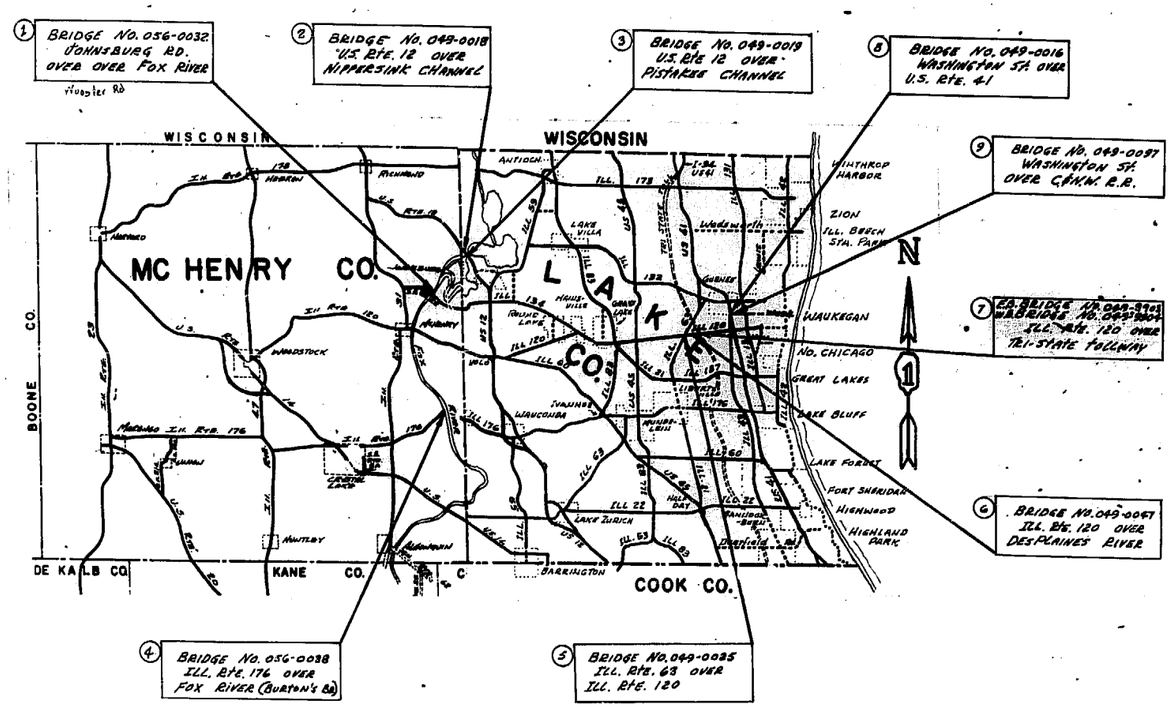
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	1974 -124BR	LAKE & MC HENRY	39	1
ILLINOIS		PROJECT NO.		

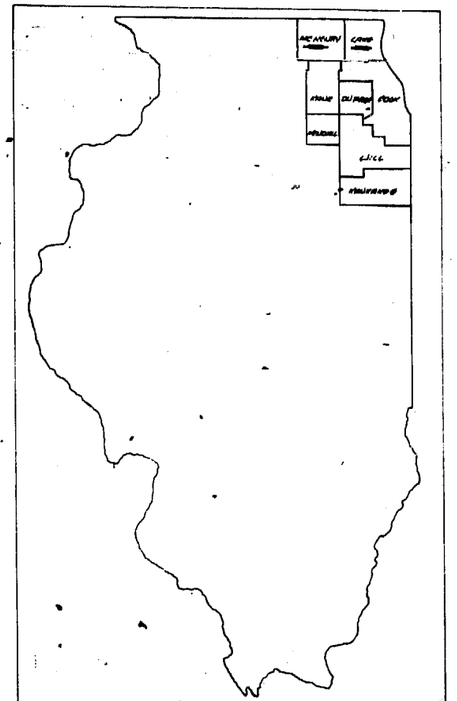
P-91-510-74

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PROPOSED HIGHWAY IMPROVEMENT
REGION ONE
VARIOUS ROUTES
SECTION: REGION ONE 1974-124BR (BRIDGE REPAIRS)
LAKE & MC HENRY COUNTIES
C-91-510-74

INDEX OF SHEETS



LOCATION MAP
NINE(9) LOCATIONS
NET LENGTH = 0.00 (0 MI.)



OPERATION SERVICES - ELGIN

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIV. OF HWYS REGION ONE

SUBMITTED: Sigmund C. Zizjewski 3/8/74
Regional Engineer

EXAMINED: April 12, 1974
Engineer of Road Plans and Contracts

PASSED: April 12, 1974
Engineer of Design

APPROVED: April 12, 1974
Director of Highways

CONTRACT NO. 29978

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NUMBER
VARIOUS	1974-124BR	LAKE & McHENRY	39	2

SUMMARY OF QUANTITIES

CODE	ITEM	UNIT	QUANTITY
406008	BITUMINOUS CONCRETE SURFACE COURSE, CLASS I	TONS	1.25
501022	CONCRETE REMOVAL	CUBIC YARDS	216.66
X05007	BRIDGE HANDRAIL REMOVAL & RE-ERECTION	LINEAL FEET	1,038.00
503004	PROTECTIVE COAT	SQUARE YARDS	2,929.00
504001	HANDRAIL CONCRETE	CUBIC YARDS	0.75
504003	CLASS "X" CONCRETE	CUBIC YARDS	216.66
509004	CLEANING AND PAINTING	LUMP SUM	1.00
507006	ADJUST AND REPOSITION BEARING	EACH	10.00
512002	WELDED WIRE FABRIC 6"X6"	SQUARE YARDS	935.00
617008	BITUMINOUS CONCRETE SURFACE REMOVAL	SQUARE YARDS	14.00
Z10178	COAL TAR INTERLAYER PROTECTIVE COAT	SQUARE YARDS	9.75
Z10224	EXPANSION JOINT 4"	LINEAL FEET	589.00
Z10563	JOINT RECONSTRUCTION	LINEAL FEET	33.67
X05008	CONCRETE DECK PATCHING, FULL DEPTH	SQUARE YARDS	20.00
X05009	CONCRETE DECK PATCHING, PARTIAL DEPTH	SQUARE YARDS	1,120.00
X05010	JACK DECK BEAM, CRIBBING UNDER 10 FEET	EACH	8.00
X05011	JACK DECK BEAM, CRIBBING OVER 10 FEET	EACH	5.00
XZ1089	TRAFFIC CONTROL AND PROTECTION, STANDARD 2316	LUMP SUM	1.00
XZ1014	TRAFFIC CONTROL AND PROTECTION, STANDARD 2309	EACH	2.00

SCHEDULE OF QUANTITIES

LOC. NO.		BRIDGE NO.	LOCATION	BITUMINOUS CONCRETE SURFACE COURSE CLASS I	CONCRETE REMOVAL	BRIDGE HANDRAIL REMOVAL AND RE-ERECTION	PROTECTIVE COAT	HANDRAIL CONCRETE	CLASS "X" CONCRETE	CLEANING AND PAINTING	ADJUST AND REPOSITION BEARINGS	WELDED WIRE FABRIC 6"x6"	BITUMINOUS CONCRETE SURFACE REMOVAL	COAL TAR INTERLAYER PROTECTIVE COAT	EXPANSION JOINT 4"	JOINT RECONSTRUCTION	CONCRETE DECK PATCHING FULL DEPTH	CONCRETE DECK PATCHING PARTIAL DEPTH	JACK DECK BEAM, CRIB UNDER 10 FEET	JACK DECK BEAM, CRIB OVER 10 FEET	TRAFFIC CONTROL RECOMMENDED
				TONS	CUBIC YARDS	LINEAL FEET	SQUARE YARDS	CUBIC YARDS	CUBIC YARDS	POUNDS	EACH	SQUARE YARDS	SQUARE YARDS	SQUARE YARDS	LINEAL FEET	LINEAL FEET	SQUARE YARDS	SQUARE YARDS	EACH	EACH	STANDARD
1	X091	056-0032	JOHNSBURG ROAD OVER FOX RIVER	----	186.00	1,038	1,152	0.75	186.00	39,000*	----	815	----	----	44	----	20	80	3	----	2309
2	X032	049-0018	U.S. ROUTE 12 OVER NIPPERSINK CHANNEL	----	----	----	565	----	----	----	----	----	----	----	----	----	----	120	----	----	2316
3	X031	049-0019	U.S. ROUTE 12 OVER PISTAKEE CHANNEL	----	30.66	----	280	----	30.66	64,055*	----	120	----	----	----	----	----	100	----	----	
4	X091	056-0038	ILLINOIS ROUTE 176 OVER FOX RIVER	1.25	----	----	112	----	----	40,350*	10	----	14	9.75	52	33.67	----	----	5	5	2309
5	X251	049-0025	ILLINOIS ROUTE 63 OVER ILLINOIS ROUTE 120	----	----	----	240	----	----	----	----	----	----	----	----	----	----	240	----	----	2316
6	X091	049-0047	ILLINOIS ROUTE 120 OVER DESPLAINES RIVER	----	----	----	125	----	----	----	----	----	----	----	118	----	----	125	----	----	2316
7	X251	049-9903 & 049-9904	ILLINOIS ROUTE 120 OVER TOLLWAY	----	----	----	90	----	----	----	----	----	----	----	116	----	----	90	----	----	
8	X251	049-0016	WASHINGTON STREET OVER U.S. ROUTE 41	----	----	----	320	----	----	----	----	----	----	----	127	----	----	320	----	----	2316
9	X131	049-0097	WASHINGTON STREET OVER C.A.W.R.R.	----	----	----	45	----	----	----	----	----	----	----	132	----	----	45	----	----	
			TOTALS	1.25	216.66	1,038	2,929	0.75	216.66	143,405*	10	935	14	9.75	589	33.67	20	1,120	8	5	

*FOR INFORMATION ONLY

PLANS PREPARED BY: Louis Heriot
OPERATIONS SERVICES - ELGIN

PLANS REVIEWED BY: William R. Stahl
OPERATIONS SERVICES ENGINEER

PLANS REVIEWED BY: Paul F. Liddle
PROJECT GROUP #1

PLANS REVIEWED BY: Sigmund M. Harris
REGIONAL PROJECT ENGINEER

PLANS REVIEWED BY: M. Tavelson
QUALITY CONTROL

PLANS SUBMITTED BY: Sigmund C. Zicjewski
REGIONAL ENGINEER

SCHEDULE AND SUMMARY OF QUANTITIES

SECTION 1974-124BR
VARIOUS ROUTES
LAKE AND McHENRY COUNTIES

STATE OF ILLINOIS

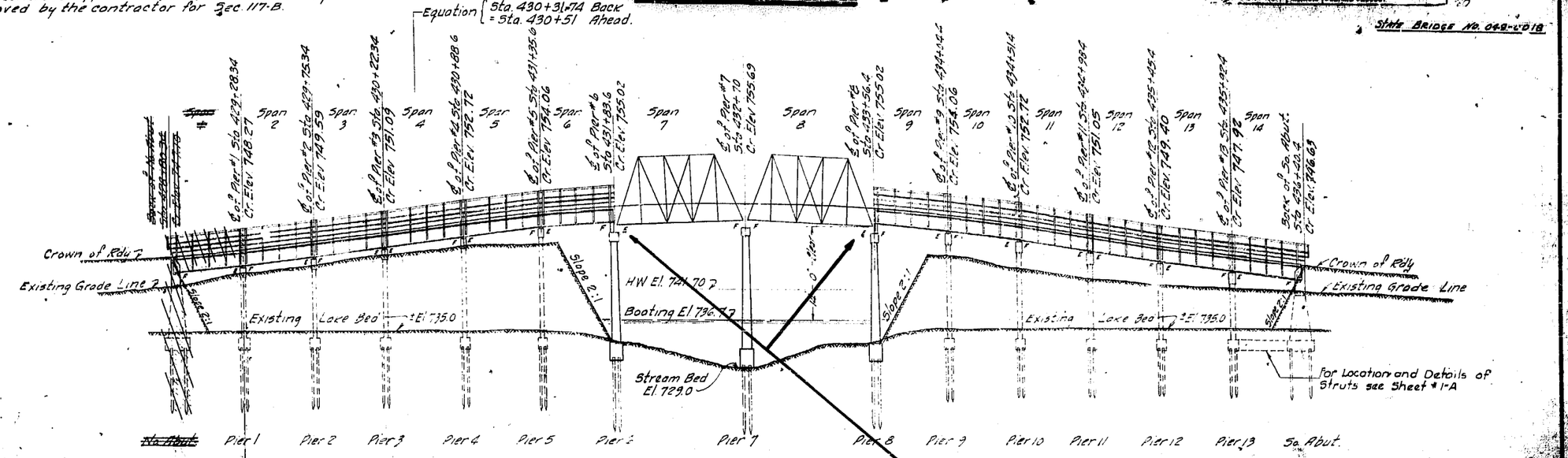
BOND ISSUE ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
VARIOUS	117-B	LAKE & MCHENRY	29	1
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT NO.		7 SHEETS

State Bridge No. 049-0018

B.M. #55 – R.R. Spike in S Pier of R.R. Bridge. 70' Left Sta. 434+00 El. 746.86

Existing structure, one 65'-6" thru truss span and two 32'-4½" concrete approach spans, with 30' roadway, to be removed by the contractor for Sec. 117-B.

