

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
649	(108BR)BP	LIVINGSTON	14	1
		ILLINOIS	CONTRACT NO. 66P83	

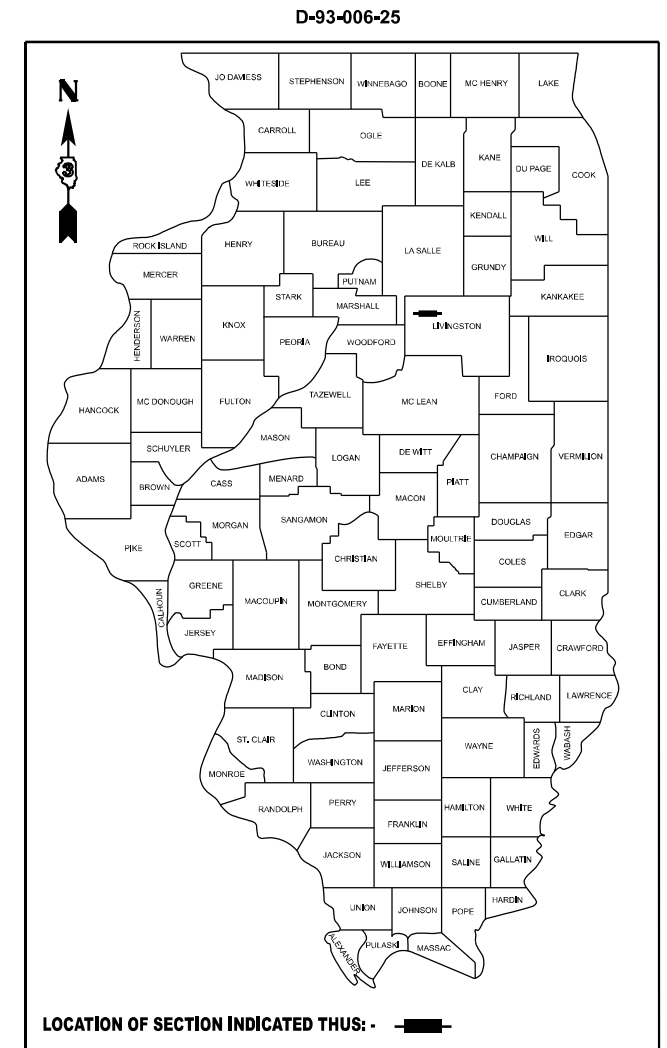
- INDEX OF SHEETS**
- COVER SHEET
 - GENERAL NOTES
 - SUMMARY OF QUANTITIES
 - TYPICAL SECTIONS
 - SCHEDULES
 - TRAFFIC CONTROL AND PROTECTION, STANDARD 701321 FOR STRUCTURE NO. 053-0160
 - TEMPORARY RUMBLE STRIPS (SPECIAL)
 - GUARDRAIL / BARRIER WALL DELINEATION DETAILS
 - TEMPORARY INFORMATION SIGNING
 - EXISTING STRUCTURE PLANS FOR STRUCTURE NO. 053-0160 FOR INFORMATION ONLY

**PROPOSED
HIGHWAY PLANS**

**F.A.P. ROUTE 649 (IL 17)
SECTION (108BR)BP
PROJECT STP-HRL9(699)
BRIDGE PAINTING
LIVINGSTON**

C-93-026-25

- HIGHWAY STANDARDS**
- 000001-08 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
 - 001006 DECIMAL OF AN INCH AND OF A FOOT
 - 701001-02 OFF-ROAD OPERATIONS 2L, 2W, MORE THAN 15' AWAY
 - 701006-05 OFF-ROAD OPERATIONS 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
 - 701201-05 LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS ≥ 45 MPH
 - 701301-04 LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
 - 701901-10 TRAFFIC CONTROL DEVICES
 - 704001-08 TEMPORARY CONCRETE BARRIER



FUNCTIONAL CLASSIFICATION
RURAL - MAJOR COLLECTOR
F.A.P. ROUTE 649 (IL 17)
2021 ADT = 1800
P.V. 93.4 % S.U. 3.3 % M.U. 3.3 %

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED December 11, 2024

Trisha Thompson
REGIONAL ENGINEER

January 31, 2025

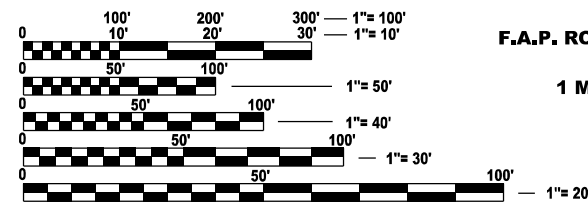
Scott A. [Signature]
ENGINEER OF DESIGN AND ENVIRONMENT

January 31, 2025

[Signature]
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

**PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS**

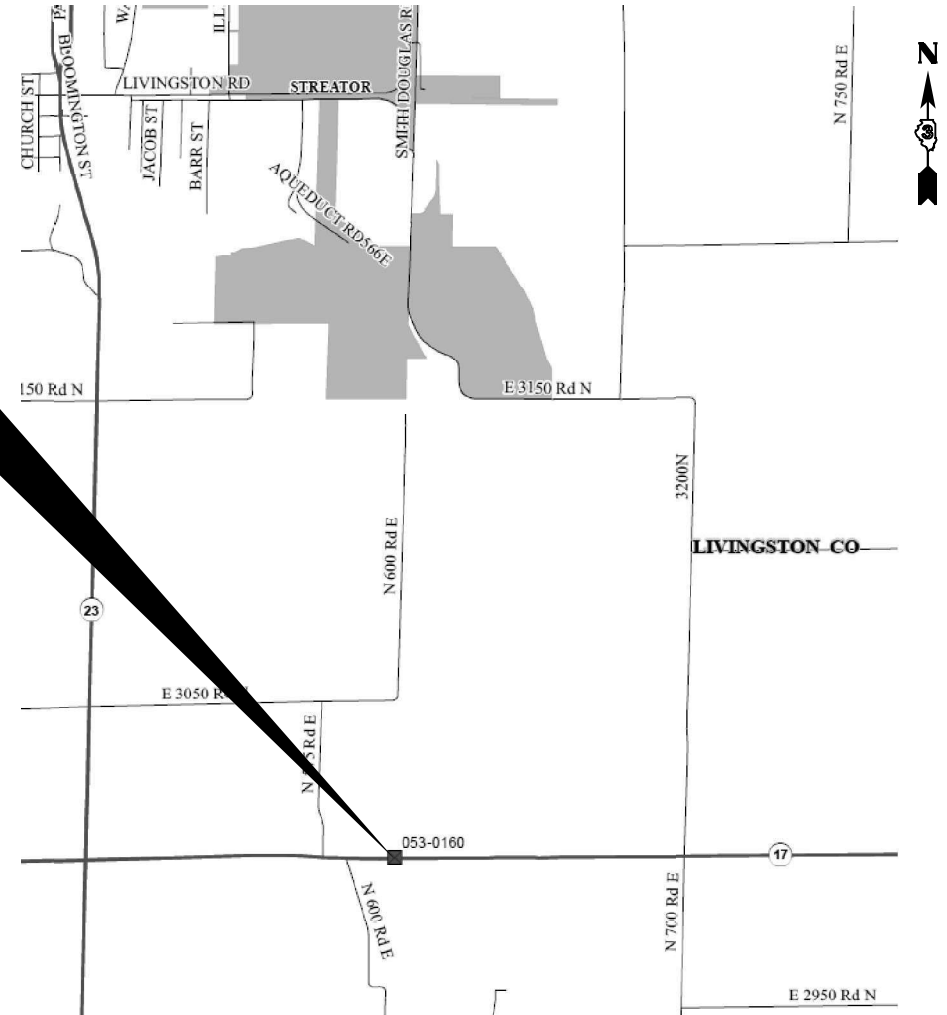
PROJECT LOCATION 1
STRUCTURE NO. 053-0160
SECTION (108BR)BP
STATION 385+489
F.A.P. ROUTE 649 (IL ROUTE 17) OVER
PRAIRIE CREEK
1 MI. EAST OF IL ROUTE 23



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

PROJECT ENGINEER: YOGESH PATEL P.E.
UNIT CHIEF: RON WOODSHANK
DISTRICT 3 (815) 434-6131
CONTRACT NO. 66P83



GENERAL NOTES

PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING PLANS ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. THE CONTRACTOR SHALL FIELD VERIFY EXISTING DIMENSIONS AND DETAILS AFFECTING NEW CONSTRUCTION AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN SCOPE OF WORK; HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.

THE CONTRACTOR SHALL BE REQUIRED TO SECURE WASTE CONTAINERS THAT REMAIN ON THE JOB SITE. THIS WILL ENTAIL THAT ALL WASTE CONTAINERS CANNOT BE MOVED OR OPENED DURING NON-WORKING HOURS.

WORKING DAYS SHALL BE CHARGED UNTIL THE CONTRACTOR OR SUBCONTRACTOR LICENSED TO DISPOSE OF LEAD OR NON-LEAD PAINT CLEANING RESIDUES HAS REMOVED THE WASTE MATERIAL FROM THE JOB SITE ACCORDING TO ALL FEDERAL, STATE AND LOCAL LAWS AND ORDINANCES. IF THE LICENSED CONTRACTOR OR SUBCONTRACTOR FAILS TO DISPOSE OF THE LEAD OR NON-LEAD PAINT CLEANING RESIDUES ON OR BEFORE THE SPECIFIED NUMBER OF WORKING DAYS, LIQUATED DAMAGES SHALL BE CHARGED PER CALENDAR DAY ACCORDING TO ARTICLE 108.09 OF THE STANDARD SPECIFICATIONS UNTIL SUB TIME THAT ALL PAINT RESIDUE MATERIALS HAVE BEEN REMOVED OFF THE SITE AND DISPOSED OF.

STRUCTURE NOTES

STRUCTURE NO. 053-0160 SHALL BE CONSIDERED AS "LOCATION 1".

EXISTING STRUCTURAL STEEL COATING(S) ON STRUCTURE NO. 053-0160 ARE NON-LEAD BASED COATINGS. CLEANING AND PAINTING OF EXISTING STRUCTURAL STEEL SHALL BE AS SPECIFIED IN THE SPECIAL PROVISION FOR "CLEANING AND PAINTING EXISTING STEEL STRUCTURES" AND THE SPECIAL PROVISION FOR "CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUES" AND AS SPECIFIED BELOW.

SSPC-QP1 "PAINTING CONTRACTOR CERTIFICATIONS" SHALL BE REQUIRED FOR THIS STRUCTURE.

CLEANING AND PAINTING EXISTING STRUCTURAL STEEL

- (a) ALL EXISTING STRUCTURAL STEEL, INCLUDING I-BEAMS, BOX BEAMS, GIRDERS, DIAPHRAGMS, CROSS/LATERAL FRAMING, STEEL COMPONENTS OF EXISTING BEARINGS, STEEL FLOOR DRAINS (WHEN PRESENT), STEEL HANDRAILS (WHEN PRESENT) SHALL BE CLEANED PER THE REQUIREMENTS OF "NEAR WHITE BLAST CLEANING - SSPC-SP-10".

