

70661

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55		MCLEAN	70	1
FED. ROAD DIST. NO. 4		ILLINOIS	FED. AID PROJECT	

(157-4)HBR-5&VBR-1&57-2HB-1

D-95-034-07

70+1=71

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS**

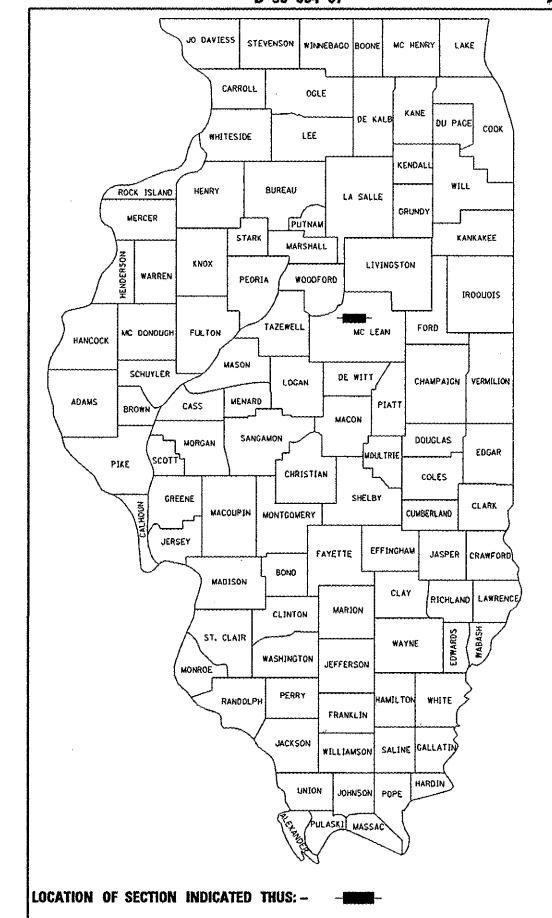
F.A.I. 55 (I-55)

SECTION {(57-4)HBR-5&VBR-1}&57-2HB-1

PROJECT IM-055-4(168)165

TYPE OF IMPROVEMENT: BRIDGE REPAIR

MCLEAN COUNTY

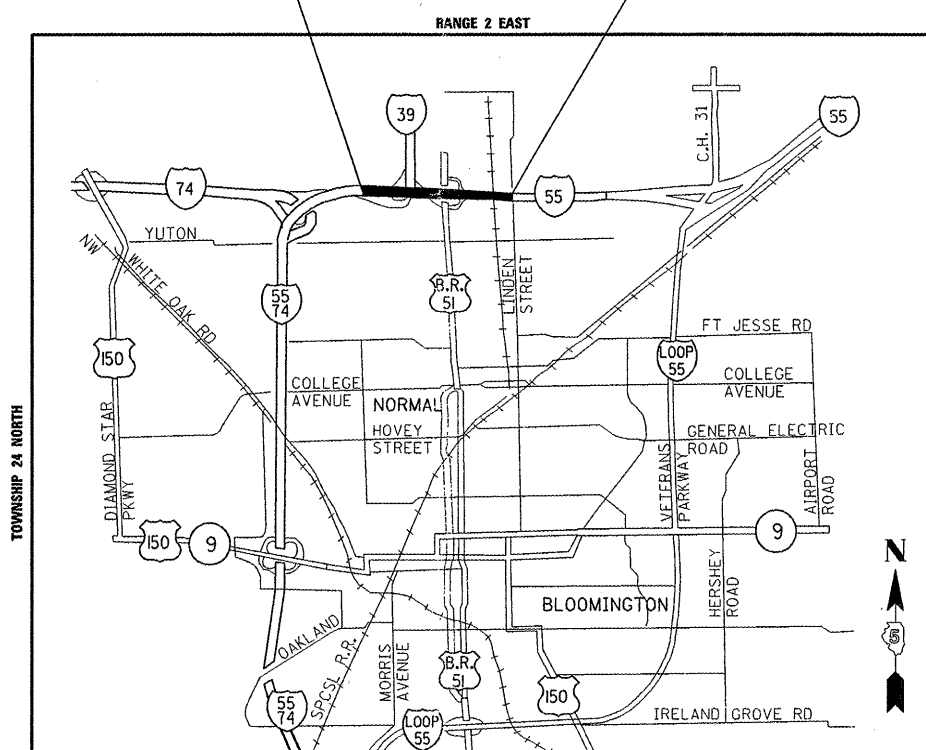


LOCATION OF SECTION INDICATED THUS: - ■ -
 DESIGN DESIGNATION: INTERSTATE 39,900 (2007)
 26,000 (2005) PRINCIPAL ARTERIAL CLASS 1 TRUCK ROUTE
 P.U.=75% S.U.=6% M.U.=19%

C-95-034-07

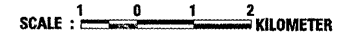
BEGIN IMPROVEMENT STA. 36+850 (F.A.I. 55)

END IMPROVEMENT STA. 38+562 (F.A.I. 55)



LOCATION MAP

MAP SCALE 1 : 60,000



GROSS LENGTH OF PROJECT = 1.712 km
 NET LENGTH OF PROJECT = 0.312 km

STRUCTURE DESCRIPTION

STRUCTURE NO. 057-0214 (S.B.) FOUR SPAN BRIDGE CARRYING RAMP A OVER F.A.I. 55. 83,201 m BK. TO BK. OF APPROACH BENTS - FOUNDATION & SLOPEWALL REPAIR.

STRUCTURE NO. 057-0215 (N.B.) FOUR SPAN BRIDGE CARRYING F.A.I. 39 OVER F.A.I. 55. 83,734 m BK. TO BK. OF APPROACH BENTS - FOUNDATION & SLOPEWALL REPAIR

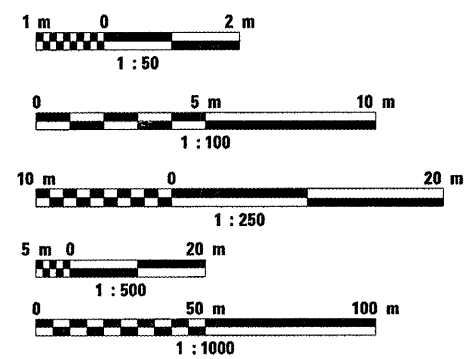
STRUCTURE NO. 057-0024 & 057-0025 FOUR SPAN DUAL BRIDGE CARRYING F.A.I. 55 OVER U.S. 51. 63,884 m BK. TO BK. OF ABUTMENTS - DECK REPAIR.

STRUCTURE NO. 057-0026 & 057-0027 THREE SPAN DUAL BRIDGE CARRYING F.A.I. 55 OVER CONSTITUTION TRAIL. 46,231 m BK. TO BK. OF ABUTMENTS - DECK REPAIR.

STRUCTURE NO. 057-0028 & 057-0029 THREE SPAN DUAL BRIDGE CARRYING F.A.I. 55 OVER LINDEN STREET. 34,950 m BK. TO BK. OF ABUTMENTS - DECK REPAIR

PLAN 1:500
 PROFILE HORIZ. 1:500
 PROFILE VERT. 1:50
 CROSS SECTIONS 1:100

METRIC RATIOS



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.

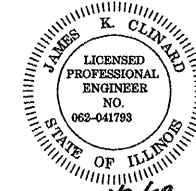
MICROFILMED _____
 REEL NUMBER _____
 AWARDED _____
 RESIDENT ENGINEER _____
 AS BUILT CHANGES WERE MADE ON THE FOLLOWING SHEETS _____

FOR JOINT UTILITY INFORMATION CALL TOLLFREE 1-800-892-0123

DISTRICT 5 PHONE # 217-465-4181
 PROJECT ENGINEER: NANCY FASIG
 UNIT CHIEF: JASON STULTS
 TOWNSHIP: NORMAL

CONTRACT NO. 70661

10/29/08 date



expires 11/30/09

J. K. Clinard
 signature

PROFESSIONAL DESIGN FIRM LICENSE NO. 184-00171

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

SUBMITTED 10/21/08 date
James E. Coe
 DEPUTY DIRECTOR OF HIGHWAYS, REGION 3 ENGINEER

December 5, 2008
Eric E. Horn
 INTERIM ENGINEER OF DESIGN AND ENVIRONMENT

December 5, 2008
Christine M. Reed
 DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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

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HIGHWAY STANDARDS

000001-05	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
001001-02	AREA OF REINFORCEMENT BARS
631031-07	TRAFFIC BARRIER TERMINAL, TYPE 6
701101-02	OFF-RD OPERATIONS, MULTILANE, 4.5 m (15') TO 600 mm (24") FROM PAVEMENT EDGE
701400-03	APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
701401-05	LANE CLOSURE, FREEWAY/EXPRESSWAY
701402-07	LANE CLOSURE, FREEWAY/EXPRESSWAY WITH BARRIER
701411-05	LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXIT RAMP, FOR SPEEDS >= 45 MPH
701426-03	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPERATION, FOR SPEEDS >= 45 MPH
701601-06	URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN
701901-01	TRAFFIC CONTROL DEVICES
704001-05	TEMPORARY CONCRETE BARRIER
780001-02	TYPICAL PAVEMENT MARKINGS
781001-03	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS

GENERAL NOTES

G.N.-105.07

EXISTING STATE-OWNED AND MAINTAINED UTILITY LINES ARE SHOWN ON THE PLANS TO INDICATE THEIR PRESENCE AND APPROXIMATE LOCATION. THE CONTRACTOR SHALL NOTIFY THE DISTRICT OPERATIONS ENGINEER TWO WEEKS PRIOR TO COMMENCING ANY EXCAVATION IN THE VICINITY OF THESE LINES. THE STATE WILL THEN LOCATE AND MARK THE HORIZONTAL LOCATIONS OF THE LINES AND PROVIDE ANY AVAILABLE INFORMATION AS TO THEIR DEPTH. SHOULD ANY OF THE LINES BE DAMAGED BY THE CONTRACTOR'S OPERATION, THE CONTRACTOR SHALL REPAIR THEM TO THE SATISFACTION OF THE ENGINEER AND AT NO COST TO THE STATE.

ALSO THERE MAY BE UTILITIES PRESENT WHICH WERE INSTALLED BY THE STATE BUT ARE MAINTAINED BY OTHERS (CITY, TOWN, ETC.) THE APPROXIMATE LOCATIONS OF THESE LINES ARE ALSO SHOWN ON THE PLANS ALONG WITH THE NAME OF THE MAINTAINING AGENCY. THE CONTRACTOR SHALL COORDINATE THE LOCATING OF THESE LINES WITH THE LOCAL AGENCY PRIOR TO COMMENCING ANY EXCAVATION OR BORING IN THEIR VICINITY. SHOULD THESE LINES BE DAMAGED BY THE CONTRACTOR'S OPERATIONS, THE CONTRACTOR SHALL REPAIR THEM TO THE SATISFACTION OF, AND AT NO COST TO, THE LOCAL AGENCY AND THE STATE.

G.N.-281

THE RIPRAP GRADATION SHALL BE IN ACCORDANCE WITH THE GRADATION SPECIFIED IN THE PLANS OR, WITH APPROVAL OF THE ENGINEER, A CLASS A3 AND CLASS A4 RIPRAP GRADATION MEETING A D50 GREATER THAN OR EQUAL TO 0.5 FEET AND 0.75 FEET, RESPECTIVELY. D50 IS DEFINED AS THE MEAN ROCK SIZE AS DESCRIBED IN THE FHWA HYDRAULIC ENGINEERING CIRCULARS (HEC 11, HEC 14 AND HEC 15).

IF GRAVEL IS USED FOR THE BEDDING MATERIAL UNDER RIPRAP, THE GRAVEL SHALL BE CRUSHED AS ALLOWED UNDER ARTICLE 1005.01.

G.N.-406

THE QUANTITIES INCLUDED IN THE PLANS FOR HOT-MIX ASPHALT RESURFACING ARE INTENDED TO GIVE THE COVERAGE SHOWN ON THE TYPICAL CROSS SECTIONS. IT IS NOT INTENDED TO INCREASE THE THICKNESS OF THE HOT-MIX ASPHALT MIXTURE IN ORDER TO USE ALL OF THE QUANTITIES INCLUDED IN THE CONTRACT.

G.N.-406H

THE FOLLOWING MIXTURE REQUIREMENTS ARE APPLICABLE FOR THIS PROJECT:

MIXTURE DESIGN	HOT-MIX ASPHALT POLYMER SURFACE ON BRIDGES
PG GRADE	SBS PG 70-22
MAX % RAP ALLOWABLE *	10%
DESIGN AIR VOIDS	4.0% @ N 105
MIXTURE COMPOSITION	IL. 9.5
FRICTION AGGREGATE	MIXTURE E
DENSITY CONTROL METHOD	UNCORRELATED

* IF RAP OPTION IS SELECTED, THE ASPHALT CEMENT GRADE MAY NEED TO BE ADJUSTED. THIS WILL BE DETERMINED BY THE ENGINEER.

G.N.-501A

THE EXISTING STRUCTURAL STEEL COATING CONTAINS LEAD. THE CONTRACTOR SHOULD FOLLOW THE GUIDE BRIDGE SPECIAL PROVISIONS FOR CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES TO DEAL WITH THE PRESENCE OF LEAD ON THIS PROJECT.

G.N.-631

IF THE CONTRACTOR ELECTS TO USE THE ALTERNATE MOUNTING METHOD OF THRU DRILLING THE MOUNTING HOLES FOR THE TRAFFIC BARRIER TERMINALS, TYPE 6, THE HOLES SHALL BE DRILLED USING A CORE DRILL. A HAMMER DRILL WILL NOT BE ALLOWED.

G.N.-609

PRIOR TO ROUTING TRAFFIC ONTO THE SHOULDERS AS SHOWN IN THE STAGING PLANS, THE CONTRACTOR SHALL SECURE THE GRATINGS ON SHOULDER INLETS AS DIRECTED BY THE ENGINEER. THIS WORK WILL BE PAID FOR ACCORDING TO ARTICLE 109.04.

G.N.-781

RAISED REFLECTIVE PAVEMENT MARKERS SHALL BE PLACED IN ACCORDANCE WITH STANDARD 781001, AND THE DETAILS SHOWN IN THE PLANS. IF THERE IS ANY DISCREPANCY BETWEEN THE STANDARD AND THE DETAILS IN THE PLANS, THE DETAILS IN THE PLANS SHALL GOVERN. THE FINAL PAVEMENT MARKINGS SHALL BE IN PLACE PRIOR TO PLACING THE RAISED REFLECTIVE PAVEMENT MARKERS AND THE RAISED REFLECTIVE PAVEMENT MARKERS SHALL BE PLACED MIDWAY IN THE 30 FOOT (9 m) SPACE BETWEEN THE DASHED CENTERLINE STRIPES (WHEN APPLICABLE).

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	•	McLEAN	70	2
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

• (157-4)HBR-5&VBR-1J&57-2HB-1

CONTRACT NO. 70661

INDEX OF SHEETS, HIGHWAY STANDARDS,
AND GENERAL NOTES
F.A.I. 55
MCLEAN COUNTY

SUMMARY OF QUANTITIES				URBAN MULTILANE 90% FEDERAL / 10% STATE SFTY 2A					
CODE NO	ITEM	CONSTRUCTION TYPE CODE:	UNIT	TOTAL QUANTITY	I000				
					STA. 36+850 TO STA. 38+562 ROADWAY	SN 057-0024 & SN 057-0025	SN 057-0026 & SN 057-0027	SN 057-0028 & SN 057-0029	SN 057-0214 & SN 057-0215
50500505	STUD SHEAR CONNECTORS		EACH	4,662.0		2,646.0	2,016.0		
50500715	JACK AND REMOVE EXISTING BEARINGS		EACH	111.0		63.0	48.0		
50800515	BAR SPLICERS		EACH	384.0		198.0	186.0		
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I		EACH	24.0			24.0		
52100020	ELASTOMERIC BEARING ASSEMBLY, TYPE II		EACH	87.0		63.0	24.0		
63302700	REMOVE AND RE-ERECT TRAFFIC BARRIER TERMINAL, TYPE 6		EACH	4.0	4.0				
67100100	MOBILIZATION		L SUM	1.0	1.0				
70100207	TRAFFIC CONTROL AND PROTECTION, STANDARD 701402		EACH	5.0	5.0				
70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411		EACH	3.0	3.0				
70100800	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401		L SUM	1.0	1.0				
70101800	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)		L SUM	1.0	1.0				
70102630	TRAFFIC CONTROL AND PROTECTION, STANDARD 701601		L SUM	1.0	1.0				
78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)		EACH	26.0	26.0				
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL		EACH	26.0	26.0				
M2040800	FURNISHED EXCAVATION		CU M	20.0	20.0				
* M2500210	SEEDING, CLASS 2A		HA	0.1	0.1				
* M2500400	NITROGEN FERTILIZER NUTRIENT		KG	10.0	10.0				
* M2500500	PHOSPHORUS FERTILIZER NUTRIENT		KG	10.0	10.0				
* M2500600	POTASSIUM FERTILIZER NUTRIENT		KG	10.0	10.0				
* M2510630	EROSION CONTROL BLANKET		SQ M	130.0	130.0				
M2810105	STONE RIPRAP, CLASS A3		SQ M	6.0			6.0		
M2810707	STONE DUMPED RIPRAP, CLASS A4		SQ M	23.0				23.0	
M4060100	BITUMINOUS MATERIALS (PRIME COAT)		LITER	283.0	283.0				
M4063575	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "E", N105		M TON	75.0			75.0		
M4402115	HOT-MIX ASPHALT SURFACE REMOVAL (DECK)		SQ M	815.0			815.0		
M5010240	CONCRETE REMOVAL		CU M	215.0		121.4	93.6		
M5010465	SLOPE WALL REMOVAL		SQ M	40.0		39.0	1.0		
M5010570	PROTECTIVE SHIELD		SQ M	1,068.0		604.0	464.0		
M5030360	CONCRETE SUPERSTRUCTURE		CU M	215.0		121.4	93.6		
M5030390	BRIDGE DECK GROOVING		SQ M	764.0		432.0	332.0		
M5030450	PROTECTIVE COAT		SQ M	943.0		537.0	406.0		
M5050405	FURNISHING AND ERECTING STRUCTURAL STEEL		KG	6,060.0		3,010.0	3,050.0		
M5080205	REINFORCEMENT BARS, EPOXY COATED		KG	29,820.0		16,950.0	12,870.0		
M5110100	SLOPE WALL 100 MM		SQ M	40.0		39.0	1.0		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	*	McLEAN	70	3
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
* (157-4HBR-5&VBR-13&57-2HB-1 CONTRACT NO. 70661				

* SPECIALTY ITEMS

SUMMARY OF QUANTITIES
F.A.I. 55
MCLEAN COUNTY

SUMMARY OF QUANTITIES

CODE NO	ITEM	UNIT	TOTAL QUANTITY	URBAN MULTILANE 90% FEDERAL / 10% STATE					
				CONSTRUCTION TYPE CODE:	I000	STA. 36+850 TO STA. 38+562 ROADWAY	SN 057-0024 & SN 057-0025	SN 057-0026 & SN 057-0027	SN 057-0028 & SN 057-0029
M5200225	PREFORMED JOINT STRIP SEAL	METER	199.5			112.2	87.3		
M5210022	ANCHOR BOLTS, M24	EACH	222.0			126.0	96.0		
M5810200	WATERPROOFING MEMBRANE SYSTEM	SQ M	815.0					815.0	
M7030100	SHORT-TERM PAVEMENT MARKING	METER	465.0	465.0					
M7031000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ M	1,013.0	1,013.0					
M7040100	TEMPORARY CONCRETE BARRIER	METER	1,563.0	1,563.0					
M7040200	RELOCATE TEMPORARY CONCRETE BARRIER	METER	1,747.0	1,747.0					
* M7800105	THERMOPLASTIC PAVEMENT MARKING - LINE 100 MM	METER	2,443.0	2,443.0					
* M7800120	THERMOPLASTIC PAVEMENT MARKING - LINE 200 MM	METER	447.0	447.0					
* M7800405	PREFORMED PLASTIC PAVEMENT MARKING, TYPE B - LINE 100 MM	SQ M	636.0	636.0					
M7830100	PAVEMENT MARKING REMOVAL	SQ M	619.0	619.0					
MX030069	SILICONE JOINT SEALER	METER	116.1		62.8		53.3		
MX033693	STRUCTURAL REPAIR OF CONCRETE (DEPTH GREATER THAN 125 MM)	SQ M	1.0		1.0				
MX033694	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 125 MM)	SQ M	14.0		1.2	1.0	0.4	11.4	
MZ016200	DECK SLAB REPAIR (PARTIAL)	SQ M	96.0				96.0		
X0321468	PLUG EXISTING DECK DRAINS	EACH	16.0				16.0		
X7015005	CHANGEABLE MESSAGE SIGN	CAL DA	220.0	220.0					
* X7200201	WIDTH RESTRICTION SIGNING	L SUM	1.0	1.0					
* Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	3.0	3.0					
* Z0030350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2.0	2.0					
MX033757	URETHANE PAVEMENT MARKING - LINE 100 MM	METER	933.0	933.0					
MX033758	URETHANE PAVEMENT MARKING - LINE 200 MM	METER	509.0	509.0					
MX033759	URETHANE PAVEMENT MARKING - LINE 300 MM	METER	90.0	90.0					

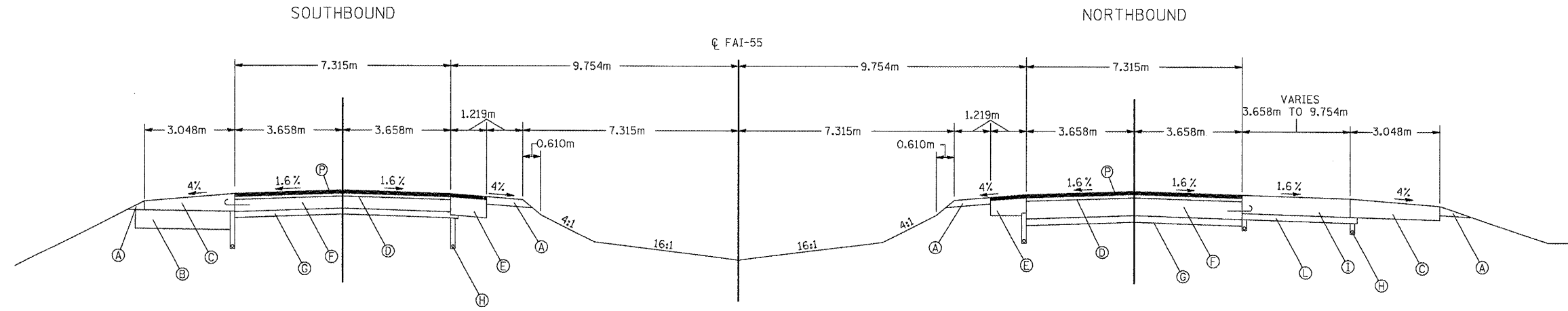
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	*	McLEAN	70	4
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* I157-4HBR-5&VBR-13&57-2HB-1
CONTRACT NO. 70661

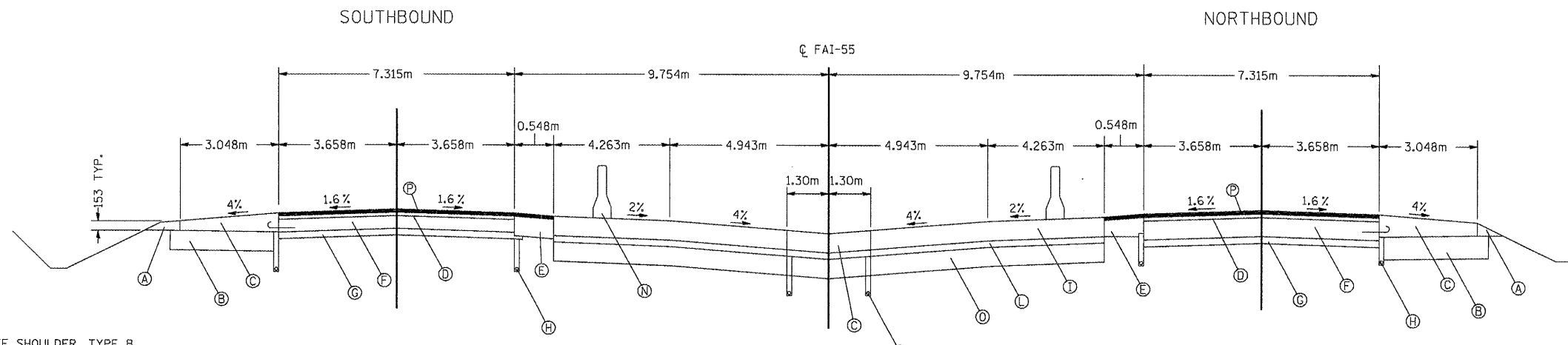
* SPECIALTY ITEMS

SUMMARY OF QUANTITIES
F.A.I. 55
MCLEAN COUNTY

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
* [(57-4)HBR-5&VBR-1J&57-2HB-1				
CONTRACT NO. 70661				



TYPICAL SECTION
STA. 36+500 TO STA. 36+630.189 N.B. & S.B.

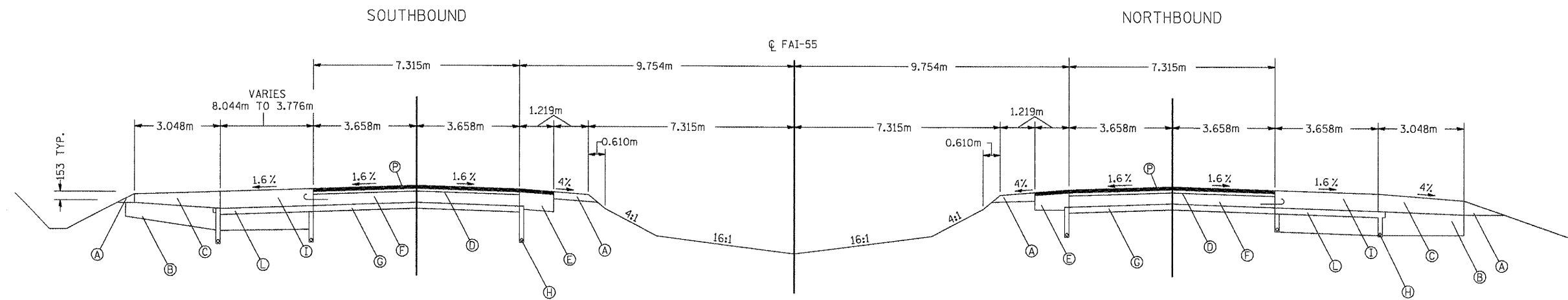


TYPICAL SECTION
STA. 36+305 TO STA. 36+500 N.B. & S.B.

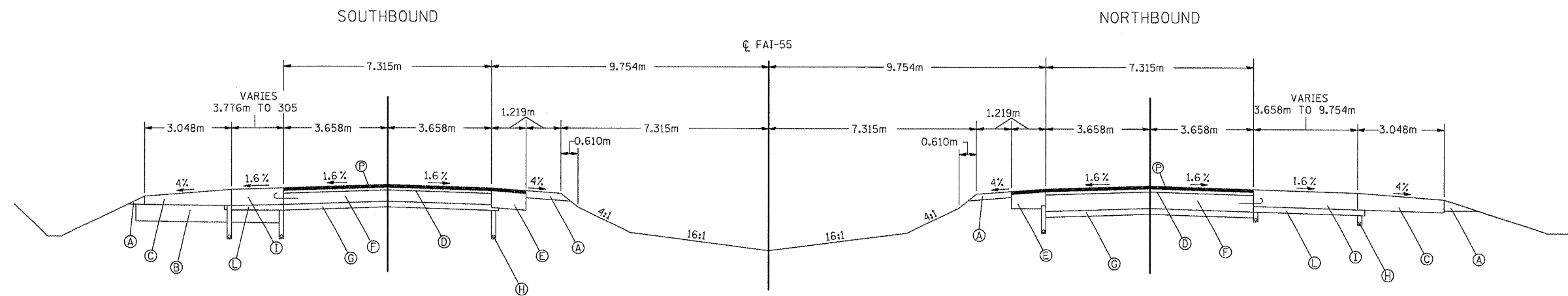
- (A) AGGREGATE SHOULDER, TYPE B
- (B) LIME MODIFIED SOIL, 305 mm
- (C) P.C.C. SHOULDERS, 305 mm
- (D) HOT MIX ASPHALT OVERLAY, 108 mm & VARIES
- (E) HOT MIX ASPHALT SHOULDERS
- (F) P.C.C. PAVEMENT, 254 mm
- (G) SUB GRANULAR MATERIAL, 153 mm
- (H) SUB-SURFACE DRAINAGE SYSTEM
- (I) P.C.C. PAVEMENT, 305 mm
- (J) P.C.C. SHOULDER, 273 mm
- (K) P.C.C. PAVEMENT, 273 mm
- (L) STABILIZED SUB-BASE, 102 mm
- (M) P.C.C. APPROACH SLAB, 305 mm
- (N) DOUBLE FACED CONCRETE BARRIER
- (O) POROUS GRANULAR EMBANKMENT, SUBGRADE 300 mm
- (P) POLYMERIZED HMA SURFACE CSE, 38 mm

EXISTING TYPICAL SECTIONS
FAI 55 (I-55)
McCLEAN COUNTY

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	*	McCLEAN	70	6
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
* [(57-4)HBR-5&VBR-1J&57-2HB-1				
CONTRACT NO. 70661				



TYPICAL SECTION
 STA. 36+803.794 TO STA. 37+084.421 N.B.
 STA. 36+803.794 TO STA. 37+017.154 S.B.



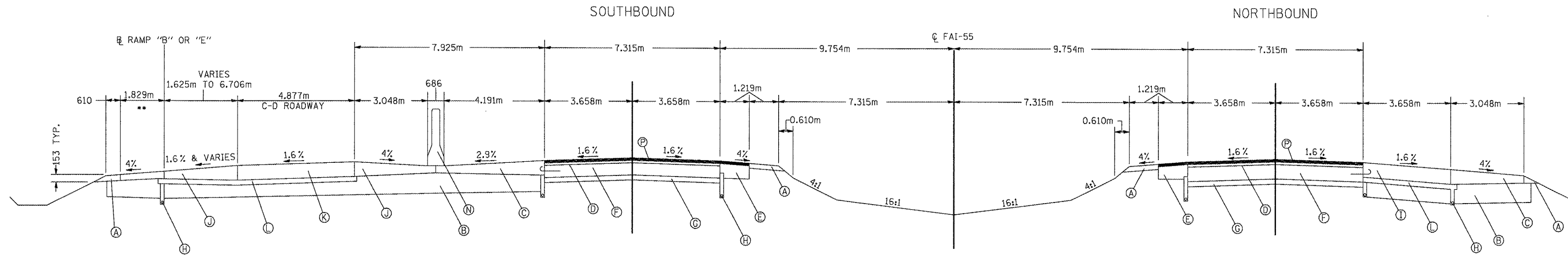
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 STA. 36+630.189 TO STA. 36+803.794 N.B. & S.B.

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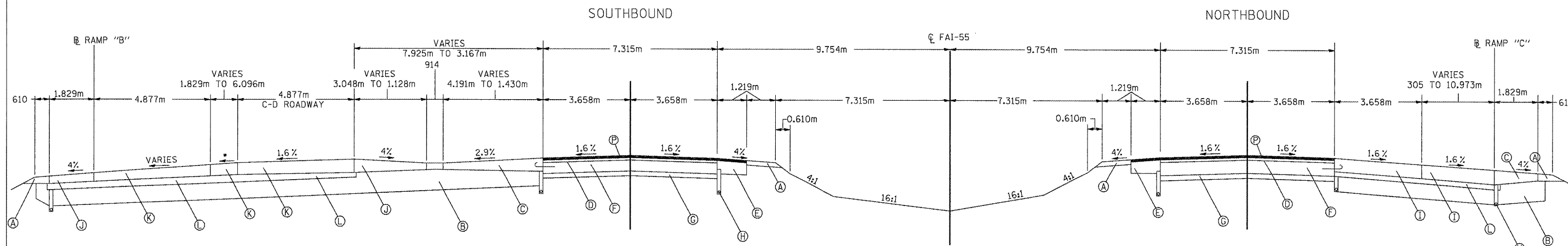
EXISTING TYPICAL SECTIONS
 FAI 55 (I-55)
 McCLEAN COUNTY

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	*	MCCLEAN	70	7
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
* [(57-4)HBR-5&VBR-1&57-2HB-1				
CONTRACT NO. 70661				

** VARIES 3.048m TO 1.829m
STA. 37+407.430 TO STA. 37+370.823



TYPICAL SECTION
STA. 37+231.545 TO STA. 37+412.956 N.B.
STA. 37+255.030 TO STA. 37+410.902 S.B.

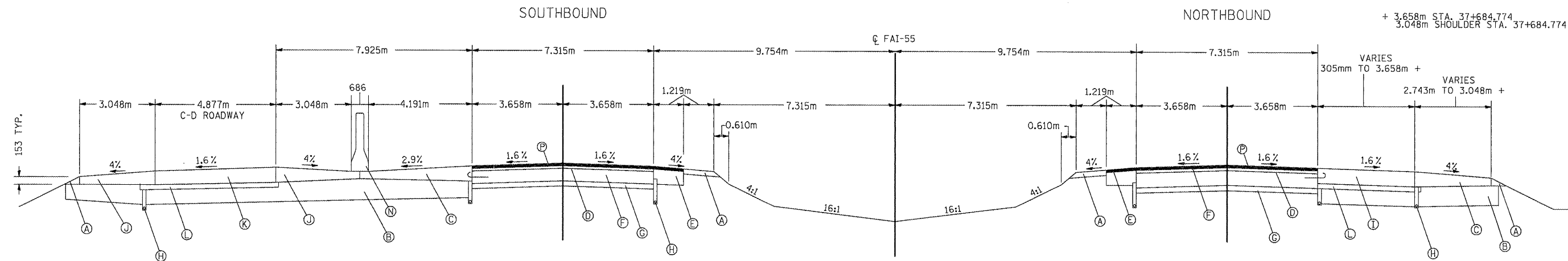


TYPICAL SECTION
STA. 37+084.421 TO STA. 37+231.545 N.B.
STA. 37+017.154 TO STA. 37+255.030 S.B.

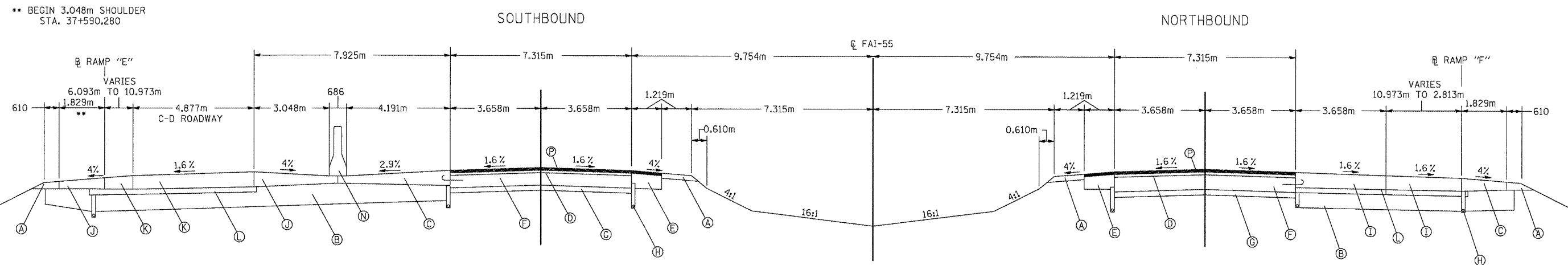
- (A) AGGREGATE SHOULDER, TYPE B
- (B) LIME MODIFIED SOIL, 305 mm
- (C) P.C.C. SHOULDERS, 305 mm
- (D) HOT MIX ASPHALT OVERLAY, 108 mm & VARIES
- (E) HOT MIX ASPHALT SHOULDERS
- (F) P.C.C. PAVEMENT, 254 mm
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- (N) DOUBLE FACED CONCRETE BARRIER
- (O) POROUS GRANULAR EMBANKMENT, SUBGRADE 300 mm
- (P) POLYMERIZED HMA SURFACE CSE, 38 mm

EXISTING TYPICAL SECTIONS
FAI 55 (I-55)
MCCLEAN COUNTY

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	*	McCLEAN	70	8
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
• [(57-4)HBR-5&VBR-1] & 57-2HB-1				
CONTRACT NO. 70661				



TYPICAL SECTION
 STA. 37+643.215 TO STA. 37+852.415 N.B.
 STA. 37+618.172 TO STA. 37+855.100 S.B.



TYPICAL SECTION
 STA. 37+537.555 TO STA. 37+643.215 N.B.
 STA. 37+535.440 TO STA. 37+618.172 S.B.

- (A) AGGREGATE SHOULDER, TYPE B
- (B) LIME MODIFIED SOIL, 305 mm
- (C) P.C.C. SHOULDERS, 305 mm
- (D) HOT MIX ASPHALT OVERLAY, 108 mm & VARIES
- (E) HOT MIX ASPHALT SHOULDERS
- (F) P.C.C. PAVEMENT, 254 mm
- (G) SUB GRANULAR MATERIAL, 153 mm
- (H) SUB-SURFACE DRAINAGE SYSTEM
- (I) P.C.C. PAVEMENT, 305 mm
- (J) P.C.C. SHOULDER, 273 mm
- (K) P.C.C. PAVEMENT, 273 mm
- (L) STABILIZED SUB-BASE, 102 mm
- (M) P.C.C. APPROACH SLAB, 305 mm
- (N) DOUBLE FACED CONCRETE BARRIER
- (O) POROUS GRANULAR EMBANKMENT, SUBGRADE 300 mm
- (P) POLYMERIZED HMA SURFACE CSE, 38 mm

EXISTING TYPICAL SECTIONS
 FAI 55 (I-55)
 McCLEAN COUNTY

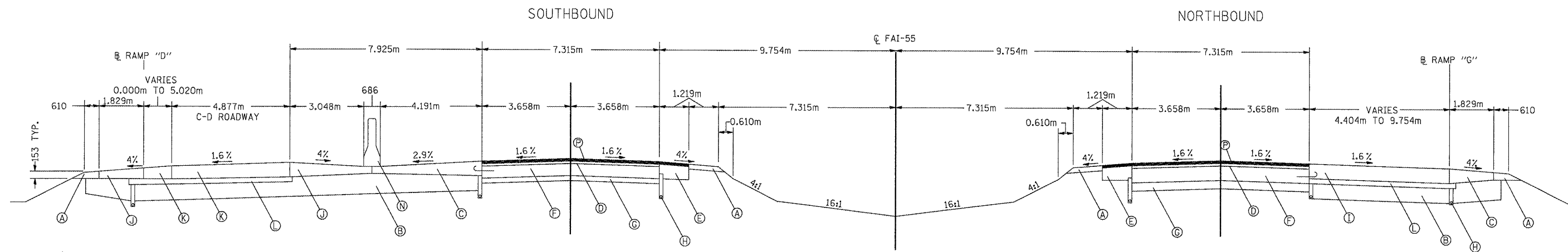
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	*	McCLEAN	70	9

STA. TO STA.

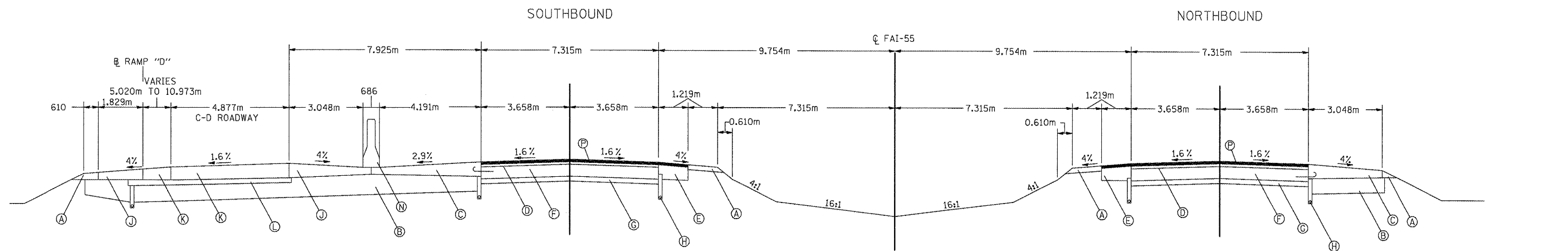
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

* (57-4)HBR-5&VBR-13&57-2HB-1

CONTRACT NO. 70661



TYPICAL SECTION
STA. 37+966.007 TO 38+116.652 N.B & S.B.

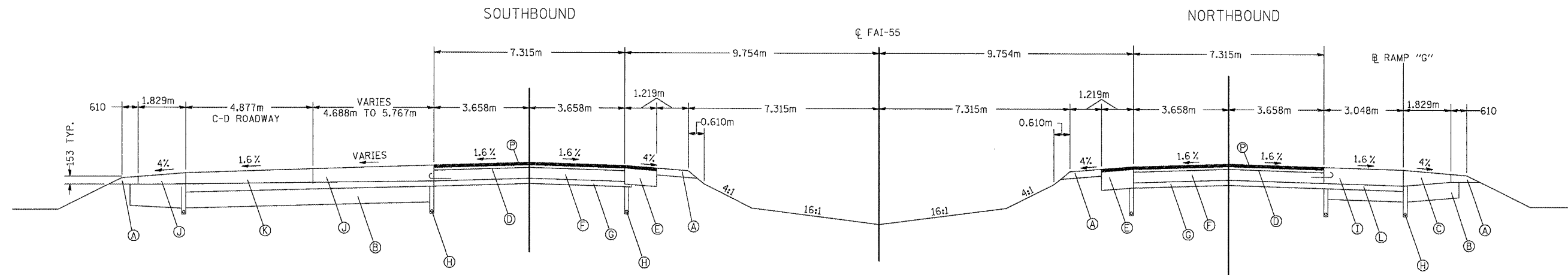


TYPICAL SECTION
STA. 37+852.415 TO STA. 37+966.007 N.B.
STA. 37+855.100 TO STA. 37+966.007 S.B.

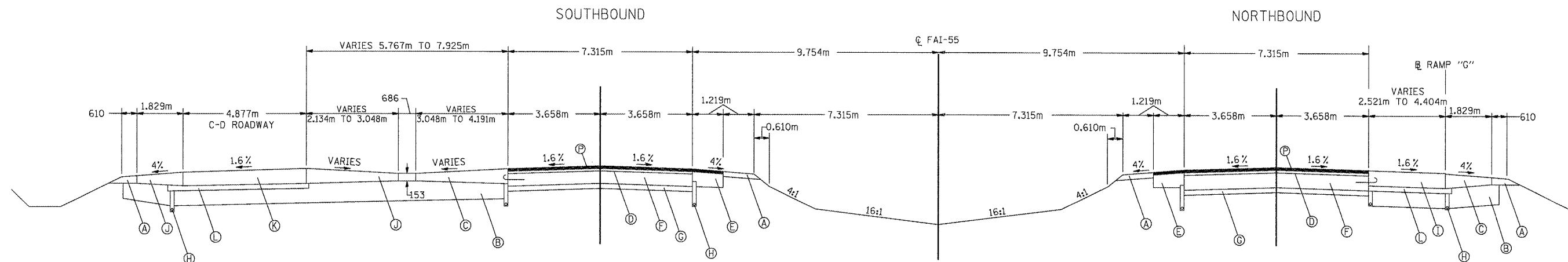
- (A) AGGREGATE SHOULDER, TYPE B
- (B) LIME MODIFIED SOIL, 305 mm
- (C) P.C.C. SHOULDERS, 305 mm
- (D) HOT MIX ASPHALT OVERLAY, 108 mm & VARIES
- (E) HOT MIX ASPHALT SHOULDERS
- (F) P.C.C. PAVEMENT, 254 mm
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- (H) SUB-SURFACE DRAINAGE SYSTEM
- (I) P.C.C. PAVEMENT, 305 mm
- (J) P.C.C. SHOULDER, 273 mm
- (K) P.C.C. PAVEMENT, 273 mm
- (L) STABILIZED SUB-BASE, 102 mm
- (M) P.C.C. APPROACH SLAB, 305 mm
- (N) DOUBLE FACED CONCRETE BARRIER
- (O) POROUS GRANULAR EMBANKMENT, SUBGRADE 300 mm
- (P) POLYMERIZED HMA SURFACE CSE, 38 mm

EXISTING TYPICAL SECTIONS
FAI 55 (I-55)
McCLEAN COUNTY

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	*	McCLEAN	70	10
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
* [(57-4)HBR-5&VBR-1&57-2HB-1				
CONTRACT NO. 70661				



TYPICAL SECTION
 STA. 38+177.850 TO STA. 38+210.808 N.B.
 STA. 38+177.850 TO STA. 38+208.330 S.B.

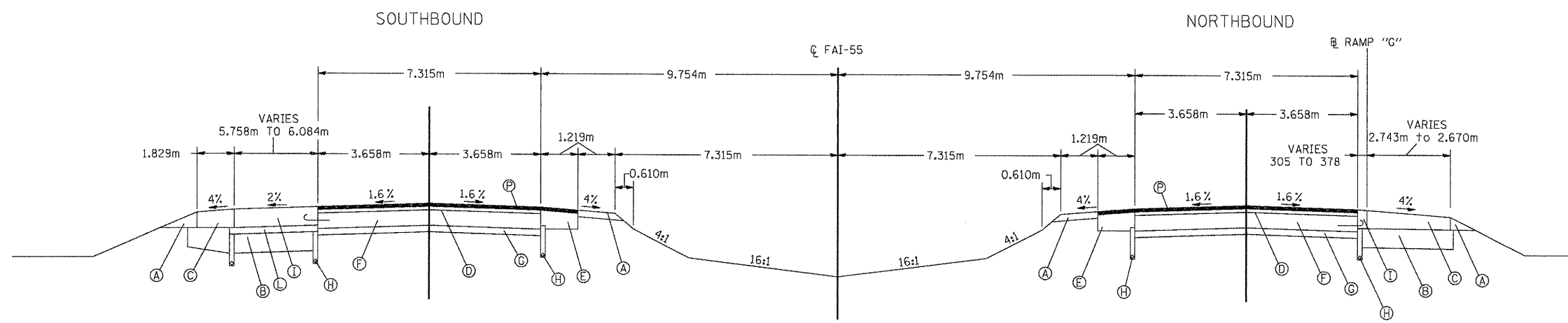


TYPICAL SECTION
 STA. 38+116.652 TO STA. 38+177.850 N.B. & S.B.

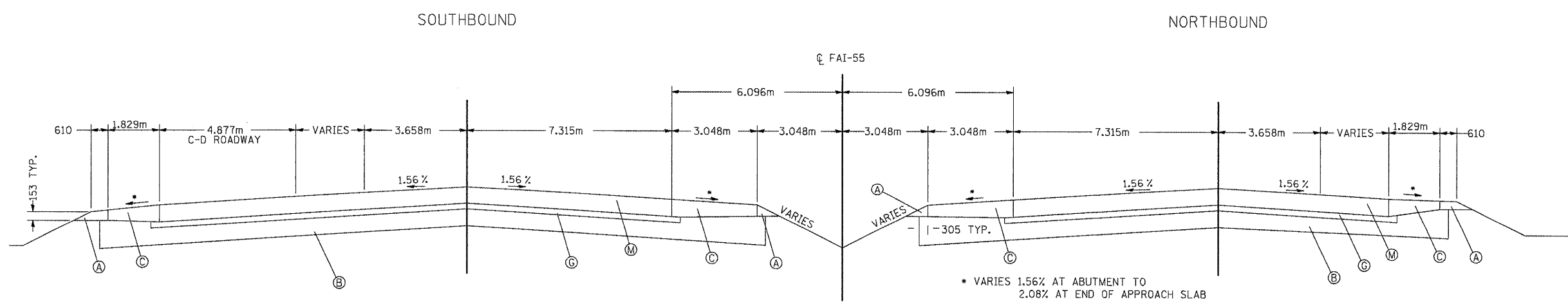
- (A) AGGREGATE SHOULDER, TYPE B
- (B) LIME MODIFIED SOIL, 305 mm
- (C) P.C.C. SHOULDERS, 305 mm
- (D) HOT MIX ASPHALT OVERLAY, 108 mm & VARIES
- (E) HOT MIX ASPHALT SHOULDERS
- (F) P.C.C. PAVEMENT, 254 mm
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- (M) P.C.C. APPROACH SLAB, 305 mm
- (N) DOUBLE FACED CONCRETE BARRIER
- (O) POROUS GRANULAR EMBANKMENT, SUBGRADE 300 mm
- (P) POLYMERIZED HMA SURFACE CSE, 38 mm

EXISTING TYPICAL SECTIONS
 FAI 55 (I-55)
 McCLEAN COUNTY

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	*	McCLEAN	70	11
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
* [(157-4)HBR-5&VBR-1] & [(57-2)HB-1]				
CONTRACT NO. 70661				



TYPICAL SECTION
 STA. 38+317.995 TO STA. 38+321.655 N.B.
 STA. 38+315.520 TO STA. 38+321.655 S.B.



TYPICAL SECTION
 STA. 38+210.808 TO STA. 38+241.288 AND STA. 38+287.515 TO STA. 38+317.995 N.B.
 STA. 38+208.333 TO STA. 38+238.813 AND STA. 38+285.040 TO STA. 38+315.520 S.B.

