

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PROPOSED
HIGHWAY PLANS**

FAP ROUTE 326 (IL ROUTE 47)
SECTION 119 BR
PROJECT ACF-0326 (074)
GRUNDY COUNTY

C - 93 - 008 - 07

IL ROUTE 47 OVER JOHNNY RUN

REPLACEMENT OF EXISTING BRIDGE AND RAISING THE PROFILE GRADE OF THE ROADWAY.

PROJECT INCLUDES A 3-SPAN CONTINUOUS WIDE FLANGE STRUCTURE WITH A COMPOSITE DECK, PILE BENT STUB ABUTMENTS, A PILE BENT PIER, AND A FIXED PIER FOUNDED ON DRILLED PIERS - S.N. 032-0112. BEGIN BRIDGE STA. 581+60.99 AND END BRIDGE STA. 583+70.51. SOUTH SPAN 69'-8", CENTER SPAN 60'-0", AND NORTH SPAN 69'-8".

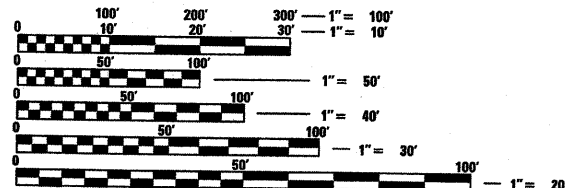
STATION 581+60.99 TO
STATION 583+70.51
BRIDGE REPLACEMENT
EXIST. S.N. 032-0031
PROP. S.N. 032-0112

BEGIN PROJECT
STA. 575+75.00

END PROJECT
STA. 589+90.00

INDEX OF SHEETS

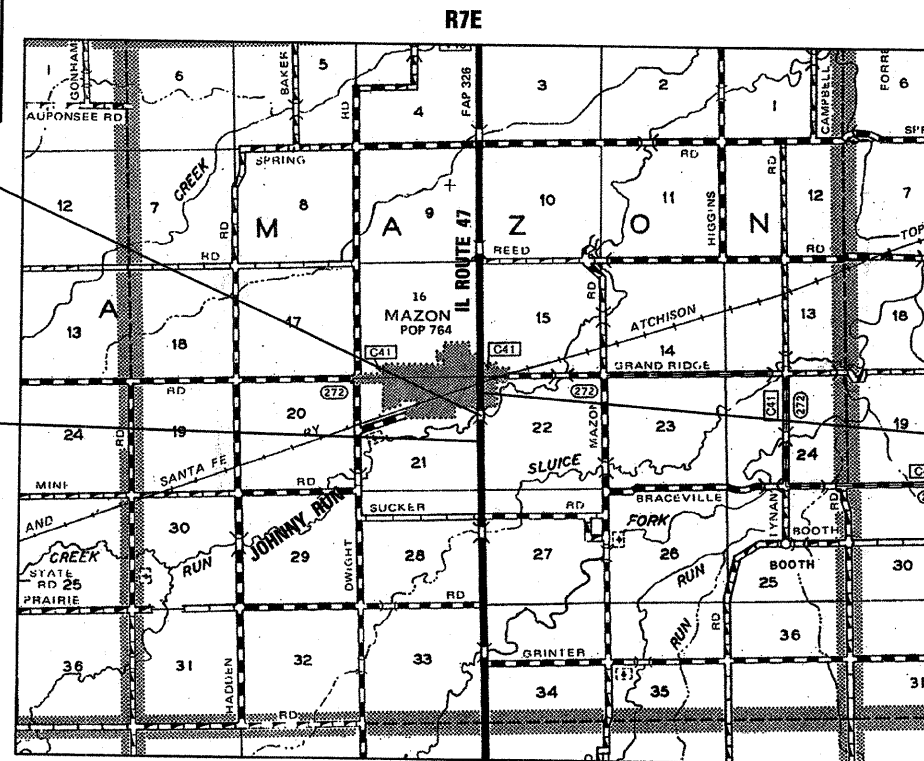
SHEET NO.	ITEM
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FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

DISTRICT 3 NO. (815) 434-6131
PROJECT ENGINEER: DAVE BROVIK
PROJECT MANAGER: SCOTT FERGUSON
CONTRACT NO. 66687



LOCATION MAP

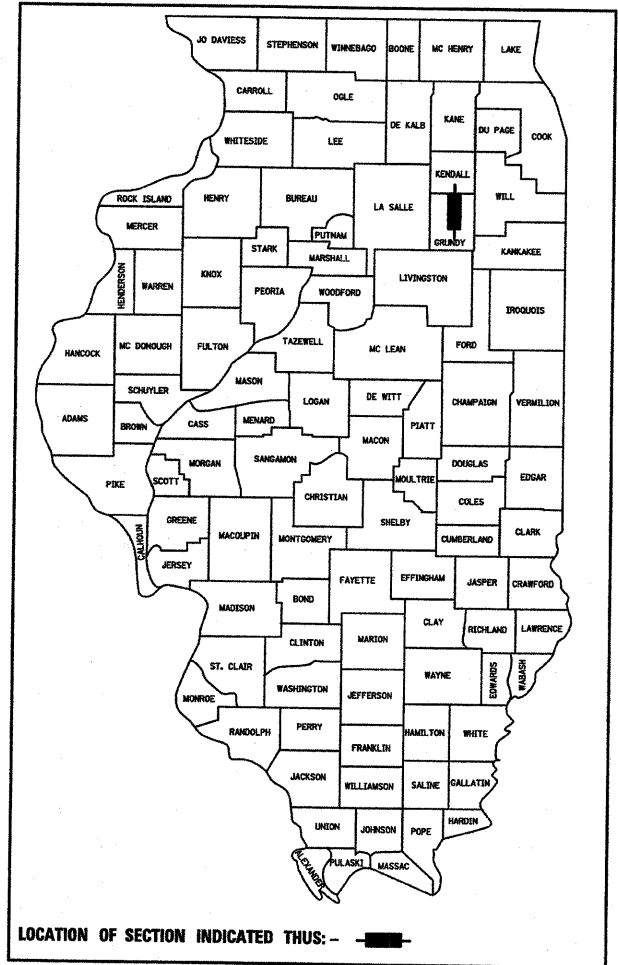


GROSS LENGTH = 1415.00 FT. = 0.27 MI.
NET LENGTH = 1415.00 FT. = 0.27 MI.

JEFFREY R. RENSING
DATE 8/13/2008

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	119 BR	GRUNDY	68	1
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 66687		

D-93-047-06
P-93-070-02



FUNCTIONAL CLASSIFICATION

OTHER PRINCIPAL ARTERIAL
ADT 8,000 (2008)
PV = 86.0%
SU = 6.0%
MU = 8.0%

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED 08/14 2008
Deputy Director of Highways, Region Engineer
October 3, 2008
Eric E. Horn
Submittal ENGINEER OF DESIGN AND ENVIRONMENT
October 3, 2008
Christine M. Reed
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER



EXPIRES 11/30/2009

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OF THE STATE OF ILLINOIS

GENERAL NOTES

- THE THICKNESS OF HMA SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE HMA IS PLACED.
- THE HMA SURFACE OF ALL MAILBOX TURNOUTS, PRIVATE ENTRANCES, COMMERCIAL ENTRANCES, AND SIDE ROADS SHALL BE MADE NEATLY, IN A WORKMANLIKE MANNER, AND SHALL ACCURATELY CONFORM TO THE SHAPES AND DIMENSIONS SHOWN ON THE PLAN DETAILS. IF REQUIRED BY THE ENGINEER, THE CONTRACTOR SHALL BE REQUIRED TO SAW CUT THE HMA SURFACE TO CONFORM TO THE SHAPES AND DIMENSIONS SHOWN ON THE PLAN DETAILS. THIS WORK SHALL BE INCLUDED IN THE COST OF THE HMA SURFACE.
- THE BASE COURSE WIDENING SHALL BE CARRIED THROUGH ALL ENTRANCES, SIDE ROADS, AND MAILBOX TURNOUTS. EXCEPTIONS WILL BE SHOWN ON THE PLANS.
- EXCEPT AS NOTED ON THE PLANS, PAVEMENT GRADES SHOWN ARE AT THE TOP OF PAVEMENT SURFACES.
- BEFORE ORDERING PIPE CULVERTS OR PIPE DRAINS, THE CONTRACTOR SHALL CONSULT THE ENGINEER FOR EXACT LENGTHS.
- THE ENGINEER WILL BE THE SOLE JUDGE CONCERNING CURING TIME FOR THE VARIOUS HMA LIFTS.
- FOR STABILIZATION, ALL TYPE III BARRICADES SHALL REQUIRE A MINIMUM OF FOUR SAND BAGS PER BARRICADE.
- SEEDING SHALL NOT BE PERMITTED AT ANY TIME WHEN THE GROUND IS FROZEN, WET, OR IN AN UNTILLABLE CONDITION. LOCATIONS TO BE SEEDED WILL BE DETERMINED BY THE ENGINEER.
- ONLY THOSE TREES DESIGNATED BY THE ENGINEER OR LISTED ON THE PLANS SHALL BE REMOVED. THE CONTRACTOR SHALL PROTECT ALL REMAINING TREES FROM DAMAGE DUE TO HIS OPERATIONS.
- THE FINISHED EARTHWORK SHALL HAVE A VEGETATION SUSTAINING SOIL COVERING THE TOP FOUR INCHES IN AREAS TO BE SEEDED OR SODDED. THE VEGETATION SUSTAINING SOIL REQUIRED WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF FURNISHED EXCAVATION.
- ALL ELEVATIONS REFERRING TO U.S.G.S. MEAN SEA LEVEL DATUM.
- ABANDONED UNDERGROUND UTILITIES THAT CONFLICT WITH CONSTRUCTION SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE RIGHT OF WAY ACCORDING TO ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.
- ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE EDITION AS INDICATED BY THE SUBNUMBER SHOWN IN THE LIST OF STANDARDS INCLUDED IN THESE PLANS.
- THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN CALCULATING PLAN QUANTITIES:

GRANULAR MATERIALS	2.05	TONS / CU YD
BITUMINOUS MAT PRIME COAT	0.08	GAL / SQ YD
	0.375	GAL / SQ YD
AGGREGATE PRIME COAT	0.002	TONS / SQ YD
HMA RESURFACING	112	LBS / SQ YD / IN
SHORT TERM PAVEMENT MARKING	10	FT / 100 FT OF APPLICATION
TEMPORARY DITCH CHECKS	5	TONS AGGREGATE / EACH
- MEMBERS OF JULIE KNOWN TO BE WITHIN THE LIMITS OF THE IMPROVEMENT ARE:

TELEPHONE- AT&T
ELECTRIC- COMMONWEALTH EDISON
- THE CHANNEL EXCAVATION QUANTITY HAS BEEN ESTIMATED. THE GRADING SHALL BEGIN AT THE PROPOSED STRUCTURE AND TIE INTO THE EXISTING CHANNEL UPSTREAM AND DOWNSTREAM, WITHIN THE RIGHT-OF-WAY LIMITS. LAYOUT OF CHANNEL EXCAVATION MAY BE VARIED IN THE FIELD TO SUIT GROUND CONDITIONS AS DIRECTED BY THE ENGINEER.

GENERAL NOTES

- THE FOLLOWING ITEMS AND APPROXIMATE QUANTITIES ARE INCLUDED IN THE "SCHEDULE OF PRICES" IN ORDER TO ESTABLISH A UNIT COST FOR WORK REQUIRED TO COMPLETE THE FIELD TILE ADJUSTMENT. THE ACTUAL QUANTITY OF EACH ITEM SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

STORM SEWERS, CLASS A, TYPE 2, 8"	50	FOOT
STORM SEWER REMOVAL 8"	50	FOOT
FIELD TILE JUNCTION VAULTS, 2' DIA.	2	EACH

COMMITMENTS

- NONE

HIGHWAY STANDARDS

- 000001-05 - STANDARD SYMBOLS, ABBREVIATIONS & PATTERNS
- 001001-01 - AREAS OF REINFORCEMENT REBARS
- 001006 - DECIMAL OF AN INCH & OF A FOOT
- 280001-04 - TEMPORARY EROSION CONTROL SYSTEMS
- 420401-06 - BRIDGE APPROACH PAVEMENT
- 482001-02 - HMA SHOULDER ADJACENT TO FLEXIBLE PAVEMENT
- 482011-03 - HMA SHLD. STRIPS/SHLDS. WITH RESURFACING OR WIDENING AND RESURFACING PROJECTS
- 515001-02 - NAME PLATE FOR BRIDGES
- 542401 - METAL END SECTION FOR PIPE CULVERTS
- 601101 - CONCRETE HEADWALL FOR PIPE DRAIN
- 602301-01 - INLET-TYPE A
- 604006-03 - FRAME & GRATE TYPE 3
- 606001-03 - CONCRETE CURB TYPE B & COMBINATION CONCRETE CURB & GUTTER
- 606006-01 - OUTLETS FOR CONC. CURB AND GUTTER TYPE B-15.60 (B-6.24)
- 630001-07 - STEEL PLATE BEAM GUARDRAIL
- 630201-05 - PCC/HMA STABILIZATION AT STEEL PLATE BEAM GUARDRAIL
- 630301-04 - SHOULDER WIDENING FOR TYPE 1 GUARDRAIL TERMINALS
- 631031-06 - TRAFFIC BARRIER TERMINAL TYPE 6
- 635006-02 - REFLECTOR AND TERMINAL MARKER REPLACEMENT
- 635011-01 - REFLECTOR MARKER & MOUNTING DETAILS
- 701001-01 - OFF-RD OPERATIONS, 2L, 2W, MORE THAN 4.5 M (15') AWAY
- 701006-02 - OFF-RD OPERATIONS, 2L, 2W, 15'-24' FROM PAVEMENT EDGE
- 701301-02 - LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
- 701311-02 - LANE CLOSURE, 2L, 2W MOVING OPERATIONS - DAY ONLY
- 701201-02 - LANE CLOSURE, 2L, 2W-DAY ONLY, FOR SPEEDS ≥ 45 MPH
- 701321-09 - LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
- 701326-02 - LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR SPEEDS ≥ 45 MPH
- 701901 - TRAFFIC CONTROL DEVICES
- 704001-04 - TEMPORARY CONCRETE BARRIER
- 720001 - SIGN PANEL MOUNTING DETAILS
- 720006-01 - SIGN PANEL ERECTING DETAILS
- 781001-02 - TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DISTRICT THREE

REVIEWED BY: Paul Powell
DISTRICT STUDIES & PLANS ENGINEER

DATE: 6-14-08

EXAMINED BY: Herb Jones
DISTRICT CONSTRUCTION ENGINEER

Steve L. Phillips
DISTRICT MATERIALS ENGINEER

Bruce C. Hock
DISTRICT OPERATIONS ENGINEER

FILE NAME = sheeta81.dgn	USER NAME = #USER#	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL NOTES, COMMITMENTS, & HIGHWAY STANDARDS	F.A.P. RTE. 326	SECTION 119 BR	COUNTY GRUNDY	TOTAL SHEETS 68	SHEET NO. 2	
	PLOT SCALE = 20,000' / IN.	CHECKED -	REVISED -			SCALE:	SHEET NO. OF SHEETS	STA.	TO STA.	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT
	PLOT DATE = 8/13/2008	DATE -	REVISED -			CONTRACT NO. 66687					

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODES	
				1000	X071-2A
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	12	12	
20100500	TREE REMOVAL, ACRES	ACRE	0.25	0.25	
20200100	EARTH EXCAVATION	CU YD	315	315	
20300100	CHANNEL EXCAVATION	CU YD	257	257	
20400800	FURNISHED EXCAVATION	CU YD	479	479	
20700400	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	127		127
25000300	SEEDING, CLASS 3	ACRE	0.75	0.75	
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	77	77	
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	77	77	
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	77	77	
25100115	MULCH, METHOD 2	ACRE	0.75	0.75	
25100630	EROSION CONTROL BLANKET	SQ YD	871	871	
25200100	SODDING	SQ YD	672	672	
25200200	SUPPLEMENTAL WATERING	UNIT	30.3	30.3	
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	225	225	
28000300	TEMPORARY DITCH CHECKS	EACH	2	2	
28000400	PERIMETER EROSION BARRIER	FOOT	2,368	2,368	
28100105	STONE RIPRAP, CLASS A3	SQ YD	4	4	
28100107	STONE RIPRAP, CLASS A4	SQ YD	1,597		1,597
28200200	FILTER FABRIC	SQ YD	1,601	4	1,597
31100100	SUB-BASE GRANULAR MATERIAL, TYPE A	TON	304	304	
35600708	HOT-MIX ASPHALT BASE COURSE WIDENING, 8"	SQ YD	634	634	
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	82	82	
40201000	AGGREGATE FOR TEMPORARY ACCESS	TON	109	109	
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	287	287	
40600300	AGGREGATE (PRIME COAT)	TON	9	9	
40600635	LEVELING BINDER (MACHINE METHOD), N70	TON	90	90	
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	320	320	
40600990	TEMPORARY RAMP	SQ YD	60	60	
40603085	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N70	TON	855	855	
40603340	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70	TON	258	258	
40800050	INCIDENTAL HOT-MIX ASPHALT SURFACING	TON	35	35	
42001165	BRIDGE APPROACH PAVEMENT	SQ YD	240	240	
44000100	PAVEMENT REMOVAL	SQ YD	320	320	
44000151	HOT-MIX ASPHALT SURFACE REMOVAL, 1/2"	SQ YD	2,737	2,737	
44000159	HOT-MIX ASPHALT SURFACE REMOVAL, 2 1/2"	SQ YD	450	450	
44000200	DRIVEWAY PAVEMENT REMOVAL	SQ YD	102	102	
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	1,300	1,300	

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODES	
				1000	X071-2A
44000920	BITUMINOUS CONCRETE SHOULDER REMOVAL	SQ YD	848	848	
48101600	AGGREGATE SHOULDERS, TYPE B 8"	SQ YD	172	172	
48203100	HOT-MIX ASPHALT SHOULDERS	TON	283	283	
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1		1
50105210	REMOVE EXISTING CULVERTS	FOOT	53	53	
50200100	STRUCTURE EXCAVATION	CU YD	332		332
50300100	FLOOR DRAINS	EACH	18		18
50300225	CONCRETE STRUCTURES	CU YD	239.9		239.9
50300255	CONCRETE SUPERSTRUCTURE	CU YD	270.2		270.2
50300260	BRIDGE DECK GROOVING	SQ YD	770		770
50300280	CONCRETE ENCASEMENT	CU YD	10.4		10.4
50300300	PROTECTIVE COAT	SQ YD	1,002		1,002
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1		1
50500505	STUD SHEAR CONNECTORS	EACH	3,762		3,762
50800105	REINFORCEMENT BARS	POUND	11,530		11,530
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	78,410		78,410
50800515	BAR SPLICERS	EACH	757		757
51201600	FURNISHING STEEL PILES HP12X53	FOOT	907		907
51202305	DRIVING PILES	FOOT	907		907
51203600	TEST PILE STEEL HP12X53	EACH	3		3
51204650	PILE SHOES	EACH	30		30
51205200	TEMPORARY SHEET PILING	SQ FT	1,790		1,790
51500100	NAME PLATES	EACH	1		1
51602000	PERMANENT CASING	FOOT	57		57
51603000	DRILLED SHAFT IN SOIL	CU YD	42.0		42.0
52000110	PREFORMED JOINT STRIP SEAL	FOOT	106.0		106.0
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	18		18
52100530	ANCHOR BOLTS, 1 1/4"	EACH	24		24
52100540	ANCHOR BOLTS, 1 1/2"	EACH	24		24
54215547	METAL END SECTIONS 12"	EACH	2		2
550A0320	STORM SEWERS, CLASS A, TYPE 2 8"	FOOT	50		50
55100300	STORM SEWER REMOVAL 8"	FOOT	50		50
58700300	CONCRETE SEALER	SQ FT	2,318		2,318
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	74		74
60100945	PIPE DRAINS 12"	FOOT	50		50
60109580	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	166		166
60235700	INLETS, TYPE A, TYPE 3 FRAME AND GRATE	EACH	2		2
60500060	REMOVING INLETS	EACH	4		4

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODES	
				1000	X071-2A
60605519	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.36	FOOT	1,183.0	1,183.0	
60900515	CONCRETE THRUST BLOCKS	EACH	2	2	
61133100	FIELD TILE JUNCTION VAULTS, 2' DIA.	EACH	2	2	
* 63000000	STEEL PLATE BEAM GUARD RAIL, TYPE A	FOOT	762.5	762.5	
* 63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4	4	
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	2	2	
* 63100169	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) FLARED	EACH	1	1	
63200310	GUARDRAIL REMOVAL	FOOT	1,104	1,104	
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	9	9	
67100100	MOBILIZATION	L SUM	1	1	
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1	1	
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1	1	
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1	
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	142	142	
70300210	TEMPORARY PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	63	63	
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	3,209	3,209	
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	1,180	1,180	
70400100	TEMPORARY CONCRETE BARRIER	FOOT	900	900	
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	790	790	
* 78000100	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	63	63	
* 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	2,292	2,292	
* 78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	287	287	
* 78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	24	24	
* 78008210	POLYUREA PAVEMENT MARKING TYPE I - LINE 4"	FOOT	538	538	
* 78008230	POLYUREA PAVEMENT MARKING TYPE I - LINE 6"	FOOT	68	68	
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	15	15	
* 78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	4	4	
* 78200420	GUARDRAIL MARKERS, TYPE B	EACH	17	17	
78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	3	3	
78300100	PAVEMENT MARKING REMOVAL	SQ FT	1,235	1,235	
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	19	19	
X0323830	DRAINAGE SCUPPERS, DS-11	EACH	4		4
X0919000	TEMPORARY PAVEMENT REMOVAL	SQ YD	123	123	
X5020501	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 1	EACH	1		1
X5020502	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 2	EACH	1		1
XZ030260	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	2		2
Z0005215	BITUMINOUS STABILIZATION 6" AT STEEL PLATE BEAM GUARD RAIL	SQ YD	310	310	
Z0030350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2		2

* SPECIALTY ITEMS

FILE NAME = sheets81.dgn

USER NAME = #USER#
 PLOT SCALE = 20.0000' / IN.
 PLOT DATE = 8/13/2008

DESIGNED -
 DRAWN -
 CHECKED -
 DATE -

REVISED -
 REVISED -
 REVISED -
 REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

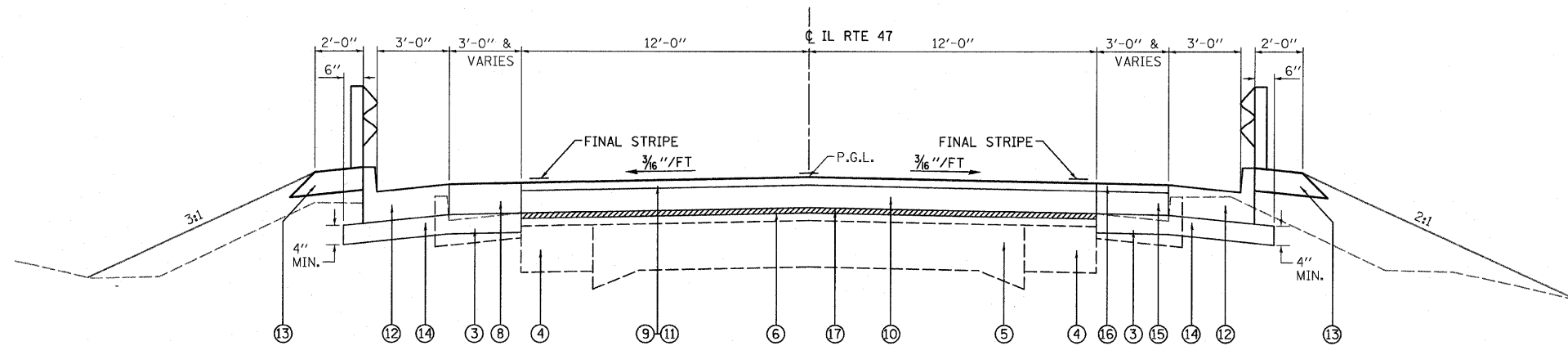
SUMMARY OF QUANTITIES
 SCALE: SHEET NO. OF SHEETS STA. TO STA.

F.A.P. RTE. 326	SECTION 119 BR	COUNTY GRUNDY	TOTAL SHEETS 68	SHEET NO. 3
CONTRACT NO. 66687				
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				

LEGEND

- ① EXISTING AGGREGATE SHOULDER
- ② EXISTING BITUMINOUS SHOULDER
- ③ EXISTING COMBINATION CURB & GUTTER, TYPE B-6.36
- ④ EXISTING BITUMINOUS CONCRETE BASE COURSE WIDENING, 7"
- ⑤ EXISTING PAVEMENT
- ⑥ EXISTING EXISTING BITUMINOUS CONCRETE OVERLAY
- ⑦ PROPOSED AGGREGATE SHOULDERS, TYPE B, 8"
- ⑧ PROPOSED HOT-MIX ASPHALT SHOULDERS, 8"
- ⑨ PROPOSED 1 1/2" HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70
- ⑩ PROPOSED VARIABLE DEPTH HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N70
- ⑪ PROPOSED 1" LEVELING BINDER (MACHINE METHOD), N70
- ⑫ PROPOSED COMBINATION CURB & GUTTER, TYPE B-6.36
- ⑬ PROPOSED BITUMINOUS STABILIZATION 6" AT STEEL PLATE BEAM GUARD RAIL
- ⑭ PROPOSED SUB-BASE GRANULAR MATERIAL, TYPE A
- ⑮ PROPOSED HOT-MIX ASPHALT BASE COURSE WIDENING (8")
- ⑯ PROPOSED HOT-MIX ASPHALT SHOULDERS (1 1/2")
- ⑰ PROPOSED HOT-MIX ASPHALT SURFACE REMOVAL (1/2")

NOTE: ESTIMATED VARIABLE DEPTH HMA BINDER THICKNESS
 STA. 575+75.00 TO STA. 578+50.00 - NONE ANTICIPATED
 STA. 578+50.00 TO STA. 581+31.00 - VARIES 2" TO 1'-7 1/4"
 STA. 584+00.00 TO STA. 587+00.00 - VARIES 2" TO 1'-7 3/4"
 STA. 587+00.00 TO STA. 589+90.00 - NONE ANTICIPATED



PROPOSED TYPICAL SECTION

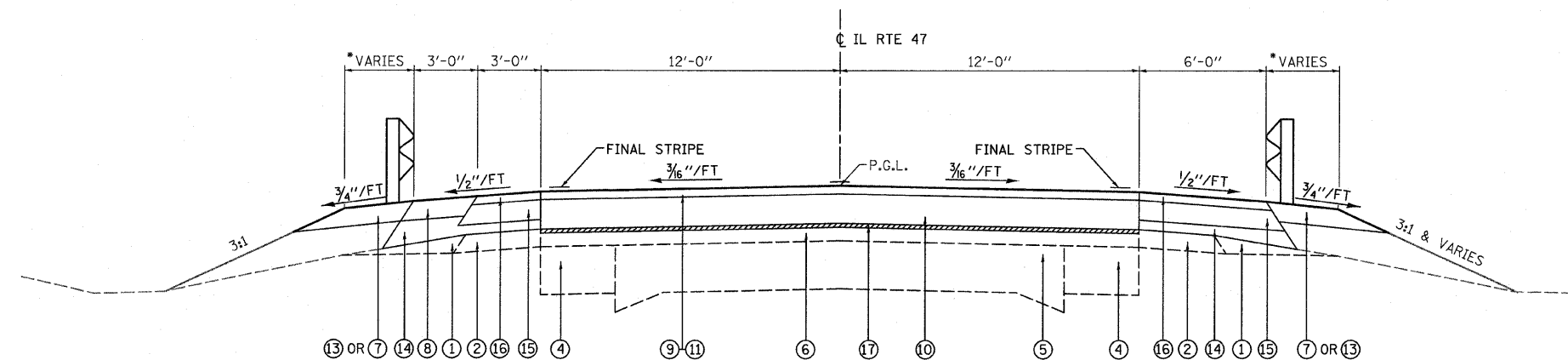
(NORTH OF STRUCTURE)
 STA. 583+99.98 TO STA. 589+90.00

MIXTURE REQUIREMENTS

	HMA BINDER	HMA LEVEL BINDER	HMA SURFACE COURSE	HMA BASE COURSE & BASE COURSE WIDENING
PG GRADE	PG64-22	PG64-22	PG58-22	PG58-22
MAX % RAP ALLOWABLE**	25%	25%	15%	25%
DESIGN AIR VOIDS	4.0% @ N70	4.0% @ N70	4.0% @ N70	3.0% @ N50
MIXTURE COMPOSITION	IL 19.0	IL 9.5	IL 12.5 or IL 9.5	IL 19.0
FRICTION AGGREGATE			MIXTURE D	
DENSITY TEST METHOD	CORES/NUCLEAR	SATISFACTION OF ENGINEER	CORES/NUCLEAR	*

* MATERIAL SHALL BE COMPACTED TO 93.0-97.4 PERCENT OF THE MAXIMUM THEORETICAL DENSITY, EXCEPT THAT WHEN PLACED AS FIRST LIFT ON AN UNIMPROVED SUBGRADE THE MINIMUM PERCENT COMPACTION SHALL BE 92.0 PERCENT. THE MAXIMUM THEORETICAL DENSITY SHALL BE DETERMINED FROM THE MOVING AVERAGE AS SPECIFIED IN THE QC/OA SPECIFICATION.

** WHEN MORE THAN 15% RAP IS USED, A SOFTER ASPHALT BINDER (PG58-22) MAY BE REQUIRED AS DETERMINED BY THE ENGINEER.



PROPOSED TYPICAL SECTION

(SOUTH OF STRUCTURE)
 STA. 575+75.00 TO STA. 581+31.52
 STRUCTURE OMISSION STA. 581+60.99 TO STA. 583+70.51

* NOTE: AGGREGATE SHOULDER SHALL BE 2'-0" WIDE
 BITUMINOUS STABILIZATION SHALL BE 3'-0" WIDE

FILE NAME = sheets01.dgn	USER NAME = *USER*	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TYPICAL SECTIONS	F.A.P. RTE. 326	SECTION 119 BR	COUNTY GRUNDY	TOTAL SHEETS 68	SHEET NO. 4
	PLOT SCALE = 20.0000' / IN.	DRAWN -	REVISED -			SCALE:	SHEET NO. OF SHEETS	STA. TO STA.	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT
PLOT DATE = 8/13/2008	CHECKED -	DATE -	REVISED -							

GUARDRAIL REMOVAL/REPLACEMENT

STATION	STATION	SPBGR TY A 63000000 (FOOT)	TRAF BAR TERM T6 63100085 (EACH)	TR BAR TERM T1 SPL TAN 63100167 (EACH)	TR BAR TERM T1 SPL FLR (NOTE 1) 63100169 (EACH)	GUARDRAIL REMOV 63200310 (FOOT)	GUARDRAIL MKR TYPE B (NOTE 2) 78200420 (EACH)	TERMINAL MARKER - DA 78201000 (EACH)	BIT STAB 6 AT SPBGR Z0005215 (SQ YD)
LT 579+44	LT 581+74					115			65
RT 580+85	RT 582+06					102			40
LT 583+23	LT 586+32					252			67
RT 583+55	RT 589+90					635			138
LT 579+78.5	LT 580+28.5			1					
LT 580+28.5	LT 580+91	62.5							
LT 580+91	LT 581+34		1						
RT 580+92.5	RT 581+30				1				
RT 581+30	RT 581+73		1						
LT 583+58	LT 584+01		1						
LT 584+01	LT 585+51	150.0							
LT 585+51	LT 586+01			1					
RT 583+97.5	RT 584+40.5		1						
RT 584+40.5	RT 589+90	550.0							
LT 579+78.5	LT 586+01						7	2	
RT 580+92.5	RT 589+90						10	1	
TOTAL		762.5	4	2	1	1104	17	3	310

GUARDRAIL NOTES:

- TR BAR TERM T1 SPL FLR IS SHORTENED TO A LENGTH OF 37.5 FT.
- ALL GUARDRAIL MKR TYPE B ARE SILVER MONODIRECTIONAL.

EARTHWORK SCHEDULE

STATION	STATION	EARTH EXCAVATION 20200100 (CU YD)	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE (NOTE 1) (CU YD)	EMBANKMENT (CU YD)	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-) 20400800 (CU YD)	CHANNEL EXCAV 20300100 (CU YD)
575+75.00	581+61.52	169	127	238	-111	
581+61.52	583+69.98					257
583+69.98	589+90.00	146	110	478	-368	
TOTAL		315	237	716	-479	257

EARTHWORK NOTES:

- ESTIMATED SHRINKAGE FACTOR = 25%.
- FURNISHED EXCAVATION = 479 CU YD.
- SEE GENERAL NOTES FOR CHANNEL EXCAVATION LIMITS.
- STRUCTURE EXCAVATION IS NOT INCLUDED IN EARTHWORK QUANTITIES.

SEEDING SCHEDULE

STATION	STATION	SEEDING CL 3 25000300 (ACRE)	NITROGEN FERT NUTR 25000400 (POUND)	PHOSPHORUS FERT NUTR 25000500 (POUND)	POTASSIUM FERT NUTR 25000600 (POUND)	MULCH METHOD 2 25100115 (ACRE)	SODDING 25200100 (SQ YD)	SUPPLE WATERING 25200200 (UNIT)	TEMP EROS CONTR SEED 28000250 (POUND)
LT 575+75	LT 581+43	0.20	18	18	18	0.20			60
RT 575+75	RT 579+42	0.10	9	9	9	0.10			30
RT 579+42	RT 581+79		9	9	9		672	30.3	
LT 583+52	LT 589+90	0.25	23	23	23	0.25			75
RT 583+88	RT 589+90	0.20	18	18	18	0.20			60
TOTAL		0.75	77	77	77	0.75	672	30.3	225

PAVEMENT MARKING SCHEDULE

STATION	STATION	SHORT-TERM PAVT MKING 70300100 (FOOT)	TEMP PVT MK LTR & SYM 70300210 (SQ FT)	TEMP PVT MK LINE 4 70300220 (FOOT)	WORK ZONE PAVT MK REM 70301000 (SQ FT)	THPL PVT MK LTR & SYM 78000100 (SQ FT)	THPL PVT MK LINE 4 78000200 (FOOT)	THPL PVT MK LINE 6 78000400 (FOOT)	THPL PVT MK LINE 24 78000650 (FOOT)	POLYUREA PM T1 LN 4 78008210 (FOOT)	POLYUREA PM T1 LN 6 78008230 (FOOT)	RAISED REFL PAVT MKR (2-WAY AMBER) 78100100 (EACH)	RAISED REF PVT MKR BR (2-WAY AMBER) 78100105 (EACH)	PAVT MARKING REMOVAL 78300100 (SQ FT)	RAISED REF PVT MK REM 78300200 (EACH)
LT 575+75	LT 581+19			544	181		544							182	
RT 575+75	RT 581+43			568	189		568							190	
CL 575+75	CL 581+31	56		139	65			139				7		70	7
LT 581+19	LT 583+88			269	90					269				90	
RT 581+43	RT 584+12			269	90					269				90	
CL 581+31	CL 584+00	27		68	31						68		4	34	4
LT 583+88	LT 589+90			602	201		602							201	
RT 584+12	RT 589+90		63	602	264	63	578		24					304	
CL 584+00	CL 589+90	59		148	69			148				8		74	8
TOTAL		142	63	3209	1180	63	2292	287	24	538	68	15	4	1235	19

TRAFFIC CONTROL ITEMS

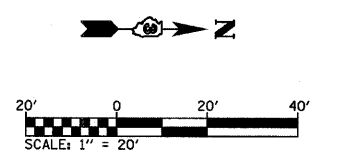
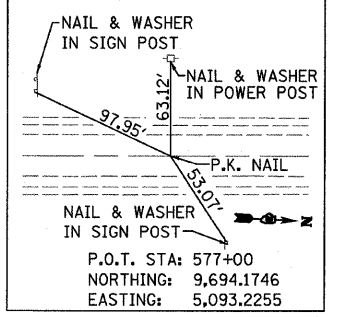
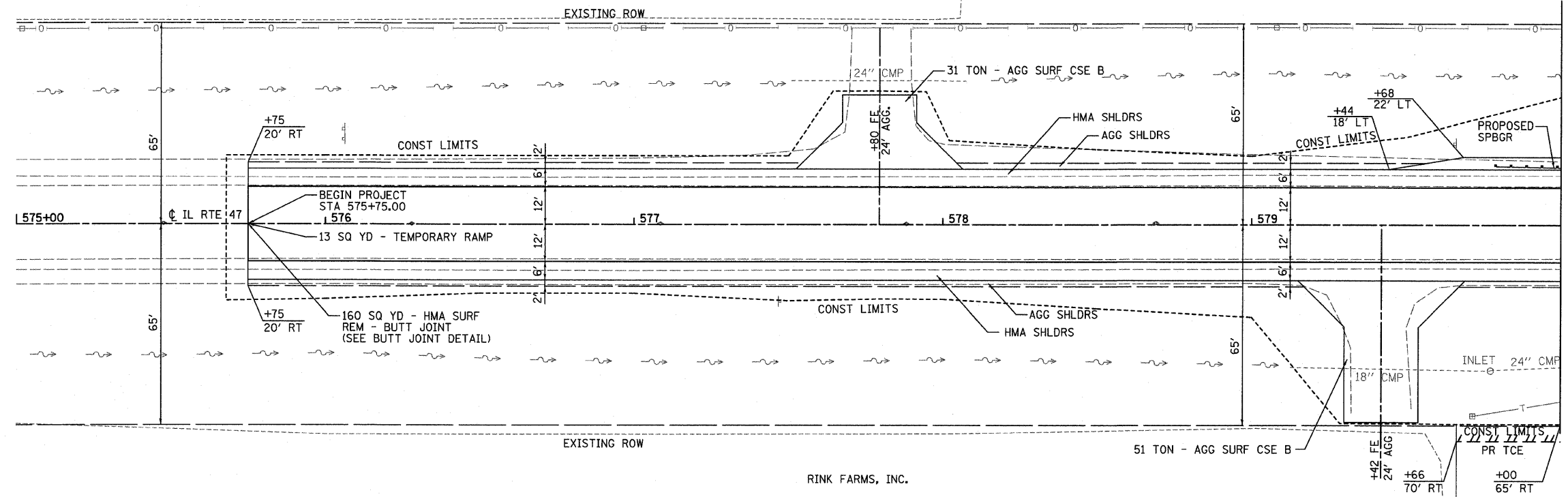
STATION	STATION	TEMP CONC BARRIER 70400100 (FOOT)	REL TEMP CONC BARRIER 70400200 (FOOT)	IMP ATTN TEMP NRN TL3 XZ030260 (EACH)	IMP ATTN REL NRD TL3 Z0030350 (EACH)
STAGE 1					
RT 578+36	RT 587+92			1	
RT 580+09	RT 587+96	790			
RT 587+92	RT 589+28			1	
STAGE 2					
RT 578+29	RT 587+22				1
RT 578+45	LT 587+46	110	790		
LT 587+21	LT 589+13				1
TOTAL		900	790	2	2

PAVEMENT SCHEDULE

STATION	STATION	SUB GRAN MAT A 31100100 (TON)	HMA BC WID 8 35600708 (SQ YD)	BIT MATLS PR CT 40600100 (GALLON)	AGG PR CT 40600300 (TON)	LEV BIND MM N70 40600635 (TON)	HMA BC IL-19.0 N70 40603085 (TON)	HMA SC "D" N70 40603340 (TON)	BR APPR PAVT 42001165 (SQ YD)	PAVEMENT REM 44000100 (SQ YD)	HMA SURF REM 1/2 44000151 (SQ YD)	HMA SURF REM 2 1/2 44000159 (SQ YD)	COMB CURB GUTTER REM 44000500 (FOOT)	BIT CONC SHLD REM 44000920 (SQ YD)	AGGREGATE SHLDS B 8 48101600 (SQ YD)	HMA SHOULDERS 48203100 (TON)	COMB CC&G TB6.36 60605519 (FOOT)	TEMP PAVT REMOVAL X0919000 (SQ YD)
575+75	581+31			119	3	45	410	125			1323							
581+31	581+61								120	160								
583+70	584+00								120	160								
584+00	589+90			126	3	45	445	133			1414	450						
LT 575+75	LT 581+19	55	126	10	1									264	75	124		21
RT 575+75	RT 581+48	60	382	22	1									261	97	70		102
LT 583+85	LT 589+90	97											665	113	69		608.0	
RT 584+13	RT 589+90	92	126	10	1								635	210	20		575.0	
TOTAL		304	634	287	9	90	855	258	240	320	2737	450	1300	848	172	283	1183.0	123

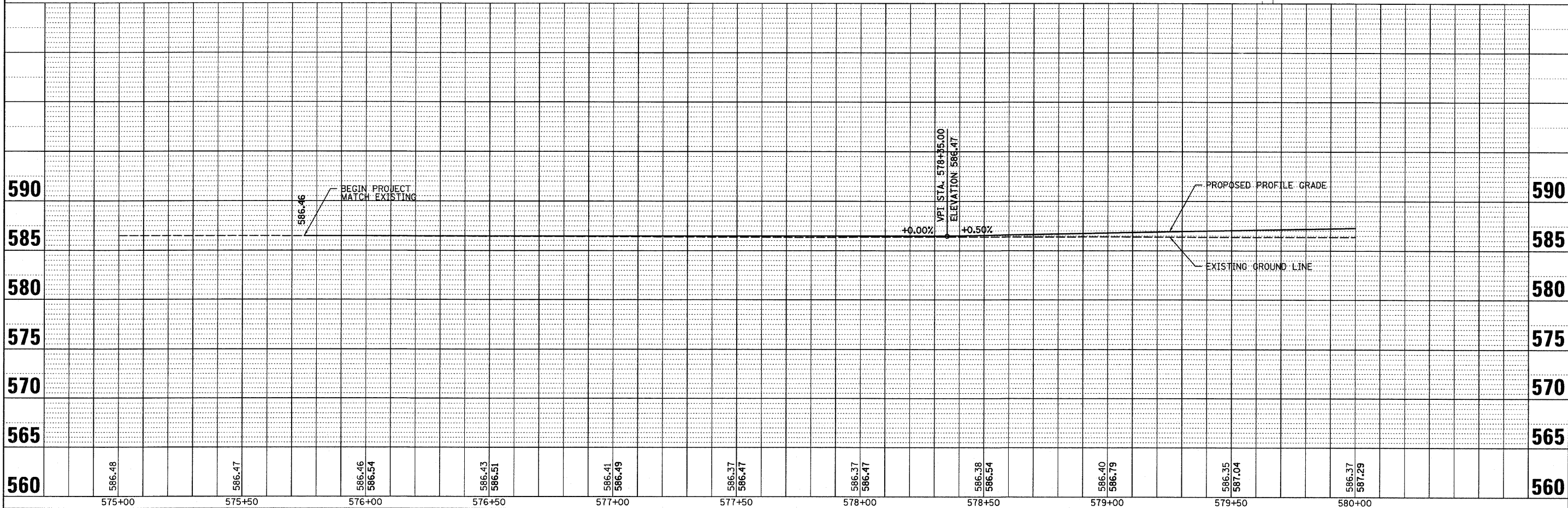
R. EUGENE WALLACE AND
MARJORIE WALLACE

CENTERLINE TIE



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NOTE BOOK	ALIGNMENT CHECKED	
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PROFILE	SURVEYED	DATE
NOTE BOOK	GRADES CHECKED	
NO.	BLK. NOTED	
	STRUCTURE NOTATIONS CHFD	

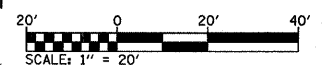
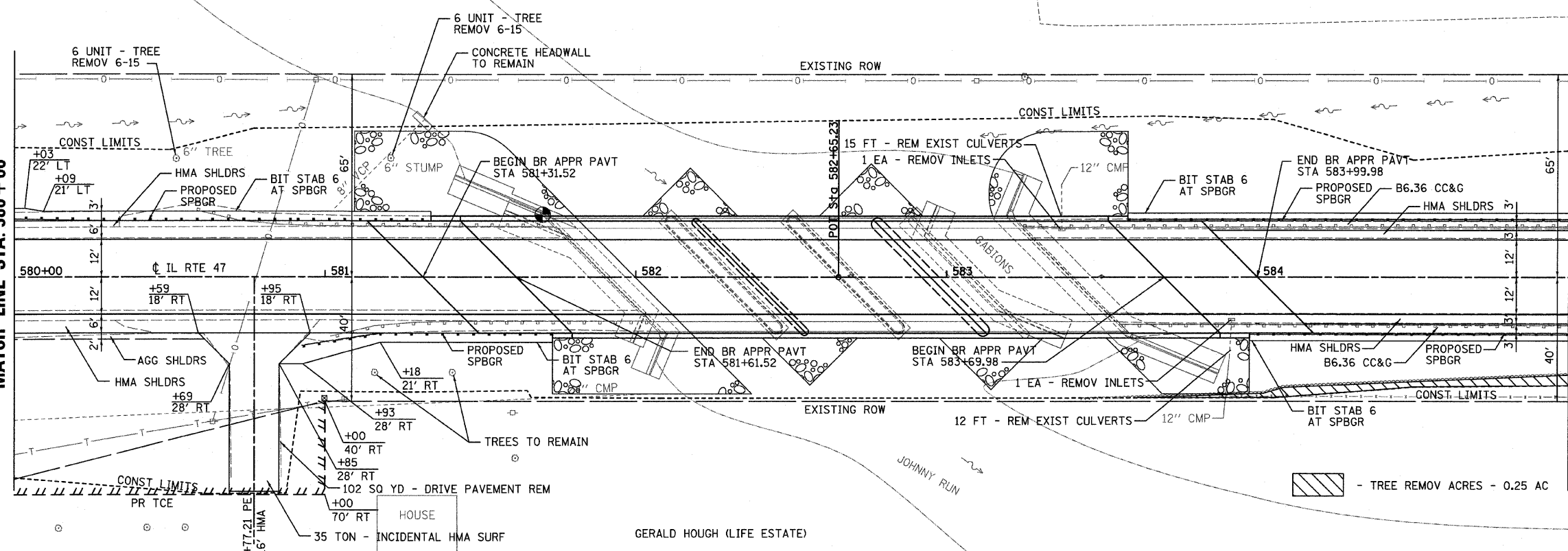


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sheets.dgn		DRAWN -	REVISED -			326	119 BR	GRUNDY	68	6	
	PLOT SCALE = 20.0000' / IN.	CHECKED -	REVISED -			SCALE: SHEET NO. OF SHEETS STA. 575+00 TO STA. 580+00		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT		CONTRACT NO. 66687	
	PLOT DATE = 8/13/2008	DATE -	REVISED -								

R. EUGENE WALLACE AND MARJORIE WALLACE

MATCH LINE STA. 580 + 00

MATCH LINE STA. 585 + 00

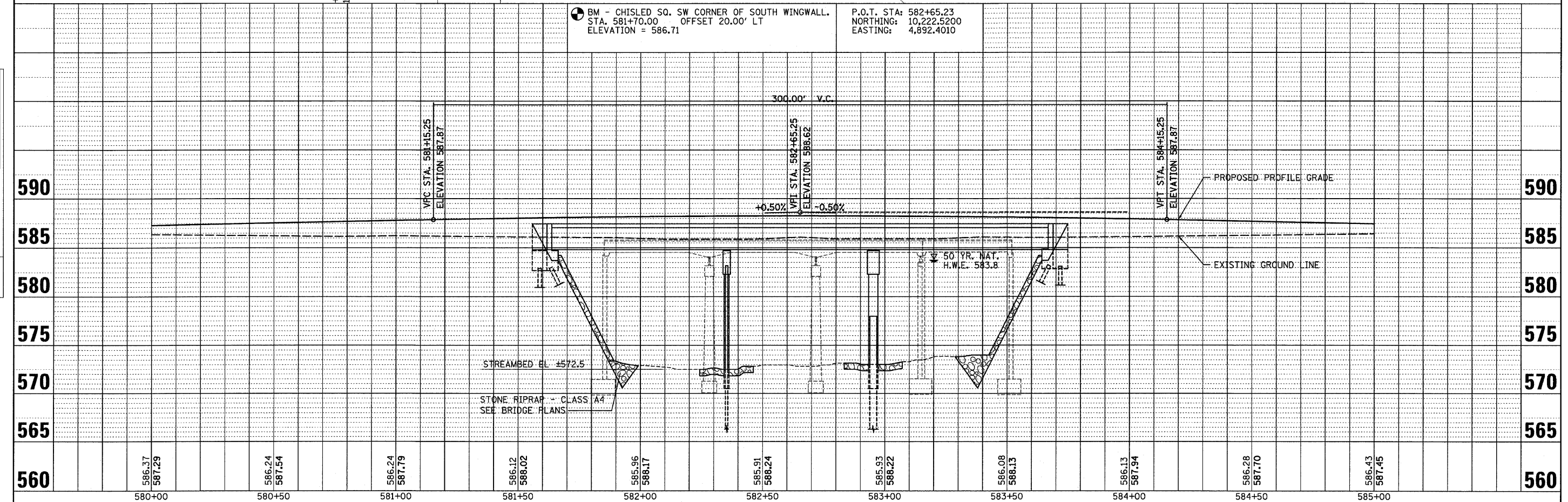


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NOTE BOOK	ALIGNMENT CHECKED	BY
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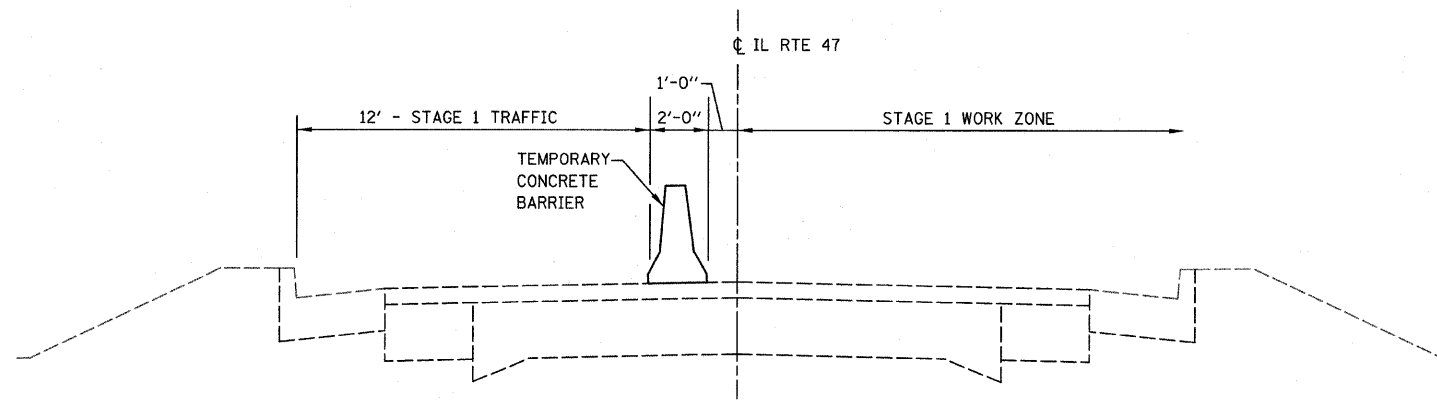
PROFILE	SURVEYED	DATE
NOTE BOOK	GRADES CHECKED	BY
NO.	BLM. NOTED	
	STRUCTURE NOTATIONS CTRD	

BM - CHISEL SQ. SW CORNER OF SOUTH WINGWALL.
STA. 581+70.00 OFFSET 20.00' LT
ELEVATION = 586.71

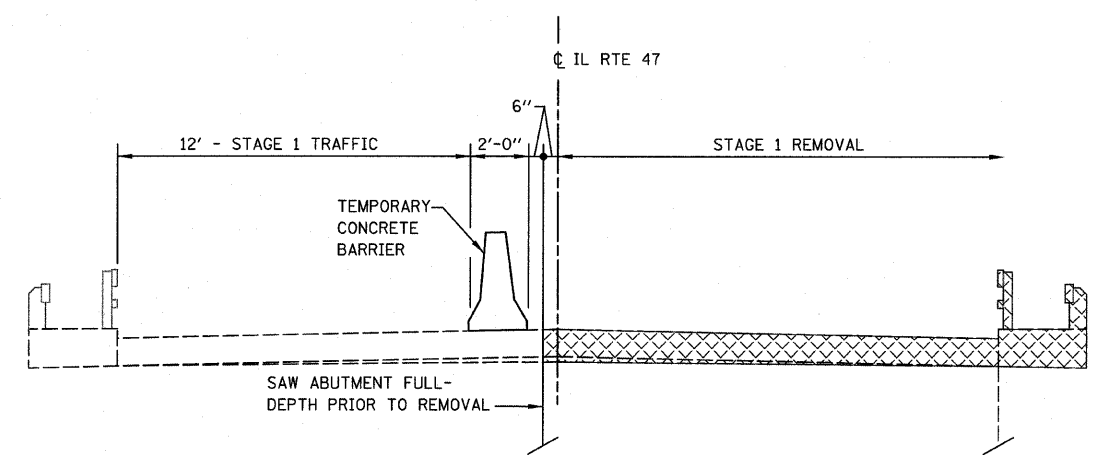
P.O.T. STA: 582+65.23
NORTHING: 10,222.5200
EASTING: 4,892.4010



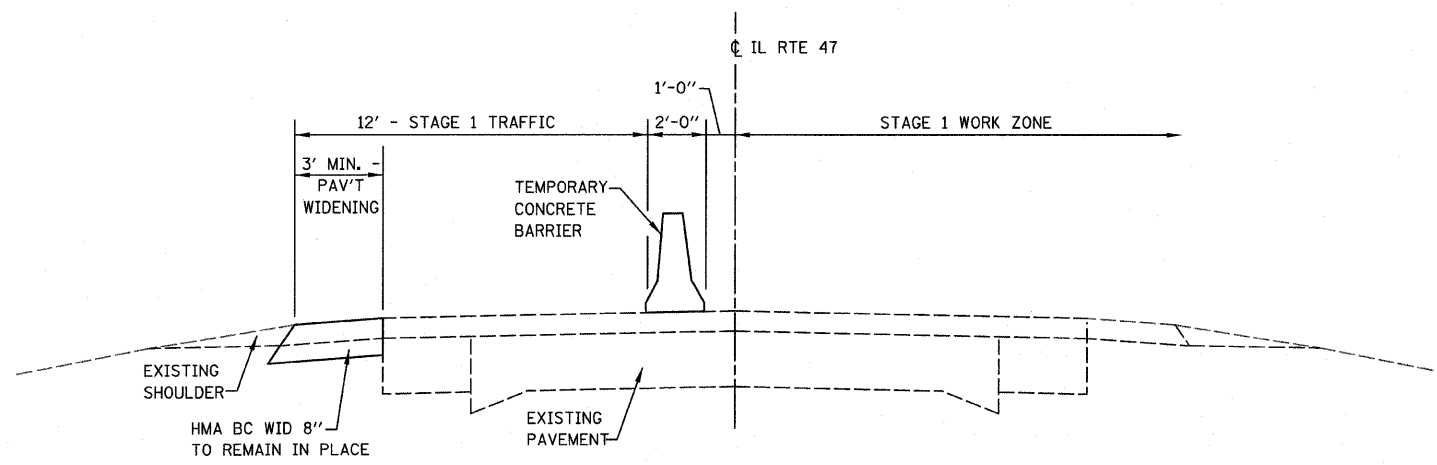
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sheets.dgn		DRAWN -	REVISED -			326	119 BR	GRUNDY	68	7	
		CHECKED -	REVISED -			CONTRACT NO. 66687					
		DATE -	REVISED -			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					



STAGE 1 CONSTRUCTION TYPICAL SECTION
(NORTH OF STRUCTURE, LOOKING NORTH)
STA. 583+42 TO STA. 587+24



STAGE 1 CONSTRUCTION TYPICAL SECTION
(LOOKING NORTH AT STRUCTURE)
STA. 581+91 TO STA. 583+42



STAGE 1 CONSTRUCTION TYPICAL SECTION
(SOUTH OF STRUCTURE, LOOKING NORTH)
STA. 578+00 TO STA. 581+91

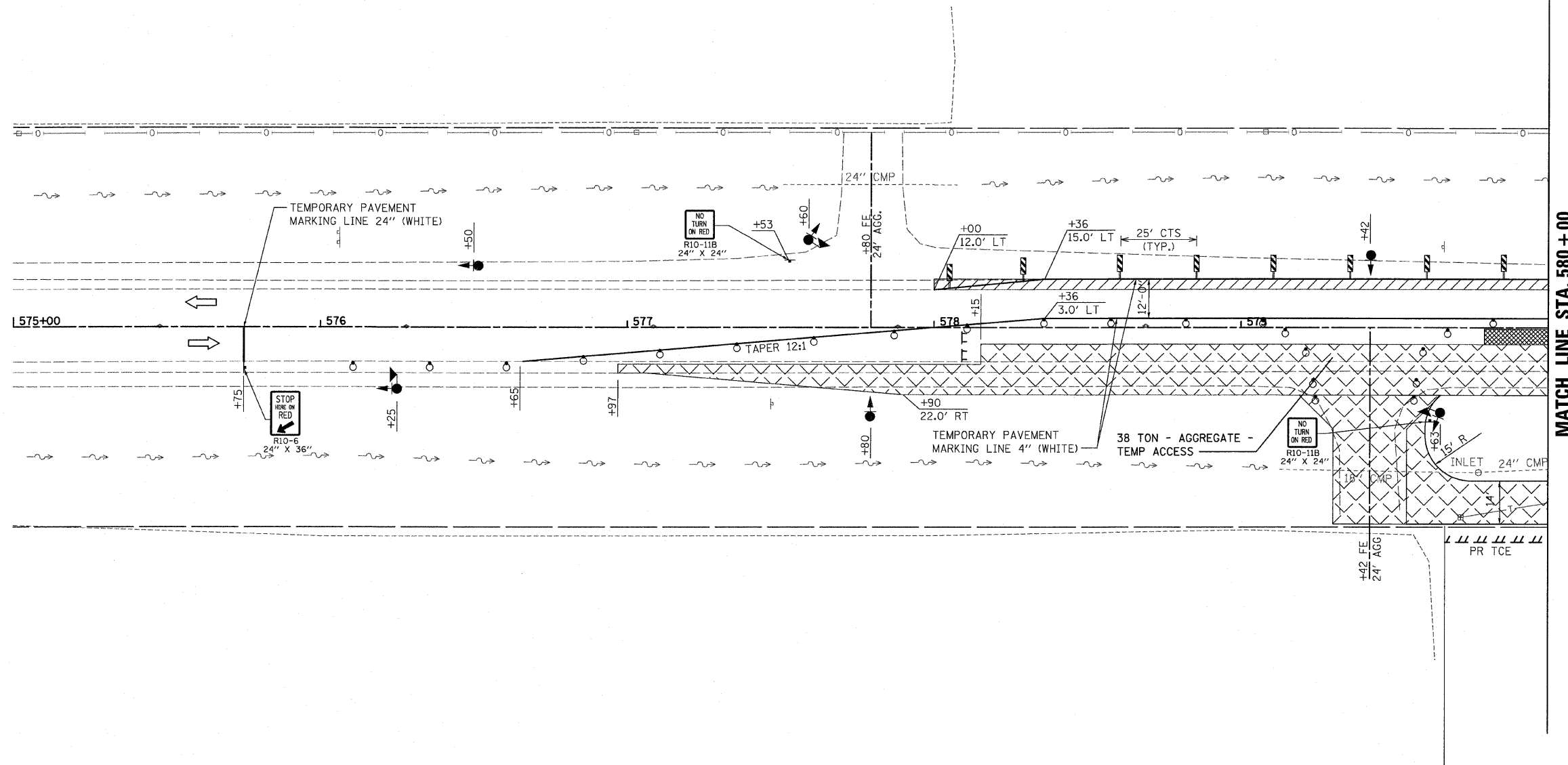
STAGE CONSTRUCTION GENERAL NOTES

- ONE LANE OF TRAFFIC ON ILLINOIS ROUTE 47 SHALL BE MAINTAINED AT ALL TIMES.
- THE FURNISHING, PLACEMENT AND REMOVAL OF THE TYPE C BI-DIRECTIONAL REFLECTORS SHALL BE INCLUDED IN THE COST OF "TRAFFIC CONTROL AND PROTECTION, STANDARD 701321."
- EMERGENCY ACCESS SHALL BE PROVIDED AT ALL TIMES.
- PRIOR TO INSTALLATION OF TRAFFIC CONTROL AND PROTECTION, STANDARD 701321, A TEMPORARY SIGN STATING "DO NOT STOP ON TRACKS" SHOULD BE INSTALLED NORTH OF RAILROAD TRACK FOR THE SOUTHBOUND LANE.

