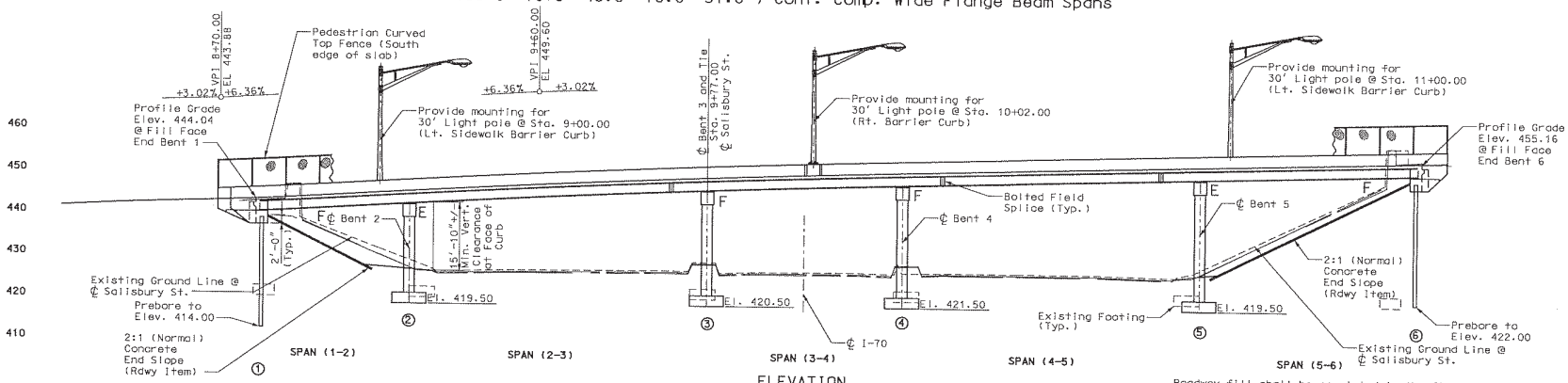
MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION

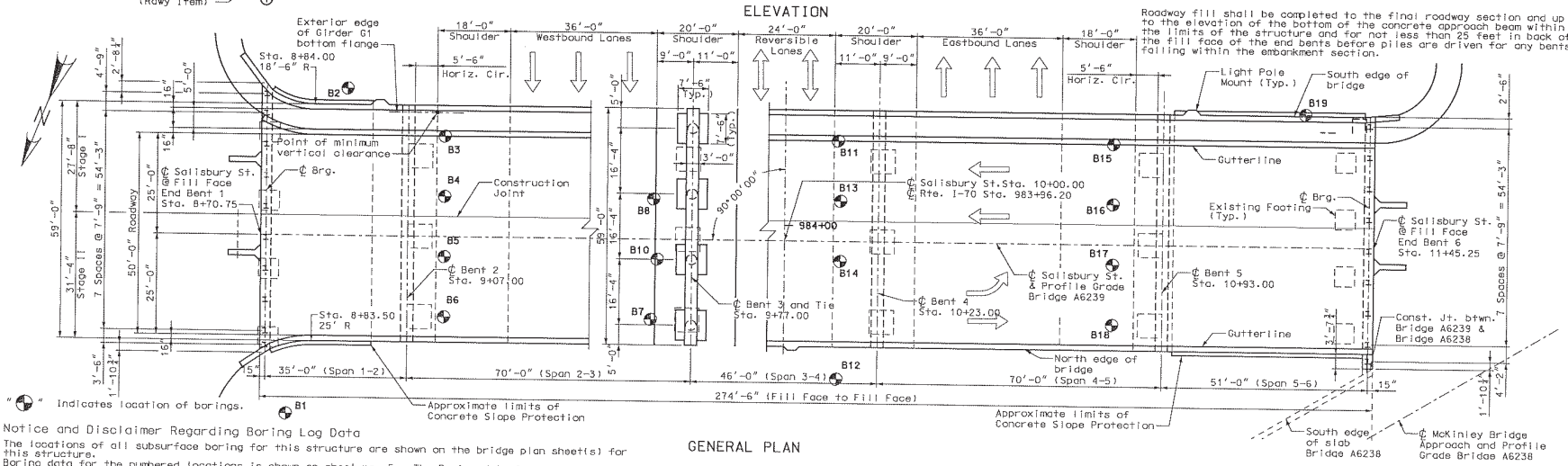
CONTRACT I.D. 010119-604
I-70-5(282)
FINAL PLANS

State	Proj. No.	Sheet No.
MO	J6I1376	

(35.0'-70.0'-46.0'-70.0'-51.0') Cont. Comp. Wide Flange Beam Spans



ELEVATION



"⊕" Indicates location of borings.

Notice and Disclaimer Regarding Boring Log Data

The locations of all subsurface boring for this structure are shown on the bridge plan sheet(s) for this structure.
Boring data for the numbered locations is shown on sheet no. 5. The Boring data for all locations indicated, as well as any other boring logs or other factual records of subsurface data and investigations performed by the department for the design of the project, is available from the District Materials Engineer or Project Contact upon written request as outlined in the project special provisions.

No greater significance or weight should be given to the boring data depicted on the plan sheets than is subsurface data available from the district or elsewhere.

The commission does not represent or warrant that any such boring data accurately depicts the conditions to be encountered in constructing this project.
A contractor assumes all risks it may encounter in basing its bid prices, time or schedule of performance on the boring data depicted here or those available from the district, or on any other documentation not expressly warranted, which the contractor may obtain from the commission.

GENERAL PLAN

In no case shall top of footing elevations at bent no's 2 and 3 be higher than 425.16.

B.M. #22 ✳ Book I-423, Pg. 34
"□" on stone curb on S.W. side of intersection of Salisbury and 11th St., 5' +/- S.E. of traffic signal control box "755" bk. pg. 64 Elev. 457.02

B.M. #34 "O" open on fireplug at S.W. corner of Broadway and Salisbury, B.M. is on Broadway Elev. 428.58

NOTE: DO NOT SCALE THIS DRAWING, FOLLOW DIMENSIONS

FOR INFORMATION ONLY

SALISBURY BRIDGE OVER I-70

CITY OF ST. LOUIS, MO

A6239

Designed: JMC
Detailed: JDG
Checked: KCK

HORNER & SHIFRIN, INC.
ENGINEERS ■ ARCHITECTS ■ PLANNERS
3200 Oakland Ave. St. Louis, Missouri 63110

