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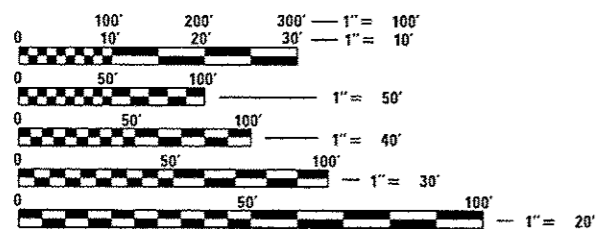
LIST OF ILLINOIS DOT HIGHWAY STANDARDS

000001-06	
001001-02	631032-09
280001-07	667101-02
420406	701301-04
482001-02	701311-03
515001-03	
	701901-06
630001-11	
	725001-01
630301-07	BLR 21-9

LIST OF DISTRICT 4 CADD STANDARDS

205001-D4
281001-D4
406101-D4
440001-D4
505001-D4
630101-D4
780001-D4

ADT = 1350 (2013)
 % HCV = 3.56 (2013)
 % SU = 2.22 (2013)
 % MU = 1.33 (2013)
 TOWNSHIP: MONMOUTH
 FUNCTIONAL CLASSIFICATION: MAJOR COLLECTOR



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

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

PROJECT ENGINEER: CHRISTOPHER MAUSHARD 309-671-3453
 PROJECT MANAGER: SOBHI LABABIDI 309-671-3460

CATALOG NO. 034921-00D
 CONTRACT NO. 68B43

STATE OF ILLINOIS 01-20-2017 LETTING ITEM 027

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	1
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 68B43		

DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

PROPOSED
 HIGHWAY PLANS

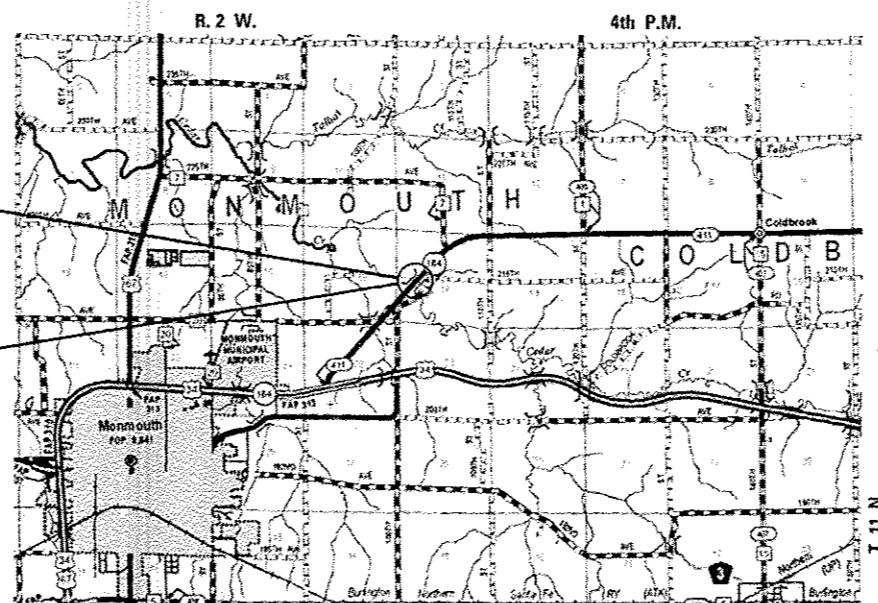
FAS 411 (IL ROUTE 164)
 SECTION (103B)BR
 PROJECT ACRS-0411(102)
 WARREN COUNTY
 C-94-049-13



PROJECT DESCRIPTION
 REMOVE & REPLACE EX STRUCTURE OVER
 CEDAR CREEK
 EX SN 094-0009
 PR SN 094-0052
 STA 597+32

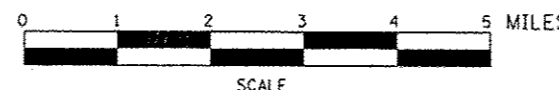
END PROJECT
 STA 603+02
 END ROADWAY
 IMPROVEMENT
 STA. 601+12

 BEGIN PROJECT
 STA 589+64
 BEGIN ROADWAY
 IMPROVEMENT
 STA. 591+71



LOCATION PLAN

NET LENGTH OF PROJECT = 1338.00 FEET = 0.253 MILES



Allen Henderson & Associates
 A Division of Veenstra & Kimm, Inc.
 Springfield, IL. Phone: (217)544-8033
 IL Design Firm No. 184-001939

CHRISTOPHER P. MAUSHARD
 LICENSED PROFESSIONAL ENGINEER
 STATE OF ILLINOIS
 EXPIRATION: 11/30/2017

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 SUBMITTED October 17 2016
Randa James
 REGION THREE ENGINEER
Dec 9 2016
Maura M. Addis, PE
 ENGINEER OF DESIGN AND ENVIRONMENT
Dec 9 2016
Christopher P. Maushard, PE
 DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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 OF THE STATE OF ILLINOIS

COMMITMENTS

COMMITMENTS SHALL NOT BE ALTERED WITHOUT THE WRITTEN CONSENT OF ALL PARTIES TO WHICH THE COMMITMENT WAS MADE.

THE STATE HAS AN AGREEMENT WITH WARREN COUNTY TO REIMBURSE THEM FOR THE USE OF CH 15 AS THE DETOUR ROUTE FOR THIS PROJECT.

GENERAL NOTES

AVAILABILITY OF ELECTRONIC FILES

MICRO STATION AND GEOPAK FILES OF THIS PROJECT WILL BE MADE AVAILABLE TO THE CONTRACTOR AFTER CONTRACT AWARD. IF THERE IS A CONFLICT BETWEEN THE ELECTRONIC FILES AND THE PRINTED CONTRACT PLANS AND DOCUMENTS, THE PRINTED CONTRACT PLANS AND DOCUMENTS SHALL TAKE PRECEDENCE OVER THE ELECTRONIC FILES. THE CONTRACTOR SHALL ACCEPT ALL RISK ASSOCIATED WITH USING THE ELECTRONIC FILES AND SHALL HOLD THE DEPARTMENT HARMLESS FOR ANY ERRORS OR OMISSIONS IN THE ELECTRONIC FILES AND THE DATA CONTAINED THEREIN. ERRORS OR DELAYS RESULTING FROM THE USE OF THE ELECTRONIC FILES BY THE CONTRACTOR SHALL NOT RESULT IN AN EXTENSION OF TIME FOR ANY INTERIM OR FINAL COMPLETION DATE OR SHALL NOT BE CONSIDERED CAUSE FOR ADDITIONAL COMPENSATION. THE CONTRACTOR SHALL NOT USE, SHARE, OR DISTRIBUTE THESE ELECTRONIC FILES EXCEPT FOR THE PURPOSE OF CONSTRUCTING THIS CONTRACT. ANY CLAIMS BY THIRD PARTIES DUE TO USE OR ERRORS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL INCLUDE THIS DISCLAIMER WITH THE TRANSFER OF THESE ELECTRONIC FILES TO ANY OTHER PARTIES AND SHALL INCLUDE APPROPRIATE LANGUAGE BINDING THEM TO SIMILAR RESPONSIBILITIES.

TREE REMOVAL – UTILITY RELOCATION

TREE REMOVAL MAY BE NECESSARY PRIOR TO UTILITY COMPANIES BEING ABLE TO RELOCATE THEIR FACILITIES OUTSIDE THE CONSTRUCTION LIMITS. THE CONTRACTOR SHOULD COORDINATE ANY CONTRACT TREE REMOVAL ACTIVITIES WITH THE UTILITY COMPANIES TO ELIMINATE CONFLICTS AND POTENTIAL DELAYS CAUSED BY UTILITY TREE REMOVAL ACTIVITIES OR INCOMPLETE UTILITY RELOCATIONS.

PLAN ELEVATIONS – U. S. G. S. MEAN SEA LEVEL DATUM

1. ALL ELEVATIONS SHOWN REFER TO U. S. G. S. DATUM AT MEAN SEA LEVEL UNLESS OTHERWISE NOTED.

PROPERTY OWNER ACCESS REQUIREMENTS

ACCESS MUST BE MAINTAINED TO ALL EXISTING PROPERTIES DURING CONSTRUCTION PER ARTICLE 107.09 UNLESS ARRANGEMENTS ARE MADE IN WRITING BY THE CONTRACTOR WITH THE PROPERTY OWNERS WITH A COPY TO THE ENGINEER FOR SHORT-TERM CLOSURES.

CRITICAL PATH WORK SCHEDULE REQUIREMENT

THE CONTRACTOR WILL SUBMIT TO THE ENGINEER A SATISFACTORY PROGRESS SCHEDULE AND CRITICAL PATH SCHEDULE WHICH SHALL SHOW THE PROPOSED SEQUENCE OF WORK AT THE TIME OF THE PRE-CONSTRUCTION CONFERENCE.

CLEARING

AT LOCATIONS WHERE CLEARING IS INDICATED ON THE PLANS BEYOND THE LIMITS OF THE PROPOSED EXCAVATION OR EMBANKMENT, THE CONTRACTOR SHALL RESTORE THE DISTURBED EARTH BY BLADING AND SHAPING TO BLEND WITH THE ADJACENT GROUND. THE CLEARING WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF EXCAVATION PAY ITEMS IN THE PLANS. PAYMENT FOR RESEEDING OR RESODDING WILL BE AS PROVIDED IN THE PLANS.

ENVIRONMENTAL REVIEWS

PRIOR TO THE USE OF ANY PROPOSED BORROW AREAS, USE AREAS (TEMPORARY ACCESS ROADS, DETOURS, RUN-AROUNDS, ETC.) AND/OR WASTE AREAS, THE CONTRACTOR SHALL FILE THE REQUIRED ENVIRONMENTAL RESOURCE REQUEST SURVEYS ACCORDING TO SECTION 107.22 OF THE STANDARD SPECIFICATIONS. THESE SURVEYS ARE REQUIRED IN ORDER FOR THE DEPARTMENT TO CONDUCT CULTURAL AND BIOLOGICAL RESOURCE SURVEYS FOR THE PROPOSED SITE.

PRIOR TO ANY WASTE MATERIALS BEING REMOVED FROM THE CONSTRUCTION SITE THE REQUIRED ENVIRONMENTAL RESOURCE SURVEYS WILL NEED TO BE OBTAINED AND FILED BY THE CONTRACTOR. EXCESS WASTE PRODUCTS REMOVED FROM THE CONSTRUCTION SITE SHALL BE DISPOSED OF AS REQUIRED IN SECTION 202.03 OF THE STANDARD SPECIFICATIONS.

ANY PROTRUDING METAL BARS SHALL BE REMOVED PRIOR TO THE DISPOSAL OF BROKEN CONCRETE AT APPROVED DISPOSAL SITES.

THE REQUIRED ENVIRONMENTAL RESOURCE DOCUMENTATION SHALL INCLUDE THE FOLLOWING:

- * BDE FORM 2289 (ENVIRONMENTAL SURVEY REQUEST)
- * BDE FORM 2290 (WASTE/USE AREA REVIEW)
- * A LOCATION MAP SHOWING THE SIZE LIMITS AND LOCATION OF THE USE AREA
- * COLOR PHOTOGRAPHS DEPICTING THE USE AREA
- * BORROW AREA ENTRY AGREEMENT FORM-D4 PI0101

PLEASE NOTE THAT A MINIMUM OF FOUR WEEKS SHALL BE ALLOWED FOR THE DISTRICT TO OBTAIN THE REQUIRED ENVIRONMENTAL CLEARANCES AND SIX WEEKS FOR THE REQUIRED BORROW SITE ENVIRONMENTAL CLEARANCES.

SEEDING – SIDE SLOPE RIPPING

ALL SLOPES STEEPER THAN 3 TO 1 AND OVER 15 FT (4.5 M) IN HEIGHT SHALL BE RIPPED THIS SHALL CONSIST OF RIPPING BETWEEN 18 INCHES TO 24 INCHES (450 MM TO 600 MM) DEEP NORMAL TO THE SLOPE. THE INTERVAL OF RIPPING ALONG THE SLOPE SHALL BE 12 FT. (3.6 M). THIS WORK SHALL BE DONE AFTER THE SEED BED HAS BEEN PREPARED BUT BEFORE ANY FERTILIZER OR SEED HAS BEEN APPLIED. THE FERTILIZER AND SEED SHALL BE APPLIED WITHIN A 24-HOUR PERIOD AFTER THE RIPPING HAS BEEN DONE. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE COST OF THE VARIOUS ITEMS OF SEEDING INVOLVED.

PAVEMENT STATIONING NUMBERS & PLACEMENT

THE CONTRACTOR SHALL PROVIDE LABOR AND MATERIALS REQUIRED TO IMPRINT PAVEMENT STATION NUMBERS IN THE FINISHED SURFACE OF THE PAVEMENT AND/OR OVERLAY. THE NUMBERS SHALL BE APPROXIMATELY 3/4 INCH (20MM) WIDE, 5 INCHES (125 MM) HIGH AND 5/8 INCH (15 MM) DEEP.

THE PAVEMENT STATION NUMBERS SHALL BE INSTALLED AS SPECIFIED HEREIN:

INTERVAL – 200 FEET (ENGLISH STATIONING) OR 100 METERS (METRIC STATIONING)

BOTTOM OF NUMBERS – 6 INCHES (150 MM) FROM THE INSIDE EDGE OF THE PAVEMENT MARKING

LOCATION:

- * 2,3, & 5 LANE PAVEMENTS – RIGHT EDGE OF PAVEMENT IN DIRECTION OF INCREASING STATIONS
- * MULTI-LANE DIVIDED ROADWAYS – OUTSIDE EDGE OF PAVEMENT IN BOTH DIRECTIONS
- * RAMPS – ALONG BASELINE EDGE OF PAVEMENT

POSITION – STATIONS SHALL BE PLACED SO THEY CAN BE READ FROM THE ADJACENT SHOULDER

FORMAT – ENGLISH (METRIC) PAVEMENT STATIONS SHALL USE THIS FORMAT "XXX (XX+X00)" WHERE X REPRESENTS THE PAVEMENT STATION

THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT WILL BE CONSIDERED INCLUDED IN THE COST OF THE ASSOCIATED PAVEMENT AND/OR OVERLAY PAY ITEMS.



USER NAME =	DESIGNED -	REVISED -
	CHECKED -	REVISED -
PLOT SCALE =	DRAWN -	REVISED -
PLOT DATE =	CHECKED -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES, COMMITMENTS & PROJECT SPECIFIC NOTES

SCALE: NONE SHEET NO. 1 OF 2 SHEETS STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	2
CONTRACT NO. 68B43				
ILLINOIS FED. AID PROJECT				

BUTT JOINT CUTTING TIME RESTRICTION

BUTT JOINTS SHALL NOT BE MILLED MORE THAN THREE (3) DAYS PRIOR TO PLACEMENT OF THE HMA SURFACE COURSE.

PAVING SURFACE COURSE

CONTINUOUS PAVING OPERATIONS ON THE MAIN ROADWAY SHALL BE MAINTAINED AT ALL TIMES DURING THE CONSTRUCTION OF THE HOT-MIX ASPHALT SURFACE. NO INTERRUPTIONS FOR SIDE ROADS, ENTRANCES, TURN LANES, ETC. WILL BE ALLOWED.

ORDERING LENGTH CONFIRMATION – DRAINAGE ITEMS

THE CONTRACTOR SHALL CONSULT WITH THE ENGINEER IN REGARD TO THE EXACT LENGTH OF THE BOX/PIPE CULVERTS, STORM SEWERS, AND/OR PIPE DRAINS REQUIRED PRIOR TO ORDERING THESE ITEMS.

SIGNING

SIGN LOCATIONS MAY VARY FROM THE STATIONS SHOWN ON THE PLANS IN ACCORDANCE WITH DIRECTIONS FROM THE ENGINEER AT THE TIME OF CONSTRUCTION. SIGN LOCATIONS MAY BE ADJUSTED IN THE FIELD TO AVOID ANY FOUND UTILITIES.

ALL WOOD POST LOCATIONS SHALL BE VERIFIED WITH THE BUREAU OF OPERATIONS, TRAFFIC SECTION, BEFORE INSTALLATION.

PROJECT SPECIFIC NOTES

1. THE THICKNESS OF THE HOT MIX ASPHALT MIXTURES 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 HOT MIXED ASPHALT MIXTURES ARE PLACED.
2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO ORDERING MATERIALS AND COMMENCING CONSTRUCTION.
3. NO TREE REMOVAL FROM APRIL 1 TO SEPTEMBER 30.
4. THE RESIDENT ENGINEER SHALL SUBMIT A FINAL COUNT OF TREES REMOVED SO THAT THEY WILL BE PROPERLY REPLACED IN THE TREE BACKING PROGRAM. PLEASE CONTACT JIM ALWILL AT 309-671-4484 FOR FINAL COUNT.

CALCULATION FACTORS

AGGREGATE SHOULDERS AND BASES: 0.05833 TON /SQ YD /INCH
 HOT MIX ASPHALT: 0.056 TON /SQ YD /INCH
 TEMPORARY EROSION CONTROL SEEDING: 100 LBS /ACRE
 STONE DUMPED RIPRAP: 1.5 TON /CU YD
 GUARDRAIL AGGREGATE EROSION CONTROL: 1.5 TON /CU. YD.

STATUS OF UTILITIES TO BE ADJUSTED

ROUTE/STREET	OFFSET	LOCATION	OWNER	TYPE OF UTILITY	TYPE OF CONFLICT	DISPOSITION
IL 164	100' LT. OF CL	STA. 589+50 TO STA 603+00	FRONTIER	FIBER OPTIC	ROADWAY DITCH	NO CONFLICT
IL 164	35' MIN. 65' MAX. RT.	STA. 589+50 TO STA 603+00	PEG BANDWIDTH	FIBER OPTIC	ROADWAY DITCH	CONFLICT

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

MIXTURE USE(S)	SURFACE COURSE	SHOULDERS (ALL LIFTS)
AC /PC	PG 64-22	PG 64-22
DESIGN AIR VOIDS	4.0% AT N = 50	4.0% AT N = 50
MIXTURE COMPOSITION	IL 9.5	IL 9.5
FRICTION AGGREGATE	MIX D	MIX D
QUALITY MANAGEMENT PROGRAM	QCQA	QCQA

- NOTE: 1) INDIVIDUAL LIFT THICKNESS OF EACH MIX TYPE WILL BE NO LESS THAN 3 TIMES NOMINAL MAXIMUM AGGREGATE SIZE AND NO MORE THN 6 TIMES NOMINAL MAXIMUM AGGREGATE SIZE, UNLESS OTHERWISE APPROVED BY THE ENGINEER.
 2) FOR DESIGN PURPOSES, MIXTURE WEIGHT FOR ALL MIXES IS DETERMINED TO BE 112.0 LB/S.Y./IN., UNLESS OTHERWISE NOTED.
 3) SUBLOT SIZES FOR PFP AND QCP MIXES WILL BE 1000 TONS, UNLESS OTHERWISE AGREED TO BY THE ENGINEER AND THE PAVING COTRACTOR.



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PLOT DATE =	CHECKED -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES, COMMITMENTS & PROJECT SPECIFIC NOTES

SCALE: NONE SHEET NO. 2 OF 2 SHEETS STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	3
CONTRACT NO. 68B43				
ILLINOIS FED. AID PROJECT				

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE	
				80% FEDERAL 20% STATE ROADWAY 0004	90% FEDERAL 10% STATE BRIDGE 0011
20100500	TREE REMOVAL, ACRES	ACRE	1.1	1.1	
20200100	EARTH EXCAVATION	CU YD	1079	1079	
20300100	CHANNEL EXCAVATION	CU YD	734		734
21101615	TOPSOIL FURNISH AND PLACE, 4"	SO YD	2078	2078	
25000200	SEEDING, CLASS 2	ACRE	1.8	1.8	
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	162	162	
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	162	162	
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	162	162	
25100115	MULCH, METHOD 2	ACRE	1.8	1.8	
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	180	180	
28000305	TEMPORARY DITCH CHECKS	FOOT	92	92	
28000400	PERIMETER EROSION BARRIER	FOOT	795	795	
28100109	STONE RIPRAP, CLASS A5	SO YD	2544		2544
28100727	STONE DUMPED RIPRAP, CLASS B4	SO YD	1379	1379	

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USER NAME *	DESIGNED -	REVISIONS -
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PLOT DATE *	DRAWN -	REVISIONS -
	CHECKED -	REVISIONS -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: NONE SHEET NO. 1 OF 5 SHEETS STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	4
ILLINOIS FED. AID PROJECT			CONTRACT NO. 68B43	

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE	
				80% FEDERAL 20% STATE ROADWAY 0004	90% FEDERAL 10% STATE BRIDGE 0011
28200200	FILTER FABRIC	SQ YD	3923	1379	2544
40600295	POLYMERIZED BITUMINOUS MATERIALS (TACK COAT)	POUND	812	812	
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	54	54	
40603335	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50	TON	149	149	
42000070	PAVEMENT CONNECTOR (HMA) FOR BRIDGE APPROACH SLAB	SQ YD	72	72	
44000100	PAVEMENT REMOVAL	SQ YD	281	281	
44000155	HOT-MIX ASPHALT SURFACE REMOVAL, 1 1/2"	SQ YD	1697	1697	
44004000	PAVED DITCH REMOVAL	FOOT	749	749	
48203029	HOT-MIX ASPHALT SHOULDERS, 8"	SQ YD	511	511	
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1		1
50104400	CONCRETE HEADWALL REMOVAL	EACH	2	2	
50104650	SLOPE WALL REMOVAL	SQ YD	2402		2402
50105220	PIPE CULVERT REMOVAL	FOOT	140	140	
50200100	STRUCTURE EXCAVATION	CU YD	198		198

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USER NAME *	DESIGNED -	REVISOR -
PLOT SCALE *	CHECKED -	REVISIONS -
PLOT DATE *	DRAWN -	REVISIONS -
	CHECKED -	REVISIONS -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES			
SCALE: NONE	SHEET NO. 2 OF 5 SHEETS	STA.	TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	5
CONTRACT NO. 68B43				
ILLINOIS FED. AID PROJECT				

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE	
				90% FEDERAL 20% STATE ROADWAY 0004	90% FEDERAL 10% STATE BRIDGE 0011
50200300	COFFERDAM EXCAVATION	CU YD	456		456
50201121	COFFERDAM (TYPE 2) (LOCATION - 1)	EACH	1		1
50201122	COFFERDAM (TYPE 2) (LOCATION - 2)	EACH	1		1
50300225	CONCRETE STRUCTURES	CU YD	250.9		250.9
50300255	CONCRETE SUPERSTRUCTURE	CU YD	205.2		205.2
50300260	BRIDGE DECK GROOVING	SQ YD	935		935
50300300	PROTECTIVE COAT	SQ YD	1023		1023
50301350	CONCRETE SUPERSTRUCTURE (APPROACH SLAB)	CU YD	95.4		95.4
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1		1
50500505	STUD SHEAR CONNECTORS	EACH	5202		5202
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	113250		113250
50901050	STEEL RAILING, TYPE SM	FOOT	466		466
51201610	FURNISHING STEEL PILES HP12X63	FOOT	495		495
51201900	FURNISHING STEEL PILES HP14X89	FOOT	500		500

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USER NAME *	DESIGNED -	REVISIONS -
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PLOT DATE *	DRAWN -	REVISIONS -
	CHECKED -	REVISIONS -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

SCALE: NONE SHEET NO. 3 OF 5 SHEETS STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	6
CONTRACT NO. 68B43				
ILLINOIS FED. AID PROJECT				

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE	
				80% FEDERAL 20% STATE ROADWAY	90% FEDERAL 10% STATE BRIDGE
				0004	0011
51202305	DRIVING PILES	FOOT	995		995
51203610	TEST PILE STEEL HP12X63	EACH	1		1
51203900	TEST PILE STEEL HP14X89	EACH	1		1
51500100	NAME PLATES	EACH	1		1
52100520	ANCHOR BOLTS, 1"	EACH	48		48
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	63		63
* 63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	725	725	
* 63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	4	4	
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4	4	
63200310	GUARDRAIL REMOVAL	FOOT	1614	1614	
66700305	PERMANENT SURVEY MARKERS, TYPE II	EACH	1	1	
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	6	
67100100	MOBILIZATION	L SUM	1	1	
70101830	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21	L SUM	1	1	

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* SPECIALTY ITEM



USER NAME *	DESIGNED -	REVISED -
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PLOT DATE *	DRAWN -	REVISED -
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES		
SCALE: NONE	SHEET NO. 4 OF 5 SHEETS	STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	7
CONTRACT NO. 68B43				
ILLINOIS FED. AID PROJECT				

105 28 701

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE	
				90% FEDERAL 20% STATE ROADWAY	90% FEDERAL 10% STATE BRIDGE
				0004	0011
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	12	12	
* 72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	4	4	
* 78005110	EPOXY PAVEMENT MARKING - LINE 4"	FOOT	3030	3030	
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	8	8	
* 78200005	GUARDRAIL REFLECTORS, TYPE A	EACH	17	17	
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	9	9	
X5860110	GRANULAR BACKFILL FOR STRUCTURES	CU YD	143		143
Z0001002	GUARDRAIL AGGREGATE EROSION CONTROL	TON	169	169	
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1	
Z0029090	DIAMOND GRINDING (BRIDGE SECTION)	SQ YD	818		818
Z0046304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	137		137
∅ Z0076604	TRAINEES TRAINING PROGRAM GRADUATE	Hour	1000	1000	
∅ Z0076600	TRAINEES	Hour	1000	1000	

12
 * SPECIALTY ITEM
 ∅ 0042

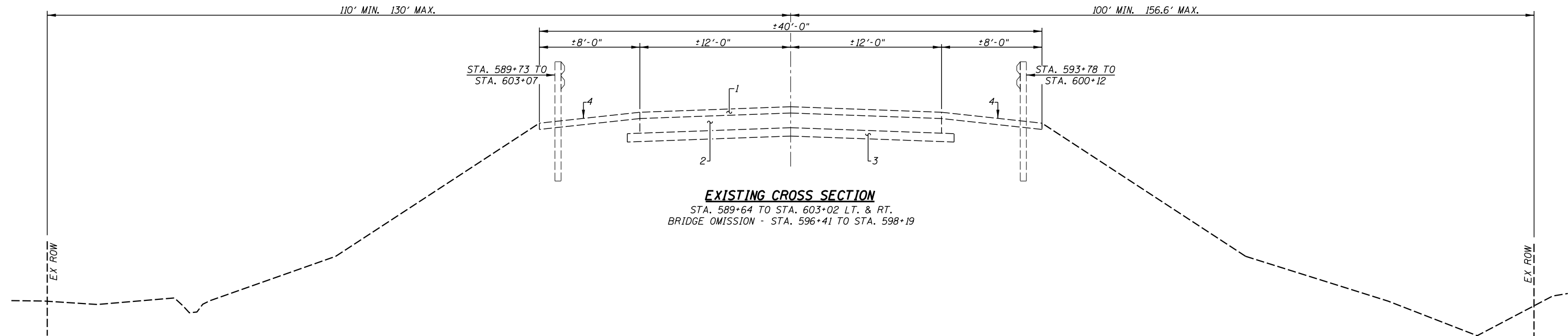


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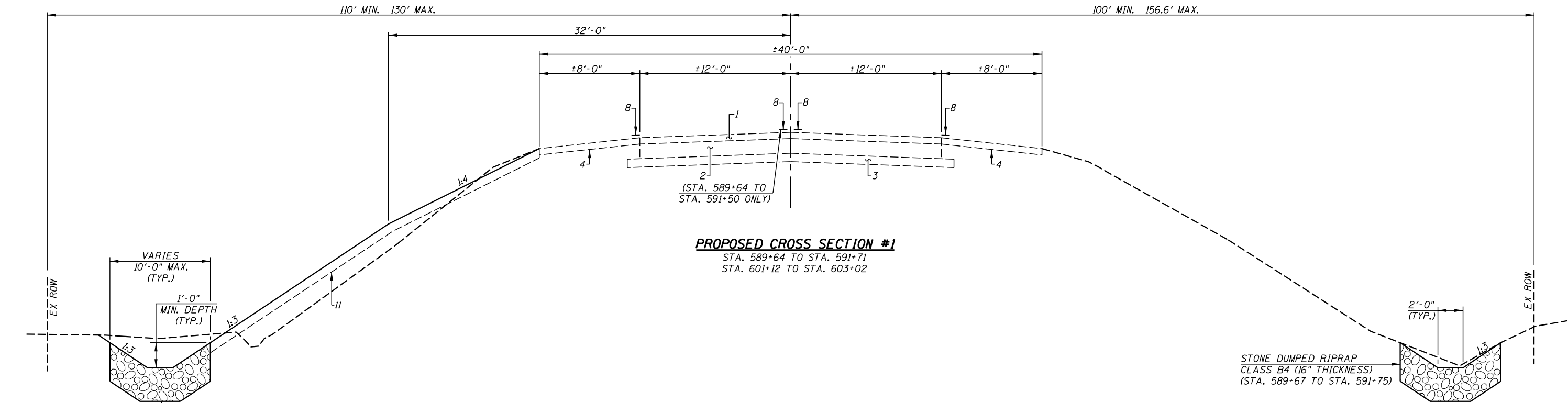
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES		
SCALE: NONE	SHEET NO. 5 OF 5 SHEETS	STA. TO STA.

F.A.S. RTE. 411	SECTION (103B)BR	COUNTY WARREN	TOTAL SHEETS 76	SHEET NO. 8
CONTRACT NO. 68B43				
ILLINOIS FED. AID PROJECT				



EXISTING CROSS SECTION
 STA. 589+64 TO STA. 603+02 LT. & RT.
 BRIDGE OMISSION - STA. 596+41 TO STA. 598+19



PROPOSED CROSS SECTION #1
 STA. 589+64 TO STA. 591+71
 STA. 601+12 TO STA. 603+02

LEGEND

1. EX H.M.A. OVERLAY
2. EX PCC PAVEMENT
3. EX AGGREGATE BASE COURSE
4. EX AGG SHOULDER
5. PR H.M.A. SURFACE COURSE, MIX. D. N50 (1 1/2")
6. PR AGG EROS CONTROL SHLD (8")
7. PR HMA SHOULDER 8"
8. PR EPOXY PAVEMENT MARKING - LINE 4"
9. PR PCC APPROACH PAVEMENT
10. PR STABILIZED AGGREGATE BASE
11. PR TOPSOIL, 4"
12. PR HMA SURFACE REMOVAL (1 1/2")



USER NAME =	DESIGNED -	REVISED -
PLOT SCALE =	CHECKED -	REVISED -
PLOT DATE =	DRAWN -	REVISED -
	CHECKED -	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

SCALE: NONE SHEET NO. 1 OF 2 SHEETS STA. TO STA.

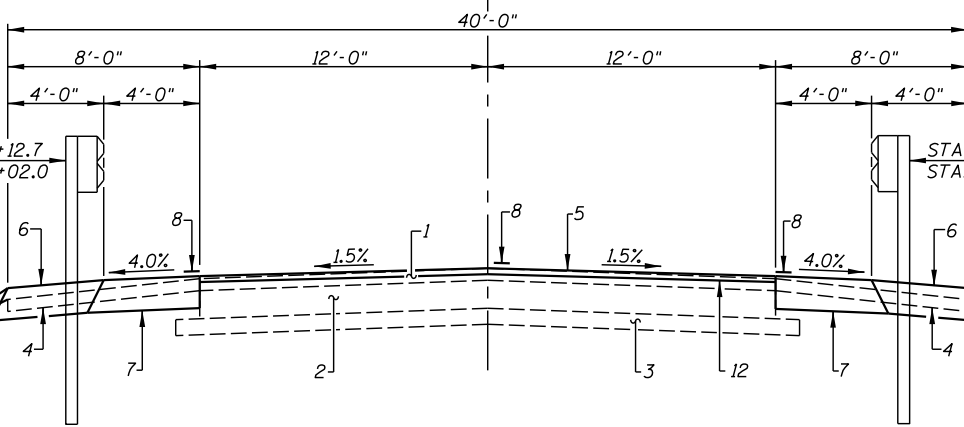
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	9
CONTRACT NO. 68B43				
ILLINOIS FED. AID PROJECT				

110' MIN. 130' MAX.

100' MIN. 156.6' MAX.

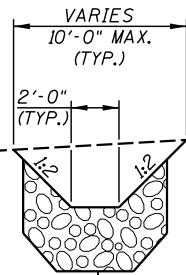
STA. 591+81.4 TO STA. 596+12.7
STA. 598+45.7 TO STA. 601+02.0

STA. 594+12.0 TO STA. 596+18.3
STA. 598+51.3 TO STA. 600+07.6



PROPOSED CROSS SECTION #2

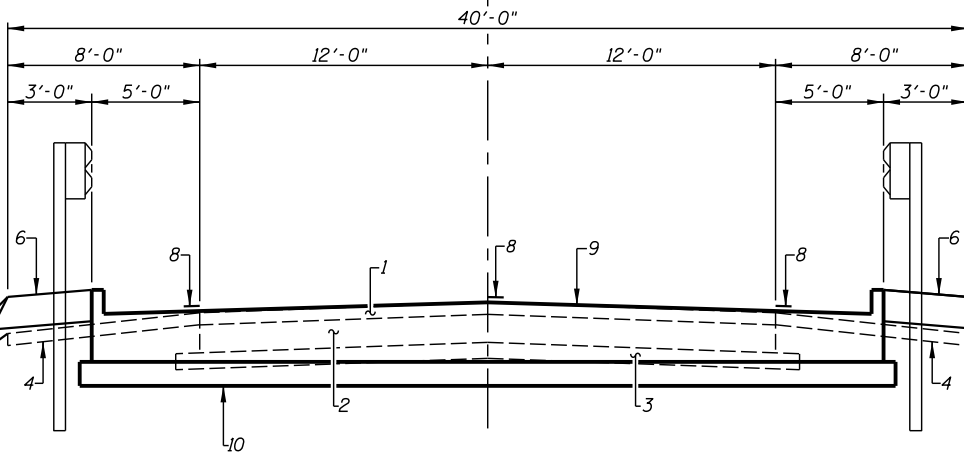
STA. 591+71 TO STA. 595+99.50
STA. 598+64.5 TO STA. 601+12



STONE DUMPED RIPRAP
CLASS B4 (16" THICKNESS)
(STA. 589+64 TO STA. 593+00 &
STA. 598+50 TO STA. 603+02)

110' MIN. 130' MAX.

100' MIN. 156.6' MAX.



PROPOSED CROSS SECTION

STA. 595+99.50 TO STA. 596+29.50
STA. 598+34.50 TO STA. 598+64.50
(BRIDGE OMISSION - STA. 596+29.50 TO STA. 598+34.50)

LEGEND

1. EX H.M.A. OVERLAY
2. EX PCC PAVEMENT
3. EX AGGREGATE BASE COURSE
4. EX AGG SHOULDER
5. PR H.M.A. SURFACE COURSE, MIX. D, N50 (1 1/2")
6. PR AGG EROS CONTROL SHLD (8")
7. PR HMA SHOULDER 8"
8. PR EPOXY PAVEMENT MARKING - LINE 4"
9. PR PCC APPROACH PAVEMENT
10. PR STABILIZED AGGREGATE BASE
11. PR TOPSOIL, 4"
12. PR HMA SURFACE REMOVAL (1 1/2")



USER NAME =	DESIGNED -	REVISED -
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PLOT DATE =	CHECKED -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

SCALE: NONE SHEET NO. 2 OF 2 SHEETS STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	10
CONTRACT NO. 68B43				
ILLINOIS FED. AID PROJECT				

EARTHWORK				
LOCATION	EARTH EXCAVATION	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE	EMBANKMENT	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)
	CU YD	CU YD	CU YD	CU YD
STA. 589+64 TO STA. 596+29.5	569	427	160	267
STA. 598+34.5 TO STA. 603+02	510	383	112	271
TOTAL	1079	810	272	538

• NO FURNISHED EXCAVATION WILL BE REQUIRED. REMOVAL OF EXCESS EARTH EXCAVATION SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR EARTH EXCAVATION.

PIPE CULVERT AND CONCRETE HEADWALL REMOVAL		
LOCATION	PIPE CULVERT REMOVAL	CONCRETE HEADWALL REMOVAL
	FOOT	EACH
STA. 596+24 68' LT TO STA. 596+82 68' LT.	58	1
STA. 597+47 68' LT TO STA. 598+29 68' LT	82	1
TOTAL	140	2

PERMANENT SEEDING					
LOCATION	SEEDING, CLASS 2	NITROGEN FERTILIZER NUTRIENT	PHOSPHORUS FERTILIZER NUTRIENT	POTASSIUM FERTILIZER NUTRIENT	MULCH, METHOD 2
	ACRE	POUND	POUND	POUND	ACRE
STA. 589+67 TO STA. 591+80 RT.	0.29	26	26	26	0.29
STA. 596+04 80' RT. TO STA. 597+28 80' RT.	0.12	11	11	11	0.12
STA. 589+64 TO STA. 596+85, 80' LT., STA. 597+10 20' LT.	0.66	60	60	60	0.66
STA. 597+40 80' LT. TO STA. 603+02 LT.	0.46	41	41	41	0.46
STA. 597+70 80' RT. TO STA. 599+50 80' RT.	0.20	18	18	18	0.20
TOTAL	1.73	156	156	156	1.73
USE	1.8	162	162	162	1.8

RAISED REFLECTIVE PAVEMENT MARKER	
LOCATION	RAISED REFLECTIVE PAVEMENT MARKER
	EACH
STA. 591+71 TO STA. 595+99.50	5
STA. 598+74.50 TO STA. 601+12	3
TOTAL	8

PAVEMENT REMOVAL	
LOCATION	PAVEMENT REMOVAL
	SQ YD
STA. 595+89.5 TO STA. 596+40.1	135
STA. 598+19.9 TO STA. 598+74.5	146
TOTAL	281

STONE DUMPED RIPRAP & FILTER FABRIC		
LOCATION	STONE DUMPED RIPRAP, CLASS B4	FILTER FABRIC
	SQ YD	SQ YD
STA 589+64 TO STA 593+00 LT	418	418
STA 589+67 TO STA 591+75 RT	308	308
STA 599+00 TO STA 603+02 LT	428	428
STA 599+00 TO STA 601+00 RT	225	225
TOTAL	1379	1379

RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	
LOCATION	PAVEMENT MARKER REMOVAL
	EACH
STA. 591+71 TO STA. 596+40.12	5
STA. 598+18 TO STA. 601+12	4
TOTAL	9

HOT-MIX ASPHALT SHOULDERS, 8"	
LOCATION	HOT-MIX ASPHALT SHOULDERS, 8"
	SQ YD
STA. 591+71 TO STA. 596+26.7 LT	203
STA. 594+02 TO STA. 596+32.3 RT	102
STA. 598+31.7 TO STA. 601+12 LT	125
STA. 598+37.3 TO STA. 600+18 RT	81
TOTAL	511

PAVED DITCH REMOVAL	
LOCATION	PAVEMENT REMOVAL
	FOOT
STA. 589+64 38' LT TO STA. 592+10 65' LT	248
STA. 590+71 80' RT TO STA. 590+95 89' RT	25
STA. 598+29 68' LT TO STA. 603+02 36' LT	476
TOTAL	749

MOBILIZATION	
LOCATION	MOBILIZATION
	L. SUM
STA. 589+64 TO STA. 603+02	1
TOTAL	1

TOPSOIL FURNISH AND PLACE, 4"	
LOCATION	TOPSOIL FURNISH AND PLACE, 4"
	SQ YD
STA 589+64 TO STA. 592+00 LT	1253
STA 601+10 TO STA. 603+02 LT	799
STA. 589+67 TO STA. 590+00 RT	26
TOTAL	2078

ENGINEER'S FIELD OFFICE, TYPE A	
LOCATION	QUANTITY
	CAL. MO.
STA. 589+64 TO STA. 603+02	1
TOTAL	1

CHANGEABLE MESSAGE SIGN	
LOCATION	QUANTITY
	CAL. MO.
TO BE DETERMINED BY D-4 TRAFFIC ENGINEER	6
TO BE DETERMINED BY D-4 TRAFFIC ENGINEER	6
TOTAL	12



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES		
SCALE:	SHEET NO. 1 OF 2 SHEETS	STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	11
CONTRACT NO. 68B43				
ILLINOIS FED. AID PROJECT				

TABULATION OF RESURFACING QUANTITIES						
LOCATION	LENGTH	HMA SURFACE REMOVAL - BUTT JOINT	HMA SURFACE REMOVAL - 1 1/2"	POLYMERIZED BITUMINOUS MATERIALS (TACK COAT)	HMA SURFACE COURSE, MIX "D", N50	PVMT CONN (HMA) FOR BRIDGE APPROACH
	FOOT	SQ YD	SQ YD	POUND	TON	SQ YD
STA. 591+71 TO STA. 591+81	10	27		12	3	
STA. 591+81 TO STA. 595+89.50	408.5		1090	491	92	
STA. 595+89.50 TO STA. 595+99.50	10			12		36
STA. 596+29.50 TO STA. 598+34.50	205			BRIDGE OMISSION S.N. 036-6073		
STA. 598+64.50 TO STA. 598+74.50	10			12		36
STA. 598+74.50 TO STA. 601+02	227.5		607	273	51	
STA. 601+02 TO STA. 601+12	10	27		12	3	
TOTAL	881	54	1697	812	149	72

GUARDRAIL AGGREGATE EROSION CONTROL	
LOCATION	GUARDRAIL AGGREGATE EROSION CONTROL
	TON
STA. 591+71 TO STA. 596+26.7 LT	67
STA. 594+02 TO STA. 596+32.3 RT	34
STA. 598+31.7 TO STA. 601+12 LT	41
STA. 598+37.3 TO STA. 600+17.6 RT	27
TOTAL	169

GUARDRAIL SCHEDULE						
LOCATION	SPBGR, TYPE A, 6' POSTS	TRAFFIC BARRIER TERMINAL, TYPE 6A	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	GUARDRAIL REMOVAL	TERMINAL MARKER DIRECT APPLIED	GUARDRAIL REFLECTORS TYPE A
	FOOT	EACH	EACH	FOOT	EACH	EACH
STA. 592+18.9 TO STA. 595+68.9 LT	350					4
STA. 594+49.5 TO STA. 595+74.5 RT	125					3
STA. 598+95.1 TO STA. 599+70.1 RT	75					3
STA. 598+89.5 TO STA. 600+64.5 LT	175					3
STA. 595+68.9 TO STA. 596+12.7 LT		1				1
STA. 595+74.5 TO STA. 596+18.3 RT		1				1
STA. 598+51.3 TO STA. 598+95.1 RT		1				1
STA. 598+45.7 TO STA. 598+89.5 LT		1				1
STA. 591+81.4 TO STA. 592+18.9 LT			1			
STA. 594+12 TO STA. 594+49.5 RT			1			
STA. 599+70.1 TO STA. 600+07.6 RT			1			
STA. 600+64.5 TO STA. 601+02 LT			1			
STA. 589+73.0 TO STA. 596+39.0 LT				666		
STA. 593+78.0 TO STA. 596+44.0 RT				266		
STA. 598+16.0 TO STA. 603+07.0 LT				491		
STA. 598+21.0 TO STA. 600+12.0 RT				191		
STA. 591+81.4 LT					1	
STA. 594+12 RT					1	
STA. 600+07.6 RT					1	
STA. 601+02 LT					1	
TOTAL	725	4	4	1614	4	17

PERMANENT SURVEY MARKERS, TYPE II	
LOCATION	PERMANENT SURVEY MARKERS, TYPE II
	EACH
STA. 599+50 30' LT.	1
TOTAL	1

PAVEMENT MARKING			
LOCATION	EPOXY PAVEMENT MARKING - LINE 4"		
	SOLID WHITE	SOLID YELLOW	SKIP DASH (10'/30') YELLOW
	FOOT	FOOT	FOOT
STA. 589+64 TO STA. 603+02 LT	1338		
STA. 589+64 TO STA. 601+30 RT	1166		
STA. 589+64 TO STA. 591+50 C.L.		186 LT	50 RT
STA. 591+50 TO STA. 603+02 C.L.			290
SUBTOTAL	2504	186	340
TOTAL		3030	

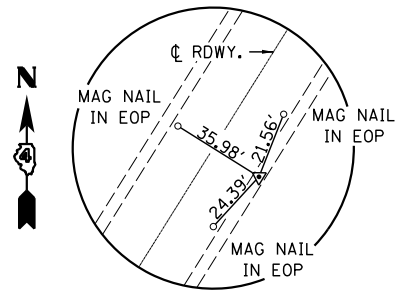


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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

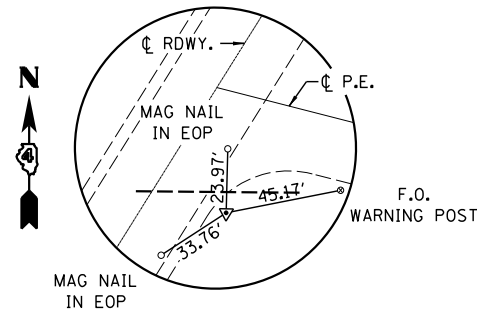
SCHEDULE OF QUANTITIES		
SCALE:	SHEET NO. 2 OF 2 SHEETS	STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	12
CONTRACT NO. 68B43				
ILLINOIS FED. AID PROJECT				



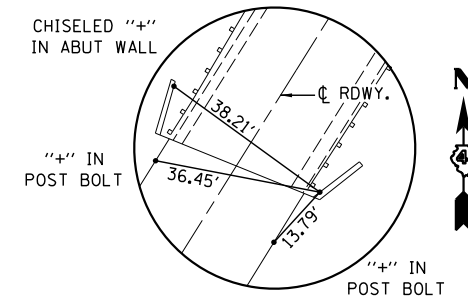
TIE #3

IRON PIN
 STA. 586+44.28, 24.56' RT.
 EL. 715.65
 N: 1556110.63
 E: 2179380.39



TIE #4

IRON PIN
 STA. 601+35.58, 27.62' RT.
 EL. 699.52
 N: 1557182.96
 E: 2180416.74



BENCHMARK "A"

IRON PIN
 STA. 598+22.9, 17.3' RT.
 EL. 695.96



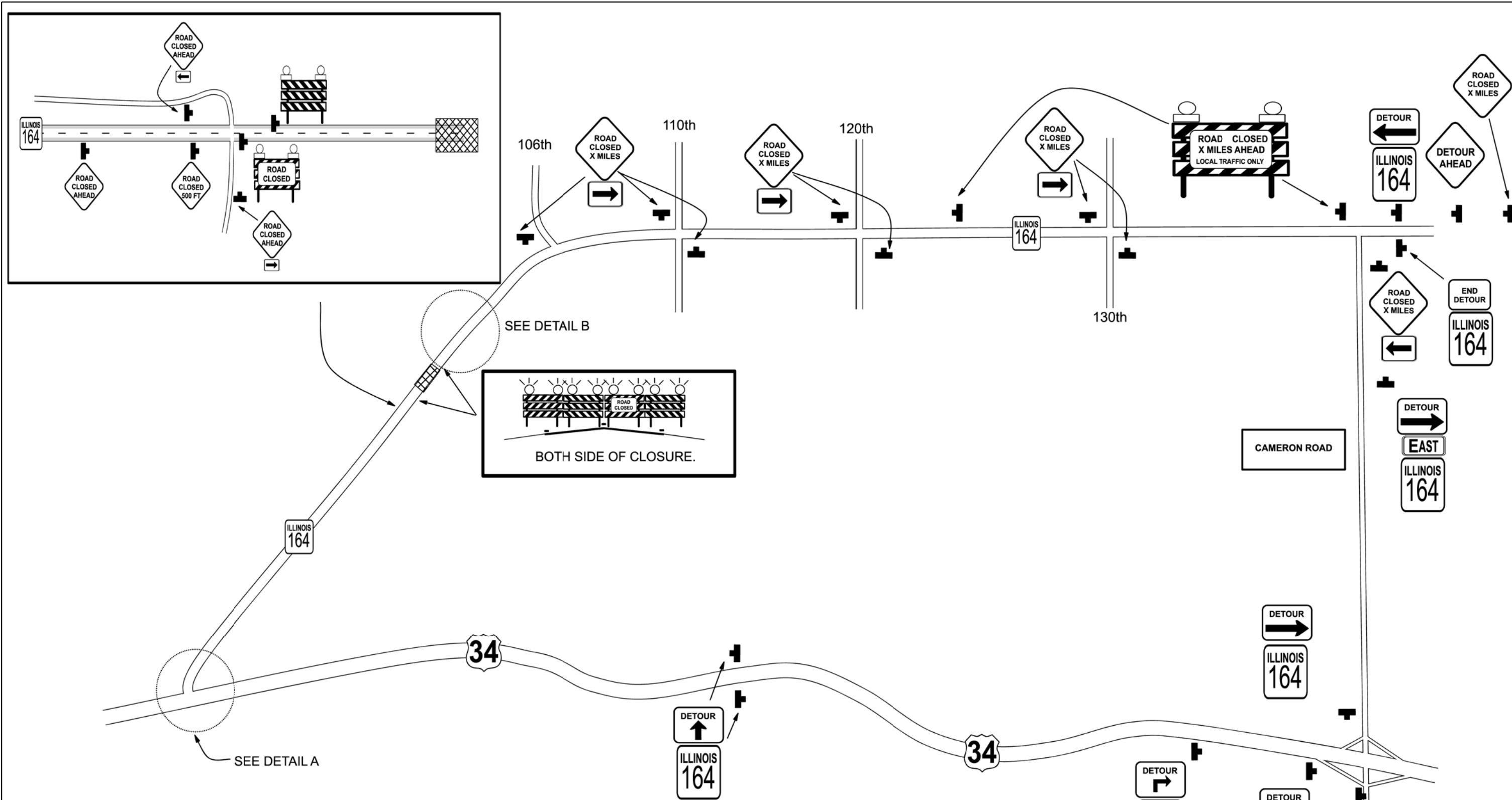
USER NAME =	DESIGNED -	REVISED -
	CHECKED -	REVISED -
PLOT SCALE =	DRAWN -	REVISED -
PLOT DATE =	CHECKED -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

CROSS TIES AND BENCHMARK DETAILS

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	13
CONTRACT NO. 68B43			ILLINOIS FED. AID PROJECT	



IL 164 SIGNS SHALL MATCH EXISTING ROUTE SIGNS IN SIZE AND COLOR.

CARDINAL DIRECTION SIGNS AND ROAD CLOSED SIGNS SHALL BE BLACK ON WHITE.

DETOUR SIGNS AND ALL OTHER SIGNS SHALL BE BLACK ON ORANGE.