- (A) AGGREGATE SHOULDER, TYPE B
- (B) LIME MODIFIED SOIL, 305 mm
- (C) P.C.C. SHOULDERS, 305 mm
- (D) HOT MIX ASPHALT OVERLAY, 108 mm & VARIES
- (E) HOT MIX ASPHALT SHOULDERS
- (F) P.C.C. PAVEMENT, 254 mm
- (G) SUB GRANULAR MATERIAL, 153 mm
- (H) SUB-SURFACE DRAINAGE SYSTEM
- (I) P.C.C. PAVEMENT, 305 mm
- (J) P.C.C. SHOULDER, 273 mm
- (K) P.C.C. PAVEMENT, 273 mm
- (L) STABILIZED SUB-BASE, 102 mm
- (M) P.C.C. APPROACH SLAB, 305 mm
- (N) DOUBLE FACED CONCRETE BARRIER
- (O) POROUS GRANULAR EMBANKMENT, SUBGRADE 300 mm
- (P) POLYMERIZED HMA SURFACE CSE, 38 mm

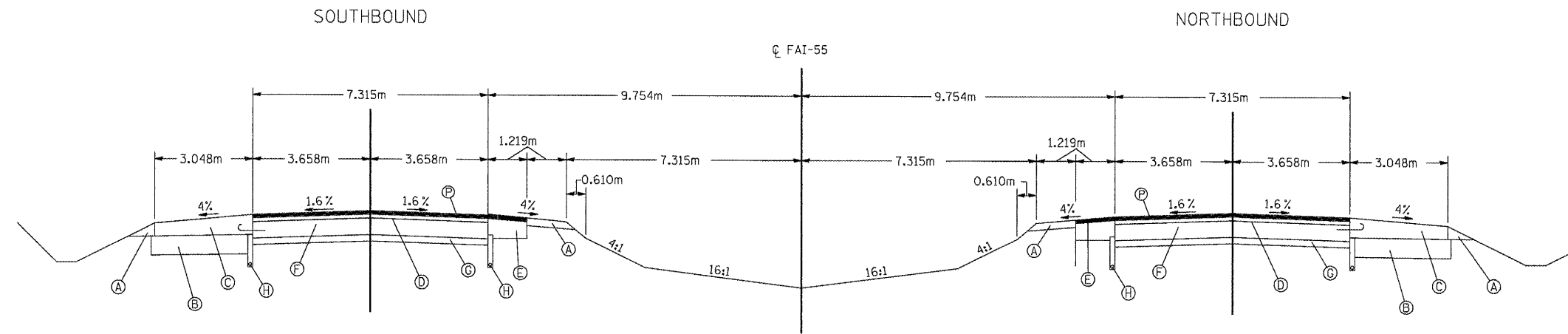
EXISTING TYPICAL SECTIONS
 FAI 55 (I-55)
 McCLEAN COUNTY

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	*	MCCLEAN	70	12

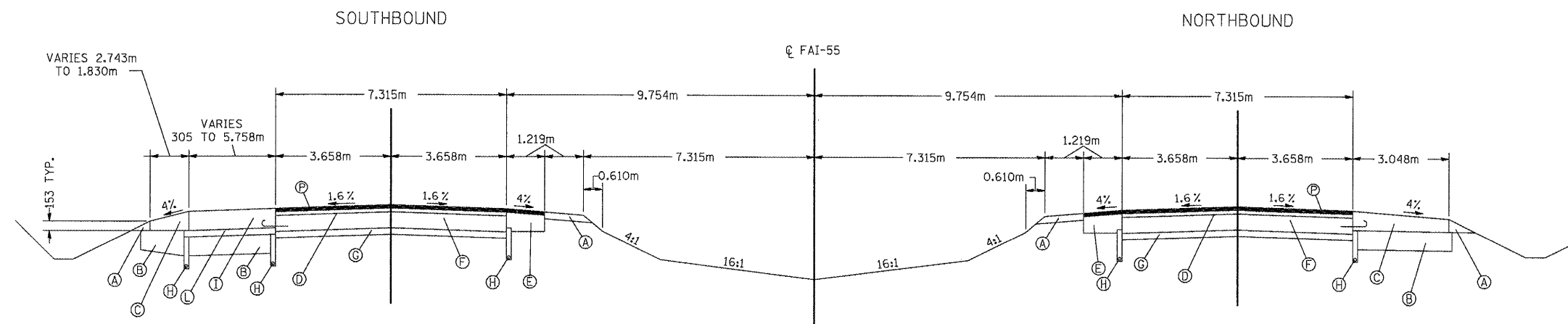
STA.	TO STA.

FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

* I(57-4)HBR-5&VBR-1J&57-2HB-1
CONTRACT NO. 70661



TYPICAL SECTION
STA. 38+424.504 TO STA. 38+480.197 N.B. & S.B.

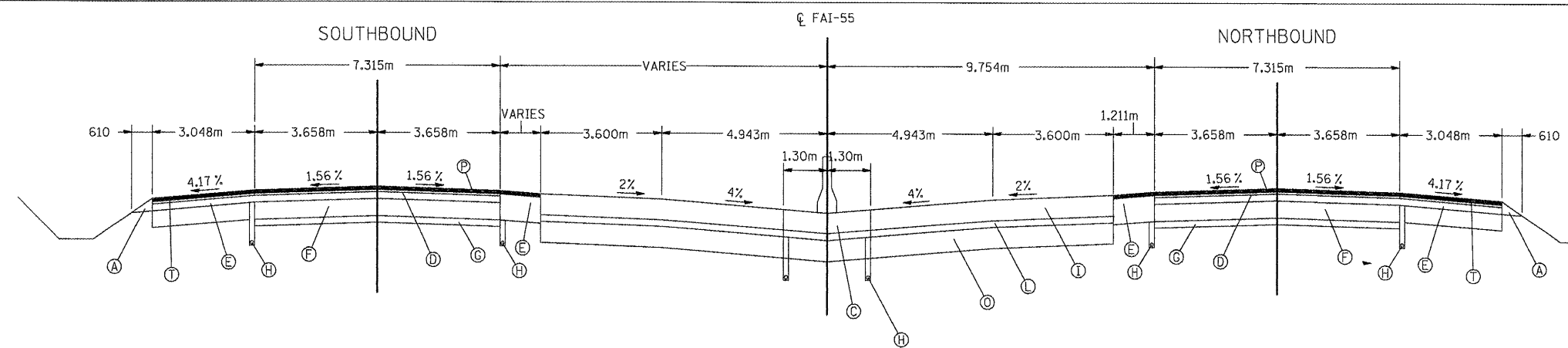


TYPICAL SECTION
STA. 38+321.655 TO STA. 38+424.504 N.B. & S.B.

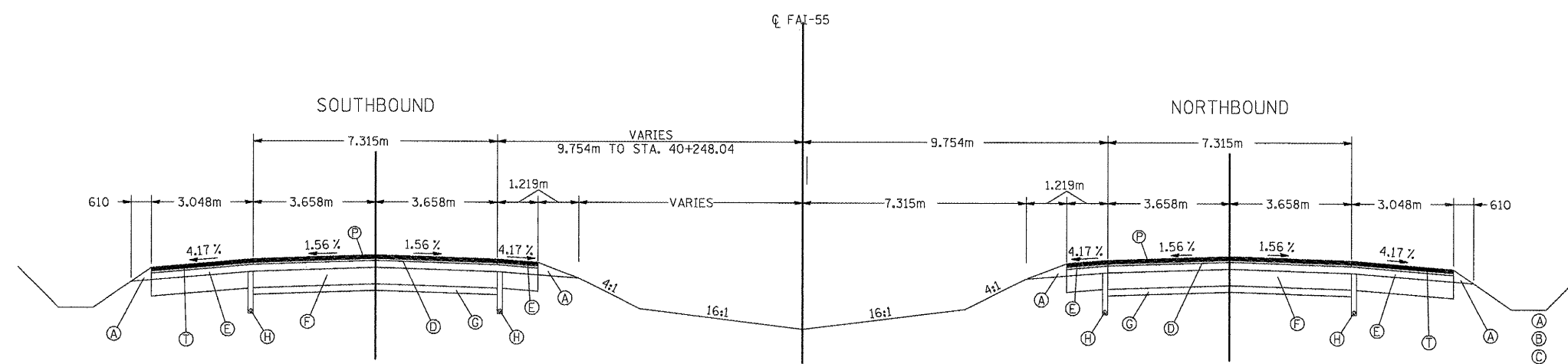
- (A) AGGREGATE SHOULDER, TYPE B
- (B) LIME MODIFIED SOIL, 305 mm
- (C) P.C.C. SHOULDERS, 305 mm
- (D) HOT MIX ASPHALT OVERLAY, 108 mm & VARIES
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- (K) P.C.C. PAVEMENT, 273 mm
- (L) STABILIZED SUB-BASE, 102 mm
- (M) P.C.C. APPROACH SLAB, 305 mm
- (N) DOUBLE FACED CONCRETE BARRIER
- (O) POROUS GRANULAR EMBANKMENT, SUBGRADE 300 mm
- (P) POLYMERIZED HMA SURFACE CSE, 38 mm

EXISTING TYPICAL SECTIONS
FAI 55 (I-55)
MCCLEAN COUNTY

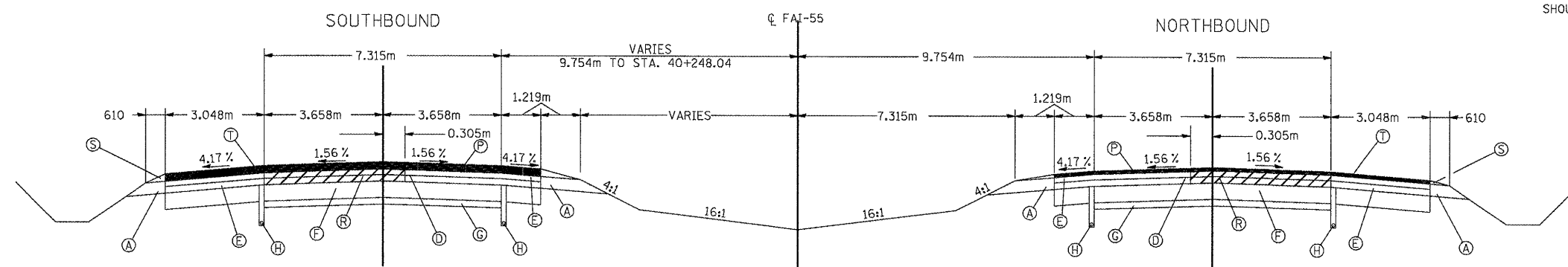
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	*	MCCLEAN	70	13
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
* I(57-4)HBR-5&VBR-13&57-2HB-1				
CONTRACT NO. 70661				



TYPICAL SECTION
STA. 40+270.000 TO STA. 40+486.00 N.B. & S.B.



TYPICAL SECTION
STA. 38+480.197 TO STA. 38+525.439 S.B.
STA. 38+480.197 TO STA. 38+526.652 N.B.
STA. 40+216.300 TO STA. 40+270.000 N.B. & S.B.
(BRIDGE OMISSION STA. 38+525.439 TO STA. 38+560.482 S.B.)
STA. 38+526.652 TO STA. 38+561.561 N.B.)



TYPICAL SECTION
STA. 38+560.482 TO STA. 40+216.300 S.B.
STA. 38+561.561 TO STA. 40+216.300 N.B.

- (A) AGGREGATE SHOULDER, TYPE B
- (B) LIME MODIFIED SOIL, 305 mm
- (C) P.C.C. SHOULDERS, 305 mm
- (D) HOT MIX ASPHALT OVERLAY, 108 mm & VARIES
- (E) HOT MIX ASPHALT SHOULDERS
- (F) P.C.C. PAVEMENT, 254 mm
- (G) SUB GRANULAR MATERIAL, 153 mm
- (H) SUB-SURFACE DRAINAGE SYSTEM
- (I) P.C.C. PAVEMENT, 305 mm
- (J) P.C.C. SHOULDER, 273 mm
- (K) P.C.C. PAVEMENT, 273 mm
- (L) STABILIZED SUB-BASE, 102 mm
- (M) P.C.C. APPROACH SLAB, 305 mm
- (N) DOUBLE FACED CONCRETE BARRIER
- (O) POROUS GRANULAR EMBANKMENT, SUBGRADE 300 mm
- (P) POLYMERIZED HMA SURFACE, 38 mm
- (R) POLYMERIZED HMA BINDER COURSE, 110 mm
- (S) AGGREGATE SHOULDERS TYPE B
- (T) HMA SHOULDERS, 38 mm (OUTSIDE SHOULDERS ONLY)

EXISTING TYPICAL SECTIONS
FAI 55 (1-55)
MCCLEAN COUNTY

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55		McLEAN	70	14

STA.	TO STA.
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT

• I(57-4)HBR-5&VBR-1J&57-2HB-1
 CONTRACT NO. 70661

EARTHWORK				
LOCATION	EARTH EXCAVATION (CUT)	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE*	EMBANKMENT (FILL)	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)
STA TO STA	CU M	CU M	CU M	CU M
RT 37+398.6 TO RT 37+412.8	0.0	0.0	5.0	-5.0
RT 38+196.6 TO RT 38+210.8	0.0	0.0	5.0	-5.0
LT 37+535.1 TO LT 37+549.3	0.0	0.0	5.0	-5.0
LT 38+315.1 TO LT 38+329.3	0.0	0.0	5.0	-5.0
ACTUAL TOTAL	0.0	0.0	20.0	-20.0
USE TOTAL	0.0	0.0	20.0	-20.0

*BASED ON SHRINKAGE FACTOR OF 25%

EARTH EXCAVATION 0 CU M
 FURNISHED EXCAVATION 20 CU M

LANDSCAPING								
LOCATION				SEEDING CLASS 2A	EROSION CONTROL BLANKET	NITROGEN FERTILIZER NUTRIENT	PHOSPHORUS FERTILIZER NUTRIENT	POTASSIUM FERTILIZER NUTRIENT
STATION	TO	STATION	O/S	HECTARE	SQ M	KG	KG	KG
37+398.6	TO	37+412.8	RT	0.003	32.3	0.3	0.3	0.3
37+535.1	TO	37+549.3	LT	0.003	32.3	0.3	0.3	0.3
38+196.6	TO	38+210.8	RT	0.003	32.3	0.3	0.3	0.3
38+315.1	TO	38+329.3	LT	0.003	32.3	0.3	0.3	0.3
ACTUAL TOTAL				0.01	129.20	1.2	1.2	1.2
USE TOTAL				0.10	130.0	10	10	10

RIPRAP		
LOCATION	STONE RIPRAP CLASS A3	STONE DUMPED RIPRAP CLASS A4
STR. NO.	SQ M	SQ M
057-0028	6	
057-0214		13
057-0215		10
ACTUAL TOTAL	6.0	23.0
USE TOTAL	6.0	23.0

REMOVE AND RE-ERECT TBT TY 6				
O/S	STA.	O/S	STA.	EACH
RT	37+398.6	RT	37+412.8	1.0
LT	37+535.1	LT	37+549.3	1.0
RT	38+196.6	RT	38+210.8	1.0
LT	38+315.1	LT	38+329.3	1.0
TOTAL				4.0

TEMPORARY CONCRETE BARRIER						
LOCATION					TEMPORARY CONCRETE BARRIER	RELOCATE TEMPORARY CONCRETE BARRIER
STAGE	O/S	STA	O/S	STA	METER	METER
I	LT	38+130.4	LT	38+426.8	297.0	
I	LT	38+426.8	LT	38+575.0	148.0	
I	LT	38+575.0	LT	38+623.0	196.0	
I	RT	37+377.1	RT	37+425.0	47.9	
I	RT	37+425.0	RT	38+299.0	874.0	
I*	LT	37+410.9	LT	37+535.1		124.2
I*	RT	37+412.8	RT	37+537.2		124.4
I*	LT	38+208.3	LT	38+315.1		106.8
I*	RT	38+210.8	RT	38+318.1		107.3
II	LT	37+432.0	LT	37+522.0		90.0
II	LT	38+233.6	LT	38+400.0		166.4
II	LT	38+400.0	LT	38+439.0		39.0
II	RT	37+330.0	RT	37+425.0		95.0
II	RT	37+425.0	RT	38+318.0		893.0
ACTUAL TOTAL					1562.9	1746.1
USE TOTAL					1563.0	1747.0

*EXISTING BARRIER TO BE MOVED 0.533 M (SEE PLAN SHEETS 17 & 18)

*SLOPEWALL		
LOCATION	SLOPE WALL REMOVAL	SLOPE WALL 100 MM
S.N.	SQ M	SQ M
057-0028 & 057-0029	0.4	0.4
057-0024 & 057-0025	39.0	39.0
ACTUAL TOTAL	39.4	39.4
USE TOTAL	40.0	40.0

*ADDITIONAL FILL OF 25 CU M MAY BE NEEDED BENEATH PROPOSED SLOPE WALL SECTIONS. AREAS FOR SLOPE WALL REPAIR ARE 3 M X 3M, 3M X 3M, AND 3M X 7M.

S.N. 057-0028 & S.N. 057-0029 DECK REHABILITATION							
LOCATION				HMA SURFACE REMOVAL (DECK)	POLYMERIZED HMA SURF CSE MIX E, N90	BITUMINOUS MATERIAL (PRIME COAT)	WATERPROOFING MEMBRANE
O/S	STA	O/S	STA	SQ M	M TON	LITER	SQ M
LT	38+525.4	LT	38+560.5	407.2	37.1	141.2	407.2
RT	38+526.7	RT	38+561.6	407.2	37.1	141.2	407.2
ACTUAL TOTAL				814.4	74.2	282.4	814.4
USE TOTAL				815.0	75.0	283.0	815.0

BRIDGE DECK GROOVING	
S.N.	SQ M
057-0024 & 057-0025	432.0
057-0026 & 057-0027	332.0
ACTUAL TOTAL	764.0
USE TOTAL	764.0

TC&P STD 701402		
LOCATION	STAGE	EACH
STR 0024 - STR 0026	I	1.0
STR 0027 - STR 0029	I	1.0
STR 0024 - STR 0026	II	1.0
STR 0025	II	1.0
STR 0027	II	1.0
TOTAL		5.0

CHANGEABLE MESSAGE SIGNS	
LOCATION	CAL DA
36+600 RT*	14
39+050 LT*	14
RAMP A*	14
RAMP E*	14
RAMP G*	14
DETOUR CMS**	75
DETOUR CMS**	75
TOTAL	220

*PLACE TWO WEEKS PRIOR TO THE START OF WORK
 **SEE SHEET 27 FOR MORE INFORMATION

TC&P STD 701411		
LOCATION	STAGE	EACH
RAMP A	II	1.0
RAMP C	II	1.0
RAMP D	II	1.0
TOTAL		3.0

IMPACT ATTENUATORS				
LOCATION			TEMPORARY NON-REDIR. TL 3	RELOCATE NON-REDIR. TL 3
STAGE	O/S	STA	EACH	EACH
I	RT	37+377.0	1.0	
I	LT	38+623.0	1.0	
II	RT	37+330.0	1.0	
II	LT	37+522.0		1.0
II	LT	37+439.0		1.0
ACTUAL TOTAL			3.0	2.0
USE TOTAL			3.0	2.0

SCHEDULE OF QUANTITIES
 F.A.I. 55
 MCLEAN COUNTY

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55		MCLEAN	TO	15
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

• I157-4IHR-5&VBR-1J&57-2HB-1
 CONTRACT NO. 70661

PAVEMENT MARKINGS													
LOCATION				COMMENTS	LINE COLOR	SHORT TERM	PREFORMED PLASTIC TY B LINE - 100 MM	THERMOPLASTIC		URETHANE			PAVEMENT MARKING REMOVAL
O/S	STA	O/S	STA					M	M	M	M	M	
LT	37+440.0	LT	37+504.0	ACCL. LANE EOP LINE	WHITE	2.6					64.0		12.8
LT	37+441.0	LT	37+505.0	CHEVRONS	WHITE							6.0	1.8
LT	38+150.0	LT	38+200.0	CHEVRONS	WHITE							50.0	15.0
LT	38+248.0	LT	38+285.0	CHEVRONS	WHITE							15.3	4.6
LT	37+441.0	LT	37+505.0	CL SKIP DASH	WHITE	6.4				16.0			1.6
LT	38+100.0	LT	38+210.8	CL SKIP DASH	WHITE	11.1	27.7						2.8
LT	38+210.8	LT	38+315.1	CL SKIP DASH	WHITE	10.4				26.1			2.6
LT	38+315.1	LT	38+753.0	CL SKIP DASH	WHITE	43.8	109.5						10.9
LT	37+441.0	LT	37+505.0	DL EOP	WHITE	2.6				64.0			6.4
LT	38+140.0	LT	38+208.3	DL EOP	WHITE	2.7		68.3					6.8
LT	38+208.3	LT	38+285.0	DL EOP	WHITE	3.1				76.7			7.7
LT	38+424.6	LT	38+602.0	DL EOP	WHITE	7.1		177.4					17.7
LT	38+348.0	LT	38+424.6	DL EOP SKIP DASH	WHITE	3.1		51.1					5.1
LT	38+125.0	LT	38+285.0	EXIT RAMP LINE	WHITE	6.4				160.0			16.0
LT	38+237.7	LT	38+285.0	EXIT RAMP LINE	WHITE	1.9				47.3			4.7
LT	37+441.0	LT	37+505.0	PL EOP	YELLOW	2.6				64.0			6.4
LT	38+100.0	LT	38+602.0	PL EOP	YELLOW	20.1		502.0					50.2
LT	37+440.0	LT	37+504.0	RAMP LANE EOP LINE	WHITE	2.6				64.0			12.8
RT	37+158.0	RT	37+194.0	AUILLARY LANE LINE	WHITE	1.4				36.0			7.2
RT	37+540.0	RT	37+648.9	CHEVRONS	WHITE							18.5	5.5
RT	36+400.0	RT	37+413.0	CL SKIP DASH	WHITE	101.3	253.3						25.3
RT	37+413.0	RT	37+537.2	CL SKIP DASH	WHITE	12.4				31.0			3.1
RT	37+537.2	RT	38+210.8	CL SKIP DASH	WHITE	67.4	168.4						16.8
RT	38+210.8	RT	38+318.0	CL SKIP DASH	WHITE	10.7				26.8			2.7
RT	38+318.0	RT	38+625.0	CL SKIP DASH	WHITE	30.7	76.8						7.7
RT	36+530.7	RT	36+598.7	DL EOP	WHITE	2.7				68.0			13.6
RT	37+413.0	RT	37+537.2	DL EOP	WHITE	5.0					124.2		24.8
RT	37+537.2	RT	37+658.0	DL EOP	WHITE	4.8					120.8		24.2
RT	37+658.0	RT	37+950.8	DL EOP	WHITE	11.7		292.8					29.3
RT	37+950.8	RT	38+087.0	DL EOP	WHITE	5.4				136.2			27.2
RT	38+241.5	RT	38+318.0	DL EOP	WHITE	3.1					76.5		7.7
RT	38+318.0	RT	38+625.0	DL EOP	WHITE	12.3		307.0					30.7
RT	37+093.0	RT	37+172.0	DL EOP SKIP DASH	WHITE	3.2					79.0		15.8
RT	37+371.0	RT	37+413.0	DL EOP SKIP DASH	WHITE	1.7					28.0		5.6
RT	37+398.4	RT	37+511.0	EXIT LANE EOP LINE	WHITE	4.5					112.6		11.3
RT	37+158.0	RT	37+242.9	EXIT LANE LINE	WHITE	3.4						84.9	17.0
RT	37+513.0	RT	37+528.0	EXIT RAMP EOP LINE	WHITE	0.6						15.0	3.0
RT	37+350.0	RT	37+413.0	PL EOP	YELLOW	2.5		63.0					6.3
RT	37+413.0	RT	37+537.2	PL EOP	YELLOW	5.0					124.2		12.4
RT	37+537.2	RT	38+210.8	PL EOP	YELLOW	26.9		673.6					67.4
RT	38+210.8	RT	38+318.0	PL EOP	YELLOW	4.3					107.2		10.7
RT	38+318.0	RT	38+625.0	PL EOP	YELLOW	12.3		307.0					30.7
RT	36+501.5	RT	36+588.6	RAMP LANE LINE	WHITE	3.5					87.1		17.4
RT	38+039.0	RT	38+087.0	RAMP LANE LINE	WHITE	1.9					48.0		9.6
ACTUAL TOTAL						465.0	635.6	2442.2	447.0	932.4	508.2	89.8	619.0
USE TOTAL						465.0	636.0	2443.0	447.0	933.0	509.0	90.0	619.0

TEMPORARY PAVEMENT MARKING LINE 100 MM						
LOCATION				YELLOW (DL)	WHITE (PL)	
O/S	STATION	TO	STATION	METER	METER	
STAGE I						
RT	36+948.4	TO	37+248.4	300.0	0.0	
RT	37+248.4	TO	37+398.4	150.0	0.0	
RT	37+398.4	TO	37+417.6	19.2	38.4	
RT	37+417.6	TO	37+511.0	0.0	93.4	
RT	37+417.6	TO	38+050.0	0.0	632.4	
RT	37+417.6	TO	38+575.0	1157.4	0.0	
LT	38+130.4	TO	38+426.8	297.0	0.0	
RT	38+287.6	TO	38+575.0	0.0	287.4	
LT	38+426.8	TO	38+583.1	156.3	156.3	
RT	38+575.0	TO	38+625.0	50.0	50.0	
LT	38+583.1	TO	38+602.3	19.2	19.2	
LT	38+602.3	TO	38+752.3	150.0	0.0	
LT	38+752.3	TO	39+052.3	300.0	0.0	
STAGE II						
RT	36+100.0	TO	36+400.0	0.0	300.0	
RT	36+400.0	TO	36+550.0	0.0	150.0	
RT	36+501.5	TO	36+550.0	48.5	0.0	
RT	36+512.2	TO	36+635.0	0.0	122.8	
RT	36+635.0	TO	37+060.0	0.0	425.0	
RT	37+060.0	TO	37+240.9	0.0	180.9	
RT	37+149.3	TO	37+245.2	0.0	95.9	
RT	37+149.3	TO	37+425.0	0.0	275.7	
RT	37+349.4	TO	37+425.0	75.6	0.0	
RT	37+425.0	TO	38+479.4	1054.4	1054.4	
LT	37+915.6	TO	38+125.0	209.4	0.0	
LT	38+100.0	TO	38+150.0	0.0	50.0	
LT	38+100.0	TO	38+582.8	482.8	0.0	
LT	38+125.0	TO	38+150.0	0.0	25.0	
LT	38+125.0	TO	38+233.6	0.0	108.6	
LT	38+233.6	TO	38+582.8	0.0	349.2	
RT	38+479.4	TO	38+625.1	145.7	145.7	
LT	38+582.8	TO	38+602.2	19.4	19.4	
LT	38+602.2	TO	38+752.4	0.0	150.2	
LT	38+752.4	TO	39+052.4	0.0	300.0	
ACTUAL TOTAL				4634.9	5029.9	
USE TOTAL					9665.0	

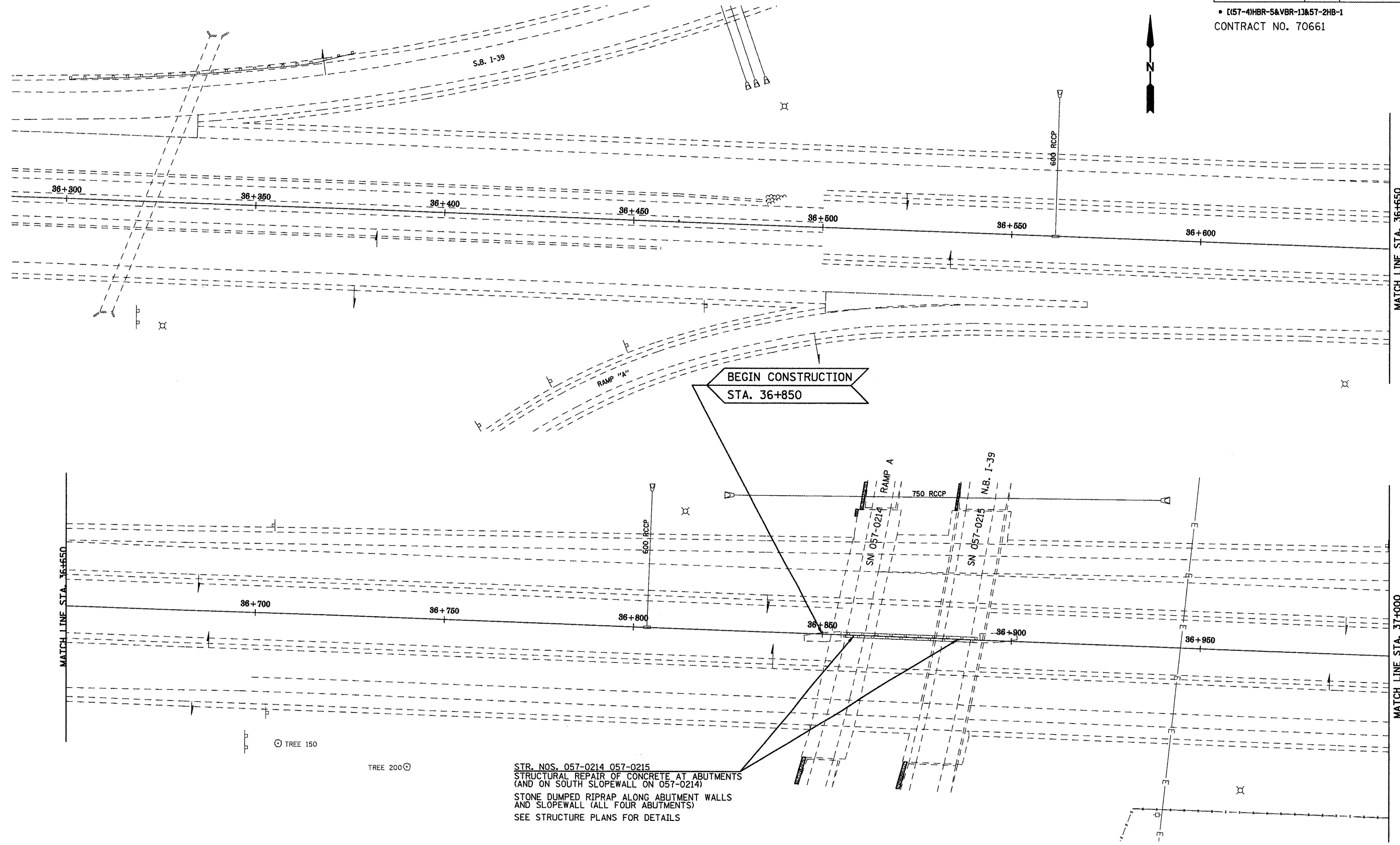
*NOTE: FOR REFERENCE ONLY; COST INCLUDED IN VARIOUS TRAFFIC CONTROL ITEMS

WORK ZONE PAVEMENT MARKING REMOVAL			
Item	LENGTH	WIDTH	AREA
	METER	METER	SQ M
Temp. Pav't Mkgs	9665.0	0.1	966.5
Short-Term	465.0	0.1	46.5
ACTUAL TOTAL			1013.0
USE TOTAL			1013.0


SCHEDULE OF QUANTITIES
 F.A.I. 55
 MCLEAN COUNTY

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	•	McLEAN	70	16
STA. 36+305		TO STA. 37+00		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

• [67-4HBR-5&VBR-1&57-2HB-1
 CONTRACT NO. 70661



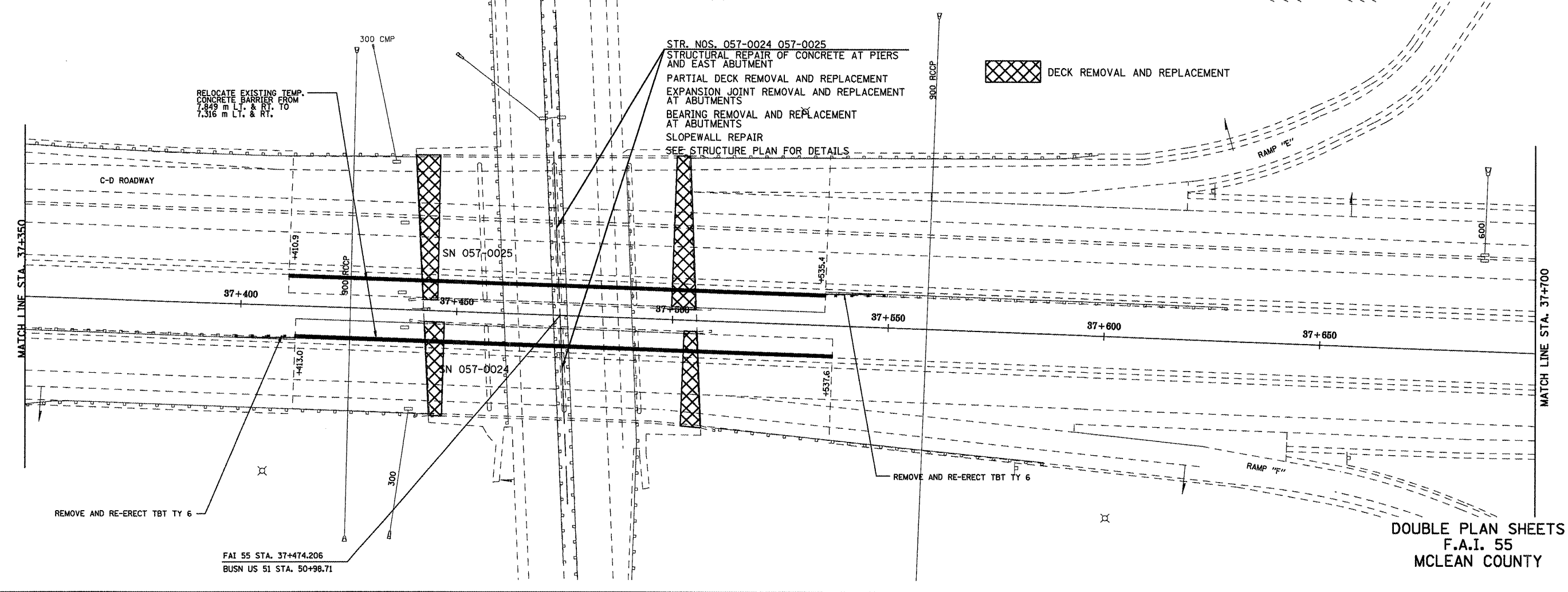
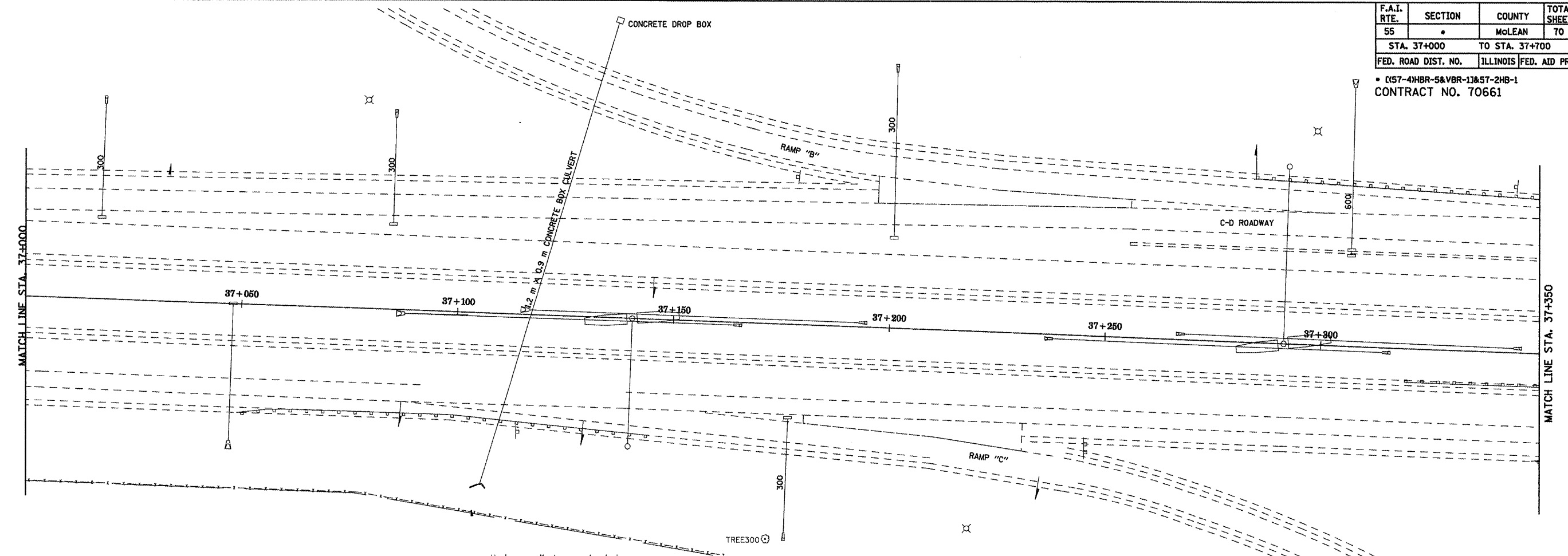
STR. NOS. 057-0214 057-0215
 STRUCTURAL REPAIR OF CONCRETE AT ABUTMENTS
 (AND ON SOUTH SLOPEWALL ON 057-0214)
 STONE DUMPED RIPRAP ALONG ABUTMENT WALLS
 AND SLOPEWALL (ALL FOUR ABUTMENTS)
 SEE STRUCTURE PLANS FOR DETAILS

 STONE DUMPED RIPRAP, CL A4

DOUBLE PLAN SHEETS
 F.A.I. 55
 McLEAN COUNTY

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS NO.
55	•	MCLEAN	TO 17
STA. 37+000		TO STA. 37+700	
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT	

• (57-4HBR-5&VBR-11&57-2HB-1)
CONTRACT NO. 70661



STR. NOS. 057-0024 057-0025
STRUCTURAL REPAIR OF CONCRETE AT PIERS AND EAST ABUTMENT
PARTIAL DECK REMOVAL AND REPLACEMENT
EXPANSION JOINT REMOVAL AND REPLACEMENT AT ABUTMENTS
BEARING REMOVAL AND REPLACEMENT AT ABUTMENTS
SLOPEWALL REPAIR
SEE STRUCTURE PLAN FOR DETAILS

DECK REMOVAL AND REPLACEMENT

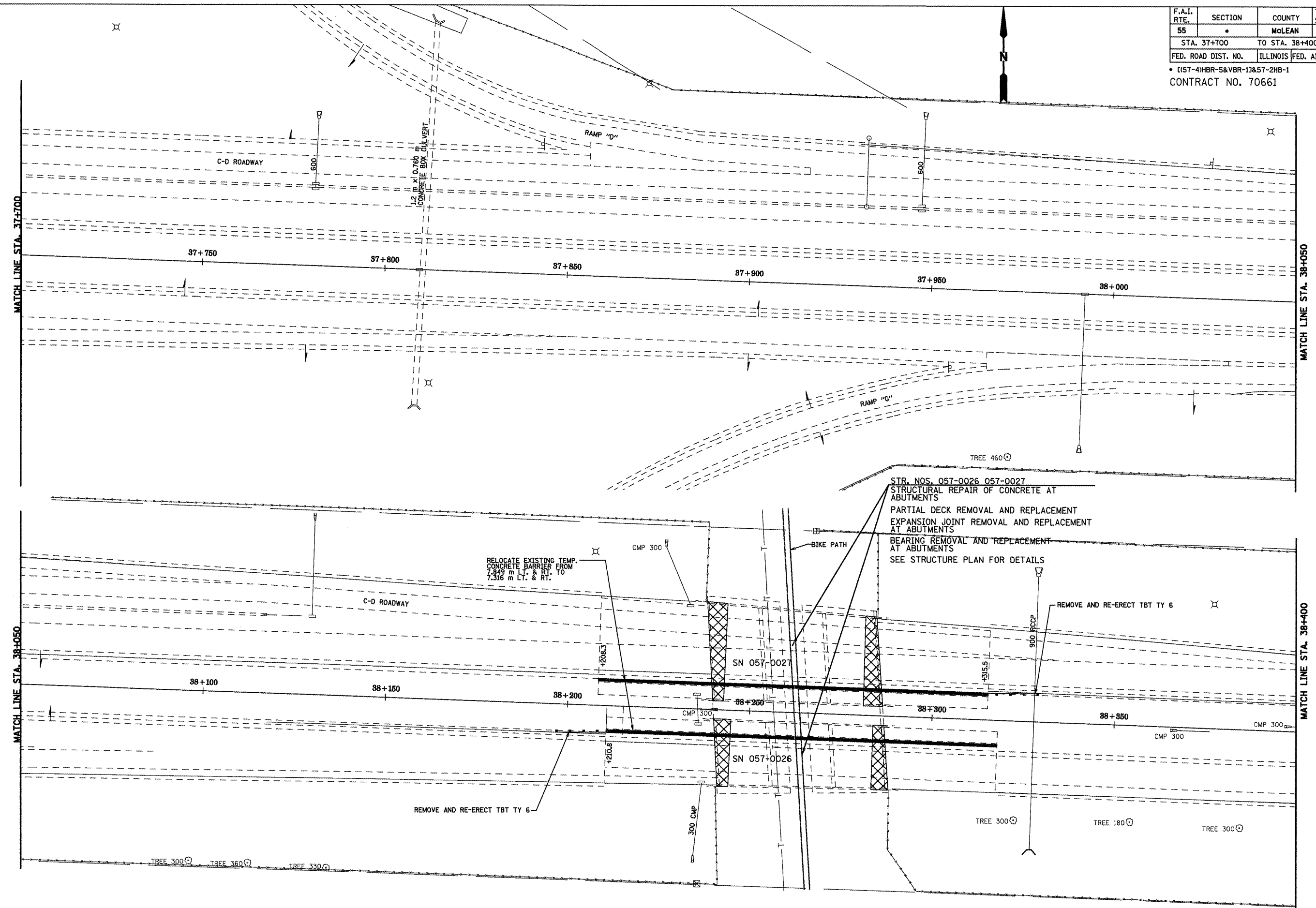
RELOCATE EXISTING TEMP. CONCRETE BARRIER FROM 7.349 m L.I. & R.I. TO 7.316 m L.I. & R.I.

REMOVE AND RE-ERECT TBT TY 6

FAI 55 STA. 37+474.206
BUSN US 51 STA. 50+98.71

DOUBLE PLAN SHEETS
F.A.I. 55
MCLEAN COUNTY

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	•	MCLEAN	70	18
STA. 37+700		TO STA. 38+400		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
• [(57-4)HBR-5&VBR-1&57-2HB-1				
CONTRACT NO. 70661				



STR. NOS. 057-0026 057-0027
 STRUCTURAL REPAIR OF CONCRETE AT ABUTMENTS
 PARTIAL DECK REMOVAL AND REPLACEMENT
 EXPANSION JOINT REMOVAL AND REPLACEMENT AT ABUTMENTS
 BEARING REMOVAL AND REPLACEMENT AT ABUTMENTS
 SEE STRUCTURE PLAN FOR DETAILS

RELOCATE EXISTING TEMP. CONCRETE BARRIER FROM 7.849 m LT. & RT. TO 7.316 m LT. & RT.

