11-08-2024 LETTING ITEM 045

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-2Q)BR	HENDERSON	87	1
		ILLINOIS CONTRACT NO. 68989		

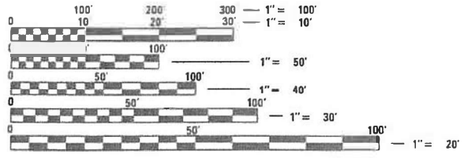
INDEX OF SHEETS

LIST OF ILLINOIS DOT HIGHWAY STANDARDS

000001-08	630001-13	701311-03
001001-02	630301-09	701321-18
280001-07	631031-18	701901-09
420401-13	643001-02	704001-08
424001-11	666001-01	720001-01
482001-02	701001-02	720006-04
515001-04	701006-05	725001-01
601101-02	701011-04	728001-01
602306-03	701201-05	780001-05
602401-07	701301-04	782006-01
606001-08		

LIST OF DISTRICT 4 CADD STANDARDS

205001-D4
406101-D4
406501-D4
423101-D4
505001-D4
606201-D4
606206-D4
630101-D4
780001-D4



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 EXCAVATORS
1-800-892-0123
OR 811

PROJECT ENGINEER: REBECCA MARRUFFO (309) 671-3454
PROJECT MANAGER: ANNA DEVINE (309) 671-3475

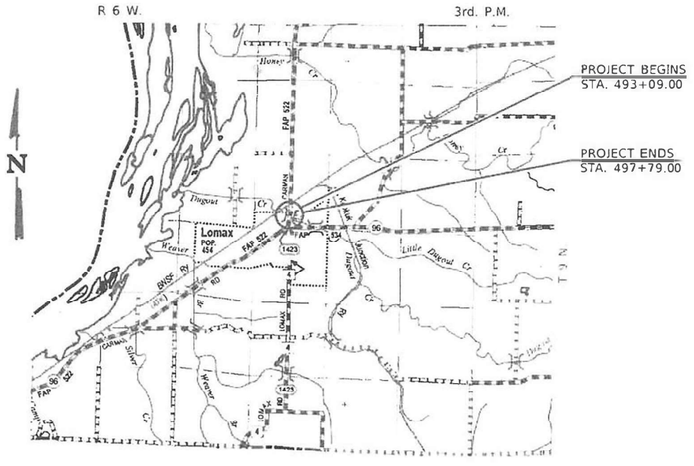
CATALOG NO. 034467-00D
CONTRACT NO. 68989

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED HIGHWAY PLANS

F.A.P. ROUTE 522 (CARMAN ROAD) OVER DUGOUT CREEK SECTION (14-2Q)BR PROJECT STP-X9PI(126) BRIDGE REPLACEMENT HENDERSON COUNTY

C-94-108-10



REMOVE AND REPLACE
EX STRUCTURE OVER
DUGOUT CREEK
EX SN 036-3003
PROP SN 036-0074

D-94-028-10

LOCATION OF SECTION INDICATED THUS: –

ADT = 2400 (2016)
% SU = 3.5 (2016)
% MU = 3.5 (2016)
TOWNSHIP: LOMAX
FUNCTIONAL CLASSIFICATION: MINOR ARTERIAL

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED Aug 15 2024
Kensel A Garnett KSD
REGIONAL ENGINEER

October 4, 2024
EA
ENGINEER OF DESIGN AND ENVIRONMENT

October 4, 2024
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

CHRISTOPHER P. KOLRUS
062-062128
LICENSED PROFESSIONAL ENGINEER
OF
STATE OF ILLINOIS

Christopher P. Kolrus 8/2/24
EXPIRATION: 11/30/2025

GROSS LENGTH = 470.00 FT. = 0.089 MILE
NET LENGTH = 431.00 FT. = 0.082 MILE

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

REV. 10/7/24 REV. 8/28/24

COMMITMENTS

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

NO COMMITMENTS HAVE BEEN MADE AT THIS TIME.

GENERAL NOTES

AVAILABILITY OF ELECTRONIC FILES

MICROSTATION 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.

TREE REMOVAL RESTRICTIONS

DUE TO POTENTIAL PRESENCE OF ENDANGERED BATS, NO TREE REMOVAL WILL BE ALLOWED ON THIS PROJECT BETWEEN APRIL 1 AND SEPTEMBER 30.

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 WIDE, 5 INCHES HIGH AND 5/8 INCH DEEP.

THE PAVEMENT STATION NUMBERS SHALL BE INSTALLED AS SPECIFIED HEREIN:

INTERVAL – 200 FEET

BOTTOM OF NUMBERS – 6 INCHES 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.

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.

ADDITIONAL SUPPLEMENTAL TRAFFIC CONTROL

THE DEPARTMENT RESERVES THE RIGHT AT ANY TIME TO ADD ADDITIONAL TRAFFIC CONTROL SYSTEMS OR DEVICES WITHIN THE ACTIVE CONTRACT LIMITS, BY MEANS OF AN ADDITIONAL CONTRACT. ALL TERMS OF ARTICLE 105,08 OF THE STANDARD SPECIFICATIONS SHALL BE FOLLOWED BY EACH CONTRACTOR.

NO PASSING ZONE VERIFICATION

THE RESIDENT SHALL CONTACT OPERATIONS TO VERIFY THE LOCATION OF NO PASSIN ZONES PRIOR TO PLACEMENT OF CENTERLINE STRIPING.

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. 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 GREG LARSON AT 309–671–3479 FOR FINAL COUNT.
4. NOTE THAT STAMPED STATIONING DOES NOT MATCH PROPOSED PLAN STATIONING.

CALCULATION FACTORS

AGGREGATE SHOULDERS AND BASES: 0.057 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: 0.057 TON /SQ YD /INCH
POLYMERIZED BITUMINOUS MATERIALS (TACK COAT): 0.08 LB /SQ FT

HOT–MIX ASPHALT MIXTURE REQUIREMENTS

MIXTURE USE(S)	POLYMER SURFACE COURSE 1.5"	POLYMER BINDER (ALL LIFTS)
AC /PG	SBS OR SBR 64–28	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
MATERIAL TRANSFER DEVICE	NO	NO

NOTE: 1) INDIVIDUAL LIFT THICKNESS OF EACH MIX TYPE WILL BE NO LESS THAN 3 TIMES NOMINAL MAXIMUM AGGREGATE SIZE AND NO MORE THAN 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 LBS/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 CONTRACTOR.

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

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

SCALE: VARIES | SHEET NO. __ OF __ SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-20)BR	HENDERSON	86	3
		CONTRACT NO. 68989		
	ILLINOIS	FED. AID PROJECT		

STATUS OF UTILITIES TO BE ADJUSTED

ROUTE/STREET	OFFSET	LOCATION	OWNER	TYPE OF UTILITY	TYPE OF CONFLICT	DISPOSITION
FAP 522 (CARMAN ROAD)	45' RT. OF CENTERLINE	STA. 493+00 TO STA. 497+00	DALLAS RURAL WATER	WATER	NONE	NO
FAP 522 (CARMAN ROAD)	20' RT. OF CENTERLINE	STA. 493+50	AMEREN ILLINOIS	ELECTRIC	NEW SIDEWALK	RELOCATE
FAP 522 (CARMAN ROAD)	30' RT. OF CENTERLINE	STA. 496+35	AMEREN ILLINOIS	ELECTRIC	NEW SLOPE	RELOCATE
FAP 522 (CARMAN ROAD)	25' RT. OF CENTERLINE	STA. 493+00 TO STA. 496+00	NICOR GAS	1" GAS LINE	NEW SS & SIDEWALK	RELOCATE
FAP 522 (CARMAN ROAD)	18' RT. OF CENTERLINE	STA. 493+00 TO STA. 493+50	MEDIACOM	FIBER AND PED	NEW SS & SIDEWALK	RELOCATE

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STATUS OF UTILITIES

SCALE: VARIES | SHEET NO. __ OF __ SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-20)BR	HENDERSON	86	4
		CONTRACT NO. 68989		
	ILLINOIS	FED. AID PROJECT		

				CONSTRUCTION CODE	
				80% FEDERAL 20% STATE	80% FEDERAL 20% STATE
				ROADWAY	BRIDGE
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	0004	0004
				S.N.	036-7074
20100500	TREE REMOVAL, ACRES	ACRE	0.25	0.25	
20200100	EARTH EXCAVATION	CU YD	105	105	
20300100	CHANNEL EXCAVATION	CU YD	131	131	
20400800	FURNISHED EXCAVATION	CU YD	69	69	
20800150	TRENCH BACKFILL	CU YD	5	5	
21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	375	375	
25000210	SEEDING, CLASS 2A	ACRE	0.5	0.5	
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	45	45	
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	45	45	
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	45	45	
25100115	MULCH, METHOD 2	ACRE	0.5	0.5	
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	50	50	
28000305	TEMPORARY DITCH CHECKS	FOOT	8	8	
28000400	PERIMETER EROSION BARRIER	FOOT	450	450	

				CONSTRUCTION CODE	
				80% FEDERAL 20% STATE	80% FEDERAL 20% STATE
				ROADWAY	BRIDGE
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	0004	0004
				S.N.	036-7074
28000500	INLET AND PIPE PROTECTION	EACH	3	3	
28100207	STONE RIPRAP, CLASS A4	TON	542		542
28200200	FILTER FABRIC	SQ YD	665		665
35600708	HOT-MIX ASPHALT BASE COURSE WIDENING, 8"	SQ YD	131	131	
40600295	POLYMERIZED BITUMINOUS MATERIALS (TACK COAT)	POUND	1199	1199	
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	702	702	
40600990	TEMPORARY RAMP	SQ YD	28	28	
40603230	POLYMERIZED HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	38	38	
40603535	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50	TON	100	100	
42000080	PAVEMENT CONNECTOR (PCC) FOR BRIDGE APPROACH SLAB	SQ YD	70	70	
42400100	PORTLAND CEMENT CONCRETE SIDEWALK 4 INCH	SQ FT	1382	1382	
* 42400800	DETECTABLE WARNINGS	SQ FT	30	30	
44000100	PAVEMENT REMOVAL	SQ YD	182	182	
48203029	HOT-MIX ASPHALT SHOULDERS, 8"	SQ YD	198	198	

*= SPECIALTY ITEM

				CONSTRUCTION CODE	
				80% FEDERAL 20% STATE	80% FEDERAL 20% STATE
				ROADWAY	BRIDGE
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	0004	0004
				S.N.	036-7074
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1		1
50200100	STRUCTURE EXCAVATION	CU YD	300		300
50200300	COFFERDAM EXCAVATION	CU YD	278		278
50201121	COFFERDAM (TYPE 2) (LOCATION - 1)	EACH	1		1
50201122	COFFERDAM (TYPE 2) (LOCATION - 2)	EACH	1		1
50300225	CONCRETE STRUCTURES	CU YD	234.8		234.8
50300255	CONCRETE SUPERSTRUCTURE	CU YD	185.3		185.3
50300260	BRIDGE DECK GROOVING	SQ YD	570		570
50300265	SEAL COAT CONCRETE	CU YD	87.2		87.2
50300300	PROTECTIVE COAT	SQ YD	835		835
50301350	CONCRETE SUPERSTRUCTURE (APPROACH SLAB)	CU YD	117.3		117.3
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1		1
50500505	STUD SHEAR CONNECTORS	EACH	4320		4320
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	109290		109290

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: _____ | SHEET NO. __ OF __ SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-20)BR	HENDERSON	86	7

CONTRACT NO. 68989
ILLINOIS FED. AID PROJECT

REV. 10/7/24 REV. 8/27/24

				CONSTRUCTION CODE	
				80% FEDERAL 20% STATE	80% FEDERAL 20% STATE
				ROADWAY	BRIDGE
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	0004	0004
				S.N.	036-7074
50800515	BAR SPLICERS	EACH	742		742
50900105	ALUMINUM RAILING, TYPE L	FOOT	133		133
51200958	FURNISHING METAL SHELL PILES 14" X 0.250"	FOOT	1528		1528
51202305	DRIVING PILES	FOOT	1528		1528
51203200	TEST PILE METAL SHELLS	EACH	2		2
51500100	NAME PLATES	EACH	1		1
52100520	ANCHOR BOLTS, 1"	EACH	48		48
52200010	TEMPORARY SHEET PILING	SQ FT	948		948
542A0220	PIPE CULVERTS, CLASS A, TYPE 1 15"	FOOT	254	254	
54213660	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 15"	EACH	2	2	
550A0070	STORM SEWERS, CLASS A, TYPE 1 15"	FOOT	42	42	
58600101	GRANULAR BACKFILL FOR STRUCTURES	CU YD	93		93
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	55		55
60100060	CONCRETE HEADWALLS FOR PIPE DRAINS	EACH	4	4	

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PLOT DATE = ___ | CHECKED - ___ | REVISED - ___

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: _____ | SHEET NO. __ OF __ SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-20)BR	HENDERSON	86	8
		CONTRACT NO. 68989		
	ILLINOIS	FED. AID PROJECT		

REV. 10/7/24 REV. 8/27/24

					CONSTRUCTION CODE	
					80% FEDERAL 20% STATE	80% FEDERAL 20% STATE
					ROADWAY	BRIDGE
	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	0004	0004
					S.N.	036-7074
	60146304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	148		148
	60240310	INLETS, TYPE B, TYPE 11 FRAME AND GRATE	EACH	3	3	
	60600095	CLASS SI CONCRETE (OUTLET)	CU YD	0.7	0.7	
	60603800	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12	FOOT	207	207	
*	63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4	4	
*	63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	2	2	
*	63100169	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) FLARED	EACH	1	1	
	64300240	IMPACT ATTENUATORS (FULLY REDIRECTIVE, NARROW), TEST LEVEL 2	EACH	1	1	
	66600105	FURNISHING AND ERECTING RIGHT OF WAY MARKERS	EACH	3	3	
	66600205	REERECTING RIGHT OF WAY MARKERS	EACH	1	1	
*	66700205	PERMANENT SURVEY MARKERS, TYPE I	EACH	1	1	
	67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	8	8	
	67100100	MOBILIZATION	L SUM	1	1	
	70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1	1	

*= SPECIALTY ITEM

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: _____ | SHEET NO. __ OF __ SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-20)BR	HENDERSON	86	9
		CONTRACT NO. 68989		
	ILLINOIS	FED. AID PROJECT		

REV. 10/7/24REV. 8/28/24REV. 8/27/24

				CONSTRUCTION CODE	
				80% FEDERAL 20% STATE	80% FEDERAL 20% STATE
				ROADWAY	BRIDGE
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	0004	0004
				S.N.	036-7074
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	1	
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	10	10	
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1.0	1.0	
70106700	TEMPORARY RUMBLE STRIPS	EACH	5	5	
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	21	21	
70300100	SHORT TERM PAVEMENT MARKING	FOOT	1572	1572	
70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	1360	1360	
70307120	TEMPORARY PAVEMENT MARKING - LINE 4" - TYPE IV TAPE	FOOT	2290	2290	
70307210	TEMPORARY PAVEMENT MARKING - LINE 24"- TYPE IV TAPE	FOOT	72	72	
70400100	TEMPORARY CONCRETE BARRIER	FOOT	500	500	
70400125	PINNING TEMPORARY CONCRETE BARRIER	EACH	60	60	
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	425	425	
70600240	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 2	EACH	2	2	
70600340	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 2	EACH	2	2	

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PLOT DATE = ___	CHECKED - ___	REVISED - ___

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: _____ | SHEET NO. __ OF __ SHEETS | STA. | TO STA.

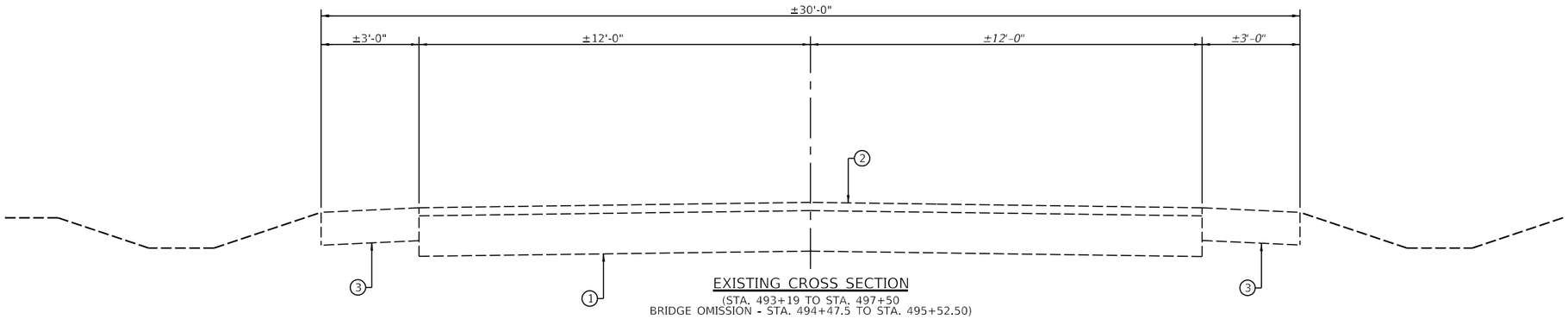
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-20)BR	HENDERSON	86	10
		CONTRACT NO. 68989		
	ILLINOIS	FED. AID PROJECT		

REV. 10/7/24 REV. 8/27/24

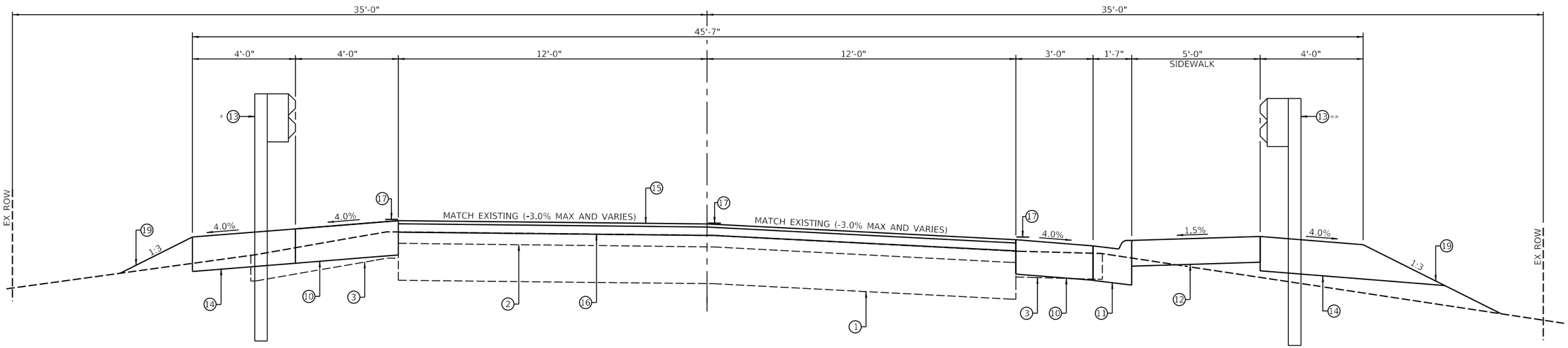
					CONSTRUCTION CODE	
					80% FEDERAL 20% STATE	80% FEDERAL 20% STATE
					ROADWAY	BRIDGE
	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	0004	0004
					S.N.	036-7074
*	72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	3	3	
*	78009004	MODIFIED URETHANE PAVEMENT MARKING - LINE 4"	FOOT	2013	2013	
*	78009008	MODIFIED URETHANE PAVEMENT MARKING - LINE 8"	FOOT	87	87	
*	78009024	MODIFIED URETHANE PAVEMENT MARKING - LINE 24"	FOOT	21	21	
*	78011025	GROOVING FOR RECESSED PAVEMENT MARKING 5"	FOOT	2013	2013	
*	78011045	GROOVING FOR RECESSED PAVEMENT MARKING 9"	FOOT	87	87	
*	78011125	GROOVING FOR RECESSED PAVEMENT MARKING 25"	FOOT	21	21	
*	78300201	PAVEMENT MARKING REMOVAL - GRINDING	SQ FT	224	224	
	X7240300	SIGN REMOVAL	EACH	4	4	
	X7240600	REMOVE AND RE-ERECT EXISTING SIGN	EACH	4	4	
	XZ013798	CONSTRUCTION STATION LAYOUT	L SUM	1	1	
Ø	Z0076600	TRAINEES	HOUR	1,000	1,000	
	Z0001002	GUARDRAIL AGGREGATE EROSION CONTROL	TON	74	74	
Ø	Z0076604	TRAINEES - TRAINING PROGRAM GRADUATE	HOUR	1,000	1,000	
	Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1	

*= SPECIALTY ITEM

Ø 0042



EXISTING CROSS SECTION
(STA. 493+19 TO STA. 497+50
BRIDGE OMISSION - STA. 494+47.5 TO STA. 495+52.50)



* GUARDRAIL LIMITS
T.B.T. TYPES 6 AND 1 (SPECIAL) TANGENT
STA. 493+51.0 TO STA. 494+52.9 LT.

PROPOSED CROSS SECTION
(STA. 493+19 TO STA. 494+02)

** GUARDRAIL LIMITS
T.B.T. TYPE 6 AND IMPACT ATTENUATOR TEST LEVEL 2
STA. 493+69.6 TO STA. 494+16.5 RT.
1'-0" EARTH SHOULDER BEYOND GUARDRAIL
STA. 493+09 TO STA. 493+58 RT.

LEGEND

1. EXIST. BASE COURSE 7"±
2. EXIST. OVERLAY
3. EXIST. EARTH/AGGREGATE SHOULDERS
10. PROP. HMA SHOULDERS 8"
11. PROP. CURB AND GUTTER M2.12 TRANSITION TO B6.12
12. PROP. PCC SIDEWALK 4"
13. PROP. GUARDRAIL
14. PROP. GUARDRAIL AGGREGATE EROSION CONTROL 8"
15. PROP. HMA SURFACE COURSE 1 1/2"
16. PROP. HMA BINDER COURSE (VARIABLE DEPTH)
17. PROP. PAINT PAVEMENT MARKING - LINE 4"
18. PROP. APPROACH PAVEMENT
19. PROP. EARTH SLOPE

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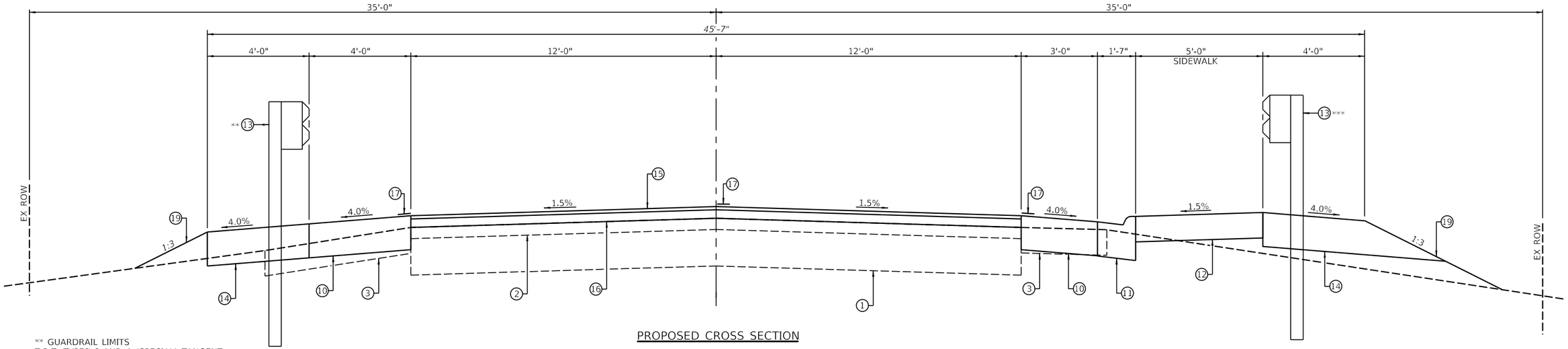
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL ROADWAY CROSS SECTIONS

SCALE: VARIES | SHEET NO. __ OF __ SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-20)BR	HENDERSON	86	12
		CONTRACT NO. 68989		
	ILLINOIS FED. AID PROJECT			

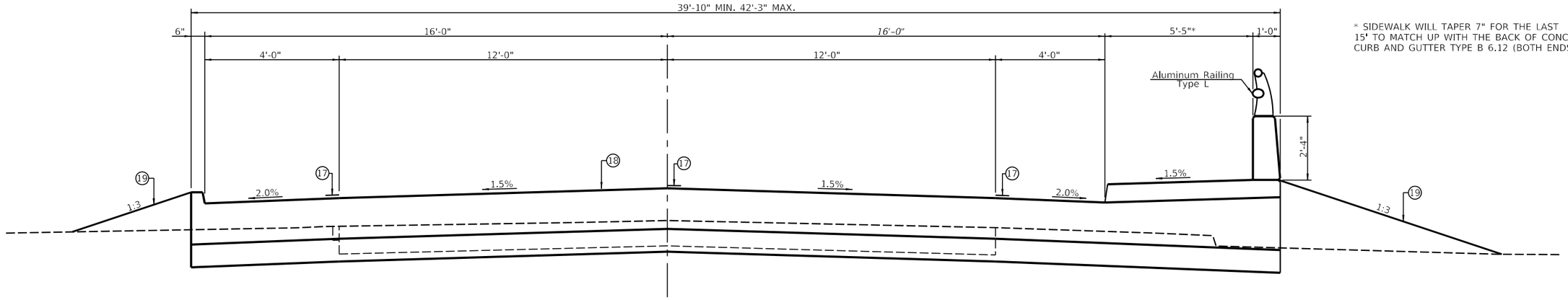


** GUARDRAIL LIMITS
T.B.T. TYPES 6 AND 1 (SPECIAL) TANGENT
STA. 495+65.6 TO STA. 496+67.5 LT.

PROPOSED CROSS SECTION

(STA. 494+02 TO STA. 494+13.62 &
STA. 495+86.39 TO STA. 497+12)
(OMISSION RUSSELL STREET RT.)

