TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS
MASON COUNTY
US 62/68 OVER LAWRENCE CREEK

REFERENCE AND ESTIMATE OF QUANTITIES

LOCATION / ITEM	SHEET NUMBER	CLASS A CONCRETE CU. YDS.	CLASS AA CONCRETE CU. YDS.	REINF. STEEL LBS.	REINF. STEEL EPOXY COATED LBS.	STRUCTURE EXCAVATION COMMON CU. YDS.	STRUCTURE EXCAVATION SOLID ROCK CU. YDS.	CONCRETE STRUCTURAL MODIFIED MEMBERS LIN. FT.	STRUCTURAL STEEL (1) LUMP SUM	HP 14 X 73 STEEL PILES TEST PILES LIN. FT.	HP 14 X 73 STEEL PILES FURNISH & DRIVE LIN. FT.	PILE POINTS 14" INCH EACH	EXPANSION DAM 4" NEOPRENE LIN. FT.	STRUCTURE GRANULAR BACKFILL CU. YDS.
TITLE AND ESTIMATE OF QUANTITIES	1													
GENERAL NOTES	2													
LAYOUT	3													
ELEVATION & TYPICAL DECK SECTIONS	4													
SUBSURFACE DATA	5–7													
FOUNDATION LAYOUT	8, 9													
SUBSTRUCTURE														
END BENT 1	10, 11, 14	94.5	60.5		15498					105	1800	19		193
PIER 1	15, 21	(Δ1) 417.7		(Δ2) 71716						45	1043	32		
PIER 2	16, 17, 21	(Δ1) 649.3		(Δ2) 111850		184	695							
PIER 3	18, 19, 21	(Δ1) 649.3		(Δ2) 111850		138	469							
PIER 4	20, 21	(Δ1) 417.7		(Δ2) 71716						70	1992	32		
END BENT 2	12–14	94.5	59.9		15467					120	2052	19		193
SUB–TOTAL SUBSTRUCTURE		(Δ1) 2323.0	120.4	(Δ2) 367132	30965	322	1164			340	6887	102		386
SUPERSTRUCTURE														
SUPERSTRUCTURE	22–25	0	1755											
SUPERSTRUCTURE BILL OF REINFORCEMENT	25				(Δ2) 481075								135	
FRAMING PLAN	26													
"BULB–T" I–BEAM DETAILS	28–30							4548						
CONSTRUCTION ELEVATIONS (Δ1)	27,31–33													
(Δ2) EMBANKMENT AT END BENT	34 & 35													
EXPANSION DAM 4" NEOPRENE (Δ2) (Δ1)	36								~~1780~~					
SUB–TOTAL SUPERSTRUCTURE		0	1755	0	(Δ2) 481075	0	0	4548	~~1780~~	0	0	0	135	0
BRIDGE TOTALS		(Δ1) 2323.0	1875.4	(Δ2) 367132	(Δ2) 512040	322	1164	4548	(1) ~~1780~~ (Δ3)	340	6887	102	135	386

(1) APPROXIMATE WEIGHT OF STRUCTURAL STEEL IS (Δ3) ~~1780~~ 4070 LBS (ARMORED EDGES BJE-001 & DRAINS) (Δ3)

BILL OF INCIDENTAL MATERIALS

ITEM	NO.	DESCRIPTION	LOCATION	
PLASTIC PIPE	16	1' I.D.x1'–1"	WINGS	(1)
(Δ2) FLANGED REBAR COUPLERS	168	THREADED FOR #5 BAR	PIERS	(2)
FLANGED REBAR COUPLERS	192	THREADED FOR #10 BAR	PIERS	(2)
1/2" THREADED ROD 1'–6	100		MID–SPAN DIA.	(3)
1/2"ø INSERTS	100		MID–SPAN DIA.	(3)
5/8"ø INSERTS	112		PIER DIA.	(3)
5/8" THREADED ROD 2'–6	112		PIER DIA.	(3)
(Δ1) CABLE CLAMPS	192	CLAMPS FOR 1/2"ø PRESTRESS STRAND	BEAM ENDS @ PIERS	(1)
(Δ1) ELASTOMERIC BEARING PADS	12	23"x 15"x 5 25/32" (SHIMMED)	END BENTS	(3)
(Δ1) ELASTOMERIC BEARING PADS	48	23"x 15"x 1 5/8" (SHIMMED)	PIERS	(3)
(Δ2) 1" POLYSTYRENE	4	1'–9" x 4'–2"	END BENT DIAPHRAGM	(1)
(Δ2) 1" POLYSTYRENE	20	2'–9" x 7'–3"	PIER DIAPHRAGM	(1)
(Δ2) 1" POLYSTYRENE	24	2'–4" x 4'–0"	PIER DIAPHRAGM	(1)
(Δ2) 1" POLYSTYRENE	40	10" x 2'–9"	PIER DIAPHRAGM	(1)
(Δ2) 1" POLYSTYRENE	8	1'–6" x 1'–9"	END BENT DIAPHRAGM	(1)
(Δ1) 1 3/8"ø POST–TENSIONING BARS	10	1 3/8"ø PT BAR W/DUCTS,COUPLER,ANCHOR PL	INTERMEDATE DIAPHRAGMS	(1)

(1) INCIDENTAL TO CLASS "AA" CONCRETE
(2) INCIDENTAL TO CLASS "A" CONCRETE
(3) INCIDENTAL TO PRESTRESSED CONCRETE I–BEAMS

REFERENCES:

STANDARD DRAWINGS, SPECIAL PROVISIONS AND SPECIAL NOTES LISTED BELOW ARE THE CURRENT EDITIONS, AND ARE TO BE USED WITH THESE PLANS.

STANDARD DRAWINGS:

BGX–006–05 STENCIL CONSTRUCTION DATE FOR BRIDGES
BPS–009–03 14" STRUCTURAL STEEL BEARING PILE AT 73 POUNDS

SPECIAL PROVISIONS:

38K (91) BUY AMERICA
69G (91) EMBANKMENT AT BRIDGE END BENT STRUCTURES
92 (91) PERMANENT STEEL BRIDGE DECK FORMS

SPECIAL NOTES:

SPECIAL NOTE FOR PILE POINTS
SPECIAL NOTE FOR CONCRETE BONDING AGENTS (DELAYED CURE TYPE)
SPECIAL NOTE FOR NON–EPOXY ADHESIVES
SPECIAL NOTE FOR LIGHT WEIGHT AGGREGATE FOR USE IN PORTLAND CEMENT CONCRETE.
SPECIAL NOTE FOR SEMI–LIGHT WEIGHT CONCRETE FOR USE IN PRESTRESSED CONCRETE BEAMS.

AMERICAN ENGINEERING COMPANY
CONSULTING ENGINEERS
LEXINGTON, KENTUCKY

JANSSEN & SPAANS ENGINEERING
CONSULTING ENGINEERS
INDIANAPOLIS, INDIANA

STATE OF KENTUCKY — WILLIAM B. CAROLAND 6450 — REGISTERED PROFESSIONAL ENGINEER
William B. Caroland Sept. 7, 1994
Signed Date

STATE OF KENTUCKY — H. HUBERT JANSSEN 9407 — REGISTERED PROFESSIONAL ENGINEER
[signature] 9/6/94
Signed Date

U.S. 62/68 OVER LAWRENCE CREEK SHEET 1

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
MASON
U.S. 62/68
ROAD

STATION 182+67.50 P. E. PROJECT NO. FD 04 0062 N 017–018 D

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		23687

DESIGNED BY __ CHECKED BY __ DATE __	REVISED (Δ1) Sheet Nos., Quantities	DATE 8-9-94
DETAILED BY __ CHECKED BY __ DATE 6/94	REVISED (Δ2) Quantities, Styrofoam to Polystrene, Special Notes, Sheets Added	DATE 9-5-94
PREPARED BY GRAPHICS SECTION CHECKED BY __ DATE __	REVISED (Δ3) Steel Quantities	DATE 9-23-94

UPDATE DATE __
LETTING DATE __

UPDATE DATE

LETTING DATE

DATE 8/24/94

DATE 8/21/94

DATE

SPECIFICATIONS

ALL REFERENCES TO THE STANDARD SPECIFICATIONS ARE TO THE 1991 EDITION OF THE KENTUCKY DEPARTMENT OF HIGHWAYS STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

ALL REFERENCES TO THE AASHTO SPECIFICATIONS ARE TO THE 1992 EDITION OF THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES WITH INTERIMS THRU 1993.

DESIGN LOAD

THIS BRIDGE IS DESIGNED FOR HS25 LIVE LOAD OR ALTERNATE LOADING OF TWO 24-KIP AXLES SPACED FOUR FEET APART, WHICHEVER PRODUCES THE GREATER STRESS. THE HS25 LIVE LOAD IS ARRIVED AT BY INCREASING THE STANDARD HS20-44 TRUCK AND LANE LOADS AS SPECIFIED IN THE AASHTO SPECIFICATIONS BY 25%. THIS BRIDGE IS DESIGNED FOR A WIND LOAD BASED ON A WIND VELOCITY OF 84 MPH.

DESIGN METHOD

ALL REINFORCED CONCRETE MEMBERS ARE DESIGNED BY THE LOAD FACTOR METHOD AS SPECIFIED IN THE CURRENT AASHTO SPECIFICATIONS.

MATERIALS DESIGN SPECIFICATIONS

FOR CLASS "A" REINFORCED CONCRETE	F'C = 3500 PSI
FOR CLASS "AA" REINFORCED CONCRETE	F'C = 4000 PSI
FOR STEEL REINFORCEMENT	FY = 60000 PSI
FOR PRESTRESSED GIRDER CONCRETE	F'C = 7000 PSI
FOR PRESTRESSING STRAND	F'S = 270,000 PSI

MATERIALS

ASTM OR AASHTO SPECIFICATIONS, CURRENT EDITION, AS DESIGNATED BELOW SHALL GOVERN THE MATERIALS FURNISHED.

AASHTO M270 GRADE 36	STRUCTURAL STEEL, 36,000 PSI MINIMUM YIELD
AASHTO M203	LOW RELAXATION UNCOATED SEVEN-WIRE STABILIZED STRAND FOR PRESTRESSED CONCRETE, GRADE 270 (SUPPLEMENT S1)
AASHTO M-31	DEFORMED AND PLAIN BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT, GRADE 60
AASHTO M153	PREMOLDED CORK

PREFORMED CORK EXPANSION JOINT MATERIAL

PREFORMED EXPANSION JOINT MATERIAL SHALL CONFORM TO SUBSECTION 807.03.02 (TYPE II) OF THE KENTUCKY DEPARTMENT OF HIGHWAYS SPECIFICATIONS.

EPOXY COATED REINFORCING STEEL

ALL REINFORCING BARS DESIGNATED BY SUFFIX (E) IN THE PLANS SHALL BE EPOXY COATED IN ACCORDANCE WITH SECTION 811.10 OF THE STANDARD SPECIFICATIONS.

CONCRETE

CLASS "AA" CONCRETE IS TO BE USED THROUGHOUT THE SUPERSTRUCTURE AND IN THE PORTIONS OF THE SUBSTRUCTURE ABOVE THE TOP OF THE CAPS EXCEPT IN THE PEDESTALS. CLASS "A" CONCRETE IS TO BE USED IN THE PEDESTALS AND IN THE SUBSTRUCTURE BELOW THE TOP OF THE CAPS. PRESTRESSED GIRDER CONCRETE SHALL BE IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.

REINFORCEMENT

DIMENSIONS SHOWN FROM THE FACE OF CONCRETE TO BARS ARE CLEAR DISTANCES UNLESS OTHERWISE SHOWN. SPACING OF BARS IS FROM CENTER TO CENTER OF BARS.

CONSTRUCTION IDENTIFICATION

THE NAMES OF THE PRIME CONTRACTOR AND THE SUB-CONTRACTOR SHALL BE IMPRINTED IN THE CONCRETE WITH ONE INCH LETTERS AT A LOCATION DESIGNATED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ALL PLANS, EQUIPMENT AND LABOR NECESSARY TO DO THE WORK FOR WHICH NO DIRECT PAYMENT WILL BE MADE.

TEMPORARY SUPPORTS

TEMPORARY SUPPORTS OR SHORING WILL NOT BE PERMITTED UNDER THE GIRDERS WHEN POURING THE CONCRETE FLOOR SLAB OR WHEN TAKING "TOP OF BEAM" ELEVATIONS.

BEVELED EDGES

ALL EXPOSED EDGES SHALL BE BEVELED 7/8" UNLESS OTHERWISE SHOWN.

DIMENSIONS

DIMENSIONS ARE FOR A NORMAL TEMPERATURE OF 60 DEGREES FAHRENHEIT. LAYOUT DIMENSIONS ARE HORIZONTAL MEASUREMENTS.

BILL OF INCIDENTAL MATERIAL

THE QUANTITIES SHOWN IN THE BILL OF INCIDENTAL MATERIALS ARE APPROXIMATE ONLY AND THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING ENOUGH MATERIAL TO COMPLETE THE WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. THE COST OF THESE ITEMS IS TO BE INCLUDED IN THE UNIT PRICE BID FOR THE QUANTITIES SPECIFIED IN THE "BILL OF INCIDENTAL MATERIALS" TABLE.

FOOTING EXCAVATION

SPECIAL CARE SHALL BE TAKEN NOT TO DISTURB THE BOTTOM OF THE EXCAVATION, AND THE FINAL REMOVAL OF THE FOUNDATION MATERIAL TO GRADE SHALL NOT BE MADE UNTIL JUST BEFORE THE MASONRY IS TO BE PLACED. THE EXCAVATION SHALL BE MAINTAINED FREE OF STANDING WATER, INSOFAR AS PRACTICABLE.

POURING SEQUENCE

THE POURING SEQUENCE OF THE SLAB MAY BE CHANGED WITH THE WRITTEN APPROVAL OF THE ENGINEER.

CONTROL OF HORIZONTAL EARTH PRESSURE

IN ORDER TO ALLEVIATE EXCESSIVE HORIZONTAL EARTH PRESSURE ON THE END BENT, PLACEMENT OF BACKFILL BEHIND THE END BENT BACKWALL ABOVE THE TOP OF CAP ELEVATION WILL NOT BE ALLOWED UNTIL THE SUPERSTRUCTURE AND DECK ARE IN PLACE.

PLAN ELEVATION FOR FOOTINGS

WHEN SUITABLE ROCK IS ENCOUNTERED AT A DATUM ELEVATION HIGHER THAN THE PLAN ELEVATION, THE HIGHER ELEVATION MAY BE UTILIZED FOR BEARING AS OUTLINED IN THE SPECIFICATIONS. WHEN THE BOTTOM OF FOOTING ELEVATION DIFFERS FROM THAT ELEVATION SHOWN ON PLANS, THE ELEVATION DATA SHALL BE SUBMITTED TO THE DIRECTOR, DIVISION OF BRIDGES TO BE PLACED ON ORIGINAL PLANS.

PILE DATA

PILING SHALL BE DRIVEN TO THE "REQUIRED DRIVING RESISTANCE" AS SHOWN IN THE PILE RECORD.

TEST PILES SHALL BE DRIVEN WHERE DESIGNATED ON THE PLANS TO DETERMINE THE LENGTH OF PILE REQUIRED.

ALL TEST PILES SHALL BE ACCURATELY LOCATED SO THAT THEY MAY BE USED IN THE FINISHED STRUCTURE.

CONTRARY TO THE STANDARD DRAWINGS FOR STEEL PILES, MILL TEST REPORTS ARE NOT REQUIRED TO BE NOTARIZED.

PILE POINTS

ALL PILES REQUIRE 14" PILE POINTS. THE POINTS SHALL BE THE TYPE FOR KEYING INTO A SLOPING ROCK SURFACE. THE "SPECIAL NOTE FOR PILE POINTS" SHALL APPLY TO THIS WORK.

FOUNDATION DATA

SPREAD FOOTING FOUNDATIONS ARE DESIGNED FOR PRESSURES AS SHOWN IN SPREAD FOOTING RECORD ON FOUNDATION LAYOUT.

COFFERDAMS

COFFERDAMS MAY BE NECESSARY FOR CONSTRUCTION OF PIERS 2 AND 3. THE COST OF ANY COFFERDAM SHALL BE INCIDENTAL TO COST OF STRUCTURE EXCAVATION, COMMON.

PAYMENT FOR PRECAST CONCRETE BEAMS

THE BASIS OF PAYMENT FOR THE PRESTRESSED CONCRETE BEAMS SHALL BE AT THE CONTRACT UNIT PRICE PER LINEAR FOOT OF BEAM, IN ACCORDANCE WITH THE SPECIFICATIONS.

TESTING PRESTRESSED CONCRETE MEMBERS

IN ADDITION TO THE REQUIREMENTS OF SECTION 605 OF THE DEPARTMENT'S STANDARD SPECIFICATIONS, FABRICATORS OF PRESTRESSED CONCRETE MEMBERS SHALL FURNISH, AS PART OF THEIR QUALITY CONTROL EQUIPMENT, A PACHOMETER FOR DETERMINING THE DEPTH OF CONCRETE COVER OVER STEEL REINFORCEMENT. THE METER FURNISHED SHALL BE AN "R" METER AS MANUFACTURED BY JAMES ELECTRONICS, INC., CHICAGO, ILLINOIS OR APPROVED EQUAL. THE PACHOMETER SHALL BE AVAILABLE FOR USE BY BOTH THE FABRICATOR'S QUALITY CONTROL PERSONNEL AND BY THE DEPARTMENT'S INSPECTOR(S).

NO SEPARATE PAYMENT WILL BE MADE FOR FURNISHING THE METER AS THIS IS CONSIDERED INCIDENTAL TO THE PRESTRESSED CONCRETE WORK.

PAYMENT FOR STRUCTURAL STEEL

THE LUMP SUM BID FOR STRUCTURAL STEEL SHALL BE FULL PAYMENT FOR ALL STRUCTURAL STEEL, BOLTS, WASHERS, WELDING AND WELDING MATERIALS, DRAINS, PAINT AND ALL LABOR AND MATERIALS NECESSARY TO ERECT THE STEEL IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. THE APPROXIMATE WEIGHT OF STRUCTURAL STEEL SHOWN IN THE ESTIMATE OF QUANTITIES DOES NOT INCLUDE OVERRUN OR WELD MATERIAL.

SELECT GRANULAR EMBANKMENT

ALL REFERENCES IN THE PLANS TO SELECT GRANULAR EMBANKMENT SHALL BE INTERPRETED TO MEAN STRUCTURE GRANULAR BACKFILL OR ROADWAY FILL-GRANULAR EMBANKMENT AS APPLICABLE.

SHOP DRAWINGS

WHEN ANY CHANGES IN THE DESIGN PLANS ARE PROPOSED BY THE FABRICATOR OR SUPPLIER, THE SHOP DRAWINGS REFLECTING THESE CHANGES SHALL BE SUBMITTED TO THE DEPARTMENT THROUGH THE CONTRACTOR.

DRAIN DETAILS

FOUNDRY NOTE - ALL DRAINS SHALL BE GRAY IRON CASTINGS, ASTM A48, CURRENT EDITION, CLASS 30A. FOUNDRIES SHALL CAST AT LEAST TWO TEST BARS FROM EACH DAYS PRODUCTION. THESE TEST BARS SHALL BE TESTED EITHER BY THE DIVISION OF MATERIALS OR BY THE FOUNDRIES QUALITY CONTROL UNIT WHO SHALL FURNISH ACTUAL TEST RESULTS FOR EACH DATE OF MANUFACTURE OR LOT NUMBER. DRAINS SHALL BE PAINTED INSIDE AND OUT.

THE DRAIN PIPE SHALL BE 6" ROUND STANDARD WEIGHT IN ACCORDANCE WITH ASTM-A53, A500, OR A501. PIPE AND ALL FITTINGS SHALL BE GALVANIZED INSIDE AND OUT IN ACCORDANCE WITH AASHTO M111. PAINTING NOT REQUIRED.

COST OF DRAINS, DRAIN PIPE, FITTINGS, CONNECTIONS AND BRACKET HARDWARE SHALL BE INCLUDED IN THE LUMP SUM PRICE FOR STRUCTURAL STEEL.

ELASTOMERIC BEARINGS

THE MATERIAL SPECIFICATIONS FOR ELASTOMERIC BEARING PADS SHALL CONFORM TO THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, EXCEPT THE LOW TEMPERATURE TEST IS WAIVED. THE ELASTOMER SHALL HAVE A DUROMETER HARDNESS OF 60, AND A LOW TEMPERATURE GRADE OF 2 (OR MORE). THE COST OF THIS ITEM IS TO BE INCLUDED IN THE PRICE PER LINEAR FOOT FOR PRECAST BEAMS.

REVISED ▽ AS PER KY MARKUP DATE 6/94

REVISED □ AS PER KY MARKUP DATE 6/94

REVISED DATE

DESIGNED BY MEC CHECKED BY JGS DATE

DETAILED BY SRP CHECKED BY JGS DATE

PREPARED BY GRAPHICS SECTION CHECKED BY DATE

STATE OF KENTUCKY WILLIAM B. CAROLAND 6450 REGISTERED PROFESSIONAL ENGINEER

9-22-94

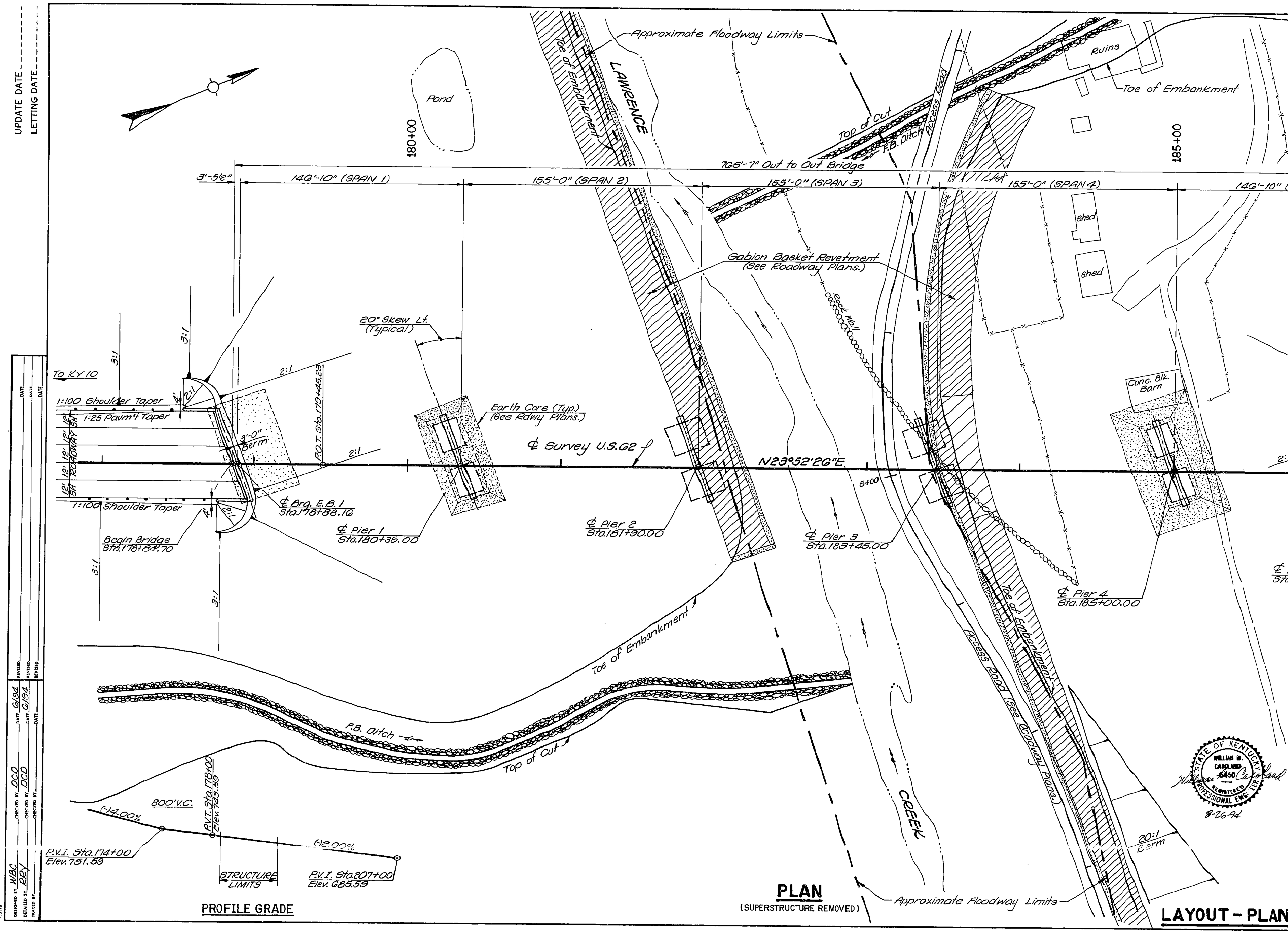
GENERAL NOTES

U.S. 62/68 OVER LAWRENCE CREEK SHEET 2

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
MASON
U.S. 62/68
ROAD

STATION 182+67.50 P. E. PROJECT NO.

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		23687


UPDATE DATE
LETTING DATE
Approximate Floodway Limits
Toe of Embankment
LAWRENCE
Pond
180+00
185+00
Top of Cut
F.B. Ditch
Access Road
Ruins
Toe of Embankment
765'-7" Out to Out Bridge
3'-5½"
146'-10" (SPAN 1)
155'-0" (SPAN 2)
155'-0" (SPAN 3)
155'-0" (SPAN 4)
146'-10" (SPAN 5)
3'-5½"
Shed
Shed
Gabion Basket Revetment
(See Roadway Plans.)
Rock Wall
20° Skew Lt.
(Typical)
Earth Core (Typ.)
(See Rdwy Plans.)
Conc. Blk. Barn
To KY 10
1:100 Shoulder Taper
1:25 Pavm't Taper
3'-0" Berm
P.O.T. Sta.179+45.23
℄ Survey U.S. 62
N23°52'26"E
Ahead
End Bridge
Sta.186+50.29
1:100 Shoulder Taper
Bridge End Drain
1:25 Pavm't Taper
1:100 Shoulder Taper
To KY 8
1:100 Shoulder Taper
℄ Brg. E.B. 1
Sta.178+88.16
Begin Bridge
Sta.178+84.70
℄ Pier 1
Sta.180+35.00
℄ Pier 2
Sta.181+90.00
℄ Pier 3
Sta.183+45.00
℄ Pier 4
Sta.185+00.00
℄ Brg. E.B. 2
Sta.186+46.83
Toe of Embankment
Access Road (See Roadway Plans)
NOTE: For Guardrail Connection to Bridge End, see Roadway Plans.
F.B. Ditch
Top of Cut
CREEK
20:1 Berm
800' V.C.
(-)4.00%
(-)2.00%
P.V.T. Sta.178+00
Elev.723.59
P.V.I. Sta.174+00
Elev.751.59
STRUCTURE LIMITS
P.V.I. Sta.207+00
Elev.685.59
PROFILE GRADE
PLAN
(SUPERSTRUCTURE REMOVED)
Approximate Floodway Limits
LAYOUT - PLAN
8-26-94

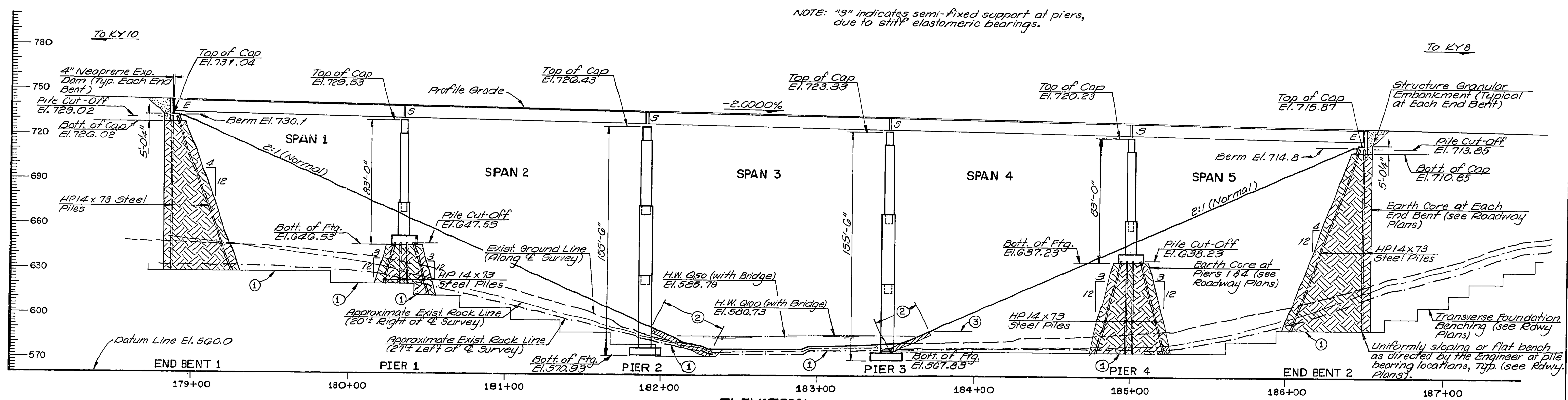
U.S. 62/68 Over Lawrence Creek — SHEET 3

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
MASON
U.S. 62/68

STATION 182+67.50 — ROAD FD 04 0062 N 017-018 D — P.E. PROJECT NO.

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		23687

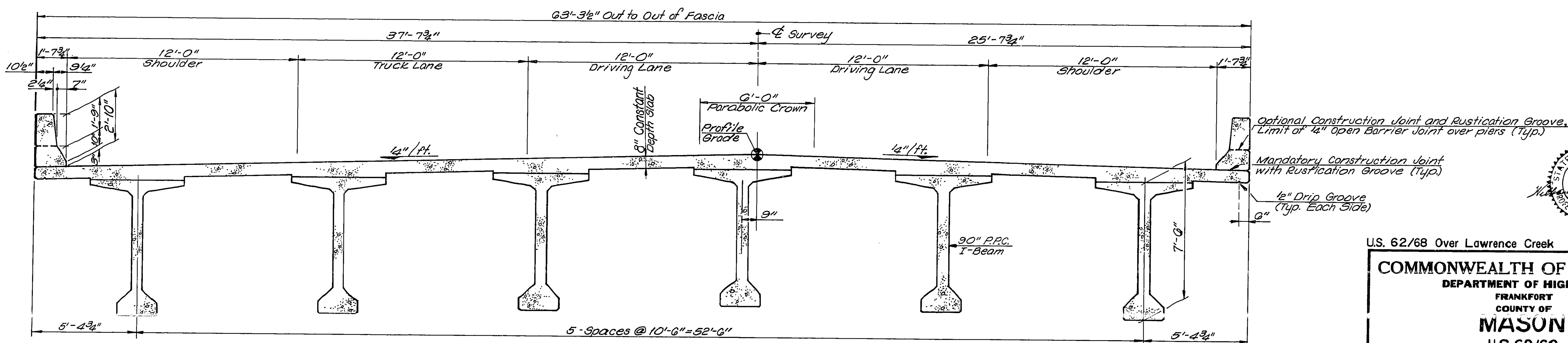
NOTE: "S" indicates semi-fixed support at piers, due to stiff elastomeric bearings.



ELEVATION

146'-10" ~ 155'-0" ~ 155'-0" ~ 155'-0" ~ 146'-10" 90" P.P.C. I-Beams
(Continuous for Live Load; Composite)
HS25 Live Load, 60'-0" Roadway, 20° Skew Left,
68'-0" Out to Out Shoulder at Bridge, 2:1 Fill Slopes

NOTATIONS
1. Rock Line is the Potential Scour Limit.
2. Gabion Basket Revetment (see Roadway Plans)
3. Protect from Rock Line up to El. 590



TYPICAL DECK SECTION
(Looking Ahead)

U.S. 62/68 Over Lawrence Creek — SHEET 4

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
MASON
U.S. 62/68

ROAD FD 04 0062 N 017-018 D
STATION 182+67.50
P.E. PROJECT NO.

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		23687

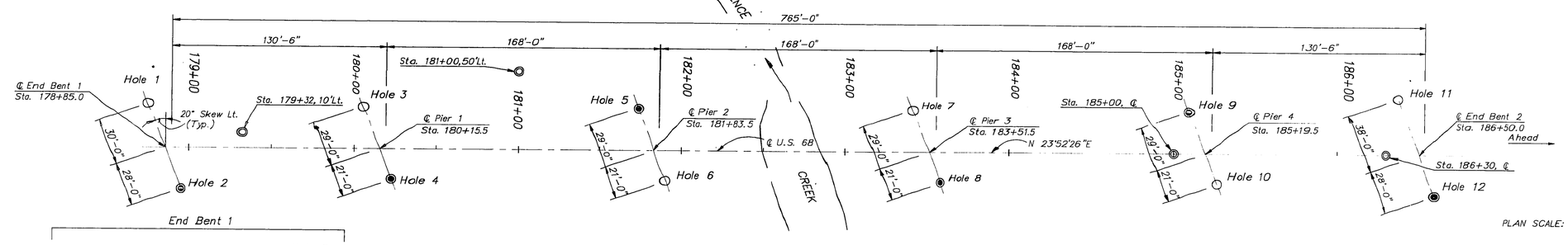
ELEVATION AND TYPICAL DECK SECTION

Designed by WBC, Detailed by RRY, Checked by DCO 6/94

UPDATE DATE
LETTING DATE

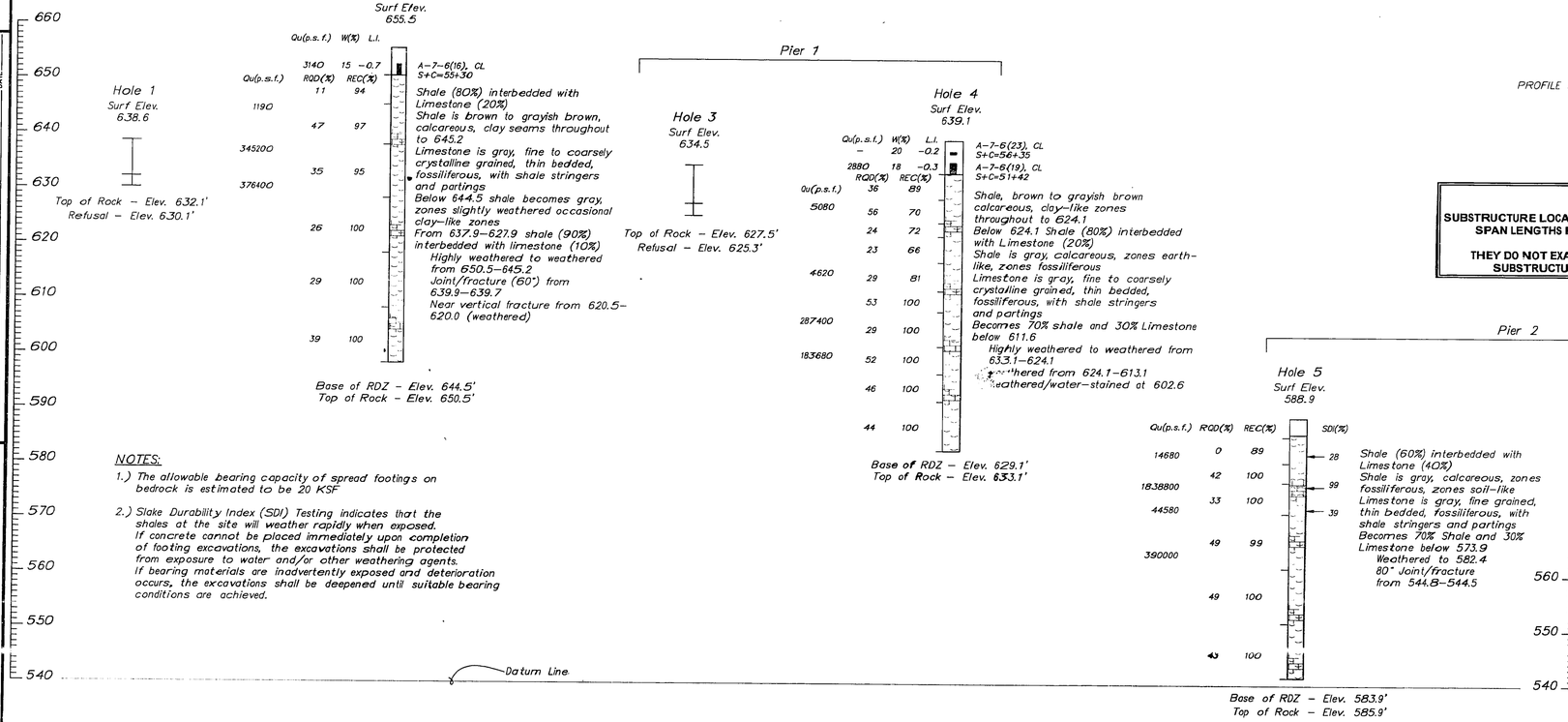
UPDATE DATE _____
LETTING DATE _____

SUBSURFACE DATA



PLAN SCALE: 1"=30'

PROFILE SCALE: Vertical – 1"=10'
Horizontal – Not to Scale



NOTE

SUBSTRUCTURE LOCATIONS FOR THESE BORINGS ARE BASED ON SPAN LENGTHS FOR A STEEL GIRDER BRIDGE DESIGN.

THEY DO NOT EXACTLY MATCH THE SPAN LENGTHS AND SUBSTRUCTURE LOCATIONS FOR THESE PLANS.

NOTES:

1.) The allowable bearing capacity of spread footings on bedrock is estimated to be 20 KSF

2.) Slake Durability Index (SDI) Testing indicates that the shales at the site will weather rapidly when exposed. If concrete cannot be placed immediately upon completion of footing excavations, the excavations shall be protected from exposure to water and/or other weathering agents. If bearing materials are inadvertently exposed and deterioration occurs, the excavations shall be deepened until suitable bearing conditions are achieved.