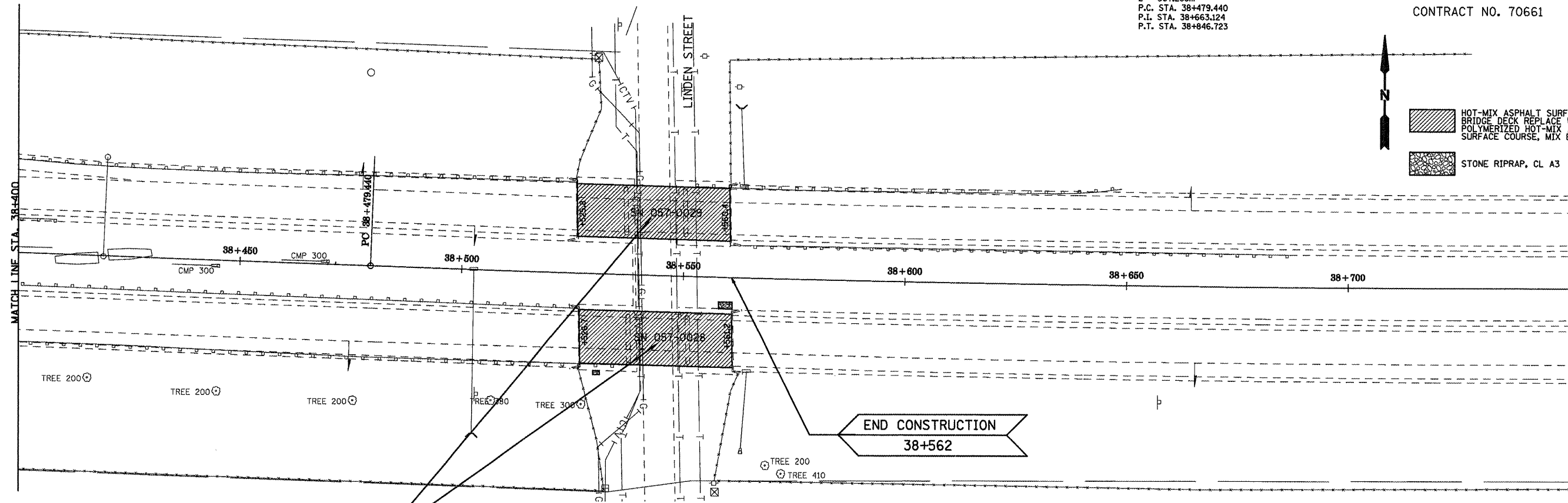
DOUBLE PLAN SHEETS
 F.A.I. 55
 MCLEAN COUNTY

 DECK REMOVAL AND REPLACEMENT

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	*	McLEAN	70	19
STA. 38+400		TO STA. 39+100		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

CENTERLINE CURVE DATA
 $\Delta = 03^{\circ}00'45''$
 $R = 6985.787m$
 $T = 183.684m$
 $L = 367.283m$
P.C. STA. 38+479.440
P.I. STA. 38+663.124
P.T. STA. 38+846.723

• (157-4)HBR-5&VBR-13&57-2HB-1
CONTRACT NO. 70661



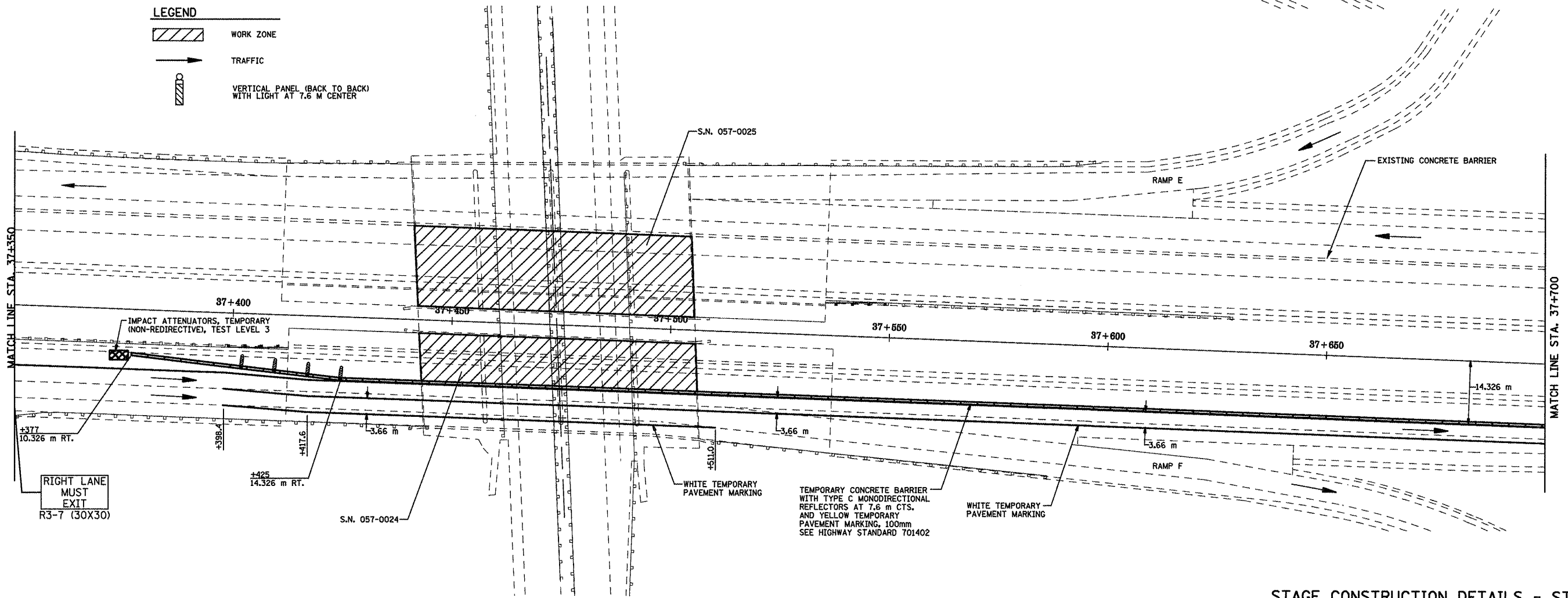
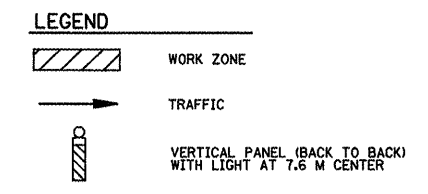
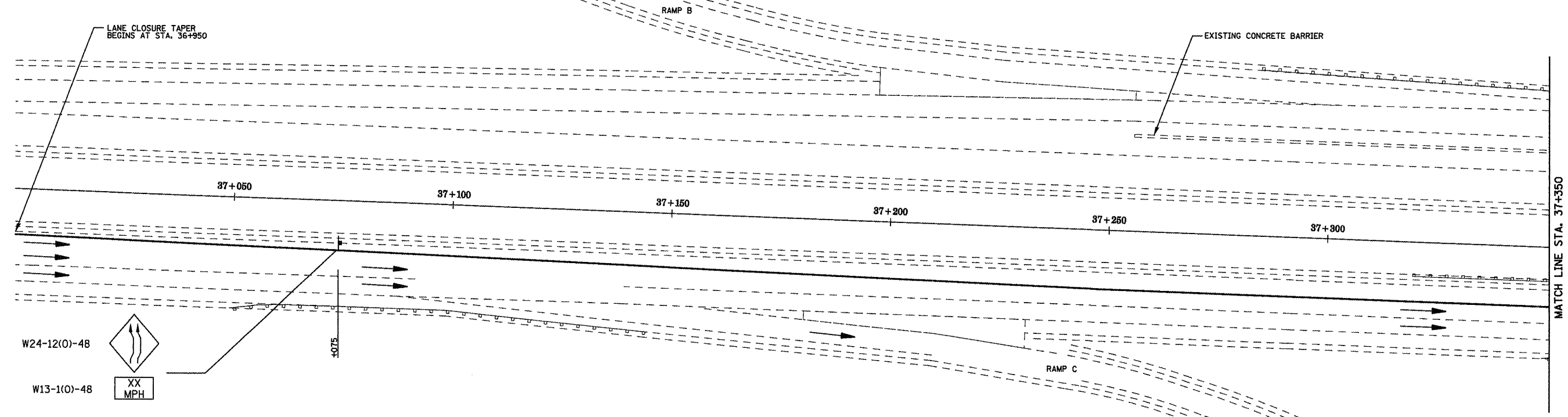
STR. NOS. 057-0028 & 057-0029
REMOVE AND REPLACE HMA OVERLAY AND WATERPROOFING MEMBRANE
DECK PATCHING
REMOVE AND REPLACE ABUTMENT JOINTS
SLOPEWALL PATCHING (STR. 057-0029 WEST SLOPEWALL)
PLUG DECK DRAINS NEAR ABUTMENTS AND PIERS
SEE STRUCTURE PLAN FOR DETAILS

DOUBLE PLAN SHEETS
F.A.I. 55
MCLEAN COUNTY

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	*	MOLEAN	TO	20
STA. 37+000		TO STA. 37+700		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

• [157-4]HBR-5&VBR-1] & 57-2HB-1
 CONTRACT NO. 70661

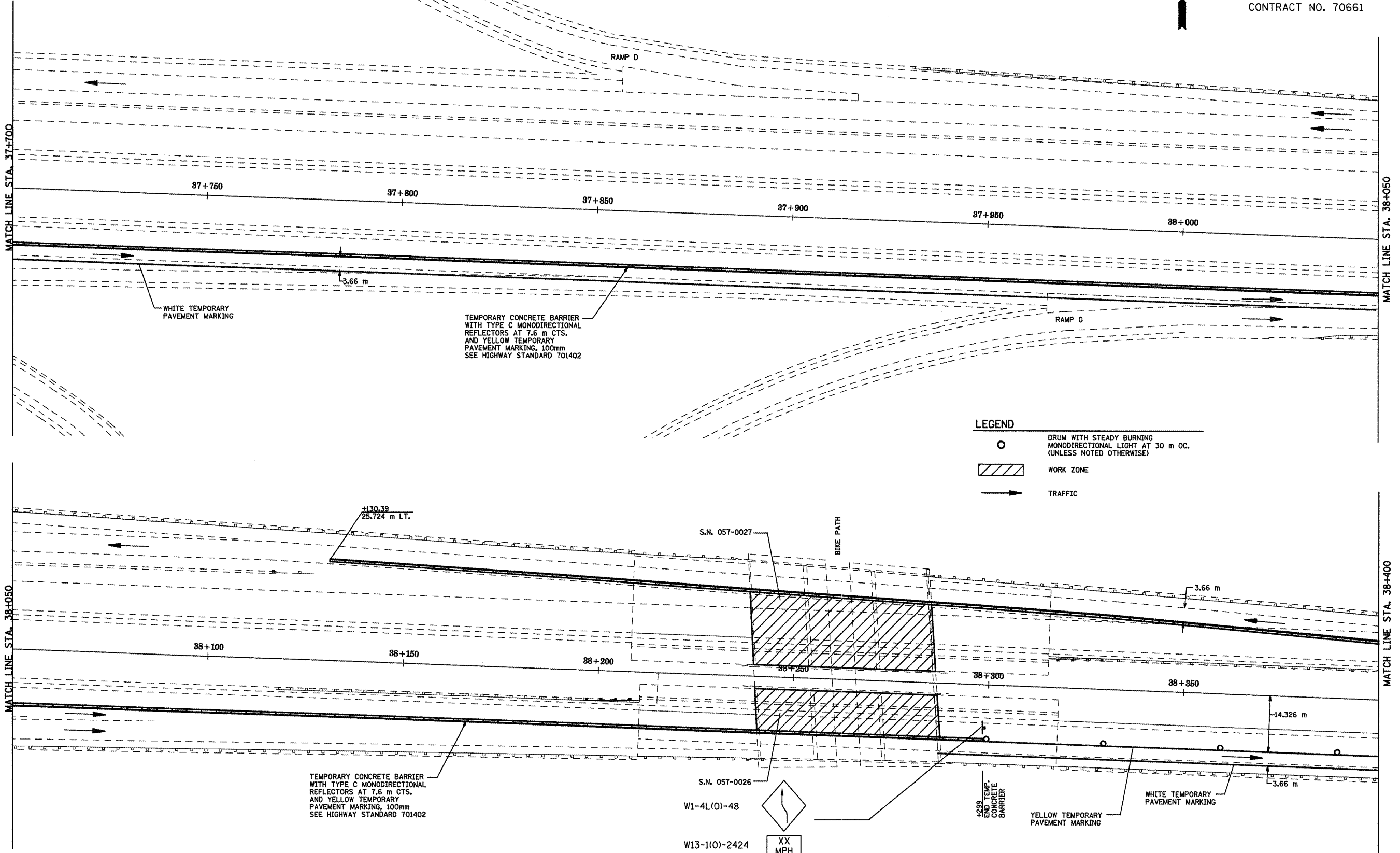
NOTE: TRAFFIC CONTROL ITEMS AND DEVICES NOT DETAILED SHALL BE IN ACCORDANCE WITH HIGHWAY STANDARDS 701400, 701401, 701402, AND 701411.



NOTE: TRAFFIC CONTROL ITEMS AND DEVICES NOT DETAILED SHALL BE IN ACCORDANCE WITH HIGHWAY STANDARDS 701400, 701401, 701402, AND 701411.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55		MCLEAN	70	21
STA. 37+700		TO STA. 38+400		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

• (157-4)HBR-5&VBR-13&57-2HB-1
CONTRACT NO. 70661

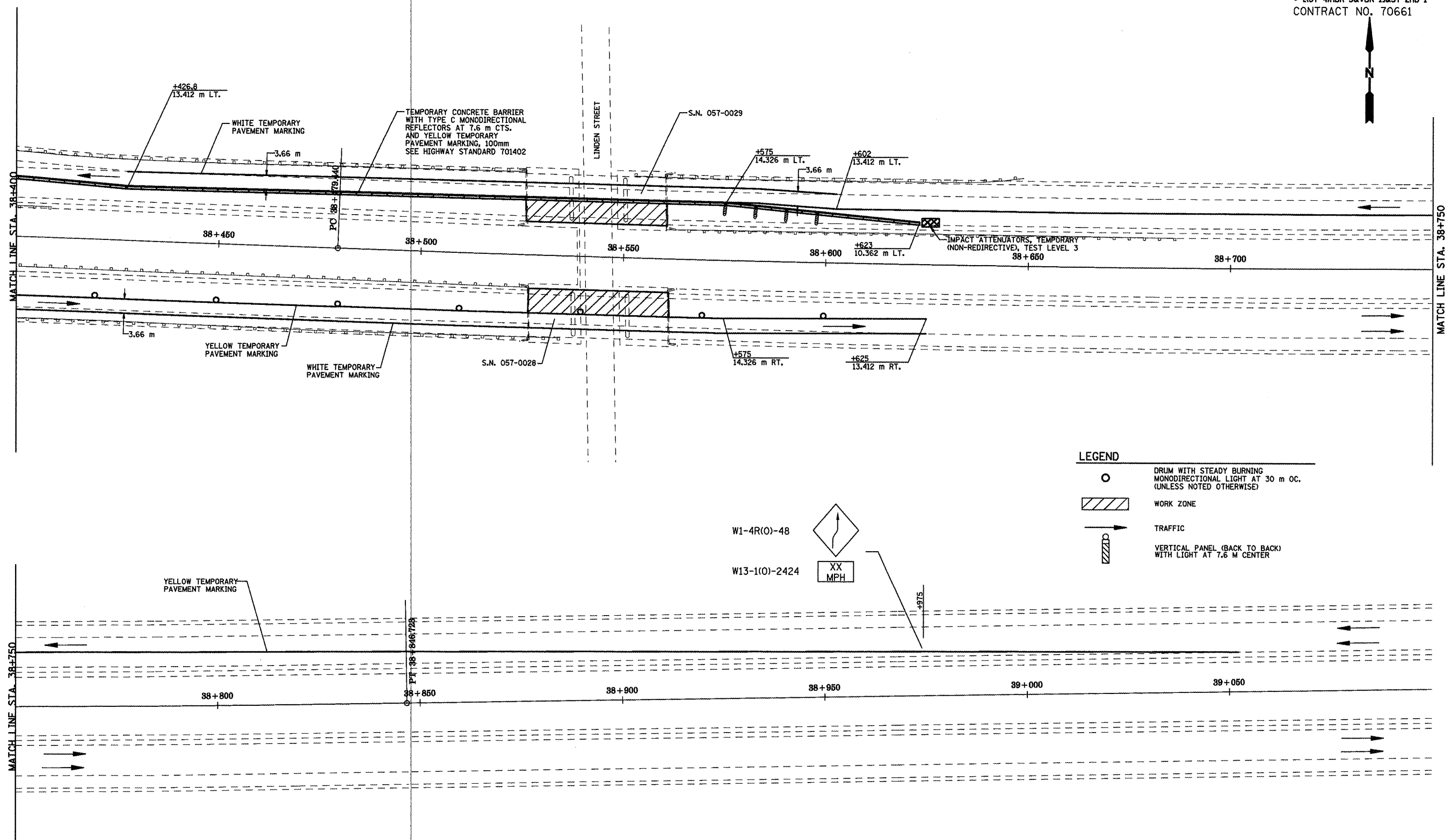


STAGE CONSTRUCTION DETAILS - STAGE 1
F.A.I. 55
MCLEAN COUNTY





NOTE: TRAFFIC CONTROL ITEMS AND DEVICES NOT DETAILED SHALL BE IN ACCORDANCE WITH HIGHWAY STANDARDS 701400, 701401, 701402, AND 701411.

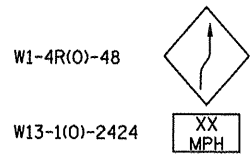
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	•	McLEAN	70	22
STA. 38+400		TO STA. 39+100		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

• [(57-4)HBR-5&VBR-1] & 57-2HB-1
CONTRACT NO. 70661



LEGEND

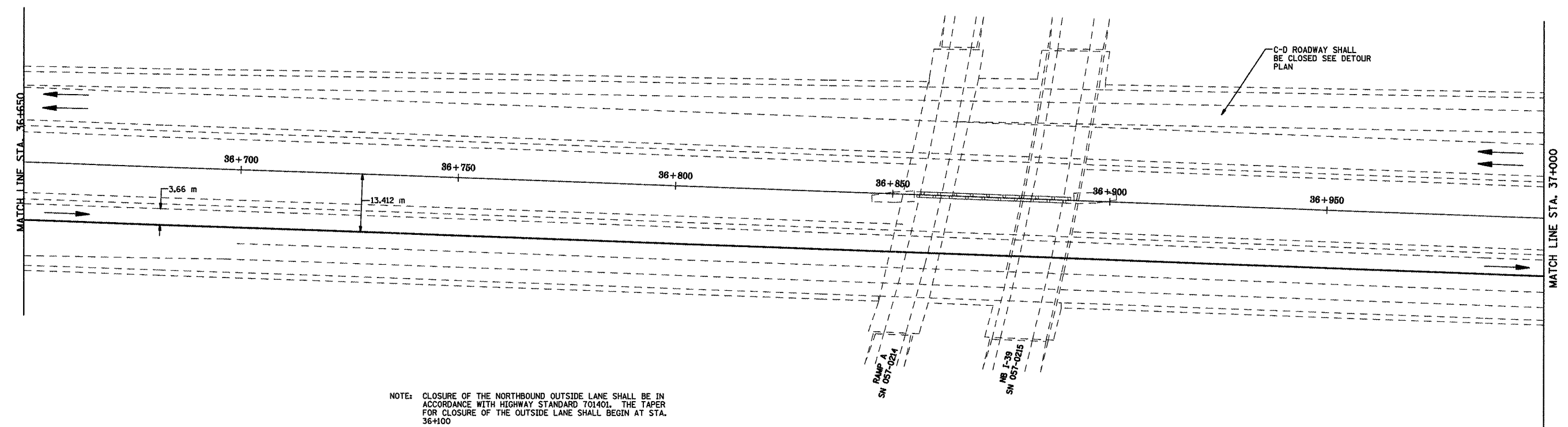
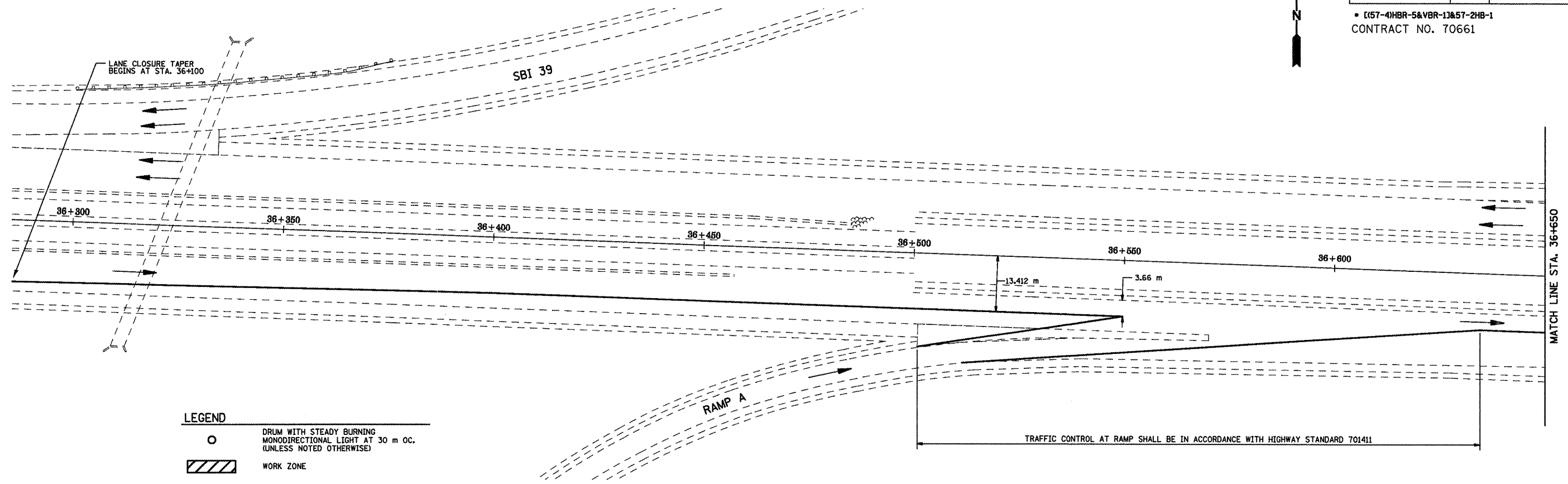
-  DRUM WITH STEADY BURNING MONODIRECTIONAL LIGHT AT 30 m OC. (UNLESS NOTED OTHERWISE)
-  WORK ZONE
-  TRAFFIC
-  VERTICAL PANEL (BACK TO BACK) WITH LIGHT AT 7.6 M CENTER



STAGE CONSTRUCTION DETAILS - STAGE 1
F.A.I. 55
MCLEAN COUNTY

NOTE: TRAFFIC CONTROL ITEMS AND DEVICES NOT DETAILED SHALL BE IN ACCORDANCE WITH HIGHWAY STANDARDS 701400, 701401, 701402, AND 701411.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55		McLEAN	70	23
STA. 36+305		TO STA. 37+00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
• (157-4)HBR-5&VBR-11&57-2HB-1 CONTRACT NO. 70661				



NOTE: CLOSURE OF THE NORTHBOUND OUTSIDE LANE SHALL BE IN ACCORDANCE WITH HIGHWAY STANDARD 701401. THE TAPER FOR CLOSURE OF THE OUTSIDE LANE SHALL BEGIN AT STA. 36+100

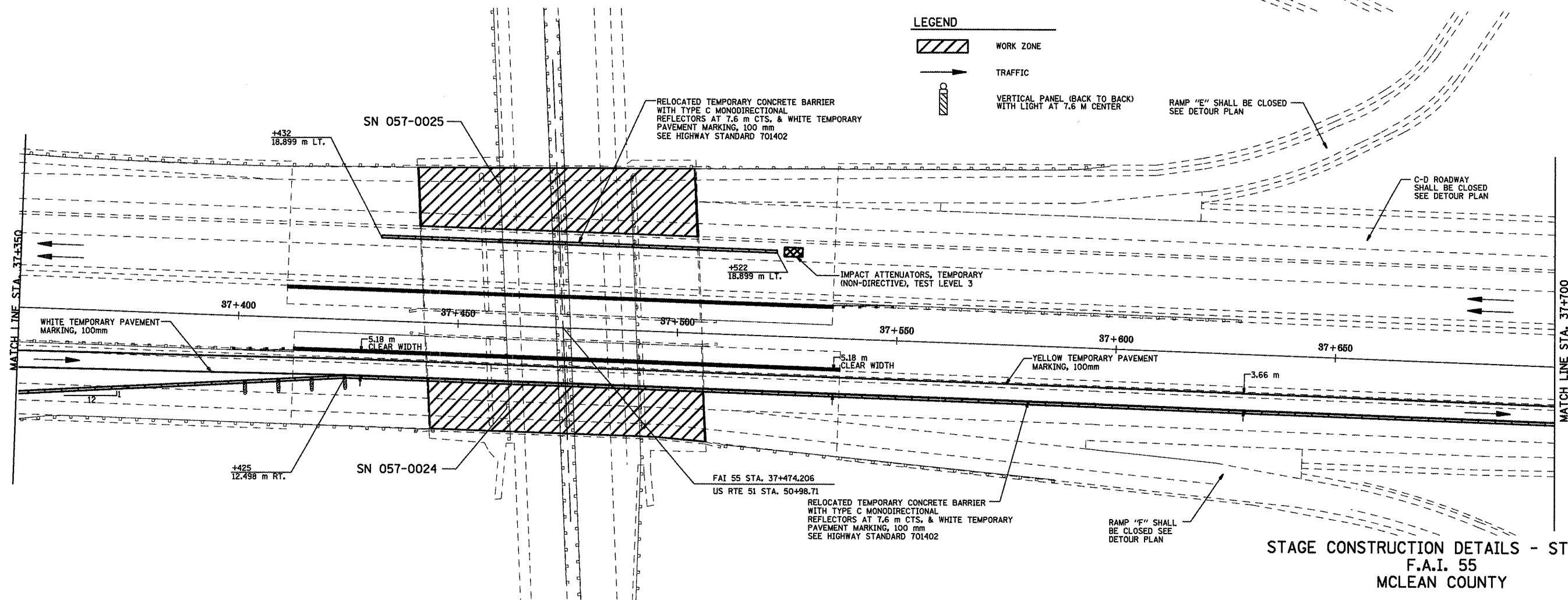
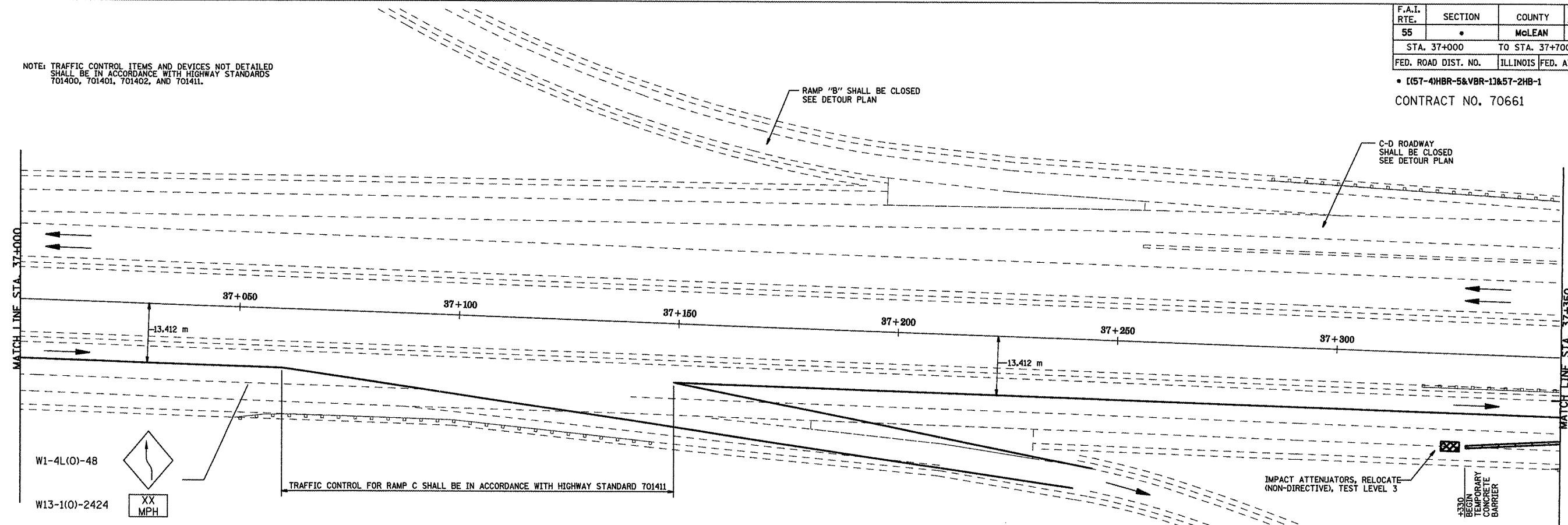
HIGHWAY STANDARD 701411 SHALL BE USED AT THE ENTRANCE RAMP FROM I74 AND THE EXIT RAMP TO I39.

STAGE CONSTRUCTION DETAILS - STAGE 2
 F.A.I. 55
 McLEAN COUNTY

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	•	McLEAN	70	24
STA. 37+000		TO STA. 37+700		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

• (G7-4)HBR-5&VBR-11&57-2HB-1
 CONTRACT NO. 70661

NOTE: TRAFFIC CONTROL ITEMS AND DEVICES NOT DETAILED SHALL BE IN ACCORDANCE WITH HIGHWAY STANDARDS 701400, 701401, 701402, AND 701411.

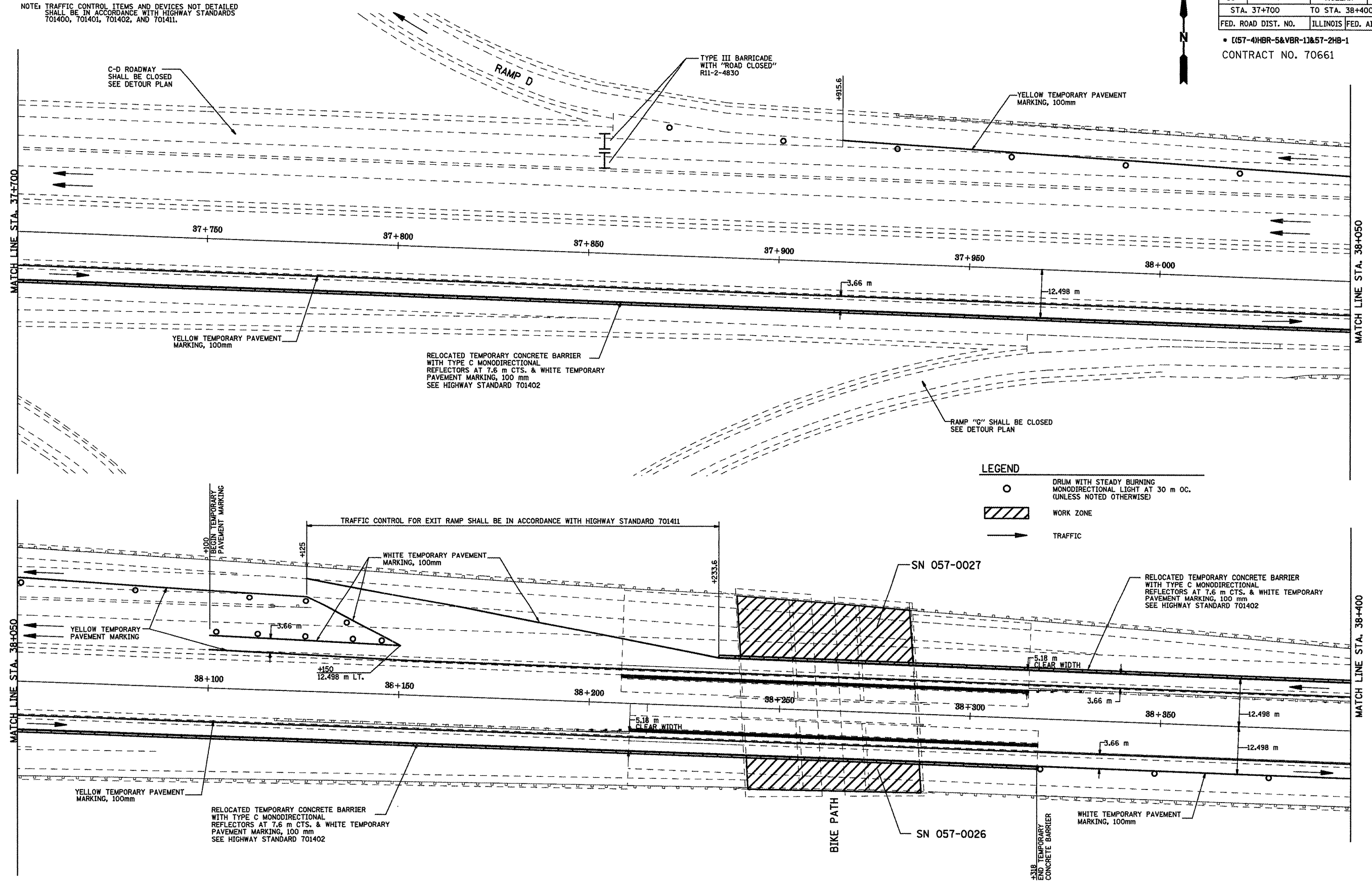


STAGE CONSTRUCTION DETAILS - STAGE 2
 F.A.I. 55
 MCLEAN COUNTY

NOTE: TRAFFIC CONTROL ITEMS AND DEVICES NOT DETAILED SHALL BE IN ACCORDANCE WITH HIGHWAY STANDARDS 701400, 701401, 701402, AND 701411.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	•	McLEAN	70	25
STA. 37+700		TO STA. 38+400		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

• [(57-4)HBR-5&VBR-1] & 57-2HB-1
CONTRACT NO. 70661

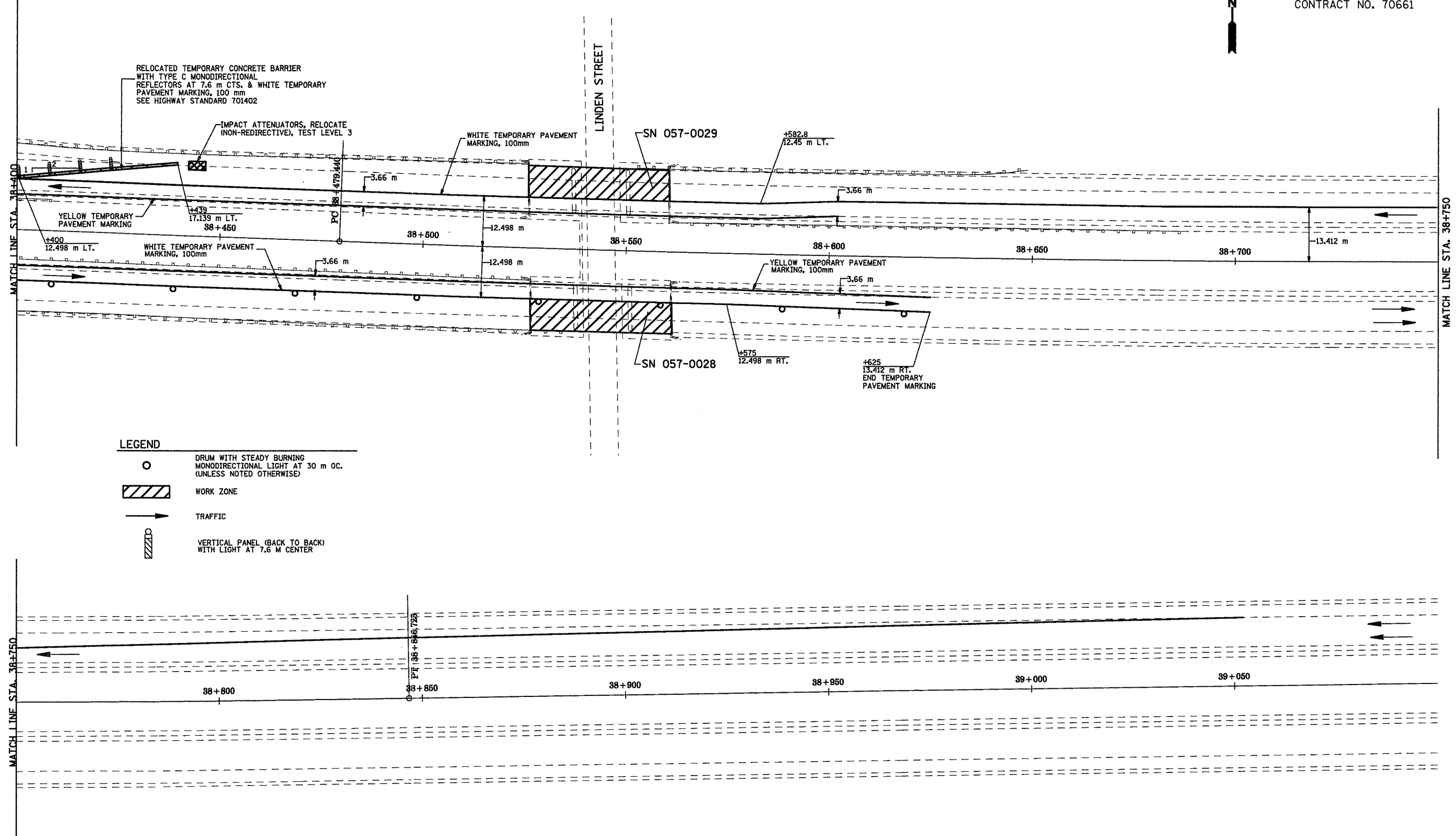
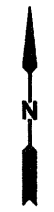


STAGE CONSTRUCTION DETAILS - STAGE 2
F.A.I. 55
MCLEAN COUNTY

NOTE: TRAFFIC CONTROL ITEMS AND DEVICES NOT DETAILED SHALL BE IN ACCORDANCE WITH HIGHWAY STANDARDS 701400, 701401, 701402, AND 701411.

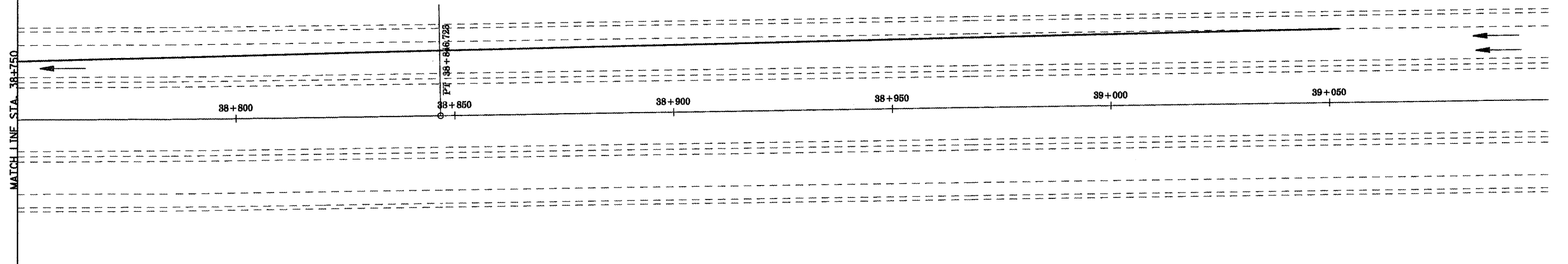
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	•	McLEAN	70	26
STA. 38+400		TO STA. 39+100		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

• (157-4)HR-5&VBR-13&57-2HB-1
CONTRACT NO. 70661



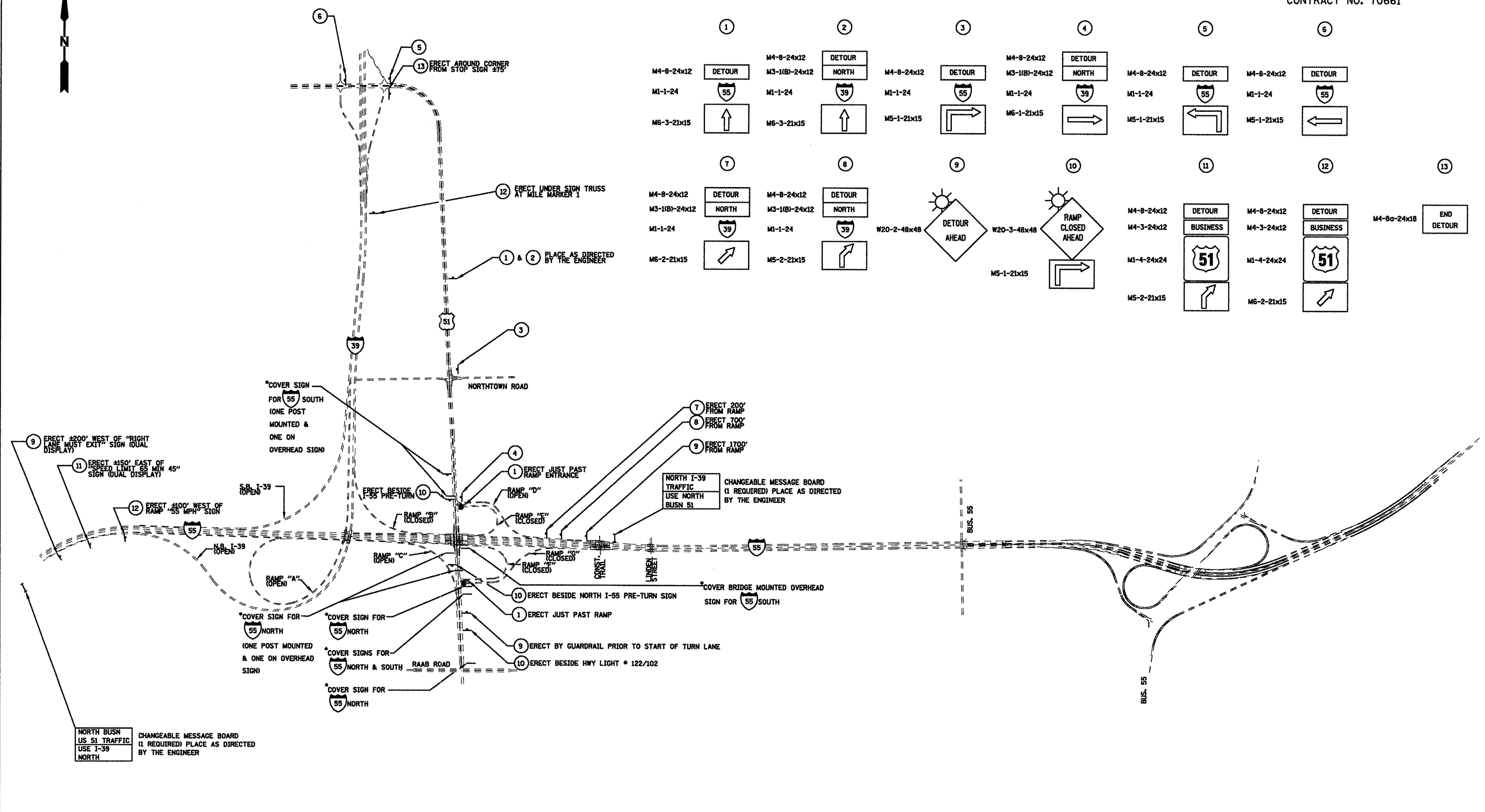
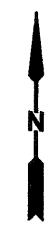
LEGEND

○	DRUM WITH STEADY BURNING MONODIRECTIONAL LIGHT AT 30 m OC. (UNLESS NOTED OTHERWISE)
▨	WORK ZONE
→	TRAFFIC
▧	VERTICAL PANEL (BACK TO BACK) WITH LIGHT AT 7.6 M CENTER



F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55		MCLEAN	70	27
STA. 36+305		TO STA. 37+00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

• [57-4HBR-5&VBR-1]&57-2HB-1
CONTRACT NO. 70661



NOTE: RAMPs B, E, F, AND G WILL BE CLOSED DURING STAGE 2 CONSTRUCTION.

TYPE III BARRICADES AT STATION 37+850 LT. AS SHOWN ON SHEET 25 ARE INCLUDED IN THE PAY ITEM "TRAFFIC CONTROL AND PROTECTION (SPECIAL)". FOR ADDITIONAL INFORMATION, SEE THE SPECIAL PROVISION "TRAFFIC CONTROL AND PROTECTION (SPECIAL)".

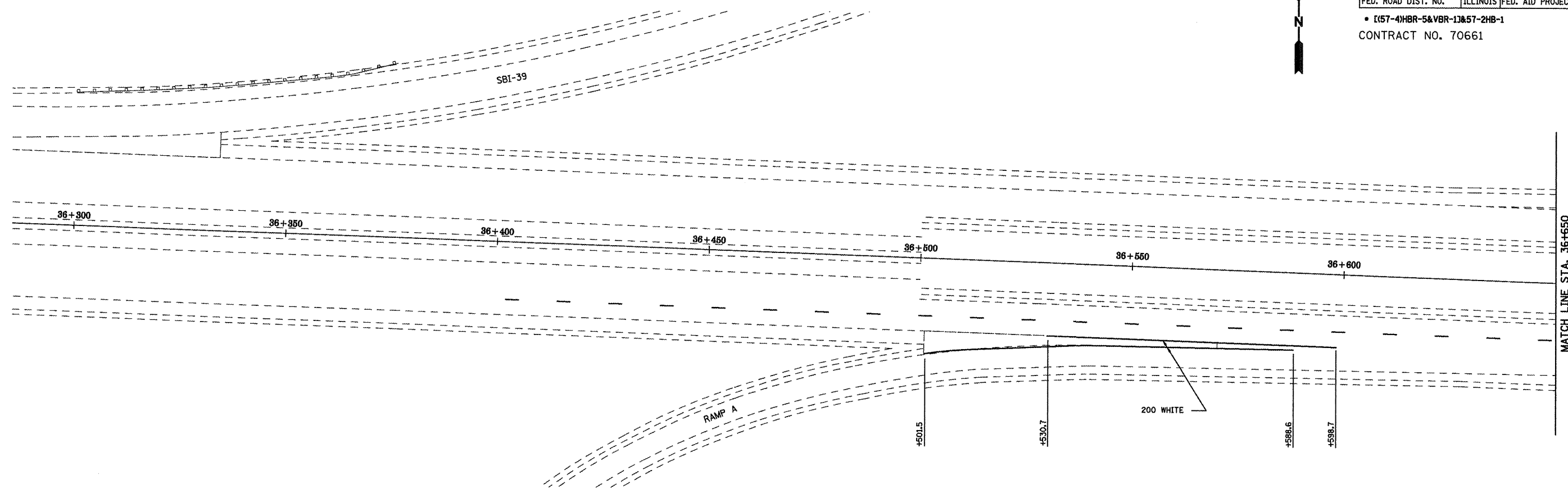
• PLACE TYPE III BARRICADES WITH R11-2-4830 "ROAD CLOSED" SIGN TO CLOSE RAMPs "E" AND "G". PLACE DRUMS WITH STEADY BURNING LIGHTS AT 8m CTS TO CLOSE SB LEFT TURN LANE TO RAMP "E" AND "G" AND NB RIGHT TURN TO RAMP "E" AND "G". SET TRAFFIC SIGNALS AT RAMP "F" & "G" INTERSECTION WITH BUS 51 TO FLASHING YELLOW

• SIGNS CONFLICTING WITH THE DETOUR SIGNING SHALL BE COVERED. CONFLICTING EXTRUDED PANEL "GREEN BOARD" SIGNS SHALL HAVE ORANGE "CLOSED" SIGNS BOLTED TO THEM TO THE SATISFACTION OF THE ENGINEER. THE ORANGE "CLOSED" SIGNS SHALL HAVE BLACK LETTERING WITH A MINIMUM LETTER SIZE >= THE MINIMUM LETTER SIZE ON THE EXISTING SIGN TO BE COVERED.

