APPENDIX A – BRIDGE REPORTS

059B00037N

KYTC Bridge Inspection Report

Summary:
Inspection Date: 4/21/14
Inspector: CBRESCH (185)
Primary Type: FracCrit (24 Months)

Types of Inspections Performed:

National Bridge Inventory:	Y
Element:	Y
Fracture Critical:	Y
Underwater:	N
Other Special:	N

Inspector Signature:

District Review Date: 8/5/14
District Reviewer: BSEITER (55)

IDENTIFICATION

Bridge ID (8):	059B00037N	**District Number:**	6
Route Carried (7):	4TH STREET	**County (3):**	59 Kenton
Mile Point:	7.634	**Feature Intersected (6):**	LICKING RIVER
Location (9):	4TH ST BR OVER LICKING RV	**Road Name:**	EAST 4TH ST
Structure Description:	1002 Foot - Single Span Steel Truss - Thru		

NBI CONDITION

Deck (58):	6
Superstructure (59):	5
Substructure (60):	5
Culverts (62):	N
Channel/Protection (61):	7

SCHEDULE TAB

Schedule:	Required (Y/N)	Last Date	Frequency	Next Date
NBI (90):		4/21/14	**(91):** 24 mos	4/21/16
Fracture Critical (92A):	Y	**(93A):** 4/24/12	**(92A):** 24 mos	4/21/16
Underwater (92B):	N	**(93B):** 1/1/01	**(92B):** mos	1/1/01
Other Special (92C):	N	**(93C):** 4/24/12	**(92C):** mos	1/1/01
Elemental:	NA		24 mos	4/21/16

Load Rating and Posting

Truck Type	Typ I	Typ II	Typ III	Typ IV	Gross
Recomm. Posting:	-1	-1	-1	-1	-1
Field Posting:	-1	-1	-1	-1	-1

Posting Status (41): A Open, no restriction
Signs Posted: **Cardinal:** N **Non-Cardinal:** N

WATERWAY

Scour Critical (113):	8
Observed 113 Rating:	U
Waterway Adeq. (71):	8

DECK/WEARING SURFACE

Deck Type (107):	1 Concrete-Cast-In-Place						
Wearing Surface/Protective System (108):	**Type:** 4	**Membrane:** 0	**Protection:** 0				
Traffic Safety Features (36):	**Bridge Rail:** 1	**Transition:** 1	**Appr. Rail:** 1	**Rail Ends:** 1			
Overlay:	Y						
Overlay Type:	PCC	**(34) Skew:** 0					
Overlay Thickness:	2	**(51) Curb-to-Curb Width:** 36					

Vertical Clearances

Minimum Vertical Overclearance (53):	17.65
Minimum Vertical Underclearance (54):	23.66
Maximum Vertical Clearance (10):	17.65
Minimum Vertical Clearance:	0.00

Sufficiency Ratings

SR: 45.4 **SD/FO:** 2 Functionally Obsolete

Element Condition State Data

Elm/Env	Description	Units	Total QTY	QTY CS1	QTY CS2	QTY CS3	QTY CS4	QTY CS5
110/3	R/Conc Open Girder	LF	3458.00	3243.00	175.00	40.00	0.00	0.00
113/3	Paint Stl Stringer	LF	4064.00	1016.00	1016.00	1016.00	1016.00	0.00

059B00037N

KYTC Bridge Inspection Report

Summary:

Inspection Date: 4/21/14
Inspector: CBRESCH (185)
Primary Type: FracCrit (24 Months)

Types of Inspections Performed:

National Bridge Inventory:	Y
Element:	Y
Fracture Critical:	Y
Underwater:	N
Other Special:	N

Element Condition State Data

Elm/Env	Description	Units	Total QTY	QTY CS1	QTY CS2	QTY CS3	QTY CS4	QTY CS5
121/3	P/Stl Thru Truss/Bot	LF	251.00	64.00	62.00	62.00	63.00	0.00
126/3	P/Stl Thru Truss/Top	LF	251.00	101.00	150.00	0.00	0.00	0.00
131/3	Paint Stl Deck Truss	LF	257.00	57.00	200.00	0.00	0.00	0.00
152/3	Paint Stl Floor Beam	LF	1323.00	333.00	330.00	330.00	330.00	0.00
205/3	R/Conc Column	EA	37.00	17.41	16.32	3.27	0.00	0.00
210/3	R/Conc Pier Wall	LF	168.00	158.00	8.00	2.00	0.00	0.00
215/3	R/Conc Abutment	LF	92.00	55.00	20.00	17.00	0.00	0.00
22/3	P Conc Deck/Rigid Ov	SF	36072.03	0.00	36072.03	0.00	0.00	0.00
234/3	R/Conc Cap	LF	468.00	283.00	155.00	30.00	0.00	0.00
300/3	Strip Seal Exp Joint	LF	39.00	32.00	7.00	0.00	0.00	0.00
302/3	Compressn Joint Seal	LF	507.00	122.00	255.00	130.00	0.00	0.00
311/3	Moveable Bearing	EA	6.00	0.00	6.00	0.00	0.00	0.00
313/3	Fixed Bearing	EA	6.00	6.00	0.00	0.00	0.00	0.00
331/3	Conc Bridge Railing	LF	2004.00	1762.00	230.00	12.00	0.00	0.00
334/3	Metal Rail Coated	LF	2004.00	1504.00	500.00	0.00	0.00	0.00
357/3	Pack Rust Smart Flag	EA	1.00	0.00	1.00	0.00	0.00	0.00
358/3	Deck Cracking SmFlag	EA	1.00	0.00	1.00	0.00	0.00	0.00
359/3	Soffit Smart Flag	EA	1.00	0.00	1.00	0.00	0.00	0.00
362/3	Traf Impact SmFlag	EA	1.00	0.00	1.00	0.00	0.00	0.00
363/3	Section Loss SmFlag	EA	1.00	0.00	1.00	0.00	0.00	0.00
505/3	RC Sidewalk	LF	2004.00	1504.00	500.00	0.00	0.00	0.00
604/3	2nd Elem Dist	EA	1.00	0.00	1.00	0.00	0.00	0.00
605/1	Transitions	EA	1.00	0.00	0.00	1.00	0.00	0.00
606/1	Drains	EA	1.00	0.00	1.00	0.00	0.00	0.00
607/1	Utilities	EA	1.00	0.00	1.00	0.00	0.00	0.00

Element Condition State Data

Str Unit	Elm/Env	Description	Description

059B00037N

KYTC Bridge Inspection Report

Summary:

Inspection Date: 4/21/14
Inspector: CBRESCH (185)
Primary Type: FracCrit (24 Months)

Types of Inspections Performed:

National Bridge Inventory:	Y
Element:	Y
Fracture Critical:	Y
Underwater:	N
Other Special:	N

Element Condition State Data

Str Unit	Elm/Env	Description	Description
1	110/3	R/Conc Open Girder	Beams~ Concrete beam elements throughout structure are of Tee Beam design. Tee beam elements throughout structure that could be closely viewed during inspection were found to have randomly spaced hairline vertical flexure cracking conditions. A moderate amount of delaminating conditions, deterioration and random areas of fascia spalling with exposed rusting reinforcing steel was found randomly throughout beam elements. Worst conditions found in beams were along end most locations, which extend outward into spans from seat supports, with conditions exposing fascia cracking, delamination, spalling and deterioration. Forward most span (#14) of structure over local roadway/street was found showing several (large amount) areas of strikes, scrapes and spalls in both lower portions of webs and bottom flanges of Tee beam elements caused by traffic impact. Noted areas of impact are not exposing reinforcing steel material at this time. (See Photos)
1	113/3	Paint Stl Stringer	Stringers~ Following notes left in place from previous Fracture Critical Inspection: Stringer elements throughout truss spans of structure were found to have a minor to moderate amount of rusting conditions, with heavy rust noted under expansion joints at stringer ends and clip angle connections to floor beams. Note that varying degrees of section loss was found randomly throughout stringer elements of sidewalk system, with 100% loss found in lower web sections of stringers at panel points L1, L3, L6 and L7 along the downstream side of structure and L2 along the upstream side of the structure. (See Photos)
1	121/3	P/Stl Thru Truss/Bot	Bottom Chord~ Several batten plates throughout bottom chord members were found showing 100% section loss at this time, which has caused small hole to form in plate material (areas of rust through). Bottom chord members throughout truss spans of structure were found showing a minor to moderate amount of pack rust in areas of batten plates and gusset plates, which has caused varying degrees of distortion in material. Note that pack rust conditions throughout bottom chords was found causing distortion throughout buildup design of chords (in between plate material). Bottom chords throughout both deck truss portions of structure and of main thru truss span were found to have varying degrees of section in bottom flanges at union with horizontal gusset plates. Horizontal gusset plate at the L2 panel point location, left main truss of structure was found to have a missing rivet. Horizontal gusset plate at the L2 panel point location, right main truss of structure was found to have approximately 50% section loss, with missing rivet. Gusset plate connections to bottom chord along right main truss of structure, at end post locations were found to have a moderate amount of rusting conditions, with light section loss noted. Top cover plate or tension plate at end post of the right most truss line of span #3, forward most end of span, was found exposing an area of 100% section loss. Inboard vertical gusset plate at panel point L3 of deck truss span #4, north/left truss line was found to have an 2 area's of 100% rust through, which has caused two small holes in the gusset plate. Area needs to be watched in future inspections. Note that several vertical gusset plates throughout truss spans of the structure were found showing a minor to heavy amount of distortion, due to pack rust conditions. Lateral bracing at the floor beam #3 connection location was found to have section loss. (See Photos)
1	126/3	P/Stl Thru Truss/Top	Top Chord~ Note that a moderate loss of protective paint coating system was found throughout elements of top chord of structure, along with a minor amount of rusting conditions occurring. (See Photos)
1	131/3	Paint Stl Deck Truss	Deck Truss~ Pack rust was found in areas of vertical gusset plate connections throughout deck truss spans. Bottom chords throughout truss spans of structure were found a minor to moderate amount of pack rust in areas of batten plates and gusset plates with some distortion. Note that pack rust conditions throughout bottom cords were found causing distortion throughout buildup design of chords. Horizontal gusset plates of deck truss spans were found showing pack rust distortion, with areas of 100% section loss forming holes in plating material (areas of rust through). (See Photos)

059B00037N

KYTC Bridge Inspection Report

Summary:

Inspection Date: 4/21/14
Inspector: CBRESCH (185)
Primary Type: FracCrit (24 Months)

Types of Inspections Performed:

National Bridge Inventory:	Y
Element:	Y
Fracture Critical:	Y
Underwater:	N
Other Special:	N

Element Condition State Data

Str Unit	Elm/Env	Description	Description
1	152/3	Paint Stl Floor Beam	Floor Beams~ Floorbeam elements throughout truss spans of structure were found to have a minor to moderate amount of rusting conditions, due to paint coating system failure, with heavy rust under areas of expansion joints at stringer ends and clip angles. (See Photos)
1	205/3	R/Conc Column	Pier Columns~ Most pier column elements throughout structure were found to have a minor to heavy amount of concrete deterioration, with concrete fascia delamination, fascia spalling with exposed reinforcing steel and heavy cracking with efflorescence. Pier column elements have been and continue to be exposed to varying degrees of seepage from expansion joint failures above. Column elements of thru truss portion/section of structure are located in channel, which are in need of an Underwater Dive Inspection. (See Photos)
1	210/3	R/Conc Pier Wall	Pier Walls~ Pier wall elements throughout structure were found showing random cracking conditions and minor deterioration in areas; otherwise elements were found to be performing as designed at this time.
1	215/3	R/Conc Abutment	Abutments~ Abutment breastwall's were found showing random areas of concrete deterioration at this time, with the forward abutment breastwall having a moderate amount of delaminating conditions, fascia cracking and spalling with exposed rusting reinforcing steel at union locations between breastwall to wingwall elements. Vertical cracking conditions were found randomly throughout the rear abutment breastwall. (See Photos)
1	22/3	P Conc Deck/Rigid Ov	Deck~ Deck wearing surface area throughout structure was found showing a moderate to heavy amount of transverse cracking conditions, with most cracks being of moderate in size. Noted cracks were found a random spacing's throughout deck surface of spans. Diagonal cracking was found along end locations of spans in random areas as well, which extend outward from armored edge of expansion joint devices towards curb faces. Light surface scaling and spalling conditions were found in wearing surface overlay along union with expansion joint material. Scaling and spalling conditions were also found randomly throughout deck surface of spans #3, #4 and #5. A moderate to heavy loss of texture was found typical throughout deck wearing surface area of all spans, with wheel track locations showing the most loss at this time. Stone aggregate material of wearing surface is becoming more and more exposed and highly polished. (See Photos)
1	234/3	R/Conc Cap	Pier Caps~ Pier cap elements throughout structure were found showing varying degrees of delaminating conditions, with fascia cracking, rust staining, efflorescence, concrete spalling and exposed rusting reinforcing steel. A moderate amount of concrete deterioration was noted in bearing areas of truss span pier caps. (See Photos)
1	300/3	Strip Seal Exp Joint	Strip Seal Expansion Joints~ Strip seal expansion joints were found to have a minor to moderate amount of dirt and debris buildup throughout areas of seal, which could be placing unwanted stress on material while under traffic flow. (See Photos)
1	302/3	Compressn Joint Seal	Compression Seal Expansion Joints~ Compression seal expansion joints throughout structure were found showing complete failure at this time or are failing, which is allowing a heavy to severe amount of seepage to random structural elements below (beam ends, diaphragms, steel truss components, pier caps, pier columns, etc.). Continuing seepage from joint seal failures has caused and is now accelerating deterioration structural elements, causing paint system failure, rusting conditions, section loss and corrosion. Expansion joint device along the forward most end of deck truss span #5 was found to have compression seal material completely missing at this time. Expansion joint repairs/replacement are needed throughout structure as soon as possible to help prevent further damages from occurring. (See Photos)
1	311/3	Moveable Bearing	Moveable Bearings- Moveable bearing devices throughout structure could not be closely or thoroughly viewed for inspection at this time, due to elements being located at height as well as structural design. What could be seen of devices was found showing protective paint coating system failure, along with rusting conditions.