Equation { Sta. 430+31.74 Back = Sta. 430+51 Ahead.



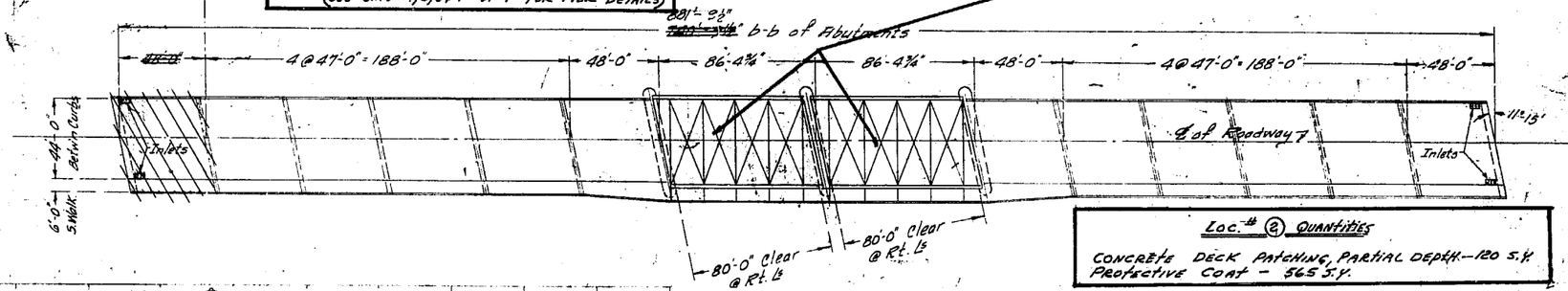
GENERAL ELEVATION

SCALE: 1" = 40' Horizontal, 1" = 10' Vertical

NOTE: FOR GENERAL ELEVATION AND PLAN OF SPANS #1, #1-A, #1-B, and #1-C, SEE SHEET No. 1-A

Protective Coat – 565 S.Y.
Note: Includes treatment of tops of all piers (total 16) & conc. deck patches.
(See shts #4, 5, 6 & 7 of 7 for pier details)

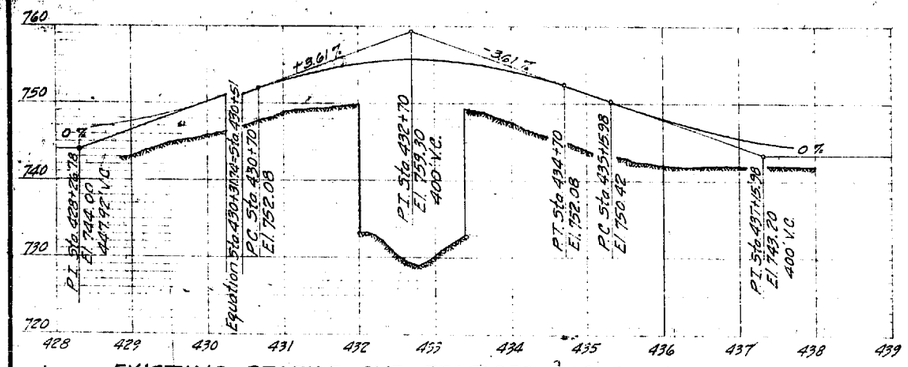
Concrete Deck Patching – Partial Depth – 120 S.Y.
Various Locations – (See Sht. #2 of 7)



PLAN

Loc. #2 Quantities

Concrete Deck Patching, Partial Depth – 120 S.Y.
Protective Coat – 565 S.Y.



EXISTING PROFILE AND PROPOSED GRADE LINE

For Revised Total Bill of Material See Sheet No. 1-A

TOTAL BILL OF MATERIAL

Items	Superstr.	Piers	Abuts.	Total-Sec. 117-B	Total-Sec. 117-B	Total-Sec. 117-B
Class A Concrete - Cu. Yds.		725.5		725.5		
Class X Concrete - Cu. Yds.	915.0	605.0	126.2	786.2	915.0	
Reinforcing Steel - Lbs.	222,170	54460	9440	63900	222,170	
Structural Steel - Lbs.	1,317,780				1,317,780	1,317,720
* Cast Iron Rockers & Bolsters - Lbs.	6140				6140 *	6140
Hollow Floor or Wall Tile - Sq. Ft.	2890				2890	
Wire Fabric - Sq. Ft.	3520				3520	
Floor Drains - Each	152				152	152
Cast Iron Frame & Cover - Each	4				4	4
8" Corrugated Metal Pipe - Lin. Ft.	30				30	
Name Plate - Each	1				1	
Untreated Piling - Lin. Ft.		9060	1360	10420		
Test Piles (Wood) - Each		4	2	6		
Installing Concrete Inserts & Sleeve in Pier Block	Complete				Complete	
Installing Sleeves in Abutments			Complete	Complete		
Removal of Old Bridge				1		

* To be included in Structural Steel.

STANDARD	COMPUTED	V. M. Romine	EXAMINED 3-19 1934
	CHECKED	P.A. Broderick M.A.P.	H. J. Burel BRIDGE ENGINEER
	DRAWN	V.M.R.	PASSED
	CHECKED	P.A.B. M.A.P.	ENGINEER OF DESIGN
SPECIAL	ASSEMBLED		APPROVED
	CHECKED		CHIEF HIGHWAY ENGINEER

Revised 10-29-34 V.M.R. 12-14-34 V.C.S. 3-7-35 H.J.B.

Rev. 3-7-35 H.J.B.

Recommend Traffic Control Std 2316 – Sht. #1 Incl. Loc. #2 & #3

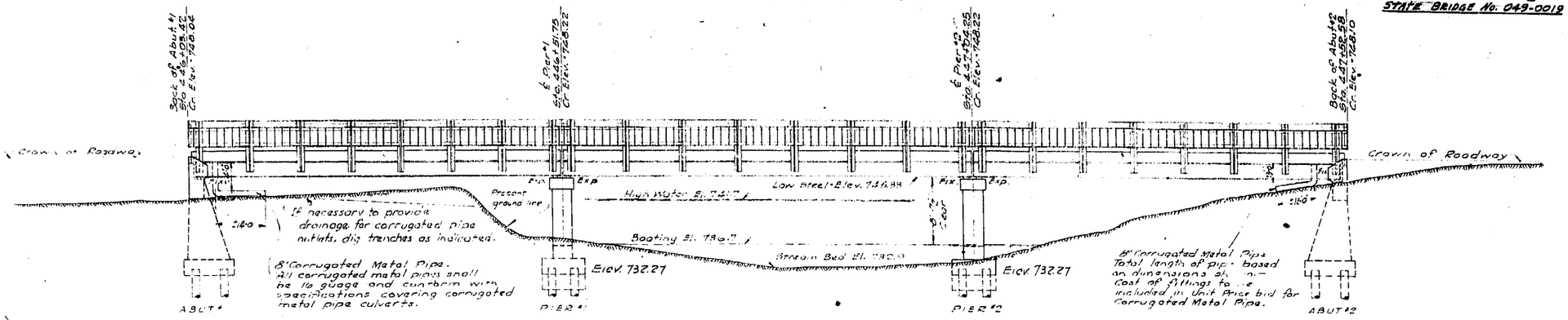
FOX RIVER CHANNEL
S.B.I. ROUTE 60 – SECTION [illegible]
LAKE COUNTY
STATION 432+70

B.M.:- "56-"X" cut on base of gas pump-Rt Sta. 445+45
Elevation 741.96
Existing structure: Thru-Girder-Span-50'-Rdwy-18'
To be removed by contractor

STATE OF ILLINOIS
[redacted]

BOND ISSUE ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
VARIOUS	1974-124-BR	LAKE & MCHENRY	39	18
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		7 SHEETS

STATE BRIDGE No. 049-0019



GENERAL ELEVATION
~ SIDEWALK, HANDRAIL SHOWN ~

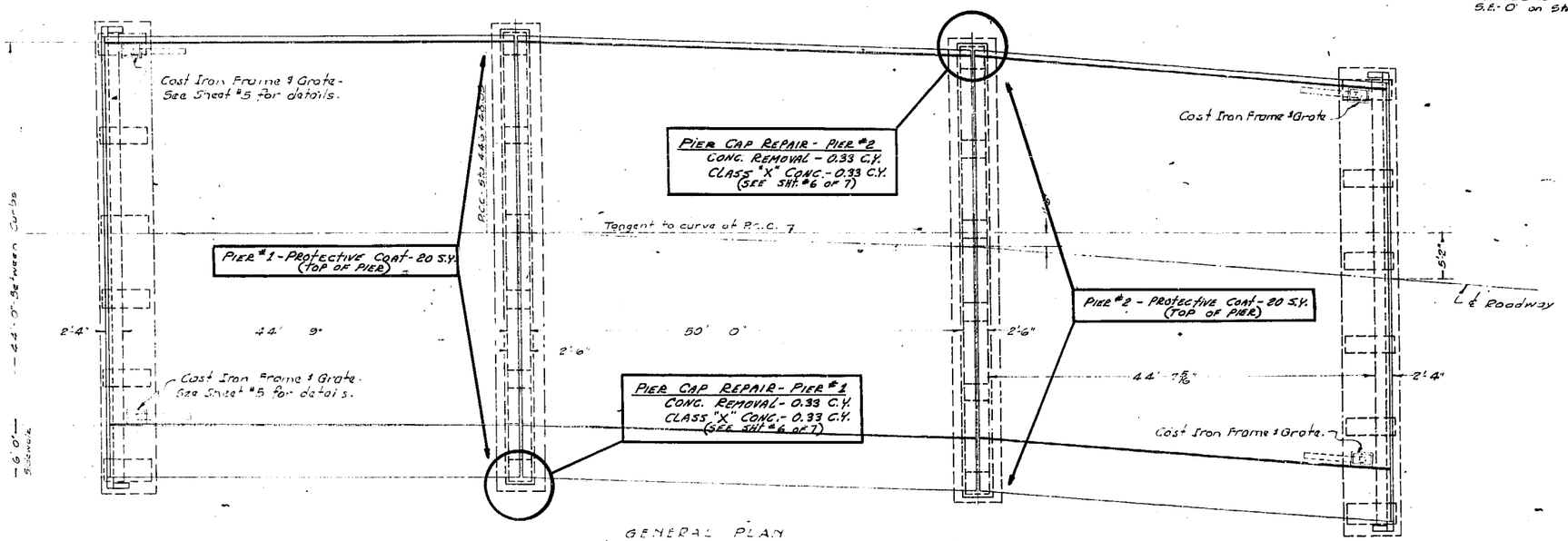
CLEAN AND PAINT STRUCTURAL STEEL - 64,055 lbs
(SEE SHTS. #2 & #3 OF 7)

CONCRETE DECK PATCHING - PARTIAL DEPTH - 100 S.Y.
PROTECTIVE COAT - 100 S.Y.
(SEE SHT. #2 OF 7)

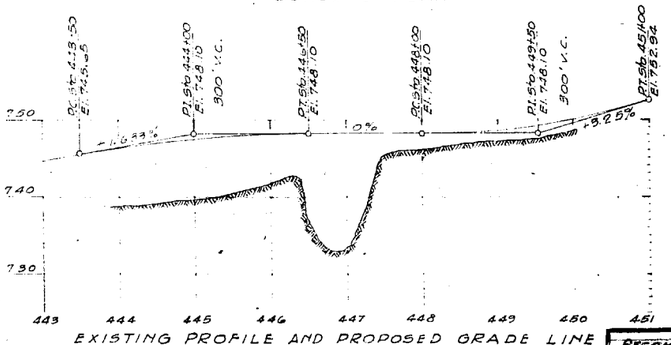
SIDEWALK & WATER TABLE REPAIR
CONC. REMOVAL - 30 C.Y.
CLASS "X" CONC. - 30 C.Y.
WELD. WIRE FABRIC 6"x6" - 120 S.Y.
PROTECTIVE COAT. - 140 S.Y.
(SEE SHT. #2 & #4 OF 7)

HORIZONTAL CURVE DATA
Δ: 1°-50'
D: 0°-09'-15.8"
T: 393.8
L: 1187.5
E:
R: 37112.50
S.E.: 0.00'/ft.

