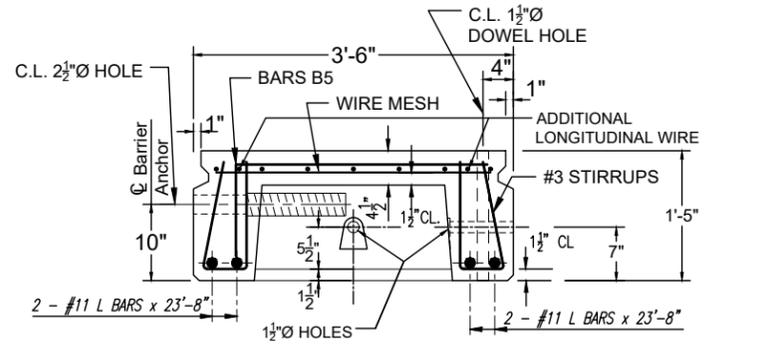
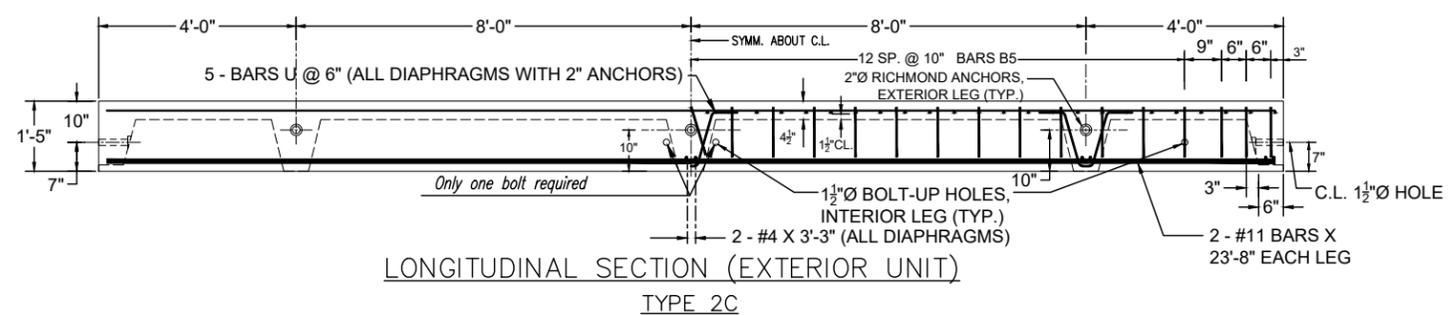
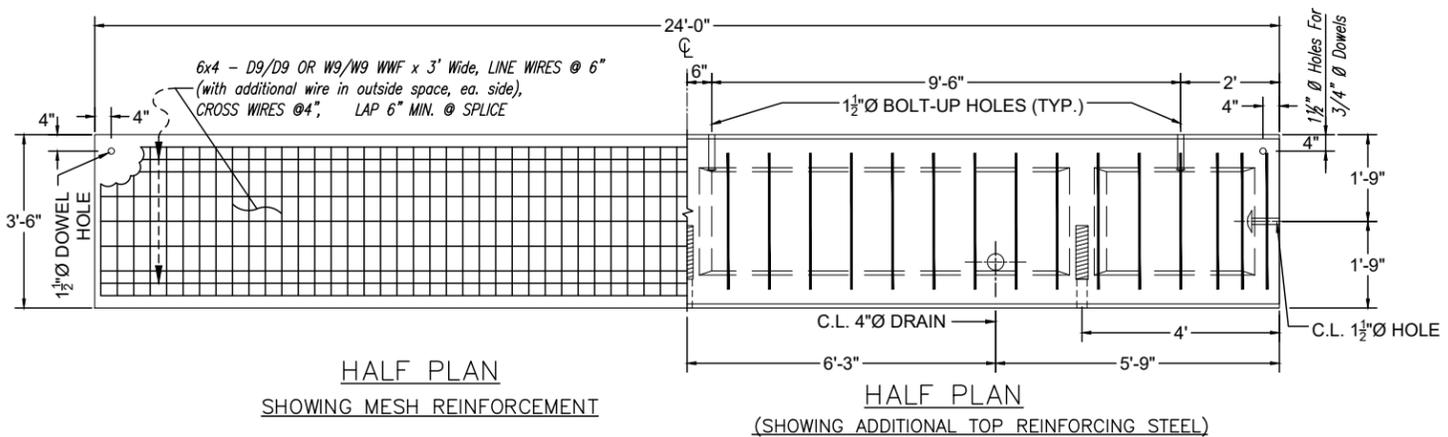
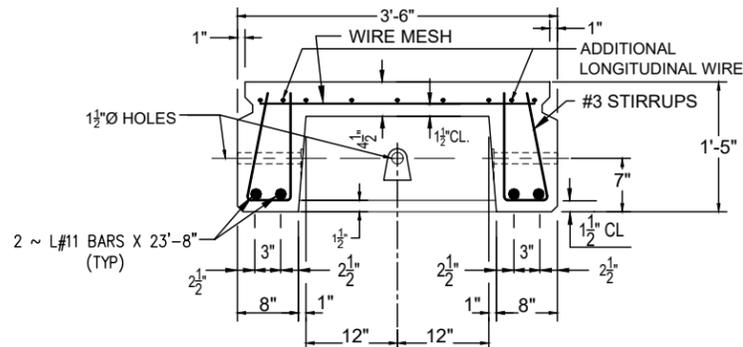


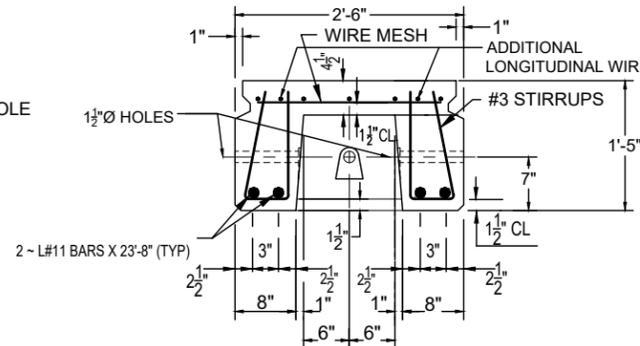
NOTE: STIRRUP LAYOUT IS THE SAME IN INTERIOR AND EXTERIOR UNITS



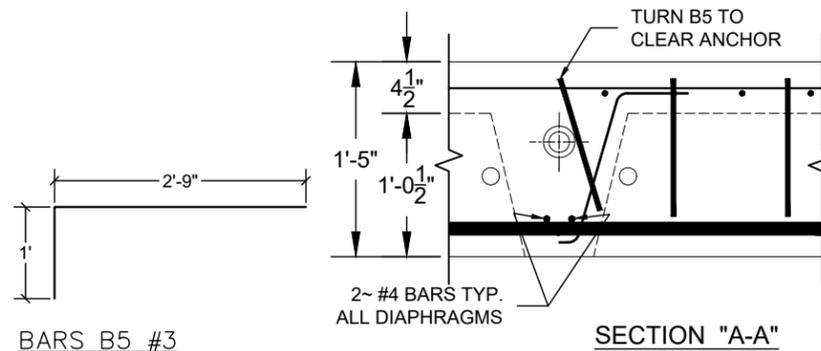
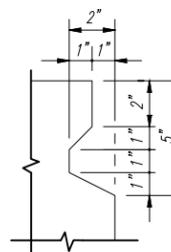
Bars U NOT SHOWN
SEE BR CONNECTION DETAIL



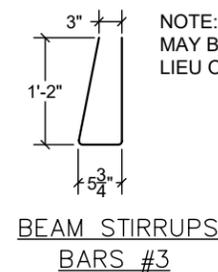
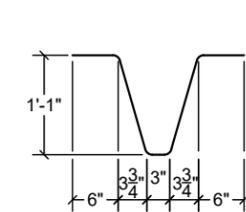
INTERIOR TYPE 1 SECTION



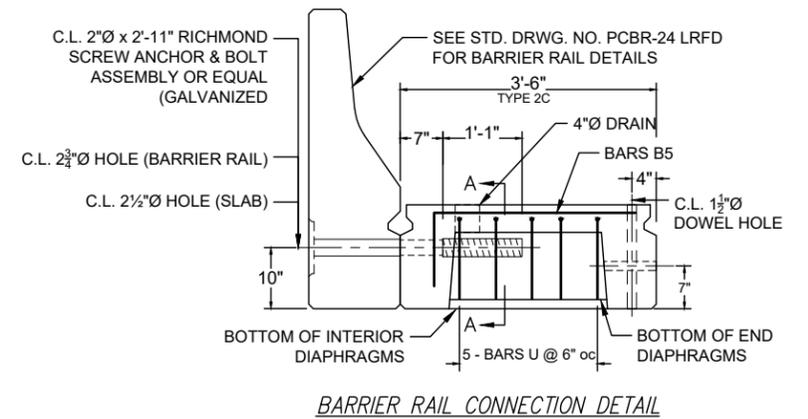
INTERIOR TYPE 1 SECTION



BARS B5 #3



NOTE: #4 REBARS MAY BE USED IN LIEU OF #3 REBARS



NOTE: SCREW ANCHOR ASSEMBLY DESIGN LOAD = 50 KIPS TENSION. PROPERLY INSTALLED SCREW ANCHOR ASSEMBLY HAS BEEN TESTED BY AN INDEPENDENT LAB TO TWICE THE DESIGN LOAD (100 KIPS). CERTIFIED TEST RESULTS AVAILABLE UPON REQUEST.

GENERAL NOTES:

SPECIFICATIONS:
AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS
AASHTO STANDARD SPECIFICATIONS FOR TRANSPORTATION MATERIALS AND METHODS OF SAMPLING AND TESTING
AMERICAN SOCIETY FOR TESTING AND MATERIALS
AMERICAN INSTITUTE OF STEEL CONSTRUCTION

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WELDED WIRE FABRIC: SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M55 OR AASHTO M221. WIRE MESH SHALL BE A MINIMUM OF 70 GRADE STEEL.

EXPANSION JOINTS: JOINT FILLER TO BE AASHTO M-213 OR EQUAL.

CONCRETE: CONCRETE SHALL CONFORM TO AASHTO CLASS A(AE). MINIMUM 28 DAY COMPRESSIVE STRENGTH SHALL BE 5000 PSI.

HARDWARE: ALL BOLTS SHALL CONFORM TO ASTM A-307 AND BE GALVANIZED IN ACCORDANCE WITH ASTM-A153

DESIGN DATA:
SPECIFICATIONS:.....AASHTO 2017, 8TH EDITION AND ALL INTERIMS
DESIGN LOADING:.....HL-93

457 St. Michael St.
Mobile, AL 36602
(251) 433-1611

Cowles, Murphy, Glover & ASSOCIATES
A Full Service Engineering Firm
PERFORMANCE RELIABILITY EXPERIENCE

11880 Cranston Dr.
Suite 102
Arlington, TN 38002
(901) 290-5444

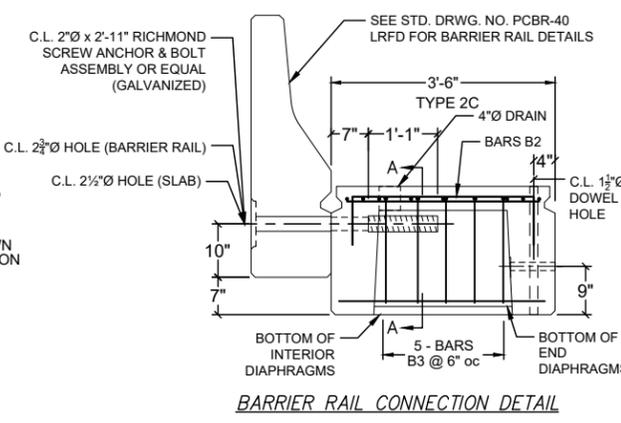
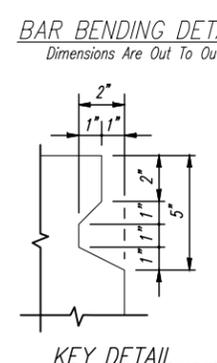
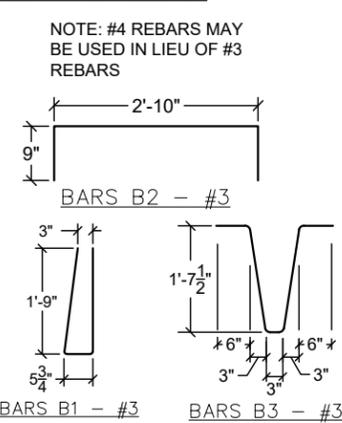
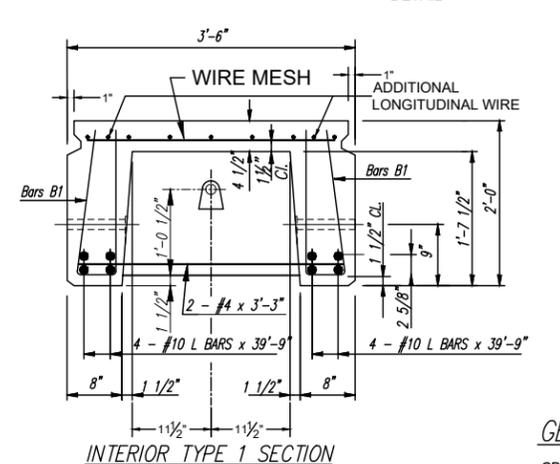
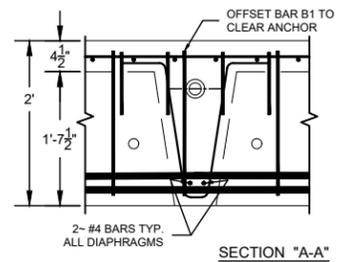
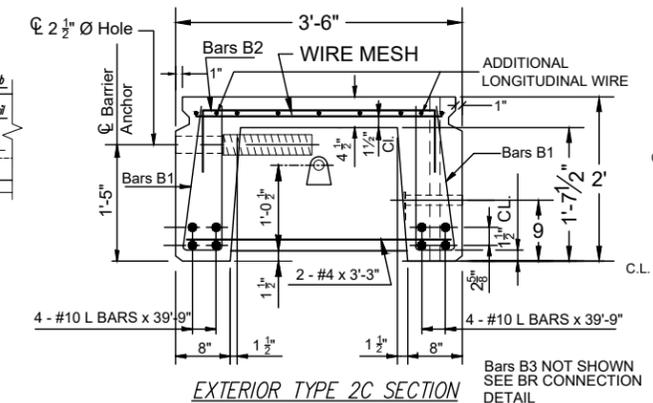
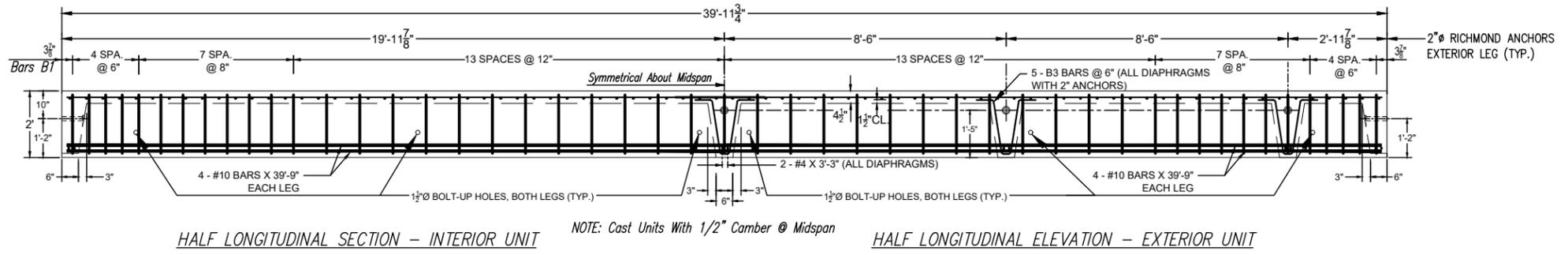
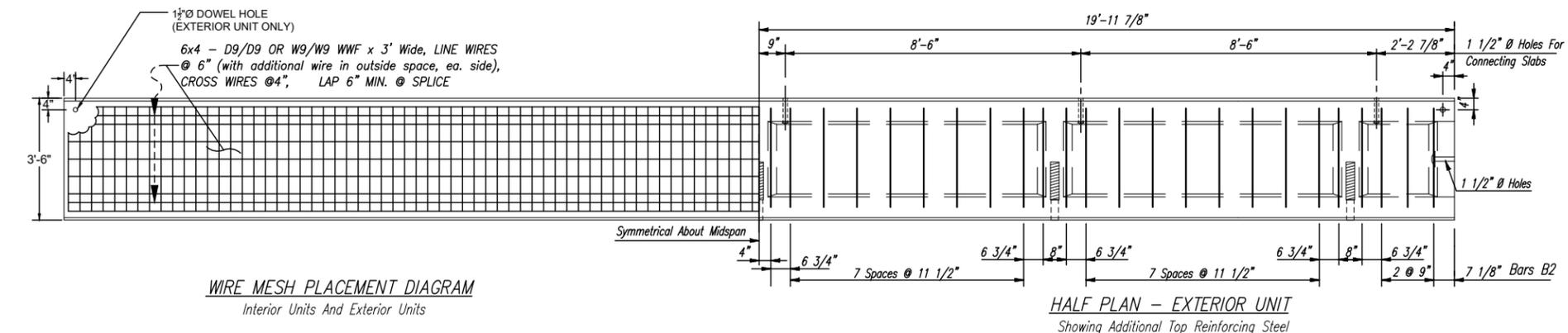
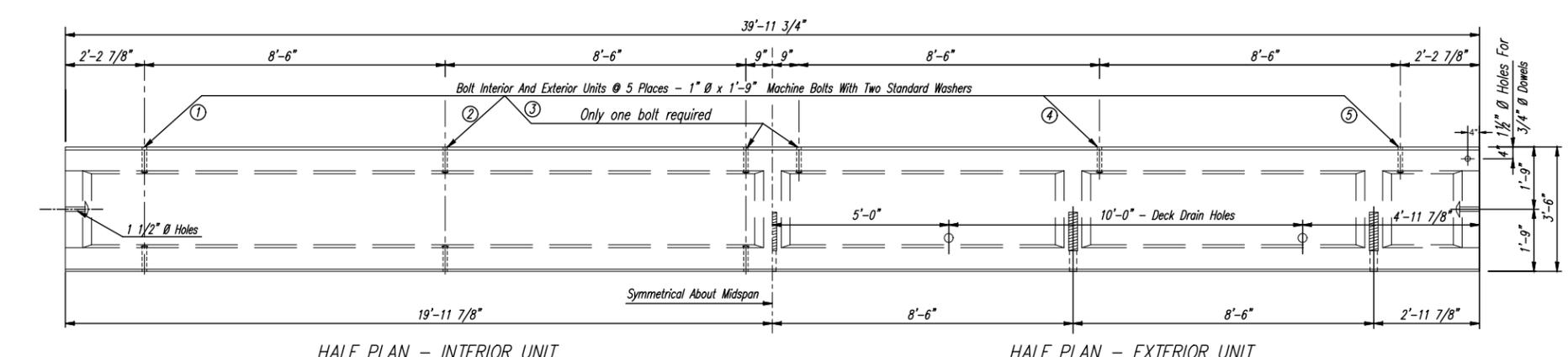
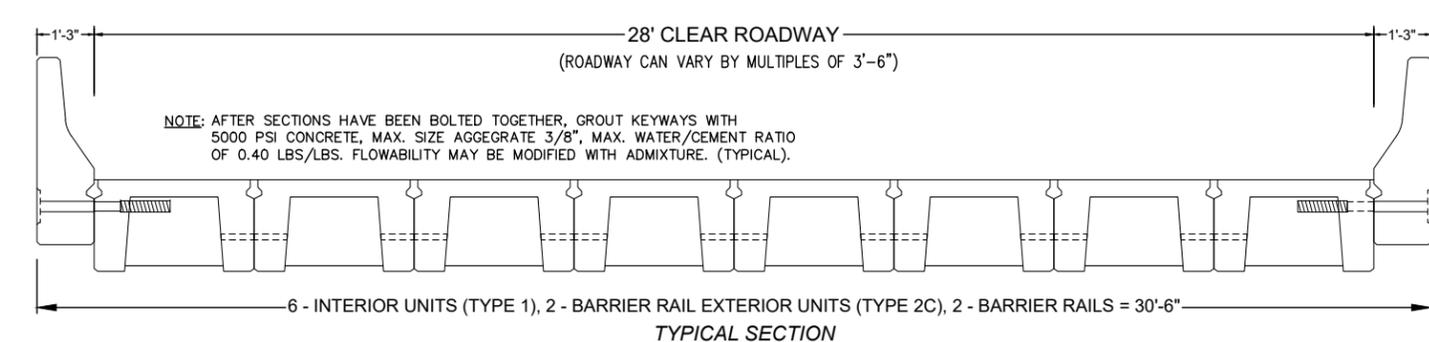
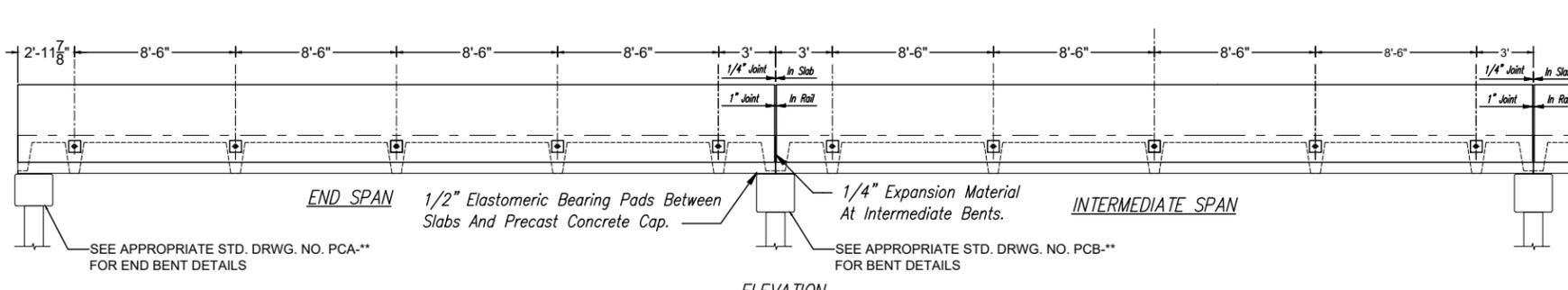
CONECUH BRIDGE & ENGINEERING, INC
P. O. Box 129
Troy, Alabama 36081
334-566-7422

249 Pike County Lake Rd.
Troy, Alabama 36079

PRECAST CONCRETE BRIDGE SLABS - 24' SPANS
HL-93 LOADING

DATE:
12/05/2022

STANDARD DWG. NO.
PC-24 LRFD
SHEET NO. 1 OF 27



NOTE: SCREW ANCHOR ASSEMBLY DESIGN LOAD = 50 KIPS TENSION. PROPERLY INSTALLED SCREW ANCHOR ASSEMBLY HAS BEEN TESTED BY AN INDEPENDENT LAB TO TWICE THE DESIGN LOAD (100 KIPS). CERTIFIED TEST RESULTS AVAILABLE UPON REQUEST.

GENERAL NOTES:

SPECIFICATIONS:
AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS
AASHTO STANDARD SPECIFICATIONS FOR TRANSPORTATION MATERIALS AND METHODS OF SAMPLING AND TESTING
AMERICAN SOCIETY FOR TESTING AND MATERIALS
AMERICAN INSTITUTE OF STEEL CONSTRUCTION

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EXPANSION JOINTS: JOINT FILLER TO BE AASHTO M-213 OR EQUAL.

CONCRETE: CONCRETE SHALL CONFORM TO AASHTO CLASS A(AE). MINIMUM 28 DAY COMPRESSIVE STRENGTH SHALL BE 5000 PSI.

HARDWARE: ALL BOLTS SHALL CONFORM TO ASTM A-307 AND BE GALVANIZED IN ACCORDANCE WITH ASTM-A153

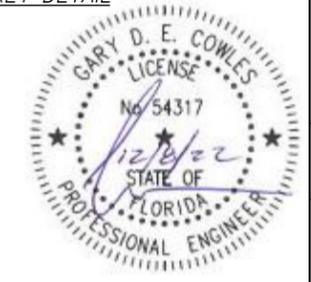
DESIGN DATA:
SPECIFICATIONS:.....AASHTO 2017, 8TH EDITION AND ALL INTERIMS
DESIGN LOADING:.....HL-93

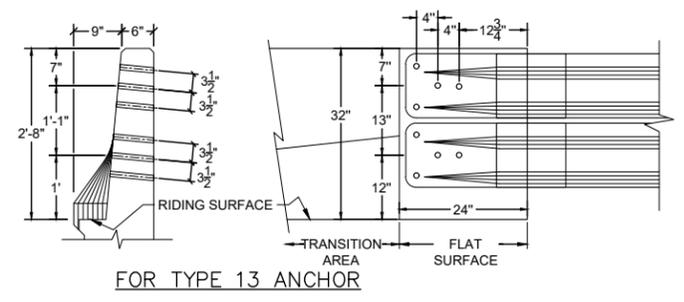
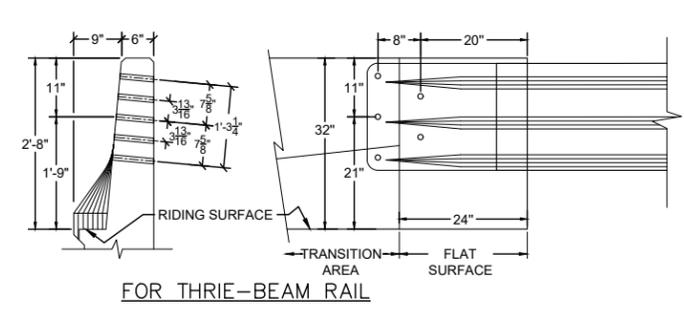
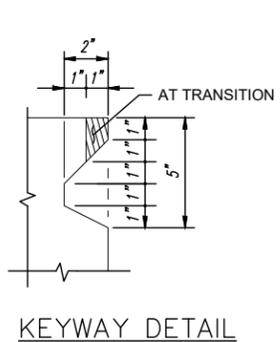
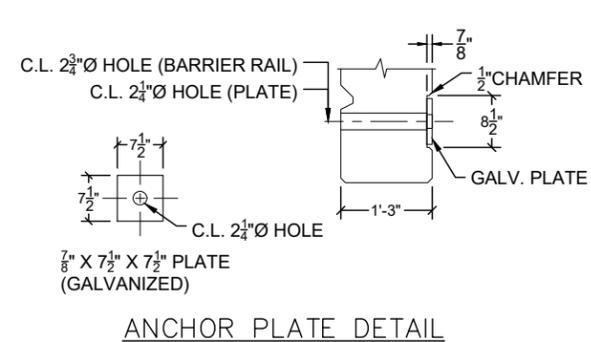
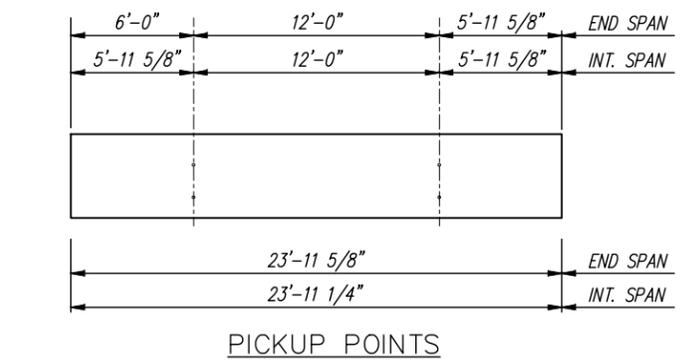
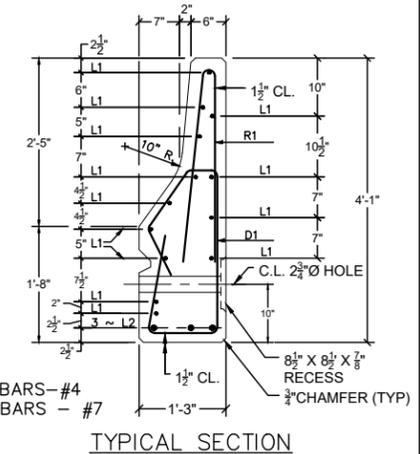
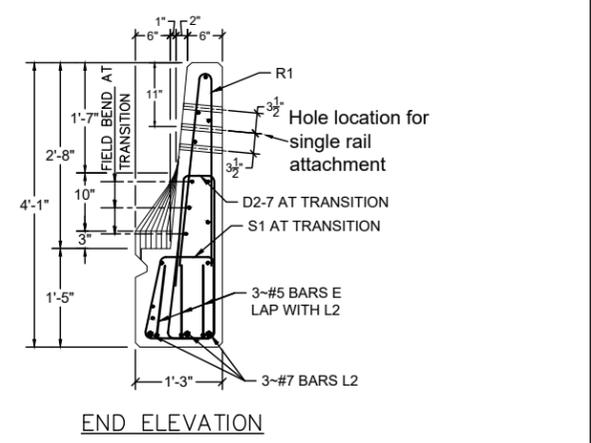
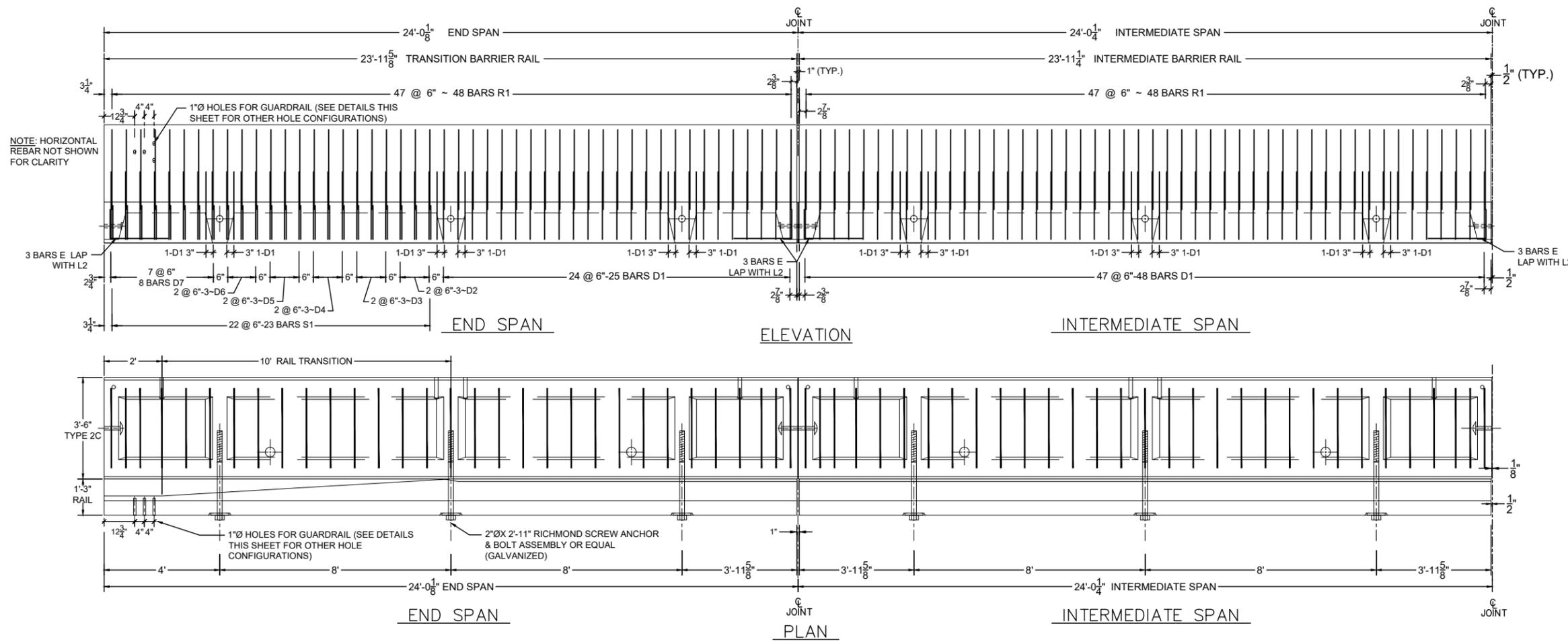
457 St. Michael St. **Cowles, Murphy, Glover & ASSOCIATES** 11880 Cranston Dr. Suite 102
Mobile, AL 36602 A Full Service Engineering Firm Arlington, TN 38002
(251) 433-1611 PERFORMANCE RELIABILITY EXPERIENCE (901) 290-5444

CONECUH BRIDGE & ENGINEERING, INC
P. O. Box 129 249 Pike County Lake Rd. Troy, Alabama 36079
Troy, Alabama 36081 334-566-7422

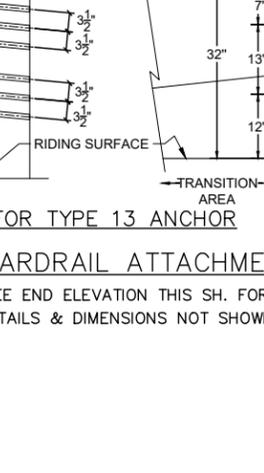
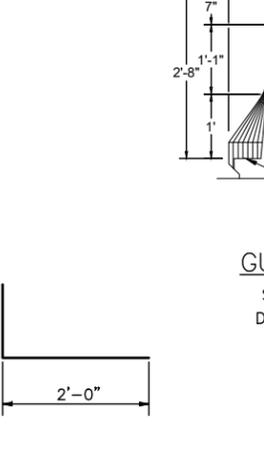
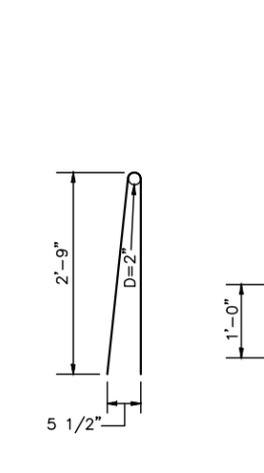
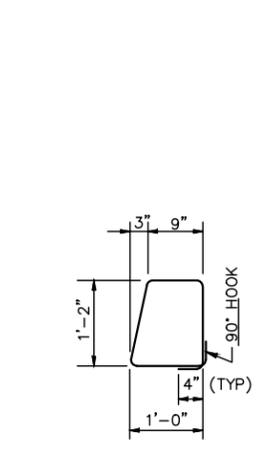
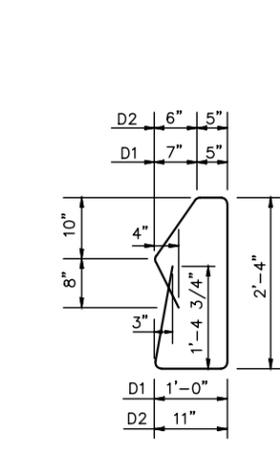
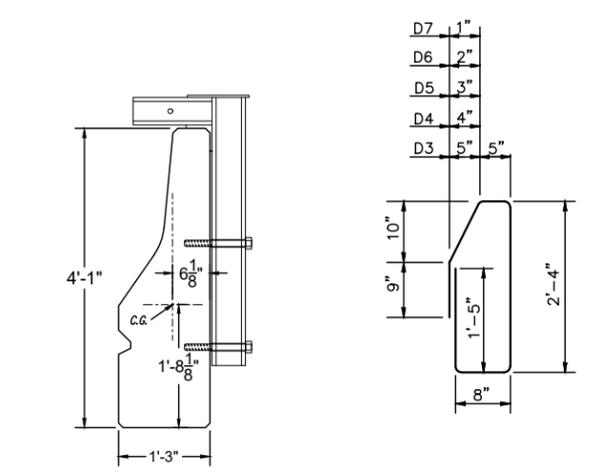
PRECAST CONCRETE BRIDGE SLABS - 40' SPANS
HL-93 LOADING

DATE: STANDARD DWG. NO.
12/05/2022 **PC-40 LRFD**
SHEET NO. 3 OF 27





GUARDRAIL ATTACHMENT
SEE END ELEVATION THIS SH. FOR DETAILS & DIMENSIONS NOT SHOWN.



BAR BENDING DETAILS (DIMENSIONS ARE OUT TO OUT)

GENERAL NOTES:

- SPECIFICATIONS:**
AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS
AASHTO STANDARD SPECIFICATIONS FOR TRANSPORTATION MATERIALS AND METHODS OF SAMPLING AND TESTING
AMERICAN SOCIETY FOR TESTING AND MATERIALS
AMERICAN INSTITUTE OF STEEL CONSTRUCTION
- REINFORCING STEEL:** ALL REINFORCING STEEL SHALL BE GRADE 60 BILLET STEEL MEETING THE REQUIREMENTS OF AASHTO M31. ALL REINFORCING STEEL SHALL BE ACCURATELY LOCATED IN THE FORMS AND PROPER CLEARANCES MAINTAINED WITH STAINLESS STEEL OR RUBBER TIPPED CHAIRS. REINFORCING DIMENSIONS ARE CENTER TO CENTER UNLESS OTHERWISE NOTED ON PLANS.
- CONCRETE:** CONCRETE SHALL CONFORM TO AASHTO CLASS A(AE). MINIMUM 28 DAY COMPRESSIVE STRENGTH SHALL BE 5000 PSI.
- HARDWARE:** ALL BOLTS SHALL CONFORM TO ASTM A-307 AND BE GALVANIZED IN ACCORDANCE WITH ASTM-A153.
- SURFACE FINISH:** SURFACES NOT PLACED AGAINST FORMS SHALL BE STRUCK OFF TO PROPER ELEVATION AND RECEIVE A WOOD FLOAT FINISH. SURFACE MAY THEN RECEIVE A BROOMED FINISH. ADDITIONALLY ALL EXPOSED SURFACES, EXCEPT BOTTOM SURFACE, SHALL BE COATED WITH A PRODUCT SUCH AS THOROCCOAT AS PRODUCED BY CHEMREX, INC. OR EQUAL.
- DESIGN DATA:**
SPECIFICATIONS:.....AASHTO 2017, 8TH EDITION AND ALL INTERIMS
DESIGN LOADING:.....BASED ON TL-4 CRASH TEST CRITERIA

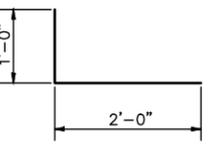
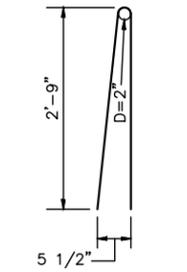
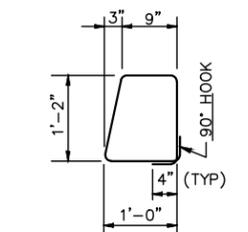
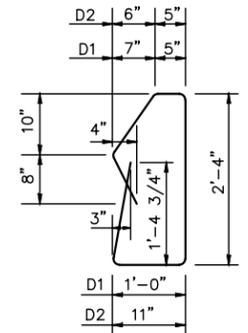
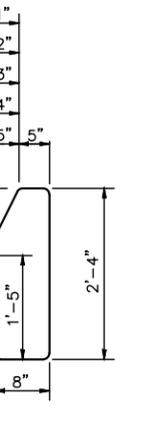
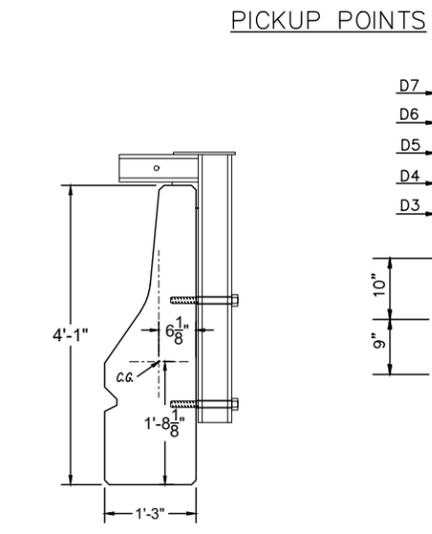
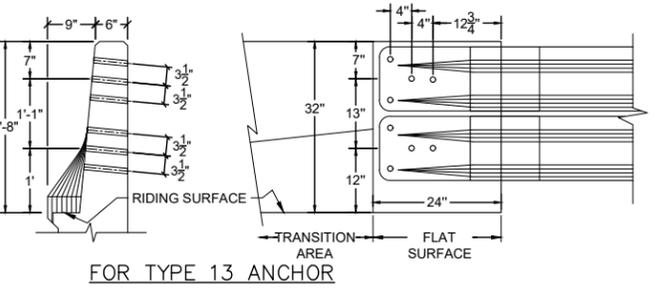
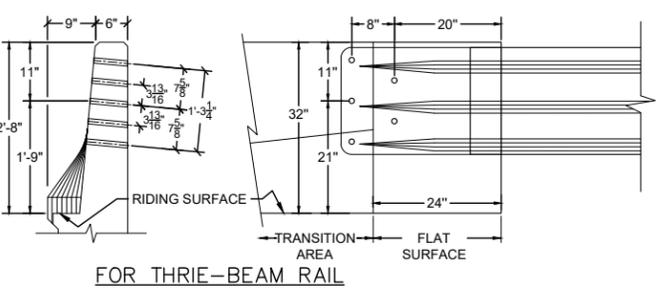
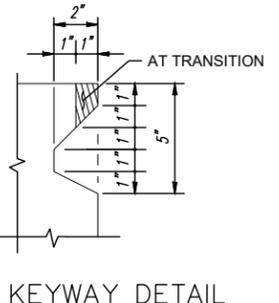
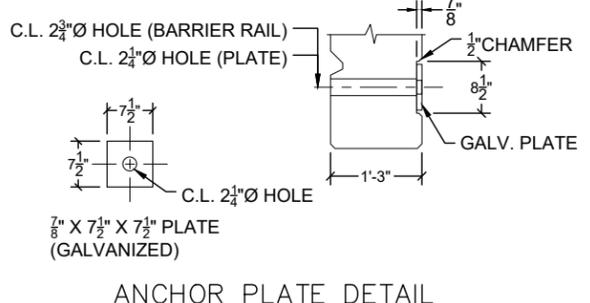
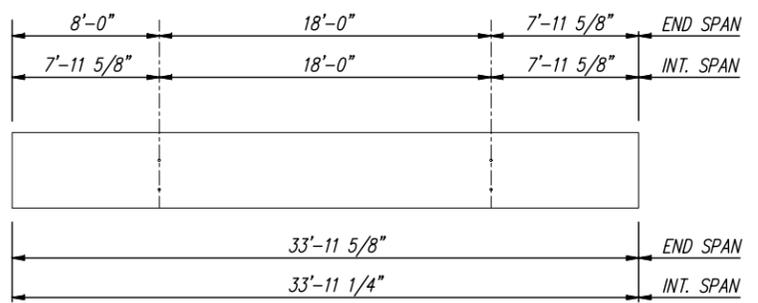
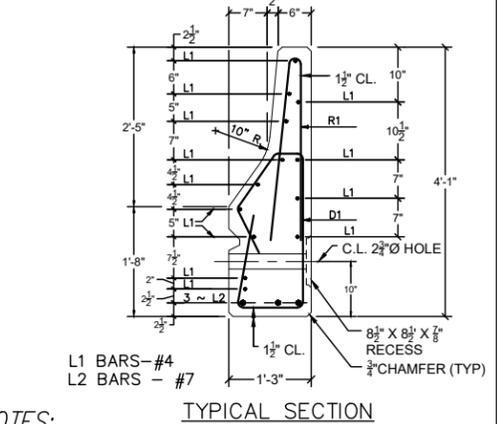
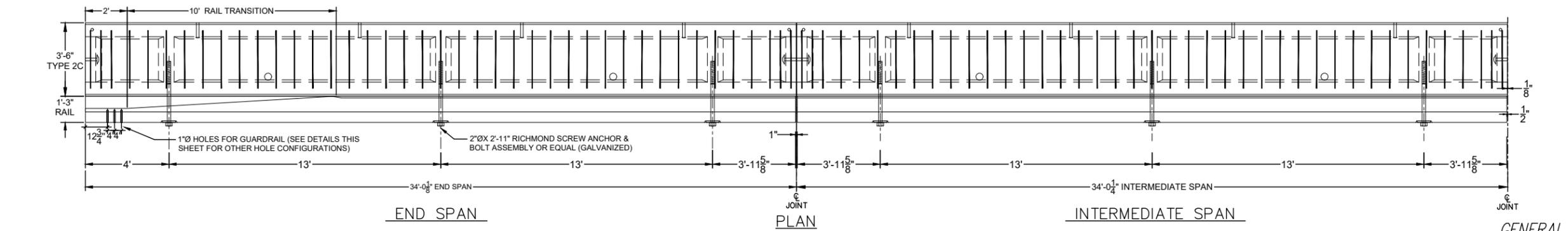
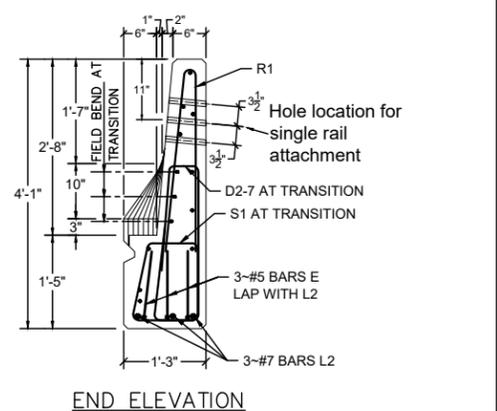
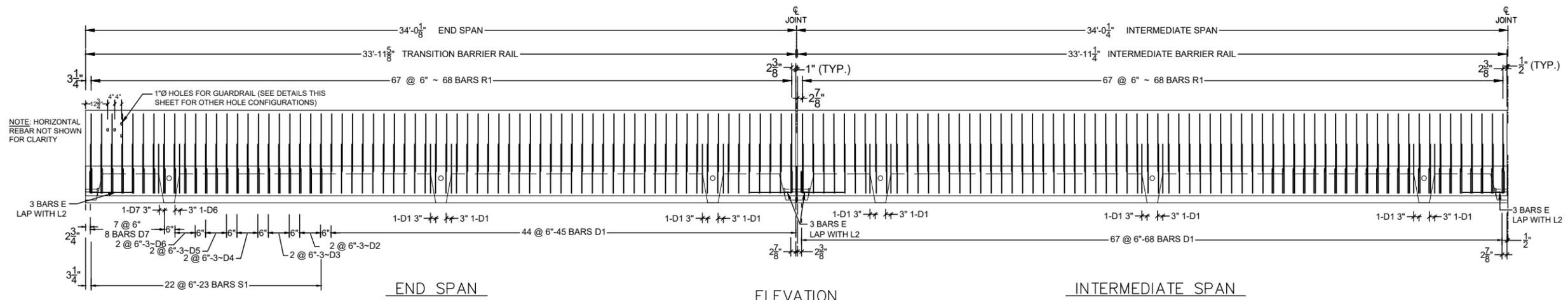
457 St. Michael St. Mobile, AL 36602 (251) 433-1611
Cowles, Murphy, Glover & ASSOCIATES
A Full Service Engineering Firm
 PERFORMANCE RELIABILITY EXPERIENCE
 11880 Cranston Dr. Suite 102 Arlington, TN 38002 (901) 290-5444