ALUMINUM HANDRAILS, WHEN PRESENT SHALL NOT BE CLEANED AND PAINTED.

- (b) ALL EXISTING STRUCTURAL STEEL, INCLUDING I-BEAMS, BOX BEAMS, GIRDERS, DIAPHRAGMS, CROSS/LATERAL FRAMING, STEEL COMPONENTS OF EXISTING BEARINGS, STEEL FLOOR DRAINS (WHEN PRESENT), STEEL HANDRAILS (WHEN PRESENT) SHALL BE PAINTED PER THE REQUIREMENTS OF "PAINT SYSTEM 1-OZ/E/U".

- 1) THE FINAL FINISH COAT FOR ALL INTERIOR STRUCTURAL STEEL SHALL BE "GRAY, MUNSELL O. 5B 7/1".
- 2) THE FINAL FINISH COAT FOR THE EXTERIOR FACE, BOTTOM FLANGE AND BEARING ASSEMBLIES OF THE FASCIA BEAMS SHALL BE "GREEN, MUNSELL NO. 7.5G 1/2".

COMITTMENTS

NONE

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DISTRICT THREE
AS BUILT INFORMATION**

SUPERVISING CONSTRUCTION FIELD ENGINEER

RESIDENT ENGINEER / TECHNICIAN

**START & END DATES
OF CONSTRUCTION:**

INSPECTORS:

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USER NAME = ronald.woodshank	DESIGNED - RW	REVISED -
	DRAWN - RW	REVISED -
	CHECKED - YP	REVISED -
PLOT DATE = 7/24/2024	DATE - 6/7/2024	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

GENERAL NOTES

SCALE: SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
649	(108BR)BP	LIVINGSTON	14	2
			CONTRACT NO. 66P83	
		ILLINOIS FED. AID PROJECT		

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CONSTRUCTION CODE
BRIDGE PAINTING
80% FED 20% STATE

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	BRIDGE
				0047 S.N. 053-0160
67100100	MOBILIZATION	L SUM	1	1
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	1
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1
70300100	SHORT TERM PAVEMENT MARKING	FOOT	60	60
70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	20	20
70400100	TEMPORARY CONCRETE BARRIER	FOOT	225	225
70600251	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	1	1
* 78009004	MODIFIED URETHANE PAVEMENT MARKING - LINE 4"	FOOT	275	275
* 78009006	MODIFIED URETHANE PAVEMENT MARKING - LINE 6"	FOOT	150	150
78300202	PAVEMENT MARKING REMOVAL - WATER BLASTING	SQ FT	165	165
X5060601	CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUES NO. 1	L SUM	1	1
X5067501	BRIDGE CLEANING AND PAINTING WARRANTY NUMBER 1	L SUM	1	1
X7010118	TEMPORARY RUMBLE STRIPS (SPECIAL)	EACH	6	6

***SPECIALITY ITEMS**

USER NAME = ronald.woodshank	DESIGNED - RW	REVISED -
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	CHECKED - YP	REVISED -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: SHEET 1 OF 2 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
649	(108BR)BP	LIVINGSTON	14	3
			CONTRACT NO. 66P83	
		ILLINOIS FED. AID PROJECT		

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE
				BRIDGE PAINTING 80% FED 20% STATE
				BRIDGE 0047 S.N. 053-0160
X7200061	TEMPORARY INFORMATION SIGNING	SQ FT	42	42
Z0010501	CLEANING AND PAINTING STEEL BRIDGE NO. 1	L SUM	1	1

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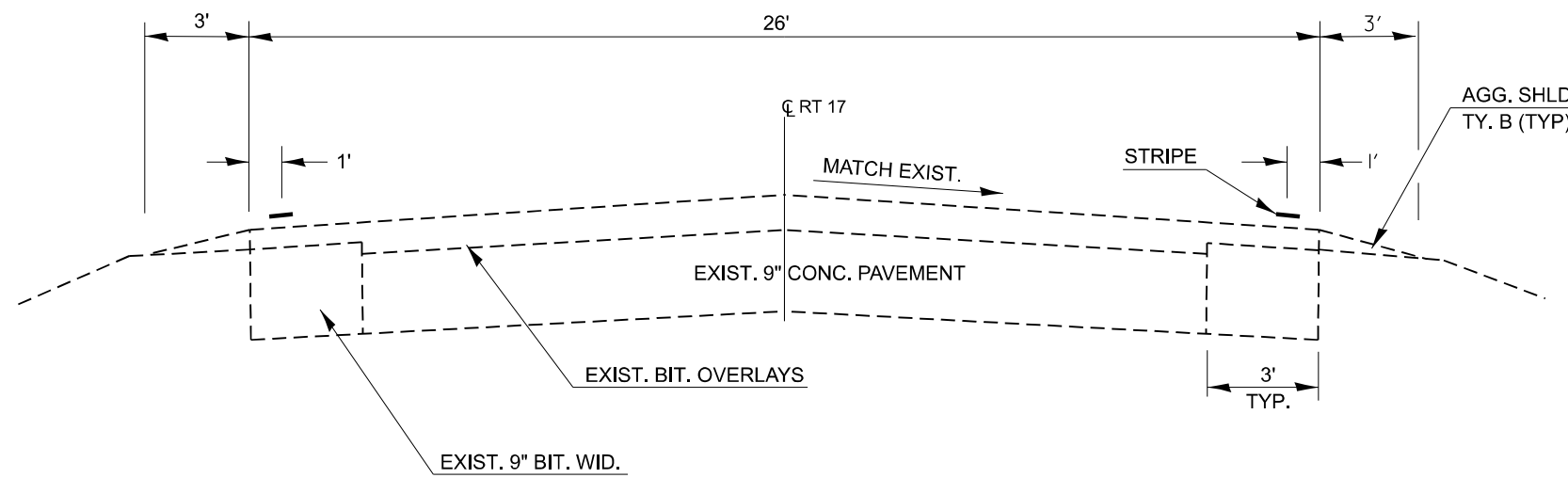
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PLOT DATE = 8/21/2024	DATE - 6/7/2024	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

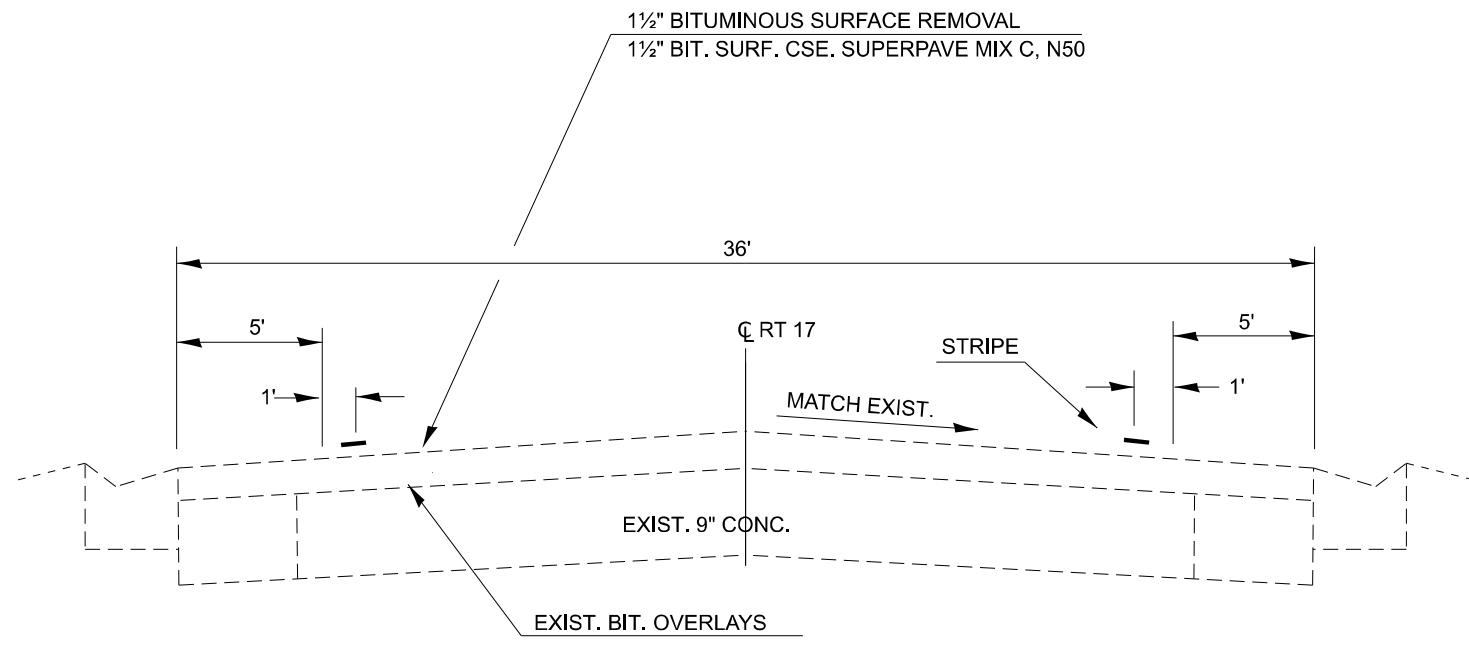
TYPICAL SECTIONS

SCALE: SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
649	(108BR)BP	LIVINGSTON	14	4
CONTRACT NO. 66P83				
ILLINOIS FED. AID PROJECT				



TYPICAL SECTION
WEST END OF STRUCTURE



TYPICAL SECTION
EAST END OF STRUCTURE

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	CHECKED - YP	REVISED -
PLOT DATE = 7/24/2024	DATE - 6/7/2024	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTION

SCALE: SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
649	(108BR)BP	LIVINGSTON	14	5
CONTRACT NO. 66P83				
ILLINOIS FED. AID PROJECT				

SCHEDULE - TRAFFIC CONTROL AND PROTECTION

LOCATION	TRAFFIC CONTROL AND PROTECTION STANDARD 701201	TRAFFIC CONTROL AND PROTECTION STANDARD 701321	TEMPORARY BRIDGE TRAFFIC SIGNALS	TEMPORARY INFORMATION SIGN	TEMPORARY RUMBLE STRIPS (SPECIAL)	TEMPORARY CONCRETE BARRIER	IMPACT ATTENUATORS, TEMPORARY NON-REDIRECTIVE, NARROW TEST LEVEL 3
SN 050-0160	L SUM	EACH	EACH	SQ FT	EACH	FOOT	EACH
PROJECT	1	1	1	42	6	225	2
TOTAL	1	1	1	42	6	225	2