*** GUARDRAIL LIMITS
T.B.T. TYPES 6 AND 1 (SPECIAL) TANGENT
STA. 495+44.3 TO STA. 496+46.1 RT.



PROPOSED CROSS SECTION
(STA. 494+13.62 TO STA. 494+43.62
& STA. 495+56.39 TO STA. 495+86.39)
(SHOWING PARAPET (FIRST 15') ON RIGHT
AND CURB (LAST 15') ON LEFT)

* SIDEWALK WILL TAPER 7" FOR THE LAST 15' TO MATCH UP WITH THE BACK OF CONCRETE CURB AND GUTTER TYPE B 6.12 (BOTH ENDS)

LEGEND

1. EXIST. BASE COURSE 7"±
2. EXIST. OVERLAY
3. EXIST. EARTH/AGGREGATE SHOULDERS
10. PROP. HMA SHOULDERS 8"
11. PROP. CURB AND GUTTER M2.12 TRANSITION TO B6.12
12. PROP. PCC SIDEWALK 4"
13. PROP. GUARDRAIL
14. PROP. GUARDRAIL AGGREGATE EROSION CONTROL 8"
15. PROP. HMA SURFACE COURSE 1 1/2"
16. PROP. HMA BINDER COURSE (VARIABLE DEPTH)
17. PROP. PAINT PAVEMENT MARKING - LINE 4"
18. PROP. APPROACH PAVEMENT
19. PROP. EARTH SLOPE

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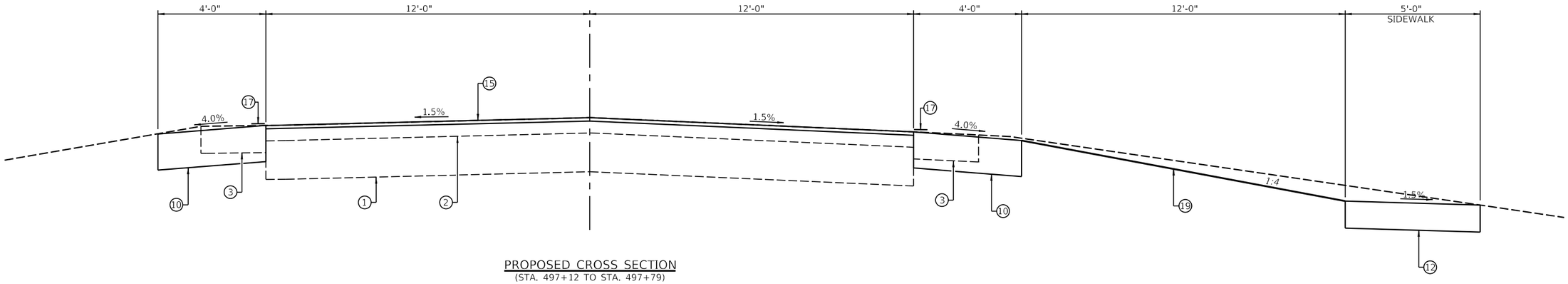
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL ROADWAY CROSS SECTIONS

SCALE: VARIES | SHEET NO. __ OF __ SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-20)BR	HENDERSON	86	13
		CONTRACT NO. 68989		
	ILLINOIS FED. AID PROJECT			



PROPOSED CROSS SECTION
(STA. 497+12 TO STA. 497+79)

LEGEND

1. EXIST. BASE COURSE 7"±
2. EXIST. OVERLAY
3. EXIST. EARTH/AGGREGATE SHOULDERS
10. PROP. HMA SHOULDERS 8"
11. PROP. CURB AND GUTTER M2.12 TRANSITION TO B6.12
12. PROP. PCC SIDEWALK 4"
13. PROP. GUARDRAIL
14. PROP. GUARDRAIL AGGREGATE EROSION CONTROL 8"
15. PROP. HMA SURFACE COURSE 1 1/2"
16. PROP. HMA BINDER COURSE (VARIABLE DEPTH)
17. PROP. PAINT PAVEMENT MARKING - LINE 4"
18. PROP. APPROACH PAVEMENT
19. PROP. EARTH SLOPE

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PLOT DATE = ___	CHECKED - ___	REVISED - ___

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL ROADWAY CROSS SECTIONS

SCALE: VARIES | SHEET NO. __ OF __ SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-20)BR	HENDERSON	86	14
		CONTRACT NO. 68989		
	ILLINOIS	FED. AID PROJECT		

HOT MIX ASPHALT SCHEDULE

LOCATION	40600295 POLYMERIZED BITUMINOUS MATERIALS (TACK COAT)	40600982 HMA SURFACE REMOVAL - BUTT JOINT	40603230 POLYMERIZED HMA BINDER COURSE	40603535 POLYMERIZED HMA SURFACE COURSE	40600990 TEMPORARY RAMP	35600708 HMA BASE COURSE WIDENING 8"	48203029 HMA SHOULDERS 8"
	POUND	SQ. YD.	TON	TON	SQ. YD.	SQ. YD.	SQ. YD.
STA. 493+19 TO STA. 494+13.62 (2 APPLICATIONS)	364			28			
STA. 495+86.39 TO STA. 497+50 (2 APPLICATIONS)	629			48			
RUSSELL STREET	206	286		24			
STA. 493+67 TO STA. 494+13.62			11				
STA. 495+86.39 TO STA. 496+50			27				
STA. 493+19 TO STA. 493+54.5 (SURFACE COURSE)		95					
STA. 493+54.5 TO STA. 493+62.4 (BINDER COURSE)		21					
STA. 496+44.3 TO STA. 496+62.5 (BINDER COURSE)		49					
STA. 496+62.5 TO STA. 497+50 (SURFACE COURSE)		233					
STA. 493+19 TO STA. 493+24					14		
STA. 497+45 TO STA. 497+50					14		
STA. 492+50 TO STA. 494+54.4 LT.						68	
STA. 495+61.9 TO STA. 497+50 LT.						63	
STA. 493+12.5 TO STA. 494+06.7 RT.							30
STA. 493+19 TO STA. 494+22.9 LT.							46
STA. 495+73.9 TO STA. 496+62.5 RT. (RUSSELL STREET)							24
STA. 495+93.3 TO STA. 497+50 LT.							69
STA. 497+07.6 TO STA. 497+50 RT.							29
TOTAL	1199	684	38	100	28	131	198

GUARDRAIL AND IMPACT ATTENUATOR SCHEDULE

LOCATION	63100167 TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	63100169 TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) FLARED	63100085 TRAFFIC BARRIER TERMINAL, TYPE 6	64300240 IMPACT ATTENUATORS (FULLY REDIRECTIVE, NARROW), TEST LEVEL 2	72501000 TERMINAL MARKER - DIRECT APPLIED
	EACH	EACH	EACH	EACH	EACH
STA. 493+51.0 TO STA. 494+01 LT.	1				
STA. 494+01 TO STA. 494+37.9 LT.			1		
STA. 493+79.6 TO STA. 494+16.50 RT.			1		
STA. 493+69.6 TO STA. 493+79.6 RT.				1	
STA. 495+59.2 TO STA. 495+96.1 RT.			1		
STA. 495+96.1 TO STA. 496+46.1		1			
STA. 495+80.6 TO STA. 496+17.5 LT.			1		
STA. 496+17.5 TO STA. 496+67.5 LT.	1				
STA. 493+51.0 LT.					1
STA. 496+46.1 RT.					1
STA. 496+67.5 LT.					1
TOTAL	2	1	4	1	3

TEMPORARY CONCRETE BARRIER

LOCATION	70400100 TEMPORARY CONCRETE BARRIER	70400200 RELOCATE TEMPORARY CONCRETE BARRIER	70600240 IMPACT ATTENUATORS, TEMPORARY (NON REDIRECTIVE, NARROW) TEST LEVEL 2	70600340 IMPACT ATTENUATORS RELOCATE (NON REDIRECTIVE, NARROW) TEST LEVEL 2
	FOOT	FOOT	EACH	EACH
STAGE I				
STA. 492+50 TO STA. 492+75.4			1	
STA. 492+75.4 TO STA. 496+99.6	425			
STA. 496+99.6 TO STA. 497+25.0			1	
STAGE II				
STA. 492+12.4 TO STA. 492+38.2				1
STA. 492+38.2 TO STA. 492+75.4	37.5			
STA. 492+75.4 TO STA. 496+99.6		425		
STA. 497+99.6 TO STA. 497+37.1	37.5			
STA. 497+37.1 TO STA. 497+62.5				1
TOTAL	500	425	2	2

20800150 TRENCH BACKFILL

LOCATION	TRENCH BACKFILL
	CU. YD.
STA. 496+35 17' RT. TO STA. 496+71 37' RT.	5
TOTAL	5

20100500 TREE REMOVAL, ACRES

LOCATION	TREE REMOVAL, ACRES
	ACRE
STA. 494+26 36' RT. TO STA. 495+02 41' RT. (INCLUDES SINGLE	0.01
6" TREE AT STA. 493+86 32' RT.)	
STA. 494+79 30' LT. TO 60' LT. TO STA. 496+50 60' LT. TO 47' LT.	0.11
TOTAL	0.12

USE 0.25 ACRE PER BDE

PERMANENT SEEDING

LOCATION	25000210 SEEDING CLASS 2A	25000400 NITROGEN FERTILIZER NUTRIENT	25000500 PHOSPHORUS FERTILIZER NUTRIENT	25000600 POTASSIUM FERTILIZER NUTRIENT	25100115 MULCH METHOD 2
	ACRE	POUND	POUND	POUND	ACRE
STA. 493+19 TO STA. 497+50 LT. (INCLUDES EASEMENT)	0.30	27	27	27	0.30
STA. 493+09 TO RUSSELL STREET RT.	0.13	12	12	12	0.13
RUSSELL STREET TO STA. 497+79 RT.	0.02	2	2	2	0.02
TOTAL	0.45	41	41	41	0.45
	USE 0.5 ACRE	USE 45 LBS.	USE 45 LBS.	USE 45 LBS.	USE 0.5 ACRE

42000080 PAVEMENT CONNECTOR (PCC) FOR BRIDGE APPROACH SLAB

	PAVEMENT CONNECTOR (HMA) BRIDGE APPROACH SLAB
	SQ. YD.
STA. 494+03.62 TO STA. 494+13.62	35
STA. 495+86.39 TO STA. 495+96.39	35
TOTAL	70

42400100 PORTLAND CEMENT CONCRETE SIDEWALK 4 INCH

	PCC SIDEWALK 4 INCH
	SQ. FT.
STA. 493+09 TO STA. 494+04 RT.	559
STA. 495+73.9 TO STA. 496+68 RT.	487
STA. 497+08 TO STA. 497+79 RT.	336
TOTAL	1382

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

QUANTITY SCHEDULES

SCALE: _____ | SHEET NO. 1 OF 3 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-20)BR	HENDERSON	86	15
		CONTRACT NO. 68989		
		ILLINOIS FED. AID PROJECT		

MODIFIED URETHANE PAVEMENT MARKING AND PAVEMENT MARKING REMOVAL - GRINDING

LOCATION	78009004 MODIFIED URETHANE PAVEMENT MARKING - LINE 4"		78009008 MODIFIED URETHANE PAVEMENT MARKING - LINE 8" WHITE	78009024 MODIFIED URETHANE PAVEMENT MARKING LINE 24" WHITE	78300201 PAVEMENT MARKING REMOVAL - GRINDING	78011025 GROOVING FOR RECESSED PAVEMENT MARKING 5"	78011045 GROOVING FOR RECESSED PAVEMENT MARKING 9"	78011125 GROOVING FOR RECESSED PAVEMENT MARKING 25"
	WHITE EDGE LINE	YELLOW CENTER LINE DOUBLE NO PASSING						
	FOOT	FOOT	FOOT	FOOT	SQ. FT.	FOOT	FOOT	FOOT
STA. 493+19 TO STA. 497+50 LT. (NO EDGE LINE AT CURB AND GUTTER)	431					431		
STA. 497+40 TO STA. 497+50 RT.	10					10		
STA. 491+29 TO STA. 499+15 (CENTERLINE)		1572				1572		
STA. 496+64 27' RT. TO STA. 497+11 27' RT. (PEDESTRIAN CROSSING)			47				47	
STA. 496+68 32' RT. TO STA. 497+08 32' RT. (PEDESTRIAN CROSSING)			40				40	
STA. 496+85 TO STA. 497+17 37' RT. (STOP BAR)				21				21
STA. 491+29 TO STA. 494+47.5 (CENTERLINE)					27			
STA. 495+52.5 TO STA. 499+15 (CENTERLINE)					30			
STA. 492+50 TO STA. 497+50 (EDGE LINE)					167			
	441	1572						
TOTAL	2013		87	21	224	2013	87	21

42400800 DETECTABLE WARNINGS

	DETECTABLE WARNINGS
	SQ. FT.
STA. 496+60 30' RT. TO STA. 496+66.8 33' RT.	10
STA. 497+10 30' RT. TO STA. 497+12 30' RT.	10
STA. 497+73 30' RT. TO STA. 497+75 30' RT.	10
TOTAL	30

44000100 PAVEMENT REMOVAL

LOCATION	PAVEMENT REMOVAL
	SQ. YD.
STA. 494+13.62 TO STA. 494+47.5	91
STA. 495+52.5 TO STA. 495+86.39	91
TOTAL	182

542A0220 PIPE CULVERTS, CLASS A, TYPE 1 15"

LOCATION	PIPE CULVERTS, CLASS A, TYPE 1 15"
	FOOT
STA. 493+20 17' RT. TO STA. 494+34 32' RT.	114
STA. 495+30 31' RT. TO STA. 496+71 37' RT.	140
TOTAL	254

550A0070 STORM SEWERS, CLASS A, TYPE 1 15"

FROM STRUCTURE		TO STRUCTURE		STORM SEWERS, CLASS A, TYPE 1 15"
LOCATION	INVERT ELEV	LOCATION	INVERT ELEV	FOOT
STA. 496+35 17' RT.	543.40	STA. 496+71 37' RT.	543.00	42
TOTAL				42

DRAINAGE STRUCTURE SCHEDULE

LOCATION			60240310 INLETS, TYPE B, TYPE 11 FRAME AND GRATE
STATION	OFFSET	FRAME ELEV.	EACH
493+20	17' RT.	545.94	1
496+35	17' RT.	546.97	1
496+71	37' RT.	546.50	1
TOTAL			3

TEMPORARY PAVEMENT MARKING

LOCATION	70307120 PAVEMENT MARKING TAPE TYPE IV 4"	70307210 PAVEMENT MARKING TAPE TYPE IV 24"	70300100 SHORT TERM PAVEMENT MARKING	70300150 SHORT TERM PVMT. MARKING REMOVAL
	FOOT	FOOT	FOOT	SQ. FT.
STAGE I				
STA. 491+79 TO STA. 497+96 RT.	619			206
STA. 492+50 TO STA. 497+50 LT.	500			167
STA. 491+29 RT. STOP BAR		12		12
STA. 499+15 LT. STOP BAR		12		12
1ST STREET STOP BAR		24		24
STA. 491+29 TO STA. 499+15 RT. (2 APPLICATIONS)			1572	524
STAGE II				
STA. 492+43 TO STA. 497+26.4 RT.	491			164
STA. 491+65.5 TO STA. 498+50 LT.	680			227
RUSSELL STREET STOP BAR		24		24
TOTAL	2290	72	1572	1360

60600095 CLASS SI CONCRETE (OUTLET)

LOCATION	CLASS SI CONCRETE (OUTLET)
	CU. YD.
STA. 496+74.6 42' RT. TO STA. 496+79.7 53' RT.	0.7
TOTAL	0.7

COMBINATION CURB AND GUTTER SCHEDULE

LOCATION	60603800 COMBINATION CURB AND GUTTER, TYPE B-6.12
	FOOT
STA. 493+12.5 TO STA. 494+00 RT.	93
STA. 495+81.2 TO STA. 496+74.6 RT.	114
STA. 494+00 TO STA. 494+04.4 RT.	
STA. 495+76.8 TO STA. 495+81.2 RT.	
TOTAL	207

66600105 FURNISHING AND ERECTING RIGHT OF WAY MARKERS

	FURNISH. & ERECT. RIGHT OF WAY MARKERS
	EACH
STA. 494+00 35' RT.	1
STA. 496+45 50' RT.	1
STA. 496+78.40 77.96' RT.	1
TOTAL	3

X7240300 SIGN REMOVAL

LOCATION	SIGN REMOVAL
	EACH
STA. 494+37, 13' RT.	1
STA. 494+52, 13' LT.	1
STA. 495+47, 12.5' RT.	1
STA. 495+63, 13' LT.	1
TOTAL	4

X7240600 REMOVE & RE-ERECTING EXISTING SIGN

LOCATION	REMOVE & RE-ERECT EXISTING SIGNS
	EACH
STA. 493+16, 28' RT. (RE-ERECTED STOP AHEAD SIGN)	1
STA. 493+87, 24' RT. (RE-ERECTED DUGOUT CREEK SIGN)	1
STA. 496+15, 24' RT. (RE-ERECTED IL 96 JUNCTION SIGN)	1
STA. 496+15, 18' LT. (RE-ERECTED DUGOUT CREEK SIGN)	1
TOTAL	4

Z0001002 GUARDRAIL AGGREGATE EROSION CONTROL

LOCATION	GUARDRAIL AGGREGATE EROSION CONTROL
	TON
STA. 493+19 TO STA. 494+22.9 LT.	22
STA. 495+73.9 TO STA. 496+55 RT.	22
STA. 495+95.6 TO STA. 497+50 LT.	30
TOTAL	74

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

QUANTITY SCHEDULES

SCALE: _____ | SHEET NO. 2 OF 3 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-20)BR	HENDERSON	86	16
		CONTRACT NO. 68989		
		ILLINOIS FED. AID PROJECT		

TEMPORARY EROSION CONTROL ITEMS

LOCATION	28000250 TEMPORARY EROSION CONTROL SEEDING	28000305 TEMPORARY DITCH CHECKS	28000400 PERIMETER EROSION BARRIER	28000500 INLET AND PIPE PROTECTION
	POUND	FOOT	FOOT	EACH
STA. 493+19 TO STA. 497+50 LT. (INCLUDES EASEMENT)	30			
STA. 493+09 TO RUSSELL STREET RT.	13			
RUSSELL STREET TO STA. 497+79 RT.	2			
STA. 495+70 40' RT.		8		
STA. 493+10 35' RT. TO STA. 494+25 35' RT.			115	
STA. 495+40 43' RT. TO STA. 496+75 75' RT.			150	
STA. 493+50 60' LT. TO STA. 494+60 60' LT.			110	
STA. 495+75 60' LT. TO STA. 496+50 60' LT.			75	
STA. 493+20 17' RT.				1
STA. 496+35 17' RT.				1
STA. 496+71 37' RT.				1
TOTAL	45	8	450	3

USE 50 LBS.

EARTHWORK

LOCATION	20200100 EARTH EXCAVATION	ADJUSTED SHRINKAGE FACTOR	EARTH EXCAVATION (ADJUSTED)	EMBANKMENT	20400800 FURNISHED EXCAVATION	REMARKS
	CU. YD.	%	CU. YD.	CU. YD.	CU. YD.	
STA. 493+19 TO STA. 494+43.62	24	25	18	47	29	
STA. 495+56.39 TO STA. 497+50	81		61	101	40	
TOTAL	105		79	148	69	

70400125 PINNING TEMPORARY CONCRETE BARRIER

LOCATION	PINNING TEMPORARY CONCRETE BARRIER
	EACH
STAGE I	
STA. 492+75.4 TO STA. 492+87.9	6*
STA. 493+87.1 TO STA. 493+99.6	1
STA. 493+99.6 TO STA. 494+12.1	2
STA. 494+12.1 TO STA. 495+87.1	42
STA. 495+87.1 TO STA. 495+99.6	2
STA. 495+99.6 TO STA. 496+12.1	1
STA. 496+84.1 TO STA. 496+99.6	6*
STAGE II	
STA. 492+38.2 TO STA. 492+50.7	6*
STA. 493+75 TO STA. 493+87.5	1
STA. 493+87.5 TO STA. 494+00	2
STA. 494+00 TO STA. 494+12.5	3
STA. 495+87.5 TO STA. 496+00	3
STA. 496+00 TO STA. 496+12.5	2
STA. 497+12.5 TO STA. 496+25	1
STA. 497+24.6 TO STA. 497+37.1	6*
TOTAL	60

NOTE: THIS QUANTITY IS INCLUDED IN CONTRACT UNIT PRICE PER FOOT FOR TEMPORARY CONCRETE BARRIER.

66700205 PERMANENT SURVEY MARKERS, TYPE I

LOCATION	PERMANENT SURVEY MARKERS, TYPE I
	EACH
TOP OF NORTHWEST WINGWALL ADJACENT TO NAME PLATE	1
TOTAL	1

70106500 TEMPORARY BRIDGE TRAFFIC SIGNALS

LOCATION	TEMPORARY BRIDGE TRAFFIC SIGNALS
	EACH
STA. 491+69 19' LT.	0.15
STA. 492+00 17' RT.	0.15
STA. 492+04 17' LT.	0.14
STA. 496+85 21' LT.	0.14
STA. 498+10 19' LT.	0.14
STA. 498+40 19' RT.	0.14
STA. 498+65 19' LT.	0.14
TOTAL	1

70106700 TEMPORARY RUMBLE STRIPS

LOCATION	TEMPORARY RUMBLE STRIPS
	EACH
STA. 474+29 RT.	1
STA. 49+29 RT.	1
STA. 484+29 RT.	1
STA. 500+50 LT.	1
STA. 502+00 RT.	1
TOTAL	5

21101615 TOPSOIL FURNISH AND PLACE, 4"

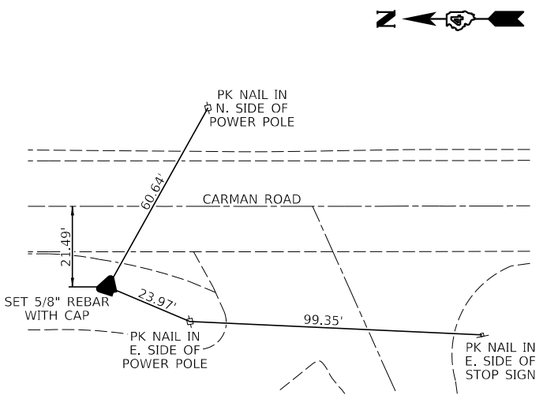
	TOPSOIL FURNISH AND PLACE
	SQ. YD.
STA. 493+19 TO STA. 494+43.62 LT.	31
STA. 493+19 TO STA. 494+43.62 RT.	91
STA. 495+56.39 TO STA. 497+50 LT.	123
STA. 495+56.39 TO STA. 497+50 RT.	130
TOTAL	375

70107025 CHANGEABLE MESSAGE SIGN

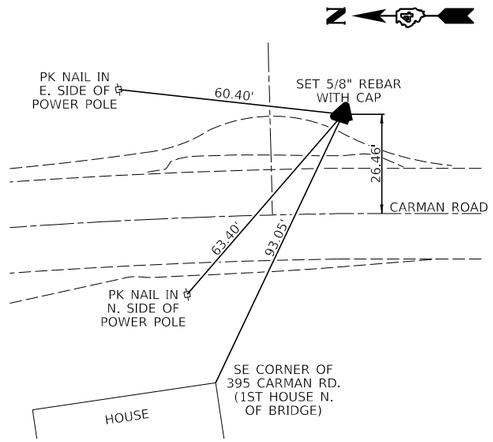
LOCATION	CHANGEABLE MESSAGE SIGN
	CAL DA
CARMAN ROAD NORTH OF STRUCTURE	7
IL 96 EAST OF CARMAN ROAD	7
IL 96 WEST OF CARMAN ROAD	7
TOTAL	21

54213660 PRECAST REINFORCED CONCRETE FLARED END SECTIONS 15"

LOCATION	PRC FLARED END SECTIONS 15"
	EACH
STA. 494+34 32' RT.	1
STA. 495+30 31' RT.	1
TOTAL	2



TIE #1
STA. 496+15.0 21.3' RT. (CARMAN RD)
N. 2045910.5700
E. 1463485.7500

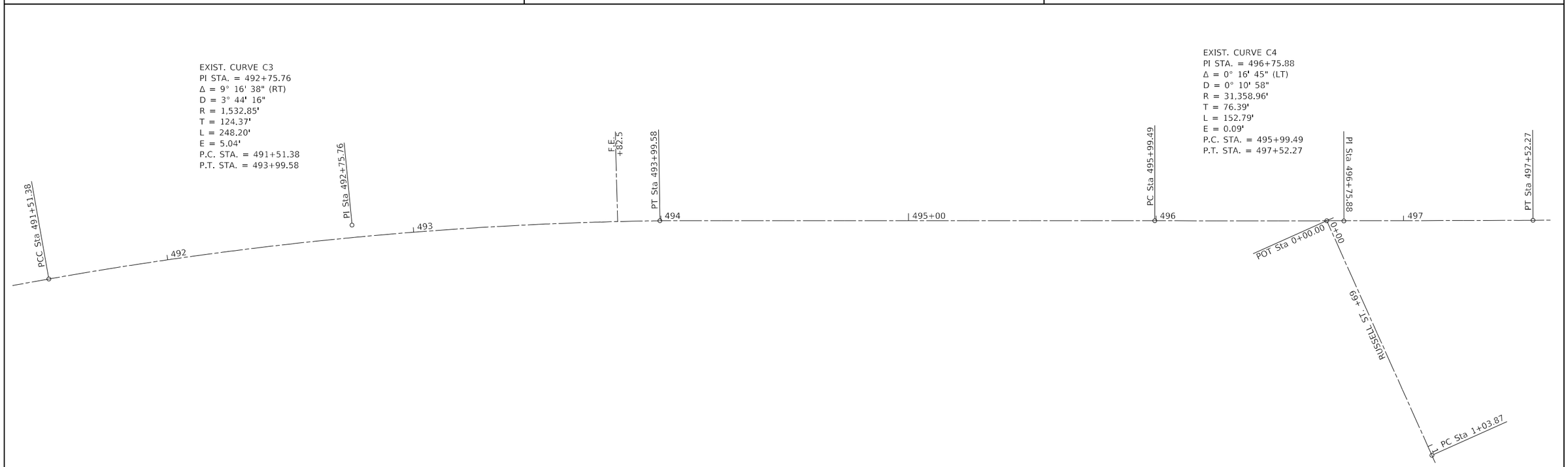


TIE #2
STA. 494+01.1 26.2' LT. (CARMAN RD)
N. 2046001.6100
E. 1463685.0100

BENCHMARKS: BM A - TOP OF ROW MARKER
36.9' RT. STA. 495+27.7 EL. 543.32

EXIST. CURVE C3
PI STA. = 492+75.76
Δ = 9° 16' 38" (RT)
D = 3° 44' 16"
R = 1,532.85'
T = 124.37'
L = 248.20'
E = 5.04'
P.C. STA. = 491+51.38
P.T. STA. = 493+99.58

EXIST. CURVE C4
PI STA. = 496+75.88
Δ = 0° 16' 45" (LT)
D = 0° 10' 58"
R = 31,358.96'
T = 76.39'
L = 152.79'
E = 0.09'
P.C. STA. = 495+99.49
P.T. STA. = 497+52.27



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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ALIGNMENT, TIES & BENCHMARKS

SCALE: VARIES | SHEET NO. __ OF __ SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-20)BR	HENDERSON	86	18
		CONTRACT NO. 68989		
	ILLINOIS FED. AID PROJECT			

SECTION 15, T.8N, R.6W. 4TH P.M.

EXIST. CURVE DATA
PI STA. = 492+75.76
Δ = 9° 16' 38" (RT)
D = 3° 44' 16"
R = 1,532.85'
T = 124.37'
L = 248.20'
E = 5.04'
P.C. STA. = 491+51.38
P.T. STA. = 493+99.58
S.E. = 0.03'/'
S.E. ATTAINED: STA. 493+19 TO STA. 494+02 LT. & STA. 493+40 TO STA. 494+02 RT.