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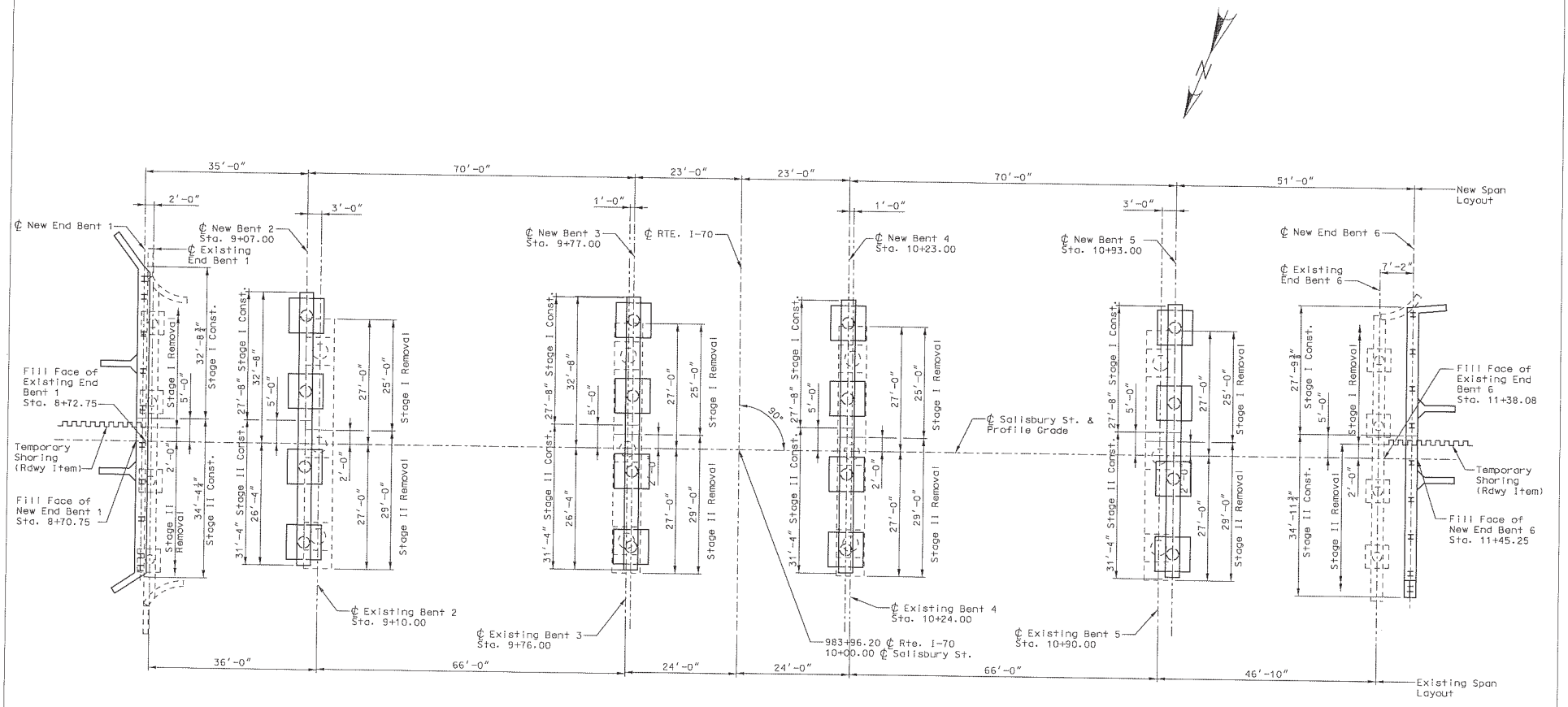
MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION

CONTRACT I.D. 010119-604
I-70-5(282)
FINAL PLANS

State	Proj. No.	Sheet No.
MO	J6I1376	



PLAN

NOTES:

All dimensions are measured horizontally.

Staged construction will require the use of temporary shoring (Rdwy Item).

FOR INFORMATION ONLY

SALISBURY BRIDGE OVER I-70
DETAILS OF STAGE CONSTRUCTION
SUBSTRUCTURE LAYOUT

CITY OF ST. LOUIS, MO

A6239

Designed: ZGC
Detailed: AAA
Checked: JMC

HORNER & SHIFRIN, INC.
ENGINEERS ■ ARCHITECTS ■ PLANNERS
5200 Oakland Ave. St. Louis, Missouri 63110

NOTE: DO NOT SCALE THIS DRAWING, FOLLOW DIMENSIONS

Sheet No. 7 of 41

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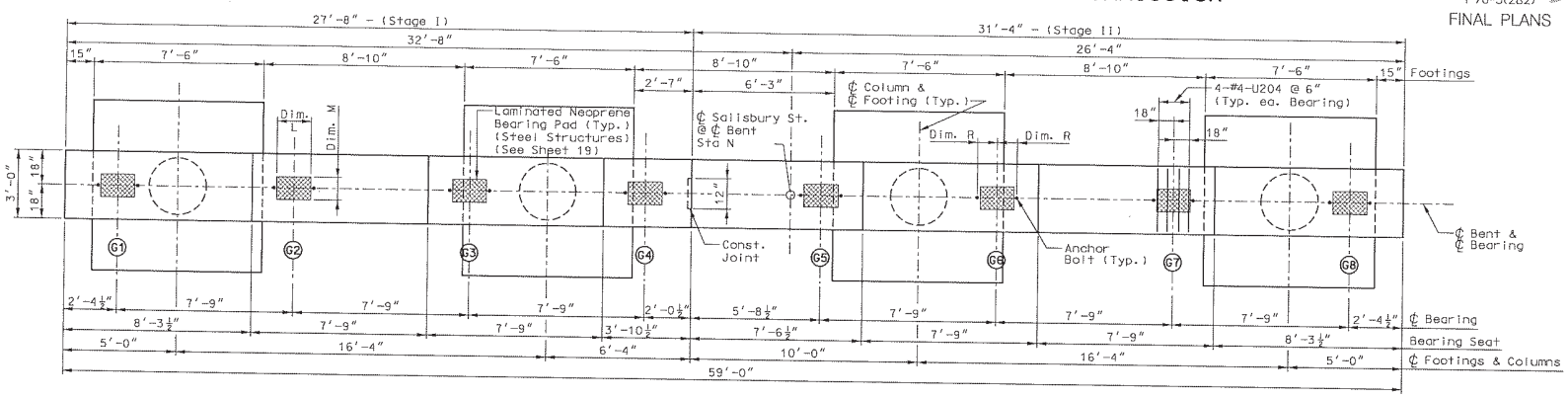
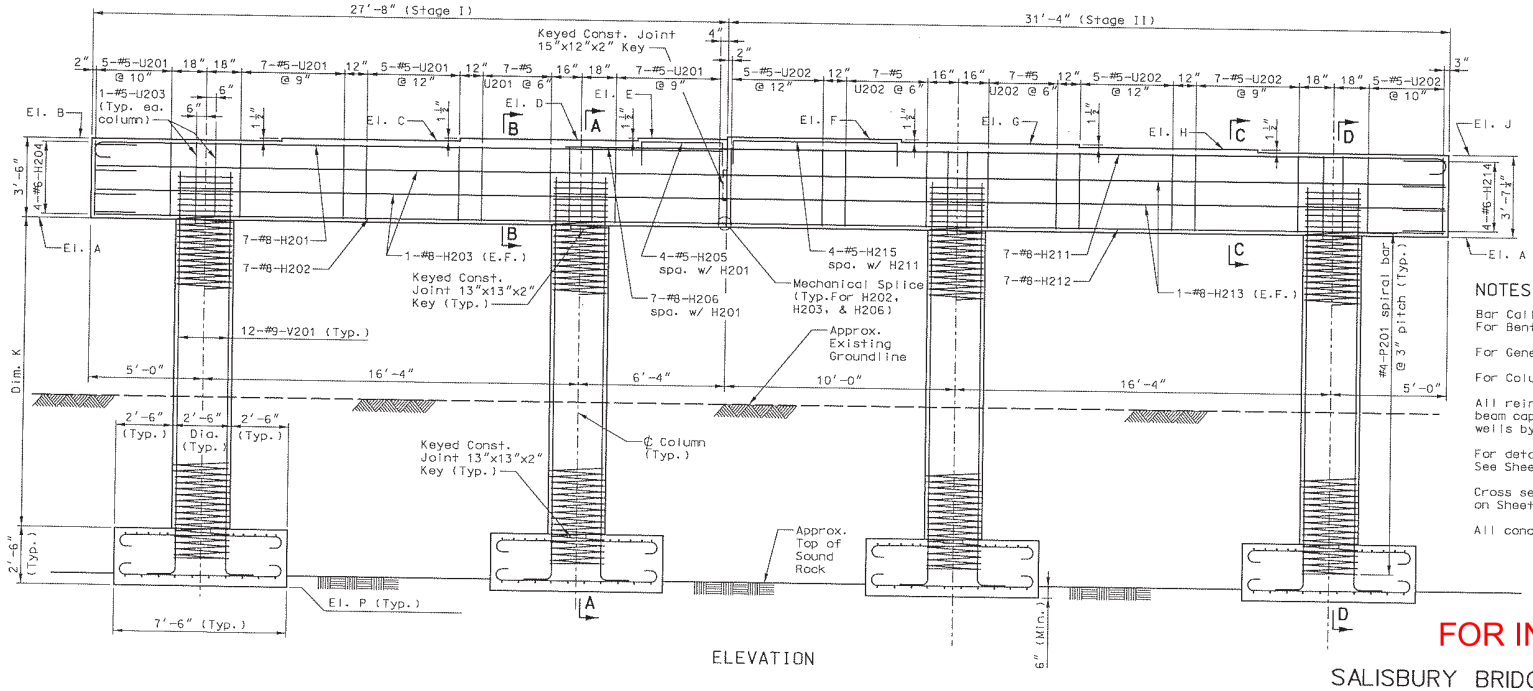
MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION

CONTRACT I.D. 010119-604
I-70-5(282)
FINAL PLANS

State	Proj. No.	Sheet No.
MO	J6I1376	



PLAN



ELEVATION

INTERMEDIATE BENT DIMENSIONS				
Bent No.	2	3	4	5
Dim. A	438.79	442.48	444.12	446.18
Dim. B	442.29	445.98	447.62	449.68
Dim. C	442.41	446.10	447.74	449.80
Dim. D	442.54	446.22	447.86	449.92
Dim. E	442.66	446.34	447.98	450.04
Dim. F	442.75	446.44	448.08	450.14
Dim. G	442.63	446.32	447.96	450.02
Dim. H	442.51	446.20	447.84	449.90
Dim. J	442.39	446.08	447.72	449.78
Dim. K	17'-9½"	19'-5½"	20'-1½"	24'-2½"
Dim. L	20"	18"	18"	20"
Dim. M	13"	12"	12"	13"
Dim. N	9+07.00	9+77.00	10+23.00	10+93.00
Dim. P	418.50	420.50	421.50	419.50
Dim. R	11½"	10½"	10½"	11½"

NOTES:

Bar Callouts shown on this sheet are for Bent 2. For Bents 3 thru 5 use series 300, 400, and 500.

For General Plan and Elevation, See Sheet No. 2.

For Column and Footing details, See Sheet No. 13.

All reinforcing bars in the top of substructure beam cap shall be spaced to clear anchor bolts wells by at least 1/2".

For details and layout of Anchor Bolt Wells, See Sheet No. 19.

Cross sections A-A, B-B, C-C, and D-D are shown on Sheet No. 13.

All concrete shall be Class B with fc' = 3000 psi.

FOR INFORMATION ONLY

SALISBURY BRIDGE OVER I-70

INTERMEDIATE BENTS 2 THRU 5
PLAN AND ELEVATION

CITY OF ST. LOUIS, MO

A6239

Designed: GGG
Detailed: GGG
Checked: KCK

HORNER & SHIFRIN, INC.
ENGINEERS ■ ARCHITECTS ■ PLANNERS
3200 Oakland Ave. St. Louis, Missouri 63110

NOTE: DO NOT SCALE THIS DRAWING, FOLLOW DIMENSIONS

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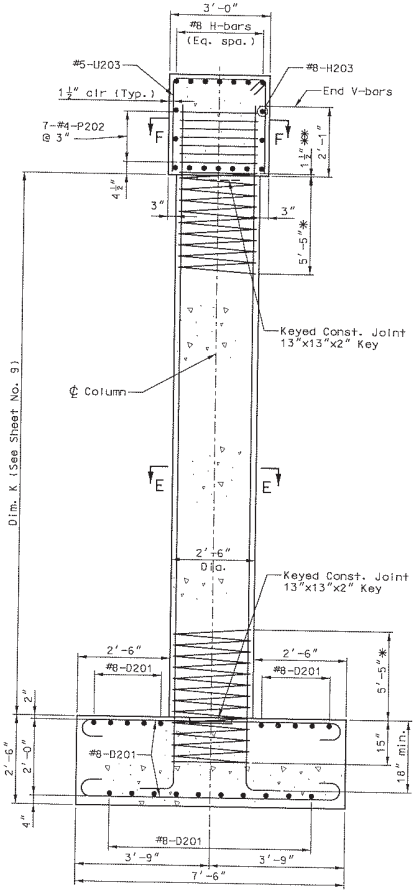
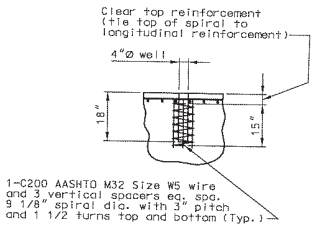
MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION

CONTRACT I.D. 010119-604
I-70-5(282)
FINAL PLANS

State	Proj. No.	Sheet No.
MO	J6I1376	

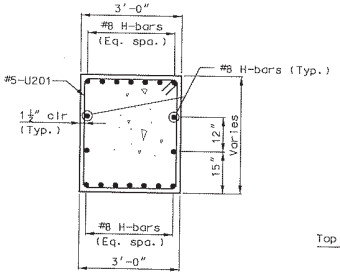


SECTION A–A
SECTION (D-D) SIMILAR

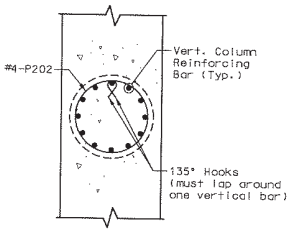


DETAIL OF
ANCHOR BOLT WELLS

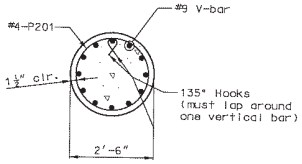
Note: Shift reinforcing as needed to clear anchor bolt well by 1/2" (min.)



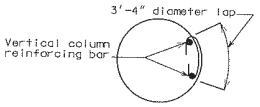
SECTION B–B
SECTION (C-C) SIMILAR



SECTION F–F
DETAIL OF SEISMIC
STIRRUP BAR



SECTION E–E



DETAILS OF 135°
SEISMIC SPIRAL
TIE HOOK

ANCHOR SPLICES IN SPIRAL AROUND VERTICAL BAR
(USE FOR INTERMEDIATE SPLICES OF SPIRALS)

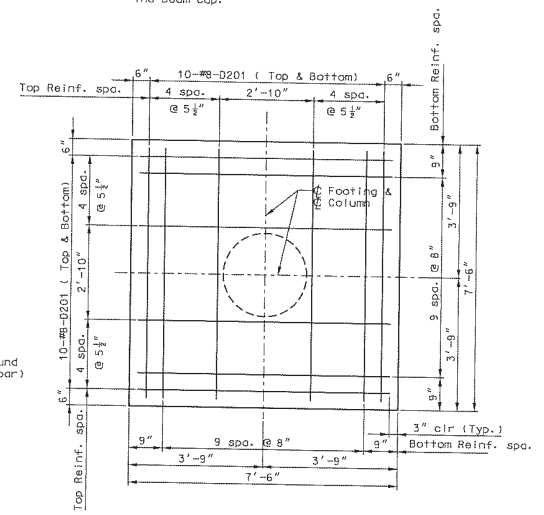
NOTES:

Bar Callouts shown on this sheet are for Bent 2. For Bents 3 thru 5 use series 300, 400, and 500.

For Plan and Elevation of Intermediate Bents, see Sheet No. 12.

* – Lapping of spiral reinforcement in this region is not permitted.

