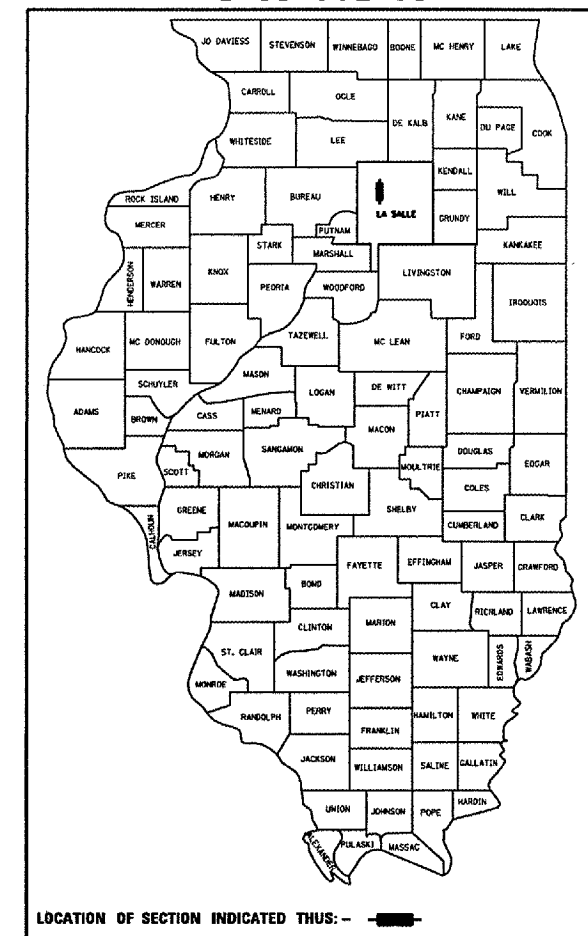


F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
412	50(1HB-2,1HB)BP	LASALLE	17	1
ILLINOIS				

D-93-002-05



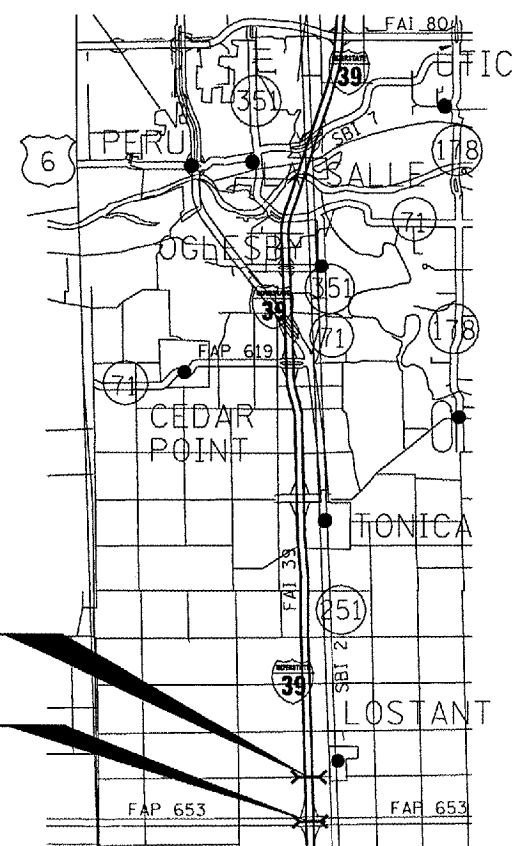
LOCATION OF SECTION INDICATED THUS: —

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED
HIGHWAY PLANS

FAI ROUTE 412 (I-39)
SECTION: 50(1HB-2,1HB)BP

LASALLE COUNTY
C-93-083-05
BRIDGE PAINTING



BRIDGE LOCATION NO. 3
 S.N. 050-0214 T.R. 525

BRIDGE LOCATION NO. 4
 S.N. 050-0215 IL ROUTE 18

LOCATION MAP
 NOT TO SCALE

INDEX OF SHEETS

1. COVER SHEET
2. GENERAL NOTES
3. SUMMARY OF QUANTITIES
4. SCHEDULES
5. TRAFFIC CONTROL AND PROTECTION, STANDARD 701402 (SPECIAL)
6. TEMPORARY CONCRETE BARRIER - BRIDGE LOCATION 1 - S.N. 050-0214
7. TEMPORARY CONCRETE BARRIER - BRIDGE LOCATION 2 - S.N. 050-0215
- 8 - 12. EXISTING STRUCTURE PLANS - BRIDGE LOCATION 1 - S.N. 050-0214
- 13 - 17. EXISTING STRUCTURE PLANS - BRIDGE LOCATION 1 - S.N. 050-0215

STANDARDS

- 635011-01 REFLECTOR MARKER AND MOUNTING DETAILS
- 701001-01 OFF-ROAD OPERATIONS 2L, 2W, MORE THAN 4.5 m (15') AWAY
- 701006-02 OFF-ROAD OPERATIONS 2L, 2W, 4.5 m (15') TO 600 mm (24") FROM PAVEMENT EDGE
- 701101-01 OFF-ROAD OPERATIONS MULTILANE, 4.5 m (15') TO 600 mm (24") FROM PAVEMENT EDGE
- 701106-01 OFF-ROAD OPERATIONS, MULTILANE, MORE THAN 4.5 m (15') AWAY
- 701400-02 APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
- 701411-03 LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXIT RAMP
- 702001-05 TRAFFIC CONTROL DEVICES
- 704001-02 TEMPORARY CONCRETE BARRIER

MICROFILMED _____
 REEL NUMBER _____
 AWARDED _____
 RESIDENT ENGINEER _____
 AS BUILT CHANGES WERE MADE
 ON THE FOLLOWING SHEETS _____

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

DISTRICT NO. 3 815-434-6131

PROJECT ENGINEER: TOM HUFNAGEL 815-434-8418

UNIT CHIEF: RON WOODSHANK 815-434-8419

CONTACT PERSON: MARK HARDEN 815-434-8425

CONTRACT NO. 66577

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

SUBMITTED July 7, 05
Gregory L. Alonzo DISTRICT ENGINEER
Aug 19, 20 05
Mike Hine ENGINEER OF DESIGN AND ENVIRONMENT
Aug 19, 20 05
Peter Mader DIRECTOR, DIVISION OF HIGHWAYS

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

Date: 04/18/05
 Project: c:/projects/cmln05/cm3078/detalls.dgn

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
412	501HB-2.1HB1BP	LASALLE	17	2
ILLINOIS				

GENERAL NOTES:

Plan dimensions and details relative to the existing roadway and structure have been taken from existing plans and are subject to nominal construction variations. It shall be the contractor's responsibility to verify such dimensions and details in the field and to make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the contractor will be paid for the quantity actually furnished at the unit price bid for the work.

The contractor shall be responsible for protecting utility property from construction operations as outlined in Article 107.31 of the Standard Specifications. The "Jule" Number is 1-800-892-0123. A minimum of forty-eight (48) hours advance notice is required.

Where section or subsection monuments are encountered, the engineer shall be notified before such monuments are removed. The contractor shall protect and carefully preserve all monuments until an authorized surveyor or agent has witnessed or otherwise referenced their location. The contractor shall be responsible for having an authorized surveyor reestablish any section of subsection monuments destroyed by his operations.

Any reference to a standard in these plans shall be interpreted to mean the edition as indicated by the subnumber listed on the index of sheets or the copy of the standard included in these plans.

Cleaning and painting of the existing structural steel shall be as specified in the Special Provision for "Cleaning and Painting Existing Steel Structures". All existing steel shall be cleaned per Near White Blast Cleaning - SSPC-SP10. All existing steel shall be painted according to the requirements of Paint System 1 - OZ/EU. The color of the final finish coat for all interior steel surfaces shall be Gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Reddish Brown, Munsell No. 2.5YR 3/4.

The contractor shall be required to secure waste containers that remain on the job site. This will entail that all waste containers can not be moved or opened during non-working hours.

Working days shall be charged until the contractor/subcontractor licensed to dispose of paint residue has removed the waste material from the job site according to all Federal, State and Local Laws and Ordinances.

The SSPC-QP1 and SSPC-QP2 Painting Contractor Certifications will not be required for this project.

DATE: July 6, 2005

PREPARED BY: [Signature]
DISTRICT OPERATIONS ENGINEER

EXAMINED BY: [Signature]
DISTRICT CONSTRUCTION ENGINEER

[Signature]
DISTRICT STUDIES & PLANS ENGINEER

[Signature]
DISTRICT MATERIALS ENGINEER

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION
NAME	DATE	
		GENERAL NOTES

SCALE: VERT. DRAWN BY RW
 HORIZ. CHECKED BY
 DATE 04/18/05

Date: 04/18/05
Project: c:/projects/cmain05/cm3078/details.dgn

F.A.L. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
412	501HB-2,1HB)BP	LASALLE	17	3
ILLINOIS				

SUMMARY OF QUANTITIES

CONSTRUCTION CODE: SFTY-2A

RURAL
100% STATE
TOTAL
QUANTITY

CODE NO.	ITEM	UNIT	RURAL 100% STATE TOTAL QUANTITY
50600600	CLEANING AND PAINTING STEEL BRIDGE NO. 1	L SUM	1
50600700	CLEANING AND PAINTING STEEL BRIDGE NO. 2	L SUM	1
X5060601	CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUES NO. 1	L SUM	1
X5060602	CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUES NO. 2	L SUM	1
67100100	MOBILIZATION	L SUM	1
70100305	TRAFFIC CONTROL AND PROTECTION, STANDARD 701400	L SUM	1
70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	2
70101605	TRAFFIC CONTROL AND PROTECTION, STANDARD 701402 (SPECIAL)	EACH	4
70400100	TEMPORARY CONCRETE BARRIER	FOOT	560
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	1160
X5067501	BRIDGE CLEANING AND PAINTING WARRANTY NUMBER 1	L SUM	1
X5067502	BRIDGE CLEANING AND PAINTING WARRANTY NUMBER 2	L SUM	1
* Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2
* Z0030350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	6

* SFTY-3N

Date: 04/18/05
Project: c:\projects\cm05\cm3078\details.dgn

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: VERT. DRAWN BY RW
 HORIZ. CHECKED BY
 DATE 04/18/05

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
412	501HB-2,1HB/BP	LASALLE	17	4
ILLINOIS				

SCHEDULE FOR BRIDGE LOCATION 1 - S.N. 050-0214

50600600	CLEANING AND PAINTING STEEL BRIDGE NO. 1	L SUM	1
X5060601	CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUES NO1	L SUM	1
67100100	MOBILIZATION	L SUM	0.5
70100305	TRAFFIC CONTROL AND PROTECTION, STANDARD 701400	L SUM	0.5
70101605	TRAFFIC CONTROL AND PROTECTION, STANDARD 701402 (SPECIAL)	EACH	2
70400100	TEMPORARY CONCRETE BARRIER	FOOT	260
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	560
X5067501	BRIDGE CLEANING AND PAINTING WARRANTY NUMBER 1	L SUM	1
Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	1
Z0030350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	3

SCHEDULE FOR BRIDGE LOCATION 2 - S.N. 050-0215

50600700	CLEANING AND PAINTING STEEL BRIDGE NO. 2	L SUM	1
X5060602	CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUES NO2	L SUM	1
67100100	MOBILIZATION	L SUM	0.5
70100305	TRAFFIC CONTROL AND PROTECTION, STANDARD 701400	L SUM	0.5
70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	2
70101605	TRAFFIC CONTROL AND PROTECTION, STANDARD 701402 (SPECIAL)	EACH	2
70400100	TEMPORARY CONCRETE BARRIER	FOOT	300
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	600
X5067502	BRIDGE CLEANING AND PAINTING WARRANTY NUMBER 2	L SUM	1
Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	1
Z0030350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	3