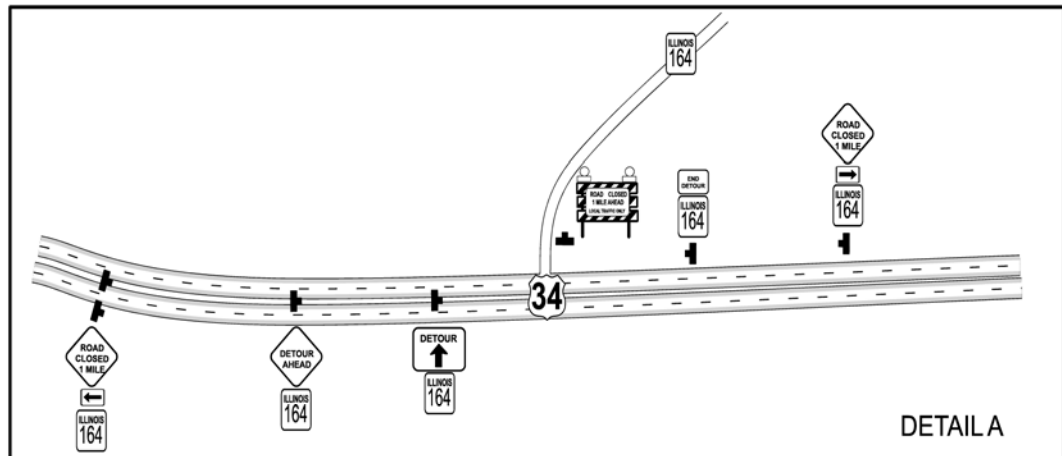
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	CHECKED -	REVISED -
PLOT SCALE =	DRAWN -	REVISED -
PLOT DATE =	CHECKED -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

DETOUR PLAN

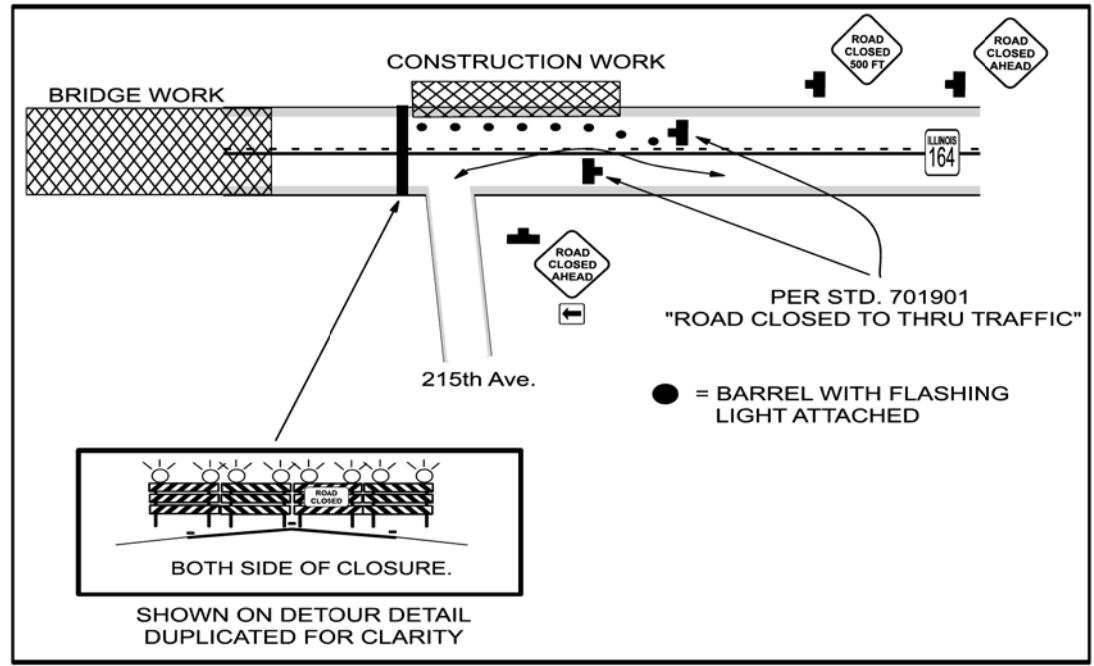
SCALE: SHEET NO. 1 OF 2 SHEETS STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	14
CONTRACT NO. 68B43				
ILLINOIS FED. AID PROJECT				



ALL DETOUR SIGNING AND CLOSURES AS SHOWN ON BOTH SHEETS SHALL BE INCLUSIVE OF TRAFFIC CONTROL AND PROTECTION BLR 21 PAY ITEM 70101830.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL THE PLACEMENT, MAINTENANCE, AND REMOVAL OF DEVICES AND SIGNAGE AS SHOWN ON ALL DETOUR/CLOSURE SHEETS.



USER NAME =	DESIGNED -	REVISED -
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PLOT SCALE =	DRAWN -	REVISED -
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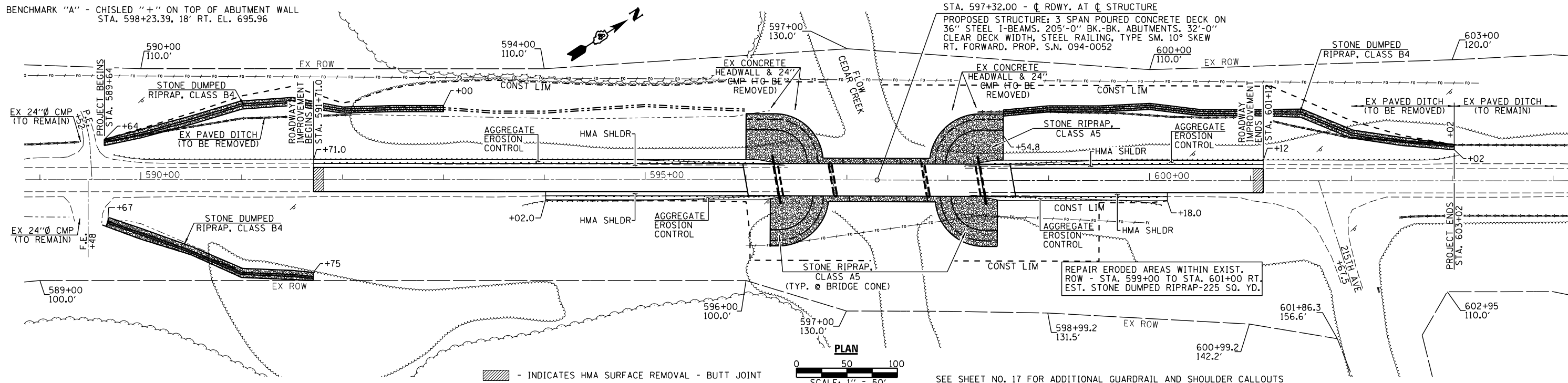
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETOUR PLAN

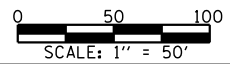
SCALE: SHEET NO. 2 OF 2 SHEETS STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	15
CONTRACT NO. 68B43				
ILLINOIS FED. AID PROJECT				

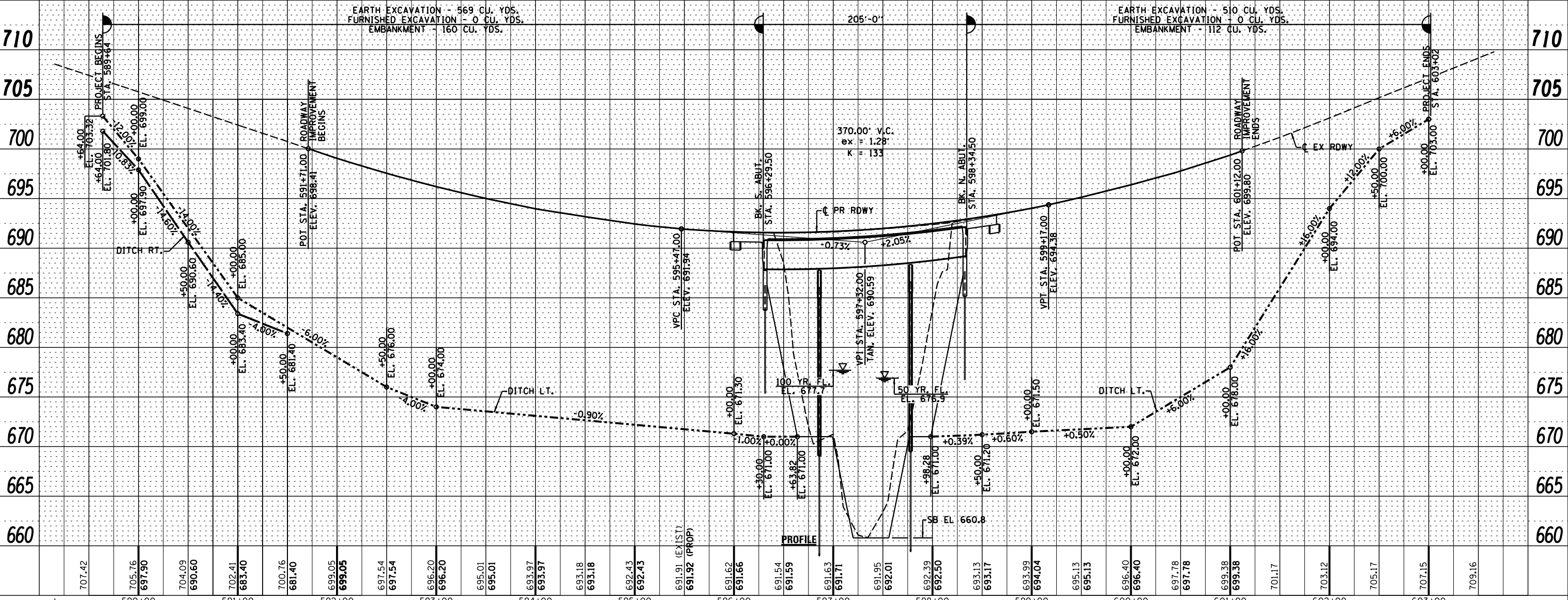
BENCHMARK "A" - CHISLED "+" ON TOP OF ABUTMENT WALL
 STA. 598+23.39, 18' RT. EL. 695.96



PLAN



SEE SHEET NO. 17 FOR ADDITIONAL GUARDRAIL AND SHOULDER CALLOUTS

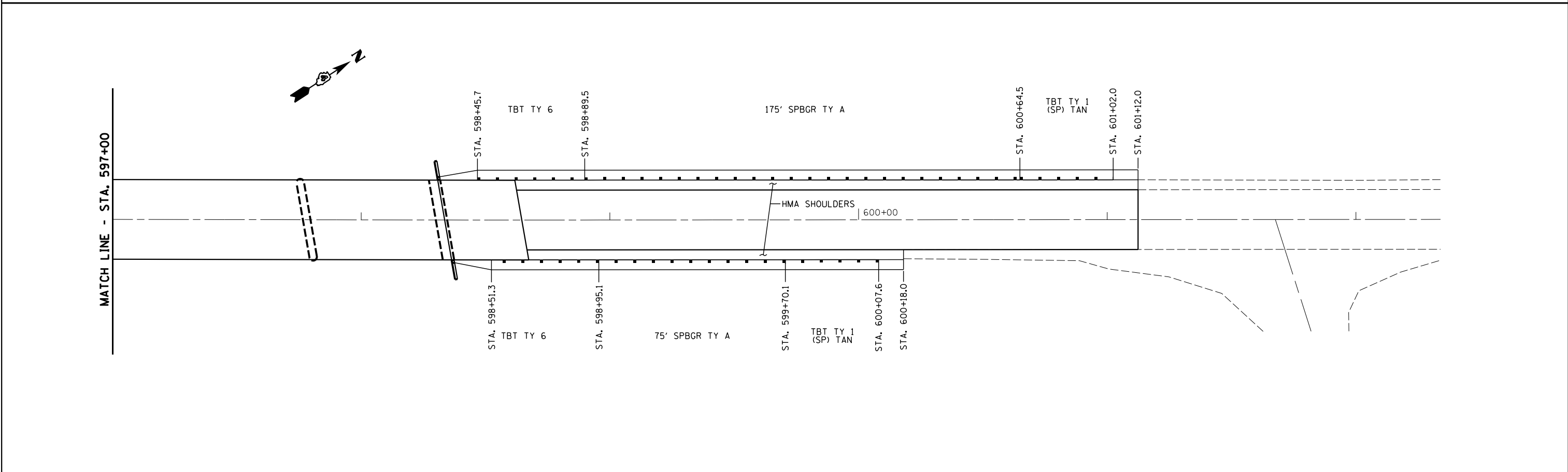
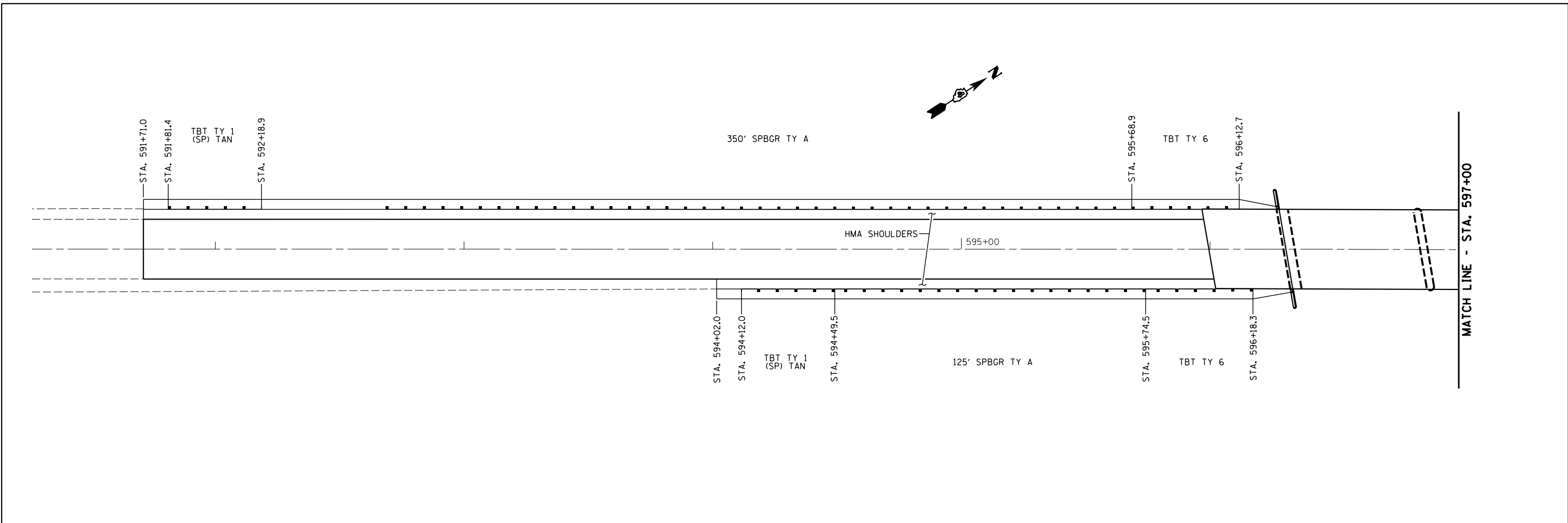


PROFILE

PLAN	SURVEYED	DATE
	PLOTTED	
	ALIGNED	
	CHECKED	
	FILED	
	NO.	

PROFILE	SURVEYED	DATE
	PLOTTED	
	GRADES CHECKED	
	STRUCTURE NOTATIONS OK'D	
	NO.	

<p>Veenstra & Kimm, Inc. Springfield, IL Phone: (217)544-8033</p>	USER NAME = *USER*	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PLAN & PROFILE		F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = *SCALE*	CHECKED -	REVISED -		411	(103B)BR	WARREN	76	16		
	PLOT DATE = *DATE*	DATE -	REVISED -		CONTRACT NO. 68B43			ILLINOIS FED. AID PROJECT			
					SCALE: 1" = 50'	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.			



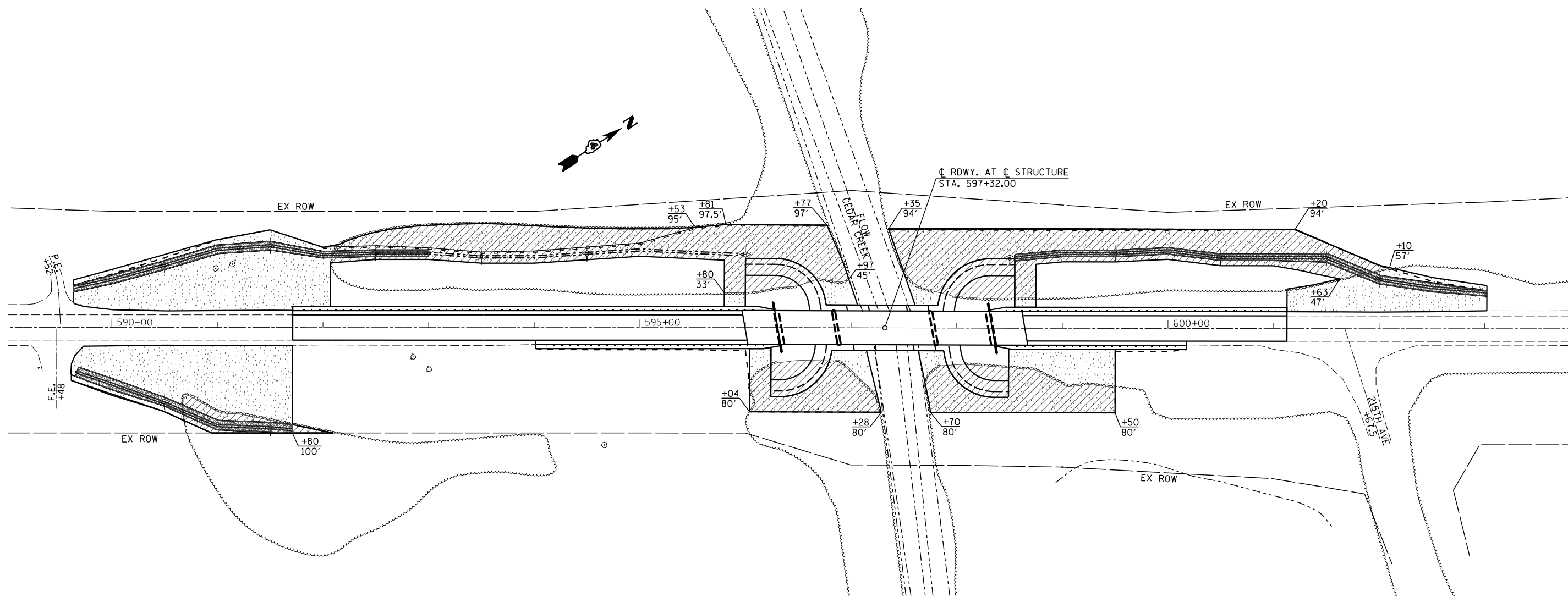
USER NAME =	DESIGNED -	REVISED -
CHECKED -	CHECKED -	REVISED -
PLOT SCALE =	DRAWN -	REVISED -
PLOT DATE =	CHECKED -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

GUARDRAIL LAYOUT

SCALE: 1" = 20' SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	17
CONTRACT NO. 68B43				
ILLINOIS FED. AID PROJECT				



TEMPORARY EROSION CONTROL ITEMS

LOCATION	TEMPORARY EROSION CONTROL	PERIMETER EROSION BARRIER	TEMPORARY DITCH CHECKS
	SEEDING POUND	FOOT	FOOT
STA. 589+67 TO STA. 591+80 RT.	30		
STA. 589+64 TO STA. 596+85 80' LT.	68		
STA. 597+70, 80' RT TO STA. 599+50 80' RT.	21		
STA. 597+40 80' LT. TO STA. 603+02 LT.	48		
STA. 596+04 80' RT. TO STA. 597+28 80' RT.	13		
STA. 592+00 76' LT. TO STA. 596+85 97' LT.		485	
STA. 597+40 94' LT. TO STA. 600+50 94' LT.		310	
STA. 590+50 54' LT. & 71' RT.			17
STA. 591+50 77.5' LT. & 95' RT.			17
STA. 592+50 70.5' LT.			6
STA. 593+50 67' LT.			6
STA. 594+50 70' LT.			6
STA. 596+00 69' LT.			6
STA. 598+50 67' LT.			6
STA. 599+50 71' LT.			6
STA. 600+50 68' LT.			6
STA. 601+50 68' LT.			8
STA. 602+00 47' LT.			8
TOTAL	180	795	92

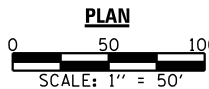
• ROLLED EXCELSIOR SHALL BE USED

TREE REMOVAL

LOCATION	TREE REMOVAL (ACRE)
	ACRE
STA. 591+68 62' RT. TO STA. 591+80 100' RT.	0.05
STA. 592+08 69' LT. TO STA. 596+97 45', 97' LT.	0.40
STA. 597+35 94' LT. TO STA. 602+10 57' LT.	0.37
STA. 597+70 35' RT TO STA. 599+50 80' RT.	0.15
STA. 596+04 35' RT. TO STA. 597+28 80' RT.	0.12
TOTAL	1.09

USE 1.1 ACRE

- LEGEND**
- TEMPORARY DITCH CHECK
 - PERIMETER EROSION BARRIER
 - SEEDING, CLASS 2 & TEMPORARY EROSION CONTROL
 - TREE REMOVAL



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	CHECKED -	REVISED -

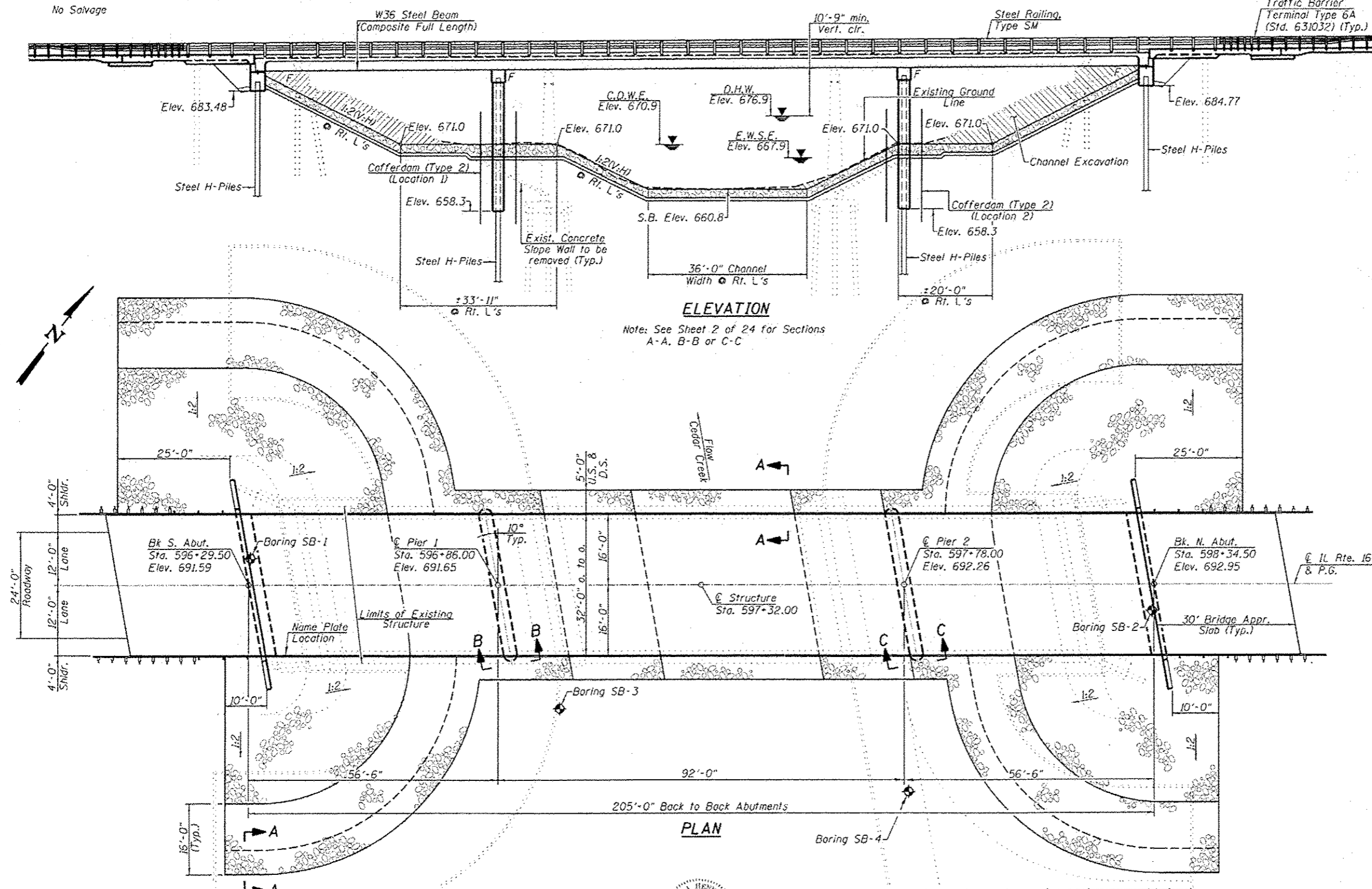
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**EROSION CONTROL &
TREE REMOVAL**

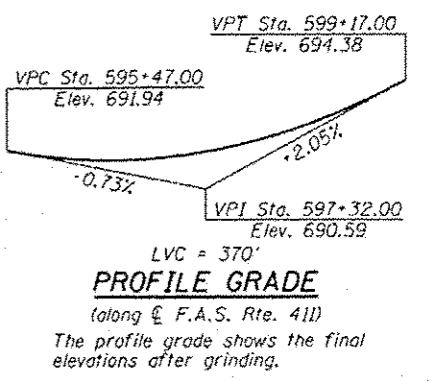
SCALE: 1" = 50' SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	18
CONTRACT NO. 68B43				
ILLINOIS FED. AID PROJECT				

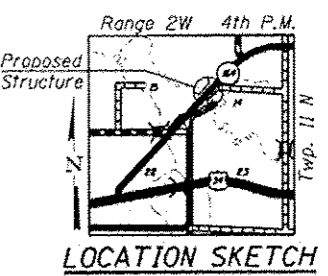
Bench Mark A: Chiseled "□" on top of north abutment wall of S.N. 094-0009. Elev. 695.96
 Existing Structure: Structure Number 094-0009 was built in 1963 as F.A. Route 9, Section 103B at Station 597+30. The structure consists of a three span non-composite concrete deck supported by continuous 33 WF steel beams. The substructure consists of concrete pile bent abutments and concrete solid wall piers. The abutments are supported by two rows of steel piles. The piers are supported on steel pile supported spread footings. The back-to-back of abutment length is 179'-9" and out-to-out width of deck is 35'-8".
 Structure to be removed and replaced. Traffic to be detoured.



APPROVED
 For Structural Adequacy Only
Dr. Carl Rupp
 Engineer of Bridges & Structures



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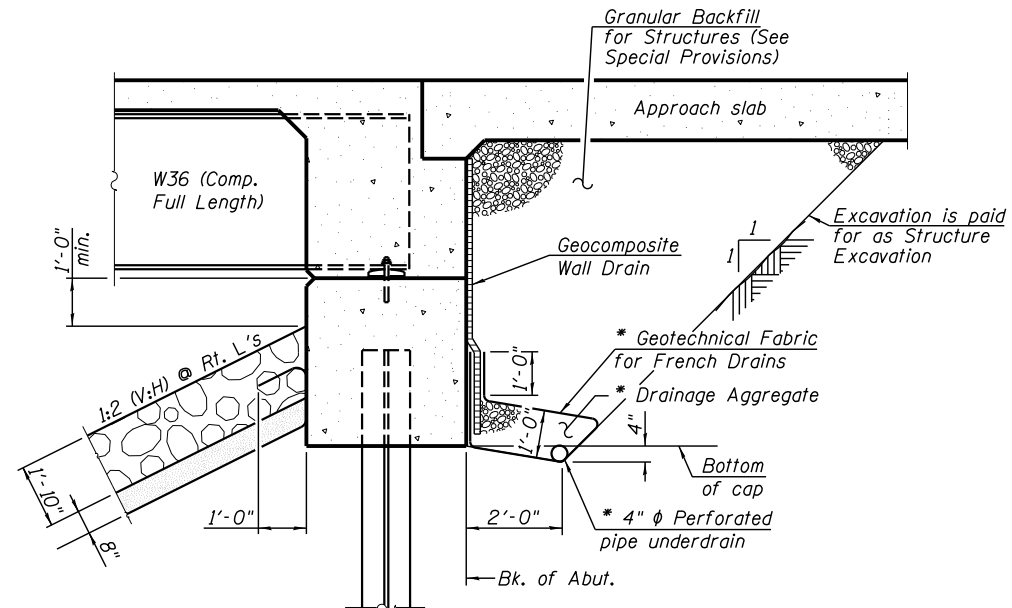
GENERAL PLAN & ELEVATION
IL RTE. 164 OVER CEDAR CREEK
F.A.S. RTE. 411 - SEC. (103B)BR
WARREN COUNTY
STATION 597+32.00
STRUCTURE NO. 094-0052

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

M. J. Henderson 10/13/2016
 Expiration Date 11/30/2016

Note:
 Up to 1/4 inch will be ground off the bridge deck and the bridge approach slab.

 Veenstra & Kimm, Inc. Springfield, IL Phone: (217)544-8033	USER NAME *	DESIGNED - GBR	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION GENERAL PLAN & ELEVATION STRUCTURE NO. 094-0052 SHEET NO. 1 OF 24 SHEETS	F.A.S. RTE. 411	SECTION (103)BR	COUNTY WARREN	TOTAL SHEETS 76	SHEET NO. 19	
	PLOT SCALE *	CHECKED - MAH	REVISED -		CONTRACT NO. 68843	ILLINOIS FED. AID PROJECT				
	PLOT DATE *	DRAWN - JRP	REVISED -							
		CHECKED - GBR	REVISED -							



SECTION THRU INTEGRAL ABUTMENT

*Included in the cost of Pipe Underdrains for Structures. (See Special Provisions)

Note:

All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).

LOADING HL 93
Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS
2014 AASHTO LRFD Bridge Design Specifications, 7th Edition with 2015 & 2016 Interims.

DESIGN STRESSES
FIELD UNITS

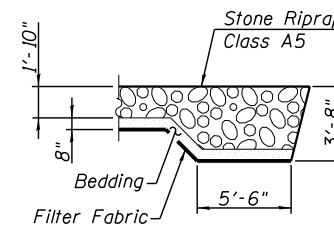
- $f'_c = 3,500$ psi (Concrete Substructure)
- $f'_c = 5,000$ psi (Concrete Superstructure)
- $f_y = 60,000$ psi (reinforcement)
- $f_y = 50,000$ psi (M270 Grade 50) - primary
- $f_y = 36,000$ psi (M270 Grade 36)

SEISMIC DATA

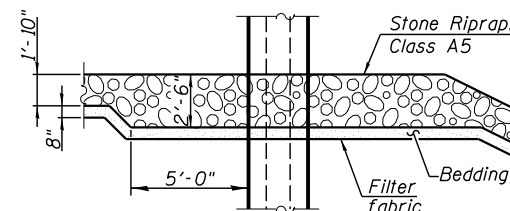
Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{d1}) = 0.099 g
Design Spectral Acceleration at 0.2 sec. (S_{d5}) = 0.144 g
Soil Site Class = D

STATION 597+32.00
BUILT 20 BY
STATE OF ILLINOIS
F.A.S. RT. 411 - SEC. (103B)BR
LOADING HL93
STR. NO. 094-0052

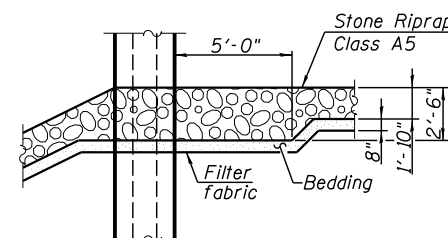
NAME PLATE
(See Std. 515001)



SECTION A-A



SECTION B-B



SECTION C-C

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu Yd			734
Stone Riprap, Class A5	Sq Yd		2544	2544
Filter Fabric	Sq Yd		2544	2544
Removal of Existing Structures	Each			1
Slope Wall Removal	Sq Yd		2402	2402
Structure Excavation	Cu Yd		198	198
Cofferdam Excavation	Cu Yd		456	456
Cofferdam (Type 2) (Location - 1)	Each		1	1
Cofferdam (Type 2) (Location - 2)	Each		1	1
Concrete Structures	Cu Yd		250.9	250.9
Concrete Superstructure	Cu Yd	205.2		205.2
Bridge Deck Grooving	Sq Yd	935		935
Protective Coat	Sq Yd	1023		1023
Concrete Superstructure (Approach Slab)	Cu Yd	95.4		95.4
Furnishing and Erecting Structural Steel	L Sum	1		1
Stud Shear Connectors	Each	5202		5202
Reinforcement Bars, Epoxy Coated	Pound	88770	24480	113250
Steel Railing, Type SM	Foot	466		466
Furnishing Steel Piles HP 12x63	Foot		495	495
Furnishing Steel Piles HP 14x89	Foot		500	500
Driving Piles	Foot		995	995
Test Pile Steel HP 12x63	Each		1	1
Test Pile Steel HP 14x89	Each		1	1
Name Plates	Each	1		1
Anchor Bolts, 1"	Each		48	48
Geocomposite Wall Drain	Sq Yd		63	63
Granular Backfill For Structures	Cu Yd		143	143
Diamond Grinding (Bridge Section)	Sq Yd	818		818
Pipe Underdrain for Structures 4"	Foot		137	137

WATERWAY INFORMATION

Drainage Area = 61.5 mi² Exist. Overtopping Elev. 691.5 at Sta. 596+40
Prop. Overtopping Elev. 691.5 at Sta. 596+40

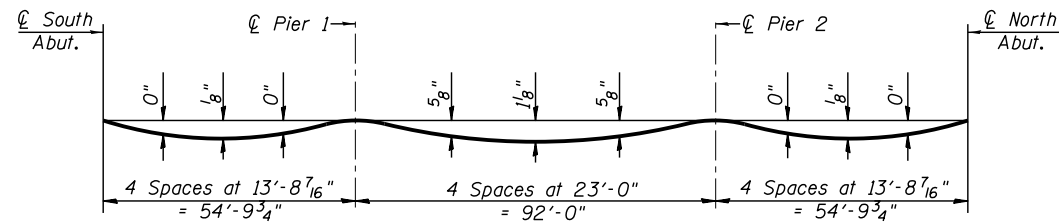
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
10	10	3631	894	1092	675.1	0.4	0.3	675.6	675.5
Design	50	7093	1094	1364	676.9	1.1	0.8	678.1	677.8
Base	100	8997	1183	1484	677.7	1.6	1.1	679.3	678.8
	200	11800	1300	1639	678.7	2.2	1.6	680.9	680.3
Overtop Proposed									
Max. Calc.	500	14605	1404	1778	679.5	3.0	2.0	682.5	681.6

10 year velocity through Existing Bridge = 4.2 fps
10 year velocity through Proposed Bridge = 3.5 fps

Event/Limit State	Design Scour Elevations (ft.)				Item 113
	S. Abut.	Pier 1	Pier 2	N. Abut.	
Q100	683.5	652.7	654.2	684.8	5
Q200	683.5	650.7	652.1	684.8	
Design	683.5	652.7	654.2	684.8	
Check	683.5	650.7	652.1	684.8	

GENERAL NOTES

All new structural steel shall be hot-dip galvanized. See Special Provision for "Hot-Dip Galvanizing for Structural Steel".
Fasteners shall be ASTM A325 Type 1, hot-dip galvanized bolts. Bolts 7/8 in. ϕ , holes 15/16 in. ϕ unless noted otherwise.
Calculated weight of Structural Steel = 201,240 lbs. (M270 Grade 50)
= 14,640 lbs. (M270 Grade 36)
No field welding is permitted except as specified in the contract documents.
Reinforcement bars designated (E) shall be epoxy coated.
Bearing seat surfaces shall be constructed or adjusted to the designated elevations within tolerance of 1/8 in. (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.
The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.

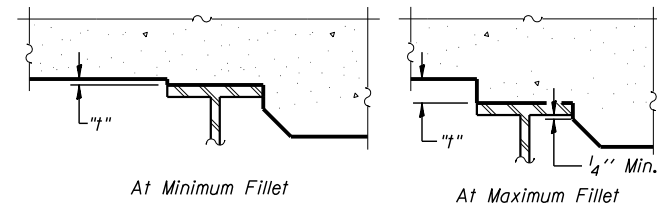


DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only)

Note:

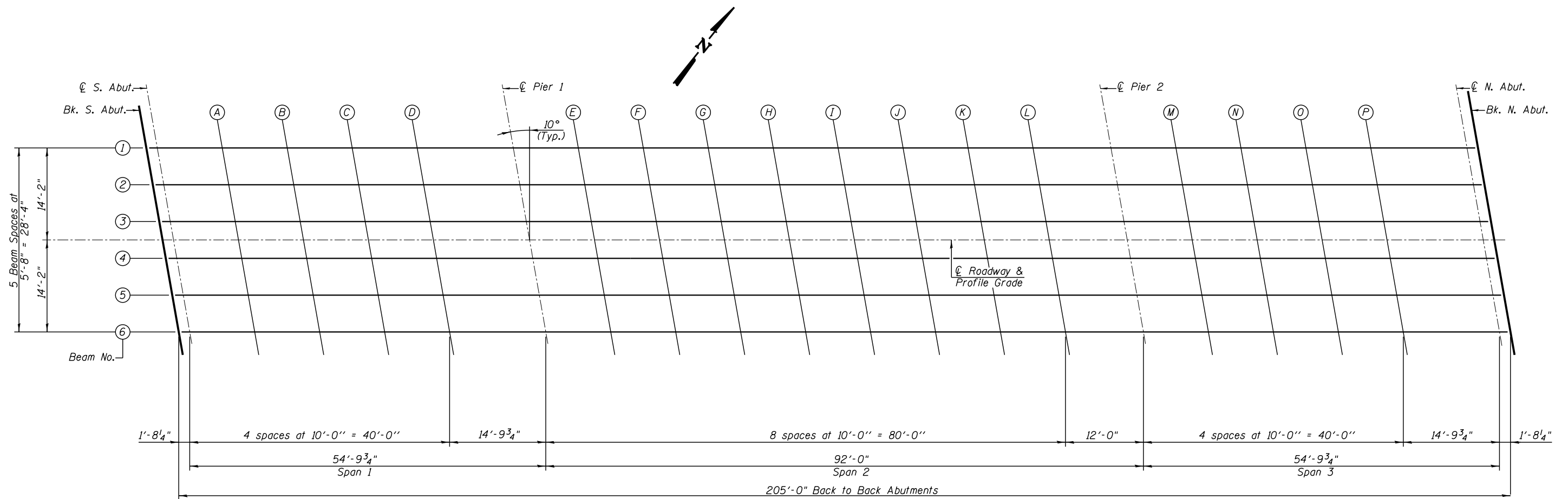
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections and grinding as shown on sheet 4 of 24.



To determine "t": 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 and Grinding" shown on Sheet 4 of 24, minus 8/4" deck thickness, equals the fillet heights "t" above top flange of beams.

The slab is to be ground after curing to achieve smoothness, but the slab is not to be ground to elevations below the "Theoretical Grade Elevations" shown on Sheet 4 of 24. For grinding the deck, see Special Provisions.

FILLET HEIGHTS



PLAN

USER NAME =	DESIGNED - GBR	REVISED -
	CHECKED - MAH	REVISED -
PLOT SCALE =	DRAWN - JRP	REVISED -
PLOT DATE =	CHECKED - GBR	REVISED -

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	21
CONTRACT NO. 68B43				
ILLINOIS FED. AID PROJECT				

BEAM 1				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection & Grinding
Bk. S. Abut.	596+27.00	-14.17	691.37	691.39
CL S. Abut.	596+28.69	-14.17	691.37	691.39
A	596+38.69	-14.17	691.36	691.38
B	596+48.69	-14.17	691.36	691.38
C	596+58.69	-14.17	691.37	691.39
D	596+68.69	-14.17	691.38	691.40
CL Pier 1	596+83.50	-14.17	691.42	691.44
E	596+93.50	-14.17	691.45	691.49
F	597+03.50	-14.17	691.49	691.56
G	597+13.50	-14.17	691.54	691.63
H	597+23.50	-14.17	691.60	691.71
I	597+33.50	-14.17	691.66	691.77
J	597+43.50	-14.17	691.73	691.83
K	597+53.50	-14.17	691.81	691.88
L	597+63.50	-14.17	691.90	691.95
CL Pier 2	597+75.50	-14.17	692.01	692.03
M	597+85.50	-14.17	692.11	692.12
N	597+95.50	-14.17	692.22	692.24
O	598+05.50	-14.17	692.34	692.36
P	598+15.50	-14.17	692.46	692.48
CL N. Abut.	598+30.31	-14.17	692.66	692.68
Bk. N. Abut.	598+32.00	-14.17	692.69	692.71

BEAM 2				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection & Grinding
Bk. S. Abut.	596+28.00	-8.50	691.47	691.49
CL S. Abut.	596+29.69	-8.50	691.47	691.49
A	596+39.69	-8.50	691.46	691.48
B	596+49.69	-8.50	691.46	691.48
C	596+59.69	-8.50	691.47	691.49
D	596+69.69	-8.50	691.48	691.50
CL Pier 1	596+84.50	-8.50	691.52	691.54
E	596+94.50	-8.50	691.55	691.59
F	597+04.50	-8.50	691.59	691.66
G	597+14.50	-8.50	691.64	691.73
H	597+24.50	-8.50	691.70	691.81
I	597+34.50	-8.50	691.76	691.87
J	597+44.50	-8.50	691.84	691.94
K	597+54.50	-8.50	691.92	691.99
L	597+64.50	-8.50	692.00	692.05
CL Pier 2	597+76.50	-8.50	692.12	692.14
M	597+86.50	-8.50	692.22	692.23
N	597+96.50	-8.50	692.33	692.35
O	598+06.50	-8.50	692.45	692.47
P	598+16.50	-8.50	692.57	692.59
CL N. Abut.	598+31.31	-8.50	692.77	692.79
Bk. N. Abut.	598+33.00	-8.50	692.80	692.82

BEAM 3				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection & Grinding
Bk. S. Abut.	596+29.00	-2.83	691.55	691.57
CL S. Abut.	596+30.69	-2.83	691.55	691.57
A	596+40.69	-2.83	691.54	691.56
B	596+50.69	-2.83	691.54	691.56
C	596+60.69	-2.83	691.55	691.57
D	596+70.69	-2.83	691.57	691.59
CL Pier 1	596+85.50	-2.83	691.61	691.63
E	596+95.50	-2.83	691.64	691.68
F	597+05.50	-2.83	691.68	691.75
G	597+15.50	-2.83	691.73	691.82
H	597+25.50	-2.83	691.79	691.90
I	597+35.50	-2.83	691.86	691.97
J	597+45.50	-2.83	691.93	692.03
K	597+55.50	-2.83	692.01	692.08
L	597+65.50	-2.83	692.10	692.15
CL Pier 2	597+77.50	-2.83	692.21	692.23
M	597+87.50	-2.83	692.31	692.32
N	597+97.50	-2.83	692.43	692.45
O	598+07.50	-2.83	692.55	692.57
P	598+17.50	-2.83	692.67	692.69
CL N. Abut.	598+32.31	-2.83	692.87	692.89
Bk. N. Abut.	598+34.00	-2.83	692.90	692.92

CENTERLINE ROADWAY & P.G.				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection & Grinding
Bk. S. Abut.	596+29.50	0.00	691.59	691.61
CL S. Abut.	596+31.19	0.00	691.59	691.61
A	596+41.19	0.00	691.59	691.61
B	596+51.19	0.00	691.59	691.61
C	596+61.19	0.00	691.60	691.62
D	596+71.19	0.00	691.61	691.63
CL Pier 1	596+86.00	0.00	691.65	691.67
E	596+96.00	0.00	691.69	691.73
F	597+06.00	0.00	691.73	691.80
G	597+16.00	0.00	691.78	691.87
H	597+26.00	0.00	691.84	691.95
I	597+36.00	0.00	691.90	692.01
J	597+46.00	0.00	691.98	692.08
K	597+56.00	0.00	692.06	692.13
L	597+66.00	0.00	692.14	692.19
CL Pier 2	597+78.00	0.00	692.26	692.28
M	597+88.00	0.00	692.36	692.37
N	597+98.00	0.00	692.47	692.49
O	598+08.00	0.00	692.59	692.61
P	598+18.00	0.00	692.72	692.74
CL N. Abut.	598+32.81	0.00	692.92	692.94
Bk. N. Abut.	598+34.50	0.00	692.95	692.97

BEAM 4				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection & Grinding
Bk. S. Abut.	596+30.00	2.83	691.55	691.57
CL S. Abut.	596+31.69	2.83	691.55	691.57
A	596+41.69	2.83	691.54	691.56
B	596+51.69	2.83	691.55	691.57
C	596+61.69	2.83	691.55	691.57
D	596+71.69	2.83	691.57	691.59
CL Pier 1	596+86.50	2.83	691.61	691.63
E	596+96.50	2.83	691.65	691.69
F	597+06.50	2.83	691.69	691.76
G	597+16.50	2.83	691.74	691.83
H	597+26.50	2.83	691.80	691.91
I	597+36.50	2.83	691.86	691.97
J	597+46.50	2.83	691.94	692.04
K	597+56.50	2.83	692.02	692.09
L	597+66.50	2.83	692.11	692.16
CL Pier 2	597+78.50	2.83	692.22	692.24
M	597+88.50	2.83	692.33	692.34
N	597+98.50	2.83	692.44	692.46
O	598+08.50	2.83	692.56	692.58
P	598+18.50	2.83	692.68	692.70
CL N. Abut.	598+33.31	2.83	692.89	692.91
Bk. N. Abut.	598+35.00	2.83	692.91	692.93

BEAM 5				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection & Grinding
Bk. S. Abut.	596+31.00	8.50	691.46	691.48
CL S. Abut.	596+32.69	8.50	691.46	691.48
A	596+42.69	8.50	691.46	691.48
B	596+52.69	8.50	691.46	691.48
C	596+62.69	8.50	691.47	691.49
D	596+72.69	8.50	691.49	691.51
CL Pier 1	596+87.50	8.50	691.53	691.55
E	596+97.50	8.50	691.56	691.60
F	597+07.50	8.50	691.61	691.68
G	597+17.50	8.50	691.66	691.75
H	597+27.50	8.50	691.72	691.83
I	597+37.50	8.50	691.79	691.90
J	597+47.50	8.50	691.86	691.96
K	597+57.50	8.50	691.94	692.01
L	597+67.50	8.50	692.03	692.08
CL Pier 2	597+79.50	8.50	692.15	692.17
M	597+89.50	8.50	692.25	692.26
N	597+99.50	8.50	692.36	692.38
O	598+09.50	8.50	692.48	692.50
P	598+19.50	8.50	692.61	692.63
CL N. Abut.	598+34.31	8.50	692.82	692.84
Bk. N. Abut.	598+36.00	8.50	692.84	692.86

BEAM 6				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection & Grinding
Bk. S. Abut.	596+32.00	14.17	691.37	691.39
CL S. Abut.	596+33.69	14.17	691.37	691.39
A	596+43.69	14.17	691.36	691.38
B	596+53.69	14.17	691.37	691.39
C	596+63.69	14.17	691.38	691.40
D	596+73.69	14.17	691.39	691.41
CL Pier 1	596+88.50	14.17	691.44	691.46
E	596+98.50	14.17	691.47	691.51
F	597+08.50	14.17	691.52	691.59
G	597+18.50	14.17	691.57	691.66
H	597+28.50	14.17	691.63	691.74
I	597+38.50	14.17	691.70	691.81
J	597+48.50	14.17	691.77	691.87
K	597+58.50	14.17	691.85	691.92
L	597+68.50	14.17	691.94	691.99
CL Pier 2	597+80.50	14.17	692.06	692.08
M	597+90.50	14.17	692.17	692.18
N	598+00.50	14.17	692.28	692.30
O	598+10.50	14.17	692.40	692.42
P	598+20.50	14.17	692.53	692.55
CL N. Abut.	598+35.31	14.17	692.73	692.75
Bk. N. Abut.	598+37.00	14.17	692.76	692.78



USER NAME =	DESIGNED - GBR	REVISED -
	CHECKED - MAH	REVISED -
PLOT SCALE =	DRAWN - JRP	REVISED -
PLOT DATE =	CHECKED - GBR	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TOP OF SLAB ELEVATIONS
STRUCTURE NO. 094-0052**

SHEET NO. 4 OF 24 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	22
CONTRACT NO. 68B43				
ILLINOIS FED. AID PROJECT				

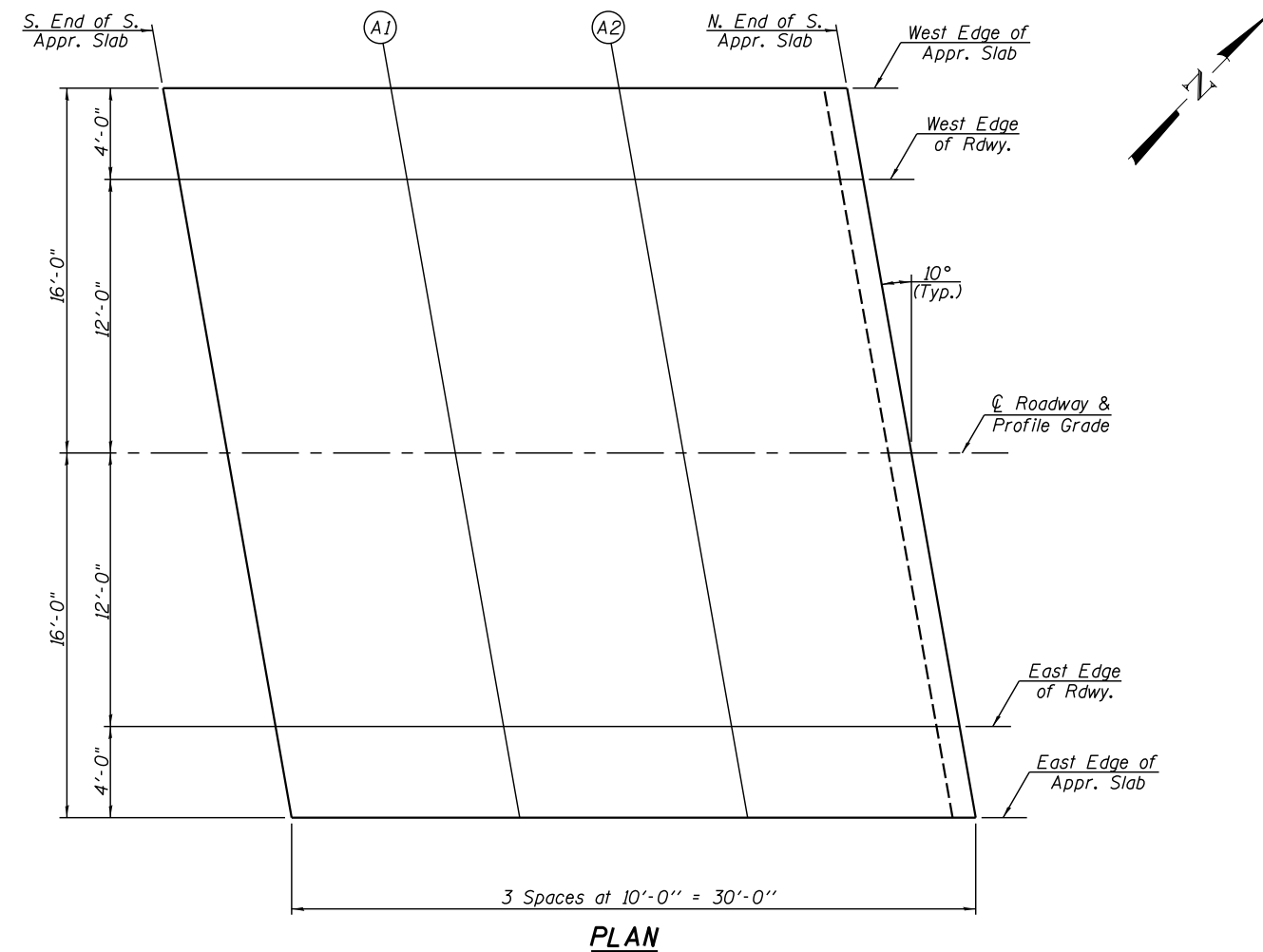
WEST EDGE OF APPROACH SLAB				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
S. End of S. Appr.	595+97.69	-16.00	691.41	691.43
A1	596+07.69	-16.00	691.38	691.40
A2	596+17.69	-16.00	691.35	691.37
N. End of S. Appr.	596+27.69	-16.00	691.34	691.36