SCOTT HARTNEY
PARCEL NOS. 1215400004 & 1215400005

PROP. S.N. 036-0074
℄ RDWY. AT ℄ STRUCTURE - STA. 495+00.00
PROPOSED STRUCTURE: 3 SPAN POURED CONCRETE DECK ON 24" WELDED PLATE GIRDERS. 112'-9¼" BK.-BK. ABUTMENTS, 32'-0" CLEAR DECK WIDTH, CONCRETE PARAPET RAIL. 30° SKEW LT. FORWARD.

493+50.00 60.00'
493+99.58 60.00'
495+99.49 60.00'
496+50.00 60.00'
493+50.00 35.00'
496+50.00 35.00'
TMP ESMT
EX ROW
F.E. +82.5 TBR
TRAFFIC BARRIER TERMINAL TYPES 6 & 1 (SPECIAL) TANGENT (N.E., & S.E. CORNERS)
CONST. LIM.
FLOW
DUGOUT CREEK
PR DUGOUT CREEK SIGN
PROJECT BEGINS STA. 493+09.00
ROADWAY IMPROVEMENT BEGINS STA. 493+19.00
ROADWAY IMPROVEMENT ENDS STA. 497+50.00
PROJECT ENDS STA. 497+79.00

EXIST. CURVE DATA
PI STA. = 496+75.88
Δ = 0° 16' 45" (LT)
D = 0° 10' 58"
R = 31,358.96'
T = 76.39'
L = 152.79'
E = 0.09'
P.C. STA. = 495+99.49
P.T. STA. = 497+52.27
NO S.E.

NOTE:
EXACT PLACEMENT OF PROPOSED SIGNS TO BE DETERMINED IN THE FIELD

493 494 495+00 496 497 498
10+00
35'
HMA PARKING LOT
PR DUGOUT CREEK SIGN
494+00.00 35.00'
PR ROW
PR IL 96 SIGN
496+45.00 50.00'
RUSSELL ST. +69
1ST ST +85
STA. 493+20 17' RT. INSTALL INLET TYPE B WITH TYPE 11 FRAME & GRATE FRAME EL. 545.94 ℄ EL. 543.00
SEE SHEET 25 FOR MAILBOX LAYOUT
P.E. +02 HMA
NICHOLAS MARLEY PARCEL NO. 1215518008
HOUSE
TRAFFIC BARRIER TERMINAL TYPES 6 & IMPACT ATTENUATOR TEST LEVEL 2 (NW CORNER ONLY)
INSTALL 15" ∅ X 114' PIPE CULVERTS CLASS A, TYPE 1 WITH PRCFLES 15" ℄ INLET - EL. 543.00 ℄ OUTLET - EL. 542.5 STA. 494+34 32' RT.
INSTALL 15" ∅ X 140' PIPE CULVERTS CLASS A, TYPE 1 WITH PRCFLES 15" ℄ INLET - EL. 543.0 ℄ OUTLET - EL. 542.0 STA. 495+30 31' RT.
TRAFFIC BARRIER TERMINAL TYPES 6 & TYPE 1 (SPECIAL) FLARED (S.W. CORNER)
STA. 496+35 17' RT. INSTALL INLET TYPE B WITH TYPE 11 FRAME & GRATE FRAME EL. 546.97 ℄ EL. 543.40
INSTALL 15" ∅ X 42' STORM SEWERS, CLASS A, TYPE 1 ℄ INLET - EL. 543.4 ℄ OUTLET - EL. 543.0
STA. 496+71. 37' RT. INSTALL INLET TYPE B W/ TYPE 11 FRAME AND GRATE FRAME EL. 546.5 ℄ EL. 543.0
496+78.30 78.00'
PARKING LOT
TERRY BIESLER PARCEL NO. 1215381007
SHEILA SLY PARCEL NO. 1215384008

PLAN
0 20 40
SCALE: 1" = 40'

PLAN
SURVEYED
PLOTTED
DESIGN CHECKED
AUDIT CHECKED
R.O.W. CHECKED
CADD FILE NAME
NOTE BOOK
NO.
BY
DATE

PROFILE
SURVEYED
PLOTTED
DESIGN CHECKED
R.O.W. CHECKED
NOTE BOOK
NO.
STRUCTURE NO.
BY
DATE

560 555 550 545 540 535 530 525 520

121.00' V.C.
ex = 0.08'
K = 223
120.00' V.C.
ex = -0.29'
K = 62
120.00' V.C.
ex = 0.11'
K = 171

VPC STA. 493+19.00 PROJECT BEGINS
ELEV. 546.28
VPI STA. 493+79.50
TAN. ELEV. 546.70
℄ EX. RDWY.
+0.70%
+1.24%
VPRC STA. 494+40.00
ELEV. 547.45
BK. N. ABUT.
STA. 494+43.62
VPI STA. 495+00.00
ELEV. 548.20
BK. S. ABUT.
STA. 495+56.39
VPT STA. 495+60.00
ELEV. 547.78
-0.70%
VPC STA. 495+90.00
ELEV. 547.57
℄ PR. RDWY.
VPI STA. 496+50.00
TAN. ELEV. 547.15
+0.00%
VPT STA. 497+10.00
ELEV. 547.15
PROJECT ENDS
POT STA. 497+50.00
ELEV. 547.15
100 YR. FL. EL. 543.4
50 YR. FL. EL. 542.4
CHANNEL EXCAVATION (TYP.)
S.B. EL. 525.5
PROFILE

546.15 546.24 546.32 546.28 546.28 546.35 546.43 546.34 546.60 546.33 546.79 546.43 546.99 546.47 547.21 546.52 547.45 546.55 547.67 546.55 547.82 546.55 547.91 546.55 547.93 546.56 547.89 546.53 547.78 546.62 547.64 546.73 547.50 546.80 547.39 546.92 547.29 547.10 547.22 547.17 547.18 547.23 547.15 547.08 547.15 547.10 547.15 547.14 547.12 547.22 547.17

492+50 493+00 493+50 494+00 494+50 495+00 495+50 496+00 496+50 497+00 497+50 498+00

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

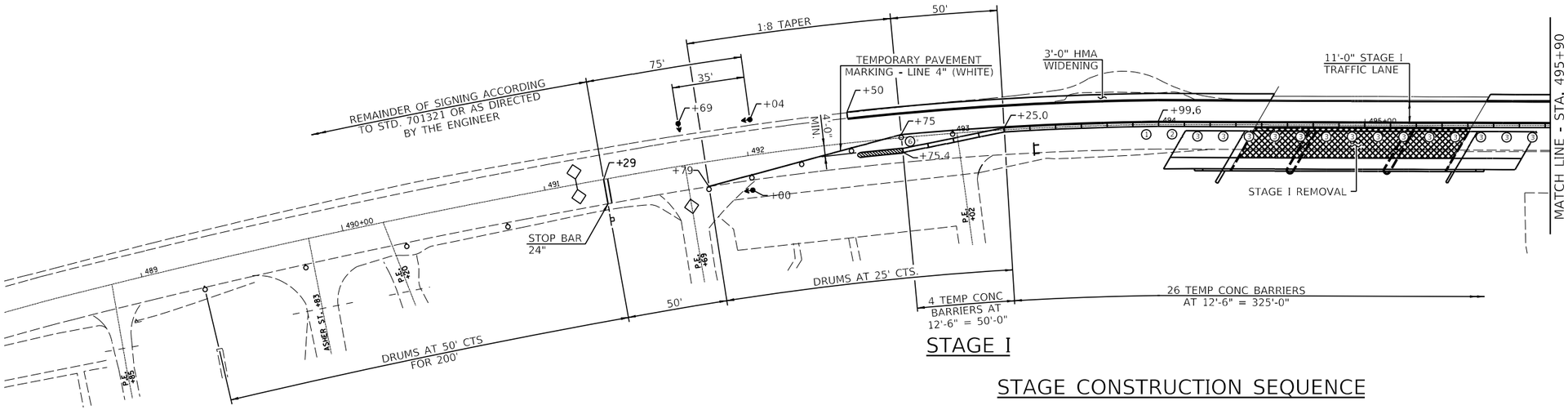
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN & PROFILE

SCALE: 1"=20' | SHEET OF SHEETS | STA. 486+00.00 TO STA. 491+60.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-2Q)BR	HENDERSON	86	19
		CONTRACT NO. 68989		
	ILLINOIS FED. AID PROJECT			

MODEL: $MODELNAME$
FILE NAME: $FILEL$



STAGE I

- ② - INDICATES NUMBER OF PINS REQUIRED FOR EACH SECTION - 48 REQUIRED FOR STAGE I
- ⑥' - QUANTITY INCLUDED IN THE CONTRACT UNIT PRICE PER FOOT FOR TEMPORARY CONCTETE BARRIER

STAGE CONSTRUCTION SEQUENCE

PRE-STAGE I

1. CONSTRUCT HMA BASE COURSE WIDENING 8" FROM STA. 492+50 TO STA. 494+54.4 & STA. 495+61.9 TO STA. 497+50 LT.

STAGE I

1. ERECT TRAFFIC CONTROL FOR STAGE I CONSTRUCTION.
2. REMOVE EXISTING STRUCTURE RIGHT, ~ 495+00.
3. CONSTRUCT PROPOSED STAGE I STRUCTURE, ~ 495+00 RT.
4. PERFORM HMA SURFACE REMOVAL FROM STA. 493+19 TO STA. 493+61 & STA. 496+60 TO STA. 497+50 ANS ALONG RUSSELL STREET AS SHOWN ION THE PLANS (72' ALONG CENTERLINE FROM EDGE OF PAVEMENT ON CARMAN ROAD).
5. CONSTRUCT PROPOSED HMA BINDER COURSE, SHOULDERS AND APPROACH SLABS STA. 493+19 TO STA. 494+30.9 RT. & STA. 495+43.7 TO STA. 496+50 RT.

STAGE II

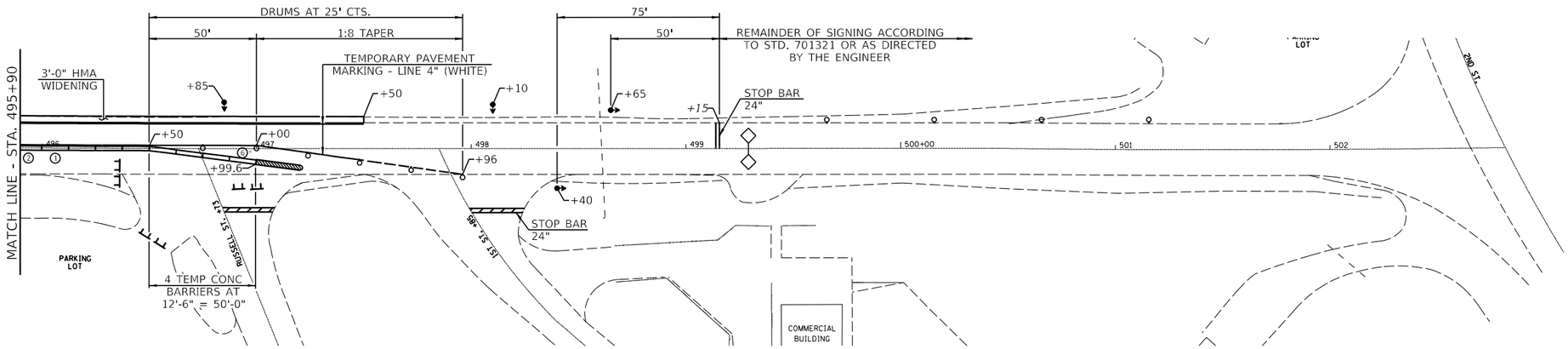
1. ERECT TRAFFIC CONTROL FOR STAGE II CONSTRUCTION.
2. REMOVE EXISTING STRUCTURE LEFT, ~ 495+00.
3. CONSTRUCT PROPOSED STAGE II STRUCTURE, ~ 495+00 LT. AND TRAFFIC BARRIER TERMINALS TYPE I (SPECIAL) TANGENT AND TYPE 6 LT.
4. CONSTRUCT PROPOSED HMA BINDER COURSE, SHOULDERS AND APPROACH SLABS FROM STA. 493+10 TO STA. 494+52.9 LT. & STA. 495+65.6 TO STA. 497+50 LT.

FINAL

1. REMOVE ALL STAGE TRAFFIC CONTROL AND RE-ESTABLISH NORMAL TRAFFIC PATTERNS.
2. COMPLETE HMA BINDER COURSE, HMA SURFACE COURSE AND HMA SHOULDERS ON ROADWAY UNDER FLAGGERS.
3. FINAL STRIPING, SEEDING AND MISCELLANEOUS CLEAN-UP.

GENERAL NOTES

1. THIS TRAFFIC CONTROL DETAIL SHALL BE USED IN CONJUNCTION WITH STANDARD 701321.
2. EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH THE REVISED STAGE TRAFFIC PATTERNS DURING ALL PHASES OF STAGE CONSTRUCTION SHALL BE REMOVED AS SPECIFIED IN SECTION 783 OF THE STANDARD SPECIFICATIONS AND PAID FOR AS "PAVEMENT MARKING REMOVAL."
3. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PROPERTIES DURING ALL PHASES OF CONSTRUCTION.
4. SIGNING FOR STAGE II SAME AS STAGE I.
5. REMOVE/CUT OFF UNCONFINED/UNCOMPACTED EDGE OF HMA BINDER COURSE PRIOR TO STAGE ii PLACEMENT OF HMA BINDER COURSE.



STAGE I

SYMBOLS

- SHOULDER REMOVAL
- PAVEMENT REMOVAL
- STRUCTURE REMOVAL
- SIGN
- TYPE III BARRICADE
- DRUM WITH STEADY BURNING LIGHT
- TRAFFIC SIGNAL
- TEMPORARY RUMBLE STRIP
- INDUCTION LOOP DETECTOR
- DOUBLE VERTICAL PANEL
- TYPE C BIDIRECTIONAL REFLECTOR
- TEMPORARY CONCRETE BARRIER
- IMPACT ATTENUATOR
- STEADY BURNING LIGHTS AND DOUBLE VERTICAL PANELS

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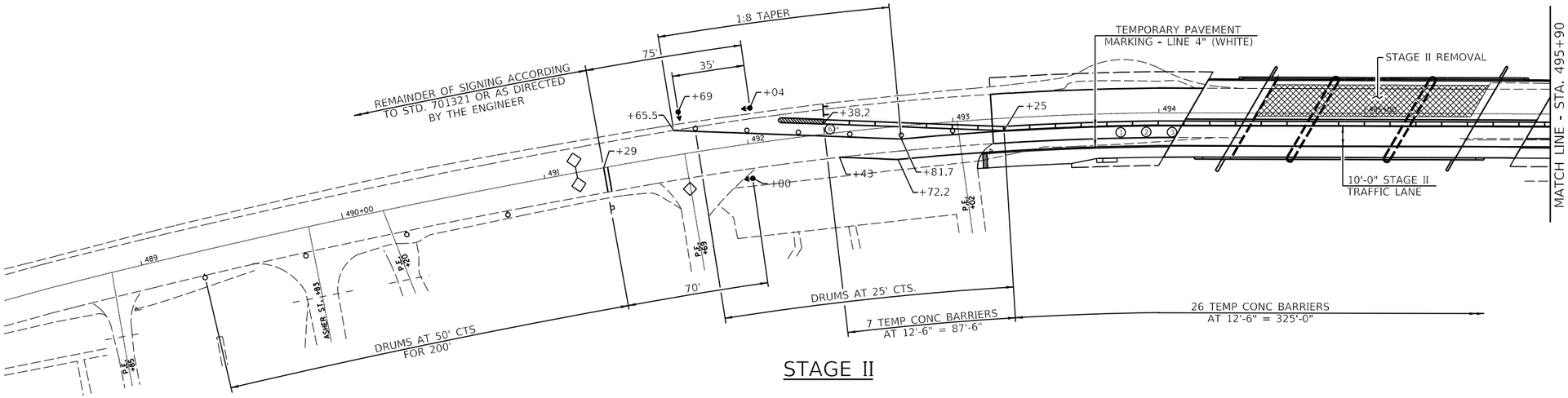
PLOT DATE = ___	CHECKED - ___	REVISED - ___

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE I CONSTRUCTION TRAFFIC DETAILS

SCALE: | SHEET NO. 2 OF 3 SHEETS | STA. | TO STA.

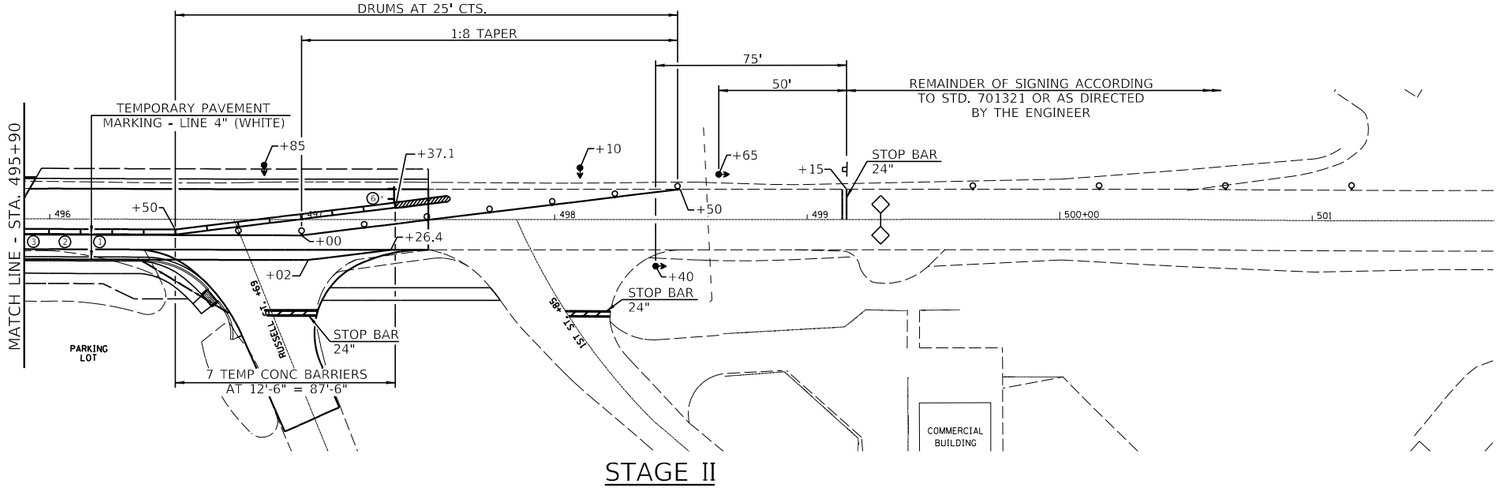
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-20)BR	HENDERSON	86	20
		CONTRACT NO. 68989		
	ILLINOIS FED. AID PROJECT			



STAGE II

③ - INDICATES NUMBER OF PINS REQUIRED FOR EACH SECTION - 12 REQUIRED FOR STAGE II

⑥ - QUANTITY INCLUDED IN THE CONTRACT UNIT PRICE PER FOOT FOR TEMPORARY CONCTETE BARRIER



STAGE II

SYMBOLS

- SHOULDER REMOVAL
- PAVEMENT REMOVAL
- STRUCTURE REMOVAL
- SIGN
- TYPE III BARRICADE
- DRUM WITH STEADY BURNING LIGHT
- TRAFFIC SIGNAL
- TEMPORARY RUMBLE STRIP
- INDUCTION LOOP DETECTOR
- DOUBLE VERTICAL PANEL
- TYPE C BIDIRECTIONAL REFLECTOR
- TEMPORARY CONCRETE BARRIER
- IMPACT ATTENUATOR
- STEADY BURNING LIGHTS AND DOUBLE VERTICAL PANELS

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PLOT DATE = ___	CHECKED - ___	REVISED - ___

STATE OF ILLINOIS
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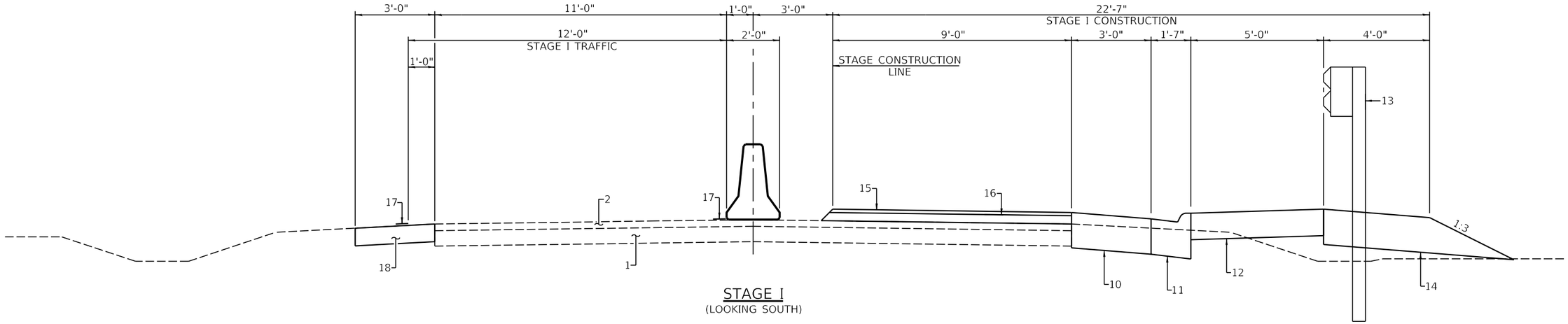
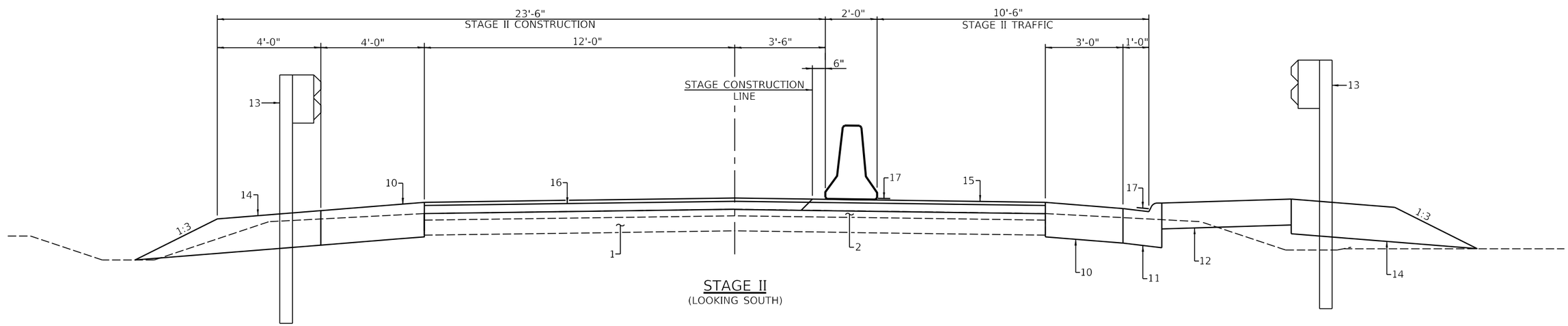
STAGE II CONSTRUCTION TRAFFIC DETAILS

SCALE: | SHEET NO. 3 OF 3 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-20)BR	HENDERSON	86	21
		CONTRACT NO. 68989		
	ILLINOIS FED. AID PROJECT			



STAGE I
(LOOKING SOUTH)



STAGE II
(LOOKING SOUTH)

LEGEND

1. EXISTING AGGREGATE BASE COURSE
2. EXISTING H.M.A. OVERLAY
3. EXISTING EARTH/AGG. SHOULDER
10. PROPOSED HMA SHOULDERS
11. PROPOSED CURB AND GUTTER M2.12 TRANSITION TO B6.12
12. PROPOSED PCC SIDEWALK 4"
13. PROPOSED GUARDRAIL
14. PROPOSED GUARDRAIL AGGREGATE EROSION CONTROL
15. PROPOSED HMA SURFACE COURSE (1 1/2")
16. PROPOSED HMA BINDER COURSE (VARIABLE DEPTH)
17. PROPOSED TEMPORARY PAVEMENT MARKING - LINE 4"
18. PROPOSED HMA WIDENING 8"

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

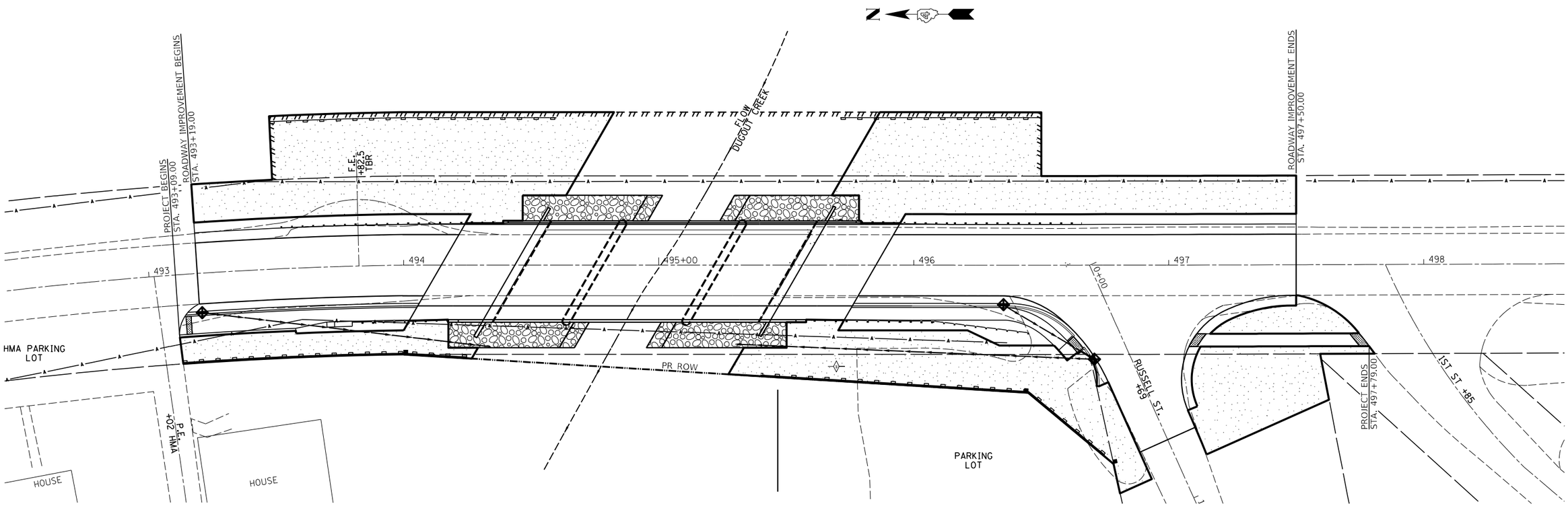
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGING DETAILS

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-20)BR	HENDERSON	86	22
		CONTRACT NO. 68989		
	ILLINOIS FED. AID PROJECT			

SECTION 15, T.8N, R.6W. 4TH P.M.