059B00037N

KYTC Bridge Inspection Report

Summary:

Inspection Date: 4/21/14
Inspector: CBRESCH (185)
Primary Type: FracCrit (24 Months)

Types of Inspections Performed:

National Bridge Inventory:	Y
Element:	Y
Fracture Critical:	Y
Underwater:	N
Other Special:	N

Element Condition State Data

Str Unit	Elm/Env	Description	Description
1	313/3	Fixed Bearing	Fixed Bearings~ Fixed bearing devices throughout structure could not be closely or thoroughly viewed for inspection at this time, due to elements being located at height as well as structural design. What could be seen of devices was found showing protective paint coating system failure, along with rusting conditions.
1	331/3	Conc Bridge Railing	Concrete Bridge Railing~ Vertical flexure cracking conditions were found randomly throughout concrete bridge railing system, but no rust staining has occurred in areas at this time. Note that bridge railing system was found to have a moderate loss of protective coating system throughout. (See Photos)
1	334/3	Metal Rail Coated	Metal Bridge Railing~ Metal bridge railing/hand railing along side of sidewalk elements was found showing protective paint coating system failure at this time, which is allowing for rusting conditions, pack rust and minor section loss to occur. Note that several sections of along upper most portion of railing material (horizontal cap angle) was found to be out of horizontal plane along joints at this time, due to pack rust formation. Pack rust conditions are causing swell in material and deformation. Several areas throughout metal railing system was found to have missing connection/attachment bolts, along with random areas of deformation which appear to be from impact of some kind. Railing repairs are needed. (See Photos)
1	357/3	Pack Rust Smart Flag	Pack Rust~ Following notes left in place from previous Fracture Critical Inspection: Bottom chords throughout truss spans of structure were found a minor to moderate amount of pack rust in areas of batten plates and gusset plate connections, along with material showing some distortion. Note that pack rust conditions throughout bottom cords was found causing distortion throughout buildup design of chords. Pack rust was found in areas of vertical gusset plate connections throughout deck truss spans. (See Photos)
1	358/3	Deck Cracking SmFlag	Deck Cracking~ Deck wearing surface area throughout structure was found showing a moderate to heavy amount of transverse cracking conditions, with most cracks being of moderate in size. (See Photos)
1	359/3	Soffit Smart Flag	Soffit~ Random areas throughout deck soffit were found showing transverse cracking with efflorescence and minor spalling with exposed reinforcing steel. Span at rear abutment has heavy soot coating/covering at this time from local (homeless) building fires directly under span of bridge. (See Photos)
1	362/3	Traf Impact SmFlag	Traffic Impact~ Forward most span of structure over local roadway/street was found showing several (large amount) areas of strikes, scrapes and spalls in Tee beam elements caused by traffic impact. Areas are not exposing reinforcing steel material at this time. (See Photos)
1	363/3	Section Loss SmFlag	Section Loss~ Following notes left in place from previous Fracture Critical Inspection: Several batten plates throughout bottom chord members were found showing 100% section loss at this time, which has caused small hole to form in plate material (areas of rust through). Horizontal gusset plate at the L2 panel point location, right truss of structure was found to have approximately 50% section loss. Gusset plate connections to bottom chord along right truss of structure, at end post locations were found to have a moderate amount of rusting conditions, with light section loss noted. Horizontal gusset plates of deck truss spans were found showing pack rust distortion, with areas of 100% section loss forming holes in plating material. Lateral bracing at the floorbeam #3 connection location was found to have section loss. (See Photos)

059B00037N

KYTC Bridge Inspection Report

Summary:

Inspection Date: 4/21/14
Inspector: CBRESCH (185)
Primary Type: FracCrit (24 Months)

Types of Inspections Performed:

National Bridge Inventory:	Y
Element:	Y
Fracture Critical:	Y
Underwater:	N
Other Special:	N

Element Condition State Data

Str Unit	Elm/Env	Description	Description
1	505/3	RC Sidewalk	Sidewalk~ Note that sections of sidewalk elements along sides of structure found exposing heaving conditions during previous inspections have since been repaired by KYTC forces. Heaved areas and/or sections of sidewalk were cut and removed from structure, being replaced with cast-in-place concrete material. Note that further repairs are needed to sidewalk along the left side of structure, with one section of sidewalk located approximately 33.0 feet ahead of the rear abutment loose and showing movement under pedestrian traffic, as well as three sections approximately 15.0 feet back from expansion joint #3. Movement detected in sections of sidewalk need to be repaired as soon as possible, as conditions could possibly become a hazard to traveling pedestrians. Also note that areas of expansion joints across sidewalks along ends of truss spans have steel cover plates along surface, which due to design are out of horizontal plane with surface of sidewalks. Some of these noted locations (steel cover plates) are higher than others, which appears to be from pack rust formation in areas. A thorough inspection of underside of sidewalk and it's components could not be obtained during time of this inspection. What could be seen of metal pan forms along underside of sidewalk was found showing a moderate to heavy amount of rusting and corrosion conditions at this time. (See Photos)
1	604/3	2nd Elem Dist	2nd Element Distress~ Concrete diaphragm elements have random areas of delamination and spalling conditions, with some exposed reinforcing steel in areas of concrete Tee beams. Concrete diaphragms have been exposed to leakage during the past and have moderate to heavy deteriorating conditions. (See Photos)
1	605/1	Transitions	Transitions~ Note that transitions of sidewalk elements as well as joint locations of sidewalks were found showing differences in surface grades (out of horizontal plane). Repairs are needed as soon as possible, as noted conditions could possibly become a hazard to traveling pedestrians. (See Photos)
1	606/1	Drains	Drains~ Several drains throughout structure were found to be no longer operating as designed at this time, due to dirt and debris buildup. All dirt and debris needs to be removed from drains to allow system to operate as designed. (See Photos)
1	607/1	Utilities	Utilities~ Note that utilities attached to breastwall of the forward abutment element were found to have a severe amount of deterioration occurring in metal conduit material (rust, corrosion, section loss, etc.). Utility conduit spanning along stringer locations of sidewalks (underside of sidewalks) of structure were found to have several missing clap attachments (fastener deficiencies), which are in need of being replaced. Owner of utilities attached to structure needs to be contacted on issues, as systems are no longer operating as designed. (See Photos)

Structure Notes

Structure Stamped 1982 HS 20-44

Changes were made to minimum vertical clearance under structure, Item 54, on 05/03/2013 this change was made as low income housing development at east approach, north side of structure has been razed and the access road in this area has been blocked off and is no longer accessible to traffic. The only area where traffic now has access is under east end of truss where park has access to park maintenance barn, work area.

Inspection Notes

059B00037N

KYTC Bridge Inspection Report

Summary:

Inspection Date: 4/21/14
Inspector: CBRESCH (185)
Primary Type: FracCrit (24 Months)

Types of Inspections Performed:

National Bridge Inventory:	Y
Element:	Y
Fracture Critical:	Y
Underwater:	N
Other Special:	N

Inspection Notes

*Note that this was a Fracture Critical Inspection which was performed and completed by rope access and Under the Bridge Crane "Snooper". KYTC's Climb Team: Josh Rogers (CO), Even Dick (CO), Harry Greer (CO), Greg Cady (D06), Gary Cochran (D06), Craig Bresch (D6). All inspection notes from previous Annual Inspection were left in place throughout report where needed, as needed. (04/21/2014-04/22/2014)

*Note that protective paint coating system throughout this structure was found showing a moderate to heavy amount of failure at this time. The replacement of paint system throughout this structure should be strongly considered soon. (09/22/2010, 11/28/2011, 04/24/2012, 04/21/2014)

*Pier elements #4 and #5 of structure are located in channel, which depth is to great to enter for access and review of current scouring conditions, if any. Structure is in need of a Underwater Dive Inspection. (11/20/2013)

Work Candidates

Inspector Candidates:

Candidate ID:	Status	Priority	Assigned	Action	Elem	Date Recommended
059-B00037N-1	Approved	High	Unassigned	33	605	11/20/13
059-B00037N-10	Approved	High	Unassigned	41	505	11/20/13
059-B00037N-2	Approved	High	Unassigned	40	606	11/20/13
059-B00037N-3	Approved	High	Unassigned	4	0	4/21/14
059-B00037N-4	Approved	High	Unassigned	33	607	11/20/13
059-B00037N-5	Approved	High	Unassigned	60	0	11/20/13
059-B00037N-6	Approved	Medium	Unassigned	6	0	11/20/13
059-B00037N-7	Approved	Medium	Unassigned	32	22	11/20/13
059-B00037N-8	Approved	High	Unassigned	31	302	4/21/14
059-B00037N-9	Approved	High	Unassigned	33	334	11/20/13

GENERAL NOTE

SPECIFICATIONS: KENTUCKY DEPARTMENT OF HIGHWAYS 1934 STANDARD SPECIFICATIONS FOR STATE AND FEDERAL ROAD AND BRIDGE CONSTRUCTION, WITH AMENDMENTS.

SCOPE OF WORK: THE WORK TO BE DONE UNDER THIS CONTRACT WILL INCLUDE THE CLEANING, SPOT PAINTING, AND FINISH PAINTING WITH TWO COATS OF APPROVED PAINT OF ALL EXPOSED METAL WORK IN THE SUPERSTRUCTURE AND SUBSTRUCTURE OF THE BRIDGE, INCLUDING ELECTRIC CONDUITS, LIGHT STANDARDS, BRACKETS, BOLTS, CLAMPS AND EQUIPMENT OF BLOCK - LIGHTING SYSTEM. THIS WORK DOES NOT INCLUDE ANY CLEANING AND PAINTING OF METAL WORK IN WATER LINES, TELEPHONE CONDUITS OR OTHER PUBLIC OR PRIVATE UTILITIES ATTACHED TO THE BRIDGE.

IT IS THE DUTY OF THE CONTRACTOR TO FULLY PROTECT PEDESTRIAN, VEHICULAR OR OTHER TRAFFIC UPON OR UNDERNEATH THE STRUCTURE AND PROTECT ALL PORTIONS OF THE STRUCTURE (SUPERSTRUCTURE AND SUBSTRUCTURE) AGAINST ANY DISFIGUREMENT FROM EQUIPMENT OR MATERIALS DURING CLEANING AND PAINTING OPERATIONS.

THE CLEANING SHALL CONSIST OF THE REMOVAL OF ALL SCALED, SCORED, BLISTERED, LOOSE AND RUST-STAINED PAINT ON ALL METAL WORK TO BARE METAL; THE CLEANING OF ALL RIVETED SURFACES TO BARE BRIDGE METAL; AND THE REMOVAL OF ALL DIRT, DUST AND OTHER FOREIGN MATTER. CLEANING SHALL BE DONE BY MEANS OF COMPRESSED AIR, SCRAPERS OR WIRE BRUSHES. HAND BLAST MAY BE USED FOR CLEANING, PROVIDED SATISFACTORY ARRANGEMENTS ARE MADE FOR THE PROTECTION OF PREVIOUSLY PAINTED SURFACES AND FOR THE PROTECTION OF PEDESTRIAN AND VEHICULAR TRAFFIC CROSSING THE BRIDGE. ALL GREASE, TAR OR OTHER SIMILAR STAINS SHALL BE REMOVED BY THE APPLICATION OF A SATISFACTORY SOLVENT TO SUCH SURFACES.

THE SPOT PAINTING SHALL CONSIST OF APPLYING TO ALL SURFACES CLEANED TO BARE METAL ONE COAT OF RED LEAD OR BASIC SULPHATE BLUE LEAD PAINT.

THE FINISH PAINTING SHALL BE DONE AS REQUIRED BY THE SPECIFICATIONS, AND SHALL CONSIST OF ONE COMPLETE COAT OF NO. 1 WHITE LEAD PAINT AND ONE COMPLETE COAT OF NO. 2 WHITE LEAD PAINT APPLIED BY MEANS OF BRUSHES IN THE ORDER NOTED. SURFACES WHICH CANNOT BE SATISFACTORILY PAINTED BY MEANS OF BRUSHES SHALL HAVE PAINT APPLIED BY MEANS OF SWABS OR OTHER APPROVED DEVICES. SPRAYING MAY BE DONE ONLY WITH THE APPROVAL OF THE COMMISSIONER OF HIGHWAYS AND ONLY IN CASES TO COVER SUCH SURFACES AS CANNOT BE SATISFACTORILY PAINTED BY MEANS OF BRUSHES, SWABS OR OTHER APPROVED METHODS.

NAPHTHA SPIRITS, BENZINE, OR OTHER CUT-BACK MATERIAL WILL NOT BE ALLOWED ON THE JOB AT ANY TIME OR UNDER ANY CIRCUMSTANCES, EXCEPT UNDER THE DIRECT SUPERVISION OF THE ENGINEER FOR USE IN CLEANING AN ADHESIVE COATED OR OTHER SIMILAR MATERIALS. THE PRESENCE OR THE USE OF NAPHTHA SPIRITS, GASOLINE, BENZINE, OR OTHER SIMILAR MATERIALS USED AS CUT-BACK AGENT FOR THINNING THE PAINT, WILL BE SUFFICIENT CAUSE FOR REJECTING THE MATERIAL PAINTED, AND FOR REQUIRING A COMPLETE RECLEANING AND REPAINTING OF THE SURFACES WITH SATISFACTORY MATERIALS.

ALL PAINT SHALL BE IN ACCORDANCE WITH SPECIFICATIONS.

ESTIMATE OF QUANTITIES: THE FOLLOWING IS A STATEMENT OF THE APPROXIMATE WEIGHTS OF STEEL AND METAL WORK TO BE PAINTED:

COVINGTON APPROACH	237,000 POUNDS
RIVER SPAN	819,000 POUNDS
NEWPORT APPROACH	236,000 POUNDS
TOTAL	1,290,000 POUNDS

TRAFFIC: THE CONTRACTOR SHALL NOT INTERFERE WITH THE MOVEMENT OF VEHICULAR OR FOOT TRAFFIC ACROSS THIS BRIDGE, EXCEPT WHEN ABSOLUTELY NECESSARY.