SUGGESTED STAGE CONSTRUCTION

- SUGGESTED STAGE 1**
- PHASE 1
- UTILIZING TRAFFIC CONTROL AND PROTECTION, STANDARD 701326, CONSTRUCT THE HMA BASE COURSE WIDENING, 8" ON THE LT SIDE OF THE ROADWAY FROM STA. 578+00 TO STA. 581+78.
- PHASE 2
- UTILIZING TRAFFIC CONTROL AND PROTECTION, STANDARD 701006, CONSTRUCT TEMPORARY AGGREGATE ROAD CONNECTING THE PRIVATE ENTRANCE AT STA. 580+77 TO THE FIELD ENTRANCE AT STA. 579+44. OWNER WILL USE FIELD ENTRANCE FOR TEMPORARY ACCESS DURING STAGE 1 CONSTRUCTION. INSTALL TEMPORARY TRAFFIC SIGNALS PRIOR TO CLOSING RT HALF OF ROADWAY. ERECT TYPE 3 BARRICADES ACROSS THE ENTRANCE ON THE RT SIDE OF FAP ROUTE 326 AT STA. 580+77.
- PHASE 3
- UTILIZING TRAFFIC CONTROL AND PROTECTION, STANDARD 701321, DIRECT TRAFFIC ON THE LT LANE OF FAP ROUTE 326.
 - CONSTRUCT TEMPORARY SHEET PILING AT NORTH AND SOUTH SIDE OF EXISTING STRUCTURE.
 - REMOVE THE RT SIDE OF THE EXISTING STRUCTURE.
 - CONSTRUCT THE RT SIDE OF THE BRIDGE AND BRIDGE APPROACH PAVEMENT.
 - COMPLETE HMA SURFACE REMOVAL, 1/2" FOR THE RT LANE OF FAP ROUTE 326 FROM STA. 578+15 TO STA. 581+31 AND STA. 584+00 TO STA. 587+24.
 - CONSTRUCT B6.36 COMBINATION CONCRETE CURB & GUTTER ON THE RT SIDE FROM STA. 584+15 TO STA. 589+90.
 - CONSTRUCT THE PROPOSED HMA BINDER COURSE FOR THE RT LANE OF FAP ROUTE 326 FROM STA. 578+15 TO STA. 581+31 AND STA. 584+00 TO STA. 587+24.
 - CONSTRUCT THE HMA BASE COURSE WIDENING, 8" ON THE RT SIDE OF FAP ROUTE 326 FROM STA. 576+97 TO STA. 581+49 AND FROM STA. 584+16 TO STA. 587+94. PROVIDE TEMPORARY AGGREGATE RAMPS FOR RELOCATED PE AT STA. 579+44.
 - UTILIZING ENTRANCE DETAIL, CONSTRUCT PRIVATE ENTRANCE AT STA. 580+77.
 - INSTALL GUARD RAIL AND BITUMINOUS STABILIZATION ON RT SIDE OF FAP ROUTE 326.
 - INSTALL TEMPORARY PAVEMENT MARKING.
- SUGGESTED STAGE 2**
- UTILIZING TRAFFIC CONTROL AND PROTECTION, STANDARD 701321, DIRECT TRAFFIC ON THE RT LANE OF FAP ROUTE 326.
 - REMOVE THE TEMPORARY AGGREGATE ROAD CONNECTION THE PRIVATE ENTRANCE AT STA. 580+77 TO THE FIELD ENTRANCE AT STA. 579+44.
 - REMOVE THE LT SIDE OF THE EXISTING STRUCTURE.
 - CONSTRUCT THE LT SIDE OF THE BRIDGE AND BRIDGE APPROACH PAVEMENT.
 - COMPLETE HMA SURFACE REMOVAL, 1/2" FOR THE LT LANE OF FAP ROUTE 326 FROM STA. 578+80 TO STA. 581+31 AND STA. 584+00 TO STA. 586+61.
 - CONSTRUCT THE PROPOSED BINDER COURSE FOR THE LT LANE OF FAP ROUTE 326 STA. 578+80 TO STA. 581+31 AND STA. 584+00 TO STA. 586+61.
 - CONSTRUCT THE 1.5" HMA SHOULDER LIFT ON THE LT SIDE FROM STA. 578+00 TO STA. 581+31.
 - CONSTRUCT THE 3' HMA SHOULDER ON THE LT SIDE FROM STA. 578+00 TO STA. 581+31 AND FROM STA. 583+85 TO STA. 588+80.
 - CONSTRUCT THE B6.36 COMBINATION CONCRETE CURB & GUTTER ON THE LT SIDE FROM STA. 583+85 TO STA. 589+90.
 - INSTALL GUARD RAIL AND BITUMINOUS STABILIZATION ON THE LT SIDE OF FAP ROUTE 326.
- SUGGESTED STAGE 3**
- REMOVE 2 1/2" OF HMA BINDER COURSE ON THE RT SIDE FROM STA. 583+70 TO STA. 587+24.
 - UTILIZING TRAFFIC CONTROL AND PROTECTION, STANDARD 701306, CONSTRUCT THE PROPOSED HMA LEVELING BINDER & HMA SURFACE COURSE FOR THE LT AND RT LANES OF FAP ROUTE 326 FROM STA. 575+75 TO STA. 589+90.
 - CONSTRUCT THE 6' HMA SHOULDER ON THE LT SIDE FROM STA. 575+75 TO STA. 578+00.
 - CONSTRUCT THE 6' HMA SHOULDER ON THE RT SIDE FROM STA. 575+75 TO STA. 576+97.
 - CONSTRUCT THE HMA SHOULDER ON THE RT SIDE FROM STA. 576+97 TO STA. 577+83 (WIDTH VARIES 0' TO 3').
 - CONSTRUCT THE 1.5" HMA SHOULDER LIFT ON THE RT SIDE FROM STA. 576+97 TO STA. 581+48 AND FROM STA. 584+16 TO STA. 587+94.
 - UTILIZING TRAFFIC CONTROL AND PROTECTION, STANDARD 701326, REMOVE THE EXCESS WIDENING PAVEMENT ON THE RT SIDE OF FAP ROUTE 326 FROM STA. 577+83 TO STA. 580+58 TO A 6' WIDTH AND CONSTRUCT THE PROPOSED 2' AGGREGATE SHOULDERS.
 - UTILIZING TRAFFIC CONTROL AND PROTECTION, STANDARD 701326, CONSTRUCT THE PROPOSED AGGREGATE SHOULDER ON THE LT SIDE OF FAP ROUTE 326 FROM STA. 575+75 TO STA. 579+53 AND ON THE RT SIDE FROM STA. 575+75 TO STA. 576+97.

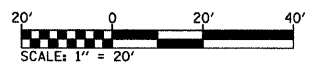
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		DATE -	REVISED -		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT							



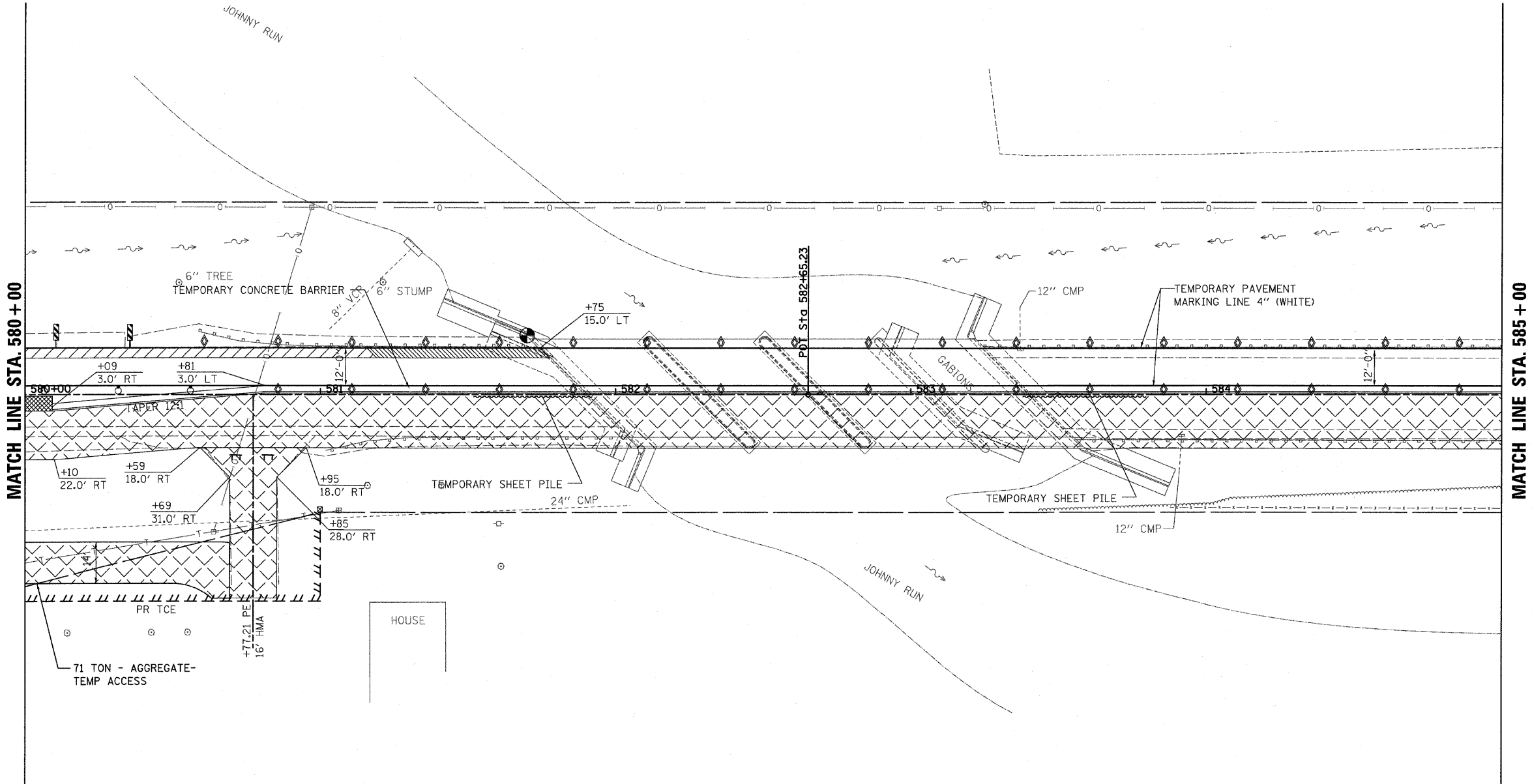
MATCH LINE STA. 580+00

LEGEND

- TRAFFIC SIGNALS
- TRAFFIC SIGNALS WITH MICROWAVE DETECTORS
- DRUM WITH STEADY BURNING LIGHT
- STOP LINE 24"
- IMPACT ATTENUATORS, TEMPORARY (FULLY-REDIRECTIVE, NARROW) TEST LEVEL 3
- DOUBLE VERTICAL PANEL
- TYPE C BI-DIRECTIONAL REFLECTOR
- TYPE III BARRICADE WITH FLASHING LIGHTS
- STEADY BURNING LIGHTS AND DOUBLE VERTICAL PANELS
- WORK AREA
- SIGN
- HMA BASE COURSE WIDENING, 8"
- TEMPORARY HMA BASE COURSE WIDENING 8"
- DIRECTION OF TRAFFIC

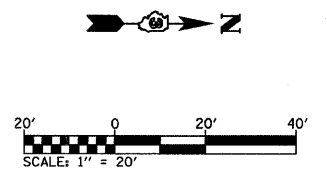


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PLOT SCALE = 20,0000' / IN.		CHECKED -	REVISED -			SCALE: 1"=20'		SHEET NO. OF SHEETS		STA. 575+00 TO STA. 580+00	
PLOT DATE = 8/13/2008		DATE -	REVISED -			FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		CONTRACT NO. 66687	



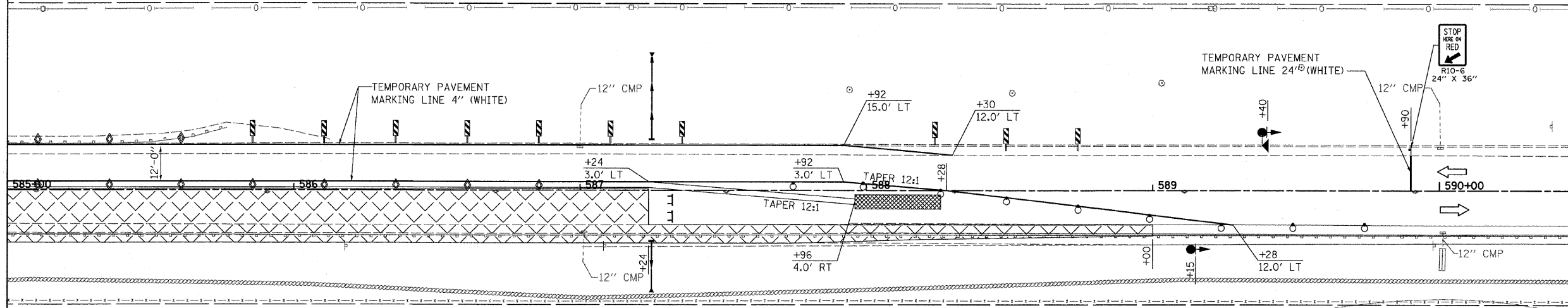
LEGEND

- TRAFFIC SIGNALS
- TRAFFIC SIGNALS WITH MICROWAVE DETECTORS
- DRUM WITH STEADY BURNING LIGHT
- STOP LINE 24"
- IMPACT ATTENUATORS, TEMPORARY (FULLY-REDIRECTIVE, NARROW) TEST LEVEL 3
- DOUBLE VERTICAL PANEL
- TYPE C BI-DIRECTIONAL REFLECTOR
- TYPE III BARRICADE WITH FLASHING LIGHTS
- STEADY BURNING LIGHTS AND DOUBLE VERTICAL PANELS
- WORK AREA
- SIGN
- HMA BASE COURSE WIDENING, 8"
- TEMPORARY HMA BASE COURSE WIDENING 8"
- DIRECTION OF TRAFFIC

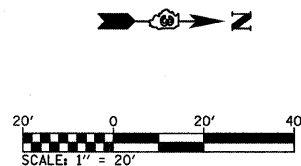


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	PLOT SCALE = 20.0000' / IN.	DRAWN -	REVISED -			SCALE: 1"=20'		SHEET NO. OF SHEETS STA. 580+00 TO STA. 585+00		CONTRACT NO. 66687	
	PLOT DATE = 8/13/2008	CHECKED -	REVISED -			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					
		DATE -	REVISED -								

MATCH LINE STA. 585+00

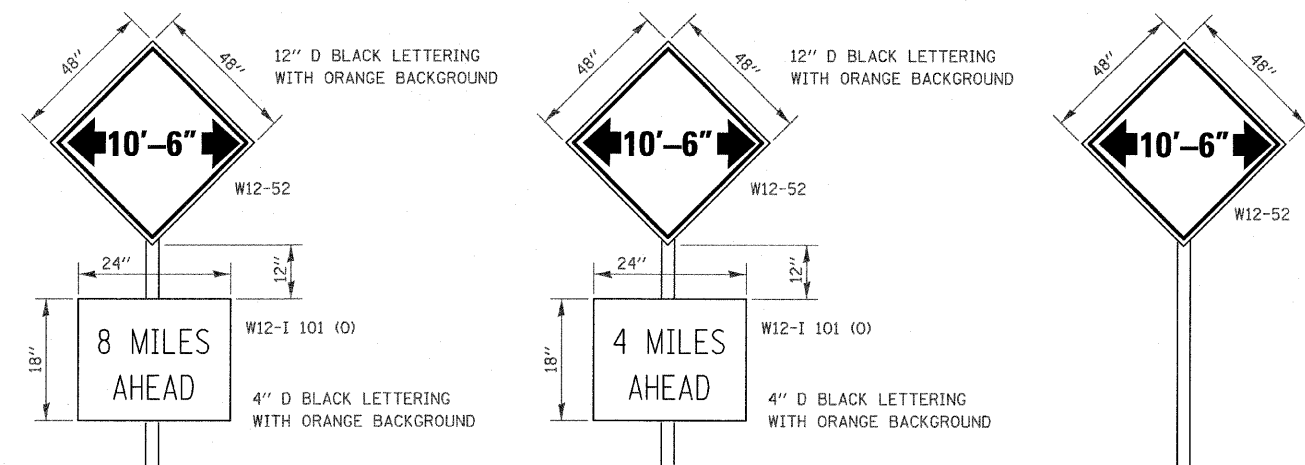


NOTES:
1. SIGNING AND BARRICADES OUTSIDE OF THE LIMITS OF THE STOP BARS SHALL BE IN ACCORDANCE WITH STANDARD 701321



LEGEND

- TRAFFIC SIGNALS
- TRAFFIC SIGNALS WITH MICROWAVE DETECTORS
- DRUM WITH STEADY BURNING LIGHT
- STOP LINE 24"
- IMPACT ATTENUATORS, TEMPORARY (FULLY-REDIRECTIVE, NARROW) TEST LEVEL 3
- DOUBLE VERTICAL PANEL
- TYPE C BI-DIRECTIONAL REFLECTOR
- TYPE III BARRICADE WITH FLASHING LIGHTS
- STEADY BURNING LIGHTS AND DOUBLE VERTICAL PANELS
- WORK AREA
- SIGN
- HMA BASE COURSE WIDENING, 8"
- TEMPORARY HMA BASE COURSE WIDENING 8"
- DIRECTION OF TRAFFIC



AT JUNCTION OF I-55 AND IL 47

A W12-52 SIGN, WITH A W12-I101 SIGN, SHALL BE ERECTED AT THE JUNCTION OF IL 47 AND IL 113 AND AT THE JUNCTION OF I-55 AND IL 47. THE ACTUAL LOCATION OF THE SIGNS TO BE DETERMINED BY THE ENGINEER. AN ADDITIONAL W12-52 SIGN SHALL BE ERECTED 1000 FEET IN EACH DIRECTION FROM THE BRIDGE PRIOR TO STAGE 1 CONSTRUCTION. THESE SIGNS SHALL BE MAINTAINED BY THE CONTRACTOR DURING STAGE 1 CONSTRUCTION AND SHALL BE REMOVED WHEN TRAFFIC IS OPEN FOR STAGE 2.

AT JUNCTION OF IL 113 AND IL 47

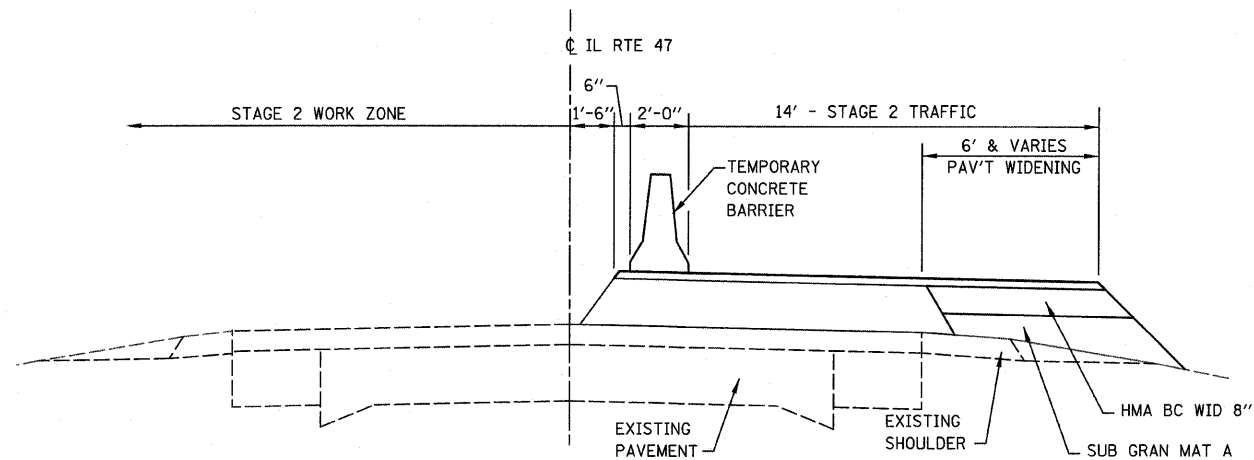
THE ENGINEER WILL NOTIFY DISTRICT 3 BUREAU OF OPERATIONS 14 CALENDAR DAYS PRIOR TO INSTALLING ANY TRAFFIC CONTROL DEVICES THAT WILL RESTRICT THE PAVEMENT WIDTH.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE ENGINEER TO MEET THIS REQUIREMENT.

COST OF SUPPLYING, INSTALLING, MAINTAINING AND REMOVING WIDTH RESTRICTION SIGNS SHALL BE INCLUDED IN THE COST OF THE TRAFFIC CONTROL AND PROTECTION PAY ITEMS.

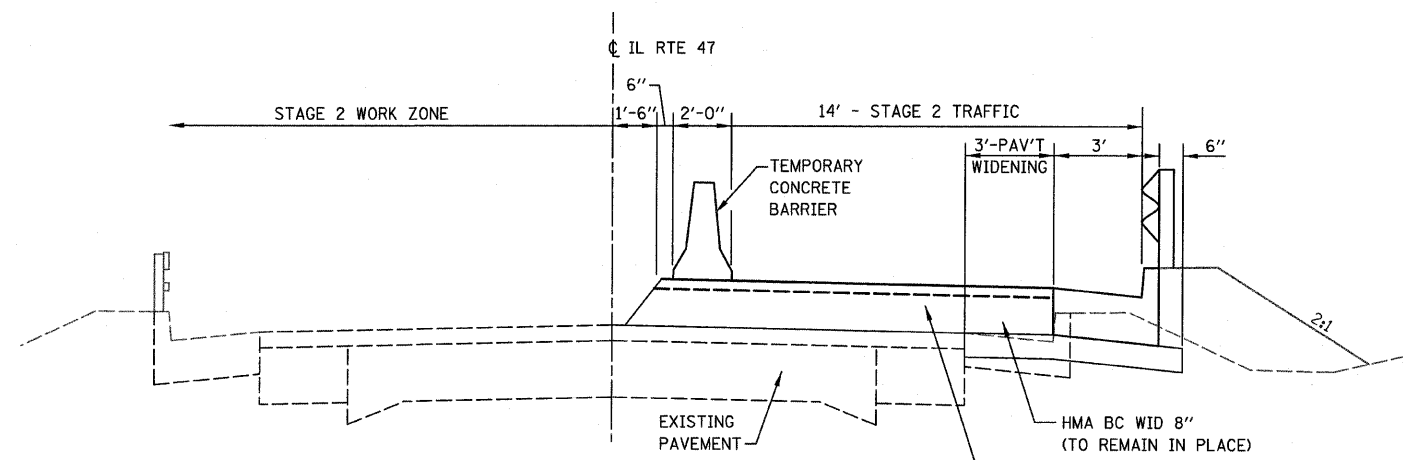
WIDTH RESTRICTION SIGNING DETAILS

FILE NAME = sheets02.dgn	USER NAME = #USER#	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STAGE 1 CONSTRUCTION & TRAFFIC CONTROL	F.A.P. RTE. 326	SECTION 119 BR	COUNTY GRUNDY	TOTAL SHEETS 68	SHEET NO. 12	
PLOT SCALE = 28,0000 ' / IN.	DRAWN -	REVISD -	REVISD -			SCALE: 1"=20'		SHEET NO. OF SHEETS		STA. 585+00 TO STA. 590+00	
PLOT DATE = 8/13/2008	CHECKED -	REVISD -	REVISD -			FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		CONTRACT NO. 66687	
	DATE -	REVISD -	REVISD -								



STAGE 2 CONSTRUCTION TYPICAL SECTION

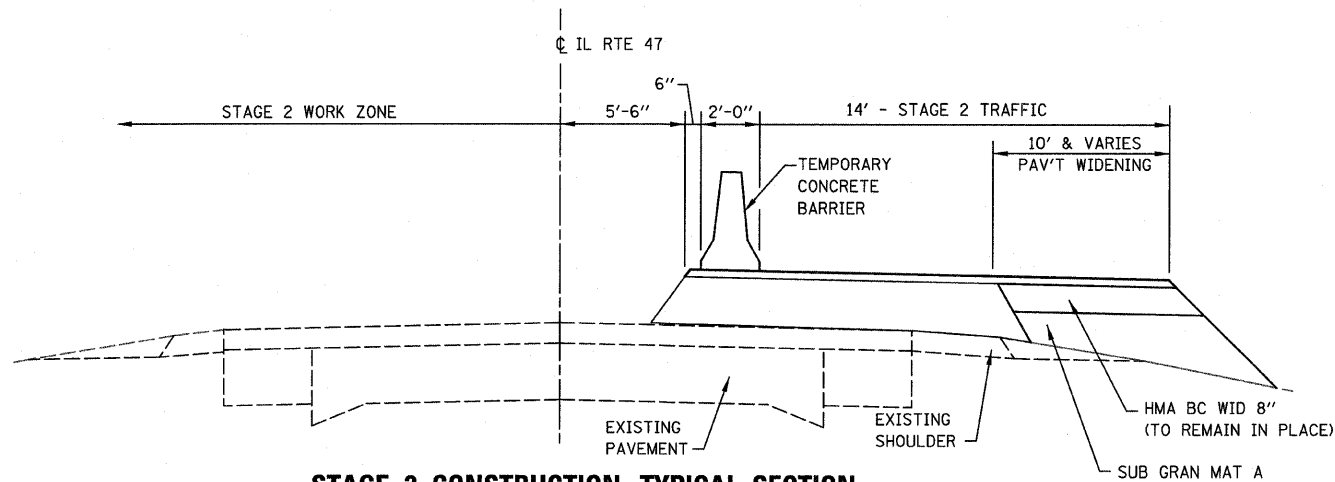
(SOUTH OF STRUCTURE, LOOKING NORTH)
STA. 580+10 TO STA. 581+61



STAGE 2 CONSTRUCTION TYPICAL SECTION

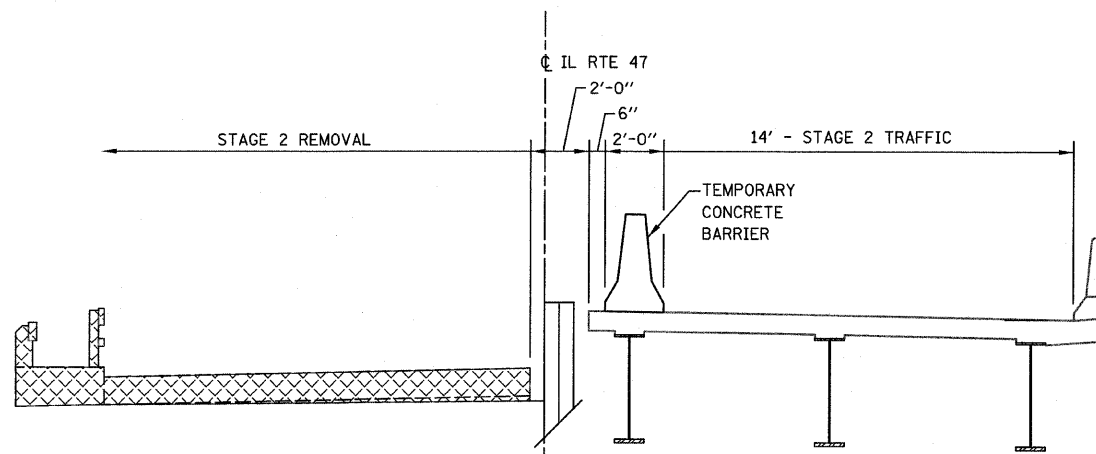
(NORTH OF STRUCTURE, LOOKING NORTH)
STA. 583+70 TO STA. 587+24

FULL DEPTH BINDER, 2 1/2" TO BE REMOVED DURING STAGE 3 CONSTRUCTION.



STAGE 2 CONSTRUCTION TYPICAL SECTION

(SOUTH OF STRUCTURE, LOOKING NORTH)
STA. 576+97 TO STA. 580+10



STAGE 2 CONSTRUCTION TYPICAL SECTION

(LOOKING NORTH AT STRUCTURE)
STA. 581+61 TO STA. 583+70

FILE NAME =
sheets02.dgn

USER NAME = #USER#

DESIGNED -

REVISED -

DRAWN -

REVISED -

PLOT SCALE = 28.0000' / IN.

CHECKED -

REVISED -

PLOT DATE = 8/13/2008

DATE -

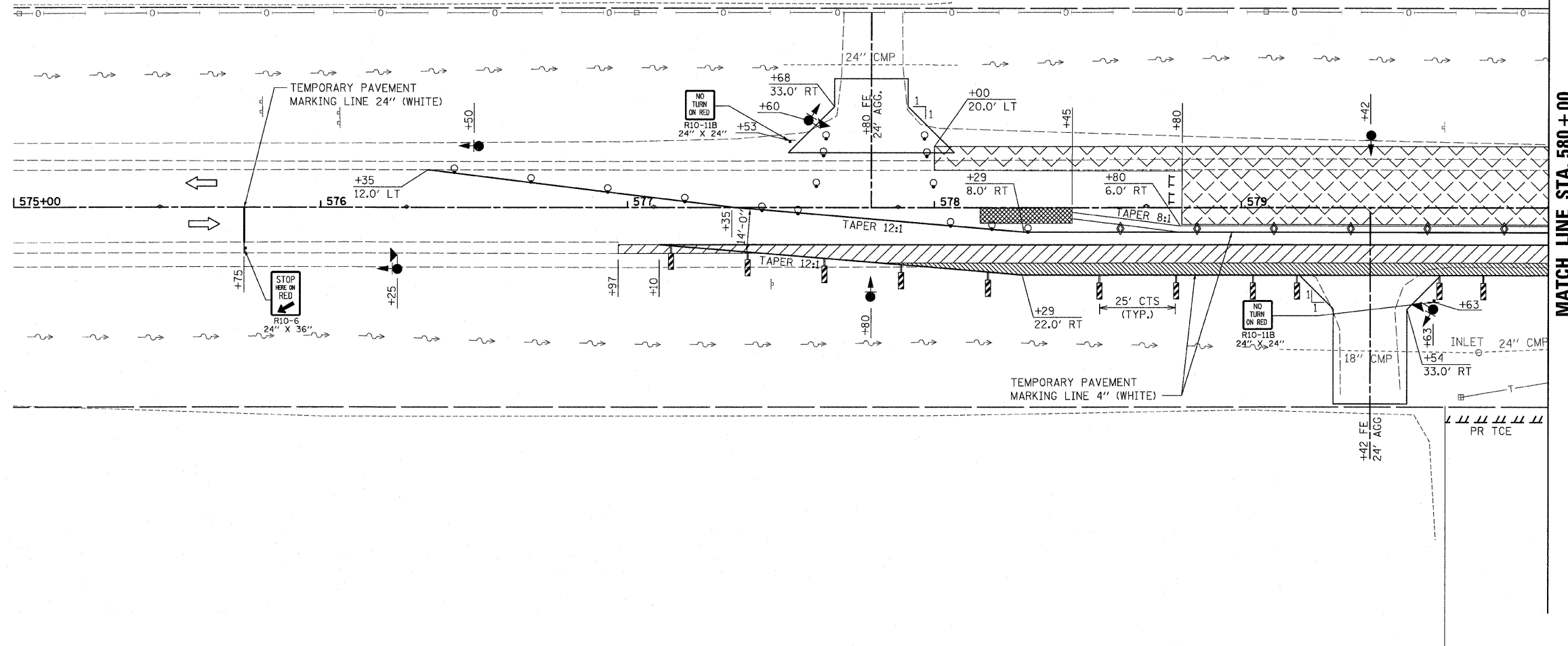
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE 2 TYPICAL SECTIONS















SCALE: SHEET NO. OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	119 BR	GRUNDY	68	13
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 66687	

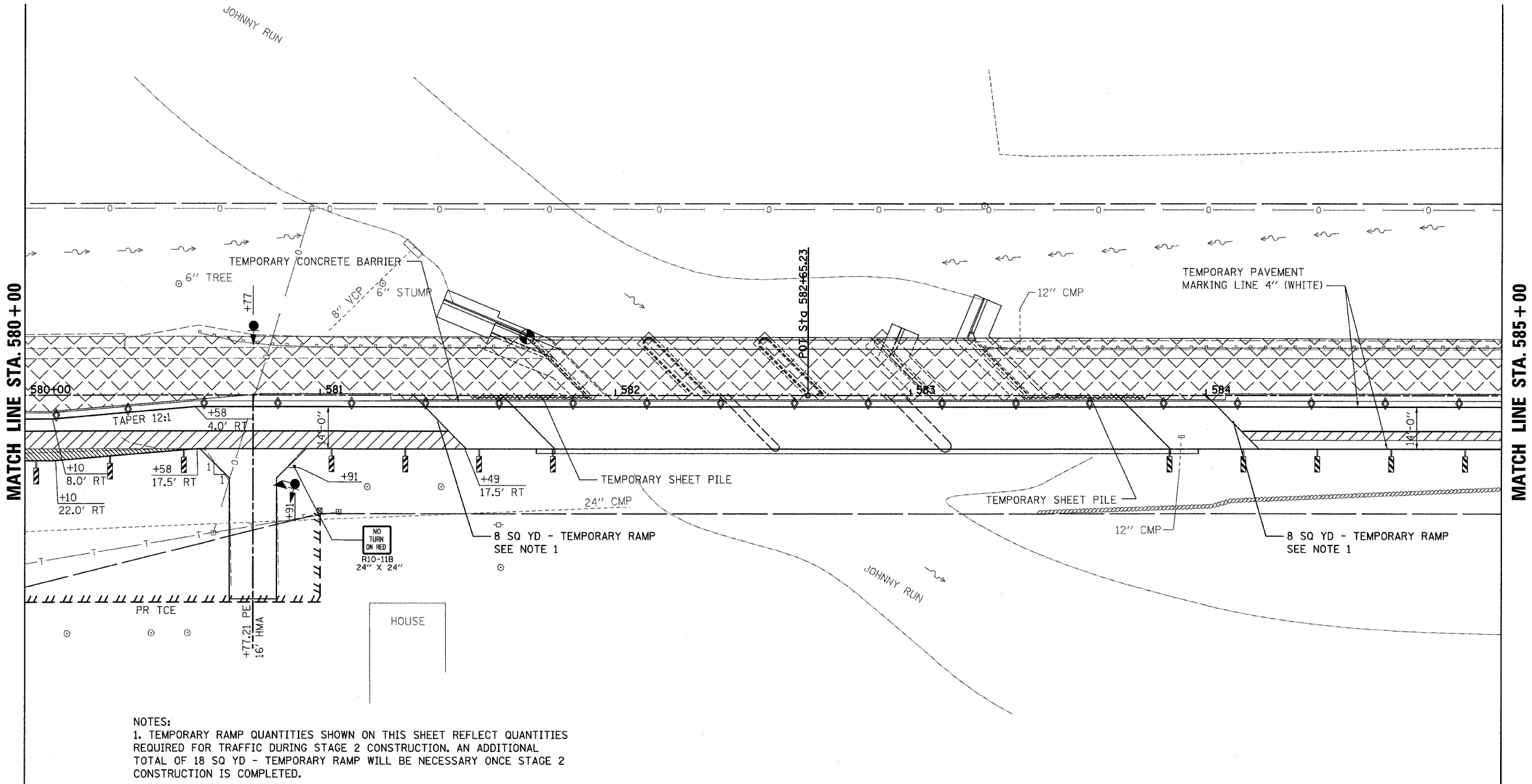


MATCH LINE STA. 580 + 00

LEGEND

-  TRAFFIC SIGNALS
-  TRAFFIC SIGNALS WITH MICROWAVE DETECTORS
-  DRUM WITH STEADY BURNING LIGHT
-  STOP LINE 24"
-  IMPACT ATTENUATORS, TEMPORARY (FULLY-REDIRECTIVE, NARROW) TEST LEVEL 3
-  DOUBLE VERTICAL PANEL
-  TYPE C BI-DIRECTIONAL REFLECTOR
-  TYPE III BARRICADE WITH FLASHING LIGHTS
-  STEADY BURNING LIGHTS AND DOUBLE VERTICAL PANELS
-  WORK AREA
-  SIGN
-  HMA BASE COURSE WIDENING, 8"
-  TEMPORARY HMA BASE COURSE WIDENING 8"
-  DIRECTION OF TRAFFIC

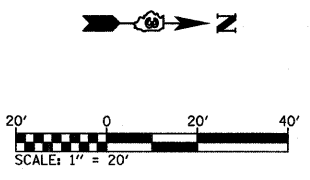
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	PLOT SCALE = 20,0000' / IN.	CHECKED -	REVISED -			SCALE: 1"=20'	SHEET NO. OF SHEETS	STA. 575+00 TO STA. 580+00		CONTRACT NO. 66687		
	PLOT DATE = 8/13/2008	DATE -	REVISED -			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT						



NOTES:
 1. TEMPORARY RAMP QUANTITIES SHOWN ON THIS SHEET REFLECT QUANTITIES REQUIRED FOR TRAFFIC DURING STAGE 2 CONSTRUCTION. AN ADDITIONAL TOTAL OF 18 SQ YD - TEMPORARY RAMP WILL BE NECESSARY ONCE STAGE 2 CONSTRUCTION IS COMPLETED.

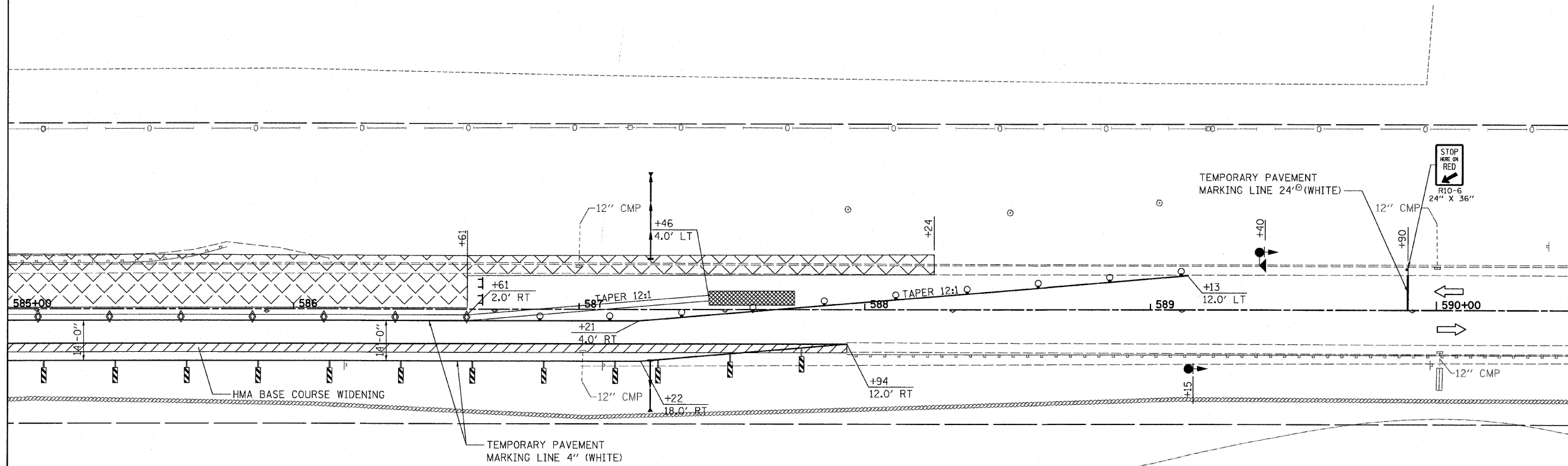
LEGEND

- TRAFFIC SIGNALS
- TRAFFIC SIGNALS WITH MICROWAVE DETECTORS
- DRUM WITH STEADY BURNING LIGHT
- STOP LINE 24"
- IMPACT ATTENUATORS, TEMPORARY (FULLY-REDIRECTIVE, NARROW) TEST LEVEL 3
- DOUBLE VERTICAL PANEL
- TYPE C BI-DIRECTIONAL REFLECTOR
- TYPE III BARRICADE WITH FLASHING LIGHTS
- STEADY BURNING LIGHTS AND DOUBLE VERTICAL PANELS
- WORK AREA
- SIGN
- HMA BASE COURSE WIDENING, 8"
- TEMPORARY HMA BASE COURSE WIDENING 8"
- DIRECTION OF TRAFFIC

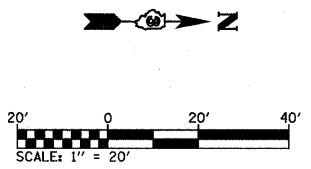


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	PLOT SCALE = 20,0000' / IN.	DRAWN -	REVISED -					326	119 BR	GRUNDY	68	15
	PLOT DATE = 8/13/2008	CHECKED -	REVISED -					CONTRACT NO. 66687				
		DATE -	REVISED -					FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
				SCALE: 1"=20'			SHEET NO. OF SHEETS STA. 580+00 TO STA. 585+00					

MATCH LINE STA. 585+00

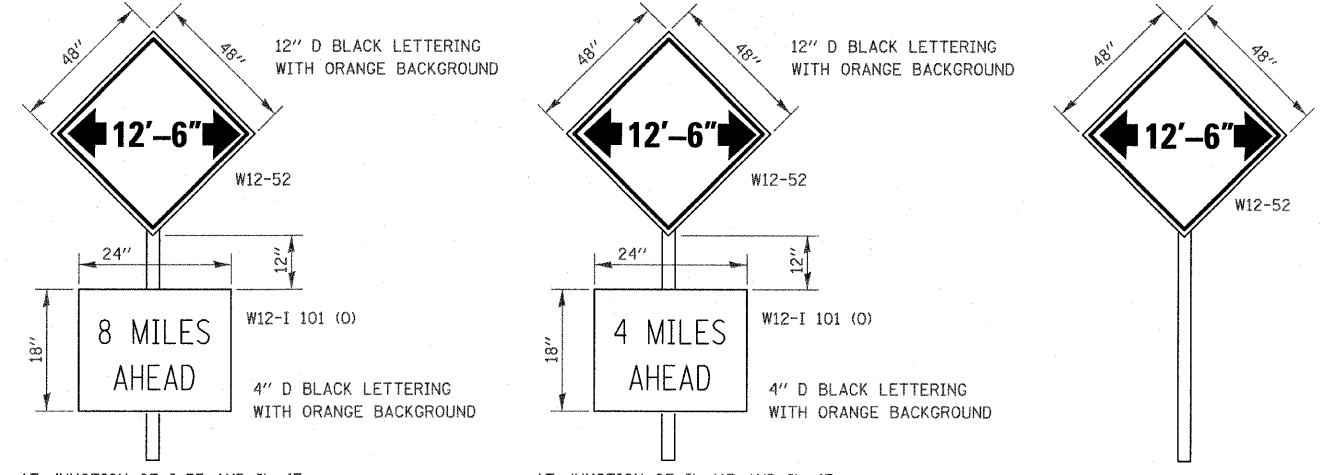


NOTES:
1. SIGNING AND BARRICADES OUTSIDE OF THE LIMITS OF THE STOP BARS SHALL BE IN ACCORDANCE WITH STANDARD 701321



LEGEND

- TRAFFIC SIGNALS
- TRAFFIC SIGNALS WITH MICROWAVE DETECTORS
- DRUM WITH STEADY BURNING LIGHT
- STOP LINE 24"
- IMPACT ATTENUATORS, TEMPORARY (FULLY-REDIRECTIVE, NARROW) TEST LEVEL 3
- DOUBLE VERTICAL PANEL
- TYPE C BI-DIRECTIONAL REFLECTOR
- TYPE III BARRICADE WITH FLASHING LIGHTS
- STEADY BURNING LIGHTS AND DOUBLE VERTICAL PANELS
- WORK AREA
- SIGN
- HMA BASE COURSE WIDENING, 8"
- TEMPORARY HMA BASE COURSE WIDENING 8"
- DIRECTION OF TRAFFIC



AT JUNCTION OF I-55 AND IL 47

A W12-52 SIGN, WITH A W12-1101 SIGN, SHALL BE ERECTED AT THE JUNCTION OF IL 47 AND IL 113 AND AT THE JUNCTION OF I-55 AND IL 47. THE ACTUAL LOCATION OF THE SIGNS TO BE DETERMINED BY THE ENGINEER. AN ADDITIONAL W12-52 SIGN SHALL BE ERECTED 1000 FEET IN EACH DIRECTION FROM THE BRIDGE PRIOR TO STAGE 2 CONSTRUCTION. THESE SIGNS SHALL BE MAINTAINED BY THE CONTRACTOR DURING STAGE 2 CONSTRUCTION AND SHALL BE REMOVED WHEN TRAFFIC IS OPEN FOR STAGE 3.

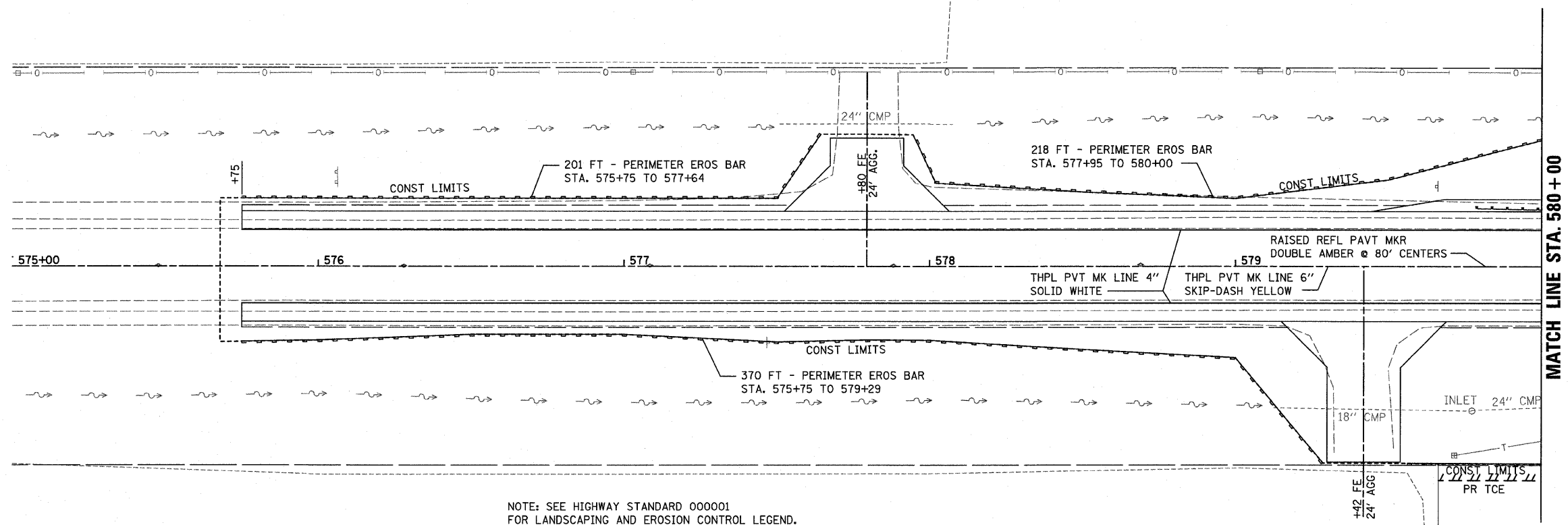
THE ENGINEER WILL NOTIFY DISTRICT 3 BUREAU OF OPERATIONS 14 CALENDAR DAYS PRIOR TO INSTALLING ANY TRAFFIC CONTROL DEVICES THAT WILL RESTRICT THE PAVEMENT WIDTH.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE ENGINEER TO MEET THIS REQUIREMENT.

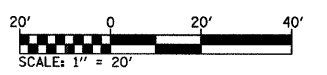
COST OF SUPPLYING, INSTALLING, MAINTAINING AND REMOVING WIDTH RESTRICTION SIGNS SHALL BE INCLUDED IN THE COST OF THE TRAFFIC CONTROL AND PROTECTION PAY ITEMS.

WIDTH RESTRICTION SIGNING DETAILS

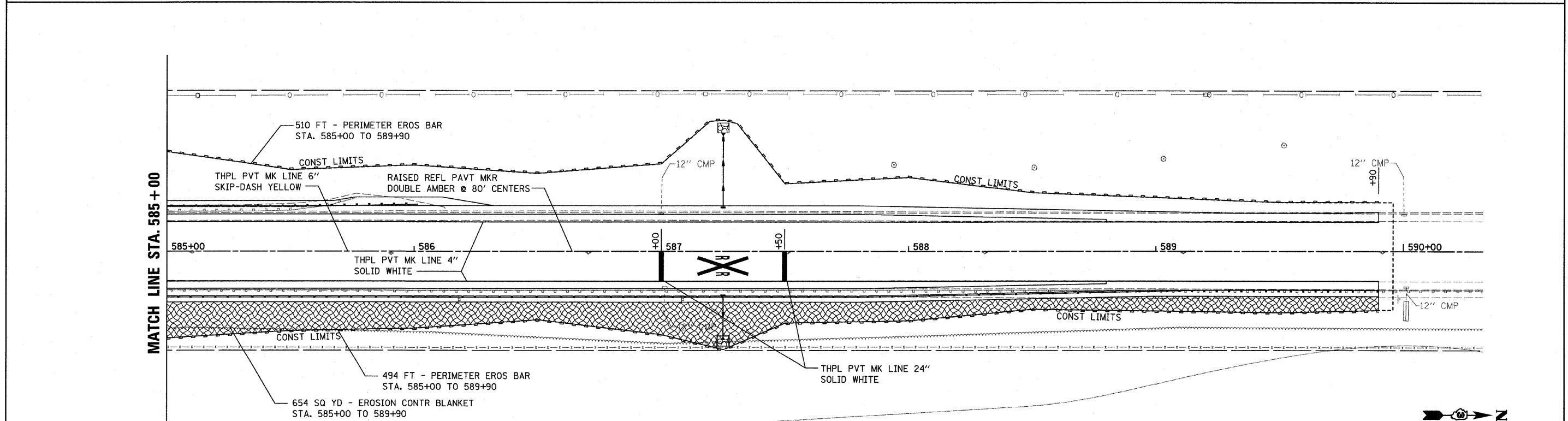
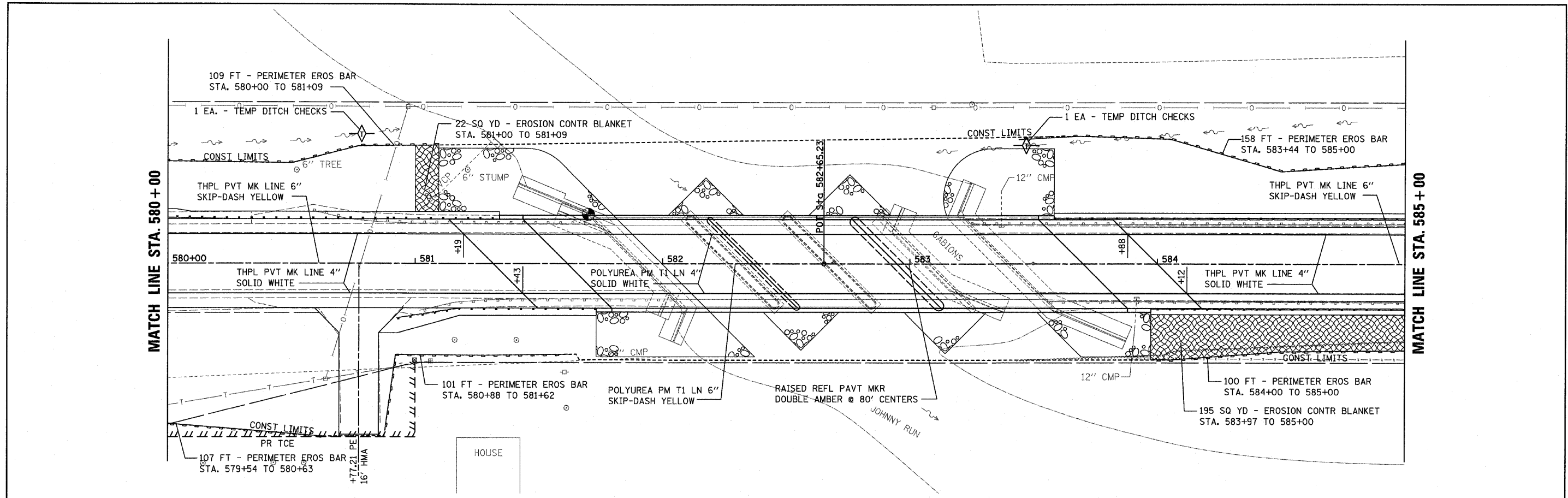
FILE NAME = sheets02.dgn	USER NAME = #USER#	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STAGE 2 CONSTRUCTION & TRAFFIC CONTROL			F.A.P. RTE. 326	SECTION 119 BR	COUNTY GRUNDY	TOTAL SHEETS 68	SHEET NO. 16
	PLOT SCALE = 28,0000 ' / IN.	DRAWN -	REVISED -					SCALE: 1"=20'	SHEET NO. OF SHEETS	STA. 585+00 TO STA. 590+00	CONTRACT NO. 66687	
	PLOT DATE = 8/13/2008	CHECKED -	REVISED -							FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT		
	DATE -	REVISED -										



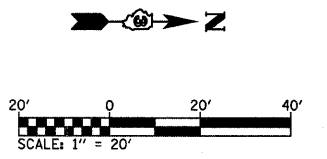
NOTE: SEE HIGHWAY STANDARD 000001 FOR LANDSCAPING AND EROSION CONTROL LEGEND.