DESIGNED BY _____ DATE _____
DETAILED BY D.A.C. DATE 2/93
TRACED BY _____ CHECKED BY _____ DATE _____
CHECKED BY L.J.S. DATE _____
CHECKED BY _____ DATE _____
REVISED
REVISED
REVISED
90239

BRIDGE OVER LAWRENCE CREEK SHEET 5

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT

COUNTY OF

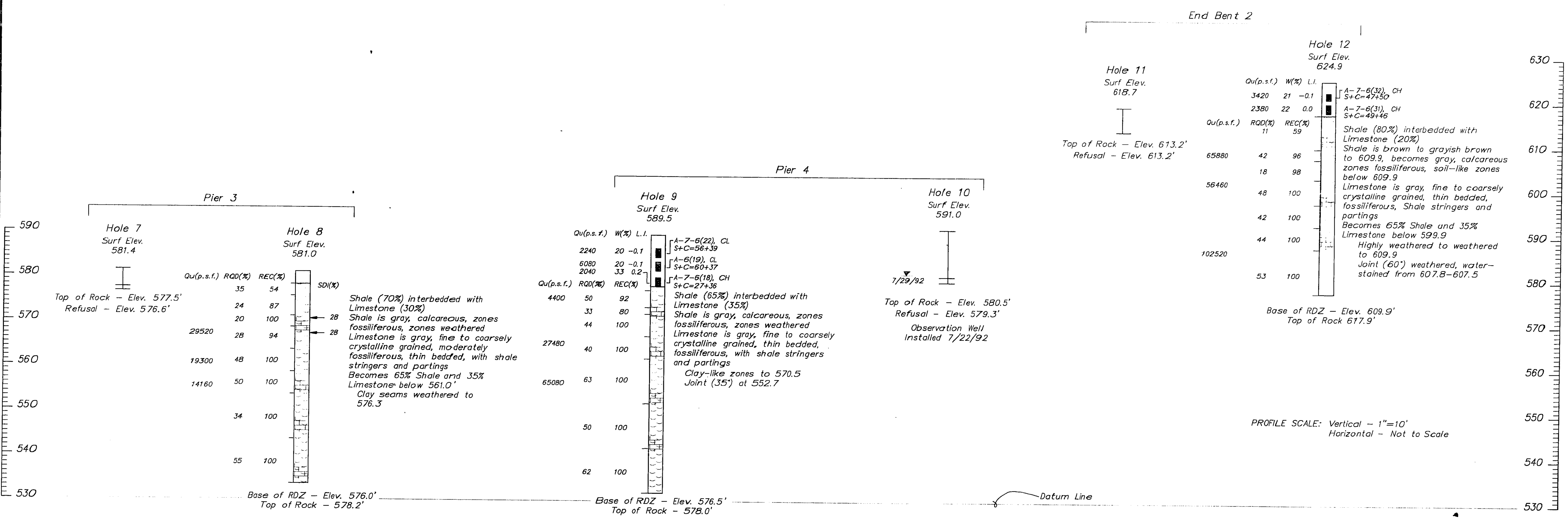
MASON

ROAD SSP 081 0062 017-018 D

STATION 182+67.5 P.E. PROJECT NO. FD040062N017-018D

CONSTRUCTION PROJECT NO. | MAINTENANCE PROJECT NO. | DRAWING NO. 23687

SUBSURFACE DATA



Pier 3
Hole 7
Surf Elev. 581.4
Top of Rock - Elev. 577.5'
Refusal - Elev. 576.6'
Hole 8
Surf Elev. 581.0
Qu(p.s.f.) RQD(%) REC(%) SDI(%)
Shale (70%) interbedded with Limestone (30%)
Shale is gray, calcareous, zones fossiliferous, zones weathered
Limestone is gray, fine to coarsely crystalline grained, moderately fossiliferous, thin bedded, with shale stringers and partings
Becomes 65% Shale and 35% Limestone below 561.0'
Clay seams weathered to 576.3
Base of RDZ - Elev. 576.0'
Top of Rock - 578.2'
Pier 4
Hole 9
Surf Elev. 589.5
Qu(p.s.f.) W(%) L.I.
A-7-6(22), CL S+C=56+39
A-6(19), CL S+C=60+37
A-7-6(18), CH S+C=27+36
Shale (65%) interbedded with Limestone (35%)
Shale is gray, calcareous, zones fossiliferous, zones weathered
Limestone is gray, fine to coarsely crystalline grained, thin bedded, fossiliferous, with shale stringers and partings
Clay-like zones to 570.5
Joint (35°) at 552.7
Base of RDZ - Elev. 576.5'
Top of Rock - 578.0'
Hole 10
Surf Elev. 591.0
7/29/92
Top of Rock - Elev. 580.5'
Refusal - Elev. 579.3'
Observation Well Installed 7/22/92
End Bent 2
Hole 11
Surf Elev. 618.7
Top of Rock - Elev. 613.2'
Refusal - Elev. 613.2'
Hole 12
Surf Elev. 624.9
A-7-6(32), CH S+C=47+50
A-7-6(31), CH S+C=49+46
Shale (80%) interbedded with Limestone (20%)
Shale is brown to grayish brown to 609.9, becomes gray, calcareous zones fossiliferous, soil-like zones below 609.9
Limestone is gray, fine to coarsely crystalline grained, thin bedded, fossiliferous, Shale stringers and partings
Becomes 65% Shale and 35% Limestone below 599.9
Highly weathered to weathered to 609.9
Joint (60°) weathered, water-stained from 607.8-607.5
Base of RDZ - Elev. 609.9'
Top of Rock 617.9'
PROFILE SCALE: Vertical - 1"=10'
Horizontal - Not to Scale
Datum Line

NOTE

SUBSTRUCTURE LOCATIONS FOR THESE BORINGS ARE BASED ON SPAN LENGTHS FOR A STEEL GIRDER BRIDGE DESIGN.

THEY DO NOT EXACTLY MATCH THE SPAN LENGTHS AND SUBSTRUCTURE LOCATIONS FOR THESE PLANS.

BRIDGE OVER LAWRENCE CREEK SHEET 6

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT

COUNTY OF
MASON

ROAD SSP 081 0062 017-018 D
STATION 182+67.5
P.E. PROJECT NO. FD04 0062 N017-018D

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		23687

UPDATE DATE
LETTING DATE

DESIGNED BY
DETAILED BY D.A.C. 90238
TRACED BY
CHECKED BY
CHECKED BY L.J.A. DATE 2/93
CHECKED BY
REVISED DATE
REVISED DATE
REVISED DATE

UPDATE DATE

LETTING DATE

Description of Soil Compactness or Consistency

SOIL TYPE	COMPACTNESS OR CONSISTENCY	RANGE OF PENETRATION RESISTENCE	RANGE OF UNCONFINED COMPRESSIVE STRENGTH
Coarse grained soils. (More than half of material is larger than No. 200 seive size.)	Very loose Loose Medium compact Compact Very compact	Less than 4 blows per foot. 4 to 10 10 to 30 30 to 50 Greater than 50	Not applicable
Fine grained soils (More than half of material is smaller than No. 200 seive size.)	Very soft Soft Medium stiff Stiff Very stiff Hard	Not applicable	Less than 0.25 tsf 0.25 to 0.5 0.5 to 1.0 1.0 to 2.0 2.0 to 4.0 Greater than 4.0

Unified Soil Classifications

MAJOR DIVISIONS		SYMBOL	NAME
COARSE-GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	GW	Well-graded gravels or gravel-sand mixtures, little or no fines.
		GP	Poorly graded gravels or gravel-sand mixtures, little or no fines.
		GM	Silty gravels, gravel-sand-silt mixtures
		GC	Clayey gravels, gravel-sand-clay mixtures
	SAND AND SANDY SOILS	SW	Well-graded sands or gravelly, little or no fines
		SP	Poorly graded sands or gravelly sands, little or no fines
		SM	Silty sands, sand-silt mixture
		SC	Clayey sands, sand-clay mixtures
FINE GRAINED SOILS	SILTS AND CLAYS LL IS LESS THAN 50	ML	Inorganic silts and very fine sands, rock, flour, silty or clayey fine sands or clayey silts with slight plasticity
		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
	SILTS AND CLAYS LL IS GREATER THAN 50	MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts
		CH	Inorganic clays of high plasticity, fat clays
UNCLASSIFIED MATERIAL		NONE	Non-classified material (i.e. overburden, pavement, coal mine waste, slag, rubble, talus, etc.) Include visual description

N	Penetration Resistence
S+C(%)	Material finer than No. 200 sieve
	Rockline Sounding
	Disturbed Sample Boring
	Undisturbed Sample Boring
	Undisturbed Sample Boring and Rock Core
	Rock Core
	Slope Inclinometer Installation
	typical applications
	Approximate Footing Elevation
	Water Elevation
	Thin-walled Tube Sample
	Standard Penetration Test Sample
Qu	Unconfined Compressive Strength
w(%)	Moisture Content
RQD(%)	Rock Quality Designation
SDI(%)	Slake Durability Index
Rec(%)	Core Recovery
	Angle of Internal Friction
	Effective Angle of Internal Friction
c	Cohesion
	Effective Cohesion
	Total Unit Weight
RDZ	Rock Disintegration Zone
OB	Overburden Bench
IB	Intermediate Bench
R	Refusal
NR	Refusal Not Encountered
LI	Liquidity Index
AI	Activity Index

LIMESTONE

SANDSTONE

COAL

SHALE, SOIL-LIKE (SDI ≤ 50)

SHALE, INTERMEDIATE (50 < SDI < 95)

SHALE, ROCK-LIKE (SDI ≥ 95)

Relation of RQD and in situ Rock Quality

RQD (%)	Rock Quality
90 - 100	Excellent
75 - 90	Good
50 - 75	Fair
25 - 50	Poor
0 - 25	Very Poor

US 62 OVER LAWRENCE CREEK SHEET 7

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
MASON
U.S. 62
ROAD SSP 081 0062 017-018 D

STATION 182+67.50

P.E. PROJECT NO. FD040062N017-018 D

CONSTRUCTION PROJECT NO.

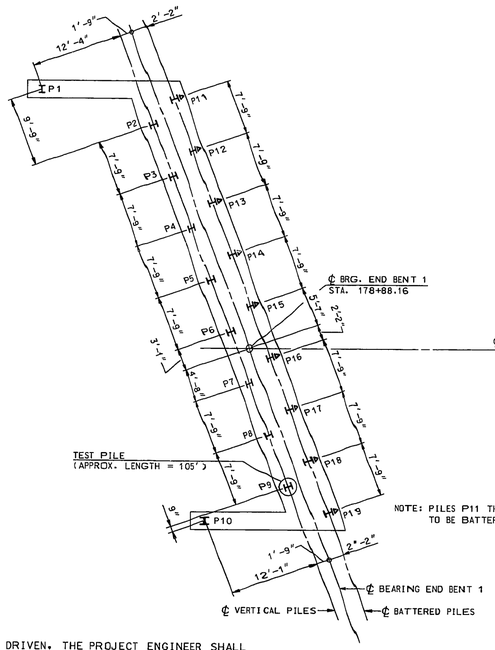
MAINTENANCE PROJECT NO.

DRAWING NO.
23687

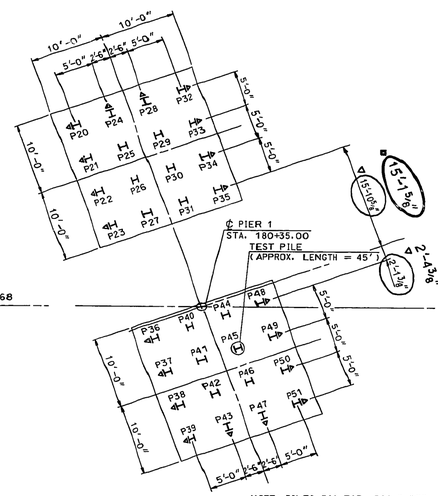
UPDATE DATE
LETTING DATE

DATE 8/4/94 REVISED ▽ COLUMN LOCATION
DATE 8/24/94 REVISED ■ AS PER KY MARKUP
DATE REVISED

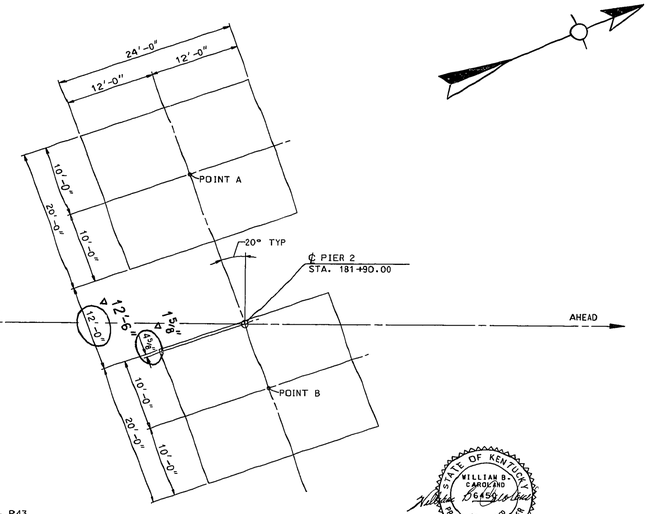
DESIGNED BY: JGS DATE 6/94
DETAILED BY: JGS DATE 6/94
PREPARED BY GRAPHICS SECTION CHECKED BY: DATE
DO CHECKED BY:
RRY & ALF CHECKED BY:



END BENT 1



PIER 1



PIER 2

PILE RECORD NOTE

AFTER ALL PILES HAVE BEEN DRIVEN. THE PROJECT ENGINEER SHALL RECORD FOR EACH PILE. THE "TIP OF PILE ELEVATION" AS DRIVEN. THE "LENGTH OF PILE IN PLACE" AND THE "DRIVING RESISTANCE". AND SHALL RETURN ONE BLUE LINE COPY OF THIS SHEET WITH THIS DATA TO THE DIRECTOR. DIVISION OF BRIDGES SO THAT THE DATA MAY BE RECORDED ON THE ORIGINAL PLANS. LENGTHS OF PILES IN PLACE SHOWN HEREON ARE THE ACTUAL LENGTHS OF PILES IN THE FINISHED STRUCTURE BELOW CUT-OFF ELEVATION.
THIS PILE RECORD DOES NOT REPLACE OTHER RECORDS OF PILES REQUIRED TO BE KEPT AND SUBMITTED BY THE PROJECT ENGINEER.

PILE RECORD – END BENT 1

PILE NUMBER	PILE CUT-OFF ELEVATION	TIP OF PILE ELEVATION AS DRIVEN	LENGTH OF PILE IN PLACE (LIN. FT.)	DESIGN HORIZONTAL THRUST (TONS)	MAXIMUM DESIGN AXIAL LOAD (TONS)	MINIMUM DESIGN AXIAL LOAD (TONS)	REQUIRED DRIVING RESISTANCE (TONS)	ACTUAL DRIVING RESISTANCE (TONS)
P1	729.024			1.5	85.0	① N/A	② N/A	
P2	729.024			1.5	85.0	① N/A	② N/A	
P3	729.024			1.5	85.0	① N/A	② N/A	
P4	729.024			1.5	85.0	① N/A	② N/A	
P5	729.024			1.5	85.0	① N/A	② N/A	
P6	729.024			1.5	85.0	① N/A	② N/A	
P7	729.024			1.5	85.0	① N/A	② N/A	
P8	729.024			1.5	85.0	① N/A	② N/A	
P9	729.024			1.5	85.0	① N/A	② N/A	
P10	729.024			1.5	85.0	① N/A	② N/A	
P11	729.024			1.5	85.0	① N/A	② N/A	
P12	729.024			1.5	85.0	① N/A	② N/A	
P13	729.024			1.5	85.0	① N/A	② N/A	
P14	729.024			1.5	85.0	① N/A	② N/A	
P15	729.024			1.5	85.0	① N/A	② N/A	
P16	729.024			1.5	85.0	① N/A	② N/A	
P17	729.024			1.5	85.0	① N/A	② N/A	
P18	729.024			1.5	85.0	① N/A	② N/A	
P19	729.024			1.5	85.0	① N/A	② N/A	

PILE RECORD – PIER 1

PILE NUMBER	PILE CUT-OFF ELEVATION	TIP OF PILE ELEVATION AS DRIVEN	LENGTH OF PILE IN PLACE (LIN. FT.)	DESIGN HORIZONTAL THRUST (TONS)	MAXIMUM DESIGN AXIAL LOAD (TONS)	MINIMUM DESIGN AXIAL LOAD (TONS)	REQUIRED DRIVING RESISTANCE (TONS)	ACTUAL DRIVING RESISTANCE (TONS)
P20	647.533			2.0	103	① N/A	② N/A	
P21	647.533			2.0	103	① N/A	② N/A	
P22	647.533			2.0	103	① N/A	② N/A	
P23	647.533			2.0	103	① N/A	② N/A	
P24	647.533			2.0	103	① N/A	② N/A	
P25	647.533			2.0	103	① N/A	② N/A	
P26	647.533			2.0	103	① N/A	② N/A	
P27	647.533			2.0	103	① N/A	② N/A	
P28	647.533			2.0	103	① N/A	② N/A	
P29	647.533			2.0	103	① N/A	② N/A	
P30	647.533			2.0	103	① N/A	② N/A	
P31	647.533			2.0	103	① N/A	② N/A	
P32	647.533			2.0	103	① N/A	② N/A	
P33	647.533			2.0	103	① N/A	② N/A	
P34	647.533			2.0	103	① N/A	② N/A	
P35	647.533			2.0	103	① N/A	② N/A	
P36	647.533			2.0	103	① N/A	② N/A	
P37	647.533			2.0	103	① N/A	② N/A	
P38	647.533			2.0	103	① N/A	② N/A	
P39	647.533			2.0	103	① N/A	② N/A	
P40	647.533			2.0	103	① N/A	② N/A	
P41	647.533			2.0	103	① N/A	② N/A	
P42	647.533			2.0	103	① N/A	② N/A	
P43	647.533			2.0	103	① N/A	② N/A	
P44	647.533			2.0	103	① N/A	② N/A	
P45	647.533			2.0	103	① N/A	② N/A	
P46	647.533			2.0	103	① N/A	② N/A	
P47	647.533			2.0	103	① N/A	② N/A	
P48	647.533			2.0	103	① N/A	② N/A	
P49	647.533			2.0	103	① N/A	② N/A	
P50	647.533			2.0	103	① N/A	② N/A	
P51	647.533			2.0	103	① N/A	② N/A	

① NO UPLIFT IS ANTICIPATED
② PILES SHALL BE END BEARING & DRIVEN TO REFUSAL. PILE TIPS SHALL BE SEATED AT OR BELOW ROCK SURFACE. DRIVING RESISTANCE FORMULA DOES NOT APPLY.

FOUNDATION LAYOUT

NOTES:
ALL PILES ARE HP 14x73. SEE STD. DWG. BPS-009 (C.E.)
END BENT 1 & 2 AND PIERS 1 & 4 SHALL REQUIRE 14" PILE POINTS. THE POINTS SHALL BE THE TYPE FOR KEYING INTO A SLOPING ROCK SURFACE. THE "SPECIAL NOTE FOR PILE POINTS" SHALL APPLY TO THIS WORK.
DIMENSIONS SHOWN ARE GIVEN AT THE BOTTOM OF THE END BENT CAP AND PIER FOOTINGS.

SPREAD FOOTING RECORD – PIER 2

POINT	PLAN FOOTING ELEVATION	AS-BUILT FOOTING ELEVATION
A	570.933	
B	570.933	

FOOTING IS DESIGNED FOR A MAXIMUM PRESSURE OF 8,500 PSF.
THE ALLOWABLE BEARING CAPACITY IS 20,000 PSF.

NOTE: AFTER ALL FOUNDATIONS HAVE BEEN PLACED, THE PROJECT RESIDENT ENGINEER SHALL RECORD THE BOTTOM OF FOOTING ELEVATION "AS-BUILT" AND SHALL SUBMIT ONE COPY OF THIS SHEET WITH THIS DATA TO THE DIRECTOR, DIVISION OF BRIDGES.

STATE OF KENTUCKY
WILLIAM B. CAROLAND
REGISTERED PROFESSIONAL ENGINEER
8-26-94

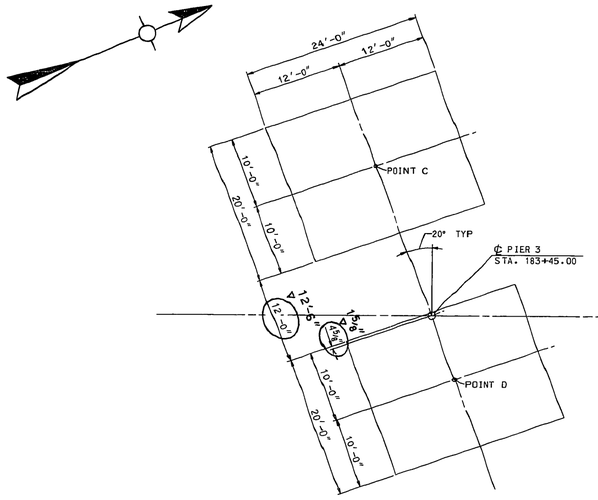
U.S. 62/68 OVER LAWRENCE CREEK SHEET 8

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
MASON
U.S. 62/68
ROAD
STATION 182+67.50 P.E. PROJECT NO.

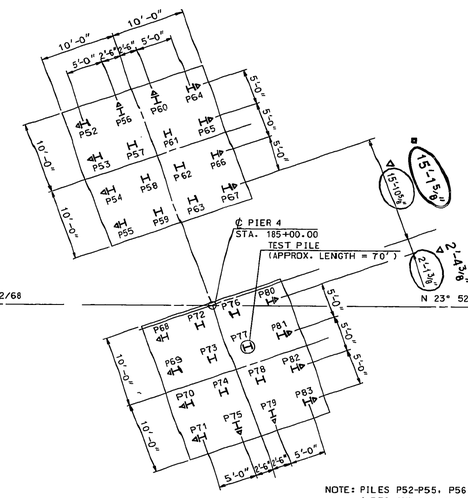
CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		23687

UPDATE DATE

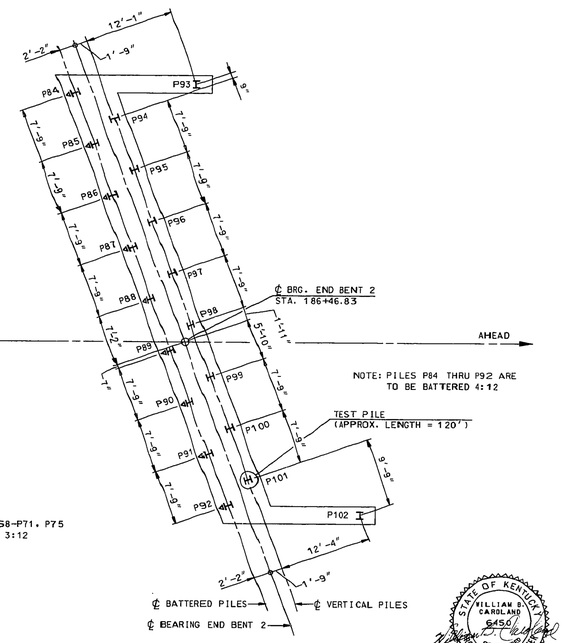
LETTING DATE



PIER 3



PIER 4



END BENT 2

NOTE: PILES P84 THRU P92 ARE TO BE BATTERED 4:12

NOTE: PILES P52-P55, P56 & P60, P64-P67, P68-P71, P75 & P79 AND P80-P83 ARE TO BE BATTERED 3:12

PILE RECORD – PIER 4

PILE NUMBER	PILE CUT-OFF ELEVATION	TIP OF PILE ELEVATION AS DRIVEN	LENGTH OF PILE IN PLACE (LIN. FT.)	DESIGN HORIZONTAL THRUST (TONS)	MAXIMUM DESIGN AXIAL LOAD (TONS)	MINIMUM DESIGN AXIAL LOAD (TONS)	REQUIRED DRIVING RESISTANCE (TONS)	ACTUAL DRIVING RESISTANCE (TONS)
P52	638.234			2.0	103	① N/A	② N/A	
P53	638.234			2.0	103	① N/A	② N/A	
P54	638.234			2.0	103	① N/A	② N/A	
P55	638.234			2.0	103	① N/A	② N/A	
P56	638.234			2.0	103	① N/A	② N/A	
P57	638.234			2.0	103	① N/A	② N/A	
P58	638.234			2.0	103	① N/A	② N/A	
P59	638.234			2.0	103	① N/A	② N/A	
P60	638.234			2.0	103	① N/A	② N/A	
P61	638.234			2.0	103	① N/A	② N/A	
P62	638.234			2.0	103	① N/A	② N/A	
P63	638.234			2.0	103	① N/A	② N/A	
P64	638.234			2.0	103	① N/A	② N/A	
P65	638.234			2.0	103	① N/A	② N/A	
P66	638.234			2.0	103	① N/A	② N/A	
P67	638.234			2.0	103	① N/A	② N/A	
P68	638.234			2.0	103	① N/A	② N/A	
P69	638.234			2.0	103	① N/A	② N/A	
P70	638.234			2.0	103	① N/A	② N/A	
P71	638.234			2.0	103	① N/A	② N/A	
P72	638.234			2.0	103	① N/A	② N/A	
P73	638.234			2.0	103	① N/A	② N/A	
P74	638.234			2.0	103	① N/A	② N/A	
P75	638.234			2.0	103	① N/A	② N/A	
P76	638.234			2.0	103	① N/A	② N/A	
P77	638.234			2.0	103	① N/A	② N/A	
P78	638.234			2.0	103	① N/A	② N/A	
P79	638.234			2.0	103	① N/A	② N/A	
P80	638.234			2.0	103	① N/A	② N/A	
P81	638.234			2.0	103	① N/A	② N/A	
P82	638.234			2.0	103	① N/A	② N/A	
P83	638.234			2.0	103	① N/A	② N/A	

① NO UPLIFT IS ANTICIPATED

② PILES SHALL BE END BEARING & DRIVEN TO REFUSAL. PILE TIPS SHALL BE SEATED AT OR BELOW ROCK SURFACE. DRIVING RESISTANCE FORMULA DOES NOT APPLY.

PILE RECORD NOTE

AFTER ALL PILES HAVE BEEN DRIVEN, THE PROJECT ENGINEER SHALL RECORD FOR EACH PILE, THE "TIP OF PILE ELEVATION" AS DRIVEN, THE "LENGTH OF PILE IN PLACE" AND THE "DRIVING RESISTANCE", AND SHALL RETURN ONE BLUE LINE COPY OF THIS SHEET WITH THIS DATA TO THE DIRECTOR, DIVISION OF BRIDGES SO THAT THE DATA MAY BE RECORDED ON THE ORIGINAL PLANS. LENGTHS OF PILES IN PLACE SHOWN HEREON ARE THE ACTUAL LENGTHS OF PILES IN THE FINISHED STRUCTURE BELOW CUT-OFF ELEVATION.
THIS PILE RECORD DOES NOT REPLACE OTHER RECORDS OF PILES REQUIRED TO BE KEPT AND SUBMITTED BY THE PROJECT ENGINEER.

NOTES:

ALL PILES ARE HP 14x73, SEE STD. DWG. BPS-009 (C.E.)

END BENT 1 & 2 AND PIERS 1 & 4 SHALL REQUIRE 14° PILE POINTS. THE POINTS SHALL BE THE TYPE FOR KEYING INTO A SLOPING ROCK SURFACE. THE "SPECIAL NOTE FOR PILE POINTS" SHALL APPLY TO THIS WORK.

DIMENSIONS SHOWN ARE GIVEN AT THE BOTTOM OF THE END BENT CAP AND PIER FOOTINGS.

PILE RECORD – END BENT 2

PILE NUMBER	PILE CUT-OFF ELEVATION	TIP OF PILE ELEVATION AS DRIVEN	LENGTH OF PILE IN PLACE (LIN. FT.)	DESIGN HORIZONTAL THRUST (TONS)	MAXIMUM DESIGN AXIAL LOAD (TONS)	MINIMUM DESIGN AXIAL LOAD (TONS)	REQUIRED DRIVING RESISTANCE (TONS)	ACTUAL DRIVING RESISTANCE (TONS)
P84	713.850			1.5	85.0	① N/A	② N/A	
P85	713.850			1.5	85.0	① N/A	② N/A	
P86	713.850			1.5	85.0	① N/A	② N/A	
P87	713.850			1.5	85.0	① N/A	② N/A	
P88	713.850			1.5	85.0	① N/A	② N/A	
P89	713.850			1.5	85.0	① N/A	② N/A	
P90	713.850			1.5	85.0	① N/A	② N/A	
P91	713.850			1.5	85.0	① N/A	② N/A	
P92	713.850			1.5	85.0	① N/A	② N/A	
P93	713.850			1.5	85.0	① N/A	② N/A	
P94	713.850			1.5	85.0	① N/A	② N/A	
P95	713.850			1.5	85.0	① N/A	② N/A	
P96	713.850			1.5	85.0	① N/A	② N/A	
P97	713.850			1.5	85.0	① N/A	② N/A	
P98	713.850			1.5	85.0	① N/A	② N/A	
P99	713.850			1.5	85.0	① N/A	② N/A	
P100	713.850			1.5	85.0	① N/A	② N/A	
P101	713.850			1.5	85.0	① N/A	② N/A	
P102	713.850			1.5	85.0	① N/A	② N/A	

SPREAD FOOTING RECORD – PIER 3

POINT	PLAN FOOTING ELEVATION	AS-BUILT FOOTING ELEVATION
C	567.834	
D	567.834	

FOOTING IS DESIGNED FOR A MAXIMUM PRESSURE OF 8,500 PSF.
THE ALLOWABLE BEARING CAPACITY IS 20,000 PSF.

NOTE: AFTER ALL FOUNDATIONS HAVE BEEN PLACED, THE PROJECT RESIDENT ENGINEER SHALL RECORD THE BOTTOM OF FOOTING ELEVATION "AS-BUILT" AND SHALL SUBMIT ONE COPY OF THIS SHEET WITH THIS DATA TO THE DIRECTOR, DIVISION OF BRIDGES.

U.S. 62/68 OVER LAWRENCE CREEK SHEET 9

FOUNDATION LAYOUT

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
MASON
U.S. 62/68
ROAD

STATION 182+67.50 P. E. PROJECT NO.

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		23687

DESIGNED BY: DJD CHECKED BY: JGS DATE: 6/94
DETAILED BY: RRY / ALF CHECKED BY: JGS DATE: 6/94
PREPARED BY: GRAPHICS SECTION CHECKED BY: DATE:

REVISED ● COLUMN LOCATION
REVISED ■ AS PER KY MARKUP
REVISED
REVISED

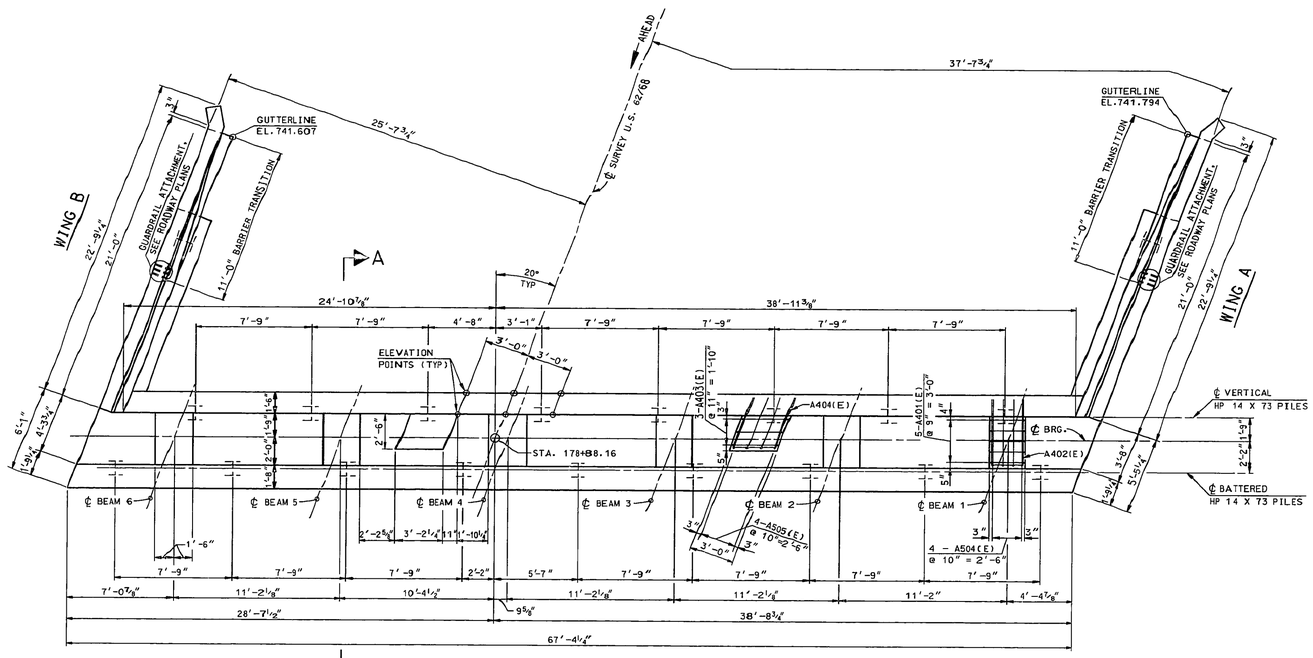
DATE 8/4/94
DATE 8/24/94
DATE

UPDATE DATE

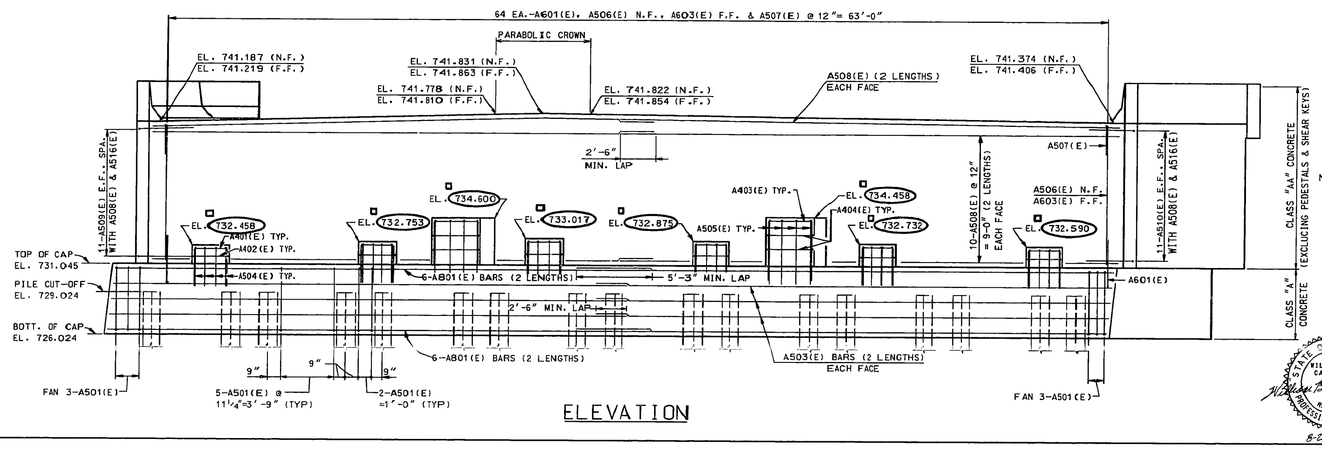
LETTING DATE

DESIGNED BY	D.D.	CHECKED BY	MRC	DATE	6/24	REVISED	AS PER KY MARKUP
DETAILED BY	A.I.	CHECKED BY		DATE	6/24	REVISED	
PREPARED BY GRAPHIC SECTION		CHECKED BY		DATE		REVISED	

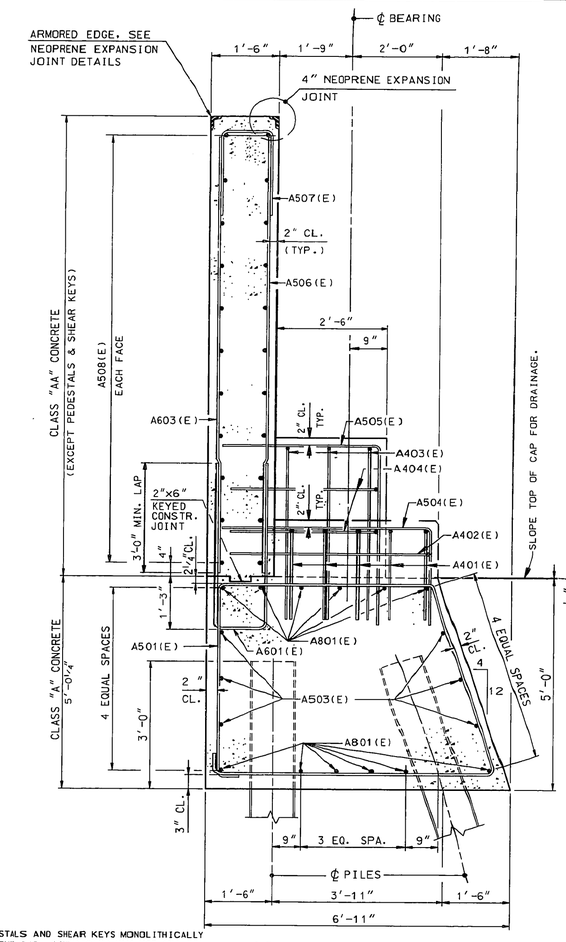
date 6/24/24



PLAN



ELEVATION



SECTION A-A

NOTES:

PLACE PEDESTALS AND SHEAR KEYS MONOLITHICALLY WITH END BENT CAP. CONTRACTOR MAY USE AN OPTIONAL CONSTRUCTION JOINT 4" ABOVE END BENT CAP FOR PEDESTALS & SHEAR KEYS IN EXCESS OF 6" IN HEIGHT.

STRUCTURE GRANULAR BACKFILL BEHIND THE BACKWALL SHALL NOT BE PLACED UNTIL AFTER ALL DECK CONCRETE HAS BEEN POURED BETWEEN THE MANDATORY DECK CONSTRUCTION JOINTS NEAR THE ENDS OF THE DECK.

WILLIAM B CAROLAND 9450 REGISTERED PROFESSIONAL ENGINEER STATE OF KENTUCKY 8-26-24

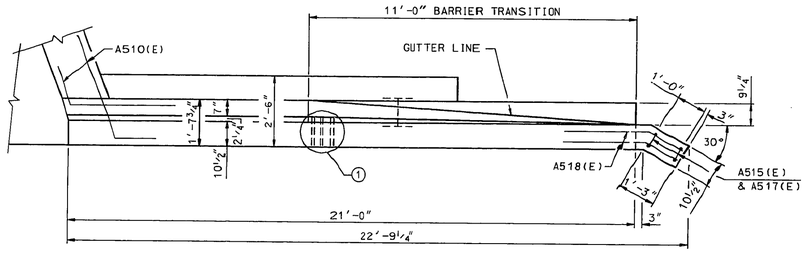
END BENT 1

U.S. 62/68 OVER LAWRENCE CREEK SHEET 10

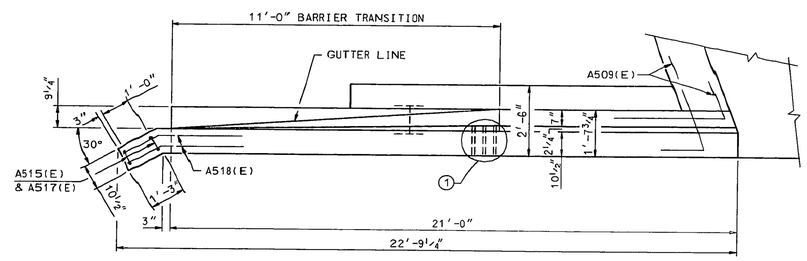
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
MASON
U.S. 62/68
ROAD
STATION 182+67.50 P.E. PROJECT NO.