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

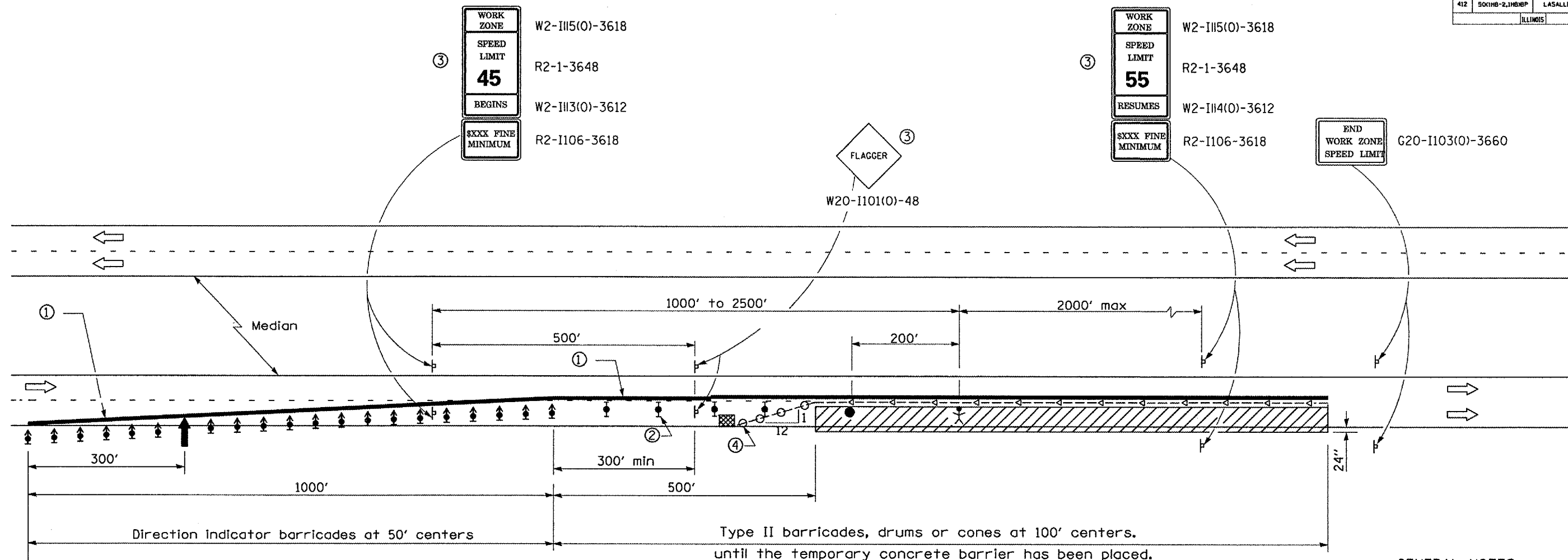
SCHEDULES

SCALE: VERT.
HORIZ.
DATE 04/18/05

DRAWN BY RW
CHECKED BY

Date: 04/18/05
Project: c:\pr\jects\main05\cm3078\details.dgn

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
412	501HB-2,1HB1BP	LASALLE	17	5
ILLINOIS				



GENERAL NOTES

This Standard is used where at any time any vehicle, equipment, workers or their activities will encroach on the lane adjacent to the shoulder, or on the shoulder within 24" of the edge of pavement whenever temporary concrete barrier is warranted.

This Standard must always be used in combination with Standard 701400.

This Standard also applies when work is being performed in the left lane. Under these conditions, the set up would be a mirror image to what is shown.

A check barricade shall be placed in the middle of the closed lane and at the shoulder at 1000' centers.

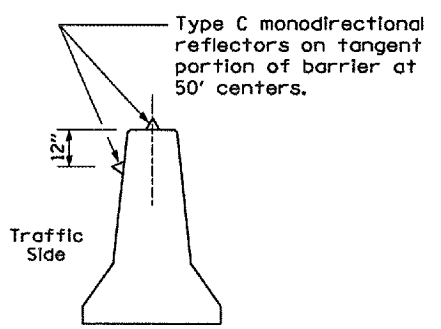
The cost of materials, equipment and labor to utilize this traffic control and protection as shown will be paid for at the contract unit bid price for TRAFFIC CONTROL AND PROTECTION, STANDARD 701402 (SPECIAL) and no further compensation will be allowed.

Temporary concrete barrier shall be paid for according to Section 704 of the Standard Specifications.

SYMBOLS

- ↑ Arrow board
- ▨ Work area
- ⊙ Worker
- ⊙ Sign
- ⊙ Direction Indicator barricade with steady burn monodirectional light
- ⊙ Type II barricade, drum, or vertical barricade with steady burn monodirectional light
- Flagger with traffic control sign
- Temporary concrete barrier
- ◁ Type C Monodirectional reflector
- Vertical panel with steady burn monodirectional light.
- ▣ Impact attenuator

- ① ReflectORIZED temporary pavement marking tape shall be placed throughout the taper and alongside the temporary concrete barrier. The edge line shall be white for right lane closure and yellow for left lane closures. Temporary raised reflectORIZED pavement markers at 25' centers shall be used to supplement the pavement marking tape.
- ② Type II barricades, drums or cones shall be used alongside the tangent portion of the work zone to provide protection during the installation of the temporary concrete barrier.
- ③ Work Zone speed limit signs and Flagger signs shall be covered after the temporary concrete barrier is in place and uncovered when the temporary concrete barrier is removed or relocated and replaced with Type II barricades, drums or cones to maintain the lane closure. The additional drums, Type II barricades or cones, required shall be included in the cost of Traffic Control and Protection, Standard 701402 (Special).
- ④ Vertical panels at 25' centers with steady burning monodirectional lights.



DETAIL A
(BARRIER WALL REFLECTORS)

See Standard 701400 for approach Start of lane closure taper

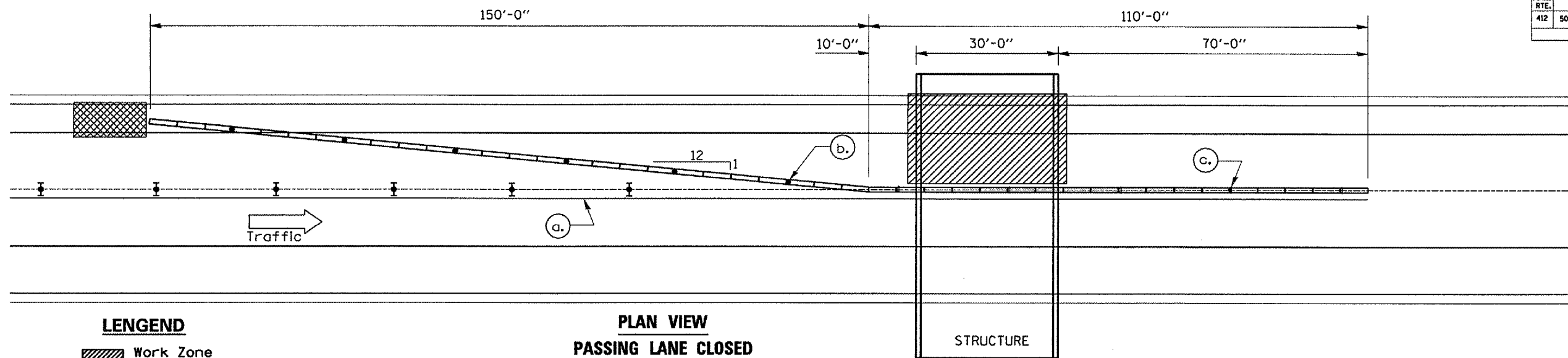
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
TRAFFIC CONTROL AND PROTECTION
STANDARD 701402 (SPECIAL)

SCALE: VERT.
HORIZ.
DATE 04/18/05

DRAWN BY RW
CHECKED BY

F.A.I. RYE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
412	501HB-2,1HB1BP	LASALLE	17	6
ILLINOIS				

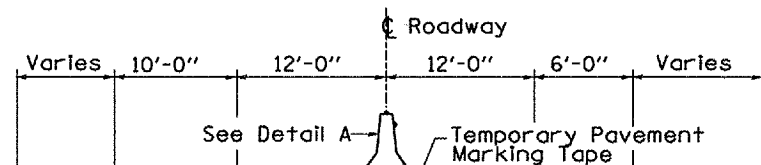


LENGEND

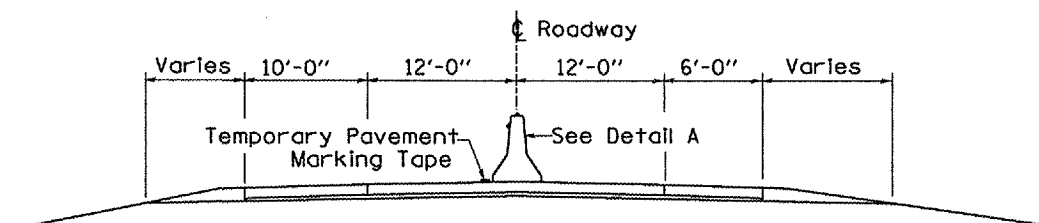
- Work Zone
- Type II barricade, drum or vertical barricade with stead burn monodirectional light
- Temporary concrete barrier
- Impact attenuator

**PLAN VIEW
PASSING LANE CLOSED**

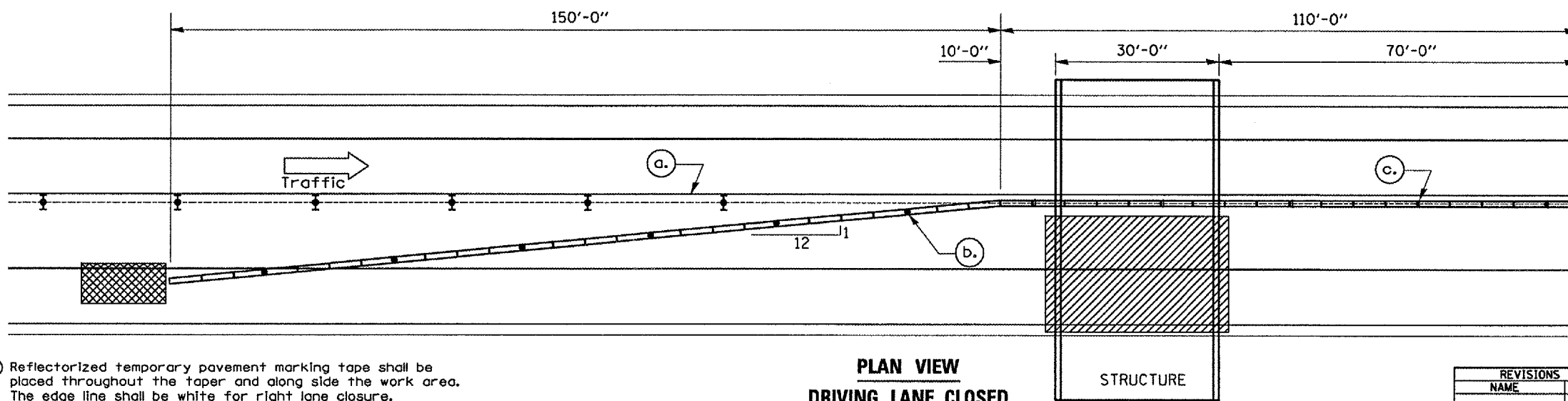
STRUCTURE



**ROADWAY SECTION
DRIVING LANE CLOSED**



**ROADWAY SECTION
PASSING LANE CLOSED**



**PLAN VIEW
DRIVING LANE CLOSED**

STRUCTURE

- (a) Reflectorized temporary pavement marking tape shall be placed throughout the taper and along side the work area. The edge line shall be white for right lane closure.
- (b) Vertical panels at 25' centers with steady burning
- (c) Type "C" monodirectional reflector

Work this sheet with Traffic Control Standards 701402

REVISIONS	
NAME	DATE

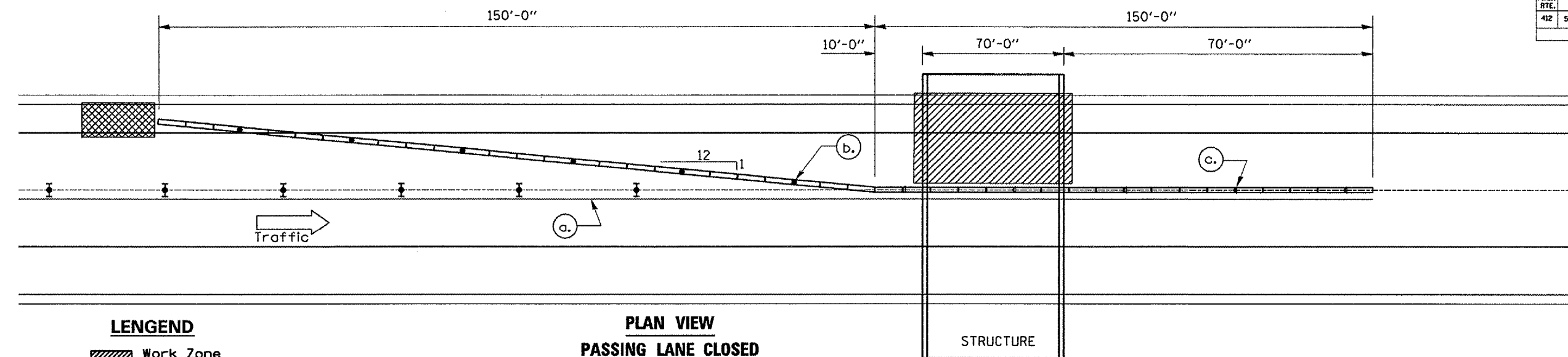
ILLINOIS DEPARTMENT OF TRANSPORTATION
TEMPORARY CONCRETE BARRIER
BRIDGE LOCATION 1
S.N. 050-0214