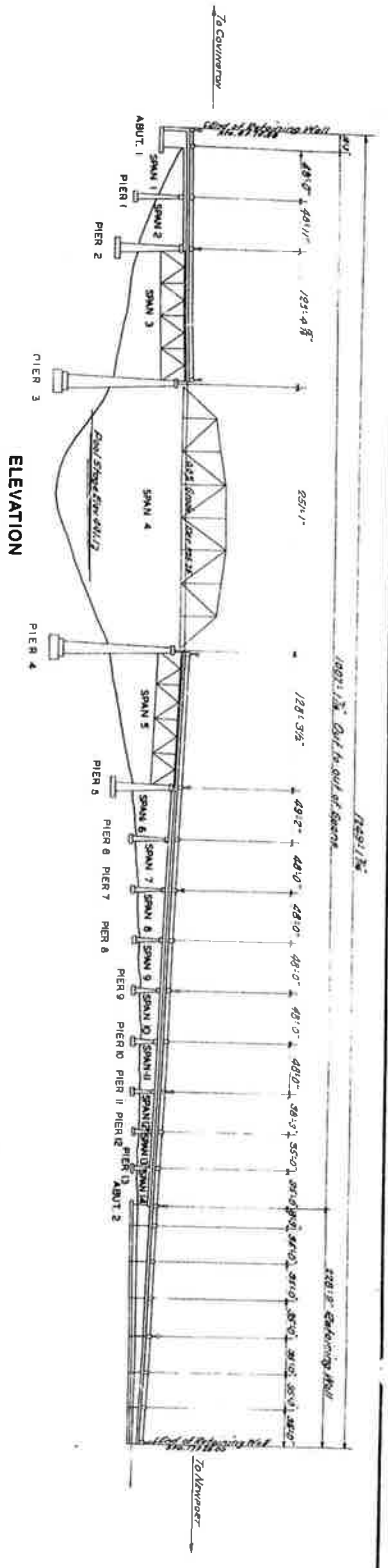
PARTIAL PAYMENT: BIDS WILL BE RECEIVED AS A LUMP SUM FOR MAINTENANCE CLEANING AND PAINTING OF THE BRIDGE. PARTIAL PAYMENT OF FIFTY PER CENT OF THE CONTRACT LUMP SUM PRICE, LESS THE PER CENT RETAINAGE, WILL BE MADE WHEN THE CLEANING, SPOT PAINTING AND ONE COMPLETE COAT OF NO. 1 WHITE LEAD PAINT HAVE BEEN SATISFACTORILY COMPLETED ON THE ENTIRE BRIDGE. TWO COMPLETE FIELD COATS ON A PORTION OF THE BRIDGE SHALL NOT BE CONSIDERED AS FULFILLING THE REQUIREMENTS ABOVE IN LIEU OF ONE COMPLETE COAT OF NO. 1 WHITE LEAD PAINT ON THE ENTIRE BRIDGE.

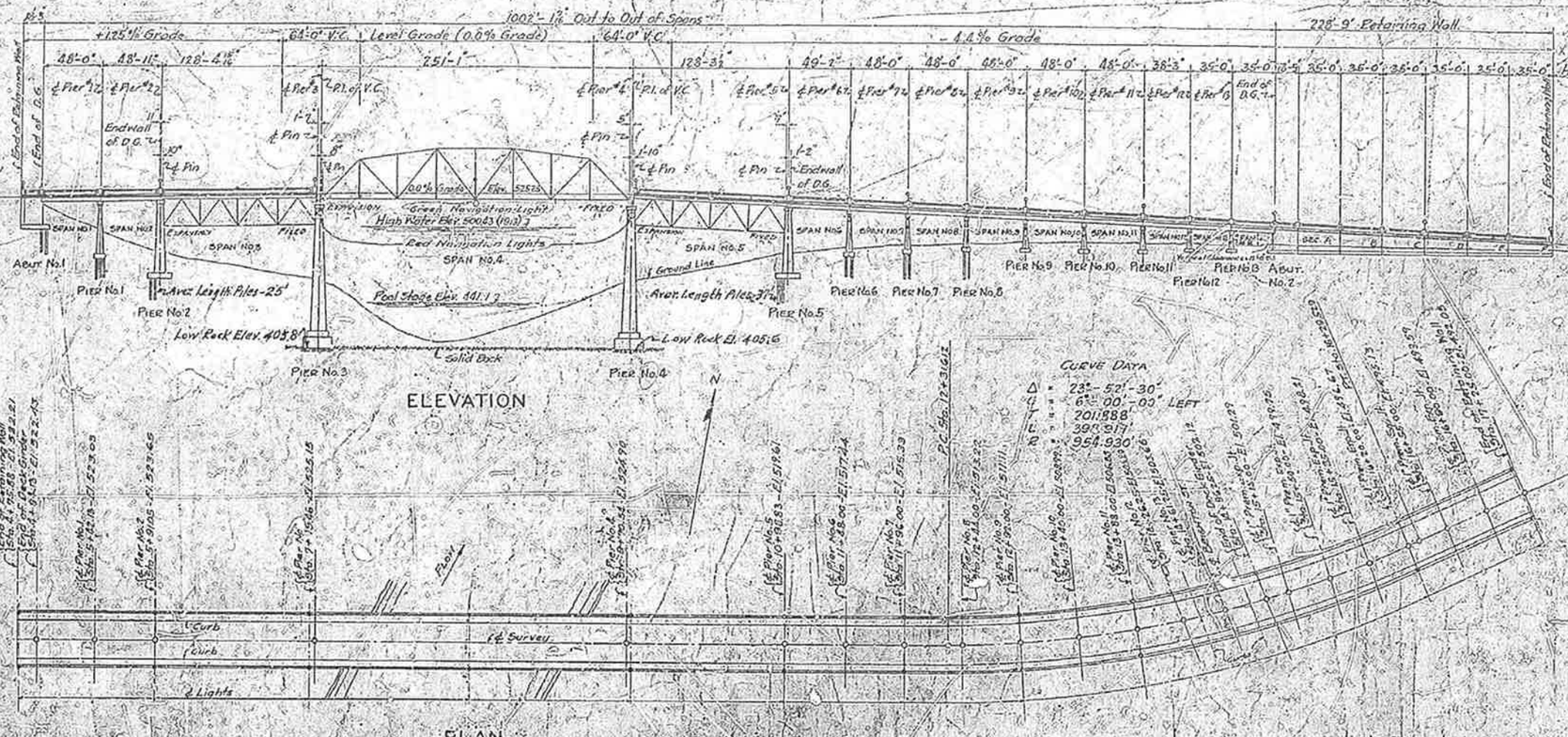
MATERIALS: THE DEPARTMENT OF HIGHWAYS WILL FURNISH THE NECESSARY PAINT, INCLUDING ANY THINNING MATERIAL DEEMED NECESSARY BY THE DEPARTMENT, AT THE SITE OF THE WORK, FREE OF COST TO THE CONTRACTOR. AFTER DELIVERY OF PAINT TO THE CONTRACTOR HE SHALL BE RESPONSIBLE THEREAFTER FOR THE STORAGE AND HANDLING OF THE PAINT. SHOULD ANY OF THE PAINT BECOME LOST, STOLEN OR DAMAGED AFTER DELIVERY TO THE CONTRACTOR HE SHALL REPLACE SAME WITH APPROVED PAINT AT HIS FULL COST AND EXPENSE.

ANY PAINT REMAINING AND WHICH MAY NOT BE REQUIRED FOR USE SHALL BE RETURNED IN GOOD CONDITION TO THE DEPARTMENT AT THE SITE OF THE WORK. ALL THE CONTAINERS, INCLUDING TOPS AND ALWAYS THE SIDE ON WHICH PAINT IS STENCILLED SHALL BE RETURNED TO THE DEPARTMENT IN GOOD CONDITION AT THE SITE OF THE WORK. A DEDUCTION OF ONE DOLLAR ($1.00) SHALL BE MADE FROM MONTHLY ESTIMATE FOR EACH 5-GALLON CONTAINER NOT RETURNED.

THE CONTRACTOR SHALL FURNISH ALL EQUIPMENT, TOOLS, SCAFFOLDING, RIGGING, MATERIALS, BRUSHES, PAINT, AND ALL INCIDENTALS NECESSARY FOR THE CLEANING AND PAINTING HERE SPECIFIED.

THE PAINT SHALL BE THOROUGHLY STIRRED AND KEPT STIRRED WHILE BEING APPLIED, BUT MECHANICAL MIXERS AS SPECIFIED IN ARTICLE 542.3-04 OF THE SPECIFICATIONS WILL NOT BE REQUIRED.





REFERENCES

1	General Layout	29	Ret. Wall Secs. D
2	Substructure Layout	30	" " E
3	Lighting Details	31	" " F
4	General Notes	32, 33 & 34	Spans 1-2-6 & 7
5 & 6	Abutment No. 1	35-36 & 37	Span 3
7	Pier No. 1	38-39 & 40	Spans 9-10 & 11
8 & 9	" " 2	41-42 & 43	Span 12
10 & 11	" " 3 & 4	44-45 & 46	" 8
12 & 13	" " 5	47-48 & 49	" 4
14	" " 6	50	Drain & Expansion Plates & Copper Strips
15	" " 7	51	Typical Handrail Details
16	" " 8	52	Handrail Abut. 1 & Spans 1-2 & 6
17	" " 9	53	" Spans 3 & 7
18	" " 10	54	" 9-10 & 11
19	" " 11	55	" Span 12
20	" " 12	56	" Spans 13 & 14 Abut. 2 Ret. Wall Secs. A & B
21	" " 13	57	" Retaining Wall Secs. C-D-E & F
22 & 23	Abutment No. 2	58-59-60 & 61	250' Thru Truss Span Steel Details
24 & 25	Ret. Wall Sec. A	62-63-64 & 65	126' Deck Truss Span Steel Details
26 & 27	" " B	66	Handrail 126' Deck Span
28	" " C	R-2	Ret. Wall Sec. C
		R-3	" " D
		S-DR	Standard Construction Details

TOTAL ESTIMATE OF QUANTITIES

For Steel Superstructure		
Concrete - Class "A"	517.0	Cu. Yds.
Concrete - Class "D"	41.2	Cu. Yds.
Structural Steel	1236.630	Lbs.
Steel Reinforcement	120.480	Lbs.
For Substructure & Concrete Approaches		
Concrete - Class "A"	6339.7	Cu. Yds.
Concrete - Class "D"	13.8	Cu. Yds.
Steel Reinforcement	834.040	Lbs.
Class "B" Bronze	4065	Lbs.
Cast Iron Drains	2400	Lbs.
Structure Excavation	17200	Cu. Yds.
14" φ C.I.P.C. Piles	7800	Lin. Ft.
16" φ C.I. Piles	7650	Lin. Ft.
Lighting System	1	Lump
Removal of Existing Structure	1	Lump

List of Drawings for Substructure
Standard Drawing S.D.P.
Sheets 1 to 57 inclusive, 60 Sheets.

List of Drawings for Superstructure
Standard Drawing S.D.P.
Sheets 1 & 4 & 58 to 66 inclusive, 12 Sheets.

COMMONWEALTH OF KENTUCKY
STATE HIGHWAY DEPARTMENT
FRANKFORT
COUNTY OF
KENTON-CAMPBELL
COVINGTON — NEWPORT
STATION
ECO
BRIDGE

Sh 1A

COMMONWEALTH OF KENTUCKY
STATE HIGHWAY DEPARTMENT
FRANKFORT
COUNTY(IES)

BRONZE TABLETS FOR COVINGTON-NEWPORT BRIDGE

ROAD PROJECT NO.

STATION

Approved by ..... Chairman
State Highway Commission

DATE 1935

SPECIFICATIONS

GENERAL: Plans shall be read in connection with ... [illegible]

MATERIAL AND WORKMANSHIP: ... [illegible]

FULL SIZE
MAKE TWO AS SHOWN

TYPICAL SECTION

1½"

6¼"

64"

1'-8¾"

Concrete Bond

VETERANS MEMORIAL BRIDGE

DEDICATED TO THOSE WHO SERVED IN THE WORLD WAR 1917 1918

COMMONWEALTH OF KENTUCKY

BUILT BY THE STATE HIGHWAY COMMISSION OF KENTUCKY

1934 - 1936

7¾"

1'-6¼"

7¾"

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

PLAN AND PROFILE OF PROPOSED
STATE HIGHWAY

KENTON ~~& CAMPBELL~~ COUNTY
R.P. 59 - 235

R.P. 59-235

COUNTY OF	STATE PROJ. NO.	SECTION NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KENTON				1	

SUBSECTIONS FOR
KENTON COUNTY RP 59-235-1
59-7235-181 Cleaning & painting of bridge over Licking River, Stas. 4+75.88 to 17+25

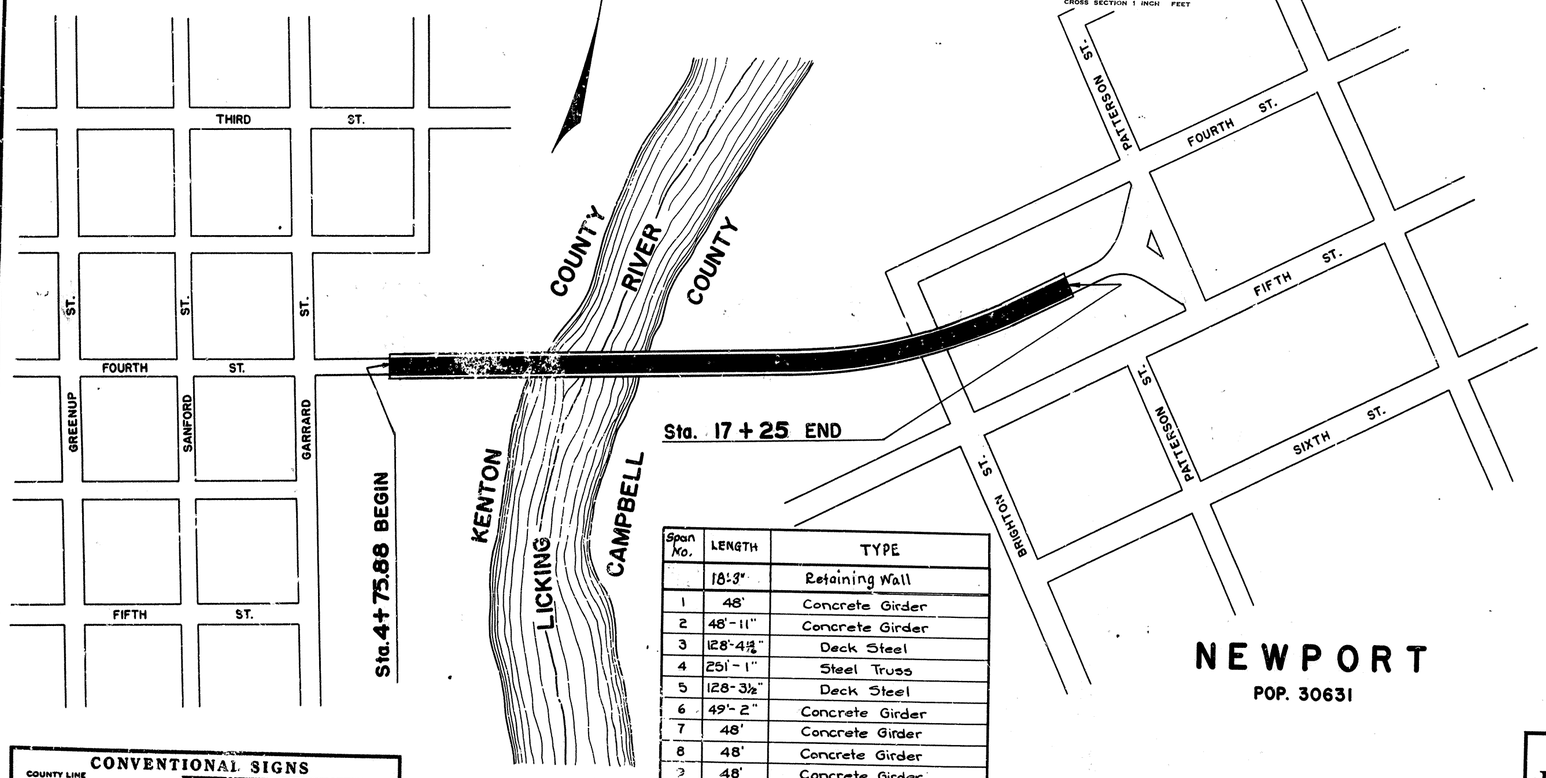
INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	LAYOUT SHEET
	TYPICAL SECTIONS—SUMMARY OF QUANTITIES
	LIST OF STANDARD DRAWINGS
	PLAN AND PROFILE SHEETS
	DETAIL SHEETS
	REFERENCE SHEETS
	CROSS SECTION SHEETS
	DRAINAGE SHEETS
1/2 SHEETS	BRIDGE SHEETS

SENT FOR FEDERAL APPROVAL — DATE
RECORD PLANS — NO. SETS
CONSTRUCTION PLANS

PLANS TRACED BY.....
PLANS COMPUTED BY.....
PLANS CHECKED BY.....
FINAL CHECK BY.....