CONECUH BRIDGE & ENGINEERING, INC
 P. O. Box 129 Troy, Alabama 36081
 249 Pike County Lake Rd. Troy, Alabama 36079
 334-566-7422

PRECAST CONCRETE BARRIER RAIL FOR USE WITH PRECAST SLAB DRAWING PC-24 LRFD

DATE: 12/05/2022
 STANDARD DWG. NO. PCBR-24 LRFD SHEET NO. 4 OF 27





HANDLING DEVICE ATTACHED TO BARRIER RAIL BARS D3-D7-#4 BARS D1-D2-#4 BARS S1-#4 BARS R1-#4 BARS E-#5

BAR BENDING DETAILS (DIMENSIONS ARE OUT TO OUT)

GENERAL NOTES:

SPECIFICATIONS:
 AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS
 AASHTO STANDARD SPECIFICATIONS FOR TRANSPORTATION MATERIALS AND METHODS OF SAMPLING AND TESTING
 AMERICAN SOCIETY FOR TESTING AND MATERIALS
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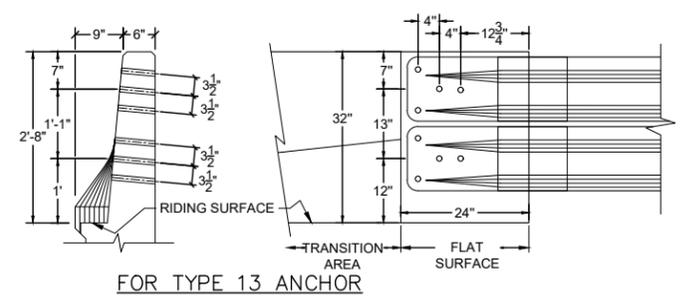
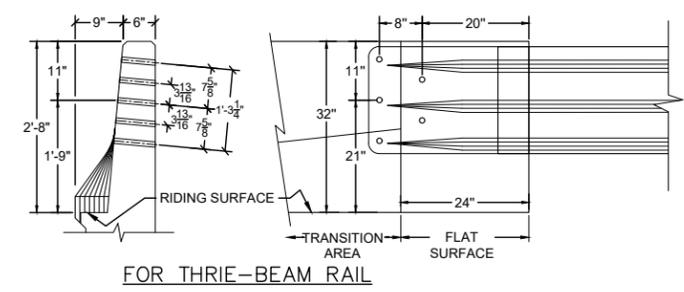
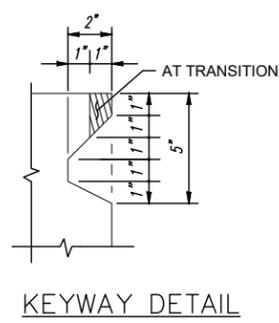
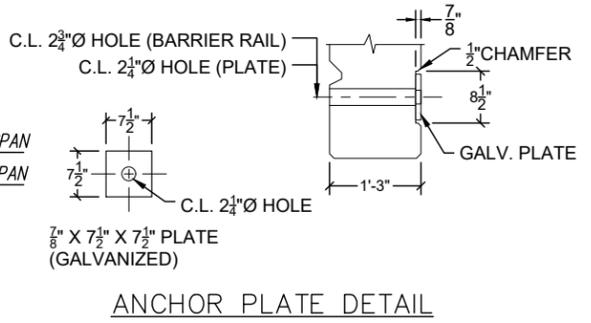
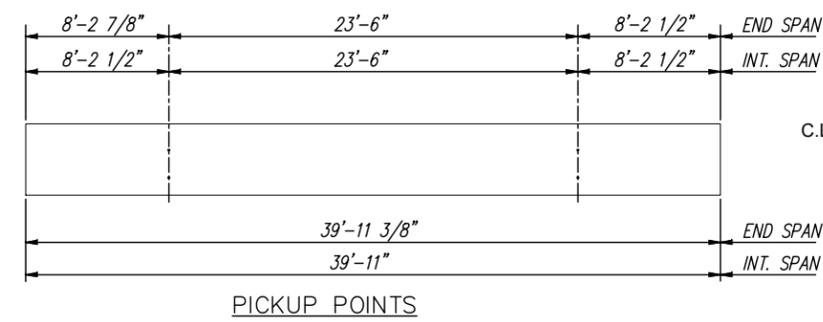
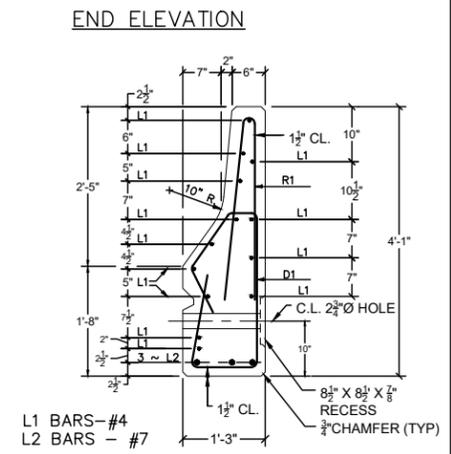
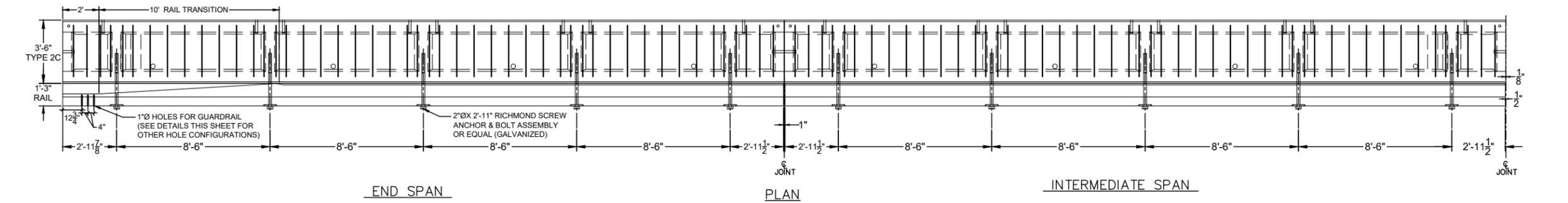
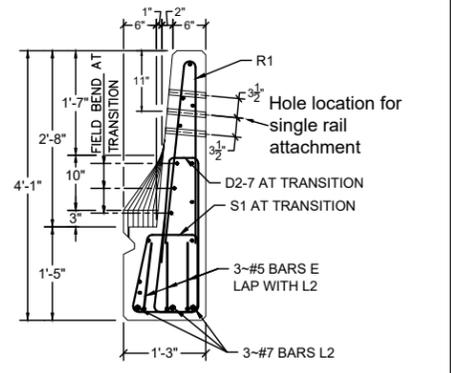
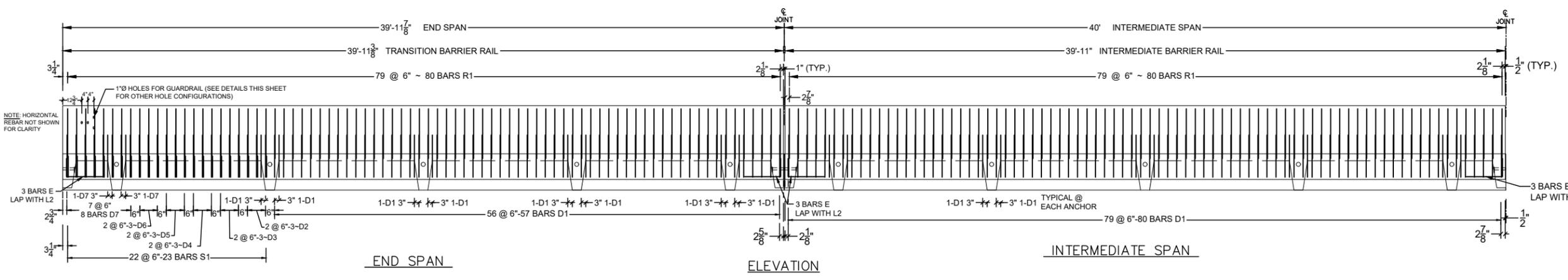
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DESIGN DATA:
 SPECIFICATIONS:AASHTO 2017, 8TH EDITION AND ALL INTERIMS
 DESIGN LOADING:BASED ON TL-4 CRASH TEST CRITERIA

GUARDRAIL ATTACHMENT
 SEE END ELEVATION THIS SH. FOR DETAILS & DIMENSIONS NOT SHOWN.



457 St. Michael St. Mobile, AL 36602 (251) 433-1611	Cowles, Murphy, Glover & ASSOCIATES A Full Service Engineering Firm PERFORMANCE RELIABILITY EXPERIENCE	11880 Cranston Dr. Suite 102 Arlington, TN 38002 (901) 290-5444
CONECUH BRIDGE & ENGINEERING, INC		
P. O. Box 129 Troy, Alabama 36081		249 Pike County Lake Rd. Troy, Alabama 36079 334-566-7422
PRECAST CONCRETE BARRIER RAIL FOR USE WITH PRECAST SLAB DRAWING PC-34 LRFD		
DATE: 12/05/2022	STANDARD DWG. NO. PCBR-34 LRFD SHEET NO. 5 OF 27	



GENERAL NOTES:

SPECIFICATIONS:
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 AASHTO STANDARD SPECIFICATIONS FOR TRANSPORTATION MATERIALS AND METHODS OF SAMPLING AND TESTING
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 AMERICAN INSTITUTE OF STEEL CONSTRUCTION

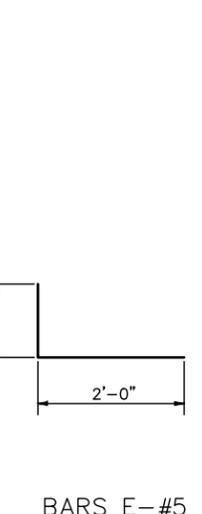
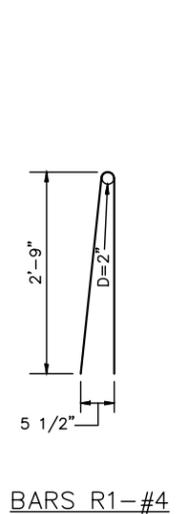
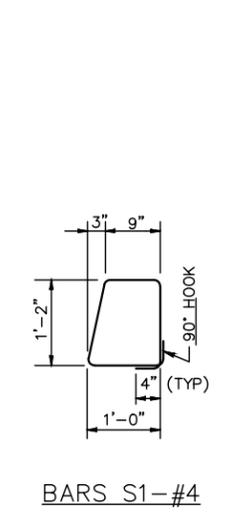
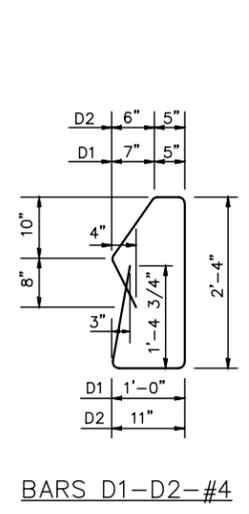
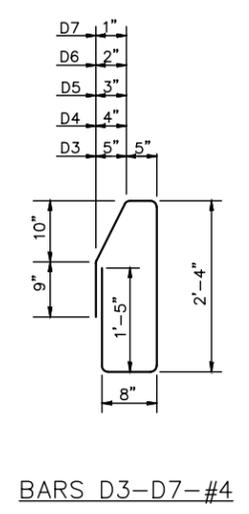
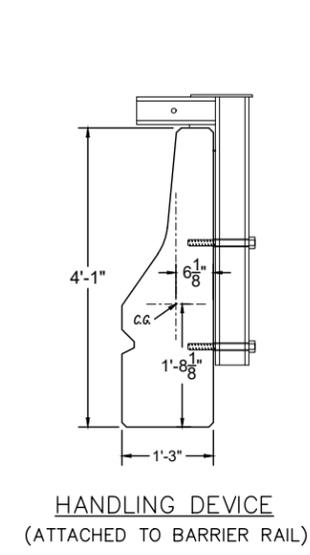
REINFORCING STEEL: ALL REINFORCING STEEL SHALL BE GRADE 60 BILLET STEEL MEETING THE REQUIREMENTS OF AASHTO M31. ALL REINFORCING STEEL SHALL BE ACCURATELY LOCATED IN THE FORMS AND PROPER CLEARANCES MAINTAINED WITH STAINLESS STEEL OR RUBBER TIPPED CHAIRS. REINFORCING DIMENSIONS ARE CENTER TO CENTER UNLESS OTHERWISE NOTED ON PLANS.

CONCRETE: CONCRETE SHALL CONFORM TO AASHTO CLASS A(AE). MINIMUM 28 DAY COMPRESSIVE STRENGTH SHALL BE 5000 PSI.

HARDWARE: ALL BOLTS SHALL CONFORM TO ASTM A-307 AND BE GALVANIZED IN ACCORDANCE WITH ASTM-A153.

SURFACE FINISH: SURFACES NOT PLACED AGAINST FORMS SHALL BE STRUCK OFF TO PROPER ELEVATION AND RECEIVE A WOOD FLOAT FINISH. SURFACE MAY THEN RECEIVE A BROOMED FINISH. ADDITIONALLY ALL EXPOSED SURFACES, EXCEPT BOTTOM SURFACE, SHALL BE COATED WITH A PRODUCT SUCH AS THOROCOAT AS PRODUCED BY CHEMREX, INC. OR EQUAL.

DESIGN DATA:
 SPECIFICATIONS:.....AASHTO 2017, 8TH EDITION AND ALL INTERIMS
 DESIGN LOADING:.....BASED ON TL-4 CRASH TEST CRITERIA



BAR BENDING DETAILS (DIMENSIONS ARE OUT TO OUT)

GUARDRAIL ATTACHMENT
 SEE END ELEVATION THIS SH. FOR DETAILS & DIMENSIONS NOT SHOWN.



457 St. Michael St.
 Mobile, AL 36602
 (251) 433-1611

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A Full Service Engineering Firm
 PERFORMANCE RELIABILITY EXPERIENCE

11880 Cranston Dr.
 Suite 102
 Arlington, TN 38002
 (901) 290-5444

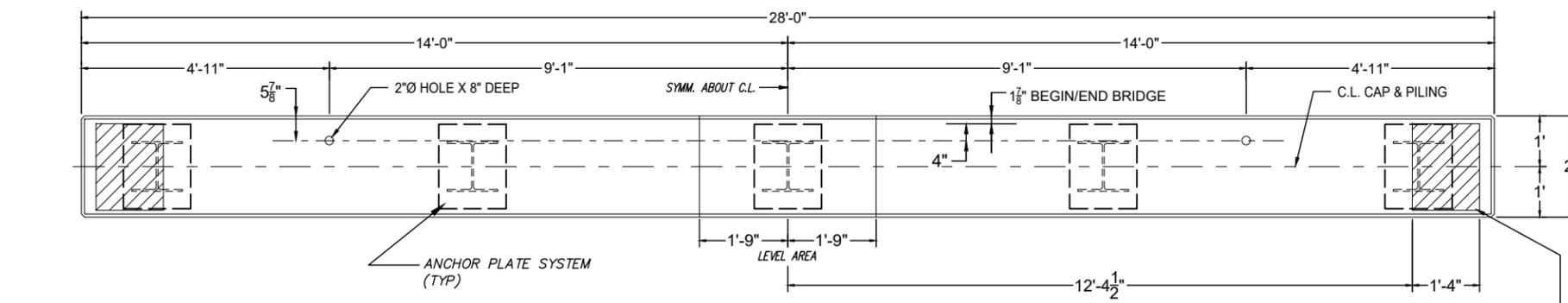
CONECUH BRIDGE & ENGINEERING, INC
 P. O. Box 129
 Troy, Alabama 36081

249 Pike County Lake Rd.
 Troy, Alabama 36079
 334-566-7422

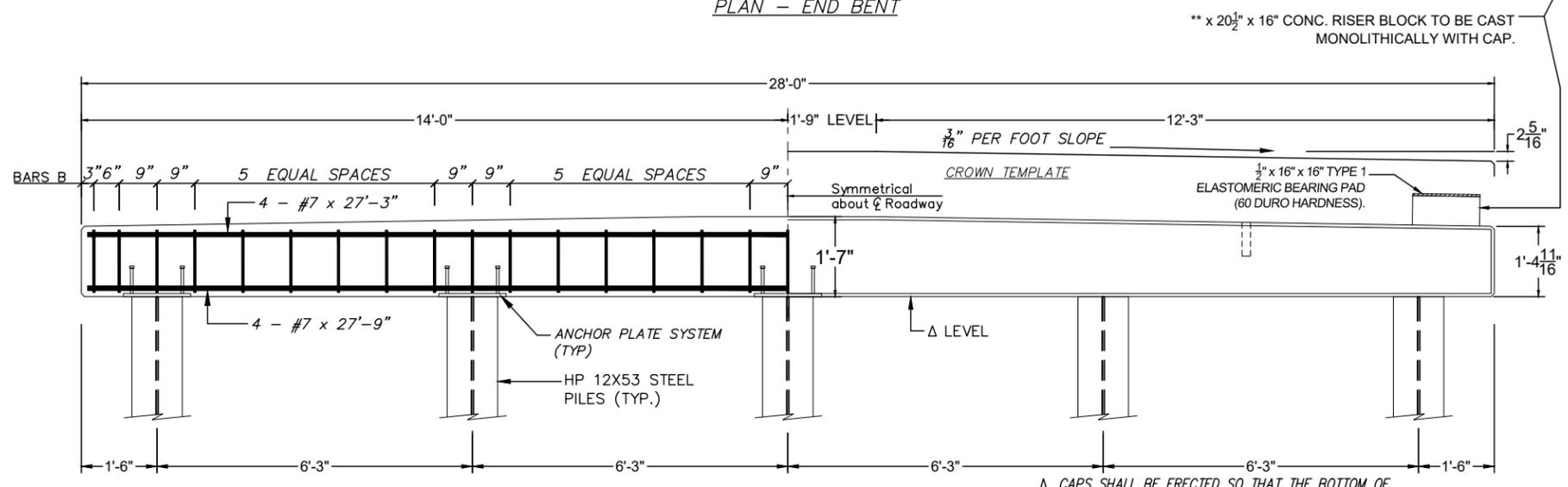
PRECAST CONCRETE BARRIER RAIL FOR USE WITH PRECAST SLAB DRAWING PC-40 LRFD

DATE: 12/05/2022

STANDARD DWG. NO. PCBR-40 LRFD SHEET NO. 6 OF 27



PLAN - END BENT



ELEVATION - END BENT

NOTE: THE CONTRACTOR SHALL CLEAN AND PAINT ALL STEEL PLATE AND PILING SURFACES THAT COME INTO CONTACT WITH CONCRETE BEFORE THE CONCRETE IS INSTALLED.

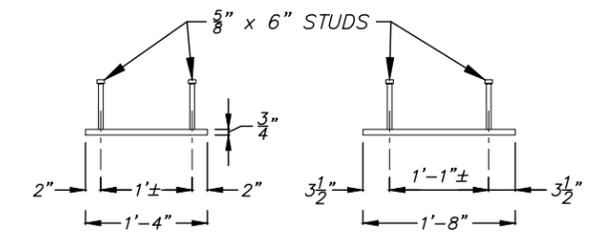
Δ CAPS SHALL BE ERECTED SO THAT THE BOTTOM OF THE CAP IS LEVEL. CAPS ERECTED WITH A SLOPE ON THE BOTTOM OF THE CAP GREATER THAN 1/16" PER FOOT SHALL BE CORRECTED TO THE SATISFACTION OF THE ENGINEER OF RECORD AT NO ADDITIONAL COST TO THE PROJECT.

**** DEPTH OF RISER BLOCK**

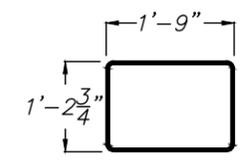
24' SPAN	NA
34' SPAN	4"
40' SPAN	7"

***** PREFORMED EXP. JT. FILLER**

24' SPAN	1/4" x 16" x 24'-6"
34' SPAN	1/4" x 20" x 24'-6"
40' SPAN	1/4" x 23" x 24'-6"

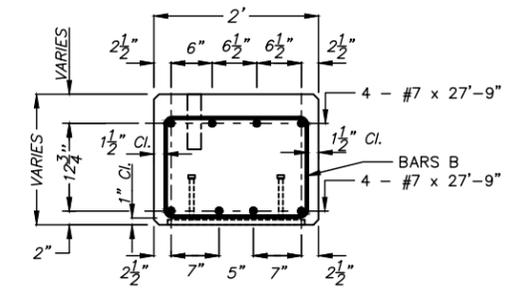


ANCHOR SYSTEM

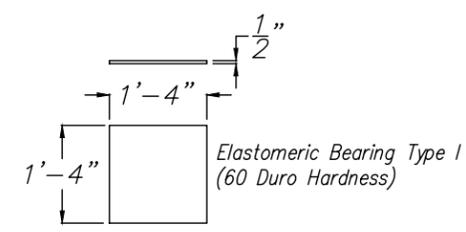


BARS B - #4
(33 per Cap)

BAR BENDING DETAILS
Dimensions Are Out To Out



STEEL PLACEMENT DETAIL



BEARING PADS

A 1/2" X 8" X 1'-4" Elastomeric Bearing, Type 1, Shall Be Used Under The Outside Legs Of The Exterior Channels.

GENERAL NOTES:

SPECIFICATIONS:
AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS
AASHTO STANDARD SPECIFICATIONS FOR TRANSPORTATION MATERIALS AND METHODS OF SAMPLING AND TESTING
AMERICAN SOCIETY FOR TESTING AND MATERIALS
AMERICAN INSTITUTE OF STEEL CONSTRUCTION

REINFORCING STEEL: ALL REINFORCING STEEL SHALL BE GRADE 60 BILLET STEEL MEETING THE REQUIREMENTS OF AASHTO M31. ALL REINFORCING STEEL SHALL BE ACCURATELY LOCATED IN THE FORMS AND PROPER CLEARANCES MAINTAINED WITH STAINLESS STEEL, PLASTIC, OR RUBBER TIPPED CHAIRS. REINFORCING DIMENSIONS ARE CENTER TO CENTER UNLESS OTHERWISE NOTED ON PLANS.

CONCRETE: CONCRETE SHALL CONFORM TO AASHTO CLASS A(AE). MINIMUM 28 DAY COMPRESSIVE STRENGTH SHALL BE 3000 PSI. ALL EXPOSED CORNERS TO BE CHAMFERED 3/4" X 45° UNLESS OTHERWISE NOTED.

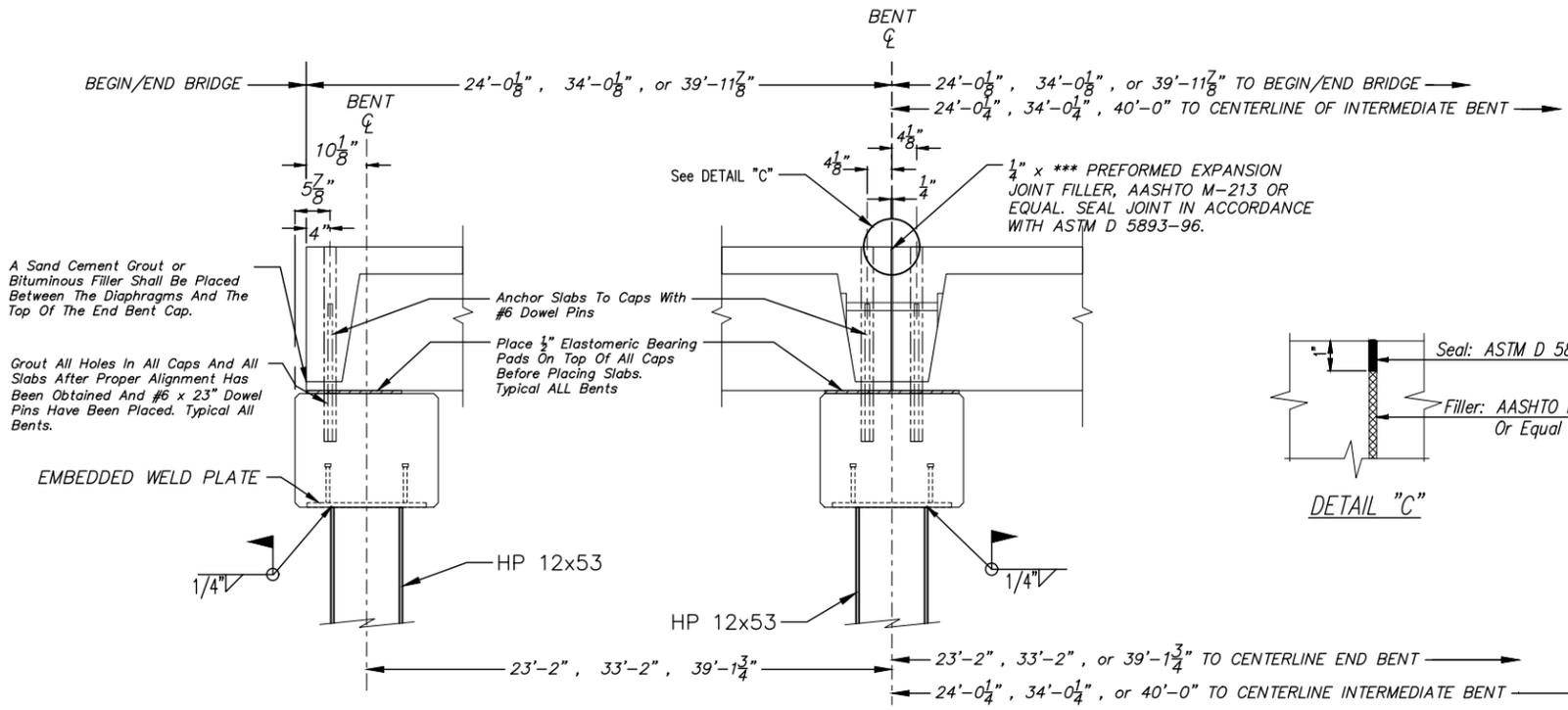
STRUCTURAL STEEL AND PILING: ALL STRUCTURAL STEEL SHALL COMPLY WITH AASHTO M270 GRADE 36. ALL PILING SHALL BE 12" STEEL "H" PILING, 53 LBS PER FOOT. ALLOWABLE PILE LOAD = 40 TONS WITH A FACTOR OF SAFETY OF 2.0 (MIN.) (HL-93).

WELDING: ALL WELDING SHALL CONFORM TO ANSI/AASHTO/ANS D 1.5 "BRIDGE WELDING CODE"

TOLERANCES: A DEVIATION OF MORE THAN 1/8" MAY BE CAUSE FOR REJECTION OF THE UNIT.

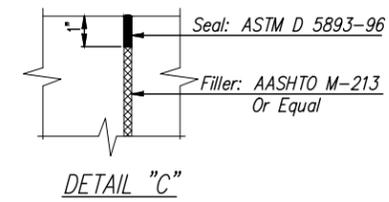
HARDWARE: ALL BOLTS SHALL CONFORM TO ASTM A-307 AND BE GALVANIZED IN ACCORDANCE WITH ASTM-A153

DESIGN DATA:
SPECIFICATIONS:.....AASHTO 2017, 8TH EDITION AND ALL INTERIMS
DESIGN LOADING:.....HL-93



TYPICAL END SECTION

TYPICAL INTERMEDIATE SECTION



DETAIL "C"

NOTE: A PRE-FABRICATED H-PILE SPLICER, SUCH AS APF HP-30000 CHAMPION SPLICER OR EQUAL, SHALL BE USED FOR SPLICING PILES.



457 St. Michael St.
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PERFORMANCE RELIABILITY EXPERIENCE

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Suite 102
Arlington, TN 38002
(901) 290-5444

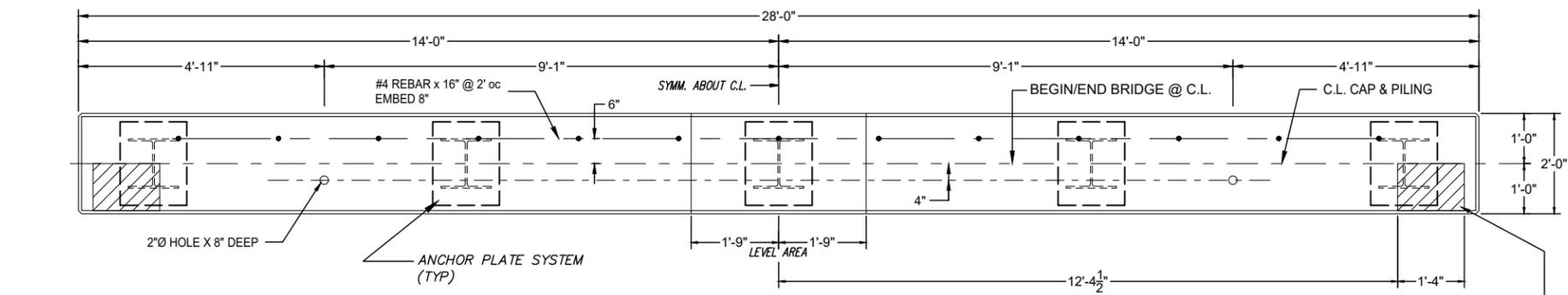
CBE & CONEcuH BRIDGE & ENGINEERING, INC
P. O. Box 129
Troy, Alabama 36081
334-566-7422

249 Pike County Lake Rd.
Troy, Alabama 36079

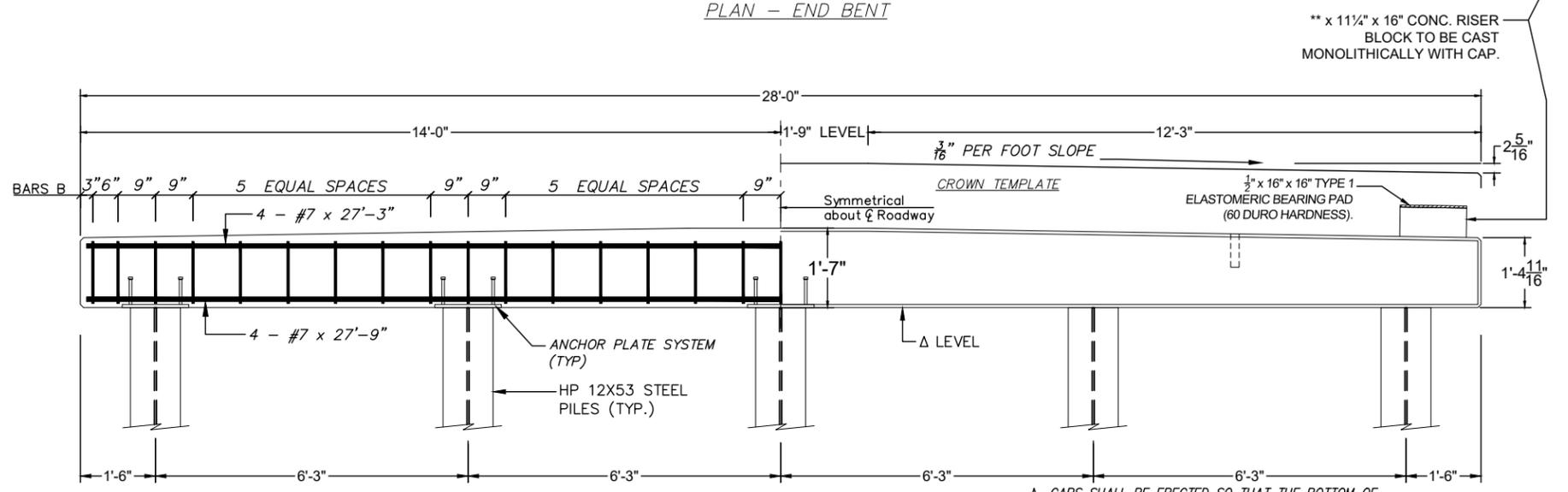
PRECAST CONCRETE END BENT CAP
FOR USE WITH STEEL PILING & 24', 34', OR 40'
PRECAST BRIDGE SLABS 24'-6" CLEAR ROADWAY

DATE: 12/05/2022

STANDARD DWG. NO.
PCA-2440 LRFD
SHEET NO. 7 OF 27



PLAN - END BENT



ELEVATION - END BENT

NOTE: THE CONTRACTOR SHALL CLEAN AND PAINT ALL STEEL PLATE AND PILING SURFACES THAT COME INTO CONTACT WITH CONCRETE BEFORE THE CONCRETE IS INSTALLED.

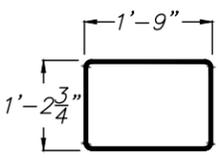
Δ CAPS SHALL BE ERECTED SO THAT THE BOTTOM OF THE CAP IS LEVEL. CAPS ERECTED WITH A SLOPE ON THE BOTTOM OF THE CAP GREATER THAN 1/16" PER FOOT SHALL BE CORRECTED TO THE SATISFACTION OF THE ENGINEER OF RECORD AT NO ADDITIONAL COST TO THE PROJECT.

**** DEPTH OF RISER BLOCK**

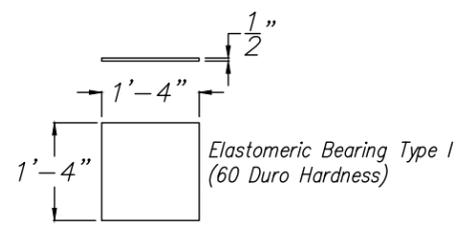
24' SPAN	NA
34' SPAN	4"
40' SPAN	7"

***** PREFORMED EXP. JT. FILLER**

24' SPAN	1/4" x 16" x 24'-6"
34' SPAN	1/4" x 20" x 24'-6"
40' SPAN	1/4" x 23" x 24'-6"



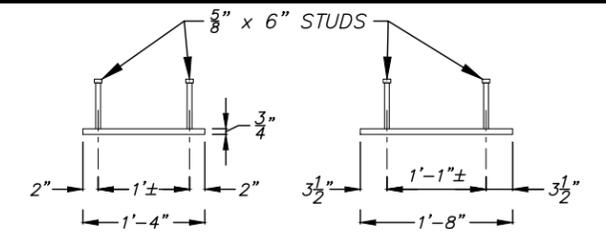
BARS B - #4 (33 per Cap)
BAR BENDING DETAILS
Dimensions Are Out To Out



BEARING PADS

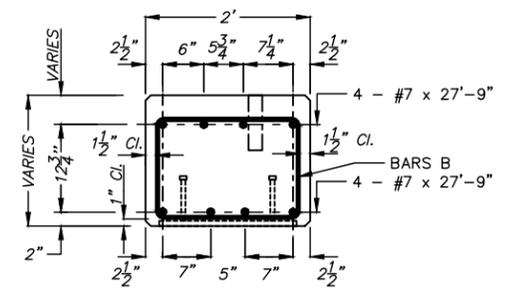
A 1/2" X 8" X 1'-4" Elastomeric Bearing, Type 1, Shall Be Used Under The Outside Legs Of The Exterior Channels.

NOTE: A PRE-FABRICATED H-PILE SPICER, SUCH AS APF HP-30000 CHAMPION SPICER OR EQUAL, SHALL BE USED FOR SPICING PILES.



ELEVATION END

ANCHOR SYSTEM



STEEL PLACEMENT DETAIL WITH APPROACH SLAB

GENERAL NOTES:

SPECIFICATIONS:
AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS
AASHTO STANDARD SPECIFICATIONS FOR TRANSPORTATION MATERIALS AND METHODS OF SAMPLING AND TESTING
AMERICAN SOCIETY FOR TESTING AND MATERIALS
AMERICAN INSTITUTE OF STEEL CONSTRUCTION

REINFORCING STEEL: ALL REINFORCING STEEL SHALL BE GRADE 60 BILLET STEEL MEETING THE REQUIREMENTS OF AASHTO M31. ALL REINFORCING STEEL SHALL BE ACCURATELY LOCATED IN THE FORMS AND PROPER CLEARANCES MAINTAINED WITH STAINLESS STEEL, PLASTIC, OR RUBBER TIPPED CHAIRS. REINFORCING DIMENSIONS ARE CENTER TO CENTER UNLESS OTHERWISE NOTED ON PLANS.

CONCRETE: CONCRETE SHALL CONFORM TO AASHTO CLASS A(AE). MINIMUM 28 DAY COMPRESSIVE STRENGTH SHALL BE 3000 PSI. ALL EXPOSED CORNERS TO BE CHAMFERED 3/4" X 45' UNLESS OTHERWISE NOTED.

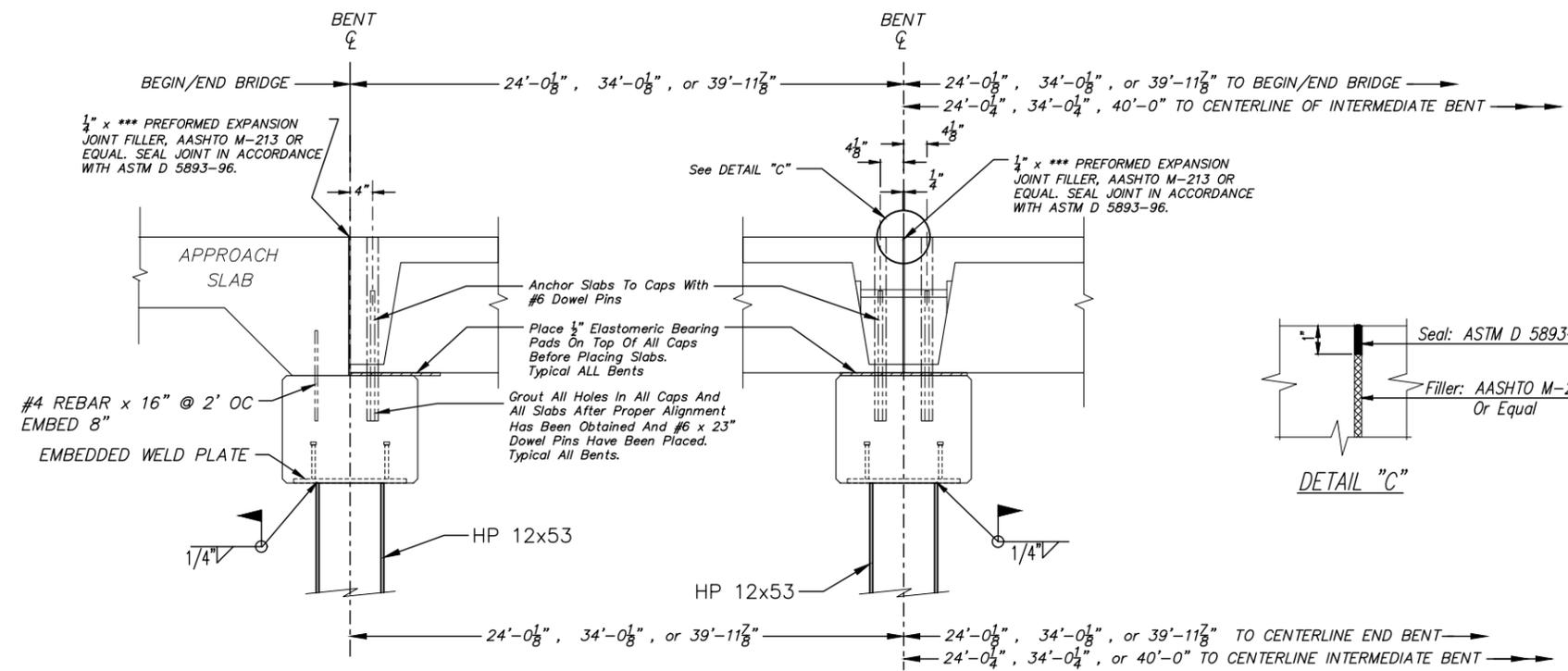
STRUCTURAL STEEL AND PILING: ALL STRUCTURAL STEEL SHALL COMPLY WITH AASHTO M270 GRADE 36. ALL PILING SHALL BE 12" STEEL "H" PILING, 53 LBS PER FOOT. ALLOWABLE PILE LOAD = 40 TONS WITH A FACTOR OF SAFETY OF 2.0 (MIN.) (HL-93).

WELDING: ALL WELDING SHALL CONFORM TO ANSI/AASHTO/ANS D 1.5 "BRIDGE WELDING CODE"

TOLERANCES: A DEVIATION OF MORE THAN 1/8" MAY BE CAUSE FOR REJECTION OF THE UNIT.