** – The top of spiral shall extent 1 1/2 " above the column connetion into the beam cap.



FOOTING PLAN

SUBSTRUCTURE QUANTITY TABLE BENT 2, 3, 4, & 5

Item		Quantity			
		Bent 2	Bent 3	Bent 4	Bent 5
Class 1 Excavation	cu. yard	139.5	150.5	130	130
Class 1 Excavation in Rock	cu. yard	18.06	9.16	14.56	12.37
Class B Concrete (Substructure	cu. yard	58	59.4	58.2	66.3
Reinforcing Steel (Bridges)	pounds	13,463	13,842	13,970	14,985
Mechanical Bar Splices		18	18	18	18

FOR INFORMATION ONLY

SALISBURY BRIDGE OVER I-70

INTERMEDIATE BENTS 2 THRU 5
TYPICAL DETAILS

CITY OF ST. LOUIS, MO

A6239

Designed: GGG
Detailed: GGG
Checked: KCK

HORNER & SHIFRIN, INC.
ENGINEERS ■ ARCHITECTS ■ PLANNERS
5200 Oakland Ave. St. Louis, Missouri 63110

NOTE: DO NOT SCALE THIS DRAWING, FOLLOW DIMENSIONS

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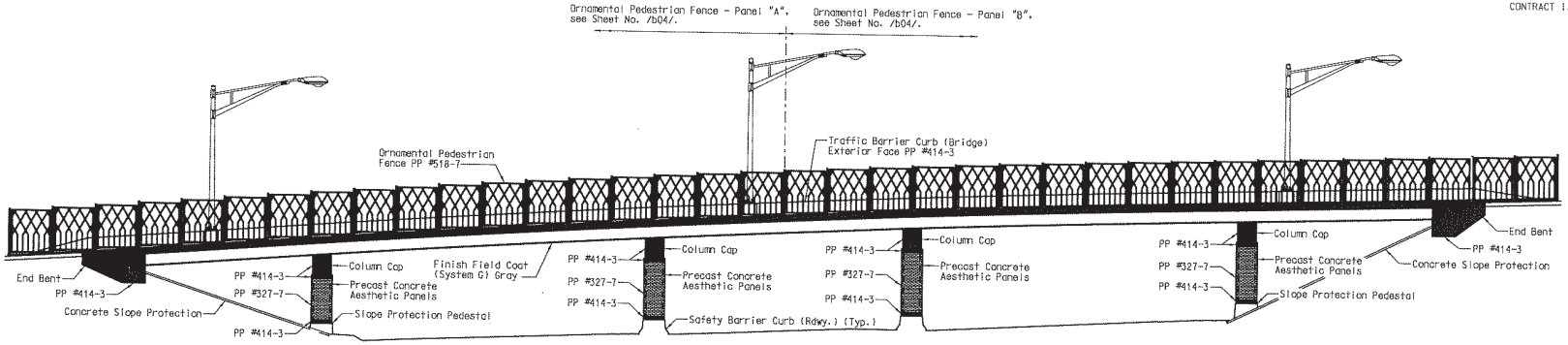
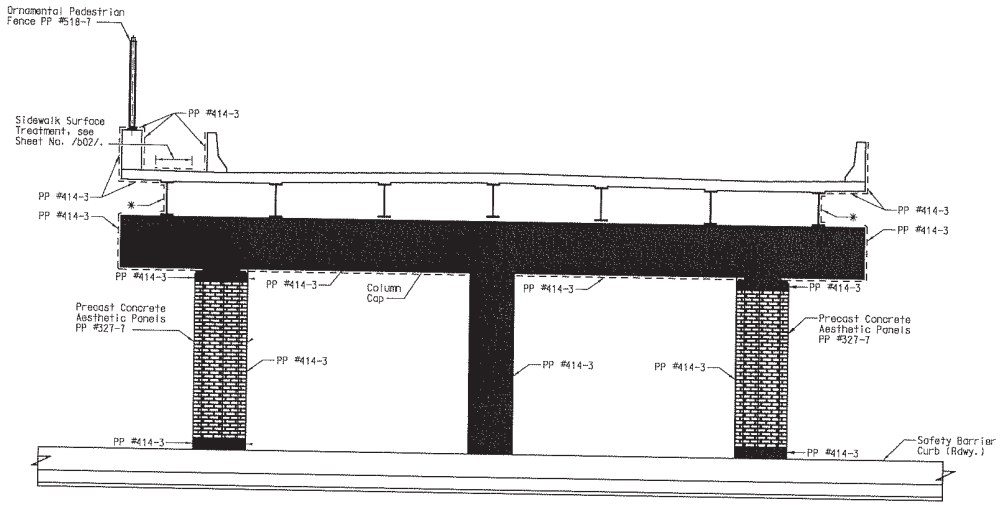
State	Proj. No.	Sheet No.
MO	I-70-5(282)	

FINAL PLANS
JOB NO. J6I1376
CONTRACT I.D. 010119-604



TYPICAL BRIDGE ELEVATION
(5 Span Bridge Shown for Illustration Purposes Only)



* Finish Field Coat (System G) Gray, Exterior Girders Only

TYPICAL SECTION THRU BRIDGE
(3 Column Bent Shown for Illustration Purposes Only)

FINAL QUANTITIES

Item		Substr.	Superstr.	Total
Line #5033, Intermediate Field Coat (System G) Gray	sq. foot			19,400
Line #5034, Finish Field Coat (System G) Gray	sq. foot			2,500
Line #5066, Aesthetic Concrete Face Panels	sq. foot			728
Line #5067, Aesthetic Concrete Stain	sq. foot			7,665
Line #5068, Ornamental Pedestrian Fence	lin. foot			280
Line #5069, Sidewalk Surface Treatment	sq. foot			545
Line #5070, Conduit System on Structure	lump sum			1
Line #5072, Graffiti Protection System	lump sum			1

AESTHETIC COLOR CHART

		Pittsburg Paints Color #414-3 or Equal (Tan)	Finished Field Coat (System G) Gray	Pittsburg Paints Color #327-7 or Equal (Buried Redwood)	Pittsburg Paints Color #518-7 or Equal (Black Magic)
Bent System	Column Cap	X			
	Columns	X			
	End Bents	X			
Structural Elements	Exterior Beams		X		
Traffic Barrier Curb (Bridges)		X			
Precast Concrete Aesthetic Panels	Top & Bottom Collars	X			
	Brick Pattern			X	
Ornamental Pedestrian Fence					X
Pedestrian Light Poles					X

FOR INFORMATION ONLY

QUANTITIES & AESTHETIC COLOR SCHEME

CITY OF ST. LOUIS

A6239

Detailed JUN 2003
Checked JUN 2003

HNTB

Note: This drawing is not to scale, follow dimensions.

Sheet No. 01 of 08

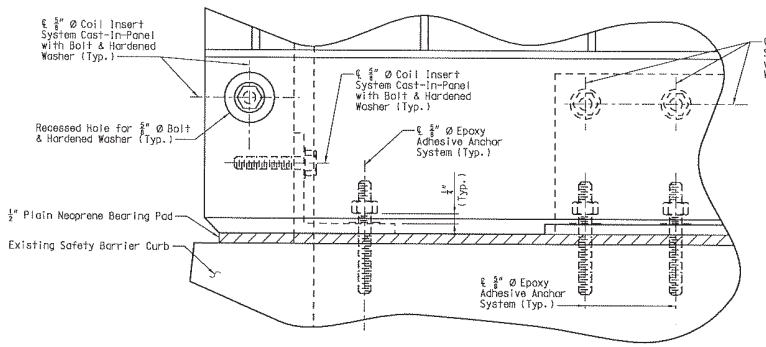
USER: $$USER$$
PLOTTED: $$DATE AND TIME$$ $$DGNSPEC$$

State	Proj. No.	Sheet No.
MO	I-70-5(282)	