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		23687

UPDATE DATE
LETTING DATE



WING A PLAN



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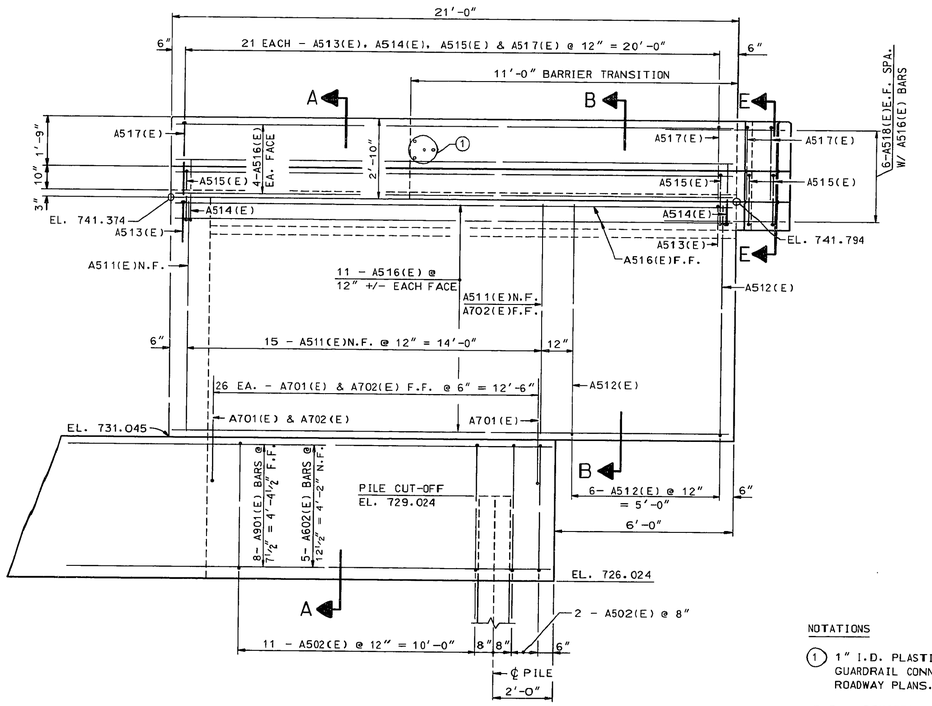
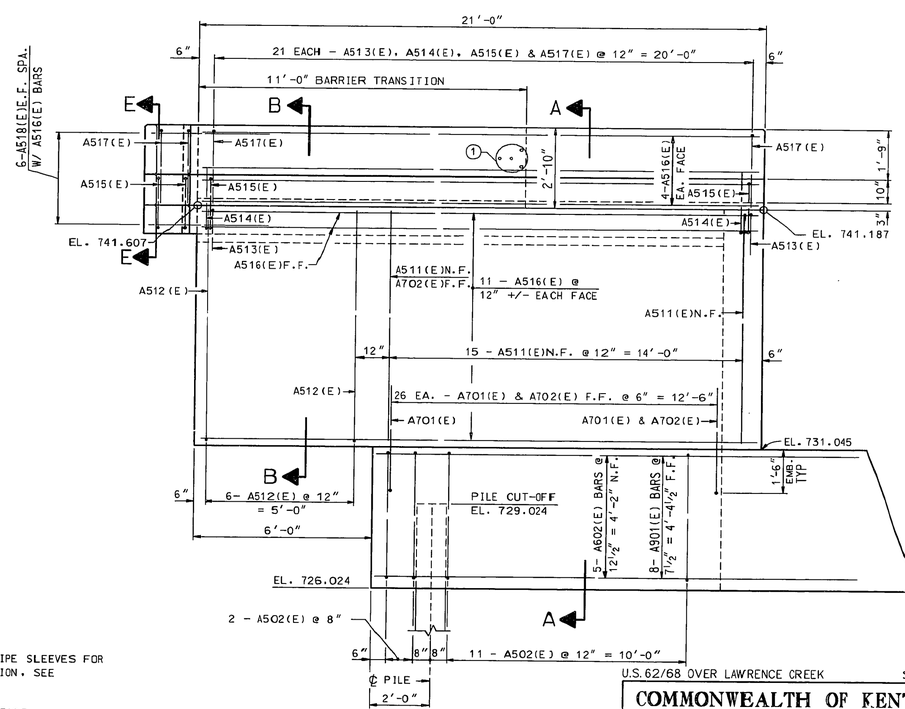


WING A ELEVATION



WING B ELEVATION

NOTATIONS

(1) 1" I.D. PLASTIC PIPE SLEEVES FOR GUARDRAIL CONNECTION. SEE ROADWAY PLANS.

E.F. - DENOTES EACH FACE

N.F. - DENOTES NEAR FACE

F.F. - DENOTES FAR FACE

* - INDICATES TO FIELD BEND AS REQ'D.

STATE OF KENTUCKY
WILLIAM D. CAROLAND
6459
REGISTERED PROFESSIONAL ENGINEER
8-26-94

END BENT 1

U.S.62/68 OVER LAWRENCE CREEK

SHEET 11

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
MASON
U.S. 62/68
ROAD
STATION 182+67.50 P. E. PROJECT NO.

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		23687

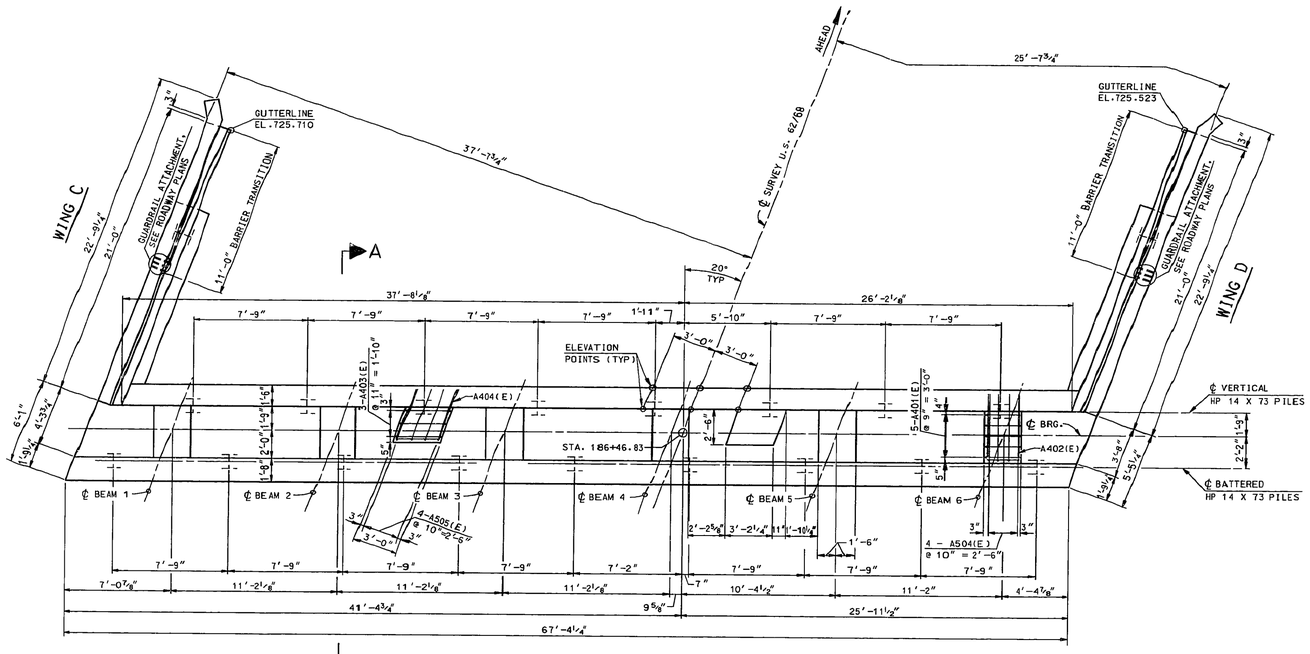
DESIGNED BY	DCD	CHECKED BY	WBC
DETAILED BY	ALF	CHECKED BY	DCD
PREPARED BY GRAPHICS SECTION	CHECKED BY		

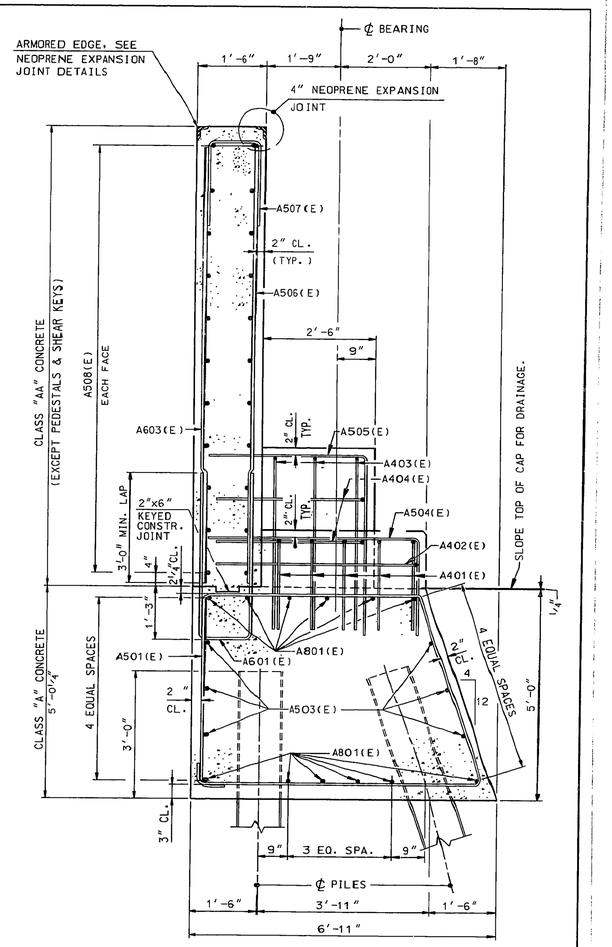
DATE 6/94 REVISED
DATE 6/94 REVISED
DATE REVISED
DATE
DATE
DATE

UPDATE DATE

LETTING DATE

DESIGNED BY	DCI	DATE 8/24/94	REVISED AS PER KY MARKUP
DRAWN BY	MBC	DATE 6/94	REVISED
CHECKED BY	ALL	DATE	REVISED
PREPARED BY GRAPHICS	DCI	DATE	REVISED
EDITION CHECKED BY	DCI	DATE	REVISED





NOTES:

PLACE PEDESTALS AND SHEAR KEYS MONOLITHICALLY WITH END BENT CAP. CONTRACTOR MAY USE AN OPTIONAL CONSTRUCTION JOINT 4" ABOVE END BENT CAP FOR PEDESTALS & SHEAR KEYS IN EXCESS OF 6" IN HEIGHT.

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STATE OF KENTUCKY WILLIAM D. CARLAND 9520 REGISTERED PROFESSIONAL ENGINEER 8-26-94

END BENT 2

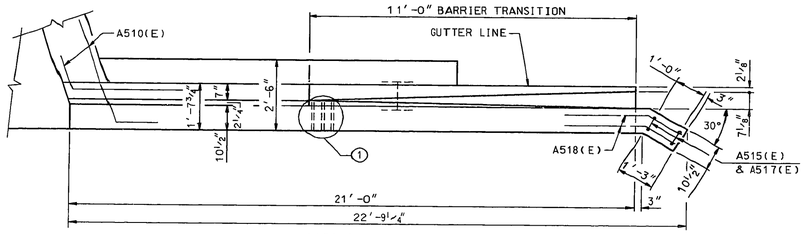
U.S. 62/68 OVER LAWRENCE CREEK SHEET 12

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
MASON
U.S. 62/68
ROAD
STATION 182+67.50 P. E. PROJECT NO.

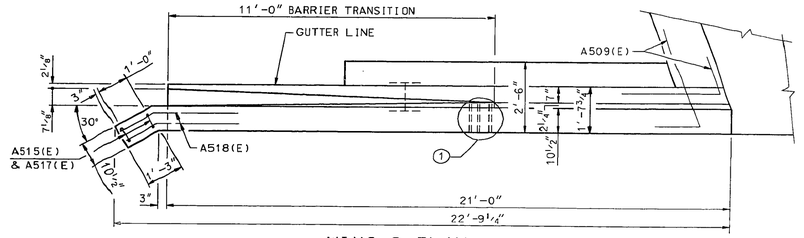
CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		23687

UPDATE DATE

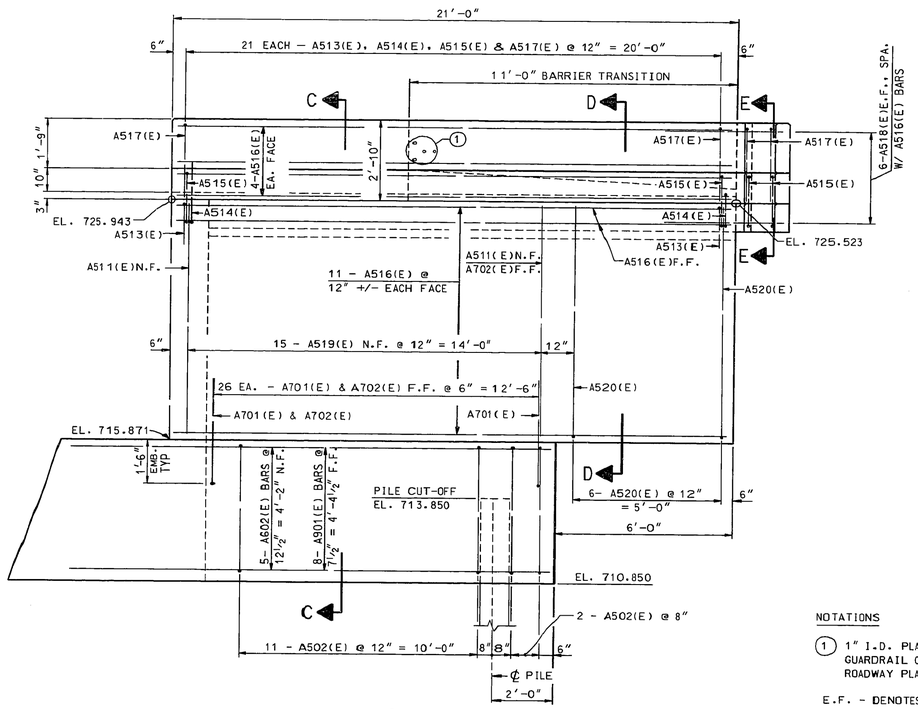
LETTING DATE



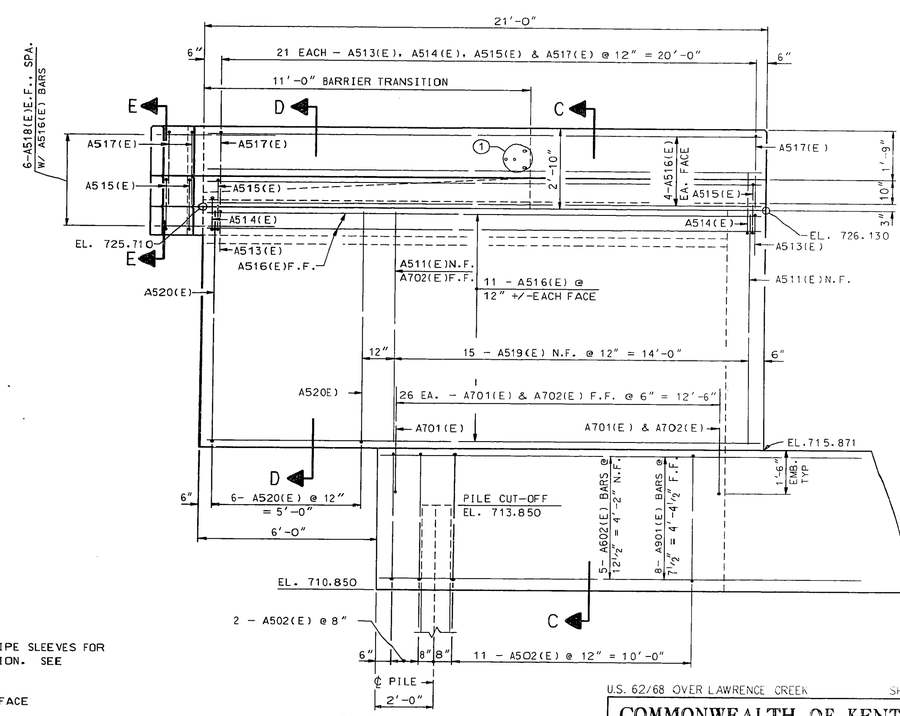
WING D PLAN



WING C PLAN



WING D ELEVATION



WING C ELEVATION

NOTATIONS

(1) 1" I.D. PLASTIC PIPE SLEEVES FOR GUARDRAIL CONNECTION. SEE ROADWAY PLANS.

E.F. - DENOTES EACH FACE

N.F. - DENOTES NEAR FACE

F.F. - DENOTES FAR FACE

* - INDICATES TO FIELD BEND AS REQ'D.

DESIGNED BY: D.C.D.	CHECKED BY: W.B.C.	DATE: 6/94	REVISED
DETAILED BY: A.L.F.	CHECKED BY: D.C.D.	DATE: 6/94	REVISED
PREPARED BY GRAPHICS SECTION	CHECKED BY:	DATE	REVISED

STATE OF KENTUCKY — WILLIAM B. CAROLAND — 9550 — REGISTERED PROFESSIONAL ENGINEER

8-26-94

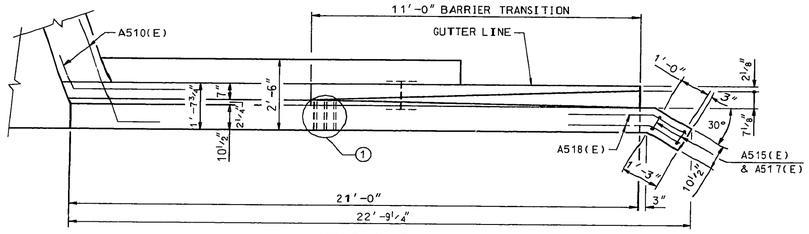
END BENT 2

U.S. 62/68 OVER LAWRENCE CREEK SHEET 13

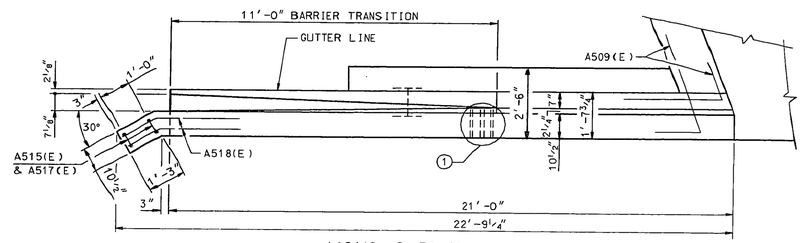
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
MASON
U.S. 62/68
ROAD

STATION 182+67.50 P. E. PROJECT NO.

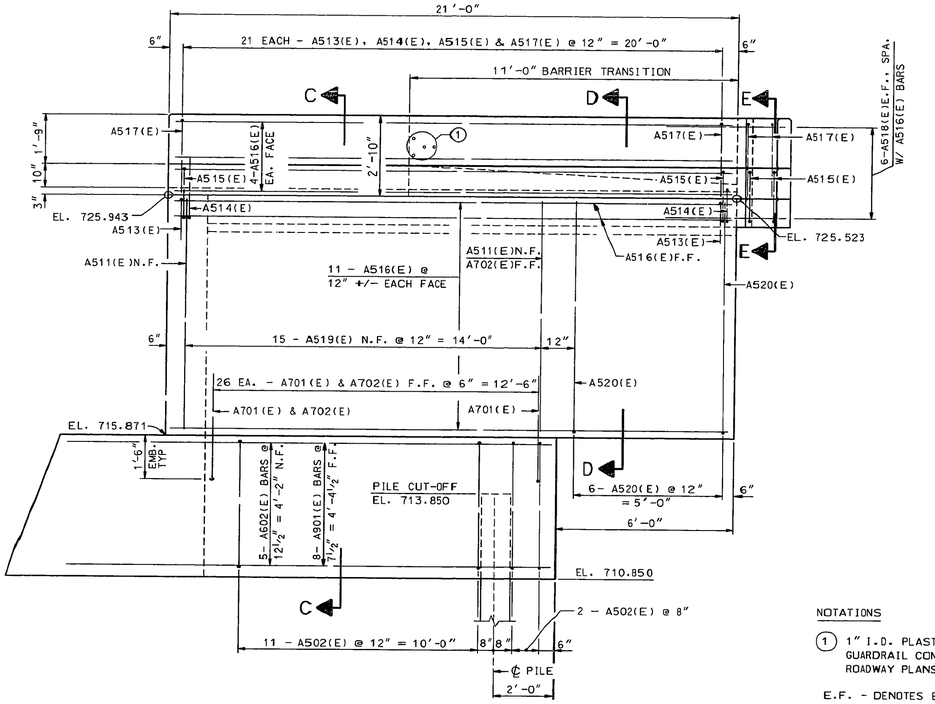
CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		23687



WING D PLAN



WING C PLAN



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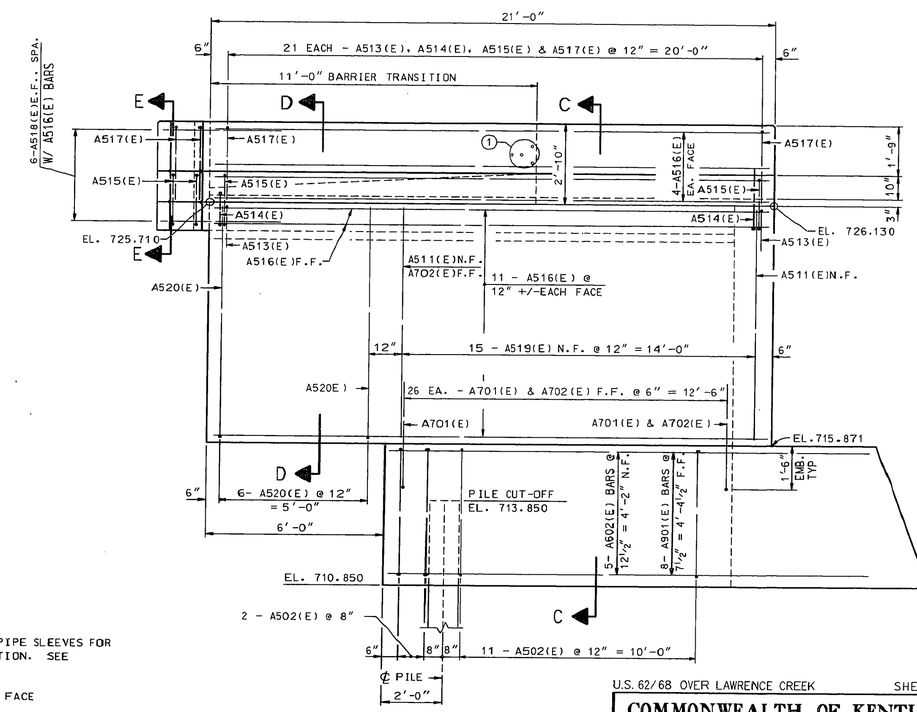

WING C ELEVATION

NOTATIONS

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F.F. - DENOTES FAR FACE

* - INDICATES TO FIELD BEND AS REQ'D.

STATE OF KENTUCKY WILLIAM B. CAROLANS 9950 REGISTERED PROFESSIONAL ENGINEER 8-26-94

END BENT 2

U.S. 62/68 OVER LAWRENCE CREEK SHEET 13

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
MASON
U.S. 62/68
ROAD
STATION 182+67.50 P. E. PROJECT NO.

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		23687

UPDATE DATE
LETTING DATE

DESIGNED BY	DCD	CHECKED BY	WBC DATE 6/94
DETAILED BY	JALF	CHECKED BY	DCD DATE 6/94
PREPARED BY GRAPHICS SECTION		CHECKED BY	DATE

DATE REVISED
DATE REVISED
DATE REVISED

UPDATE DATE

LETTING DATE

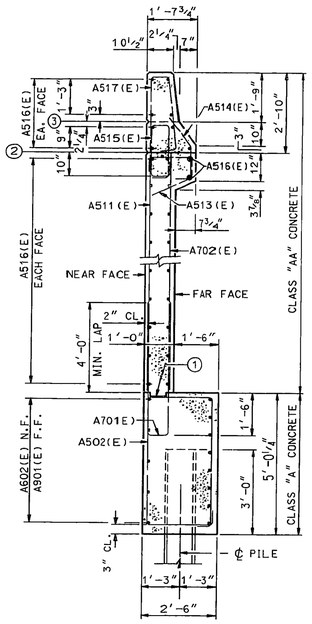
BILL OF REINFORCEMENT

MARK	TYPE	SIZE	NUMBER EB 1	NUMBER EB 2	LENGTH Ft.	LENGTH In.	LOCATION	A Ft.	A In.	B Ft.	B In.	C Ft.	C In.	D Ft.	D In.
A401(E)	1	4	30	30	8	6	PEDESTALS	3	0	2	7				
A402(E)	1	4	6	6	12	3	PEDESTALS	4	10	2	8				
A403(E)	1	4	6	6	11	10	SHEAR KEYS	4	7	2	9				
A404(E)	2	4	4	4	9	4	SHEAR KEYS	2	10	3	3 1/2	3	6	1	3 1/4
A501(E)	3	5	62	62	21	7	CAP								
A502(E)	4	5	26	26	14	3	WING FOOTING	4	7	2	2				
A503(E)	STR.	5	12	12	34	9	CAP								
A504(E)	5	5	24	24	7	10	PEDESTALS	3	0	4	10				
A505(E)	5	5	8	8	8	5	SHEAR KEY	4	7	3	10				
A506(E)	STR.	5	64	64	9	9	BACKWALL								
A507(E)	1	5	64	64	6	1	BACKWALL	2	6	1	2				
A508(E)	STR.	5	22	22	34	9	BACKWALL								
A509(E)	6	5	22	22	6	7	BACKWALL - WING	4	6	2	2	2	0 1/2	0	9
A510(E)	7	5	22	22	6	7	BACKWALL - WING	4	6	2	2	2	0 1/2	0	9
A511(E)	STR.	5	30	——	9	11	WING WALL								
A512(E)	1	5	12	——	20	9	WING WALL	10	1	0	8				
A513(E)	8	5	42	42	3	11	WING WALL								
A514(E)	9	5	42	42	2	9	WING WALL & BARRIER								
A515(E)	4	5	46	46	5	5	WING WALL & BARRIER	1	9 1/2	0	6 1/2				
A516(E)	STR.	5	64	64	20	8	WING WALL & BARRIER								
A517(E)	10	5	46	46	6	1	WING BARRIER								
A518(E)	7	5	24	24	3	11	WING TURNBACK	2	9	1	2	0	7	1	0
A519(E)	STR.	5	——	30	9	6	WING WALL								
A520(E)	1	5	——	12	19	3	WING WALL	9	4	0	8				
A601(E)	1	6	64	64	9	7	CAP-BACKWALL	4	3	1	2				
A602(E)	STR.	6	10	10	18	0	WING FOOTING								
A603(E)	STR.	6	64	64	9	9	BACKWALL								
A701(E)	1	7	52	52	11	7	WING FTG.-WING WALL	5	6	0	8				
A702(E)	STR.	7	52	52	9	7	WING WALL								
A801(E)	STR.	8	24	24	36	2	CAP								
A901(E)	STR.	9	16	16	18	0	WING FOOTING								

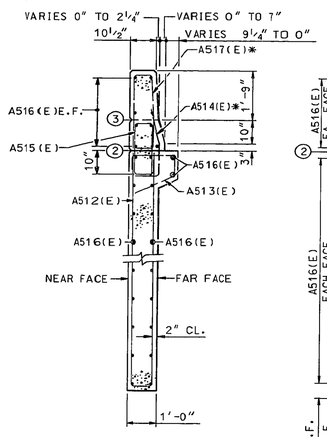
DESIGNED BY DCD CHECKED BY WBC DATE 5/94 REVISED

DETAILED BY ALF CHECKED BY DCD DATE 6/94 REVISED

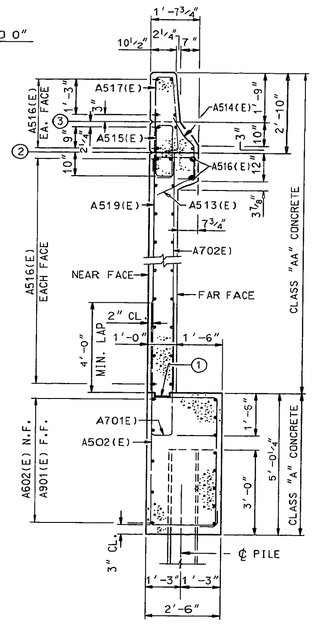
PREPARED BY GRAPHICS SECTION CHECKED BY DATE REVISED



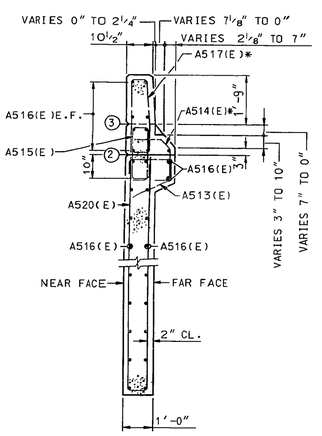
SECTION A-A



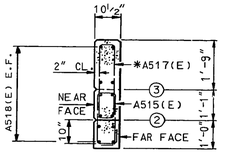
SECTION B-B



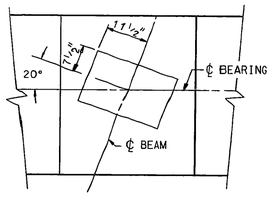
SECTION C-C



SECTION D-D



SECTION E-E



BEARING LAYOUT

NOTATIONS

(1) 2"x4" KEYED CONSTRUCTION JOINT

(2) MANDATORY CONSTRUCTION JOINT & RUSTICATION GROOVE

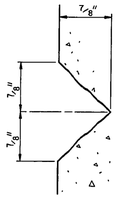
(3) OPTIONAL CONSTRUCTION JOINT & RUSTICATION GROOVE (USE ONLY IF OPTIONAL JOINT IN SUPERSTRUCTURE BARRIER IS USED.)

E.F. - DENOTES EACH FACE

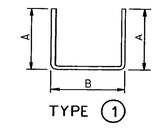
N.F. - DENOTES NEAR FACE

F.F. - DENOTES FAR FACE

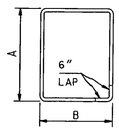
* - INDICATES TO FIELD BEND AS REQ'D.



RUSTICATION GROOVE



TYPE (1)



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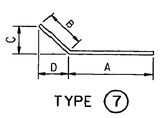
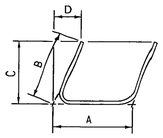
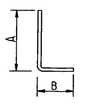


TYPE (7)



TYPE (2)



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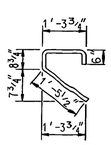

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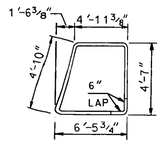

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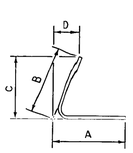
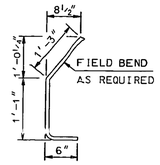


TYPE (6)



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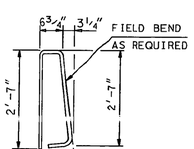


TYPE (10)

STATE OF KENTUCKY WILLIAM D. CAROLAN 6450 REGISTERED PROFESSIONAL ENGINEER 8-26-94

ESTIMATE OF QUANTITIES

ITEM	UNIT	QUANTITY E.B.1	QUANTITY E.B.2
CLASS "A" CONCRETE	CU. YDS.	94.5	94.5
CLASS "AA" CONCRETE	CU. YDS.	60.5	59.9
EPOXY COATED REINFORCEMENT	LBS.	15498	15467

END BENT 1 & 2 DETAILS

U.S. 62/68 OVER LAWRENCE CREEK SHEET 14

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
MASON
U.S. 62/68
ROAD

STATION 182+67.50 P. E. PROJECT NO.

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		23687

UPDATE DATE

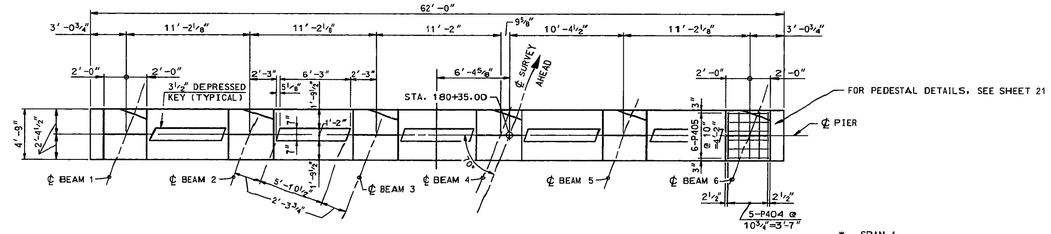
LETTING DATE

DATE 6/4/94
DATE 6/24/94
DATE

DESIGNED BY DCD CHECKED BY DATE 6/94
DETAILED BY JGS CHECKED BY DATE 6/94
PREPARED BY GRAPHICS SECTION CHECKED BY DATE

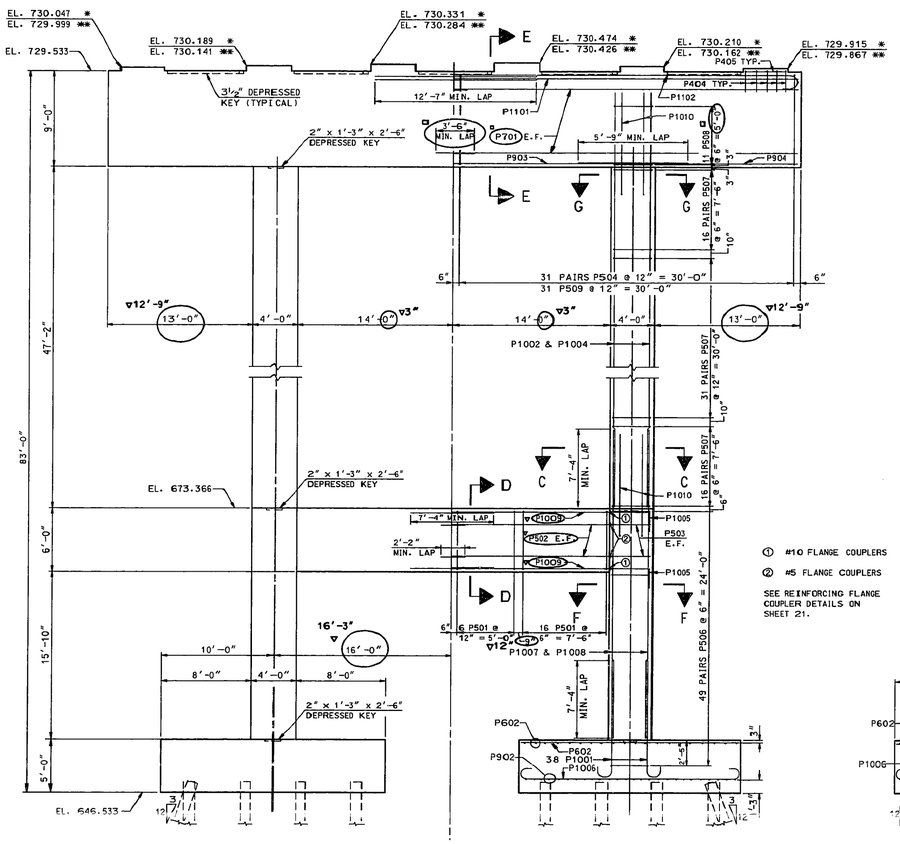
▽ COLUMN LOCATION
□ AS PER KY MARK UP

REVISED
REVISED
REVISED



PLAN OF CAP

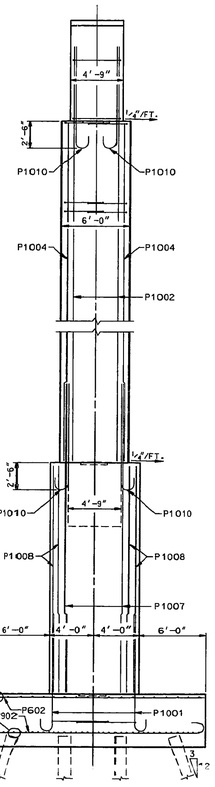
* SPAN 1
** SPAN 2



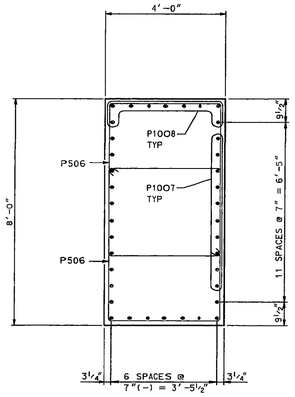
PART ELEVATION

① #10 FLANGE COUPLERS
② #5 FLANGE COUPLERS

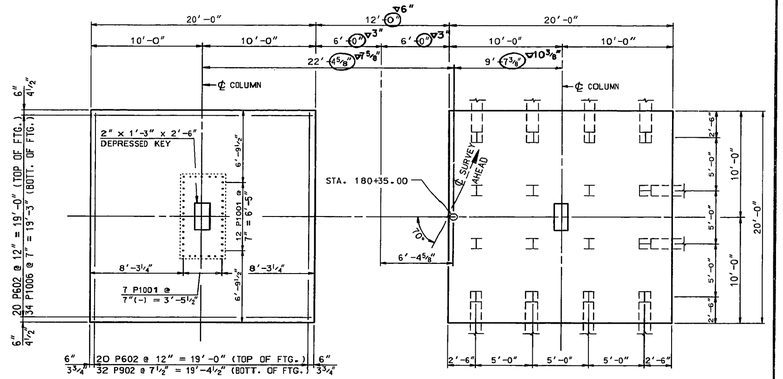
SEE REINFORCING FLANGE COUPLER DETAILS ON SHEET 21.



PART END ELEVATION



SECTION F-F



PLAN OF FOOTING

FOR SECTIONS C-C, D-D E-E AND G-G, SEE SHEET 21.

U.S. 62/68 OVER LAWRENCE CREEK SHEET 15

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
MASON
U.S. 62/68
ROAD
STATION 182+67.50 P. E. PROJECT NO.

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		23687

PIER 1

UPDATE DATE

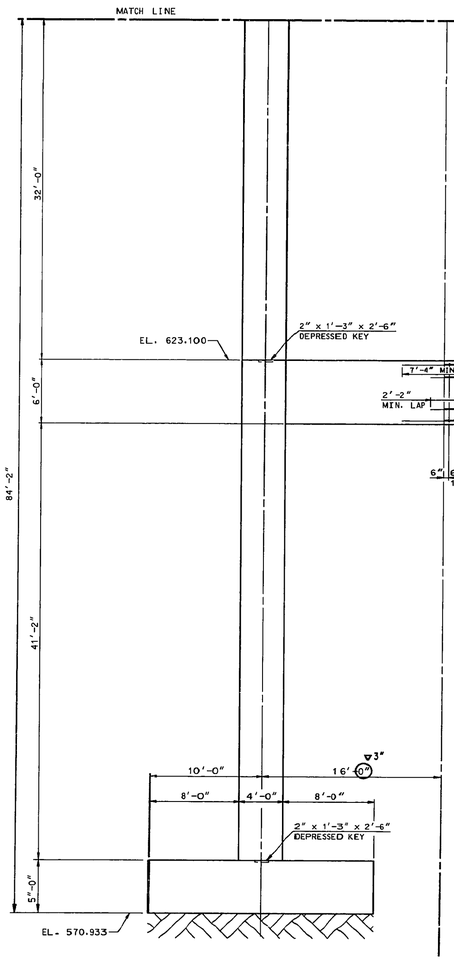
LETTING DATE

DESIGNED BY	JG	CHECKED BY	DCD
DETAILED BY	AL	CHECKED BY	JGS
PREPARED BY GRAPHIC SECTION		CHECKED BY	

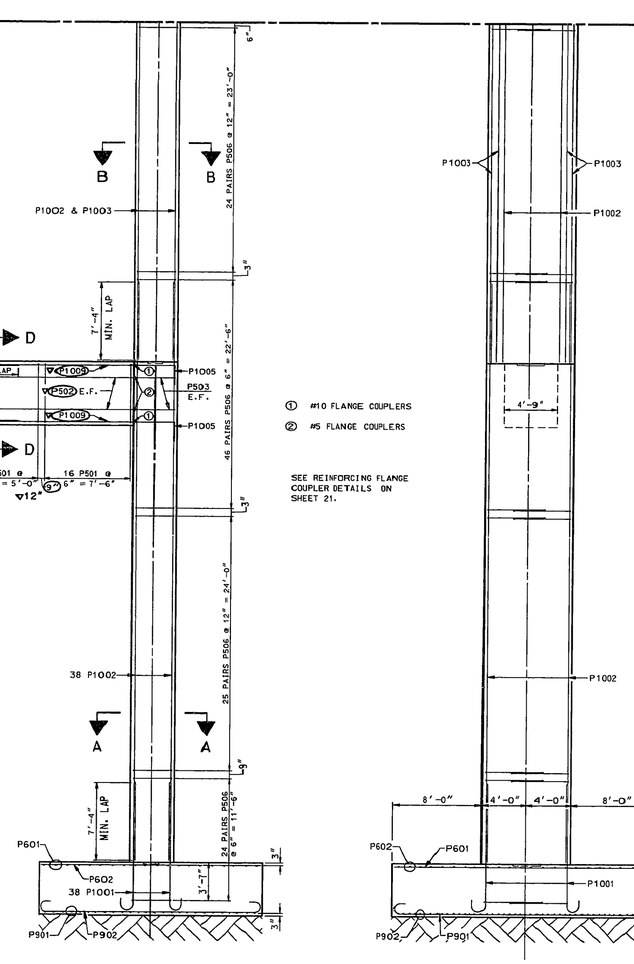
∇ Column Location

DATE 8/24/94	REVISED	DATE 6/94	REVISED
DATE 8/24/94	REVISED	DATE 6/94	REVISED
DATE	REVISED	DATE	REVISED

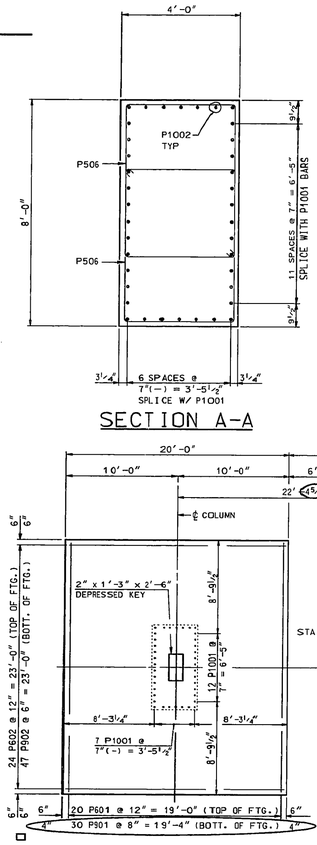
□ AS PER KY MARK UP



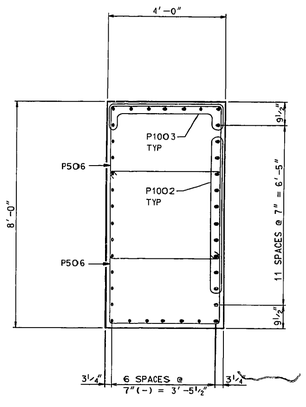
PART ELEVATION



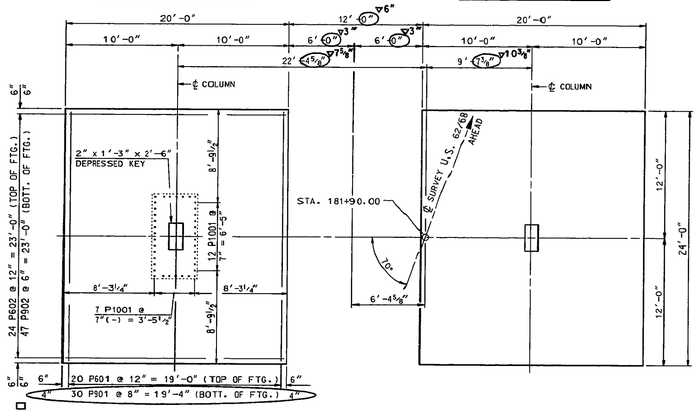
PART END ELEVATION



SECTION A-A



SECTION B-B



PLAN OF FOOTING

FOR SECTION D-D SEE SHEET 21.