LEGEND

- SEEDING, CLASS 2A & MULCH
- PERIMETER EROSION BARRIER
- TEMPORARY DITCH CHECK
- INLET PIPE PROTECTION
- STONE RIPRAP, CLASS A4

PLAN

0 20 40

SCALE: 1" = 40'

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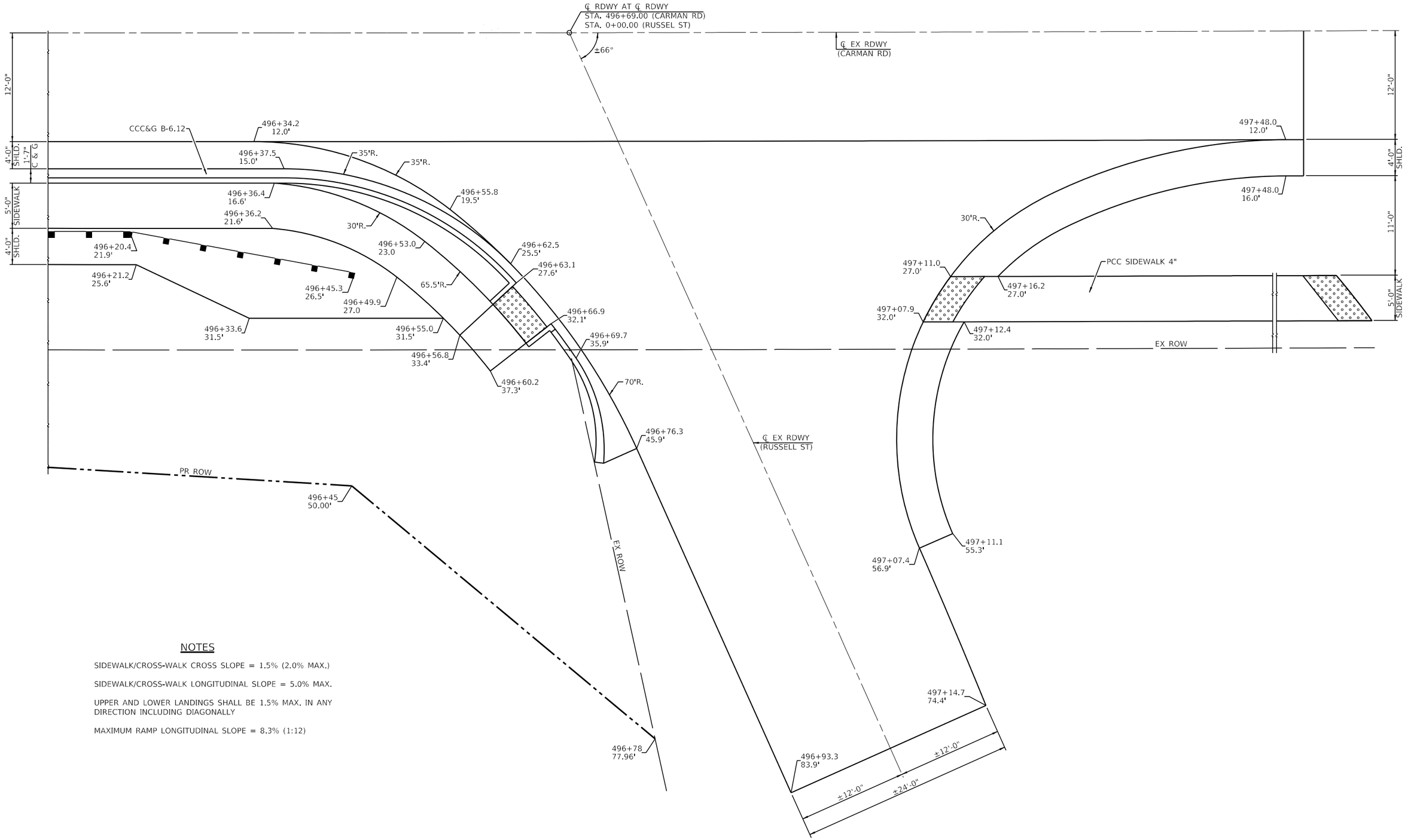
		CHECKED -	REVISED -
	PLOT SCALE =	DRAWN -	REVISED -
	PLOT DATE =	CHECKED -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PLAN

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-20)BR	HENDERSON	86	23
		CONTRACT NO. 68989		
	ILLINOIS	FED. AID PROJECT		



NOTES

SIDEWALK/CROSS-WALK CROSS SLOPE = 1.5% (2.0% MAX.)

SIDEWALK/CROSS-WALK LONGITUDINAL SLOPE = 5.0% MAX.

UPPER AND LOWER LANDINGS SHALL BE 1.5% MAX. IN ANY DIRECTION INCLUDING DIAGONALLY

MAXIMUM RAMP LONGITUDINAL SLOPE = 8.3% (1:12)

PLAN

Veenstra & Kimm, Inc.
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USER NAME = ___	DESIGNED - ___	REVISED - ___
	CHECKED - ___	REVISED - ___
PLOT SCALE = ___	DRAWN - ___	REVISED - ___
PLOT DATE = ___	CHECKED - ___	REVISED - ___

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

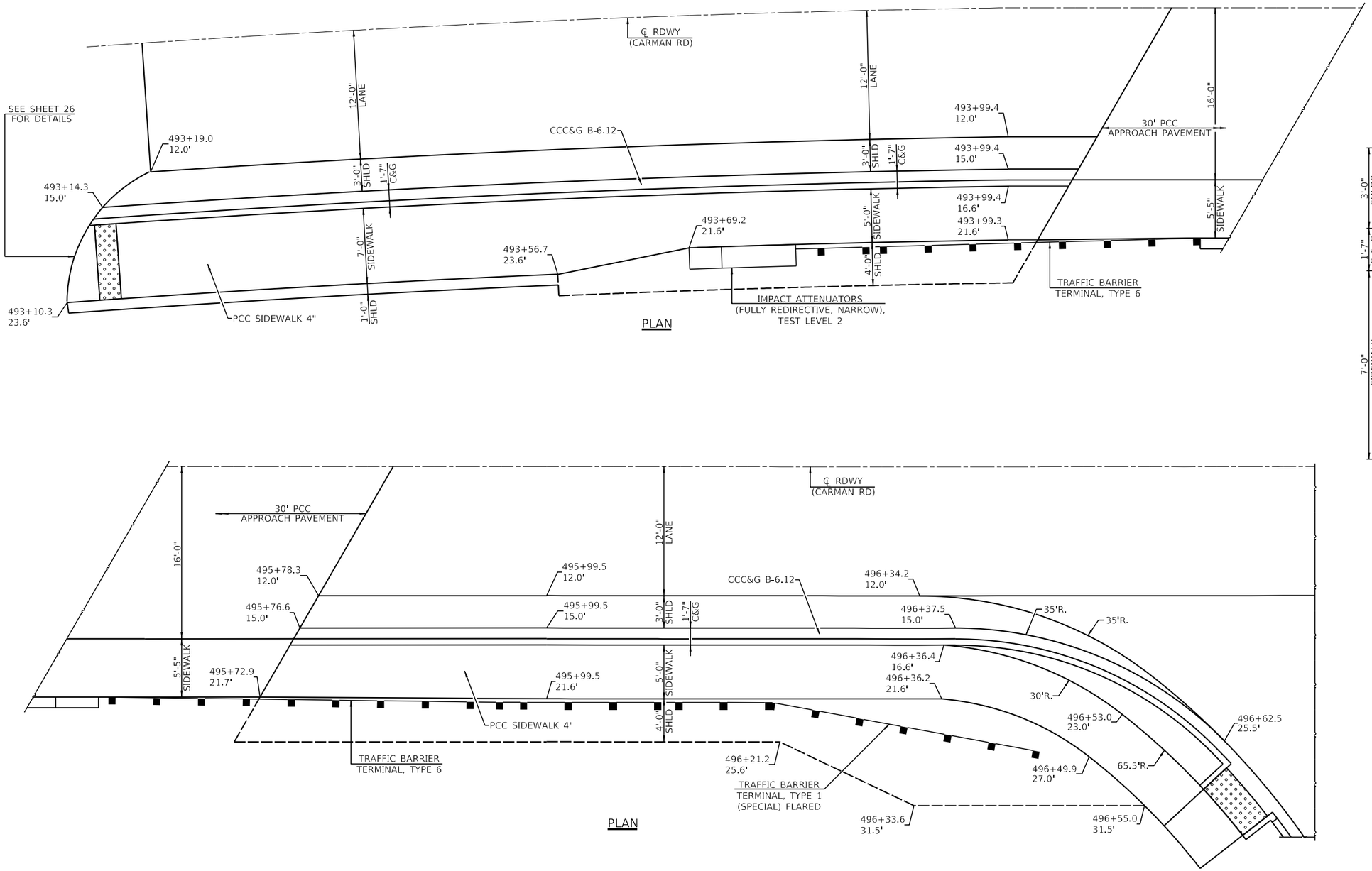
INTERSECTION DETAILS

SCALE: VARIES | SHEET NO. __ OF __ SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-20)BR	HENDERSON	86	24

CONTRACT NO. 68989

ILLINOIS FED. AID PROJECT



Veenstra & Kimm, Inc. Springfield, IL. Phone: (217)544-8033	USER NAME = ___	DESIGNED - ___	REVISED - ___
		CHECKED - ___	REVISED - ___
	PLOT SCALE = ___	DRAWN - ___	REVISED - ___
	PLOT DATE = ___	CHECKED - ___	REVISED - ___

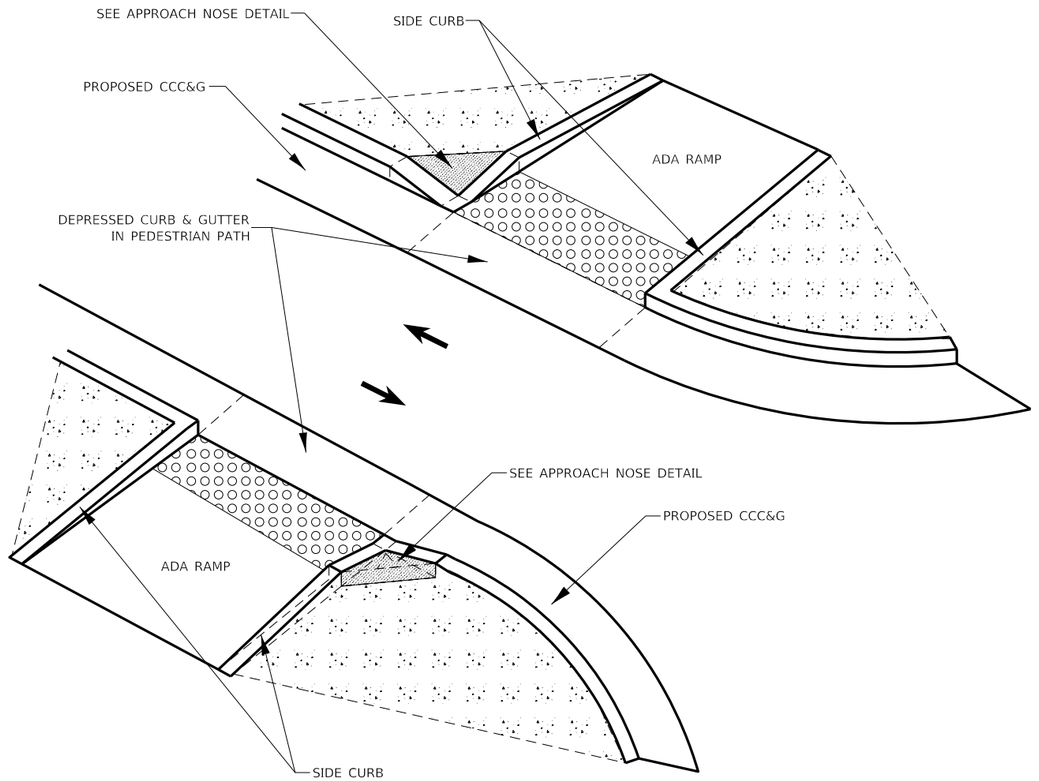
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIDEWALK DETAILS

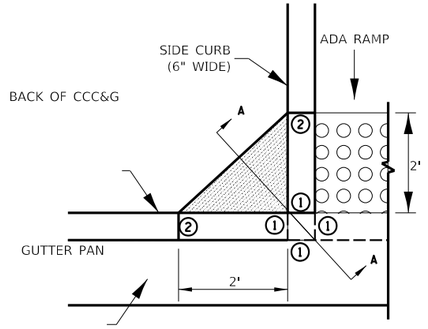
SCALE: VARIES | SHEET NO. __ OF __ SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-20)BR	HENDERSON	86	25
		CONTRACT NO. 68989		
	ILLINOIS	FED. AID PROJECT		

APPROACH NOSE DETAIL

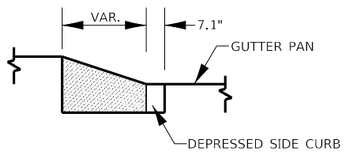


PLAN



① 0" CURB HEIGHT.
② FULL CURB HEIGHT.

SECTION A-A



NOTES:

1. ANY METHOD OF CONSTRUCTING THE APPROACH NOSE, OTHER THAN WHAT IS SHOWN ON THIS DETAIL, SHALL BE APPROVED BY THE ENGINEER AND DISTRICT ADA COORDINATOR.

2. THE APPROACH NOSE CAN EITHER BE CONCRETE OR GRADED TURF. IF CONCRETE IS USED, IT SHALL BE PAID FOR AS P.C.C SIDEWALK.

LEGEND

DETECTABLE WARNING

CONCRETE OR TURF

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Springfield, IL. Phone: (217)544-8033

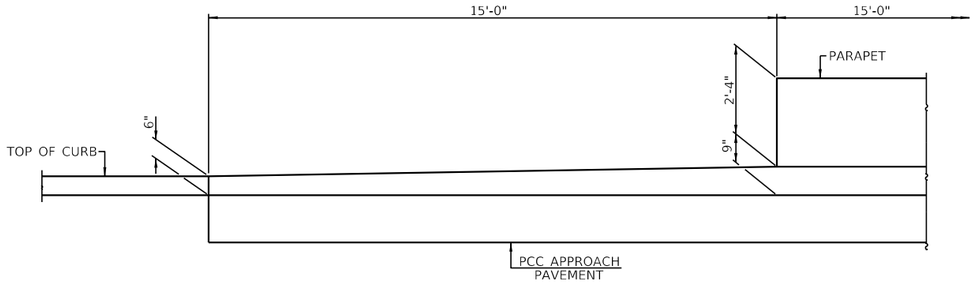
USER NAME = ___	DESIGNED - ___	REVISED - ___
	CHECKED - ___	REVISED - ___
PLOT SCALE = ___	DRAWN - ___	REVISED - ___
PLOT DATE = ___	CHECKED - ___	REVISED - ___

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

APPROACH NOSE DETAIL

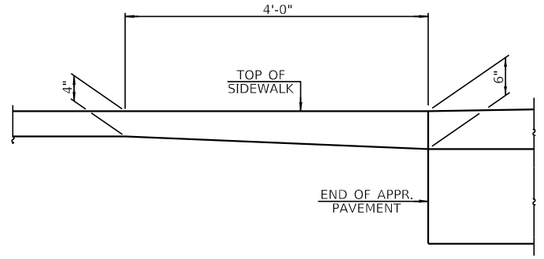
SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-20)BR	HENDERSON	86	26
		CONTRACT NO. 68989		
	ILLINOIS	FED. AID PROJECT		

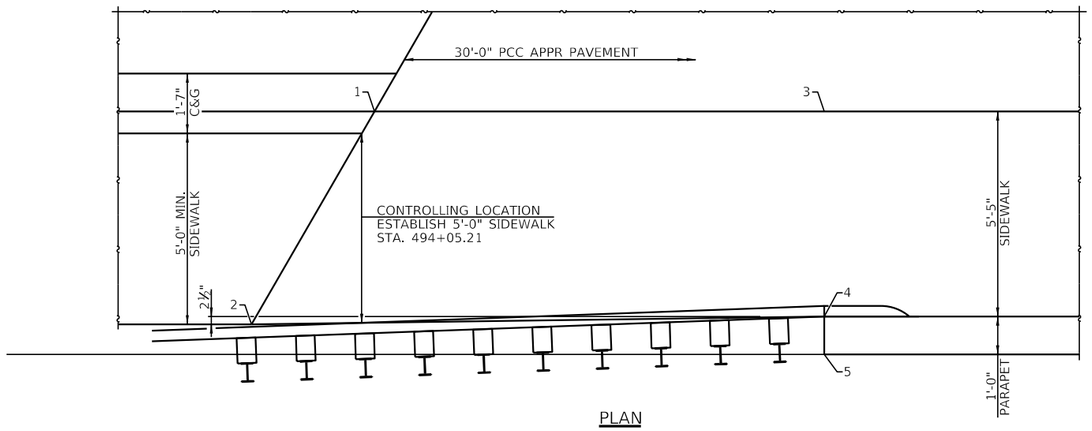


CURB TRANSITION DETAIL

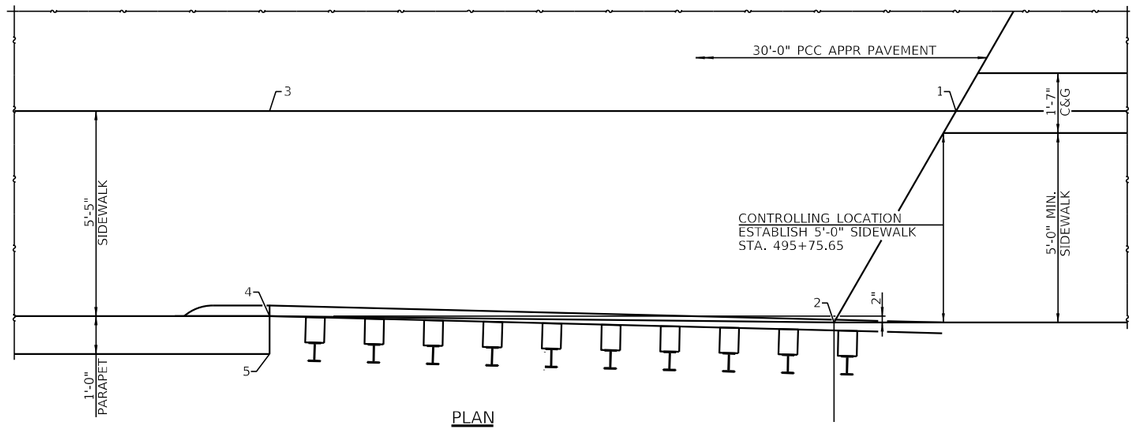
(N.W. & S.W. CORNERS)



SIDEWALK TRANSITION DETAIL



PLAN



PLAN

	NORTH APPROACH		SOUTH APPROACH	
LOCATION	TOP OF PAVEMENT	TOP OF SIDEWALK	TOP OF PAVEMENT	TOP OF SIDEWALK
1	546.94	547.44	547.41	547.91
2	546.65	547.15	547.32	547.91
3	546.93	547.60	547.52	548.19
4	546.82	547.68	547.41	548.27
5	546.80	547.68	547.39	548.27

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Springfield, IL. Phone: (217)544-8033

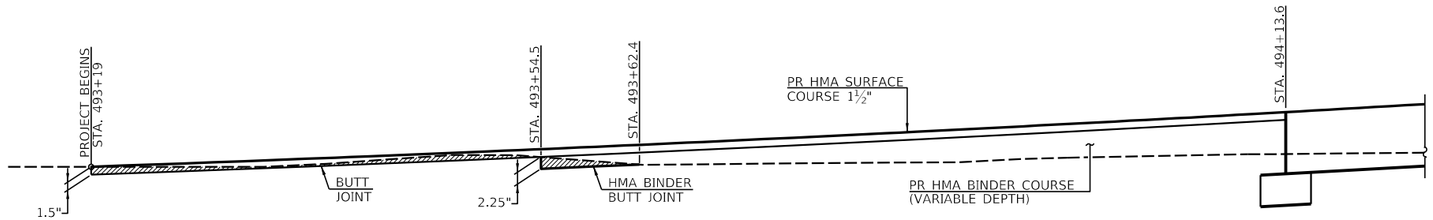
USER NAME = ___	DESIGNED - ___	REVISED - ___
	CHECKED - ___	REVISED - ___
PLOT SCALE = ___	DRAWN - ___	REVISED - ___
PLOT DATE = ___	CHECKED - ___	REVISED - ___

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

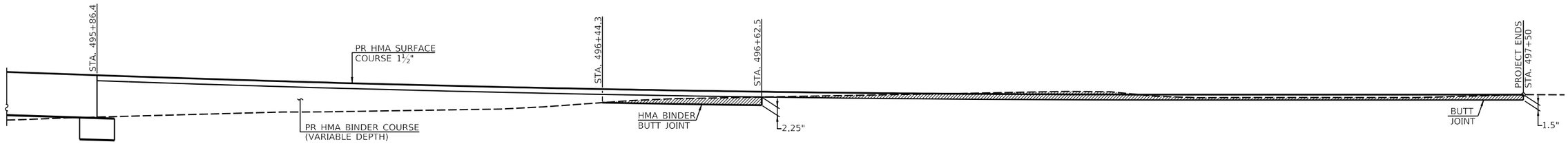
APPROACH PAVEMENT SIDEWALK DETAILS

SCALE: VARIES | SHEET NO. __ OF __ SHEETS | STA. | TO STA.

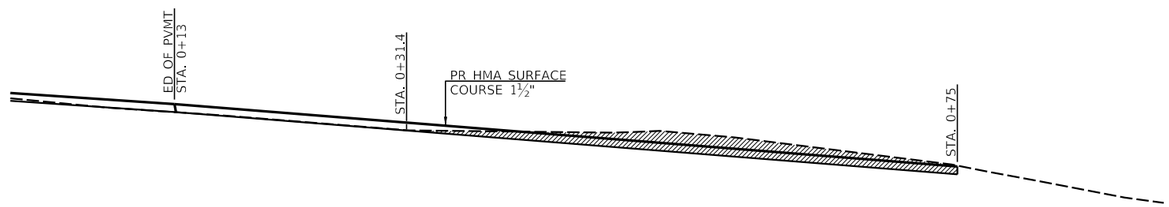
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-20)BR	HENDERSON	86	27
		CONTRACT NO. 68989		
	ILLINOIS FED. AID PROJECT			



BUTT JOINT DETAIL
(CARMAN ROAD)



BUTT JOINT DETAIL
(CARMAN ROAD)



BUTT JOINT DETAIL
(RUSSELL ST)

Veenstra & Kimm, Inc.
Springfield, IL. Phone: (217)544-8033

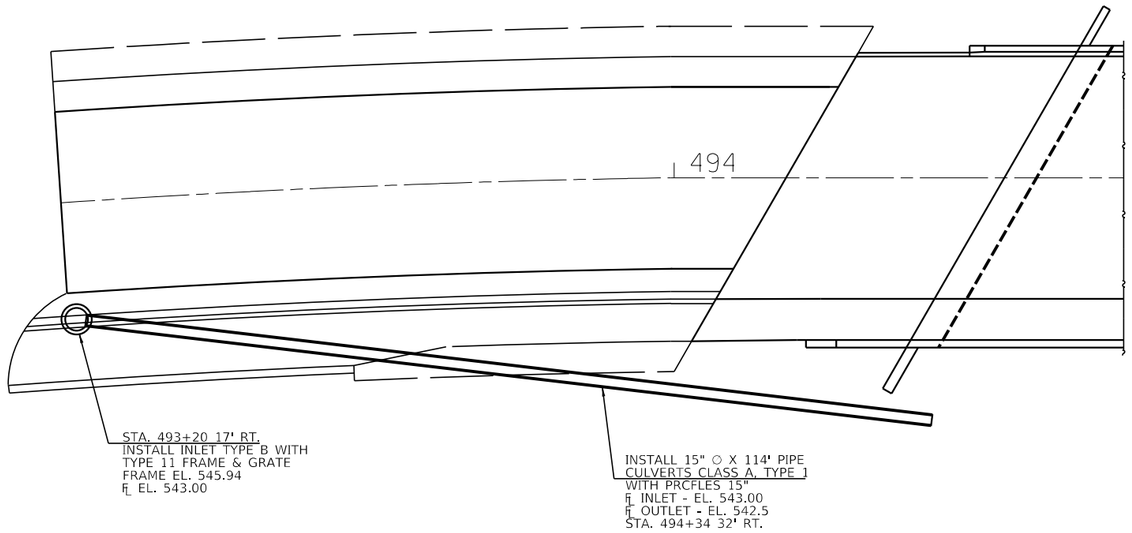
USER NAME = ___	DESIGNED - ___	REVISED - ___
	CHECKED - ___	REVISED - ___
PLOT SCALE = ___	DRAWN - ___	REVISED - ___
PLOT DATE = ___	CHECKED - ___	REVISED - ___

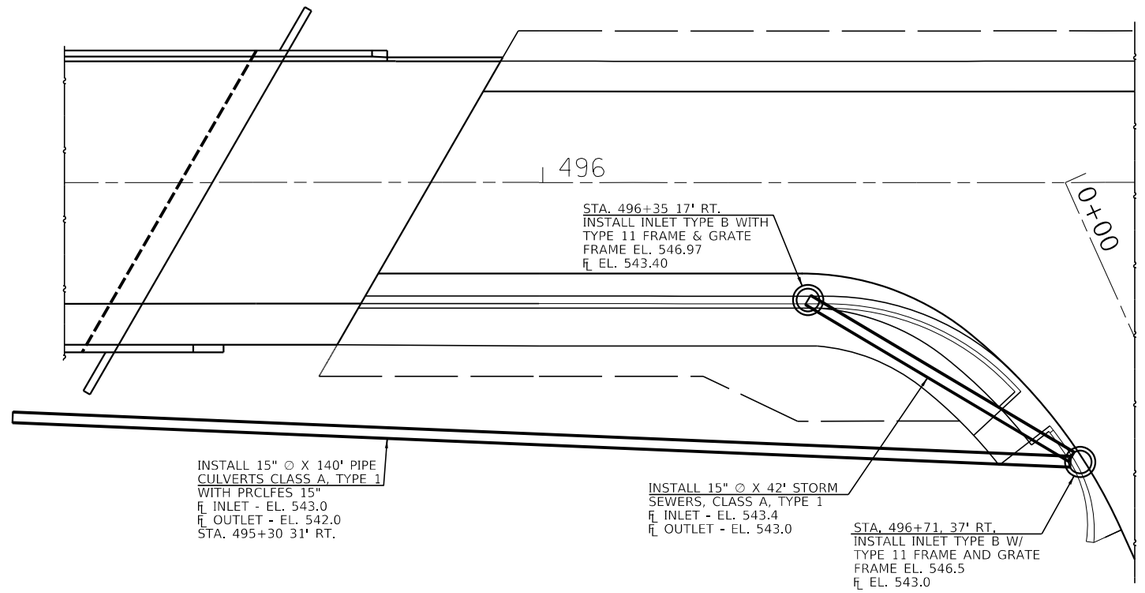
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

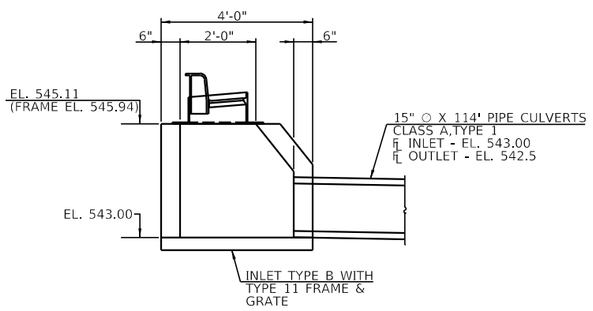
BUTT JOINT DETAILS

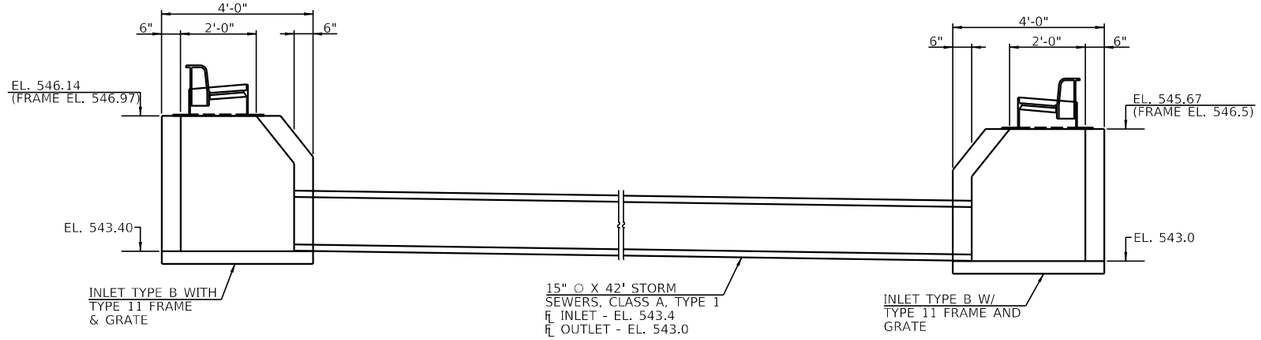
SCALE: VARIES | SHEET NO. __ OF __ SHEETS | STA. | TO STA.

