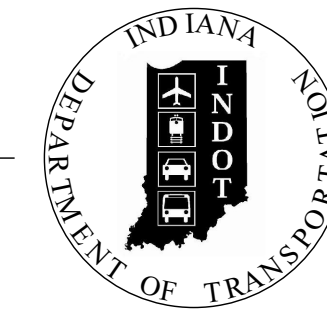


PROJECT	DESIGNATION
1400825	1400825
CONTRACT	BRIDGE FILE
B-37711	13-00043 B

INDIANA DEPARTMENT OF TRANSPORTATION



STRUCTURE INFORMATION				
STRUCTURE	TYPE	SPAN AND SKEW	OVER	STATION
13-00043 B	Continuous Composite Prestressed Concrete Hybrid Bulb-Tee Beam	3 Spans: 80'-0", 90'-0", & 80'-0" Skew: 0°	Little Blue River	106+21.00 "PR-A"

TRAFFIC DATA		
A.A.D.T. (2023)		300 V.P.D.
A.A.D.T. (2043)		360 V.P.D.
D.H.V. (2043)		10 V.P.H.
DIRECTIONAL DISTRIBUTION		50/50 %
TRUCKS		5% A.A.D.T. 2% D.H.V.

DESIGN DATA	
DESIGN SPEED	25 M.P.H.
PROJECT DESIGN CRITERIA	3R (NON-FREEWAY)
FUNCTIONAL CLASSIFICATION	LOCAL AGENCY COLLECTOR
RURAL/URBAN	RURAL
TERRAIN	ROLLING
ACCESS CONTROL	NONE

BRIDGE PLANS FOR SPANS OVER 20 FEET

ROUTE: BEECHWOOD ROAD
 PROJECT NO. 1400825 P.E.
 1400825 R/W
 1400825 CONST.

APPROVED BY:
 CRAWFORD COUNTY BOARD OF COMMISSIONERS

Date: _____

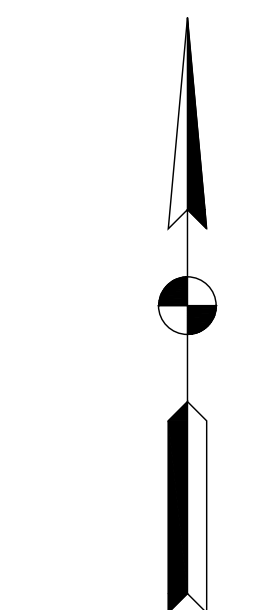
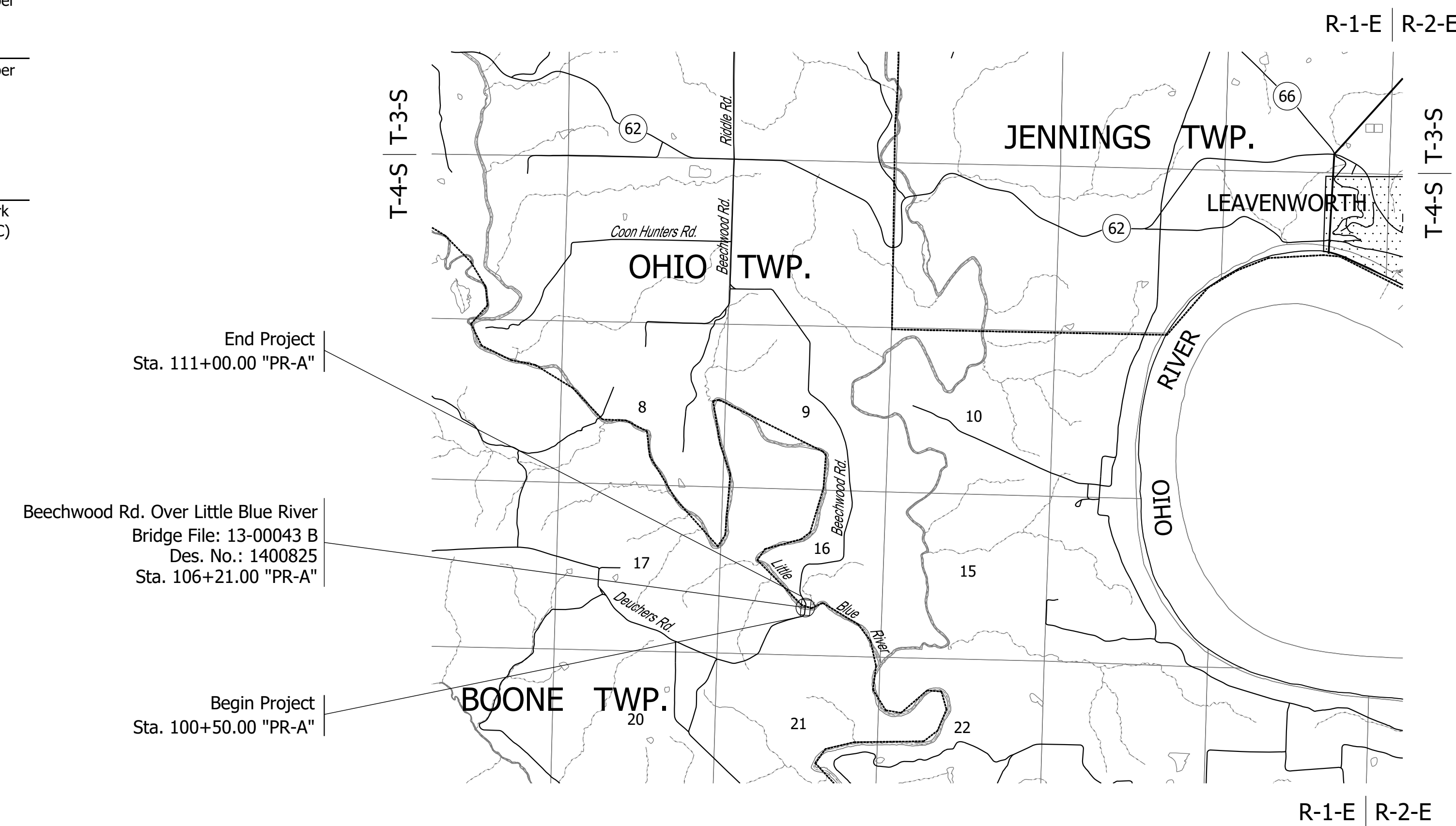
Morton Dale _____ President

Dan Crecelius _____ Member

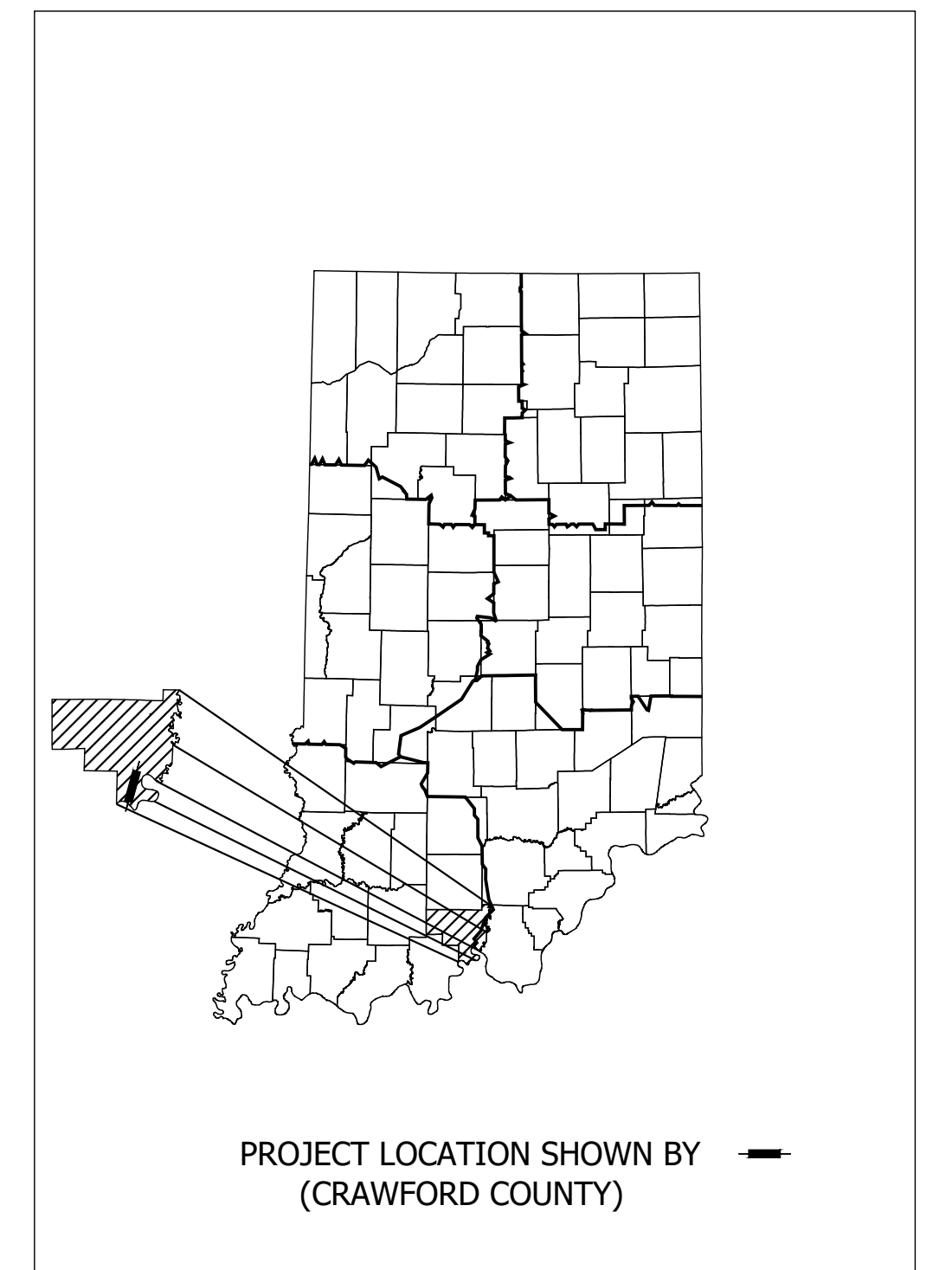
Larry Ingle _____ Member

Laura Mahoney _____ Highway Clerk
 Employee In Responsible Charge (ERC)

Bridge Replacement on Beechwood Road over Little Blue River
 Located 3.3 Miles South of SR 62
 Section 16, T-4-S, R-1-E, Boone & Ohio Townships, Crawford County



SCALE: 1"=3000'



LATITUDE: 38°10'01" N LONGITUDE: 86°24'57" W

BRIDGE LENGTH:	0.048	MI.
ROADWAY LENGTH:	0.151	MI.
TOTAL LENGTH:	0.199	MI.
MAX. GRADE:	-13.29%	%

HUC (14): 05140104180110
 HUC (12): 051401041107

LOCATION MAP

INDIANA DEPARTMENT OF TRANSPORTATION
 STANDARD SPECIFICATIONS DATED 2022
 TO BE USED WITH THESE PLANS

Date: Nov 18, 2022, 3:19pm User Name: Vaughn
 File: X:\Production\Files\2021\1121-0006\CAD\BRIDGE\Plans\Title.dwg



PLANS PREPARED BY: LOCHMUELLER GROUP, INC. (812) 479-6200 PHONE NUMBER
 CERTIFIED BY: _____ DATE
 APPROVED FOR LETTING: _____ DATE
 INDIANA DEPARTMENT OF TRANSPORTATION

BRIDGE FILE	13-00043 B
DESIGNATION	1400825
SURVEY BOOK	SHEET
ELECTRONIC	1 of 62
CONTRACT	PROJECT
B-37711	1400825

UTILITIES

ELECTRIC

Duke Energy
2727 Central Ave.
Columbus, IN 47201
(317) 723-9596
Contact: Christina Girod
Email: christina.girod@duke-energy.com

WATER

Patoka Lake Regional Water & Sewer District - Dubois
2647 N State Rd. 545
Dubois, IN 47527
(812) 678-8300 Ext. 350
Contact: Shawn Kluesner
Email: shawn@plwrs.net

COMMUNICATIONS

Frontier
505 Newton St.
Jasper, IN 47546
(812) 634-0335
Contact: Scott Shields
Email: scott.d.shields@ftr.com



INDEX

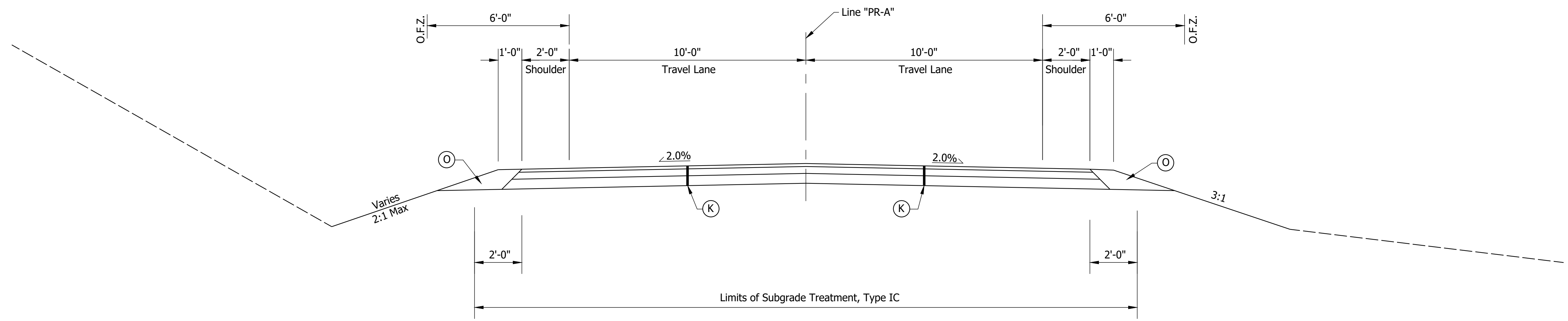
SHEET NO.	SUBJECT
1	TITLE
2	INDEX
3-6	TYPICAL CROSS SECTION LINE "PR-A"
7-8	GEOMETRIC TIE-UP DIAGRAM
8A	PLAT NO. 1
9	MAINTENANCE OF TRAFFIC DETOUR
10-12	PLAN AND PROFILE LINE "PR-A"
13-16	EROSION AND SEDIMENT CONTROL DETAILS
17-18	TEMPORARY CAUSEWAY
19-22	EROSION AND SEDIMENT CONTROL DETAILS & TABLES
23-25	PAVEMENT MARKING DETAILS
26	PAVEMENT MARKING AND SIGN TABLES
27-29	SOIL BORINGS
30	LAYOUT
31	GENERAL PLAN
32-36	END BENT DETAILS
37-40	INTERIOR BENT DETAILS
41	FRAMING PLAN
42-44	BEAM DETAILS
45-47	SUPERSTRUCTURE DETAILS
48	CONCRETE BARRIER RAIL
49	SCREEDS
50	R.C. BRIDGE APPROACH
51	BRIDGE SUMMARY OF QUANTITIES
52	MISCELLANEOUS TABLES
53	APPROACH & STRUCTURE DATA TABLE
54	PIPE MATERIAL TABLE
55-62	CROSS SECTIONS LINE "PR-A"

REVISIONS

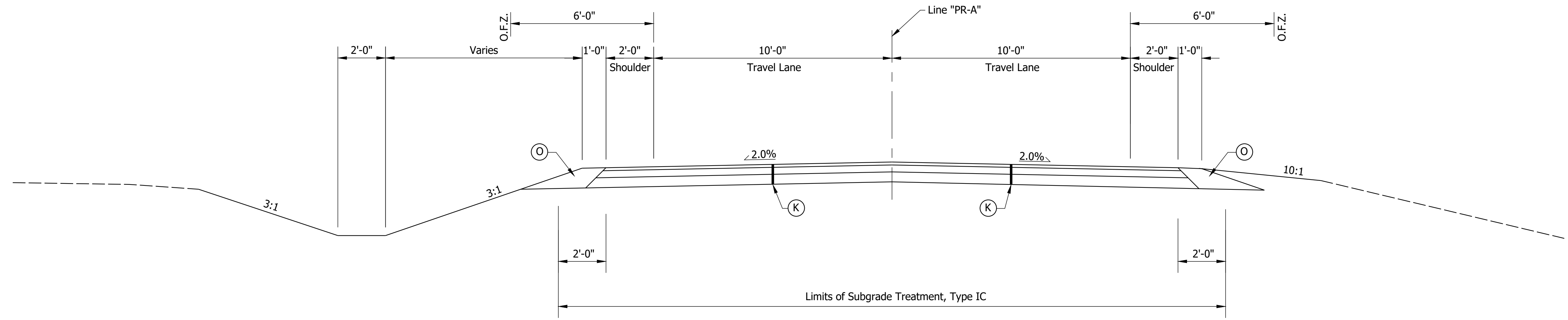
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Date: Nov 18, 2022, 3:19pm User Name: Vaughn File: X:\Production\Files\2021\1121-0006\CAD\BRIDGE\Plans\Index.dwg

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE	INDIANA DEPARTMENT OF TRANSPORTATION	HORIZONTAL SCALE	BRIDGE FILE
		NONE	13-00043 B
DESIGNED: G CJ DRAWN: V CH	INDEX	VERTICAL SCALE	DESIGNATION
		NONE	1400825
CHECKED: ACS CHECKED: MAR		SURVEY BOOK	SHEET
		ELECTRONIC	2 of 62
		CONTRACT	PROJECT
		B-37711	1400825



TYPICAL SECTION
Line "PR-A"
Sta. 100+50.00 to Sta. 101+75.00



TYPICAL SECTION
Line "PR-A"
Sta. 101+75.00 to Sta. 103+79.94 Lt.
Sta. 101+75.00 to Sta. 104+10.00 Rt.

LEGEND

- (K) HMA Pavement - Mainline
165#/SYS QC/QA-HMA, 2, 64, Surface, 9.5 mm on
385#/SYS QC/QA-HMA, 2, 64, Intermediate, 19.0mm on
5" Compacted Aggregate, No. 53 on
Subgrade Treatment, Type IC
- (O) Compacted Aggregate, No. 53, 10"
- O.F.Z. - Obstruction Free Zone

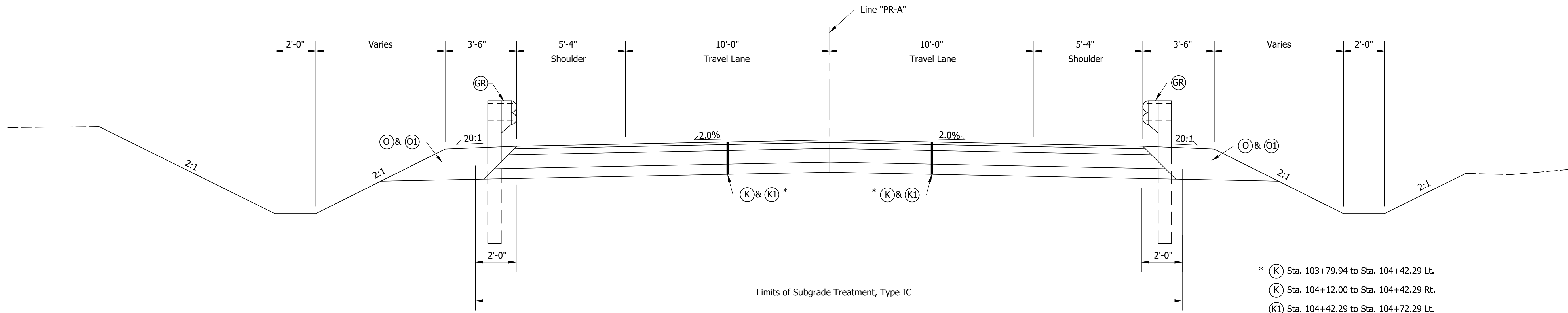
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RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: _____ DAS _____	DRAWN: _____ DAS _____	
CHECKED: _____ JAW _____	CHECKED: _____ JAW _____	

INDIANA
DEPARTMENT OF TRANSPORTATION

**TYPICAL CROSS SECTIONS
LINE "PR-A"**

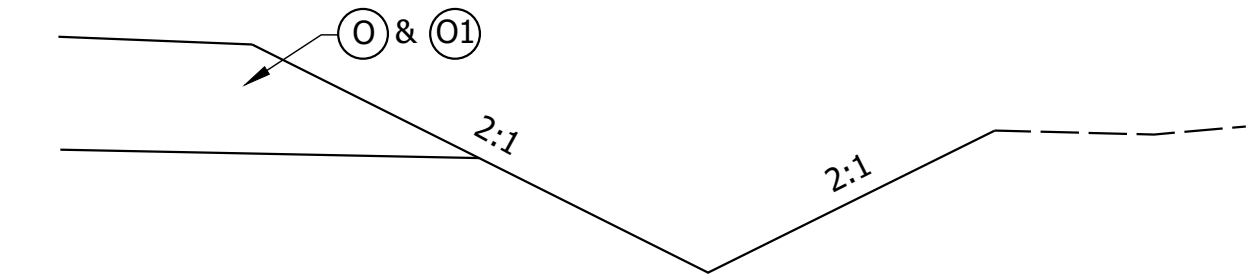
HORIZONTAL SCALE 3/8"=1'-0"	BRIDGE FILE 13-00043 B
VERTICAL SCALE 3/8"=1'-0"	DESIGNATION 1400825
SURVEY BOOK ELECTRONIC	SHEET 3 of 62
CONTRACT B-37711	PROJECT 1400825



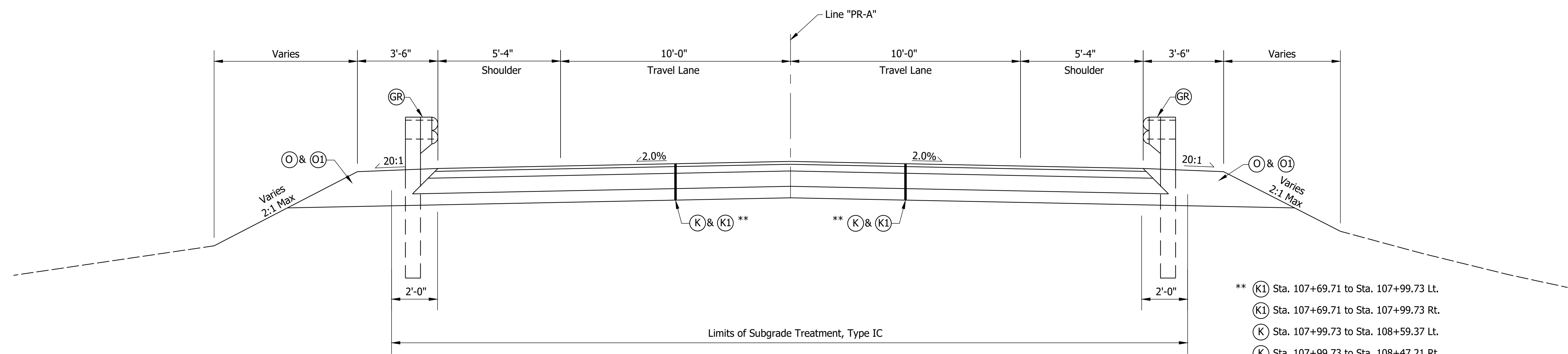
TYPICAL SECTION
 Line "PR-A"
 Sta. 103+79.94 to Sta. 104+72.29 Lt.
 Sta. 104+10.00 to Sta. 104+72.29 Rt.

- * (K) Sta. 103+79.94 to Sta. 104+42.29 Lt.
- (K) Sta. 104+12.00 to Sta. 104+42.29 Rt.
- (K1) Sta. 104+42.29 to Sta. 104+72.29 Lt.
- (K1) Sta. 104+42.29 to Sta. 104+72.29 Rt.

PAVING EXCEPTION
 Line "PR-A"
 Sta. 104+72.29 to Sta. 107+69.71



AUXILIARY DITCH RIGHT
 Line "PR-A"
 Sta. 108+25.00 to Sta. 108+47.21 Rt.



TYPICAL SECTION
 Line "PR-A"
 Sta. 107+69.71 to Sta. 108+59.37 Lt.
 Sta. 107+69.71 to Sta. 108+47.21 Rt.

- ** (K1) Sta. 107+69.71 to Sta. 107+99.73 Lt.
- (K1) Sta. 107+69.71 to Sta. 107+99.73 Rt.
- (K) Sta. 107+99.73 to Sta. 108+59.37 Lt.
- (K) Sta. 107+99.73 to Sta. 108+47.21 Rt.

LEGEND

- (K) HMA Pavement - Mainline
 165#/SYS QC/QA-HMA, 2, 64, Surface, 9.5 mm on
 385#/SYS QC/QA-HMA, 2, 64, Intermediate, 19.0mm on
 5" Compacted Aggregate, No. 53 on
 Subgrade Treatment, Type IC
- (K1) HMA Pavement -Mainline
 165#/SYS QC/QA-HMA, 2, 64, Surface, 9.5 mm on
 385#/SYS QC/QA-HMA, 2, 64, Intermediate, 19.0mm on
 880#/SYS QC/QA-HMA, 2, 64, Base, 25.0mm on
 6" Compacted Aggregate, No. 53 on
 Subgrade Treatment, Type IC on
 Geotextile for Subgrade, Type 2B
- (O) Compacted Aggregate, No. 53, 10"
- (O1) Compacted Aggregate, No. 53, 19"
- (GR) Guardrail

O.F.Z. - Obstruction Free Zone

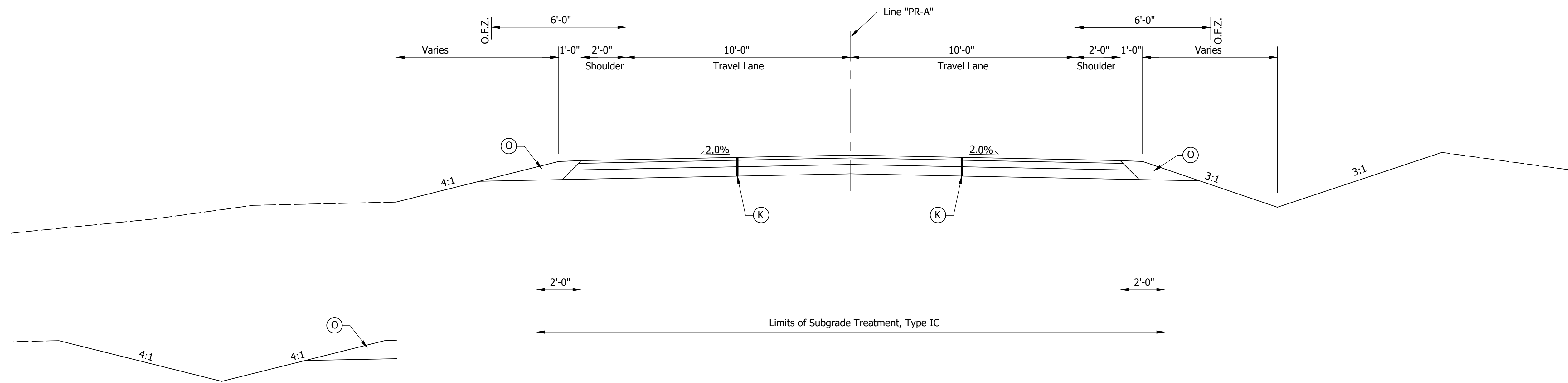
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RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: _____ DAS _____	DRAWN: _____ DAS _____	
CHECKED: _____ JAW _____	CHECKED: _____ JAW _____	

INDIANA DEPARTMENT OF TRANSPORTATION

TYPICAL CROSS SECTIONS LINE "PR-A"

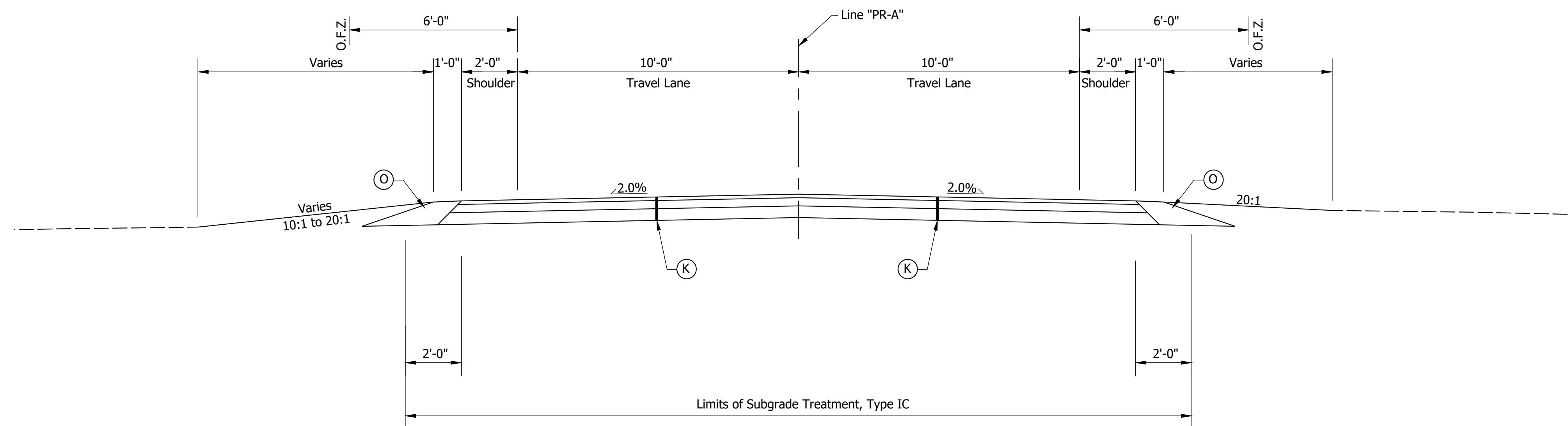
HORIZONTAL SCALE 3/8"=1'-0"	BRIDGE FILE 13-00043 B
VERTICAL SCALE 3/8"=1'-0"	DESIGNATION 1400825
SURVEY BOOK ELECTRONIC	SHEET 4 of 62
CONTRACT B-37711	PROJECT 1400825



AUXILIARY DITCH LEFT
Line "PR-A"
Sta. 109+00.00 to Sta. 110+00.00 Lt.

TYPICAL SECTION

Line "PR-A"
Sta. 108+59.37 to Sta. 110+00.00 Lt.
Sta. 108+47.21 to Sta. 110+00.00 Rt.



TYPICAL SECTION

Line "PR-A"
Sta. 110+00.00 to Sta. 111+00.00

LEGEND

- (K) HMA Pavement - Mainline
165#/SYS QC/QA-HMA, 2, 64, Surface, 9.5 mm on
385#/SYS QC/QA-HMA, 2, 64, Intermediate, 19.0mm on
5" Compacted Aggregate, No. 53 on
Subgrade Treatment, Type IC
- (O) Compacted Aggregate, No. 53, 10"

O.F.Z. - Obstruction Free Zone

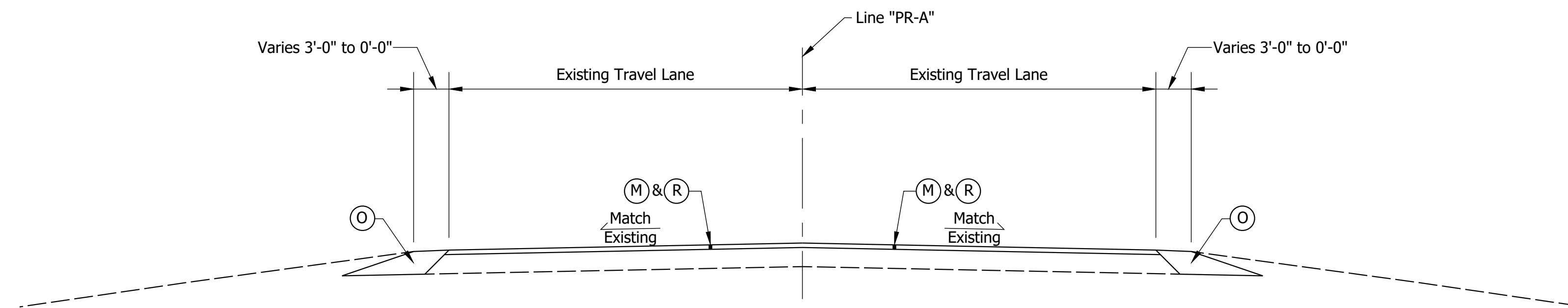
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RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: DAS	DRAWN: DAS	
CHECKED: JAW	CHECKED: JAW	

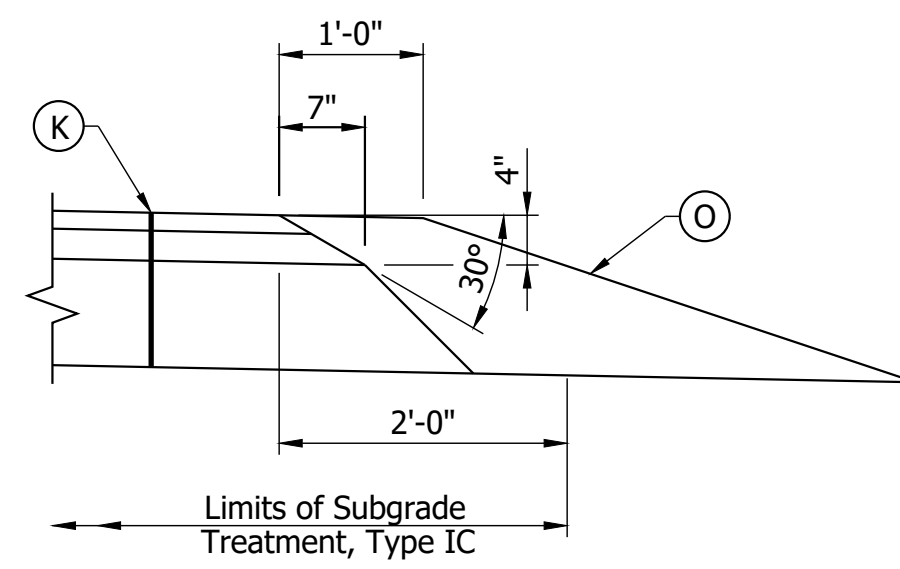
INDIANA
DEPARTMENT OF TRANSPORTATION

TYPICAL CROSS SECTIONS
LINE "PR-A"

HORIZONTAL SCALE	BRIDGE FILE
3/8"=1'-0"	13-00043 B
VERTICAL SCALE	DESIGNATION
3/8"=1'-0"	1400825
SURVEY BOOK	SHEET
ELECTRONIC	5 of 62
CONTRACT	PROJECT
B-37711	1400825



INCIDENTAL CONSTRUCTION
Line "PR-A"
Sta. 100+07.66 to Sta. 100+50.00
Sta. 111+00.00 to Sta. 111+50.00



SAFETY EDGE DETAIL
NOT TO SCALE

LEGEND

- (K) HMA Pavement - Mainline
165#/SYS QC/QA-HMA, 2, 64, Surface, 9.5 mm on
385#/SYS QC/QA-HMA, 2, 64, Intermediate, 19.0mm on
5" Compacted Aggregate, No. 53 on
Subgrade Treatment, Type IC
- (M) Milling, Transition (0.025"-1.5")
- (O) Compacted Aggregate, No. 53, 10"
- (R) 165#/SYS QC/QA-HMA, 2, 64, Surface, 9.5 mm

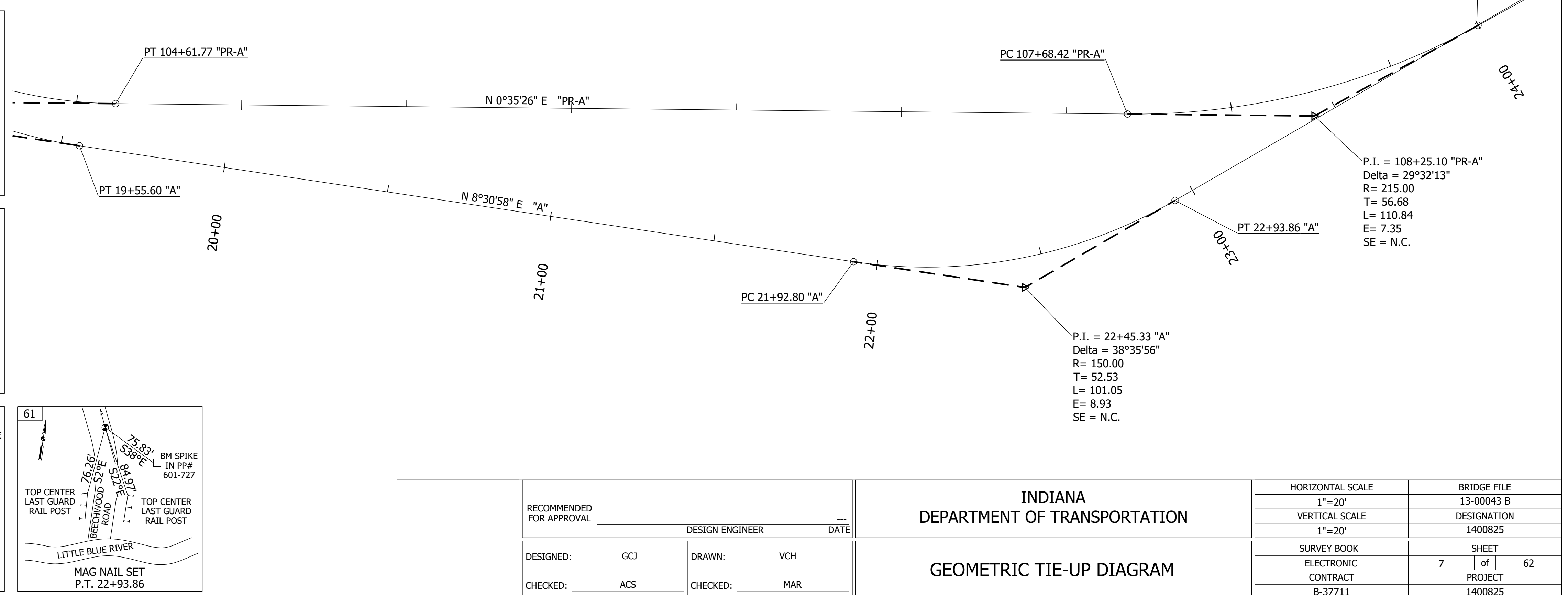
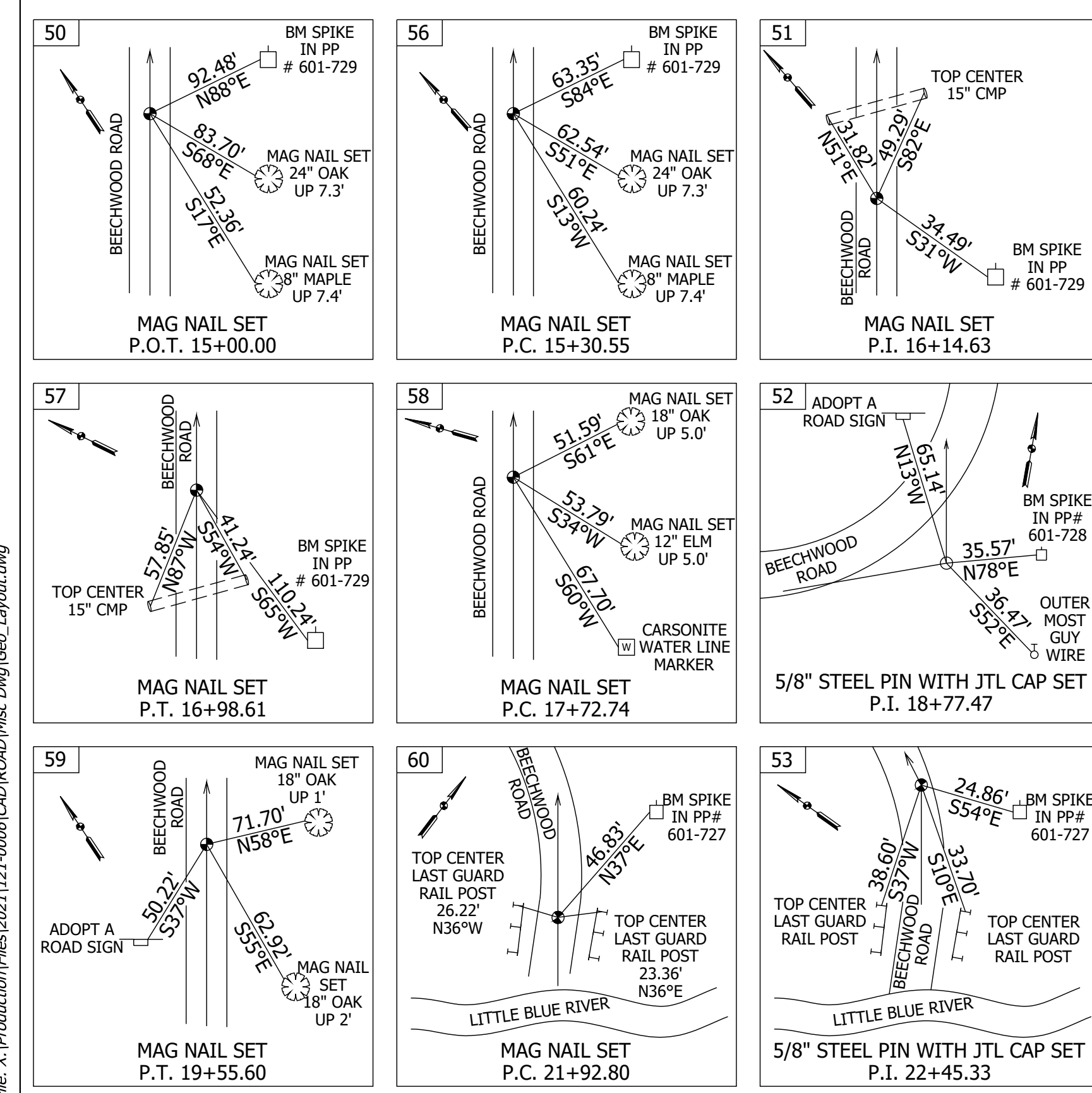
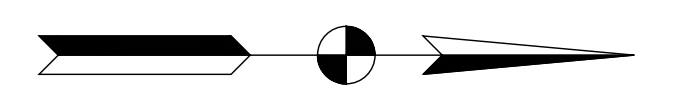
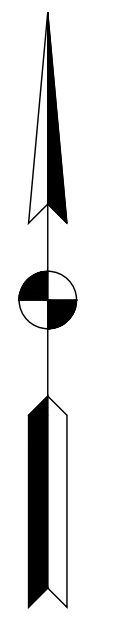
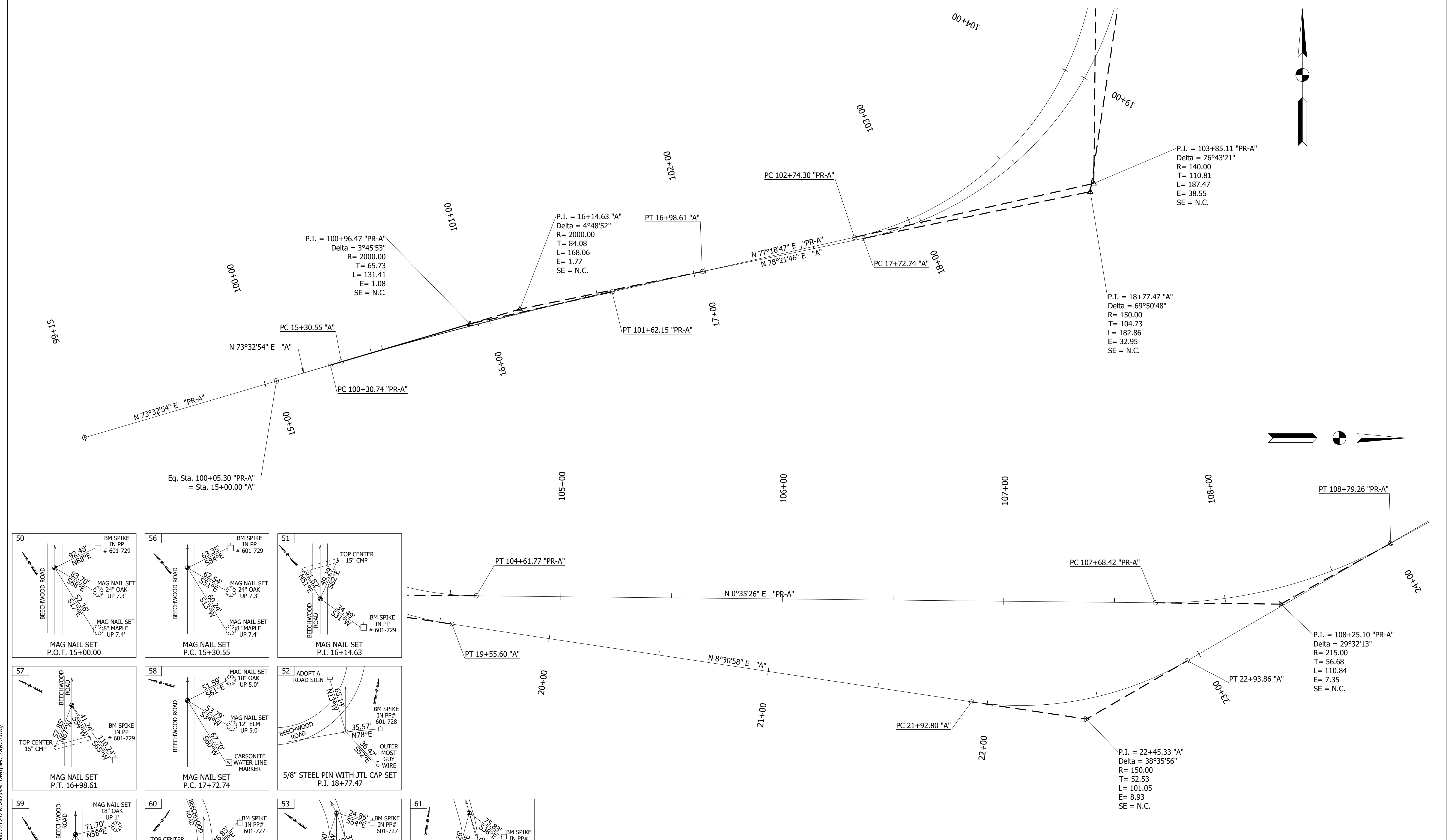
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RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: _____ DAS _____	DRAWN: _____ DAS _____	
CHECKED: _____ JAW _____	CHECKED: _____ JAW _____	

**INDIANA
DEPARTMENT OF TRANSPORTATION**

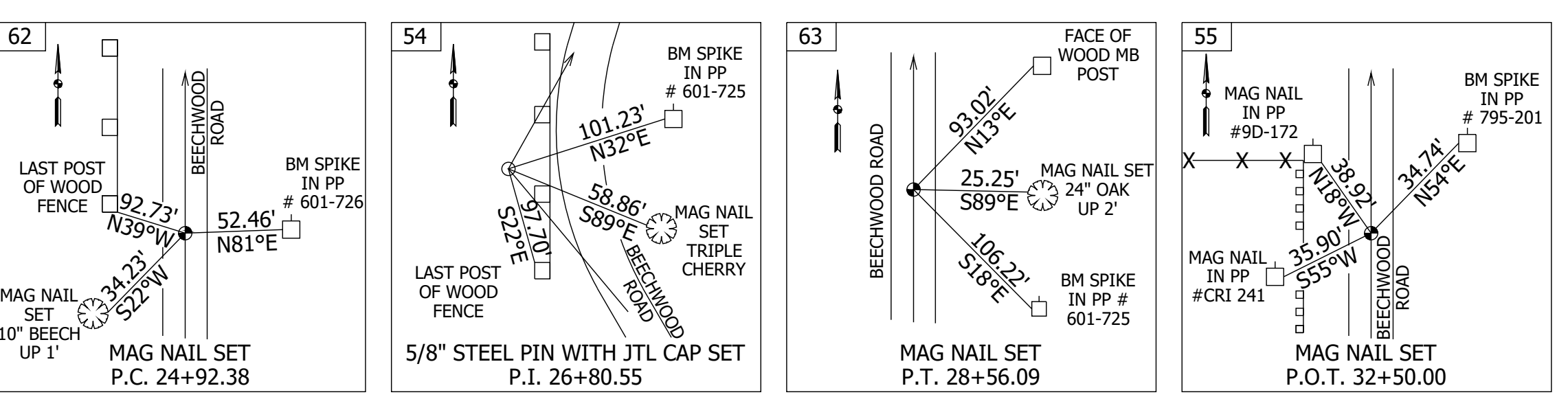
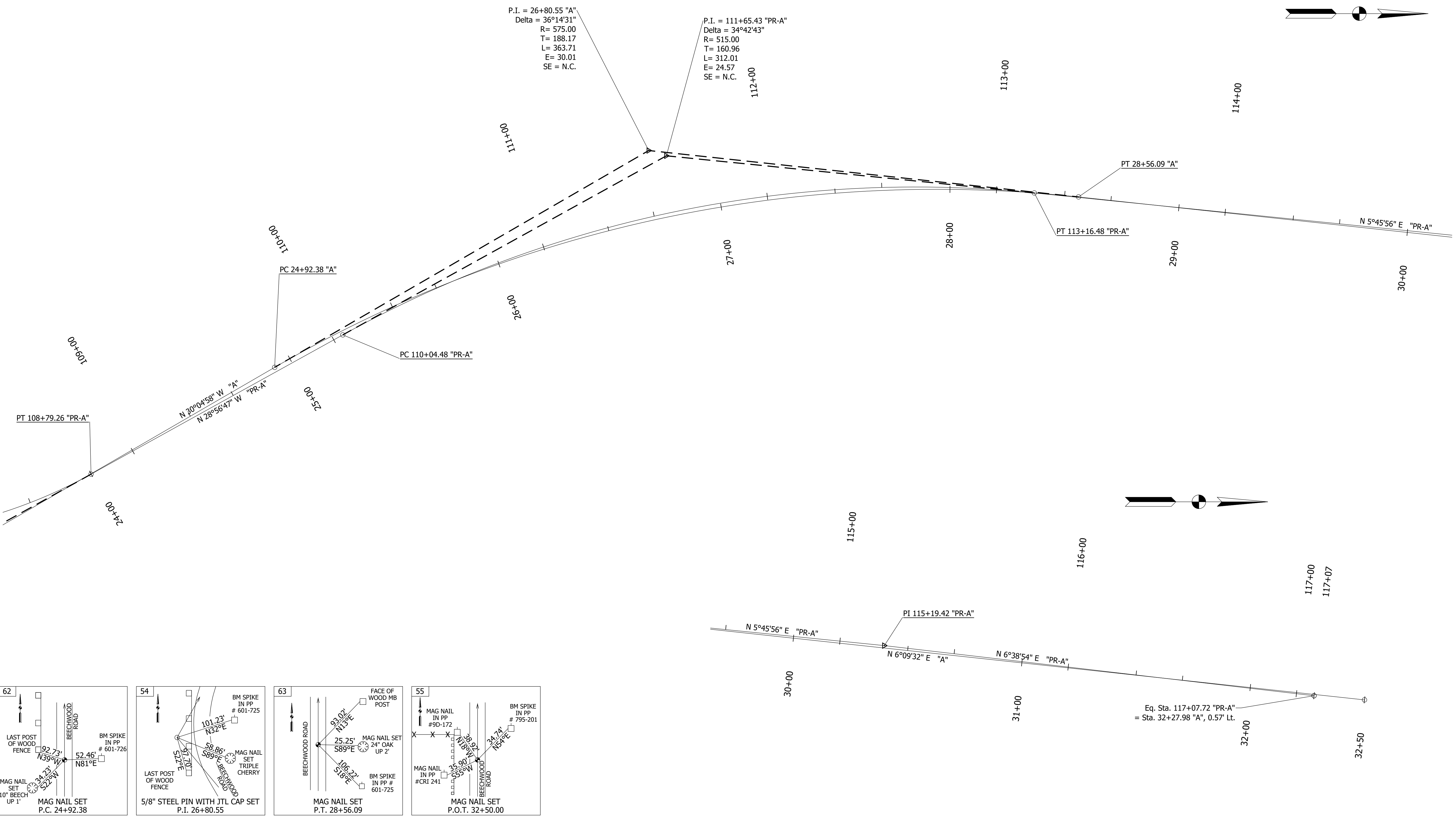
**TYPICAL CROSS SECTIONS
LINE "PR-A"**

HORIZONTAL SCALE	BRIDGE FILE
3/8"=1'-0"	13-00043 B
VERTICAL SCALE	DESIGNATION
3/8"=1'-0"	1400825
SURVEY BOOK	SHEET
ELECTRONIC	6 of 62
CONTRACT	PROJECT
B-37711	1400825



Date: Nov 18, 2022, 3:12pm User Name: Vaughn
 File: X:\Production\Files\2021\1121-0006\CAD\ROAD\Misc Dwg\Geo_Layout.dwg

RECOMMENDED FOR APPROVAL _____		DESIGN ENGINEER _____ DATE _____		INDIANA DEPARTMENT OF TRANSPORTATION GEOMETRIC TIE-UP DIAGRAM		HORIZONTAL SCALE		BRIDGE FILE	
DESIGNED: G CJ		DRAWN: V CH				1"=20'		13-00043 B	
CHECKED: ACS		CHECKED: MAR				VERTICAL SCALE		DESIGNATION	
				1"=20'		1400825		SURVEY BOOK	
						ELECTRONIC		7 of 62	
						CONTRACT		PROJECT	
						B-37711		1400825	



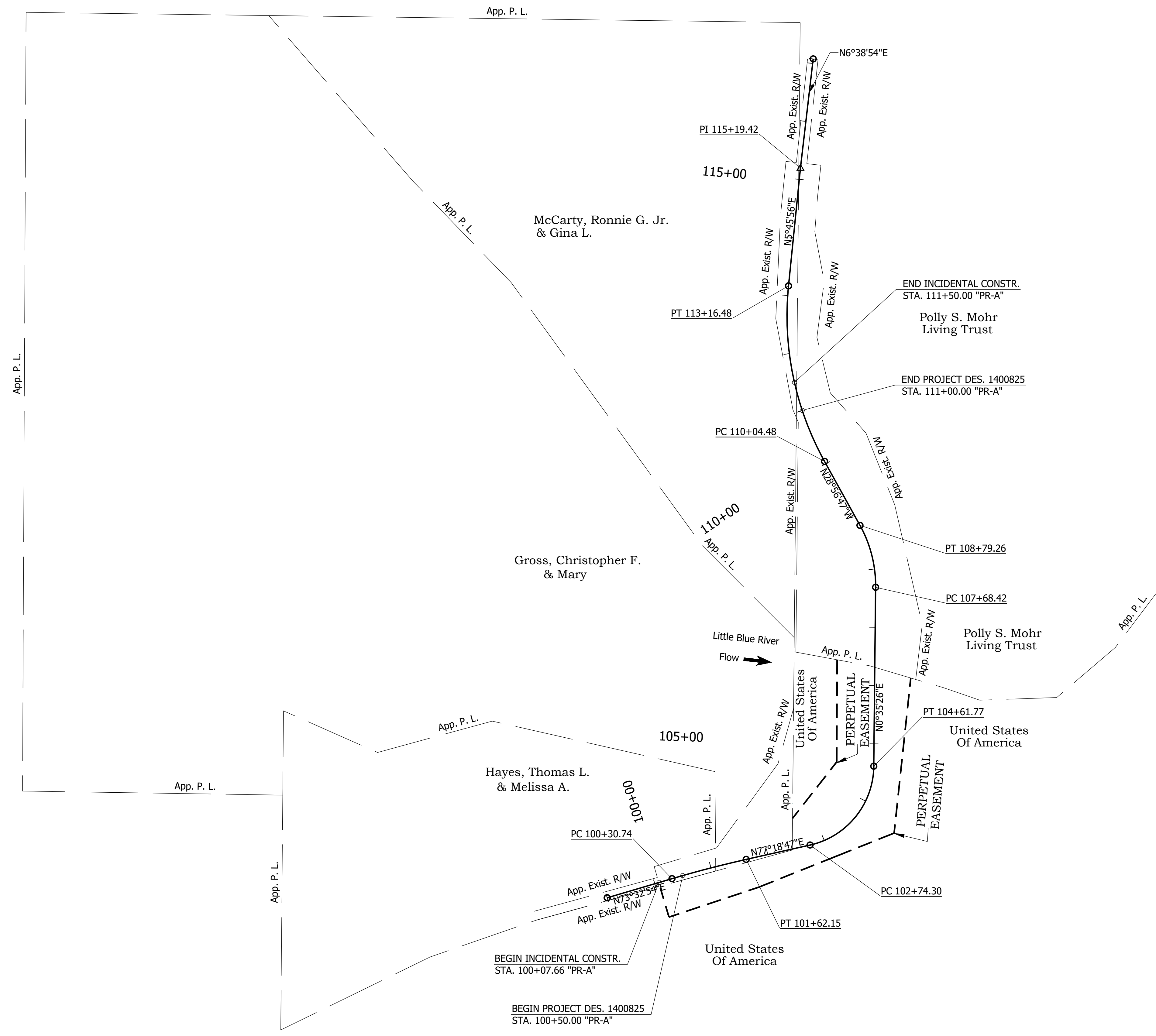
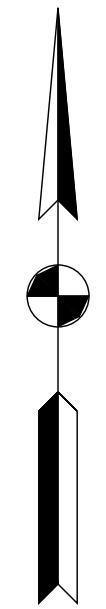
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RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: G CJ	DRAWN: V CH	
CHECKED: A CS	CHECKED: M AR	

INDIANA DEPARTMENT OF TRANSPORTATION

GEOMETRIC TIE-UP DIAGRAM

HORIZONTAL SCALE	BRIDGE FILE
1"=20'	13-00043 B
VERTICAL SCALE	DESIGNATION
1"=20'	1400825
SURVEY BOOK	SHEET
ELECTRONIC	8 of 62
CONTRACT	PROJECT
B-37711	1400825



Date: Nov 18, 2022, 3:13pm User Name: Vaughn
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NOTES:
See Geometric Tie-Up Diagram on Sheets 7 and 8 for Line "A" & Line "PR-A" Alignment information & references.

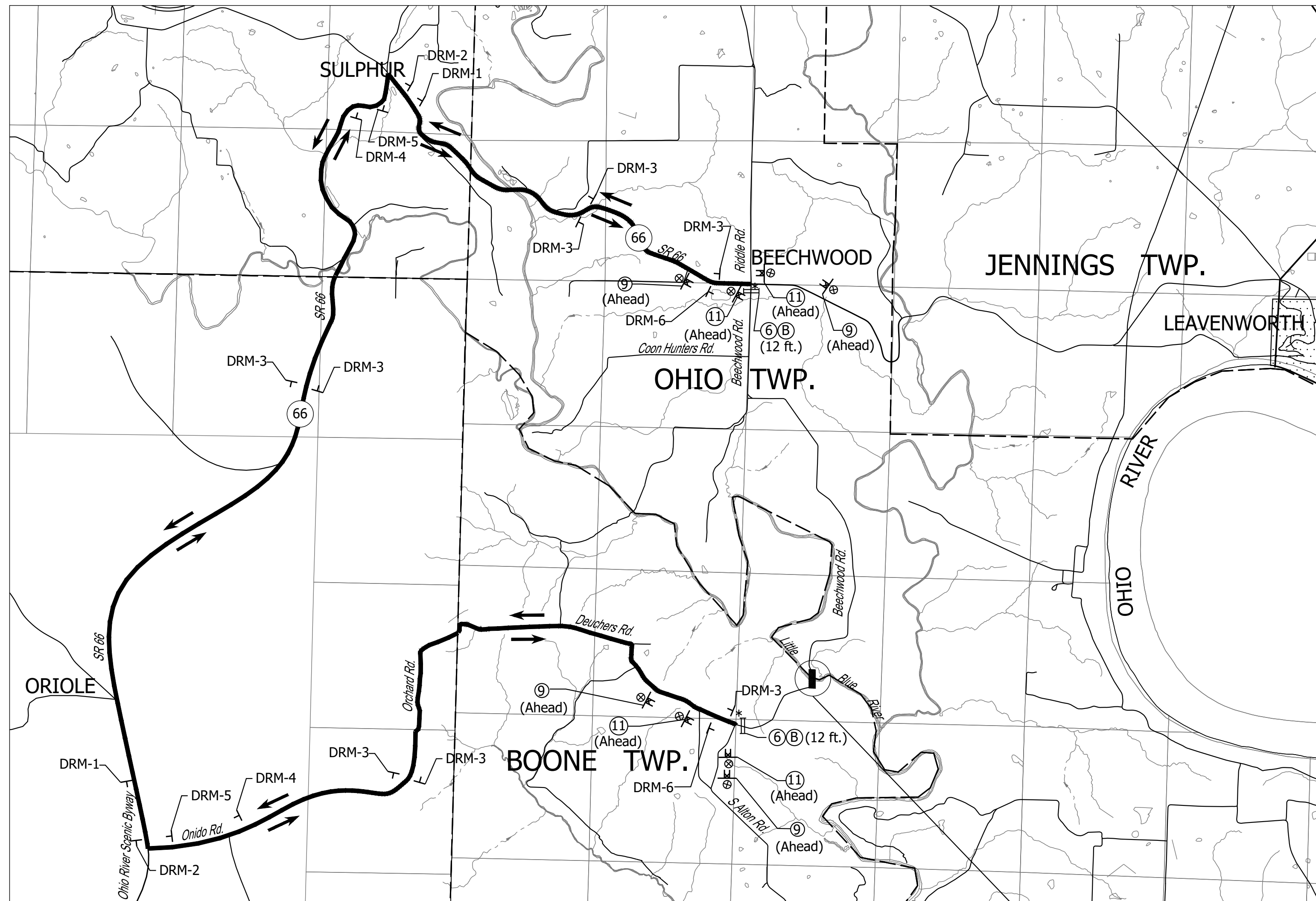
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DESIGNED: _____ DAS _____	DRAWN: _____ DAS _____	
CHECKED: _____ JAW _____	CHECKED: _____ JAW _____	

**INDIANA
DEPARTMENT OF TRANSPORTATION**

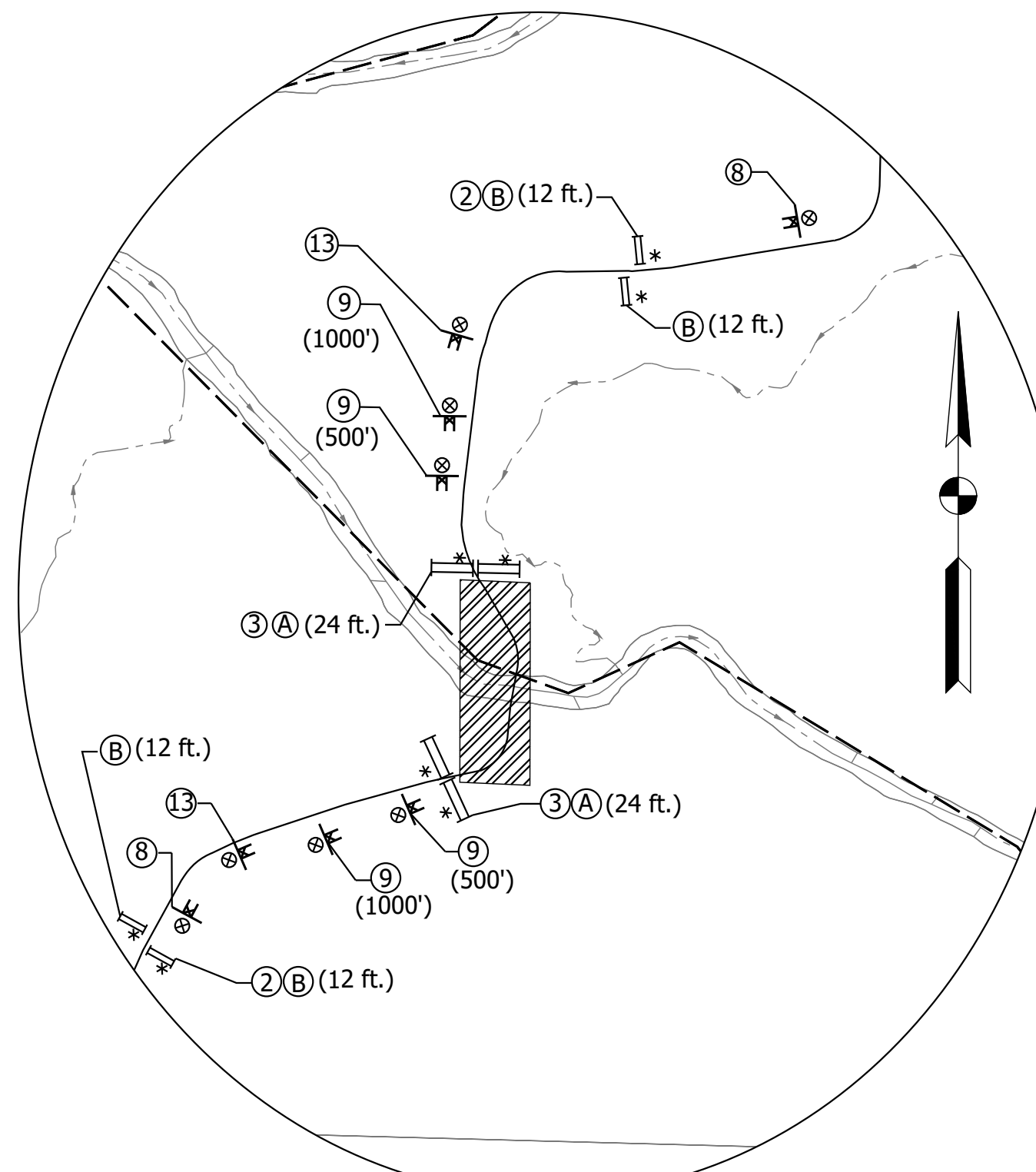
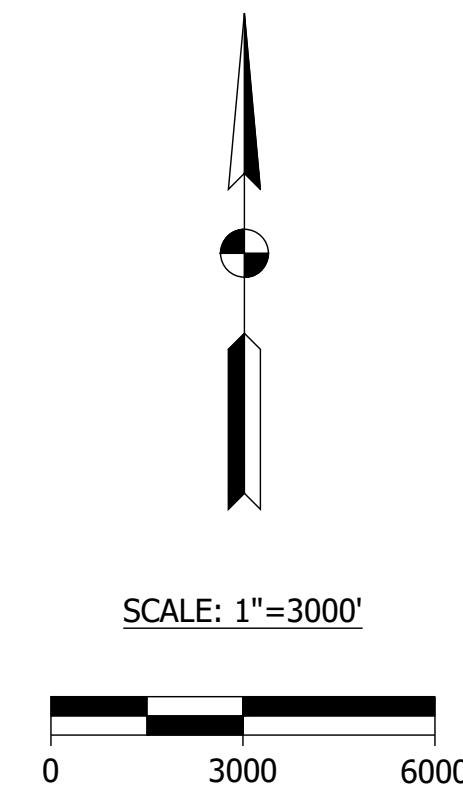
PLAT NO. 1

HORIZONTAL SCALE 1"=100'	BRIDGE FILE 13-00043 B
VERTICAL SCALE 1"=100'	DESIGNATION 1400825
SURVEY BOOK ELECTRONIC	SHEET 8A of 62
CONTRACT B-37711	PROJECT 1400825

Date: Nov 18, 2022, 4:53pm User Name: Vaughn
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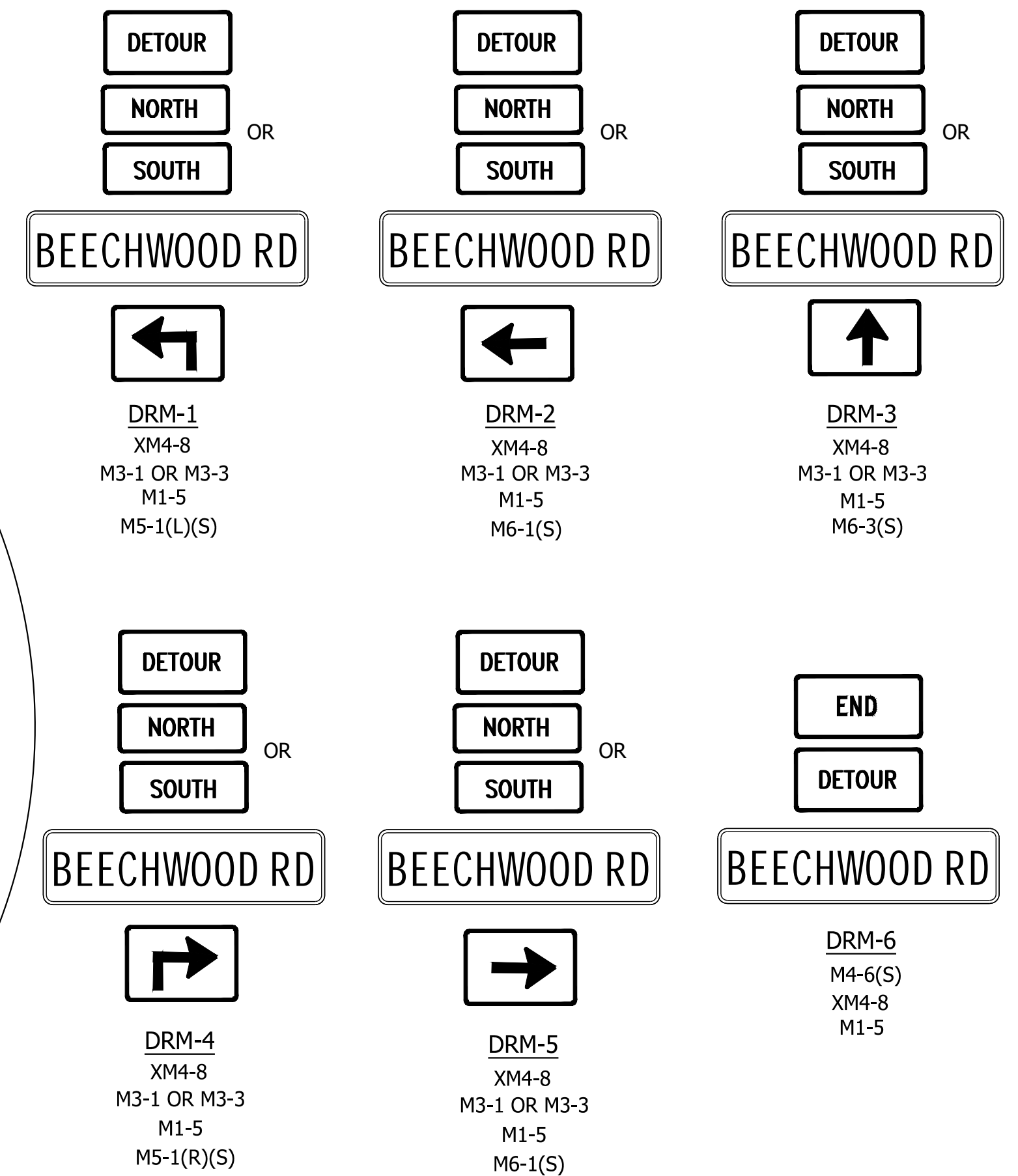


Detail "A"
See This Sheet



DETAIL "A"
SCALE: 1"=500'

ESTIMATED MAINTENANCE OF TRAFFIC QUANTITIES	
Construction Sign, A	14 Each
Std. Barricade, Type III-A	48 ft.
Std. Barricade, Type III-B	72 ft.
Road Closure Sign Assembly	6 Each
Detour Route Marker Assembly	18 Each



LEGEND

- (A) Std. Barricade, Type III-A (Length)
- (B) Std. Barricade, Type III-B (Length)
- (2) Road Closure Sign Assembly w/ R11-4 (Road Closed to Thru Traffic) (60x30)
- (3) Road Closure Sign Assembly; R11-2 (Road Closed) (48x30)
- (6) Road Closure Sign Assembly w/ R11-3a (Road Closed ___ Miles Ahead Local Traffic Only) (60x30), XM4-8 (Detour) (24x12)
- (8) Construction Sign A, XG20-5 (Beechwood Rd Closed "Date") (60x36)
- (9) Construction Sign A, XW20-3 (Road Closed XX) (48x48)
- (11) Construction Sign A, XW20-2 (Detour XX) (48x48)
- (13) Construction Sign, A, XW2-6-A (Worksite Penalty) (78x42)
- Construction Sign
- Detour Route Marker
- Construction Warning Light, A
- Construction Warning Light, B
- Std. Barricade
- Denotes Project Area

NOTES

- Beechwood Rd. shall be closed to thru traffic from SR 66 to Deuchers Rd.
- Thru traffic shall be detoured along SR 66, Onico Rd., Orchard Rd., & Deuchers Rd. throughout construction.
- Access to all driveways shall be maintained.

RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: _____	DAS	DRAWN: _____
_____	DAS	_____
CHECKED: _____	JAW	CHECKED: _____
_____	JAW	_____

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC DETOUR

HORIZONTAL SCALE	BRIDGE FILE
AS SHOWN	13-00043 B
VERTICAL SCALE	DESIGNATION
AS SHOWN	1400825
SURVEY BOOK	SHEET
ELECTRONIC	9 of 62
CONTRACT	PROJECT
B-37711	1400825

EARTHWORK SUMMARY (Cu. Yards)						
Location	Excavation	Fill Available	*Benching	Benching +25%	Fill	Fill + 25%
Line "PR-A"	3550	3550	190	240	1,285	1,606
TOTALS	3,550	3,550	190	240	1,285	1,606

* Benching Not to be Measured for Payment.

Unclassified Excavation		Fill Available	
Excavation	3,550	Excavation	3,550
		Benching	+ 190
		Fill Available	3,740
	3,550		

Fill Req'd.		Waste	
Fill + 25%	1,606	Fill Available	3,740
Benching + 25%	+ 240	Fill Req'd	- 1,984
Fill (Spill Slope)	+ 51		(1,756)
Fill (Exist. Rdwy)	+ 87		
	1,984		

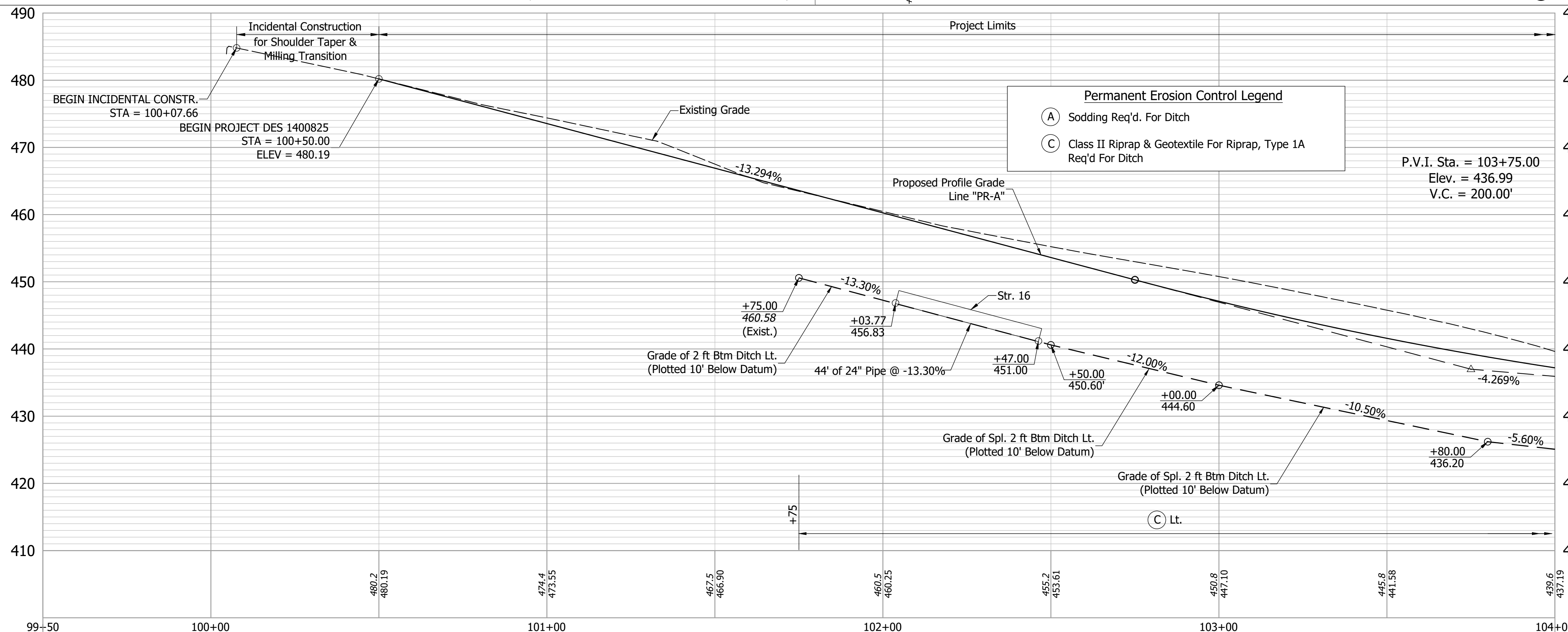
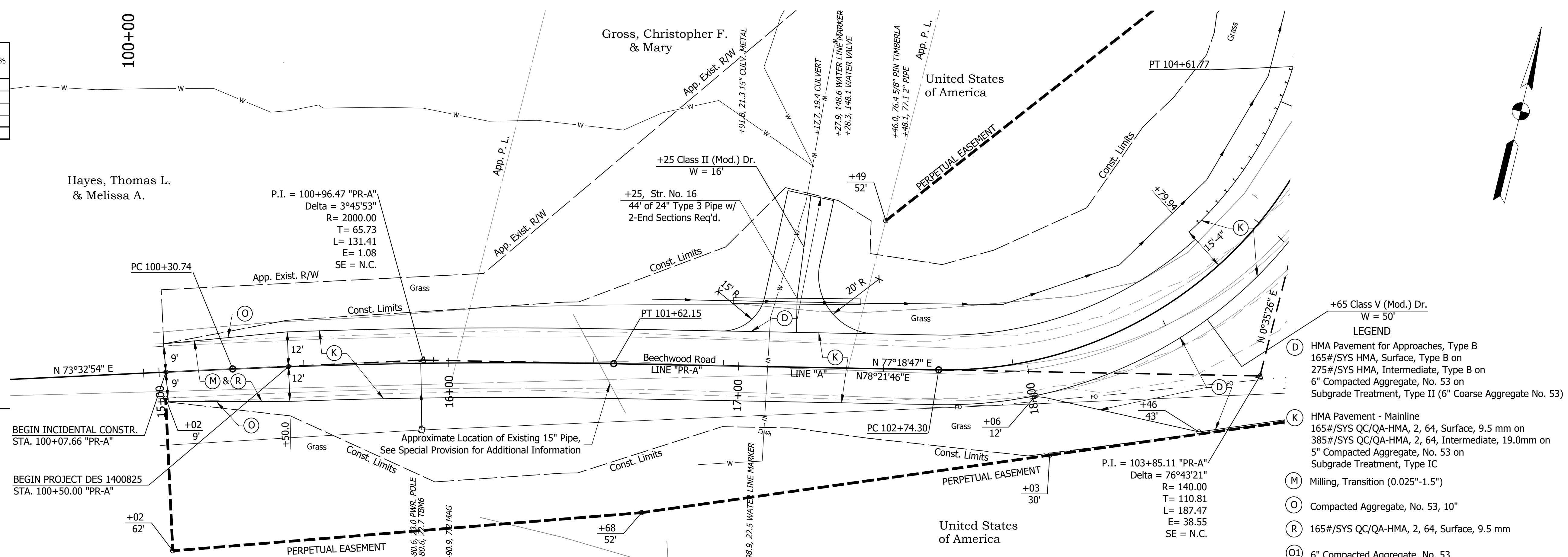
COMMON, EXCAVATION 3,550 CYD

WASTE -1,756 CYD

EXCAVATION, WATERWAY 125 CYD

EXCAVATION, UNCLASSIFIED (For Exist. Rdwy) 87 CYD

PERPETUAL EASEMENT ON THIS SHEET DESCRIBED FROM LINE "A" EXCEPT AS SHOWN. ALL TOPOGRAPHY ON THIS SHEET DESCRIBED FROM LINE "PR-A" EXCEPT AS SHOWN. LINE "PR-A" TO BE CONSTRUCTED.