FILE NAME = sheets04.dgn	USER NAME = #USER*	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EROSION CONTROL & PAVEMENT MARKING	F.A.P. RTE. 326	SECTION 119 BR	COUNTY GRUNDY	TOTAL SHEETS 68	SHEET NO. 17
	PLOT SCALE = 20,0000' / IN.	CHECKED -	REVISED -			CONTRACT NO. 66687				
	PLOT DATE = 8/13/2008	DATE -	REVISED -			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
SCALE: SHEET NO. OF SHEETS STA. 573+73 TO STA. 580+00										

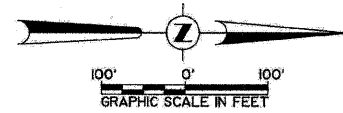


NOTE: SEE HIGHWAY STANDARD 000001 FOR LANDSCAPING AND EROSION CONTROL LEGEND.



FILE NAME = sheets24.dgn	USER NAME = #USER#	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EROSION CONTROL AND PAVEMENT MARKING	F.A.P. RTE. 326	SECTION 119 BR	COUNTY GRUNDY	TOTAL SHEETS 68	SHEET NO. 18		
	PLOT SCALE = 20,0000' / IN.	DRAWN -	REVISED -			SCALE:	SHEET NO. OF SHEETS	STA. 580+00 TO STA. 589+43	CONTRACT NO. 66687			
	PLOT DATE = 8/13/2008	CHECKED -	REVISED -			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT						
		DATE -	REVISED -									

SEC. 21, T. 32 N., R. 7 E., 3RD. P.M.

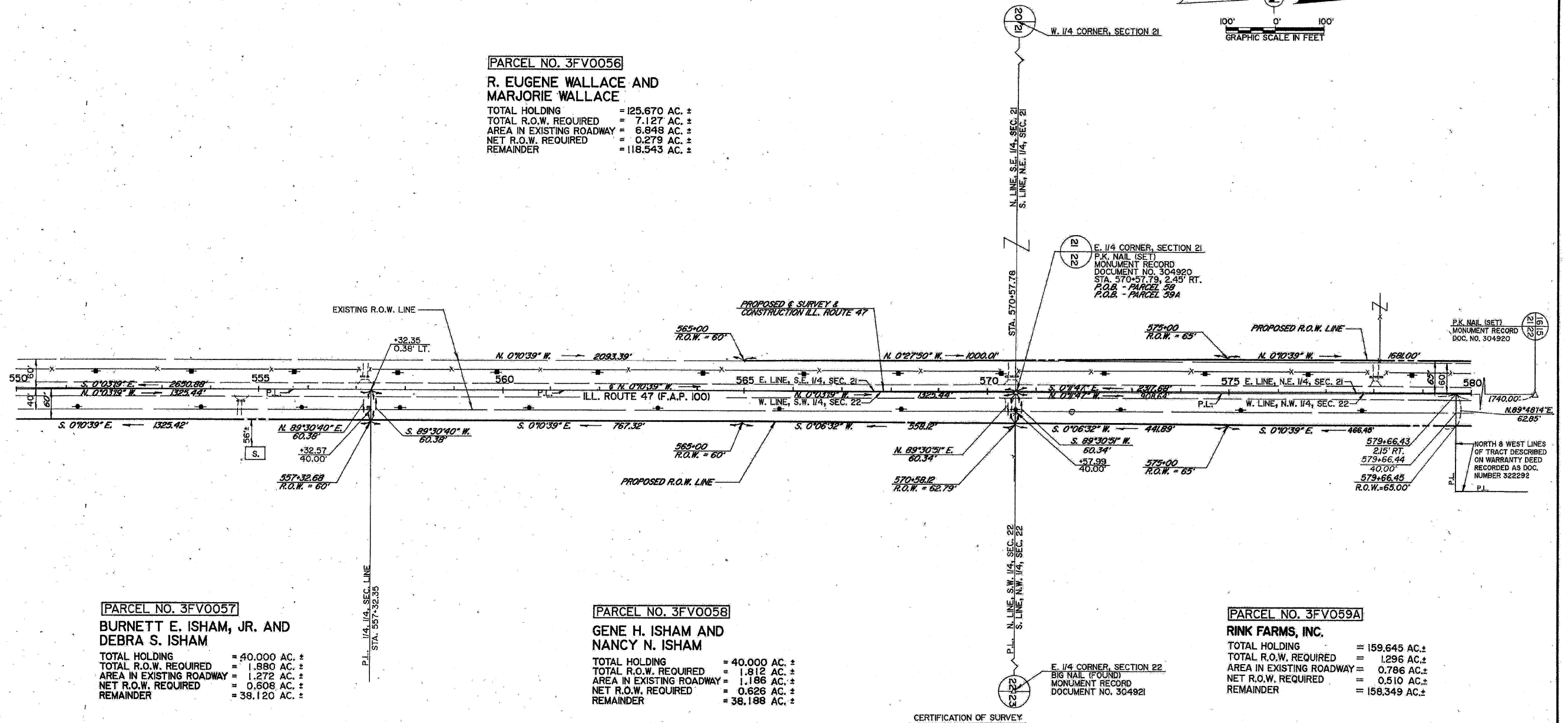


PARCEL NO. 3FV0056
R. EUGENE WALLACE AND MARJORIE WALLACE
 TOTAL HOLDING = 125.670 AC. ±
 TOTAL R.O.W. REQUIRED = 7.127 AC. ±
 AREA IN EXISTING ROADWAY = 6.848 AC. ±
 NET R.O.W. REQUIRED = 0.279 AC. ±
 REMAINDER = 118.543 AC. ±

PARCEL NO. 3FV0057
BURNETT E. ISHAM, JR. AND DEBRA S. ISHAM
 TOTAL HOLDING = 40.000 AC. ±
 TOTAL R.O.W. REQUIRED = 1.880 AC. ±
 AREA IN EXISTING ROADWAY = 1.272 AC. ±
 NET R.O.W. REQUIRED = 0.608 AC. ±
 REMAINDER = 38.120 AC. ±

PARCEL NO. 3FV0058
GENE H. ISHAM AND NANCY N. ISHAM
 TOTAL HOLDING = 40.000 AC. ±
 TOTAL R.O.W. REQUIRED = 1.812 AC. ±
 AREA IN EXISTING ROADWAY = 1.186 AC. ±
 NET R.O.W. REQUIRED = 0.626 AC. ±
 REMAINDER = 38.188 AC. ±

PARCEL NO. 3FV059A
RINK FARMS, INC.
 TOTAL HOLDING = 159.645 AC. ±
 TOTAL R.O.W. REQUIRED = 1.296 AC. ±
 AREA IN EXISTING ROADWAY = 0.786 AC. ±
 NET R.O.W. REQUIRED = 0.510 AC. ±
 REMAINDER = 158.349 AC. ±



CERTIFICATION OF SURVEY

STATE OF ILLINOIS
 COUNTIES OF GRUNDY & LIVINGSTON

I, GARY L. HUTCHISON, HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR OF THE STATE OF ILLINOIS, THAT THE SURVEY OF PROPOSED ILL. ROUTE 47 - F.A.P. ROUTE 100 WAS MADE BY ME OR UNDER MY DIRECTION, AND THAT THE SURVEY IS TRUE AND COMPLETE AS SHOWN TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT ALL MONUMENTS AND MARKS ARE OF THE CHARACTER AND OCCUPY THE POSITION SHOWN THEREON, AND ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED.



DATE: 12/11/11
 GARY L. HUTCHISON
 ILLINOIS PROFESSIONAL LAND SURVEYOR NUMBER 2479

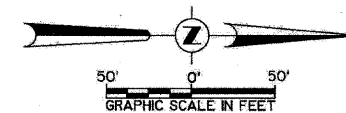
NOTE: ALL BEARINGS ARE ON A ASSUMED BASIS.

RIGHT OF WAY PLANS
 ROUTE F.A.P. 100 (ILL. ROUTE 47)
 SECTION (118, 119) R
 PROJECT _____
 COUNTY GRUNDY
 JOB NUMBER R-93-005-90
 STATION 550+00 TO 580+00
 SCALE: 1" = 100' SHEET 16 OF 23

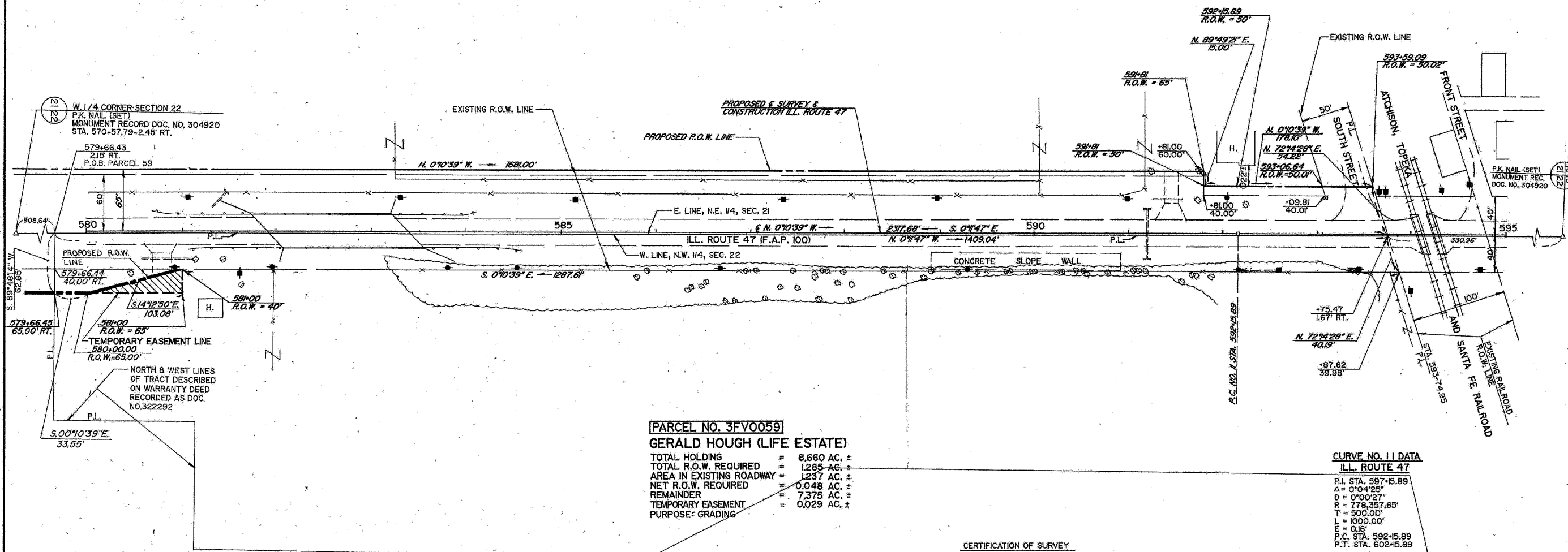
SEC. 22, T. 32 N., R. 7 E., 3RD. P.M.

FILE NAME - sheets03.dgn	USER NAME - #USER#	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING R.O.W. PLANS FOR INFORMATION ONLY	F.A.P. RTE. 326	SECTION 119 BR	COUNTY GRUNDY	TOTAL SHEETS 68	SHEET NO. 19
	PLOT SCALE = 20.0000' / IN.	CHECKED -	REVISED -			SCALE:	SHEET NO. OF SHEETS	STA. TO STA.	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT
PLOT DATE = 8/13/2008	DATE -	REVISED -	REVISED -							

SEC. 21, T. 32 N., R. 7 E., 3RD. P.M.



PARCEL NO. 3FV0056
R. EUGENE WALLACE AND
MARJORIE WALLACE
 FOR AREAS SEE SHEET NO. 16



PARCEL NO. 3FV0059
GERALD HOUGH (LIFE ESTATE)
 TOTAL HOLDING = 8.660 AC. ±
 TOTAL R.O.W. REQUIRED = 1.285 AC. ±
 AREA IN EXISTING ROADWAY = 1.237 AC. ±
 NET R.O.W. REQUIRED = 0.048 AC. ±
 REMAINDER = 7.375 AC. ±
 TEMPORARY EASEMENT = 0.029 AC. ±
 PURPOSE: GRADING

CURVE NO. 11 DATA
ILL. ROUTE 47
 P.I. STA. 597+5.89
 Δ = 0°04'25"
 D = 0°00'27"
 R = 778.357.65'
 T = 500.00'
 L = 1000.00'
 E = 0.15'
 P.C. STA. 592+5.89
 P.T. STA. 602+5.89

CERTIFICATION OF SURVEY

STATE OF ILLINOIS
 COUNTIES OF GRUNDY & LIVINGSTON

I, GARY L. HUTCHISON, HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR OF THE STATE OF ILLINOIS, THAT THE SURVEY OF PROPOSED ILL. ROUTE 47 - F.A.P. ROUTE 100 WAS MADE BY ME OR UNDER MY DIRECTION, AND THAT THE SURVEY IS TRUE AND COMPLETE AS SHOWN TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT ALL MONUMENTS AND MARKS ARE OF THE CHARACTER AND OCCUPY THE POSITION SHOWN THEREON, AND ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED.



NOTE: ALL BEARINGS ARE ON AN ASSUMED BASIS.

RIGHT OF WAY PLANS
 ROUTE F.A.P. 100 (ILL. ROUTE 47)
 SECTION (118, 119) R.
 PROJECT _____
 COUNTY GRUNDY
 JOB NUMBER R-93-005-90
 STATION 580+00 TO 595+00
 SCALE 1" = 50' SHEET 17 OF 23

SEC. 22, T. 32 N., R. 7 E., 3RD. P.M.

DATE: 12/11/91 Gary L. Hutchison
 ILLINOIS PROFESSIONAL LAND SURVEYOR NUMBER 2479

FILE NAME = sheets03.dgn	USER NAME = #USER*	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING R.O.W. PLANS FOR INFORMATION ONLY	F.A.P. RTE. 326	SECTION 119 BR	COUNTY GRUNDY	TOTAL SHEETS 68	SHEET NO. 20	
	PLOT SCALE = 28,8000' / IN.	DRAWN -	REVISED -			SCALE:	SHEET NO. OF SHEETS	STA. TO STA.	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT	CONTRACT NO. 66687
	PLOT DATE = 8/13/2008	CHECKED -	REVISED -								
		DATE -	REVISED -								

Benchmark: Chiseled square on top of Southwest wingwall, S.N. 032-0031. Sta. 581+70, 20' Lt., Elev. 586.71

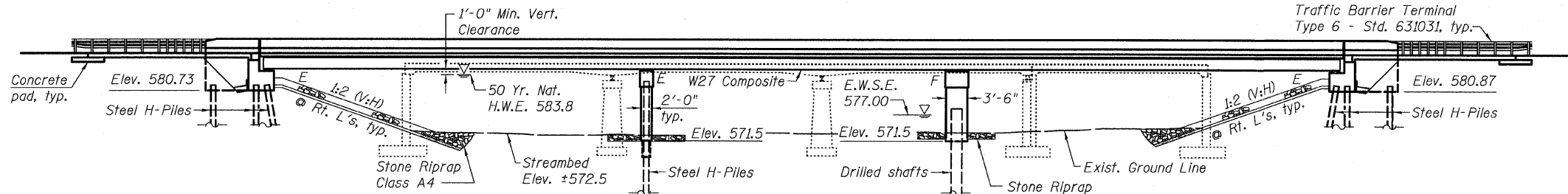
Existing Structure: S.N. 032-0031 built in 1927 as SBI Route 47, Section 119B. Superstructure replaced, substructure widened, and fourth span added on North end in 1954 as SBI Route 47, Section 119B-Y. Structure consists of three continuous spans and one simple span of reinforced concrete slab superstructure supported on closed abutments and solid piers. The back-to-back abutment dimension is 151'-1 1/8" and the out-to-out deck dimension is 36'-4". The structure is to be removed and replaced using stage construction.

No Salvage.

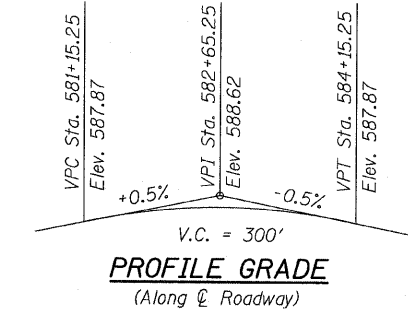
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
FAP 326	119BR	GRUNDY	68	21
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

Contract #66687



ELEVATION



SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.041g
Site Coefficient (S) = 1.0

DESIGN SPECIFICATIONS

2002 AASHTO

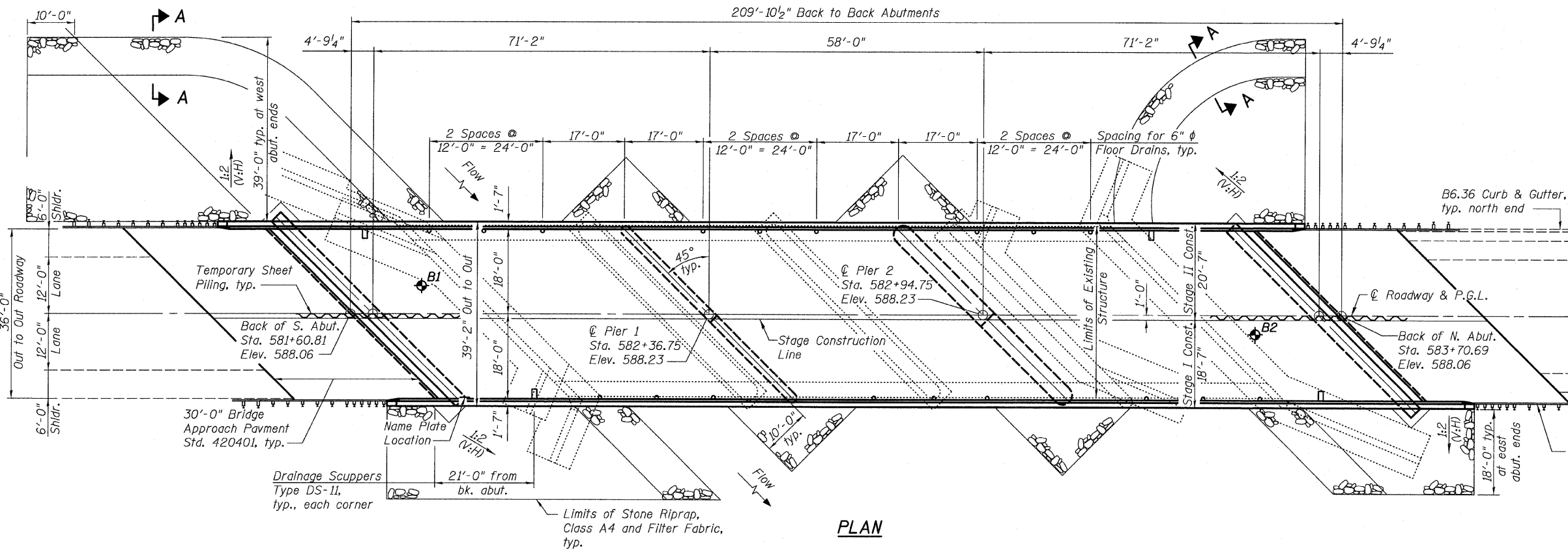
LOADING HS20-44

Allow 50#/sq. ft. for future wearing surface.

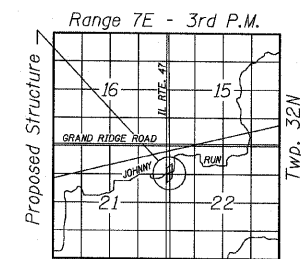
DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (AASHTO M 270 Grade 50W)



PLAN



LOCATION SKETCH

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	S. Abut.	Piers	N. Abut.
	577.8	569.2	577.9

WATERWAY INFORMATION

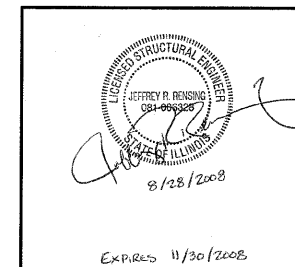
Drainage Area = 46.8 Sq. Mi.		Exist. Low Grade Elev. 586.2 @ Sta. 584+00		Prop. Low Grade Elev. 586.4 @ Sta. 574+00		
Flood Yr.	Freq. C.F.S.	Q	Opening Sq. Ft.	Nat. H.W.E.	Head - Ft.	Headwater El.
			Exist. Prop.	Exist. Prop.	Exist. Prop.	Exist. Prop.
Design	50	2713	784 954	582.8	0.1 0.1	582.9 582.9
Base	100	3040	874 1080	583.8	0.1 0.1	583.9 583.9
Overtopping			910 1131	584.2	0.3 0.2	584.5 584.4
Max. Calc.	500	3791	920 1210	584.8	0.4 0.3	585.2 585.1

STATION 582+65.75
BUILT 200_ BY
STATE OF ILLINOIS
FAP ROUTE 326 - SEC 119BR
LOADING HS20
STRUCTURE NO. 032-0112

NAME PLATE
See Std. 515001

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES



EXPIRES 11/30/2008

Notes:
① See sheet 2 of 27 for Section A-A and Index of Sheets.

GENERAL PLAN
IL 47 OVER JOHNNY RUN
FAP ROUTE 326 - SECTION 119BR
GRUNDY COUNTY
STATION 582+65.75
STRUCTURE NO. 032-0112

Eastport Business Center 1
100 Lanter Court, Suite 1
Collinsville, Illinois 62234
618-345-2200
OATES ASSOCIATES
Consulting Engineers
Design Firm License No. 184.001115

DESIGNED	MJP
CHECKED	NEL
DRAWN	NEL
CHECKED	MJP

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
FAP 326	119BR	GRUNDY	68	22
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

Contract #66687

SHEET NO. 2
27 SHEETS

GENERAL NOTES

Fasteners shall be AASHTO M 164 Type 1, mechanically galvanized bolts in painted areas and M 164 Type 3 in unpainted areas. Bolts $\frac{7}{8}$ in. ϕ , holes $\frac{15}{16}$ in. ϕ , unless otherwise noted.

Calculated weight of structural steel: AASHTO M 270 Grade 50W = 201,270 pounds

All structural steel shall be AASHTO M 270 Grade 50W except expansion joints which shall be AASHTO M 270 Grade 50.

No field welding is permitted except as specified in the contract documents.

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.

Reinforcement bars designated (E) shall be epoxy coated.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $\frac{1}{8}$ " (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.

Concrete Sealer shall be applied to the designated areas of the abutments and piers.

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

Structural steel shall only be painted for a distance of 7 ft. each way from the deck joints. All structural steel shall be cleaned as specified in the Special Provision for "Surface Preparation and Painting Requirements for Weathering Steel".

All exposed structural steel of the bearings shall be cleaned and shop painted as specified in the Special Provisions for "Surface Preparation and Painting Requirements for Weathering Steel".

Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.

The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at substructures specified or approved by the Engineer before ordering the remainder of piles.

The concrete for bridge decks finished according to Article 503.16(a) of the Standard Specifications shall be placed and compacted parallel to the skew in uniform increments along centerline of bridge. The machine used for finishing shall be set parallel to the skew for striking off and screeding concrete.

Hard driving may be encountered during the sheet piling installation. The Contractor shall provide the appropriate driving equipment for the soil condition indicated on the boring logs.

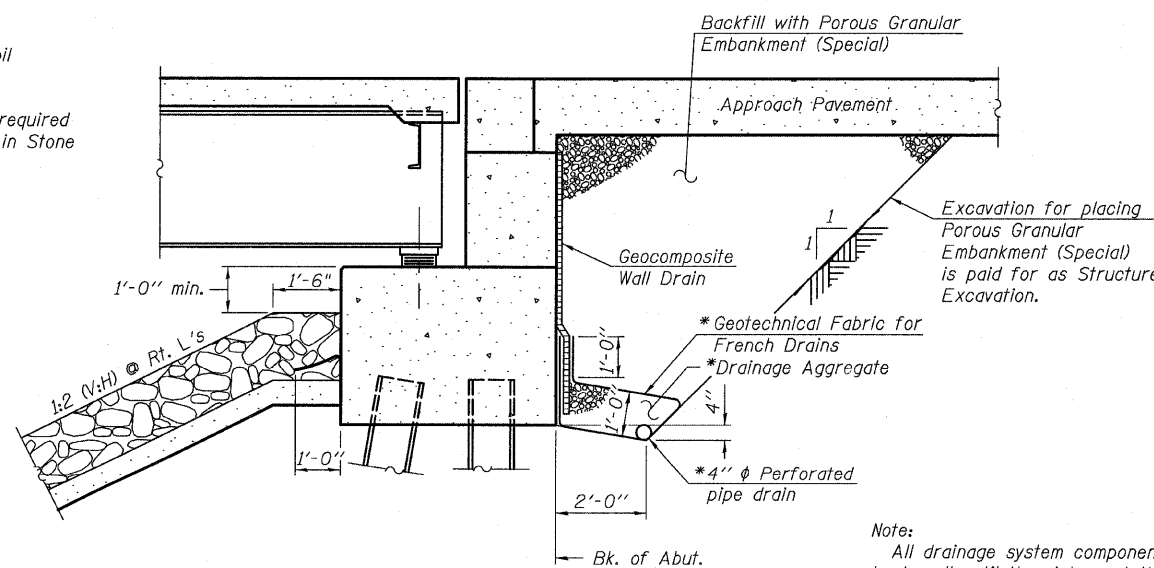
Gabion baskets exist within the stream flowline. Partial removal may be required to facilitate pier and riprap anchor construction. Cost shall be included in Stone Riprap, Class A4.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment, Special	Cu. Yd.	-	127	127
Stone Riprap, Class A4	Sq. Yd.	-	1,597	1,597
Filter Fabric	Sq. Yd.	-	1,597	1,597
Removal of Existing Structures	Each	1	-	1
Structure Excavation	Cu. Yd.	-	332	332
Floor Drains	Each	18	-	18
Concrete Structures	Cu. Yd.	-	2,39.9	2,39.9
Concrete Superstructure	Cu. Yd.	270.2	-	270.2
Bridge Deck Grooving	Sq. Yd.	770	-	770
Concrete Encasement	Cu. Yd.	-	10.4	10.4
Protective Coat	Sq. Yd.	1,002	-	1,002
Furnishing and Erecting Structural Steel	L Sum	1	-	1
Stud Shear Connectors	Each	3,762	-	3,762
Reinforcement Bars	Pound	-	11,530	11,530
Reinforcement Bars, Epoxy Coated	Pound	58,080	20,330	78,410
Bar Splacers	Each	551	206	757
Furnishing Steel Piles HP12X53	Foot	-	907	907
Driving Piles	Foot	-	907	907
Test Pile Steel HP12X53	Each	-	3	3
Pile Shoes	Each	-	30	30
Temporary Sheet Piling	Sq. Ft.	-	1,790	1,790
Name Plates	Each	1	-	1
Permanent Casing	Foot	-	57	57
Drilled Shaft in Soil	Cu. Yd.	-	42.0	42.0
Preformed Joint Strip Seal	Foot	106.0	-	106.0
Elastomeric Bearing Assembly, Type I	Each	18	-	18
Anchor Bolts, $\frac{1}{4}$ "	Each	24	-	24
Anchor Bolts, $\frac{1}{2}$ "	Each	24	-	24
Concrete Sealer	Sq. Ft.	-	2,318	2,318
Geocomposite Wall Drain	Sq. Yd.	-	74	74
Pipe Underdrains for Structures 4"	Foot	-	166	166
Drainage Scuppers, DS-11	Each	4	-	4
Underwater Structure Excavation Protection, Location 1	Each	-	1	1
Underwater Structure Excavation Protection, Location 2	Each	-	1	1

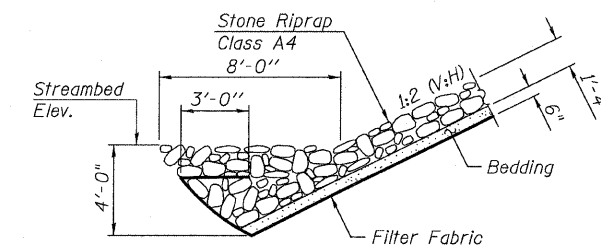
INDEX OF SHEETS

Sheet No.	Description
1	General Plan
2	General Data
3	Stage Construction Details
4	Temporary Concrete Barrier for Stage Construction
5-6	Top of Slab Elevations
7	Top of South Approach Slab Elevations
8	Top of North Approach Slab Elevations
9	Superstructure
10	Superstructure Details
11	Preformed Joint Strip Seal
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13	Framing Plan
14	Beam & Framing Details
15	Bearing Details at Abutments
16	Bearing Details at Piers
17	South Abutment Details
18	North Abutment Details
19	Abutment Details
20	Pier 1 Details
21	Pier 2 Details
22	HP Pile Details
23	Bar Splicer Assembly Details
24	Cantilever Forming Brackets for Superstructures
25	Concrete Parapet Slipforming Option
26-27	Soil Boring Logs



**SECTION THRU PILE SUPPORTED
STUB ABUTMENT**
(Horiz. dim. @ Rt. L's)

* Included in the cost of Pipe Underdrains for Structures 4".



SECTION A-A

Note:
All drainage system components shall extend parallel to the abutment back wall until they intersect the wingwalls or 2'-0" from the end of the wingwalls when the wings are parallel to the abutment. The pipe shall extend under the wingwall, if necessary, until intersecting the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).

DESIGNED	MJP
CHECKED	DGL
DRAWN	MJP
CHECKED	DGL

GENERAL DATA
IL 47 OVER JOHNNY RUN
FAP ROUTE 326 - SECTION 119BR
GRUNDY COUNTY
STATION 582+65.75
STRUCTURE NO. 032-0112

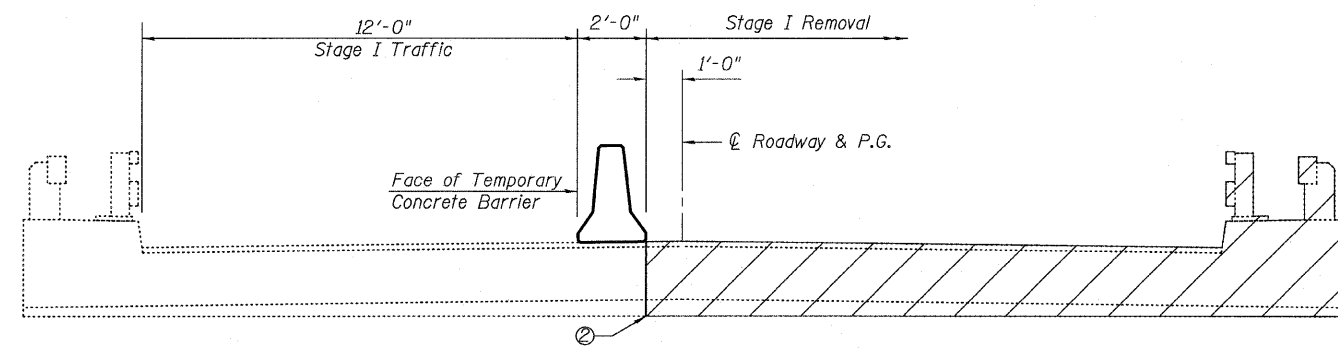


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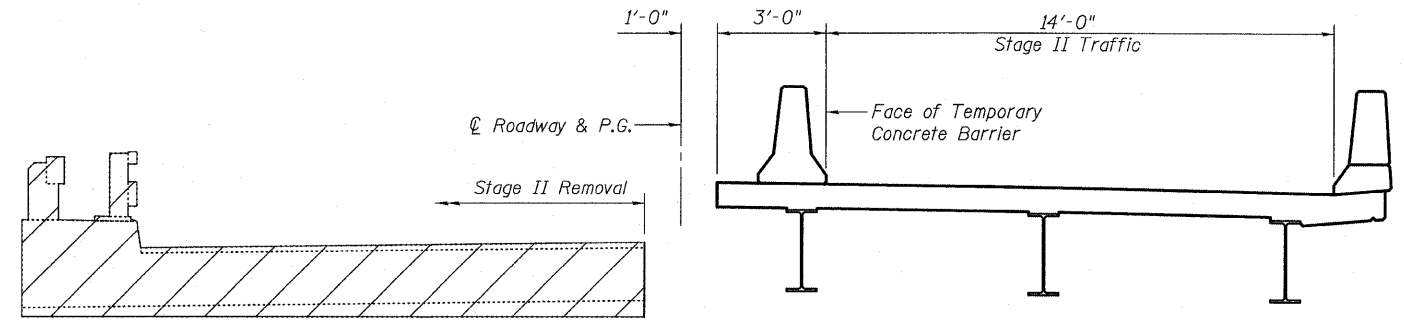
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
FAP 326	119BR	GRUNDY	68	23
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

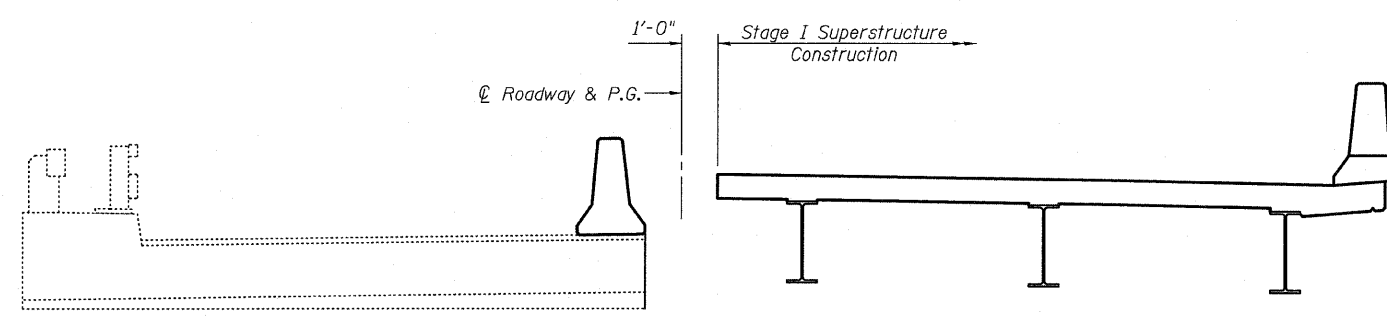
Contract #66687



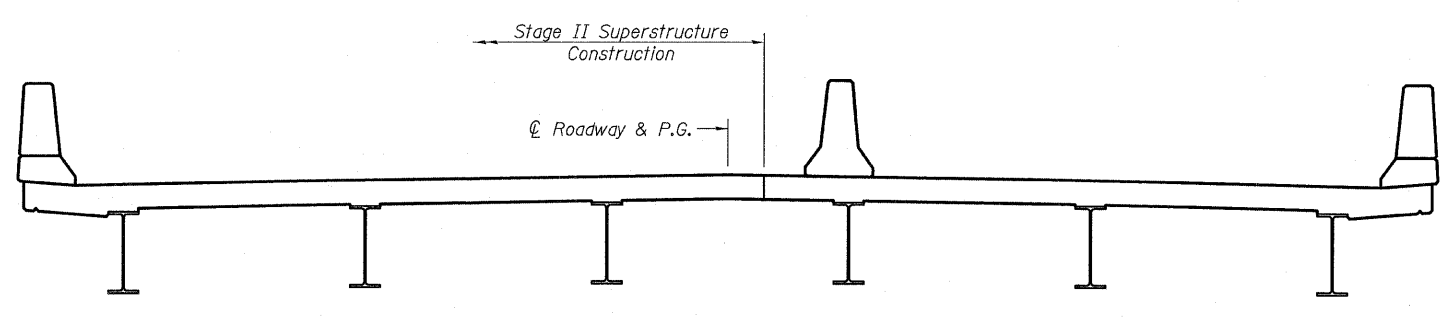
STAGE I REMOVAL



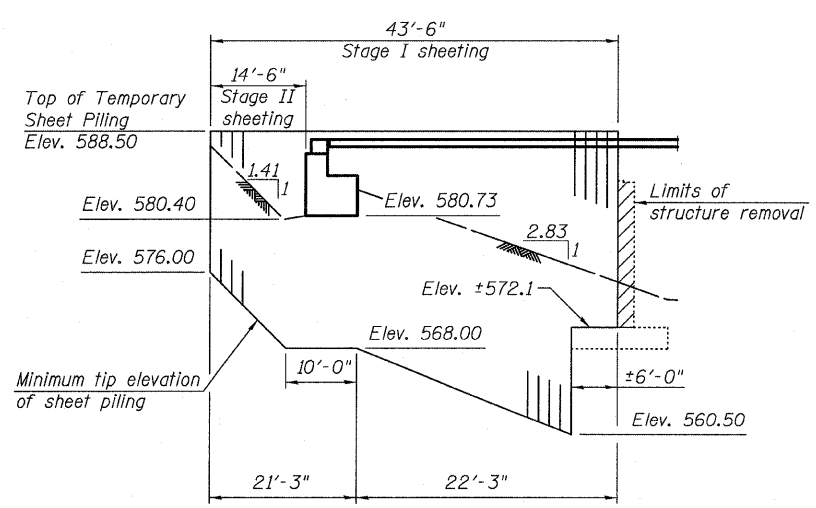
STAGE II REMOVAL



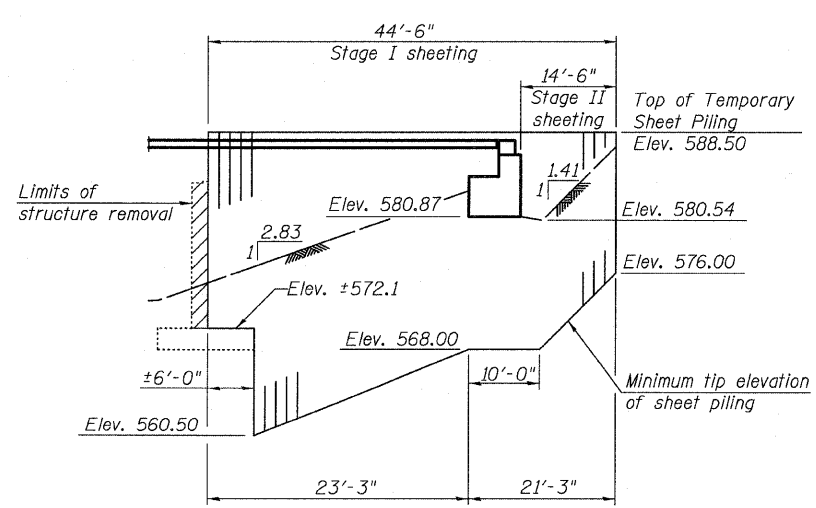
STAGE I CONSTRUCTION



STAGE II CONSTRUCTION



SOUTH ABUTMENT
Minimum Section
Modulus = 22.8 in³/ft



NORTH ABUTMENT
Minimum Section
Modulus = 22.8 in³/ft

- Notes:
- ① All views looking north.
 - ② Existing concrete deck, piers, and abutments shall be saw cut full depth at stage removal line prior to Stage I removal. Cost included with Removal of Existing Structures.
 - ③ For quantity of Temporary Concrete Barrier and related traffic control, see roadway plans.
 - ④ For details of Temporary Concrete Barrier, see sheet 4 of 27.
 - ⑤ If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.
 - ⑥ The Contractor shall connect the first sheet to the existing abutment wall to ensure stability of sheets driven to the top of the existing footing. This connection shall be reviewed and accepted by the Engineer and included in the cost of Temporary Sheet Piling.
 - ⑦ The Contractor shall monitor the existing structure during Stage I removal and pile driving to assure that no movement or damage is occurring. If movement or damage is observed, the Contractor shall immediately stop work and notify the Engineer. Cost included in Removal of Existing Structures.
 - ⑧ Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure. The Contractor shall sawcut the upper portion of the existing abutment at the stage removal line before Stage I removal to ensure the remaining portion will not be prematurely damaged.
 - ⑨ See sheets 17, 18, 20 & 21 of 27 for stage construction limits for substructure units.

STAGE CONSTRUCTION DETAILS
IL 47 OVER JOHNNY RUN
FAP ROUTE 326 - SECTION 119BR
GRUNDY COUNTY
STATION 582+65.75
STRUCTURE NO. 032-0112

DESIGNED	NEL
CHECKED	MJP
DRAWN	NEL
CHECKED	MJP

TEMPORARY SHEET PILING DETAIL

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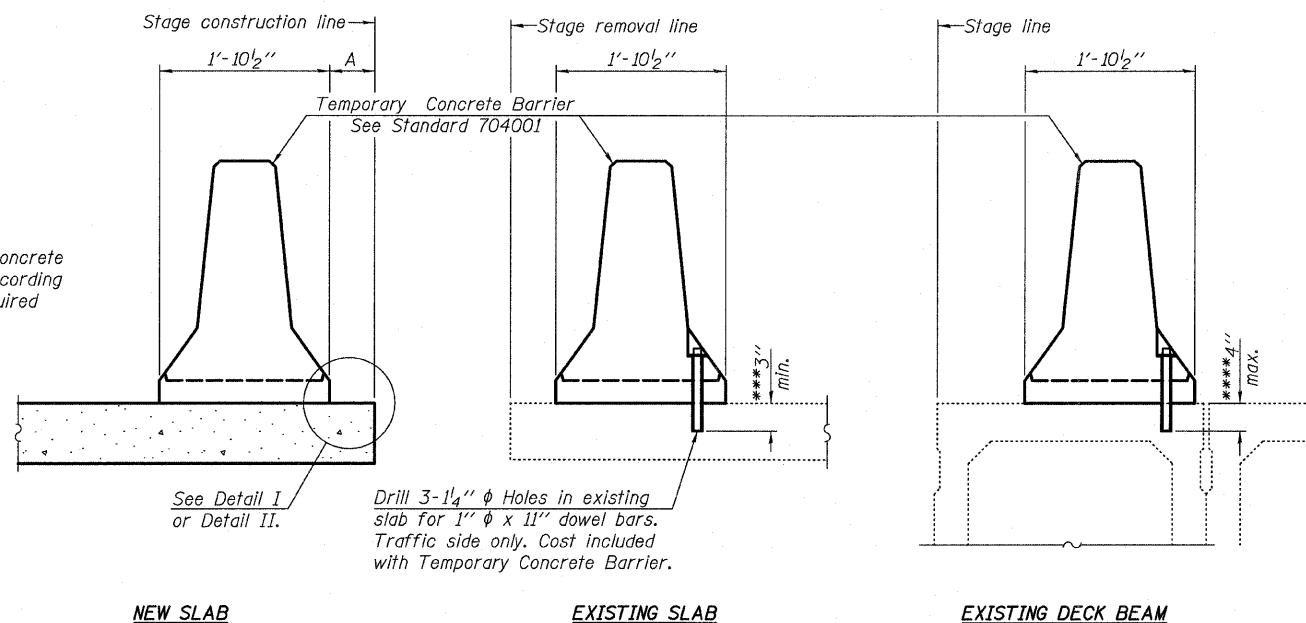
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET
FAP 326	119BR	GRUNDY	68	24
FED. ROAD DIST. NO. 7	ILL. MOBS	FED. AID PROJECT		

SHEET NO. 4
27 SHEETS

Contract #66687

When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".



NEW SLAB

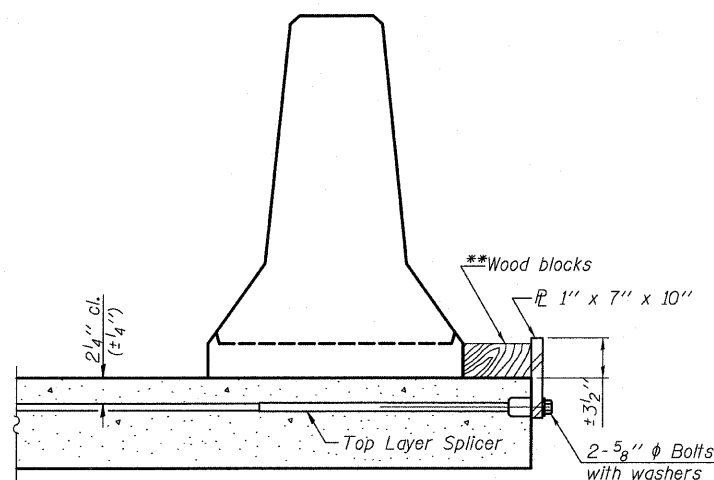
EXISTING SLAB

EXISTING DECK BEAM

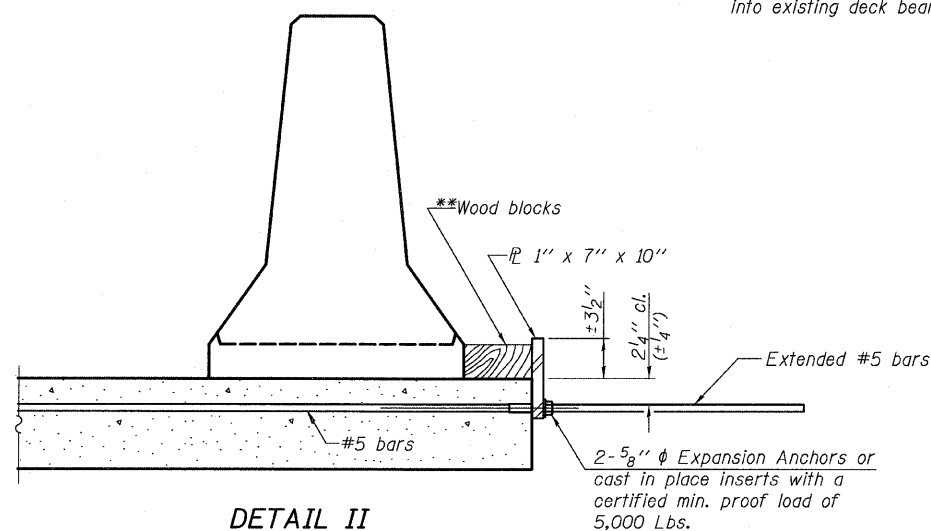
SECTIONS THRU SLAB OR DECK BEAM

- NOTES**
- Detail I - With Bar Splicer or Couplers:
Connect one (1) 1"x7"x10" steel \bar{L} to the top layer of couplers with 2-5/8" ϕ bolts screwed to coupler at approximate \bar{C} of each barrier panel.
- Detail II - With Extended Reinforcement Bars:
Connect one (1) 1"x7"x10" steel \bar{L} to the concrete slab or concrete wearing surface with 2-5/8" ϕ Expansion Anchors or cast in place Inserts spaced between the top layer of reinforcement at approximate \bar{C} of each barrier panel.
- Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x 10" 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.

- ***Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.
- ****If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.

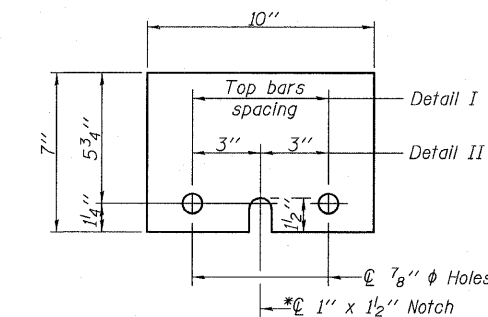


DETAIL I



DETAIL II

**Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.



STEEL RETAINER \bar{L} 1" x 7" x 10"

*Required only with Detail II

**TEMPORARY CONCRETE BARRIER
FOR STAGE CONSTRUCTION
IL 47 OVER JOHNNY RUN
FAP ROUTE 326 - SECTION 119BR
GRUNDY COUNTY
STATION 582+65.75
STRUCTURE NO. 032-0112**

DESIGNED -
CHECKED -
DRAWN -
CHECKED -

R-27

5-16-08



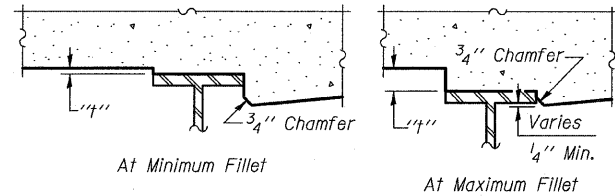
OATES ASSOCIATES
Consulting Engineers

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

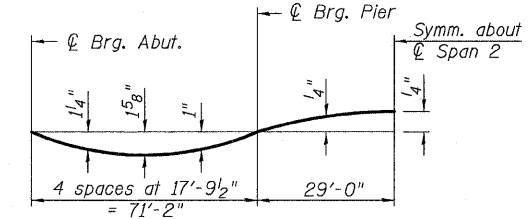
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 326	119BR	GRUNDY	68	25
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

Contract #66687



To determine "f": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown below and on sheet 6 of 27, minus slab thickness, equals the fillet heights "f" above top flange of beams.

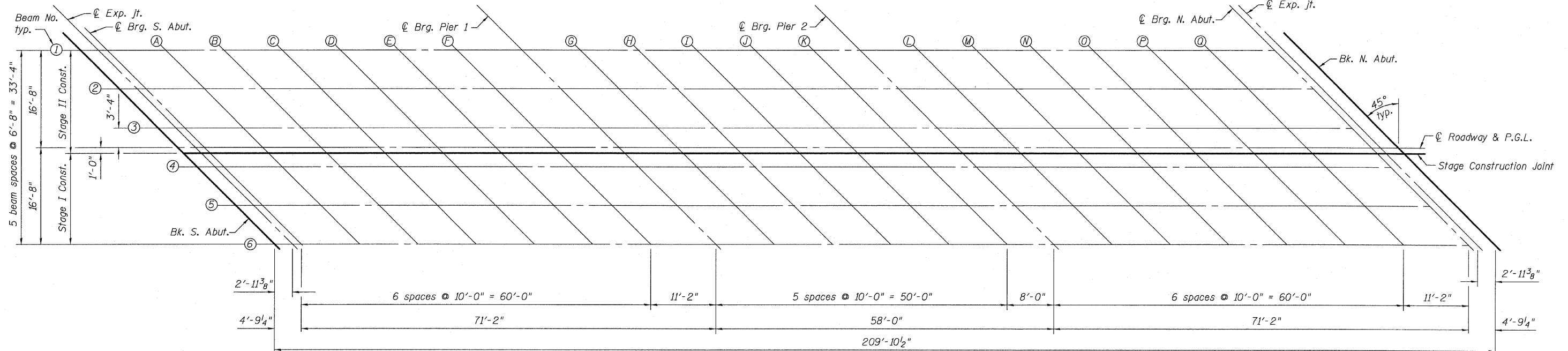
FILLET HEIGHTS



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

Note:
The above deflections are not to be used in the field if the engineer is working from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" as shown below and on sheet 6 of 27



PLAN

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	581+44.14	-16.67	587.72	587.72
☉ Brg. S. Abut.	581+48.92	-16.67	587.73	587.73
A	581+58.92	-16.67	587.77	587.84
B	581+68.92	-16.67	587.81	587.92
C	581+78.92	-16.67	587.84	587.97
D	581+88.92	-16.67	587.86	587.99
E	581+98.92	-16.67	587.89	587.98
F	582+08.92	-16.67	587.91	587.96
☉ Brg. Pier 1	582+20.08	-16.67	587.93	587.93
G	582+30.08	-16.67	587.94	587.92
H	582+40.08	-16.67	587.95	587.93
I	582+50.08	-16.67	587.96	587.93
J	582+60.08	-16.67	587.96	587.94
K	582+70.08	-16.67	587.96	587.94
☉ Brg. Pier 2	582+78.08	-16.67	587.96	587.96
L	582+88.08	-16.67	587.95	587.99
M	582+98.08	-16.67	587.94	588.03
N	583+08.08	-16.67	587.93	588.05
O	583+18.08	-16.67	587.91	588.05
P	583+28.08	-16.67	587.89	588.01
Q	583+38.08	-16.67	587.87	587.94
☉ Brg. N. Abut.	583+49.25	-16.67	587.84	587.84
Bk. N. Abut.	583+54.02	-16.67	587.83	587.83

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	581+50.81	-10.00	587.87	587.87
☉ Brg. S. Abut.	581+55.58	-10.00	587.89	587.89
A	581+65.58	-10.00	587.92	587.99
B	581+75.58	-10.00	587.95	588.07
C	581+85.58	-10.00	587.98	588.12
D	581+95.58	-10.00	588.01	588.14
E	582+05.58	-10.00	588.03	588.12
F	582+15.58	-10.00	588.05	588.10
☉ Brg. Pier 1	582+26.75	-10.00	588.06	588.06
G	582+36.75	-10.00	588.08	588.06
H	582+46.75	-10.00	588.08	588.06
I	582+56.75	-10.00	588.09	588.06
J	582+66.75	-10.00	588.09	588.07
K	582+76.75	-10.00	588.09	588.07
☉ Brg. Pier 2	582+84.75	-10.00	588.08	588.08
L	582+94.75	-10.00	588.07	588.12
M	583+04.75	-10.00	588.06	588.15
N	583+14.75	-10.00	588.05	588.17
O	583+24.75	-10.00	588.03	588.16
P	583+34.75	-10.00	588.01	588.12
Q	583+44.75	-10.00	587.98	588.05
☉ Brg. N. Abut.	583+55.92	-10.00	587.95	587.95
Bk. N. Abut.	583+60.69	-10.00	587.94	587.94

DESIGNED	DGL
CHECKED	MJP
DRAWN	MJP
CHECKED	DGL

**TOP OF SLAB ELEVATIONS
IL 47 OVER JOHNNY RUN
FAP ROUTE 326 - SECTION 119BR
GRUNDY COUNTY
STATION 582+65.75
STRUCTURE NO. 032-0112**

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 326	19BR	GRUNDY	68	26
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 6
27 SHEETS

Contract #66687

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	581+57.48	-3.33	588.00	588.00
☉ Brg. S. Abut.	581+62.25	-3.33	588.02	588.02
A	581+72.25	-3.33	588.05	588.11
B	581+82.25	-3.33	588.08	588.19
C	581+92.25	-3.33	588.10	588.24
D	582+02.25	-3.33	588.13	588.25
E	582+12.25	-3.33	588.15	588.24
F	582+22.25	-3.33	588.16	588.21
☉ Brg. Pier 1	582+33.42	-3.33	588.18	588.18
G	582+43.42	-3.33	588.18	588.17
H	582+53.42	-3.33	588.19	588.17
I	582+63.42	-3.33	588.19	588.17
J	582+73.42	-3.33	588.19	588.17
K	582+83.42	-3.33	588.19	588.17
☉ Brg. Pier 2	582+91.42	-3.33	588.18	588.18
L	583+01.42	-3.33	588.17	588.21
M	583+11.42	-3.33	588.16	588.25
N	583+21.42	-3.33	588.14	588.27
O	583+31.42	-3.33	588.12	588.25
P	583+41.42	-3.33	588.10	588.21
Q	583+51.42	-3.33	588.07	588.14
☉ Brg. N. Abut.	583+62.58	-3.33	588.04	588.04
Bk. N. Abut.	583+67.36	-3.33	588.02	588.02

☉ ROADWAY & P.G.L.