SCALE: VERT.
HORIZ.
DATE 04/18/05

DRAWN BY RW
CHECKED BY

Date: 04/18/05
Project: c:\projects\cm04h05\cm3078\details.dgn

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
412	50(IHB-2, IHB)BP	LASALLE	17	7
ILLINOIS				

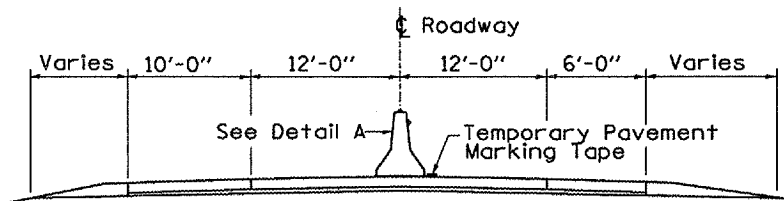


LENGEND

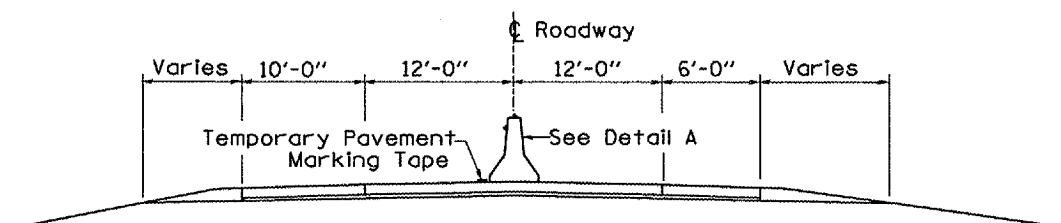
- Work Zone
- Type II barricade, drum or vertical barricade with steady burn monodirectional light
- Temporary concrete barrier
- Impact attenuator

**PLAN VIEW
PASSING LANE CLOSED**

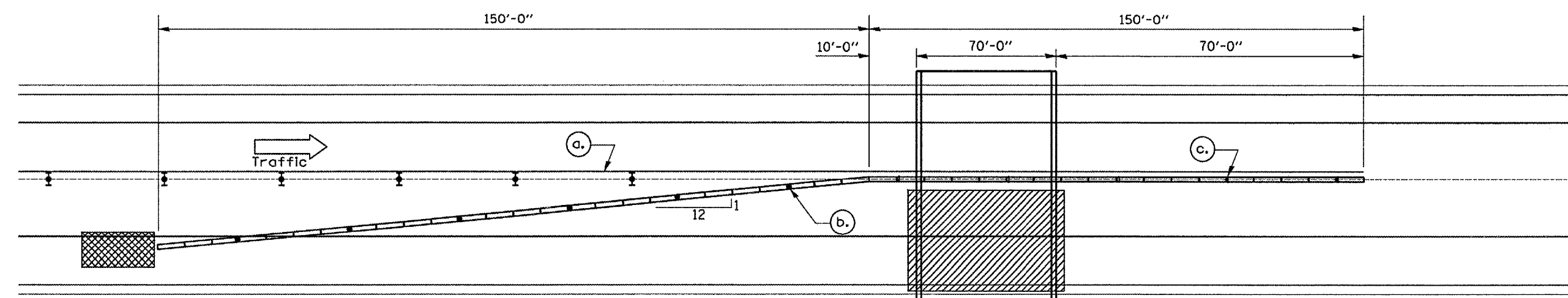
STRUCTURE



**ROADWAY SECTION
DRIVING LANE CLOSED**



**ROADWAY SECTION
PASSING LANE CLOSED**



**PLAN VIEW
DRIVING LANE CLOSED**

STRUCTURE

- (a) ReflectORIZED temporary pavement marking tape shall be placed throughout the taper and along side the work area. The edge line shall be white for right lane closure.
- (b) Vertical panels at 25' centers with steady burning
- (c) Type "C" monodirectional reflector

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
**TEMPORARY CONCRETE BARRIER
 BRIDGE LOCATION 2
 S.N. 050-0215**
 SCALE: VERT. DRAWN BY RW
 HORIZ. CHECKED BY
 DATE 04/18/05

Work this sheet with Traffic Control Standards 701402

Date: 04/18/05
Project: cr/projects/cmain05/cm3078/details.dgn

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
412	50(1)B-2,1H)BP	LASALLE	17	8

Bench Mark: Bench mark #15 is a railroad spike in the power pole at Sta. 208+57.7, Elev. 682.612
Existing Structure: None

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SPECIFICATIONS

DESIGN SPECIFICATIONS: Design Specifications American Association of State Highway and Transportation Officials (AASHTO) Standard Specifications for Highway Bridges, 1983, with 1984, 1985 and 1986 interims.

CONSTRUCTION SPECIFICATIONS: State of Illinois Standard Specifications for Road and Bridge Construction, Adopted October 1, 1983 and Special Provisions thereto.

DESIGN LOADING: AASHTO HS 20-44. Allowance for future wearing surface is 25 psf. The superstructure is designed to accommodate 1" settlement at the front walls of both abutments; and 1/2" differential settlement between the two front walls. In both cases no settlement was assumed at the rear walls.

UNIT STRESSES:
Concrete: $f_c = 3,500$ psi
Reinforcing steel: $F_y = 60,000$ psi
Structural Steel: $F_y = 36,000$ psi M223, Gr. 50
 $F_y = 36,000$ psi M183
Prestressing rods: $f_{pu} = 150,000$ psi
Max. Range of Temperature: -120°F to $+110^{\circ}\text{F}$

GENERAL NOTES

Dwg. No. F1 of 17

STRUCTURAL STEEL: Fasteners shall be high strength bolts having 7/8" diameter with 15/16" diameter open holes unless otherwise noted. Tightening and inspection of all high strength bolt connections shall conform to the requirements of the latest issue of the Specification for Structural Joints using ASTM A325 (M183) or A325 (M183) bolts for slip-critical connections. Except tightening methods using either the load indicating washers or the calibrated wrench are not allowed.

Calculated weight of AASHTO M223, Grade 50 structural steel = 234,000 Lbs. Calculated weight of AASHTO M183 structural steel = 26,300 Lbs. The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are the tension flanges, webs and all splice plate material of the steel girders.

DIMENSIONS: Dimensions shall not be scaled from the plans. All plan dimensions are measured horizontal.

CONCRETE: Exposed edges of concrete shall be chamfered 3/4 inch unless otherwise shown.

REINFORCEMENT: Reinforcement bars shall conform to the requirements of AASHTO M-31, M-42 or M-53 Grade 60. The concrete cover over the reinforcement shall be 2" clear unless otherwise shown. Bars shown thus 8x7 #4 etc. indicate 8 lines of bars with 7 lengths per line. Reinforcement bars designated (E) shall be epoxy coated. All dimensions relating to reinforcing bars are to center of bars unless otherwise shown. Dimensions relating to bending of bars are out to out of the bar.

BEARING SEATS: Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two 1/8" adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed if necessary.

BORING DATA: See Dwg. No. F17

ANCHOR BOLTS: Anchor bolts shall be set before bolting cross frames over abutment front walls.

TEST PILES: The contractor shall drive 1 Concrete test pile at each abutment front wall and 1 test pile at each abutment rear wall as directed by the Engineer before ordering the remainder of the piles.

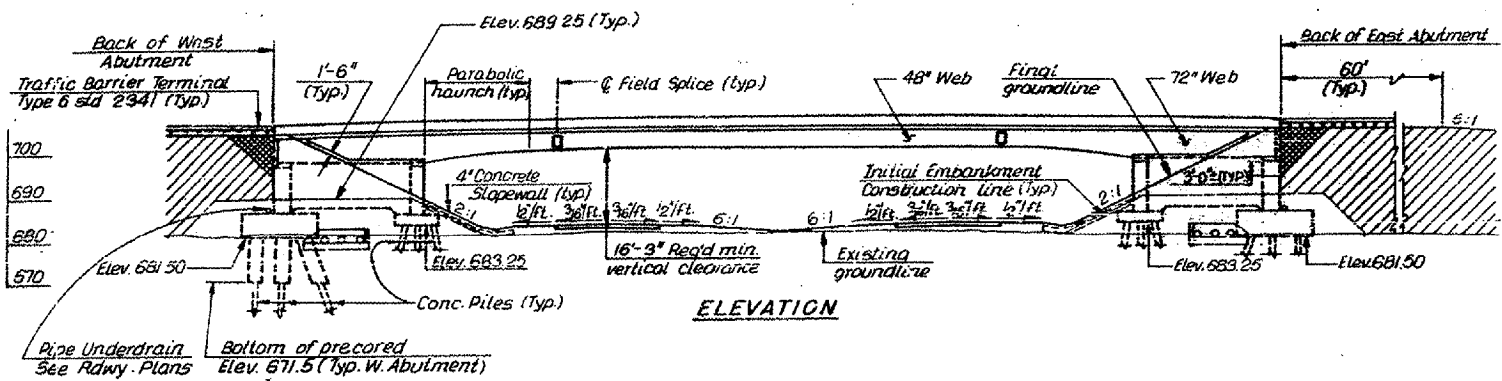
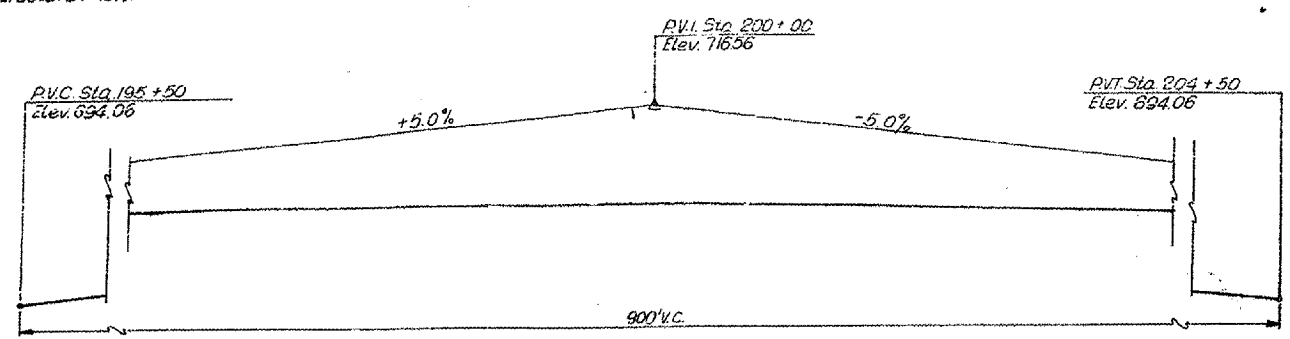
WATERPROOFING: The back of the abutment rear walls shall be waterproofed according to Article 503.11 of the Standard Specifications.

FIELD WELDING: Field welding of construction accessories will not be permitted to the bottom flange of girders nor to the top flange of girders in spans 1 and 3, nor to the top flange of girders in span 2 for a distance equal to one-fourth the span length from the abutment front walls. Field welding in other areas will be permitted only when approved by the Engineer.

SLOPE WALLS: Slope walls shall be reinforced with welded wire fabric, 6" x 6" - W4.0 x W4.0, weighing 58 lbs. per 100 sq. ft.