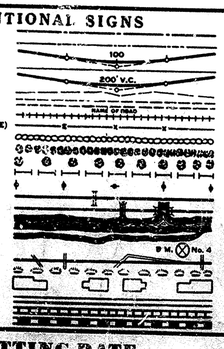
SCALES
PLAN 1 INCH 100 FEET
PROFILE HOR. 1 INCH ..... FEET
PROFILE VER. 1 INCH ..... FEET
CROSS SECTION 1 INCH ..... FEET



Span No.	LENGTH	TYPE
	18'-3"	Retaining Wall
1	48'	Concrete Girder
2	48'-11"	Concrete Girder
3	128'-4½"	Deck Steel
4	251'-1"	Steel Truss
5	128-3½"	Deck Steel
6	49'-2"	Concrete Girder
7	48'	Concrete Girder
8	48'	Concrete Girder
9	48'	Concrete Girder
10	48'	Concrete Girder
11	48'	Concrete Girder
12	38'-3"	Concrete Girder
13	35'	Concrete Girder
14	35'	Concrete Girder
	428'-0"	Retaining Wall

CONVENTIONAL SIGNS

COUNTY LINE
CORPORATE LIMITS
SURVEY LINE
PROPOSED RIGHT OF WAY
GRADE LINE
GROUND LINE
TRAVELLED WAY
RAILROAD
FENCES (EXCEPT STONE & HEDGE)
STONE FENCE
HEDGE FENCE
TREES & STUMPS
PIPE LINE
TELEPHONE POLES
PIPE CULVERT
CONCRETE CULVERT & BRIDGE
LARGE STREAM
SMALL STREAM
BENCH MARKS
ROAD INTERSECTIONS
MARSH
BUILDINGS
UNIMPROVED ROADS
GRADED EARTH ROADS
IMPROVED ROADS



LAYOUT MAP
SCALE 1 INCH 120 FEET

GROSS LENGTH ..... LIN. FT. ..... MILES
ADDED / DEDUCTED FOR EQUALITIES ..... LIN. FT.
NET LENGTH ..... LIN. FT. ..... MILES
NOT INCLUDED
RAILROAD CROSSINGS NO. ..... LIN. FT.
BRIDGES ..... LIN. FT.

GROSS LENGTH ..... LIN. FT. ..... MILES
ADDED / DEDUCTED FOR EQUALITIES ..... LIN. FT.
NET LENGTH ..... LIN. FT. ..... MILES
NOT INCLUDED
RAILROAD CROSSINGS NO. ..... LIN. FT.
BRIDGES ..... LIN. FT.

GROSS LENGTH ..... LIN. FT. ..... MILES
ADDED / DEDUCTED FOR EQUALITIES ..... LIN. FT.
NET LENGTH ..... LIN. FT. ..... MILES
NOT INCLUDED
RAILROAD CROSSINGS NO. ..... LIN. FT.
BRIDGES ..... LIN. FT.

GROSS LENGTH 1249.12 LIN. FT. 0.237 MILES
ADDED / DEDUCTED FOR EQUALITIES ..... LIN. FT.
NET LENGTH 1249.12 LIN. FT. 0.237 MILES
NOT INCLUDED
RAILROAD CROSSINGS NO. ..... LIN. FT.
BRIDGES ..... LIN. FT.

LETTING DATE .....

KENTUCKY DEPARTMENT OF HIGHWAYS
COUNTY OF
KENTON – ~~CAMPBELL~~
COVINGTON – NEWPORT
ROAD

STATE PROJECT No.	SECTION	DATE
59-235		

SUBMITTED FOR APPROVAL 9/18 19 92 BY H.K. Qual. BRIDGE ENGINEER
PLANS CHECKED 19 BY CHIEF DRAFTSMAN
SURVEY AND PLANS APPROVED 9/5 19 94 BY [illegible] ENGINEER OF ROAD DESIGN
SURVEY AND PLAN APPROVED 19 BY DIRECTOR OF PLANNING
SURVEY AND PLAN APPROVED 19 BY STATE HIGHWAY ENGINEER

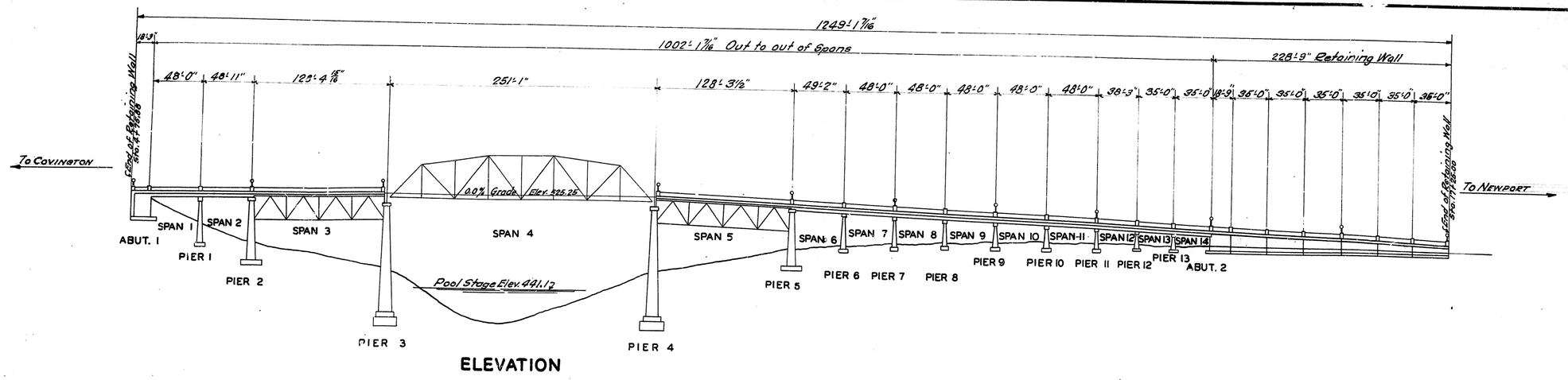
59-235

RECOMMENDED FOR APPROVAL
[redacted]
DISTRICT ENGINEER
PUBLIC ROADS ADMINISTRATION
FEDERAL WORKS AGENCY

APPROVED
[redacted]
COMMISSIONER
PUBLIC ROADS ADMINISTRATION
FEDERAL WORKS AGENCY

Drawing No. B162, Sheet 1 of 2

FED. ROAD DIST.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY.				



ELEVATION

DESIGNED BY _____ CHECKED BY _____ DATE _____
DETAILED BY _____ CHECKED BY _____ DATE _____
TRACED BY Gilbert Hyde CHECKED BY _____ DATE _____

REVISED	DATE
REVISED	DATE
REVISED	DATE

GENERAL NOTE

SPECIFICATIONS: KENTUCKY DEPARTMENT OF HIGHWAYS 1956 STANDARD SPECIFICATIONS FOR STATE AND FEDERAL ROAD AND BRIDGE CONSTRUCTION, WITH AMENDMENTS.

SCOPE OF WORK: THE WORK TO BE DONE UNDER THIS CONTRACT WILL INCLUDE THE CLEANING, SPOT PAINTING, AND FINISH PAINTING WITH TWO COATS OF APPROVED PAINT ON ALL EXPOSED METAL SURFACES OF THE SUPERSTRUCTURE AND SUBSTRUCTURE OF THE BRIDGE, INCLUDING ELECTRIC CONDUITS, LIGHT STANDARDS, BRACKETS, DUCTS, CLAMPS AND EQUIPMENT OF EVERY DESCRIPTION ON THE BRIDGE.

IT IS THE DUTY OF THE CONTRACTOR TO FULLY PROTECT PEDESTRIAN, VEHICULAR OR OTHER TRAFFIC UPON OR UNDERNEATH THE STRUCTURE AND TO PROTECT ALL PORTIONS OF THE STRUCTURE (SUPERSTRUCTURE AND SUBSTRUCTURE) AND ALL MATERIALS DURING CLEANING AND PAINTING OPERATIONS. CLEANING AND DISPOSITION OF MATERIALS FROM EQUIPMENT OR MATERIALS USED IN CLEANING AND PAINTING SHALL BE SUCH AS NOT TO CAUSE ANY NUISANCE OR DAMAGE TO ANY PROPERTY OR ANY PERSON OR ANIMAL. THE CLEANING SHALL CONSIST OF THE REMOVAL OF ALL SCALED, BROKEN, LOOSE AND RUST-STAINED PAINT ON METAL; THE CLEANING OF ALL RUSTED SURFACES TO BARE METAL AND BRIGHT METAL; AND THE REMOVAL OF ALL DIRT AND OTHER FOREIGN MATTER. CLEANING SHALL BE DONE BY MEANS OF COMPRESSED AIR, SCRAPERS OR WIRE BRUSHES. SAND BLAST MAY BE USED FOR CLEANING, PROVIDED SATISFACTORY ARRANGEMENTS ARE MADE FOR THE PROTECTION OF PREVIOUSLY PAINTED SURFACES AND FOR THE PROTECTION OF PEDESTRIAN AND VEHICULAR TRAFFIC CROSSING THE BRIDGE. ALL GREASE, TAR OR OTHER SIMILAR STAINS SHALL BE REMOVED BY THE APPLICATION OF A SATISFACTORY SOLVENT TO SUCH SURFACES.

THE SPOT PAINTING SHALL CONSIST OF APPLYING TO ALL SURFACES CLEANED TO BARE METAL ONE COAT OF RED LEAD BASE SURFACE ELITE RED OXIDE PAINT.

THE FINISH PAINTING SHALL BE DONE AS REQUIRED BY THE SPECIFICATIONS, AND SHALL CONSIST OF ONE COMPLETE COAT OF NO. 1 WHITE LEAD PAINT APPLIED BY MEANS OF BRUSHES IN THE OTHER COAT OF NO. 2 WHITE LEAD PAINT APPLIED BY MEANS OF BRUSHES WHICH CANNOT BE SATISFACTORILY PAINTED BY SPRAYING MAY BE DONE ONLY WITH THE APPROVAL OF THE COMPOSITION OF HIGHWAYS AND ONLY IN ORDER TO COVER SUCH SURFACES AS CANNOT BE SATISFACTORILY PAINTED BY MEANS OF BRUSHES, SWABS OR OTHER APPROVED METHODS.

NAPHTHA SPIRITS, BENZINE, OR OTHER CUT-BACK MATERIAL WILL NOT BE ALLOWED ON THE JOB AT ANY TIME OR UNDER ANY CIRCUMSTANCES, EXCEPT UNDER THE DIRECT SUPERVISION OF THE ENGINEER WHEN USE IN CLEANING OR REMOVING GREASE OR OTHER SIMILAR MATERIALS. THE PRESENCE OF OR USE OF NAPHTHA SPIRITS, GASOLINE, BENZINE, OR OTHER SIMILAR MATERIALS USED AS CUT-BACK AGENT FOR THINNING THE PAINT, SHALL CONSTITUTE CAUSE FOR REJECTING THE SURFACES PAINTED, AND FOR REQUIRING A COMPLETE RECLEANING AND REPAINTING OF THE SURFACES WITH SATISFACTORY MATERIALS.

ALL PAINT SHALL BE IN ACCORDANCE WITH SPECIFICATIONS.

ESTIMATE OF QUANTITIES: THE FOLLOWING IS A STATEMENT OF THE APPROXIMATE WEIGHTS OF STEEL AND METAL WORK TO BE PAINTED:

COVINGTON APPROACH ..... 237,000 POUNDS
RIVER SPAN ..... 815,000 POUNDS
NEWPORT APPROACH ..... 238,000 POUNDS
TOTAL ..... 1,290,000 POUNDS

TRAFFIC: THE CONTRACTOR SHALL NOT INTERFERE WITH THE MOVEMENT OF VEHICULAR OR FOOT TRAFFIC ACROSS THE BRIDGE, WHEN ABSOLUTELY NECESSARY.

PARTIAL PAYMENTS: BIDS WILL BE REQUIRED AS A LUMP SUM FOR MAINTENANCE CLEANING AND PAINTING OF THIS BRIDGE.