WEST EDGE OF ROADWAY				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
S. End of S. Appr.	595+98.40	-12.00	691.48	691.50
A1	596+08.40	-12.00	691.45	691.47
A2	596+18.40	-12.00	691.43	691.45
N. End of S. Appr.	596+28.40	-12.00	691.41	691.43

CENTERLINE ROADWAY & P.G.				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
S. End of S. Appr.	596+00.52	0.00	691.66	691.68
A1	596+10.52	0.00	691.63	691.65
A2	596+20.52	0.00	691.61	691.63
N. End of S. Appr.	596+30.52	0.00	691.59	691.61

EAST EDGE OF ROADWAY				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
S. End of S. Appr.	596+02.63	12.00	691.47	691.49
A1	596+12.63	12.00	691.44	691.46
A2	596+22.63	12.00	691.42	691.44
N. End of S. Appr.	596+32.63	12.00	691.41	691.43

EAST EDGE OF APPROACH SLAB				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
S. End of S. Appr.	596+03.34	16.00	691.39	691.41
A1	596+13.34	16.00	691.36	691.38
A2	596+23.34	16.00	691.34	691.36
N. End of S. Appr.	596+33.34	16.00	691.33	691.35



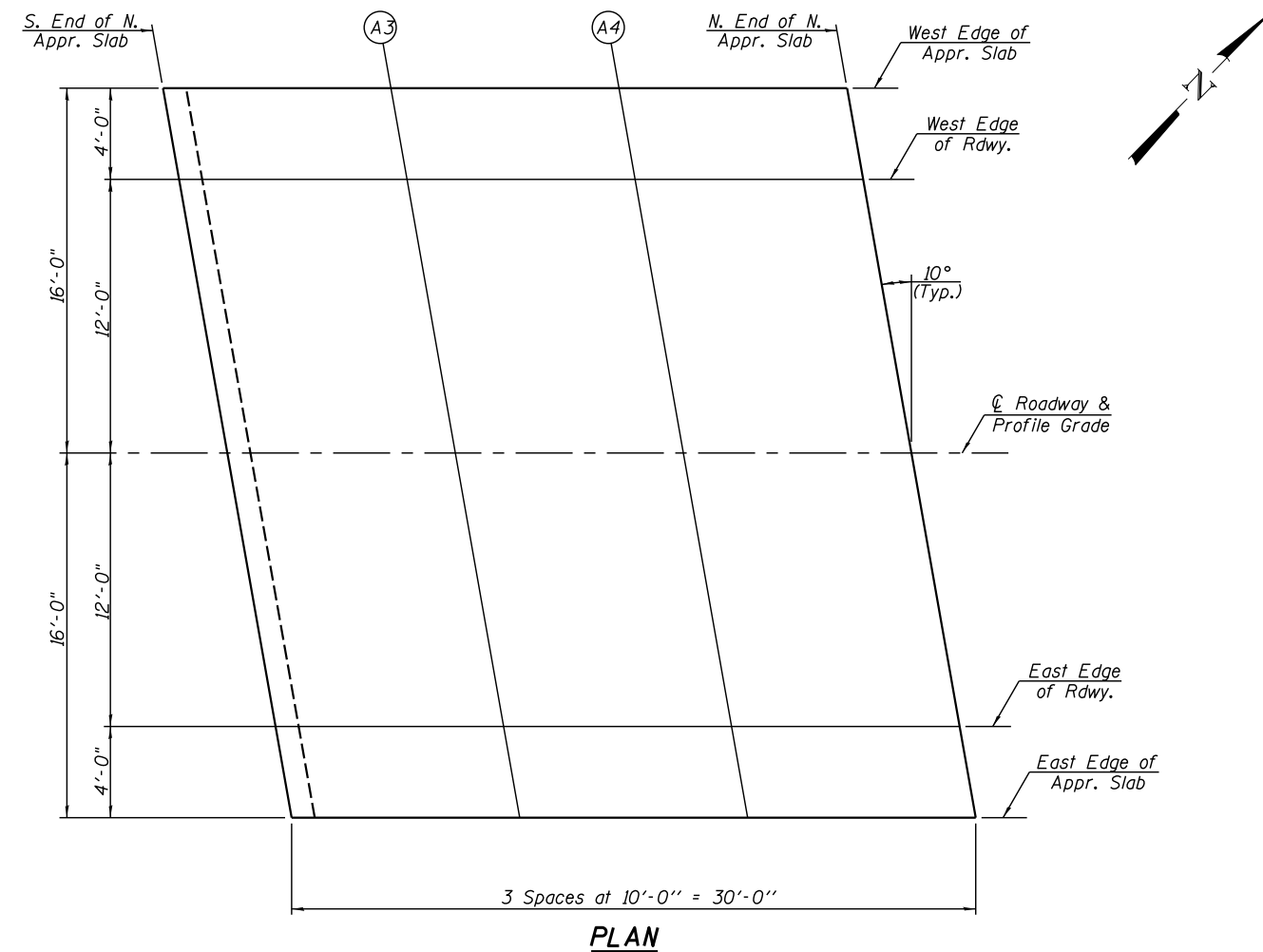
WEST EDGE OF APPROACH SLAB				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
S. End of N. Appr.	598+30.66	-16.00	692.63	692.65
A3	598+40.66	-16.00	692.78	692.80
A4	598+50.66	-16.00	692.93	692.95
N. End of N. Appr.	598+60.66	-16.00	693.09	693.11

WEST EDGE OF ROADWAY				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
S. End of N. Appr.	598+31.37	-12.00	692.72	692.74
A3	598+41.37	-12.00	692.87	692.89
A4	598+51.37	-12.00	693.02	693.04
N. End of N. Appr.	598+61.37	-12.00	693.18	693.20

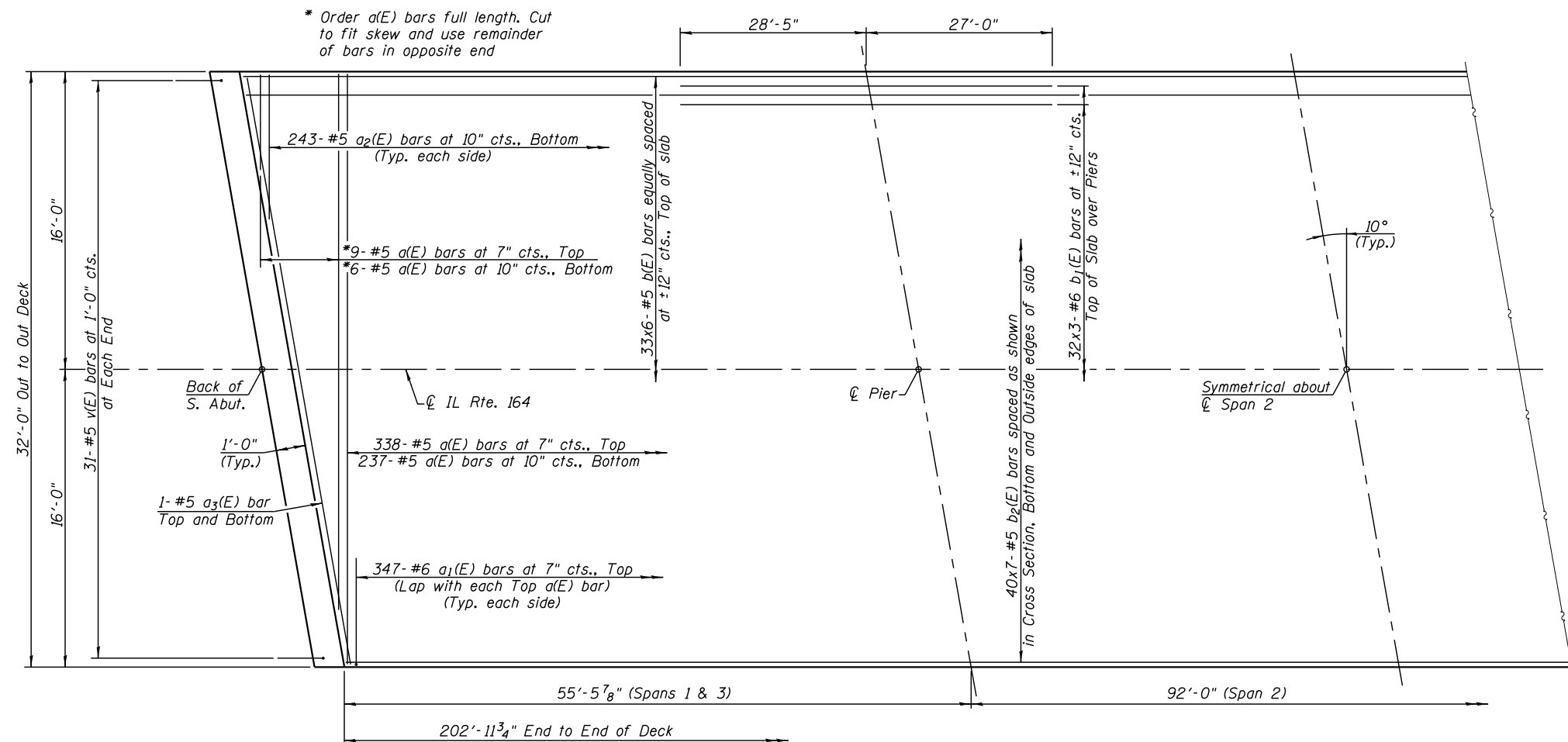
CENTERLINE ROADWAY & P.G.				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
S. End of N. Appr.	598+33.48	0.00	692.93	692.95
A3	598+43.48	0.00	693.08	693.10
A4	598+53.48	0.00	693.23	693.25
N. End of N. Appr.	598+63.48	0.00	693.39	693.41

EAST EDGE OF ROADWAY				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
S. End of N. Appr.	598+35.60	12.00	692.78	692.80
A3	598+45.60	12.00	692.93	692.95
A4	598+55.60	12.00	693.08	693.10
N. End of N. Appr.	598+65.60	12.00	693.25	693.27

EAST EDGE OF APPROACH SLAB				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
S. End of N. Appr.	598+36.31	16.00	692.71	692.73
A3	598+46.31	16.00	692.86	692.88
A4	598+56.31	16.00	693.02	693.04
N. End of N. Appr.	598+66.31	16.00	693.18	693.20



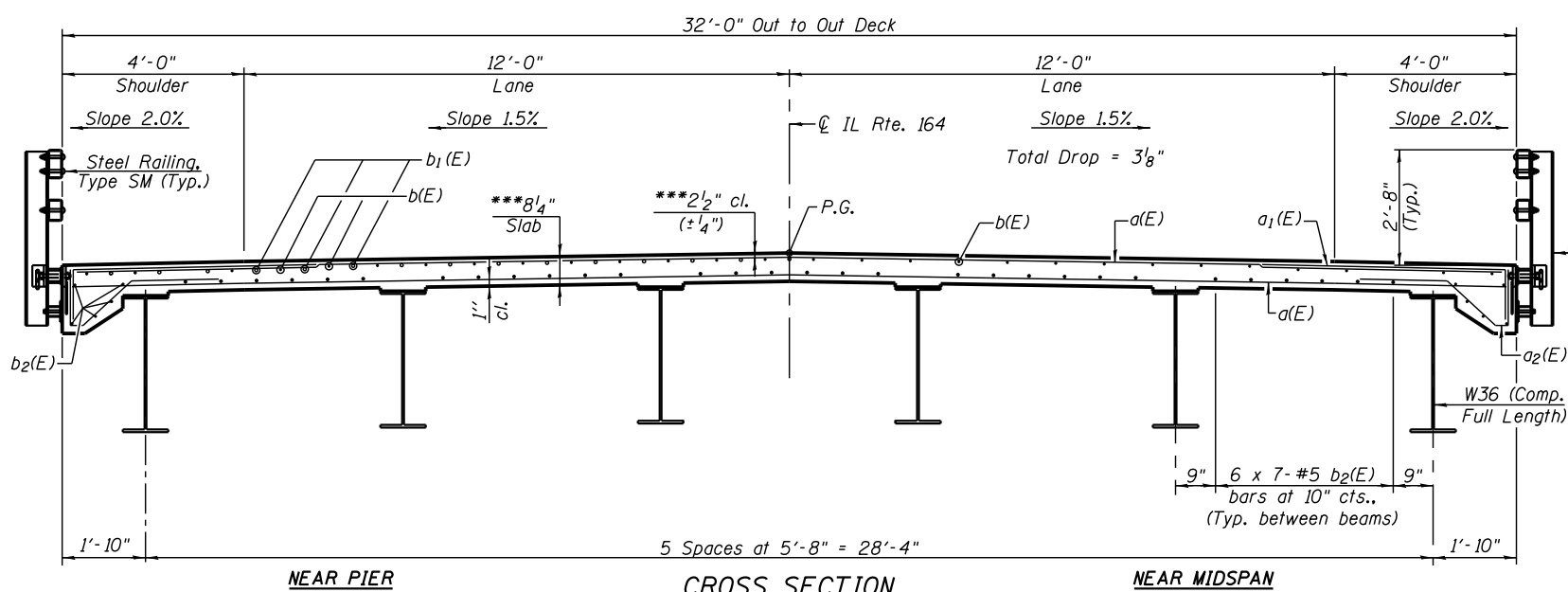
* Order a(E) bars full length. Cut to fit skew and use remainder of bars in opposite end



HALF PLAN

MINIMUM BAR LAP

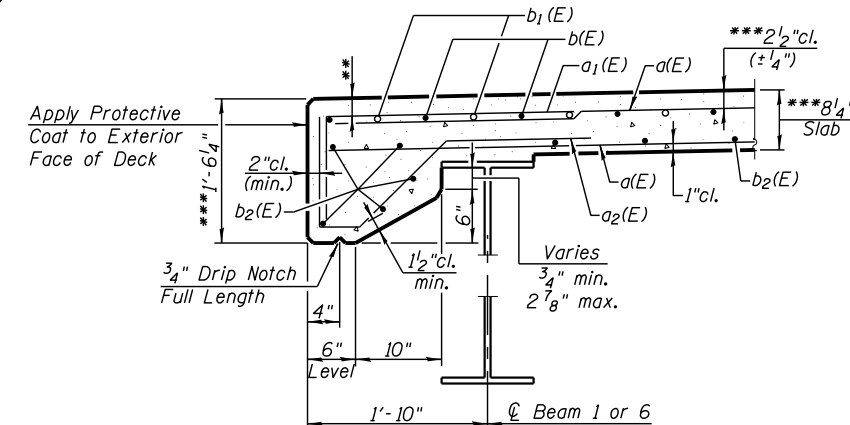
#5 bar = 3'-6"
#6 bar = 4'-10"



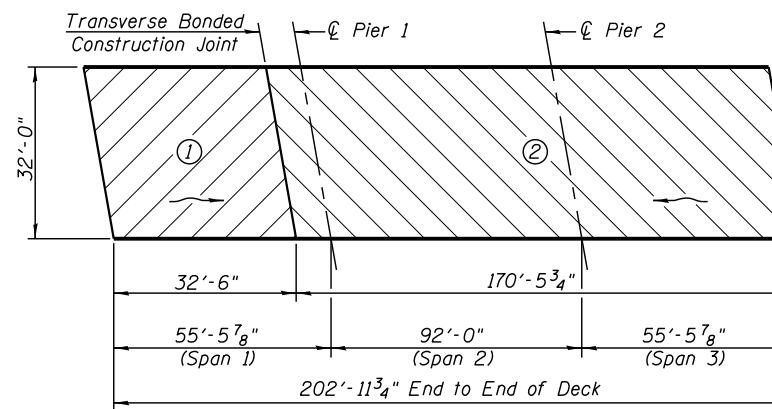
CROSS SECTION (Looking North)

** Reinforcement bars in the deck shall be placed with a 2" minimum clearance in the area of the rail post anchor devices. The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.

*** Prior to grinding



SECTION THRU EDGE OF SLAB (Near Pier) (Railing Not Shown For Clarity)



DECK POURING SEQUENCE PLAN

- Notes:
- The concrete deck segments shall be poured in the numerical order and the directions shown above to avoid uplift at an abutment.
 - When the deck pour is stopped for the day at one or more of the transverse bonded construction joints in the deck pouring sequence as shown, the next pour shall not be made until both of the following are met.
 - At least 72 hours shall have elapsed from the end of the previous pour.
 - The concrete strength shall have attained a minimum flexural strength of 800 psi or a minimum compressive strength of 5000 psi.
 - The Contractor may pour the deck starting at an abutment location and proceed to the opposite abutment without stopping. However, the Contractor shall provide counterweights, or other measures, at the opposite abutment to resist uplift forces. The counterweights or other measures shall be designed for the following LRFD Strength I uplift force: 4.7 kips per beam (or a total of 28.2 kips at the opposite abutment).

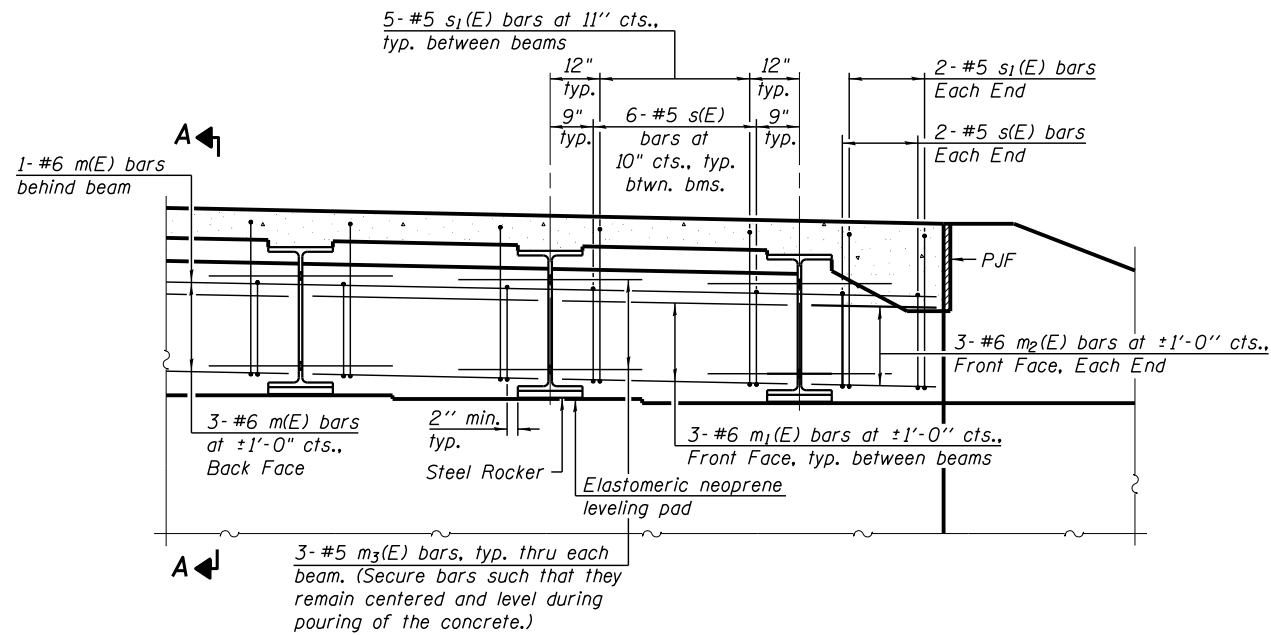
SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	590	#5	31'-8"	—
a ₁ (E)	694	#6	7'-8"	—
a ₂ (E)	486	#5	6'-7"	—
a ₃ (E)	4	#5	32'-2"	—
b(E)	198	#5	37'-3"	—
b ₁ (E)	192	#6	23'-4"	—
b ₂ (E)	280	#5	32'-6"	—
m(E)	8	#6	32'-2"	—
m ₁ (E)	30	#6	5'-4"	—
m ₂ (E)	12	#6	1'-6"	—
m ₃ (E)	36	#5	4'-0"	—
s(E)	68	#5	8'-0"	⊏
s ₁ (E)	58	#5	10'-2"	⊏
v(E)	62	#5	3'-3"	⊏
Concrete Superstructure			Cu. Yd.	205.2
Reinforcement Bars, Epoxy Coated			Pound	57060

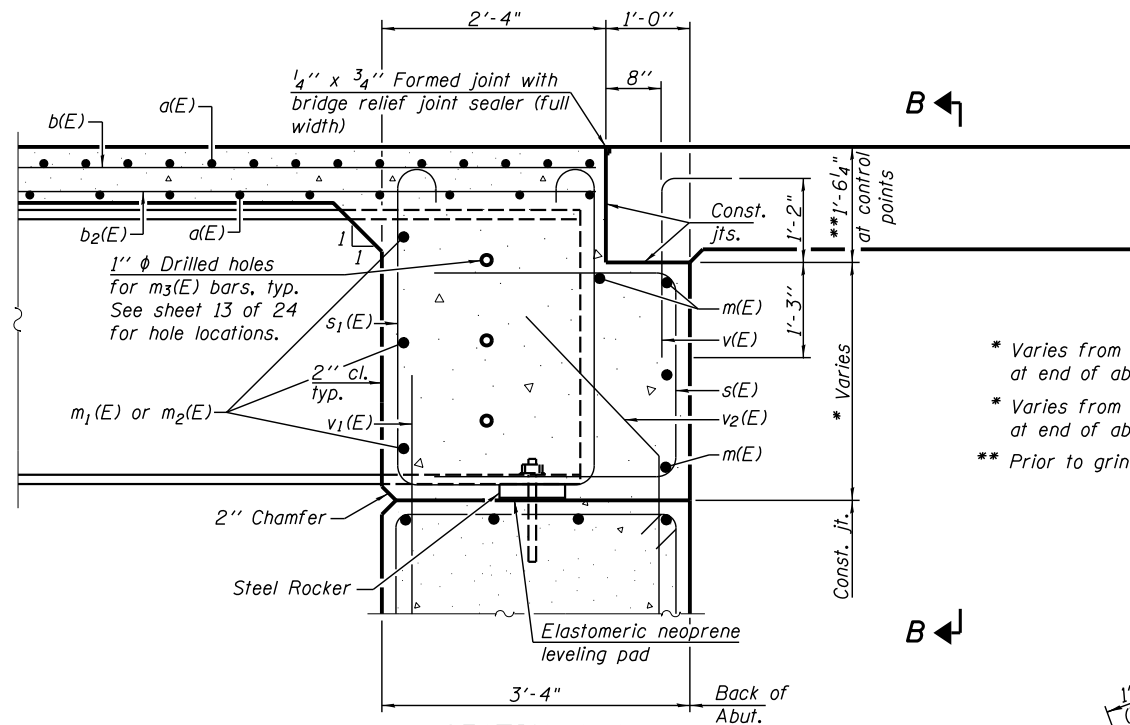
Notes:

See sheet 8 of 24 for diaphragm details, and bar details.

Bars indicated thus 33 x 6-#5 etc. indicates 33 lines of bars with 6 lengths per line.

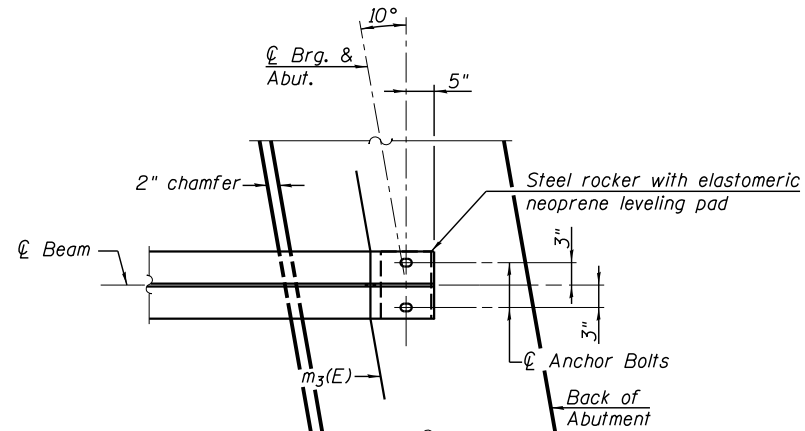
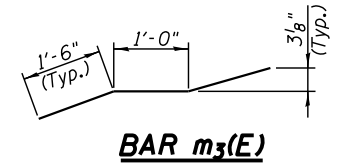


DIAPHRAGM ELEVATION AT ABUTMENT

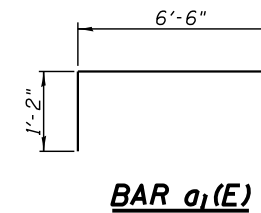


SECTION A-A
(At Rt. L's)

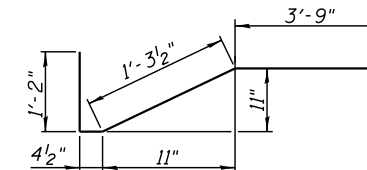
* Varies from 2'-5 1/8" @ C Rdwy. to 2'-4 1/4" at end of abutment (South Abutment)
 * Varies from 2'-5 3/8" @ C Rdwy. to 2'-4 5/8" at end of abutment (North Abutment)
 ** Prior to grinding



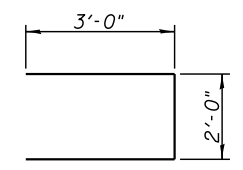
PARTIAL PLAN AT ABUTMENT
(Showing bottom flange of beam)



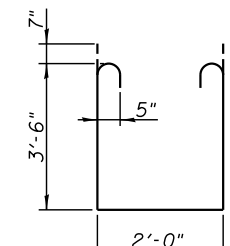
BAR a1(E)



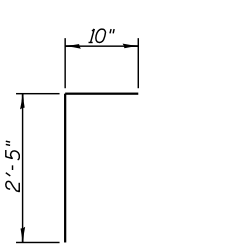
BAR a2(E)



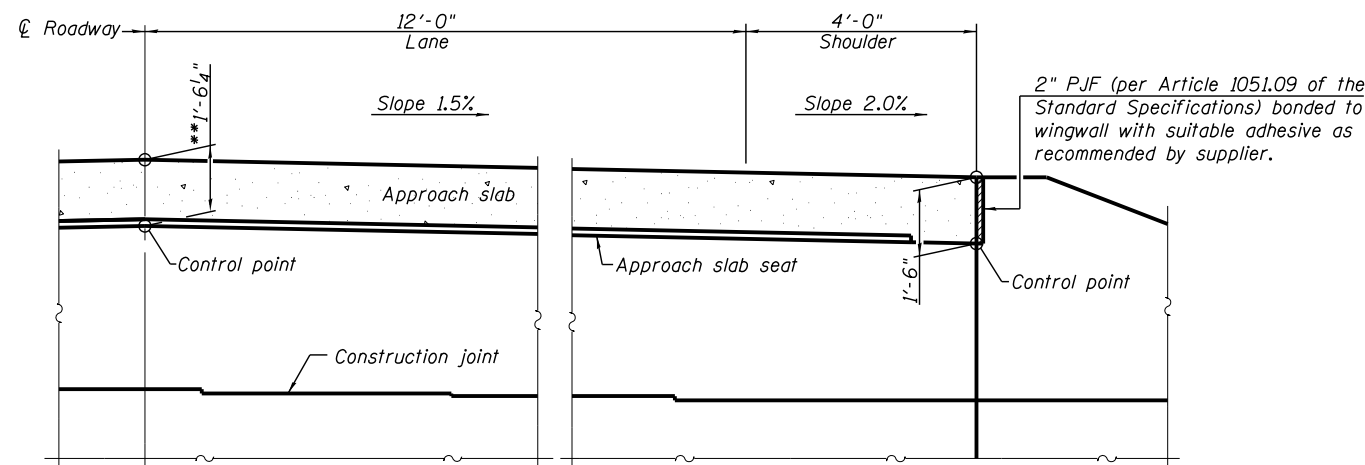
BAR s(E)



BAR s1(E)



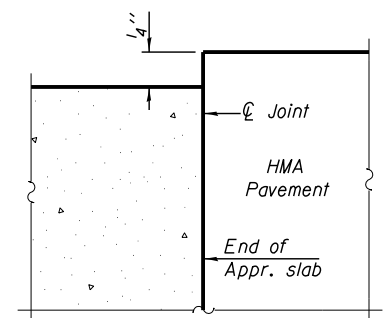
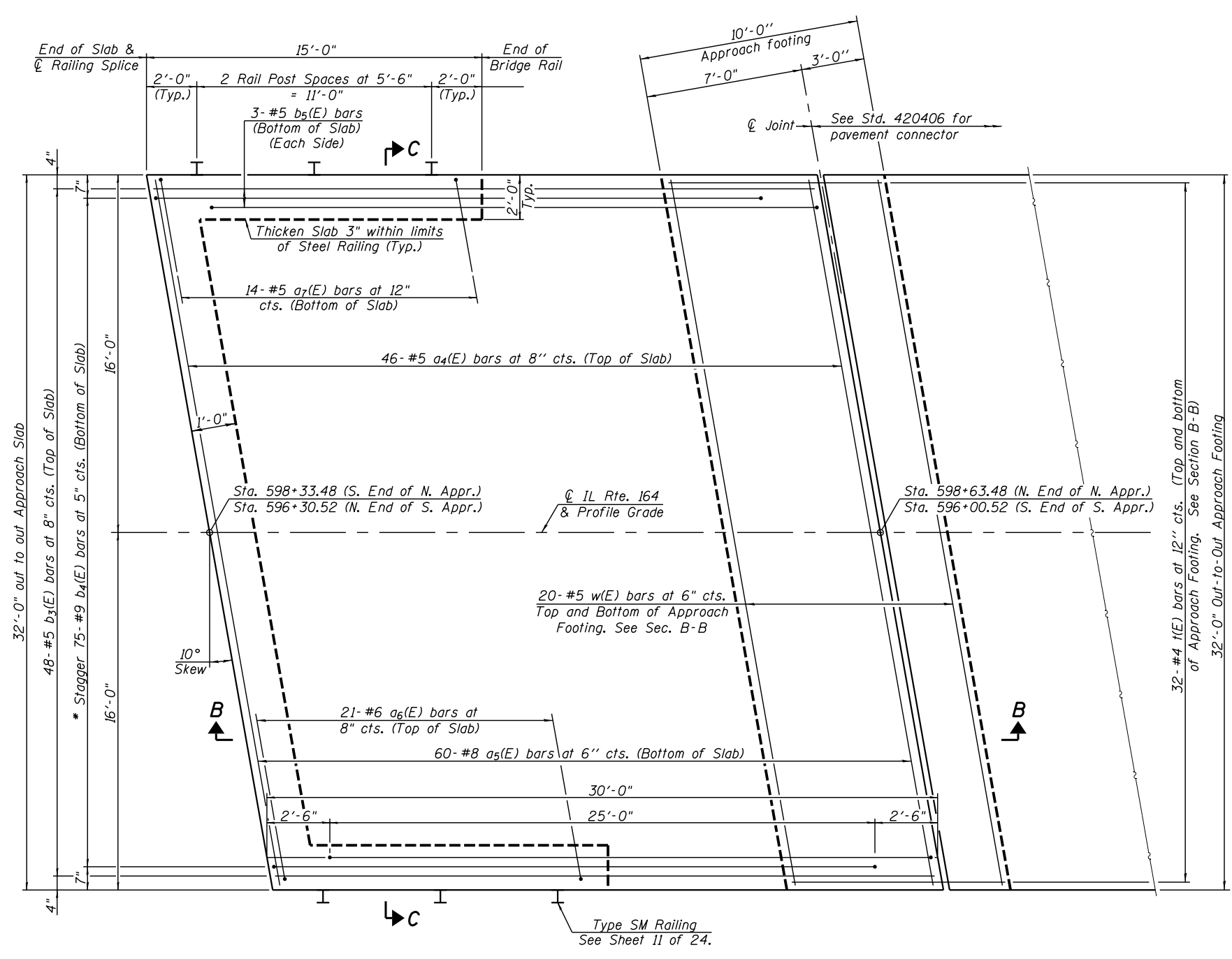
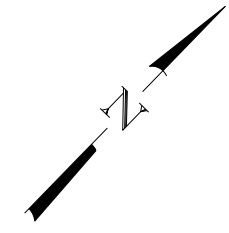
BAR v(E)



SECTION B-B

Notes:
 Reinforcement bars in diaphragm are billed with superstructure on Sheet 7 of 24.
 Concrete in diaphragm is included with Concrete Superstructure on Sheet 7 of 24.
 The s(E) and s1(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.
 The approach slab seat shall have a constant slope determined from the control points shown.
 For bearing details see Sheet 15 of 24.

Notes:
 See Sheet 10 of 24 for Sections B-B & C-C.
 See Sheet 11 of 24 for Railing & Railing Connection Details.
 a₄(E), a₅(E) bar spacings measured along ϕ Rdwy.



FLEXIBLE PAVEMENT
DETAIL A

PLAN

(North Approach shown)

- * Tilt #9 b₄(E) bars as required to maintain clearance.
- ** Space between a₄(E) bars, typ. each side.
- *** Space between every other a₅(E) bar, typ. each side.

(Sheet 1 of 2)



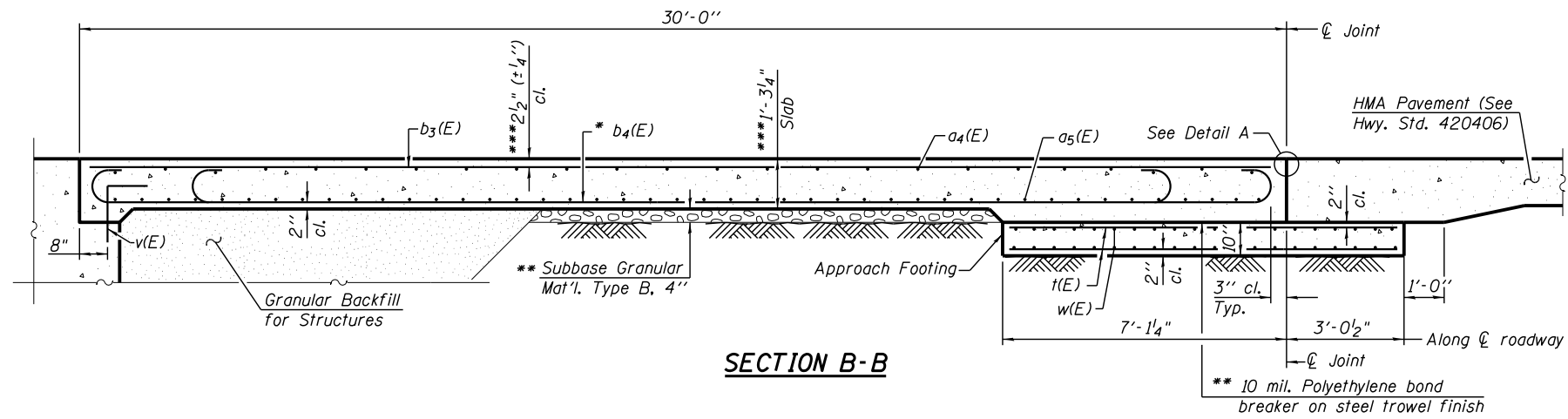
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PLOT SCALE =	CHECKED - MAH	REVISED -
PLOT DATE =	DRAWN - JRP	REVISED -
	CHECKED - GBR	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH SLAB
STRUCTURE NO. 094-0052

SHEET NO. 9 OF 24 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	27
CONTRACT NO. 68B43				
ILLINOIS FED. AID PROJECT				



Notes:

See sheet 9 of 24 for Detail A.

Approach slab shall be paid for as Concrete Superstructure (Approach Slab).

Approach footing concrete shall be paid for as Concrete Structures.

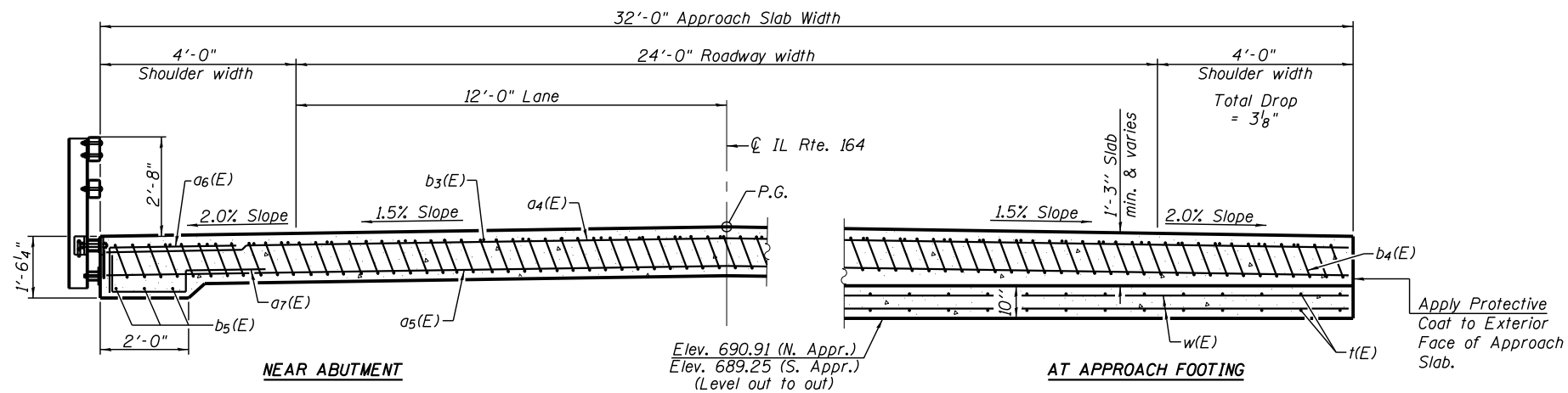
Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.

For v(E) bar details, see sheet 8 of 24.

The approach footing maximum applied service bearing pressure (Q_{max}) = 2.0 ksf.

Cost of excavation for approach footing included with Concrete Structures.

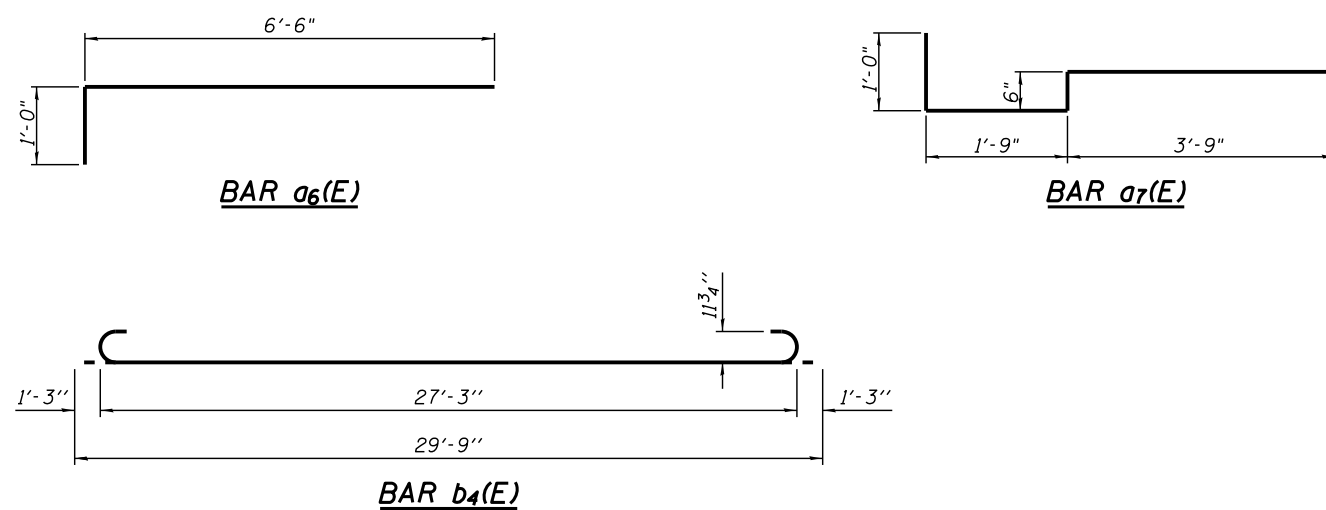
For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 24.



* Tilt #9 b4(E) bars as required to maintain clearance.

** Cost included with Concrete Superstructure (Approach Slab).

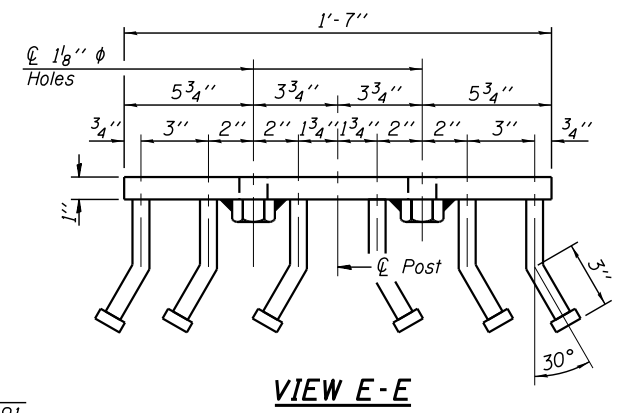
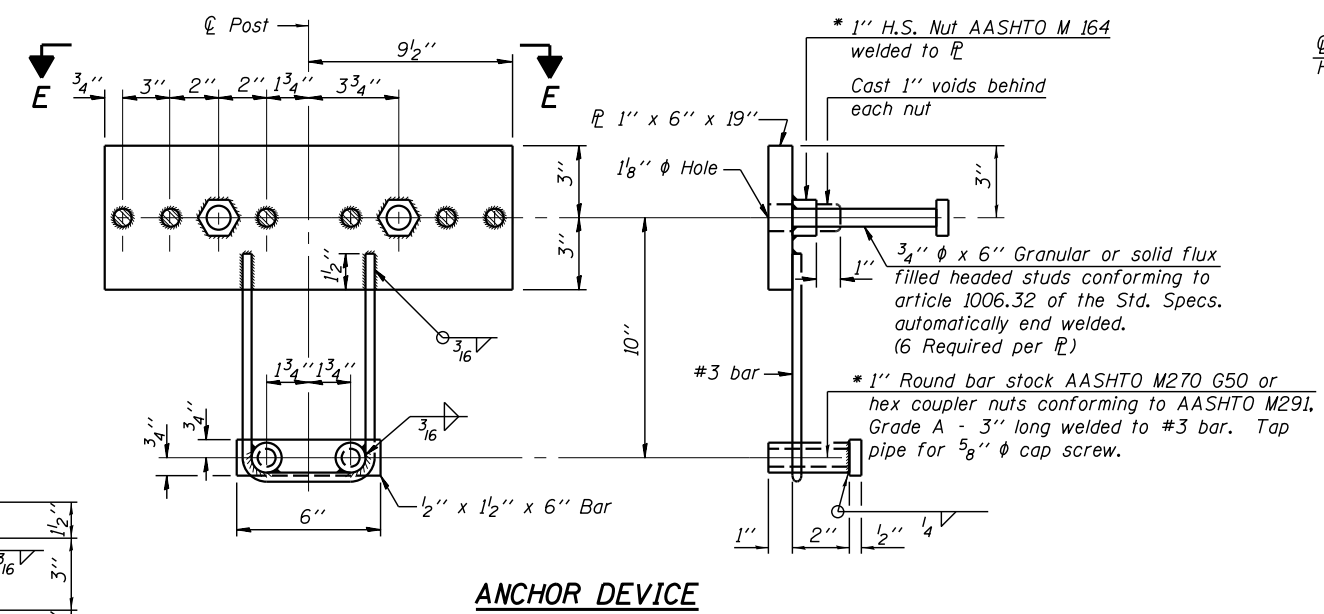
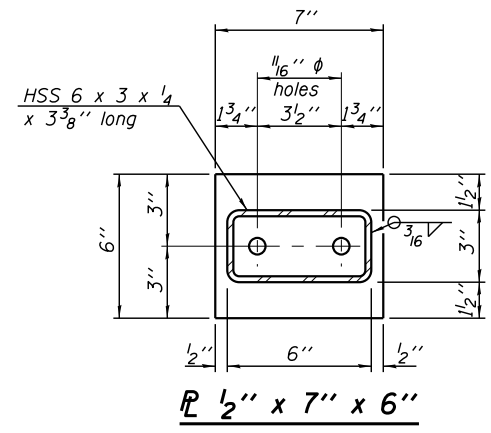
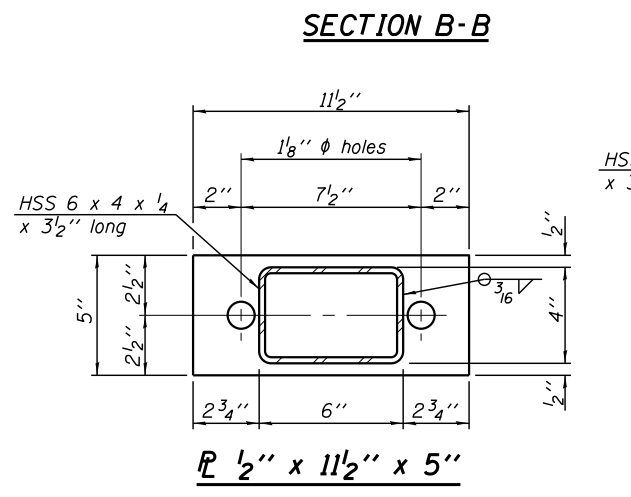
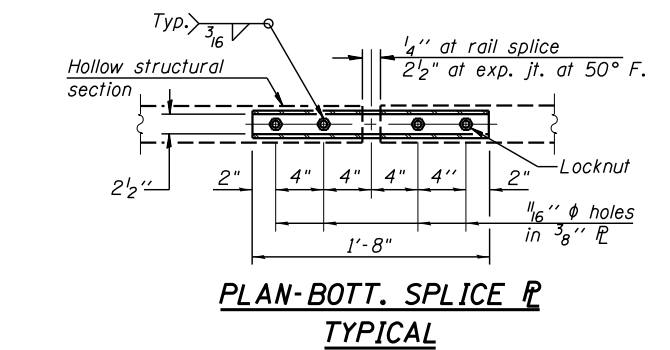
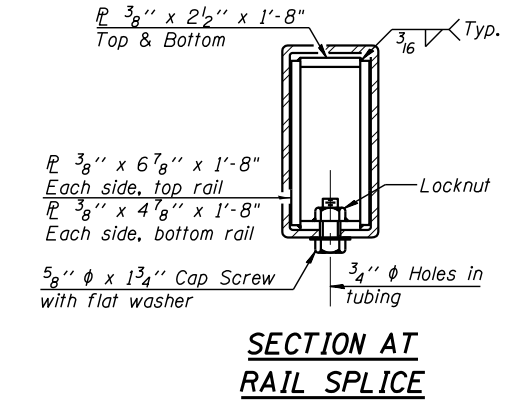
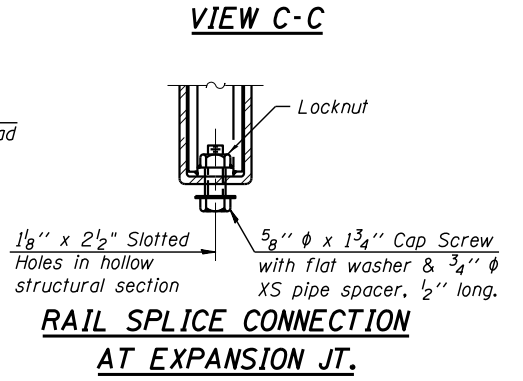
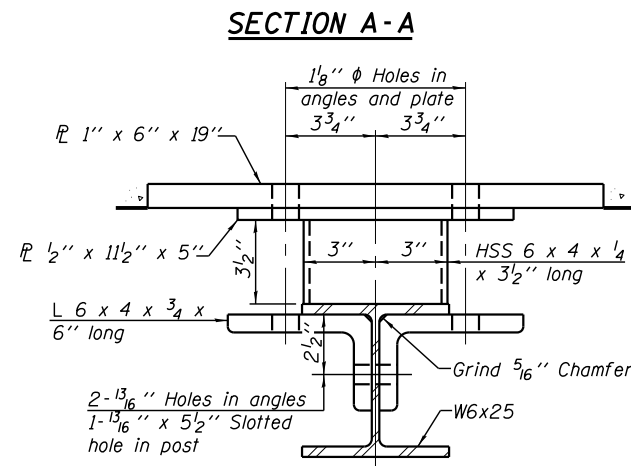
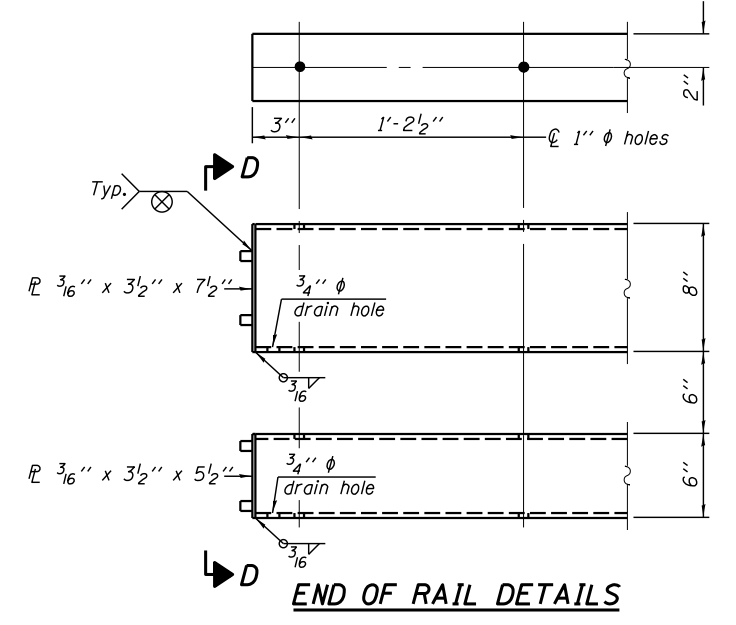
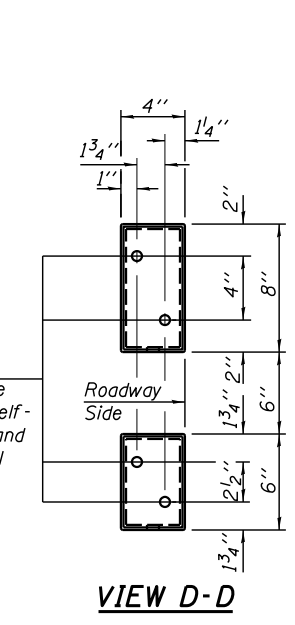
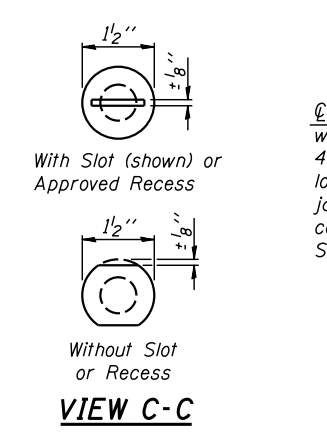
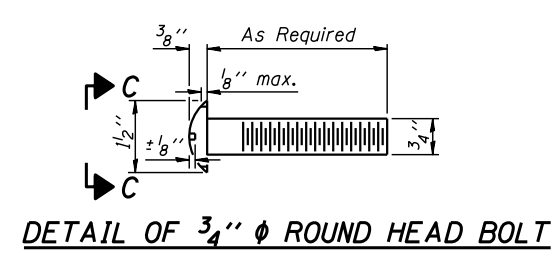
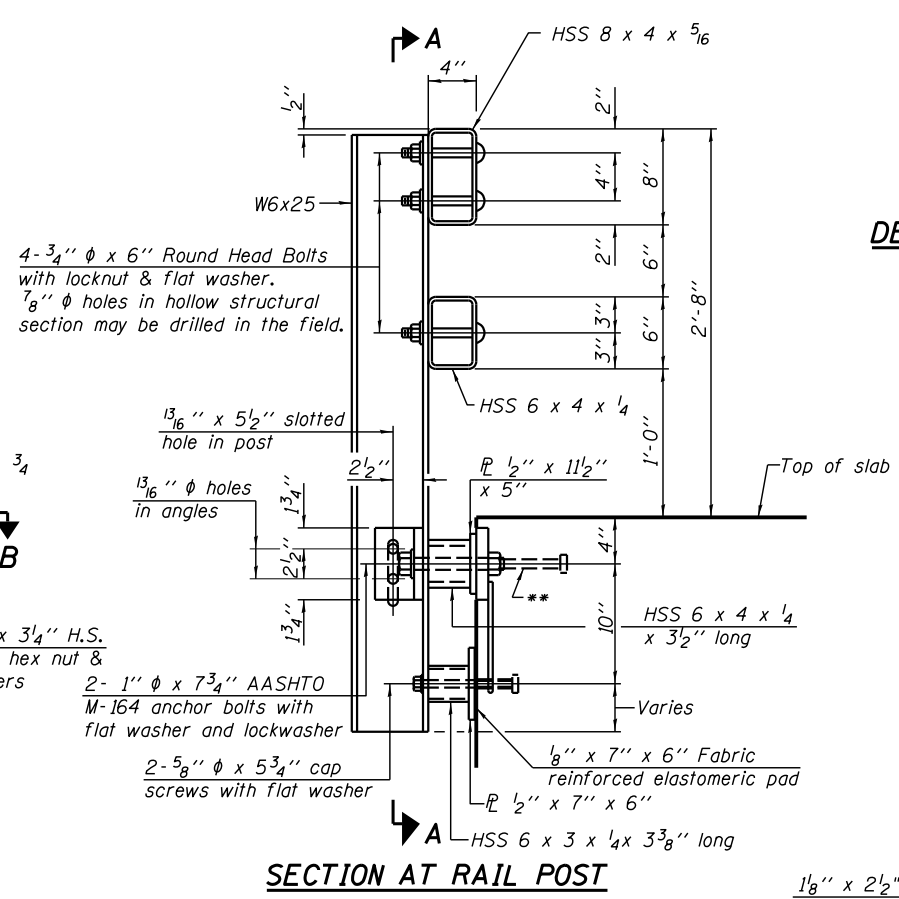
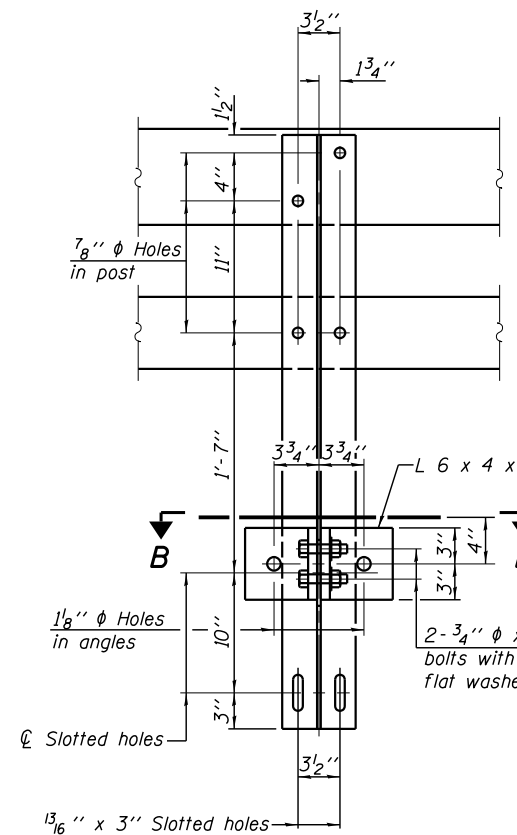
*** Prior to grinding



**TWO APPROACHES
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a4(E)	92	#5	32'-2"	—
a5(E)	120	#8	32'-2"	—
a6(E)	84	#6	7'-6"	┌
a7(E)	56	#5	7'-0"	┌
b3(E)	52	#5	29'-8"	—
b4(E)	150	#9	29'-9"	┌
b5(E)	12	#5	14'-4"	—
t(E)	128	#4	9'-10"	—
w(E)	80	#5	32'-2"	—
Concrete Superstructure (Approach Slab)			Cu. Yd.	95.4
Concrete Structures			Cu. Yd.	20.0
Reinforcement Bars, Epoxy Coated			Pound	35240

(Sheet 2 of 2)



Notes:
 For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type SM.
 All steel rail members shall be galvanized according to Article 509.05 of the Standard Specifications.
 * The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.
 See Sheet 12 of 24 for Rail Post spacing.