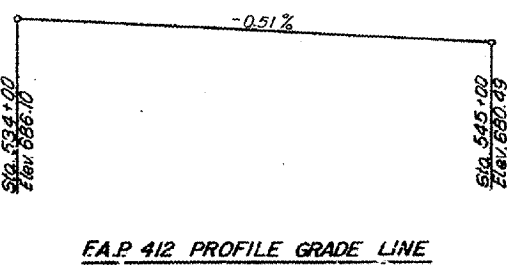
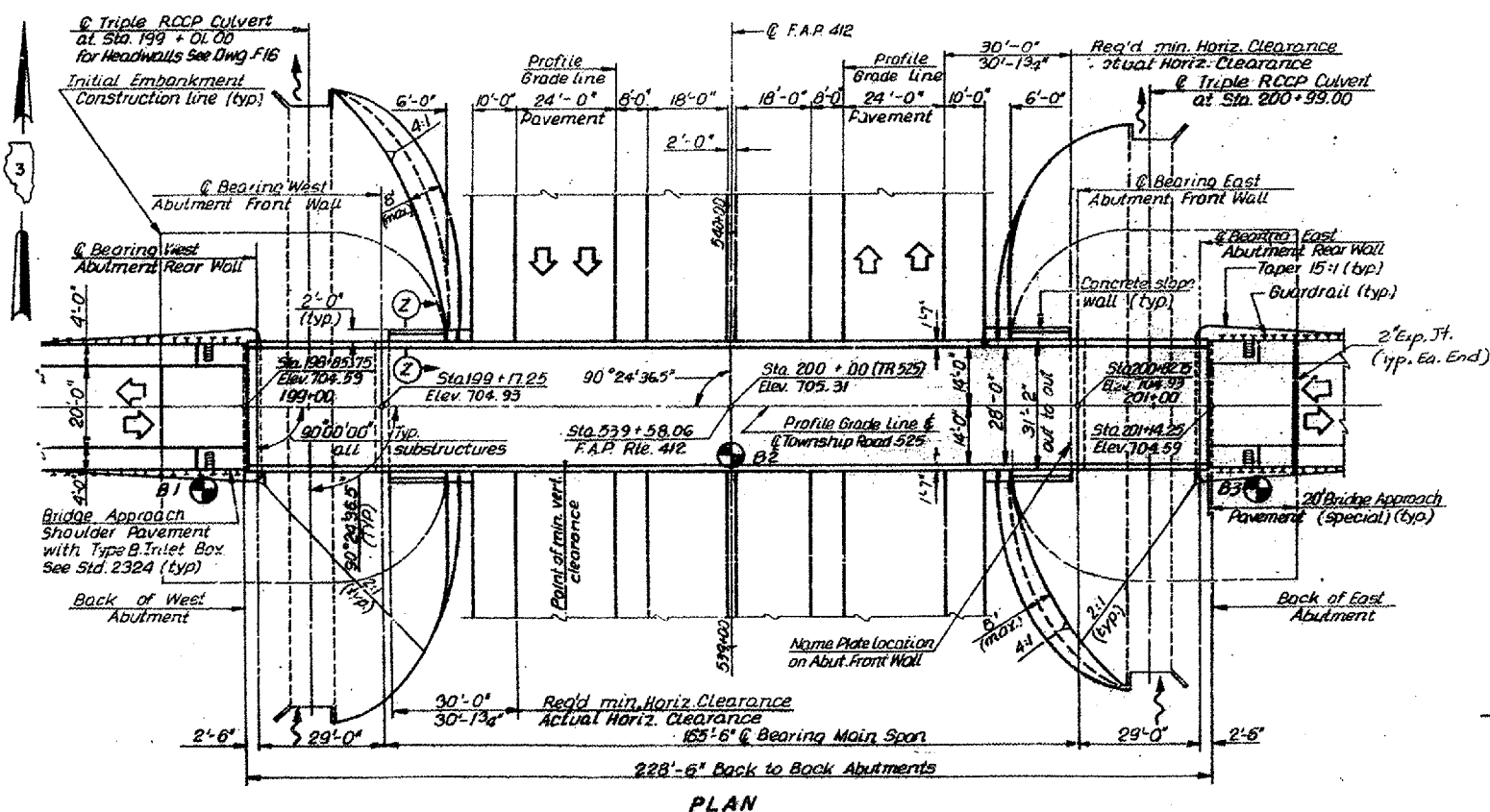
EMBANKMENT: The initial embankment configuration shown shall be the minimum embankment that must be constructed prior to the construction of the abutments.

CONCRETE PILES: Concrete piles shall be driven in holes at the West Abutment precast through the embankment to Elev. 671.5 in accordance with article 513.09(c) of the Standard Specifications.