HORIZONTAL CURVE DATA
Δ: 4.8°-09'
D: 2°-27'
T: 469.7'
L: 883.5'
E: 100.16'
R: 1051.2
S.E.: 0' on Structure



GENERAL PLAN



EXISTING PROFILE AND PROPOSED GRADE LINE

TOTAL BILL OF MATERIAL

	SEC. E&F TOTAL	SEC. B TOTAL
Class "A" Concrete	*189.3	217.7
Class "X" Concrete		40.2
Reinforcement Bars	*42310	18010
Structural Steel	254670	
Installing Pipe Culverts		Complete
Hollow Metal Pipe	* 725	
Wire Mesh	* 870	
Floor Drains	30	
Untreated Timber		2360
Test Pile		2
Installing Pile	*Complete	1
Removal of Existing Structure		
Name Plate	* 1	
Cast Iron Frame & Grate	4	
8" Corrugated Metal Pipe Lin. Ft.	* 70	

LOCATION (3) QUANTITIES

CLEANING AND PAINTING ------ 64,055 POUNDS (STRUCTURAL STEEL)
CONCRETE DECK PATCHING, PARTIAL DEPTH -- 100 SQUARE YARDS
CONCRETE REMOVAL -- 30.66 CUBIC YARDS
CLASS "X" CONCRETE -- 30.66 CUBIC YARDS
WELDED WIRE FABRIC 6X6 -- 120 SQUARE YARDS
PROTECTIVE COAT -- 280 SQUARE YARDS

*SECTION 1.17-E only.

COMPUTED J. Buckner Jr.
STANDARD CHECKED H. Anderson
DRAWN DDP
CHECKED MHA
SPECIAL ASSEMBLED
CHECKED

EXAMINED 19-
PASSED
APPROVED
BRIDGE ENGINEER
ENGINEER OF DESIGN
CHIEF HIGHWAY ENGINEER

ARTIFICIAL CHANNEL
S.B.I. ROUTE 60 - SECTION 1974-124-BR
COUNTY

RECOMMENDED TRAFFIC CONTROL STD. 2316 - SET UP INCL. LOC. [illegible] 46+78

B.M. #3 Chiseled square on South Curb of Exist. road 81 ft. Lft. of Sta. 229+00. El. 743.42
B.M. #4 Chiseled square on Exist. Bridge Curb 45 ft. Lft. of Sta. 233+80 El. 743.69
Existing structure 5-80 ft. clear span Reinf. Concr. Arches on Reinf. Concr. Piers & Reinf. Concr. Abutments: to be removed by contractor.

STATE OF ILLINOIS

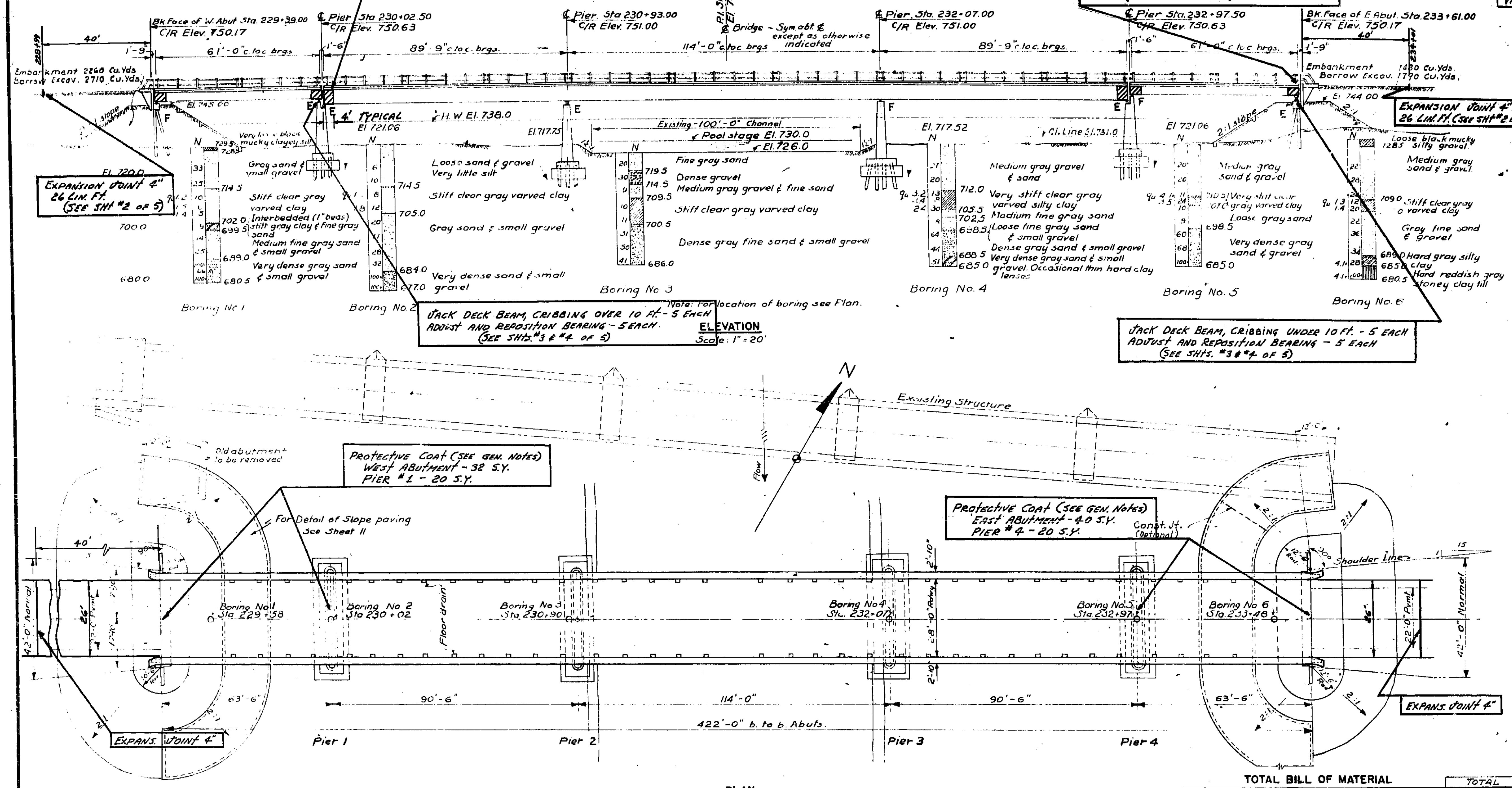
[redacted]

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
Rt. 176	146BR / 146-3R	McHenry	29	5
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 1 — 14 SHEETS

STATE BRIDGE No. 056-0038

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHT. NO.
VARIOUS	1974-124BR	LAKE & McHENRY	39	26



CLEAN & PAINT STRUCT. STEEL - 40,350 # (SEE GEN. NOTES)
Joint Reconstruction - 33.67 Lin. Ft.
Bituminous Conc. Surf. Removal - 14 S.Y.
Coal Tar Interlayer Prot. Ct. - 9.75 S.Y.
Bit. Conc. Surf. Crse. Cl. I - 1.25 Ton
(See Sht #2 of 5)
1000' V.C.
+2.0%
-2.0%
P.I. Sta. 231+50
El. 753.06
Bk. Face of W. Abut. Sta. 229+39.00
C/R Elev. 750.17
℄ Pier Sta. 230+02.50
C/R Elev. 750.63
℄ Pier Sta. 230+93.00
C/R Elev. 751.00
℄ Bridge - Sym. abt. ℄ except as otherwise indicated
℄ Pier Sta. 232+07.00
C/R Elev. 751.00
℄ Pier Sta. 232+97.50
C/R Elev. 750.63
Bk. Face of E. Abut. Sta. 233+61.00
C/R Elev. 750.17
61'-0" c. to c. brgs.
89'-9" c. to c. brgs.
114'-0" c. to c. brgs.
89'-9" c. to c. brgs.
61'-0" c. to c. brgs.
Embankment 2260 Cu. Yds.
Borrow Excav. 2710 Cu. Yds.
Embankment 1480 Cu. Yds.
Borrow Excav. 1790 Cu. Yds.
El. 745.00
El. 744.00
4' TYPICAL
H.W. El. 738.0
Existing 100'-0" Channel
Pool stage El. 730.0
El. 726.0
El. 721.06
El. 717.75
El. 717.52
El. 721.06
Cl. Line El. 731.0
EXPANSION JOINT 4" 26 LIN. FT. (SEE SHT #2 OF 5)
EXPANSION JOINT 4" 26 LIN. FT. (SEE SHT #2 OF 5)
El. 720.0
700.0
680.0
Boring No. 1
Boring No. 2
Boring No. 3
Boring No. 4
Boring No. 5
Boring No. 6
Very stiff clear gray varved clay
Gray sand & gravel
Medium gray gravel & fine sand
Dense gray fine sand & small gravel
Very dense sand & small gravel
Loose black mucky silty gravel
Hard gray silty clay
Hard reddish gray stoney clay till
JACK DECK BEAM, CRIBBING OVER 10 FT. - 5 EACH
ADJUST AND REPOSITION BEARING - 5 EACH
(SEE SHTS. #3 & #4 OF 5)
JACK DECK BEAM, CRIBBING UNDER 10 FT. - 5 EACH
ADJUST AND REPOSITION BEARING - 5 EACH
(SEE SHTS. #3 & #4 OF 5)
Note: For location of boring see Plan.
ELEVATION
Scale: 1" = 20'
N
Existing Structure
Flow
Old abutment to be removed
Protective Coat (SEE GEN. NOTES)
West Abutment - 32 S.Y.
PIER #1 - 20 S.Y.
Protective Coat (SEE GEN. NOTES)
East Abutment - 40 S.Y.
PIER #4 - 20 S.Y.
For Detail of Slope paving See Sheet 11
Const. Jt. (Optional)
Shoulder Line
Boring No. 1 Sta. 229+58
Boring No. 2 Sta. 230+02
Boring No. 3 Sta. 230+90
Boring No. 4 Sta. 232+07
Boring No. 5 Sta. 232+97
Boring No. 6 Sta. 233+48
Floor drain
42'-0" Normal
22'-0" Pvmt.
EXPANS. JOINT 4"
EXPANS. JOINT 4"
63'-6"
90'-6"
114'-0"
90'-6"
63'-6"
422'-0" b. to b. Abuts.
Pier 1
Pier 2
Pier 3
Pier 4

PLAN
Scale: 1" = 20'

GENERAL NOTES

CLEANING AND PAINTING ...... THIS WORK SHALL INCLUDE THE PAINTING OF ALL FIXED BEARING SHOES AT THE WEST ABUTMENT AND AT PIER #4; ALL THE EXPANSION SHOES AT PIER #1, PIER #4 AND AT THE EAST ABUTMENT. ALL DIAPHRAGMS AND/OR CROSS FRAME MEMBERS LOCATED ABOVE THE CENTERLINES OF BEARINGS AT THE EAST AND WEST ABUTMENTS, AND AT PIER #1 AND PIER #4 SHALL BE PAINTED. ALSO INCLUDED IN THIS ITEM IS THE PAINTING OF FOUR (4) LINEAL FEET AT EACH END OF ALL THE WIDE FLANGE DECK BEAMS IN SPAN #1 AND SPAN #5. ALSO INCLUDED IS THE PAINTING OF FOUR (4) LINEAL FEET OF THE WEST END OF THE STEEL PLATE GIRDER AT PIER #1 AND FOUR (4) LINEAL FEET AT THE EAST END OF THE STEEL PLATE GIRDER AT PIER #4.

ALL CLEANING AND PAINTING SHALL BE DONE IN ACCORDANCE WITH ARTICLE 509.06 OF THE STANDARD SPECIFICATIONS. (SEE SPECIAL PROVISIONS).

PROTECTIVE COAT: THIS WORK CONSISTS OF APPLYING TWO (2) COATS OF LINSEED OIL MIXTURE TO PIER CAPS #1 AND #4, THE EAST AND WEST ABUTMENT SEATS, ABUTMENT FACES, AND DRAINAGE GUTTERS.

THIS ITEM ALSO INCLUDES THE REMOVAL OF ALL DIRT, DEBRIS, SAND, GRAVEL AND BITUMINOUS MATERIAL THAT HAS ACCUMULATED ON THE PIER CAPS, ABUTMENT SEATS AND IN THE DRAINAGE GUTTERS.

PROTECTIVE COAT SHALL BE APPLIED IN ACCORD WITH THE APPLICABLE PORTIONS OF ARTICLE 503.12 OF THE STANDARD SPECIFICATIONS.

Copper bearing steel (A.S.T.M. designation A-7 with 0.2% copper added) shall be used for 16"x1½" flame cut expansion guard plates and the ∠s welded to these plates.

The roadway expansion plate shall be fabricated and erected to fit the crown of roadway.

Roadway expansion guards shall be assembled in the shop in proper position with the adjacent ends in place and shall be left assembled for shop inspection.