PARTIAL PAYMENT OF FIFTY PER CENT OF THE CONTRACT LUMP SUM PRICE, LESS TEN PER CENT RETAINAGE, WILL BE PAID WHEN THE CLEANING, SPOT PAINTING AND ONE COMPLETE COAT OF NO. 1 WHITE LEAD PAINT HAVE BEEN SATISFACTORILY COMPLETED ON THE ENTIRE BRIDGE. TWO COMPLETE FIELD COATS ON A PORTION OF THE BRIDGE SHALL NOT BE CONSIDERED AS FULFILLING THE REQUIREMENTS ABOVE IN LIEU OF ONE COMPLETE COAT OF NO. 1 WHITE LEAD PAINT ON THE ENTIRE BRIDGE.

MATERIALS: THE DEPARTMENT OF HIGHWAYS WILL FURNISH THE NECESSARY PAINT, INCLUDING ANY THINNING MATERIAL DEEMED NECESSARY BY THE DEPARTMENT, AT THE SITE OF THE WORK, FREE OF COST TO THE CONTRACTOR. AFTER DELIVERY OF PAINT TO THE CONTRACTOR HE SHALL BE RESPONSIBLE THEREAFTER FOR THE STORAGE AND HANDLING OF THE PAINT. SHOULD ANY OF THE PAINT BECOME LOST, STOLEN OR DAMAGED AFTER DELIVERY TO THE CONTRACTOR HE SHALL REPLACE SAME WITH APPROVED PAINT AT HIS FINAL COST AND EXPENSE.

ANY PAINT FURNISHED AND WHICH MAY NOT BE REQUIRED FOR THE WORK SHALL BE RETURNED IN GOOD CONDITION TO THE DEPARTMENT AT THE SITE OF THE WORK. ALL THE CONTAINERS, INCLUDING TOPS AND GASKETS, IN WHICH THE PAINT IS FURNISHED SHALL BE RETURNED TO THE DEPARTMENT IN GOOD CONDITION AT THE SITE OF THE WORK. A REDUCTION OF ONE DOLLAR ($1.00) SHALL BE MADE FROM AMOUNTS DUE THE CONTRACTOR FOR EACH 5-GALLON CONTAINER NOT RETURNED.

THE CONTRACTOR SHALL FURNISH ALL EQUIPMENT, TOOLS, SCAFFOLDING, RIGGING, MATERIALS, EXCEPT PAINT, AND ALL INCIDENTALS NECESSARY FOR THE CLEANING AND PAINTING WORK SPECIFIED.

THE PAINT SHALL BE THOROUGHLY MIXED AND KEPT STIRRED WHILE BEING APPLIED, BY A MECHANICAL MIXER AS SPECIFIED IN ARTICLE 5:2.2-3 OF THE SPECIFICATIONS WILL NOT BE REQUIRED.

DATE _____ SUBMITTED BY _____ BRIDGE ENGINEER
DATE _____ APPROVED BY _____ STATE HIGHWAY ENGINEER

LICKING RIVER BRIDGE Sheet 2 of 2

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
KENTON-CAMPBELL
COVINGTON - NEWPORT
STATION ROAD R. PROJECT NO. 59-253
BRIDGE NUMBER DRAWING NO. 8162 INDEX

PLANS PREPARED BY LYNCH MAINTENANCE DESIGN SECTION

FINAL CHECK DATE 3/1/82

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	Location
2-4	General Note & Estimate of Quantities
5,6	Layout
7	Construction Phases
8	Abutment No. 1
9	Abutment No. 2
10-15	Retaining Walls
16	Approach Details
17	Barrier Transition
18-25	Slab Details
26	Reinforcement
27-29	Expansion Joints
30	Pier and Drain Details
31-35	Structural Steel
36	Handrail
37	Telephone Conduit
38-43	Lighting

STANDARD DRAWINGS

RBR-001-05	Steel Beam Guardrail
RBR-005-05	Guardrail Components
RBR-010-01	Guardrail Terminal Sections
BGX-006-02	Stencil Const. Date
BJE-001-03	Armored Edge
BJE-002-03	"
BJJ-003-04	Preformed Joint Seal
BJJ-004-03	Preformed Cork

SPECIAL PROVISIONS

5C (79) Concrete Bridge Deck Overlays
45A (79) Automatic Printing Scales
50A (79) Epoxy Coated Steel Reinforcement
4C (79) Welding Steel Bridges

SPECIAL NOTES

For Inorganic Zinc Rich Primer, Green
For Vinyl Finish Coating, Blue
For Cleaning and Painting Steel Bridges
For Shotcrete Patching
For Neoprene Expansion Joints
For Protection to Navigation

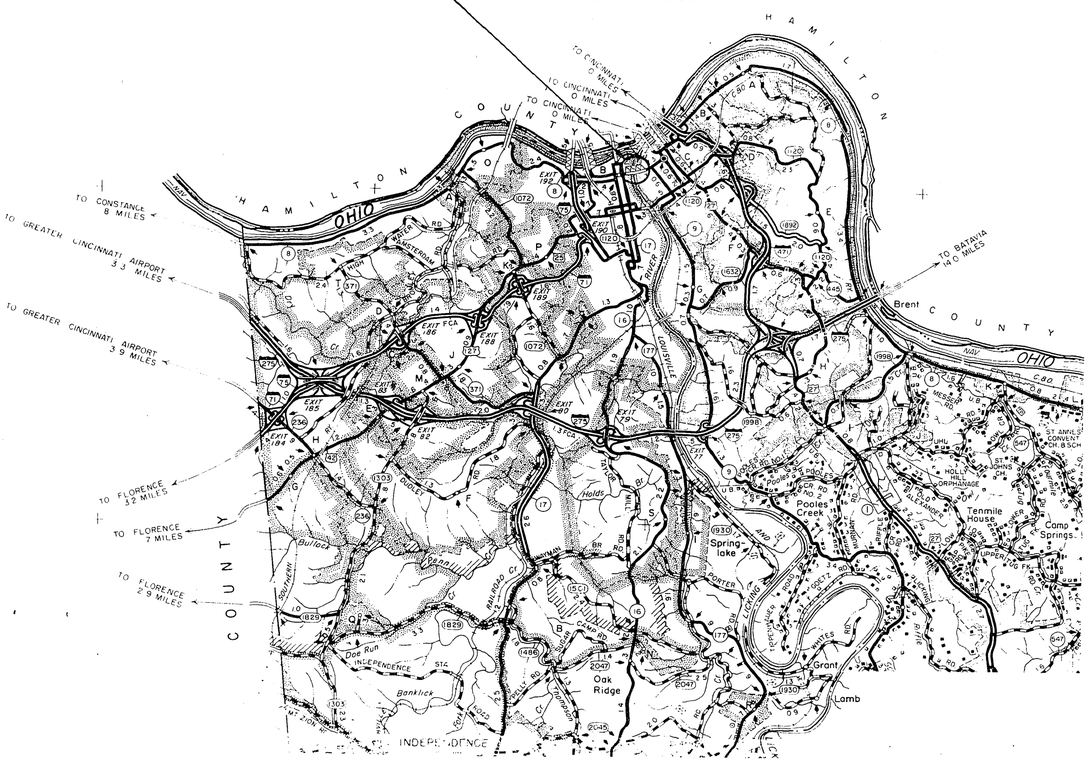
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PLANS OF PROPOSED PROJECT

KENTON COUNTY

BRIDGE REPAIRS

MP 059-0008-007.652



GRAPHIC SCALE IN MILES
0 1 2 3

LAYOUT MAP

N

SHEET 1 OF 43

DRAWING NO. 20374

Repairs to 4th Street Bridge over Licking R.

KENTUCKY
BUREAU OF HIGHWAYS
KENTON
COUNTY
COVINGTON – NEWPORT
ROAD

PROJECT NO. MP059-0008-007.652

PLAN APPROVED 3/30/82 — DIRECTOR OF BRIDGES

PLAN APPROVED 3/30/82 — James W. Fish — STATE HIGHWAY ENGINEER

UPDATE DATE
LETTING DATE

DATE
DATE
DATE

REVISED
REVISED
REVISED

DATE
DATE
DATE

CHECKED BY
CHECKED BY
CHECKED BY

DESIGNED BY
DETAILED BY
TRACED BY

GENERAL NOTE

SPECIFICATIONS

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

DESIGN LOAD

THIS BRIDGE IS DESIGNED FOR HS20-44 LIVE LOAD, AS SPECIFIED IN 1977 AASHTO SPECIFICATIONS. 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 = 40000 PSI

FOR STRUCTURAL STEEL
FS = 20000 PSI FOR A36 STEEL

CONCRETE

CLASS "AA" CONCRETE SHALL BE USED THROUGHOUT EXCEPT IN THE OVERLAY AND SIDEWALK GRID FILLER AND EXCEPT THAT CLASS "A" CONCRETE SHALL BE USED IN THE SUBSTRUCTURE AND RETAINING WALLS WHERE SHOWN ON THE PLANS AND IN THE APPROACH SIDEWALKS, AND CURB AND GUTTERS.

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. ALL BARS WHICH REQUIRE FIELD BENDING SHALL BE GRADE 40. OTHER BARS MAY BE GRADE 40 OR GRADE 60. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A METHOD FOR STRAIGHTENING THE SLAB BARS IN THE FIELD (WITHOUT HEAT) THAT WILL NOT KINK OR OTHERWISE DAMAGE THE BARS.

EPOXY COATED REINFORCING STEEL

ALL REINFORCING BARS DESIGNATED BY SUFFIX (E) IN THE PLANS SHALL BE EPOXY COATED IN ACCORDANCE WITH SPECIAL PROVISION 50(79), CURRENT EDITION.

BEVELED EDGES

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

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 CLASS "AA" CONCRETE.

PAYMENT FOR STRUCTURAL STEEL

THE LUMP SUM BID FOR STRUCTURAL STEEL SHALL BE FULL PAYMENT FOR ALL NEW STRUCTURAL STEEL, BOLTS, WASHERS, CAST IRON DRAINS, WELDING AND WELDING MATERIALS, PAINT AND ALL LABOR AND MATERIALS NECESSARY TO ERECT THE NEW STEEL AND TO MODIFY OR REMOVE THE EXISTING 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.

SHOP DRAWINGS

THE CONTRACTOR SHALL SUBMIT FULL SETS OF PRINTS OF THE DETAILED SHOP DRAWINGS FOR ALL STRUCTURAL STEEL AND STEEL GRID SIDEWALK FLOORING TO THE BUREAU FOR APPROVAL IN ACCORDANCE WITH SECTION 607.04 OF THE SPECIFICATIONS.

MILL TEST REPORTS

NOTARIZED TEST REPORTS SHALL BE FURNISHED IN TRIPLICATE TO THE BUREAU SHOWING THAT ALL MATERIALS USED IN THE STRUCTURAL STEEL AND STEEL GRID SIDEWALK FLOORING CONFORM TO THE REQUIREMENTS OF THE SPECIFICATIONS.

PAINT

ALL NEW AND EXISTING STRUCTURAL STEEL IN THE BRIDGE SHALL BE CLEANED AND PAINTED WITH THE FOLLOWING PAINT SYSTEM:

BLAST CLEAN THE COMPLETE SURFACE AREA OF ALL STRUCTURAL STEEL TO PICTORIAL SURFACE PREPARATIONS REQUIREMENTS C SA 2 1/2 STEEL STRUCTURES PAINTING COUNCIL'S SSPC-VIS-1.

A. THE AREA BLAST CLEANED TO C,SA 2 1/2 SHALL BE PAINTED WITH ONE (1) SPRAY-ON COAT OF INORGANIC ZINC PAINT AS OUTLINED IN THE SPECIAL NOTE FOR INORGANIC ZINC RICH PRIMER, GREEN.

B. THEN PAINT ALL STRUCTURAL STEEL WITH ONE (1) SPRAY-ON COAT OF VINYL PAINT AS OUTLINED IN THE SPECIAL NOTE FOR VINYL FINISH COATING, BLUE

NO PAINT SHALL BE APPLIED TO STEEL THAT WILL BE IN CONTACT WITH CONCRETE.

CLEANING EXISTING STEEL

ALL AREAS OF EXISTING STEEL THAT ARE TO BE IN CONTACT WITH NEW STEEL, INCLUDING AREAS UNDER BOLT HEADS, SHALL BE CLEANED OF ALL DIRT, RUST, PAINT, AND OTHER FOREIGN MATTER BEFORE INSTALLING THE NEW STEEL. THE COST OF THIS CLEANING IS TO BE INCIDENTAL TO THE LUMP SUM BID FOR STRUCTURAL STEEL.

CLEANING TOPS OF BEAMS

THE TOPS OF ALL EXISTING STEEL STRINGERS, FLOORBEAMS, AND OTHER STEEL TO BE IN CONTACT WITH NEW CONCRETE, ARE TO BE CLEANED OF ALL RUST AND OTHER FOREIGN MATTER BEFORE POURING THE CONCRETE FLOOR. THE COST OF MATERIAL AND LABOR IS TO BE INCIDENTAL TO THE LUMP SUM BID FOR STRUCTURAL STEEL.

EXISTING REINFORCING STEEL

THE COST OF CUTTING, BENDING AND CLEANING EXISTING REINFORCING STEEL IS TO BE INCIDENTAL TO THE LUMP SUM BID FOR REMOVE EXISTING REINFORCED CONCRETE.

DRILLING HOLES IN CONCRETE

THE COST OF DRILLING HOLES IN EXISTING CONCRETE FOR BOLTS AND DOWELS IS TO BE INCIDENTAL TO THE UNIT PRICE BID FOR REMOVE EXISTING REINFORCED CONCRETE.

GROUT

GROUT FOR USE IN GROUTING STEEL REINFORCEMENT INTO THE EXISTING CONCRETE SHALL BE OF THE NONSHRINKING TYPE. THE GROUT SHALL BE MADE FROM CEMENT, SAND, AND WATER WITH ADMIXTURES AS NECESSARY OR DESIRABLE TO OBTAIN NON-SHRINK PROPERTIES. THE CEMENT, SAND, AND WATER SHALL MEET THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND, IN ADDITION, THE SAND SHALL ALL PASS A NO. 30 SIEVE. 50 PERCENT SHALL PASS A NO. 50 SIEVE, AND 20 PERCENT SHALL PASS A NO. 100 SIEVE. THE PROPORTIONS OF CEMENT TO SAND MAY VARY FROM A NEAT GROUT TO A 1:1 MIX. A MINIMUM AMOUNT OF WATER SHALL BE USED TO OBTAIN A FLOWABLE GROUT. THE GROUT SHALL HAVE A CONSISTENCY OF THICK CREAM TO HEAVY PAINT. SAMPLE MIXES SHALL BE MADE TO DETERMINE SATISFACTORY CONSISTENCY FOR USE AND THESE MIXES SHALL BE MADE INTO TEST SPECIMENS TO DETERMINE THE STRENGTH AND SHRINKAGE CHARACTERISTICS WHICH MUST BE APPROVED BY THE ENGINEER PRIOR TO THE USE OF THE GROUT IN THE CONSTRUCTION. THE COST OF GROUTING IS TO BE INCLUDED IN THE UNIT PRICE BID FOR CLASS "A" CONCRETE. (*F'C=3000 PSI)

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.