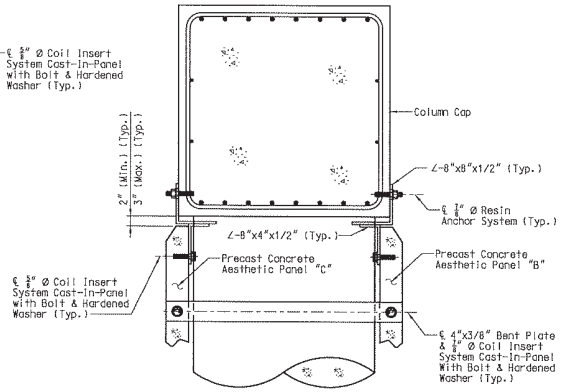
FINAL PLANS

JOB NO. J6I1376

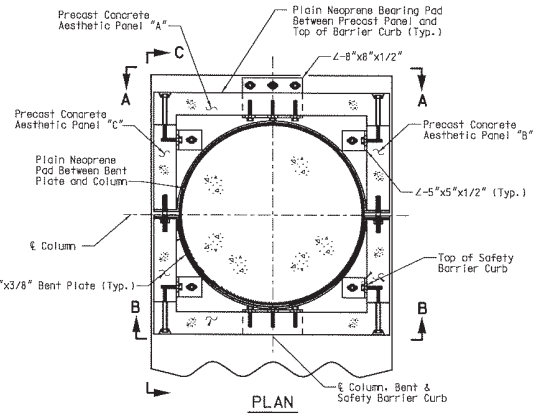
CONTRACT I.D. 010119-604



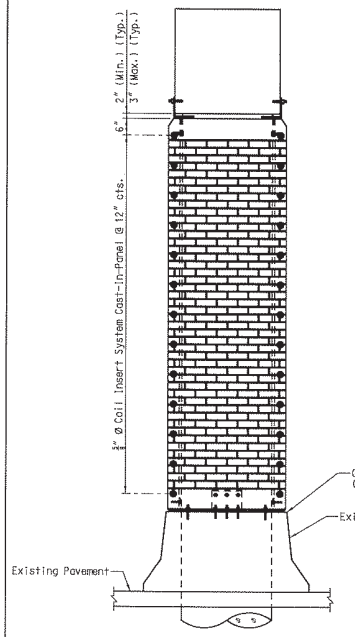
PART ELEVATION OF PRECAST CONCRETE AESTHETIC PANEL NEAR SAFETY BARRIER CURB



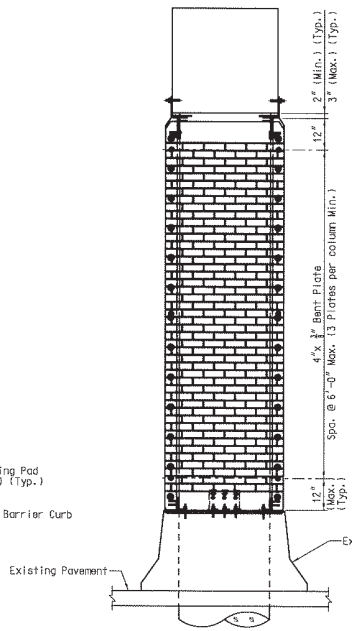
PART ELEVATION NEAR COLUMN CAP



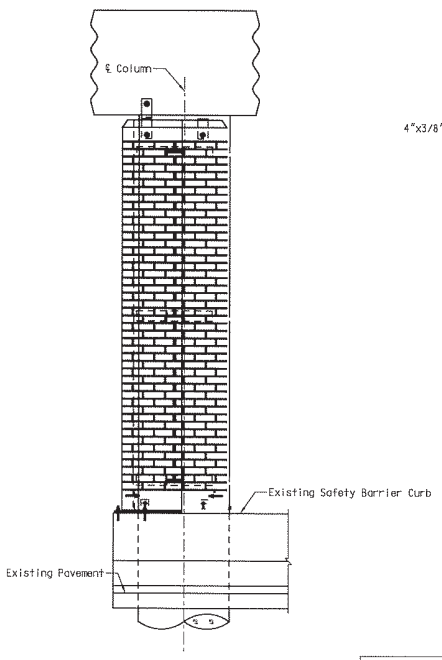
PLAN



VIEW A-A



VIEW B-B



VIEW C-C

Notes

All fabricated structural steel shall be ASTM A709 Grade A36 except as noted. The fabricated structural steel shall be galvanized in accordance with ASTM A123.

All bolts, hardened washers and nuts shall be galvanized in accordance with ASTM A153.

Shop drawings will be required for the fabricated structural steel.

The 3/4" and 1" Ø resin anchor systems used in the top of the existing safety barrier curb and in the side of the column cap shall consist of one of the approved systems listed in the Special Provisions. The 3/4" and 1" Ø threaded rod used in the resin anchor systems shall be ASTM A36 and galvanized in accordance with ASTM A153.

Plain neoprene bearing pads shall be 60 durometer neoprene pads. The neoprene pad shall be bonded to the top of the safety barrier curb and to the 4"x3/8" bent plates with an epoxy adhesive as approved by the bearing manufacturer for bonding neoprene to concrete and to galvanized steel.

Payment for furnishing and installing fabricated structural steel, resin anchor systems, and plain neoprene bearing pads shall be included in the contract unit price for Precast Concrete Aesthetic Panels.

For details of fabricated structural steel, layout of resin anchor systems and layout of plain neoprene bearing pad, see Sheet No. /b07/.

For details of the Precast Concrete Aesthetic Panels, see Sheet No. /b08/.

FOR INFORMATION ONLY

USER: $$USER$$
PLOTTED: $$DATE AND TIME$$ $$DGNSPEC$$

Detailed JUN 2003
Checked JUN 2003

HNTB

Note: This drawing is not to scale, follow dimensions.

Sheet No. 05 of 08

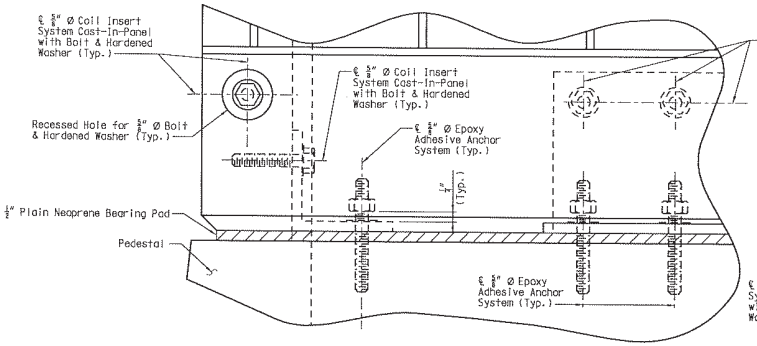
PRECAST CONCRETE AESTHETIC PANELS ON SAFETY BARRIER CURB

CITY OF ST. LOUIS

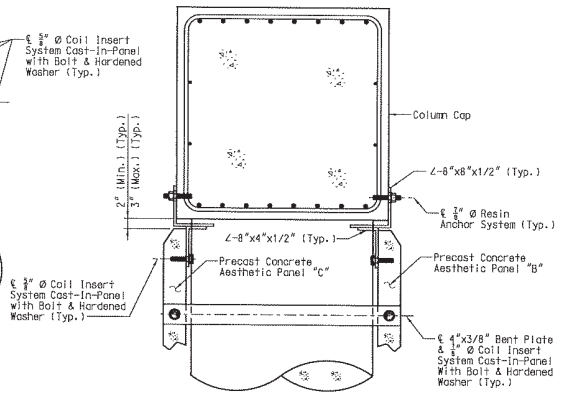
A6239

State	Proj. No.	Sheet No.
MO	I-70-5(282)	

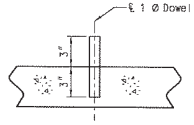
FINAL PLANS
JOB NO. J6I1376
CONTRACT I.D. 010119-604