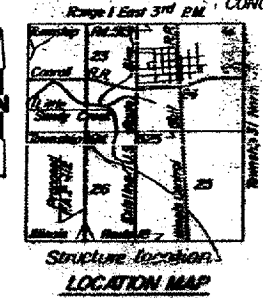


LEGEND

- ⊙ indicates boring location
- |||| indicates guardrail
- ~~~~ indicates water flow
- ▨ indicates embankment placement after construction of abutment rear wall.
- ▩ indicates porous granular embankment to be placed after construction of the abutment and after construction of the superstructure.
- ↔ indicates direction of traffic lane



APPROVED
FOR STRUCTURAL AGENCY ONLY
James J. Stapp
James J. Stapp
Professional Engineer



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
**EXISTING STRUCTURE PLANS
FOR INFORMATION ONLY
BRIDGE LOCATION 1
S.N. 050-0214**

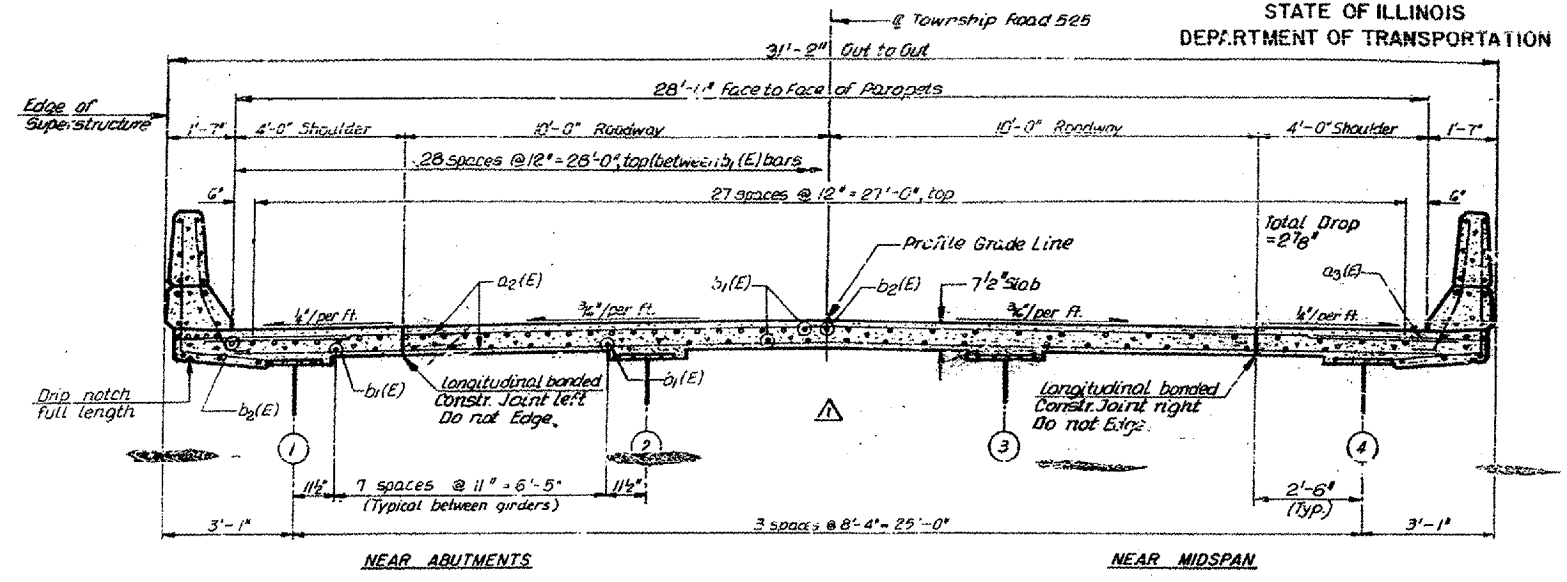
SCALE: VERT. 1" = 10'
HORIZ. 1" = 40'
DATE: 04/18/05

DRAWN BY: RW
CHECKED BY:

Date: 04/18/05
Project: c:\projects\cmain05\cm3078\details.dgn

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
412	501HB-2.1HB1BP	LASALLE	17	9

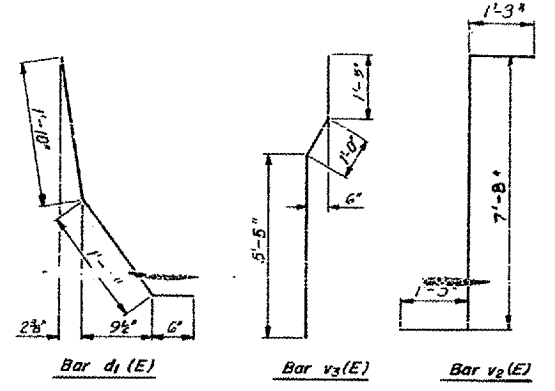
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



Note:
If longitudinal joint is used, areas outside of joint to be poured after ① & ② as shown on Dwg. No F5

SUPERSTRUCTURE
BILL OF MATERIAL

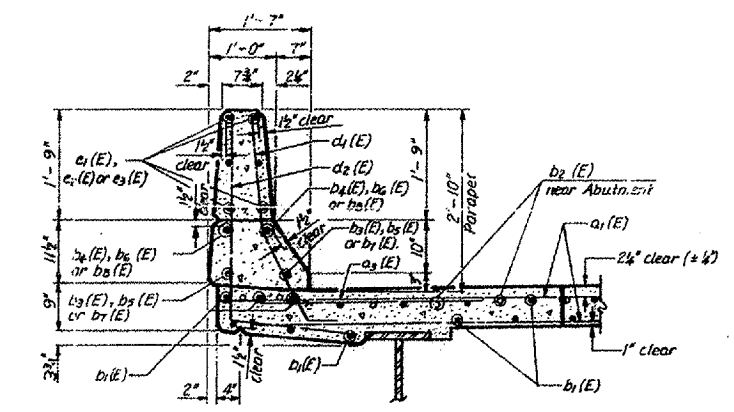
Bar	No.	Size	Length	Shape
a ₁ (E)	860	#5	30'-4"	
a ₂ (E)	496	#6	4'-0"	
b ₁ (E)	512	#5	29'-11"	
b ₂ (E)	180	#6	33'-2"	
b ₃ (E)	32	#5	15'-3"	
b ₄ (E)	32	#6	15'-3"	
b ₇ (E)	16	#5	32'-11"	
b ₈ (E)	16	#5	32'-11"	
b ₉ (E)	8	#5	19'-9"	
b ₁₀ (E)	8	#8	19'-9"	
b ₁₁ (E)	68	#5	4'-0"	
d ₁ (E)	496	#5	3'-11"	
d ₂ (E)	456	#4	5'-2"	
e ₂ (E)	96	#4	15'-3"	
e ₃ (E)	96	#4	15'-4"	
e ₄ (E)	24	#4	19'-9"	
h ₁	28	#5	28'-3"	
v ₁ (E)	106	#5	4'-6"	
v ₂ (E)	56	#5	10'-2"	
v ₃ (E)	56	#5	7'-10"	
v ₄ (E)	56	#5	2'-0"	
v ₅ (E)	56	#5	5'-0"	



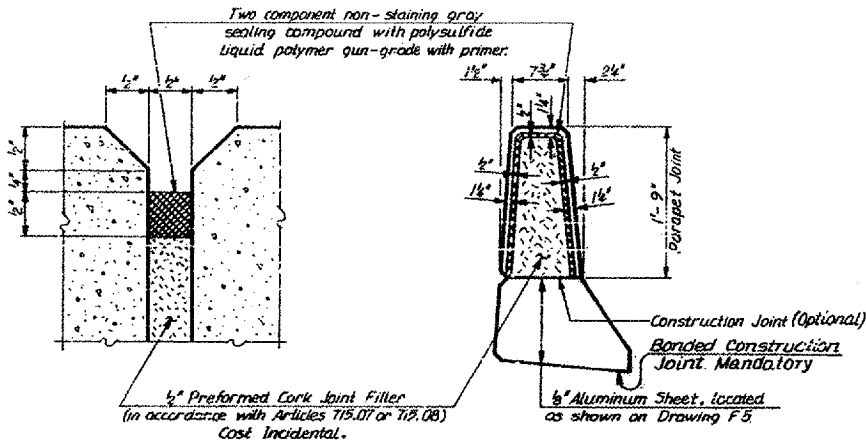
BAR BENDING DIAGRAMS

MINIMUM BAR LAPS

#5 bars = 1'-9"
#6 bars = 2'-4"



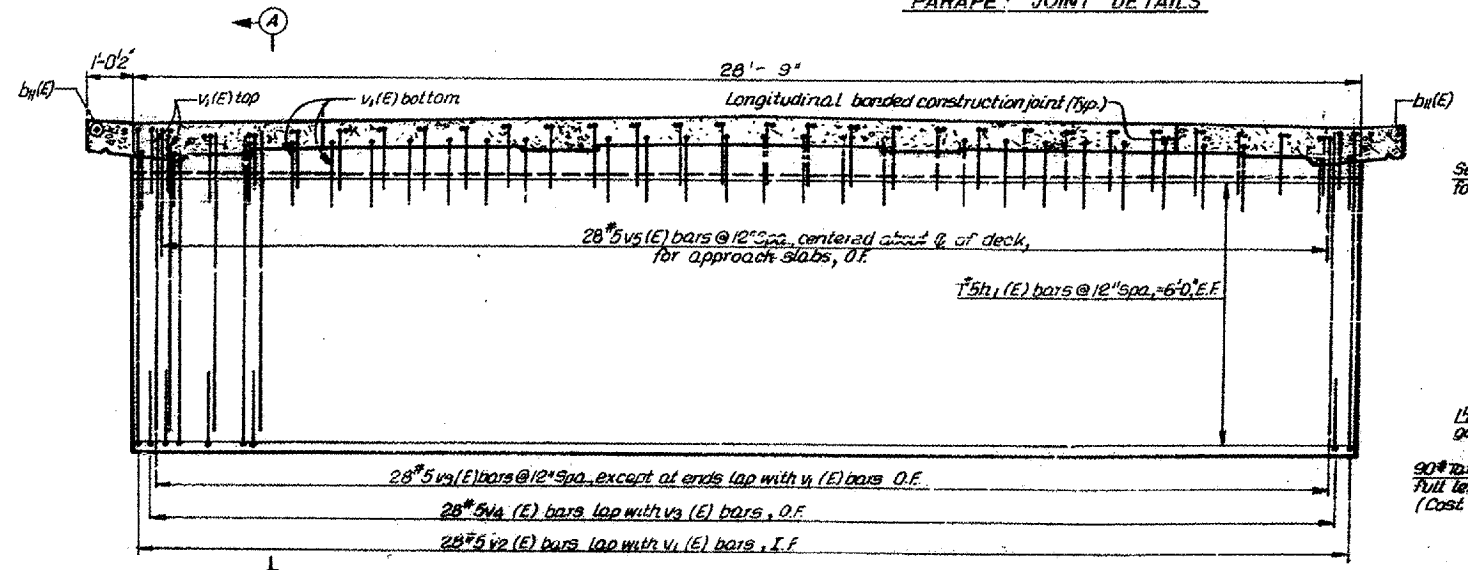
CROSS SECTION THRU PARAPET



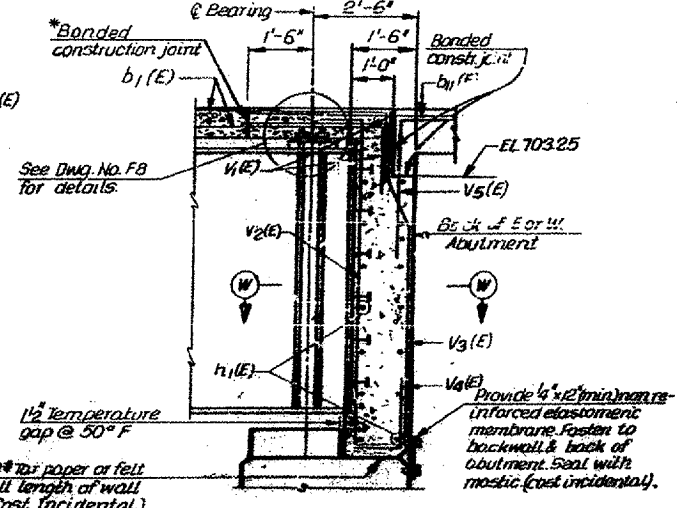
LONGITUDINAL SECTION THRU JOINT

SECTION Y-Y

PARAPET JOINT DETAILS



ABUTMENT DIAPHRAGM ELEVATION (SECTION X-X)



SECTION A-A B-C-C

Notes:
* Diaphragms and ends of deck are to be poured after other forms have been removed.
For Section W-W see Dwg. F8
For location of Section X-X & Y-Y see Dwg. F5
For location of Section C-C see Dwg. F5

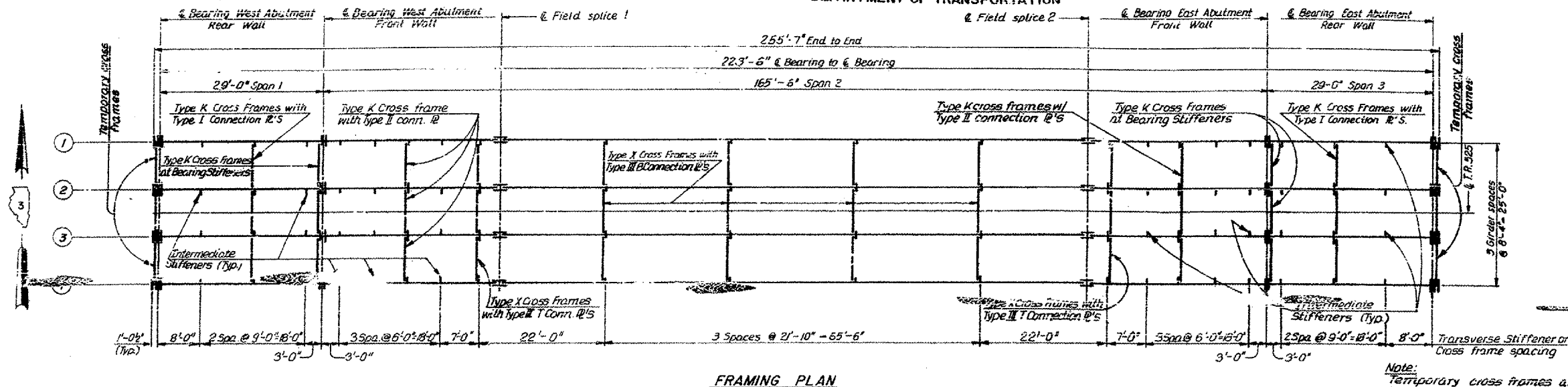
REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
**EXISTING STRUCTURE PLANS
FOR INFORMATION ONLY**
BRIDGE LOCATION 1
S.N. 050-0214
SCALE: VERT. 1"=4'-0"
HORIZ. 1"=10'-0"
DATE 04/18/05
DRAWN BY RW
CHECKED BY

Date: 04/18/05
Project: c:\projects\main05\cm3078\details.dgn

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
412	501HB-2,1HB1BP	LASALLE	17	10
ILLINOIS				

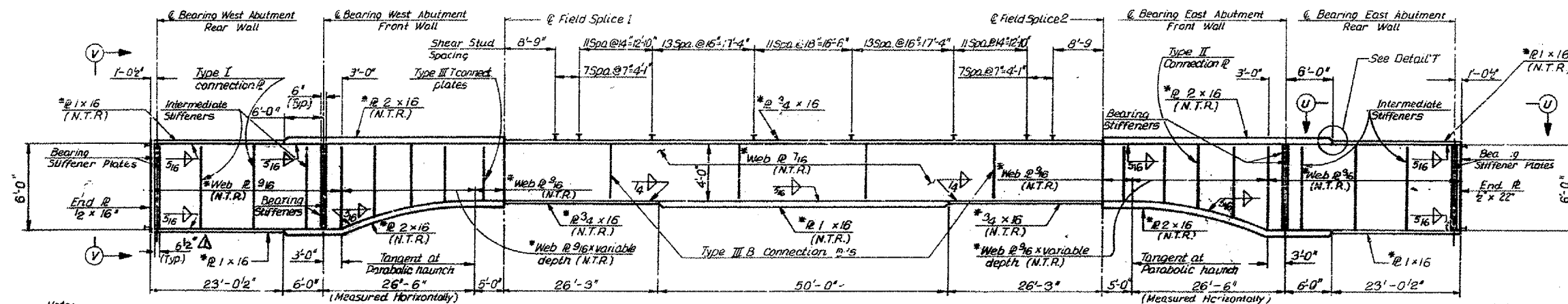
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



FRAMING PLAN

Note:
See framing plan for location of cross-frame connection @'s.

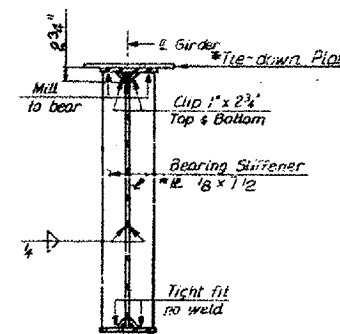
Note:
Temporary cross frames are to be placed during steel erection and removed after deck has been cured. Cost incidental.



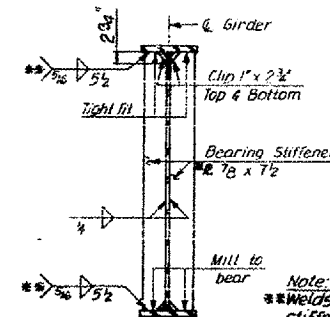
GIRDER ELEVATION

Note:
All structural steel fabricators performing work on the main load carrying components of steel structures shall be certified under Category III (AISC) of the Quality Certification Program.

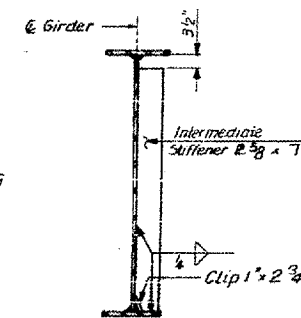
Notes:
For Detail T, and End View U-See Drawing No. FG for View U-See Drawing No. FB
N.T.R. indicates notch toughness requirements are applicable.