Permanent Erosion Control Legend	
(A)	Sodding Req'd. For Ditch
(C)	Class II Riprap & Geotextile For Riprap, Type 1A Req'd For Ditch

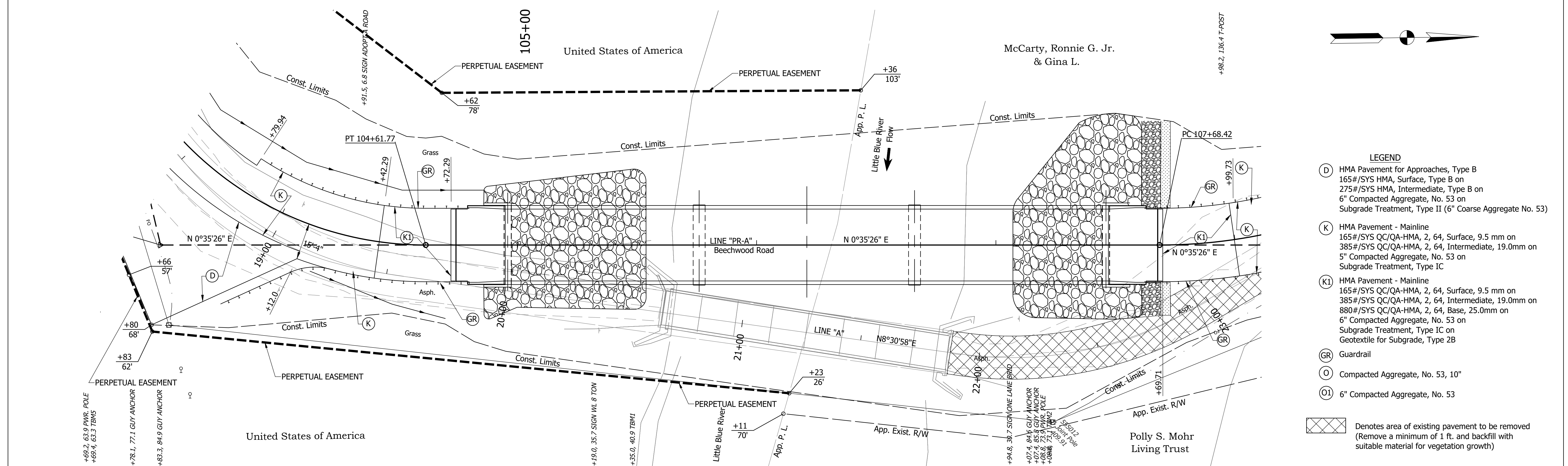
NOTES:
See Geometric Tie-Up Diagram on Sheets 7 and 8 for Line "A" & Line "PR-A" Alignment information & references.

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
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INDIANA DEPARTMENT OF TRANSPORTATION
PLAN AND PROFILE LINE "PR-A"

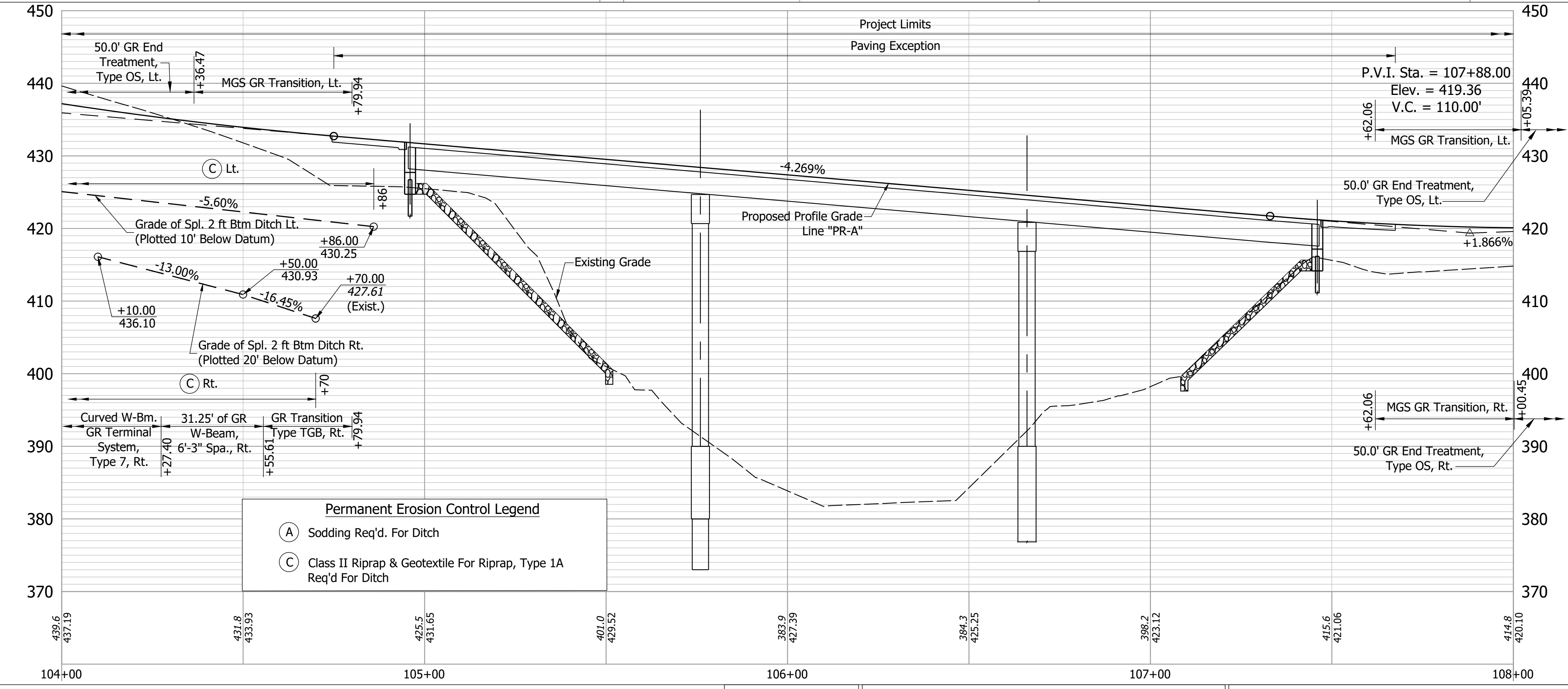
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1"=20'	13-00043 B
VERTICAL SCALE	DESIGNATION
1"=10'	1400825
SURVEY BOOK	SHEET
ELECTRONIC	10 of 62
CONTRACT	PROJECT
B-37711	1400825

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- LEGEND**
- (D) HMA Pavement for Approaches, Type B
165#/SYS HMA, Surface, Type B on
275#/SYS HMA, Intermediate, Type B on
6" Compacted Aggregate, No. 53 on
Subgrade Treatment, Type II (6" Coarse Aggregate No. 53)
 - (K) HMA Pavement - Mainline
165#/SYS QC/QA-HMA, 2, 64, Surface, 9.5 mm on
385#/SYS QC/QA-HMA, 2, 64, Intermediate, 19.0mm on
5" Compacted Aggregate, No. 53 on
Subgrade Treatment, Type IC
 - (K1) HMA Pavement - Mainline
165#/SYS QC/QA-HMA, 2, 64, Surface, 9.5 mm on
385#/SYS QC/QA-HMA, 2, 64, Intermediate, 19.0mm on
880#/SYS QC/QA-HMA, 2, 64, Base, 25.0mm on
6" Compacted Aggregate, No. 53 on
Subgrade Treatment, Type IC on
Geotextile for Subgrade, Type 2B
 - (GR) Guardrail
 - (O) Compacted Aggregate, No. 53, 10"
 - (O1) 6" Compacted Aggregate, No. 53
- Denotes area of existing pavement to be removed
(Remove a minimum of 1 ft. and backfill with suitable material for vegetation growth)

PERPETUAL EASEMENT ON THIS SHEET DESCRIBED FROM LINE "A" EXCEPT AS SHOWN. ALL TOPOGRAPHY ON THIS SHEET DESCRIBED FROM LINE "PR-A" EXCEPT AS SHOWN. LINE "PR-A" TO BE CONSTRUCTED.



Permanent Erosion Control Legend

(A)	Sodding Req'd. For Ditch
(C)	Class II Riprap & Geotextile For Riprap, Type 1A Req'd For Ditch

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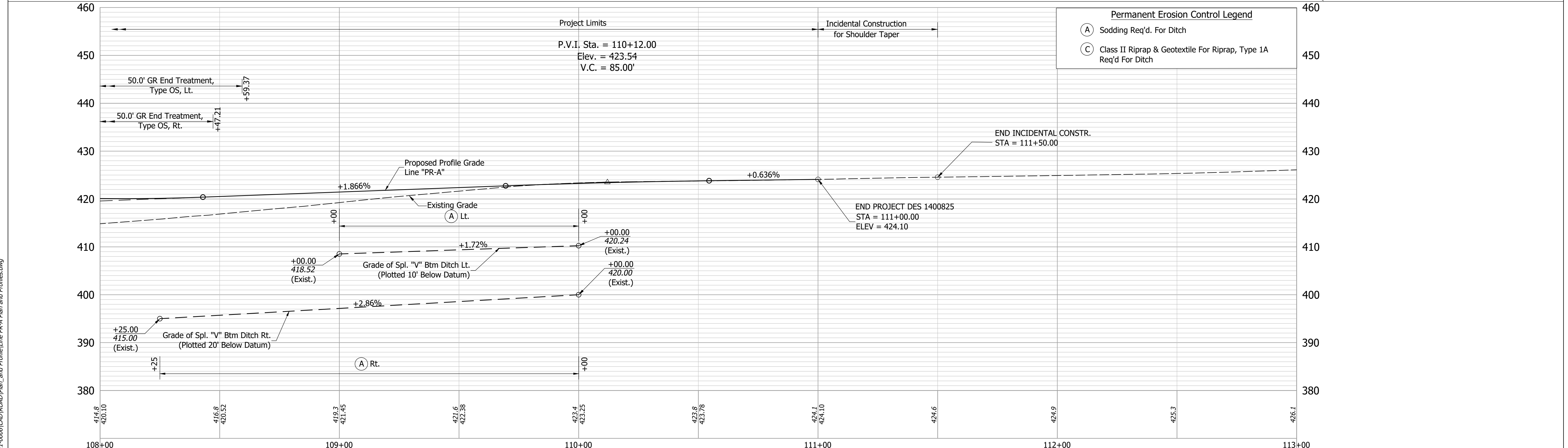
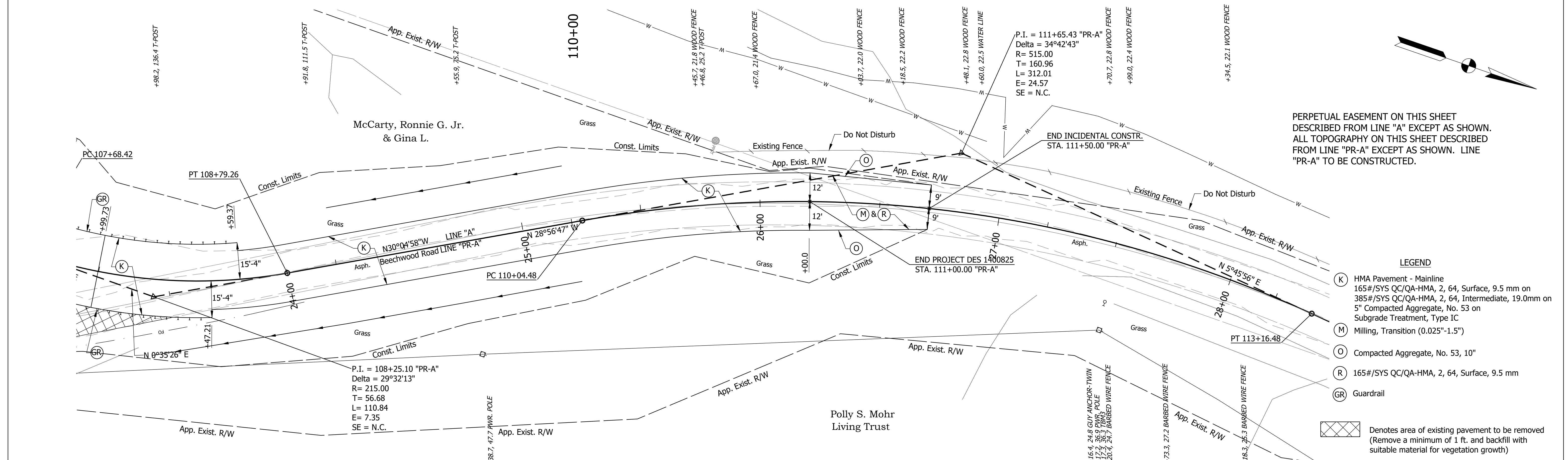
NOTES:
See Geometric Tie-Up Diagram on Sheets 7 and 8 for Line "A" & Line "PR-A" Alignment information & references.

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: DAS	DRAWN: DAS	
CHECKED: JAW	CHECKED: JAW	

**INDIANA
DEPARTMENT OF TRANSPORTATION**

**PLAN AND PROFILE
LINE "PR-A"**

HORIZONTAL SCALE 1"=20'	BRIDGE FILE 13-00043 B
VERTICAL SCALE 1"=10'	DESIGNATION 1400825
SURVEY BOOK ELECTRONIC	SHEET 11 of 62
CONTRACT B-37711	PROJECT 1400825



NOTES: See Geometric Tie-Up Diagram on Sheets 7 and 8 for Line "A" & Line "PR-A" Alignment information & references.	RECOMMENDED FOR APPROVAL _____ DATE _____ DESIGN ENGINEER _____	INDIANA DEPARTMENT OF TRANSPORTATION PLAN AND PROFILE LINE "PR-A"	HORIZONTAL SCALE 1"=20' VERTICAL SCALE 1"=10'	BRIDGE FILE 13-00043 B DESIGNATION 1400825
	DESIGNED: _____ DAS _____ DRAWN: _____ DAS _____		SURVEY BOOK ELECTRONIC CONTRACT B-37711	SHEET 12 of 62 PROJECT 1400825
	CHECKED: _____ JAW _____ CHECKED: _____ JAW _____			

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NATURE & PURPOSE OF CONSTRUCTION ACTIVITY

Assessment of Stormwater Pollution Prevention Plan (Cont'd)
Construction Component (Section B)

Assessment of Stormwater Pollution Prevention Plan (Cont'd)
Construction Component (Section B)

- A-1** Index showing locations of required Plan Elements.
Sheet 12 (This Sheet)
- A-2** Vicinity map depicting site location in relationship to local landmarks, towns, and major roads
Sheet 9 - 11
- A-3** Narrative describing the nature and purpose of the project.
Proposed project replaces existing 112.5 ft L x 13.8 ft W x 17 ft T single span through truss bridge over Little Blue River with a new 252 ft L x 33 ft W x 41.5 ft T triple span continuous concrete beam bridge.
- A-4** Project location latitude and longitude.
Latitude: 38.166896°N/Longitude: -86.415868°W
- A-5** Legal Description of the Project Site
Specifically, the project site is located in:
- Indiana, Crawford County, Beechwood USGS Quadrangle
- Boone and Ohio Townships; T4S, R1E, Section 14
- A-6** 11 X 17-inch plat showing building lot numbers/boundaries and road layout/names.
Sheets 7
- A-7** 100 year floodplains, floodways, and floodway fringes.
According to the enclosed FEMA FIRM map, the project is located within the 100-year floodplain of Little Blue River.
- A-8** Adjacent landuse
Adjacent land is dominated by mature forest (Hoosier National Forest).
- A-9** Identification of any US EPA approved or established TMDL.
No named or identified TMDLs are located within the project watershed.
- A-10** Identification of all receiving waters.
Little Blue River
- A-11** Identification of discharges to a water on the current 303(d) list.
No waterbodies listed on the 303 (d) list are located within the project watershed.
- A-12** Soils map including soil descriptions and limitations.
Soil Map was derived from the USGS Soil Survey of Crawford County, IN. See enclosed soils map and report.
- A-13** Location and name of all wetlands, lakes and water courses on and adjacent to the site.
Little Blue River, no wetlands
- A-14** Notation of any State or Federal water quality permits.
Construction Stormwater General Permit (CSGP)
401 IDEM/WQC
404 USACE
USACE Section 10
IDNR CIF
- A-15** Identification of existing vegetative cover, including natural buffers.
Mature woodland
- A-16** Existing site topography.
See Plan Sheets 9 - 11
See Cross-section Sheets 50 - 57
- A-17** Locations where run-off enters the project site.
Runoff will enter the site from cross streets and adjacent forested areas that adjoin the site.
- A-18** Locations where run-off discharges from the project site.
Stormwater runoff will exit the roadside ditches into Little Blue River.
- A-19** Location of existing stormwater systems/structures.
Roadside ditches.
- A-20** Existing permanent retention or detention facilities.
No existing retention is located within or adjacent to the project area.
- A-21** Identification of potential discharges to ground water.
There are no known areas within the project site where stormwater will be discharged to groundwater.
- A-22** Project Area
Total Acreage:
- A-23** Proposed Land Disturbance
Total Acreage:
- A-24** Proposed final topography.
See Plan Sheets 9 - 11
See Cross-section Sheets 50 - 57
- A-25** Locations and approximate boundaries of all disturbed areas.
Sheets XX - XX show the anticipated work areas.
Disturbance is anticipated to remain within the designated work areas.
- A-26** Locations, size, and dimensions of all stormwater drainage systems.
Plan and Profile Sheets 9 - 11 show locations of the proposed stormwater system.
- A-27** Specific points where stormwater discharge will leave the site.
The project will drain into the Little Blue River via roadside ditches.
See Sheets 9 - 11 for these locations.
- A-28** Locations of all proposed site improvements.
Plan and Profile Sheets 9 - 11 show locations of the proposed improvements.
- A-29** Locations of proposed soil stockpiles and/or borrow/disposal areas.
Offsite disposal of demolition debris is anticipated for this project. Waste sites shall be accepted by the Engineer prior to the start of any disposal operations. For each proposed disposal site, an IC-203 Request for Acceptance of Borrow or Disposal Site form shall be submitted to the Engineer a minimum of 14 days prior to the Contractor's planned start of disposal operations. All requests for acceptance of disposal sites shall be in accordance with INDOT Standard Specification 203.08(a).
- A-30** Location of any construction support activities
(i.e. laydown yard, concrete batch plant, staging areas, etc.).
Proposed laydown and material storage areas shall be identified by the Contractor and accepted by the Engineer prior to Contractor mobilization. Contractor shall be responsible for ensuring all proper E&SC BMPs are installed around these areas to prevent sediment and chemical discharges into adjacent properties, water resources or stormwater systems.
- A-31** Location of any in-stream activities.
Construction of the bridge will require installation of a temporary causeway. See Sheets 26 - 27 for details.
Installation of dewatering cofferdams along each bank will be required to provide dry work areas for construction personnel.

- B-1** Description of potential pollutant sources associated with the construction activities:
Potential pollutant sources associated with this construction activity include those normally associated with construction equipment and construction activities such as: concrete wash-out water, soil sediment, oils, fuels, hydraulic fluids, transmission fluids, brake fluid, antifreeze, greases, brake dust, etc. All heavy equipment shall be parked on site at a location, when not in use; leakage from the equipment will be captured by the surrounding terrain, and not be provided a direct path to the surrounding stormwater system. Sediment discharge will be controlled by proper work sequencing and proper installation of E&SC BMPs. Concrete wash-out water shall be controlled through proper construction of concrete wash-out containments.
- B-2** Construction Entrance:
The Contractor shall install stable entrances/exits at any location where the contractor plans to enter and exit the site to reduce the amount of mud and sediment tracked onto public roads. Recommended locations for these entrances are shown in the SWPPP but may need to be relocated to support contractor's sequence of work. Any mud, soil, rock, etc. tracked onto open public roads shall be immediately removed. CE's shall be installed in accordance with INDOT standard drawing E-205-TECD-12.
- B-3** Specifications for temporary and permanent stabilization:
Temporary surface stabilization shall be accomplished by the use of a temporary seed mixture along with temporary mulching. The temporary seed mixture shall be used to establish a temporary cover for disturbed soils during the construction operations. Temporary seeding (INDOT Seed Mix T) shall be placed on disturbed areas that are expected to be idle for 7 days or greater, or as directed by the Engineer. Placement of temporary surface stabilization shall be completed per INDOT Standard Specification 205.04.

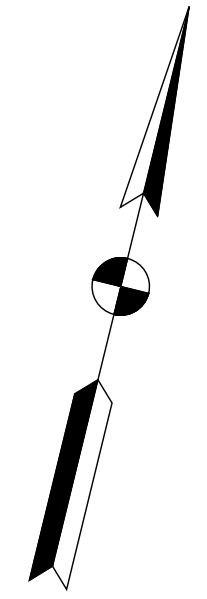
Permanent surface stabilization shall be achieved by the use of pavement, sod and a permanent seed mixture (INDOT Seed Mixture R), along with mulching material and fertilizer. Placement of the permanent surface stabilization shall immediately follow final grading of an area and shall be completed per INDOT Standard Specification 621 unless otherwise specified.
- B-4** Sediment control measures for concentrated flow areas:
Rock Check Dam (CD): Consists of geotextile fabric and aggregate, placed across drainage channels to slow stormwater runoff. Primarily used to prevent erosion in roadside ditches by may also provide limited sediment control. CD's shall be spaced so that the bottom of the upstream dam aligns with the weir of the downstream dam in a toe-to-crest fashion. CD shall be installed in accordance with INDOT Standard Drawing E205-TECD-06.
- B-5** Sediment control measures for sheet flow areas:
Silt Fence (SF): Used primarily as perimeter protection in sheet flow areas. Install Sf to trap sediment small, disturbed areas by reducing sheet flow velocity. SF captures sediment by ponding water to allow sediment deposition, not by filtration. SF should not be used as a diversion. SF shall not be installed across streams, channels, ditches, swales, or any other concentrated flow. SF shall be installed in accordance with INDOT standard drawing E 205-TECD-11.
Filter Socks (FS): A temporary barrier consisting of permeable material (compost or mulch) contained in a permeable geotextile fabric or non-biodegradable net matrix installed to intercept and treat sediment-laden runoff from small unvegetated, or disturbed drainage areas. They will trap sediment by intercepting runoff and reducing the velocity of the runoff into stabilized areas. Filter socks shall be installed as needed along back of curb to treat runoff from sidewalk and greenscape construction. They shall be installed in accordance with INDOT Standard Drawing E 205-TECD-10 and manufacturer recommendations.
Vegetative Filter Strip (VFS): A vegetative filter strip is an area where the ground cover is to be left undisturbed to filter runoff from the disturbed drainage area. All existing vegetation located outside of the construction limits, shall not be disturbed, to act as vegetative filter strips. In some cases, filter socks may not be needed if a minimum 20-foot vegetative filter is left between disturbed areas and the edge of the site or a concentrated flow area.
- B-6** Runoff control measures:
Concrete Washout (CW): Concrete washout areas shall be installed and utilized as containment for washing equipment of uncured concrete and associated liquids. They shall be constructed in accordance with INDOT Standard Specification 205.03 and detail on Sheet ####. Straw bales shall not be used in the construction of concrete washout areas. All concrete washout water shall be discharged to a concrete washout area. CW's will be placed a minimum of 50 feet from any body of water and located away from inlets and stormwater conveyances. They shall be placed on stable material and in such a manner that all washout water is captured and contained in the CW.
Filter Berm (FB): Used to trap sediment long linear, disturbed areas by reducing sheet flow velocities. Filter berms capture sediment by filtering stormwater runoff and by ponding water at their base to allow settling and deposition. May be constructed with rock, compost, or filter socks. Filter berms shall be installed in accordance with details on Sheet XX
Filter Sock (FS): See B-4 for details.
Vegetative Filter Strip (VFS): See B-5 for details.
- B-7** Stormwater outlet protection specifications:
No outlet protection is anticipated for this project.
- B-8** Grade stabilization structure locations and specifications:
Disturbed grades shall be stabilized in accordance with B-12 and as shown in the drawings.
- B-9** Dewatering application and management methods:
Dewatering: Dewatering cofferdams shall be installed along each bank as shown in the SWPPP. Proper outflow of the dewatering activity shall be reviewed and planned for to prevent discharge of sediment laden runoff into adjacent Little Blue River. Dewatering components include pump, water filtering device (sediment bag), stabilized outlet, and secondary containment (check dam, silt fence, filter sock, etc.). Dewatering shall be installed in accordance with the details on Sheet XX.
- B-10** Measures utilized for work within waterbodies:
No work within a waterbody is anticipated for this project.
- B-11** Monitoring and maintenance guidelines for each proposed pollution prevention measure:
In accordance with INDOT Specification 205, the contractor shall develop a Storm Water Quality Control Plan (SWQCP). The SWQCP shall include the processes and procedures of how the Contractor intends to meet the requirements as outlined in INDOT Standard Specification 205 and the approved SWPPP. Any individual phase of the SWQCP shall be submitted to the Engineer for review a minimum of 14 calendar days prior to commencing earth disturbing activities for that phase. Temporary erosion and sediment control measures shall be self-inspected by the Contractor's SWQM, once every seven days and within 24 hours of a 1/2 inch measurable storm event. Inspections shall be documented and records shall be maintained by the Contractor's SWQM and be made available for review upon request. Records shall include, at a minimum: date, inspector's name, maintenance and corrections needed based on the inspection, and status of previously identified deficiencies. INDOT Form 108-c-192d; Storm Water, Erosion, and Sediment Control Inspection Report may be utilized and is available on INDOT's website for use. The temporary protection measures shall be returned to good working condition within 48 hours after inspection or as directed. Inspections shall continue until the entire contract is complete and has been permanently stabilized and the Notice of Termination has been filed with the reviewing authority.

- B-11** Monitoring and maintenance guidelines for each proposed pollution prevention measure (Cont'd):
The following shall apply to maintaining the specific erosion and sediment control facilities:

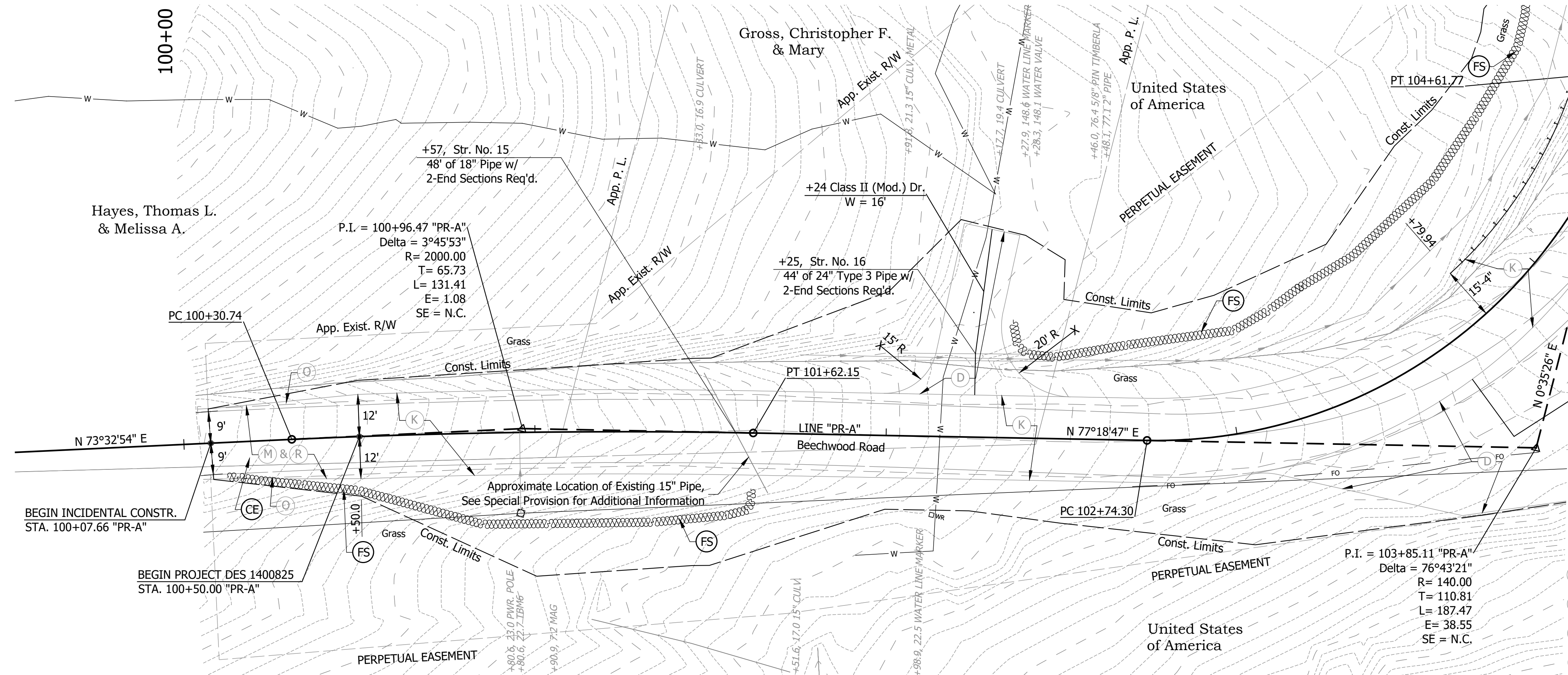
 - Construction Entrances:
 - Inspection
 - Verify entrances are where they are most effective.
 - Ensure entrances do not interfere with existing drainage patterns.
 - Inspect entrances each day they are being used.
 - Monitor tracking onto public roads and observe sediment being collected in the stone.
 - Maintenance
 - Redress #2 stone as necessary to provide clean stone with voids capable of trapping additional sediment.
 - Remove and replace #2 stone on construction entrances near sensitive areas or where redressing could cause a safety or drainage problems.
 - Sweep or otherwise remove sediment from public roads at the end of each day and throughout the day as necessary.
 - Reshape, resize or relocate ineffective construction entrances.
 - Silt Fence:
 - Inspection
 - Check for torn, decomposed or ineffective fence.
 - Ensure fence is trenched in and placed along a contour.
 - Check for sediment accumulation and areas where fence has fallen.
 - check for "J" hooks at the ends of silt fence runs.
 - Maintenance
 - Repair or replace silt fence if torn, starting to decompose, damaged by construction equipment, or is ineffective.
 - At a minimum, remove sediment once it reaches one-half the height of the silt fence or when silt fence begins to bow out.
 - Filter Sock:
 - Inspection
 - Monitor sediment accumulation and remove one it reaches one-quarter of the height of the filter berm/sock.
 - Look for areas that been damaged by storm water or equipment.
 - Maintenance
 - Replace or resecure damaged filter socks.
 - Replace with rock or stronger measure if damage is sever or reoccurring.
 - Remove accumulated sediment once it reaches one-quarter of the height of the filter berm.
 - Vegetative Buffers
 - Inspection
 - Inspect for the beginning of erosion rills or channel erosion.
 - Inspect for sediment accumulation.
 - Maintenance
 - Promptly repair any small rills that form.
 - Add fertilizer and soil amendments as needed to maintain healthy vegetation.
 - Mow as needed but not shorter than four inches.
 - Where the filter strip has actively trapped sediment during construction, remove the accumulated sediment, regrade the area and reseed it when conditions are favorable for vegetative establishment.
 - Rock Check Dam
 - Inspection
 - Ensure center dam is low and the sides are tied into the slopes so water flows across dam center.
 - Check for #5 or #8 filter stone of front face of dam.
 - Geotextile under dam should extend at least 3-feet down slope.
 - Inspect channel for erosion,. If channel erosion is found, space dams closer so that bottom of upstream dam is aligned with weir of downstream dam (toe-to-crest).
 - Maintenance
 - Remove sediment after once it reaches one-half the height of the check dam.
 - Repair or replace damaged or ineffective dams.
 - Filter Berm
 - Monitor for sediment accumulation.
 - Inspect for equipment or storm damage.
 - Check for filter stone on upslope side.
 - Maintenance
 - Remove sediment once it reaches one-quarter the dam height.
 - Repair damaged areas as needed or directed.
 - Concrete Washout
 - Inspection
 - Make sure all concrete slurry can be contained within the washout provided. Construct additional washouts as needed.
 - Inspect daily during concrete placement operations.
 - Ensure washout is completely contained with one sheet of plastic free of tears.
 - Dispose of cured concrete per specifications.
 - Maintenance
 - Repair or replace if leaks, spills or tears are found.
 - Provide additional concrete washout as needed to ensure adequate capacity.
 - Dewatering
 - Inspection
 - Inspect daily during dewatering operations.
 - Inspect filter location for erosion and development of concentrated flows.
 - Check hoses/pipes for leaks, kinks, or other damage.
 - Inspect filter bag for tears, bulges, or over filling.
 - Check for debris clogging inlet hoses.
 - Ensure proper secondary containment (silt fence, filter sock, rock filter berm, etc.) is properly installed.
 - Maintenance
 - Repair damaged or inoperable pumps.
 - Clear clogged inlets.
 - Replace damaged/leaking sediment bags.
 - Remove sediment accumulation from secondary containment.
 - Repair and stabilize eroded areas.
 - Repair leaking/damaged hoses and pipes.

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		VERTICAL SCALE Not to Scale DESIGNATION 1400825	
		SURVEY BOOK ELECTRONIC CONTRACT B-37711	SHEET of PROJECT 62 1400825
	RECOMMENDED FOR APPROVAL _____ _____ DESIGN ENGINEER DATE	EROSION & SEDIMENT CONTROL PLAN INFORMATION SHEET	
	DESIGNED: _____ DLD DRAWN: _____ DAS		
	CHECKED: _____ DAS CHECKED: _____ DLD		



EROSION LEGEND	
(SF)	Silt Fence
(FS)	Filter Sock
(CD)	Check Dam
(CE)	Construction Entrance
(FSB)	Filter Stone Berm
(RFB)	Rock Filter Berm



LEGEND	
(D)	HMA Pavement for Approaches, Type B 165#/SYS HMA, Surface, Type B on 275#/SYS HMA, Intermediate, Type B on 6" Compacted Aggregate, No. 53 on Subgrade Treatment, Type II (6" Coarse Aggregate No. 53)
(K)	HMA Pavement - Mainline 165#/SYS QC/QA-HMA, 2, 64, Surface, 9.5 mm on 385#/SYS QC/QA-HMA, 2, 64, Intermediate, 19.0mm on 5" Compacted Aggregate, No. 53 on Subgrade Treatment, Type IC
(M)	Milling, Transition (0.025"-1.5")
(O)	Compacted Aggregate, No. 53, 10"
(R)	165#/SYS QC/QA-HMA, 2, 64, Surface, 9.5 mm
(O1)	6" Compacted Aggregate, No. 53

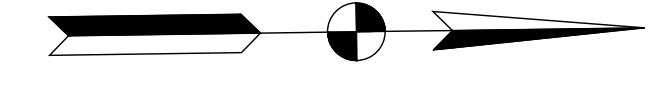
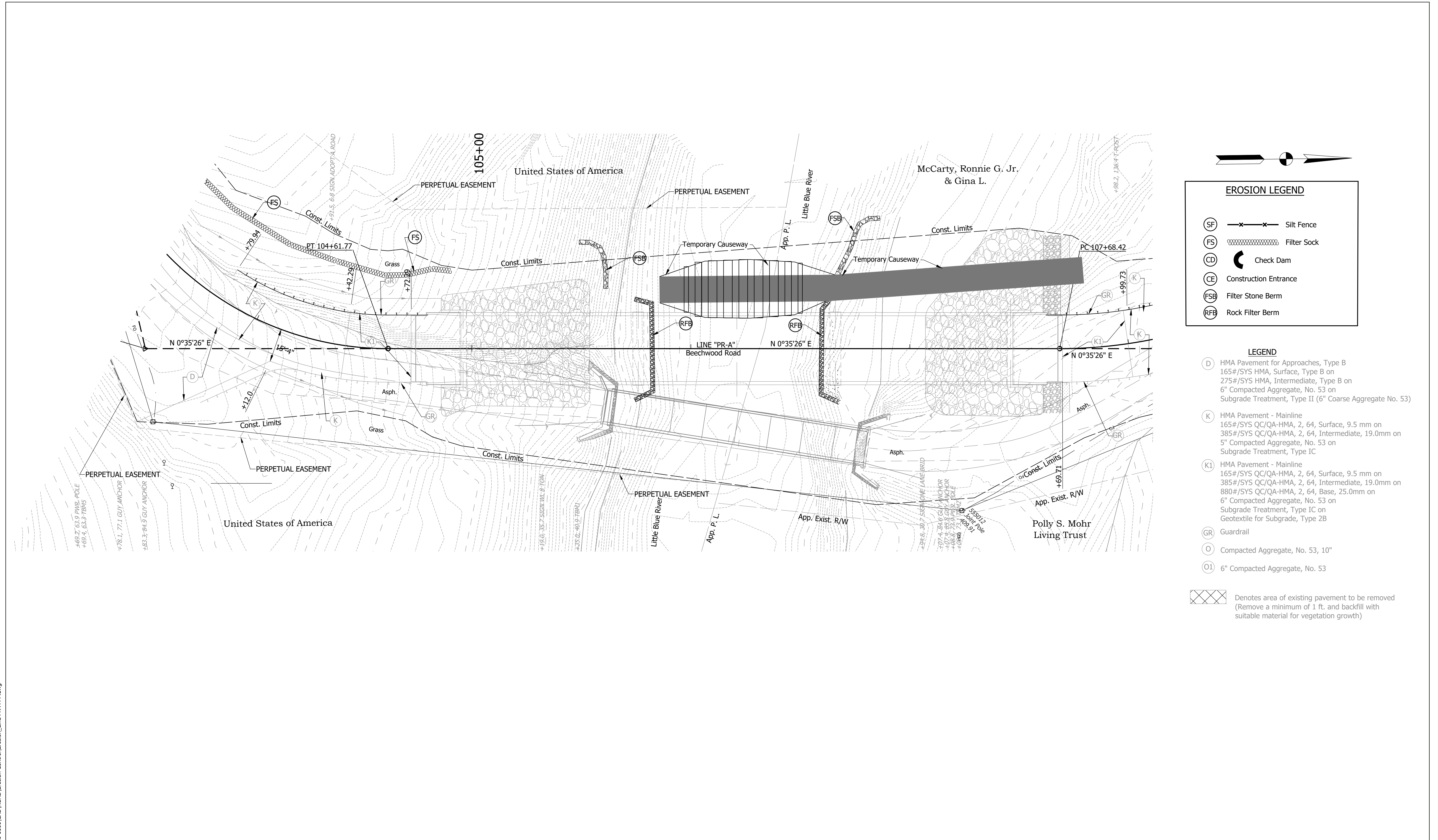
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INDIANA DEPARTMENT OF TRANSPORTATION
EROSION CONTROL - PLAN AND PROFILE
LINE "PR-A"

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EROSION LEGEND	
(SF)	—x—x— Silt Fence
(FS)	▨ Filter Stone
(CD)	⤵ Check Dam
(CE)	— Construction Entrance
(FSB)	▨ Filter Stone Berm
(RFB)	▨ Rock Filter Berm

LEGEND	
(D)	HMA Pavement for Approaches, Type B 165#/SYS HMA, Surface, Type B on 275#/SYS HMA, Intermediate, Type B on 6" Compacted Aggregate, No. 53 on Subgrade Treatment, Type II (6" Coarse Aggregate No. 53)
(K)	HMA Pavement - Mainline 165#/SYS QC/QA-HMA, 2, 64, Surface, 9.5 mm on 385#/SYS QC/QA-HMA, 2, 64, Intermediate, 19.0mm on 5" Compacted Aggregate, No. 53 on Subgrade Treatment, Type IC
(K1)	HMA Pavement - Mainline 165#/SYS QC/QA-HMA, 2, 64, Surface, 9.5 mm on 385#/SYS QC/QA-HMA, 2, 64, Intermediate, 19.0mm on 880#/SYS QC/QA-HMA, 2, 64, Base, 25.0mm on 6" Compacted Aggregate, No. 53 on Subgrade Treatment, Type IC on Geotextile for Subgrade, Type 2B
(GR)	Guardrail
(O)	Compacted Aggregate, No. 53, 10"
(O1)	6" Compacted Aggregate, No. 53

▨ Denotes area of existing pavement to be removed
 (Remove a minimum of 1 ft. and backfill with
 suitable material for vegetation growth)

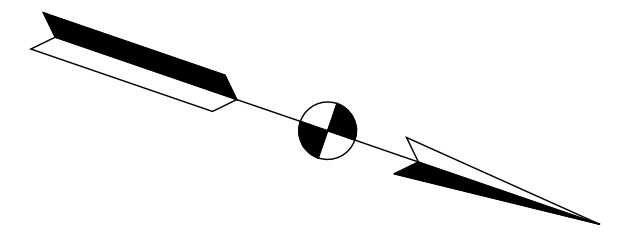
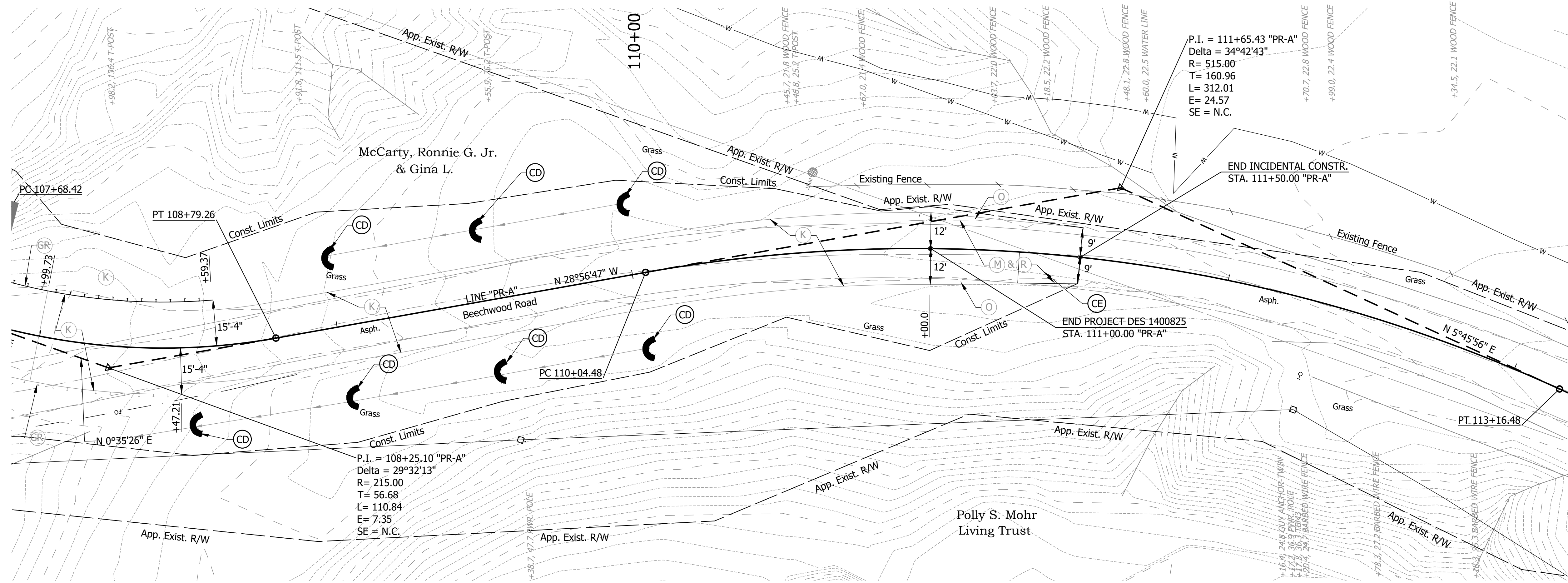
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**INDIANA
 DEPARTMENT OF TRANSPORTATION**

**EROSION CONTROL - PLAN AND PROFILE
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EROSION LEGEND	
(SF)	Silt Fence
(FS)	Filter Sock
(CD)	Check Dam
(CE)	Construction Entrance
(FSB)	Filter Stone Berm
(RFB)	Rock Filter Berm

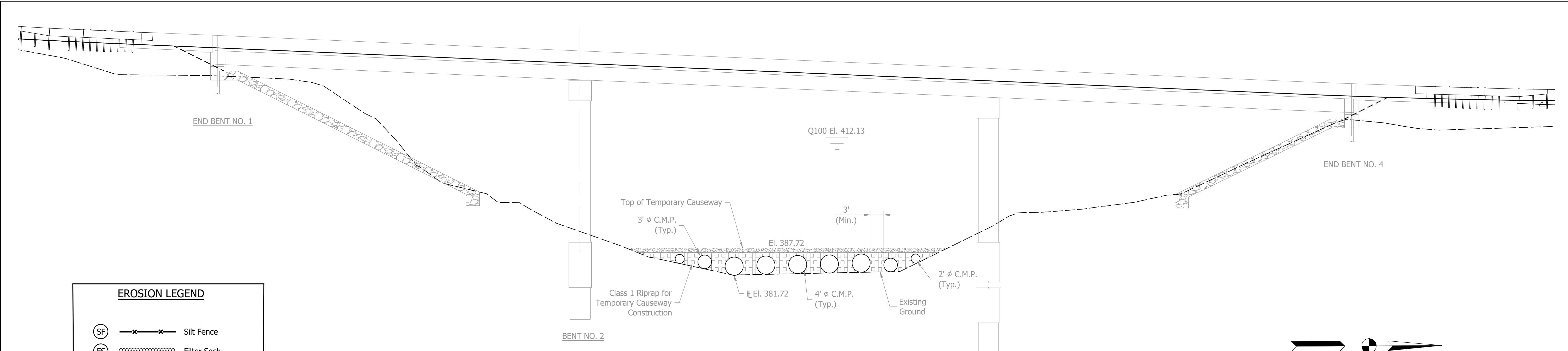
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(O)	Compacted Aggregate, No. 53
(GR)	Guardrail

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**INDIANA
DEPARTMENT OF TRANSPORTATION**

**EROSION CONTROL - PLAN AND PROFILE
LINE "PR-A"**

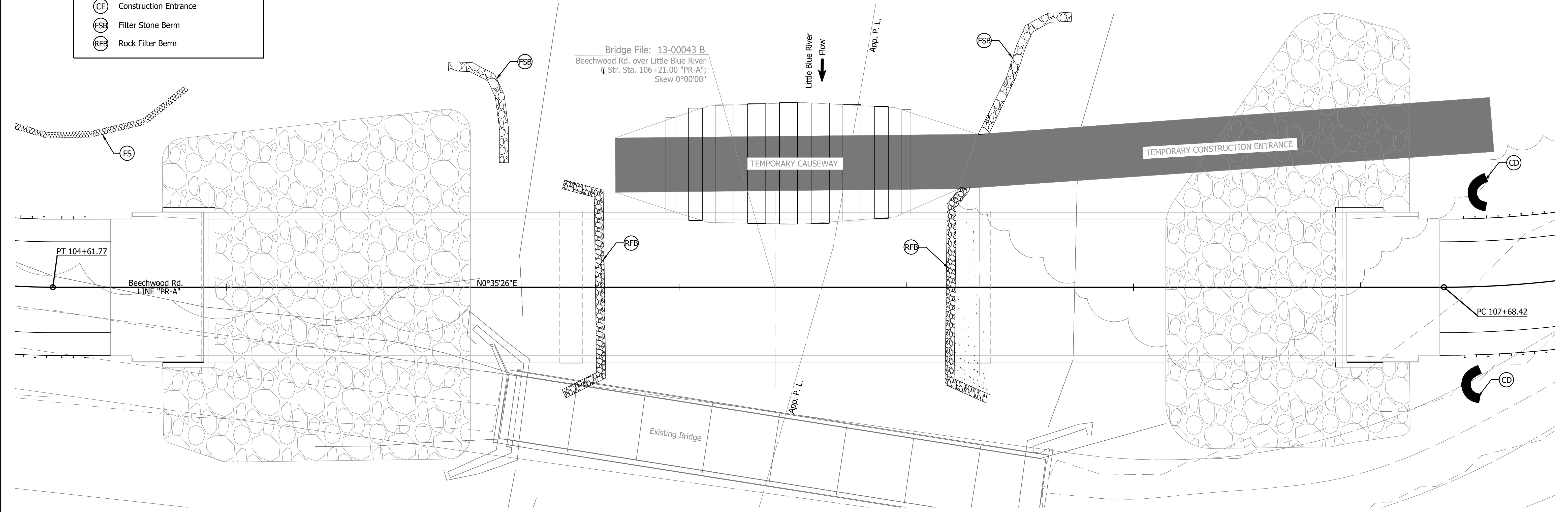
HORIZONTAL SCALE 1"=20'	BRIDGE FILE 13-00043 B
VERTICAL SCALE 1"=10'	DESIGNATION 1400825
SURVEY BOOK ELECTRONIC	SHEET 16 of 62
CONTRACT B-37711	PROJECT 1400825



EROSION LEGEND

(SF)	—x—x—	Silt Fence
(FS)	▨	Filter Sock
(CD)	⤿	Check Dam
(CE)	—	Construction Entrance
(FSB)	▨	Filter Stone Berm
(RFB)	▨	Rock Filter Berm

ELEVATION



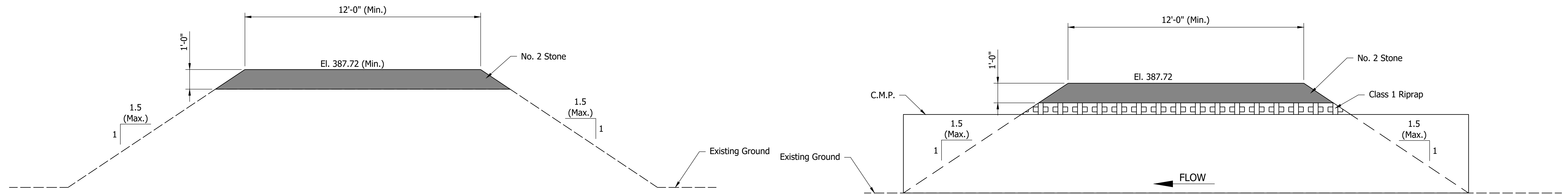
PLAN

Date: Nov 18, 2022, 3:14pm User Name: Vaughn File: X:\Production\Files\2021\121-0006\CAD\ROAD\Erosion Control\Erosion_EC_Causeway.dwg

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	08/09/2022	DATE
DESIGNED: MAR	DRAWN: TAM		
CHECKED: ACS	CHECKED: MAR		

INDIANA DEPARTMENT OF TRANSPORTATION	
TEMPORARY CAUSEWAY	

HORIZONTAL SCALE	BRIDGE FILE
Not to Scale	13-00043 B
VERTICAL SCALE	DESIGNATION
Not to Scale	1400825
SURVEY BOOK	SHEET
ELECTRONIC	17 of 62
CONTRACT	PROJECT
B-37711	1400825

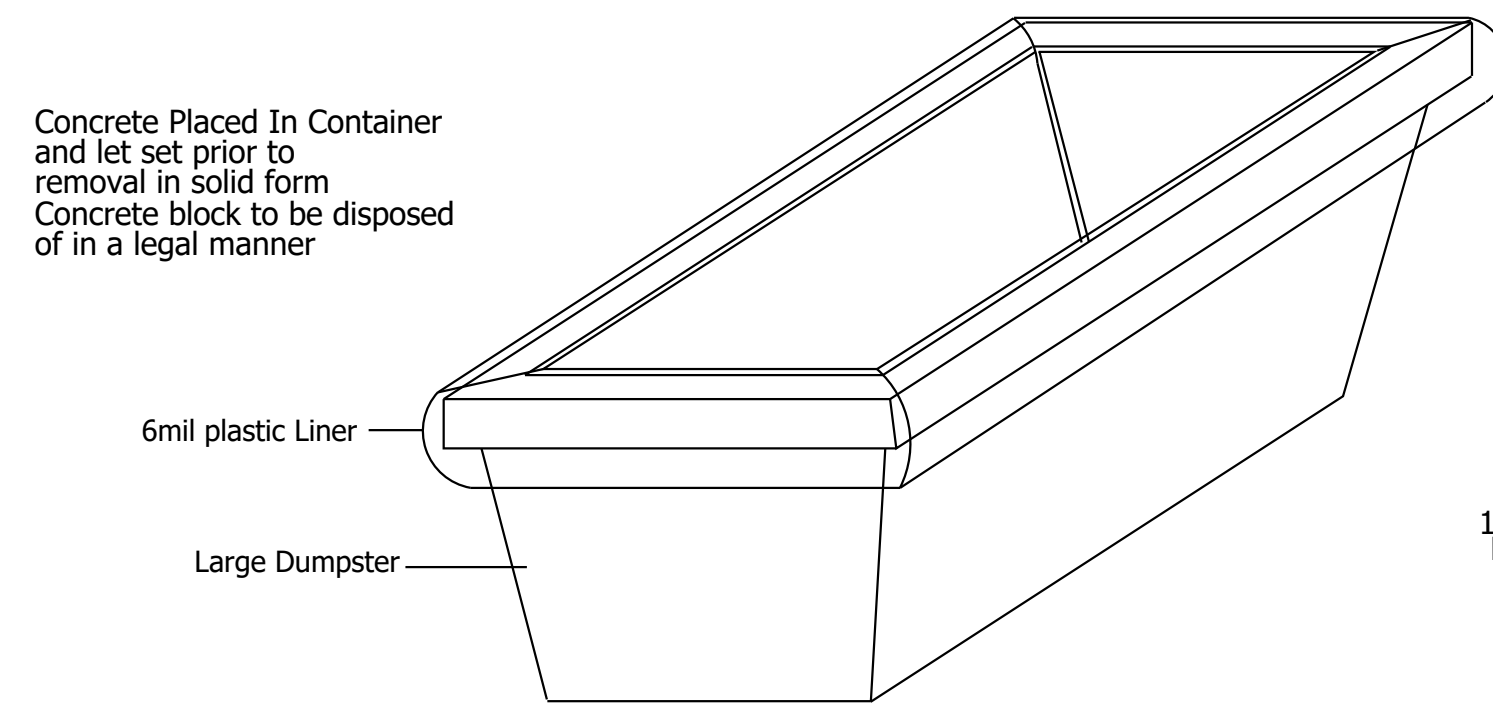
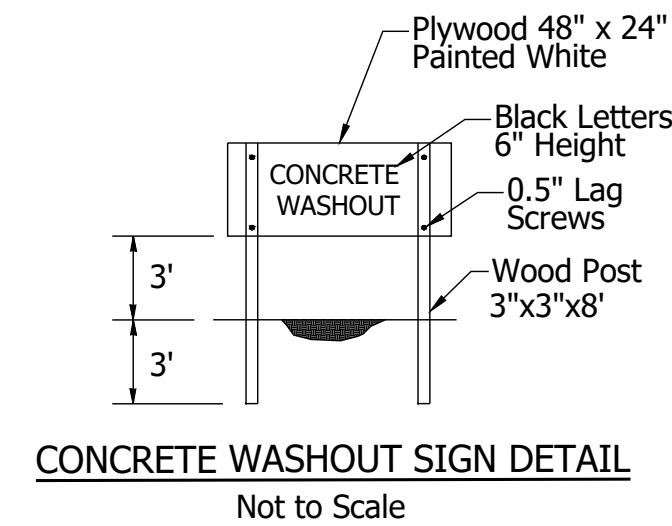


TEMPORARY CONSTRUCTION ENTRANCE
 (To Causeway)
 SCALE: 3/8" = 1'-0"

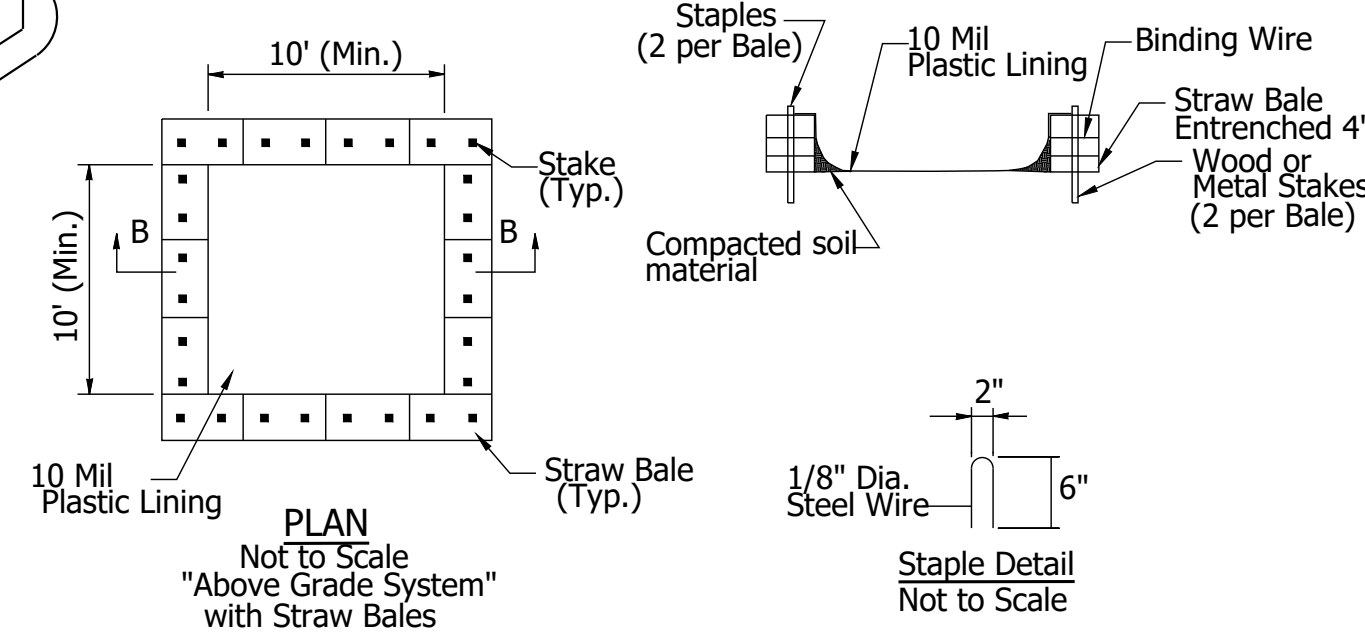
TEMPORARY CAUSEWAY TYPICAL
 SCALE: 3/8" = 1'-0"

Date: Nov 18, 2022, 3:15pm User Name: Vaughn
 File: X:\Production\Files\2021\1121-0006\CAD\BRIDGE\Plans\EC_Causeway_D16.dwg

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE	INDIANA DEPARTMENT OF TRANSPORTATION		HORIZONTAL SCALE	BRIDGE FILE
			AS SHOWN	13-00043 B
DESIGNED: _____ MAR _____ DRAWN: _____ TAM _____	TEMPORARY CAUSEWAY		VERTICAL SCALE	DESIGNATION
			AS SHOWN	1400825
CHECKED: _____ ACS _____ CHECKED: _____ MAR _____			SURVEY BOOK	SHEET
			ELECTRONIC	18 of 62
			CONTRACT	PROJECT
			B-37711	1400825

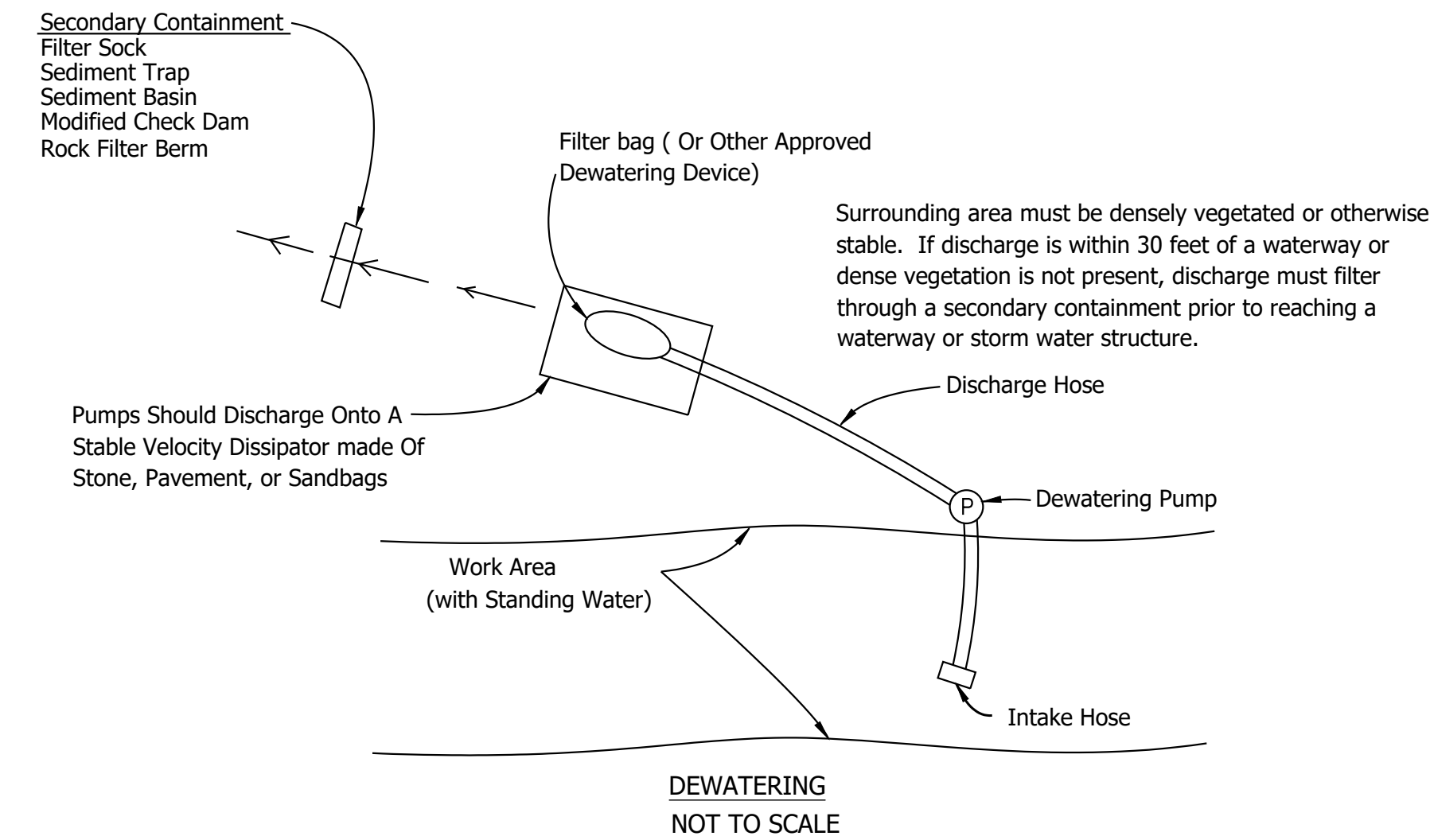


CWO CONCRETE WASHOUT - ABOVE GRADE SYSTEM
Not to Scale



CONCRETE WASHOUT - ABOVE GRADE SYSTEM

DI DROP INLET PROTECTION GEOTEXTILE BOX



- Dewatering of the project area shall be performed using a mechanical pump. A dewatering (filter) bag shall be securely connected to the end of the discharge hose. The suction hose shall be floated as long as possible to prevent the pump from pulling sediment from the bottom of the pooled area.
- The dewatering bag may be of the single-use or reusable variety and shall be constructed of non-woven, polypropylene geotextile material. Each type and size of dewatering bag can handle varying rates of flow. The bag shall have for following minimum specifications:

Permittivity	Grab Tensile	Weight	Apparent Opening Size
1.4 sec	205 lbs	8 oz/yd ²	80 US Sieve
- The dewatering bag shall be placed on a flat surface. Placing the dewatering bag on top of an aggregate base or straw bales will help to increase to flow through the fabric by providing a larger surface area of discharge.
- Water shall not be pumped from the project area at a rate faster than the manufacturer's maximum recommended flow rate of the dewatering bag.
- Dewatering bags shall be placed in a location in which runoff will pass through additional sediment control measures prior to entering the storm sewer.
- Following completion of dewatering, the sediment accumulated within the dewatering bag shall be removed from the bag and placed in an upland area.

D DEWATERING

Concrete Washout:

Concrete washout systems can be manufactured systems or systems constructed on site above grade.

Design Considerations:

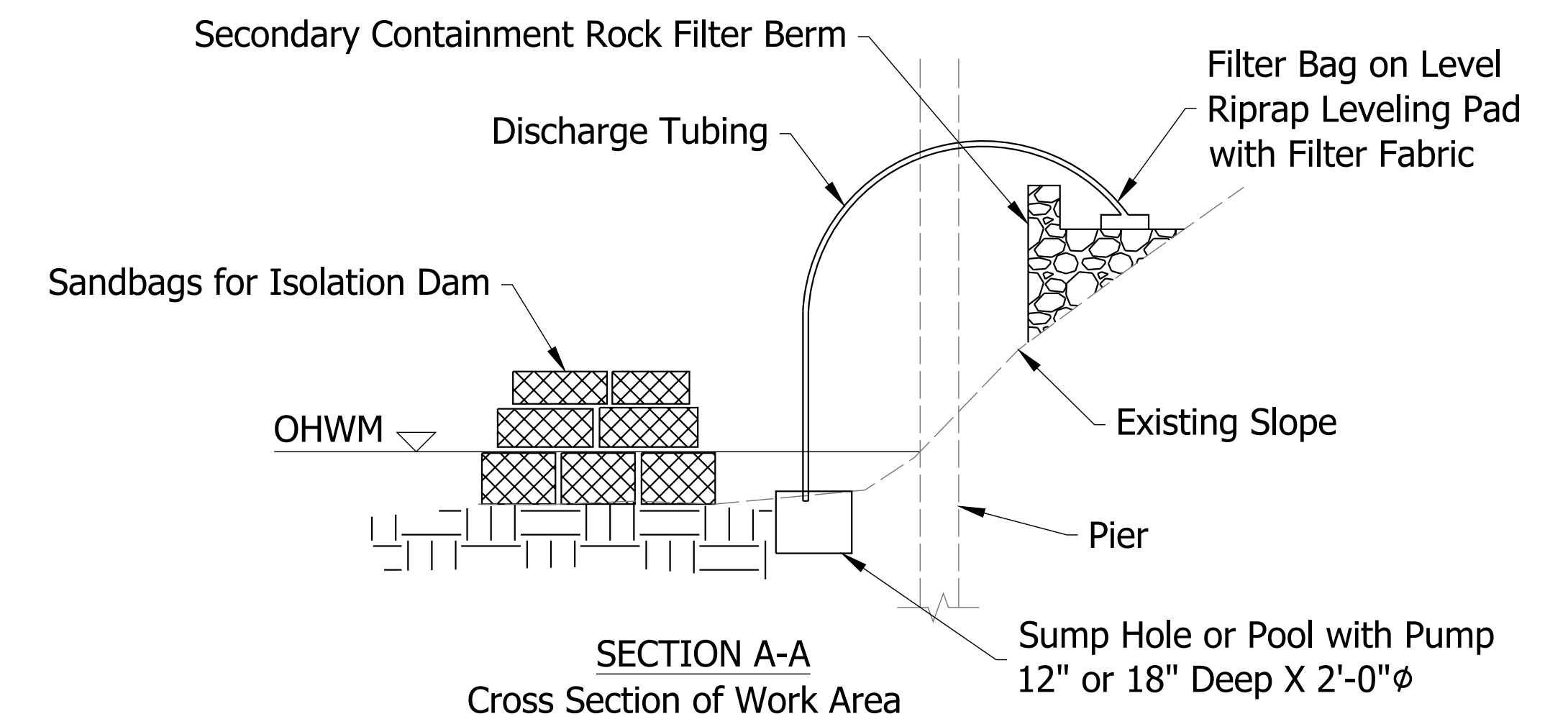
- * Sizing Considerations:
 - ** Storage volume of the containment structure should correlate to the anticipated amount of plastic cementitious material used for construction.
 - ** Washout sizing must include provisions for mortar operations
 - *** Provide source of clean water for washing tools
 - *** Capture washwater and/or transfer to containment structure
 - ** Estimating washwater volumes for concrete deliveries can be highly variable due to weather, air temperature, product slump, concrete temperature, and number of chutes used:
 - *** One method to estimate washwater volume is to use 20 to 40 gallons per ready mix truckload (20 to 40 gallons x total cubic yards (~8 cubic yards per truckload) = total estimated gallons washwater generated)
 - *** For concrete pump trucks allow for a minimum of 50-gallons of washwater per pump use
- * When sizing washout, contractor must include an additional 25% freeboard to ensure structure will not overtop.
- * System shall be designed to eliminate run-off and minimize precipitation from entering the washwater containment system.

Structure Specifications:

- * Manufactured systems or disposable containments.
 - ** Use the required materials or components according to product specifications.
- * Structures built on-site must be watertight.
 - ** Must have strength to resist failure or collapse for duration of the project or use.
 - ** Washout systems should be a minimum of ten feet wide by ten feet long, but sized to contain all liquid and waste that is expected to be generated between scheduled clean-out periods.
 - *** Washout size may be limited by the available size of polyethylene.
 - *** Polyethylene lining shall be a single continuous sheet, sufficient to adequately line the entire containment and have a minimum thickness of 10-millimeter.
 - *** Must be durable, resistant to washwater chemistry, and weathering or deterioration.
 - *** Must be free of defects, holes, rips or tears.
 - *** The bottom of the washout shall level and clean of sticks, stumps, rocks and other debris that may penetrate the liner.
 - ** Install signage identifying location of washwater containments/facilities and to discourage disposal of non-washwater materials into washout facilities.
- * Provide maximum fill level indicator to allow sufficient capacity in the containment to avoid overflowing.
 - ** Containments shall not be filled beyond 75% of the containment capacity.

STANDARD INDOT DRAWINGS

- SF TEMPORARY SILT FENCE**
Installation shall be per INDOT Standard Drawing 205-TECP-11.
- CE TEMPORARY CONSTRUCTION ENTRANCE**
Installation shall be per INDOT Standard Drawing 205-TECP-12.
- CD ROCK CHECK DAM**
Installation shall be per INDOT Standard Drawing 205-TECP-06.

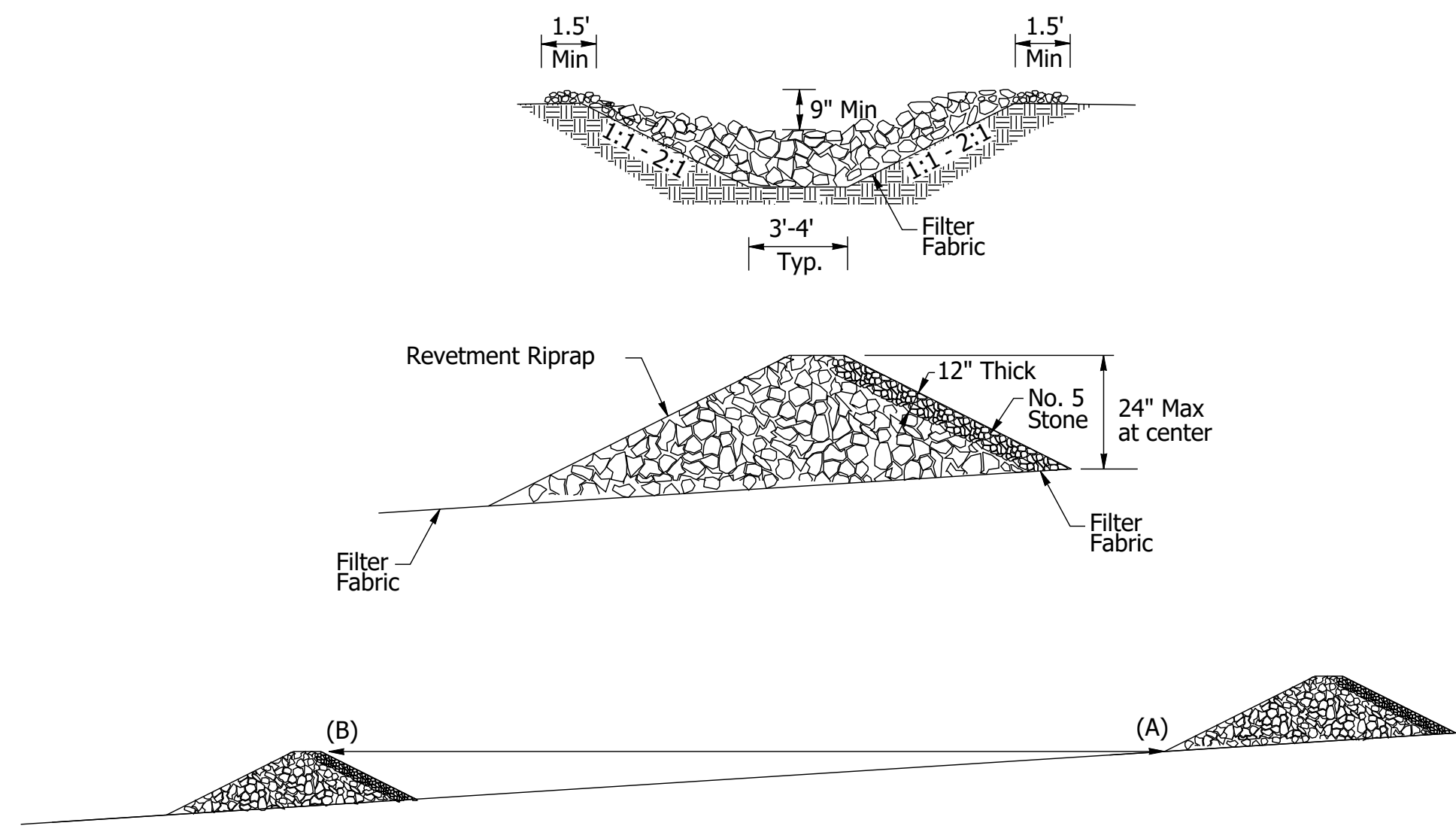


Date: Nov 18, 2022, 3:15pm User Name: Vaughn
File: X:\Production\Files\2021\121-0006\CAD\ROAD\Erosion Control\ESC Details.dwg

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: DAS	DRAWN: DAS	
CHECKED: JAW	CHECKED: JAW	

INDIANA DEPARTMENT OF TRANSPORTATION	
EROSION & SEDIMENT CONTROL DETAILS	

HORIZONTAL SCALE	BRIDGE FILE
No Scale	13-00043 B
VERTICAL SCALE	DESIGNATION
No Scale	1400825
SURVEY BOOK	SHEETS
Electronic	19 of 62
CONTRACT	PROJECT
B-37711	1400825



Space check dams in the channel so the up-stream dam toe elevation (A) and down-stream dam weir elevation (B) are the same.

Installation:

1. Excavate a cutoff trench into the ditch bank, and extend it a minimum of 18" beyond the abutments.
2. Place the rock in the cutoff trench and channel to the lines and dimensions shown above - i.e., center a max. depth of 2' high yet 9" below the where the dam abuts the channel banks.
3. Extend the rock at least 18" beyond the channel banks to keep overflow water from undercutting the dam as it re-enters the channel.
4. Install as many dams as necessary to satisfy the spacing requirements shown above.
5. Stabilize the channel above the uppermost dam.
6. Recognizing that water will flow over and around the lowermost dam, protect the channel downstream from it with an erosion resistant lining for a distance of 6' unless the channel is protected through other means.

Maintenance:

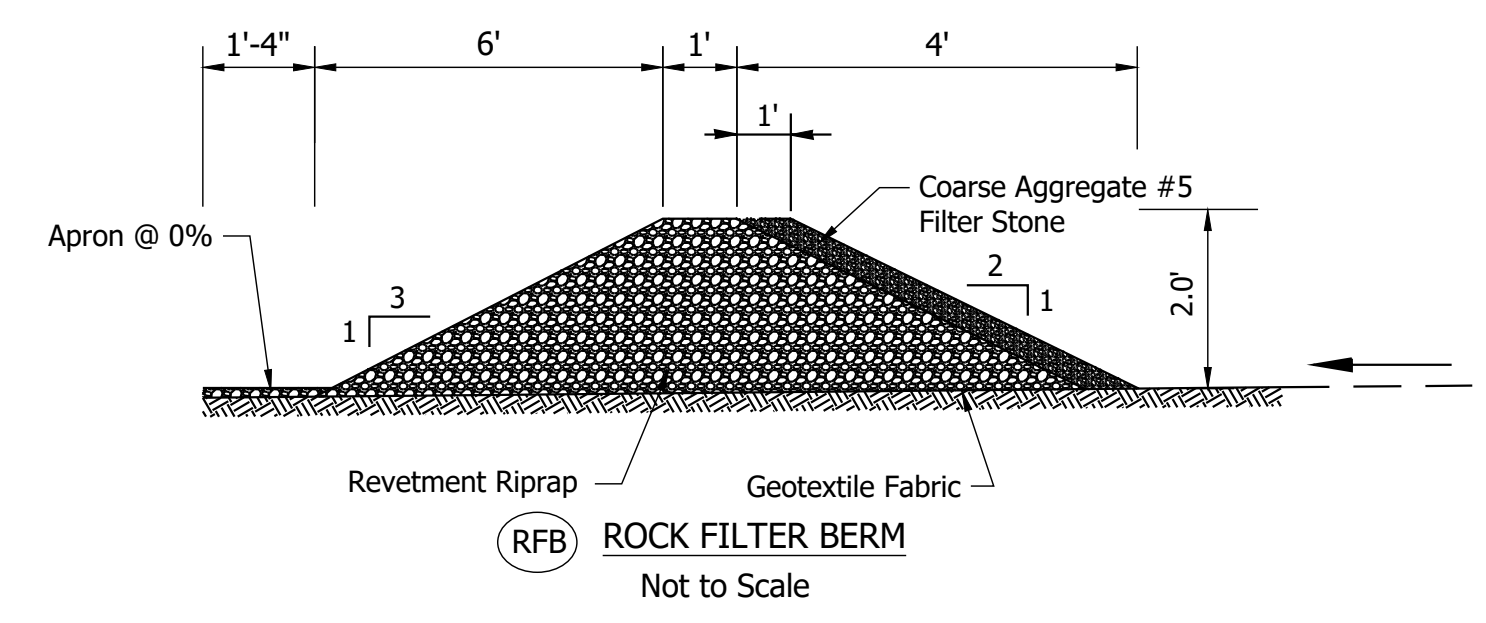
- * Inspect check dams and the channel after each storm event, and repair any damage immediately.
- * If significant erosion occurs between dams, install a riprap liner in that portion of the channel.
- * Remove sediment accumulated behind each dam as needed to maintain channel capacity, to allow drainage through the dam, and to prevent large flows from displacing sediment.
- * Add rock to the dams as needed to maintain design height and cross section.
- * When the dams are no longer needed, remove the rock and stabilize channel, using an erosion-resistant lining if necessary.

Material Specifications:

Revetment Riprap - Broken rock, cobble, or boulders placed on earth surfaces, such as the face of dams or riprap ditch check. Revetment riprap is material graded such that: (1) no individual piece weighs more than 120 lbs. and (2) 90-100% will pass through a 12" sieve, 20-60% through a 6" sieve, and not more than 10% through a 1.5" sieve.

Filter/Geotextile Fabric - A woven or non-woven, water permeable material generally made of synthetic products such as polypropylene and used to trap sediment to prevent the movement of fine soil particles.

No. 5 Stone - Coarse aggregate is material graded such that 100% pass through 1.5" sieve, 85-95% through a 1" sieve, 60-85% through a ¾" sieve, 30-60% through a ½" sieve, 15-45% through a ⅜" sieve, 0-15% through a No. 4 sieve, 0-10% through a No. 8 sieve.

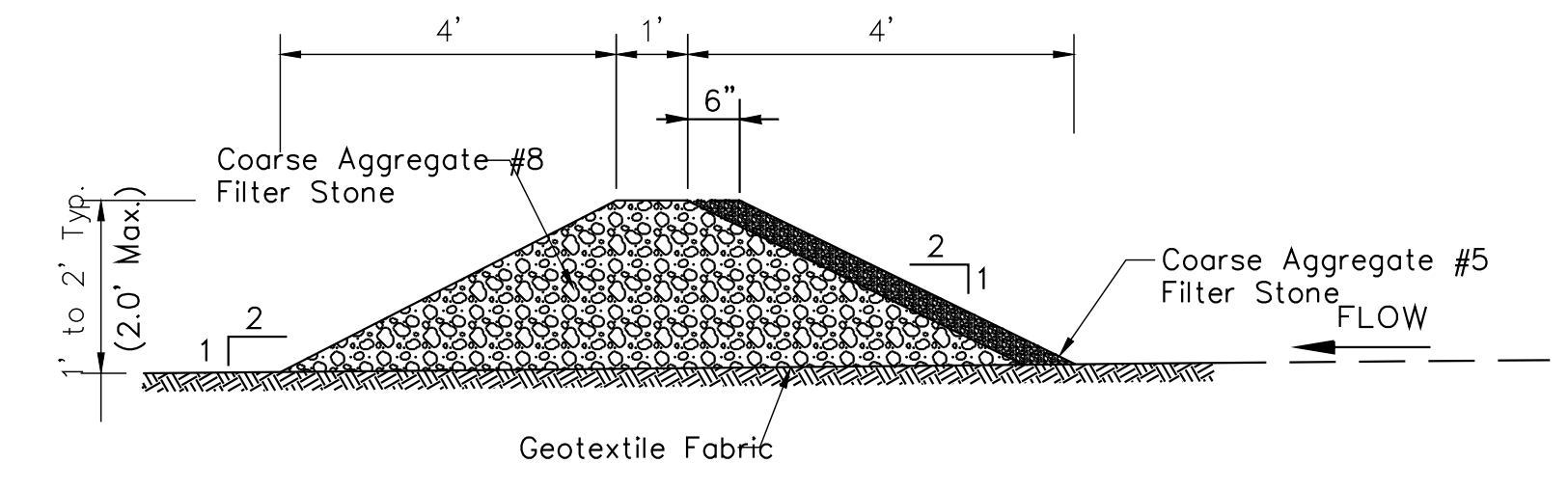


Materials & Specifications:

- *INDOT Revetment Riprap
- *INDOT CA No. 5 aggregate, CA No. 8 is acceptable if No. 5 aggregate is not available. The use of No. 8 stone may result in more frequent overtopping of the structure and will increase the frequency of structure maintenance.
- *Geotextile Fabric

Maintenance

- * Inspect after each storm event, and repair any damage immediately.
- * Remove sediment from the pool area to ensure adequate runoff storage for the next rain.
- * When the contributing drainage area has been stabilized, remove aggregate, construction materials, and sediment and dispose of properly, grade the disturbed area to the elevation of the top of the inlet and stabilize.