*Threaded areas shall be plugged or blocked off during casting of beam. Galvanized after fabrication.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type SM	Foot	466



USER NAME =	DESIGNED - GBR	REVISED -
DESIGNED - GBR	CHECKED - MAH	REVISED -
CHECKED - MAH	DRAWN - JRP	REVISED -
DRAWN - JRP	CHECKED - GBR	REVISED -
CHECKED - GBR		

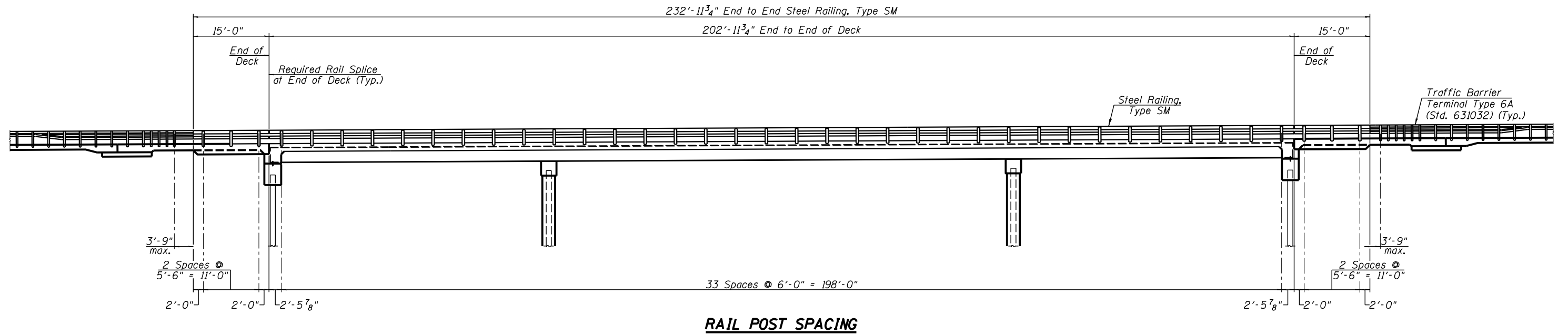
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**STEEL RAILING, TYPE SM
STRUCTURE NO. 094-0052**

SHEET NO. 11 OF 24 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	29
CONTRACT NO. 68B43				
ILLINOIS FED. AID PROJECT				

(6'-3" Maximum Post Spacing)



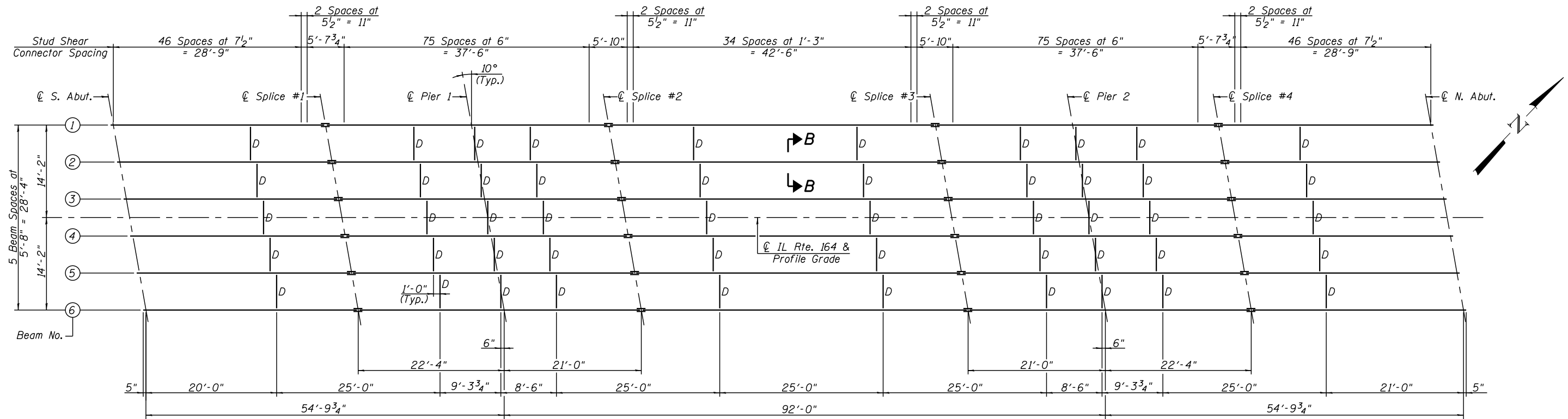
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PLOT DATE =	CHECKED - GBR	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**STEEL RAILING, TYPE SM
STRUCTURE NO. 094-0052**

SHEET NO. 12 OF 24 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	30
CONTRACT NO. 68B43				
ILLINOIS FED. AID PROJECT				

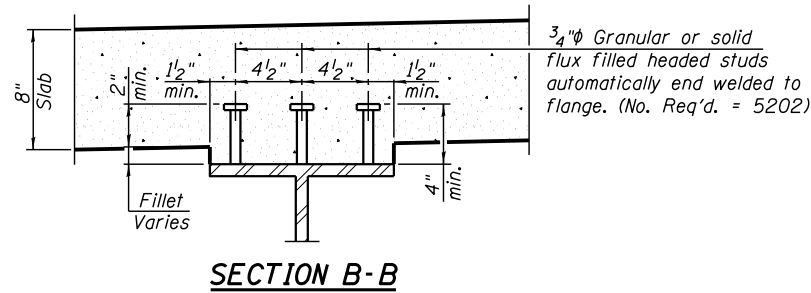


FRAMING PLAN

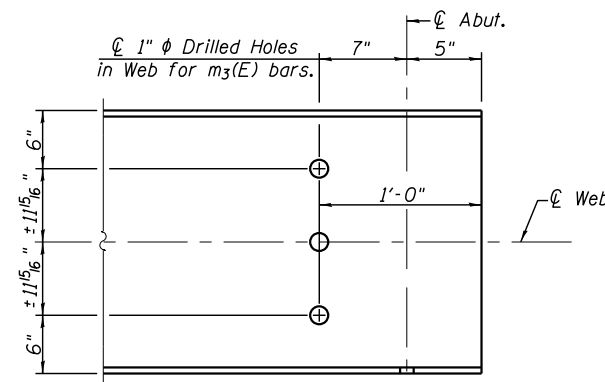
All beams are W36x150, AASHTO M 270, Grade 50, NTR.

Note: Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.

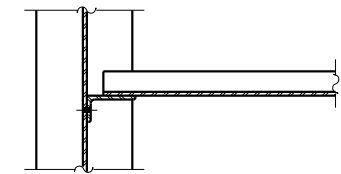
All new structural steel shall be hot-dip galvanized. See Special Provision for "Hot-Dip Galvanizing for Structural Steel".



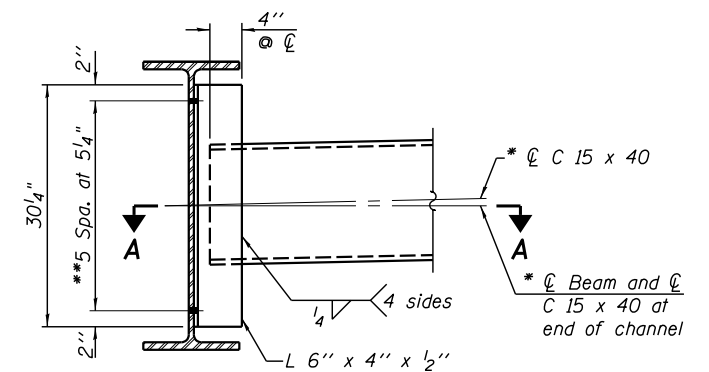
SECTION B-B



TYP. END OF BEAM ELEVATION



SECTION A-A



INTERIOR DIAPHRAGM D
(50 Required)

***** TOP OF BEAM ELEVATIONS**

	℄ S. Abut.	℄ Splice 1	℄ Pier 1	℄ Splice 2	℄ Splice 3	℄ Pier 2	℄ Splice 4	℄ N. Abut.
Beam 1	690.65	690.57	690.64	690.70	691.02	691.23	691.45	691.94
Beam 2	690.75	690.67	690.74	690.80	691.13	691.34	691.56	692.05
Beam 3	690.83	690.76	690.83	690.89	691.22	691.43	691.65	692.15
Beam 4	690.83	690.76	690.83	690.90	691.23	691.44	691.67	692.17
Beam 5	690.74	690.68	690.75	690.81	691.15	691.36	691.59	692.10
Beam 6	690.65	690.58	690.65	690.72	691.06	691.28	691.51	692.01

*** For Fabrication Only

Note:

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.

Two hardened washers required for each set of oversized holes. *Alternate channels C 15 x 50 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.

**3/4" φ HS bolts, 1 5/16" φ holes

BEAM MOMENT TABLE				
		0.4 Span	Pier 1	0.5 Span 2
		1 or 3	or 2	
		0.6 Span 3		
		Interior	Interior	Interior
I_s	(in ⁴)	9040	9040	9040
$I_c(n)$	(in ⁴)	23031	23031	23031
$I_c(3n)$	(in ⁴)	17046	17046	17046
$I_c(cr)$	(in ⁴)	-	-	-
S_s	(in ³)	504	504	504
$S_c(n)$	(in ³)	721	721	721
$S_c(3n)$	(in ³)	654	654	654
$S_c(cr)$	(in ³)	-	561	-
DC1	(k/')	0.778	0.778	0.778
MDC1	(k)	90.7	-474.8	348.3
DC2	(k/')	0.033	0.033	0.033
MDC2	(k)	3.8	-20.2	14.7
DW	(k/')	0.280	0.280	0.280
MDW	(k)	32.8	-173.1	126.3
LLDF		0.550	0.523	0.503
$M_k + IM$	(k)	545.3	-711.5	722.5
M_u (Strength I)	(k)	1121.6	-2123.5	1907.6
$\phi_r M_n$	(k)	3837	2886	3640
f_s DC1	(ksi)	2.2	-11.3	8.3
f_s DC2	(ksi)	0.1	-0.4	0.3
f_s DW	(ksi)	0.6	-3.2	2.3
f_s ($k + IM$)	(ksi)	9.1	-11.8	12.0
f_s (Service II)	(ksi)	14.9	-30.3	26.5
$0.95R_h F_{yf}$	(ksi)	47.5	47.5	47.5
f_s (Total)(Strength I)	(ksi)	-	-	-
$\phi_r F_n$	(ksi)	-	-	-
V_r	(k)	22.4	25.9	25.9

BEAM REACTION TABLE					
		Abutments		Piers	
		Interior	Exterior	Interior	Exterior
LLDF		0.646	0.506	0.646	0.506
OCF		-	1.04	-	-
R_{DC1}	(k)	12.7	13.3	65.8	69.2
R_{DC2}	(k)	0.5	0.5	2.8	2.8
R_{DW}	(k)	4.6	4.1	23.9	21.1
R_k	(k)	47.7	38.8	82.3	64.4
R_{Im}	(k)	12.3	10.0	15.2	11.9
R_{Total}	(k)	77.8	66.7	190.0	169.4

I_s, S_s : Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total-Strength I, and Service II) 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-Strength I, and Service II) in uncracked sections due to short-term composite live loads (in.⁴ and in.³).

$I_c(3n), S_c(3n)$: 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-Strength I, and Service II) in uncracked sections, due to long-term composite (superimposed) dead loads (in.⁴ and in.³).

$I_c(cr), S_c(cr)$: Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing f_s (Total-Strength I and Service II) in cracked sections, due to both short-term composite live loads and long-term composite (superimposed) dead loads (in.⁴ and in.³).

DC1: Un-factored non-composite dead load (kips/ft.).

MDC1: Un-factored moment due to non-composite dead load (kip-ft.).

DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).

MDC2: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).

DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).

MDW: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).

$M_k + IM$: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

M_u (Strength I): Factored design moment (kip-ft.).

$1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_k + IM$

$\phi_r M_n$: Compact composite positive moment capacity computed according to Article 6.10.7.1 or non-slender negative moment capacity according to Article A6.1.1 or A6.1.2 (kip-ft.).

f_s DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).

M_{DC1} / S_{nc}

f_s DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).

$M_{DC2} / S_c(3n)$ or $M_{DC2} / S_c(cr)$ as applicable.

f_s DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).

$M_{DW} / S_c(3n)$ or $M_{DW} / S_c(cr)$ as applicable.

f_s ($k + IM$): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live load plus impact loads as calculated below (ksi).

$M_k + IM / S_c(n)$ or $M_{LL+I} / S_c(cr)$ as applicable.

f_s (Service II): Sum of stresses as computed below (ksi).

$f_{sDC1} + f_{sDC2} + f_{sDW} + 1.3 f_s (k + IM)$

$0.95R_h F_{yf}$: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).

f_s (Total)(Strength I): Sum of stresses as computed below on non-compact section (ksi).

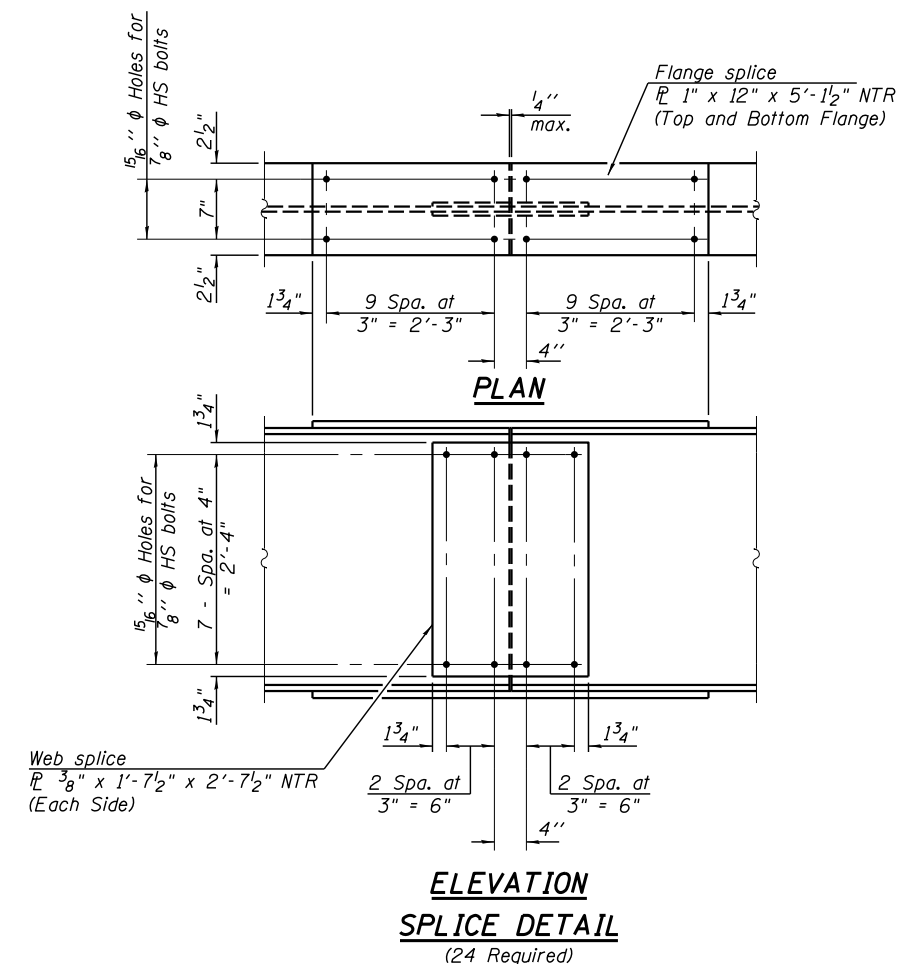
$1.25 (f_{sDC1} + f_{sDC2}) + 1.5 f_{sDW} + 1.75 f_s (k + IM)$

$\phi_r F_n$: Non-Compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7 or 6.10.8 (ksi).

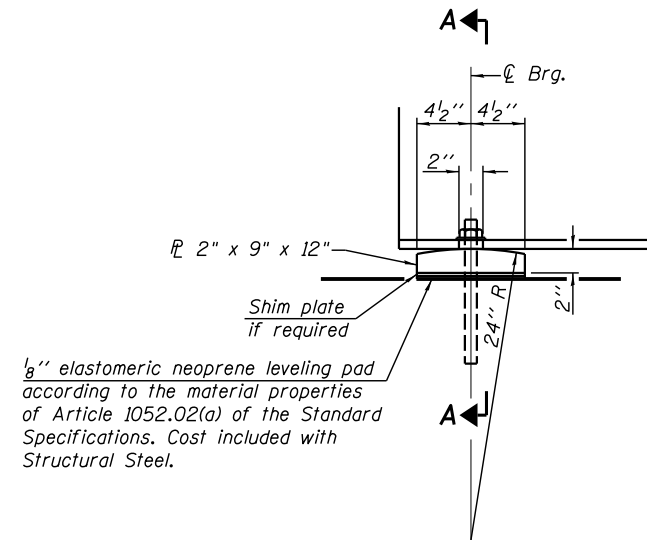
V_r : Maximum factored shear range in span computed according to Article 6.10.10.

LLDF: Live Load Distribution Factor

OCF: Obtuse Correction Factor



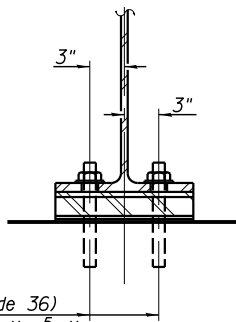
All splice plates shall be AASHTO M 270, Grade 50, NTR. Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2. All new structural steel shall be hot-dip galvanized. See Special Provision for "Hot-Dip Galvanizing for Structural Steel".



ELEVATION AT ABUTMENTS

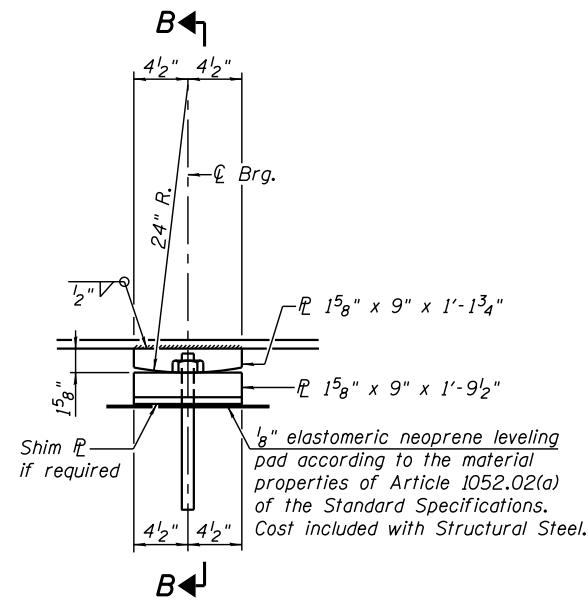
FIXED BEARING AT ABUTMENTS
(12 Required)

1/8" elastomeric neoprene leveling pad according to the material properties of Article 1052.02(a) of the Standard Specifications. Cost included with Structural Steel.



SECTION A-A

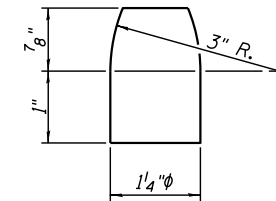
1" ϕ x 12" (F1554, Grade 36) anchor bolts with 2 1/4" x 2 1/4" x 5/16" ϕ washer under nut. 1 3/8" x 2" slotted hole in flange. 1 1/2" ϕ holes in bearing plate.



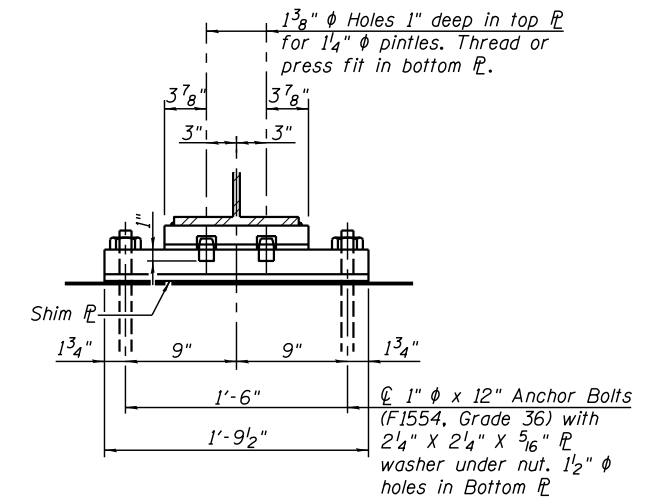
ELEVATION AT PIERS

FIXED BEARING AT PIERS
(12 Required)

1/8" elastomeric neoprene leveling pad according to the material properties of Article 1052.02(a) of the Standard Specifications. Cost included with Structural Steel.



PINTLE



SECTION B-B

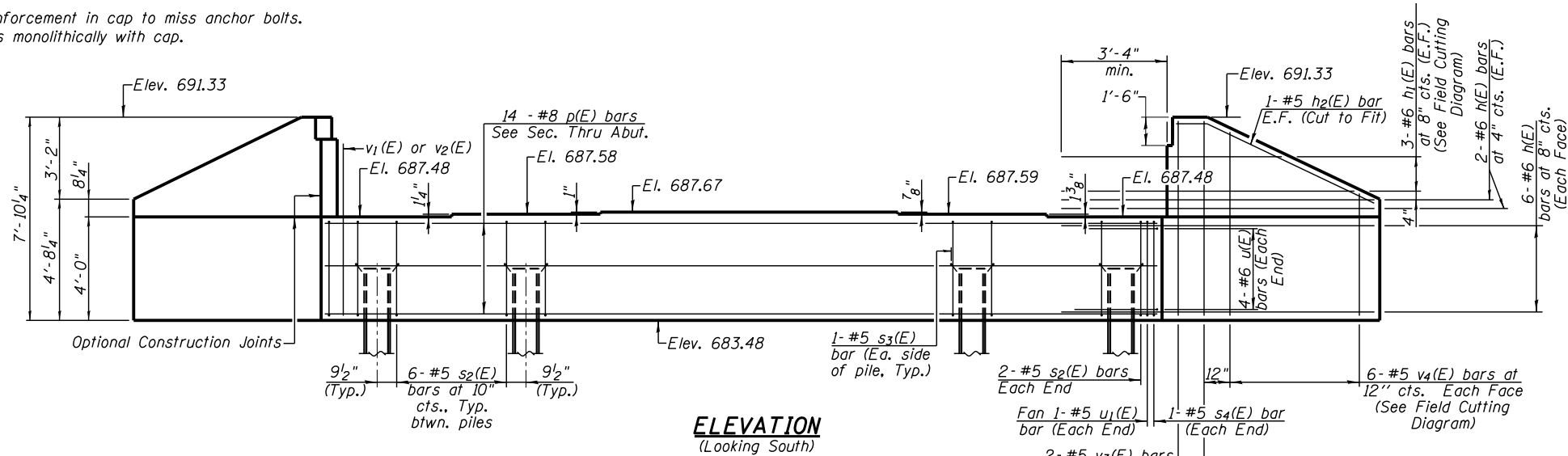
1 3/8" ϕ Holes 1" deep in top ϕ for 1 1/4" ϕ pintles. Thread or press fit in bottom ϕ .
1 3/4" 9" 9" 1 3/4"
1'-6" 1'-9 1/2"
1" ϕ x 12" Anchor Bolts (F1554, Grade 36) with 2 1/4" x 2 1/4" x 5/16" ϕ washer under nut. 1 1/2" ϕ holes in Bottom ϕ

Notes: 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.
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
The structural steel plates of the bearings shall conform to the requirements of AASHTO M 270, Grade 50.
All bearing plates, anchor bolts, nuts, washers and pintels shall be galvanized according to AASHTO M 111 or M 262 as applicable.
Beams shall be braced for stability during erection and remain braced until deck is poured and cured.
Anchor bolts at all supports shall be installed as each member is erected unless an equivalent temporary means of lateral restraint is used.

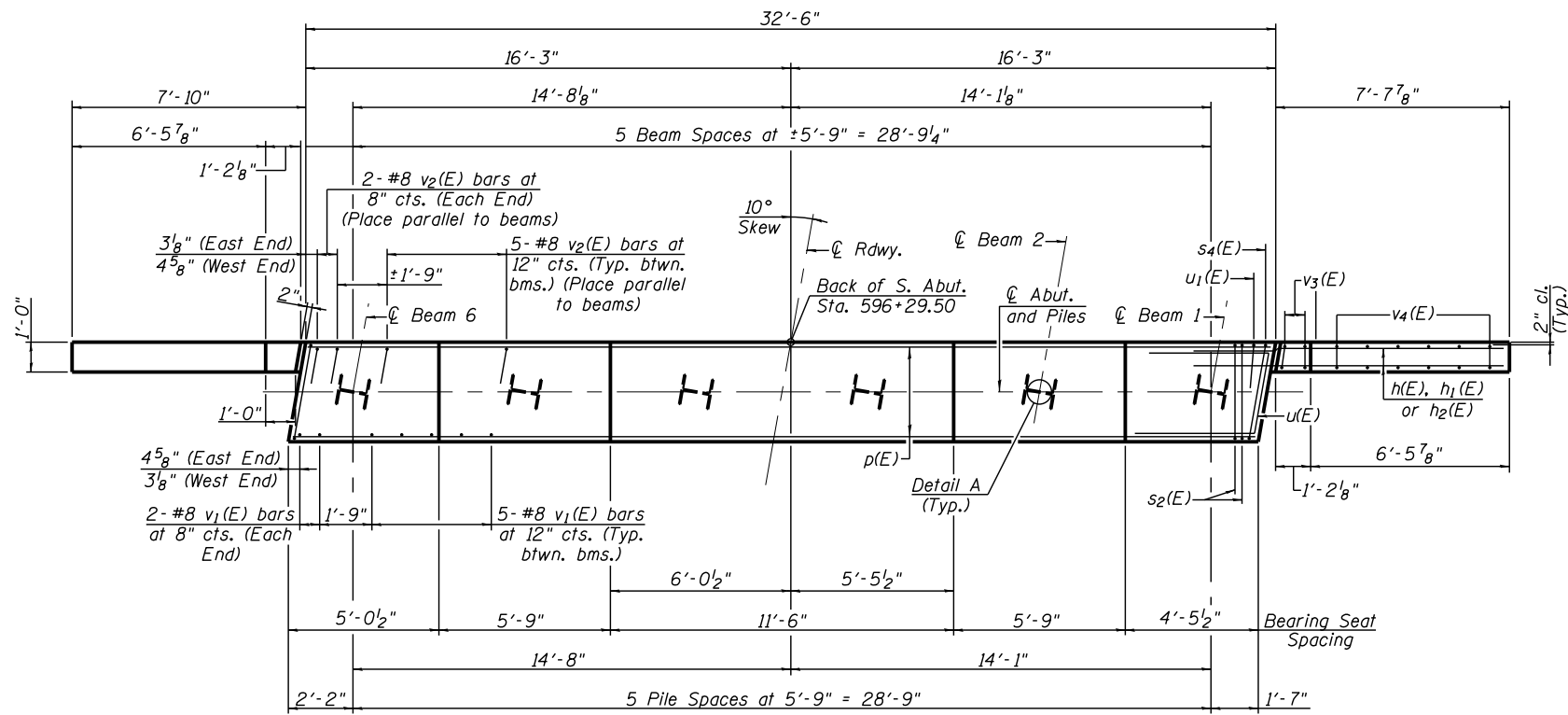
BILL OF MATERIAL

Item	Unit	Total
Anchor Bolts, 1"	Each	48

Notes:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.



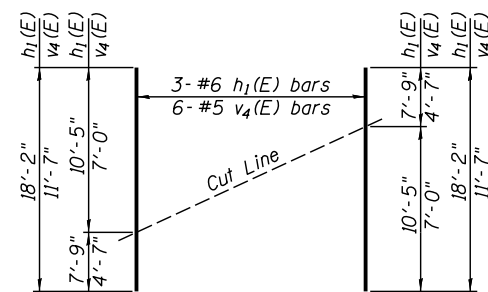
ELEVATION
(Looking South)



PLAN

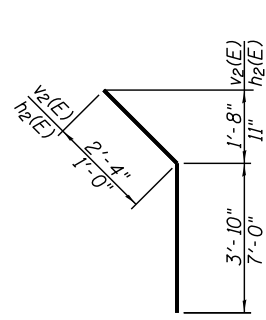
PILE DATA

Type: HP 12x63
Nominal Required Bearing: 497 kips
Factored Resistance Available: 273 kips
Est. Length: 45 ft.
No. Production Piles: 5
No. Test Piles: 1

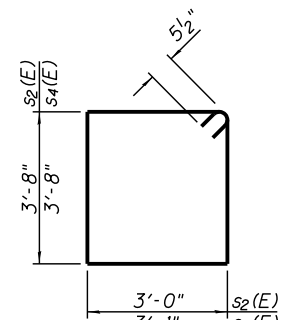


FIELD CUTTING DIAGRAM

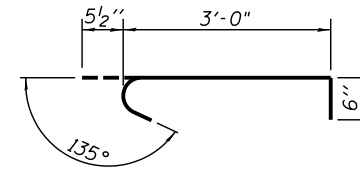
Order h₁(E) and v₄(E) full length. Cut as shown and use remainder of bars in opposite face.



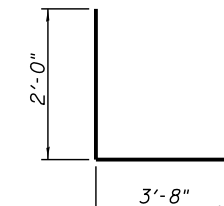
BAR v₂(E) & h₂(E)



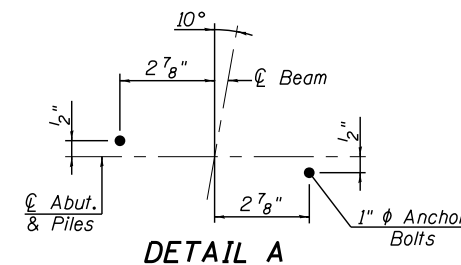
BAR s₂(E) & s₄(E)



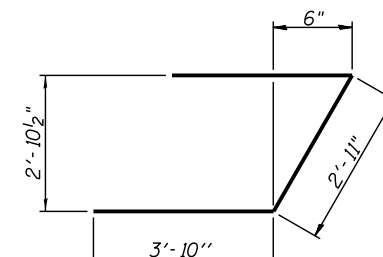
BAR s₃(E)



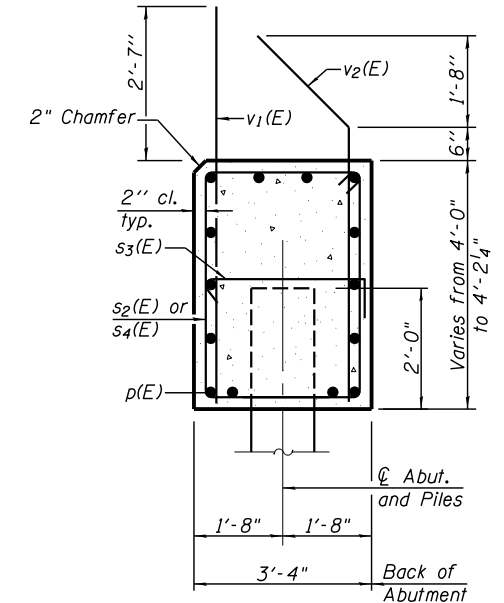
BAR u₁(E)



DETAIL A



BAR u(E)



SEC. THRU ABUT.

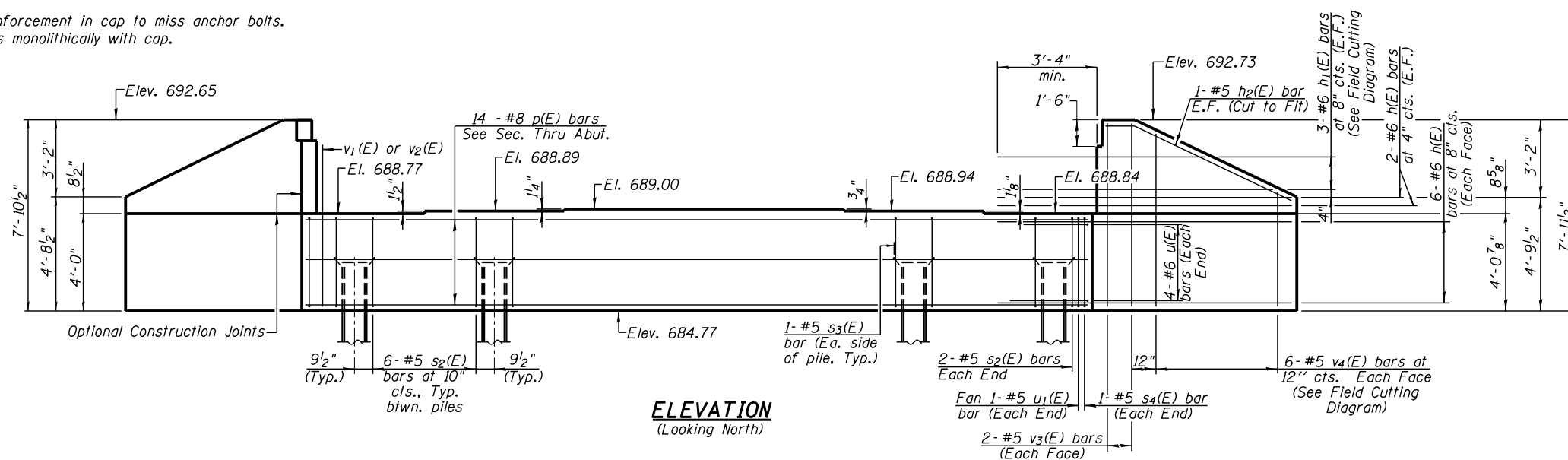
Dimensions at right angles to abutment.

BILL OF MATERIAL

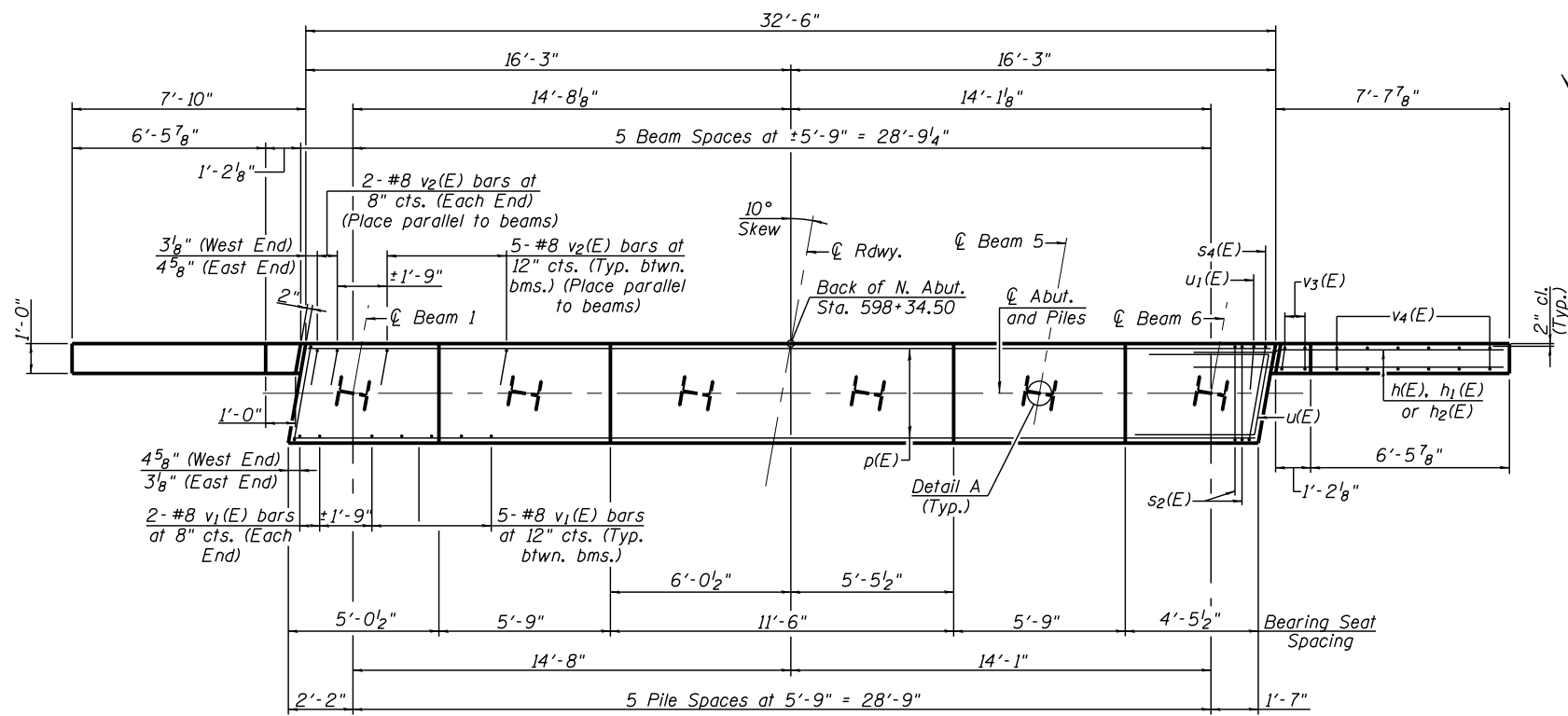
Bar	No.	Size	Length	Shape
h(E)	32	#6	11'-0"	—
h ₁ (E)	6	#6	18'-2"	—
h ₂ (E)	4	#5	8'-0"	—
p(E)	14	#8	32'-2"	—
s ₂ (E)	34	#5	14'-3"	□
s ₃ (E)	12	#5	4'-0"	□
s ₄ (E)	2	#5	14'-5"	□
u(E)	8	#6	10'-7"	—
u ₁ (E)	2	#5	7'-8"	—
v ₁ (E)	29	#8	5'-11"	—
v ₂ (E)	29	#8	6'-2"	—
v ₃ (E)	8	#5	7'-6"	—
v ₄ (E)	12	#5	11'-7"	—
Structure Excavation		Cu. Yd.	99	
Concrete Structures		Cu. Yd.	20.2	
Reinforcement Bars, Epoxy Coated		Pound	3800	
Furnishing Steel Piles HP 12x63		Foot	225	
Driving Piles HP 12x63		Foot	225	
Test Pile Steel HP 12x63		Each	1	

For details of piles see sheet 20 of 24.

Notes:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.



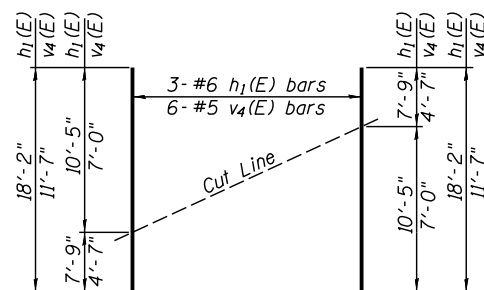
ELEVATION
(Looking North)



PLAN

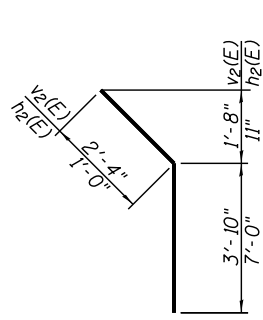
PILE DATA

Type: HP 12x63
Nominal Required Bearing: 497 kips
Factored Resistance Available: 273 kips
Est. Length: 45 ft.
No. Production Piles: 6
No. Test Piles: 0

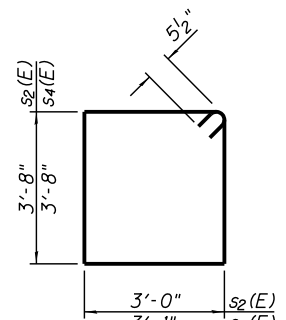


FIELD CUTTING DIAGRAM

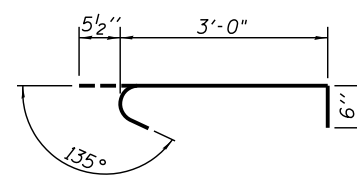
Order h₁(E) and v₄(E) full length. Cut as shown and use remainder of bars in opposite face.



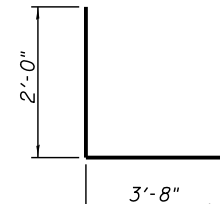
BAR v₂(E) & h₂(E)



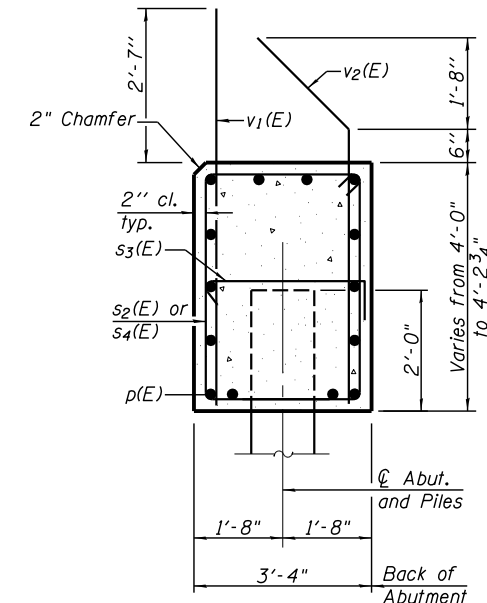
BAR s₂(E) & s₄(E)



BAR s₃(E)



BAR u₁(E)



SEC. THRU ABUT.

Dimensions at right angles to abutment.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	32	#6	11'-0"	—
h ₁ (E)	6	#6	18'-2"	—
h ₂ (E)	4	#5	8'-0"	—
p(E)	14	#8	32'-2"	—
s ₂ (E)	34	#5	14'-3"	□
s ₃ (E)	12	#5	4'-0"	□
s ₄ (E)	2	#5	14'-5"	□
u(E)	8	#6	10'-7"	—
u ₁ (E)	2	#5	7'-8"	—
v ₁ (E)	29	#8	5'-11"	—
v ₂ (E)	29	#8	6'-2"	—
v ₃ (E)	8	#5	7'-6"	—
v ₄ (E)	12	#5	11'-7"	—
Structure Excavation		Cu. Yd.	99	
Concrete Structures		Cu. Yd.	20.4	
Reinforcement Bars, Epoxy Coated		Pound	3800	
Furnishing Steel Piles HP 12x63		Foot	270	
Driving Piles		Foot	270	

For details of piles see sheet 20 of 24.



