
A1002	4	4	8	21'- 9"	749	STR							
SUB-TOTAL					9,490								

NOTE:
BAR DIMENSIONS SHOWN ARE OUT TO OUT
UNLESS OTHERWISE INDICATED. "R" INDICATES
INSIDE RADIUS, UNLESS OTHERWISE NOTED.
"STD." WRITTEN IN PLACE OF A DIMENSION
INDICATES A STANDARD BEND AT THE END
OF THE BAR.

ALL REINFORCING STEEL TO BE EPOXY COATED.

BAR LEGEND

A 5 0 6

BAR LOCATION

BAR NUMBER

BAR SIZE

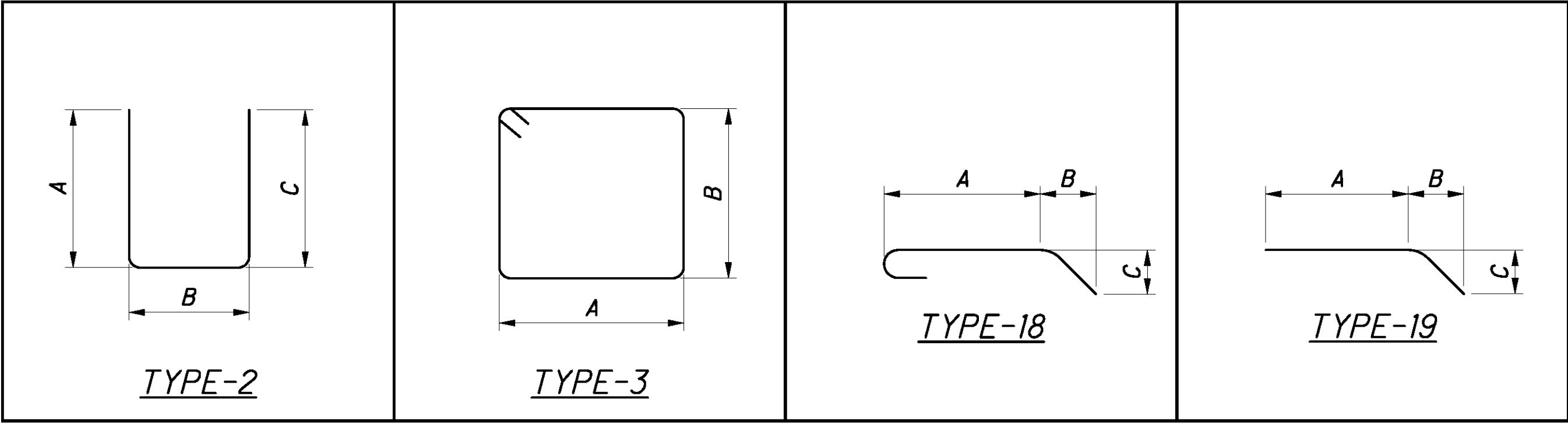
- A - ABUTMENT

- P - PIER

- S - SUPERSTRUCTURE

- SP - SPIRAL BAR

- SR - SERIES



s:\projects\projects k-o\ohd\80443\Structures\HEN024_1383C\Sheets\024_1383C\130435.dwg 1:22:27 PM

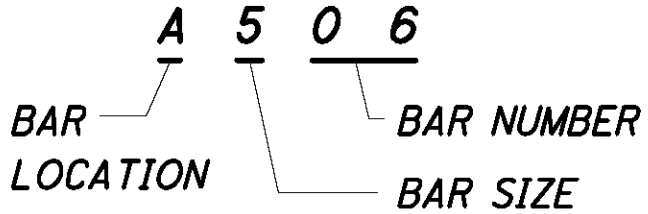
MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
	PIER 1	PIER 2	TOTAL				A	B	C	D	E	R	INC
EASTBOUND PIERS													
P401	14	14	28	9'- 5"	176	3	2'-0"	2'-6"					
P501	5	5	10	11'- 9"	123	24	2'-6"	3'-11"				1'-3"	
P502	BAR	NOT	USED	EB									
P503	1	1	2	9'- 3"	19	6	2'-6"	2'-10"	0'-10"				
P504	BAR	NOT	USED	EB									
P505	1	1	2	4'- 3"	9	2	0'-10"	2'-10"	0'-10"				
P506	BAR	NOT	USED	EB									
P507	BAR	NOT	USED	EB									
P508	BAR	NOT	USED	EB									
	1 SR	1 SR	2 SR	9'- 11"				3'-1"					
P509	OF	OF	OF	TO	572	6	2'-8"	TO	0'-10"				0'-2 ¼"
	23	23	23	13'- 11"				5'-1"					
	1 SR	1 SR	2 SR	13'- 5"				4'-10"					
P510	OF	OF	OF	TO	200	6	2'-8"	TO	0'-10"				0'-1"
	7	7	7	13'- 11"				5'-1"					
P511	1	1	2	13'- 3"	28	6	2'-6"	4'-10"	0'-10"				
P512	1	1	2	6'- 3"	13	2	0'-10"	4'-10"	0'-10"				
P513	2	2	4	16'- 0"	67	STR							
P514	4	4	8	35'- 0"	292	STR							
P1001	BAR	NOT	USED	EB									
P1002	BAR	NOT	USED	EB									
P1003	4		4	29'- 11"	515	STR							
P1004		4	4	30'- 3"	521	STR							
P1005	4	4	8	30'- 0"	1033	STR							
P1101	4	4	8	30'- 0"	1275	STR							
P1102	4	4	8	35'- 0"	1488	STR							
SUB-TOTAL					6,329								