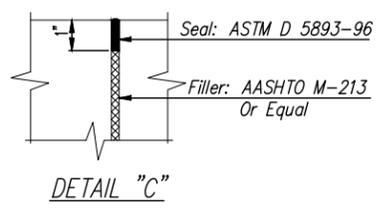
HARDWARE: ALL BOLTS SHALL CONFORM TO ASTM A-307 AND BE GALVANIZED IN ACCORDANCE WITH ASTM-A153

DESIGN DATA:
SPECIFICATIONS:.....AASHTO 2017, 8TH EDITION AND ALL INTERIMS
DESIGN LOADING:.....HL-93

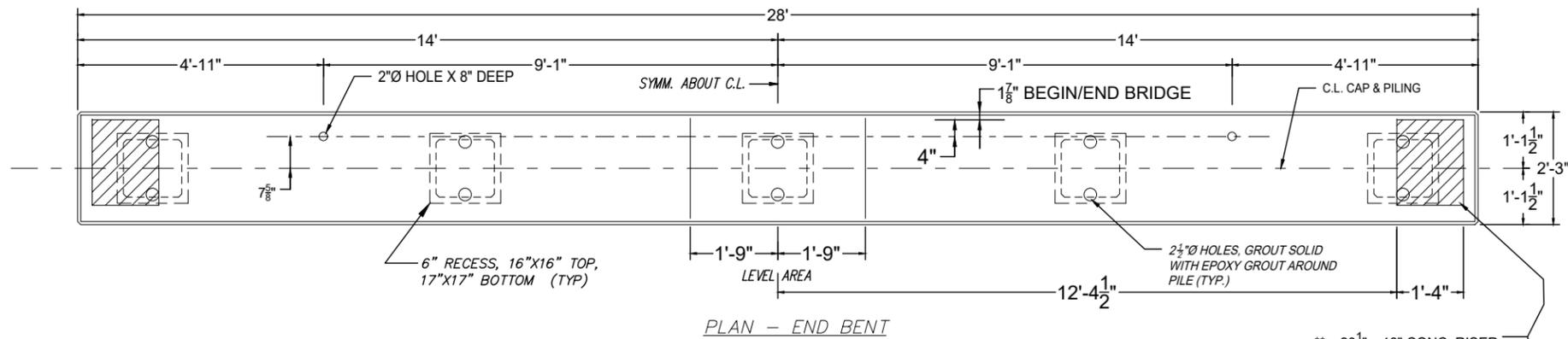


TYPICAL END SECTION WITH APPROACH SLAB

TYPICAL INTERMEDIATE SECTION WITH APPROACH SLAB



457 St. Michael St. Mobile, AL 36602 (251) 433-1611	Cowles, Murphy, Glover & ASSOCIATES A Full Service Engineering Firm PERFORMANCE RELIABILITY EXPERIENCE	11880 Cranston Dr. Suite 102 Arlington, TN 38002 (901) 290-5444
C_B&E CONECU H BRIDGE & ENGINEERING, INC		
P. O. Box 129 Troy, Alabama 36081		249 Pike County Lake Rd. Troy, Alabama 36079 334-566-7422
PRECAST CONCRETE END BENT CAP FOR USE WITH STEEL PILING & 24', 34', OR 40' PRECAST BRIDGE SLABS 24'-6" CLEAR ROADWAY WITH APPROACH SLAB		
DATE: 12/05/2022	STANDARD DWG. NO. PCA-2440-AS LRFD SHEET NO. 8 OF 27	

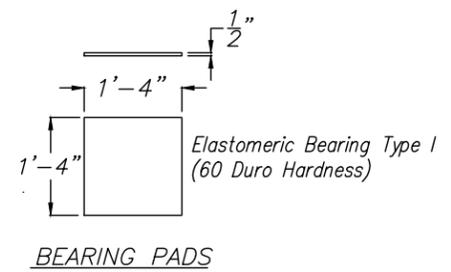
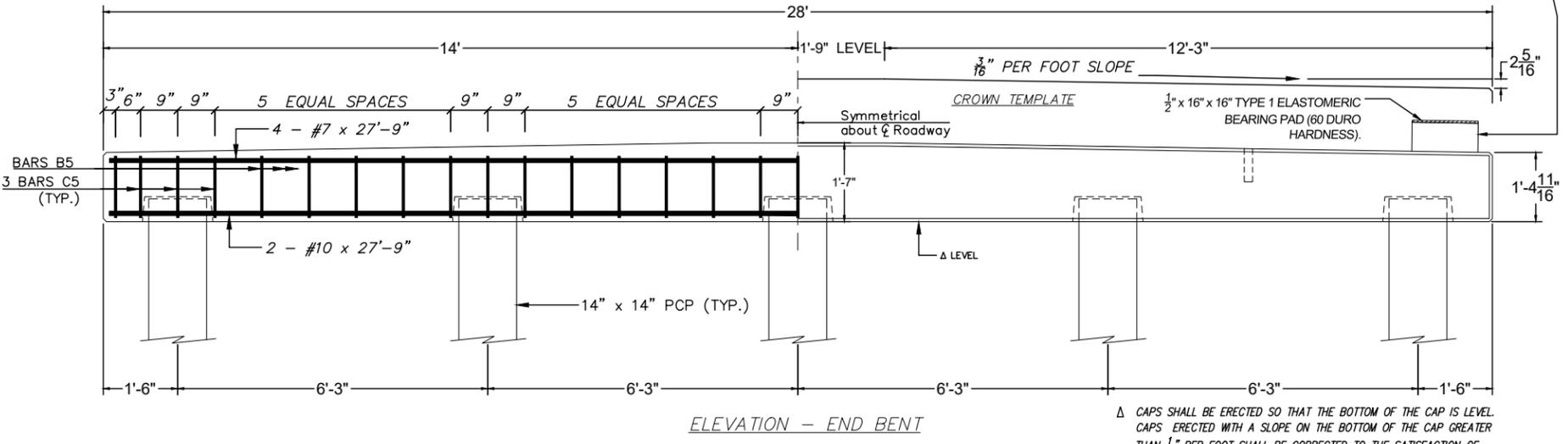
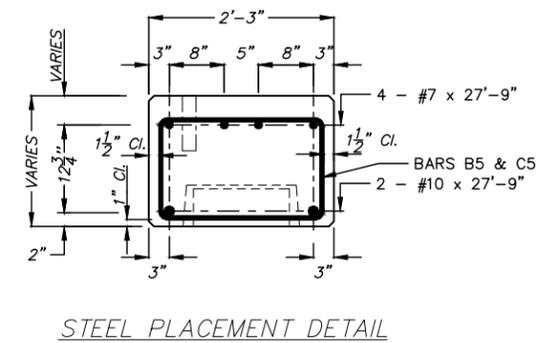
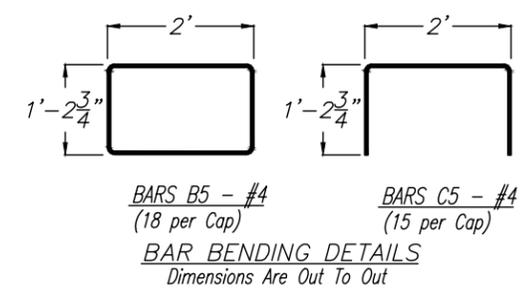


**** DEPTH OF RISER BLOCK**

24' SPAN	NA
34' SPAN	4"
40' SPAN	7"

***** PREFORMED EXP. JT. FILLER**

24' SPAN	1/4" x 16" x 24'-6"
34' SPAN	1/4" x 20" x 24'-6"
40' SPAN	1/4" x 23" x 24'-6"



GENERAL NOTES:

SPECIFICATIONS:
 AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS
 AASHTO STANDARD SPECIFICATIONS FOR TRANSPORTATION MATERIALS AND METHODS OF SAMPLING AND TESTING
 AMERICAN SOCIETY FOR TESTING AND MATERIALS
 AMERICAN INSTITUTE OF STEEL CONSTRUCTION

REINFORCING STEEL: ALL REINFORCING STEEL SHALL BE GRADE 60 BILLET STEEL MEETING THE REQUIREMENTS OF AASHTO M31. ALL REINFORCING STEEL SHALL BE ACCURATELY LOCATED IN THE FORMS AND PROPER CLEARANCES MAINTAINED WITH STAINLESS STEEL, PLASTIC, OR RUBBER TIPPED CHAIRS. REINFORCING DIMENSIONS ARE CENTER TO CENTER UNLESS OTHERWISE NOTED ON PLANS.

CONCRETE: CONCRETE SHALL CONFORM TO AASHTO CLASS A(AE). MINIMUM 28 DAY COMPRESSIVE STRENGTH SHALL BE 3000 PSI. ALL EXPOSED CORNERS TO BE CHAMFERED 3/4" X 45° UNLESS OTHERWISE NOTED.

PILING: ALL PILING SHALL BE 14"x14" PRESTRESSED CONCRETE PILE. ALLOWABLE PILE LOAD = 40 TONS WITH A FACTOR OF SAFETY OF 2.0 (MIN.) (HL-93).

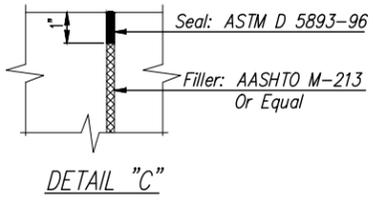
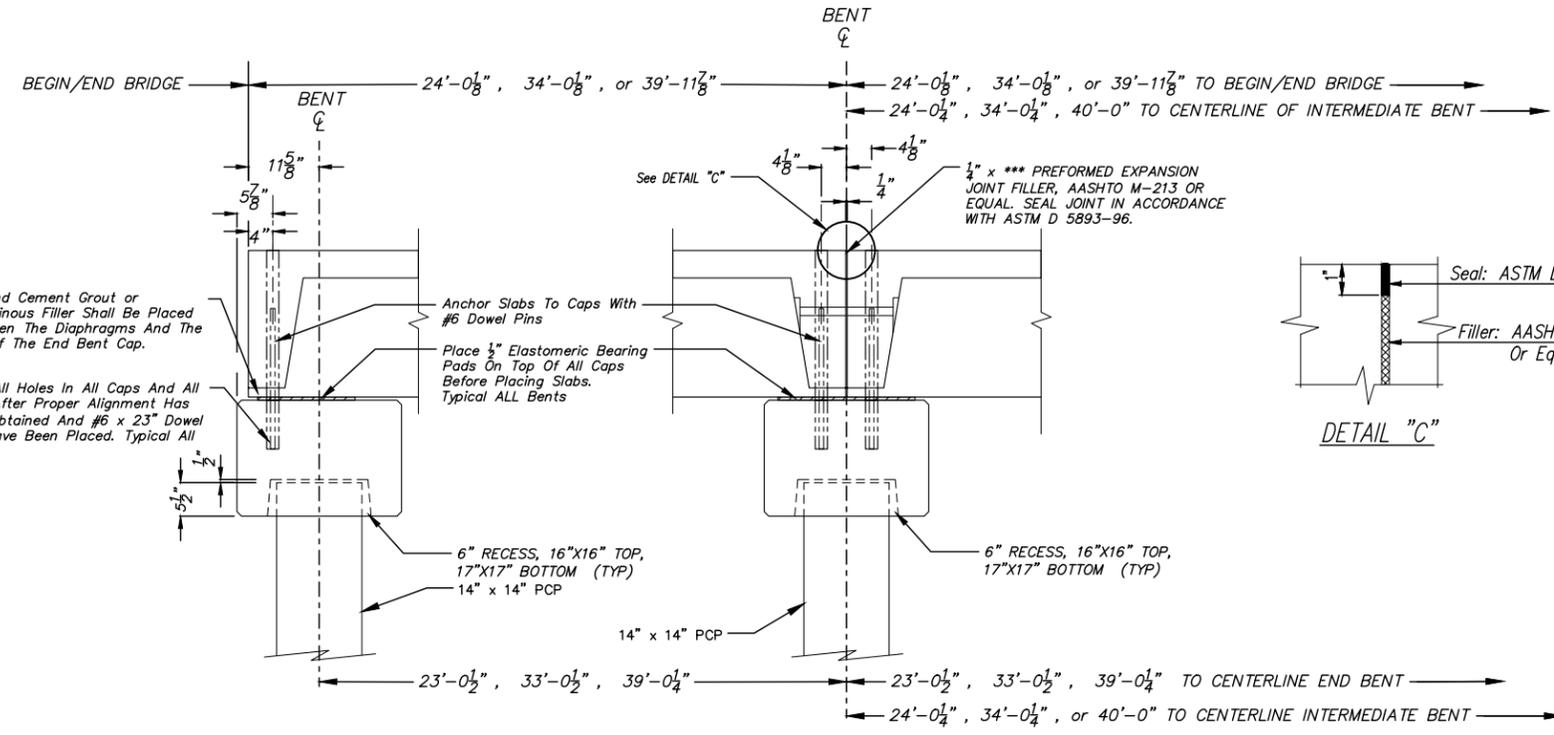
EPOXY GROUT: EPOXY GROUT SHALL DEVELOP A COMPRESSIVE STRENGTH OF 5000 PSI IN TWELVE (12) HOURS.

TOLERANCES: A DEVIATION OF MORE THAN 1/8" MAY BE CAUSE FOR REJECTION OF THE UNIT.

HARDWARE: ALL BOLTS SHALL CONFORM TO ASTM A-307 AND BE GALVANIZED IN ACCORDANCE WITH ASTM-A153

DESIGN DATA:
 SPECIFICATIONS:.....AASHTO 2017, 8TH EDITION AND ALL INTERIMS
 DESIGN LOADING:.....HL-93

A 1/2" X 8" X 1'-4" Elastomeric Bearing, Type 1, Shall Be Used Under The Outside Legs Of The Exterior Channels.



A Sand Cement Grout or Bituminous Filler Shall Be Placed Between The Diaphragms And The Top Of The End Bent Cap.

Anchor Slabs To Caps With #6 Dowel Pins
 Place 1/2" Elastomeric Bearing Pads On Top Of All Caps Before Placing Slabs.
 Typical ALL Bents

Grout All Holes In All Caps And All Slabs After Proper Alignment Has Been Obtained And #6 x 23" Dowel Pins Have Been Placed. Typical All Bents.



457 St. Michael St.
 Mobile, AL 36602
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 PERFORMANCE RELIABILITY EXPERIENCE

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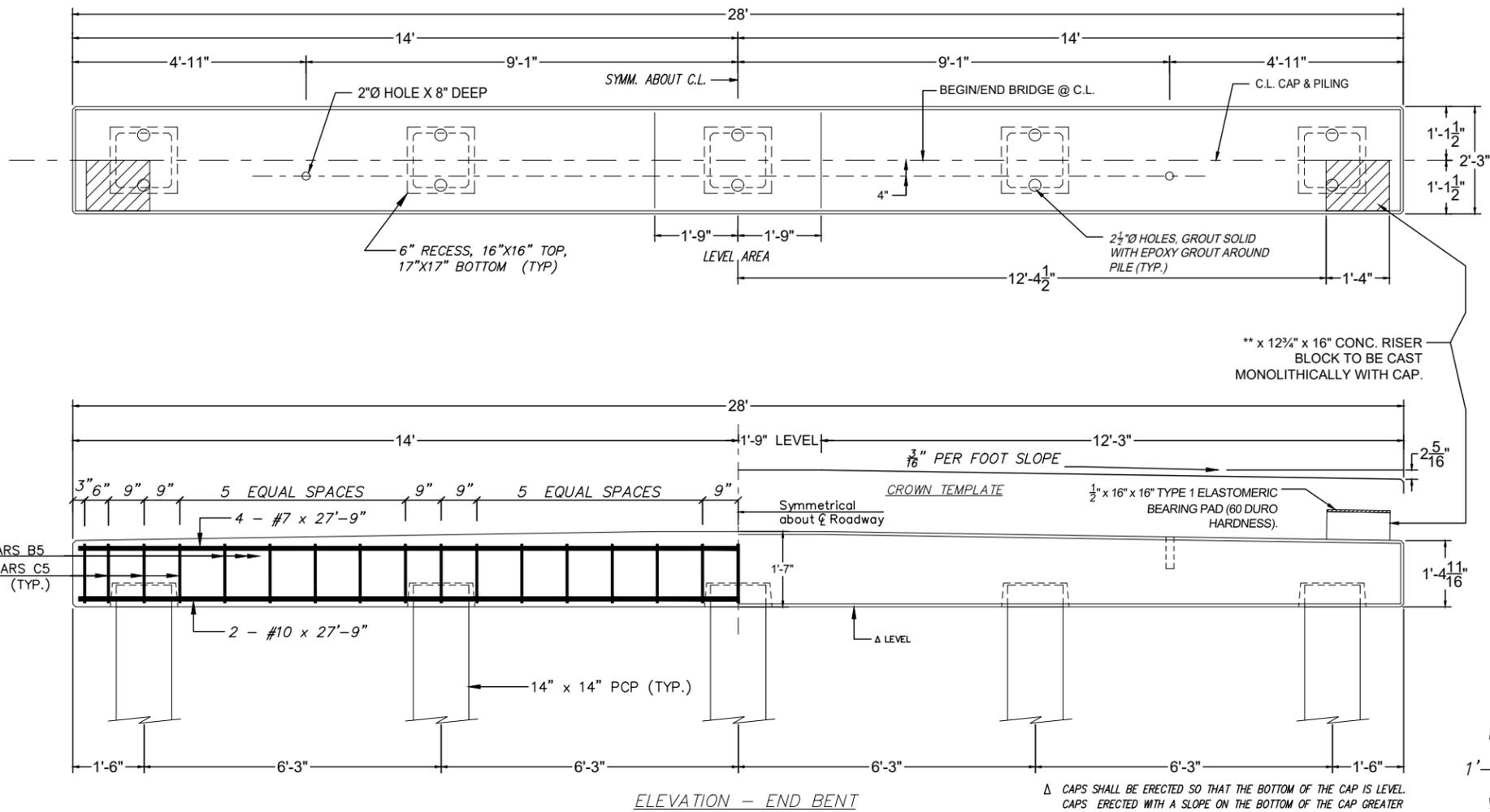
CONECUH BRIDGE & ENGINEERING, INC
 P. O. Box 129
 Troy, Alabama 36081

249 Pike County Lake Rd.
 Troy, Alabama 36079
 334-566-7422

PRECAST CONCRETE END BENT CAP
 FOR USE WITH 14'x14' CONCRETE PILING &
 24', 34', OR 40' PRECAST BRIDGE SLABS
 24'-6" CLEAR ROADWAY

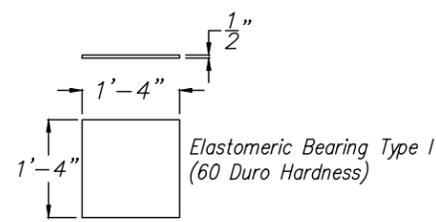
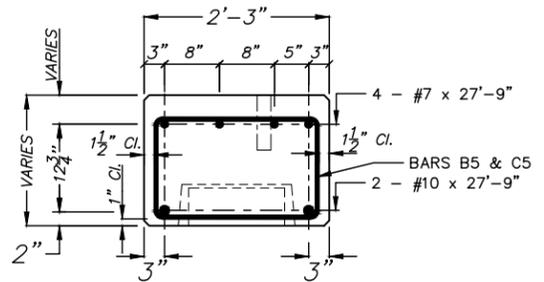
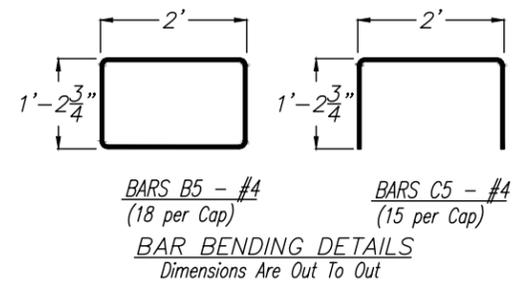
DATE: 12/05/2022

STANDARD DWG. NO.
 PCA-2440-CP LRFD
 SHEET NO. 9 OF 27



** DEPTH OF RISER BLOCK	
24' SPAN	NA
34' SPAN	4"
40' SPAN	7"

*** PREFORMED EXP. JT. FILLER	
24' SPAN	1/4" x 16" x 24'-6"
34' SPAN	1/4" x 20" x 24'-6"
40' SPAN	1/4" x 23" x 24'-6"



BEARING PADS

A 1/2" X 8" X 1'-4" Elastomeric Bearing, Type 1, Shall Be Used Under The Outside Legs Of The Exterior Channels.

GENERAL NOTES:

SPECIFICATIONS:
 AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS
 AASHTO STANDARD SPECIFICATIONS FOR TRANSPORTATION MATERIALS AND METHODS OF SAMPLING AND TESTING
 AMERICAN SOCIETY FOR TESTING AND MATERIALS
 AMERICAN INSTITUTE OF STEEL CONSTRUCTION

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CONCRETE: CONCRETE SHALL CONFORM TO AASHTO CLASS A(AE). MINIMUM 28 DAY COMPRESSIVE STRENGTH SHALL BE 3000 PSI. ALL EXPOSED CORNERS TO BE CHAMFERED 3/4" X 45' UNLESS OTHERWISE NOTED.

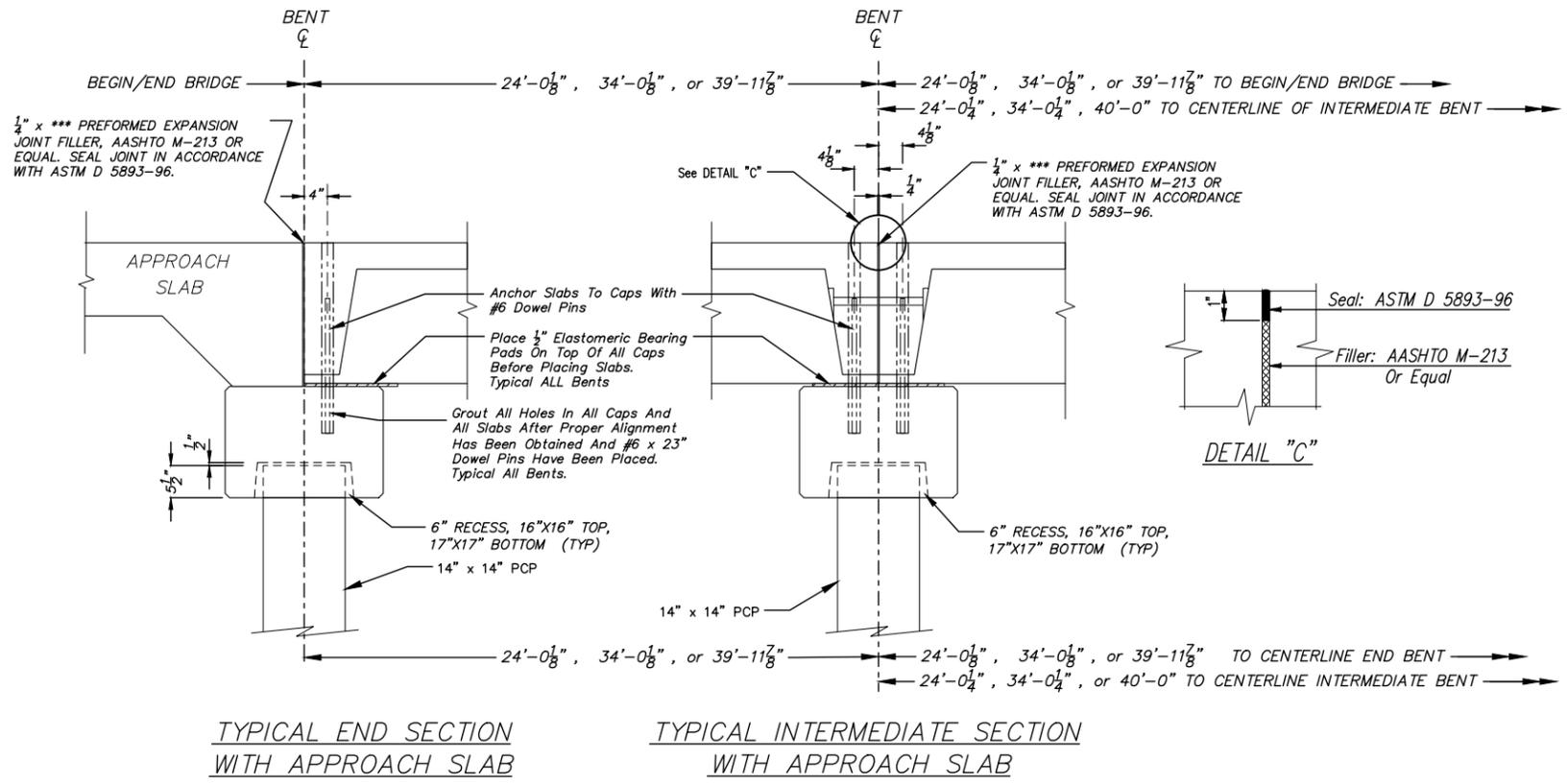
PILING: ALL PILING SHALL BE 14"x14" PRESTRESSED CONCRETE PILE. ALLOWABLE PILE LOAD = 40 TONS WITH A FACTOR OF SAFETY OF 2.0 (MIN.) (HL-93).

EPOXY GROUT: EPOXY GROUT SHALL DEVELOP A COMPRESSIVE STRENGTH OF 5000 PSI IN TWELVE (12) HOURS.

TOLERANCES: A DEVIATION OF MORE THAN 1/8" MAY BE CAUSE FOR REJECTION OF THE UNIT.

HARDWARE: ALL BOLTS SHALL CONFORM TO ASTM A-307 AND BE GALVANIZED IN ACCORDANCE WITH ASTM-A153

DESIGN DATA:
 SPECIFICATIONS:.....AASHTO 2017, 8TH EDITION AND ALL INTERIMS
 DESIGN LOADING:.....HL-93



TYPICAL END SECTION WITH APPROACH SLAB

TYPICAL INTERMEDIATE SECTION WITH APPROACH SLAB



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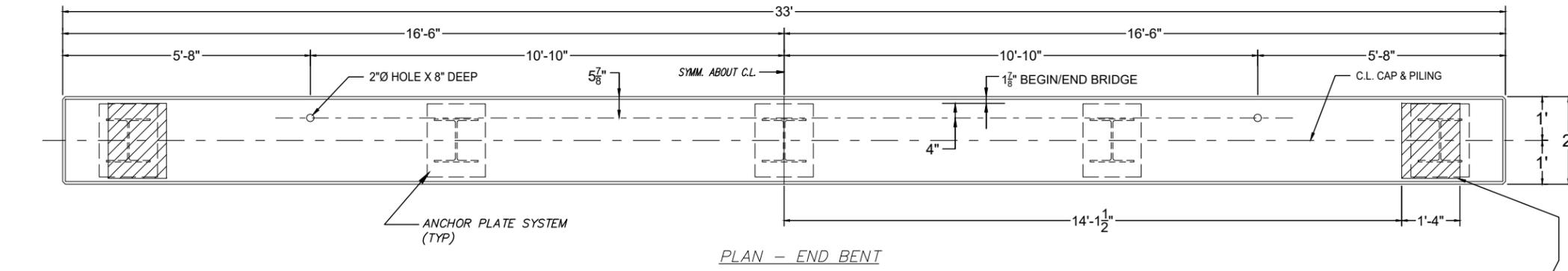
C&E CONECCU H BRIDGE & ENGINEERING, INC
 P. O. Box 129
 Troy, Alabama 36081

249 Pike County Lake Rd.
 Troy, Alabama 36079
 334-566-7422

PRECAST CONCRETE END BENT CAP
 FOR USE WITH 14"x14' CONCRETE PILING &
 24', 34', OR 40' PRECAST BRIDGE SLABS
 24'-6" CLEAR ROADWAY WITH APPROACH SLAB

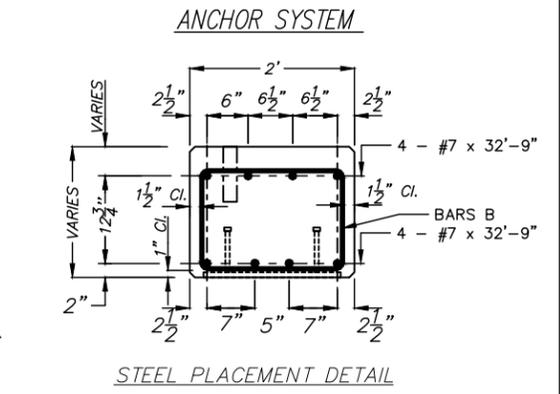
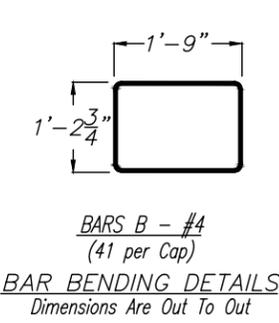
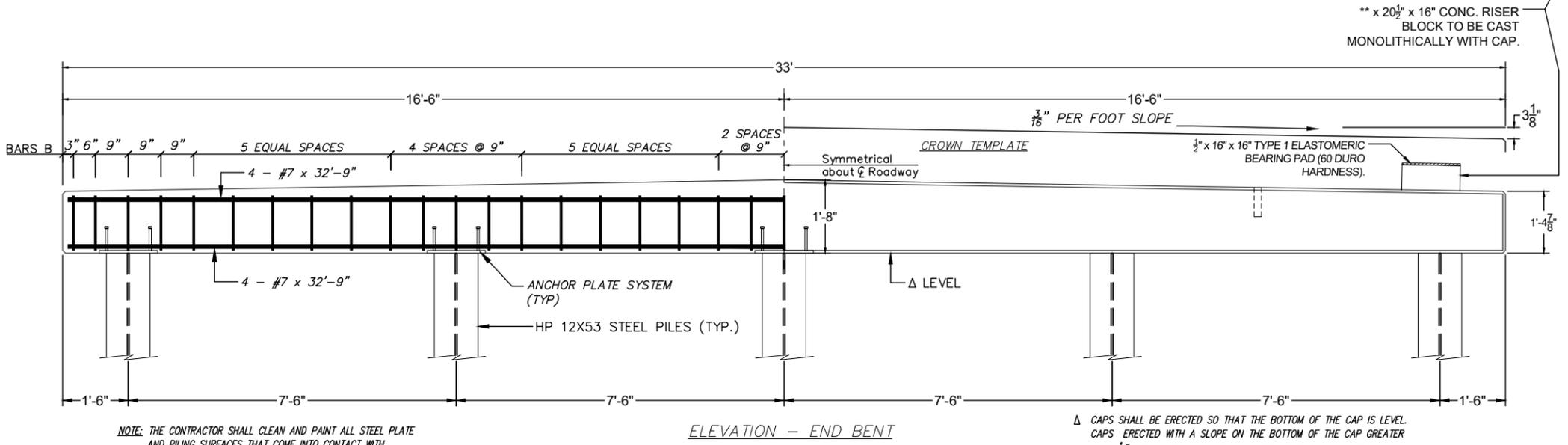
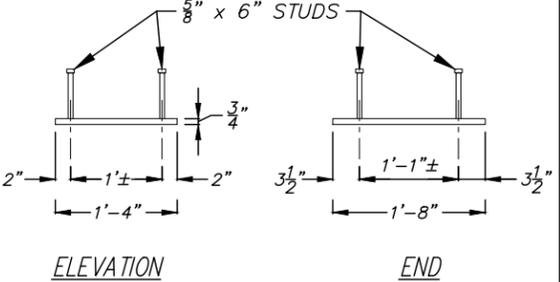
DATE: 12/05/2022

STANDARD DWG. NO. PCA-2440-CP-AS LRFD
 SHEET NO. 10 OF 27



** DEPTH OF RISER BLOCK	
24' SPAN	NA
34' SPAN	4"
40' SPAN	7"

*** PREFORMED EXP. JT. FILLER	
24' SPAN	1/4" x 16" x 28'-0"
34' SPAN	1/4" x 20" x 28'-0"
40' SPAN	1/4" x 23" x 28'-0"



NOTE: THE CONTRACTOR SHALL CLEAN AND PAINT ALL STEEL PLATE AND PILING SURFACES THAT COME INTO CONTACT WITH CONCRETE BEFORE THE CONCRETE IS INSTALLED.

Δ CAPS SHALL BE ERECTED SO THAT THE BOTTOM OF THE CAP IS LEVEL. CAPS ERECTED WITH A SLOPE ON THE BOTTOM OF THE CAP GREATER THAN 1/16" PER FOOT SHALL BE CORRECTED TO THE SATISFACTION OF THE ENGINEER OF RECORD AT NO ADDITIONAL COST TO THE PROJECT.

GENERAL NOTES:

SPECIFICATIONS:
 AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS
 AASHTO STANDARD SPECIFICATIONS FOR TRANSPORTATION MATERIALS AND METHODS OF SAMPLING AND TESTING
 AMERICAN SOCIETY FOR TESTING AND MATERIALS
 AMERICAN INSTITUTE OF STEEL CONSTRUCTION

REINFORCING STEEL: ALL REINFORCING STEEL SHALL BE GRADE 60 BILLET STEEL MEETING THE REQUIREMENTS OF AASHTO M31. ALL REINFORCING STEEL SHALL BE ACCURATELY LOCATED IN THE FORMS AND PROPER CLEARANCES MAINTAINED WITH STAINLESS STEEL, PLASTIC, OR RUBBER TIPPED CHAIRS. REINFORCING DIMENSIONS ARE CENTER TO CENTER UNLESS OTHERWISE NOTED ON PLANS.

CONCRETE: CONCRETE SHALL CONFORM TO AASHTO CLASS A(AE). MINIMUM 28 DAY COMPRESSIVE STRENGTH SHALL BE 3000 PSI. ALL EXPOSED CORNERS TO BE CHAMFERED 3/4" X 45° UNLESS OTHERWISE NOTED.

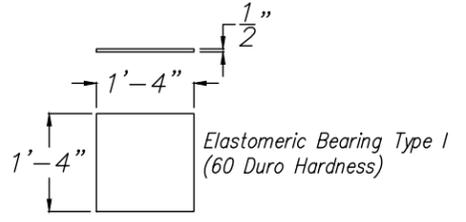
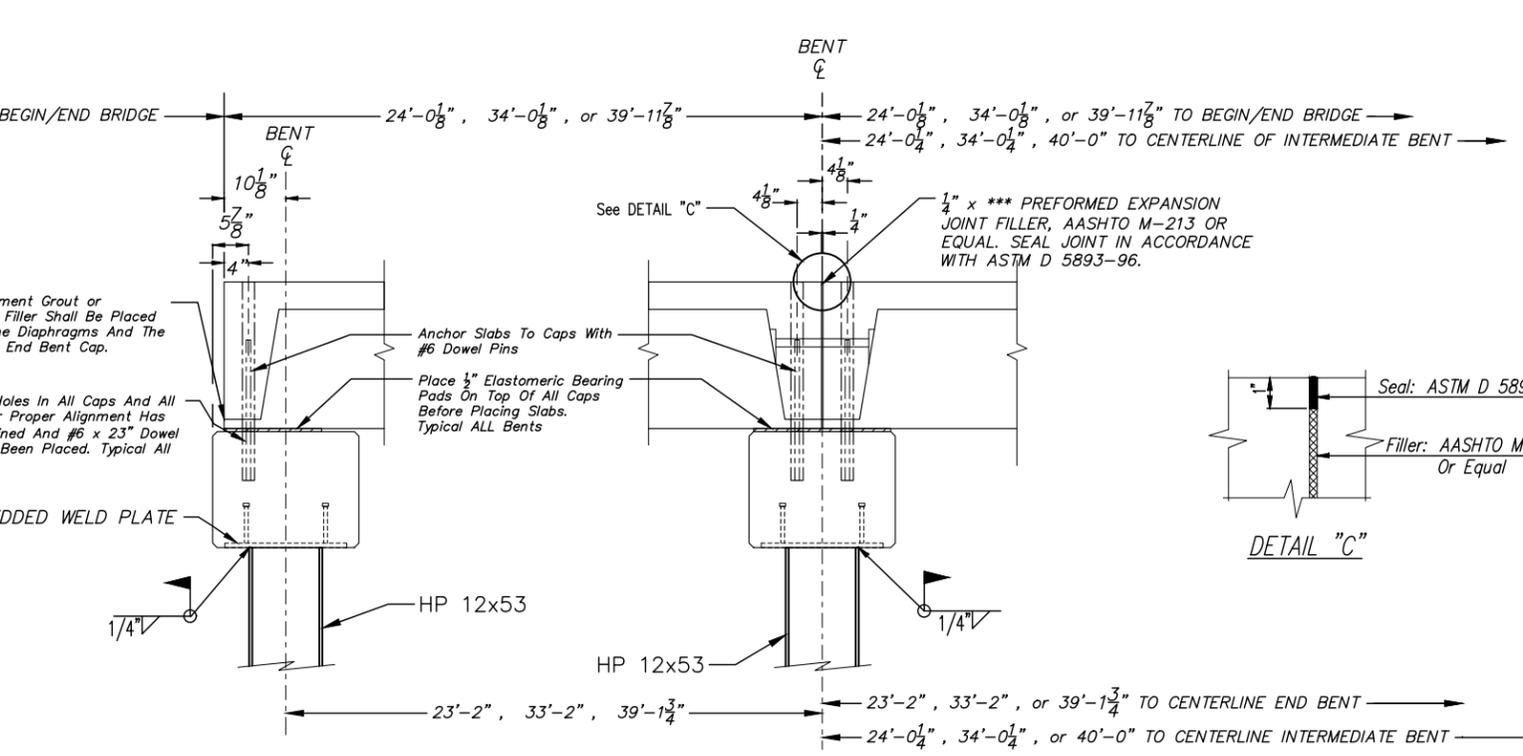
STRUCTURAL STEEL AND PILING: ALL STRUCTURAL STEEL SHALL COMPLY WITH AASHTO M270 GRADE 36. ALL PILING SHALL BE 12" STEEL "H" PILING, 53 LBS PER FOOT. ALLOWABLE PILE LOAD = 40 TONS WITH A FACTOR OF SAFETY OF 2.0 (MIN.) (HL-93).

WELDING: ALL WELDING SHALL CONFORM TO ANSI/AASHTO/ANS D 1.5 "BRIDGE WELDING CODE"

TOLERANCES: A DEVIATION OF MORE THAN 1/8" MAY BE CAUSE FOR REJECTION OF THE UNIT.

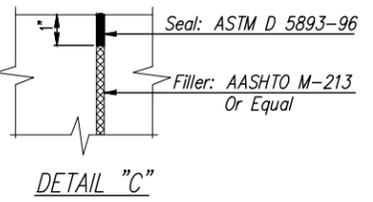
HARDWARE: ALL BOLTS SHALL CONFORM TO ASTM A-307 AND BE GALVANIZED IN ACCORDANCE WITH ASTM-A153

DESIGN DATA:
 SPECIFICATIONS:.....AASHTO 2017, 8TH EDITION AND ALL INTERIMS
 DESIGN LOADING:.....HL-93



A 1/2" X 8" X 1'-4" Elastomeric Bearing, Type 1, Shall Be Used Under The Outside Legs Of The Exterior Channels.

NOTE: A PRE-FABRICATED H-PILE SPLICER, SUCH AS APF HP-30000 CHAMPION SPLICER OR EQUAL, SHALL BE USED FOR SPLICING PILES.



A Sand Cement Grout or Bituminous Filler Shall Be Placed Between The Diaphragms And The Top Of The End Bent Cap.

Grout All Holes In All Caps And All Slabs After Proper Alignment Has Been Obtained And #6 x 23" Dowel Pins Have Been Placed. Typical All Bents.

Place 1/2" Elastomeric Bearing Pads On Top Of All Caps Before Placing Slabs. Typical ALL Bents

TYPICAL END SECTION

TYPICAL INTERMEDIATE SECTION



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 Mobile, AL 36602
 (251) 433-1611

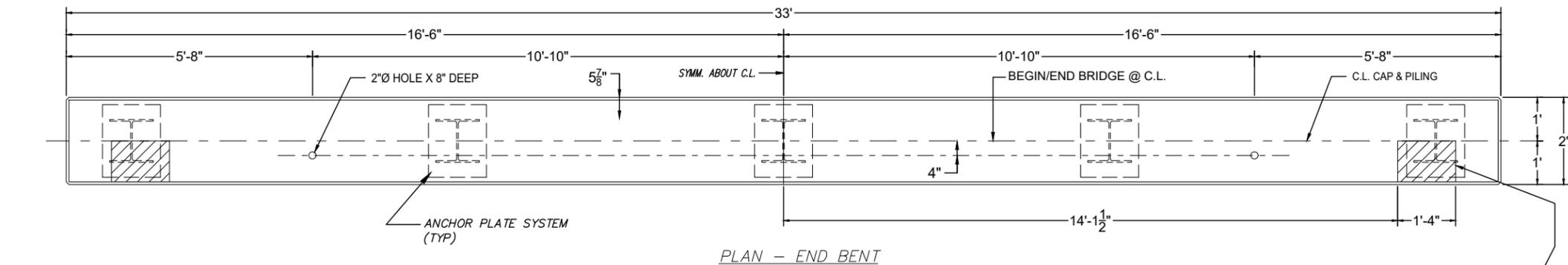
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 A Full Service Engineering Firm
 PERFORMANCE RELIABILITY EXPERIENCE

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 Suite 102
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 (901) 290-5444

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 P. O. Box 129
 Troy, Alabama 36081
 249 Pike County Lake Rd.
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 334-566-7422

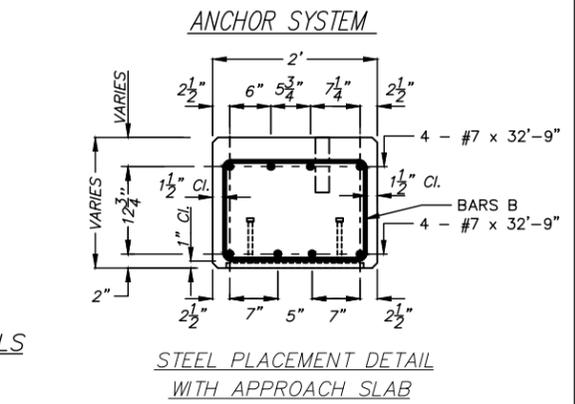
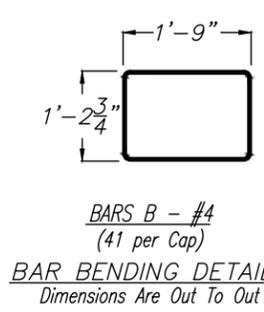
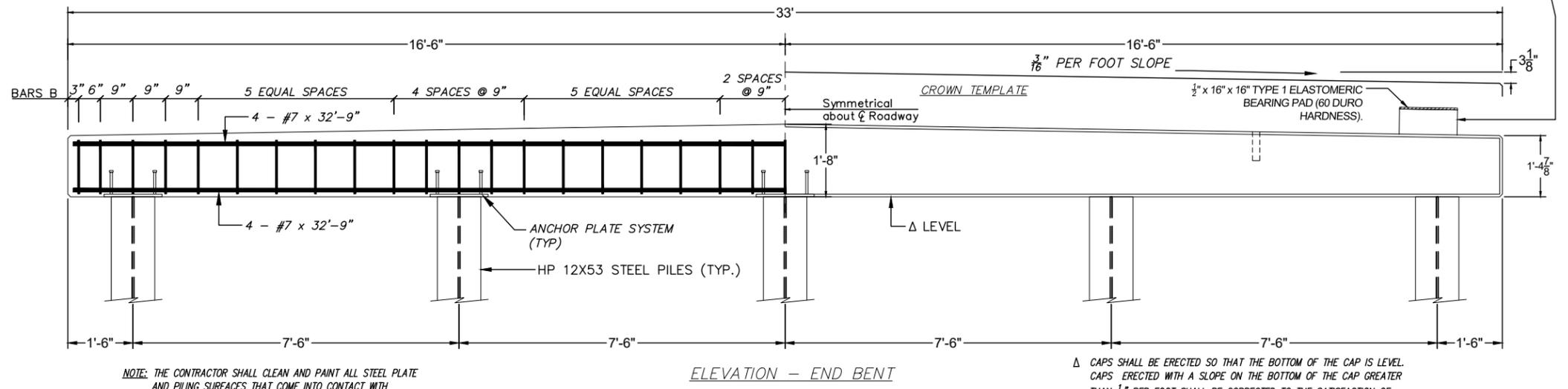
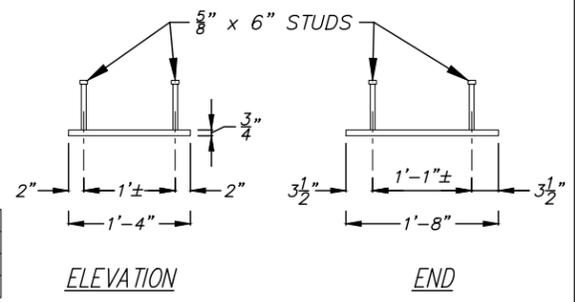
PRECAST CONCRETE END BENT CAP FOR USE WITH STEEL PILING & 24', 34', OR 40' PRECAST BRIDGE SLABS 28'-0" CLEAR ROADWAY

DATE: 12/05/2022
 STANDARD DWG. NO. PCA-2840 LRFD
 SHEET NO. 11 OF 27



** DEPTH OF RISER BLOCK	
24' SPAN	NA
34' SPAN	4"
40' SPAN	7"

*** PREFORMED EXP. JT. FILLER	
24' SPAN	1/4" x 16" x 28'-0"
34' SPAN	1/4" x 20" x 28'-0"
40' SPAN	1/4" x 23" x 28'-0"



NOTE: THE CONTRACTOR SHALL CLEAN AND PAINT ALL STEEL PLATE AND PILING SURFACES THAT COME INTO CONTACT WITH CONCRETE BEFORE THE CONCRETE IS INSTALLED.

