

PROJECT	DESIGNATION
1700135	1600744 (NB) & 1600750 (SB)
CONTRACT	BRIDGE FILE
R-41529	I65-016-04220 ENBL & ESBL

STRUCTURE	TYPE	SPAN AND SKEW	OVER	STATION
I65-016-04220 ENBL & ESBL	TWIN COMPOSITE PRESTRESSED CONCRETE BOX BEAM BRIDGES	3 SPANS: 40'-0", 40'-0", 40'-0" SKEW: 27° LT.	BLUE LICK CREEK	Q STRUCTURE Sta.403+66.08 "Q"

KIN PROJECT INFORMATION	
DESIGNATION	PROJECT DESCRIPTION
1600729	Bridge Rehabilitation for Structure I65-017-04222 ENBL
1600733	Bridge Rehabilitation for Structure I65-017-04222 ESBL
1600744	Bridge Rehabilitation for Structure I65-016-04220 ENBL
1600750	Bridge Rehabilitation for Structure I65-016-04220 ESBL
1700135	I65 Roadway Reconstruction (Lead)
2001593	Small Structure Pipe Lining for Structure CV I65-072-26.20
2001594	Small Structure Pipe Lining for Structure CV I65-072-25.05
2001595	Small Structure Pipe Lining for Structure CV I65-010-22.77
2001596	Small Structure Replacement for Structure CV I65-072-25.83
2001597	Small Structure Repair for Structure CV I65-010-22.65
2001598	Small Structure Repair for Structure CV I65-010-19.90
2001599	Small Structure Pipe Lining for Structure CV I65-010-18.35
2001600	Bridge Rehabilitation for Structure I65-021-09939 ASBL
2001601	Bridge Rehabilitation for Structure I65-021-09940 ANBL
2001603	Bridge Rehabilitation for Structure I65-023-04227
2001604	Bridge Rehabilitation for Structure I65-024-04229 BNBL
2001605	Bridge Rehabilitation for Structure I65-024-04229 BSBL
2001607	Bridge Rehabilitation for Structure I65-028-04232 A

INDIANA DEPARTMENT OF TRANSPORTATION



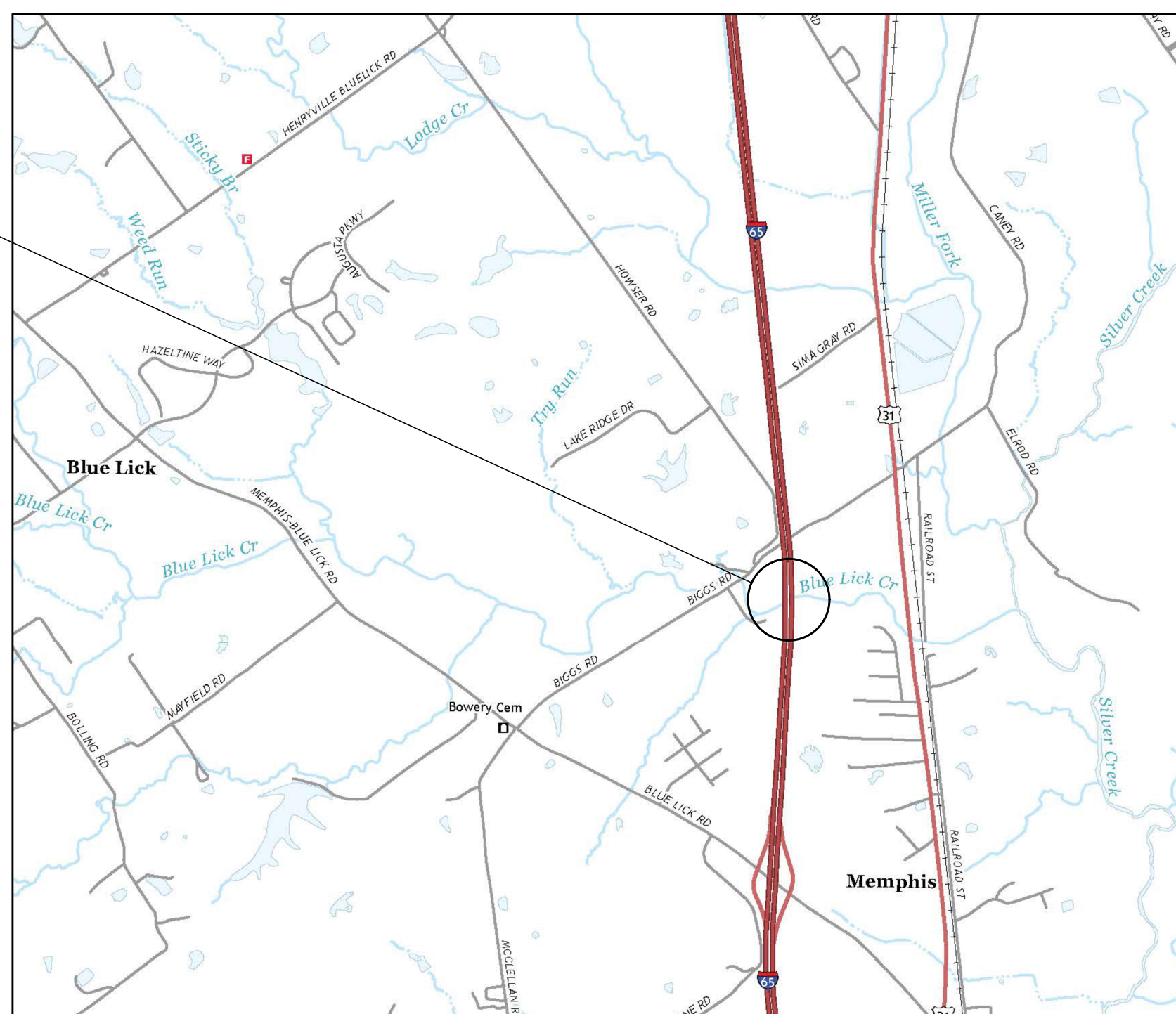
BRIDGE REHABILITATION PLANS

FOR SPANS OVER 20 FEET
ROUTE: I-65 AT: RP 16+49 (I-65)

PROJECT NO. 1600744 P.E.
R/W
1600744 CONST.

NO ADDITIONAL RIGHT-OF-WAY
REQUIRED FOR THIS PROJECT

Bridge Rehabilitation on I-65 over Blue Lick Creek
Located 2.68 Miles South of SR 160 in
Union Township, Clark County (Illinois Grant), Indiana

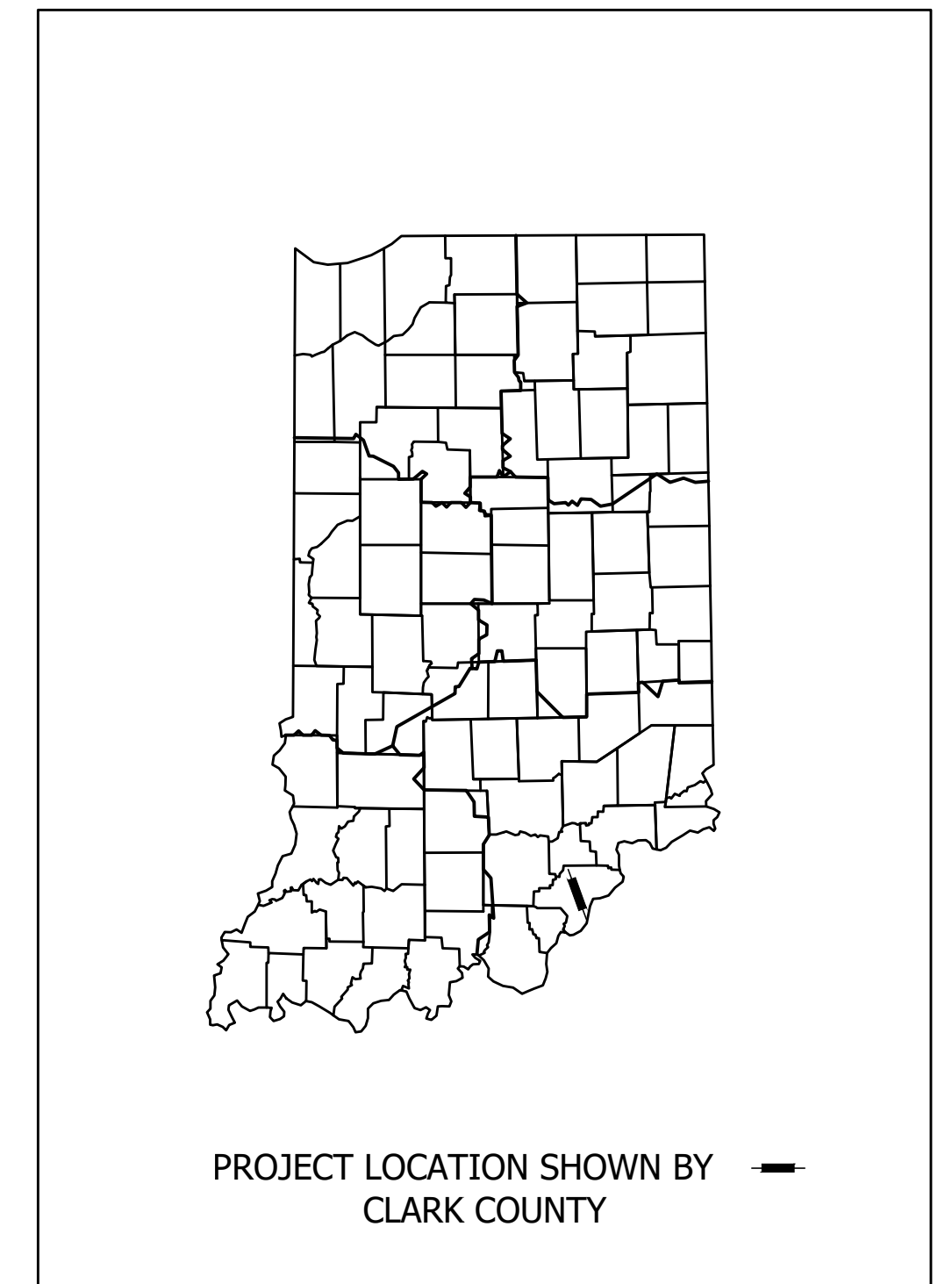


PROJECT LOCATION
Begin Project-Sta.402+50.00 "Q" SBL
End Project-Sta.404+48.16 "Q" SBL
Begin Project-Sta.402+84.40 "PR-Q" NBL
End Project-Sta.404+80.68 "PR-Q" NBL

LOCATION MAP
SCALE: 1:24000

TRAFFIC DATA		
A.A.D.T.	(2023)	45,669 V.P.D.
A.A.D.T.	(2043)	49,452 V.P.D.
D.H.V	(2043)	3,398 V.P.H.
DIRECTIONAL DISTRIBUTION		49.7 %
TRUCKS		32.1 % A.A.D.T. 22.5 % D.H.V.

DESIGN DATA	
DESIGN SPEED	70 M.P.H.
PROJECT DESIGN CRITERIA	COMPLETE RECONSTRUCTION (FREEWAY)
FUNCTIONAL CLASSIFICATION	INTERSTATE
RURAL/URBAN	RURAL
TERRAIN	LEVEL
ACCESS CONTROL	FULL



LATITUDE: 38°30'5" N LONGITUDE: 85°46'14" W

BRIDGE LENGTH:	0.023	MI.
ROADWAY LENGTH:	0.015	MI.
TOTAL LENGTH:	0.038	MI.
MAX. GRADE:	0.46	%

PART 4 OF 15

INDIANA DEPARTMENT OF TRANSPORTATION
STANDARD SPECIFICATIONS DATED 2020
TO BE USED WITH THESE PLANS.

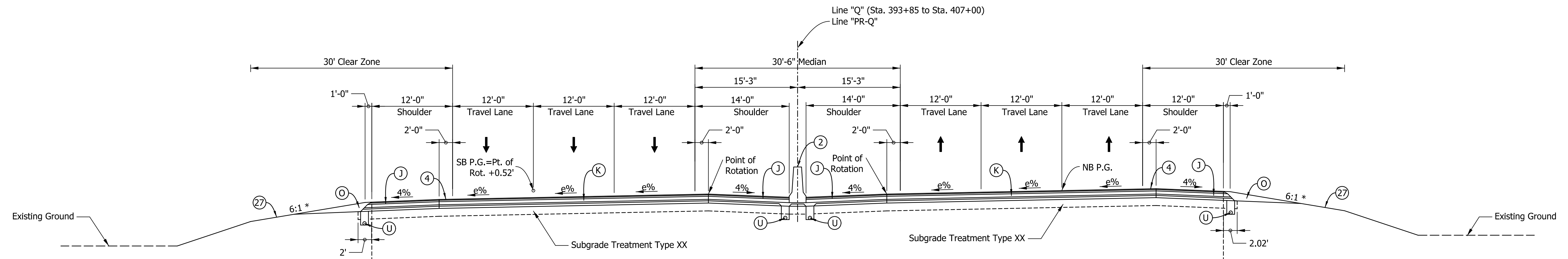
PLANS PREPARED BY:

8320 CRAIG STREET | INDIANAPOLIS, IN 46250
317.849.5832 | F: 317.841.4280 | WWW.B-L-N.COM

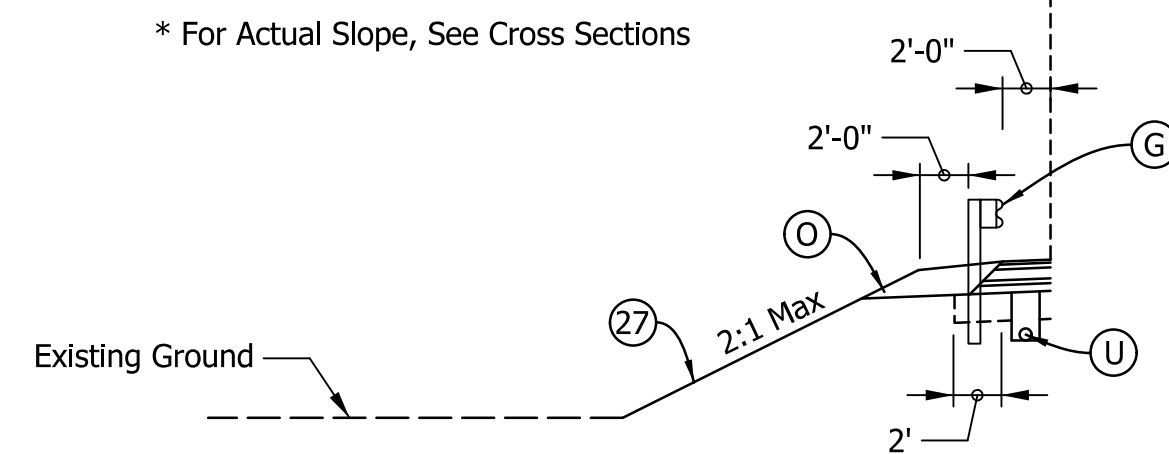
PLANS PREPARED BY:	BEAM, LONGEST & NEFF, LLC	(317)849-5832 PHONE NUMBER
CERTIFIED BY:		DATE
APPROVED FOR LETTING:	INDIANA DEPARTMENT OF TRANSPORTATION	DATE

BRIDGE FILE	
I65-016-04220 ENBL & ESBL	
DESIGNATION	
1600744 (NB) & 1600750 (SB)	
DRAWING NO.	SHEETS
1	of 30
CONTRACT	PROJECT
R-41529	1700135

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* For Actual Slope, See Cross Sections



SB I-65 MGS Guardrail Section

See Guardrail Summary Table for Stations

SB I-65 Typical Superelevation Section

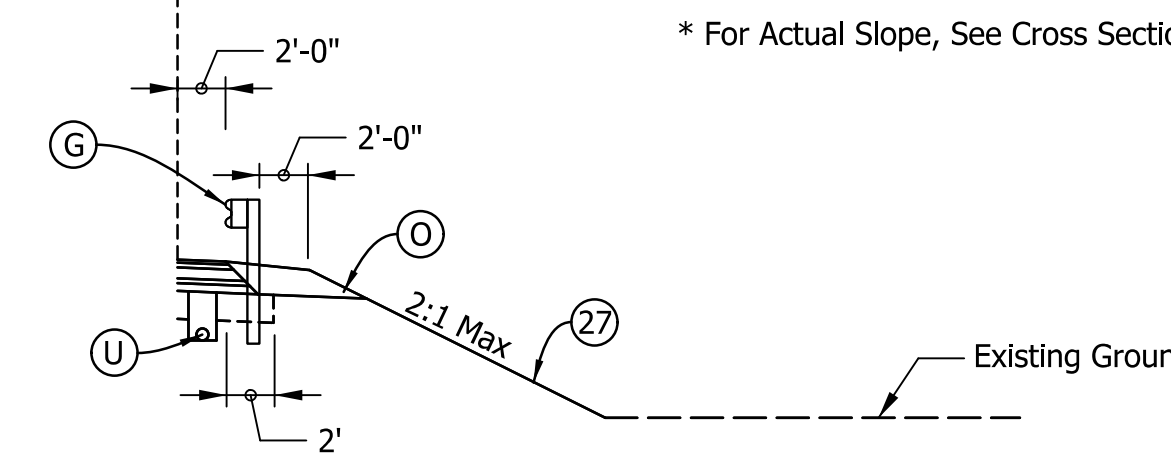
Sta. 393+85.00 "Q" to Sta. 402+50.00 "Q", e_s = 2.00%
 Sta. 404+48.16 "Q" to Sta. 407+00.00 "Q", e_s = 2.00%
 Sta. 407+00.00 "PR-Q" to Sta. 417+10.00 "PR-Q", e_s = 2.00%
 Sta. 493+95.00 "PR-Q" to Sta. 514+05.00 "PR-Q", e_s = 2.00%

Note To Reviewer:
 Second underdrain was recommended by Value Engineering. Final Determination pending pavement design approval.

NB I-65 Typical Superelevation Section

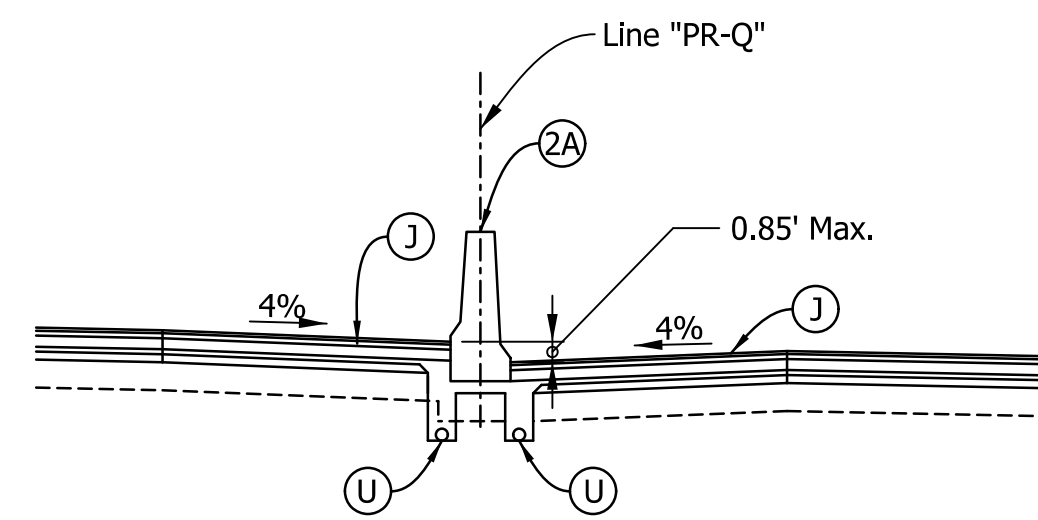
Sta. 393+85.00 "Q" to Sta. 402+84.40 "Q", e_s = 2.00%
 Sta. 404+80.68 "Q" to Sta. 407+00.00 "Q", e_s = 2.00%
 Sta. 407+00.00 "PR-Q" to Sta. 417+10.00 "PR-Q", e_s = 2.00%
 Sta. 493+95.00 "PR-Q" to Sta. 514+05.00 "PR-Q", e_s = 2.00%

* For Actual Slope, See Cross Sections



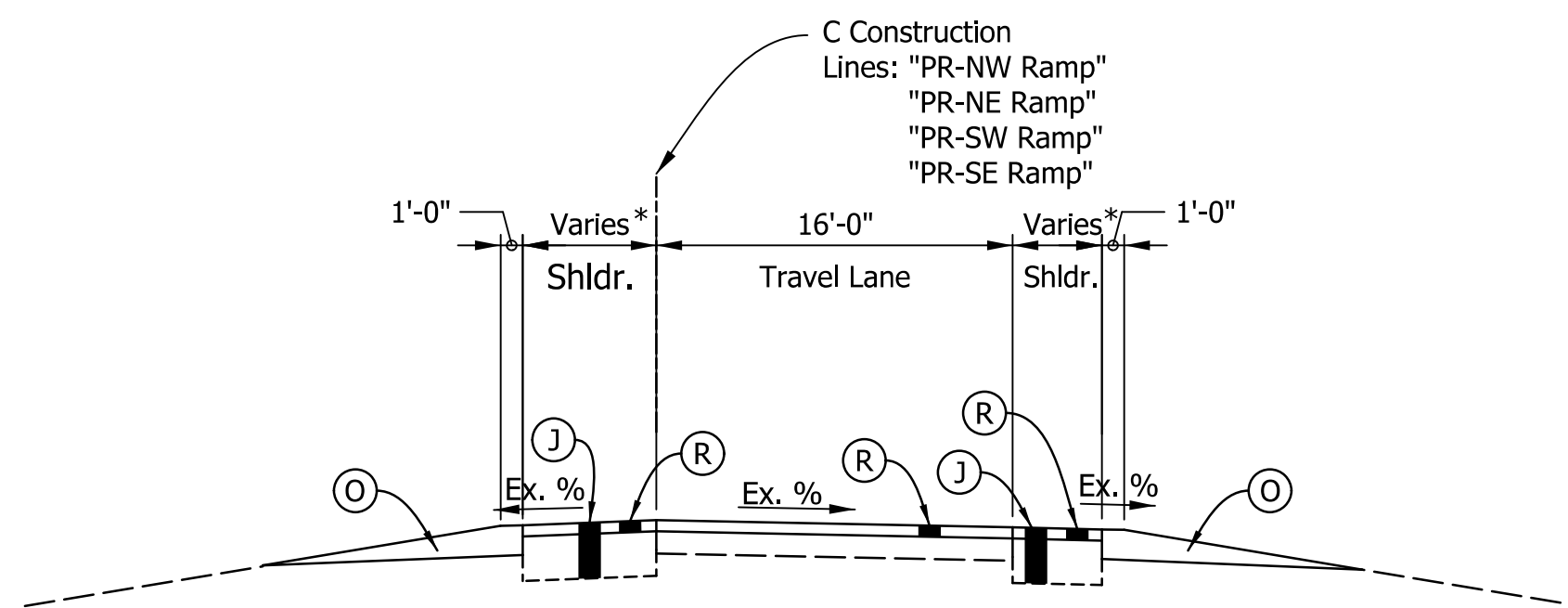
NB I-65 MGS Guardrail Section

See Guardrail Summary Table for Stations



TYPICAL MODIFIED BARRIER WALL

Sta. 399+97.91 "PR-Q" to Sta. 407+49.79 "PR-Q"



Typical Ramp Section

Sta. 13+63.14 "PR-SE Ramp" To Sta. 19+93.20 "PR-SE Ramp"
 Sta. 80+08.94 "PR-SW Ramp" To Sta. 89+33.22 "PR-SW Ramp"
 Sta. 30+45.87 "PR-NE Ramp" To Sta. 40+85.10 "PR-NE Ramp"
 Sta. 59+83.92 "PR-NW Ramp" To Sta. 69+57.83 "PR-NW Ramp"

* See Ramp Construction Details for More Information.

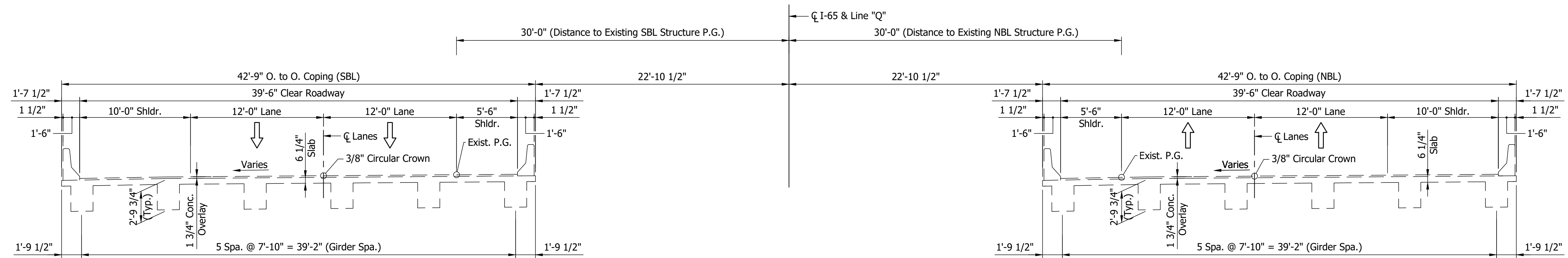
- LEGEND**
- (K) I-65 (Travel Lanes, Aux. Lanes, Gore Areas)
 Full-Depth HMA Pavement consisting of
 xxx lbs/syd QC/QA-HMA, x, xx, Surface x.x mm, on
 xxx lbs/syd QC/QA-HMA, x, xx, Intermediate x.x mm, on
 xxx lbs/syd QC/QA-HMA, x, xx, Base x.x mm, on
 xxx lbs/syd QC/QA-HMA, x, xx, Base x.x mm, on
 xxx lbs/syd QC/QA-HMA, x, xx, Intermediate x.x mm, on
 X" Compacted Aggregate, No. 53, Separation Layer, on
 Geotextile for Pavement, Type XX on
 Subgrade Treatment, Type XX
 - (J) I-65 (Shoulders)
 Full-Depth HMA Pavement consisting of
 xxx lbs/syd QC/QA-HMA, x, xx, Surface x.x mm, on
 xxx lbs/syd QC/QA-HMA, x, xx, Intermediate x.x mm, on
 xxx lbs/syd QC/QA-HMA, x, xx, Base x.x mm, on
 xxx lbs/syd QC/QA-HMA, x, xx, Base x.x mm, on
 xxx lbs/syd QC/QA-HMA, x, xx, Intermediate x.x mm, on
 X" Compacted Aggregate, No. 53, Separation Layer, on
 Geotextile for Pavement, Type XX on
 Subgrade Treatment, Type XX
 - (G) MGS W-Beam Guardrail
 - (M) Milling, Asphalt, X.X"
 - (O) Compacted Aggregate, No. 53
 - (R) xxx lbs/syd QC/QA0HMA, x, xx, Surface, x.x mm
 - (U) Underdrain (See Underdrain Details)
 - (2) Concrete Median Barrier, 45"
 - (2A) Concrete Median Barrier, Modified
 - (4) Milled HMA Corrugations
 - (27) Seed Mixture, R

FOR INFORMATION ONLY

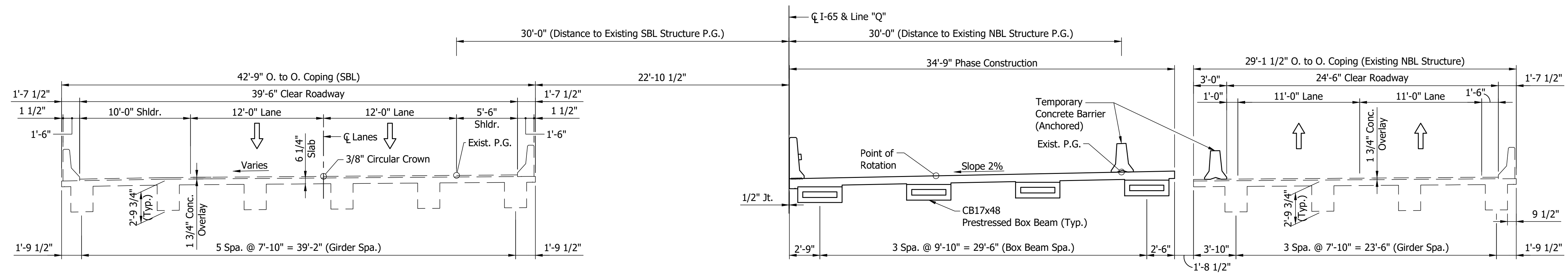
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: AMD	DRAWN: VK	
CHECKED: DJG	CHECKED: DJG	

INDIANA DEPARTMENT OF TRANSPORTATION	
TYPICAL CROSS SECTIONS	

HORIZONTAL SCALE	BRIDGE FILE
1/8" = 1'-0"	N/A
VERTICAL SCALE	DESIGNATION
1/8" = 1'-0"	1700135
SURVEY BOOK	SHEETS
Electronic	3 of 30
CONTRACT	PROJECT
R-41529	1700135



TYPICAL SECTION - EXISTING
Scale: 3/16" = 1'-0"



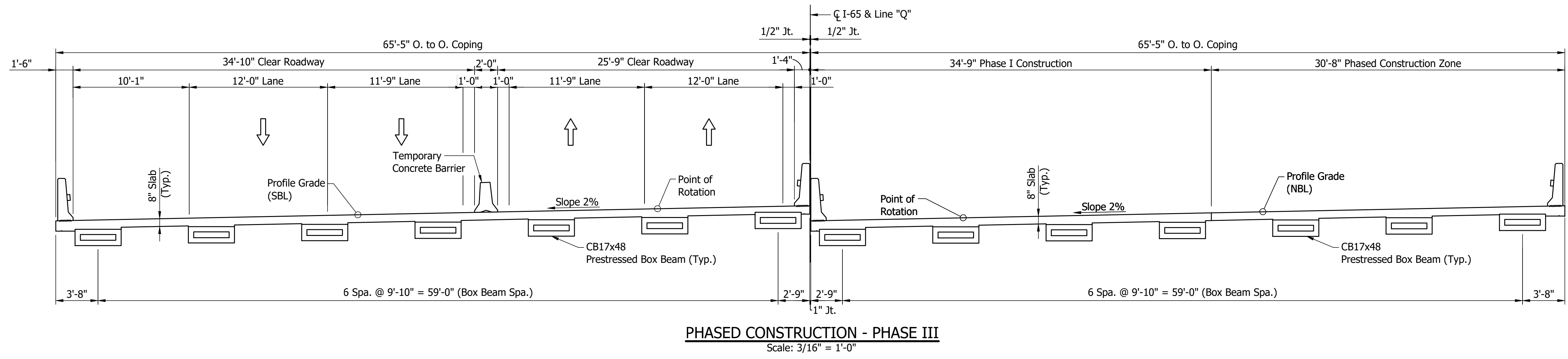
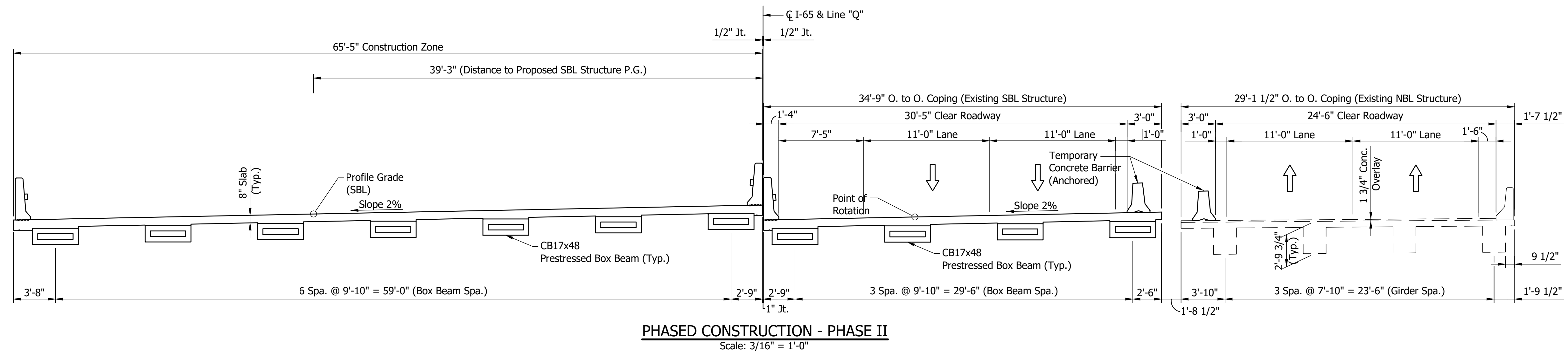
PHASED CONSTRUCTION - PHASE I
Scale: 3/16" = 1'-0"

RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: APL _____	DRAWN: NW _____	
CHECKED: RTW _____	CHECKED: APL _____	

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I65-016-04220 ENBL & ESBL
VERTICAL SCALE	DESIGNATION
AS NOTED	1600744 (NB) & 1600750 (SB)
DRAWING NO.	SHEETS
	4 of 30
CONTRACT	PROJECT
R-41529	1700135



	RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____	INDIANA DEPARTMENT OF TRANSPORTATION	HORIZONTAL SCALE	BRIDGE FILE
					AS NOTED	I65-016-04220 ENBL & ESBL
					VERTICAL SCALE	DESIGNATION
					AS NOTED	1600744 (NB) & 1600750 (SB)
	DESIGNED: APL	DRAWN: NW		MAINTENANCE OF TRAFFIC	DRAWING NO.	SHEETS
	CHECKED: RTW	CHECKED: APL			5	of 30
					CONTRACT	PROJECT
					R-41529	1700135

CURVE # 1
 PI = 401+37.60 "Q"
 Delta = 5°37'43" LT
 D = 0°30'00"
 R = 11,459.16'
 T = 563.30
 L = 1,125.70'
 E = 7.04'
 SE = 2.00%

405+00

Survey 220 of
 the Illinois Grant

CURVE # 2
 PI = 411+11.19 "PR-Q"
 Delta = 3°55'30" LT
 D = 0°28'39"
 R = 12,000.00'
 T = 411.19'
 L = 822.05'
 E = 7.04'
 SE = 2.00%

410+00

Survey 237 of
 the Illinois Grant

415+00

Staggs Michael Lee &
 Vicki & Suncire Robin

GRAF RICHARD L & CATHLEEN M

STRUCTURE:
 165-016-04220 ENBL
 165-016-04220 ESBL
 DES. NO. 1600744 & 1600750
 REPLACE SUPERSTRUCTURE
 (See Part 4)

BEGIN PAVING EXCEPTION
 STA. 402+50.00 "Q", SB

Structure
 Sta. 403+66.08 "Q"
 Skew: 27° Lt.