STATE OF KENTUCKY
WILLIAM B. CRAIG AND
6450
REGISTERED
PROFESSIONAL ENGINEER
8-26-94

PIER 2

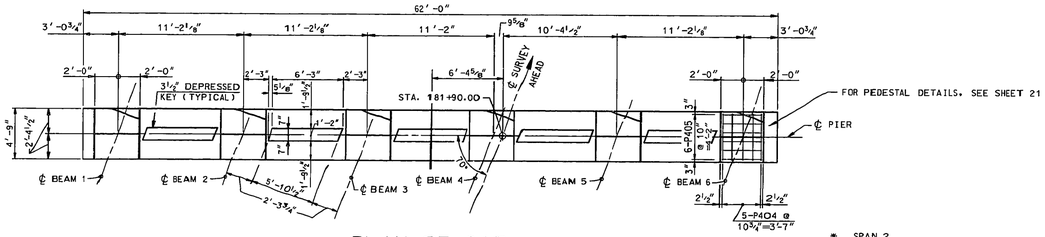
U.S. 62/68 OVER LAWRENCE CREEK SHEET 16

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
MASON
U.S. 62/68
ROAD
STATION 182+67.50 P. E. PROJECT NO.

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		23687

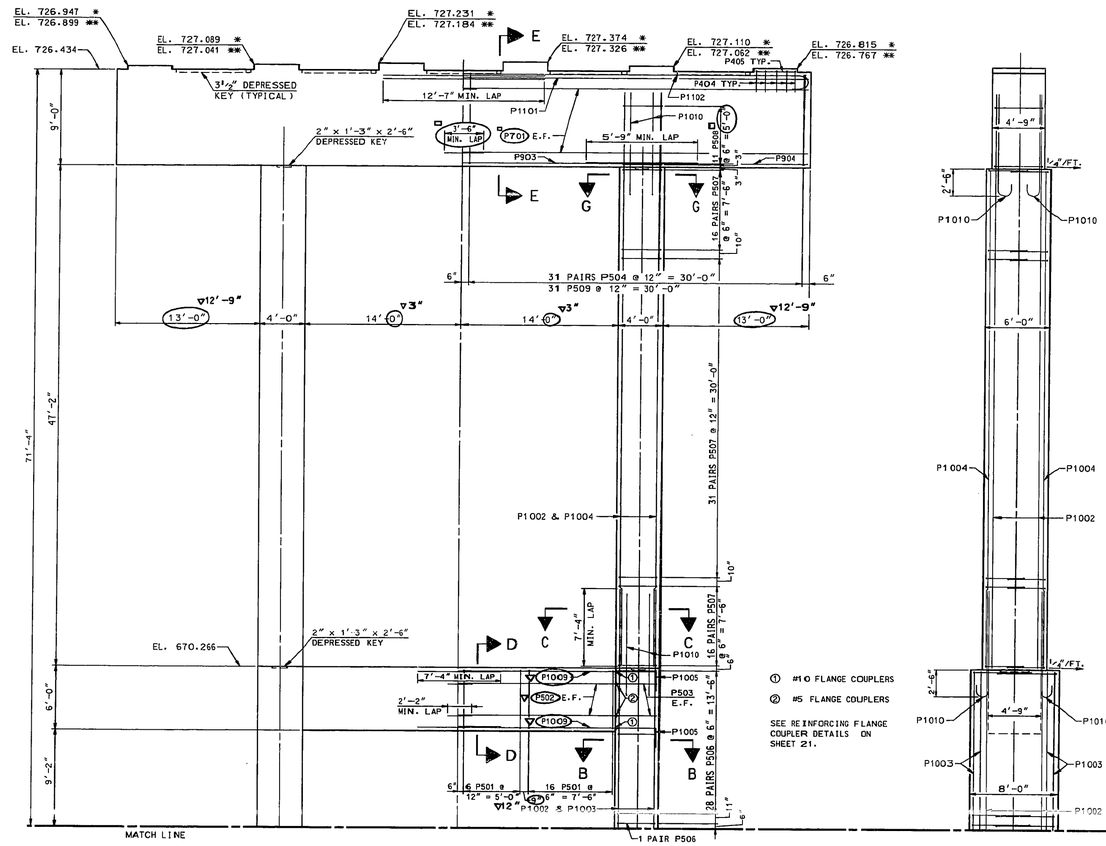
UPDATE DATE

LETTING DATE



PLAN OF CAP

* SPAN 2
** SPAN 3



PART ELEVATION

PART END ELEVATION

① #10 FLANGE COUPLERS

② #5 FLANGE COUPLERS

SEE REINFORCING FLANGE COUPLER DETAILS ON SHEET 21.

FOR SECTIONS C-C, D-D, E-E AND G-G. SEE SHEET 21.
FOR SECTION B-B. SEE SHEET 16.

STATE OF KENTUCKY
WILLIAM B. CAROLAND
19450
REGISTERED PROFESSIONAL ENGINEER
8-26-94

PIER 2

DESIGNED BY JGS	CHECKED BY DCD	DATE 6/94	REVISED ▽Column Location
DETAILED BY ALF	CHECKED BY JGS	DATE 6/94	REVISED □ AS PER KY MARK UP
PREPARED BY GRAPHICS SECTION	CHECKED BY	DATE	REVISED

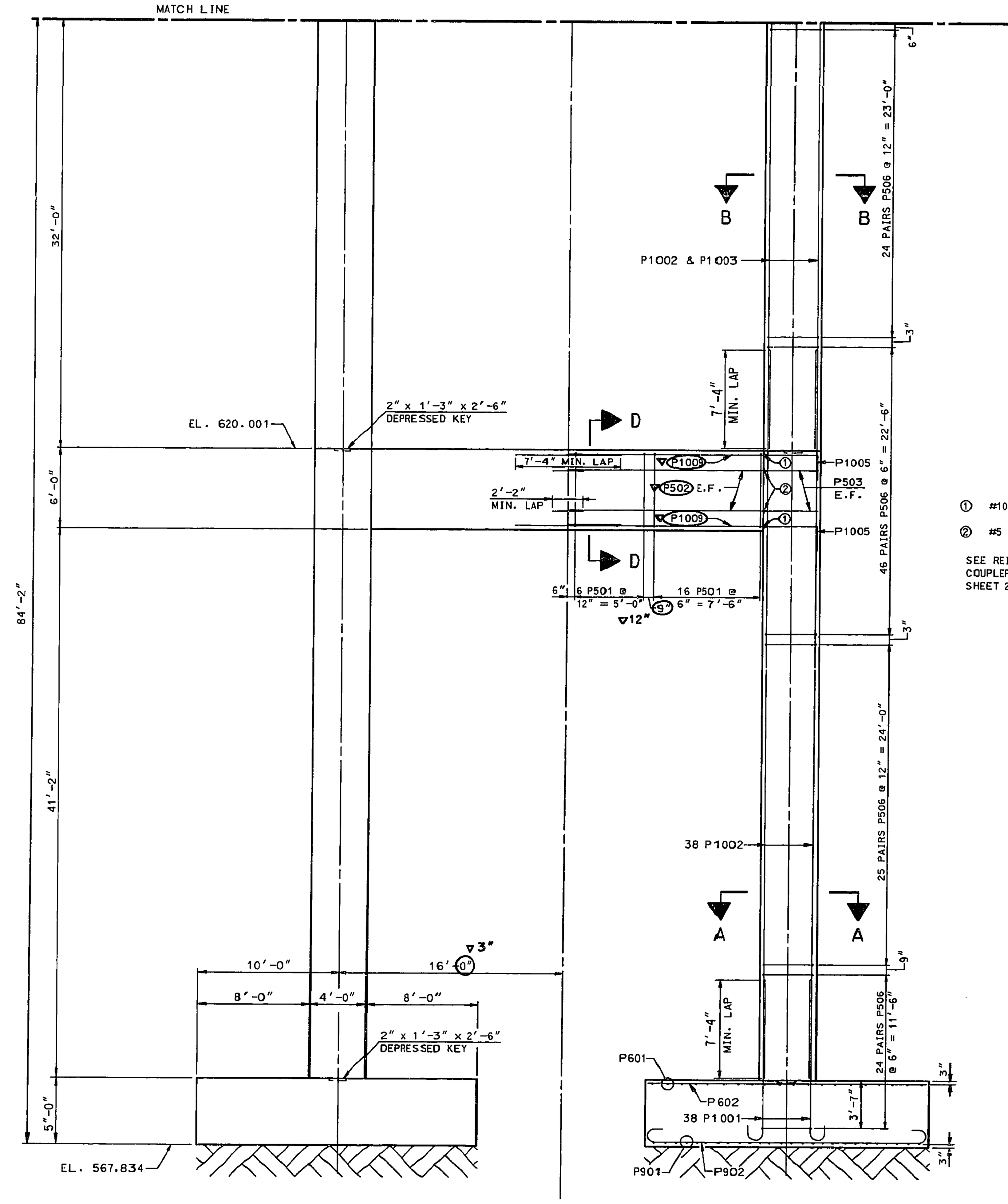
DATE 8/4/94
DATE 8/24/94
DATE

U.S. 62/68 OVER LAWRENCE CREEK SHEET 17

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
MASON
U.S. 62/68
ROAD
STATION 182+67.50 P.E. PROJECT NO.

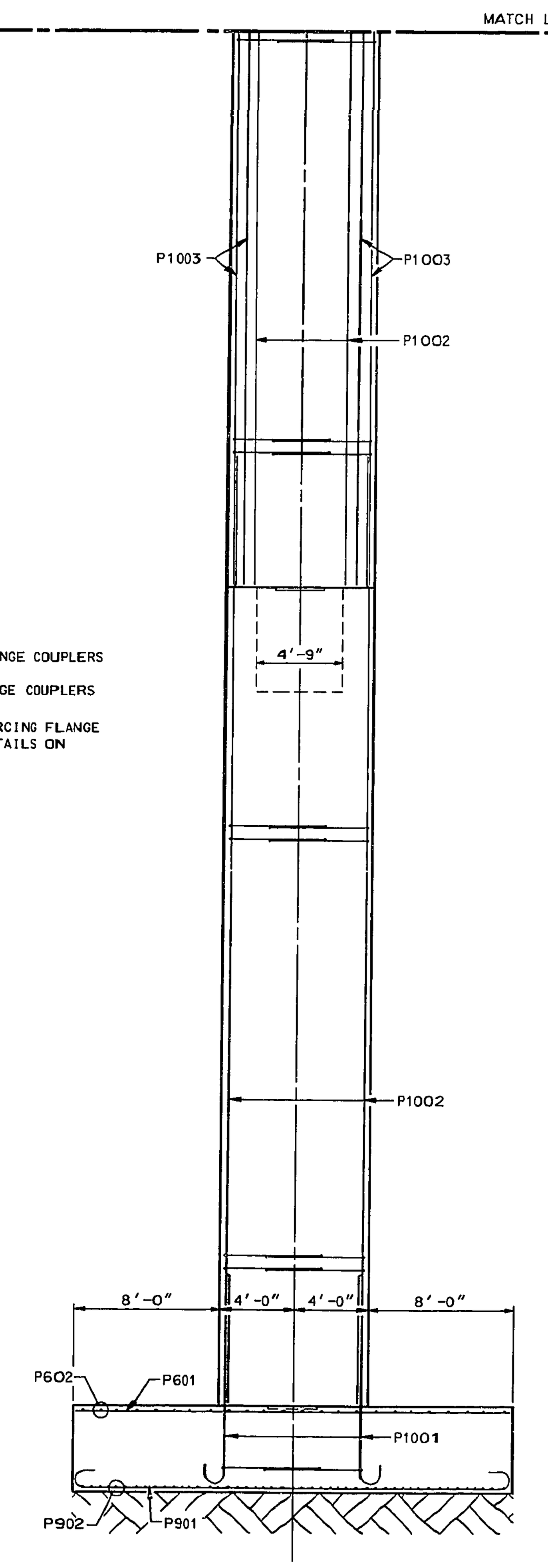
CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		23687

UPDATE DATE
LETTING DATE

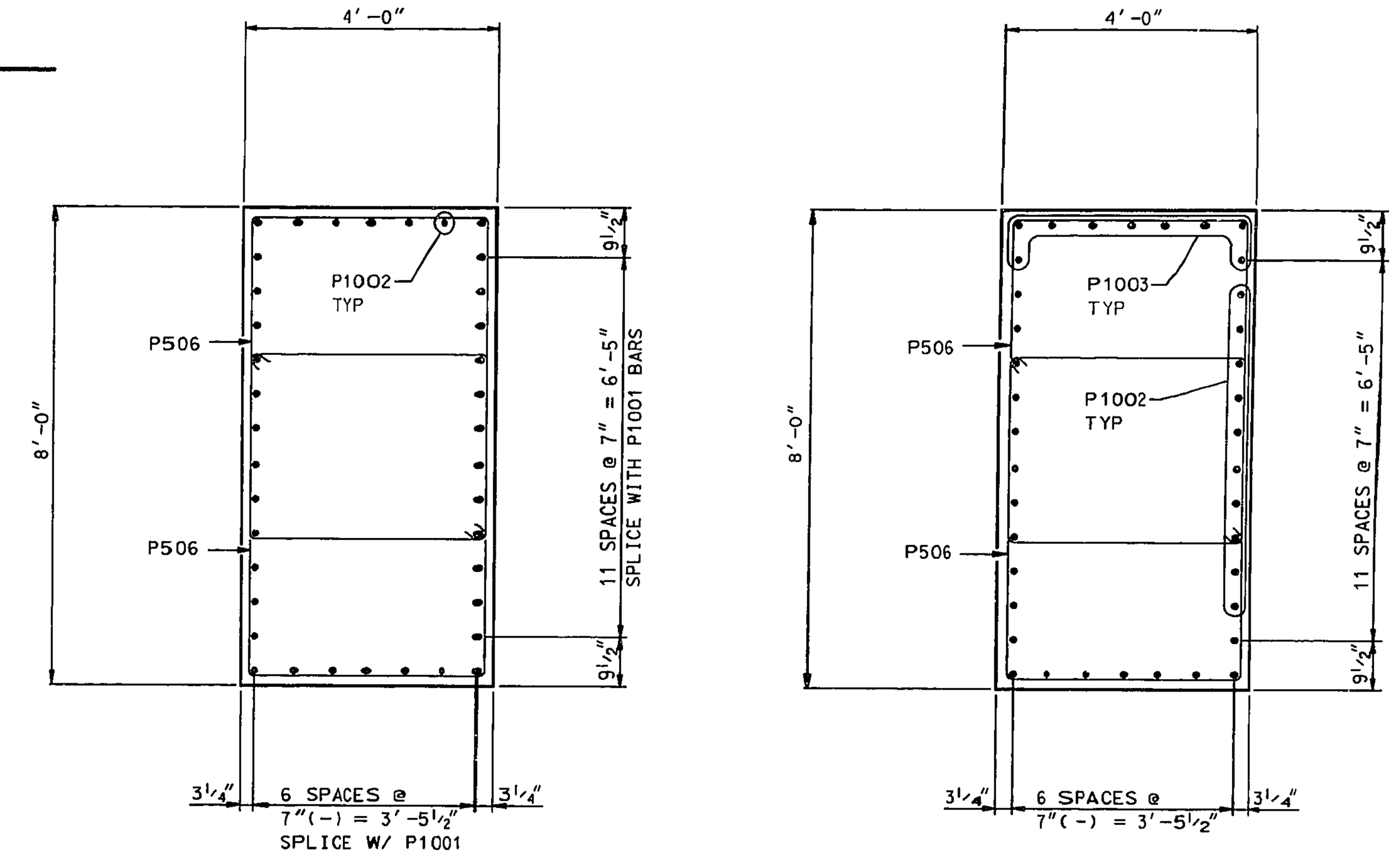


PART ELEVATION

① #10 FLANGE COUPLERS
② #5 FLANGE COUPLERS
SEE REINFORCING FLANGE COUPLER DETAILS ON SHEET 21.

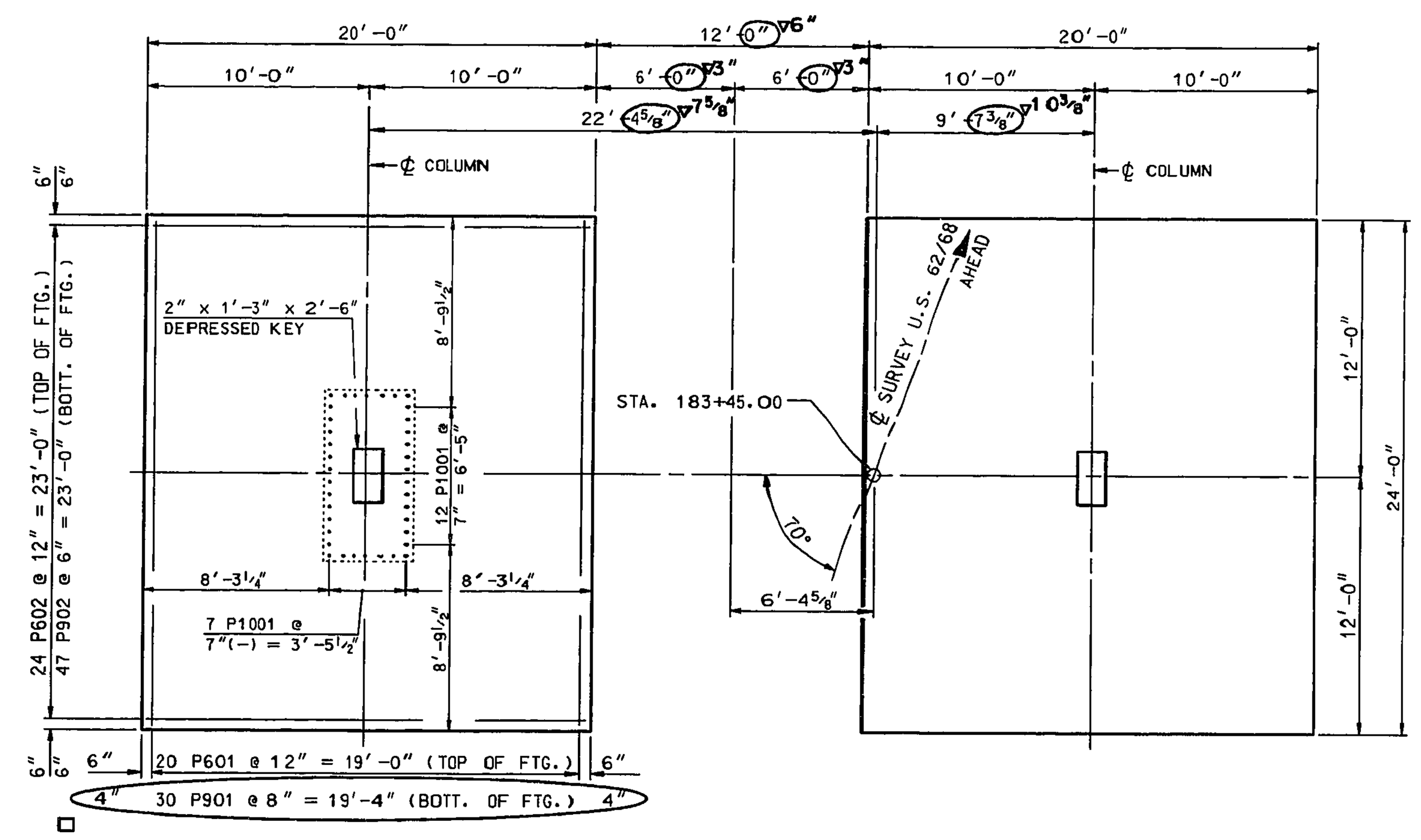


PART END ELEVATION



SECTION A-A

SECTION B-B



PLAN OF FOOTING

FOR SECTION D-D SEE SHEET 21.

STATE OF KENTUCKY
WILLIAM B. CAROLAND
6850
REGISTERED PROFESSIONAL ENGINEER
8-26-94

PIER 3

U.S. 62/68 OVER LAWRENCE CREEK — SHEET 18

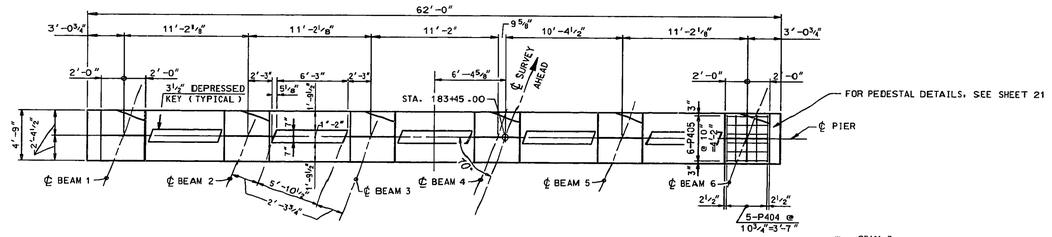
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
MASON
U.S. 62/68
ROAD
STATION 182+67.50 — P.E. PROJECT NO.

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		23687

DESIGNED BY JCS — CHECKED BY DDD — DATE 6/94 — REVISED ▽ Column Location — DATE 8/4/94
DETAILED BY ALF — CHECKED BY JCS — DATE 6/94 — REVISED □ AS PER KY MARK UP — DATE 8/24/94
PREPARED BY GRAPHICS SECTION — CHECKED BY — DATE — REVISED — DATE

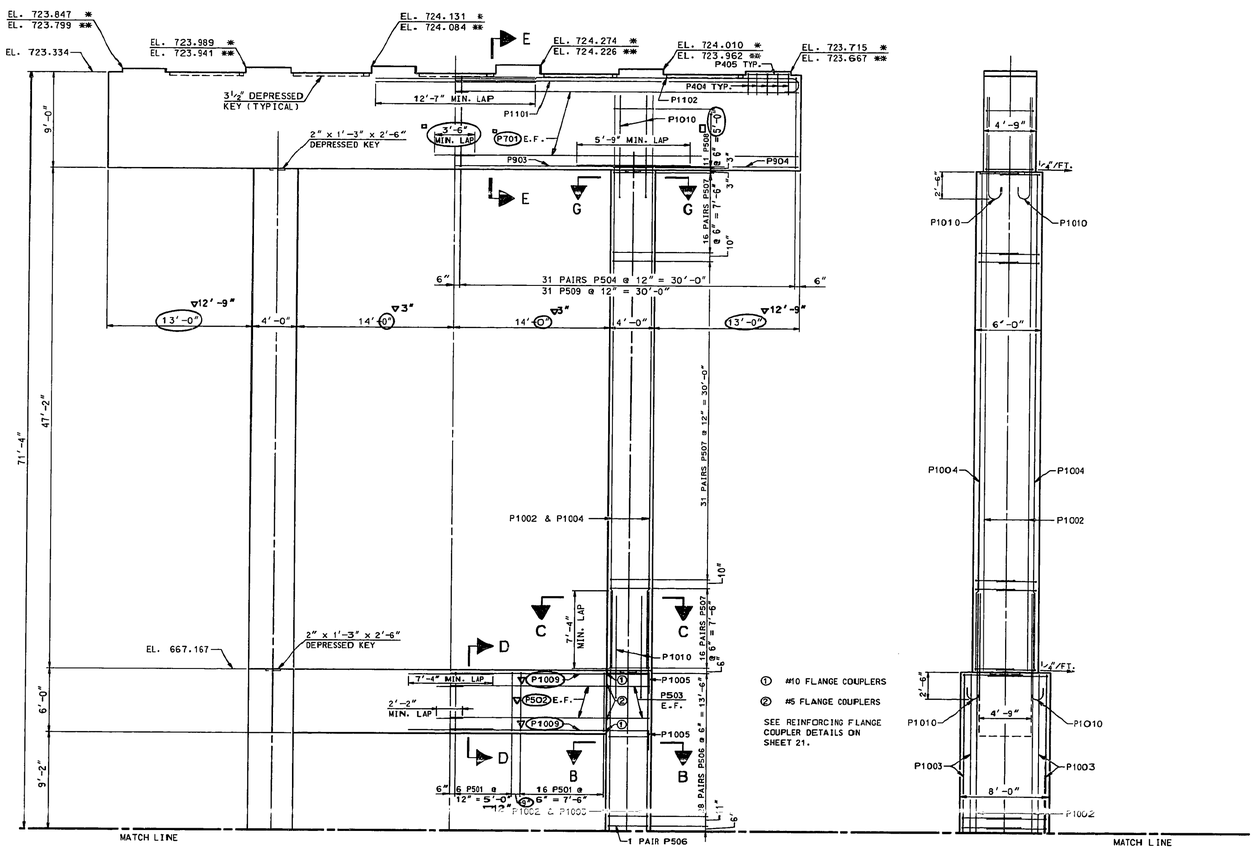
UPDATE DATE

LETTING DATE



PLAN OF CAP

* SPAN 3
** SPAN 4



PART ELEVATION

① #10 FLANGE COUPLERS
② #5 FLANGE COUPLERS

SEE REINFORCING FLANGE COUPLER DETAILS ON SHEET 21.

PART END ELEVATION

FOR SECTIONS C-C, D-D, E-E AND G-G, SEE SHEET 21.
FOR SECTION B-B, SEE SHEET 18.

STATE OF KENTUCKY
WILLIAM C. CAROLAND
6450
REGISTERED PROFESSIONAL ENGINEER
3-26-94

PIER 3

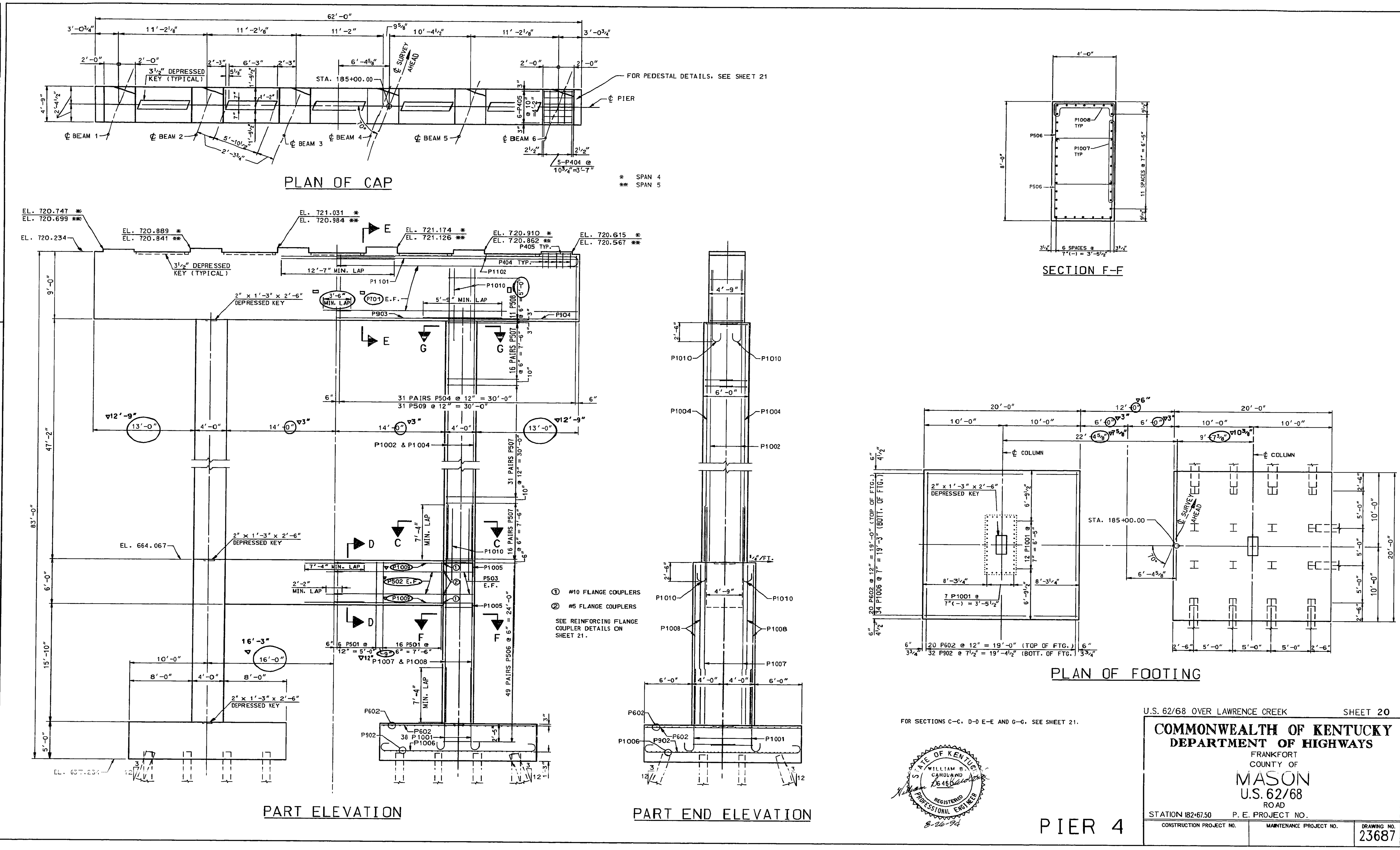
U.S.62/68 OVER LAWRENCE CREEK SHEET 19

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
MASON
U.S. 62/68
ROAD
STATION 182+67.50 P. E. PROJECT NO.

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		23687

DESIGNED BY	JGS	CHECKED BY	DCD
DETAILED BY	ALF	CHECKED BY	JGS
PREPARED BY GRAPHICS SECTION		CHECKED BY	

DATE 8/4/94	REVISED	▽COLUMN LOCATION
DATE 6/24/94	REVISED	□AS PER KY MARK UP
DATE	REVISED	
	DATE 6/94	
	DATE 6/94	
	DATE	



U.S. 62/68 OVER LAWRENCE CREEK

SHEET 20

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT

COUNTY OF MASON

U.S. 62/68
ROAD

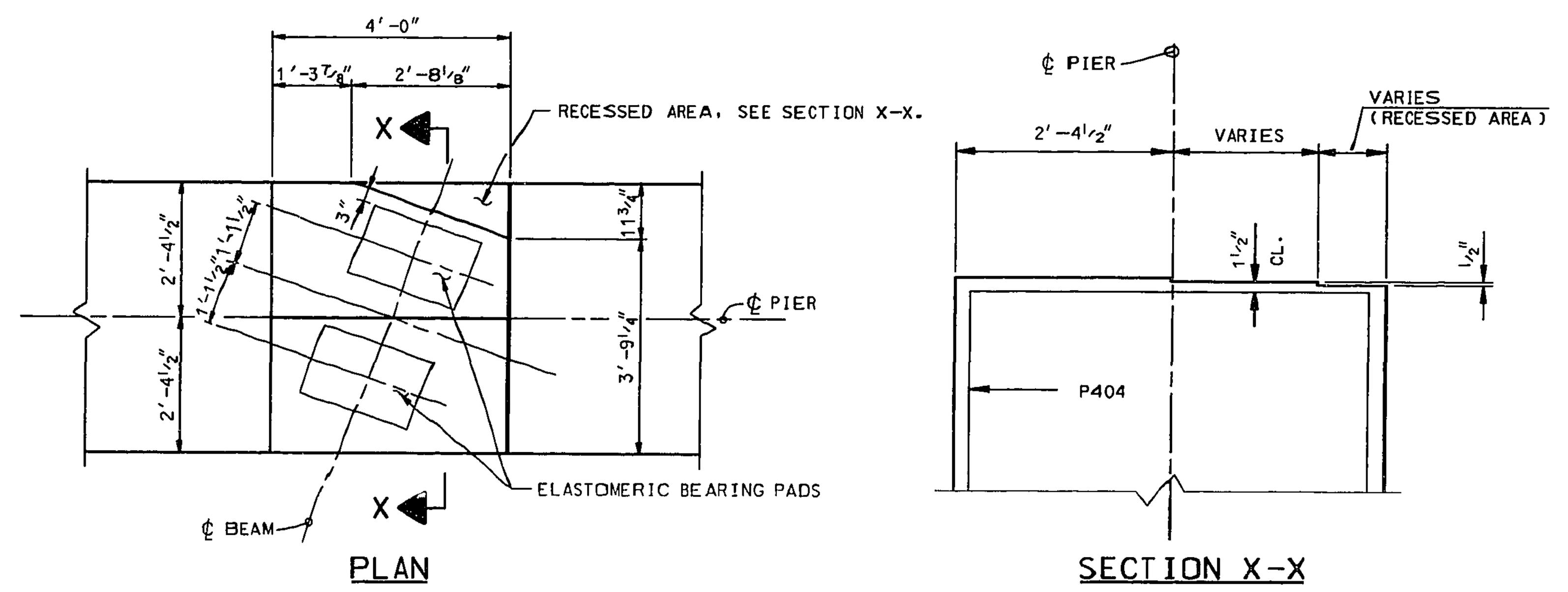
STATION 182+67.50

P. E. PROJECT NO.

CONSTRUCTION PROJECT NO.

MAINTENANCE PROJECT NO.