Δ CAPS SHALL BE ERECTED SO THAT THE BOTTOM OF THE CAP IS LEVEL. CAPS ERECTED WITH A SLOPE ON THE BOTTOM OF THE CAP GREATER THAN 1/16" PER FOOT SHALL BE CORRECTED TO THE SATISFACTION OF THE ENGINEER OF RECORD AT NO ADDITIONAL COST TO THE PROJECT.

GENERAL NOTES:

SPECIFICATIONS:
 AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS
 AASHTO STANDARD SPECIFICATIONS FOR TRANSPORTATION MATERIALS AND METHODS OF SAMPLING AND TESTING
 AMERICAN SOCIETY FOR TESTING AND MATERIALS
 AMERICAN INSTITUTE OF STEEL CONSTRUCTION

REINFORCING STEEL: ALL REINFORCING STEEL SHALL BE GRADE 60 BILLET STEEL MEETING THE REQUIREMENTS OF AASHTO M31. ALL REINFORCING STEEL SHALL BE ACCURATELY LOCATED IN THE FORMS AND PROPER CLEARANCES MAINTAINED WITH STAINLESS STEEL, PLASTIC, OR RUBBER TIPPED CHAIRS. REINFORCING DIMENSIONS ARE CENTER TO CENTER UNLESS OTHERWISE NOTED ON PLANS.

CONCRETE: CONCRETE SHALL CONFORM TO AASHTO CLASS A(AE). MINIMUM 28 DAY COMPRESSIVE STRENGTH SHALL BE 3000 PSI. ALL EXPOSED CORNERS TO BE CHAMFERED 3/4" X 45° UNLESS OTHERWISE NOTED.

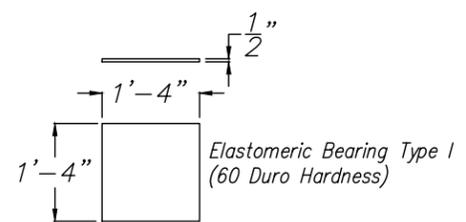
STRUCTURAL STEEL AND PILING: ALL STRUCTURAL STEEL SHALL COMPLY WITH AASHTO M270 GRADE 36. ALL PILING SHALL BE 12" STEEL "H" PILING, 53 LBS PER FOOT. ALLOWABLE PILE LOAD = 40 TONS WITH A FACTOR OF SAFETY OF 2.0 (MIN.) (HL-93).

WELDING: ALL WELDING SHALL CONFORM TO ANSI/AASHTO/ANS D 1.5 "BRIDGE WELDING CODE"

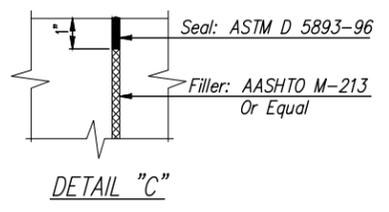
TOLERANCES: A DEVIATION OF MORE THAN 1/8" MAY BE CAUSE FOR REJECTION OF THE UNIT.

HARDWARE: ALL BOLTS SHALL CONFORM TO ASTM A-307 AND BE GALVANIZED IN ACCORDANCE WITH ASTM-A153

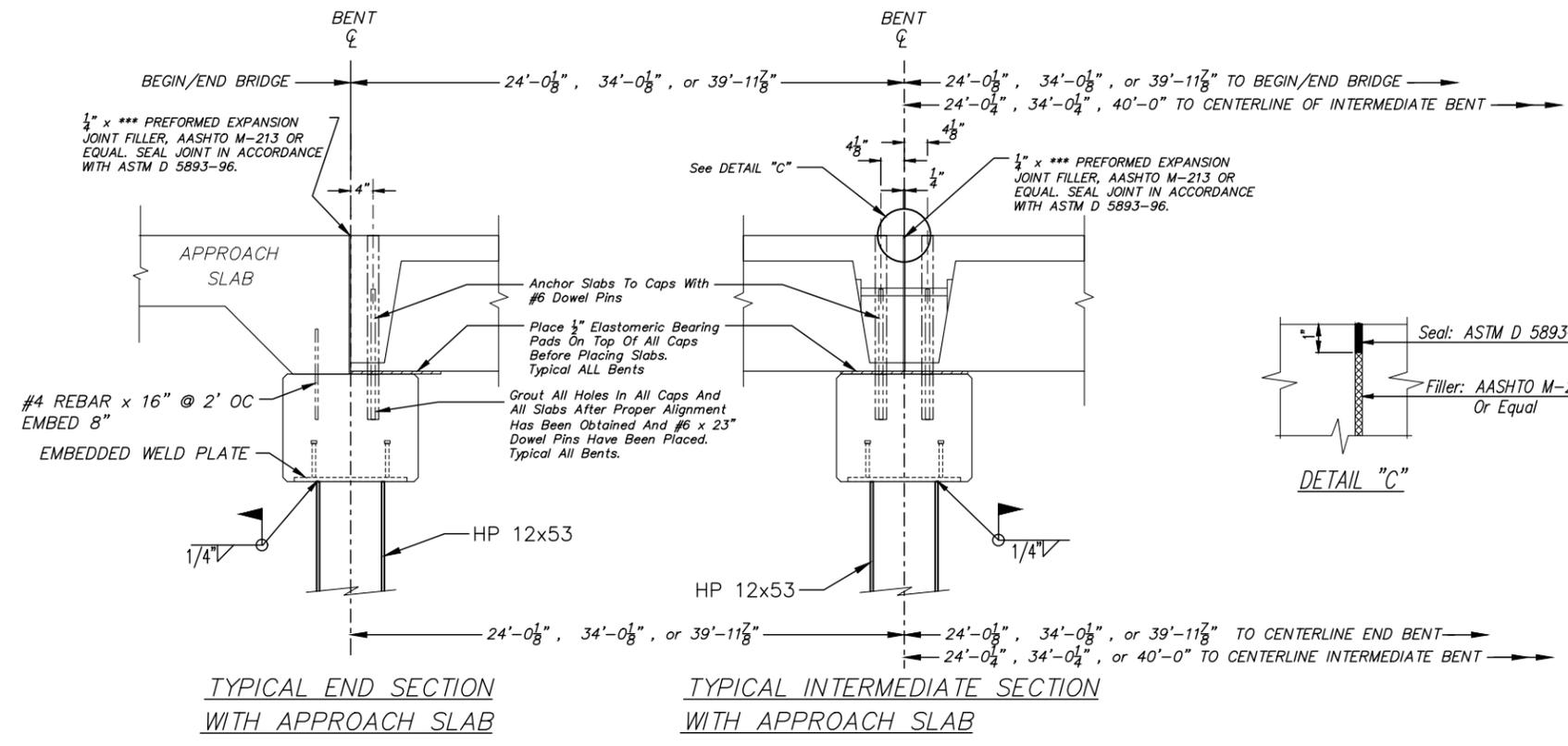
DESIGN DATA:
 SPECIFICATIONS:.....AASHTO 2017, 8TH EDITION AND ALL INTERIMS
 DESIGN LOADING:.....HL-93



BEARING PADS
 A 1 1/2" X 8" X 1'-4" Elastomeric Bearing, Type 1, Shall Be Used Under The Outside Legs Of The Exterior Channels.



NOTE: A PRE-FABRICATED H-PILE SPLICER, SUCH AS APF HP-30000 CHAMPION SPLICER OR EQUAL, SHALL BE USED FOR SPLICING PILES.



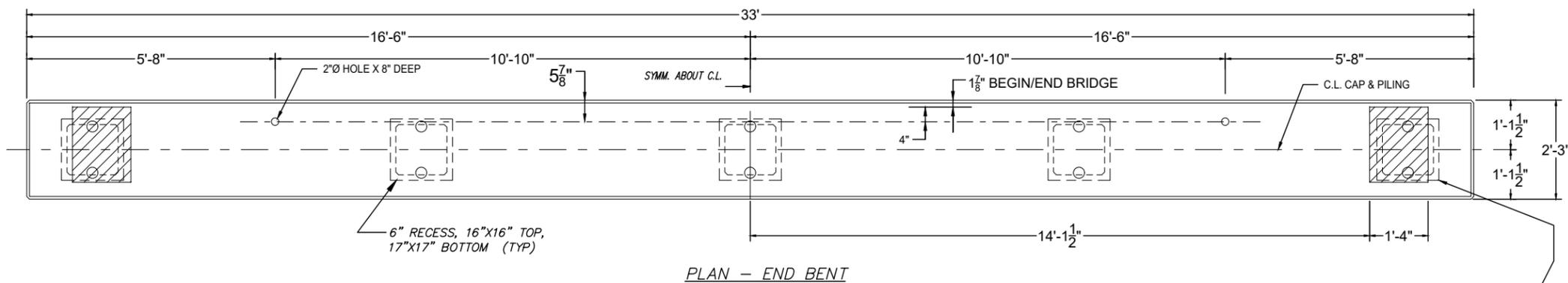
457 St. Michael St. Mobile, AL 36602 (251) 433-1611
Cowles, Murphy, Glover & ASSOCIATES
 A Full Service Engineering Firm
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 11880 Cranston Dr. Suite 102 Arlington, TN 38002 (901) 290-5444

CONECUH BRIDGE & ENGINEERING, INC
 P. O. Box 129 Troy, Alabama 36081
 249 Pike County Lake Rd. Troy, Alabama 36079
 334-566-7422

PRECAST CONCRETE END BENT CAP FOR USE WITH STEEL PILING & 24', 34', OR 40' PRECAST BRIDGE SLABS 28'-0" CLEAR ROADWAY WITH APPROACH SLAB

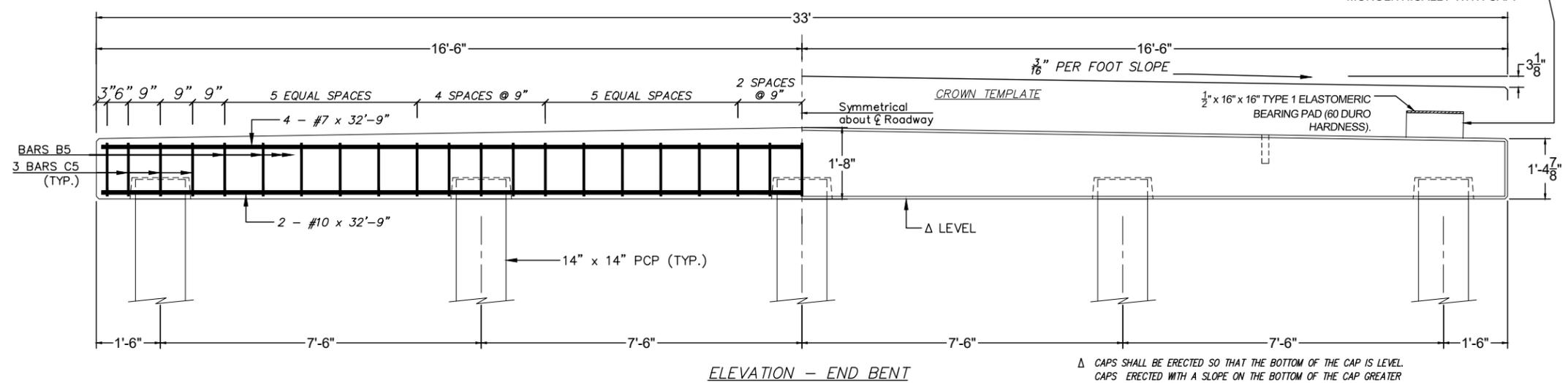
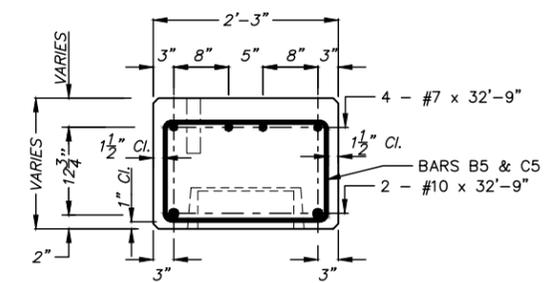
DATE: 12/05/2022
 STANDARD DWG. NO. PCA-2840-AS LRFD
 SHEET NO. 12 OF 27





** DEPTH OF RISER BLOCK	
24' SPAN	NA
34' SPAN	4"
40' SPAN	7"

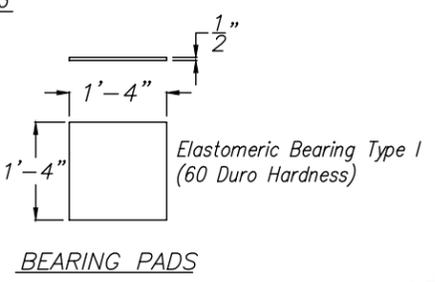
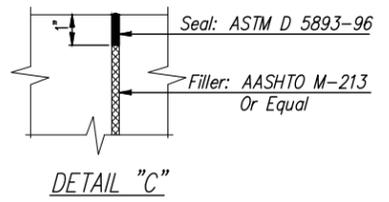
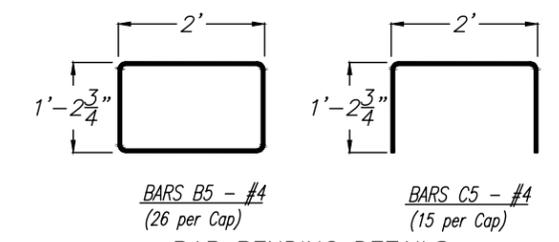
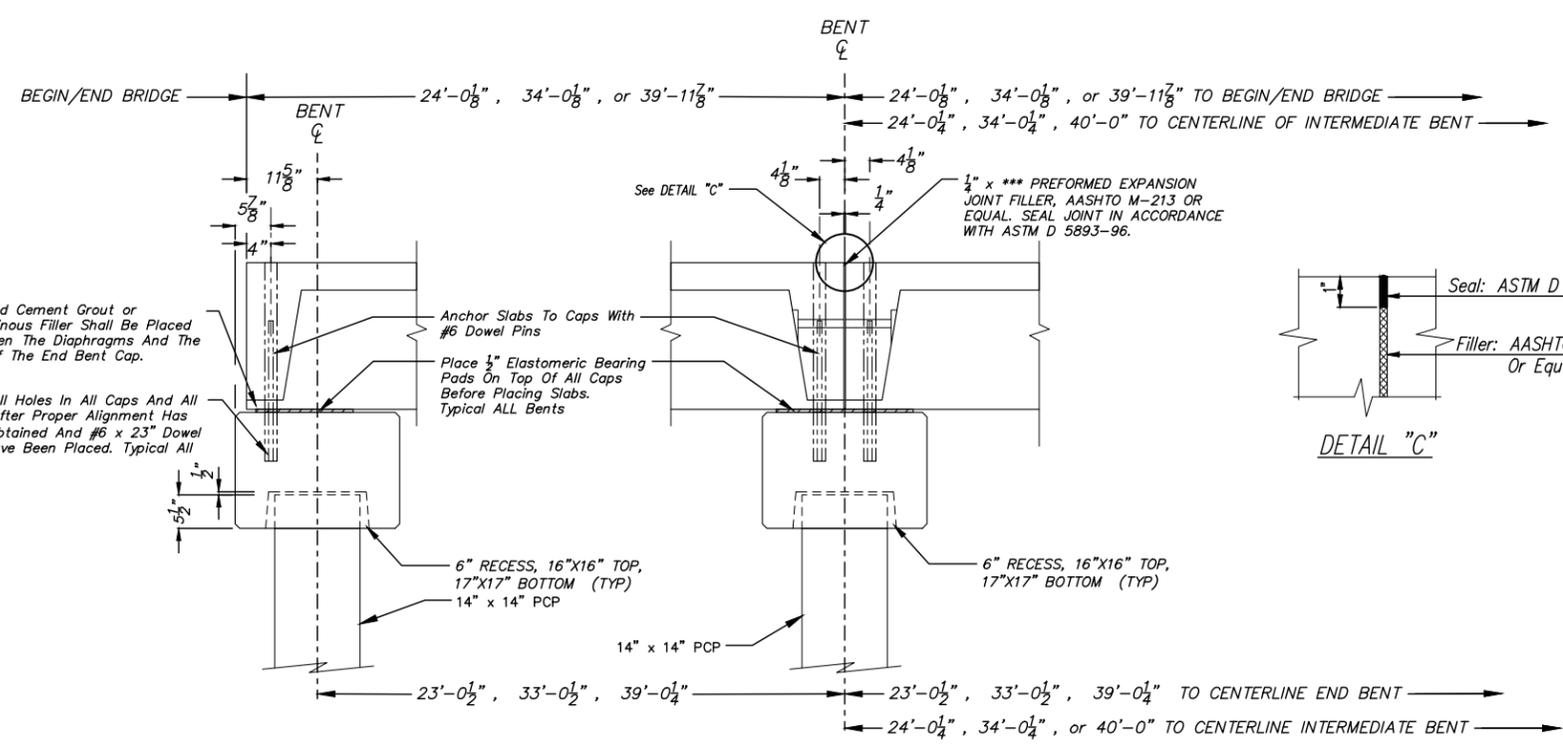
*** PREFORMED EXP. JT. FILLER	
24' SPAN	1/4" x 16" x 28'-0"
34' SPAN	1/4" x 20" x 28'-0"
40' SPAN	1/4" x 23" x 28'-0"



GENERAL NOTES:

- SPECIFICATIONS:**
 AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS
 AASHTO STANDARD SPECIFICATIONS FOR TRANSPORTATION MATERIALS AND METHODS OF SAMPLING AND TESTING
 AMERICAN SOCIETY FOR TESTING AND MATERIALS
 AMERICAN INSTITUTE OF STEEL CONSTRUCTION
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- CONCRETE:** CONCRETE SHALL CONFORM TO AASHTO CLASS A(AE). MINIMUM 28 DAY COMPRESSIVE STRENGTH SHALL BE 3000 PSI. ALL EXPOSED CORNERS TO BE CHAMFERED 3/4" X 45° UNLESS OTHERWISE NOTED.
- PILING:** ALL PILING SHALL BE 14"x14" PRESTRESSED CONCRETE PILE. ALLOWABLE PILE LOAD = 40 TONS WITH A FACTOR OF SAFETY OF 2.0 (MIN.) (HL-93).
- EPOXY GROUT:** EPOXY GROUT SHALL DEVELOP A COMPRESSIVE STRENGTH OF 5000 PSI IN TWELVE (12) HOURS.
- TOLERANCES:** A DEVIATION OF MORE THAN 1/8" MAY BE CAUSE FOR REJECTION OF THE UNIT.
- HARDWARE:** ALL BOLTS SHALL CONFORM TO ASTM A-307 AND BE GALVANIZED IN ACCORDANCE WITH ASTM-A153
- DESIGN DATA:**
 SPECIFICATIONS:.....AASHTO 2017, 8TH EDITION AND ALL INTERIMS
 DESIGN LOADING:.....HL-93

Δ CAPS SHALL BE ERECTED SO THAT THE BOTTOM OF THE CAP IS LEVEL. CAPS ERECTED WITH A SLOPE ON THE BOTTOM OF THE CAP GREATER THAN 1/16" PER FOOT SHALL BE CORRECTED TO THE SATISFACTION OF THE ENGINEER OF RECORD AT NO ADDITIONAL COST TO THE PROJECT.



A 1/2" X 8" X 1'-4" Elastomeric Bearing, Type 1, Shall Be Used Under The Outside Legs Of The Exterior Channels.

A Sand Cement Grout or Bituminous Filler Shall Be Placed Between The Diaphragms And The Top Of The End Bent Cap.

Grout All Holes In All Caps And All Slabs After Proper Alignment Has Been Obtained And #6 x 23" Dowel Pins Have Been Placed. Typical All Bents.

Anchor Slabs To Caps With #6 Dowel Pins

Place 1/2" Elastomeric Bearing Pads On Top Of All Caps Before Placing Slabs. Typical ALL Bents



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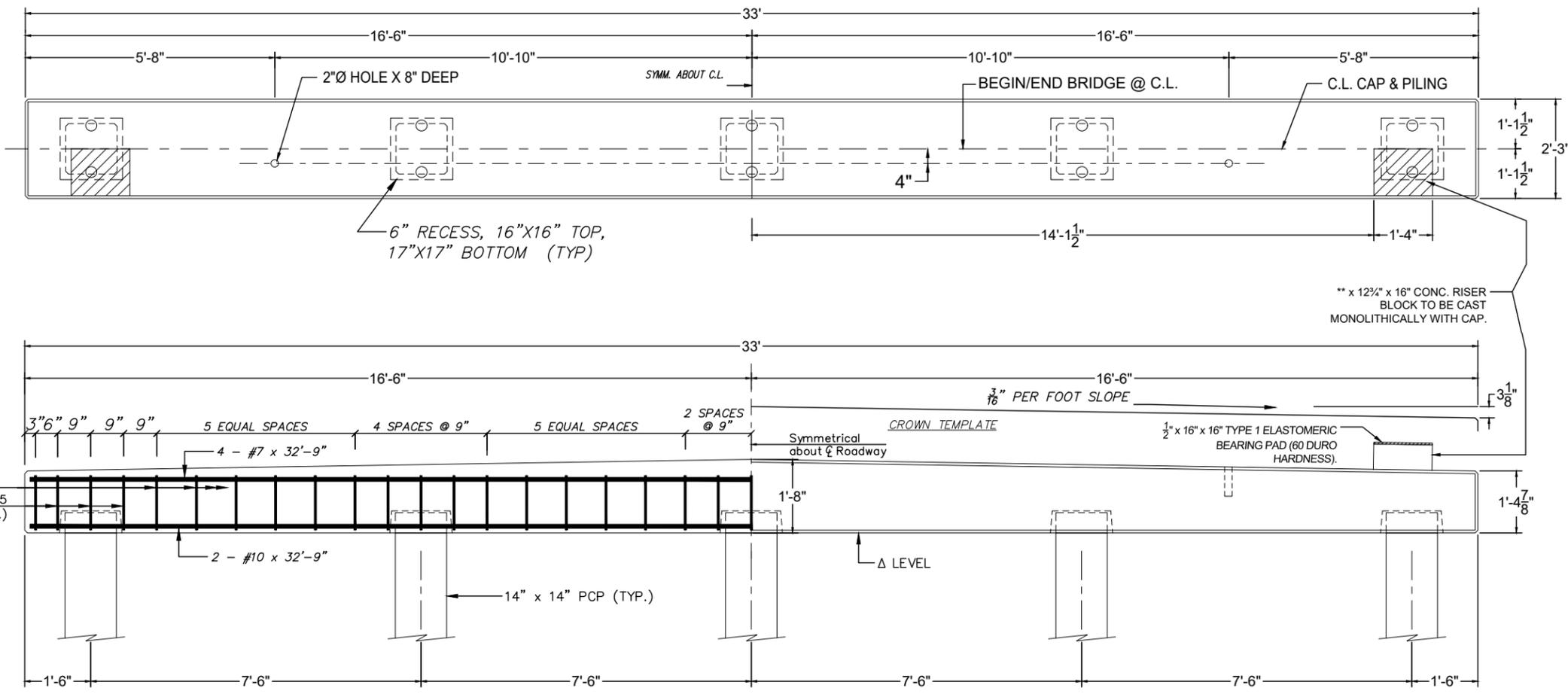
11880 Cranston Dr.
 Suite 102
 Arlington, TN 38002
 (901) 290-5444

CONECUH BRIDGE & ENGINEERING, INC
 P. O. Box 129 Troy, Alabama 36081
 249 Pike County Lake Rd. Troy, Alabama 36079
 334-566-7422

PRECAST CONCRETE END BENT CAP FOR USE WITH 14"x14" CONCRETE PILING & 24', 34', OR 40' PRECAST BRIDGE SLABS 28'-0" CLEAR ROADWAY

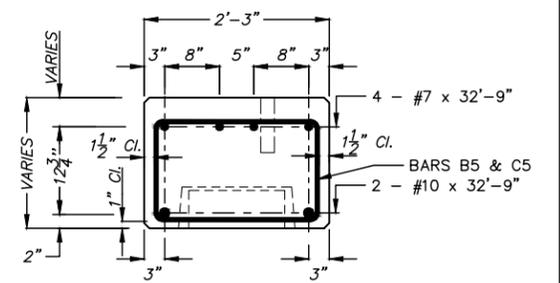
DATE: 12/05/2022

STANDARD DWG. NO. PCA-2840-CP LRFD
 SHEET NO. 13 OF 27



** DEPTH OF RISER BLOCK	
24' SPAN	NA
34' SPAN	4"
40' SPAN	7"

*** PREFORMED EXP. JT. FILLER	
24' SPAN	1/4" x 16" x 28'-0"
34' SPAN	1/4" x 20" x 28'-0"
40' SPAN	1/4" x 23" x 28'-0"



STEEL PLACEMENT DETAIL WITH APPROACH SLAB

GENERAL NOTES:

SPECIFICATIONS:
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REINFORCING STEEL: ALL REINFORCING STEEL SHALL BE GRADE 60 BILLET STEEL MEETING THE REQUIREMENTS OF AASHTO M31. ALL REINFORCING STEEL SHALL BE ACCURATELY LOCATED IN THE FORMS AND PROPER CLEARANCES MAINTAINED WITH STAINLESS STEEL, PLASTIC, OR RUBBER TIPPED CHAIRS. REINFORCING DIMENSIONS ARE CENTER TO CENTER UNLESS OTHERWISE NOTED ON PLANS.

CONCRETE: CONCRETE SHALL CONFORM TO AASHTO CLASS A(AE). MINIMUM 28 DAY COMPRESSIVE STRENGTH SHALL BE 3000 PSI. ALL EXPOSED CORNERS TO BE CHAMFERED 3/4" X 45° UNLESS OTHERWISE NOTED.

PILING: ALL PILING SHALL BE 14"x14" PRESTRESSED CONCRETE PILE. ALLOWABLE PILE LOAD = 40 TONS WITH A FACTOR OF SAFETY OF 2.0 (MIN.) (HL-93).

EPOXY GROUT: EPOXY GROUT SHALL DEVELOP A COMPRESSIVE STRENGTH OF 5000 PSI IN TWELVE (12) HOURS.

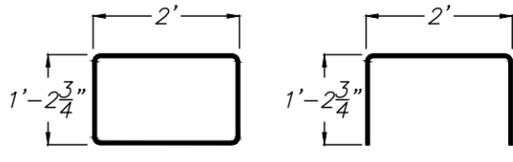
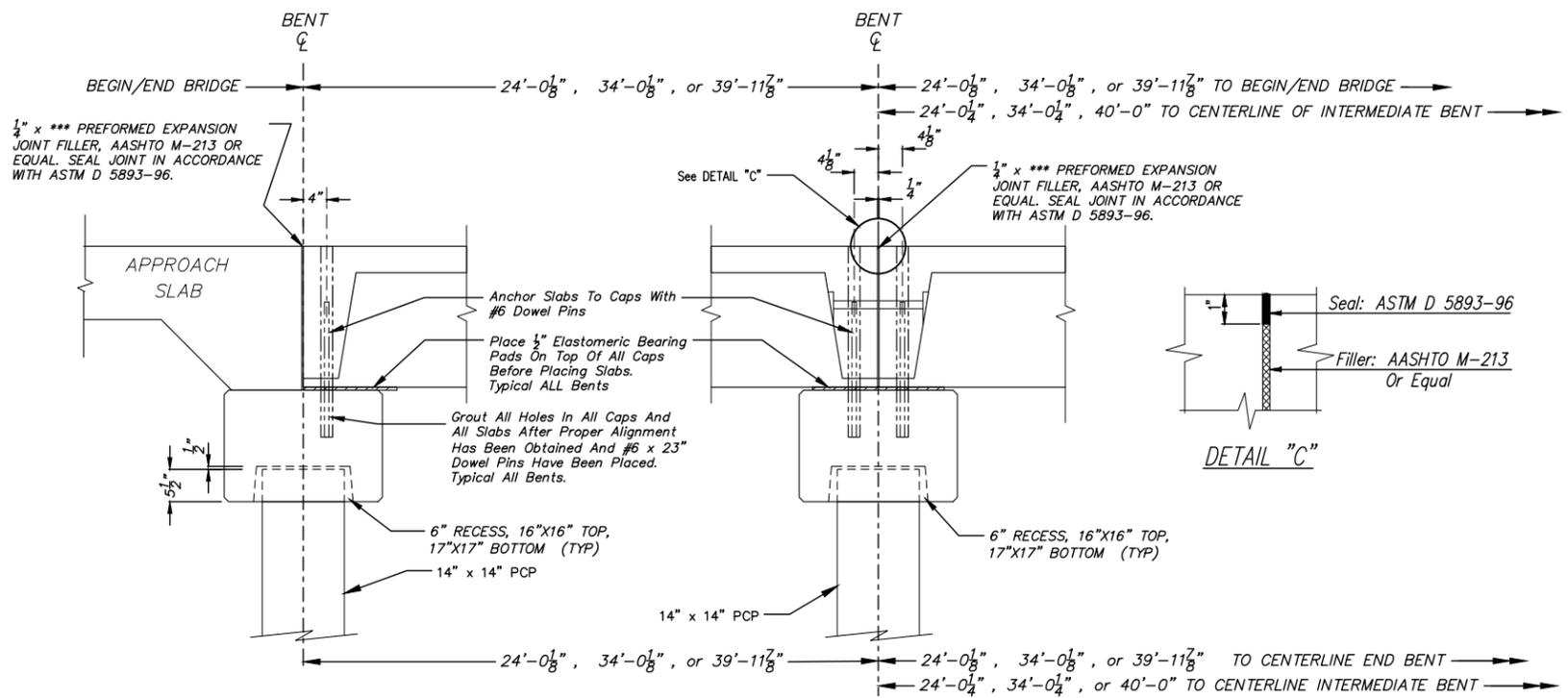
TOLERANCES: A DEVIATION OF MORE THAN 1/8" MAY BE CAUSE FOR REJECTION OF THE UNIT.

HARDWARE: ALL BOLTS SHALL CONFORM TO ASTM A-307 AND BE GALVANIZED IN ACCORDANCE WITH ASTM-A153

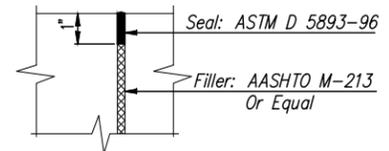
DESIGN DATA:
 SPECIFICATIONS:.....AASHTO 2017, 8TH EDITION AND ALL INTERIMS
 DESIGN LOADING:.....HL-93

ELEVATION - END BENT

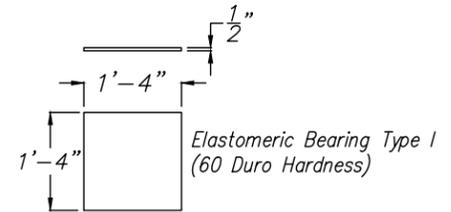
Δ CAPS SHALL BE ERECTED SO THAT THE BOTTOM OF THE CAP IS LEVEL. CAPS ERECTED WITH A SLOPE ON THE BOTTOM OF THE CAP GREATER THAN 1/16" PER FOOT SHALL BE CORRECTED TO THE SATISFACTION OF THE ENGINEER OF RECORD AT NO ADDITIONAL COST TO THE PROJECT.



BAR BENDING DETAILS
 Dimensions Are Out To Out



DETAIL "C"



BEARING PADS

A 1/2" X 8" X 1'-4" Elastomeric Bearing, Type 1, Shall Be Used Under The Outside Legs Of The Exterior Channels.

TYPICAL END SECTION WITH APPROACH SLAB

TYPICAL INTERMEDIATE SECTION WITH APPROACH SLAB



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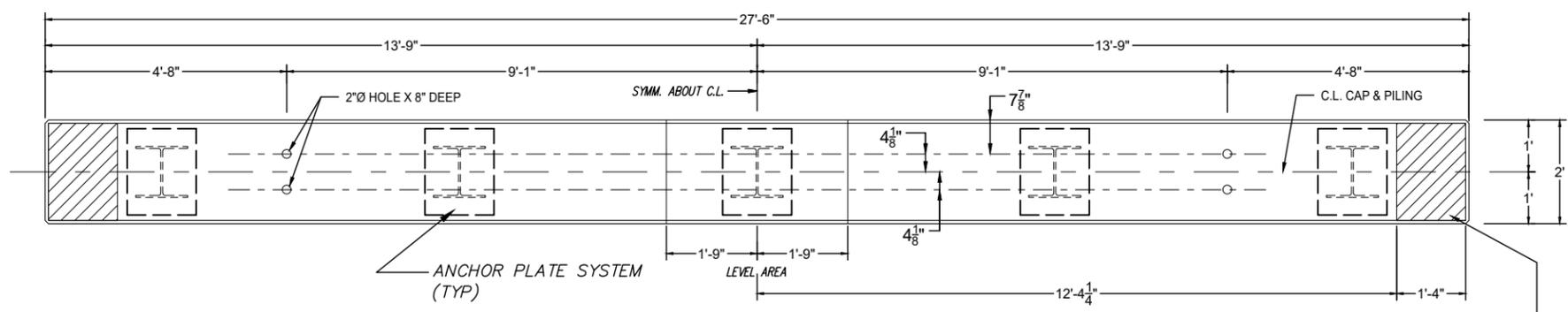
CBE CONEUCH BRIDGE & ENGINEERING, INC
 P. O. Box 129
 Troy, Alabama 36081
 334-566-7422

249 Pike County Lake Rd.
 Troy, Alabama 36079

PRECAST CONCRETE END BENT CAP FOR USE WITH 14"x14" CONCRETE PILING & 24', 34', OR 40' PRECAST BRIDGE SLABS 28'-0" CLEAR ROADWAY WITH APPROACH SLAB

DATE: 12/05/2022

STANDARD DWG. NO. PCA-2840-CP-AS LRFD SHEET NO. 14 OF 27



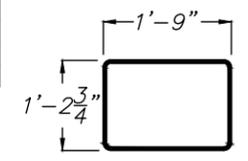
PLAN - INTERMEDIATE BENT

**** DEPTH OF RISER BLOCK**

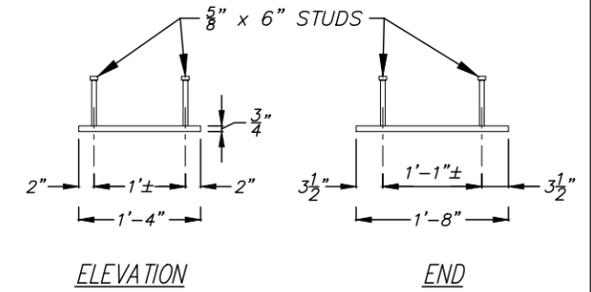
24' SPAN	NA
34' SPAN	4"
40' SPAN	7"

***** PREFORMED EXP. JT. FILLER**

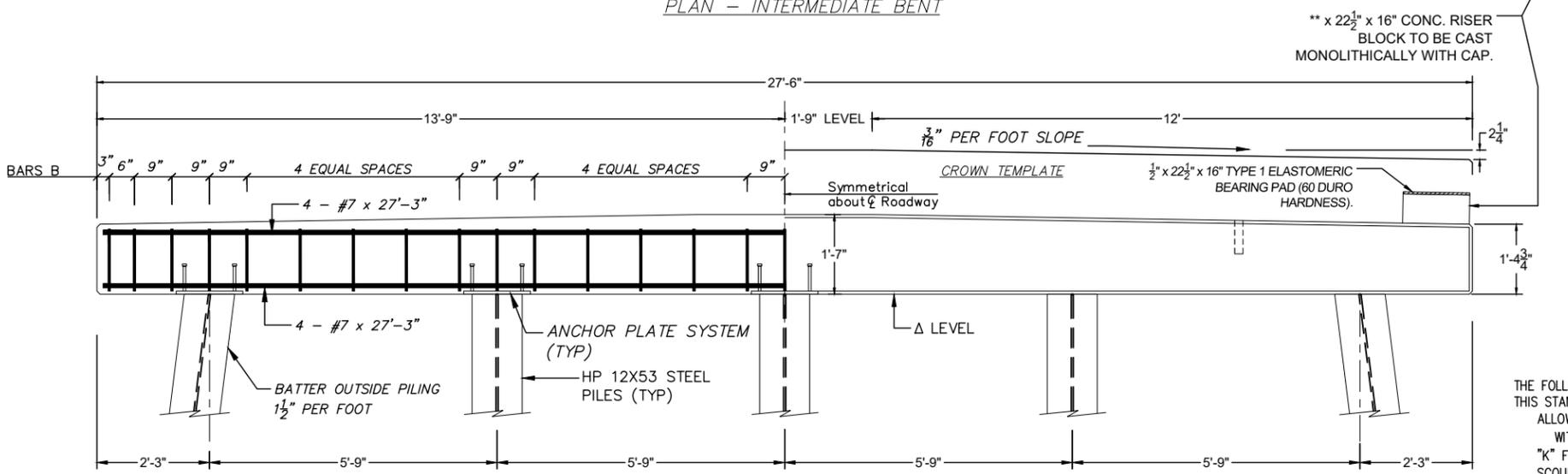
24' SPAN	1/4" x 16" x 24'-6"
34' SPAN	1/4" x 20" x 24'-6"
40' SPAN	1/4" x 23" x 24'-6"



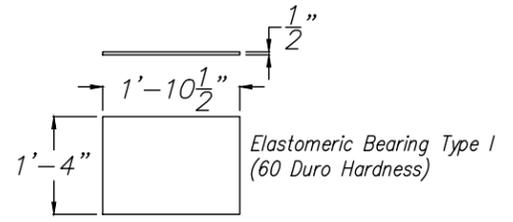
BARS B - #4 (35 per Cap)
BAR BENDING DETAILS
Dimensions Are Out To Out



ANCHOR SYSTEM



ELEVATION - INTERMEDIATE BENT



BEARING PADS

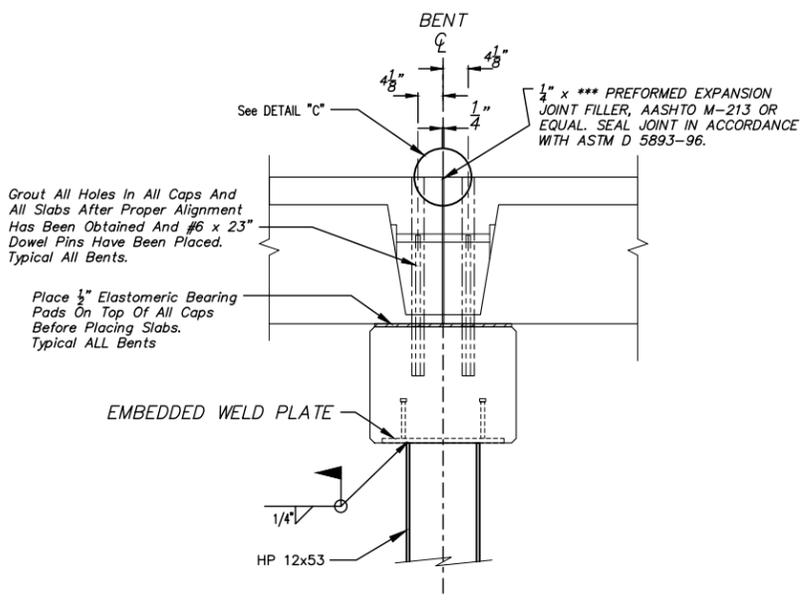
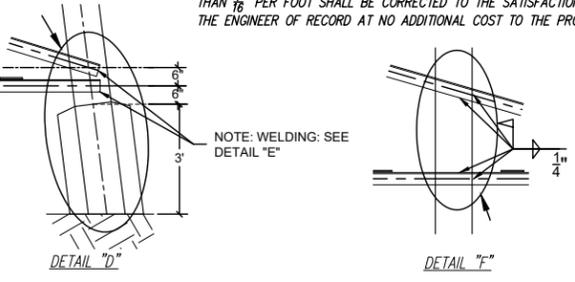
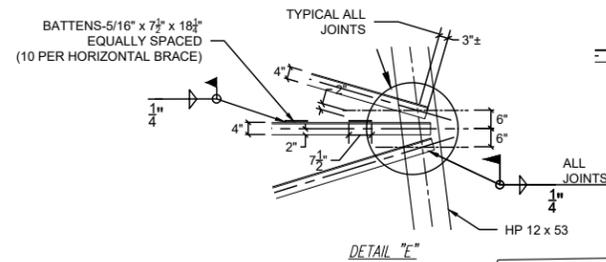
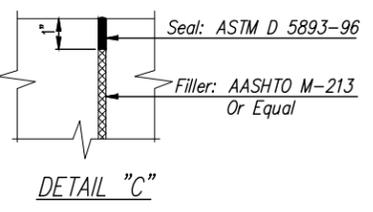
A 1/2" X 8" X 1'-10 1/2" Elastomeric Bearing, Type 1, Shall Be Used Under The Outside Legs Of The Exterior Channels.

DESIGN PARAMETERS
THE FOLLOWING DESIGN PARAMETERS WERE USED TO DEVELOP THIS STANDARD DRAWING:
ALLOWABLE PILE LOAD = 55 TONS/PILE
WITH A FACTOR OF SAFETY OF 2.0 (MIN.)
"K" FOR COMPUTING UNBRACED PILE LENGTH = 1.0
SCOUR DEPTH = NOT CALCULATED
DISTANCE FROM GROUND LINE TO PILE FULLY FIXED = 10 FEET
FACTOR OF SAFETY FOR UNSECURED CONDITION = 2.0
THE DESIGNER OF RECORD IS RESPONSIBLE FOR DETERMINING ACTUAL PILE SIZE AND BRACING REQUIREMENTS FOR CONDITIONS NOT SATISFIED BY THE ABOVE NOTED DESIGN PARAMETERS.

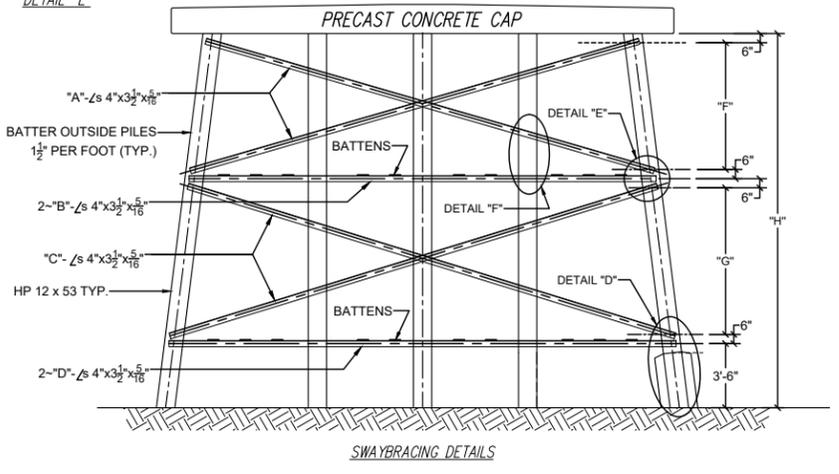
Δ CAPS SHALL BE ERECTED SO THAT THE BOTTOM OF THE CAP IS LEVEL. CAPS ERECTED WITH A SLOPE ON THE BOTTOM OF THE CAP GREATER THAN 1/8" PER FOOT SHALL BE CORRECTED TO THE SATISFACTION OF THE ENGINEER OF RECORD AT NO ADDITIONAL COST TO THE PROJECT.

NOTE: WEIGHT GIVEN IS TOTAL FOR TWO PIECES OF EACH LENGTH OF SWAYBRACING IN TABLE PLUS 10 BATTENS PER STORY OF SWAYBRACING.