POC 407+00.00 "Q" (BK) =
 PCC 407+00.00 "PR-Q" (AH)

Ex. Low Clearance: 25.22'
 Prop Low Clearance: 24.84'

POC 412+59.67 "PR-Q" =
 POT 11+99.85 "S-5-Q"

END PAVING EXCEPTION
 STA. 404+48.16 "Q", SB

Const. Limits

Str. No. 112

Str. No. 118

Str. No. 120

Str. No. 122

Str. No. 127

Str. No. 41

Str. No. 132

Str. No. 135

Str. No. 138

Str. No. 137

Str. No. 114

Str. No. 115

Str. No. 116

Str. No. 117

Str. No. 119

Str. No. 121

Str. No. 123

Str. No. 124

Str. No. 125

Str. No. 126

Str. No. 128

Str. No. 131

Str. No. 129

Str. No. 133

Str. No. 134

Str. No. 136

Str. No. 139

BEGIN PAVING EXCEPTION
 STA. 402+84.40 "Q", NB

PI 401+37.60 "PR-Q"

App. EX. L.A. R/W

Blueick Creek

PI 405+34.87 "Q"

END PAVING EXCEPTION
 STA. 404+80.68 "Q", NB

Const. Limits

App. EX. L.A. R/W

PI 411+11.19 "PR-Q"

Ex. Low Clearance: 22.74'
 Prop Low Clearance: 22.71'

App. Section Line

PT 415+22.05 "PR-Q"

Str. No. 131

Str. No. 129

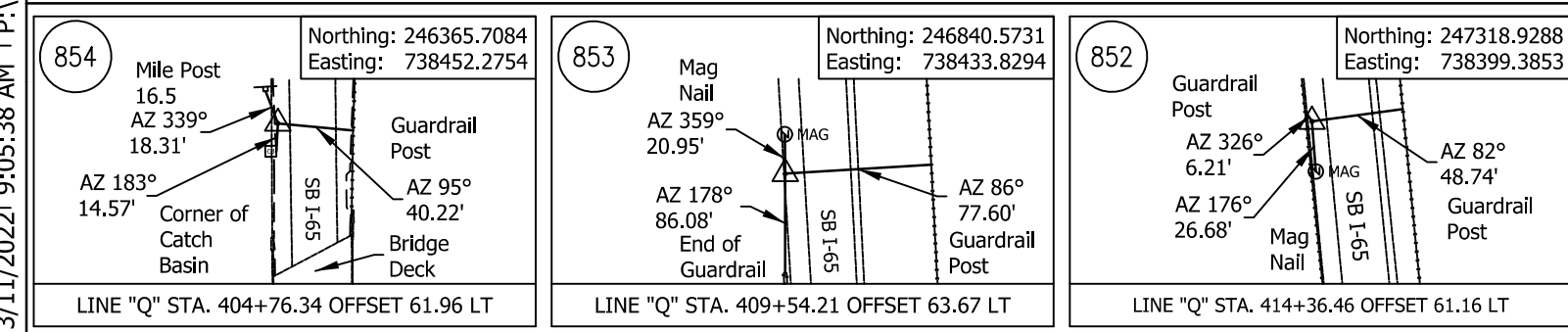
Graf Properties Llc

GRAF RICHARD L & CATHLEEN M

FOR INFORMATION ONLY

Notes:
 All Topo described from Line "Q".
 Line "Q" to be Constructed to Sta. 407+00.00.
 Line "PR-Q" to be Constructed from Sta. 407+00.00.
 See Geometric Tie Sheets for Line "Q".

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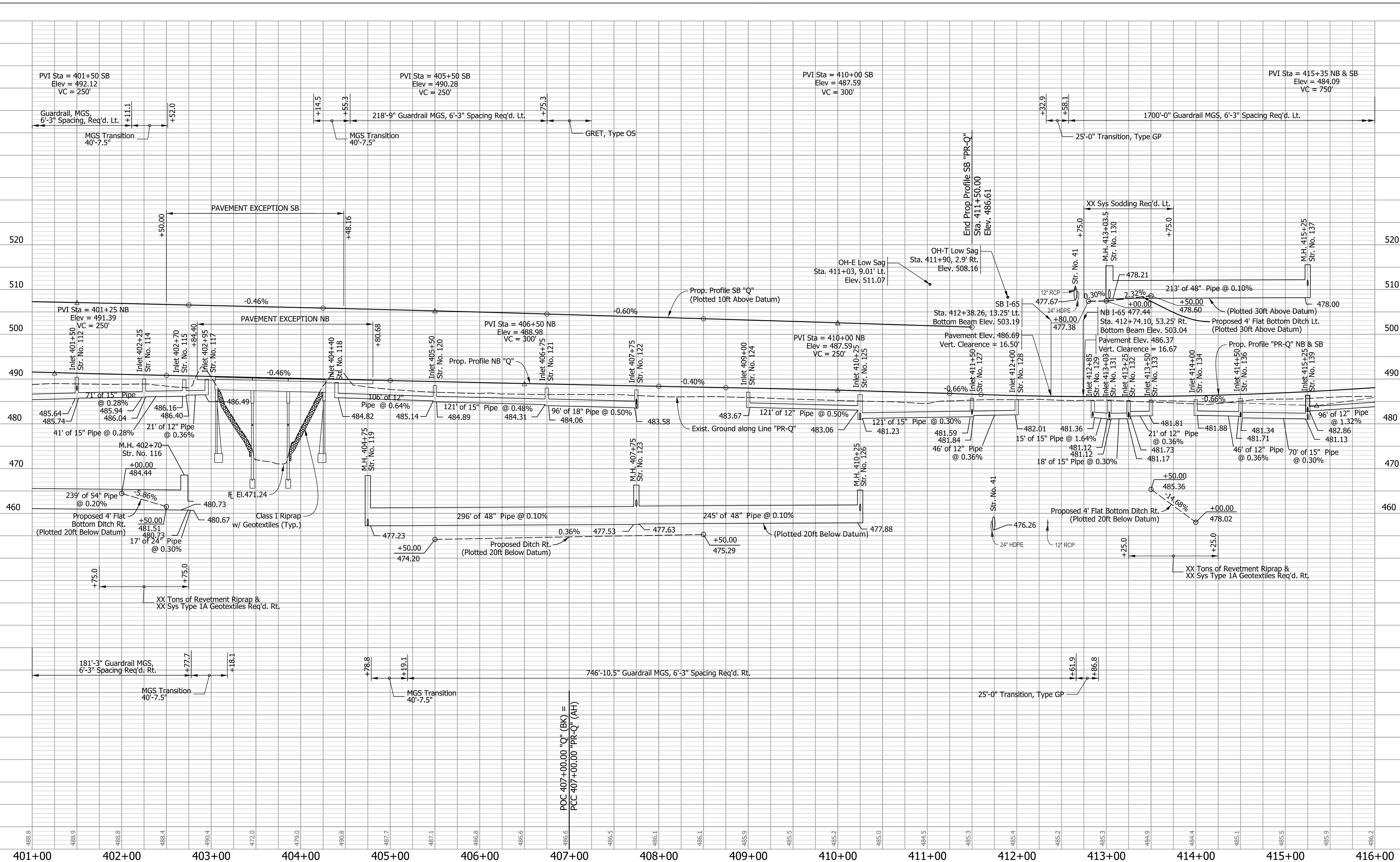
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: AMD	DRAWN: JJP	
CHECKED: DJG	CHECKED: DJG	

INDIANA
 DEPARTMENT OF TRANSPORTATION

PLAN
 STA. 401+00.00 TO STA. 416+00.00

HORIZONTAL SCALE	BRIDGE FILE
1" = 50'	N/A
VERTICAL SCALE	DESIGNATION
N.A.	1700135
SURVEY BOOK	SHEETS
Electronic	6 of 30
CONTRACT	PROJECT
R-41529	1700135

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FOR INFORMATION ONLY

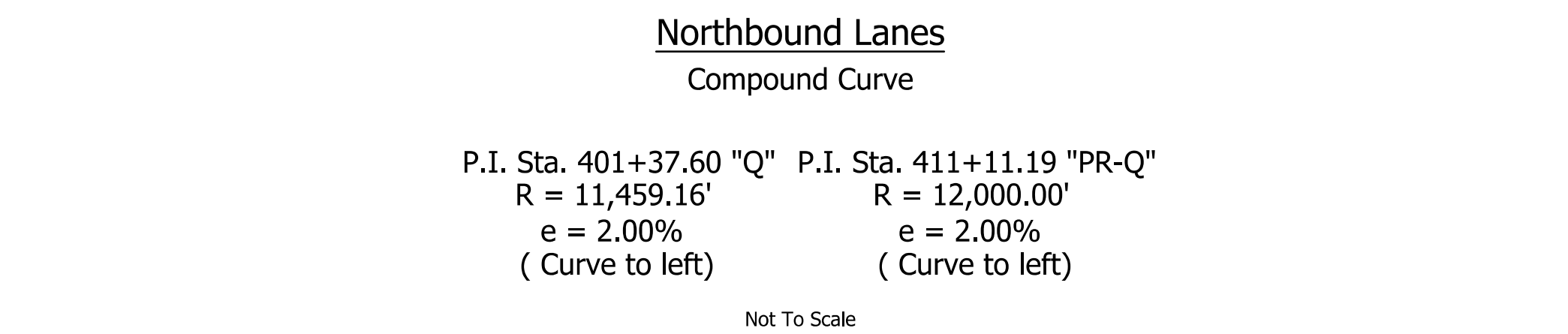
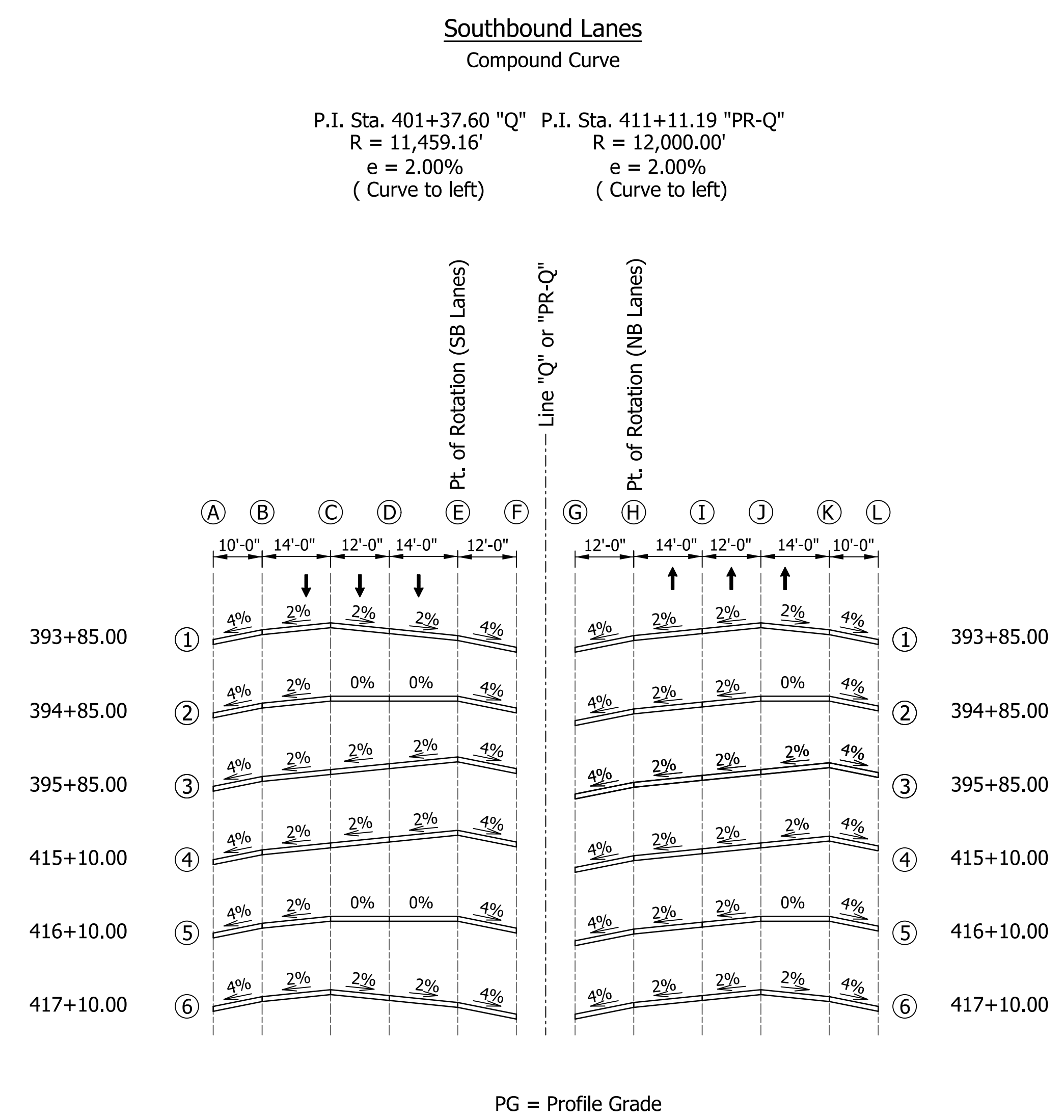
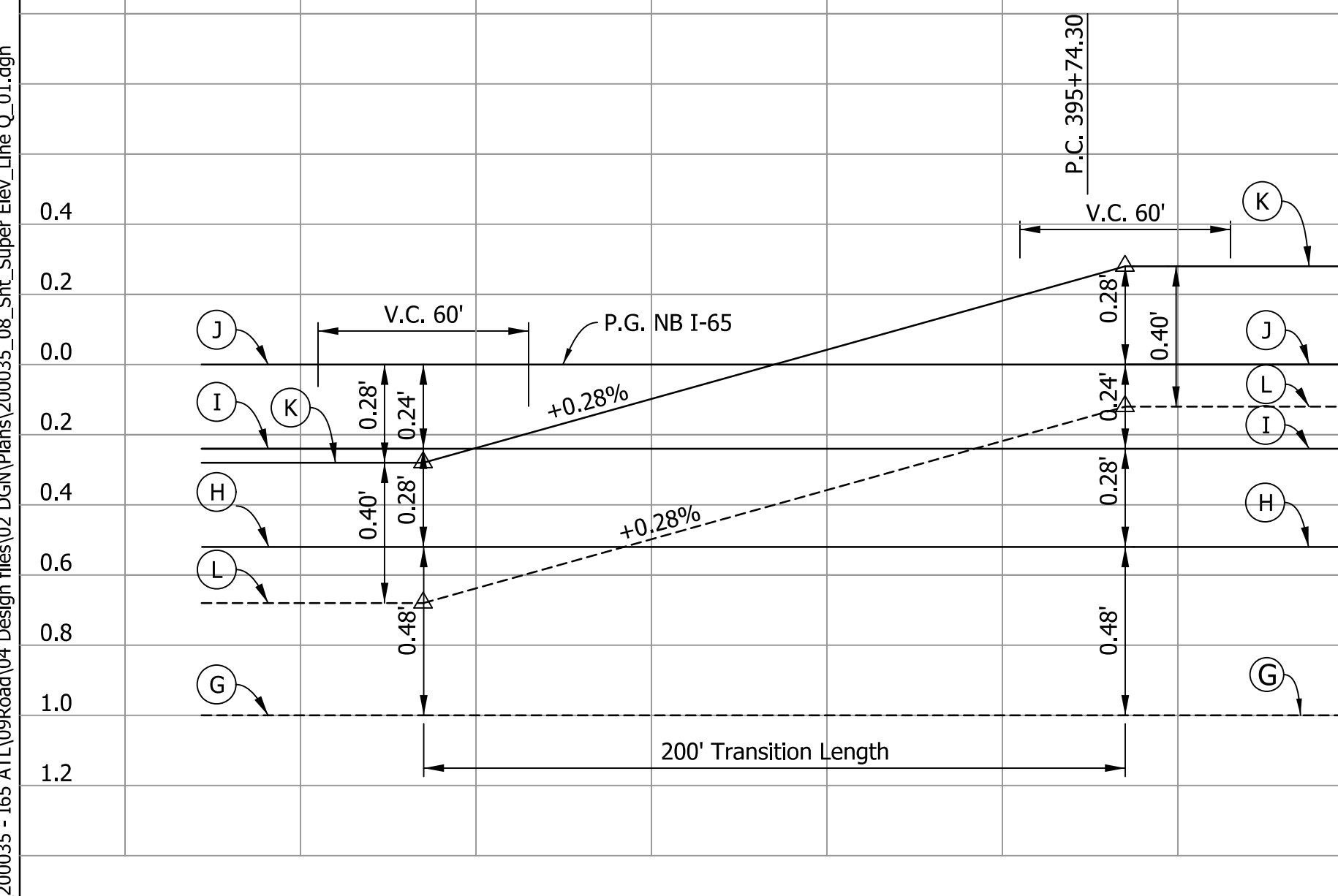
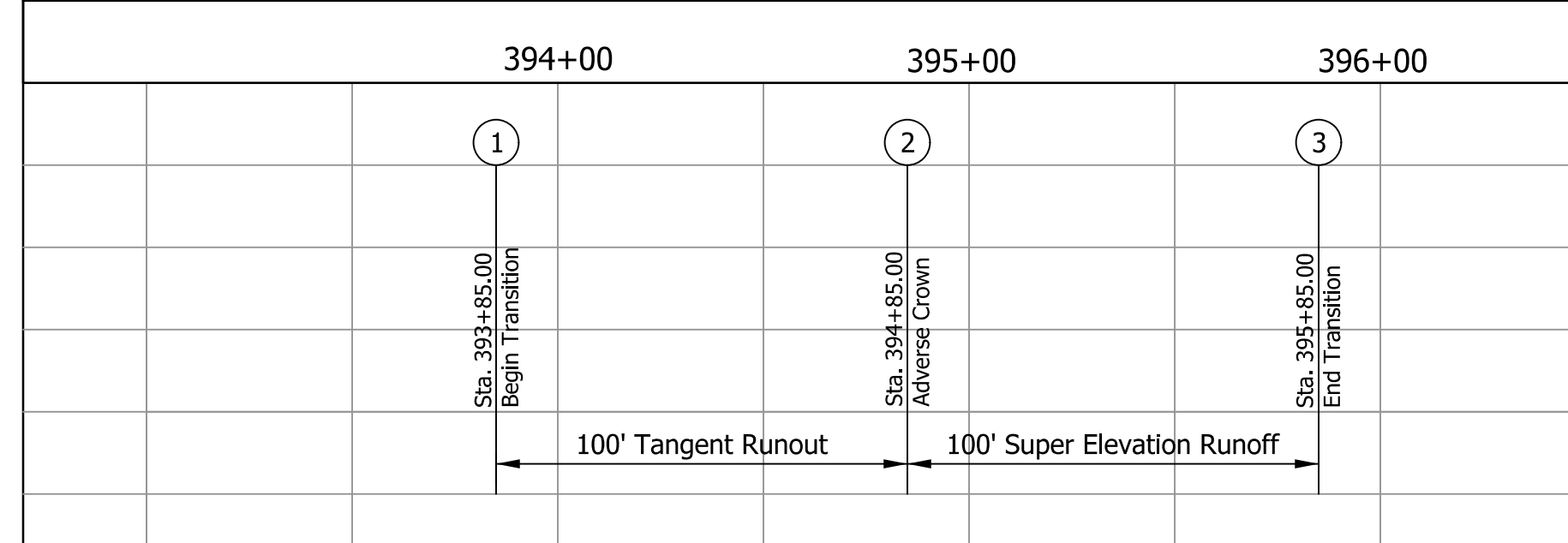
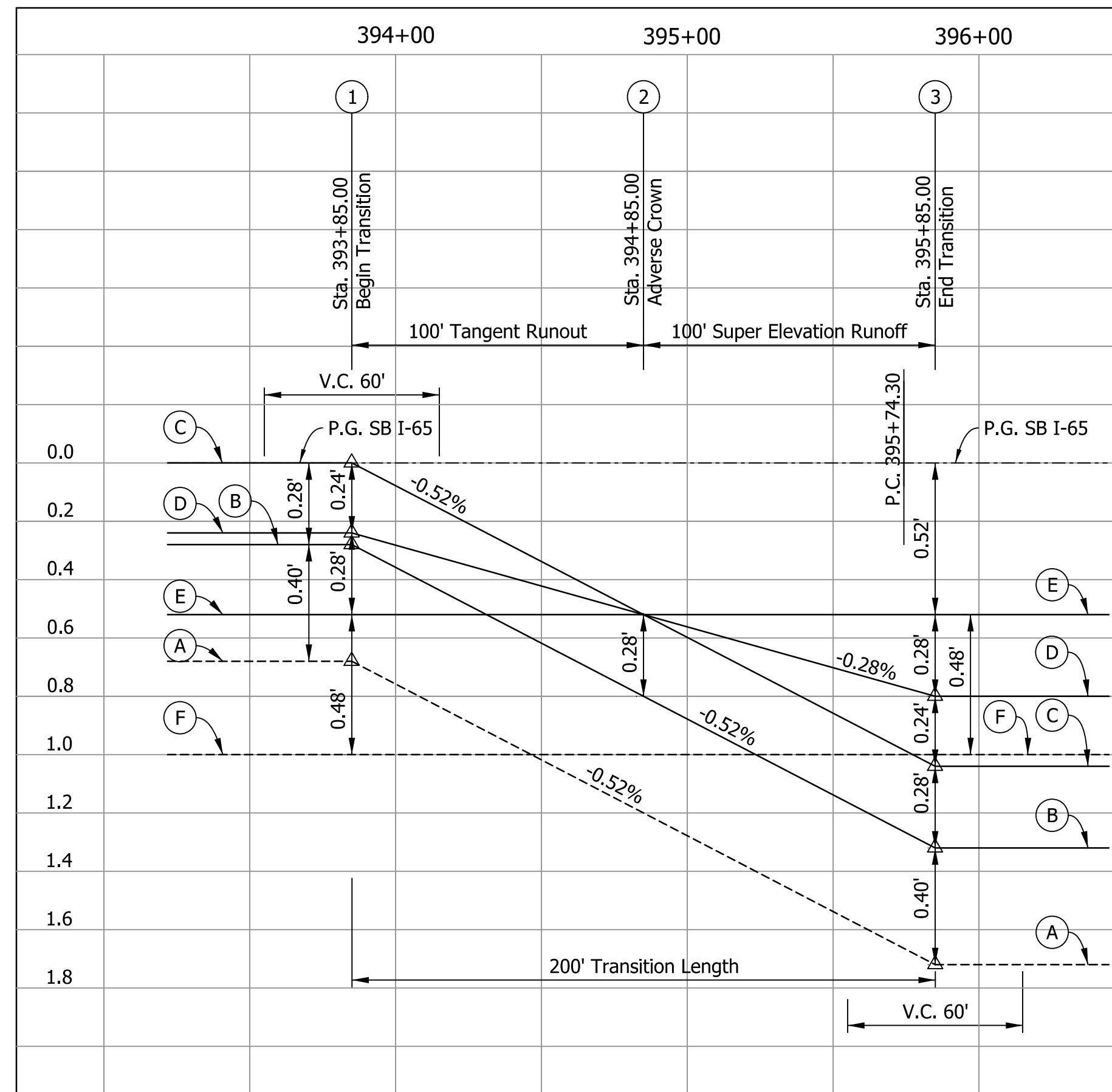
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: AMD	DRAWN: JJP	
CHECKED: DJG	CHECKED: DJG	

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
STA. 401+00.00 TO STA. 416+00.00

HORIZONTAL SCALE	BRIDGE FILE
1" = 50'	N/A
VERTICAL SCALE	DESIGNATION
1" = 10'	1700135
SURVEY BOOK	SHEETS
Electronic	7 of 30
CONTRACT	PROJECT
R-41529	1700135

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FOR INFORMATION ONLY


RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE _____	DESIGNED: VK _____ CHECKED: DJG _____
DRAWN: VK _____	CHECKED: DJG _____

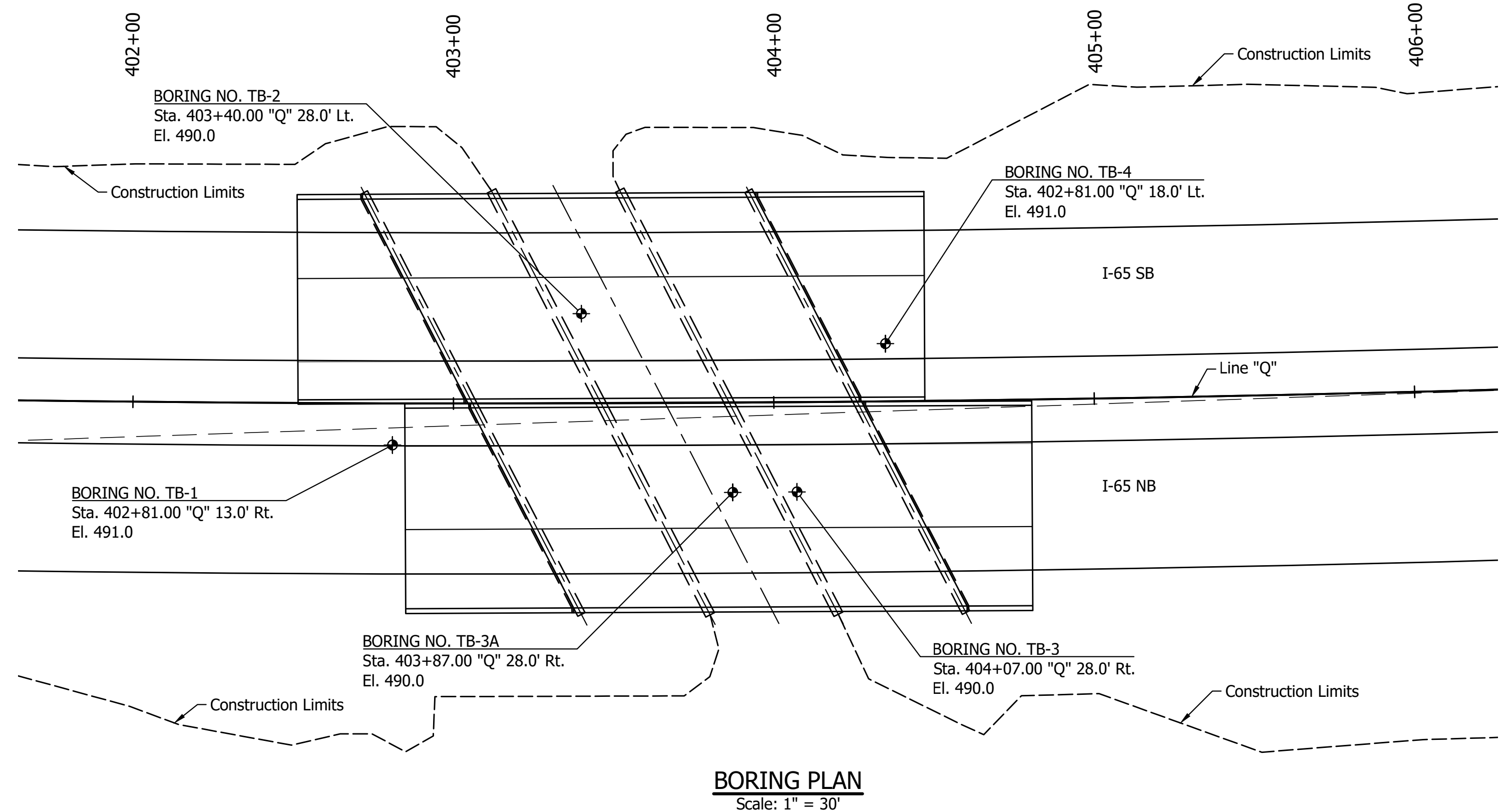
INDIANA
 DEPARTMENT OF TRANSPORTATION

SUPERELEVATION DIAGRAM
 CURVE NO. 1 & CURVE NO. 2

HORIZONTAL SCALE 1" = 40' VERTICAL SCALE 1" = 0.4'	BRIDGE FILE N/A DESIGNATION 1700135
SURVEY BOOK Electronic	SHEETS 8 of 30
CONTRACT R-41529	PROJECT 1700135

BORING NO. TB-1

TEST BORING RECORD											
CLIENT : Beam, Longest and Neff, LLC					BORING NO. : TB-1						
PROJECT : Bridge Rehabilitation					SHEET : 1 OF 1						
ROUTE NO. : I-65 COUNTY : Clark					DATE STARTED : 02-24-21						
LOCATION : I-65 over Blue Lick Creek					DATE COMPLETED : 02-24-21						
DES. NO. : 1600744 (NB) & 1600750 (SB)					CTL PROJECT NO. : 20050105IND						
Boring Elevation : 491.0 feet		Boring Depth : 17.8 feet		Boring Method : HSA		Hammer : Automatic					
Latitude : -38.501574		Station : 402+81		Rig Type : CME-550 ATY		Hammer Efficiency : 90.7					
Longitude : -85.770758		Offset : 13.0 feet Rt		Casing Diameter : 3.25" I.D.		Driller/Inspector : JS/DW					
Line : "Q"		Core Size : ---		Temperature : 40° F		Weather : Overcast					
GROUNDWATER: <input type="checkbox"/> Encountered or Dry <input type="checkbox"/> At completion Dry <input type="checkbox"/> 3.0 feet After 24 hours <input type="checkbox"/> Caved in at 3.7 feet											
Station Elevation	Sample Depth	SOIL/MATERIAL DESCRIPTION	Station Depth	Sample Number	SPT per 6"	SPT per 12"	Recovery (%)	Moisture Content (%)	Unit Weight (pcf)	Unconfined Compression (ksf)	Afterberg Limits
490.7	0.0	TOPSOIL (4") (Visual)	0.3								LL PL PI
	2.5			SS-1	3	8	89	17.5			33 20 12
	5.0			SS-2	2	7	78	16.2			
	7.5	Brown, Moist, Medium Stiff, SILTY CLAY LOAM A-6 (11), Lab 1		SS-3	4	10	100	14.0			
	10.0			SS-4	3	6	89	16.6			
	12.5			SS-5	2	4	0	19.6			
	15.0	Brown, Moist, Soft, SILT (Visual)		SS-6	50/3"			14.5			
	17.0	Gray, Highly Weathered, Very Soft, SHALE									
	17.8	Auger refusal at 17.8 feet									
	20.0	Bottom of Boring at 17.8 feet									
Boring backfilled in accordance with INDOT requirements.											
 CTL Engineering, Inc. Phone: 317-295-8650		BORING METHOD HSA - Hollow Stem Auger SFA - Solid Flight Auger RC - Rock Coring MD - Mud Drilling WD - Wash Drilling HA - Hand Auger		SAMPLING METHOD SS - Split Spoon Sample ST - Shelby Tube Sample CR - Rock Core Sample BS - Bag Sample AC - Auger Cuttings SBS - Subbase Sample		ABBREVIATIONS * - Hand Penetrometer LL - Liquid Limit PL - Plastic Limit FI - Plasticity Index DCP - Dynamic Cone Penetrometer Test					



PILE LOADING FOR GEOTECHNICAL TESTING				
	BENT NO.1	BENT NO.2	BENT NO.3	BENT NO.4
Pile Size, Type & Grade	HP 12x74 50 ksi	N/A	N/A	HP 12x74 50 ksi
Factored Design Load Q_f (Kips)	xxx	N/A	N/A	xxx
Factored Design Soil Resistance $R_{R \max}$ (Kips)	xxx	N/A	N/A	xxx
Resistance Factor Φ_{dyn}	x.xx	N/A	N/A	x.xx
Downdrag Load, DD (Kips)*	0	N/A	N/A	0
Nominal Soil Resistance $R_{n \max}$ (Kips)	xxx	N/A	N/A	xxx
Downdrag Friction R_{sdd} (Kips)	0	N/A	N/A	0
Scour Zone Friction $R_{s \text{ scour}}$ (Kips)	0	N/A	N/A	0
Relaxation in Shale (Kips)	xxx	N/A	N/A	xxx
Nominal Driving Resistance, R_{ndr} (Kips)	xxx	N/A	N/A	xxx
Testing Method	By Formula, Standard Specifications 701.05(a)			

Note:

* In calculations of Downdrag Loads, $\gamma_o = 1.4$

STANDARD PENETRATION TEST:

Driving 2" O.D. Split-Barrel Sampler 18" with a 140 lb. Hammer falling 30". Blow counts indicate number of blows per 6" interval. First 6" for setting Sampler.

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE _____	INDIANA DEPARTMENT OF TRANSPORTATION	HORIZONTAL SCALE	BRIDGE FILE
		1"=30'	165-016-04220 ENBL & ESBL
DESIGNED: APL _____ DRAWN: MEN _____ CHECKED: RTW _____ CHECKED: APL _____	SOIL BORINGS LINE "Q"	VERTICAL SCALE	DESIGNATION
		1"=30'	1600744 (NB) & 1600750 (SB)
		DRAWING NO.	SHEETS
		R-41529	9 of 30
		CONTRACT	PROJECT
		R-41529	1700135

BORING NO. TB-2

TEST BORING RECORD											
CLIENT : Beam, Longest and Neff, LLC		BORING NO. : TB- 2		PROJECT : Bridge Rehabilitation		SHEET : 1 OF 2		ROUTE NO. : I-65 COUNTY : Clark		DATE STARTED : 02-25-21	
LOCATION : I-65 over Blue Lick Creek		DATE COMPLETED : 02-26-21		DES NO. : 1600744 (NB) & 1600750 (SB)		PROJECT NO. :		CTL PROJECT NO : 20050105IND		Boring Elevation : 490.0 feet	
Boring Depth : 33.5 feet		Boring Method : HSA		Hammer Efficiency : 90.7		Rig Type : CME-550 ATV		Driller/Inspector : JS/DW		Offset : 28.0 feet RL	
Station : 403+40		Casing Diameter : 3.25" I.D.		Temperature : 30° F		Core Size : 2" NO		Weather : Clear		Groundwater: Encountered at 17.3 feet	
At completion 17.3 feet											
Stratum Elevation	Sample Depth	SOIL/MATERIAL DESCRIPTION	Stratum Depth	Sample Number	SPT per 6"	SPT per 12"	Recovery (%)	Moisture Content (%)	Total Unit Weight (pcf)	Unclassified Compression (ksf)	Afterberg Limits
489.3	0.7	CEMENT CONCRETE (8") (Visual)									LL PL PI
2.5											
5.0											
7.5											
10.0											
12.5											
15.0											
17.4		Gray, Highly Weathered, Very Soft, SHALE									
18.5		Dark Brownish Grey, Thin Bedding, Slightly Weathered, Moderately Hard, SHALE									
20.0		18.6' Mechanical Break 19.1' J, 1", PL, VC, SR 19.2' J, 1", IR, VC, R 19.6' J, 1", PL, VC, SR 20' J, 1", PL, VC, SR									
21.5		21.5' J, 2", PL, VC, SR									
21.8		21.8' J, 1", PL, VC, s									
22.5		22.3' J, 1", PL, VC, SR									
Continued on next page											
CTL Engineering, Inc. Phone: 317-295-8650		BORING METHOD HSA - Hollow Stem Auger SFA - Solid Flight Auger RC - Rock Coring WD - Wash Drilling HA - Hand Auger		SAMPLING METHOD SS - Split Spoon Sample ST - Shelby Tube Sample CR - Rock Core Sample BS - Bag Sample AC - Auger Cuttings SBS - Subbase Sample		ABBREVIATIONS * - Hand Penetrometer LL - Liquid Limit PL - Plastic Limit PI - Plasticity Index DCP - Dynamic Cone Penetrometer Test					

BORING NO. TB-2 (CONT'D.)