Expansion guard plates shall be flame cut as provided in Article 55.4(1) of Standard Specifications.

Expansion guards are included for payment as Structural Steel and estimated weight of Structural Steel includes weight of 8"x8" steel shims.

All metal handrail including rail post anchors is included for payment as Metal Handrail. The number of lin. ft. is measured c. to c. of the handrail angles, without any deduction for open joints.

The contract unit price for metal Handrail includes the installing and painting of the handrail.

Welds connecting expansion guard plates to ∠ shall be peened.

Except as otherwise provided, all structural steel shall receive one shop coat of red lead paint and two field coats of aluminum paint. See arts. 57.1 to 57.5 inclusive of the Standard Specifications.

Paint Metal Handrail same as structural steel.

Expansion guards shall receive two shop coats of red lead paint except for anchor straps which shall not be painted.

All paint shall be furnished and applied by the contractor.

Boring Data are shown on the drawings only as a guide to bidders in estimating soil conditions which may be encountered in the work.

The Contractor shall drive 2 precast concrete and 4 untreated timber piles in permanent locations as directed by the Engineer before ordering remainder of piles.

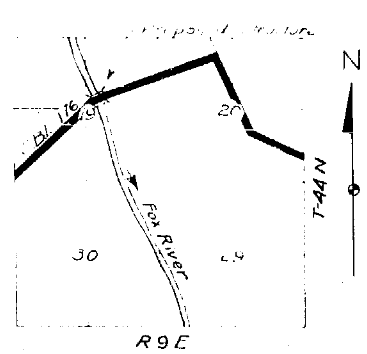
Piles under piers shall be untreated timber.

The letter "N" given in the boring log refers to the number of blows required to drive a split barrel sampling spoon (1½" I.D. and 2" O.D.) a distance of 1 ft. with a 340 lb. hammer dropped from a height of 12 inches.

STATION 231+50
BUILT 19 BY
STATE OF ILLINOIS
S.B.I. RT. 176 SEC. 146-BR

LOADING H-20 S-16

LETTERING FOR NAME PLATE
See Standard 2113



TOTAL BILL OF MATERIAL

LOCATION (4) QUANTITIES

BITUMINOUS CONCRETE SURFACE COURSE, CLASS I -- 1.25 TONS
PROTECTIVE COAT -- 112 SQUARE YARDS
CLEANING AND PAINTING -- 40,350 POUNDS
ADJUST AND REPOSITION BEARINGS -- 10 EACH
BITUMINOUS CONCRETE SURFACE REMOVAL -- 14 SQUARE YARDS
COAL TAR INTERLAYER PROTECTIVE COATS -- 9.75 SQUARE YARDS
EXPANSION JOINT 4 INCHES -- 52 LINEAL FEET
JOINT RECONSTRUCTION -- 33.67 LINEAL FEET
JACK DECK BEAM, CRIBBING OVER 10 FEET -- 5 EACH
JACK DECK BEAM, CRIBBING UNDER 10 FEET -- 5 EACH

		TOTAL	
Timber Test Piles	Ea.	4	4

WATERWAY INFORMATION

Drainage Area	1240 Sq. Miles
Character	Rolling
Required Opening (30 yr. Flood)	3230 Sq. Ft.
Present Opening	3520 Sq. Ft.
Proposed Opening	3300 Sq. Ft.

DESIGN STRESSES

f_s =	18000 psi	Struct.
f_s =	20000 psi	Reinf.
f_c =	1400 psi	Superstructure
f_c =	800 psi	Substructure
n =	10	

DESIGNED: Chachaturian
Nov 5 53
W.E. Hanson
E.R. Knight, Acting

RECOMMENDED TRAFFIC CONTROL — Sta. 2309

GENERAL PLAN & ELEVATION

S.B.I. RT. 176 SEC. 1974-124 BR
McHENRY COUNTY
STATION 231+50
BURTON'S BRIDGE, FOX RIVER

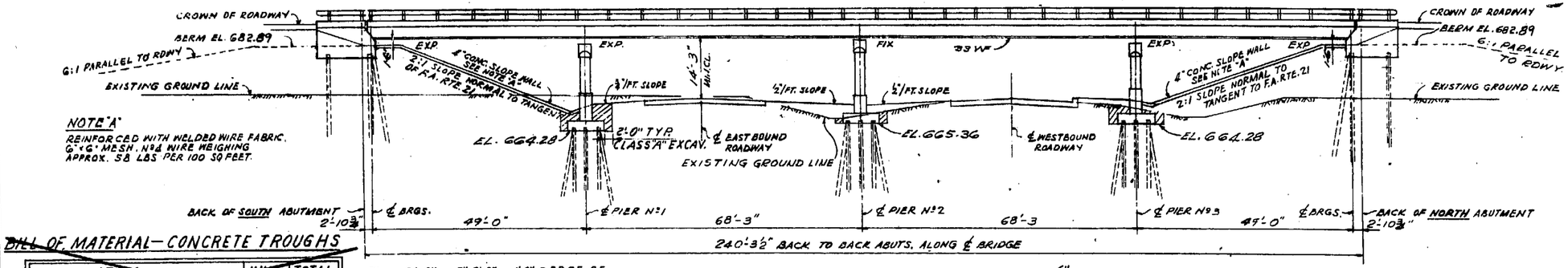
LOCATION #4

ROUTE	SECTION	COUNTY	TOTAL SHTS.	SHEET NO.
F.A. 201	(G&12) 1 HB	LAKE	6	5
STA.	TO STA.			
INDEX ROAD DIST. NO. 7	ILLINOIS		PROJECT	

Route	Section	County	TOTAL SHTS.	SHEET NO.
VARIOUS	1974-1048	LAKE & MCHENRY	39	30

SHEET NO. 1
2 SHEETS

STATE BRIDGE No. 049-0025

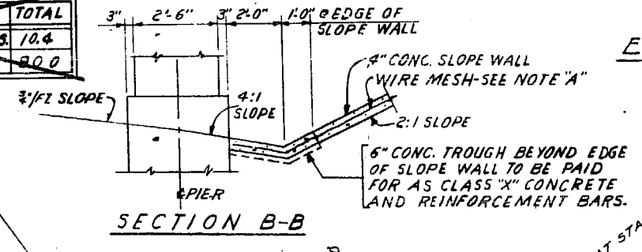


ELEVATION

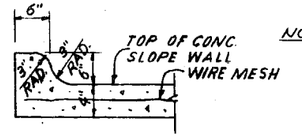
SCALE 1"=15'-0"

BILL OF MATERIAL—CONCRETE TROUGHS

ITEM	UNIT	TOTAL
CLASS "X" CONCRETE	CU.YDS.	10.4
REINFORCEMENT BARS	LBS.	80.0



SECTION B-B



SECTION A-A

THRU EDGE OF CONCRETE SLOPE WALL

NOTE:

AT ABUTMENTS
(1) DRIVE TEST PILES
(2) CONSTRUCT EMBANKMENT AS SHOWN
(3) DRIVE REMAINDER OF PILES THROUGH EMBANKMENT. SEE SPECIAL PROVISIONS

SUMMARY OF QUANTITIES (BRIDGE) SEC. (G&12) 1 HB

ITEM	UNIT	QUANTITY SUPERSTR	QUANTITY SUBSTR	QUANTITY TOTAL
CLASS X CONCRETE	CU.YDS.	420.7	493.3*	914.0
REINFORCEMENT BARS	LBS.	80,960	60,350	141,310
ERECTING STRUCTURAL STEEL	LBS.	418,490		418,490
FURNISHING & ERECTING METAL HANDRAIL	LIN.FT.	519		519
NAM. PLATES	EACH	1		1
FURNISHING CONCRETE PILES	LIN.FT.		1,034	1,034
FURNISHING CREOSOTED PILES, UP TO 20 FT.	LIN.FT.		2448	2,448
FURNISHING CREOSOTED PILES, OVER 20 FT.	LIN.FT.		120	120
DRIVING CONCRETE PILES	LIN.FT.		1,034	1,034
DRIVING TIMBER PILES	LIN.FT.		2,568	2,568
TEST PILES (CONCRETE)	EACH		2	2
TEST PILES (TIMBER)	EACH		3	3
SLOPE WALL	SQ YDS.		181	181
CLASS A EXCAV. FOR STRUCTURES	CU.YDS.		400	400

* INCLUDES QUANTITY OF CLASS X CONCRETE AND REINFORCEMENT BARS IN CONCRETE TROUGHS.

SUMMARY OF QUANTITIES SEC. (G&12) 1 HB

ITEM	UNIT	QUANTITY
FURNISHING STRUCTURAL STEEL	LBS.	418,490

SECTION C-C

Concrete Deck Patching, Partial Depth - 240 S.Y.
Protective Coat (All Patches) - 240 S.Y.
(Various Locations on Bridge Deck)

Note: See Sht. #2 of 2 for Details of Deck Reinf.

DESIGN LOADS

L.L. H20-S16-44
½" FUTURE WEARING SURFACE

DESIGN STRESSES

CONCRETE
f_c = 3500 P.S.I.
f_c = 1400 P.S.I.
f_c = 1000 P.S.I. (WITH EARTH PRESSURE)
f_v = 75 P.S.I. (PIER FOOTING)
n = 10
REINFORCING STEEL
f_s = 20,000 P.S.I.
STRUCTURAL STEEL
f_t = 18,000 P.S.I.

PILE LOADS
ABUTMENTS - 35 TONS (CONC. PILES)
PIERS - 20 TONS (TIMBER PILES)

LOC. # (5) QUANTITIES

Concrete Deck Patching, Partial Depth - 240 S.Y.
Protective Coat - 240 S.Y.

DESIGN CLASSIFICATION

S.B.I. RTE. 172	689 (1977)	P	60
F.A. RTE. 21 (BELVIDERE RD)	1590 (1977)	P	70

NOTE: FOR CURVE DATA SEE SHEET 33

RECOMMEND. TRAFFIC CONTROL STD. 2316

LOCATION # (5)

GENERAL PLAN & ELEVATION
GRADE SEPARATION
S.B.I. ROUTE 172 (ILL. RTE. 63)
OVER F.A. ROUTE 201 (BELVIDERE RD)
~~F.A. PROJECT F-43(14)~~
F.A. ROUTE 201 SECTION (G&12) 1 HB
STATION 356+00.47

ALFRED BENESCH & ASSOCIATES CONSULTING ENGINEERS
10 SOUTH WABASH AVENUE CHICAGO, ILLINOIS

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHT. NO.
VARIOUS	1974-124 BR	LAKE & MCHENRY	39	32

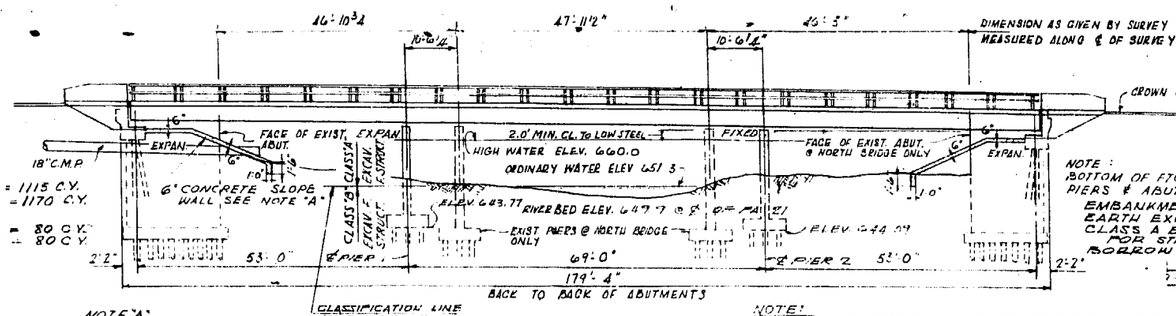
SHEET #2 OF SHEETS

FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEET NO.	SHT. NO.
FA 21	12-F-1	LAKE	39	2
		TO BTA		
FED. ROAD DIV. NO. 4	ILLINOIS	FED. AID PROJECT		

B.M. #37 SPIKE IN POWER POLE 48' LEFT FROM ℄ OF PRESENT PAVEMENT STA. 359+61 ELEVATION 668.24

EXISTING STRUCTURE IS 3 SIMPLE SPANS 46'7⅝" - 48'2¾" AND 46'7⅝" REINFORCED CONCRETE DECK GIRDER BRIDGE WITH 19'2 ROADWAY. REINFORCED CONCRETE CLOSED ABUTS. AND SOLID PIERS. TO BE REMOVED BY CONTRACTOR SEE SPECIAL PROVISIONS.

EMBANKMENT = 1115 C.Y.
EARTH EXCAVATION = 1170 C.Y.
CLASS A EXCAVATION FOR STRUCTURES = 80 C.Y.
BORROW EXCAVATION = 80 C.Y.