		SWAYBRACING TABLE						
		"H"	"F"	"A"	"B"	"C"	"D"	WT. LBS
SINGLE STORY SWAYBRACING	11'-0"	6'-11"	---	25'-6"	25'-6"	---	---	906
	12'-0"	7'-11"	---	25'-11"	25'-9"	---	---	916
	13'-0"	8'-11"	---	26'-4"	26'-0"	---	---	927
	14'-0"	9'-11"	---	26'-10"	26'-3"	---	---	938
	15'-0"	10'-11"	---	27'-4"	26'-6"	---	---	949
	16'-0"	11'-11"	---	27'-10"	26'-9"	---	---	961
	17'-0"	12'-11"	---	28'-5"	27'-0"	---	---	974
DOUBLE STORY SWAYBRACING	18'-0"	6'-11"	5'-7"	25'-6"	25'-6"	27'-0"	27'-3"	1862
	19'-0"	6'-11"	6'-7"	25'-6"	25'-6"	27'-5"	27'-6"	1872
	20'-0"	6'-11"	7'-7"	25'-6"	25'-6"	27'-10"	27'-9"	1882
	21'-0"	6'-11"	8'-7"	25'-6"	25'-6"	28'-3"	28'-0"	1892
	22'-0"	6'-11"	9'-7"	25'-6"	25'-6"	28'-9"	28'-3"	1903
	23'-0"	6'-11"	10'-7"	25'-6"	25'-6"	29'-2"	28'-6"	1914

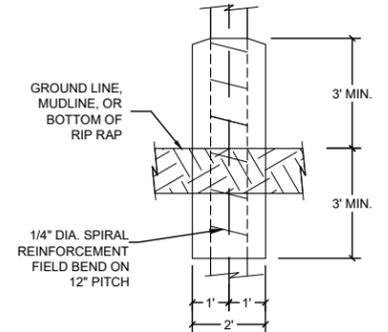


TYPICAL INTERMEDIATE SECTION



Two Story Bent Shown, Single Story Bents Similar. Swaybracing For Single Story Bents Shall Be 4" x 3 1/2" x 5/16" Angles & Designated By The Letters "A" & "B". All Piling @ Ground And/or Water Line Shall Be Encased In Concrete. Note Encasement Details.

NOTE: WHERE "H" IS LESS THAN 11', OMIT SWAYBRACING AND EXTEND THE ENCASEMENT TO THE BOTTOM OF THE CAP OR TO WITHIN 1' OF THE BOTTOM OF THE CAP. IF ENCASEMENT IS STOPPED SHORT OF THE BOTTOM OF THE CAP, THE STEEL PLATE AND STEEL PILE SHALL BE CLEANED AND PAINTED TO 12" BELOW THE TOP OF THE PILE ENCASEMENT.



PILE ENCASEMENT DETAILS

NOTE: A PRE-FABRICATED H-PILE SPLICER, SUCH AS APF HP-30000 CHAMPION SPLICER OR EQUAL, SHALL BE USED FOR SPLICING PILES.

GENERAL NOTES:

SPECIFICATIONS:
AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS
AASHTO STANDARD SPECIFICATIONS FOR TRANSPORTATION MATERIALS AND METHODS OF SAMPLING AND TESTING
AMERICAN SOCIETY FOR TESTING AND MATERIALS
AMERICAN INSTITUTE OF STEEL CONSTRUCTION

REINFORCING STEEL: ALL REINFORCING STEEL SHALL BE GRADE 60 BILLET STEEL MEETING THE REQUIREMENTS OF AASHTO M31. ALL REINFORCING STEEL SHALL BE ACCURATELY LOCATED IN THE FORMS AND PROPER CLEARANCES MAINTAINED WITH STAINLESS STEEL, PLASTIC, OR RUBBER TIPPED CHAIRS. REINFORCING DIMENSIONS ARE CENTER TO CENTER UNLESS OTHERWISE NOTED ON PLANS.

CONCRETE: CONCRETE SHALL CONFORM TO AASHTO CLASS A(AE). MINIMUM 28 DAY COMPRESSIVE STRENGTH SHALL BE 3000 PSL. ALL EXPOSED CORNERS TO BE CHAMFERED 3/4" X 45° UNLESS OTHERWISE NOTED.

STRUCTURAL STEEL AND PILING: ALL STRUCTURAL STEEL SHALL COMPLY WITH AASHTO M270 GRADE 36. ALL PILING SHALL BE 12" STEEL "H" PILING, 53 LBS PER FOOT. ALLOWABLE PILE LOAD = 55 TONS WITH A FACTOR OF SAFETY OF 2.0 (MIN.) (HL-93).

WELDING: ALL WELDING SHALL CONFORM TO ANSI/AASHTO/ANS D 1.5 "BRIDGE WELDING CODE"

TOLERANCES: A DEVIATION OF MORE THAN 1/8" MAY BE CAUSE FOR REJECTION OF THE UNIT.

HARDWARE: ALL BOLTS SHALL CONFORM TO ASTM A-307 AND BE GALVANIZED IN ACCORDANCE WITH ASTM-A153

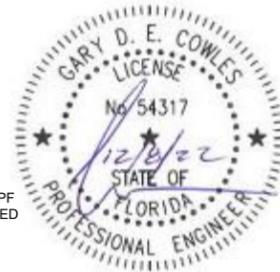
DESIGN DATA:
SPECIFICATIONS:.....AASHTO 2017, 8TH EDITION AND ALL INTERIMS
DESIGN LOADING:.....HL-93

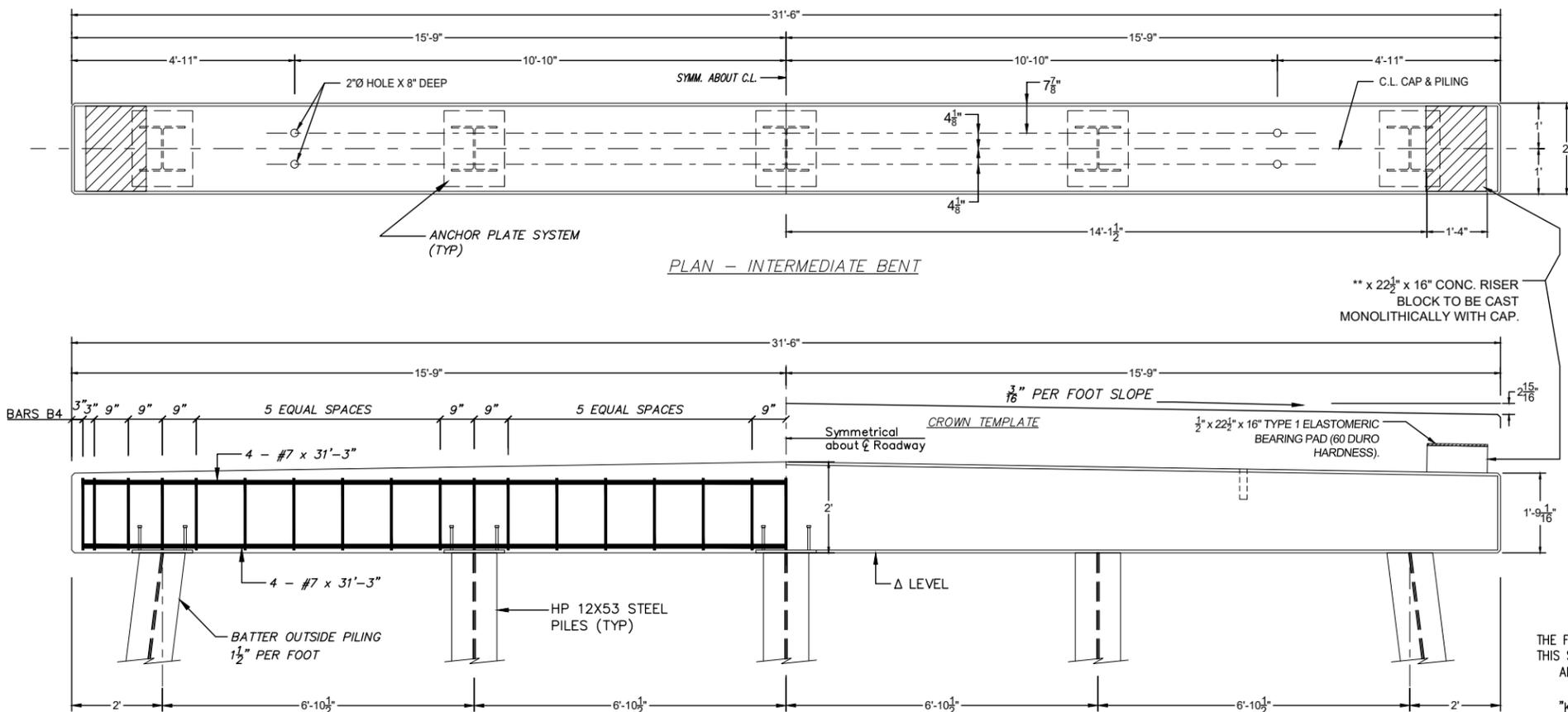
457 St. Michael St. Mobile, AL 36602 (251) 433-1611
Cowles, Murphy, Glover & ASSOCIATES
A Full Service Engineering Firm
PERFORMANCE RELIABILITY EXPERIENCE
11880 Cranston Dr. Suite 102 Arlington, TN 38002 (901) 290-5444

CONECUH BRIDGE & ENGINEERING, INC
P. O. Box 129 Troy, Alabama 36081
249 Pike County Lake Rd. Troy, Alabama 36079
334-566-7422

PRECAST CONCRETE BENT CAP FOR USE WITH STEEL PILING & 24', 34', OR 40' PRECAST BRIDGE SLABS 24'-6" CLEAR ROADWAY

DATE: 12/05/2022
STANDARD DWG. NO. PCB-2440 LRFD
SHEET NO. 15 OF 27





PLAN - INTERMEDIATE BENT

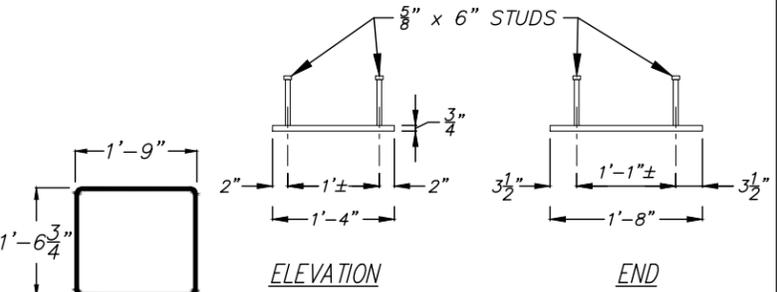
ELEVATION - INTERMEDIATE BENT

**** DEPTH OF RISER BLOCK**

24' SPAN	NA
34' SPAN	4"
40' SPAN	7"

***** PREFORMED EXP. JT. FILLER**

24' SPAN	1/4" x 16" x 28'-0"
34' SPAN	1/4" x 20" x 28'-0"
40' SPAN	1/4" x 23" x 28'-0"



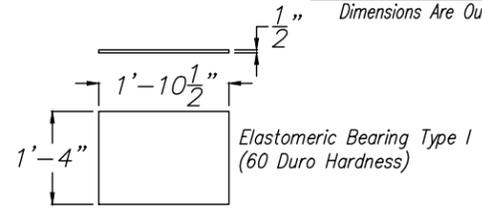
ELEVATION

END

BARS B4 - #4
(35 per Cap)

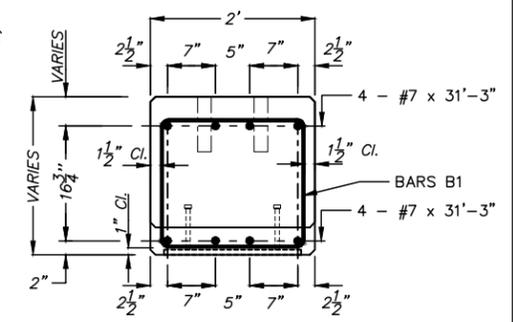
ANCHOR SYSTEM

BAR BENDING DETAILS
Dimensions Are Out To Out



BEARING PADS

A 1/2" X 8" X 1'-10 1/2" Elastomeric Bearing, Type 1, Shall Be Used Under The Outside Legs Of The Exterior Channels.



STEEL PLACEMENT DETAIL

DESIGN PARAMETERS
THE FOLLOWING DESIGN PARAMETERS WERE USED TO DEVELOP THIS STANDARD DRAWING:
ALLOWABLE PILE LOAD = 55 TONS/PILE WITH A FACTOR OF SAFETY OF 2.0 (MIN.)
"K" FOR COMPUTING UNBRACED PILE LENGTH = 1.0
SCOUR DEPTH = NOT CALCULATED
DISTANCE FROM GROUND LINE TO PILE FULLY FIXED = 10 FEET
FACTOR OF SAFETY FOR UNSECURED CONDITION = 2.0
THE DESIGNER OF RECORD IS RESPONSIBLE FOR DETERMINING ACTUAL PILE SIZE AND BRACING REQUIREMENTS FOR CONDITIONS NOT SATISFIED BY THE ABOVE NOTED DESIGN PARAMETERS.

GENERAL NOTES:

SPECIFICATIONS:
AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS
AASHTO STANDARD SPECIFICATIONS FOR TRANSPORTATION MATERIALS AND METHODS OF SAMPLING AND TESTING
AMERICAN SOCIETY FOR TESTING AND MATERIALS
AMERICAN INSTITUTE OF STEEL CONSTRUCTION

REINFORCING STEEL: ALL REINFORCING STEEL SHALL BE GRADE 60 BILLET STEEL MEETING THE REQUIREMENTS OF AASHTO M31. ALL REINFORCING STEEL SHALL BE ACCURATELY LOCATED IN THE FORMS AND PROPER CLEARANCES MAINTAINED WITH STAINLESS STEEL, PLASTIC, OR RUBBER TIPPED CHAIRS. REINFORCING DIMENSIONS ARE CENTER TO CENTER UNLESS OTHERWISE NOTED ON PLANS.

CONCRETE: CONCRETE SHALL CONFORM TO AASHTO CLASS A(AE). MINIMUM 28 DAY COMPRESSIVE STRENGTH SHALL BE 3000 PSL. ALL EXPOSED CORNERS TO BE CHAMFERED 3/4" X 45" UNLESS OTHERWISE NOTED.

STRUCTURAL STEEL AND PILING: ALL STRUCTURAL STEEL SHALL COMPLY WITH AASHTO M270 GRADE 36. ALL PILING SHALL BE 12" STEEL "H" PILING, 53 LBS PER FOOT. ALLOWABLE PILE LOAD = 55 TONS WITH A FACTOR OF SAFETY OF 2.0 (MIN.) (HL-93).

WELDING: ALL WELDING SHALL CONFORM TO ANSI/AASHTO/ANS D 1.5 "BRIDGE WELDING CODE"

TOLERANCES: A DEVIATION OF MORE THAN 1/8" MAY BE CAUSE FOR REJECTION OF THE UNIT.

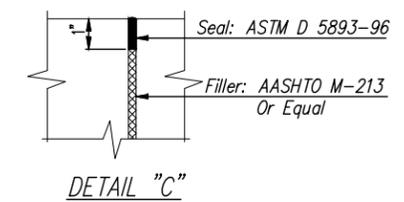
HARDWARE: ALL BOLTS SHALL CONFORM TO ASTM A-307 AND BE GALVANIZED IN ACCORDANCE WITH ASTM-A153

DESIGN DATA:
SPECIFICATIONS:.....AASHTO 2017, 8TH EDITION AND ALL INTERIMS
DESIGN LOADING:.....HL-93

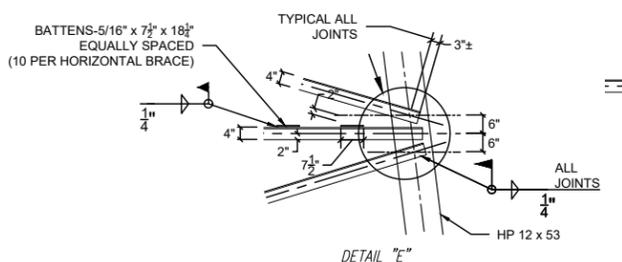
Δ CAPS SHALL BE ERECTED SO THAT THE BOTTOM OF THE CAP IS LEVEL. CAPS ERECTED WITH A SLOPE ON THE BOTTOM OF THE CAP GREATER THAN 1/8" PER FOOT SHALL BE CORRECTED TO THE SATISFACTION OF THE ENGINEER OF RECORD AT NO ADDITIONAL COST TO THE PROJECT.

NOTE: WEIGHT GIVEN IS TOTAL FOR TWO PIECES OF EACH LENGTH OF SWAYBRACING IN TABLE PLUS 10 BATTENS PER STORY OF SWAYBRACING.

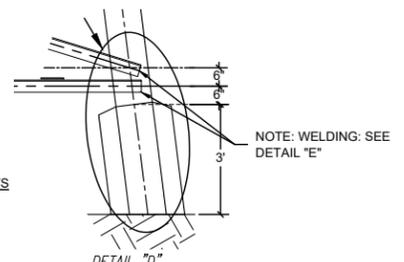
	SWAYBRACING TABLE						WT. LBS
	"H"	"F"	"G"	"A"	"B"	"C"	
SINGLE STORY SWAYBRACING	11'-0"	6'-6"	---	29'-8"	29'-11"	---	1038
	12'-0"	7'-6"	---	30'-0"	30'-2"	---	1047
	13'-0"	8'-6"	---	30'-5"	30'-5"	---	1057
	14'-0"	9'-6"	---	30'-11"	30'-8"	---	1068
	15'-0"	10'-6"	---	31'-3"	30'-11"	---	1078
DOUBLE STORY SWAYBRACING	16'-0"	11'-6"	---	31'-9"	31'-2"	---	1089
	17'-0"	12'-6"	---	32'-3"	31'-5"	---	1101
	18'-0"	6'-11"	5'-7"	29'-10"	30'-0"	31'-4"	2132
	19'-0"	6'-11"	6'-7"	29'-10"	30'-0"	31'-8"	2141
	20'-0"	6'-11"	7'-7"	29'-10"	30'-0"	32'-0"	2150
	21'-0"	6'-11"	8'-7"	29'-10"	30'-0"	32'-4"	2160
	22'-0"	6'-11"	9'-7"	29'-10"	30'-0"	32'-9"	2170
	23'-0"	6'-11"	10'-7"	29'-10"	30'-0"	33'-2"	2180



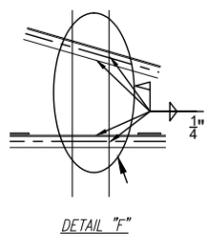
DETAIL "C"



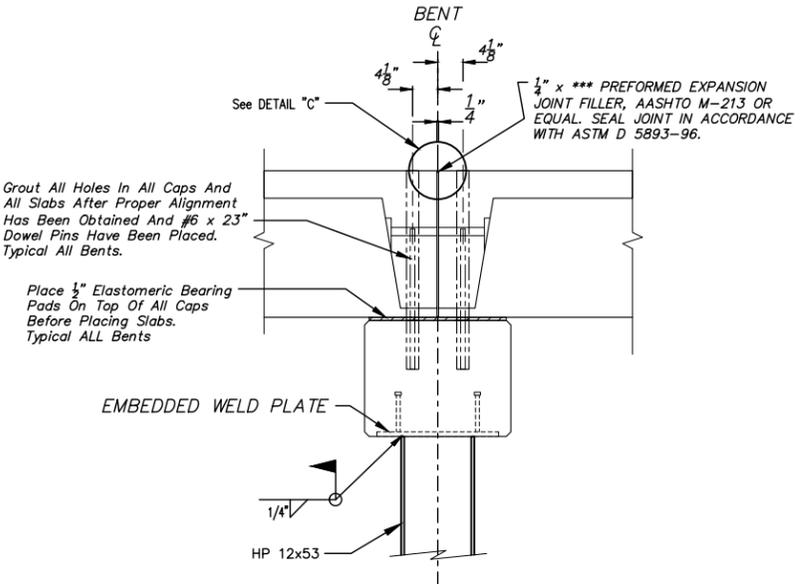
DETAIL "E"



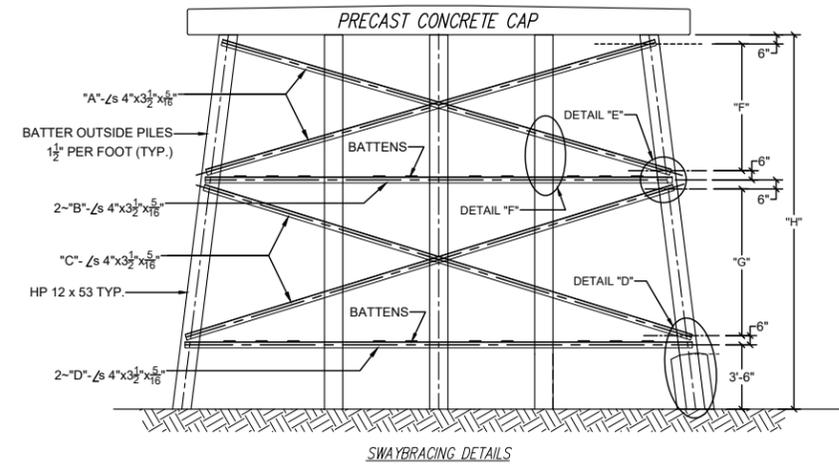
DETAIL "D"



DETAIL "F"



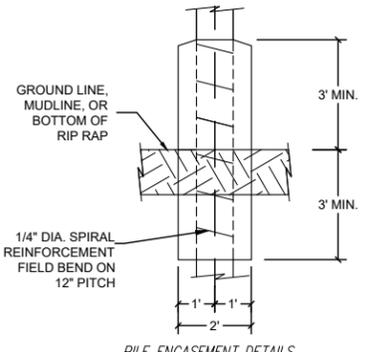
TYPICAL INTERMEDIATE SECTION



SWAYBRACING DETAILS

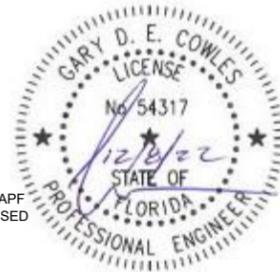
Two Story Bent Shown, Single Story Bents Similar. Swaybracing For Single Story Bents Shall Be 4" x 3 1/2" x 5/16" Angles & Designated By The Letters "A" & "B". All Piling @ Ground And or Water Line Shall Be Encased In Concrete. Note Encasement Details.

NOTE: WHERE "H" IS LESS THAN 11', OMIT SWAYBRACING AND EXTEND THE ENCASEMENT TO THE BOTTOM OF THE CAP OR TO WITHIN 1' OF THE BOTTOM OF THE CAP. IF ENCASEMENT IS STOPPED SHORT OF THE BOTTOM OF THE CAP, THE STEEL PLATE AND STEEL PILE SHALL BE CLEANED AND PAINTED TO 12" BELOW THE TOP OF THE PILE ENCASEMENT.

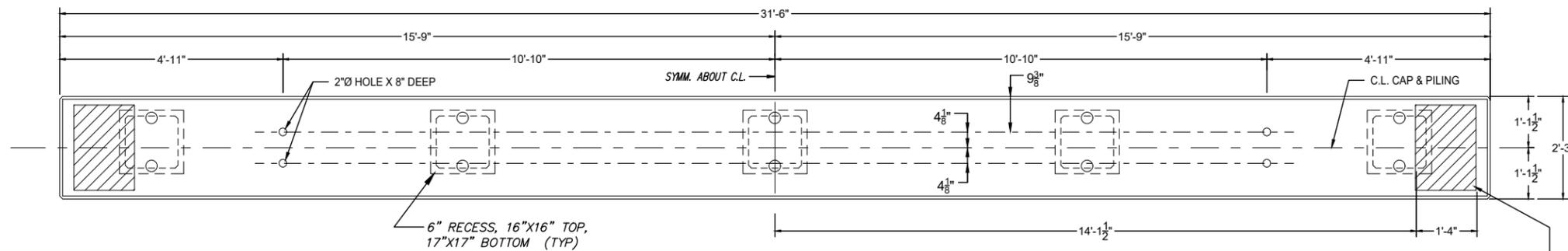


PILE ENCASUREMENT DETAILS

NOTE: A PRE-FABRICATED H-PILE SPLICER, SUCH AS APF HP-30000 CHAMPION SPLICER OR EQUAL, SHALL BE USED FOR SPLICING PILES.



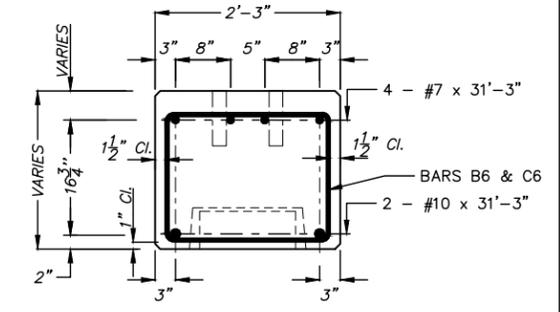
457 St. Michael St. Mobile, AL 36602 (251) 433-1611	Cowles, Murphy, Glover & ASSOCIATES A Full Service Engineering Firm PERFORMANCE RELIABILITY EXPERIENCE	11880 Cranston Dr. Suite 102 Arlington, TN 38002 (901) 290-5444
CONECU H BRIDGE & ENGINEERING, INC		
P. O. Box 129 Troy, Alabama 36081 334-566-7422		249 Pike County Lake Rd. Troy, Alabama 36079
PRECAST CONCRETE BENT CAP FOR USE WITH STEEL PILING & 24', 34', OR 40' PRECAST BRIDGE SLABS 28'-0" CLEAR ROADWAY		
DATE: 12/05/2022	STANDARD DWG. NO. PCB-2840 LRFD SHEET NO. 17 OF 27	



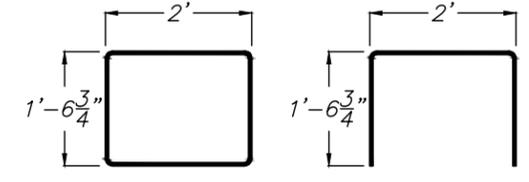
PLAN - INTERMEDIATE BENT

** DEPTH OF RISER BLOCK	
24' SPAN	NA
34' SPAN	4"
40' SPAN	7"

*** PREFORMED EXP. JT. FILLER	
24' SPAN	1/4" x 16" x 28'-0"
34' SPAN	1/4" x 20" x 28'-0"
40' SPAN	1/4" x 23" x 28'-0"



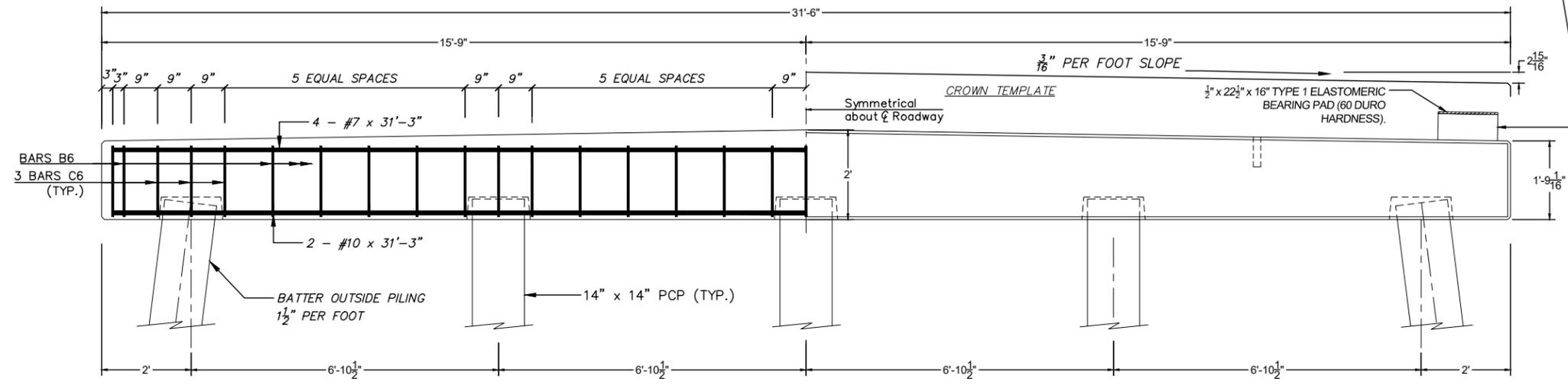
STEEL PLACEMENT DETAIL



BARS B6 - #4
(20 per Cap)

BARS C6 - #4
(15 per Cap)

BAR BENDING DETAILS
Dimensions Are Out To Out



ELEVATION - INTERMEDIATE BENT

Δ CAPS SHALL BE ERECTED SO THAT THE BOTTOM OF THE CAP IS LEVEL. CAPS ERECTED WITH A SLOPE ON THE BOTTOM OF THE CAP GREATER THAN 1/16" PER FOOT SHALL BE CORRECTED TO THE SATISFACTION OF THE ENGINEER OF RECORD AT NO ADDITIONAL COST TO THE PROJECT.

GENERAL NOTES:

SPECIFICATIONS:
AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS
AASHTO STANDARD SPECIFICATIONS FOR TRANSPORTATION MATERIALS AND METHODS OF SAMPLING AND TESTING
AMERICAN SOCIETY FOR TESTING AND MATERIALS
AMERICAN INSTITUTE OF STEEL CONSTRUCTION

REINFORCING STEEL: ALL REINFORCING STEEL SHALL BE GRADE 60 BILLET STEEL MEETING THE REQUIREMENTS OF AASHTO M31. ALL REINFORCING STEEL SHALL BE ACCURATELY LOCATED IN THE FORMS AND PROPER CLEARANCES MAINTAINED WITH STAINLESS STEEL, PLASTIC, OR RUBBER TIPPED CHAIRS. REINFORCING DIMENSIONS ARE CENTER TO CENTER UNLESS OTHERWISE NOTED ON PLANS.

CONCRETE: CONCRETE SHALL CONFORM TO AASHTO CLASS A(AE). MINIMUM 28 DAY COMPRESSIVE STRENGTH SHALL BE 3000 PSI. ALL EXPOSED CORNERS TO BE CHAMFERED 3/4" X 45° UNLESS OTHERWISE NOTED.

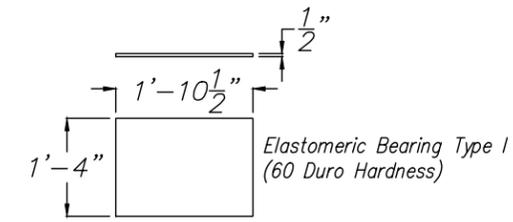
PILING: ALL PILING SHALL BE 14"x14" PRESTRESSED CONCRETE PILE. ALLOWABLE PILE LOAD = 55 TONS WITH A FACTOR OF SAFETY OF 2.0 (MIN.)

EPOXY GROUT: EPOXY GROUT SHALL DEVELOP A COMPRESSIVE STRENGTH OF 5000 PSI IN TWELVE (12) HOURS.

TOLERANCES: A DEVIATION OF MORE THAN 1/8" MAY BE CAUSE FOR REJECTION OF THE UNIT.

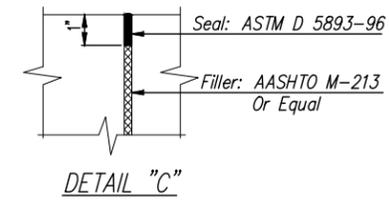
HARDWARE: ALL BOLTS SHALL CONFORM TO ASTM A-307 AND BE GALVANIZED IN ACCORDANCE WITH ASTM-A153

DESIGN DATA:
SPECIFICATIONS:.....AASHTO 2017, 8TH EDITION AND ALL INTERIMS
DESIGN LOADING:.....HL-93

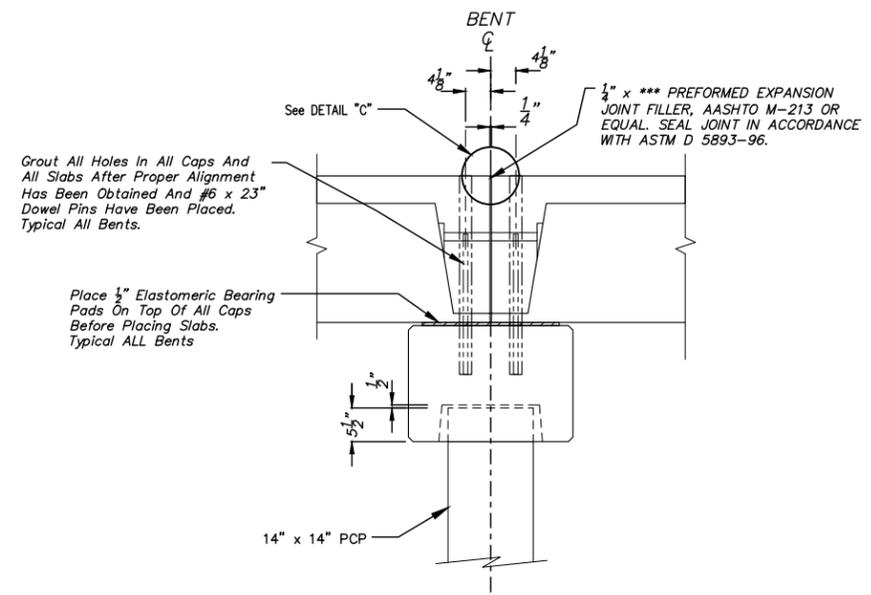


BEARING PADS

A 1/2" X 8" X 1'-10 1/2" Elastomeric Bearing, Type 1, Shall Be Used Under The Outside Legs Of The Exterior Channels.



DETAIL "C"

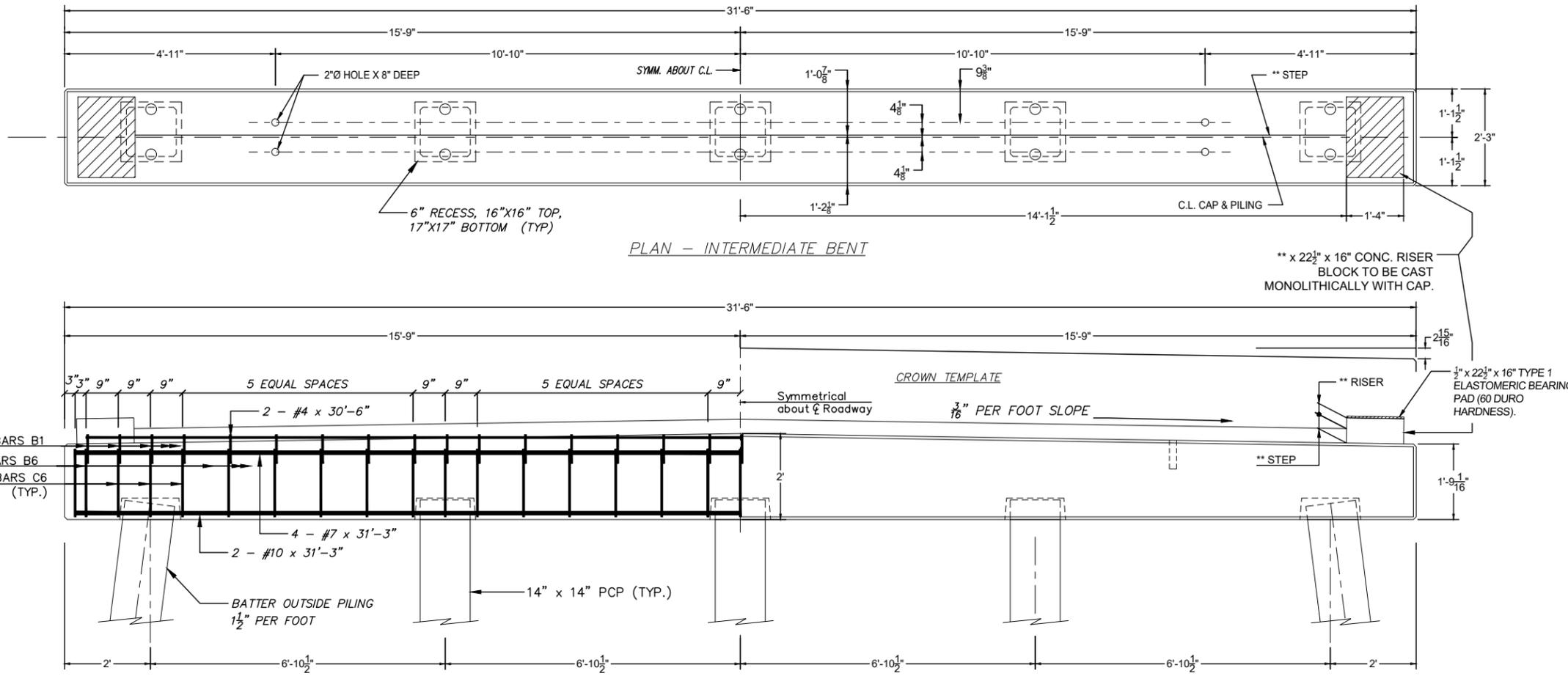


TYPICAL INTERMEDIATE SECTION

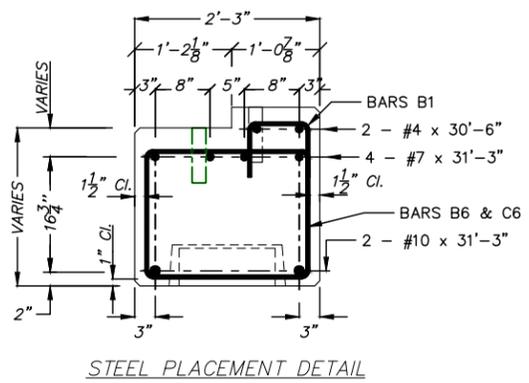
DESIGN PARAMETERS
THE FOLLOWING DESIGN PARAMETERS WERE USED TO DEVELOP THIS STANDARD DRAWING:
ALLOWABLE PILE LOAD = 55 TONS/PILE
WITH A FACTOR OF SAFETY OF 2.0 (MIN.)
"K" FOR COMPUTING UNBRACED PILE LENGTH = 1.0
SCOUR DEPTH = NOT CALCULATED
DISTANCE FROM GROUND LINE TO PILE FULLY FIXED = 10 FEET
FACTOR OF SAFETY FOR UNSECURED CONDITION = 2.0
FREE STANDING LENGTH = 23 FEET*
THE DESIGNER OF RECORD IS RESPONSIBLE FOR DETERMINING ACTUAL PILE SIZE FOR CONDITIONS NOT SATISFIED BY THE ABOVE NOTED DESIGN PARAMETERS.
* LENGTH FROM POINT OF FIXITY TO UNDERSIDE OF CAP.



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CONECUH BRIDGE & ENGINEERING, INC		
P. O. Box 129 Troy, Alabama 36081		249 Pike County Lake Rd. Troy, Alabama 36079 334-566-7422
PRECAST CONCRETE BENT CAP FOR USE WITH 14"x14" CONCRETE PILING & 24', 34', OR 40' PRECAST BRIDGE SLABS 28'-0" CLEAR ROADWAY		
DATE: 12/05/2022	STANDARD DWG. NO. PCB-2840-CP LRFD SHEET NO. 18 OF 27	



** DEPTH OF STEP, RISER BLOCK, & JT. FILLER			
	STEP	RISER	JT. FILLER
24' SPAN TO 34' SPAN	4"	NA	20"
24' SPAN TO 40' SPAN	7"	NA	23"
34' SPAN TO 40' SPAN	3"	4"	23"



GENERAL NOTES:

SPECIFICATIONS:
 AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS
 AASHTO STANDARD SPECIFICATIONS FOR TRANSPORTATION MATERIALS AND METHODS OF SAMPLING AND TESTING
 AMERICAN SOCIETY FOR TESTING AND MATERIALS
 AMERICAN INSTITUTE OF STEEL CONSTRUCTION

REINFORCING STEEL: ALL REINFORCING STEEL SHALL BE GRADE 60 BILLET STEEL MEETING THE REQUIREMENTS OF AASHTO M31. ALL REINFORCING STEEL SHALL BE ACCURATELY LOCATED IN THE FORMS AND PROPER CLEARANCES MAINTAINED WITH STAINLESS STEEL, PLASTIC, OR RUBBER TIPPED CHAIRS. REINFORCING DIMENSIONS ARE CENTER TO CENTER UNLESS OTHERWISE NOTED ON PLANS.

CONCRETE: CONCRETE SHALL CONFORM TO AASHTO CLASS A(AE). MINIMUM 28 DAY COMPRESSIVE STRENGTH SHALL BE 3000 PSI. ALL EXPOSED CORNERS TO BE CHAMFERED 3/4" X 45° UNLESS OTHERWISE NOTED.

PILING: ALL PILING SHALL BE 14"x14" PRESTRESSED CONCRETE PILE. ALLOWABLE PILE LOAD = 55 TONS WITH A FACTOR OF SAFETY OF 2.0 (MIN.)

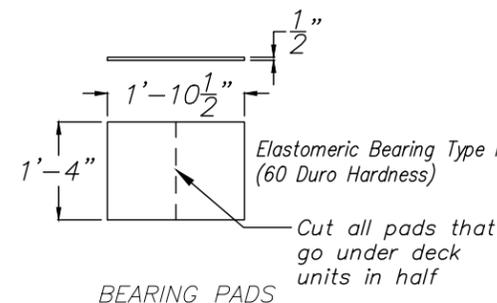
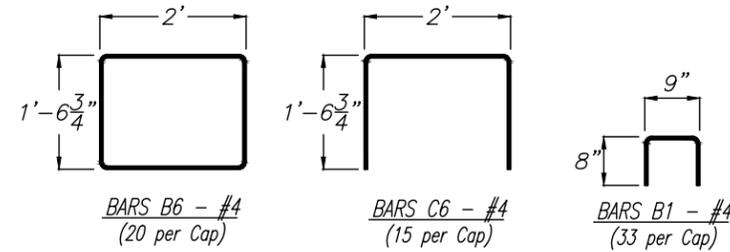
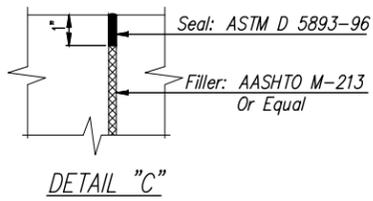
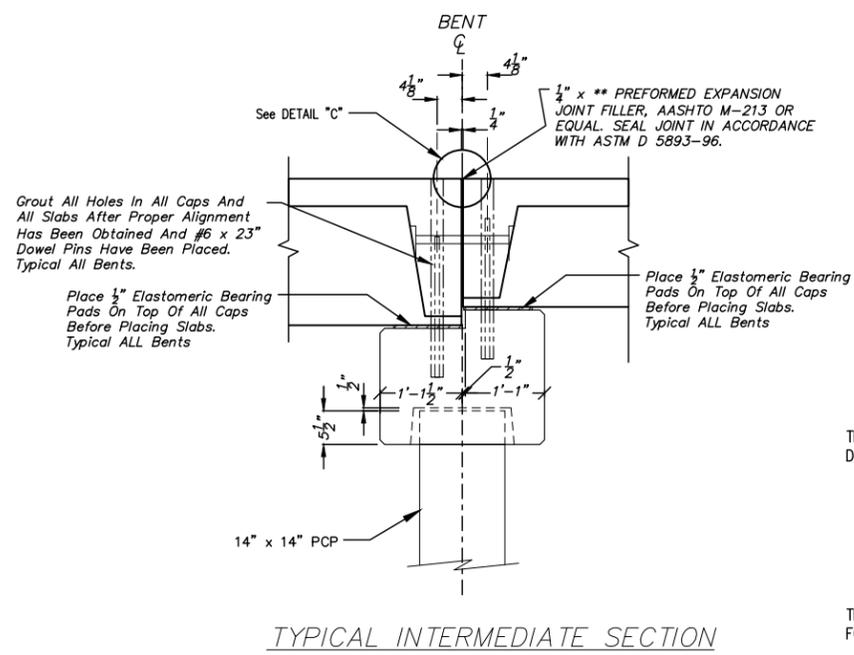
EPOXY GROUT: EPOXY GROUT SHALL DEVELOP A COMPRESSIVE STRENGTH OF 5000 PSI IN TWELVE (12) HOURS.

TOLERANCES: A DEVIATION OF MORE THAN 1/8" MAY BE CAUSE FOR REJECTION OF THE UNIT.

HARDWARE: ALL BOLTS SHALL CONFORM TO ASTM A-307 AND BE GALVANIZED IN ACCORDANCE WITH ASTM-A153

DESIGN DATA:
 SPECIFICATIONS:.....AASHTO 2017, 8TH EDITION AND ALL INTERIMS
 DESIGN LOADING:.....HL-93

△ CAPS SHALL BE ERECTED SO THAT THE BOTTOM OF THE CAP IS LEVEL. CAPS ERECTED WITH A SLOPE ON THE BOTTOM OF THE CAP GREATER THAN 1/16" PER FOOT SHALL BE CORRECTED TO THE SATISFACTION OF THE ENGINEER OF RECORD AT NO ADDITIONAL COST TO THE PROJECT.