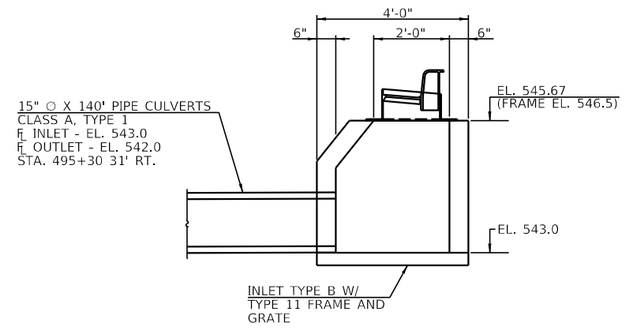
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-20)BR	HENDERSON	86	28
		CONTRACT NO. 68989		
	ILLINOIS FED. AID PROJECT			











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Springfield, IL. Phone: (217)544-8033

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

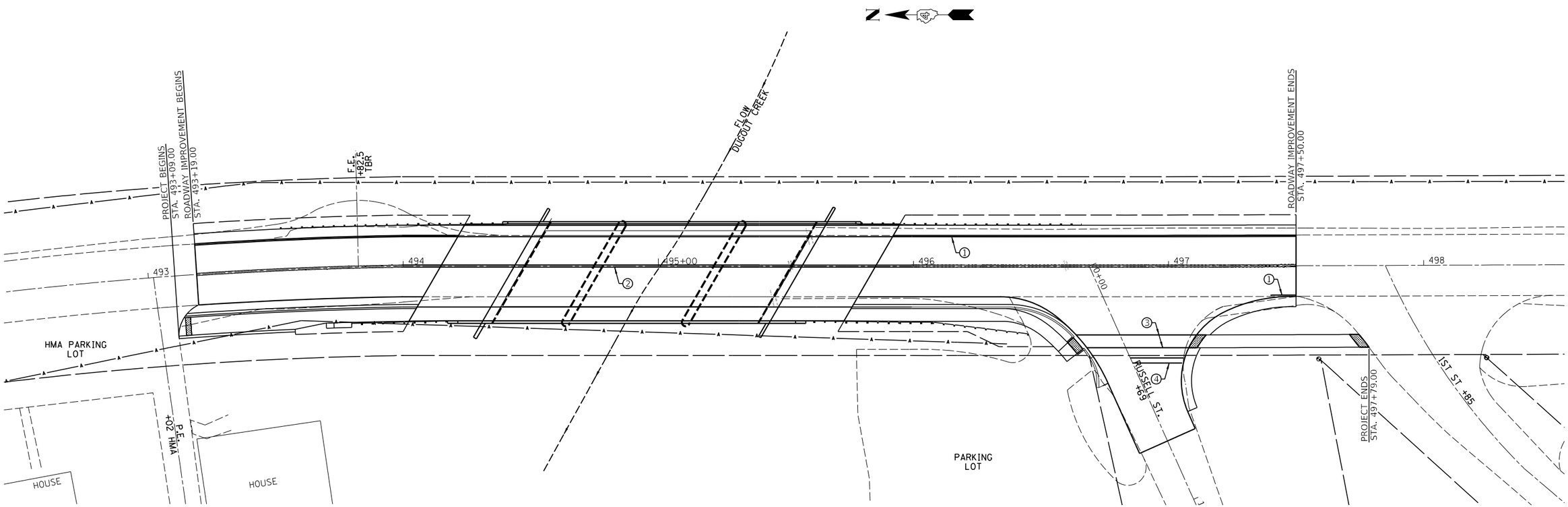
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DRAINAGE DETAILS

SCALE: VARIES | SHEET NO. __ OF __ SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-20)BR	HENDERSON	86	29
		CONTRACT NO. 68989		
	ILLINOIS FED. AID PROJECT			

SECTION 15, T.8N, R.6W. 4TH P.M.



LEGEND
① - MODIFIED URETHANE PAVEMENT MARKING - LINE 4" (WHITE) & GROOVING FOR RECESSED PAVEMENT MARKING 5"
② - MODIFIED URETHANE PAVEMENT MARKING - LINE 4" (DOUBLE YELLOW NO PASSING) & GROOVING FOR RECESSED PAVEMENT MARKING 5"
③ - MODIFIED URETHANE PAVEMENT MARKING - LINE 8" (WHITE) & GROOVING FOR RECESSED PAVEMENT MARKING 9"
④ - MODIFIED URETHANE PAVEMENT MARKING - LINE 24" (WHITE) & GROOVING FOR RECESSED PAVEMENT MARKING 25"

PLAN

0 20 40

SCALE: 1" = 40'

V&K
Veenstra & Kimm, Inc.
Springfield, IL. Phone: (217)544-8033

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING PLAN

SCALE: VARIES | SHEET NO. __ OF __ SHEETS | STA. | TO STA.

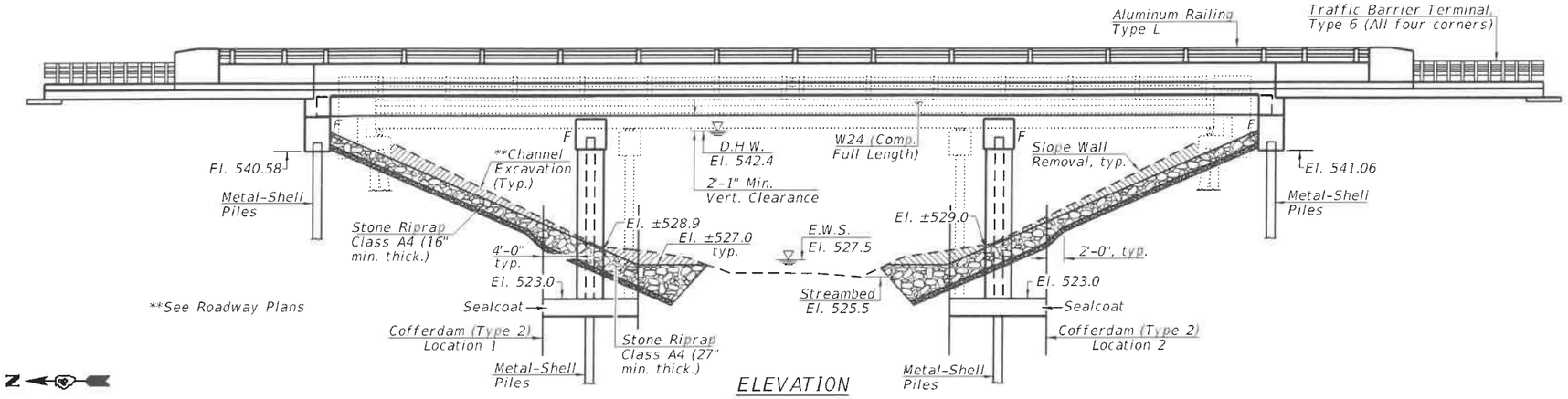
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-20)BR	HENDERSON	86	30
		CONTRACT NO. 68989		
	ILLINOIS FED. AID PROJECT			

Bench Mark: High point on top of R.O.W. marker. Sta. 495+27.8, 37' Rt. El. 543.32

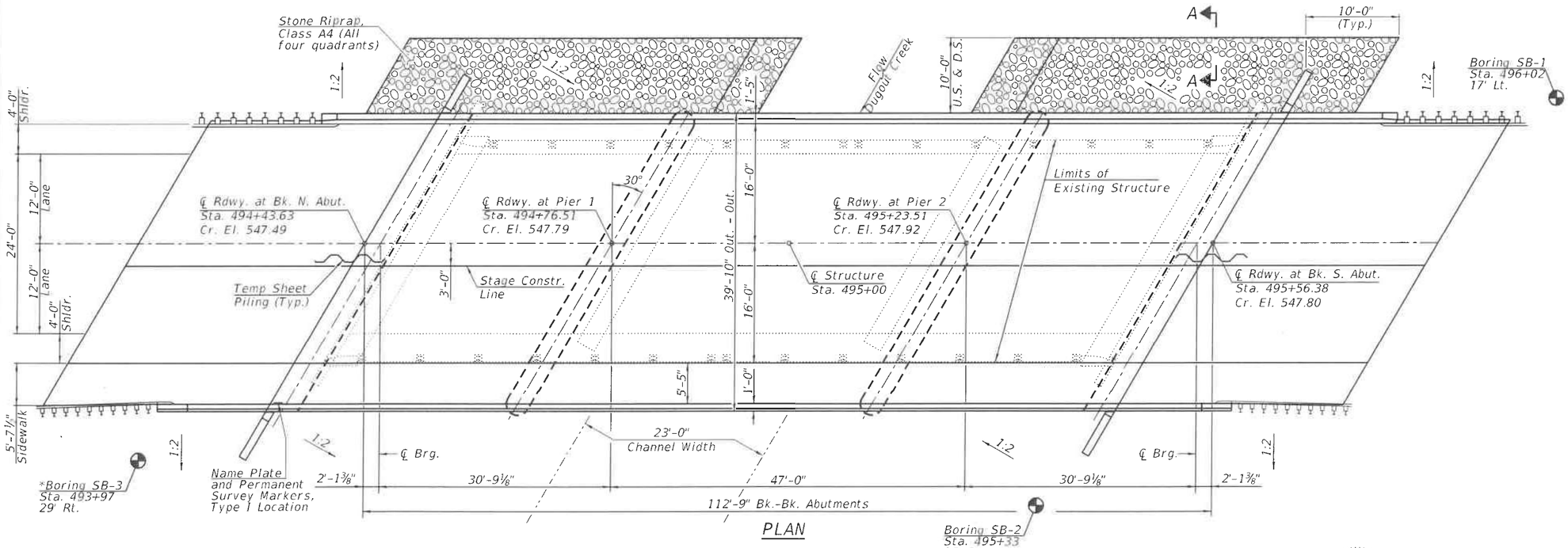
Existing Structure: Structure Number 036-3003, built in 1954 as F.A.S. Route 418, Section 14-2O at Station 495+00. The existing structure is a three span bridge having a back to back abutment length of 105'-0" and a face to face of curb width of 24'-0" and an out to out deck width of 29'-8". The superstructure consists of a reinforced concrete deck supported by continuous steel I beams with welded cover plates over the piers. The substructure consists of reinforced concrete pile bent abutments and concrete pile bent piers. The bridge is skewed 30° left forward. The structure will be replaced utilizing stage construction.

No Salvage.

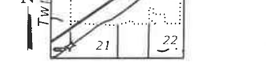
INDEX OF SHEETS



ELEVATION



PLAN



LOCATION SKETCH

* Boring SB-3 is not displayed in its correct location. This boring is located 29.0' Rt. from Sta. 493+97 along ℄ of Carman Road.

APPROVED
For Structural Adequacy Only
Engineer of Bridges & Structures

THOMAS R. CARSON 2007 LICENSED STRUCTURAL ENGINEER OF STATE OF ILLINOIS

Thomas R Carson 9-17-2024

Expires: 11-30-2024

GENERAL PLAN & ELEVATION
CARMAN ROAD OVER DUGOUT CREEK
F.A.P. ROUTE 522 - SEC. (14-2Q)BR
HENDERSON COUNTY
STA. 495+00.00
STRUCTURE NO. 036-0074

VEENSTRA & KIMM INC.
Springfield, IL. Phone: (217)544-8033
IL. Design Firm No. 184-001939

USER NAME =		DESIGNED - KES	REVISED -
		CHECKED - VVR	REVISED -
PLOT SCALE =		DRAWN - JRP	REVISED -
PLOT DATE =	March 23, 2023	CHECKED - TRC	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
STRUCTURE NO. 036 - 0074
SHEET NO. 1 OF 37 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-2Q)BR	HENDERSON	86	31
			CONTRACT NO. 68989	
	ILLINOIS	FED. AID PROJECT		

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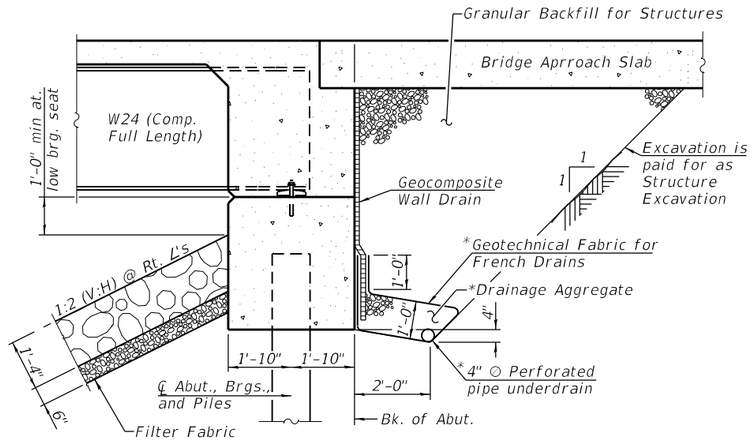


SECTION THRU INTEGRAL ABUTMENT

(Horiz. dim. @ Rt. ℄'s)

*Included in the cost of Pipe Underdrains for Structures. Drainage aggregate should match material used for Granular Backfill for Structures.

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

2020 AASHTO LRFD Bridge Design Specifications, 9th Edition.

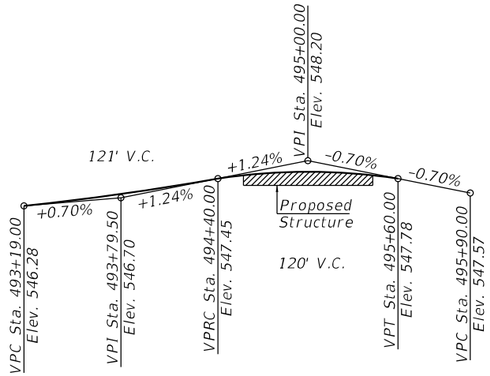
DESIGN STRESSES

FIELD UNITS

f'_c = 3,500 psi
f'_c = 4,000 psi (Superstructure Concrete)
f_y = 60,000 psi (Reinforcement)
*f_y = 50,000 psi (M270 Grade 50)
*All new structural steel shall be galvanized

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.101 g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.144 g
Soil Site Class = D



PROFILE GRADE

(Along ℄ Roadway)

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Stone Riprap, Class A4	Ton		542	542
Filter Fabric	Sq. Yd.		665	665
Removal of Existing Structures	Each	1		1
Structure Excavation	Cu. Yd.		300	300
Cofferdam Excavation	Cu. Yd.		278	278
Cofferdam (Type 2) (Location-1)	Each		1	1
Cofferdam (Type 2) (Location-2)	Each		1	1
Concrete Structures	Cu. yd.		234.8	234.8
Concrete Superstructure	Cu. Yd.	185.3		185.3
Bridge Deck Grooving	Sq. Yd.	570		570
Seal Coat Concrete	Cu. Yd.		87.2	87.2
Protective Coat	Sq. Yd.	835		835
Concrete Superstructure (Approach Slab)	Cu. Yd.	117.3		117.3
Furnishing & Erecting Structural Steel	L. Sum	1		1
Stud Shear Connectors	Each	4320		4320
Reinforcement Bars, Epoxy Coated	Pound	85,510	23,780	109,290
Bar Splicers	Each	542	200	742
Aluminum Railing, Type L	Foot	133		133
Furnishing Metal Shell Piles 14"x0.250"	Foot		1528	1528
Driving Piles	Foot		1528	1528
Test Pile Metal Shells	Each		2	2
Name Plates	Each	1		1
Anchor Bolts, 1"	Each	48		48
Temporary Sheet Piling	Sq. Ft.	948		948
Granular Backfill for Structures	Cu. Yd.		93	93
Geocomposite Wall Drain	Sq. Yd.		55	55
Pipe Underdrains for Structures 4"	Foot		148	148

GENERAL NOTES

Fasteners shall be ASTM F 3125 Grade A325 Type 1. Fasteners shall be hot dip galvanized. See Special Provision for "Hot Dip Galvanizing for Structural Steel." Bolts 7/8 in. diameter, holes 15/16 in. diameter, unless otherwise noted.

Calculated weight of Structural Steel = 76,250 pounds (Grade 50).
9,740 pounds (Grade 36).

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

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

Reinforcement bars designated (E) shall be epoxy coated.

The finishing machine rails shall be placed on the top of the top flange of the exterior beams within the deck pour. Beam blocks shall be placed between beams at all tie locations in each bay for the full width of the deck pour.

Slipforming of the parapets is not allowed.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 in. (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.

The Seal coat design thickness is based on the Cofferdam Design Water Elevation (CDWE) shown. Final cofferdam design, details and seal coat thickness shall be submitted to the Engineer for approval. The CDWE is equal to the Estimated Water Surface Elevation (EWSE) plus 3 feet.

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

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

WATERWAY INFORMATION

Drainage Area = 19 mi^2

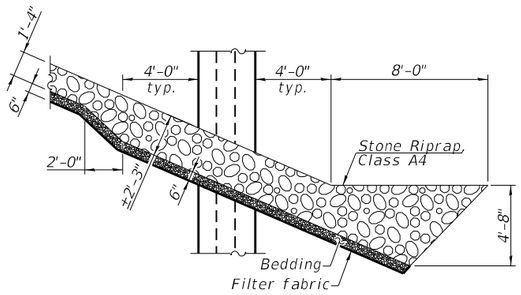
Exist. Low Grade Elev. 545.4 @ Sta. 491+00
Prop. Low Grade Elev. 545.4 @ Sta. 491+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	2670	573	670	539.6	0.3	0.1	539.9	539.7
Design	50	4150	763	891	542.4	0.3	0.1	542.7	542.5
Base	100	4830	839	978	543.4	0.3	0.1	543.7	543.5
Scour Design Check	200	5480	897	1048	544.2	0.3	0.1	544.5	544.3
Overtop Existing	400	6200	897	-	544.9	0.5	-	545.4	-
Overtop Proposed	460	6350	-	1065	545.1	-	0.3	-	545.4
Max. Calc.									

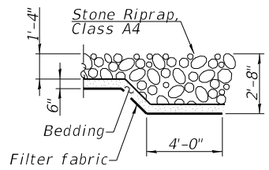
10 year velocity through existing bridge = 4.7 fps
10 year velocity through prop. bridge = 4.0 fps

DESIGN SCOUR TABLE

Event/Limit State	Design Scour Elevations (ft.) N. Abut.	Pier 1	Pier 2	S. Abut.	Item 113
Q100	540.6	521.5	521.5	541.1	5
Q200	540.6	520.5	520.5	541.1	
Design	540.6	521.5	521.5	541.1	
Check	540.6	520.5	520.5	541.1	



TOE DETAIL AT PIERS



SECTION A-A

STATION 495+00.00
BUILT 202 BY
STATE OF ILLINOIS
F.A.P. RTE. 522 - SECTION (14-2Q)BR
LOADING HL-93
STRUCTURE NO. 036-0074

NAME PLATE

Std. 515001

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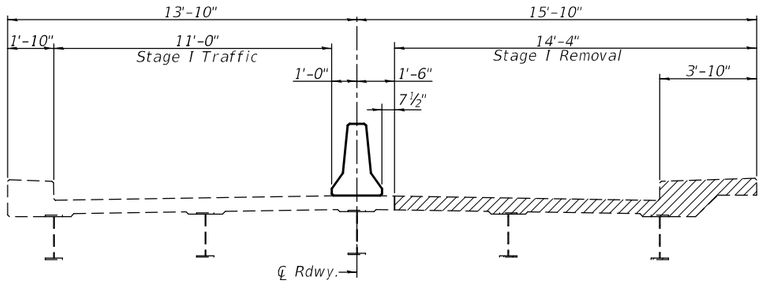
VEENSTRA & KIMM INC.
Springfield, IL. Phone: (217)544-8033
IL. Design Firm No. 184-001939

USER NAME =	DESIGNED - KES	REVISED -	
	CHECKED - VVR	REVISED -	
PLOT SCALE =	DRAWN - JRP	REVISED -	
PLOT DATE = March 23, 2023	CHECKED - TRC	REVISED -	

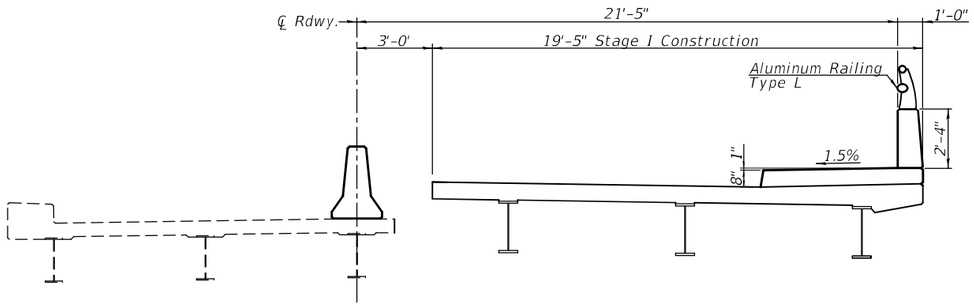
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL DATA
STRUCTURE NO. 036-0074
SHEET NO. 2 OF 37 SHEETS

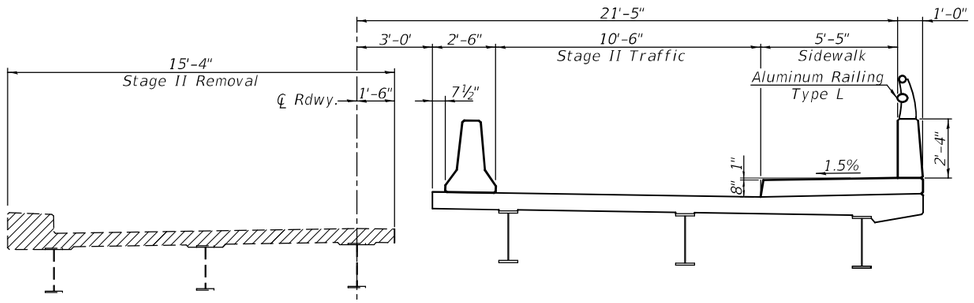
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-2Q)BR	HENDERSON	86	32
		CONTRACT NO. 68989		
	ILLINOIS FED. AID PROJECT			



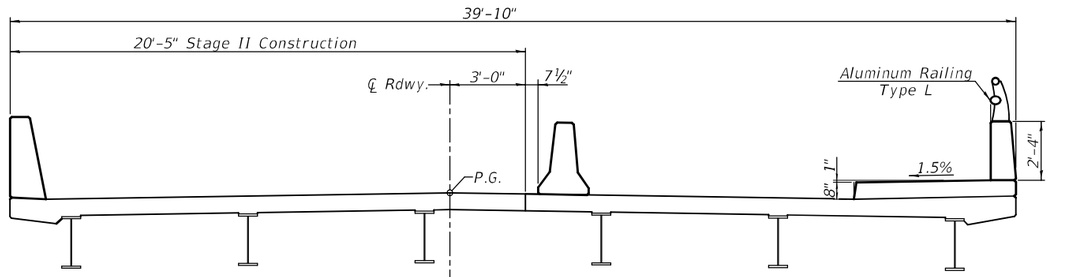
STAGE I REMOVAL
(Looking South)



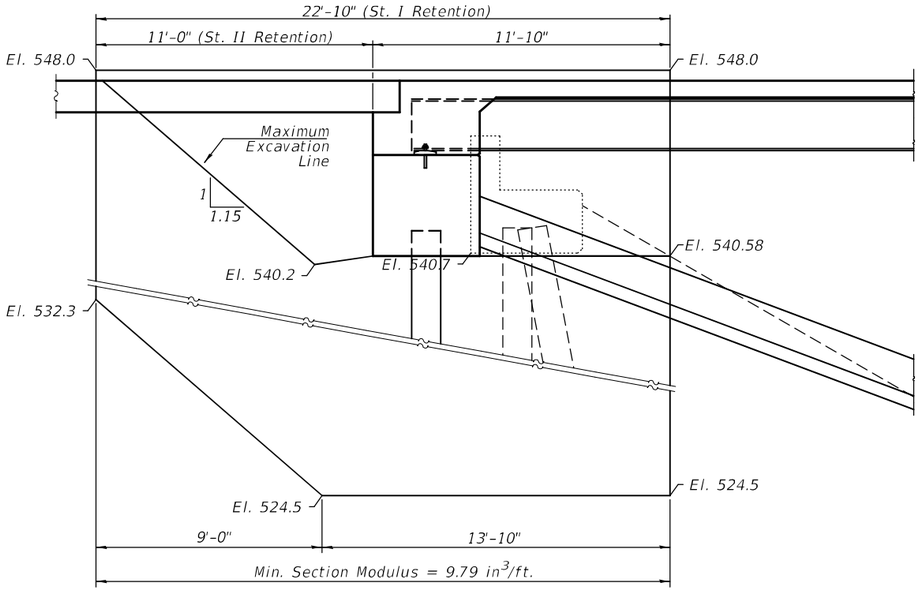
STAGE I CONSTRUCTION
(Looking South)



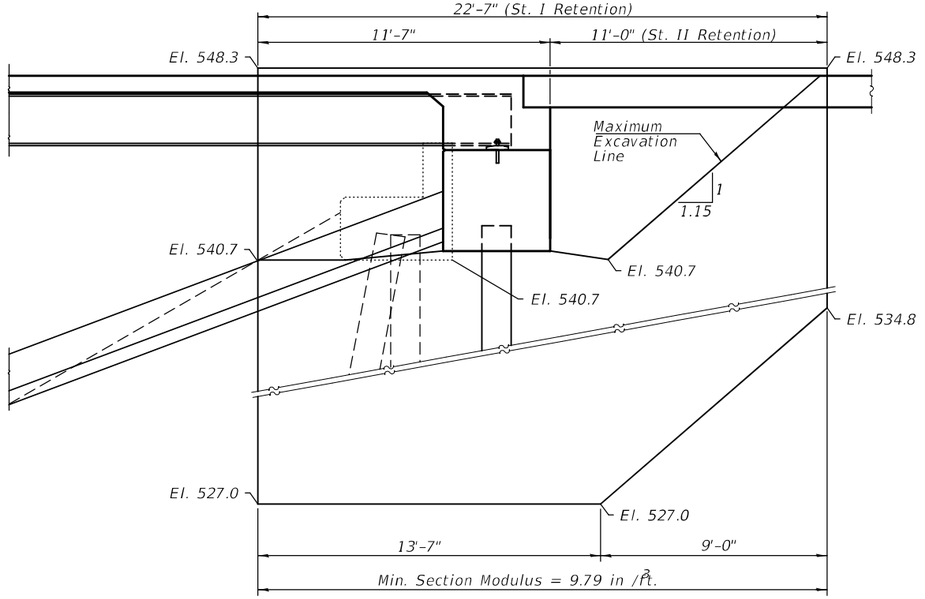
STAGE II REMOVAL
(Looking South)



STAGE II CONSTRUCTION
(Looking South)



NORTH ABUTMENT TEMPORARY SHEET PILING



SOUTH ABUTMENT TEMPORARY SHEET PILING

Notes:

For quantity of Temporary Concrete Barrier, see Roadway Plans.
Hatched areas indicate Removal of Existing Structures.
If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.