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	581+60.81	0.00	588.06	588.06
☉ Brg. S. Abut.	581+65.58	0.00	588.08	588.08
A	581+75.58	0.00	588.11	588.18
B	581+85.58	0.00	588.14	588.25
C	581+95.58	0.00	588.16	588.30
D	582+05.58	0.00	588.19	588.31
E	582+15.58	0.00	588.20	588.30
F	582+25.58	0.00	588.22	588.27
☉ Brg. Pier 1	582+36.75	0.00	588.23	588.23
G	582+46.75	0.00	588.24	588.22
H	582+56.75	0.00	588.24	588.22
I	582+66.75	0.00	588.24	588.22
J	582+76.75	0.00	588.24	588.22
K	582+86.75	0.00	588.24	588.22
☉ Brg. Pier 2	582+94.75	0.00	588.23	588.23
L	583+04.75	0.00	588.22	588.26
M	583+14.75	0.00	588.20	588.29
N	583+24.75	0.00	588.19	588.31
O	583+34.75	0.00	588.16	588.30
P	583+44.75	0.00	588.14	588.26
Q	583+54.75	0.00	588.11	588.18
☉ Brg. N. Abut.	583+65.92	0.00	588.08	588.08
Bk. N. Abut.	583+70.69	0.00	588.06	588.06

STAGE CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	581+61.81	1.00	588.05	588.05
☉ Brg. S. Abut.	581+66.58	1.00	588.07	588.07
A	581+76.58	1.00	588.10	588.16
B	581+86.58	1.00	588.13	588.24
C	581+96.58	1.00	588.15	588.28
D	582+06.58	1.00	588.17	588.30
E	582+16.58	1.00	588.19	588.28
F	582+26.58	1.00	588.20	588.25
☉ Brg. Pier 1	582+37.75	1.00	588.22	588.22
G	582+47.75	1.00	588.22	588.21
H	582+57.75	1.00	588.23	588.20
I	582+67.75	1.00	588.23	588.21
J	582+77.75	1.00	588.23	588.20
K	582+87.75	1.00	588.22	588.20
☉ Brg. Pier 2	582+95.75	1.00	588.21	588.21
L	583+05.75	1.00	588.20	588.24
M	583+15.75	1.00	588.19	588.28
N	583+25.75	1.00	588.17	588.29
O	583+35.75	1.00	588.15	588.28
P	583+45.75	1.00	588.12	588.24
Q	583+55.75	1.00	588.09	588.16
☉ Brg. N. Abut.	583+66.92	1.00	588.06	588.06
Bk. N. Abut.	583+71.69	1.00	588.04	588.04

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	581+64.14	3.33	588.02	588.02
☉ Brg. S. Abut.	581+68.92	3.33	588.04	588.04
A	581+78.92	3.33	588.07	588.13
B	581+88.92	3.33	588.10	588.21
C	581+98.92	3.33	588.12	588.25
D	582+08.92	3.33	588.14	588.27
E	582+18.92	3.33	588.16	588.25
F	582+28.92	3.33	588.17	588.22
☉ Brg. Pier 1	582+40.08	3.33	588.18	588.18
G	582+50.08	3.33	588.19	588.17
H	582+60.08	3.33	588.19	588.17
I	582+70.08	3.33	588.19	588.17
J	582+80.08	3.33	588.19	588.17
K	582+90.08	3.33	588.18	588.17
☉ Brg. Pier 2	582+98.08	3.33	588.17	588.17
L	583+08.08	3.33	588.16	588.20
M	583+18.08	3.33	588.15	588.24
N	583+28.08	3.33	588.13	588.25
O	583+38.08	3.33	588.10	588.24
P	583+48.08	3.33	588.08	588.20
Q	583+58.08	3.33	588.05	588.12
☉ Brg. N. Abut.	583+69.25	3.33	588.01	588.01
Bk. N. Abut.	583+74.02	3.33	588.00	588.00

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	581+70.81	10.00	587.94	587.94
☉ Brg. S. Abut.	581+75.58	10.00	587.95	587.95
A	581+85.58	10.00	587.98	588.05
B	581+95.58	10.00	588.01	588.12
C	582+05.58	10.00	588.03	588.16
D	582+15.58	10.00	588.05	588.18
E	582+25.58	10.00	588.06	588.16
F	582+35.58	10.00	588.07	588.12
☉ Brg. Pier 1	582+46.75	10.00	588.08	588.08
G	582+56.75	10.00	588.09	588.07
H	582+66.75	10.00	588.09	588.06
I	582+76.75	10.00	588.09	588.06
J	582+86.75	10.00	588.08	588.06
K	582+96.75	10.00	588.07	588.06
☉ Brg. Pier 2	583+04.75	10.00	588.06	588.06
L	583+14.75	10.00	588.05	588.09
M	583+24.75	10.00	588.03	588.12
N	583+34.75	10.00	588.01	588.13
O	583+44.75	10.00	587.98	588.12
P	583+54.75	10.00	587.96	588.07
Q	583+64.75	10.00	587.92	587.99
☉ Brg. N. Abut.	583+75.92	10.00	587.88	587.88
Bk. N. Abut.	583+80.69	10.00	587.87	587.87

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	581+77.48	16.67	587.83	587.83
☉ Brg. S. Abut.	581+82.25	16.67	587.85	587.85
A	581+92.25	16.67	587.87	587.94
B	582+02.25	16.67	587.89	588.01
C	582+12.25	16.67	587.91	588.05
D	582+22.25	16.67	587.93	588.06
E	582+32.25	16.67	587.94	588.04
F	582+42.25	16.67	587.95	588.00
☉ Brg. Pier 1	582+53.42	16.67	587.96	587.96
G	582+63.42	16.67	587.96	587.94
H	582+73.42	16.67	587.96	587.93
I	582+83.42	16.67	587.95	587.93
J	582+93.42	16.67	587.95	587.92
K	583+03.42	16.67	587.94	587.92
☉ Brg. Pier 2	583+11.42	16.67	587.92	587.92
L	583+21.42	16.67	587.91	587.95
M	583+31.42	16.67	587.89	587.98
N	583+41.42	16.67	587.86	587.99
O	583+51.42	16.67	587.84	587.97
P	583+61.42	16.67	587.81	587.92
Q	583+71.42	16.67	587.77	587.84
☉ Brg. N. Abut.	583+82.58	16.67	587.73	587.73
Bk. N. Abut.	583+87.36	16.67	587.71	587.71

TOP OF SLAB ELEVATIONS
IL 47 OVER JOHNNY RUN
FAP ROUTE 326 - SECTION 19BR
GRUNDY COUNTY
STATION 582+65.75
STRUCTURE NO. 032-0112

DESIGNED	DGL
CHECKED	MJP
DRAWN	MJP
CHECKED	DGL

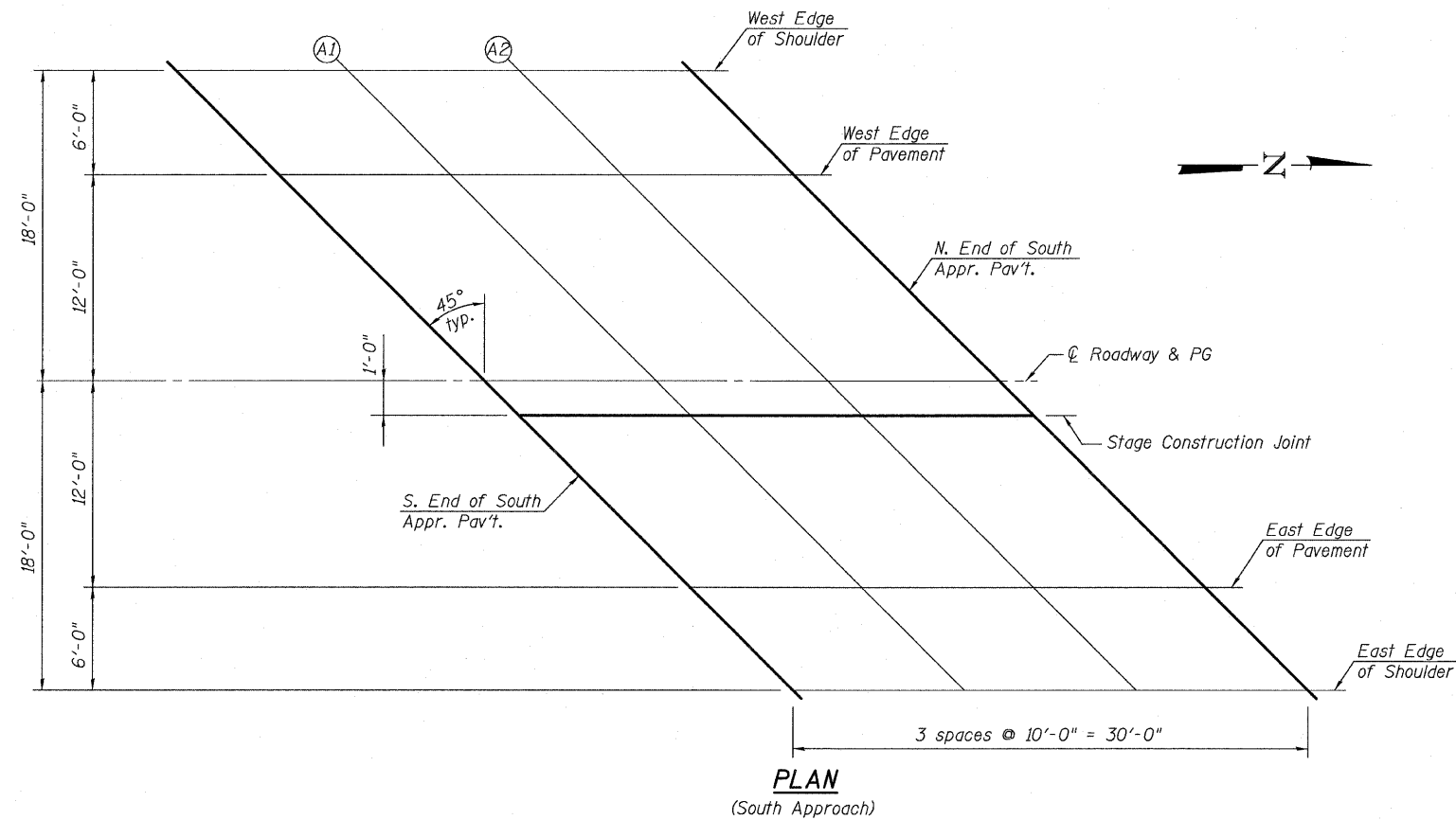


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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET	SHEET NO. 7 27 SHEETS
FAP 326	119BR	GRUNDY	68	27	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-		

Contract #66687



WEST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
S. End of South Appr. Pav't.	581+13.52	-18.00	587.55
A1	581+23.52	-18.00	587.60
A2	581+33.52	-18.00	587.64
N. End of South Appr. Pav't.	581+43.52	-18.00	587.69

WEST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
S. End of South Appr. Pav't.	581+19.52	-12.00	587.70
A1	581+29.52	-12.00	587.75
A2	581+39.52	-12.00	587.79
N. End of South Appr. Pav't.	581+49.52	-12.00	587.83

☉ ROADWAY & PG

Location	Station	Offset	Theoretical Grade Elevations
S. End of South Appr. Pav't.	581+31.52	0.00	587.95
A1	581+41.52	0.00	587.99
A2	581+51.52	0.00	588.03
N. End of South Appr. Pav't.	581+61.52	0.00	588.07

STAGE CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations
S. End of South Appr. Pav't.	581+32.52	1.00	587.94
A1	581+42.52	1.00	587.98
A2	581+52.52	1.00	588.02
N. End of South Appr. Pav't.	581+62.52	1.00	588.05

EAST EDGE OF PAVEMENT


Location	Station	Offset	Theoretical Grade Elevations
S. End of South Appr. Pav't.	581+43.52	12.00	587.81
A1	581+53.52	12.00	587.85
A2	581+63.52	12.00	587.89
N. End of South Appr. Pav't.	581+73.52	12.00	587.92

EAST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
S. End of South Appr. Pav't.	581+49.52	18.00	587.71
A1	581+59.52	18.00	587.75
A2	581+69.52	18.00	587.78
N. End of South Appr. Pav't.	581+79.52	18.00	587.81

**TOP OF SOUTH APPROACH
SLAB ELEVATIONS
IL 47 OVER JOHNNY RUN
FAP ROUTE 326 - SECTION 119BR
GRUNDY COUNTY
STATION 582+65.75
STRUCTURE NO. 032-0112**

DESIGNED	DGL
CHECKED	MJP
DRAWN	MJP
CHECKED	DGL

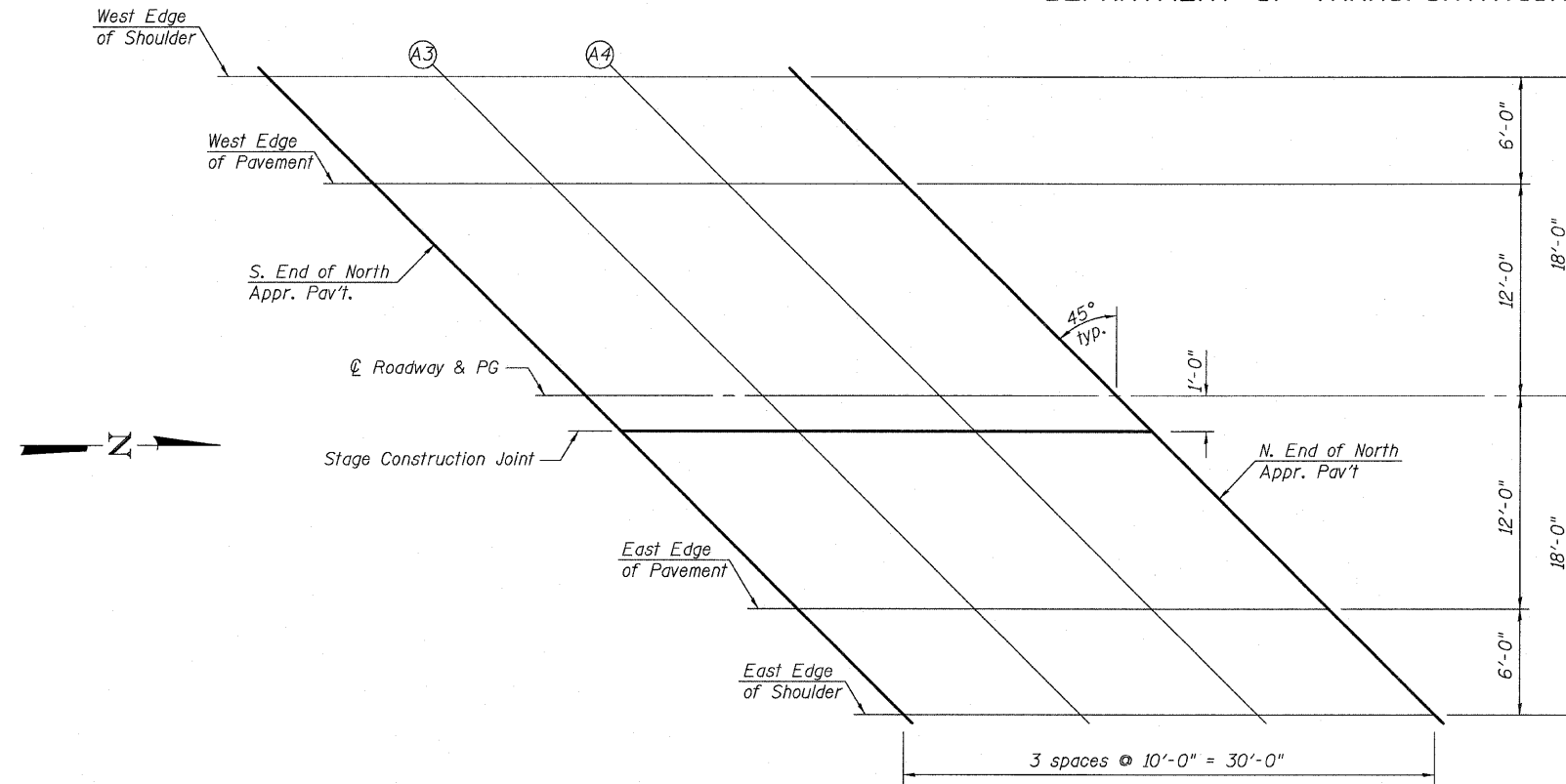


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STATE OF ILLINOIS
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ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET	SHEET NO.
FAP 326	119BR	GRUNDY	68	28	27 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-		

Contract #66687



PLAN
(North Approach)

WEST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
S. End of North Appr. Pav't.	583+51.98	-18.00	587.81
A3	583+61.98	-18.00	587.78
A4	583+71.98	-18.00	587.74
N. End of North Appr. Pav't.	583+81.98	-18.00	587.71

WEST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
S. End of North Appr. Pav't.	583+57.98	-12.00	587.91
A3	583+67.98	-12.00	587.88
A4	583+77.98	-12.00	587.85
N. End of North Appr. Pav't.	583+87.98	-12.00	587.81

☉ ROADWAY & PG

Location	Station	Offset	Theoretical Grade Elevations
S. End of North Appr. Pav't.	583+69.98	0.00	588.06
A3	583+79.98	0.00	588.03
A4	583+89.98	0.00	587.99
N. End of North Appr. Pav't.	583+99.98	0.00	587.94

STAGE CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations
S. End of North Appr. Pav't.	583+70.98	1.00	588.04
A3	583+80.98	1.00	588.01
A4	583+90.98	1.00	587.97
N. End of North Appr. Pav't.	584+00.98	1.00	587.92

EAST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
S. End of North Appr. Pav't.	583+81.98	12.00	587.83
A3	583+91.98	12.00	587.79
A4	584+01.98	12.00	587.75
N. End of North Appr. Pav't.	584+11.98	12.00	587.70

EAST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
S. End of North Appr. Pav't.	583+87.98	18.00	587.68
A3	583+97.98	18.00	587.64
A4	584+07.98	18.00	587.59
N. End of North Appr. Pav't.	584+17.98	18.00	587.54

**TOP OF NORTH APPROACH
SLAB ELEVATIONS
IL 47 OVER JOHNNY RUN
FAP ROUTE 326 - SECTION 119BR
GRUNDY COUNTY
STATION 582+65.75
STRUCTURE NO. 032-0112**

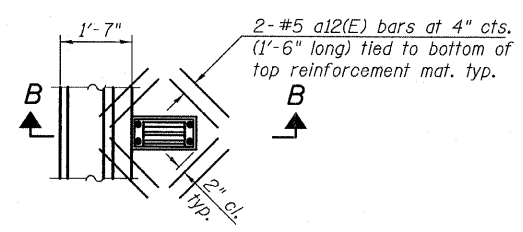
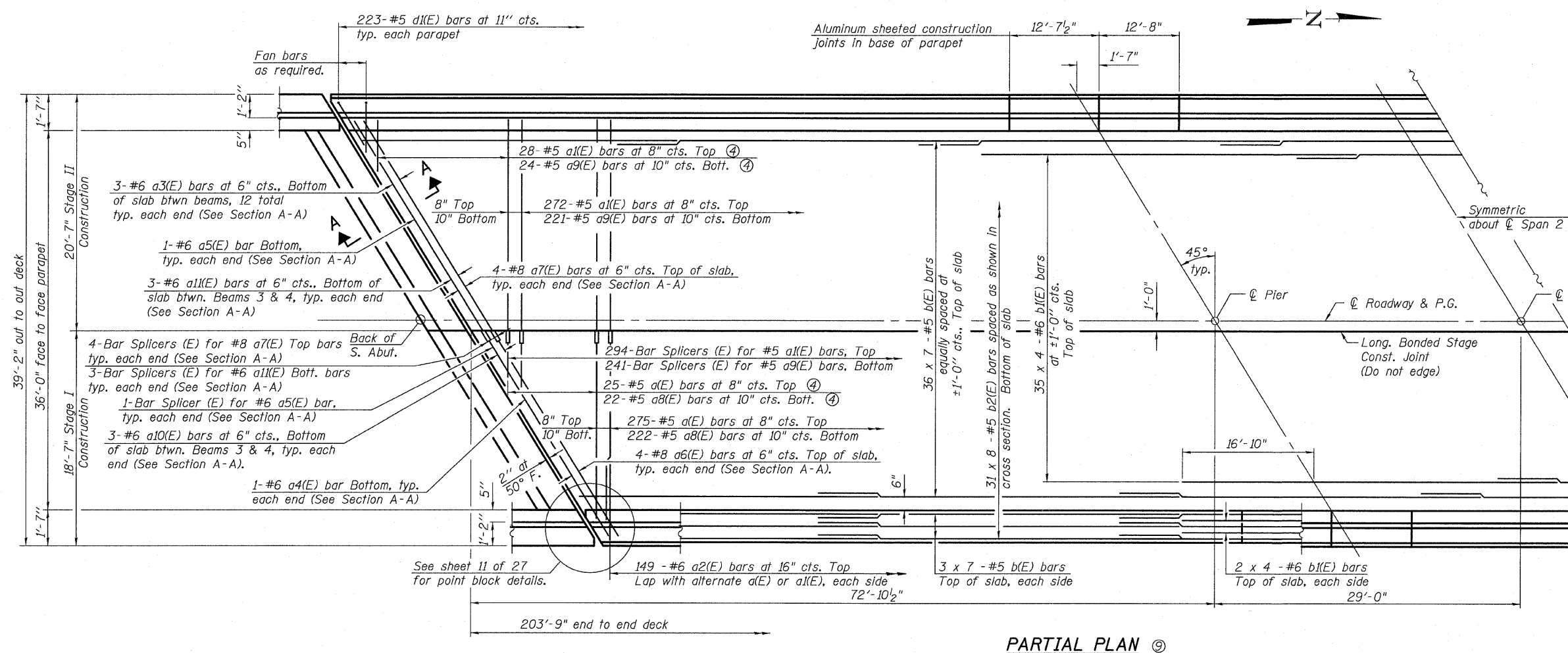
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CHECKED	MJP
DRAWN	MJP
CHECKED	DGL

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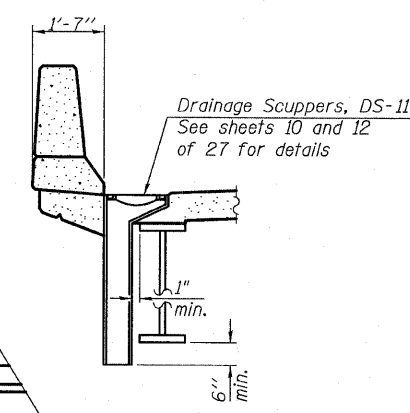
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ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET	SHEET NO. 9 27 SHEETS
FAP 326	119BR	GRUNDY	68	29	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #66687

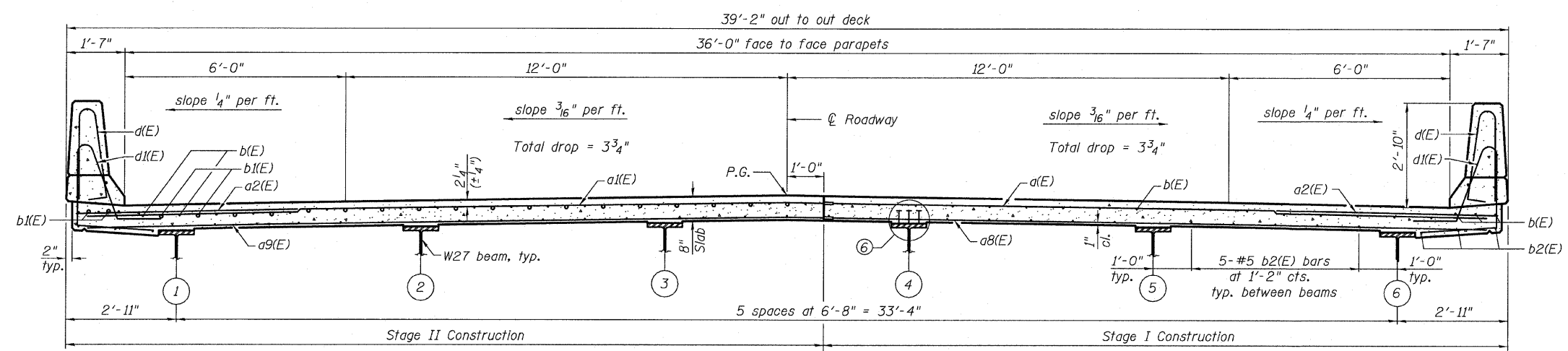


PLAN 10



SECTION B-B

- Notes:
- See sheet 10 of 27 for superstructure details and Bill of Material.
 - Bars indicated thus 36 x 7-#5 etc. indicates 36 lines of bars with 7 lengths per line.
 - See sheet 10 of 27 for parapet reinforcement and Section A-A.
 - Order a(E), a1(E), a8(E) and a9(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.
 - Minimum bar lap: #5 bars = 1'-8"
#6 bars = 2'-0".
 - See sheet 14 of 27, for shear stud details. Shear studs are located at Spans 1, 2 & 3, see beam elevation.
 - For location of drainage scuppers, see sheet 1 of 27.
 - See sheet 23 of 27 for bar splicer assembly details.
 - Bars x(E) and x1(E) at concrete end beam not shown for clarity. See Section A-A for location & call outs.
 - Cut longitudinal reinforcement to clear drainage scuppers.



NEAR PIER & SPAN 2

NEAR MIDSPAN, SPANS 1 & 3

CROSS SECTION
(Looking North)

DESIGNED	NEL
CHECKED	JGS
DRAWN	NEL
CHECKED	JGS

SUPERSTRUCTURE
IL 47 OVER JOHNNY RUN
FAP ROUTE 326 - SECTION 119BR
GRUNDY COUNTY
STATION 582+65.75
STRUCTURE NO. 032-0112

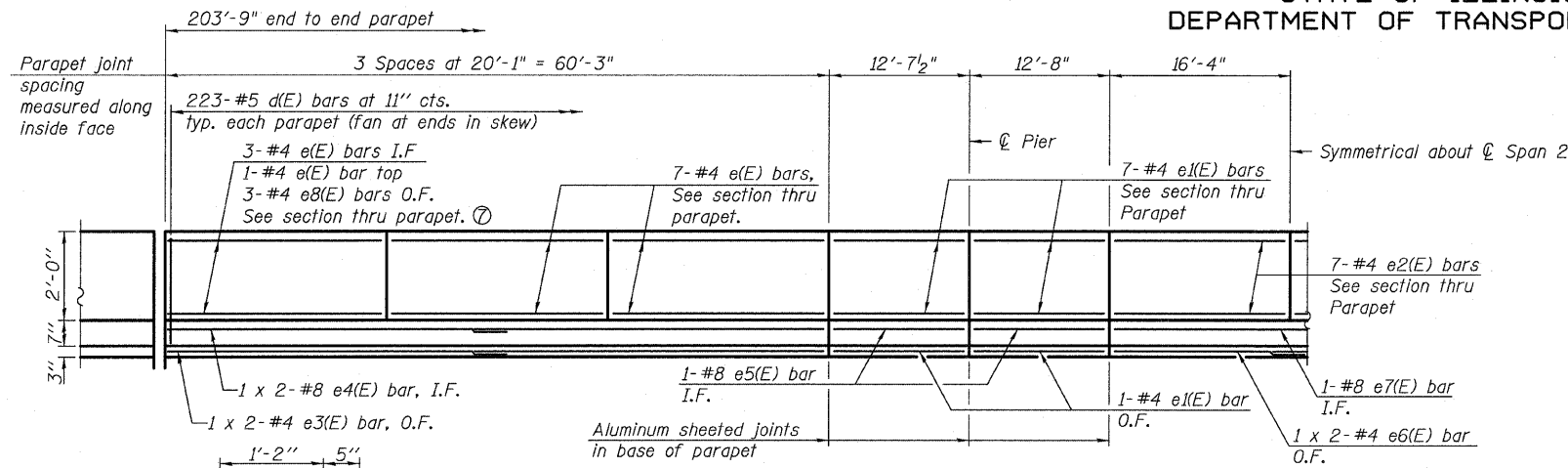
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DEPARTMENT OF TRANSPORTATION

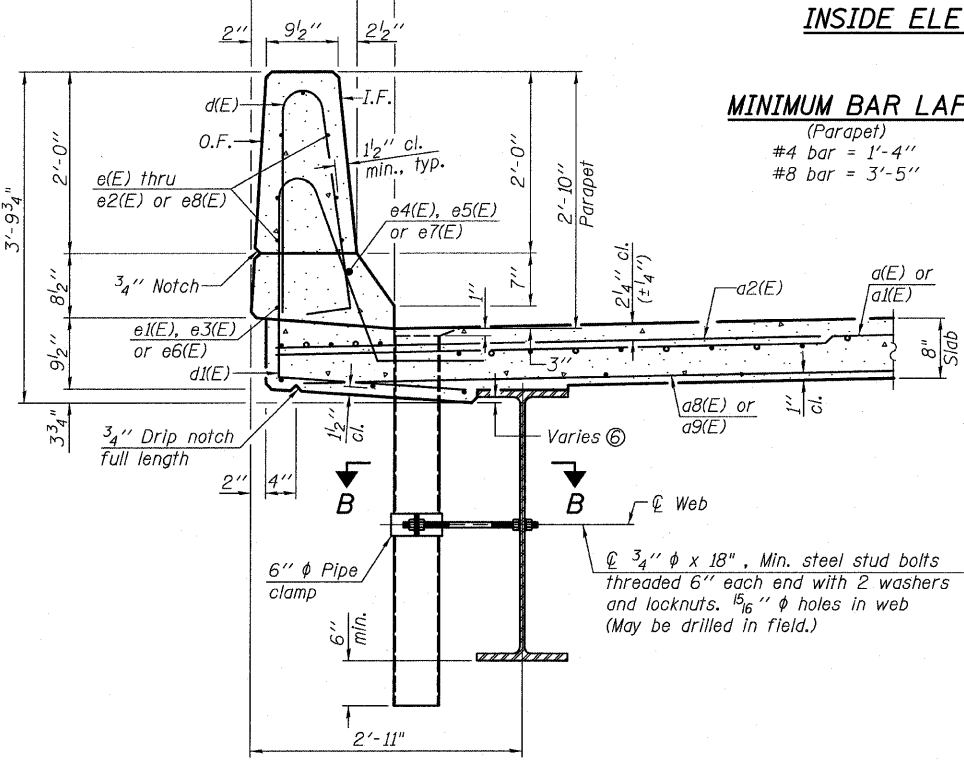
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FAP 326	119BR	GRUNDY	68	30
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

Contract #66687

SHEET NO. 10
27 SHEETS

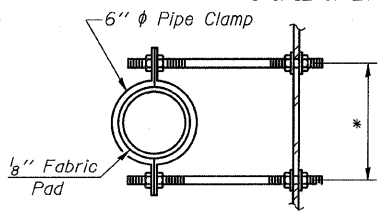


INSIDE ELEVATION OF PARAPET



SECTION THRU PARAPET

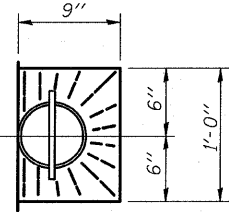
(6" ϕ floor drains are shown. See sheets 9 & 12 of 27 for scupper details.)



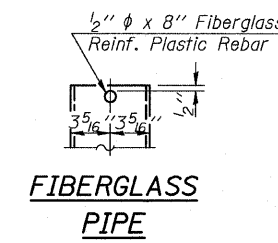
SECTION B-B

*Dimension as required by Pipe Clamp

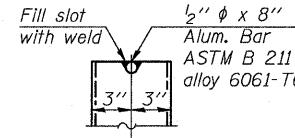
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DRAWN	NEL
CHECKED	JGS



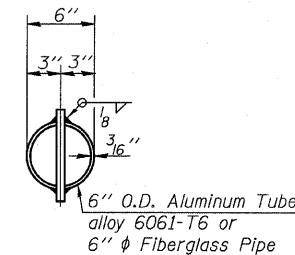
TOP PLAN



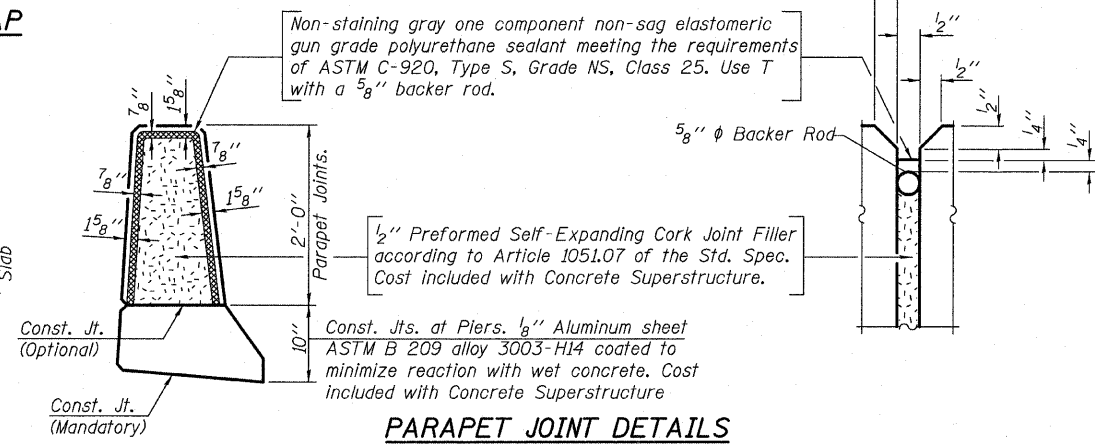
FIBERGLASS PIPE



ALUMINUM TUBE

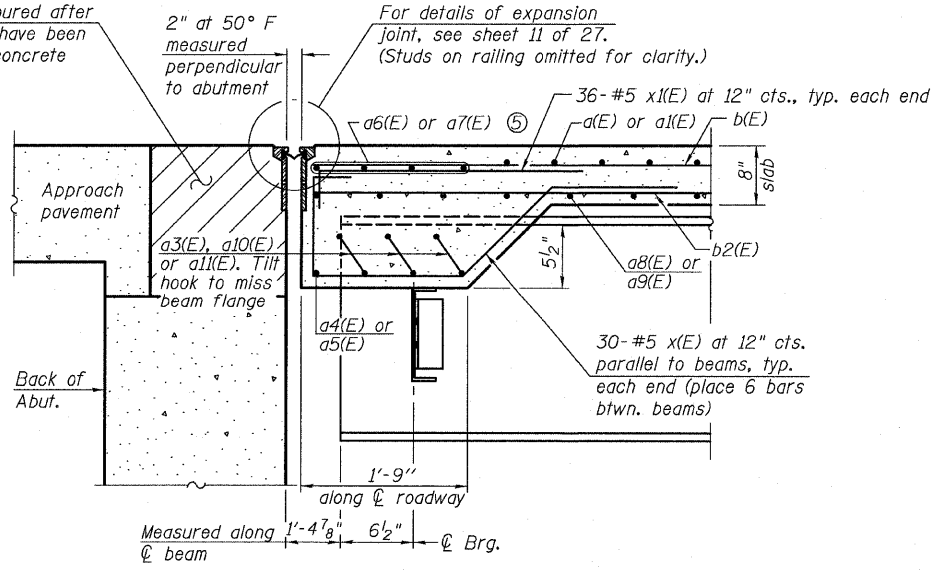


TOP PLAN (Showing Aluminum Tube)

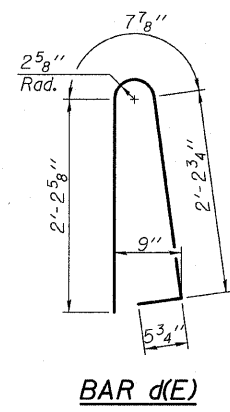


PARAPET JOINT DETAILS

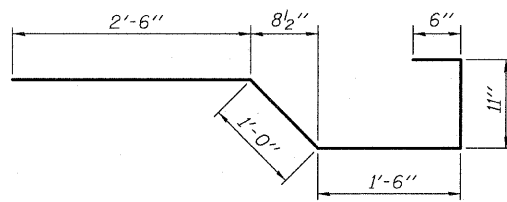
Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete Superstructure.



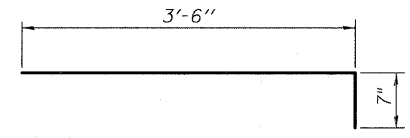
SECTION A-A



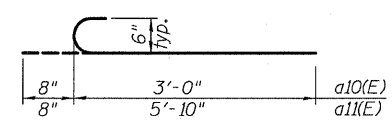
BAR d(E)



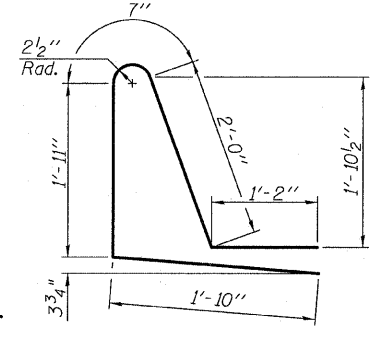
BAR x(E)



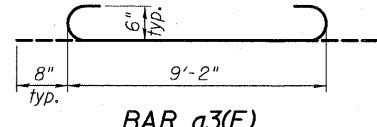
BAR x1(E)



BARS a10(E) & a11(E)



BAR d1(E)



BAR a3(E)

SUPERSTRUCTURE
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	300	#5	18'-1"	—
a1(E)	300	#5	20'-1"	—
a2(E)	298	#6	6'-0"	—
a3(E)	24	#6	10'-6"	—
a4(E)	2	#6	22'-0"	—
a5(E)	2	#6	24'-10"	—
a6(E)	8	#8	22'-0"	—
a7(E)	8	#8	24'-10"	—
a8(E)	244	#5	17'-9"	—
a9(E)	245	#5	19'-9"	—
a10(E)	6	#6	3'-8"	—
a11(E)	6	#6	6'-6"	—
a12(E)	32	#5	1'-6"	—
b(E)	294	#5	30'-6"	—
b1(E)	156	#6	24'-11"	—
b2(E)	248	#5	26'-11"	—
d(E)	446	#5	5'-7"	—
d1(E)	446	#5	7'-6"	—
e(E)	72	#4	19'-9"	—
e1(E)	64	#4	12'-3"	—
e2(E)	28	#4	16'-0"	—
e3(E)	8	#4	31'-4"	—
e4(E)	8	#8	32'-5"	—
e5(E)	8	#8	12'-4"	—
e6(E)	4	#4	16'-10"	—
e7(E)	2	#8	32'-4"	—
e8(E)	12	#4	21'-2"	—
x(E)	60	#5	6'-5"	—
x1(E)	72	#5	4'-1"	—
Reinforcement Bars, Epoxy Coated		Pound	58,080	
Concrete Superstructure		Cu. Yds.	270.2	

- Notes:
- ① Bars indicated thus 1 x 2 - #4 etc. indicates 1 line of bars with 2 lengths per line.
 - ② Drains shall be located clear of all diaphragms.
 - ③ Floor drains need not be painted.
 - ④ Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. min.
 - ⑤ Place a6(E) & a7(E) bars under longitudinal bars as shown in Section A-A.
 - ⑥ Dimension varies throughout the length of the structure from 1/4" minimum at the maximum fascia beam fillet height.
 - ⑦ Place e8(E) bars in outside face of SW & NE corners of parapets as required. Cut e8(E) bars in outside face of SE & NW corners of parapets as required.
 - ⑧ I.F. denotes inside face. O.F. denotes outside face.

SUPERSTRUCTURE DETAILS
IL 47 OVER JOHNNY RUN
FAP ROUTE 326 - SECTION 119BR
GRUNDY COUNTY
STATION 582+65.75
STRUCTURE NO. 032-0112

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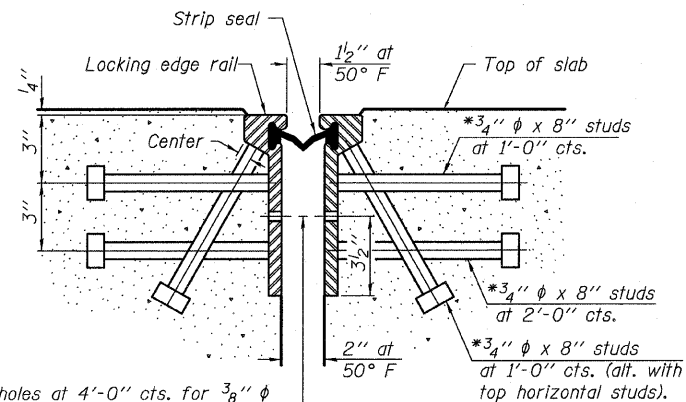
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DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	LENG. FEET	SHEET NO.	SHEET NO. 11 27 SHEETS
FAP 326	119BR	GRUNDY	68	31	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

Contract #66687

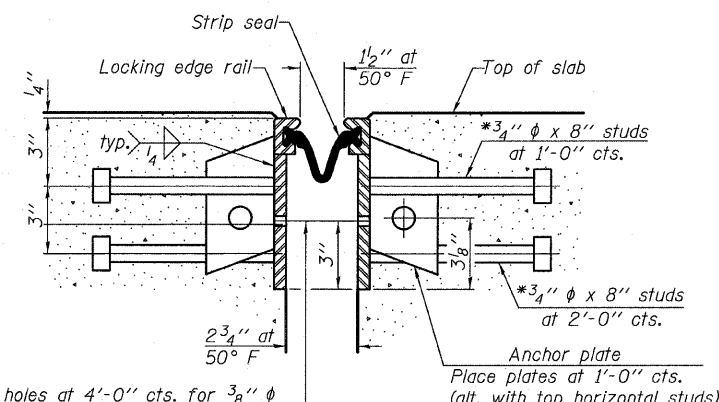
*Granular or solid Flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.

Notes:
The strip seal shall be made continuous and shall have a minimum thickness of 1/4". 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.



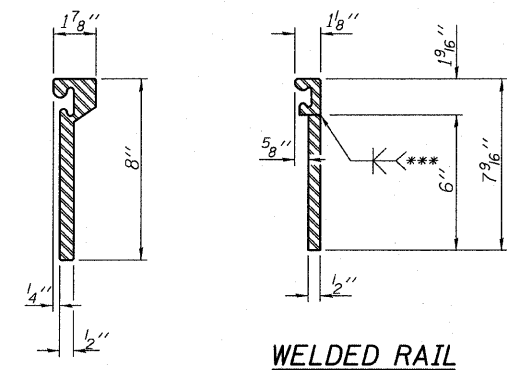
7/16" ϕ holes at 4'-0" cts. for 3/8" ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

SECTION THRU ROLLED RAIL JOINT



7/16" ϕ holes at 4'-0" cts. for 3/8" ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

SECTION THRU WELDED RAIL JOINT



ROLLED EXTRUDED RAIL

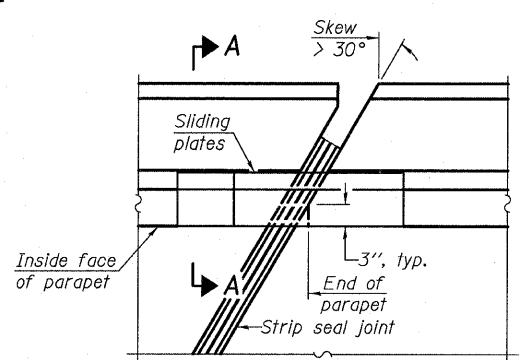
WELDED RAIL

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

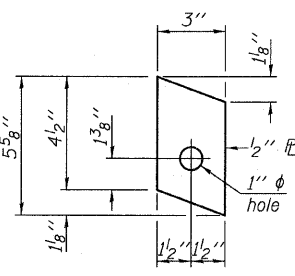
LOCKING EDGE RAIL SPLICE

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

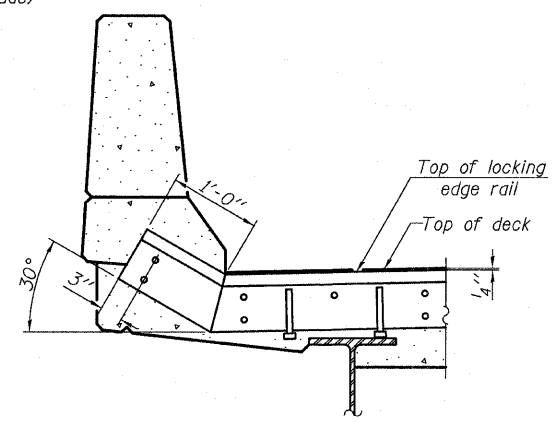
LOCKING EDGE RAILS



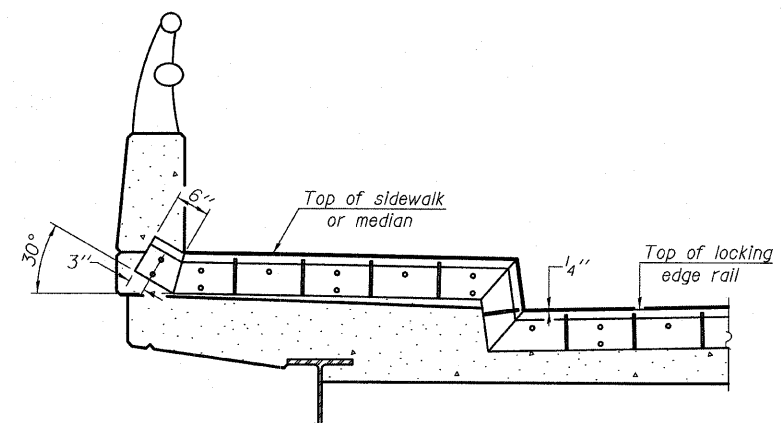
PLAN



ANCHOR PLATE
(for welded rail)



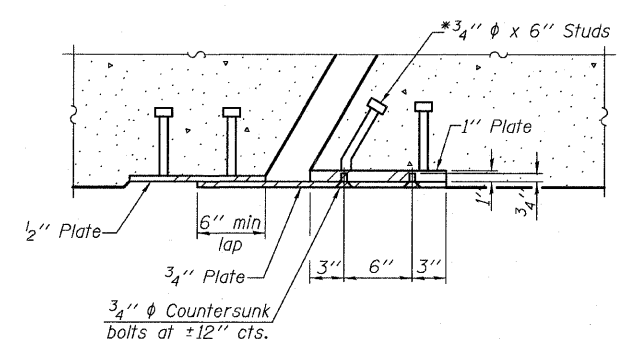
AT PARAPET



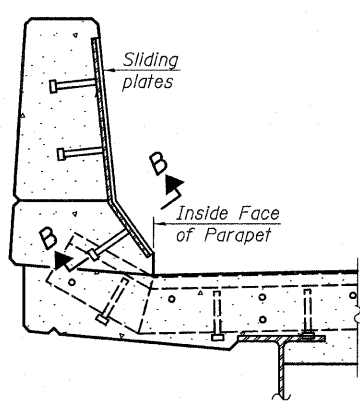
AT SIDEWALK OR MEDIAN

Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.

TYPICAL END TREATMENTS



SECTION B-B



SECTION A-A

POINT BLOCK DETAILS
(for skews > 30°)

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	106.0

PREFORMED JOINT STRIP SEAL
IL 47 OVER JOHNNY RUN
FAP ROUTE 326 - SECTION 119BR
GRUNDY COUNTY
STATION 582+65.75
STRUCTURE NO. 032-0112

DESIGNED -
CHECKED -
DRAWN -
CHECKED -

EJ-SSJ

5-16-08



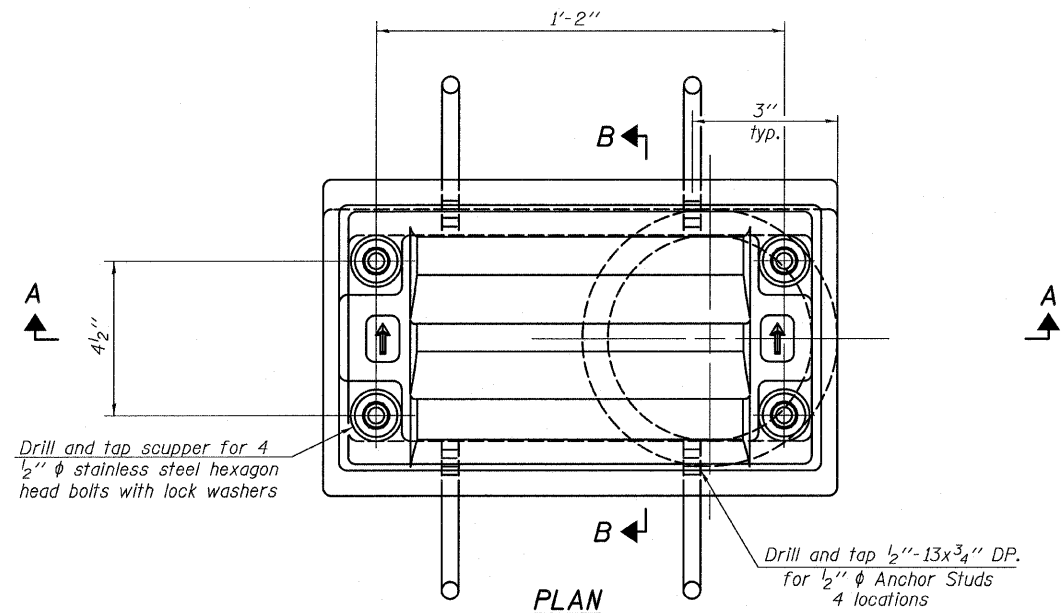
OATES ASSOCIATES
Consulting Engineers
Eastport Business Center 1
100 Lanter Court, Suite 1
Collinsville, Illinois 62234
618-345-2200
Design Firm License No. 184.001115

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

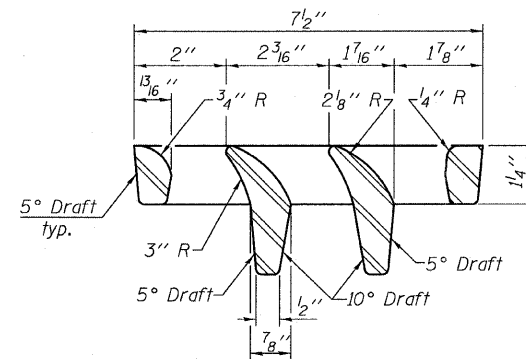
ROUTE NO. FAP 326	SECTION 119BR	COUNTY GRUNDY	SHEET NO. 68	SHEET TOTAL 32	SHEET NO. 12 27 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

Contract #66687

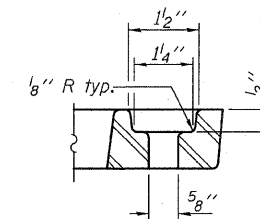
Notes:
 All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.
 Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.
 Downspouts located on the exterior side of a painted steel fascia beam shall be painted with the finish coat specified for the exterior side of the fascia beam.
 As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.
 Structural steel weldments of equal sections and of the same configuration may be substituted for the cast iron scupper frame. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval. Structural steel weldments shall not be substituted for the cast iron scupper grate. Structural steel frames and downspouts shall be galvanized according to AASHTO M11.
 The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.
 Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scuppers, DS-11.
 Alternate fiberglass downspout conforming to ASTM D 2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. may be used in lieu of the cast iron or steel equivalent.



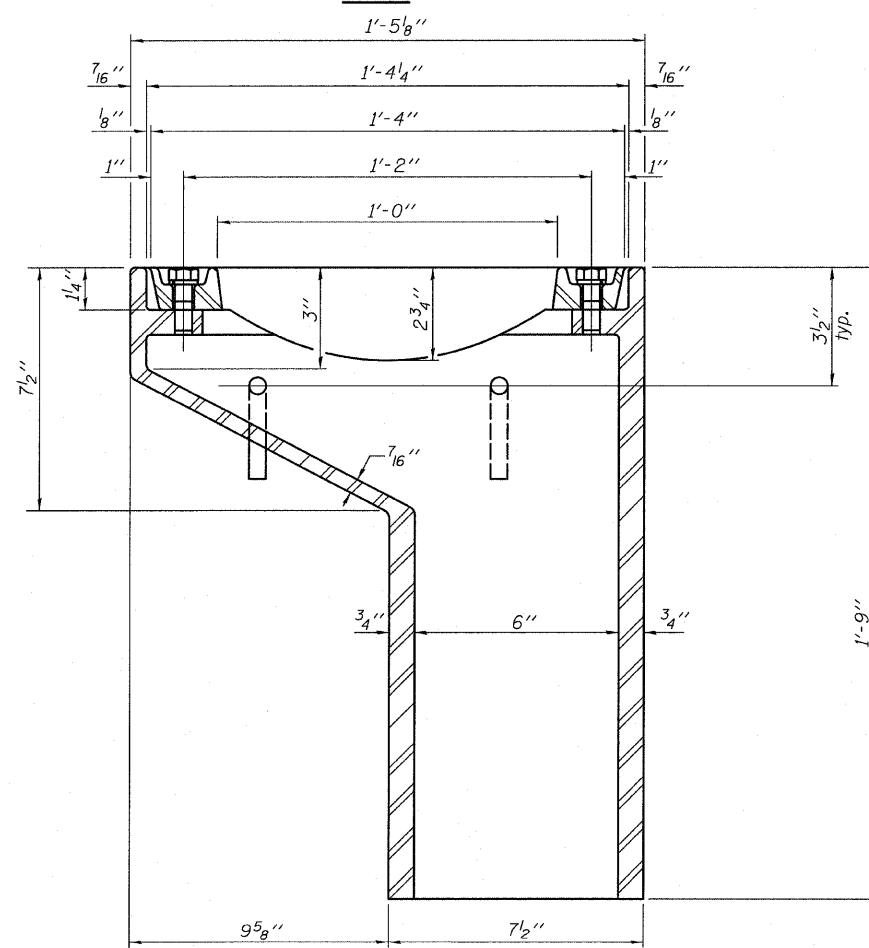
PLAN



VANE GRATE DETAIL

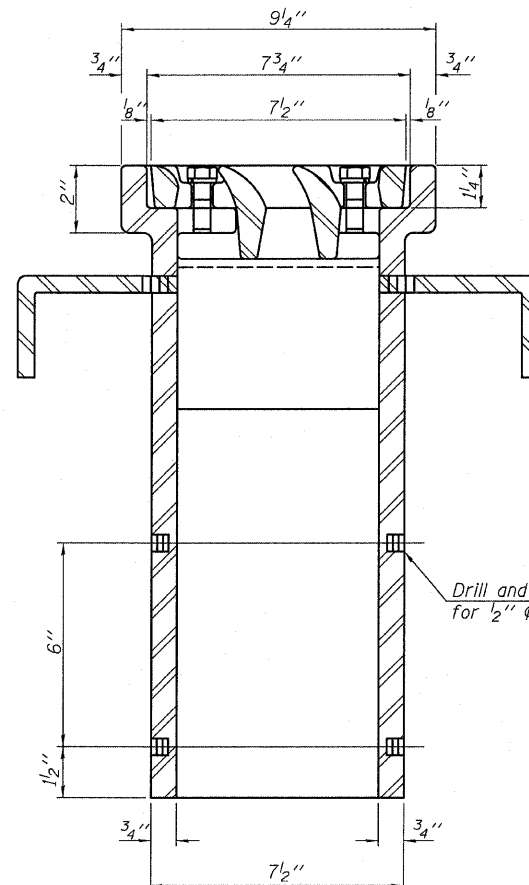


BOLT HOLE DETAIL



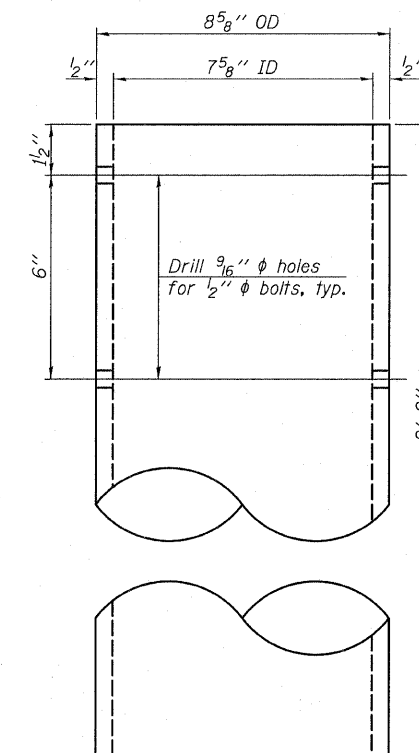
SECTION A-A

See sheet 9 of 27 for scupper location relative to parapet.