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
	PIER 1	PIER 2	TOTAL				A	B	C	D	E	R	INC
WESTBOUND PIERS													
P401	14	14	28	9'- 5"	176	3	2'-0"	2'-6"					
P501	5	5	10	11'- 9"	123	24	2'-6"	3'-11"				1'-3"	
	1 SR	1 SR	2 SR	9'- 11"				3'-1"					
P502	OF	OF	OF	TO	746	6	2'-8"	TO	0'-10"				0'-1 3/4"
	30	30	30	13'- 11"				5'-1"					
P503	1	1	2	9'- 3"	19	6	2'-6"	2'-10"	0'-10"				
P504	1	1	2	13'- 9"	29	6	2'-6"	5'-1"	0'-10"				
P505	1	1	2	4'- 3"	9	2	0'-10"	2'-10"	0'-10"				
P506	1	1	2	6'- 6"	14	2	0'-10"	5'-1"	0'-10"				
P507	2	2	4	13'- 0"	54	STR							
P508	4	4	8	38'- 0"	317	STR							
P509	BAR	NOT	USED	WB									
P510	BAR	NOT	USED	WB									
P511	BAR	NOT	USED	WB									
P512	BAR	NOT	USED	WB									
P513	BAR	NOT	USED	WB									
P514	BAR	NOT	USED	WB									
P1001	4		4	30'- 0"	516	STR							
P1002		4	4	30'- 3"	521	STR							
P1003	BAR	NOT	USED	WB									
P1004	BAR	NOT	USED	WB									
P1005	4	4	8	30'- 0"	1033	STR							
P1101	4	4	8	30'- 0"	1275	STR							
P1102	4	4	8	35'- 0"	1488	STR							
SUB-TOTAL					6,319								

NOTE:

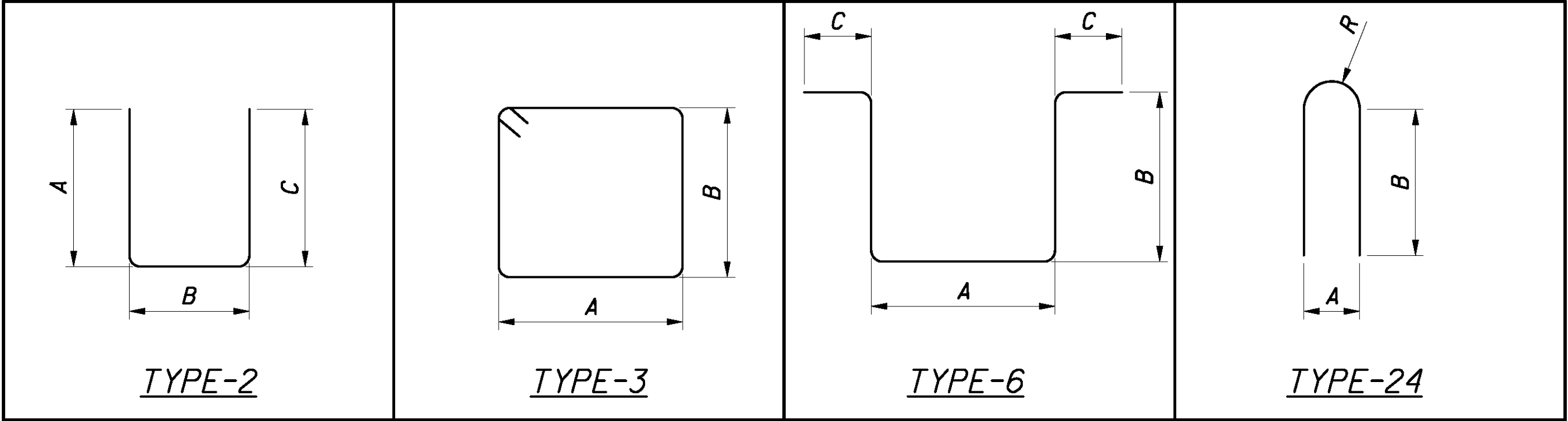
BAR DIMENSIONS SHOWN ARE OUT TO OUT
UNLESS OTHERWISE INDICATED. "R" INDICATES
INSIDE RADIUS, UNLESS OTHERWISE NOTED.
"STD." WRITTEN IN PLACE OF A DIMENSION
INDICATES A STANDARD BEND AT THE END
OF THE BAR.