* indicates M 223, Gr 50 steel.
See Dwg. FB for table of web elevations.



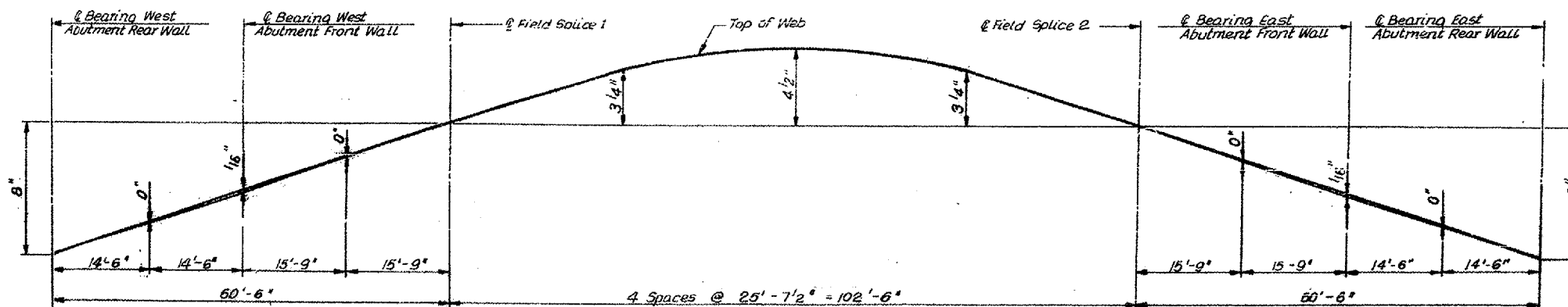
BEARING STIFFENER AT REAR WALL



BEARING STIFFENER AT FRONT WALL



INTERMEDIATE STIFFENER



CAMBER DIAGRAM

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
**EXISTING STRUCTURE PLANS
FOR INFORMATION ONLY
BRIDGE LOCATION 1
S.N. 050-0214**

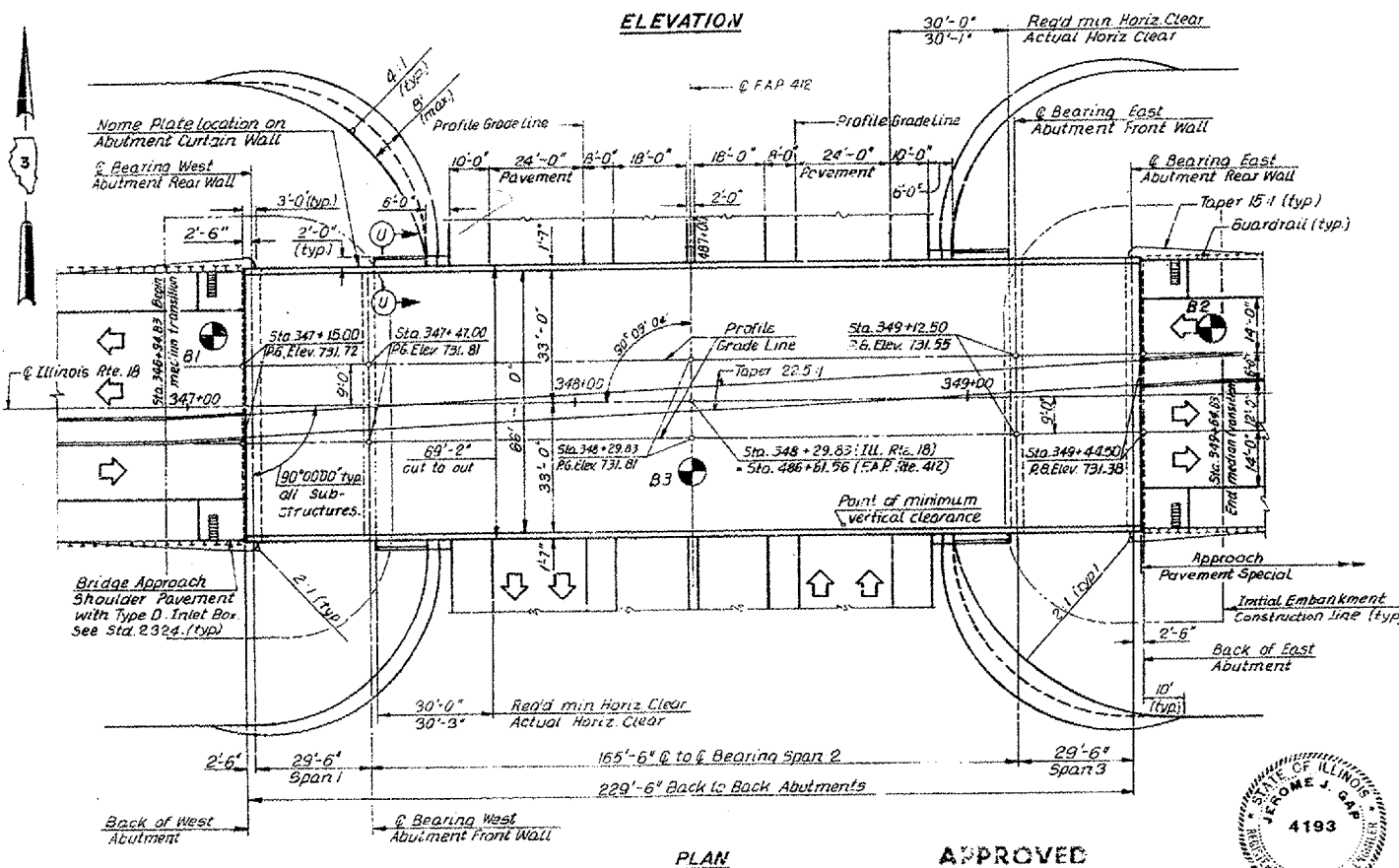
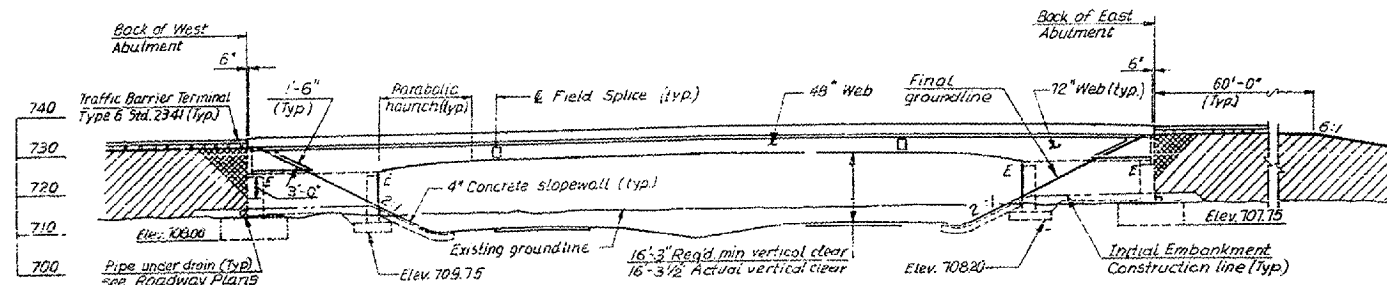
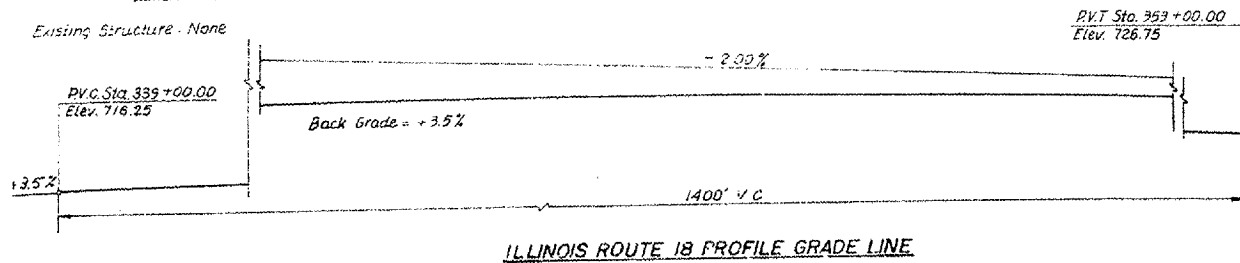
SCALE: VERT. DRAWN BY RW
HORIZ. CHECKED BY
DATE 04/18/05

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
412	50(IHB-2,1HB)BP	LASALLE	17	13
ILLINOIS				

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Bench Mark: Benchmark #7 is a railroad spike in the power pole at the proposed southwest corner of the intersection of Illinois Route 18 and F.A.P. Route 412. Elevation 70.177.

Existing Structure - None



SPECIFICATIONS

DESIGN SPECIFICATIONS: American Association of State Highway and Transportation Officials (AASHTO) Standard Specifications for Highway Bridges, 1983, with 1984, and 1985 Interim Specifications.

DESIGN LOADING: Live load is AASHTO HS 20-44. Allowance for future wearing surface is 25 psf. All other loads are as prescribed in AASHTO.

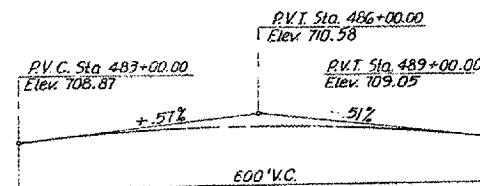
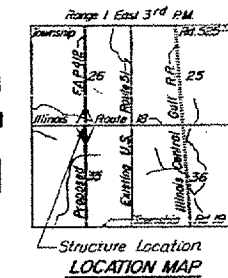
UNIT STRESSES:
Concrete: $f'c = 3,500$ psi
Reinforcing Steel: $f_y = 60,000$ psi
Structural Steel: $f_y = 50,000$ psi M223, Gr 50
 $f_y = 36,000$ psi M183
Prestressing rods: $f_{pu} = 150,000$ psi

GENERAL NOTES

ABBREVIATIONS:
E.F. denotes each face
B.F. denotes back face
F.F. denotes front face
O.F. denotes outside face
I.F. denotes inside face
Bott. denotes bottom
Min. denotes minimum
Brg. denotes bearing
C. denotes center line
Clr. denotes clearance
P.J.F. denotes preformed joint filler

LEGEND

- ◀ indicates direction of traffic lane.
- ⊙ indicates boring location
- indicates guardrail
- E indicates expansion bearing
- ▨ indicates embankment placement after construction of Abutment Rear Wall
- ▩ indicates porous granular embankment to be placed after construction of the deck and superstructure



F.A.P. 412 PROFILE GRADE LINE

PLATE GIRDER ERECTION SEQUENCE

- 1 Erect the girders in 3 segments supported by the permanent bearings and temporary supports
- 2 Erect the girder splices.
- 3 Install tie-down devices.
- 4 Remove temporary supports
- 5 Pour concrete deck in sequence as shown on Dwg. No. I.7.

Notes: For section U-U see Dwg. No. I.2
Temporary supports shall be incidental to structural steel.

GENERAL NOTES (CONT'D)

REINFORCEMENT: Reinforcement bars shall conform to the requirements of AASHTO M-31, M-42 or M-53 Grade 60. The concrete cover over the reinforcement shall be 2" clear unless otherwise shown. Bars shown thus 8x7 #4 etc. indicate 8 lines of bars with 7 lengths per line. Reinforcement bars designated (B) shall be epoxy coated. All dimensions relating to reinforcing bars are to center of bars unless otherwise shown. Dimensions relating to bending of bars are out to out of the bar.