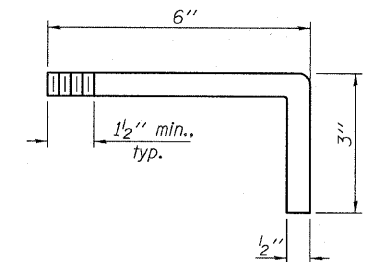


SECTION B-B

Drill and tap 1/2"-13x1/2" DP. for 1/2" φ bolts. (4 locations)



DOWNSPOUT



ANCHOR STUD DETAIL

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scuppers, DS-11	Each	4

DRAINAGE SCUPPER DS-11
 IL 47 OVER JOHNNY RUN
 FAP ROUTE 326 - SECTION 119BR
 GRUNDY COUNTY
 STATION 582+65.75
 STRUCTURE NO. 032-0112

DESIGNED -
CHECKED -
DRAWN -
CHECKED -

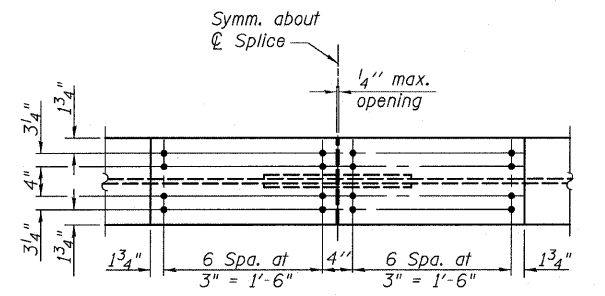
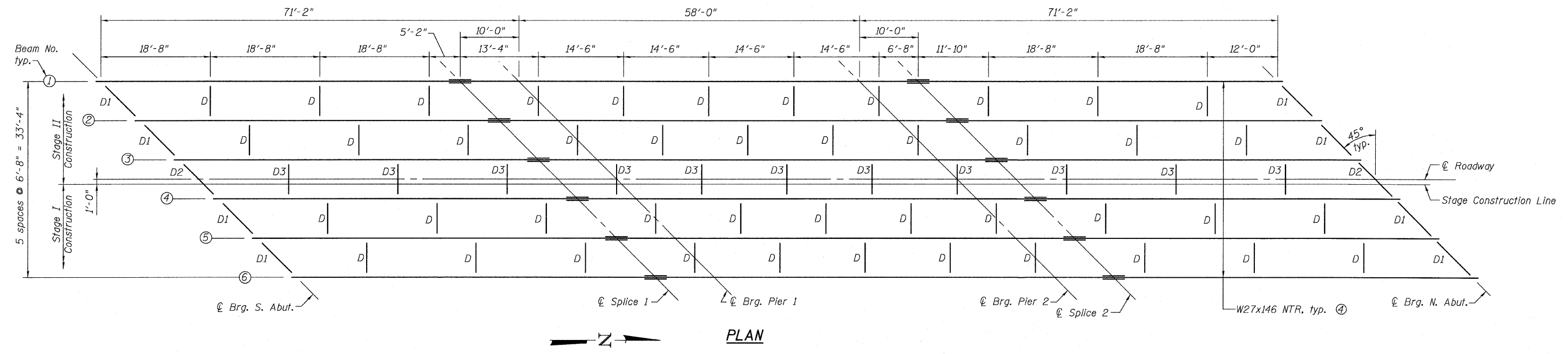
DS-11

5-16-08

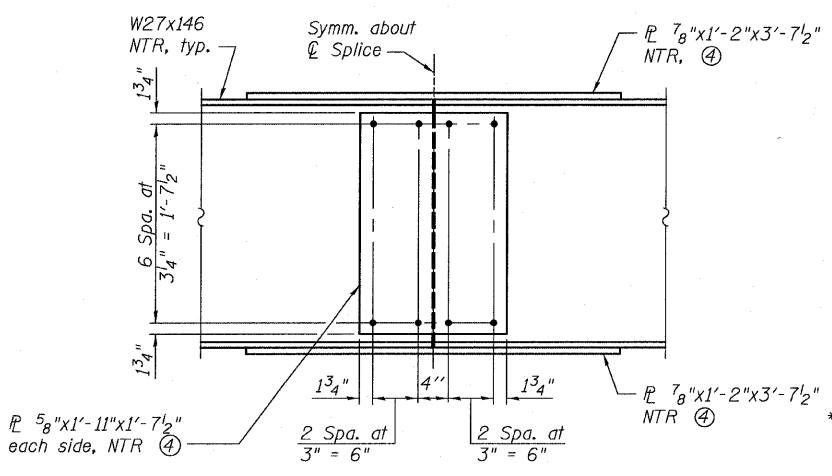


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TOP & BOTTOM PLAN



ELEVATION

SPLICE DETAIL
(12 Required)

DESIGNED	MJP
CHECKED	JGS
DRAWN	MJP
CHECKED	JGS

	0.4 Span 1 & 3	Pier 1 & 2	0.5 Span 2
I_s	5660	5660	5660
$I_c(n)$	14446	14446	14446
$I_c(3n)$	10577	10577	10577
S_s	414	414	414
$S_c(n)$	584	584	584
$S_c(3n)$	530	530	530
Z	464	464	464
ρ	0.864	1.314	0.864
$M \rho$	373.4	547.0	-16.0
$s \rho$	0.450	0.450	0.450
$M_s \rho$	206.4	21.5	21.5
M_t	510.9	243.5	349.8
M_i	130.3	64.3	95.5
$\sum_3 [M_t + M_i]$	1068.7	513.0	742.3
M_a	2143.0	1377.9	972.1
M_u	2703.8	1911.1	2703.8
$f_s \rho$ non-comp	10.82	15.85	-0.46
$f_s \rho$ (comp)	4.67	0.49	0.49
$f_s \rho \sum_3 [M_t + M_i]$	21.96	14.87	15.25
f_s (Overload)	37.46	30.72	15.27
f_s (Total)			
VR	54.2	47.7	47.7

*Compact section
**Braced non-compact and partially braced section

	N. & S. Abut.	Pier 1 & 2
$R \rho$	39.1	92.5
R_t	41.5	45.1
R_i	10.6	8.9
R Total	91.2	146.5

I_s, S_s : Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total and Overload) due to non-composite dead loads (in.⁴ and in.³).

$I_c(n), S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total and Overload) due to short-term composite live loads (in.⁴ and in.³).

$I(3n), S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total and Overload) due to long-term composite (superimposed) dead loads (in.⁴ and in.³).

Z : Plastic Section Modulus of the steel section in non-composite areas (in.³).

ρ : Un-factored non-composite dead load (kips/ft.).

$M \rho$: Un-factored moment due to non-composite dead load (kip-ft.).

$s \rho$: Un-factored long-term composite (superimposed) dead load (kips/ft.).

$M_s \rho$: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).

M_t : Un-factored live load moment (kip-ft.).

M_i : Un-factored moment due to impact (kip-ft.).

M_a : Factored design moment (kip-ft.).
 $1.3 [M \rho + M_s \rho + \frac{5}{3} (M_t + M_i)]$

M_u : Compact composite moment capacity according to AASHTO LFD 10.50.1.1 or compact non-composite moment capacity according to AASHTO LFD 10.48.1 (kip-ft.).

f_s (Overload): Sum of stresses as computed from the moments below (ksi).
 $M \rho + M_s \rho + \frac{5}{3} (M_t + M_i)$

f_s (Total): Sum of stresses as computed from the moments below on non-compact section (ksi).
 $1.3 [M \rho + M_s \rho + \frac{5}{3} (M_t + M_i)]$

VR: Maximum t + impact horizontal shear range within the composite portion of the span for stud shear connector design (kips).

FRAMING PLAN
IL 47 OVER JOHNNY RUN
FAP ROUTE 326 - SECTION 119BR
GRUNDY COUNTY
STATION 582+65.75
STRUCTURE NO. 032-0112

Notes:
① Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.
② For beam elevation and details, see sheet 14 of 27.
③ All diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual diaphragms at supports may be temporarily disconnected to install bearing anchor rods.
④ AASHTO M 270 Grade 50W steel.

QATES ASSOCIATES
Consulting Engineers

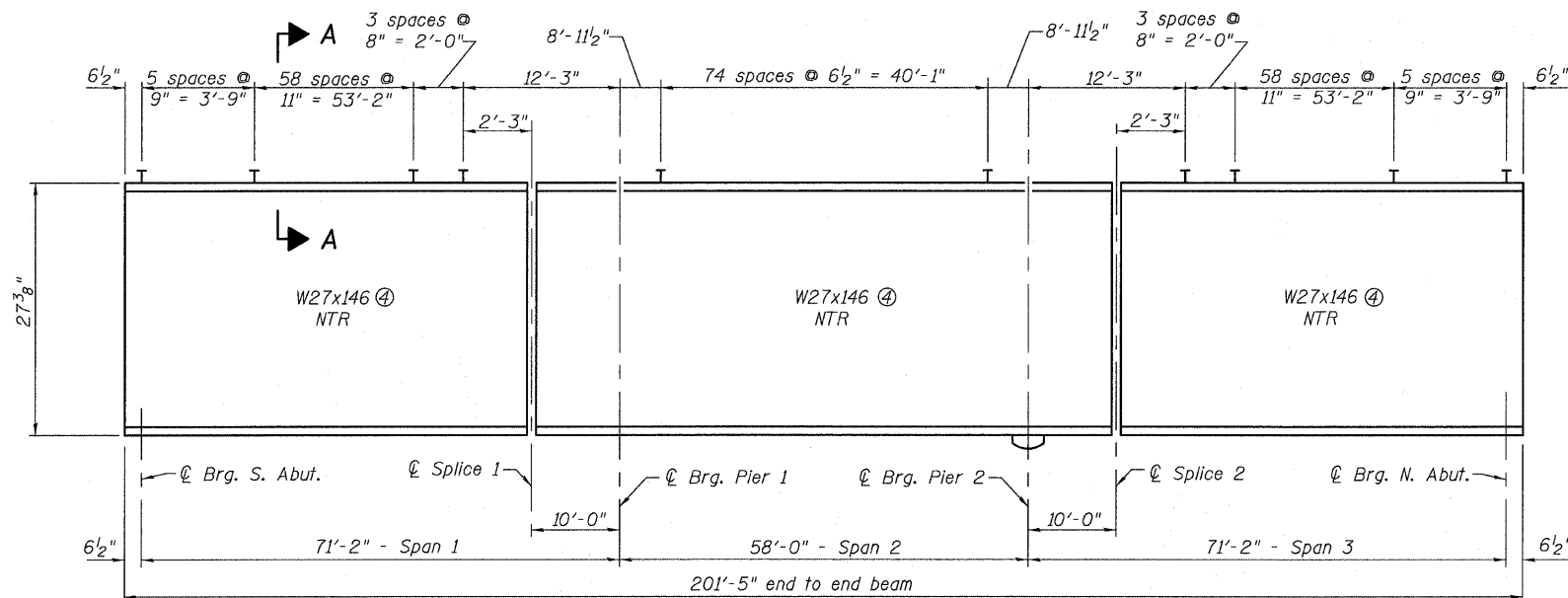
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	STATION	SHEET
FAP 326	119BR	GRUNDY	68	34
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

Contract #66687

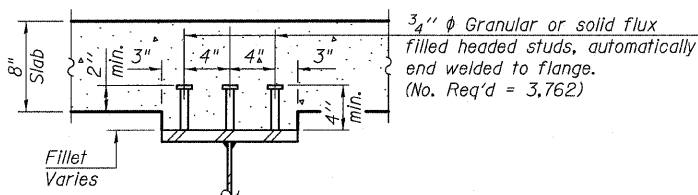
SHEET NO. 14
27 SHEETS



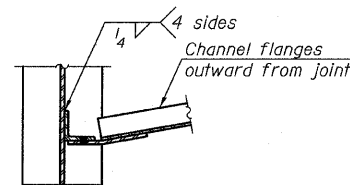
BEAM ELEVATION

TOP OF BEAM ELEVATIONS *						
	Beam #1	Beam #2	Beam #3	Beam #4	Beam #5	Beam #6
℄ Brg. S. Abut.	587.03	587.18	587.31	587.33	587.25	587.14
℄ Splice 1	587.17	587.31	587.43	587.44	587.34	587.22
℄ Brg. Pier 1	587.18	587.32	587.43	587.43	587.33	587.21
℄ Brg. Pier 2	587.21	587.33	587.43	587.43	587.31	587.18
℄ Splice 2	587.21	587.34	587.43	587.43	587.31	587.17
℄ Brg. N. Abut.	587.13	587.24	587.33	587.30	587.18	587.02

* For Fabrication Only

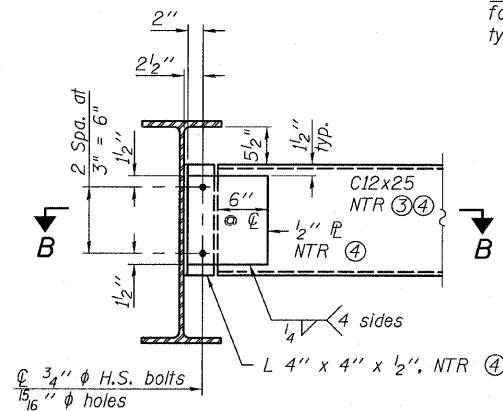


SECTION A-A



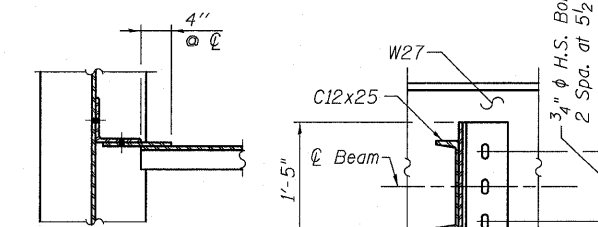
SECTION B-B

DESIGNED	MJP
CHECKED	JGS
DRAWN	MJP
CHECKED	JGS

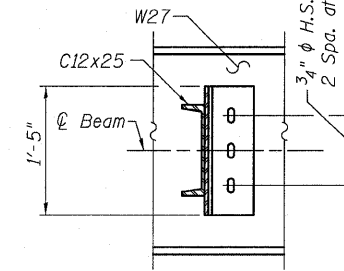


END DIAPHRAGM D1

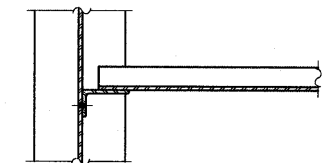
(8 Req'd)



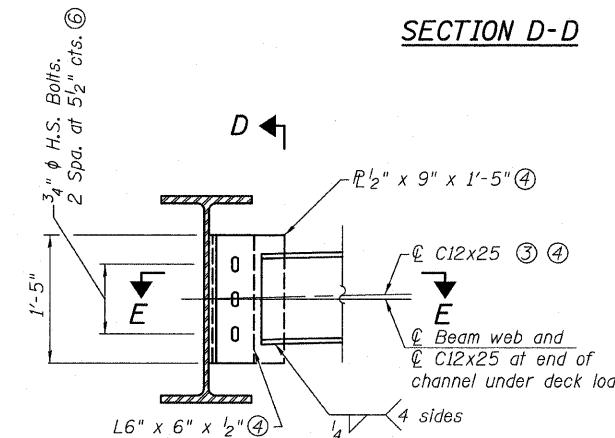
SECTION E-E



SECTION D-D

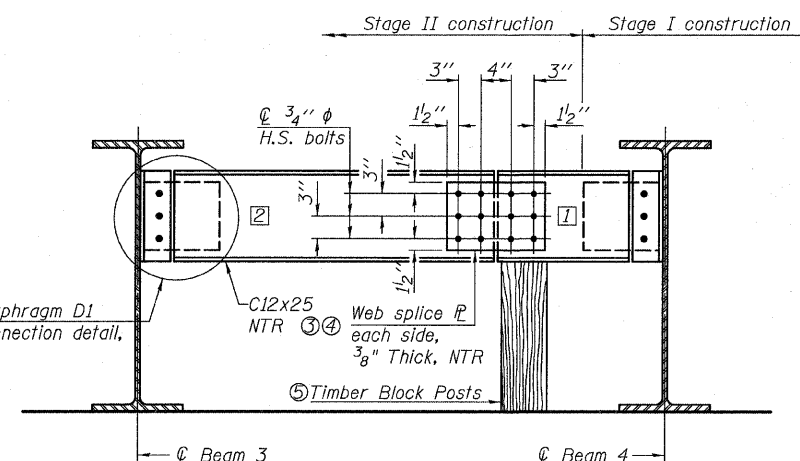


SECTION C-C



INTERIOR DIAPHRAGM D3

(11 Req'd)



END DIAPHRAGM D2

(2 Req'd)

END DIAPHRAGM STAGE CONSTRUCTION SEQUENCE

- 1.) Order Diaphragm in two sections.
- 2.) Attach section 1 of Diaphragm to Beam
- 3.) Place Timber Block Posts between section 1 of diaphragm and abutment bearing section.
- 4.) Attach section 2 of diaphragm to both Beam 3 and section 1 of diaphragm during Stage II Construction with splice plates.
- 5.) Remove Timber Block Posts.

INTERIOR DIAPHRAGM D

(44 Req'd)

Notes:

- 1.) Use two hardened washers per bolt for all oversized holes in diaphragm connections.
- 2.) Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.
- 3.) Alternate C12x30 channels are permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section. The alternate, if utilized, shall be provided at no additional cost to the Department.
- 4.) AASHTO M 270 Grade 50W Steel.
- 5.) Cost of Timber Block Posts is included with Furnishing and Erecting Structural Steel.
- 6.) Provide 1/16 inch x 1 7/8 inch vertical slotted holes in the Beam 3 connection only. Beam 4 connection shall be similar to the typical interior diaphragm connection for diaphragm D. Slotted holes shall be provided in the plate at the plate to angle connection and in the angle at the angle to web connection. Standard 1/16 inch diameter holes shall be provided in the web of the beam and in the leg of the angle used to connect the 1/2 inch plate to the angle. Use 5/16 inch structural plate washers placed over all slotted holes in diaphragm connection. The bolts for the slotted holes shall be finger tight until the second stage pour is complete and then fully tightened. The slots shall be positioned so bolts start at one end with no concrete load and finish near the opposite end under deck load, allowing maximum displacement without laterally stressing the main members.

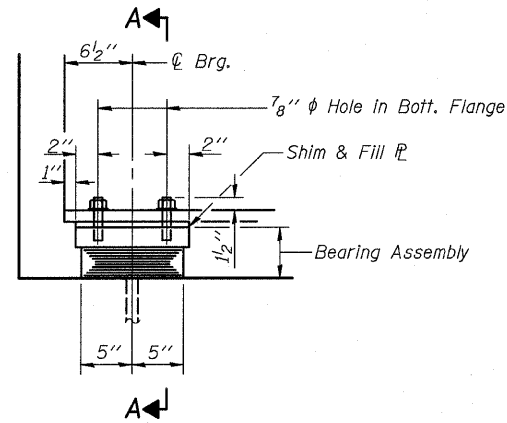
BEAM & FRAMING DETAILS
IL 47 OVER JOHNNY RUN
FAP ROUTE 326 - SECTION 119BR
GRUNDY COUNTY
STATION 582+65.75
STRUCTURE NO. 032-0112



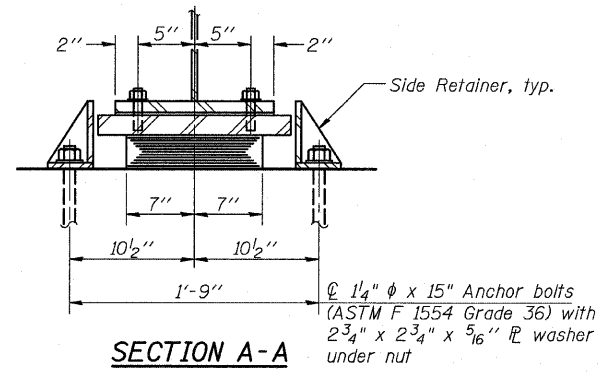
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DEPARTMENT OF TRANSPORTATION

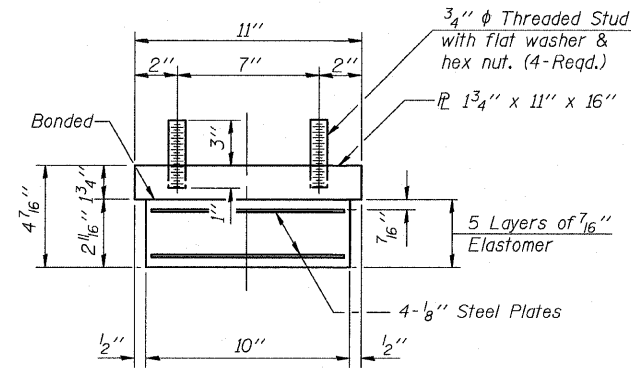


ELEVATION AT ABUT.



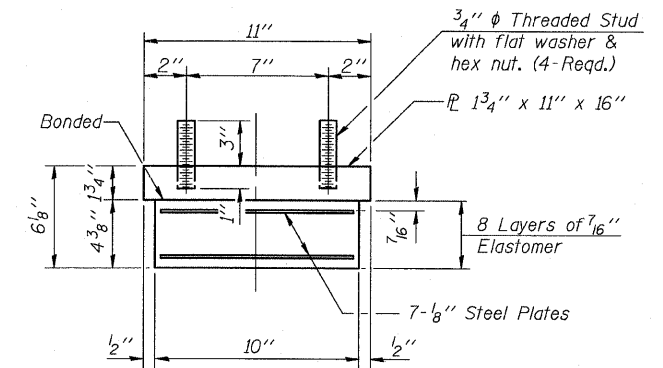
SECTION A-A

① 1/4" ϕ x 15" Anchor bolts
(ASTM F 1554 Grade 36) with
2 3/4" x 2 3/4" x 5/16" PL washer
under nut



BEARING ASSEMBLY AT NORTH ABUTMENT ⑥

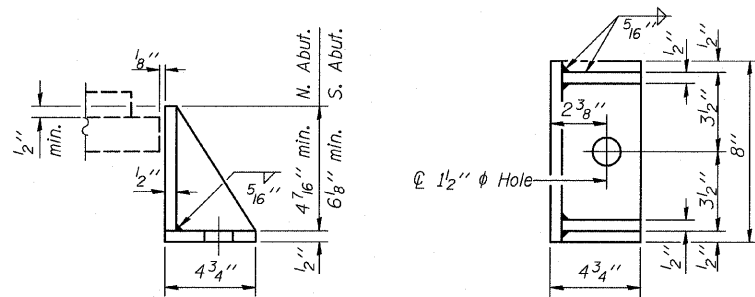
(6 Required)



BEARING ASSEMBLY AT SOUTH ABUTMENT ⑥

(6 Required)

TYPE I ELASTOMERIC EXP. BRG. AT ABUTMENTS



SIDE RETAINER AT ABUTMENTS ⑦

(24 Required)

SHIM TABLE ⑧

	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	Beam 6
S. Abut.	—	—	—	1/4"	—	—
Pier 1	—	—	—	1/8"	—	—
Pier 2	—	—	1/8"	—	—	—
N. Abut.	—	—	1/4"	—	—	—

- Notes:
- Anchor bolts shall be ASTM F1554 all-thread or an Engineer-approved alternate material of the grade and diameter specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
 - Anchor bolts for side retainers may be cast in place or installed in holes drilled before or after members are in place.
 - Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
 - Side retainers and other steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.
 - The structural steel plates of the Bearing Assembly and Side Retainers shall conform to the requirements of AASHTO M 270 Grade 50W.
 - Shim & fill plates shall not be placed under Bearing Assembly.
 - Two 1/2 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.
 - Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	12
Anchor Bolts, 1/4" ϕ	Each	24

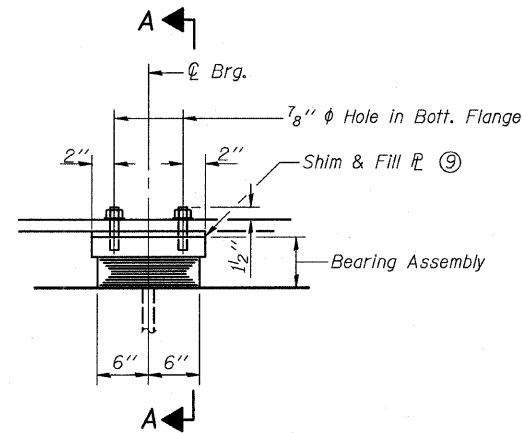
BEARING DETAILS AT ABUTMENTS
IL 47 OVER JOHNNY RUN
FAP ROUTE 326 - SECTION 119BR
GRUNDY COUNTY
STATION 582+65.75
STRUCTURE NO. 032-0112

DESIGNED	NEL
CHECKED	MJP
DRAWN	NEL
CHECKED	MJP

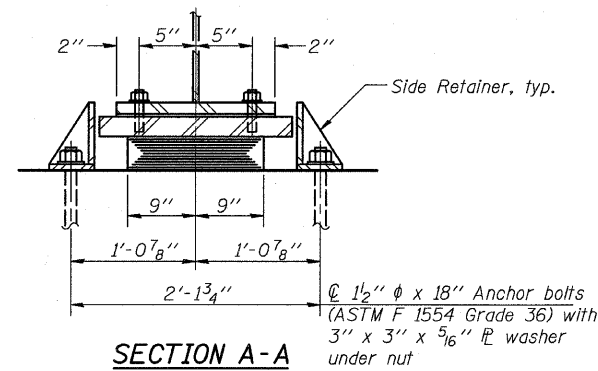
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
FAP 326	119BR	GRUNDY	68	36
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

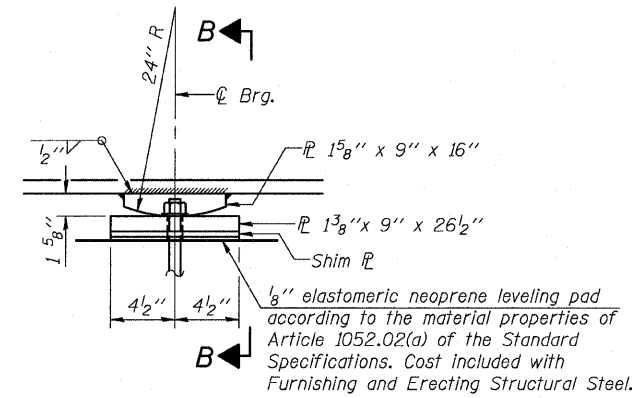
Contract #66687



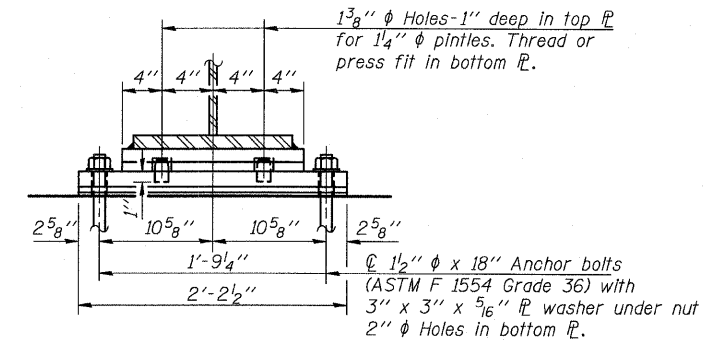
ELEVATION AT PIER 1



SECTION A-A

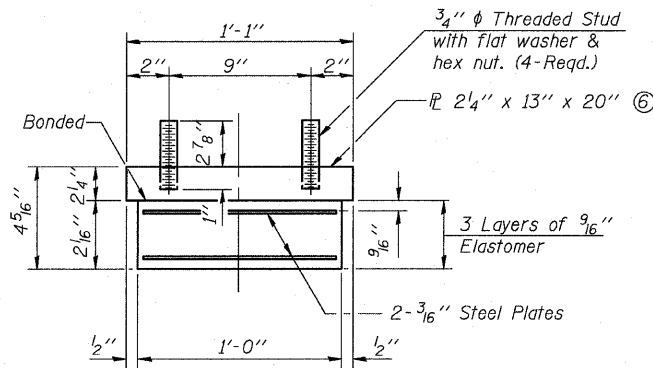


ELEVATION AT PIER 2



SECTION B-B

TYPE I ELASTOMERIC EXP. BRG. AT PIER 1

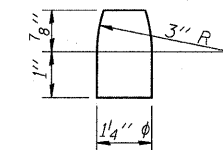


BEARING ASSEMBLY AT PIER 1

(6 Required)

FIXED BEARING AT PIER 2

(6 Required)

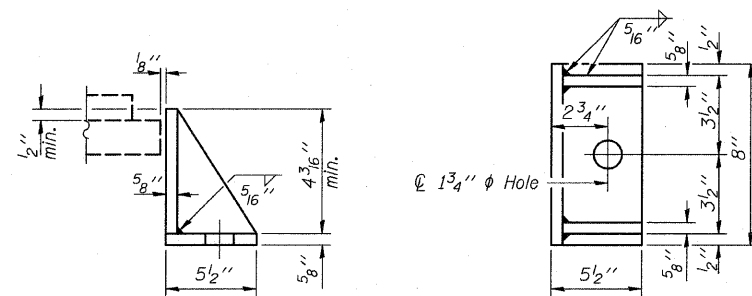


PINTLE

(12 Required)

Notes:

- Anchor bolts shall be ASTM F1554 all-thread or an Engineer-approved alternate material of the grade and diameter specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (F_y=36ksi). 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 side retainers may be cast in place or installed in holes drilled before or after members are in place.
- Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
- Side retainers and other steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.
- The structural steel plates of the Bearing Assembly and Side Retainers shall conform to the requirements of AASHTO M 270 Grade 50W.
- Shim & fill plates shall not be placed under Bearing Assembly.
- Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.
- See sheet 15 of 27 for shim plate location & thickness.
- Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



SIDE RETAINER AT PIER 1

(12 Required)

DESIGNED	MJP
CHECKED	NEL
DRAWN	MJP
CHECKED	NEL

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	6
Anchor Bolts, 1 1/2" φ	Each	24

BEARING DETAILS AT PIERS
IL 47 OVER JOHNNY RUN
FAP ROUTE 326 - SECTION 119BR
GRUNDY COUNTY
STATION 582+65.75
STRUCTURE NO. 032-0112



Eastport Business Center 1
100 Lanter Court, Suite 1
Collinsville, Illinois 62234
618-345-2200
Design Firm License No. 184.001115

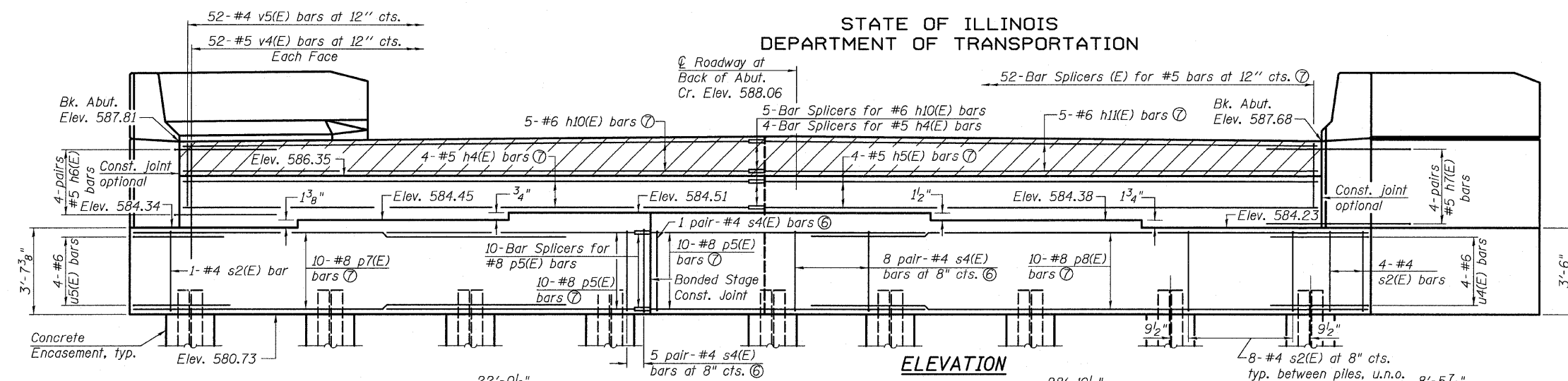
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET NO.
FAP 326	119BR	GRUNDY	68	37
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

Contract #66687

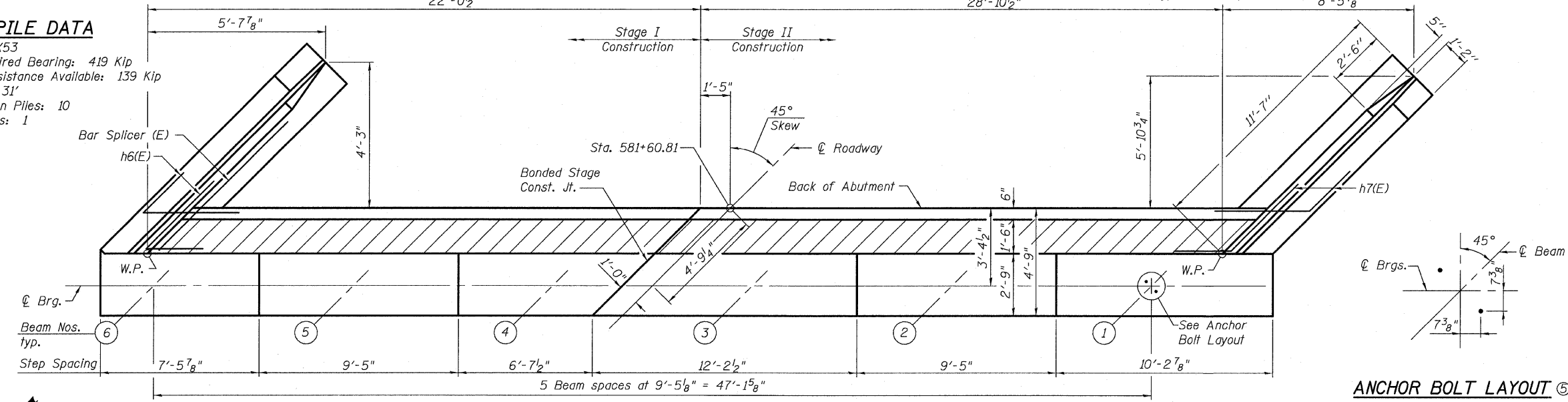
**SOUTH ABUTMENT
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h4(E)	4	#5	23'-8"	—
h5(E)	4	#5	26'-6"	—
h6(E)	8	#5	7'-4"	—
h7(E)	8	#5	7'-4"	—
h8(E)	8	#4	9'-10"	—
h9(E)	8	#4	11'-1"	—
h10(E)	5	#6	23'-8"	—
h11(E)	5	#6	26'-6"	—
h12(E)	8	#4	9'-6"	—
h13(E)	8	#4	8'-3"	—
n(E)	16	#6	11'-8"	—
n1(E)	12	#6	5'-10"	—
p5(E)	20	#8	12'-0"	—
p6(E)	12	#7	11'-10"	—
p7(E)	10	#8	20'-3"	—
p8(E)	10	#8	25'-11"	—
s2(E)	53	#4	15'-11"	—
s3(E)	28	#4	9'-5"	—
s4(E)	28	#4	11'-4"	—
u4(E)	4	#6	11'-6"	—
u5(E)	4	#6	9'-7"	—
v4(E)	104	#5	4'-11"	—
v5(E)	52	#4	3'-3"	—
v6(E)	16	#6	5'-11"	—
v7(E)	6	#6	5'-2"	—
v8(E)	22	#6	5'-10"	—
Structure Excavation		Cu. Yd.	149	
Concrete Structures		Cu. Yd.	52.1	
Concrete Encasement		Cu. Yd.	3.8	
Reinforcement Bars, Epoxy Coated		Pound	5,570	
Furnishing Steel Piles HP12x53		Foot	310	
Driving Piles		Foot	310	
Test Pile Steel HP12x53		Each	1	
Pile Shoes		Each	11	
Concrete Sealer		Sq. Ft.	318	

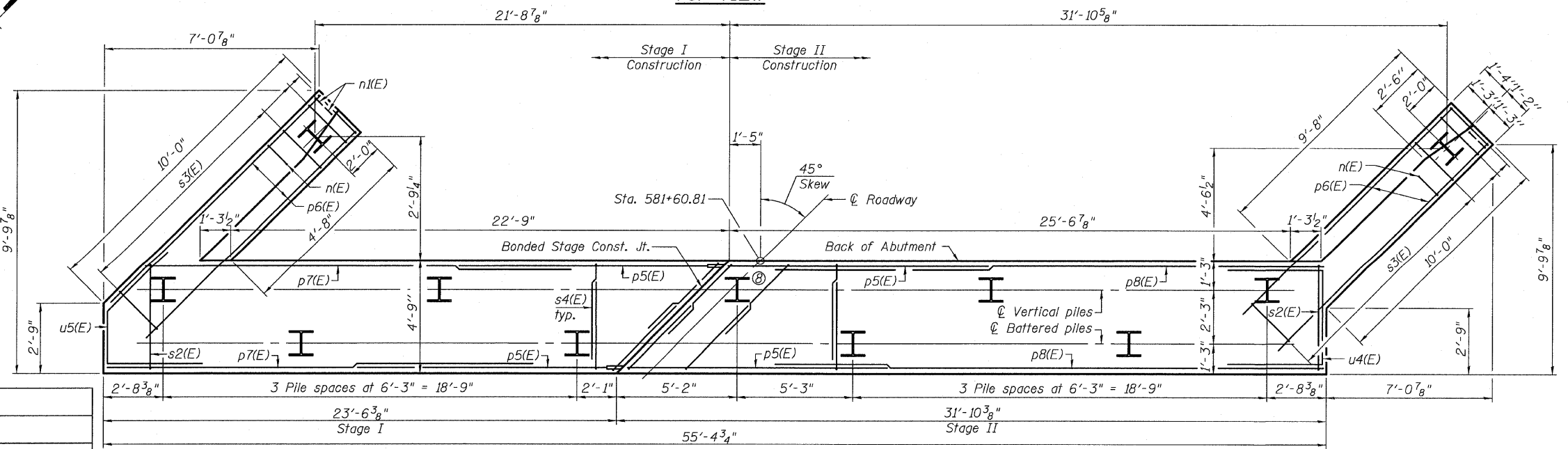


PILE DATA

Type: HP12X53
Nominal Required Bearing: 419 Kip
Allowable Resistance Available: 139 Kip
Est. Length: 31'
No. Production Piles: 10
No. Test Piles: 1



ANCHOR BOLT LAYOUT ⑤



- Notes:
- ① For details of Bar Splicers, see sheet 23 of 27.
 - ② For details of piles and Concrete Encasement, see sheet 22 of 27.
 - ③ See sheet 19 of 27 for wingwall reinforcing locations and details.
 - ④ All edges shall have standard 3/4" chamfer.
 - ⑤ Space reinforcement in cap to miss anchor bolts.
 - ⑥ Fan s4(E) bars as required. Lap length varies to accommodate skew. Minimum lap length is 1'-11".
 - ⑦ See Sec. Thru Abut. on sheet 19 of 27 for bar locations.
 - ⑧ Contractor shall drive during Stage I if clearance allows or may move as approved by the Engineer.
 - ⑨ Min. bar lap: #8 bars = 6'-4".

**SOUTH ABUTMENT DETAILS
IL 47 OVER JOHNNY RUN
FAP ROUTE 326 - SECTION 119BR
GRUNDY COUNTY
STATION 582+65.75
STRUCTURE NO. 032-0112**

DESIGNED MJP
CHECKED DGL
DRAWN MJP
CHECKED DGL

OATES ASSOCIATES
Consulting Engineers
Design Firm License No. 184.001115

Eastport Business Center I
100 Lanter Court, Suite 1
Collinsville, Illinois 62234
618-345-2200

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET	SHEET NO. 18 27 SHEETS
FAP 326	119BR	GRUNDY	68	38	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

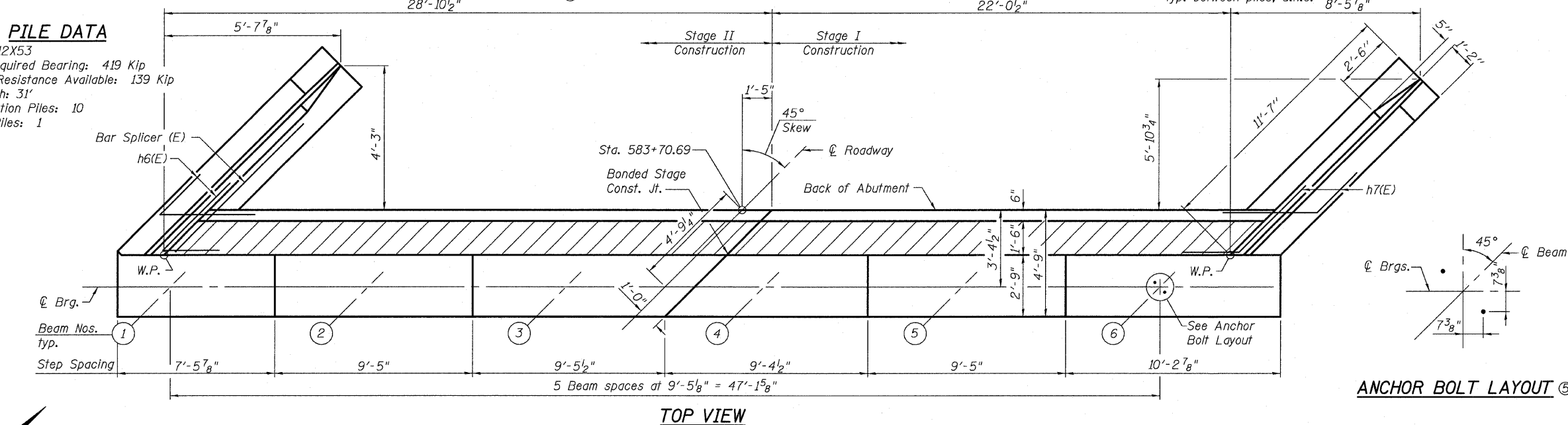
Contract #66687

**NORTH ABUTMENT
BILL OF MATERIAL**

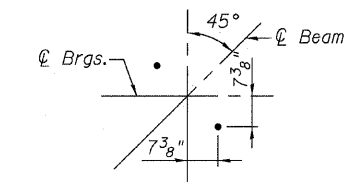
Bar	No.	Size	Length	Shape
h4(E)	4	#5	23'-8"	
h5(E)	4	#5	26'-6"	
h6(E)	8	#5	7'-4"	
h7(E)	8	#5	7'-4"	
h8(E)	8	#4	9'-10"	
h9(E)	8	#4	11'-1"	
h10(E)	5	#6	23'-0"	
h11(E)	5	#6	26'-6"	
h12(E)	8	#4	9'-6"	
h13(E)	8	#4	8'-3"	
n(E)	16	#6	11'-8"	
n1(E)	12	#6	5'-10"	
p4(E)	20	#8	23'-2"	
p5(E)	20	#8	12'-0"	
p6(E)	12	#7	11'-10"	
s2(E)	53	#4	15'-11"	
s3(E)	28	#4	9'-5"	
s4(E)	42	#4	11'-4"	
u4(E)	4	#6	11'-6"	
u5(E)	4	#6	9'-7"	
v4(E)	104	#5	4'-11"	
v5(E)	52	#4	3'-3"	
v6(E)	16	#6	5'-11"	
v7(E)	6	#6	5'-2"	
v8(E)	22	#6	5'-10"	
Structure Excavation		Cu. Yd.	149	
Concrete Structures		Cu. Yd.	50.4	
Concrete Encasement		Cu. Yd.	3.8	
Reinforcement Bars, Epoxy Coated		Pound	5,680	
Furnishing Steel Piles HP12x53		Foot	310	
Driving Piles HP12x53		Foot	310	
Test Pile Steel HP12x53		Each	1	
Pile Shoes		Each	11	
Concrete Sealer		Sq. Ft.	318	

PILE DATA

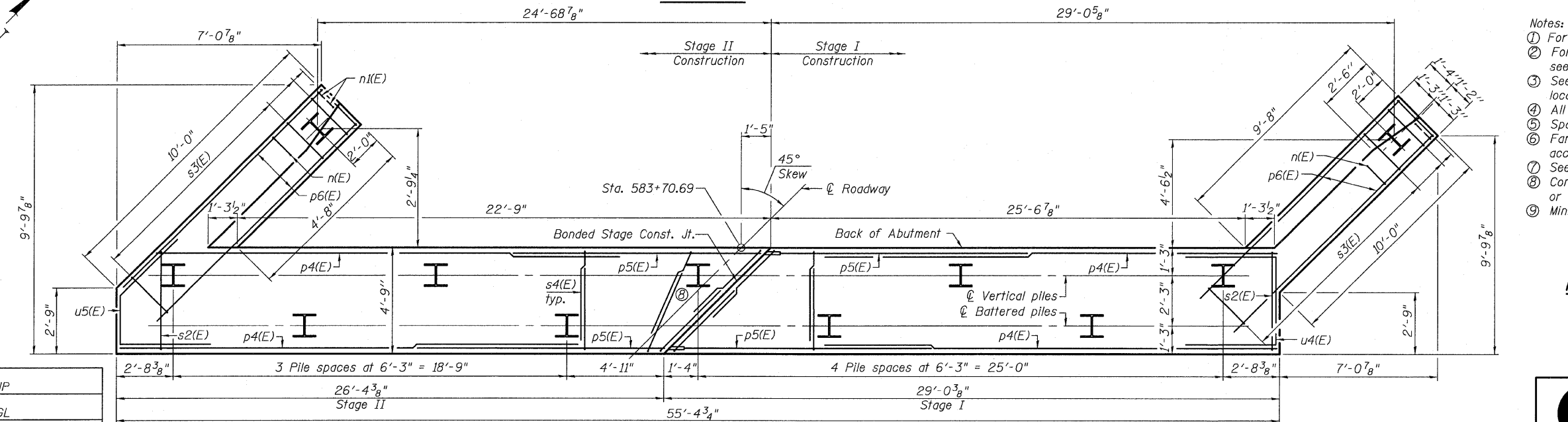
Type: HP12X53
Nominal Required Bearing: 419 Kip
Allowable Resistance Available: 139 Kip
Est. Length: 31'
No. Production Piles: 10
No. Test Piles: 1



ANCHOR BOLT LAYOUT



TOP VIEW



PLAN-PILE CAP

DESIGNED	MJP
CHECKED	DGL
DRAWN	MJP
CHECKED	DGL

- Notes:
- For details of Bar Splicers, see sheet 23 of 27.
 - For details of piles and Concrete Encasement, see sheet 22 of 27.
 - See sheet 19 of 27 for wingwall reinforcing locations and details.
 - All edges shall have standard 3/4" chamfer.
 - Space reinforcement in cap to miss anchor bolts.
 - Fan s4(E) bars as required. Lap length varies to accommodate skew. Minimum lap length is 1'-11".
 - See Sec. Thru Abut. on sheet 19 of 27 for bar locations.
 - Contractor shall drive during stage I if clearance allows or may move as approved by the Engineer.
 - Min. bar lap: #8 bars = 6'-4".

**NORTH ABUTMENT DETAILS
IL 47 OVER JOHNNY RUN
FAP ROUTE 326 - SECTION 119BR
GRUNDY COUNTY
STATION 582+65.75
STRUCTURE NO. 032-0112**

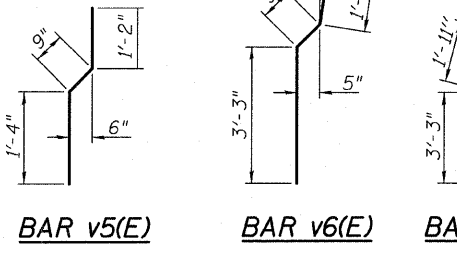
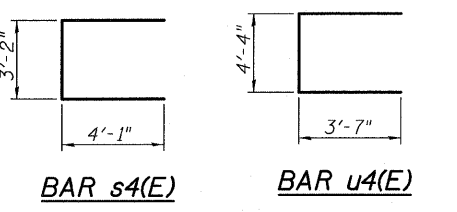
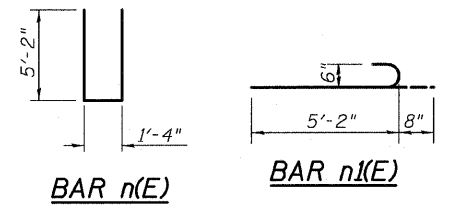
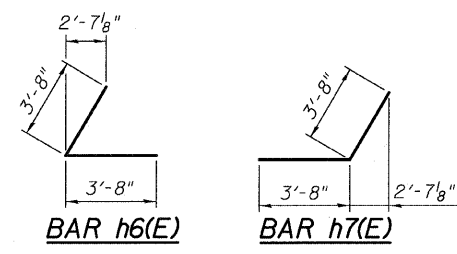
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100 Lanter Court, Suite 1
Collinsville, Illinois 62234
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Consulting Engineers Design Firm License No. 184.001115

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 326	119BR	GRUNDY	68	39
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

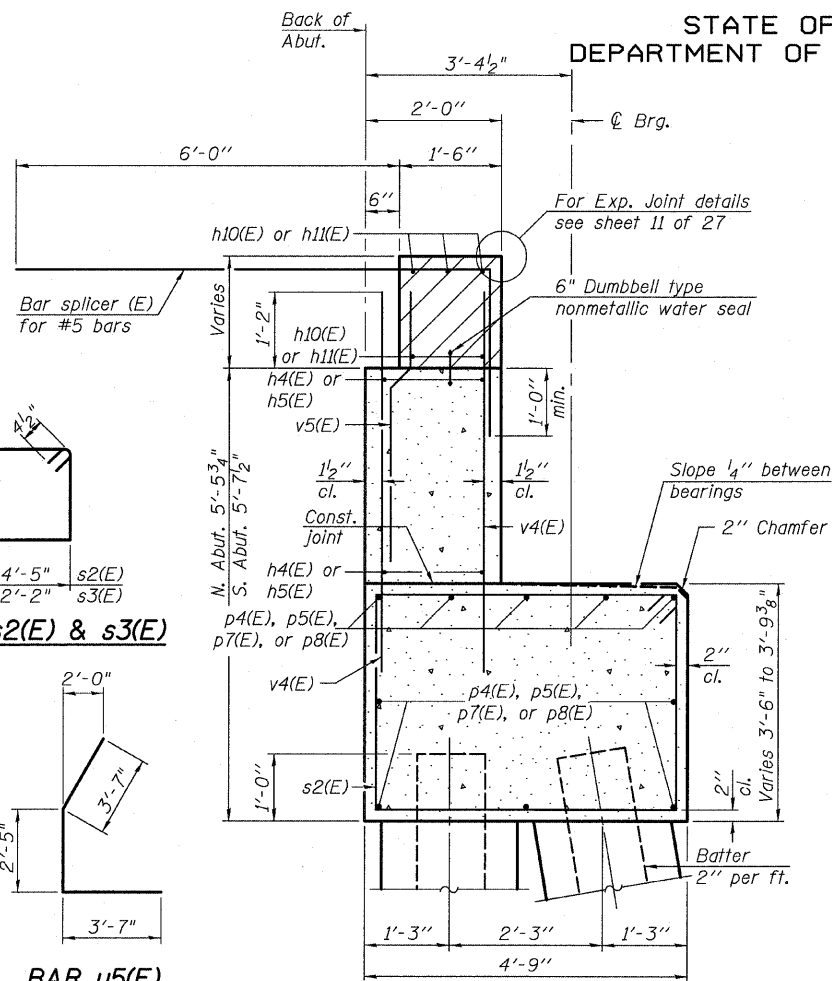
SHEET NO. 19
27 SHEETS

Contract #66687

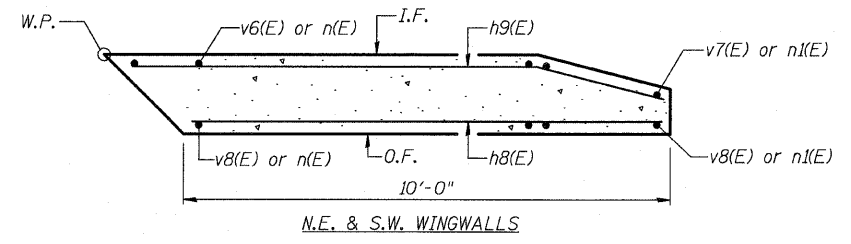


DIMENSION TABLE

	A	B	C	D
N.E. Wingwall	3'-6"	3'-5 3/8"	6'-11 3/8"	1'-0"
N.W. Wingwall	3'-7 3/8"	3'-5 1/2"	7'-0 7/8"	1'-1 3/8"
S.E. Wingwall	3'-7 3/8"	3'-7 1/4"	7'-2 5/8"	1'-1 3/8"
S.W. Wingwall	3'-6"	3'-7"	7'-1"	1'-0"

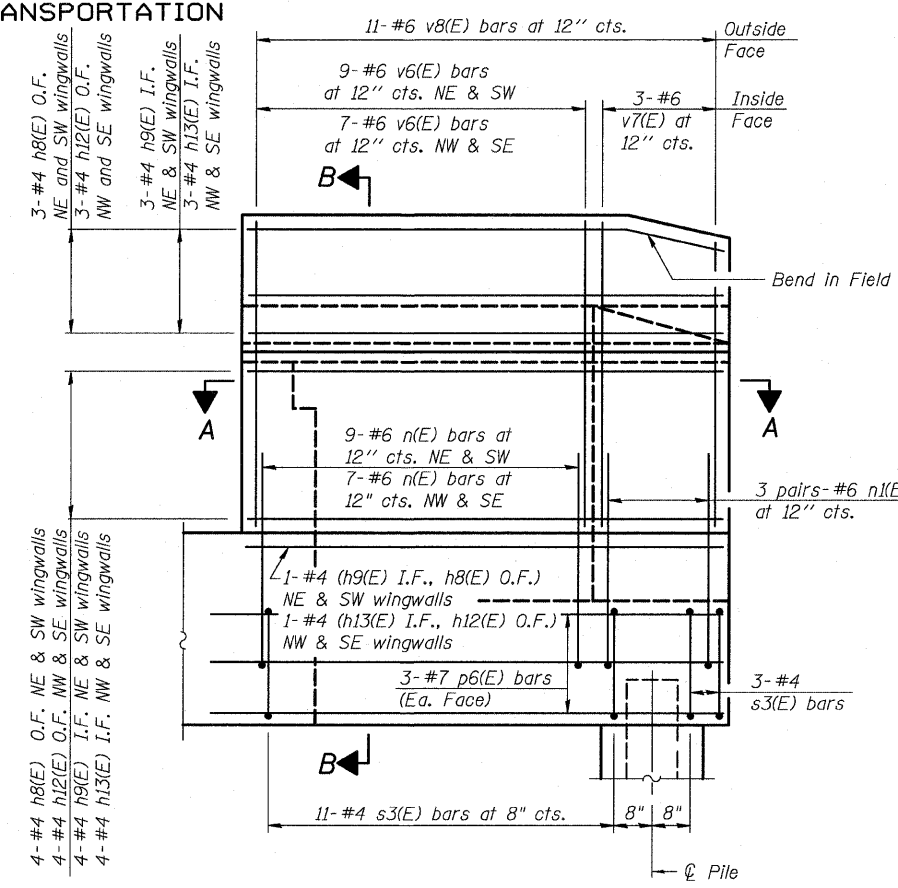


SEC. THRU ABUT.
Dimensions at right angles

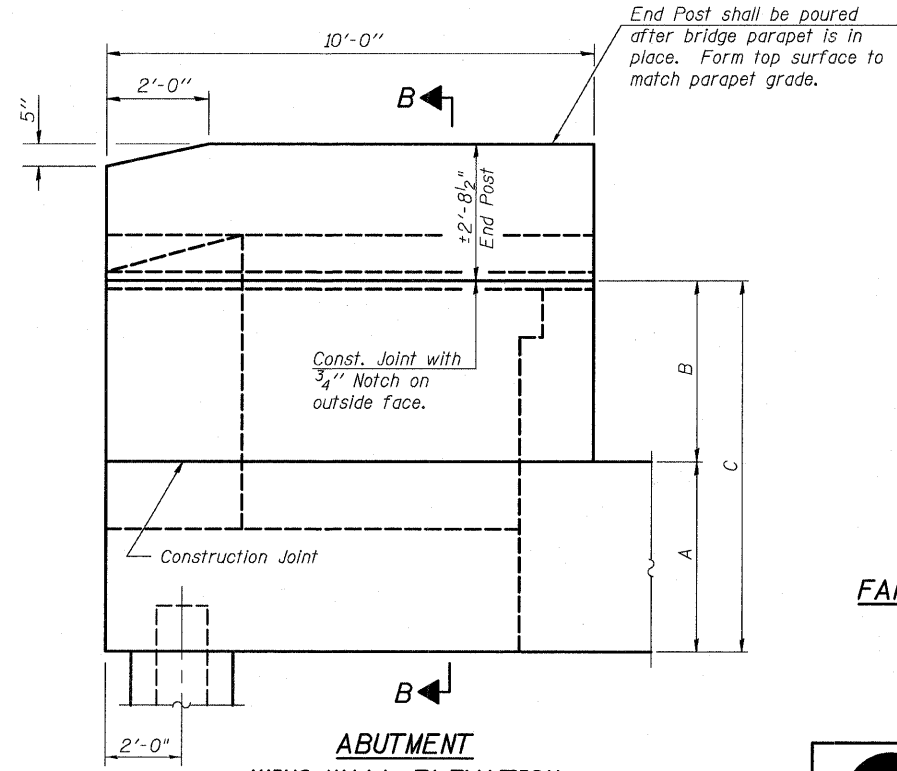


SECTION A-A

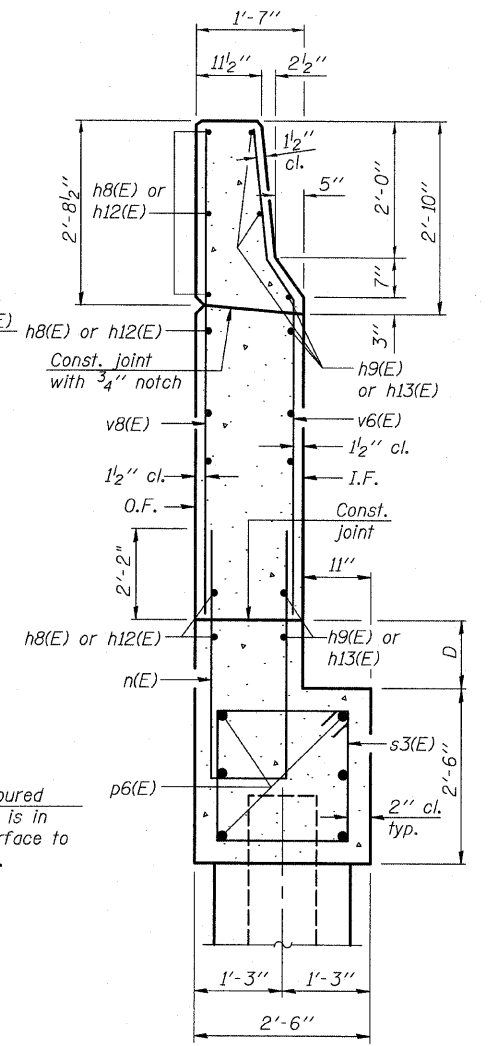
- Notes:
- Hatched area to be poured after superstructure false work has been removed. Quantity of concrete included with Concrete Superstructure.
 - Space reinforcement in cap to miss anchor bolts.
 - Pour steps monolithically with cap.
 - Quantity of concrete in end post included with Concrete Superstructure on sheet 10 of 27.
 - For Concrete Encasement details, see sheet 22 of 27.
 - The abutments shall have all exposed surfaces of backwalls, bridge seats, and front faces of pile caps treated with Concrete Sealer.
 - I.F. denotes inside face. O.F. denotes outside face.
 - Min. bar lap: #6 bars = 2'-7".