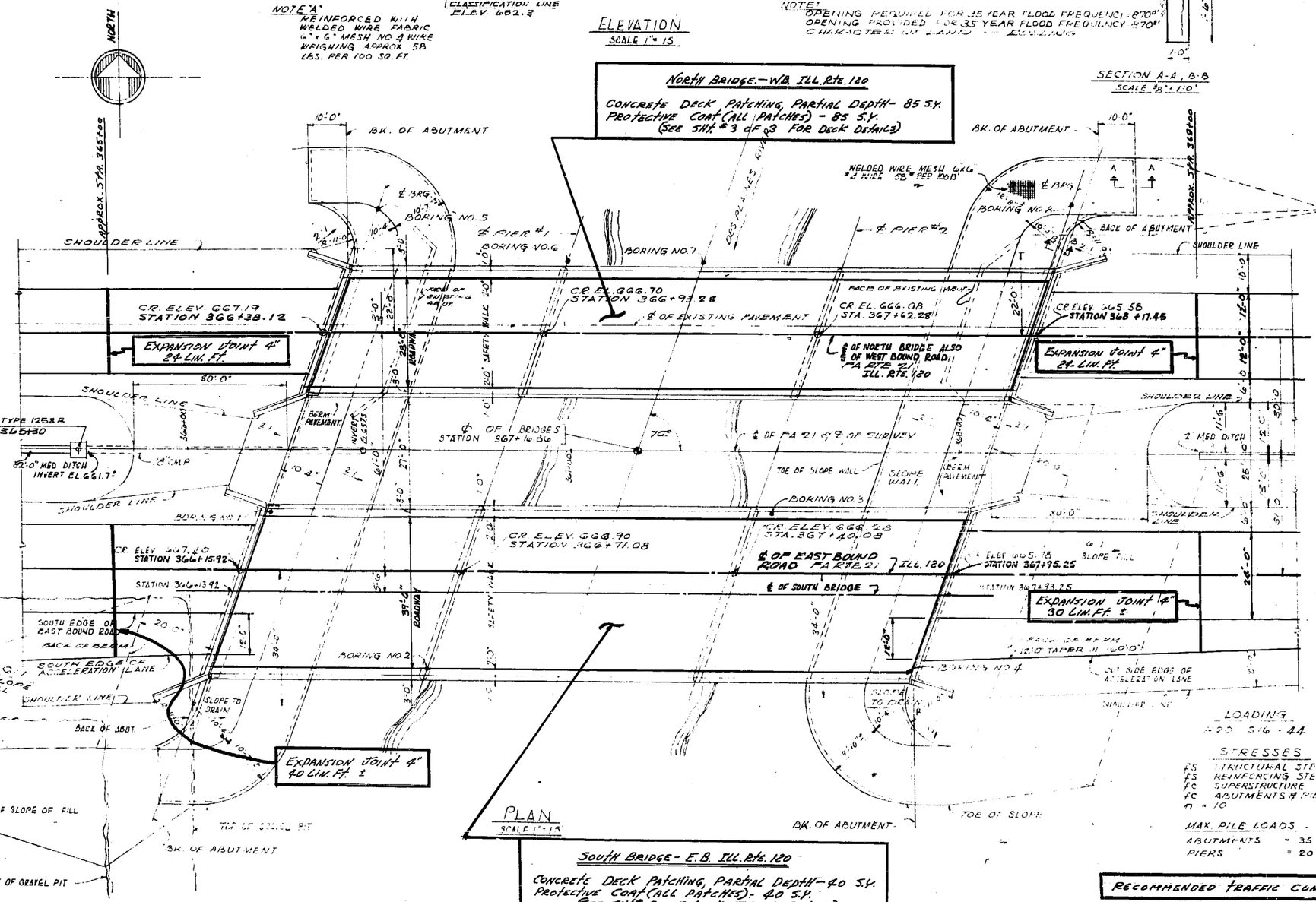
NOTE: BOTTOM OF FTG ELEV. OF BOTH PIERS ℄ ABUTS 641.8 EXIST BRIDGE
EMBANKMENT = 1050 C.Y.
EARTH EXCAVATION = 110 C.Y.
CLASS A EXCAVATION FOR STRUCTURES = 40 C.Y.
BORROW EXCAVATION = 1105 C.Y.

NOTE "A" REINFORCED WITH WELDED WIRE FABRIC 6" x 6" MESH NO 4 WIRE WEIGHING APPROX 58 LBS. PER 100 SQ. FT.

NOTE: OPENING REQUIRED FOR 35 YEAR FLOOD FREQUENCY 670.0'
OPENING REQUIRED FOR 35 YEAR FLOOD FREQUENCY 670.0'
CHARACTER OF STREAM BED ERODIBLE

ELEVATION
SCALE 1"=15'

SECTION A-A, B-B
SCALE ⅜"=1'-0"



PLAN
SCALE 1"=15'

North Bridge - W.B. Ill. Rte. 120

Concrete Deck Patching, Partial Depth - 85 S.Y.
Protective Coat (All Patches) - 85 S.Y.
(See Sht. # 3 of 3 for Deck Details)

South Bridge - E.B. Ill. Rte. 120

Concrete Deck Patching, Partial Depth - 40 S.Y.
Protective Coat (All Patches) - 40 S.Y.
(See Sht. # 2 of 3 for Deck Details)

LOADING
H20 S16 - 44

STRESSES

fs	STRUCTURAL STEEL	= 18,000 #/□"
fs	REINFORCING STEEL	= 20,000 #/□"
fc	SUPERSTRUCTURE	= 1,400 #/□"
fc	ABUTMENTS & PIERS	= 800 #/□"
n	= 10	

MAX. PILE LOADS.
ABUTMENTS = 35 TONS
PIERS = 20 TONS

RECOMMENDED TRAFFIC CONTROL STD. 2316 - Set up Incl. Loc. # 7

ALFRED BENESCH & ASSOCIATES CONSULTING ENGINEERS
111 WEST JACKSON BLVD. SUITE 2 CHICAGO - ILLINOIS

STATE BRIDGE NO. 044-0347

SUMMARY OF QUANTITIES SECTION 12-F-1

ITEM	UNIT	QUANTITY				
		NORTH BRIDGE		SOUTH BRIDGE		TOTAL
		SUPERSTR.	SUBSTR.	SUPERSTR.	SUBSTR.	
CLASS 'A' CONCRETE	CU. YDS.	1014.1	223.8	207.8	239.2	2684.7
HANDRAIL CONCRETE	CU. YDS.	——	3.8	——	3.8	7.6
REINFORCEMENT BARS	LBS.	34,030	12,540	38,310	24,160	108,240
ERECTING STRUCTURAL STEEL	LBS.	173,770	——	232,120	——	405,890
ERECTING METAL HANDRAIL	LIN. FT.	353.7	——	353.7	——	707.4
GUIDE PLATES	EACH	1	——	1	——	2
FURNISHING CONCRETE PILES	LIN. FT.	——	595	——	765	1360
FURNISHING CREOSOTED PILES, 20' TO 20'	LIN. FT.	——	972	——	1056	2028
DRIVING CONCRETE PILES	LIN. FT.	——	595	——	765	1360
DRIVING TIMBER PILES	LIN. FT.	——	972	——	1056	2028
TEST PILES (CONCRETE)	EACH	——	2	——	2	4
TEST PILES (TIMBER)	EACH	——	2	——	2	4
SLOPE WALL	SQ. YDS.	——	——	——	——	765
CLASS 'A' EXCAVATION FOR STRUCTURES	CU. YDS.	——	190	——	140	330
CLASS 'B' EXCAV. ON FOR STRUCTURES	CU. YDS.	——	290	——	370	660
BORROW EXCAVATION	CU. YDS.	——	——	——	——	21,050
EARTH EXCAVATION	CU. YDS.	——	——	——	——	1860
BITUMINOUS CONCRETE BINDER COURSE	TONS	——	——	——	——	77
BITUMINOUS CONC. SURFACE COURSE, MIX DESIGNED ROLLER GATE TYPE, SUB CLASS 3-11	TONS	——	——	——	——	73
BITUMINOUS MATERIALS (PRIME COAT)	GALS.	——	——	——	——	435
CORRUGATED METAL PIPE, 18"	LIN. FT.	——	——	——	——	225
GRAVEL OR CRUSHED STONE BASE COURSE, TYPE A	TONS	——	——	——	——	381
GRAVEL OR CRUSHED STONE SHOULDERS	TONS	——	——	——	——	75
GRAVEL OR CRUSHED STONE SURFACE COURSE, TYPE A (3" COMPACTED @ P.E.)	TONS	——	——	——	——	38
PAVEMENT FABRIC	SQ. YDS.	——	——	——	——	2110
PORTLAND CEMENT CONCRETE PAVEMENT (10")	SQ. YDS.	——	——	——	——	2110
POSTLAND CEMENT CONC. PAVEMENT (12"x10'-0"x16'-6")	SQ. YDS.	——	——	——	——	208
SURFACE BITUMINOUS MATERIAL, TYPE A	TONS	——	——	——	——	880
PAVEMENT REMOVAL	SQ. YDS.	——	——	——	——	128
INLETS	EACH	——	——	——	——	1
REMOVAL OF EXISTING STRUCTURES	EACH	——	——	——	——	1
BARRICADES	EACH	——	——	——	——	4
STEEL PLATE BEAM GUARD RAIL	LIN. FT.	——	——	——	——	75

NOTE: TOTAL QUANTITIES FOR 2 BRIDGES INCLUDE DETOUR ROAD QUANTITIES FROM SHEET 16.

SUMMARY OF QUANTITIES - SECTION 12-F-1

ITEM	UNIT	QUANTITY		
		N. BRIDGE	S. BRIDGE	TOTAL
FURNISHING STRUCTURAL STEEL	LBS.	173,770	232,120	405,890
FURNISHING METAL HANDRAIL	LIN. FT.	353.7	353.7	707.4

Loc. ⑥ NORTH AND SOUTH BRIDGES: TOTAL QUANT.
EXPANSION JOINT 4" - 118 LIN. FT.
CONCRETE DECK PATCHING, PARTIAL DEPTH - 125 S.Y.
PROTECTIVE COAT - 125 S.Y.

AT ABUTMENTS
(1) DRIVE TEST PILES
(2) CONSTRUCT EMBANKMENT AS SHOWN FROM EARTH EXCAVATION.
(3) DRIVE REMAINDER OF PILES THROUGH EMBANKMENTS. SEE SPECIAL PROVISIONS

Note: Locations of Expansion Joints are approximate. Exact locations will be determined by the Engineer. Expansion Joints shall be constructed at least 25 ft. from existing pavement joints.

Location # ⑥

GENERAL PLAN, ELEVATION & QUANTITIES
BRIDGE OVER DES PLAINES RIVER
F.A. ROUTE 21 • SECTION 1974-124-BR
LAKE COUNTY
STATION 367+16.86

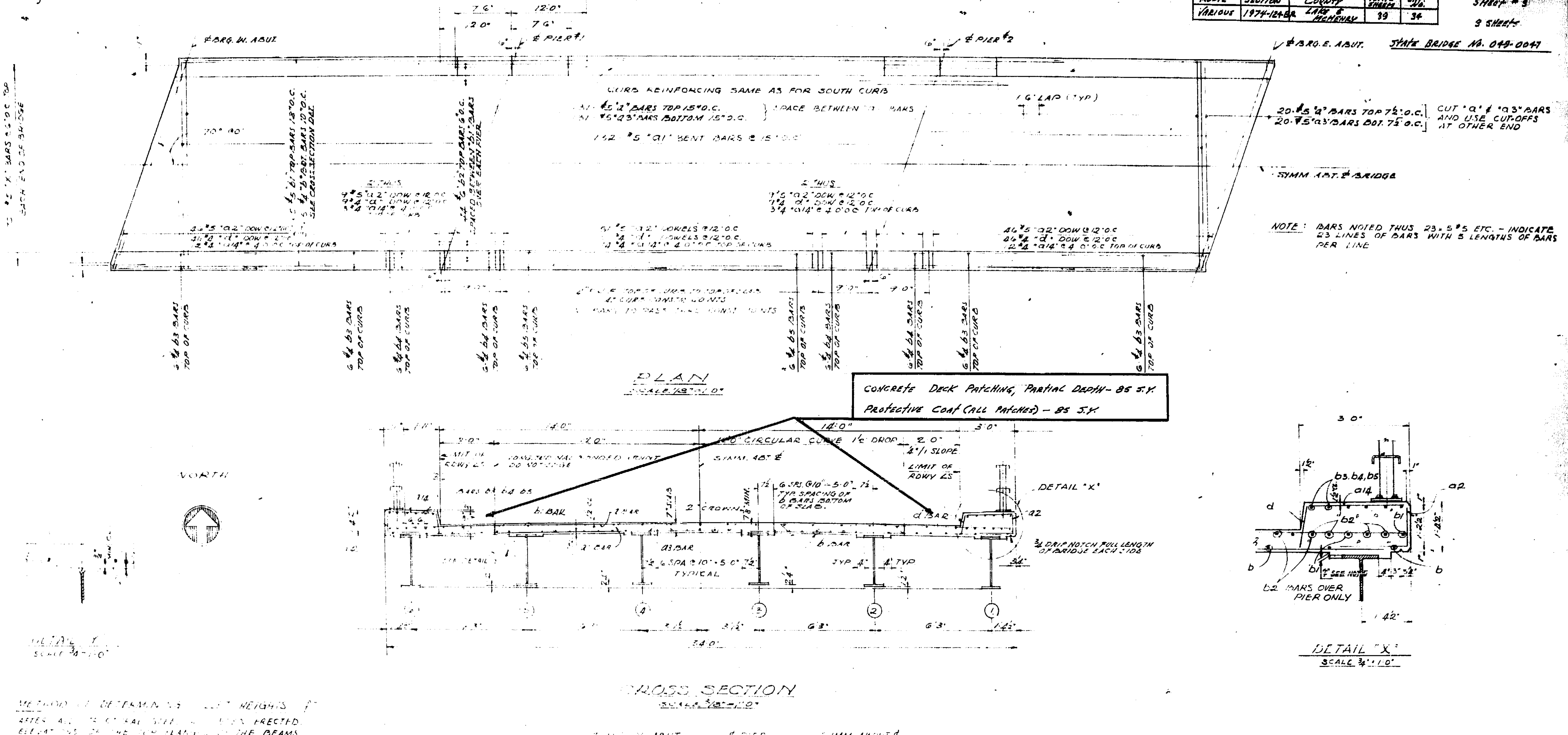
2316

Route	Section	County	Total Sheets	Sht. No.
Various	1974-124BR	Lake & McHenry	39	34