SCHEDULE - PAVEMENT MARKING

LOCATION	SHORT TERM PAVEMENT MARKING	MODIFIED URETHANE PAVEMENT MARKING LINE 4"		MODIFIED URETHANE PAVEMENT MARKING LINE 6"	PAVEMENT MARKING REMOVAL WATERBLASTING		SHORT TERM PAVEMENT MARKING REMOVAL
	FOOT	FOOT	FOOT	FOOT	SQ FT	SQ FT	SQ FT
SN 053-0160	YELLOW	WHITE	WHITE	YELLOW	LINE 4"	LINE 6"	
PROJECT	60	275	0	150	90	75	20
TOTAL	60	275		150	165		20

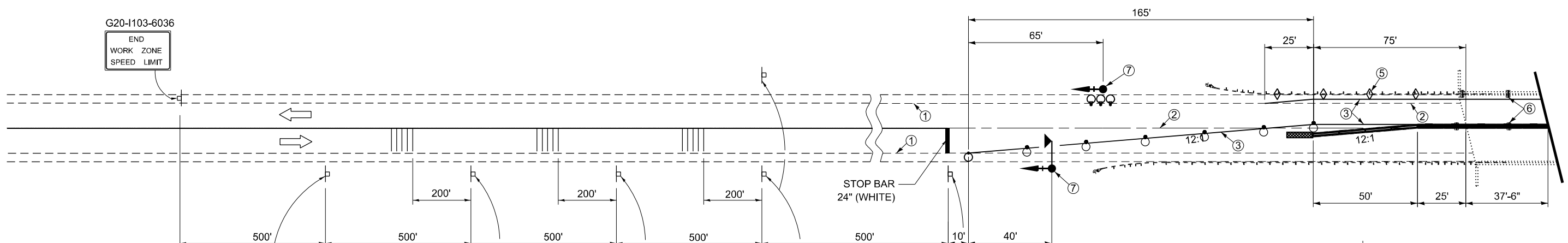
SCHEDULE - CLEANING AND PAINTING

LOCATION	CONTAINMENT AND DISPOSAL NON-LEAD PAINT CLEANING RESIDUES NO. 1	CLEANING AND PAINTING STEEL BRIDGE NO. 1	BRIDGE CLEANING AND PAINTING WARRANTY NUMBER 1
SN 053-0160	L SUM	L SUM	EACH
TOTAL	1	1	1

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G20-1103-6036
END
WORK ZONE
SPEED LIMIT



ROAD
CONSTRUCTION
AHEAD
W20-1103(0)-48

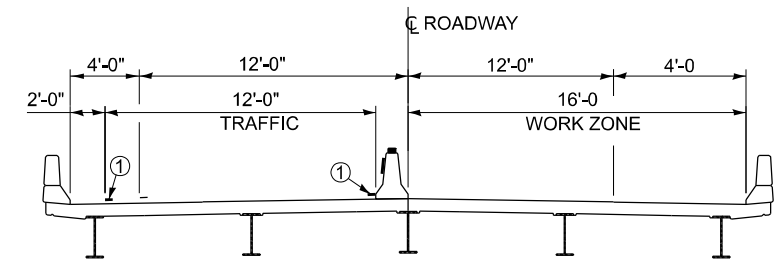
12'-0"
W12-1102(O)-48

ONE LANE
ROAD
AHEAD
W20-4(0)-48

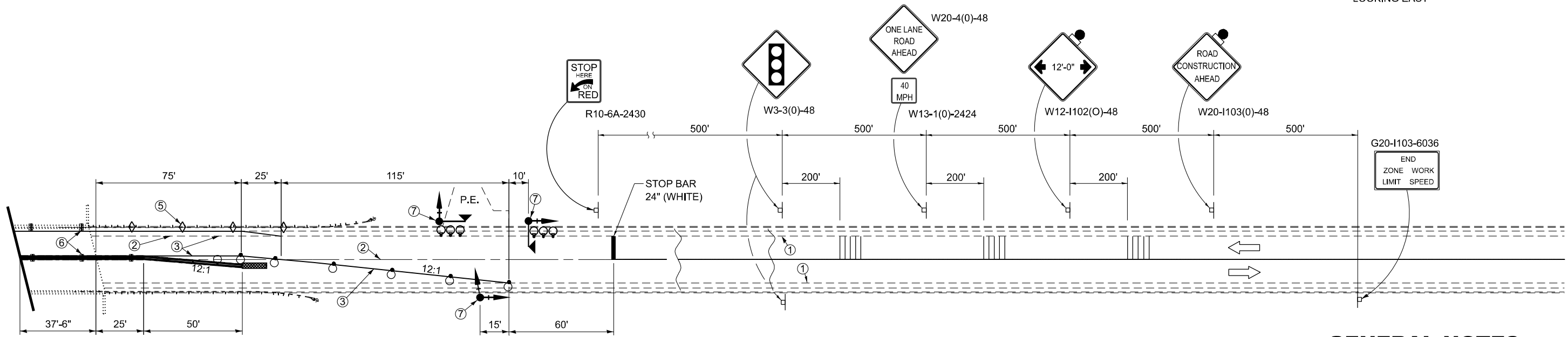
W3-3(0)-48

STOP
HERE
ON
RED
R10-6A-2430

40
MPH
W13-1(0)-2424



CROSS SECTION
LOOKING EAST



STOP
HERE
ON
RED
R10-6A-2430

W3-3(0)-48

ONE LANE
ROAD
AHEAD
40
MPH
W13-1(0)-2424

12'-0"
W12-1102(O)-48

ROAD
CONSTRUCTION
AHEAD
W20-1103(0)-48

G20-1103-6036
END
ZONE
LIMIT
SPEED

SYMBOLS

- WORK AREA
- SIGN
- TYPE III BARRICADE WITH FLASHING LIGHTS
- IMPACT ATTENUATOR
- DRUM (TANGENT ONLY)
- TRAFFIC SIGNAL WITH BACK PLATE AND MICROWAVE DETECTOR
- DRUM WITH STEADY BURNING BI-DIRECTIONAL LIGHT (TAPER ONLY)
- TEMPORARY CONCRETE BARRIER
- TEMPORARY RUMBLE STRIP (SPECIAL)
- BARRIER WALL REFLECTOR, TYPE "C"
- CRYSTAL, BIDIRECTIONAL GUARDRAIL REFLECTOR
- FLASHING BI-DIRECTIONAL LIGHT
- TRAFFIC SIGNAL WITH BACK PLATE

- ① EXISTING PAVEMENT MARKING (EDGE LINE)
- ② PAVEMENT MARKING REMOVAL (C STRIPE STOP BAR TO STOP BAR)
- ③ TEMPORARY PAVEMENT MARKING
- ④ TYPE III BARRICADE TO BE PLACED WHEN NO WORK IS BEING PERFORMED.
- ⑤ GUARDRAIL REFLECTORS, TYPE "A" AT 25' CTS. SEE STANDARD 782006 AND GUARDRAIL / BARRIER WALL DELINEATION DETAIL SHEET 9 OF 14
- ⑥ BARRIER WALL REFLECTORS TYPE "C" AT 25' CTS. SEE TEMPORARY CONCRETE BARRIER WALL DETAILS SHEET 9 OF 14 AND STANDARD 704001.
- ⑦ THE EDGE OF THE POST MOUNTED SIGNAL HEAD SHALL BE BETWEEN 24" AND 6" FROM EDGE OF SHOULDER.
- ⑧ VERTICAL PANELS AT 25' CTS. THROUGHOUT LANE SHIFT. THESE DEVICES MAY BE OMITTED WHEN THE GUARDRAIL WITH REFLECTORS EXTENDS TO AT LEAST THIS POINT ON THE TAPER.

GENERAL NOTES

THIS STANDARD IS USED WHERE, AT ANY TIME, ANY VEHICLE, EQUIPMENT, WORKERS, OR THEIR ACTIVITIES WILL ENCROACH ON ONE LANE OF A BRIDGE. TRAFFIC SIGNALS AND A POSITIVE BARRIER ARE REQUIRED.

TRAFFIC SIGNALS SHALL BE OPERATIONAL ONLY WHEN ALL TRAFFIC CONTROLS ARE IN PLACE. WHEN TRAFFIC SIGNALS ARE NOT IN OPERATION, FLAGGERS SHALL BE USED AND TRAFFIC CONTROL SHALL CONFORM TO STANDARD 701201 OR 701206.

TEMPORARY CONCRETE BARRIER SHALL BE ACCORDING TO STANDARD 704001.

EXISTING OR TEMPORARY PAVEMENT MARKINGS SHALL BE ON BOTH SIDES OF OPEN LANE FROM STOP BAR TO STOP BAR.

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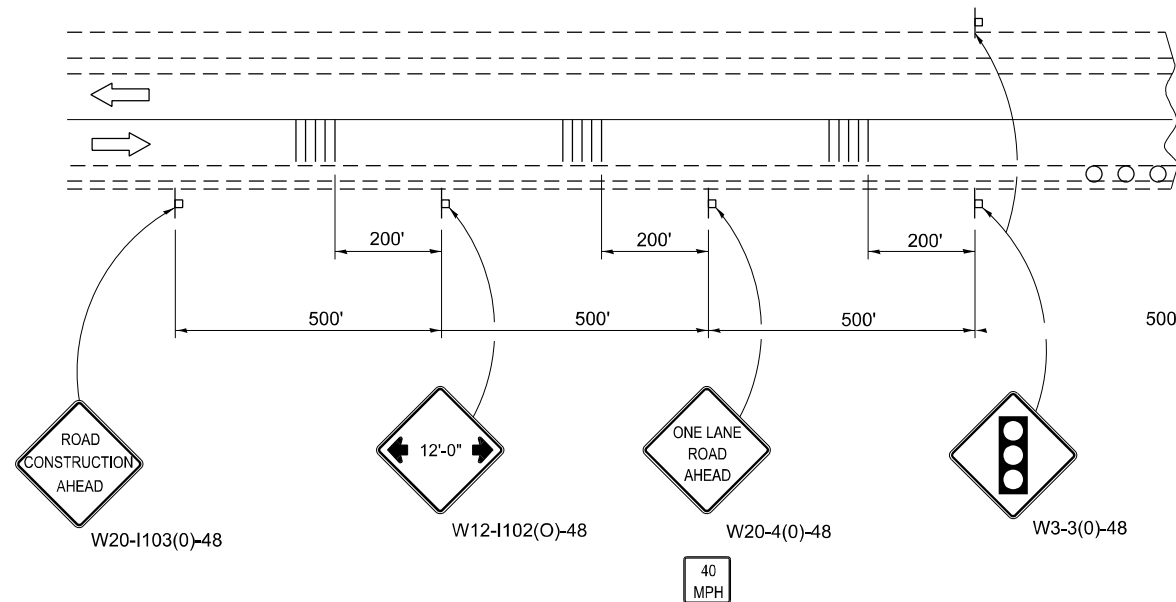
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL AND PROTECTION, STANDARD 701321
FOR STRUCTURE NO. 053-0160

SCALE: SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
649	(108BR)BP	LIVINGSTON	14	7
CONTRACT NO. 66P83				
ILLINOIS FED. AID PROJECT				

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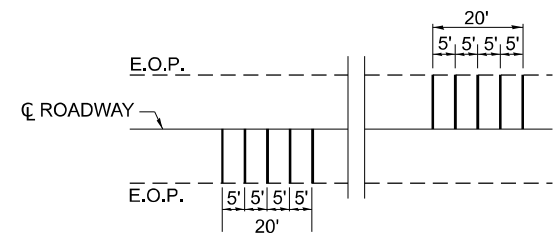
SYMBOLS

- TRAFFIC
- SIGN
- DRUM WITH MONODIRECTIONAL FLASHING LIGHT
- TEMPORARY RUMBLE STRIPS (SEE SPECIAL PROVISION)

GENERAL NOTES

THIS DETAIL MUST BE USED IN COMBINATION WITH TRAFFIC CONTROL AND PROTECTION, STANDARD 701400 WHENEVER TEMPORARY RUMBLE STRIPS ARE REQUIRED.