A 1/2" X 8" X 1'-10 1/2" Elastomeric Bearing, Type 1, Shall Be Used Under The Outside Legs Of The Exterior Channels.

DESIGN PARAMETERS
 THE FOLLOWING DESIGN PARAMETERS WERE USED TO DEVELOP THIS STANDARD DRAWING:
 ALLOWABLE PILE LOAD = 55 TONS/PILE
 WITH A FACTOR OF SAFETY OF 2.0 (MIN.)
 "K" FOR COMPUTING UNBRACED PILE LENGTH = 1.0
 SCOUR DEPTH = NOT CALCULATED
 DISTANCE FROM GROUND LINE TO PILE FULLY FIXED = 10 FEET
 FACTOR OF SAFETY FOR UNSECURED CONDITION = 2.0
 FREE STANDING LENGTH = 23 FEET*
 THE DESIGNER OF RECORD IS RESPONSIBLE FOR DETERMINING ACTUAL PILE SIZE FOR CONDITIONS NOT SATISFIED BY THE ABOVE NOTED DESIGN PARAMETERS.

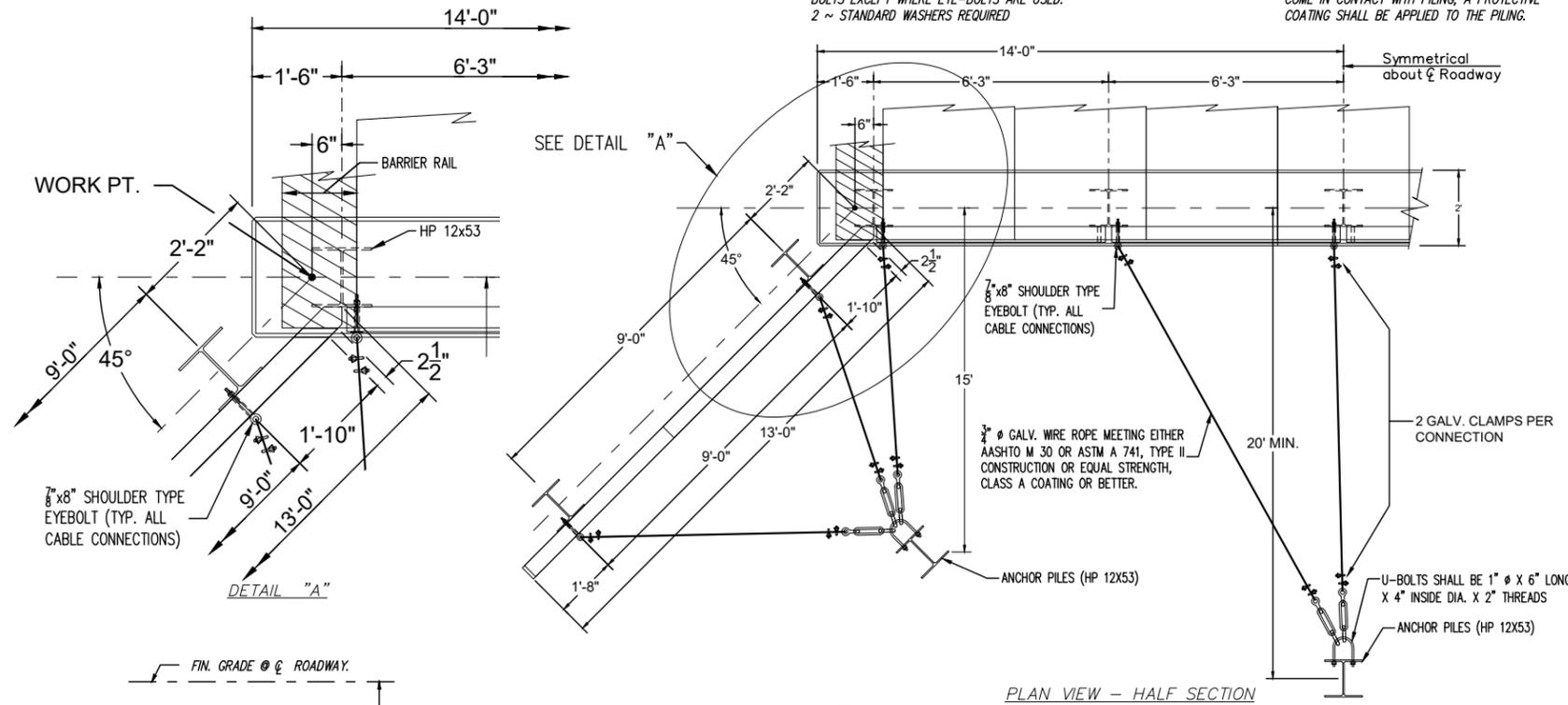
* LENGTH FROM POINT OF FIXITY TO UNDERSIDE OF CAP.



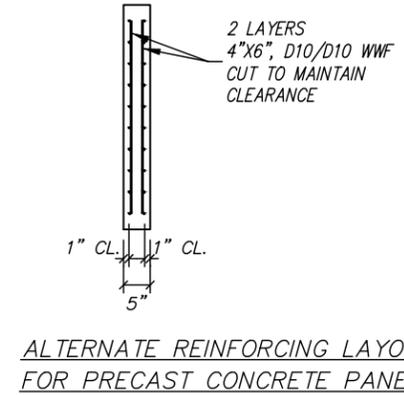
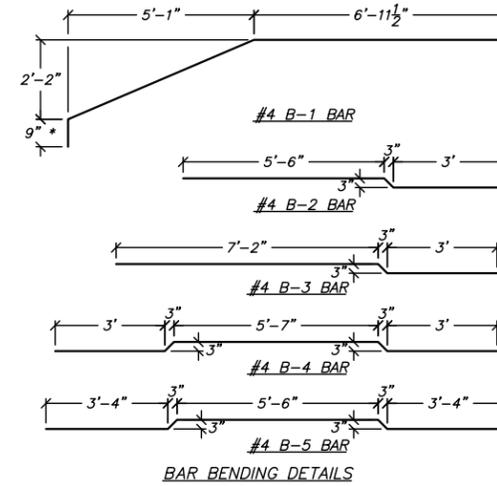
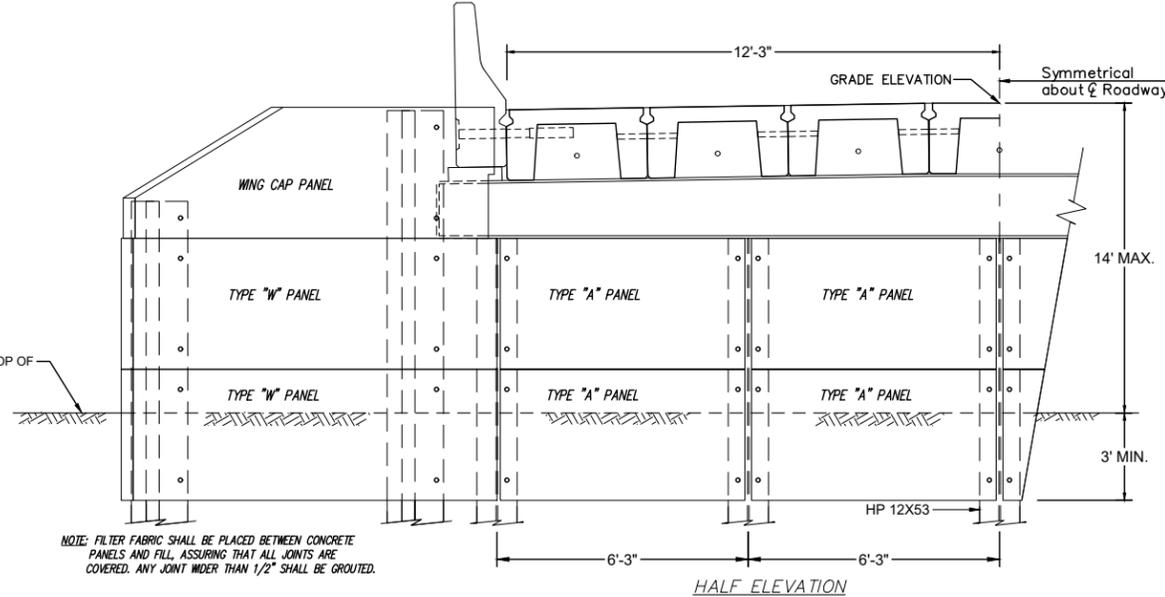
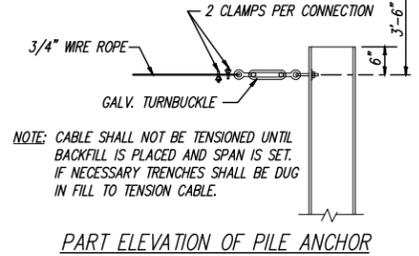
457 St. Michael St. Mobile, AL 36602 (251) 433-1611	Cowles, Murphy, Glover & ASSOCIATES A Full Service Engineering Firm PERFORMANCE RELIABILITY EXPERIENCE	11880 Cranston Dr. Suite 102 Arlington, TN 38002 (901) 290-5444
CONECUH BRIDGE & ENGINEERING, INC		
P. O. Box 129 Troy, Alabama 36081		249 Pike County Lake Rd. Troy, Alabama 36079 334-566-7422
PRECAST CONCRETE BENT CAP FOR USE WITH 14'x14' CONCRETE PILING & 24', 34', OR 40' PRECAST BRIDGE SLABS 28'-0" CLEAR ROADWAY		
DATE: 12/05/2022	STANDARD DWG. NO. PCB-2840-CP-STEP LRFD SHEET NO. 19 OF 27	

NOTE: BOLT ALL PANELS TO PILING WITH 3/4" Ø X 8" MACHINE BOLTS EXCEPT WHERE EYE-BOLTS ARE USED. 2 ~ STANDARD WASHERS REQUIRED

NOTE: AT THE POINT WHERE PRECAST CONCRETE PANELS COME IN CONTACT WITH PILING, A PROTECTIVE COATING SHALL BE APPLIED TO THE PILING.



REBAR SCHEDULE (PCP-2400)																
	"V"	"Y"	"C" BAR		"D" BAR		"B5" BAR		"B1" BAR		"B2" BAR		"B3" BAR		"B4" BAR	
			QTY.	LENGTH	QTY.	LENGTH	QTY.	LENGTH	QTY.	LENGTH	QTY.	LENGTH	QTY.	LENGTH	QTY.	LENGTH
A1	2'-3"	1'-3"	7 (C-1)	2'-0"	5	5'-10"										
A2	3'-3"	2'-3"	7 (C-2)	3'-0"	8	5'-10"										
A3	4'-3"	3'-3"	7 (C-3)	4'-0"	10	5'-10"										
A4	6'-3"	3'-3"	7 (C-4)	6'-0"	14	5'-10"										
A5	7'-3"	3'-3"	7 (C-5)	7'-0"	16	5'-10"										
A6	8'-3"	3'-3"	7 (C-6)	8'-0"	18	5'-10"										
W1	2'-3"	1'-3"	15 (C-1)	2'-0"			5	12'-8"								
W2	3'-3"	2'-3"	15 (C-2)	3'-0"			8	12'-8"								
W3	4'-3"	3'-3"	15 (C-3)	4'-0"			12	12'-8"								
W4	6'-3"	3'-3"	15 (C-4)	6'-0"			17	12'-8"								
W5	7'-3"	3'-3"	15 (C-5)	7'-0"			20	12'-8"								
W6	8'-3"	3'-3"	15 (C-6)	8'-0"			23	12'-8"								
WC (24 & 34)	3'-3"	2'-3"	7 (C-2)	3'-0"					1	13'-3"	1	8'-10"	1	10'-6"	2	12'-3 1/2"
WC (40)	3'-6"	2'-6"	7 (C-2a)	3'-3"					1	13'-6"	1	8'-10"	1	10'-6"	2	12'-3 1/2"



GENERAL NOTES:

SPECIFICATIONS:
AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS
AASHTO STANDARD SPECIFICATIONS FOR TRANSPORTATION MATERIALS AND METHODS OF SAMPLING AND TESTING
AMERICAN SOCIETY FOR TESTING AND MATERIALS
AMERICAN INSTITUTE OF STEEL CONSTRUCTION

REINFORCING STEEL: ALL REINFORCING STEEL SHALL BE GRADE 60 BILLET STEEL MEETING THE REQUIREMENTS OF AASHTO M31. ALL REINFORCING STEEL SHALL BE ACCURATELY LOCATED IN THE FORMS AND PROPER CLEARANCES MAINTAINED WITH STAINLESS STEEL, PLASTIC, OR RUBBER TIPPED CHAIRS. REINFORCING DIMENSIONS ARE CENTER TO CENTER UNLESS OTHERWISE NOTED ON PLANS.

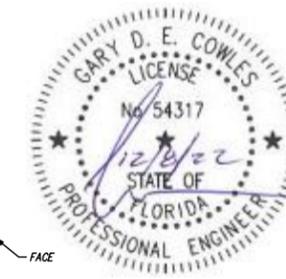
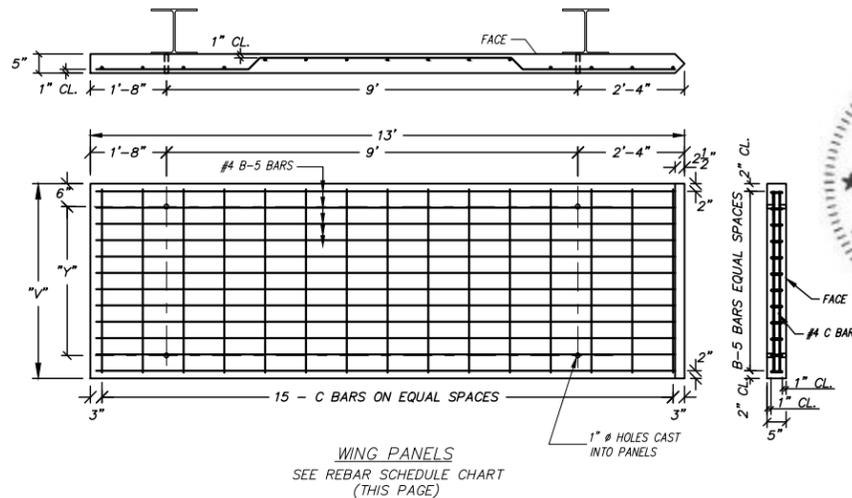
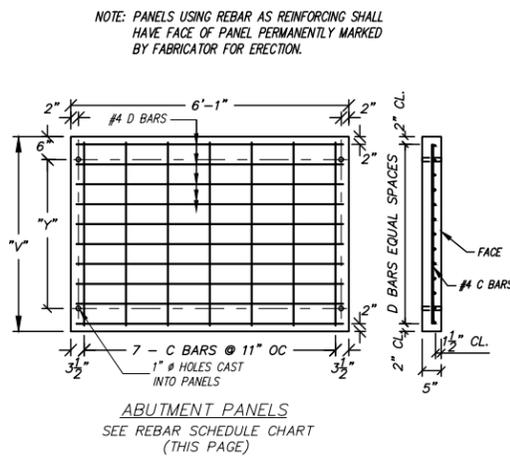
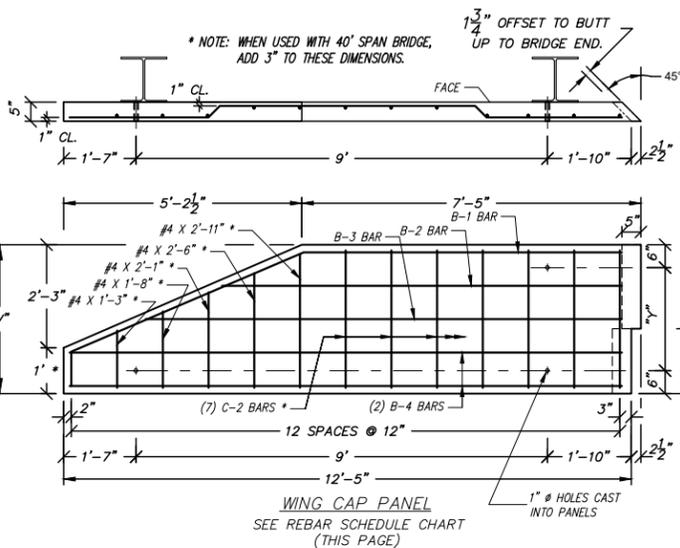
CONCRETE: CONCRETE SHALL CONFORM TO AASHTO CLASS A(AE). MINIMUM 28 DAY COMPRESSIVE STRENGTH SHALL BE 3000 PSI. ALL EXPOSED CORNERS TO BE ROUNDED TO A 1/4" RADIUS UNLESS OTHERWISE NOTED.

HARDWARE: ALL BOLTS SHALL CONFORM TO ASTM A-307 AND BE GALVANIZED IN ACCORDANCE WITH ASTM-A153

DESIGN DATA:
SPECIFICATIONS:.....AASHTO 2017, 8TH EDITION AND ALL INTERIMS

NOTE: IN CASTING PANELS (ABUTMENT, WING, WING CAP), WIRE MESH CONFORMING TO THE REQUIREMENTS OF AASHTO M221, MINIMUM GRADE 70 STEEL, MAY BE USED UP TO A DEPTH OF 14' BELOW GRADE IN LIEU OF THE REINFORCEMENT SHOWN. TWO LAYERS OF MESH SHALL BE USED IN EACH PANEL AND BE LOCATED WITH 1" CLEAR OF THE SIDE OF THE PANEL. THE WIRE CONFIGURATION MUST BE SUCH THAT A MINIMUM STEEL AREA OF .30 SQ. IN. PER FOOT IN THE LINE WIRE DIRECTION AND .20 SQ. IN. PER FOOT IN THE CROSS WIRE DIRECTION IS ACQUIRED.

NOTE: PANELS OF DIFFERENT HEIGHTS THAN THOSE SHOWN MAY BE CAST. STEEL REQUIREMENTS AND CLEARANCES SHOWN HEREON MUST BE MAINTAINED.

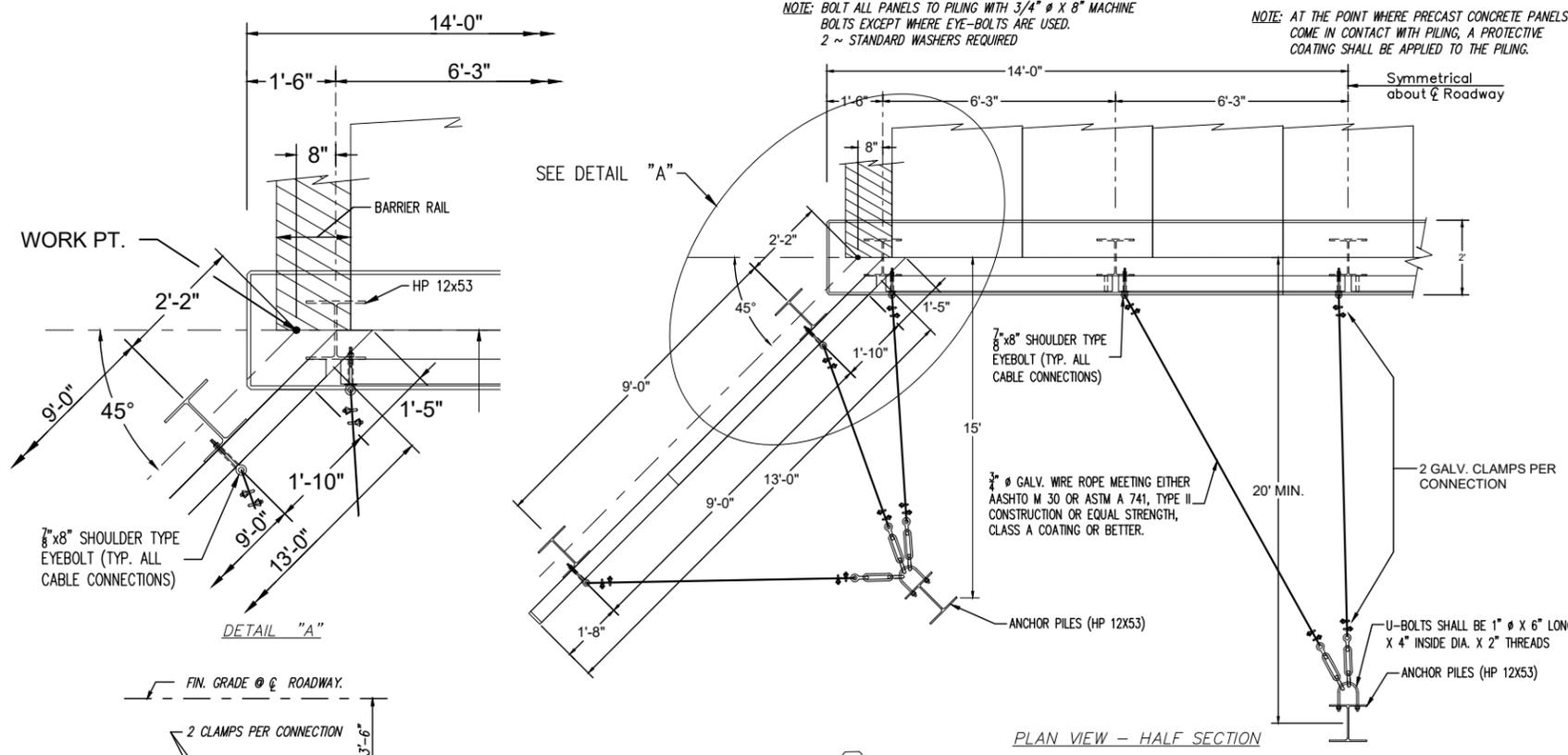


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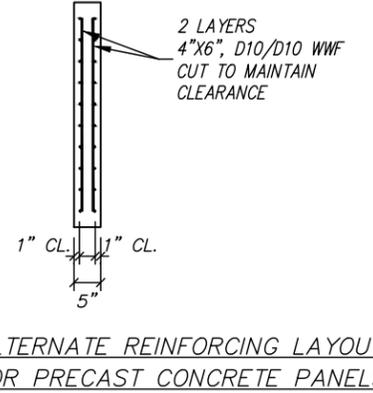
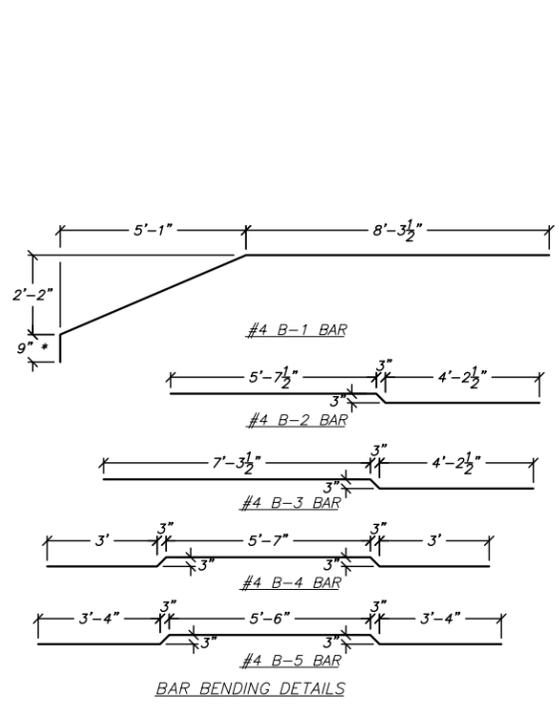
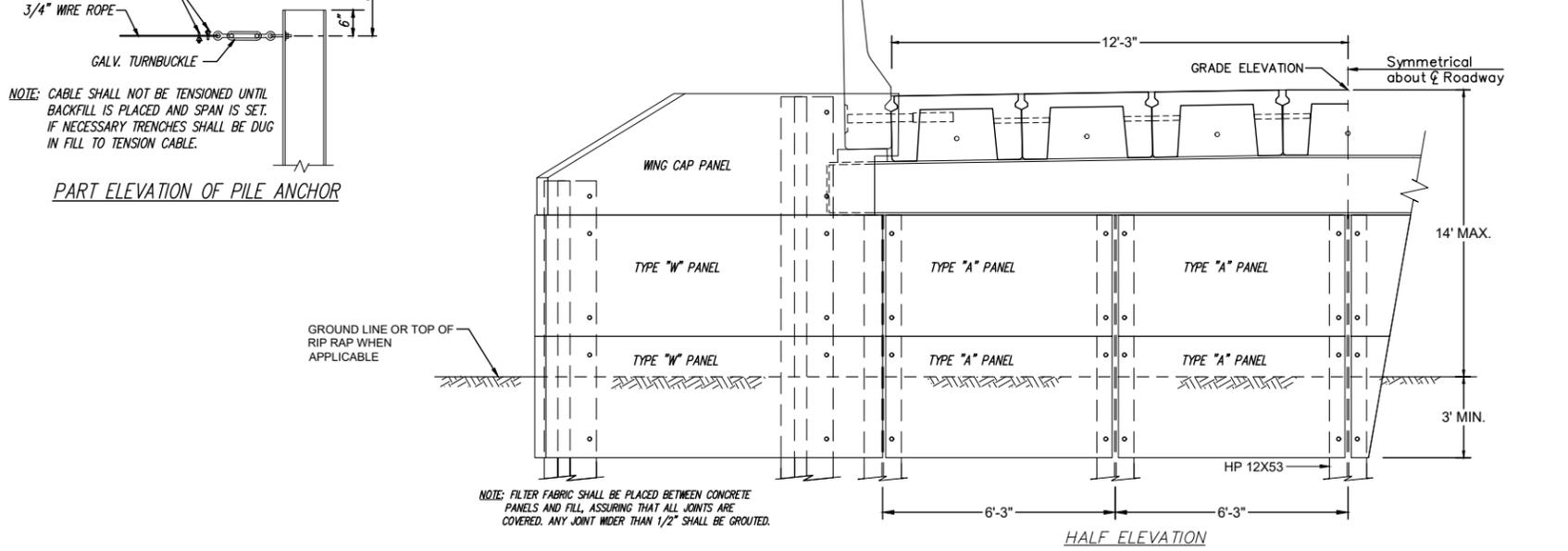
C&E CONE/CU/H BRIDGE & ENGINEERING, INC
P. O. Box 129 Troy, Alabama 36081
249 Pike County Lake Rd. Troy, Alabama 36079
334-566-7422

PRECAST CONCRETE ABUTMENT PANELS FOR USE WITH STEEL PILING & 24', 34', OR 40' PRECAST CONCRETE SPANS 24'-6" CLEAR ROADWAY

DATE: 12/05/2022
STANDARD DWG. NO. PCP-2400 LRFD
SHEET NO. 20 OF 27



REBAR SCHEDULE (PCP-2400-AS)																
	"V"	"Y"	"C" BAR		"D" BAR		"B5" BAR		"B1" BAR		"B2" BAR		"B3" BAR		"B4" BAR	
			QTY.	LENGTH	QTY.	LENGTH	QTY.	LENGTH	QTY.	LENGTH	QTY.	LENGTH	QTY.	LENGTH	QTY.	LENGTH
A1	2'-3"	1'-3"	7 (C-1)	2'-0"	5	5'-10"										
A2	3'-3"	2'-3"	7 (C-2)	3'-0"	8	5'-10"										
A3	4'-3"	3'-3"	7 (C-3)	4'-0"	10	5'-10"										
A4	6'-3"	3'-3"	7 (C-4)	6'-0"	14	5'-10"										
A5	7'-3"	3'-3"	7 (C-5)	7'-0"	16	5'-10"										
A6	8'-3"	3'-3"	7 (C-6)	8'-0"	18	5'-10"										
W1	2'-3"	1'-3"	15 (C-1)	2'-0"			5	12'-8"								
W2	3'-3"	2'-3"	15 (C-2)	3'-0"			8	12'-8"								
W3	4'-3"	3'-3"	15 (C-3)	4'-0"			12	12'-8"								
W4	6'-3"	3'-3"	15 (C-4)	6'-0"			17	12'-8"								
W5	7'-3"	3'-3"	15 (C-5)	7'-0"			20	12'-8"								
W6	8'-3"	3'-3"	15 (C-6)	8'-0"			23	12'-8"								
WC (24 & 34)	3'-3"	2'-3"	7 (C-2)	3'-0"					1	14'-7"	1	10'-2"	1	11'-10"	2	12'-3 1/2"
			2 (C-7)	1'-7"												
WC (40)	3'-6"	2'-6"	7 (C-2a)	3'-3"					1	14'-10"	1	10'-2"	1	11'-10"	2	12'-3 1/2"
			2 (C-7)	1'-7"												



GENERAL NOTES:

SPECIFICATIONS:
AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS
AASHTO STANDARD SPECIFICATIONS FOR TRANSPORTATION MATERIALS AND METHODS OF SAMPLING AND TESTING
AMERICAN SOCIETY FOR TESTING AND MATERIALS
AMERICAN INSTITUTE OF STEEL CONSTRUCTION

REINFORCING STEEL: ALL REINFORCING STEEL SHALL BE GRADE 60 BILLET STEEL MEETING THE REQUIREMENTS OF AASHTO M31. ALL REINFORCING STEEL SHALL BE ACCURATELY LOCATED IN THE FORMS AND PROPER CLEARANCES MAINTAINED WITH STAINLESS STEEL, PLASTIC, OR RUBBER TIPPED CHAIRS. REINFORCING DIMENSIONS ARE CENTER TO CENTER UNLESS OTHERWISE NOTED ON PLANS.

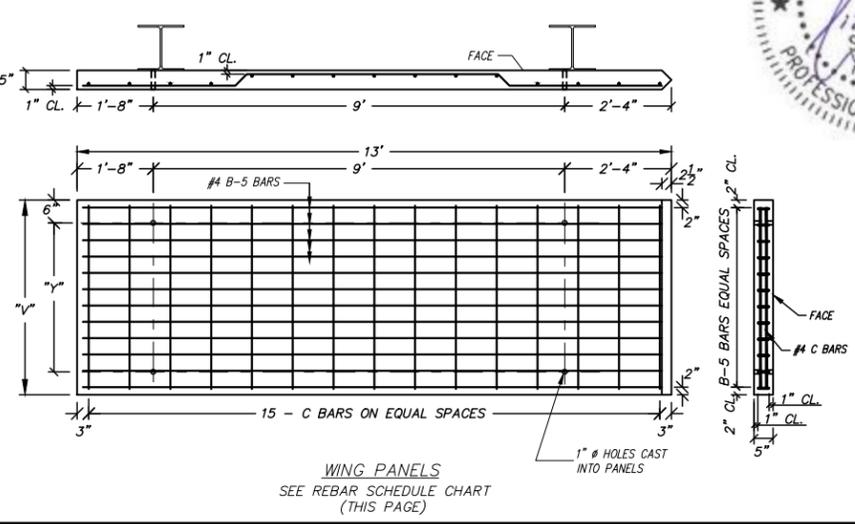
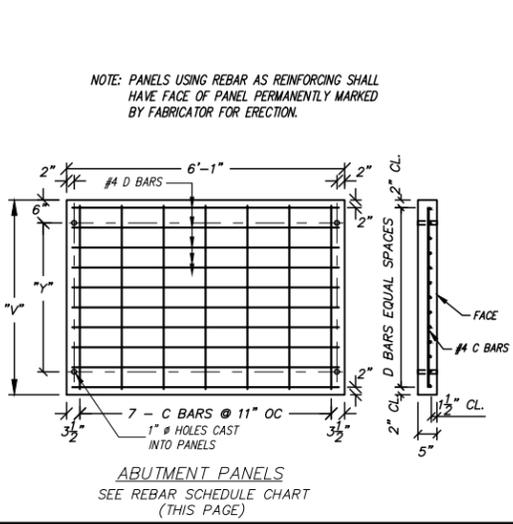
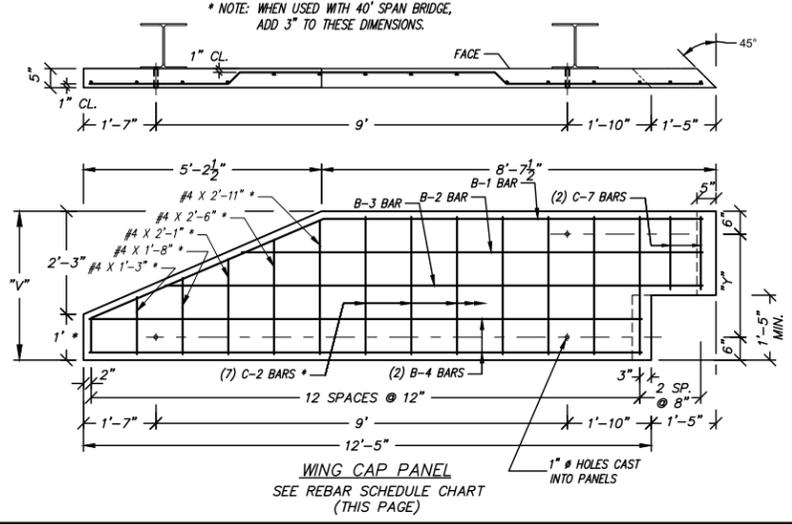
CONCRETE: CONCRETE SHALL CONFORM TO AASHTO CLASS A(AE). MINIMUM 28 DAY COMPRESSIVE STRENGTH SHALL BE 3000 PSI. ALL EXPOSED CORNERS TO BE ROUNDED TO A 1/4" RADIUS UNLESS OTHERWISE NOTED.

HARDWARE: ALL BOLTS SHALL CONFORM TO ASTM A-307 AND BE GALVANIZED IN ACCORDANCE WITH ASTM-A153

DESIGN DATA:
SPECIFICATIONS:.....AASHTO 2017, 8TH EDITION AND ALL INTERIMS

NOTE: IN CASTING PANELS (ABUTMENT, WING, WING CAP), WIRE MESH CONFORMING TO THE REQUIREMENTS OF AASHTO M221, MINIMUM GRADE 70 STEEL, MAY BE USED UP TO A DEPTH OF 14' BELOW GRADE IN LIEU OF THE REINFORCEMENT SHOWN. TWO LAYERS OF MESH SHALL BE USED IN EACH PANEL AND BE LOCATED WITH 1" CLEAR OF THE SIDE OF THE PANEL. THE WIRE CONFIGURATION MUST BE SUCH THAT A MINIMUM STEEL AREA OF .30 SQ. IN. PER FOOT IN THE LINE WIRE DIRECTION AND .20 SQ. IN. PER FOOT IN THE CROSS WIRE DIRECTION IS ACQUIRED.

NOTE: PANELS OF DIFFERENT HEIGHTS THAN THOSE SHOWN MAY BE CAST. STEEL REQUIREMENTS AND CLEARANCES SHOWN HEREON MUST BE MAINTAINED.



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Mobile, AL 36602
(251) 433-1611

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Suite 102
Arlington, TN 38002
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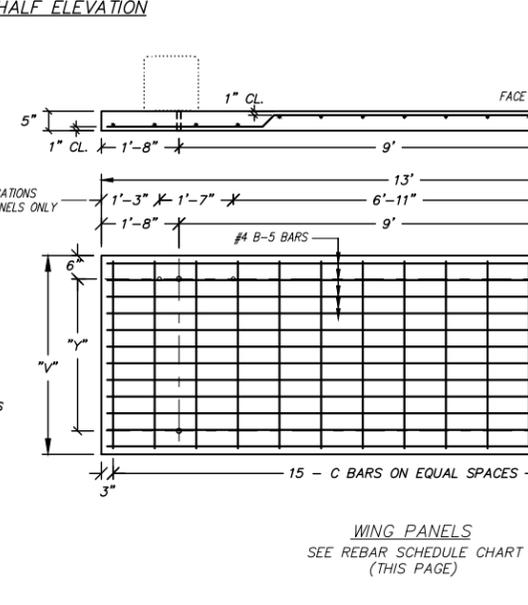
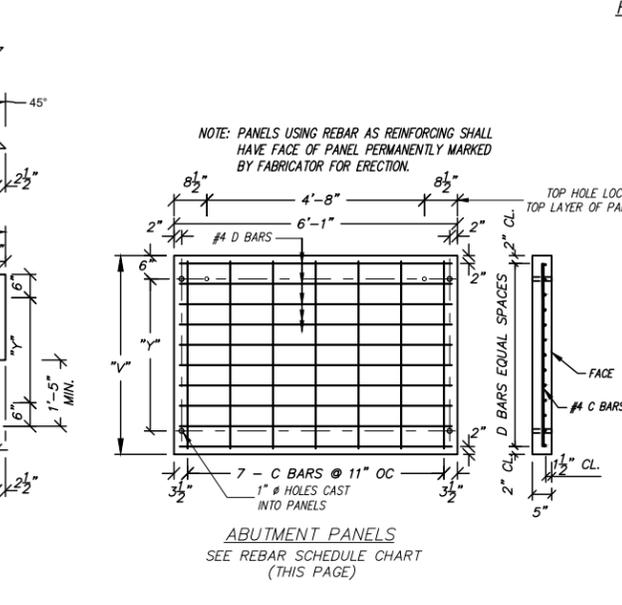
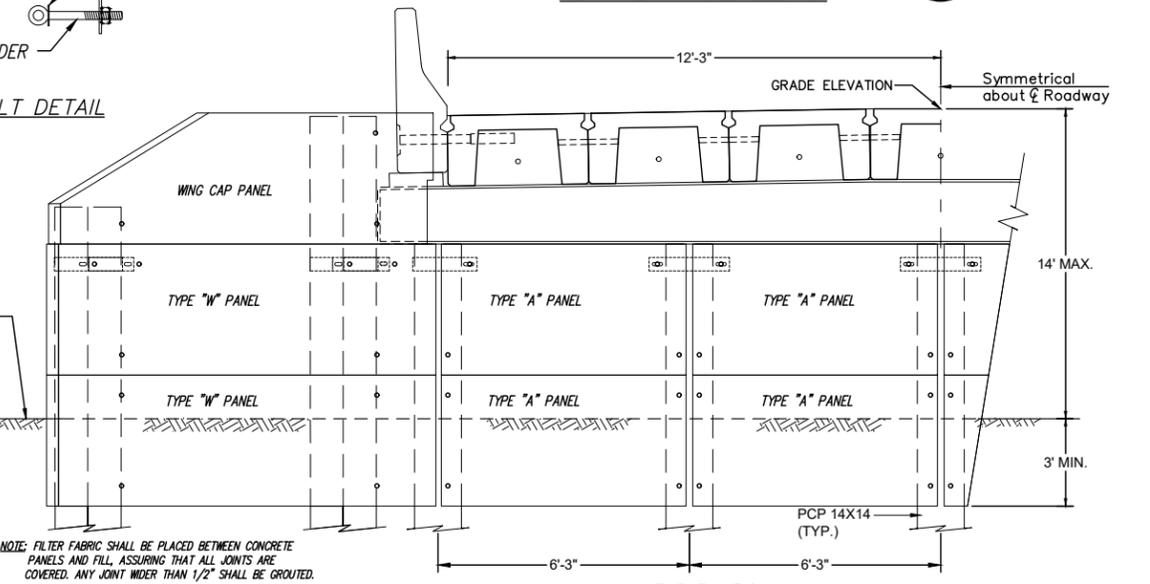
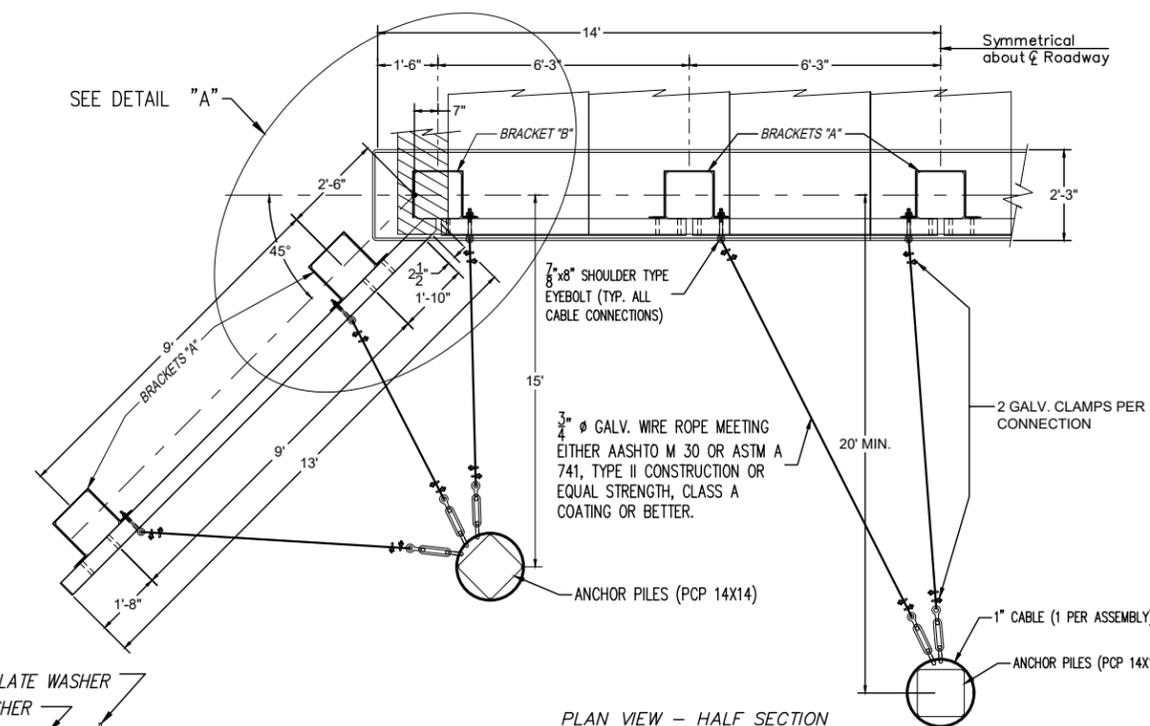
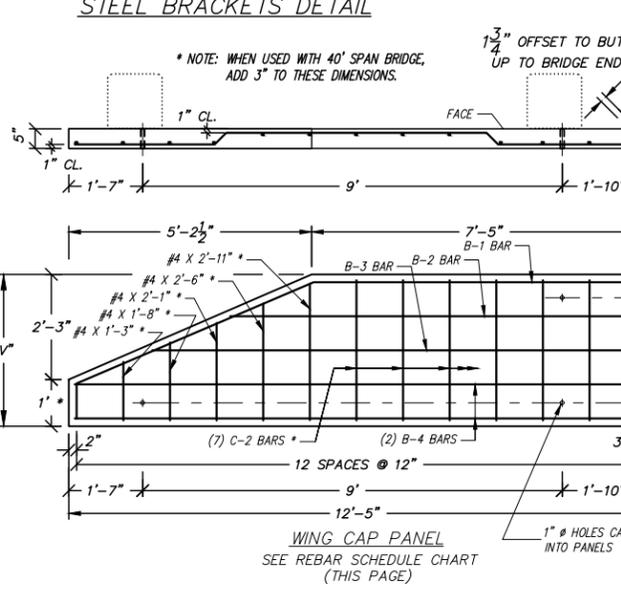
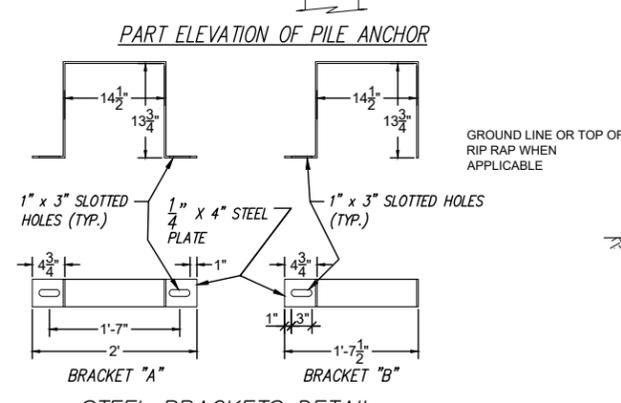
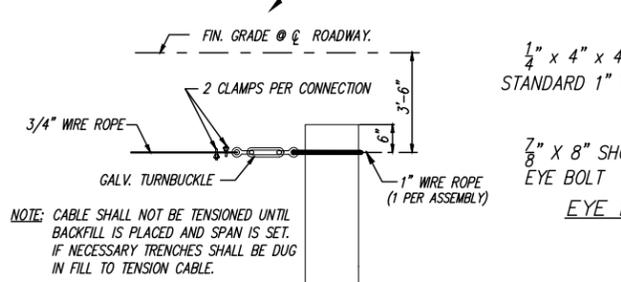
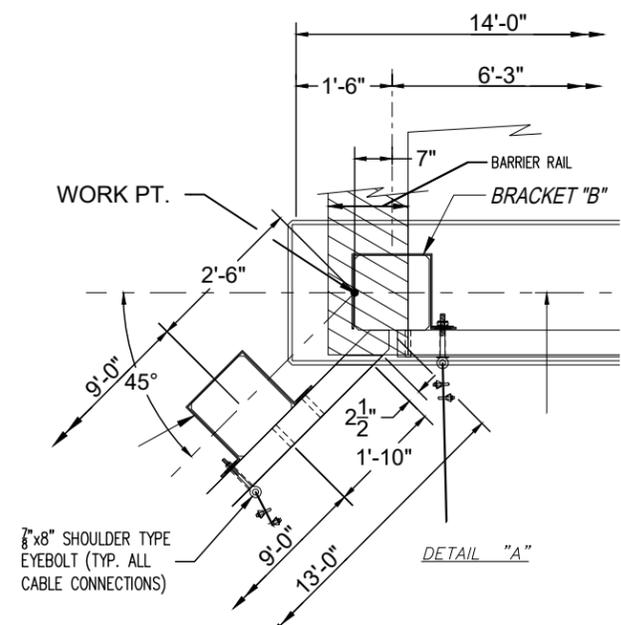
C&E CONE/CU/H BRIDGE & ENGINEERING, INC
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Troy, Alabama 36081