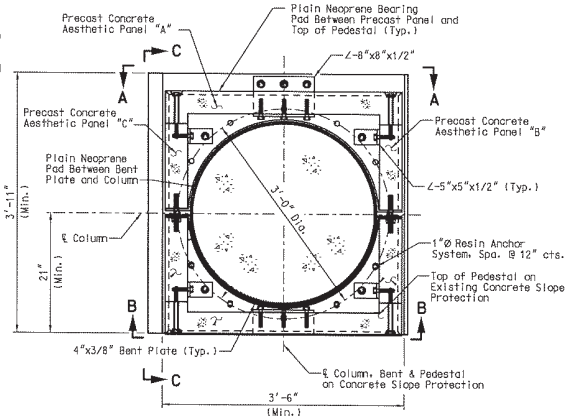
PART ELEVATION OF PRECAST CONCRETE AESTHETIC PANEL NEAR PEDESTAL



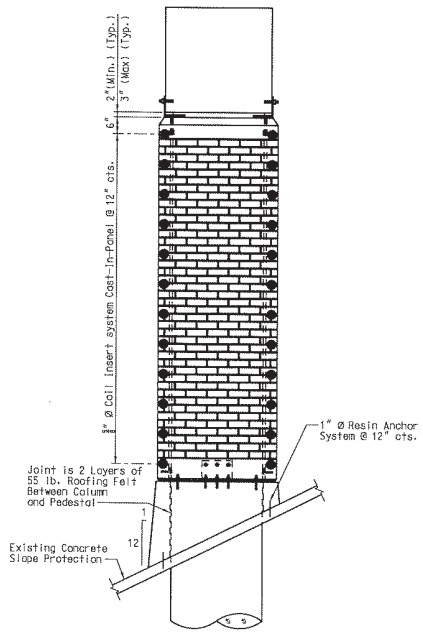
PART ELEVATION NEAR COLUMN CAP



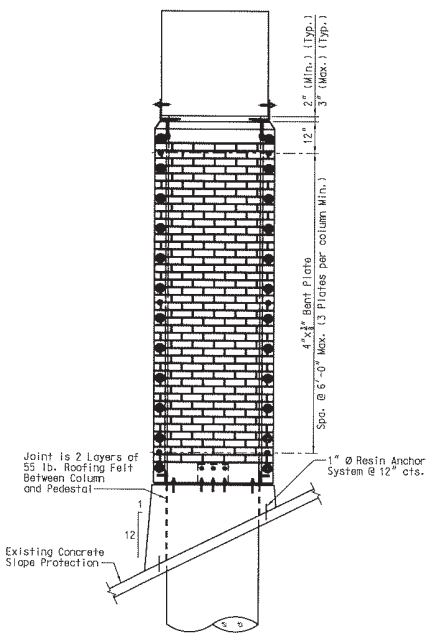
DETAIL OF RESIN ANCHOR SYSTEM IN EXISTING CONCRETE SLOPE PROTECTION



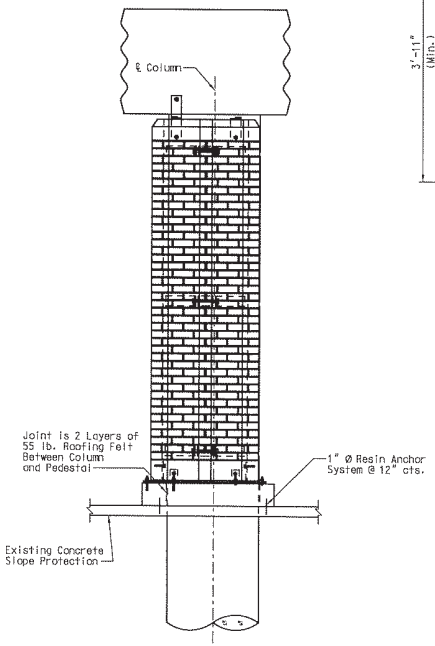
PLAN



VIEW A-A



VIEW B-B



VIEW C-C

Notes

All concrete used in the pedestal on existing concrete slope protection shall be Class B.

All fabricated structural steel shall be ASTM A709 Grade A36 except as noted. The fabricated structural steel shall be galvanized in accordance with ASTM A123.

All bolts, hardened washers, lock washers and nuts shall be galvanized in accordance with ASTM A153.

Shop drawings will be required for the fabricated structural steel.

The material used for the 1" Ø resin anchor system shall meet the requirements of Section 1039.3 of the Missouri Standard Specifications.

The ¾" and ⅞" Ø resin anchor systems used in the top of the Pedestal and in the side of the column cap shall consist of one of the approved systems listed in the special provisions. The ¾" and ⅞" Ø threaded rod used in the resin anchor systems shall be ASTM A36 and galvanized in accordance with ASTM A153.

Plain neoprene bearing pads shall be 60 durometer neoprene pads. The neoprene pad shall be bonded to the top of the Pedestal to the 4"x¾" bent plates with an epoxy adhesive as approved by the bearing manufacturer for bonding neoprene to concrete and galvanized steel.

Payment for furnishing and installing the pedestal on existing concrete slope protection, fabricated structural steel, resin anchor systems, epoxy coated dowel bars and plain neoprene bearing pads shall be included in the contract unit price for Precast Concrete Aesthetic Panels.

For details of fabricated structural steel, layout of resin anchor systems and layout of plain neoprene bearing pad see Sheet No. /b07/.

For details of Precast Concrete Aesthetic Panels see, Sheet No. /b08/.

FOR INFORMATION ONLY

PRECAST CONCRETE AESTHETIC PANELS ON CONCRETE SLOPE PROTECTION

CITY OF ST. LOUIS

A6239

Detailed JUN 2003
Checked JUN 2003
HNTB

Note: This drawing is not to scale, follow dimensions.

Sheet No. 06 of 08

USER: $$USER$$
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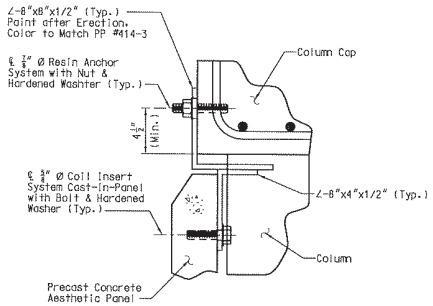
State	Proj. No.	Sheet No.
MO	I-70-5(282)	

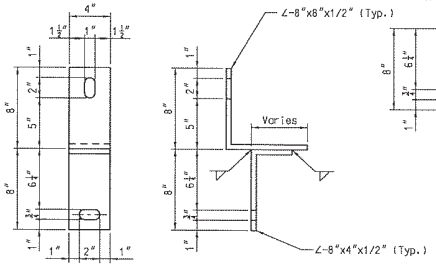
FINAL PLANS

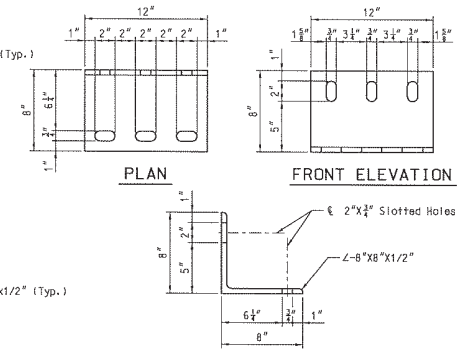
JOB NO. J6I1376

CONTRACT I.D. 0I0119-604

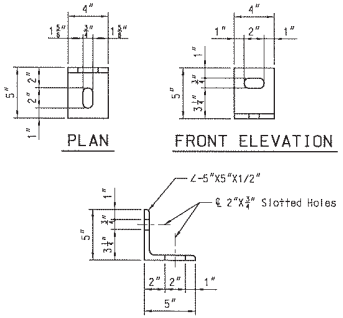


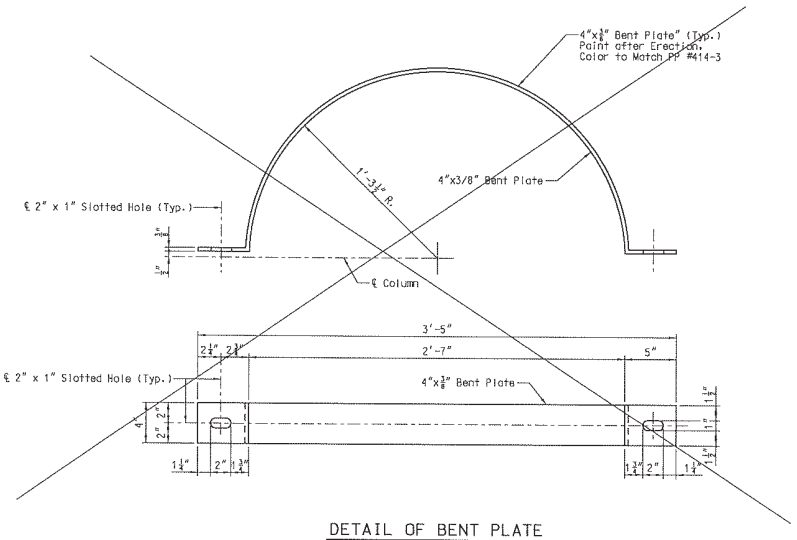
DETAIL OF AESTHETIC PANEL CONNECTION TO COLUMN CAP