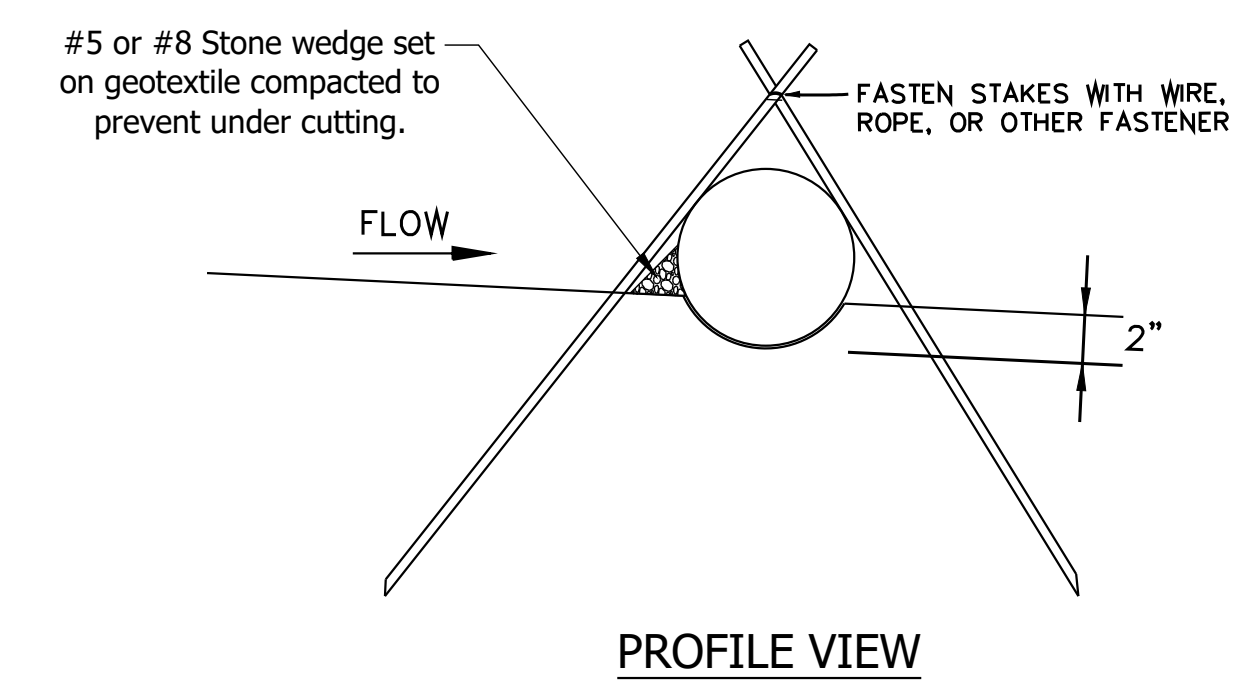
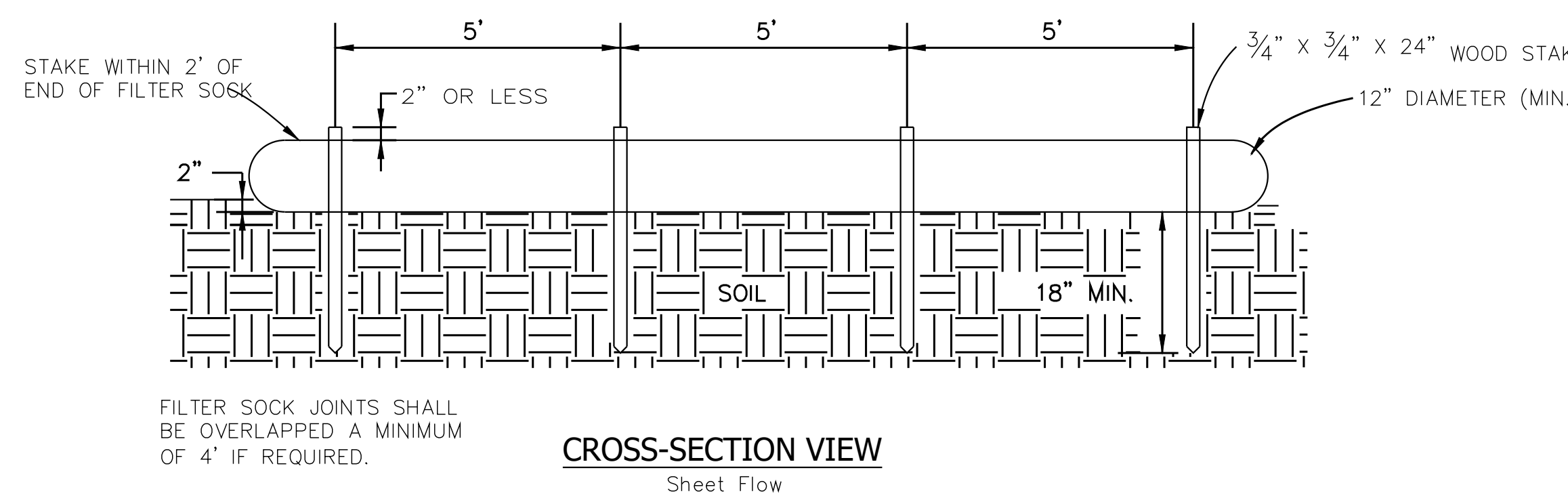
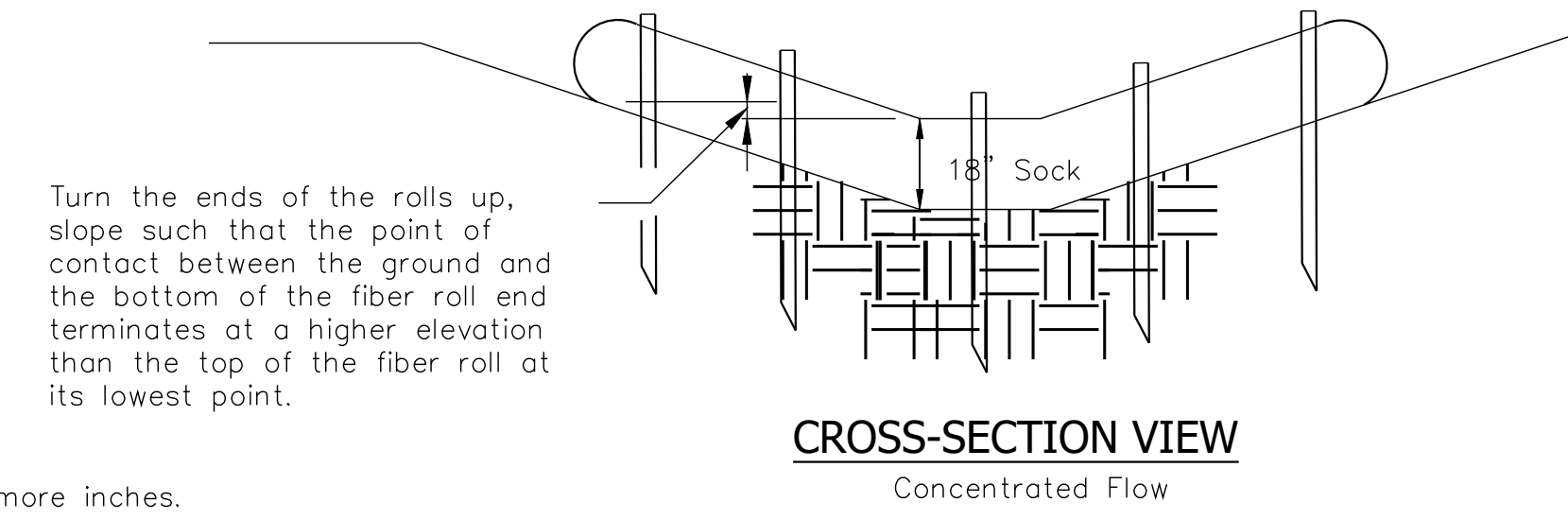
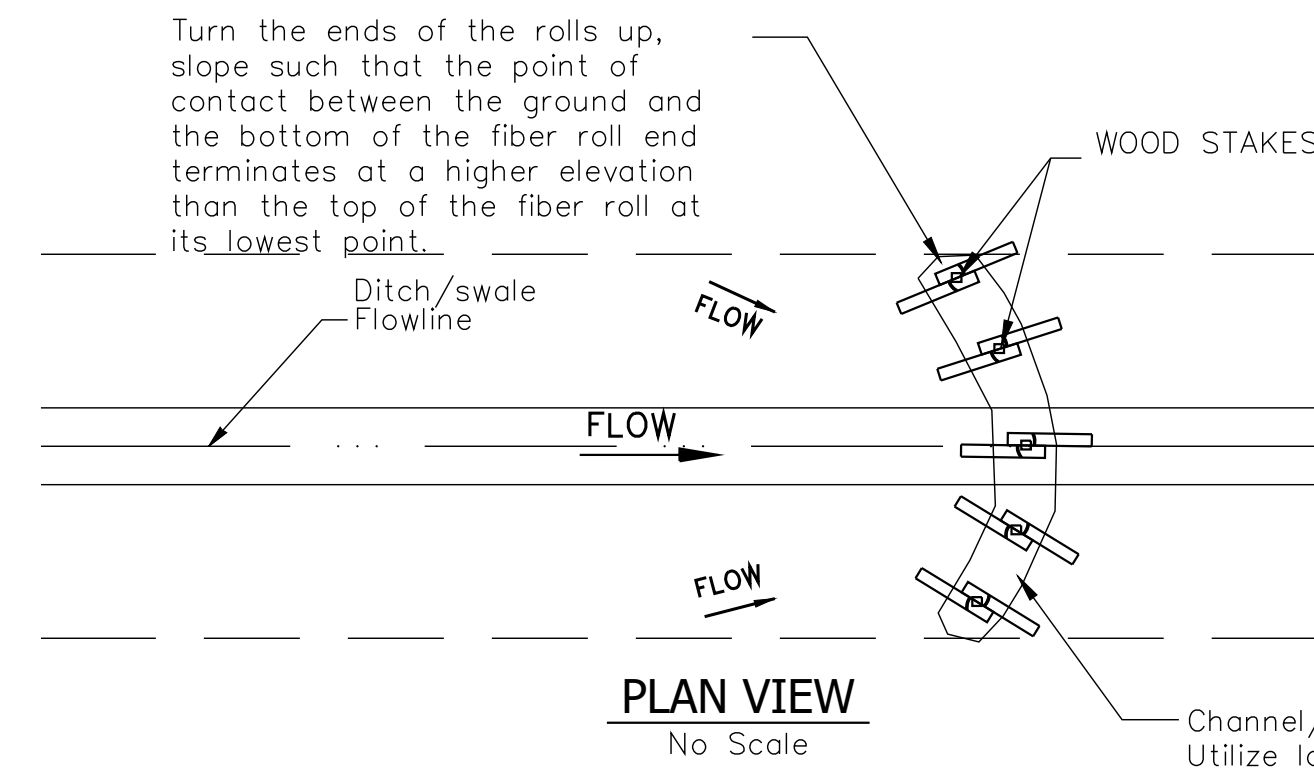


FILTER BERM- FILTER STONE

Not to Scale

Date: Nov 18, 2022, 3:15pm User Name: Vaughn File: X:\Production\Files\2021\121-0006\CAD\ROAD\Erosion Control\ESC Details.dwg

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE _____	INDIANA DEPARTMENT OF TRANSPORTATION		HORIZONTAL SCALE	BRIDGE FILE
			No Scale	13-00043 B
DESIGNED: DAS DRAWN: DAS	EROSION & SEDIMENT CONTROL DETAILS		VERTICAL SCALE	DESIGNATION
CHECKED: JAW CHECKED: JAW			No Scale	1400825
			SURVEY BOOK	SHEETS
			Electronic	20 of 62
			CONTRACT	PROJECT
			B-37711	1400825



FILTER SOCK
No Scale

- Location:
- * Slope Application
 - * Installed on the Contour
 - * Five to ten feet from toe of slope (10 feet preferred).
 - * Channel/Swale Application
 - * Perpendicular to channel flow
 - * Less than one acre of drainage
 - * Utilize larger product, typically 18 or more inches.

Date: Nov 18, 2022, 3:15pm User Name: Vaughn
File: X:\Production\Files\2021\121-0006\CAD\ROAD\Erosion Control\ESC Details.dwg

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: DAS	DRAWN: DAS	
CHECKED: JAW	CHECKED: JAW	

INDIANA DEPARTMENT OF TRANSPORTATION	
EROSION & SEDIMENT CONTROL DETAILS	

HORIZONTAL SCALE	BRIDGE FILE
No Scale	13-00043 B
VERTICAL SCALE	DESIGNATION
No Scale	1400825
SURVEY BOOK	SHEETS
Electronic	21 of 62
CONTRACT	PROJECT
B-37711	1400825

EROSION CONTROL BLANKET					
FROM STATION	TO STATION	LEFT	MEDIAN	RIGHT	TOTAL (SYS)
Line "PR-A"					
100+07.66	105+00.00			X	702
100+07.66	105+00.00	X			1206
107+00.00	111+50.00	X			597
107+00.00	111+50.00			X	842
TOTAL:					3347

CD REVETMENT RIPRAP CHECK DAM						
STATION	STATION	LEFT	RIGHT	NO. CHECKS (EACH)	MASS PER CHECK (TONS)	TOTAL MASS (TONS)
Line "PR-A"						
109+00	110+00	X		3	7.25	21.8
108+25	110+00		X	4	7.25	29.0
TOTAL:						50.8

FS FILTER SOCK					
FROM STATION	TO STATION	LEFT	MEDIAN	RIGHT	TOTAL LENGTH (LFT)
Line "PR-A"					
Project Area		X		X	380
TOTAL:					380

TEMPORARY SEED MIXTURE (1.16 ac)	
Temporary Seeding Mixture (150 lbs/Acre * 2 appl.)	348 lbs

FERTILIZER (1.16 ac)	
Temporary Seeding (0.2 Ton/Acre * 2 appl.)	0.5 Ton

TEMPORARY MULCH (1.16 ac)	
Temporary Mulch (2.5 Ton/Acre * 2 appl.)	5.4 Ton

FSB FILTER STONE BERM							
STATION	STATION	LEFT	RIGHT	NO. BERMS (EACH)	MASS PER BERM (TONS)	TOTAL MASS (TONS)	TOTAL LENGTH (LFT)
Line "PR-A"							
105+49	105+62	X		1	19.3	19.3	32
106+65	106+87	X		1	23.7	23.7	38
TOTAL:						43.0	70

PROJECT QUANTITIES	
No. 2 Stone : (2 Constr. Entrances, locations determined in field)	214 Ton
Geotextile : (2 Constr. Entrances, locations determined in field)	406 Sys
Mobilization & Demobilization for surface stabilization	4 Each
Sediment, Remove	2 Cys
*Concrete Washout (undisturbed locations, locations determined in field)	4 Each

*Not paid for directly

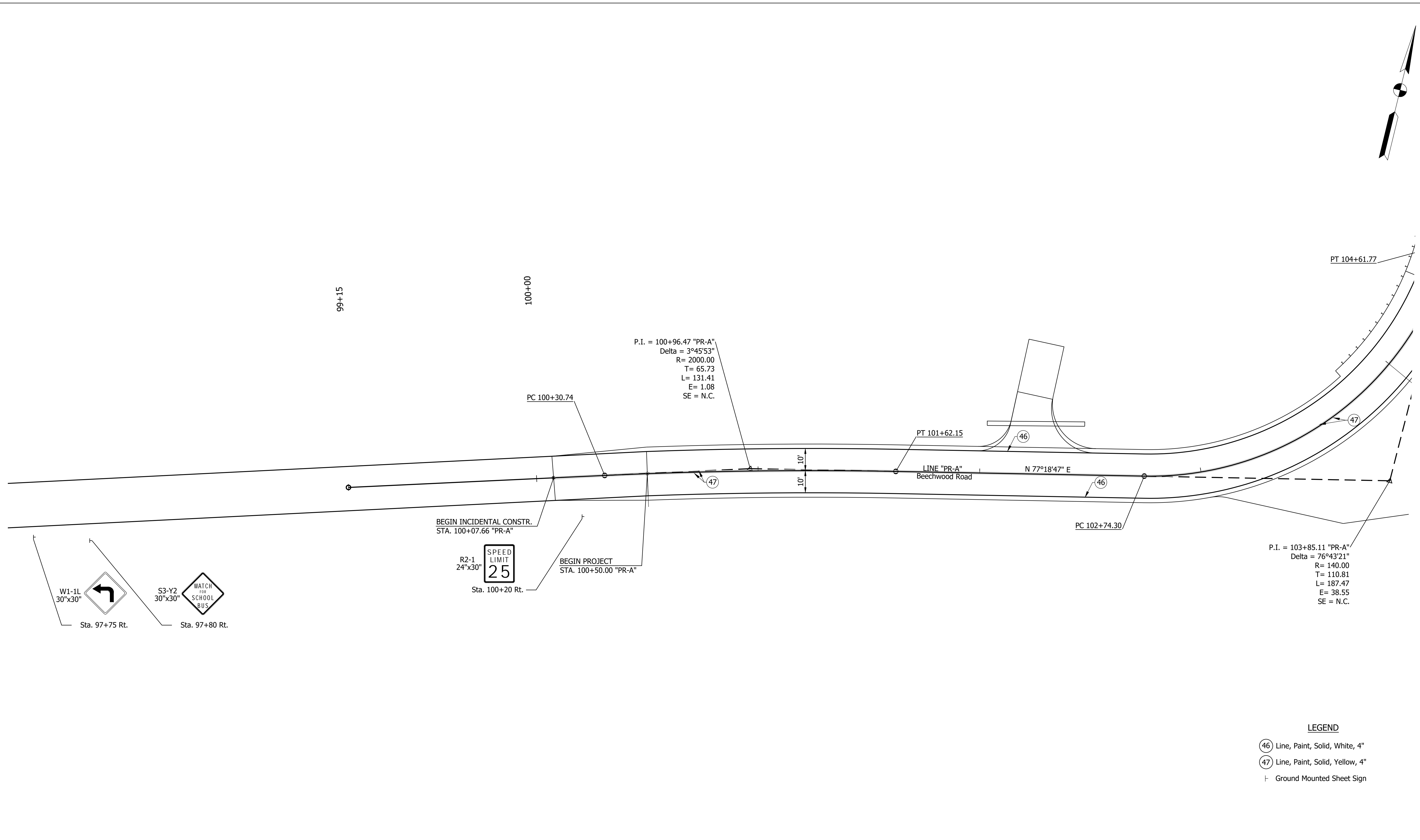
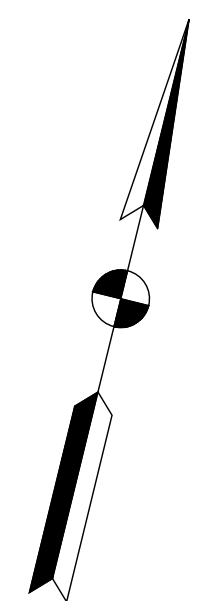
RFB ROCK FILTER BERM							
STATION	STATION	LEFT	RIGHT	NO. BERMS (EACH)	MASS PER BERM (TONS)	TOTAL MASS (TONS)	TOTAL LENGTH (LFT)
Line "PR-A"							
105+74	105+85	X	X	1	50.7	50.7	62
106+58	106+68	X	X	1	47.1	47.1	62
TOTAL:						97.8	124

Date: Nov 18, 2022, 4:59pm User Name: Vaughn
File: X:\Production\Files\2021\121-0006\CAD\ROAD\EROSION CONTROL\ESC Details.dwg

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: DAS	DRAWN: DAS	
CHECKED: JAW	CHECKED: JAW	

INDIANA DEPARTMENT OF TRANSPORTATION	
EROSION & SEDIMENT CONTROL TABLES	

HORIZONTAL SCALE	BRIDGE FILE
No Scale	13-00043 B
VERTICAL SCALE	DESIGNATION
No Scale	1400825
SURVEY BOOK	SHEETS
Electronic	22 of 62
CONTRACT	PROJECT
B-37711	1400825



- LEGEND**
- (46) Line, Paint, Solid, White, 4"
 - (47) Line, Paint, Solid, Yellow, 4"
 - ⊥ Ground Mounted Sheet Sign

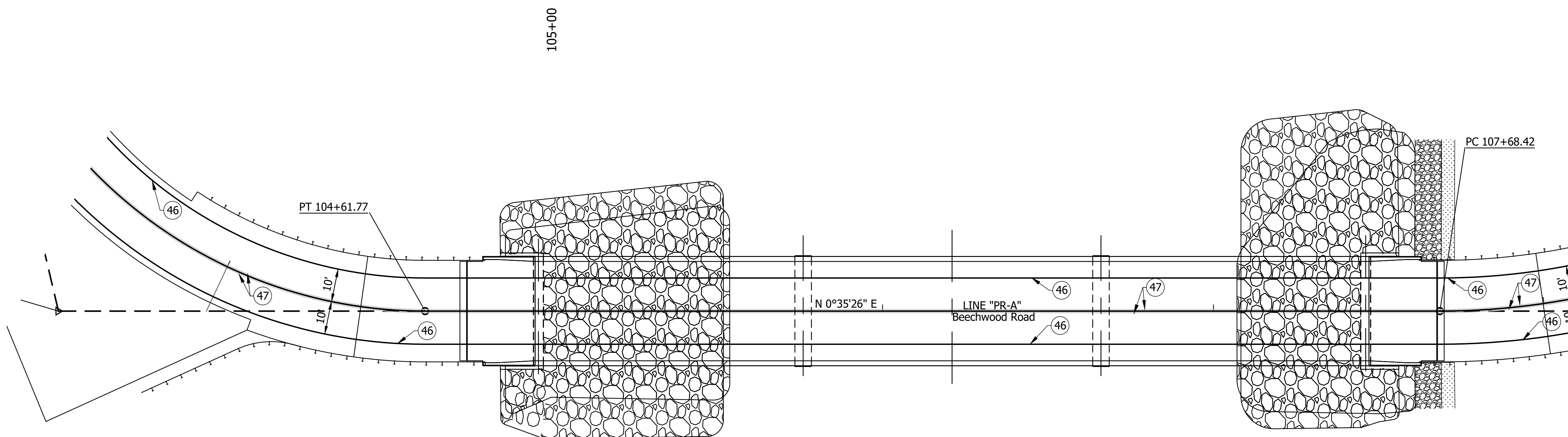
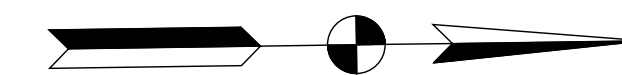
Date: Nov 18, 2022, 3:16pm User Name: Vaughn
File: X:\Production\Files\2021\1121-0006\CAD\ROAD\Signs\Mark\ Pavement Marking Details.dwg

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: DAS	DRAWN: DAS	
CHECKED: JAW	CHECKED: JAW	

**INDIANA
DEPARTMENT OF TRANSPORTATION**

**PAVEMENT MARKING DETAILS LINE "PR-A"
STA. 97+75 TO 104+00**

HORIZONTAL SCALE	BRIDGE FILE
1"=20'	13-00043 B
VERTICAL SCALE	DESIGNATION
1"=10'	1400825
SURVEY BOOK	SHEET
ELECTRONIC	23 of 62
CONTRACT	PROJECT
B-37711	1400825



LEGEND

- ④6 Line, Paint, Solid, White, 4"
- ④7 Line, Paint, Solid, Yellow, 4"
- ⊞ Ground Mounted Sheet Sign

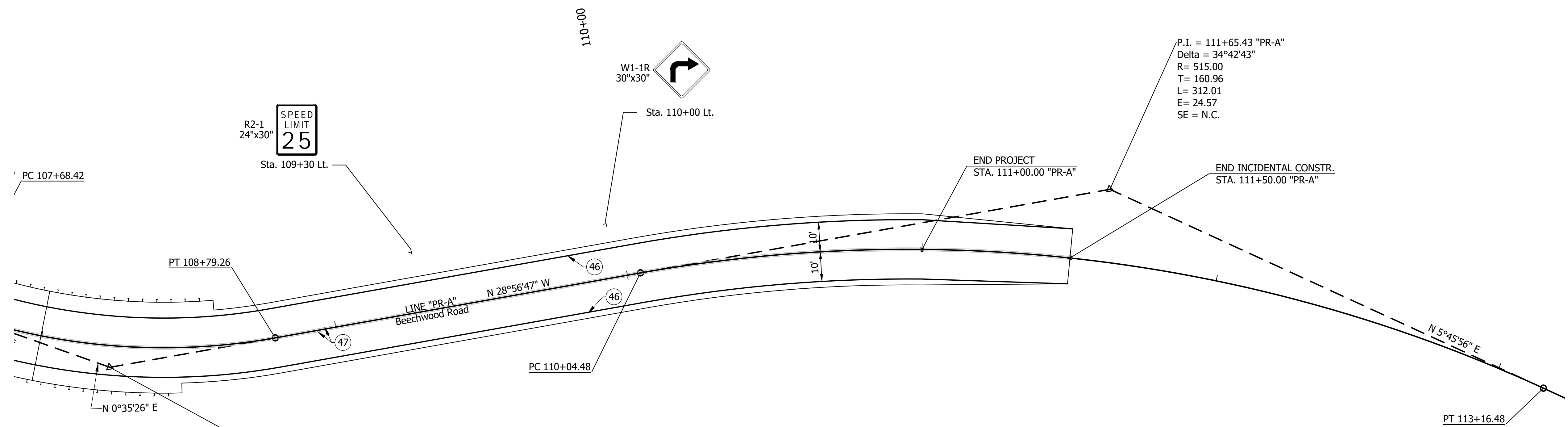
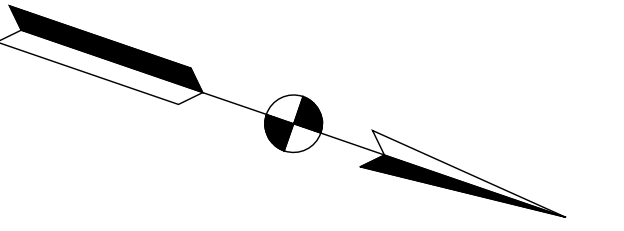
Date: Nov 18, 2022, 3:16pm User Name: Vaughn
File: X:\Production\Files\2021\1121-0006\CAD\ROAD\Signs\SheetMark\Pavement Marking Details.dwg

RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: _____ DAS _____	DRAWN: _____ DAS _____	
CHECKED: _____ JAW _____	CHECKED: _____ JAW _____	

**INDIANA
DEPARTMENT OF TRANSPORTATION**

**PAVEMENT MARKING DETAILS LINE "PR-A"
STA. 104+00 TO 108+00**

HORIZONTAL SCALE	BRIDGE FILE
1"=20'	13-00043 B
VERTICAL SCALE	DESIGNATION
1"=10'	1400825
SURVEY BOOK	SHEET
ELECTRONIC	24 of 62
CONTRACT	PROJECT
B-37711	1400825



LEGEND

- (46) Line, Paint, Solid, White, 4"
- (47) Line, Paint, Solid, Yellow, 4"
- Ground Mounted Sheet Sign

Date: Nov 18, 2022, 3:16pm User Name: Vaughn File: X:\Production\Files\2021\1121-0006\CAD\ROAD\Signs\Mark\ Pavement Marking Details.dwg

RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: _____ DAS _____	DRAWN: _____ DAS _____	
CHECKED: _____ JAW _____	CHECKED: _____ JAW _____	

**INDIANA
DEPARTMENT OF TRANSPORTATION**

**PAVEMENT MARKING DETAILS LINE "PR-A"
STA. 108+00 TO 113+00**

HORIZONTAL SCALE 1"=20'	BRIDGE FILE 13-00043 B
VERTICAL SCALE 1"=10'	DESIGNATION 1400825
SURVEY BOOK ELECTRONIC	SHEET 25 of 62
CONTRACT B-37711	PROJECT 1400825

PAVEMENT MARKING SUMMARY				
LOCATION		PAINT		
		LINE, SOLID, WHITE, 4"	LINE, SOLID, YELLOW, 4"	LINE, BROKEN, YELLOW, 4"
FROM STATION	TO STATION	Ft.	Ft.	Ft.
Line "PR-A"				
100+07.66	111+50.00	2286	2286	
TOTALS:		2286	2286	

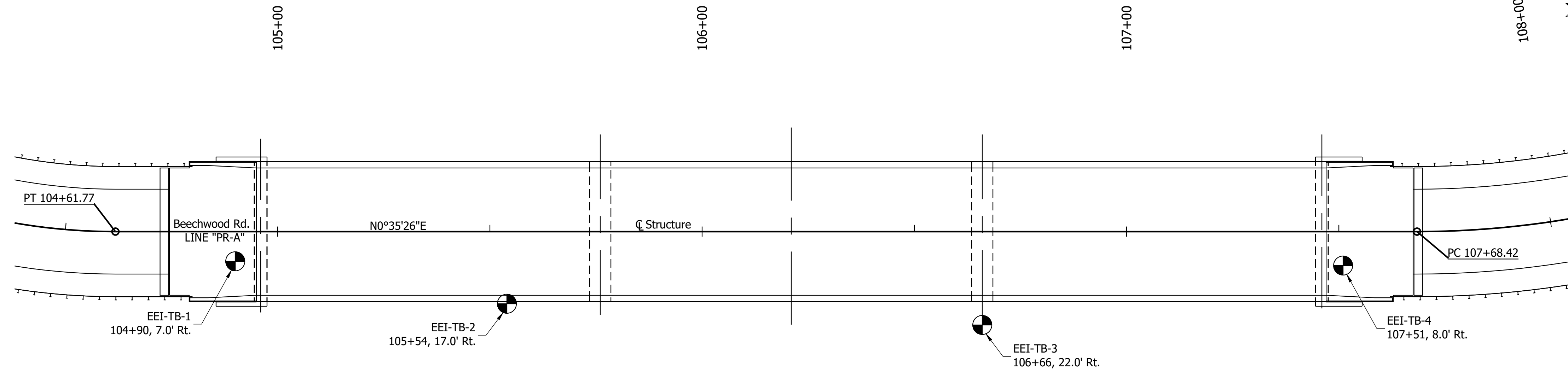
SHEET SIGN & POST SUMMARY																	
PLAN SHEET NO. / LINE	SIGN LOCATION (STA.)	SIGN CODE	SIGN	SIGN SIZE (IN. x IN.)	GROUND - MOUNTED SIGN AREA (Sq. Ft.)			POST						REMARKS			
					0.080	0.100	0.125	SQUARE									
								2½" x 2½" - 12 ga. (TYPE 3) UNREINFORCED			2" x 2" - 12 ga. (TYPE 2) REINFORCED				2¼" x 2¼" - 12 ga. (TYPE 1) REINFORCED		
								POST LENGTH (Ft.)			POST LENGTH (Ft.)				POST LENGTH (Ft.)		
1	2	TOTAL (Ft.)	1	2	TOTAL (Ft.)	1	TOTAL										
Line "PR-A"	97+75 Rt.	W1-1L	Left Curve Ahead	30x30	6.25								x	12.00	12" Wide Mounted Sign Bracket Shall Be Used.		
	97+80 Rt.	S3-Y2	Watch for School Bus	30x30	6.25								x	12.00	12" Wide Mounted Sign Bracket Shall Be Used.		
	100+20 Rt.	R2-1	Speed Limit 25mph	24x30	5.00								x	11.00	12" Wide Mounted Sign Bracket Shall Be Used.		
	109+30 Lt.	R2-1	Speed Limit 25mph	24x30	5.00								x	11.00	12" Wide Mounted Sign Bracket Shall Be Used.		
	110+00 Lt.	W1-1R	Right Curve Ahead	30x30	6.25								x	12.00	12" Wide Mounted Sign Bracket Shall Be Used.		
Sheet Total					29.00									58			

Date: Nov 18, 2022, 4:53pm User Name: Vaughn File: X:\Production\Files\2021\12\1121-0006\CAD\ROAD\Signs\SignMark\Sign and Pmt\Marking Tables.dwg

RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: _____ DAS _____	DRAWN: _____ DAS _____	
CHECKED: _____ JAW _____	CHECKED: _____ JAW _____	

INDIANA DEPARTMENT OF TRANSPORTATION	
PAVEMENT MARKING AND SIGN TABLES	

HORIZONTAL SCALE	BRIDGE FILE
1"=20'	13-00043 B
VERTICAL SCALE	DESIGNATION
1"=10'	1400825
SURVEY BOOK	SHEET
ELECTRONIC	26 of 62
CONTRACT	PROJECT
B-37711	1400825



BORING PLAN
SCALE: 1/16"=1'-0"

PILE LOADING FOR GEOTECHNICAL TESTING		
	BENT NO. 1	BENT NO. 4
Pile Size, Type & Grade	HP 12x84, Grade 50	HP 12x84, Grade 50
Factored Design Load per Pile, Q _F (kips)	240	240
Factored Design Soil Resistance per Pile, R _R (kips)	240	240
Resistance Factor, Φ _{dyn}	0.55	0.55
Downdrag Load, DD (kips)	Negligible	Negligible
Nominal Soil Resistance, R _n (kips)	437	437
Downdrag Friction, R _{sdd} (kips)	Negligible	Negligible
Scour Zone Friction, R _{s scour} (kips)	N/A	N/A
Relaxation of Tip in Shale (kips)	N/A	N/A
Nominal Driving Resistance, R _{ndr} (kips)	437	437
Estimated Pile Tip Elevation	409	340
Minimum Pile Tip Elevation	N/A - Pre-Core Piles 4'-0" Min. Into Rock	N/A - Drive Piles To Rock
Testing Method	* INDOT Standard Specification 701.05(a)	

* The Dynamic Formula Method with Wave Equation Analysis shall be used.

LOG OF TEST BORING											
PROJECT TYPE : Bridge Replacement						BORING NO.: EEI-TB-1					
CLIENT : Lochmueller Group, Inc.						SHEET : 1 OF 1					
DES NO. : 1400825 STRUCTURE # : Crawford 43						LATITUDE : 38.16656					
LOCATION : Beechwood Road over Little Blue River						LONGITUDE : -86.41596					
COUNTY : Crawford PROJECT NO.: CJ215107						DATUM : WGS 84					
ELEVATION : 424.0 BORING METHOD : Hollow Stem Auger						DATE STARTED : 02-16-22					
STATION : 104+90 RIG TYPE : D-50 Track ATV						DATE COMPLETED : 02-16-22					
OFFSET LINE : 7.0 ft Right						HAMMER : Auto					
DEPTH : 21.0 ft						DRILLER/NSP : J.S.					
CORE SIZE : ---						TEMPERATURE : 50 °F					
WEATHER : Windy						GROUNDWATER : Encountered at 11.0' At completion 11.0'					
ELEVATION	SAMPLE DEPTH	SOIL/MATERIAL DESCRIPTION	SAMPLE NUMBER	SPT per 6"	RECOVERY	MOISTURE CONTENT	UNIT WEIGHT	LIQUID LIMIT	PLASTICITY INDEX	ATTEMBERG LIMITS	REMARKS
424.0	0.0	Asphaltic Concrete	SS 1	3-4-4	22	14.3	0.75				
423.0	0.8	Granular Subbase, crushed stone	SS 2	2-2-5	22	14.5	1.0				
420.0	4.0	Sandy Loom, medium stiff, moist, brown, A-4, Lab No. 33006	SS 3	4-5-6	22	15.9	0.5				
415.0	9.0	Clay Loom, medium stiff to very stiff, moist, brown, with sandy loam seam near 5 ft, with weathered siltstone near 7 ft, A-6, Lab No. 33005	SS 4	2-4-16	56	23.9	2.5				
410.0	11.0	Clay, very stiff, moist, brown and gray, A-6, Lab No. 33007	SS 5	50/0	0						11.0, *Water introduced during rock coring
410.0	11.0	Sandstone, soft to moderately hard, gray to brown, fine grained to coarse grained, with very soft shale partings	RC 1 RQD= 53%								
405.0	21.0	Bottom of Boring at 21.0 ft	RC 2 RQD= 82%								
405.0	21.0	Auger refusal at 11 ft									

LOG OF TEST BORING											
PROJECT TYPE : Bridge Replacement						BORING NO.: EEI-TB-2					
CLIENT : Lochmueller Group, Inc.						SHEET : 1 OF 2					
DES NO. : 1400825 STRUCTURE # : Crawford 43						LATITUDE : 38.16674					
LOCATION : Beechwood Road over Little Blue River						LONGITUDE : -86.41592					
COUNTY : Crawford PROJECT NO.: CJ215107						DATUM : WGS 84					
ELEVATION : 413.0 BORING METHOD : Hollow Stem Auger						DATE STARTED : 02-16-22					
STATION : 105+54 RIG TYPE : D-50 Track ATV						DATE COMPLETED : 02-16-22					
OFFSET LINE : 17.0 ft Right						HAMMER : Auto					
DEPTH : 50.0 ft						DRILLER/NSP : J.S.					
CORE SIZE : ---						TEMPERATURE : 50 °F					
WEATHER : Clear						GROUNDWATER : Encountered at 11.0' At completion 11.0'					
ELEVATION	SAMPLE DEPTH	SOIL/MATERIAL DESCRIPTION	SAMPLE NUMBER	SPT per 6"	RECOVERY	MOISTURE CONTENT	UNIT WEIGHT	LIQUID LIMIT	PLASTICITY INDEX	ATTEMBERG LIMITS	REMARKS
413.0	0.0	Asphaltic Concrete	SS 1	1-2-8	56	22.0	1.0				
410.0	2.5	Clay Loom, soft to medium stiff, moist, brown, A-6, Lab No. 33005	SS 2	2-3-3	33	23.3	0.5				
405.0	8.0	Clay, soft to medium stiff, moist, brown, A-6, Lab No. 33007	SS 3	2-2-2	44	22.4	0.75				
400.0	12.0	Clay, soft to medium stiff, moist, brown, A-6, Lab No. 33007	SS 4	2-2-3	56	28.1	0.75				
395.0	17.0	Sandy Loom, medium stiff to stiff, moist, brown, with weathered sandstone fragments, A-4, Lab No. 33006	SS 5	2-2-4	22	18.2	0.5				
390.0	20.0	Sand, medium dense to very dense, moist, brown, with weathered sandstone fragments, A-2-4, Lab No. 'LAB 5'	SS 6	10-7-5	44		0.5				18.5, *Water introduced during rock coring
385.0	22.0	Limestone, moderately hard to hard, gray to light gray, low bedding planes	RC 1 RQD= 20%								
380.0	27.5	Clay-filled void	RC 2 RQD= 35%								
375.0	27.5	Limestone, moderately hard to hard, gray to light gray, low bedding planes, with soft shale seam near 36.5 ft, siltstone near 35.5 ft	RC 3 RQD= 65%								
370.0	41.5	Interbedded Limestone and Shale, soft to moderately hard, gray, low bedding planes	RC 4 RQD= 67%								
365.0	45.5	Limestone, hard, gray, low bedding planes, siltstone near 47.5 ft	RC 5 RQD= 80%								
360.0	50.0	Bottom of Boring at 50.0 ft									
355.0	50.0	Auger refusal at 20 ft									

Continued on next page

LOG OF TEST BORING											
PROJECT TYPE : Bridge Replacement						BORING NO.: EEI-TB-2					
CLIENT : Lochmueller Group, Inc.						SHEET : 2 OF 2					
DES NO. : 1400825 STRUCTURE # : Crawford 43						LATITUDE : 38.16674					
LOCATION : Beechwood Road over Little Blue River						LONGITUDE : -86.41592					
COUNTY : Crawford PROJECT NO.: CJ215107						DATUM : WGS 84					
ELEVATION : 413.0 BORING METHOD : Hollow Stem Auger						DATE STARTED : 02-16-22					
STATION : 105+54 RIG TYPE : D-50 Track ATV						DATE COMPLETED : 02-16-22					
OFFSET LINE : 17.0 ft Right						HAMMER : Auto					
DEPTH : 50.0 ft						DRILLER/NSP : J.S.					
CORE SIZE : ---						TEMPERATURE : 50 °F					
WEATHER : Clear						GROUNDWATER : Encountered at 11.0' At completion 11.0'					
ELEVATION	SAMPLE DEPTH	SOIL/MATERIAL DESCRIPTION	SAMPLE NUMBER	SPT per 6"	RECOVERY	MOISTURE CONTENT	UNIT WEIGHT	LIQUID LIMIT	PLASTICITY INDEX	ATTEMBERG LIMITS	REMARKS
413.0	0.0	Asphaltic Concrete	SS 1	1-2-8	56	22.0	1.0				
410.0	2.5	Clay Loom, soft to medium stiff, moist, brown, A-6, Lab No. 33005	SS 2	2-3-3	33	23.3	0.5				
405.0	8.0	Clay, soft to medium stiff, moist, brown, A-6, Lab No. 33007	SS 3	2-2-2	44	22.4	0.75				
400.0	12.0	Clay, soft to medium stiff, moist, brown, A-6, Lab No. 33007	SS 4	2-2-3	56	28.1	0.75				
395.0	17.0	Sandy Loom, medium stiff to stiff, moist, brown, with weathered sandstone fragments, A-4, Lab No. 33006	SS 5	2-2-4	22	18.2	0.5				
390.0	20.0	Sand, medium dense to very dense, moist, brown, with weathered sandstone fragments, A-2-4, Lab No. 'LAB 5'	SS 6	10-7-5	44		0.5				18.5, *Water introduced during rock coring
385.0	22.0	Limestone, moderately hard to hard, gray to light gray, low bedding planes	RC 1 RQD= 20%								
380.0	27.5	Clay-filled void	RC 2 RQD= 35%								
375.0	27.5	Limestone, moderately hard to hard, gray to light gray, low bedding planes, with soft shale seam near 36.5 ft, siltstone near 35.5 ft	RC 3 RQD= 65%								
370.0	41.5	Interbedded Limestone and Shale, soft to moderately hard, gray, low bedding planes	RC 4 RQD= 67%								
365.0	45.5	Limestone, hard, gray, low bedding planes, siltstone near 47.5 ft	RC 5 RQD= 80%								
360.0	50.0	Bottom of Boring at 50.0 ft									
355.0	50.0	Auger refusal at 20 ft									

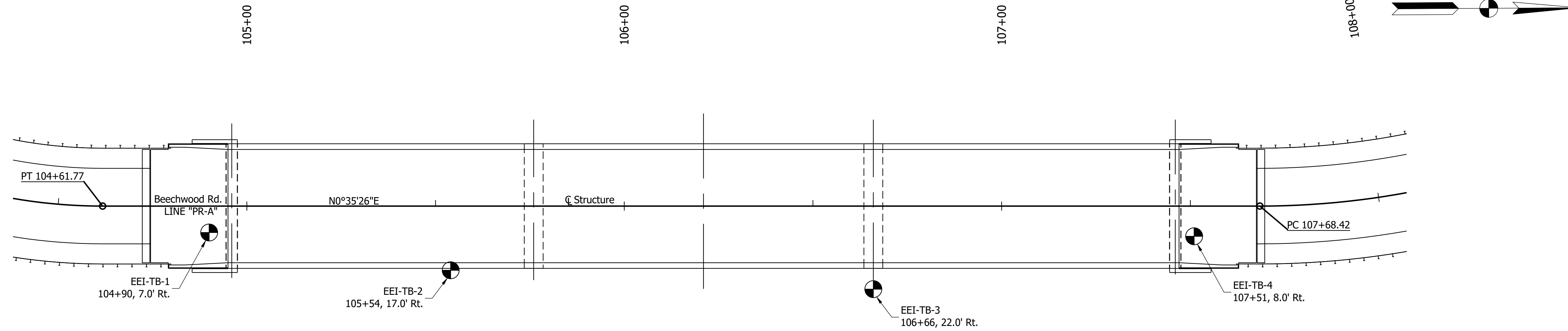
SUMMARY OF LOADING FOR DRILLED SHAFTS		
	BENT NO. 2	BENT NO. 3
Drilled Shaft Diameter	5'-0" (4'-6" in Rock)	5'-0" (4'-6" in Rock)
Factored Design Load (kips)	1227	1227
Factored Design Soil Resistance, R _R (kips)	1227	1227
Resistance Factor, Φ _{dyn}	0.55	0.55
Downdrag Load, DD (kips)	Negligible	Negligible
Nominal Soil Resistance, R _n (kips)	2231	2231
Testing Method	See Special Provision	

LEGEND OF SAMPLE TYPES

- SS-Split Spoon
- RC-Rock Core
- ST-Shelby Tube

- NOTE:
- SPT per 6" indicates the number of blows required to drive 2" O.D. Split-Spoon Sampler 6" by means of a 140 lb weight falling 30".
 - RQD indicates the rock quality designation.

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE	INDIANA DEPARTMENT OF TRANSPORTATION	HORIZONTAL SCALE	BRIDGE FILE
DESIGNED: G CJ	DRAWN: V CH			AS SHOWN	13-00043 B
CHECKED: ACS	CHECKED: MAR			VERTICAL SCALE	DESIGNATION
			SOIL BORINGS	AS SHOWN	1400825
				SURVEY BOOK	SHEET
				ELECTRONIC	27 of 62
			CONTRACT	PROJECT	
			B-37711	1400825	



BORING PLAN
SCALE: 1/16"=1'-0"

LOG OF TEST BORING														
BORING NO.: EET-TB-3 SHEET: 1 OF 3 CLIENT: Lochmueller Group, Inc. DES. NO.: 1400825 STRUCTURE #: Crawford 43 PROJECT TYPE: Bridge Replacement LOCATION: Beechwood Road over Little Blue River COUNTY: Crawford PROJECT NO.: C215107 DATE STARTED: 02-15-22 DATE COMPLETED: 02-15-22 BORING METHOD: Hollow Stem Auger HAMMER: Auto STATION: 106+66 RIG TYPE: D-50 Track ATV DRILLER/NSP: J.S. OFFSET LINE: 78'-4" CASING DIA.: --- TEMPERATURE: 20 °F DEPTH: 85.0 ft CORE SIZE: --- WEATHER: Clear GROUNDWATER: Encountered at 21.0 ft At completion 18" 13.0 ft After 24 hr Coved in at 19.5 ft					SOIL/MATERIAL DESCRIPTION ELEVATION SAMPLE DEPTH SOIL/MATERIAL DESCRIPTION TOPSOIL 0.7 Silty Clay Loom, very soft to soft, moist, brown to gray below 9 ft, with silty clay seam near 6.5 ft, A-7(6), Lab No. 33006 Clay Loom, soft to medium stiff, moist, brown, with A-4 seams, A-6(5), Lab No. 33005 Sandy Loom, soft to very stiff, moist, gray, A-4(0), Lab No. 33006 Continued on next page					SOIL/MATERIAL DESCRIPTION ELEVATION SAMPLE DEPTH SOIL/MATERIAL DESCRIPTION TOPSOIL 0.7 Silty Clay Loom, very soft to soft, moist, brown to gray below 9 ft, with silty clay seam near 6.5 ft, A-7(6), Lab No. 33006 Clay Loom, soft to medium stiff, moist, brown, with A-4 seams, A-6(5), Lab No. 33005 Sandy Loom, soft to very stiff, moist, gray, A-4(0), Lab No. 33006 Continued on next page				
ELEVATION	SAMPLE DEPTH	SOIL/MATERIAL DESCRIPTION	SAMPLE NUMBER	SPT per 6"	RECOVERY	MOISTURE CONTENT	DRY DENSITY	UNCONF. COMP., %	ATTERBERG LIMITS	REMARKS				
									LL PL PI					
390.0	0.7	Topsoil	SS 1	1-2-2	28	30.2	89.3	0.5	0.32					
390.0	5.0	Silty Clay Loom, very soft to soft, moist, brown to gray below 9 ft, with silty clay seam near 6.5 ft, A-7(6), Lab No. 33006	SS 2	1-2-2	78	24.8	95.4	0.5	0.34					
385.0	7.5		SS 3	2-2-2	78	29.9		0.5						
385.0	10.0		SS 4	2-1-2	78	29.5	93.6	1.0	0.26					
380.0	15.0		SS 5	2-3-4	78	22.4		2.5						
375.0	20.0	Clay Loom, soft to medium stiff, moist, brown, with A-4 seams, A-6(5), Lab No. 33005	ST 1		88	30.2	<0.25	<0.25	28 16 12	12.0, SG = 2.66, UU = 0.178 tsf				
370.0	22.5		SS 6	2-2-3	78	20.9		1.0						
370.0	25.0	Sandy Loom, soft to very stiff, moist, gray, A-4(0), Lab No. 33006	SS 7	2-2-3	78	19.9		1.25						
365.0	27.5		SS 8	2-2-3	78	22.0	102.6	0.75	23 18 5	27.0, SG = 2.66, UU = 0.517 tsf				

LOG OF TEST BORING														
BORING NO.: EET-TB-3 SHEET: 2 OF 3 CLIENT: Lochmueller Group, Inc. DES. NO.: 1400825 STRUCTURE #: Crawford 43 PROJECT TYPE: Bridge Replacement LOCATION: Beechwood Road over Little Blue River COUNTY: Crawford PROJECT NO.: C215107 DATE STARTED: 02-15-22 DATE COMPLETED: 02-15-22 BORING METHOD: Hollow Stem Auger HAMMER: Auto STATION: 106+66 RIG TYPE: D-50 Track ATV DRILLER/NSP: J.S. OFFSET LINE: 78'-4" CASING DIA.: --- TEMPERATURE: 20 °F DEPTH: 85.0 ft CORE SIZE: --- WEATHER: Clear GROUNDWATER: Encountered at 21.0 ft At completion 18" 13.0 ft After 24 hr Coved in at 19.5 ft					SOIL/MATERIAL DESCRIPTION ELEVATION SAMPLE DEPTH SOIL/MATERIAL DESCRIPTION Sandy Loom, soft to very stiff, moist, gray, A-4(0), Lab No. 33006 Clay, soft, moist, gray, A-6(18), Lab No. 33007 Sandy Loom, medium stiff to hard, moist, gray, with silty clay loam seam near 49 ft, with some gravel near 55 ft, A-4, Lab No. 33006 Limestone, moderately hard to hard, soft near 71.5 ft and 72.5 ft, low bedding planes, with pyrite filled vugs near 63 ft, stylolitic near 75 to 80 ft, with interbedded soft shale near 80.5 to 82 ft Continued on next page					SOIL/MATERIAL DESCRIPTION ELEVATION SAMPLE DEPTH SOIL/MATERIAL DESCRIPTION Sandy Loom, soft to very stiff, moist, gray, A-4(0), Lab No. 33006 Clay, soft, moist, gray, A-6(18), Lab No. 33007 Sandy Loom, medium stiff to hard, moist, gray, with silty clay loam seam near 49 ft, with some gravel near 55 ft, A-4, Lab No. 33006 Limestone, moderately hard to hard, soft near 71.5 ft and 72.5 ft, low bedding planes, with pyrite filled vugs near 63 ft, stylolitic near 75 to 80 ft, with interbedded soft shale near 80.5 to 82 ft Continued on next page				
ELEVATION	SAMPLE DEPTH	SOIL/MATERIAL DESCRIPTION	SAMPLE NUMBER	SPT per 6"	RECOVERY	MOISTURE CONTENT	DRY DENSITY	UNCONF. COMP., %	ATTERBERG LIMITS	REMARKS				
									LL PL PI					
325.0		Sandy Loom, soft to very stiff, moist, gray, A-4(0), Lab No. 33006	ST 5		17			0.25						
320.0	35.0		SS 9	2-7-10	78	21.8		0.5	NP NP NP	34.5, pH = 7.4, SG = 2.66				
315.0	37.5	Clay, soft, moist, gray, A-6(18), Lab No. 33007	ST 6		50			0.5						
310.0	40.0		SS 10	2-2-2	78	40.7		0.5	40 23 17	39.5, pH = 7.4, SG = 2.75				
305.0	42.5	Sandy Loom, medium stiff to hard, moist, gray, with silty clay loam seam near 49 ft, with some gravel near 55 ft, A-4, Lab No. 33006	SS 11	4-3-5	44	21.1		0.25						
300.0	45.0		SS 12	8-8-10	67	27.9		0.5	NP NP NP					
295.0	47.5	Limestone, moderately hard to hard, soft near 71.5 ft and 72.5 ft, low bedding planes, with pyrite filled vugs near 63 ft, stylolitic near 75 to 80 ft, with interbedded soft shale near 80.5 to 82 ft	SS 13	15-20-20	78	12.2				55.0 *Water introduced during rock coring				
290.0	50.0		RC 1							70X				
285.0	52.5	Sandy Loom, medium stiff to hard, moist, gray, with silty clay loam seam near 49 ft, with some gravel near 55 ft, A-4, Lab No. 33006	RC 2							785				
280.0	55.0		RC 2							95X				

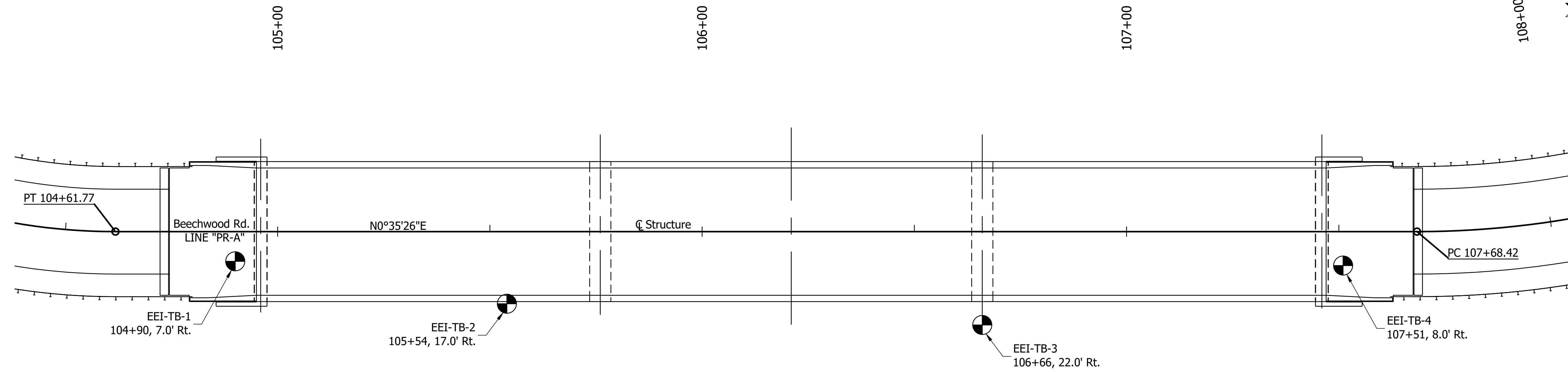
LOG OF TEST BORING														
BORING NO.: EET-TB-3 SHEET: 3 OF 3 CLIENT: Lochmueller Group, Inc. DES. NO.: 1400825 STRUCTURE #: Crawford 43 PROJECT TYPE: Bridge Replacement LOCATION: Beechwood Road over Little Blue River COUNTY: Crawford PROJECT NO.: C215107 DATE STARTED: 02-15-22 DATE COMPLETED: 02-15-22 BORING METHOD: Hollow Stem Auger HAMMER: Auto STATION: 107+51 RIG TYPE: D-50 Track ATV DRILLER/NSP: J.S. OFFSET LINE: 78'-4" CASING DIA.: --- TEMPERATURE: 20 °F DEPTH: 85.0 ft CORE SIZE: --- WEATHER: Clear GROUNDWATER: Encountered at 21.0 ft At completion 18" 13.0 ft After 24 hr Coved in at 19.5 ft					SOIL/MATERIAL DESCRIPTION ELEVATION SAMPLE DEPTH SOIL/MATERIAL DESCRIPTION Limestone, moderately hard to hard, soft near 71.5 ft and 72.5 ft, low bedding planes, with pyrite filled vugs near 63 ft, stylolitic near 75 to 80 ft, with interbedded soft shale near 80.5 to 82 ft Auger refusal at 55 ft Bottom of Boring at 85.0 ft Continued on next page					SOIL/MATERIAL DESCRIPTION ELEVATION SAMPLE DEPTH SOIL/MATERIAL DESCRIPTION Limestone, moderately hard to hard, soft near 71.5 ft and 72.5 ft, low bedding planes, with pyrite filled vugs near 63 ft, stylolitic near 75 to 80 ft, with interbedded soft shale near 80.5 to 82 ft Auger refusal at 55 ft Bottom of Boring at 85.0 ft Continued on next page				
ELEVATION	SAMPLE DEPTH	SOIL/MATERIAL DESCRIPTION	SAMPLE NUMBER	SPT per 6"	RECOVERY	MOISTURE CONTENT	DRY DENSITY	UNCONF. COMP., %	ATTERBERG LIMITS	REMARKS				
									LL PL PI					
325.0		Limestone, moderately hard to hard, soft near 71.5 ft and 72.5 ft, low bedding planes, with pyrite filled vugs near 63 ft, stylolitic near 75 to 80 ft, with interbedded soft shale near 80.5 to 82 ft	RC 4							397				
320.0	70.0		RC 4							72X				
315.0	72.5	Limestone, moderately hard to hard, soft near 71.5 ft and 72.5 ft, low bedding planes, with pyrite filled vugs near 63 ft, stylolitic near 75 to 80 ft, with interbedded soft shale near 80.5 to 82 ft	RC 5							100				
310.0	75.0		RC 5							100X				
305.0	77.5	Limestone, moderately hard to hard, soft near 71.5 ft and 72.5 ft, low bedding planes, with pyrite filled vugs near 63 ft, stylolitic near 75 to 80 ft, with interbedded soft shale near 80.5 to 82 ft	RC 6							98				
300.0	80.0		RC 6							97X				
295.0	82.5	Limestone, moderately hard to hard, soft near 71.5 ft and 72.5 ft, low bedding planes, with pyrite filled vugs near 63 ft, stylolitic near 75 to 80 ft, with interbedded soft shale near 80.5 to 82 ft	RC 6							85.0				
290.0	85.0		RC 6							87X				

LEGEND OF SAMPLE TYPES	
SS	Split Spoon
RC	Rock Core
ST	Shelby Tube

NOTE:
 1. SPT per 6" indicates the number of blows required to drive 2" O.D. Split-Spoon Sampler 6" by means of a 140 lb weight falling 30".
 2. RQD indicates the rock quality designation.

Date: Nov 18, 2022, 3:19pm User Name: Vaughn File: X:\Production\Files\2021\11\21-0006\CAD\BRIDGE\Plans\Soil_Borings.dwg

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE	INDIANA DEPARTMENT OF TRANSPORTATION		HORIZONTAL SCALE	BRIDGE FILE
			AS SHOWN	13-00043 B
DESIGNED: G CJ DRAWN: V CH CHECKED: ACS CHECKED: MAR	SOIL BORINGS		VERTICAL SCALE	DESIGNATION
			AS SHOWN	1400825
			SURVEY BOOK	SHEET
			ELECTRONIC	28 of 62
			CONTRACT	PROJECT
			B-37711	1400825



BORING PLAN
SCALE: 1/16"=1'-0"

LOG OF TEST BORING												
PROJECT TYPE : Bridge Replacement					BORING NO.: EEI-TB-4							
CLIENT : Lohmueller Group, Inc.					SHEET : 1 OF 3							
DES NO. : 1400825 STRUCTURE # : Crawford 43					LATITUDE : 38.16728							
LOCATION : Beechwood Road over Little Blue River					LONGITUDE : -86.41594							
COUNTY : Crawford PROJECT NO.: C/215107					DATE STARTED : 02-14-22							
DATE COMPLETED : 02-14-22					DATUM : WGS 84							
ELEVATION : 413.0 BORING METHOD : Hollow Stem Auger					HAMMER : Auto							
STATION : 107+51 RIG TYPE : B-57 Truck					DRILLER/NSP : J.S.							
OFFSET : 8.0 ft Right					TEMPERATURE : 30 °F							
LINE : TB-4					WEATHER : Clear							
DEPTH : 83.0 ft					CORE SIZE : ---							
GROUNDWATER : Encountered at 49.5 ft At completion 31.5' 46.5 ft After 24 hr. Coved in at 33.0 ft												
ELEVATION	SAMPLE DEPTH	SOIL/MATERIAL DESCRIPTION	SAMPLE NUMBER	SPT per 6"	RECOVERY	MOISTURE CONTENT	DRY DENSITY, pcf	UNSAT. WGT. FOL. RATIO	LI	PL	PI	REMARKS
410.0	0.0	Topsoil	SS 1	2-2-3	78	24.5	3.0	2.0				
405.0	5.0	Clay Loom, soft to medium stiff, moist, brown, A-6, Lab No. 33005	SS 2	2-2-3	78	19.6	1.5	2.0				
400.0	10.0		SS 3	2-4-5	78	18.4	1.5					
395.0	15.0		SS 4	4-4-5	78	17.4	1.5					
390.0	20.0		SS 5	3-4-4	78	21.8	1.75					
385.0	25.0	Clay, medium stiff to soft, moist, brown, A-6, Lab No. 33007	SS 6	2-3-4	78	20.8	0.5					
380.0	30.0		SS 7	2-2-3	78	20.1	109.8	0.5	0.64			
375.0	35.0		SS 8	2-2-3	78	21.2	0.75					
370.0	40.0	Silly Clay Loom, soft to medium stiff, moist, brown to gray below 22 ft, with clay loam seam near 21 ft, A-7-6, Lab No. Lab 6'	SS 9	2-2-4	78	24.5	95.5	1.0	0.60			
365.0	45.0		SS 10	2-2-3	78	26.9	1.5					
360.0	50.0		SS 11	3-3-3	78	27.2	0.75					
355.0	55.0	Clay Loom, medium stiff, moist, gray to brown and gray below 37 ft, A-6, Lab No. 33005	SS 12	2-3-4	78	22.4	104.4	2.25	1.84			

LOG OF TEST BORING												
PROJECT TYPE : Bridge Replacement					BORING NO.: EEI-TB-4							
CLIENT : Lohmueller Group, Inc.					SHEET : 2 OF 3							
DES NO. : 1400825 STRUCTURE # : Crawford 43					LATITUDE : 38.16728							
LOCATION : Beechwood Road over Little Blue River					LONGITUDE : -86.41594							
COUNTY : Crawford PROJECT NO.: C/215107					DATE STARTED : 02-14-22							
DATE COMPLETED : 02-14-22					DATUM : WGS 84							
ELEVATION : 413.0 BORING METHOD : Hollow Stem Auger					HAMMER : Auto							
STATION : 107+51 RIG TYPE : B-57 Truck					DRILLER/NSP : J.S.							
OFFSET : 8.0 ft Right					TEMPERATURE : 30 °F							
LINE : TB-4					WEATHER : Clear							
DEPTH : 83.0 ft					CORE SIZE : ---							
GROUNDWATER : Encountered at 49.5 ft At completion 31.5' 46.5 ft After 24 hr. Coved in at 33.0 ft												
ELEVATION	SAMPLE DEPTH	SOIL/MATERIAL DESCRIPTION	SAMPLE NUMBER	SPT per 6"	RECOVERY	MOISTURE CONTENT	DRY DENSITY, pcf	UNSAT. WGT. FOL. RATIO	LI	PL	PI	REMARKS
380.0	32.5	Clay Loom, medium stiff, moist, gray to brown and gray below 37 ft, A-6, Lab No. 33005	SS 13	2-4-6	67	20.4	2.25		30	15	15	
375.0	37.5		SS 14	2-3-6	78	20.0	108.7	3.0	1.32			
370.0	42.5	Sandy Loom, soft to medium stiff, moist, brown to gray below 43 ft, A-4, Lab No. 33006	SS 15	2-3-4	78	20.7	107.7	1.25	0.94			
365.0	47.5		SS 16	2-2-3	78	23.2	1.5		24	14	10	-39.5, pH = 7.8
360.0	52.5		SS 17	3-3-6	67	21.0	1.25					
355.0	57.5	Sand, medium dense to dense, moist to wet below 50 ft, gray, A-2-4, Lab No. Lab 5'	SS 18	4-10-13	67							
350.0	62.5		SS 19	20-21-28	67							
345.0	67.5		SS 20	5-7-4	78	40.3	0.5					
340.0	72.5	Clay, stiff, moist, gray, with sand seams near 59 ft and 64.5 ft, A-6, Lab No. 33007	SS 21	4-5-7	78	22.9	1.0					

LOG OF TEST BORING												
PROJECT TYPE : Bridge Replacement					BORING NO.: EEI-TB-4							
CLIENT : Lohmueller Group, Inc.					SHEET : 3 OF 3							
DES NO. : 1400825 STRUCTURE # : Crawford 43					LATITUDE : 38.16728							
LOCATION : Beechwood Road over Little Blue River					LONGITUDE : -86.41594							
COUNTY : Crawford PROJECT NO.: C/215107					DATE STARTED : 02-14-22							
DATE COMPLETED : 02-14-22					DATUM : WGS 84							
ELEVATION : 413.0 BORING METHOD : Hollow Stem Auger					HAMMER : Auto							
STATION : 107+51 RIG TYPE : B-57 Truck					DRILLER/NSP : J.S.							
OFFSET : 8.0 ft Right					TEMPERATURE : 30 °F							
LINE : TB-4					WEATHER : Clear							
DEPTH : 83.0 ft					CORE SIZE : ---							
GROUNDWATER : Encountered at 49.5 ft At completion 31.5' 46.5 ft After 24 hr. Coved in at 33.0 ft												
ELEVATION	SAMPLE DEPTH	SOIL/MATERIAL DESCRIPTION	SAMPLE NUMBER	SPT per 6"	RECOVERY	MOISTURE CONTENT	DRY DENSITY, pcf	UNSAT. WGT. FOL. RATIO	LI	PL	PI	REMARKS
345.0	68.0	Sandy Loom, medium stiff, moist, gray, with some gravel near 70 ft, A-4, Lab No. 33006	SS 22	8-6-7	78	17.4	0.5					
340.0	73.0	Weathered Limestone, soft, gray, (field visual)	RC 1									73.0, *Water introduced during rock coring
335.0	77.5	Limestone, hard to moderately hard near 80 to 81 ft, soft near 81.3 ft, gray, low bedding planes, interbedded shale near 80 to 81 ft	RC 2									
330.0	82.5		RC 3									
325.0	87.5	Bottom of Boring of 83.0 ft										
320.0	92.5	Auger refusal at 73 ft										

LEGEND OF SAMPLE TYPES	
SS	Split Spoon
RC	Rock Core
ST	Shelby Tube

- NOTE:
- SPT per 6" indicates the number of blows required to drive 2" O.D. Split-Spoon Sampler 6" by means of a 140 lb weight falling 30".
 - RQD indicates the rock quality designation.

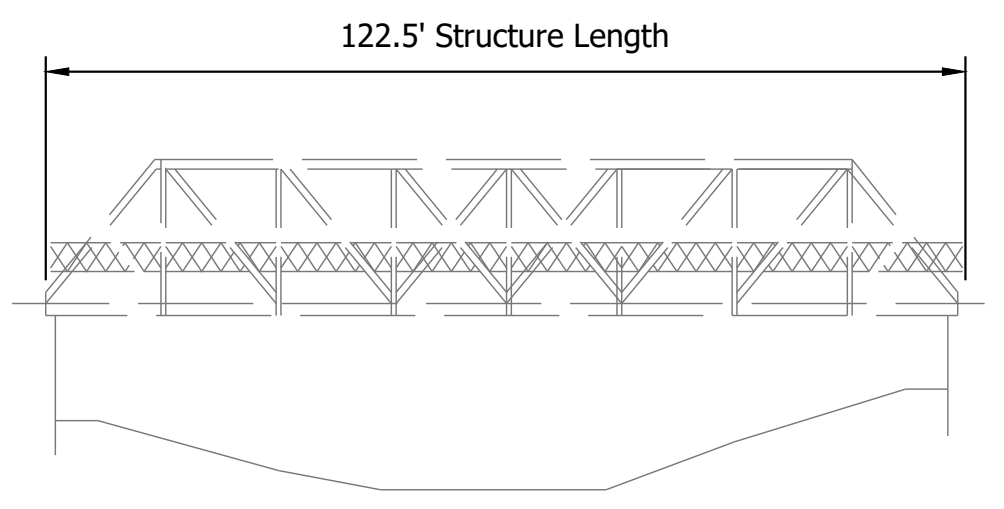
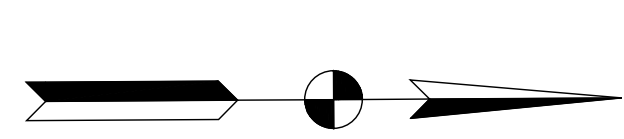
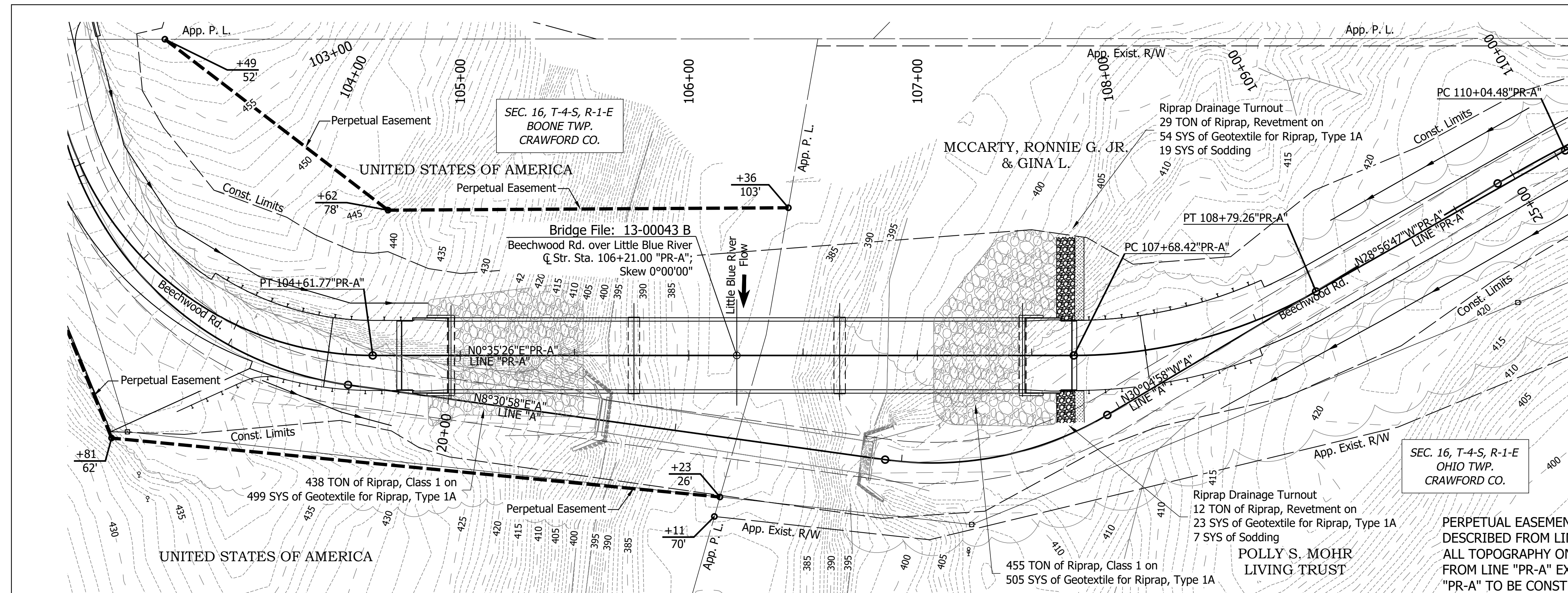
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RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: G CJ	DRAWN: V CH	
CHECKED: ACS	CHECKED: MAR	

INDIANA DEPARTMENT OF TRANSPORTATION

SOIL BORINGS

HORIZONTAL SCALE	BRIDGE FILE
AS SHOWN	13-00043 B
VERTICAL SCALE	DESIGNATION
AS SHOWN	1400825
SURVEY BOOK	SHEET
ELECTRONIC	29 of 62
CONTRACT	PROJECT
B-37711	1400825



EXISTING STRUCTURE
 The existing structure (13-00043) is a single span through truss built in 1925 and rehabilitated in 1994. The bridge span length is 113.5' with a 13.8' clear roadway width.
 Existing structure to be dismantled. (See specifications for requirements.)

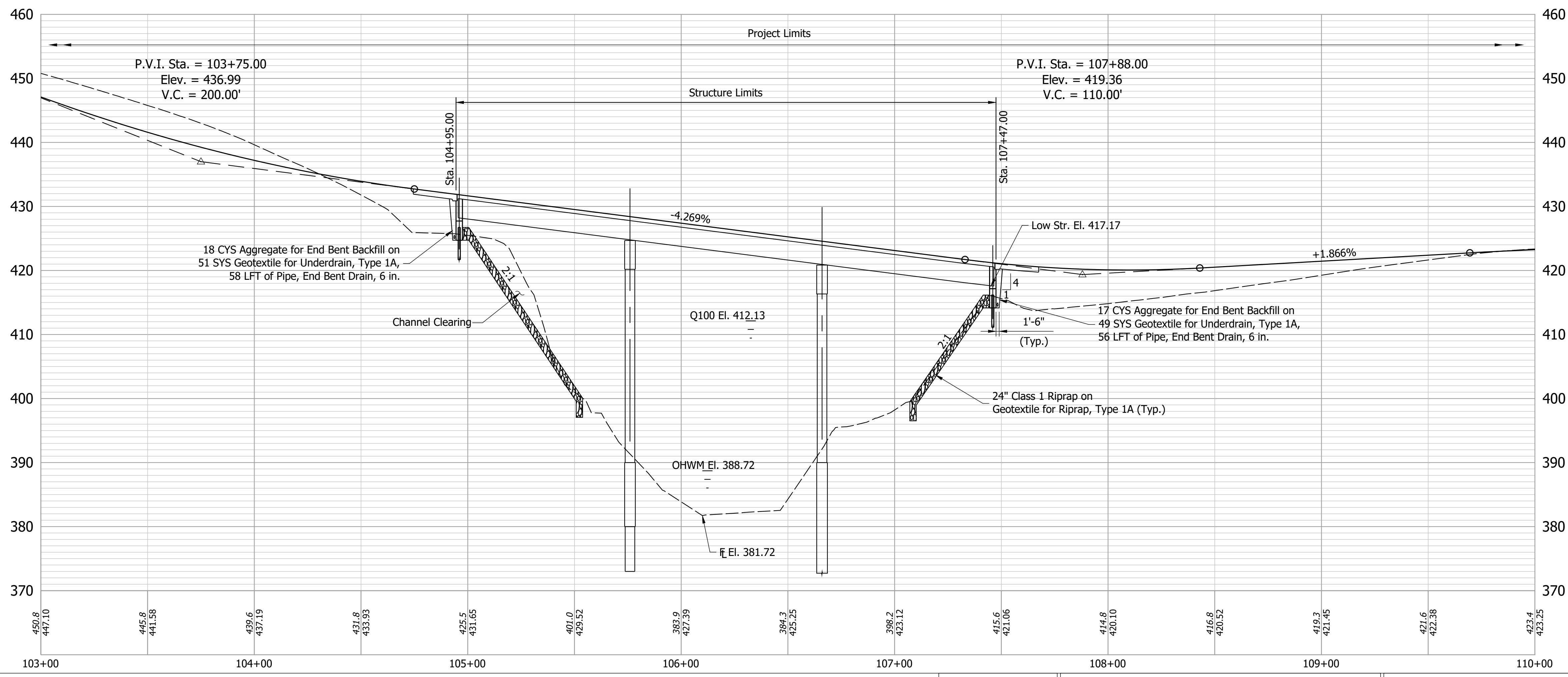
DENOTES LIMITS OF 24" CLASS 1 RIPRAP ON GEOTEXTILE FOR RIPRAP, TYPE 2B

HYDRAULIC INFORMATION

DRAINAGE AREA	=157.76 mi. ²
PROPOSED WATERWAY AREA PROVIDED	=3800.12 ft. ²
Q100 DISCHARGE	=29000 ft. ³ /sec.
Q100 ELEVATION	=412.13 ft.
Q100 HEADWATER ELEVATION	=414.09 ft.
PROPOSED VELOCITY	=7.69 ft./sec.
PROPOSED BACKWATER DEPTH (Q100)	=0.81 ft.
PROPOSED ROAD OVERFLOW AREA	=0.0 ft. ²
LOW STRUCTURE ELEV.	=417.17 ft.
EXISTING LOW STRUCTURE ELEV.	=409.94 ft.
EXISTING BACKWATER DEPTH	=1.20 ft.
EXISTING WATERWAY OPENING	=2660.37 ft. ²

HYDRAULIC SCOUR DATA

Q100 DISCHARGE	=29000 ft. ³ /sec.
Q100 ELEVATION	=412.13 ft.
VELOCITY AT Q100	=10.23 ft./sec.
SCOUR DEPTH (CONTRACTION)	=1.57 ft.
SCOUR DEPTH (TOTAL)	=12.37 ft.
LOW SCOUR ELEVATION	=369.35 ft.
Q500 DISCHARGE	=40600 ft. ³ /sec.
Q500 ELEVATION	=418.72 ft.
VELOCITY AT Q500	=10.93 ft./sec.
SCOUR DEPTH (CONTRACTION)	=0.06 ft.
SCOUR DEPTH (TOTAL)	=10.86 ft.
LOW SCOUR ELEVATION	=370.86 ft.



CONTINUOUS COMPOSITE PRESTRESSED CONCRETE HYBRID BULB-TEE BEAM BRIDGE
 3 SPANS: 80'-0", 90'-0", 80'-0"
 CLEAR ROADWAY: 30'-0"
 SKEW: 0°00'00"
 BEECHWOOD RD. OVER LITTLE BLUE RIVER
 CRAWFORD COUNTY

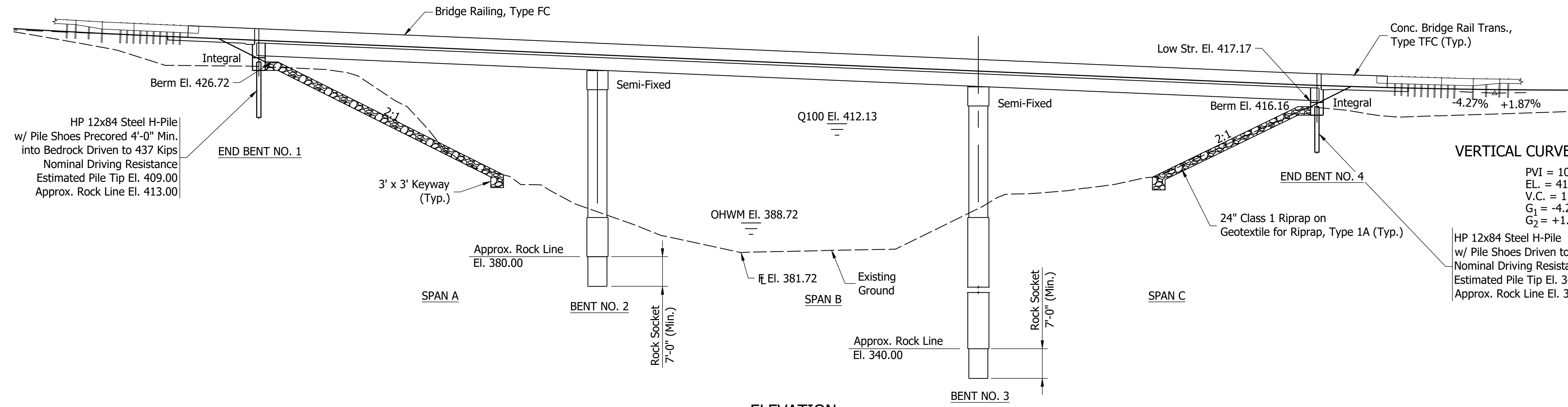
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RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: G CJ	DRAWN: TAM	
CHECKED: ACS	CHECKED: MAR	

INDIANA DEPARTMENT OF TRANSPORTATION
 LAYOUT

HORIZONTAL SCALE	BRIDGE FILE
1"=30'	13-00043 B
VERTICAL SCALE	DESIGNATION
1"=10'	1400825
SURVEY BOOK	SHEET
ELECTRONIC	30 of 62
CONTRACT	PROJECT
B-37711	1400825

STRUCTURE TO BE BUILT TO A -4.27% GRADE & A 110' VERTICAL CURVE



DESIGN STRESSES

Class A Concrete: $f_c = 3,500$ psi
 Class C Concrete: $f_c = 4,000$ psi
 Reinforcing Steel (Grade 60): $f_y = 60,000$ psi

DESIGN DATA

Live Load: Designed for HL-93 Loading, in accordance with the AASHTO LRFD Bridge Design Specifications, Eighth Edition, 2017, and subsequent interims through 2018.
 Dead Load: Actual weight plus 35 lb/ft² for future wearing surface and 15 lb/ft² for permanent metal deck forms.
 Bridge Floor: Designed with a 7 1/2" structural depth plus 1/2" sacrificial wearing surface.