DAMAGE TO THE STRUCTURE

THE CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL DAMAGES TO THE STRUCTURE DURING RECONSTRUCTION, EVEN TO THE REPLACEMENT OF ENTIRE SPANS AND REMOVAL OF THE FALLEN SPANS AT HIS EXPENSE, SHOULD THEY BE ALLOWED TO FALL FOR ANY CAUSE WHATSOEVER.

EXISTING STEEL

ALL EXISTING STEEL THAT IS TO BE REMOVED AND NOT REUSED IN THE STRUCTURE SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE BRIDGE SITE. THE COST OF THIS REMOVAL SHALL BE INCIDENTAL TO THE LUMP SUM BID FOR STRUCTURAL STEEL.

REMOVAL OF EXISTING REINFORCED CONCRETE

THIS WORK SHALL INCLUDE REMOVING THE REINFORCED CONCRETE DECK SLABS, CURBS, SIDEWALKS, OVERLAYS, PATCHES, HANDRAILS, ETC. FOR THE ENTIRE LENGTH OF THE BRIDGE & APPROACHES PLUS OTHER CONCRETE NOTED ON THE PLANS AND DISPOSING OF THIS MATERIAL AWAY FROM THE BRIDGE SITE. PROPER CARE SHALL BE TAKEN TO PROTECT THE STRUCTURAL STEEL AND REMAINING CONCRETE FROM DAMAGE DURING THIS OPERATION. THE FLOOR SHALL BE REMOVED WITHOUT ALLOWING THE BROKEN CONCRETE TO DROP INTO THE STREAM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED BY FALLING PARTICLES. THE COST OF THIS WORK SHALL BE INCLUDED IN THE LUMP SUM BID FOR REMOVE EXISTING REINFORCED CONCRETE.

TELEPHONE CONDUIT

SEE SHEET 37 FOR ALL NOTES PERTAINING TO THIS ITEM.

SURFACE FINISH OF CLASS "AA" CONCRETE IN THE BRIDGE DECK

THE DECK OF THIS STRUCTURE IS TO RECEIVE AN OVERLAY, THEREFORE, THE BURLAP DRAG FINISH SPECIFIED BY SECTION 609.12 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 1979 EDITION, IS ELIMINATED, NOR WILL ANY SURFACE TEXTURING BEYOND 10 FT. STRAIGHTEDGE SECTION 609.11 BE REQUIRED. THE CONTRACTOR IS CAUTIONED THAT THE PROPOSED DECK OVERLAYS ARE VERY SENSITIVE TO OILS, PAINTS, GREASE, WAXES AND SIMILAR SUBSTANCES AND IF THESE SUBSTANCES ARE DEPOSITED IN THE DECK, HE WILL BE RESPONSIBLE FOR THEIR COMPLETE REMOVAL WHICH MAY INCLUDE REMOVAL AND REPACEMENT OF THE AFFECTED CONCRETE TO THE DEPTH THE SUBSTANCES HAVE PENETRATED. ANY EXPENSE OF THIS REMOVAL WILL BE BORNE BY THE CONTRACTOR.

REPAIRS TO BRIDGE OVER LICKING RIVER SHEET 2

COMMONWEALTH OF KENTUCKY
BUREAU OF HIGHWAYS
FRANKFORT
COUNTY OF
KENTON
COVINGTON-NEWPORT
ROAD
STATION P.E. PROJECT NO. MP059-0008-007.652

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		20374

UPDATE DATE
LETTING DATE

DATE
DATE
DATE

REVISED
REVISED
REVISED

DATE
DATE
DATE

CHECKED BY
CHECKED BY
CHECKED BY

DESIGNED BY
DETAILED BY
TRACED BY

GENERAL NOTE

CURING OF CLASS "AA" CONCRETE IN THE BRIDGE DECK

THE DECK OF THIS STRUCTURE IS TO RECEIVE AN OVERLAY, THEREFORE, MEMBRANE CURING AS SPECIFIED IN SECTION 609.15 IS NOT TO BE APPLIED TO THE BRIDGE DECK. THE CONCRETE DECK, INCLUDING PORTIONS OF THE CURBS, AND/OR BARRIER WALLS DESIGNATED, MUST BE WET CURED IN CONFORMITY WITH SUB-SECTION 601.25A OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 1979 EDITION, WITH THE FOLLOWING REQUIREMENTS:

1. NO CURING COMPOUND, STYRENE BUTADIENE, LINSEED OIL, MASONRY COATING, FORM OIL OR SIMILAR SUBSTANCES WILL BE PERMITTED ON THE CLASS "AA" CONCRETE DECK SURFACE NOR FOR 6" VERTICALLY ABOVE THE CLASS "AA" CONCRETE GUTTER LINE OF THE INTERIOR FACES OF BARRIER CURBS.
2. AS SOON AFTER FINAL FINISH OF THE CONCRETE AS POSSIBLE, ONE THICKNESS OF PRE-WETTED BURLAP MUST BE APPLIED AND KEPT MOIST BY A FOG SPRAY APPLICATION OF WATER. THIS ONE THICKNESS OF BURLAP MUST BE FOLLOWED, AS SOON AS POSSIBLE, WITHOUT DAMAGING THE SURFACE OF THE CONCRETE, WITH AN ADDITIONAL LAYER OF WET BURLAP, COTTON MATS, ETC.
3. THE REQUIRED INITIAL LAYER OF BURLAP SHALL BE PRE-WETTED BY COMPLETE SATURATION WITH WATER EXCEPT THAT IT SHALL BE SQUEEZED FREE OF EXCESS WATER THAT WILL DAMAGE THE CONCRETE SURFACE BY DRIPPING. THE PRE-WETTED BURLAP MUST BE APPLIED FROM WORK BRIDGES AND WALKWAYS IN A MANNER THAT WILL PRECLUDE WORKMEN OR TOOLS DAMAGING THE FRESH CONCRETE SURFACE. THE PRE-WETTED BURLAP MUST BE APPLIED IN A MANNER THAT WILL PREVENT IT FROM BEING DRAGGED, UNTANGLED, OR UNROLLED ON THE FRESH CONCRETE SURFACE AND DAMAGING IT.

OVERLAY POURING SEQUENCE

THE OVERLAY SHALL BE POURED BEFORE ANY TRAFFIC IS ALLOWED ON A NEW SLAB.

ALTERNATE TYPES OF CONCRETE OVERLAY

THE CONTRACTOR SHALL USE AT HIS OPTION, ONE OF THE FOLLOWING ALTERNATES THROUGHOUT THE PROJECT.

ALTERNATE A - CONCRETE OVERLAY, LATEX IN ACCORDANCE WITH SPECIAL PROVISION 5(79), CURRENT EDITION.

ALTERNATE B - CONCRETE OVERLAY, PORTLAND CEMENT IN ACCORDANCE WITH SPECIAL PROVISION 5(79), CURRENT EDITION.

SIDEWALK, WELDED 2 INCH TEE CONCRETE FILLED

THE SIDEWALK FLOORING SHALL BE COMPOSED OF 2"X2" TEES AT 3.56 LBS. PER FOOT, SPACED AT 6" CENTERS AND FASTENED TOGETHER ACROSS THE STEMS AT RIGHT ANGLES WITH 1/2" X 3/16" CROSS BARS AT 4" CENTERS. THE JOINTS BETWEEN CROSS BARS AND OTHER MEMBERS SHALL BE ELECTRO-PRESSURE WELDED OR ARC WELDED. TWENTY GAUGE FORM PLATES SHALL REST BETWEEN THE TEES ON THEIR FLANGES AND SHALL BE TACK-WELDED SECURELY IN PLACE. FLOORING SHALL BE CUT, FITTED, BENT AND WELDED AS SHOWN ON THE PLANS. MILL TEST REPORTS SHALL BE FURNISHED THE BUREAU IN TRIPLICATE SHOWING THAT ALL TEES, BARS AND PLATES CONFORM TO THE SPECIFICATIONS. AFTER FABRICATION ALL SURFACES OF THE STEEL SHALL BE CLEANED AND PAINTED WITH THE SAME PAINT SYSTEM SPECIFIED FOR STRUCTURAL STEEL. NO PAINT SHALL BE APPLIED ON ANY SURFACE THAT WILL BE IN CONTACT WITH THE CONCRETE. AFTER FLOORING IS IN PLACE IT SHALL BE FILLED WITH CONCRETE. THE COST OF FURNISHING AND PLACING ALL FLOORING INCLUDING PAINT, CONCRETE, WELDING MATERIALS, AND INCIDENTALS IS TO BE INCLUDED IN THE UNIT PRICE BID FOR 2 INCH TEE WELDED SIDEWALK FLOORING, CONCRETE FILLED. PAYMENT FOR SIDEWALK FLOORING SHALL BE MADE AT THE UNIT PRICE BID AND SHALL BE BASED ON THE ACTUAL MEASUREMENT OF THE COMPLETED FLOOR. ALL STEEL TEES, ANGLES AND BARS SHALL CONFORM TO ASTM A36, CURRENT EDITION. THE FORM PLATES SHALL CONFORM TO ASTM A569, CURRENT EDITION. ALL STEEL EXCEPT THE FORM PLATES SHALL HAVE A MINIMUM COPPER CONTENT OF 0.20 PER CENT.

CONCRETE FILLER FOR BRIDGE SIDEWALK

THE CONCRETE FILLER SHALL BE CLASS "D" CONCRETE TO WHICH AN APPROVED AIR ENTRAINING ADMIXTURE HAS BEEN ADDED AT THE MIXER ACCORDING TO THE SPECIFICATIONS. THE SURFACE SHALL BE FINISHED SMOOTH AND EVEN WITH THE TOP OF THE FLOOR BARS BY MEANS OF A WOODEN FLOAT AND THEN BROOMED. THE COST OF FURNISHING ALL MATERIALS, EQUIPMENT AND LABOR NECESSARY FOR FILLING THE SIDEWALK FLOORING IS TO BE INCLUDED IN THE UNIT PRICE BID FOR 2 INCH TEE WELDED SIDEWALK FLOORING, CONCRETE FILLED.

LIGHTING

SEE SHEETS 39-44 FOR ALL NOTES FOR THIS ITEM.

BITUMINOUS CONCRETE

THE BITUMINOUS MATERIAL FOR THE BITUMINIOUS CONCRETE SHALL BE AC-20. THE BITUMINOUS TACK COAT SHALL BE EMULSIFIED ASPHALT SS-1H. OTHER MATERIAL MAY BE USED IF APPROVED IN WRITING BY THE ENGINEER.

DRAIN DETAILS

FOUNDRY NOTE - ALL DRAINS SHALL BE GRAY IRON CASTINGS, ASTM A48, CURRENT EDITION, CLASS 30A. REPORT OF FIELD INSPECTION OF CASTINGS, CURRENT FORM, SHALL BE SUBMITTED TO THE DIVISION OF MATERIALS.

THE DRAIN PIPE SHALL BE 6" ROUND STANDARD WEIGHT IN ACCORDANCE WITH ASTM-A53, A500, OR A501. PIPE, FITTINGS, AND CONNECTIONS SHALL BE INCLUDED IN THE UNIT PRICE PER LINEAR FOOT OF 6" DRAIN PIPE COMPLETE IN PLACE. PIPE AND ALL FITTINGS SHALL BE PAINTED IN ACCORDANCE WITH SECTION 607.25 OF THE KBH SPECFICATIONS.

MATERIALS

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

ASTM	MATERIAL
A36-77A	STRUCTURAL STEEL
A325-79	HIGH STRENGTH CARBON STEEL BOLTS, NUTS, AND WASHERS
A48-76	GRAY IRON CASTINGS, CLASS 30A
A53-79	GRADE B WELDED OF SEAMLESS STEEL PIPE
A123-78	ZINC COATING FOR FABRICATED STEEL PRODUCTS
A153-78	ZINC COATING FOR IRON & STEEL HARDWARE
B209-79	SHEET AND PLATE, ALUMINUM ALLOY 6061-T6
B221-76A	EXTRUDED TUBE ALUMINUM ALLOY 6061-T6511
B241-76	PIPE, ALUMINUM ALLOY 6061-T6
A320-79A	STAINLESS STEEL HARDWARE NUTS, BOLTS AND WASHERS
A569-72	STEEL, HOT ROLLED SHEET AND STRIP (FOR SIDEWALK FORMS)

GALVANIZED METAL

GALVANIZED METAL SHALL BE LOADED, HAULED, AND HANDLED IN SUCH A MANNER THAT THE GALVANIZING WILL NOT BE DAMAGED. ALL DAMAGED AND ABRADED SURFACES SHALL BE REGALVANIZED OR REPAIRED AS APPROVED BY THE ENGINEER. DAMAGED SPELTER COATING INCLUDING AREAS AROUND BOLTS MAY BE REPAIRED, IF APPROVED, BY THOROUGHLY WIRE BRUSHING THE DAMAGED AREA AND REMOVING ALL LOOSE AND CRACKED SPELTER COATING. AFTER WHICH THE CLEANED AREA SHALL BE PAINTED WITH TWO COATS OF ZINC OXIDE-ZINC DUST PAINT CONFORMING TO THE REQUIREMENTS OF FEDERAL SPECIFICATION TT-P-641B, TYPE 2.

METAL HANDRAIL

THE COST OF FURNISHING AND INSTALLING NEW HANDRAIL INCLUDING WELDING MATERIALS, PLATES, BOLTS AND INCIDENTALS NECESSARY FOR THE COMPLETE HANDRAIL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR METAL HANDRAIL. THE CONTRACTOR SHALL PROVIDE THROUGHOUT THE BRIDGE AT HIS OPTION ONE OF THE FOLLOWING HANDRAILS WHICH ARE DETAILED ON THE PLANS.