Sheet # 3

9 Sheets

STATE BRIDGE No. 049-0047



~~SUPERSTRUCTURE BILL OF MATERIAL~~

ITEM	UNIT	QUANTITY
CLASS "X" CONCRETE	CU. YDS.	164.1
REINFORCEMENT BARS	LBS.	30,030
METAL HANDRAIL	LIN. FT.	353.7
STRUCTURAL STEEL	LBS.	173,770

Location # 6

ALFRED BENESCH & ASSOCIATES CONSULTING ENGINEERS
111 WEST JACKSON BLVD. 565-4 CHICAGO · ILLINOIS

DECK REINFORCEMENT PLAN · NORTH BRIDGE

BRIDGE OVER DES PLAINES RIVER

F.A. ROUTE 21 · SECTION 1974-124BR

LAKE COUNTY

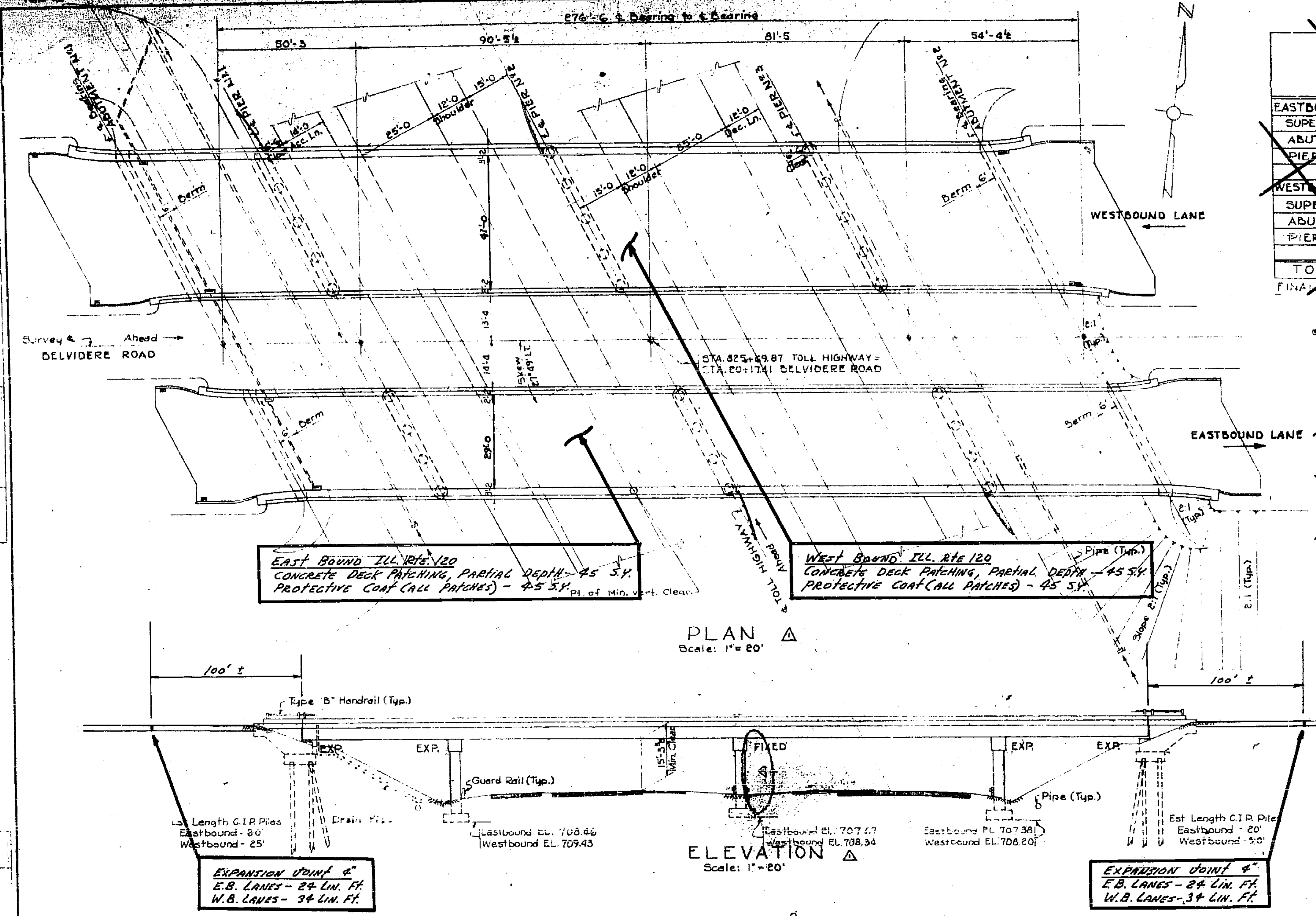
STATION 367+16.86

	Concrete (Cubic Yards) Class "K" in Footings	Class "K" above Footings	Class "M" Superstr. Curbs & Parapets	Reinf'g. Steel (Lbs.)								
EASTBOUND STRUCTURE												
SUPERSTRUCTURE			506.6	68972	344,091			604.4	2	10		
ABUTMENTS	50.0	285	48.6	7980			560				20	840
PIERS	60.0	74.0	52.2	28545		312						
WESTBOUND STRUCTURE												
SUPERSTRUCTURE			395.0	90649	445425			604.4	2	10		
ABUTMENTS	64.8	41.0	50.5	6452			990				30	780.5
PIERS	75.0	83.7	70.5	37278		486						
TOTALS	249.8	227.2	922.8	843,878	785,514	79.2	1510	1208.8	4	20	50	
FINAL QUANTITIES	[illegible]	68.5	1066.9	[illegible]	[illegible]	[illegible]	1615	215	[illegible]	72	30	1280.7

Route	Section	County	Total Sheets	Sht. No.
Various	1974-124 BR	Lake & McHenry	39	35

Sheet # 1 / 1 Sheet

State Br. # E.B. 049-9903
" " W.B. 049-9904



GENERAL NOTES

Design Specifications In accordance with the A.A.S.H.O. Specifications as modified by the following Illinois State Toll Highway Commission Specifications.

1. Design Specifications - Bridges.

3. Design Loads - Bridge designed for H20-S16-44 loading as specified in A.A.S.H.O. Specifications 1953, except that superstructure and approach slabs are designed for 32,000 lb. axle load.

4. Design Unit Stresses -
   Structural Steel bending (Tension) 18,000 #/sq. inch.
   Shear on rivets 13,500 #/sq. inch.
   Structural Steel bearing (including rivets) 27,000 #/sq. inch.
   Bearing Steel on concrete (including overturning & eccentric loading) 1,000 #/sq. inch.
   Reinforcing Steel (Tension) 20,000 #/sq. inch.
   △ Concrete: f_c = 5,000 #/sq. inch

△ Concrete: All exposed edges of concrete shall have a ¾ inch, 45° chamfer. Chamfer on vertical edges shall be continued a minimum of one foot below finished ground line. (Details indicate class of concrete to be used.)

Reinforcement: Reinforcing steel shall be of Intermediate Grade, Billet Steel, in accordance with the A.S.T.M. Spec. A15 with deformations in accordance with A.S.T.M. Spec. A305.

Reinforcement bending details in accordance with the "Manual of Standard Practice for Detailing Reinforced Concrete Highway Structures" (A.C.I. 315A-53).

Reinforcement shall be spliced a minimum of 20 diameters unless other-wise shown or noted.

Reinforcement clearance to concrete surfaces shall be 2 inches unless otherwise shown or noted.

Structural Steel: Structural steel shall be Structural Carbon Steel conforming to A.S.T.M. Spec. ...

Note: Locations of expansion joints are approximate, exact locations to be determined by the engineer. Expansion joints shall be constructed no closer than 25 Lin. Ft. to existing pavement joints.
The contractor shall anticipate, and be required to, patch concrete approach slabs at this location. This work shall be paid for as "Concrete Deck Patching, Partial Depth" - sq. foot.

Quantities Location # 7

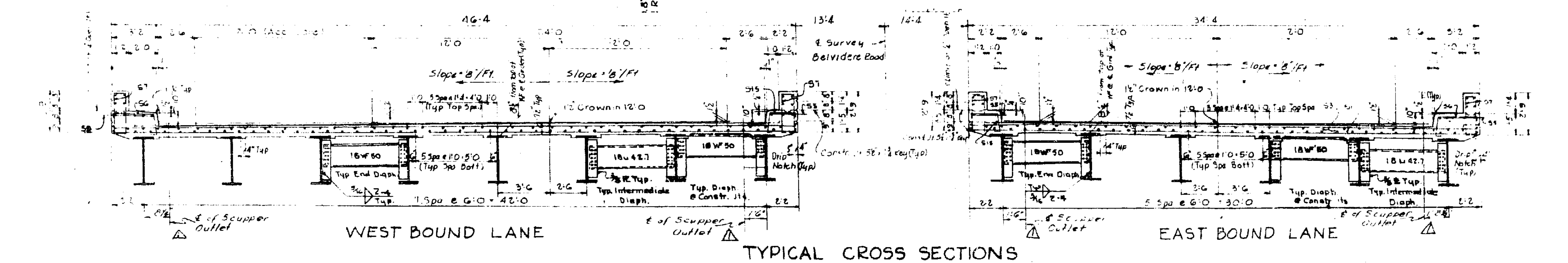
Concrete Deck Patching, Partial Depth - 90 S.Y.
Protective Coat - 90 S.Y.
Expansion Joint 4" - 116 Lin. Ft.

REFERENCE DRAWINGS

Sheet No. 1 - General Plan
No. 2 - Superstructure
No. 3 - Superstructure Details
No. 4 - Superstructure Details
No. 5 - Abutments - Eastbound
No. 6 - Abutments - Westbound
No. 7 - Piers - Eastbound
No. 8 - Piers - Westbound
No. 9 - Soil Boring Log
No. 10 - Approach Slab Details

Standards ST-1 - Handrail Details
ST-3 - Scupper & Drainage Details

Scuppers, W.I. Drain Pipe, General Notes, ...