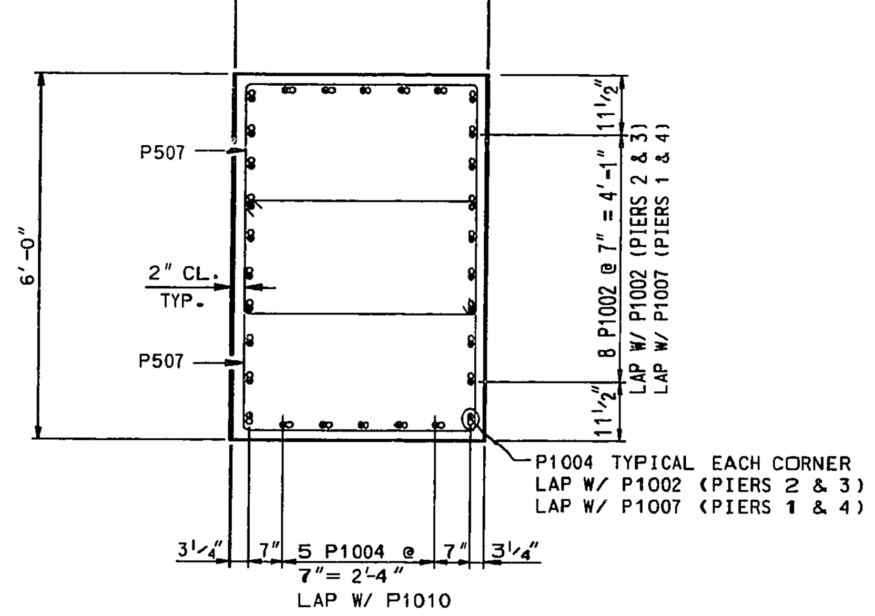
DRAWING NO. 23687



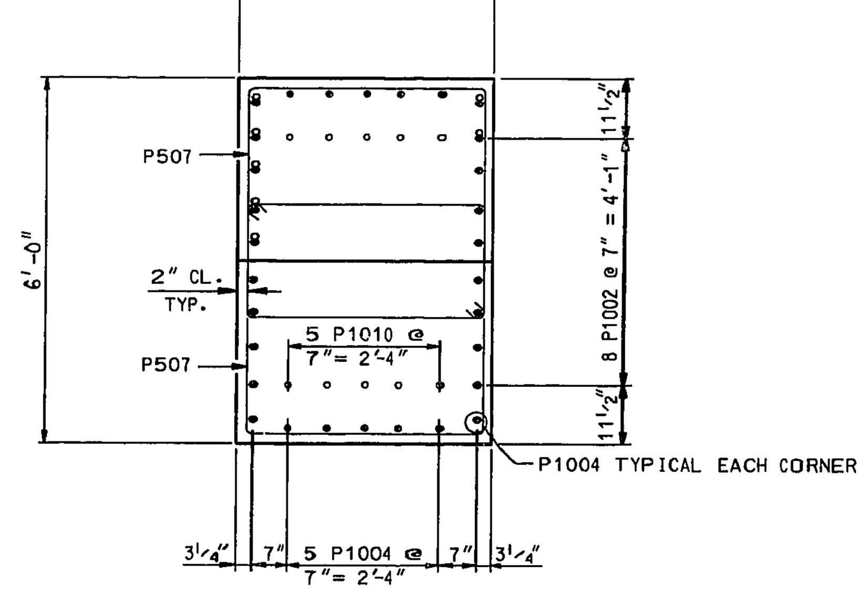
PLAN

SECTION X-X

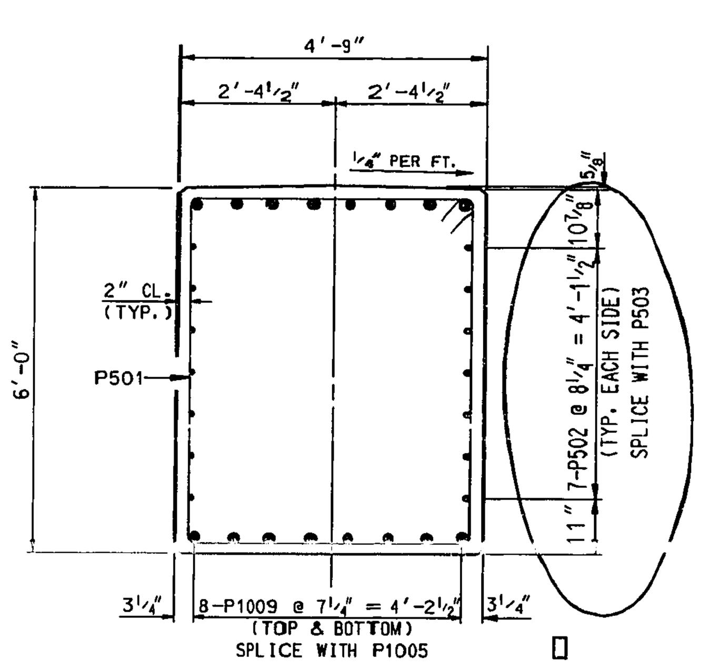
PEDESTAL DETAILS



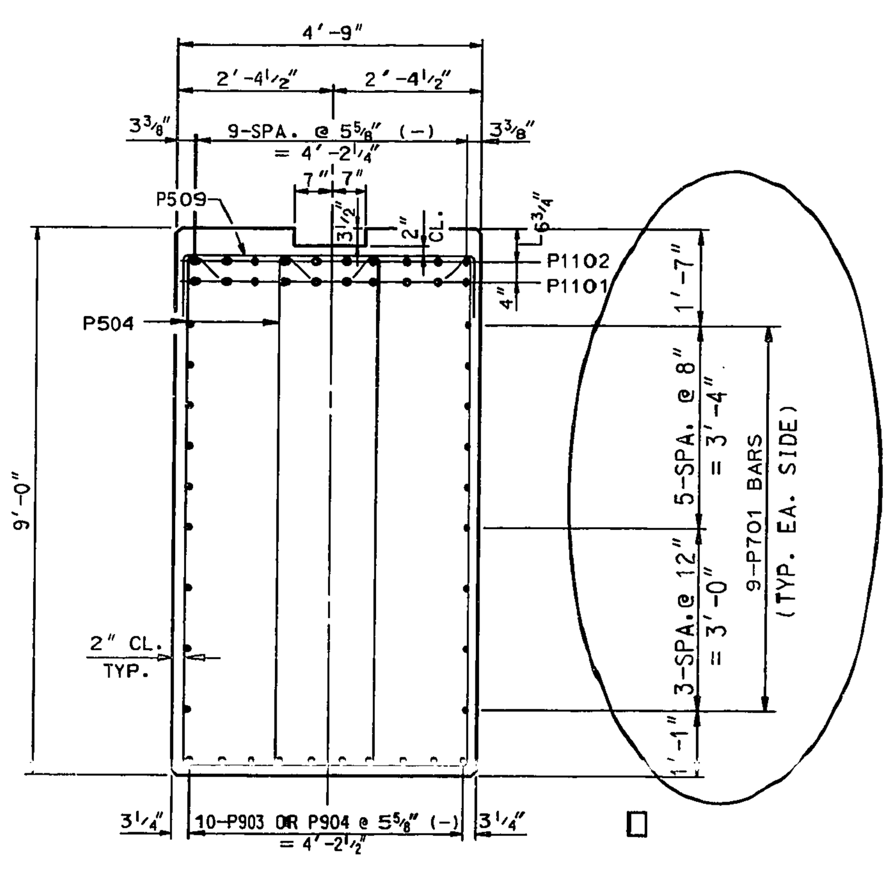
SECTION C-C



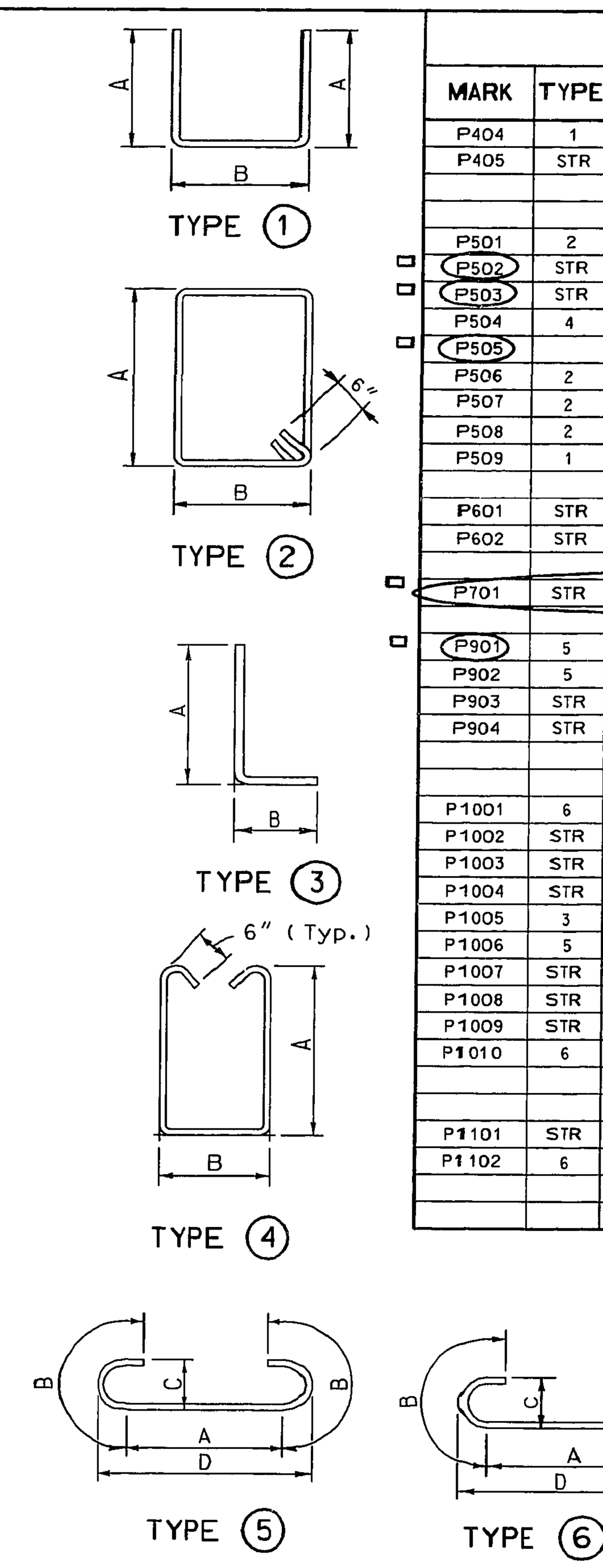
SECTION G-G



SECTION D-D

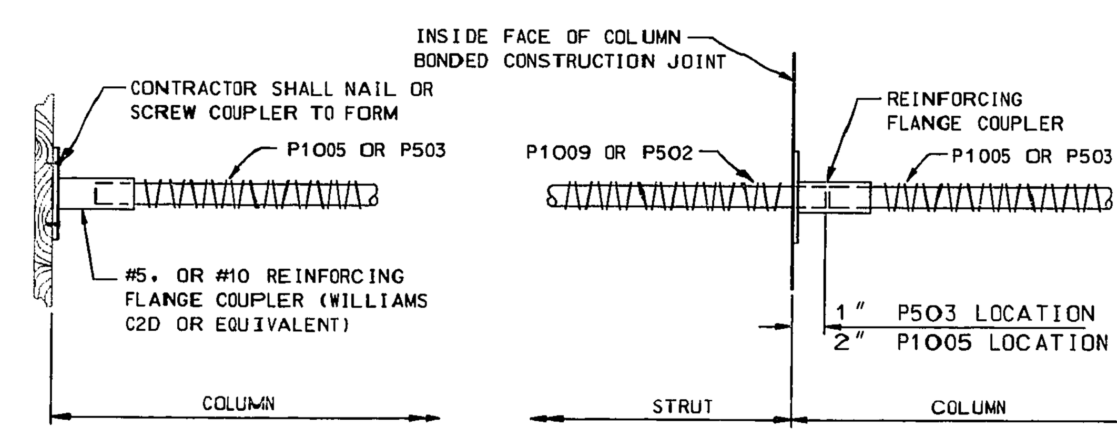


SECTION E-E



BILL OF REINFORCEMENT																		
MARK	TYPE	SIZE	NUMBER				LENGTH		LOCATION	A		B		C		D		
			PIER 1	PIER 2	PIER 3	PIER 4	Ft.	In.		Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	
P404	1	4	30	30	30	30	7	10	PEDESTAL	1	9	4	5					
P405	STR	4	36	36	36	36	3	9	PEDESTAL									
P501	2	5	44	88	88	44	20	11	STRUT	5	8	4	5					
P502	STR	5	28	56	56	28	15	1 ▽3	STRUT									
P503	STR	5	28	56	56	28	3	10	COLUMN									
P504	4	5	124	124	124	124	20	6	CAP	8	4 1/2	2	11					
P505									NOT USED									
P506	2	5	196	592	592	196	18	9	COLUMN	5	4	3	8					
P507	2	5	252	252	252	252	15	7	COLUMN	3	9	3	8					
P508	2	5	22	22	22	22	16	5	CAP	4	2	3	8					
P509	1	5	62	62	62	62	6	4	CAP	1	0	4	5					
P601	STR	6	—	40	40	—	23	9	FOOTING									
P602	STR	6	80	48	48	80	19	8	FOOTING									
P701	STR	7	36	36	36	36	32	7	CAP									
P901	5	9	—	60	60	—	26	6	FOOTING	22	8	1	11	0	11 3/4	23	7 3/4	
P902	5	9	64	94	94	64	22	6	FOOTING	18	8	1	11	0	11 3/4	19	7 3/4	
P903	STR	9	10	10	10	10	37	9	CAP									
P904	STR	9	20	20	20	20	17	11	CAP									
P1001	6	10	76	76	76	76	14	8	COLUMN	12	6	2	2	1	1 1/4	13	0 5/8	
P1002	STR	10	32	148	148	32	54	6	COLUMN									
P1003	STR	10	—	36	36	—	47	0	COLUMN									
P1004	STR	10	28	28	28	28	47	0	COLUMN									
P1005	3	10	32	64	64	32	5	9	COLUMN	3	10	2	0					
P1006	5	10	68	—	—	68	22	11	FOOTING	18	7	2	2	1	1 1/4	19	8 1/4	
P1007	STR	10	40	—	—	40	29	2	COLUMN									
P1008	STR	10	36	—	—	36	21	6	COLUMN									
P1009	STR	10	32	64	64	32	17	8 ▽11	STRUT									
P1010	6	10	40	40	40	40	11	8	COLUMN	9	6	2	2	1	1 1/4	10	0 5/8	
P1101	STR	11	20	20	20	20	37	2	CAP									
P1102	6	11	20	20	20	20	39	5	CAP	37	0	2	5	1	2 3/4	37	7 3/8	

ESTIMATE OF QUANTITIES					
ITEM	UNIT	QUANTITY			
		PIER 1	PIER 2	PIER 3	PIER 4
CLASS "A" CONCRETE	CU. YDS.	417.2	648.2	648.2	417.2
STEEL REINFORCEMENT	LBS.	69975	109289	109289	69975
HP14 x 73 PILES	L.F.	1043	–	–	1992
TEST PILES	L.F.	45	–	–	70
PILE POINTS (14")	EA.	32	–	–	32
STR. EXCAV. (COMMON)	C.Y.	–	184	138	–
STR. EXCAV. (ROCK)	C.Y.	–	695	469	–
▽		417.7	649.3	649.3	417.7
☐		71716	111850	111850	71716



REINFORCING FLANGE COUPLER DETAILS

(COST OF COUPLERS SHALL BE INCIDENTAL TO REINFORCEMENT)

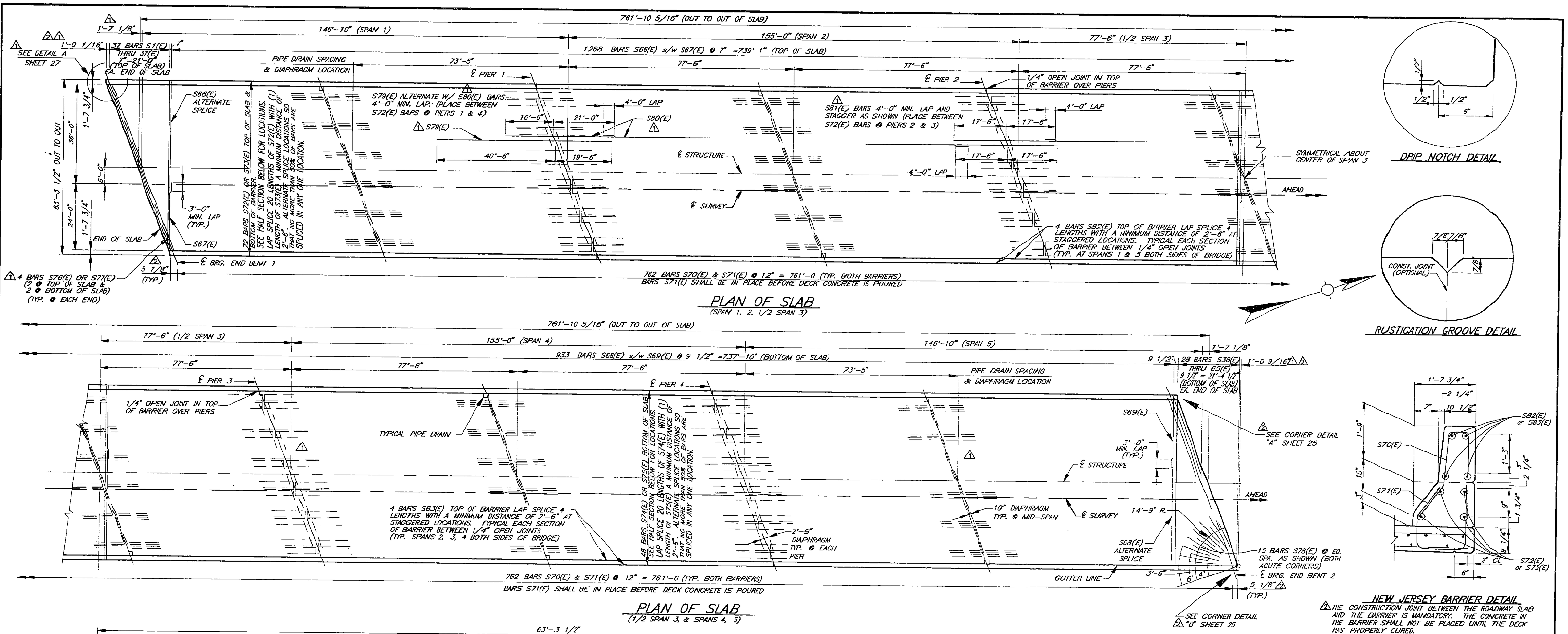
U.S. 62/68 OVER LAWRENCE CREEK SHEET 21

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
MASON
U.S. 62/68
ROAD
STATION 182+67.50 P.E. PROJECT NO.

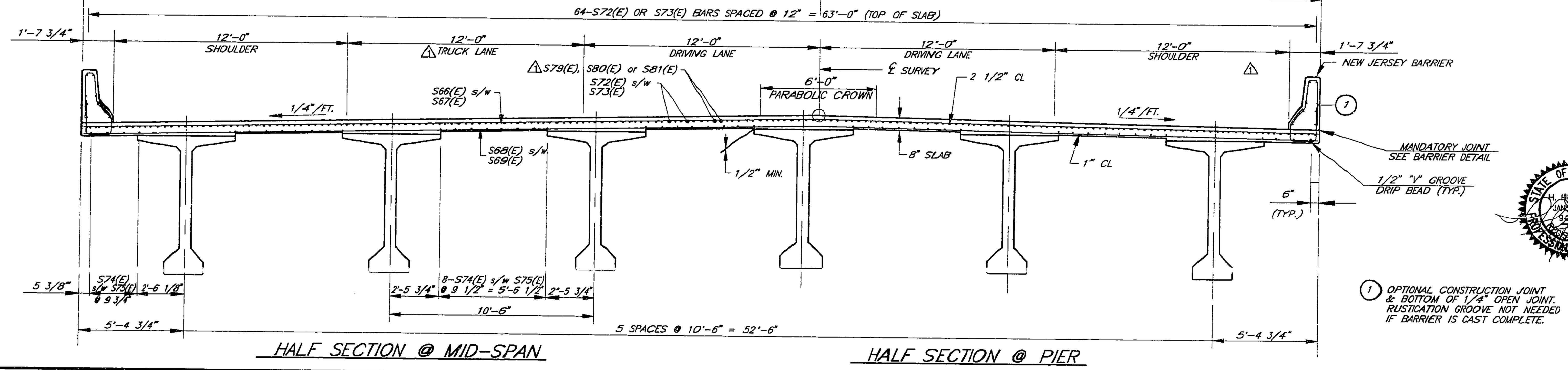
CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		23687

PIER DETAILS

UPDATE DATE
LETTING DATE
REVISED ▽ COLUMN LOCATION DATE 8/4/94
REVISED ☐ AS PER MARK UP DATE 8/25/94
DESIGNED BY JGS DATE 6/94
DETAILED BY RRY
CHECKED BY DCD DATE 6/94
CHECKED BY JGS



△2 THE CONSTRUCTION JOINT BETWEEN THE ROADWAY SLAB AND THE BARRIER IS MANDATORY. THE CONCRETE IN THE BARRIER SHALL NOT BE PLACED UNTIL THE DECK HAS PROPERLY CURED.



(1) OPTIONAL CONSTRUCTION JOINT & BOTTOM OF 1/4" OPEN JOINT. RUSTICATION GROOVE NOT NEEDED IF BARRIER IS CAST COMPLETE.

ESTIMATE OF QUANTITIES

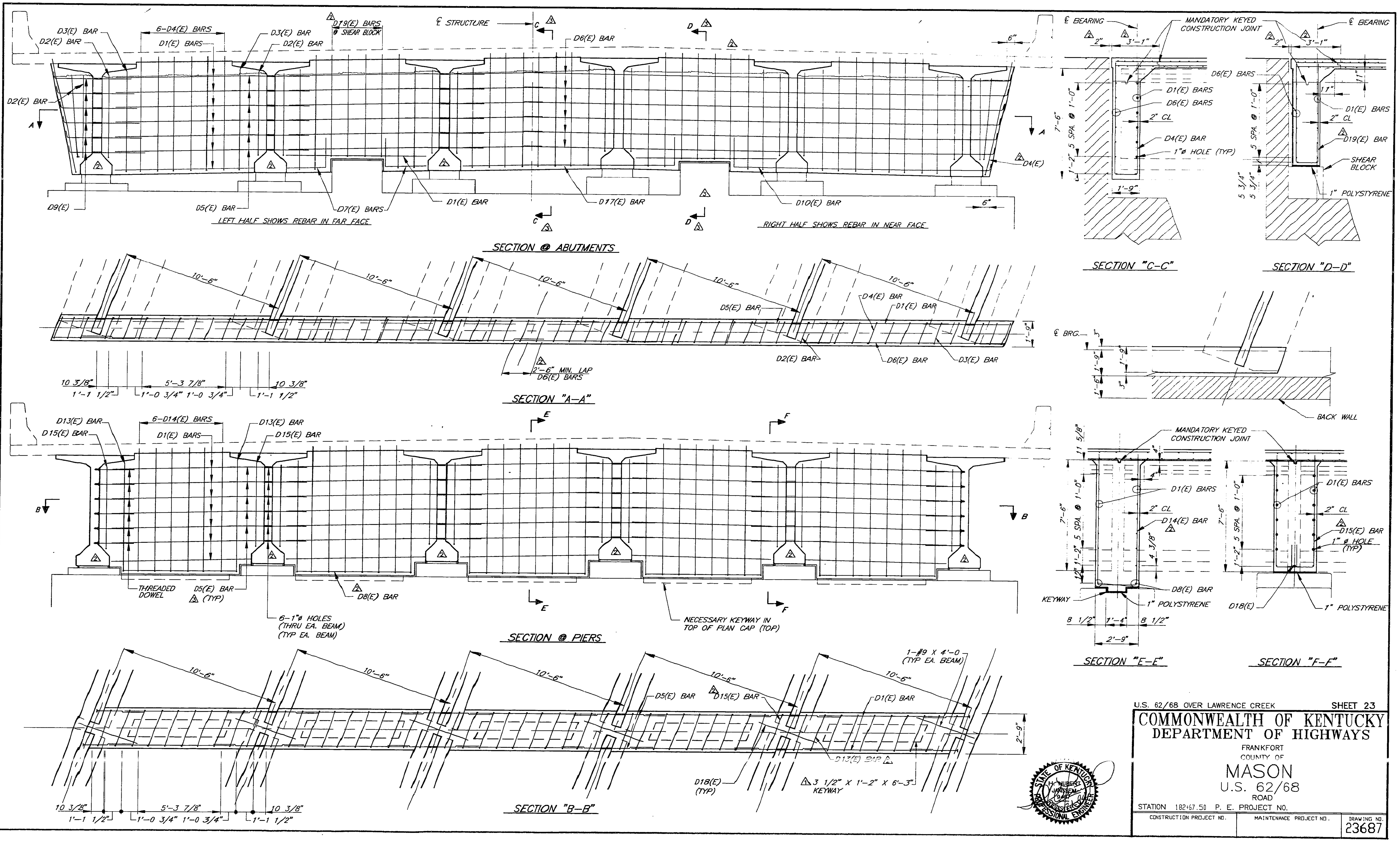
ITEM	QUANTITY	UNIT
CLASS "A" CONCRETE	1755	C.Y.
EPOXY COATED REINFORCEMENT	△1 480,456	LBS.

U.S. 62/68 OVER LAWRENCE CREEK — SHEET 22

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

FRANKFORT
COUNTY OF
MASON
U.S. 62/68
ROAD
STATION 182+67.50 P. E. PROJECT NO.

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		23687



UPDATE DATE
LETTING DATE

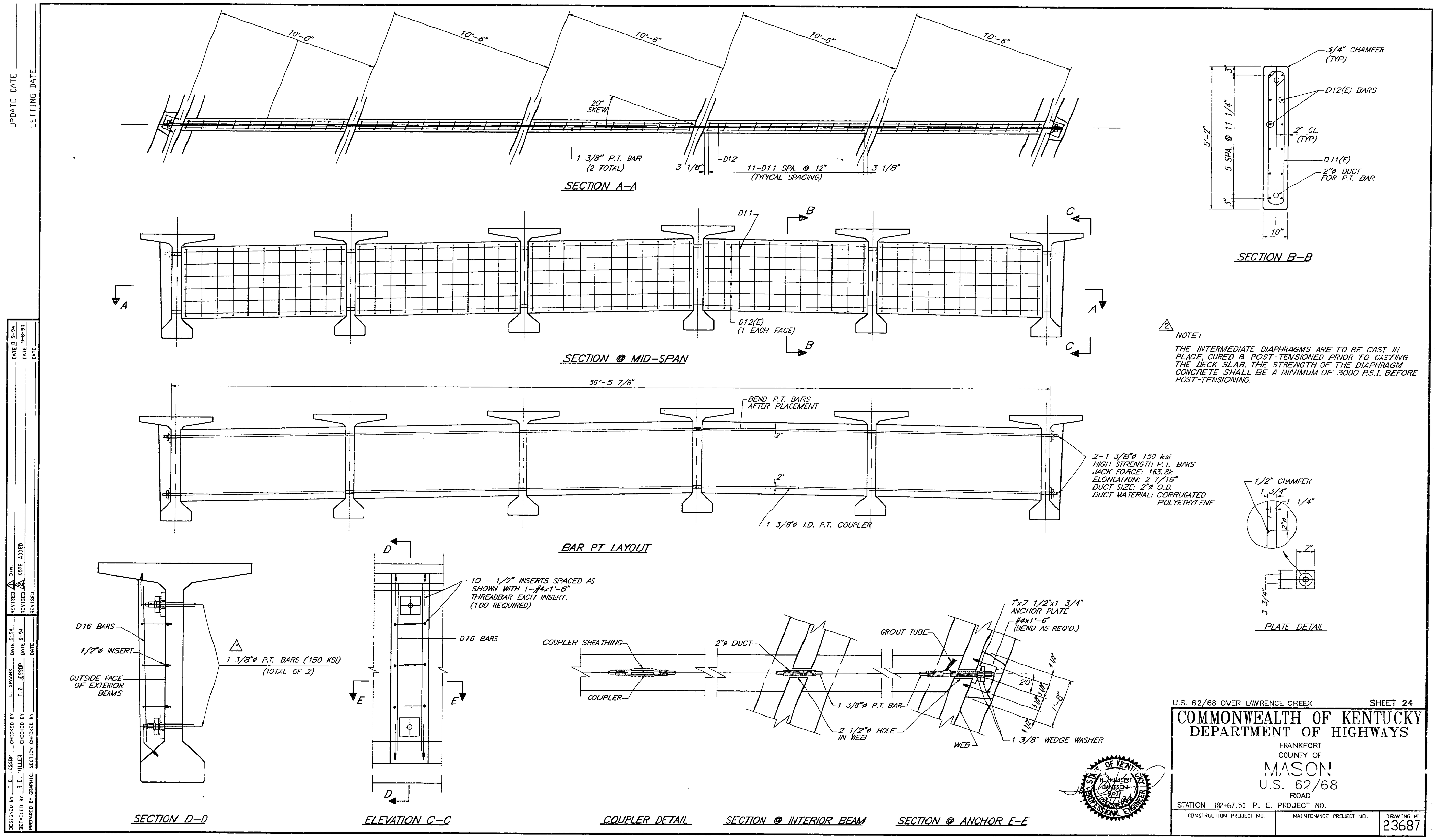
REVISED △ DIM'S	DATE 8-9-94	
REVISED △ AS NOTED	DATE 9-2-94	
REVISED △ AS NOTED	DATE 9-21-94	
DESIGNED BY T.D. JESSOP	CHECKED BY L. STRANGS	DATE 6-94
DETAILED BY R.E. MILLER	CHECKED BY T.D. JESSOP	DATE 6-94
PREPARED BY GRAPHICS SECTION	CHECKED BY	DATE

F\097\097F32

U.S. 62/68 OVER LAWRENCE CREEK — SHEET 23

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
MASON
U.S. 62/68
ROAD
STATION 182+67.50 P. E. PROJECT NO.

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		23687



UPDATE DATE
LETTING DATE
10'-6"
20° SKEW
1 3/8" P.T. BAR (2 TOTAL)
3 1/8"
D12
11-D11 SPA. @ 12" (TYPICAL SPACING)
SECTION A-A
3/4" CHAMFER (TYP)
D12(E) BARS
5'-2"
5 SPA. @ 11 1/4"
2" CL. (TYP)
D11(E)
2"ø DUCT FOR P.T. BAR
10"
SECTION B-B
D11
D12(E) (1 EACH FACE)
SECTION @ MID-SPAN
NOTE:
THE INTERMEDIATE DIAPHRAGMS ARE TO BE CAST IN PLACE, CURED & POST-TENSIONED PRIOR TO CASTING THE DECK SLAB. THE STRENGTH OF THE DIAPHRAGM CONCRETE SHALL BE A MINIMUM OF 3000 P.S.I. BEFORE POST-TENSIONING.
56'-5 7/8"
BEND P.T. BARS AFTER PLACEMENT
2-1 3/8"ø 150 ksi HIGH STRENGTH P.T. BARS
JACK FORCE: 163.8k
ELONGATION: 2 7/16"
DUCT SIZE: 2"ø O.D.
DUCT MATERIAL: CORRUGATED POLYETHYLENE
1 3/8"ø I.D. P.T. COUPLER
BAR PT LAYOUT
1/2" CHAMFER
1 3/4"
1 1/4"
7"
3 3/4"
PLATE DETAIL
D16 BARS
1/2"ø INSERT
OUTSIDE FACE OF EXTERIOR BEAMS
1 3/8"ø P.T. BARS (150 KSI) (TOTAL OF 2)
SECTION D-D
10 - 1/2" INSERTS SPACED AS SHOWN WITH 1-#4x1'-6" THREADBAR EACH INSERT. (100 REQUIRED)
D16 BARS
ELEVATION C-C
COUPLER SHEATHING
COUPLER
COUPLER DETAIL
2"ø DUCT
1 3/8"ø P.T. BAR
2 1/2"ø HOLE IN WEB
SECTION @ INTERIOR BEAM
GROUT TUBE
7"x7 1/2"x1 3/4" ANCHOR PLATE
#4x1'-6" (BEND AS REQ'D.)
20°
1'-8"
WEB
1 3/8" WEDGE WASHER
SECTION @ ANCHOR E-E
DESIGNED BY T.D. JESSOP CHECKED BY L. SPARKS DATE 6-94
DETAILED BY R.E. TILLER CHECKED BY T.D. JESSOP DATE 6-94
PREPARED BY GRAPHIC SECTION CHECKED BY DATE
REVISED 1 DIM. DATE 8-9-94
REVISED 2 NOTE ADDED DATE 9-8-94
REVISED DATE
U.S. 62/68 OVER LAWRENCE CREEK
SHEET 24
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
MASON
U.S. 62/68
ROAD
STATION 182+67.50 P. E. PROJECT NO.
CONSTRUCTION PROJECT NO.
MAINTENANCE PROJECT NO.
DRAWING NO.
23687

UPDATE DATE

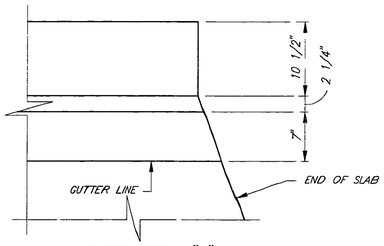
LETTING DATE

BILL OF REINFORCEMENT

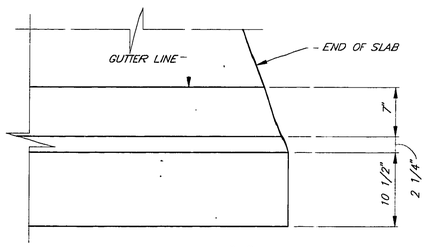
MARK	TYPE	NO.	SIZE	LENGTH FT.	LENGTH IN.	A FT.	A IN.	B FT.	B IN.	C FT.	C IN.	D FT.	D IN.	LOCATION
S1(E)	STR.	2	# 6	3	0									TOP OF SLAB
S2(E)	STR.	2	# 6	4	7									TOP OF SLAB
S3(E)	STR.	2	# 6	6	2									TOP OF SLAB
S4(E)	STR.	2	# 6	7	9									TOP OF SLAB
S5(E)	STR.	2	# 6	9	4									TOP OF SLAB
S6(E)	STR.	2	# 6	11	0									TOP OF SLAB
S7(E)	STR.	2	# 6	12	7									TOP OF SLAB
S8(E)	STR.	2	# 6	14	2									TOP OF SLAB
S9(E)	STR.	2	# 6	15	9									TOP OF SLAB
S10(E)	STR.	2	# 6	17	5									TOP OF SLAB
S11(E)	STR.	2	# 6	19	0									TOP OF SLAB
S12(E)	STR.	2	# 6	20	7									TOP OF SLAB
S13(E)	STR.	2	# 6	22	2									TOP OF SLAB
S14(E)	STR.	2	# 6	23	9									TOP OF SLAB
S15(E)	STR.	2	# 6	25	5									TOP OF SLAB
S16(E)	STR.	2	# 6	27	0									TOP OF SLAB
S17(E)	STR.	2	# 6	28	7									TOP OF SLAB
S18(E)	STR.	2	# 6	30	2									TOP OF SLAB
S19(E)	STR.	2	# 6	31	10									TOP OF SLAB
S20(E)	STR.	2	# 6	33	5									TOP OF SLAB
S21(E)	STR.	2	# 6	35	0									TOP OF SLAB
S22(E)	STR.	2	# 6	36	7									TOP OF SLAB
S23(E)	STR.	2	# 6	38	3									TOP OF SLAB
S24(E)	STR.	2	# 6	39	10									TOP OF SLAB
S25(E)	STR.	2	# 6	41	5									TOP OF SLAB
S26(E)	STR.	2	# 6	43	0									TOP OF SLAB
S27(E)	STR.	2	# 6	44	8									TOP OF SLAB
S28(E)	STR.	2	# 6	46	3									TOP OF SLAB
S29(E)	STR.	2	# 6	47	10									TOP OF SLAB
S30(E)	STR.	2	# 6	49	5									TOP OF SLAB
S31(E)	STR.	2	# 6	51	1									TOP OF SLAB
S32(E)	STR.	2	# 6	52	8									TOP OF SLAB
S33(E)	STR.	2	# 6	54	3									TOP OF SLAB
S34(E)	STR.	2	# 6	55	10									TOP OF SLAB
S35(E)	STR.	2	# 6	57	5									TOP OF SLAB
S36(E)	STR.	2	# 6	59	1									TOP OF SLAB
S37(E)	STR.	2	# 6	60	8									TOP OF SLAB
S38(E)	STR.	2	# 6	3	1									BOTTOM OF SLAB
S39(E)	STR.	2	# 6	5	3									BOTTOM OF SLAB
S40(E)	STR.	2	# 6	7	5									BOTTOM OF SLAB
S41(E)	STR.	2	# 6	9	7									BOTTOM OF SLAB
S42(E)	STR.	2	# 6	11	9									BOTTOM OF SLAB
S43(E)	STR.	2	# 6	13	11									BOTTOM OF SLAB
S44(E)	STR.	2	# 6	16	1									BOTTOM OF SLAB
S45(E)	STR.	2	# 6	18	3									BOTTOM OF SLAB
S46(E)	STR.	2	# 6	20	5									BOTTOM OF SLAB
S47(E)	STR.	2	# 6	22	7									BOTTOM OF SLAB
S48(E)	STR.	2	# 6	24	10									BOTTOM OF SLAB
S49(E)	STR.	2	# 6	27	0									BOTTOM OF SLAB
S50(E)	STR.	2	# 6	29	2									BOTTOM OF SLAB
S51(E)	STR.	2	# 6	31	4									BOTTOM OF SLAB
S52(E)	STR.	2	# 6	33	6									BOTTOM OF SLAB
S53(E)	STR.	2	# 6	35	8									BOTTOM OF SLAB
S54(E)	STR.	2	# 6	37	10									BOTTOM OF SLAB
S55(E)	STR.	2	# 6	40	0									BOTTOM OF SLAB
S56(E)	STR.	2	# 6	42	2									BOTTOM OF SLAB
S57(E)	STR.	2	# 6	44	4									BOTTOM OF SLAB
S58(E)	STR.	2	# 6	46	6									BOTTOM OF SLAB
S59(E)	STR.	2	# 6	48	9									BOTTOM OF SLAB
S60(E)	STR.	2	# 6	50	11									BOTTOM OF SLAB
S61(E)	STR.	2	# 6	53	1									BOTTOM OF SLAB
S62(E)	STR.	2	# 6	55	3									BOTTOM OF SLAB
S63(E)	STR.	2	# 6	57	5									BOTTOM OF SLAB
S64(E)	STR.	2	# 6	59	7									BOTTOM OF SLAB
S65(E)	STR.	2	# 6	61	9									BOTTOM OF SLAB
S66(E)	STR.	1268	# 6	40	0									TOP OF SLAB
S67(E)	STR.	1268	# 6	26	0									TOP OF SLAB
S68(E)	STR.	933	# 6	40	0									BOTTOM OF SLAB
S69(E)	STR.	933	# 6	26	0									BOTTOM OF SLAB
S70(E)	13	1524	# 5	5	10	(SEE BAR TYPE)								BARRIERS
S71(E)	12	1524	# 5	4	8	1	4	(SEE BAR TYPE)						BARRIERS
S72(E)	STR.	1440	# 5	40	0									SLAB & BARRIER
S73(E)	STR.	72	# 5	11	0									SLAB & BARRIER
S74(E)	STR.	960	# 6	40	0									BOTTOM OF SLAB
S75(E)	STR.	48	# 6	11	0									BOTTOM OF SLAB
S76(E)	STR.	8	# 6	40	0									END OF SLAB
S77(E)	STR.	8	# 6	33	3									END OF SLAB
S78(E)	STR.	30	# 6	10	0									SLAB ACUTE CORNERS
S79(E)	STR.	126	# 8	60	0									TOP OF SLAB
S80(E)	STR.	252	# 8	37	6									TOP OF SLAB
S81(E)	STR.	504	# 8	35	0									TOP OF SLAB
S82(E)	STR.	64	# 5	38	8									TOP OF BARRIER
S83(E)	STR.	96	# 5	40	8									TOP OF BARRIER

BILL OF REINFORCEMENT

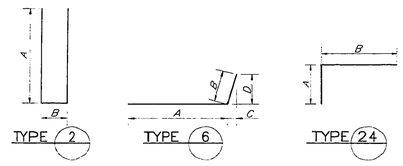
MARK	TYPE	NO.	SIZE	LENGTH FT.	LENGTH IN.	A FT.	A IN.	B FT.	B IN.	C FT.	C IN.	D FT.	D IN.	LOCATION
D1(E)	STR.	350	# 5	8	11									ABUT. & PIER DIA.
D2(E)	(2)	28	# 5	13	0	5	9	1	6					ABUTMENT DIA.
D3(E)	(2)	20	# 5	14	10	6	8	1	6					ABUTMENT DIA.
D4(E)	(2)	48	# 5	16	10	7	8	1	6					ABUTMENT DIA.
D5(E)	STR.	240	# 5	7	0									ABUT. & PIER DIA.
D6(E)	STR.	24	# 5	32	2									ABUTMENT DIA.
D7(E)	(24)	8	# 5	4	6	1	11	2	7					ABUTMENT DIA.
D8(E)	STR.	40	# 5	6	9									PIER DIA.
D9(E)	(6)	28	# 5	5	3	4	9	0	6	0	1 1/8	0	6	ABUTMENT DIA.
D10(E)	(3)	4	# 5	18	9	16	3	0	6	0	1 1/8	0	6	ABUTMENT DIA.
D11(E)	(4)	275	# 5	11	8	4	10	0	6	0	6			MID-SPAN DIA.
D12(E)	STR.	300	# 5	10	3									MID-SPAN DIA.
D13(E)	(2)	40	# 5	15	10	6	8	2	6					PIER DIA.
D14(E)	(2)	120	# 5	19	2	8	4	2	6					PIER DIA.
D15(E)	(2)	40	# 5	14	0	5	9	2	6					ABUTMENT DIA.
D16(E)	STR.	20	# 4	5	8									MID-SPAN DIA.
D17(E)	(2)	2	# 5	22	9	2	0	18	9					ABUTMENT DIA.
D18(E)	STR.	24	# 9	4	0									PIER DIA.
D19(E)	(2)	16	# 5	13	10	6	2	1	6					ABUTMENT DIA.