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334-566-7422

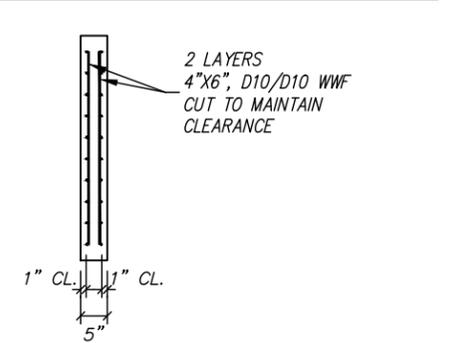
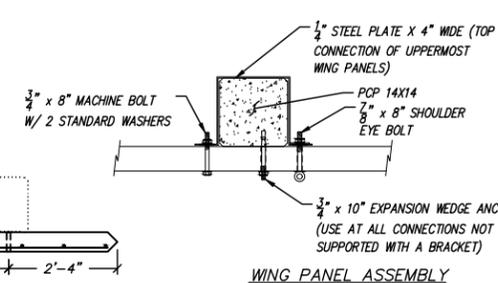
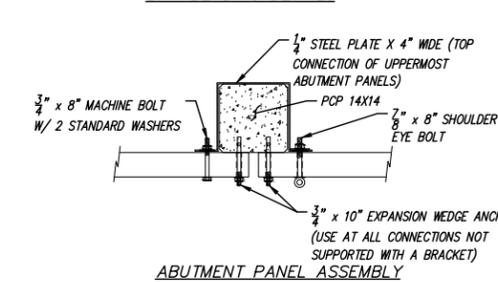
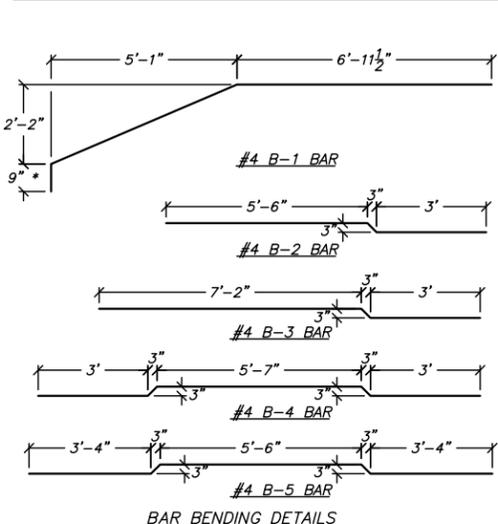
PRECAST CONCRETE ABUTMENT PANELS
FOR USE WITH STEEL PILING & 24', 34', OR 40'
PRECAST CONCRETE SPANS, 24'-6" CLEAR ROADWAY
WITH APPROACH SLAB

DATE: 12/05/2022

STANDARD DWG. NO.
PCP-2400-AS LRFD
SHEET NO. 21 OF 27



	"V"	"Y"	"C" BAR		"D" BAR		"B5" BAR		"B1" BAR		"B2" BAR		"B3" BAR		"B4" BAR	
			QTY.	LENGTH	QTY.	LENGTH	QTY.	LENGTH	QTY.	LENGTH	QTY.	LENGTH	QTY.	LENGTH	QTY.	LENGTH
A1	2'-3"	1'-3"	7 (C-1)	2'-0"	5	5'-10"										
A2	3'-3"	2'-3"	7 (C-2)	3'-0"	8	5'-10"										
A3	4'-3"	3'-3"	7 (C-3)	4'-0"	10	5'-10"										
A4	6'-3"	3'-3"	7 (C-4)	6'-0"	14	5'-10"										
A5	7'-3"	3'-3"	7 (C-5)	7'-0"	16	5'-10"										
A6	8'-3"	3'-3"	7 (C-6)	8'-0"	18	5'-10"										
W1	2'-3"	1'-3"	15 (C-1)	2'-0"			5	12'-8"								
W2	3'-3"	2'-3"	15 (C-2)	3'-0"			8	12'-8"								
W3	4'-3"	3'-3"	15 (C-3)	4'-0"			12	12'-8"								
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W5	7'-3"	3'-3"	15 (C-5)	7'-0"			20	12'-8"								
W6	8'-3"	3'-3"	15 (C-6)	8'-0"			23	12'-8"								
WC (24 & 34)	3'-3"	2'-3"	7 (C-2)	3'-0"					1	13'-3"	1	8'-10"	1	10'-6"	2	12'-3 1/2"
WC (40)	3'-6"	2'-6"	7 (C-2a)	3'-3"					1	13'-6"	1	8'-10"	1	10'-6"	2	12'-3 1/2"



ALTERNATE REINFORCING LAYOUT FOR PRECAST CONCRETE PANELS

GENERAL NOTES:
 SPECIFICATIONS:
 AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS
 AASHTO STANDARD SPECIFICATIONS FOR TRANSPORTATION MATERIALS AND METHODS OF SAMPLING AND TESTING
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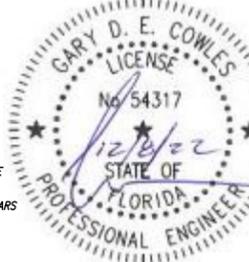
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HARDWARE: ALL BOLTS SHALL CONFORM TO ASTM A-307 AND BE GALVANIZED IN ACCORDANCE WITH ASTM-A153

DESIGN DATA:
 SPECIFICATIONS:.....AASHTO 2017, 8TH EDITION AND ALL INTERIMS

NOTE: IN CASTING PANELS (ABUTMENT, WING, WING CAP), WIRE MESH CONFORMING TO THE REQUIREMENTS OF AASHTO M221, MINIMUM GRADE 70 STEEL, MAY BE USED UP TO A DEPTH OF 14' BELOW GRADE IN LIEU OF THE REINFORCEMENT SHOWN. TWO LAYERS OF MESH SHALL BE USED IN EACH PANEL AND BE LOCATED WITH 1" CLEAR OF THE SIDE OF THE PANEL. THE WIRE CONFIGURATION MUST BE SUCH THAT A MINIMUM STEEL AREA OF .30 SQ. IN. PER FOOT IN THE LINE WIRE DIRECTION AND .20 SQ. IN. PER FOOT IN THE CROSS WIRE DIRECTION IS ACQUIRED.

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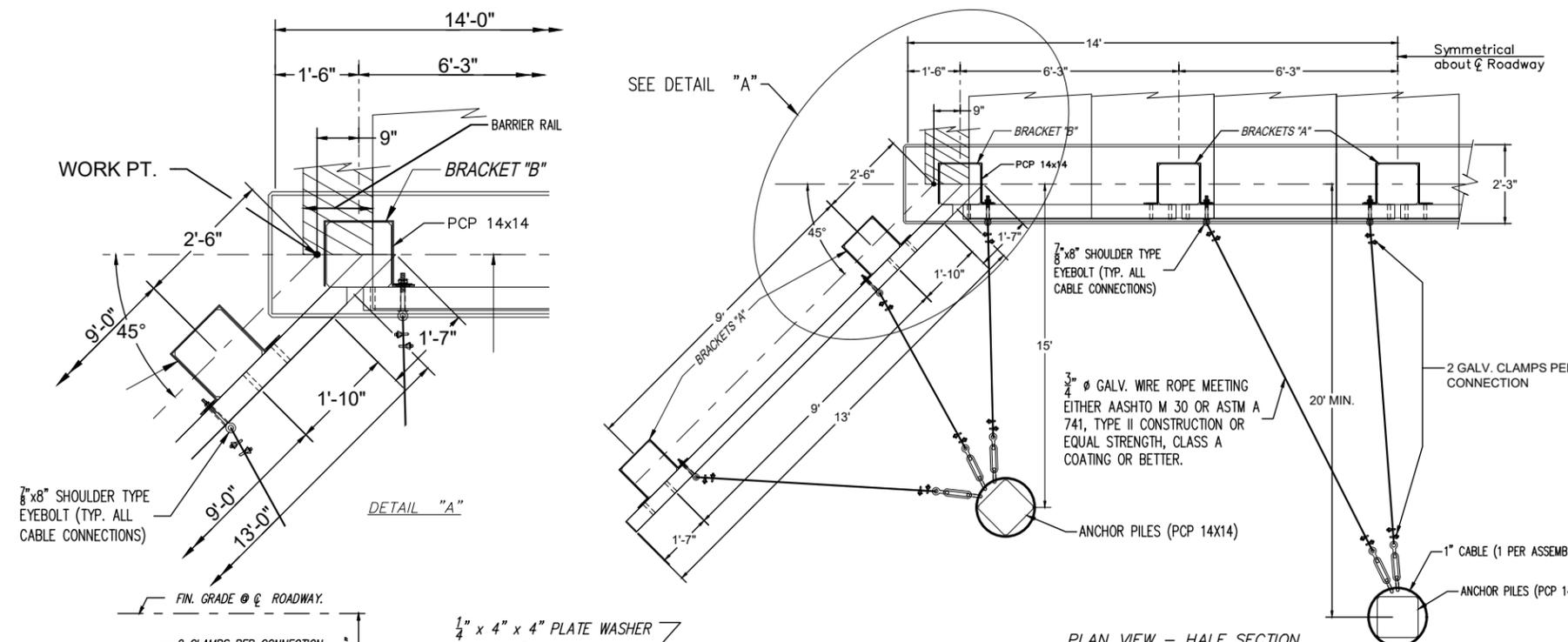
C&E CONE CUB H BRIDGE & ENGINEERING, INC
 P. O. Box 129
 Troy, Alabama 36081

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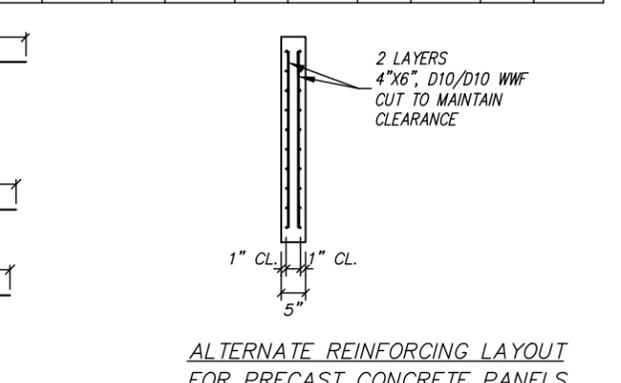
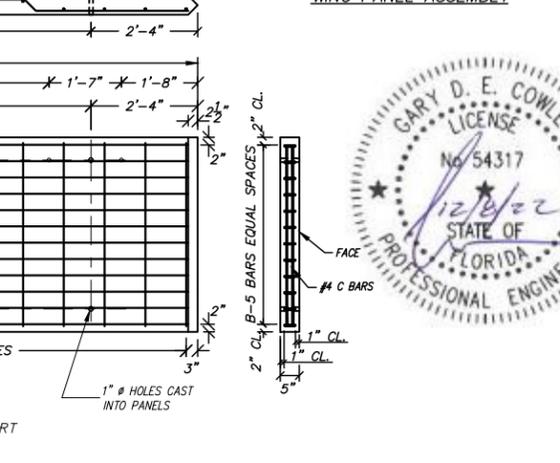
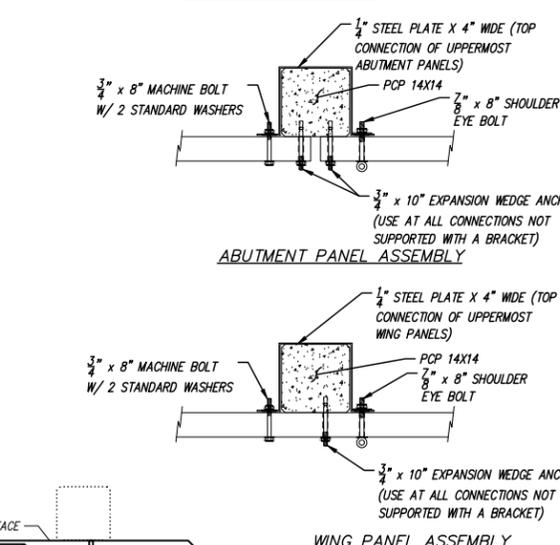
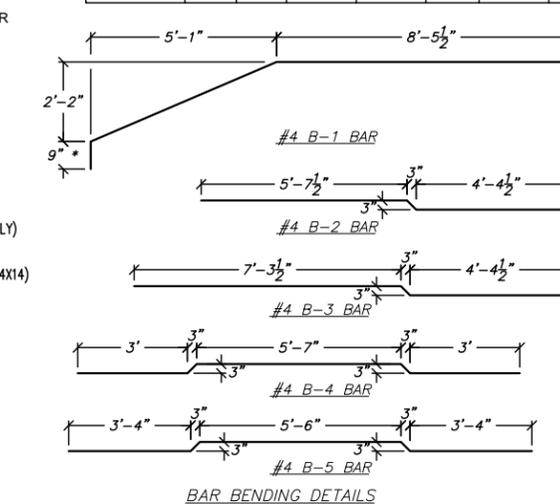
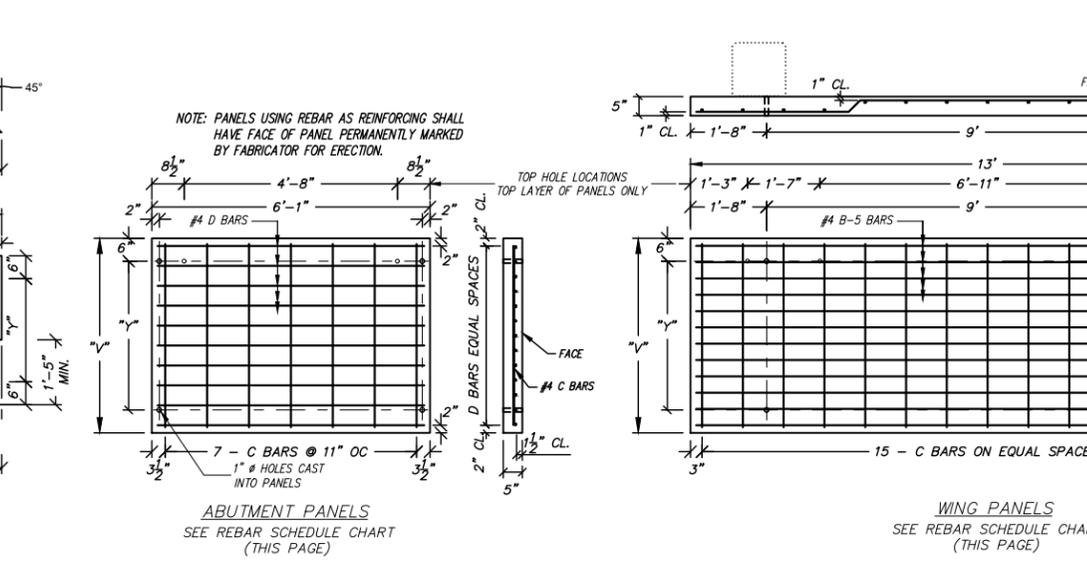
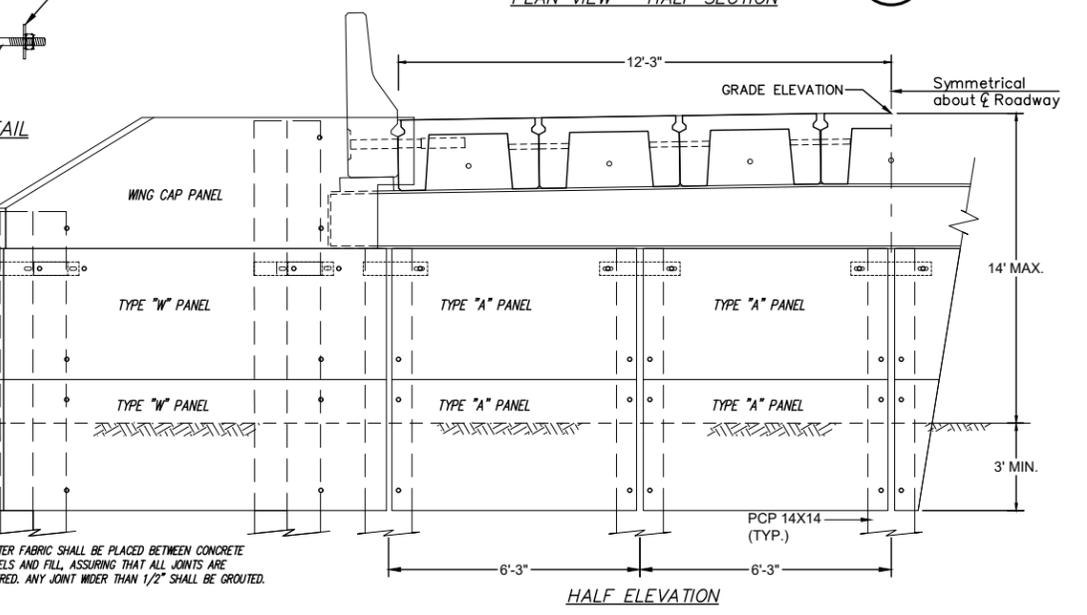
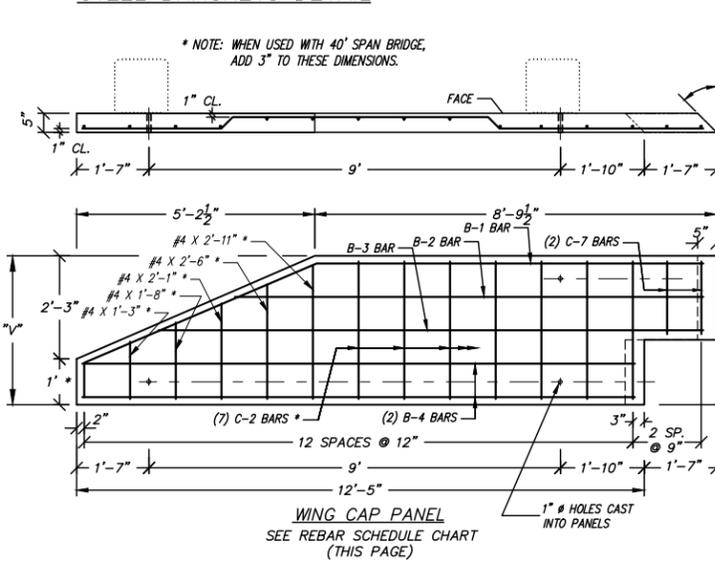
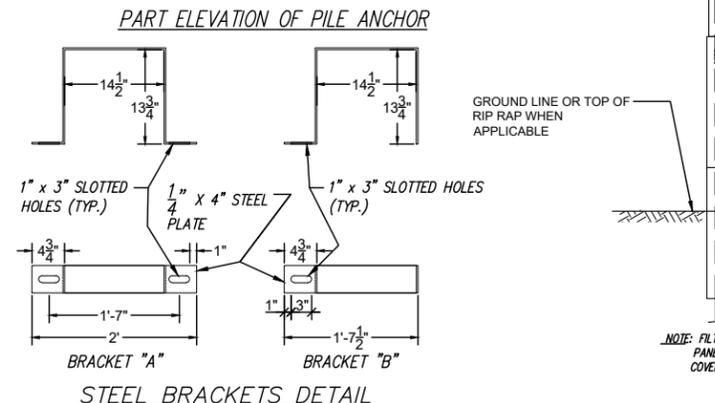
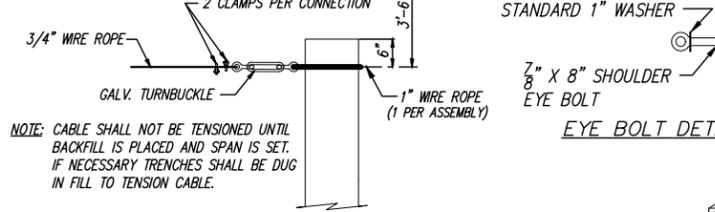
PRECAST CONCRETE ABUTMENT PANELS FOR USE WITH CONCRETE PILING & 24', 34', OR 40' PRECAST CONCRETE SPANS 24'-6" CLEAR ROADWAY

DATE: 12/05/2022

STANDARD DWG. NO. PCP-2400-CP LRFD
 SHEET NO. 22 OF 27



REBAR SCHEDULE (PCP-2400-CP-AS)																
	"v"	"y"	"C" BAR		"D" BAR		"B5" BAR		"B1" BAR		"B2" BAR		"B3" BAR		"B4" BAR	
			QTY.	LENGTH	QTY.	LENGTH	QTY.	LENGTH	QTY.	LENGTH	QTY.	LENGTH	QTY.	LENGTH	QTY.	LENGTH
A1	2'-3"	1'-3"	7 (C-1)	2'-0"	5	5'-10"										
A2	3'-3"	2'-3"	7 (C-2)	3'-0"	8	5'-10"										
A3	4'-3"	3'-3"	7 (C-3)	4'-0"	10	5'-10"										
A4	6'-3"	3'-3"	7 (C-4)	6'-0"	14	5'-10"										
A5	7'-3"	3'-3"	7 (C-5)	7'-0"	16	5'-10"										
A6	8'-3"	3'-3"	7 (C-6)	8'-0"	18	5'-10"										
W1	2'-3"	1'-3"	15 (C-1)	2'-0"	5	12'-8"										
W2	3'-3"	2'-3"	15 (C-2)	3'-0"	8	12'-8"										
W3	4'-3"	3'-3"	15 (C-3)	4'-0"	12	12'-8"										
W4	6'-3"	3'-3"	15 (C-4)	6'-0"	17	12'-8"										
W5	7'-3"	3'-3"	15 (C-5)	7'-0"	20	12'-8"										
W6	8'-3"	3'-3"	15 (C-6)	8'-0"	23	12'-8"										
WC (24 & 34)	3'-3"	2'-3"	7 (C-2)	3'-0"					1	14'-9"	1	10'-4"	1	12'-0"	2	12'-3 1/2"
			2 (C-7)	1'-7"												
WC (40)	3'-6"	2'-6"	7 (C-2a)	3'-3"					1	15'-0"	1	10'-4"	1	12'-0"	2	12'-3 1/2"
			2 (C-7)	1'-7"												



GENERAL NOTES:

SPECIFICATIONS:
 AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS
 AASHTO STANDARD SPECIFICATIONS FOR TRANSPORTATION MATERIALS AND METHODS OF SAMPLING AND TESTING
 AMERICAN SOCIETY FOR TESTING AND MATERIALS
 AMERICAN INSTITUTE OF STEEL CONSTRUCTION

REINFORCING STEEL: ALL REINFORCING STEEL SHALL BE GRADE 60 BILLET STEEL MEETING THE REQUIREMENTS OF AASHTO M31. ALL REINFORCING STEEL SHALL BE ACCURATELY LOCATED IN THE FORMS AND PROPER CLEARANCES MAINTAINED WITH STAINLESS STEEL, PLASTIC, OR RUBBER TIPPED CHAIRS. REINFORCING DIMENSIONS ARE CENTER TO CENTER UNLESS OTHERWISE NOTED ON PLANS.

CONCRETE: CONCRETE SHALL CONFORM TO AASHTO CLASS A(AE). MINIMUM 28 DAY COMPRESSIVE STRENGTH SHALL BE 3000 PSI. ALL EXPOSED CORNERS TO BE ROUNDED TO A 1/4" RADIUS UNLESS OTHERWISE NOTED.

HARDWARE: ALL BOLTS SHALL CONFORM TO ASTM A-307 AND BE GALVANIZED IN ACCORDANCE WITH ASTM-A153

DESIGN DATA:
 SPECIFICATIONS:.....AASHTO 2017, 8TH EDITION AND ALL INTERIMS

NOTE: IN CASTING PANELS (ABUTMENT, WING, WING CAP), WIRE MESH CONFORMING TO THE REQUIREMENTS OF AASHTO M221, MINIMUM GRADE 70 STEEL, MAY BE USED UP TO A DEPTH OF 14' BELOW GRADE IN LIEU OF THE REINFORCEMENT SHOWN. TWO LAYERS OF MESH SHALL BE USED IN EACH PANEL AND BE LOCATED WITH 1" CLEAR OF THE SIDE OF THE PANEL. THE WIRE CONFIGURATION MUST BE SUCH THAT A MINIMUM STEEL AREA OF .30 SQ. IN. PER FOOT IN THE LINE WIRE DIRECTION AND .20 SQ. IN. PER FOOT IN THE CROSS WIRE DIRECTION IS ACQUIRED.

NOTE: PANELS OF DIFFERENT HEIGHTS THAN THOSE SHOWN MAY BE CAST. STEEL REQUIREMENTS AND CLEARANCES SHOWN HEREON MUST BE MAINTAINED.



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249 Pike County Lake Rd.
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 334-566-7422

PRECAST CONCRETE ABUTMENT PANELS FOR USE WITH CONCRETE PILING & 24', 34', OR 40' PRECAST CONCRETE SPANS, 24'-6" CLEAR ROADWAY WITH APPROACH SLAB

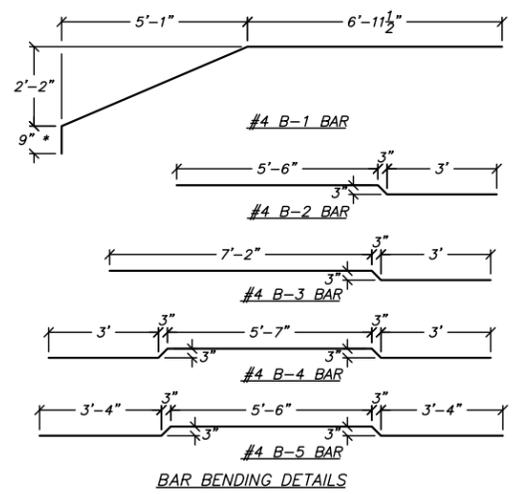
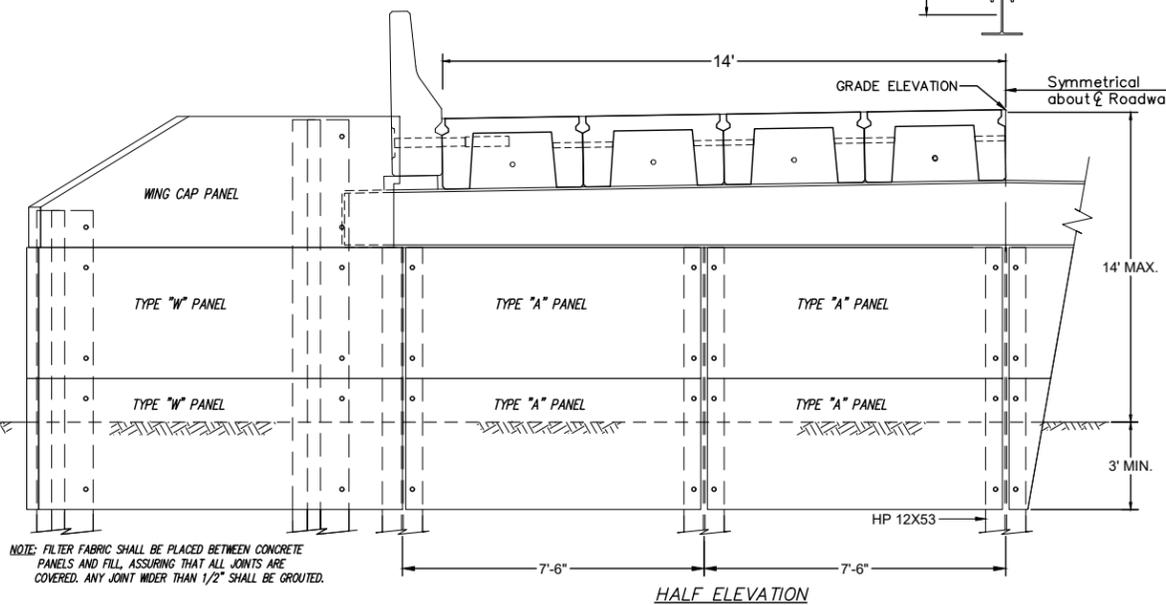
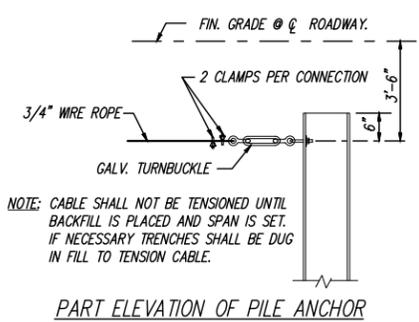
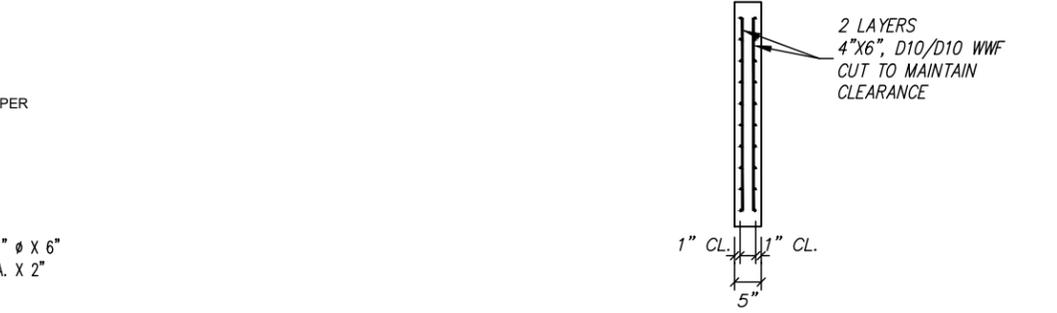
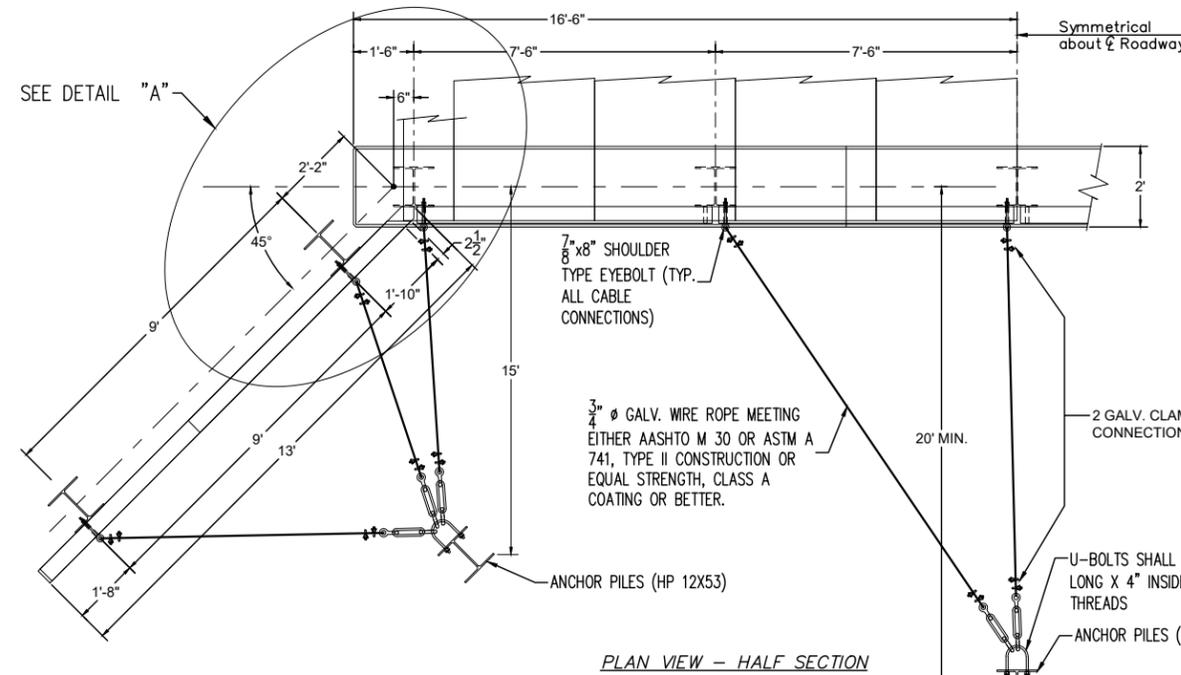
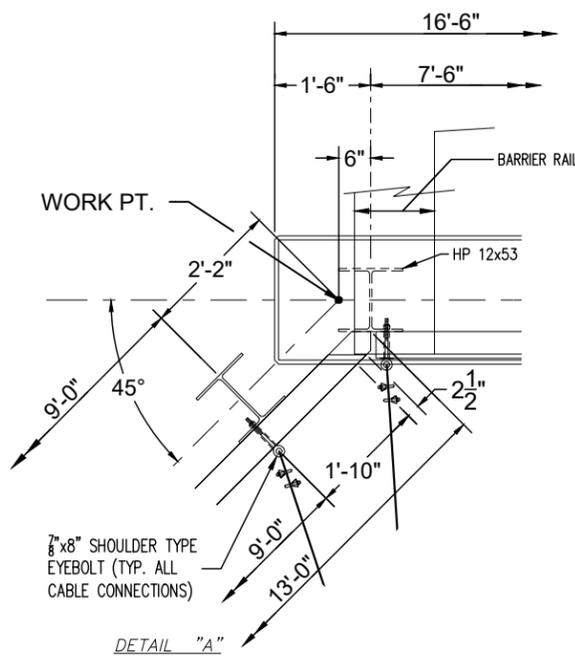
DATE: 12/05/2022

STANDARD DWG. NO. PCP-2400-CP-AS LRFD
 SHEET NO. 23 OF 27

NOTE: BOLT ALL PANELS TO PILING WITH 3/4" Ø X 8" MACHINE BOLTS EXCEPT WHERE EYE-BOLTS ARE USED. 2 ~ STANDARD WASHERS REQUIRED

NOTE: AT THE POINT WHERE PRECAST CONCRETE PANELS COME IN CONTACT WITH PILING, A PROTECTIVE COATING SHALL BE APPLIED TO THE PILING.

	"V" QTY.	"Y" QTY.	"C" BAR		"D" BAR		"B5" BAR		"B1" BAR		"B2" BAR		"B3" BAR		"B4" BAR	
			QTY.	LENGTH	QTY.	LENGTH	QTY.	LENGTH	QTY.	LENGTH	QTY.	LENGTH	QTY.	LENGTH	QTY.	LENGTH
A1	2'-3"	1'-3"	8 (C-1)	2'-0"	5	7'-1"										
A2	3'-3"	2'-3"	8 (C-2)	3'-0"	8	7'-1"										
A3	4'-3"	3'-3"	8 (C-3)	4'-0"	10	7'-1"										
A4	6'-3"	3'-3"	8 (C-4)	6'-0"	14	7'-1"										
A5	7'-3"	3'-3"	8 (C-5)	7'-0"	16	7'-1"										
A6	8'-3"	3'-3"	8 (C-6)	8'-0"	18	7'-1"										
W1	2'-3"	1'-3"	15 (C-1)	2'-0"	5	12'-8"										
W2	3'-3"	2'-3"	15 (C-2)	3'-0"	8	12'-8"										
W3	4'-3"	3'-3"	15 (C-3)	4'-0"	12	12'-8"										
W4	6'-3"	3'-3"	15 (C-4)	6'-0"	17	12'-8"										
W5	7'-3"	3'-3"	15 (C-5)	7'-0"	20	12'-8"										
W6	8'-3"	3'-3"	15 (C-6)	8'-0"	23	12'-8"										
WC (24 & 34)	3'-3"	2'-3"	7 (C-2)	3'-0"			1	13'-3"	1	8'-10"	1	10'-6"	2	12'-3 1/2"		
WC (40)	3'-6"	2'-6"	7 (C-2a)	3'-3"			1	13'-6"	1	8'-10"	1	10'-6"	2	12'-3 1/2"		



GENERAL NOTES:

SPECIFICATIONS:
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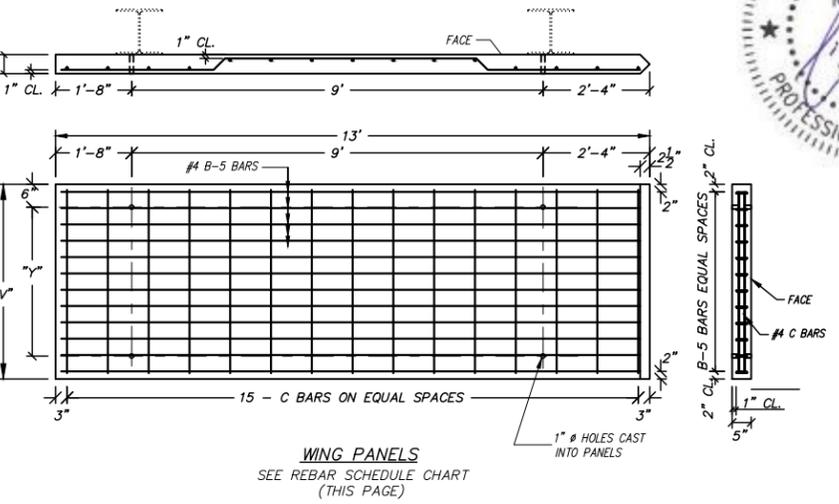
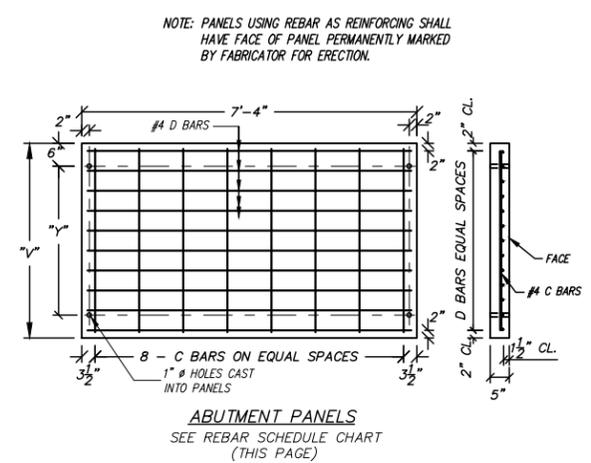
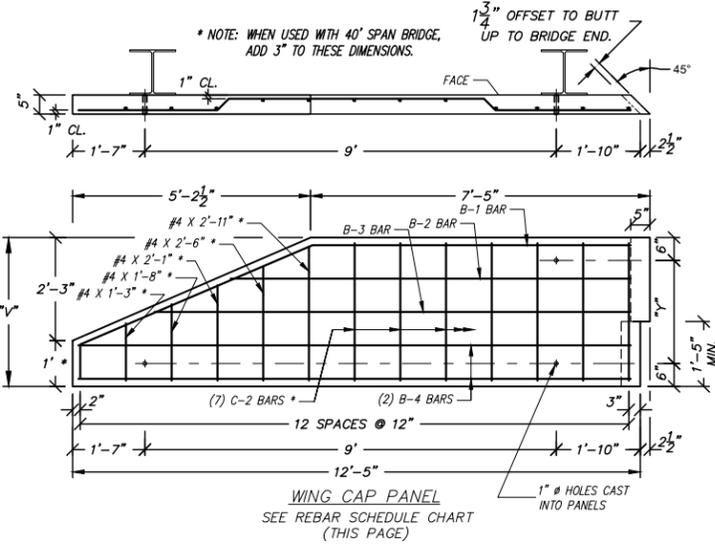
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HARDWARE: ALL BOLTS SHALL CONFORM TO ASTM A-307 AND BE GALVANIZED IN ACCORDANCE WITH ASTM-A153

DESIGN DATA:
 SPECIFICATIONS:.....AASHTO 2017, 8TH EDITION AND ALL INTERIMS

NOTE: IN CASTING PANELS (ABUTMENT, WING, WING CAP), WIRE MESH CONFORMING TO THE REQUIREMENTS OF AASHTO M221, MINIMUM GRADE 70 STEEL, MAY BE USED UP TO A DEPTH OF 14" BELOW GRADE IN LIEU OF THE REINFORCEMENT SHOWN. TWO LAYERS OF MESH SHALL BE USED IN EACH PANEL AND BE LOCATED WITH 1" CLEAR OF THE SIDE OF THE PANEL. THE WIRE CONFIGURATION MUST BE SUCH THAT A MINIMUM STEEL AREA OF .30 SQ. IN. PER FOOT IN THE LINE WIRE DIRECTION AND .20 SQ. IN. PER FOOT IN THE CROSS WIRE DIRECTION IS ACQUIRED.