WING WALL ELEVATION
Showing Reinforcement



ABUTMENT WING WALL ELEVATION
Showing Dimensions



SECTION B-B

ABUTMENT DETAILS
IL 47 OVER JOHNNY RUN
FAP ROUTE 326 - SECTION 119BR
GRUNDY COUNTY
STATION 582+65.75
STRUCTURE NO. 032-0112

DESIGNED	MJP
CHECKED	DGL
DRAWN	MJP
CHECKED	DGL

OATES ASSOCIATES
Consulting Engineers
Eastport Business Center 1
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET
FAP 326	119BR	GRUNDY	68	40
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

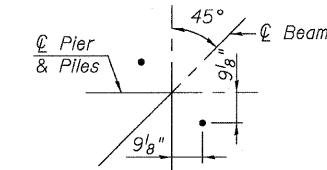
Contract #66687

SHEET NO. 20

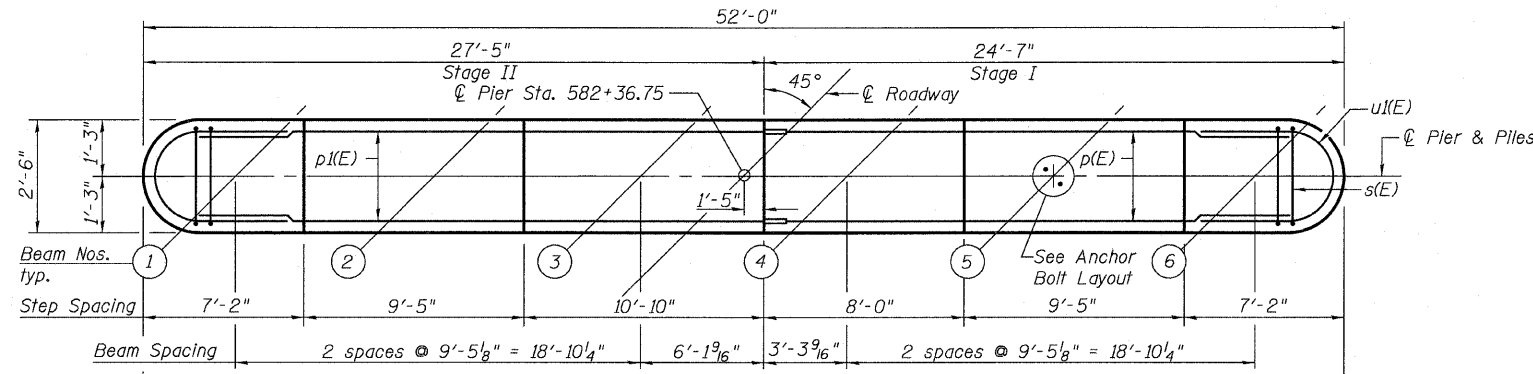
27 SHEETS

BILL OF MATERIAL

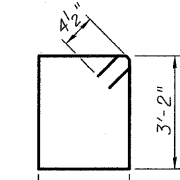
Bar	No.	Size	Length	Shape
h(E)	20	#5	23'-2"	—
h(I)	20	#5	26'-0"	—
p(E)	10	#7	23'-2"	—
p(I)	10	#7	26'-0"	—
s(E)	74	#4	11'-5"	□
u(E)	20	#5	8'-4"	U
u(I)	8	#6	9'-0"	U
v(E)	106	#5	10'-4"	—
Structure Excavation			Cu. Yd.	19
Concrete Structures			Cu. Yd.	53.5
Concrete Encasement			Cu. Yd.	2.8
Reinforcement Bars, Epoxy Coated			Pound	4,020
Furnishing Steel Piles HP12x53			Foot	287
Driving Piles			Foot	287
Test Pile HP12x53			Each	1
Pile Shoes			Each	8
Underwater Structure Excavation Protection, Location 1			Each	1



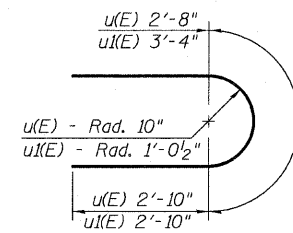
ANCHOR BOLT LAYOUT 5



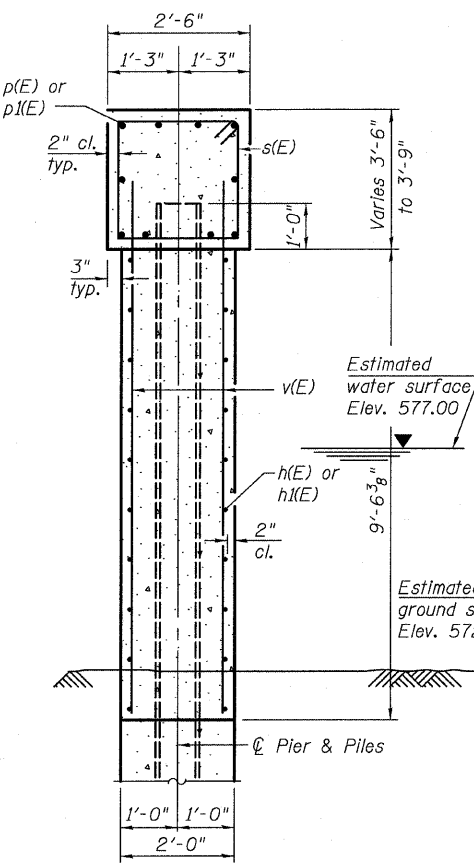
TOP PLAN



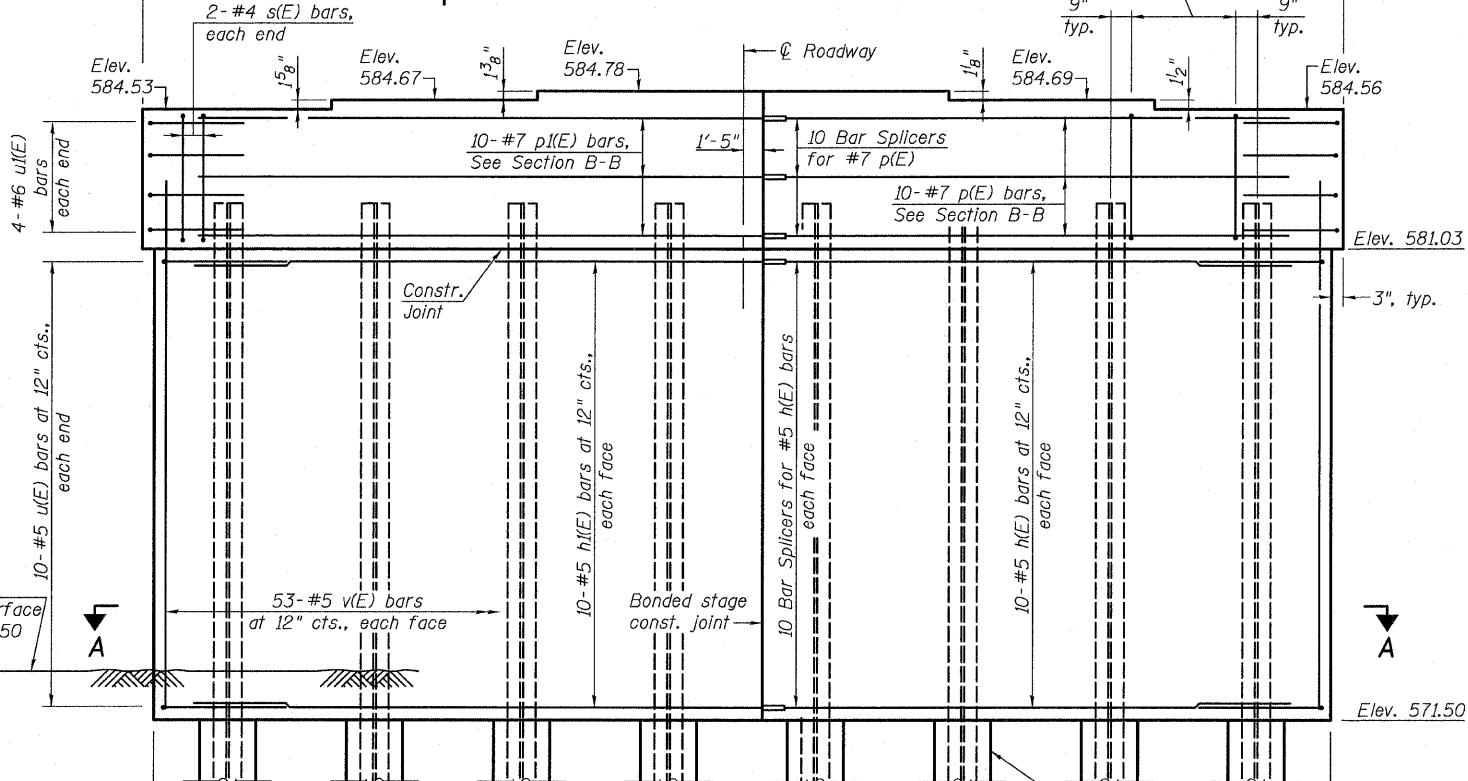
BAR s(E)



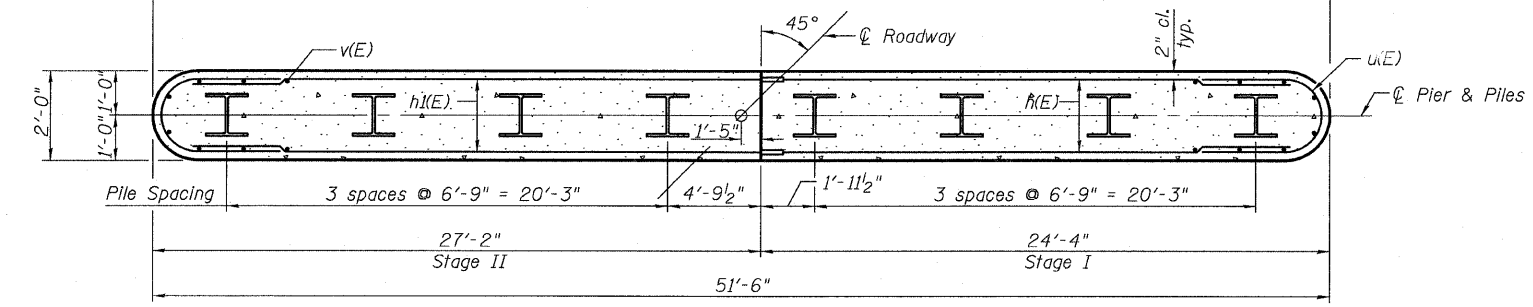
BARS u(E) & u(I)



SECTION B-B



ELEVATION (Looking North)



SECTION A-A

- Notes:
- ① Pour steps monolithically with cap.
 - ② For details of Bar Splicers, see sheet 23 of 27.
 - ③ For details of piles and Concrete Encasement, see sheet 22 of 27.
 - ④ All edges shall have standard 3/4" chamfer.
 - ⑤ Space reinforcement in cap to miss anchor bolts.
 - ⑥ If a portion of the pier wall or concrete encasement is under water, reinforcement may be placed underwater into forms. Concrete shall be tremied according to Article 503.08 of the Standard Specifications to an elevation of 1'-0" above the water line at the time of construction.
 - ⑦ Exposed surface areas of the pier within 10'-0" of the outer edge of shoulder shall be treated with Concrete Sealer.

PILE DATA
Type: Steel HP12X53
Nominal Required Bearing: 419 Kips
Allowable Resistance Available: 139 Kips
Est. Length: 41'
No. Production Piles: 7
No. Test Piles: 1

DESIGNED	MJP
CHECKED	NEL
DRAWN	MJP
CHECKED	NEL

PIER 1 DETAILS
IL 47 OVER JOHNNY RUN CREEK
FAP ROUTE 326 - SECTION 119BR
GRUNDY COUNTY
STATION 582+65.75
STRUCTURE NO. 032-0112

Eastport Business Center 1
100 Lanter Court, Suite 1
Collinsville, Illinois 62234
618-345-2200
Design Firm License No. 184.001115

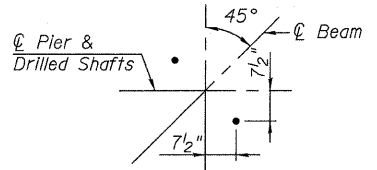
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 326	119BR	GRUNDY	68	41
SHEET NO. 21 27 SHEETS				
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

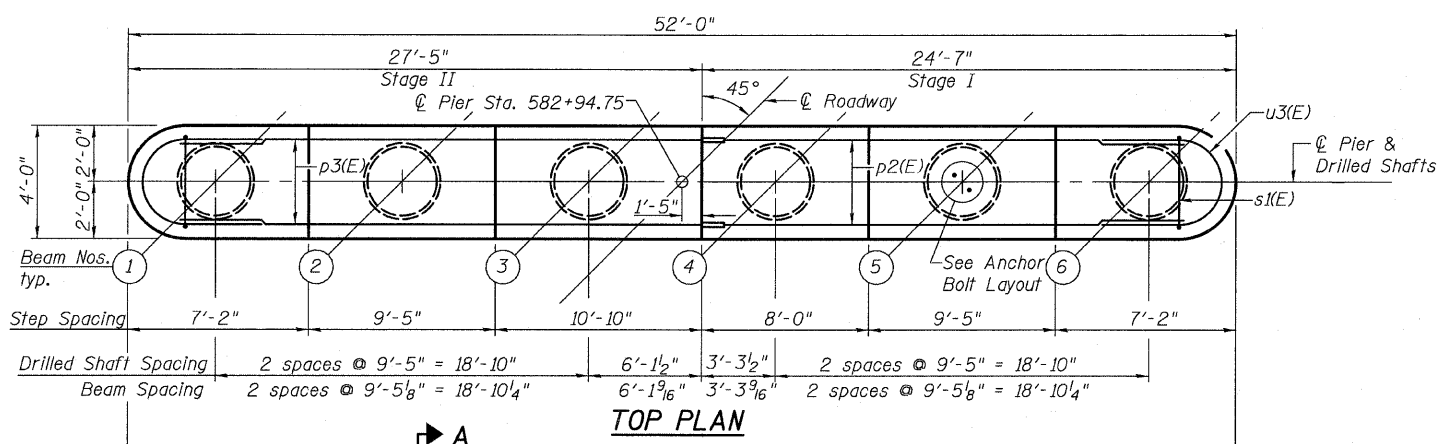
Contract #66687

BILL OF MATERIAL

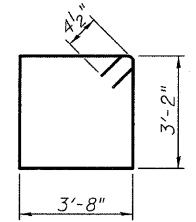
Bar	No.	Size	Length	Shape
h2(E)	24	#6	22'-5"	—
h3(E)	24	#6	25'-3"	—
p2(E)	10	#7	22'-5"	—
p3(E)	10	#7	25'-3"	—
s1(E)	33	#4	14'-5"	□
sp	6	#4	38'-6"	⋈
sp(E)	6	#4	3'-4"	⋈
u2(E)	24	#6	10'-8"	U
u3(E)	8	#6	11'-4"	U
v	66	#9	44'-4"	—
v1(E)	108	#5	8'-2"	—
v2(E)	108	#5	4'-2"	—
Structure Excavation		Cu. Yd.	15	
Concrete Structures		Cu. Yd.	83.9	
Reinforcement Bars		Pound	11,530	
Reinforcement Bars, Epoxy Coated		Pound	5,060	
Underwater Structure Excavation Protection, Location 2		Each	1	
Drilled Shaft in Soil		Cu. Yd.	42.0	
Permanent Casing		Foot	57	



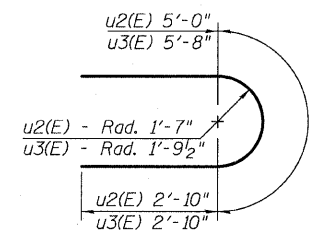
ANCHOR BOLT LAYOUT ④



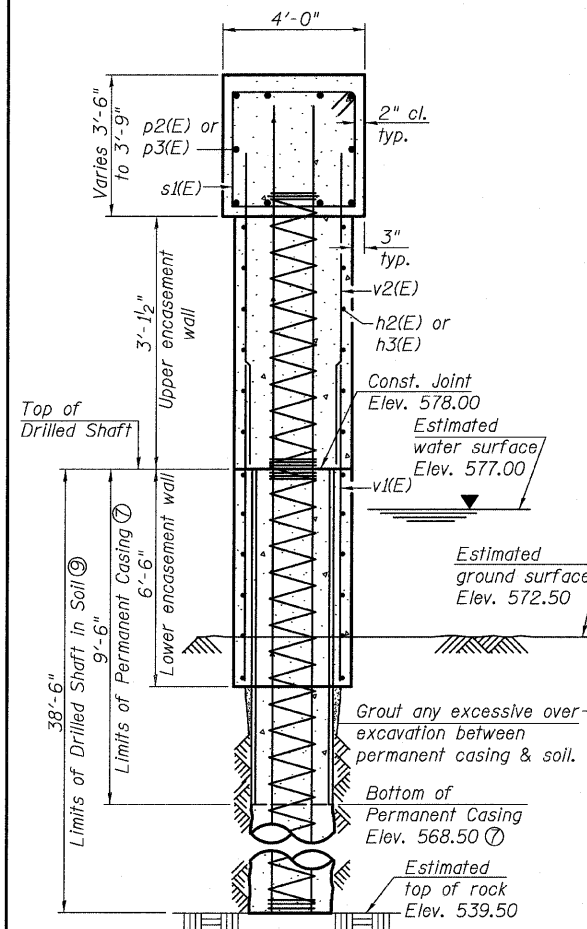
TOP PLAN



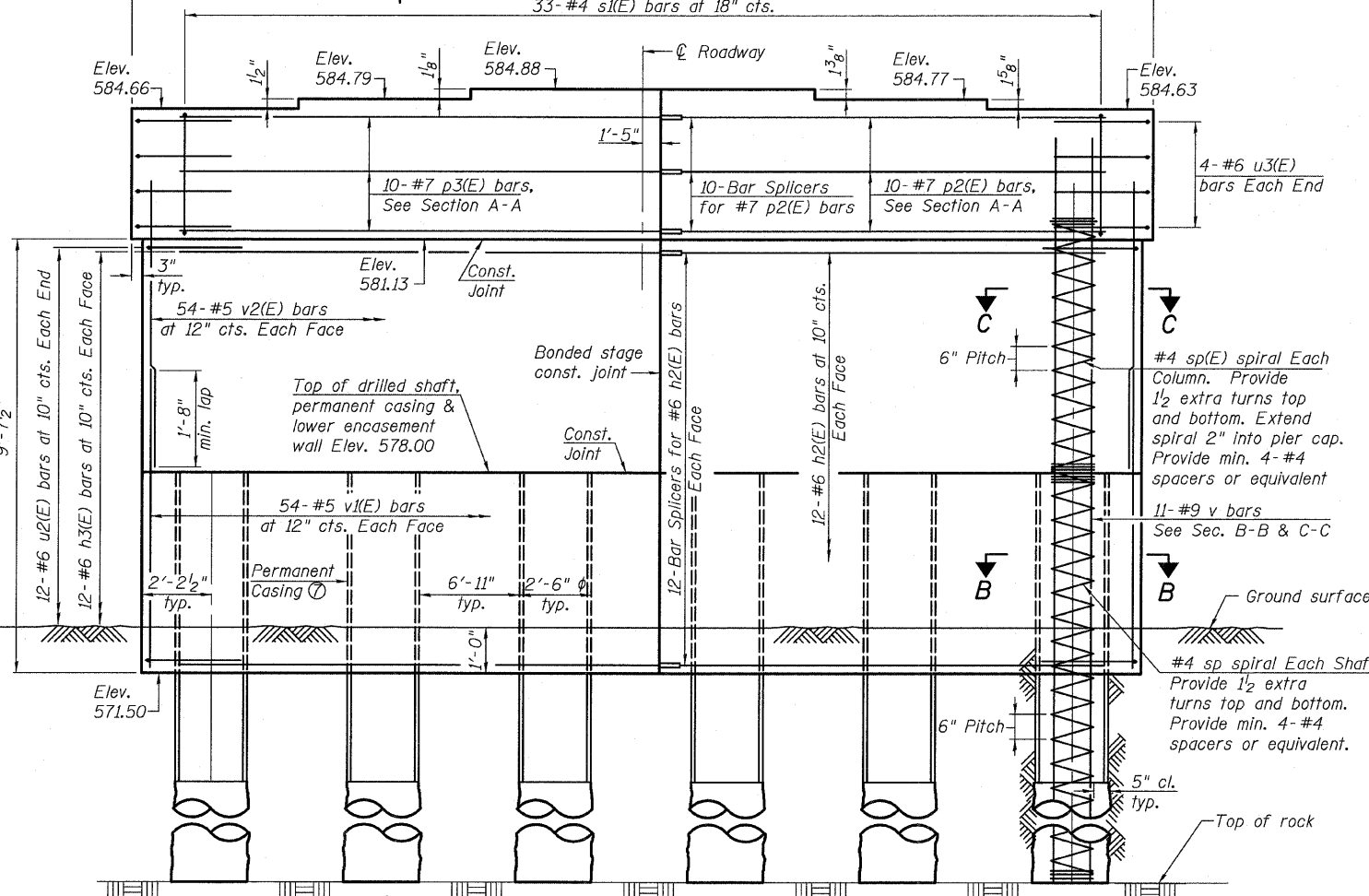
BAR s1(E)



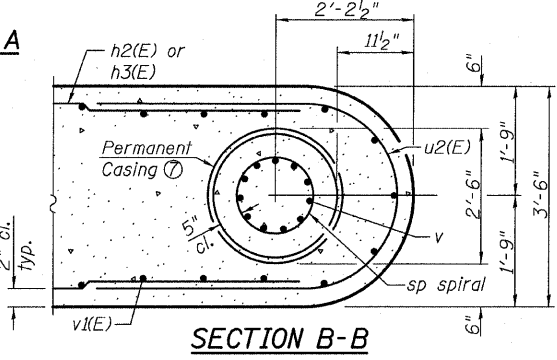
BARS u2(E) & u3(E)



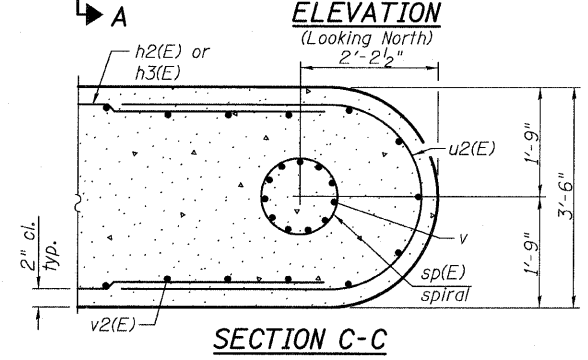
SECTION A-A



ELEVATION
(Looking North)



SECTION B-B



SECTION C-C

DESIGNED	DGL
CHECKED	MJP
DRAWN	DGL
CHECKED	MJP

- Notes:
- ① Pour steps monolithically with cap.
 - ② For details of Bar Splicers, see sheet 23 of 27.
 - ③ All edges shall have standard 3/4" chamfer.
 - ④ Space cap reinforcement to miss anchor bolts.
 - ⑤ Minimum lap for spirals = 2'-0"
 - ⑥ Length is height of spiral.
 - ⑦ Contractor is responsible for determining the casing thickness and the actual tip elevation to be used. If the required tip elevation is below the bottom of Permanent Casing elevation shown on the plans, a design submittal including plan details and calculations for the pier and foundation, sealed by an Illinois Structural Engineer, will be required for review and acceptance by the Engineer. Alternatively, the Contractor may utilize one of the other construction methods described in Article 516.06 of the Standard Specifications. Cost of alternative construction method, if used, shall be included in Drilled Shaft in Soil.
 - ⑧ Pay limits for the Permanent Casing are based on the length shown. Contractor shall not be paid for Permanent Casing if an alternative construction method is used.
 - ⑨ If the prevailing water surface elevation during construction is consistently different than estimated on the plans, the contractor may propose an adjustment to the top of the drilled shaft elevation as part of their installation procedure. The top of all drilled shafts within a substructure unit shall be constructed to the same elevation and extend above the prevailing water surface. The quantities and reinforcement detailing are based on the top of shaft and the estimated elevations shown and may change based on the actual elevations encountered at each shaft and the final top of shaft elevation.
 - ⑩ Exposed surface areas of the pier within 10'-0" of the outer edge of shoulder shall be treated with Concrete Sealer.

- Construction Sequence for encasement walls:
1. Excavate through water, between and outside of shafts, to base of lower encasement wall.
 2. Set lower encasement wall forms into place through water and secure at top and bottom as required to maintain proper clearance from shaft.
 3. Place the lower encasement wall reinforcement cage into forms using spacers to maintain proper clearances from shaft and forms.
 4. If the forms can be sealed against the stream bed to allow dewatering, the reinforcement and the concrete placement may be completed in the dry. Alternatively, the rebar cage can be lowered into position through water and the concrete discharged at the base of the excavation through a tremie pipe or pump hose, displacing water, sediment, and tainted concrete out the top of the forms.
 5. Prepare construction joint at top of drilled shafts and lower encasement wall.
 6. Splice upper encasement wall reinforcement and cage length to lower encasement and shaft reinforcement, form and pour upper encasement wall.

PIER 2 DETAILS
IL 47 OVER JOHNNY RUN CREEK
FAP ROUTE 326 - SECTION 119BR
GRUNDY COUNTY
STATION 582+65.75
STRUCTURE NO. 032-0112

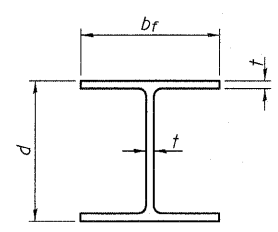
OATES ASSOCIATES
Consulting Engineers
Eastport Business Center 1
100 Lanter Court, Suite 1
Collinsville, Illinois 62234
618-345-2200
Design Firm License No. 184.001115

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET
FAP 326	119BR	GRUNDY	68	42
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

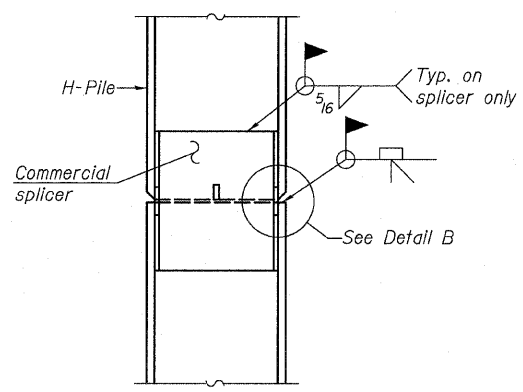
Contract #66687

SHEET NO. 22
27 SHEETS

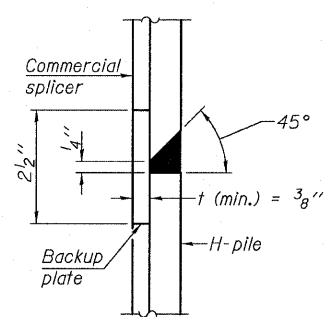


STEEL PILE TABLE

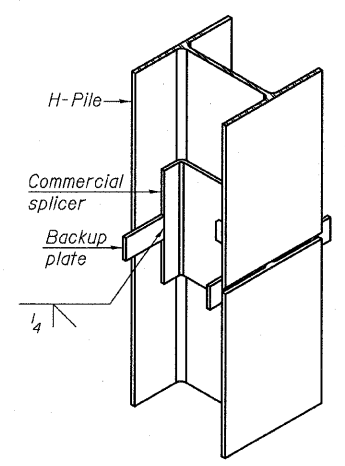
Designation	Depth d	Flange width br	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 1/8"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"



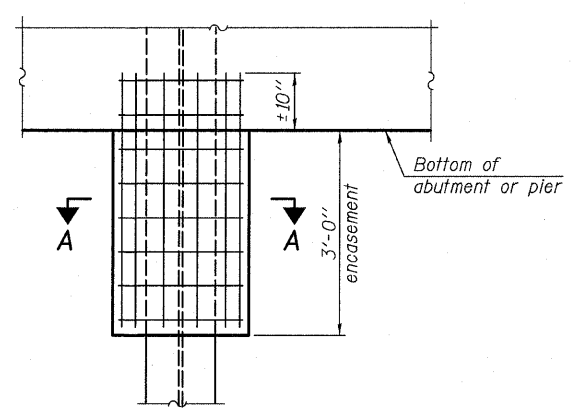
ELEVATION



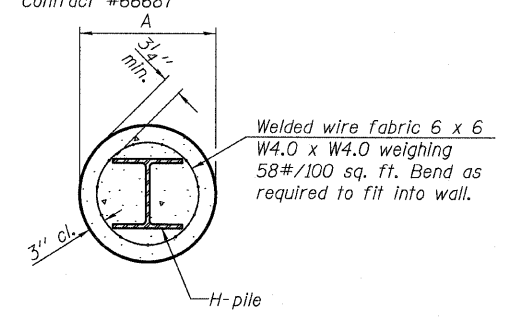
DETAIL "B"



ISOMETRIC VIEW



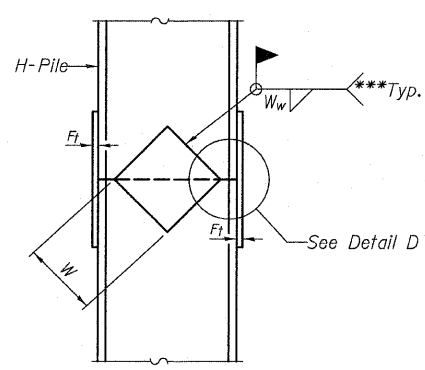
ELEVATION



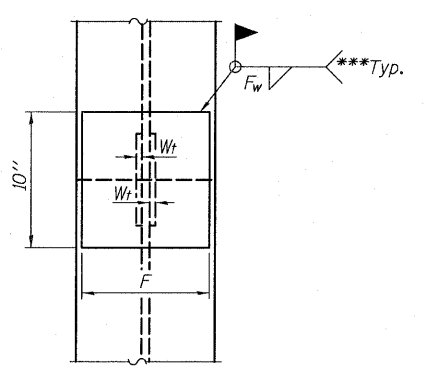
SECTION A-A

Note: Forms for encasement may be omitted when soil conditions permit.

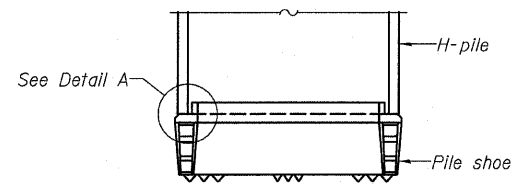
PILE ENCASEMENT



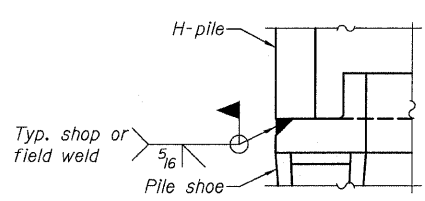
ELEVATION



END VIEW

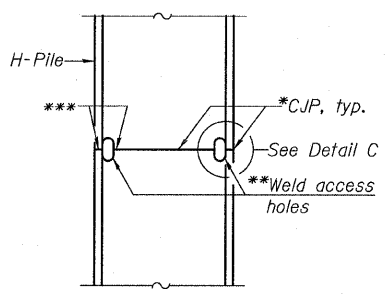


ELEVATION

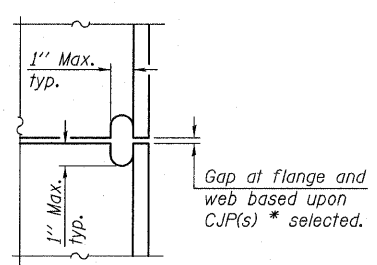


DETAIL A

H-PILE SHOE ATTACHMENT

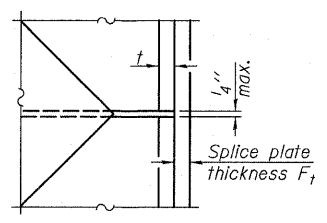


ELEVATION



DETAIL C

COMPLETE PENETRATION WELD SPLICE



DETAIL D

WELDED PLATE FIELD SPLICE

Designation	F	Ft	Fw	W	Wt	Ww
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5 1/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5 1/8"	1/2"
x89	12 1/2"	3/4"	1/16"	7 3/4"	5 1/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5 1/8"	1/2"
HP 12x84	10"	7/8"	1/16"	6 1/2"	5 1/8"	1/2"
x74	10"	7/8"	1/16"	6 1/2"	5 1/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

HP PILE DETAILS
IL 47 OVER JOHNNY RUN
FAP ROUTE 326 - SECTION 119BR
GRUNDY COUNTY
STATION 582+65.75
STRUCTURE NO. 032-0112

Note: The steel H-piles shall be according to AASHTO M270 Grade 50.

- *Use joint conforming to Figure 3.4 in AWS D1.1, Structure Welding Code-Steel.
- **Preparation per Fig. 5.2 in AWS D1.1, Structure Welding Code-Steel.
- ***Interrupt welds 1/4" from end of each pile.

DESIGNED -
CHECKED -
DRAWN -
CHECKED -

F-HP 5-16-08

OATES ASSOCIATES
Consulting Engineers
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618-345-2200
Design Firm License No. 184.001115

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 326	119BR	GRUNDY	68	43
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 23
27 SHEETS

Contract #66687

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 60 ksi 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.

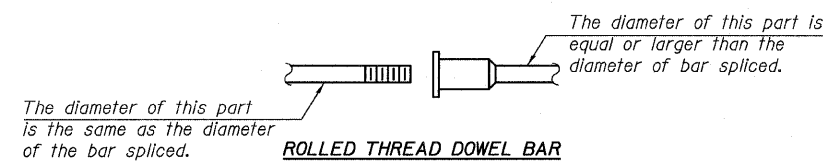
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

- ① Minimum Capacity (Tension in kips) = $1.25 \times f_y \times A_t$
- ② Minimum *Pull-out Strength (Tension in kips) = $0.66 \times f_y \times A_t$

Where f_y = Yield strength of lapped reinforcement bars in ksi.

A_t = Tensile stress area of lapped reinforcement bars.

* = 28 day concrete



ROLLED THREAD DOWEL BAR



** ONE PIECE

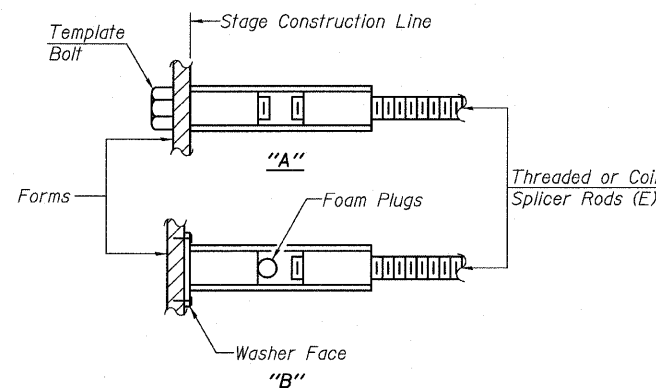
Wire Connector



WELDED SECTIONS

BAR SPLICER ASSEMBLY ALTERNATIVES

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



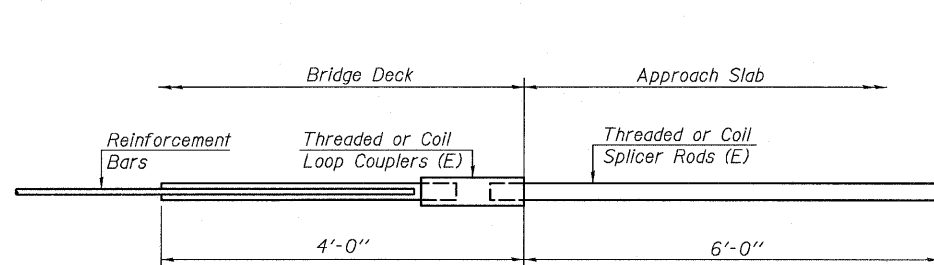
INSTALLATION AND SETTING METHODS

"A" :Set bar splicer assembly by means of a template bolt.

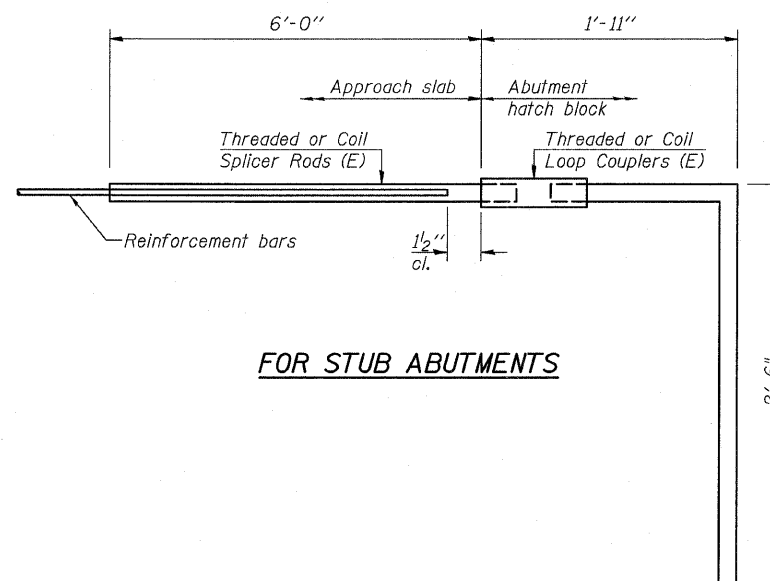
"B" :Set bar splicer assembly by nailing to wood forms or cementing to steel forms.

(E) : Indicates epoxy coating.

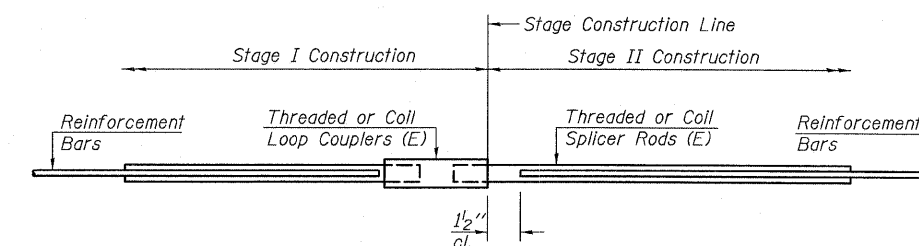
BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	7.9
#5	2'-0"	23.0	12.3
#6	2'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	4'-6"	58.9	31.3
#9	5'-9"	75.0	39.6
#10	7'-3"	95.0	50.3
#11	9'-0"	117.4	61.8



FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS



FOR STUB ABUTMENTS



STANDARD

Bar Size	No. Assemblies Required	Location
#5	535	Deck
#5	4	S. Abut.
#5	20	Pier 1
#5	4	N. Abut.
#6	8	Deck
#6	5	S. Abut.
#6	24	Pier 2
#6	5	N. Abut.
#7	10	Pier 1
#7	10	Pier 2
#8	8	Deck
#8	10	S. Abut.
#8	10	N. Abut.

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required =

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required = 104

DESIGNED -
CHECKED -
DRAWN -
CHECKED -

BSD-1

5-16-08

BAR SPLICER ASSEMBLY DETAILS
IL 47 OVER JOHNNY RUN
FAP ROUTE 326 - SECTION 119BR
GRUNDY COUNTY
STATION 582+65.75
STRUCTURE NO. 032-0112



OATES ASSOCIATES
Consulting Engineers
Design Firm License No. 184.001115

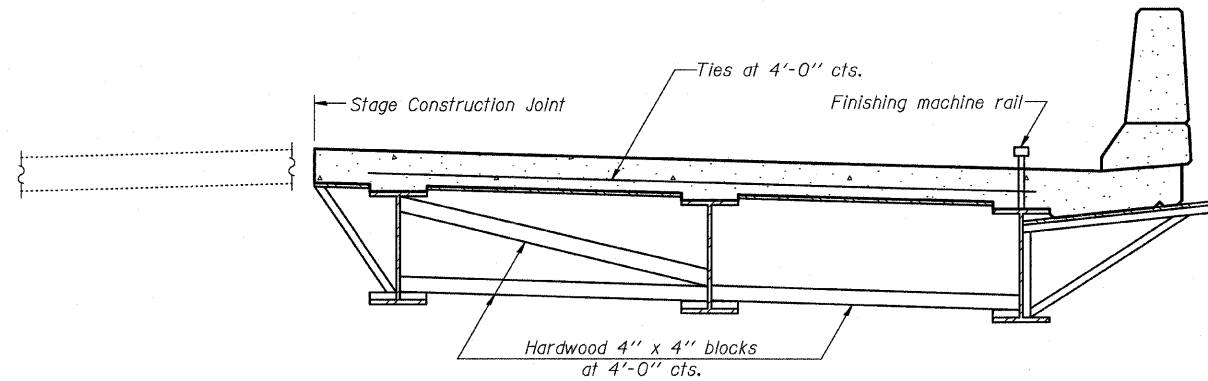
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Collinsville, Illinois 62234
618-345-2200

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

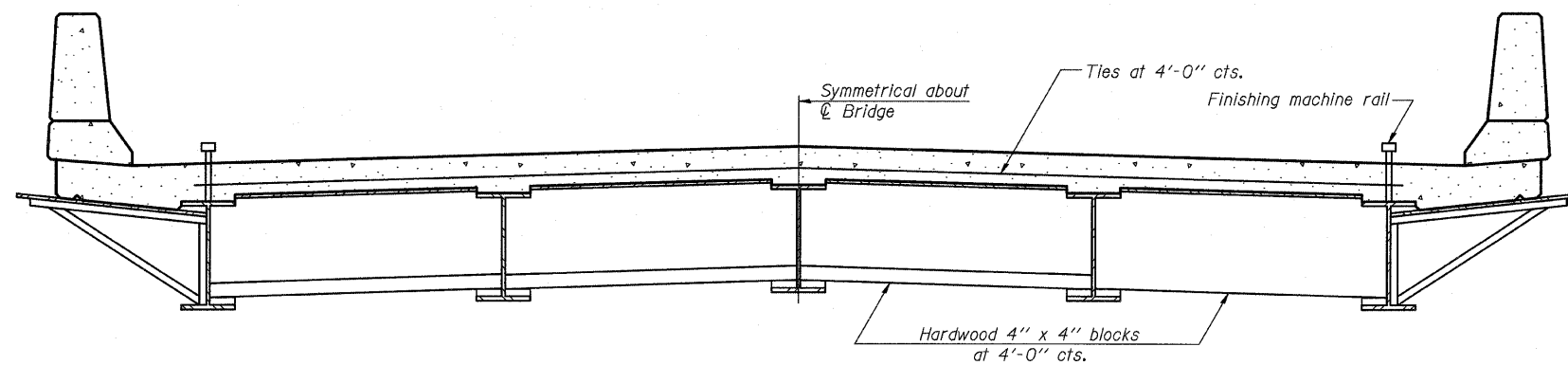
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 24 27 SHEETS
FAP 326	119BR	GRUNDY	68	44	
FED. ROAD DIST. NO. 7		ILLINOIS		FED. AID PROJECT-	

Contract #66687

When cantilever forming brackets are used, the work shall be done according to Article 503.06(b) of the Standard Specifications, except as modified below and in the details shown on this sheet.
The finishing machine rails shall be placed on the top flange of the exterior beams.
The beams or girders, supporting cantilever forming brackets, shall be tied together at 4 foot intervals.
For Standard construction, or Stage Construction the Hardwood bracing materials shall be placed as shown between webs of beams in each bay.



FORM BRACES FOR STAGE CONSTRUCTION



FORM BRACES FOR STANDARD CONSTRUCTION

**CANTILEVER FORMING BRACKETS FOR
SUPERSTRUCTURES
WITH W27 BEAMS AND SMALLER
IL 47 OVER JOHNNY RUN
FAP ROUTE 326 - SECTION 119BR
GRUNDY COUNTY
STATION 582+65.75
STRUCTURE NO. 032-0112**

DESIGNED -
CHECKED -
DRAWN -
CHECKED -

SB-1

5-16-08



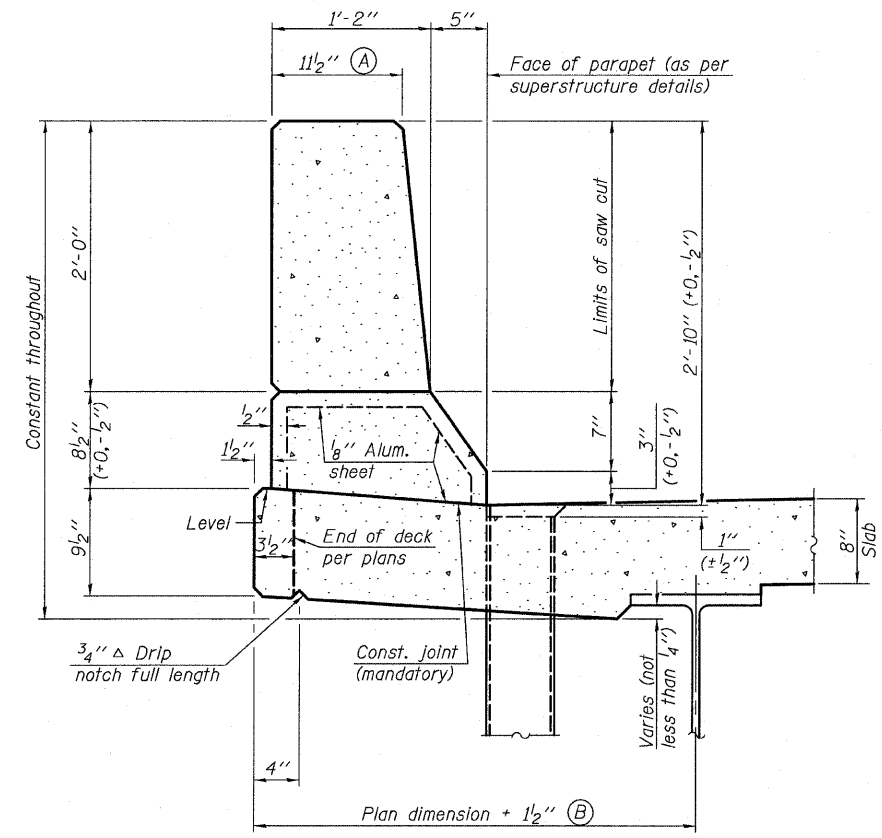
Eastport Business Center 1
100 Lanter Court, Suite 1
Collinsville, Illinois 62234
618-345-2200
Design Firm License No. 184.001115

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

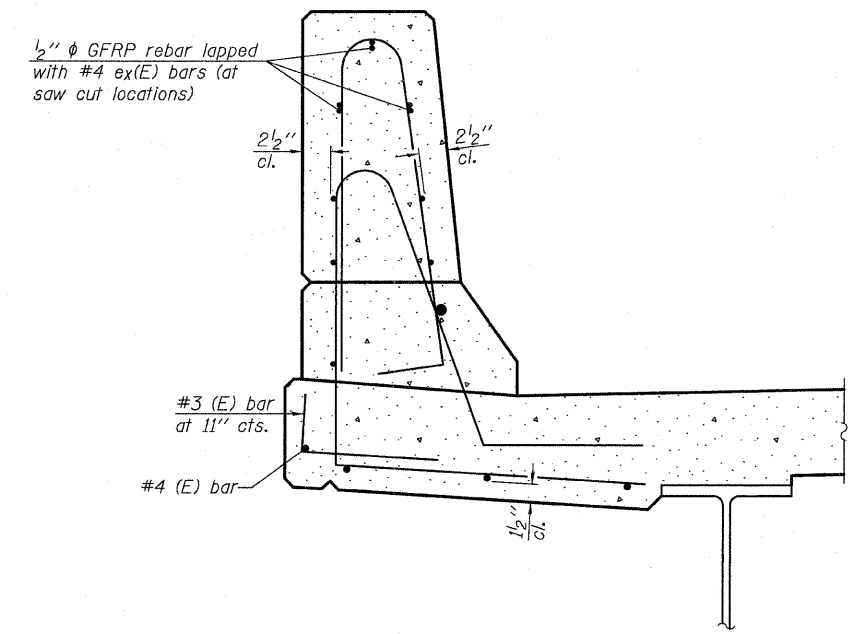
ROUTE NO.	SECTION	COUNTY	STATION	SHEET NO.
FAP 326	119BR	GRUNDY	68	45
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 25
27 SHEETS

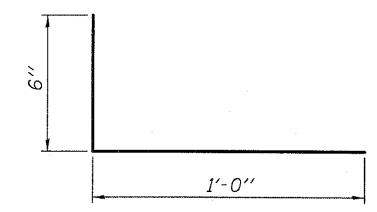
Contract #66687



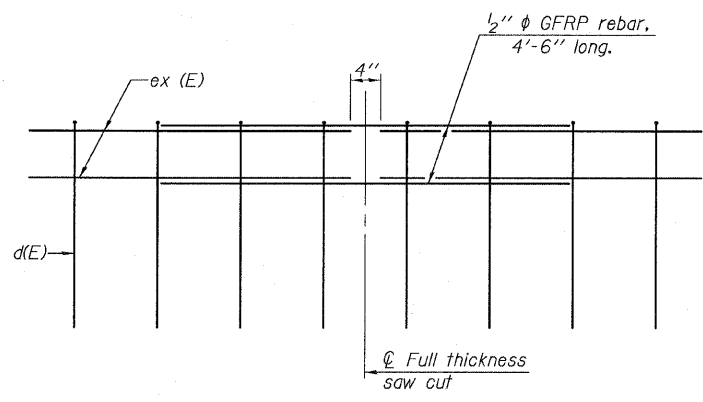
SECTION
(Showing dimensions)



SECTION
(Showing reinforcement clearances for slip forming and additional reinforcement bars)



#3 (E) BAR



GFRP REBAR STIFFENING DETAIL
(Place as shown in parapet section at each parapet joint location.)

GENERAL NOTES

All dimensions shall remain the same as shown on contract plans, except dimensions A and B which are to be revised as shown to provide additional clearance. Additional concrete needed to revise dimension A and B = 0.0165 cu. yds./ft. of parapet.
Place aluminum sheet in curb portion at and near piers. Full thickness saw cut at all joint locations in lieu of cork joint filler.