CORNER DETAIL "A"
(TYPICAL @ OBTUSE CORNERS)



CORNER DETAIL "B"
(TYPICAL @ ACUTE CORNERS)



DESIGNED BY	T.D.	STDP	DATE 6-94
DETAILED BY	R.V.	UGEL	CHECKED BY
PREPARED BY GRAPHICS SECTION	CHECKED BY	T.D.	ESTDP

REVISED ⚠1 No. & Size of Bars — DATE 8-9-94
REVISED ⚠2 No. & Size of Bars, (E) Added to All Bars, Details "A" & "B" Added — DATE 7-3-96
REVISED ⚠3 as noted — DATE

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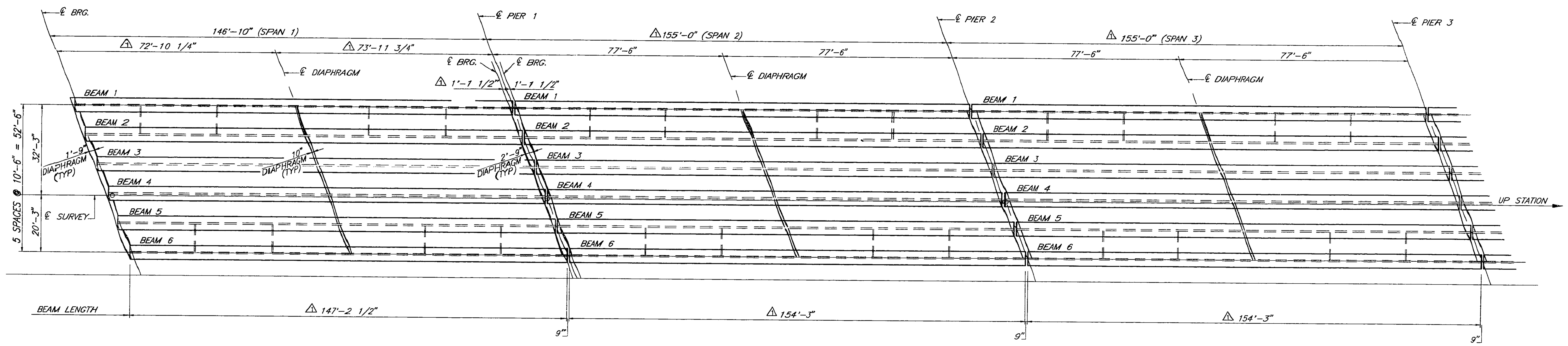
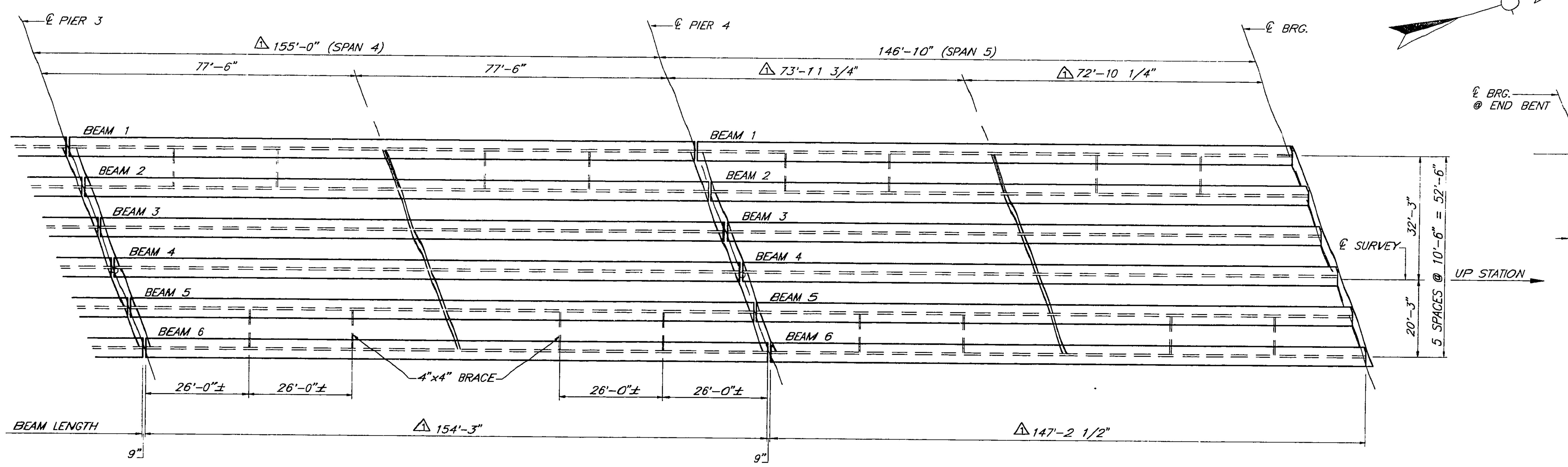
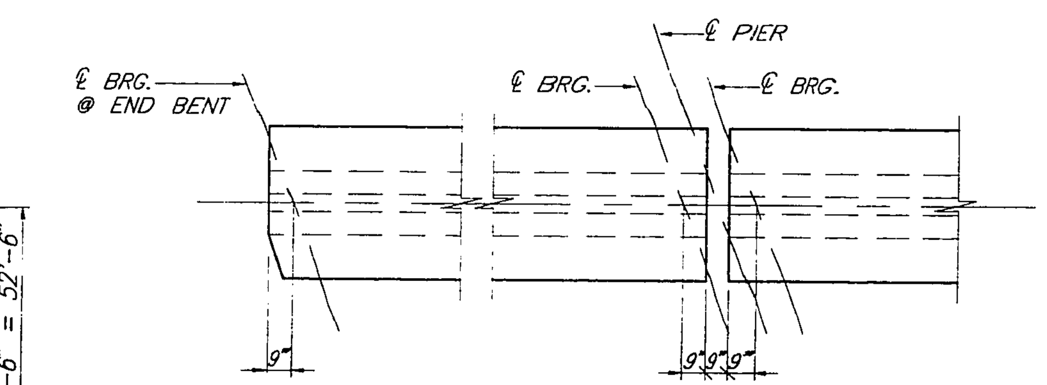
U.S. 62/68 OVER LAWRENCE CREEK — SHEET 25

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
MASON
U.S. 62/68
ROAD
STATION 182+67.50 P. E. PROJECT NO.

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		23687

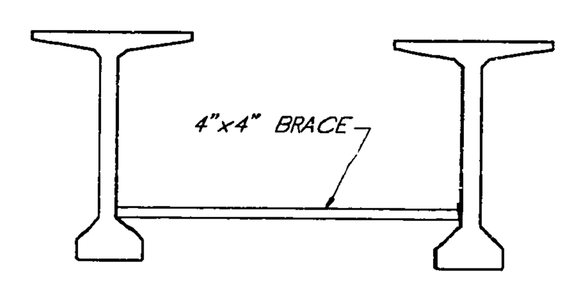






TYPICAL BEARING LOCATIONS

FRAMING PLAN



BRACING @ EXTERIOR BEAMS

NOTE:

4"x4" POSTS SHALL BE BRACED BETWEEN EXTERIOR AND ADJACENT BEAMS PRIOR TO POURING THE DECK, IN ORDER TO REDUCE ROTATION OF THE EXTERIOR BEAM DUE TO SCREED MACHINE LOADS AND DEAD WEIGHT OF OVERHANG.

U.S. 62/68 OVER LAWRENCE CREEK SHEET 26

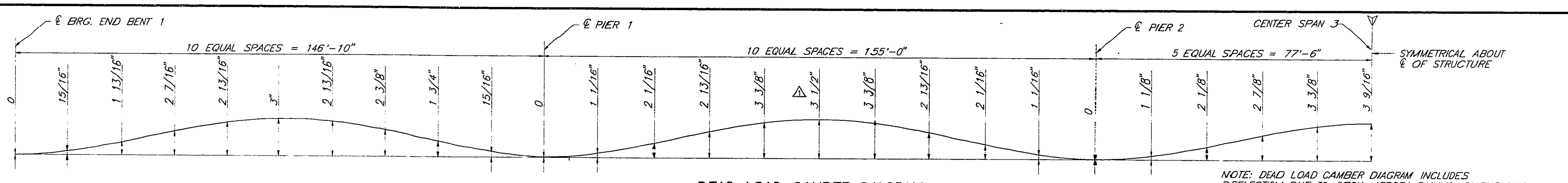
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
MASON
U.S. 62/68
ROAD
STATION 182+67.50 P. E. PROJECT NO.

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		23687

DESIGNED BY ___ CHECKED BY ___ DATE ___
DETAILED BY ___ CHECKED BY ___ DATE 6/94
PREPARED BY GRAPHICS SECTION CHECKED BY ___ DATE ___
REVISED △ DIM'S DATE 8-9-94
REVISED ___ DATE ___
REVISED ___ DATE ___

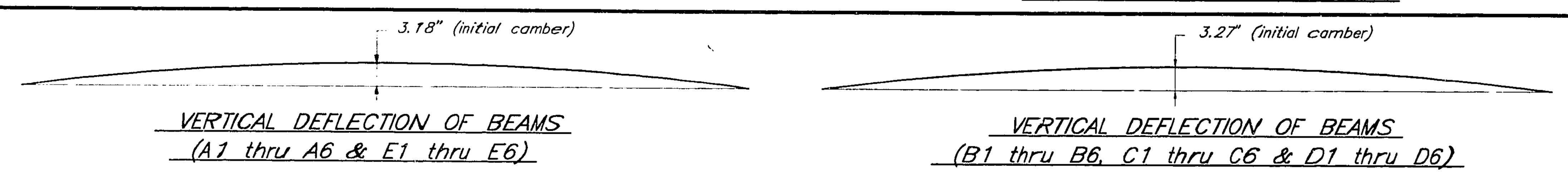
UPDATE DATE
LETTING DATE

097487



DEAD LOAD CAMBER DIAGRAM

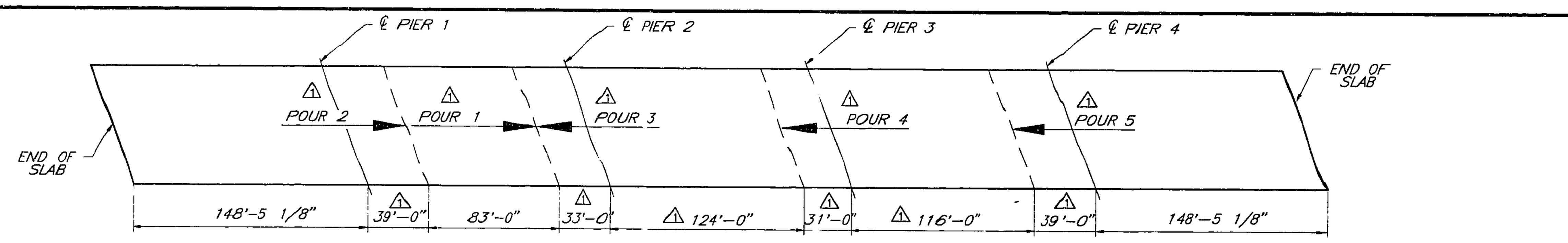
NOTE: DEAD LOAD CAMBER DIAGRAM INCLUDES DEFLECTION DUE TO DECK, JERSEY RAILING, DIAPHRAGMS, AND FUTWS.



VERTICAL DEFLECTION OF BEAMS (A1 thru A6 & E1 thru E6)

VERTICAL DEFLECTION OF BEAMS (B1 thru B6, C1 thru C6 & D1 thru D6)

DEFLECTION DIAGRAMS



NOTE: SLAB POURING SHOULD OCCUR IN THE SEQUENCE SHOWN. THE SEQUENCE MAY BE CHANGED WITH WRITTEN APPROVAL OF THE ENGINEER.

SLAB POURING SEQUENCE

NOTE: CONCRETE DIAPHRAGMS AT END BENTS AND/OR MID-SPAN SHALL BE CAST AND CURED AT BOTH ENDS OF A SPAN PRIOR TO ANY SLAB POUR ON THAT SPAN.

BILL OF REINFORCEMENT

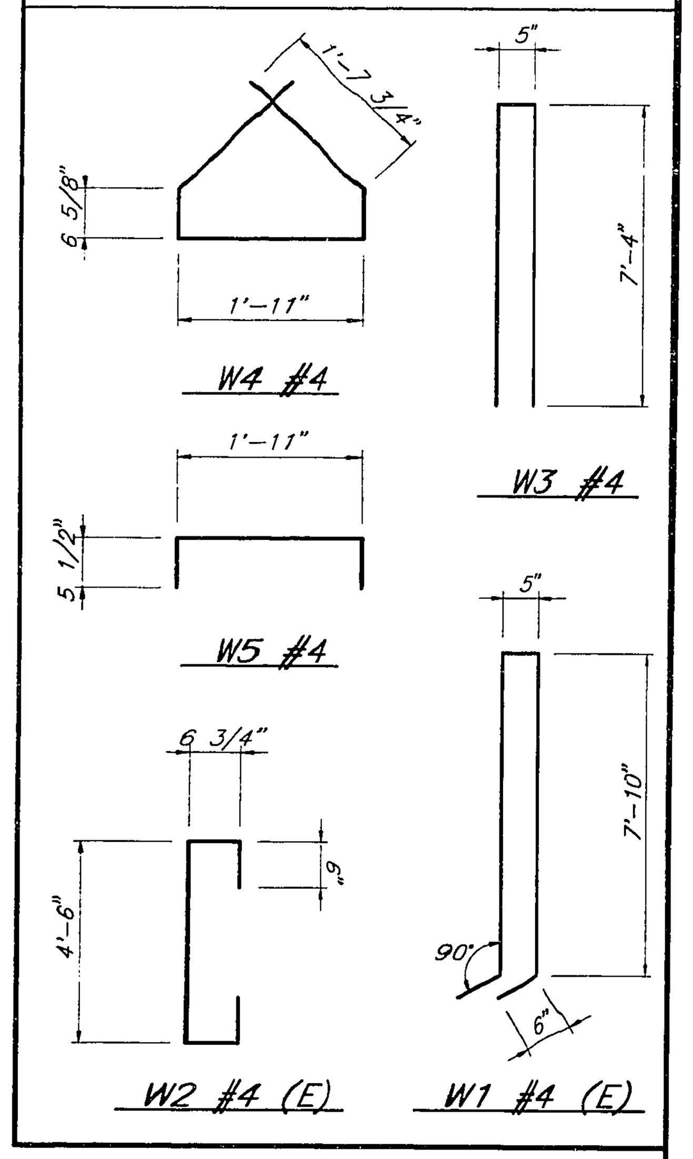
VALID FOR 147'-3 1/2" BEAMS

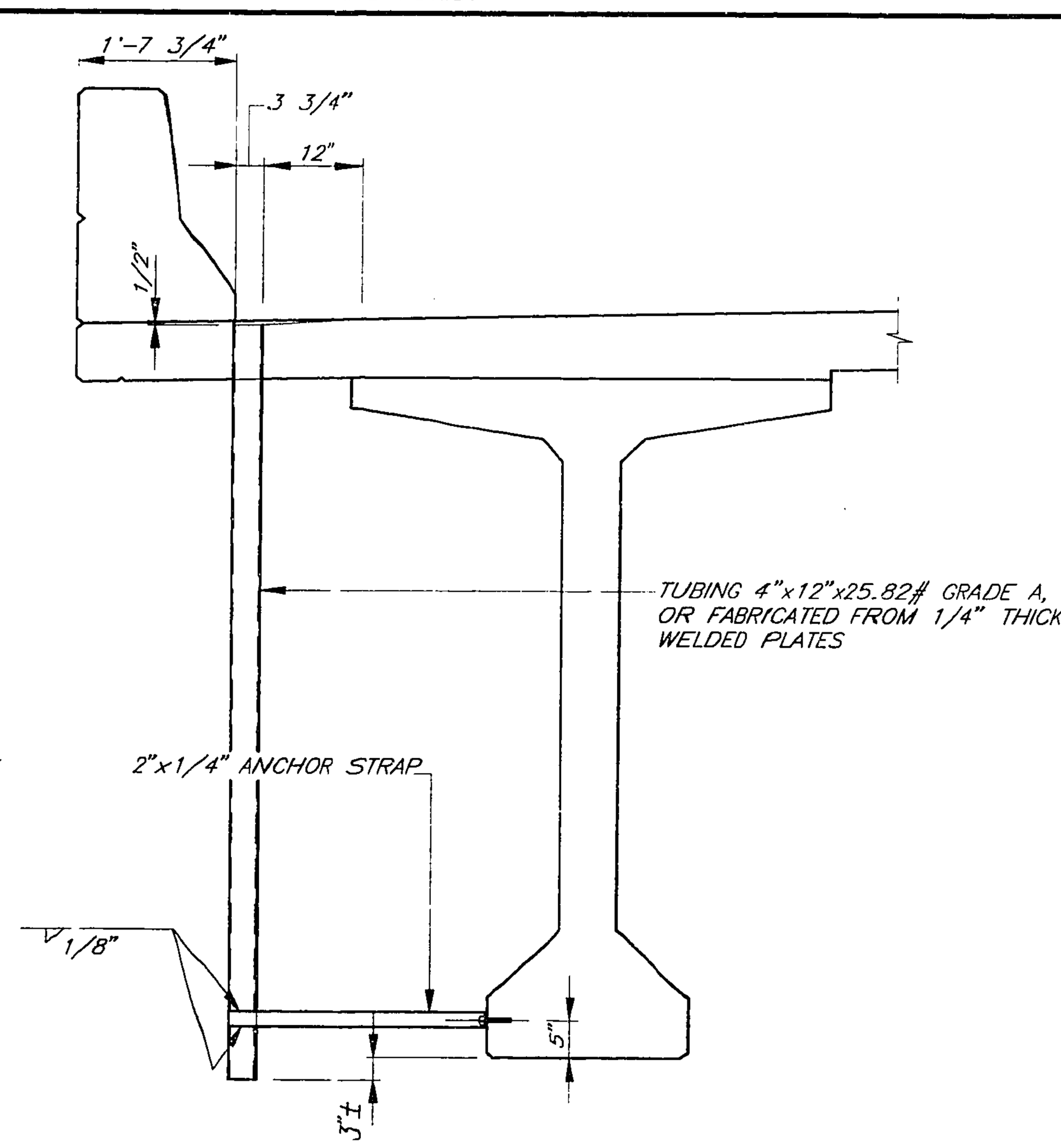
MARK	SIZE	NUMBER	LENGTH Ft.	LENGTH In.	WEIGHT
W1(E)	#4	154	17	1	1757
W2(E)	#4	130	6	7 1/2	575
W3	#4	46	15	1	463
W4	#4	28	6	3 3/4	118
W5	#4	28	2	9 1/2	53
W6	#6	4	25	0	150
TOTAL					3116

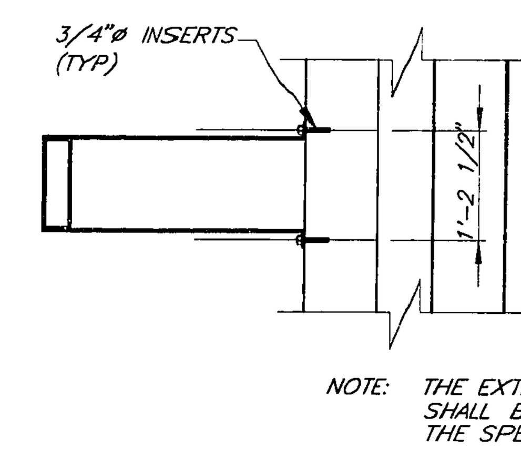
VALID FOR 154'-4" BEAMS

MARK	SIZE	NUMBER	LENGTH Ft.	LENGTH In.	WEIGHT
W1(E)	#4	161	17	1	1837
W2(E)	#4	137	6	7 1/2	606
W3	#4	46	15	1	463
W4	#4	28	6	3 3/4	118
W5	#4	28	2	9 1/2	53
W6	#6	4	25	0	150
TOTAL					3227

BAR SHAPES

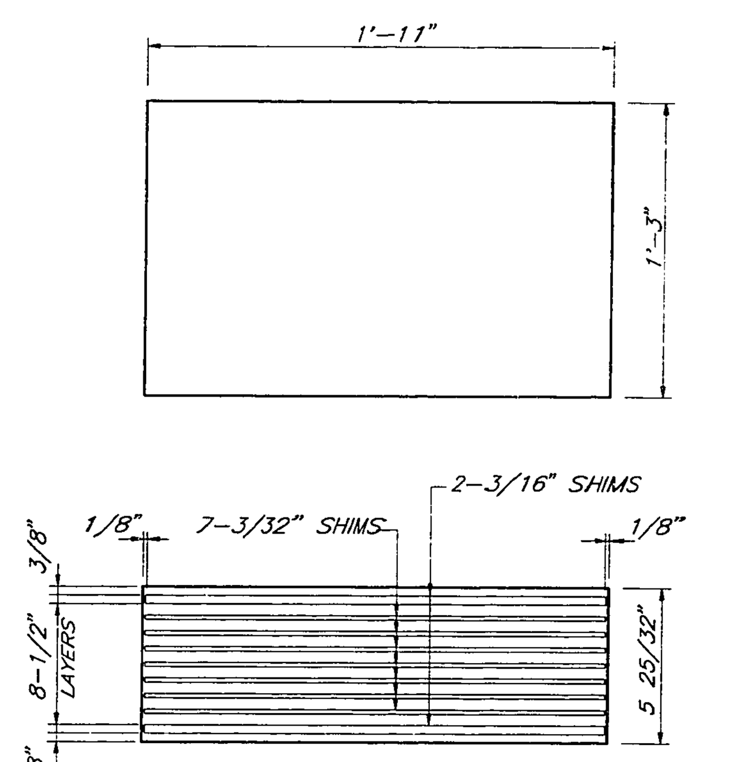




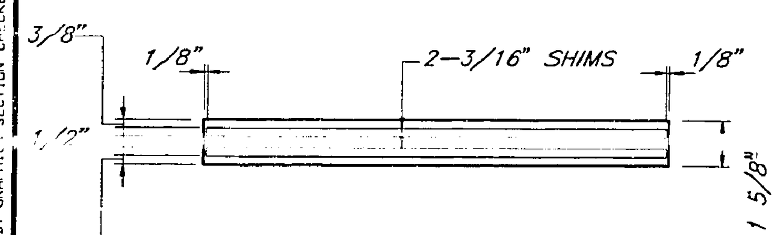


NOTE: THE EXTERIOR SURFACES OF THE DRAINS SHALL BE PAINTED IN ACCORDANCE WITH THE SPECIFICATIONS.

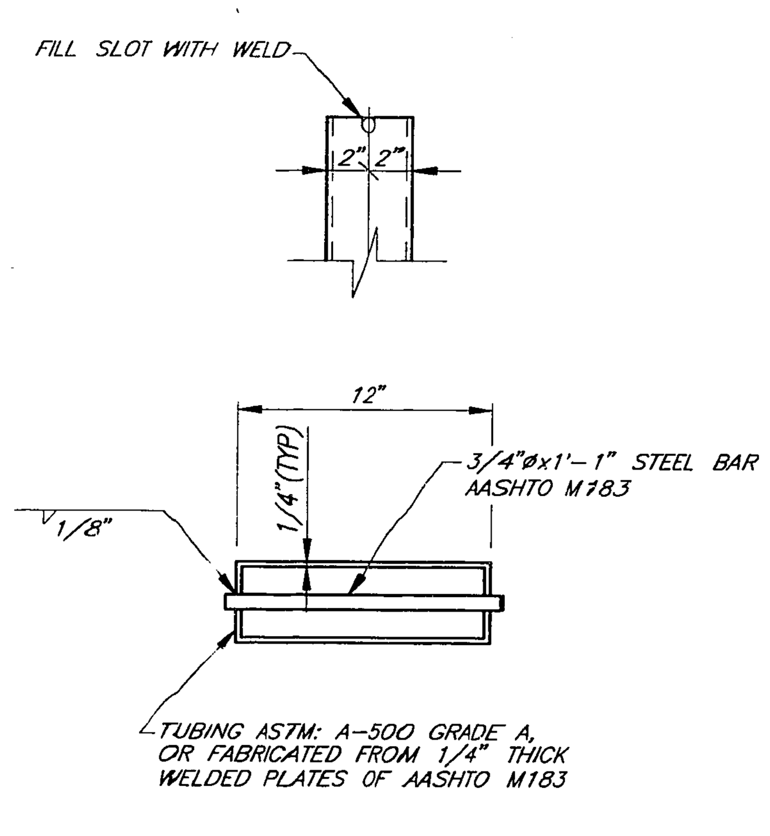
SECTION THRU DRAIN



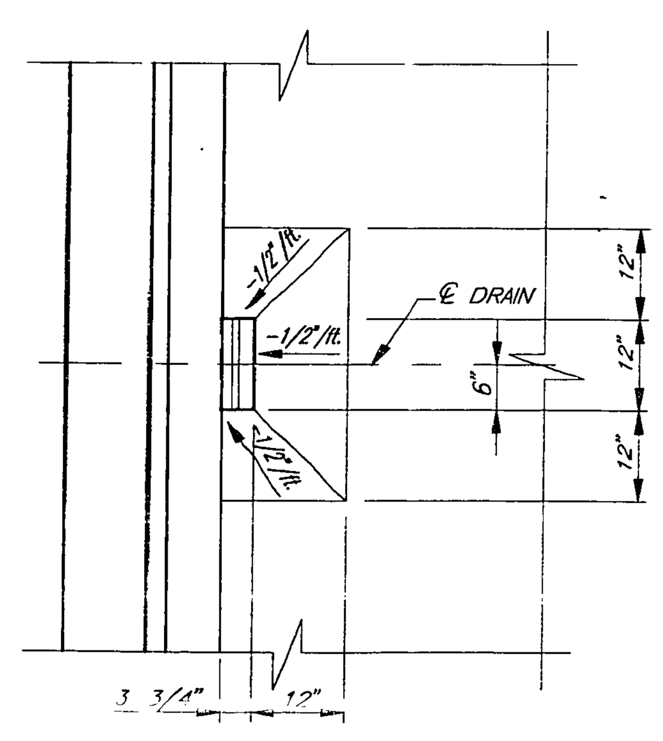
BEARING PAD @ ABUTMENTS
(12 REQUIRED)



BEARING PAD @ PIERS
(48 REQUIRED)



PLAN OF DRAIN



PLAN

STEEL TUBE DECK DRAIN DETAILS

UPDATE DATE
LETTING DATE

REVISED ⚠1 Dim's., Rebar, Added Detail A. DATE 8-9-94
REVISED ⚠2 Bearing Pad Changed, Detail A Removed, Drain Details Replaced DATE 9-5-94
REVISED ⚠3 AS NOTED DATE 9-21-94

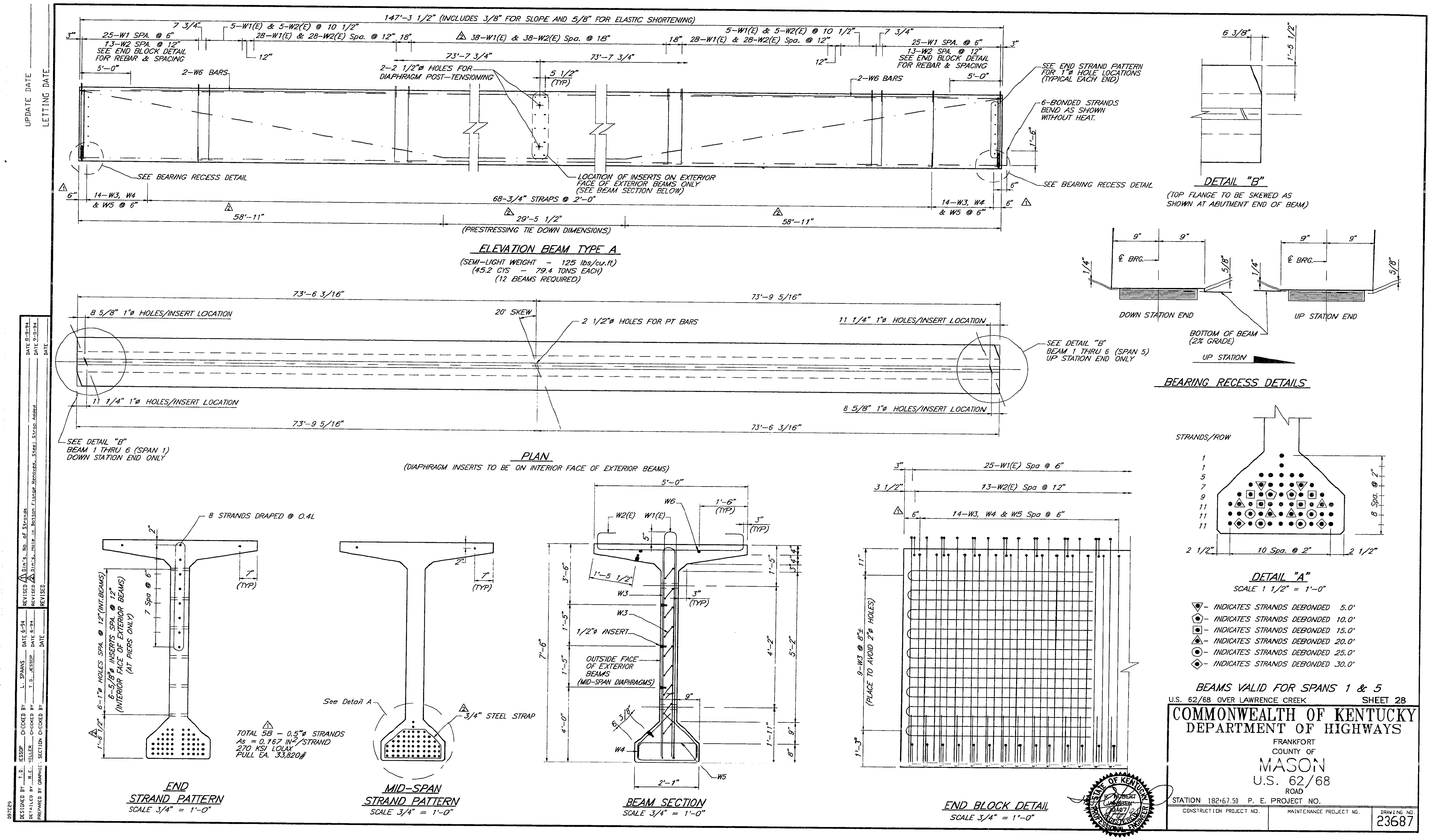
DESIGNED BY T.D. JESSOP CHECKED BY L. SPARKS DATE 8-94
DETAILED BY R.E. MILLER CHECKED BY T.D. JESSOP DATE 8-94
PREPARED BY GRAPHIC SECTION CHECKED BY DATE

U.S. 62/68 OVER LAWRENCE CREEK SHEET 27

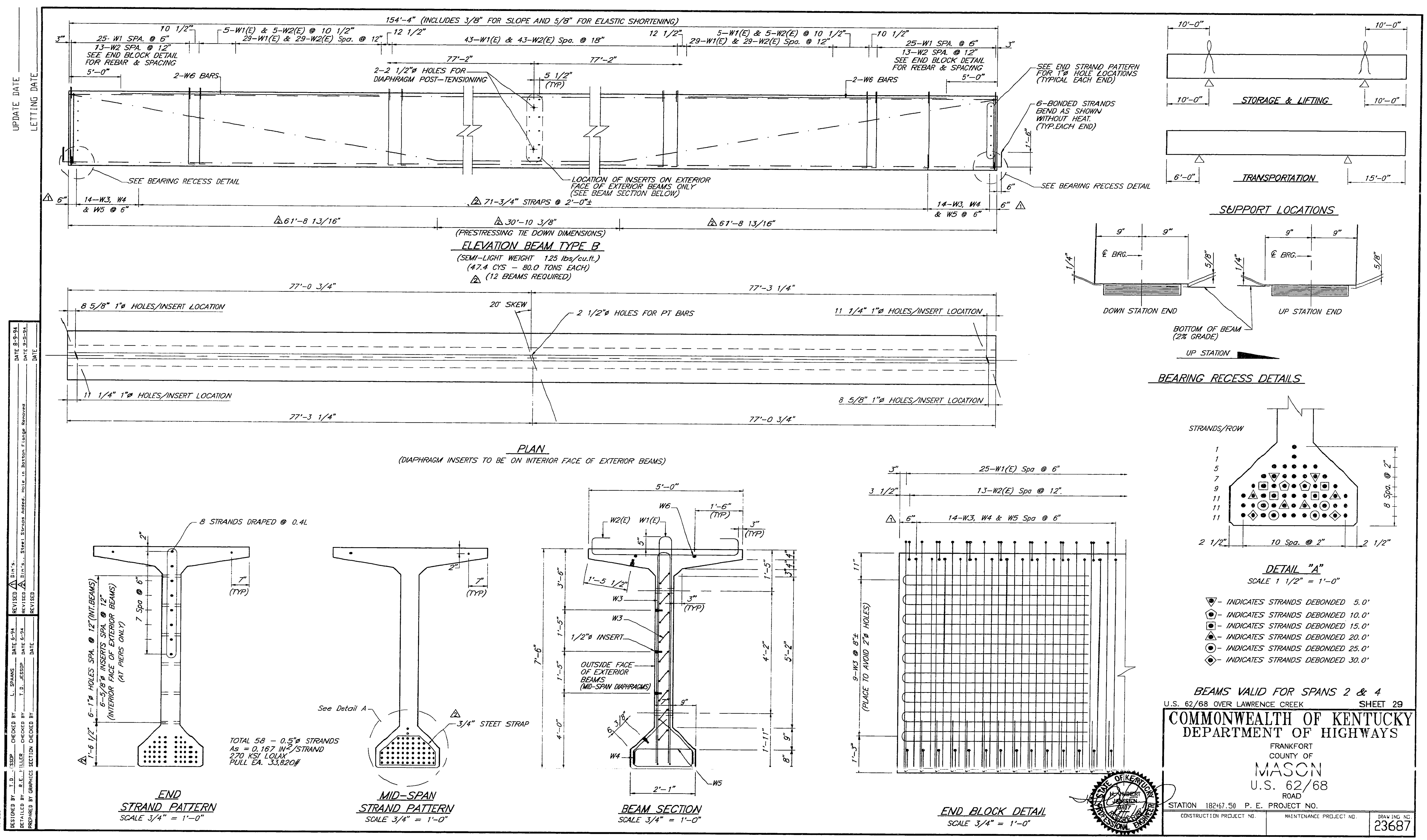
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

FRANKFORT
COUNTY OF
MASON
U.S. 62/68
ROAD
STATION 182+67.50 P. E. PROJECT NO.

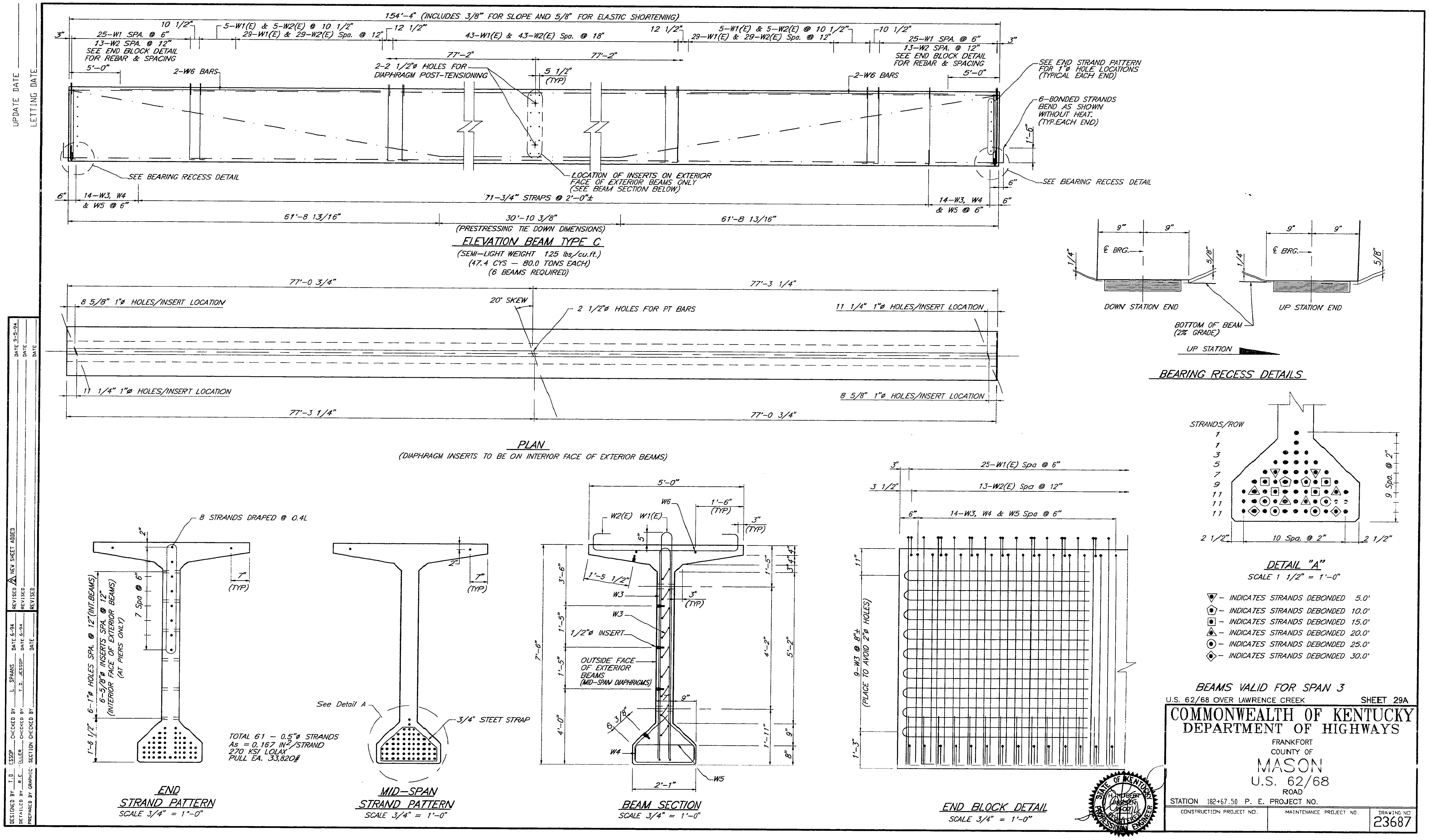
CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		23687



147'-3 1/2" (INCLUDES 3/8" FOR SLOPE AND 5/8" FOR ELASTIC SHORTENING)
25-W1 SPA. @ 6"
13-W2 SPA. @ 12"
SEE END BLOCK DETAIL FOR REBAR & SPACING
5-W1(E) & 5-W2(E) @ 10 1/2"
28-W1(E) & 28-W2(E) Spa. @ 12"
38-W1(E) & 38-W2(E) Spa. @ 18"
73'-7 3/4"
2-2 1/2"ø HOLES FOR DIAPHRAGM POST-TENSIONING
2-W6 BARS
SEE END STRAND PATTERN FOR 1"ø HOLE LOCATIONS (TYPICAL EACH END)
6-BONDED STRANDS BEND AS SHOWN WITHOUT HEAT.
SEE BEARING RECESS DETAIL
LOCATION OF INSERTS ON EXTERIOR FACE OF EXTERIOR BEAMS ONLY (SEE BEAM SECTION BELOW)
14-W3, W4 & W5 @ 6"
68-3/4" STRAPS @ 2'-0"
58'-11"
29'-5 1/2"
(PRESTRESSING TIE DOWN DIMENSIONS)
ELEVATION BEAM TYPE A
(SEMI-LIGHT WEIGHT - 125 lbs/cu.ft)
(45.2 CYS - 79.4 TONS EACH)
(12 BEAMS REQUIRED)
DETAIL "B"
(TOP FLANGE TO BE SKEWED AS SHOWN AT ABUTMENT END OF BEAM)
DOWN STATION END
UP STATION END
BOTTOM OF BEAM (2% GRADE)
UP STATION
BEARING RECESS DETAILS
73'-6 3/16"
73'-9 5/16"
8 5/8" 1"ø HOLES/INSERT LOCATION
11 1/4" 1"ø HOLES/INSERT LOCATION
20° SKEW
2 1/2"ø HOLES FOR PT BARS
SEE DETAIL "B" BEAM 1 THRU 6 (SPAN 5) UP STATION END ONLY
SEE DETAIL "B" BEAM 1 THRU 6 (SPAN 1) DOWN STATION END ONLY
PLAN
(DIAPHRAGM INSERTS TO BE ON INTERIOR FACE OF EXTERIOR BEAMS)
8 STRANDS DRAPED @ 0.4L
6-1"ø HOLES SPA. @ 12"(INT.BEAMS)
6-5/8"ø INSERTS SPA. @ 12" (INTERIOR FACE OF EXTERIOR BEAMS) (AT PIERS ONLY)
END STRAND PATTERN
SCALE 3/4" = 1'-0"
See Detail A
3/4" STEEL STRAP
TOTAL 58 - 0.5"ø STRANDS
As = 0.167 IN²/STRAND
270 KSI LOLAX
PULL EA. 33,820#
MID-SPAN STRAND PATTERN
SCALE 3/4" = 1'-0"
W2(E) W1(E) W6
1/2"ø INSERT
OUTSIDE FACE OF EXTERIOR BEAMS (MID-SPAN DIAPHRAGMS)
BEAM SECTION
SCALE 3/4" = 1'-0"
25-W1(E) Spa @ 6"
13-W2(E) Spa @ 12"
14-W3, W4 & W5 Spa @ 6"
9-W3 @ 8" (PLACE TO AVOID 2"ø HOLES)
END BLOCK DETAIL
SCALE 3/4" = 1'-0"
STRANDS/ROW
8 Spa. @ 2"
10 Spa. @ 2"
DETAIL "A"
SCALE 1 1/2" = 1'-0"
- INDICATES STRANDS DEBONDED 5.0'
- INDICATES STRANDS DEBONDED 10.0'
- INDICATES STRANDS DEBONDED 15.0'
- INDICATES STRANDS DEBONDED 20.0'
- INDICATES STRANDS DEBONDED 25.0'
- INDICATES STRANDS DEBONDED 30.0'
BEAMS VALID FOR SPANS 1 & 5
U.S. 62/68 OVER LAWRENCE CREEK SHEET 28
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
MASON
U.S. 62/68
ROAD
STATION 182+67.50 P. E. PROJECT NO.
CONSTRUCTION PROJECT NO.
MAINTENANCE PROJECT NO.
DRAWING NO. 23687
UPDATE DATE
LETTING DATE