FOR PAYMENT PURPOSES, EACH LANE OF TRAFFIC SHALL BE CONSIDERED AS "ONE EACH".



TEMPORARY RUMBLE STRIP (SPECIAL)

FOR PAYMENT PURPOSES, EACH LANE OF TRAFFIC SHALL BE CONSIDERED "ONE EACH".

2L, 2W ROADWAYS

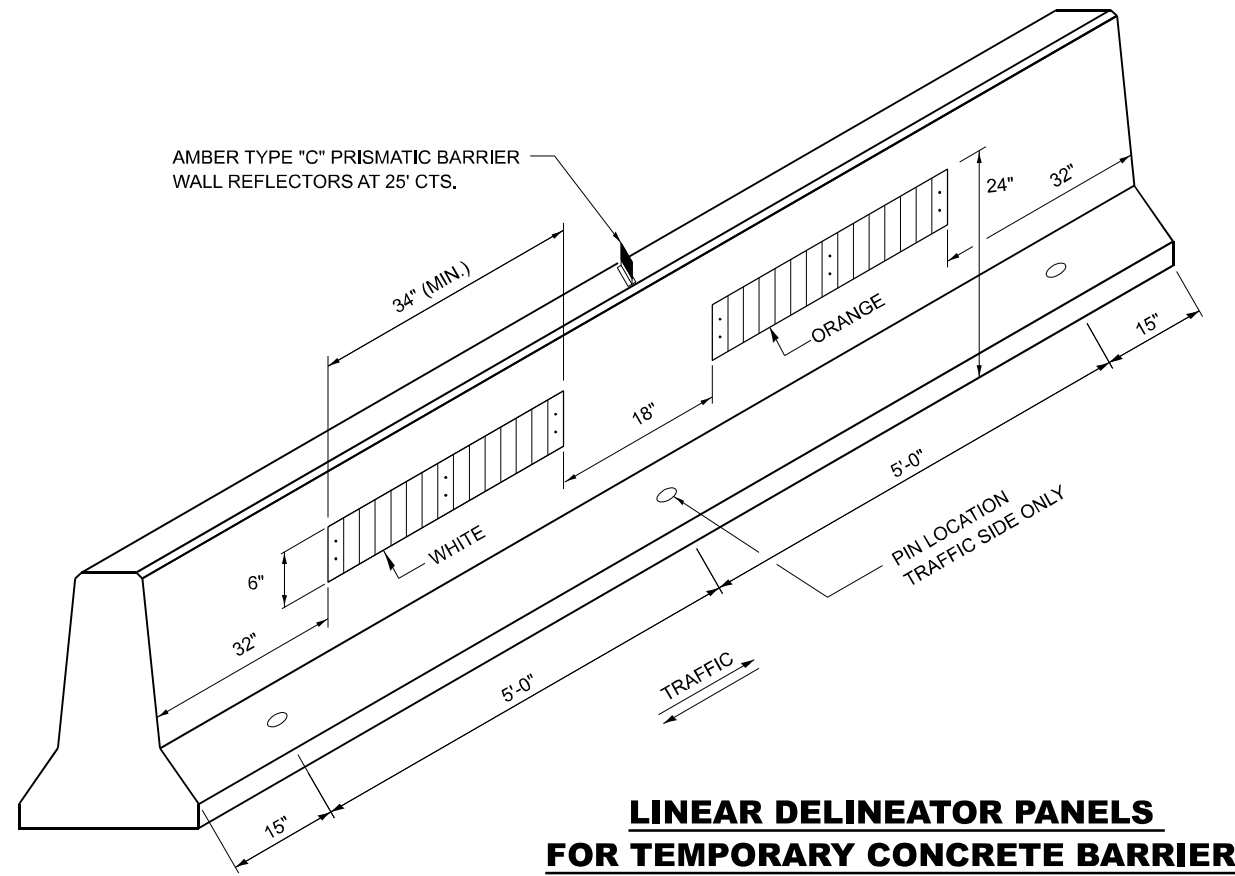
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

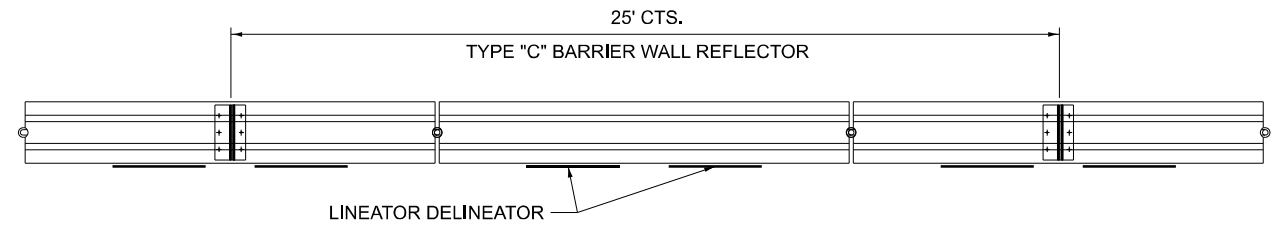
TEMPORARY RUMBLE STRIPS (SPECIAL)

SCALE: SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
649	(108BR)BP	LIVINGSTON	14	8
CONTRACT NO. 66P83			ILLINOIS FED. AID PROJECT	

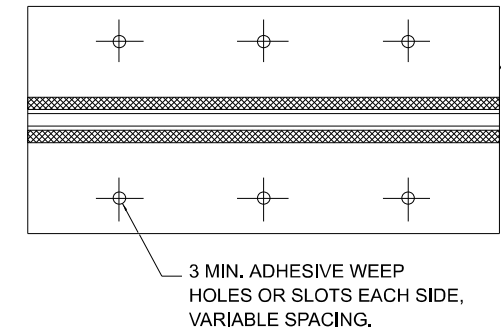
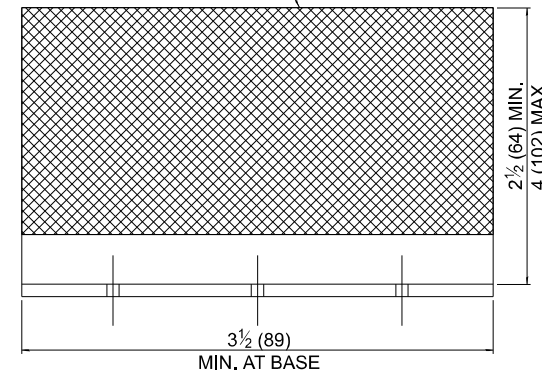


**LINEAR DELINEATOR PANELS
FOR TEMPORARY CONCRETE BARRIER**

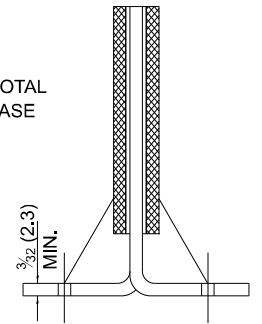


TYPE "C" REFLECTOR FOR TEMPORARY CONCRETE BARRIER

REFLECTIVE AREA, MAY BE
RECTANGULAR OR SLIGHT
TRAPEZOID.



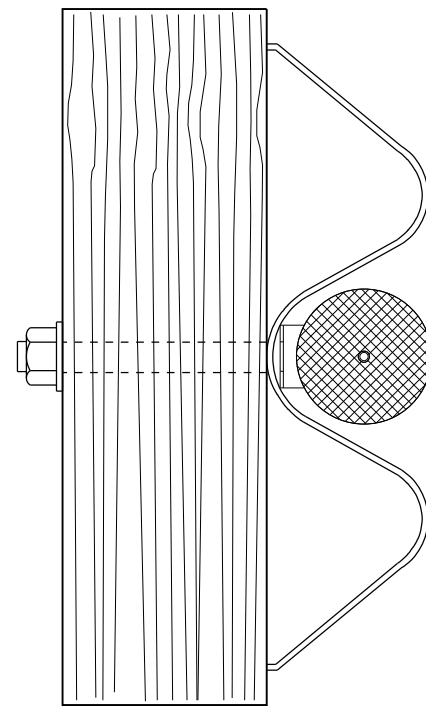
MINIMUM TOTAL
AREA OF BASE
7.0 SQ. IN.



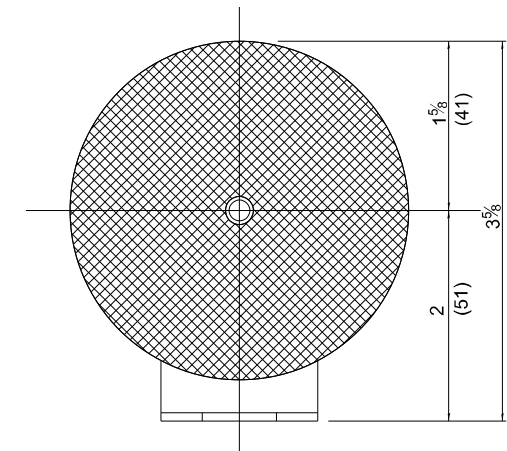
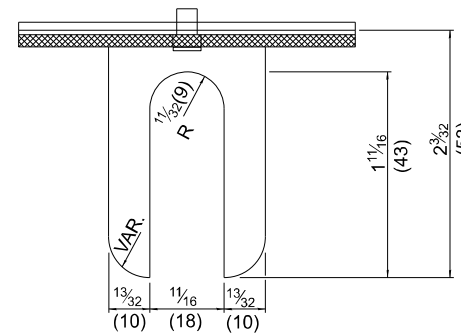
CROSS SECTION MAY BE "T"
OR "L" SHAPED AND MAY HAVE
SIDE SUPPORTS AT ENDS.