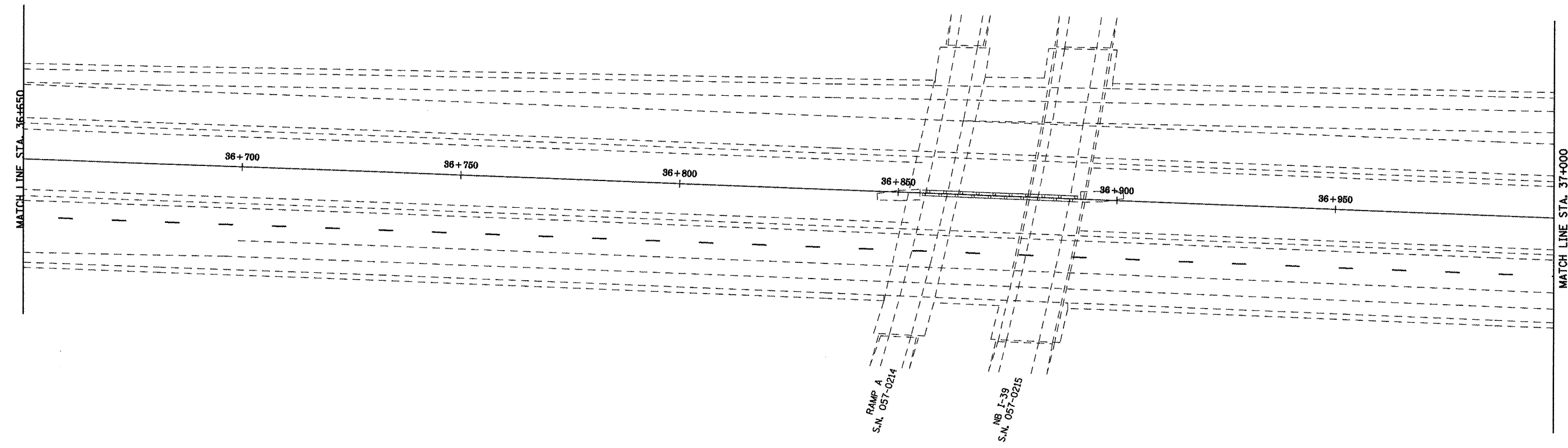
TRAFFIC CONTROL AND PROTECTION (SPECIAL)
DETOUR PLAN
STAGE II CONSTRUCTION
F.A.I. 55
MCLEAN COUNTY

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	•	McLEAN	70	28
STA. 36+305		TO STA. 37+00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

• (157-4)HBR-5&VBR-13&57-2HB-1
 CONTRACT NO. 70661



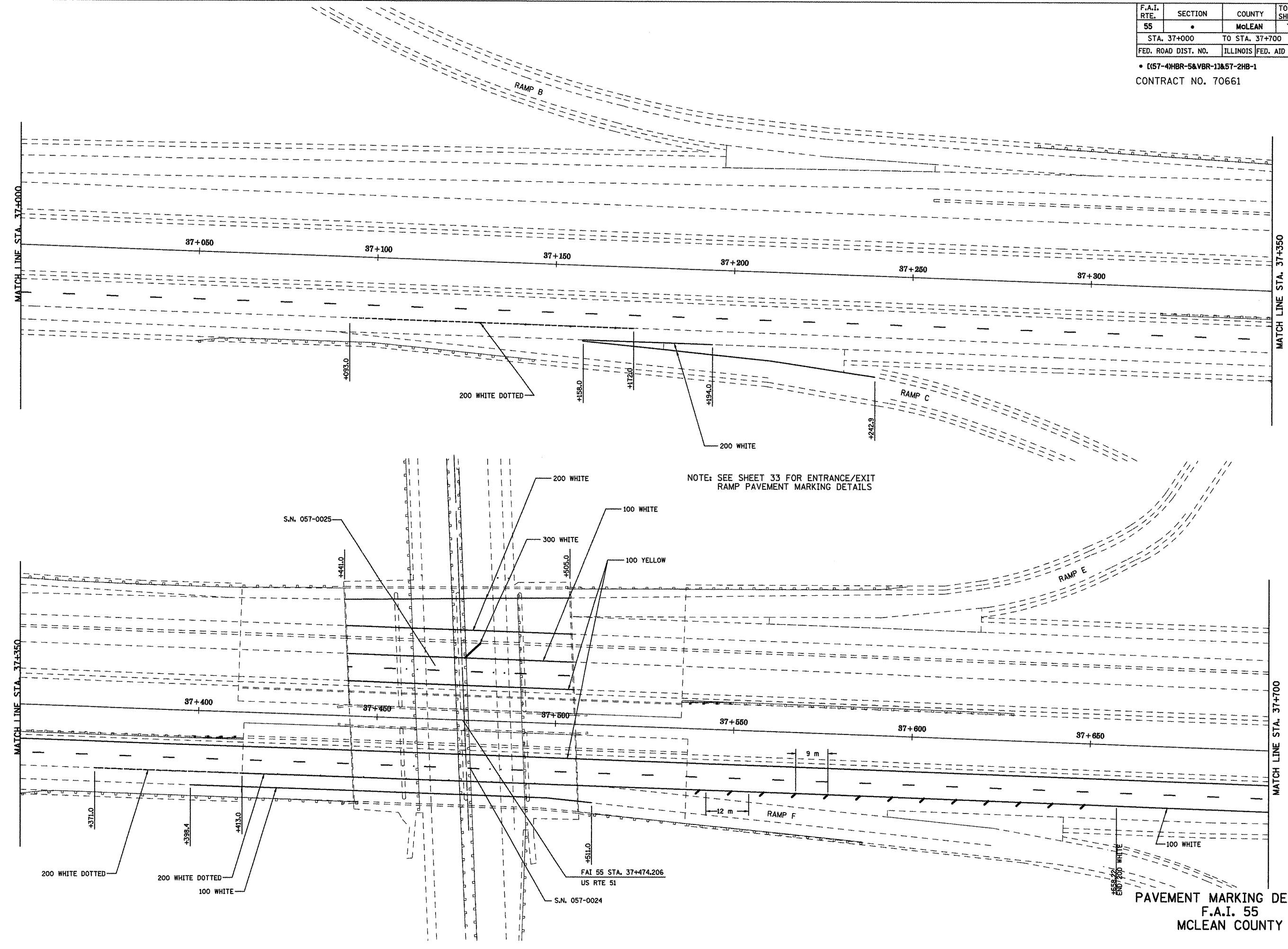
NOTE: SEE SHEET 33 FOR ENTRANCE/EXIT
 RAMP PAVEMENT MARKING DETAILS



PAVEMENT MARKING DETAILS
 F.A.I. 55
 McLEAN COUNTY

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	•	MCLEAN	TO	29
STA. 37+000		TO STA. 37+700		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

• [(57-4)HBR-5&VBR-1] & (57-2)HB-1
 CONTRACT NO. 70661

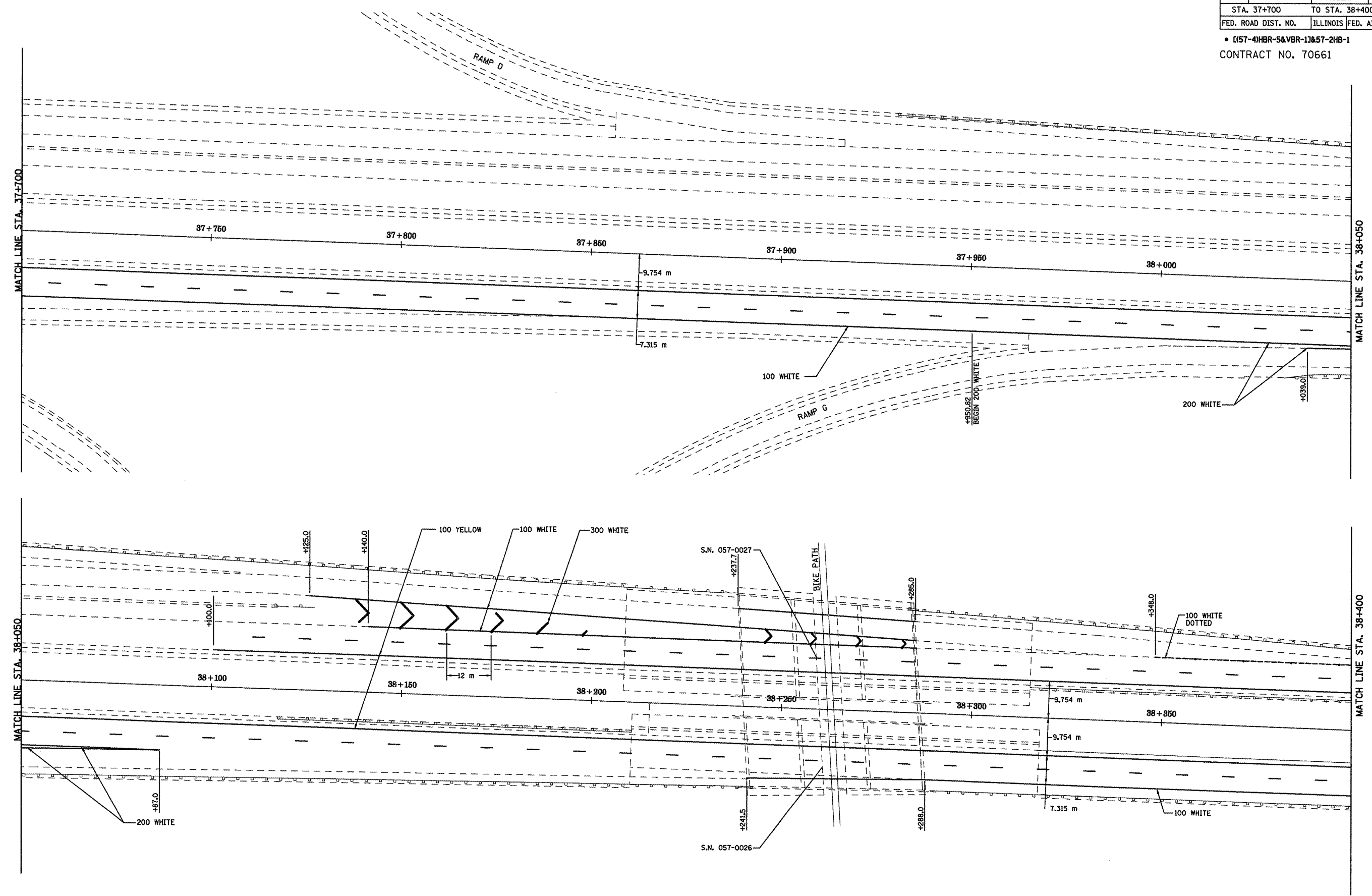


FAL 55 STA. 37+474.206
 US RTE 51

PAVEMENT MARKING DETAILS
 F.A.I. 55
 MCLEAN COUNTY

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	*	McLEAN	70	30
STA. 37+700		TO STA. 38+400		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

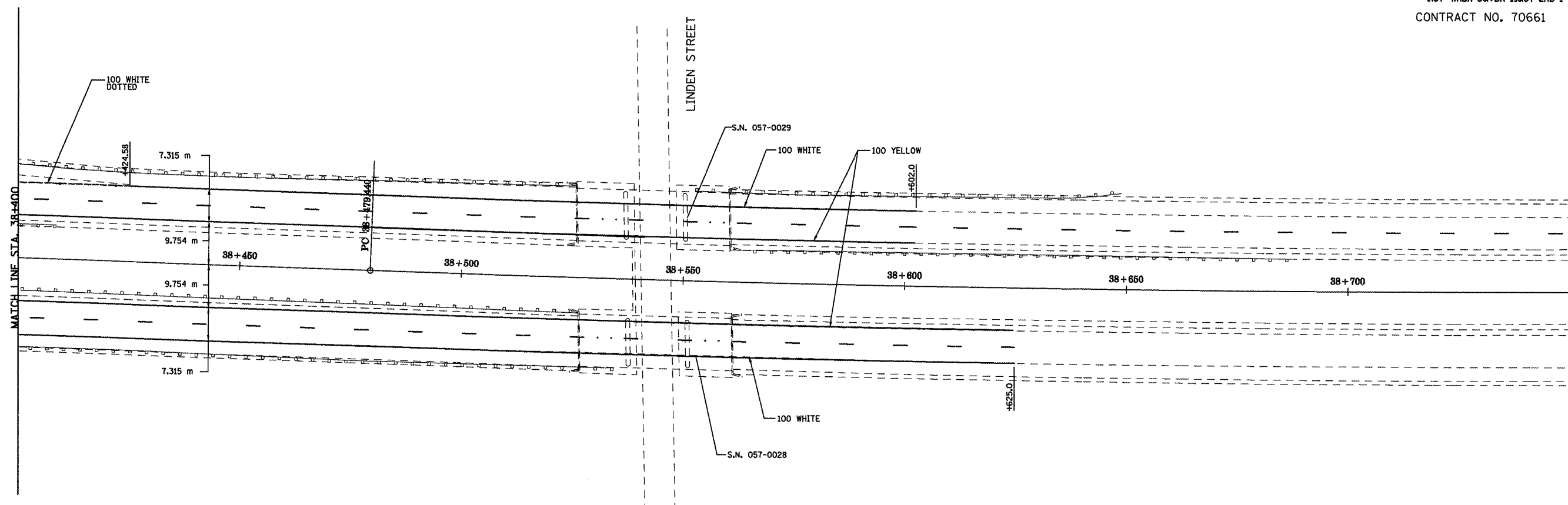
• [(57-4)HBR-5&VBR-1]857-2HB-1
 CONTRACT NO. 70661



PAVEMENT MARKING DETAILS
 F.A.I. 55
 McLEAN COUNTY

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	•	McLEAN	70	31
STA. 38+400		TO STA. 39+100		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

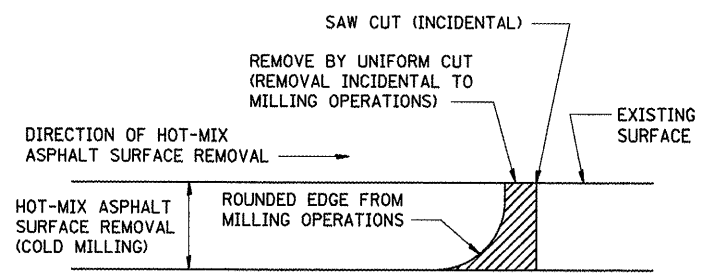
• [(57-4)HBR-5&VBR-13&57-2HB-1
CONTRACT NO. 70661



PAVEMENT MARKING DETAILS
F.A.I. 55
MCLEAN COUNTY

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	•	McLEAN	70	32
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

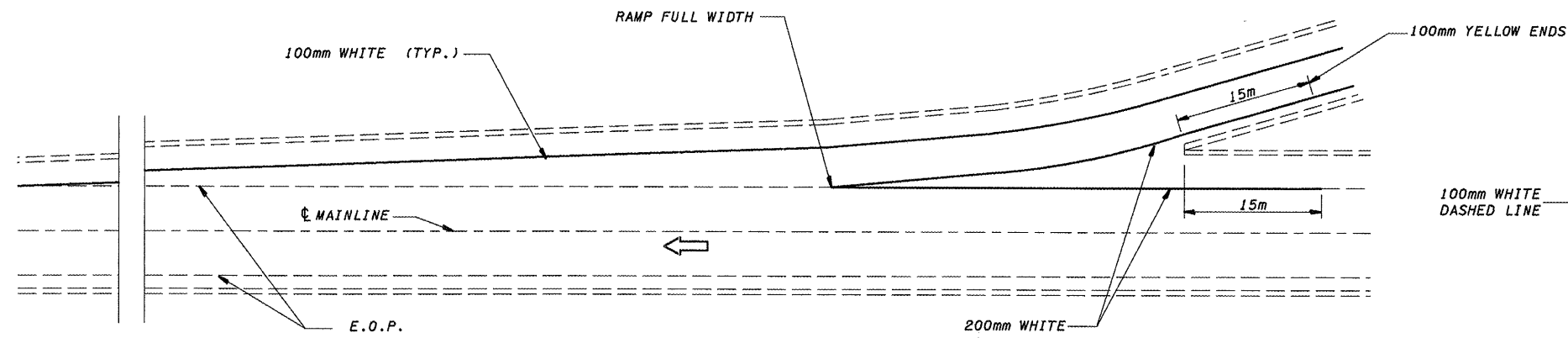
• [(57-4HBR-5&VBR-1)&57-2HB-1
 CONTRACT NO. 70661



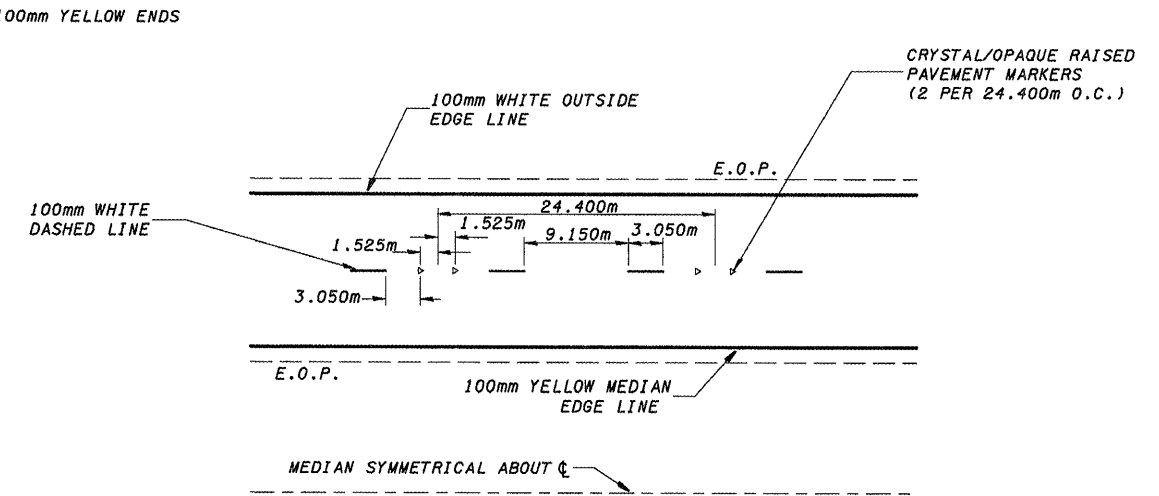
NOTE: WHEN MILLING OPERATIONS PRODUCE A ROUNDED EDGE, THEN A SAW CUT SHALL BE USED TO MANUFACTURE A PERPENDICULAR EDGE AS SHOWN IN THE DETAIL. THE ENGINEER SHALL BE THE SOLE JUDGE CONCERNING THE USE OF THIS DETAIL.

**HOT-MIX ASPHALT DETAIL AT BUTT JOINTS
 STRUCTURES 057-0028 & 057-0029**

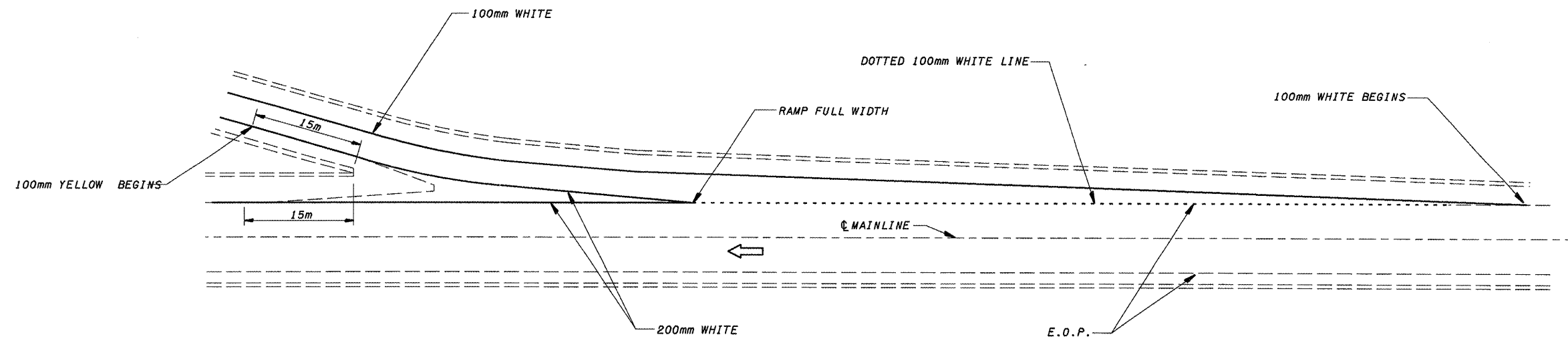
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55		McLEAN	70	33
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
• [(57-4)HBR-5&VBR-1] & 57-2HB-1				
CONTRACT NO. 70661				



TYPICAL PAVEMENT MARKING FOR ENTRANCE RAMP TERMINALS



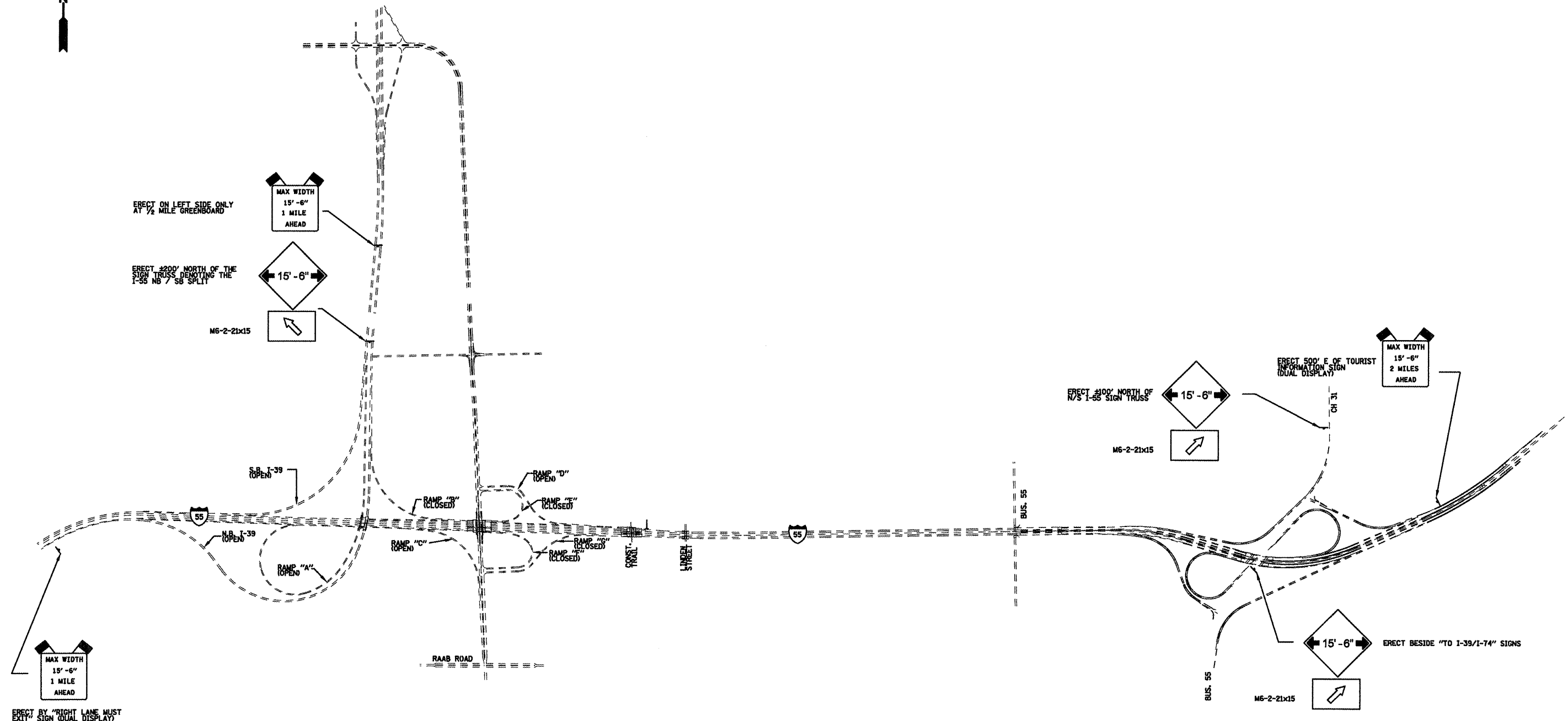
TYPICAL PAVEMENT MARKINGS



TYPICAL PAVEMENT MARKINGS FOR EXIT RAMP TERMINALS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55		MCLEAN	70	34
STA. 36+305		TO STA. 37+00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

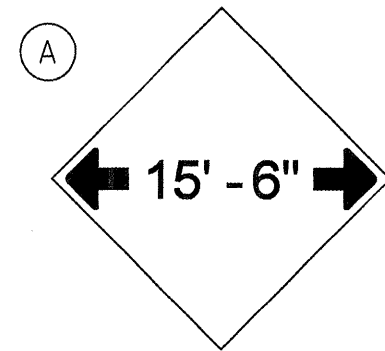
• [157-4]HR-5&VBR-13&57-2HB-1
CONTRACT NO. 70661



ERECT BY "RIGHT LANE MUST EXIT" SIGN (DUAL DISPLAY)

NOTE: SEE "WIDTH RESTRICTION SIGNING DETAIL" ON SHEET 34A FOR SIGN DETAILS NOT SHOWN

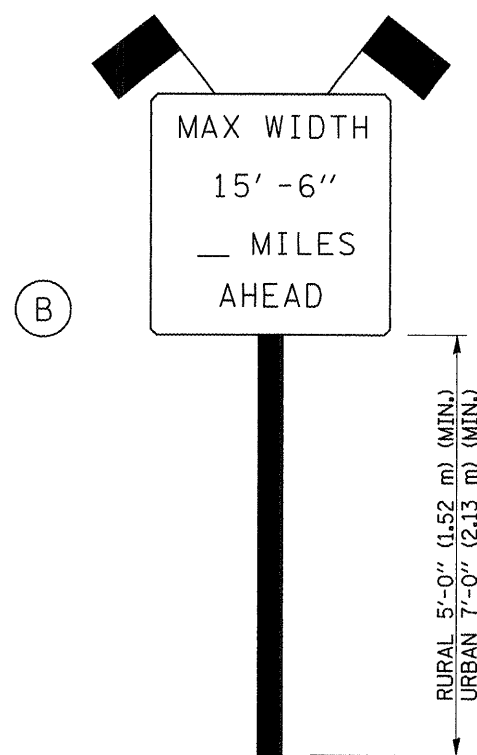
WIDTH RESTRICTION
SIGNING PLAN
STAGE II CONSTRUCTION
F.A.I. 55
MCLEAN COUNTY



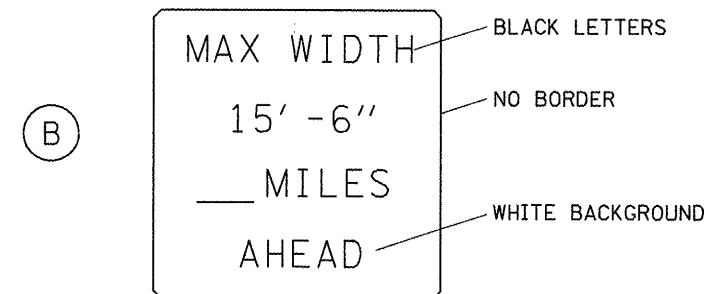
W12-2(O)-48"x48"(1200x1200)

SIGN (A) 2 SIGNS - W12-2(O)-48"x48"(1200x1200) ARE TO BE PLACED AS SHOWN ON THE WIDTH RESTRICTION SIGNING LOCATION PLAN SHEET 34.

SIGN (B) 2 SIGNS - (SIGN PANEL, TYPE II) AS SHOWN ARE TO BE PLACED AS SHOWN ON THE WIDTH RESTRICTION SIGNING LOCATION PLAN SHEET 34.



SIGN PANEL, TYPE II



W12-I103-48"x48"(1200x1200)
"D" LETTERS/NUMBERS

GENERAL NOTES

1. ALL TRAFFIC CONTROL DEVICES SHALL BE FURNISHED, ERECTED AND MAINTAINED BY THE CONTRACTOR.
2. ALL (B) SIGNS SHALL HAVE FLAGS INSTALLED UNLESS OTHERWISE DIRECTED.
3. LOCATIONS OF TRAFFIC CONTROL DEVICES MAY BE ADJUSTED BY THE ENGINEER.
4. ALL TRAFFIC CONTROL SHOWN ON THIS SHEET SHALL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR WIDTH RESTRICTION SIGNING.
5. ALL SIGNS SHALL BE POST MOUNTED UNLESS OTHERWISE DIRECTED.
6. ALL SIGNS SHOWN ORANGE (O) SHALL BE FLUORESCENT ORANGE.

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

* [(57-4)HBR-5&VBR-1J&57-2HB-1

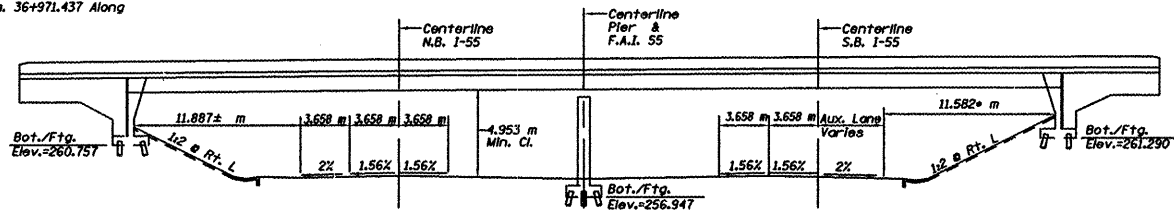
FILE NAME = o:\pro\jeote\570661\z04604-052-stds.dgn	USER NAME = keyerb	DESIGNED -	REVISED - 11/06	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	WIDTH RESTRICTION SIGNING	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		DRAWN -	REVISED - 05/08			55	*	MCLEAN	70	34A	
		CHECKED -	REVISED -			CONTRACT NO. 70661					
		DATE -	REVISED -			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					
PLOT SCALE = 27.0000 m / IN.		PLOT DATE = 10/22/2008		SCALE:	SHEET NO. OF SHEETS	STA.	TO STA.				

DISTRICT 5 DETAIL NO. X7200201

ROUTE NO.	DISTRICT	COUNTY	SECTION	SHEET NO.
FAT 55		McLEAN	70 35	3 SHEETS
FED. ROAD DIST. NO. 7		SHEET NO.		
		SHEETS		

• (157-4)HBR-5&VBR-11&57-2HB-1

Bench Mark: Disk on Centerline F.A.I. I-55 at Sta. 37+139.078 Elev.=261.851
 Bench Mark: Disk at Sta. 36+971.437 Along Centerline F.A.I. I-55 Elev.=259.492



MB 139
 P.I. STA. = 97+50.58 "English"
 Δ = 20° 00' 00"
 R = 878.030 m
 D = 1° 59' 20"
 T = 154.820 m
 L = 306.489 m
 E = 13.545 m
 S.E. = 5.25%
 S.E. TRANS. = FROM 91+15.14 "English" TO 93+70.14 "English"
 FROM 101+63.19 "English" TO 104+18.19 "English"
 P.C. STATION = 92+42.64 "English"
 P.T. STATION = 102+48.18 "English"

RAMP A
 P.I. STA. = 30+60.63 "English"
 Δ = 30° 49' 45"
 R = 698.551 m
 D = 2° 30' 00"
 T = 192.603 m
 L = 375.871 m
 E = 26.066 m
 S.E. = 5.75%
 S.E. TRANS. = FROM 22+58.73 "English" TO 25+13.73 "English"
 FROM 24+28.73 "English" TO 36+61.89 "English"

Proposed Work

1. Structural Repair of Concrete at all four abutments.
2. Structural Repair of Concrete at South abutment slopewall for SN 057-0214 (SB).
3. Place Stone Dumped Riprap along abutment walls and slopewalls at all four abutments.

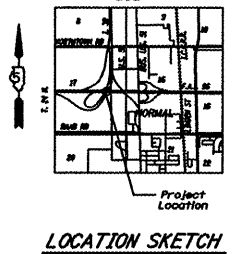
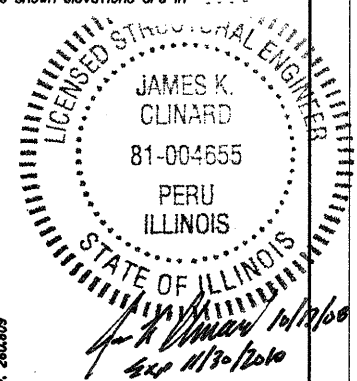
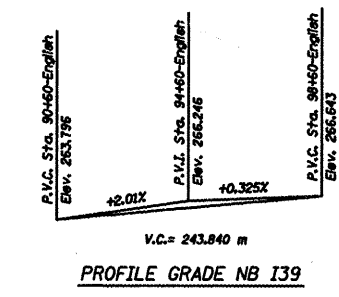
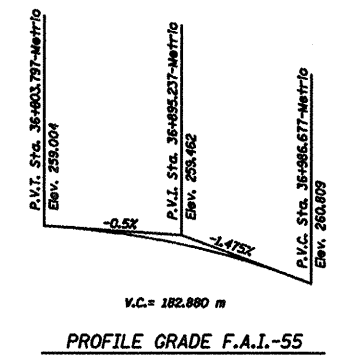
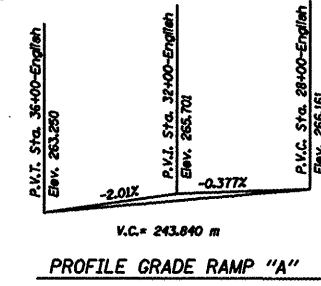
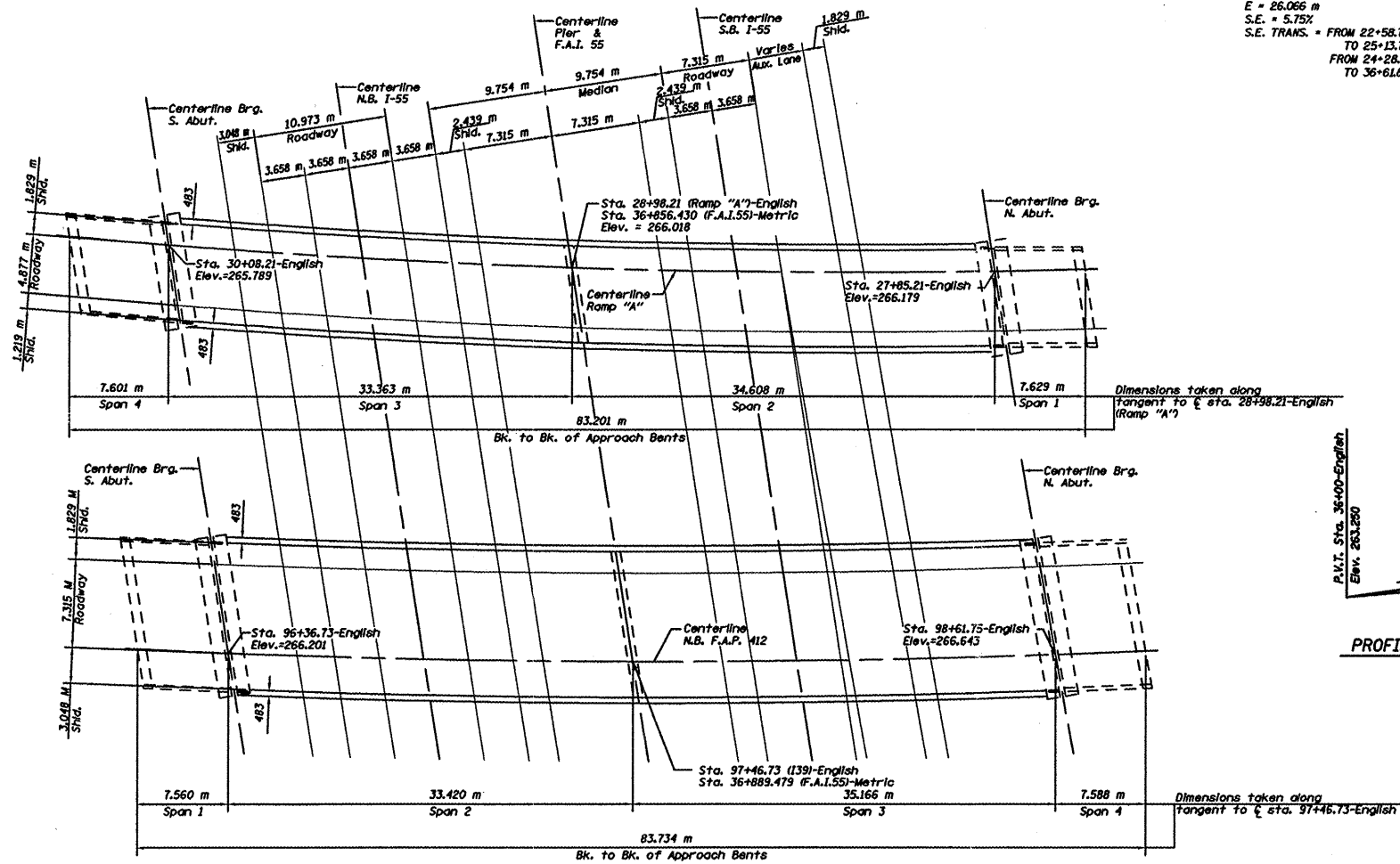
TOTAL BILL OF MATERIALS		
Item	Unit	Qty.
Stone Dumped Riprap, Class A4	sq m	23
Structural Repair of Concrete (Depth equal to or less than 125 mm)	sq m	11.4

General Notes

Plan dimensions and details relative to existing plans are subject to routine variations. The Contractor shall 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 the work, however, the Contractor will be paid for the quantity actually furnished based upon the unit price bid for the work.

All dimensions are in millimeters (mm) except as noted.

Stationing for structures has been shown in English units for I-39 and Ramp A stations because metric stationing is not available. Where shown elevations are in metric units.



DESIGNED	--
CHECKED	--
DRAWN	MQ
CHECKED	JKC

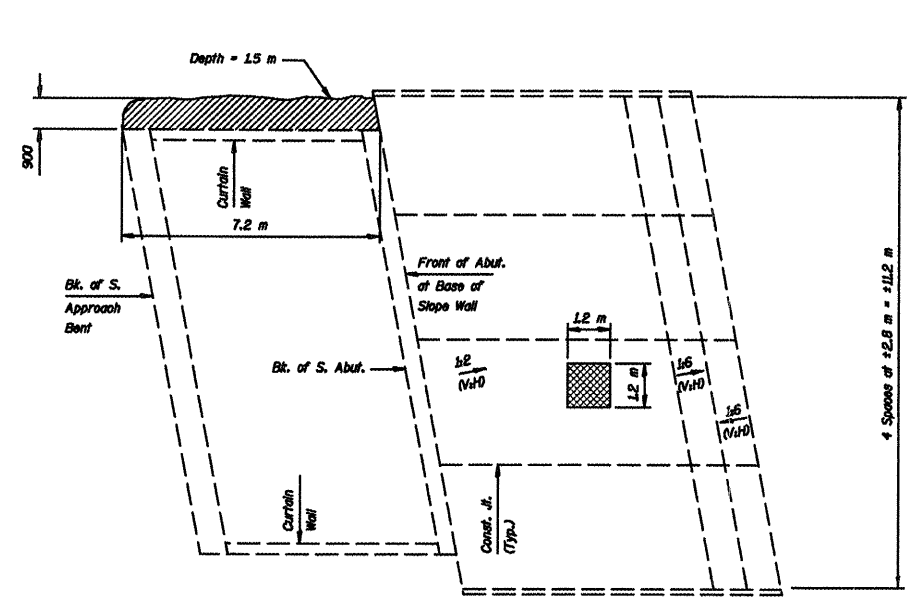


CHAMLIN ASSOCIATES
 PERU ILLINOIS MORRIS

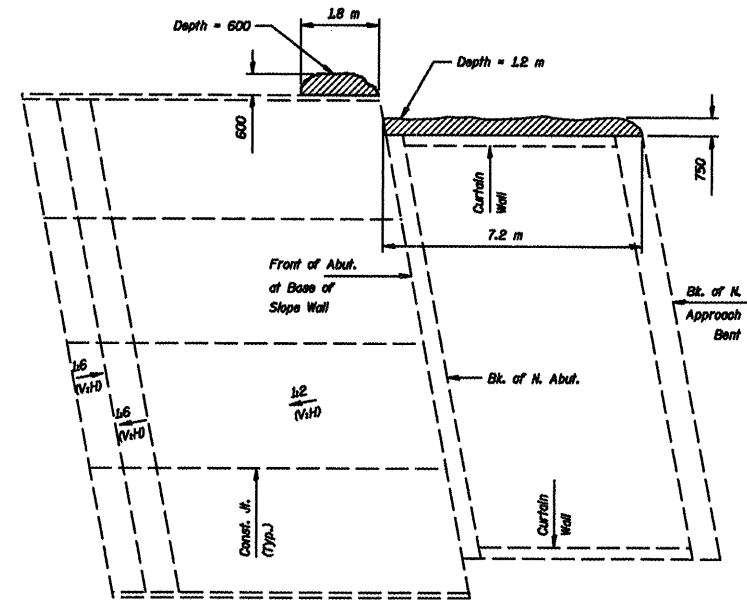
GENERAL PLAN AND ELEVATION
 I-39 OVER F.A.I. ROUTE 55
 McLEAN COUNTY
 SN 057-0214 (RAMP A)
 SN 057-0215 (NB I-39)

ROUTE NO.	DISTRICT	COUNTY	SECTION	SHEET NO.
FAI 55	•	McLEAN	70	36
SHEET NO. 2				
3 SHEETS				

• 1157-4HBR-5&VBR-11&57-2HB-1



S. ABUT. AND SLOPE WALL PLAN

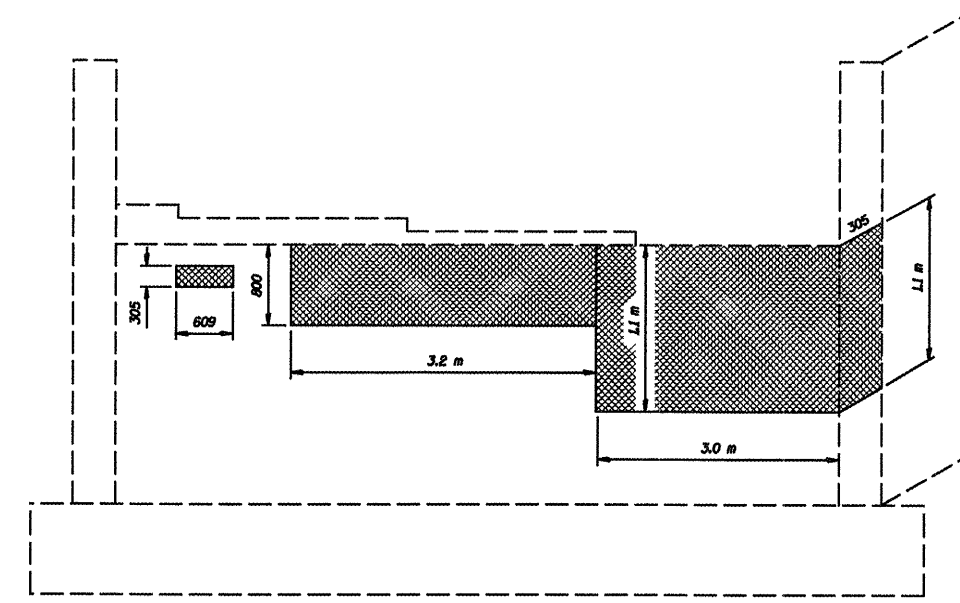


N. ABUT. AND SLOPE WALL PLAN

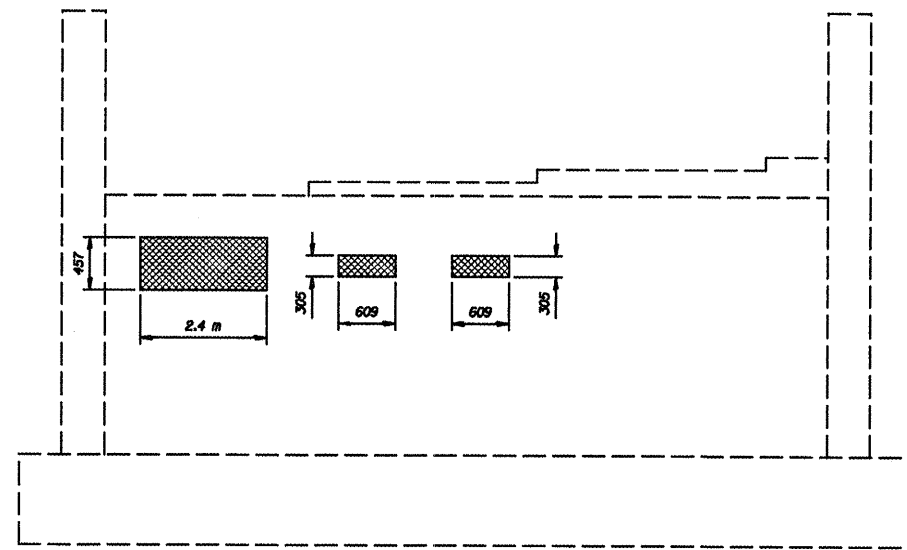
TOTAL BILL OF MATERIAL

ITEM	UNIT	QTY.
Stone Dumped Riprap, Class A4	m ²	13
Structural Repair of Concrete (Depth Equal To or Less Than 125 mm)	m ²	9.3

All dimensions are in millimeters (mm) except as noted.



SOUTH ABUTMENT



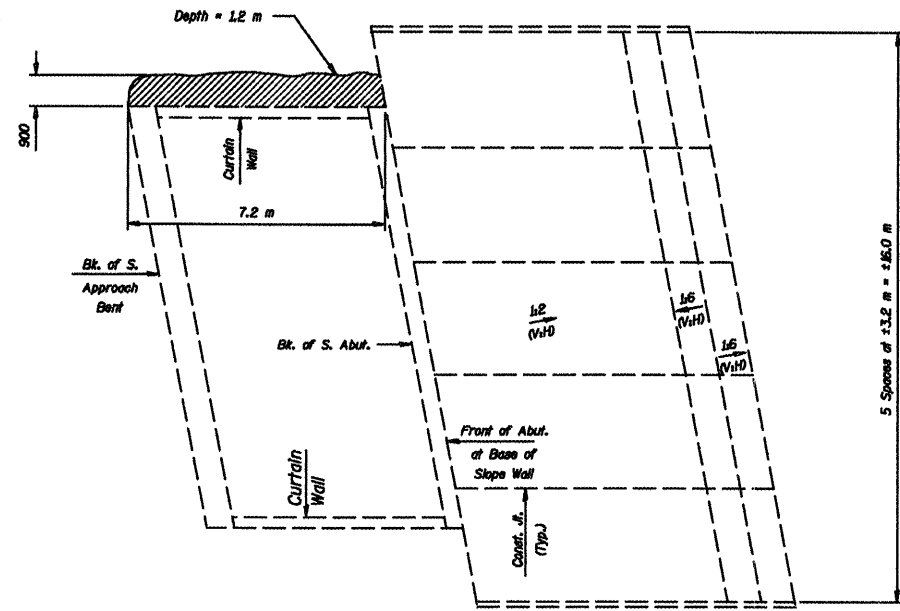
NORTH ABUTMENT

DESIGNED	--
CHECKED	--
DRAWN	NQ
CHECKED	JKC

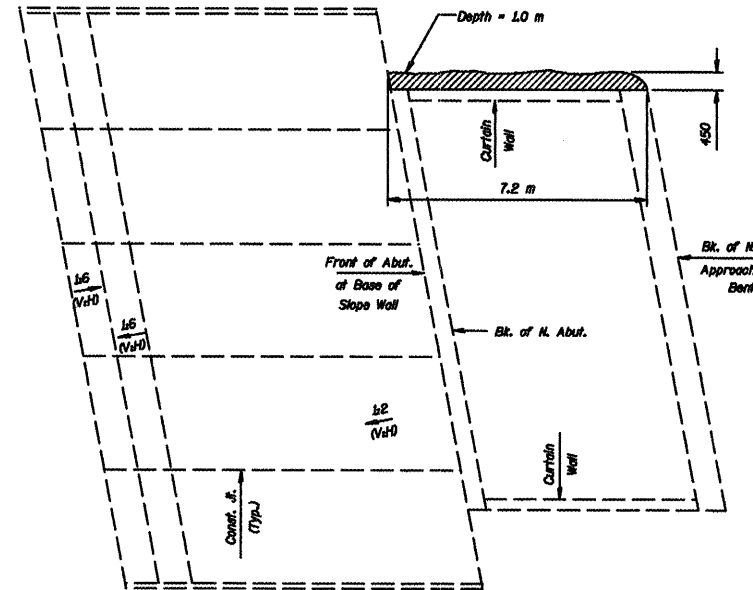
Structural Repair of Concrete (Depth Equal To or Less Than 125 mm)
 Denotes graded areas requiring backfill. Use Stone Dumped Riprap, Class A4 as backfill material.

REPAIR PLAN-SN 057-0214
 I-39 OVER F.A.I. ROUTE 55
 McLEAN COUNTY
 SN 057-0214 (RAMP A)
 SN 057-0215 (NB I-39)

ROUTE NO.	DISTRICT	COUNTY	SECTION	SHEET NO.
FAI 55	•	McLEAN	70	37
SHEET NO. 3				
3 SHEETS				
• 1157-41HBR-5&VBR-11&57-2HB-1				



S. ABUT. AND SLOPE WALL PLAN

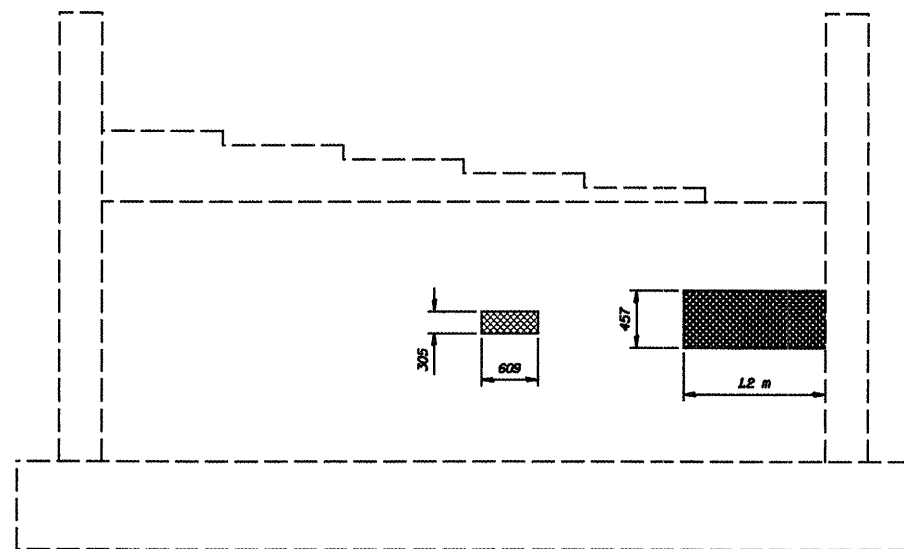


N. ABUT. AND SLOPE WALL PLAN

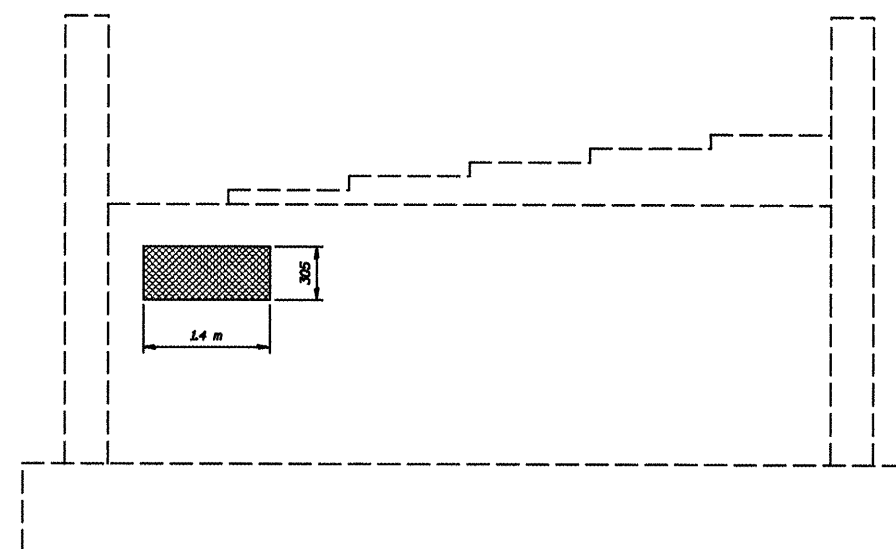
TOTAL BILL OF MATERIAL

ITEM	UNIT	QTY.
Stone Dumped Riprap, Class A-4	m ²	30
Structural Repair of Concrete (Depth Equal To or Less Than 125 mm)	m ²	1.2

All dimensions are in millimeters (mm) except as noted.



SOUTH ABUTMENT



NORTH ABUTMENT

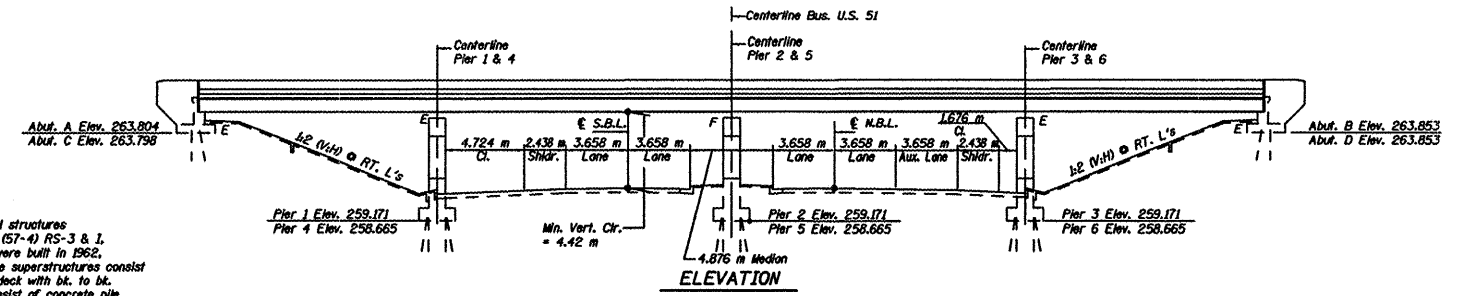
DESIGNED	--
CHECKED	--
DRAWN	NQ
CHECKED	JKC

Structural Repair of Concrete (Depth Equal To or Less Than 125 mm)
 Dashed hatched areas requiring backfill.
 Use Stone Dumped Riprap, Class A-4 as backfill material.

REPAIR PLAN-SN 057-0215
 I-39 OVER F.A.I. ROUTE 55
 McLEAN COUNTY
 SN 057-0214 (RAMP A)
 SN 057-0215 (NB I-39)

ROUTE NO.	DISTRICT	COUNTY	SECTION	SHEET
FAI 55		MCLEAN	70	38
SHEET NO. 1				
JOA SHEETS				

Benchmarks Disk on E of F.A.I. 55 at Sta. 37+535.318 Elev. 265.755



Existing Structures
Structure Number 057-0024 and 057-0025 are dual structures carrying F.A.I. Route 55 over Bus. U.S. 51. Structures were built in 1962, widening and deck replacement occurred in 1990. The superstructures consist of 4 span, steel stringer, reinforced concrete slab deck with bk. to bk. abutment length of 63.576 m. The substructures consist of concrete pile bent abutments and multi-column piers.

See proposed work on this sheet for description of proposed improvements.
Traffic to be maintained by staged construction.

- Proposed Work**
- Expansion joint removal and replacement.
 - Partial deck removal and replacement.
 - Add stud shear connectors at abutment ends of beams.
 - Structural Repair of Concrete at Piers.