TEST BORING RECORD											
CLIENT : Beam, Longest and Neff, LLC		BORING NO. : TB- 2		PROJECT : Bridge Rehabilitation		SHEET : 2 OF 2		ROUTE NO. : I-65 COUNTY : Clark		DATE STARTED : 02-25-21	
LOCATION : I-65 over Blue Lick Creek		DATE COMPLETED : 02-26-21		DES NO. : 1600744 (NB) & 1600750 (SB)		PROJECT NO. :		CTL PROJECT NO : 20050105IND		Boring Elevation : 490.0 feet	
Boring Depth : 33.5 feet		Boring Method : HSA		Hammer Efficiency : 90.7		Rig Type : CME-550 ATV		Driller/Inspector : JS/DW		Offset : 28.0 feet RL	
Station : 403+40		Casing Diameter : 3.25" I.D.		Temperature : 30° F		Core Size : 2" NO		Weather : Clear		Groundwater: Encountered at 18.0 feet	
At completion 17.3 feet											
Stratum Elevation	Sample Depth	SOIL/MATERIAL DESCRIPTION	Stratum Depth	Sample Number	SPT per 6"	SPT per 12"	Recovery (%)	Moisture Content (%)	Total Unit Weight (pcf)	Unclassified Compression (ksf)	Afterberg Limits
22.9'		J, 1", IR, VC, R									
24.3'		J, 2", PL, VC, SR									
25.0'		J, 1", PL, VC, SR									
25.3'		J, 3", IR, VC, R									
26.3'		J, 2", IR, VC, VR									
27.0'		J, 3", Wavy, VC, R									
27.5'		J, 1", PL, VC, SR									
28.5		Dark Brownish Grey, Thin Bedding, Slightly Weathered, Moderately Hard, SHALE (Trace Pyrite throughout the rock core)									
29.6'		J, 2", IR, VC, R									
30.0'		J, 2", PL, VC, S									
30.1'		J, 2", PL, VC, R									
30.9'		J, 1", PL, VC, SR									
31.7'		J, 3", Wavy, VC, SR									
32.8'		J, 4", PL, VC, SR									
33.2'		J, 3", IR, VC, SR									
33.3'		J, 3", PL, VC, SR									
Bottom of Boring at 33.5 feet											
Boring backfilled in accordance with INDOT requirements.											
CTL Engineering, Inc. Phone: 317-295-8650		BORING METHOD HSA - Hollow Stem Auger SFA - Solid Flight Auger RC - Rock Coring WD - Wash Drilling HA - Hand Auger		SAMPLING METHOD SS - Split Spoon Sample ST - Shelby Tube Sample CR - Rock Core Sample BS - Bag Sample AC - Auger Cuttings SBS - Subbase Sample		ABBREVIATIONS * - Hand Penetrometer LL - Liquid Limit PL - Plastic Limit PI - Plasticity Index DCP - Dynamic Cone Penetrometer Test					

BORING NO. TB-3

TEST BORING RECORD											
CLIENT : Beam, Longest and Neff, LLC		BORING NO. : TB- 3		PROJECT : Bridge Rehabilitation		SHEET : 1 OF 1		ROUTE NO. : I-65 COUNTY : Clark		DATE STARTED : 02-26-21	
LOCATION : I-65 over Blue Lick Creek		DATE COMPLETED : 02-26-21		DES NO. : 1600744 (NB) & 1600750 (SB)		PROJECT NO. :		CTL PROJECT NO : 20050105IND		Boring Elevation : 490.0 feet	
Boring Depth : 25.0 feet		Boring Method : HSA		Hammer Efficiency : 93.7		Rig Type : CME-550 ATV		Driller/Inspector : JS/DW		Offset : 28.0 feet RL	
Station : 404+07		Casing Diameter : 3.25" I.D.		Temperature : 25° F		Core Size : ---		Weather : Clear		Groundwater: Encountered at 18.0 feet	
At completion ---											
Stratum Elevation	Sample Depth	SOIL/MATERIAL DESCRIPTION	Stratum Depth	Sample Number	SPT per 6"	SPT per 12"	Recovery (%)	Moisture Content (%)	Total Unit Weight (pcf)	Unclassified Compression (ksf)	Afterberg Limits
489.3	0.7	CEMENT CONCRETE (8") (Visual)									LL PL PI
2.5											
5.0											
7.5											
10.0											
12.5											
13.5											
15.0											
17.5											
19.0											
20.0											
22.5											
25.0											
27.5											
30.0											
32.5											
35.0											
37.5											
40.0											
42.5											
45.0											
CTL Engineering, Inc. Phone: 317-295-8650		BORING METHOD HSA - Hollow Stem Auger SFA - Solid Flight Auger RC - Rock Coring WD - Wash Drilling HA - Hand Auger		SAMPLING METHOD SS - Split Spoon Sample ST - Shelby Tube Sample CR - Rock Core Sample BS - Bag Sample AC - Auger Cuttings SBS - Subbase Sample		ABBREVIATIONS * - Hand Penetrometer LL - Liquid Limit PL - Plastic Limit PI - Plasticity Index DCP - Dynamic Cone Penetrometer Test					

Note:
For Soil Boring Plan, see Sht.9.

RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____	INDIANA DEPARTMENT OF TRANSPORTATION		HORIZONTAL SCALE	BRIDGE FILE	
					N/A	165-016-04220 ENBL & ESBL	
DESIGNED: APL	DRAWN: MEN	CHECKED: RTW	CHECKED: APL	SOIL BORINGS LINE "Q"		VERTICAL SCALE	DESIGNATION
						N/A	1600744 (NB) & 1600750 (SB)
				DRAWING NO.	SHEETS		
					10	of	30
				CONTRACT	PROJECT		
					R-41529	1700135	

BORING NO. TB-3A

TEST BORING RECORD													
CLIENT : Beam, Longest and Neff, LLC			BORING NO. : TB- 3A										
PROJECT : Bridge Rehabilitation			SHEET : 1 OF 2										
ROUTE NO. : I-65 COUNTY : Clark			DATE STARTED : 03-01-21										
LOCATION : I-65 over Blue Lick Creek			DATE COMPLETED : 03-02-21										
DES NO. : 1600744 (NB) & 1600750 (SB)			PROJECT NO. :			CTL PROJECT NO : 20050105IND							
Boring Elevation : 490.0 feet		Boring Depth : 34.0 feet		Boring Method : HSA		Hammer : Automatic							
Latitude : -38.501821		Station : 403+87		Rig Type : CME-550 ATV		Hammer Efficiency : 90.7							
Longitude : -85.779707		Offset : 28.0 feet Rt		Driller/Inspector : JS/DW									
		Line : "Q"		Casing Diameter : 3.25" I.D.		Temperature : 40° F							
				Core Size : 2" NO		Weather : Clear							
GROUNDWATER: Encountered at 17.0 feet At completion 17.0 feet													
Stratum Elevation	Sample Depth	SOIL/MATERIAL DESCRIPTION	Stratum Depth	Sample Number	SPT per 6"	SPT per 12"	Recovery (%)	Moisture Content (%)	Total Unit Weight (pcf)	Unconfined Compression (ksf)	Afterberg Limits		
489.3	0.7	CEMENT CONCRETE (8") (Visual)									LL	PL	PI
Test boring performed through bridge deck. Creek encountered at 17 feet and bedrock encountered at 19 feet.													
Test boring performed through bridge deck. Creek encountered at 17 feet and bedrock encountered at 19 feet.													
473.0	17.0	Blue Lick Creek											
471.0	19.0	Dark Brownish Grey, Thin Bedding, Slightly Weathered, Moderately Hard, Moderately Fractured, SHALE											
		19.5', J,1', PL, VC, S											
		20.0', J,2', PL, VC, S											
		20.2', J,2', PL, VC, S											
		20.5', J,1', PL, VC, S											
		20.7', J,2', PL, VC, SR											
		20.7'-21.0' Diagonal/Vertical Fracture											
		21.3', J,1', PL, VC, SR											
		21.7'-21.85' Vertical Fracture											
		22.1' 2mm Coal seam											
		22.2', J, 1', PL, VC, SR											
Continued on next page													
CTL Engineering, Inc. Phone: 317-295-8650			BORING METHOD HSA - Hollow Stem Auger SFA - Solid Flight Auger RC - Rock Coring MD - Mud Drilling WD - Wash Drilling HA - Hand Auger			SAMPLING METHOD SS - Split Spoon Sample ST - Shelby Tube Sample CR - Rock Core Sample BS - Bag Sample AC - Auger Cuttings SBS - Subbase Sample			ABBREVIATIONS * - Hand Penetrometer LL - Liquid Limit PL - Plastic Limit PI - Plasticity Index DCP - Dynamic Cone Penetrometer Test				

BORING NO. TB-3A (CONT'D.)

TEST BORING RECORD													
CLIENT : Beam, Longest and Neff, LLC			BORING NO. : TB- 3A										
PROJECT : Bridge Rehabilitation			SHEET : 2 OF 2										
SOIL/MATERIAL DESCRIPTION													
466.0		22.3', J, 1', PL, VC, SR											
		23.4', J, 2', PL, VC, SR											
25.0		Dark Brownish Grey, Thin Bedding, Slightly Weathered, Moderately Hard, SHALE (Pyrite appears throughout the sample, but gets more prominent with depth)	24.0										
		25.7', J, 3', IR, VC, R											
		26.3', Mechanical Break											
		26.8', Mechanical Break											
		27.0', J, 3', PL, VC, SR											
		27.3', Mechanical Break											
		28.8', Mechanical Break											
		29.8', J, 3', PL, VC, S											
		29.9', J, 2', PL, VC, SR											
		30.2', Mechanical Break											
		30.5', Mechanical Break											
		30.8', J,2', PL, VC, S											
		31.9', 2mm vein of coal(maybe) Reacts to HCL											
		32.6', Mechanical Break											
		32.7' J, 1', PL, VC, S											
		33.2', Mechanical Break											
456.0		Bottom of Boring at 34.0 feet	34.0										
Boring backfilled in accordance with INDOT requirements and pavement restored with concrete patch.													
CTL Engineering, Inc. Phone: 317-295-8650			BORING METHOD HSA - Hollow Stem Auger SFA - Solid Flight Auger RC - Rock Coring MD - Mud Drilling WD - Wash Drilling HA - Hand Auger			SAMPLING METHOD SS - Split Spoon Sample ST - Shelby Tube Sample CR - Rock Core Sample BS - Bag Sample AC - Auger Cuttings SBS - Subbase Sample			ABBREVIATIONS * - Hand Penetrometer LL - Liquid Limit PL - Plastic Limit PI - Plasticity Index DCP - Dynamic Cone Penetrometer Test				

BORING NO. TB-4

TEST BORING RECORD													
CLIENT : Beam, Longest and Neff, LLC			BORING NO. : TB- 4										
PROJECT : Bridge Rehabilitation			SHEET : 1 OF 1										
SOIL/MATERIAL DESCRIPTION													
489.8		TOPSOIL (2") (Visual)	0.2										
		2.5'											
		5.0'											
		6.4 feet After 24 hours											
		Gray and Brown, Moist, Soft to SHIF, SILTY CLAY LOAM A-6, As Lab 1									6.463		
		7.5'									7.0%		
		10.0'											
		12.5'											
476.0		Gray, Moist, Very Soft, SILT (Visual)	13.5										
		15.0'											
		17.0'											
473.0		Gray, Highly Weathered, Soft, SHALE	17.0										
471.7		Bottom of Boring at 18.3 feet	18.3										
Auger Refusal at 18.3 feet Boring backfilled in accordance with INDOT requirements.													
CTL Engineering, Inc. Phone: 317-295-8650			BORING METHOD HSA - Hollow Stem Auger SFA - Solid Flight Auger RC - Rock Coring MD - Mud Drilling WD - Wash Drilling HA - Hand Auger			SAMPLING METHOD SS - Split Spoon Sample ST - Shelby Tube Sample CR - Rock Core Sample BS - Bag Sample AC - Auger Cuttings SBS - Subbase Sample			ABBREVIATIONS * - Hand Penetrometer LL - Liquid Limit PL - Plastic Limit PI - Plasticity Index DCP - Dynamic Cone Penetrometer Test				

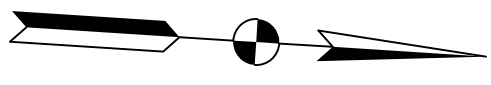
Note:
For Soil Boring Plan, see Sht.9.

RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____	INDIANA DEPARTMENT OF TRANSPORTATION		HORIZONTAL SCALE	BRIDGE FILE	
					N/A	165-016-04220 ENBL & ESBL	
DESIGNED: APL	DRAWN: MEN	CHECKED: RTW	CHECKED: APL	SOIL BORINGS LINE "Q"		VERTICAL SCALE	DESIGNATION
						N/A	1600744 (NB) & 1600750 (SB)
				DRAWING NO.	SHEETS		
				CONTRACT	11	of 30	
				R-41529	PROJECT		
					1700135		

CURVE # 1
 PI = 401+37.60 "PR-Q"
 Delta = 5°37'43" LT
 D = 0°30'00"
 R = 11459.16'
 T = 563.30
 L = 1125.70'
 E = 7.04'

Survey 220 of
 the Illinois Grant

CURVE # 1
 PI = 405+34.87 "Q"
 Delta = 9°35'00" LT
 D = 0°30'00"
 R = 11459.16'
 T = 960.57
 L = 1916.67'
 E = 40.19'

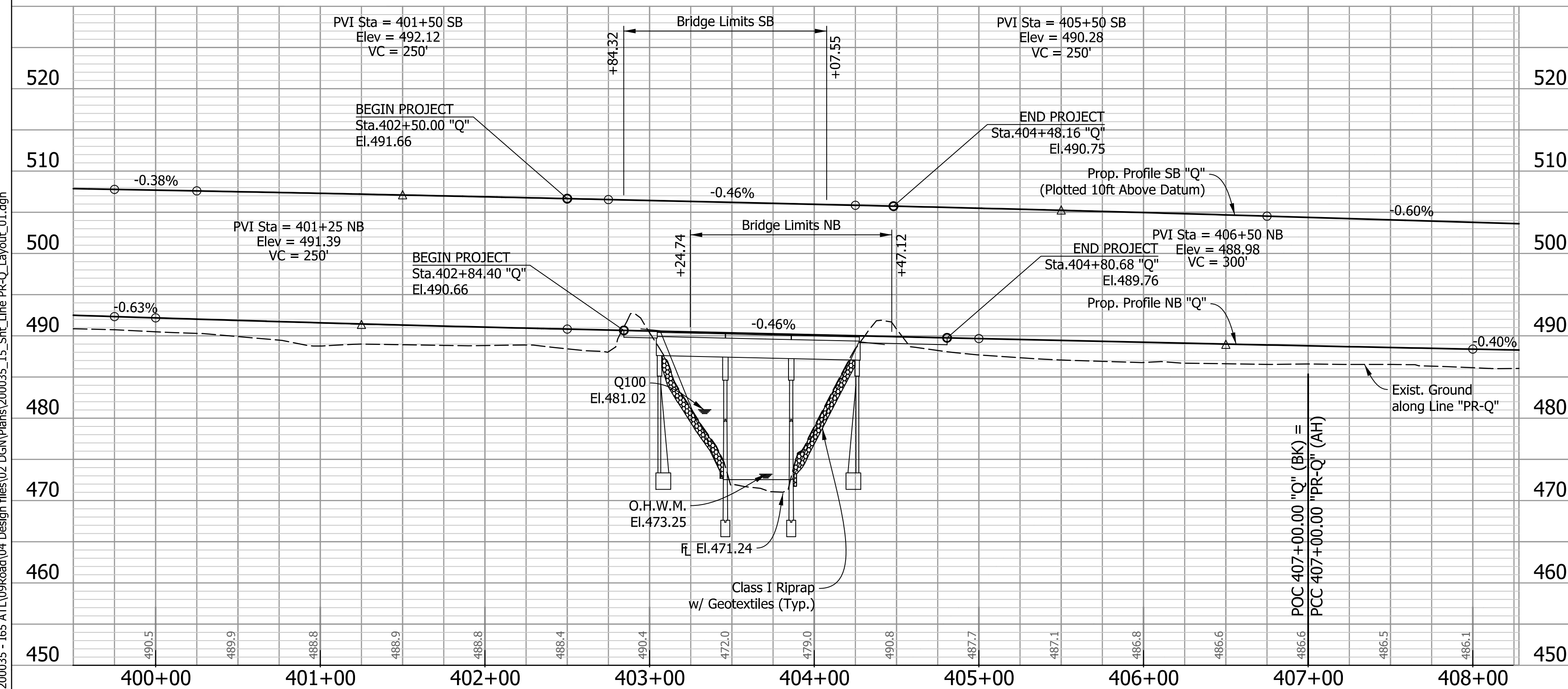
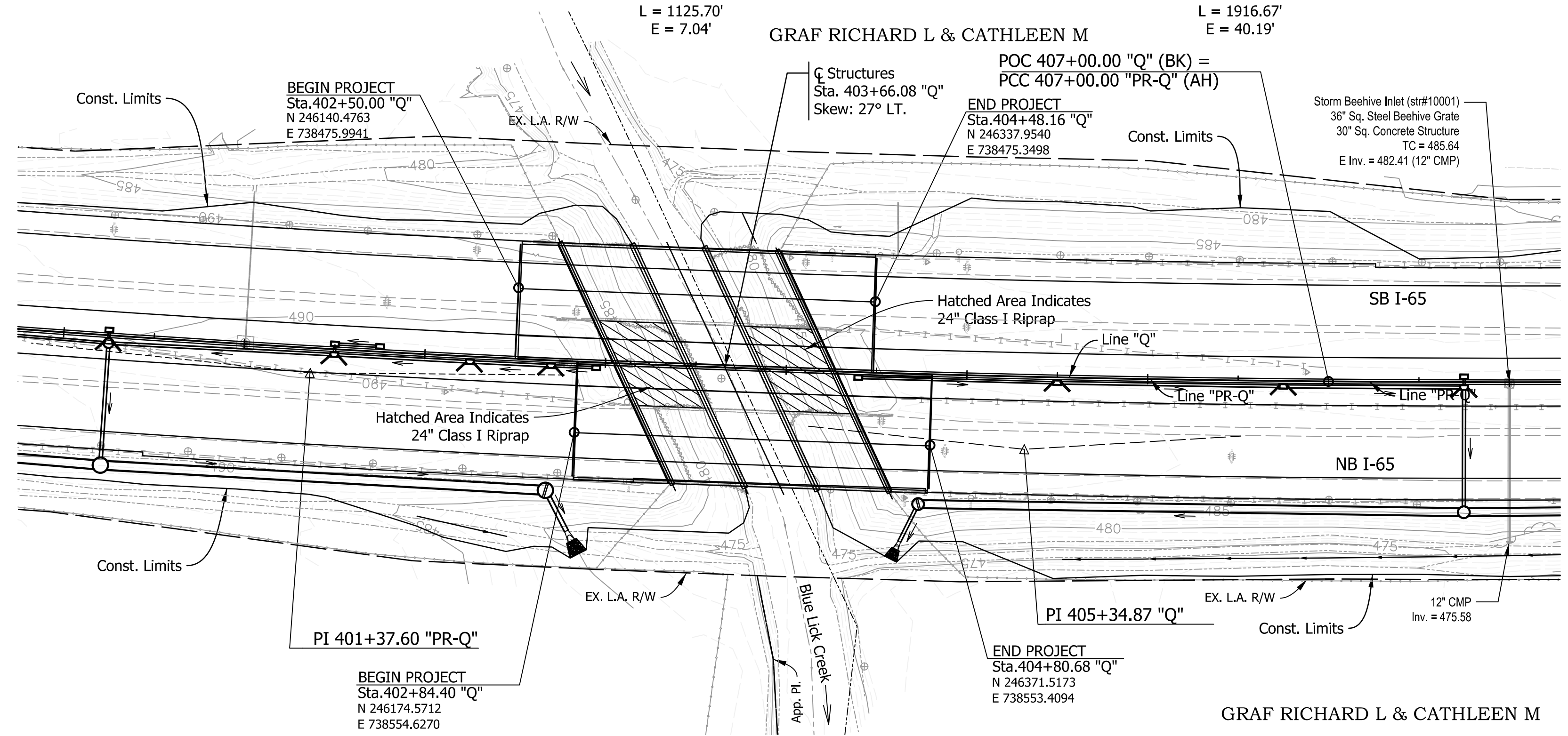


EXISTING STRUCTURE

The existing structures (165-016-04220 DNBL & DSBL) are twin three span concrete girder structures (40'-0", 40'-0", 40'-0") with 39'-6" clear roadway width built circa 1958. (To Be Rehabilitated)

HYDRAULIC SCOUR DATA

DRAINAGE AREA	15.30 sq. mi.
Q100 Discharge	5,540 cfs.
Q100 Elevation	481.02 ft.
Q100 Contraction Scour	15.88 ft.
Q100 Total Scour	21.77 ft.
Flowline Elevation	471.24 ft.
Q100 Low Scour Elevation	449.47 ft.
Q100 Max Velocity	12.16 ft/s
Q100 Avg Velocity	8.69 ft/s



**TWIN CONTINUOUS COMPOSITE PRESTRESSED
 CONCRETE BOX BEAM BRIDGES
 3 SPANS: 40'-0", 40'-0", 40'-0"
 62'-7" CLEAR ROADWAY SKEW: 27° Lt.
 I-65 OVER BLUE LICK CREEK
 CLARK COUNTY**

Notes:
 All Topo described from Line "Q".
 Line "PR-Q" to be Constructed.
 See Geometric Tie Sheets for Line "Q".
 See Plan and Profile Sheets for Reference Points.

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: AMD	DRAWN: JJP	
CHECKED: DJG	CHECKED: DJG	

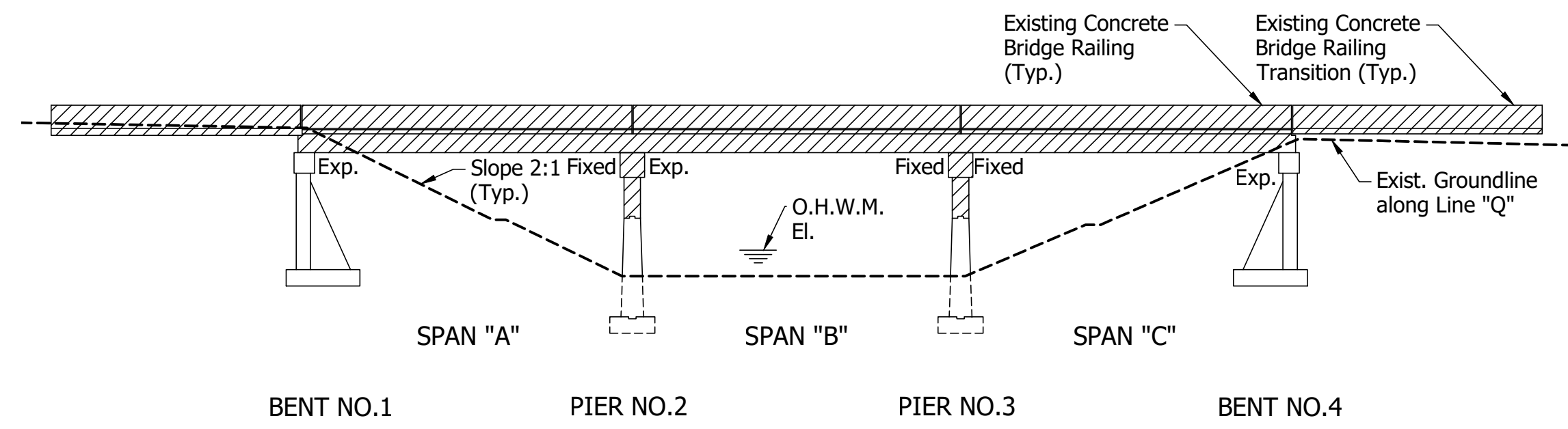
INDIANA
 DEPARTMENT OF TRANSPORTATION

 LAYOUT SHEET

HORIZONTAL SCALE 1" = 50'	BRIDGE FILE I65-016-04220 ENBL & ESBL
VERTICAL SCALE 1" = 10'	DESIGNATION 1600744 (NB) & 1600750 (SB)
SURVEY BOOK C1 of C18	SHEETS 12 of 30
CONTRACT R-41529	PROJECT 1700135

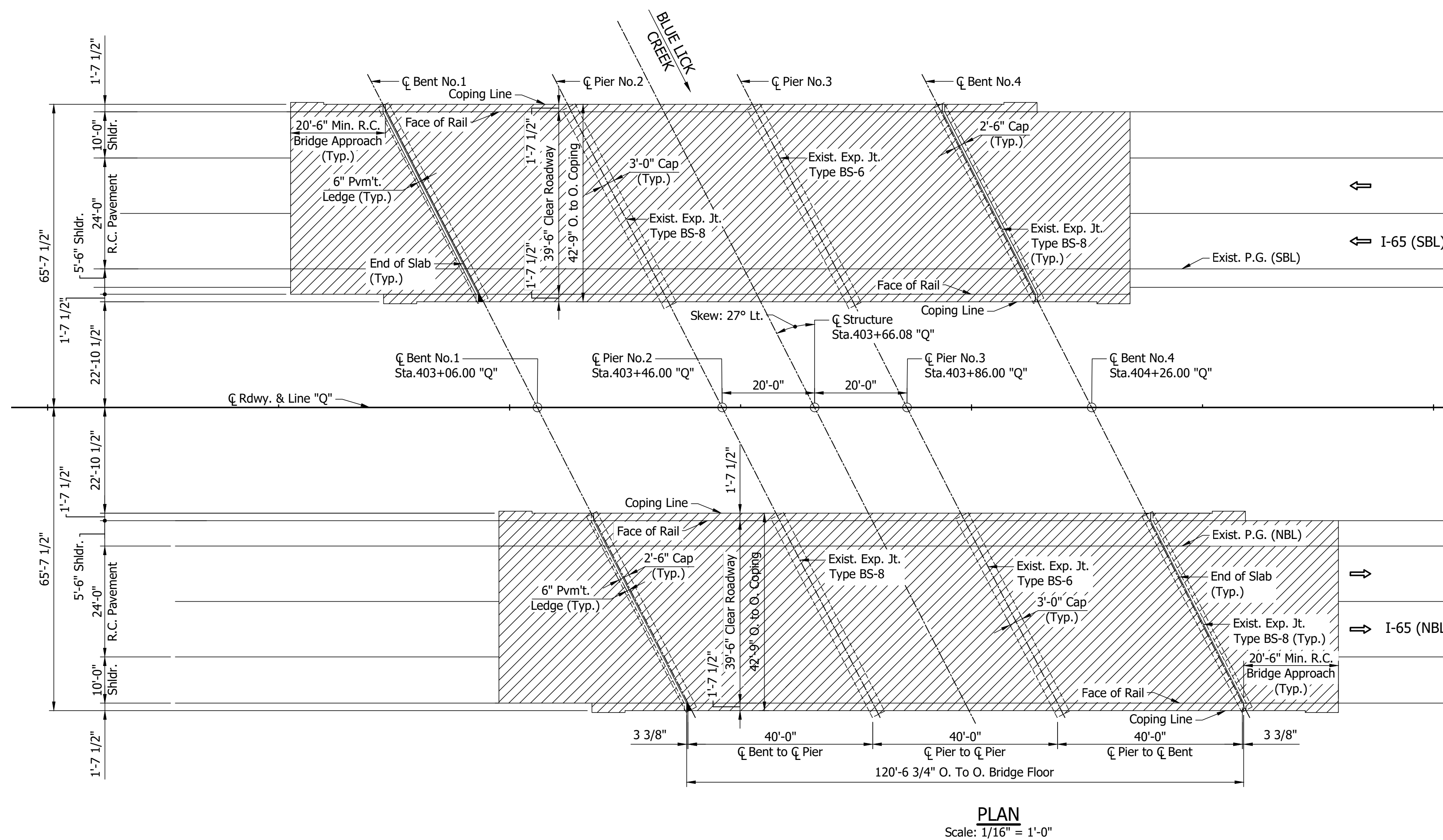
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STRUCTURE BUILT ON A -0.44% GRADE



ELEVATION
Scale: 1/16" = 1'-0"

Notes:
Hatched areas indicate portions to be removed.
Portions of Hammerhead Piers to be removed on SBL only.



PLAN
Scale: 1/16" = 1'-0"



Note:
For General Notes and Typical Sections, see Dwg.xx.

**TWIN CONTINUOUS PRESTRESSED
CONCRETE BOX BEAM BRIDGES**
3 SPANS: 40'-0", 40'-0", 40'-0"
39'-6" CLEAR ROADWAYS SKEW: 27° LT.
I-65 OVER BLUE LICK CREEK
CLARK COUNTY

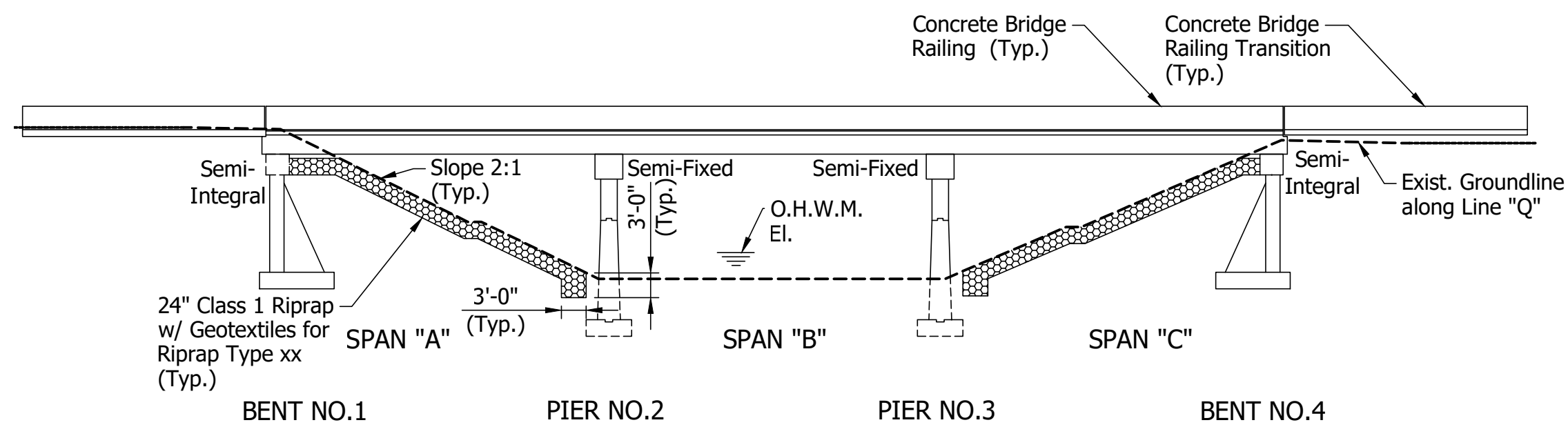
RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: APL _____	DRAWN: NW _____	
CHECKED: RTW _____	CHECKED: APL _____	

INDIANA
DEPARTMENT OF TRANSPORTATION

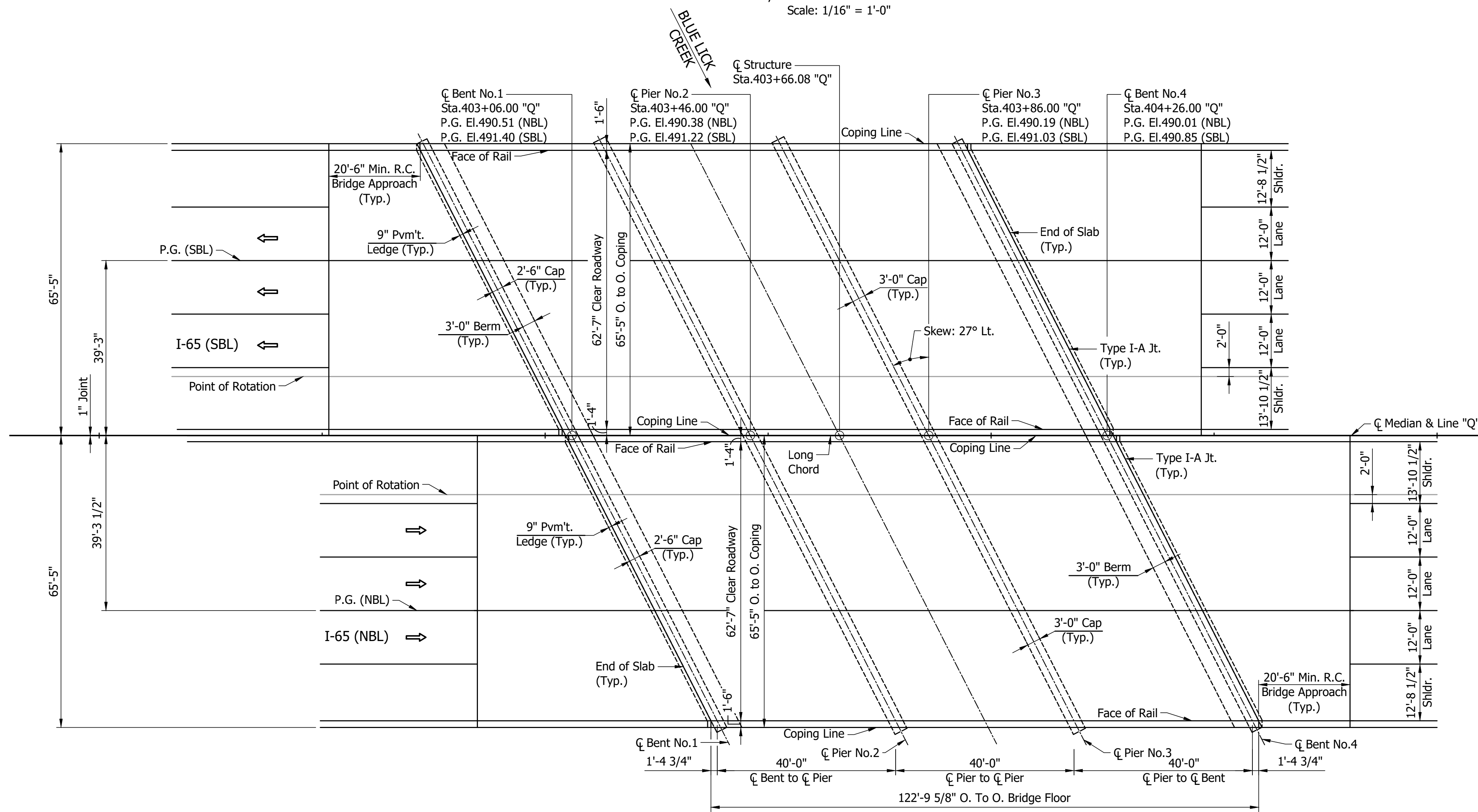
GENERAL PLAN
EXISTING

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I65-016-04220 ENBL & ESBL
VERTICAL SCALE	DESIGNATION
AS NOTED	1600744 (NB) & 1600750 (SB)
DRAWING NO.	SHEETS
C2 of C18	13 of 30
CONTRACT	PROJECT
R-41529	1700135

STRUCTURE BUILT ON A -0.46% GRADE



ELEVATION
SBL SHOWN, NBL SIMILAR BY OPPOSITE HAND
Scale: 1/16" = 1'-0"



PLAN
Scale: 1/16" = 1'-0"



Note:
For General Notes and Typical Sections, see Dwg.xx.