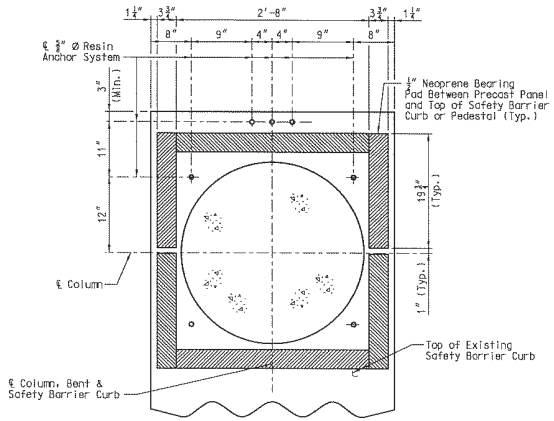


DETAIL OF CONNECTION ANGLES





DETAIL OF BENT PLATE



Anchor Bolt and Neoprene Bearing Pad Layout

(Top of Existing Safety Barrier Curb Shown. Pedestal on Concrete Slope Protection Similar)

FOR INFORMATION ONLY

CONNECTION DETAILS

CITY OF ST. LOUIS

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Note: This drawing is not to scale, follow dimensions.

Sheet No. 07 of 08

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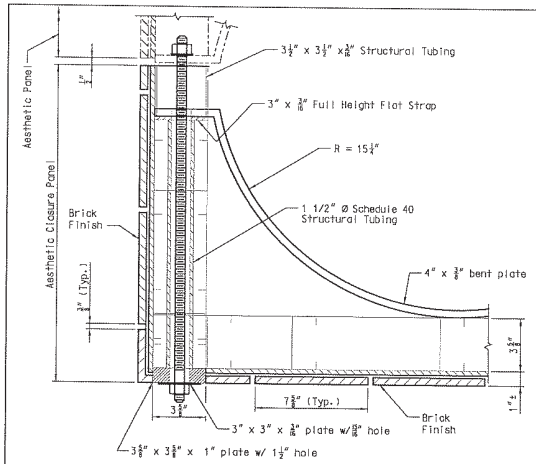
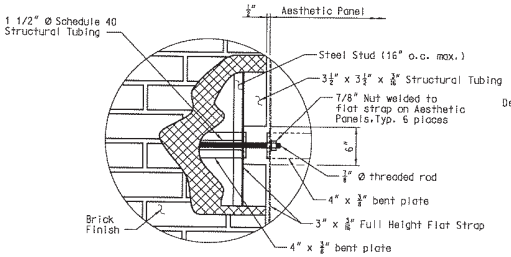
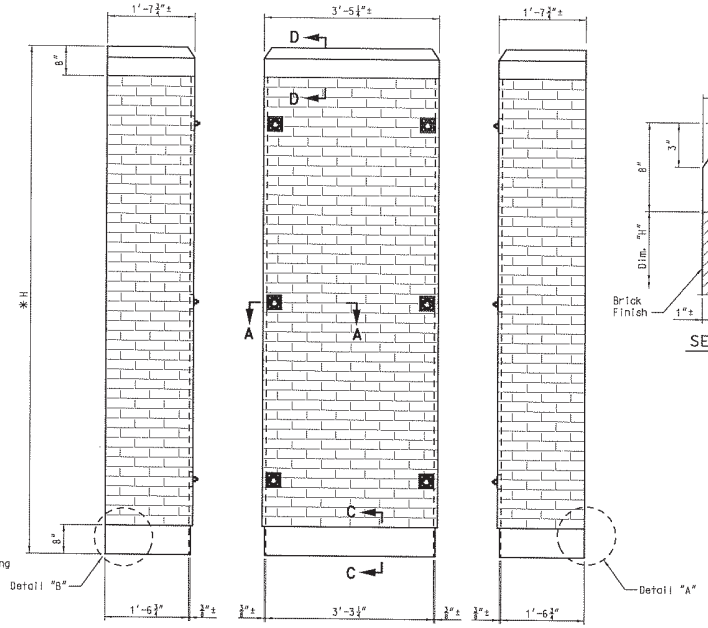


SECTION A-A

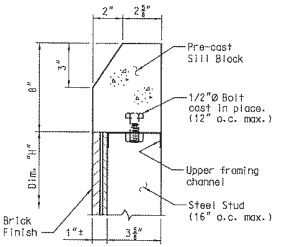


VIEW B-B



VIEW E-E VIEW F-F VIEW G-G

* Contractor must verify dimension "H" and location of 3/8" Bent Plates on Aesthetic Panels prior to fabricating Aesthetic Closure Panels.



SECTION D-D

FINAL PLANS

JOB NO. J611376
CONTRACT I.D. 010119-604

State	Proj. No.	Sheet No.
MO	I-70-5(282)	

QUANTITY TABLE FOR PANELS AT BENT 2

Item		Quantity
Aesthetic Closure Panels	Lump Sum	1
Paid under Force Account Work, Line #5130		

QUANTITY TABLE FOR PANELS AT BENT 3

Item		Quantity
Aesthetic Closure Panels	Lump Sum	1
Paid under Force Account Work, Line #5130		

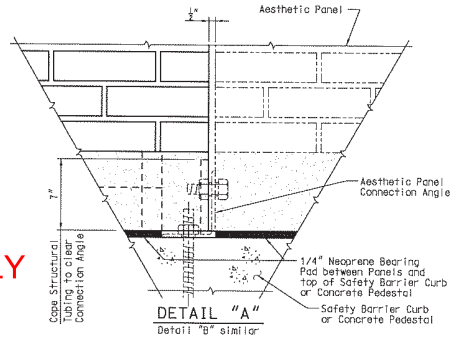
QUANTITY TABLE FOR PANELS AT BENT 4

Item		Quantity
Aesthetic Closure Panels	Lump Sum	1
Paid under Force Account Work, Line #5130		

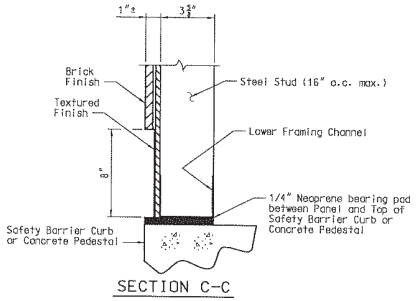
QUANTITY TABLE FOR PANELS AT BENT 5

Item		Quantity
Aesthetic Closure Panels	Lump Sum	1
Paid under Force Account Work, Line #5130		

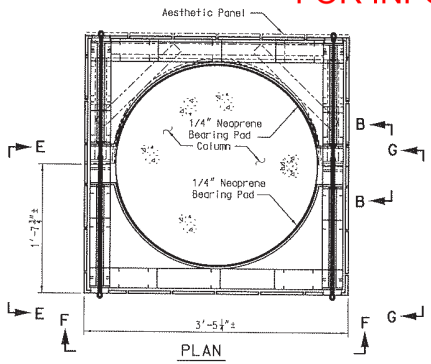
Note:
These quantities are not included in the Estimated Quantities table on Sheet No. 1.
These quantities are net surface areas that do not include the 4 5/8" thickness of the front face. The corresponding gross surface area at Bents 2, 3, 4 and 5 are 128, 164, 184 and 233 sq. feet respectively.