• (157-4)HBR-5&VBR-11&57-2HB-1

BILL OF MATERIAL				
Item	Unit	Super	Sub.	Total
CONCRETE REMOVAL	CU M	121.4	--	121.4
SLOPE WALL REMOVAL	SO M	--	39	39
SLOPE WALL 100 mm	SO M	--	39	39
PREFORMED JOINT STRIP SEAL	METER	112.2	--	112.2
CONCRETE SUPERSTRUCTURE	CU M	121.4	--	121.4
PROTECTIVE COAT	SO M	537	--	537
REINFORCEMENT BARS, EPOXY COATED	KG	8990	--	8990
PROTECTIVE SHIELD	SO M	604	--	604
BRIDGE DECK GROOVING	SO M	432	--	432
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 125 mm)	SO M	--	1.2	1.2
STRUCTURAL REPAIR OF CONCRETE (DEPTH GREATER THAN 125 mm)	SO M	--	1.0	1.0
BAR SPLICERS	EACH	296	--	296
STUD SHEAR CONNECTORS	EACH	2646	--	2646
SILICONE JOINT SEALER	METER	62.8	--	62.8

Quantities for Temporary Concrete Barrier and Relocate Temporary Concrete Barrier Included in Roadway Plans. For Bearing Replacement details, notes and Bill of Material see sheets 49 thru 51.

General Notes

Reinforcement Bars designated (E) shall be Epoxy Coated. All new structural steel shall be stop painted with the inorganic zinc rich primer per AASHTO M 300, Type 1. Cost included with Furnishing and Erecting Structural Steel.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project. Field welding of construction accessories will not be permitted to beams or girders.

Plan dimensions and details relative to existing plans are subject to routine variations. The Contractor shall 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 the work, however, the Contractor will be paid for the quantity actually furnished based upon the unit price bid for the work.

Any existing reinforcement bars which are intended to be incorporated into the new construction that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost included with "Concrete Removal".

All dimensions are in millimeters (mm) except as noted. All construction joints shall be bonded.

Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

As directed by the Engineer, existing construction accessories welded to the top flange of beams and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by qualified personnel approved by the Engineer.

Any cracks that cannot be removed by grinding 1/4 inch deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.

Reinforcement bars shall conform to the requirements of ASTM A 706 or 400. See Special Provisions.

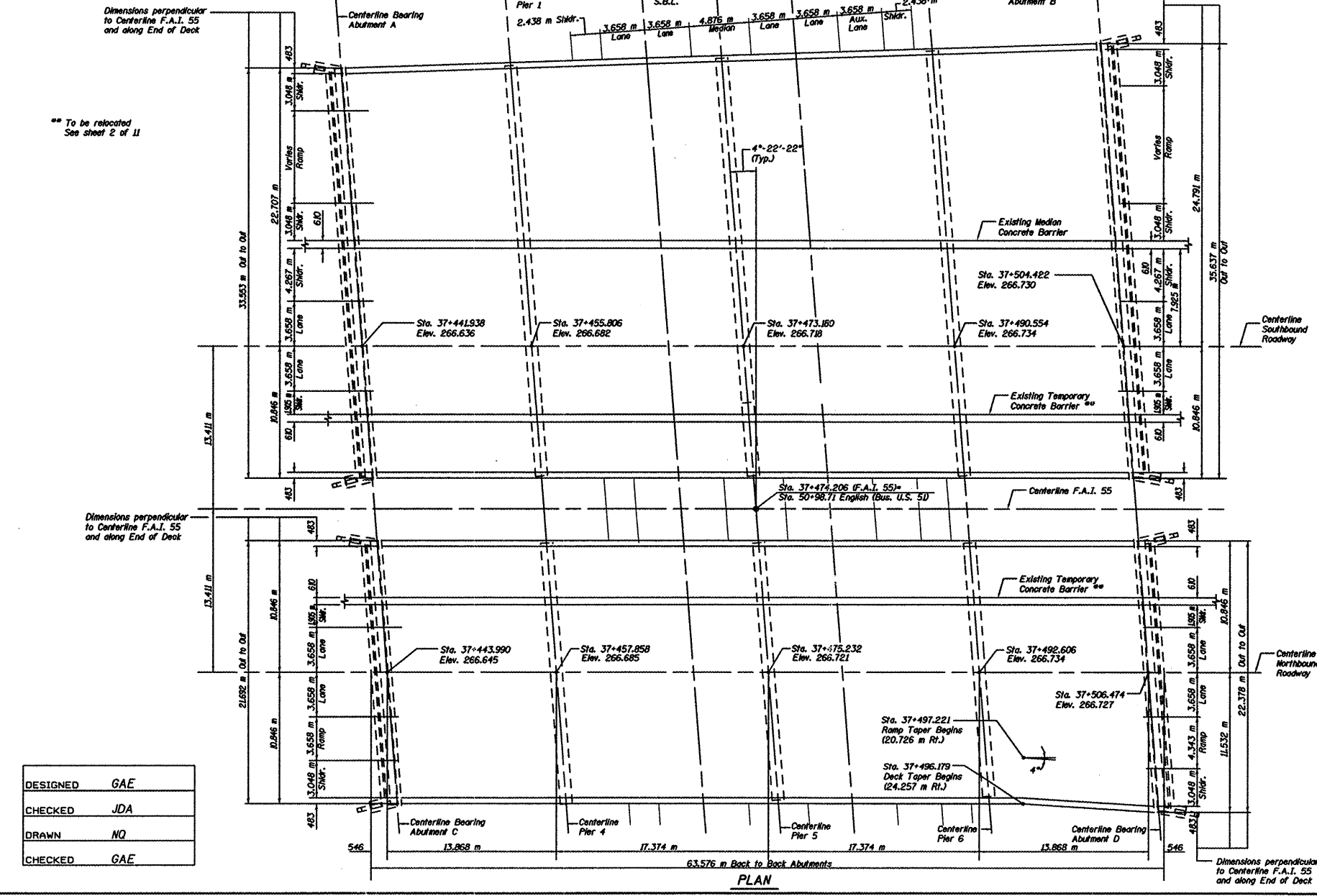
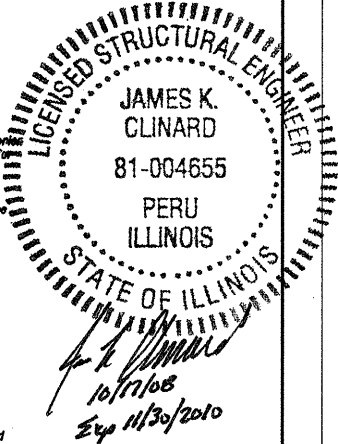
DESIGN STRESSES
(EXISTING CONSTRUCTION)

Concrete: $f'_c = 24$ Mpa
Reinforcement: f_s (1962) = 138 Mpa
 f_y (1990) = 400 Mpa
Structural Steel: f_s (1962) = 124 Mpa
 f_y (1990) = 248 Mpa

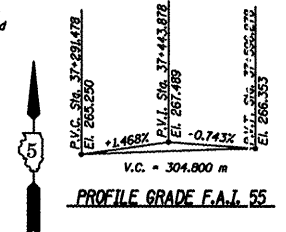
Design Loading: MS18 & Alternate
Allow 12 kN/m for future wearing surface.
Design Specifications: AASHTO (1981) plus 1984 thru 1988 Interims.

DESIGN STRESSES
(NEW CONSTRUCTION)

Concrete: $f'_c = 24$ Mpa
Reinforcement: $f_y = 400$ Mpa
Structural Steel: $f_y = 248$ Mpa
Design Specifications: AASHTO 2002 and Interims

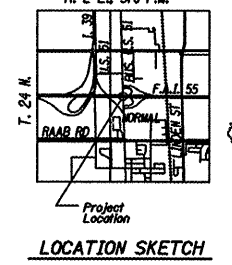


DESIGNED	GAE
CHECKED	JDA
DRAWN	NQ
CHECKED	GAE



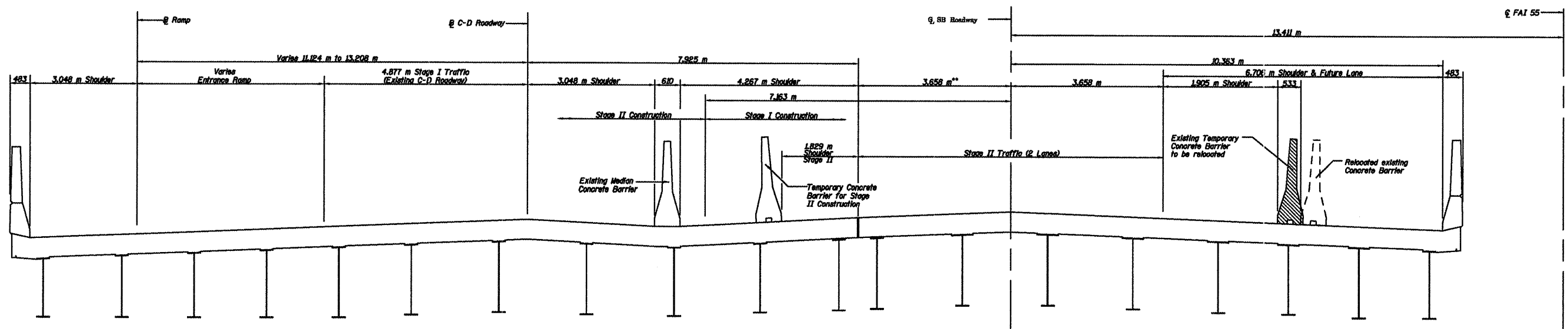
CHAMLIN ASSOCIATES
PERU ILLINOIS MORRIS

GENERAL PLAN AND ELEVATION
F.A.I. 55 OVER BUSINESS U.S. 51
MCLEAN COUNTY
SN 057-0024 (NB)
SN 057-0025 (SB)
STA. 37+474.206



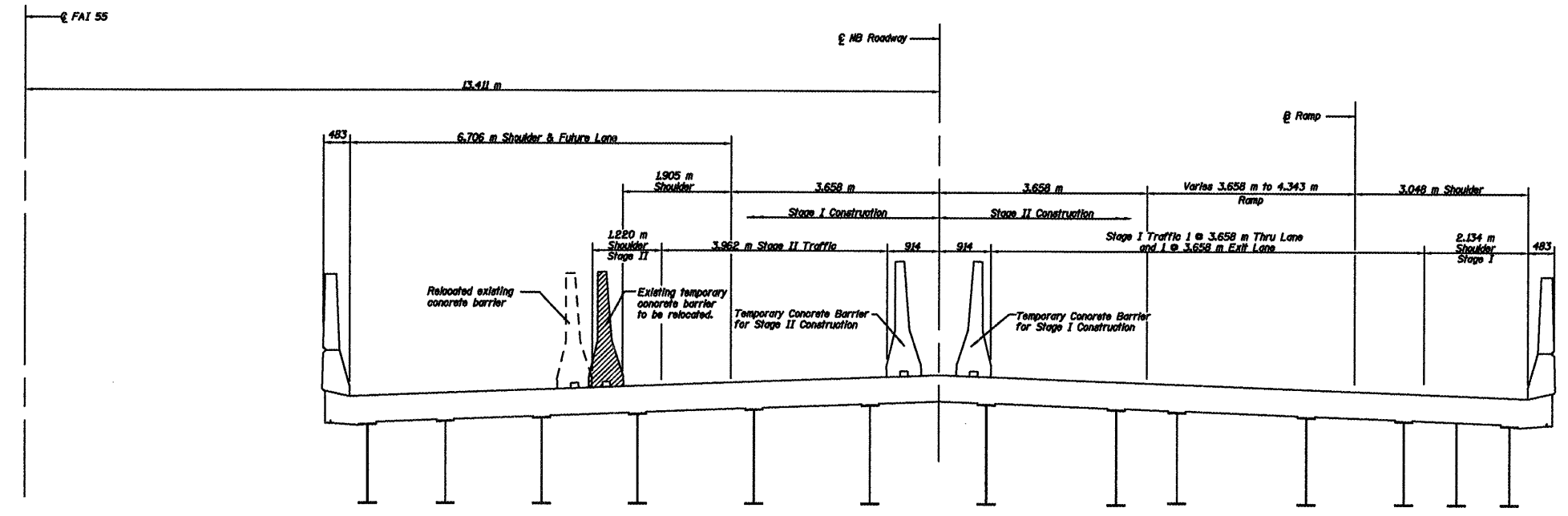
PROJECT NO.	SECTION	COUNTY	DATE	SHEET NO.
FAI 55		McLEAN	70	39
SHEET NO. 2				
JOA SHEETS				

• (157-1)HBR-5&VBR-11&57-2HB-1



** This lane may experience temporary closure due to pavement patching and resurfacing work off the bridge deck.

CROSS SECTION (SN 057-0025)
(Looking East)



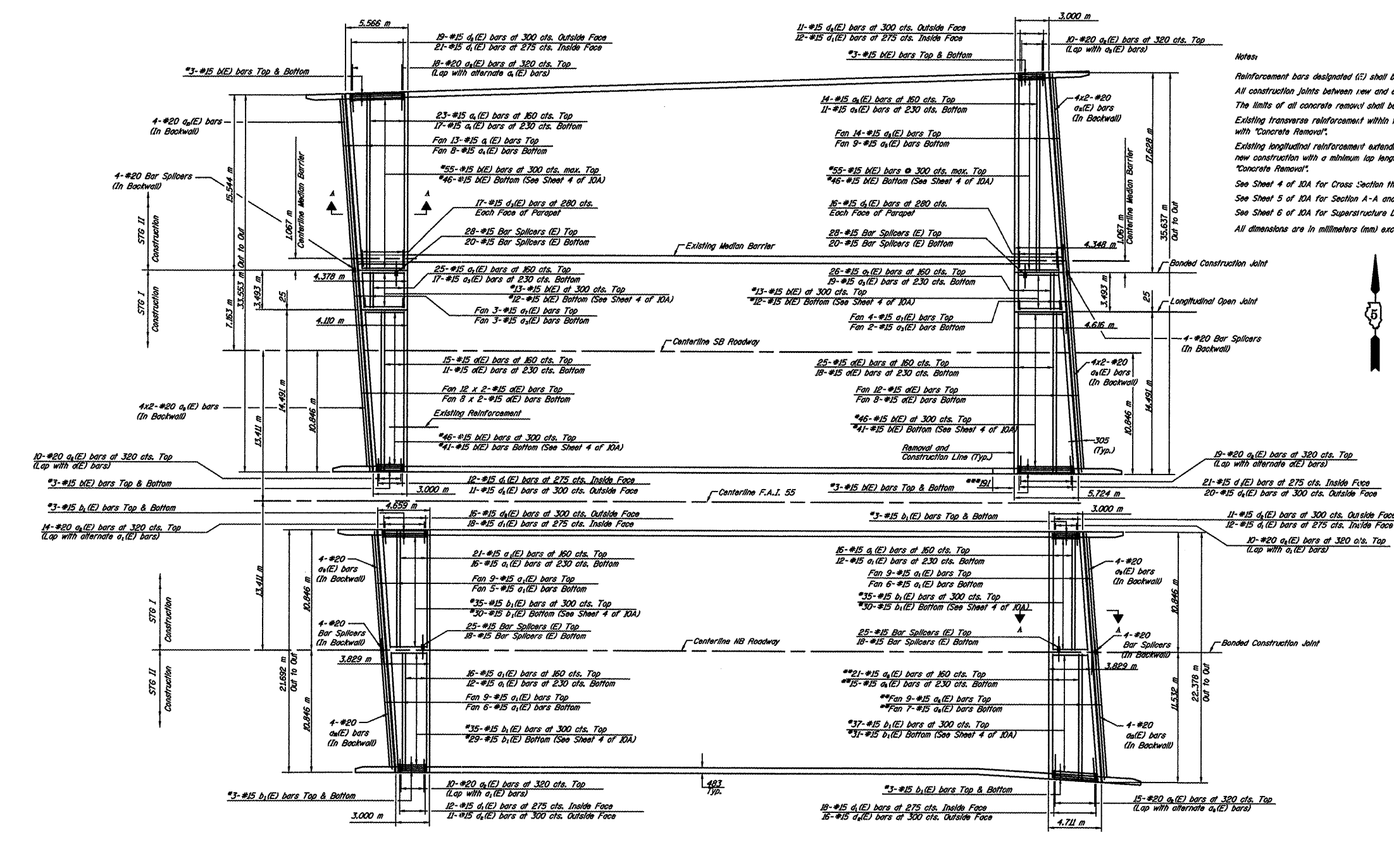
CROSS SECTION (SN 057-0024)
(Looking East)

DESIGNED	GAE
CHECKED	JDA
DRAWN	NQ
CHECKED	GAE

STAGE CONSTRUCTION
F.A.I. 55 OVER BUSINESS U.S. 51
McLEAN COUNTY
SN 057-0024 (NB)
SN 057-0025 (SB)
STA. 37+474.206

DATE	BY	QUANTITY	SCALE	SHEET NO.
FAI 55	M	McLEAN	70	40
DESIGNED		DRAWN		PROJECT
GAE		NQ		(157-1)HBR-5&VBR-11&57-2HB-1

SHEET NO. 3
IDA SHEETS



PLAN-DECK REINFORCEMENT

DESIGNED	GAE
CHECKED	JDA
DRAWN	NQ
CHECKED	GAE

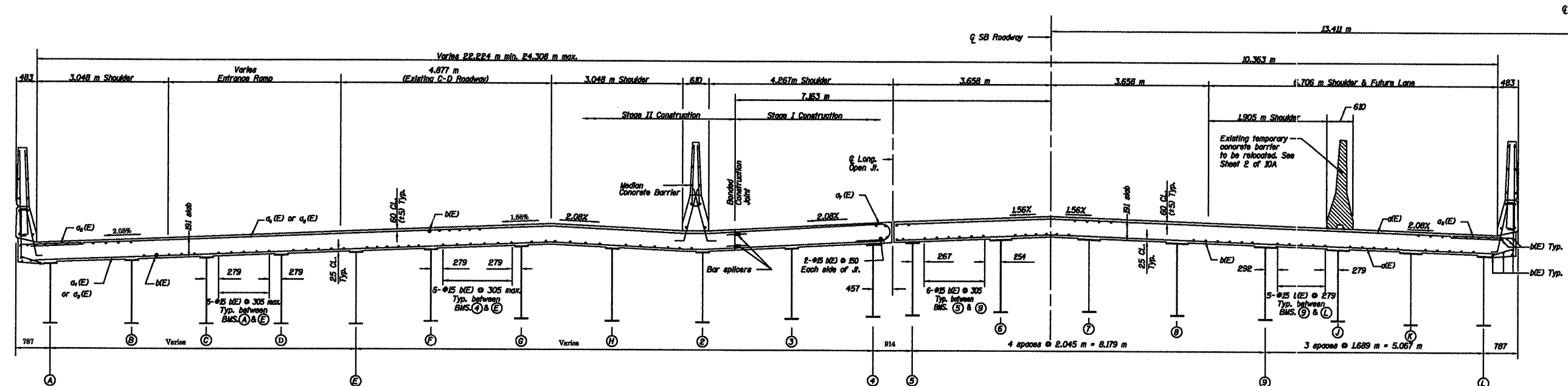
* Cut to fit. Use remainder in opposite Staged corner.
 Lap to existing reinforcement.
 ** Cut to fit.
 *** See sheet 6 of IDA for Exterior Parapet Elevation Joint Detail.

MIN. BAR LAP
 #15 bars = 510

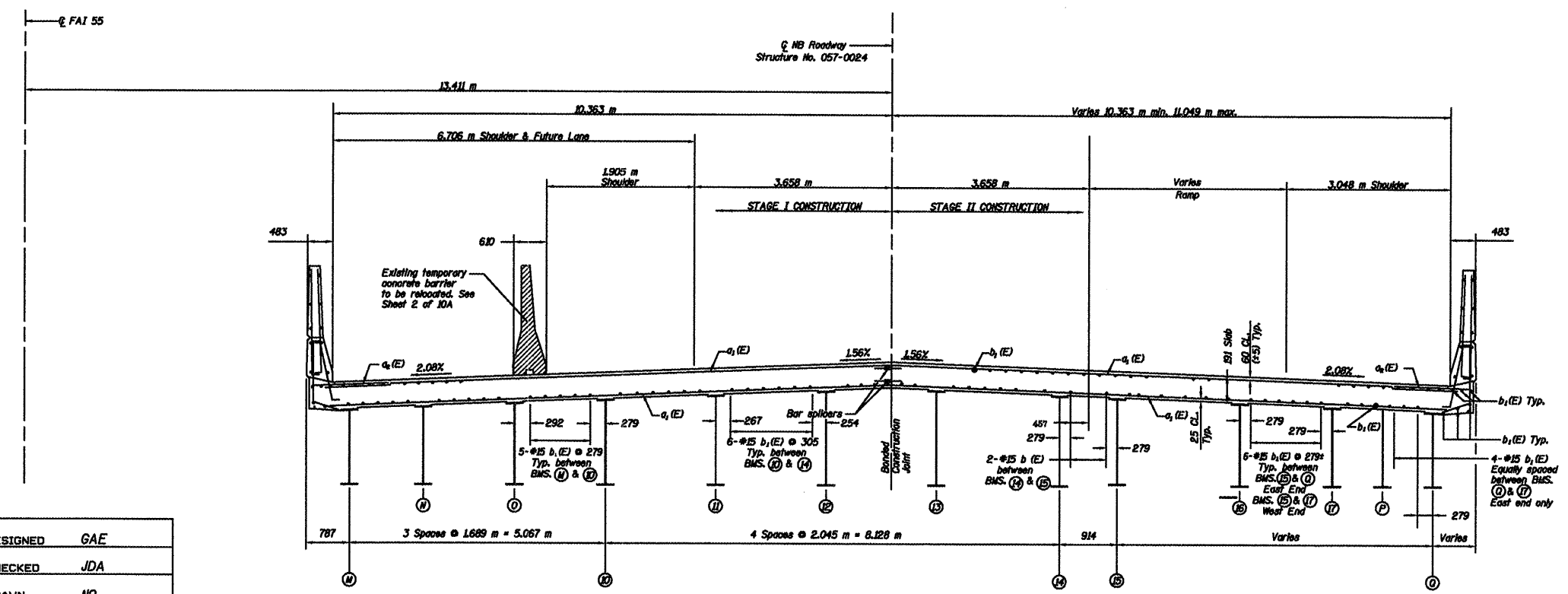
SUPERSTRUCTURE PLAN
 F.A.I. 55 OVER BUSINESS U.S. 51
 McLEAN COUNTY
 SN 057-0024 (NB)
 SN 057-0025 (SB)
 STA. 37+474.206

ROUTE NO.	DISTRICT	COUNTY	DATE	SHEET NO.
FAI 55		McLEAN	70	41
SHEETS				
JOA SHEETS				

• (157-1)HBR-5&VBR-11&57-2HB-1



CROSS SECTION-DECK
SN 057-0025
(Looking East)



CROSS SECTION-DECK
SN 057-0024
(Looking East)

Notes:
See sheet 6 of JOA for Parapet reinforcement.
All dimensions are in millimeters (mm) except as noted.
Beam "P" will only be found in Span 4. (It does not extend full length of the Structure.)

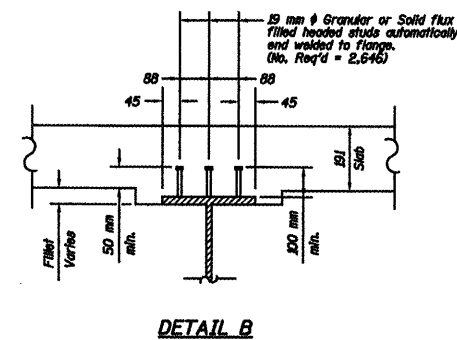
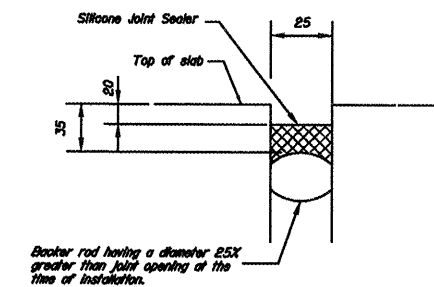
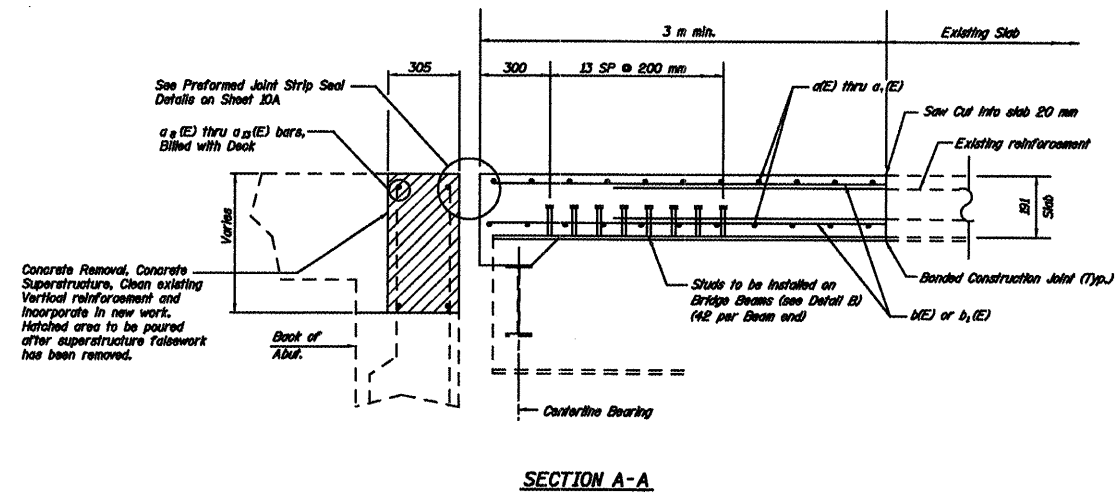
DESIGNED	GAE
CHECKED	JDA
DRAWN	NQ
CHECKED	GAE

SUPERSTRUCTURE DETAILS
F.A.I. 55 OVER BUSINESS U.S. 51
McLEAN COUNTY
SN 057-0024 (NB)
SN 057-0025 (SB)
STA. 37+474.206

PROJECT NO.	DISTRICT	COUNTY	SECTION	SHEET NO.
FAI 55	•	McLEAN	70	42
DESIGNED BY	DRAWN	CHECKED	DATE	

SHEET NO. 5
10A SHEETS

• (157-1)HBR-5&VBR-11&57-2HB-1

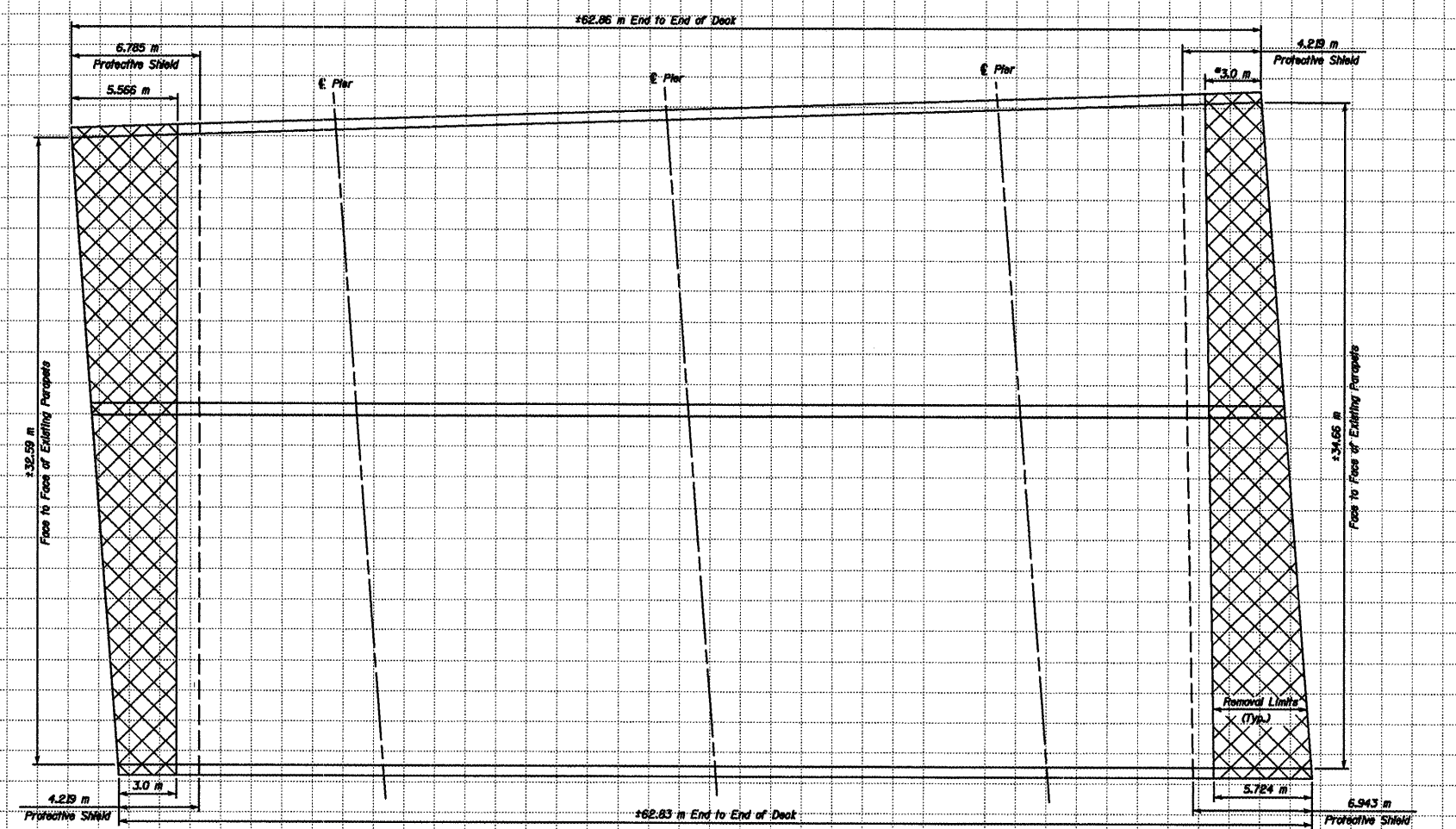


All dimensions are in millimeters (mm) except as noted.

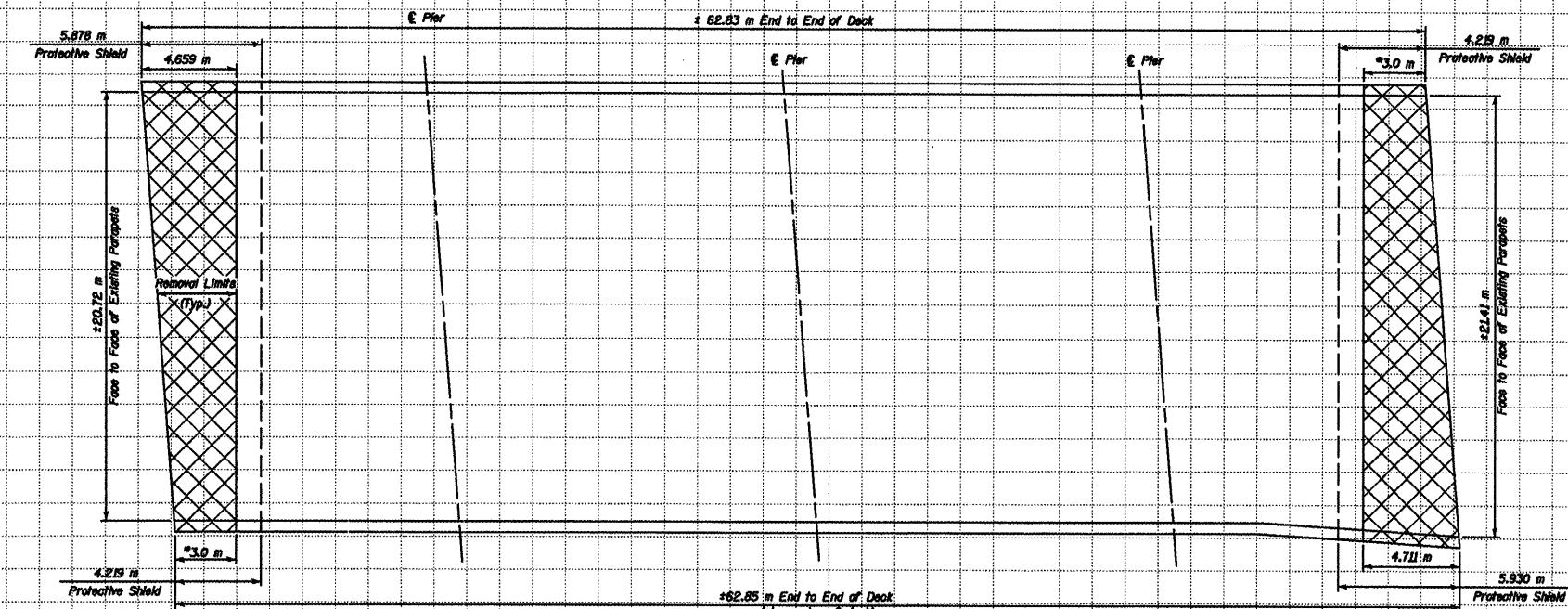
DESIGNED	GAE
CHECKED	JDA
DRAWN	NQ
CHECKED	GAE

SUPERSTRUCTURE DETAILS
F.A.I. 55 OVER BUSINESS U.S. 51
McLEAN COUNTY
SN 057-0024 (NB)
SN 057-0025 (SB)
STA. 37+474.206

ROUTE NO.	SECTION	COUNTY	DATE	SHEET NO.
FAI 55		McLEAN	70	44
FED. ROAD DIST. NO. 7		ILLINOIS		FED. ROAD PROJECT
• (157-1)HBR-5&VBR-11&57-2HB-1				




PLAN - TOP OF DECK
Existing Southbound Structure



PLAN - TOP OF DECK
Existing Northbound Structure

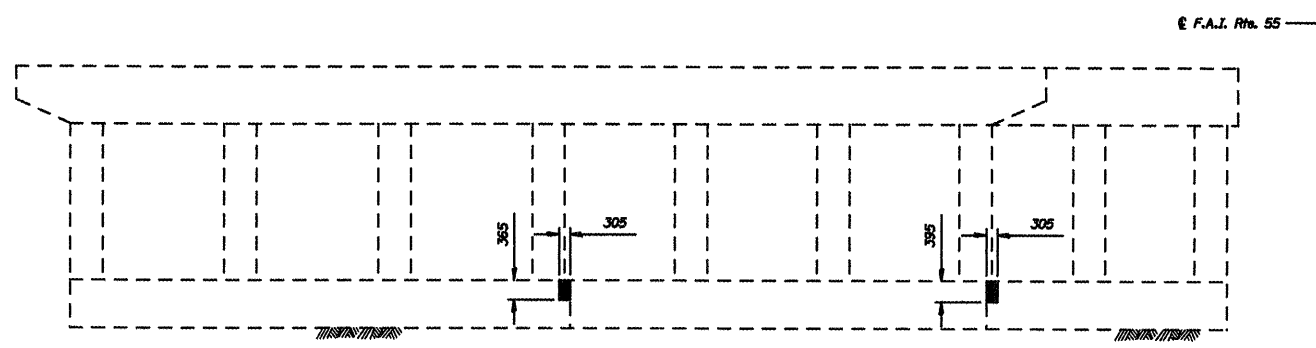
* This portion of deck to be removed and replaced.

 Remove and Replace existing Bridge Deck See Sheet 3 & 4 of IDA for details

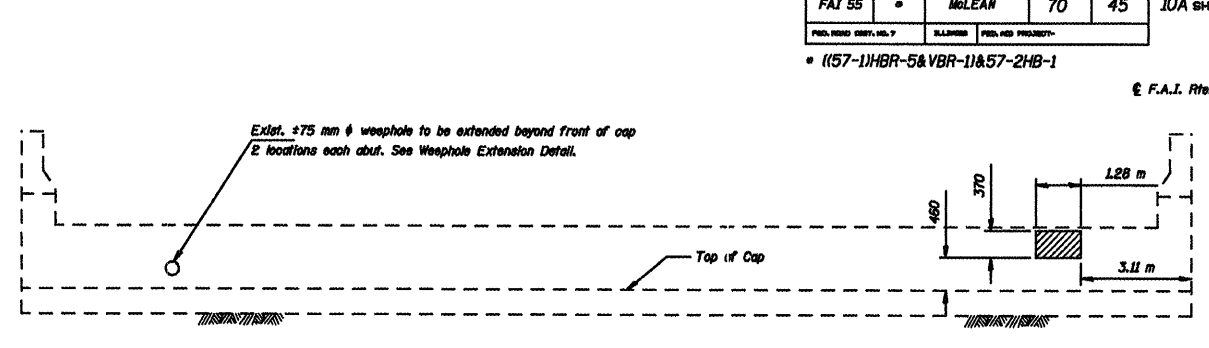
DESIGNED	GAE
CHECKED	JDA
DRAWN	NQ
CHECKED	GAE

DECK REPAIR PLAN
F.A.I. 55 OVER BUSINESS U.S. 51
McLEAN COUNTY
SN 057-0024 (NB)
SN 057-0025 (SB)
STA. 37+474.206

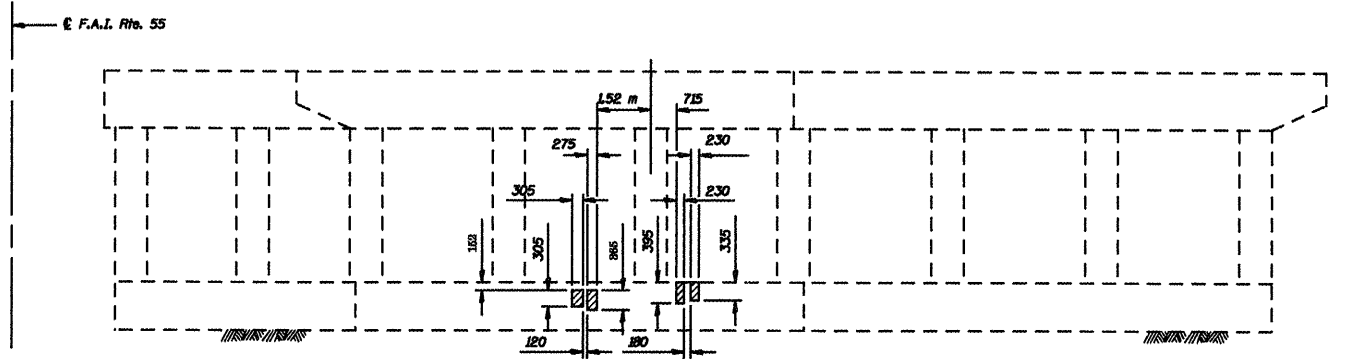
PROJECT NO.	DISTRICT	COUNTY	SECTION	SHEET NO.
FAI 55	0	McLEAN	70	45
FED. ROAD DIST. NO. 7		SLAB NO.	FED. ROAD PROJECT	
			* (157-1)HBR-5&VBR-11&57-2HB-1	



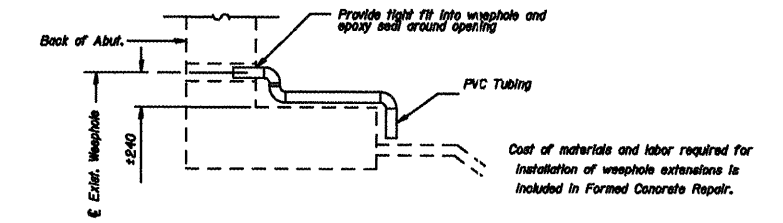
EXISTING PIER 2 WEST ELEVATION
(Southbound Lanes - Looking East)



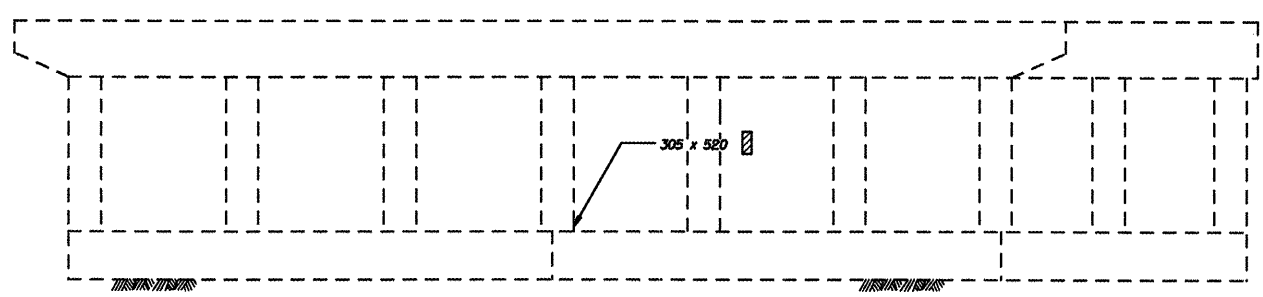
EXISTING EAST ABUTMENT ELEVATION
(Southbound Lanes)



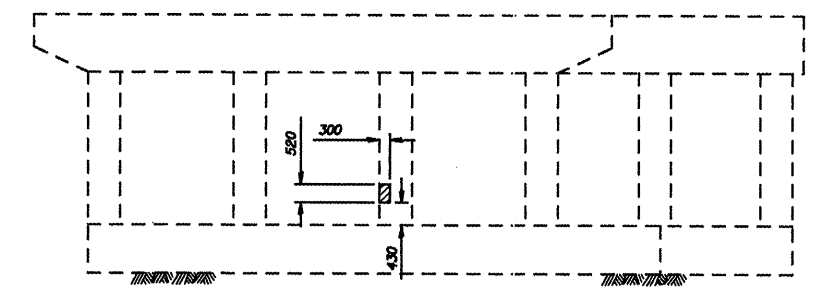
EXISTING PIER 2 EAST ELEVATION
(Southbound Lanes - Looking West)



WEEP HOLE EXTENSION DETAIL
No. Required = 8



EXISTING PIER 3 WEST ELEVATION
(Southbound Lanes - Looking East)



EXISTING PIER 4 EAST ELEVATION
(Northbound Lanes - Looking West)

All dimensions are in millimeters (mm) except as noted.

DESIGNED	GAE
CHECKED	JDA
DRAWN	NQ
CHECKED	GAE

- Structural Repair of Concrete (Depth Equal to or Less Than 125 mm)
- Structural Repair of Concrete (Depth Greater Than 125 mm)

Notes
Quantities for SLOPE WALL REPAIR, 39 SQ M and SLOPE WALL, 100M 39 SQ M have been included for work at 3 locations to be determined by the Engineer.
Welded Wire Fabric 152 x 152 - MW25.8 x MW25.8 with a mass of 2.91 kg/m². A length of 150 mm of existing welded wire around the removal area shall be exposed in order to lap the proposed welded wire fabric.

BILL OF MATERIAL

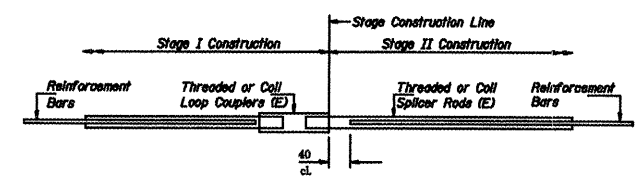
Item	Unit	Quant.
Structural Repair of Concrete (Depth Equal to or Less Than 125 mm)	Sq M	1.2
Structural Repair of Concrete (Depth Greater Than 125 mm)	Sq M	0.2

FOUNDATION REPAIR DETAILS
F.A.I. 55 OVER BUSINESS U.S. 51
MCLEAN COUNTY
SN 057-0024 (NB)
SN 057-0025 (SB)
STA. 37+474.206

ROUTE NO.	DISTRICT	COUNTY	SHEET	TOTAL
FAI 55	•	McLEAN	70	46
FED. ROAD DIST. NO. 7		CLASSIFICATION	FED. ROAD PROJECT	

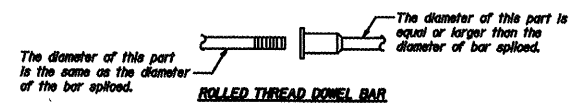
SHEET NO. 9
10A SHEETS

• (157-1)HBR-5&VBR-1) & 57-2HB-1



BAR SPLICER ASSEMBLY DETAIL

Bar Size	No. Assemblies Required	Location
#15	182	Slab
#20	15	Backwall



ROLLED THREAD DOWEL BAR



ONE PIECE



WELDED SECTIONS

BAR SPLICER ASSEMBLY ALTERNATIVES

* Heavy Hex Nuts conforming to ASTM A 563M, Grade C, D or DH may be used.

NOTES

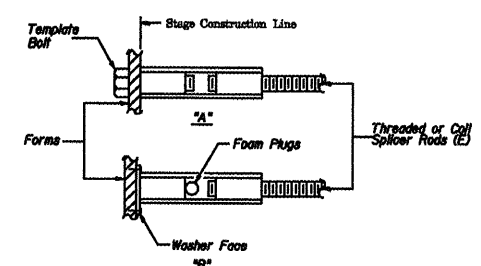
Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars. Splicer rods shall be of minimum 400 MPa yield strength, threaded or coiled full length. All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars. Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

① Minimum Capacity = $1.25 \times 10^3 \times f_y \times A_s$
(Tension in kN)
Minimum Pull-out Strength = $1.25 \times 10^3 \times f_{a,allow} \times A_s$
(Tension in kN)

Where f_y = Yield strength of lapped reinforcement bars in MPa.
 $f_{a,allow}$ = Allowable tensile stress in lapped reinforcement bars in MPa (Service Load)
 A_s = Tensile stress area of lapped reinforcement bars (mm²).
* = 28 day concrete

Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kN - tension	Min. Pull-Out Strength kN - tension
#15	610 mm	100	40
#20	710 mm	150	60
#25	1.04 m	250	100
#30	1.37 m	350	140

Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit prices each for "BAR SPLICERS." All dimensions are in millimeters (mm) except as noted.



INSTALLATION AND SETTING METHODS

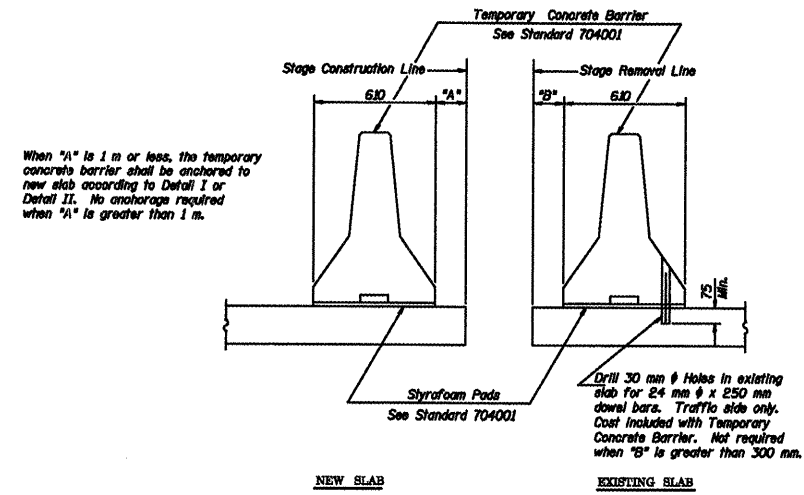
A Set bar splicer assembly by means of a template bolt.
B Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) = Indicates epoxy coating.

DESIGNED	GAE
CHECKED	JDA
DRAWN	NQ
CHECKED	GAE

BAR SPLICER ASSEMBLY DETAILS
F.A.I. 55 OVER BUSINESS U.S. 51
McLEAN COUNTY
SN 057-0024 (NB)
SN 057-0025 (SB)
STA. 37+474.206

ROUTE NO.	SECTION	COUNTY	TOWNSHIP	RANGE	SHEET NO.
FAI 55	#	MCLEAN	70	47	10
FED. HIGH. DIST. NO. 7					10A SHEETS
SHEET NO.					10

• (157-1)HBR-5&VBR-11&57-2HB-1



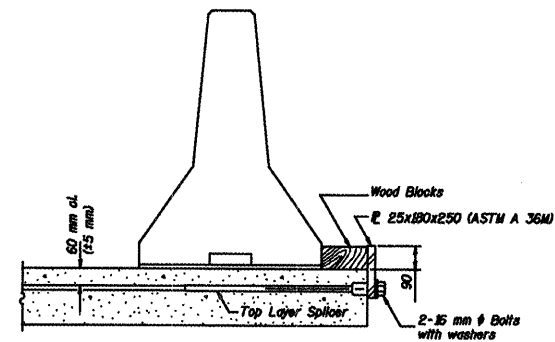
SECTIONS THRU SLAB

NOTES

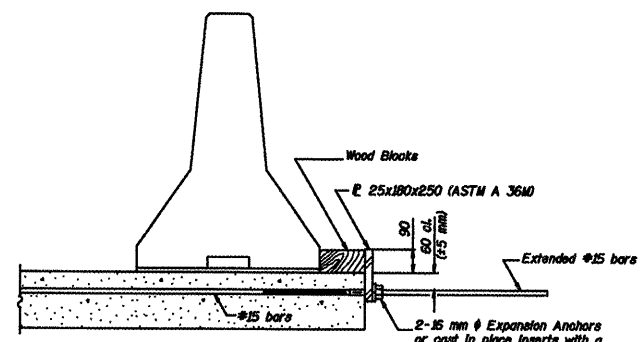
Detail I - With Bar Splice or Couplers:
Connect one (1) 25x180x250 steel \bar{E} to the top layer of couplers with 2-16 mm ϕ bolts screwed to coupler at approximate \bar{E} of each 3 m barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 25x180x250 steel \bar{E} to the concrete slab with 2-16 mm ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate \bar{E} of each 3 m barrier panel.