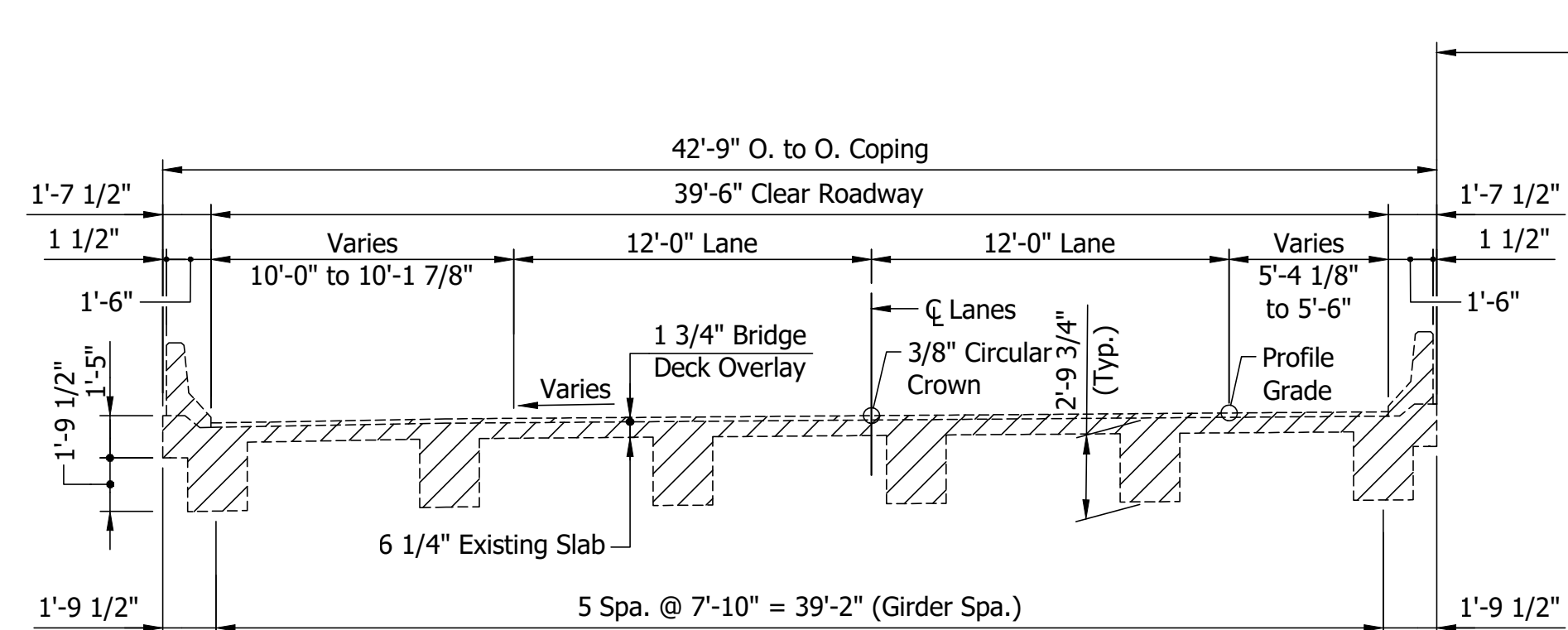
TWIN CONTINUOUS COMPOSITE PRESTRESSED
CONCRETE BOX BEAM BRIDGES
3 SPANS: 40'-0", 40'-0", 40'-0"
62'-7" CLEAR ROADWAYS SKEW: 27° LT.
I-65 OVER BLUE LICK CREEK
CLARK COUNTY

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: APL	DRAWN: NW	
CHECKED: RTW	CHECKED: APL	

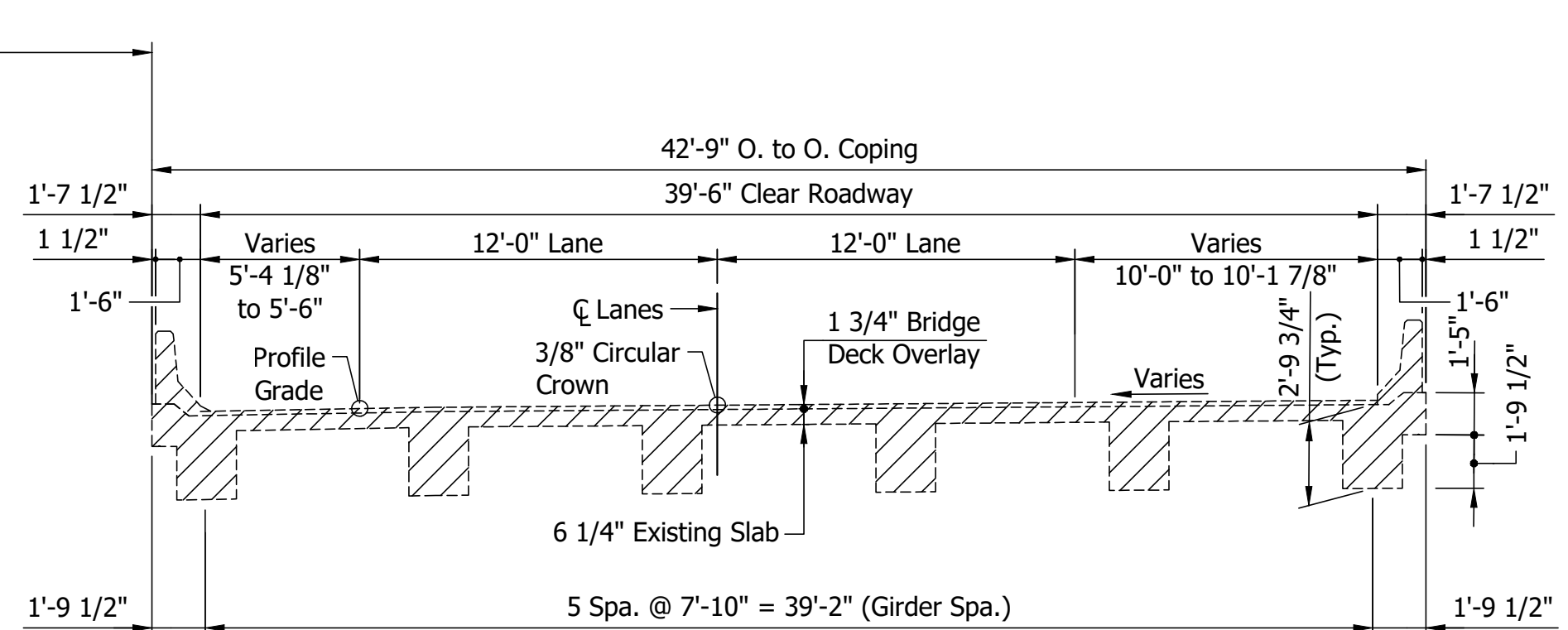
INDIANA
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
PROPOSED

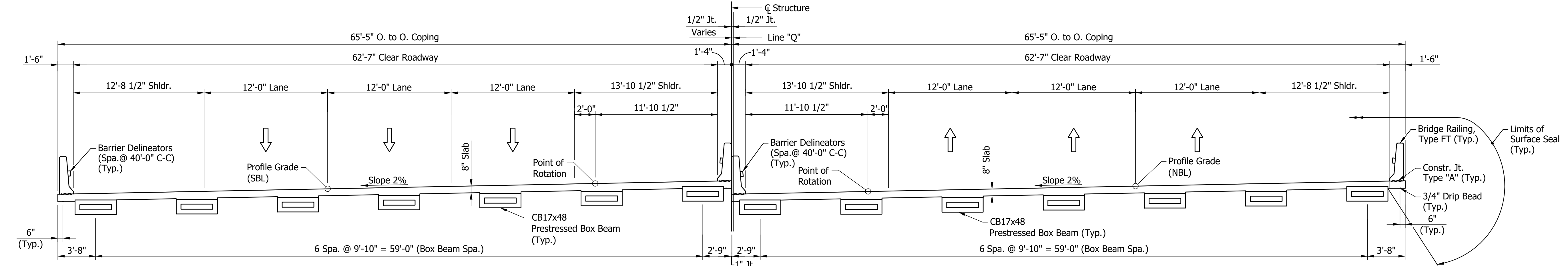
HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I65-016-04220 ENBL & ESBL
VERTICAL SCALE	DESIGNATION
AS NOTED	1600744 (NB) & 1600750 (SB)
DRAWING NO.	SHEETS
C3 of C18	14 of 30
CONTRACT	PROJECT
R-41529	1700135



TYPICAL SECTION - EXISTING
Scale: 3/16" = 1'-0"



Note:
Hatched area indicates portions to be removed.



TYPICAL SECTION - PROPOSED
Scale: 3/16" = 1'-0"

GENERAL NOTES

Reinforcing steel covering shall be 2 1/2" in top and 1" minimum in bottom of floor slabs, 3" in top of footings and 4" in bottom of footings, and 2" in all other parts unless noted.

Where new work is to be fitted to the old work, the Contractor shall check and verify all dimensions, elevations and conditions in the field and report any errors or discrepancies to the Engineer and assume responsibility for their correctness and the fit of the new construction to the existing structure.

The hand chipping and cleaning of deteriorated substructure areas shall be as directed by the Engineer. It is the intent of these plans that all such deteriorated concrete be removed and should there be any doubt as to the quality of the concrete, removal shall continue until perfectly sound concrete is exposed.

Portions of present structure to be removed.

Concrete Patching for interior piers estimates at xx Sft for Pier No.x and xx Sft for all others. Concrete Patching for Bents No.1 and No.4 estimates at xx Sft each. (NBL and SBL same.)

The top of roadway surface from coping line to coping line, all exposed faces of concrete railings, face of deck copings, underside of bridge floor from coping to outside face of exterior beam or girder, all exposed top of piers, surfaces of wingwalls and abutments, and tops of approach slabs to be sealed in accordance with Article 702.21 of Specifications.

(Estimated Quantity = Sft-NBL)
(Estimated Quantity = Sft-SBL)

Data shown for existing bridge and subsequent geometry for proposed structure taken from original structure plans.

Plans for existing structure are on file in the Research and Documents Section at the Indiana Department of Transportation, as Bridge File No.165-016-04220 NBL & SBL and are available upon request. The existing bridge was constructed under Contract No. B-4444.

CONSTRUCTION LOADING

The exterior beam has been checked for strength, deflection, and overturning using the construction loads shown below. Cantilever overhang brackets were assumed for support of the deck overhang past the edge of exterior beam. The finishing machine was assumed to be supported 6 inches outside the vertical coping form. The top overhang brackets were assumed to be located 6 inches past the edge of the vertical coping form. The bottom overhang brackets were assumed to be braced against the side of the box beam.

- DECK FALSEWORK LOADS:**
Designed for 15 psf for permanent metal stay-in-place deck forms, removable deck forms, and 2-ft. exterior walkway.
- CONSTRUCTION LIVE LOAD:**
Designed for 20 psf extending 2 ft. past the edge of coping and 75 plf vertical force applied at a distance of 6 inches outside the face of coping over a 30-ft. length of the deck centered with the finishing machine.
- FINISHING-MACHINE LOAD:**
4,500 lbs distributed over 10 ft. along the coping.
- WIND LOAD:**
Designed for 70 mph horizontal wind loading in accordance with AASHTO LRFD 3.8.1.

SEISMIC DATA

AASHTO Guide Design Specifications for LRFD Seismic Bridge Design
Seismic Zone
S1 =
Site Class
Fv =

DESIGN DATA

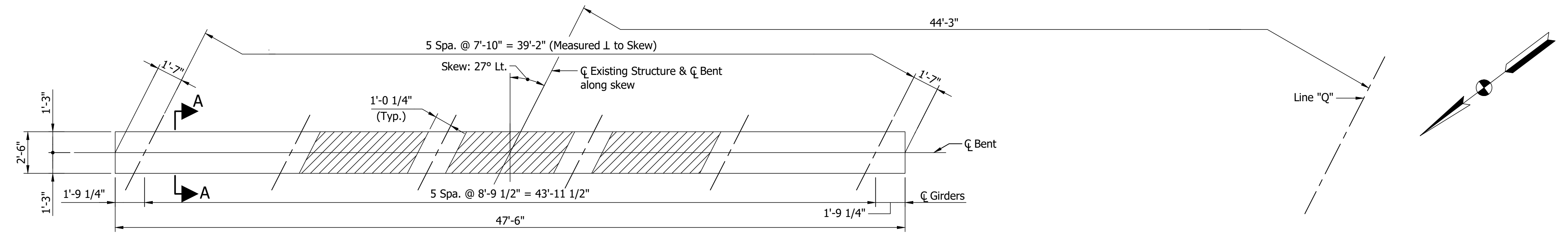
- LIVE LOAD**
Designed for HL-93 loading, in accordance with the 2018 AASHTO LRFD Bridge Design Specifications.
- DEAD LOAD**
Actual weight plus 35 psf (composite) for future wearing surface and 15 psf (non-composite) for permanent metal deck forms.
- FLOOR SLAB**
Designed for HL-93 Loading with a 1/2" sacrificial wearing surface.
- DESIGN STRENGTHS**
To be in accordance with 2018 AASHTO LRFD Bridge Design Specifications.
- PRESTRESSED CONCRETE, NORMAL WEIGHT:**
f_c=7,000 psi @ 28 days
Initial f_c=6,000 psi @ Release of Strands
- PRESTRESSING STRANDS:**
0.5" Ø 7 Wire Special LoLax Strands (A_s=0.167 in²)
Min. Tensile Strength=270,000 psi
Initial Pull=33,800 lbs. per strand
- CONCRETE:**
Class "C": f_c=4,000 psi
Class "B": f_c=3,000 psi
Class "A": f_c=3,500 psi
- REINFORCING STEEL:**
Grade 60: f_y=60,000 psi

TWIN CONTINUOUS COMPOSITE PRESTRESSED CONCRETE BOX BEAM BRIDGES
3 SPANS: 40'-0", 40'-0", 40'-0"
62'-7" CLEAR ROADWAYS SKEW: 27° LT.
I-65 OVER BLUE LICK CREEK
CLARK COUNTY

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: APL	DRAWN: NW	
CHECKED: RTW	CHECKED: APL	

INDIANA DEPARTMENT OF TRANSPORTATION	
GENERAL PLAN	
TYPICAL SECTIONS	

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I65-016-04220 ENBL & ESBL
VERTICAL SCALE	DESIGNATION
AS NOTED	1600744 (NB) & 1600750 (SB)
DRAWING NO.	SHEETS
C4 of C18	15 of 30
CONTRACT	PROJECT
R-41529	1700135

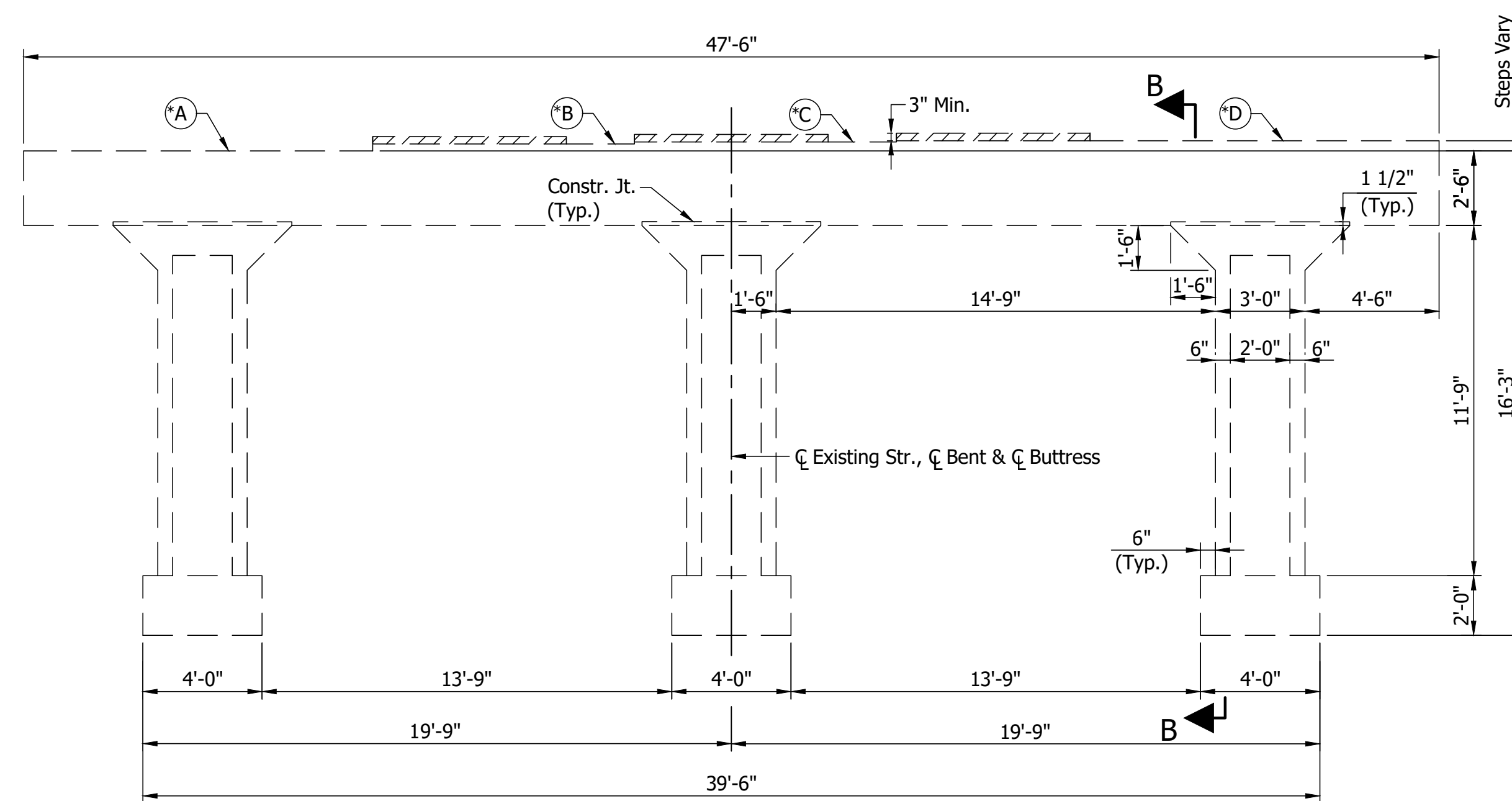


CAP PLAN
NORTHBOUND SHOWN, SOUTHBOUND SIMILAR BY OPPOSITE HAND
Scale: 1/4" = 1'-0"

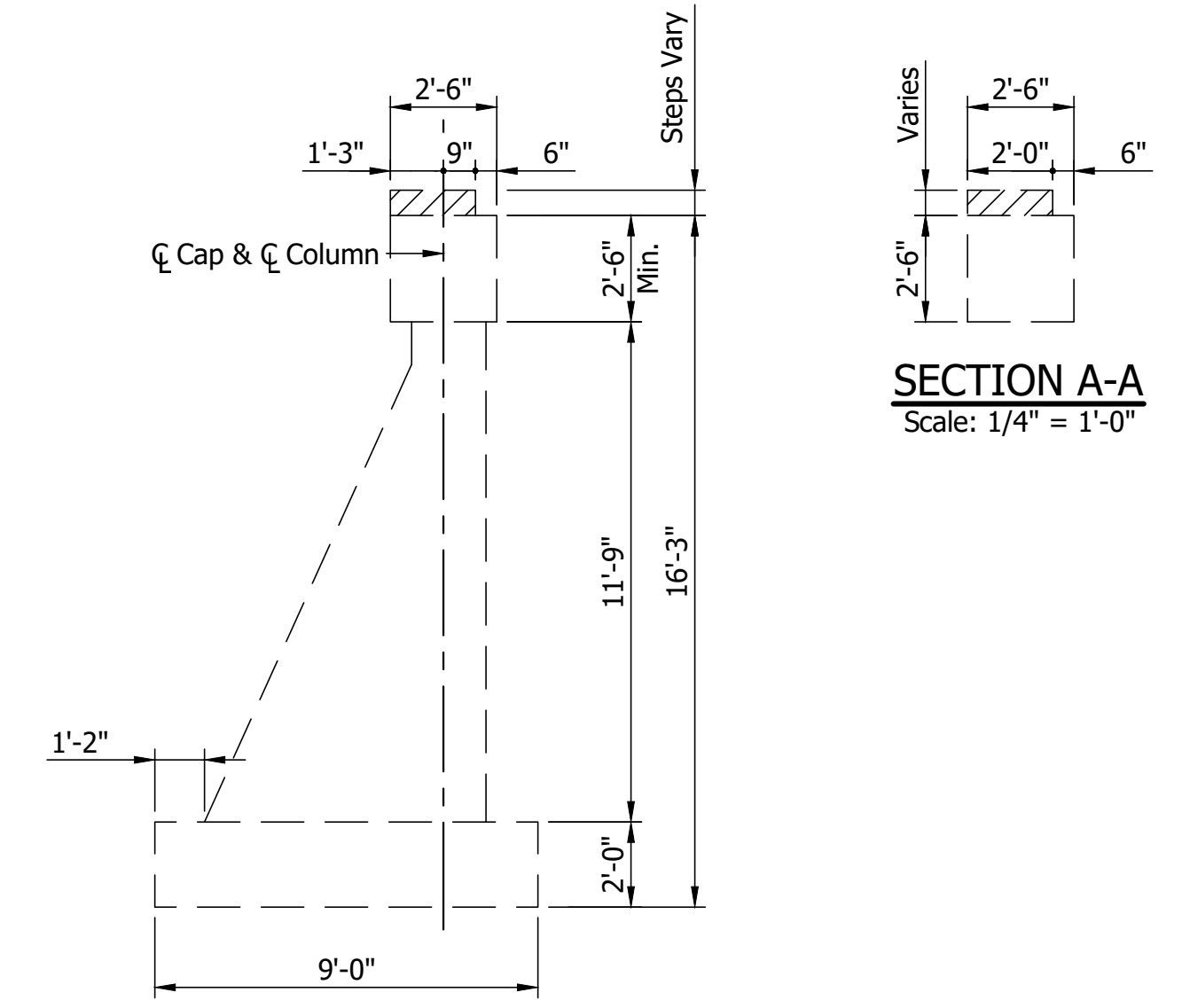
Note:
Hatched Areas indicate portions to be removed.

TABLE OF ELEVATIONS		
ELEVATION POINT	BENT NO.1	
	SOUTHBOUND	NORTHBOUND
"A"	486.94	487.13
"B"	487.17	487.26
"C"	487.24	487.34
"D"	487.28	487.12

* Contractor shall verify all existing bridge seat elevations.



ELEVATION
NORTHBOUND SHOWN, SOUTHBOUND SIMILAR BY OPPOSITE HAND
Scale: 1/4" = 1'-0"



SECTION B-B
Scale: 1/4" = 1'-0"

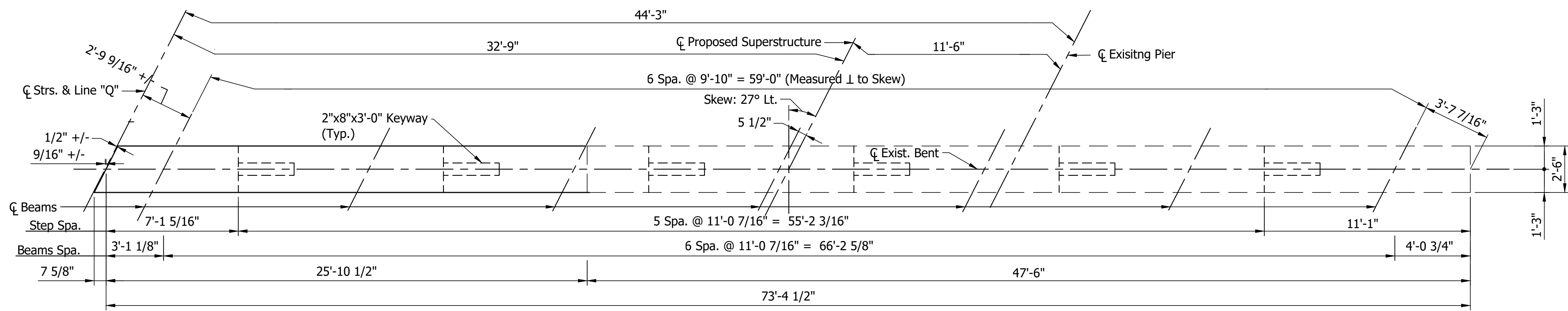
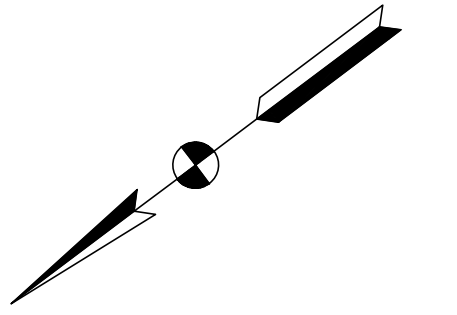
Notes:
For General Notes, see Dwg.xx.
For Reconstruction Details, see Dwgs.xx - xx.

RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: APL _____	DRAWN: NW _____	
CHECKED: RTW _____	CHECKED: APL _____	

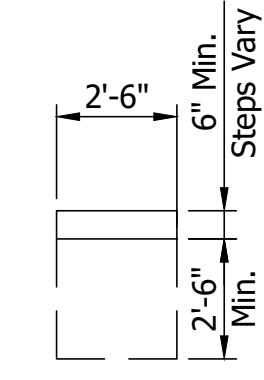
**INDIANA
DEPARTMENT OF TRANSPORTATION**

**BENT NO. 1
REMOVAL DETAILS**

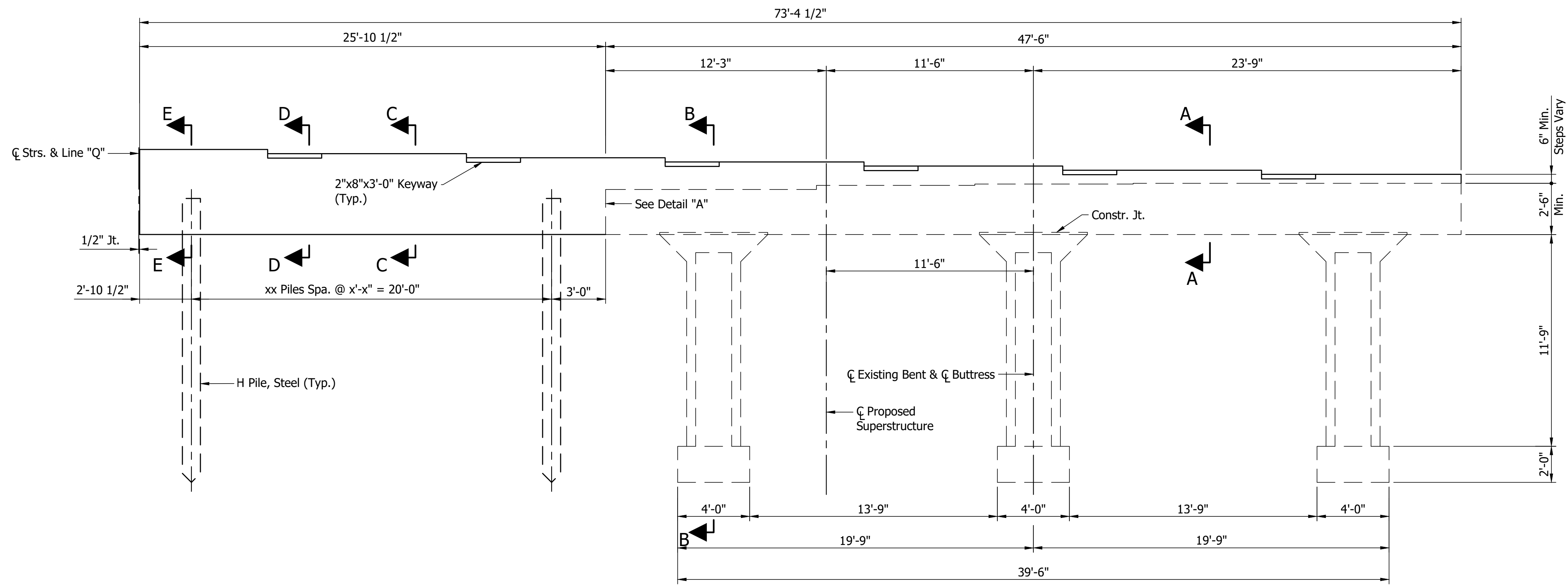
HORIZONTAL SCALE	BRIDGE FILE	
AS NOTED	I65-016-04220 ENBL & ESBL	
VERTICAL SCALE	DESIGNATION	
AS NOTED	1600744 (NB) & 1600750 (SB)	
DRAWING NO.	SHEETS	
C5 of C18	16	of 30
CONTRACT	PROJECT	
R-41529	1700135	



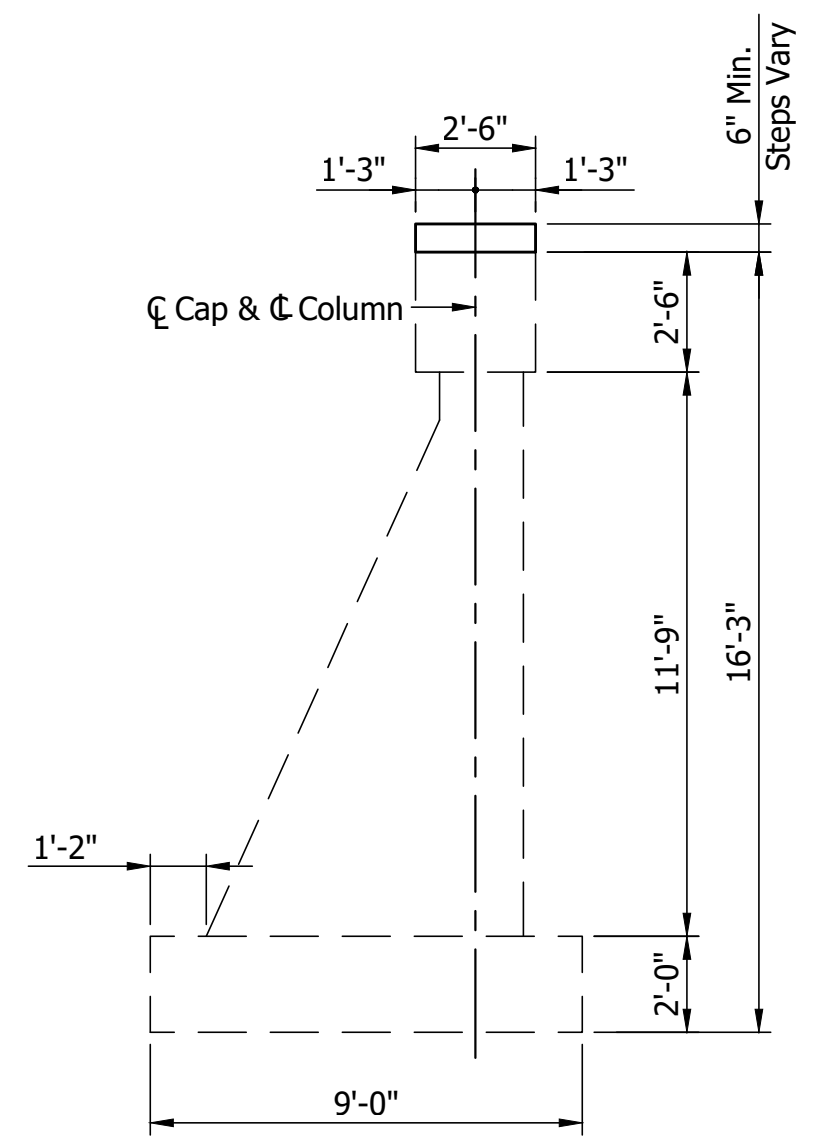
CAP PLAN
(SOUTHBOUND)
Scale: 1/4" = 1'-0"



SECTION A-A
Scale: 1/4" = 1'-0"



ELEVATION
(SOUTHBOUND)
Scale: 1/4" = 1'-0"



SECTION B-B
Scale: 1/4" = 1'-0"

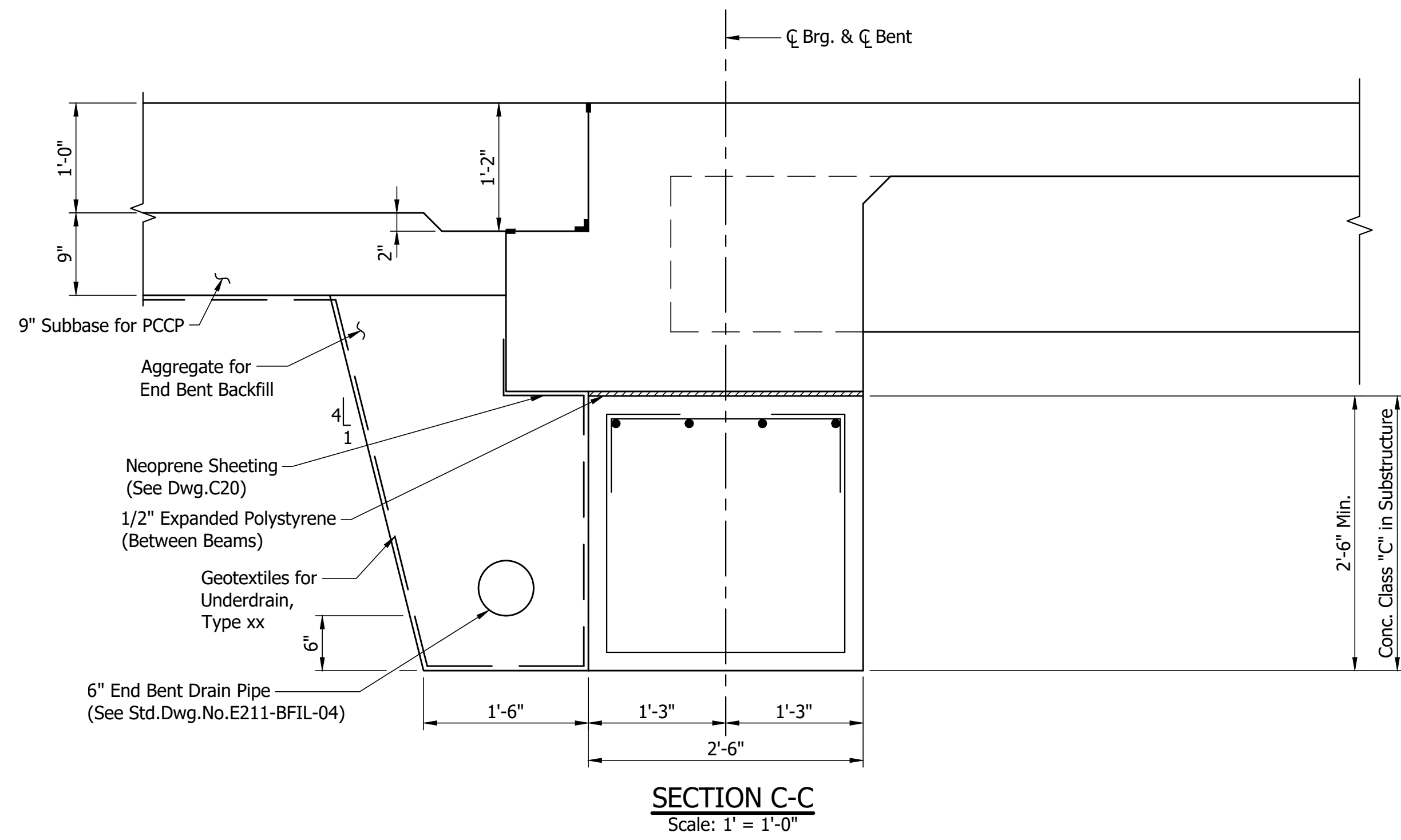
Notes:
 For General Notes, see Dwg.xx.
 For Type "A" Construction Joint, see Std.Dwg.No. E702-CJTA-01.
 For Sections C-C, D-D, E-E and additional notes, see Dwg.xx.
 For Detail "A", see Dwg.xx.

RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: APL _____	DRAWN: NW _____	
CHECKED: RTW _____	CHECKED: APL _____	

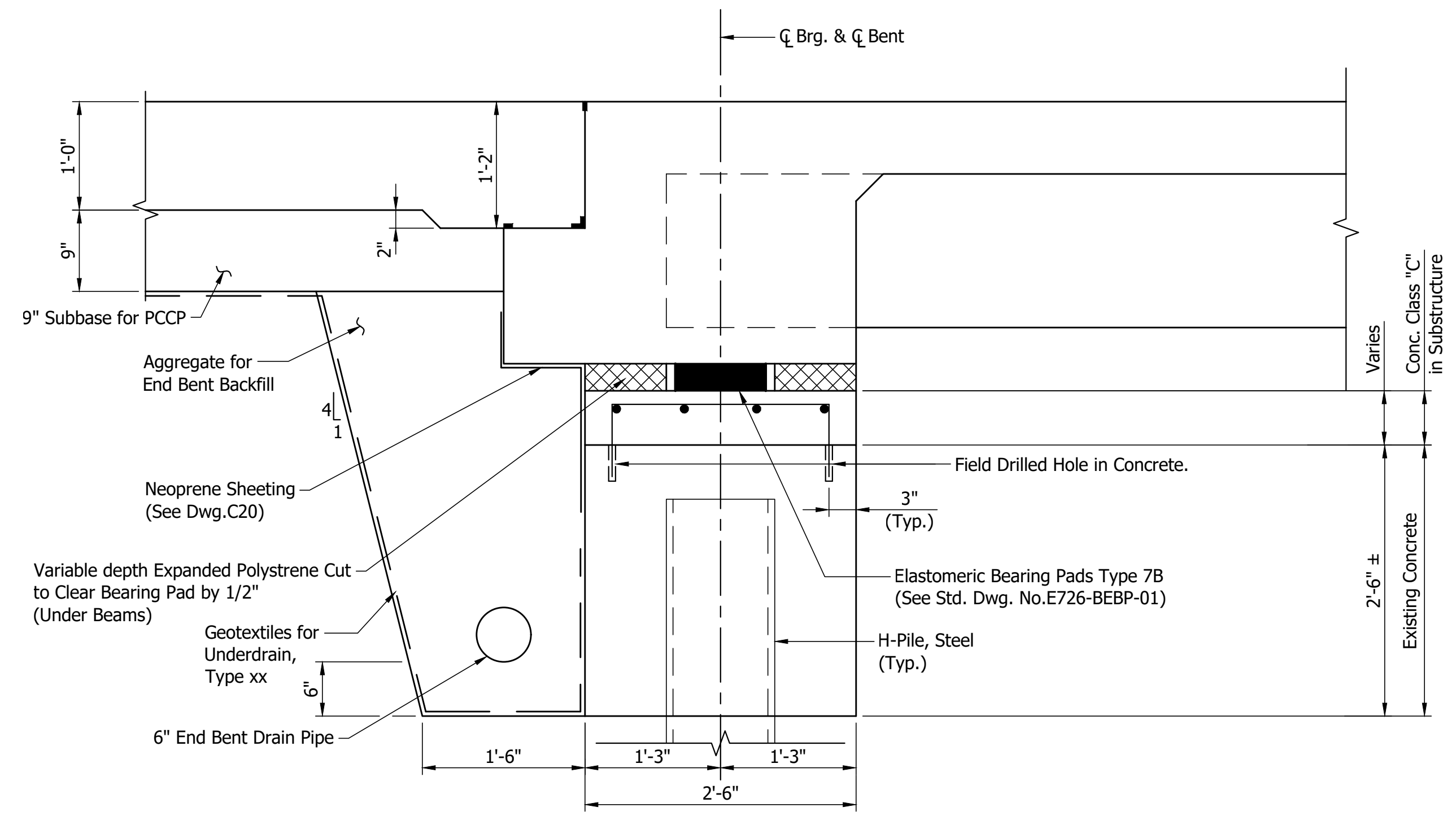
INDIANA
DEPARTMENT OF TRANSPORTATION

BENT NO.1
SBL RECONSTRUCTION DETAILS

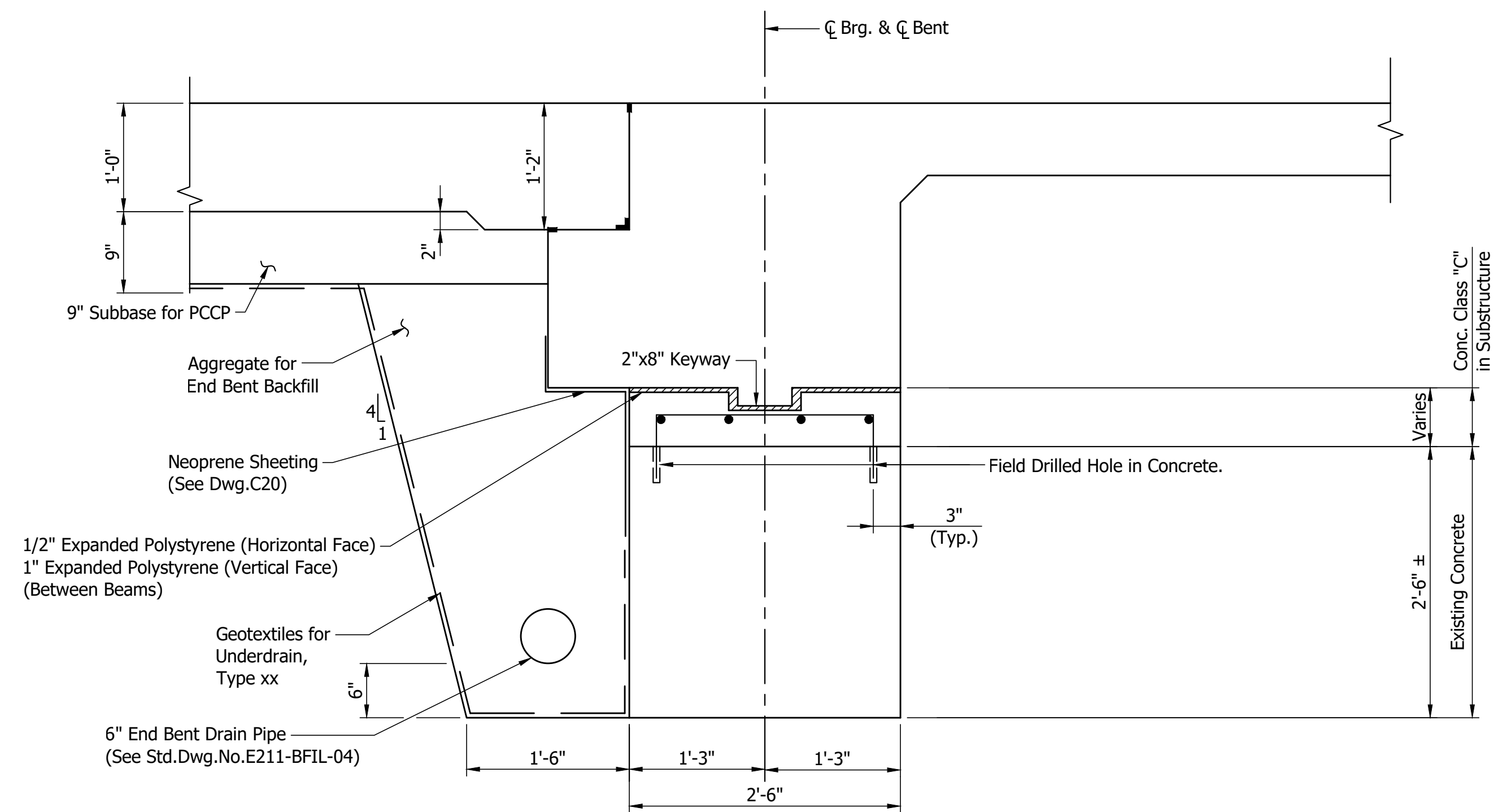
HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I65-016-04220 ENBL & ESBL
VERTICAL SCALE	DESIGNATION
AS NOTED	1600744 (NB) & 1600750 (SB)
DRAWING NO.	SHEETS
C6 of C18	18 of 30
CONTRACT	PROJECT
R-41529	1700135



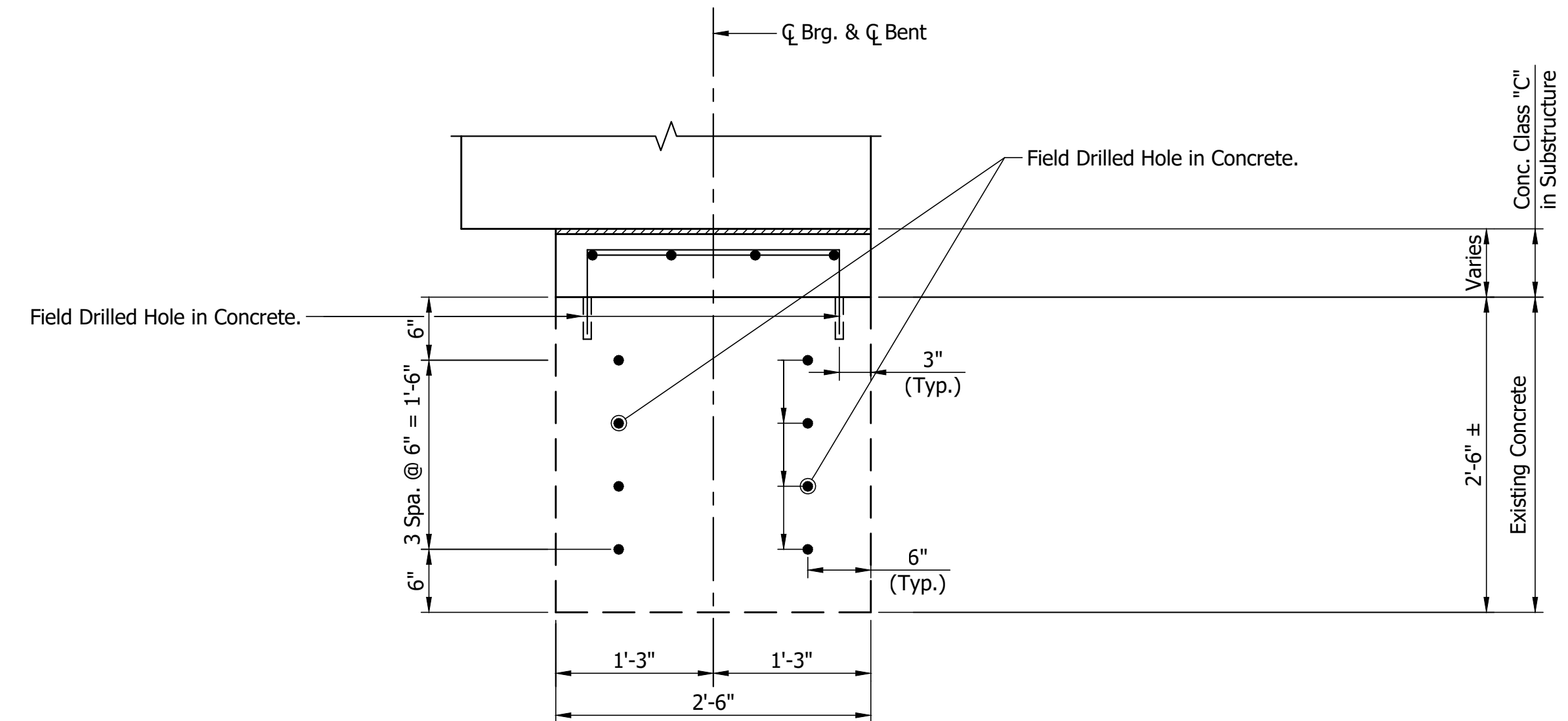
SECTION C-C
Scale: 1' = 1'-0"



SECTION E-E
Scale: 1' = 1'-0"



SECTION D-D
Scale: 1' = 1'-0"



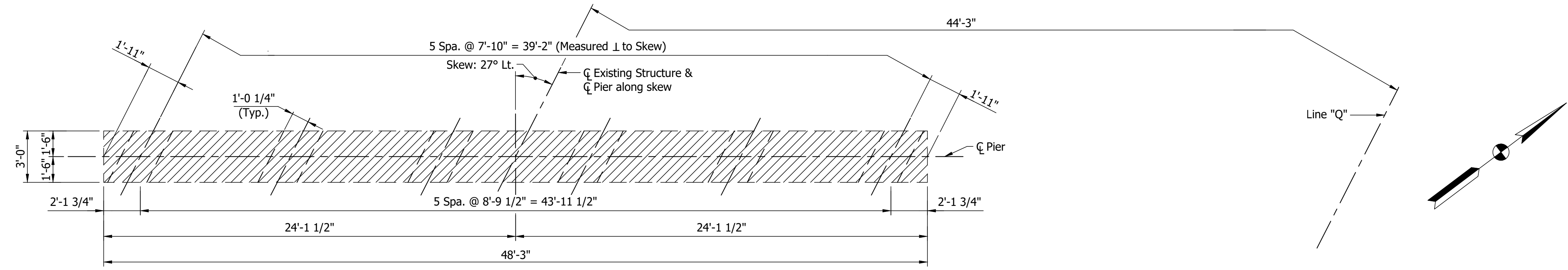
DETAIL "A"
Scale: 1' = 1'-0"

RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: APL _____	DRAWN: NW _____	
CHECKED: RTW _____	CHECKED: APL _____	

INDIANA
DEPARTMENT OF TRANSPORTATION

BENT NO. 1 DETAILS

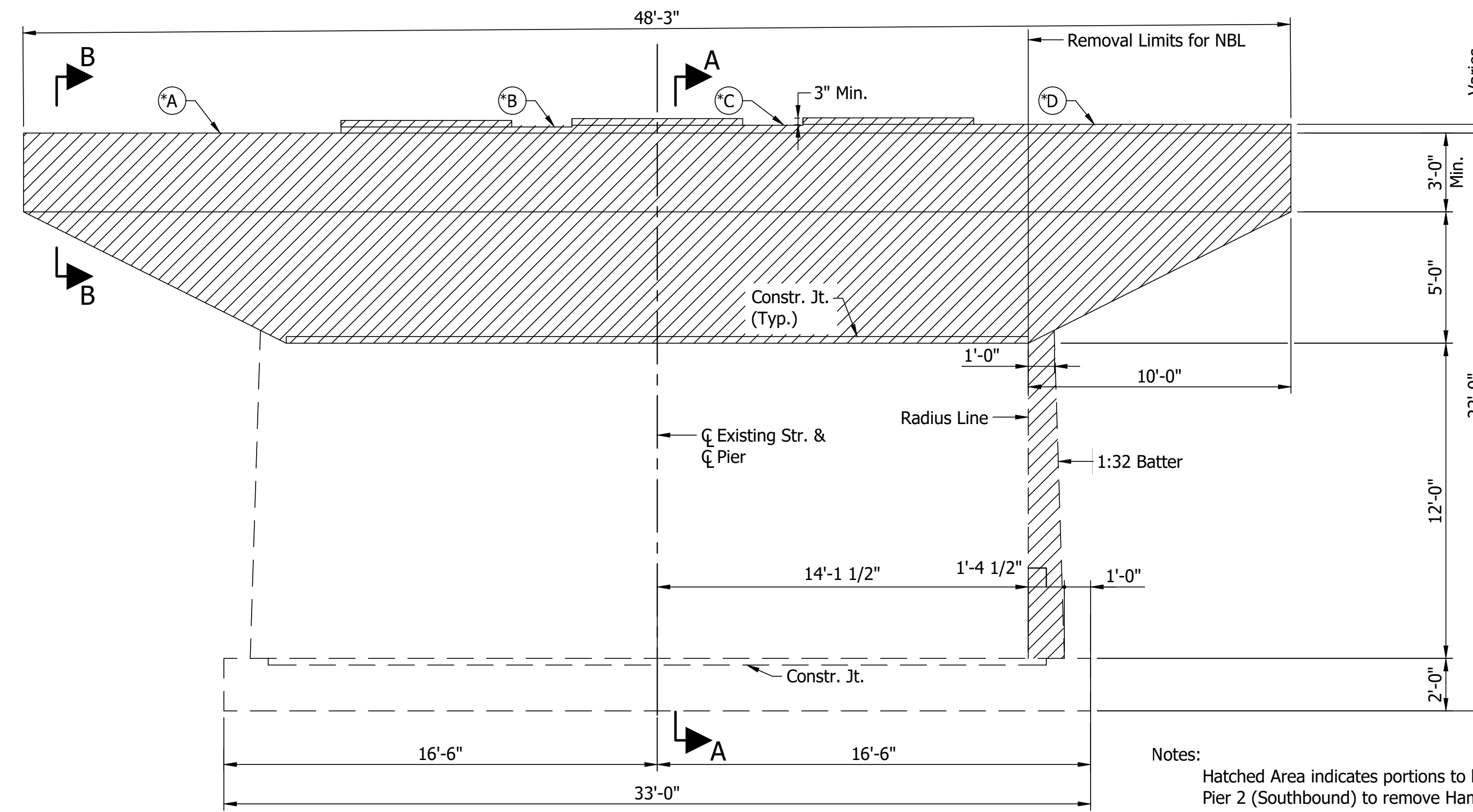
HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I65-016-04220 ENBL & ESBL
VERTICAL SCALE	DESIGNATION
AS NOTED	1600744 (NB) & 1600750 (SB)
DRAWING NO.	SHEETS
C8 of C18	19 of 30
CONTRACT	PROJECT
R-41529	1700135



CAP PLAN
(SOUTHBOUND SHOWN, NORTHBOUND SIMILAR)
Scale: 1/4" = 1'-0"

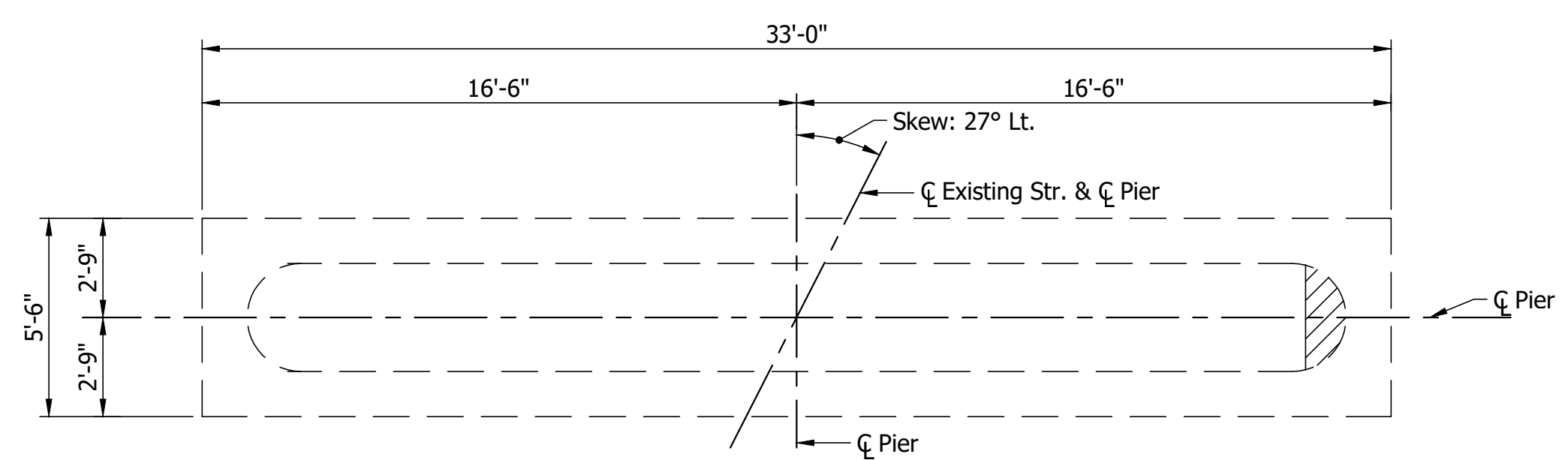
TABLE OF ELEVATIONS		
ELEVATION POINT	PIER NO.2	
	SOUTHBOUND	NORTHBOUND
"A"	486.75	486.94
"B"	486.98	487.07
"C"	487.05	487.14
"D"	487.08	487.18

* Contractor shall verify all existing bridge seat elevations.

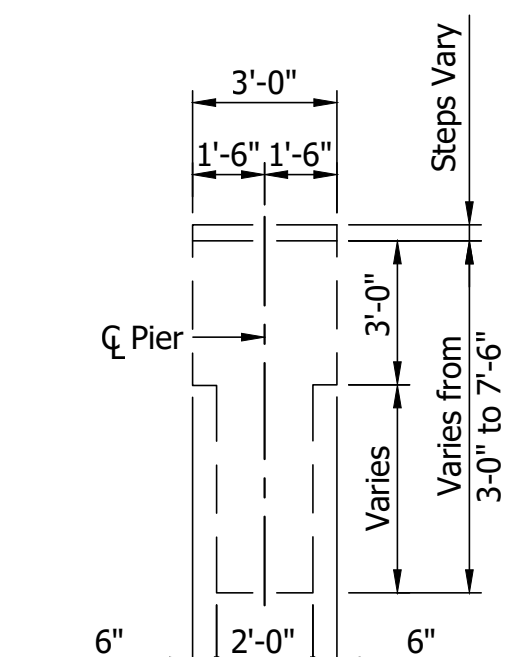


ELEVATION
(SOUTHBOUND SHOWN, NORTHBOUND SIMILAR)
Scale: 1/4" = 1'-0"

SECTION A-A
Scale: 1/4" = 1'-0"



FOOTING PLAN
(SOUTHBOUND SHOWN, NORTHBOUND SIMILAR)
Scale: 1/4" = 1'-0"



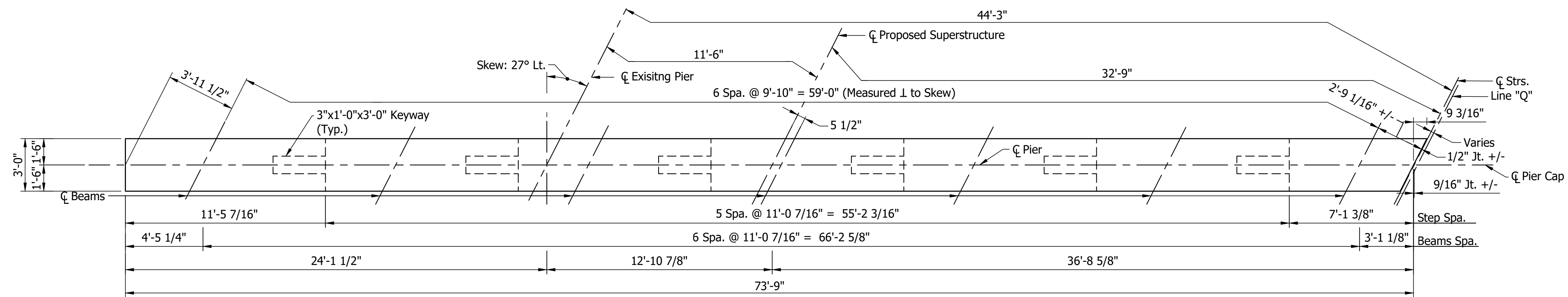
SECTION B-B
Scale: 1/4" = 1'-0"

RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: APL _____	DRAWN: NW _____	
CHECKED: RTW _____	CHECKED: APL _____	

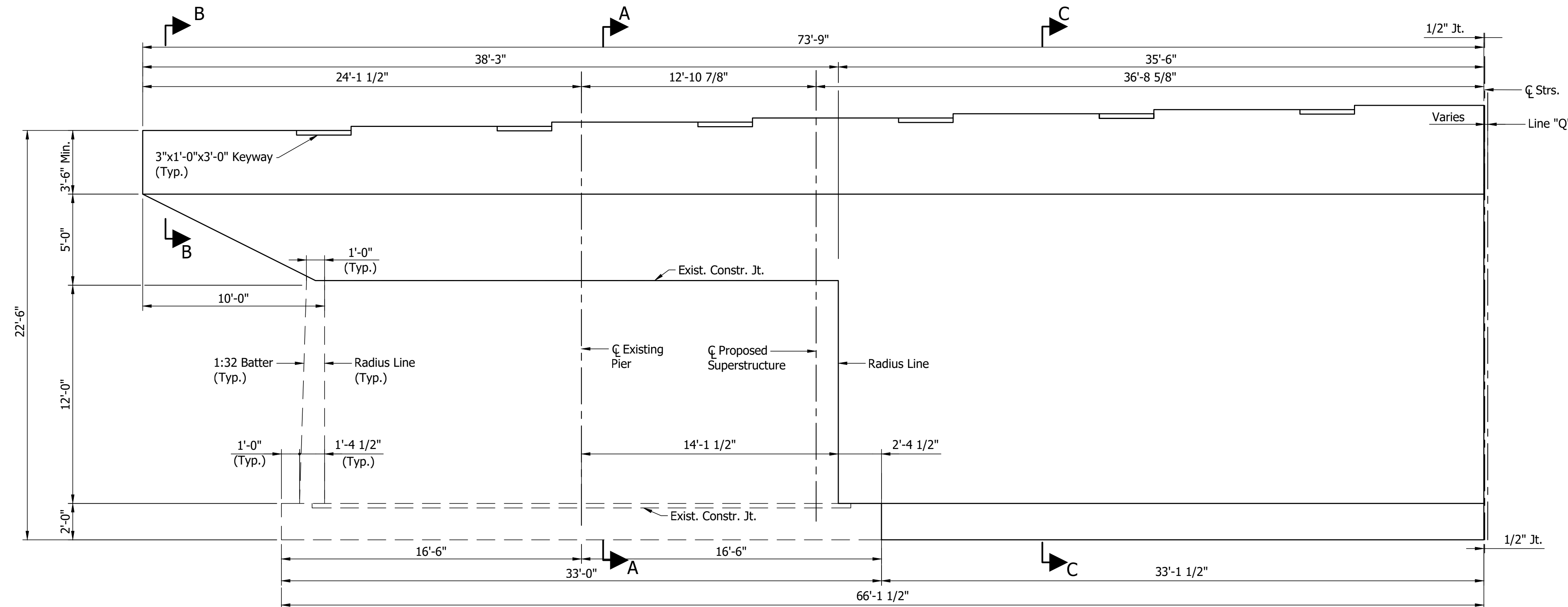
INDIANA
DEPARTMENT OF TRANSPORTATION

PIER NO. 2
REMOVAL DETAILS

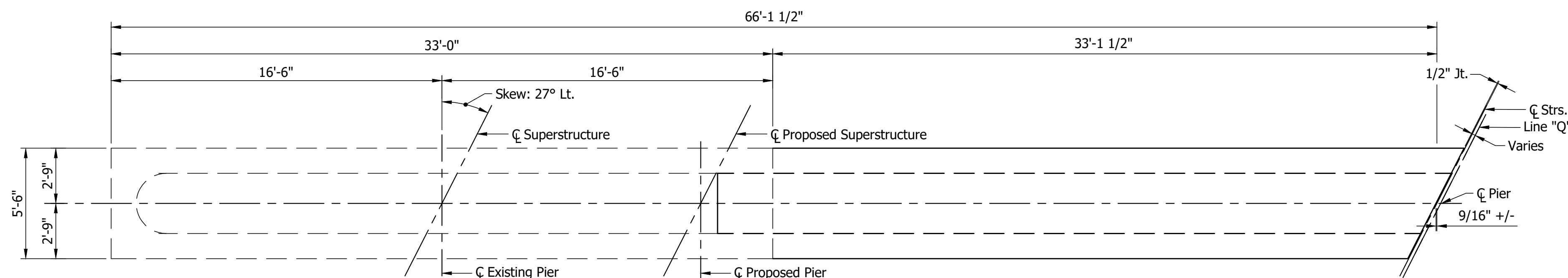
HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I65-016-04220 ENBL & ESBL
VERTICAL SCALE	DESIGNATION
AS NOTED	1600744 (NB) & 1600750 (SB)
DRAWING NO.	SHEETS
C9 of C18	20 of 30
CONTRACT	PROJECT
R-41529	1700135



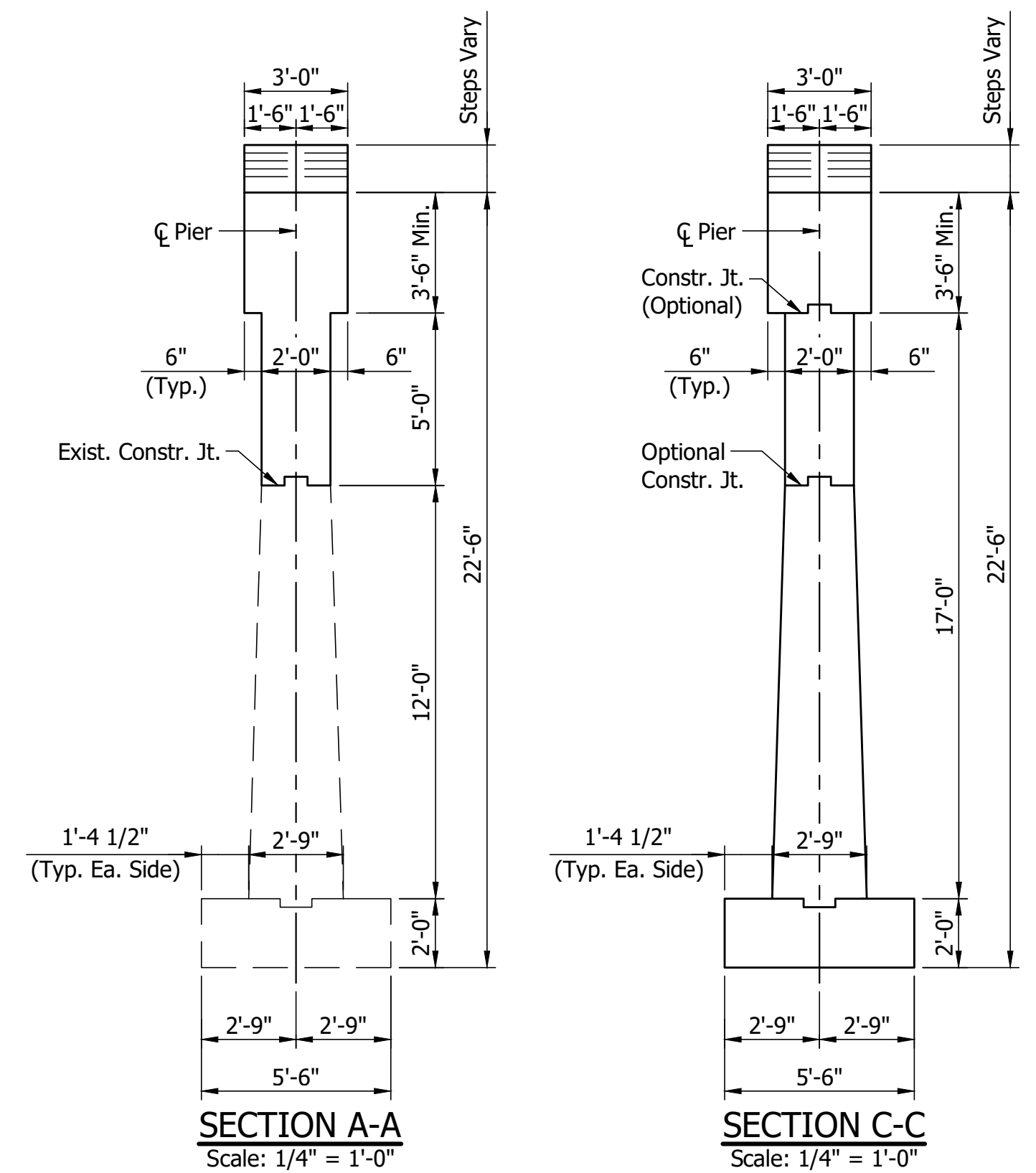
CAP PLAN
Scale: 1/4" = 1'-0"



ELEVATION
Scale: 1/4" = 1'-0"

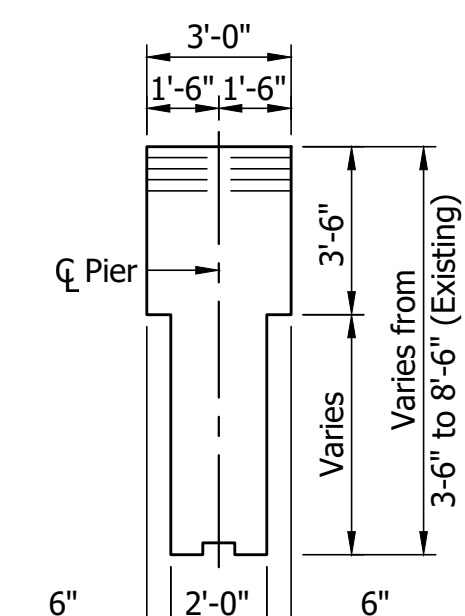


FOOTING PLAN
Scale: 1/4" = 1'-0"



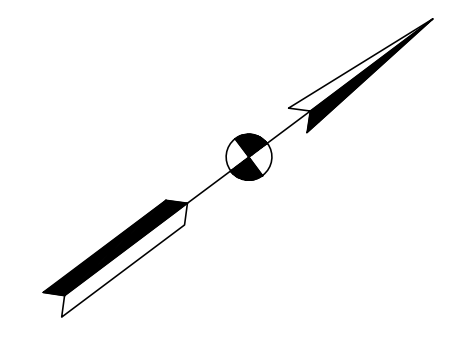
SECTION A-A
Scale: 1/4" = 1'-0"

SECTION C-C
Scale: 1/4" = 1'-0"



SECTION B-B
Scale: 1/4" = 1'-0"

Notes:
For General Notes, see Dwg.xx.
For Type "A" Construction Joint, see Std.Dwg.No. E702-CJTA-01.