REFLECTOR TYPE C

TEMPORARY CONCRETE BARRAIER WALL

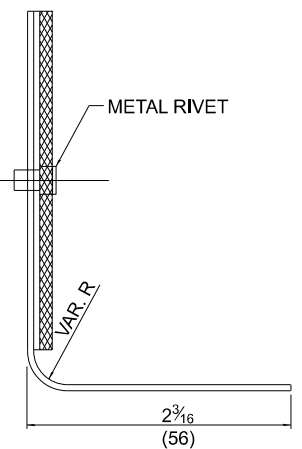


**TYPICAL MOUNTING DETAIL
FOR GUARDRAIL TYPE "A" REFLECTOR**



REFLECTOR TYPE A

(MONODIRECTIONAL SHOWN)
STEEL PLATE BEAM GUARDRAIL



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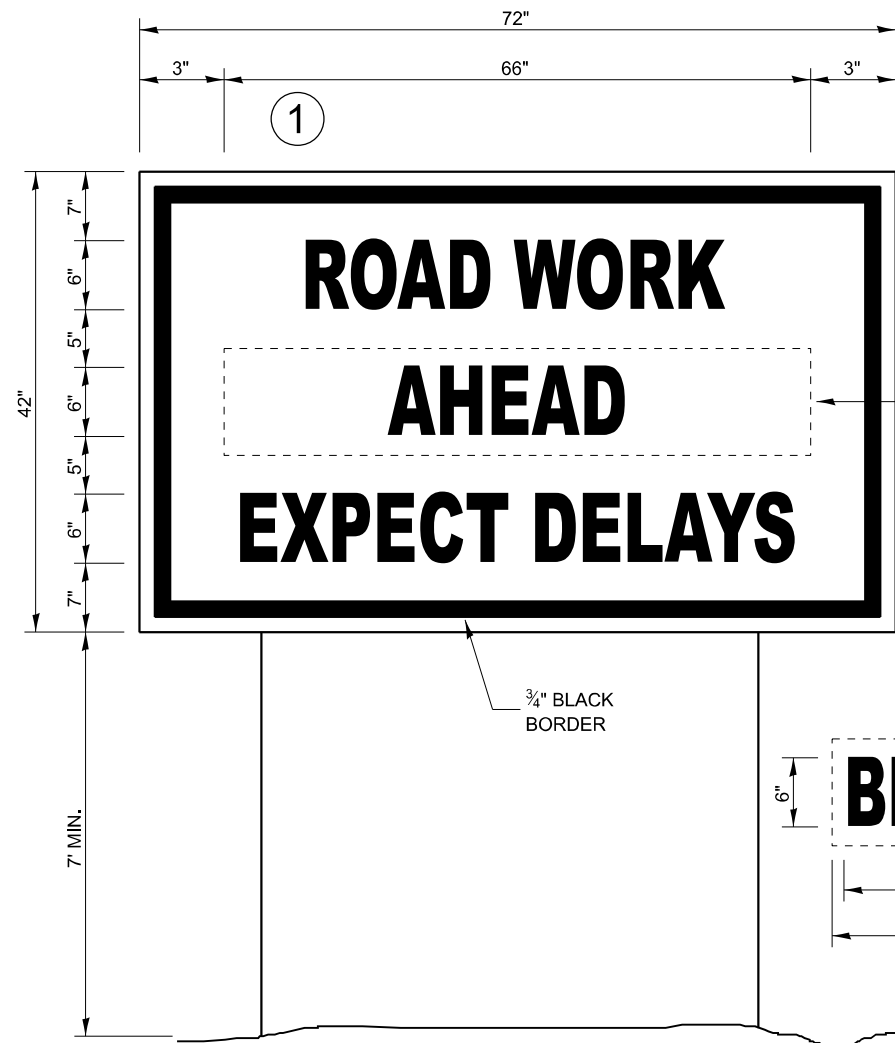
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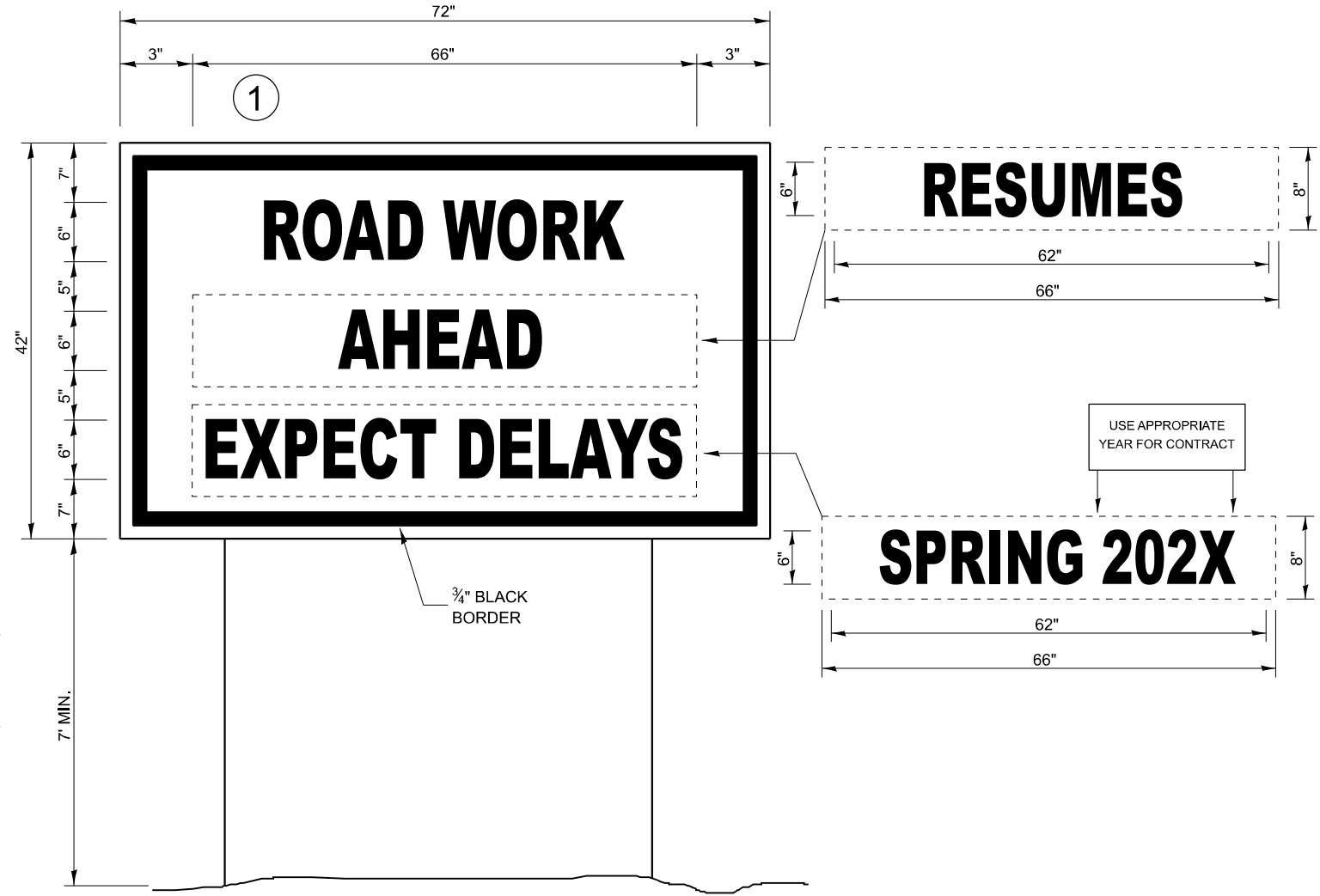
GUARDRAIL / BARRIER WALL DELINEATION DETAILS

SCALE: SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
649	(108BR)BP	LIVINGSTON	14	9
CONTRACT NO. 66P83				
ILLINOIS FED. AID PROJECT				



TEMPORARY INFORMATION SIGNING



WINTER SHUT DOWN SIGNING

NOTES:

1. USE 6" D BLACK LETTERING ON FLOURESENT ORANGE BACKGROUND.
2. ERECT SIGNS AT LOCATIONS IN ADVANCE OF THE "ROAD CONSTRUCTION AHEAD" SIGNS AS DIRECTED BY THE ENGINEER.
3. ERECT SIGN ① WITH INSTALLED PANEL ② A MINIMUM OF ONE WEEK PRIOR TO THE START OF THE LANE CLOSURE.
4. REMOVE PANEL ② ON THAT DATE.
5. SEE SPECIAL PROVISION "TEMPORARY INFORMATION SIGNING" FOR ADDITIONAL INFORMATION.
6. WILL BE PAID FOR PER SQ FT AS "TEMPORARY INFORMATION SIGNING". EACH SIGN = 21 SQ FT.

MODEL: Default
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

TEMPORARY INFORMATION SIGNING DETAILS

SCALE: SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
649	(108BR)BP	LIVINGSTON	14	10
CONTRACT NO. 66P83				
ILLINOIS FED. AID PROJECT				

DESIGN MARK: U 011111
North-West wing wall
Elevation 595.41

PROPOSED IMPROVEMENTS:
Complete removal of existing structure and replacement with a
new bridge. No salvage. Traffic to be maintained utilizing stage construction.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING structure consists of a single span reinforced
concrete Arched, rigid frame structure, 55'-0" in length
and 24'-0" in width, carrying S.B.I. Route 118-A (Ill. Rte. 17)
over Prairie Creek. Bridge Structure No. S.N. 053-0025

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 1
F.A.R. 651	108 BR	Livingston	51	14	11 SHEETS
FED. ROAD DIST. NO. ALIQUOTED AID PROJECT					

GENERAL NOTES

- SEE PROPOSAL FOR BIDDING DATA.
- FASTENERS SHALL BE HIGH STRENGTH BOLTS (ASTM A 325), UNLESS OTHERWISE NOTED.
- THE ZINC-SILICATE AND VINYL-PRIME SYSTEM SHALL BE USED FOR SHOP AND FIELD PAINTING OF STRUCTURAL STEEL EXCEPT WHERE OTHERWISE NOTED.
- FIELD WELDING OF CONSTRUCTION ACCESSORIES WILL NOT BE PERMITTED TO THE BOTTOM FLANGE OF BEAMS.
- FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.
- THE MAIN LOAD CARRYING MEMBER COMPONENTS SUBJECT TO TENSILE STRESS SHALL CONFORM TO THE SUPPLEMENTAL REQUIREMENTS FOR NOTCH TOUGHNESS, FINE 2. THESE COMPONENTS ARE THE WIDE FLANGE BEAMS.
- THE INFORMATION SHOWN FOR THE TEMPORARY SHEET PILING IS ESTIMATED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE A DESIGN OF THE TEMPORARY SHEET PILING AND ASSOCIATED MEMBERS, IF REQUIRED, SUBJECT TO THE APPROVAL OF THE ENGINEER.
- LAYOUT OF THE SLOPE PROTECTION SYSTEM MAY BE VARIED TO SUIT GROUND CONDITIONS IN THE FIELD, AS DIRECTED BY THE ENGINEER.
- THE ADDITIONAL LABOR, EXPENSE AND INEFFICIENCIES AFFECTED BY THE TWO STAGE CONSTRUCTION SHALL BE INCLUDED IN THE UNIT PRICES OF THE VARIOUS ITEMS OF WORK INVOLVED.
- THE CONTRACTOR SHALL DRIVE ONE HP8x36 TEST PILE IN A PERMANENT LOCATION AT THE WEST ABUTMENT AS DIRECTED BY THE ENGINEER BEFORE ORDERING THE REMAINDER OF PILES.
- CALCULATED WEIGHT OF STRUCTURAL STEEL = 74,565 LBS. (M225) GR. 50 = 3,954 LBS. (M165)

* Quantity includes bridge deck surface.
For quantity & location of temp conc. barrier see Rdwy. Plans.