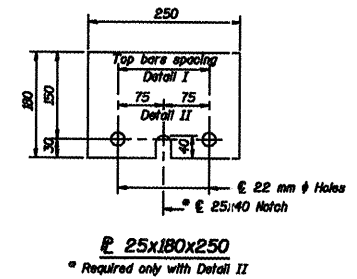
Cost of anchorage included with Temporary Concrete Barrier. All dimensions are in millimeters (mm) except as noted.



DETAIL I
The 25x180x250 Plate shall not be removed until Stage II Construction forms and reinforcement bars are in place.



DETAIL II
The 25x180x250 Plate shall not be removed until Stage II Construction forms and all reinforcement bars are in place and the concrete is ready to be placed.



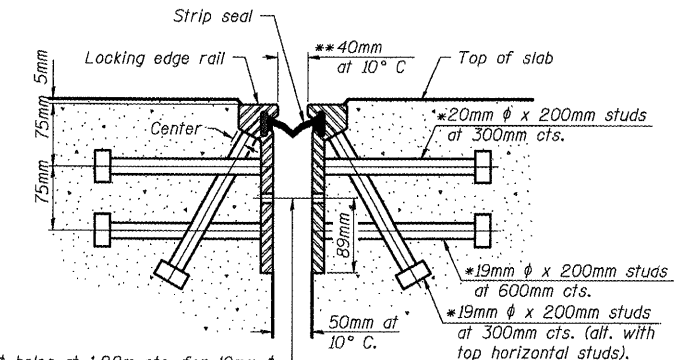
DESIGNED	GAE
CHECKED	JDA
DRAWN	NQ
CHECKED	GAE

TEMPORARY CONCRETE BARRIER
F.A.I. 55 OVER BUSINESS U.S. 51
MCLEAN COUNTY
SN 057-0024 (NB)
SN 057-0025 (SB)
STA. 37+474.206

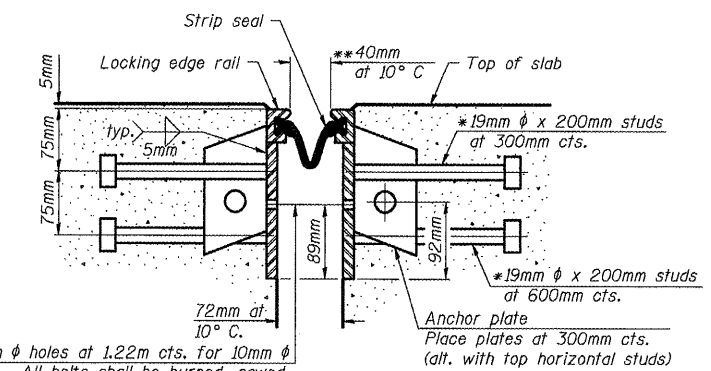
ROUTE NO.	DISTRICT	COUNTY	SECTION	SHEET NO.
FAI 55	*	McLEAN	70	48
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

* Granular or solid Flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.

** When joint is fixed, dimension is set at 40mm.



12mm ϕ holes at 1.22m cts. for 10mm ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.



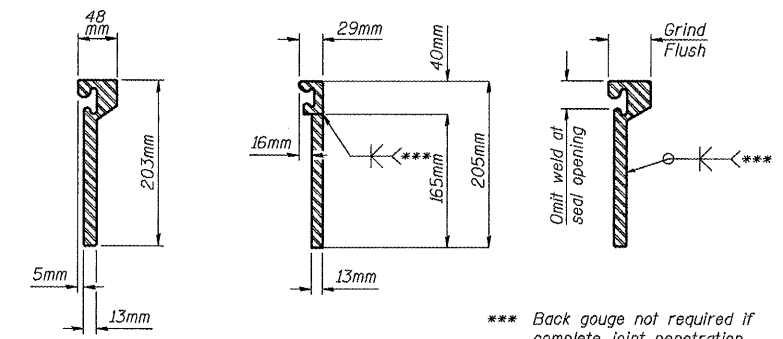
12mm ϕ holes at 1.22m cts. for 10mm ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

Notes:
 The strip seal shall be made continuous and shall have a minimum thickness of 5mm. The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches. The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities and stage construction joints. The manufacturer's recommended installation methods shall be followed. The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State. All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

All dimensions are in millimeters (mm) except as noted.

SECTION THRU ROLLED RAIL JOINT

SECTION THRU WELDED RAIL JOINT



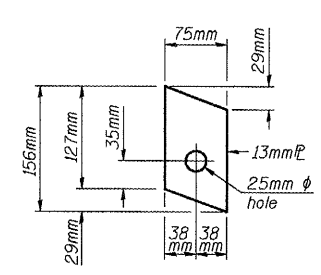
ROLLED (EXTRUDED) RAIL

WELDED RAIL

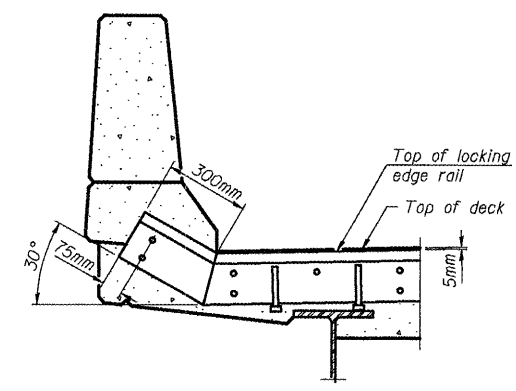
*** Back gouge not required if complete joint penetration is verified by mock-up.

LOCKING EDGE RAIL SPLICE

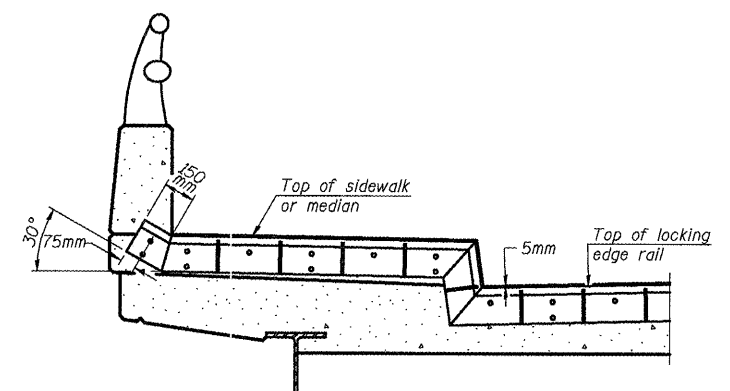
The inside of the locking edge rail groove shall be free of weld residue.



ANCHOR PLATE
(for welded rail)



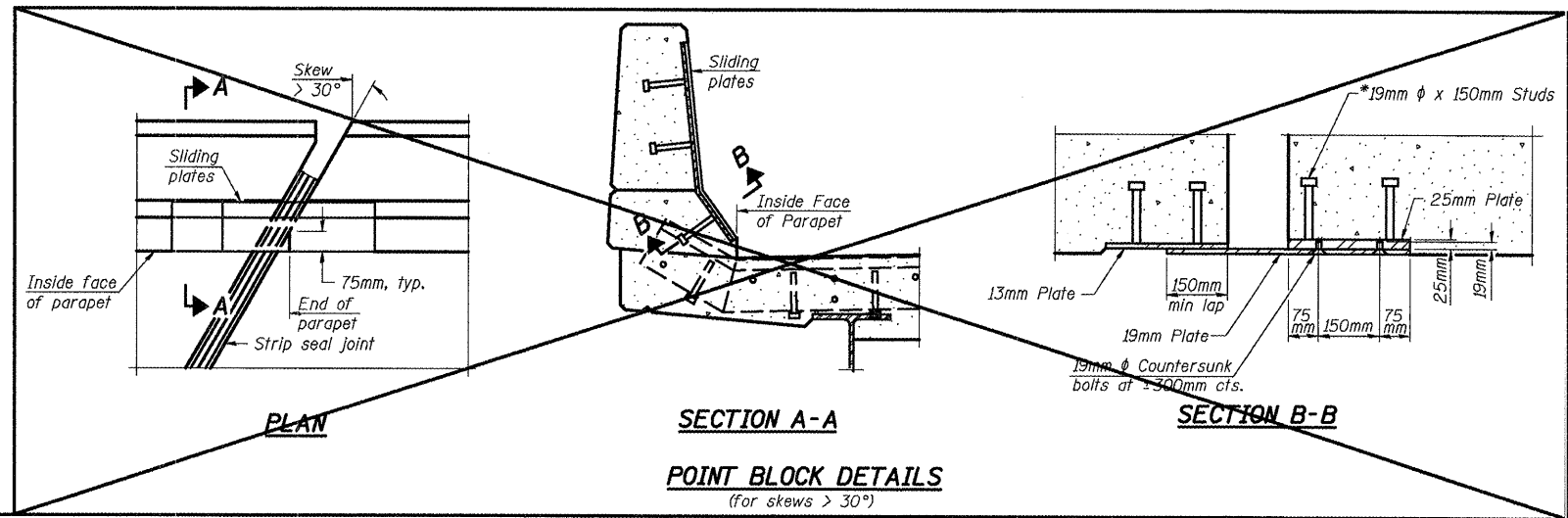
AT PARAPET



AT SIDEWALK OR MEDIAN

Shorter plates with a single row of studs at 300mm cts. may be necessary on medians which are shallower than 230mm. See manufacturer's recommendation.

TYPICAL END TREATMENTS



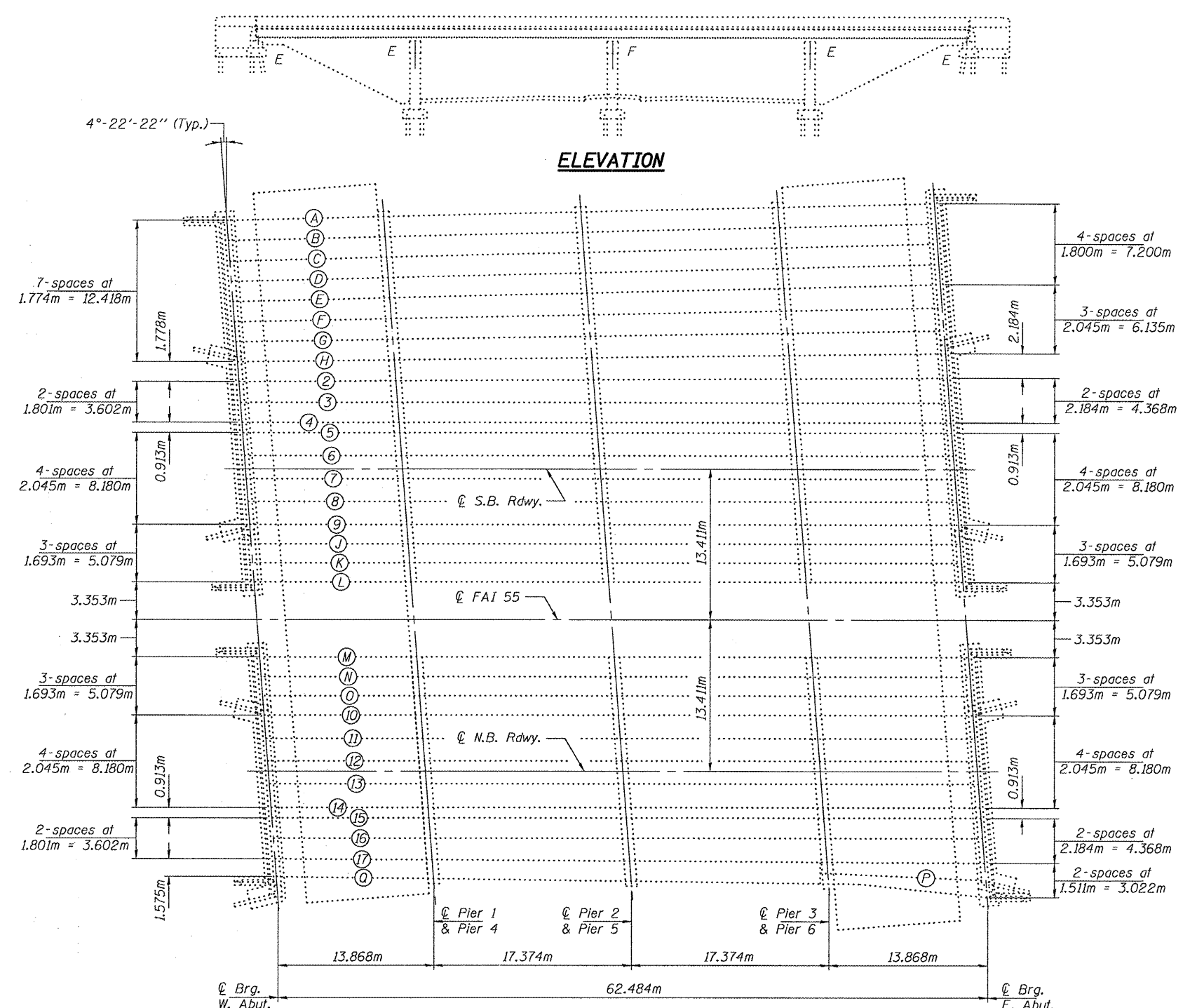
BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Meter	112.2

DESIGNED	JDA	200
CHECKED	JKC	EXAMINED
DRAWN	NQ	PASSED
CHECKED	JDA	ENGINEER OF BRIDGES AND STRUCTURES

PREFORMED JOINT STRIP SEAL
 F.A.I. 55 OVER BUSINESS U.S. 51
 McLEAN COUNTY
 SN 057-0024 (NB)
 SN 057-0025 (SB)
 STA. 37+474.206

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ELEVATION

FRAMING PLAN

Remove and Replace Bearings at Abutments

GENERAL NOTES

All structural steel shall conform to AASHTO Classification M-270 Gr. 250, unless otherwise noted.

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 the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

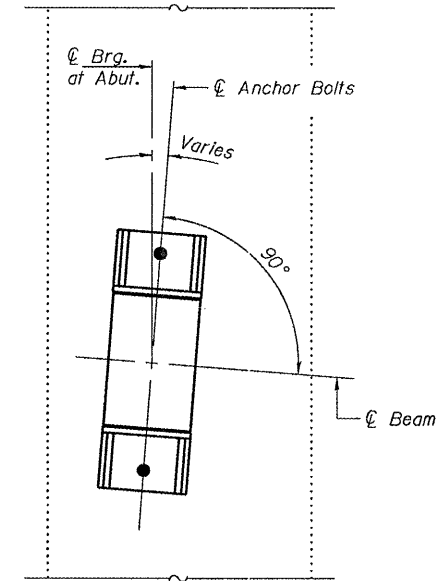
If the analysis submitted to the Contractor for the jacking/temporary support system to be used shows temporary stiffeners are required to prevent web crippling or buckling, the stiffeners shall be steel and bolted to the web. If stiffeners are not required, hardwood timbers shall be installed tightly between the top and bottom flange to prevent flange rotation.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

All structural steel shall be shop painted with the inorganic zinc rich primer per AASHTO M300, Type 1. Cost included with Furnishing and Erecting Structural Steel.

All dimensions shown are in millimeters (mm) unless otherwise noted.



ANCHOR BOLT LOCATION
(Typical All Beams)

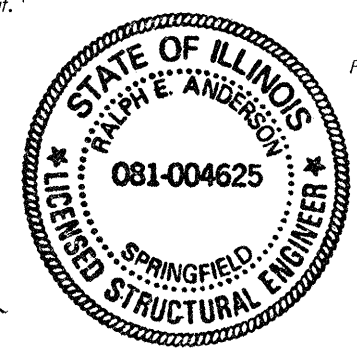
BILL OF MATERIAL

ITEM	UNIT	TOTAL
Furnishing & Erecting Structural Steel	kg	3010
Elastomeric Bearing Assembly, Type II	Each	63
Jack and Remove Existing Bearings	Each	63
Anchor Bolts, M24	Each	126

**BEARING REPLACEMENT
PLAN AND ELEVATION
F.A.I. 55 OVER U.S. RTE. 51
SN 057-0024(NB) & 0025(SB)**

DESIGNED	<i>Kyle M. Steffen</i>
CHECKED	<i>Adrian T. Holloway</i>
DRAWN	<i>Kyle M. Steffen</i>
CHECKED	<i>ASB ATH</i>

NOVEMBER 18, 2008	EXAMINED	<i>Ralph E. Anderson</i>
	PASSED	<i>Ralph E. Anderson</i>



EXPIRES 11-30-2010

SHEET NO. 1 3 SHEETS	F.A.I. RTE. 55	SECTION (57-4)HBR-5 RVBR-1 R57-2HB-1	COUNTY McLEAN	TOTAL SHEETS 70	SHEET NO. 49
	FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	

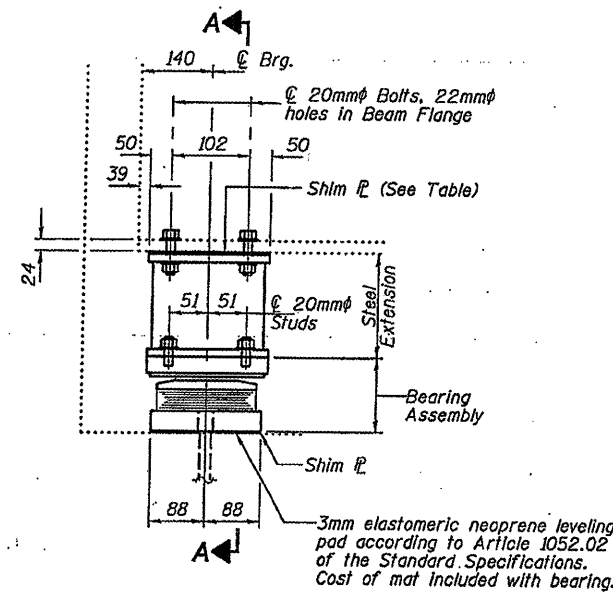
CONTRACT NO. 70661

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

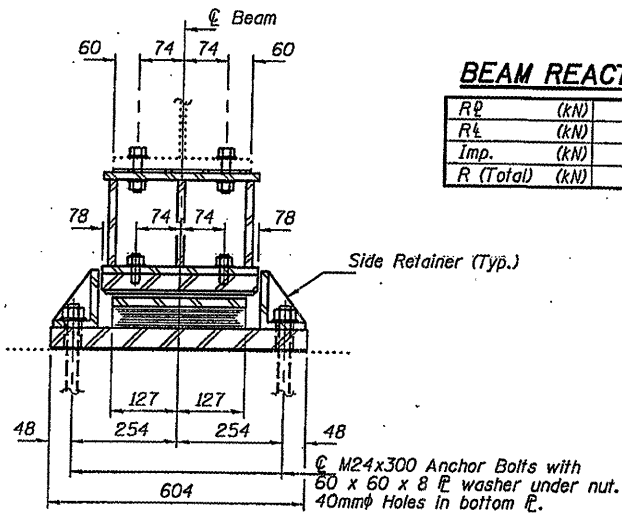
BEAM REACTIONS

R _L	(kN)	74.7
R _R	(kN)	134.8
Imp.	(kN)	55.6
R (Total)	(kN)	265.1

Notes:
Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.
New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Min. Jack capacity = 255 kN.
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 250 (F_y=248MPa). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
Anchor bolts for Type II bearings shall be placed in holes drilled through the bottom bearing plate after members are in place. Side retainers shall be placed after bolts are installed.
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
Side retainers shall be included in the cost of Elastomeric Bearing Assembly, Type II.
The 3mm TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.
Bonding of 3mm TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

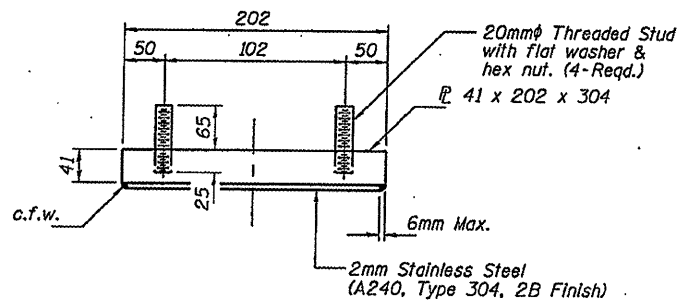


ELEVATION AT ABUTMENT

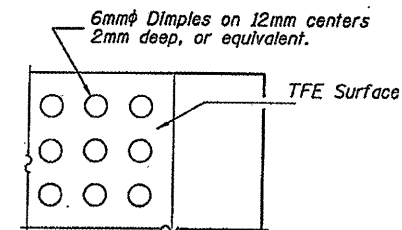


SECTION A-A

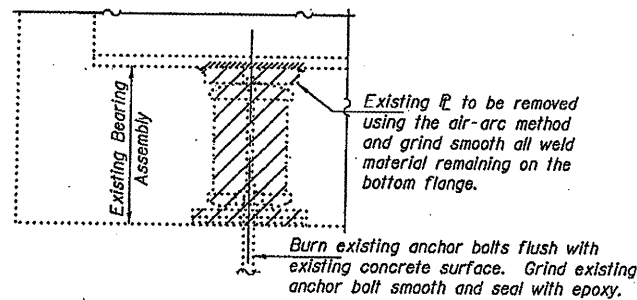
TYPE II TFE ELASTOMERIC EXP. BRG.



TOP BEARING ASSEMBLY

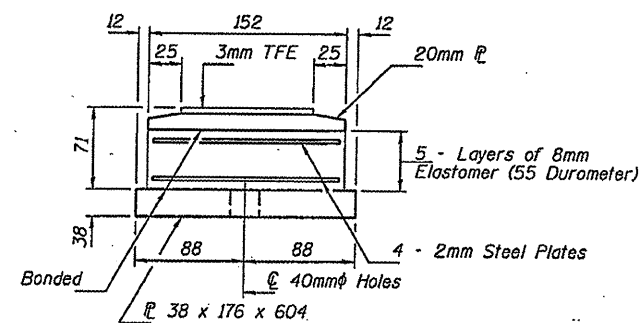


PLAN-TFE SURFACE

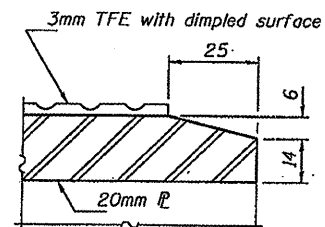


EXISTING BEARING REMOVAL DETAIL

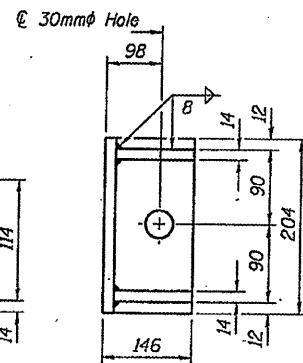
Cost included with Jack and Remove Existing Bearings.



BOTTOM BEARING ASSEMBLY

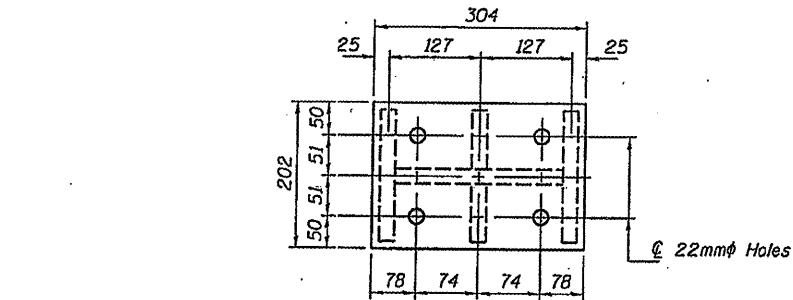


SECTION THRU TFE

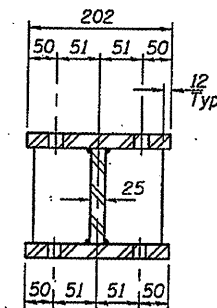


SIDE RETAINER

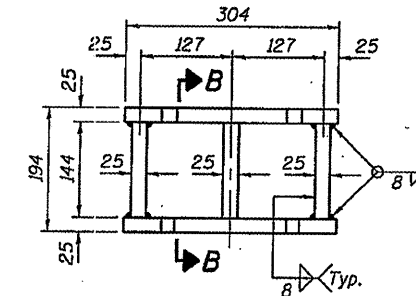
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



PLAN TOP AND BOTTOM PLATE



SECTION B-B



STEEL EXTENSION DETAIL

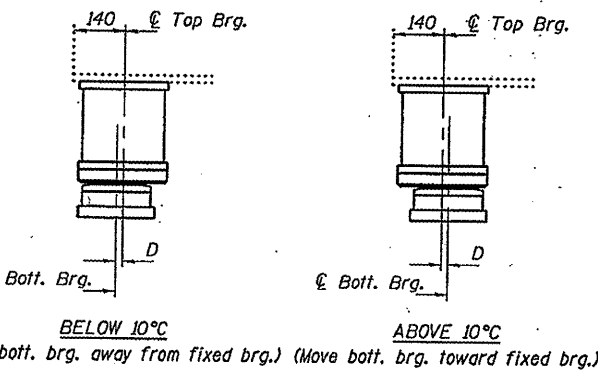
SHIM PLATES

SN	Beam	Abut.	Thickness
057-0024	P	East	32
057-0024	Q	West	19

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type II	Each	61
Jack and Remove Existing Bearings	Each	61
Furnishing and Erecting Structural Steel	kg	2860
Anchor Bolts, M24	Each	122

BEARING REPLACEMENT DETAILS FOR ALL BEAMS EXCEPT BEAM H F.A.I. 55 OVER U.S. RTE. 51 SN 057-0024(NB) & 0025(SB)



SETTING ANCHOR BOLTS AT EXP. BRG.

D = 1mm per each 10m of expansion for every 8°C temp. change from the normal temp. of 10°C.

DESIGNED	AJB
CHECKED	ATH
DRAWN	Kyle M. Steffen
CHECKED	AJB ATH

NOVEMBER 18, 2008
EXAMINED *Carl Perry*
PASSED *Ralph E. Anderson*

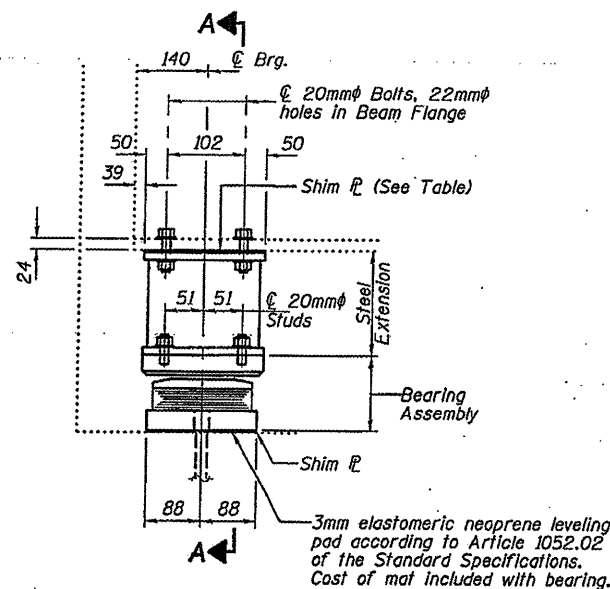
TYII/REPS 11-01-2006

SHEET NO. 2	F.A.I. RTE. 55	SECTION (57-4)HBR-5 RVBR-1 R57-2HB-1	COUNTY McLEAN	TOTAL SHEETS 70	SHEET NO. 50
3 SHEETS	CONTRACT NO. 70661				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					

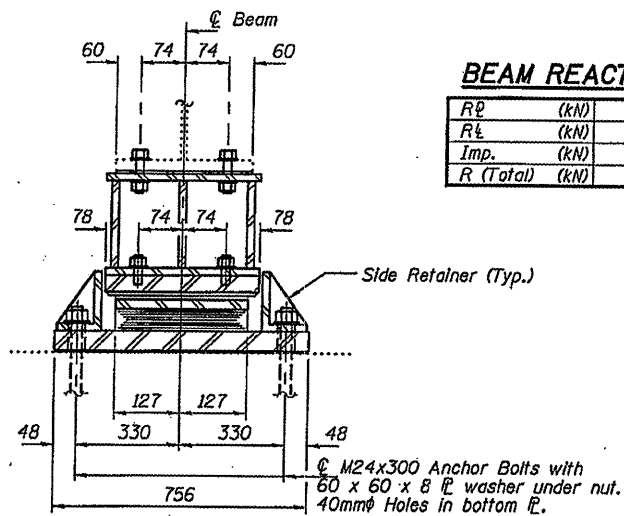
REVISIED SHEET

12/23/08

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ELEVATION AT ABUTMENT



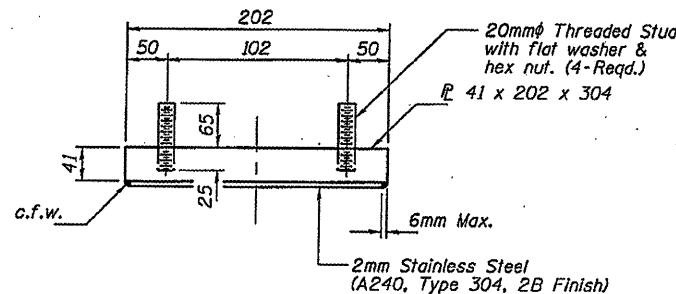
SECTION A-A

BEAM REACTIONS

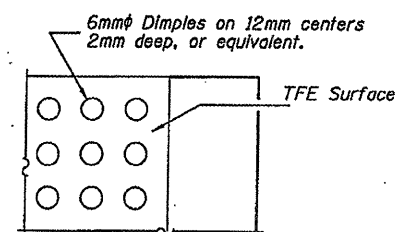
R _P	(kN)	74.7
R _L	(kN)	134.8
Imp.	(kN)	55.6
R (Total)	(kN)	265.1

Notes:
Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.
New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Min. Jack capacity = 255 kN.
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 250 (F_y=248MPa). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
Anchor bolts for Type II bearings shall be placed in holes drilled through the bottom bearing plate after members are in place. Side retainers shall be placed after bolts are installed.
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
Side retainers shall be included in the cost of Elastomeric Bearing Assembly, Type II.
The 3mm TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.
Bonding of 3mm TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

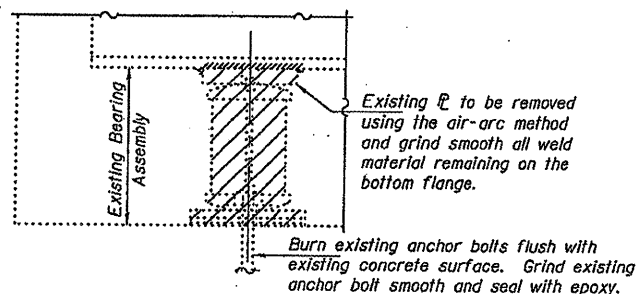
TYPE II TFE ELASTOMERIC EXP. BRG.



TOP BEARING ASSEMBLY

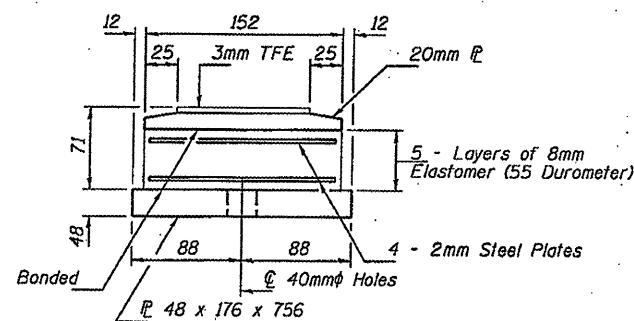


PLAN-TFE SURFACE

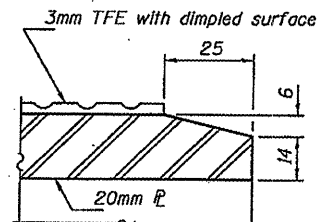


EXISTING BEARING REMOVAL DETAIL

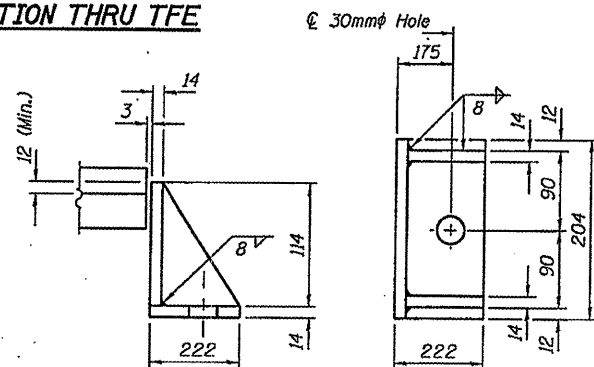
Cost included with Jack and Remove Existing Bearings.



BOTTOM BEARING ASSEMBLY

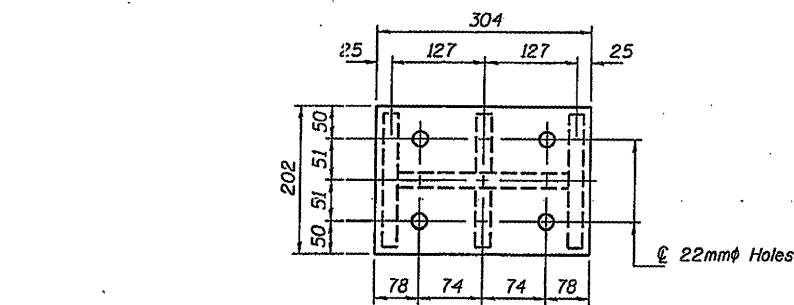


SECTION THRU TFE

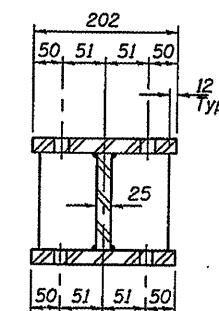


SIDE RETAINER

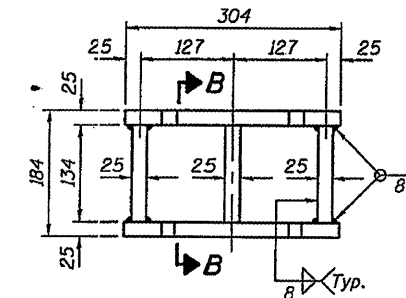
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



PLAN TOP AND BOTTOM PLATE



SECTION B-B



STEEL EXTENSION DETAIL

SHIM PLATES

SN	Beam	Abut.	Thickness
057-0025	H	East	76
057-0025	H	West	35

BILL OF MATERIAL

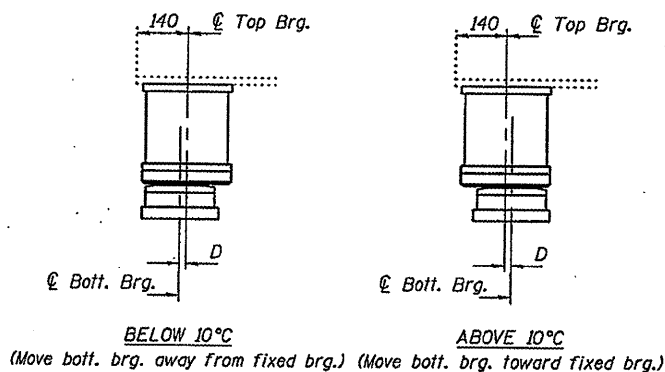
Item	Unit	Total
Elastomeric Bearing Assembly, Type II	Each	2
Jack and Remove Existing Bearings	Each	2
Furnishing and Erecting Structural Steel	kg	150
Anchor Bolts, M24	Each	4

BEARING REPLACEMENT

DETAILS FOR BEAM H
F.A.I. 55 OVER U.S. RTE. 51
SN 057-0024(NB) & 0025 (SB)

SETTING ANCHOR BOLTS AT EXP. BRG.

D = 1mm per each 10m of expansion for every 8°C temp. change from the normal temp. of 10°C.



DESIGNED	AJB
CHECKED	ATH
DRAWN	Kyle M. Steffen
CHECKED	AJB ATH

NOVEMBER 18, 2008
EXAMINED
PASSED
ENGINEER OF STRUCTURAL SERVICES
ENGINEER OF BRIDGES AND STRUCTURES

TYII/REPS 11-01-2006

REVISOR SHEET 12/23/08

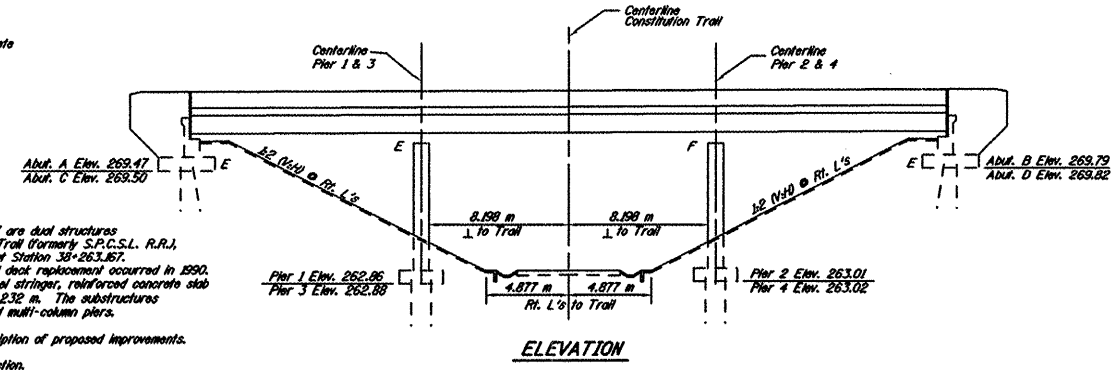
SHEET NO. 3	F.A.I. RTE. 55	SECTION (57-4)HBR-5 RVBR-1) R57-2HB-1	COUNTY McLEAN	TOTAL SHEETS 70	SHEET NO. 51
3 SHEETS	FED. ROAD DIST. NO. ILLINOIS		FED. AID PROJECT CONTRACT NO. 70661		

ROUTE NO.	SECTION	COUNTY	POST MILE	SHEET NO.
FAI 55		MCLEAN	70 52	14 SHEETS
FED. ROAD DIST. NO. 7		STATE	FED. ROAD PROJECT	
			• (157-4)HBR-58.VBR-11&57-2HB-1	

Benchmark: MP-5 brass tablet set in concrete
Sta. 38+400.200 Elev. 270.21 m

Existing Structures
Structure Number 057-0026 and 057-0027 are dual structures carrying F.A.I. Route 55 over Constitution Trail (formerly S.P.C.S.L. R.R.), Section (57-4) RS-3 & 1, McLean County at Station 38+263.167. Structures were built in 1962, widening and deck replacement occurred in 1990. The superstructures consist of 3 span, steel stringer, reinforced concrete slab deck with bit. to bit. abutment length of 46.232 m. The substructures consist of concrete pile bent abutments and multi-column piers.

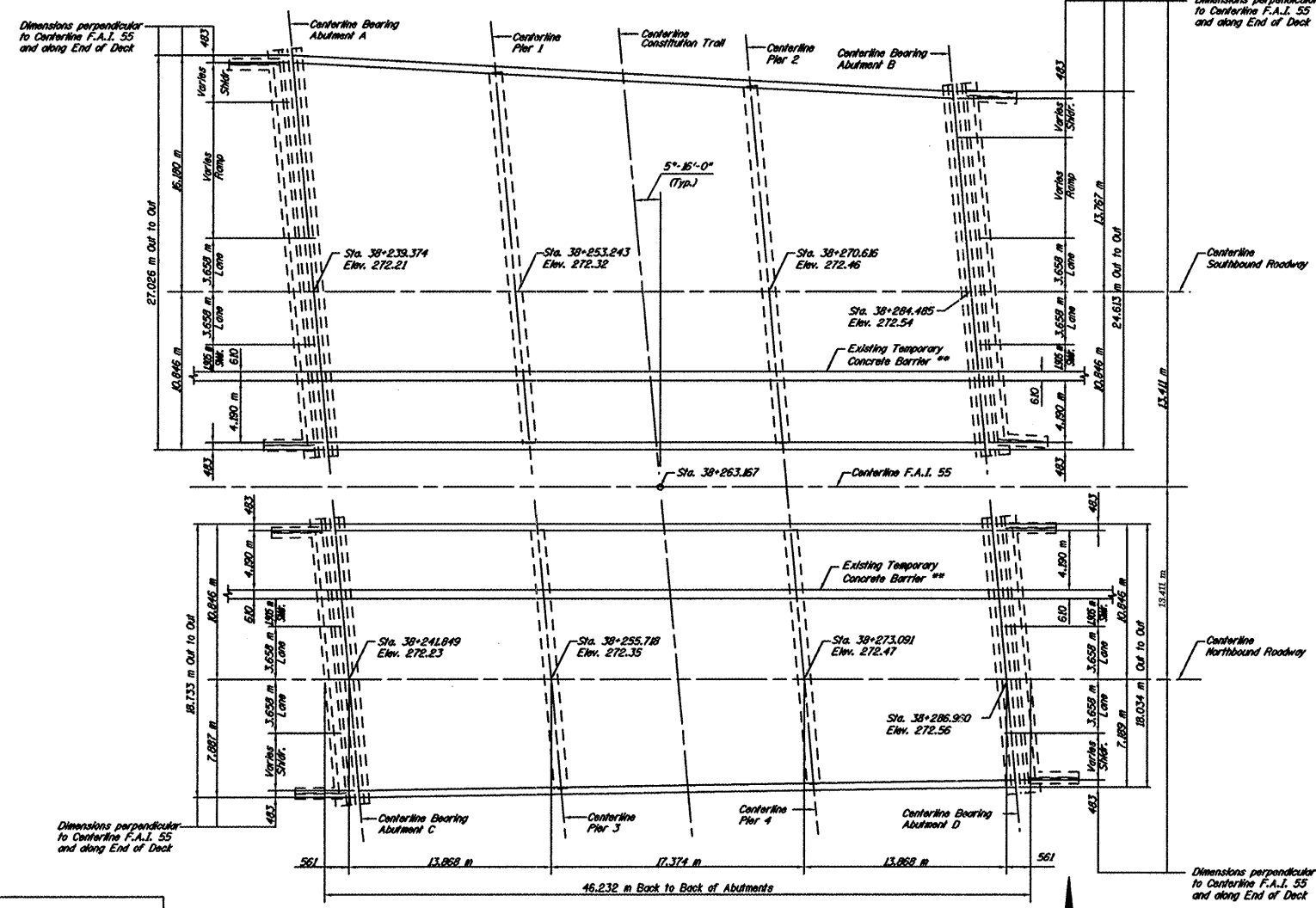
See proposed work on this sheet for description of proposed improvements.
Traffic to be maintained by staged construction.



- Proposed Work**
1. Expansion joint removal and replacement.
 2. Partial deck removal and replacement.
 3. Add stud shear connectors at abutment ends of beams.
 4. Remove existing expansion bearings of abutments and replace with elastomeric bearings.
 5. Structural repair of concrete at abutments.

TOTAL BILL OF MATERIALS

Item	Unit	Super	Sub.	Total
CONCRETE REMOVAL	CU M	93.6	0.7	93.6
PREFORMED JOINT STRIP SEAL	METER	87.3	--	87.3
CONCRETE SUPERSTRUCTURE	CU M	93.6	--	93.6
BRIDGE DECK GROOVING	SQ M	332	--	332
PROTECTIVE COAT	SQ M	406	--	406
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 125 MM)	SQ M	--	1.0	1.0
FURNISHING AND ERECTING STRUCTURAL STEEL	KG	3050	--	3050
REINFORCEMENT BARS, EPOXY COATED	KG	2870	--	2870
PROTECTIVE SHIELD	SQ M	464	--	464
BAR SPACERS	EACH	186	--	186
ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	24	--	24
ELASTOMERIC BEARING ASSEMBLY TYPE II	EACH	24	--	24
STUD SHEAR CONNECTORS	EACH	2016	--	2016
JACK AND REMOVE EXISTING BEARINGS	EACH	48	--	48
ANCHOR BOLTS, M24	EACH	96	--	96



General Notes

Reinforcement Bars designated (E) shall be Epoxy Coated.

All new structural steel shall be shop primed with an inorganic zinc rich primer per AASHTO M 300, Type I. Cost included with Furnishing and Erecting Structural Steel.

Field welding of construction accessories will not be permitted to beams or girders.

Plan dimensions and details relative to existing plans are subject to routine 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 the work, however, the Contractor will be paid for the quantity actually furnished based upon the unit price bid for the work.

Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by qualified personnel approved by the Engineer.

Any cracks that cannot be removed by grinding 1 inch deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 108.04 of the Standard Specifications.

All dimensions are in millimeters (mm) except as noted.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

Reinforcement bars shall conform to the requirements of ASTM A 706 or 400. See Special Provisions.

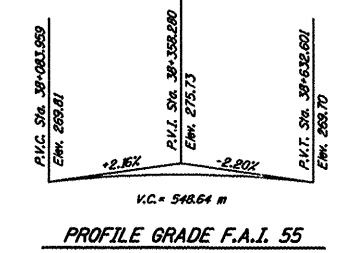
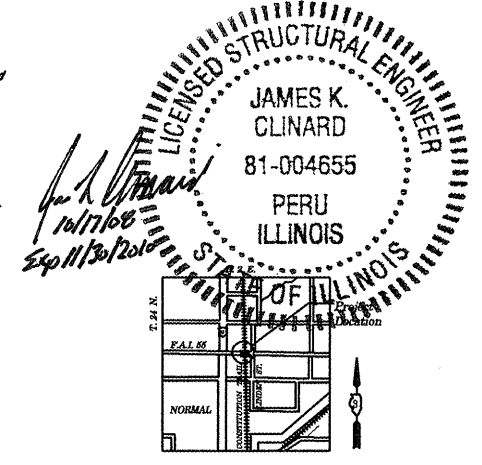
DESIGN STRESSES
(EXISTING CONSTRUCTION)

Concrete: $f'_c = 24$ Mpa
Reinforcement: f_y (A602) = 139 Mpa
 f_y (A990) = 400 Mpa
Structural Steel: f_y (A602) = 224 Mpa
 f_y (A990) = 248 Mpa

Design Loading: MSB & Alternate
Allow 12 MN/m for future wearing surface.
Design Specifications: AASHTO (1993) plus ISB4 thru 1998 Interims.

DESIGN STRESSES
(NEW CONSTRUCTION)

Concrete: $f'_c = 24$ Mpa
Reinforcement: $f_y = 400$ Mpa
Structural Steel: $f_y = 248$ Mpa
Design Specifications: AASHTO 2002 and Interims



LOCATION SKETCH

GENERAL PLAN AND ELEVATION
F.A.I. 55 OVER CONSTITUTION TRAIL
MCLEAN COUNTY
SN 057-0026 (NB)
SN 057-0027 (SB)
STA. 38+263.167

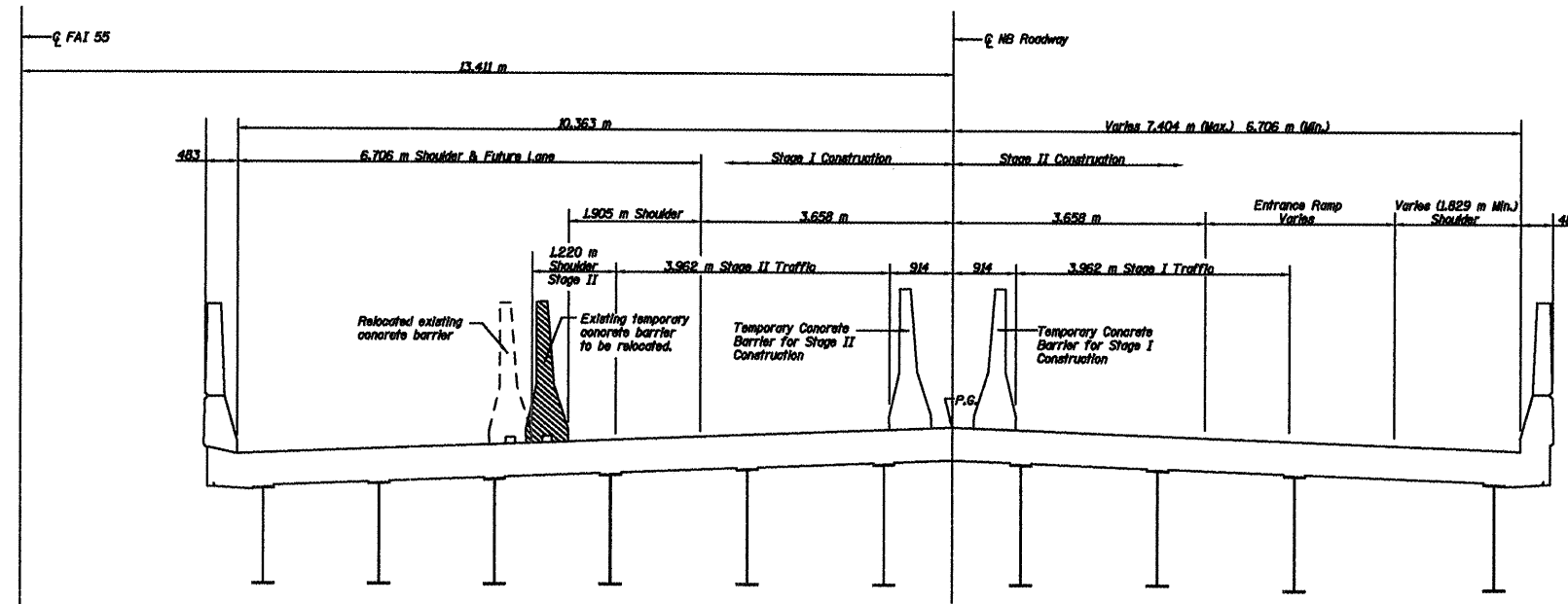
CHAMLIN ASSOCIATES
PERU ILLINOIS MORRIS

DESIGNED	GAE
CHECKED	JDA
DRAWN	NQ
CHECKED	GAE

** To be relocated
See sheet 2 of 14

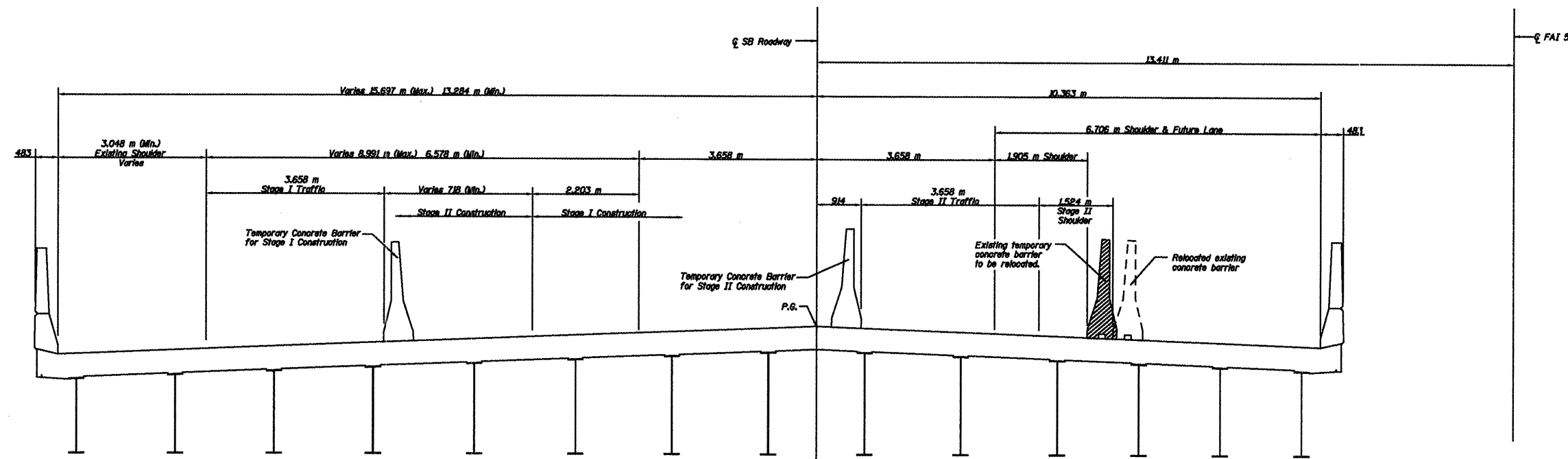
ROUTE NO.	SECTION	COUNTY	DATE	SHEET NO.
FAI 55		MCLEAN	70	53
PREPARED BY: JDA		DATE: 10/15/05	SHEET NO. 2	
DRAWN BY: NG		DATE: 10/15/05	14 SHEETS	

• (157-4)HBR-5&VBR-11&57-2HB-1



CROSS SECTION (SN 057-0026)
(Looking East)

Note:
All dimensions are in millimeters (mm) except as noted.