CONCRETE PARAPET SLIPFORMING OPTION
IL 47 OVER JOHNNY RUN
FAP ROUTE 326 - SECTION 119BR
GRUNDY COUNTY
STATION 582+65.75
STRUCTURE NO. 032-0112

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET	SHEET NO.
FAP 326	119BR	GRUNDY	68	47	27 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-		

Contract #66687

Illinois Department of Transportation SOIL BORING LOG Page 1 of 2
 Date 11/20/03

ROUTE FAP Route 326 (Illinois - 47) DESCRIPTION Over Johnny Run LOGGED BY Larry Meyers

SECTION Section 119B BR LOCATION SEC. 22, TWP. 32, RNG. 7, 3rd PM

COUNTY Grundy County DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 032-0031 Station 583+52.55

BORING NO. 2 No. Abutment Station 583+52.55 Offset 4.00R Rt

Ground Surface Elev. 586.57 ft (ft) (ft) (ft) (ft) (ft)

SOIL DESCRIPTION	DEPTH (ft)	BLOWS	UNSAT. W. (%)	WATER CONTENT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	SOIL CLASSIFICATION
cored bituminous pavement, concrete- average black clay loam	0 - 11						
stiff black and gray clay loam (fill)	11 - 14	11					
	14 - 15	14					
	15 - 16	9					
	16 - 17	11	7.1				11.3
	17 - 18	11					
	18 - 19	6					
	19 - 20	9	8.5				14.6
	20 - 21	13					
hard gray loam (fill)	21 - 29						
	29 - 30	29					
	30 - 31	65	<4.5				8.2
	31 - 32	100/5					
stiff brown and gray sandy clay loam (fill)	32 - 33						
	33 - 34	15					
very stiff brown sandy clay loam (fill)	34 - 35						
	35 - 36	1					
	36 - 37	3	2.9				16.7
	37 - 38	6					
hard gray sandy clay loam (fill)	38 - 39						
	39 - 40	3					
	40 - 41	6	4.9				11.8
	41 - 42	9					
	42 - 43	6					
	43 - 44	9	7.6				11.1
	44 - 45	15					
	45 - 46	11					

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T205)
 BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation SOIL BORING LOG Page 2 of 2
 Date 11/20/03

ROUTE FAP Route 326 (Illinois - 47) DESCRIPTION Over Johnny Run LOGGED BY Larry Meyers

SECTION Section 119B BR LOCATION SEC. 22, TWP. 32, RNG. 7, 3rd PM

COUNTY Grundy County DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 032-0031 Station 583+52.55

BORING NO. 2 No. Abutment Station 583+52.55 Offset 4.00R Rt

Ground Surface Elev. 586.57 ft (ft) (ft) (ft) (ft) (ft)

SOIL DESCRIPTION	DEPTH (ft)	BLOWS	UNSAT. W. (%)	WATER CONTENT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	SOIL CLASSIFICATION
hard gray loam (fill) (continued)	46 - 47	57	9.0				9.1
	47 - 48	63					
	48 - 49	27					
	49 - 50	54	7.0				9.8
	50 - 51	25					
gray shale weathered and reworked at rock surface	51 - 52						
	52 - 53						
	53 - 54						
	54 - 55						
	55 - 56						
	56 - 57						
End of Boring	57 - 58						

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T205)
 BBS, from 137 (Rev. 8-99)

DESIGNED -
CHECKED -
DRAWN -
CHECKED -

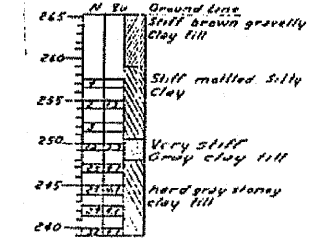
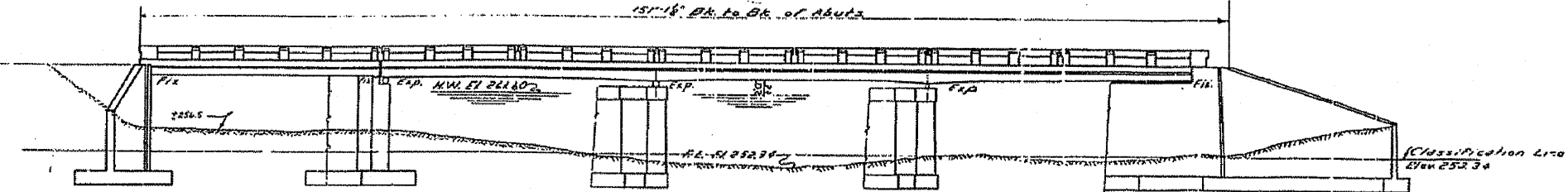
SOIL BORING LOGS
 IL 47 OVER JOHNNY RUN
 FAP ROUTE 326 - SECTION 119BR
 GRUNDY COUNTY
 STATION 582+65.75
 STRUCTURE NO. 032-0112

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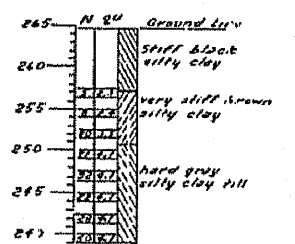
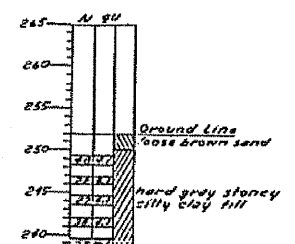
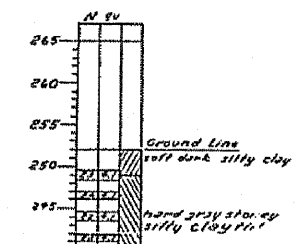
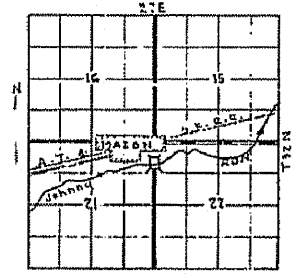
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

PROJECT NO.	SECTION	EX 1119	SHEET NO.	7	TOTAL SHEETS	16
47	119B	Grundy	34	16	7	16
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT F-204(5)						

BM. TOP OF NEW M.W. WING - 266.03
B.M. Top of M.W. Wing
Elev 265.00
Existing Structure
R.C. Deck Girders 3 Spans @ 24.5' @ R.L. 0
 roadway 21'-0" on R.C. C/Os over Abutts.
Sup. & Part of Abutts to be removed.
No Salvage.



ELEVATION



Note: N = Blows per foot of penetration of sampling spoon Hammer Weight 350 lbs.
Drop = 12 inches
qu = Unconfined compressive strength in tons per square foot

GENERAL NOTES

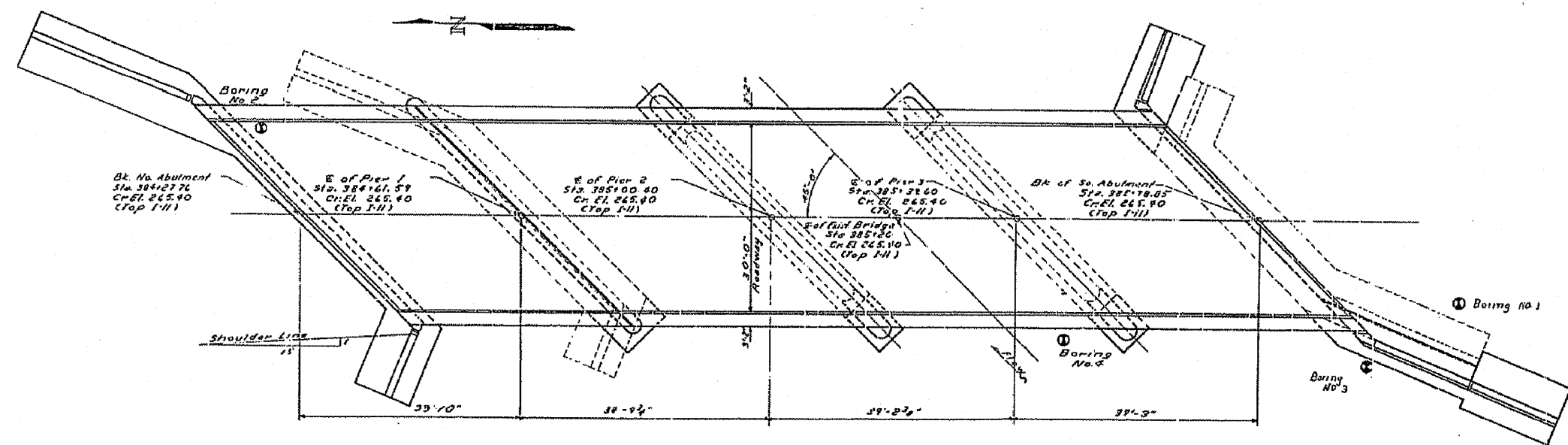
Class X Concrete shall be used throughout except as noted.
Handrail Concrete shall be used in Post & Rails. The Handrails shall not be poured until falsework has been removed.
The Concrete Floor Slab shall be finished in accordance with the applicable provisions of Section 27 of the Standard Specifications.
For Expansion Bolts, see special provisions.
All Rollers, Packers, Bearing Plates, Lead Plates, Pivots & Anchor Bolts shall be fabricated & set in accordance with Article 514 of the Standard Specifications & are included for payment as Structural Steel, Est. We. 610.
Expansion Guards shall be fabricated and erected in accordance with Article 512 (d) of the Standard Specifications & are included for payment as Structural Steel, Est. We. 610.
Except as otherwise provided, 1/2" Structural Steel shall receive one shop coat of red lead paint & two field coats of aluminum paint. See Articles 521 to 525 inclusive of the Standard Specifications. All paint shall be furnished & applied by the Contractor.
For backfill behind Abutments, refer to the Job by Super-structure, see Article 6010 of the Standard Specifications.
Boring Data are shown on the drawings only as a guide to bidders in determining soil conditions which may be encountered in the work.
The following surfaces of the bridge shall be waterproofed: back of Abutments & Back of Wing walls from top of footing to ground line.
No Piles Used in Existing Structure.

STATION 385+20
BUILT 195 BY
STATE OF ILLINOIS
S.B.I. RT. 47 SEC. 119-B-Y
F.A. PROJ. F-204(5)
LOADING H20-S16

LETTERING FOR NAME PLATE
See Std. No. 2113

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Handrail Concrete	Cu. Yds.	7.2		7.2
Class X Concrete	Cu. Yds.	398.4	302.8	701.2
Reinforcement Bars	Lbs.	94,270	14,920	109,190
Concrete Removal	Cu. Yds.		170	170
Name Plates	Each	one		one
Expansion Bolts	Each		181	181
Structural Steel	Cu. Yds.		525	525
Removal of Existing Superstr.	Each		one	one
Pavement Removal	Sq. Yds.		81	81
Class A Excavation for Strud.	Cu. Yds.		472	472
Class B Excavation for Strud.	Cu. Yds.		471	471
Temporary Bridge Complete	Each		one	one



PLAN

WATERWAY INFORMATION

Drainage Area 29,200 acres
Character rolling, cultivated & wooded
Required Opening (30 yr Flood) 811'-0"
Present Opening 681'-0"
Proposed Opening 811'-0"

DESIGNED *David S. Johnson*
CHECKED *R. J. Johnson*
DRAWN D.S.S. *C. Green*
CHECKED *R. J. Johnson*

EXAMINED *W. B. Hanson*
PASSED *R. J. Johnson*
APPROVED *R. J. Johnson*

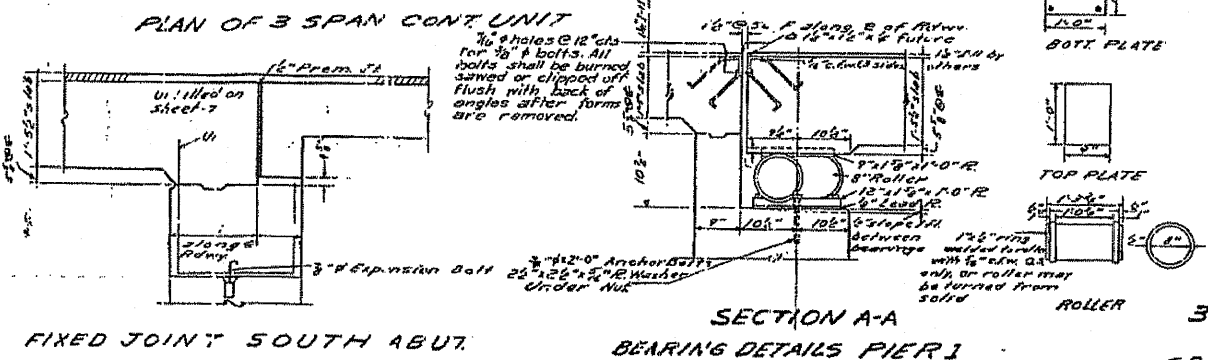
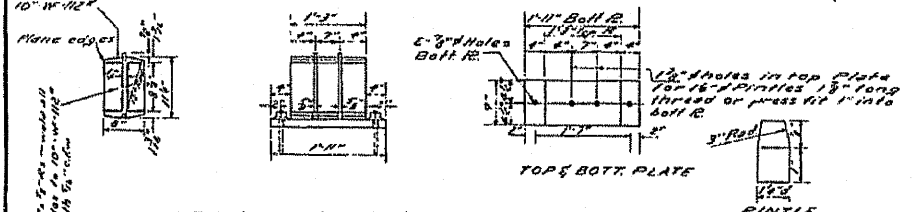
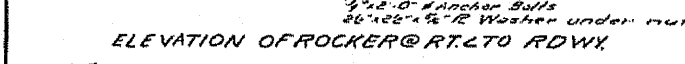
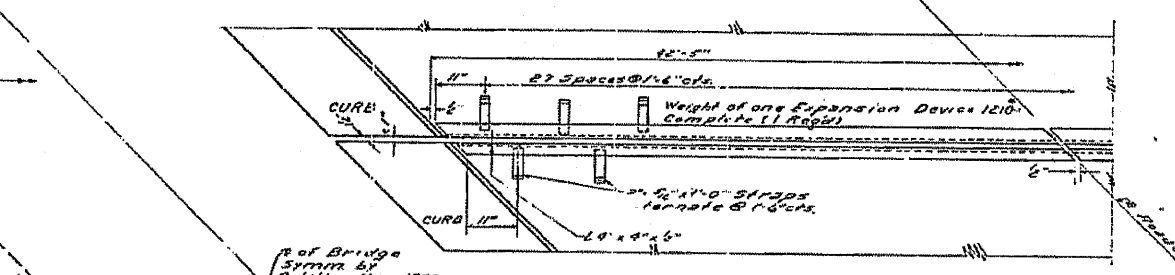
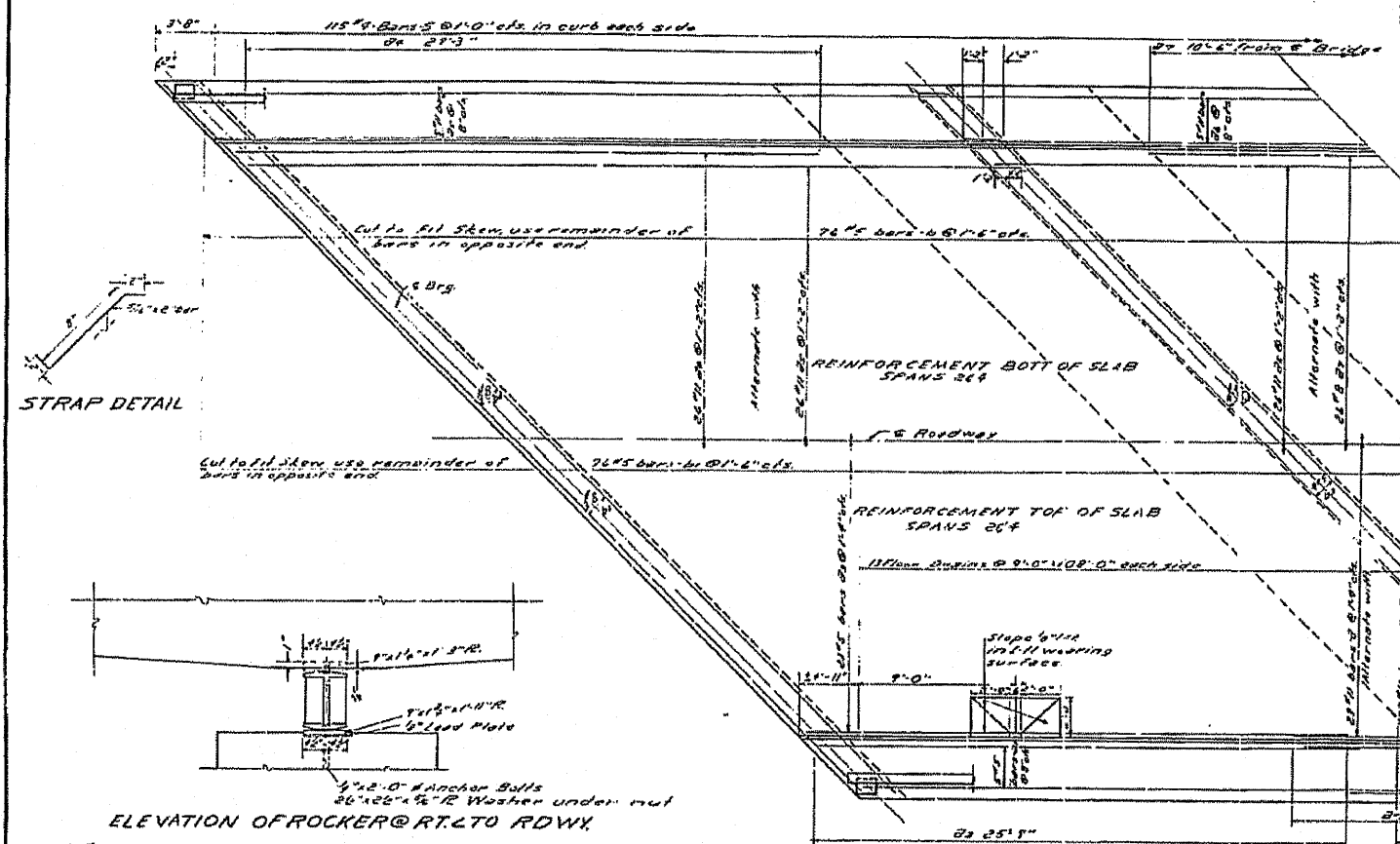
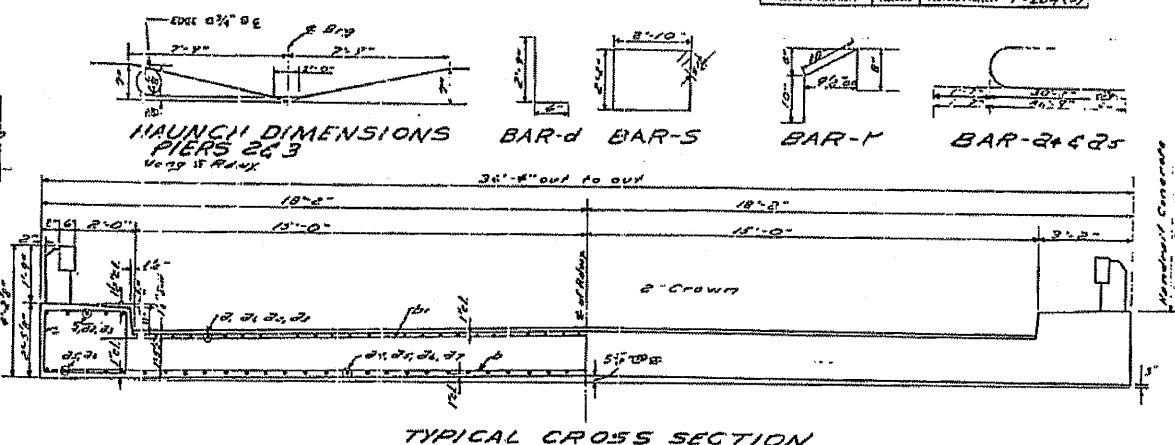
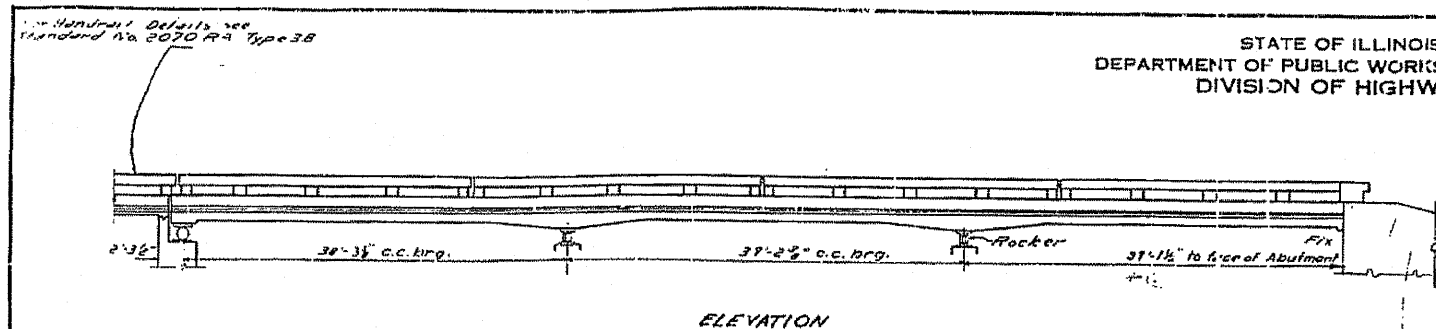
STRESSES
fc = 4000 psi (Super)
fc = 3000 psi (Sub)
fs = 20,000 psi (Reinf)
n = 10

GENERAL PLAN & ELEVATION
PROJ. F-204(5)
S.B.I. RT. 47 SEC. 119-B-Y
GRUNDY COUNTY
STA. 385+20

FILE NAME = sheets03.dgn	USER NAME = @USER@	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING BRIDGE PLAN FOR INFORMATION ONLY	F.A.P. RTE. 326	SECTION 119 BR	COUNTY GRUNDY	TOTAL SHEETS 68	SHEET NO. 48
PLOT SCALE = 20,000' / IN.	DRAWN -	REVISED -	SCALE: SHEET NO. OF SHEETS STA. TO STA.			CONTRACT NO. 66687				
PLOT DATE = 8/13/2008	CHECKED -	REVISED -				FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
	DATE -	REVISED -								

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

PROJECT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO.
S.B.I. 47	119 BR	Grundy	68	17	1 SHEETS
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT - F-204(5)					



BILL OF MATERIALS

BAR NO	SIZE	LENGTH	SHAPE
1	44	41	30'-0"
2	48	41	20'-0"
3	33	48	10'-6"
4	44	45	25'-3"
5	52	41	37'-0"
6	72	41	42'-6"
7	36	41	41'-6"
8	26	48	21'-0"
9	24	45	35'-3"
10	24	45	32'-6"
11	18	48	41'-3"
12	16	48	41'-3"
13	160	45	3'-3"
14	30	45	21'-6"
15	80	48	21'-6"
16	220	48	10'-0"

Handrail Concrete Curb 56
Class I Concrete Curb 276.7
Reinforcement Bars Lbs 45,280
Structural Steel Lbs 7220

DESIGNED *David S. Sullivan*
CHECKED *D.H. Tolson*
DRAWN *D.S.S. F. Crosson*
CHECKED *D.H. Tolson*

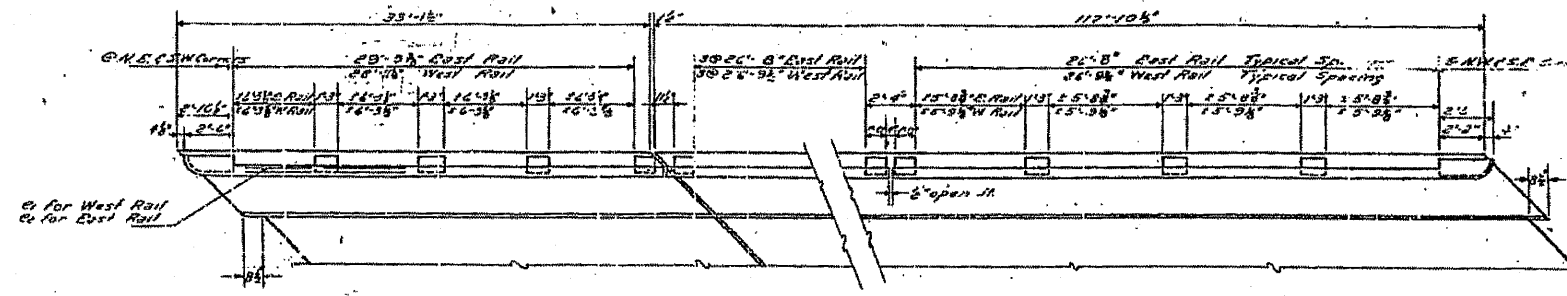
EXAMINED *W.B. Hanson*
PASSED *[Signature]*
APPROVED *K.R. [Signature]*

Feb 17 1954

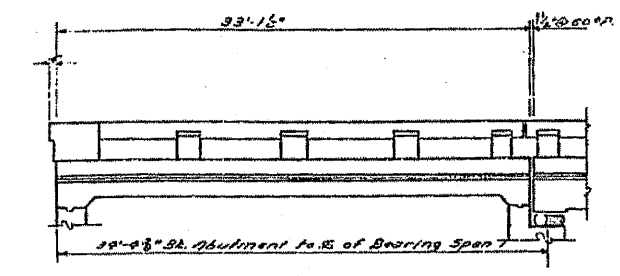
SUPERSTRUCTURE
3 SPAN CONT. UNIT
PROJ. F-204(5)
S.B.I. RT 47 SEC. 119 B-Y
GRUNDY CO.
STA 385+20

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

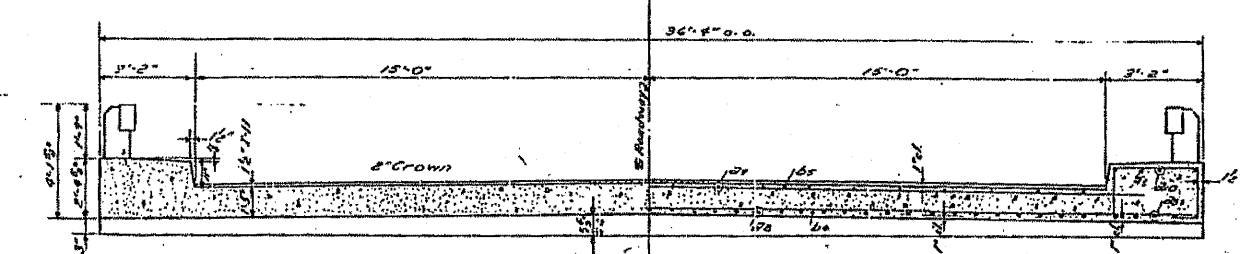
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
119 BR	119 BR	GRUNDY	34	18
SHEET NO. 3 OF 7 SHEETS				



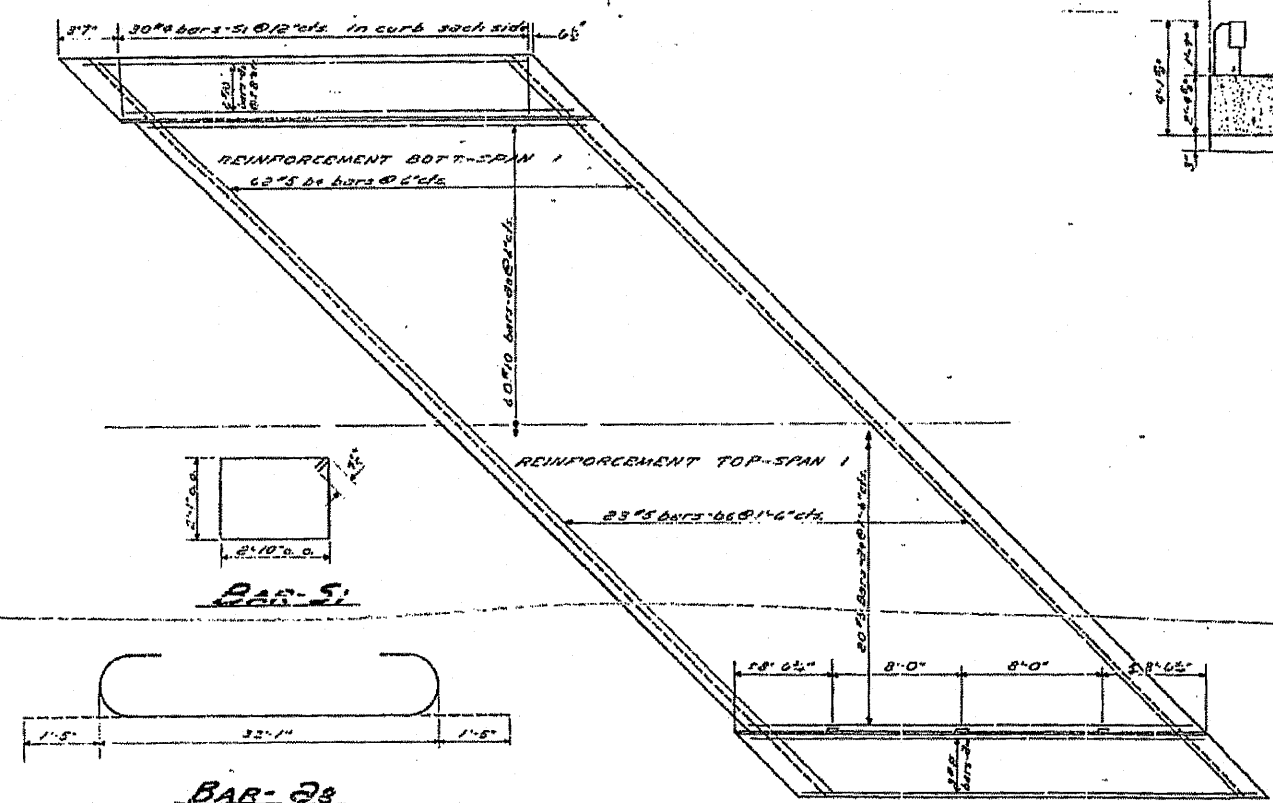
HANDRAIL & POST LAYOUT



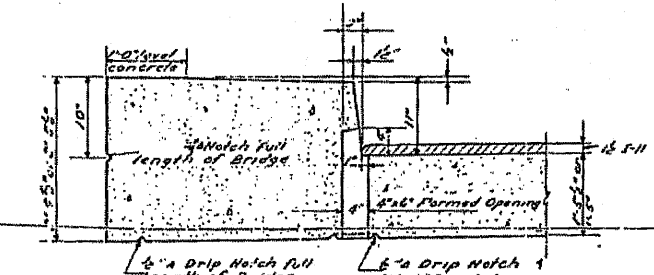
ELEV. SHOWING WEST HANDRAIL



TYPICAL CROSS SECTION



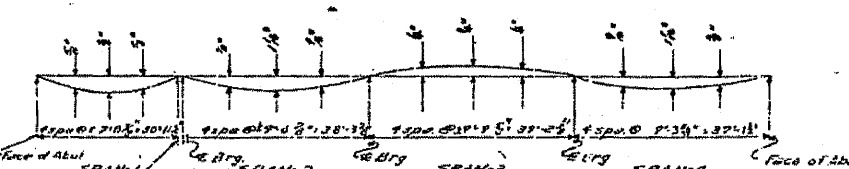
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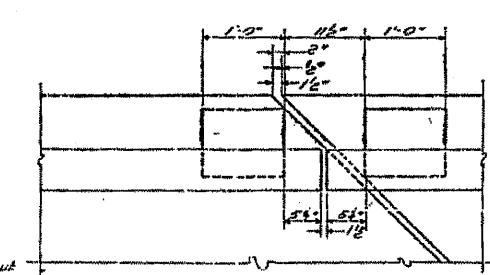
DRAIN DETAIL

BILL OF MATERIALS

BAR	NO.	SIZE	LENGTH	SHAPES
29	72	#10	34'-11"	
21	20	#5	32'-1"	
20a	16	#8	22'-1"	
22	62	#5	60'-6"	
23	23	#5	66'-6"	
d	82	#5	3'-3"	
e1	8	#5	30'-9"	
e2	4	#5	31'-6"	
f	20	#8	3'-6"	
g	10	#8	10'-2"	
Handrail Concrete Co. 12				
Class X Concrete Co. 217				
Reinforcement Bars 162 14,170				



DEAD LOAD DEFLECTION DIAGRAM



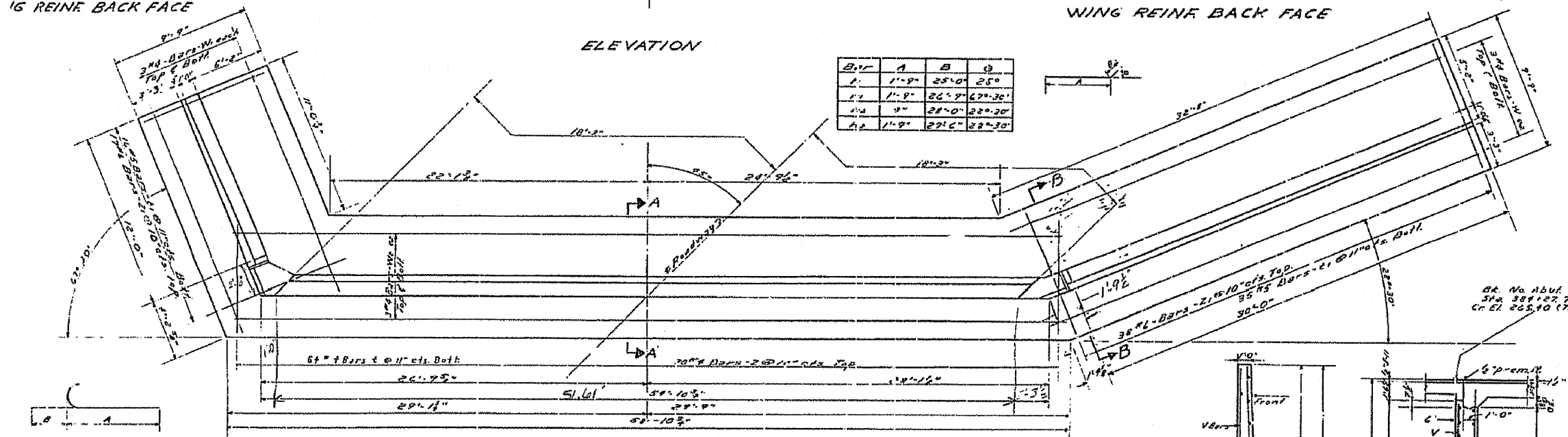
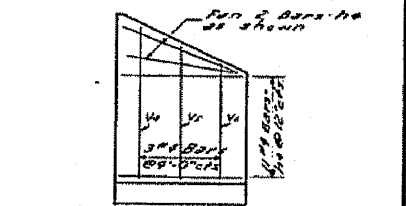
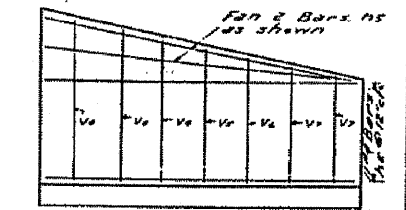
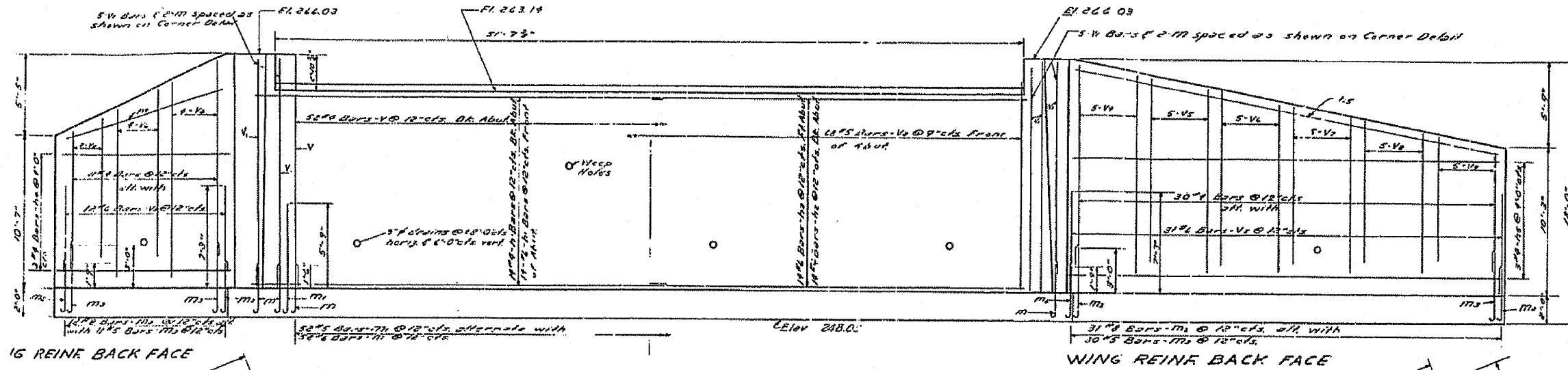
LAYOUT OF POSTS @ EXP. T-

DESIGNED: *David J. Bellon*
 CHECKED: *P. J. Johnson*
 DRAWN: *D.S.S. R. Grossch*
 CHECKED: *P. J. Johnson*

EXAMINED: *W.B. Howard*
 PASSED: *[Signature]*
 APPROVED: *[Signature]*

Feb 17 1954

APPROACH SPAN
 PROJ. F-209 (5)
 S.B.I. RT. 97 SEC. 119-BY
 GRUNDY COUNTY

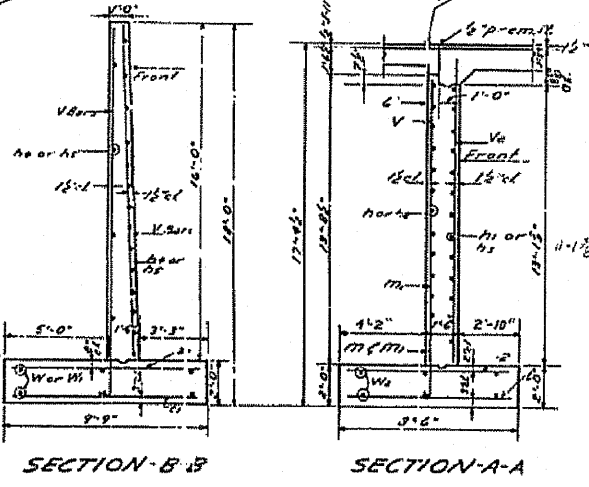
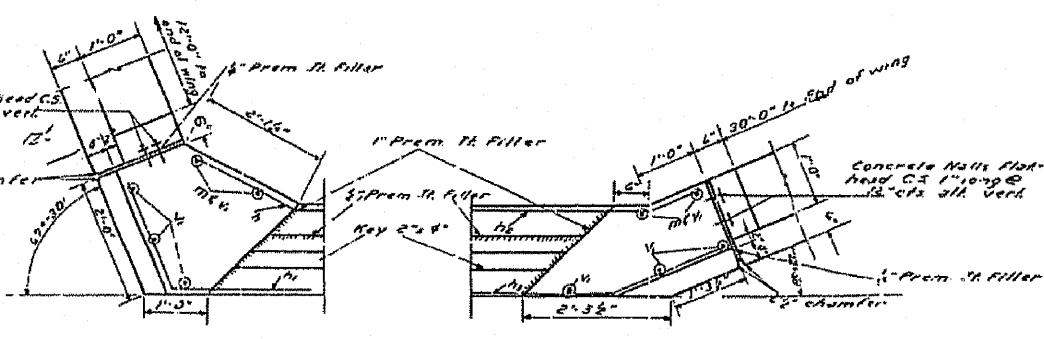


BAR	A	B	C
1	1'-2"	25'-0"	25'-0"
2	1'-8"	26'-7"	27'-30"
3	9"	28'-0"	22'-30"
4	1'-9"	27'-0"	22'-30"

BAR	A	B
M	3'-3"	8"
M1	7'-6"	7"
M2	3'-4"	1'-1"
M3	4'-9"	2"

BAR	NO	SIZE	LENGTH	SHAPE
A	14	#4	26'-9"	U
A1	14	#6	28'-6"	U
A2	14	#6	28'-9"	U
A3	14	#6	29'-3"	U
A4	17	#4	18'-0"	U
A5	34	#4	15'-6"	U
M	56	#6	3'-11"	C
M1	52	#5	8'-2"	C
M2	43	#8	4'-2"	C
M3	41	#5	8'-8"	C
E	64	#4	8'-0"	U
E1	51	#5	3'-1"	U
V	52	#4	12'-3"	U
V1	10	#8	18'-8"	U
V2	68	#5	11'-6"	U
V3	42	#6	2'-3"	U
V4	13	#4	12'-6"	U
V5	7	#4	12'-6"	U
V6	11	#4	11'-6"	U
V7	7	#4	10'-6"	U
V8	8	#4	1'-6"	U
V9	5	#4	8'-6"	U
W	12	#4	16'-6"	U
W1	4	#4	15'-6"	U
W2	12	#4	16'-6"	U
Z	70	#4	8'-0"	U
Z1	55	#4	8'-3"	U

Class 2 Concrete Cu Yds. 1397
Reinforcement Bars Lbs. 8000
Class A Estimation Cu Yds. 345
Class B Estimation Cu Yds. 270



DESIGNED *Erwin J. Sullivan*
CHECKED *R.H. Tolson*
DRAWN BY *E. G. Scaesch*
CHECKED *R.H. Tolson*

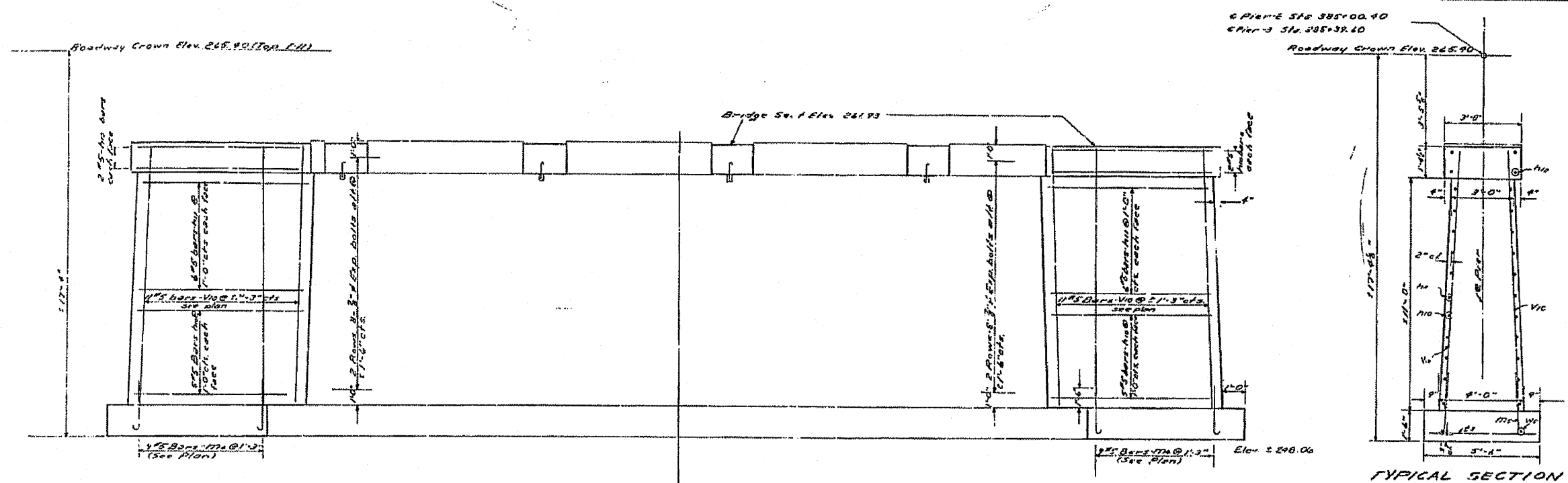
EXAMINED *W.E. Hanson*
PASSED *[Signature]*
APPROVED *R.H. Tolson*

Feb 17 1954

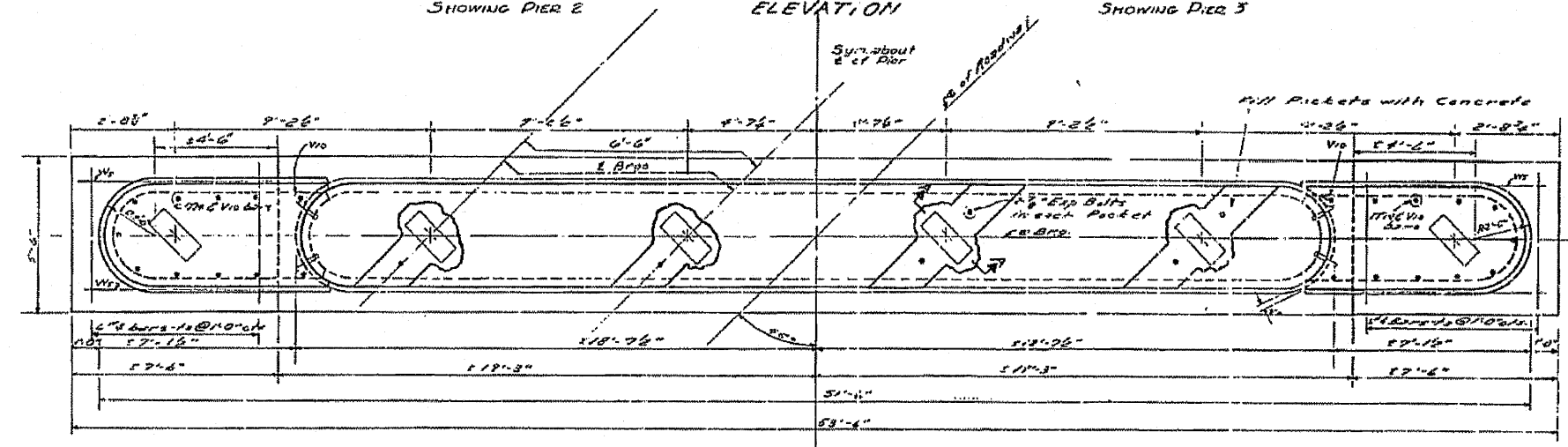
NORTH ABUTMENT
PROJ. F-204 (5)
S.B.I. RT. 47 SEC. 119-BY
GRUNDY COUNTY
STA. 385+20

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

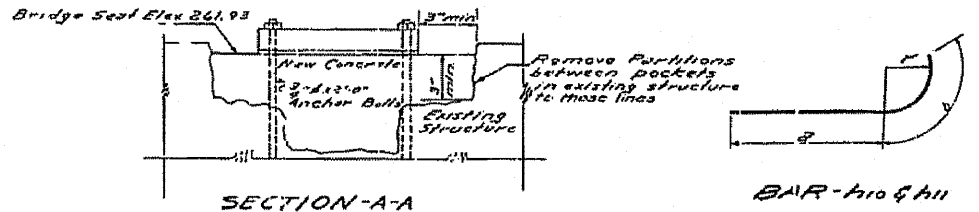
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO.
47	BY	Grundy	34	21	7 SHEETS
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT F-204(5)					



TYPICAL SECTION



SHOWING PIER 3 PLAN SHOWING PIER 2



SECTION-A-A

BAR-A10 & A11

BILL OF MATERIALS - 2 PIERS

BAR	NO.	SIZE	LENGTH	SHAPE
A10	56	5	8'-3"	
A11	68	5	7'-10"	
M10	26	5	3'-6"	
E1	24	5	5'-0"	
V10	10	5	12'-0"	
V11	8	5	7'-0"	
Reinforcement Bars Lbs. 4470				
Class X Concrete Cu Yds 558				
Class A Excav for Struct Cu Yds 76				
Class B Excav for Struct Cu Yds 90				
Concrete Removal Cu Yds 0.9				
Expansion Bolts Each 76				

DESIGNED *L. J. Sullivan*
CHECKED *R.H. Johnson*
DRAWN *D.S.S. K. Groeschel*
CHECKED *R.H. Johnson*

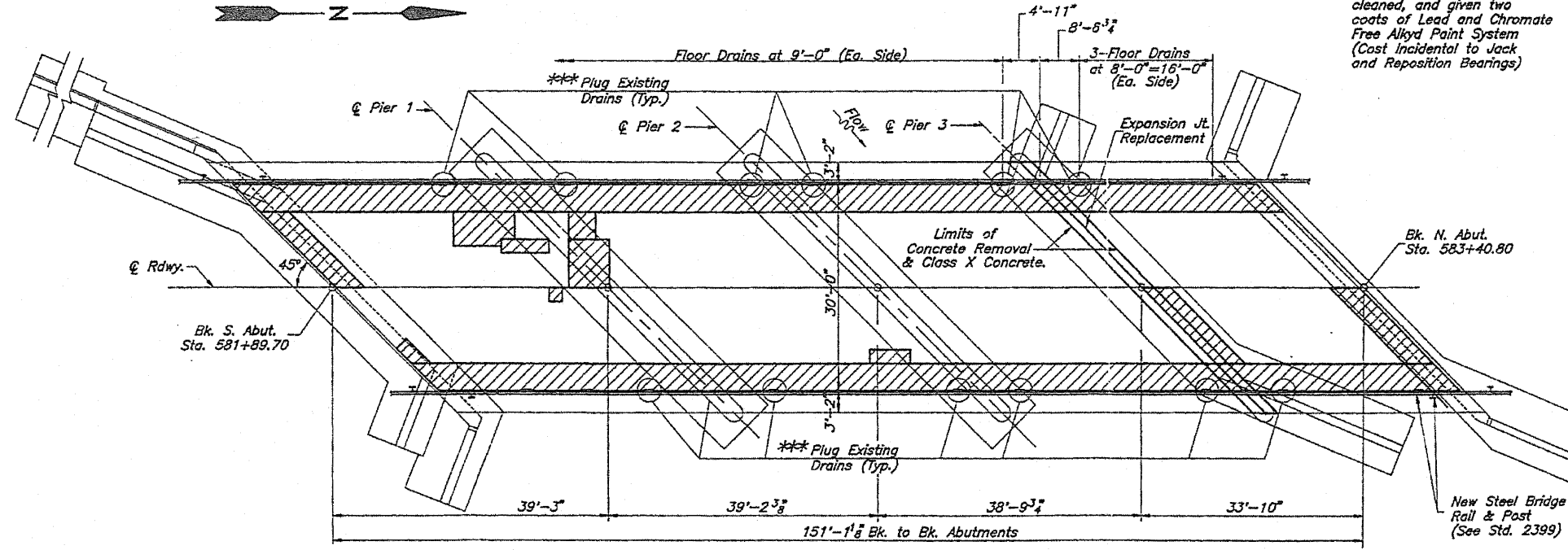
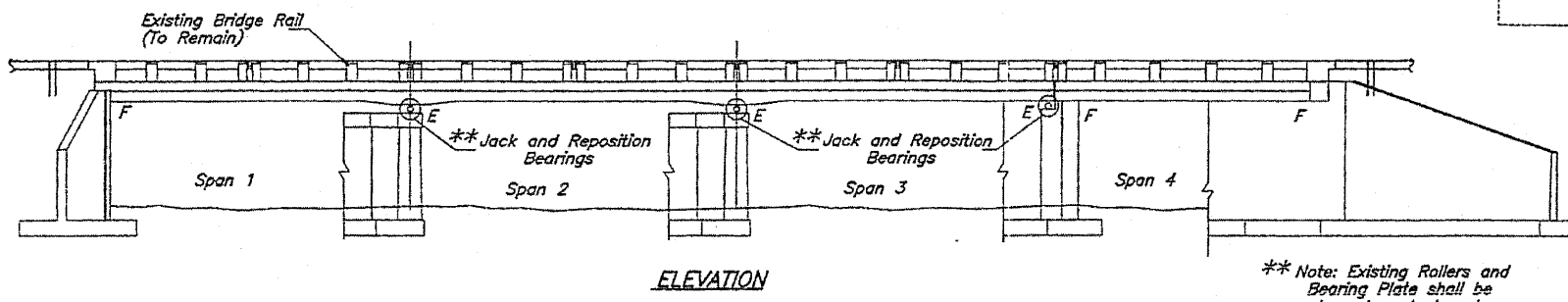
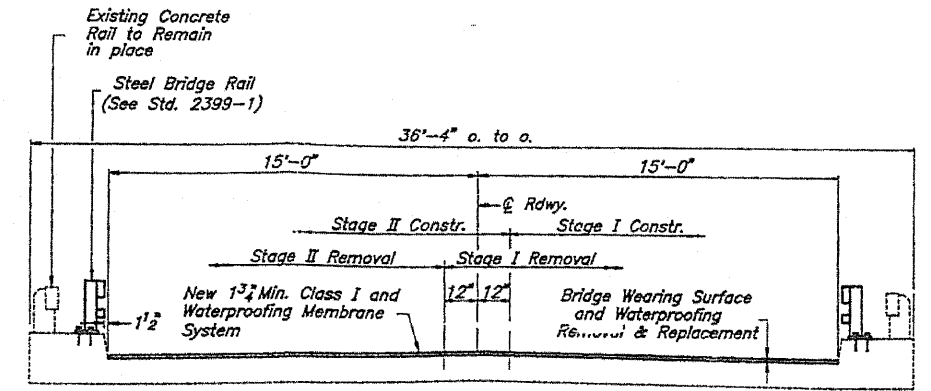
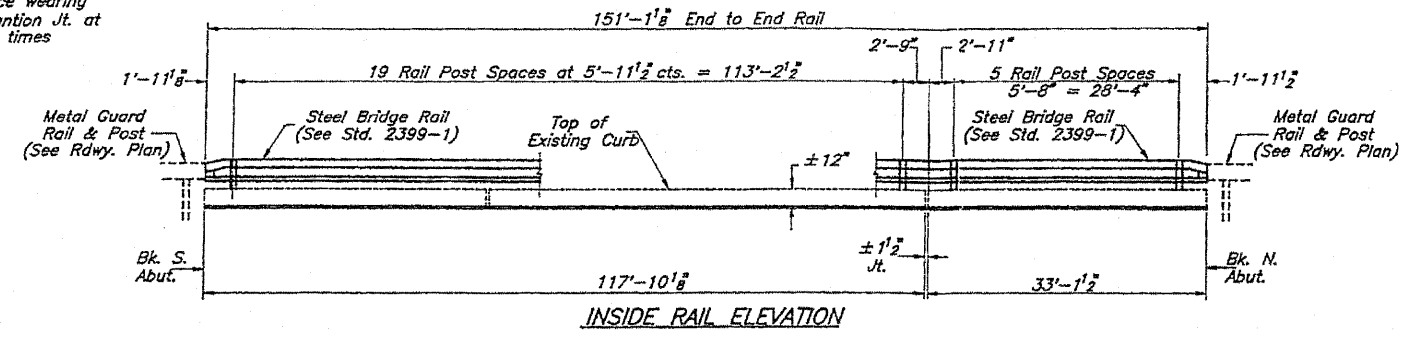
EXAMINED *W. B. Hancock*
PASSED *[Signature]*
APPROVED *R.H. Johnson*

Feb 17 1954

PIERS 263
PROJ F-204-(5)
S.B.I. RT. 47 SEC. 119-BY
GRUNDY CO.
STA 385+20

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 1
ILL. RTE. 47	*	GRUNDY	255	144	3 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT			

EXISTING STRUCTURE:
 Four span R.C. slab superstructure with spans of 39'-3", 39'-2 3/8", 38'-9 3/4" & 33'-10". Retrofit new curb mounted steel rail, remove and replace wearing surface. Remove and Replace existing Expansion Jt. at Pier No. 3. Traffic to be maintained at all times utilizing stage construction.
 No Salvage
 Str. No. 032-0031



HALF CROSS SECTION
 LOOKING NORTH
 Remove existing bituminous concrete surface and replace with new Class I surface & Waterproofing Membrane System.

GENERAL NOTES
 Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
 Reinforcement bars shall conform to the requirements of AASHTO M-31, M-42 or M-53 Grade 60.
 Debonded areas shown are based upon a survey taken before plan preparation and are for bidding purposes only. Actual areas to be repaired shall be determined by the Engineer in the field at the time of construction.
 Locations of partial and full depth bridge deck repair areas shall be determined by the Engineer in the field at the time of construction. Defective concrete areas shall be removed to the width, length, and depth required to reach sound concrete as determined by the Engineer.

** Note: Existing Rollers and Bearing Plate shall be cleaned, and given two coats of Lead and Chromate Free Alkyd Paint System (Cost incidental to Jack and Reposition Bearings)

TOTAL BILL OF MATERIALS

ITEM	UNIT	QUANTITY
* Bituminous Concrete Surface Removal	Sq. Yd.	504
* Waterproofing Membrane System	Sq. Yd.	504
* Bit. Conc. Surf. Cse., Mix. D, Class I, Type 2	Ton	42.3
* Steel Bridge Rail	Lin. Ft.	303
* Class X Concrete Superstructure	Cu. Yd.	2.9
* Concrete Removal	Cu. Yd.	2.9
* Neoprene Expansion Jt. (2")	Lin. Ft.	52
* Reinforcement Bars (E ₆₀ (cont'd))	Lbs.	480
* Deck Slab Repair (Partial)	Sq. Yd.	154
* Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	5
* Jack and Reposition Bearings	Each	24

JAMES O. HAMILTON
 LICENSED STRUCTURAL ENGINEER
 OF JACKSONVILLE
 ILLINOIS
 James O. Hamilton
 4/18/94
 License Expires 11/30/94

WATERWAY INFORMATION

Drainage Area 46.9 Sq. Mi. Low Grade Elev. 585.86 @ Sta. 584+00

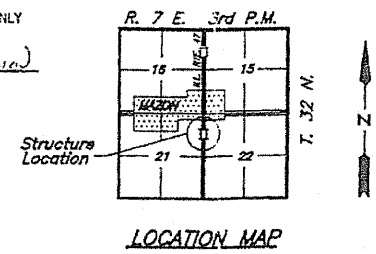
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head Ft.		Headwater	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	50	3399	809	809	582.31	0.7	0.7	582.96	582.96
Base	100	3828	829	829	582.51	0.8	0.8	583.26	583.26
Overtopping									
Max. Calc.	500	4819	866	866	582.89	1.0	1.0	583.87	583.87

LEGEND
 Debonded Area (From Deck Survey December, 1990)

** The existing drains at locations shown shall be cleaned and filled with Class X Concrete. Cost incidental to Deck Slab Repair (Full Depth, Type I)

APPROVED
 FOR STRUCTURAL ADEQUACY ONLY
 Ralph E. Anderson
 Engineer of Bridges and Structures

DESIGN STRESSES
 f_c = 3,500 p.s.i.
 f_c = 60,000 p.s.i. (Reinf.)