TOTAL BILL OF MATERIAL

Item	Unit	Super.	Sub. Abuts.	Total
Removal of Existing Structures	Each			1
Filter Fabric-use w/riprap	Sq. Yd.		754	754
Structure Excavation	Cu. Yd.		192	192
Floor Drains	Each	8		8
Protective Coat	Sq. Yd.	344		344
Class X Concrete	Cu. Yd.		32.7	32.7
Furnishing & Erecting Structural Steel	Lump Sum	1		1
Stud Shear Connectors	Each	1,026		1,026
Temporary Bridge Rail	Lin. Ft.	55		55
Reinf. Bars (Epoxy Coated)	Lbs.	18,340		18,340
Furnishing Str. Piles HP8x36	Lin. Ft.		304	304
Driving Steel Piles	Lin. Ft.		304	304
Metal Shoes	Each		11	11
Name Plates	Each		1	1
Stone Riprap (Class A-4)	Sq. Yd.		754	754
Temporary Sheet Piling	Sq. Ft.		1,551	1,551
Channel Excavation	Cu. Yd.		443	443
Reinforcement Bars	Lbs.		4,600	4,600
Test Piles Steel (HP8x36)	Each		1	1
Porous Granular Embankment	Cu. Yd.		66	66
Class X Concrete Superstructure	Cu. Yd.	100.4		100.4
Mobilization	L. Sum			0.3
Unidirectional Prismatic Barrier Reflector	Each		6	6

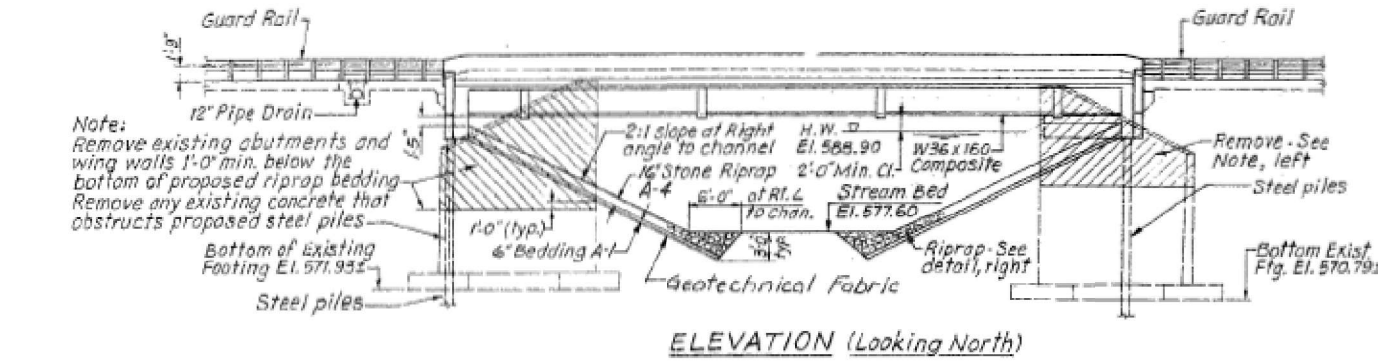
GENERAL PLAN & ELEVATION

F.A.R. ROUTE 651 (ILL. RTE. 17)
OVER PRAIRIE CREEK

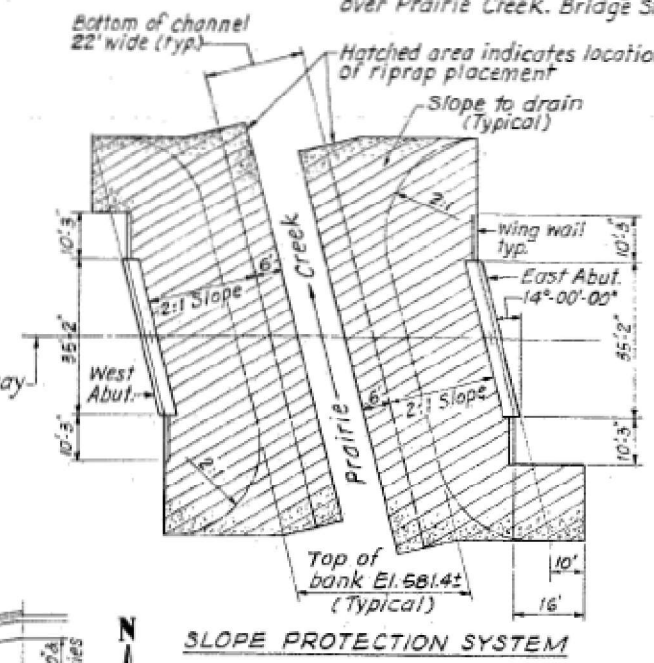
RT. F.A.R. 651 SECTION 108 BR
LIVINGSTON COUNTY
STATION 385+48

INDEX OF SHEETS

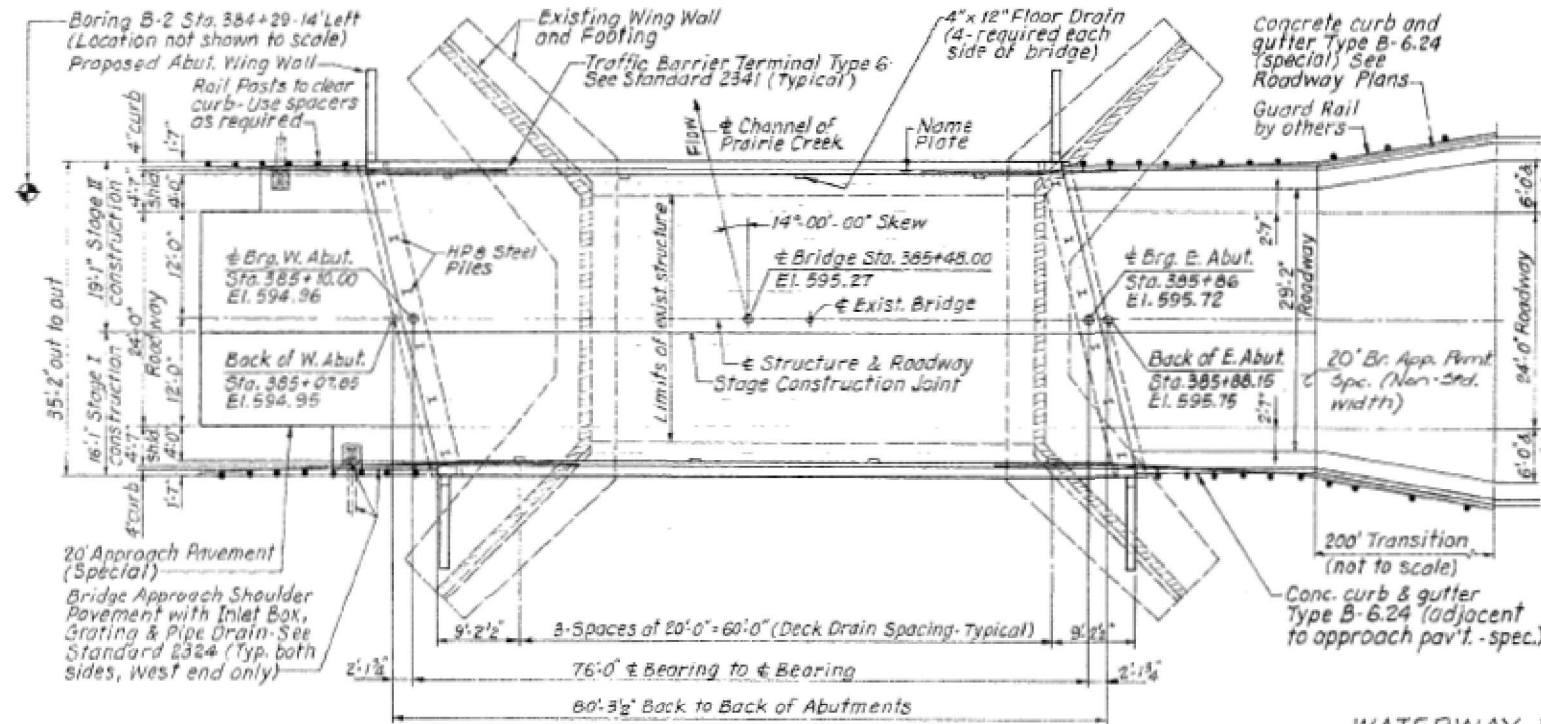
- General Plan and Elevation
- Deck Elevations
- Superstructure Details
- Parapet Details
- Framing Plan
- West Abutment
- East Abutment
- Splicer Bar Details
- Temporary Bridge Rail
- Temporary Concrete Barrier
- Anchor Bolt Details



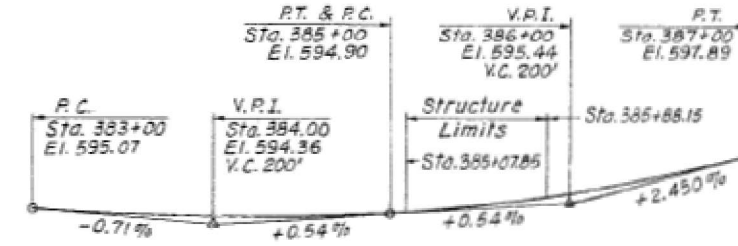
ELEVATION (Looking North)



SLOPE PROTECTION SYSTEM



PLAN

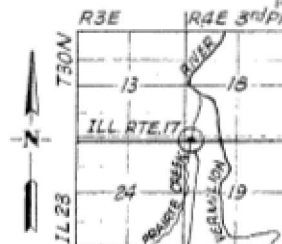


PROFILE GRADE

WATERWAY INFORMATION

Drainage Area = 28.3 sq. mi. Low Grade El. 594.67 @ Sta. 384+00

Flood	Freq. Yr.	Q C.F.S.	Opng. Sq. Ft.	Nat. H.W.E.	Head - Ft.	Headwater El.
Design	50	2603	488 504	588.90	1.46 1.16	590.36 590.06
Base	100	2969	527 559	589.70	1.62 1.18	591.32 590.88
Overlapping						
Max. Calc.	500	3801		591.70	0.74	592.44



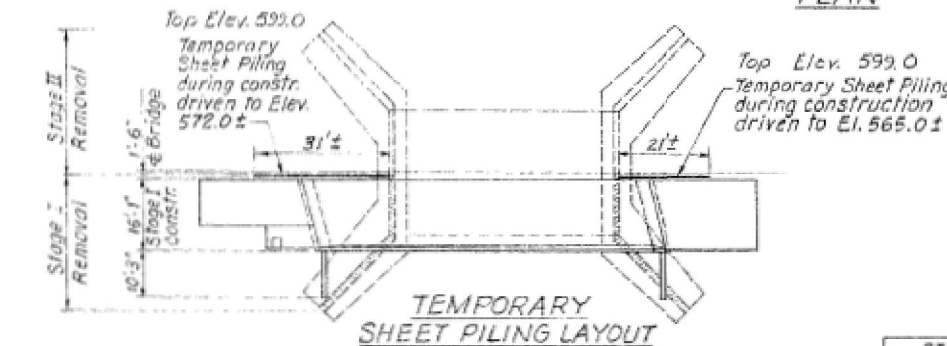
PROPOSED BRIDGE LOCATION SKETCH

DESIGN CRITERIA:
Load Factor Design
Live Load: HS 20-44
Allow 25 p.s.f. for future wearing surface.