CROSS SECTION (SN 057-0027)
(Looking East)

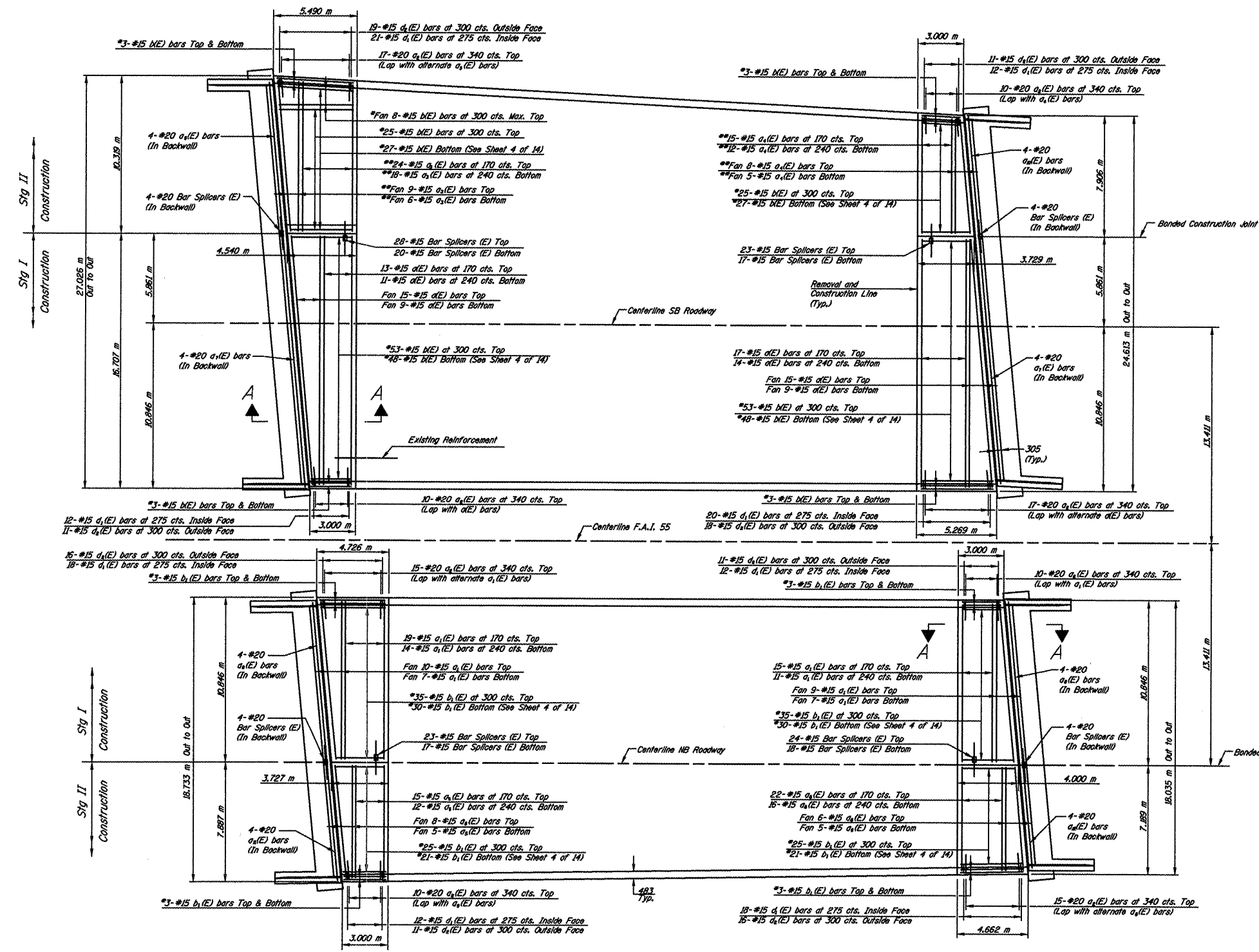
** Location of barrier will vary as necessary to develop exit ramp

DESIGNED	GAE
CHECKED	JDA
DRAWN	NG
CHECKED	GAE

STAGE CONSTRUCTION DIAGRAM
F.A.I. 55 OVER CONSTITUTION TRAIL
MCLEAN COUNTY
SN 057-0026 (NB)
SN 057-0027 (SB)
STA. 38+263.167

PROJECT NO.	DISTRICT	COUNTY	DATE	SHEET NO.
FAJ 55		MCLEAN	70	54
PROJ. ENG. DATE	DESIGNED	DRAWN	CHECKED	DATE

• (57-4)HBR-5&VBR-11&57-2HB-1



Notes:

- Reinforcement bars designated (E) shall be epoxy coated.
- All construction joints between new and existing construction shall be Bonded Construction Joints.
- The limits of all concrete removal shall be cut 20 mm into concrete.
- Existing transverse reinforcement within the removal area shall be cut off flush with the removal line. Cost included with "Concrete Removal".
- Existing longitudinal reinforcement extending into removed areas shall be cleaned, straightened and incorporated into the new construction with a minimum lap length of 610 mm except as noted. Cost included with "Concrete Removal".
- See Sheet 4 of 14 For Cross Section thru deck.
- See Sheet 5 of 14 For Superstructure Details, Parapet Reinforcement, Bar Details and Bill of Material.
- See Sheet 6 of 14 For Section A-A.
- All dimensions are in millimeters (mm) except as noted.

PLAN-DECK REINFORCEMENT

DESIGNED	GAE
CHECKED	JDA
DRAWN	NQ
CHECKED	GAE

* Cut to fit. Use remainder in opposite Staged corner. Lap to existing reinforcement.

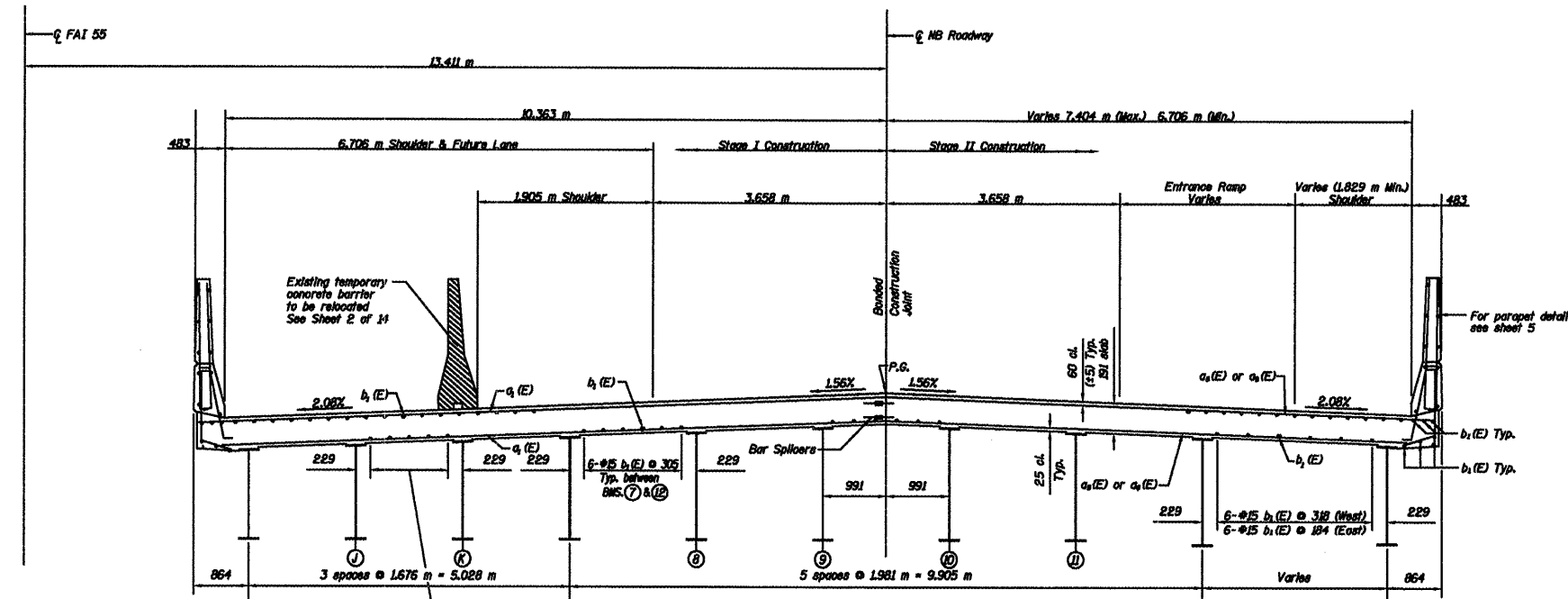
** Cut to fit.

MIN. BAR LAP
#15 bars = 510

DECK REPAIR
F.A.I. 55 OVER CONSTITUTION TRAIL
MCLEAN COUNTY
SN 057-0026 (NB)
SN 057-0027 (SB)
STA. 38+263.167

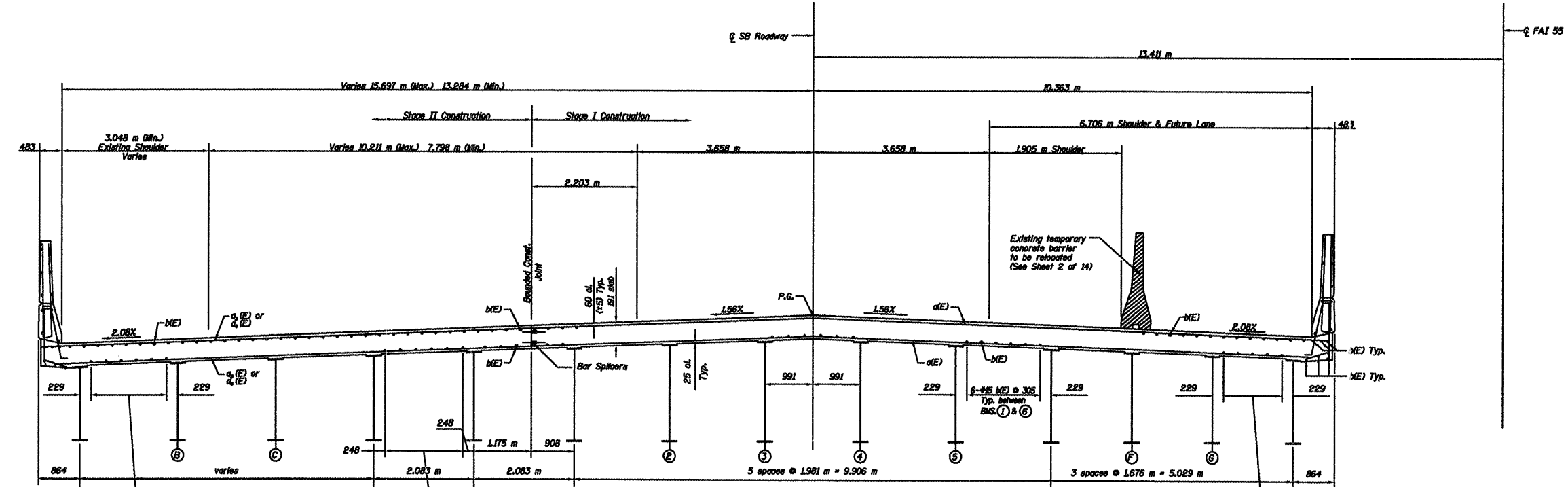
ROUTE NO.	SECTION	COUNTY	DATE	SHEET NO.
FAI 55		McLEAN	70	55
DRAWN BY: NQ		CHECKED BY: GAE		14 SHEETS

• (57-4)HBR-5&VBR-11&57-2HB-1



CROSS SECTION-DECK
SN 057-0026
(Looking East)

Note:
See sheet 5 of 14 for
Parapet reinforcement.
All dimensions are in
millimeters (mm) except
as noted.



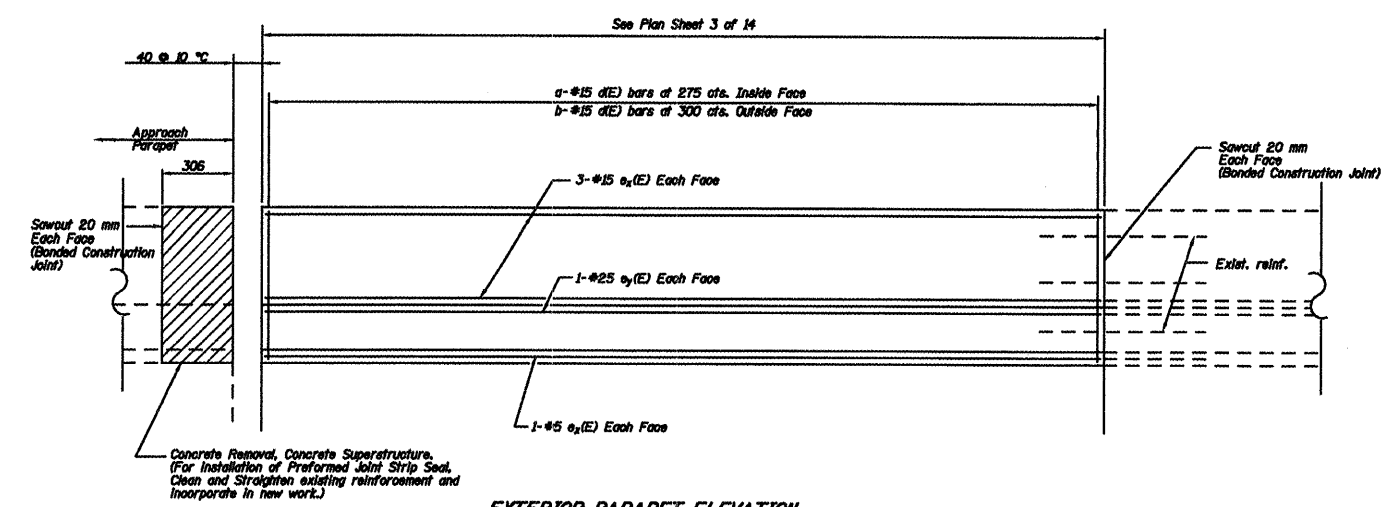
CROSS SECTION-DECK
SN 057-0027
(Looking East)

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CHECKED	JDA
DRAWN	NQ
CHECKED	GAE

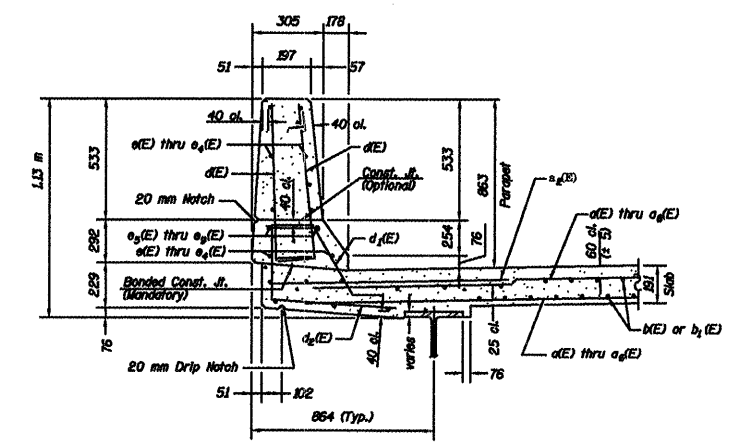
SUPERSTRUCTURE DETAILS
F.A.I. 55 OVER CONSTITUTION TRAIL
SECTION (57-4)RS-3 & I
McLEAN COUNTY
SN 057-0026 (NB)
SN 057-0027 (SB)
STA. 38+263.167

ROUTE NO.	DISTRICT	COUNTY	SECTION	SHEET NO.
FAI 55	•	McLEAN	70	56
SHEET NO. 5				
14 SHEETS				

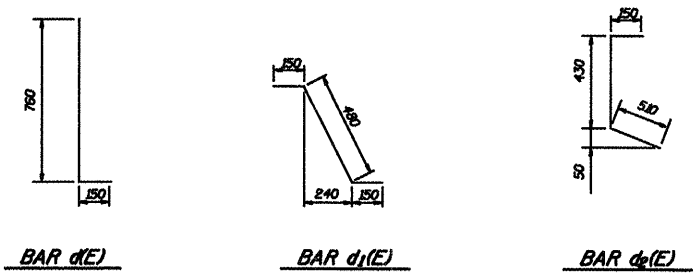
• (157-4)HBR-5&VBR-11&57-2HB-1



EXTERIOR PARAPET ELEVATION
(Inside Face of North Parapet Shown)



SECTION THRU EXTERIOR PARAPET



DESIGNED	GAE
CHECKED	JDA
DRAWN	NQ
CHECKED	GAE

SOUTH BOUND ROADWAY

Stage	Location	a	b	x	y
Stage 1	SW Parapet	12	11	a ₁ (E)	a ₂ (E)
	SE Parapet	20	18	a ₁ (E)	a ₂ (E)
Stage 2	NW Parapet	21	19	a ₁ (E)	a ₂ (E)
	NE Parapet	12	11	a ₁ (E)	a ₂ (E)

NORTH BOUND ROADWAY

Stage	Location	a	b	x	y
Stage 1	NW Parapet	18	15	a ₁ (E)	a ₂ (E)
	NE Parapet	12	11	a ₁ (E)	a ₂ (E)
Stage 2	SW Parapet	12	11	a ₁ (E)	a ₂ (E)
	SE Parapet	18	15	a ₁ (E)	a ₂ (E)

BILL OF MATERIAL

SOUTH BOUND ROADWAY

Bar	Number	Size	Length (m)	Shape
a(E)	103	#15	15.60	—
a ₁ (E)	27	#20	1.20	—
a ₂ (E)	57	#15	10.22	—
a ₃ (E)	40	#15	7.79	—
a ₄ (E)	8	#20	16.65	—
a ₅ (E)	4	#20	10.24	—
a ₆ (E)	4	#20	7.81	—
b(E)	107	#15	8.39	—
b ₁ (E)	61	#15	0.91	—
b ₂ (E)	32	#15	0.78	—
b ₃ (E)	29	#15	1.09	—
b ₄ (E)	8	#15	2.90	—
b ₅ (E)	8	#15	5.17	—
b ₆ (E)	8	#15	5.39	—
b ₇ (E)	2	#25	2.90	—
b ₈ (E)	2	#25	5.17	—
b ₉ (E)	2	#25	5.39	—
Reinforcement Bars, Epoxy Coated	kg	7690		
Concrete Superstructure	cu m	55.6		
Bar Spillovers	each	96		

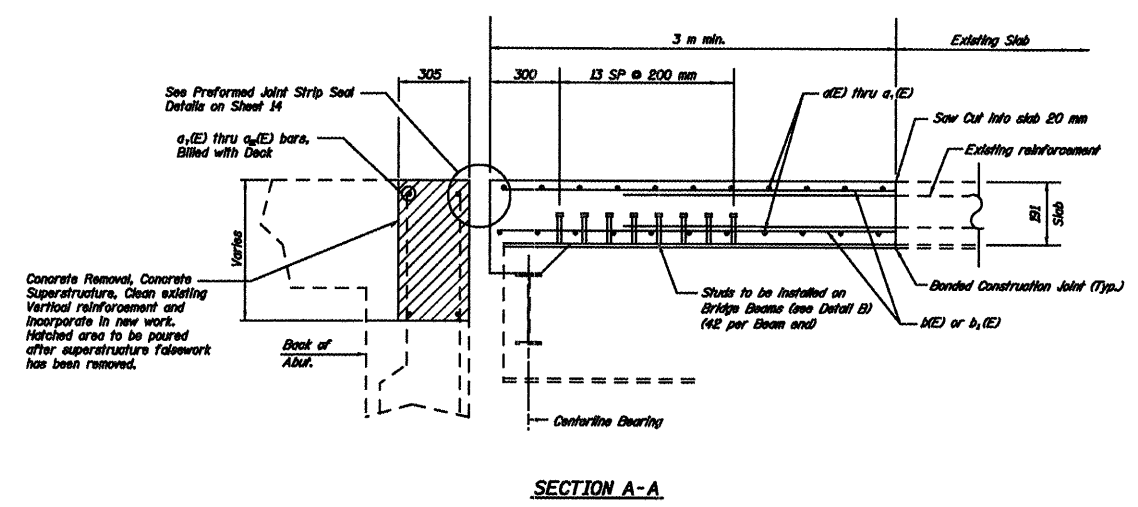
NORTH BOUND ROADWAY

Bar	Number	Size	Length (m)	Shape
a ₁ (E)	92	#15	10.74	—
a ₂ (E)	25	#20	1.20	—
a ₃ (E)	40	#15	7.78	—
a ₄ (E)	49	#15	7.08	—
a ₅ (E)	8	#20	10.76	—
a ₆ (E)	4	#20	7.79	—
a ₇ (E)	4	#20	7.09	—
b ₁ (E)	71	#15	7.63	—
b ₂ (E)	57	#15	0.91	—
b ₃ (E)	30	#15	0.78	—
b ₄ (E)	27	#15	1.09	—
b ₅ (E)	8	#15	2.90	—
b ₆ (E)	8	#15	4.63	—
b ₇ (E)	8	#15	4.56	—
b ₈ (E)	2	#25	2.90	—
b ₉ (E)	2	#25	4.63	—
b ₁₀ (E)	2	#25	4.56	—
Reinforcement Bars, Epoxy Coated	kg	5180		
Concrete Superstructure	cu m	38.0		
Bar Spillovers	each	90		

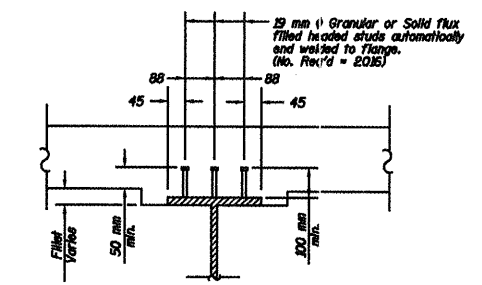
STRUCTURAL DETAILS &
BILL OF MATERIALS
F.A.I. 55 OVER CONSTITUTION TRAIL
McLEAN COUNTY
SN 057-0026 (NB)
SN 057-0027 (SB)
STA. 38+263.167

ROUTE NO.	SECTION	COUNTY	DATE	BY	SHEET NO.
FAJ 55		McLEAN	70	57	6
SHEETS					14

• (157-4)HBR-5&VBR-11&57-2HB-1



SECTION A-A



DETAIL B

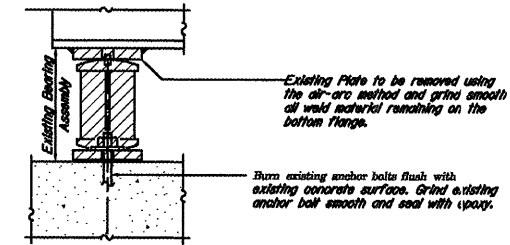
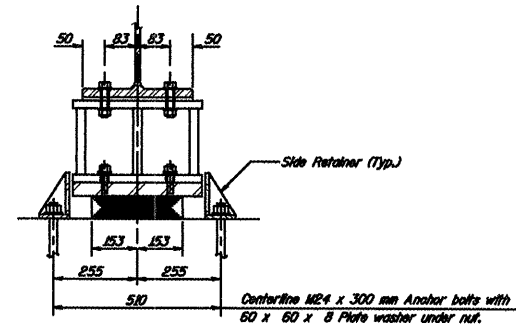
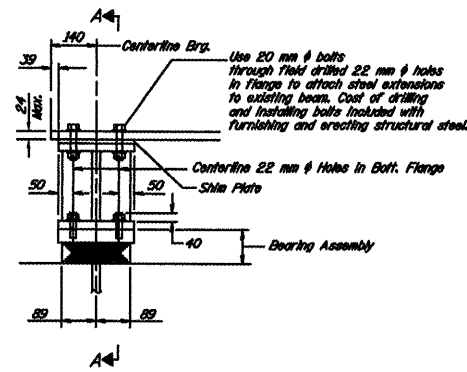
All dimensions are in millimeters (mm) except as noted.

DESIGNED	GAE
CHECKED	JDA
DRAWN	NQ
CHECKED	GAE

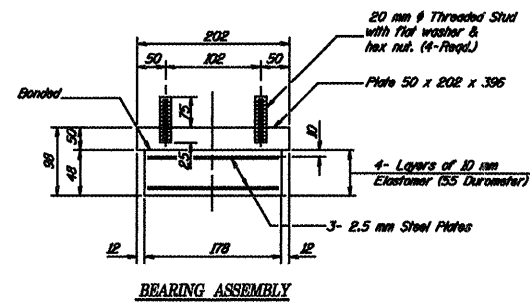
EXPANSION JOINT REPLACEMENT DETAILS
 F.A.I. 55 OVER CONSTITUTION TRAIL
 McLEAN COUNTY
 SN 057-0026 (NB)
 SN 057-0027 (SB)
 STA. 38+263.167

ROUTE NO.	DISTRICT	COUNTY	DATE	NO.	SHEET NO. 7
FAJ 55	*	McLEAN	70	58	14 SHEETS
FILE NO. DIST. NO. 7	CLASS	FILE NO. PROJECT			

* (157-4)HBR-5&VBR-11&57-2HB-1



TYPE I ELASTOMERIC EXP. BRG.
(East Abut. B & D)

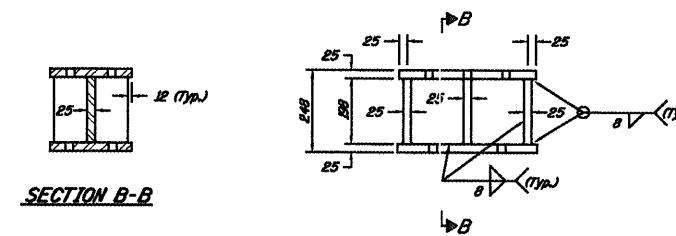
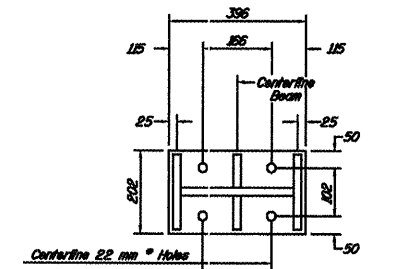


Note: Shim plates shall not be placed under Bearing Assembly.

BEAM REACTIONS
(All Abutments)

R ₁	000	76
R ₂	000	172
Imp.	000	50
R (Total)	000	298

Min. Jack Capacity= 281 kN



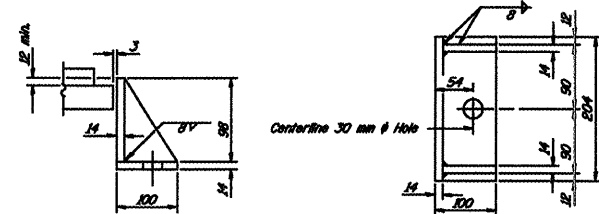
STEEL EXTENSION DETAILS

24 Required of Abutments B & D

Note: Contractor shall field measure existing bearings and provide 202 x 266 shims as necessary.

BILL OF MATERIAL

Item	Unit	Quantity
Elastomeric Bearing Assembly, Type I	Each	24
Furnishing and Erecting Structural Steel	kg	1800
Jack and Remove Existing Bearing	Each	24
Anchor Bolts, M24	Each	24



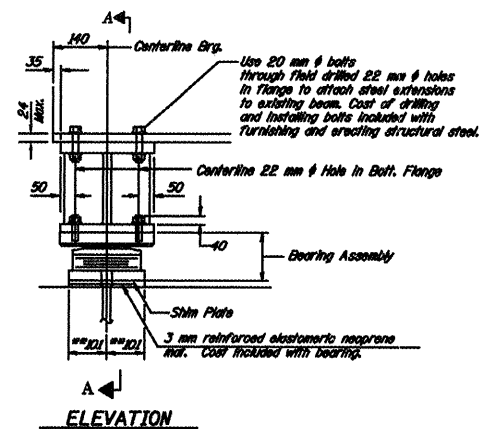
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with Structural Steel. (No. Req'd 48 @ Abutments B & D)

DESIGNED	GAE
CHECKED	JDA
DRAWN	NQ
CHECKED	GAE

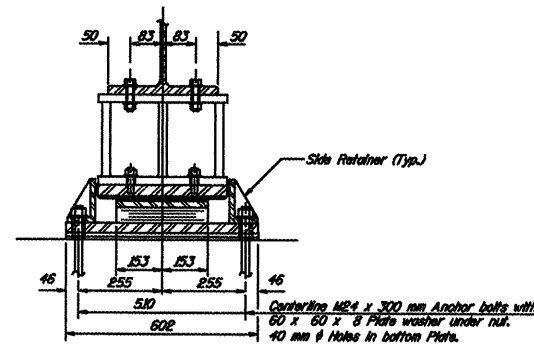
BEARING DETAILS ABUTS. B & D
F.A.I. 55 OVER CONSTITUTION TRAIL
McLEAN COUNTY
SN 057-0026 (NB)
SN 057-0027 (SB)
STA. 38+263.167

ROUTE NO.	DISTRICT	COUNTY	SECTION	SHEET NO.
FAJ 55		McLEAN	70 59	8
FED. ROAD DIST. NO. 7				14 SHEETS
BLDG. NO.				
FED. AID PROJECT NO.				

• (157-4)HBR-5&VBR-11&57-2HB-1

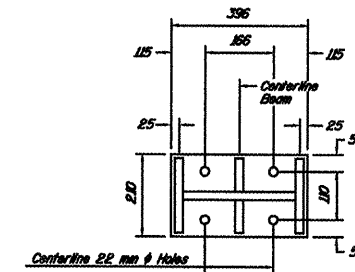


TYPE II ELASTOMERIC EXP. BRG.
(West Abut. A & C)

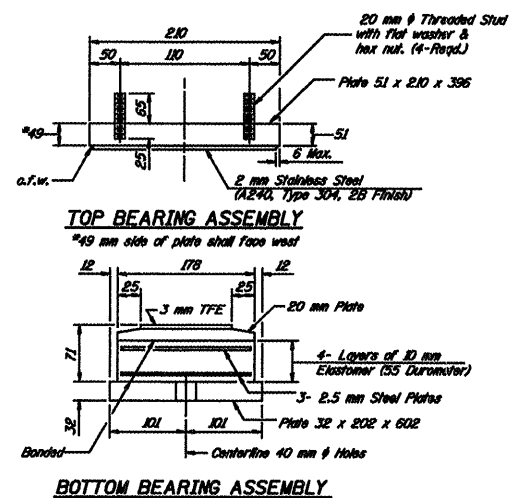


SECTION A-A

Notes:
 Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.
 New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.
 Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.
 Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 250. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
 Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.
 Anchor bolts for Type II bearings shall be placed in holes drilled through the bottom bearing plate after members are in place. Side retainers shall be placed after bolts are installed.
 Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
 Side retainers shall be included in the cost of Elastomeric Bearing Assembly, Type II.
 The 3 mm TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.
 Bonding of 3mm TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.
 All dimensions are in millimeters (mm) except as noted.

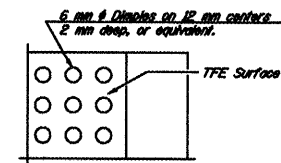


TOP & BOTTOM PLAN STEEL EXTENSION

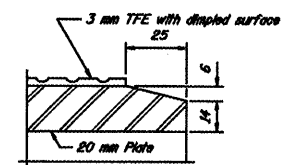


TOP BEARING ASSEMBLY
 *45 mm side of plate shall face west

BOTTOM BEARING ASSEMBLY

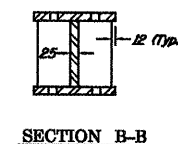


PLAN-TFE SURFACE

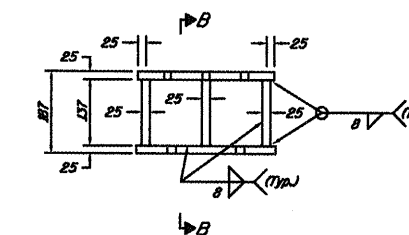


SECTION THRU TFE

Notes:
 The 3 mm TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.
 Bonding of 3 mm TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



SECTION B-B



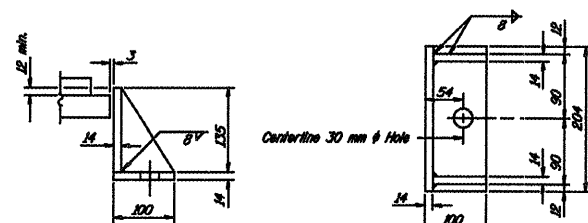
ELEVATION STEEL EXTENSION

STEEL EXTENSION DETAILS
 *4 Required at Abutments A & C

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	24
Furnishing and Erecting Structural Steel	sq	1450
Jack and Remove Existing Bearing	Each	24
Anchor Bolts, M24	Each	48

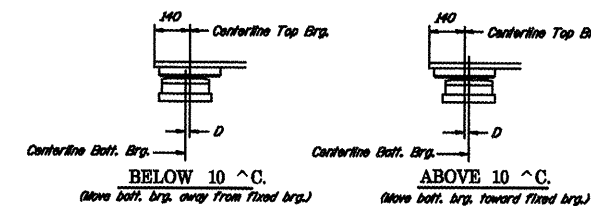
Note: Contractor shall field measure existing bearings and provide 202 x 602 shims as necessary.



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with Structural Steel. (See Req'd at Abutments A & C)

DESIGNED	GAE
CHECKED	JDA
DRAWN	NQ
CHECKED	GAE



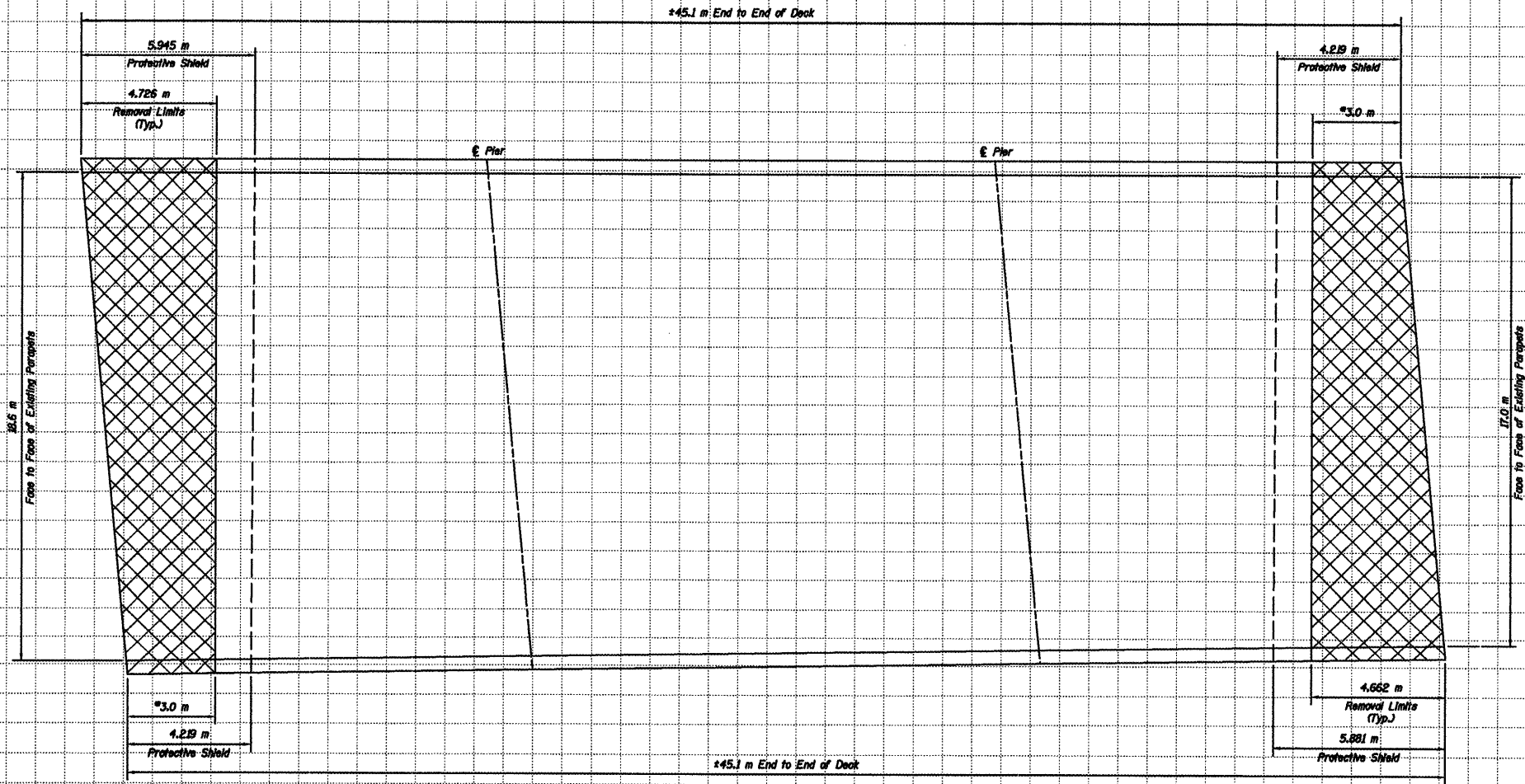
**** SETTING ANCHOR BOLTS AT EXP. BRG.**

D= 1 mm per each 10 is of expansion for every 8 °C temp. change from the normal temp. of 10 °C.

BEARING DETAILS ABUTS. A & C
F.A.I. 55 OVER CONSTITUTION TRAIL
McLEAN COUNTY
SN 057-0026 (NB)
SN 057-0027 (SB)
STA. 38+263.167


ROUTE NO.	DISTRICT	COUNTY	SECTION	SHEET NO.
FAI 55		McLEAN	70	60
SHEET NO. 9				
14 SHEETS				

• (157-41BR-5&VBR-11&57-2HB-1)



* This portion of deck to be removed & replaced.

PLAN - TOP OF DECK
SN 057-026 (NB)

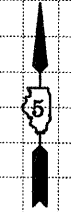
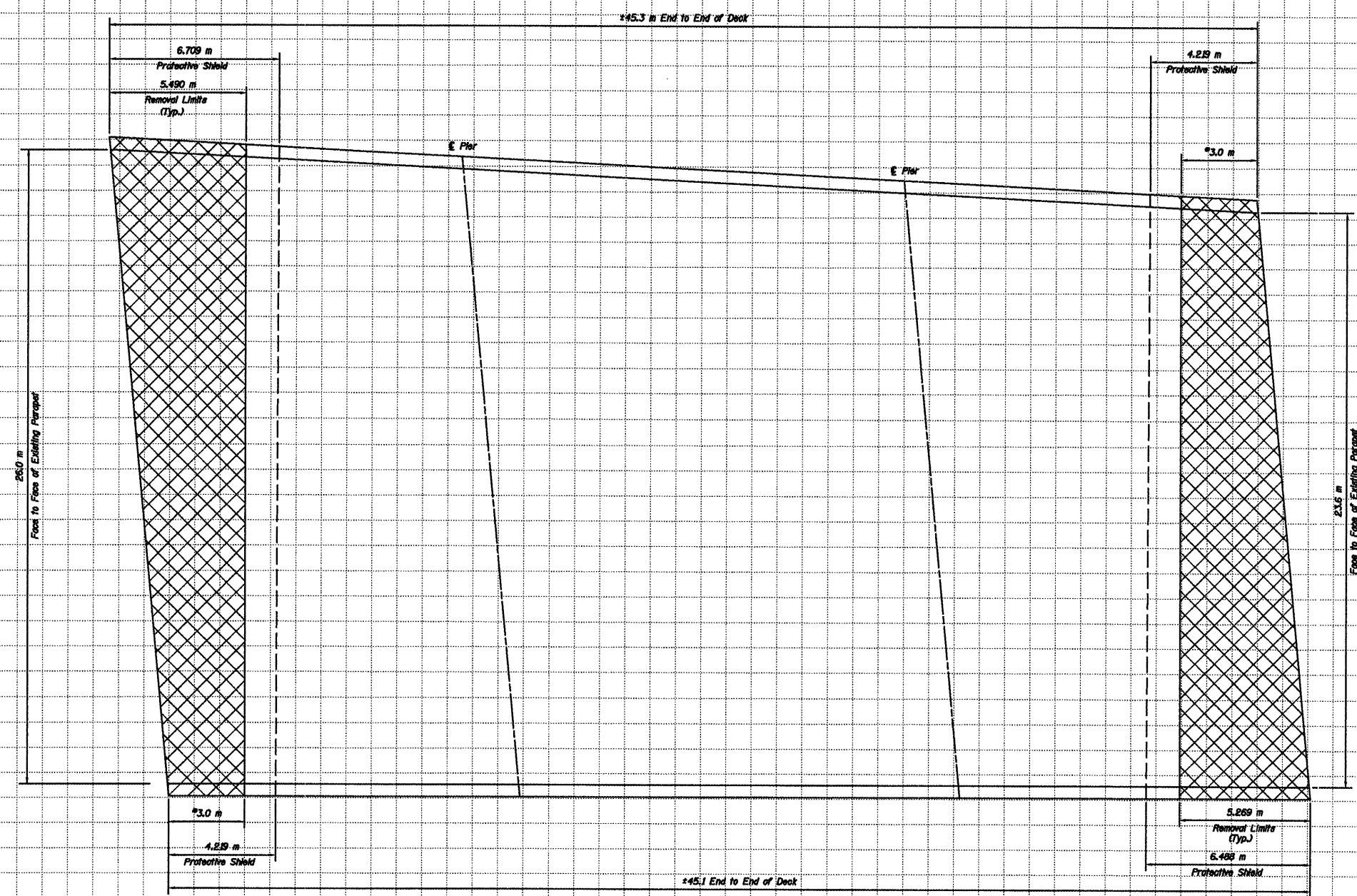
 Remove and Replace existing Bridge Deck See Sheet 3 & 4 of 14 for details

DESIGNED	GAE
CHECKED	JDA
DRAWN	NQ
CHECKED	GAE

DECK REPAIR PLAN
F.A.I. 55 OVER CONSTITUTION TRAIL
McLEAN COUNTY
SN 057-0026 (NB)
SN 057-0027 (SB)
STA. 38+263.167

ROUTE NO.	DISTRICT	COUNTY	SECTION	SHEET NO.
FAI 55	•	McLEAN	70 61	14 SHEETS

• 1157-4HBR-5&VBR-11&57-2HB-1



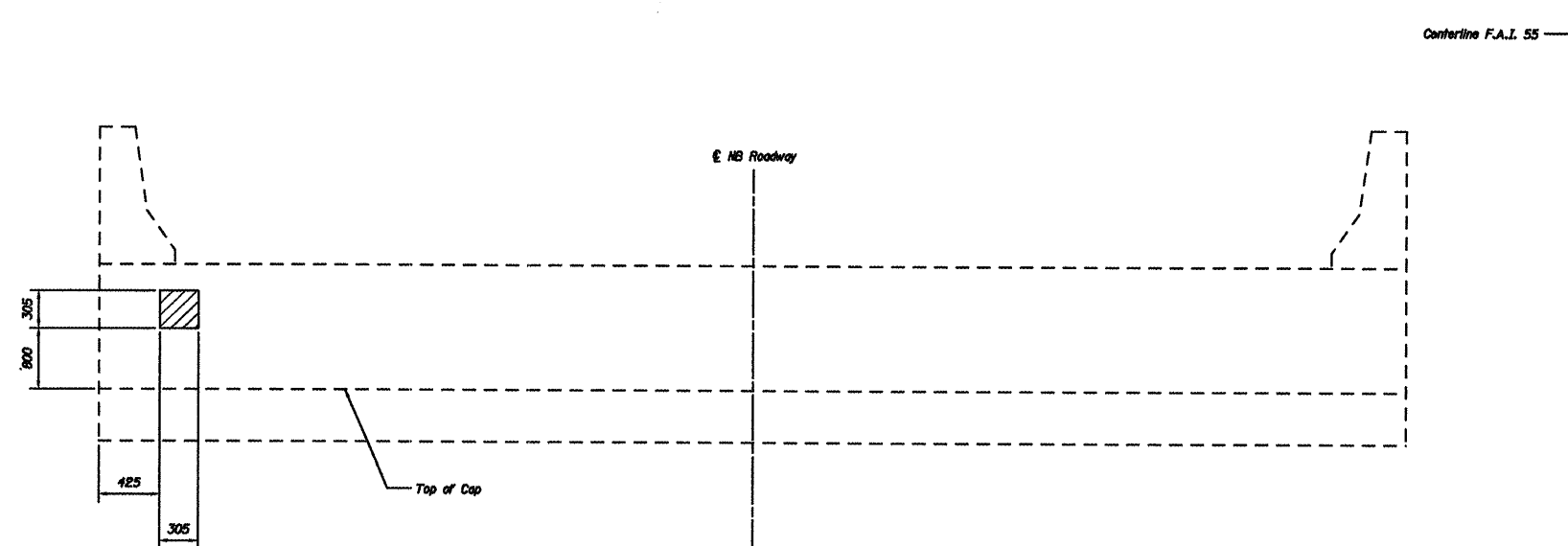
 Remove and Replace existing Bridge Deck See Sheet 3 & 4 of 14 for details

DESIGNED	GAE
CHECKED	JDA
DRAWN	NQ
CHECKED	GAE

PLAN - TOP OF DECK
SN 057-027 (SB)

DECK REPAIR PLAN
F.A.I. 55 OVER CONSTITUTION TRAIL
McLEAN COUNTY
SN 057-0026 (NB)
SN 057-0027 (SB)
STA. 38+263.167

ROUTE NO.	DISTRICT	COUNTY	SECTION	SHEET NO.
FAI 55	*	MCLEAN	70	62
SHEET NO. 11 14 SHEETS				
PROJECT NO. 057-026 (NB)				
* (157-4)HBR-5&VBR-11&57-2HB-1				



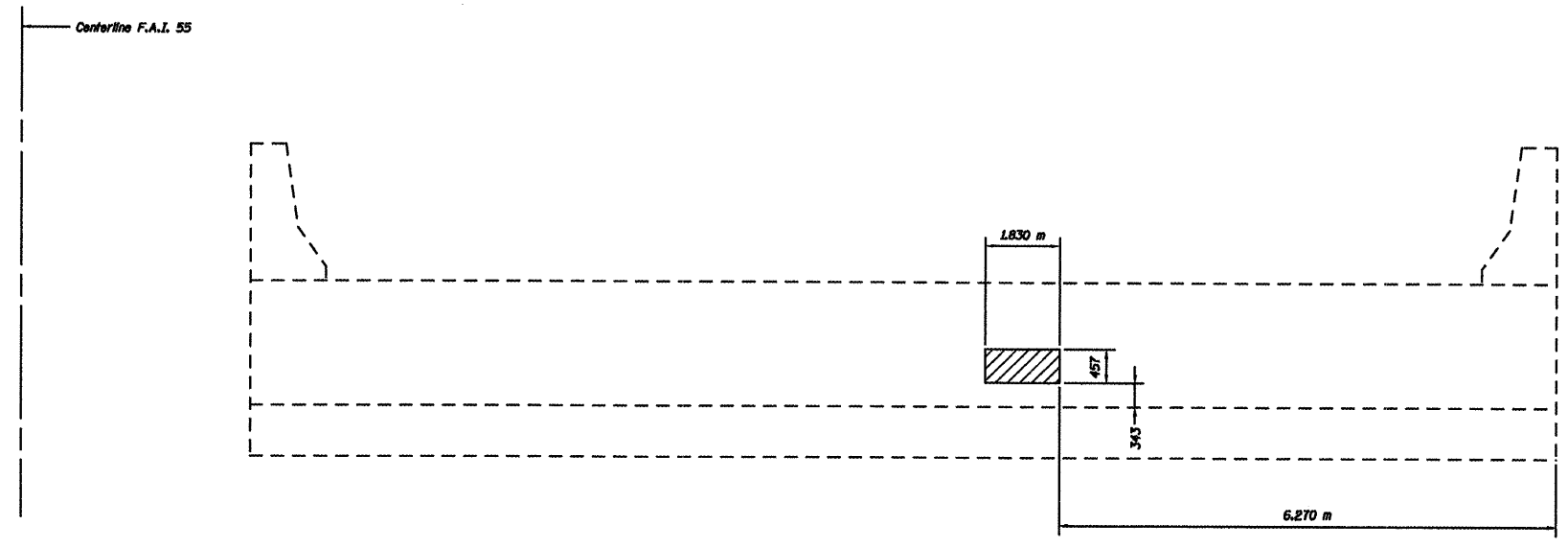
EXISTING WEST ABUTMENT ELEVATION
SN 057-026 (NB)

LEGEND

 Structural Repair of Concrete (Depth Equal to or Less than 125 mm)

TOTAL BILL OF MATERIALS		
Item	Unit	Quantity
Structural Repair of Concrete (Depth Equal to or Less Than 125 mm)	Sq M	1.0

Note: Diaphragm removal and replacement may be required to facilitate repair. Cost shall be included in the cost of Structural Repair of Concrete.