STRUCTURAL STEEL: Fasteners shall be high strength bolts having 7/8" diameter with 15/16" diameter open holes unless otherwise noted. All high strength bolted connections shall conform to the requirements of the latest issue of the Specifications for Structural Joints using ASTM A325 (M164) or A490 (M253) bolts for slip critical connections except tightening methods using either the load indicating washers or the calibrated wrench method are not allowed. Calculated weight of AASHTO M223, Grade 50 structural steel = 549,550 pounds. Calculated weight of AASHTO M183 structural steel = 78,170 pounds. The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are the tension flanges, webs and all splice plate material of the steel girders.

PAINTING: The zinc-silicate and vinyl paint system shall be used for shop and field painting of structural steel except where otherwise noted.

FIELD WELDING: Field welding of construction accessories will not be permitted in the bottom flange of girders nor to the top flange of girders in Spans 1 and 3, nor to the top flange of girders in Span 2 for a distance equal to one-fourth the span length from the abutment front walls. Field welding in other areas will be permitted only when approved by the Engineer.

BORING DATA: See proposal for boring data, or Dwg. No. I.7

ANCHOR BOLTS: Anchor bolts shall be set before bolting cross frames over abutment front walls.

CONCRETE: Exposed edges of concrete shall be chiseled 3/4 inch unless otherwise shown.

BEARING SEATS: Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two 1/8" adjusting shims of the dimensions shown in Drawing I.1 shall be provided for each bearing in addition to all other plates or shims and placed if necessary.

UTILITIES: The Contractor is responsible for making his own determinations as to the type and location of underground and other utilities as may be necessary to avoid damage thereto.

PLAN

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

James J. Rayburn



James J. Rayburn

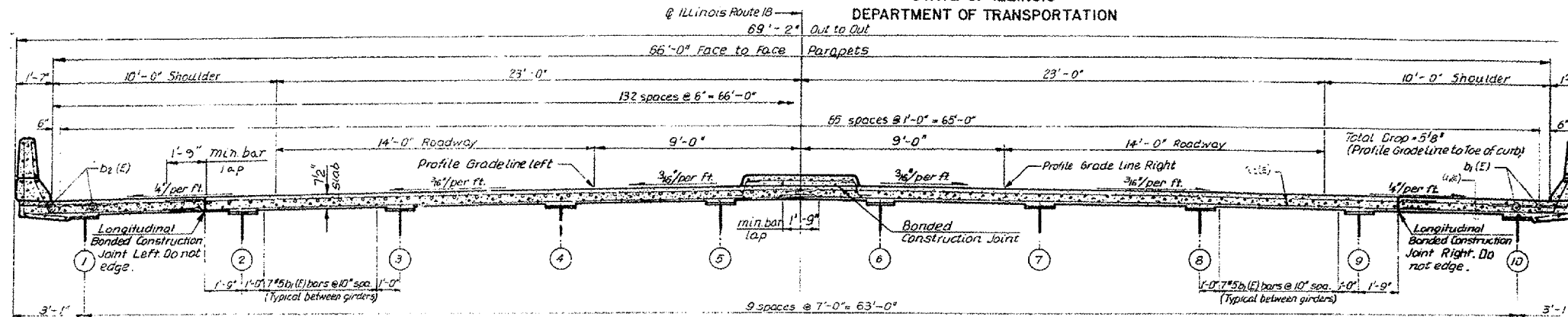
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
**EXISTING STRUCTURE PLANS
FOR INFORMATION ONLY
BRIDGE LOCATION 2
S.N. 050-0215**

SCALE: VERT. DRAWN BY RW
 HORIZ. CHECKED BY
DATE: 04/18/05

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
412	501HB-2,1HB1BP	LASALLE	17	14
ILLINOIS				

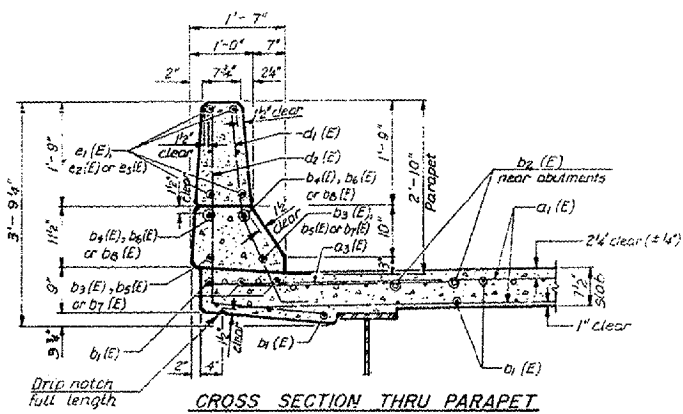
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



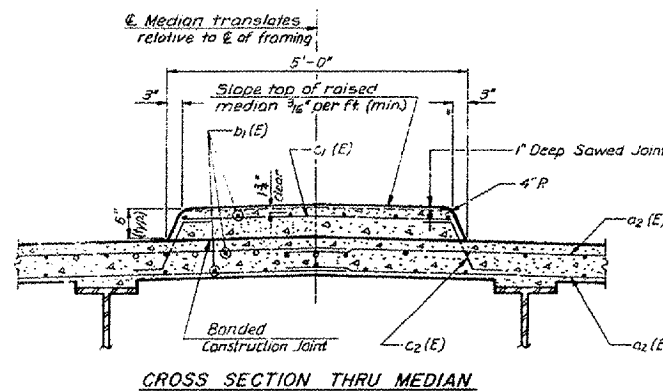
NEAR ABUTMENTS

NEAR MIDSPAN

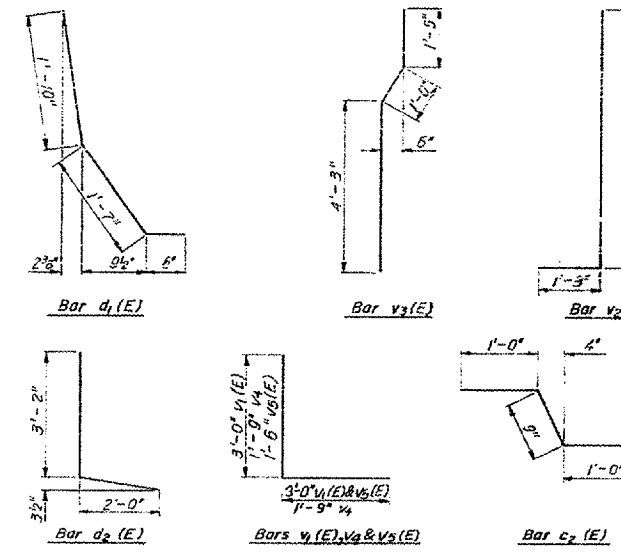
CROSS SECTION LOOKING EAST



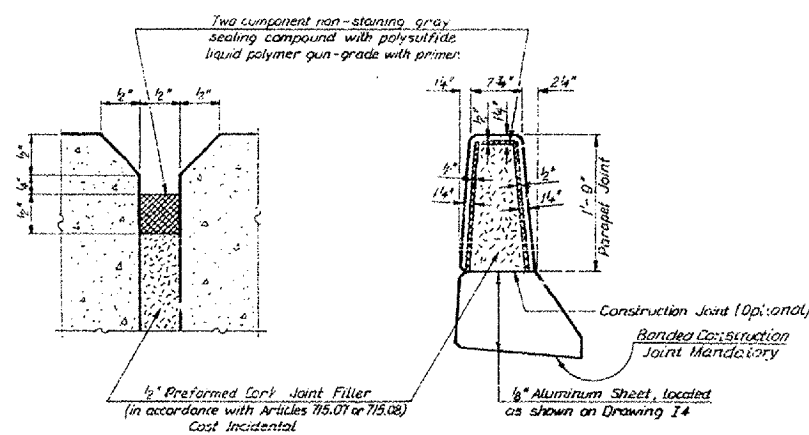
CROSS SECTION THRU PARAPET



CROSS SECTION THRU MEDIAN



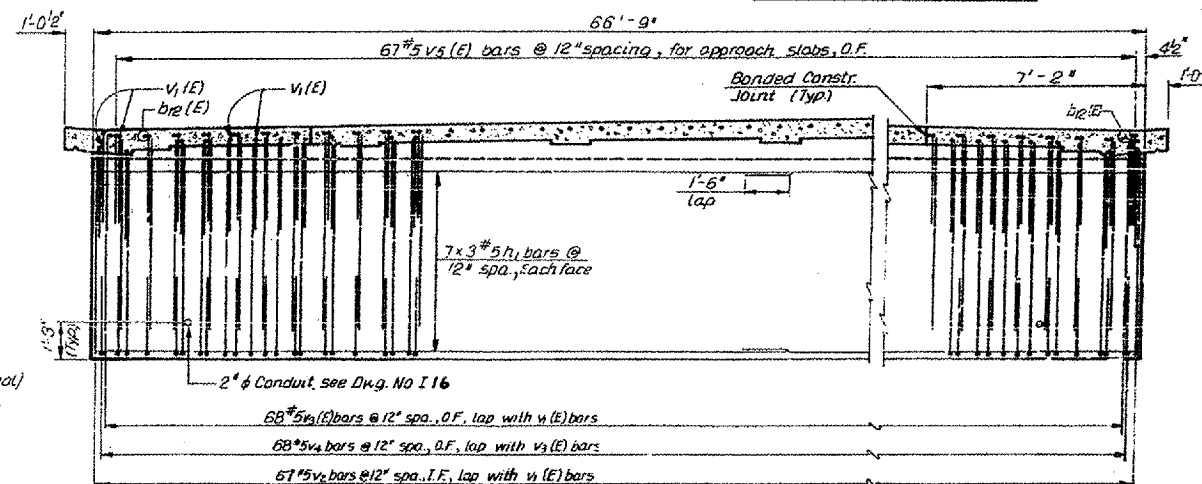
BAR BENDING DIAGRAMS



LONGITUDINAL SECTION THRU JOINT

SECTION Y-Y

PARAPET JOINT DETAILS



ABUTMENT DIAPHRAGM ELEVATION (SECTION Z-Z)

Bar	No.	Size	Length	Shape
a1(E)	1454	#5	7'-3"	
a2(E)	1454	#5	27'-0"	
a3(E)	422	#6	4'-0"	
b1(E)	1269	#5	27'-0"	
b2(E)	284	#6	34'-2"	
b3(E)	16	#5	15'-6"	
b4(E)	16	#8	15'-6"	
b5(E)	8	#5	7'-9"	
b6(E)	8	#8	19'-9"	
b7(E)	16	#5	32'-8"	
b8(E)	16	#8	33'-5"	
c1(E)	24	#5	15'-6"	
c2(E)	12	#5	19'-6"	
c3(E)	24	#5	32'-8"	
c4(E)	134	#5	4'-0"	
c5(E)	229	#5	2'-2"	
c6(E)	438	#5	2'-9"	
d1(E)	500	#5	3'-4"	
d2(E)	428	#6	5'-2"	
v1(E)	48	#5	19'-6"	
v2(E)	24	#4	19'-9"	
v3(E)	96	#4	15'-5"	
v4	84	#5	23'-2"	
v5(E)	210	#5	6'-0"	
v6	134	#5	7'-2"	
v7(E)	136	#5	8'-8"	
v8	136	#5	3'-6"	
v9(E)	134	#5	4'-6"	
Item		Unit	Quantity	
Class Conc. Supersbr.		Cu. Yd.	509	
Reinforcement Bars		Pound	3,600	
Reinforcement Bars (Epoxy coated)		Pound	124,310	

Notes:
For location of sections Y-Y and Z-Z see Drawing No. 17

MINIMUM BAR LAPS
#5 BARS = 1'-9"
#6 BARS = 2'-4"

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
**EXISTING STRUCTURE PLANS
FOR INFORMATION ONLY