SEISMIC DATA

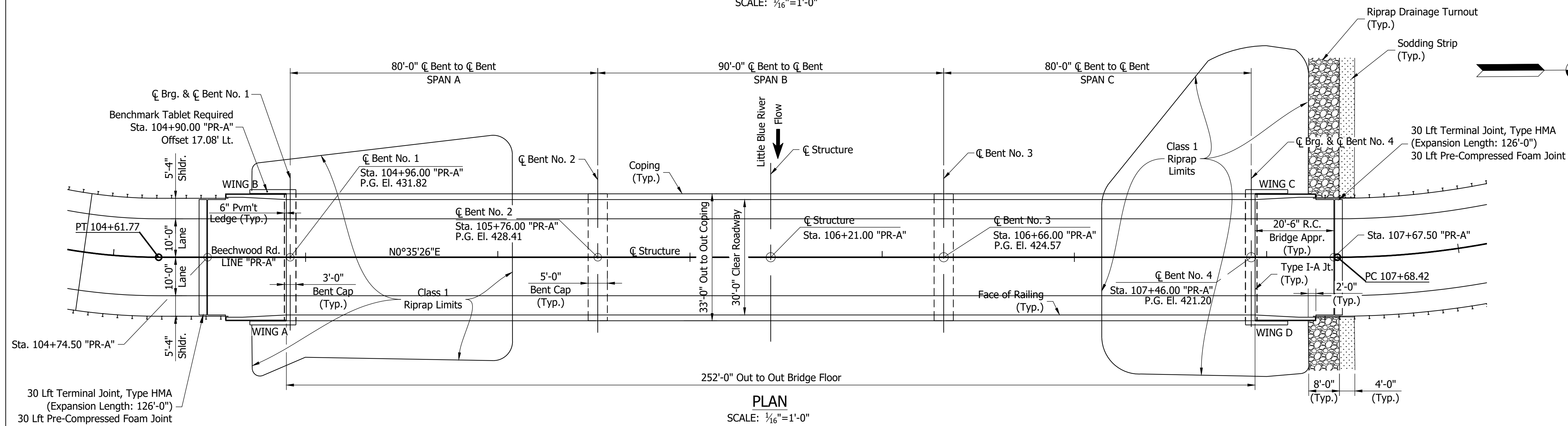
Seismic Performance Zone: Zone 2
 Acceleration Coefficient: 0.176
 Seismic Soil Profile Type: Class D

GENERAL NOTES

- Reinforcing steel covering shall be 2 1/2" in top and 1" minimum in bottom of floor slab, 4" in bottom of footings, and 2" in all other parts, unless noted.
- Concrete requirements: Concrete in Interior Bents to be Class "A". Concrete in Superstructure and End Bents to be Class "C".

VERTICAL CURVE INFORMATION

PVI = 107+88.00
 EL. = 419.36
 V.C. = 110'
 G₁ = -4.269%
 G₂ = +1.866%

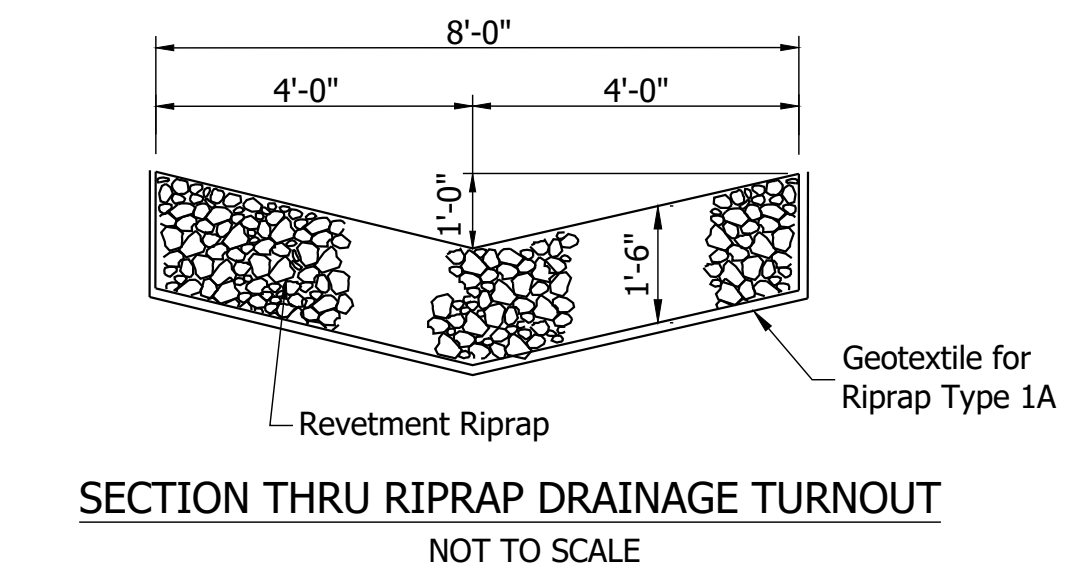
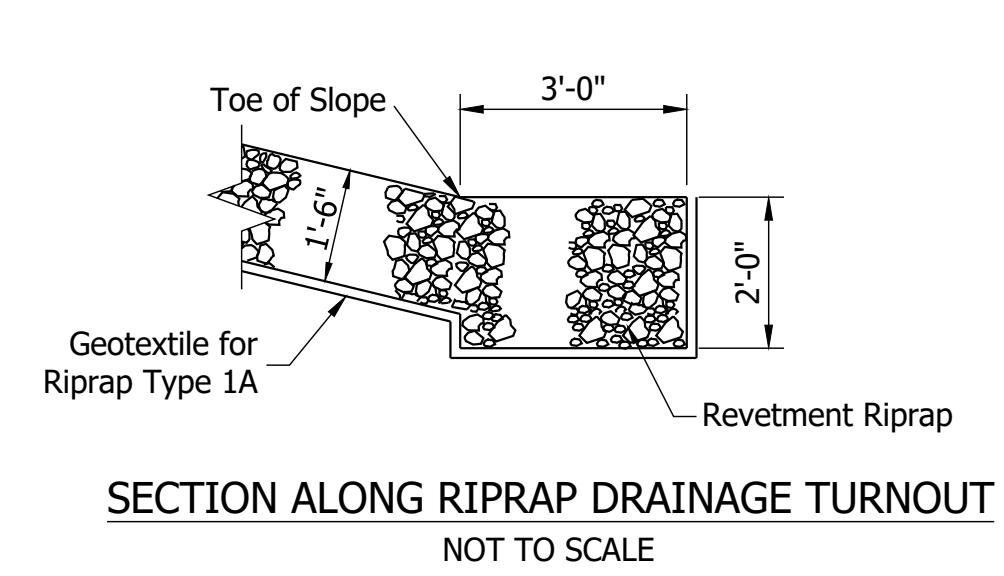
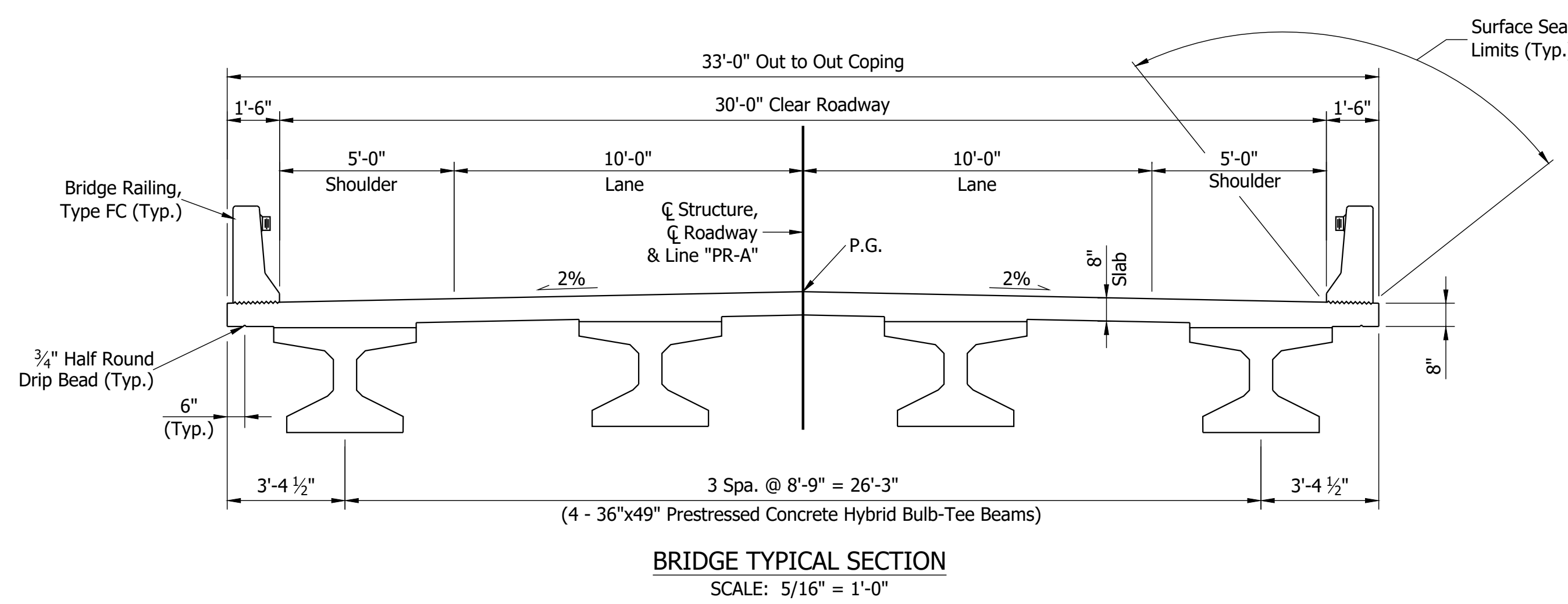


CONSTRUCTION LOADING

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 the exterior beam. The finishing machine was assumed to be supported 6 in. outside the vertical coping form. The top overhang brackets were assumed to be located 6 in. past the edge of the vertical coping form. The bottom overhang brackets were assumed to be braced against the intersection of the beam bottom flange and web.

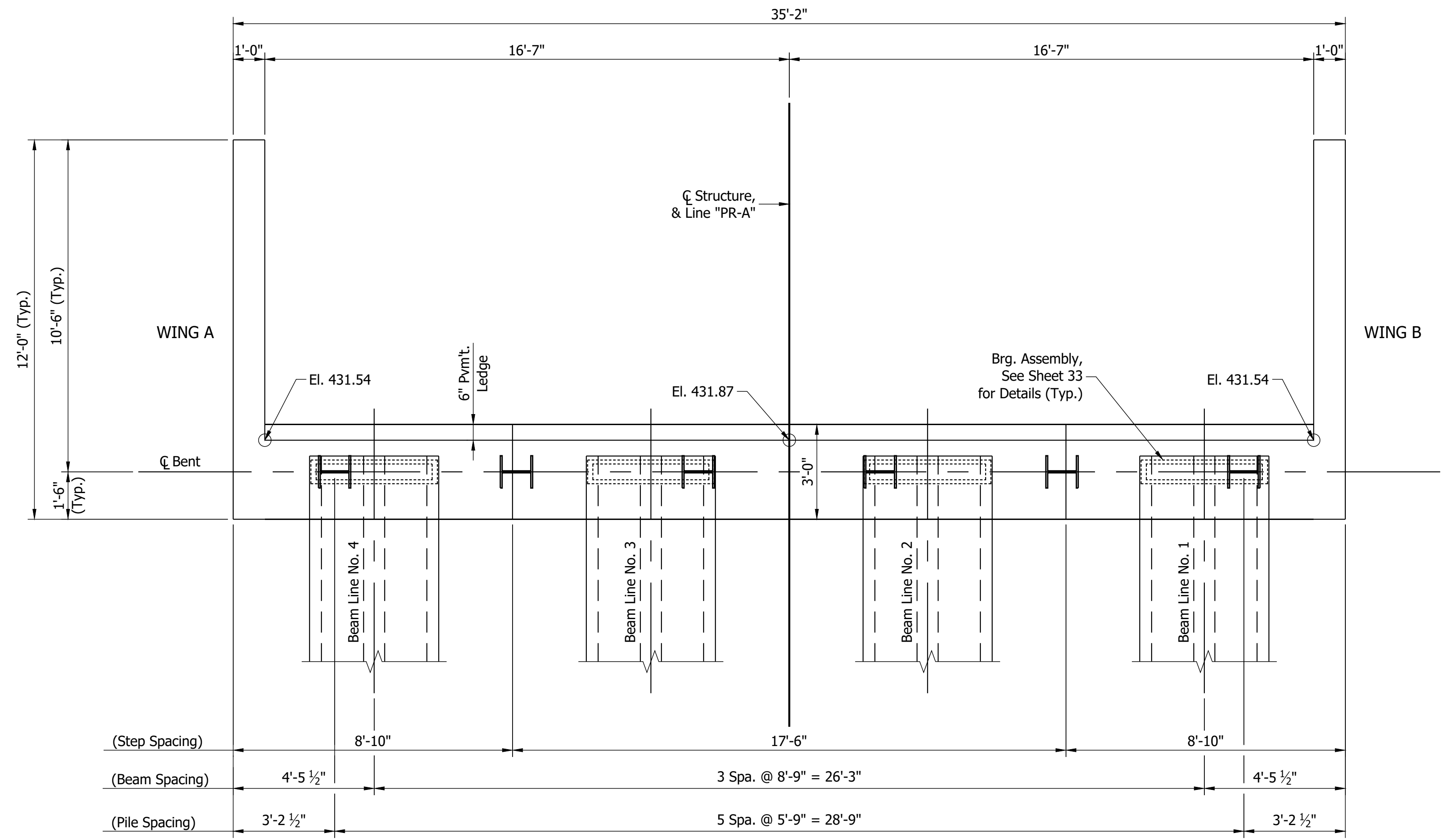
- Deck Falsework Loads: Designed for 15 lb/ft² for permanent metal stay-in-place deck forms, removable deck forms and 2 ft. exterior walkway.
 Construction Live Load: Designed for 20 lb/ft² extending 2 ft. past the edge of coping and 75 lb/ft vertical force applied at a distance of 6 in. outside the face of coping over a 30 ft. length of the deck centered with the finishing machine.
 Finishing-Machine Load: 4500 lb. distributed over 10 ft. along the coping.
 Wind Load: Designed for 70 mph horizontal wind loading in accordance with LRFD 3.8.1.

CONTINUOUS COMPOSITE PRESTRESSED CONCRETE HYBRID BULB-TEE BEAM BRIDGE
 3 SPANS: 80'-0", 90'-0", 80'-0"
 CLEAR ROADWAY: 30'-0"
 SKEW: 0°00'00"
 BEECHWOOD RD. OVER LITTLE BLUE RIVER
 CRAWFORD COUNTY

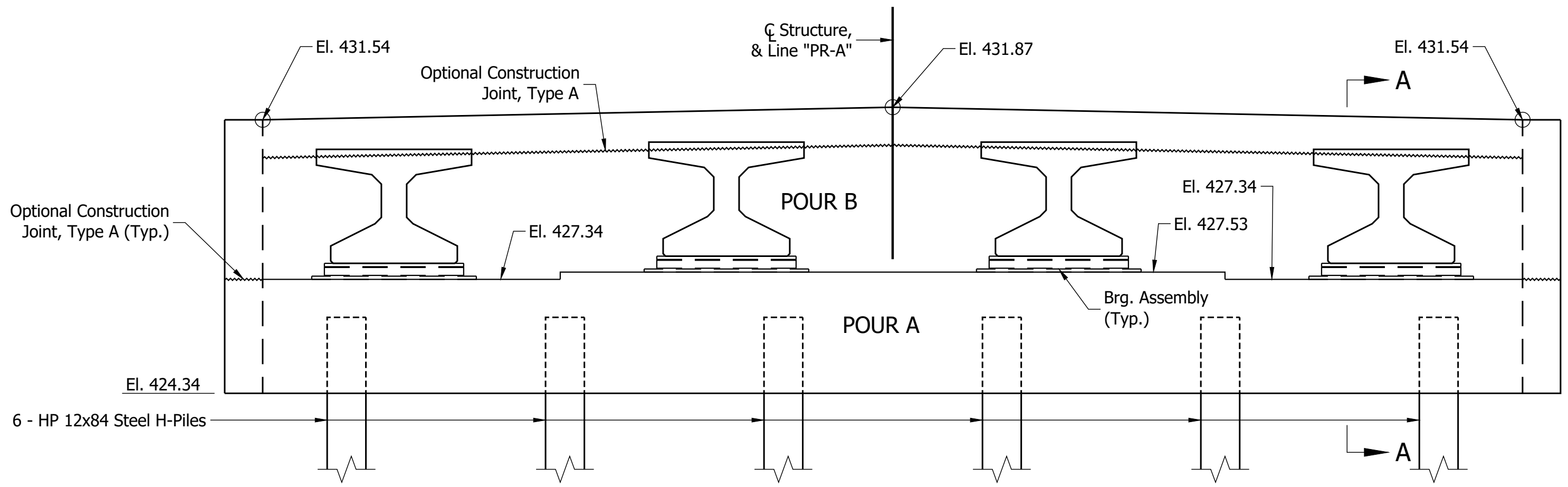


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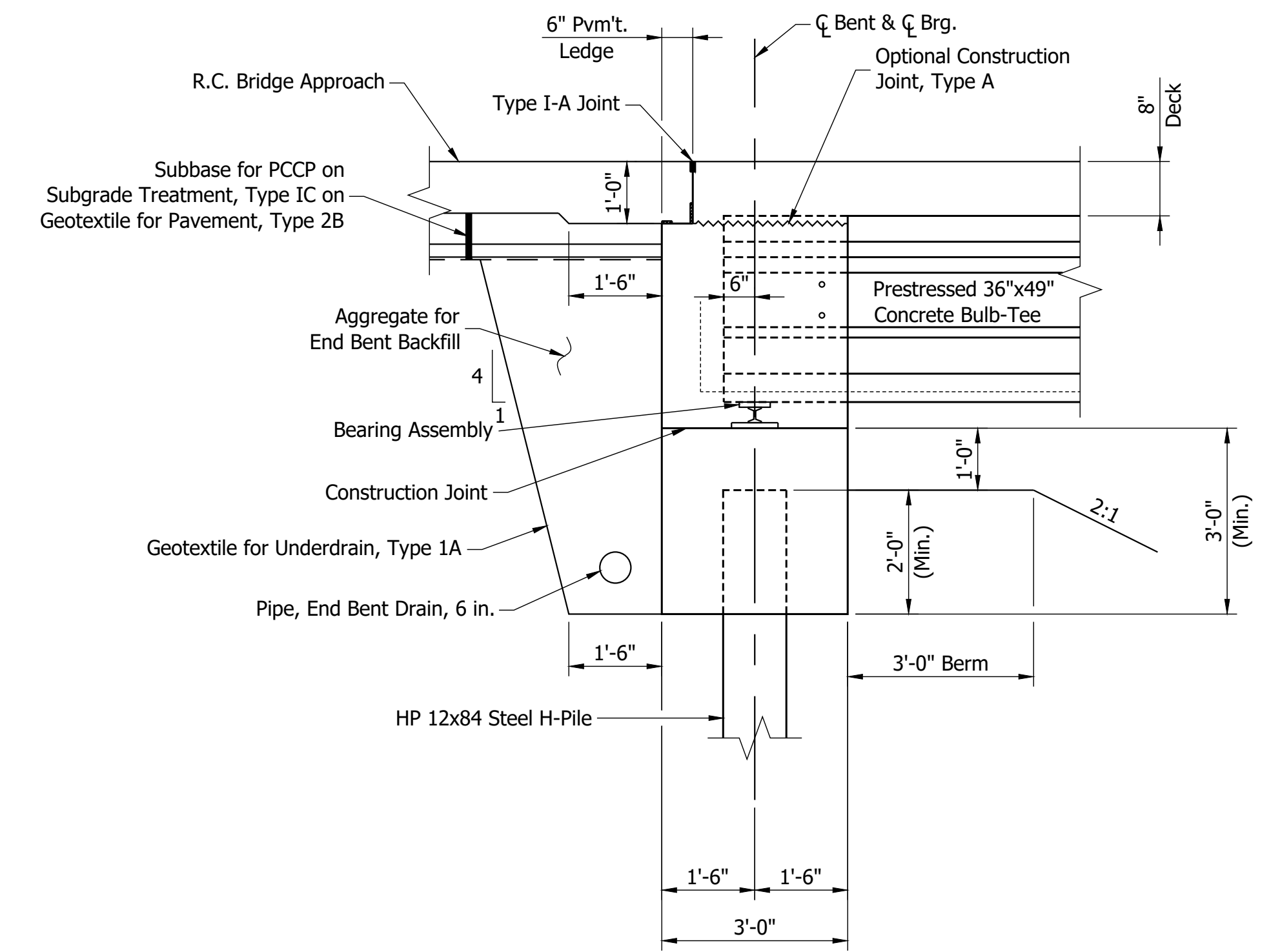
RECOMMENDED FOR APPROVAL _____ DESIGNED: G CJ DRAWN: TAM CHECKED: ACS CHECKED: MAR	DESIGN ENGINEER _____ DATE _____ TAM MAR	INDIANA DEPARTMENT OF TRANSPORTATION GENERAL PLAN		HORIZONTAL SCALE	BRIDGE FILE
				AS SHOWN	13-00043 B
				VERTICAL SCALE	DESIGNATION
		AS SHOWN	1400825		
		SURVEY BOOK	SHEET		
		ELECTRONIC	31 of 62		
		CONTRACT	PROJECT		
		B-37711	1400825		



PLAN
SCALE: 3/8" = 1'-0"



ELEVATION
SCALE: 3/8" = 1'-0"



SECTION A-A
SCALE: 1/2" = 1'-0"

- NOTES:**
1. Pile shoes shall be used on each pile.
 2. Piles shall be cored in rock a minimum of 4 ft from top of competent rock.

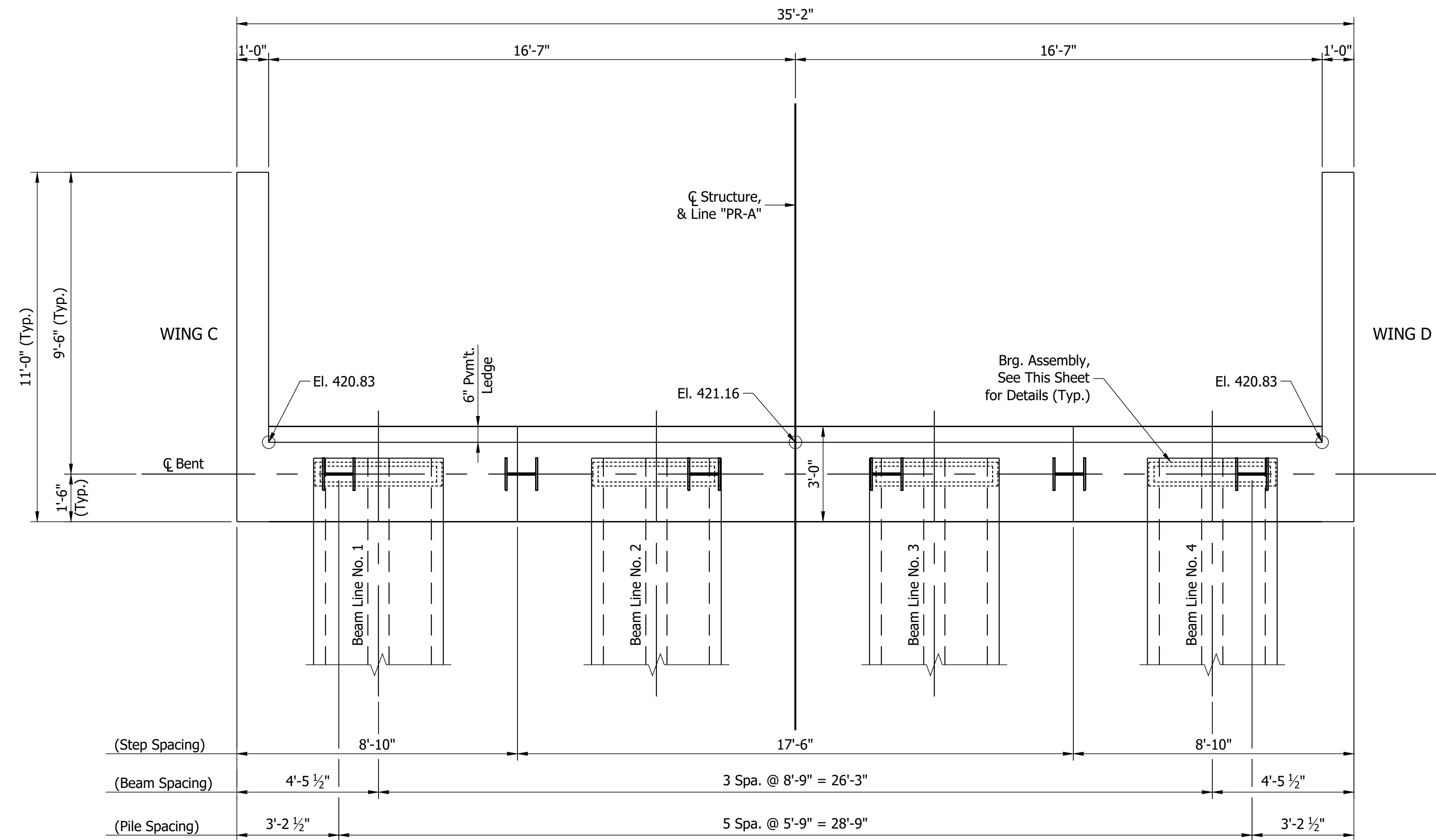
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RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: G CJ	DRAWN: V CH	
CHECKED: ACS	CHECKED: MAR	

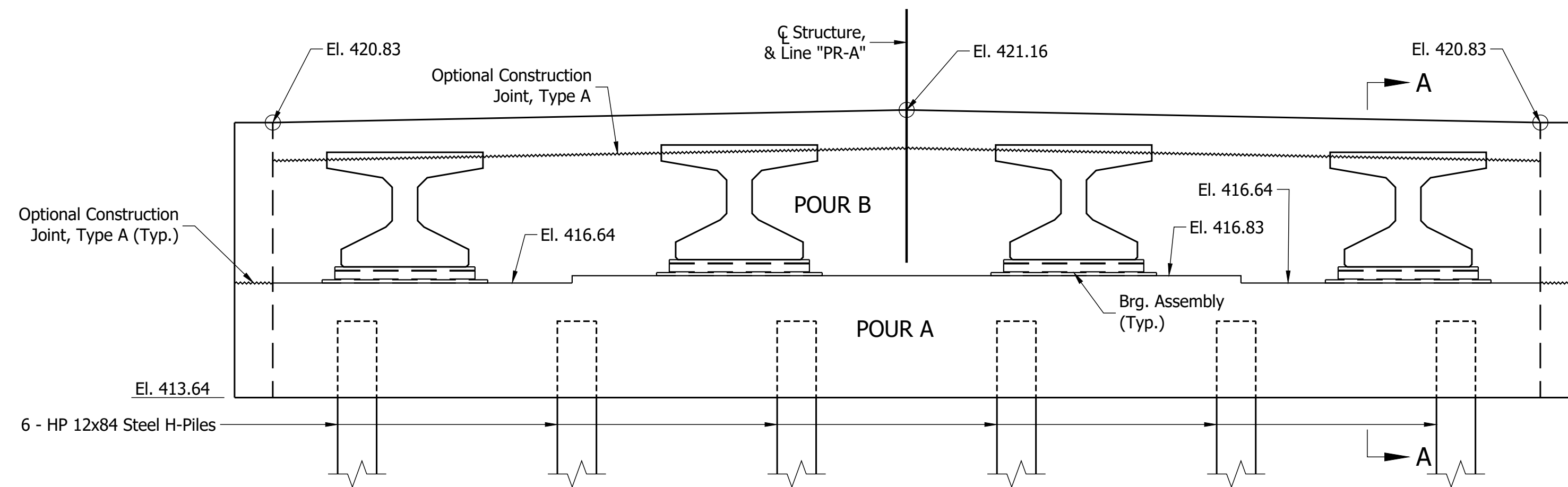
INDIANA
DEPARTMENT OF TRANSPORTATION

END BENT DETAILS
END BENT NO. 1 CONSTRUCTION DETAILS

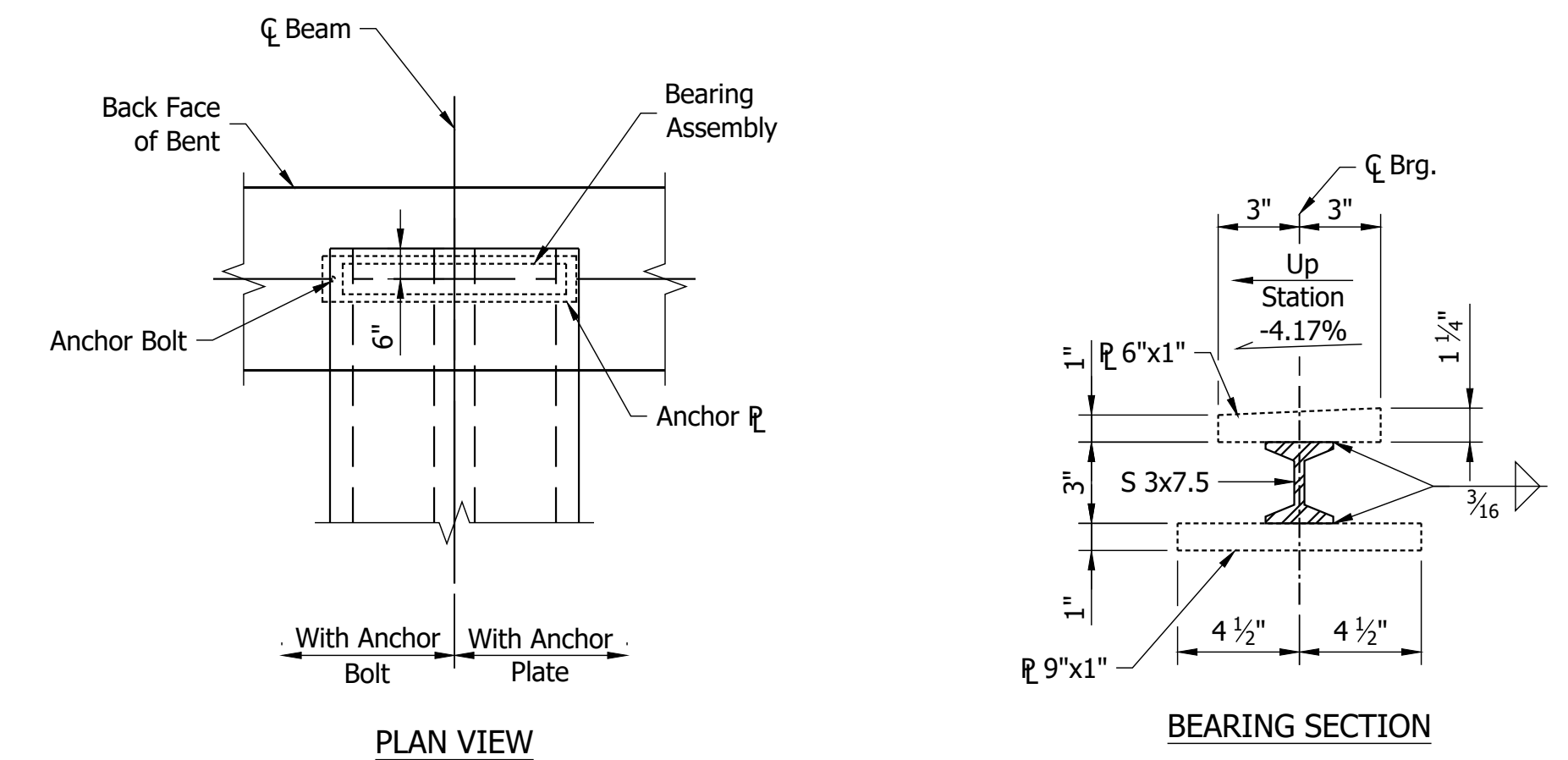
HORIZONTAL SCALE	BRIDGE FILE
AS SHOWN	13-00043 B
VERTICAL SCALE	DESIGNATION
AS SHOWN	1400825
SURVEY BOOK	SHEET
ELECTRONIC	32 of 62
CONTRACT	PROJECT
B-37711	1400825



PLAN
SCALE: 3/8" = 1'-0"

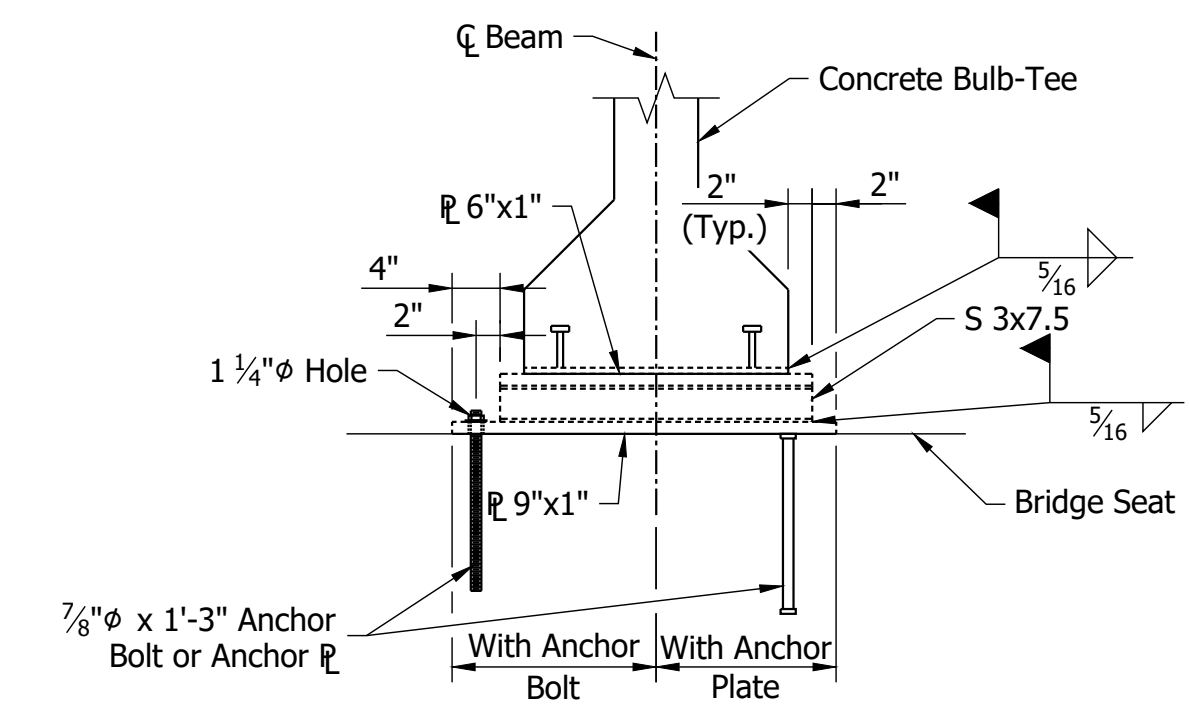


ELEVATION
SCALE: 3/8" = 1'-0"



PLAN VIEW

BEARING SECTION



END VIEW

BEARING ASSEMBLY DETAILS
NOT TO SCALE

NOTES:

1. Pile shoes shall be used on each pile.
2. For Section A-A see Sheet 32.

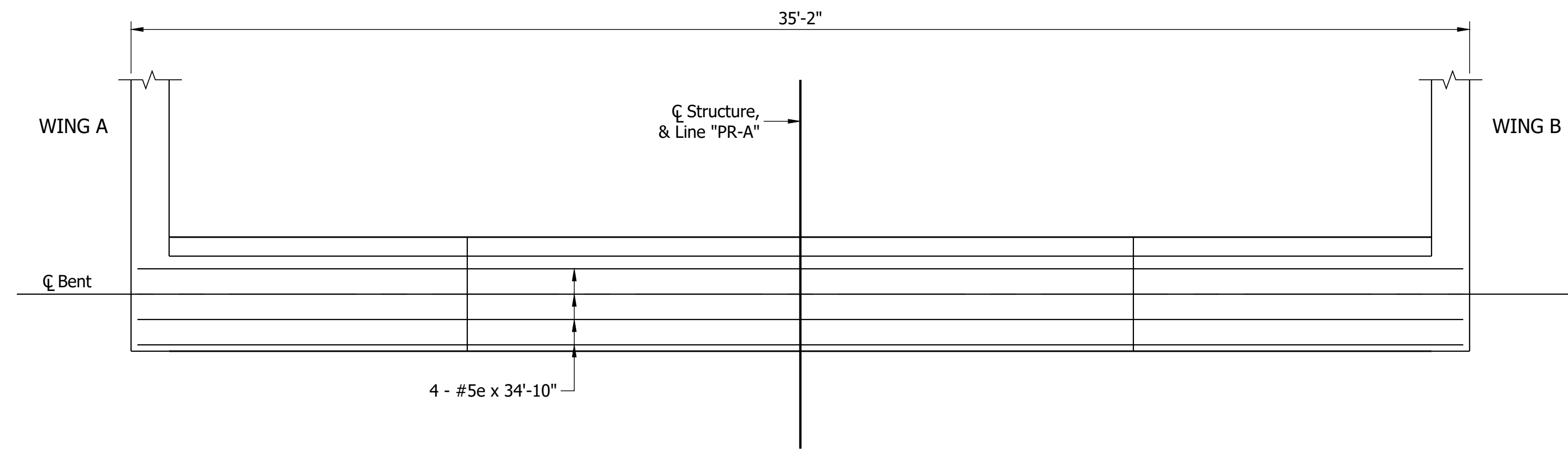
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RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: G CJ	DRAWN: V CH	
CHECKED: A CS	CHECKED: M AR	

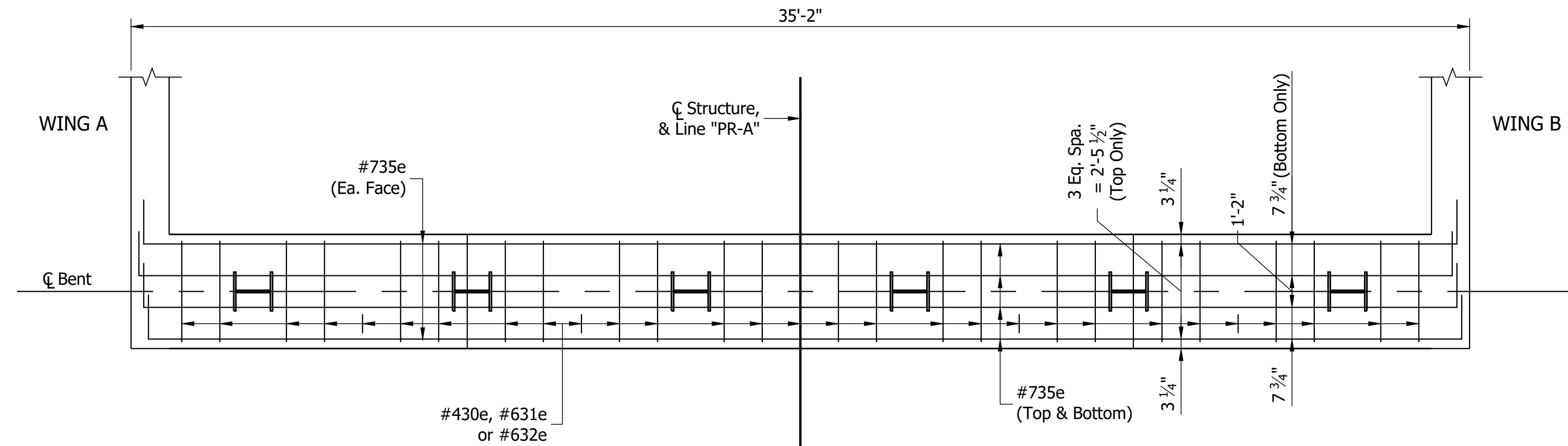
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DEPARTMENT OF TRANSPORTATION

END BENT DETAILS
END BENT NO. 4 CONSTRUCTION DETAILS

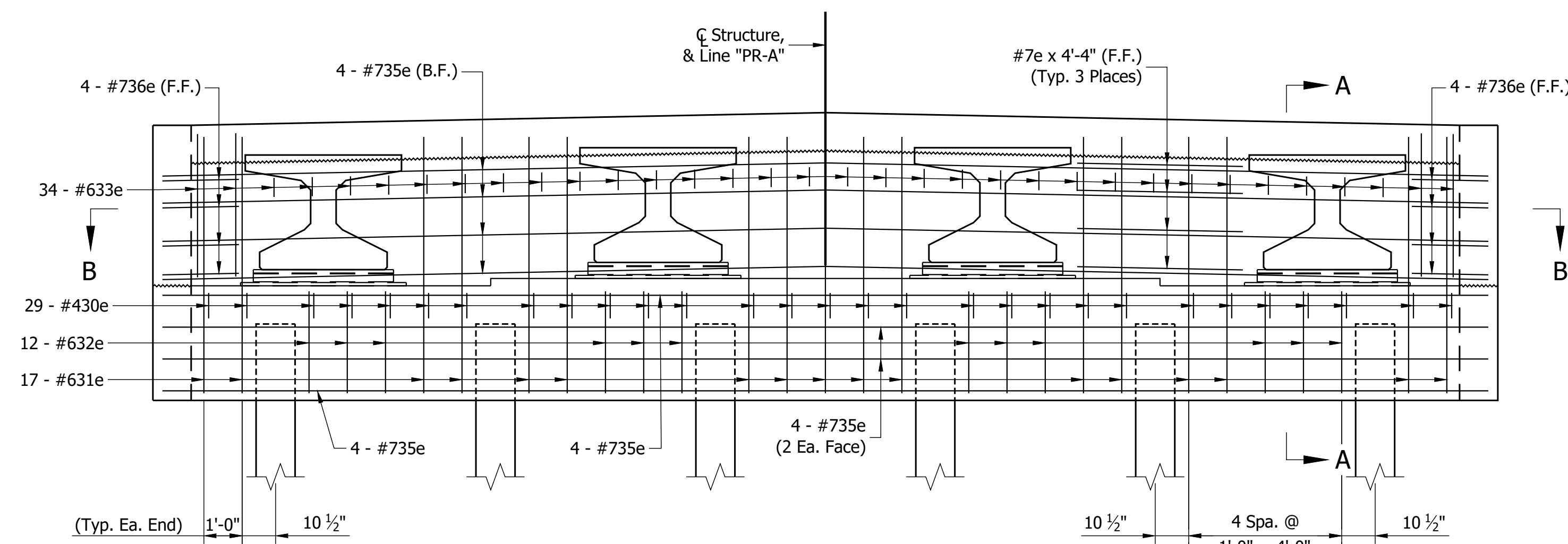
HORIZONTAL SCALE	BRIDGE FILE
AS SHOWN	13-00043 B
VERTICAL SCALE	DESIGNATION
AS SHOWN	1400825
SURVEY BOOK	SHEET
ELECTRONIC	33 of 62
CONTRACT	PROJECT
B-37711	1400825



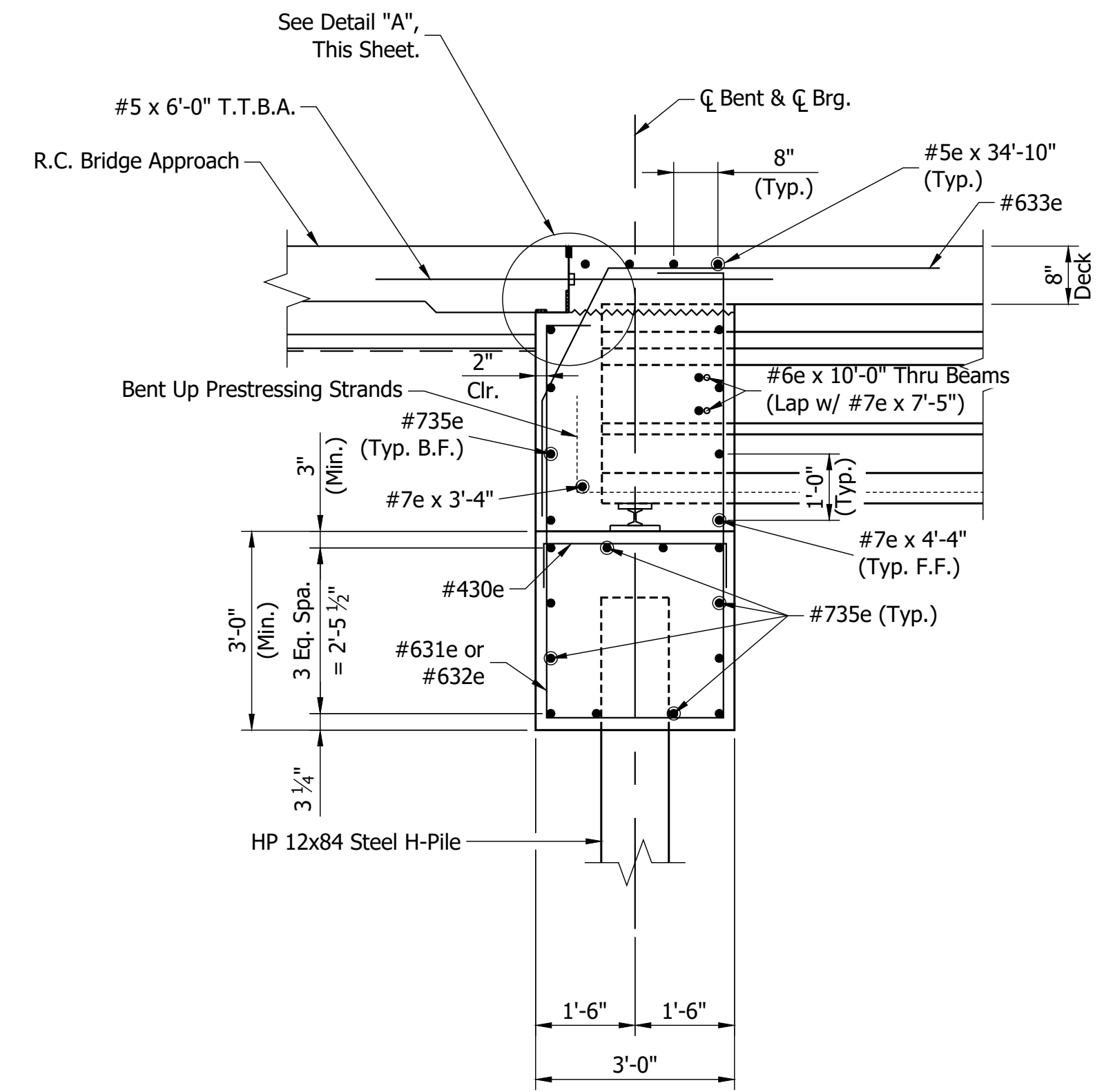
PLAN
(BENT NO. 1 SHOWN, BENT NO. 4 SIMILAR)
SCALE: 3/8" = 1'-0"



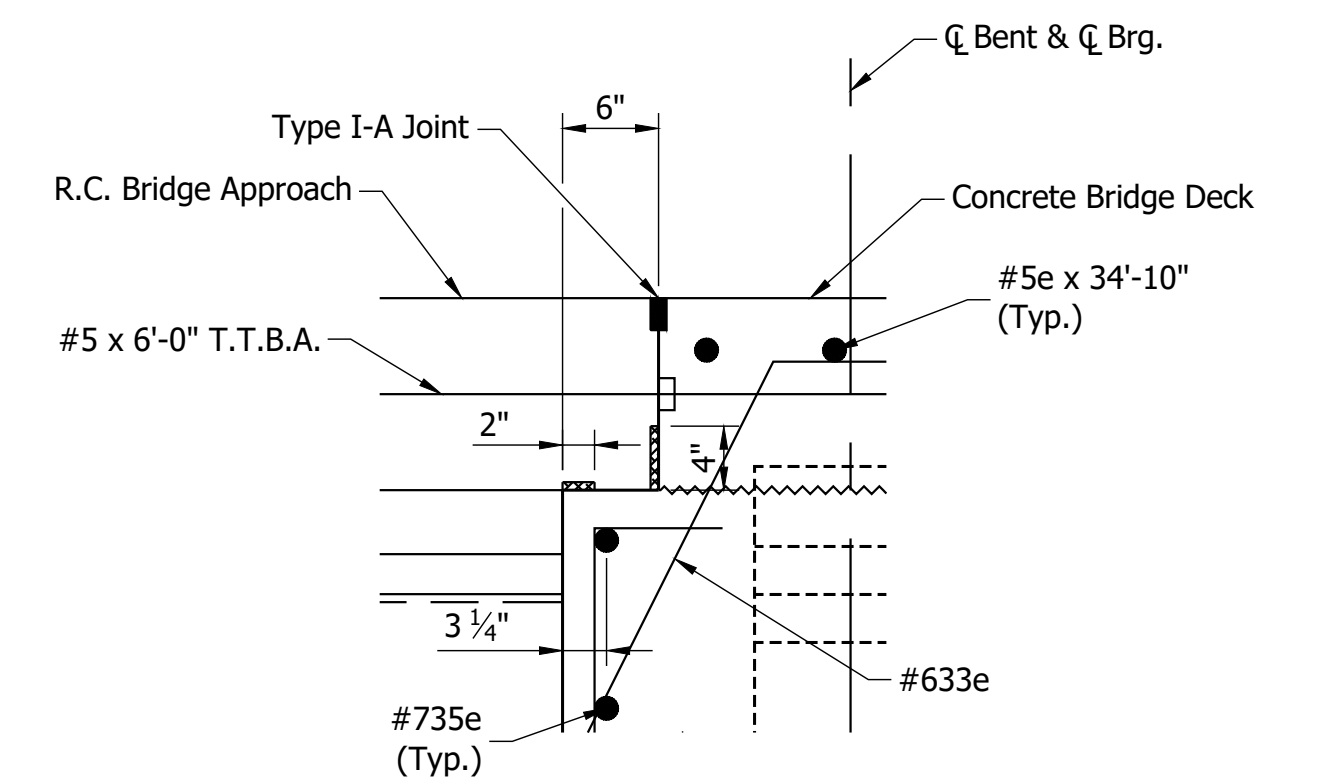
CAP PLAN
(BENT NO. 1 SHOWN, BENT NO. 4 SIMILAR)
SCALE: 3/8" = 1'-0"



ELEVATION
(BENT NO. 1 SHOWN, BENT NO. 4 SIMILAR)
SCALE: 3/8" = 1'-0"



SECTION A-A
SCALE: 1/2" = 1'-0"



1/2" Preformed Expansion Joint Filler

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

LEGEND
F.F. - Denotes Front Face
B.F. - Denotes Back Face
T.T.B.A. - Denotes Threaded Tie Bar Assembly, Epoxy Coated

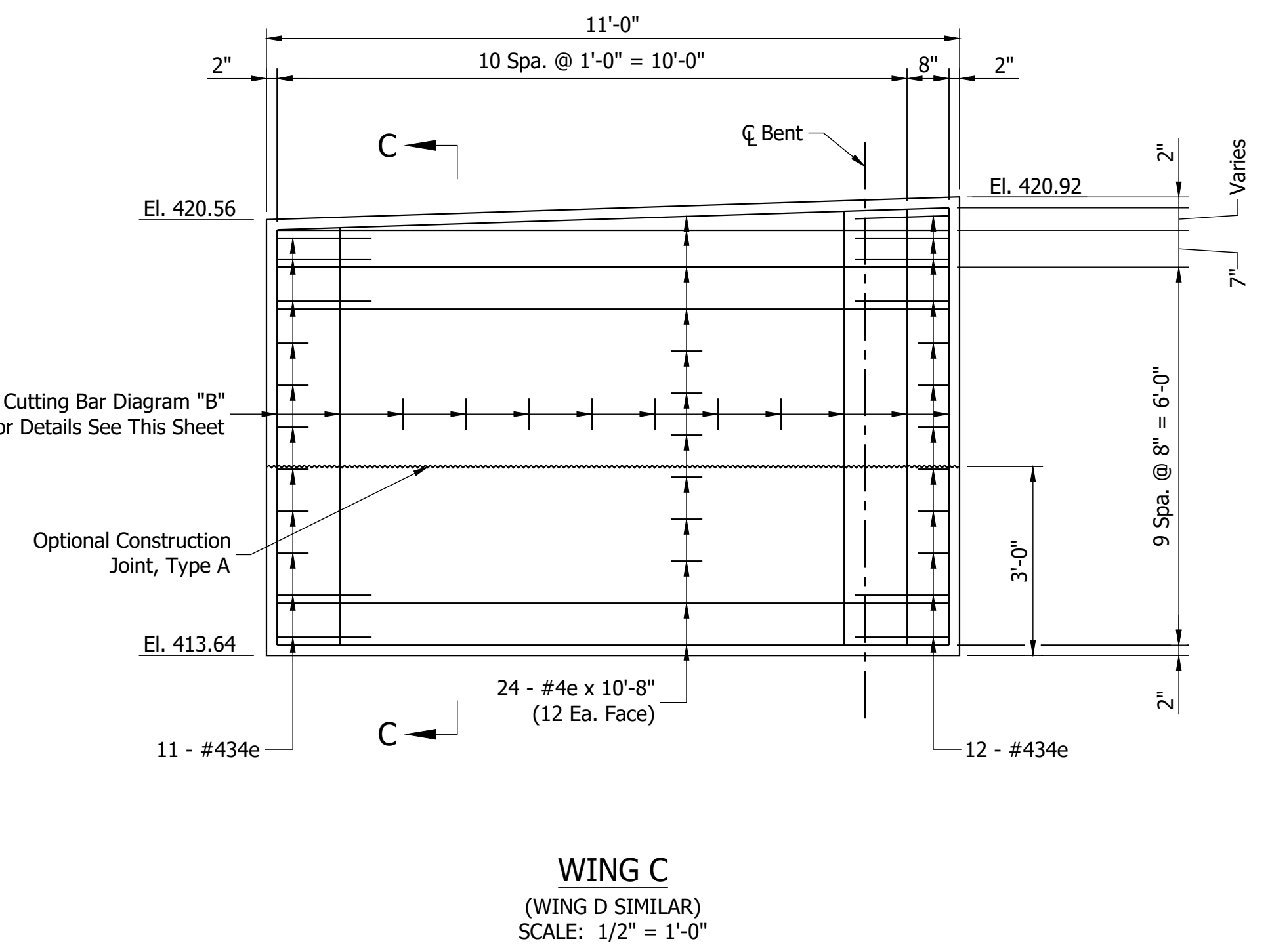
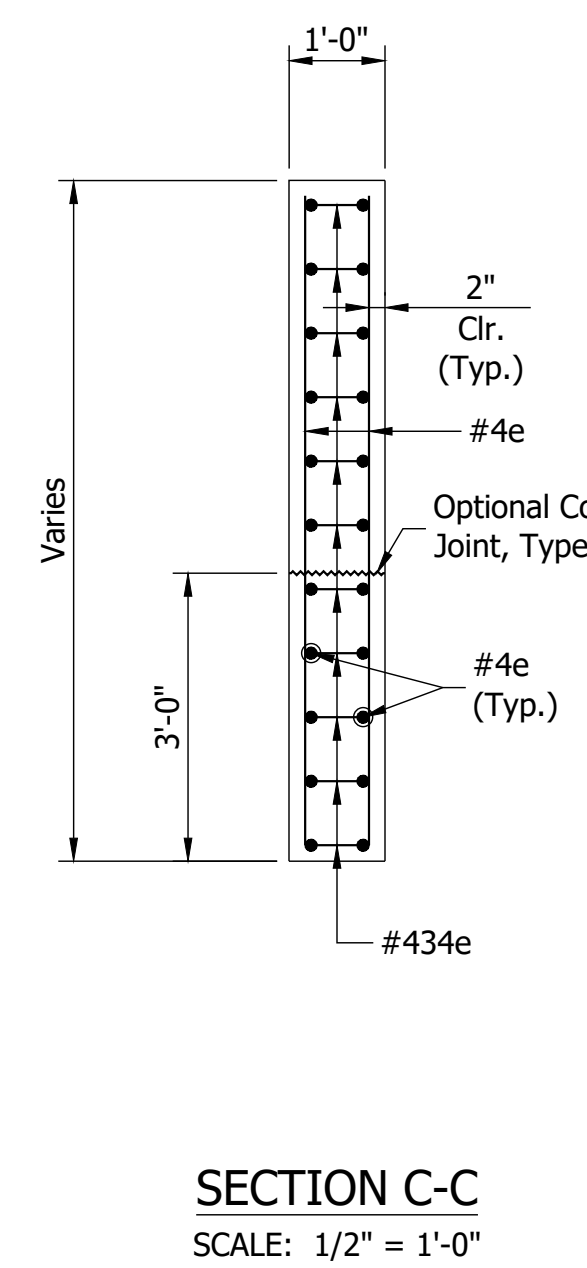
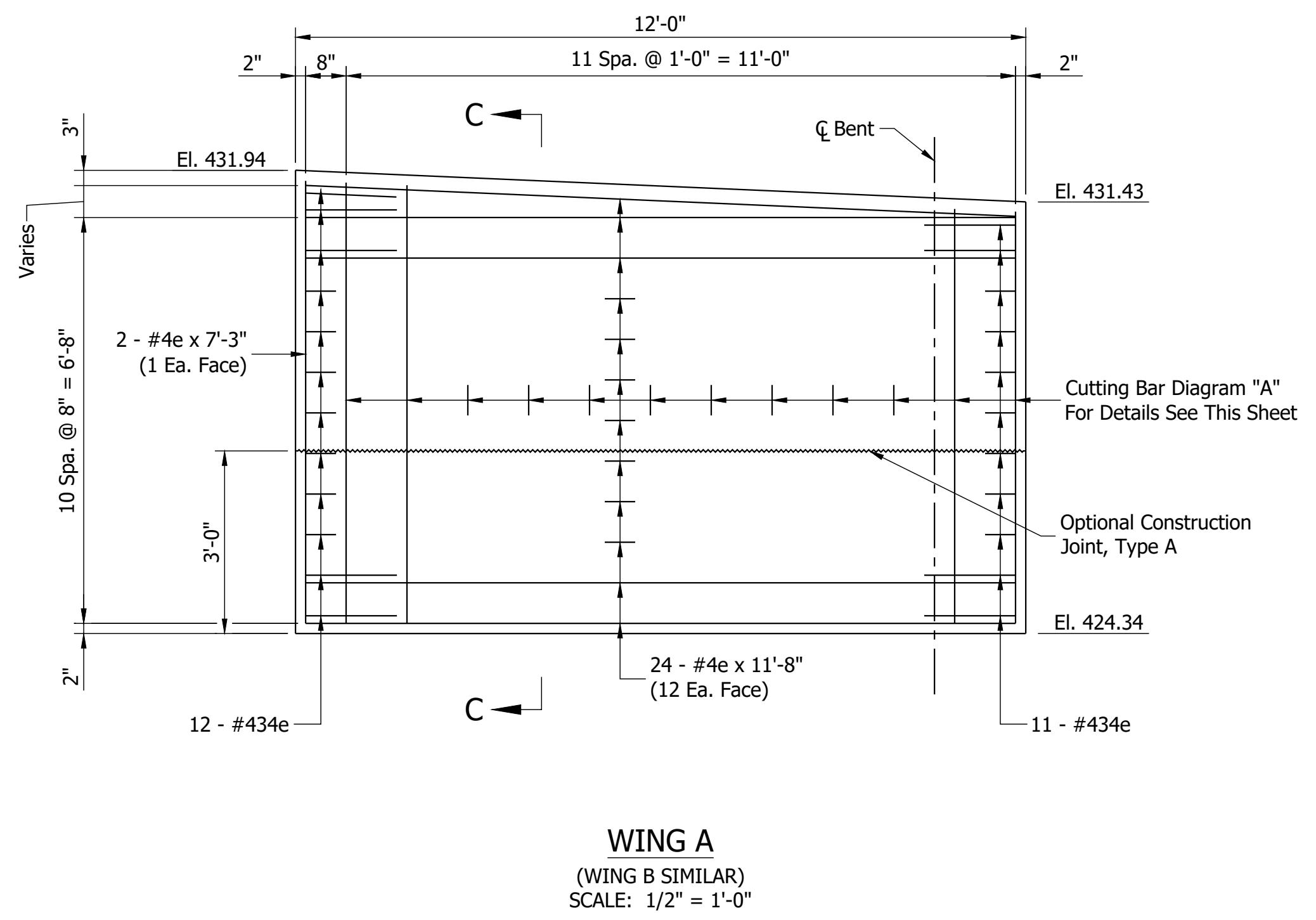
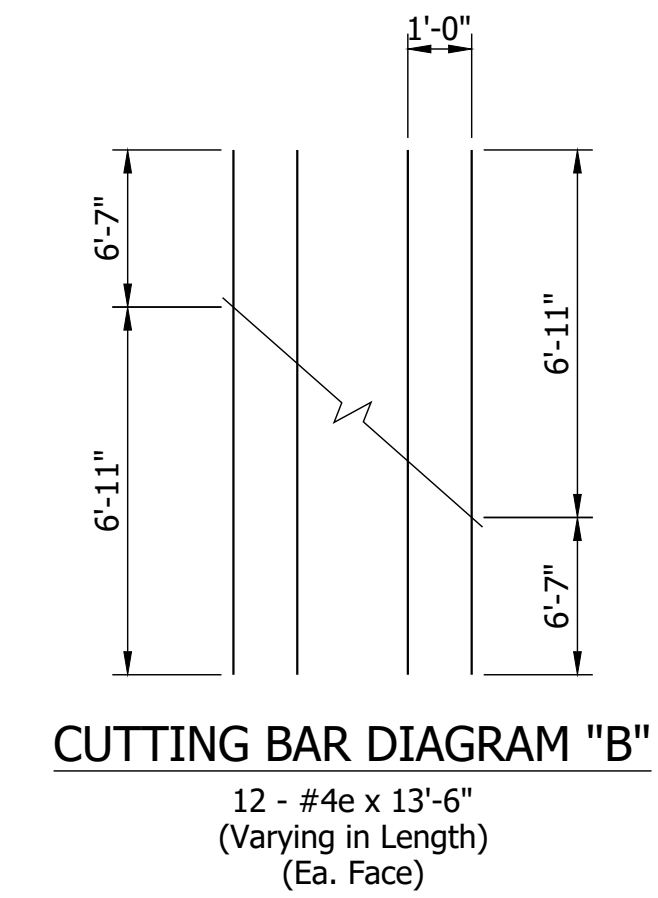
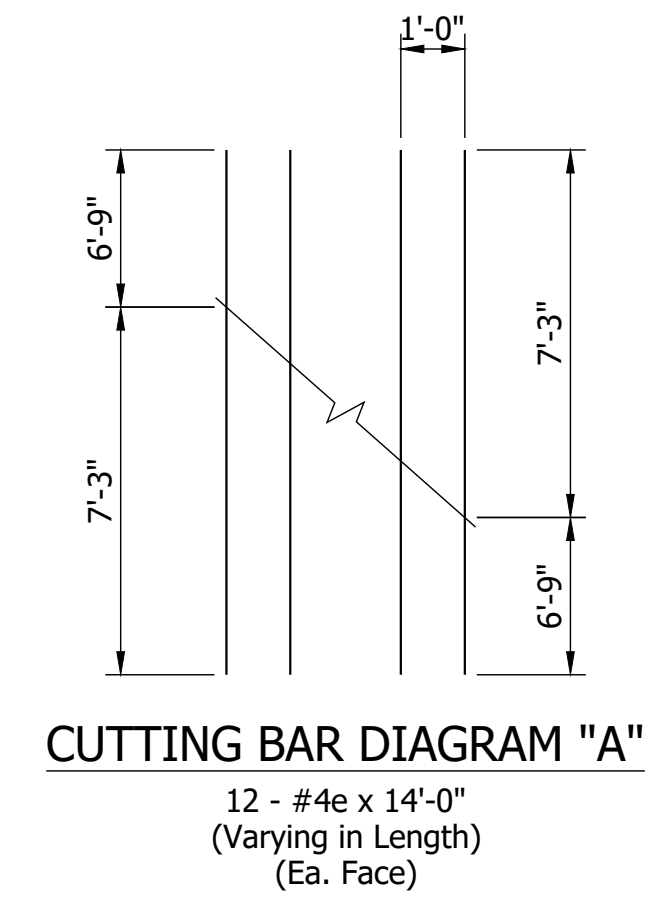
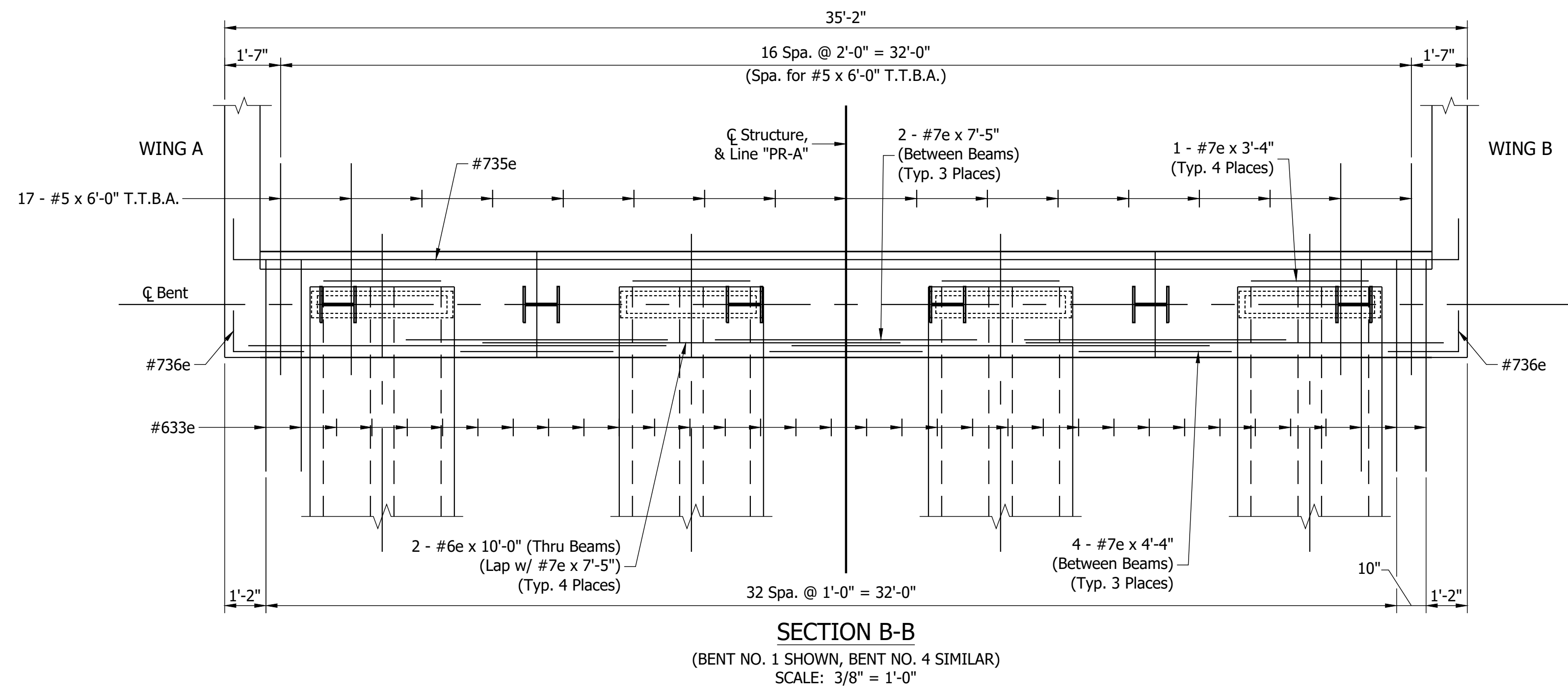
NOTES:
1. For Section B-B, See Sheet 35.

Date: Nov 18, 2022, 3:20pm User Name: Vaughn
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CHECKED: A CS	CHECKED: M AR	

INDIANA
DEPARTMENT OF TRANSPORTATION
END BENT DETAILS
END BENT NO. 1 & 4 REINFORCEMENT DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS SHOWN	13-00043 B
VERTICAL SCALE	DESIGNATION
AS SHOWN	1400825
SURVEY BOOK	SHEET
ELECTRONIC	34 of 62
CONTRACT	PROJECT
B-37711	1400825



LEGEND
T.T.B.A. - Denotes Threaded Tie Bar Assembly, Epoxy Coated

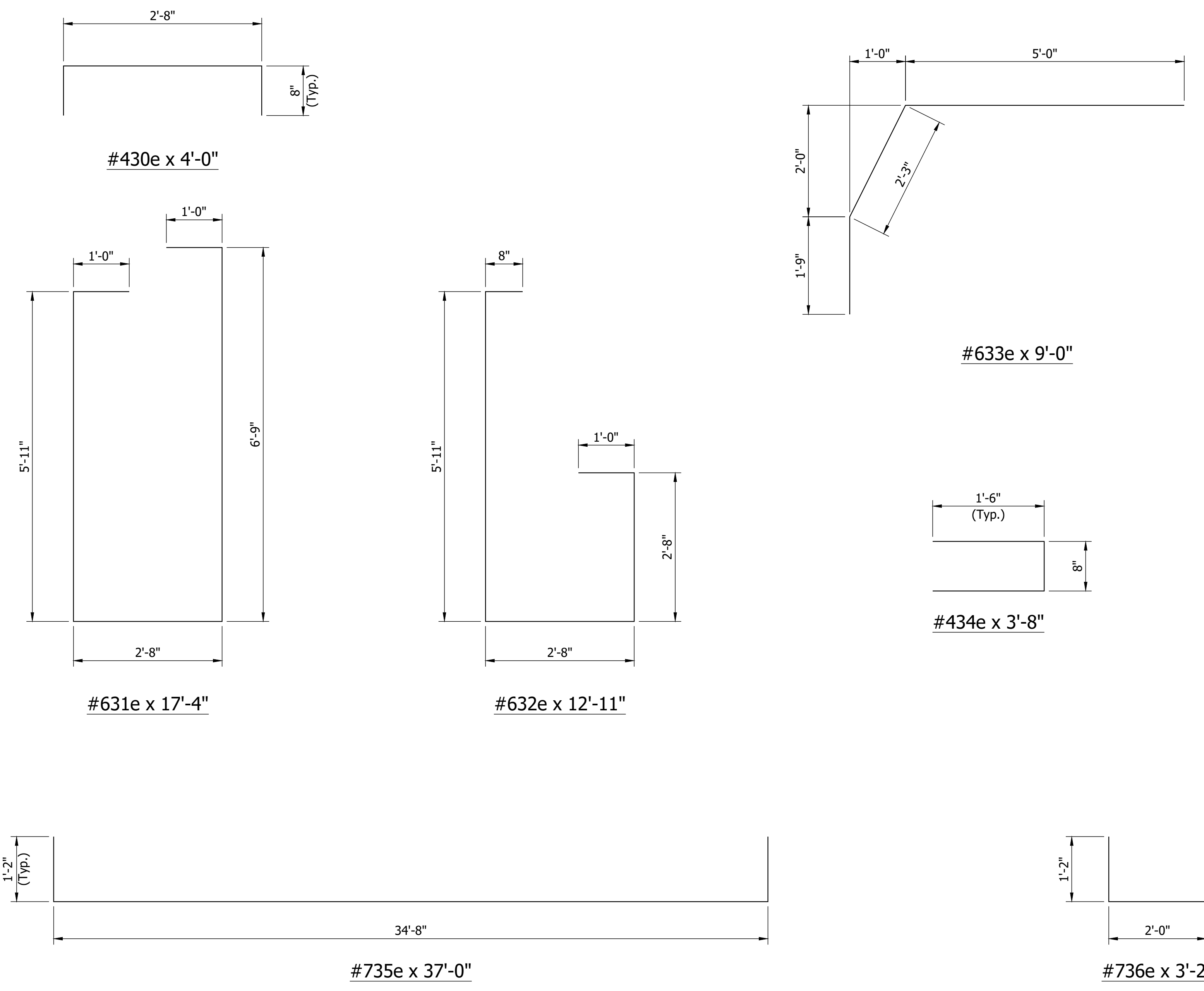
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RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: G CJ	DRAWN: V CH	
CHECKED: ACS	CHECKED: MAR	

INDIANA DEPARTMENT OF TRANSPORTATION

END BENT DETAILS
END BENT NO. 1 & 4 REINFORCEMENT DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS SHOWN	13-00043 B
VERTICAL SCALE	DESIGNATION
AS SHOWN	1400825
SURVEY BOOK	SHEET
ELECTRONIC	35 of 62
CONTRACT	PROJECT
B-37711	1400825



BILL OF MATERIALS				
BENT NO. 1 & 4				
REINFORCING STEEL				
SIZE & MARK	NO. OF BARS BENT #1	NO. OF BARS BENT #4	LENGTH	WEIGHT (LB.)
EPOXY COATED REINFORCING STEEL				
#736e	8	8	3'-2"	
#735e	16	16	37'-0"	
#7e	6	6	7'-5"	
#7e	12	12	4'-4"	
#7e	4	4	3'-4"	
TOTAL #7e BARS:				2973
#633e	34	34	9'-0"	
#632e	12	12	12'-11"	
#631e	17	17	17'-4"	
#6e	8	8	10'-0"	
TOTAL #6e BARS:				2511
#5e	4	4	34'-10"	
TOTAL #5e BARS:				291
#434e	46	46	3'-8"	
#430e	29	29	4'-0"	
#4e	24	---	14'-0"	
#4e	---	24	13'-6"	
#4e	48	---	11'-8"	
#4e	---	48	10'-8"	
#4e	4	---	7'-3"	
TOTAL #4e BARS:				1557
TOTAL EPOXY COATED REINFORCING STEEL:				7332
CONCRETE *				
Concrete, C, Substructure				
	BENT #1	BENT #4		
Pour A	11.5 CYS	11.5 CYS		
Wingwall **	2.7 CYS	2.5 CYS		
TOTAL	14.2 CYS	14.0 CYS		
MISCELLANEOUS				
	BENT #1	BENT #4		
Pile, Steel H, HP, 12 x 84				
6 Piles @ 18 ft.	108 LFT	---		
6 Piles @ 76 ft.	---	456 LFT		
Pile Shoe, HP 12 x 84	6 EACH	6 EACH		
Cored Hole in Rock, 24 in.	24 LFT	---		
Threaded Tie Bar Assembly, Epoxy Coated #5 x 6'-0"	17 EACH	17 EACH		

* Pour B Included with Superstructure Bill of Materials, See Sheet 47.
 ** Only Pour A (Cap Portion) of Wingwall included. Remainder of Wingwall included in Pour B.