ELEVATION BEAM TYPE B
(SEMI-LIGHT WEIGHT 125 lbs/cu.ft.)
(47.4 CYS - 80.0 TONS EACH)
(12 BEAMS REQUIRED)
154'-4" (INCLUDES 3/8" FOR SLOPE AND 5/8" FOR ELASTIC SHORTENING)
25-W1 SPA. @ 6"
13-W2 SPA. @ 12"
SEE END BLOCK DETAIL FOR REBAR & SPACING
5-W1(E) & 5-W2(E) @ 10 1/2"
29-W1(E) & 29-W2(E) Spa. @ 12"
43-W1(E) & 43-W2(E) Spa. @ 18"
2-W6 BARS
2-2 1/2"ø HOLES FOR DIAPHRAGM POST-TENSIONING
SEE END STRAND PATTERN FOR 1"ø HOLE LOCATIONS (TYPICAL EACH END)
6-BONDED STRANDS BEND AS SHOWN WITHOUT HEAT. (TYP.EACH END)
SEE BEARING RECESS DETAIL
LOCATION OF INSERTS ON EXTERIOR FACE OF EXTERIOR BEAMS ONLY (SEE BEAM SECTION BELOW)
14-W3, W4 & W5 @ 6"
71-3/4" STRAPS @ 2'-0"±
61'-8 13/16"
30'-10 3/8"
(PRESTRESSING TIE DOWN DIMENSIONS)
PLAN
(DIAPHRAGM INSERTS TO BE ON INTERIOR FACE OF EXTERIOR BEAMS)
8 5/8" 1"ø HOLES/INSERT LOCATION
11 1/4" 1"ø HOLES/INSERT LOCATION
20° SKEW
2 1/2"ø HOLES FOR PT BARS
77'-0 3/4"
77'-3 1/4"
STORAGE & LIFTING
TRANSPORTATION
SUPPORT LOCATIONS
DOWN STATION END
UP STATION END
BOTTOM OF BEAM (2% GRADE)
UP STATION
BEARING RECESS DETAILS
END STRAND PATTERN
SCALE 3/4" = 1'-0"
8 STRANDS DRAPED @ 0.4L
6-1"ø HOLES SPA. @ 12" (INT.BEAMS)
6-5/8"ø INSERTS SPA. @ 12" (INTERIOR FACE OF EXTERIOR BEAMS) (AT PIERS ONLY)
MID-SPAN STRAND PATTERN
SCALE 3/4" = 1'-0"
See Detail A
3/4" STEEL STRAP
TOTAL 58 - 0.5"ø STRANDS
As = 0.167 IN²/STRAND
270 KSI LOLAX
PULL EA. 33,820#
BEAM SECTION
SCALE 3/4" = 1'-0"
1/2"ø INSERT
OUTSIDE FACE OF EXTERIOR BEAMS (MID-SPAN DIAPHRAGMS)
END BLOCK DETAIL
SCALE 3/4" = 1'-0"
25-W1(E) Spa @ 6"
13-W2(E) Spa @ 12"
14-W3, W4 & W5 Spa @ 6"
9-W3 @ 8"± (PLACE TO AVOID 2"ø HOLES)
DETAIL "A"
SCALE 1 1/2" = 1'-0"
STRANDS/ROW
10 Spa. @ 2"
8 Spa. @ 2"
- INDICATES STRANDS DEBONDED 5.0'
- INDICATES STRANDS DEBONDED 10.0'
- INDICATES STRANDS DEBONDED 15.0'
- INDICATES STRANDS DEBONDED 20.0'
- INDICATES STRANDS DEBONDED 25.0'
- INDICATES STRANDS DEBONDED 30.0'
BEAMS VALID FOR SPANS 2 & 4
U.S. 62/68 OVER LAWRENCE CREEK
SHEET 29
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
MASON
U.S. 62/68
ROAD
STATION 182+67.50 P. E. PROJECT NO.
CONSTRUCTION PROJECT NO.
MAINTENANCE PROJECT NO.
DRAWING NO.
23687
UPDATE DATE
LETTING DATE


154'-4" (INCLUDES 3/8" FOR SLOPE AND 5/8" FOR ELASTIC SHORTENING)
25-W1 SPA. @ 6"
13-W2 SPA. @ 12"
SEE END BLOCK DETAIL FOR REBAR & SPACING
5-W1(E) & 5-W2(E) @ 10 1/2"
29-W1(E) & 29-W2(E) Spa. @ 12"
43-W1(E) & 43-W2(E) Spa. @ 18"
2-2 1/2"ø HOLES FOR DIAPHRAGM POST-TENSIONING
2-W6 BARS
SEE END STRAND PATTERN FOR 1"ø HOLE LOCATIONS (TYPICAL EACH END)
6-BONDED STRANDS BEND AS SHOWN WITHOUT HEAT. (TYP.EACH END)
SEE BEARING RECESS DETAIL
LOCATION OF INSERTS ON EXTERIOR FACE OF EXTERIOR BEAMS ONLY (SEE BEAM SECTION BELOW)
14-W3, W4 & W5 @ 6"
71-3/4" STRAPS @ 2'-0"±
61'-8 13/16"
30'-10 3/8"
(PRESTRESSING TIE DOWN DIMENSIONS)
ELEVATION BEAM TYPE C
(SEMI-LIGHT WEIGHT 125 lbs/cu.ft.)
(47.4 CYS - 80.0 TONS EACH)
(6 BEAMS REQUIRED)
77'-0 3/4"
77'-3 1/4"
8 5/8" 1"ø HOLES/INSERT LOCATION
20° SKEW
2 1/2"ø HOLES FOR PT BARS
11 1/4" 1"ø HOLES/INSERT LOCATION
PLAN
(DIAPHRAGM INSERTS TO BE ON INTERIOR FACE OF EXTERIOR BEAMS)
DOWN STATION END
UP STATION END
BOTTOM OF BEAM (2% GRADE)
UP STATION
BEARING RECESS DETAILS
STRANDS/ROW
DETAIL "A"
SCALE 1 1/2" = 1'-0"
- INDICATES STRANDS DEBONDED 5.0'
- INDICATES STRANDS DEBONDED 10.0'
- INDICATES STRANDS DEBONDED 15.0'
- INDICATES STRANDS DEBONDED 20.0'
- INDICATES STRANDS DEBONDED 25.0'
- INDICATES STRANDS DEBONDED 30.0'
8 STRANDS DRAPED @ 0.4L
6-1"ø HOLES SPA. @ 12"(INT.BEAMS)
6-5/8"ø INSERTS SPA. @ 12" (INTERIOR FACE OF EXTERIOR BEAMS) (AT PIERS ONLY)
TOTAL 61 - 0.5"ø STRANDS
As = 0.167 IN²/STRAND
270 KSI LOLAX
PULL EA. 33,820#
END STRAND PATTERN
SCALE 3/4" = 1'-0"
See Detail A
3/4" STEET STRAP
MID-SPAN STRAND PATTERN
SCALE 3/4" = 1'-0"
1/2"ø INSERT
OUTSIDE FACE OF EXTERIOR BEAMS (MID-SPAN DIAPHRAGMS)
BEAM SECTION
SCALE 3/4" = 1'-0"
25-W1(E) Spa @ 6"
13-W2(E) Spa @ 12"
14-W3, W4 & W5 Spa @ 6"
9-W3 @ 8"± (PLACE TO AVOID 2"ø HOLES)
END BLOCK DETAIL
SCALE 3/4" = 1'-0"
BEAMS VALID FOR SPAN 3
U.S. 62/68 OVER LAWRENCE CREEK
SHEET 29A
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
MASON
U.S. 62/68
ROAD
STATION 182+67.50 P. E. PROJECT NO.
CONSTRUCTION PROJECT NO.
MAINTENANCE PROJECT NO.
DRAWING NO.
23687
UPDATE DATE
LETTING DATE
DESIGNED BY T.D. ESSOP
CHECKED BY L. SPARKS
DATE 6-94
REVISED NEW SHEET ADDED
DATE 9-5-94

CONCRETE

△1 CONCRETE FOR PRECAST BEAMS SHALL BE CLASS "SL", A SEMI-LIGHTWEIGHT MIX WITH A UNIT WEIGHT OF 125 LBS/CUBIC FEET. SEE SPECIAL PROVISIONS FOR CONCRETE MIX REQUIREMENTS.

MATERIALS DESIGN SPECIFICATIONS

△1 F'C = 7000 PSI
F'S = 270000 PSI

PRESTRESSING REINFORCEMENT

ALL PRESTRESSING STRANDS SHALL BE 1/2 INCH UNCOATED, SEVEN WIRE LOW RELAXATION 270 KSI SPECIAL (ASTM)416-80 (0.5 INCH NOMINAL DIAMETER 0.167 SQ INCH AREA WITH A G.U.T.S. OF 45000 LBS PER STRAND)-M203. SPACING TO BE 2 INCHES VERTICALLY AND HORIZONTALLY.

△1 COST OF THE PRESTRESSING STRAND IS INCLUDED IN THE COST OF THE PRESTRESSED BEAM.

TENSIONING METHOD

BEAMS SHALL BE PRETENSIONED.

ELASTOMERIC BEARING PADS.

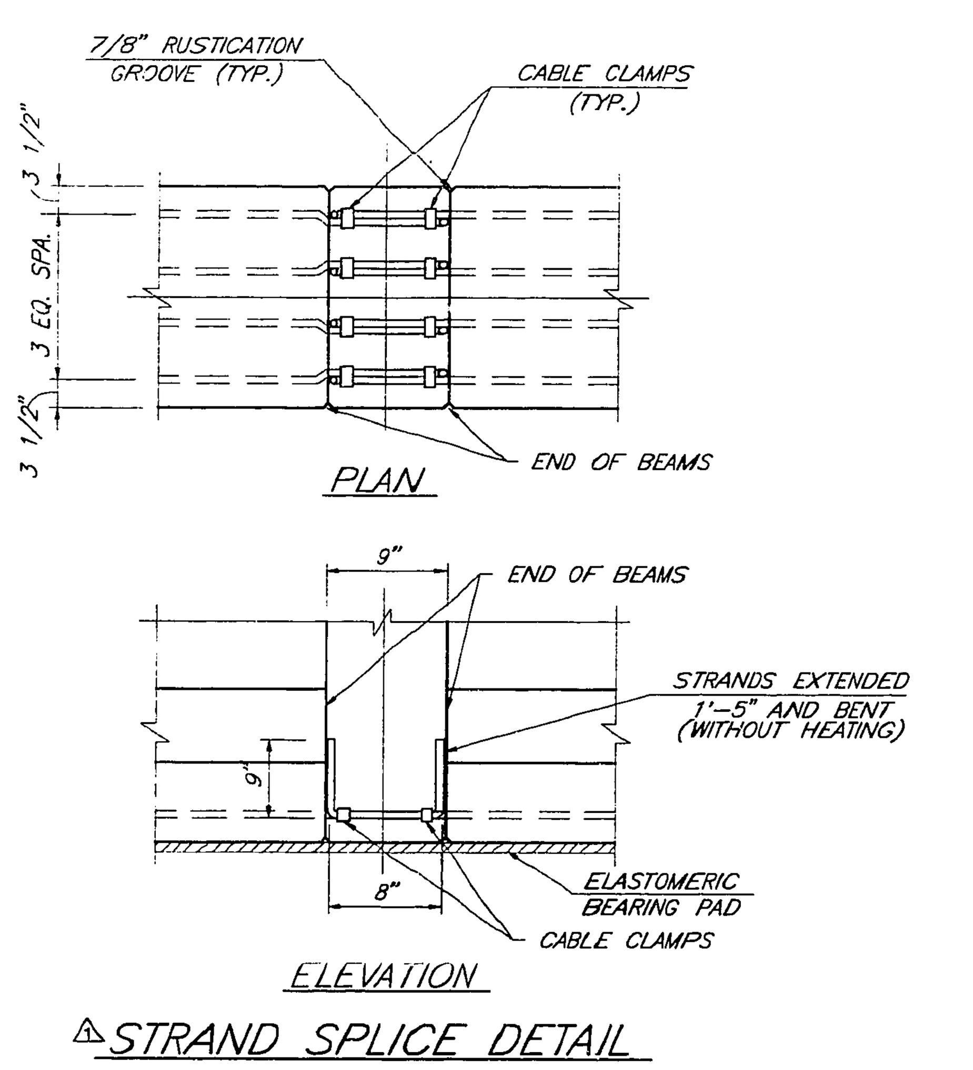
THE MATERIAL SPECIFICATIONS FOR ELASTOMERIC BEARING PADS SHALL CONFORM TO THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES EXCEPT THAT THE REQUIREMENT OF THE LOW TEMPERATURE TEST IS WAIVED AND A DUROMETER HARDNESS OF ~~50 OR~~ 60 IS REQUIRED. THE COST OF THIS ITEM IS TO BE INCLUDED IN THE PRICE PER LINEAR FOOT FOR PRECAST BEAMS.

CONSTRUCTION METHOD (PRECAST BEAMS)

NO BOND STRESS SHALL BE TRANSFERRED TO THE CONCRETE, NOR SHALL END ANCHORS BE RELEASED, UNTIL THE CONCRETE HAS ATTAINED A COMPRESSIVE STRENGTH AS SHOWN BY STANDARD CYLINDERS MADE AND CURED IDENTICALLY WITH THE BEAMS, OF AT LEAST A MINIMUM STRENGTH OF 5000 PSI. CYLINDER STRENGTH SHALL BE 7000 PSI AT OR PRIOR TO 28 DAYS. AN INITIAL FORCE SHALL BE APPLIED TO EACH LOW RELAXATION STRAND SUCH AS TO DEVELOP A STRESS OF 202,500 PSI. BEAMS WITH HONEYCOMB OF SUCH EXTENT AS TO AFFECT THE STRENGTH OR RESISTANCE TO DETERIORATION WILL NOT BE ACCEPTED. AN ALLOWANCE OF 1" SHALL BE MADE FOR SHORTENING OF BEAMS DUE TO SHRINKAGE AND ELASTIC CHANGE.
SHOP DRAWINGS AND CALCULATIONS MUST BE SUBMITTED BY THE MANUFACTURER THROUGH THE CONTRACTOR. THESE ARE TO INCLUDE THE DESTRESSING ORDER (SEE SPECIAL PROVISIONS FOR ADDITIONAL ITEMS).

DEFORMED WIRE FABRIC

DEFORMED WIRE FABRIC MAY BE USED IN THE PRECAST BEAMS IN LIEU OF REINFORCING BARS, PROVIDED AN EQUIVALENT AREA OF STEEL IS FURNISHED. WIRE FABRIC SHALL CONFORM TO THE REQUIREMENTS OF AASHTO SPECIFICATION W221 (A497) AND IS TO BE MADE OF DEFORMED WIRE CONFORMING TO AASHTO SPECIFICATION W225 (A496).



△ STRAND SPLICE DETAIL
BEAM ENDS AT PIERS

PAYMENT FOR PRECAST CONCRETE BEAMS

THE BASIS OF PAYMENT FOR THE PRESTRESSED CONCRETE BEAMS SHALL BE AT THE CONTRACT UNIT PRICE PER LINEAR FOOT OF BEAM, IN ACCORDANCE WITH THE SPECIFICATIONS.

△1 PAYMENT FOR POST-TENSIONING

THE COST OF ALL POST-TENSIONING HARDWARE (STRANDS, DUCTS, ANCHOR ASSEMBLIES, ETC.) AND POST-TENSIONING OPERATIONS (STRESSING, GROUTING, ETC.) SHALL BE INCLUDED IN THE COST OF ~~OTHER ITEMS.~~ CLASS "AA" CONCRETE. △3

TESTING PRESTRESSED CONCRETE MEMBERS

IN ADDITION TO THE REQUIREMENTS OF SECTION 605 OF THE DEPARTMENT'S STANDARD SPECIFICATIONS, FABRICATORS OF PRESTRESSED CONCRETE MEMBERS SHALL FURNISH, AS PART OF THEIR QUALITY CONTROL EQUIPMENT, A PACHOMETER FOR DETERMINING THE DEPTH OF CONCRETE COVER OVER STEEL REINFORCEMENT. THE METER FURNISHED SHALL BE AN "R" METER AS MANUFACTURED BY JAMES ELECTRONICS, INC., CHICAGO, ILLINOIS, OR APPROVED EQUAL. THE PACHOMETER SHALL BE AVAILABLE FOR USE BY BOTH THE FABRICATOR'S QUALITY CONTROL PERSONNEL AND THE DEPARTMENT'S INSPECTOR(S).

NO SEPARATE PAYMENT WILL BE MADE FOR FURNISHING THE METER AS THIS IS CONSIDERED INCIDENTAL TO THE PRESTRESSED CONCRETE WORK.

GENERAL BEAM NOTES

BEAMS SHALL BE CAST A MINIMUM OF 28 DAYS BEFORE DECK IS POURED.

TOP OF BEAMS ARE TO BE SCORED TRANSVERSELY AT ABOUT 3 INCH CENTERS WITH POINTED TOOL (MAX DEPTH OF SCORING 1/4 INCH).

ALL REINFORCING IN PRECAST BEAMS SHALL BE GRADE 60.

SEVERAL LIFTING DEVICES ARE SATISFACTORY. THE TYPE USED MUST BE GUARANTEED BY THE BEAM MANUFACTURER AND APPROVED BY THE ENGINEER ON THE SHOP DRAWINGS. BEAMS ARE TO BE LIFTED AND SUPPORTED AT THE LOCATIONS AS SHOWN IN THE PLANS DURING HANDLING, STORAGE, AND TRANSPORTATION.

INITIAL PULL PER STRAND 33,820#.

DURING LIFTING, TRANSPORTATION, STORAGE, AND ERECTION, BEAMS SHALL BE MAINTAINED VERTICALLY AT ALL TIMES. FAILURE TO DO SO COULD RESULT IN SUDDEN FAILURE OF BEAMS.

ADEQUATE BRACING MUST BE PROVIDED AT ALL TIMES DURING STORAGE, TRANSPORTATION, AND ERECTION TO RESIST LATERAL LOADS.

A MINIMUM OF 2 BEAMS SHOULD BE ERECTED IN ANY GIVEN SPAN TO ALLOW FOR ADEQUATE BRACING OF THE BEAMS.

BEAMS HAVE BEEN DESIGNED FOR A MAXIMUM SUPER-ELEVATION OF 5%. THIS IS TO BE VERIFIED BY THE BEAM MANUFACTURER AND CONTRACTOR.

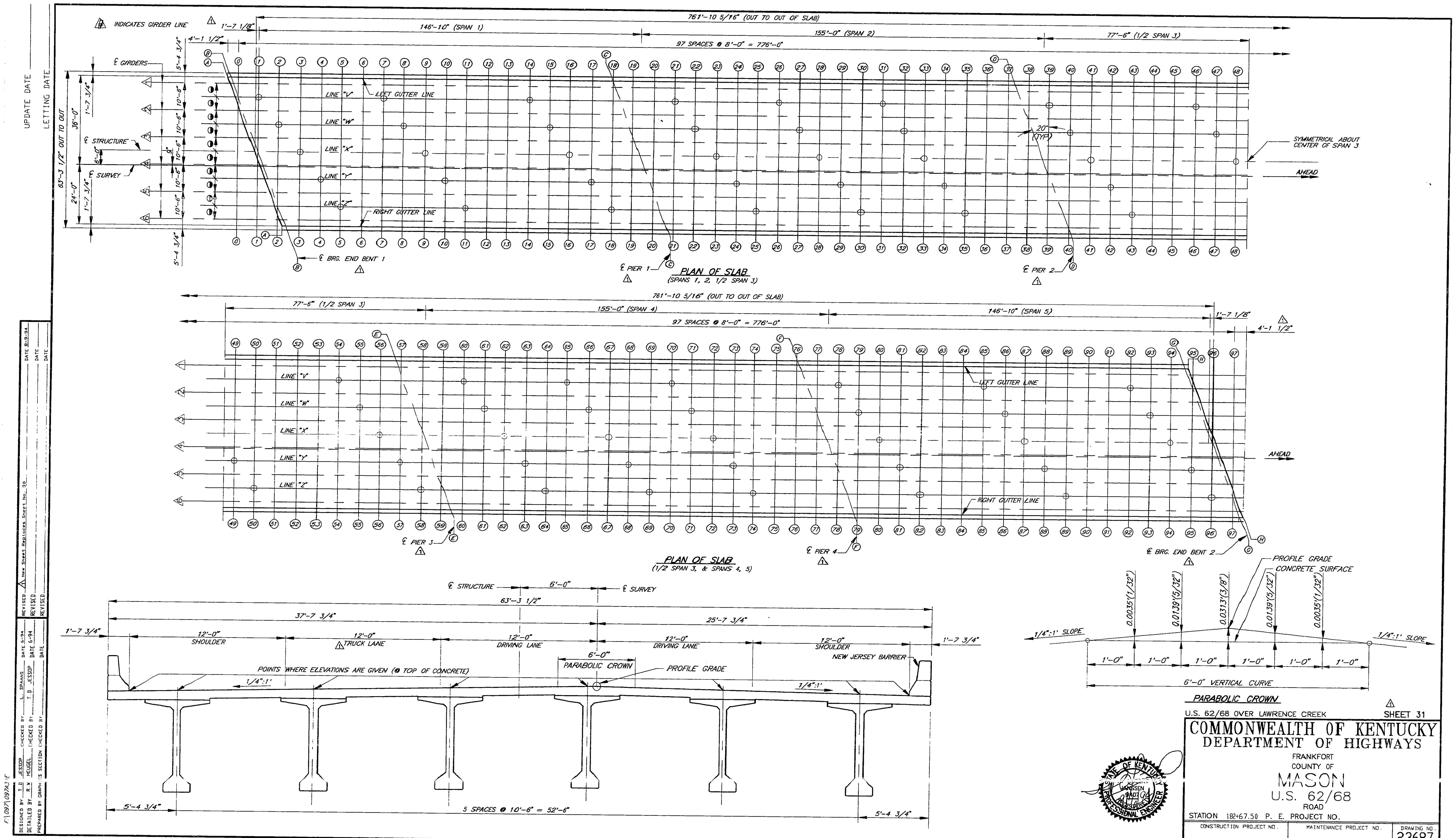
△1

U.S. 62/68 OVER LAWRENCE CREEK — SHEET 30

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
MASON
U.S. 62/68
ROAD
STATION 182+67.50 P. E. PROJECT NO.

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		23687

UPDATE DATE
LETTING DATE



INDICATES GIRDER LINE
761'-10 5/16" (OUT TO OUT OF SLAB)
146'-10" (SPAN 1)
155'-0" (SPAN 2)
77'-6" (1/2 SPAN 3)
97 SPACES @ 8'-0" = 776'-0"
℄ GIRDERS
℄ STRUCTURE
℄ SURVEY
LINE "V"
LINE "W"
LINE "X"
LINE "Y"
LINE "Z"
LEFT GUTTER LINE
RIGHT GUTTER LINE
SYMMETRICAL ABOUT CENTER OF SPAN 3
AHEAD
20" (TYP)
℄ BRG. END BENT 1
℄ PIER 1
℄ PIER 2
PLAN OF SLAB
(SPANS 1, 2, 1/2 SPAN 3)
155'-0" (SPAN 4)
146'-10" (SPAN 5)
℄ PIER 3
℄ PIER 4
℄ BRG. END BENT 2
PLAN OF SLAB
(1/2 SPAN 3, & SPANS 4, 5)
63'-3 1/2"
37'-7 3/4"
25'-7 3/4"
12'-0" SHOULDER
12'-0" TRUCK LANE
12'-0" DRIVING LANE
6'-0" PARABOLIC CROWN
PROFILE GRADE
POINTS WHERE ELEVATIONS ARE GIVEN (@ TOP OF CONCRETE)
NEW JERSEY BARRIER
1/4":1'
5 SPACES @ 10'-6" = 52'-6"
5'-4 3/4"
1'-7 3/4"
PROFILE GRADE
CONCRETE SURFACE
0.0035'(1/32")
0.0139'(5/32")
0.0313'(3/8")
1/4":1' SLOPE
6'-0" VERTICAL CURVE
PARABOLIC CROWN
UPDATE DATE
LETTING DATE
DESIGNED BY T.D. JESSOP
DETAILED BY R.V. HEUGEL

U.S. 62/68 OVER LAWRENCE CREEK

SHEET 31

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT

COUNTY OF MASON

U.S. 62/68 ROAD

STATION 182+67.50 P. E. PROJECT NO.

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		23687

UPDATE DATE

LETTING DATE

REVISED △1 New Sheet Replaces Sheet No. 31 DATE 8-9-94

TABLE OF ELEVATIONS

LINE	LEFT GUTTER LINE	BEAM #1 CONSTR. ELEV.	BEAM #1 TOP OF GIRDER	BEAM #1 DIM. "X"	BEAM #2 CONSTR. ELEV.	BEAM #2 TOP OF GIRDER	BEAM #2 DIM. "X"	BEAM #3 CONSTR. ELEV.	BEAM #3 TOP OF GIRDER	BEAM #3 DIM. "X"	BEAM #4 CONSTR. ELEV.	BEAM #4 TOP OF GIRDER	BEAM #4 DIM. "X"	℄ SURVEY	BEAM #5 CONSTR. ELEV.	BEAM #5 TOP OF GIRDER	BEAM #5 DIM. "X"	BEAM #6 CONSTR. ELEV.	BEAM #6 TOP OF GIRDER	BEAM #6 DIM. "X"	RIGHT GUTTER LINE
A–A	741.371	741.422			741.564			741.706			741.831			741.827	741.585			741.289			741.184
B–B	741.339	741.390			741.532			741.674			741.799			741.796	741.553			741.258			741.152
C–C	738.402	738.453			738.595			738.738			738.862			738.859	738.616			738.321			738.215
D–D	735.302	735.353			735.495			735.638			735.762			735.759	735.516			735.221			735.115
0–0	741.305	741.377			741.591																
1–1	741.185	741.260			741.458			741.656													
2–2	741.063	741.142			741.341			741.540			741.720			741.721	741.529						
3–3	740.938	741.021			741.222			741.422			741.603			741.604	741.413			741.174			741.088
4–4	740.809	740.896			741.099			741.300			741.483			741.484	741.295			741.056			740.971
5–5	740.676	740.766			740.971			741.175			741.360			741.361	741.173			740.937			740.852
6–6	740.537	740.630			740.838			741.044			741.232			741.233	741.048			740.813			740.729
7–7	740.393	740.487			740.698			740.908			741.099			741.100	740.917			740.685			740.602
8–8	740.242	740.337			740.552			740.765			740.959			740.960	740.780			740.551			740.469
9–9	740.084	740.181			740.399			740.615			740.812			740.814	740.637			740.411			740.330
10–10	739.920	740.017			740.238			740.458			740.659			740.661	740.487			740.264			740.184
11–11	739.750	739.846			740.071			740.294			740.498			740.500	740.329			740.110			740.032
12–12	739.573	739.668			739.896			740.123			740.330			740.332	740.165			739.949			739.872
13–13	739.391	739.485			739.715			739.945			740.155			740.158	739.993			739.781			739.705
14–14	739.203	739.295			739.528			739.761			739.974			739.977	739.815			739.606			739.531
15–15	739.011	739.101			739.336			739.571			739.787			739.790	739.631			739.424			739.350
16–16	738.815	738.903			739.140			739.377			739.595			739.598	739.441			739.237			739.164
17–17	738.617	738.703			738.941			739.179			739.399			739.402	739.246			739.045			738.973
18–18	738.417	738.502			738.740			738.979			739.199			739.203	739.049			738.848			738.777
19–19	738.297	738.368			738.564			738.778			738.998			739.002	738.848			738.649			738.578
20–20	738.183	738.254			738.451			738.647			738.826			738.826	738.647			738.448			738.377
21–21	738.066	738.138			738.336			738.533			738.713			738.713	738.521			738.279			738.193
22–22	737.946	738.019			738.218			738.417			738.597			738.598	738.406			738.166			738.080
23–23	737.820	737.895			738.097			738.298			738.480			738.481	738.290			738.051			737.965
24–24	737.689	737.767			737.971			738.175			738.359			738.360	738.171			737.933			737.848
25–25	737.552	737.632			737.840			738.046			738.233			738.234	738.047			737.812			737.727
26–26	737.409	737.490			737.701			737.910			738.101			738.102	737.918			737.685			737.602
27–27	737.258	737.341			737.556			737.768			737.962			737.963	737.783			737.553			737.471
28–28	737.100	737.185			737.403			737.619			737.816			737.818	737.640			737.414			737.333
29–29	736.934	737.021			737.242			737.462			737.663			737.665	737.491			737.268			737.188
30–30	736.762	736.849			737.074			737.298			737.502			737.504	737.333			737.114			737.036
31–31	736.582	736.670			736.898			737.125			737.333			737.336	737.169			736.953			736.876
32–32	736.396	736.484			736.716			736.946			737.157			737.160	736.996			736.784			736.708
33–33	736.204	736.292			736.527			736.760			736.974			736.977	736.816			736.608			736.533
34–34	736.007	736.094			736.332			736.568			736.785			736.788	736.630			736.425			736.351
35–35	735.806	735.893			736.132			736.370			736.590			736.593	736.437			736.235			736.162
36–36	735.601	735.688			735.928			736.168			736.390			736.393	736.240			736.039			735.968
37–37	735.395	735.481			735.722			735.963			736.186			736.190	736.037			735.839			735.768
38–38	735.240	735.310			735.515			735.756			735.980			735.983	735.832			735.635			735.565
39–39	735.126	735.197			735.394			735.590			735.773			735.776	735.625			735.429			735.359
40–40	735.010	735.084			735.281			735.477			735.656			735.656	735.463			735.222			735.152
41–41	734.891	734.967			735.165			735.363			735.542			735.543	735.350			735.109			735.023
42–42	734.768	734.846			735.046			735.246			735.427			735.428	735.236			734.996			734.910
43–43	734.639	734.720			734.923			735.125			735.308			735.309	735.119			734.880			734.795
44–44	734.504	734.587			734.794			734.998			735.184			735.185	734.998			734.761			734.676
45–45	734.363	734.448			734.658			734.866			735.055			735.056	734.871			734.637			734.553
46–46	734.215	734.302			734.515			734.727			734.919			734.920	734.738			734.507			734.425
47–47	734.060	734.148			734.365			734.580			734.776			734.777	734.599			734.371			734.289
48–48	733.897	733.987			734.207			734.426			734.625			734.627	734.452			734.228			734.147

ALL SCREED ELEVATIONS GIVEN ARE TOP OF DECK ELEVATIONS INCLUDING POINTS WITHIN THE PARABOLIC CROWN

TAKE ELEVATIONS ON TOP OF BEAM AT POINTS INDICATED AFTER ALL BEAMS ARE SET. READ ELEVATIONS TO THREE DECIMALS USING A TARGET ROD AND ENTER READINGS IN TABLES UNDER "TOP OF BEAM ELEVATIONS".

COMPUTE DIMENSION "X" AS FOLLOWS

"CONSTRUCTION ELEVATION MINUS "TOP OF BEAM ELEVATION" EQUALS DIMENSION "X". CONSTRUCTION ELEVATION INCLUDES CAMBER DUE TO WEIGHT OF CONCRETE SLAB BARRIER, AND FUTURE SURFACING. MEASURING OF DIMENSION "X" GIVES THE FINAL CHECK ON BEAM TOLERANCES FOR CAMBER, BEAM DAMAGE AND ERRORS IN ERECTION THAT PRODUCE REVERSE CAMBERS, SAGS AND UNSIGHTLY FASCIA BEAMS.

FOR SETTING TEMPLATES MEASURE DIMENSION "X" ABOVE TOP OF BEAM FOR TOP OF TEMPLATE. DO NOT SET TEMPLATE BY ELEVATIONS.

CONSTRUCT BARRIER TO ROADWAY GRADE. DO NOT ADD CAMBER TO BARRIER.

SLAB THICKNESS CONTROL

AFTER THE SLAB FORMS ARE ERECTED AND BEFORE THE SLAB REINFORCEMENT IS PLACED, THE RESIDENT ENGINEER SHALL TAKE FIELD ELEVATIONS AT THE SLAB THICKNESS CHECK POINTS AND ENTER THEM IN THE TABLE IN THE SPACE PROVIDED. THE SLAB THICKNESS SHALL THEN BE COMPUTED. IF THE COMPUTED SLAB THICKNESS VARIES MORE THAN 1\4" FROM THE PLAN THICKNESS, ALLOWING 1/360 OF THE SLAB SPAN FOR DEFLECTION OF THE FORM WORK, THE FORM SHALL BE ADJUSTED UNTIL THE COMPUTED SLAB THICKNESS IS WITHIN THE TOLERANCE ALLOWED.

TABLE OF ELEVATIONS FOR CONTROL OF SLAB THICKNESS

SLAB CHECK POINT	TOP OF SLAB ELEV.	BOTT. OF SLAB ELEV.	COMPUTED SLAB THICKNESS
V – 1	741.359		
W – 2	741.441		
X – 3	741.521		
Y – 4	741.413		
Z – 5	741.055		
V – 7	740.593		
W – 8	740.658		
X – 9	740.722		
Y – 10	740.597		
Z – 11	740.220		
V – 14	739.412		
W – 15	739.454		
X – 16	739.495		
Y – 17	739.347		
Z – 18	738.948		
V – 21	738.237		
W – 22	738.318		
X – 23	738.398		
Y – 24	738.289		
Z – 25	737.930		
V – 26	737.596		
W – 27	737.662		
X – 28	737.726		
Y – 29	737.601		
Z – 30	737.224		
V – 31	736.784		
W – 32	736.831		
X – 33	736.876		
Y – 34	736.732		
Z – 35	736.336		
V – 39	735.295		
W – 40	735.379		
X – 41	735.462		
Y – 42	735.356		
Z – 43	735.000		
V – 46	734.409		
W – 47	734.473		
X – 48	734.535		

U.S. 62/68 OVER LAWRENCE CREEK △1 SHEET 32

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
MASON
U.S. 62/68
ROAD
STATION 182+67.50 P. E. PROJECT NO.

CONSTRUCTION PROJECT NO. | MAINTENANCE PROJECT NO. | DRAWING NO. 23687

TABLE OF ELEVATIONS

LINE	LEFT GUTTER LINE	BEAM #1 CONSTR. ELEV.	BEAM #1 TOP OF GIRDER	BEAM #1 DIM. "X"	BEAM #2 CONSTR. ELEV.	BEAM #2 TOP OF GIRDER	BEAM #2 DIM. "X"	BEAM #3 CONSTR. ELEV.	BEAM #3 TOP OF GIRDER	BEAM #3 DIM. "X"	BEAM #4 CONSTR. ELEV.	BEAM #4 TOP OF GIRDER	BEAM #4 DIM. "X"	℄ SURVEY	BEAM #5 CONSTR. ELEV.	BEAM #5 TOP OF GIRDER	BEAM #5 DIM. "X"	BEAM #6 CONSTR. ELEV.	BEAM #6 TOP OF GIRDER	BEAM #6 DIM. "X"	RIGHT GUTTER LINE
E-E	732.202	732.253			732.395			732.538			732.662			732.659	732.416			732.121			732.015
F-F	729.102	729.153			729.295			729.438			729.562			729.559	729.316			729.021			728.915
G-G	726.166	726.216			726.359			726.501			726.625			726.622	726.379			726.084			725.979
H-H	726.134	726.184			726.327			726.469			726.594			726.590	726.347			726.052			725.947
49-49	733.727	733.818			734.042			734.264			734.467			734.469	734.297			734.077			733.998
50-50	733.550	733.641			733.869			734.095			734.301			734.304	734.135			733.918			733.841
51-51	733.367	733.457			733.688			733.918			734.128			734.130	733.965			733.752			733.676
52-52	733.177	733.267			733.501			733.734			733.947			733.950	733.788			733.578			733.503
53-53	732.982	733.071			733.308			733.543			733.760			733.762	733.604			733.397			733.323
54-54	732.782	732.870			733.109			733.347			733.566			733.569	733.413			733.209			733.137
55-55	732.578	732.666			732.906			733.146			733.367			733.370	733.216			733.016			732.944
56-56	732.372	732.459			732.700			732.941			733.164			733.168	733.015			732.817			732.745
57-57	732.182	732.252			732.493			732.734			732.958			732.962	732.811			732.613			732.543
58-58	732.069	732.139			732.335			732.532			732.751			732.754	732.604			732.407			732.337
59-59	731.954	732.025			732.222			732.419			732.597			732.598	732.405			732.200			732.130
60-60	731.836	731.909			732.107			732.305			732.484			732.485	732.292			732.051			731.965
61-61	731.715	731.789			731.990			732.189			732.369			732.370	732.178			731.938			731.852
62-62	731.588	731.665			731.867			732.069			732.251			732.252	732.062			731.823			731.737
63-63	731.456	731.535			731.740			731.944			732.129			732.130	731.942			731.704			731.619
64-64	731.317	731.398			731.606			731.813			732.001			732.002	731.817			731.582			731.498
65-65	731.172	731.254			731.466			731.676			731.867			731.869	731.686			731.454			731.371
66-66	731.019	731.103			731.319			731.532			731.727			731.728	731.548			731.320			731.238
67-67	730.859	730.944			731.163			731.381			731.579			731.580	731.404			731.179			731.098
68-68	730.692	730.778			731.001			731.222			731.423			731.425	731.252			731.031			730.951
69-69	730.517	730.604			730.830			731.055			731.260			731.262	731.093			730.875			730.796
70-70	730.336	730.423			730.653			730.881			731.090			731.092	730.926			730.711			730.634
71-71	730.149	730.235			730.468			730.699			730.912			730.914	730.751			730.540			730.465
72-72	729.955	730.042			730.277			730.511			730.727			730.730	730.570			730.362			730.288
73-73	729.757	729.843			730.081			730.318			730.536			730.539	730.381			730.177			730.103
74-74	729.555	729.641			729.880			730.119			730.339			730.342	730.187			729.985			729.913
75-75	729.350	729.436			729.676			729.916			730.138			730.142	729.988			729.789			729.717
76-76	729.143	729.229			729.471			729.712			729.934			729.938	729.786			729.588			729.517
77-77	729.006	729.080			729.277			729.505			729.729			729.732	729.581			729.384			729.313
78-78	728.885	728.961			729.158			729.357			729.539			729.539	729.374			729.178			729.108
79-79	728.761	728.840			729.038			729.238			729.420			729.420	729.230			728.992			728.907
80-80	728.635	728.717			728.916			729.117			729.300			729.301	729.111			728.873			728.788
81-81	728.504	[illegible]			[illegible]			728.994			729.178			729.179	728.990			728.753			728.668
82-82	728.368	728.456			728.661			728.866			729.052			729.053	728.866			728.631			728.547
83-83	728.226	728.317			728.525			728.733			728.922			728.923	728.738			728.505			728.421
84-84	728.078	728.171			728.383			728.594			728.786			728.787	728.605			728.374			728.292
85-85	727.924	728.019			728.235			728.449			728.644			728.645	728.466			728.238			728.156
86-86	727.763	727.860			728.079			728.297			728.495			728.497	728.321			728.096			728.015
87-87	727.595	727.693			727.916			728.137			728.339			728.341	728.168			727.947			727.867
88-88	727.422	727.520			727.747			727.971			728.176			728.178	728.009			727.790			727.712
89-89	727.242	727.339			727.570			727.797			728.006			728.008	727.842			727.627			727.550
90-90	727.057	727.153			727.387			727.617			727.829			727.832	727.668			727.457			727.381
91-91	726.867	726.961			727.197			727.431			727.645			727.648	727.487			727.279			727.205
92-92	726.672	726.764			727.003			727.239			727.456			727.459	727.301			727.095			727.022
93-93	726.475	726.564			726.805			727.042			727.261			727.265	727.109			726.906			726.833
94-94	726.276	726.361			726.603			726.842			727.063			727.066	726.912			726.711			726.639
95-95					726.399			726.639			726.861			726.864	726.711			726.512			726.441
96-96											726.657			726.661	726.508			726.310			726.239
97-97																		726.107			726.036

ALL SCREED ELEVATIONS GIVEN ARE TOP OF DECK ELEVATIONS INCLUDING POINTS WITHIN THE PARABOLIC CROWN

TAKE ELEVATIONS ON TOP OF BEAM AT POINTS INDICATED AFTER ALL BEAMS ARE SET. READ ELEVATIONS TO THREE DECIMALS USING A TARGET ROD AND ENTER READINGS IN TABLES UNDER "TOP OF BEAM ELEVATIONS".