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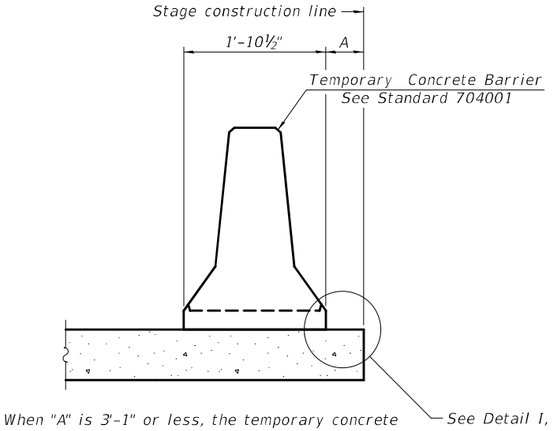
VEENSTRA & KIMM INC.
Springfield, IL. Phone: (217)544-8033
IL. Design Firm No. 184-001939

USER NAME =		DESIGNED - KES	REVISED -
		CHECKED - VVR	REVISED -
PLOT SCALE =		DRAWN - JRP	REVISED -
PLOT DATE =	March 23, 2023	CHECKED - TRC	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

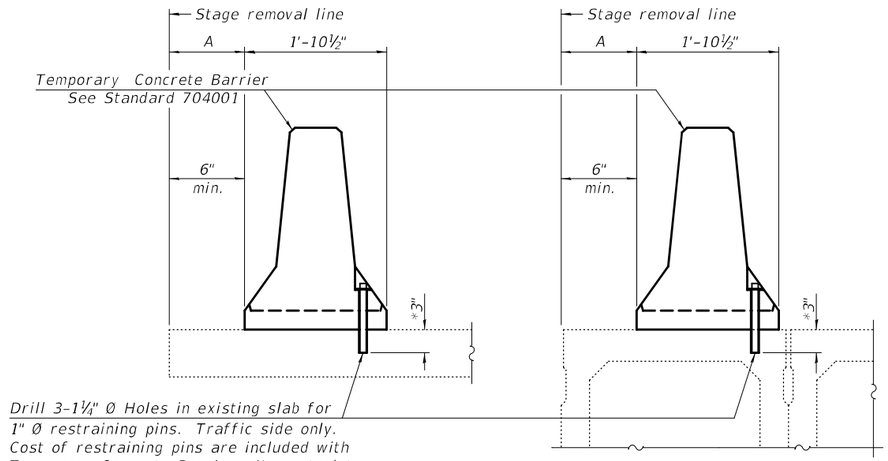
STAGE CONSTRUCTION DETAILS
STRUCTURE NO. 036-0074
SHEET NO. 3 OF 37 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-2Q)BR	HENDERSON	86	33
		CONTRACT NO. 68989		
	ILLINOIS	FED. AID PROJECT		



When "A" is 3'-1" or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I, II or III. No restraint is required when "A" is greater than 3'-1".

NEW SLAB OR NEW DECK BEAM



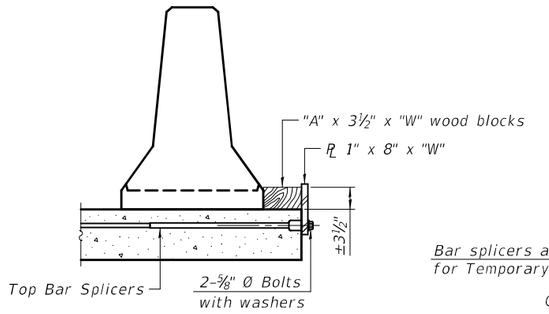
Drill 3-1¼" Ø Holes in existing slab for 1" Ø restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

EXISTING SLAB

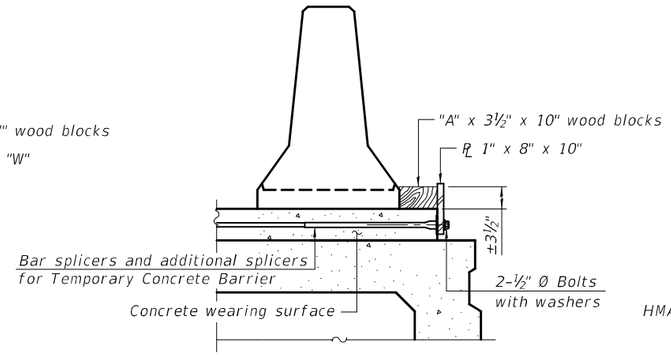
* When hot-mix asphalt wearing surface is present, embedment shall be 3" plus the wearing surface depth.

EXISTING DECK BEAM

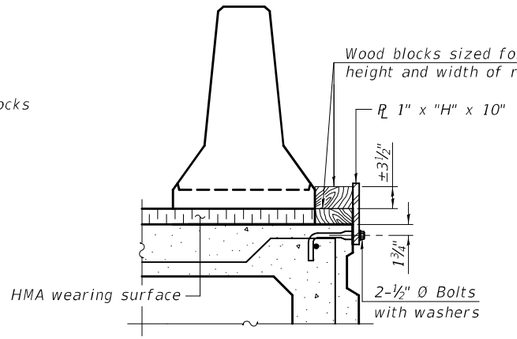
SECTIONS THRU SLAB OR DECK BEAM



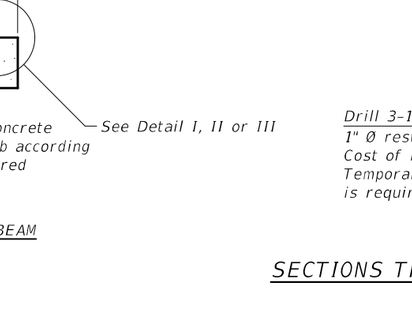
DETAIL I



DETAIL II

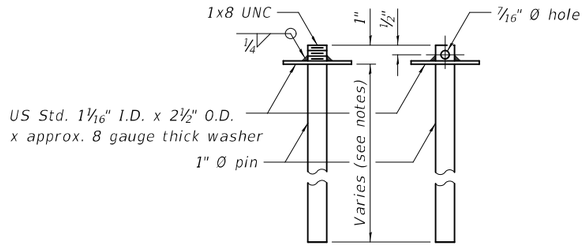


DETAIL III

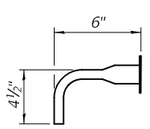


STEEL RETAINER PL 1" x 8" x "W"
(Detail I and II)

STEEL RETAINER PL 1" x "H" x 10"
(Detail III)



RESTRAINING PIN



BAR SPLICER FOR #4 BAR - DETAIL III

Notes:

Cost of retainer assembly is included with Temporary Concrete Barrier.

A retainer assembly shall be located at the approximate ℄ of each temporary concrete barrier.

The retainer plate shall not be removed until the concrete on the adjacent stage is ready to be poured. For Detail III applications the retainer plate shall not be removed until just prior to placing the adjacent beam.

When the 'A' dimension is less than 1½", the wood block shall be omitted and the barrier shall be placed in direct contact with the steel retainer plate. For deck beam applications the minimum required 'A' distance is 6" to accommodate the shear key clamping device.

Detail I - Installation for a new bridge deck or bridge slab.

Detail II - Installation for a new deck beam with an initial concrete wearing surface. Additional bar splicers shall be provided at 6'-0" centers and paired with the bar splicers of the concrete wearing surface reinforcement to accommodate the installation of the retainer assemblies. The cost of the additional bar splicers is included with the concrete wearing surface.

Detail III - Installation for a new deck beam with no initial wearing surface or with an initial hot-mix asphalt (HMA) wearing surface present. The deck beam directly beneath the temporary concrete barrier shall be fabricated with bar splicer inserts in the side of the beam, as detailed, to accommodate the installation of the retainer assemblies. A pair of bar splicers, 6" apart, shall be placed at 6'-0" centers along the length of the beam. The cost of the bar splicers is included with the deck beam.

RAILING CRITERIA

NCHRP 350 Test Level	3
Railing Weight (plf)	440

R-27

10-12-2021

VEENSTRA & KIMM INC.
Springfield, IL. Phone: (217)544-8033
IL. Design Firm No. 184-001939

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PLOT DATE = March 23, 2023	CHECKED - TRC	REVISED - _____

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
STRUCTURE NO. 036-0074

SHEET NO. 4 OF 37 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-2Q)BR	HENDERSON	86	34
		CONTRACT NO. 68989		
	ILLINOIS	FED. AID PROJECT		

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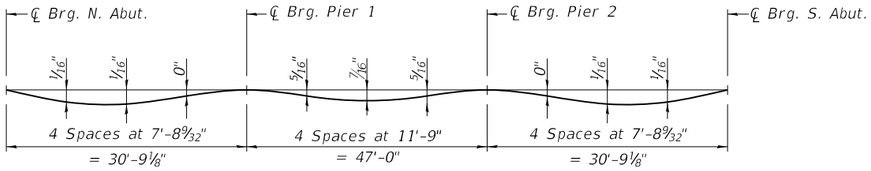
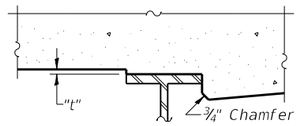


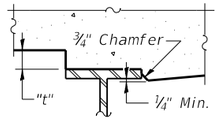
DEAD LOAD DEFLECTION DIAGRAM

(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 as shown on Sheet 6 of 37.



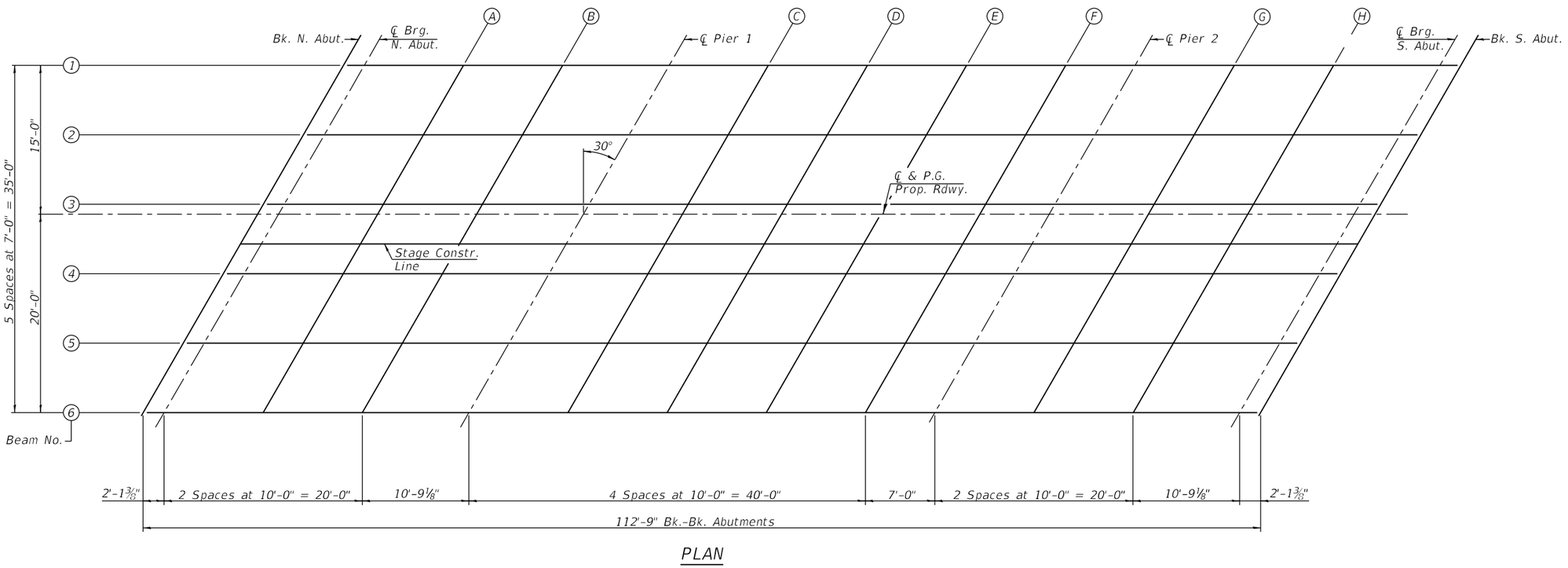
At Minimum Fillet



At Maximum Fillet

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" shown on Sheet 6 of 37, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS



PLAN

VEENSTRA & KIMM INC.
Springfield, IL. Phone: (217)544-8033
IL. Design Firm No. 184-001939

USER NAME =	DESIGNED - KES	REVISED -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 036-0074

SHEET NO. 5 OF 37 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-2Q)BR	HENDERSON	86	35
		CONTRACT NO. 68989		
	ILLINOIS FED. AID PROJECT			

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Bk. North Abut.	494+52.29	-15.00	547.35	547.35
℄ Brg. N. Abut.	494+54.41	-15.00	547.37	547.37
A	494+64.41	-15.00	547.47	547.47
B	494+74.41	-15.00	547.54	547.54
℄ Brg. Pier 1	494+85.17	-15.00	547.61	547.61
C	494+95.17	-15.00	547.65	547.65
D	495+05.17	-15.00	547.68	547.68
E	495+15.17	-15.00	547.69	547.69
F	495+25.17	-15.00	547.68	547.68
℄ Brg. Pier 2	495+32.17	-15.00	547.67	547.67
G	495+42.17	-15.00	547.64	547.64
H	495+52.17	-15.00	547.59	547.59
℄ Brg. S. Abut.	495+62.93	-15.00	547.52	547.52
Bk. South Abut.	495+65.04	-15.00	547.50	547.50

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Bk. North Abut.	494+48.25	-8.00	547.43	547.43
℄ Brg. N. Abut.	494+50.37	-8.00	547.45	547.45
A	494+60.37	-8.00	547.55	547.55
B	494+70.37	-8.00	547.63	547.63
℄ Brg. Pier 1	494+81.13	-8.00	547.70	547.70
C	494+91.13	-8.00	547.75	547.75
D	495+01.13	-8.00	547.79	547.79
E	495+11.13	-8.00	547.81	547.81
F	495+21.13	-8.00	547.81	547.81
℄ Brg. Pier 2	495+28.13	-8.00	547.80	547.80
G	495+38.13	-8.00	547.77	547.77
H	495+48.13	-8.00	547.73	547.73
℄ Brg. S. Abut.	495+58.89	-8.00	547.66	547.66
Bk. South Abut.	495+61.00	-8.00	547.65	547.65

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Bk. North Abut.	494+44.21	-1.00	547.49	547.49
℄ Brg. N. Abut.	494+46.33	-1.00	547.51	547.51
A	494+56.33	-1.00	547.62	547.62
B	494+66.33	-1.00	547.72	547.72
℄ Brg. Pier 1	494+77.09	-1.00	547.79	547.79
C	494+87.09	-1.00	547.84	547.84
D	494+97.09	-1.00	547.88	547.88
E	495+07.09	-1.00	547.91	547.91
F	495+17.09	-1.00	547.91	547.91
℄ Brg. Pier 2	495+24.09	-1.00	547.91	547.91
G	495+34.09	-1.00	547.89	547.89
H	495+44.09	-1.00	547.85	547.85
℄ Brg. S. Abut.	495+54.85	-1.00	547.80	547.80
Bk. South Abut.	495+56.96	-1.00	547.78	547.78

℄ & P.G. PROP. RDWY.

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Bk. North Abut.	494+43.63	0.00	547.49	547.49
℄ Brg. N. Abut.	494+45.75	0.00	547.52	547.52
A	494+55.75	0.00	547.63	547.63
B	494+65.75	0.00	547.72	547.72
℄ Brg. Pier 1	494+73.51	0.00	547.80	547.80
C	494+86.51	0.00	547.85	547.85
D	494+96.51	0.00	547.89	547.89
E	495+06.51	0.00	547.92	547.92
F	495+16.51	0.00	547.93	547.93
℄ Brg. Pier 2	495+23.51	0.00	547.92	547.92
G	495+33.51	0.00	547.91	547.91
H	495+43.51	0.00	547.87	547.87
℄ Brg. S. Abut.	495+54.27	0.00	547.81	547.81
Bk. South Abut.	495+56.38	0.00	547.80	547.80

STAGE CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Bk. North Abut.	494+41.90	+3.00	547.43	547.43
℄ Brg. N. Abut.	494+44.01	+3.00	547.45	547.45
A	494+54.01	+3.00	547.56	547.56
B	494+64.01	+3.00	547.66	547.66
℄ Brg. Pier 1	494+74.77	+3.00	547.74	547.74
C	494+84.77	+3.00	547.80	547.80
D	494+94.77	+3.00	547.84	547.84
E	495+04.77	+3.00	547.87	547.87
F	495+14.77	+3.00	547.88	547.88
℄ Brg. Pier 2	495+21.77	+3.00	547.88	547.88
G	495+31.77	+3.00	547.86	547.86
H	495+41.77	+3.00	547.83	547.83
℄ Brg. S. Abut.	495+52.53	+3.00	547.78	547.78
Bk. South Abut.	495+54.65	+3.00	547.77	547.77

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Bk. North Abut.	494+40.17	+6.00	547.36	547.36
℄ Brg. N. Abut.	494+42.29	+6.00	547.39	547.39
A	494+52.29	+6.00	547.50	547.50
B	494+62.29	+6.00	547.60	547.60
℄ Brg. Pier 1	494+73.05	+6.00	547.68	547.68
C	494+83.05	+6.00	547.75	547.75
D	494+93.05	+6.00	547.79	547.79
E	495+03.05	+6.00	547.82	547.82
F	495+13.05	+6.00	547.84	547.84
℄ Brg. Pier 2	495+20.05	+6.00	547.84	547.84
G	495+30.05	+6.00	547.82	547.82
H	495+40.05	+6.00	547.79	547.79
℄ Brg. S. Abut.	495+50.81	+6.00	547.74	547.74
Bk. South Abut.	495+52.92	+6.00	547.73	547.73

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Bk. North Abut.	494+36.12	+13.00	547.20	547.20
℄ Brg. N. Abut.	494+38.24	+13.00	547.23	547.23
A	494+48.24	+13.00	547.35	547.35
B	494+58.24	+13.00	547.45	547.45
℄ Brg. Pier 1	494+69.00	+13.00	547.54	547.54
C	494+79.00	+13.00	547.61	547.61
D	494+89.00	+13.00	547.67	547.67
E	494+99.00	+13.00	547.70	547.70
F	495+09.00	+13.00	547.72	547.72
℄ Brg. Pier 2	495+16.00	+13.00	547.73	547.73
G	495+26.00	+13.00	547.72	547.72
H	495+36.00	+13.00	547.70	547.70
℄ Brg. S. Abut.	495+46.76	+13.00	547.66	547.66
Bk. South Abut.	495+48.87	+13.00	547.64	547.64

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Bk. North Abut.	494+32.08	+20.00	547.22	547.22
℄ Brg. N. Abut.	494+34.20	+20.00	547.25	547.25
A	494+44.20	+20.00	547.37	547.37
B	494+54.20	+20.00	547.48	547.48
℄ Brg. Pier 1	494+64.96	+20.00	547.58	547.58
C	494+74.96	+20.00	547.66	547.66
D	494+84.96	+20.00	547.72	547.72
E	494+94.96	+20.00	547.76	547.76
F	495+04.96	+20.00	547.79	547.79
℄ Brg. Pier 2	495+11.96	+20.00	547.80	547.80
G	495+21.96	+20.00	547.80	547.80
H	495+31.96	+20.00	547.78	547.78
℄ Brg. S. Abut.	495+42.72	+20.00	547.74	547.74
Bk. South Abut.	495+44.83	+20.00	547.73	547.73

VEENSTRA & KIMM INC.
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IL. Design Firm No. 184-001939

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DESIGNED - KES
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REVISED - _____
REVISED - _____

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 036-0074
SHEET NO. 6 OF 37 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-2Q)BR	HENDERSON	86	36
		CONTRACT NO. 68989		
	ILLINOIS	FED. AID PROJECT		

MODEL: 68989-036
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EAST EDGE OF SHOULDER

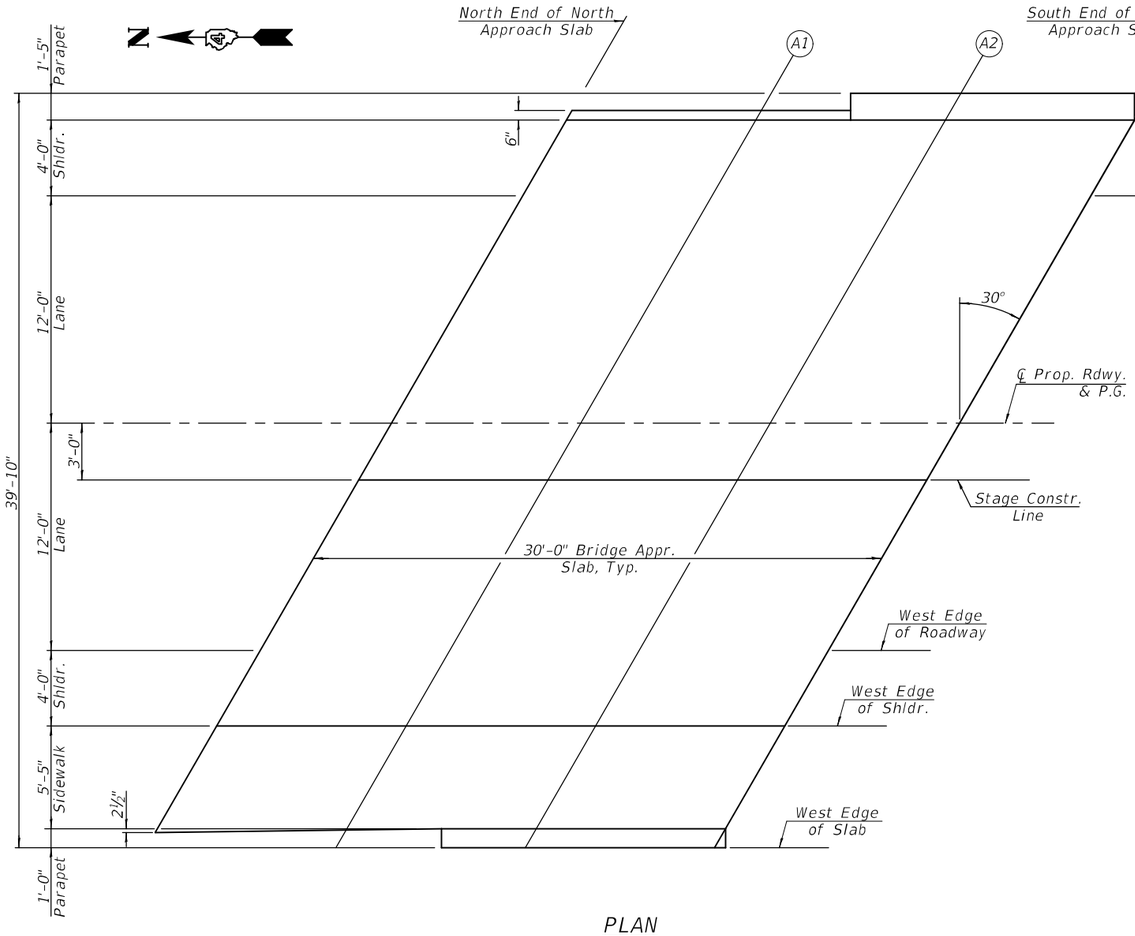
Location	Station	Offset	Theoretical Grade Elevations
N. End of N. Appr.	494+24.02	-16.00	547.00
A1	494+34.02	-16.00	547.12
A2	494+44.02	-16.00	547.24
S. End of N. Appr.	494+54.02	-16.00	547.35

EAST EDGE OF ROADWAY

Location	Station	Offset	Theoretical Grade Elevations
N. End of N. Appr.	494+21.71	-12.00	547.05
A1	494+31.71	-12.00	547.17
A2	494+41.71	-12.00	547.29
S. End of N. Appr.	494+51.71	-12.00	547.40

℄ ROADWAY & P.G.