USER NAME =	DESIGNED - GBR	REVISED -
PLOT SCALE =	CHECKED - MAH	REVISED -
PLOT DATE =	DRAWN - JRP	REVISED -
	CHECKED - GBR	REVISED -

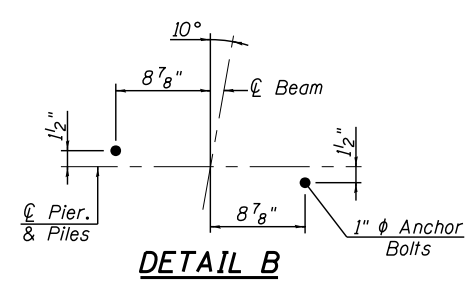
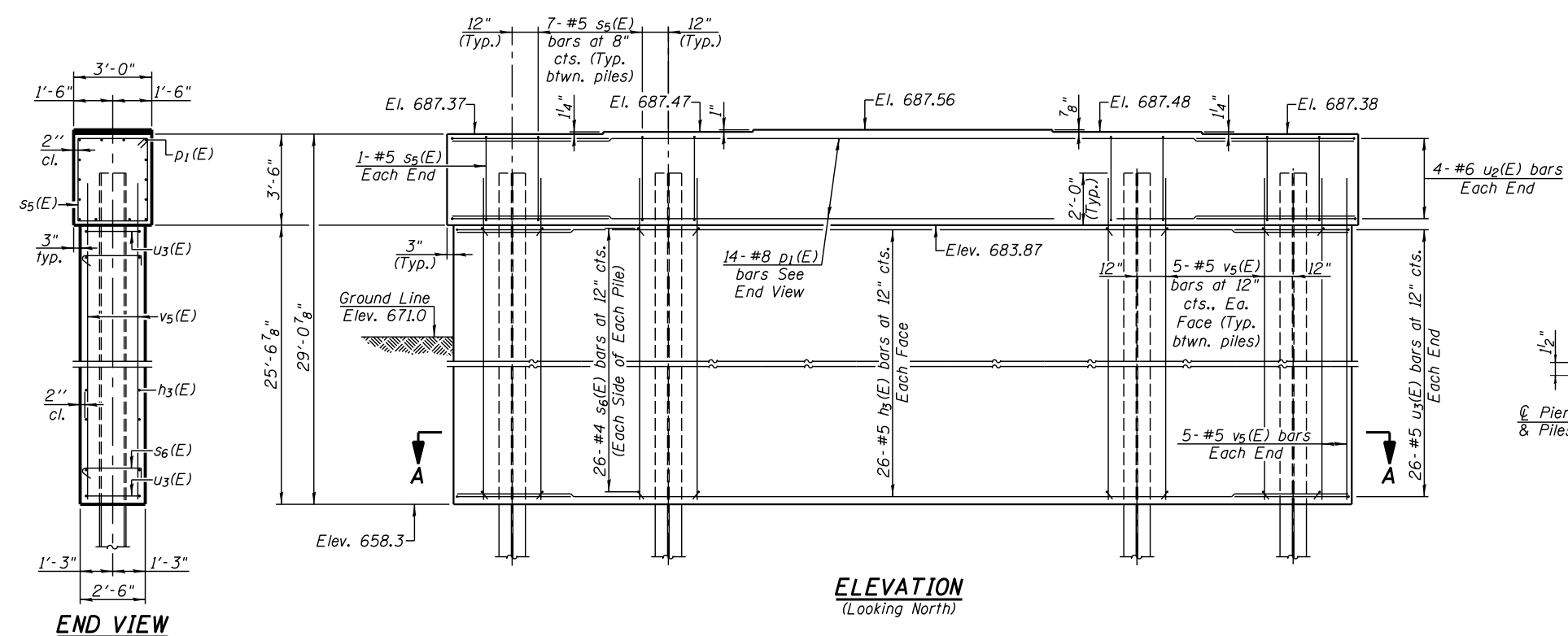
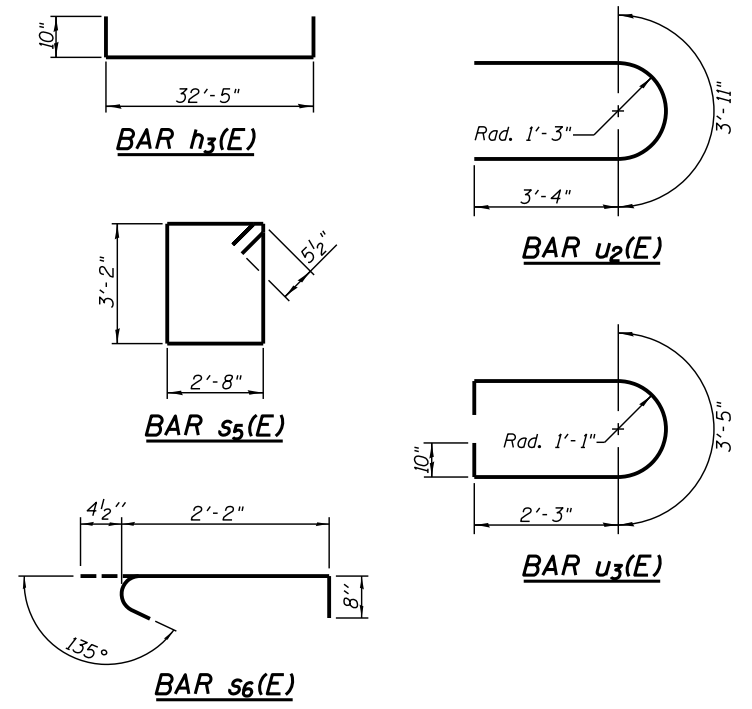
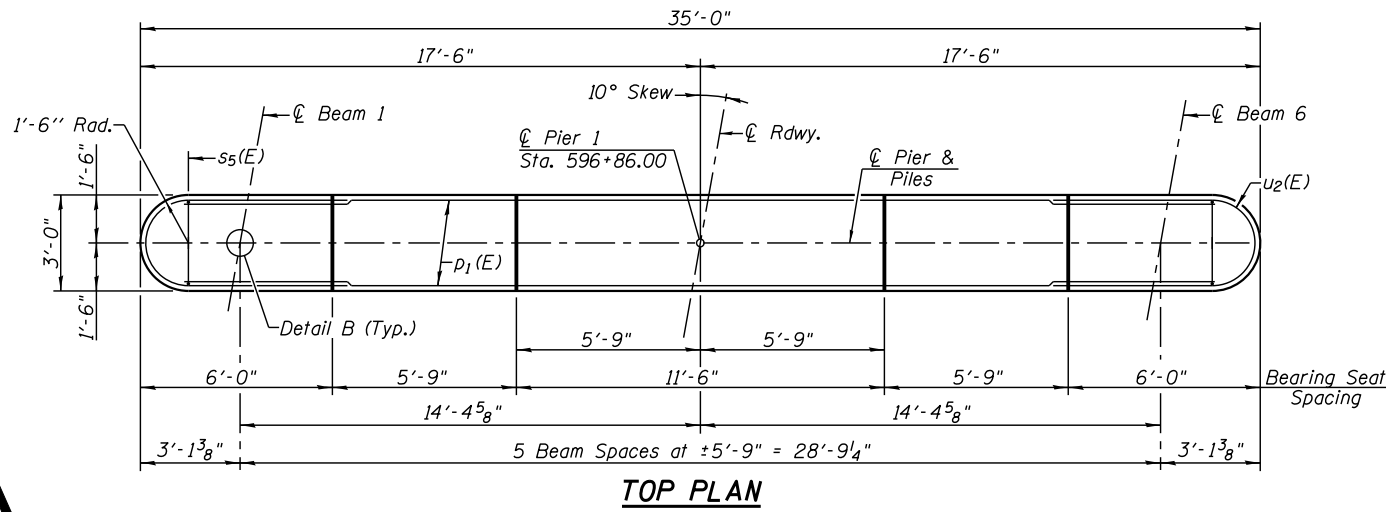
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH ABUTMENT
STRUCTURE NO. 094-0052

SHEET NO. 17 OF 24 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	35
CONTRACT NO. 68B43				
ILLINOIS FED. AID PROJECT				

Notes:
 Space reinforcement in cap to miss anchor bolts.
 Pour steps monolithically with cap.
 If a portion of the 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.



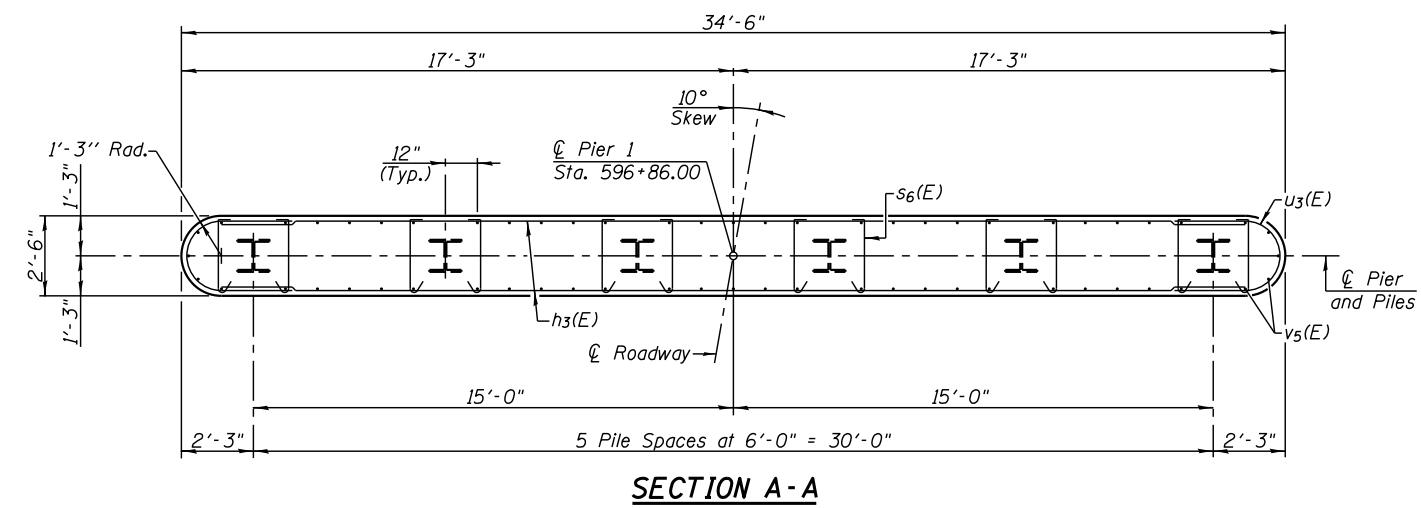
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h ₃ (E)	52	#5	34'-1"	┌
p ₁ (E)	14	#8	32'-0"	—
s ₅ (E)	37	#5	12'-7"	□
s ₆ (E)	312	#4	3'-3"	└
u ₂ (E)	8	#6	10'-7"	U
u ₃ (E)	52	#5	9'-7"	U
v ₅ (E)	60	#5	27'-9"	—
Cofferdam Excavation			Cu. Yd.	204
Cofferdam (Type 2) (Location - 1)			Each	1
Concrete Structures			Cu. Yd.	94.2
Reinforcement Bars, Epoxy Coated			Pound	6600
Furnishing Steel Piles HP 14X89			Foot	270
Driving Piles			Foot	270

PILE DATA

Type: HP 14 x 89
 Nominal Required Bearing: 705 kips
 Factored Resistance Available: 388 kips
 Est. Length: 45 ft.
 No. Production Piles: 6
 No. Test Piles: 0

For details of piles see sheet 20 of 24.



USER NAME =	DESIGNED - GBR	REVISED -
PLOT SCALE =	CHECKED - MAH	REVISED -
PLOT DATE =	DRAWN - JRP	REVISED -
	CHECKED - GBR	REVISED -

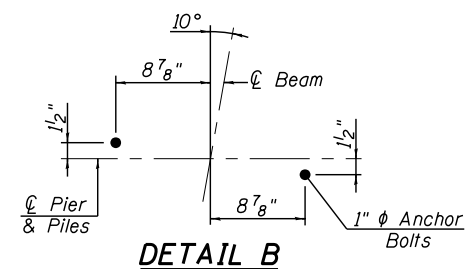
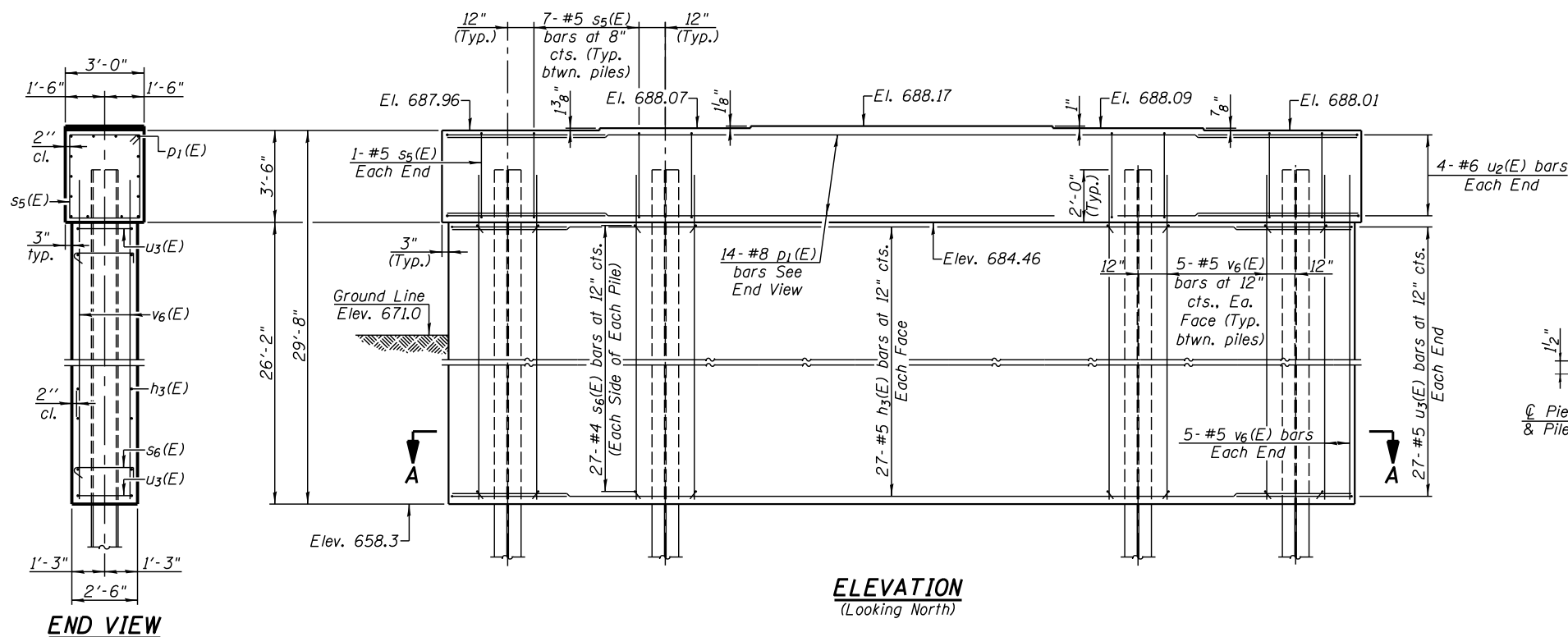
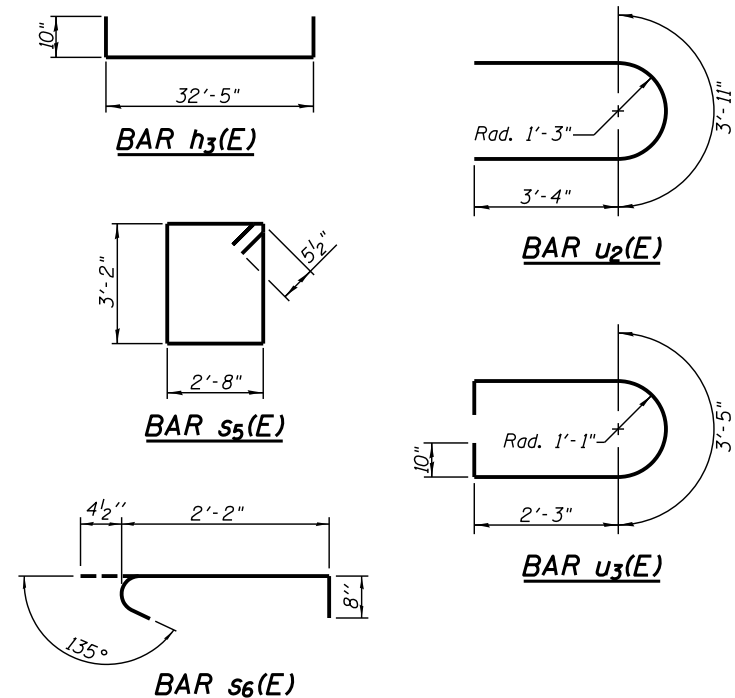
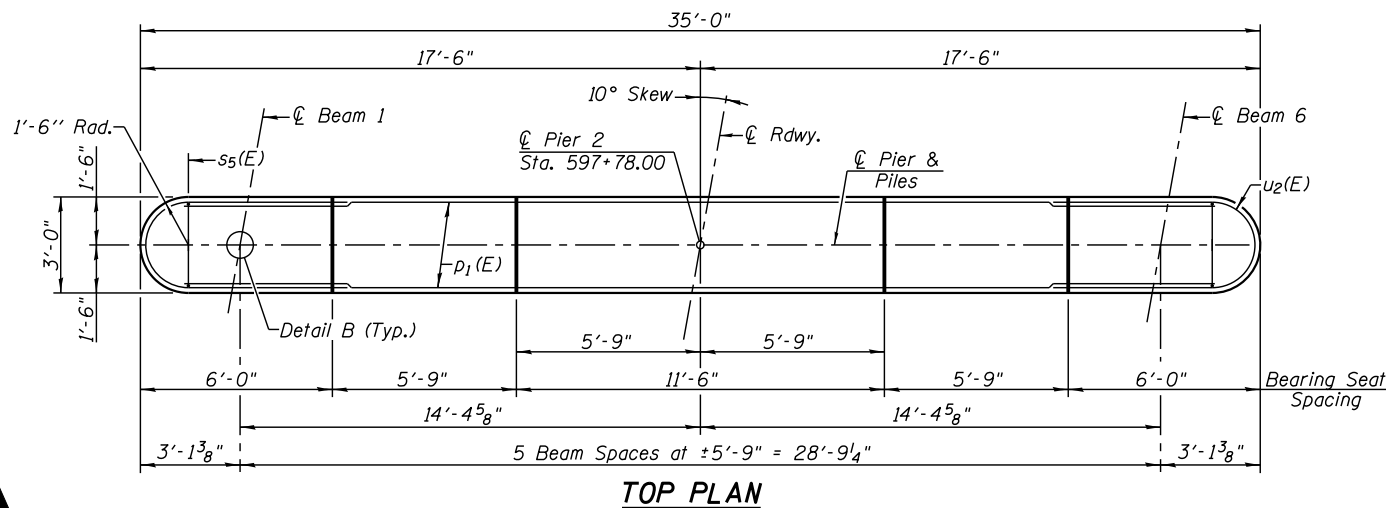
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

PIER 1
 STRUCTURE NO. 094-0052

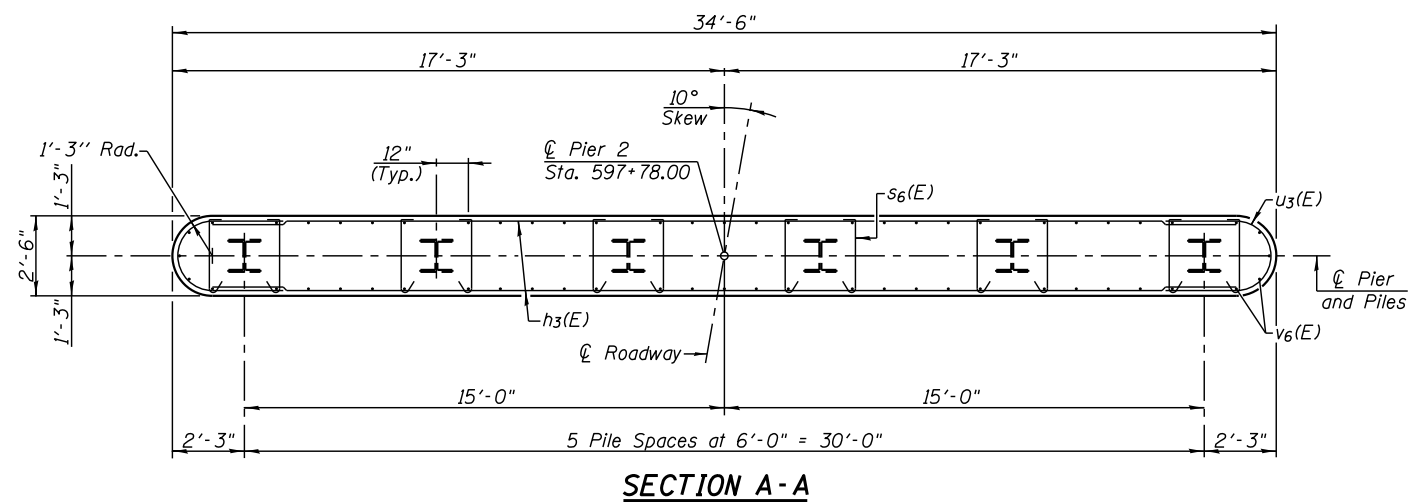
SHEET NO. 18 OF 24 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	36
CONTRACT NO. 68B43				
ILLINOIS FED. AID PROJECT				

Notes:
 Space reinforcement in cap to miss anchor bolts.
 Pour steps monolithically with cap.
 If a portion of the 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.



END VIEW



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h ₃ (E)	54	#5	34'-1"	┌
p ₁ (E)	14	#8	32'-0"	—
s ₅ (E)	37	#5	12'-7"	□
s ₆ (E)	324	#4	3'-3"	└
u ₂ (E)	8	#6	10'-7"	U
u ₃ (E)	54	#5	9'-7"	U
v ₆ (E)	60	#5	28'-5"	—
Cofferdam Excavation			Cu. Yd.	252
Cofferdam (Type 2)			Each	1
Concrete Structures			Cu. Yd.	96.1
Reinforcement Bars, Epoxy Coated			Pound	6750
Furnishing Steel Piles				
HP 14X89			Foot	230
Driving Piles			Foot	230
Test Pile Steel				
HP 14x89			Each	1

PILE DATA

Type: HP 14 x 89
 Nominal Required Bearing: 705 kips
 Factored Resistance Available: 388 kips
 Est. Length: 46 ft.
 No. Production Piles: 5
 No. Test Piles: 1

For details of piles see sheet 20 of 24.



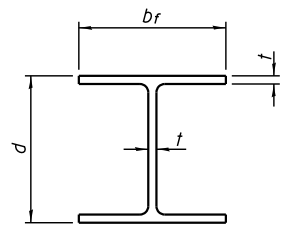
USER NAME =	DESIGNED - GBR	REVISED -
PLOT SCALE =	CHECKED - MAH	REVISED -
PLOT DATE =	DRAWN - JRP	REVISED -
	CHECKED - GBR	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

PIER 2
 STRUCTURE NO. 094-0052

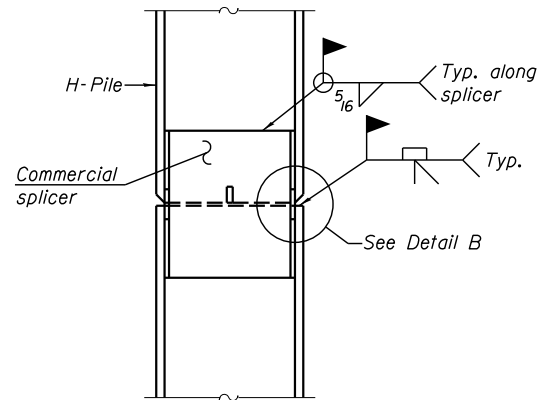
SHEET NO. 19 OF 24 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	37
CONTRACT NO. 68B43				
ILLINOIS FED. AID PROJECT				

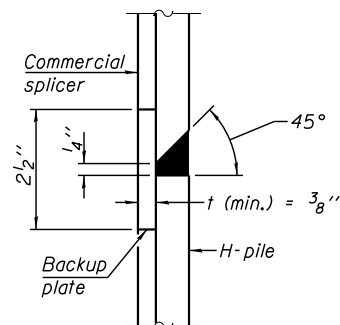


STEEL PILE TABLE

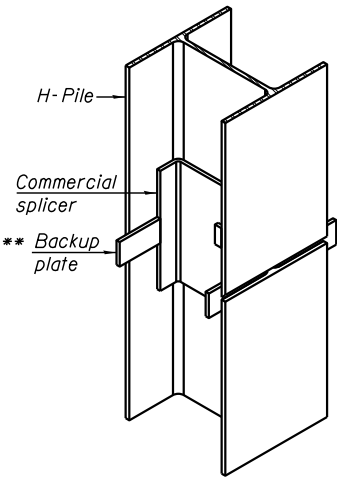
Designation	Depth d	Flange width br	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	1 3/16"	30"
x102	14"	14 3/4"	1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53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

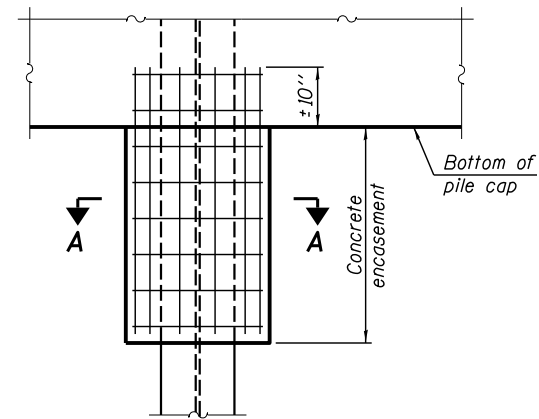


DETAIL "B"



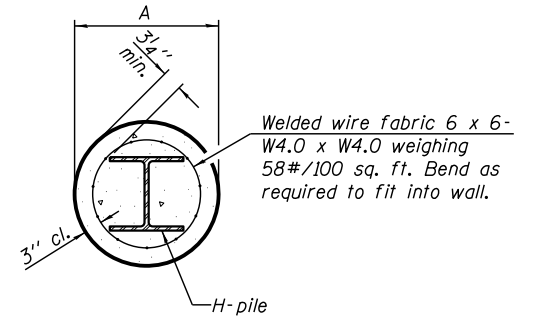
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



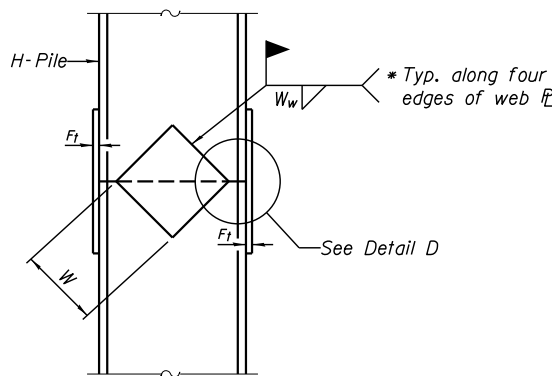
ELEVATION

PILE ENCASEMENT

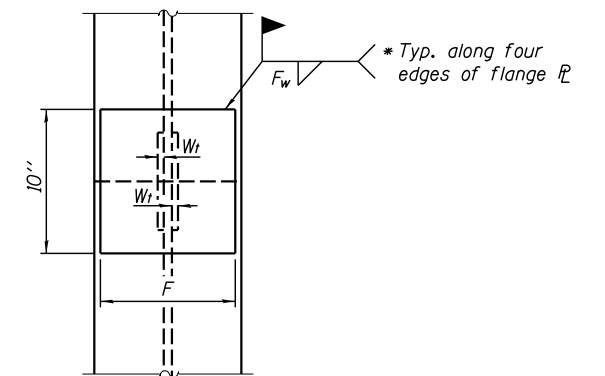


SECTION A-A

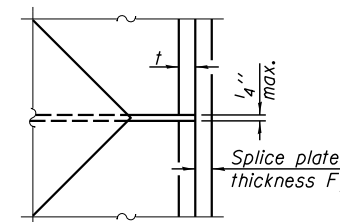
Note: Forms for encasement may be omitted when soil conditions permit.



ELEVATION



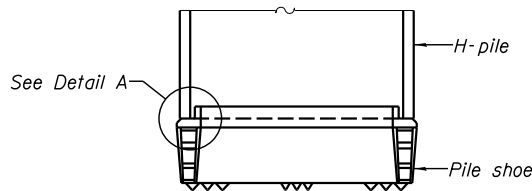
END VIEW



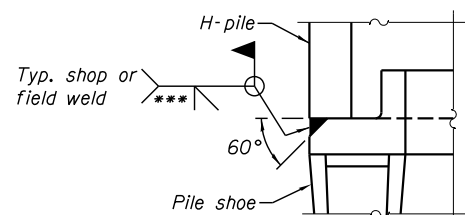
DETAIL D

WELDED PLATE FIELD SPLICE

Designation	F	F _t	F _w	W	W _t	W _w
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	1/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	1/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	1/16"	6 1/2"	5/8"	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"

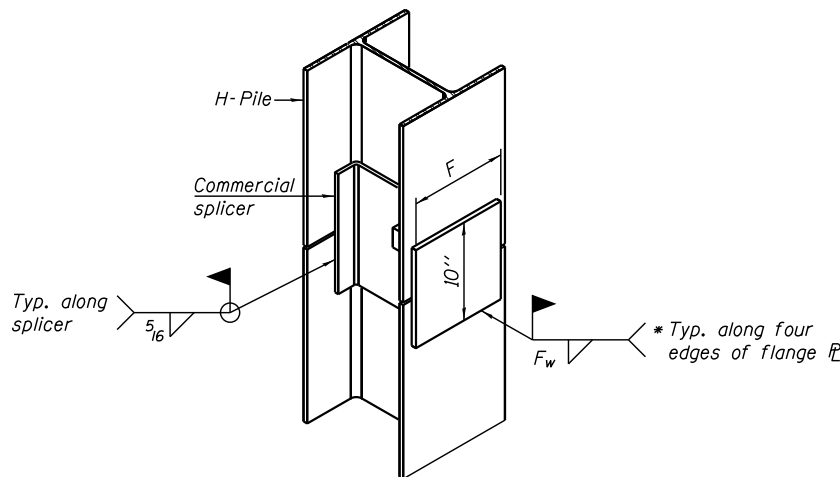


ELEVATION



DETAIL A

H-PILE SHOE ATTACHMENT



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

- * Interrupt welds 1/4" from end of web and/or each flange.
- ** Remove portions of backup plates that extend outside the flanges.
- *** Weld size per pile shoe manufacturer (5/16" min.).

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

F-HP 1-27-12



USER NAME =	DESIGNED - GBR	REVISED -
PLOT SCALE =	CHECKED - MAH	REVISED -
PLOT DATE =	DRAWN - JRP	REVISED -
	CHECKED - GBR	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HP PILE DETAILS
STRUCTURE NO. 094-0052

SHEET NO. 20 OF 24 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	38
CONTRACT NO. 68B43				
ILLINOIS FED. AID PROJECT				



ROCK CORE LOG

Date 8/2/15

ROUTE F.A.S. 411 DESCRIPTION IL-164 over Cedar Creek LOGGED BY KEG

SECTION (103B)BRBR LOCATION Monmouth, IL

COUNTY Warren CORING METHOD

STRUCT. NO. 094-0009 (E) CORING BARREL TYPE & SIZE NQ
 Station 597+30
 Core Diameter 1.8 in
 BORING NO. SB-1 Top of Rock Elev. 642.51 ft
 Station 596+29.96 Begin Core Elev. 642.51 ft
 Offset 7.0 ft LT
 Ground Surface Elev. 692.51 ft

DEPTH (ft)	DEPTH (#)	RECOVERY (%)	ROQ (%)	CORE TIME (min/ft)	STRENGTH (tsf)
642.51	1	94	89	1.3	
SANDSTONE: Grayish green, fine, moderately hard, slightly weathered, with chert nodules and layers, slightly calcareous, trace glauconite, clay, pyrite, and marcasite					
	2	98	82	0.7	
	3	100	93	1.2	176.0
Becomes fine to medium, slightly vuggy					
630.71	4	100	93	1.3	
LIMESTONE: White and grey, moderately hard, slightly weathered, with fine sand and glauconite bands, rare fossils and shale partings					
	4	100	93	1.3	179.0
Becomes fossiliferous, trace fine sand					
Not fossiliferous, fossils rare					
4" chert layer					
624.51					
End of Boring					

Color pictures of the cores Yes No
 Cores will be stored for examination until _____
 The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)
 BBS, form 138 (Rev. 8-99)



SOIL BORING LOG

Date 8/3/15

ROUTE F.A.S. 411 DESCRIPTION IL-164 over Cedar Creek LOGGED BY KEG

SECTION (103B)BRBR LOCATION Monmouth, IL

COUNTY Warren DRILLING METHOD HSA HAMMER TYPE Automatic

STRUCT. NO. 094-0009 (E)
 Station 597+30
 BORING NO. SB-2
 Station 598+34.06
 Offset 7.0 ft RT
 Ground Surface Elev. 692.51 ft

DEPTH (ft)	DEPTH (#)	UCS (tsf)	MOIST (%)	DESCRIPTION	DEPTH (ft)	DEPTH (#)	UCS (tsf)	MOIST (%)
692.2				4" ASPHALTIC CONCRETE				
691.5				8" CONCRETE				
	1	--	31	FILL: Dark brown, silty clay, with fine to coarse gravel, trace sand and rebar	671.5	4	2.6	23
	2				669.5	7	B	
689.5				FILL: Light brown, clay, trace fine sand and gravel	669.5	4	2.5	24
	3	0.5	16		668.5	5	B	
	2				668.5	6	B	
687.0				SANDY CLAY: Light brown, sand is fine to coarse	668.5			
	2	1.8	16		664.5	ST	0.8	24
	3							
	3	2.3	15		664.5	WOH	0.7	23
	3					3	B	
	2	1.6	18					
	3				659.0			
679.5				CLAY: Brown, trace fine sand and gravel	659.0	1	N/C	23
	3	1.3	19			2		
	4							
	2	1.0	26					
	3				654.0			
675.0				SILTY CLAY: Light brownish-green, medium-stiff	654.0	3	2.2	20
	2					5	B	
	3	1.8	27			6	B	
	3							

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 T206)
 BBS, form 137 (Rev. 8-99)



USER NAME =	DESIGNED - GBR	REVISED -
CHECKED - MAH	REVISED -	
PLOT SCALE =	DRAWN - JRP	REVISED -
PLOT DATE =	CHECKED - GBR	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

BORING LOGS
 STRUCTURE NO. 094-0052

SHEET NO. 22 OF 24 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	40
CONTRACT NO. 68B43				
ILLINOIS FED. AID PROJECT				



SOIL BORING LOG

Date 8/3/15

ROUTE F.A.S. 411 DESCRIPTION IL-164 over Cedar Creek LOGGED BY KEG
 SECTION (103B)BRBR LOCATION Monmouth, IL
 COUNTY Warren DRILLING METHOD HSA HAMMER TYPE Automatic

STRUCT. NO. 094-0009 (E) Surface Water Elev. _____ ft
 Station 597+30 Stream Bed Elev. _____ ft
 BORING NO. SB-2
 Station 598+34.06 Groundwater Elev.: _____ ft
 Offset 7.0 ft RT First Encounter 665.5 ft
 Ground Surface Elev. 692.51 ft Upon Completion 680.3 ft
 After -- Hrs. -- ft

DEPTH (ft)	DESCRIPTION	D (ft)	B (in)	U (tsf)	M (%)
0	CLAY: Gray, trace organics, stiff (continued)				
4		4	3.1	19	
6		6	B		
9		9			
14	CHERT: Gray and black with some blue, some interbedded fat clay, fragments range from small to large	14	50/4*	--	8
50		50			
53.0	Auger Refusal at 52.8 ft. Boring terminated at 53.0 ft.	50/2*	--	12	
55		55			
60		60			
65		65			
70		70			

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 T206) BBS, form 137 (Rev. 8-99)



SOIL BORING LOG

Date 8/2/15

ROUTE F.A.S. 411 DESCRIPTION IL-164 over Cedar Creek LOGGED BY KEG
 SECTION (103B)BRBR LOCATION Monmouth, IL
 COUNTY Warren DRILLING METHOD HSA HAMMER TYPE Automatic

STRUCT. NO. 094-0009 (E) Surface Water Elev. _____ ft
 Station 597+30 Stream Bed Elev. _____ ft
 BORING NO. SB-3
 Station 597+00 Groundwater Elev.: _____ ft
 Offset 28.1 ft RT First Encounter 665.5 ft
 Ground Surface Elev. 673.96 ft Upon Completion 670.6 ft
 After 16 Hrs. 671.0 ft

DEPTH (ft)	DESCRIPTION	D (ft)	B (in)	U (tsf)	M (%)
0	CLAY: Dark brown and gray, medium-stiff (continued)				
1		1	0.3	30	
2		2	P		
3		3	0.5	32	
4		4	B		
5		5			
6		6			
10		10			
12		12	1.5	28	
15		15	P		
21		21			
23		23			
24		24			
28		28			
32.8	Auger Refusal at 32.8 ft. Boring terminated at 32.9 ft.	50/3.5*	--	8	
35		35			
40		40			
45		45			
50		50			
55		55			
60		60			
65		65			
70		70			

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 T206) BBS, form 137 (Rev. 8-99)



USER NAME = _____	DESIGNED - GBR	REVISED - _____
CHECKED - MAH	REVISOR - _____	
PLOT SCALE = _____	DRAWN - JRP	REVISED - _____
PLOT DATE = _____	CHECKED - GBR	REVISED - _____

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS
STRUCTURE NO. 094-0052

SHEET NO. 23 OF 24 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	41
CONTRACT NO. 68B43				

ILLINOIS FED. AID PROJECT



SOIL BORING LOG

Date 8/3/15

ROUTE F.A.S. 411 DESCRIPTION IL-164 over Cedar Creek LOGGED BY KEG

SECTION (103B)BRBR LOCATION Monmouth, IL

COUNTY Warren DRILLING METHOD HSA HAMMER TYPE Automatic

STRUCT. NO. 094-0009 (E)
 Station 597+30
 BORING NO. SB-4
 Station 597+79.00
 Offset 42.0 ft RT
 Ground Surface Elev. 676.71 ft

Surface Water Elev. _____ ft
 Stream Bed Elev. _____ ft
 Groundwater Elev.:
 First Encounter 666.2 ft
 Upon Completion N/A ft
 After _____ Hrs.

DEPTH (ft)	BLOWS (6")	UCS (tsf)	MOISTURE (%)	DESCRIPTION	DEPTH (ft)	BLOWS (6")	UCS (tsf)	MOISTURE (%)
62	5	0.3 P	29	SILTY CLAY: Dark brown, moist, medium-stiff, trace organics, trace fine sand	3	5	2.2 S	25
672.5	2	--	20	SILTY CLAY LOAM: Dark red and brown, medium-stiff	4	4	--	19
670.7	WOH	0.2 B	23	SANDY CLAY: Dark brown, sand is fine to coarse, moist, very soft, trace gravel	7	11	--	15
665.7	3	N/C	13	Becomes light gray, with chert	10	25	--	25
	7	1.3 P	23	CLAY: Blue and green, with fine sand, trace gravel				
	2	4	1.2 B	Becomes gray				
	3	4	1.0 B	Becomes light brown				
	ST	2.5 P						

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 T206)
 BBS, form 137 (Rev. 8-99)



ROCK CORE LOG

Date 8/3/15

ROUTE F.A.S. 411 DESCRIPTION IL-164 over Cedar Creek LOGGED BY KEG

SECTION (103B)BRBR LOCATION Monmouth, IL

COUNTY Warren CORING METHOD _____

STRUCT. NO. 094-0009 (E)
 Station 597+30
 BORING NO. SB-4
 Station 597+79.00
 Offset 42.0 ft RT
 Ground Surface Elev. 676.71 ft

CORING BARREL TYPE & SIZE NQ
 Core Diameter 1.8 in
 Top of Rock Elev. 644.71 ft
 Begin Core Elev. 644.71 ft

DEPTH (ft)	CORER (#)	RECOVERY (%)	Q (%)	CORE DIAMETER (min/ft)	STRENGTH (tsf)	DESCRIPTION
844.71	1	100	31	0.96		CHERT: Grey, moderately soft, highly weathered, with infilled fossils
843.51	2	96	58	0.64		LIMESTONE: Tan and grey, moderately hard, slightly to moderately weathered, with fine sand
843.51	2	96	58	0.64		SANDSTONE: Grayish green, fine, moderately hard, slightly weathered, with chert nodules and layers, slightly calcareous, trace glauconite
834.31	3	87	67	1	174.0	Becomes fine to medium, slightly vuggy 3.5" Banded sandstone layer, highly weathered, vuggy
834.31	4	100	99	3.4		LIMESTONE: Tan and grey, moderately hard, slightly to moderately weathered, with fine sand 3" chert layer
831.98	5	100	53	1.4		CALCAREOUS SANDSTONE: White, fine to medium, moderately soft, moderately to highly weathered, occasional glauconite layers, rare shale partings and stylolites
828.41					149.0	End of Boring

Color pictures of the cores Yes _____
 Cores will be stored for examination until _____
 The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)
 BBS, form 138 (Rev. 8-99)



USER NAME =	DESIGNED - GBR	REVISED -
CHECKED - MAH	REVISED -	
PLOT SCALE =	DRAWN - JRP	REVISED -
PLOT DATE =	CHECKED - GBR	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

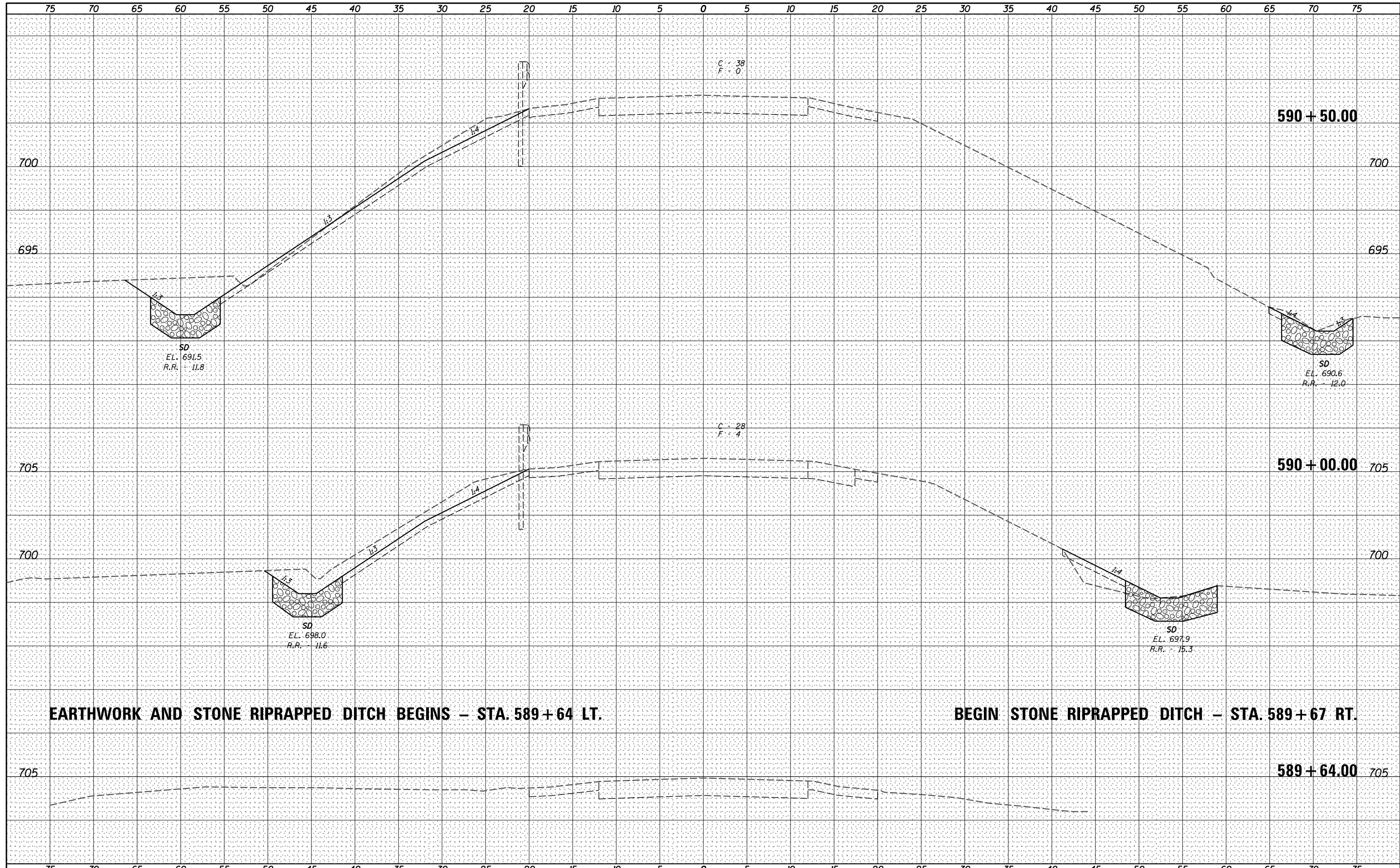
BORING LOGS
 STRUCTURE NO. 094-0052

SHEET NO. 24 OF 24 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	42
CONTRACT NO. 68B43				
ILLINOIS FED. AID PROJECT				

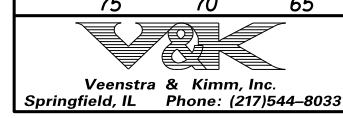
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 BY: _____
 SURVEYED _____
 PLOTTED _____
 TEMPLATE _____
 NOTE BOOK _____
 AREAS CHECKED _____
 NO. _____

DATE: _____
 BY: _____
 SURVEYED _____
 PLOTTED _____
 TEMPLATE _____
 NOTE BOOK _____
 AREAS CHECKED _____
 NO. _____



EARTHWORK AND STONE RIPRAPPED DITCH BEGINS - STA. 589+64 LT.

BEGIN STONE RIPRAPPED DITCH - STA. 589+67 RT.



USER NAME : *USERS*	DESIGNED -	REVISED -
PLOT SCALE : *SCALE*	DRAWN -	REVISED -
PLOT DATE : *DATE*	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

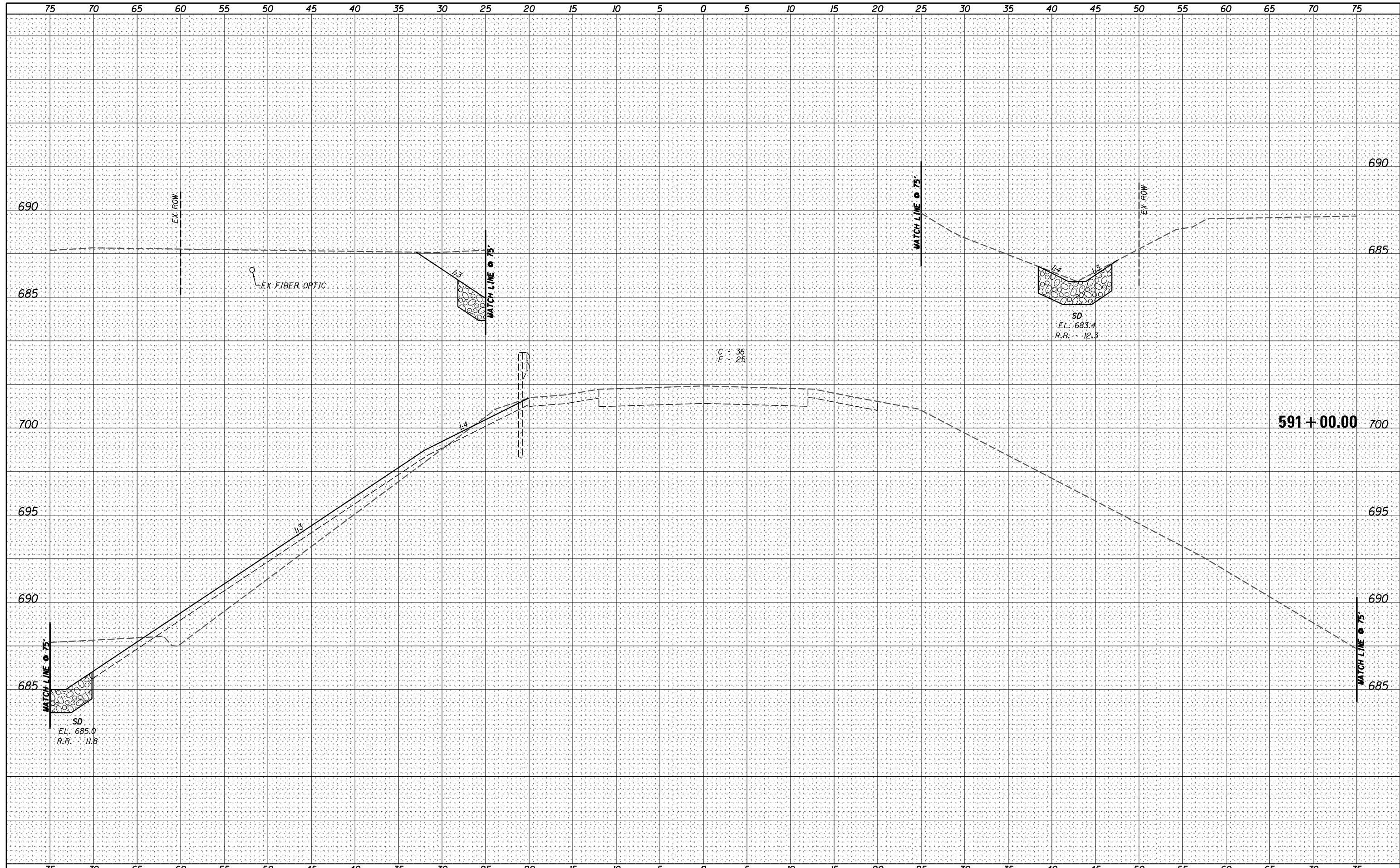
CROSS SECTIONS

SCALE: SHEET NO. 1 OF 23 SHEETS STA. 590+00.00 TO STA. 590+50.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	43
CONTRACT NO. 68B43				
ILLINOIS FED. AID PROJECT				

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

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



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Springfield, IL Phone: (217)544-8033

USER NAME = *USER*	DESIGNED -	REVISED -
PLOT SCALE = *SCALE*	DRAWN -	REVISED -
PLOT DATE = *DATE*	CHECKED -	REVISED -
	DATE -	REVISED -

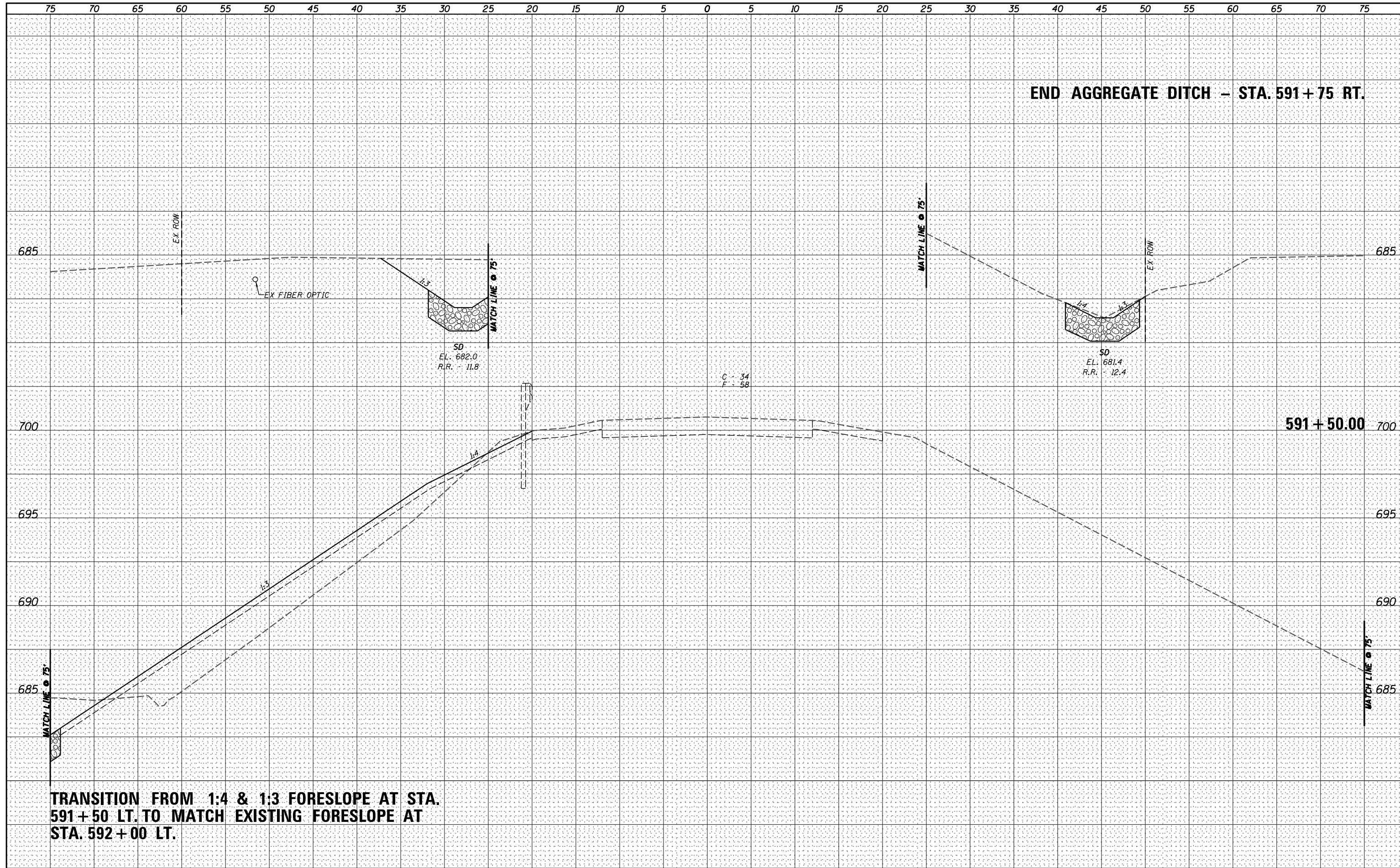
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS		
SCALE:	SHEET NO. 2 OF 23 SHEETS	STA. 591+00.00 TO STA. 591+00.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	44
CONTRACT NO. 68B43				
ILLINOIS FED. AID PROJECT				

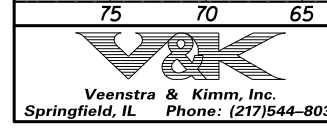
DATE	
BY	
FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED
	AREAS CHECKED

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



END AGGREGATE DITCH - STA. 591+75 RT.