BRIDGE LOCATION 2
S.N. 050-0215**

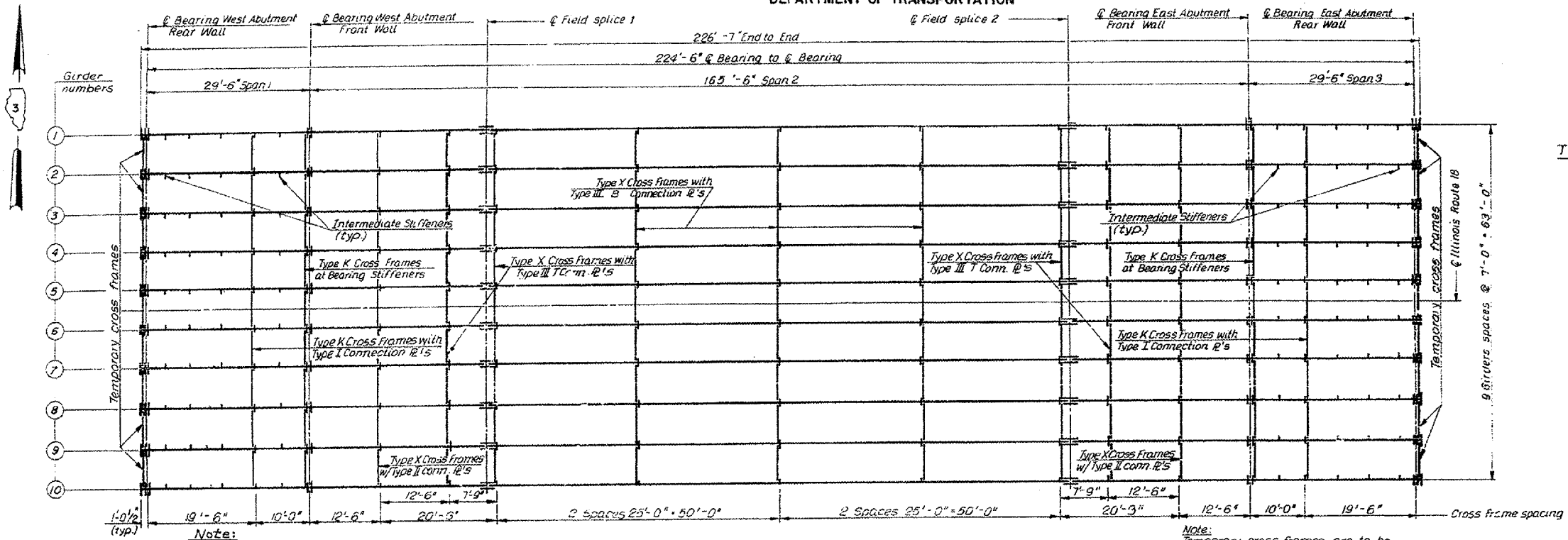
SCALE: VERT. _____
HORIZ. _____
DATE: 04/18/05

DRAWN BY: RW
CHECKED BY: _____

Date: 04/18/05
Project: cz/projects/cmln05/cm3078/details.dgn

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
412	5011HB-2,1HB1BP	LASALLE	17	15
ILLINOIS				

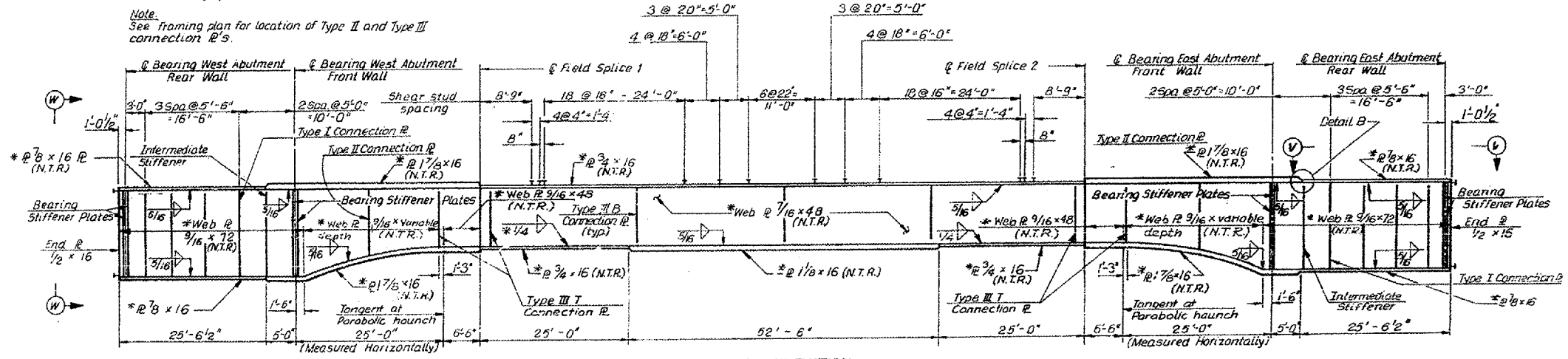
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



Note:
All structural steel fabricators performing work on the main load carrying components of steel structures shall be certified under Category III (AISC) of the Quality Certification Program.

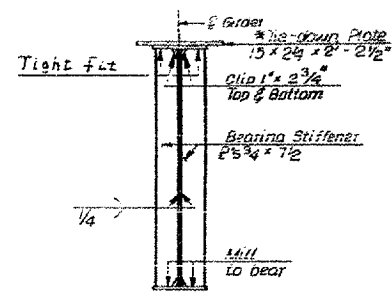
FRAMING PLAN

Note:
Temporary cross frames are to be placed during steel erection and removed after slab has cured.

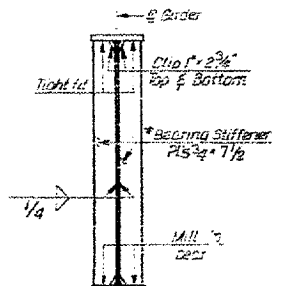


Note:
See framing plan for location of Type II and Type III connection @'s.

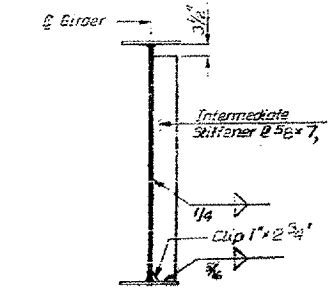
GIRDER ELEVATION



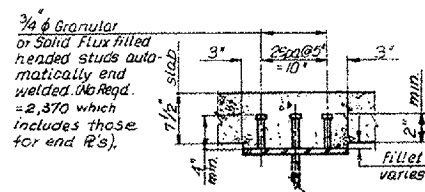
BEARING STIFFENER AT REAR WALL



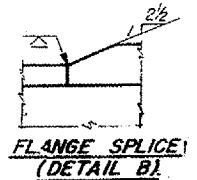
BEARING STIFFENER AT FRONT WALL



INTERMEDIATE STIFFENER



SHEAR STUDS



FLANGE SPLICE (DETAIL B)

Notes:
For View V, and End View W-W, see Dwg. No. I.ii
See Dwg. I.ii for connection @ details
N.T.R. indicates notch toughness requirement. See General Notes.
* Indicates M223, Gr.50 Steel

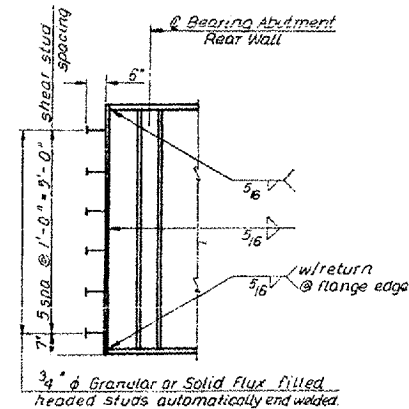
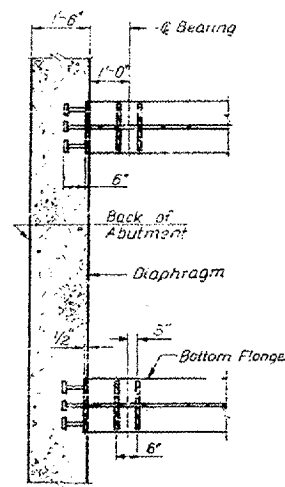
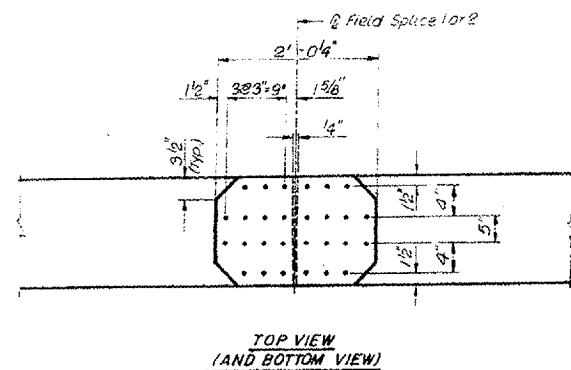
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
**EXISTING STRUCTURE PLANS
FOR INFORMATION ONLY**
BRIDGE LOCATION 2
S.N. 050-0215
SCALE: VERT. DRAWN BY RW
 HORIZ. CHECKED BY
DATE 04/18/05

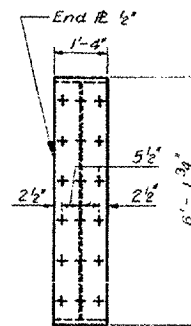
Date: 04/18/05
Project: cv/projects/cmain05/cm3078/details.dgn

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
412	501HB-2,1HB1P	LASALLE	17	16
ILLINOIS				

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



Note:
+ indicates location of shear studs.

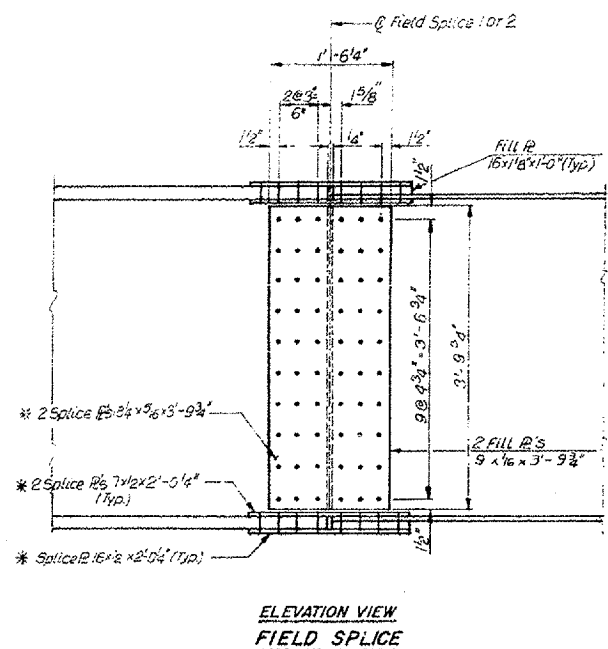


SECTION X-X

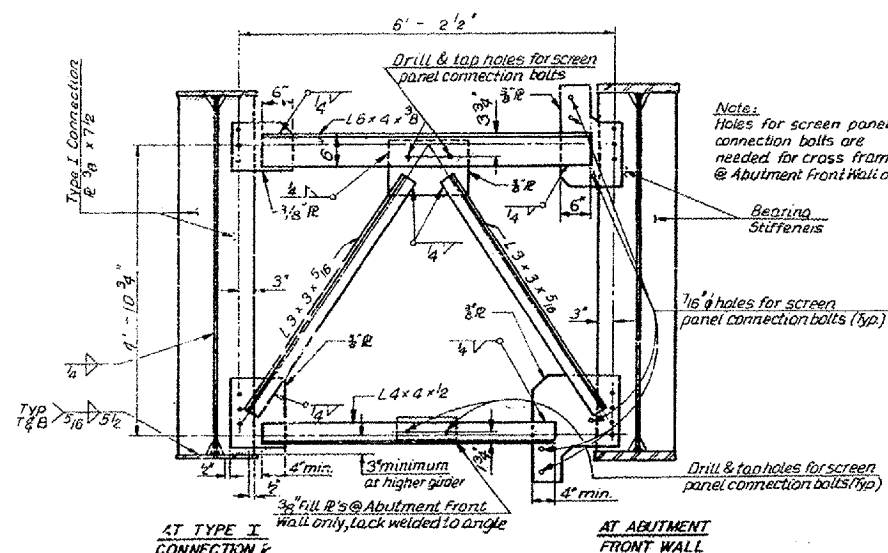
ELEVATION VIEW

END VIEW W-W

GIRDER END DETAILS

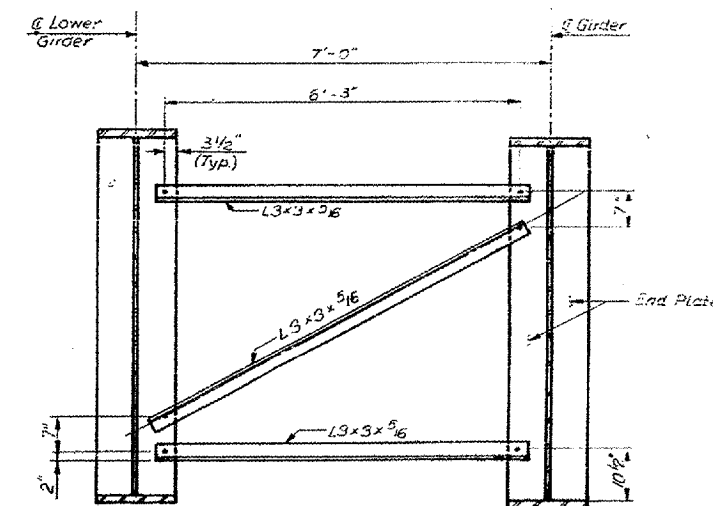


ELEVATION VIEW
FIELD SPLICE



AT TYPE I CONNECTION &
AT ABUTMENT FRONT WALL

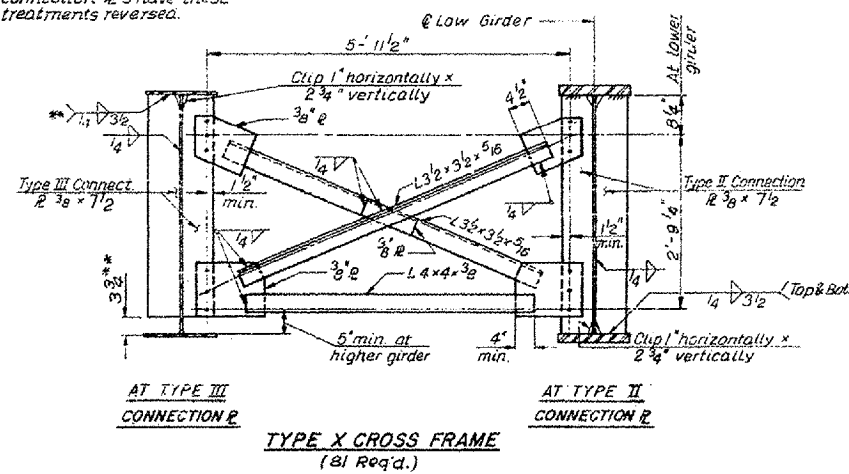
Note:
Holes for screen panel connection bolts are needed for cross frames @ Abutment Front Wall only.



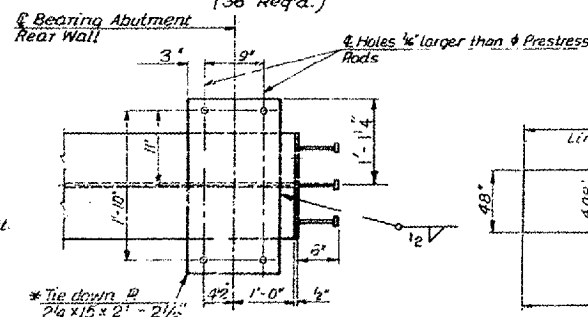
Note:
Temporary cross frames are to be removed after deck is poured and prior to placement of Diaphragm concrete.

TEMPORARY CROSS FRAMES
(18 Req'd.)

Note:
Type III B connection @'s have gap @ bottom and tight fit with weld @ top. Type III T Connection @'s have these treatments reversed.



AT TYPE III CONNECTION &
AT TYPE II CONNECTION &
TYPE X CROSS FRAME
(81 Req'd.)



VIEW V-V

WEB HAUNCH TEMPLATE

Notes:
For location of Section X-X, see Dwg. No. I7
For location of End View W-W, see Dwg. No. I9
End welded studs shall conform to article 710.38 of the Standard Specifications
For location of View V-V, see Dwg. No. I9 & I16
Connections of cross frames to connection @'s and bearing stiffeners shall be made with 3/4" bolts, 15/16" over sized holes & hardened washers
* Indicates A223, Gr-50 Steel.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
**EXISTING STRUCTURE PLANS
FOR INFORMATION ONLY**
BRIDGE LOCATION 2
S.N. 050-0215
SCALE: VERT. _____
HORIZ. _____
DATE: 04/18/05
DRAWN BY: RW
CHECKED BY: _____