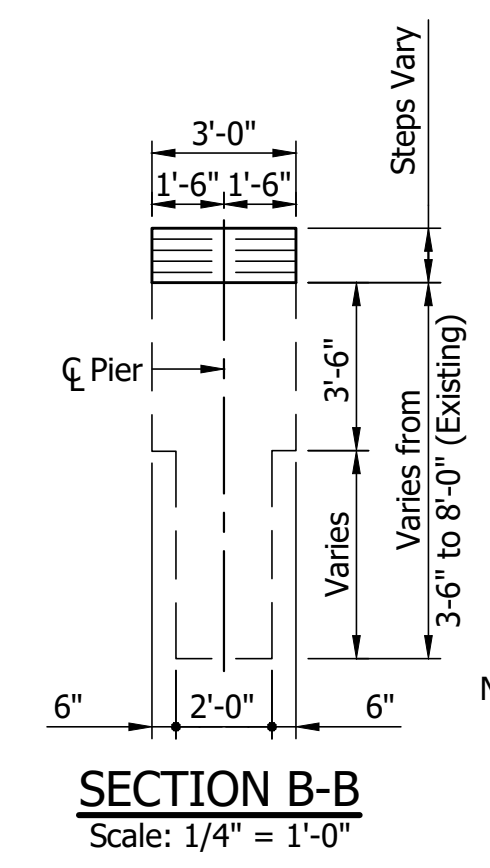
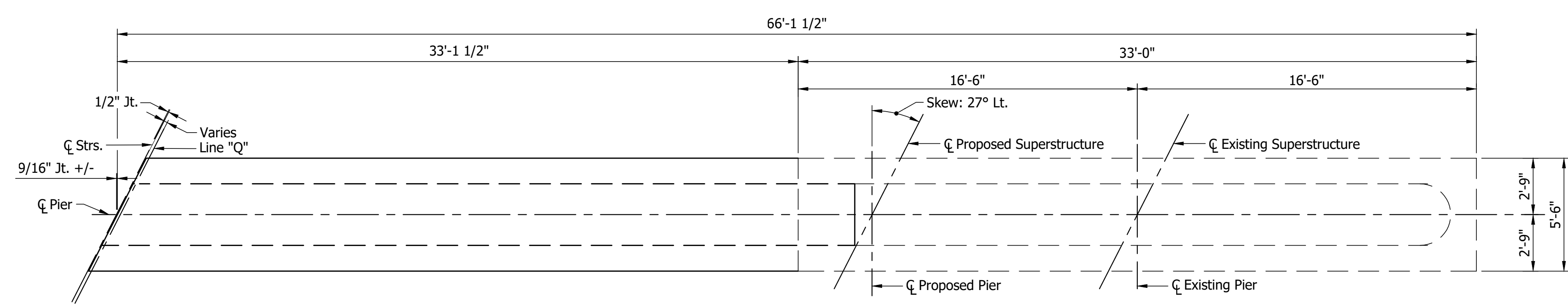
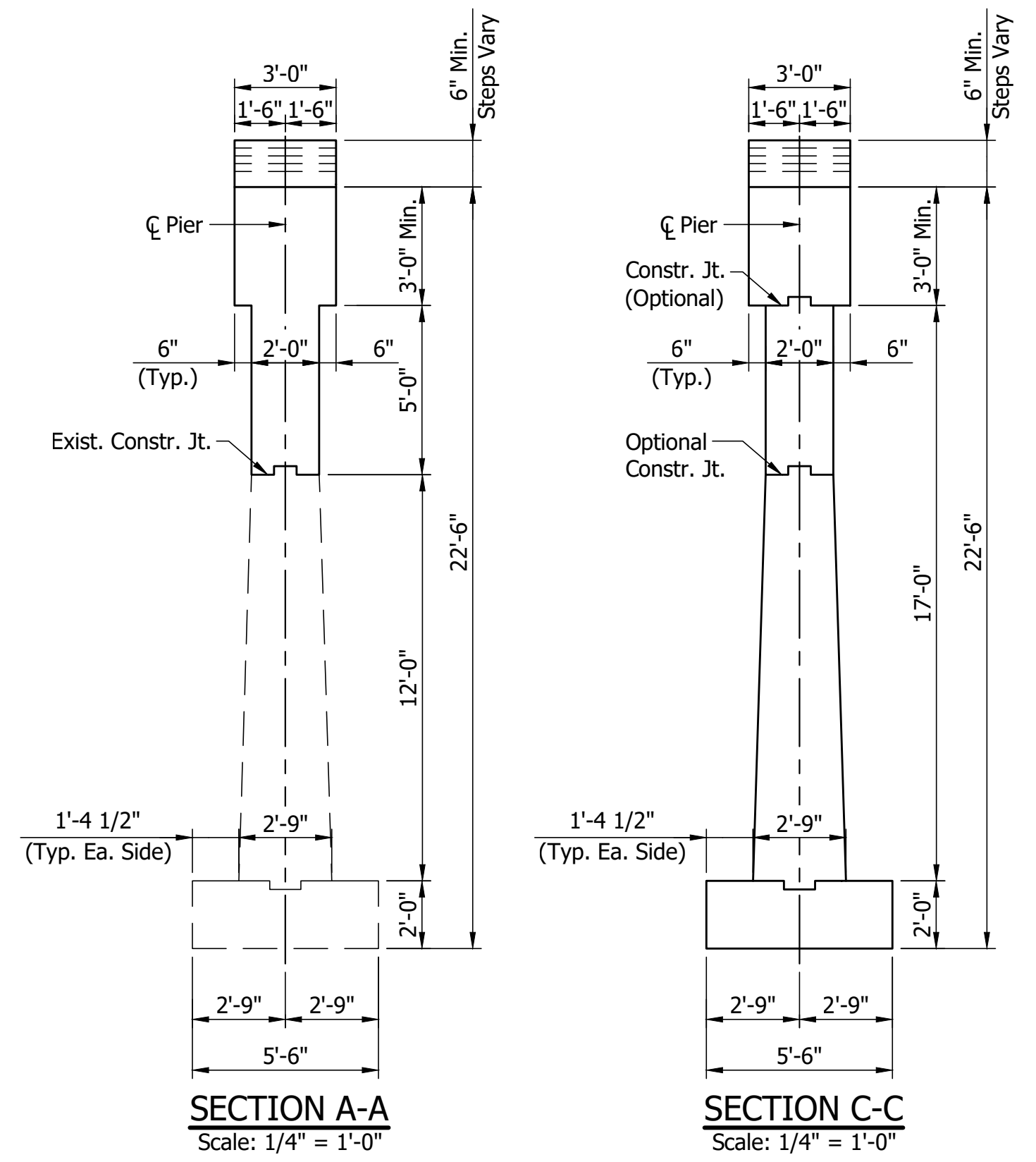
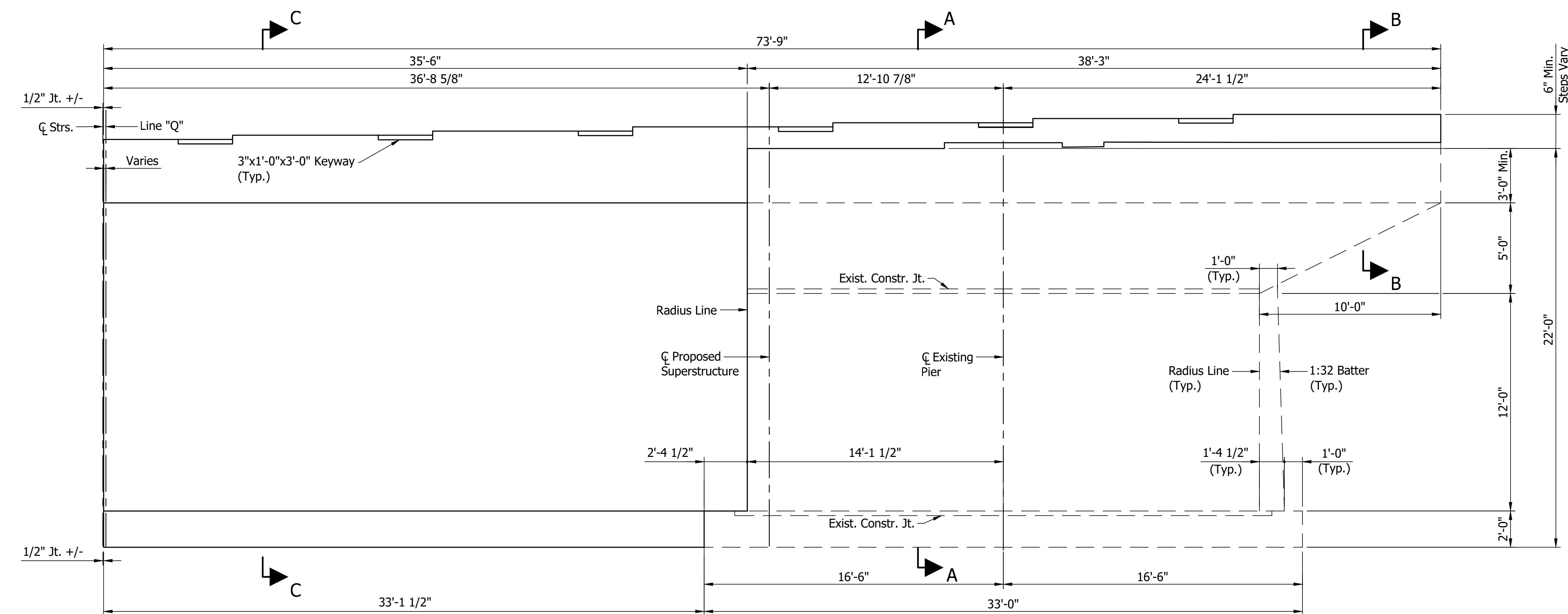
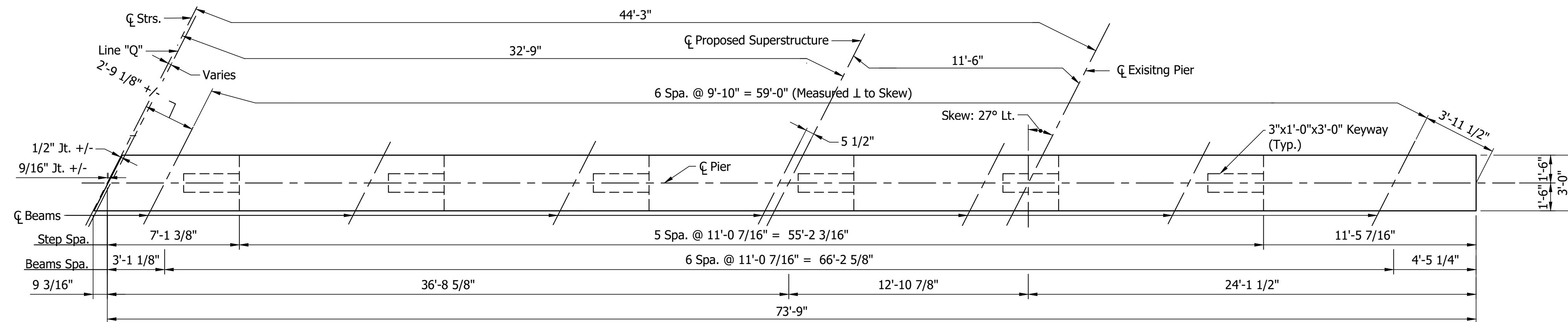


RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: APL _____	DRAWN: NW _____	
CHECKED: RTW _____	CHECKED: APL _____	

INDIANA
DEPARTMENT OF TRANSPORTATION

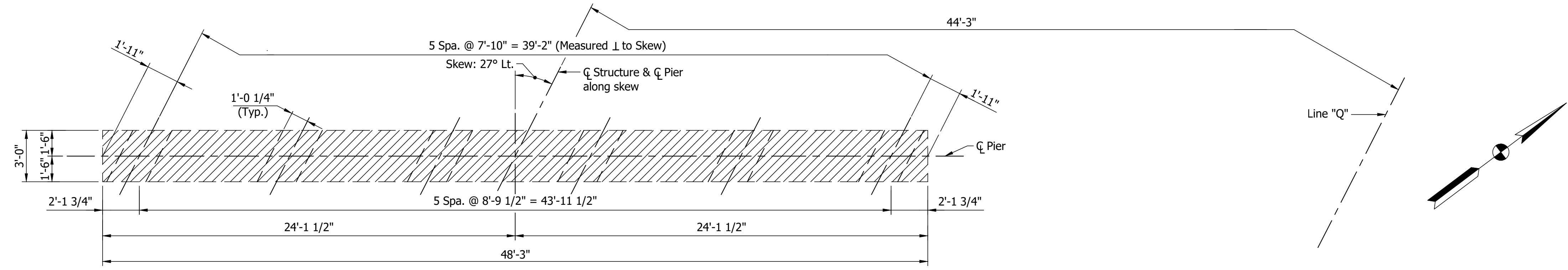
PIER NO. 2
SBL RECONSTRUCTION DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I65-016-04220 ENBL & ESBL
VERTICAL SCALE	DESIGNATION
AS NOTED	1600744 (NB) & 1600750 (SB)
DRAWING NO.	SHEETS
C10 of C18	21 of 30
CONTRACT	PROJECT
R-41529	1700135



Notes:
 For General Notes, see Dwg.xx.
 For Type "A" Construction Joint, see Std.Dwg.No. E702-CJA-01.

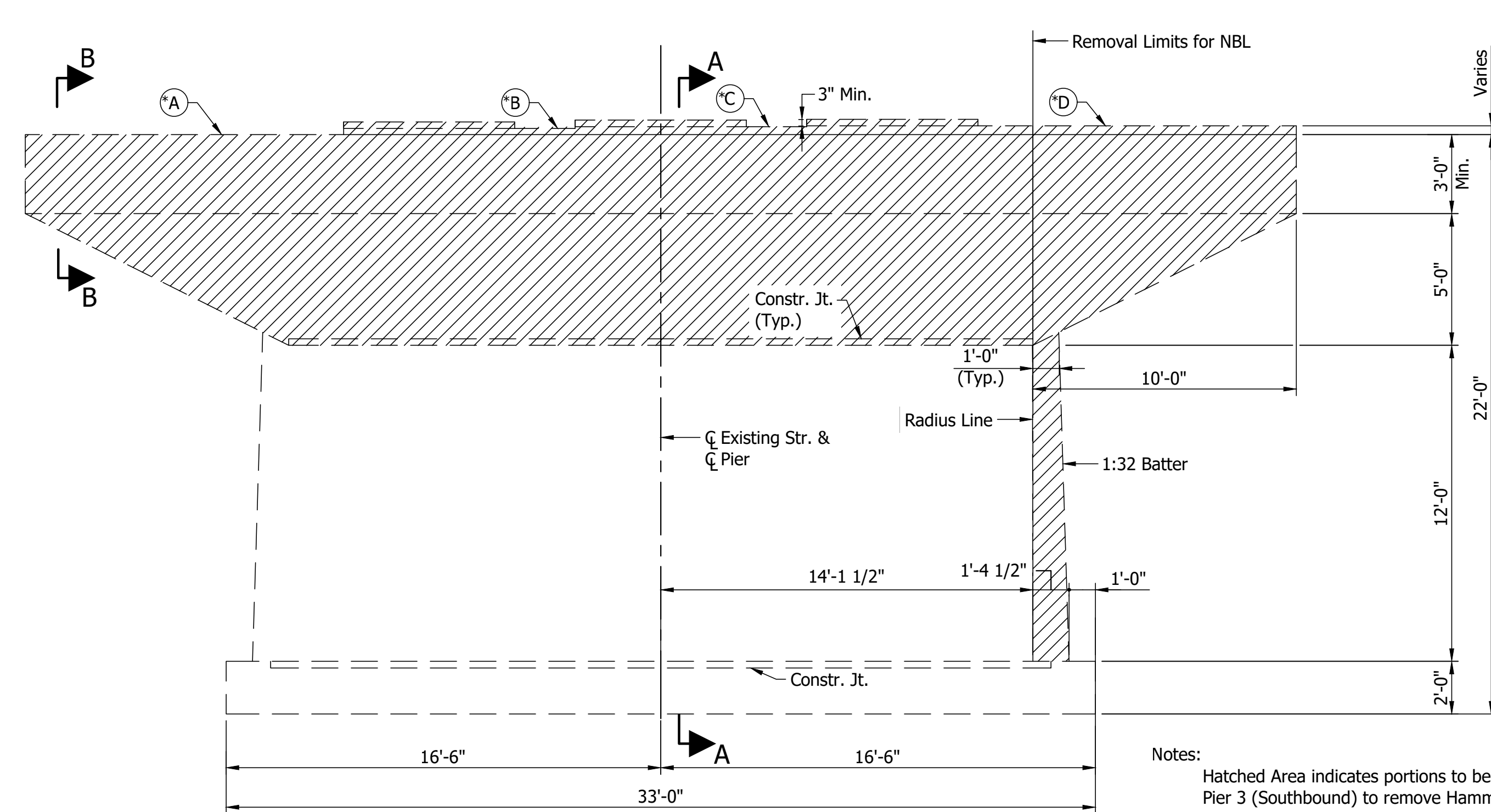
RECOMMENDED FOR APPROVAL _____ DESIGNED: APL CHECKED: RTW	DESIGN ENGINEER _____ DRAWN: NW CHECKED: APL	INDIANA DEPARTMENT OF TRANSPORTATION PIER NO. 2 NBL RECONSTRUCTION DETAILS	HORIZONTAL SCALE	BRIDGE FILE
			AS NOTED	I65-016-04220 ENBL & ESBL
			VERTICAL SCALE	DESIGNATION
			AS NOTED	1600744 (NB) & 1600750 (SB)
			DRAWING NO.	SHEETS
			C11 of C18	22 of 30
			CONTRACT	PROJECT
			R-41529	1700135



CAP PLAN
(SOUTHBOUND SHOWN, NORTHBOUND SIMILAR)
Scale: 1/4" = 1'-0"

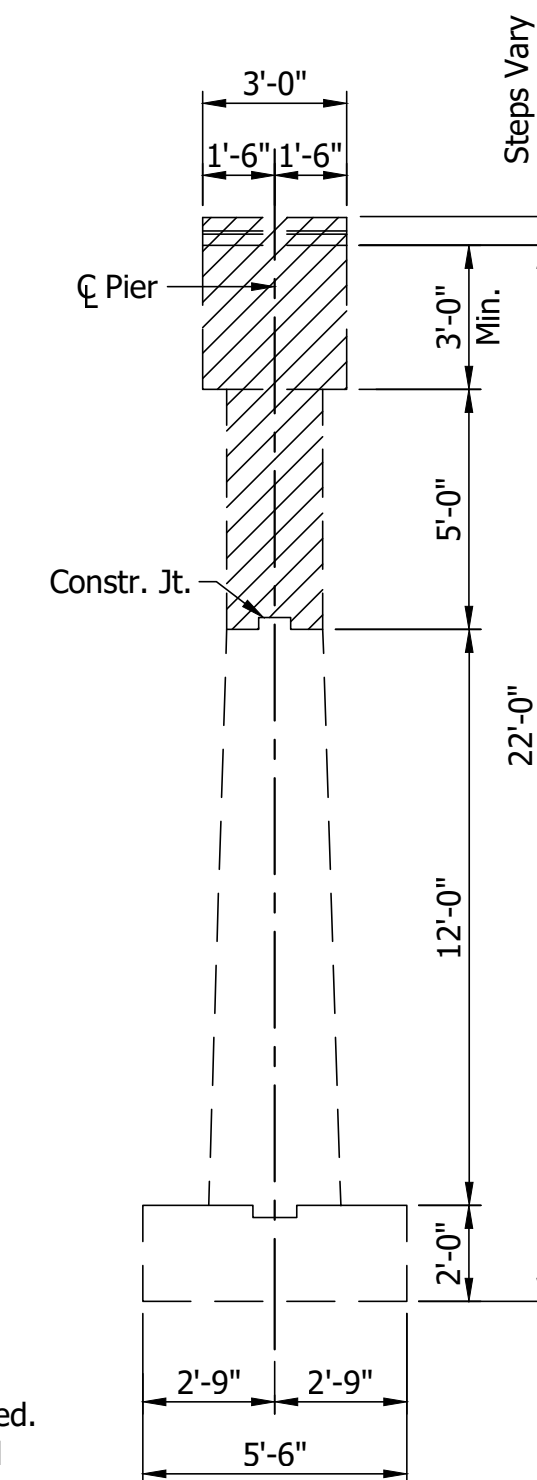
TABLE OF ELEVATIONS		
ELEVATION POINT	PIER NO.3	
	SOUTHBOUND	NORTHBOUND
"A"	486.57	486.76
"B"	486.80	486.89
"C"	486.87	486.96
"D"	486.90	487.00

* Contractor shall verify all existing bridge seat elevations.

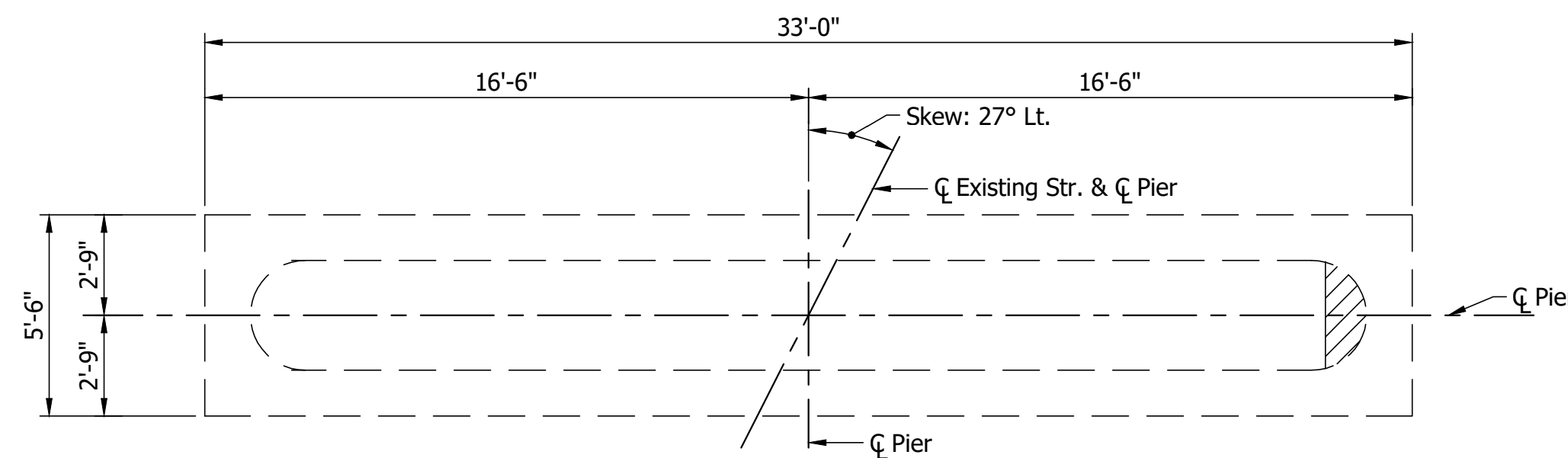


ELEVATION
(SOUTHBOUND SHOWN, NORTHBOUND SIMILAR)
Scale: 1/4" = 1'-0"

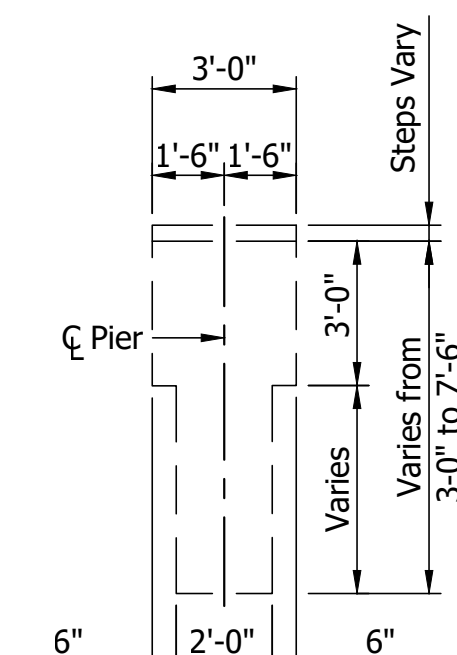
Notes:
Hatched Area indicates portions to be removed.
Pier 3 (Southbound) to remove Hammerhead portion of Piers and reconstruct.
Pier 3 (Northbound) to remove Keyways only and interior portion of hammerhead only.
Temporary Shoring required at exterior hammer under phased construction.



SECTION A-A
Scale: 1/4" = 1'-0"



FOOTING PLAN
(SOUTHBOUND SHOWN, NORTHBOUND SIMILAR)
Scale: 1/4" = 1'-0"



SECTION B-B
Scale: 1/4" = 1'-0"

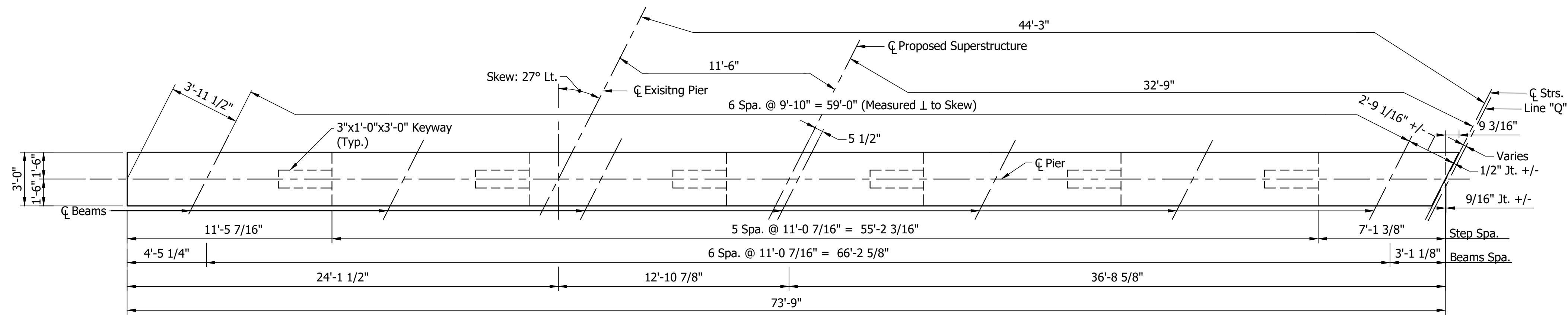
Notes:
For General Notes, see Dwg.xx.
For Reconstruction Details, see Dwgs.xx & xx.

RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: APL _____	DRAWN: NW _____	
CHECKED: RTW _____	CHECKED: APL _____	

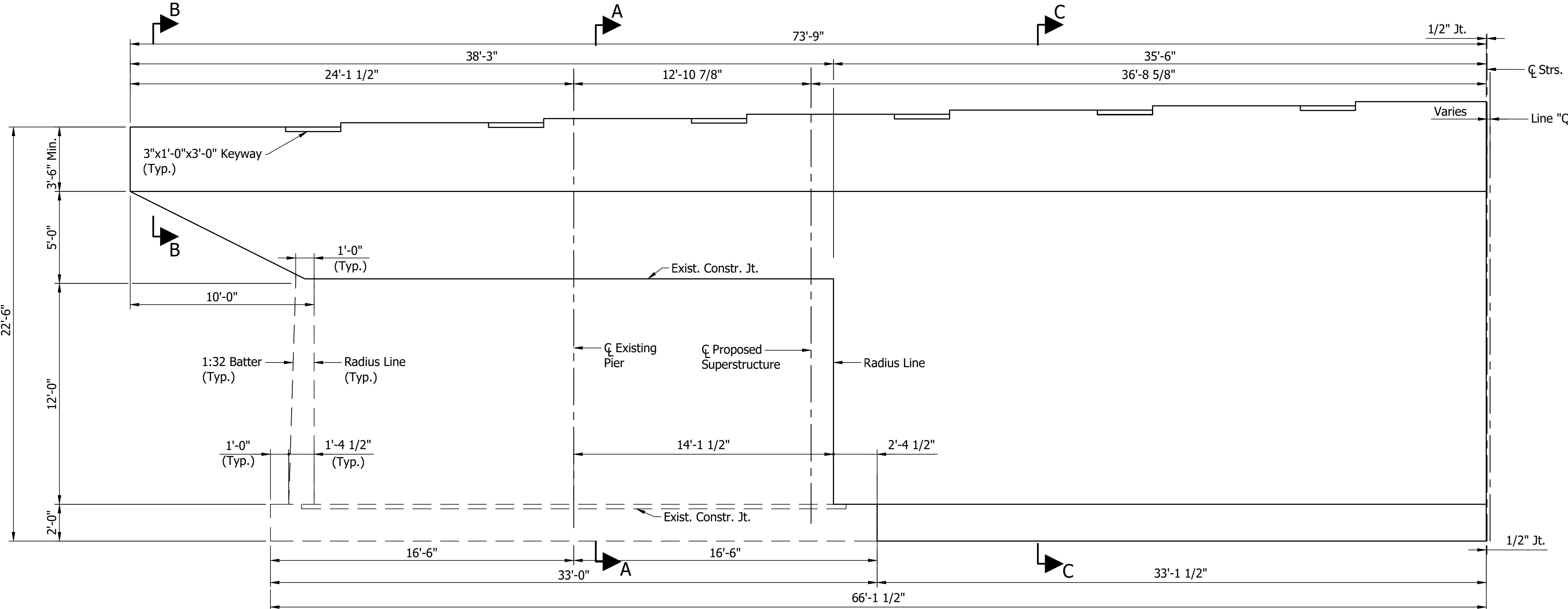
INDIANA
DEPARTMENT OF TRANSPORTATION

PIER NO. 3
REMOVAL DETAILS

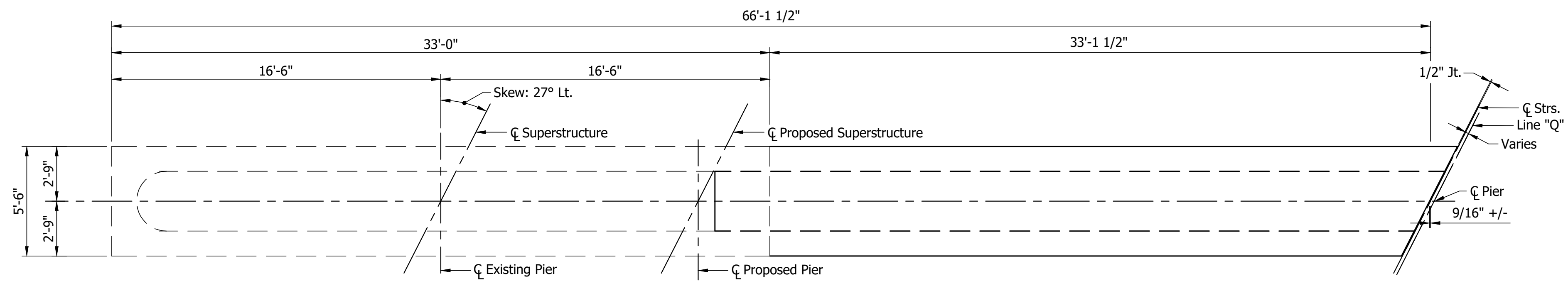
HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I65-016-04220 ENBL & ESBL
VERTICAL SCALE	DESIGNATION
AS NOTED	1600744 (NB) & 1600750 (SB)
DRAWING NO.	SHEETS
C12 of C18	23 of 30
CONTRACT	PROJECT
R-41529	1700135