OPTION 1: ALUMINUM PIPE
OPTION 2: GALVANIZED STEEL PIPE
OPTION 3: ALUMINUM SQUARE TUBING
OPTION 4: GALVANIZED STEEL SQUARE TUBING

REINSTALL HANDRAIL

THE EXISTING METAL HANDRAIL IN SPAN 4, INCLUDING THE SIDEWALK STRINGERS ARE TO BE REMOVED AND REINSTALLED AS SHOWN ON THE PLANS. THE COST OF THIS ITEM INCLUDING NEW BOLTS, WELDING AND INCIDENTALS NECESSARY FOR COMPLETE REINSTALLATION IS TO BE INCLUDED IN THE LUMP SUM BID FOR STRUCTURAL STEEL.

NEOPRENE EXPANSION JOINTS

THE NEOPRENE EXPANSION JOINTS SHALL COMPLY WITH THE PLANS AND THE SPECIAL NOTES FOR NEOPRENE EXPANSION JOINTS.

SEAL PIER CAPS

THE PIER CAPS, WHERE SHOWN ON THE PLANS, SHALL BE BLAST CLEANED AND SEALED WITH AN EPOXY SAND SLURRY. THE BLAST CLEANING AND EPOXY SAND SLURRY SHALL BE AS SPECIFIED IN THE SPECIAL PROVISION NO. 5(79), CURRENT EDITION.

WELDING

ALL WELDING AND WELDING MATERIALS SHALL CONFORM TO THE SPECIFICATIONS FOR WELDED HIGHWAY AND RAILWAY BRIDGES OF THE AMERICAN WELDING SOCIETY, CURRENT EDITION.

PROHIBITED FIELD WELDING

EXCEPT AS SHOWN ON THE PLANS, NO WELDING OF ANY NATURE SHALL BE PERFORMED ON THE LOAD CARRYING MEMBERS OF THE BRIDGE WITHOUT THE WRITTEN CONSENT OF THE DIRECTOR, DIVISION OF BRIDGES, OR HIS AUTHORIZED REPRESENTATIVE, AND THEN ONLY IN THE MANNER AND AT THE LOCATIONS DESIGNATED IN THE AUTHORIZATION.

MAINTAIN TRAFFIC

AT LEAST TWO LANES OF VEHICULAR TRAFFIC AND ONE SIDEWALK SHALL BE MAINTAINED AND PROTECTED ON A 24-HOUR BASIS DURING CONSTRUCTION. SIGNS AND SIGNALS SHALL BE MAINTAINED IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. TRAFFIC CONTROLS IN ADDITION TO THESE SPECIFIED MAY BE REQUIRED BY THE ENGINEER WHEN THE CONTRACTOR'S OPERATION CREATES AN UNSAFE CONDITION. WHEN ONE LANE OF SLAB IS REMOVED OR BEING REMOVED, THE ADJACENT LANE OR LANES MUST BE PROTECTED WITH AN APPROVED BARRIER (SUCH AS THE BARRIER SHOWN ON THE PLANS). THE COST OF FURNISHING ALL SIGNS, BARRIERS, AND INCIDENTALS NECESSARY FOR THE MAINTENANCE AND PROTECTION OF TRAFFIC SHALL BE INCLUDED IN THE LUMP SUM BID FOR MAINTAIN AND CONTROL TRAFFIC.

REPAIRS TO BRIDGE OVER LICKING RIVER SHEET 3

COMMONWEALTH OF KENTUCKY
BUREAU OF HIGHWAYS
FRANKFORT
COUNTY OF
KENTON
COVINGTON-NEWPORT
ROAD
STATION P.E. PROJECT NO. MP059-0008-007.652

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		20374

GENERAL NOTE

UPDATE DATE
LETTING DATE

DATE
DATE
DATE

REVISED
REVISED
REVISED

DESIGNED BY ____ DATE ____
DETAILED BY ____ DATE ____
TRACED BY ____ DATE ____

CHECKED BY ____ DATE ____
CHECKED BY ____ DATE ____
CHECKED BY ____ DATE ____

GENERAL NOTE

MASONRY SURFACE FINISH FOR EXISTING CONCRETE

AREAS OF EXISTING CONCRETE WHICH ARE DESIGNATED ON THE PLANS SHALL RECEIVE A MASONRY SURFACE FINISH IN ACCORDANCE WITH SECTION 601.26 OF THE SPECIFICATIONS WITH THE PROVISION THAT ALL OF THE AREA SHALL FIRST BE BLAST CLEANED TO REMOVE ALL DIRT, PAINT, GREASE AND OTHER FOREIGN MATTER. THE COST OF THIS BLAST CLEANING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR MASONRY SURFACE FINISH FOR EXISTING CONCRETE.

TOTAL ESTIMATE OF QUANTITIES

CONCRETE CLASS "A"	85.7	C.Y.
CONCRETE CLASS "AA"	1530.4	C.Y.
REMOVE EXISTING REIN. CONCRETE (1)	1	L.S.
STEEL REINFORCEMENT	269,864	LBS.
EPOXY COATED STEEL REINFORCEMENT	63,006	LBS.
STRUCTURE EXCAVATION, COMMON	115	C.Y.
STRUCTURAL STEEL (2)	1	L.S.
6 IN. DRAIN PIPE	227	L.F.
EXPANSION DAM 2 IN. NEOPRENE	77	L.F.
EXPANSION DAM 4 IN. NEOPRENE	39	L.F.
CONCRETE OVERLAY, LATEX	166.7	C.Y.
OR		
CONCRETE OVERLAY, PORTLAND CEMENT	222.3	C.Y.
EPOXY SAND SLURRY	605	S.Y.
BLAST CLEANING	4726	S.Y.
5 WALK WLD 2 IN. T. CONC. FILLED	8168	S.F.
CONC. CURB AND GUTTER COMB.	375	L.F.
MAINTAIN AND CONTROL TRAFFIC	1	L.S.
DEMOBILIZATION	1	L.S.
TELEPHONE CONDUIT	1	L.S.
DGA BASE	306	TONS
BIT. MATERIAL FOR TACK	0.4	TONS
BIT. CONC. BASE, CR. LSTONE	245	TONS
OR		
BIT. CONC. BASE, CALCAREOUS GRAVEL	242	TONS
BITUMINOUS CONCRETE SURFACE, CRUSHED LIMESTONE	105	TONS
OR		
BITUMINOUS CONCRETE SURFACE, CALCAREOUS GRAVEL	104	TONS
HANDRAIL, METAL	2495.3	L.F.
MASONRY SURFACE FINISH FOR EXISTING CONCRETE	900	S.Y.
PCC BASE-8 IN.	164	S.Y.
CLEAN & PAINT EXISTING STRUCTURAL STEEL (3)	1	L.S.
SHOTCRETE PATCHING	56	BAGS
POLE 30 MTG HT 4 BKT AL	12	EACH
POLE 25 MTG HT 4 BKT AL	2	EACH
POLE W SEC CONTROL EQUIPMENT	1	EACH
HIGH PRESSURE SODIUM LUMINAIRE 250W	14	EACH
WIRE 12/2 C	550	L.F.
WIRE 8	17500	L.F.
JUNCTION BOX 16 X 12 X 8 (OFF STRUCTURE)	2	EACH
JUNCTION BOX 16 X 6 X 6 (ON STRUCTURE)	14	EACH
FUSED CONNECTOR KIT	28	EACH
NAVIGATION LT 180 RED	4	EACH
NAVIGATION LT 360 GREEN	2	EACH
TRENCHING AND BACKFILLING	175	L.F.
CONDUIT 3/4	100	L.F.
CONDUIT 1 1/4	1600	L.F.
CONDUIT 2	7200	L.F.
REMOVE LIGHTING	7	EACH

(1) ESTIMATED EXISTING CONCRETE TO BE REMOVED = 1480 C.Y.

(2) ESTIMATED WEIGHT OF STRUCTURAL STEEL = 163,500 LBS.

(3) ESTIMATED WEIGHT OF EXISTING STEEL = 645 TONS

BILL OF INCIDENTAL MATERIALS

ITEM	NO.	DESCRIPTION
Preformed Joint Seal	9	For 1 5/8" Jt., 36'-0" long
" " "	1	For 1 5/8" Jt., 36'-10 7/8" long
" " "	1	For 1 5/8" Jt., 36'-7 1/2" long
" " "	22	For 1 5/8" Jt., 3'-11 1/2" long
" " "	4	For 1 5/8" Jt., 4'-0 5/8" long
Preformed Cork Exp. Jt. Mat'l	2	1" x 12" x 2'-2 3/4"
" " " "	2	1" x 3'-6" x 4'-6 1/2"
" " " "	4	1 5/8" x 12" x 2'-8 3/4"
" " " "	4	1 5/8" x 4'-1" x 4'-1"
" " " "	2	1 5/8" x 3'-0" x 5'-6 1/2"
" " " "	9	1" x 12" x 2'-8 3/4"
" " " "	5	1" x 3'-0" x 5'-6 1/2"
" " " "	2	1" x 3'-0" x 5'-3 3/4"
" " " "	6	1" x 4'-6 1/2" x 5'-8 3/4"
" " " "	2	1" x 12" x 7'-4 3/4"
" " " "	2	1" x 12" x 5'-10 3/4"
" " " "	1	1" x 4" x 375'-0"
" " " "	9	1 5/8" x 12" x 36'-0"
" " " "	18	1 5/8" x 18" x 3'-10"
" " " "	16	1 5/8" x 3'-1 1/2" x 4'-7"
" " " "	1	1 5/8" x 12" x 36'-11"
" " " "	6	1 5/8" x 18 1/2" x 3'-10"
" " " "	4	1 5/8" x 3'-1 1/2" x 4'-8 1/2"
" " " "	1	1 5/8" x 12" x 36'-7 1/2"
" " " "	1	1 5/8" x 12" x 36'-5"
" " " "	1	1 5/8" x 7" x 36'-0"
" " " "	2	1 5/8" x 18" x 3'-6 1/4"

REPAIRS TO BRIDGE OVER LICKING RIVER SHEET 4

COMMONWEALTH OF KENTUCKY
BUREAU OF HIGHWAYS
FRANKFORT
COUNTY OF
KENTON
COVINGTON-NEWPORT
ROAD
STATION P.E. PROJECT NO. MP059-0008-007.652

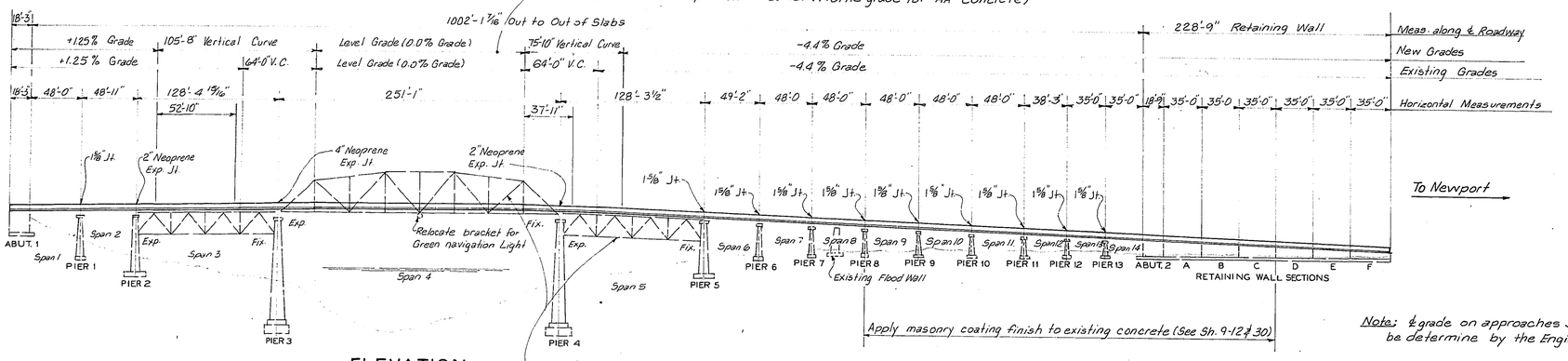
CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		20374

GENERAL NOTE

UPDATE DATE

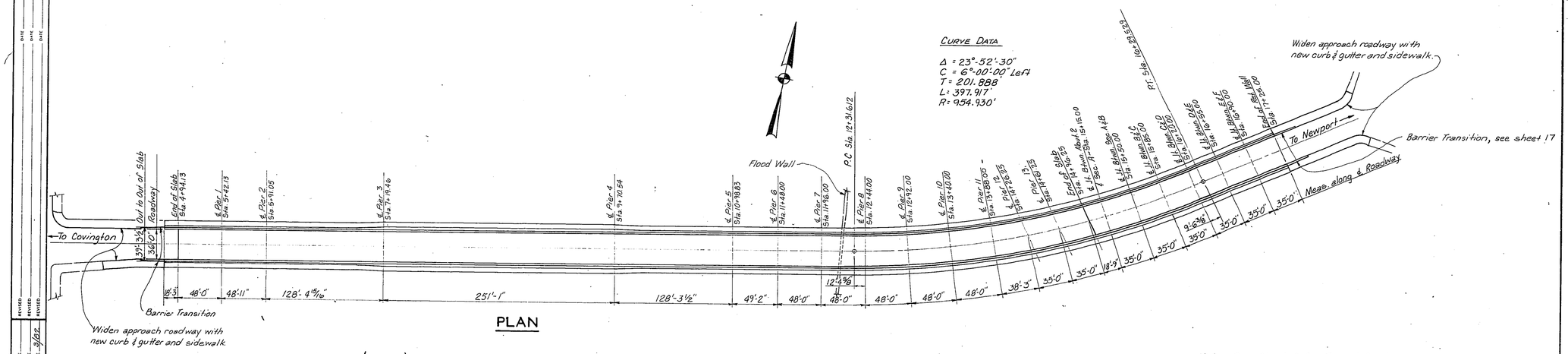
LETTING DATE

Profile grade elevations for the bridge shall be established with the 0.0% grade on Span 4 being 0.938' above the top of floor beams. (Profile grade for "AA" Concrete)



ELEVATION

Note: ℄ grade on approaches shall be determine by the Engineer.



PLAN

Note: See Sheet 6 for Typical Sections.