DESIGN STRESSES:
Reinforced Concrete
f'c = 3500 p.s.i. Deck Slab

DESIGN SPECIFICATIONS:
A.A.S.H.T.O. 1983 Standard Specifications for Highway Bridges, 1984 - 1986 Interims, Standard Specifications for Road and Bridge Construction, State of Illinois, Dated October 1, 1983.

STRUCTURAL STEEL:
fy = 50,000 p.s.i. (M225) Gr. 50
fy = 36,000 p.s.i. (M183)
REINFORCEMENT:
fy = 60,000 p.s.i. Reinforcement bars shall conform to A.A.S.H.T.O. M-31, M-42, or M-53 Grade 60.



TEMPORARY SHEET PILING LAYOUT

STATION 385+48
BUILT 19 BY
STATE OF ILLINOIS
F.A.R.T. 651 SECTION 108 BR
LOADING HS 20
STR. NO. 053-0160

LETTERING FOR NAME PLATE
Locate Name Plate at Northeast Corner of Bridge (See Std. 2115)

DESIGNED	J.P.
CHECKED	E.E.G.
DRAWN	W.E.S.
CHECKED	

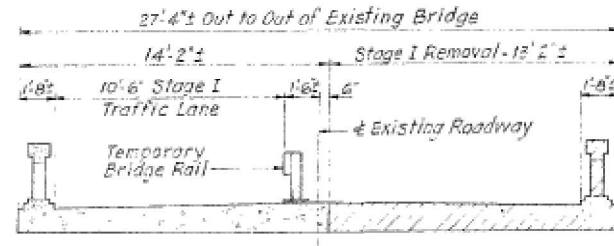
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	DRAWN - RW	REVISED -
	CHECKED - YP	REVISED -
	DATE - 6/7/2024	REVISED -
PLOT DATE = 7/24/2024		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

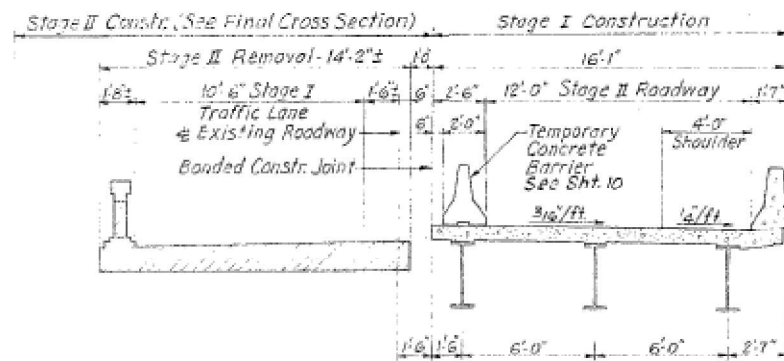
EXISTING STRUCTURE PLANS FOR STRUCTURE NO. 053-0160
FOR INFORMATION ONLY

SCALE: SHEET 1 OF 4 SHEETS STA. TO STA.

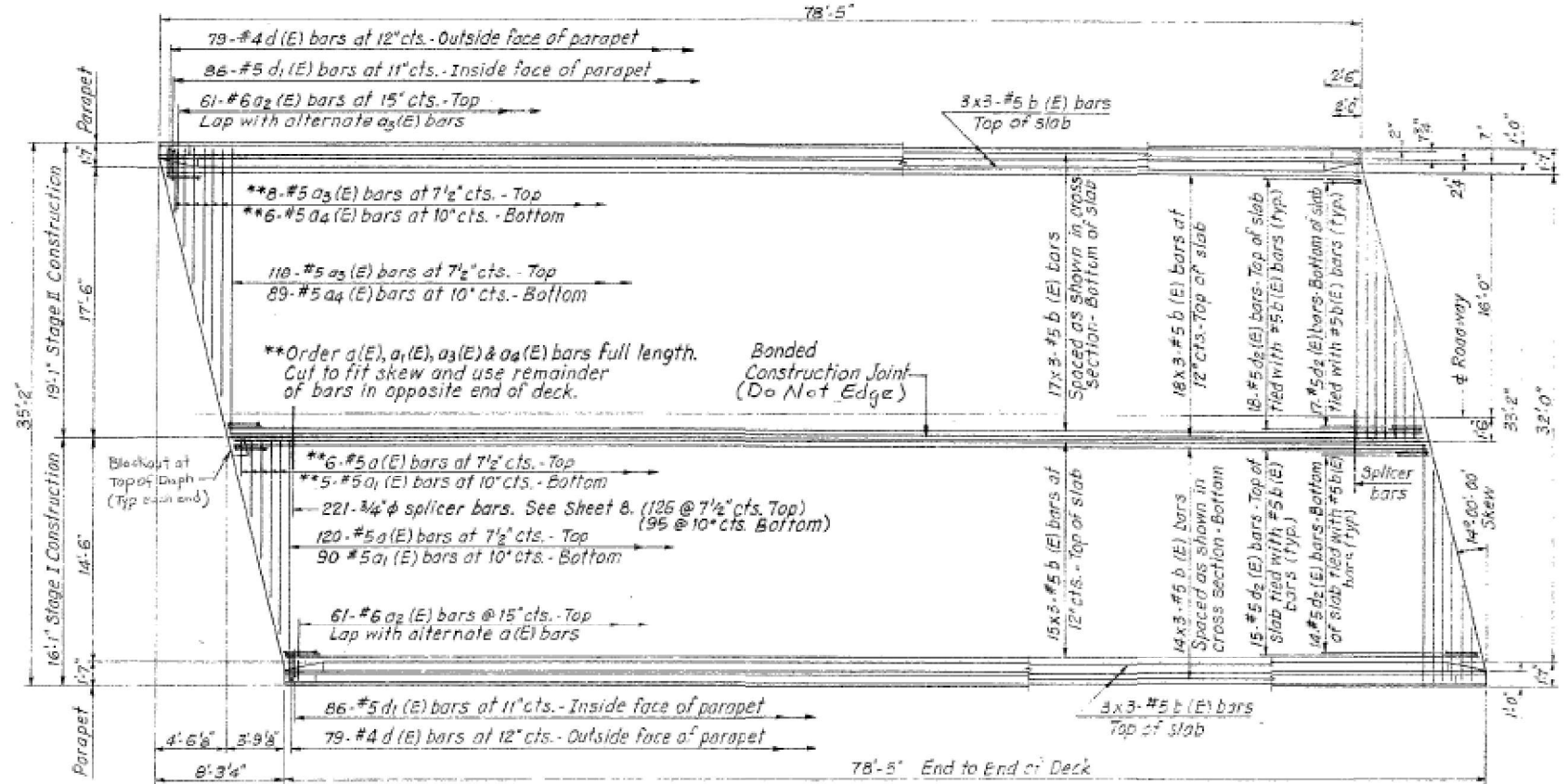
F.A.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
649	(108BR)BP	LIVINGSTON	14	11
CONTRACT NO. 66P83				
ILLINOIS FED. AID PROJECT				



STAGE I REMOVAL (Section Looking East)



STAGE II REMOVAL - STAGE I CONSTRUCTION (Section Looking East)



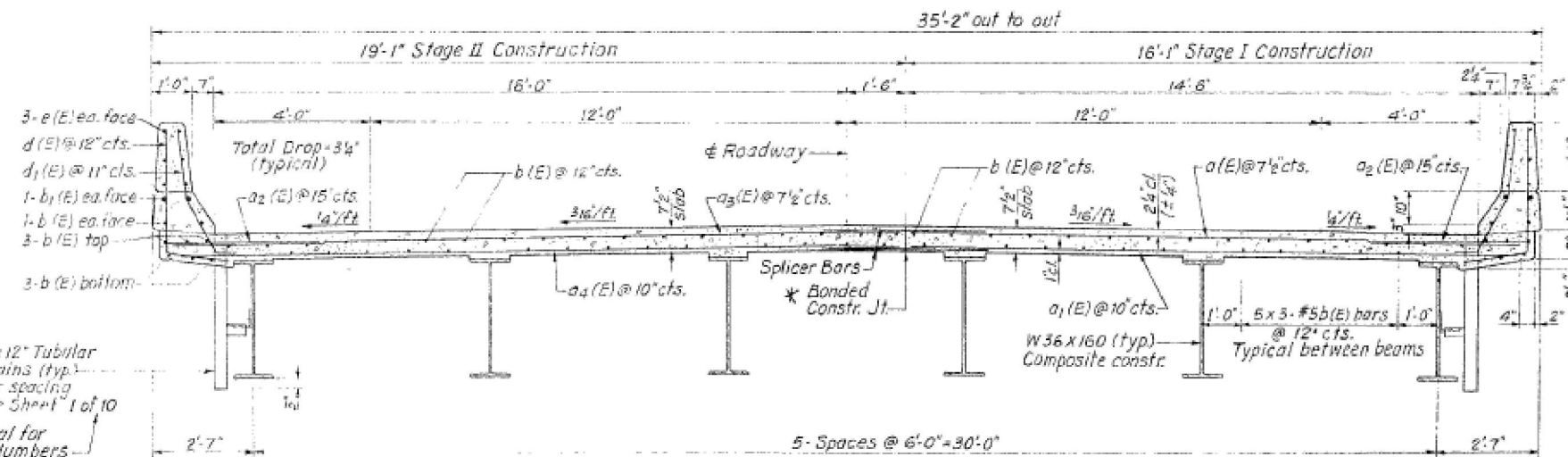
PLAN OF DECK

Bars indicated thus - 15 x 3 #5 etc. indicates 15 lines of bars with 3 lengths per line. Min. bar lap #5 - 2'2"

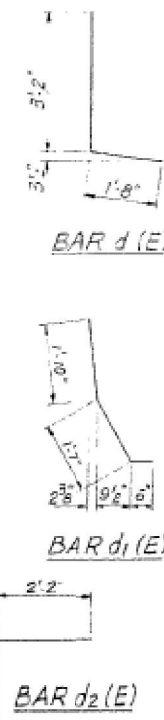
SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a1(E)	126	#5	15'-6"	—
a2(E)	95	#5	15'-9"	—
a3(E)	122	#6	4'-0"	—
a4(E)	126	#5	15'-6"	—
a5(E)	95	#5	15'-9"	—
b1(E)	222	#5	27'-7"	—
b2(E)	12	#8	26'-11"	—
d1(E)	158	#4	4'-10"	L
d2(E)	172	#5	3'-11"	L
e(E)	128	#5	4'-4"	Γ
f(E)	48	#4	19'-4"	—
Reinforcement Bars (Epoxy Coated)		Lbs.	18,340	
Class X Concrete Superstructures		Cu. Yds.	100.4	

* See sheets 6 & 7 for d2(E) bars. See sheet 4 for e(E) bars. Reinforcement bars designated (E) shall be epoxy coated.