TRANSITION FROM 1:4 & 1:3 FORESLOPE AT STA. 591+50 LT. TO MATCH EXISTING FORESLOPE AT STA. 592+00 LT.



USER NAME = *USER*	DESIGNED -	REVISED -
PLOT SCALE = *SCALE*	DRAWN -	REVISED -
PLOT DATE = *DATE*	CHECKED -	REVISED -
	DATE -	REVISED -

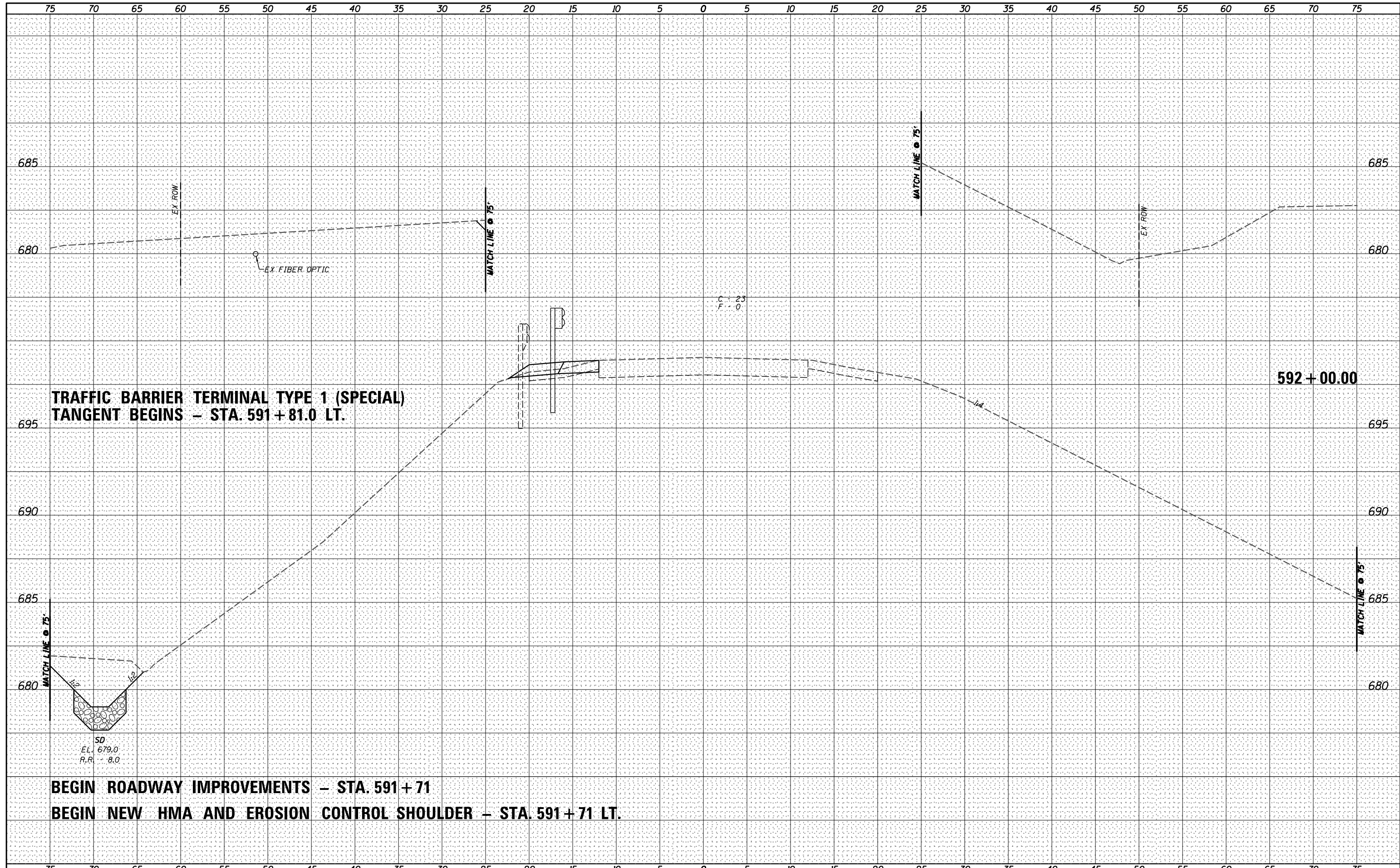
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS	
SCALE:	SHEET NO. 3 OF 23 SHEETS STA. 591+50.00 TO STA. 591+50.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	45
CONTRACT NO. 68B43				
ILLINOIS FED. AID PROJECT				

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

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



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Springfield, IL Phone: (217)544-8033

USER NAME = *USER*	DESIGNED -	REVISED -
PLOT SCALE = *SCALE*	DRAWN -	REVISED -
PLOT DATE = *DATE*	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

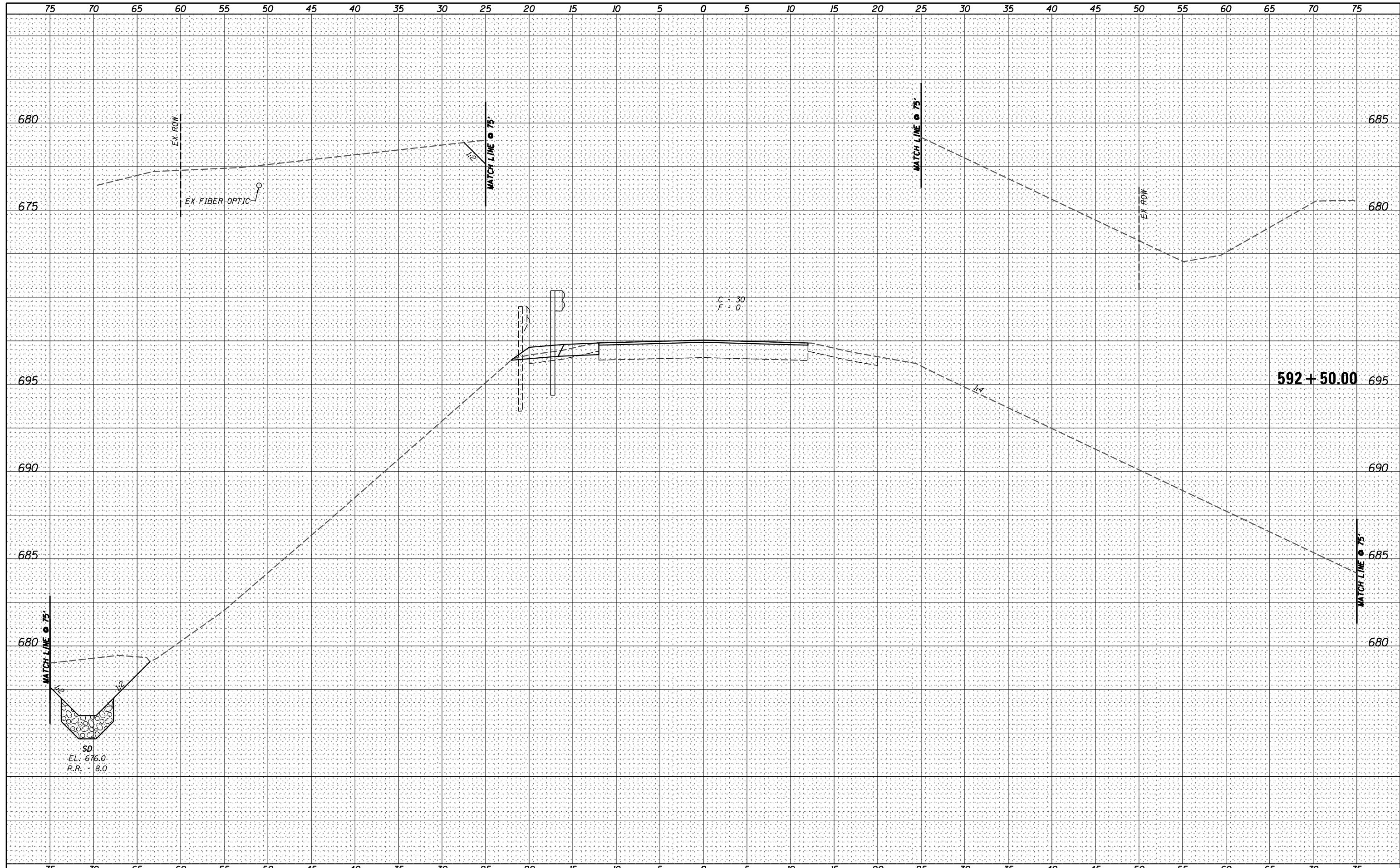
CROSS SECTIONS

SCALE: SHEET NO. 4 OF 23 SHEETS STA. 592+00.00 TO STA. 592+00.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	46
CONTRACT NO. 68B43				
ILLINOIS FED. AID PROJECT				

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

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



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USER NAME = *USER*	DESIGNED -	REVISED -
PLOT SCALE = *SCALE*	DRAWN -	REVISED -
PLOT DATE = *DATE*	CHECKED -	REVISED -
	DATE -	REVISED -

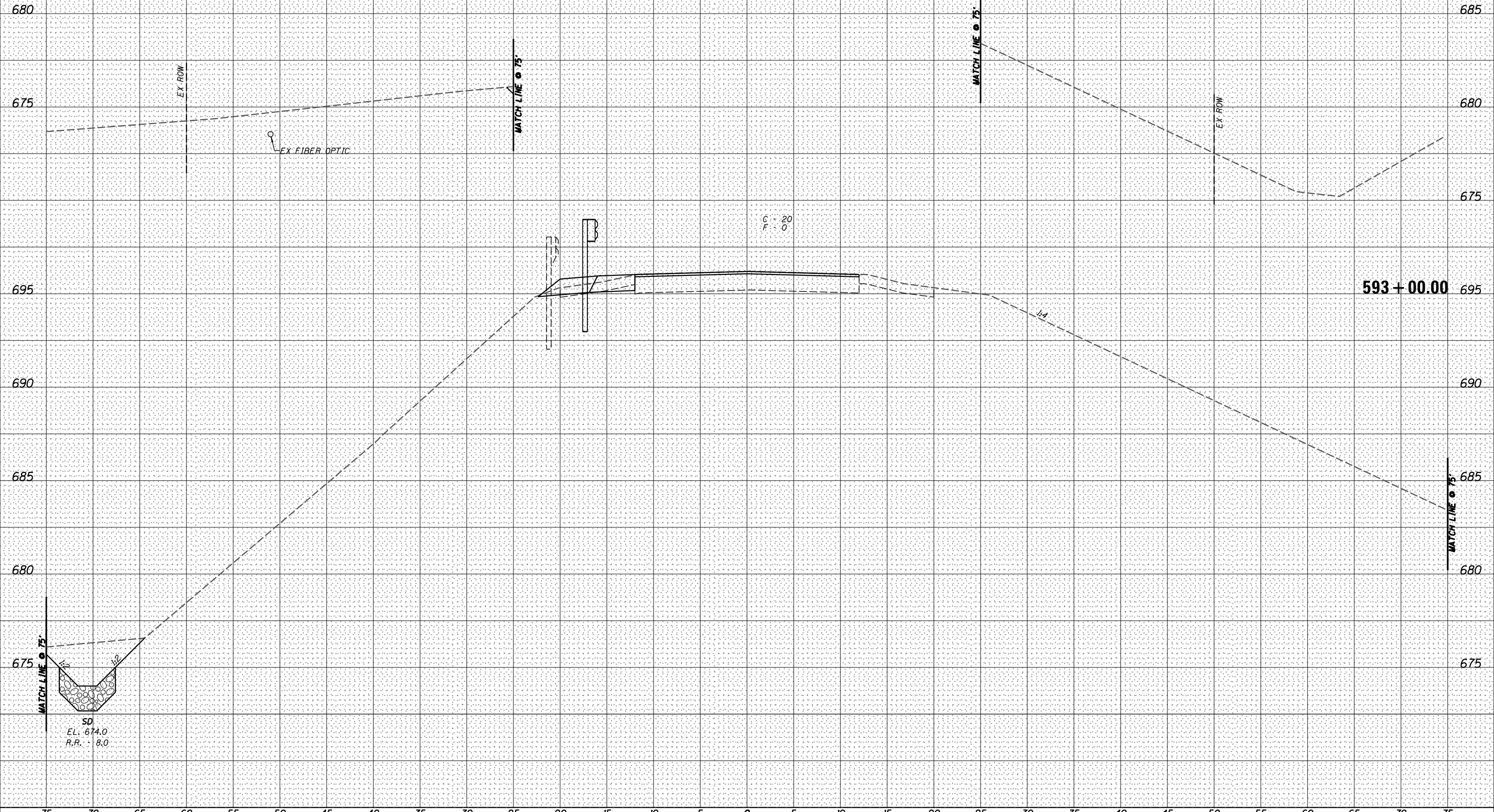
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SCALE: SHEET NO. 5 OF 23 SHEETS STA. 592+50.00 TO STA. 592+50.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	47
CONTRACT NO. 68B43				
ILLINOIS FED. AID PROJECT				

END STONE RIPRAP DITCH - STA. 593+00



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

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

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USER NAME = *USER*	DESIGNED -	REVISSED -
PLOT SCALE = *SCALE*	DRAWN -	REVISSED -
PLOT DATE = *DATE*	CHECKED -	REVISSED -
	DATE -	REVISSED -

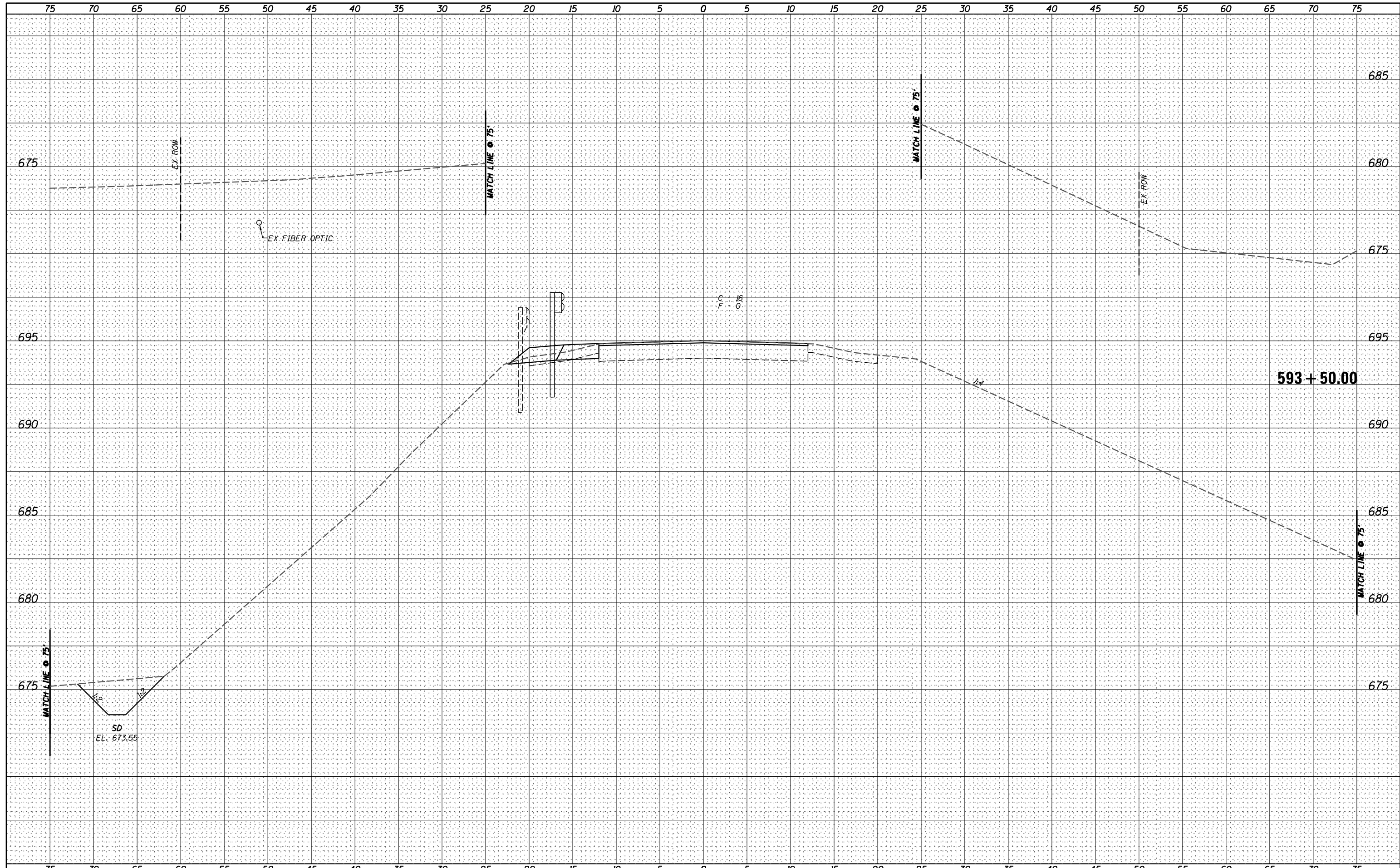
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCALE:	SHEET NO. 6 OF 23 SHEETS	STA. 593+00.00 TO STA. 593+00.00
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F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	48
CONTRACT NO. 68B43				
ILLINOIS FED. AID PROJECT				

DATE: _____
 BY: _____
 SURVEYED _____
 PLOTTED _____
 TEMPLATE _____
 NOTE BOOK _____
 AREAS CHECKED _____
 NO. _____

DATE: _____
 BY: _____
 SURVEYED _____
 PLOTTED _____
 TEMPLATE _____
 NOTE BOOK _____
 AREAS CHECKED _____
 NO. _____



V&K
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 Springfield, IL Phone: (217)544-8033

USER NAME = *USER*	DESIGNED -	REVISED -
PLOT SCALE = *SCALE*	DRAWN -	REVISED -
PLOT DATE = *DATE*	CHECKED -	REVISED -
	DATE -	REVISED -

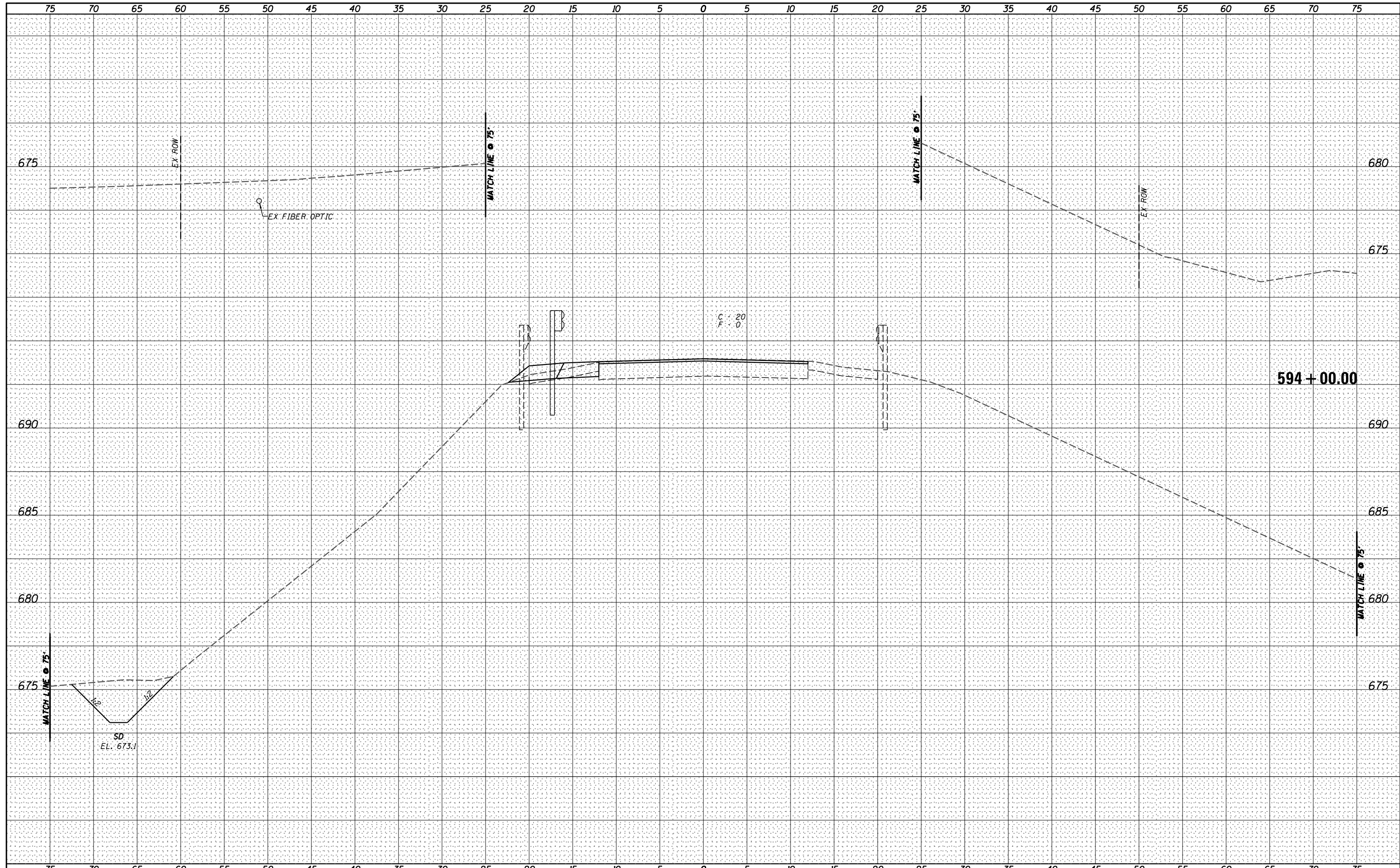
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS
 SCALE: SHEET NO. 7 OF 23 SHEETS STA. 593+50.00 TO STA. 593+50.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	49
CONTRACT NO. 68B43				
ILLINOIS FED. AID PROJECT				

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

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



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USER NAME = *USER*	DESIGNED -	REVISED -
PLOT SCALE = *SCALE*	DRAWN -	REVISED -
PLOT DATE = *DATE*	CHECKED -	REVISED -
	DATE -	REVISED -

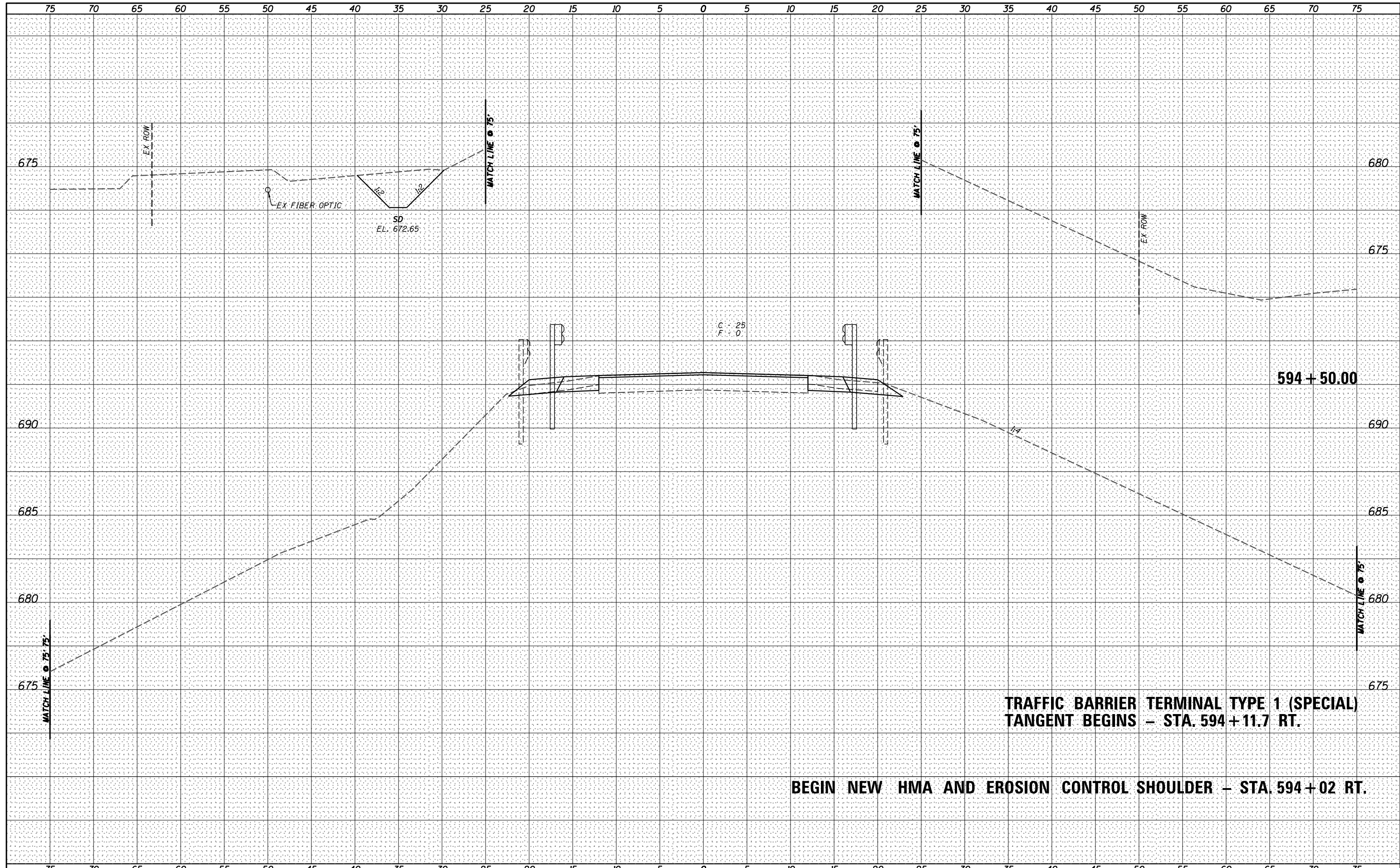
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
 SCALE: SHEET NO. 8 OF 23 SHEETS STA. 594+00.00 TO STA. 594+00.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	50
CONTRACT NO. 68B43			ILLINOIS FED. AID PROJECT	

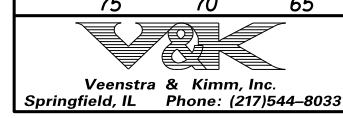
DATE	
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FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
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	AREAS CHECKED

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ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED



**TRAFFIC BARRIER TERMINAL TYPE 1 (SPECIAL)
TANGENT BEGINS - STA. 594 + 11.7 RT.**

BEGIN NEW HMA AND EROSION CONTROL SHOULDER - STA. 594 + 02 RT.



USER NAME = *USER*	DESIGNED -	REVISED -
PLOT SCALE = *SCALE*	DRAWN -	REVISED -
PLOT DATE = *DATE*	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

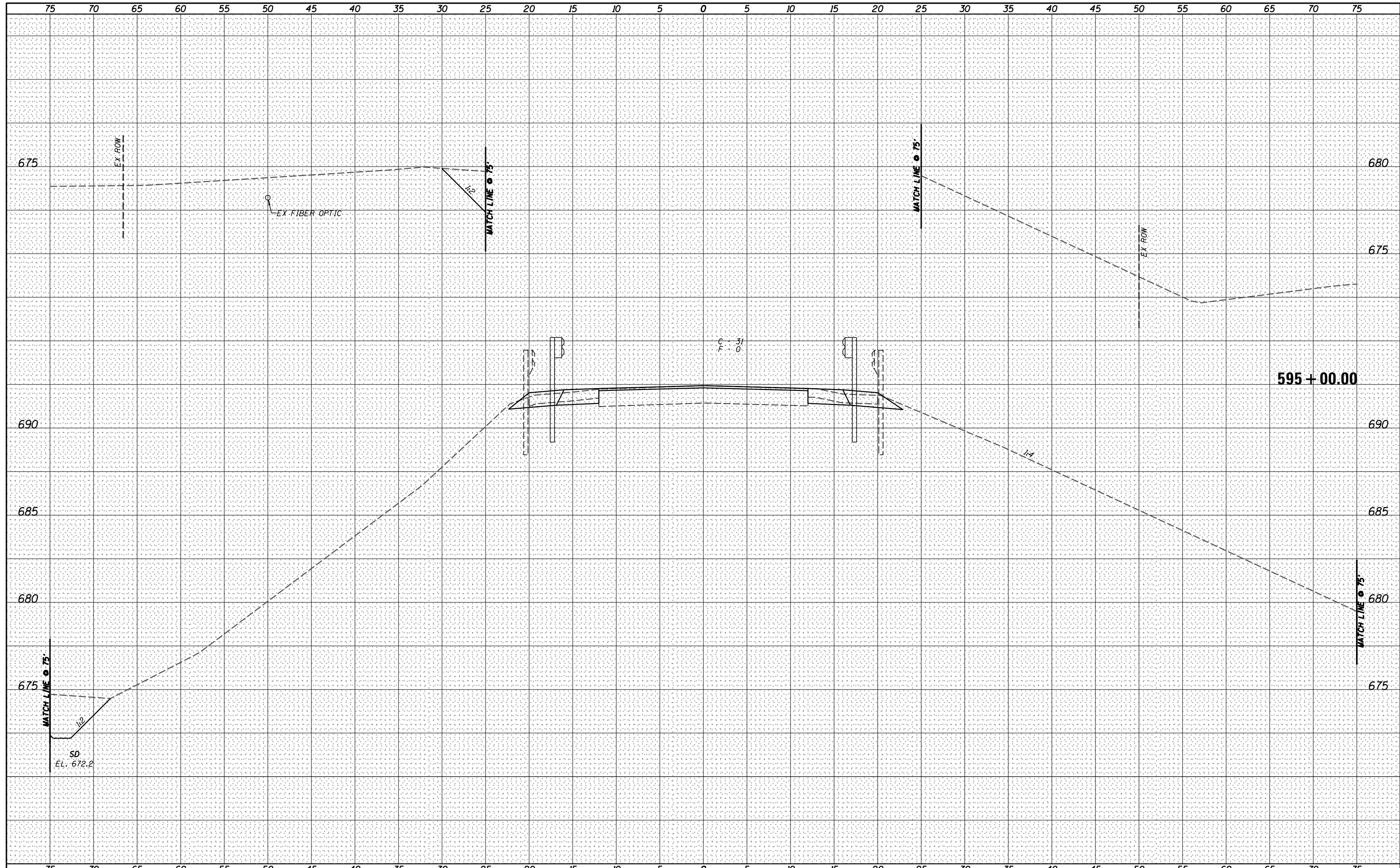
CROSS SECTIONS

SCALE: SHEET NO. 9 OF 23 SHEETS STA. 594+50.00 TO STA. 594+50.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	51
CONTRACT NO. 68B43				
ILLINOIS FED. AID PROJECT				

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

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



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USER NAME = *USER*	DESIGNED -	REVISED -
PLOT SCALE = *SCALE*	DRAWN -	REVISED -
PLOT DATE = *DATE*	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

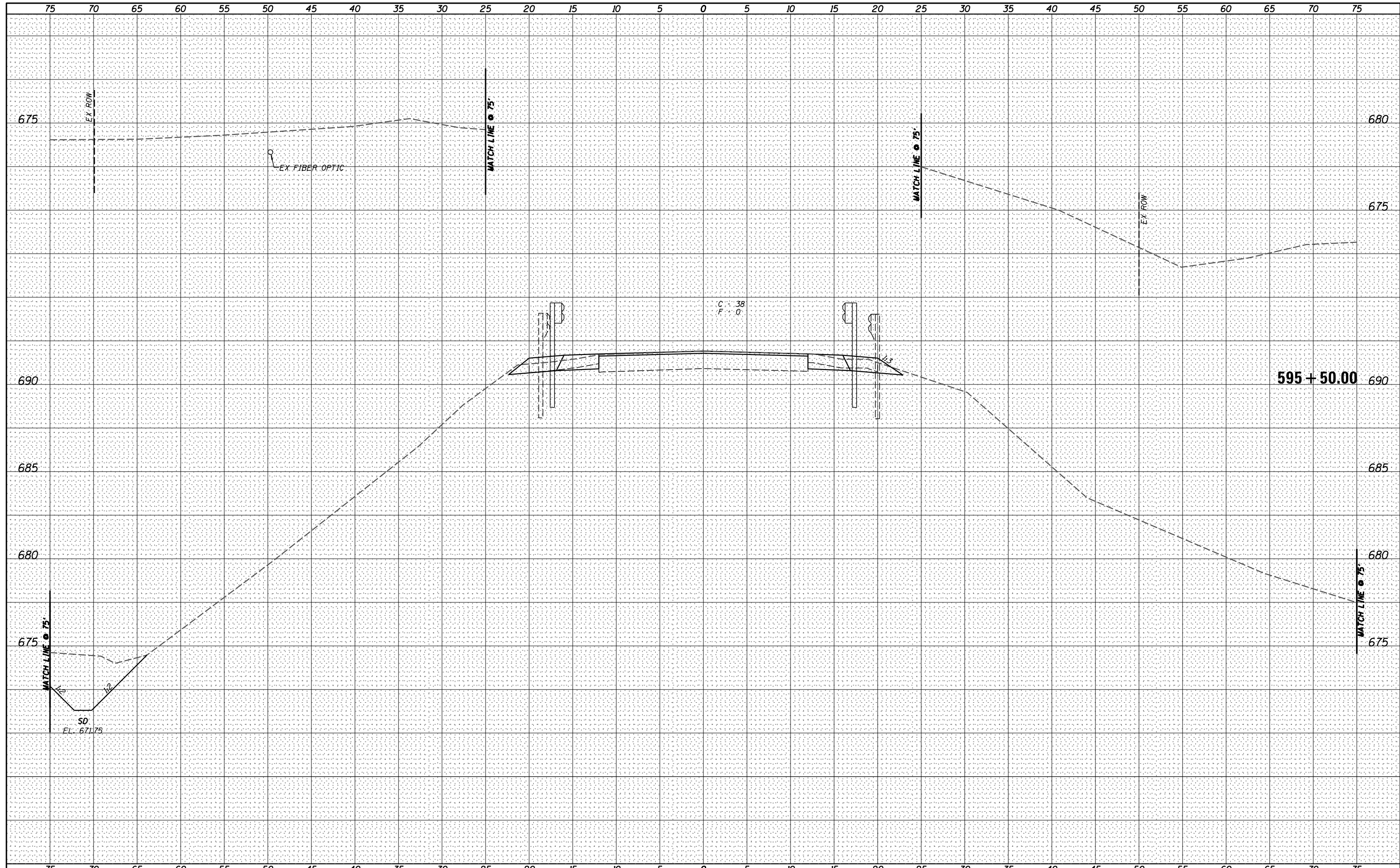
CROSS SECTIONS

SCALE: SHEET NO. 10 OF 23 SHEETS STA. 595+00.00 TO STA. 595+00.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	52
				CONTRACT NO. 68B43
ILLINOIS FED. AID PROJECT				

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

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



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USER NAME = *USER*	DESIGNED -	REVISED -
PLOT SCALE = *SCALE*	DRAWN -	REVISED -
PLOT DATE = *DATE*	CHECKED -	REVISED -
	DATE -	REVISED -

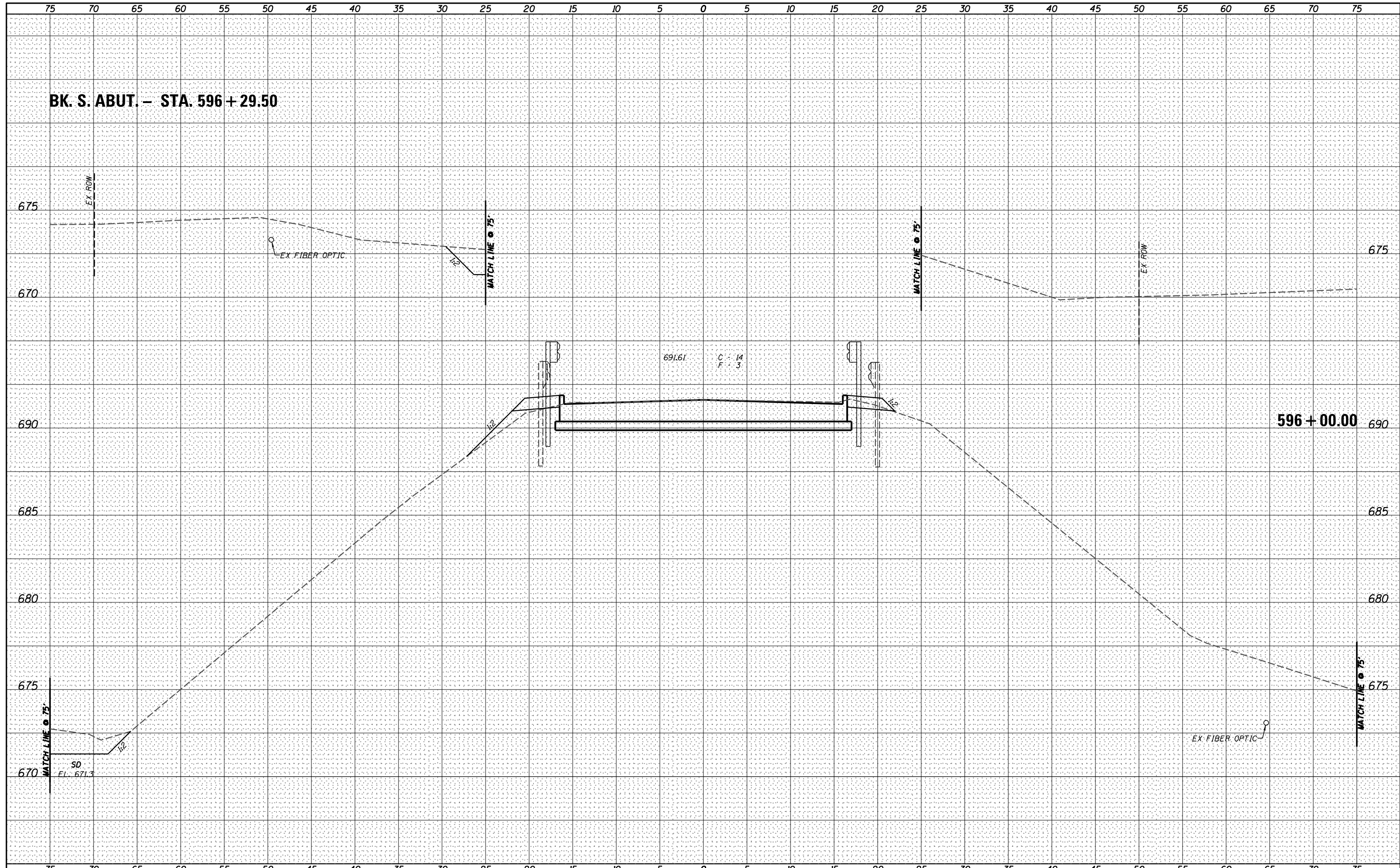
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
 SCALE: SHEET NO. 11 OF 23 SHEETS STA. 595+50.00 TO STA. 595+50.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	53
CONTRACT NO. 68B43				
ILLINOIS FED. AID PROJECT				

BY	DATE

BY	DATE



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USER NAME = *USER*	DESIGNED -	REVISED -
PLOT SCALE = *SCALE*	DRAWN -	REVISED -
PLOT DATE = *DATE*	CHECKED -	REVISED -
	DATE -	REVISED -

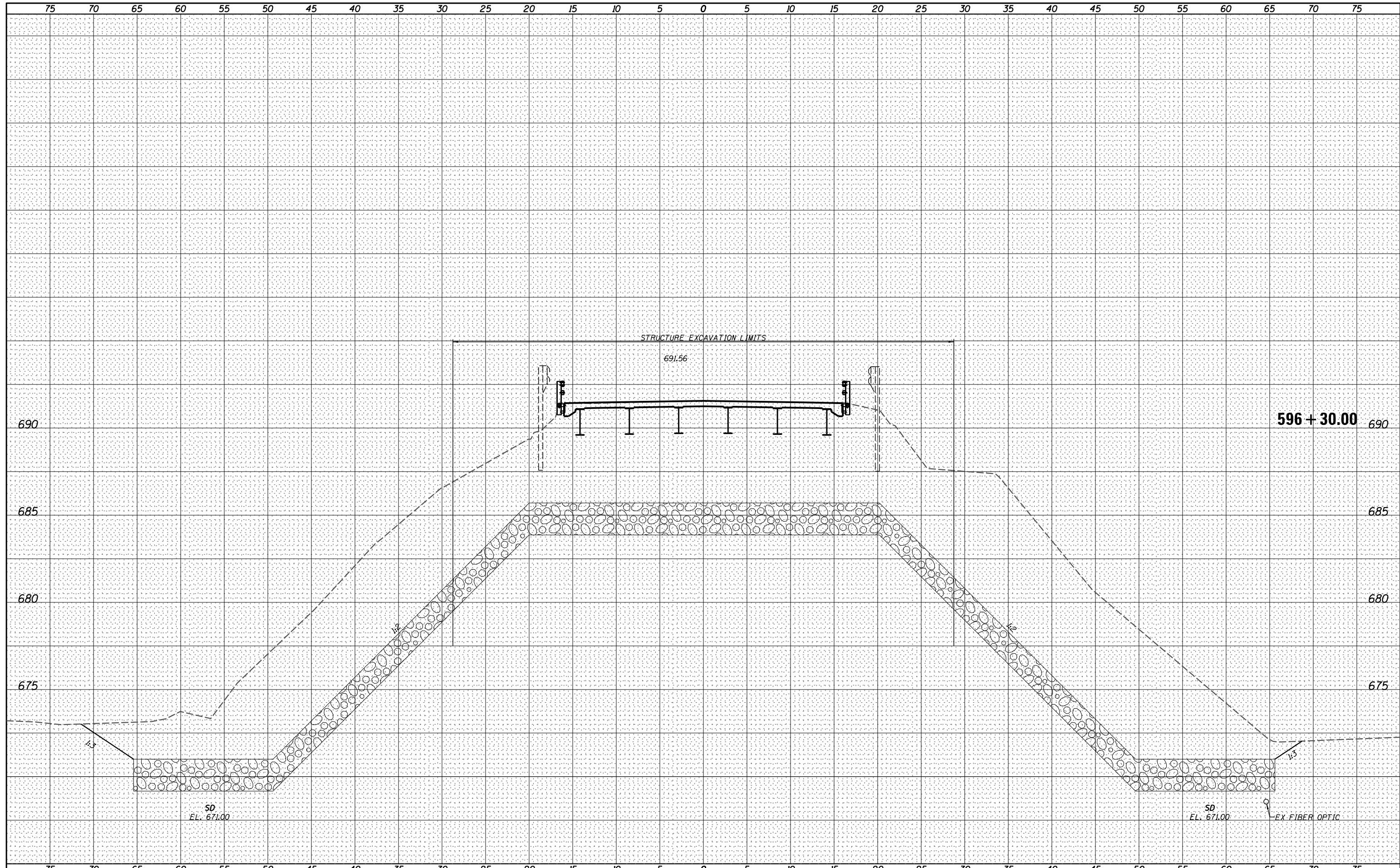
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS			
SCALE:	SHEET NO. 12 OF 23 SHEETS	STA. 596+00.00	TO STA. 596+00.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	54
CONTRACT NO. 68B43				
ILLINOIS FED. AID PROJECT				

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

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



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USER NAME = *USER*	DESIGNED -	REVISED -
PLOT SCALE = *SCALE*	DRAWN -	REVISED -
PLOT DATE = *DATE*	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

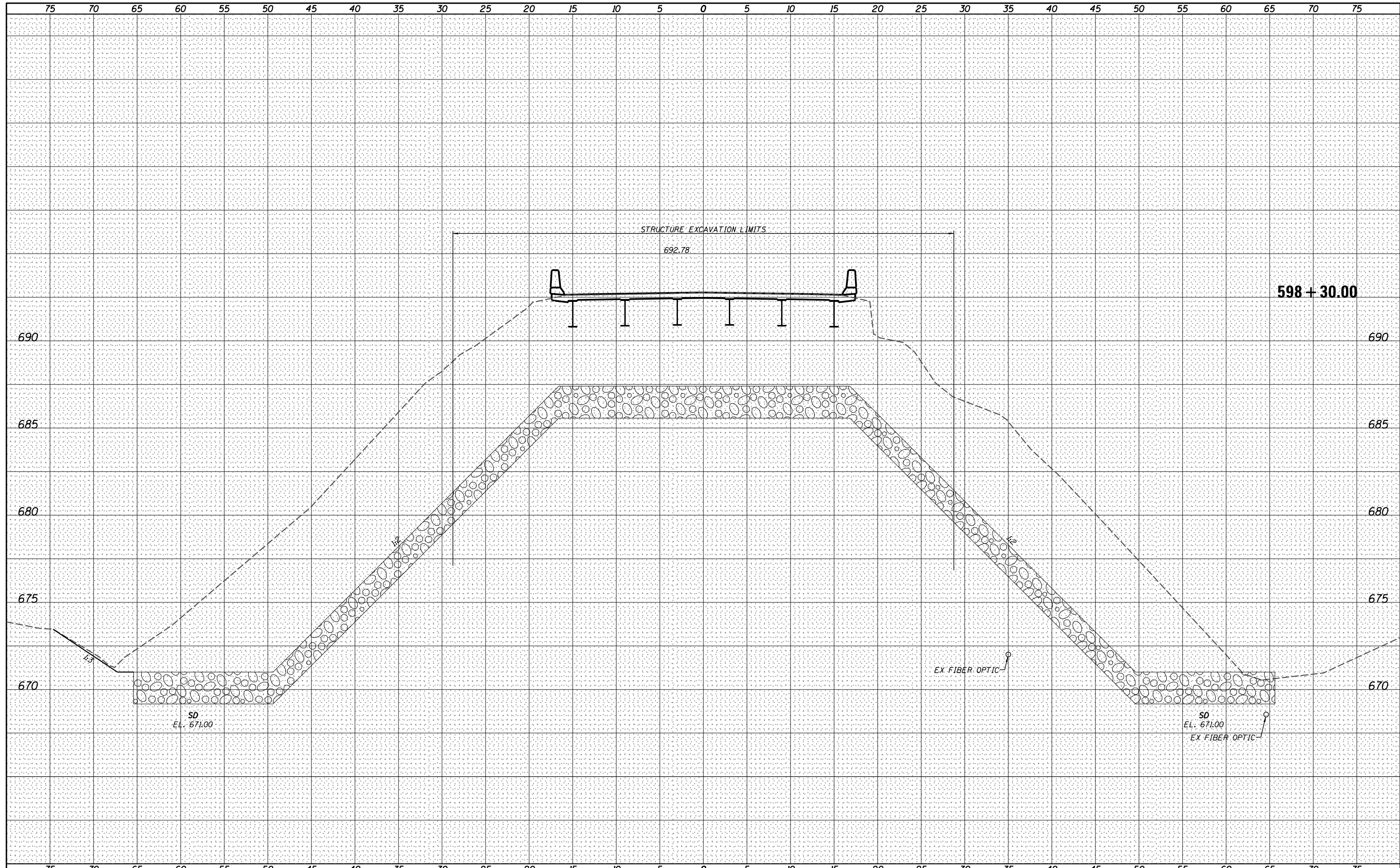
CROSS SECTIONS

SCALE: SHEET NO. 13 OF 23 SHEETS STA. 596+30.00 TO STA. 596+30.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	55
				CONTRACT NO. 68B43
ILLINOIS FED. AID PROJECT				

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

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



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USER NAME = *USER*	DESIGNED -	REVISED -
PLOT SCALE = *SCALE*	DRAWN -	REVISED -
PLOT DATE = *DATE*	CHECKED -	REVISED -
	DATE -	REVISED -