SITE PLAN

PROFILE - BELVIDERE ROAD

PROFILE - TOLL HIGHWAY

Recommend traffic control Sta. 2516 - to include Loc. # 6 & # 7

Location # 7

Designed by:	
Drawn by:	K.H.
Checked by:	CEE

△ 3-18-57 REVISIONS

TRI-STATE ROUTE
BRIDGE T12-18
CARRYING SBI-20 ROUTE No. 120
BELVIDERE ROAD
STATION 825+69.87
GENERAL PLAN
SCALE: AS NOTED

CONTRACT T-12

SHEET

CHAS. W. COLE ...
SECTION ENGINEER

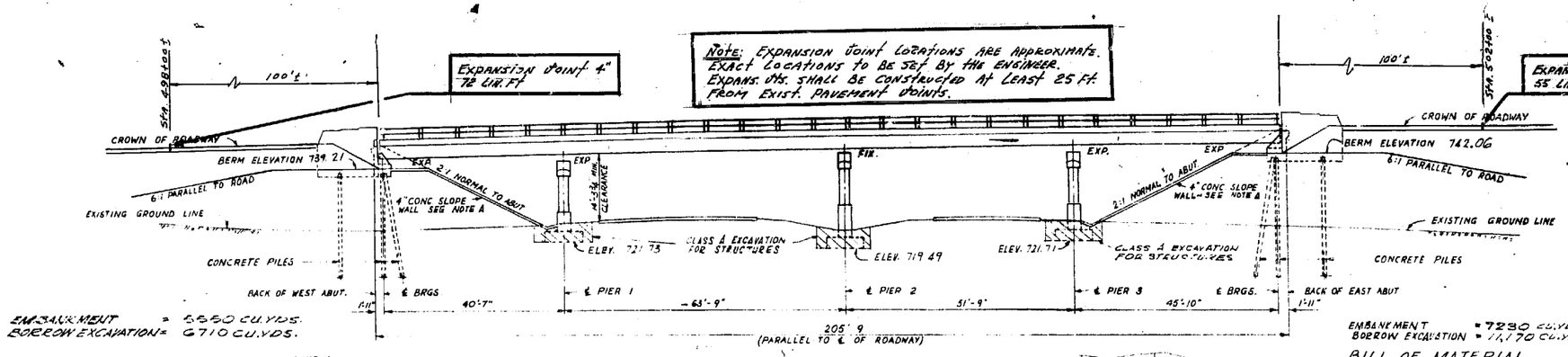
FED. AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHT. NO.
42 (SPUR)	10-11B	LAKE	11	4
STA.		TO STA		
FED. ROAD DIST. NO. 9		ILLINOIS	FED. AID PROJECT	

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHT. NO.
VARIOUS	1974-124BR	LAKE & MCHENRY	39	36

SHEET #1
2 SHEETS

STATE BRIDGE NO. 049-0016

Note: EXPANSION JOINT LOCATIONS ARE APPROXIMATE. EXACT LOCATIONS TO BE SET BY THE ENGINEER. EXPANS. JTS. SHALL BE CONSTRUCTED AT LEAST 25 FT. FROM EXIST. PAVEMENT JOINTS.



EMBANKMENT = 5550 CU.YDS.
BORROW EXCAVATION = 6710 CU.YDS.

EMBANKMENT = 7230 CU.YDS
BORROW EXCAVATION = 17,170 CU.YDS

NOTE A
REINFORCED WITH WELDED WIRE FABRIC 6"x6" MESH NO. 4 WIRE WEIGHING APPROX. 58# PER 100 SQ.FT.

BILL OF MATERIAL
SLOPE WALL AND DRAINAGE TROUGH

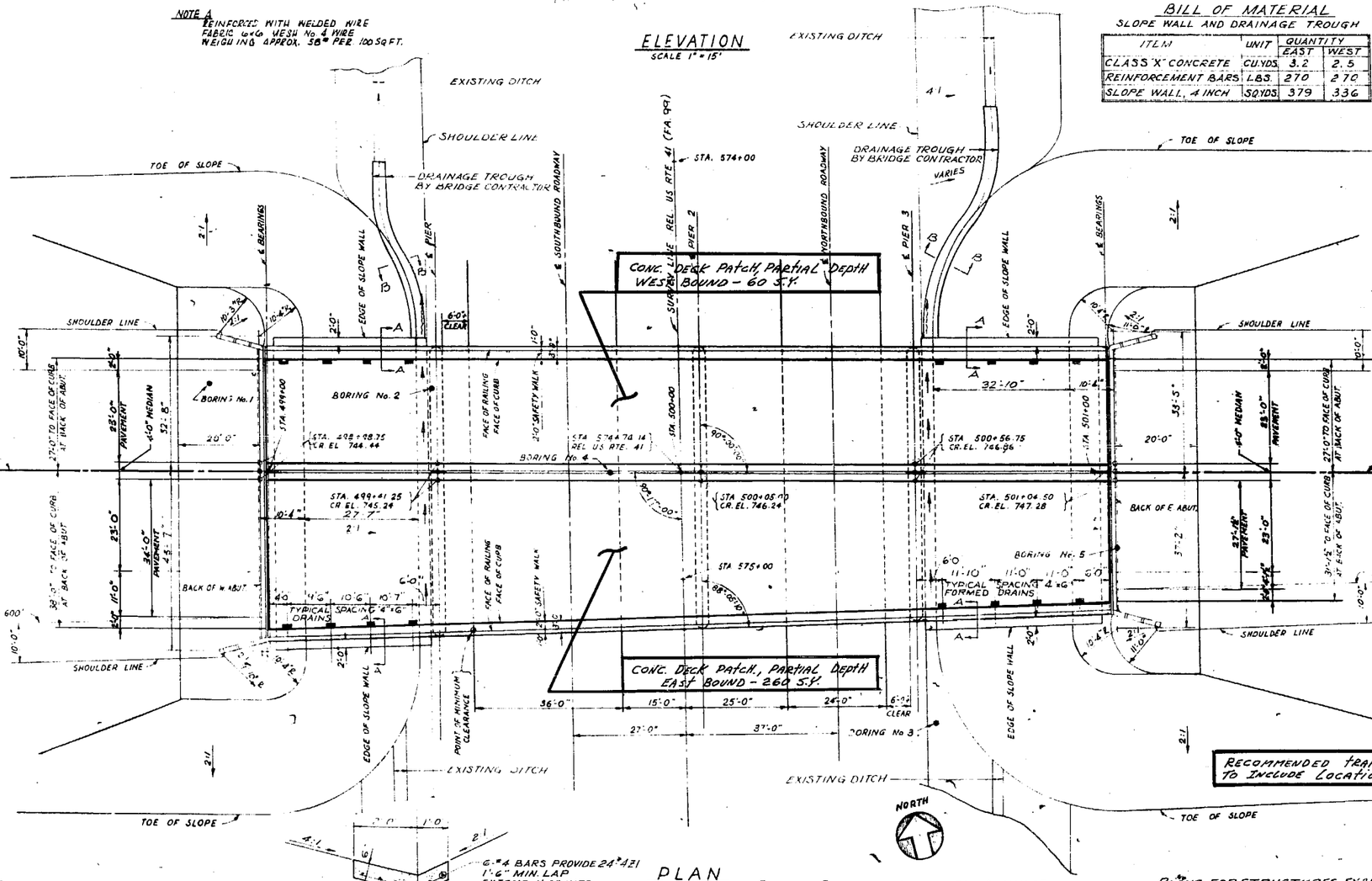
ITEM	UNIT	QUANTITY EAST	QUANTITY WEST
CLASS 'X' CONCRETE	CU.YDS.	3.2	2.5
REINFORCEMENT BARS	LBS.	270	270
SLOPE WALL, 4 INCH	SQ.YDS.	379	336

TOTAL BILL OF MATERIAL SECTION 10-HB

ITEM	UNIT	QUANTITY SUPERSTR.	QUANTITY SUBSTRUCT.	QUANTITY TOTAL
CLASS 'X' CONCRETE	CU. YDS.	363.5	458.5	822.5 *
REINFORCEMENT BARS	LBS.	85,370	76,150	161,520 *
ERECTING STRUCTURAL STEEL	LBS.	389,070	—	389,070
ERECTING METAL HANDRAIL	LIN FT.	407	—	407
NAME PLATES	EACH	1	—	1
FURNISHING CONCRETE PILES	LIN.FT.	—	1000	1000
DRIVING CONCRETE PILES	LIN.FT.	—	1000	1000
TEST PILE (CONCRETE)	EACH	—	2	2
CLASS A EXCAVATION FOR STRUCTURES	CU. YDS.	—	390	390
BORROW EXCAVATION	CU.YDS	—	—	17,880
PAVEMENT REMOVAL	SQ.YDS.	—	—	342
CURB REMOVAL	LIN. FT.	—	—	260
SLOPE WALL, 4 INCH	SQ. YDS.	—	—	715
GRAVEL OR CRUSHED STONE SURFACE COURSE, TYPE 'A'	TONS	—	—	104 *
CALCIUM CHLORIDE APPLIED	TONS	—	—	0.5

NOTE: TOTALS MARKED THUS * INCLUDE QUANTITIES FOR DRAINAGE TROUGH AND SLOPE WALL

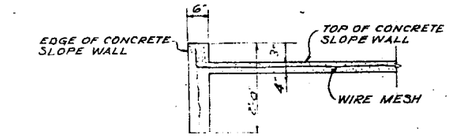
ELEVATION
SCALE 1" = 15'



PLAN
SCALE 1" = 15'-0"

NOTE BARS ARE BILLED FOR TOTAL LENGTH OF TROUGHS

SECTION "B-B"
SCALE: 2" = 1'-0"



SECTION "A-A"

LOADING
H20-S16-44

STRESSES

f_s	STRUCTURAL STEEL	=	18,000 #/in²
f_s	REINFORCING STEEL	=	20,000 #/in²
f_c	CONCRETE - SUPERSTR (PIERS	=	1,200 #/in²
f_c	CONCRETE - ABUTMENTS	=	800 #/in²
n	= 10		

MAX PILE LOADS:
ABUTMENTS 35 TONS

SOIL PRESSURE:
PIERS 4000# PER SQ.FT.

RECOMMENDED TRAFFIC CONTROL S16.2316-SE1 UP TO INCLUDE LOCATIONS #8 & #9

Location #8
REVISION A 7-20-60

Loc.#8 Quantities
CONCRETE DECK PATCHING, PARTIAL DEPTH - total 320 S.Y.
E.B. LANE - 260 S.Y. W.B. LANE - 60 S.Y.
(SEE SHT #2 OF 2 FOR DECK DETAILS)

Protective Coat (All Patches) - 320 S.Y.
Expansion Joint 4" - total 127 Lin. Ft.

Revised Plans for Structures Examined _____
Engineer of Bridge & Traffic Structures

Plans for Structures Examined Feb. 1, 1957
Engineer of Bridge & Traffic Structures

ALFRED BENESCH & ASSOCIATES CONSULTING ENGINEERS
111 WEST JACKSON BLVD. 4115-4 CHICAGO - ILLINOIS

GENERAL PLAN, ELEVATION & QUANTITIES
GRADE SEPARATION
F.A. ROUTE 42(SPUR) - WASHINGTON STREET
OVER ~~RELOCATED~~ U.S. ROUTE 41
~~PROJECT U-1-(99)~~
F.A. RTE 42(SPUR) SECTION ~~10-11B~~ 1974-124 BR
LAKE COUNTY
STATION 500+05.00

Revised 12-20-60 Added 2'-0" Cut off Wall Section A-A & Class X Conc. & Reinforcement Bars No. 2

2.316

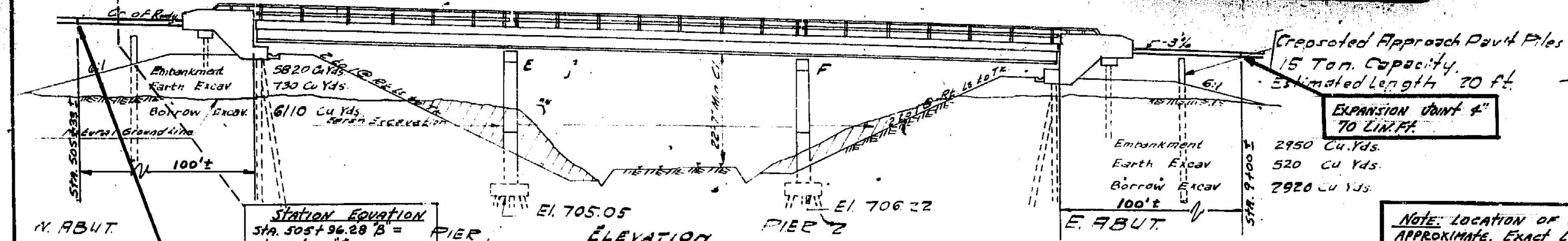
Exist. 30' spike in T.P. 118' Rt. Sta. 8+10 Elev. 724.86
Existing Structure - Plate girder and timber spans 1 @ 60'-0" and 6 @ 15'-0" with a 20'-0" Rdwy. Timber abuts. on concrete footings, main span, piling for approach spans. Structure to be removed by Bridge Contractor before construction of new bridge.