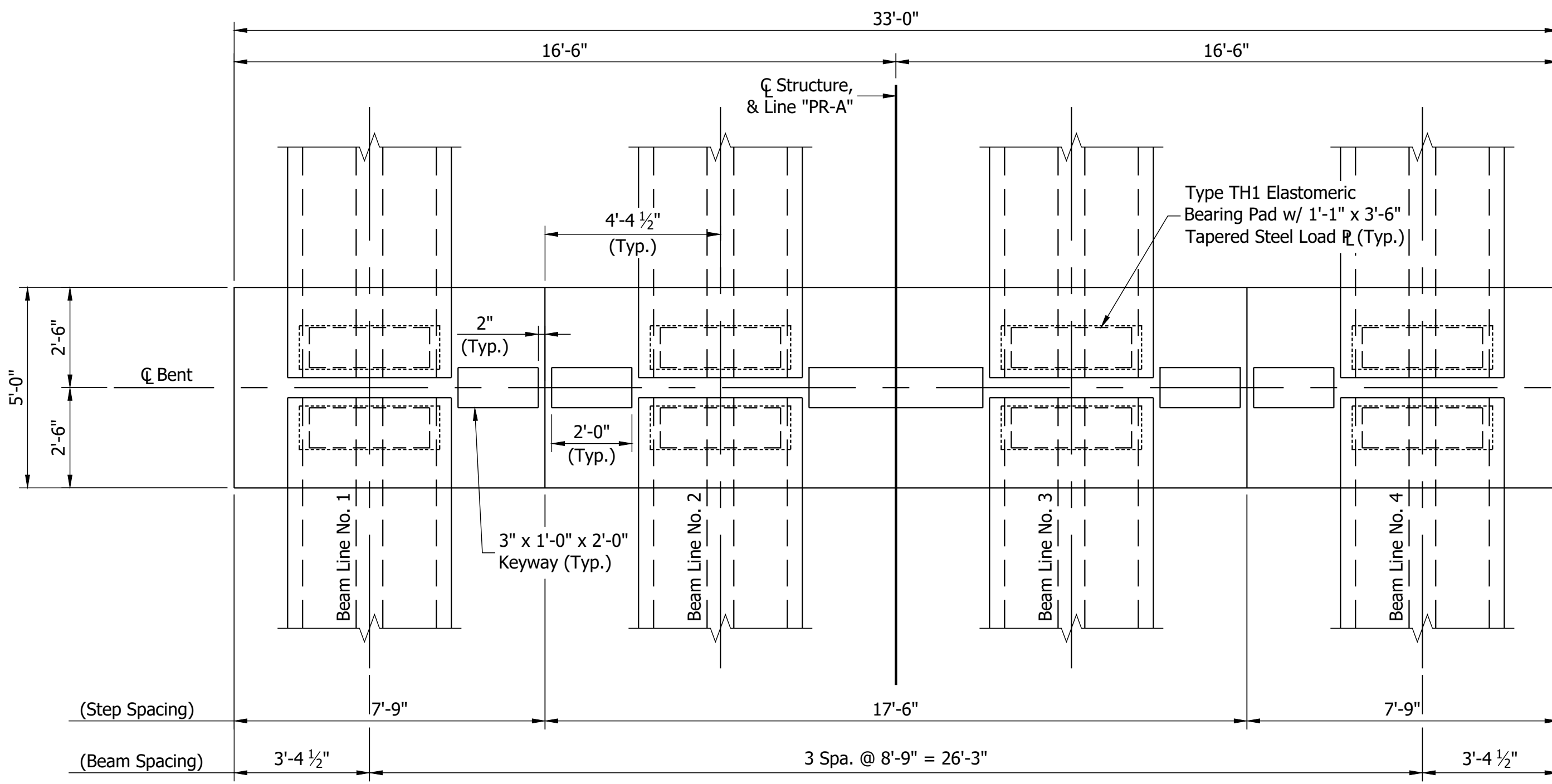
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RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER	DATE
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CHECKED: ACS	CHECKED: MAR	

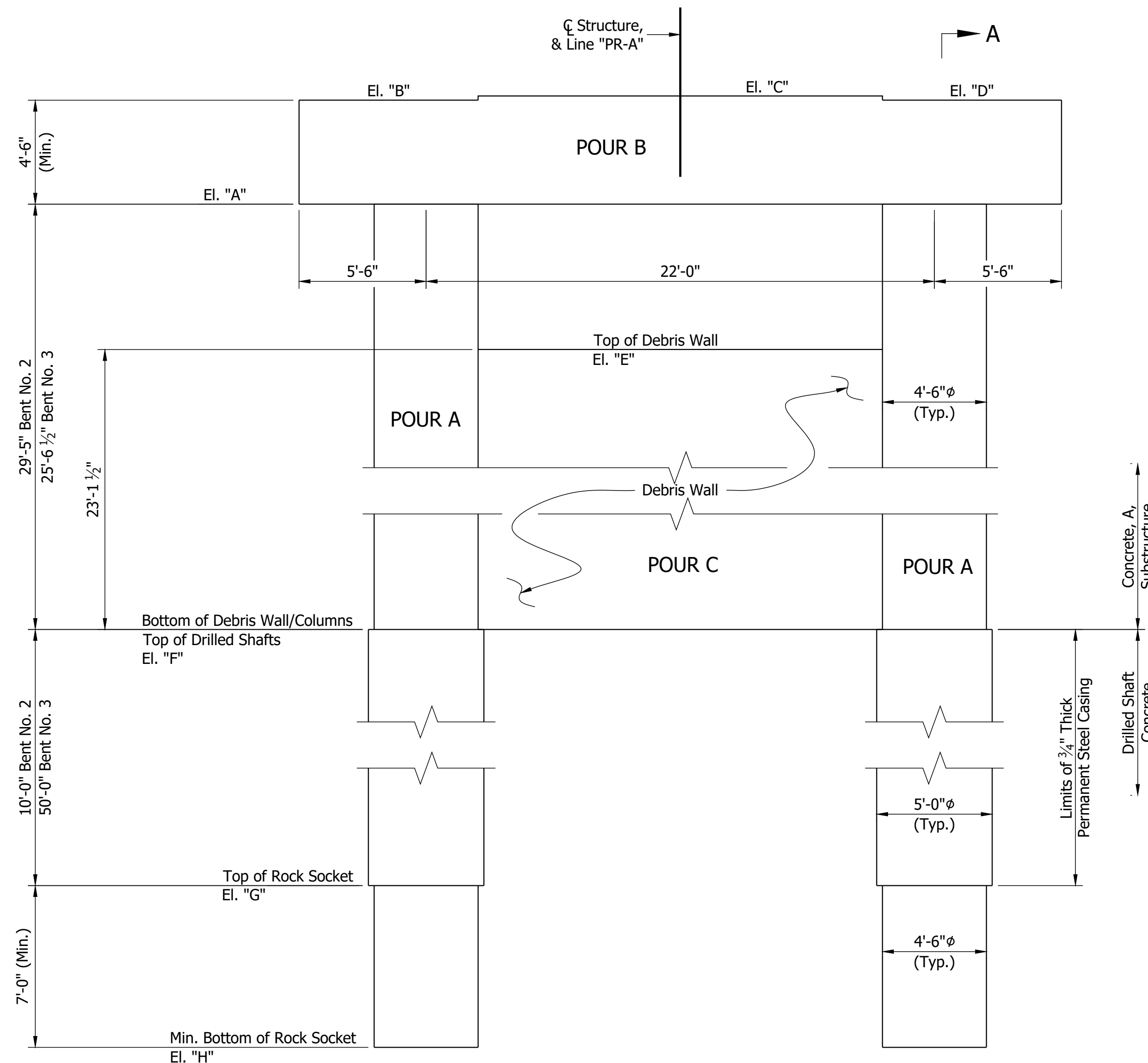
INDIANA
 DEPARTMENT OF TRANSPORTATION

END BENT DETAILS
 END BENT NO. 1 & 4 REINFORCEMENT DETAILS

HORIZONTAL SCALE	BRIDGE FILE
NOT TO SCALE	13-00043 B
VERTICAL SCALE	DESIGNATION
NOT TO SCALE	1400825
SURVEY BOOK	SHEET
ELECTRONIC	36 of 62
CONTRACT	PROJECT
B-37711	1400825

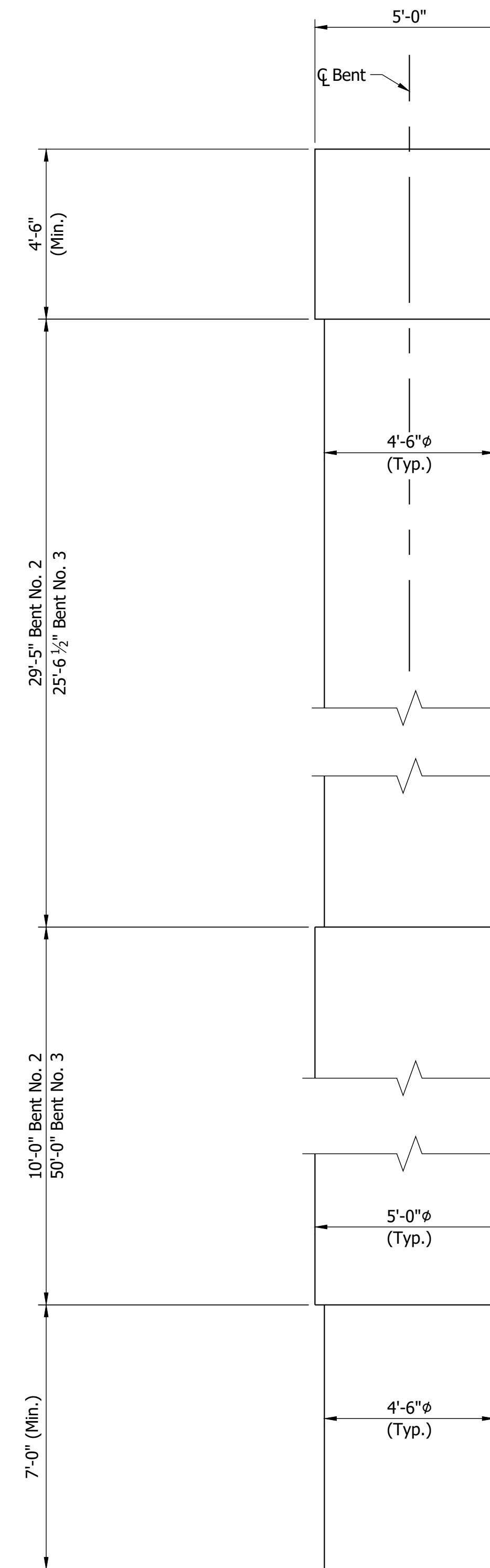


CAP PLAN
SCALE: 3/8" = 1'-0"



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

INTERIOR BENT ELEVATIONS		
ELEV.	BENT NO. 2	BENT NO. 3
A	419.42	415.54
B	423.92	420.04
C	424.10	420.22
D	423.92	420.04
E	413.13	413.13
F	390.00	390.00
G	380.00	340.00
H	373.00	333.00



SECTION A-A
SCALE: 3/8" = 1'-0"

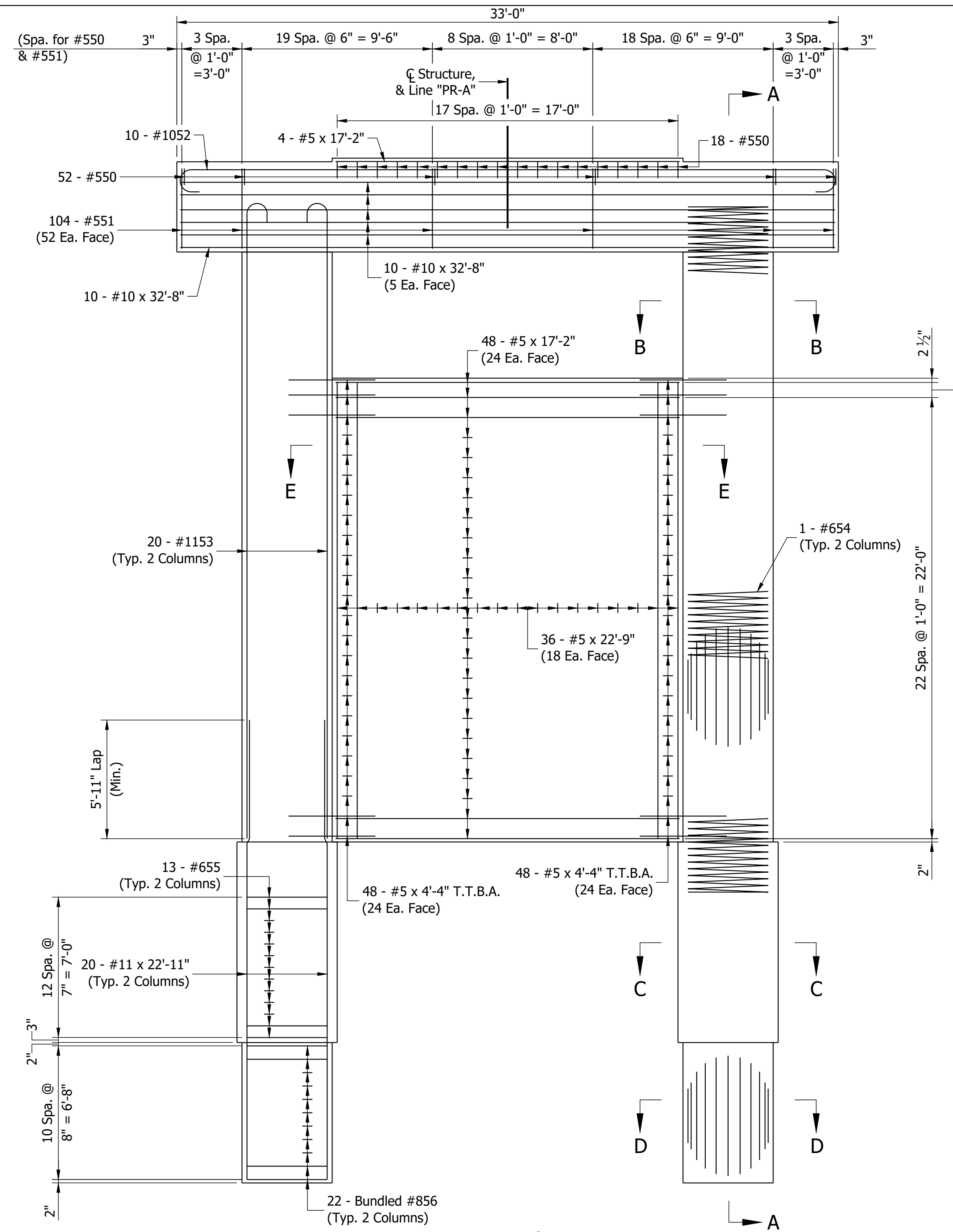
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RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: G CJ	DRAWN: V CH	
CHECKED: A CS	CHECKED: M AR	

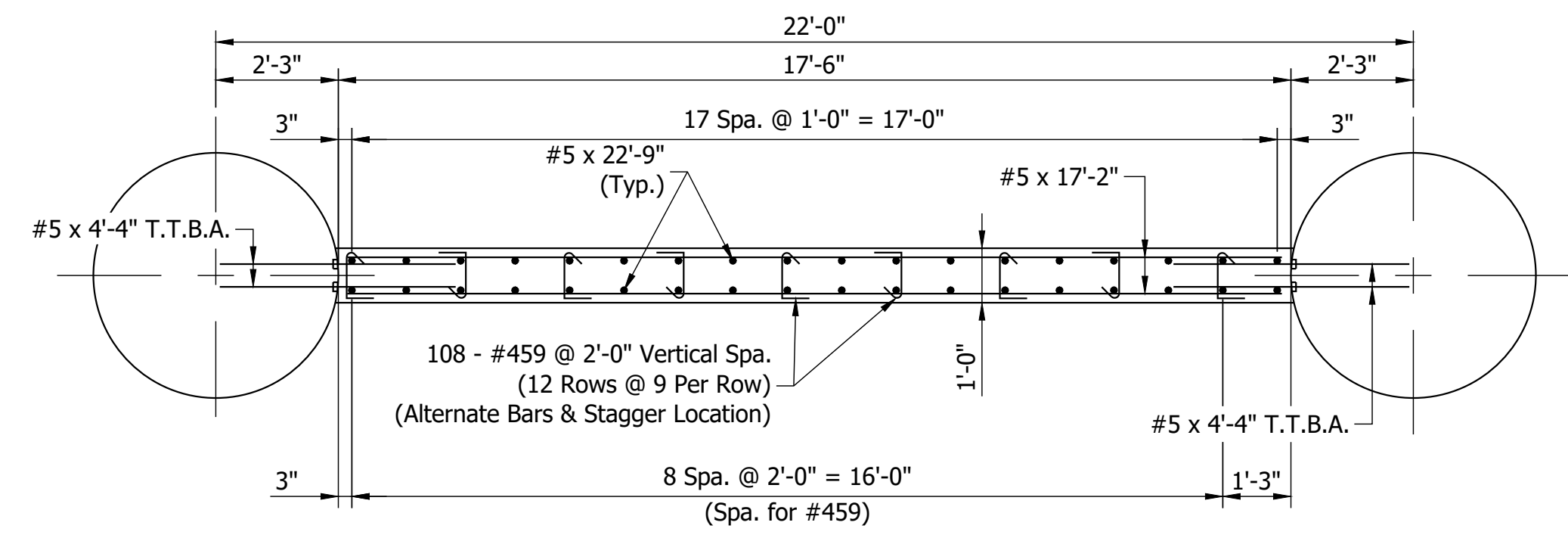
INDIANA DEPARTMENT OF TRANSPORTATION	
INTERIOR BENT DETAILS INTERIOR BENT NO. 2 & 3 CONSTRUCTION DETAILS	

HORIZONTAL SCALE	BRIDGE FILE
AS SHOWN	13-00043 B
VERTICAL SCALE	DESIGNATION
AS SHOWN	1400825
SURVEY BOOK	SHEET
ELECTRONIC	37 of 62
CONTRACT	PROJECT
B-37711	1400825

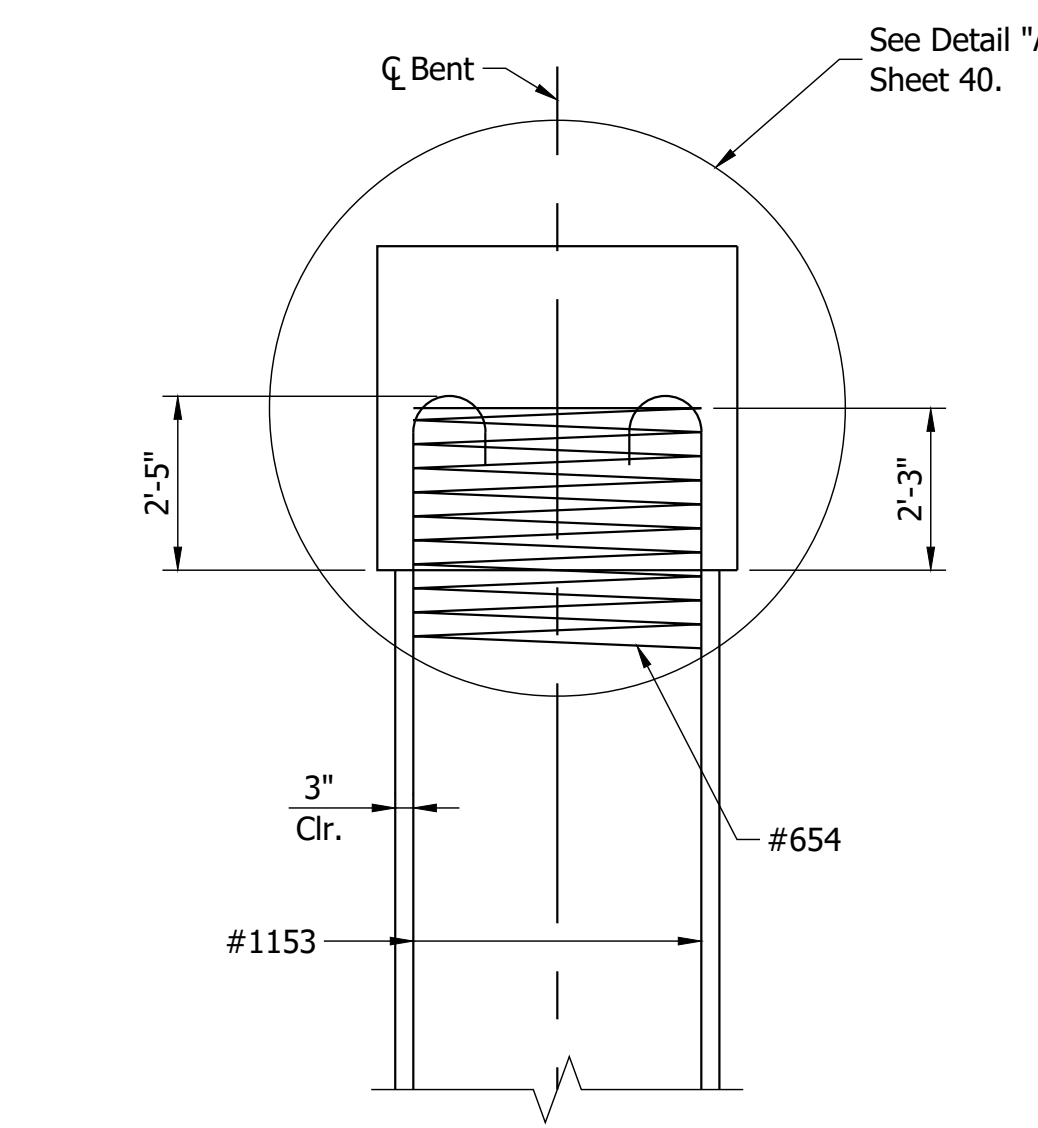
Date: Nov 18, 2022, 3:21pm User Name: Vaughn
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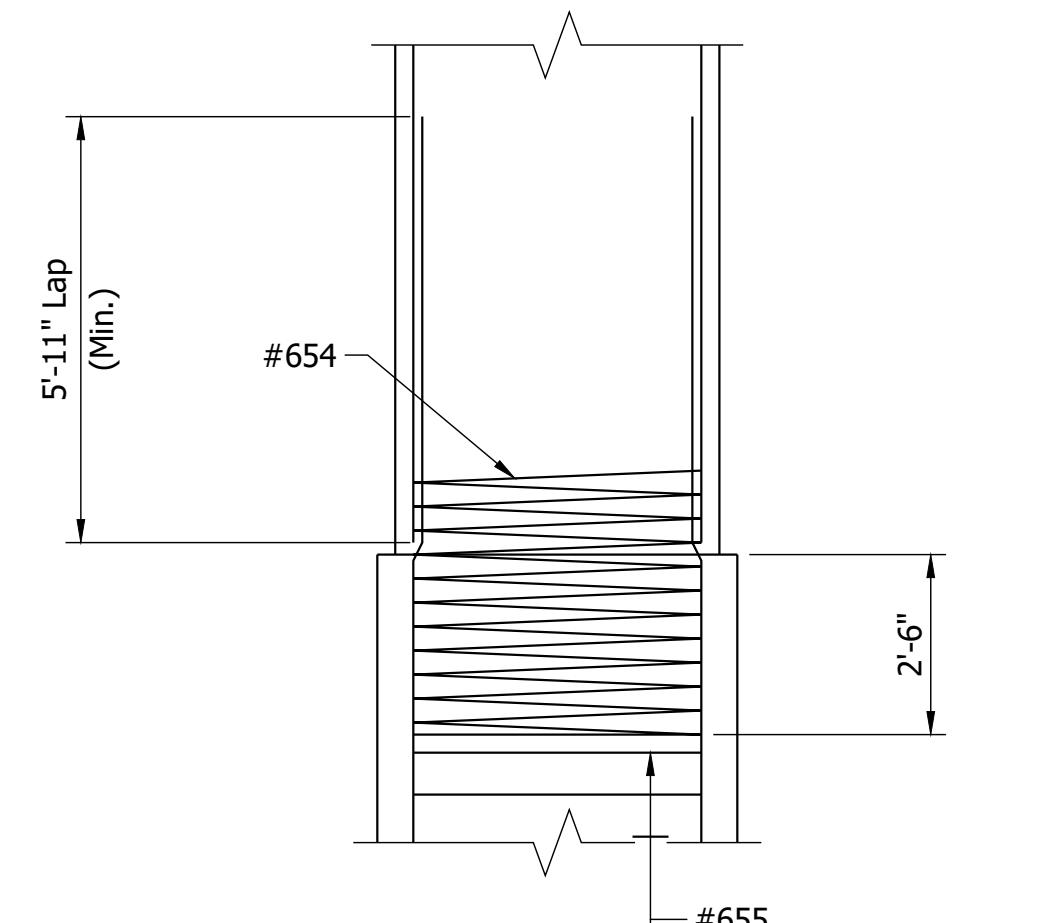
ELEVATION
 SCALE: 1/4" = 1'-0"



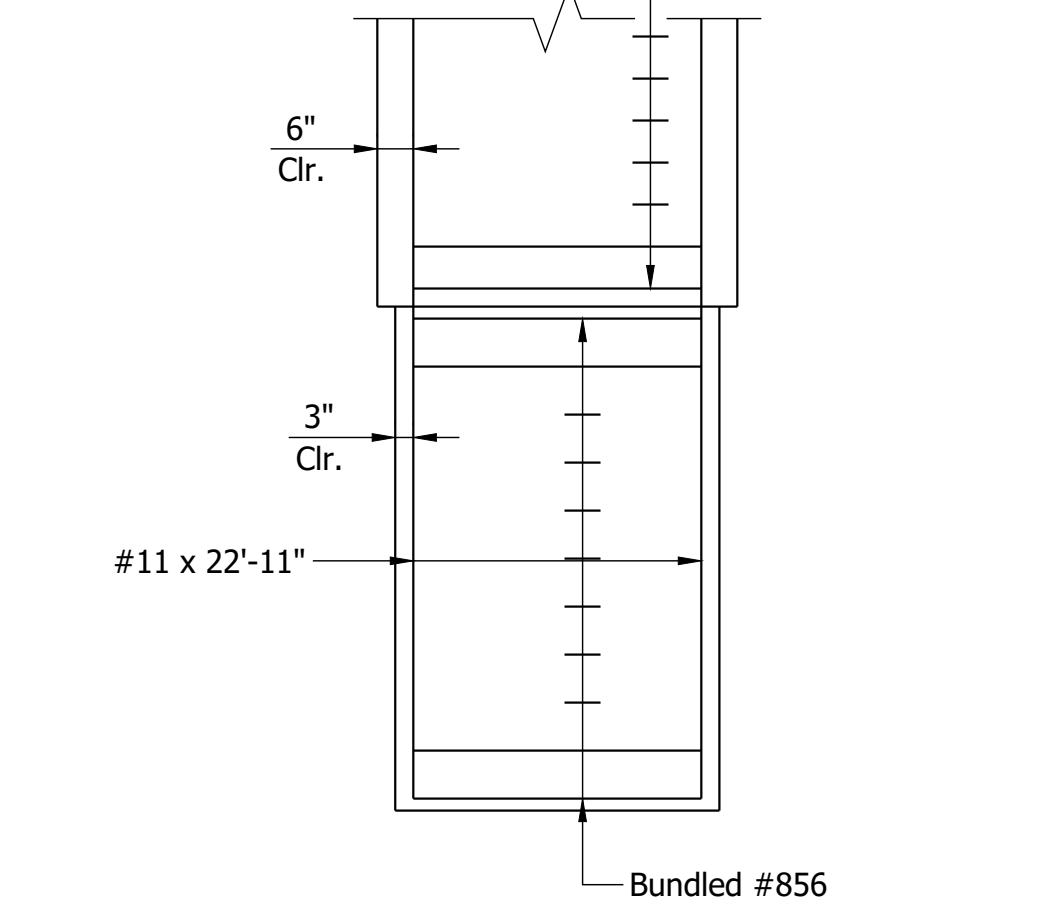
SECTION E-E
 SCALE: 3/8" = 1'-0"



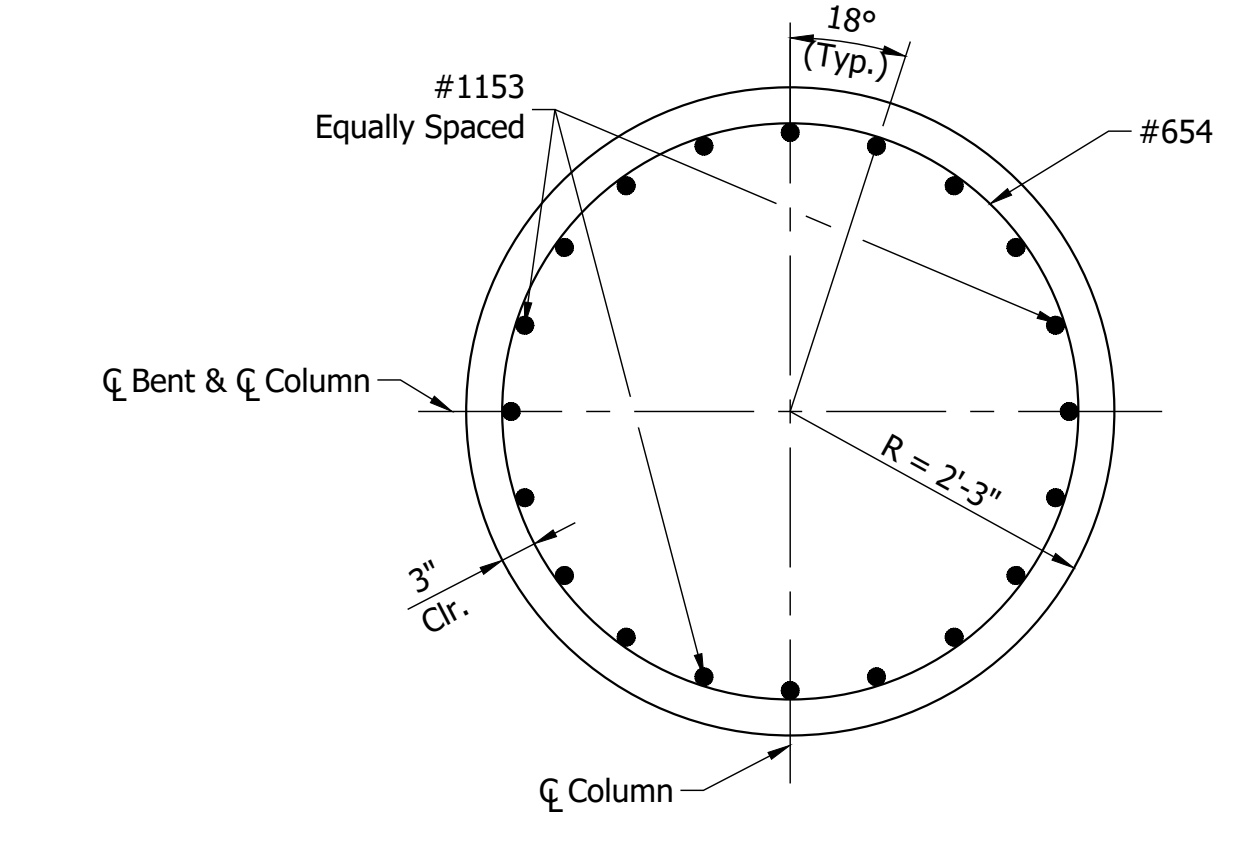
SECTION A-A
 SCALE: 3/8" = 1'-0"



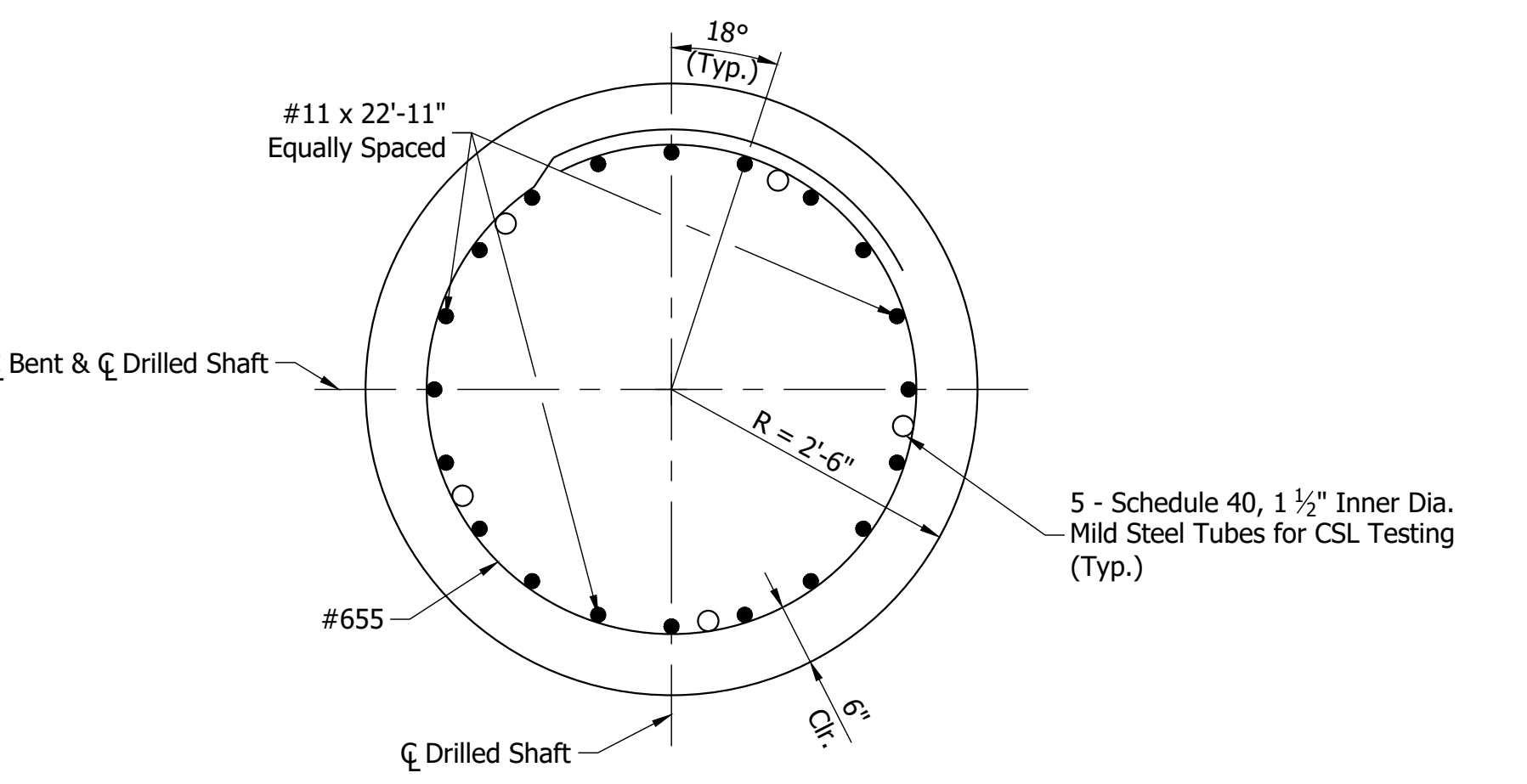
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 SCALE: 3/4" = 1'-0"



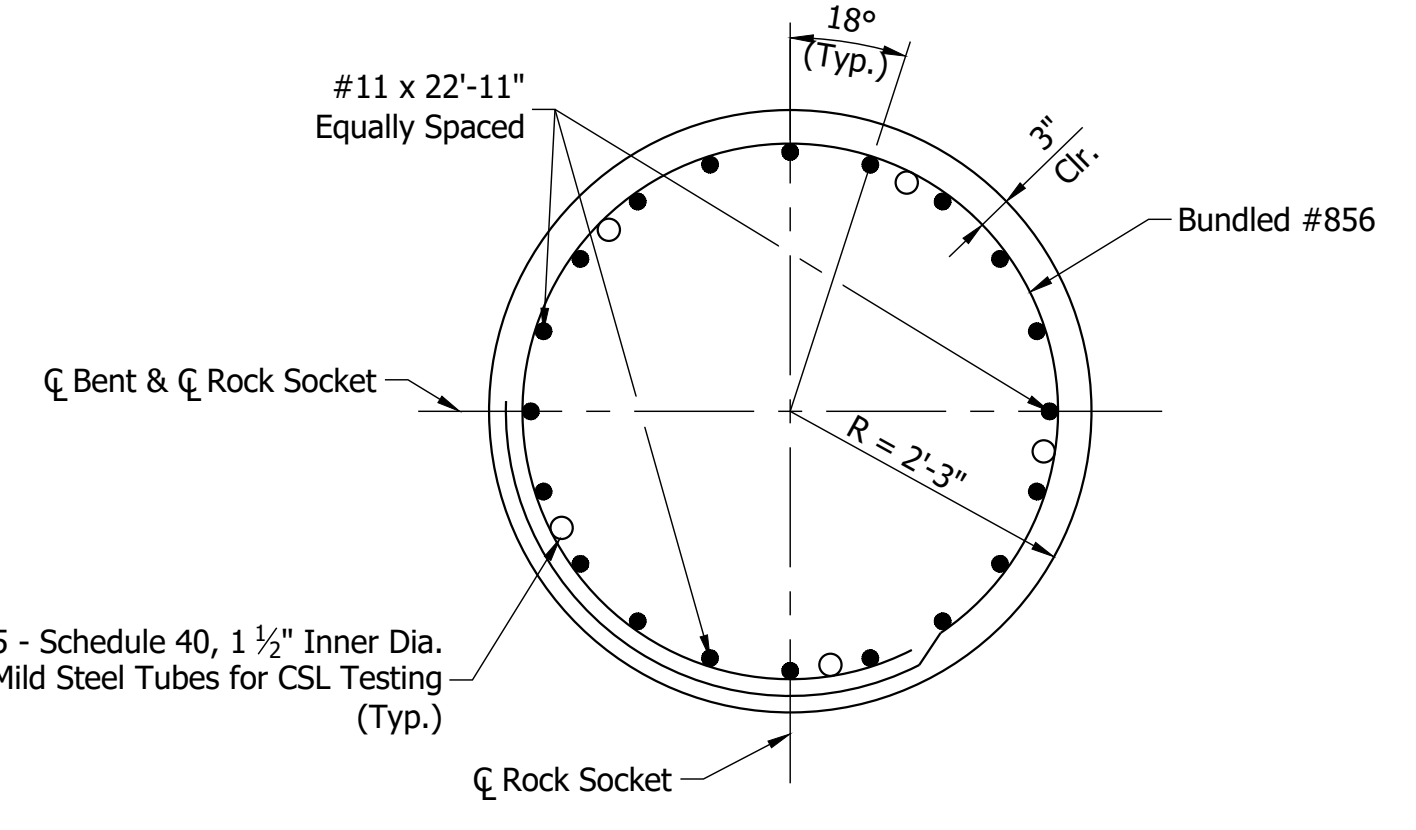
SECTION C-C
 SCALE: 3/4" = 1'-0"



SECTION D-D
 SCALE: 3/4" = 1'-0"



SECTION E-E
 SCALE: 3/4" = 1'-0"

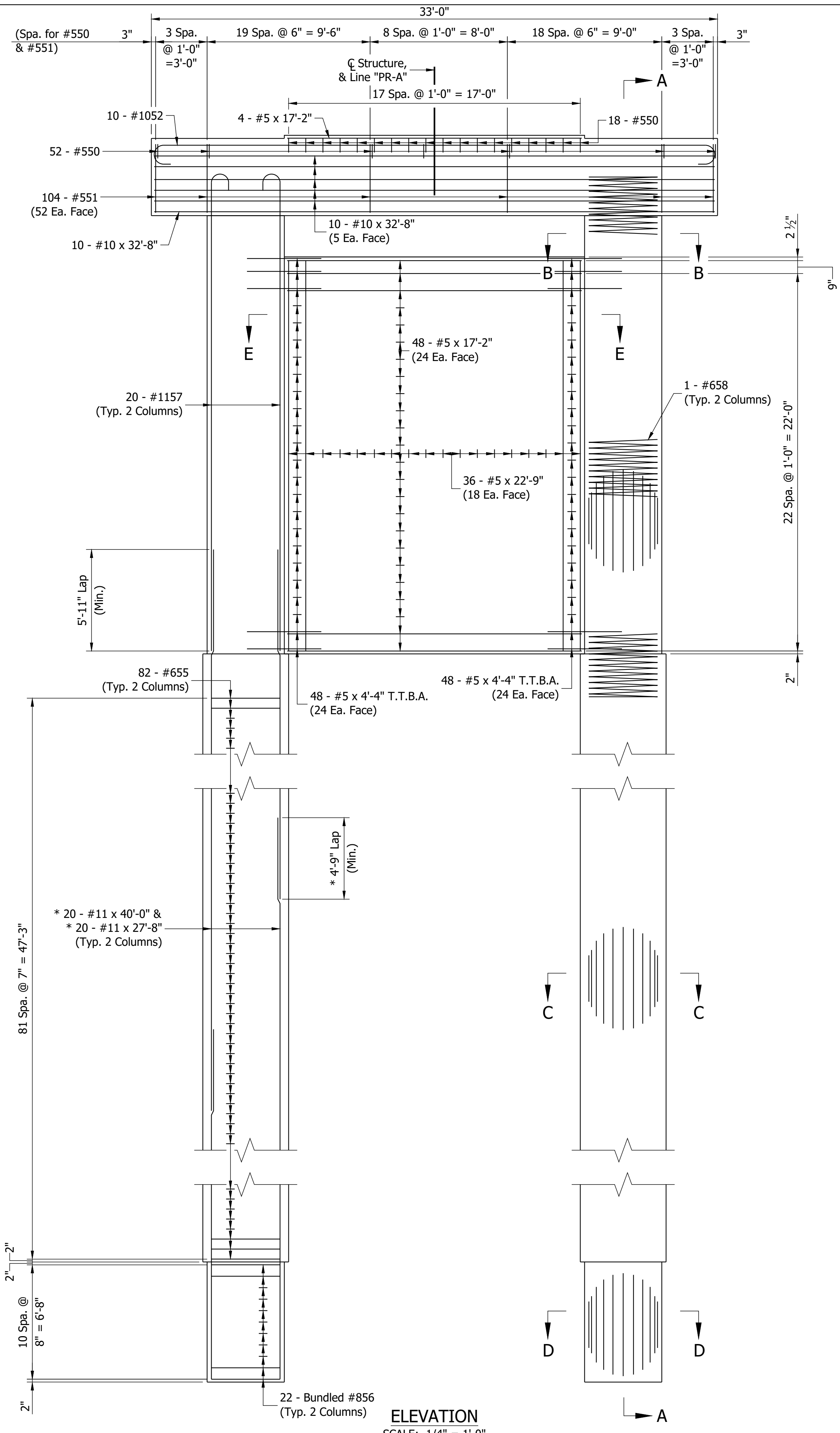


SECTION F-F
 SCALE: 3/4" = 1'-0"

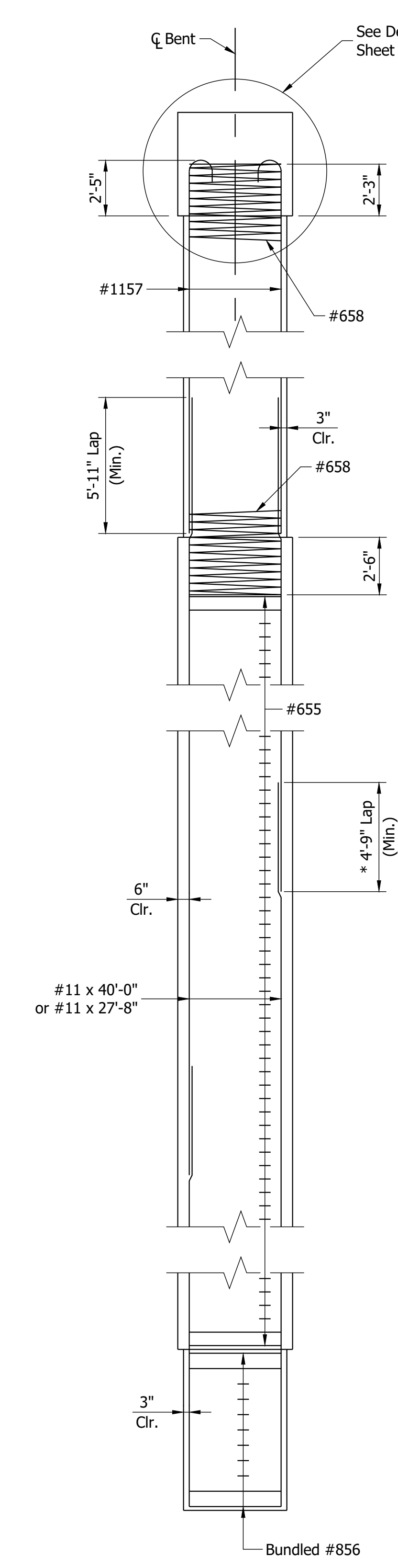
LEGEND
 T.T.B.A. - Denotes Threaded Tie Bar Assembly

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE	INDIANA DEPARTMENT OF TRANSPORTATION		HORIZONTAL SCALE	BRIDGE FILE
			AS SHOWN	13-00043 B
DESIGNED: G CJ	DRAWN: V CH	VERTICAL SCALE		DESIGNATION
CHECKED: ACS	CHECKED: MAR	AS SHOWN		1400825
INTERIOR BENT DETAILS INTERIOR BENT NO. 2 REINFORCEMENT DETAILS		SURVEY BOOK	SHEET	
		ELECTRONIC	38	of 62
		CONTRACT	PROJECT	
		B-37711	1400825	

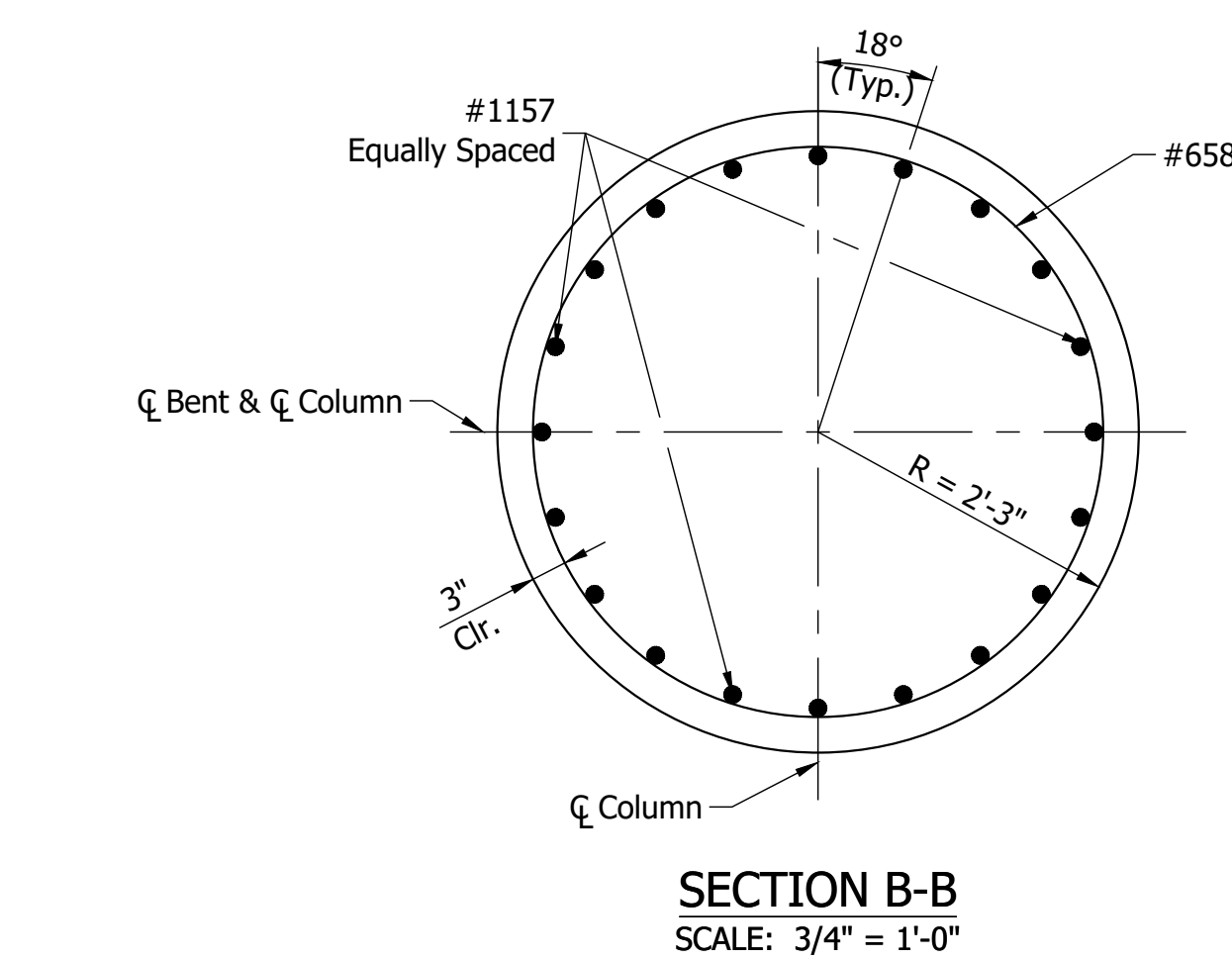
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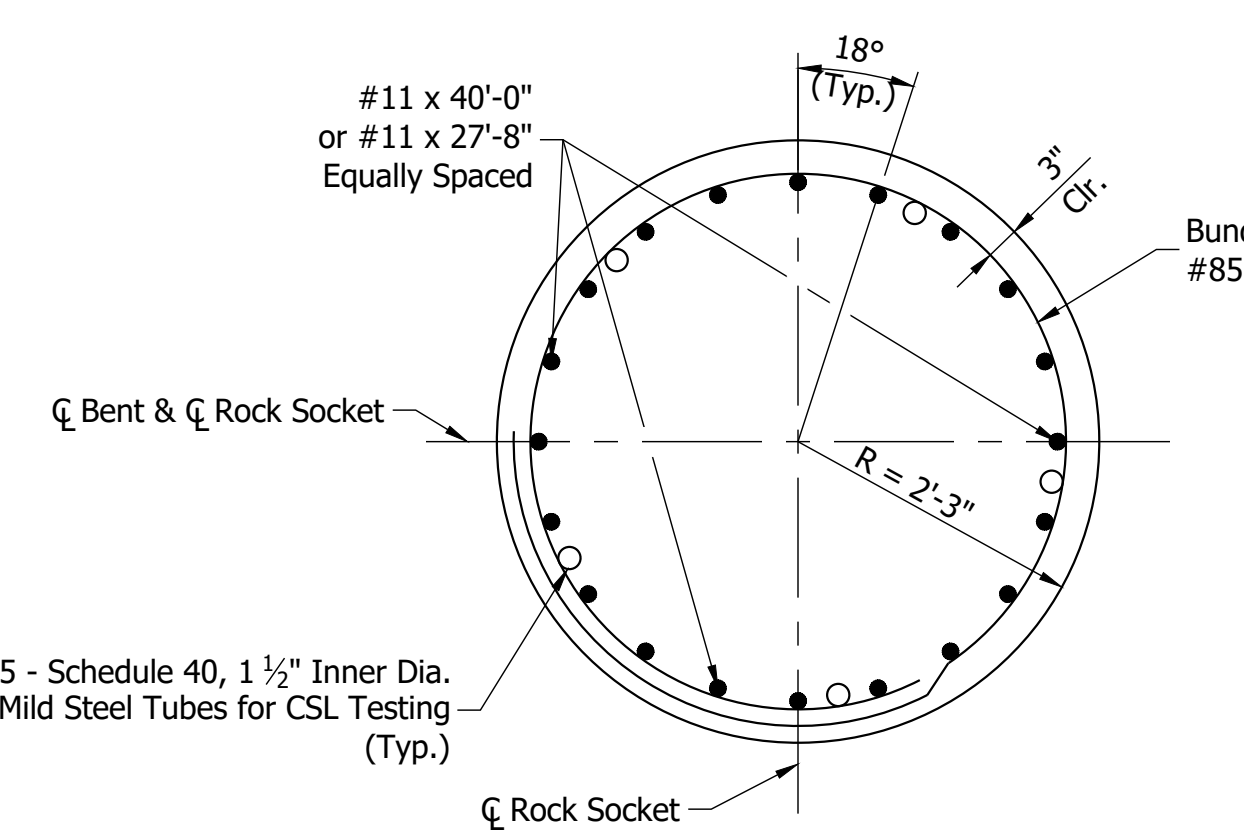
ELEVATION
 SCALE: 1/4" = 1'-0"



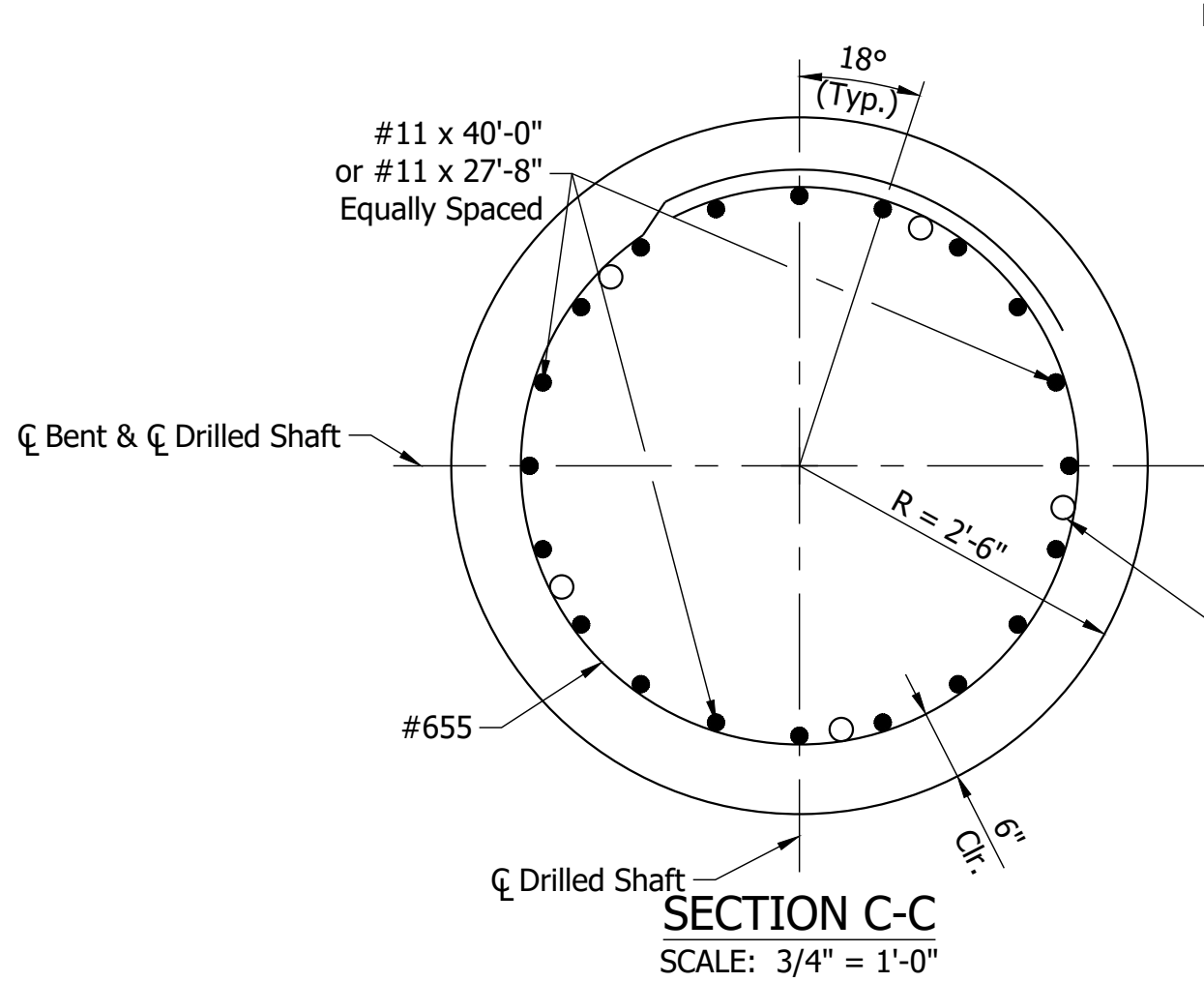
SECTION A-A
 SCALE: 1/4" = 1'-0"



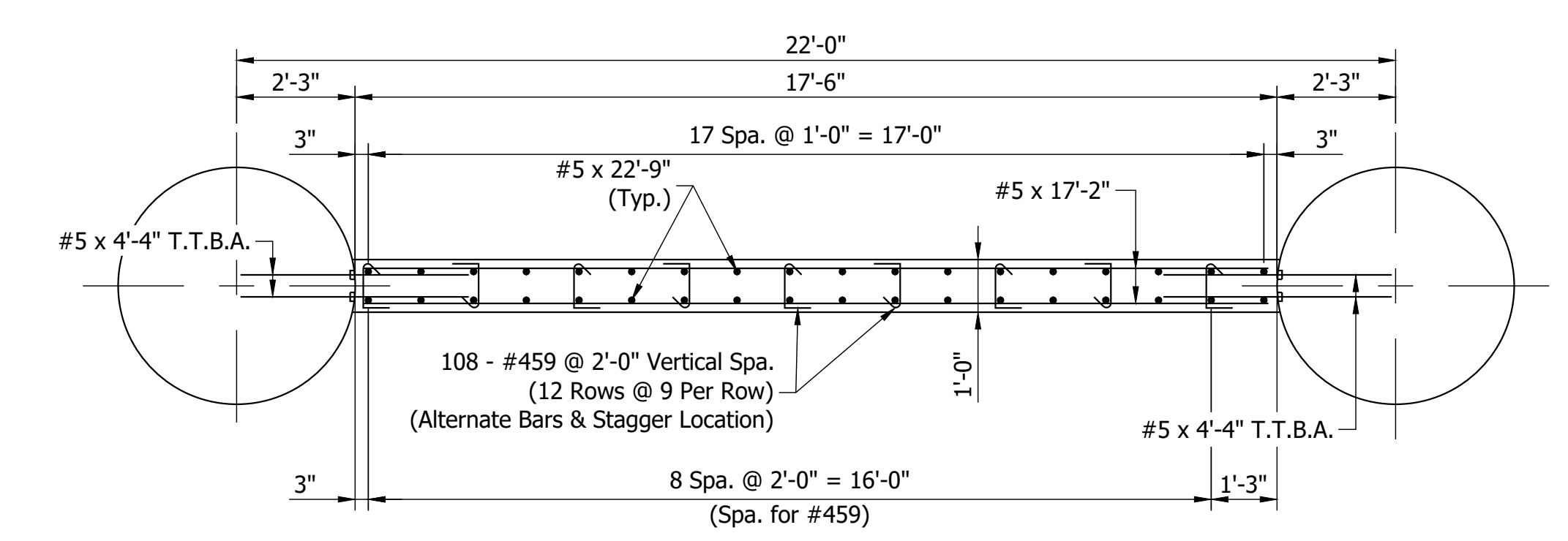
SECTION B-B
 SCALE: 3/4" = 1'-0"



SECTION D-D
 SCALE: 3/4" = 1'-0"



SECTION C-C
 SCALE: 3/4" = 1'-0"

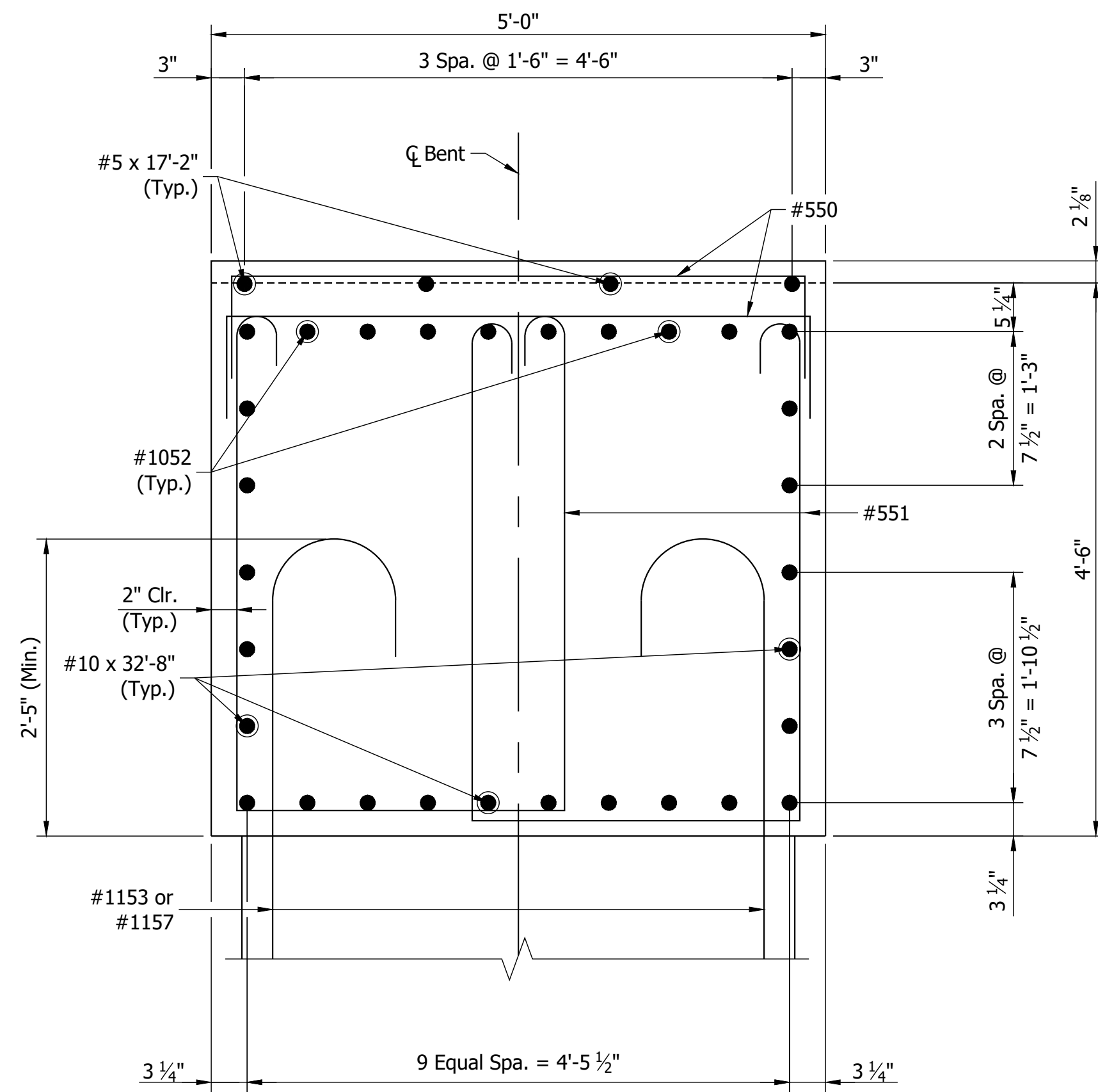


SECTION E-E
 SCALE: 3/8" = 1'-0"

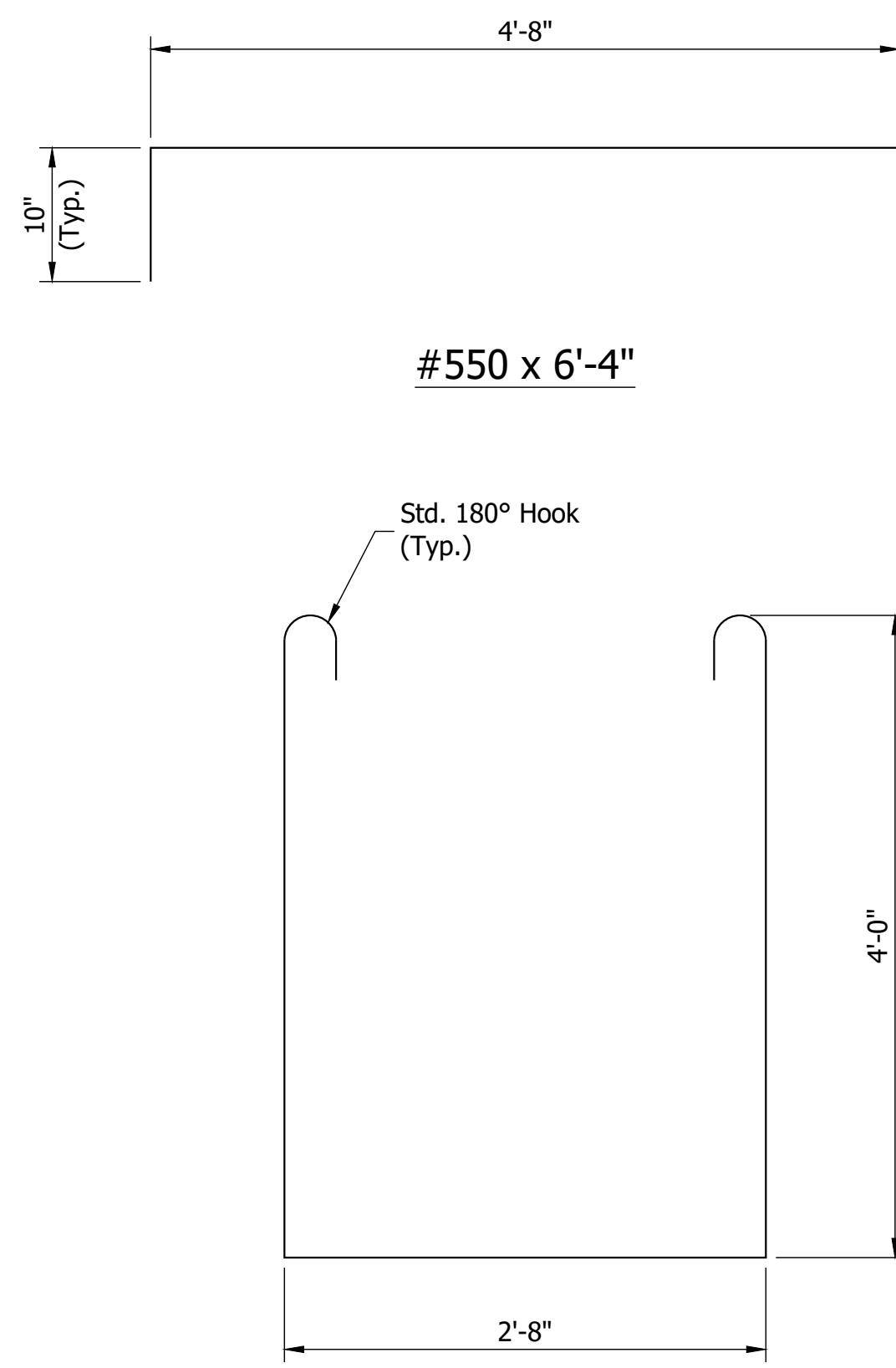
* No more than 50% of reinforcement should be lapped at one location within drilled shaft.

LEGEND
 T.T.B.A. - Denotes Threaded Tie Bar Assembly

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE _____ DESIGNED: G CJ DRAWN: V CH CHECKED: ACS CHECKED: MAR	INDIANA DEPARTMENT OF TRANSPORTATION INTERIOR BENT DETAILS INTERIOR BENT NO. 3 REINFORCEMENT DETAILS		HORIZONTAL SCALE AS SHOWN	BRIDGE FILE 13-00043 B
			VERTICAL SCALE AS SHOWN	DESIGNATION 1400825
			SURVEY BOOK ELECTRONIC	SHEET 39 of 62
		CONTRACT B-37711	PROJECT 1400825	

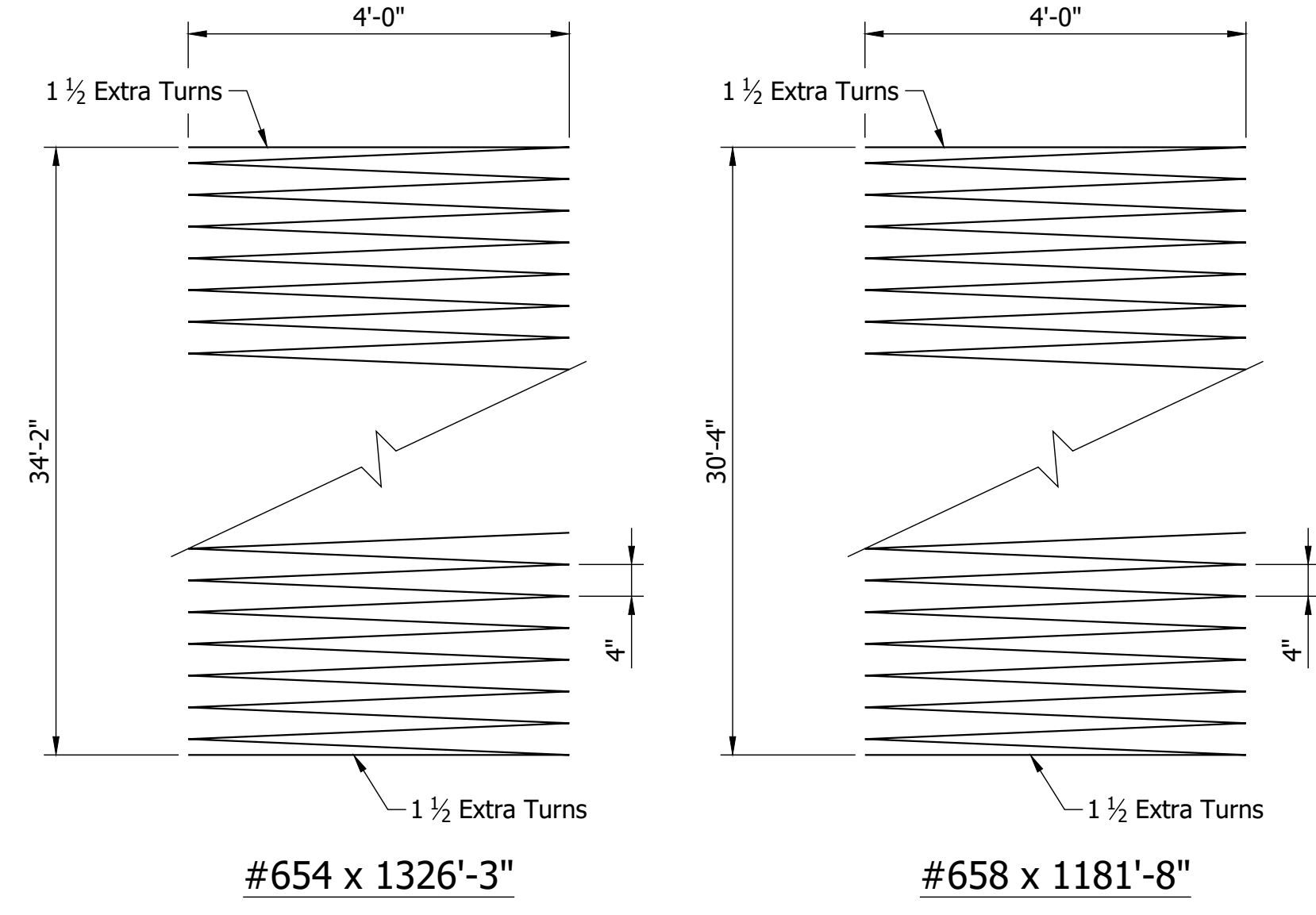


DETAIL "A"
SCALE: 1" = 1'-0"



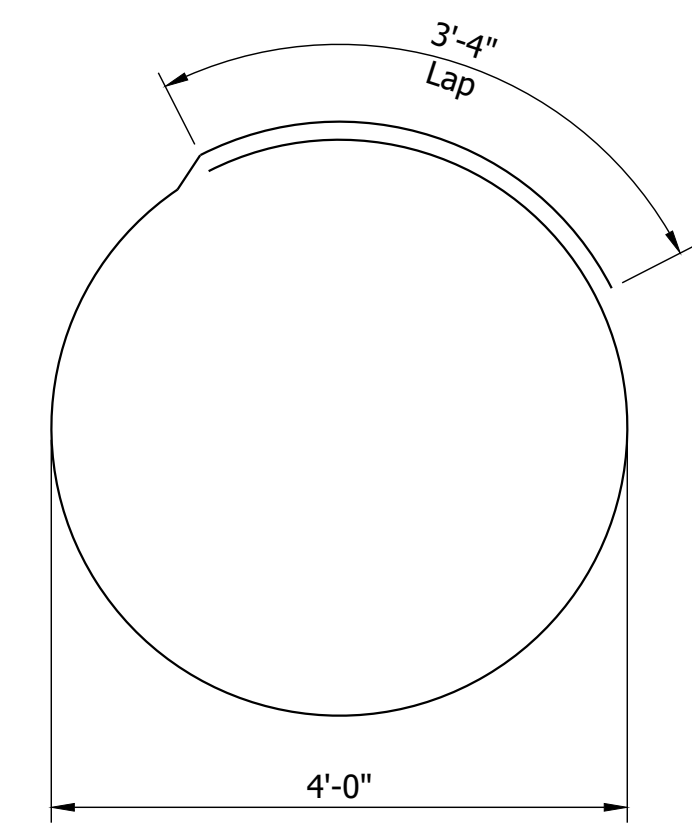
#550 x 6'-4"

#551 x 11'-10"

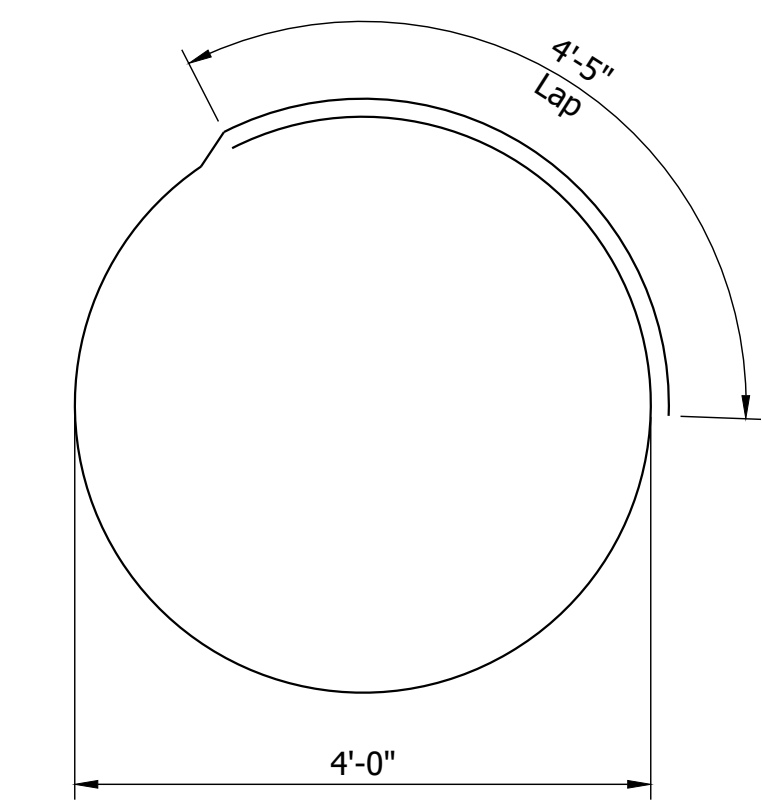


#654 x 1326'-3"

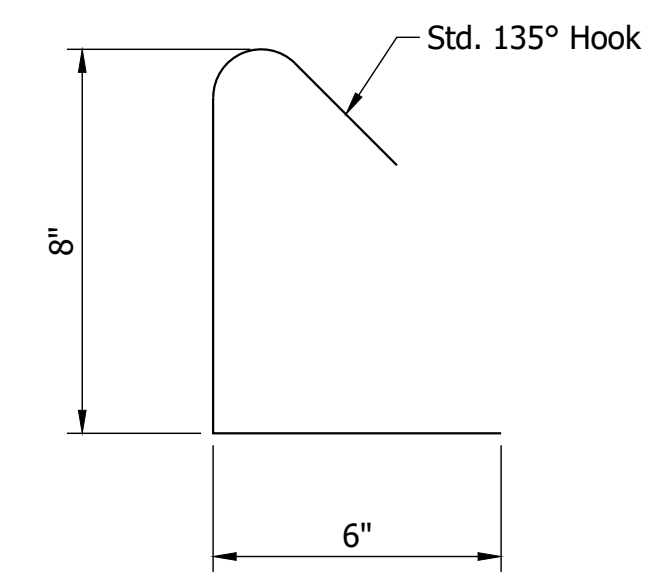
#658 x 1181'-8"



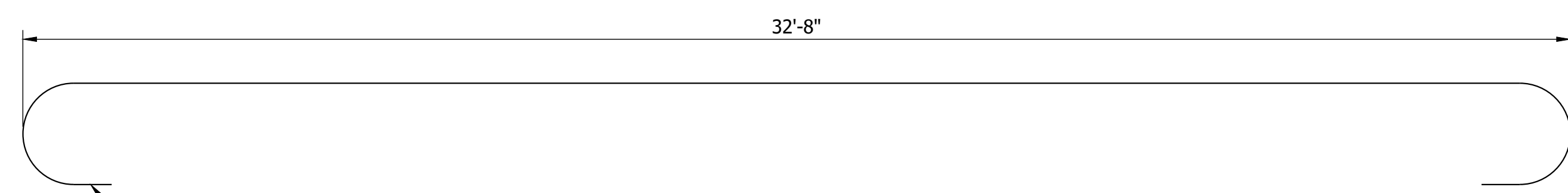
#655 x 15'-11"



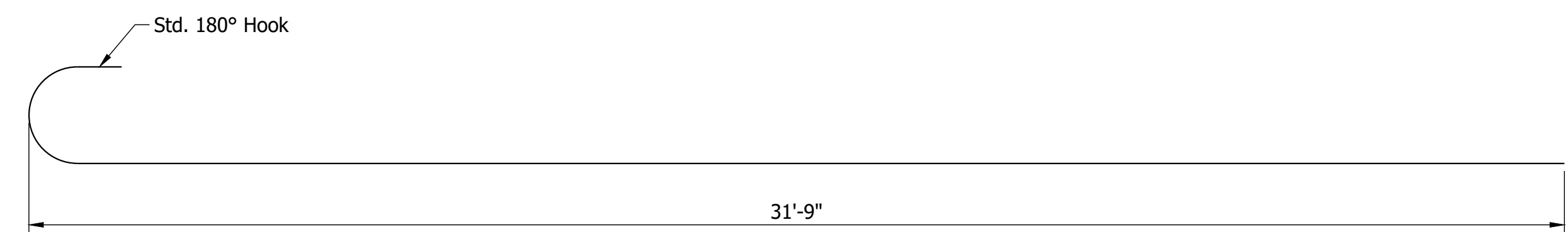
#856 x 17'-0"



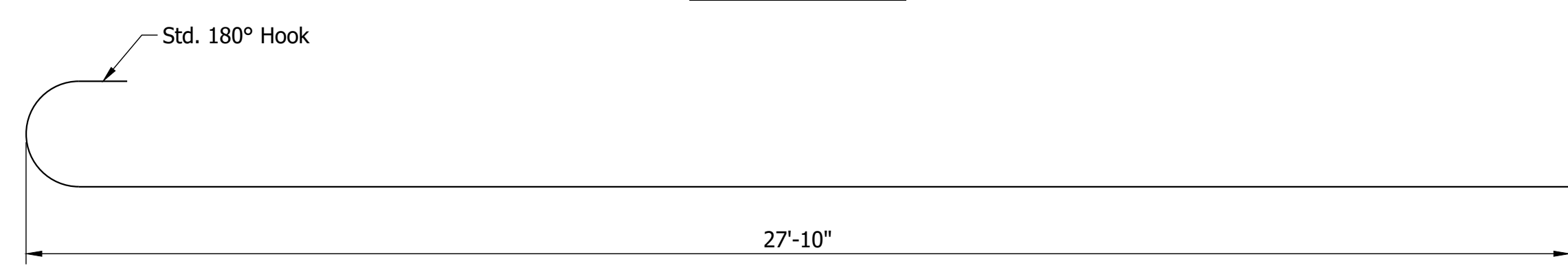
#459 x 1'-7"



#1052 x 35'-6"



#1153 x 33'-4"



#1157 x 29'-5"

BILL OF MATERIALS				
BENT NO. 2 & 3				
REINFORCING STEEL				
SIZE & MARK	NO. OF BARS BENT #2	NO. OF BARS BENT #3	LENGTH	WEIGHT (LB.)
PLAIN REINFORCING STEEL				
#1157	---	40	29'-5"	
#1153	40	---	33'-4"	
TOTAL #11 BARS:				13336
#1052	10	10	35'-6"	
#10	20	20	32'-8"	
TOTAL #10 BARS:				8678
#658	---	2	1181'-8"	
#654	2	---	1326'-3"	
TOTAL #6 BARS:				7534
#551	104	104	11'-10"	
#550	70	70	6'-4"	
#5	36	36	22'-9"	
#5	52	52	17'-2"	
TOTAL #5 BARS:				9501
#459	108	108	1'-7"	
TOTAL #4 BARS:				229
TOTAL REINFORCING STEEL:				39278
CONCRETE				
Concrete, A, Substructure				
	BENT #2	BENT #3		
Pour A	34.7 CYS	30.1 CYS		
Pour B	28.1 CYS	28.1 CYS		
Pour C	15.1 CYS	15.1 CYS		
TOTAL	77.9 CYS	73.3 CYS		
MISCELLANEOUS				
	BENT #2	BENT #3		
Drilled Shaft Exploratory Core	45 LFT	45 LFT		
Drilled Shaft Permanent Casing	20 LFT	100 LFT		
Drilled Shaft 60 IN. Diameter	20 LFT	100 LFT		
Drilled Shaft 54 IN. Diameter	14 LFT	14 LFT		
Threaded Tie Bar Assembly #5 x 4'-4"	96 EACH	96 EACH		

** DRILLED SHAFT REINFORCING STEEL				
SIZE & MARK	NO. OF BARS BENT #2	NO. OF BARS BENT #3	LENGTH	WEIGHT (LB.)
PLAIN REINFORCING STEEL				
#11	---	40	40'-0"	
#11	---	40	27'-8"	
#11	40	---	22'-11"	
TOTAL #11 BARS:				19251
#856	44	44	17'-0"	
TOTAL #8 BARS:				3995
#655	26	164	15'-11"	
TOTAL #6 BARS:				4543
TOTAL REINFORCING STEEL:				27789

** Reinforcing included in the cost of Drilled Shafts.

NOTES:
1. For Reinforcing Steel Details, see INDOT Std. Drwg. 703-BRST-01.