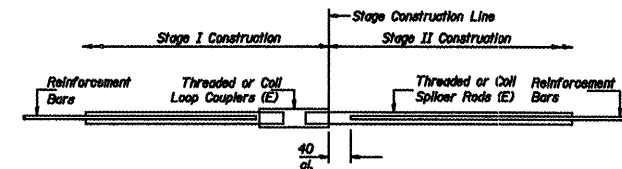
EXISTING EAST ABUTMENT ELEVATION
SN 057-026 (NB)

DESIGNED	GAE
CHECKED	JDA
DRAWN	NO
CHECKED	GAE

ABUTMENT REPAIR
F.A.I. 55 OVER CONSTITUTION TRAIL
MCLEAN COUNTY
SN 057-0026 (NB)
SN 057-0027 (SB)
STA. 38+263.167

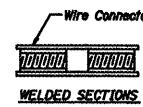
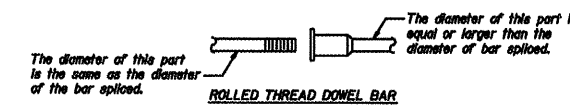
ROUTE NO.	DISTRICT	COUNTY	SECTION	SHEET NO.
F.A.I. 55	6	McLEAN	70	63
FED. ROAD DIST. NO. 7		SHEET NO.		14 SHEETS

• (157-4)HBR-5&VBR-11&57-2HB-1



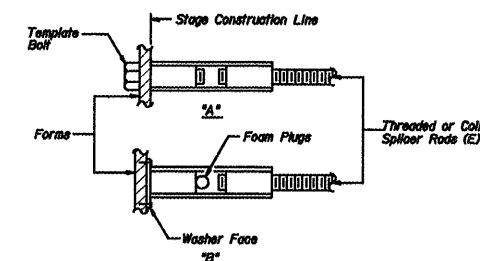
BAR SPLICER ASSEMBLY DETAIL

Bar Size	No. Assemblies Required	Location
#15	170	Slab
#20	16	Backwall



BAR SPLICER ASSEMBLY ALTERNATIVES

** Heavy Hex Nuts conforming to ASTM A 563M, Grade C, D or DH may be used.



INSTALLATION AND SETTING METHODS

"A" Set bar splicer assembly by means of a template bolt.
 "B" Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
 (E) : Indicates epoxy coating.

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
 Splicer rods shall be of minimum 420 MPa yield strength, threaded or coated full length.
 All reinforcement bars shall be lapped and fixed to the splicer rods or dowel bars.
 Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:
 ① Minimum Capacity = $1.25 \times 10^3 \times f_y \times A_s$
 (Tension in kN)
 ② Minimum "Pull-out Strength" = $1.25 \times 10^3 \times f_y \times A_s$
 (Tension in kN)
 Where f_y = Yield strength of lapped reinforcement bars in MPa,
 T_{allow} = Allowable tensile stress in lapped reinforcement bars in MPa (Service Load)
 A_s = Tensile stress area of lapped reinforcement bars (mm²).
 * = 28 day concrete

Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kN - tension	Min. Pull-Out Strength kN - tension
#13	510 mm	69	27
#16	610 mm	102	41
#19	790 mm	147	59
#22	1040 mm	201	80
#25	1370 mm	262	105

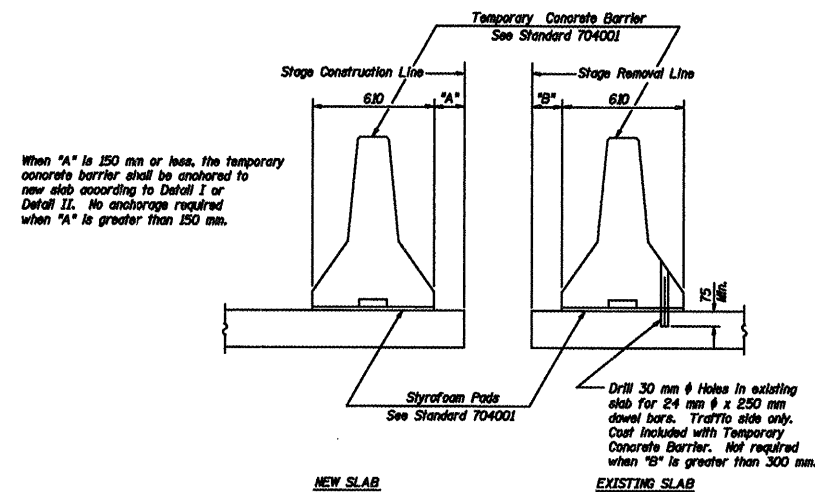
Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for "BAR SPLICERS."
 All dimensions are in millimeters (mm) except as noted.

DESIGNED	GAE
CHECKED	JDA
DRAWN	NQ
CHECKED	GAE

BAR SPLICER ASSEMBLY DETAILS
 F.A.I. 55 OVER CONSTITUTION TRAIL
 McLEAN COUNTY
 SN 057-0026 (NB)
 SN 057-0027 (SB)
 STA. 38+263.167

ROUTE NO.	DISTRICT	COUNTY	SECTION	SHEET NO.
FAI 55	•	McLEAN	70	64
SHEET NO. 13				
14 SHEETS				

• (157-4)HBR-5&VBR-11&57-2HB-1



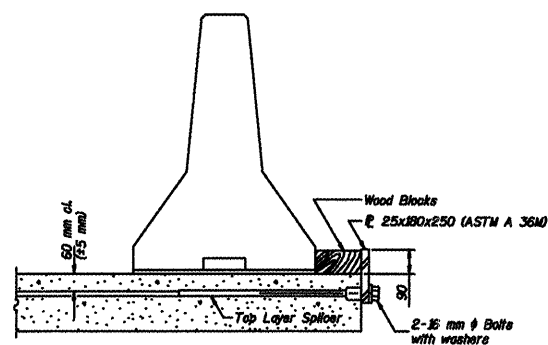
SECTIONS THRU SLAB

NOTES

Detail I - With Bar Splice or Couplers
Connect one (1) 25x180x250 steel ϵ to the top layer of couplers with 2-16 mm ϕ bolts screwed to coupler at approximate ϵ of each 3 m barrier panel.

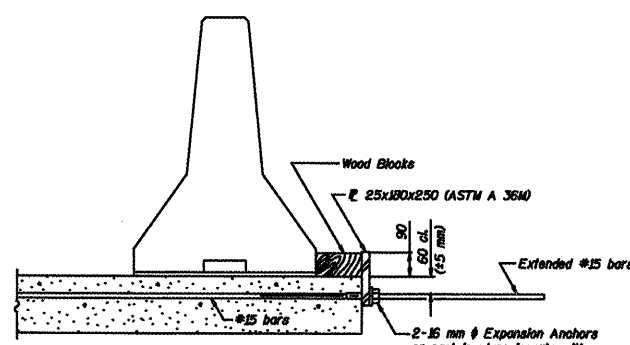
Detail II - With Extended Reinforcement Bars
Connect one (1) 25x180x250 steel ϵ to the concrete slab with 2-16 mm ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate ϵ of each 3 m barrier panel.

Cost of anchorage included with Temporary Concrete Barrier. All dimensions are in millimeters (mm) except as noted.



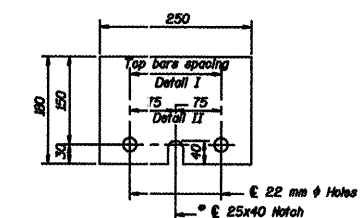
DETAIL I

The 25x180x250 Plate shall not be removed until Stage II Construction forms and reinforcement bars are in place.



DETAIL II

The 25x180x250 Plate shall not be removed until Stage II Construction forms and all reinforcement bars are in place and the concrete is ready to be placed.



ϵ 25x180x250
* Required only with Detail II

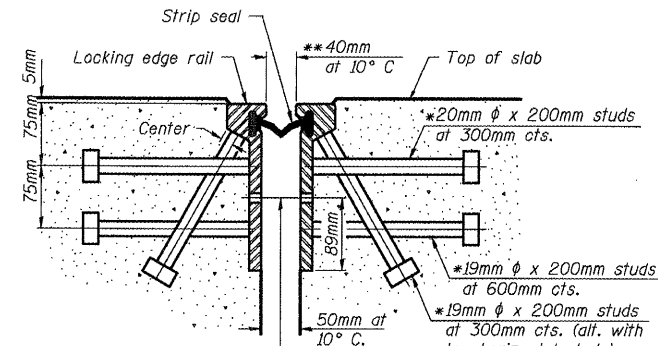
DESIGNED	GAE
CHECKED	JDA
DRAWN	NQ
CHECKED	GAE

TEMPORARY CONCRETE BARRIER
F.A.I. 55 OVER CONSTITUTION TRAIL
McLEAN COUNTY
SN 057-0026 (NB)
SN 057-0027 (SB)
STA. 38+263.167

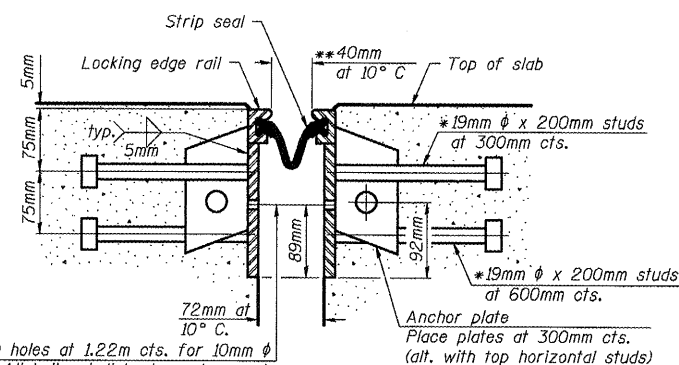
ROUTE NO.	DISTRICT	COUNTY	SHEET	OF	SHEET NO.
FAJ 55	•	MCLEAN	70	65	14
SHEETS					

* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.

** When joint is fixed, dimension is set at 40mm.



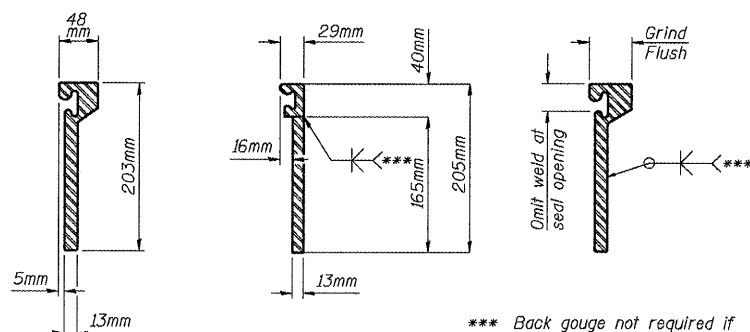
12mm ϕ holes at 1.22m cts. for 10mm ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.



12mm ϕ holes at 1.22m cts. for 10mm ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

SECTION THRU ROLLED RAIL JOINT

SECTION THRU WELDED RAIL JOINT

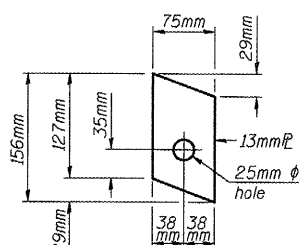


ROLLED (EXTRUDED) RAIL WELDED RAIL

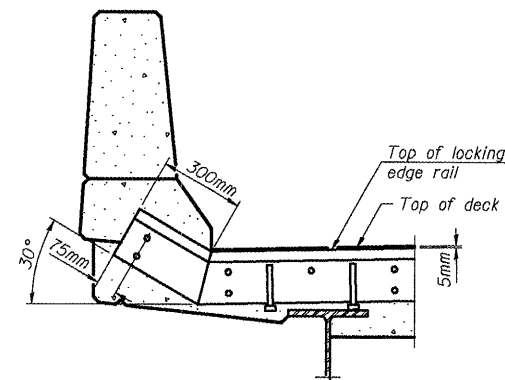
*** Back gouge not required if complete joint penetration is verified by mock-up.

LOCKING EDGE RAIL SPLICE

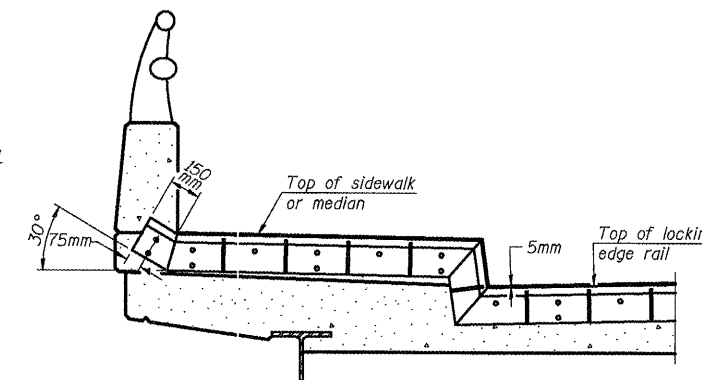
The inside of the locking edge rail groove shall be free of weld residue.



ANCHOR PLATE (for welded rail)



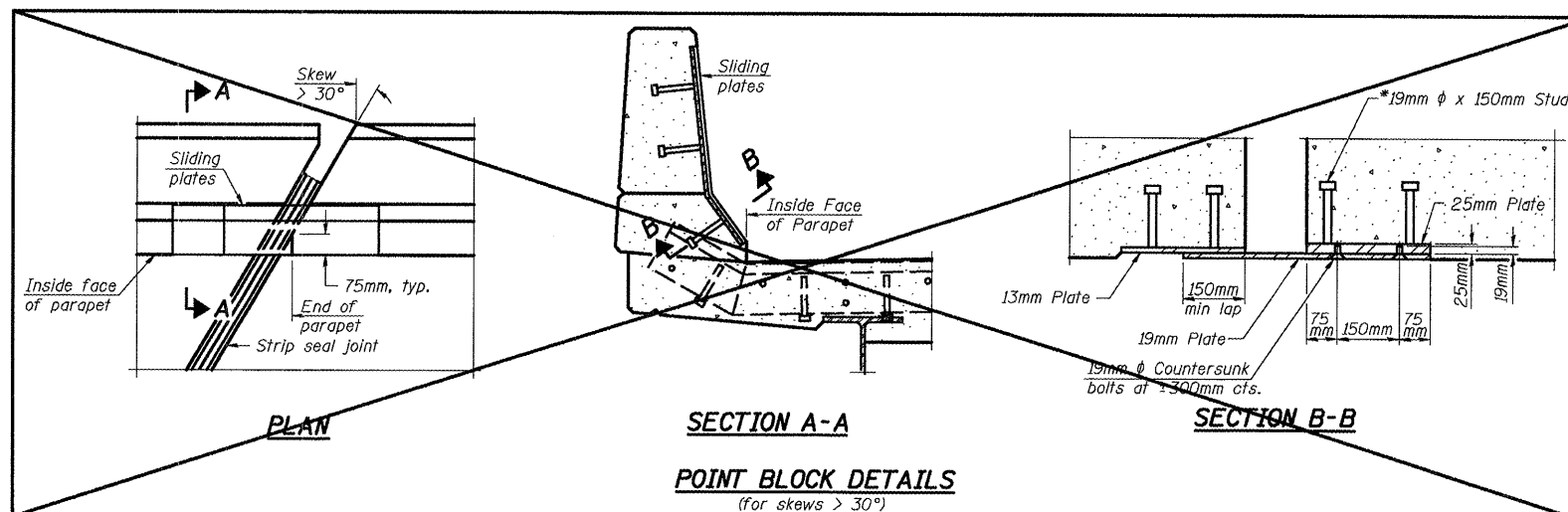
AT PARAPET



AT SIDEWALK OR MEDIAN

Shorter plates with a single row of studs at 300mm cts. may be necessary on medians which are shallower than 230mm. See manufacturer's recommendation.

TYPICAL END TREATMENTS



BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Meter	87.3

DESIGNED	JDA	200
CHECKED	JKC	EXAMINED
DRAWN	NQ	PASSED
CHECKED	JDA	ENGINEER OF BRIDGES AND STRUCTURES

**PREFORMED JOINT STRIP SEAL
F.A.I. 55 OVER CONSTITUTION TRAIL
MCLEAN COUNTY
SN 057-0026 (NB)
SN 057-0027 (SB)
STA. 38+263.167**

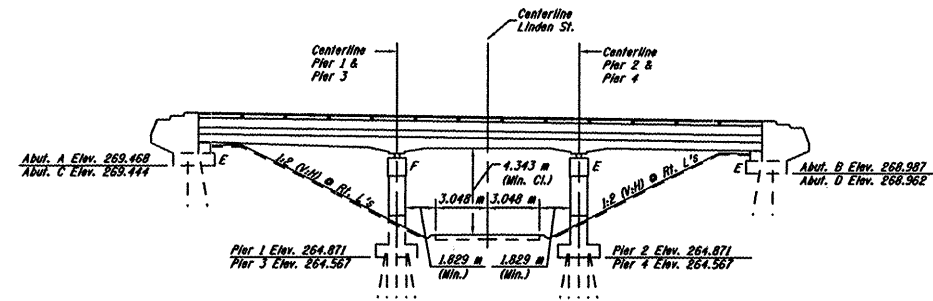
ROUTE NO.	SECTION	COUNTY	DATE	SHEET NO.
FAI 55		McLEAN	70	66
FED. ROAD DIST. NO. 7				5 SHEETS

* K157-1JHBR-5&VBR-11&57-2HB-1

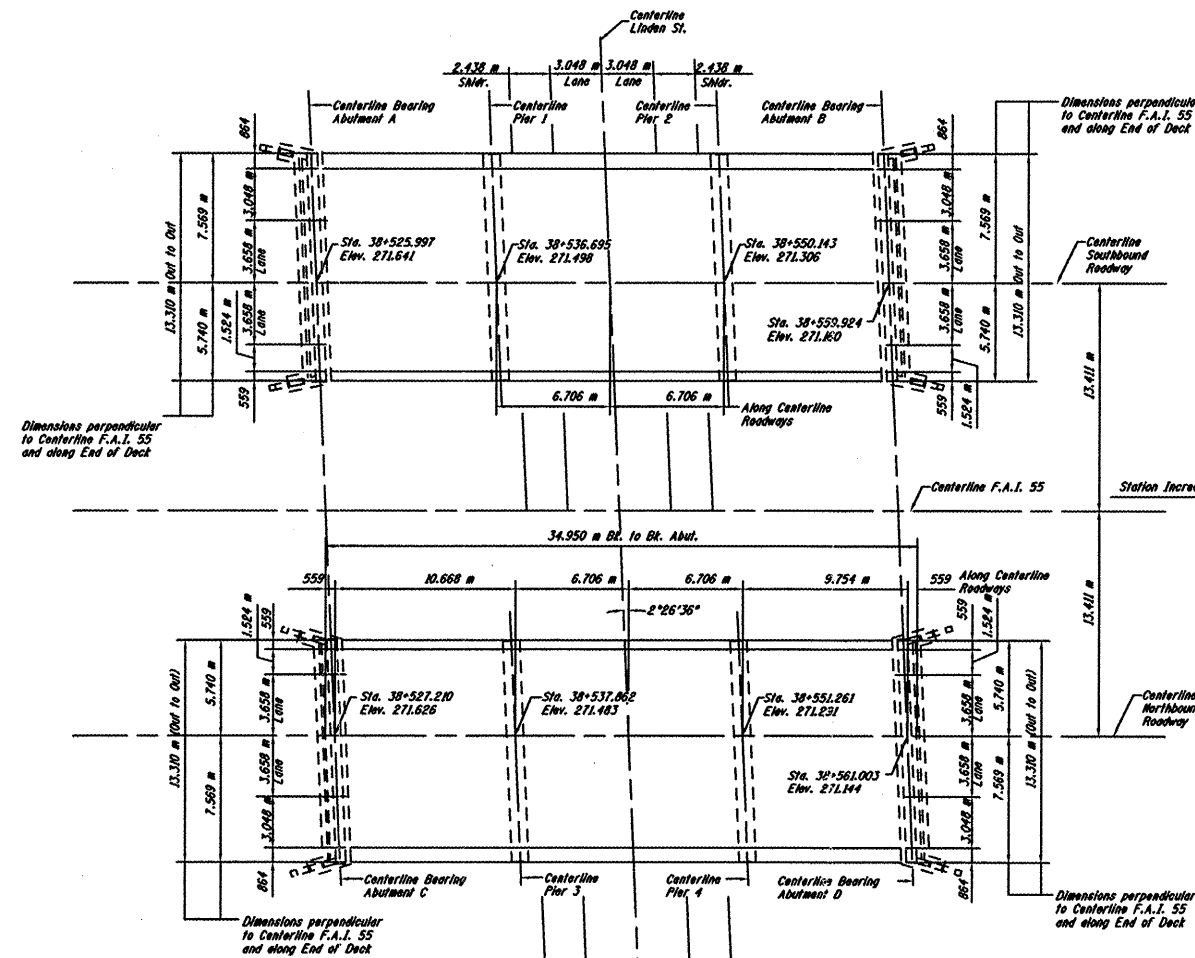
Benchmark: #23 nail in 915 mm cottonwood tree 15,850 m Lt. Sta. 38+561.887 Elev. 268.531

Existing Structures

Structure Number 057-0028 (NB) and 057-0029 (SB) are dual structures carrying F.A.I. Route 55 over Linden Street, Section 57-48B-3, McLean County of Station 38+543.992. Structures were built in 1962 as a continuous slab deck supported by 2 multiple column piers and pile bent abutments. Structures are 13.310 m out-to-out and 34.950 m long. In 1974 the expansion joints were replaced and the deck was waterproofed and resurfaced with 38 mm surface course. In 1992 the outside curbs were retrofitted with new steel railing, deck drains, neoprene expansion joints, and various bearings were replaced. Longitudinal deck joints were eliminated, the waterproofing and surfacing was replaced, and concrete repairs were performed on the substructure.



ELEVATION

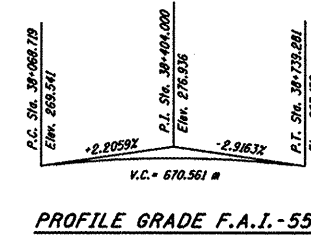


DESIGN STRESSES (EXISTING CONSTRUCTION)

DESIGNED	JDA
CHECKED	JKC
DRAWN	NQ
CHECKED	JDA

Concrete: $f'_c = 24.1 \text{ Mpa}$
 Reinforcement: $f_s = 138 \text{ Mpa}$
 Structural Steel: $f_s = 124 \text{ Mpa}$
 Design Loading: NS18 & Alternate
 Design Specifications: AASHTO 1957

PLAN



PROFILE GRADE F.A.I. 55

Proposed Work

1. Replace all four abutment P.S. Expansion Joints with Silicone Joint Sealer.
2. Deck patching and remove and replace bituminous overlay and waterproofing membrane.
3. Plug deck drains near abutments and piers.
4. Structural repair of concrete of north curb of bridge deck and patch west slope wall, of SN 057-0029 (SB).
5. Riprap along southwest and northeast slope east of SN 057-0028 (NB).

Traffic to be maintained by staged construction.

TOTAL BILL OF MATERIALS

Item	Unit	Super	Sub	Total
STONE RIPRAP, CLASS A3	SD M	--	6	6
HOT-MIX ASPHALT SURFACE REMOVAL (DECK)	SD M	815.0	--	815.0
SLOPE WALL REMOVAL	SD M	--	1.0	1.0
SLOPE WALL 100 mm	SD M	--	1.0	1.0
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 125 MM)	SD M	0.4	--	0.4
WATERPROOFING MEMBRANE SYSTEM	SD M	815.0	--	815.0
SILICONE JOINT SEALER	METER	53.3	--	53.3
PLUS EXISTING DECK DRAINS	EACH	16	--	16
DECK SLAB REPAIR (PARTIAL)	SD M	96.0	--	96.0
POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX E, 190	M TON	75.0	--	75.0

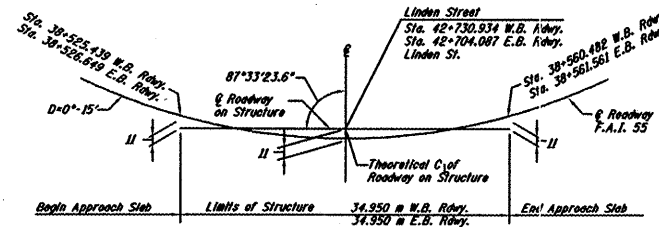
General Notes

Plan dimensions and details relative to existing plans are subject to routine 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 the work, however, the Contractor will be paid for the quantity actually furnished based upon the unit price bid for the work.

All dimensions are in millimeters (mm) except as noted.

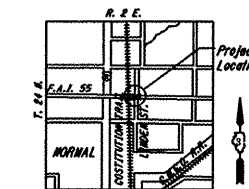
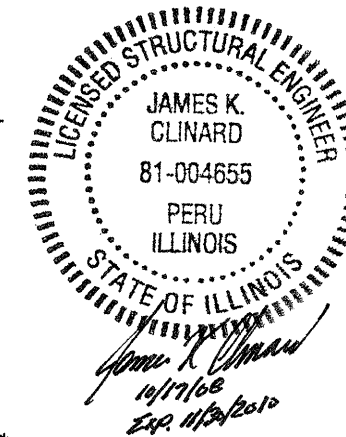
CURVE

PI STA. = 38+663.038
 A = 3° 00' 00"
 D = 0° 15'
 R = 6985.515 m
 T = 182.922 m
 L = 365.761 m
 E = 2.394 m
 S.E. = None
 PC STA. = 38+480.189
 PT STA. = 38+845.960



DETAIL-STRUCTURE LOCATION ON F.A.I. 55

NO SCALE



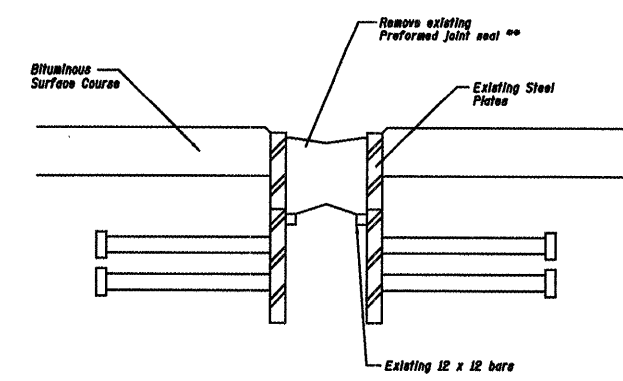
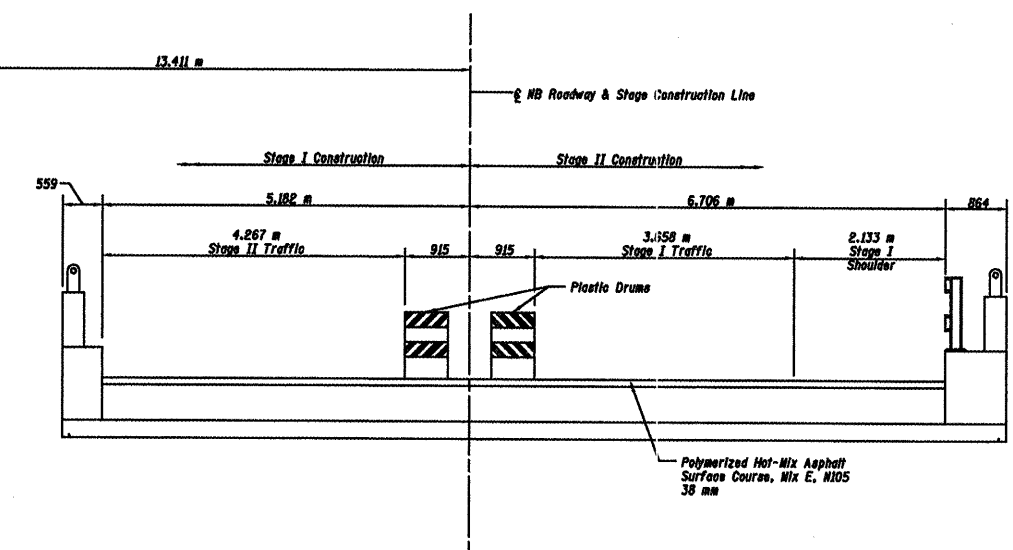
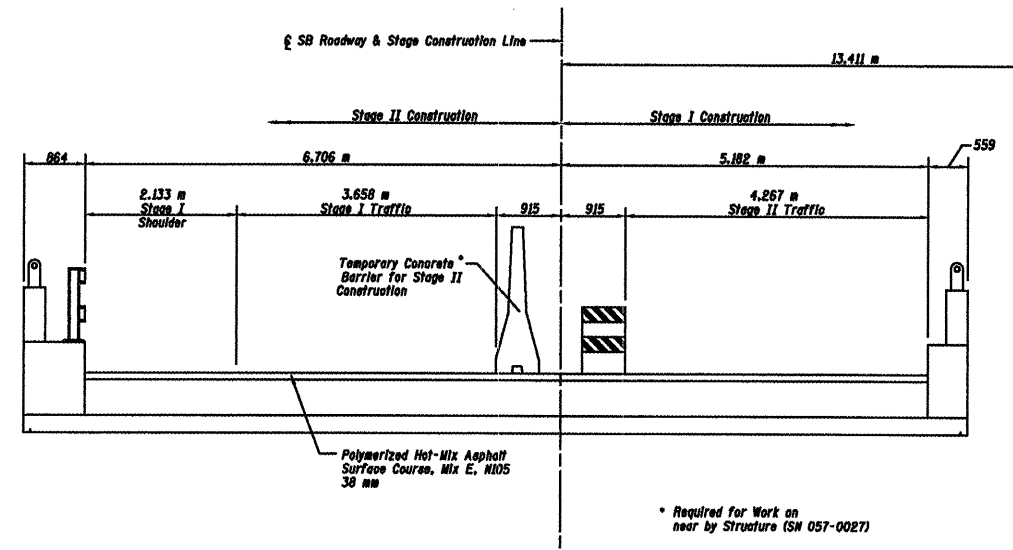
LOCATION SKETCH

**GENERAL PLAN AND ELEVATION
 F.A.I. 55 OVER LINDEN STREET
 McLEAN COUNTY
 SN 057-0028 (NB)
 SN 057-0029 (SB)
 STA. 38+543.992**

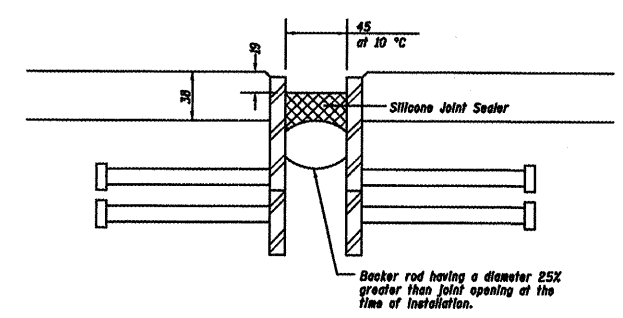
CHAMLIN ASSOCIATES
 PERU ILLINOIS MORRIS

ROUTE NO.	SECTION	COUNTY	DATE	TIME	SHEET NO. 2
FAI 55	#	McLEAN	70	67	5 SHEETS
PREPARED BY: JDA	DRAWN BY: NQ	CHECKED BY: JKC	DESIGNED BY: JDA	DATE: 10/10/07	

• (157-1)HBR-5&VBR-11&57-2HB-1



EXISTING
PREFORMED JOINT SEAL



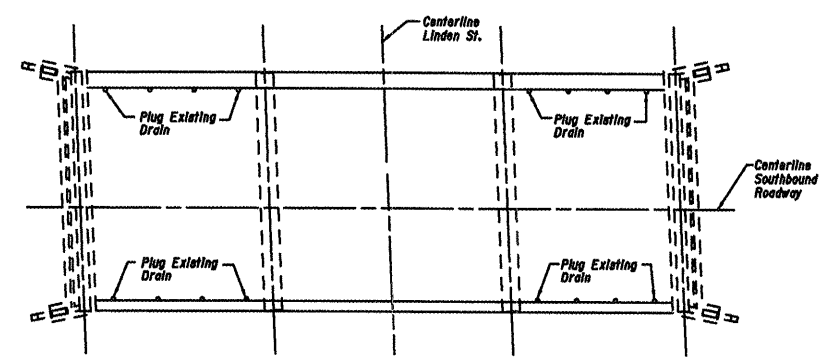
PROPOSED
SILICONE JOINT SEALER DETAIL

DESIGNED	JDA
CHECKED	JKC
DRAWN	NQ
CHECKED	JDA

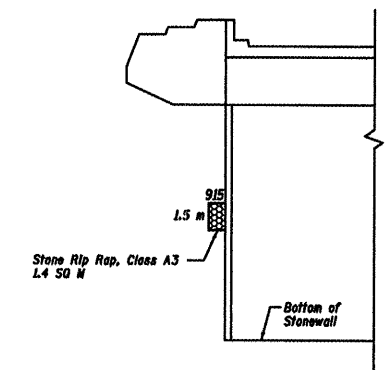
STAGE CONSTRUCTION CROSS SECTIONS AND
EXPANSION JOINT REPLACEMENT DETAILS
F.A.I. 55 OVER LINDEN STREET
McLEAN COUNTY
SN 057-0028 (NB)
SN 057-0029 (SB)
STA. 38+543.992

ROUTE NO.	DISTRICT	COUNTY	SECTION	SHEET NO.
FAL 55	•	McLEAN	70 68	5 SHEETS
PREVIOUS DIST. NO.		PLAN NO.	PROJECT NO.	

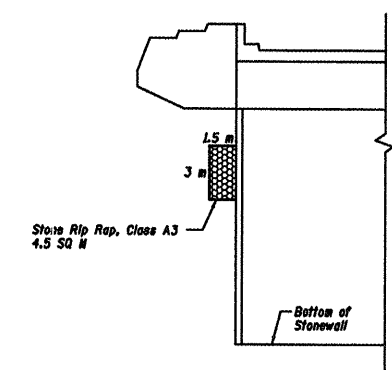
• (157-1)HBR-5&VBR-11&57-2HB-1



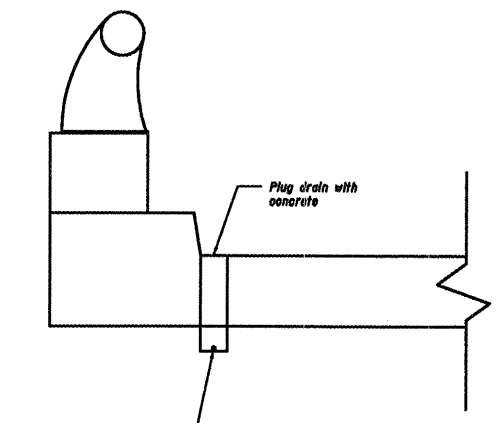
DECK DRAIN PLAN
SN 057-0028 (SB)
(SN 057-0029 (NB) Similar)



WEST SLOPEWALL, SOUTH END
SN 057-0028 (NB)

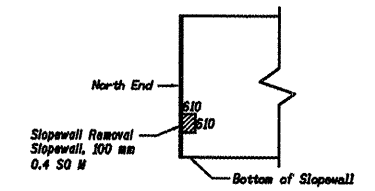


EAST SLOPEWALL, NORTH END
SN 057-0028 (NB)

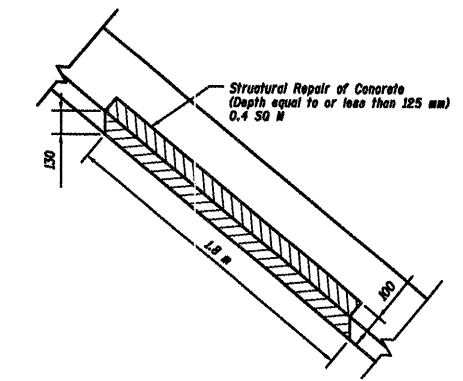


Field Drill 10 mm ϕ hole
For 6 mm ϕ Threaded
rod 330 mm long with
nuts and washers.
Cost of threaded rod, nuts,
washers, concrete and labor
shall be considered
included in the cost for
"Plug Deck Drain".

**DETAIL FOR DRAINS
TO BE PLUGGED**



EAST SLOPEWALL
(Looking East)
SN 057-0029 (SB)
Welded Wire Fabric: 252 x 132 - ANCS.8 x ANCS.8
with a mass of 2.51 g/cm³. A length of 150mm
of existing welded wire around the removal area shall be
exposed in order to lap with the proposed welded wire fabric.



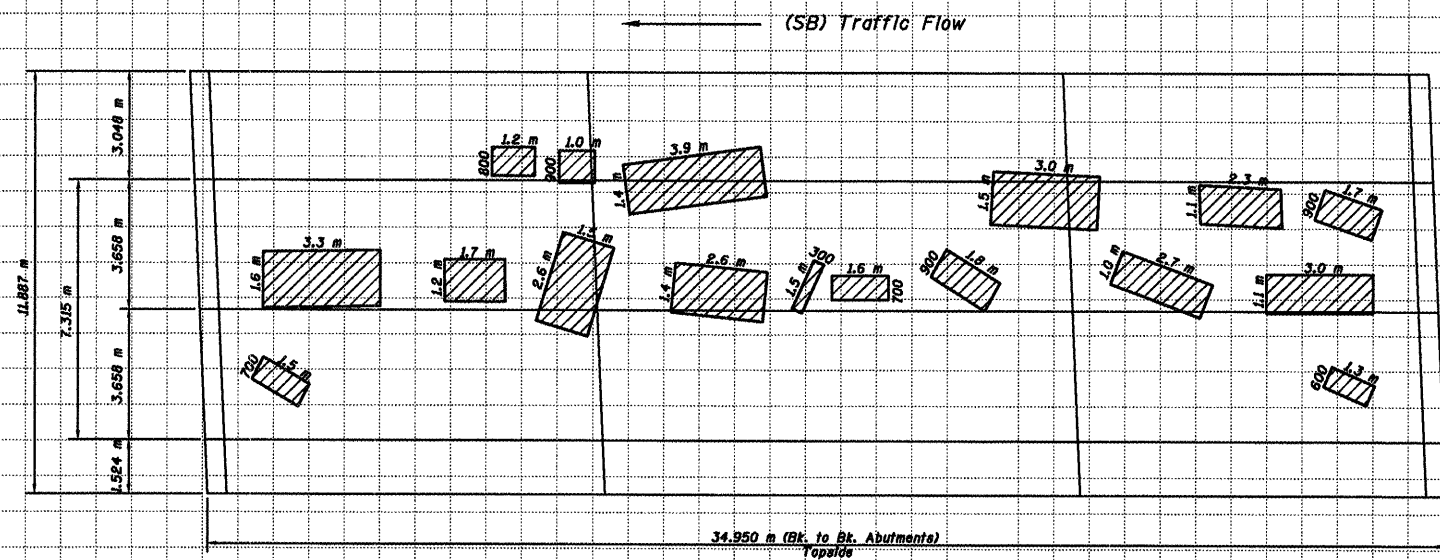
NORTH CURB OF BRIDGE DECK
SN 057-0029


DESIGNED	JDA
CHECKED	JKC
DRAWN	NQ
CHECKED	JDA

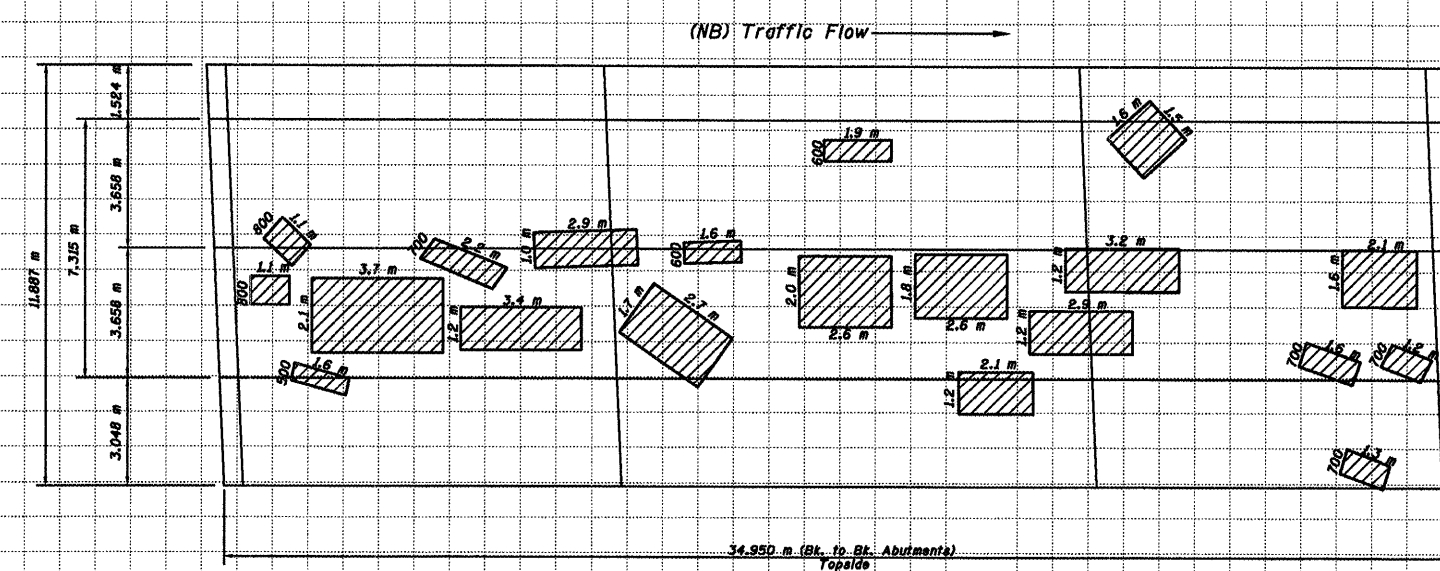
MISCELLANEOUS REPAIR DETAILS
F.A.I. 55 OVER LINDEN STREET
McLEAN COUNTY
SN 057-0028 (NB)
SN 057-0029 (SB)
STA. 38+543.992

ROUTE NO.	DISTRICT	COUNTY	SECTION	SHEET NO.
FAI 55	•	McLEAN	70	69
SHEETS 5				

• (57-1)HBR-5&VBR-1) & 57-2HB-1



 Deck Slab Repair (Partial)
 41.8 SQ M (SB)
 53.9 SQ M (NB)

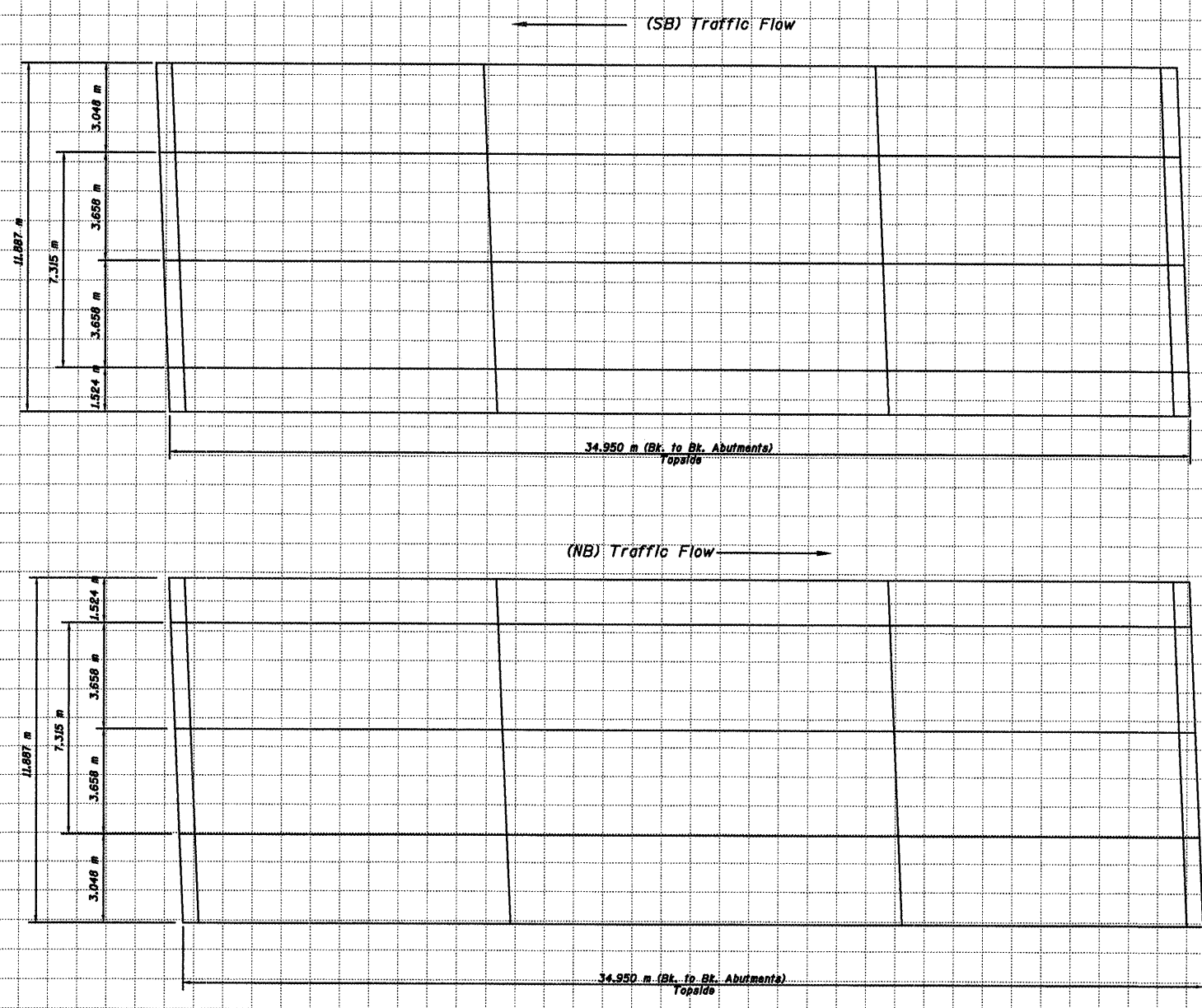


DESIGNED	JDA
CHECKED	JKC
DRAWN	NQ
CHECKED	JDA

DECK REPAIRS
 F.A.I. 55 OVER LINDEN STREET
 McLEAN COUNTY
 SN 057-0028 (NB)
 SN 057-0029 (SB)
 STA. 38+543.992

ROUTE NO.	DISTRICT	COUNTY	SECTION	SHEET NO.
FAJ 55		McLEAN	70	5
FED. ROAD DIST. NO. 7		SECTION	FED. ROAD PROJECT	SHEETS
				5

• (07-118R-5&VBR-11&57-21B-1



DESIGNED	JDA
CHECKED	JKC
DRAWN	NO
CHECKED	JDA

AS BUILT
 DECK REPAIRS
 F.A.I. 55 OVER LINDEN STREET
 McLEAN COUNTY
 SN 057-0028 (NB)
 SN 057-0029 (SB)
 STA. 38+543.992