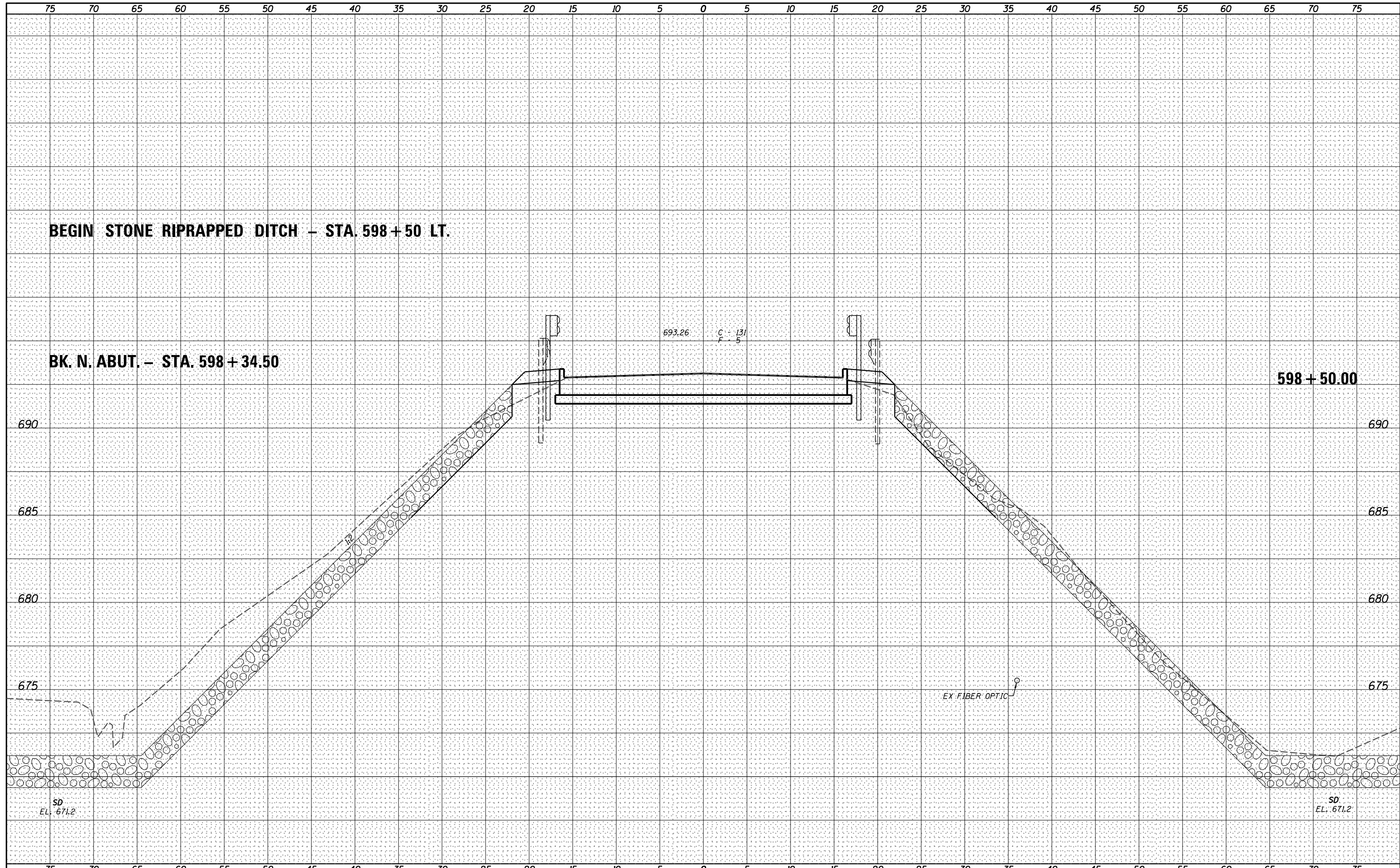
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS	
SCALE:	SHEET NO. 14 OF 23 SHEETS STA. 598+30.00 TO STA. 598+30.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	56
CONTRACT NO. 68B43				
ILLINOIS FED. AID PROJECT				

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

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



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USER NAME = *USERS*	DESIGNED -	REVISED -
DRAWN -	REVISOR -	
PLOT SCALE = *SCALE*	CHECKED -	REVISED -
PLOT DATE = *DATE*	DATE -	REVISED -

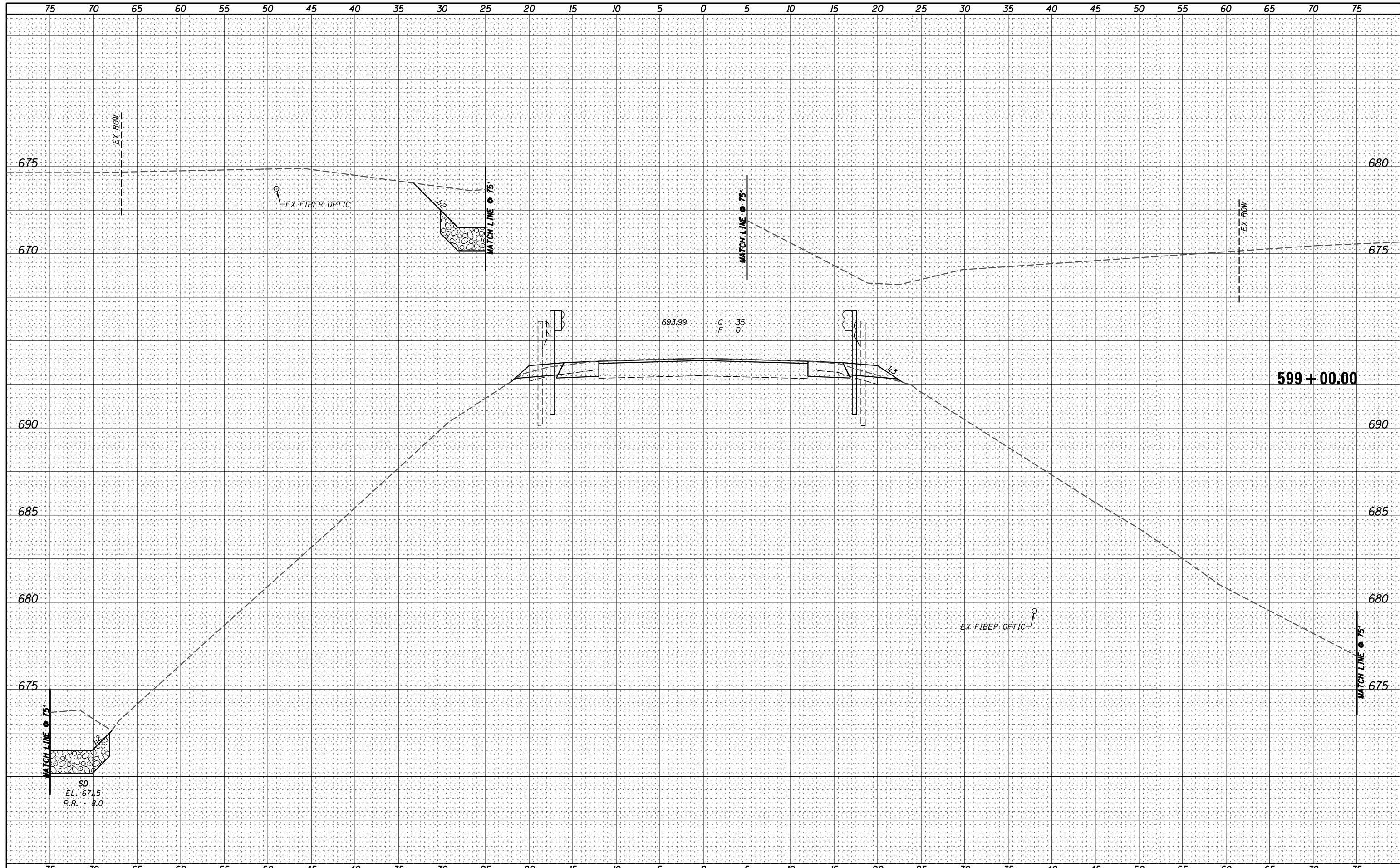
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS
 SCALE: SHEET NO. 15 OF 23 SHEETS STA. 598+50.00 TO STA. 598+50.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	57
CONTRACT NO. 68B43			ILLINOIS FED. AID PROJECT	

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

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



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USER NAME = *USER*	DESIGNED -	REVISED -
PLOT SCALE = *SCALE*	DRAWN -	REVISED -
PLOT DATE = *DATE*	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

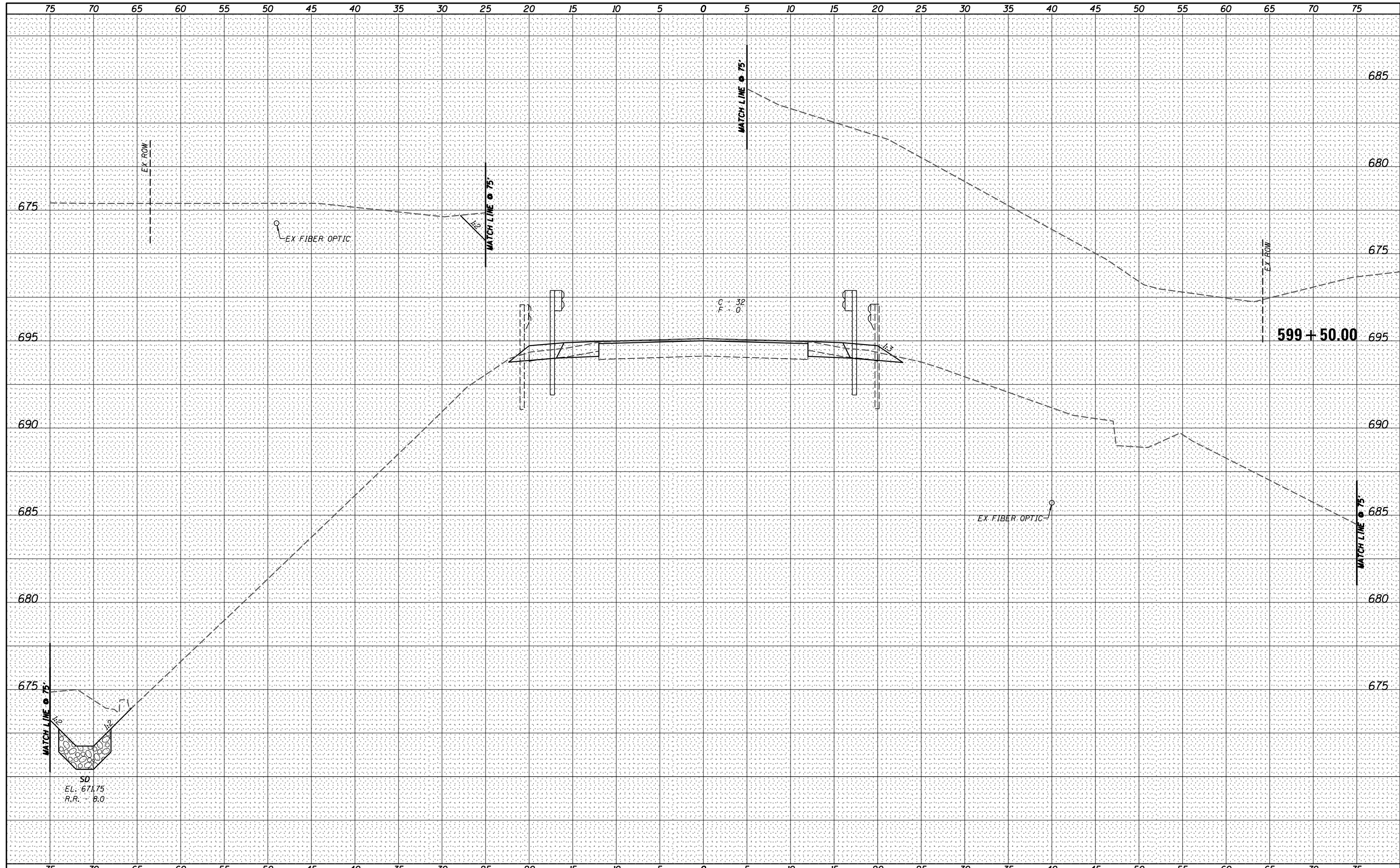
CROSS SECTIONS

SCALE: SHEET NO. 16 OF 23 SHEETS STA. 599+00.00 TO STA. 599+00.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	58
CONTRACT NO. 68B43				
ILLINOIS FED. AID PROJECT				

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

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



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USER NAME : *USER*	DESIGNED -	REVISED -
PLOT SCALE : *SCALE*	DRAWN -	REVISED -
PLOT DATE : *DATE*	CHECKED -	REVISED -
	DATE -	REVISED -

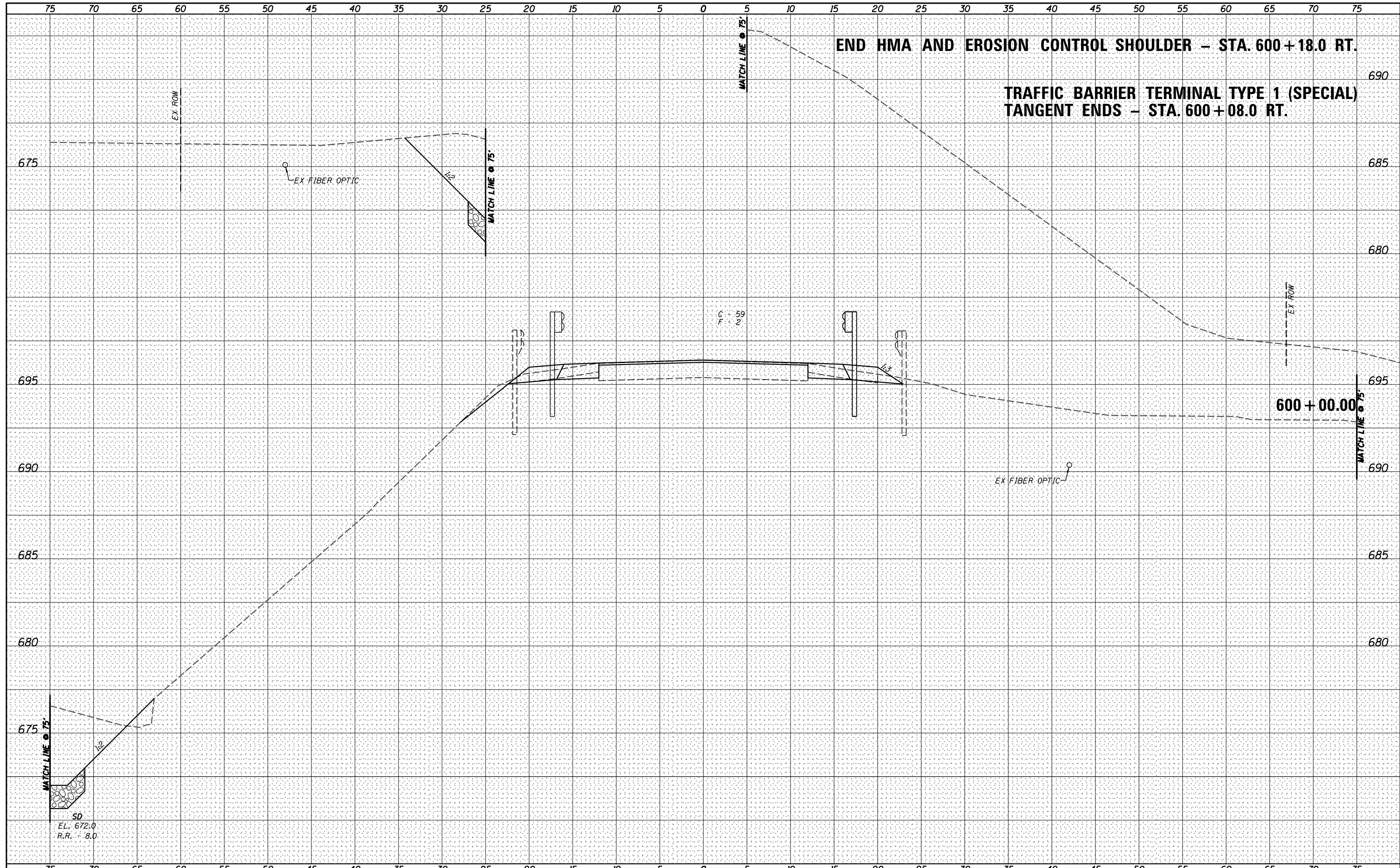
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS		
SCALE:	SHEET NO. 17 OF 23 SHEETS	STA. 599+50.00 TO STA. 599+50.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	59
CONTRACT NO. 68B43			ILLINOIS FED. AID PROJECT	

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

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



END HMA AND EROSION CONTROL SHOULDER - STA. 600+18.0 RT.

TRAFFIC BARRIER TERMINAL TYPE 1 (SPECIAL)
TANGENT ENDS - STA. 600+08.0 RT.

600+00.00

C = 59
F = 2

SD
EL. 672.0
R.R. = 8.0



USER NAME = *USER*	DESIGNED -	REVISED -
PLOT SCALE = *SCALE*	DRAWN -	REVISED -
PLOT DATE = *DATE*	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

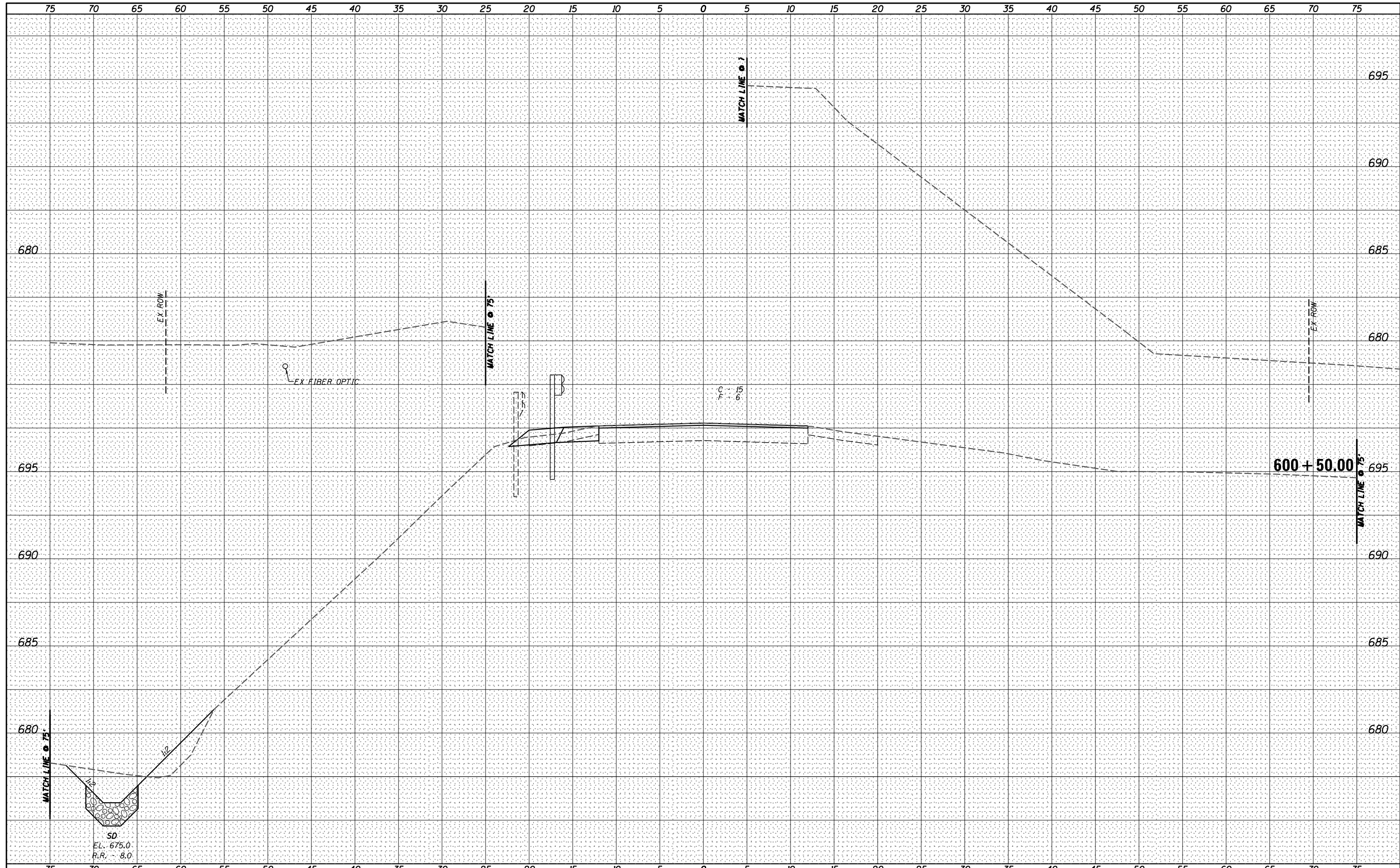
CROSS SECTIONS

SCALE: SHEET NO. 18 OF 23 SHEETS STA. 600+00.00 TO STA. 600+00.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	60
CONTRACT NO. 68B43			ILLINOIS FED. AID PROJECT	

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

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



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Springfield, IL Phone: (217)544-8033

USER NAME = *USER*	DESIGNED -	REVISED -
PLOT SCALE = *SCALE*	DRAWN -	REVISED -
PLOT DATE = *DATE*	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

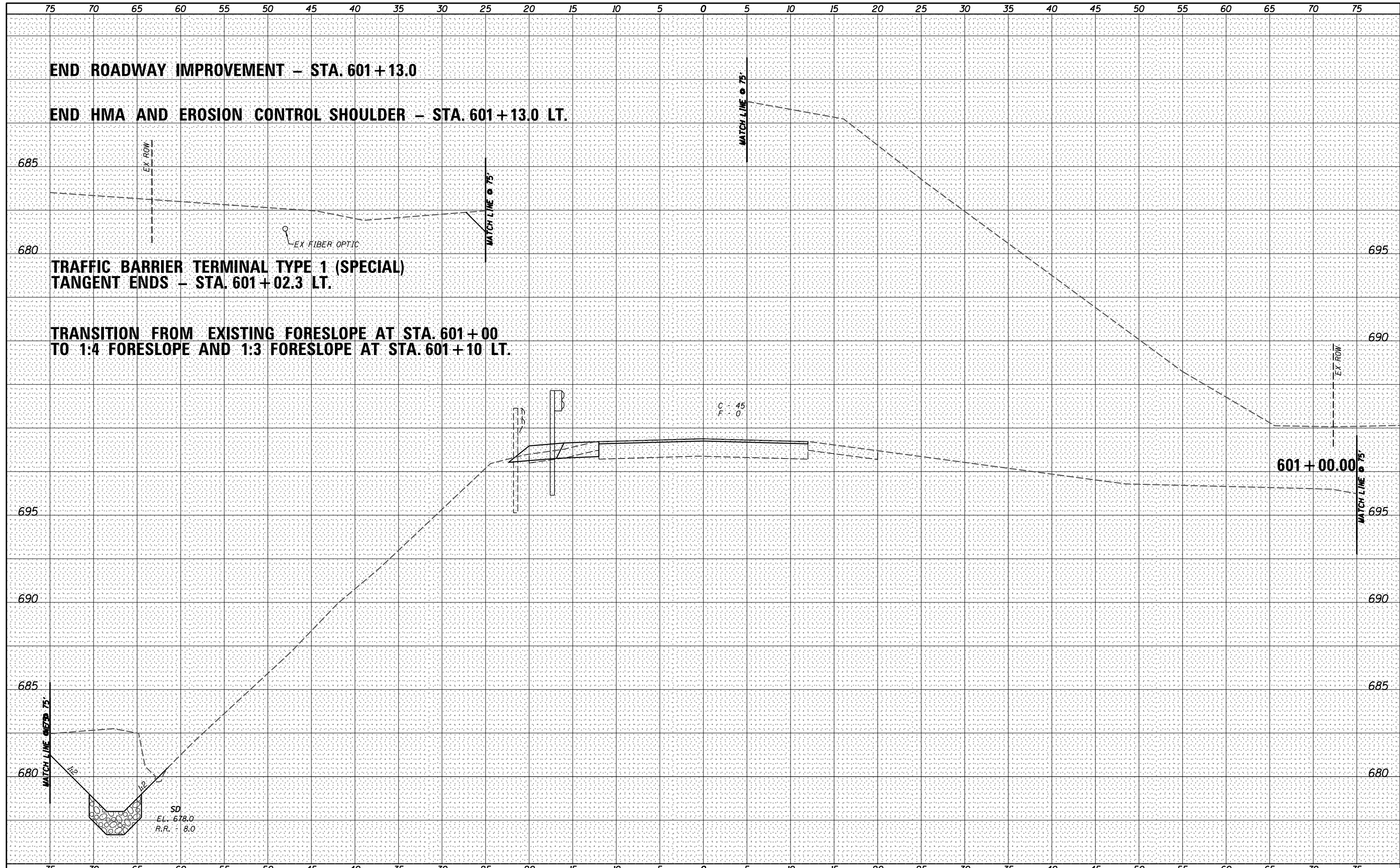
CROSS SECTIONS

SCALE: SHEET NO. 19 OF 23 SHEETS STA. 600+50.00 TO STA. 600+50.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	61
CONTRACT NO. 68B43				
ILLINOIS FED. AID PROJECT				

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

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



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USER NAME = *USER*	DESIGNED -	REVISED -
PLOT SCALE = *SCALE*	DRAWN -	REVISED -
PLOT DATE = *DATE*	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

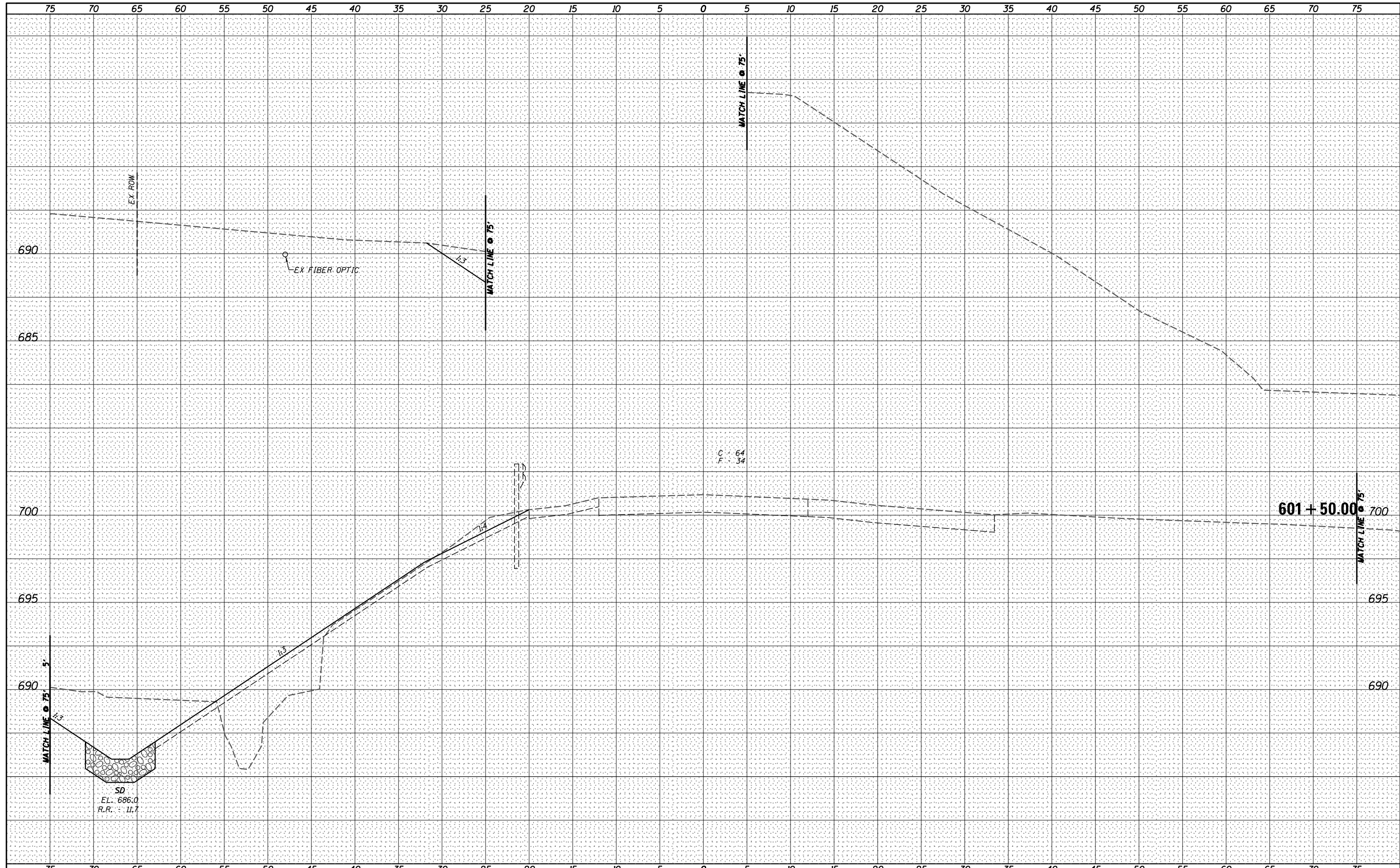
CROSS SECTIONS

SCALE: SHEET NO. 20 OF 23 SHEETS STA. 601+00.00 TO STA. 601+00.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	62
CONTRACT NO. 68B43				
ILLINOIS FED. AID PROJECT				

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

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



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USER NAME = *USER*	DESIGNED -	REVISED -
PLOT SCALE = *SCALE*	DRAWN -	REVISED -
PLOT DATE = *DATE*	CHECKED -	REVISED -
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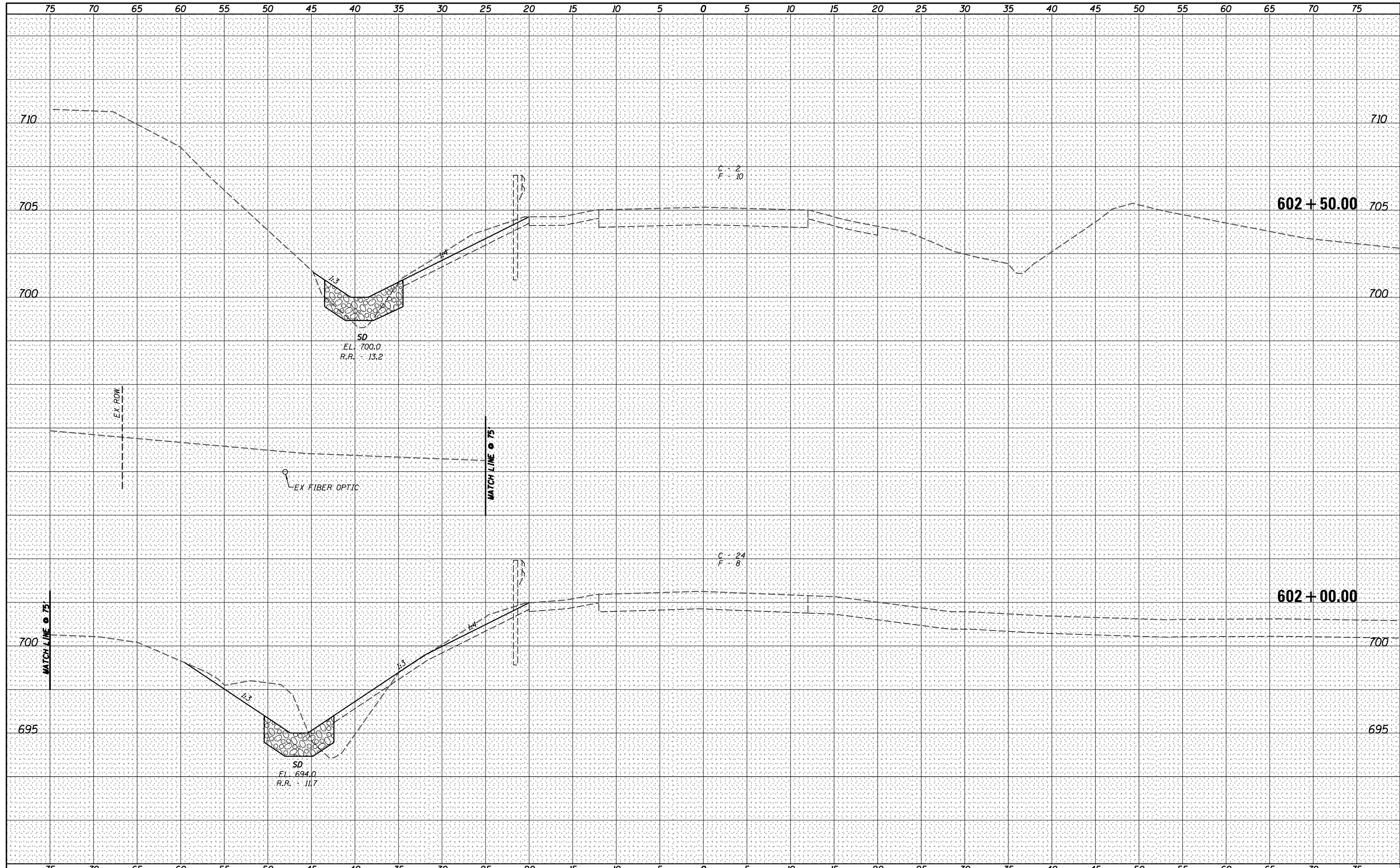
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS		
SCALE:	SHEET NO. 21 OF 23 SHEETS	STA. 601+50.00 TO STA. 601+67.50

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	63
CONTRACT NO. 68B43			ILLINOIS FED. AID PROJECT	

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

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



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USER NAME = *USER*	DESIGNED -	REVISED -
PLOT SCALE = *SCALE*	DRAWN -	REVISED -
PLOT DATE = *DATE*	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

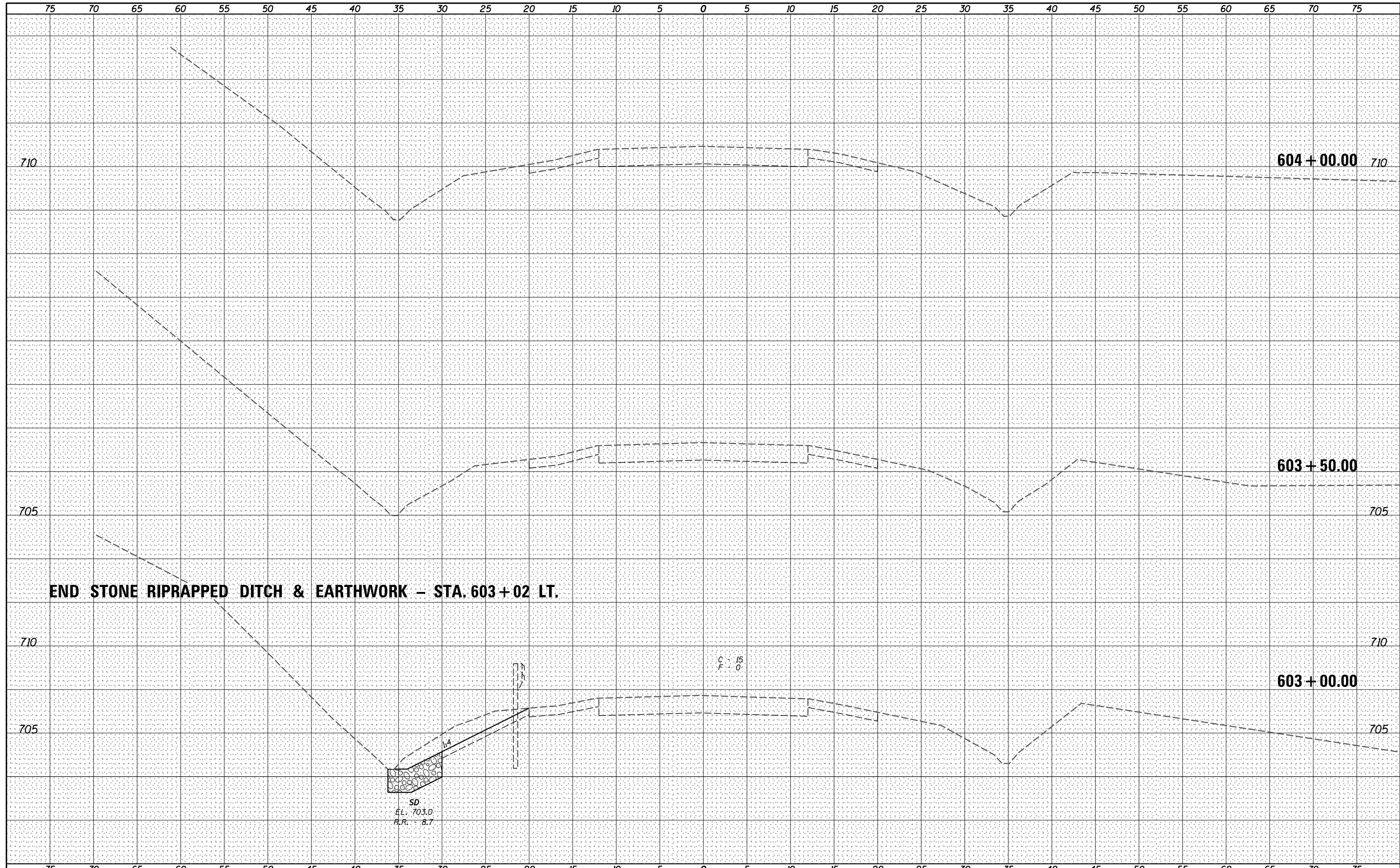
CROSS SECTIONS

SCALE: SHEET NO. 22 OF 23 SHEETS STA. 602+00.00 TO STA. 602+50.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	64
CONTRACT NO. 68B43				
ILLINOIS FED. AID PROJECT				

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

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



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USER NAME = *USER*	DESIGNED -	REVISED -
PLOT SCALE = *SCALE*	DRAWN -	REVISED -
PLOT DATE = *DATE*	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

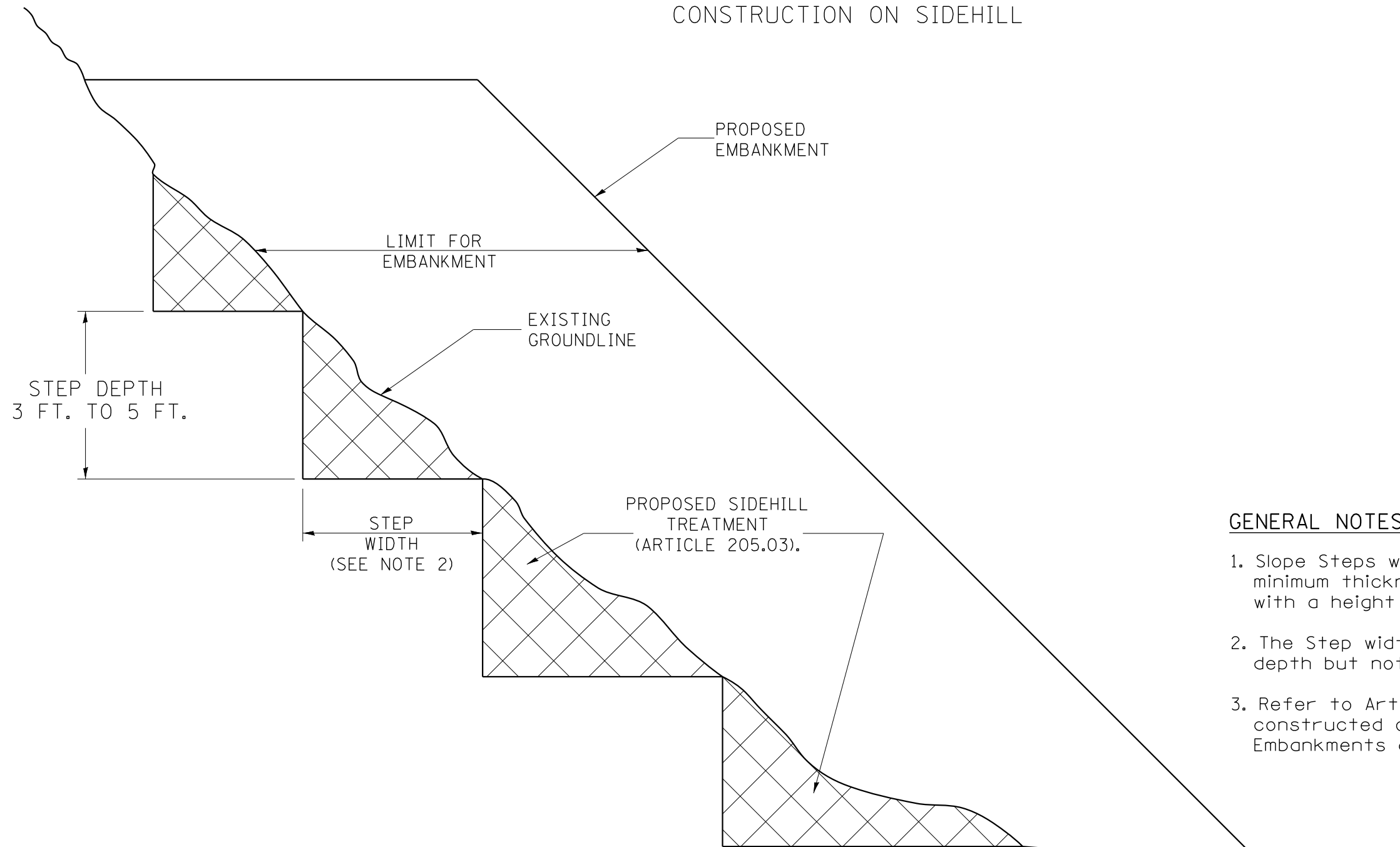
CROSS SECTIONS

SCALE: SHEET NO. 23 OF 23 SHEETS STA. 603+00.00 TO STA. 603+50.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	65
CONTRACT NO. 68B43				
ILLINOIS FED. AID PROJECT				

SLOPE STEPS DETAIL

TYPICAL CROSS-SECTION EMBANKMENT CONSTRUCTION ON SIDEHILL



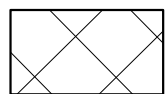
GENERAL NOTES:

1. Slope Steps will be required for all 12(300) minimum thickness "sliver fills" and on a fills with a height of 10 feet or greater.
2. The Step width shall be twice the Step depth but not less than 6 feet.
3. Refer to Article 205.03 for Embankment to be constructed on Hillside or Slopes, or if existing Embankments are to be widened.

DESIGNER NOTE:

1. EACH PROJECT SHOULD BE REVIEWED INDEPENDENTLY FOR TREATMENT REQUIRED.
2. REFER TO THIS DETAIL WITH NOTE ON APPLICABLE TYPICAL SECTIONS.

REPLACEMENT MATERIAL:



STANDARD EMBANKMENT
(IN ACCORDANCE WITH
205 OF THE STANDARD SPECIFICATION).

All dimensions are in inches (millimeters) unless otherwise noted.

1:1-97	BENJAM. 1-5.03. NEW REVISION BOX. REVISED TITLE	J.P.	
	BOX. REVISED GENERAL NOTES		
10-16-06	REVISED TO 2007 SPEC.	M.A.	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SLOPE STEPS DETAIL

NOT TO SCALE

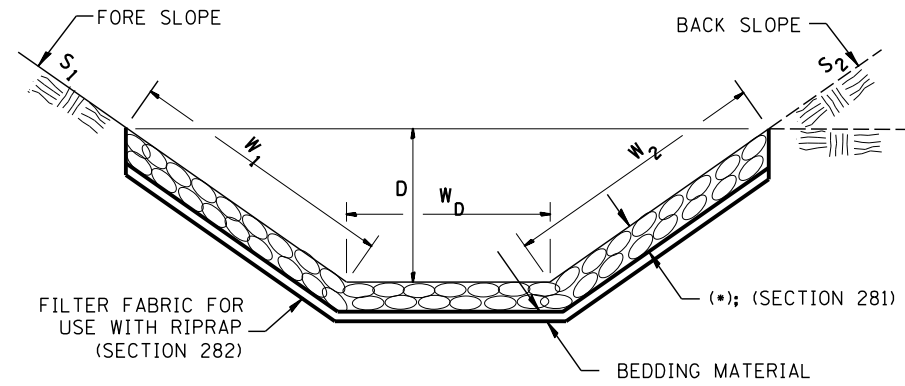
CADD SID. 205001-04

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	66
CONTRACT NO. 68B43				

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

Designer NOTES:
 1. Designer to modify this Special Detail Sheet, as needed for inclusion in plans.
 2. (*) Designer to specify pay item including material, quality, and gradation.
 3. Include District Special Provision if needed.

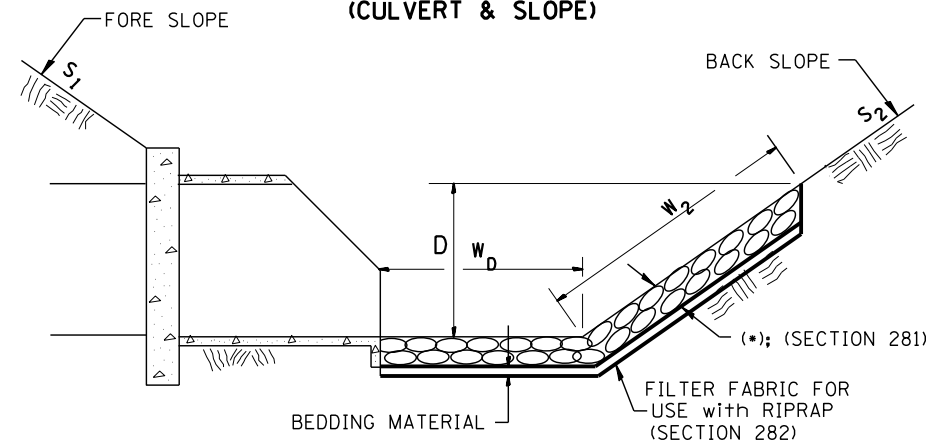
**CASE 1
(DITCH)**



(*)				
LOCATION	WIDTH (1)	LENGTH	RIPRAP	FABRIC
STA TO STA	lin ft (m)	lin ft (m)	tons (m tons)	sq yds (m ²)
TOTAL				

(1) WIDTH = $W_1 + W_2 + W_D$

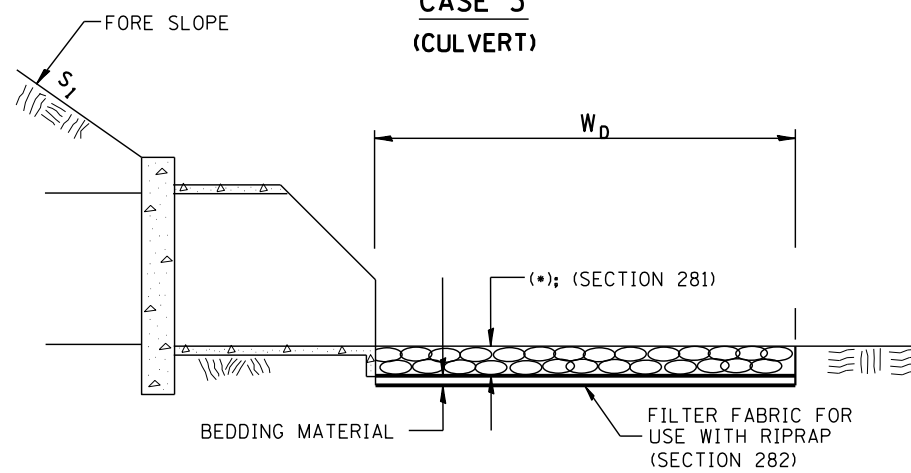
**CASE 2
(CULVERT & SLOPE)**



(*)				
LOCATION	WIDTH (1)	LENGTH	RIPRAP	FABRIC
STA TO STA	lin ft (m)	lin ft (m)	tons (m tons)	sq yds (m ²)
TOTAL				

(1) WIDTH = $W_2 + W_D$

**CASE 3
(CULVERT)**



(*)				
LOCATION	WIDTH (1)	LENGTH	RIPRAP	FABRIC
STA TO STA	lin ft (m)	lin ft (m)	tons (m tons)	sq yds (m ²)
TOTAL				

(1) WIDTH = W_D

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

All dimensions are in inches (millimeters) unless otherwise noted.

11-1-97	BENUM_A=12.02_NEW_REVISION_BOX	J.P.		
12-1-97	COBRECT_FILTER_FABRIC_LEADER_ARROW	J.A.		
10-16-06	REVISED TO 2007 SPEC.	M.A.		
9-6-12	REMOVED A DESIGNER NOTE AND MADE MINOR CHANGES	R.D.		

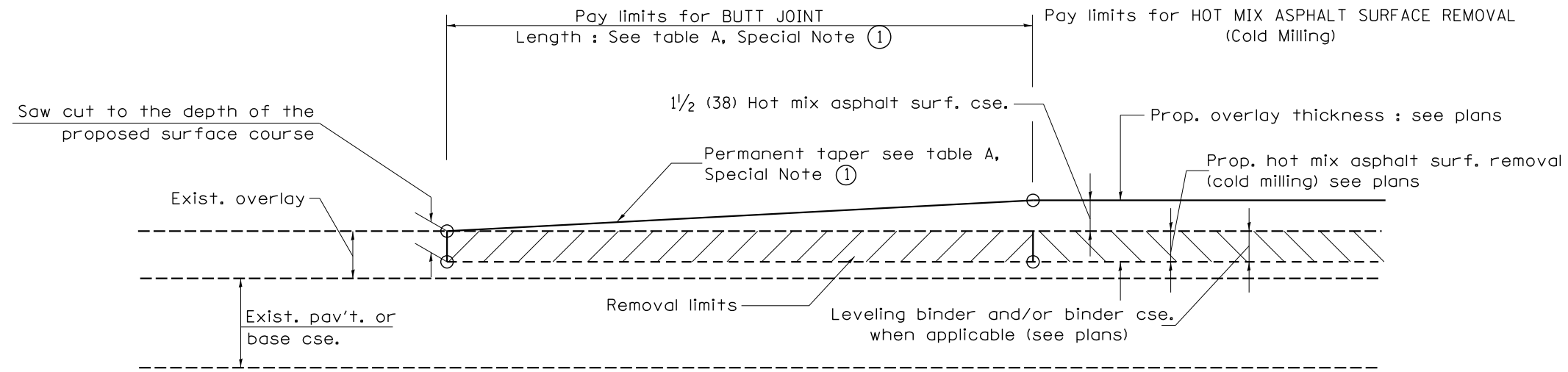
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RIPRAP DITCH FOR EROSION PROTECTION

NOT TO SCALE

CADD SID. 281001-04

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	67
CONTRACT NO. 68B43				
FED. ROAD DIST. NO. - [ILLINOIS] FED. AID PROJECT				



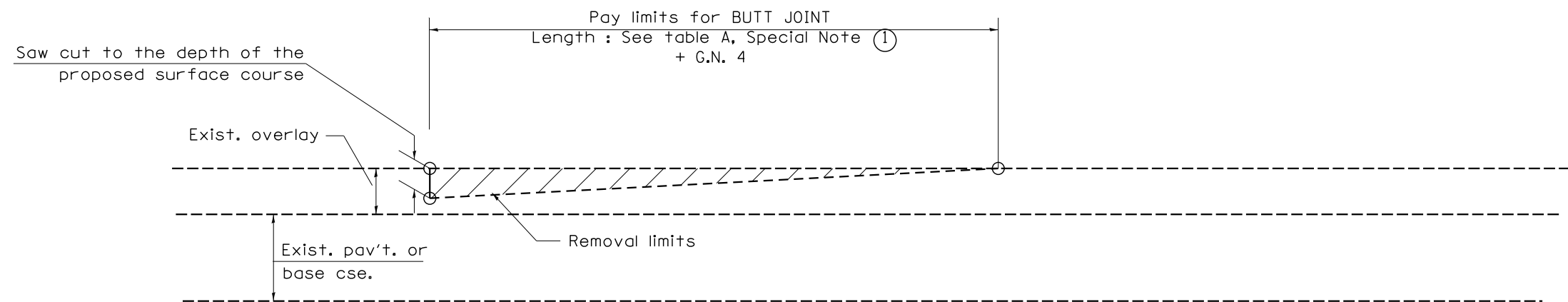
CASE 1 : WITH HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)

**TABLE A
TAPER RATES**

SPECIAL NOTE NUMBER	ELEMENT	MAINLINE INTERSTATES & 4-LANE EXPRESSWAYS	ALL OTHERS
①	BUTT JOINT TAPER RATE	1:480	1:240
②	TEMPORARY RAMP TAPER RATE	1:80	1:40

GENERAL NOTES

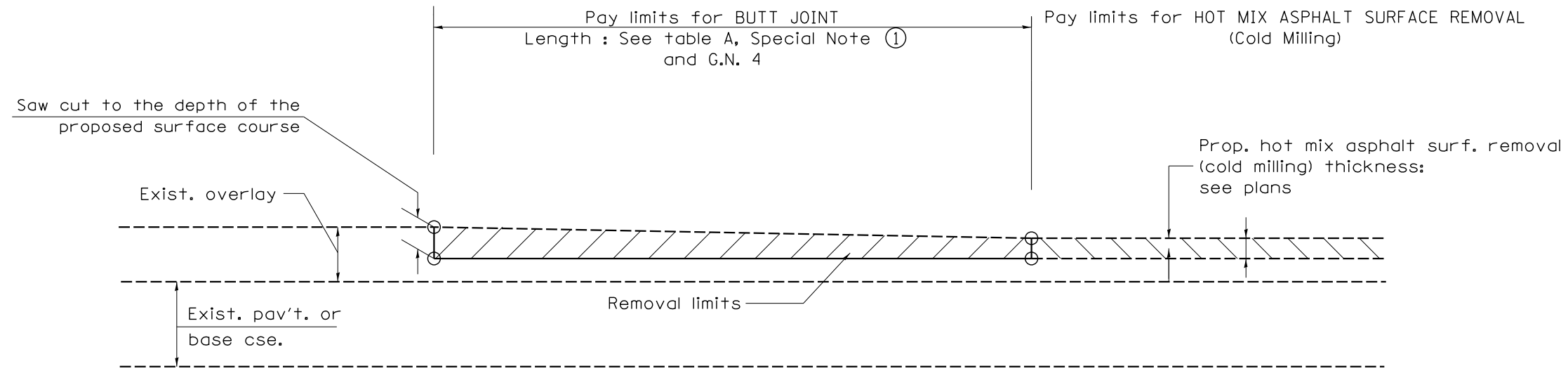
1. The work shall be done in accordance with Article 406.08 and the Special Provision for Butt Joints.
2. The pavement surface to be removed may be either bituminous or P.C. concrete. The work shall be performed in accordance with Article 440.04 and the Special Provisions for Butt Joints.
3. The saw cut joints shall be primed just prior to the placing of bituminous material. The work will be in accordance with the applicable portions of Article 406.05.
4. The length of butt joint is based on the taper rate times change in cold milling depth within the butt joint pay limits, unless otherwise indicated.