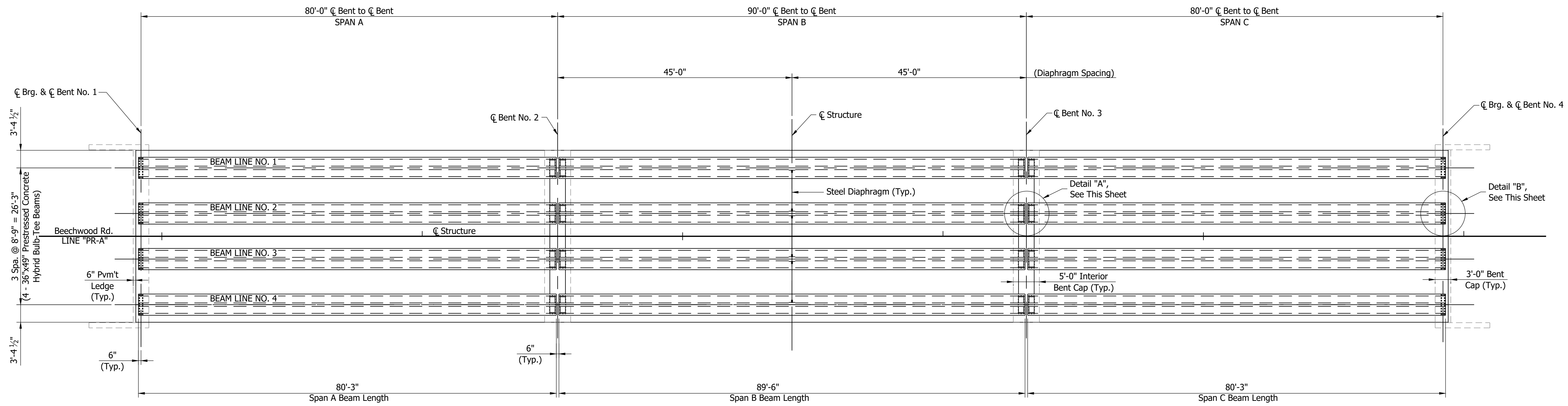
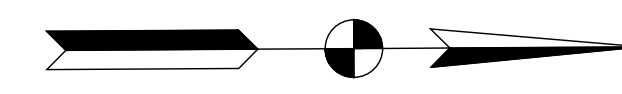
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RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: G CJ	DRAWN: V CH	
CHECKED: ACS	CHECKED: MAR	

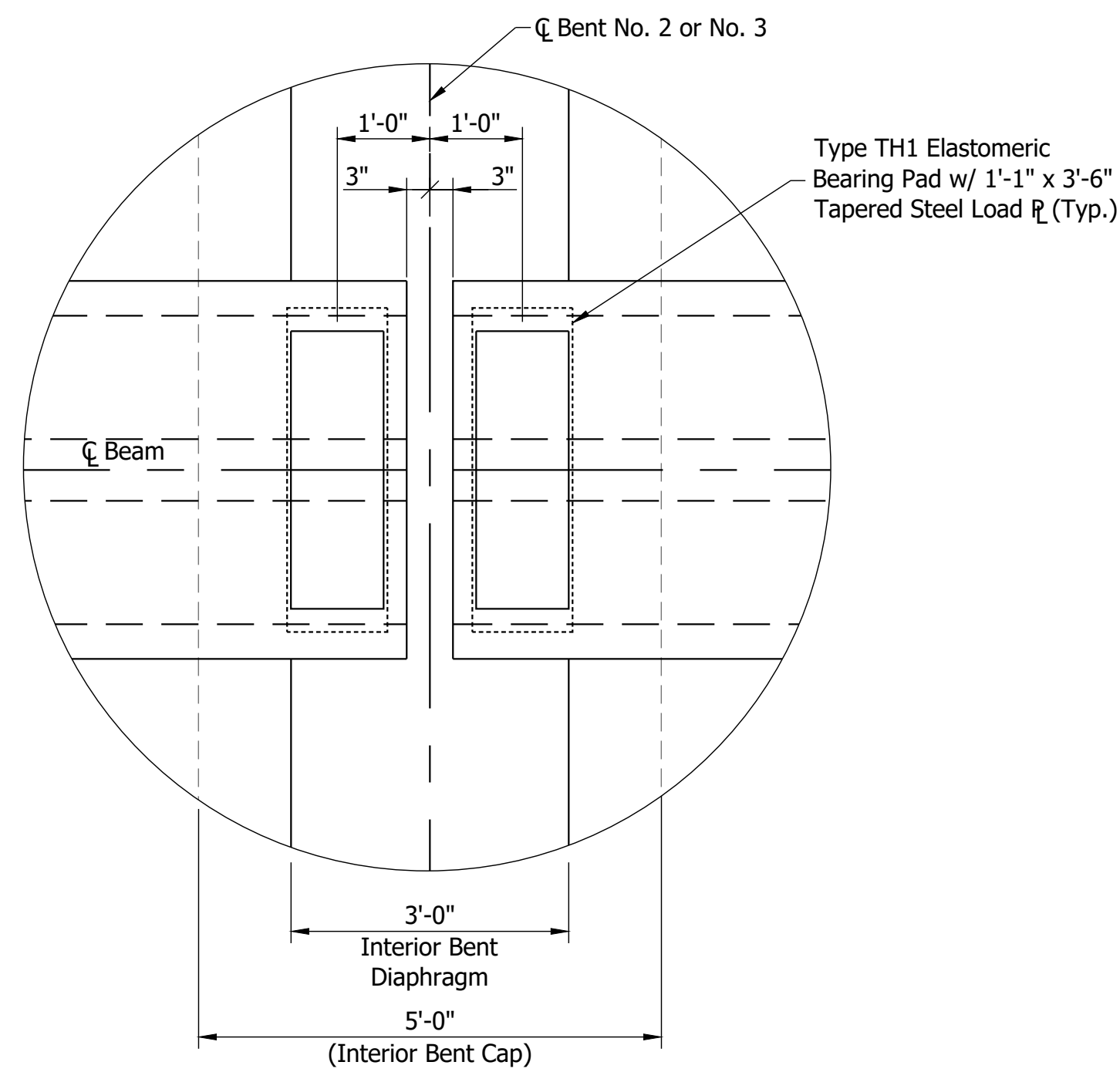
INDIANA
DEPARTMENT OF TRANSPORTATION

INTERIOR BENT DETAILS
INTERIOR BENT NO. 2 & 3 REINFORCEMENT DETAILS

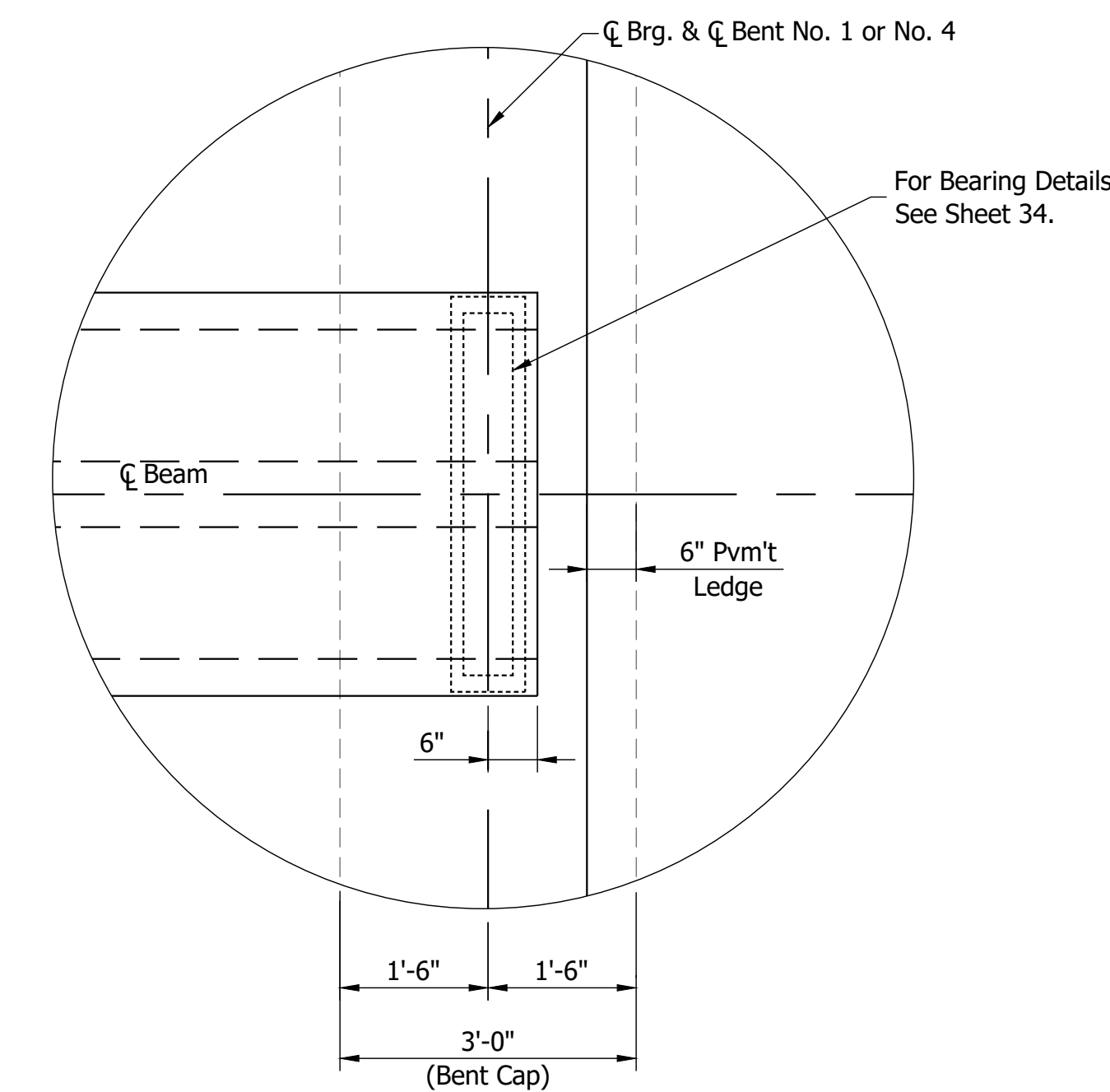
HORIZONTAL SCALE AS SHOWN	BRIDGE FILE 13-00043 B
VERTICAL SCALE AS SHOWN	DESIGNATION 1400825
SURVEY BOOK ELECTRONIC	SHEET 40 of 62
CONTRACT B-37711	PROJECT 1400825



FRAMING PLAN
SCALE: 1" = 10'-0"



DETAIL "A"
SCALE: 5/8" = 1'-0"



DETAIL "B"
SCALE: 5/8" = 1'-0"

NOTE:
1. For Type TH1 Elastomeric Bearing Pad Details, See INDOT Std. Drwg. 726-BEBP-03.

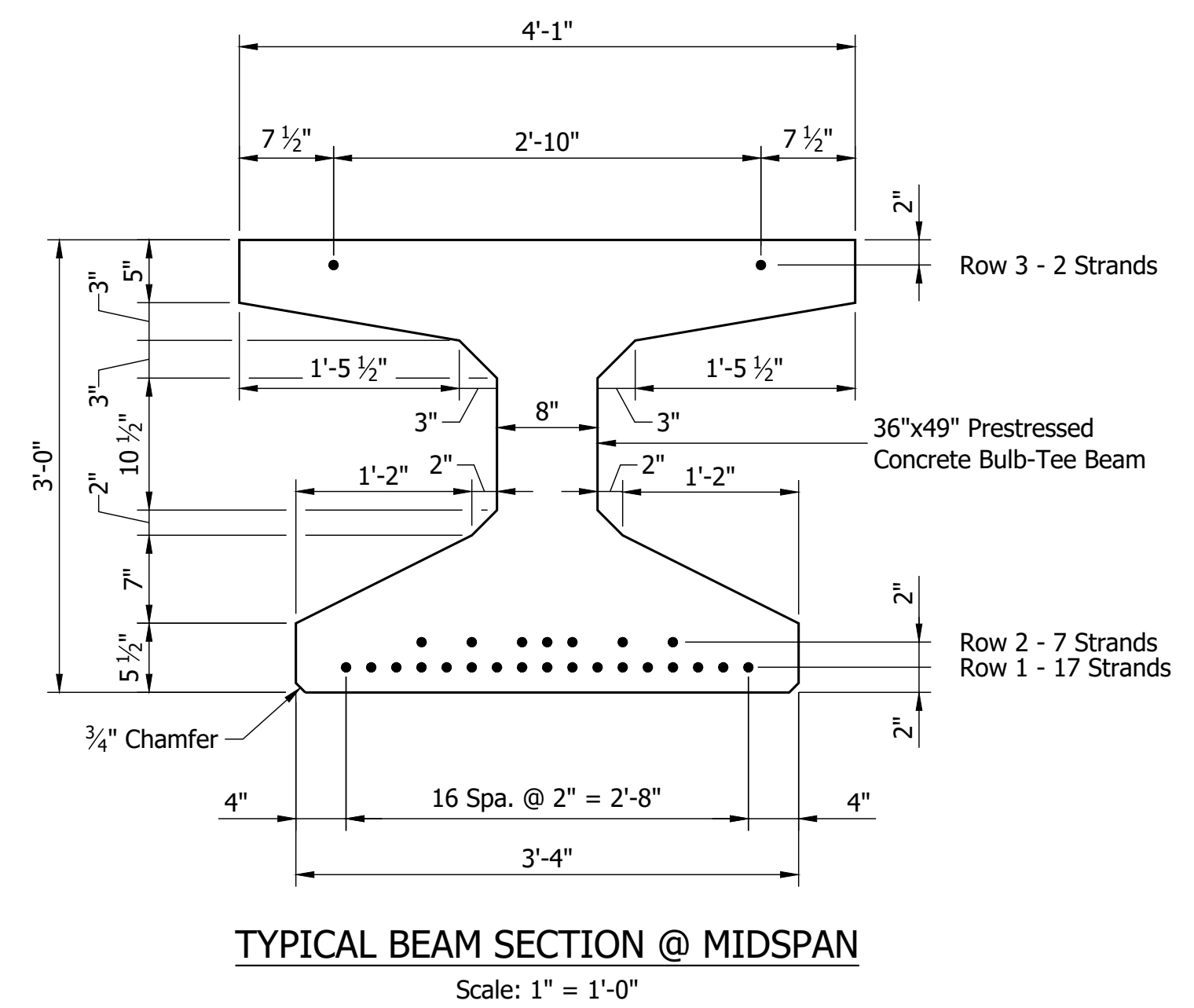
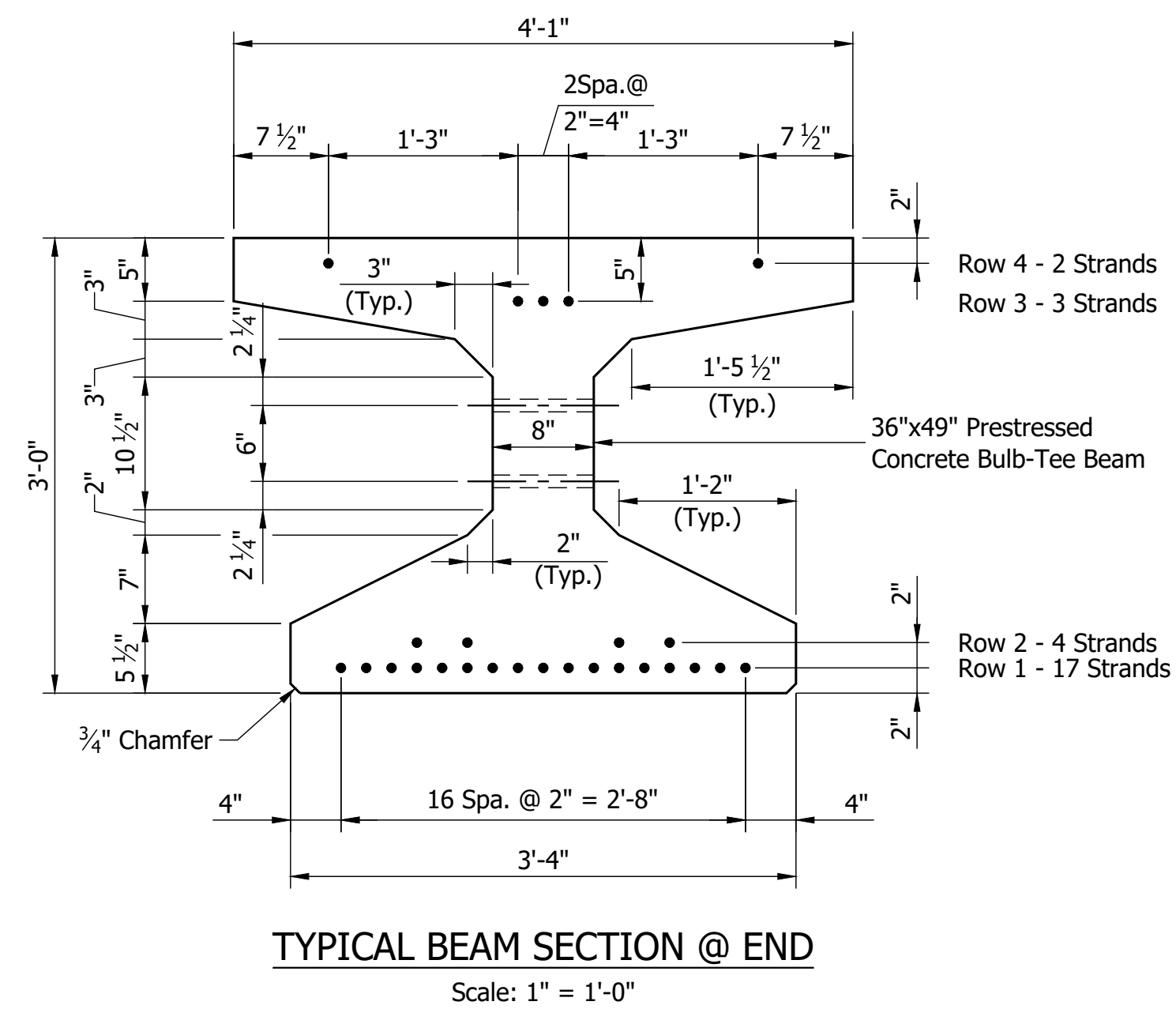
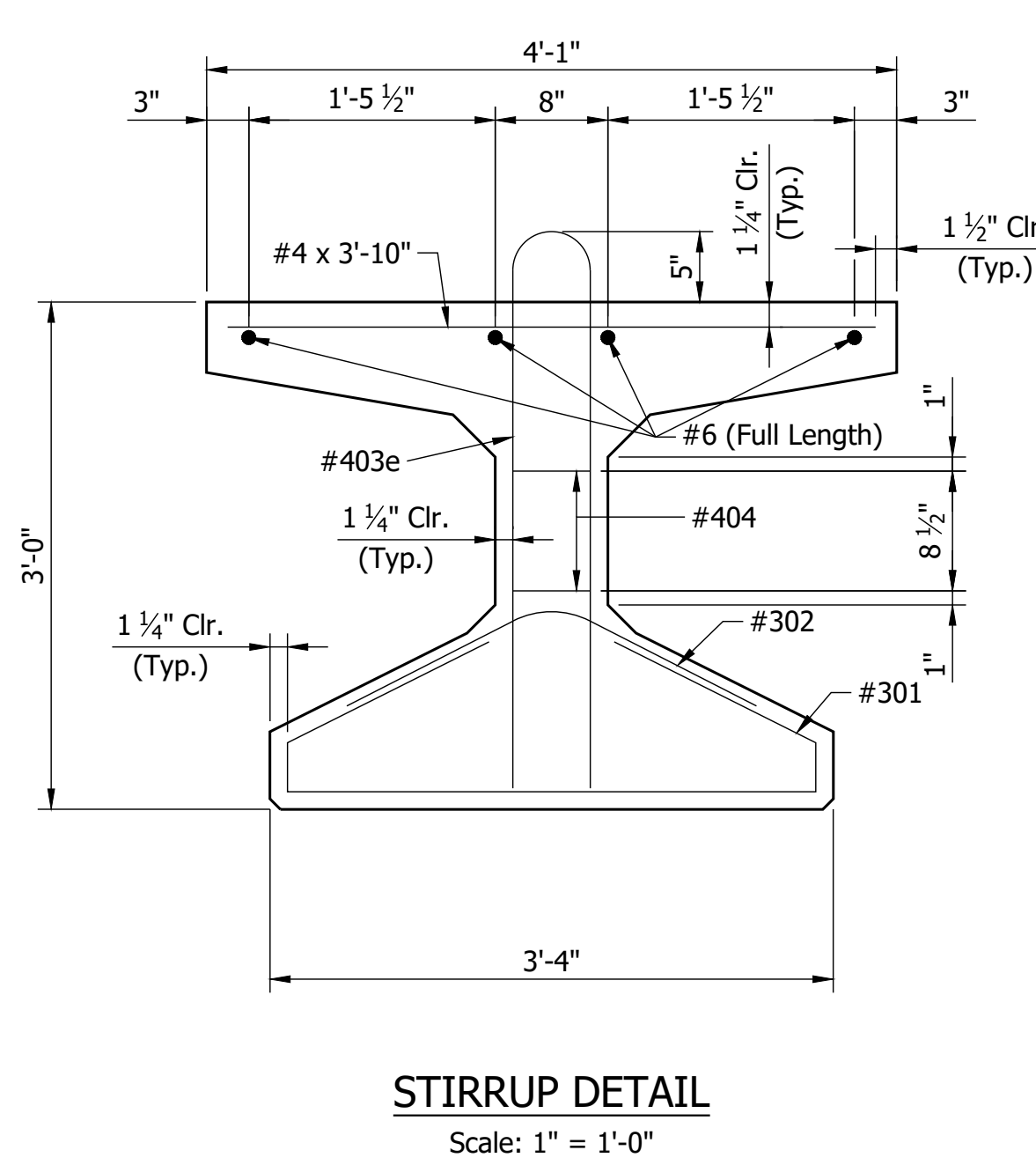
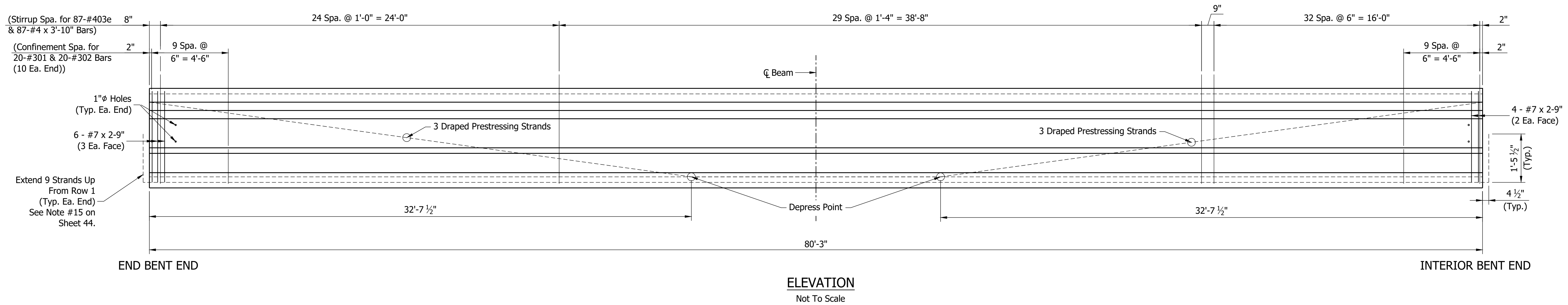
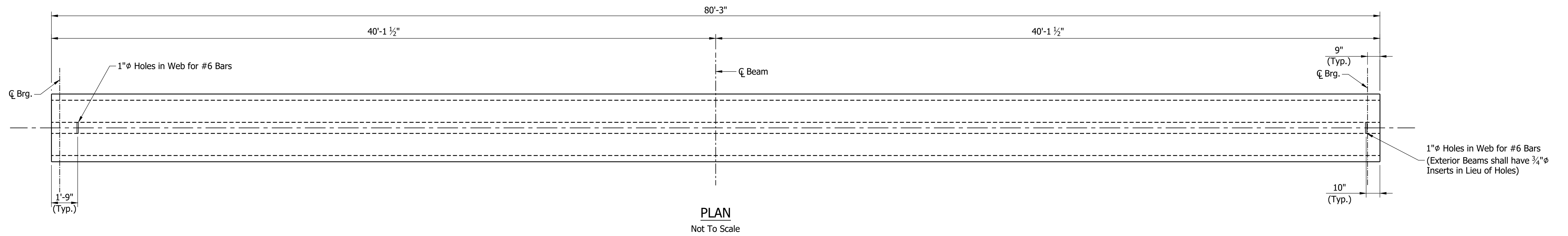
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RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: G CJ	DRAWN: TAM	
CHECKED: ACS	CHECKED: MAR	

INDIANA
DEPARTMENT OF TRANSPORTATION

FRAMING PLAN

HORIZONTAL SCALE	BRIDGE FILE
AS SHOWN	13-00043 B
VERTICAL SCALE	DESIGNATION
AS SHOWN	1400825
SURVEY BOOK	SHEET
ELECTRONIC	41 of 62
CONTRACT	PROJECT
B-37711	1400825



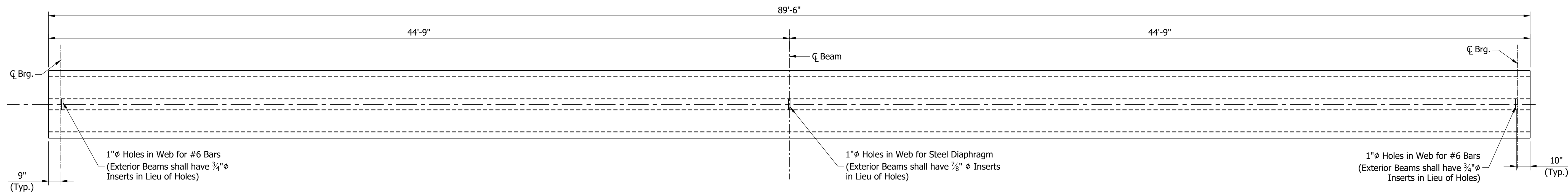
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RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: G CJ	DRAWN: TAM	
CHECKED: ACS	CHECKED: MAR	

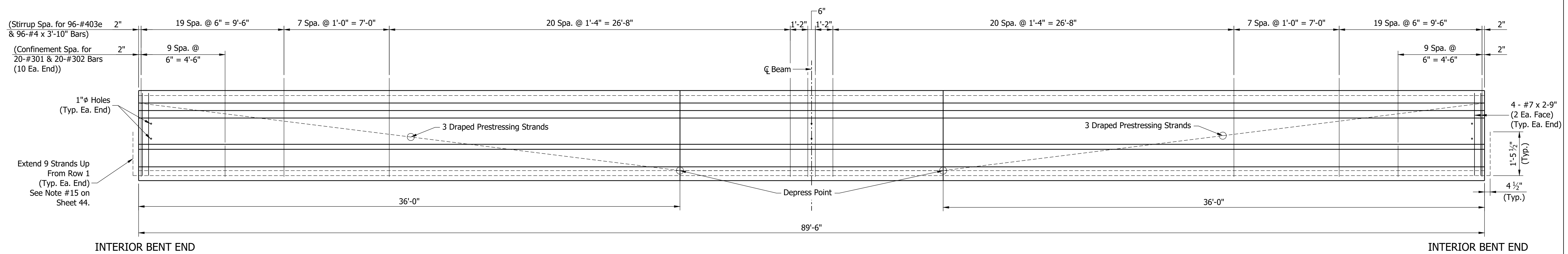
**INDIANA
DEPARTMENT OF TRANSPORTATION**

**BEAM DETAILS
SPAN A OR C**

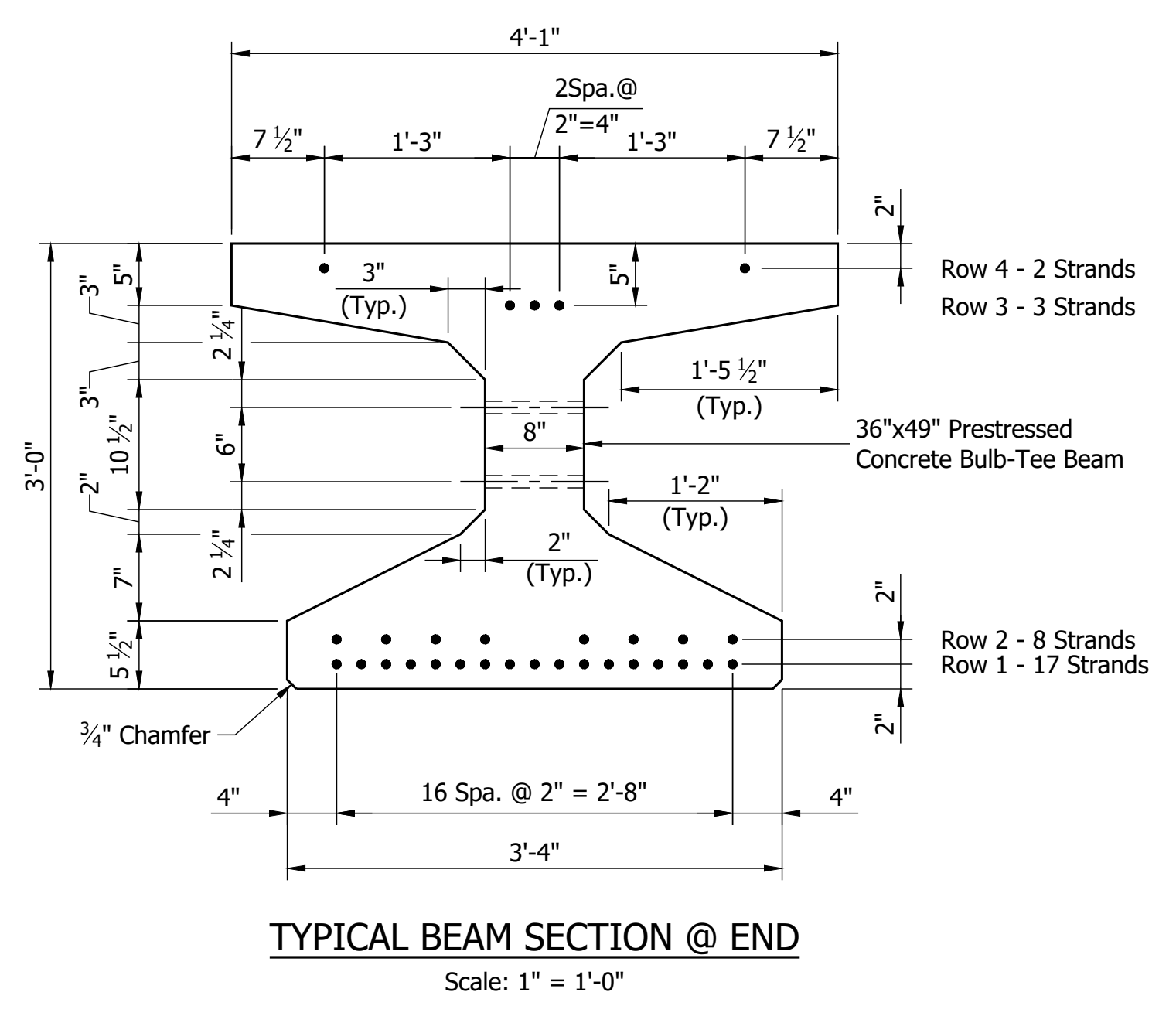
HORIZONTAL SCALE	BRIDGE FILE
AS SHOWN	13-00043 B
VERTICAL SCALE	DESIGNATION
AS SHOWN	1400825
SURVEY BOOK	SHEET
ELECTRONIC	42 of 62
CONTRACT	PROJECT
B-37711	1400825



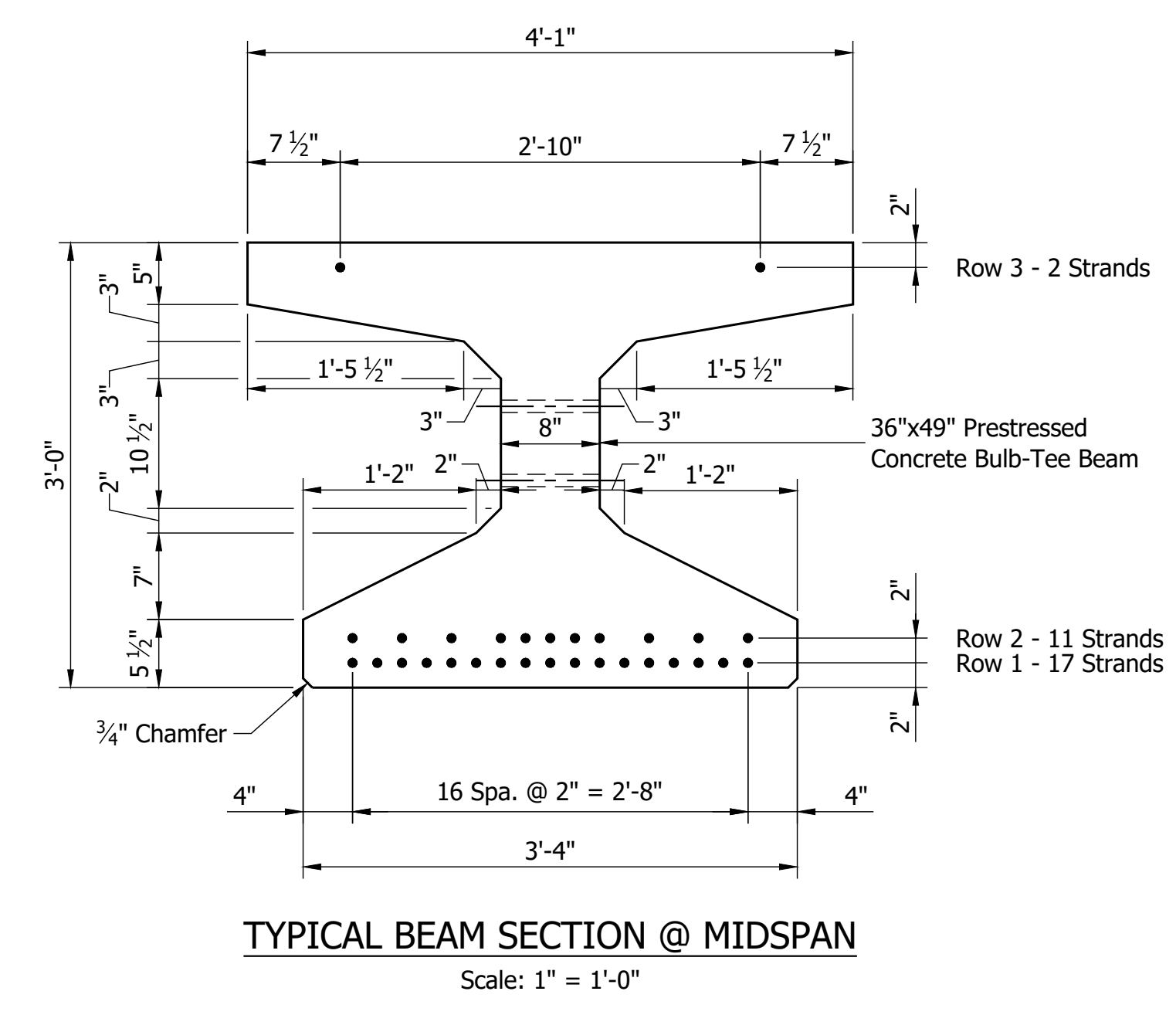
PLAN
Not To Scale



ELEVATION
Not To Scale



TYPICAL BEAM SECTION @ END
Scale: 1" = 1'-0"



TYPICAL BEAM SECTION @ MIDSPAN
Scale: 1" = 1'-0"

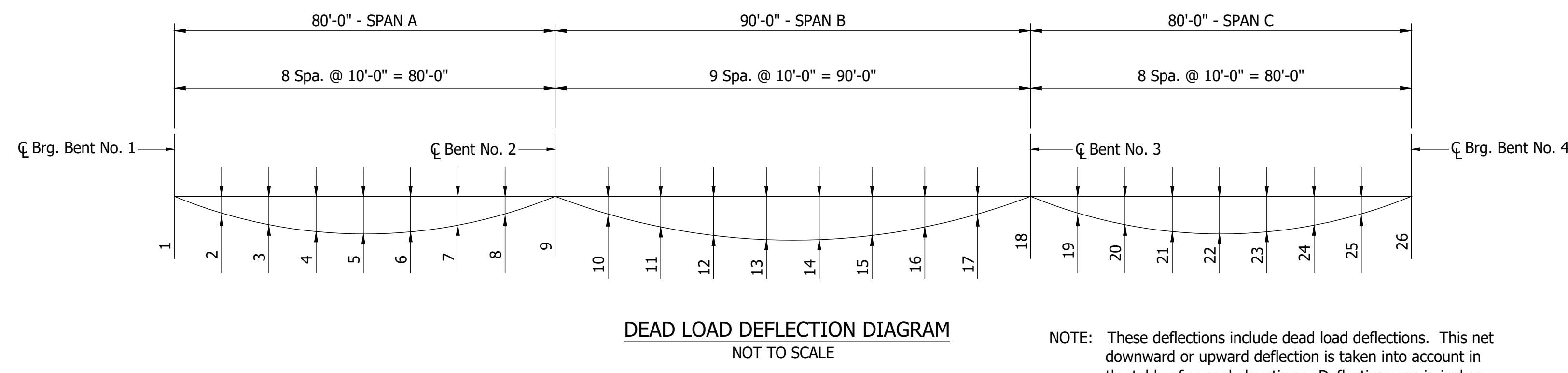
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RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: G CJ	DRAWN: TAM	
CHECKED: ACS	CHECKED: MAR	

**INDIANA
DEPARTMENT OF TRANSPORTATION**

**BEAM DETAILS
SPAN B**

HORIZONTAL SCALE AS SHOWN	BRIDGE FILE 13-00043 B
VERTICAL SCALE AS SHOWN	DESIGNATION 1400825
SURVEY BOOK ELECTRONIC	SHEET 43 of 62
CONTRACT B-37711	PROJECT 1400825



CONCRETE DEAD LOAD DEFLECTIONS (IN.)

POINT:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
Beams 1 & 4	0.00	0.44	0.80	1.03	1.10	1.00	0.75	0.38	0.00	0.52	1.04	1.43	1.63	1.63	1.43	1.04	0.53	0.00	0.38	0.75	1.00	1.10	1.03	0.80	0.44	0.00
Beams 2 & 3	0.00	0.47	0.87	1.12	1.20	1.10	0.82	0.42	0.00	0.58	1.15	1.57	1.80	1.80	1.58	1.15	0.58	0.00	0.42	0.82	1.09	1.20	1.12	0.87	0.47	0.00

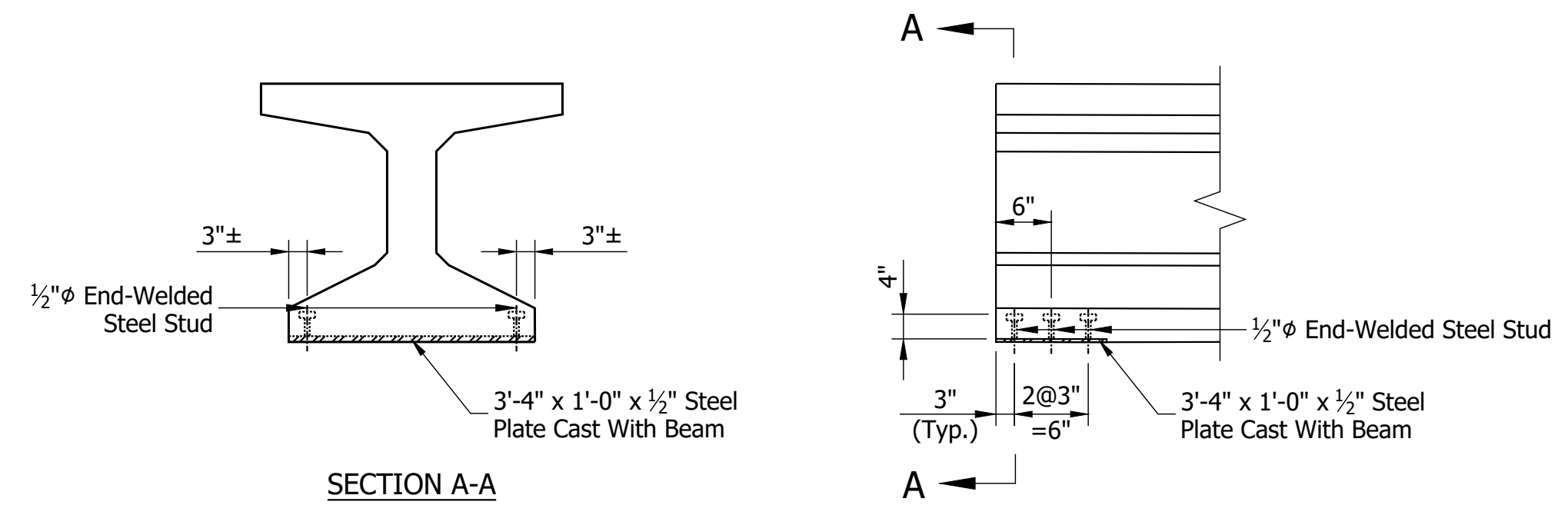
- NOTES**
- Indicates 0.6"φ - 270 ksi (ASTM A416) - 7 Wire Low Relaxation Pre-stressing Strand. Area = 0.217 in²
 - 0.6"φ Strands to be pulled to 43,943 lbs. each.
 - Minimum strength of concrete at time of prestressing = 7,000 psi. Minimum strength of concrete at 28 days = 8,000 psi.
 - Reinforcing steel shall be Grade 60 ksi minimum yield strength.
 - For Bar Bending Details, see INDOT Std. Drwg. 703-BRST-01.
 - Deflections at Midspan in Inches
(Negative Numbers Denote Downward Deflection)

	Span A or C		Span B	
	Ext. Bm.	Int. Bm.	Ext. Bm.	Int. Bm.
Prestress	= 2.108	2.108	3.062	3.062
Beam	= -1.143	-1.143	-1.768	-1.768
Initial Beam Camber	= 0.965	0.965	1.294	1.294
*Anticipated Beam Camber at Erection	= 1.689	1.689	2.265	2.265
Deck + Diaphragm	= -1.043	-1.155	-1.627	-1.803
Barrier	= -0.057	-0.046	-0.029	-0.023
Residual Camber	= 0.589	0.488	0.608	0.439
LL + Impact	= -0.526	-0.472	-0.557	-0.485
TOTAL	= 0.063	0.016	0.051	0.047

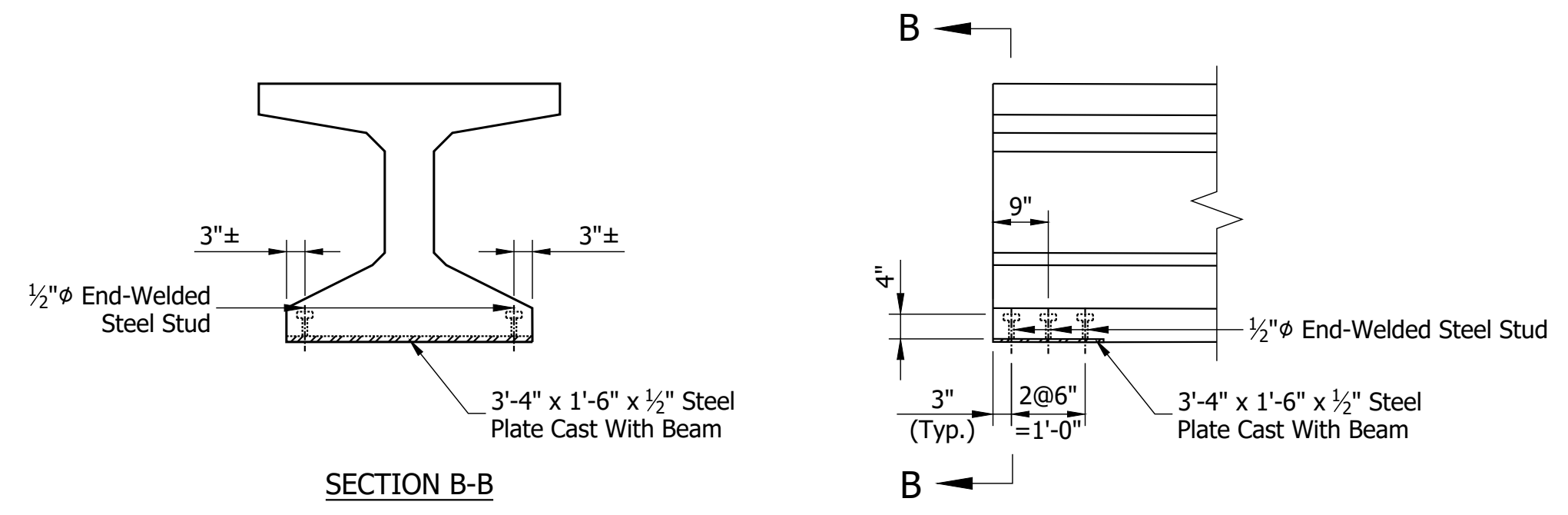
* 1.75 times the Initial Beam Camber to account for the loss of prestress and the creep effect.
 - Beams shall be cast a minimum of 90 days before deck is poured.
 - Estimated elastic shortening is 0.232 in. for beams in Spans A & C and 0.297 in. for beams in Span B.
 - Allowance in beam length shall be made during fabrication.
 - See INDOT Std. Drwg. 707-SDPC-01 and 707-SDPC-02 for additional steel diaphragm details. Use table below for dimensions and channel type in these standard drawings.

Diaphragm Information							Channel Type
Beam Type	Dimension						
	A	B	C	D	E	F	
Bulb-Tee, Type BT 36x49	6"	1'-1 1/4"	10"	3"	3 1/2"	3"	C 9x20

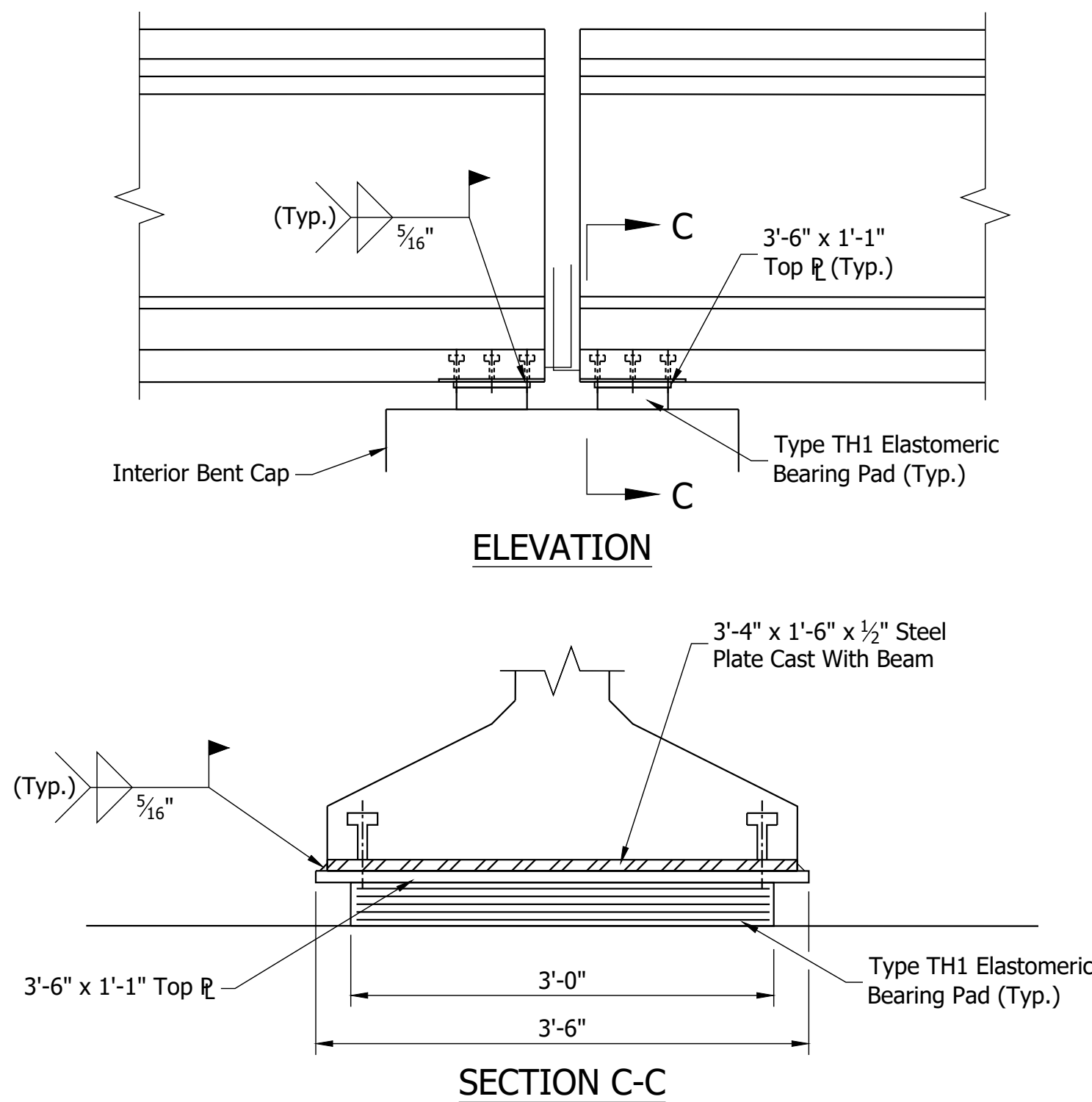
- For Fabrication Tolerances of Prestressed Beams, see INDOT Std. Drwg. 707-BPBF-01 & 707-BPBF-03.
- Reinforcing bars designated "e" shall be epoxy coated.
- Beams are to be lifted and supported at bearing points during handling, storage, and transportation.
- Top surface of beams shall be clean & free of laitance and be intentionally roughened to a full amplitude of approximately 1/4" according to the AASHTO LRFD Standard Specifications.
- Strands are to be bent up without the use of heat.
- Suitable restraint shall be provided to prevent the rotation of the exterior beams from construction load such as finishing machine, forms, etc.
- Estimated Weight of Steel Intermediate Diaphragms = 618 lbs



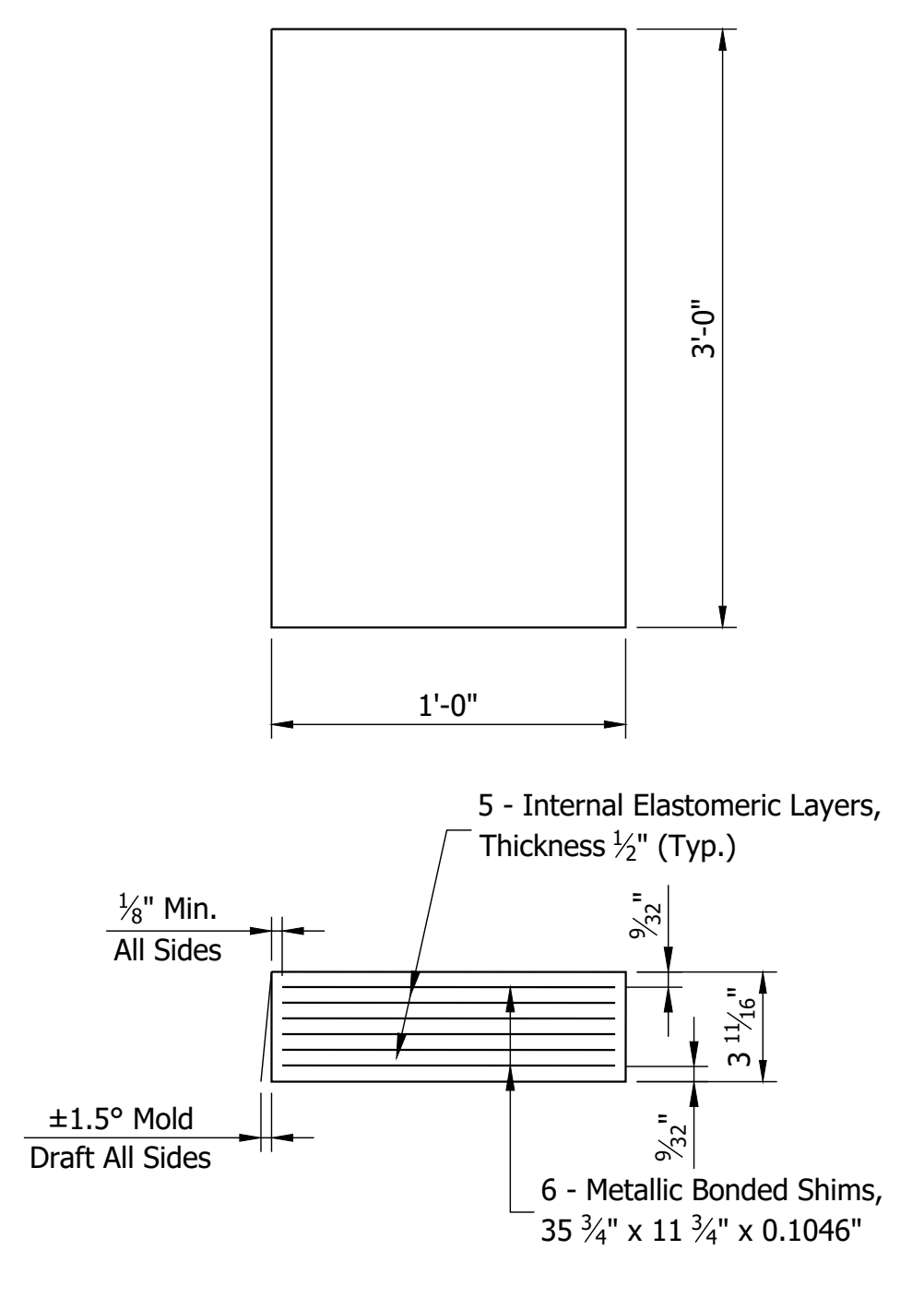
END OF BEAM DETAILS AT END BENTS



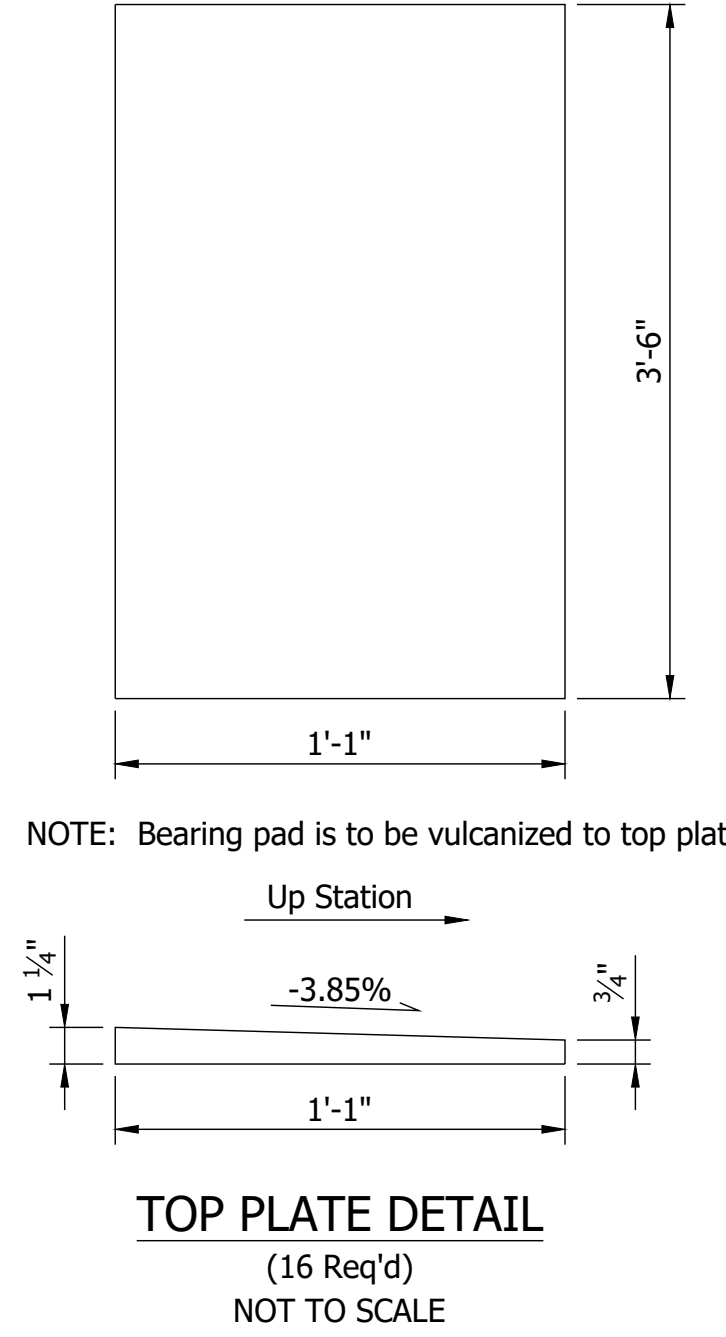
END OF BEAM DETAILS AT INTERIOR BENTS



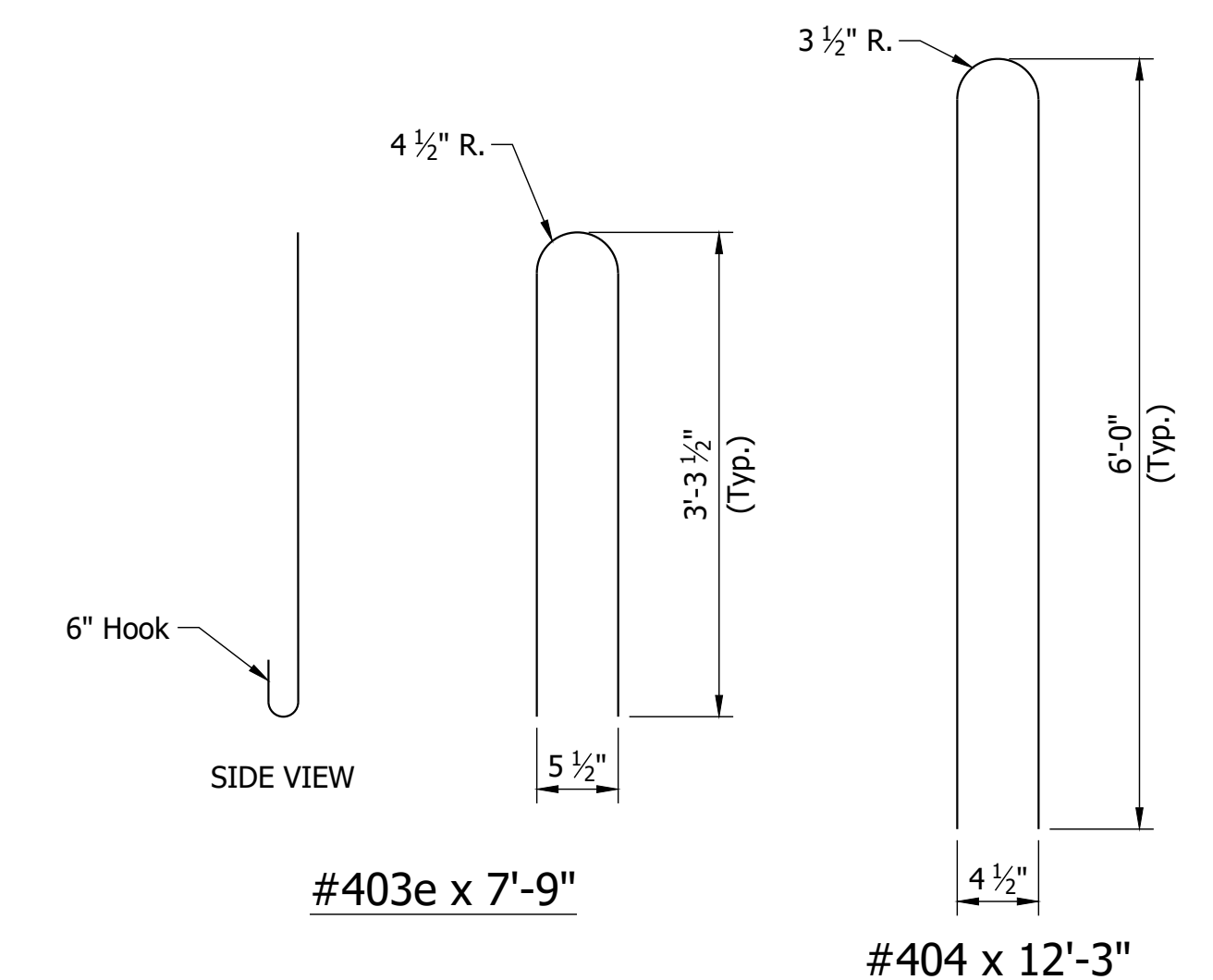
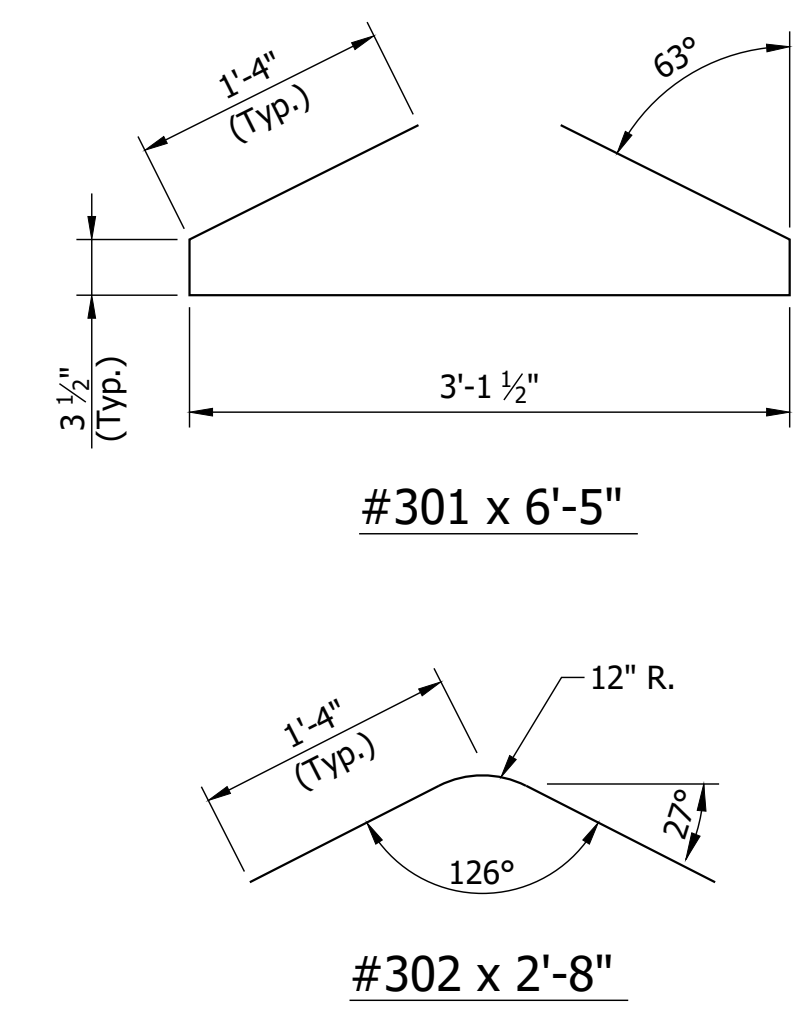
BEAM BEARING ASSEMBLY AT PIER
NOT TO SCALE



TYPE TH1 ELASTOMERIC BEARING PAD DETAILS
NOT TO SCALE

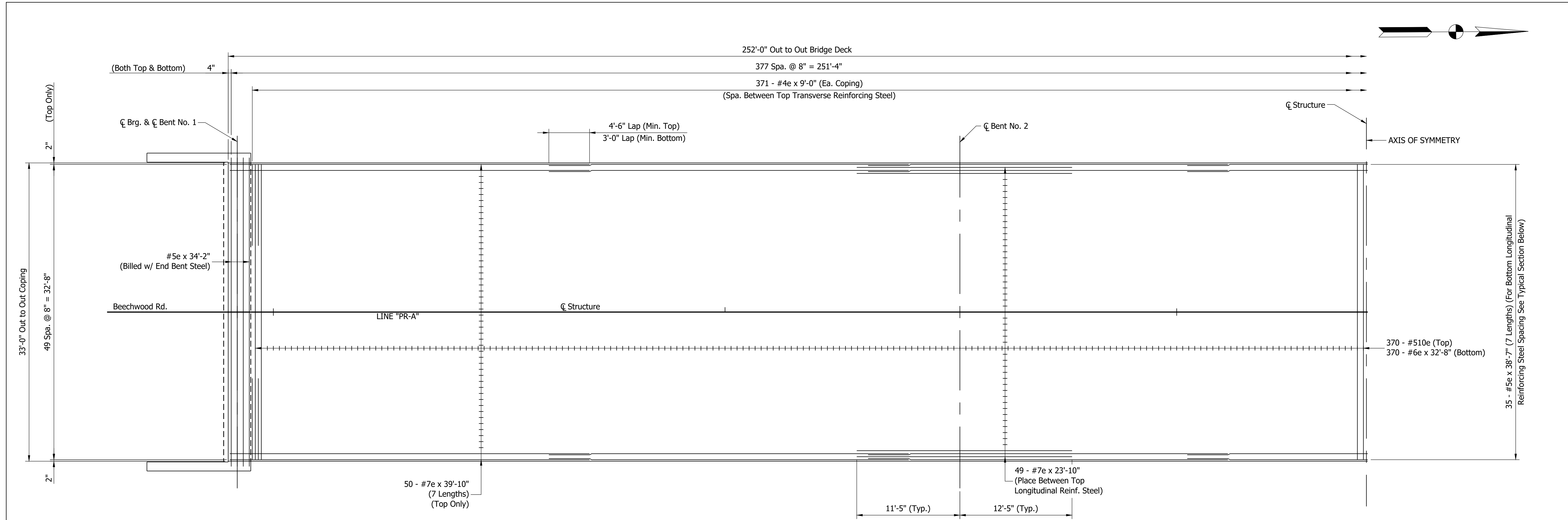


TOP PLATE DETAIL
(16 Req'd)
NOT TO SCALE

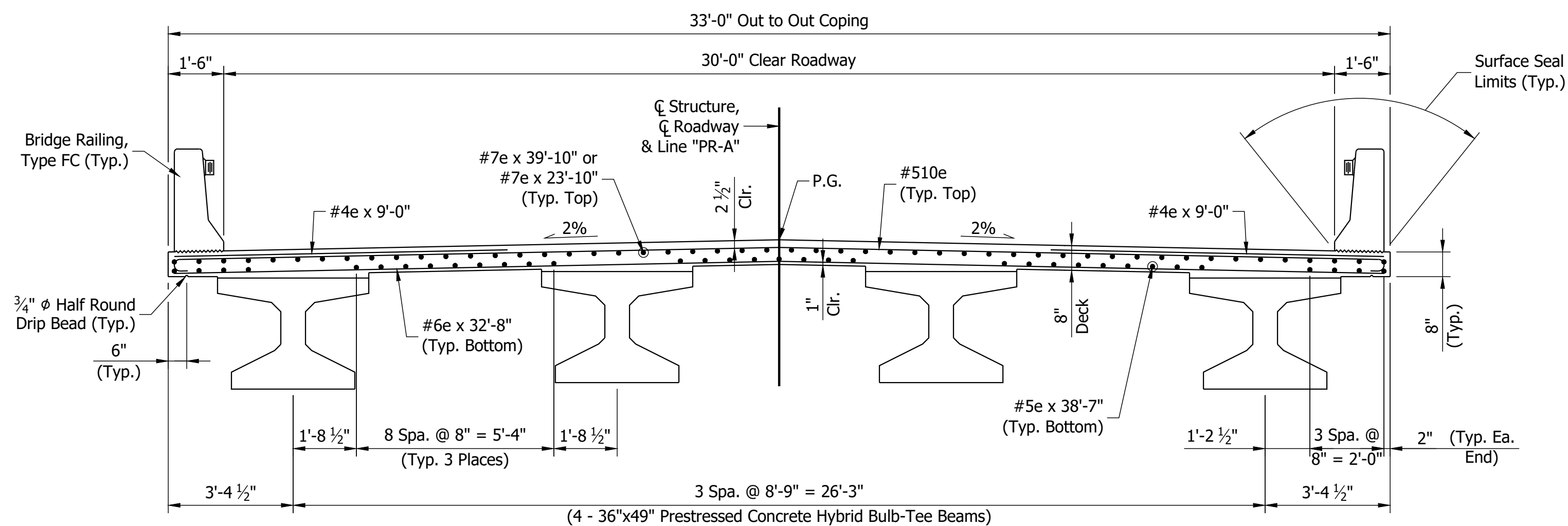


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RECOMMENDED FOR APPROVAL _____ DESIGNED: G CJ DRAWN: TAM CHECKED: ACS CHECKED: MAR	DESIGN ENGINEER _____ DATE _____ DRAWN: TAM CHECKED: MAR	INDIANA DEPARTMENT OF TRANSPORTATION		HORIZONTAL SCALE	BRIDGE FILE
		BEAM DETAILS		NOT TO SCALE	13-00043 B
				VERTICAL SCALE	DESIGNATION
		NOT TO SCALE	1400825	SURVEY BOOK	SHEET
				ELECTRONIC	44 of 62
				CONTRACT	PROJECT
				B-37711	1400825



PLAN
SCALE: 3/16" = 1'-0"



BRIDGE TYPICAL SECTION
SCALE: 3/8" = 1'-0"

NOTES:

1. The top reinforcing in the deck shall be securely tied down to the deck forms and/or beams to prevent lifting during concrete placement.

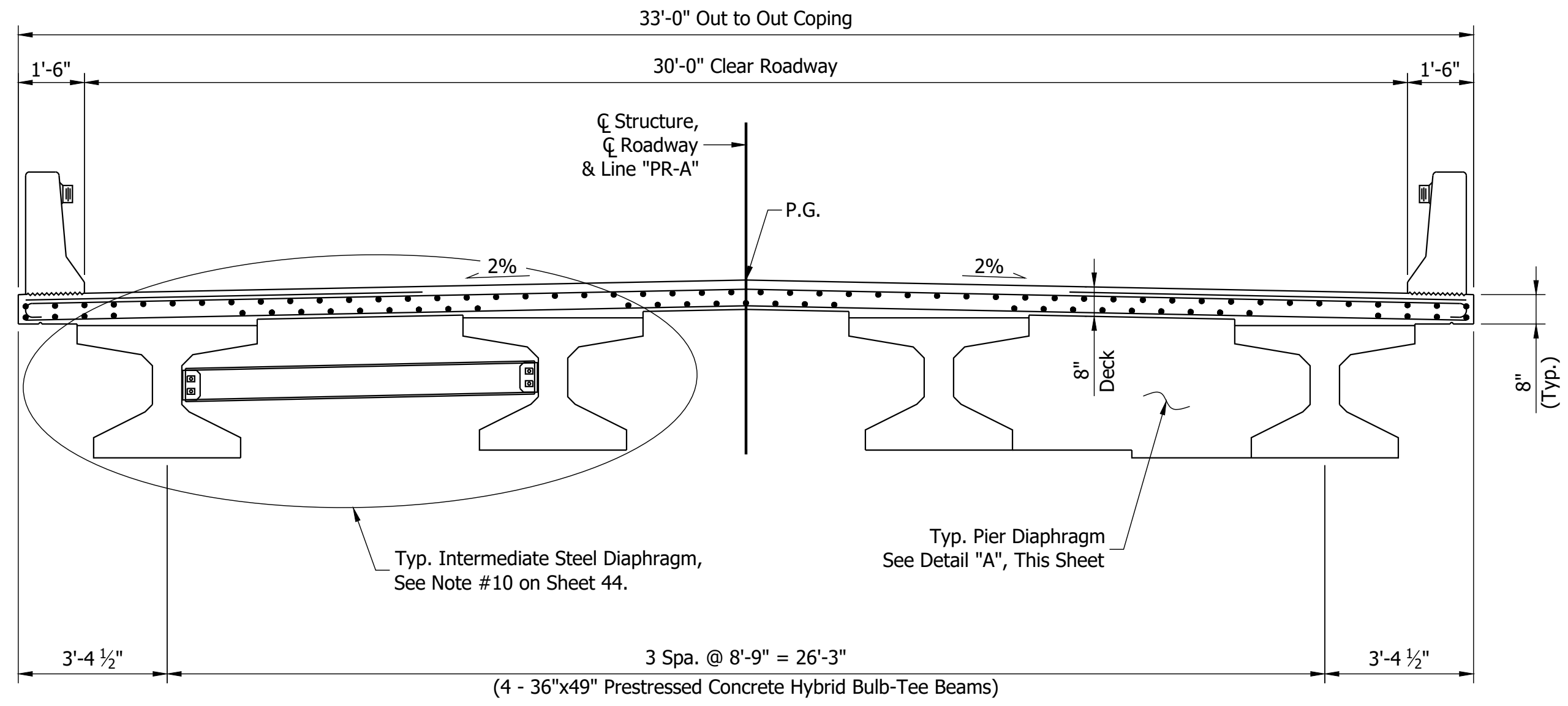
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RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: G CJ	DRAWN: V CH	
CHECKED: A CS	CHECKED: M AR	

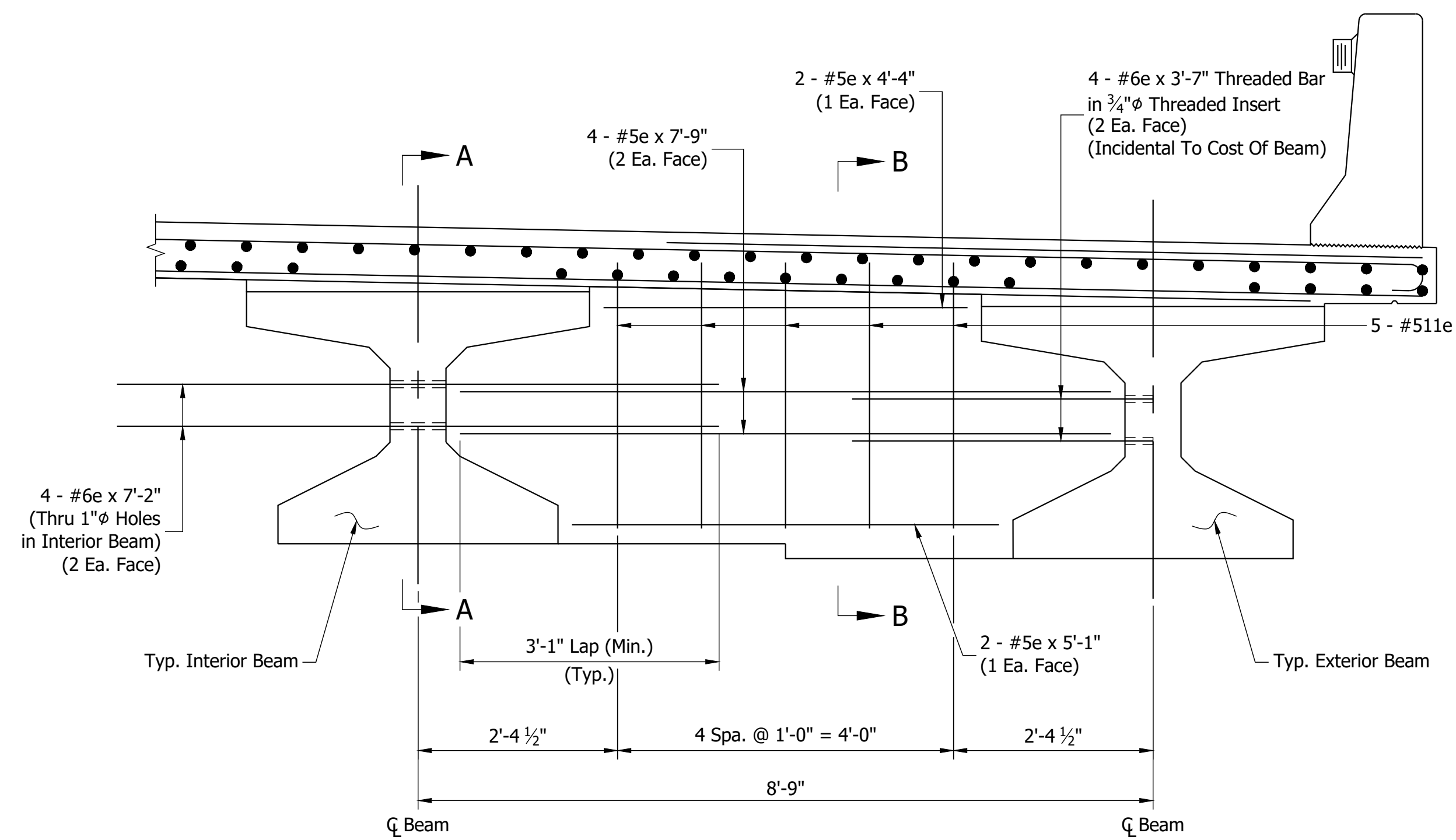
INDIANA DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS

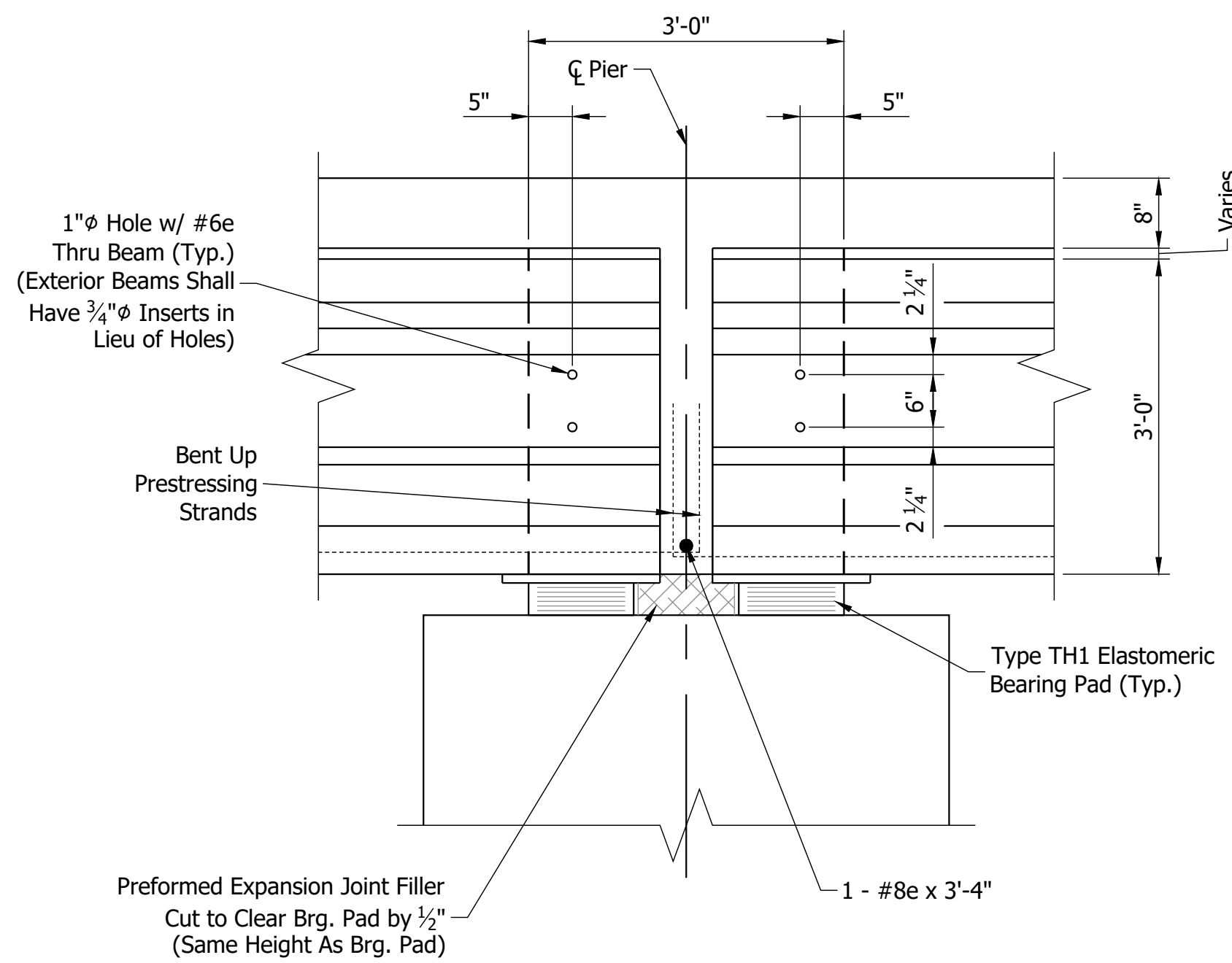
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VERTICAL SCALE AS SHOWN	DESIGNATION 1400825
SURVEY BOOK ELECTRONIC	SHEET 45 of 62
CONTRACT B-37711	PROJECT 1400825



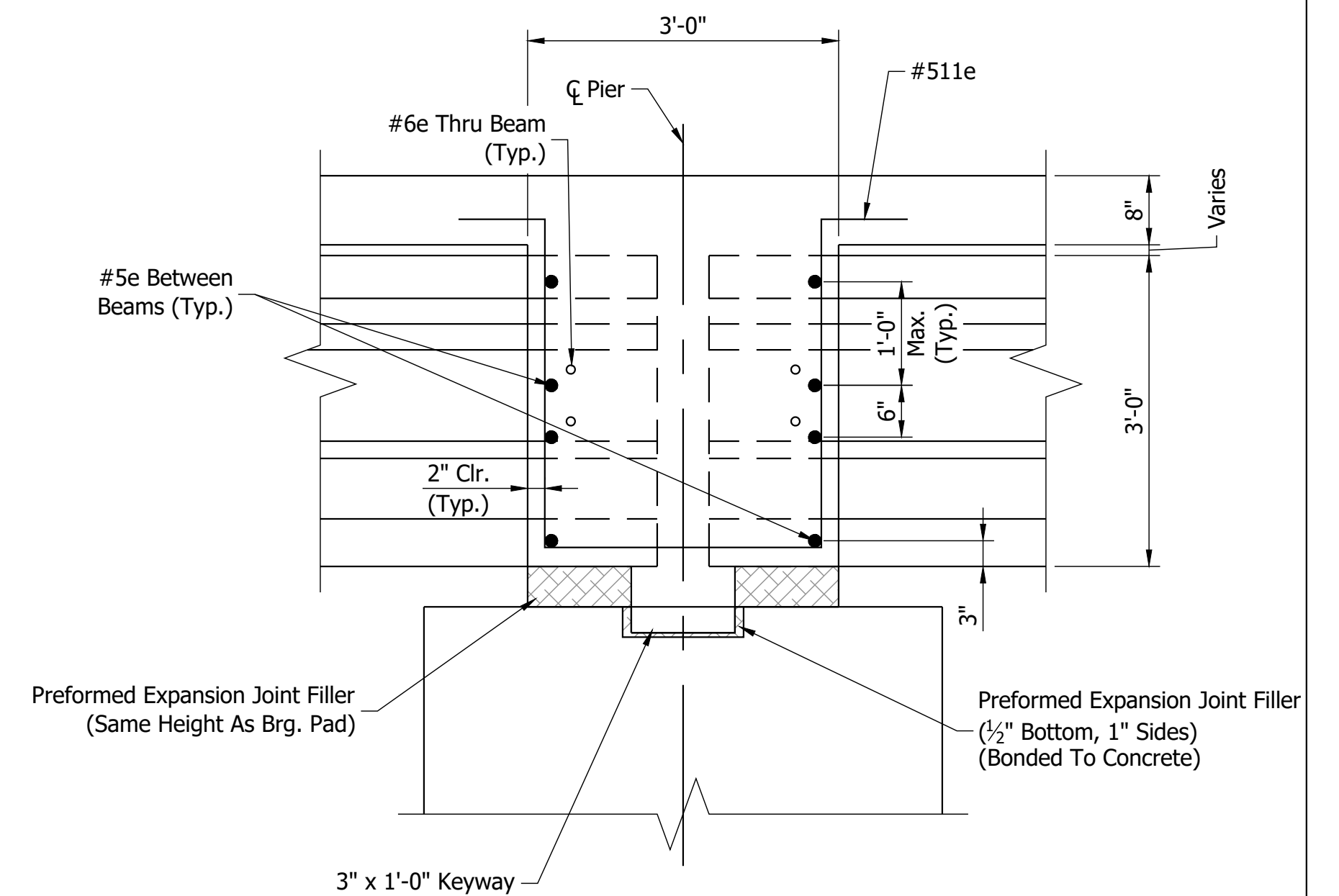
BRIDGE TYPICAL SECTION
SCALE: 3/8" = 1'-0"



DETAIL "A"
(TYPICAL 6 PLACES)
SCALE: 3/4" = 1'-0"



SECTION A-A
(TYPICAL 8 PLACES)
SCALE: 3/4" = 1'-0"



SECTION B-B
SCALE: 3/4" = 1'-0"

NOTES:

1. For Type TH1 Elastomeric Bearing Pad Details, see INDOT Std. Drwg. 726-BEBP-03.
2. For Intermediate Steel Diaphragm Details, see Sheet 44.