Location	Station	Offset	Theoretical Grade Elevations
N. End of N. Appr.	494+14.79	0.00	547.16
A1	494+24.79	0.00	547.27
A2	494+34.79	0.00	547.39
S. End of N. Appr.	494+44.79	0.00	547.51



PLAN

STAGE CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations
N. End of N. Appr.	494+13.05	+3.00	547.09
A1	494+23.05	+3.00	547.20
A2	494+33.05	+3.00	547.32
S. End of N. Appr.	494+43.05	+3.00	547.44

WEST EDGE OF ROADWAY

Location	Station	Offset	Theoretical Grade Elevations
N. End of N. Appr.	494+07.86	+12.00	546.90
A1	494+17.86	+12.00	547.01
A2	494+27.86	+12.00	547.13
S. End of N. Appr.	494+37.86	+12.00	547.25

WEST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
N. End of N. Appr.	494+05.55	+16.00	546.79
A1	494+15.55	+16.00	546.90
A2	494+25.55	+16.00	547.02
S. End of N. Appr.	494+35.55	+16.00	547.14

WEST EDGE OF SLAB

Location	Station	Offset	Theoretical Grade Elevations
N. End of N. Appr.	494+02.30	+21.62	546.65
A1	494+12.38	+21.49	546.76
A2	494+21.84	+22.42	546.85
S. End of N. Appr.	494+31.84	+22.42	546.97

MODEL: 68989-037
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VEENSTRA & KIMM INC.
Springfield, IL. Phone: (217)544-8033
IL. Design Firm No. 184-001939

USER NAME = _____
PLOT SCALE = _____
PLOT DATE = March 23, 2023

DESIGNED - KES
CHECKED - VVR
DRAWN - JRP
CHECKED - TRC

REVISED - _____
REVISED - _____
REVISED - _____
REVISED - _____

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF NORTH APPROACH SLAB ELEVATIONS
STRUCTURE NO. 036-0074

SHEET NO. 7 OF 37 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-2Q)BR	HENDERSON	86	37
		CONTRACT NO. 68989		
	ILLINOIS	FED. AID PROJECT		

EAST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
N. End of S. Appr.	495+64.46	-16.00	547.49
A1	495+74.46	-16.00	547.42
A2	495+84.46	-16.00	547.35
S. End of S. Appr.	495+94.46	-16.00	547.28

EAST EDGE OF ROADWAY

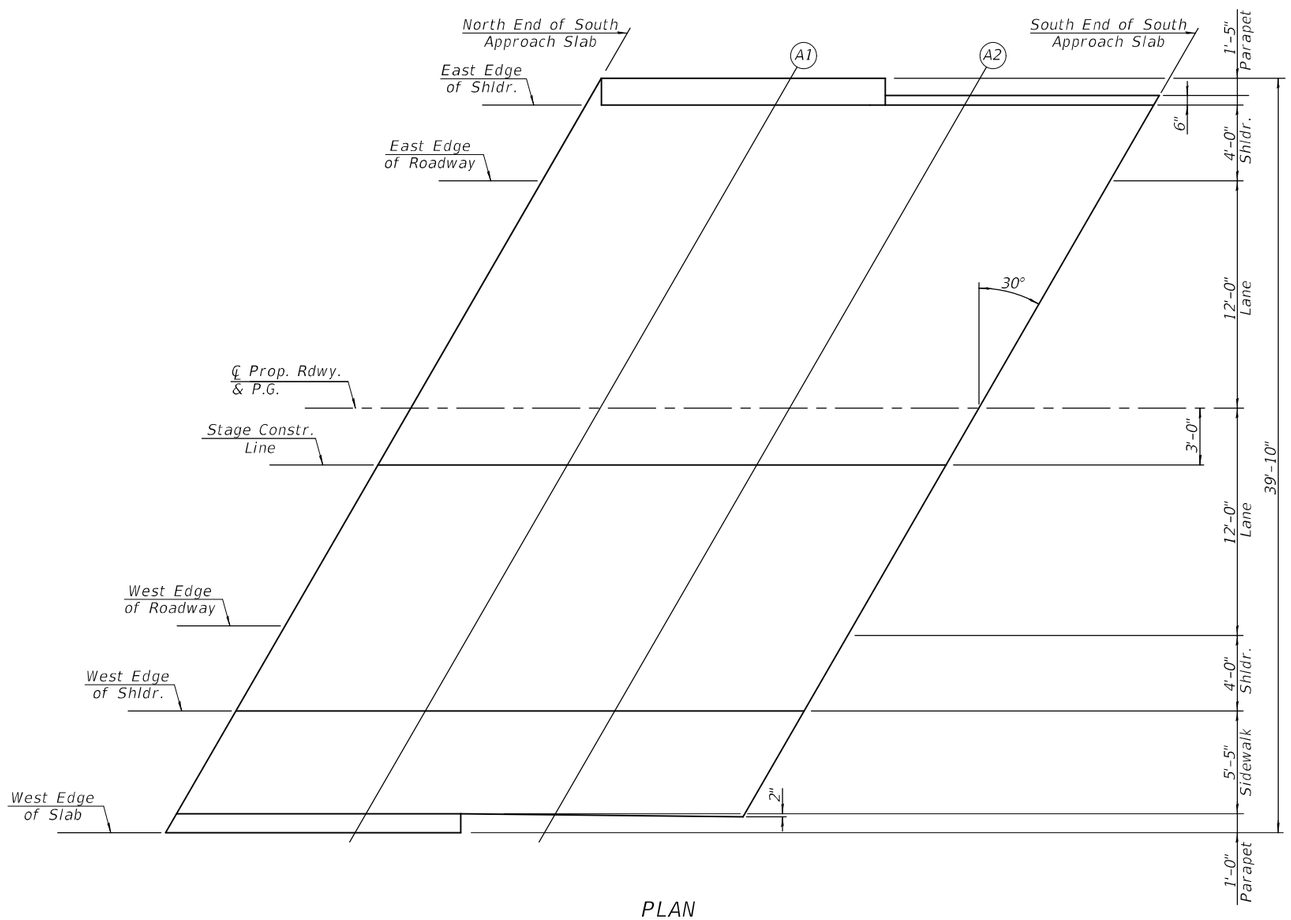
Location	Station	Offset	Theoretical Grade Elevations
N. End of S. Appr.	495+62.15	-12.00	547.58
A1	495+72.15	-12.00	547.51
A2	495+82.15	-12.00	547.44
S. End of S. Appr.	495+92.15	-12.00	547.37

℄ ROADWAY & P.G.

Location	Station	Offset	Theoretical Grade Elevations
N. End of S. Appr.	495+55.23	0.00	547.81
A1	495+65.23	0.00	547.74
A2	495+75.23	0.00	547.67
S. End of S. Appr.	495+85.23	0.00	547.60

STAGE CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations
N. End of S. Appr.	495+53.49	+3.00	547.77
A1	495+63.49	+3.00	547.71
A2	495+73.49	+3.00	547.64
S. End of S. Appr.	495+83.49	+3.00	547.57



PLAN

WEST EDGE OF ROADWAY

Location	Station	Offset	Theoretical Grade Elevations
N. End of S. Appr.	495+48.30	+12.00	547.67
A1	495+58.30	+12.00	547.61
A2	495+68.30	+12.00	547.54
S. End of S. Appr.	495+78.30	+12.00	547.47

WEST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
N. End of S. Appr.	495+45.99	+16.00	547.60
A1	495+55.99	+16.00	547.54
A2	495+65.99	+16.00	547.48
S. End of S. Appr.	495+75.99	+16.00	547.41

WEST EDGE OF SLAB

Location	Station	Offset	Theoretical Grade Elevations
N. End of S. Appr.	495+42.29	+22.42	547.48
A1	495+52.29	+22.42	547.43
A2	495+62.83	+21.47	547.39
S. End of S. Appr.	495+72.76	+21.58	547.32

VEENSTRA & KIMM INC.
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IL. Design Firm No. 184-001939

USER NAME = _____	DESIGNED - KES	REVISED - _____	
	CHECKED - VVR	REVISED - _____	
PLOT SCALE = _____	DRAWN - JRP	REVISED - _____	
PLOT DATE = March 23, 2023	CHECKED - TRC	REVISED - _____	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SOUTH APPROACH SLAB ELEVATIONS
STRUCTURE NO. 036-0074

SHEET NO. 8 OF 37 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-2Q)BR	HENDERSON	86	38
		CONTRACT NO. 68989		
	ILLINOIS FED. AID PROJECT			

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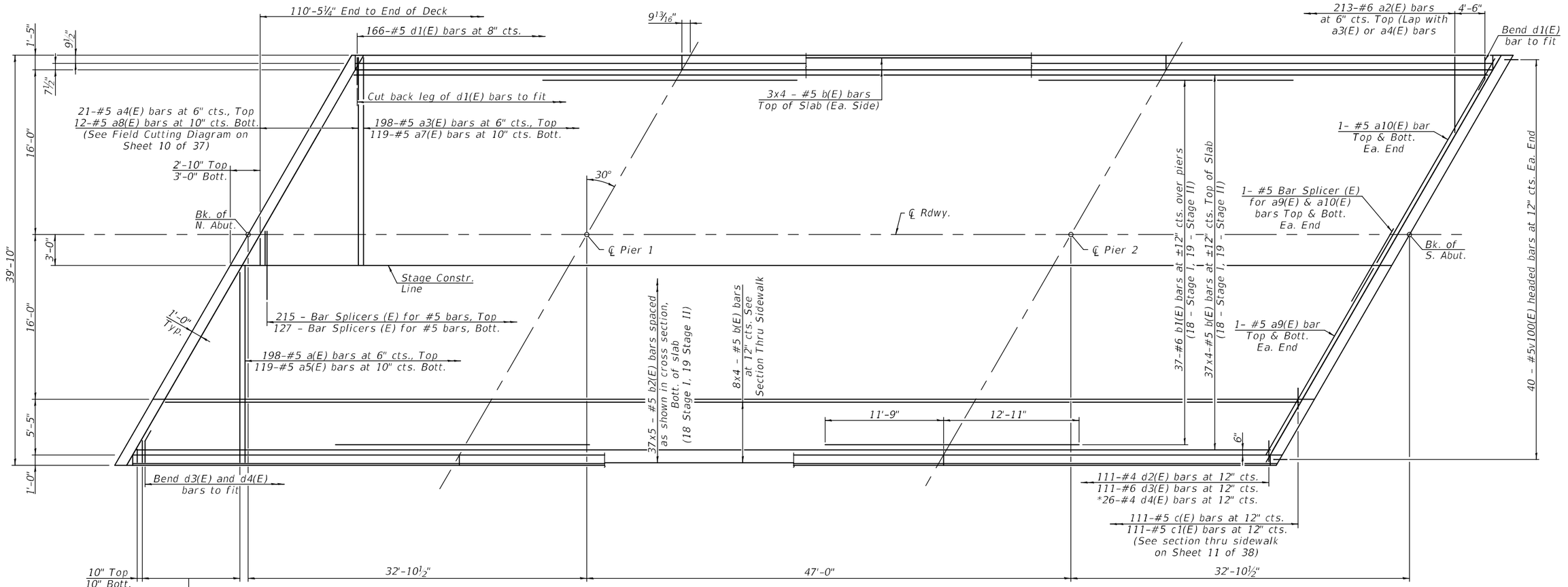
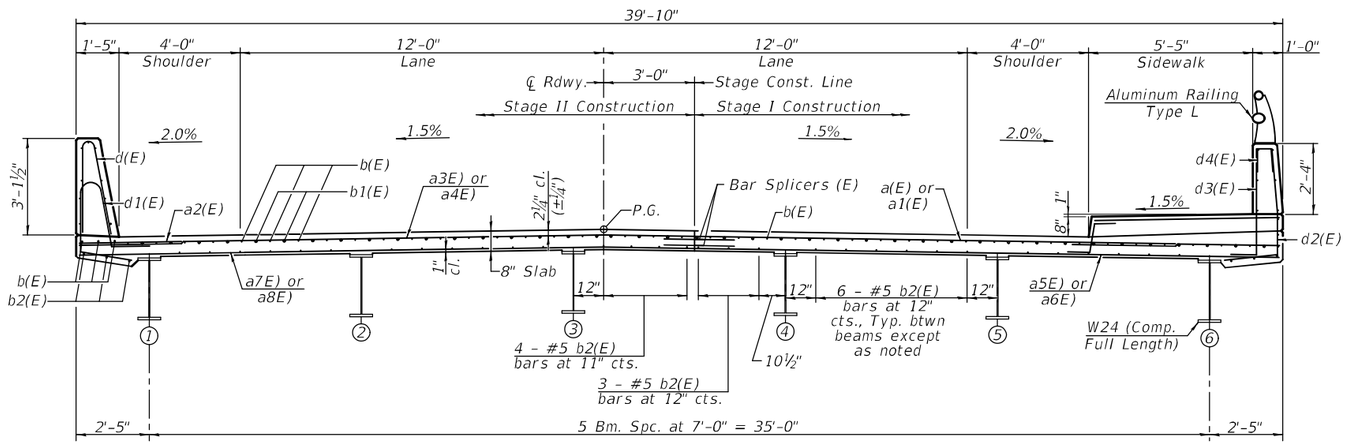


PLAN

* Place 2 d4(E) bars at each rail post.



NEAR PIER — PROPOSED CROSS SECTION (Looking South) — NEAR MIDSPAN

MINIMUM BAR LAP

#5 bar = 3'-6"
#5 bar = 3'-7"

Notes:
See Sheet 10 of 37 for Bill of Material.
See Sheets 10 and 11 of 37 for superstructure details, parapet details, and sidewalk details.
Bars indicated thus 37x5-#5 etc. indicates 37 lines of bars with 5 lengths per line.
See Sheet 29 of 37 for Bar Splicer Details.

VEENSTRA & KIMM INC.
Springfield, IL. Phone: (217)544-8033
IL. Design Firm No. 184-001939

USER NAME = _____	DESIGNED - KES	REVISED - _____	
	CHECKED - VVR	REVISED - _____	
PLOT SCALE = _____	DRAWN - JRP	REVISED - _____	
PLOT DATE = March 23, 2023	CHECKED - TRC	REVISED - _____	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE
STRUCTURE NO. 036 - 0074
SHEET NO. 9 OF 37 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-2Q)BR	HENDERSON	86	39
		CONTRACT NO. 68989		
	ILLINOIS	FED. AID PROJECT		

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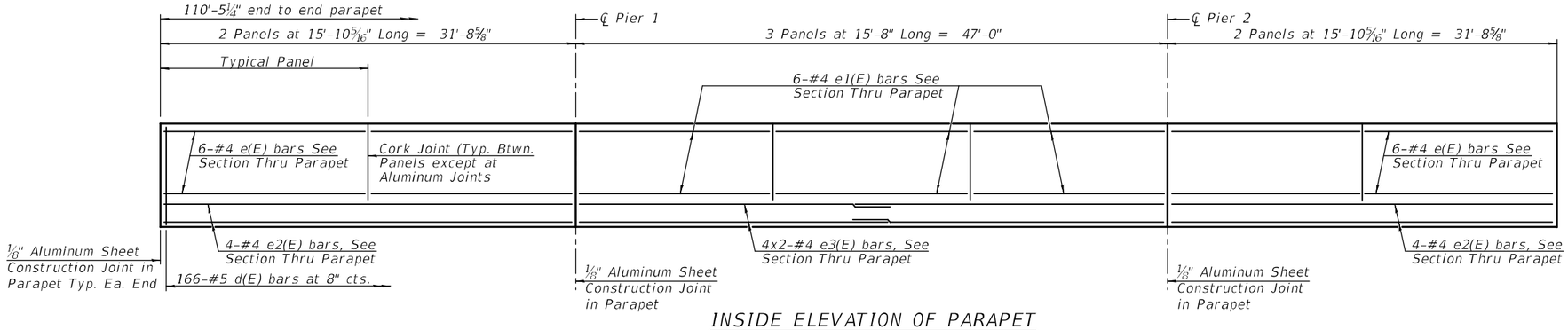
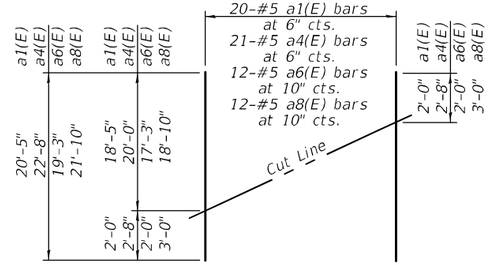


INSIDE ELEVATION OF PARAPET

(Looking East)

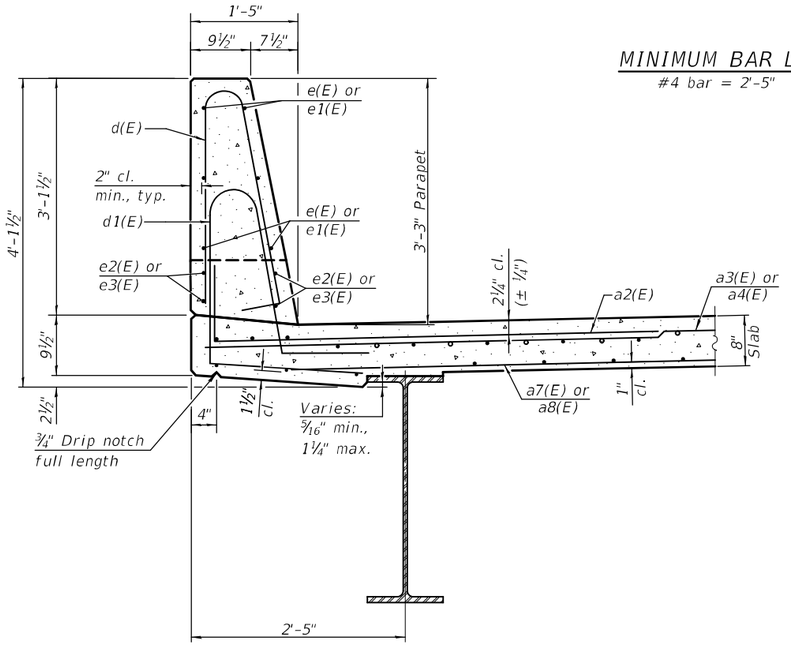


FIELD CUTTING DIAGRAM

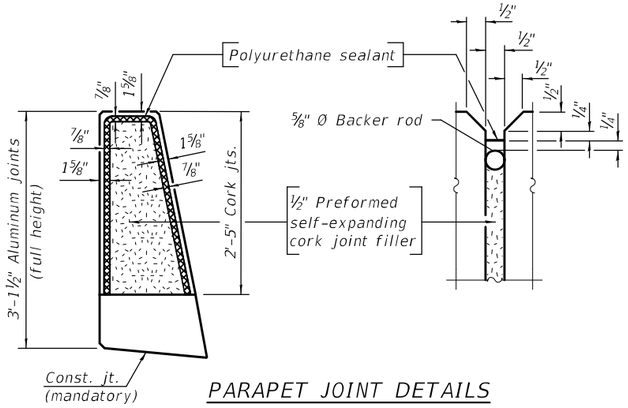
Order a1(E), a4(E), a6(E), and a8(E) bars full length. Cut as shown and use remainder of bars in opposite end of deck.

MINIMUM BAR LAP

#4 bar = 2'-5"



SECTION THRU PARAPET



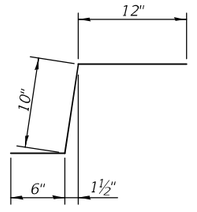
PARAPET JOINT DETAILS

Notes:

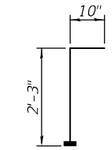
The ⅛" aluminum sheet shall be ASTM B 209 alloy 3003-H14 and coated to minimize reaction with wet concrete. Cost included with Concrete Superstructure.

The polyurethane sealant shall be according to Article 1050.04 of the Std. Spec. and the color shall be gray.

Headed bars shall conform to ASTM A970 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.

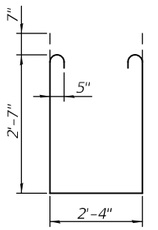


BAR c(E)

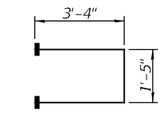


BAR v100(E)

(Headed)

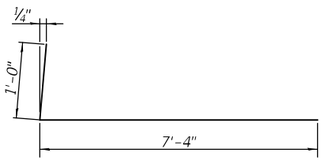


BAR s11(E)

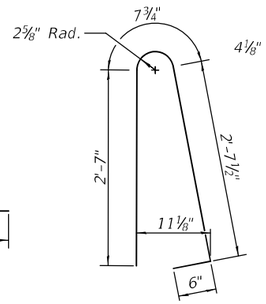


BAR s10(E)

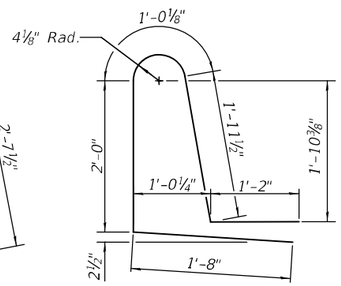
(Headed)



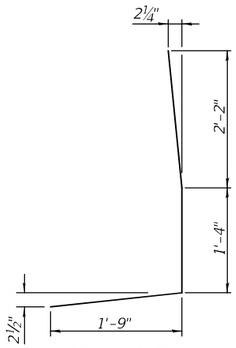
BAR a2(E)



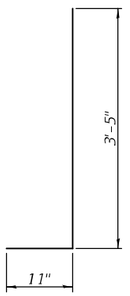
BAR d(E)



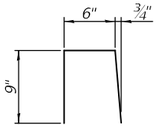
BAR d1(E)



BAR d2(E)



BAR d3(E)



BAR d4(E)

SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	198	#5	19'-2"	
a1(E)	20	#5	20'-5"	
a2(E)	213	#6	8'-4"	
a3(E)	198	#5	20'-0"	
a4(E)	21	#5	22'-8"	
a5(E)	119	#5	18'-5"	
a6(E)	12	#5	19'-3"	
a7(E)	119	#5	19'-0"	
a8(E)	12	#5	21'-10"	
a9(E)	4	#5	21'-10"	
a10(E)	4	#5	22'-10"	
b(E)	204	#5	30'-2"	
b1(E)	74	#6	24'-8"	
b2(E)	185	#5	24'-11"	
c(E)	111	#5	2'-4"	
c1(E)	111	#5	6'-1"	
d(E)	166	#5	6'-5"	
d1(E)	166	#5	7'-10"	
d2(E)	111	#4	5'-3"	
d3(E)	111	#6	4'-4"	
d4(E)	26	#4	2'-0"	
e(E)	56	#4	15-6"'	
e1(E)	42	#4	15'-4"	
e2(E)	8	#4	31'-5"	
e3(E)	8	#4	24'-7"	
m10(E)	8	#6	22'-1"	
m11(E)	8	#6	19'-9"	
m12(E)	24	#6	7'-9"	
m13(E)	12	#6	2'-5"	
m14(E)	6	#6	4'-3"	
m15(E)	6	#6	3'-1"	
s10(E)	74	#5	8'-1"	
s11(E)	74	#5	8'-8"	
v100(E)	80	#5	3'-1"	
Reinforcement Bars, Epoxy Coated		Lbs.	39,330	
Concrete Superstructure		Cu. Yds.	177.3	

Bars indicated thus 4 x 2-#4 etc. indicates 4 lines of bars with 2 lengths per line.

SDI-SB-2

06-15-2019

VEENSTRA & KIMM INC.
Springfield, IL. Phone: (217)544-8033
IL. Design Firm No. 184-001939

USER NAME = _____	DESIGNED - KES	REVISED - _____	
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PLOT SCALE = _____	DRAWN - JRP	REVISED - _____	
PLOT DATE = March 23, 2023	CHECKED - TRC	REVISED - _____	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS
STRUCTURE NO. 036-0074

SHEET NO. 10 OF 37 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-2Q)BR	HENDERSON	86	40
		CONTRACT NO. 68989		
		ILLINOIS	FED. AID PROJECT	

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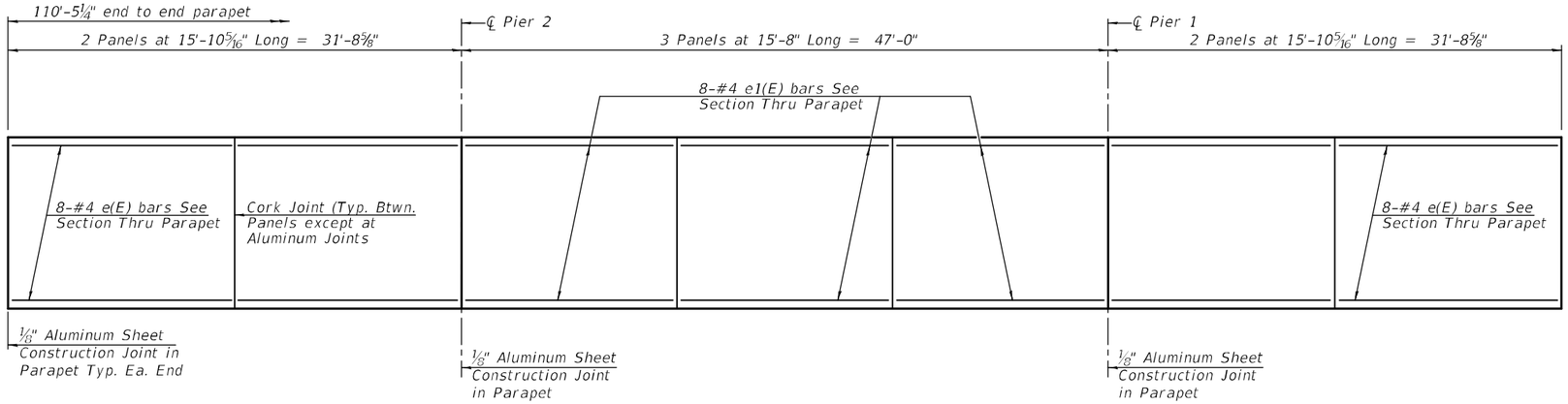
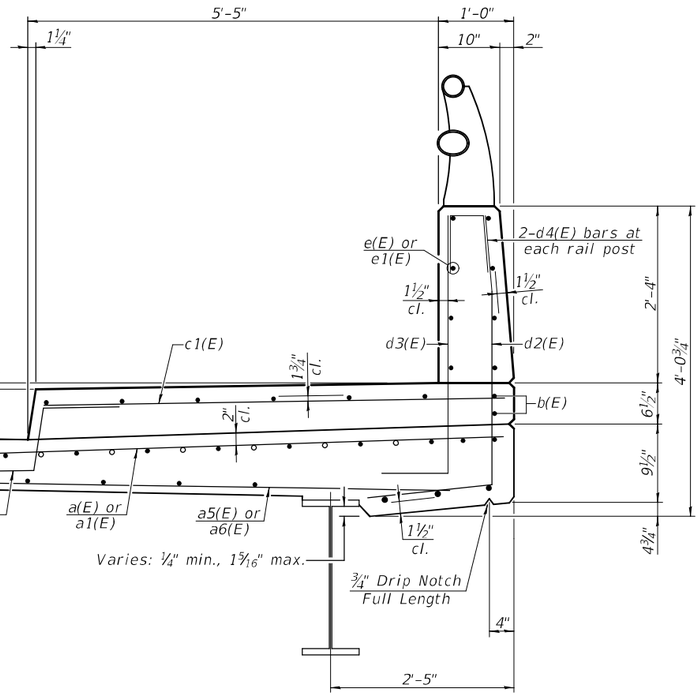
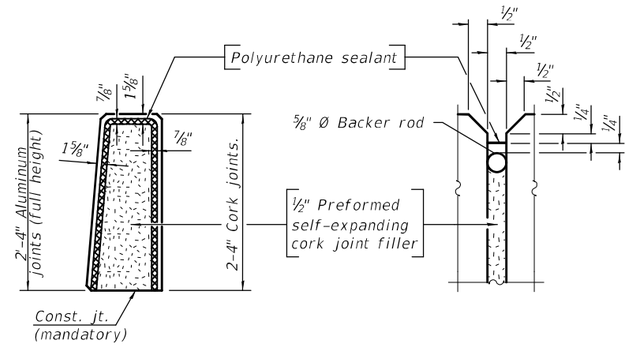


INSIDE ELEVATION OF PARAPET

(Looking West)



SECTION THRU SIDEWALK & PARAPET



PARAPET JOINT DETAILS

MINIMUM BAR LAP

#4 bar = 2'-5"

Notes:

The ⅛" aluminum sheet shall be ASTM B 209 alloy 3003-H14 and coated to minimize reaction with wet concrete. Cost included with Concrete Superstructure.