DETAIL "A"
Detail "B" similar



SECTION C-C



PLAN

FOR INFORMATION ONLY

Notes:
Aesthetic Closure Panels shall be internally braced to prevent deformation during handling, installation, and subsequent removals and reinstallations.
All fabricated structural steel shall be ASTM A709 Grade 36 except as noted. The fabricated structural steel shall be galvanized in accordance with ASTM A123.
All nuts and threaded rod shall be galvanized in accordance with ASTM A153.
Shop drawings will be required for the fabricated structural steel and aesthetic panels.
Plain neoprene bearing pads shall be 60 durometer neoprene pads. The neoprene pad shall be bonded to the top of the Concrete Pedestal or Safety Barrier Curb and to the 4" x 3/8" bent plates with an epoxy adhesive as approved by the manufacturer for bonding neoprene to concrete and galvanized steel.
Payment for furnishing and installing the fabricated structural steel, steel framing, threaded rods and plain neoprene bearing pads shall be included in the contract price for Aesthetic Closure Panels.
Threaded rods shall be 7/8" diameter ASTM A709 Grade 50W steel with two ASTM A194-2H or A563-C, C3, D, DH, DH3 heavy hexagon nuts.
Aesthetic Closure Panels shall be fabricated and erected in accordance with the Special Provisions.
Brick finish shall consist of 2 1/4" x 7 5/8" running bond brick with 3/8" mortar joint.
Installation of the Aesthetic Closure Panels requires removal of the 4" x 3/8" bent plates securing the Aesthetic Panels to the columns. The stability of the Aesthetic Panels shall be maintained during removal of the bent plates and installation of the Aesthetic Closure Panels.
Aesthetic Closure Panel dimensions shown are based on Aesthetic Panel shop drawings.

STATE OF MISSOURI
BRIAN CARLSON NUMBER E-24941
REGISTERED PROFESSIONAL ENGINEER

AESTHETIC CLOSURE PANEL DETAILS

CITY OF ST. LOUIS

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Checked SEP 2003

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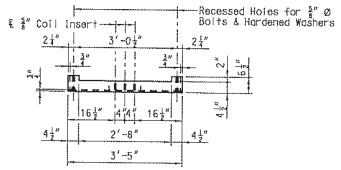
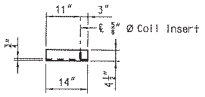
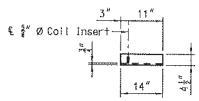
Note: This drawing is not to scale, follow dimensions.



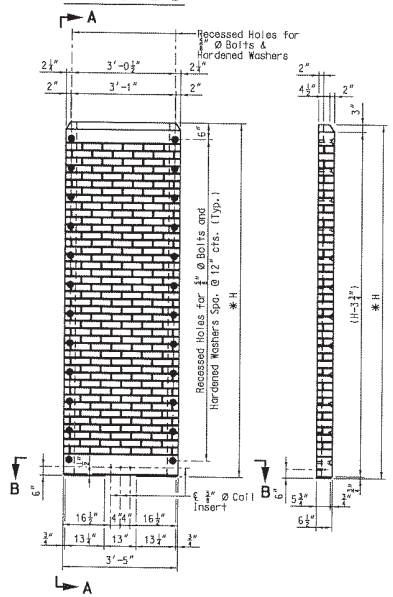
SECTION B-B



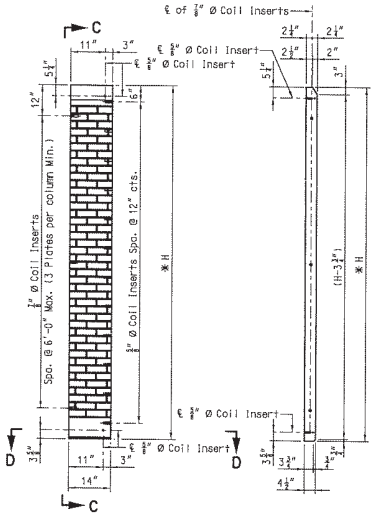
SECTION D-D



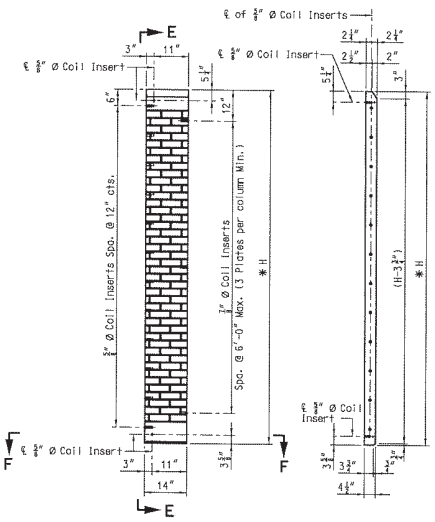
SECTION F-F



PLAN OF PRECAST PANEL "A" VIEW A-A

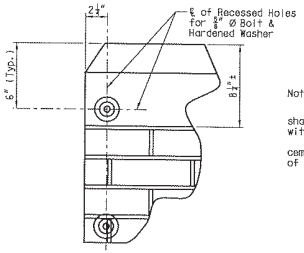


PLAN OF PRECAST PANEL "B" VIEW C-C



PLAN OF PRECAST PANEL "C" VIEW E-E

* Contractor must verify dimension "H" prior to ordering Precast Concrete Aesthetic Panels



PART PLAN OF PRECAST CONCRETE AESTHETIC PANEL

(Top of panel shown, bottom similar)

Note:

Brick pattern formed into the precast panel shall consist of 2⅛" x 7⅝" running bond brick with ½" mortar joints.

Recessed holes shall be filled with a non-shrink cementitious grout and finished flush with the surface of the precast panel prior to applying Aesthetic Stain.

FOR INFORMATION ONLY

Note: This drawing is not to scale, follow dimensions.

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Sheet No. 08 of 08

FINAL PLANS
JOB NO. J611376
CONTRACT I.D. 010119-604

State	Proj. No.	Sheet No.
MO	I-70-5(282)	

QUANTITY TABLE FOR PANELS AT BENT 2

Item		Quantity
Precast Concrete Aesthetic Panels	sq. foot	131.99

Note: These quantities are included in the Estimated Quantities table on Sheet No. /b01/.

QUANTITY TABLE FOR PANELS AT BENT 3

Item		Quantity
Precast Concrete Aesthetic Panels	sq. foot	168.26

Note: These quantities are included in the Estimated Quantities table on Sheet No. /b01/.

QUANTITY TABLE FOR PANELS AT BENT 4

Item		Quantity
Precast Concrete Aesthetic Panels	sq. foot	189.02

Note: These quantities are included in the Estimated Quantities table on Sheet No. /b01/.

QUANTITY TABLE FOR PANELS AT BENT 5

Item		Quantity
Precast Concrete Aesthetic Panels	sq. foot	238.95

Note: These quantities are included in the Estimated Quantities table on Sheet No. /b01/.

Notes

PRECAST CONCRETE PANELS:
Concrete used for the precast concrete panels shall be class A1 with F'c = 5,000 psi.
Anchorage devices for lifting panels may be cast in the backside of the panels, provided that they are shown on the shop drawings and approved by the Engineer.

REINFORCING STEEL:
Minimum clearance to reinforcing steel shall be 1-1/2", unless otherwise shown.
Hooks and bends shall be in accordance with the C.R.S.I. manual of standard practice for detailing reinforced concrete structures, stirrup and tie dimensions.
Welded wire fabric or welded deformed bar mats providing 0.6 sq. in./ft. shall be used.
Payment for reinforcing steel shall be fully covered by the contract unit price for Precast Concrete Aesthetic Panels.

ANCHORAGE INSERTS:
The ⅝" and ¾" Coil inserts shall be galvanized in accordance with ASTM A123.
Coil inserts shall have a concrete pull-out strength (ultimate load) of at least 5,000 pounds in 5,000 psi concrete.
The ⅝" and ¾" Ø coil inserts required for the Precast Concrete Aesthetic Panel connections shall be located on the shop drawings.
Payment for the ⅝" and ¾" Ø coil inserts shall be included in the contract unit price for Precast Concrete Aesthetic Panels.

PRECAST CONCRETE AESTHETIC PANEL DETAILS

CITY OF ST. LOUIS

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