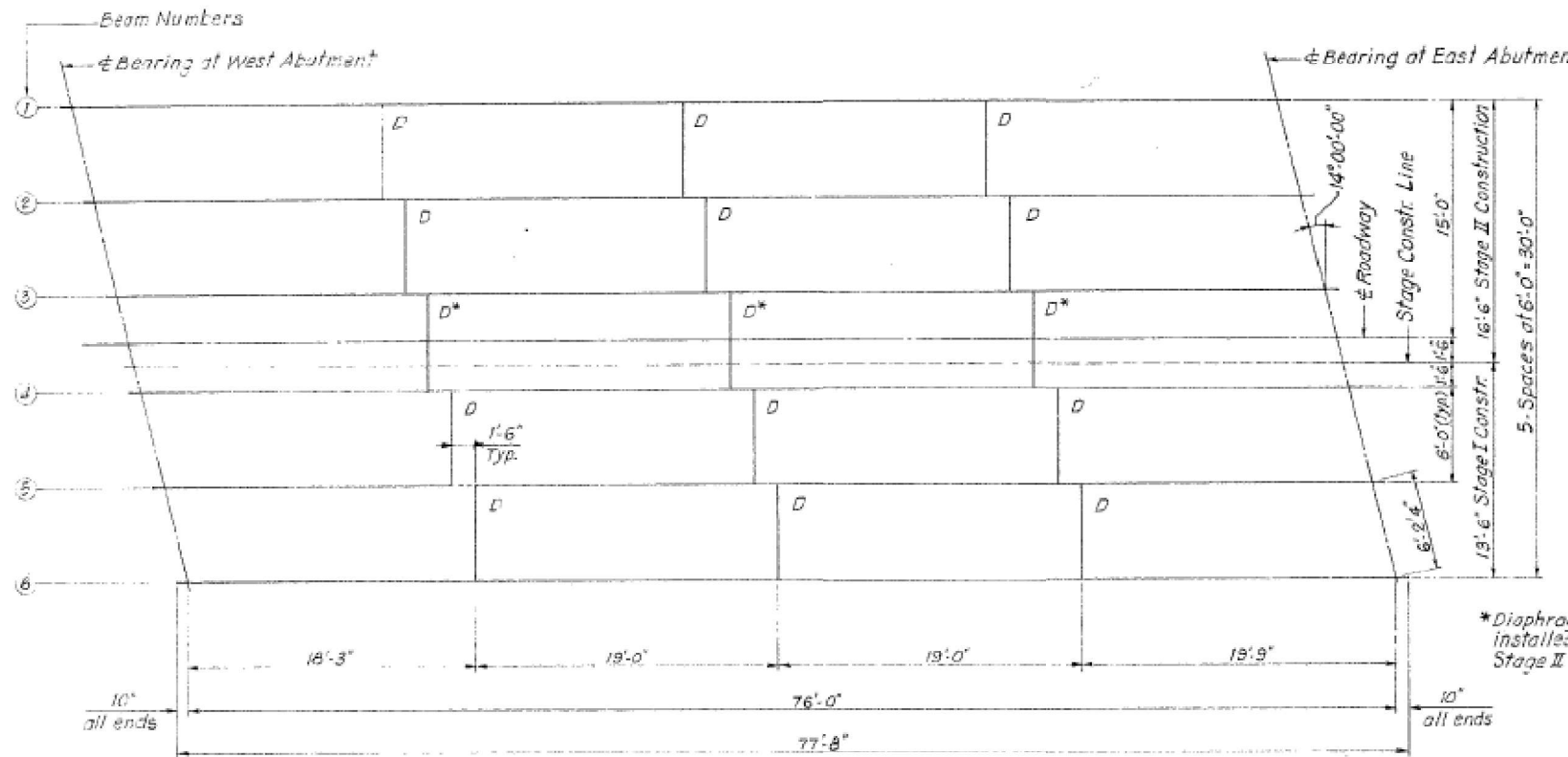
FINAL CROSS SECTION (Looking East)



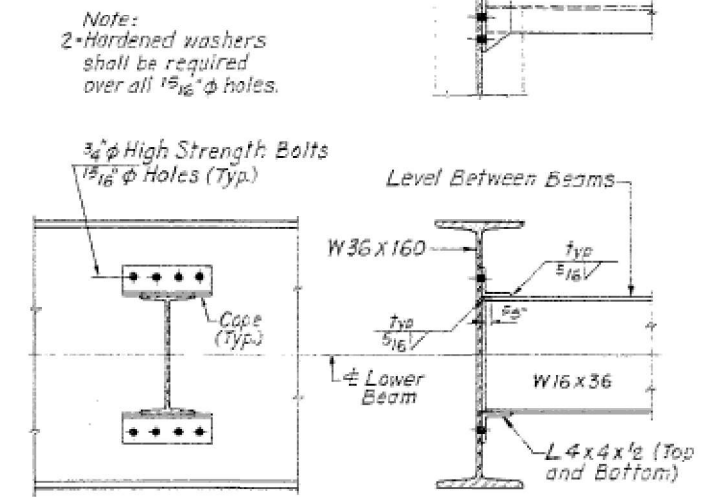
SUPERSTRUCTURE DETAILS
F.A.P. ROUTE 651 (ILLINOIS RTE. 17)
OVER PRAIRIE CREEK
SECTION 108 BR - LIVINGSTON COUNTY

DESIGNED	J.P.
CHECKED	E.E.G.
DRAWN	W.E.S.
CHECKED	

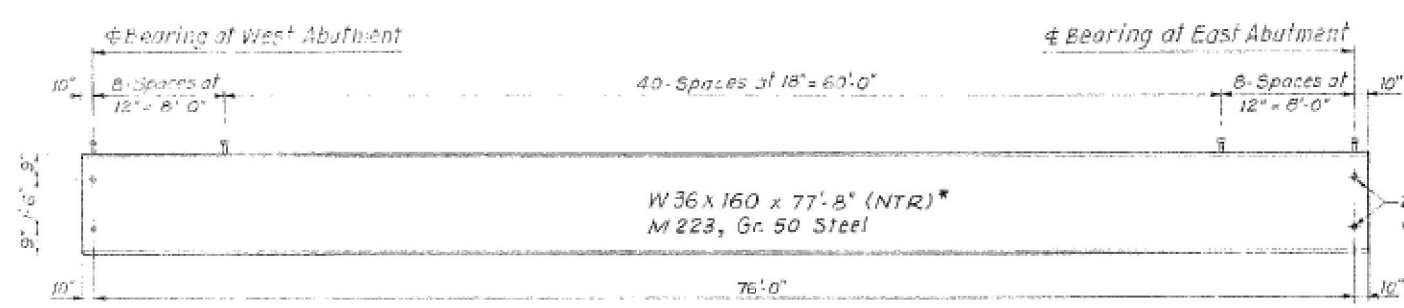
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	DRAWN - RW	REVISED -
	CHECKED - YP	REVISED -
PLOT DATE = 7/24/2024	DATE - 6/7/2024	REVISED -



FRAMING PLAN



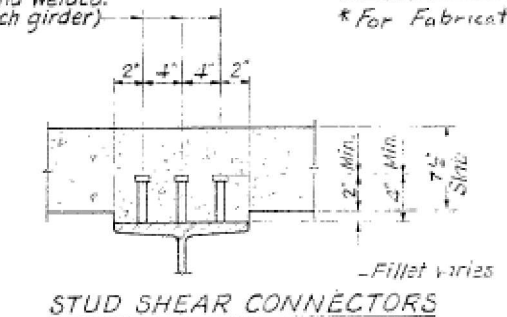
*Diaphragms to be installed during Stage II Construction.



GIRDER ELEVATION

*Notch Toughness Requirement

3/4" Granular or solid flux filled headed studs conforming to the requirements of Article 710-38 of the Std. Specs. automatically end welded. (No reqd. -17/ each girder)



I_s and S_s are the moment of inertia and section modulus of the steel section used in computing f_s (Total and Overload.)
 I_c and S_c are the moment of inertia and section modulus of the composite section used in computing f_s (Total and Overload.)
 V_R is the maximum \pm impact shear range in span.
 The Fully Plastic Moment capacity (M_u) is computed according to AASHTO 10.4B.1 and 10.50.1.1.

*TOP OF FLANGE ELEV.

Beam	Bearing East Abut.	Bearing West Abut.
1	594.78	594.02
2	594.88	594.14
3	594.99	594.24
4	594.91	594.25
5	594.94	594.17
6	594.85	594.07

*For Fabrication Only

INTERIOR BEAM MOMENT TABLE

	0.5 Span
I_s (in.4)	9750.00
I_c (in.4)	22510.40
S_s (in.3)	542.0
S_c (in.3)	746.38
ϕ (K')	0.749
M_E (K')	540.78
s_D (K/ft)	0.290
M_{SE} (K)	209.56
M_{LE} (K)	595.72
M_{IMP} (K)	148.33
$5_s(M_{LE}+I)$ (K)	1240.08
M_a (K)	587.31
M_u (K)	3105.8
f_s non-comp (K.S.I.)	11.97
f_s comp (K.S.I.)	5.87
f_s (L+I) (K.S.I.)	19.96
f_s (Overload) (K.S.I.)	35.30
V_R (K)	43.82

INTERIOR BEAM REACTION TABLE

	Abut.
R_E (K)	39.29
R_W (K)	34.44
Imp. (K)	8.58
R Total (K)	82.31

DESIGNED	J.R.
CHECKED	E.E.G.
DRAWN	W.E.S.

FRAMING PLAN
 F.A.P. ROUTE 651 (ILLINOIS RTE. 17)
 OVER FRAIRIE CREEK
 SECTION 108 BR - LIVINGSTON COUNTY

MODEL: Default
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USER NAME = ronald.woodshank	DESIGNED - RW	REVISED -
	DRAWN - RW	REVISED -
	CHECKED - YP	REVISED -
	DATE - 6/7/2024	REVISED -
PLOT DATE = 7/24/2024		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS FOR STRUCTURE NO. 053-0160
FOR INFORMATION ONLY

SCALE: SHEET 4 OF 4 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
649	(108BR)BP	LIVINGSTON	14	14
			CONTRACT NO. 66P83	
		ILLINOIS	FED. AID PROJECT	