COMPUTE DIMENSION "X" AS FOLLOWS

"CONSTRUCTION ELEVATION MINUS "TOP OF BEAM ELEVATION" EQUALS DIMENSION "X". CONSTRUCTION ELEVATION INCLUDES CAMBER DUE TO WEIGHT OF CONCRETE SLAB BARRIER, AND FUTURE SURFACING. MEASURING OF DIMENSION "X" GIVES THE FINAL CHECK ON BEAM TOLERANCES FOR CAMBER, BEAM DAMAGE AND ERRORS IN ERECTION THAT PRODUCE REVERSE CAMBERS, SAGS AND UNSIGHTLY FASCIA BEAMS.

FOR SETTING TEMPLATES MEASURE DIMENSION "X" ABOVE TOP OF BEAM FOR TOP OF TEMPLATE. DO NOT SET TEMPLATE BY ELEVATIONS.

CONSTRUCT BARRIER TO ROADWAY GRADE. DO NOT ADD CAMBER TO BARRIER.

SLAB THICKNESS CONTROL

AFTER THE SLAB FORMS ARE ERECTED AND BEFORE THE SLAB REINFORCEMENT IS PLACED, THE RESIDENT ENGINEER SHALL TAKE FIELD ELEVATIONS AT THE SLAB THICKNESS CHECK POINTS AND ENTER THEM IN THE TABLE IN THE SPACE PROVIDED. THE SLAB THICKNESS SHALL THEN BE COMPUTED. IF THE COMPUTED SLAB THICKNESS VARIES MORE THAN 1\4" FROM THE PLAN THICKNESS, ALLOWING 1/360 OF THE SLAB SPAN FOR DEFLECTION OF THE FORM WORK, THE FORM SHALL BE ADJUSTED UNTIL THE COMPUTED SLAB THICKNESS IS WITHIN THE TOLERANCE ALLOWED.

TABLE OF ELEVATIONS FOR CONTROL OF SLAB THICKNESS

SLAB CHECK POINT	TOP OF SLAB ELEV.	BOTT. OF SLAB ELEV.	COMPUTED SLAB THICKNESS
Y - 49	734.407		
Z - 50	734.027		
V - 54	732.990		
W - 55	733.026		
X - 56	733.061		
Y - 57	732.909		
Z - 58	732.505		
V - 60	732.008		
W - 61	732.089		
X - 62	732.169		
Y - 63	732.060		
Z - 64	731.699		
V - 65	731.360		
W - 66	731.425		
X - 67	731.489		
Y - 68	731.362		
Z - 69	730.984		
V - 70	730.538		
W - 71	730.584		
X - 72	730.628		
Y - 73	730.483		
Z - 74	730.086		
V - 78	729.060		
W - 79	729.138		
X - 80	729.218		
Y - 81	729.109		
Z - 82	728.749		
V - 85	728.127		
W - 86	728.188		
X - 87	728.247		
Y - 88	728.117		
Z - 89	727.734		
V - 92	726.884		
W - 93	726.923		
X - 94	726.961		
Y - 95	726.810		
Z - 96	726.409		

UPDATE DATE

LETTING DATE

U.S. 62/68 OVER LAWRENCE CREEK

△1 SHEET 33

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
MASON
U.S. 62/68
ROAD

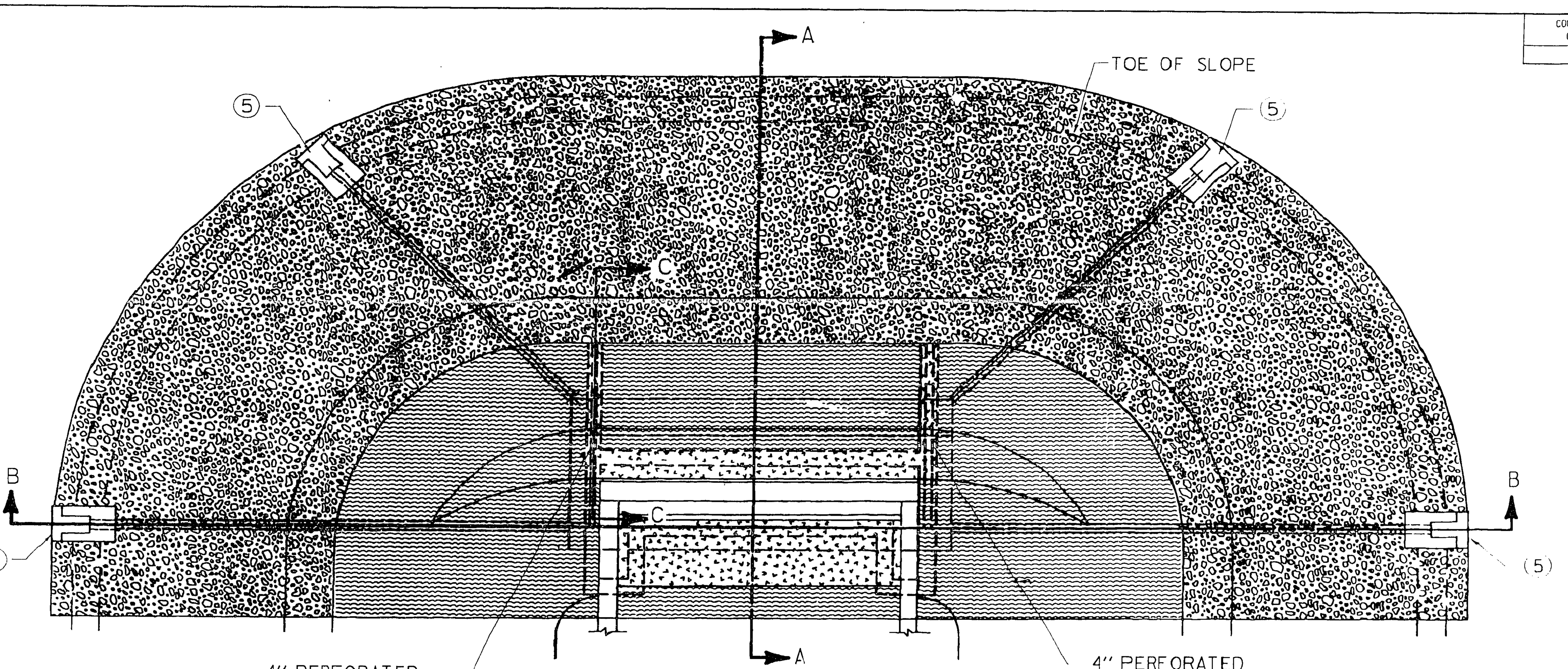
STATION 182+67.50 P. E. PROJECT NO.

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		23687

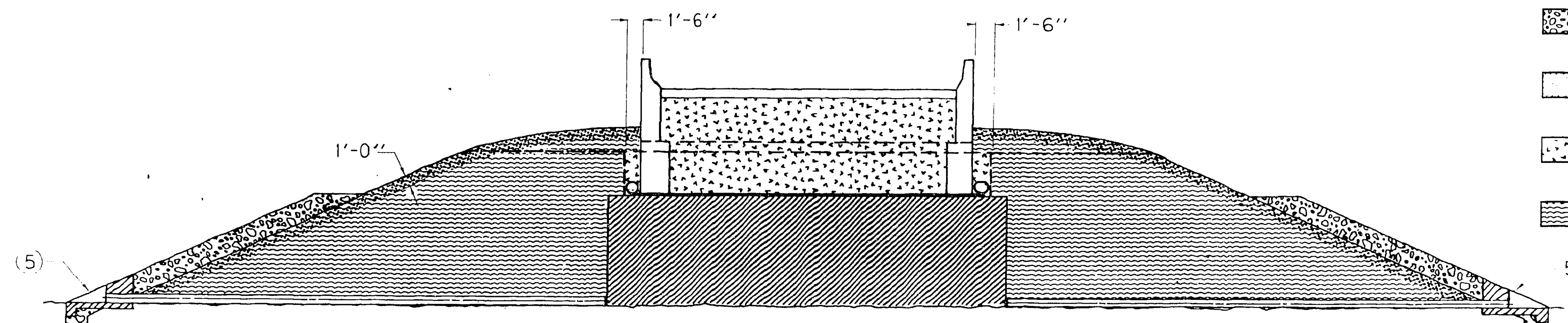
STATE OF KENTUCKY H. HUBERT JANSSEN 9402 REGISTERED PROFESSIONAL ENGINEER

DRAWING SCALE: .
DRAWING NOT TO SCALE

COUNTY OF	FISCAL YEAR	SHEET NO.	TOTAL SHEETS



PLAN VIEW



SECTION B-B

LEGEND

(1) SLOPE PROTECTION (SEE BRIDGE PLANS)

(2) EARTH CORE

(3) STRUCTURE GRANULAR BACKFILL

(4) ROADWAY FILL-GRANULAR EMB.

SHEET 34

NOTES:

THE PURPOSE OF THIS DRAWING AND CURRENT STANDARD DRAWING RGX-105 IS TO DEFINE THE LIMITS OF THE FOUR MATERIALS SHOWN.

FOR SIMPLICITY PURPOSES, AN END-BENT WITH WINGS ON A ZERO DEGREE SKEW IS SHOWN. THE SAME PRINCIPLES WOULD APPLY FOR MORE VARIED STRUCTURES.

SHADED PORTION, REPRESENTS LIMITS OF NON-ERODABLE GRANULAR EMBANKMENT.

(1) SLOPE PROTECTION SHALL BE REQUIRED WHEN AND AS NOTED ON THE BRIDGE PLANS.

(2) EARTH CORE SHALL BE REQUIRED AT ALL TIMES.

(3) STRUCTURE GRANULAR BACKFILL SHALL BE REQUIRED AT ALL TIMES.

(4) ROADWAY FILL-GRANULAR EMBANKMENT SHALL BE REQUIRED WHEN AND AS NOTED ON THE ROADWAY PLANS.

(5) 8" PERFORATED PIPE WHEN REQUIRED BY CURRENT SPECIAL PROVISION NO. 69. FOR HEADWALL CONSTRUCTION SEE CUR. STD. DWG. RDP-010.

SSP 051 0062 017-018D/ FL 04 0CC2N017-018D

KENTUCKY
DEPARTMENT OF HIGHWAYS

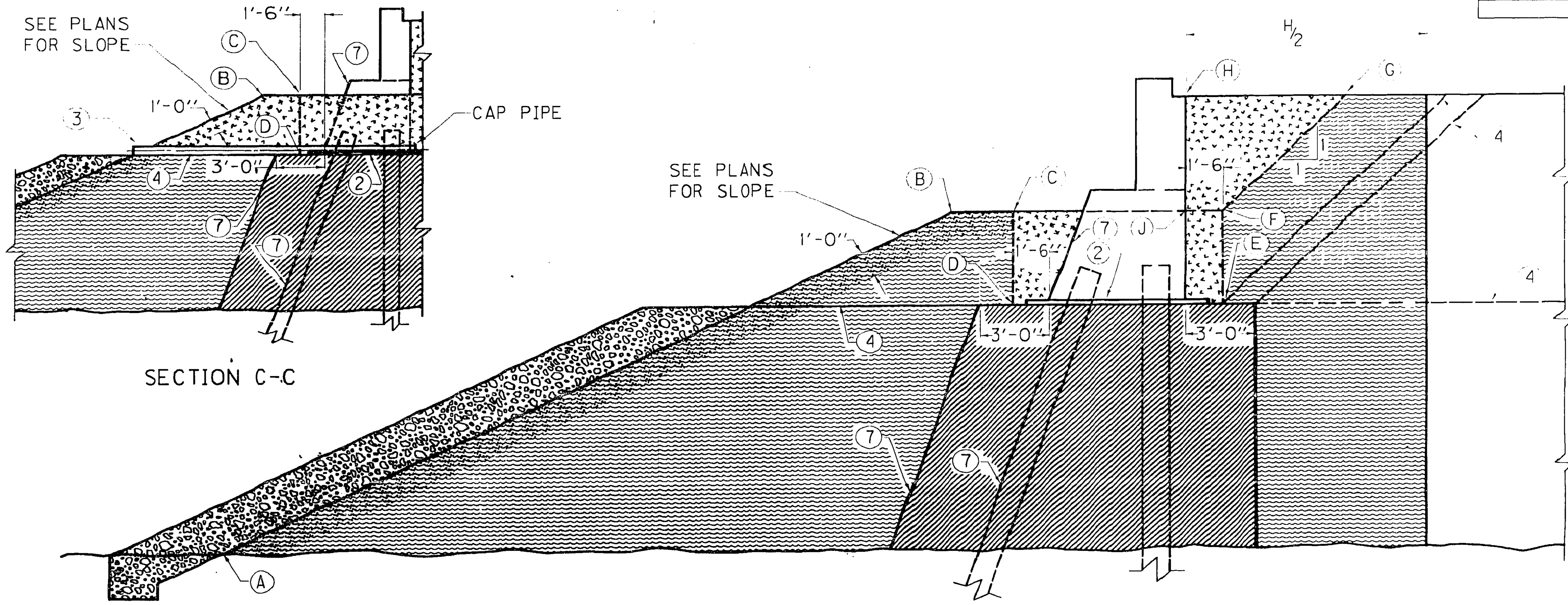
TREATMENT OF EMBANKMENT AT BRIDGE END-BENT STRUCTURES

SUBMITTED Charles S. Wagner 1/30/92
DIRECTOR DIVISION OF DESIGN — DATE

APPROVED
STATE HIGHWAY ENGINEER — DATE

DRAWING SCALE:
DRAWING NOT TO SCALE

COUNTY OF	FISCAL YEAR	SHEET NO.	TOTAL SHEETS



SECTION A-A

LEGEND

- SLOPE PROTECTION (SEE BRIDGE PLANS)
- EARTH CORE
- STRUCTURE GRANULAR BACKFILL
- ROADWAY FILL-GRANULAR EMBANKMENT

CONSTRUCTION SEQUENCE "A"

1. CONSTRUCT EMBANKMENT TO SLOPES A, B, F, AND G SUCH THAT NO UNCOMPACTED OR LOOSE MATERIAL SHALL REMAIN.
2. EXCAVATE FOR END-BENT TO C, D, E, AND F.
3. DRIVE PILING.
4. PLACE 2" MORTAR BED OR ANY CLASS CONCRETE.
5. CONSTRUCT CONCRETE END-BENT.
6. BACKFILL TO C, D, E, F, G, H, AND J.
7. INSTALL 4" PERFORATED UNDERDRAIN PIPE AND BACKFILL.

(1) CONSTRUCTION SEQUENCE "B"

1. CONSTRUCT EMBANKMENT TO TEMPORARY SLOPE (4).
2. DRIVE PILING.
3. PLACE 2" MORTAR BED OR ANY CLASS CONCRETE.
4. CONSTRUCT CONCRETE END-BENT.
5. BACKFILL TO FINISHED GRADE.
6. INSTALL 4" PERFORATED UNDERDRAIN PIPE AND BACKFILL.

NOTES

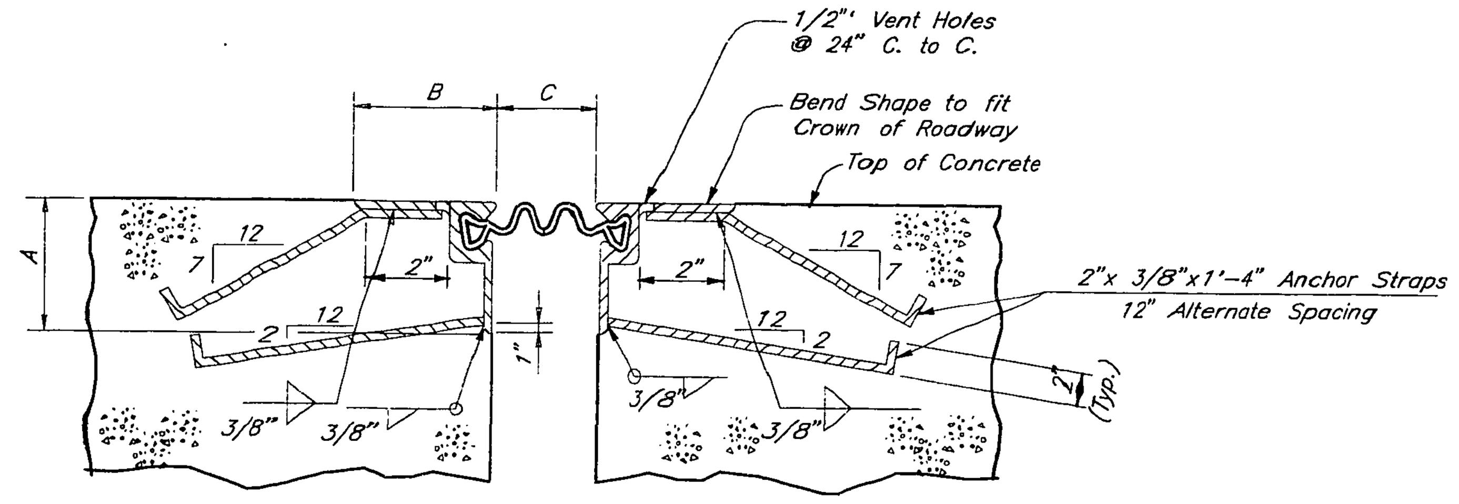
1. CONSTRUCTION SEQUENCE "B" IS A PERMITTED ALTERNATE BY THE CONTRACTOR ONLY WHEN ROADWAY FILL-GRANULAR EMBANKMENT IS REQUIRED.
2. 2" MORTAR BED OR ANY CLASS CONCRETE.
3. 4" PERFORATED UNDERDRAIN PIPE WRAPPED WITH FILTER FABRIC FOR DRAINING THE EXCAVATED TRENCH AND STRUCTURE GRANULAR BACKFILL.
4. ACCEPTABLE ALTERNATES FOR TEMPORARY SLOPES (CONSTRUCTION SEQUENCE "B").
5. H = EMBANKMENT HEIGHT MEASURED FROM SUBGRADE ELEVATION AT POINT (H) TO THE LOWEST ELEVATION AT THE TOE OF THE SLOPE.
6. SHADED PORTION [symbol] AND [symbol] REPRESENTS LIMITS OF NON-ERODABLE GRANULAR EMBANKMENT.
7. SLOPES ARE EQUAL.
8. SEE CUR. SPECIAL PROVISION NO. 69 FOR CONSTRUCTION AND MATERIAL REQUIREMENTS, METHOD OF MEASUREMEMT AND BASIS OF PAYMENT.
9. STRUCTURE GRANULAR BACKFILL SHALL BE PLACED AS A COMPLETE SEPARATE OPERATION AFTER CONSTRUCTION OF ALL OTHER EMBANKMENT.
10. *INDIVIDUAL FRAGMENTS LARGER THAN 4 INCHES IN ANY DIMENSION SHALL NOT BE PERMITTED WITHIN 3 FEET OF THE STRUCTURE.*

SHEET 35

KENTUCKY
DEPARTMENT OF HIGHWAYS

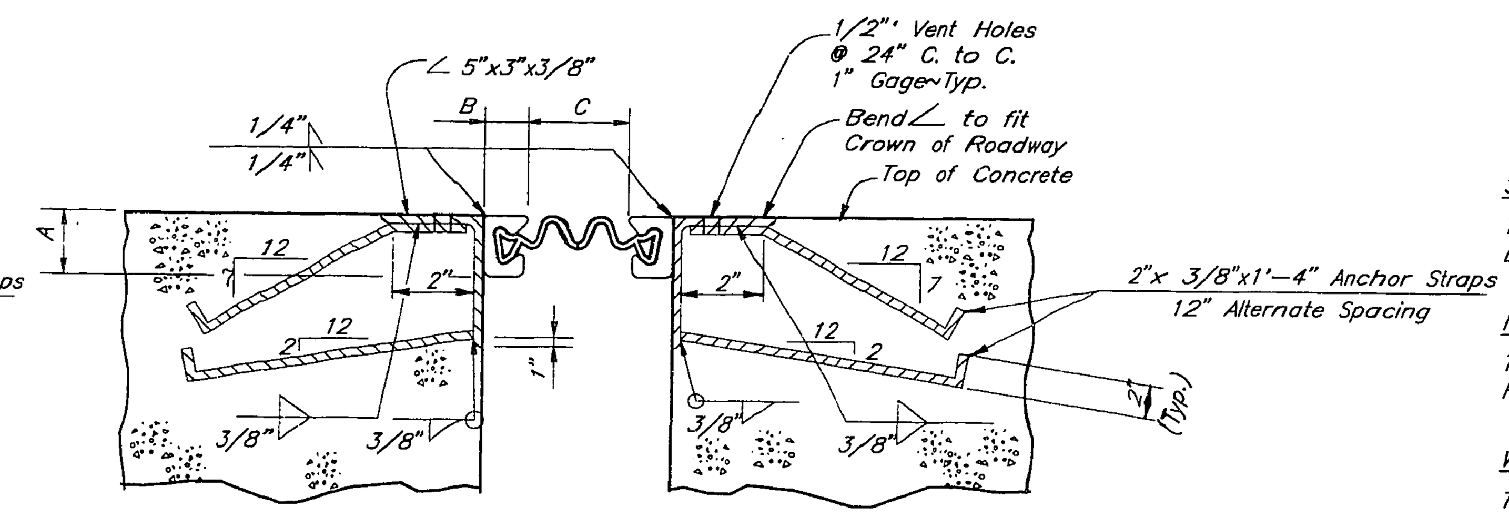
TREATMENT OF EMBANKMENT AT BRIDGE END-BENT STRUCTURES

SUBMITTED: Charles J. Raymer — DIRECTOR, DIVISION OF DESIGN — 1/30/92
APPROVED: STATE HIGHWAY ENGINEER — DATE



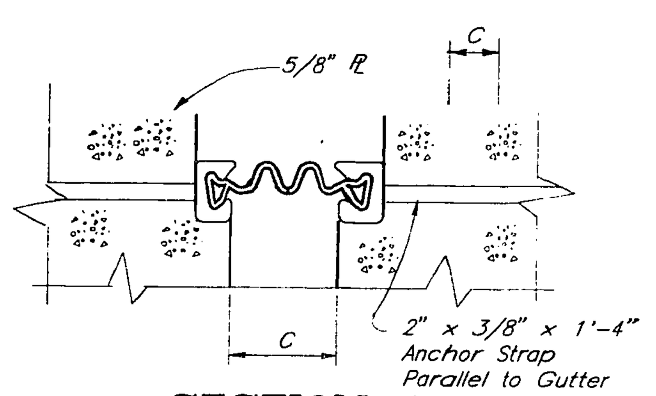
CROSS SECTION ~ TYPE "A"

Shop Splice is Permissible in Steel Using Continious Groove welds.

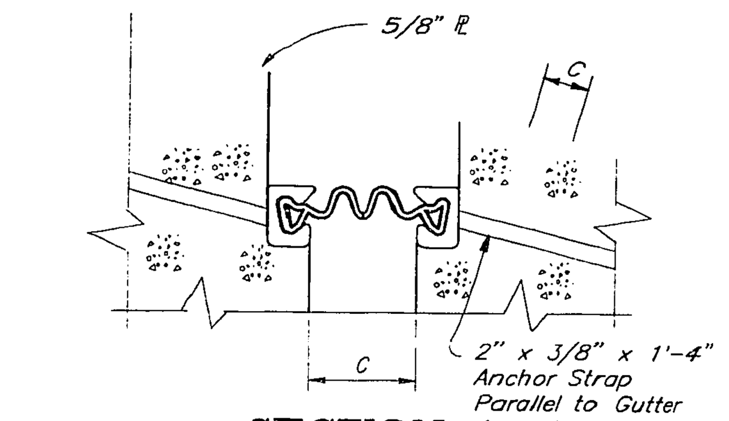


CROSS SECTION ~ TYPE "B"

Shop Splice is Permissible in Steel Using Continuous Groove welds.



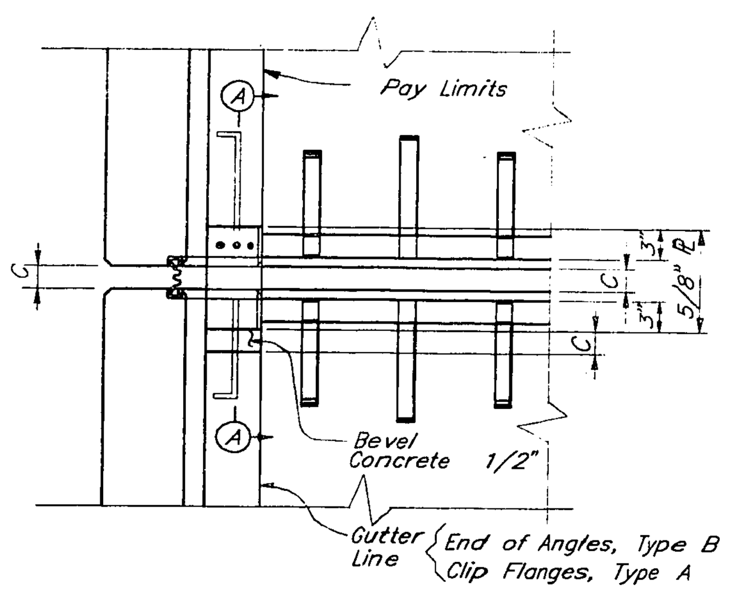
SECTION A-A

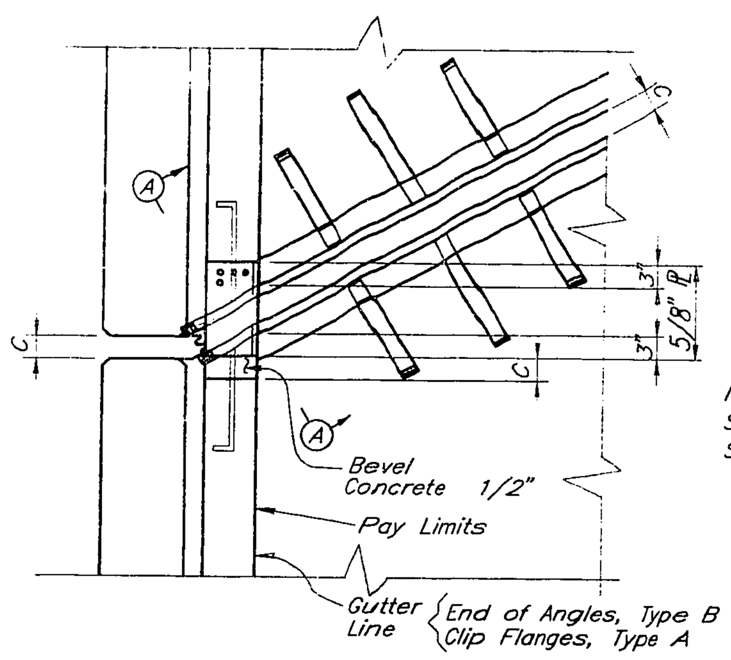


SECTION A-A

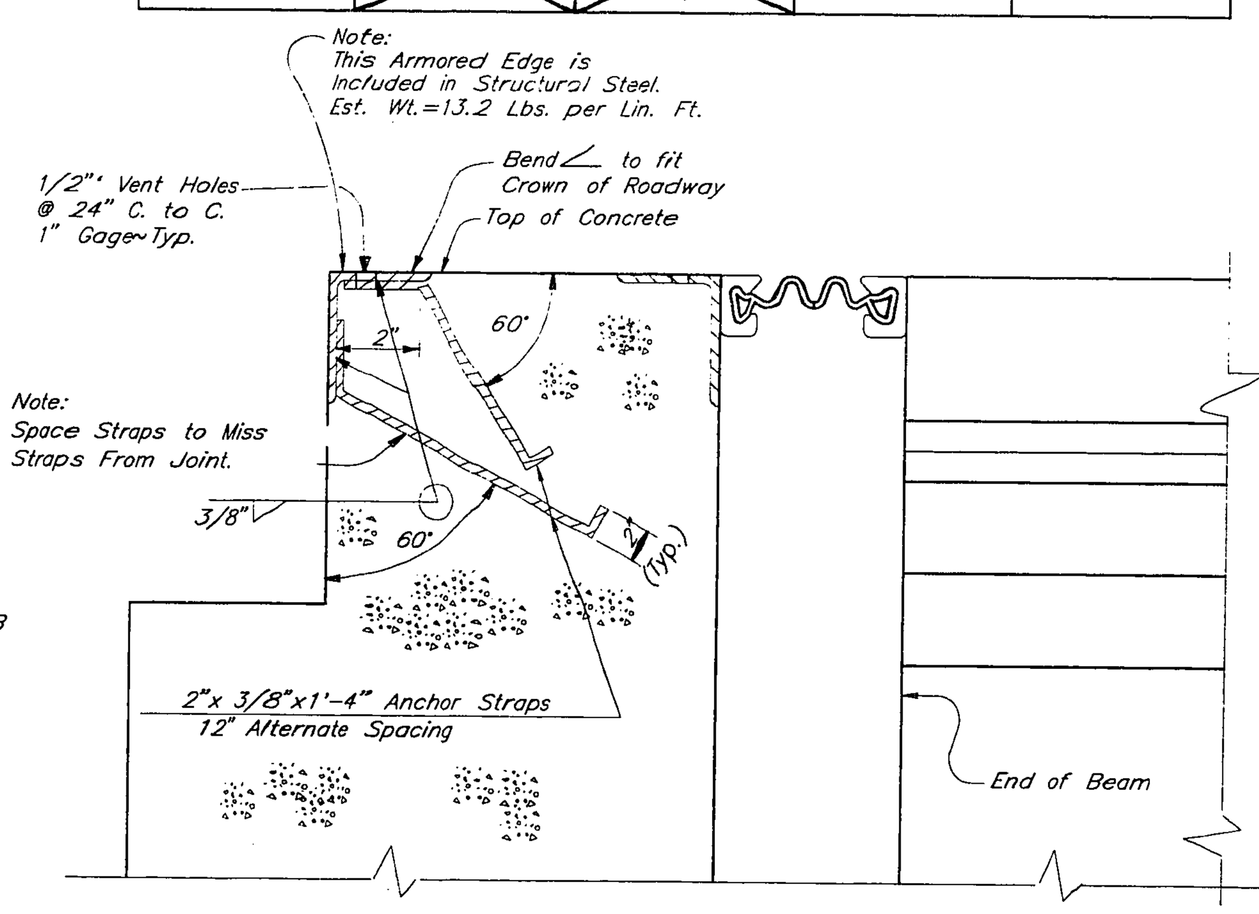
Note:
Joint Openings Shall Be Adjusted For Each 10° Above or Below 60° F, Decrease or Increase Respectively by Increment Shown.

INCREMENT FOR 10° TEMPERATURE CHANGE				
— STEEL SPAN —				
180'-240'	241'-320'	321'-365'		
3/16"	1/4"	5/16"		
— CONCRETE SPAN —				
320'-420'	421'-560'	561'-700'		
3/16"	1/4"	5/16"		

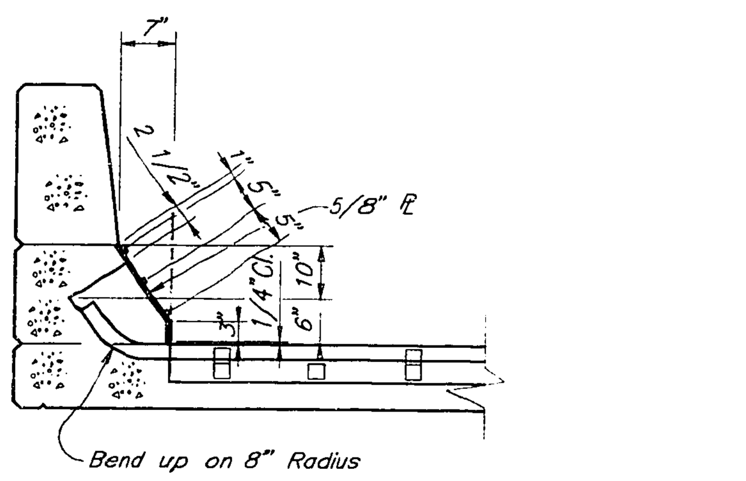




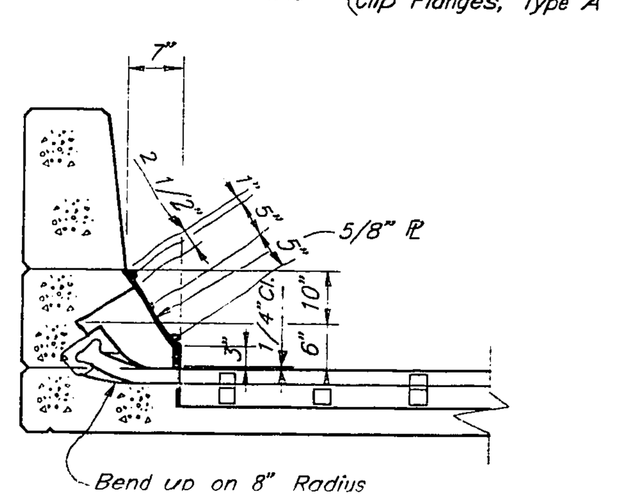
Note:
Space Straps to Miss Straps From Joint.



CROSS SECTION OF EXPANSION DAM AT ABUTMENT



TYPICAL END TREATMENT
0° SKEWED BRIDGE



TYPICAL END TREATMENT
SKEWED BRIDGE

GENERAL NOTES

SPECIFICATIONS

THE KENTUCKY DEPARTMENT OF HIGHWAYS STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION SHALL APPLY TO THIS PROJECT.

INSTALLATION PROCEDURE

THE ENDS OF THE JOINT SEAL SHALL BE SEALED TO PREVENT THE ENTRANCE OF WATER AND FOREIGN MATERIAL.

WELDING SPECIFICATIONS

TECHNIQUES AND WELDING PROCEDURE SHALL COMPLY WITH JOINT SPECIFICATION ANSI/AASHTO/AWS D1.5-88 BRIDGE WELDING CODE WITH REVISIONS.

BASIS OF PAYMENT

THE ACCEPTED QUANTITIES OF EXPANSION DAM WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER LINEAR FOOT FOR EACH SIZE, MEASURED ALONG THE CENTERLINE OF JOINT. THIS PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIALS (INCLUDING JOINT SEAL, ARMORED EDGES, ANCHOR STRAPS, 1" X 3/16" BARS, WELDING AND WELDING MATERIALS AND INSTALLING HARDWARE) AND INSTALLATION. PAYMENT WILL BE MADE UNDER:

PAY ITEM	PAY UNIT
EXPANSION DAM (4") NEOPRENE	LINEAR FOOT

MATERIAL SPECIFICATIONS

STEEL MATERIAL SHALL BE NEW, COMMERCIAL GRADE STEEL SUITABLE FOR WELDING. ACCEPTANCE WILL BE BASED ON VISUAL INSPECTION BY THE ENGINEER. JOINT SEALING MATERIAL, ONLY, SHALL BE IN ACCORDANCE WITH SECTION 807.02.03 OF THE SPECIFICATIONS.

LOCATION

THE LOCATION OF EXPANSION DAMS SHALL BE IN ACCORDANCE WITH THE DETAIL PLANS.

PAINT

ALL STRUCTURAL STEEL SHALL BE CLEANED AND PAINTED IN ACCORDANCE WITH THE SPECIFICATIONS, EXCEPT THAT AREA IN CONTACT WITH CONCRETE SHALL NOT BE PAINTED.

PAY LIMITS

THE PAY LIMITS SHALL BE GUTTER LINE TO GUTTER LINE.

SHOP PLANS

CONTRARY TO THE SPECIFICATIONS, SHOP PLANS WILL NOT BE REQUIRED.

ALTERNATE NEOPRENE EXPANSION DAMS

TYPE	MODEL	SUPPLIER	A	B	C*
A	WABO STRIP SEAL Type C Extrusion With S-400 Seal	Watson Bowman Associates Inc.	4 1/4"	3 3/4"	2"
A	ONFLEX Type C-C Extrusion With 40SS Seal	Structrual Accessories Inc.	4 1/4"	3 3/4"	2"
A	STEEL FLEX Type SSCM With 400 Seal	D. S. Brown Co.	4 1/4"	3 3/4"	2"
B	WABO STRIP SEAL Type A Extrusion With S-400 Seal	Watson Bowman Associates Inc.	2"	1 1/2"	2"
B	STEEL FLEX Type SSA With 400 Seal	D. S. Brown Co.	2"	1 1/2"	2 1/2"
B	GEN STRIP CD Profile A Steel Extrusion With Gen Strip CD Seal	General Tire Co.	2"	1 3/8"	2 1/4"
B	ONFLEX Type AM2 Extrusion With 40SEQ Seal	Sturctural Accessories Inc.	2"	1 1/4"	2"

*Joint Opening At 60° F.

NEOPRENE EXPANSION DAM (4")

U.S. 62/68 OVER LAWRENCE CREEK △2 △1 SHEET 36

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
MASON
U.S. 62/68
ROAD
STATION 182+67.50 P. E. PROJECT NO.

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		23687

STATE OF KENTUCKY H. HUBERT JANSSEN REGISTERED PROFESSIONAL ENGINEER

DESIGNED BY I.D. JESSUP CHECKED BY L. SPAANS DATE 6-94 REVISED Sheet No. DATE 8-9-94
DETAILED BY R.E. MILLER CHECKED BY T.D. JESSUP DATE 6-94 REVISED Sheet No. DATE 9-5-94
PREPARED BY GRAPHICS SECTION CHECKED BY DATE REVISED DATE

UPDATE DATE
LETTING DATE