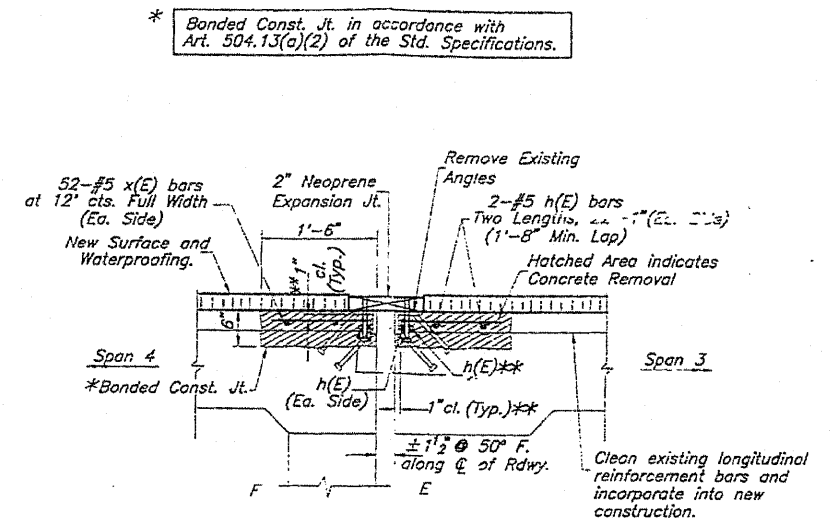
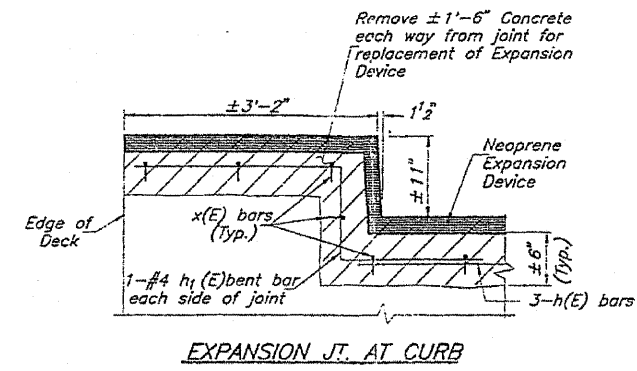
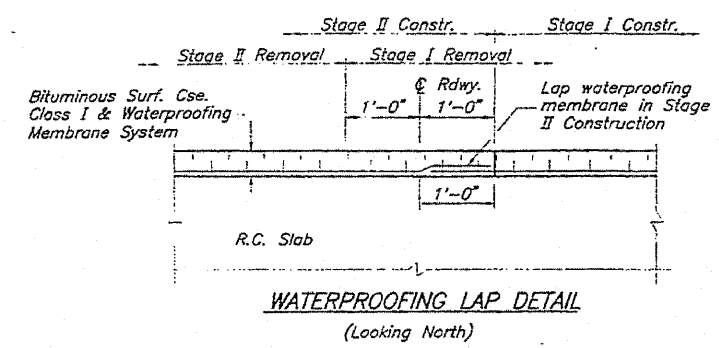


BRIDGE DETAILS
 F.A.P. RTE. 100 (ILL. RTE. 47)
 OVER JOHNNY RUN CREEK
 GRUNDY COUNTY
 SECTION 119B-1
 STRUCTURE NO. 032-0031

PROJ. NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
ILL. RTE. 47	*	GRUNDY	255	145
FED. ROAD DIST. NO. 7	CUNDS	PROJECT		

SHEET NO. 2
3 SHEETS

*1152-1

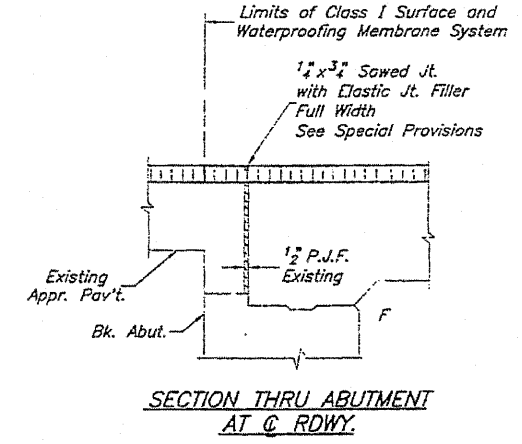
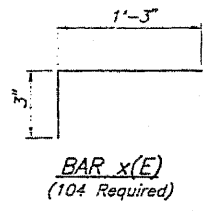
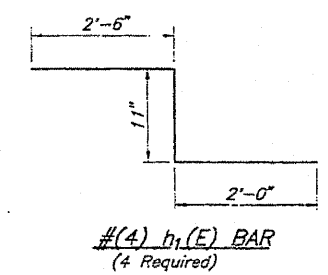


* Bonded Const. Jt. in accordance with Art. 504.13(a)(2) of the Std. Specifications.

See Sh. #3 of 3 for Expansion Joint Details

** Place h(E) Bars in back of anchor bolt as shown if required to maintain 1" clearance (0'-1 1/2"). Anchor bolts should be tied to h(E) bars.

Reinforcement bars designated (E) shall be epoxy coated.



BILL OF MATERIALS

BAR	NO	SIZE	LENGTH	SHAPE
h(E)	12	#5	22'-1"	
h ₁ (E)	4	#4	2'-6"	
x(E)	108	#5	1'-6"	
Reinforcement Bars Epoxy Coated		Lbs.	460	
Class X Concrete Superstructure		Cu. Yd.	2.9	

Note: Reinforcement bars designated (E) shall be Epoxy Coated.

BRIDGE DETAILS
F.A.P. RTE. 100 (ILL. RTE. 47)
OVER JOHNNY RUN CREEK
GRUNDY COUNTY
SECTION 119B-1
STRUCTURE NO. 032-0031

FILE NAME = sheets03.dgn	USER NAME = #USER*	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING BRIDGE PLAN FOR INFORMATION ONLY	F.A.P. RTE. 326	SECTION 119 BR	COUNTY GRUNDY	TOTAL SHEETS NO. 68	SHEET NO. 56
PLOT SCALE = 20,000' / IN.	DRAWN -	REVISED -	SCALE:			SHEET NO. OF SHEETS STA. TO STA.	FED. ROAD DIST. NO. ILLINOIS	FED. AID PROJECT	CONTRACT NO. 66687	
PLOT DATE = 8/13/2009	CHECKED -	REVISED -								
	DATE -	REVISED -								

GENERAL NOTES

Continuous Seal Neoprene Expansion Joint shall consist of molded anchor blocks of elastomer and steel, field assembled over continuous lengths of elastomeric membrane.

The elastomeric membrane shall be premolded with a single or a double upward convolution that will have a "memory" to return to its molded position upon joint closure.

The steel reinforcement must extend up the back face of anchor blocks when asphalt surfaces are used but is optional in concrete blockout.

The convolution length shall be such that the extended length will not be greater than the manufactured length when the joint is fully expanded in its design range and will not protrude above the anchor blocks when the joint is fully compressed.

Joint openings shall be adjusted in accordance with Article 503.07(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F.

The parapet and sidewalk flaps are used but is optional in concrete blockout.

The parapet and sidewalk flaps may be furnished factory vulcanized to the roadway membrane provided the centerline of the convolution is maintained and the process and method meet the approval of the Engineer.

Joint Size	"C" at 50°F	"D" at 50°F
2"	2"	1 1/2" Min.
2 1/2"	2 1/2"	1 3/4" Min.
4"	3"	2 1/2" Min.

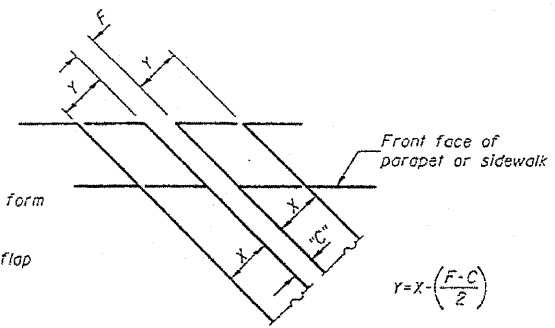
INSTALLATION NOTES

1. Install sponge mandrels into positions shown to form flap convolution.
2. Install parapet or sidewalk piece (trim roadway flap to fit before applying epoxy).
3. Install continuous seal in roadway.
4. Install anchor blocks as indicated.

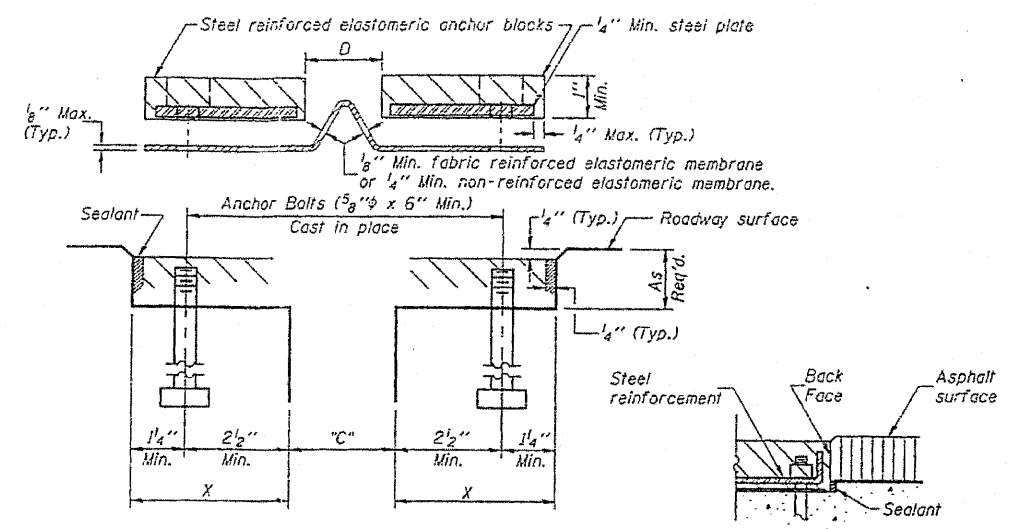
NOTE A: Maximum spacing of anchor bolts shall be 12" centers.

SKREW LIMITATIONS

The details of the anchor blocks and the elastomeric membrane in the parapet, as shown, are for up to 50° skews. For skews greater than 50°, the anchor blocks and the elastomeric membrane, installed in accordance with dimension "D", might require modifications to insure a minimum clearance of 1/2" from centerline of anchor studs to edge of parapet opening. The anchor blocks and the elastomeric membrane shall also be installed to the top of the parapet with the anchor studs spaced at ±12" cts.

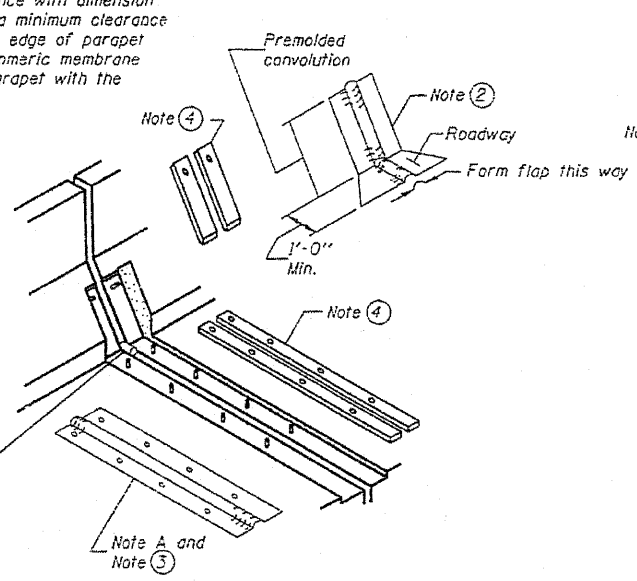


FORMING BLOCKOUT SKETCH

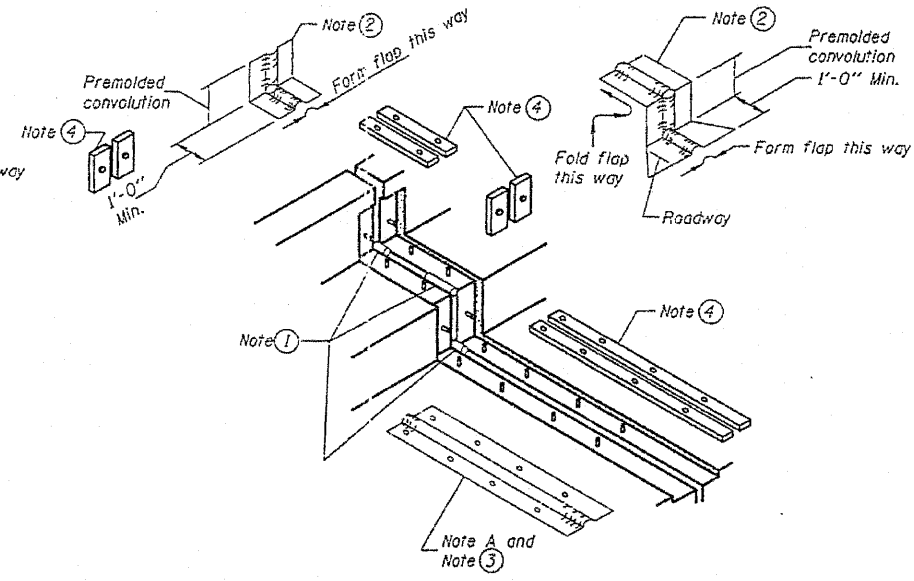


CROSS SECTION

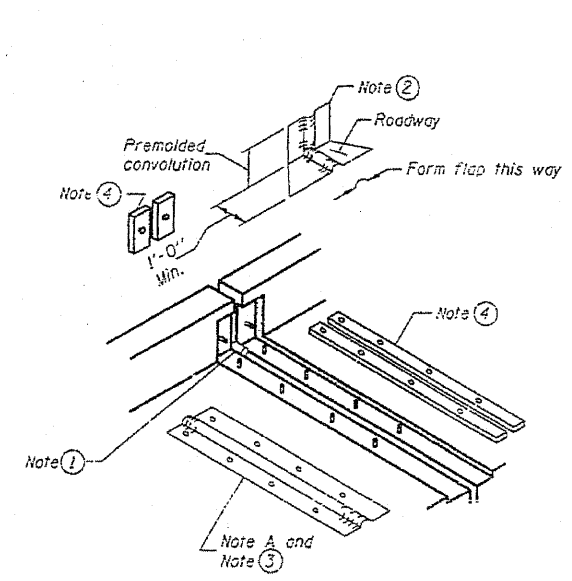
ANCHOR BLOCK REINFORCEMENT WITH ASPHALT SURFACE



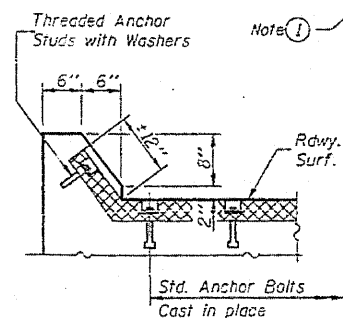
AT PARAPET



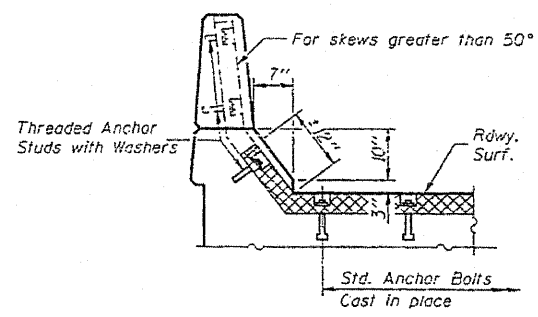
AT SIDEWALK OR MEDIAN



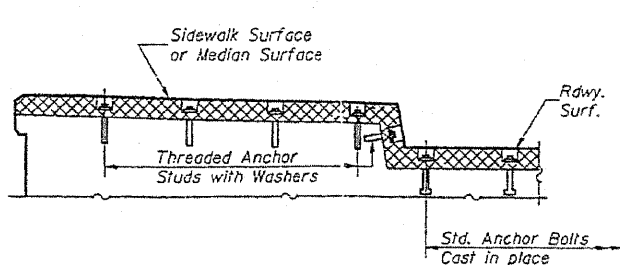
AT WALL



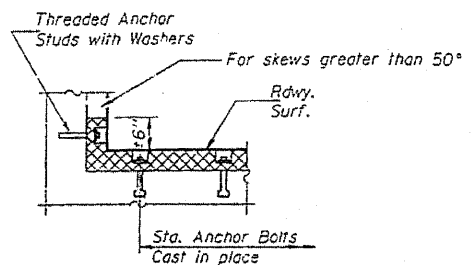
AT CURB



AT PARAPET



AT SIDEWALK OR MEDIAN TYPICAL END TREATMENTS

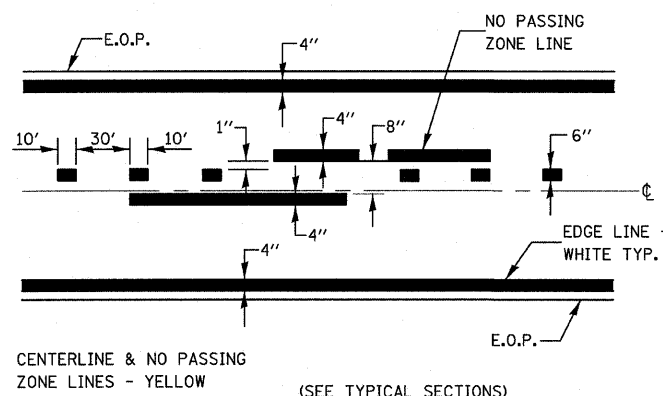


AT WALL

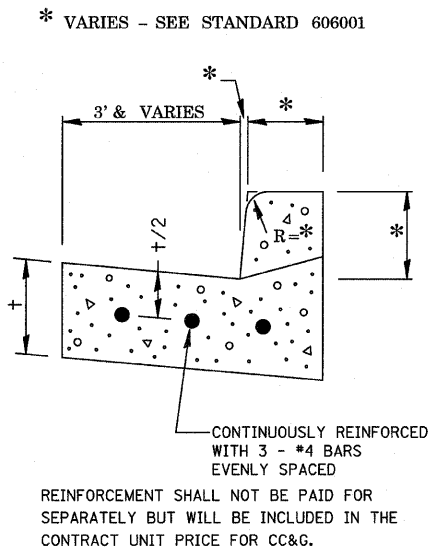
CONTINUOUS SEAL TYPE NEOPRENE EXPANSION JOINTS
For 2", 2 1/2" and 4" Movement

F.A.P. RTE. 100 ILL. RTE. 47
OVER JOHNNY RUN CREEK
GRUNDY COUNTY
SECTION 119B-1
STRUCTURE NO. 032-0031

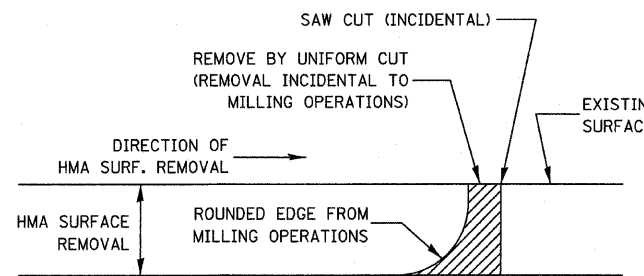
EJ-CS 2-26-93



PAVEMENT MARKING

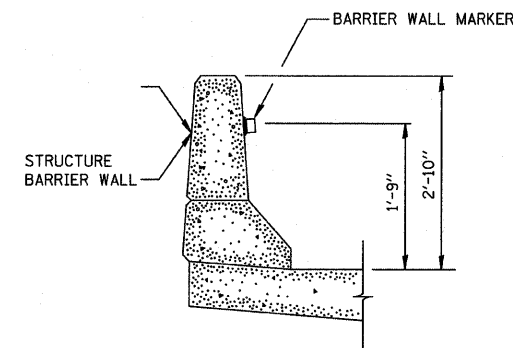


REINFORCEMENT DETAIL FOR COMBINATION CONCRETE CURB AND GUTTER

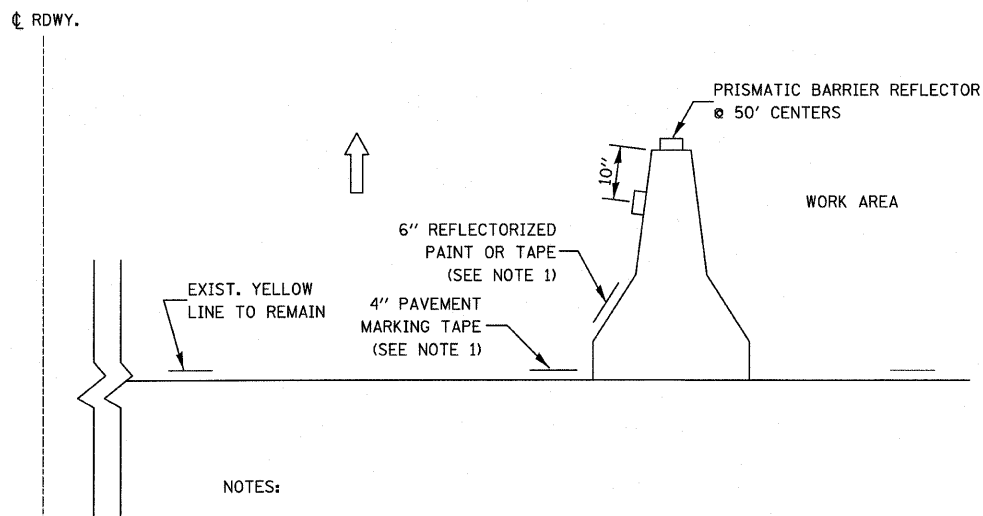


NOTE:
WHEN MILLING OPERATIONS PRODUCE A ROUNDED EDGE, THEN A SAW CUT SHALL BE USED TO MANUFACTURE A PERPENDICULAR EDGE AS SHOWN IN THE DETAIL. THE ENGINEER SHALL BE THE SOLE JUDGE CONCERNING THE USE OF THIS DETAIL

HMA DETAIL AT BUTT JOINTS

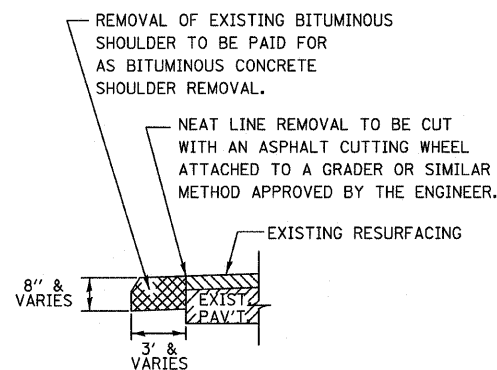


BARRIER WALL MARKER

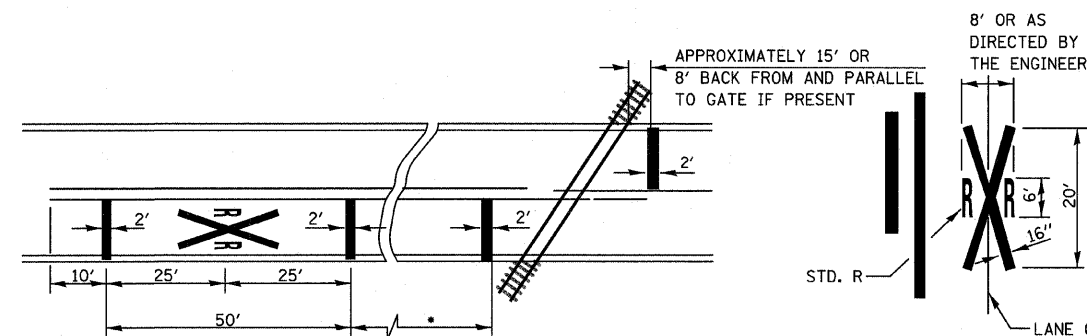


- NOTES:
1. THE CONTRACTOR HAS THE OPTION OF USING EITHER THE LINE ON THE TEMPORARY CONCRETE BARRIER OR ON THE PAVEMENT.
 2. THE COLOR OF THE REFLECTORS AND PAVEMENT/BARRIER MARKING LINE WILL VARY WITH STAGING AND SHALL MATCH THE EXISTING LINE IN THE WORK AREA.
 3. THE COST OF THE REFLECTORS AND THE PAVEMENT/BARRIER MARKING LINE IS INCLUDED IN THE COST OF THE TEMPORARY CONCRETE BARRIER.

TEMPORARY CONCRETE BARRIER



REMOVAL OF EXISTING BITUMINOUS SHOULDER



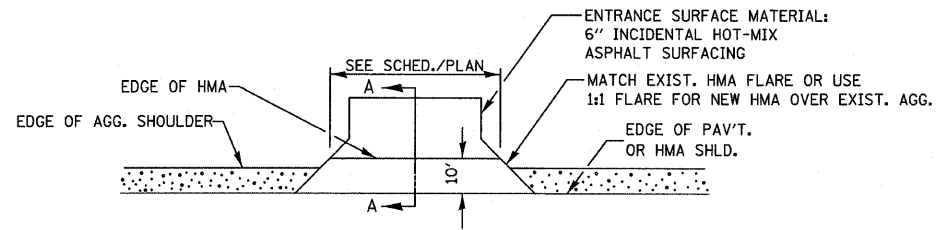
- * MINIMUM DISTANCE
400' FOR 55 MPH
250' FOR 45 MPH
100' FOR 35 MPH OR LESS

NOTES:
THE TRANSVERSE SPREAD OF THE "X" MAY VARY ACCORDING TO LANE WIDTH.

ON MULTI-LANE ROADS, THE STOP LINES SHALL EXTEND ACROSS ALL APPROACH LANES AND SEPARATE RXR SYMBOLS SHALL BE PLACED ADJACENT TO EACH OTHER IN EACH LANE.

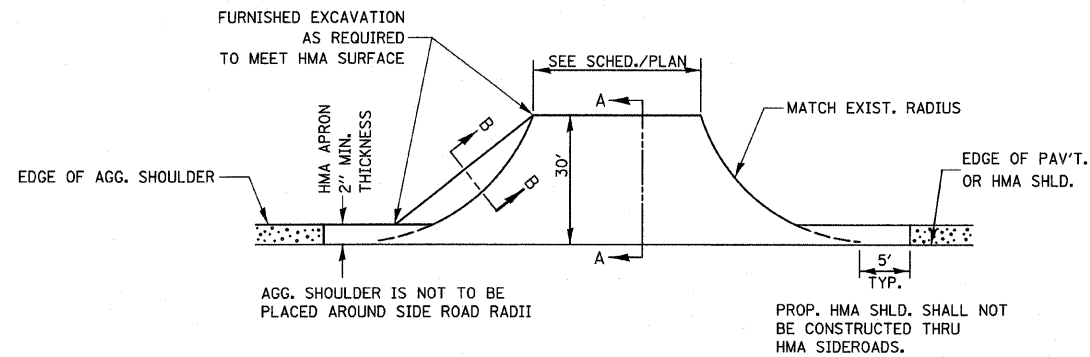
PAVEMENT MARKINGS AT RAILROAD-HIGHWAY GRADE CROSSING

FILE NAME = sheets01.dgn	USER NAME = #USER#	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	MISCELLANEOUS DETAILS			F.A.P. RTE. 326	SECTION 119 BR	COUNTY 6 GRUNDY	TOTAL SHEETS 68	SHEET NO. 58
PLOT SCALE = 20,0000' / IN.	CHECKED -	REVISED -	REVISED -					SCALE:	SHEET NO. OF SHEETS	STA. TO STA.	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT
PLOT DATE = 8/13/2008	DATE -	REVISED -	REVISED -									

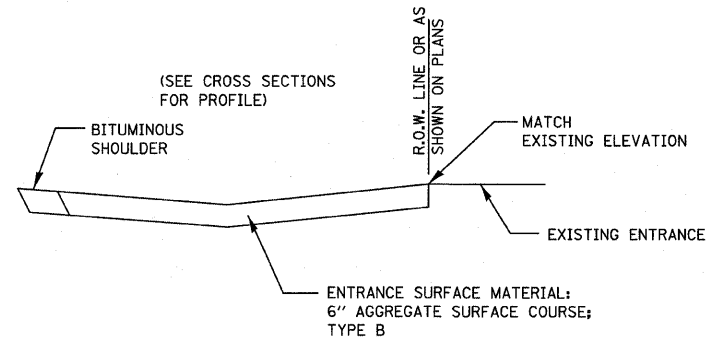
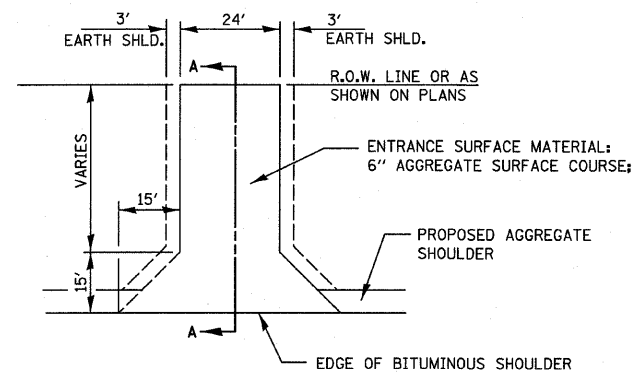


PLAN AT PRIVATE & COMMERCIAL ENTRANCES

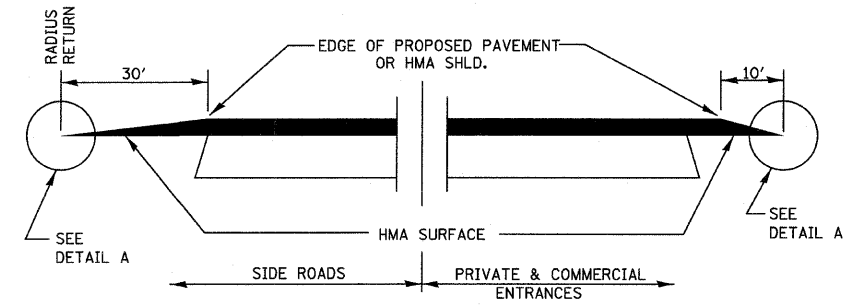
(DO NOT RESURFACE FIELD ENTRANCES)



PLAN AT SIDE ROADS



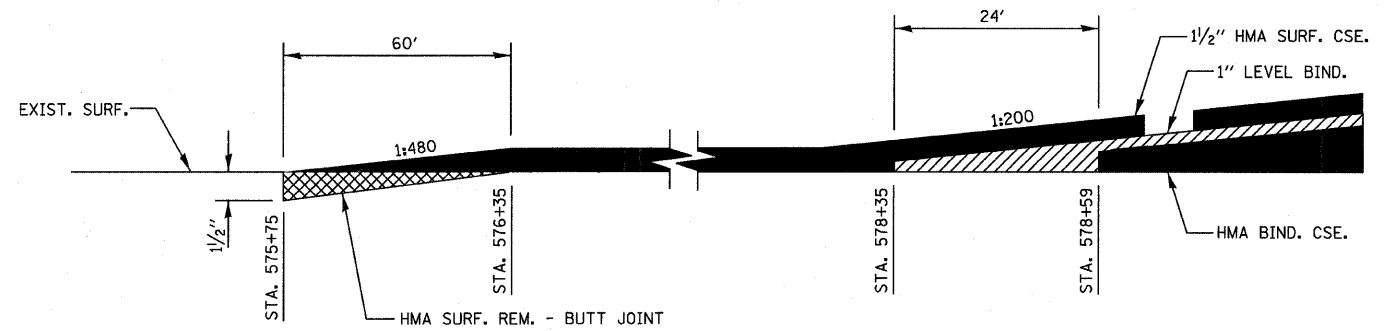
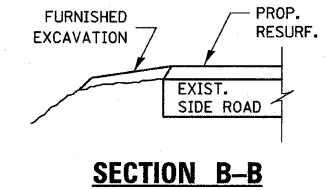
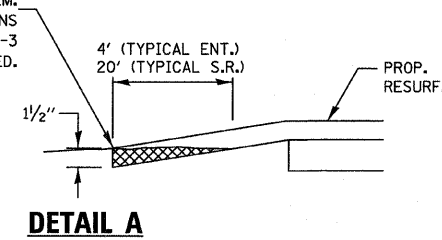
FIELD ENTRANCE DETAIL



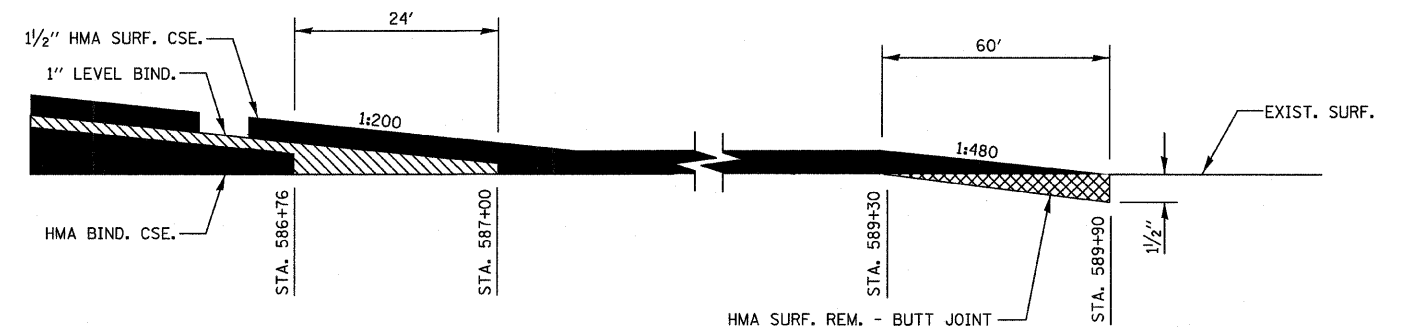
SECTION A-A

DETAILS AT ENTRANCES & SIDE ROADS

THE COST OF REMOVAL AT EXISTING HMA OR
P.C.C. LOCATIONS SHALL BE PAID FOR PER
SQ. YD. BY THE APPROPRIATE PAY ITEM.
REMOVAL AT THE EXISTING AGG. LOCATIONS
SHALL BE INCIDENTAL TO THE HMA. A-3
LOCATIONS SHALL BE FEATHER TAPERED.



HMA BUTT JOINT AT STA. 575+75



HMA BUTT JOINT AT STA. 589+90

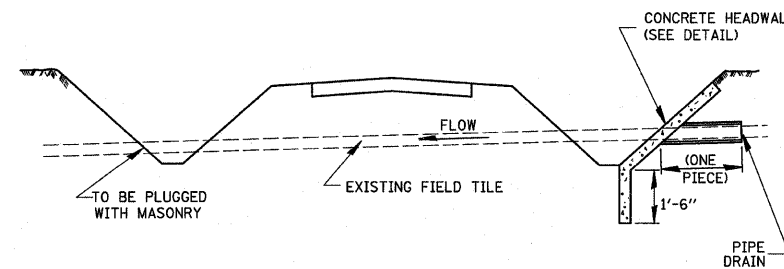
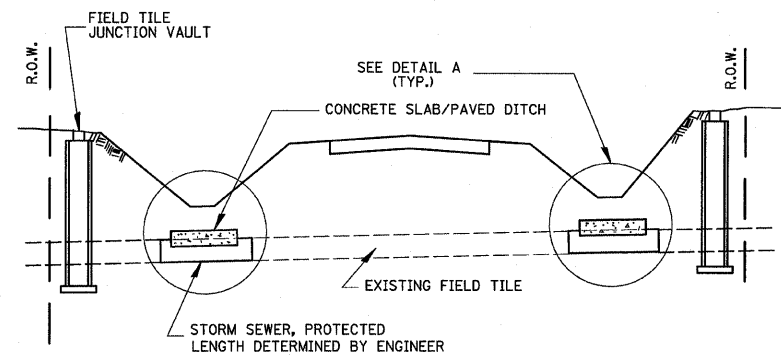
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	PLOT DATE = 8/13/2008	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

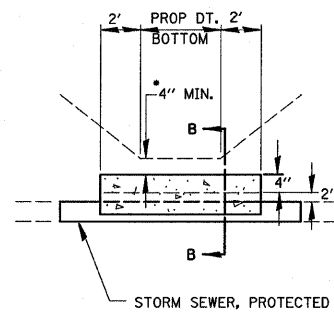
MISCELLANEOUS DETAILS

SCALE: SHEET NO. OF SHEETS STA. TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	119 BR	GRUNDY	68	59
CONTRACT NO. 66687				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



FIELD TILE REPLACEMENT

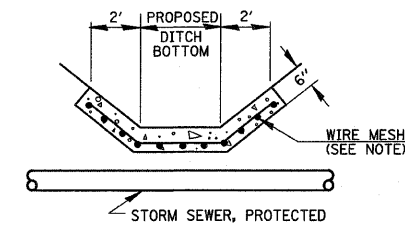


DETAIL A
NO SCALE

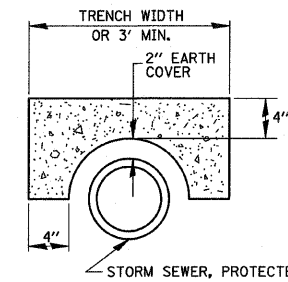
* IF A 4" COVER CAN NOT BE PROVIDED A PAVED DITCH SHALL BE CONSTRUCTED AS SHOWN IN DETAIL C.

NOTES

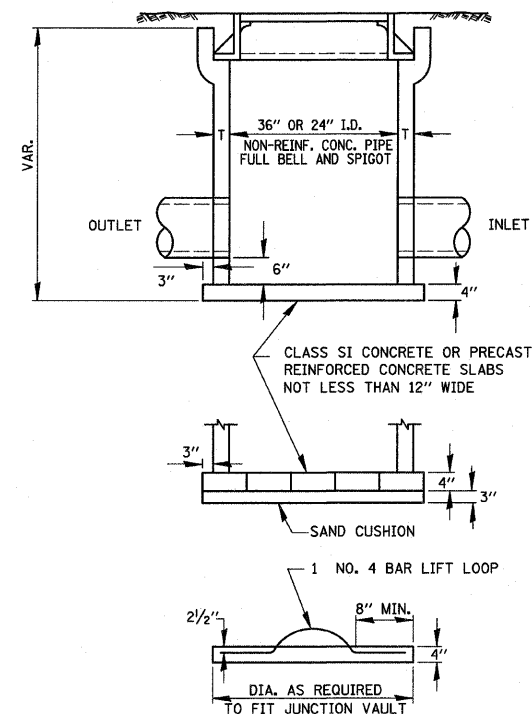
1. WIDTH OF CONCRETE SLAB SHALL BE THE SAME AS THE TRENCH WIDTH IN ACCORDANCE WITH SECTION 550 OF THE STD. SPECIFICATIONS, OR 3' MIN.
2. CONCRETE FOR SLAB, HEADWALL AND PAVED DITCH SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CUBIC YARD FOR MISCELLANEOUS CONCRETE."
3. COST OF FURNISHING AND INSTALLING WIRE MESH SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE PER CUBIC YARD FOR MISCELLANEOUS CONCRETE. WIRE MESH TO WEIGH NOT LESS THAN 58# PER 100 SQ. FT.



DETAIL C
NO SCALE



SECTION B-B

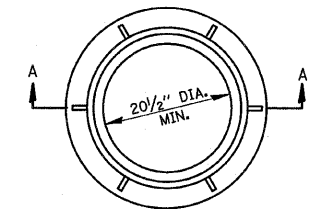


FIELD TILE JUNCTION VAULT

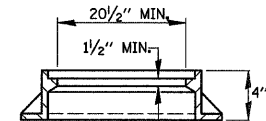
ALTERNATE MATERIALS FOR WALLS	
PRECAST REINFORCED CONCRETE RISERS	4"
CONCRETE MASONRY UNIT	5"
MONOLITHIC CONCRETE	6"
BUILDING BRICK, GRADE SW FROM CLAY OR SHALE	8"
CONCRETE BUILDING BRICK, GRADE A	8"

NOTES

1. THE CONTRACT UNIT PRICE FOR FIELD TILE JUNCTION VAULT SHALL INCLUDE THE COST OF FURNISHING AND PLACING THE FRAME AND GRATE OR PRECAST CONCRETE LID AND WHEN REQUIRED, THE SAND CUSHION.
2. ALL FIELD TILE JUNCTION VAULTS SHALL BE 2'-0" IN DIAMETER UNLESS OTHERWISE NOTED ON THE PLANS.



± 145#



SECTION A-A

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USER NAME = #USER#

PLOT SCALE = 28,0000 ' / IN.

PLOT DATE = 8/13/2008

DESIGNED -

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DATE -

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

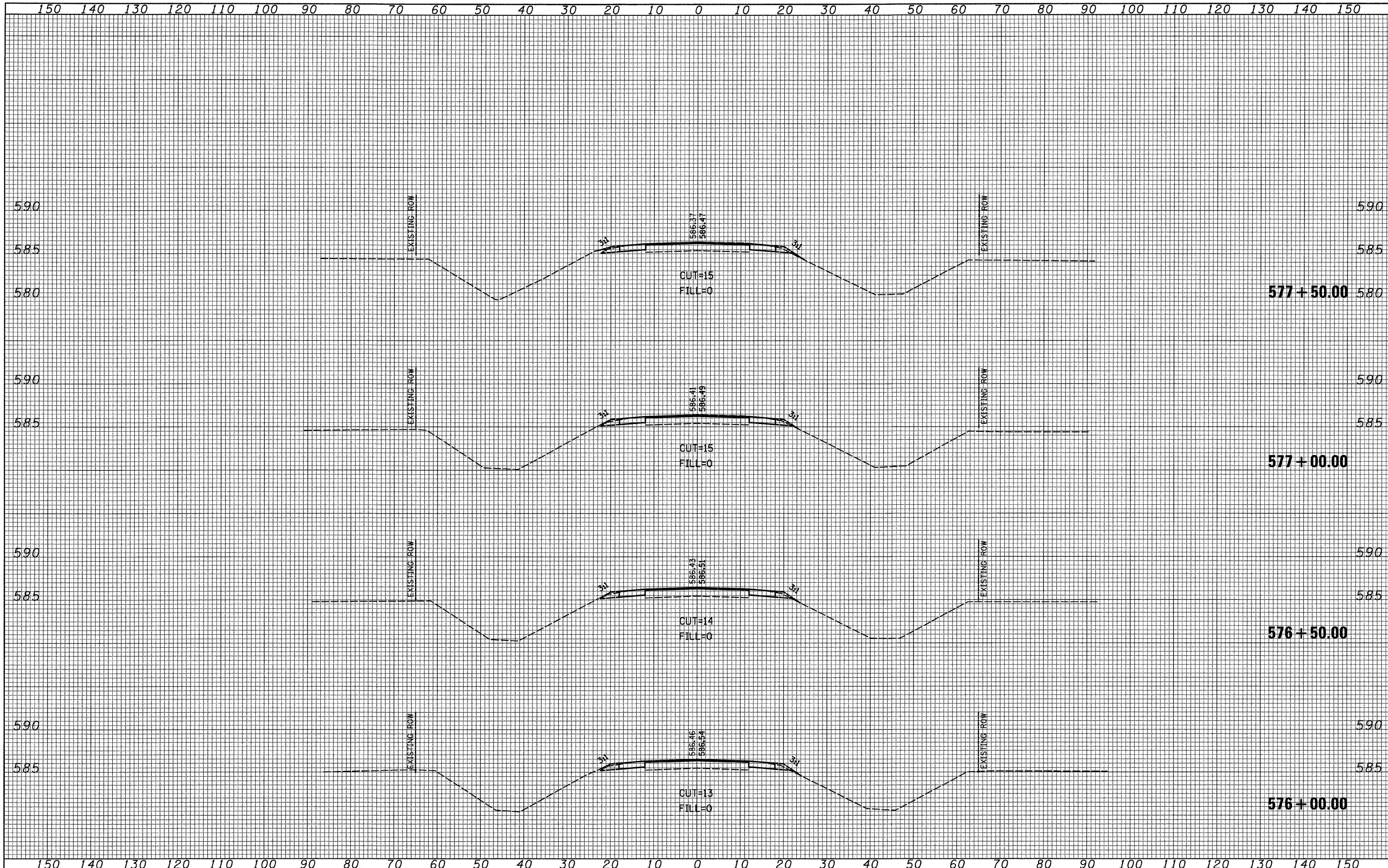
SUMMARY OF QUANTITIES

SCALE: SHEET NO. OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	119 BR	GRUNDY	68	60
				CONTRACT NO. 66687
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

DATE	
BY	
FINAL SURVEY	
SURVEYED	
NOTE BOOK	
PLOTTED	
DATE	
AREAS CHECKED	
NO.	

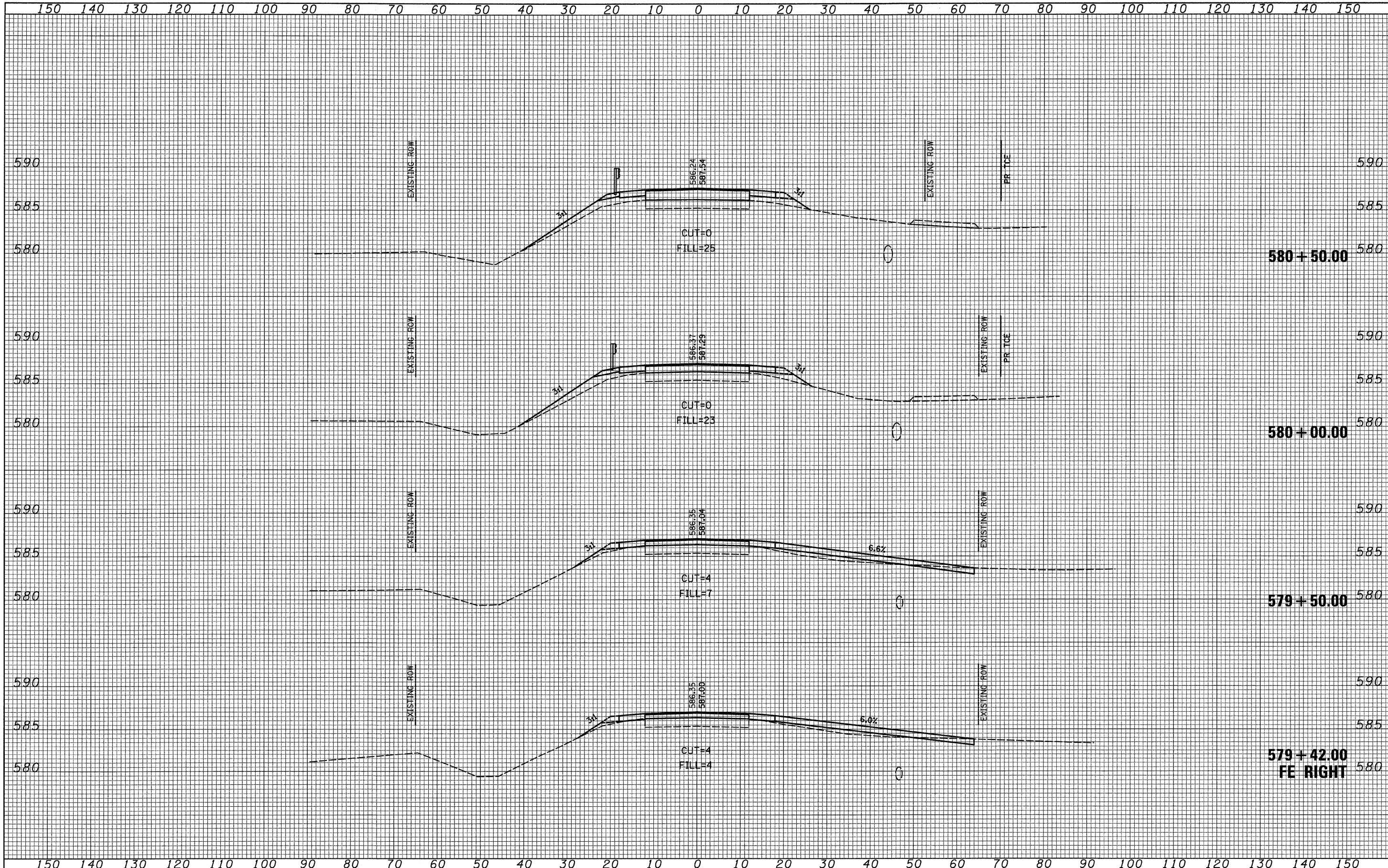
DATE	
BY	
ORIGINAL SURVEY	
SURVEYED	
NOTE BOOK	
PLOTTED	
DATE	
AREAS CHECKED	
NO.	



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	PLOT SCALE = 10.0000' / IN.	DRAWN -	REVISED -		SCALE:	SHEET NO.	OF	SHEETS	STA. 576+00.00	TO STA. 577+50.00	CONTRACT NO. 66687	
	PLOT DATE = 8/13/2008	CHECKED -	REVISED -		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT							
		DATE -	REVISED -									

DATE	BY
SURVEYED	PLOTTED
NOTE BOOK	AREAS CHECKED
NO.	NO.

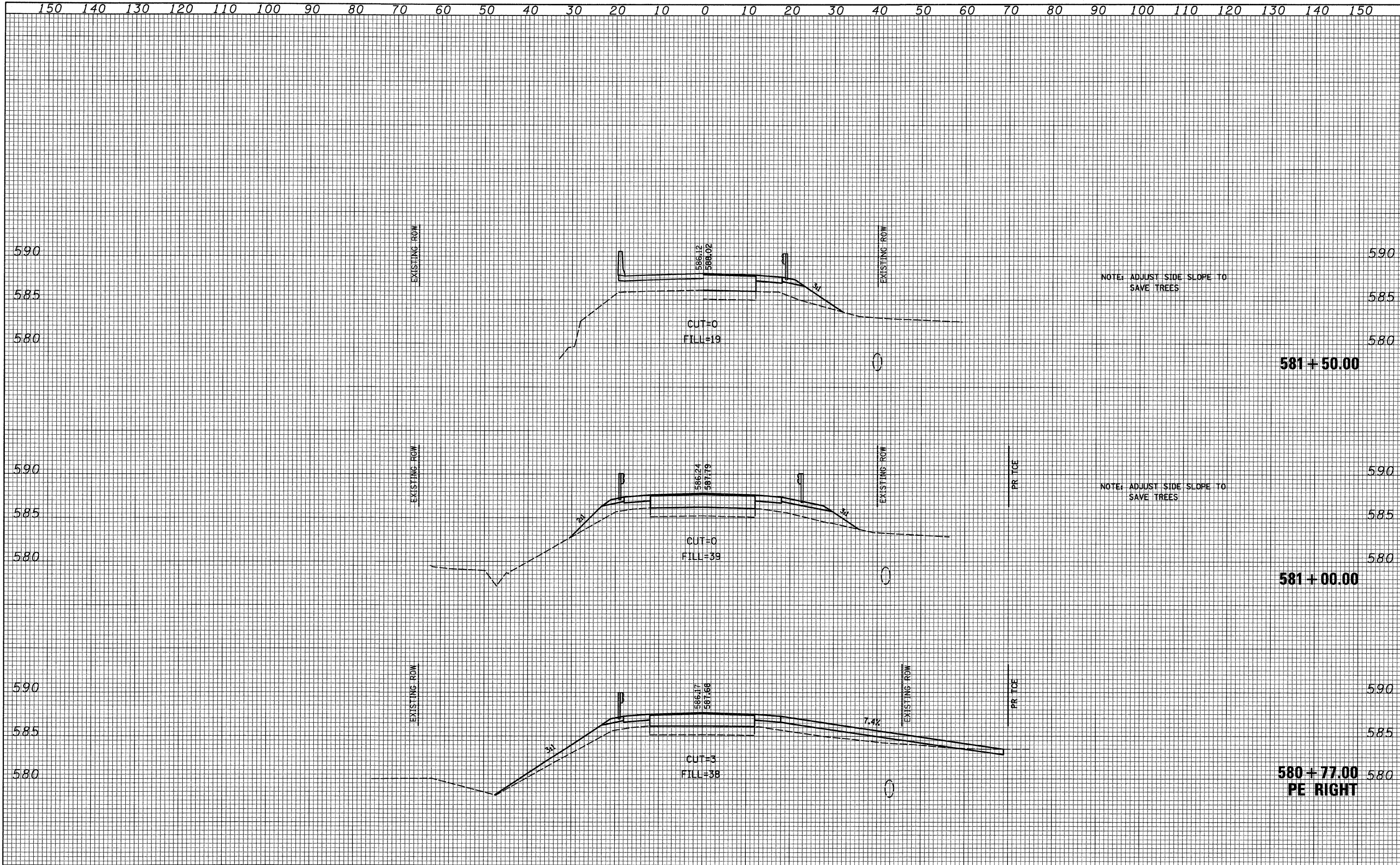
DATE	BY
SURVEYED	PLOTTED
NOTE BOOK	AREAS CHECKED
NO.	NO.



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	PLOT SCALE = 10.0000' / IN.	DRAWN -	REVISED -		SCALE:	SHEET NO.	OF	SHEETS	STA. 579+42.00	TO STA. 580+50.00	CONTRACT NO. 66687	
	PLOT DATE = 8/13/2008	CHECKED -	REVISED -		FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT							
		DATE -	REVISED -									

DATE	
BY	
FINAL SURVEY	
SURVEYED	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	
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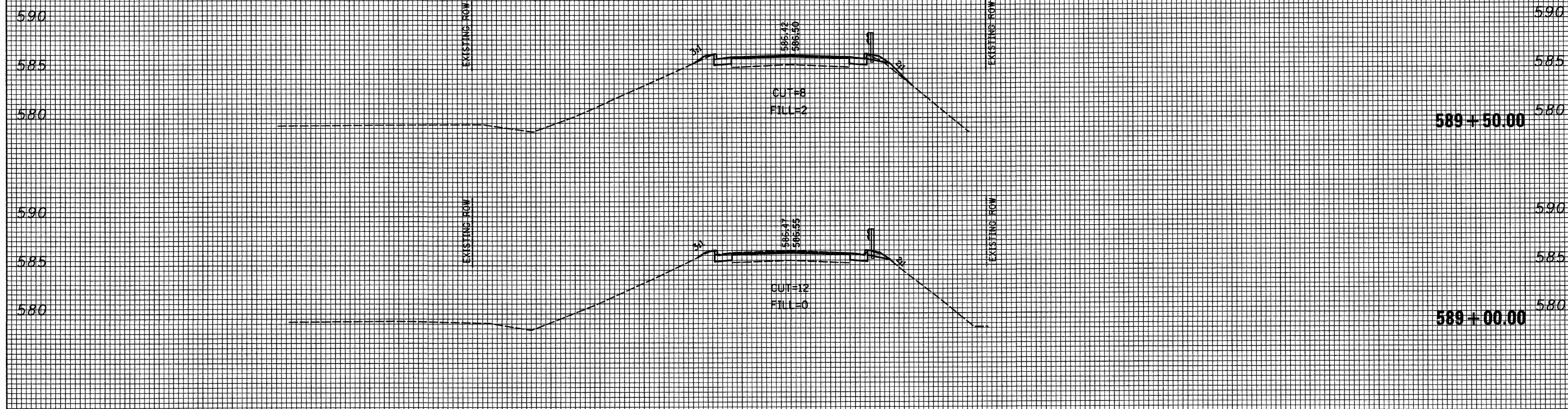


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	PLOT DATE = 8/13/2008	CHECKED -	REVISED -									
		DATE -	REVISED -									

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FINAL SURVEY NOTE BOOK NO.	REVISIONS	DATE
	PLOTTED	
	TEMPLATE	
	AREAS CHECKED	

ORIGINAL SURVEY NOTE BOOK NO.	REVISIONS	DATE
	PLOTTED	
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PLOT DATE = 8/13/2008	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS

SCALE: SHEET NO. OF SHEETS STA. 589+00.00 TO STA. 589+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	119 BR	GRUNDY	68	68
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 66687	