BAR LEGEND



- A - ABUTMENT
- P - PIER
- S - SUPERSTRUCTURE
- SP - SPIRAL BAR
- SR - SERIES

ALL REINFORCING STEEL TO BE EPOXY COATED.



s:\projects\projects k-o\ohd\80443\Structures\HEN024_1383C\0046.dwg007 1:22:30 PM

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
	REAR	FWD	TOTAL				A	B	C	D	E	R	INC
EASTBOUND SUPERSTRUCTURE													
S401			105	30'- 0"	2104	STR							
S402			105	20'- 3"	1420	STR							
S403			210	3'- 6"	491	2	1'-3"	1'-2"	1'-3"				
S501			24	30'- 0"	751	STR							
S502			12	27'- 0"	338	STR							
S503			160	7'-5"	1238	23	1'-1"	3'-2"	3'-0"				
S504			32	10'- 0"	334	STR							
S505			12	5'- 7"	70	25	1'-8"	2'-5"	1'-5"	0'-1 1/2"	0'-5"		
S506			20	6'-2"	129	STR							
S601			91	30'- 0"	4100	STR							
S602			87	21'- 0"	2744	STR							
S603			2	33'- 6"	101	STR							
S604			160	4'-0"	961	53	0'-5"	2'-2"	1'-1"				
S605			160	3'- 1"	741	1	1'-1"	2'-2"					
			8 SR	4'- 8"				3'-9"					
S606			OF	TO	672	1	1'-1"	TO					0'-1"
			11	5'- 6"				4'-7"					
S607			32	4'- 8"	224	1	1'-1"	3'-9"					
S901			90	56'- 10"	17391	STR							
S902			44	40'- 4"	6034	STR							
S903			44	23'- 6"	3516	STR							
S904			90	42'- 7"	13030	16	41'-4"						
S905			51	40'- 1"	6950	STR							
S906			36	35'- 1"	4294	16	33'-10"						
S907			36	29'- 6"	3611	16	28'-3"						
S908			18	39'- 0"	2387	STR							
S909			18	33'- 0"	2020	STR							
SUB-TOTAL					75,651								

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
	REAR	FWD	TOTAL				A	B	C	D	E	R	INC
WESTBOUND SUPERSTRUCTURE													
S401			105	30'- 0"	2104	STR							
S402			105	20'- 3"	1420	STR							
S403			210	3'- 6"	491	2	1'-3"	1'-2"	1'-3"				
S501			24	30'- 0"	751	STR							
S502			12	27'- 0"	338	STR							
S503			160	7'-5"	1238	23	1'-1"	3'-2"	3'-0"				
S504			32	10'- 0"	334	STR							
S505			12	5'- 7"	70	25	1'-8"	2'-5"	1'-5"	0'-1 ½"	0'-5"		
S506			20	6'-2"	129	STR							
S601			91	30'- 0"	4100	STR							
S602			87	21'- 0"	2744	STR							
S603			2	33'- 6"	101	STR							
S604			160	4'-0"	961	53	0'-5"	2'-2"	1'-1"				
S605			160	3'- 1"	741	1	1'-1"	2'-2"					
			8 SR	4'- 8"				3'-9"					
S606			OF	TO	672	1	1'-1"	TO					0'-1"
			11	5'- 6"				4'-7"					
S607			32	4'- 8"	224	1	1'-1"	3'-9"					
S901			90	56'- 10"	17391	STR							
S902			44	40'- 4"	6034	STR							
S903			44	23'- 6"	3516	STR							
S904			90	42'- 7"	13030	16	41'-4"						
S905			51	40'- 1"	6950	STR							
S906			36	35'- 1"	4294	16	33'-10"						
S907			36	29'- 6"	3611	16	28'-3"						
S908			18	39'- 0"	2387	STR							
S909			18	33'- 0"	2020	STR							
SUB-TOTAL					75,651								

NOTE:
BAR DIMENSIONS SHOWN ARE OUT TO OUT
UNLESS OTHERWISE INDICATED. "R" INDICATES
INSIDE RADIUS, UNLESS OTHERWISE NOTED.
"STD." WRITTEN IN PLACE OF A DIMENSION
INDICATES A STANDARD BEND AT THE END
OF THE BAR.

ALL REINFORCING STEEL TO BE EPOXY COATED.

BAR LEGEND

BAR LOCATION

A 5 0 6

BAR NUMBER

BAR SIZE

- A - ABUTMENT
- P - PIER
- S - SUPERSTRUCTURE
- SP - SPIRAL BAR
- SR - SERIES