STATE OF ILLINOIS
[redacted]

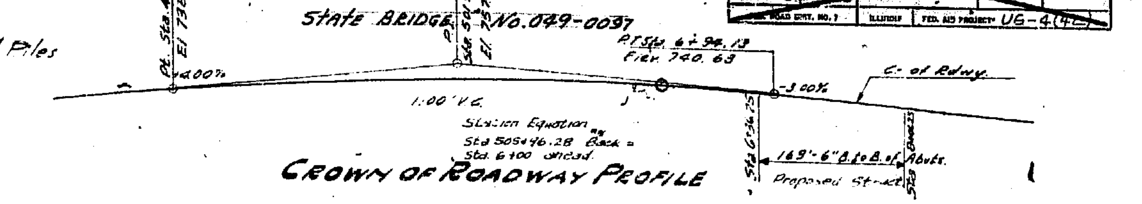
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHT. NO.
VARIOUS	1974-124-BR	LAKE & McHENRY	39	38

SHT #1 of 2 SHEETS

STATE BRIDGE No. 049-0097



Creosoted Approach Pavt. Piles 15 Ton Capacity. Estimated Length 20 ft.
Expansion Joint 4" 70 Lin. Ft.
Embankment 5820 Cu. Yds.
Earth Excav. 730 Cu. Yds.
Borrow Excav. 6110 Cu. Yds.
Embankment 2950 Cu. Yds.
Earth Excav. 520 Cu. Yds.
Borrow Excav. 7920 Cu. Yds.
100'±
El. 705.05
El. 706.22
Station Equation Sta. 505+96.28 'B' = Sta. 6+00 'A'
N. ABUT.
PIER
ELEVATION
PIER 2
E. ABUT.
Expansion Joint 4" 62 Lin. Ft.



Note: LOCATION OF EXPANSION JOINTS ARE APPROXIMATE. EXACT LOCATIONS TO BE DETERMINED BY THE ENGINEER. EXPANSION JOINTS ARE TO BE CONSTRUCTED AT LEAST 25' FROM EXIST. PAVE. JOINTS

~~STATION 7+21.50~~
~~BUILT 196 BY~~
~~STATE OF ILLINOIS~~
~~F.A. RT. 42 SPUR SEC. 10 VB~~
~~F.A. PROJ. UG-4(42) STA. 7+21.50~~
~~LOADING H20-S16~~

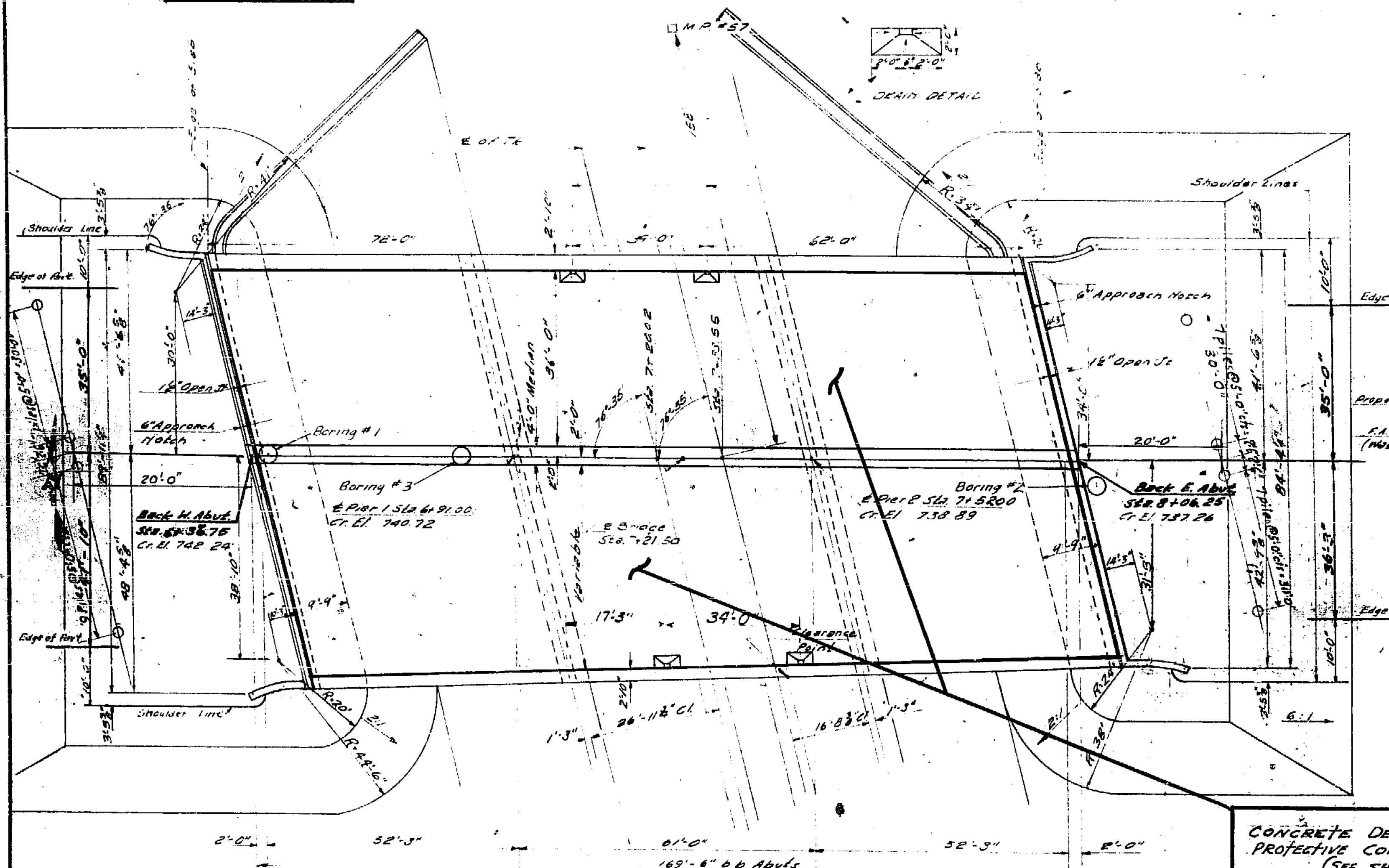
NAME PLATE
Std. 2113

GENERAL NOTES

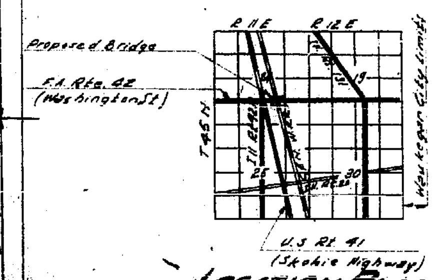
~~Class "X" Concrete shall be used throughout.~~
~~The Concrete floor slab shall be finished in accordance with Art. ... of the Standard Specifications.~~
~~Rivets 3/4" Ø. Open holes 13/16" Ø unless noted.~~

~~All bolsters, rockers, bearing plates, lead plates, pintles and anchor bolts shall be fabricated and set in accordance with Article 51.15 of the Standard Specifications and are included for payment as Structural Steel. Est. ... 21,400#~~
~~Anchor bolts shall be set before riveting diaphragms over supports.~~
~~Expansion guards are included for payment as Structural Steel.~~
~~Expansion Guards shall be fabricated & erected in accordance with Article 51.13(e) of the Standard Specifications.~~
~~Except as otherwise provided, all Structural Steel shall receive one shop coat of red lead paint and two field coats of aluminum paint. See Articles 561 to 565 inclusive of the Standard Specifications.~~
~~The following surfaces of expansion guards shall be given two shop coats of red lead paint: all surfaces inaccessible after erection ... Anchor ... shall not be painted.~~
~~All paint shall be furnished and applied by the Contractor.~~
~~The Contractor shall drive 2 Concrete test piles for abutments in permanent locations and two timber piles as directed by the Engineer before ordering remainder of piles.~~
~~All timber piles in place shall be creosoted.~~
~~Before Superstructure is placed construct embankment in accordance with Section 16 of the Standard Specifications.~~

Loc. # 9 Quantities
CONCRETE DECK PATCHING, PARTIAL DEPTH - 45 S.Y.
PROTECTIVE COAT (ALL PATCHES) - 45 S.Y.
EXPANSION JOINT 4" - 132 LIN. FT.



CONCRETE DECK PATCHING; PARTIAL DEPTH - 45 S.Y.
PROTECTIVE COAT (ALL PATCHES) - 45 S.Y.
(SEE SHT. #2 OF 2 FOR DECK DETAILS)



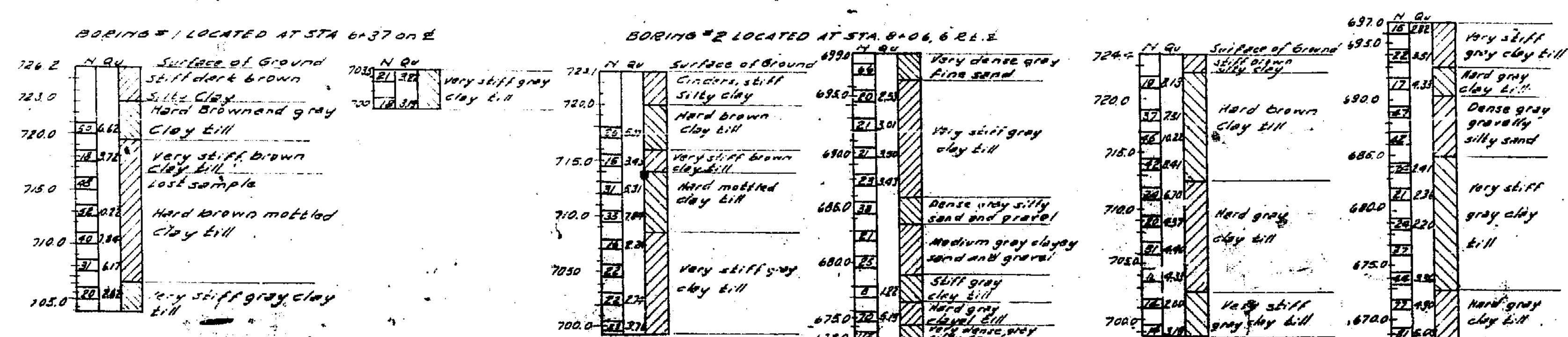
STRESSES

Fc. = 1400 #/□" Super
Fc. = 1000 #/□" Sub
Fs. = 20000 #/□" Reinf.
Fs. = 18000 #/□" Struct.
n = 10

BILL OF MATERIAL SEC 10 VB

ITEM		SUPER	SUB	TOTAL
~~Class "X" Concrete~~	Cu. Yds.	378.3	578.9	957.2
~~Reinforcement Bars~~	Lbs.	89350	59560	148910
~~Structural Steel~~	Lbs.	402,100		402,100
~~Name Plates~~	Each			1
~~Metal Handrail~~	Lin. Ft.	365		365
~~Class "A" Excavation for Struct.~~	Cu. Yds.		670	670
~~Borrow Excavation~~	Cu. Yds.			9030
~~Concrete Piles~~	Lin. Ft.		1892	1892
~~Creosoted Piles~~	Lin. Ft.		2840	2840
~~Test Piles (Concrete)~~	Each			2
~~Test Piles (Timber)~~	Each			2
~~Removal of Existing Structure~~	Each			1
~~Earth Excavation~~	Cu. Yds.			1250
SEC 10 VF				
Furnishing Structural Steel				402,100

RECOMMENDED TRAFFIC CONTROL STD. 2316 - SET UP TO INCLUDE LOCATIONS # 8 & # 9



BORING #1 LOCATED AT STA. 6+37 on E
Surface of Ground
Stiff dark brown silty clay
Hard brown and gray clay till
Very stiff brown clay till
Lost sample
Hard brown mottled clay till
Very stiff gray clay till
Very stiff gray clay till
BORING #2 LOCATED AT STA. 8+06, 6 Rt. E
Surface of Ground
Cinders, stiff silty clay
Hard brown clay till
Very stiff brown clay till
Hard mottled clay till
Very stiff gray clay till
Very dense gray fine sand
Very stiff gray clay till
Dense gray silty sand and gravel
Medium gray clayey sand and gravel
Stiff gray clay till
Hard gray clay till
Very dense gray silty sand
BORING #3 LOCATED AT STA. 6+72 on E
Surface of Ground
Stiff brown silty clay
Hard brown clay till
Hard gray clay till
Very stiff gray clay till
Very stiff gray clay till
Hard gray clay till
Dense gray gravelly silty sand
Very stiff gray clay till
Hard gray clay till

DESIGNED	Charles W. Bleck
CHECKED	H. S. Mengkuirke
DRAWN	Charles W. Bleck / Mercado
CHECKED	H. S. M.

FEB 11 1959
EXAMINED — ENGINEER OF BRIDGES AND TRAFFIC STRUCTURES
PASSED — ENGINEER OF DESIGN
APPROVED — R. K. Bartelsmeyer, CHIEF HIGHWAY ENGINEER

~~PROJECT UG-4(42)~~
GENERAL PLAN
C & N.W. R.R. OVERHEAD
SPUR TO F.A. RT. 42 - SEC. ~~10 VB~~ 1974-124 BR
LAKE COUNTY
STATION 7+21.50

LOCATION # 9

~~LOADING H20-S16-44~~

Revised: 1-25-60 ...
Revised: 9-9-60 Class X Conc. & Reinforcement Bars Quantities J.D.
Revised: 12-15-60 Paint Steel Quantities

2316