LAYOUT

REVISED DATE
REVISED DATE
REVISED DATE
DESIGNED BY
DETAILED BY
TRACED BY L.T.G.
CHECKED BY
CHECKED BY 9/62
CHECKED BY 9/62
CHECKED BY

REPAIRS TO BRIDGE OVER LICKING RIVER SHEET 5

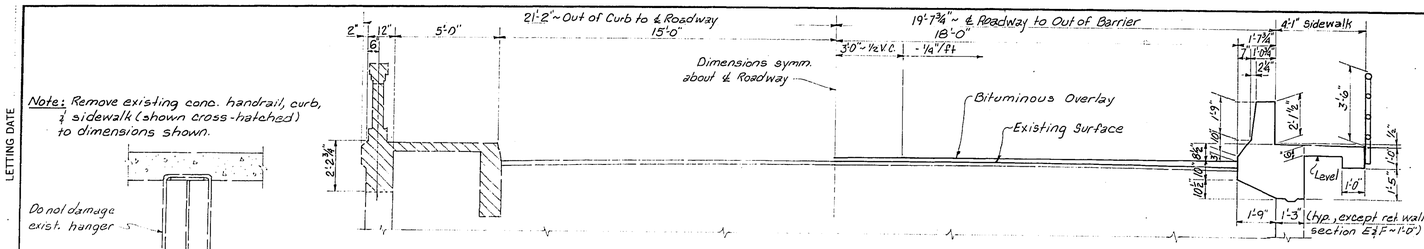
COMMONWEALTH OF KENTUCKY
BUREAU OF HIGHWAYS
FRANKFORT
COUNTY OF
KENTON
COVINGTON – NEWPORT
ROAD

STATION 9+95.19 **P. E. PROJECT NO.**

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		20374

UPDATE DATE

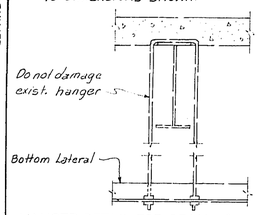
LETTING DATE



EXISTING HALF SECTION — NEW HALF SECTION

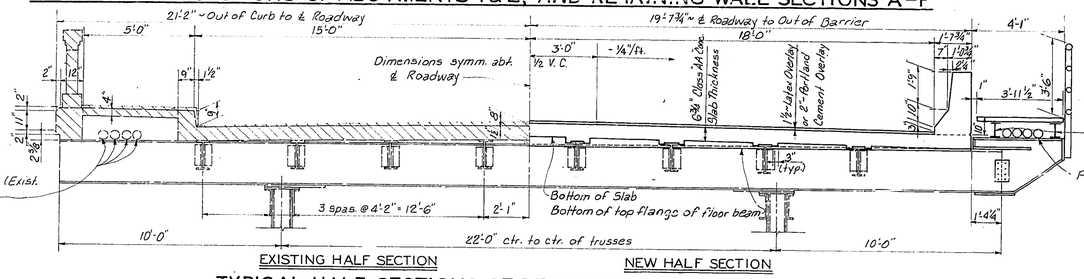
TYPICAL HALF SECTIONS OF ABUTMENTS 1 & 2, AND RETAINING WALL SECTIONS A-F

Note: Remove existing conc. handrail, curb, & sidewalk (shown cross-hatched) to dimensions shown.



HANGER DETAIL FOR SPAN 4

Note: Remove all exist. reinforced concrete and foreign overlay. (shown cross-hatched)



Place 4-4"ϕ Telephone Conduit (U.S.) 2-4"ϕ Telephone Conduit (D.S.) in position shown.

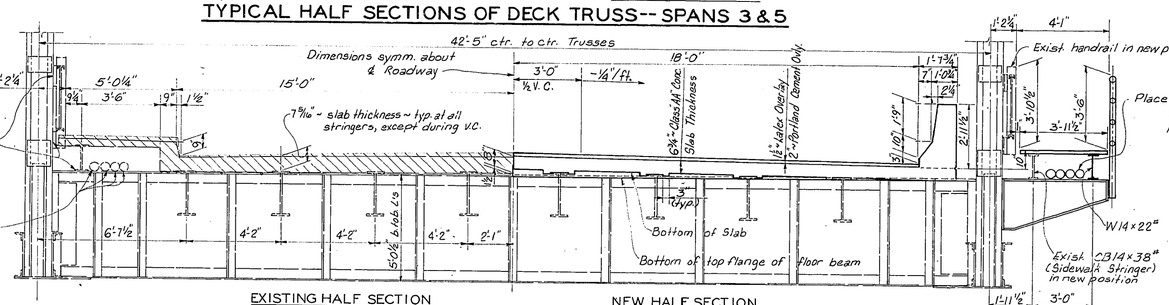
EXISTING HALF SECTION — NEW HALF SECTION

TYPICAL HALF SECTIONS OF DECK TRUSS--SPANS 3 & 5

Remove exist. bolts and rivets that secure exist. handrail assembly to truss members and exist. sidewalk stringer to floor beam. Salvage handrail and sidewalk stringer to be used with new sidewalk outside the truss. Clean and paint areas left bare by removal of handrail and stringer.

Note: Remove all existing concrete and foreign overlay (shown cross-hatched).

4-4"ϕ Conduit (Utility) to be removed. (Existing Conduit is located on D.S. side, only)



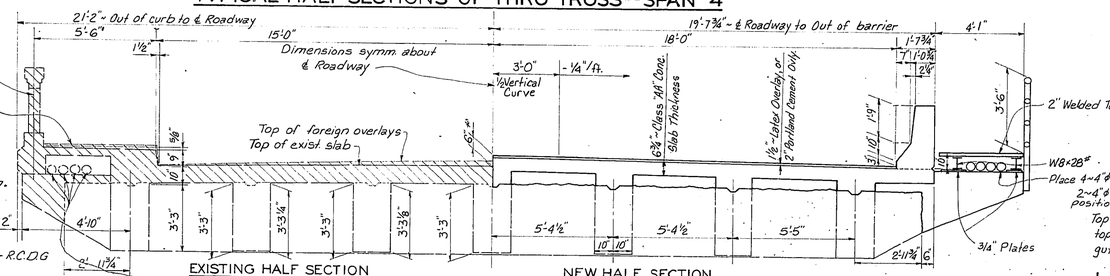
EXISTING HALF SECTION — NEW HALF SECTION

TYPICAL HALF SECTIONS OF THRU TRUSS--SPAN 4

Note: Remove cross-hatched areas of existing handrail, curb, sidewalk, foreign overlay, slab, and endwalls & diaphragms to bottom of slab elevation. Also remove sidewalk brackets to dimensions shown in new half section.

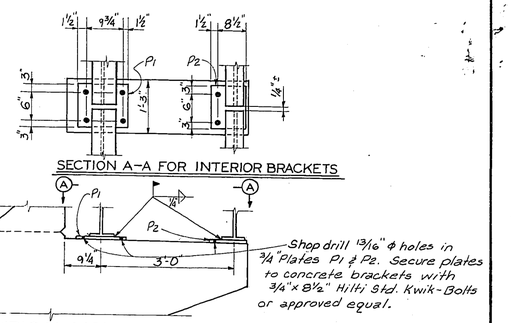
* Top of Cl. AA Conc. shall be 5" above top of original concrete slab @ ℄ Roadway for R.C.D.G. spans, except on vertical curves.

4-4"ϕ Conduit (Utility) to be removed (Exist. Conduit is located on D.S. side, only.)



EXISTING HALF SECTION — NEW HALF SECTION

TYPICAL HALF SECTIONS OF R.C.D.G. SPANS 1, 2, 6-14

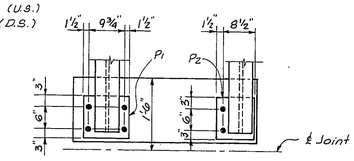


SECTION A-A FOR INTERIOR BRACKETS

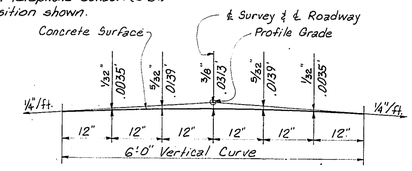
Shop drill 13/16" ϕ holes in ¾" Plates P1 & P2. Secure plates to concrete brackets with ¾"x 8½" Hilti Std. Kwik-Bolts or approved equal.

TYPICAL MOUNTING DETAIL

FOR SIDEWALK STRINGERS--SPANS 1,2,6-14



SECTION A-A FOR END BRACKETS



PARABOLIC CROWN DETAIL

LAYOUT

REPAIRS TO BRIDGE OVER LICKING RIVER — SHEET 6

COMMONWEALTH OF KENTUCKY
BUREAU OF HIGHWAYS
FRANKFORT
COUNTY OF
KENTON
COVINGTON - NEWPORT
ROAD

STATION	P. E. PROJECT NO.	
CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO. 20374

REVISED DATE — REVISED DATE — REVISED DATE

DESIGNED BY — CHECKED BY — DATE 3/62

DETAILED BY MG — CHECKED BY SEG — DATE

TRACED BY — CHECKED BY — DATE

HIGHWAYS

COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET
FRANKFORT, KY 40622
WWW.TRANSPORTATION.KY.GOV/

MATTHEW G. BEVIN
GOVERNOR

GREG THOMAS
SECRETARY

Memo To: Rob Hans
Chief District Engineer
District Six

Through: Anne Irish AJ
Chief Load Rating Engineer
Division of Maintenance

From: Dora Alexander
Load Rating Engineer
Division of Maintenance

Date: May 6, 2016

Subject: Bridge Posting
Kenton County
4th Street (KY 8 at MP 7.63) over Licking River

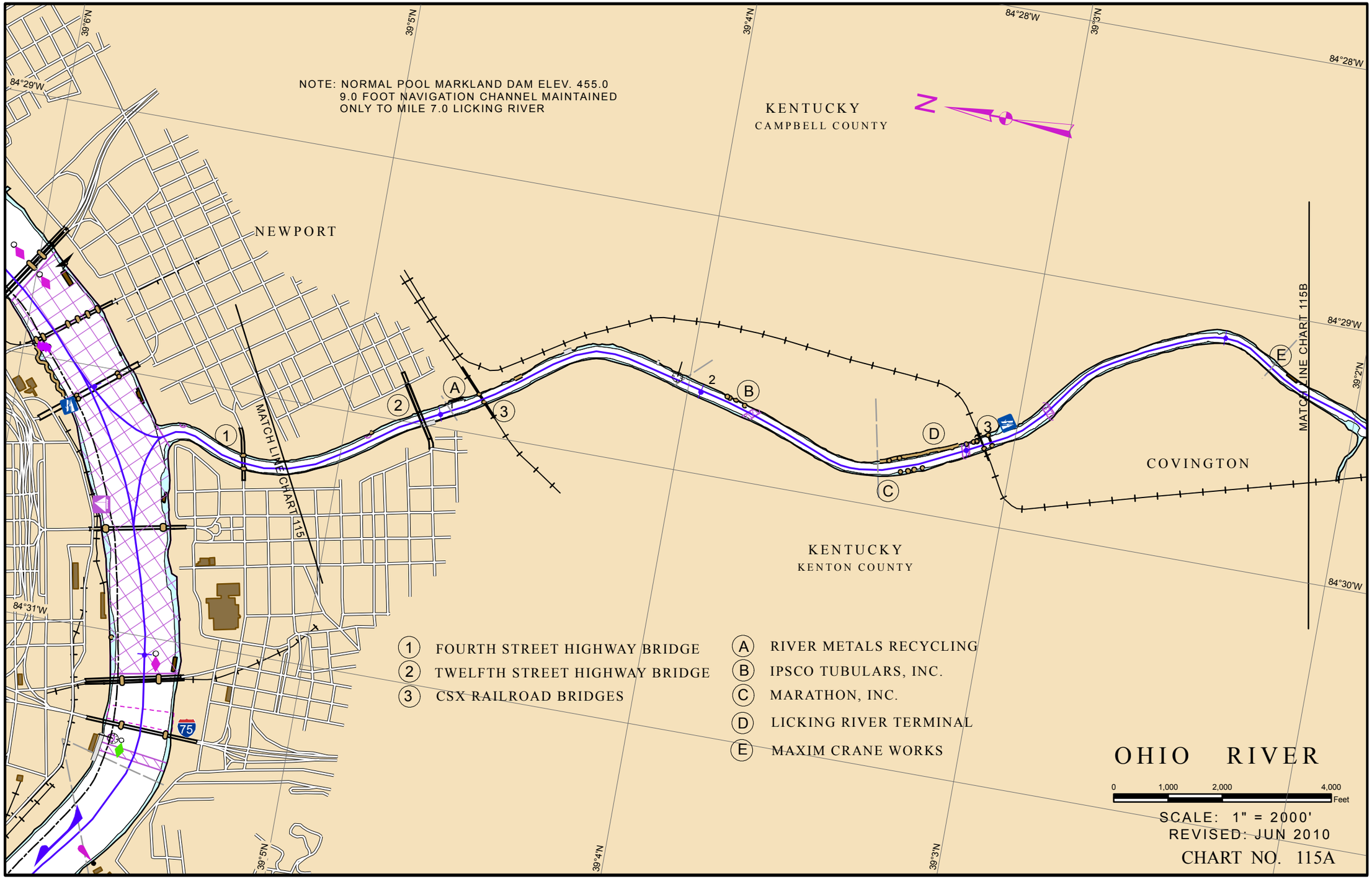
After review of the condition and analysis or changes in the weight carrying capacity of the subject structure by the bridge preservation analysis staff, this office has determined that the posting level for the following bridge should be as follows:

059B00037N **Post at 17 tons for all vehicles due to the load rating of the superstructure.**

Please notify the proper officials of this posting change. Should you have any questions, please advise.

DGA

c: Matt Arlinghaus, TEBM
Nicholas Reis
Gary Cochran
Craig Bresch
Greg Cady
Andrew Bush
File


NOTE: NORMAL POOL MARKLAND DAM ELEV. 455.0
9.0 FOOT NAVIGATION CHANNEL MAINTAINED
ONLY TO MILE 7.0 LICKING RIVER
KENTUCKY
CAMPBELL COUNTY
N
NEWPORT
MATCH LINE CHART 115
MATCH LINE CHART 115B
COVINGTON
KENTUCKY
KENTON COUNTY
39°6'N
39°5'N
39°4'N
39°3'N
39°2'N
84°28'W
84°29'W
84°30'W
84°31'W
1 FOURTH STREET HIGHWAY BRIDGE
2 TWELFTH STREET HIGHWAY BRIDGE
3 CSX RAILROAD BRIDGES
A RIVER METALS RECYCLING
B IPSCO TUBULARS, INC.
C MARATHON, INC.
D LICKING RIVER TERMINAL
E MAXIM CRANE WORKS
OHIO RIVER
0 1,000 2,000 4,000 Feet
SCALE: 1" = 2000'
REVISED: JUN 2010
CHART NO. 115A