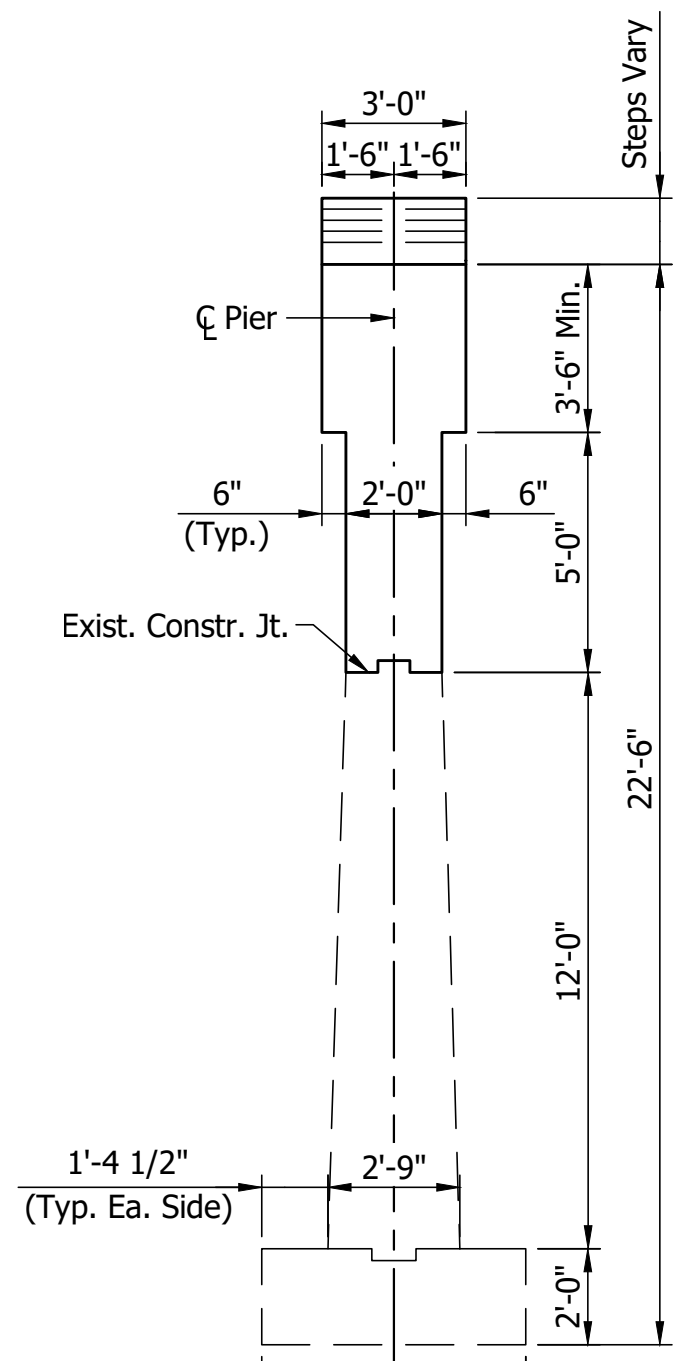
CAP PLAN
Scale: 1/4" = 1'-0"



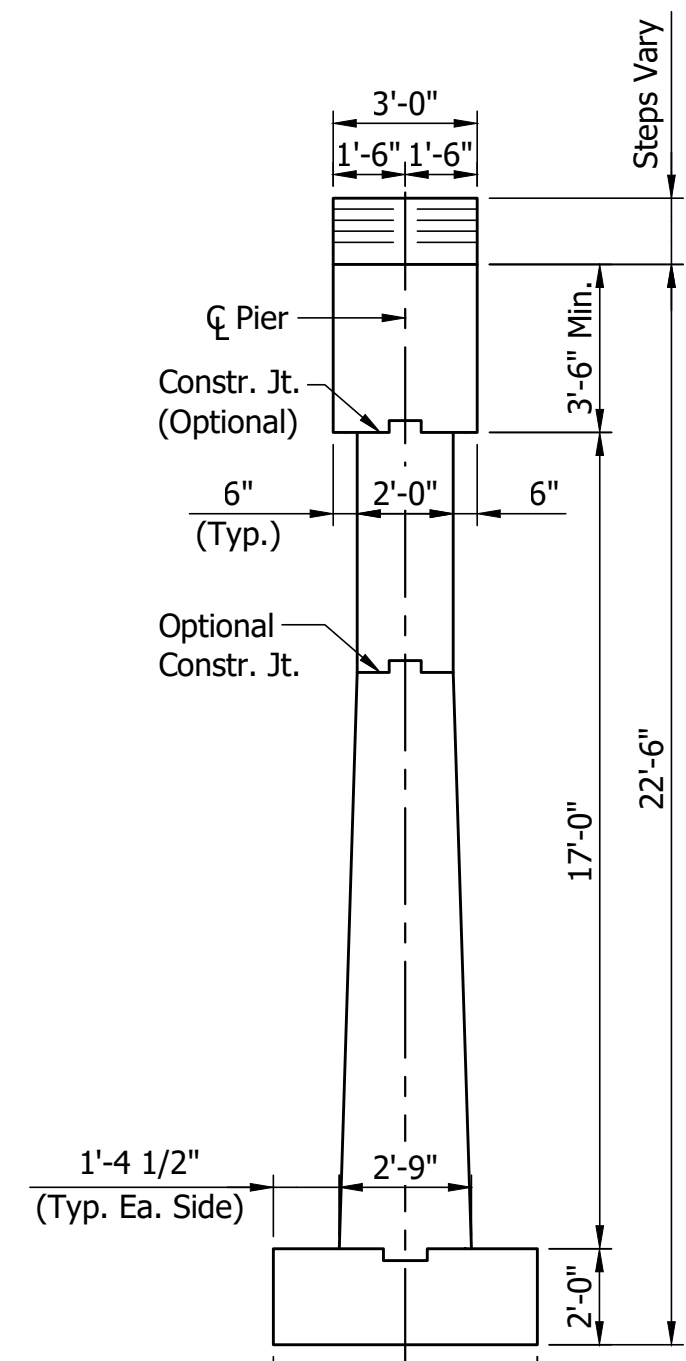
ELEVATION
Scale: 1/4" = 1'-0"



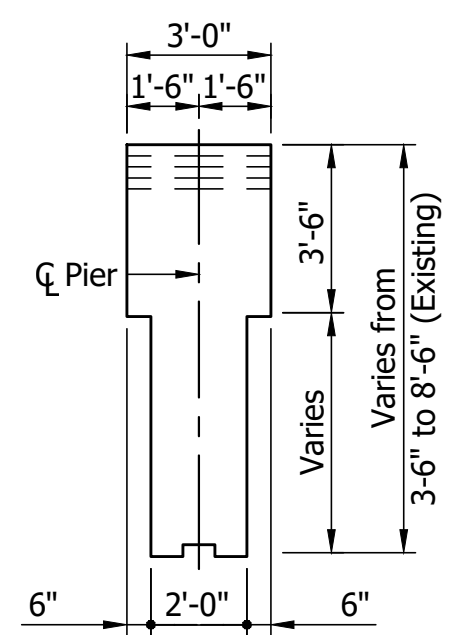
FOOTING PLAN
Scale: 1/4" = 1'-0"



SECTION A-A
Scale: 1/4" = 1'-0"



SECTION C-C
Scale: 1/4" = 1'-0"



SECTION B-B
Scale: 1/4" = 1'-0"

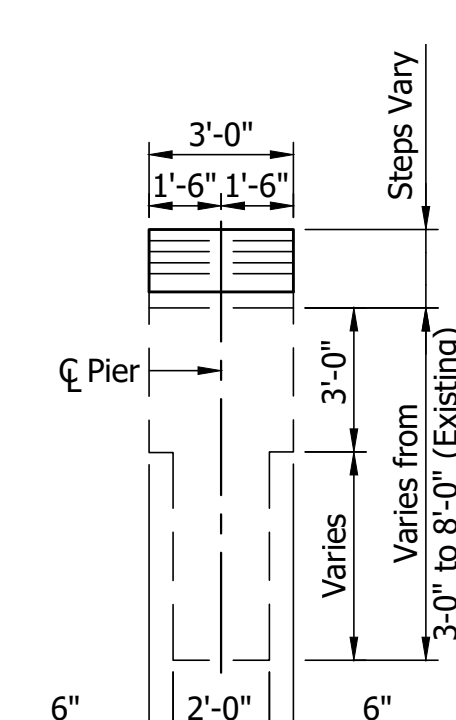
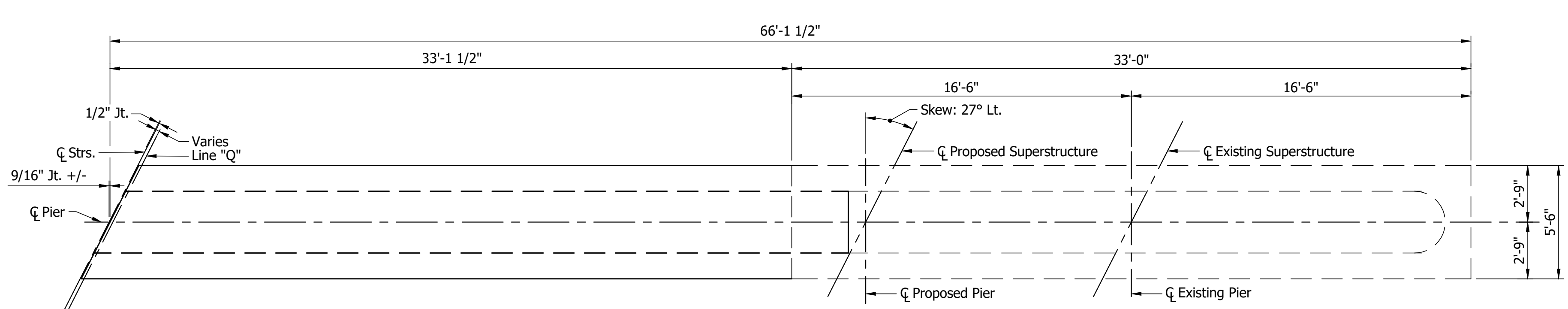
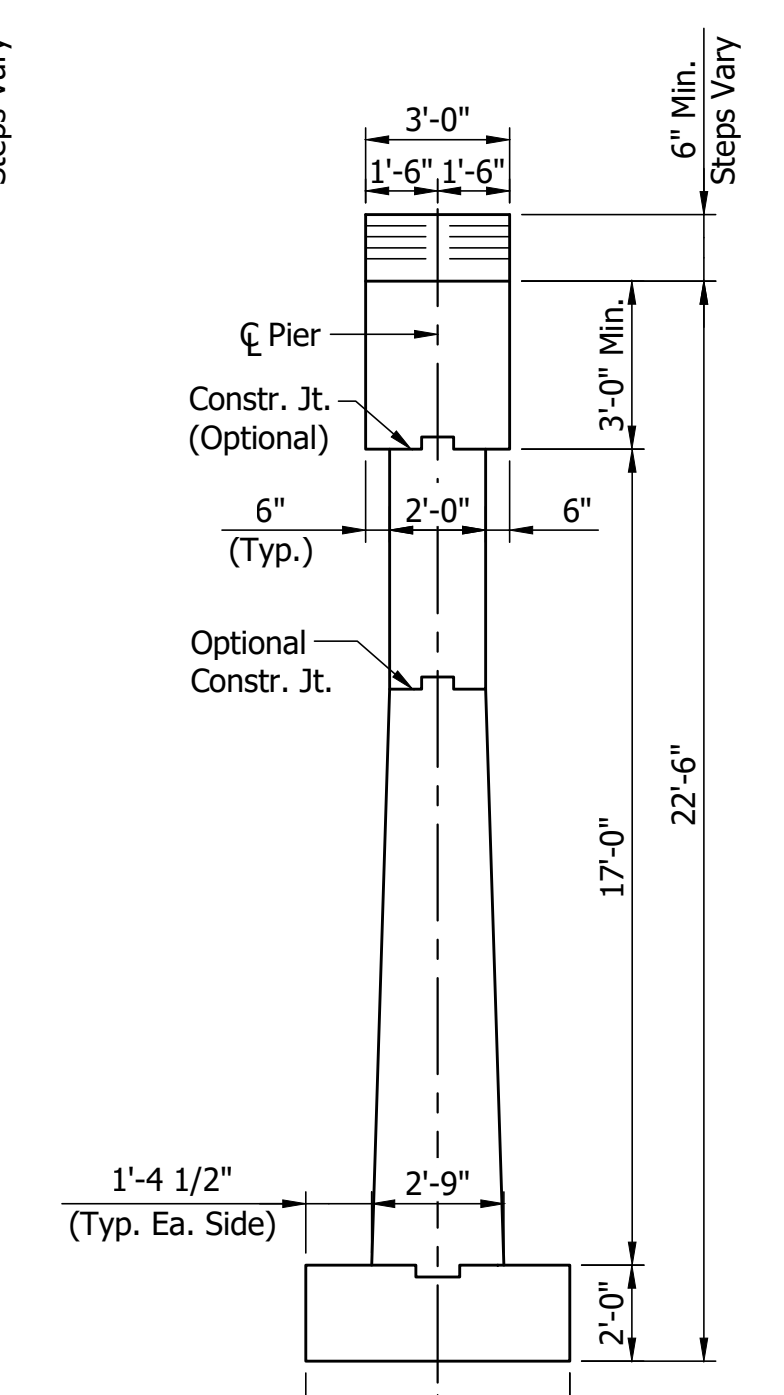
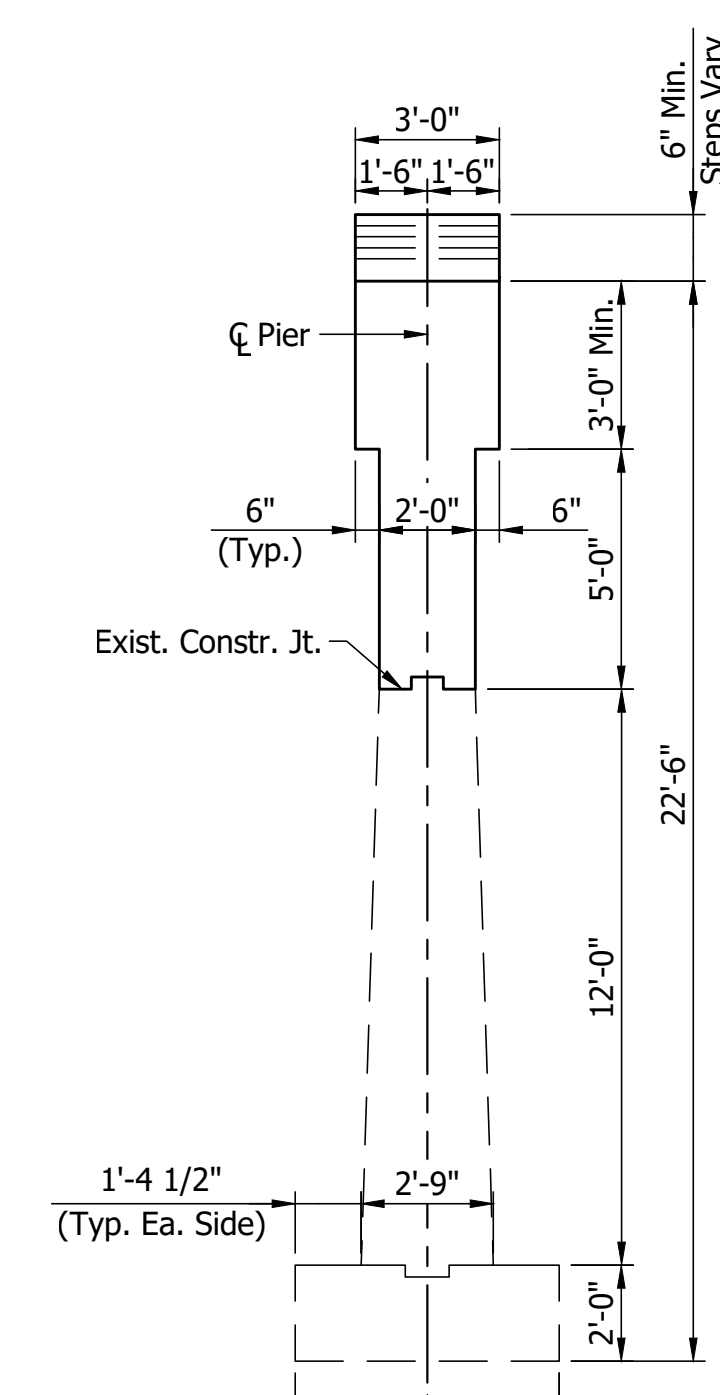
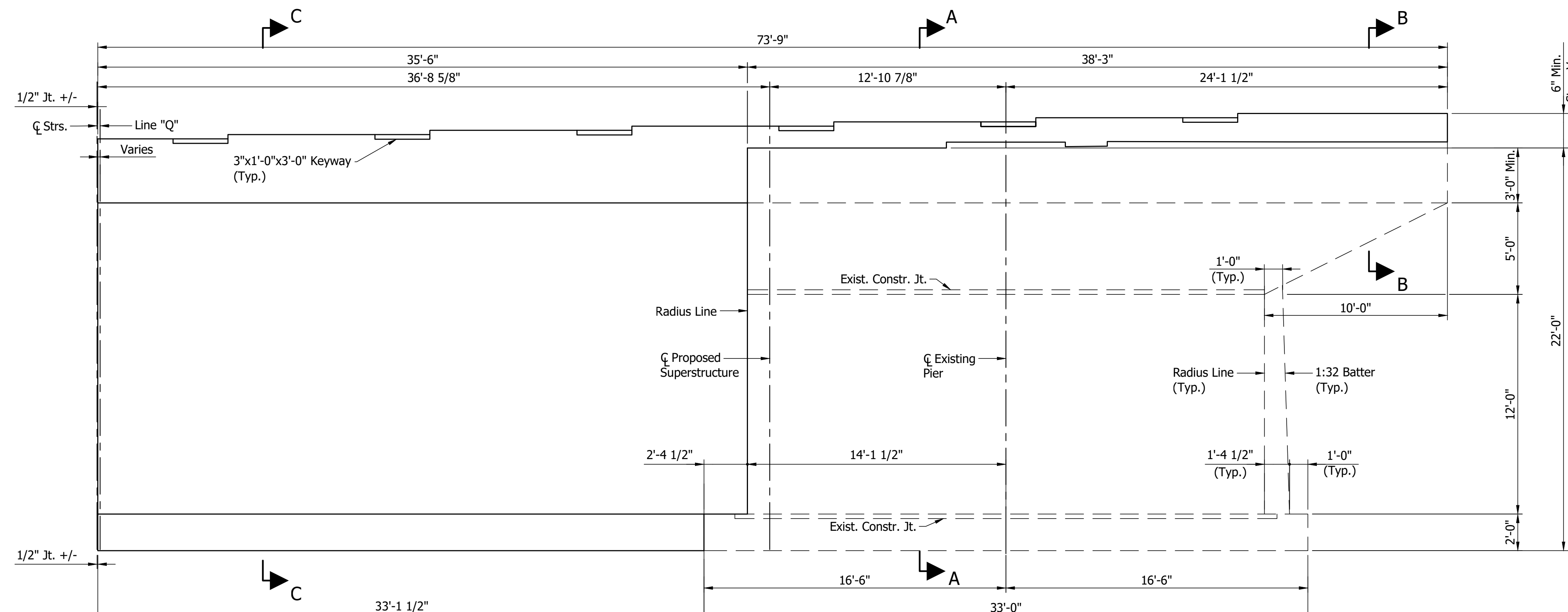
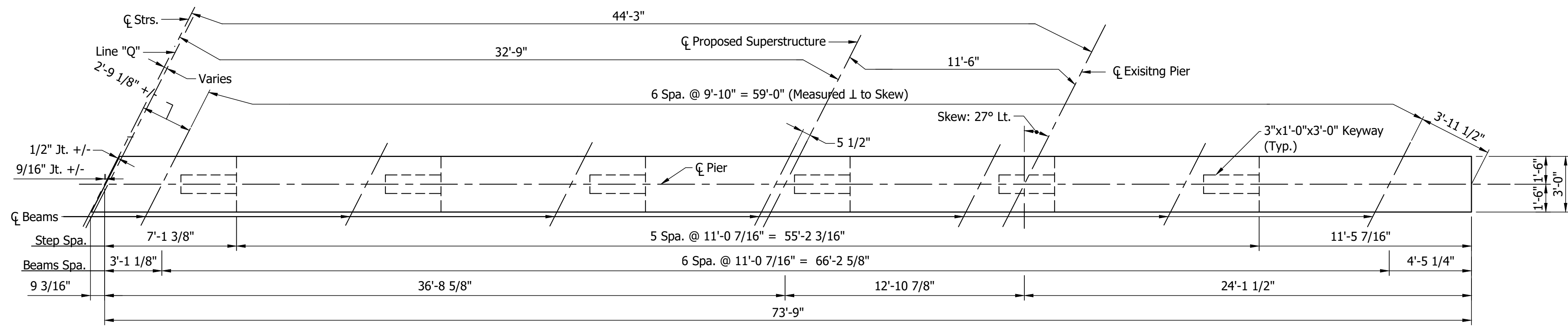
Notes:
For General Notes, see Dwg.xx.
For Type "A" Construction Joint, see Std.Dwg.No. E702-CJTA-01.

RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: APL _____	DRAWN: NW _____	
CHECKED: RTW _____	CHECKED: APL _____	

INDIANA
DEPARTMENT OF TRANSPORTATION

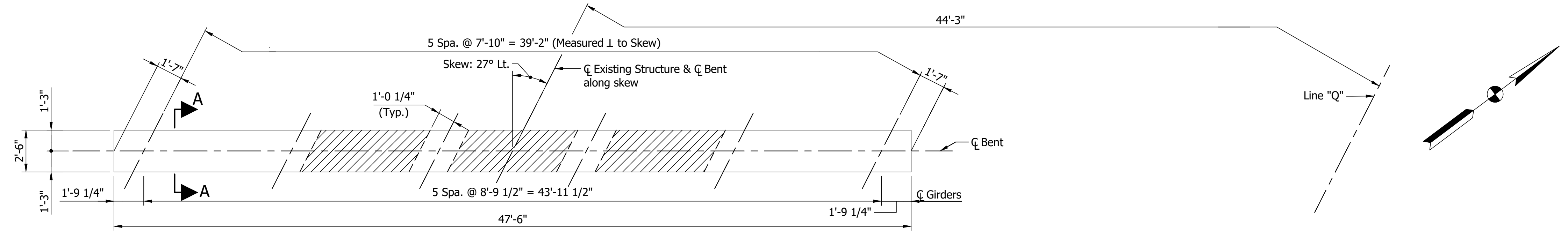
PIER NO. 3
SBL RECONSTRUCTION DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I65-016-04220 ENBL & ESBL
VERTICAL SCALE	DESIGNATION
AS NOTED	1600744 (NB) & 1600750 (SB)
DRAWING NO.	SHEETS
C13 of C18	24 of 30
CONTRACT	PROJECT
R-41529	1700135



Notes:
For General Notes, see Dwg.xx.
For Type "A" Construction Joint, see Std.Dwg.No. E702-CJTA-01.

RECOMMENDED FOR APPROVAL _____ DESIGNED: APL CHECKED: RTW	DESIGN ENGINEER _____ DRAWN: NW CHECKED: APL	INDIANA DEPARTMENT OF TRANSPORTATION PIER NO. 3 NBL RECONSTRUCTION DETAILS	HORIZONTAL SCALE AS NOTED	BRIDGE FILE I65-016-04220 ENBL & ESBL
			VERTICAL SCALE AS NOTED	DESIGNATION 1600744 (NB) & 1600750 (SB)
			DRAWING NO. C14 of C18	SHEETS 25 of 30
			CONTRACT R-41529	PROJECT 1700135

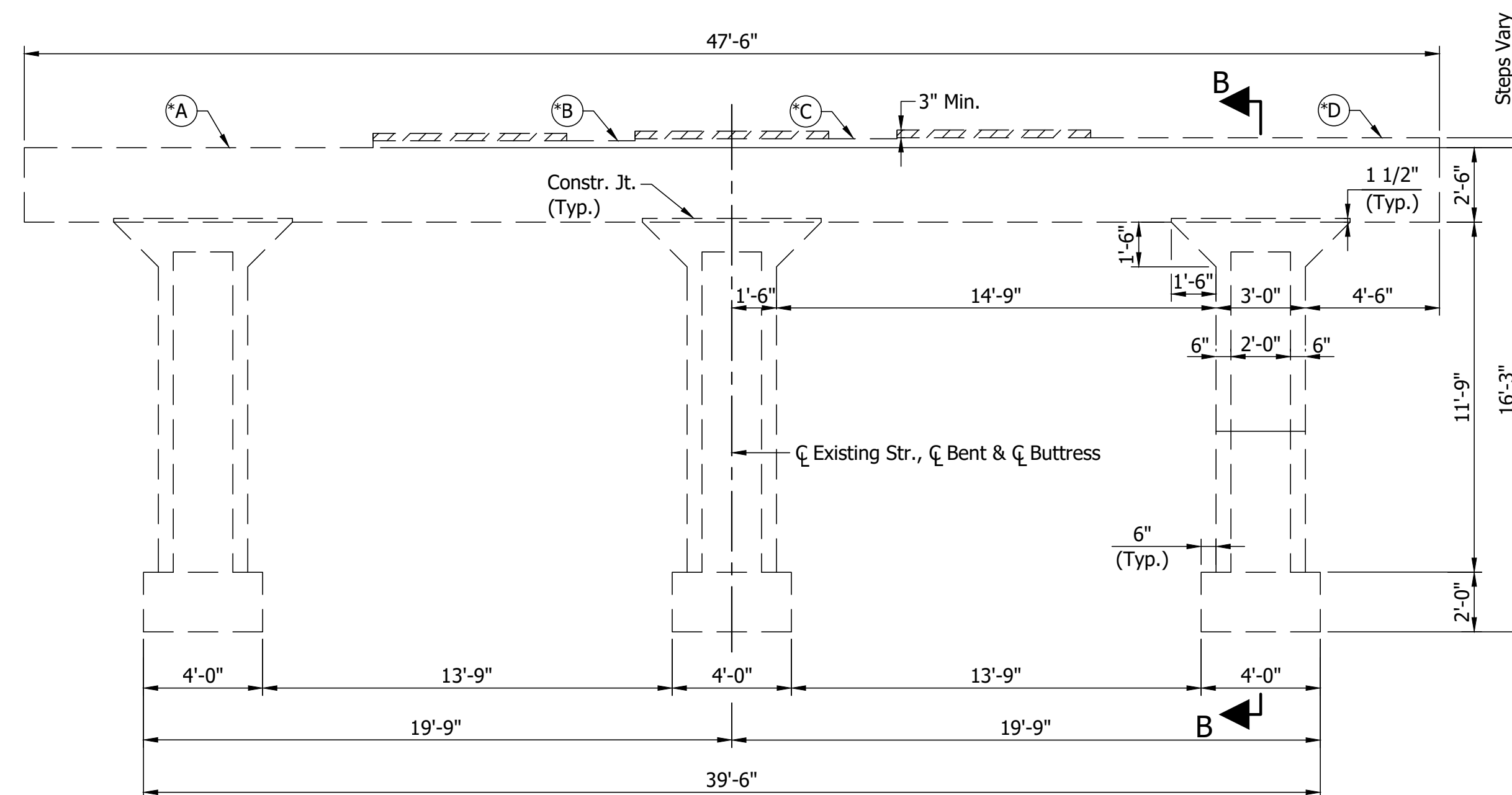


CAP PLAN
 SOUTHBOUND SHOWN, NORTHBOUND SIMILAR BY OPPOSITE HAND
 Scale: 1/4" = 1'-0"

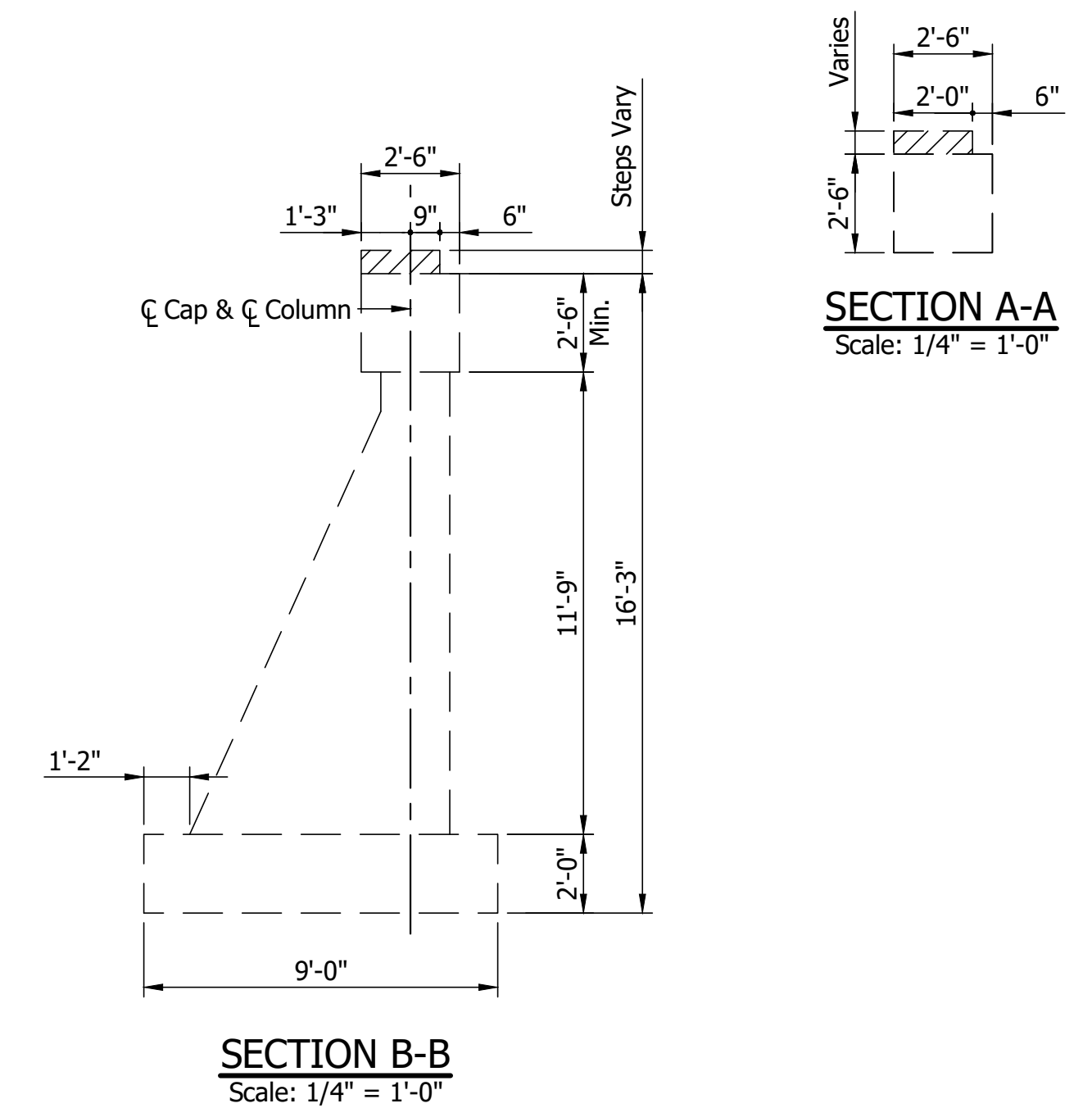
Note:
 Hatched Areas indicate portions to be removed.

TABLE OF ELEVATIONS		
ELEVATION POINT	BENT NO.4	
	SOUTHBOUND	NORTHBOUND
"A"	486.41	486.60
"B"	486.64	486.73
"C"	486.71	486.80
"D"	486.74	486.84

* Contractor shall verify all existing bridge seat elevations.



ELEVATION
 SOUTHBOUND SHOWN, NORTHBOUND SIMILAR BY OPPOSITE HAND
 Scale: 1/4" = 1'-0"



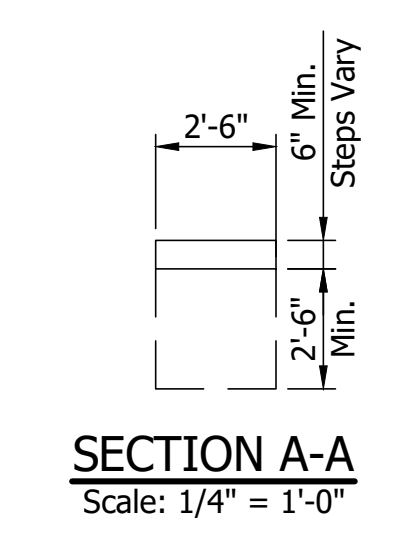
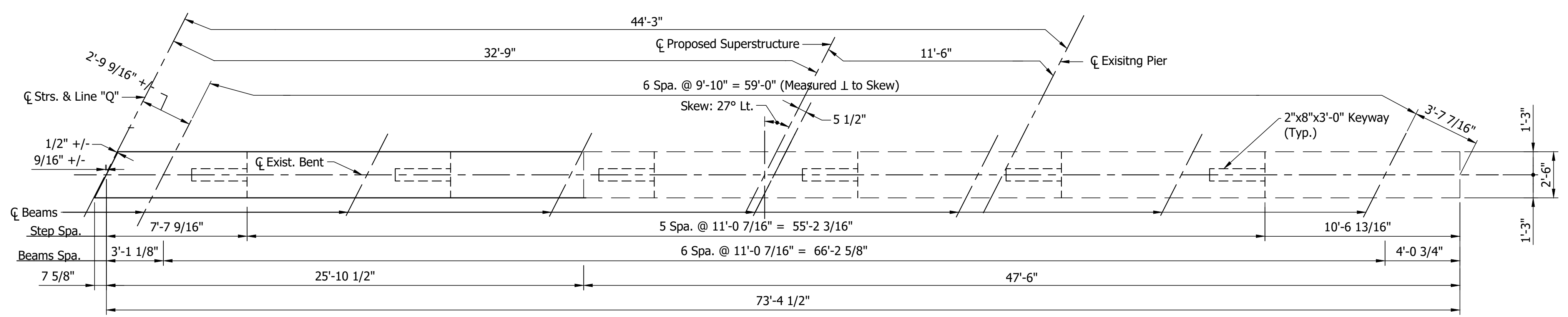
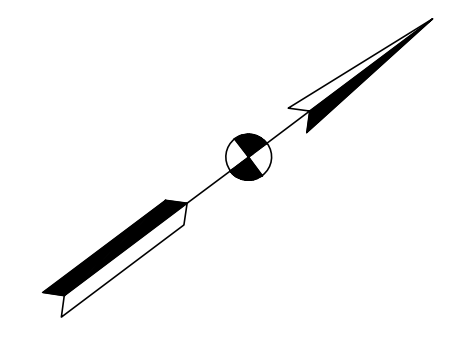
Notes:
 For General Notes, see Dwg.xx.
 For Reconstruction Details, see Dwgs.xx - xx.

RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: APL _____	DRAWN: NW _____	
CHECKED: RTW _____	CHECKED: APL _____	

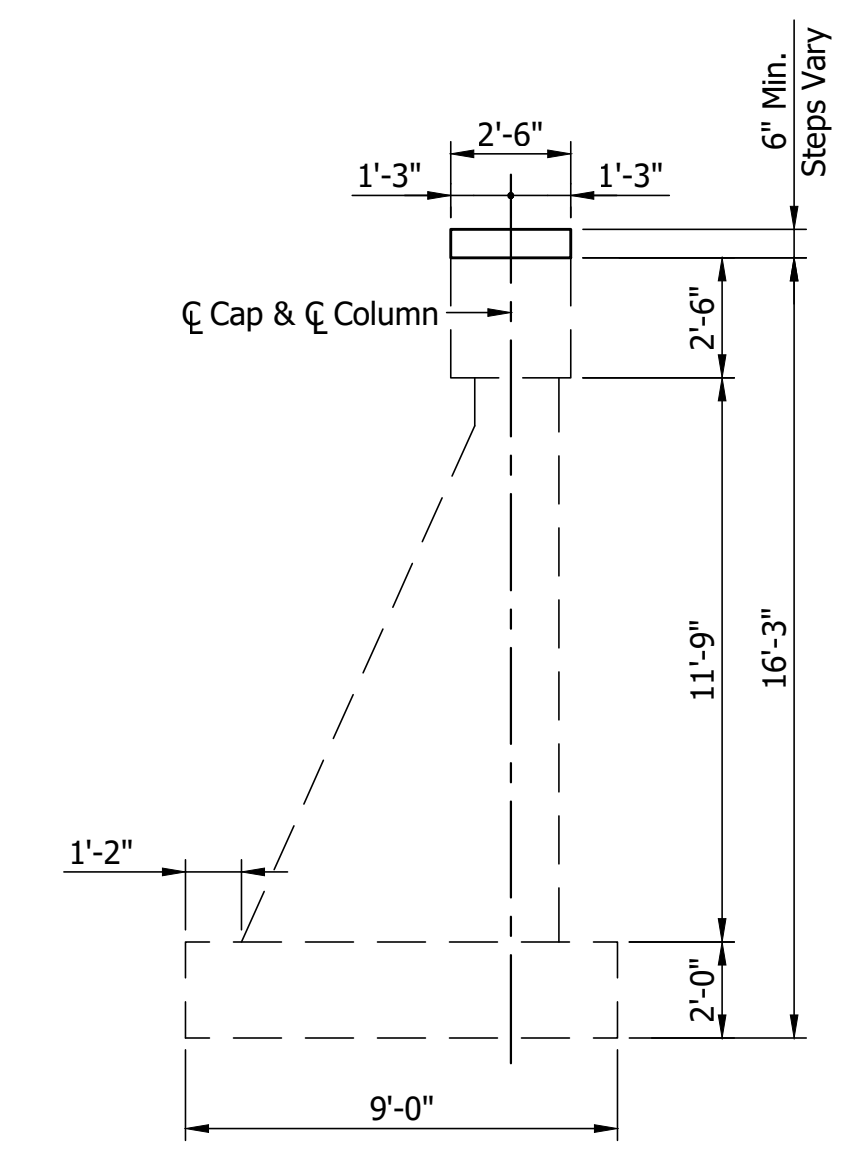
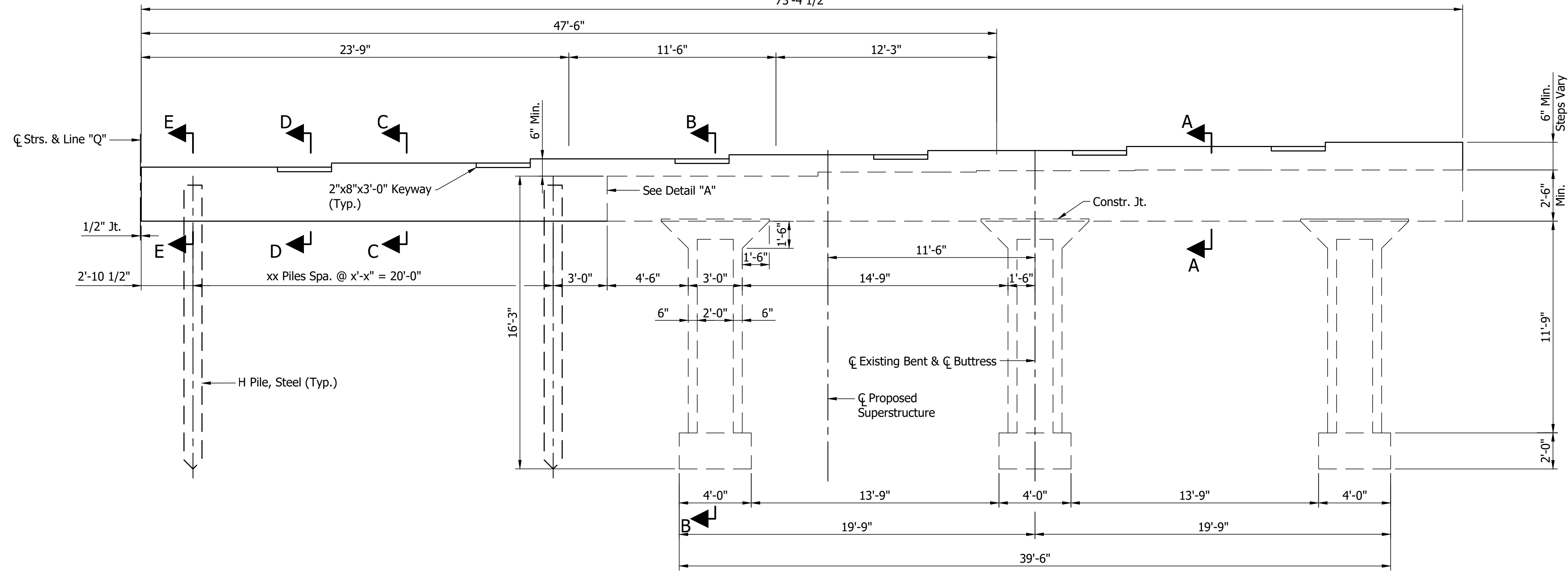
INDIANA
 DEPARTMENT OF TRANSPORTATION

BENT NO. 4
 REMOVAL DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I65-016-04220 ENBL & ESBL
VERTICAL SCALE	DESIGNATION
AS NOTED	1600744 (NB) & 1600750 (SB)
DRAWING NO.	SHEETS
C15 of C18	26 of 30
CONTRACT	PROJECT
R-41529	1700135



CAP PLAN
(NORTHBOUND)
Scale: 1/4" = 1'-0"

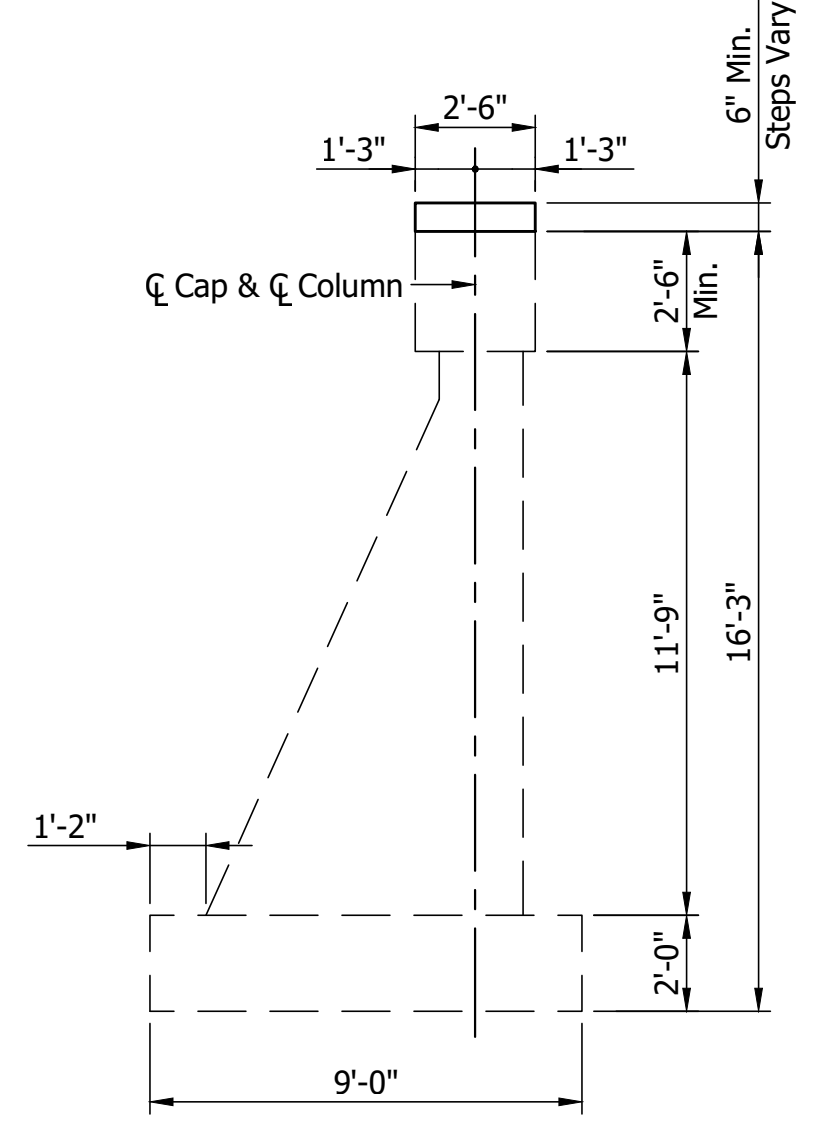
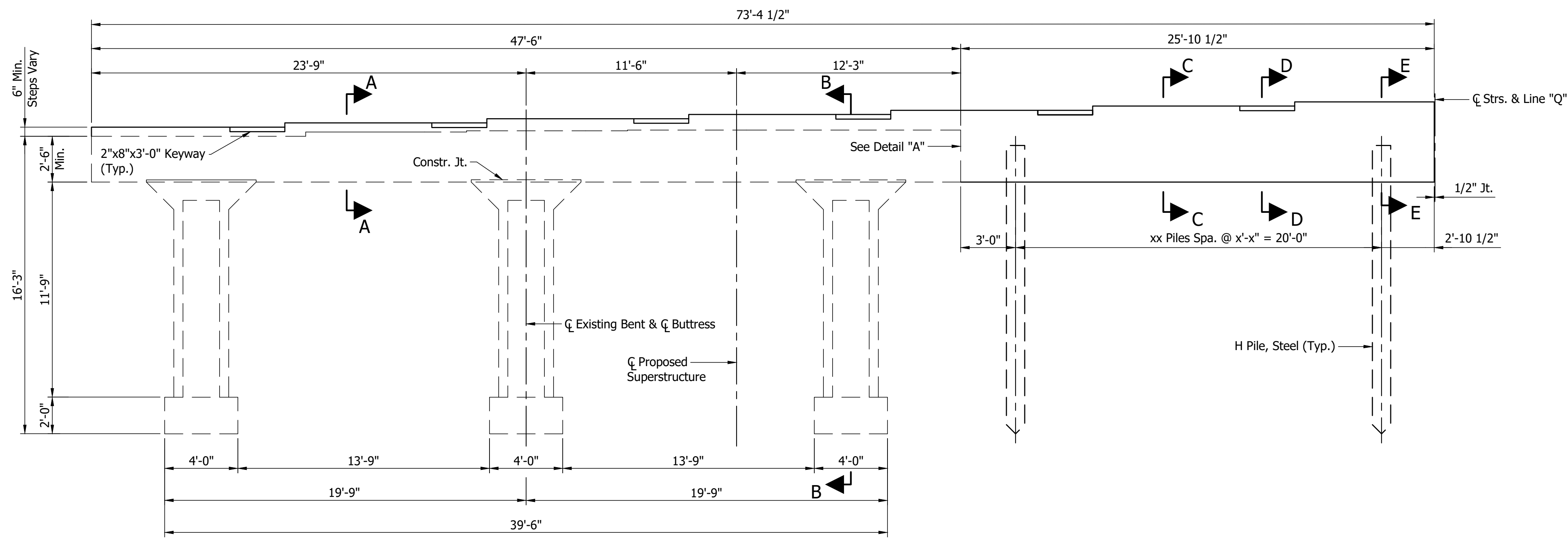
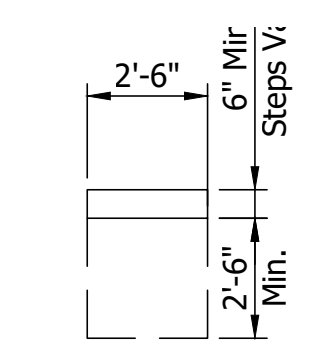
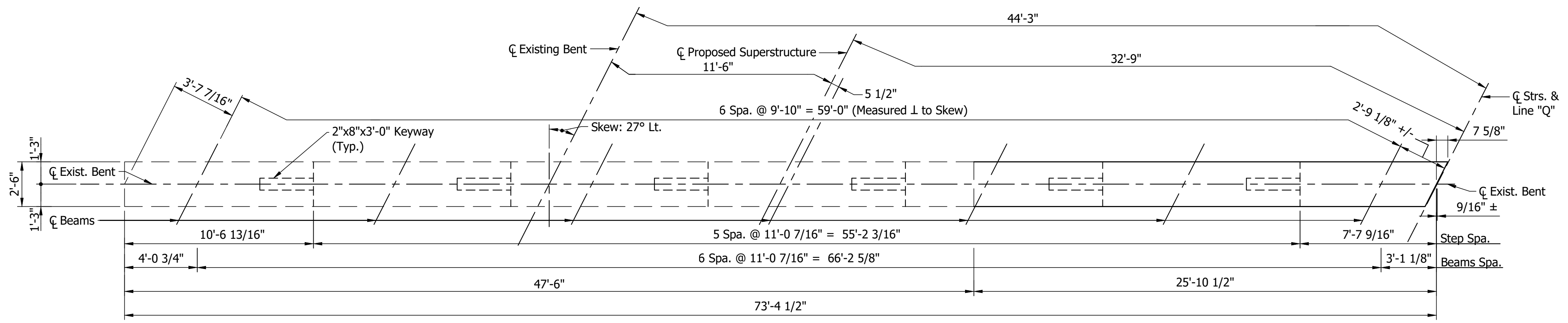
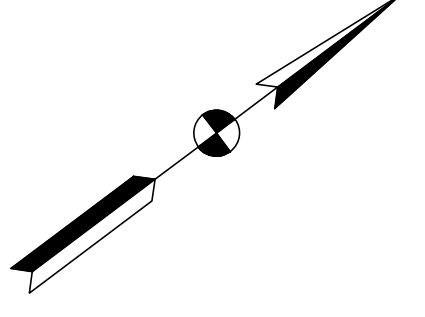


ELEVATION
(NORTHBOUND)
Scale: 1/4" = 1'-0"

SECTION B-B
Scale: 1/4" = 1'-0"

Notes:
 For General Notes, see Dwg.xx.
 For Type "A" Construction Joint, see Std.Dwg.No. E702-CJTA-01.
 For Sections C-C, D-D, E-E and additional notes, see Dwg.xx.
 For Detail "A", see Dwg.xx.

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE	INDIANA DEPARTMENT OF TRANSPORTATION		HORIZONTAL SCALE	BRIDGE FILE	
			AS NOTED	I65-016-04220 ENBL & ESBL	
DESIGNED: APL DRAWN: NW	CHECKED: RTW CHECKED: APL	BENT NO. 4 NBL RECONSTRUCTION DETAILS		VERTICAL SCALE	DESIGNATION
				AS NOTED	1600744 (NB) & 1600750 (SB)
		DRAWING NO. C16 of C18		SHEETS	
				27 of 30	
		CONTRACT R-41529		PROJECT 1700135	



Notes:
 For General Notes, see Dwg.xx.
 For Type "A" Construction Joint, see Std.Dwg.No. E702-CJTA-01.
 For Sections C-C, D-D, E-E and additional notes, see Dwg.xx.
 For Detail "A", see Dwg.xx.

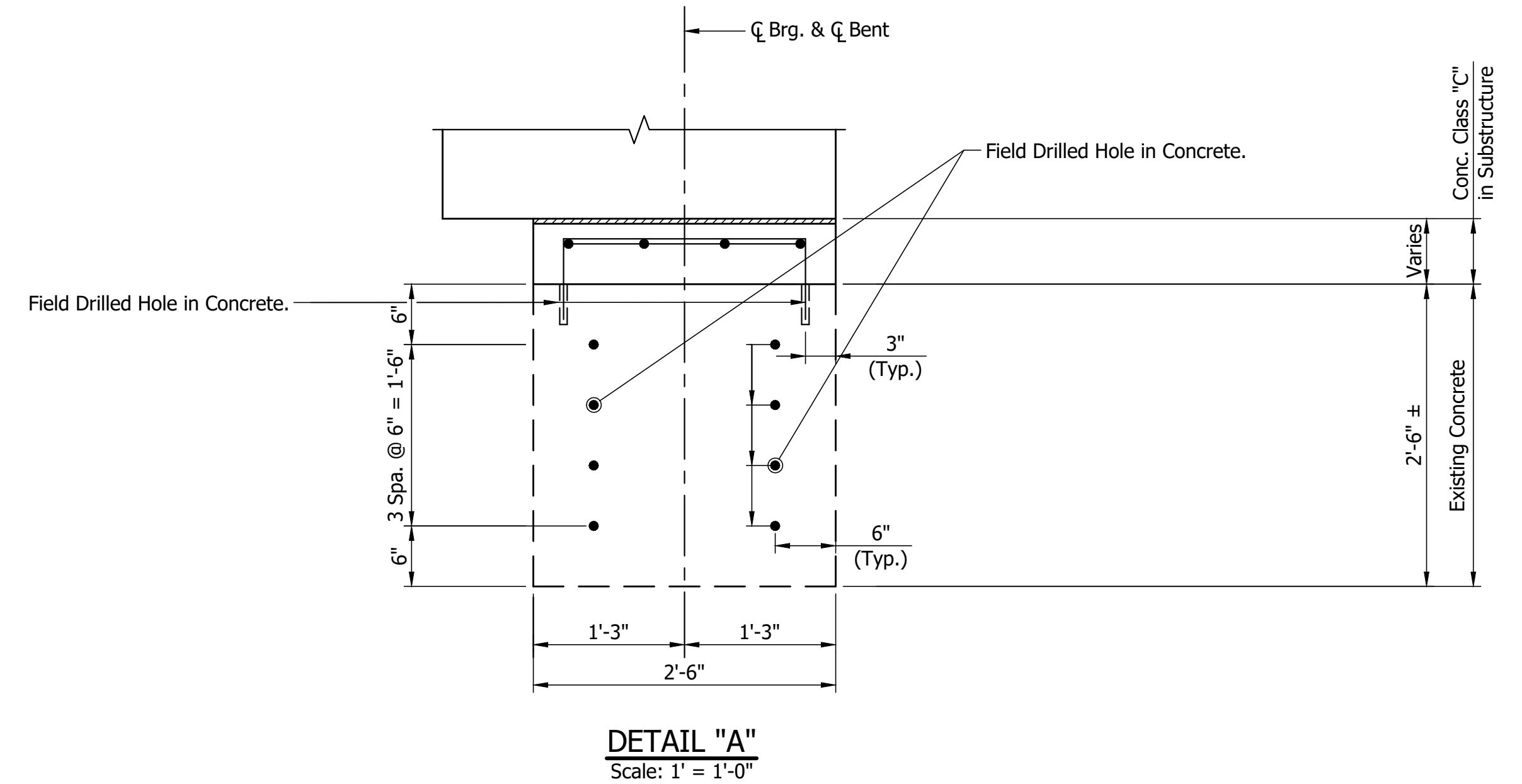
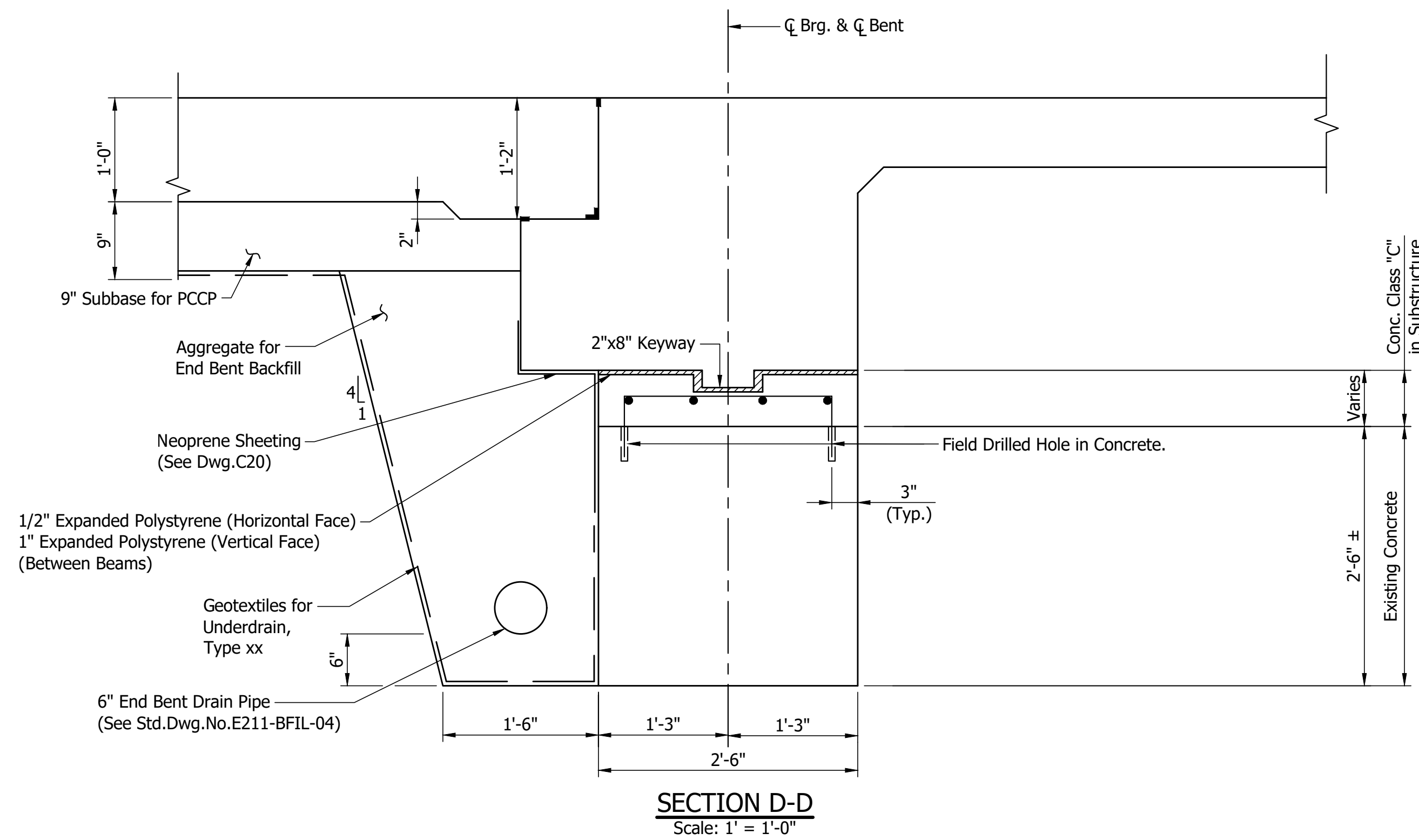
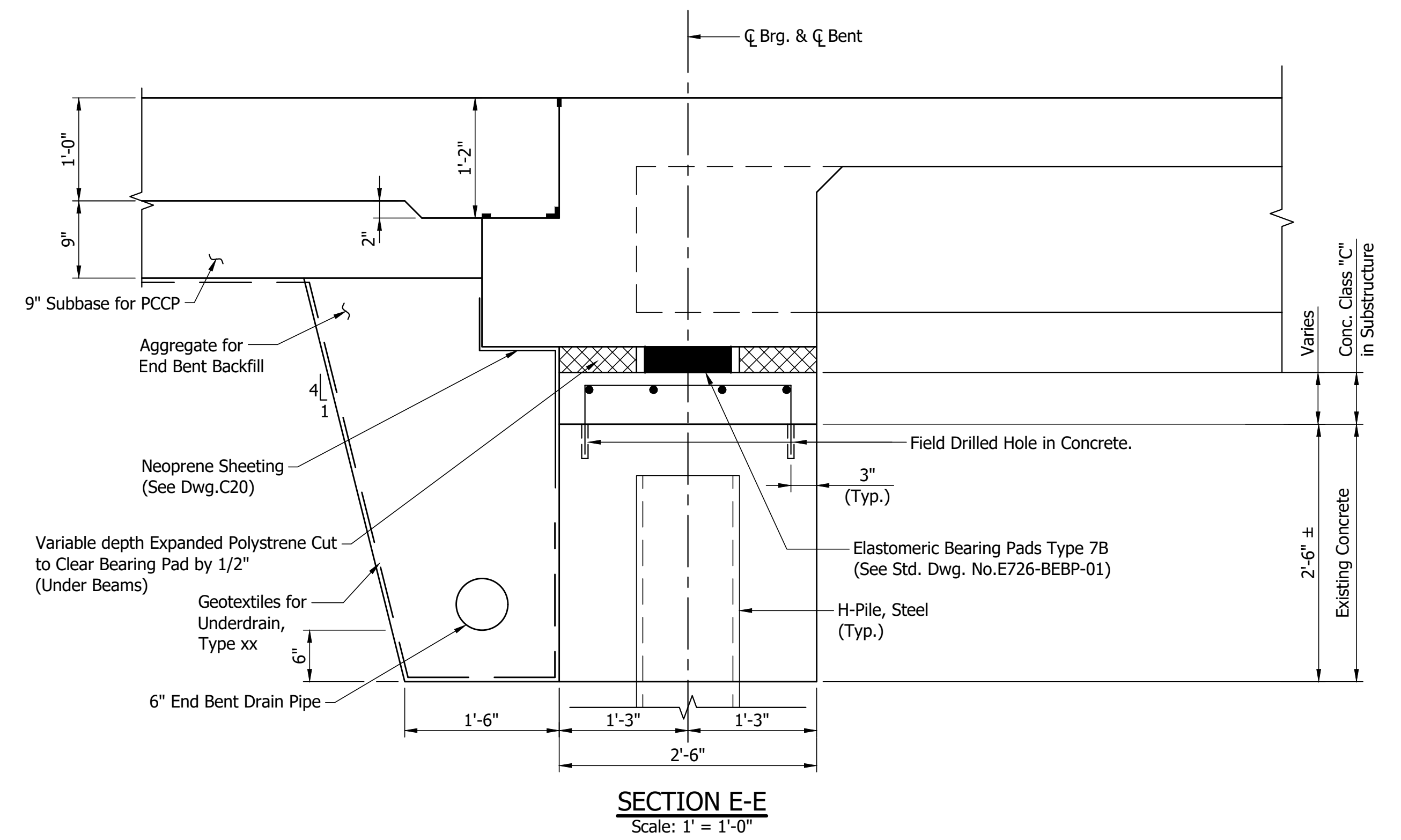
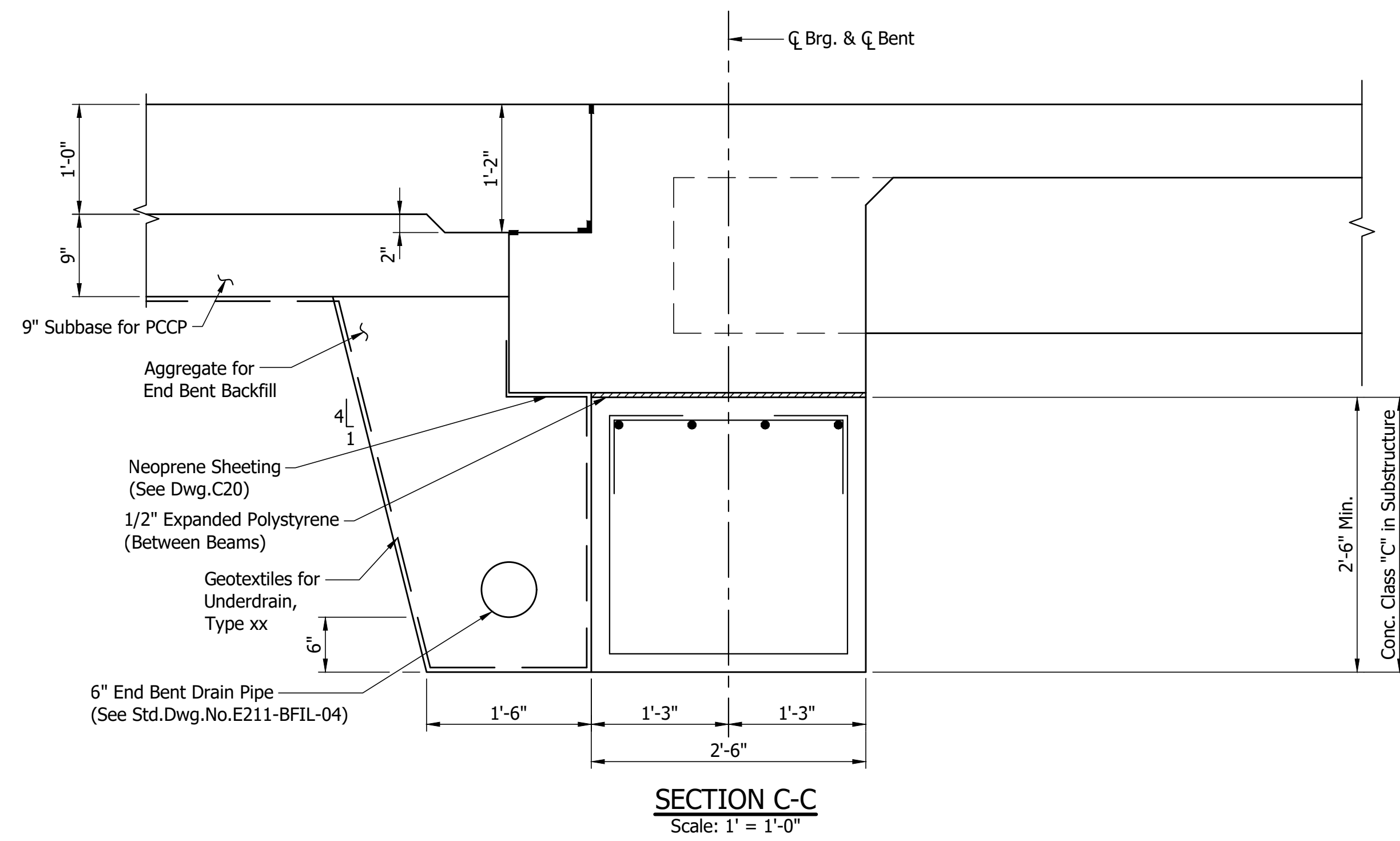
RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: APL _____	DRAWN: NW _____	
CHECKED: RTW _____	CHECKED: APL _____	

INDIANA DEPARTMENT OF TRANSPORTATION

BENT NO. 4

SBL RECONSTRUCTION DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I65-016-04220 ENBL & ESBL
VERTICAL SCALE	DESIGNATION
AS NOTED	1600744 (NB) & 1600750 (SB)
DRAWING NO.	SHEETS
C17 of C18	28 of 30
CONTRACT	PROJECT
R-41529	1700135



RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: APL _____	DRAWN: NW _____	
CHECKED: RTW _____	CHECKED: APL _____	

INDIANA
DEPARTMENT OF TRANSPORTATION

BENT NO. 4 DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I65-016-04220 ENBL & ESBL
VERTICAL SCALE	DESIGNATION
AS NOTED	1600744 (NB) & 1600750 (SB)
DRAWING NO.	SHEETS
C18 of C18	29 of 30
CONTRACT	PROJECT
R-41529	1700135

SUMMARY OF BRIDGE QUANTITIES

ITEM	CONCRETE			RAILING, CONCRETE FT	RAILING, SLIDING PLATE	BARRIER DELINEATORS	MODIFIED CONC. RAILING TRANSITION, TFT	REINF. CONC. BRIDGE APPROACH, 12"	DENSE GRADED SUBBASE	TERMINAL JOINT	REINF. BARS	REINF. BARS EPOXY COATED	FIELD DRILLED HOLE IN CONCRETE	STRUCTURAL STEEL*	DRILLED HOLE	STUD SHEAR CONNECTORS	PIPE RDWY. DRAIN, CASTING EXTENSION	DECK DRAIN	PILES					AGGREGATE FOR END BENT BACKFILL	GEOTEXTILES FOR UNDERDRAINS, TYPE 2A	STRUCTURAL EXPANSION JOINT, M	EXCAVATION FOUNDATION, UNCLASS.	PATCHING CONCRETE STRUCTURES	SURFACE SEAL*	
	CLASS C	CLASS B	CLASS A																STEEL H, HP12x74	TEST PILE, INDICATOR, PRODUCTION	TEST PILE, INDICATOR, RESTRIKE	DYNAMIC PILE LOAD TEST	PILE SHOE, STEEL H							
	SUPERSTR.	IN FTG.	SUBSTR.																											
	CYS	CYS	CYS																NO.	LFT	LFT	EACH	EACH							
BENT NO.1 (NBL)																														
PIER NO.2 (NBL)																														
PIER NO.3 (NBL)																														
BENT NO.4 (NBL)																														
SUPERSTRUCTURE (NBL)																														
R.C. BRIDGE APPROACH-BENT NO.1 (NBL)																														
R.C. BRIDGE APPROACH-BENT NO.4 (NBL)																														
BENT NO.1 (SBL)																														
PIER NO.2 (SBL)																														
PIER NO.3 (SBL)																														
BENT NO.4 (SBL)																														
SUPERSTRUCTURE (SBL)																														
R.C. BRIDGE APPROACH-BENT NO.1 (SBL)																														
R.C. BRIDGE APPROACH-BENT NO.4 (SBL)																														
SUBTOTAL (NBL)																														
SUBTOTAL (SBL)																														
TOTALS																														

RECOMMENDED FOR APPROVAL _____ _____ DESIGN ENGINEER _____ DATE DESIGNED: APL _____ DRAWN: NW _____ CHECKED: RTW _____ CHECKED: APL _____	INDIANA DEPARTMENT OF TRANSPORTATION	HORIZONTAL SCALE _____ BRIDGE FILE _____ NONE I65-016-04220 ENBL & ESBL VERTICAL SCALE _____ DESIGNATION _____ NONE 1600744 (NB) & 1600750 (SB)
BRIDGE SUMMARY OF QUANTITIES	DRAWING NO. _____ SHEETS _____ 30 of 30 CONTRACT _____ PROJECT _____ R-41529 1700135	