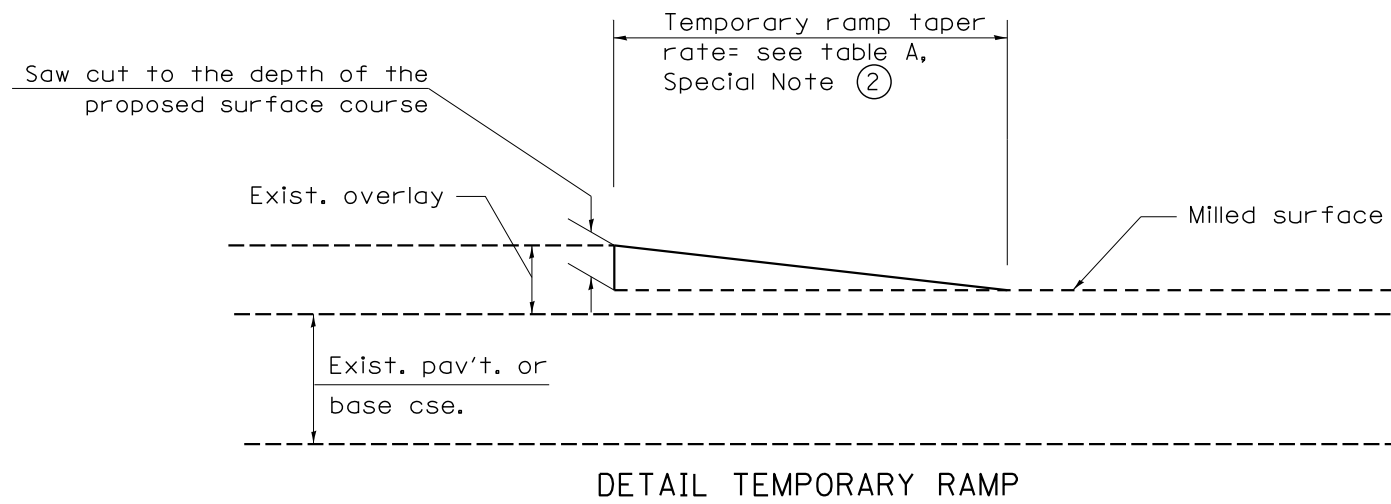
CASE 2 : NO HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)

All dimensions are in inches (millimeters) unless otherwise noted.

01-01-97	BENUM_C:23.01_NEW_REVISION_BOX	J.P.	08-21-13	MAJOR MODIFICATIONS	B.D.	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BUTT JOINTS	NOT TO SCALE	SHI_J_0E_3 CADD_SID_406101:04	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
04-01-97	CORRECTION TO DEPTH	J.A.	02-29-16	MINOR CORRECTIONS	B.D.					411	(103B)BR	WARREN	76	68
09-15-05	REVISED DESIGNER NOTE	M.M.A.	04-12-16	MINOR CORRECTIONS	B.D.					CONTRACT NO. 68B43				
10-16-06	REVISED TO 2007 SPEC.	M.A.								FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT				



**CASE 3 : HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)
TIE-IN TO EXISTING BITUMINOUS TAPER**



All dimensions are in inches (millimeters) unless otherwise noted.

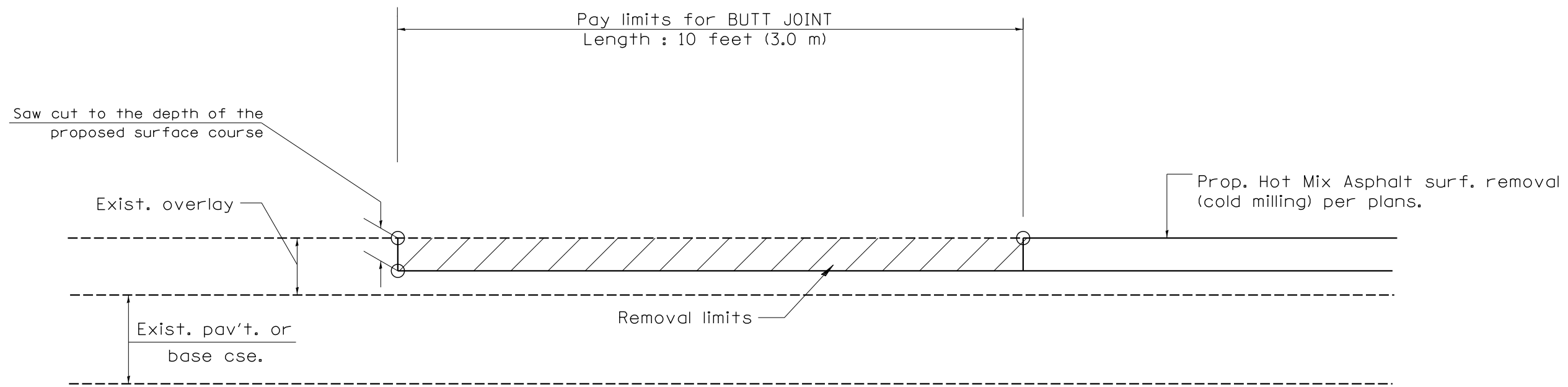
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BUTT JOINTS

NOT TO SCALE

SHI_2_OF_3
CADD SID_406101:04

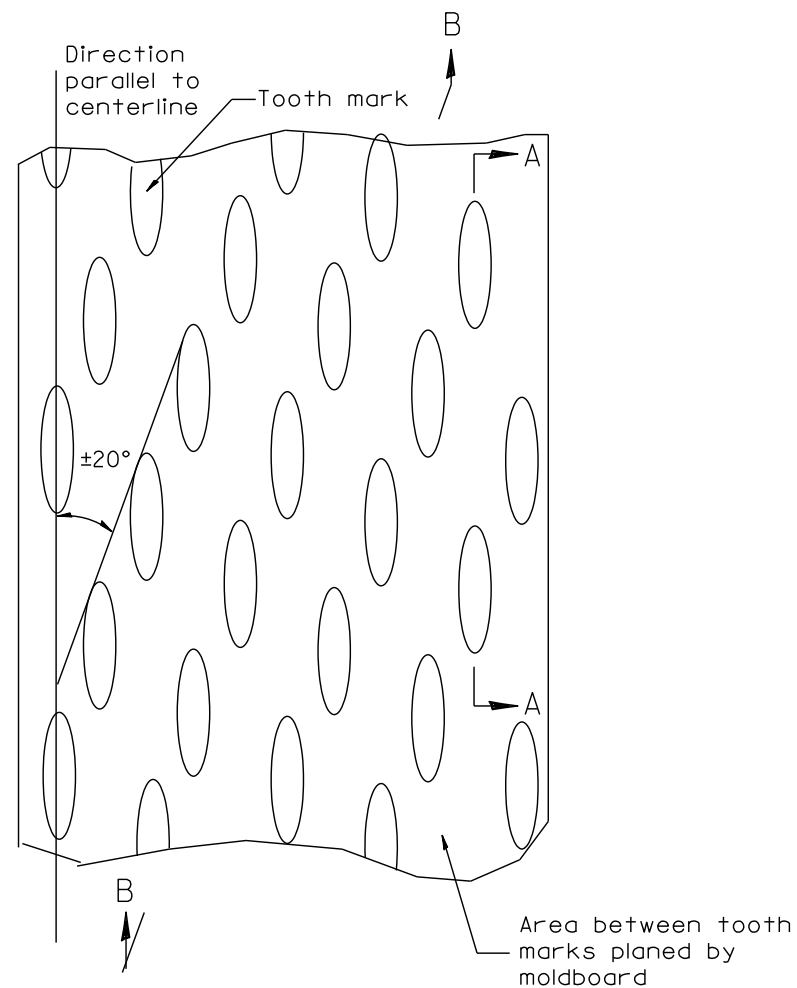
F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	69
CONTRACT NO. 68B43			FED. ROAD DIST. NO. - [ILLINOIS] FED. AID PROJECT	



**CASE 4 : SINGLE LIFT OVERLAY WITH EQUIVALENT DEPTH
HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)
TIE-IN TO EXISTING BITUMINOUS TAPER**

All dimensions are in inches (millimeters) unless otherwise noted.

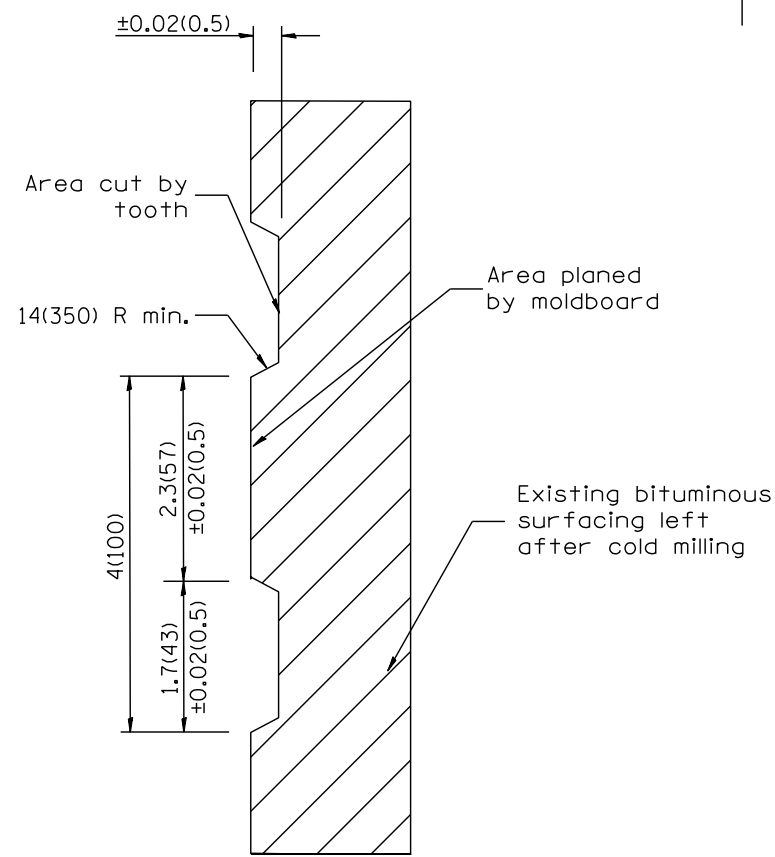
				STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		BUTT JOINTS		SHI_3 OF 3 CADD SID_406101:04	
				NOT TO SCALE				FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT	
F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.					
411	(103B)BR	WARREN	76	70	CONTRACT NO. 68B43				



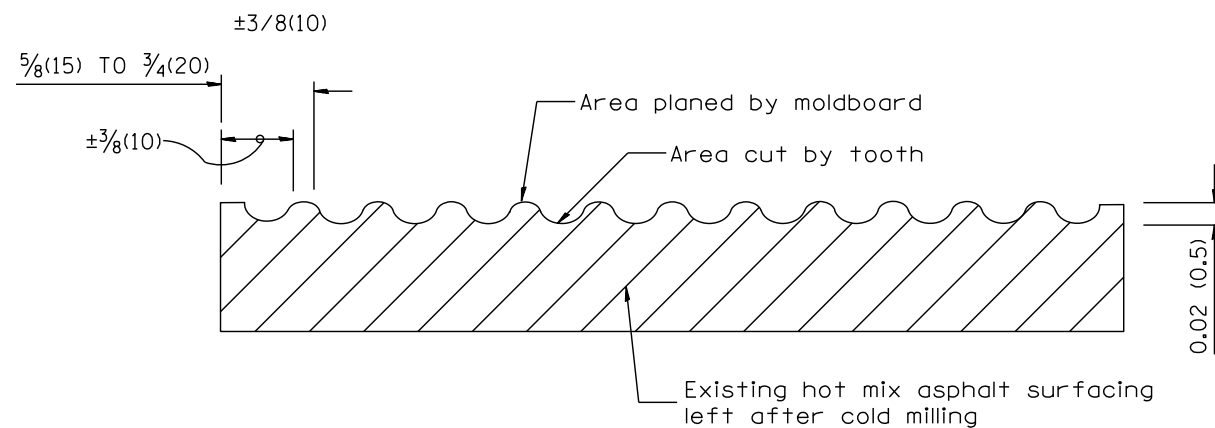
PLAN

General notes:

1. Coldmilling shall consist of two processes: Cutting with carbide teeth mounted on a rotating drum, and planing with a moldboard mounted immediately behind the cutting drum.
2. Other similar patterns will be acceptable if they consist of a smooth, flat, planed surface interspersed with a pattern of discontinuous longitudinal striations.



SECTION A-A



SECTION B-B PROJECTED PERPENDICULAR TO CENTERLINE

DESIGNER NOTES:
1. INCLUDE DISTRICT SPECIAL PROVISION, IF APPLICABLE.

All dimensions are in inches (millimeters) unless otherwise noted.

01-01-97	BENUM_C=104.01_NEW_REVISION_BOX	J.P.	
04-20-98	REMOVED_MILLING_DETAIL_FROM_STANDARD	J.A.	
09-08-98	CORRECT_NOIE_LEADER_PLACEMENT	B.W.	
10-16-06	REVISED_TO_2007_SPEC.	M.A.	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)

NOT TO SCALE

CADD STD. 440001-04

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
441	(103B)BR	WARREN	76	71
CONTRACT NO. 68B43				

FED. ROAD DIST. NO. - [ILLINOIS] FED. AID PROJECT

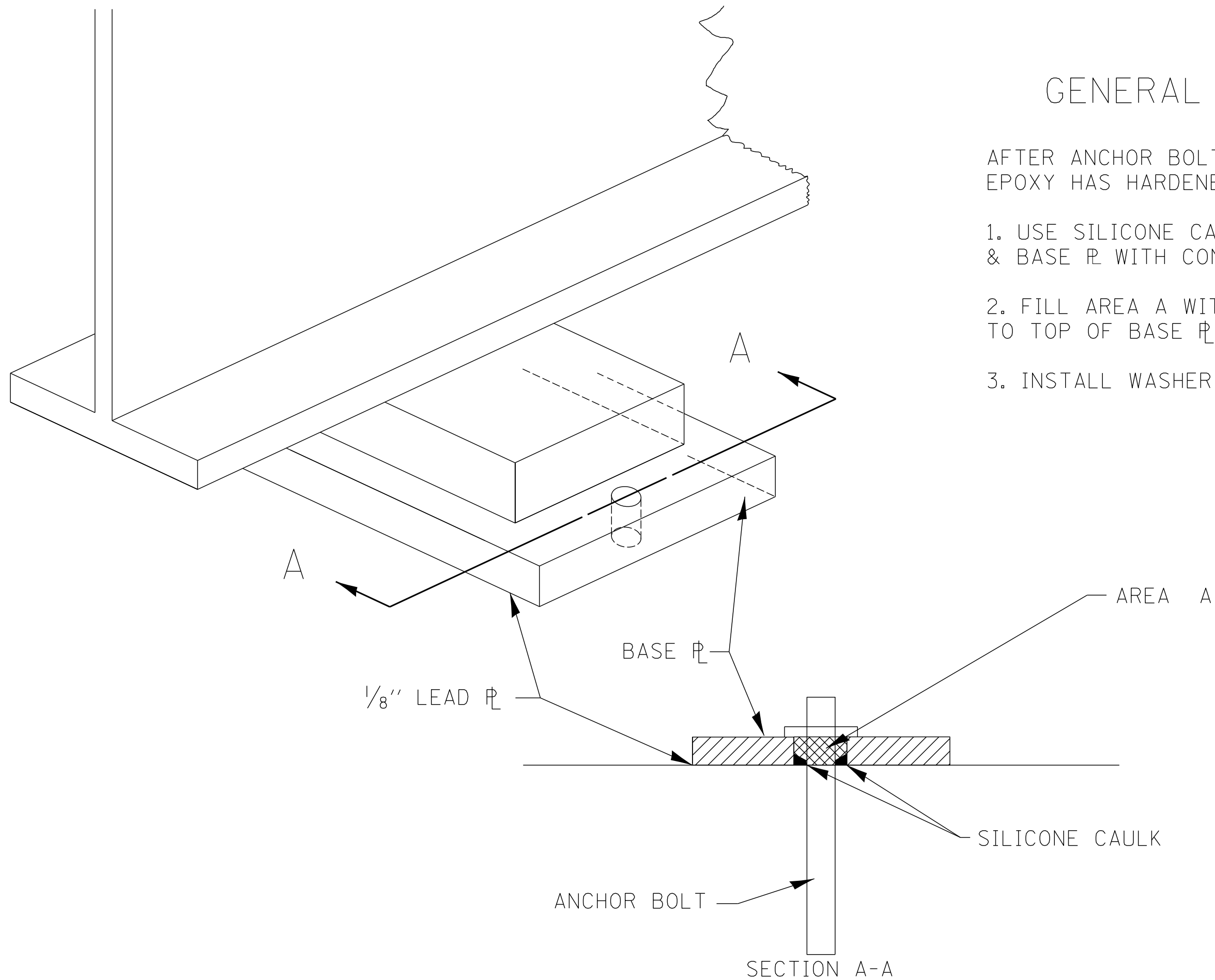
GENERAL NOTES

AFTER ANCHOR BOLT IS INSTALLED & EPOXY HAS HARDENED

1. USE SILICONE CAULK TO SEAL LEAD ϕ & BASE ϕ WITH CONCRETE

2. FILL AREA A WITH 2 PART EPOXY, TO TOP OF BASE ϕ

3. INSTALL WASHER & NUT



All dimensions are in inches (millimeters) unless otherwise noted.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEARING PLATE DETAIL

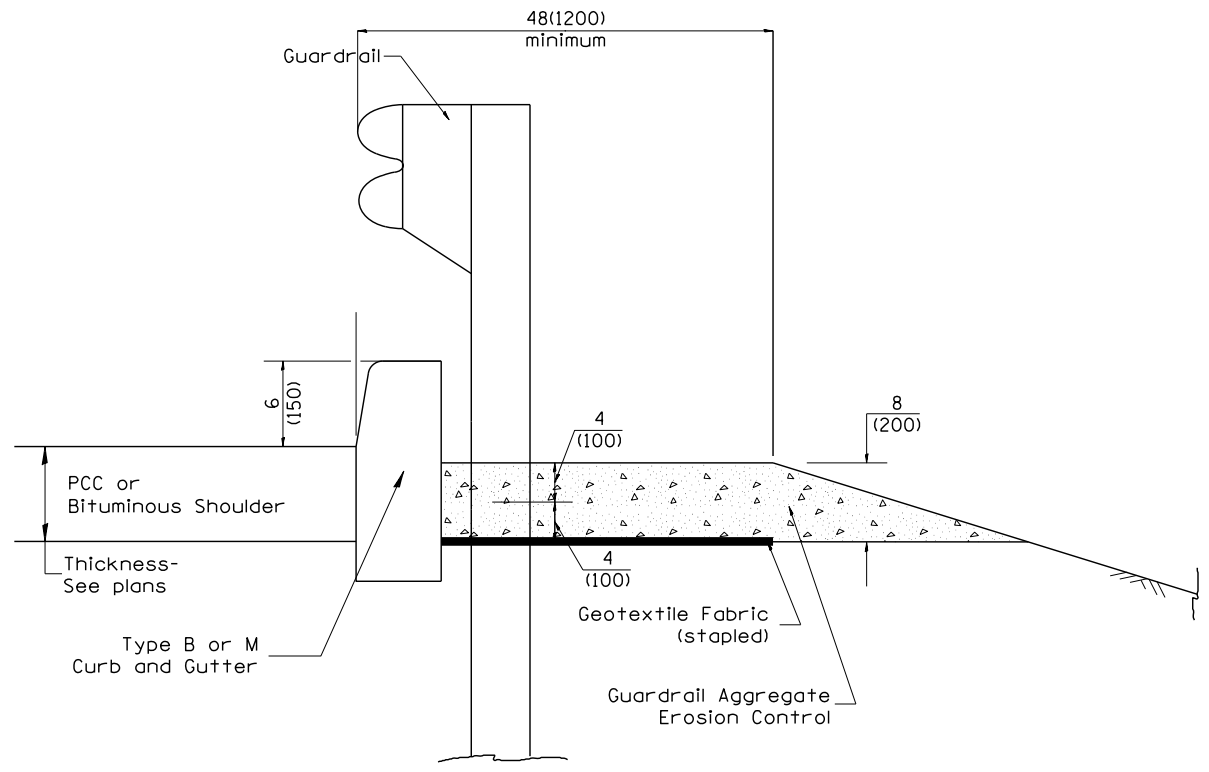
NOT TO SCALE

CADD SID. 505001-04

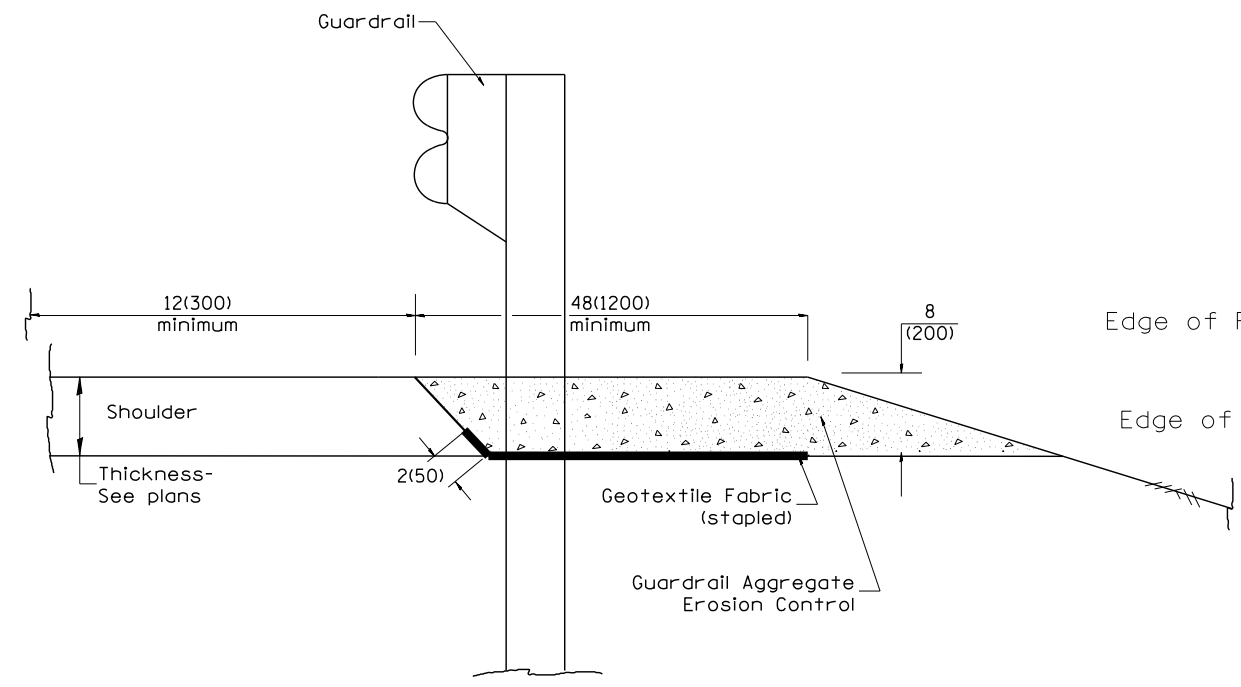
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	72
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT			CONTRACT NO. 68B43	

DESIGNER NOTES:

1. CONSIDER USING A "B" CURB PAY ITEM AT GUARDRAIL INSTALLATIONS WHERE GRADES ARE EQUAL TO OR GREATER THAN 1/2" AND AT INLETS. (INCLUDE DISTRICT SPECIAL PROVISION)
2. USE "GUARDRAIL AGGREGATE EROSION CONTROL" AT GUARDRAIL INSTALLATIONS WHERE GRADES ARE LESS THAN 1/2" (INCLUDE DISTRICT SPECIAL PROVISION).
3. INCLUDE STATE STANDARD 610001, IF APPLICABLE.
4. INCLUDE THE FOLLOWING DISTRICT CADD STANDARDS AS NEEDED: SLOPE DRAINS FOR EXPOSED PIPES; SLOPE DRAINS FOR BURIED PIPES; SEEPAGE COLLARS FOR BURIED PIPES
5. SEE PAGE COLLARS FOR EXPOSED PIPES; CONCRETE THRUST BLOCKS AND PIPE ELBOW.
6. INCLUDE DISTRICT SPECIAL PROVISION - "AGGREGATE QUALITY" FOR PROJECTS LOCATED IN THE WESTERN AREA OF THE DISTRICT - APPROX. DIVIDING LINE IS IL 97.
7. DELETE DESIGNER NOTES WHEN INSERTING INTO PLAN FILES.
8. OPERATIONS PREFERS USE OF PIPE OUTLETTING ONTO FORESLOPE WITH RIPRAP. USE NON-METALLIC PIPE WHEN POSSIBLE BECAUSE OF FUTURE CORROSION ISSUES.



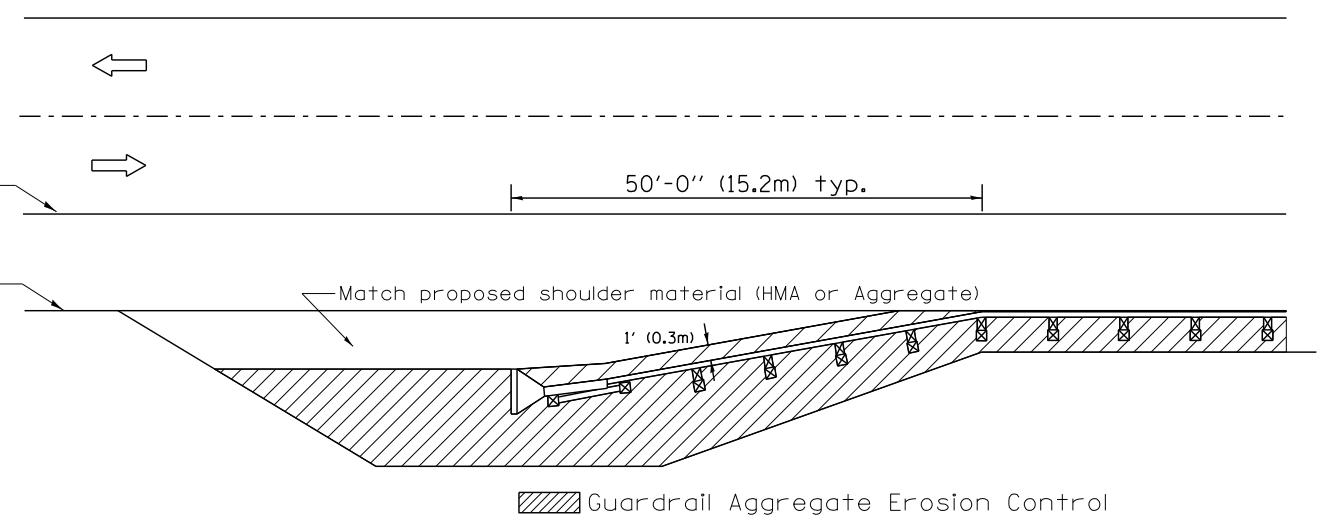
TYPICAL SECTION WITH EROSION CONTROL CURB



TYPICAL SECTION WITHOUT EROSION CONTROL CURB

GENERAL NOTES: GUARDRAIL AGGREGATE EROSION CONTROL

1. This work shall consist of grading as needed, furnishing and installing geotextile fabric and staples, and furnishing, placing and shaping crushed aggregate around and behind Steel Plate Beam Guardrail posts in accordance with Plan Details.
2. Before placing the aggregate and the Geotextile Fabric, weeds and grass shall be removed from the area to be covered.
3. After the area has been prepared, and in a dry condition, the Geotextile fabric shall be placed with a 12(300) minimum overlap. A knife cut for guardrail post installation is necessary.
4. The aggregate shall be deposited, compacted and shaped by either mechanical or hand methods, in a manner reasonably true to line and grade.
5. The Contractor shall have the option of placing the guardrail before or after the Geotextile Fabric and Aggregate are in place. If the guardrail is placed after the Geotextile Fabric and Aggregate, then any voids must be filled and the aggregate returned to line and grade.
6. Materials shall meet the following requirements:
 - A. The crushed aggregate shall be CA1 gradation in accordance with Article 1004.01(c) of the Standard Specifications.
 - B. The Geotextile Fabric shall be nonwoven fabric in accordance with Article 1080.02 of the Standard Specifications.



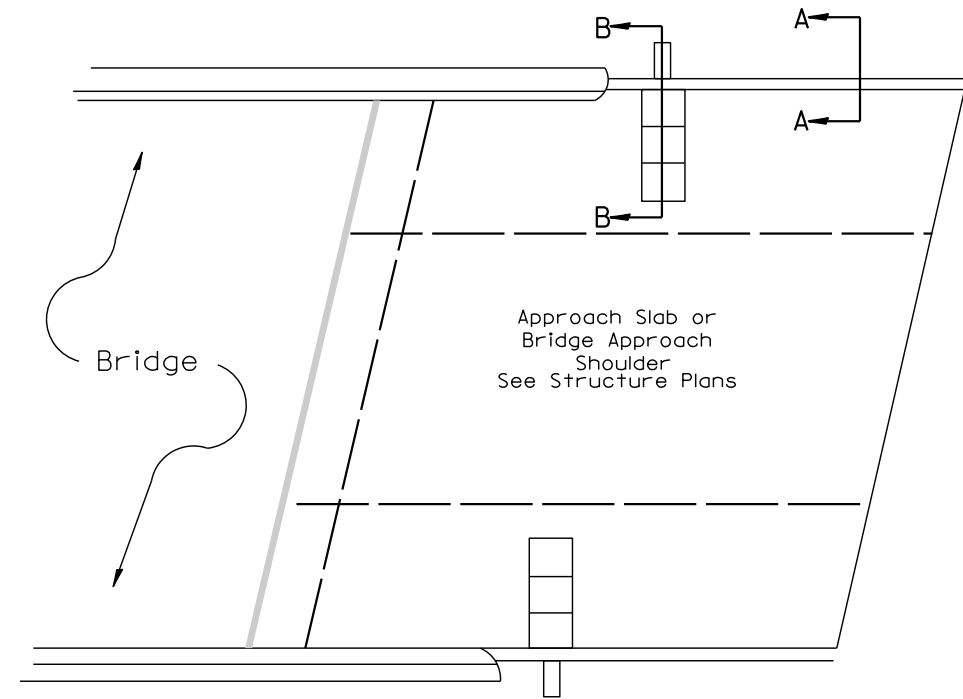
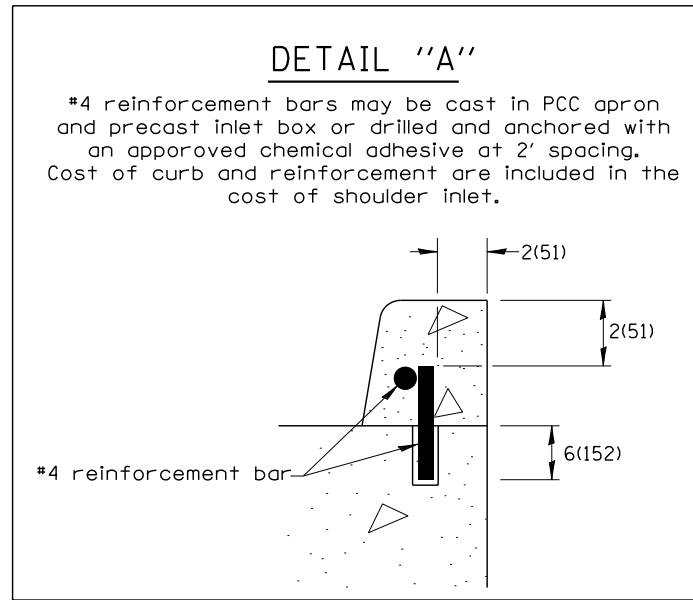
All dimensions are in inches (millimeters) unless otherwise noted.

01-01-97	BENUM_C-22.01_NEW_REVISION_BOX	J.R.	3-7-11	Added Detail showing plan view	R.D.
03-01-97	COBRECT_SID_NUMBERS_IN_NOIES_PG_2	J.A.	8-10-12	Revised curb "B" and aggregate	R.D.
11-03-00	COBRECTIION_TO_NOIES	M.A.	7-15-15	Addressed shoulder inlet curb	R.D.
10-16-06	REVISED_TO_2007_SPEC.	M.A.			

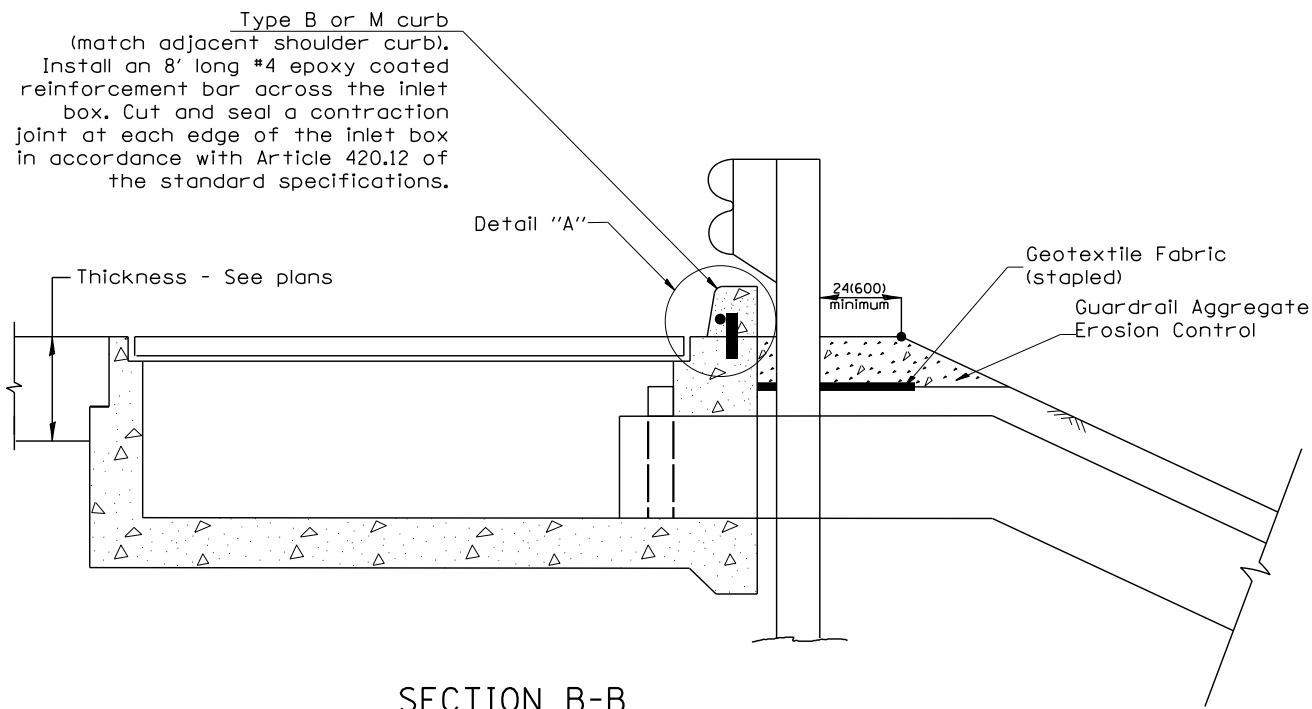
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GUARDRAIL EROSION CONTROL TREATMENTS
NOT TO SCALE

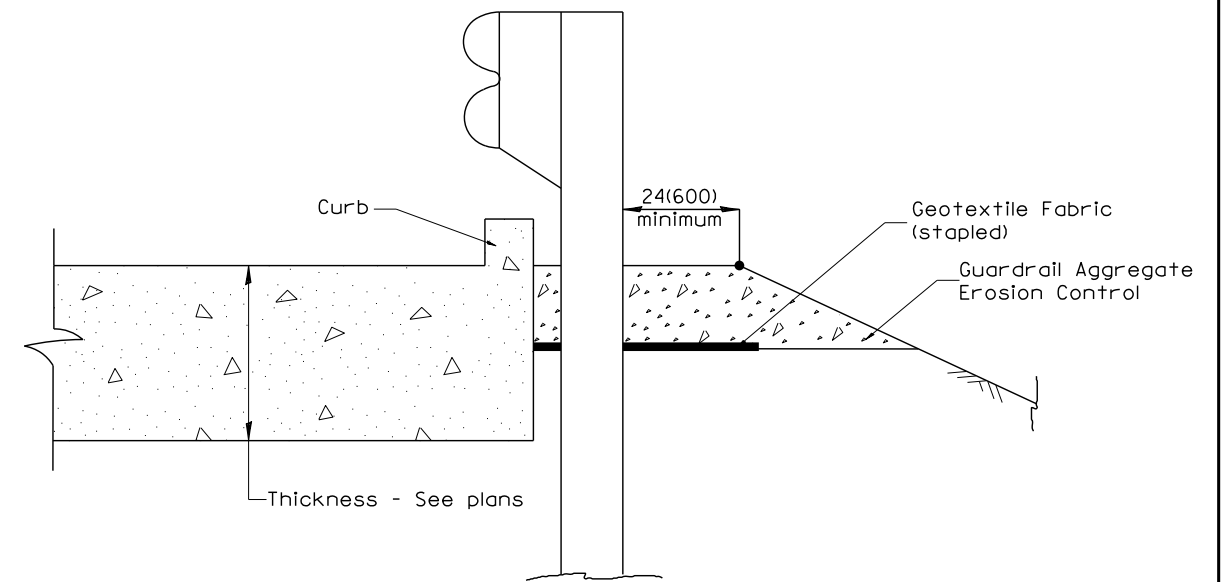
F.A.S RTE. 411	SECTION (103B)BR	COUNTY WARREN	TOTAL SHEETS 76	SHEET NO. 73
CONTRACT NO. 68B43			SHI, J OF 2 CADD SID. 630101:04	
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



PLAN VIEW
APPROACH SLAB OR SHOULDER PLACEMENT



SECTION B-B
TYPICAL SECTION AT INLETS
TYPE E, F & G (HIGHWAY STANDARD 610001)

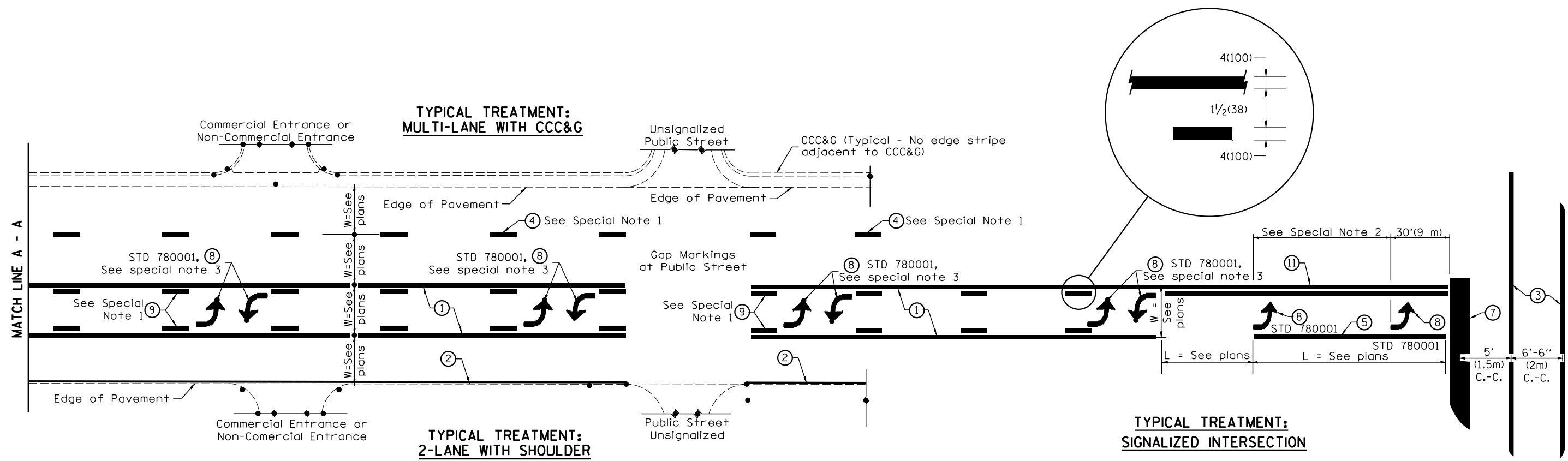


SECTION A-A
TYPICAL SECTION WITH BRIDGE APPROACH CURB

All dimensions are in inches (millimeters) unless otherwise noted.

FILE NAME	USER NAME = \$USER\$	DESIGNED	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GUARDRAIL EROSION CONTROL TREATMENTS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
%FILEL%		DRAWN	REVISED			411	(103B)BR	WARREN	76	74	
	PLOT SCALE = \$SCALE\$	CHECKED	REVISED			CONTRACT NO. 68B43					
%MODELNAME%	PLOT DATE = \$DATE\$	DATE	REVISED			SHI. 2 OF 2 CADD SID. 630101-04					
					NOT TO SCALE		SHEET ___ OF ___ SHEETS		STA. _____		
FED. ROAD DIST. NO. - [ILLINOIS] FED. AID PROJECT											

DESIGNER NOTES:
1. Include State Standard 780001 (Typical Pavement Markings)



FLUSH PAVED MEDIAN: TWO-WAY LEFT TURN LANE WITH ONE-WAY LEFT TURN LANE AT SIGNALIZED INTERSECTION

TYPICAL PAVEMENT MARKING LEGEND
(Note: This is a District Standard Legend. Some elements may not apply to specific project.)

- ① 4(100) Solid (Yellow)
- ② 4(100) Solid (White)
- ③ 2-6(150) Crosswalk @ 6'-6" (2m)min C.-C. (White)
2-8(200) Crosswalk @ 6'-6" (2m)min C.-C. (White) (When traffic signals are present.)
- ④ 6(150) Skip-Dash (White) (See Special Note 1)
- ⑤ 8(200) Solid (White)
- ⑥ 12(300) Diagonal (White) (Item ⑥ is shown on Std. 780001)
- ⑦ 24(600) Stop Bar (White)
- ⑧ Letters & Arrows (See Std. 780001 and Special Notes 2 & 3)
- ⑨ 4(100) Skip-Dash (Yellow) (See Special Note 1)
- ⑩ 12(300) Diagonal (Yellow) (See Table A)
- ⑪ 4(100) Double Solid (Yellow) (See Table A)

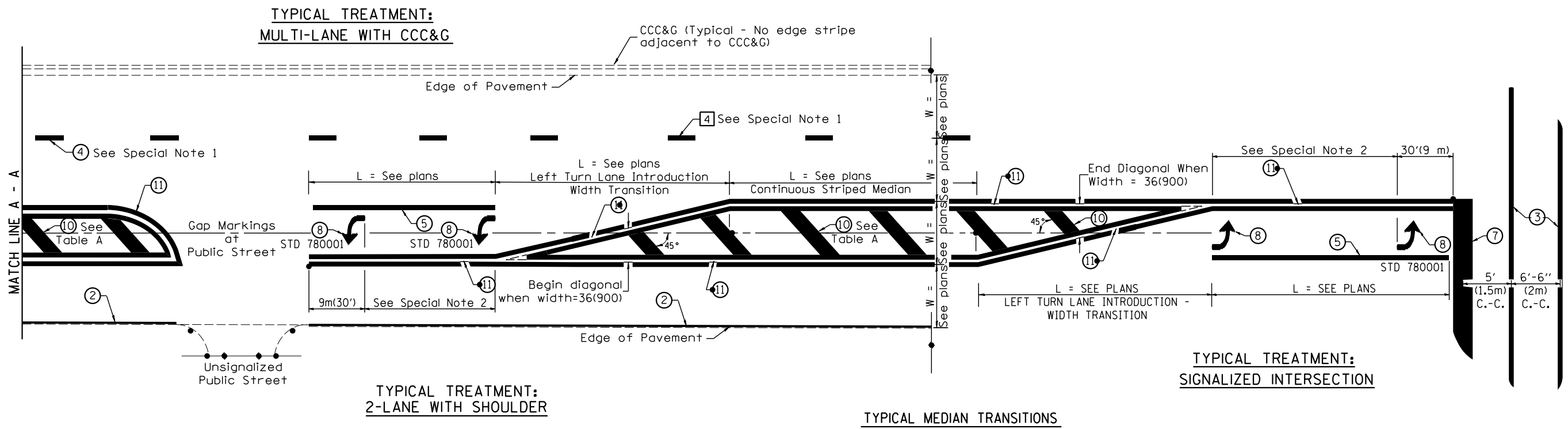
SPECIAL NOTES

- Skip-Dash markings will be centered between both ends of city blocks and shall be placed in alignment transversely across the pavement.
- The following shall apply to arrows located in one-way left turn lanes:
 - A. A minimum of two (2) arrows is required.
 - B. The maximum spacing between arrows is 80' (24 m).
 - C. Arrows shall be evenly spaced if three (3) or more are required.
- The following shall apply to arrow pairs located in two-way left turn lanes:
 - A. A minimum of two (2) arrow pairs is required.
 - B. The maximum spacing between arrow pairs is 200' (61 m).
 - C. Arrow pairs shall be evenly spaced if three (3) or more are required.
 - D. The spacing between Bi Directional Left Turn Arrows is 33' (10 m).

GENERAL NOTES

- Refer to State Standard 780001 for additional Pavement Markings including letters & arrows.
- See Plans for Pavement Markings adjacent to curbed islands and medians, and through lane reductions.
- Refer to Article 780.13 for letter, number and symbol areas (sq. ft.)
- Areas are grooved 1" beyond each edge for the following symbols:
Through Arrow= 14.8 sq. ft.
Large Left or Right Arrow= 21.9 sq. ft.
2 Arrow Combination Left (or Right) and Through= 34.9 sq. ft.
Wrong Way Arrow= 29.5 sq. ft.
Railroad Crossing Symbol= 69.8 sq. ft.
(For further information, refer to BDE Special Provision: Grooving for Recessed Pavement Markings)

01-01-97	BENUM_E=8.03_NEW_REVISION_BOX	J.P.	10-16-06	REVISED_TO_2007_SPEC.		STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TYPICAL PAVEMENT MARKINGS	F.A.S	SECTION	COUNTY	TOTAL	SHEET		
02-07-97	ADD_BI_DIRECTIONAL_DIMENSION	J.A.	2/29/16	ADDED_GROOVING_AREAS	B.D.			411	(103B)BR	WARREN	76	75		
10-97	COBBECT_BI_DIRECTIONAL_DIMENSION	J.A.												
08-02	ADD_CROSSWALK_DIMNS_WITH_I.S.	M.A.												
							NOT TO SCALE	SHI_I_0E_2 CADD_SIG_780001-04	FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT	CONTRACT NO. 68B43				



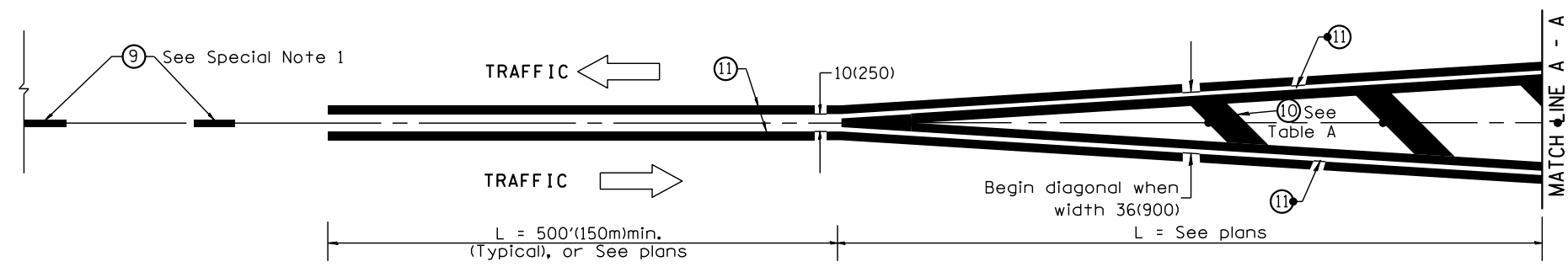
TYPICAL TREATMENT:
2-LANE WITH SHOULDER

TYPICAL MEDIAN TRANSITIONS

FLUSH PAVED MEDIAN: RESTRICTED LEFT TURN LANE

TABLE A
RECOMMENDED SPACING BETWEEN DIAGONAL LINES

SPEED LIMIT RANGE	INTERSECTION CHANNELIZATION (Includes Width Transitions for Median and Left Turn Lane Introductions)	
	CONTINUOUS	
Less Than 30 mph (50 km/h)	50' (15m)	15' (5m)
30 - 45 mph (50 - 70 km/h)	75' (23m)	20' (6m)
Over 45 mph (70 km/h)	150' (46m)	30' (9m)



MEDIAN INTRODUCTION - WIDTH TRANSITIONS

All dimensions are in inches (millimeters) unless otherwise noted.