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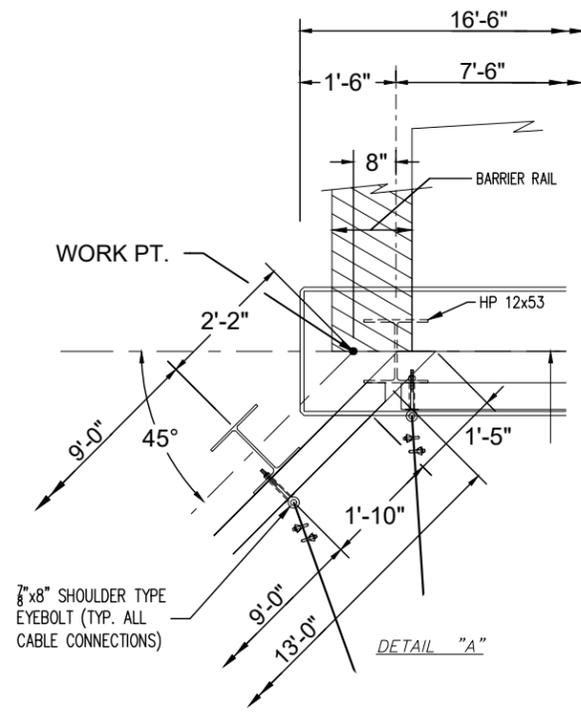
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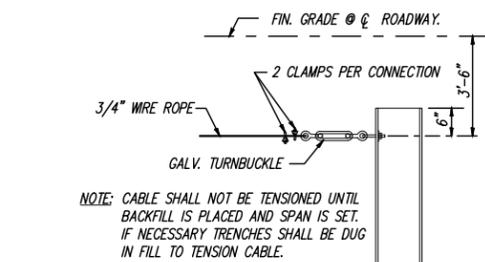
PRECAST CONCRETE ABUTMENT PANELS FOR USE WITH STEEL PILING & 24", 34", OR 40" PRECAST CONCRETE SPANS 28'-0" CLEAR ROADWAY

DATE: 12/05/2022

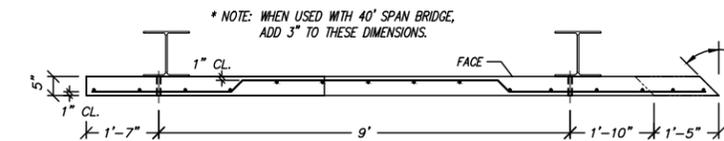
STANDARD DWG. NO. PCP-2800 LRFD
 SHEET NO. 24 OF 27



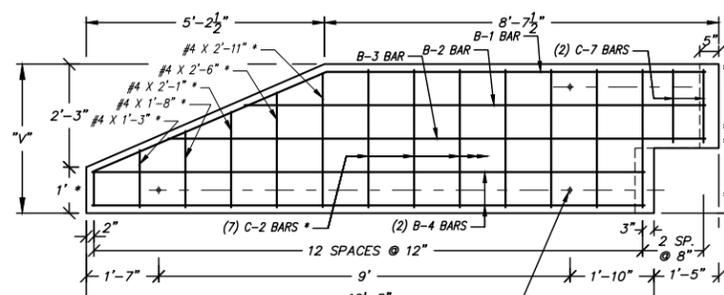
7/8" SHOULDER TYPE EYEBOLT (TYP. ALL CABLE CONNECTIONS)



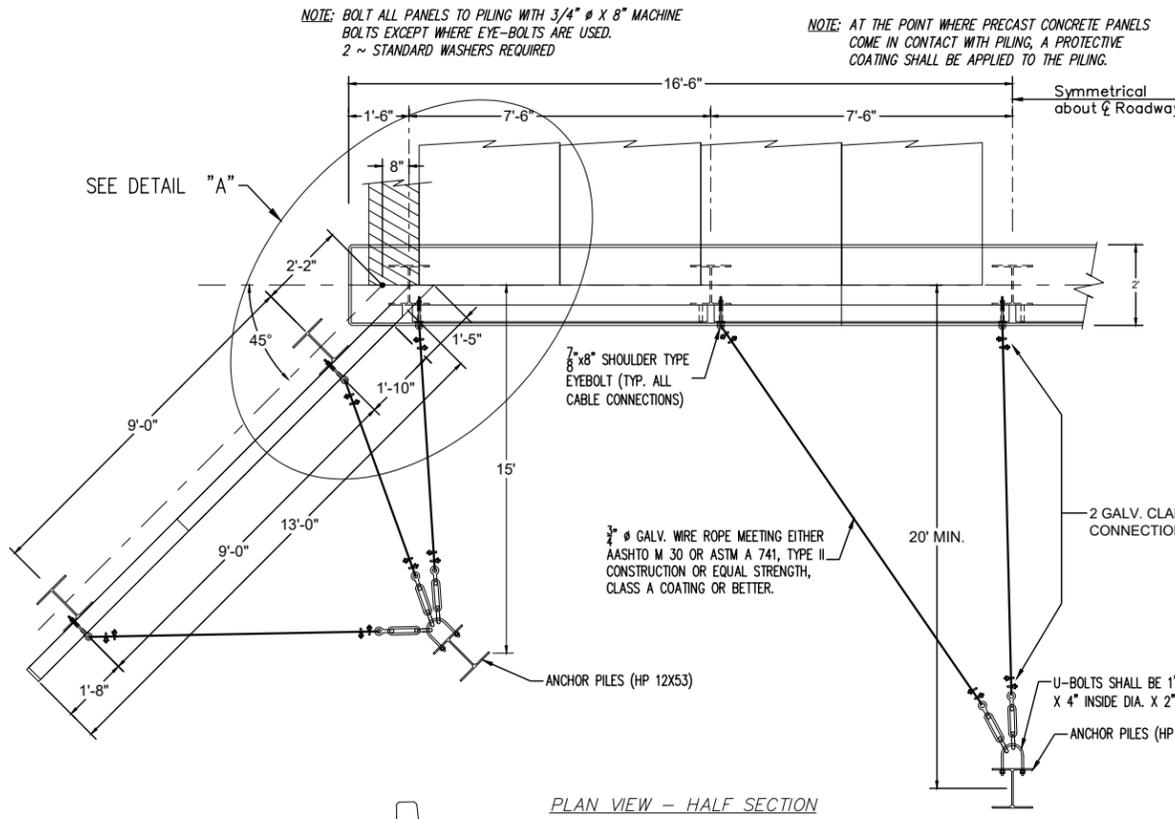
PART ELEVATION OF PILE ANCHOR



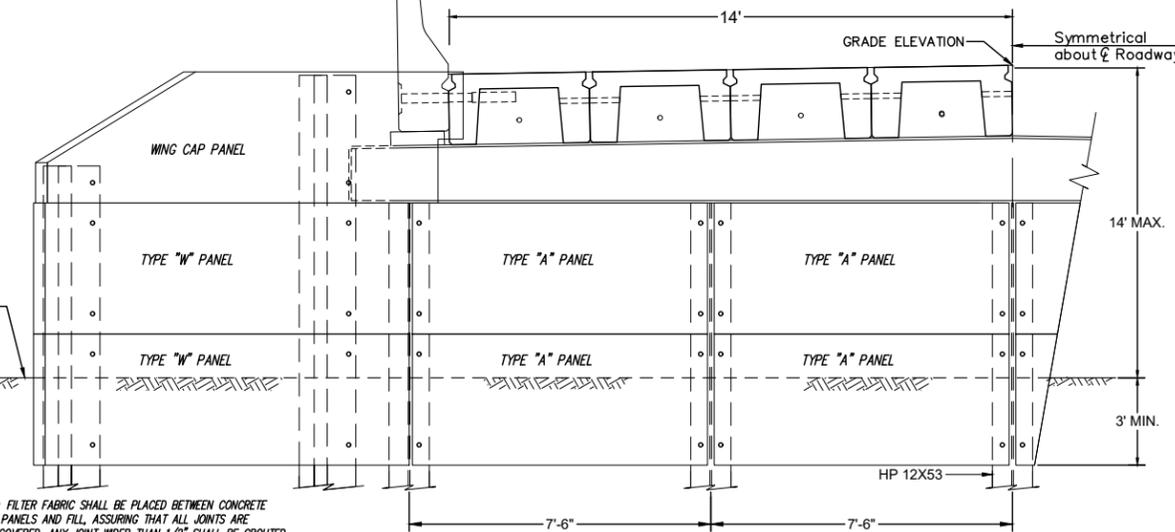
* NOTE: WHEN USED WITH 40' SPAN BRIDGE, ADD 3" TO THESE DIMENSIONS.



WING CAP PANEL
SEE REBAR SCHEDULE CHART (THIS PAGE)



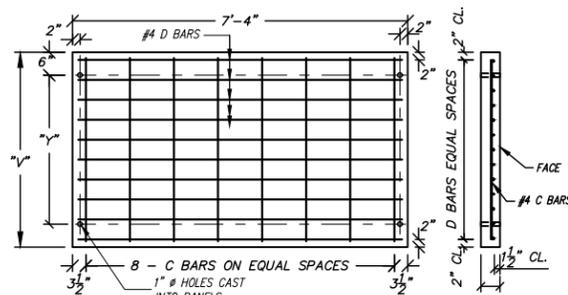
PLAN VIEW - HALF SECTION



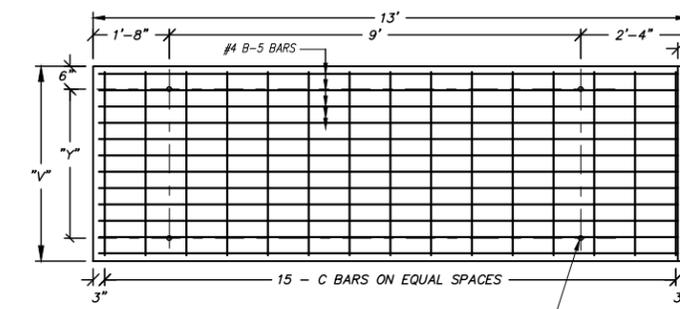
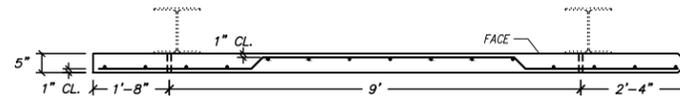
HALF ELEVATION

NOTE: FILTER FABRIC SHALL BE PLACED BETWEEN CONCRETE PANELS AND FILL, ASSURING THAT ALL JOINTS ARE COVERED. ANY JOINT WIDER THAN 1/2" SHALL BE GROUTED.

NOTE: PANELS USING REBAR AS REINFORCING SHALL HAVE FACE OF PANEL PERMANENTLY MARKED BY FABRICATOR FOR ERECTION.

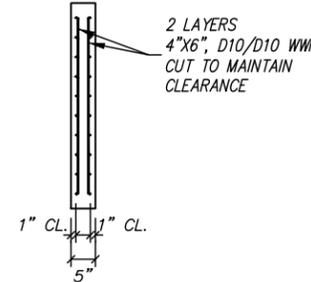


ABUTMENT PANELS
SEE REBAR SCHEDULE CHART (THIS PAGE)



WING PANELS
SEE REBAR SCHEDULE CHART (THIS PAGE)

REBAR SCHEDULE (PCP-2800-AS)														
	"V"	"Y"	"C" BAR		"D" BAR		"B5" BAR		"B1" BAR		"B2" BAR		"B4" BAR	
			QTY.	LENGTH	QTY.	LENGTH	QTY.	LENGTH	QTY.	LENGTH	QTY.	LENGTH	QTY.	LENGTH
A1	2'-3"	1'-3"	8 (C-1)	2'-0"	5	7'-1"								
A2	3'-3"	2'-3"	8 (C-2)	3'-0"	8	7'-1"								
A3	4'-3"	3'-3"	8 (C-3)	4'-0"	10	7'-1"								
A4	6'-3"	3'-3"	8 (C-4)	6'-0"	14	7'-1"								
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A6	8'-3"	3'-3"	8 (C-6)	8'-0"	18	7'-1"								
W1	2'-3"	1'-3"	15 (C-1)	2'-0"			5	12'-8"						
W2	3'-3"	2'-3"	15 (C-2)	3'-0"			8	12'-8"						
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WC (24 & 34)	3'-3"	2'-3"	7 (C-2)	3'-0"					1	14'-7"	1	10'-2"	1	11'-10"
			2 (C-7)	1'-7"									2	12'-3 1/2"
WC (40)	3'-6"	2'-6"	7 (C-2a)	3'-3"					1	14'-10"	1	10'-2"	1	11'-10"
			2 (C-7)	1'-7"									2	12'-3 1/2"



ALTERNATE REINFORCING LAYOUT FOR PRECAST CONCRETE PANELS

GENERAL NOTES:

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HARDWARE: ALL BOLTS SHALL CONFORM TO ASTM A-307 AND BE GALVANIZED IN ACCORDANCE WITH ASTM-A153

DESIGN DATA:
SPECIFICATIONS:.....AASHTO 2017, 8TH EDITION AND ALL INTERIMS

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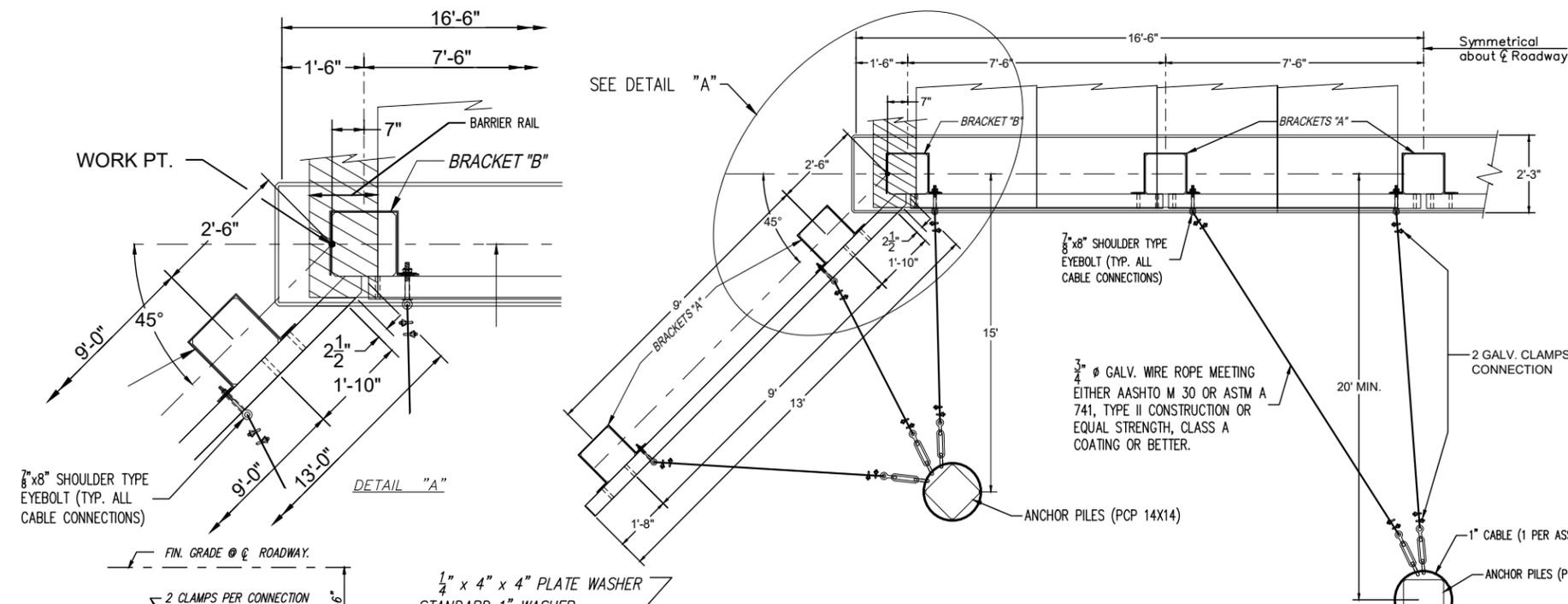
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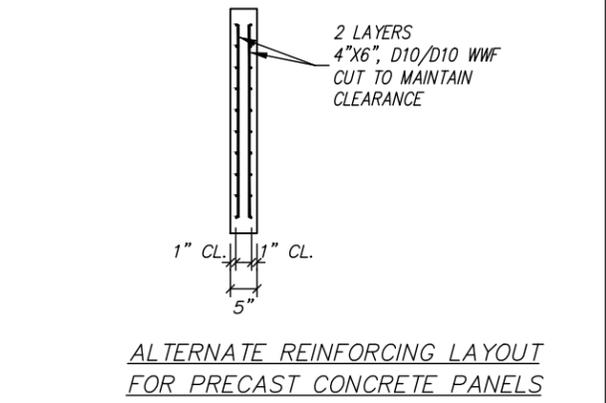
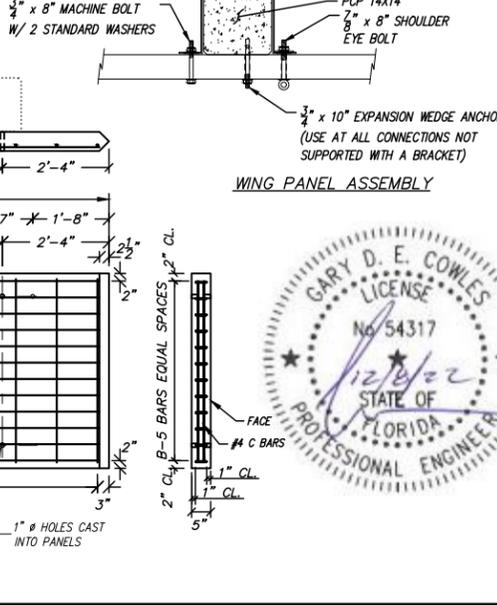
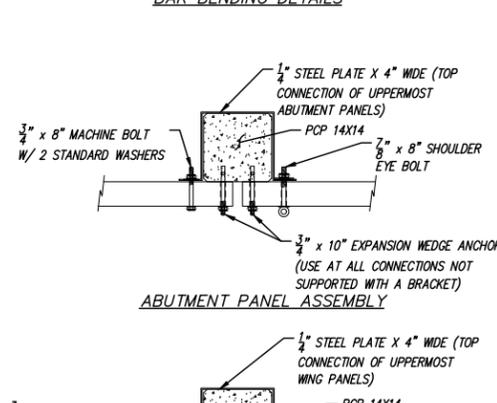
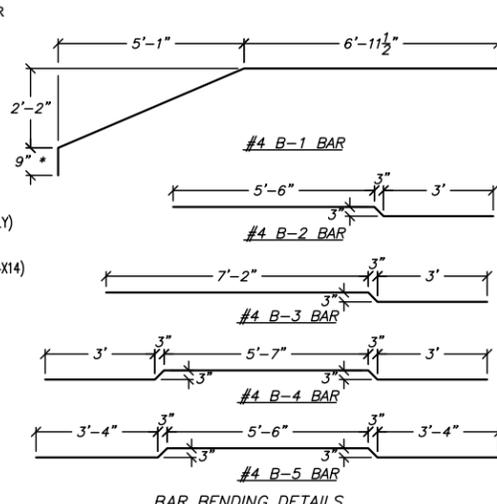
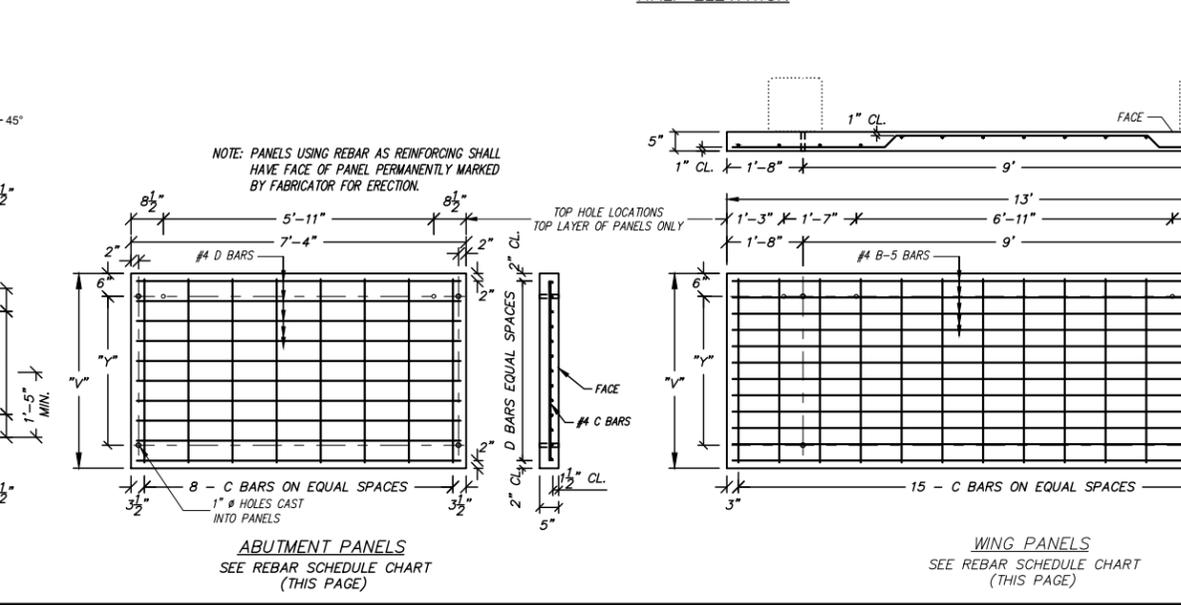
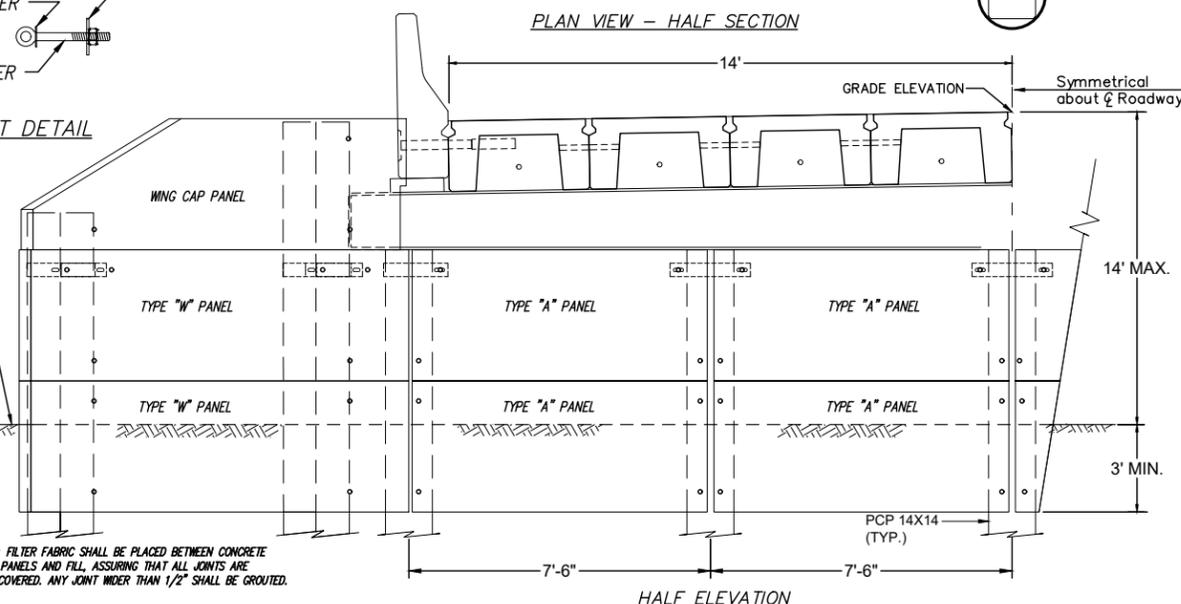
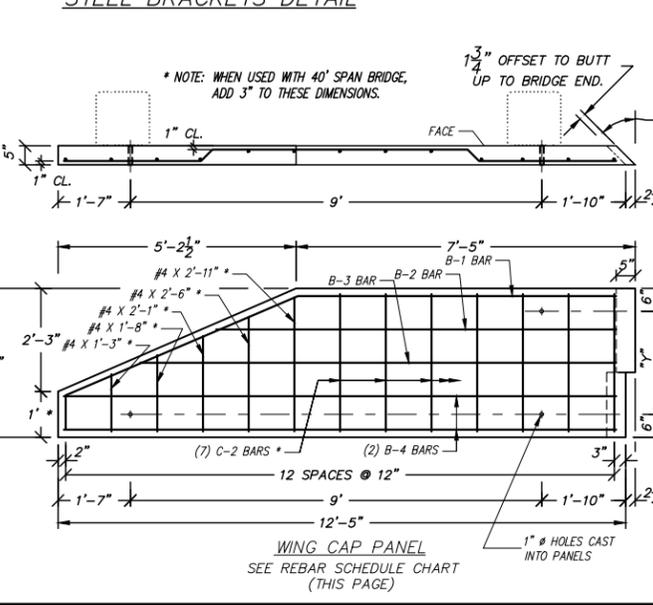
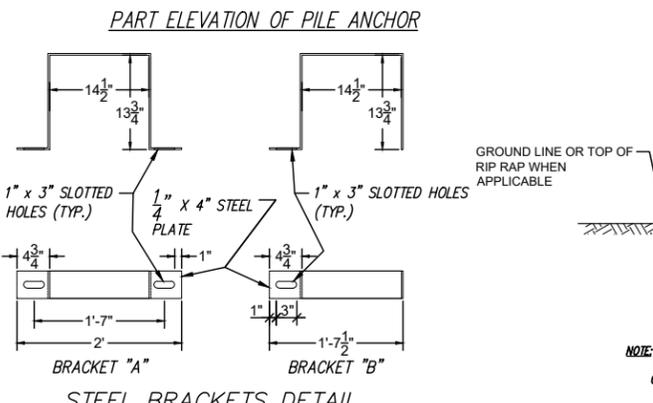
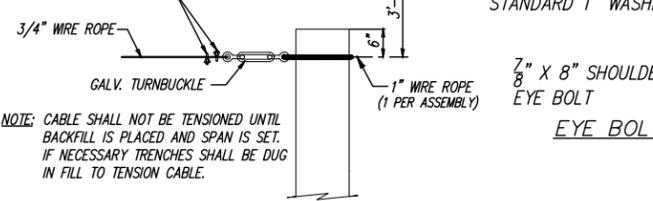
PRECAST CONCRETE ABUTMENT PANELS
FOR USE WITH STEEL PILING & 24', 34', OR 40'
PRECAST CONCRETE SPANS, 28'-0" CLEAR ROADWAY
WITH APPROACH SLAB

DATE: 12/05/2022

STANDARD DWG. NO. PCP-2800-AS LRFD
SHEET NO. 25 OF 27



REBAR SCHEDULE (PCP-2800-CP)																
	"V"	"Y"	"C" BAR		"D" BAR		"B5" BAR		"B1" BAR		"B2" BAR		"B3" BAR		"B4" BAR	
	QTY.	LENGTH	QTY.	LENGTH	QTY.	LENGTH	QTY.	LENGTH	QTY.	LENGTH	QTY.	LENGTH	QTY.	LENGTH	QTY.	LENGTH
A1	2'-3"	1'-3"	8 (C-1)	2'-0"	5	7'-1"										
A2	3'-3"	2'-3"	8 (C-2)	3'-0"	8	7'-1"										
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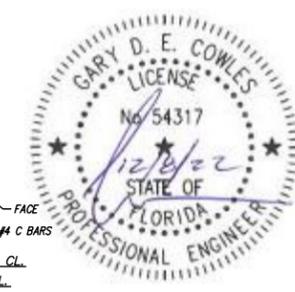
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DESIGN DATA:
 SPECIFICATIONS:.....AASHTO 2017, 8TH EDITION AND ALL INTERIMS

NOTE: IN CASTING PANELS (ABUTMENT, WING, WING CAP), WIRE MESH CONFORMING TO THE REQUIREMENTS OF AASHTO M221, MINIMUM GRADE 70 STEEL, MAY BE USED UP TO A DEPTH OF 14' BELOW GRADE IN LIEU OF THE REINFORCEMENT SHOWN. TWO LAYERS OF MESH SHALL BE USED IN EACH PANEL AND BE LOCATED WITH 1" CLEAR OF THE SIDE OF THE PANEL. THE WIRE CONFIGURATION MUST BE SUCH THAT A MINIMUM STEEL AREA OF .30 SQ. IN. PER FOOT IN THE LINE WIRE DIRECTION AND .20 SQ. IN. PER FOOT IN THE CROSS WIRE DIRECTION IS ACQUIRED.

NOTE: PANELS OF DIFFERENT HEIGHTS THAN THOSE SHOWN MAY BE CAST. STEEL REQUIREMENTS AND CLEARANCES SHOWN HEREON MUST BE MAINTAINED.



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 Mobile, AL 36602
 (251) 433-1611

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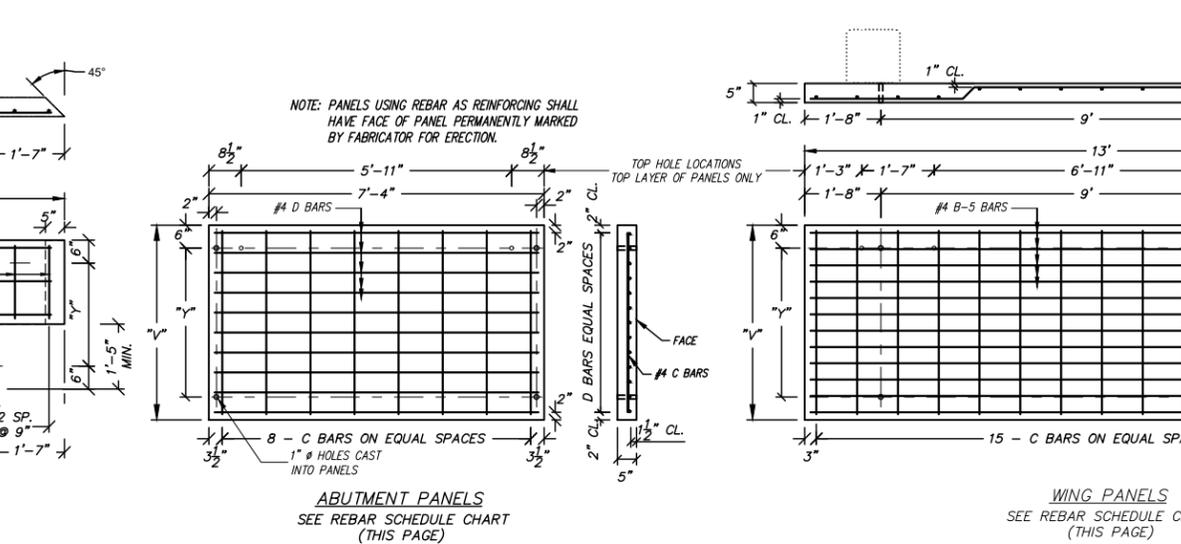
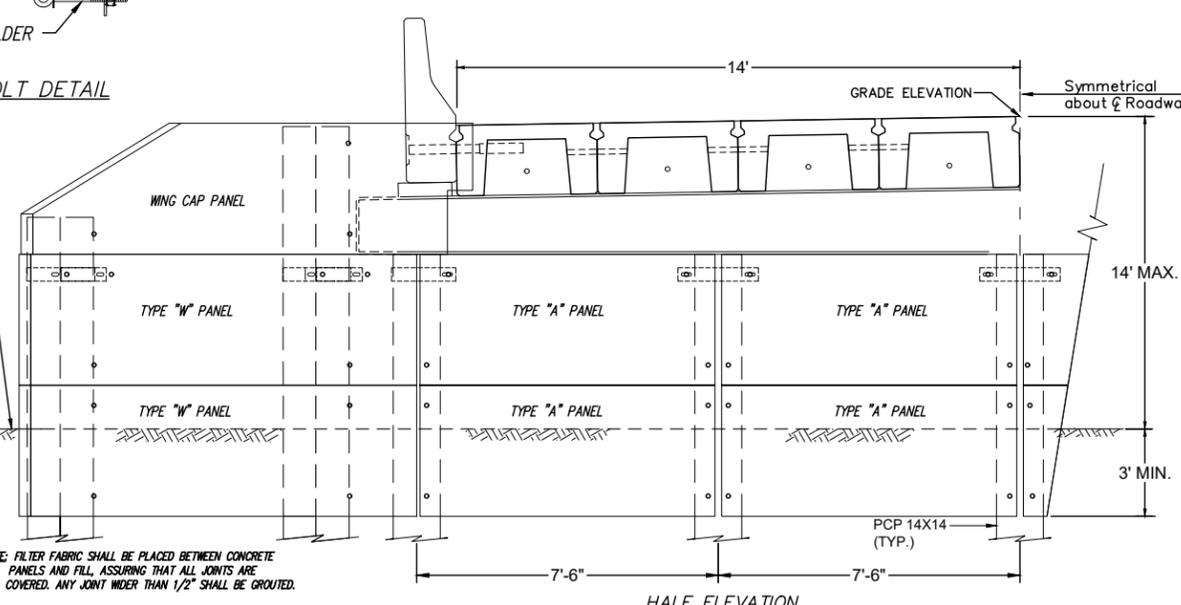
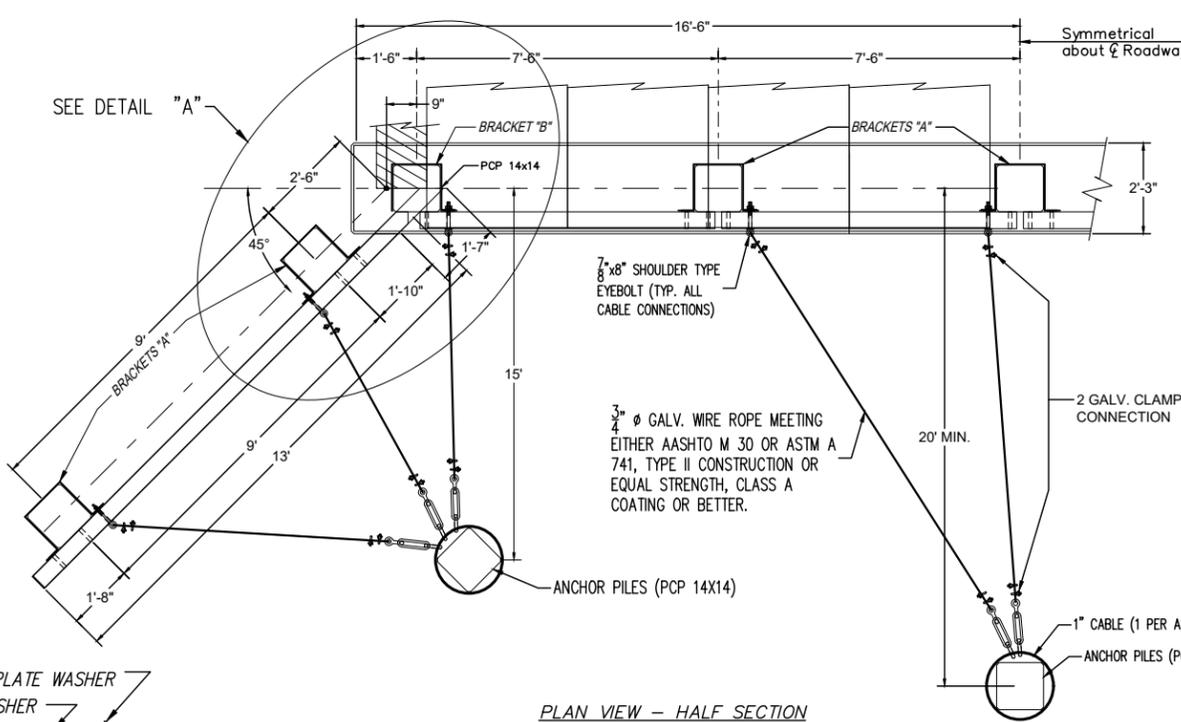
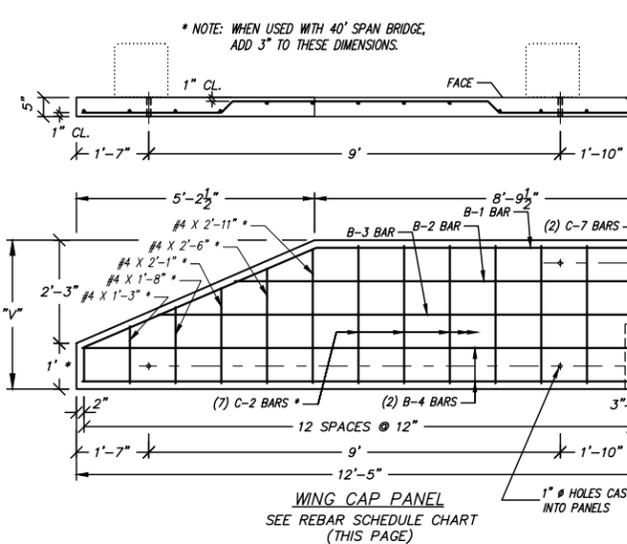
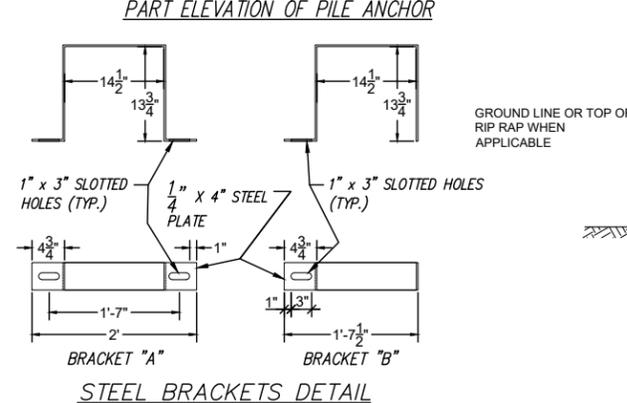
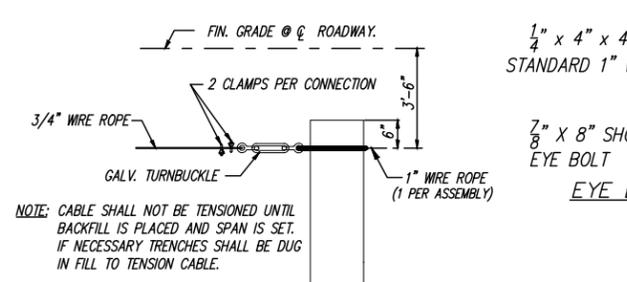
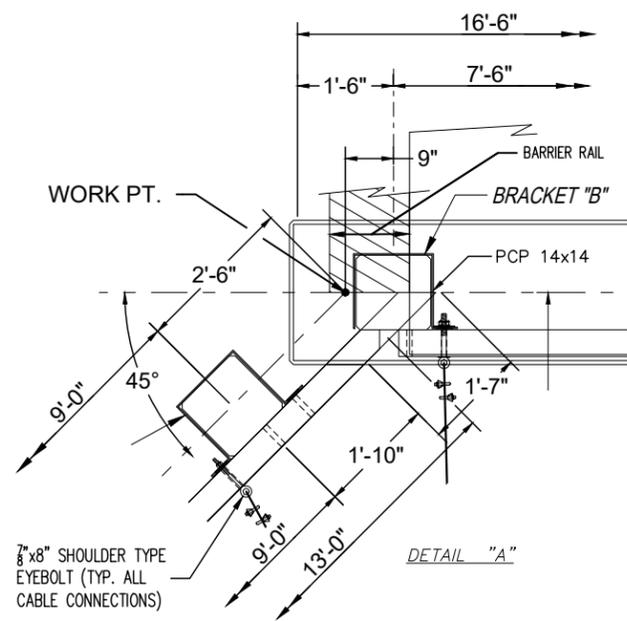
11880 Cranston Dr.
 Suite 102
 Arlington, TN 38002
 (901) 290-5444

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 P. O. Box 129
 Troy, Alabama 36081
 249 Pike County Lake Rd.
 Troy, Alabama 36079
 334-566-7422

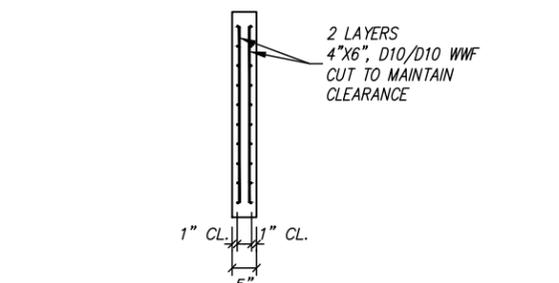
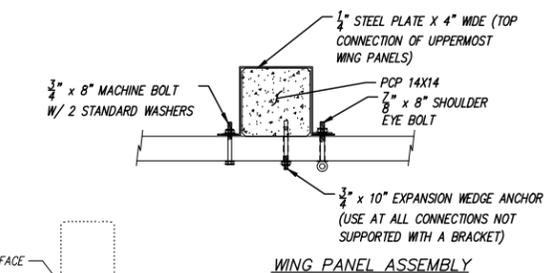
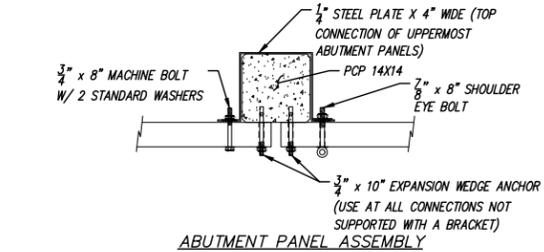
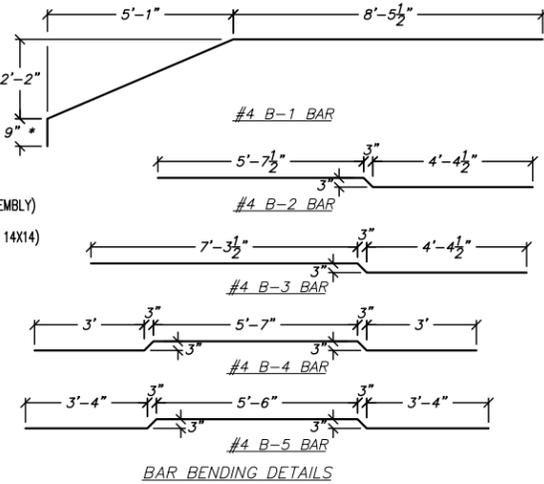
PRECAST CONCRETE ABUTMENT PANELS FOR USE WITH CONCRETE PILING & 24', 34', OR 40' PRECAST CONCRETE SPANS 28'-0" CLEAR ROADWAY

DATE: 12/05/2022

STANDARD DWG. NO. PCP-2800-CP LRFD
 SHEET NO. 26 OF 27



	"V"	"Y"	"C" BAR		"D" BAR		"B5" BAR		"B1" BAR		"B2" BAR		"B3" BAR		"B4" BAR	
			QTY.	LENGTH	QTY.	LENGTH	QTY.	LENGTH	QTY.	LENGTH	QTY.	LENGTH	QTY.	LENGTH		
A1	2'-3"	1'-3"	8 (C-1)	2'-0"	5	7'-1"										
A2	3'-3"	2'-3"	8 (C-2)	3'-0"	8	7'-1"										
A3	4'-3"	3'-3"	8 (C-3)	4'-0"	10	7'-1"										
A4	6'-3"	3'-3"	8 (C-4)	6'-0"	14	7'-1"										
A5	7'-3"	3'-3"	8 (C-5)	7'-0"	16	7'-1"										
A6	8'-3"	3'-3"	8 (C-6)	8'-0"	18	7'-1"										
W1	2'-3"	1'-3"	15 (C-1)	2'-0"			5	12'-8"								
W2	3'-3"	2'-3"	15 (C-2)	3'-0"			8	12'-8"								
W3	4'-3"	3'-3"	15 (C-3)	4'-0"			12	12'-8"								
W4	6'-3"	3'-3"	15 (C-4)	6'-0"			17	12'-8"								
W5	7'-3"	3'-3"	15 (C-5)	7'-0"			20	12'-8"								
W6	8'-3"	3'-3"	15 (C-6)	8'-0"			23	12'-8"								
WC (24 & 34)	3'-3"	2'-3"	7 (C-2)	3'-0"					1	14'-9"	1	10'-4"	1	12'-0"	2	12'-3 1/2"
			2 (C-7)	1'-7"												
WC (40)	3'-6"	2'-6"	7 (C-2a)	3'-3"					1	15'-0"	1	10'-4"	1	12'-0"	2	12'-3 1/2"
			2 (C-7)	1'-7"												



GENERAL NOTES:

SPECIFICATIONS:
 AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS
 AASHTO STANDARD SPECIFICATIONS FOR TRANSPORTATION MATERIALS AND METHODS OF SAMPLING AND TESTING
 AMERICAN SOCIETY FOR TESTING AND MATERIALS
 AMERICAN INSTITUTE OF STEEL CONSTRUCTION

REINFORCING STEEL: ALL REINFORCING STEEL SHALL BE GRADE 60 BILLET STEEL MEETING THE REQUIREMENTS OF AASHTO M31. ALL REINFORCING STEEL SHALL BE ACCURATELY LOCATED IN THE FORMS AND PROPER CLEARANCES MAINTAINED WITH STAINLESS STEEL, PLASTIC, OR RUBBER TIPPED CHAIRS. REINFORCING DIMENSIONS ARE CENTER TO CENTER UNLESS OTHERWISE NOTED ON PLANS.

CONCRETE: CONCRETE SHALL CONFORM TO AASHTO CLASS A(AE). MINIMUM 28 DAY COMPRESSIVE STRENGTH SHALL BE 3000 PSI. ALL EXPOSED CORNERS TO BE ROUNDED TO A 1/4" RADIUS UNLESS OTHERWISE NOTED.

HARDWARE: ALL BOLTS SHALL CONFORM TO ASTM A-307 AND BE GALVANIZED IN ACCORDANCE WITH ASTM-A153

DESIGN DATA:
 SPECIFICATIONS:.....AASHTO 2017, 8TH EDITION AND ALL INTERIMS

NOTE: IN CASTING PANELS (ABUTMENT, WING, WING CAP), WIRE MESH CONFORMING TO THE REQUIREMENTS OF AASHTO M221, MINIMUM GRADE 70 STEEL, MAY BE USED UP TO A DEPTH OF 14" BELOW GRADE IN LIEU OF THE REINFORCEMENT SHOWN. TWO LAYERS OF MESH SHALL BE USED IN EACH PANEL AND BE LOCATED WITH 1" CLEAR OF THE SIDE OF THE PANEL. THE WIRE CONFIGURATION MUST BE SUCH THAT A MINIMUM STEEL AREA OF .30 SQ. IN. PER FOOT IN THE LINE WIRE DIRECTION AND .20 SQ. IN. PER FOOT IN THE CROSS WIRE DIRECTION IS ACQUIRED.

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PRECAST CONCRETE ABUTMENT PANELS FOR USE WITH CONCRETE PILING & 24', 34', OR 40' PRECAST CONCRETE SPANS, 28'-0" CLEAR ROADWAY WITH APPROACH SLAB

DATE: 12/05/2022

STANDARD DWG. NO. PCP-2800-CP-AS LRFD
 SHEET NO. 27 OF 27