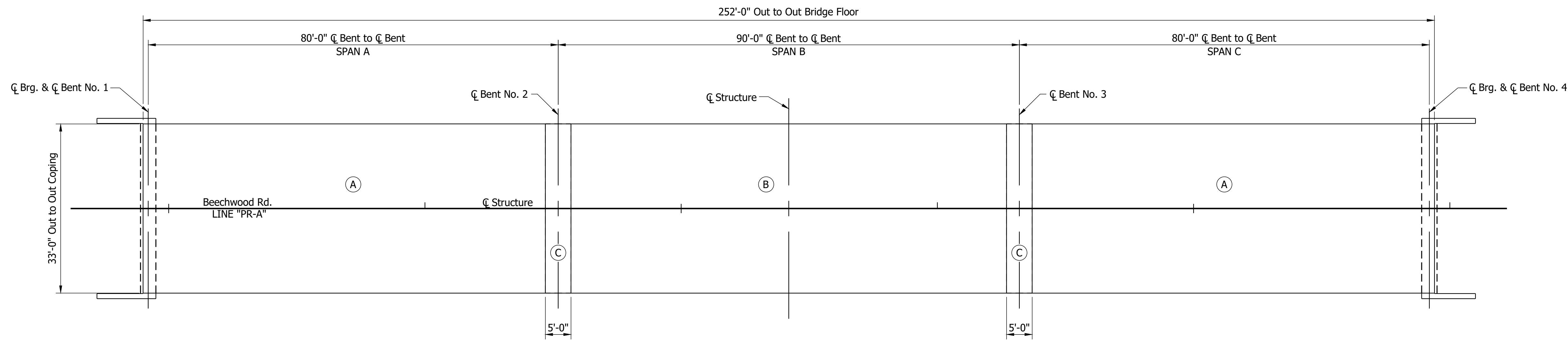
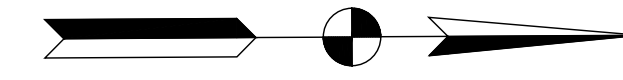
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RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: G CJ	DRAWN: V CH	
CHECKED: A CS	CHECKED: M AR	

INDIANA
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS SHOWN	13-00043 B
VERTICAL SCALE	DESIGNATION
AS SHOWN	1400825
SURVEY BOOK	SHEET
ELECTRONIC	46 of 62
CONTRACT	PROJECT
B-37711	1400825

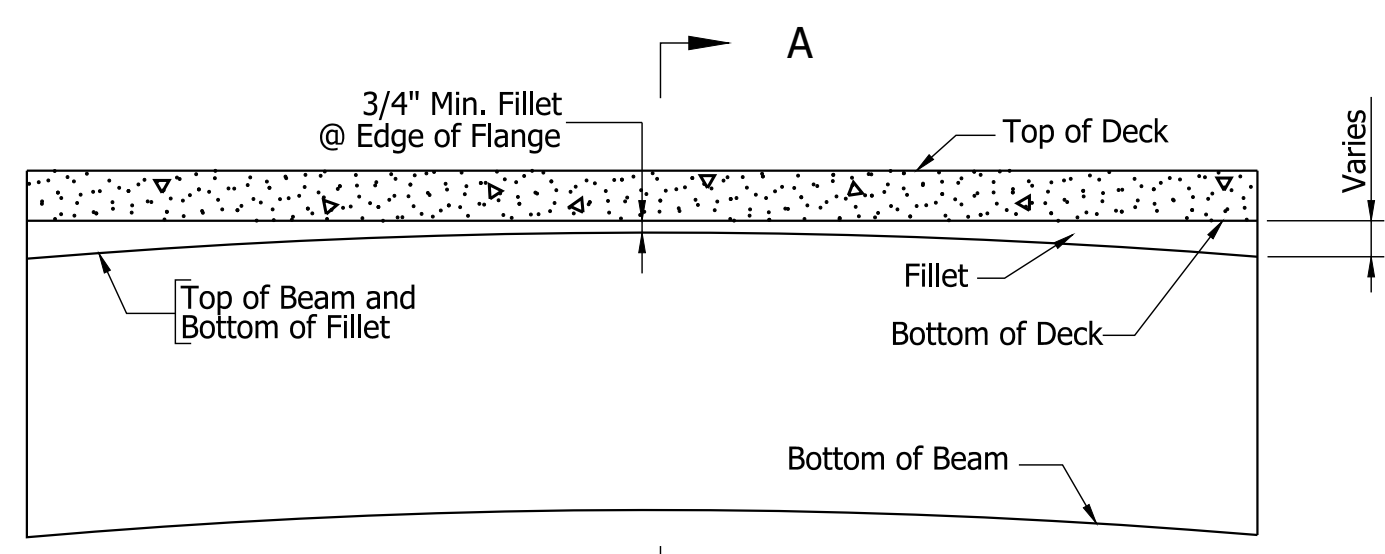


POUR DIAGRAM
 Pour letters indicate sequence of pours. Pours over interior supports shall be made last to reduce the effect of the deck dead load in the negative moment area. Pour C will include the diaphragms at the supports and shall be held to a 5'-0" length. Intermediate Steel Diaphragms shall be placed before deck is poured. All pour sequences and procedures shall be submitted in accordance with Section 704.04 of the Standard Specifications.

As an alternate, the contractor may elect to pour the deck and diaphragms as one continuous pour from one end to the other. This will be allowed provided the following criteria is met:
 - The minimum required pour rate shall be 27.5 cys/hour.
 - Each span (deck + prior pier diaphragm shall be completed with 3 1/2 hours from the time the concrete within that span is discharged.

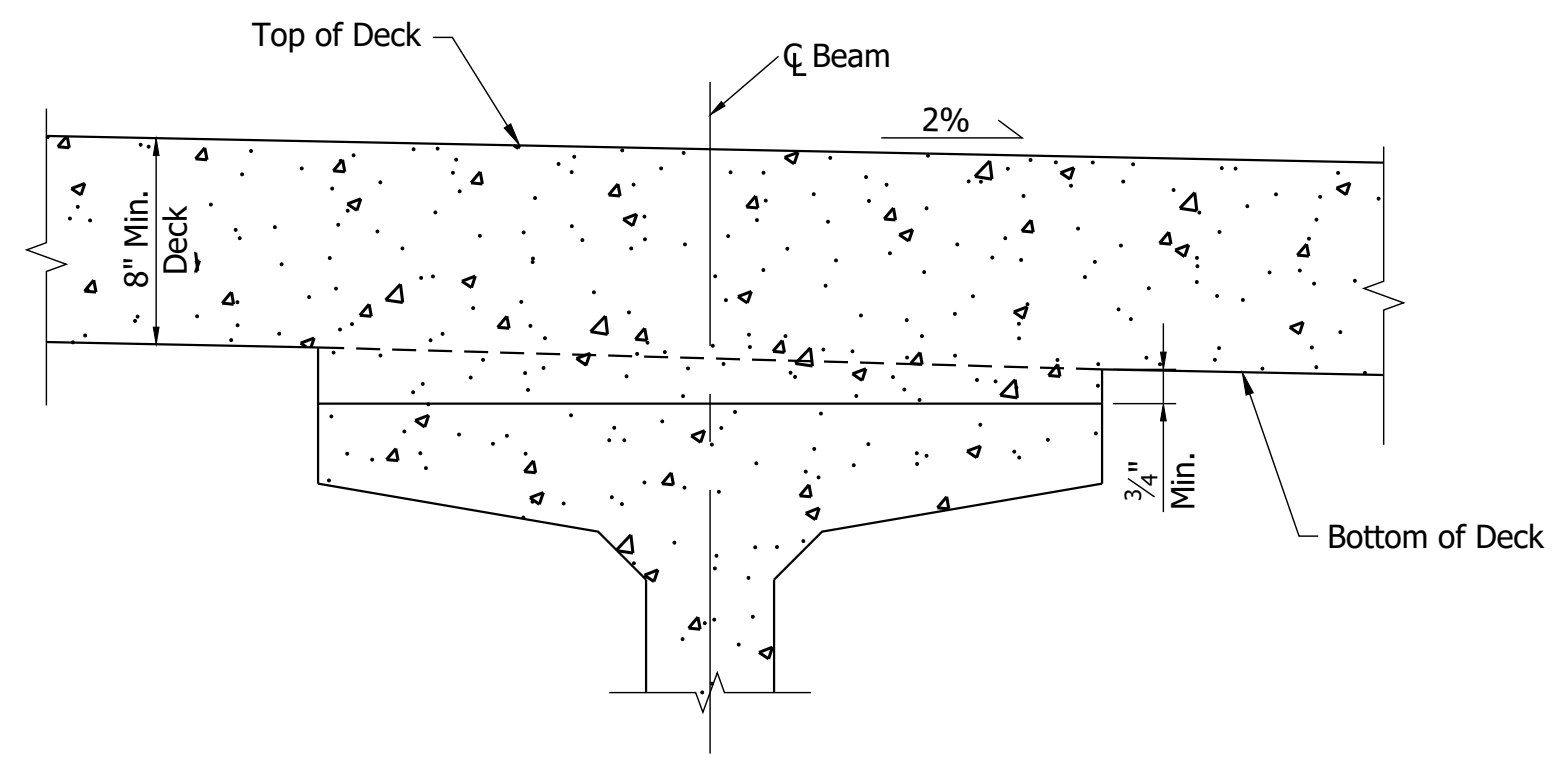
BILL OF MATERIALS			
SUPERSTRUCTURE			
REINFORCING STEEL			
SIZE & MARK	NO. OF BARS	LENGTH	WEIGHT (LB.)
EPOXY COATED REINFORCING STEEL			
#8e	8	3'-4"	
TOTAL #8e BARS:			72
#7e	350	39'-10"	
#7e	98	23'-10"	
TOTAL #7e BARS:			33271
#6e	370	32'-8"	
#6e	16	7'-2"	
TOTAL #6e BARS:			18327
#511e	30	10'-8"	
#510e	370	33'-10"	
#5e	245	38'-7"	
#5e	24	7'-9"	
#5e	12	5'-1"	
#5e	12	4'-4"	
TOTAL #5e BARS:			23563
#4e	742	9'-0"	
TOTAL #4e BARS:			4461
TOTAL EPOXY COATED REINFORCING			79694
CONCRETE			
Concrete, C, Superstructure			
* Pour A			170.0 CYS
Pour B			77.6 CYS
** Pour C			25.8 CYS
TOTAL			273.4 CYS
MISCELLANEOUS			
Str. Members, Conc. Bulb-Tee 36x49			1000 LFT
Longitudinal Grooving			840 SYS

* Including End Bent Diaphragms & Wingwalls.
 ** Including Interior Bent Diaphragms.

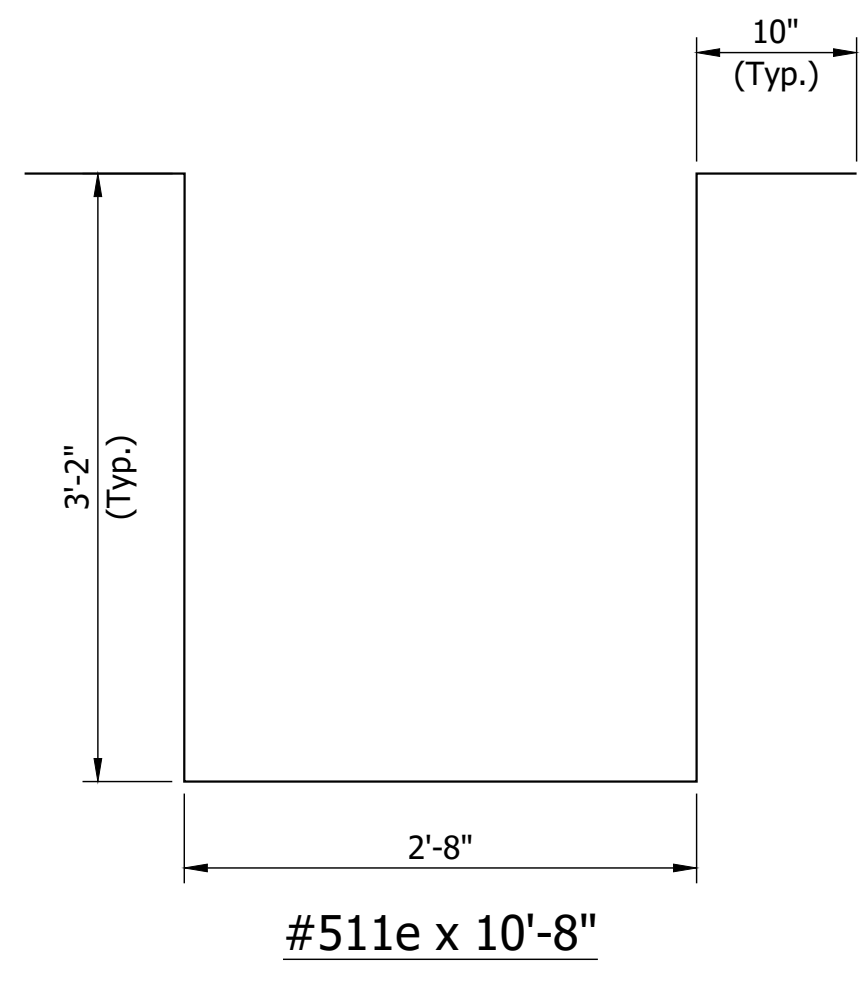
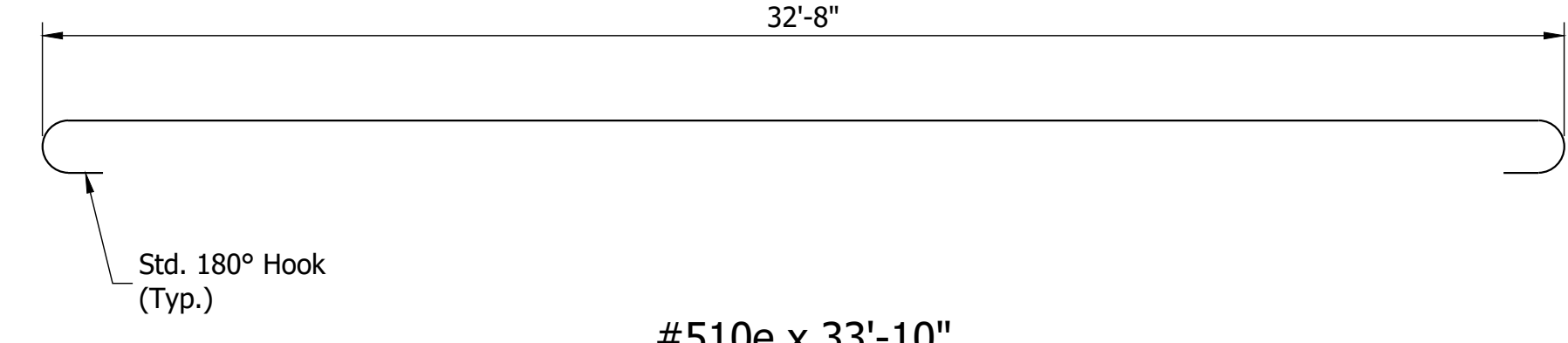


ELEVATION ALONG C BEAM

Beam Seat Elevations Were Calculated Using Residual Beam Camber (Design Camber and Dead Load deflection of Deck) With The Top of Beam 3/4" Below The Bottom of Deck Elevation At The Centerline of Span.



SECTION A-A
 FILLET DETAILS
 NOT TO SCALE



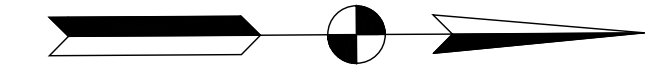
NOTES:
 1. For Reinforcing Steel Details, see INDOT Std. Drwg. 703-BRST-01.

Date: Nov 18, 2022, 3:22pm User Name: Vaughn
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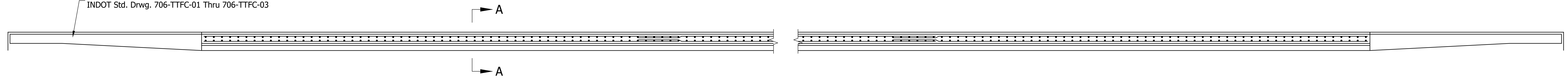
RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: G CJ	DRAWN: V CH	
CHECKED: ACS	CHECKED: MAR	

INDIANA
 DEPARTMENT OF TRANSPORTATION
 SUPERSTRUCTURE DETAILS

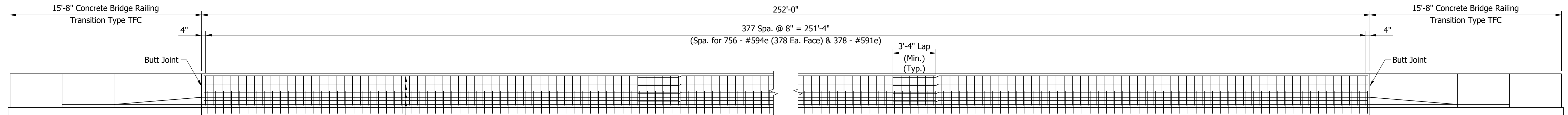
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NOT TO SCALE	13-00043 B
VERTICAL SCALE	DESIGNATION
NOT TO SCALE	1400825
SURVEY BOOK	SHEET
ELECTRONIC	47 of 62
CONTRACT	PROJECT
B-37711	1400825



For Concrete Bridge Railing Transition TFC See
INDOT Std. Drwg. 706-TTFC-01 Thru 706-TTFC-03



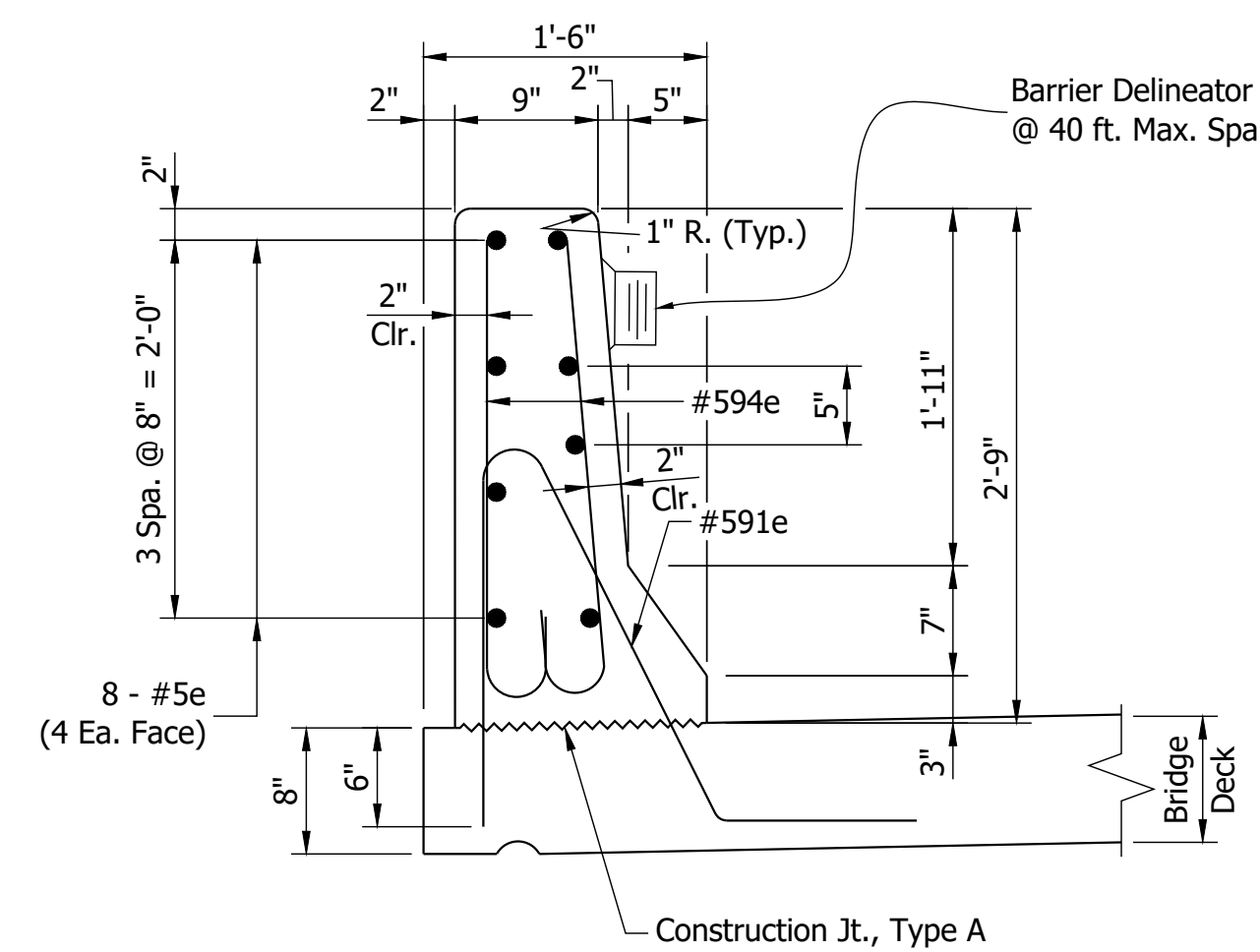
PLAN
(LEFT BARRIER RAIL SHOWN, RIGHT BARRIER RAIL SIMILAR)
SCALE: 1/4" = 1'-0"



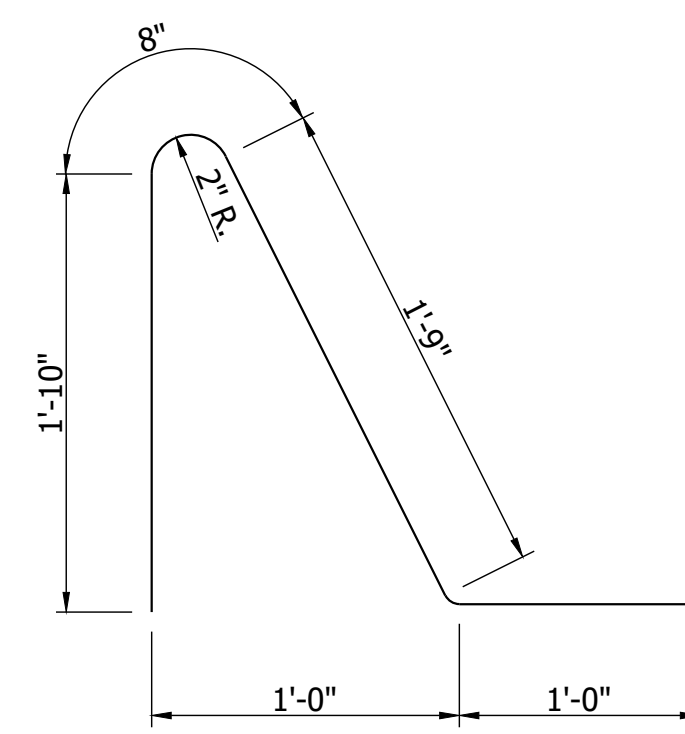
ELEVATION
(LEFT BARRIER RAIL SHOWN, RIGHT BARRIER RAIL SIMILAR)
SCALE: 1/4" = 1'-0"

8 - #5e x 38'-10"
(4 Ea. Face)
(7 Lengths)

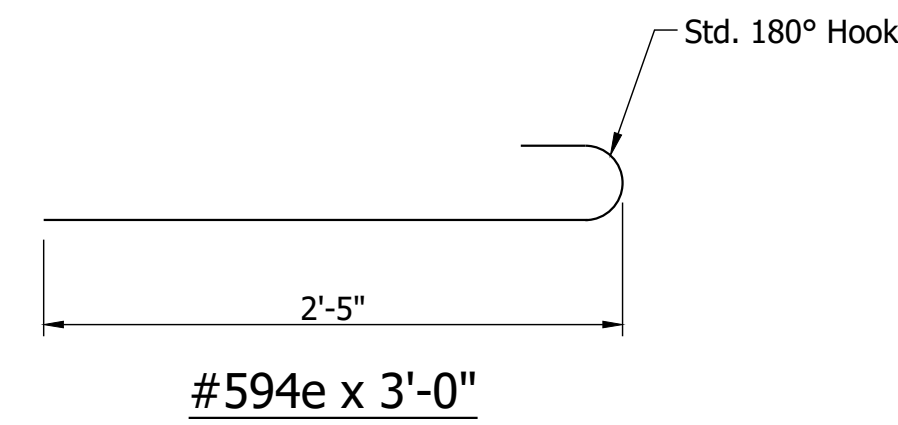
- NOTES:**
- #591e To Be Cast With Deck.
 - For Additional Details See INDOT Std. Drwg. 706-BRSF-01 & 706-BRSF-02.



SECTION A-A
SCALE: 1"=1'-0"



#591e x 5'-6"



#594e x 3'-0"

BILL OF MATERIALS			
CONCRETE BARRIER RAIL (2 REQUIRED)			
REINFORCING STEEL			
SIZE & MARK	NO. OF BARS	LENGTH	WEIGHT (LB)
EPOXY COATED REINFORCING STEEL			
#594e	756	3'-0"	
#591e	378	5'-6"	
#5e	56	38'-10"	
TOTAL #5e BARS:			6803
BRIDGE RAILING TRANSITION TYPE TFC			1102
TOTAL EPOXY COATED REINFORCING STEEL			7905
CONCRETE			
Railing, Concrete, FC			24.1 CYS
MISCELLANEOUS			
Conc. Bridge Rail Trans. Type TFC			2 EACH *
Surface Seal			1801 SFT
Barrier Delineators			8 EACH

* See INDOT Standard Drawing 706-TTFC-03 for Bill of Materials for Concrete Bridge Railing Transition Type TFC.

Date: Nov 18, 2022, 3:22pm User Name: Vaughn
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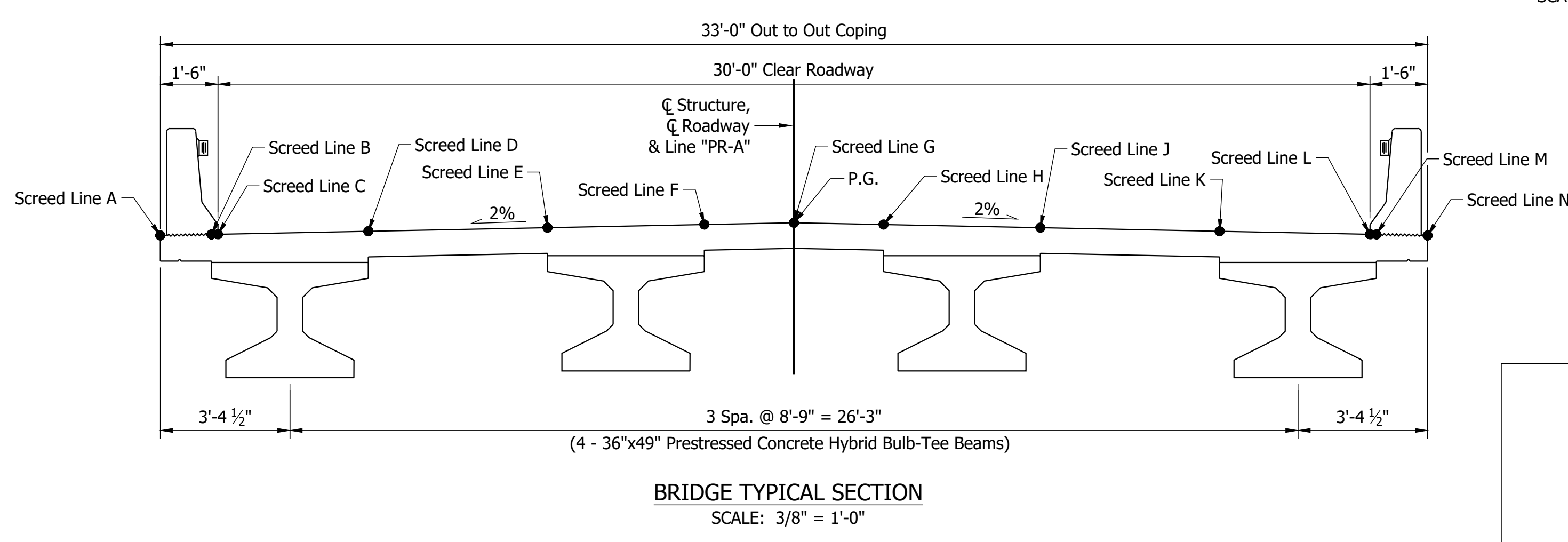
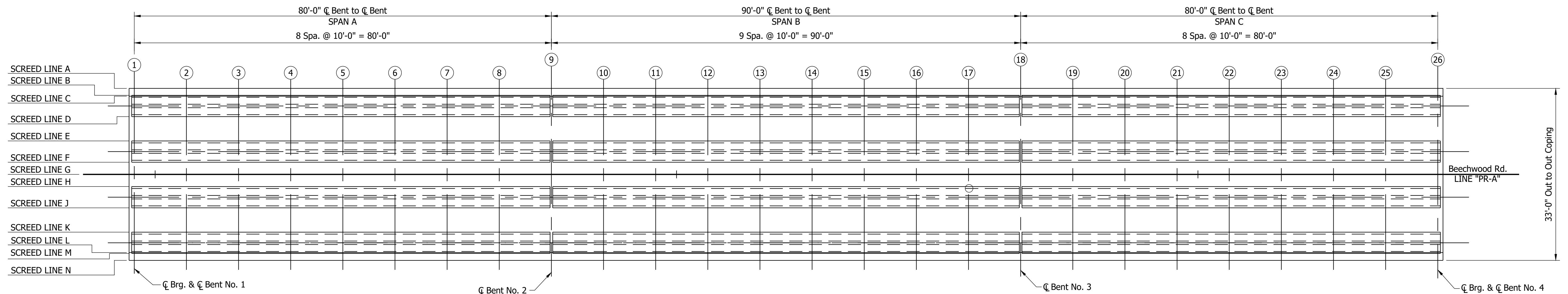
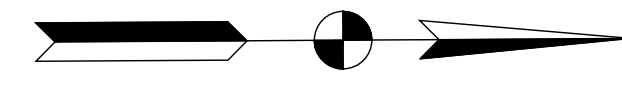
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: G CJ	DRAWN: V CH	
CHECKED: A CS	CHECKED: M AR	

INDIANA
DEPARTMENT OF TRANSPORTATION

CONCRETE BARRIER RAIL

HORIZONTAL SCALE	BRIDGE FILE
AS SHOWN	13-00043 B
VERTICAL SCALE	DESIGNATION
AS SHOWN	1400825
SURVEY BOOK	SHEET
ELECTRONIC	48 of 62
CONTRACT	PROJECT
B-37711	1400825

		TABLE OF SCREED ELEVATIONS																												
		POINT:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26		
SCREED LINE	A	Lt. Coping	ELEVATION - TOP OF SCREED	431.495	431.105	430.710	430.300	429.880	429.445	428.995	428.540	428.080	427.695	427.315	426.920	426.510	426.080	425.640	425.180	424.710	424.240	423.845	423.445	423.040	422.620	422.190	421.745	421.290	420.870	
			ELEVATION - TOP OF BEAM																											
			DISTANCE - TOP OF BEAM TO TOP OF SCREED																											
	B	Beam 1 Lt. Edge	ELEVATION - TOP OF SCREED	431.520	431.130	430.735	430.325	429.905	429.470	429.025	428.565	428.105	427.725	427.340	426.945	426.535	426.110	425.665	425.205	424.735	424.265	423.870	423.475	423.070	422.650	422.215	421.770	421.315	420.895	
			ELEVATION - TOP OF BEAM																											
			DISTANCE - TOP OF BEAM TO TOP OF SCREED																											
	C	Lt. Curb Line	ELEVATION - TOP OF SCREED	431.525	431.135	430.740	430.330	429.910	429.475	429.025	428.570	428.110	427.725	427.345	426.950	426.540	426.110	425.670	425.210	424.740	424.270	423.875	423.475	423.070	422.650	422.220	421.775	421.320	420.900	
			ELEVATION - TOP OF BEAM																											
			DISTANCE - TOP OF BEAM TO TOP OF SCREED																											
	D	Beam 1 Rt. Edge	ELEVATION - TOP OF SCREED	431.605	431.215	430.815	430.410	429.990	429.555	429.105	428.645	428.190	427.805	427.420	427.025	426.615	426.190	425.745	425.285	424.815	424.345	423.950	423.555	423.150	422.730	422.300	421.850	421.395	420.980	
			ELEVATION - TOP OF BEAM																											
			DISTANCE - TOP OF BEAM TO TOP OF SCREED																											
	E	Beam 2 Lt. Edge	ELEVATION - TOP OF SCREED	431.695	431.310	430.915	430.510	430.090	429.655	429.205	428.745	428.280	427.905	427.525	427.130	426.725	426.295	425.850	425.390	424.915	424.440	424.050	423.655	423.250	422.830	422.400	421.950	421.495	421.070	
			ELEVATION - TOP OF BEAM																											
			DISTANCE - TOP OF BEAM TO TOP OF SCREED																											
	F	Beam 2 Rt. Edge	ELEVATION - TOP OF SCREED	431.780	431.390	430.995	430.590	430.170	429.735	429.285	428.825	428.365	427.985	427.605	427.215	426.805	426.380	425.935	425.470	424.995	424.520	424.130	423.735	423.330	422.915	422.480	422.035	421.575	421.155	
		ELEVATION - TOP OF BEAM																												
		DISTANCE - TOP OF BEAM TO TOP OF SCREED																												
G	Line "PR-A"	ELEVATION - TOP OF SCREED	431.825	431.440	431.045	430.640	430.220	429.780	429.335	428.870	428.410	428.030	427.650	427.260	426.850	426.425	425.980	425.520	425.045	424.570	424.175	423.785	423.380	422.960	422.525	422.080	421.620	421.200		
		ELEVATION - TOP OF BEAM																												
		DISTANCE - TOP OF BEAM TO TOP OF SCREED																												
H	Beam 3 Lt. Edge	ELEVATION - TOP OF SCREED	431.780	431.390	430.995	430.590	430.170	429.735	429.285	428.825	428.365	427.985	427.605	427.215	426.805	426.380	425.935	425.470	424.995	424.520	424.130	423.735	423.330	422.915	422.480	422.035	421.575	421.155		
		ELEVATION - TOP OF BEAM																												
		DISTANCE - TOP OF BEAM TO TOP OF SCREED																												
J	Beam 3 Rt. Edge	ELEVATION - TOP OF SCREED	431.695	431.310	430.915	430.510	430.090	429.655	429.205	428.745	428.280	427.905	427.525	427.130	426.725	426.295	425.850	425.390	424.915	424.440	424.050	423.655	423.250	422.830	422.400	421.950	421.495	421.070		
		ELEVATION - TOP OF BEAM																												
		DISTANCE - TOP OF BEAM TO TOP OF SCREED																												
K	Beam 4 Lt. Edge	ELEVATION - TOP OF SCREED	431.605	431.215	430.815	430.410	429.990	429.555	429.105	428.645	428.190	427.805	427.420	427.025	426.615	426.190	425.745	425.285	424.815	424.345	423.950	423.555	423.150	422.730	422.300	421.850	421.395	420.980		
		ELEVATION - TOP OF BEAM																												
		DISTANCE - TOP OF BEAM TO TOP OF SCREED																												
L	Rt. Curb Line	ELEVATION - TOP OF SCREED	431.525	431.135	430.740	430.330	429.910	429.475	429.025	428.570	428.110	427.725	427.345	426.950	426.540	426.110	425.670	425.210	424.740	424.270	423.875	423.475	423.070	422.650	422.220	421.775	421.320	420.900		
		ELEVATION - TOP OF BEAM																												
		DISTANCE - TOP OF BEAM TO TOP OF SCREED																												
M	Beam 4 Rt. Edge	ELEVATION - TOP OF SCREED	431.520	431.130	430.735	430.325	429.905	429.470	429.025	428.565	428.105	427.725	427.340	426.945	426.535	426.110	425.665	425.205	424.735	424.265	423.870	423.475	423.070	422.650	422.215	421.770	421.315	420.895		
		ELEVATION - TOP OF BEAM																												
		DISTANCE - TOP OF BEAM TO TOP OF SCREED																												
N	Rt. Coping	ELEVATION - TOP OF SCREED	431.495	431.105	430.710	430.300	429.880	429.445	428.995	428.540	428.080	427.695	427.315	426.920	426.510	426.080	425.640	425.180	424.710	424.240	423.845	423.445	423.040	422.620	422.190	421.745	421.290	420.870		
		ELEVATION - TOP OF BEAM																												
		DISTANCE - TOP OF BEAM TO TOP OF SCREED																												



NOTE:
1. For Dead Load Deflection Diagram, see Sheet 44.

PURPOSE

Plan and Bridge Typical Section on this sheet show locations of screeds. "Table of Screed Elevations" shows data for setting screeds at these locations, and elevations after all the concrete has been poured.

SCREED NOTES

- After the beams are set, take elevations at all the screed points on top of beams. Enter these elevations in the table. Subtract these elevations from tabulated elevations and use the resulting dimensions as the height for setting the screed forms above these points. These dimensions remain constant regardless of how much or in what order the concrete is poured.
- Do not set screed forms by leveling.
- No concrete in the deck is to be poured until the above operations are complete.
- Screed elevations as shown in the table include an allowance for concrete dead load deflections.

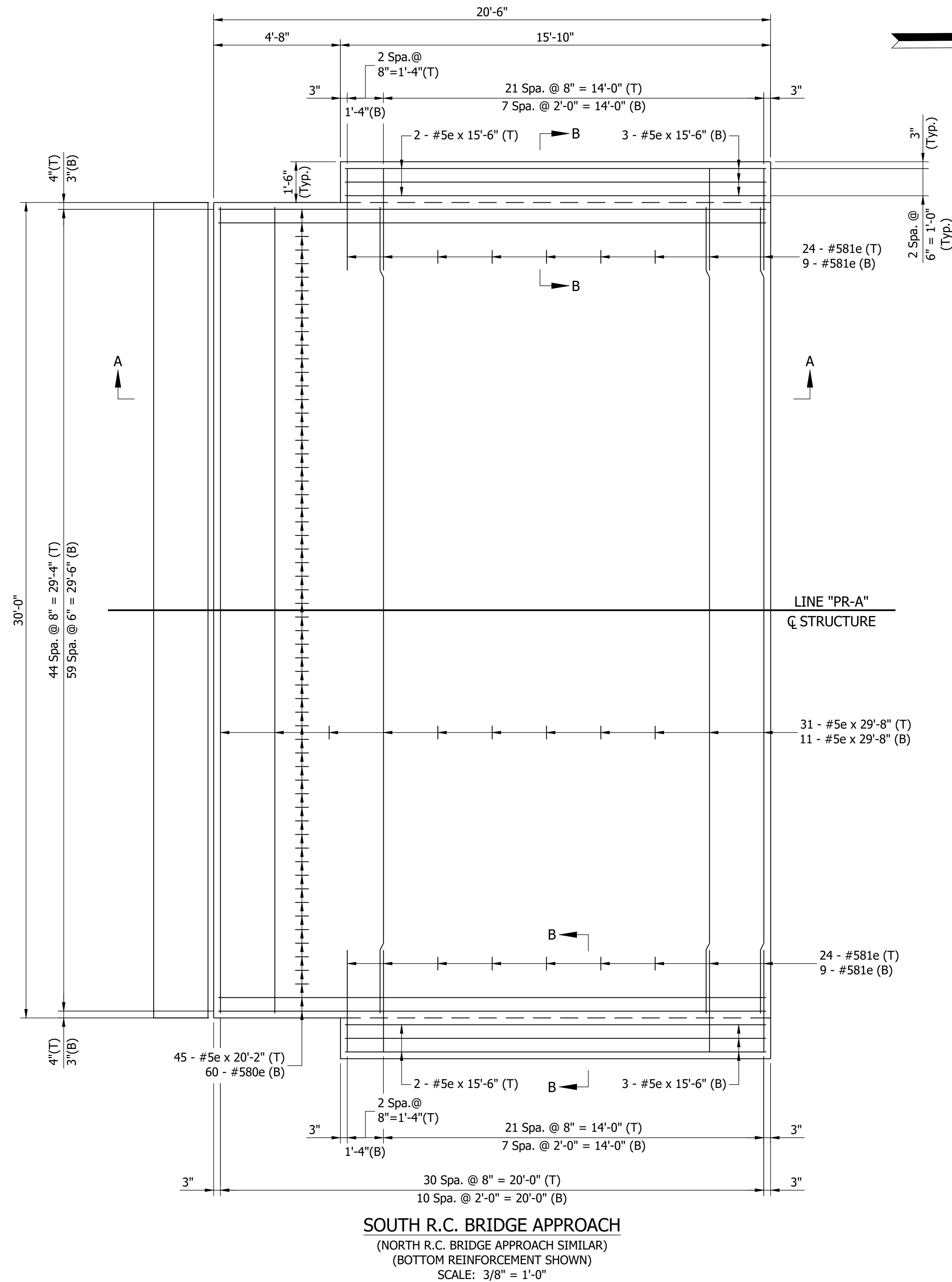
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: G CJ	DRAWN: TAM	
CHECKED: ACS	CHECKED: MAR	

INDIANA
DEPARTMENT OF TRANSPORTATION

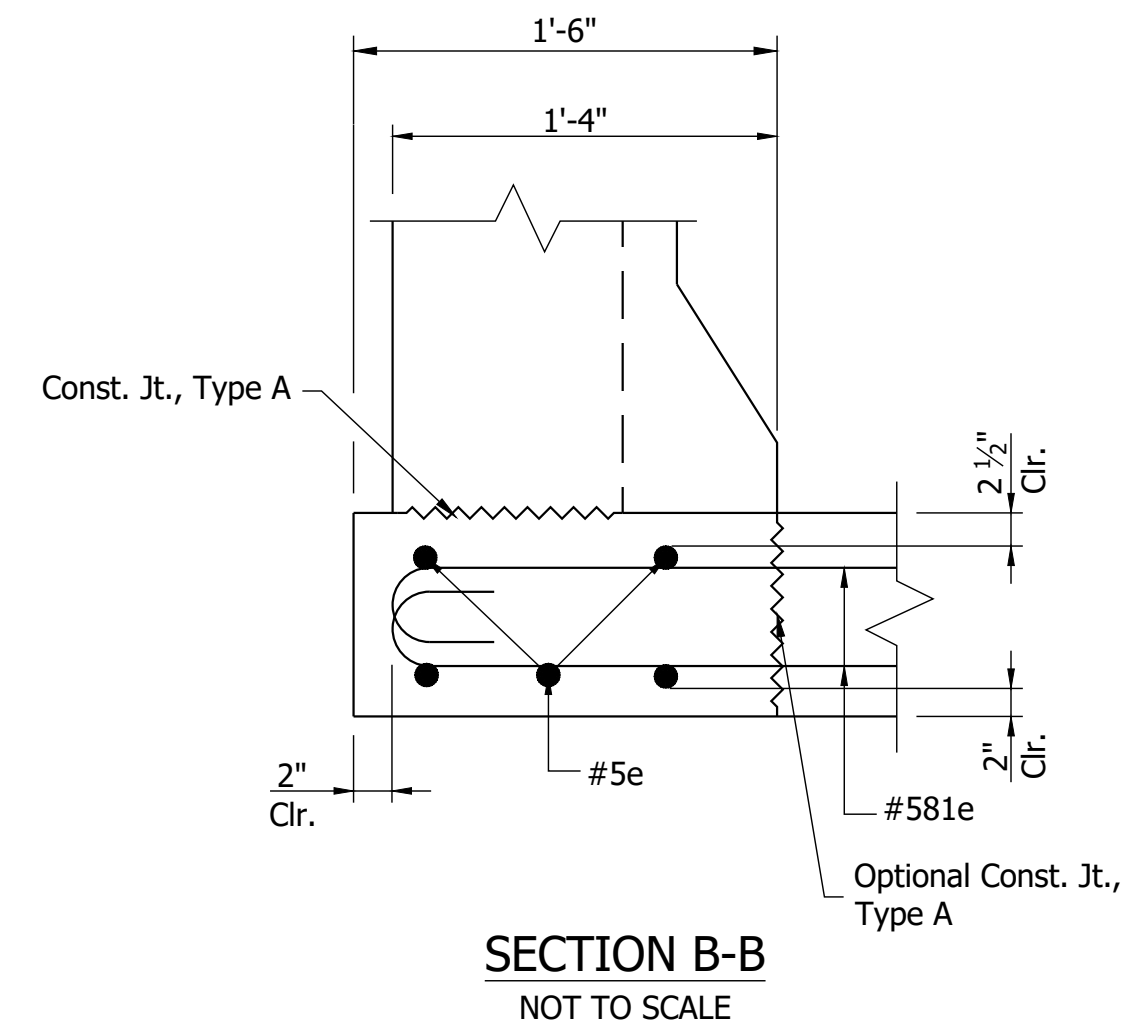
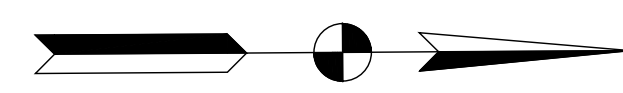
SCREEDS

HORIZONTAL SCALE	BRIDGE FILE
AS SHOWN	13-00043 B
VERTICAL SCALE	DESIGNATION
AS SHOWN	1400825
SURVEY BOOK	SHEET
ELECTRONIC	49 of 62
CONTRACT	PROJECT
B-37711	1400825

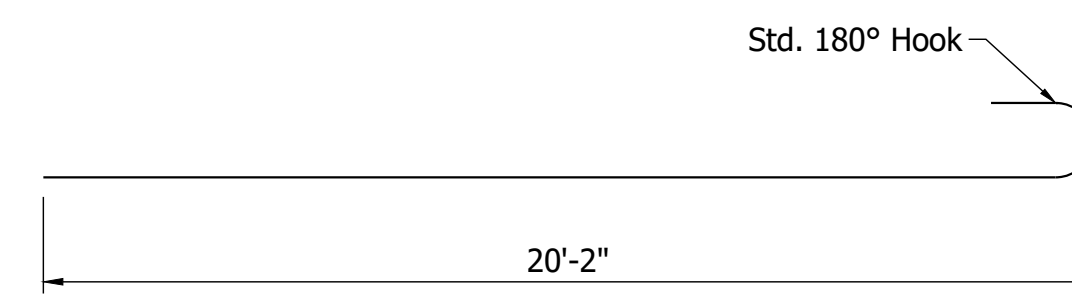
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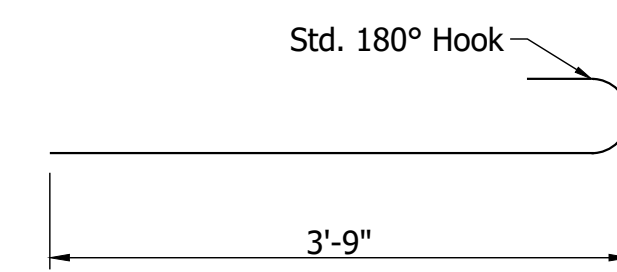
SOUTH R.C. BRIDGE APPROACH
 (NORTH R.C. BRIDGE APPROACH SIMILAR)
 (BOTTOM REINFORCEMENT SHOWN)
 SCALE: 3/8" = 1'-0"



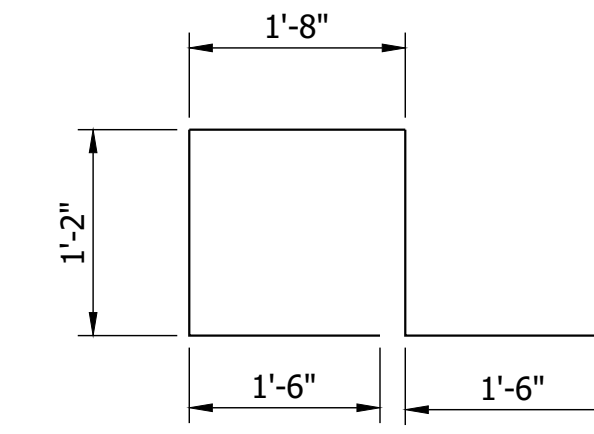
SECTION B-B
 NOT TO SCALE



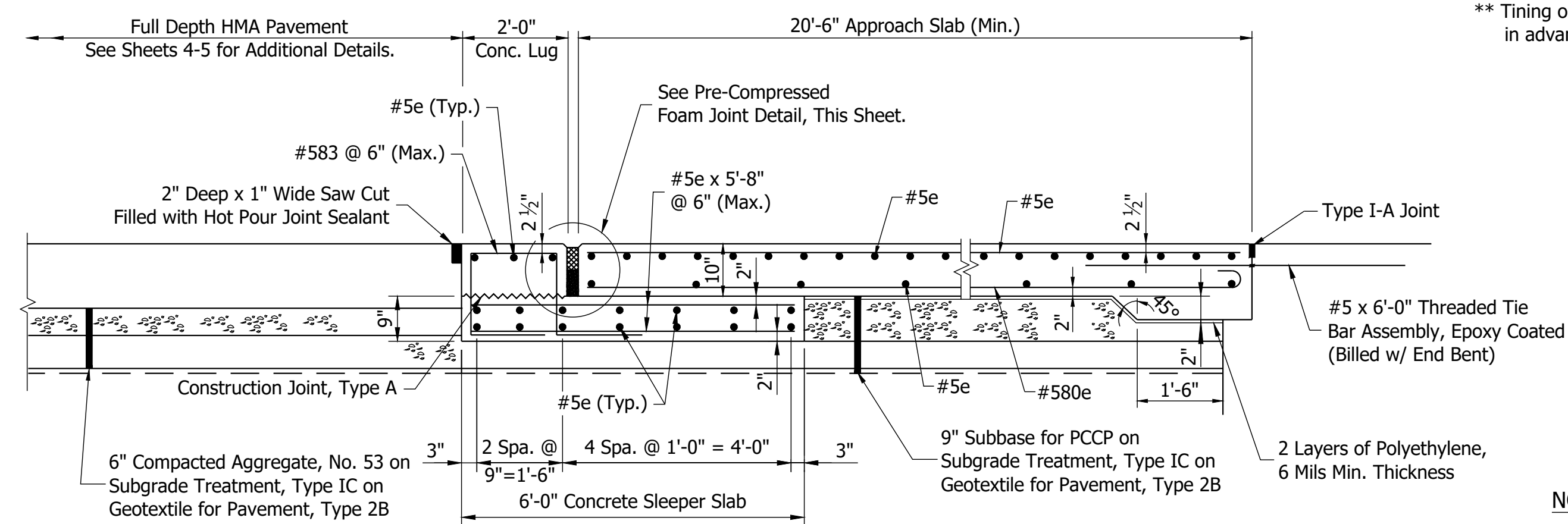
#580e x 20'-9"



#581e x 4'-4"

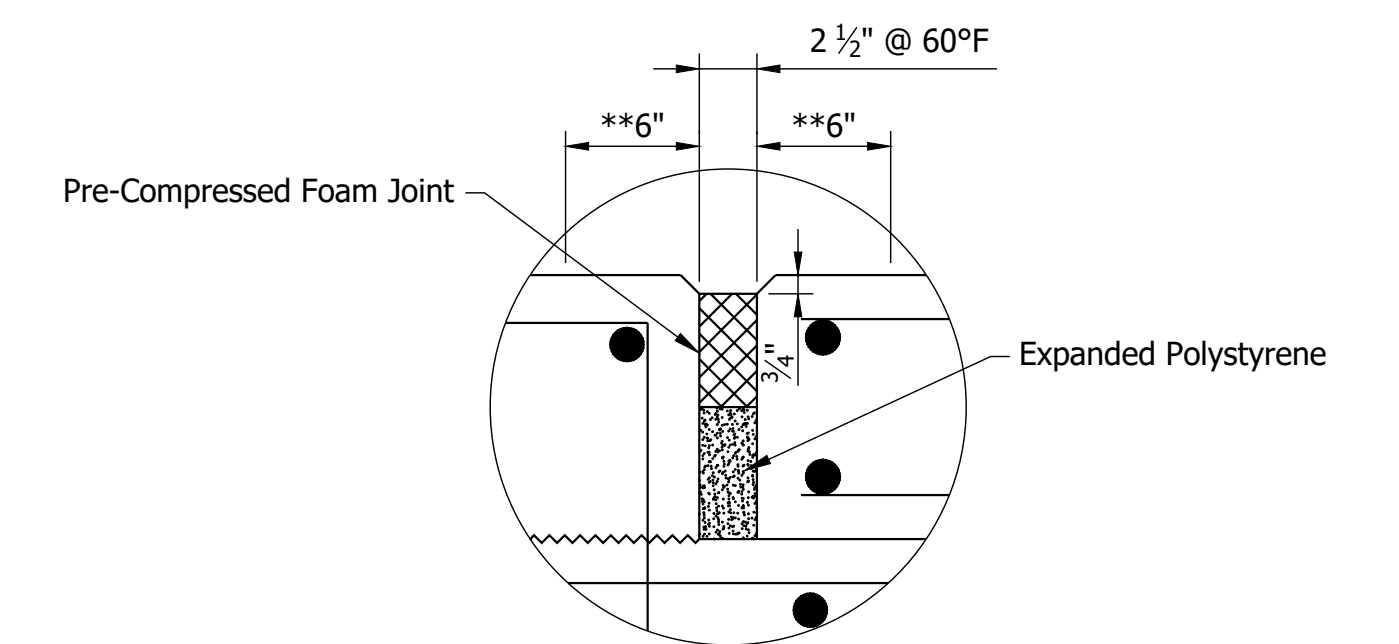


#583 x 7'-0"



SECTION A-A
 NOT TO SCALE

BILL OF MATERIALS			
R.C. BRIDGE APPROACH (2 REQUIRED)			
REINFORCING STEEL			
SIZE & MARK	NO. OF BARS	LENGTH	WEIGHT (LB)
EPOXY COATED REINFORCING STEEL			
#581e	66	4'-4"	
#580e	60	20'-9"	
#5e	42	29'-8"	
#5e	45	20'-2"	
#5e	10	15'-6"	
TOTAL #5e BARS:			4007
TOTAL EPOXY COATED REINFORCING STEEL			4007
CONCRETE			
Reinforced Concrete Bridge Approach, 10 in.			74 SYS
MISCELLANEOUS			
Subbase for PCCP			15 CYS
Subgrade Treatment, Type IC			80 SYS
Geotextile for Pavement, Type 2B			80 SYS
Terminal Joint, Type HMA			30 LFT
Longitudinal Grooving			68.5 SYS



PRE-COMPRESSED FOAM JOINT DETAIL
 NOT TO SCALE

** Tining or grooving of the concrete shall be terminated 6 in. in advance of the joint opening.

LEGEND

T - Denotes Top Mat of Reinforcing Steel
 B - Denotes Bottom Mat of Reinforcing Steel

NOTES:

- For Type I-A Joint Details, see INDOT Std. Drwg. 609-BRJT-01.
- For Reinforcing Steel Details, see INDOT Std. Drwg. 703-BRST-01.
- The width of concrete sleeper slab shall match width of reinforced concrete bridge approach slab.

RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____ DATE _____	INDIANA DEPARTMENT OF TRANSPORTATION		HORIZONTAL SCALE	BRIDGE FILE
				AS SHOWN	13-00043 B
DESIGNED: G CJ	DRAWN: V CH	R.C. BRIDGE APPROACH		VERTICAL SCALE	DESIGNATION
				AS SHOWN	1400825
CHECKED: ACS	CHECKED: MAR			SURVEY BOOK	SHEET
				ELECTRONIC	50 of 62
				CONTRACT	PROJECT
				B-37711	1400825

SUMMARY OF BRIDGE QUANTITIES

ITEM	CONCRETE			GEOTEXTILE FOR PAVEMENT, TYPE 2B	RAILING, CONC., FC	BARRIER DELINEATORS	REINF. STEEL, EPOXY COATED	REINF. STEEL, PLAIN	SUBBASE FOR PCCP	CONCRETE BRIDGE RAIL TRANS., TYPE TFC	REINF. CONC. BRIDGE APPROACH 10 IN.	SUBGRADE TREATMENT, TYPE IC	THREADED TIE BAR ASSEMBLY, E.C.	THREADED TIE BAR ASSEMBLY	TERMINAL JOINT, TYPE HMA	CONC. STR. MEMBERS BULD-TEE (36x49)	PILES				LONGITUDINAL GROOVING	DRILLED SHAFT EXPLORATORY CORE	DRILLED SHAFT PERMANENT CASING	DRILLED SHAFT 60 IN. DIA.	DRILLED SHAFT 54 IN. DIA.	GEOTEXTILE FOR RIPRAP, TYPE 1A	RIPRAP, REVETMENT	SODDING	RIPRAP, CLASS 1	GEOTEXTILE FOR UNDERDRAIN, TYPE 1A	AGGREGATE FOR END BENT BACKFILL	PIPE, END BENT DRAIN, 6 IN.	SURFACE SEAL **
	CLASS C SUPERSTR	CLASS C SUBSTR	CLASS A SUBSTR														PILE SHOE, HP 12x84	STEEL HP, 12x84	CORED HOLE IN ROCK, 24 IN.	TEST PILE, DYNAMIC, PRODUCTION													
	CYS	CYS	CYS														EACH	LFT	LFT	LFT													
BENT #1		14.2					3697						17				6	108	24						499			438	51	18	58		
BENT #2			77.9					20274						96							45	20	20	14									
BENT #3			73.3					19004						96							45	100	100	14									
BENT #4		14.0					3635						17				6	456							582	41	26	455	49	17	56		
SUPERSTRUCTURE	273.4						79694									1000					840												
CONC. BARRIER RAIL					48.2	16	15810			4																							3602
R.C. BR. APPROACH				160			8014		30		148	160			60						137												
TOTALS	273.4	28.2	151.2	160	48.2	16	110850	39278	30	4	148	160	34	192	60	1000	12	564	24		977	90	120	120	28	1081	41	26	893	100	35	114	3602

** Estimated Quantity
Lump Sum Item

Date: Nov 18, 2022, 4:53pm User Name: Vaughn File: X:\Production\Files\2021\12-008\CAD\BRIDGE\Plans\summary.dwg

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE _____	INDIANA DEPARTMENT OF TRANSPORTATION	HORIZONTAL SCALE NONE BRIDGE FILE 13-00043 B
DESIGNED: TAM DRAWN: TAM CHECKED: ACS CHECKED: MAR	BRIDGE SUMMARY OF QUANTITIES	VERTICAL SCALE NONE DESIGNATION 1400825
		SURVEY BOOK ELECTRONIC 51 of 62 CONTRACT B-37711 PROJECT 1400825

RIP RAP SUMMARY TABLE						
FROM STATION	TO STATION	LEFT RIGHT	RIP RAP			
			ACTUAL LENGTH	REVETMENT RIP RAP	CLASS II RIP RAP	GEOTEXTILE FOR RIPRAP TYPE 1A
			LFT	TONS	TONS	SYS
LINE "PR-A"						
101+75	104+86	X	269		279.4	233.6
104+10	104+70	X	61		54.7	43.7
TOTAL				334.1	267.3	

SODDING SUMMARY TABLE					
FROM STATION	TO STATION	LEFT RIGHT	SODDING		
			ACTUAL LENGTH	FOR YARDS	FOR DITCHES
			LFT	SYS	SYS
LINE "PR-A"					
109+00	110+00	X	100.01		92.1
108+25	110+00	X	175.07		122.6
TOTALS					214.7

WATER	
Area	215 SYS
Water Rate	4.0 Gallon/SYS
Applications	2 Each
Water	1.7 kGal

GUARDRAIL SUMMARY TABLE									
FROM STATION	TO STATION	LEFT RIGHT	GUARDRAIL, MSG W-BEAM, 6'-3" POST SPACING	GUARDRAIL END TREATMENT, OS (31")	GUARDRAIL, TERMINAL SYSTEM, W-BEAM, CURVED, 7	GUARDRAIL, MGS, LONG SPAN, TYPE 2	GUARDRAIL, MGS, TRANSITION WITHOUT CURB	GUARDRAIL, TRANSITION, TYPE TGB	* CURVED TERMINAL END
			LFT	EACH	EACH	EACH	EACH	EACH	EACH
LINE "PR-A"									
104+27.40	104+79.94	X	31.25		1				1
103+79.94	104+79.94	X		1			1		
LINE "PR-A"									
107+62.06	108+47.21	X		1			1		
107+62.06	108+59.37	X		1			1		
TOTAL			31.25	3	1		3	1	

* Not Paid for Directly

TABLE OF MONUMENTS			
LOCATION	TYPE B	TYPE C	OFFSET
	Line "PR-A"		
P.C. 100+30.74	1		
P.I. 100+96.47	1		1.08' Lt.
P.T. 101+62.15	1		
P.C. 102+74.30	1		
P.I. 103+85.11		1	38.55' Rt.
P.T. 104+61.77	1		
P.C. 107+68.42	1		
P.I. 108+25.10	1		7.35' Rt.
P.T. 108+79.26	1		
P.C. 110+04.48	1		
P.I. 111+65.43		1	24.57' Lt.
P.T. 113+16.48	1		
TOTAL	10	2	

SEEDING TABLE	
1.16 Acres	
Seeding Mixture, Floodplain	10.2 LBS.
Seeding Mixture, R	133.3 LBS.
Mulching Material	1.3 Tons
Fertilizer	0.3 Tons
Mob. & Demob. for Seeding	4 Each

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RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____ DATE _____
DESIGNED: _____ DAS _____	DRAWN: _____ DAS _____
CHECKED: _____ JAW _____	CHECKED: _____ JAW _____

INDIANA DEPARTMENT OF TRANSPORTATION	
MISCELLANEOUS TABLES	

HORIZONTAL SCALE	BRIDGE FILE	
No Scale	13-00043 B	
VERTICAL SCALE	DESIGNATION	
No Scale	1400825	
SURVEY BOOK	SHEET	
Electronic	52	of 62
CONTRACT	PROJECT	
B-37711	1400825	

PAVEMENT QUANTITIES AND APPROACH TABLE

LOCATION	DESCRIPTION (APPROACH TYPE OR CLASS)	WIDTH "W"	LENGTH "L"	RADII "R"	QC/QA HMA			HMA FOR APPROACHES			MILLING ASPHALT, TRANSITION	PCC BASE Patching, 7"	COMPACTED AGGREGATE No. 53	COMPACTED AGGREGATE No. 53	COMPACTED AGGREGATE No. 53	PCCP FOR APPROACHES, 6 IN.	PCCP FOR APPROACHES, 9 IN.	DENSE GRADED SUBBASE	GEOTEXTILE FOR PAVEMENT, TYPE 2B	SUBGRADE TREATMENT, TYPE IC	SUBGRADE TREATMENT, TYPE II	ASPHALT FOR TACK COAT	JOINT ADHESIVE SURFACE	JOINT ADHESIVE INTERMEDIATE	LIQUID ASPHALT SEALANT	REMARKS			
					2, 64		2, 64	SURFACE	INTER.	BASE																	SURFACE	INTER.	BASE
					9.5 mm	19.0 mm	25.0mm	TYPE B																			TYPE B		
					LBS/SYS			LBS/SYS.																			LBS/SYS.		
					165	385	880	165	275	440																	6"	5"	6"
MAINLINE																													
Line "PR-A"																													
	100+50.00 to 104+72.29 Lt. & Rt.	12	422.30	Varies	105.3	227.5	45.0				94.1	121.0	149.9	17.1				115.6	1369.0	1377.8	1309.2	1266.9	1309.2						
	107+69.71 to 111+00.00 Lt. & Rt.	12	330.3	Varies	87.0	181.5	45.0				111.1	118.7	116.7	17.1				115.6	1089.2	1155.7	990.9	990.9	1040.9						
DRIVES																													
Line "PR-A"																													
	102+24.00 Lt.		25.0	20/15							8.7			17.5							118.0								
	103+65.00 Rt.		43.0	0/0							30.7			62.0							382.2								
SUBTOTALS THIS SHEET:					192.3	409.0	90.0	39.4	65.7	0.0	205.2	0.0	239.7	266.6	113.7	0.0	0.0	0.0	231.2	2458.2	500.2	2533.5	2300.1	2257.8	2350.1				

STRUCTURE DATA

STRUCTURE NUMBER	LOCATION				DESCRIPTION		FLOW LINE					UNDERCUT										SCOUR PROTECTION		GRATED BOX END SECTION			SAFETY METAL END SECTION			CONNECT TO STR.	CULVERT ASSET ID	REMARKS															
	STATION	LEFT	RIGHT	CROSS	OFFSET	SIZE	PIPE TYPE	MANHOLE, INLET, CATCH BASIN, OR SPECIALTY STRUCTURE AND TYPE	LENGTH	VIDEO INSPECTION LENGTH	SKEW	COVER		UP STREAM	DOWN STREAM	SUMP DEPTH	TOP OF CASTING	SERVICE LIFE	SITE DESIGNATION	pH	BACKFILL METHOD	STRUCTURE BACKFILL TYPE 2	STRUCTURE BACKFILL TYPE 3	FLOWABLE BACKFILL TYPE 5	FLOWABLE BACKFILL TYPE	EXCAVATION	COMPACTED AGGREGATE #5	COMPACTED AGGREGATE #53	GEOTEXTILES				GEOTEXTILES for RIPRAP TYPE	REVETMENT RIPRAP	GEOTEXTILES for RIPRAP TYPE	REVIEWMENT RIPRAP	CLASS II RIPRAP	B-BORROW	PIPE, REMOVE	VIDEO INSPECTION	PIPE END SECTION						
												CYS	CYS									CYS	CYS	CYS.	TONS		TONS	TONS	SYS				TONS		TONS	TONS	CYS					LFT	LFT	EA.	EA.	EA.	EA.
												FT	IN.									LFT	LFT	FT	FT		ELEV.	ELEV.	IN.				ELEV.		YRS												
Line "PR-A"																																															
16	102+24	X			24	3		44	44		1.0	2.0	456.70	452.23			50	A	6.5	2	24.2														50		2										

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RECOMMENDED FOR APPROVAL DESIGN ENGINEER	DATE
DESIGNED: _____	DAS	DRAWN: _____
CHECKED: _____	JAW	CHECKED: _____
CHECKED: _____	JAW	CHECKED: _____

INDIANA DEPARTMENT OF TRANSPORTATION	
APPROACH & STRUCTURE DATA TABLE	

HORIZONTAL SCALE	BRIDGE FILE
No Scale	13-00043 B
VERTICAL SCALE	DESIGNATION
No Scale	1400825
SURVEY BOOK	SHEET
Electronic	53 of 62
CONTRACT	PROJECT
B-37711	1400825

		STRUCTURE NUMBER	16	
		PIPE TYPE / SHAPE (CIR or DEF)	3/Cir.	
INT. DES.		SMOOTH PIPE SIZE		
		CORRUGATED PIPE SIZE	24"	
		SEMI-SMOOTH PIPE SIZE		
CONC.	RCP/RCHP (S)	CLASS D 0.01 RATING		
	NON-REINFORCED CONCRETE PIPE, CLASS 3 (S)			
PLASTIC PIPE	CORRUGATED PE PIPE, TYPE S (S)*			
	PROFILE WALL (RIBBED) PE PIPE (S)*			
	PROFILE WALL (CLOSED) PE PIPE (S)*			
	SMOOTH WALL PE PIPE (S)* / MAXIMUM DR			
	CORRUGATED PP PIPE (S)			
	PROFILE WALL PVC PIPE (S)			
SMOOTH WALL PVC PIPE (S)*				
CLAY	VITRIFIED CLAY PIPE, EXTRA STRENGTH (S)			
CORRUGATED STEEL PIPE / PIPE-ARCH	FULLY BIT. PAVED & LINED (S)	CORR.PROFILE		
		THICKNESS		
	ZINC COATED (C)	CORR.PROFILE		
		THICKNESS		
	ZINC COATED W/ BPI (C)	CORR.PROFILE		
		THICKNESS		
	ALUM. COATED TYPE 2 (C)	CORR.PROFILE		
		THICKNESS		
	ALUM. COATED TYPE 2 W/ BPI (C)	CORR.PROFILE	2 2/3" x 1/2"	
		THICKNESS	0.079"	
	POLYMER PRECOATED GALVANIZED (C)	CORR.PROFILE	2 2/3" x 1/2"	
		THICKNESS	0.064"	
POLYMER PRECOATED GALVANIZED CORRUGATED STEEL PIPE TYPE 1A (S)	CORR.PROFILE			
	THICKNESS			
COR. ALUM. PIPE / P-ARCH	CORRUGATED ALUM. ALLOY (C)	CORR.PROFILE		
	THICKNESS			
CORRUGATED ALUM. ALLOY W/ BPI (C)	CORR.PROFILE	2 2/3" x 1/2"		
	THICKNESS	0.060"		
SPIRAL RIB STEEL PIPE	ZINC COATED (SS)	CORR.PROFILE		
		THICKNESS		
	ALUM. COATED TYPE 2 (C)	CORR.PROFILE		
		THICKNESS		
	ALUM. COATED TYPE 2 W/ BPI (C)	CORR.PROFILE		
		THICKNESS		
POLYMER PRECOATED GALVANIZED (C)	CORR.PROFILE			
	THICKNESS			
STRUCTURAL PLATE PIPE / PIPE-ARCH	STR. PLATE ALUMINUM ALLOY (C)	CORR.PROFILE		
		THICKNESS		
	STR. PLATE ALUMINUM ALLOY W/ CFP (C)	CORR.PROFILE		
		THICKNESS		
STR. PLATE STEEL (C)	CORR.PROFILE			
	THICKNESS			
STR. PLATE STEEL W/ CFP (C)	CORR.PROFILE			
	THICKNESS			

LEGEND

PIPE MATERIAL

RCP	Reinforced Concrete Pipe
RCHP	Reinforced Concrete Horizontal Elliptical Pipe
PE	Polyethylene
DR	Dimension Ratio
PVC	Polyvinyl Chloride
PP	Polypropylene
CORR	Corrugation
ALUM	Aluminum
STR	Structural
(LS)	Lock Seam Pipe Required

PIPE PROTECTION

BPI	Bituminous Paved Invert
CFP	Concrete Field Paving
BIT	Bituminous

SHAPE

CIR	Circular Pipe
DEF	Deformed Pipe

INTERIOR PROTECTION

(S)	Smooth Pipe Material
(C)	Corrugated Pipe Material
(SS)	Semi-Smooth Pipe Material

PIPE SIZE

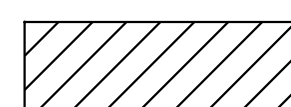
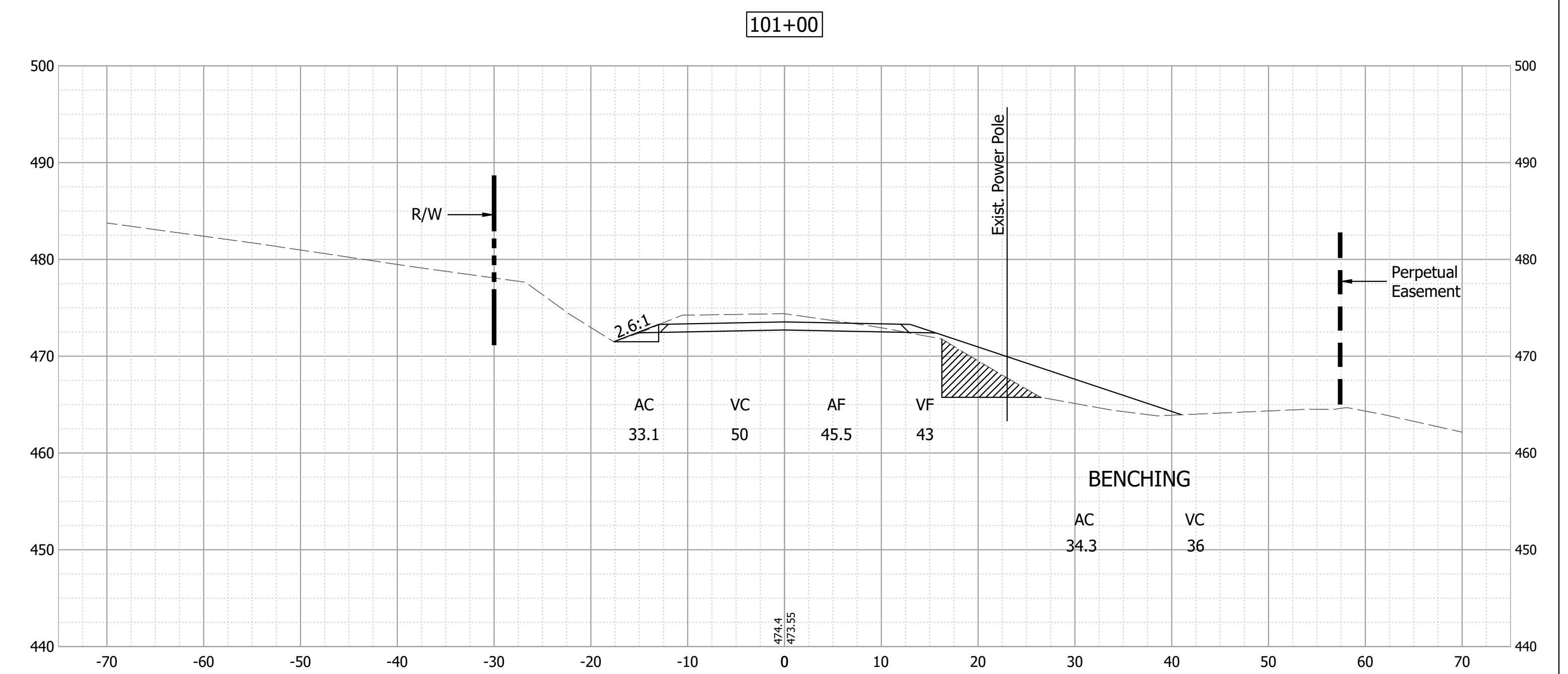
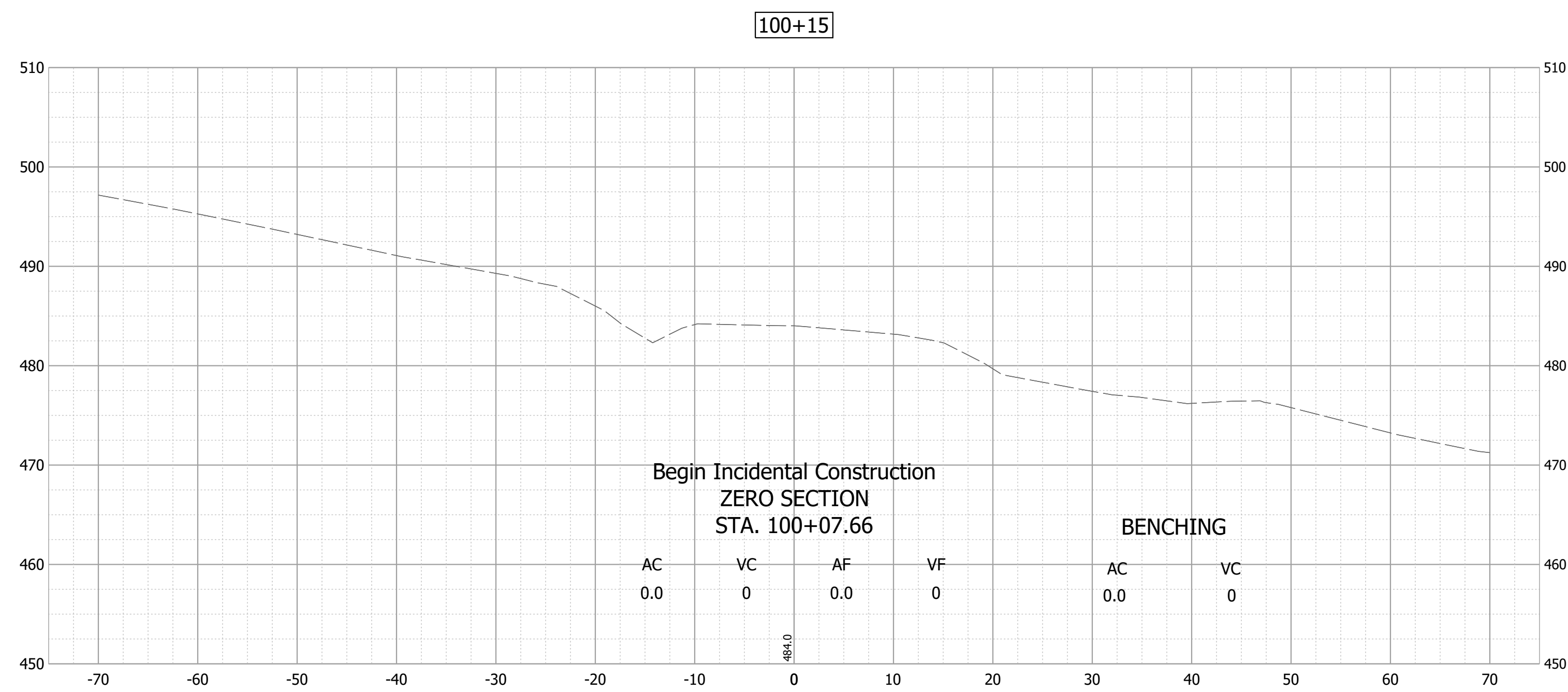
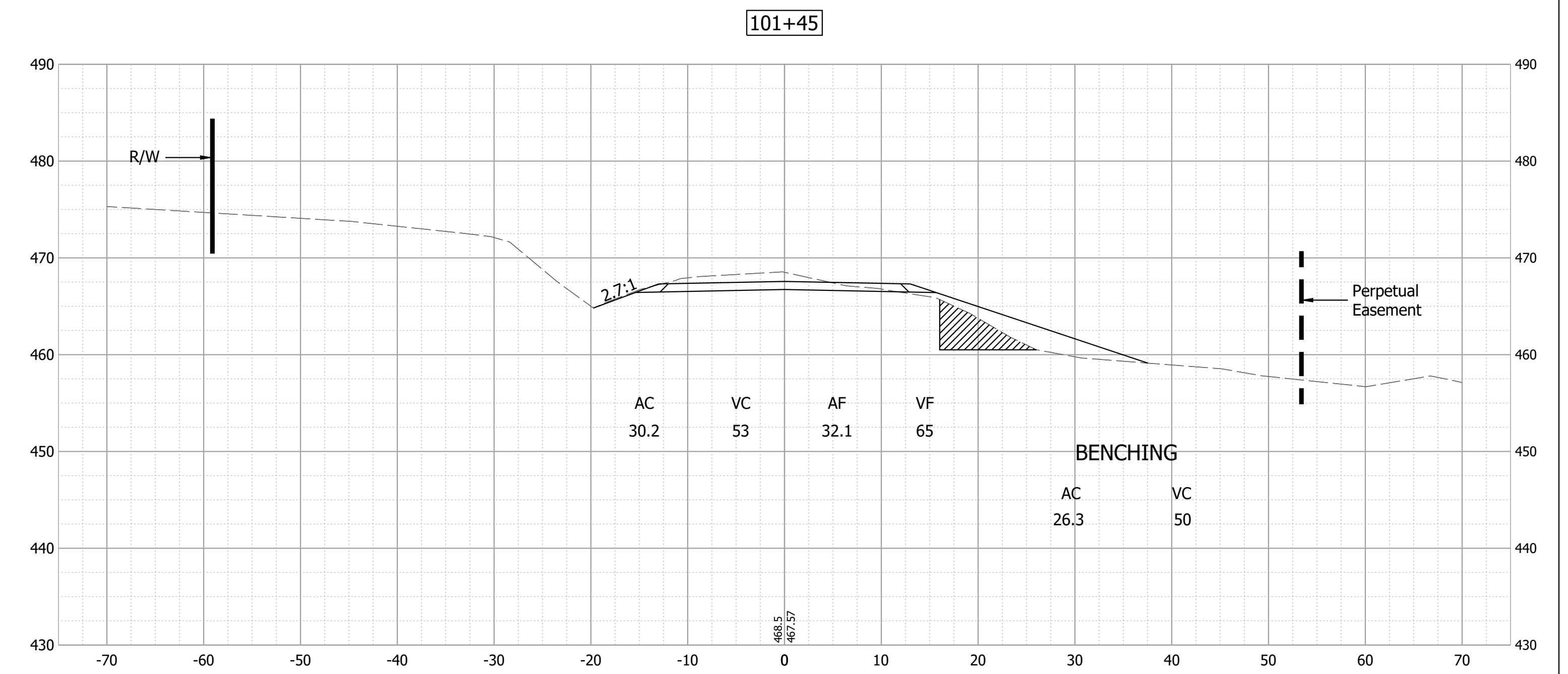
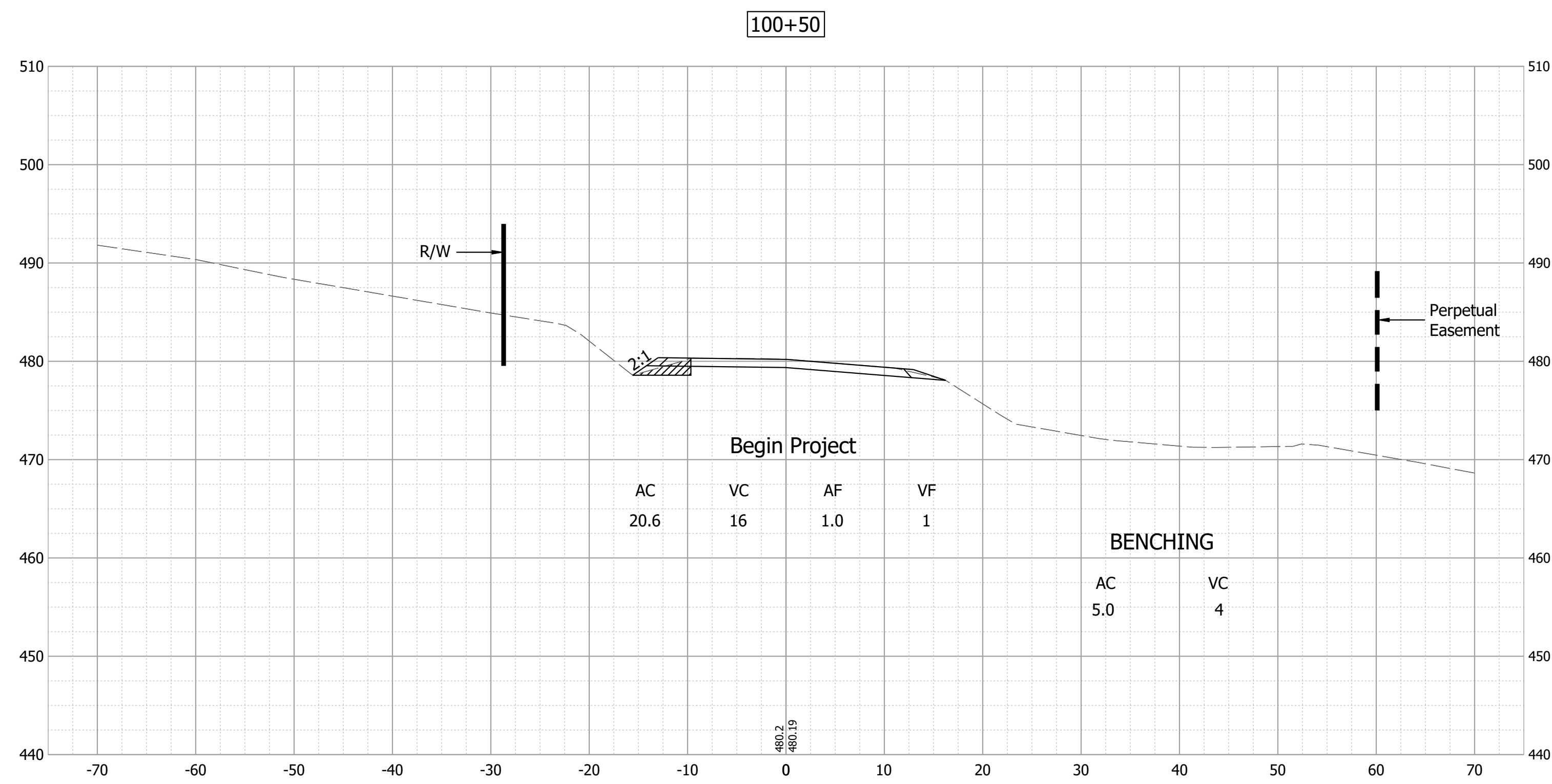
Circular pipe is shown as diameter in inches
 Deformed pipe is shown as area in square feet

* Refer to Standard Drawings 715-PHCL-20 through -22 for nominal diameter appropriate for pay item diameter.

** Tabulated thickness refers to top and side plates. For pipes and pipe-arches with a thickness less than .280 in., bottom plates shall be of next greater available thickness.

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE	INDIANA DEPARTMENT OF TRANSPORTATION		HORIZONTAL SCALE	BRIDGE FILE
			No Scale	13-00043 B
DESIGNED: _____ DAS _____ DRAWN: _____ DAS _____	PIPE MATERIAL TABLE		VERTICAL SCALE	DESIGNATION
			No Scale	1400825
CHECKED: _____ JAW _____ CHECKED: _____ JAW _____			SURVEY BOOK	SHEET
			Electronic	54 of 62
			CONTRACT	PROJECT
			B-37711	1400825

Date: Nov 18, 2022, 3:21pm User Name: Tracy
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DENOTES LIMITS OF BENCHING

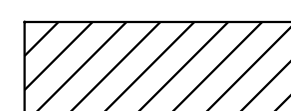
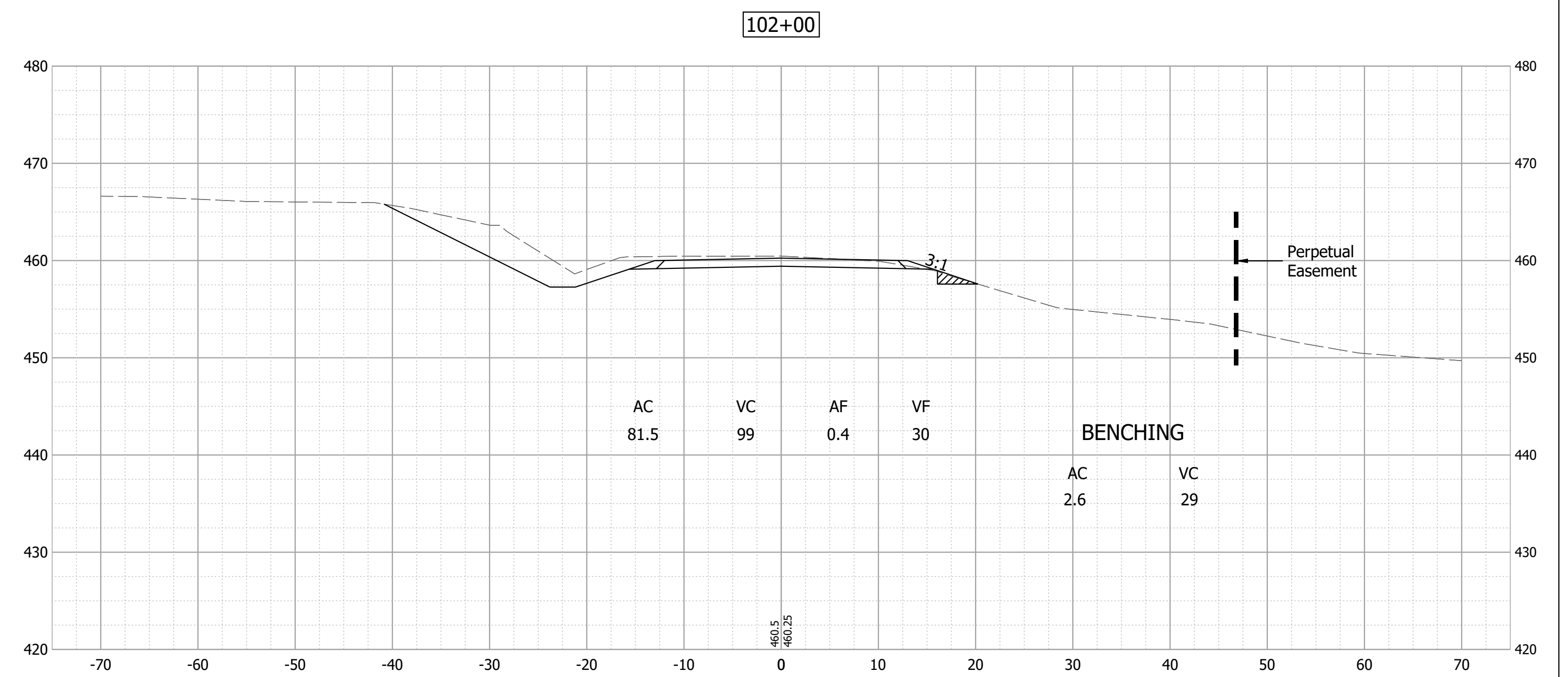
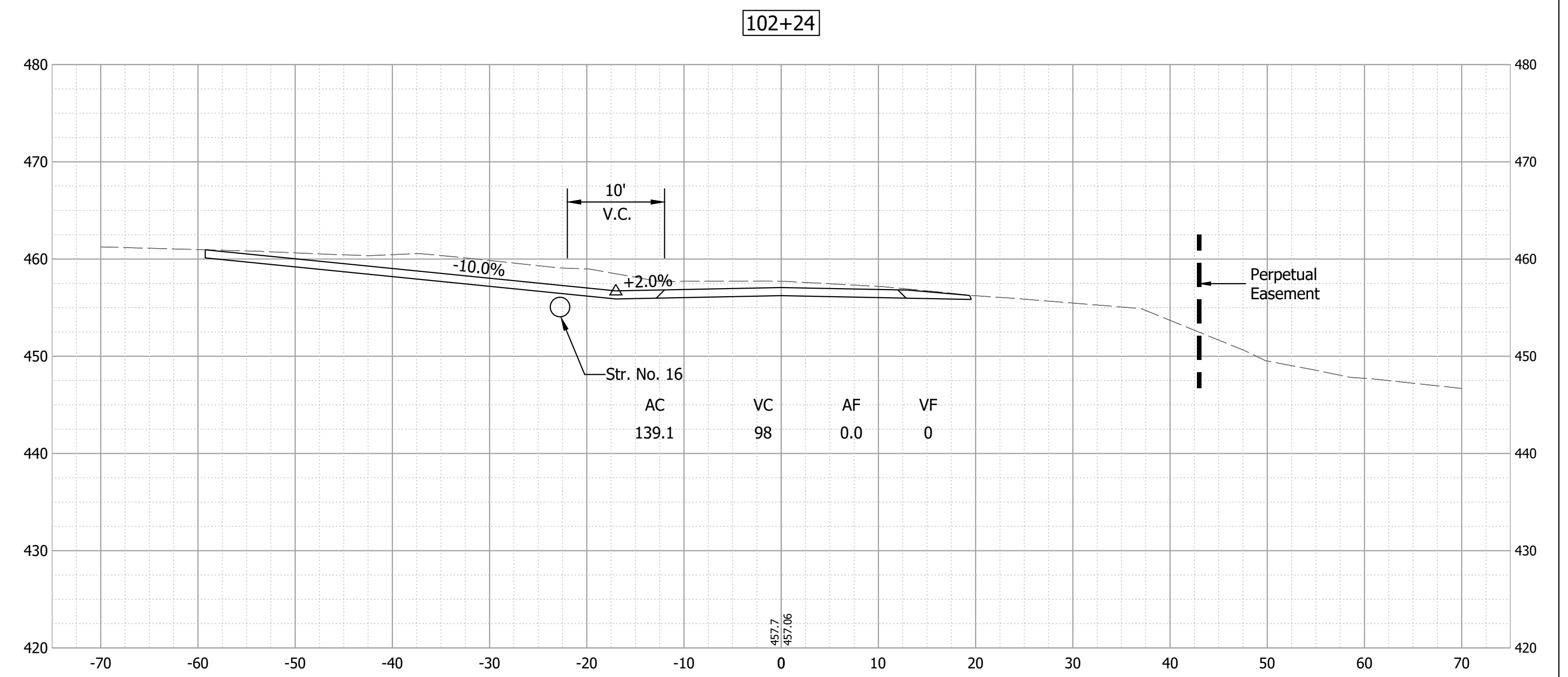
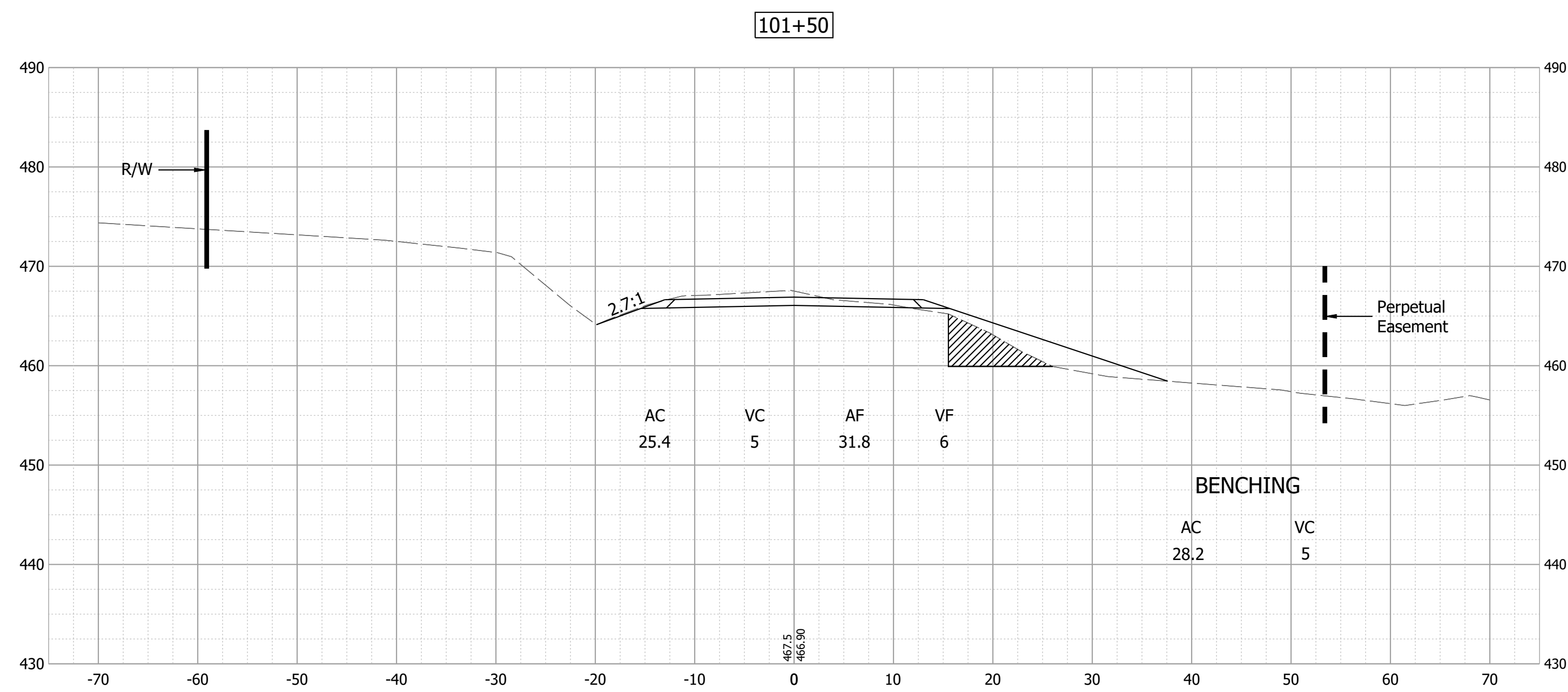
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: DAS	DRAWN: DAS	
CHECKED: JAW	CHECKED: JAW	

INDIANA
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
LINE "PR-A"

HORIZONTAL SCALE	BRIDGE FILE
1"=10'	13-00043 B
VERTICAL SCALE	DESIGNATION
1"=10'	1400825
SURVEY BOOK	SHEET
ELECTRONIC	55 of 62
CONTRACT	PROJECT
B-37711	1400825

Date: Nov 18, 2022, 3:21pm User Name: Tracy
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DENOTES LIMITS OF BENCHING

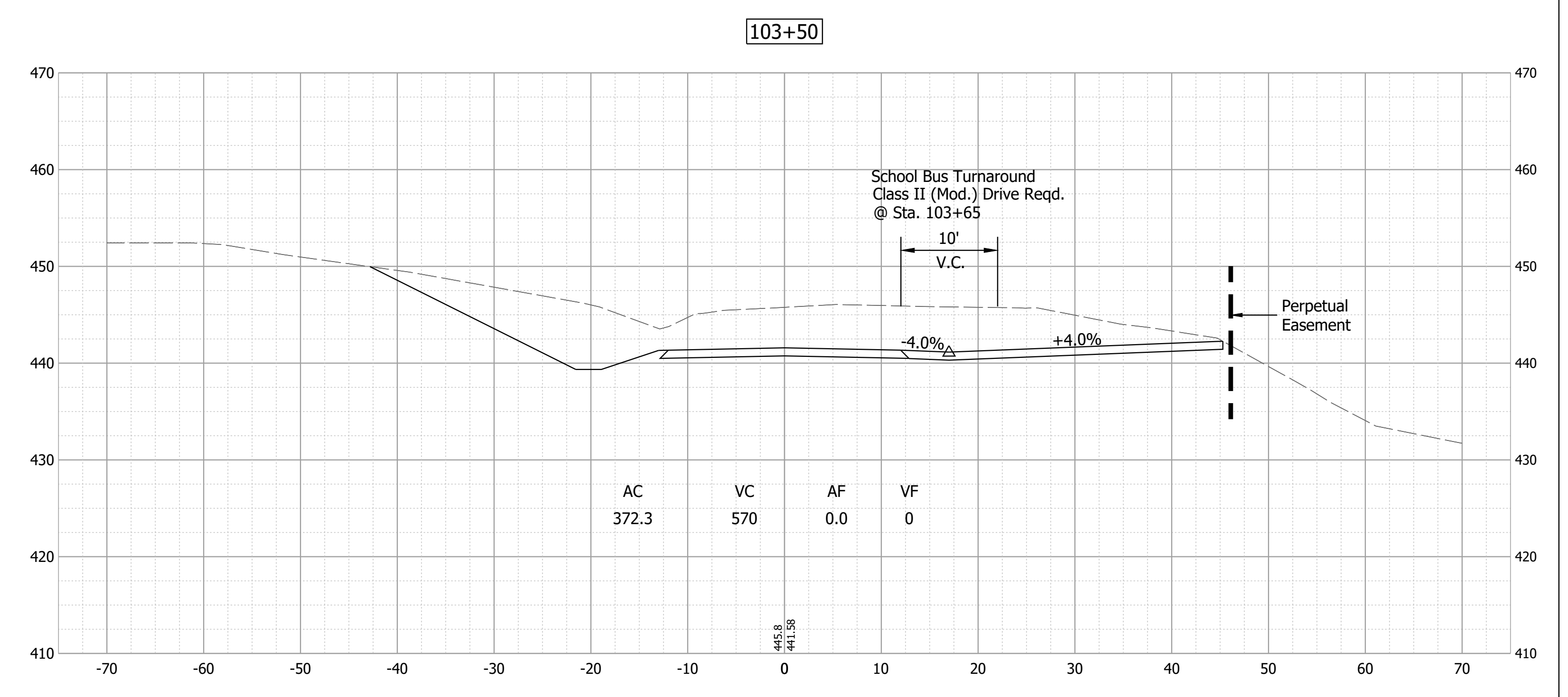
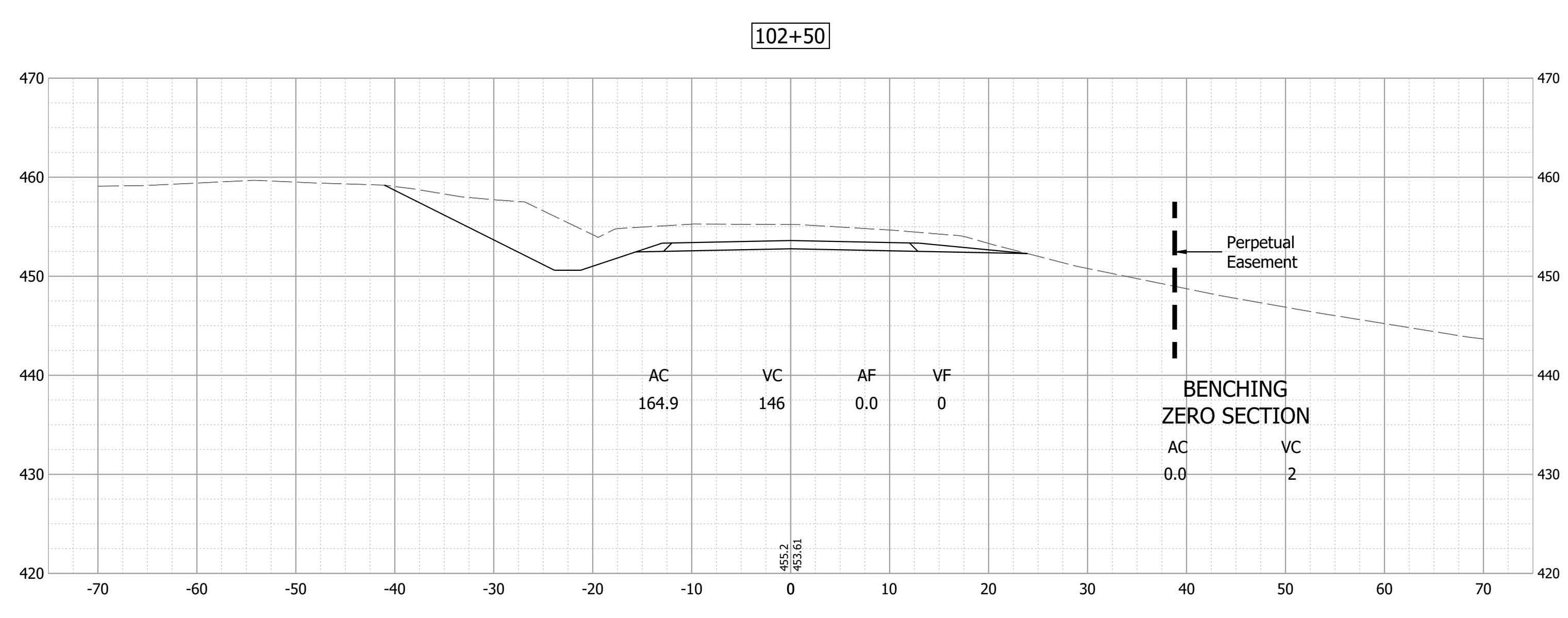
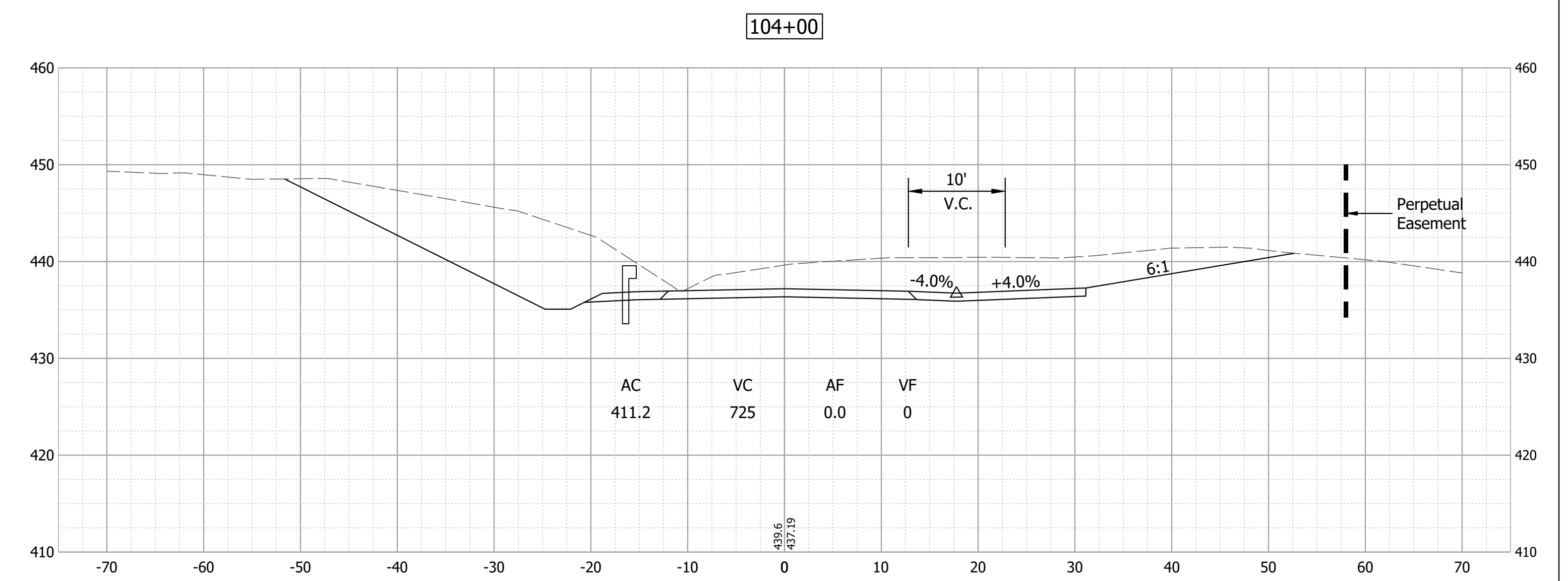
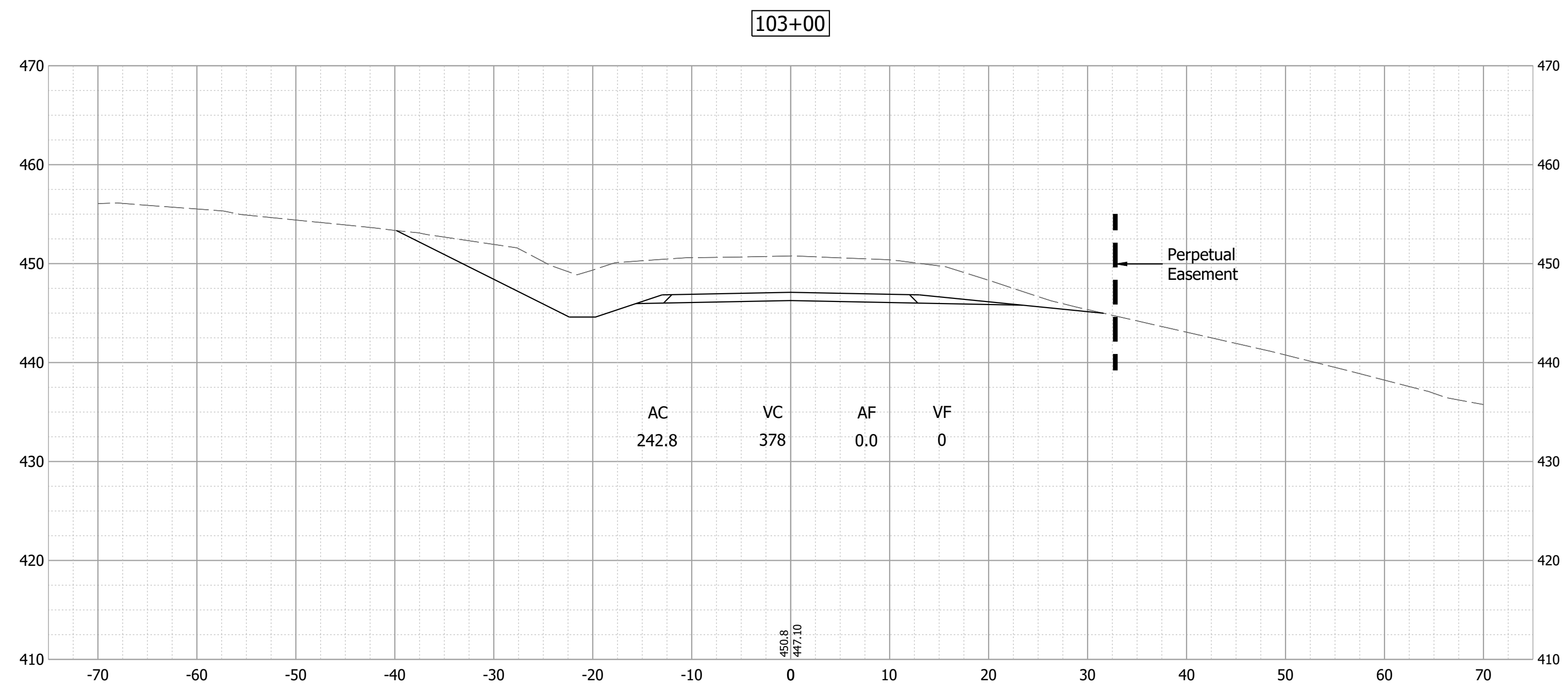
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: DAS	DRAWN: DAS	
CHECKED: JAW	CHECKED: JAW	

INDIANA
DEPARTMENT OF TRANSPORTATION

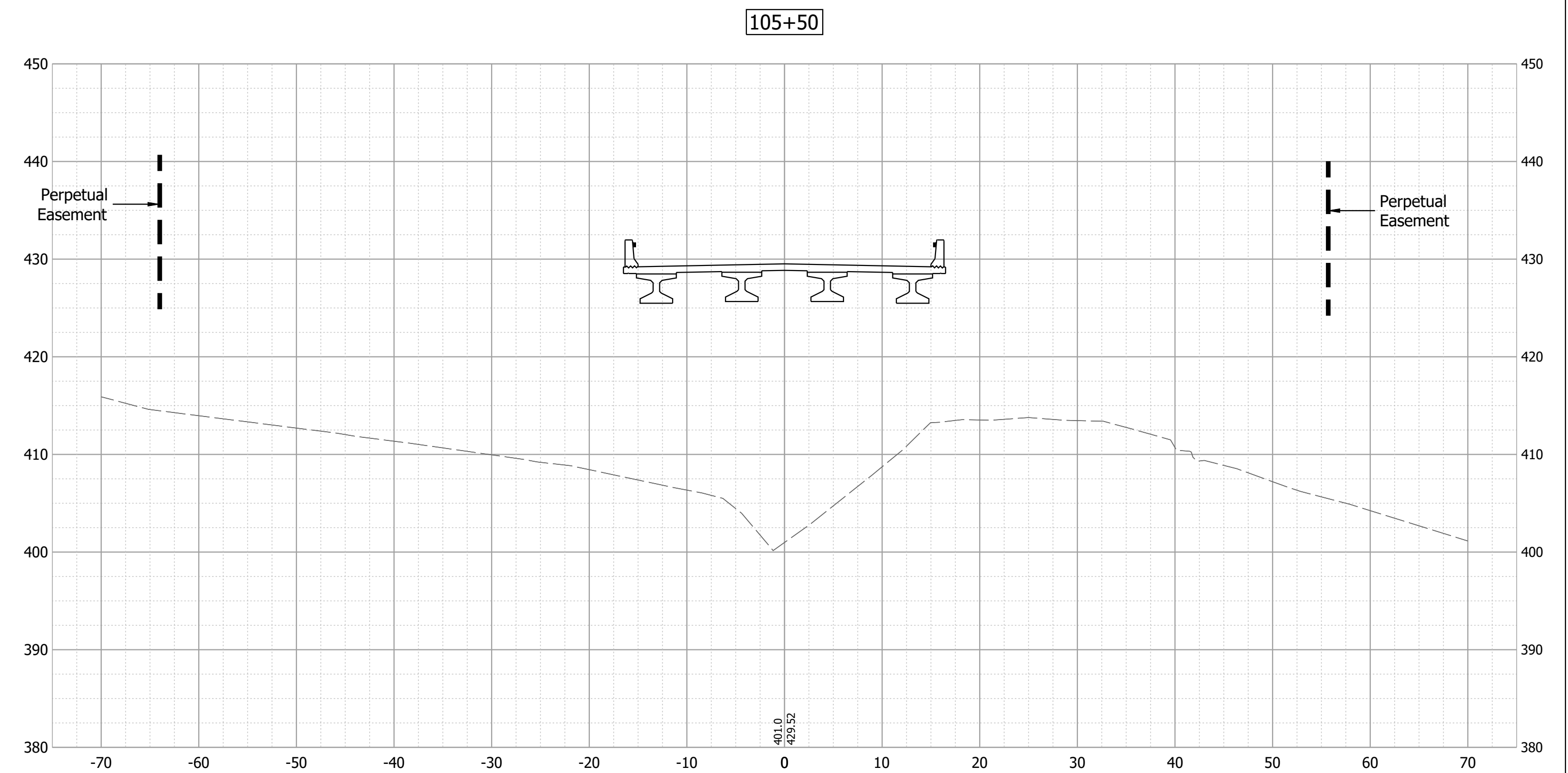
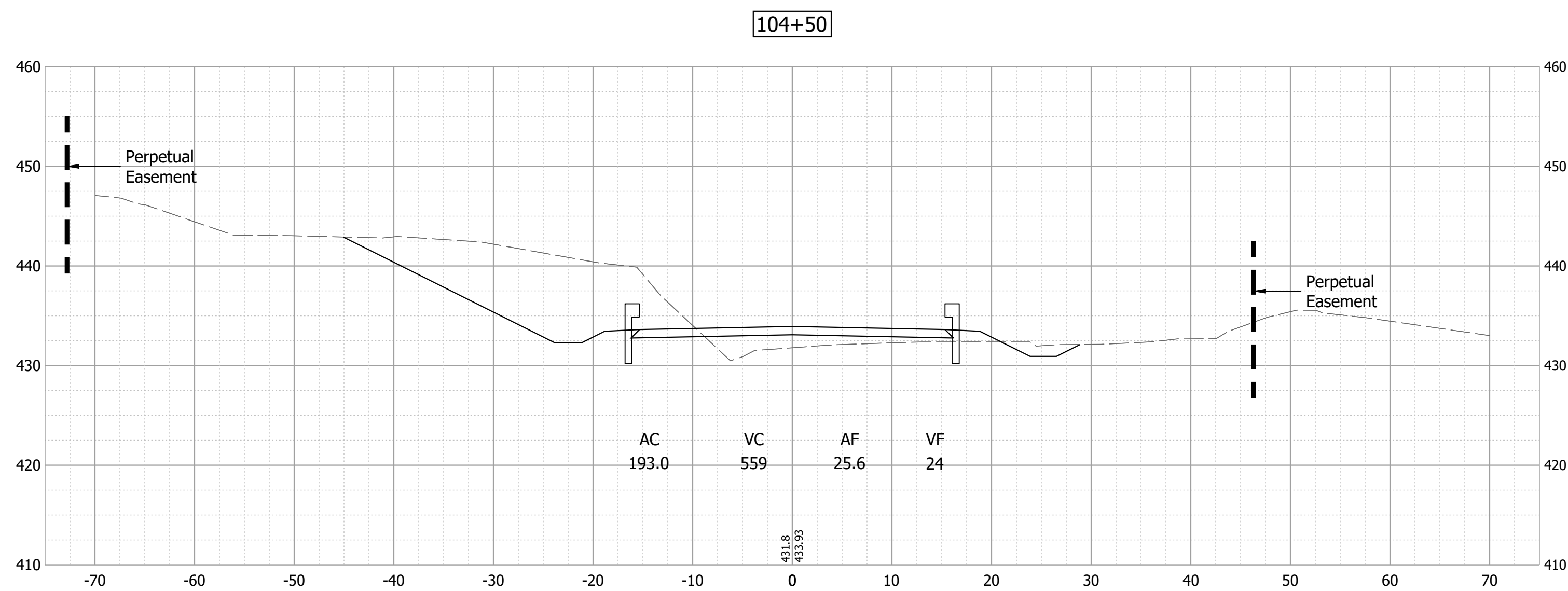
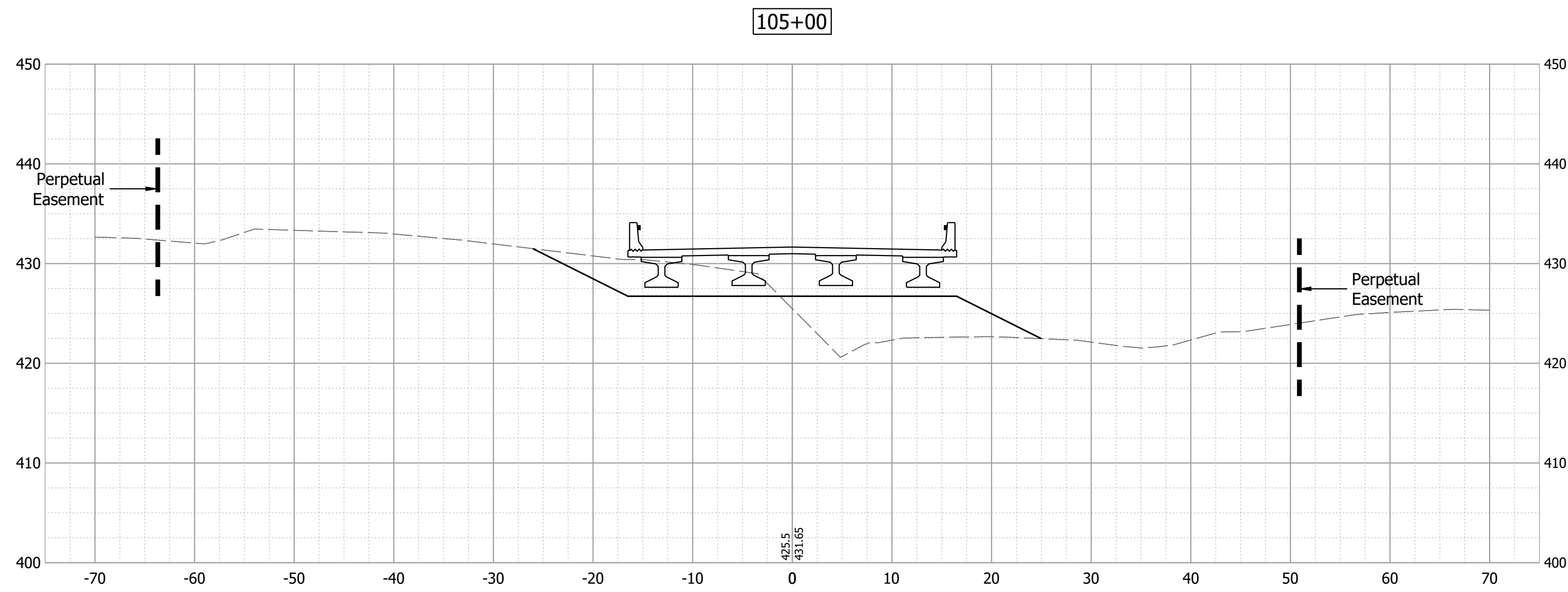
CROSS SECTIONS
LINE "PR-A"

HORIZONTAL SCALE	BRIDGE FILE
1"=10'	13-00043 B
VERTICAL SCALE	DESIGNATION
1"=10'	1400825
SURVEY BOOK	SHEET
ELECTRONIC	56 of 62
CONTRACT	PROJECT
B-37711	1400825

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RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____	INDIANA DEPARTMENT OF TRANSPORTATION		HORIZONTAL SCALE 1"=10'	BRIDGE FILE 13-00043 B		
DESIGNED: _____ DAS _____	DRAWN: _____ DAS _____	CHECKED: _____ JAW _____			VERTICAL SCALE 1"=10'	DESIGNATION 1400825		
			CROSS SECTIONS LINE "PR-A"		SURVEY BOOK	SHEET		
					ELECTRONIC	57	of	62
					CONTRACT B-37711	PROJECT 1400825		



Date: Nov 18, 2022, 3:21pm User Name: Tracy
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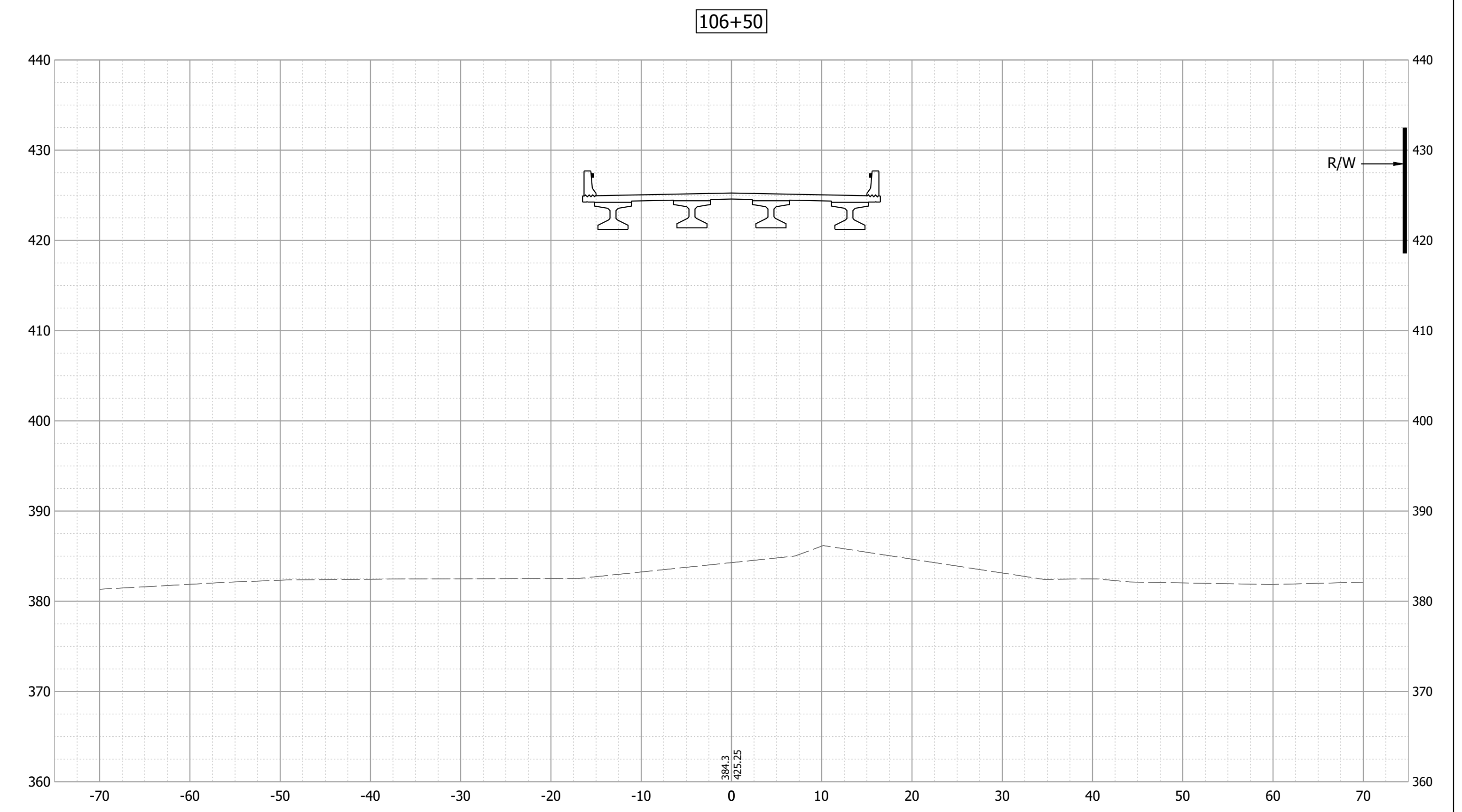
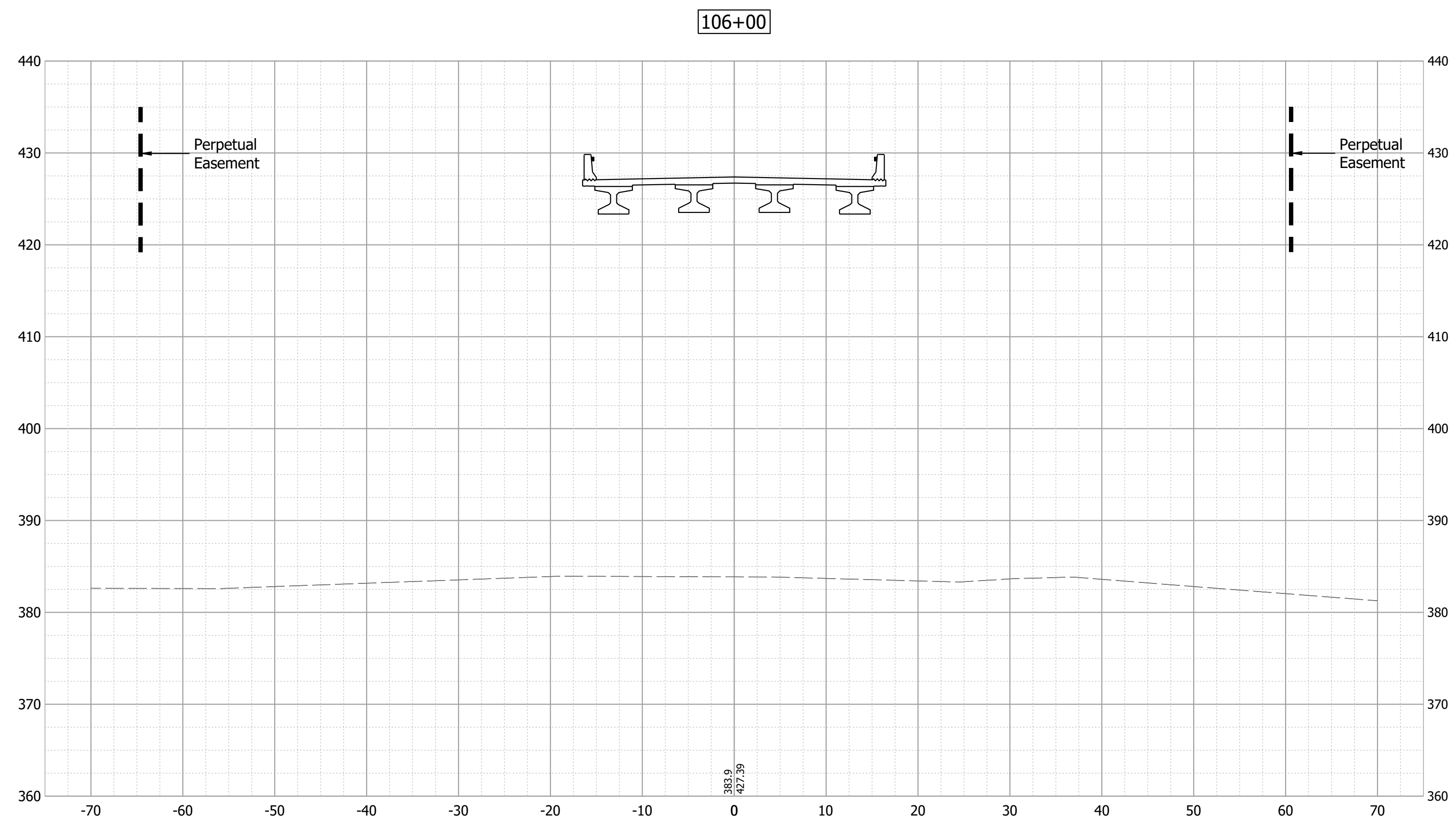
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: DAS	DRAWN: DAS	
CHECKED: JAW	CHECKED: JAW	

**INDIANA
DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS
LINE "PR-A"**

HORIZONTAL SCALE	BRIDGE FILE
1"=10'	13-00043 B
VERTICAL SCALE	DESIGNATION
1"=10'	1400825
SURVEY BOOK	SHEET
ELECTRONIC	58 of 62
CONTRACT	PROJECT
B-37711	1400825

Date: Nov 18, 2022, 3:21pm User Name: Tracy
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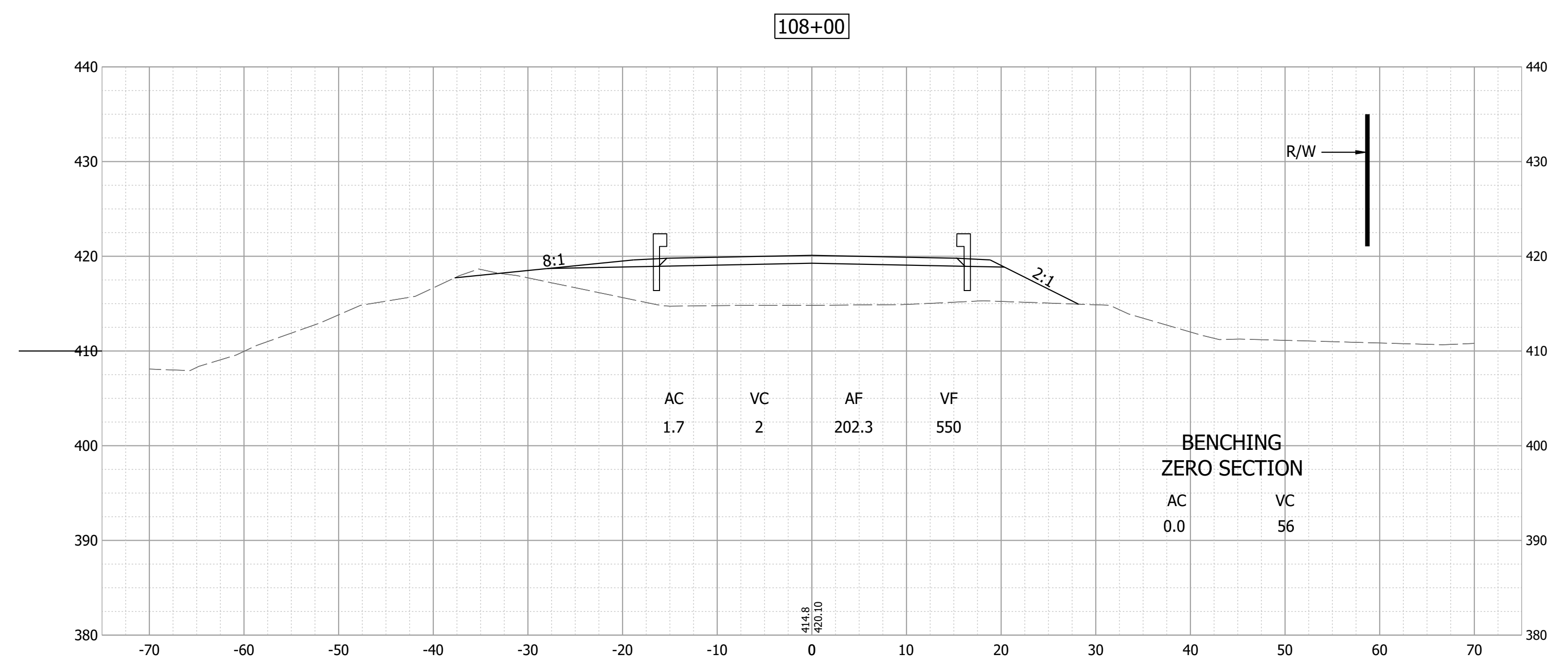
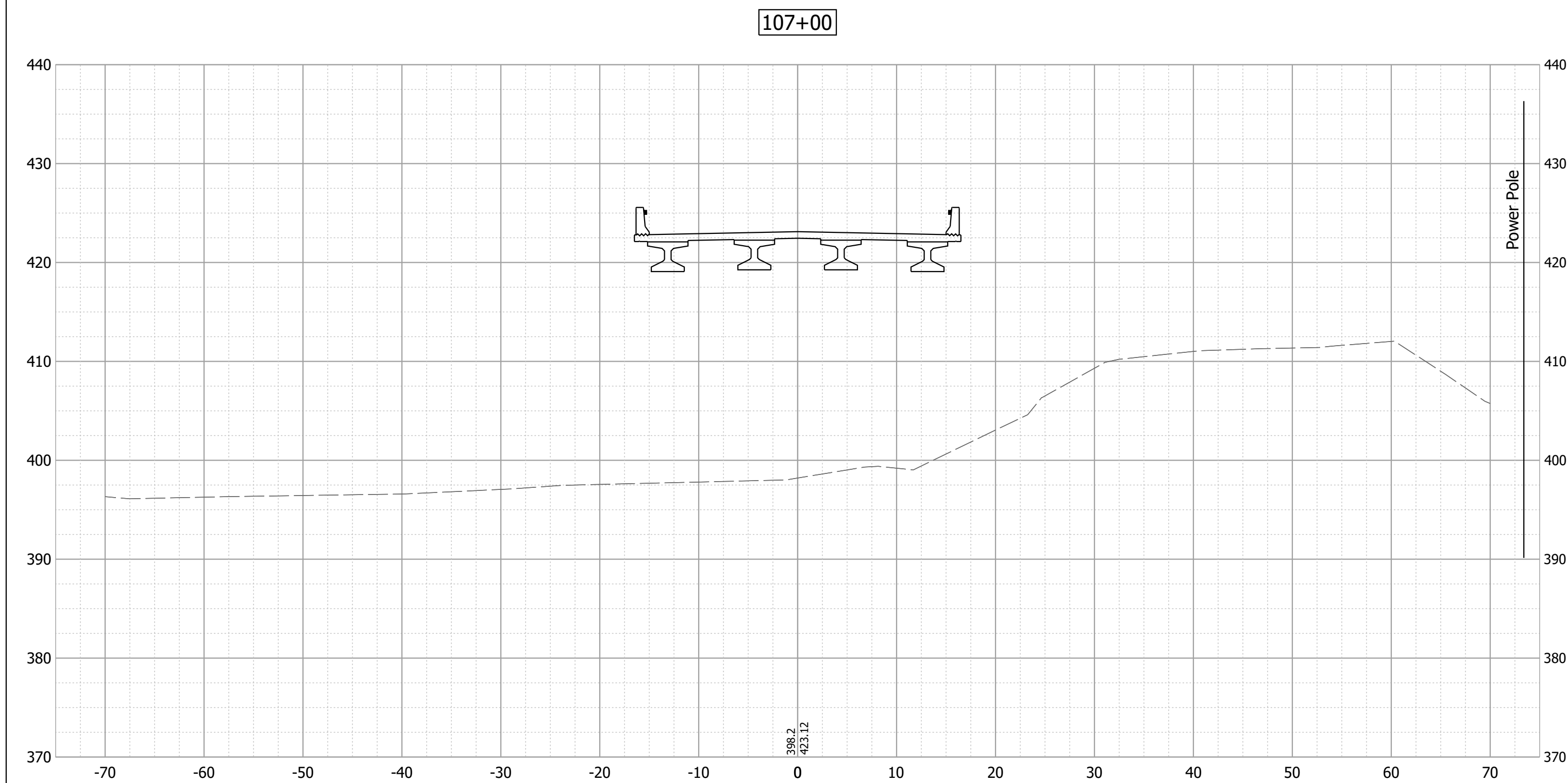
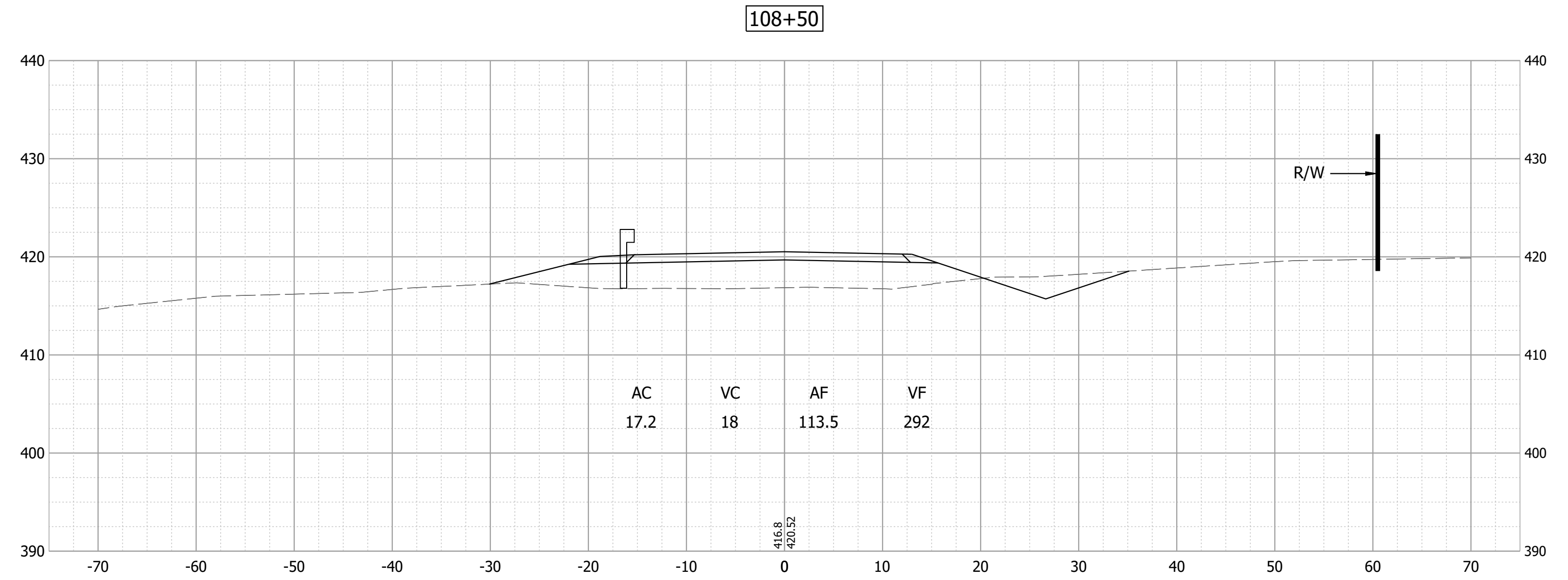
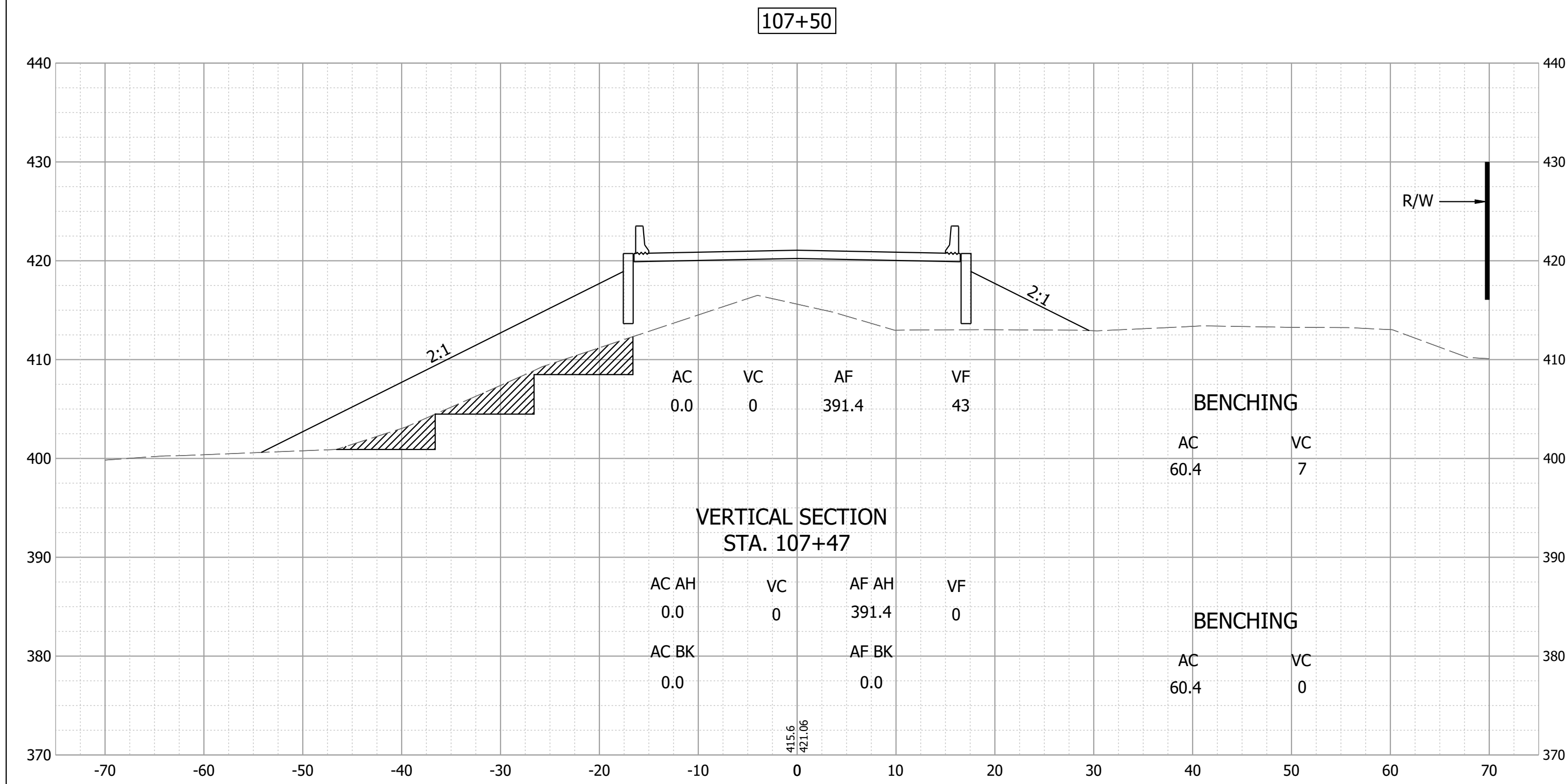
RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: _____ DAS _____	DRAWN: _____ DAS _____	
CHECKED: _____ JAW _____	CHECKED: _____ JAW _____	

INDIANA
DEPARTMENT OF TRANSPORTATION

**CROSS SECTIONS
LINE "PR-A"**

HORIZONTAL SCALE 1"=10'	BRIDGE FILE 13-00043 B
VERTICAL SCALE 1"=10'	DESIGNATION 1400825
SURVEY BOOK ELECTRONIC	SHEET 59 of 62
CONTRACT B-37711	PROJECT 1400825

Date: Nov 18, 2022, 3:22pm User Name: Tracy
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 DENOTES LIMITS OF BENCHING

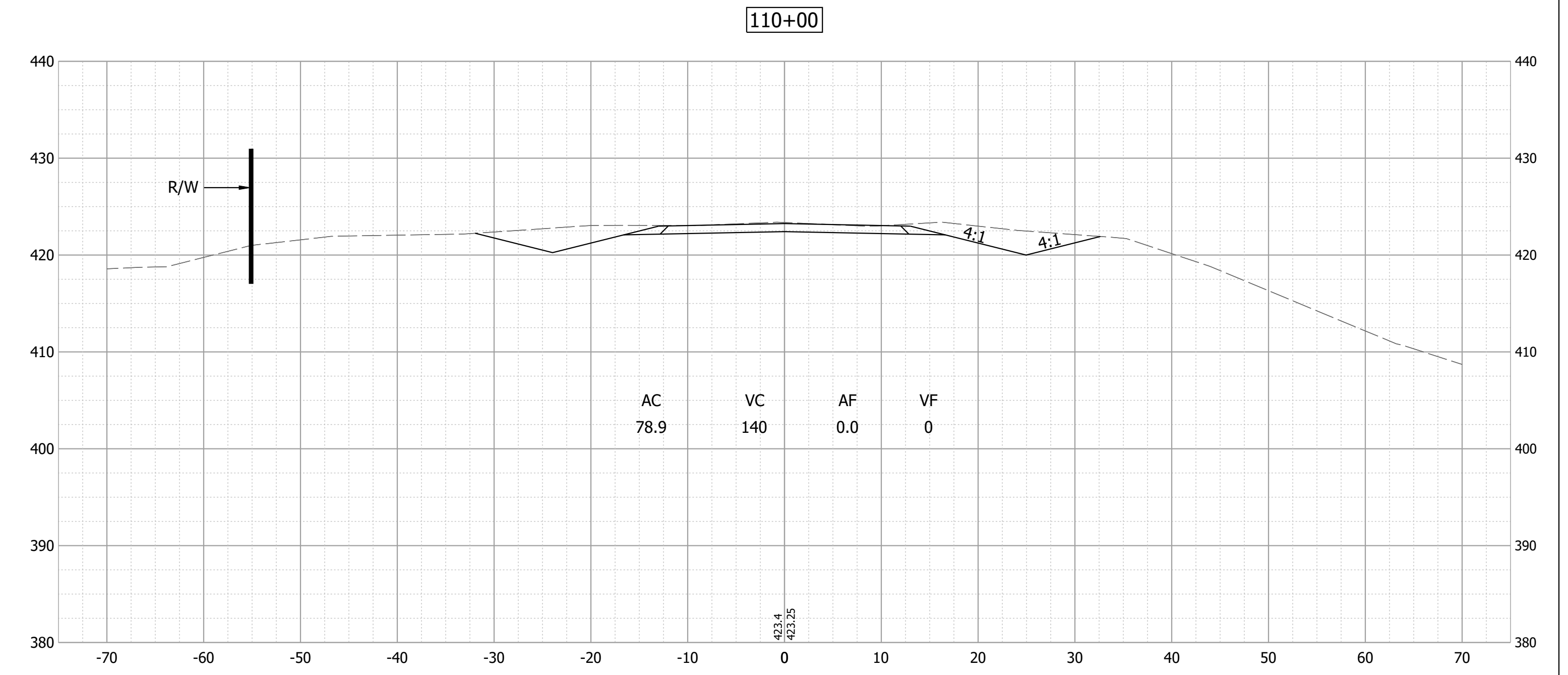
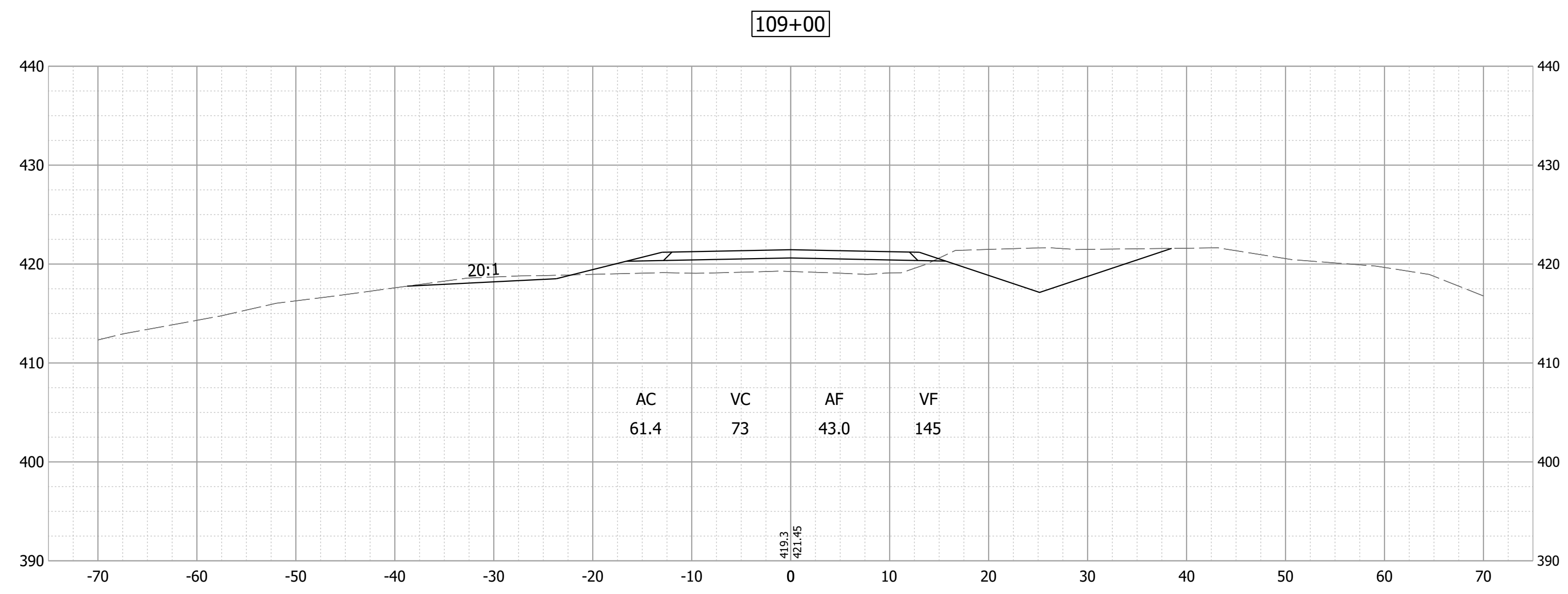
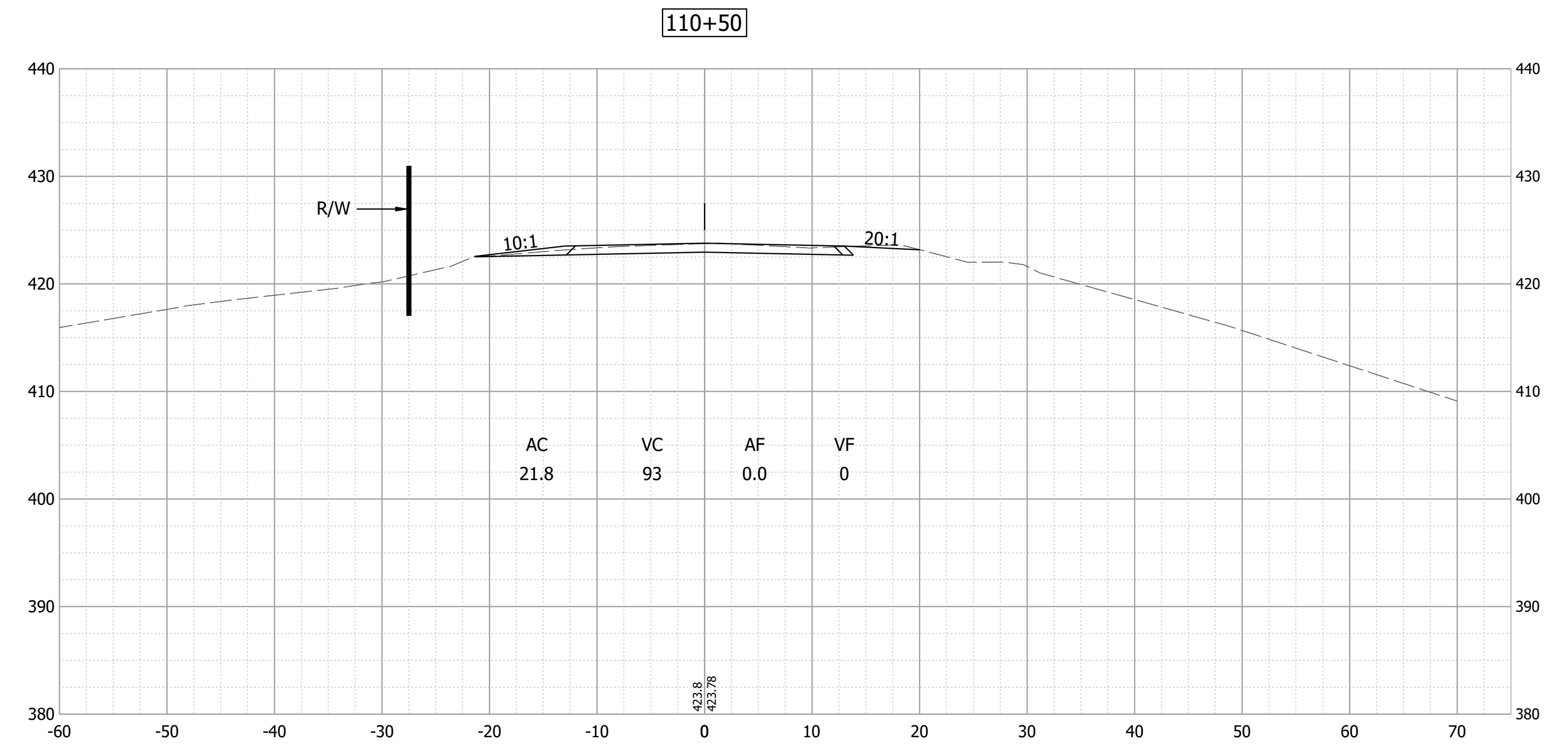
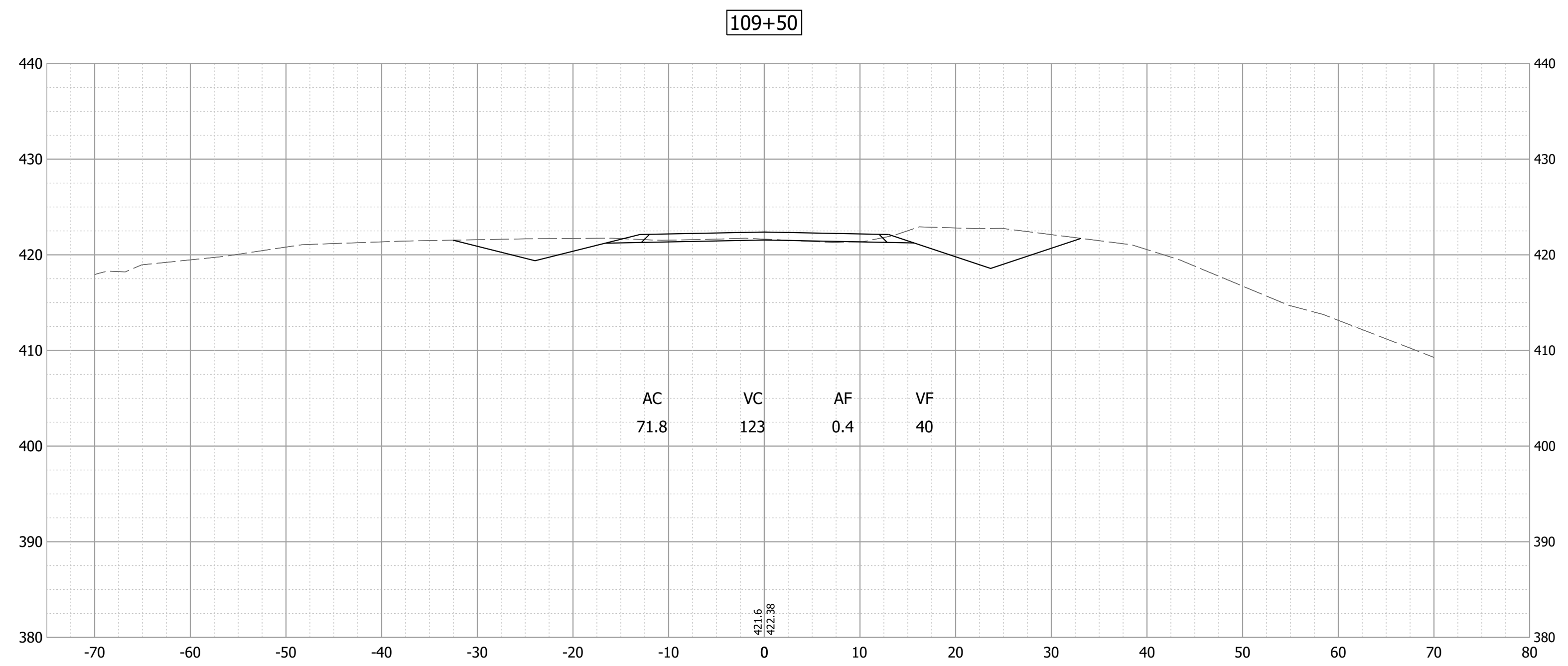
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: DAS	DRAWN: DAS	
CHECKED: JAW	CHECKED: JAW	

INDIANA
 DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
 LINE "PR-A"

HORIZONTAL SCALE	BRIDGE FILE
1"=10'	13-00043 B
VERTICAL SCALE	DESIGNATION
1"=10'	1400825
SURVEY BOOK	SHEET
ELECTRONIC	60 of 62
CONTRACT	PROJECT
B-37711	1400825

Date: Nov 18, 2022, 3:22pm User Name: Tracy
 File: X:\Production\Files\2021\12\1-0006\CAD\ROAD\CrossSections\PR-A_XSEC.dwg



RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: DAS	DRAWN: DAS	
CHECKED: JAW	CHECKED: JAW	

**INDIANA
DEPARTMENT OF TRANSPORTATION**

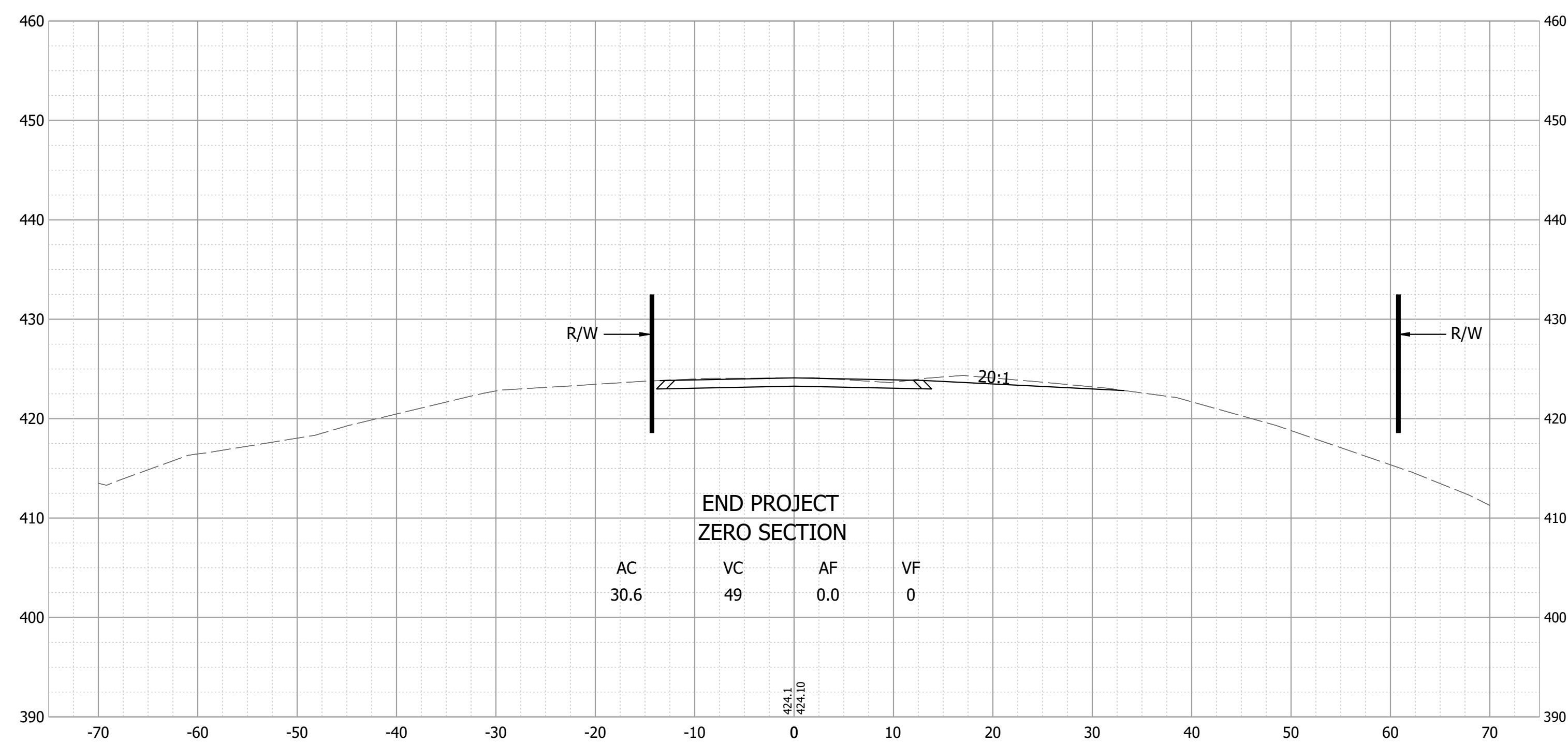
**CROSS SECTIONS
LINE "PR-A"**

HORIZONTAL SCALE 1"=10'	BRIDGE FILE 13-00043 B
VERTICAL SCALE 1"=10'	DESIGNATION 1400825
SURVEY BOOK ELECTRONIC	SHEET 61 of 62
CONTRACT B-37711	PROJECT 1400825

End Incidental Construction
ZERO SECTION
STA. 111+50

AC	VC	AF	VF
0.0	28	0.0	0

111+00



Date: Nov 18, 2022, 3:22pm User Name: Tracy
File: X:\Production\Files\2021\1121-0006\CAD\ROAD\CrossSections\PR-A_XSEC.dwg

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: DAS	DRAWN: DAS	
CHECKED: JAW	CHECKED: JAW	

INDIANA
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
LINE "PR-A"

HORIZONTAL SCALE	BRIDGE FILE
1"=10'	13-00043 B
VERTICAL SCALE	DESIGNATION
1"=10'	1400825
SURVEY BOOK	SHEET
ELECTRONIC	62 of 62
CONTRACT	PROJECT
B-37711	1400825