The polyurethane sealant shall be according to Article 1050.04 of the Std. Spec. and the color shall be gray.

Headed bars shall conform to ASTM A970 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.

See Sheet 10 of 37 for Bill of Material.

SDI-SB-2 06-15-2019

VEENSTRA & KIMM INC.
Springfield, IL. Phone: (217)544-8033
IL. Design Firm No. 184-001939

USER NAME = _____	DESIGNED - KES	REVISED - _____
	CHECKED - VVR	REVISED - _____
PLOT SCALE = _____	DRAWN - JRP	REVISED - _____
PLOT DATE = March 23, 2023	CHECKED - TRC	REVISED - _____

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS
STRUCTURE NO. 036-0074

SHEET NO. 11 OF 37 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-2Q)BR	HENDERSON	86	41
		CONTRACT NO. 68989		
	ILLINOIS	FED. AID PROJECT		

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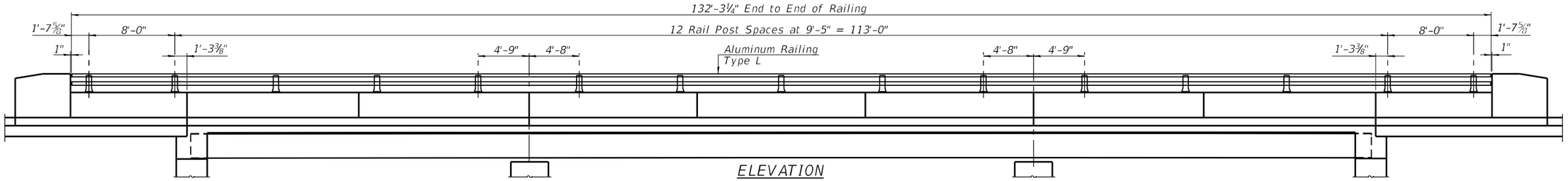
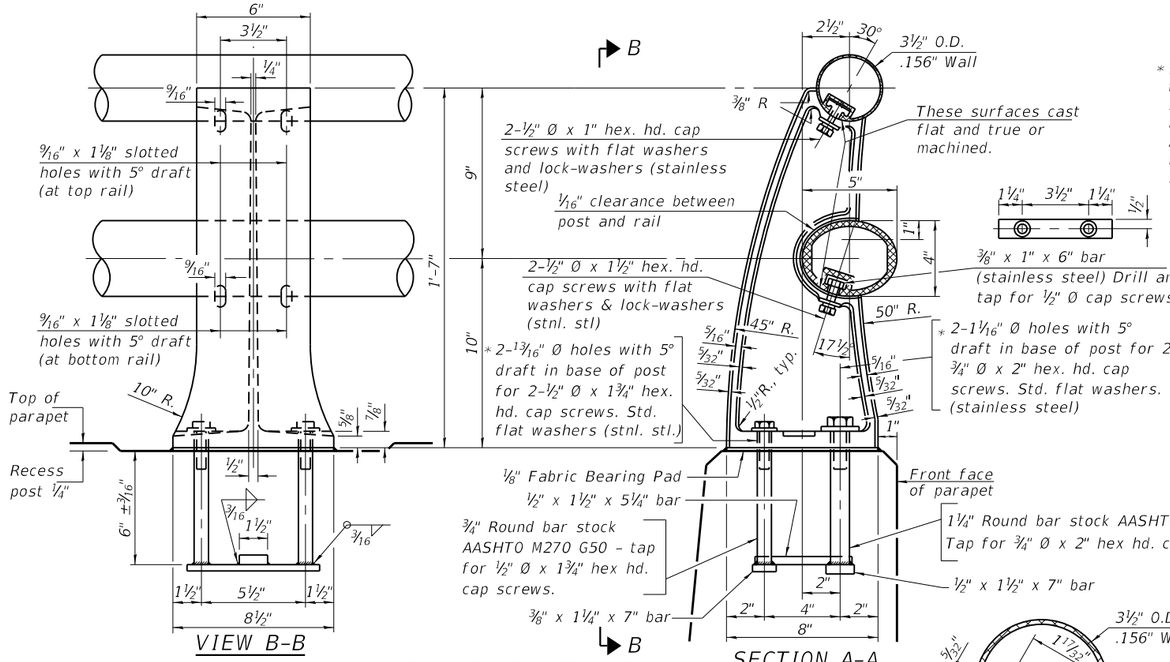


ELEVATION

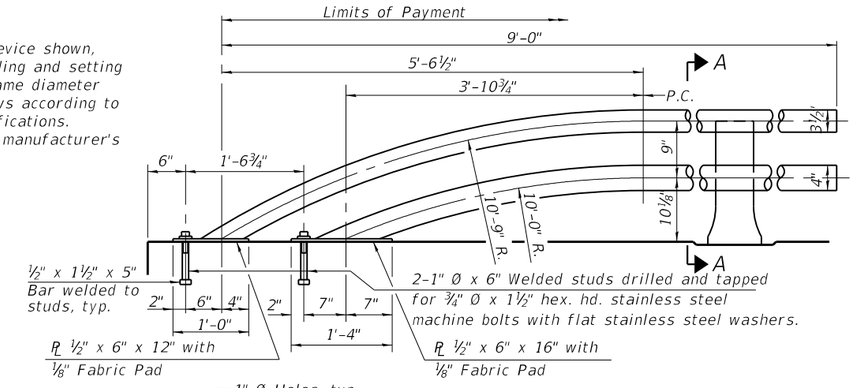


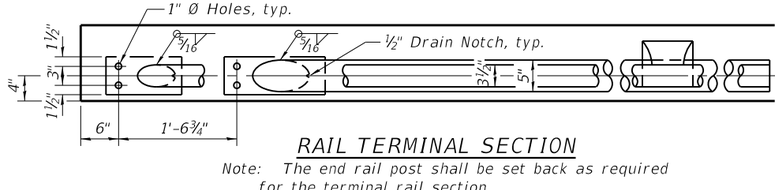
VIEW B-B

RAIL POST DETAILS

SECTION A-A

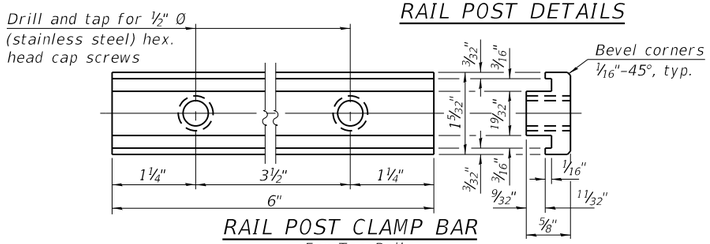
* In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting stainless steel anchor rods of the same diameter and grade as the specified cap screws according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.





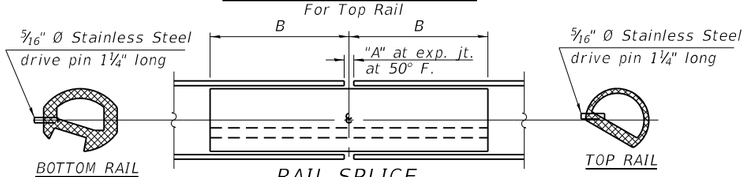
RAIL TERMINAL SECTION

Note: The end rail post shall be set back as required for the terminal rail section.



RAIL POST CLAMP BAR

For Top Rail

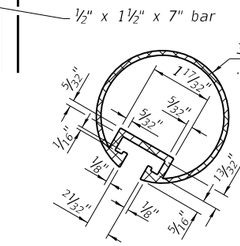


RAIL SPLICE

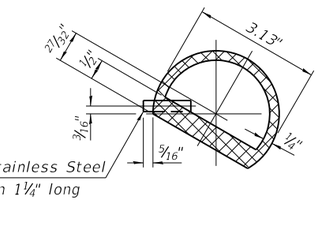
SPLICE DIMENSIONS

Location	T	A	B
All locs. not over exp. jts.	0	⅜"	1'-2"
Over Strip Seal Jt.	≤4"	2½"	1'-2"
Over Finger or Modular Jt.	≤9½"	5½"	1'-7¾"
Over Finger or Modular Jt.	≤15"	8¼"	2'-1¼"

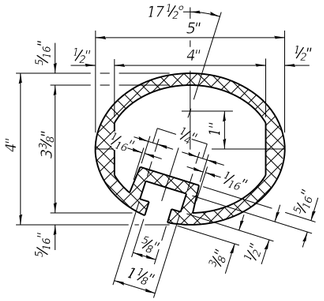
T = ; total movement along centerline of roadway at expansion joint.



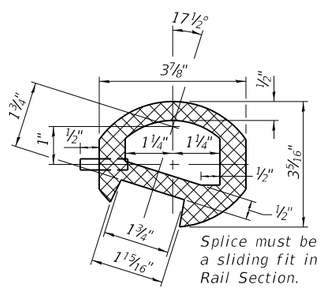
SECTION THRU TOP RAIL



SECTION THRU TOP RAIL SPLICE

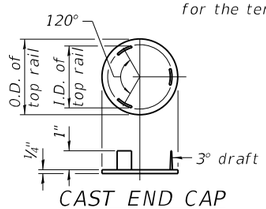


SECTION THRU BOTTOM RAIL



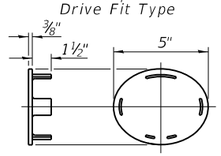
Splice must be a sliding fit in Rail Section.

SECTION THRU BOTTOM RAIL SPLICE



CAST END CAP

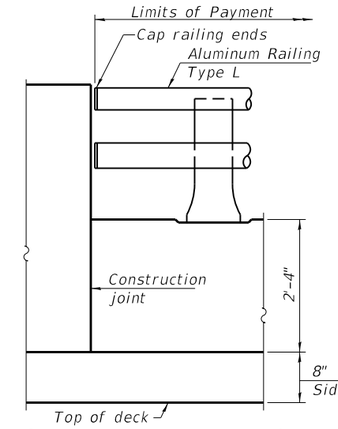
For top rail
Drive Fit Type



CAST END CAP

For bottom rail
Drive Fit Type

Notes:
All Posts shall be normal to parapet.
All joints in rail shall be spliced per detail.
All exposed rail ends shall be capped per detail.
Provide 1-⅛" and 2-1/16" Aluminum Shims for 25% of the Posts. Rail elements shall be parallel to Grade, high spots shall be ground and low spots shimmed.
Place reinforcement bars to miss anchor rod locations.
See sheet of for rail post spacing.



RAIL END TREATMENT FOR TYPE 5 AND 6 TERMINAL

BILL OF MATERIAL

Item	Unit	Quantity
Aluminum Railing, Type L	Foot	133

RAILING CRITERIA

NCHRP 350 Test Level	4
Post Spacing Range	7'-0" - 10'-0"
Rail Weight (plf)	40

R-20 10-12-2021

MODEL: 0360074-68989-042
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Springfield, IL. Phone: (217)544-8033
IL. Design Firm No. 184-001939

USER NAME =
PLOT SCALE =
PLOT DATE = March 23, 2023
DESIGNED - KES
CHECKED - VVR
DRAWN - JRP
CHECKED - TRC
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ALUMINUM RAILING, TYPE L
STRUCTURE NO. 036 - 0074
SHEET NO. 12 OF 37 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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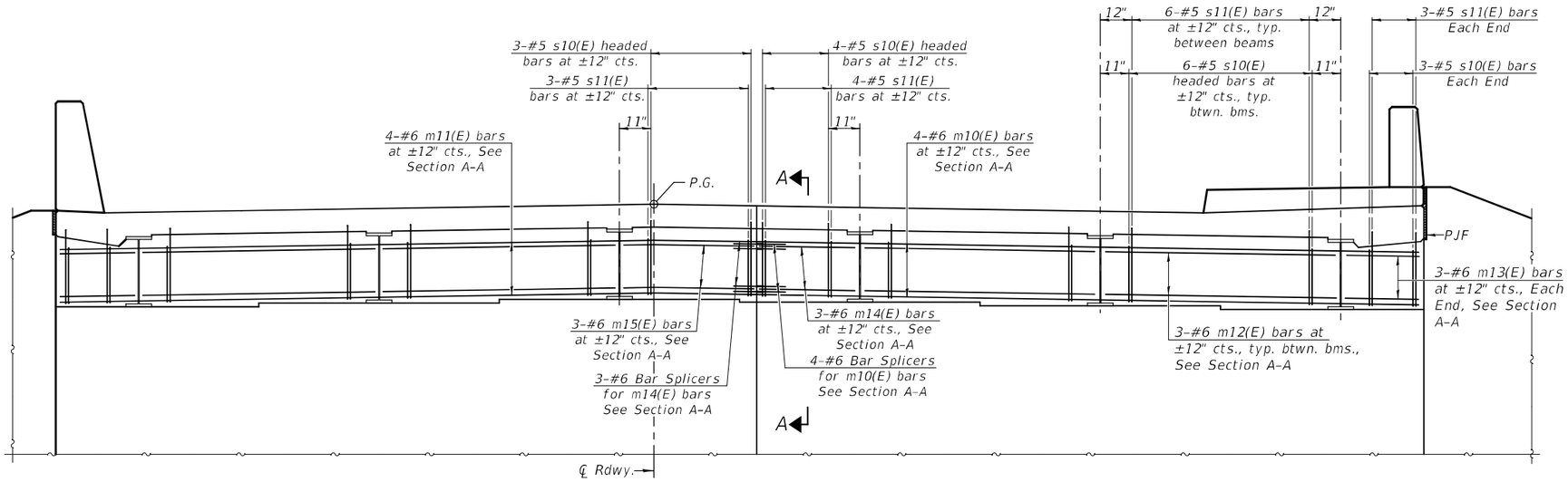
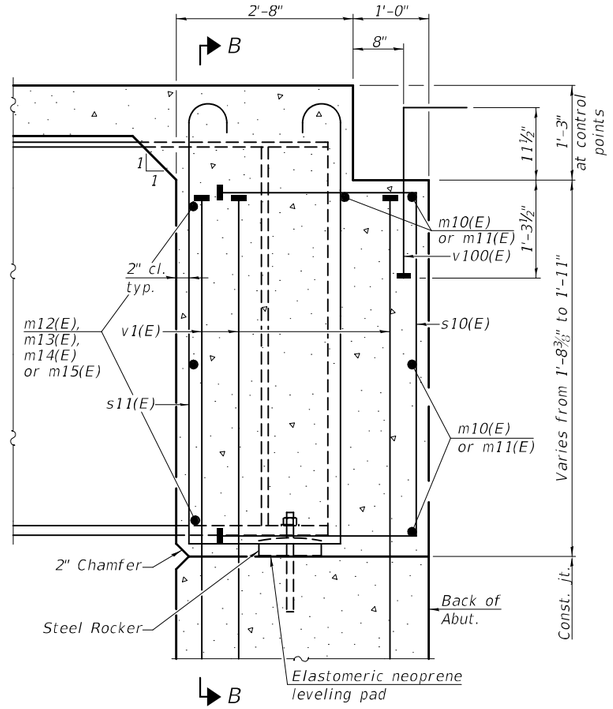
		CONTRACT NO. 68989		
	ILLINOIS	FED. AID PROJECT		



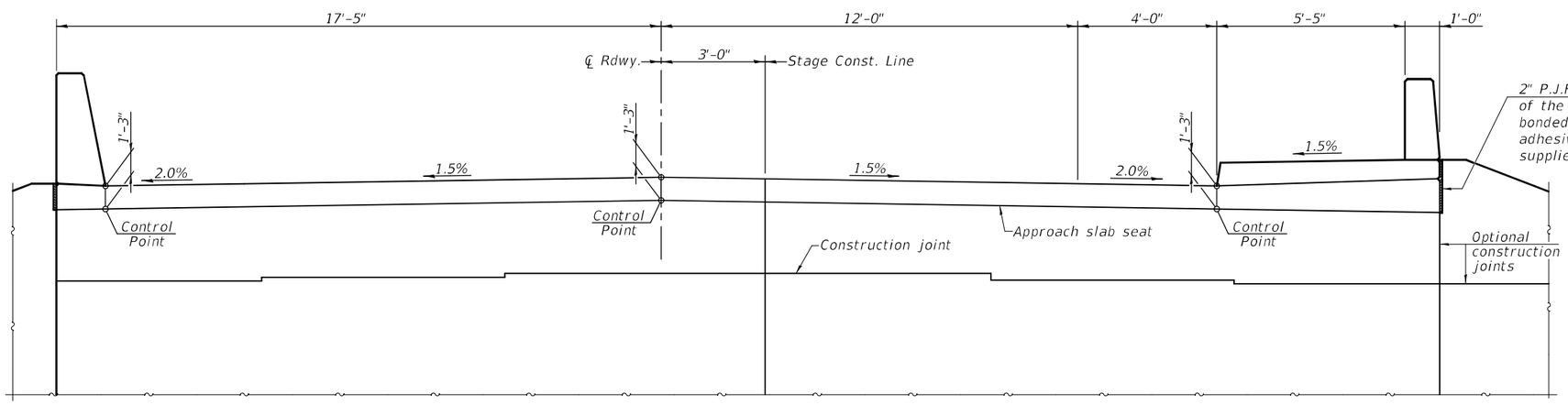
DIAPHRAGM ELEVATION AT SOUTH ABUTMENT

Looking South (South Abutment shown, North Abutment similar)

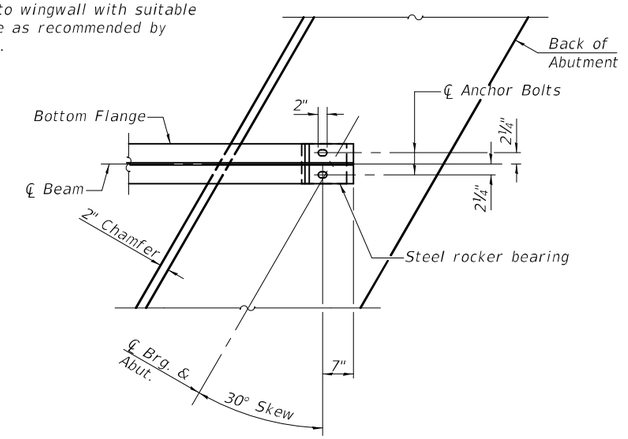


SECTION A-A

(at Rt. ℄'s)



VIEW B-B



PLAN AT ABUTMENT

(Showing bottom flange of beam)

Notes:

See sheet 10 of 37 for Bill of Material.

See sheets 10 and 11 of 37 for superstructure details.

The s10(E) and s11(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.

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PLOT DATE = March 23, 2023 | DRAWN - JRP | REVISED - _____
CHECKED - TRC | REVISED - _____

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INTEGRAL ABUTMENT DIAPHRAGM DETAILS
STRUCTURE NO. 036-0074
SHEET NO. 13 OF 37 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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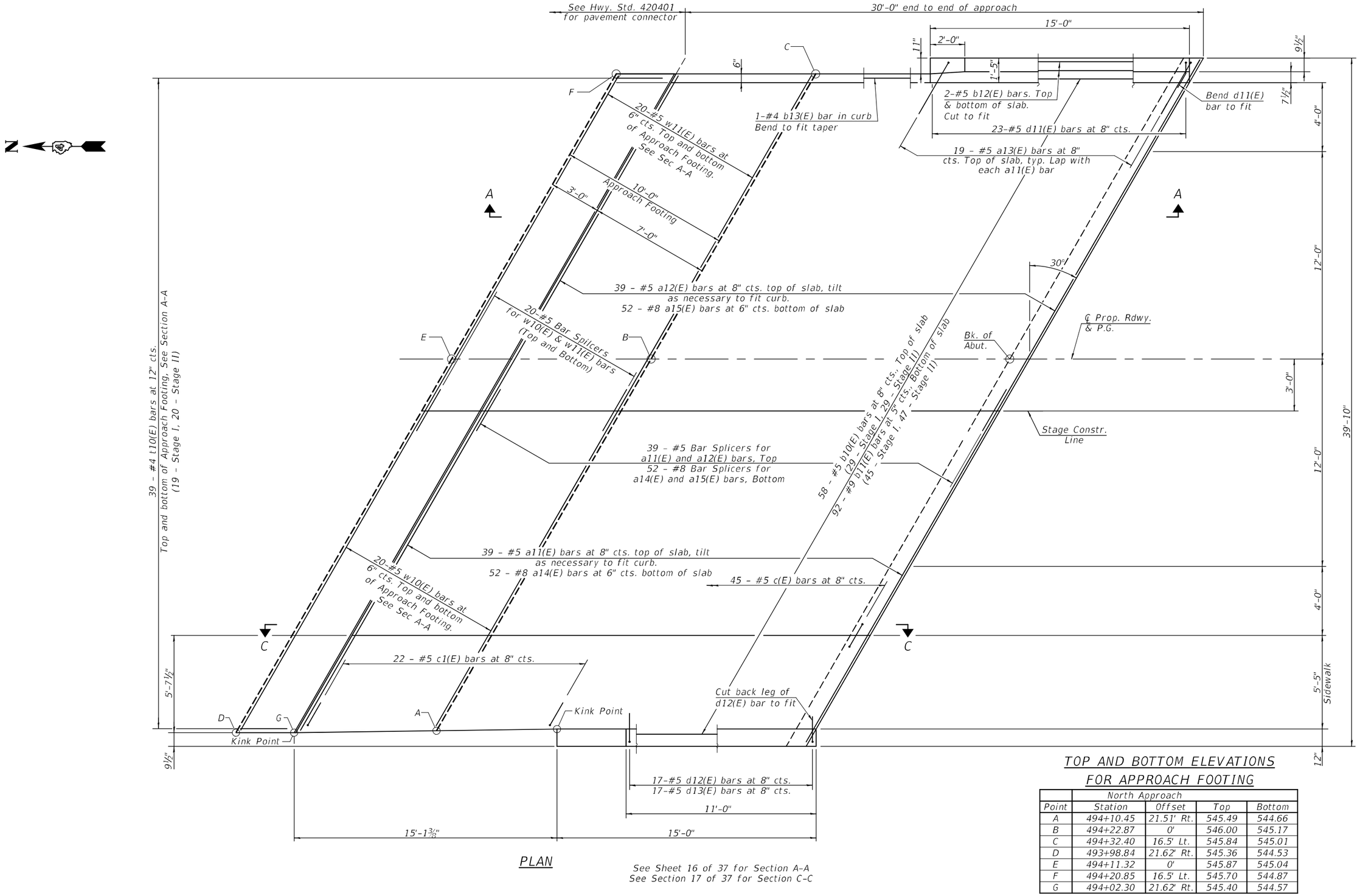
		CONTRACT NO. 68989		
	ILLINOIS	FED. AID PROJECT		



PLAN

See Sheet 16 of 37 for Section A-A
See Section 17 of 37 for Section C-C

TOP AND BOTTOM ELEVATIONS FOR APPROACH FOOTING

	North Approach			
Point	Station	Offset	Top	Bottom
A	494+10.45	21.51' Rt.	545.49	544.66
B	494+22.87	0'	546.00	545.17
C	494+32.40	16.5' Lt.	545.84	545.01
D	493+98.84	21.62' Rt.	545.36	544.53
E	494+11.32	0'	545.87	545.04
F	494+20.85	16.5' Lt.	545.70	544.87
G	494+02.30	21.62' Rt.	545.40	544.57

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PLOT SCALE = _____	DRAWN - JRP	REVISED - _____	
PLOT DATE = March 23, 2023	CHECKED - TRC	REVISED - _____	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH SLAB DETAILS - NORTH ABUTMENT
STRUCTURE NO. 036-0074

SHEET NO. 14 OF 37 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-2Q)BR	HENDERSON	86	44
		CONTRACT NO. 68989		
		ILLINOIS	FED. AID PROJECT	

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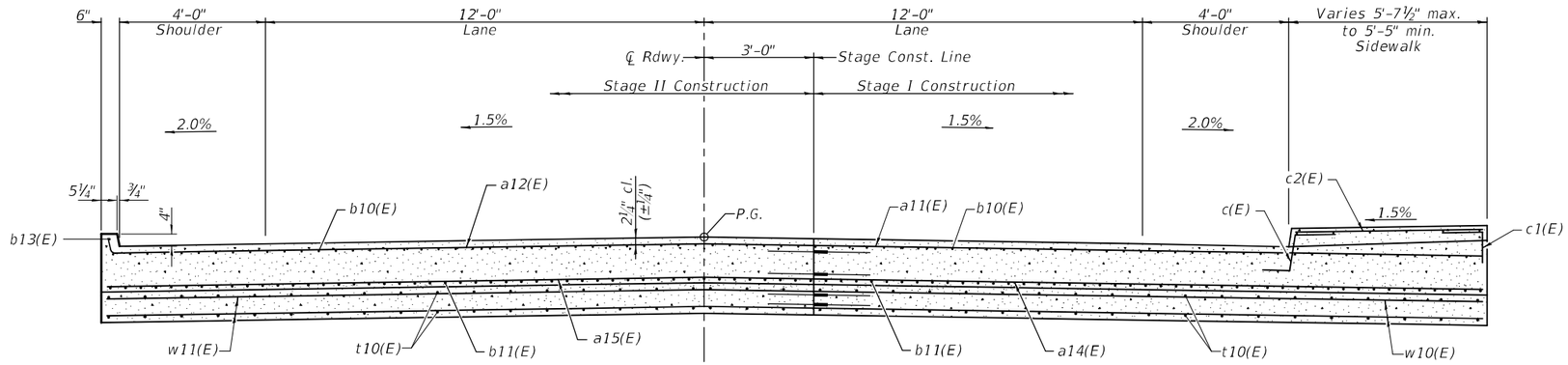
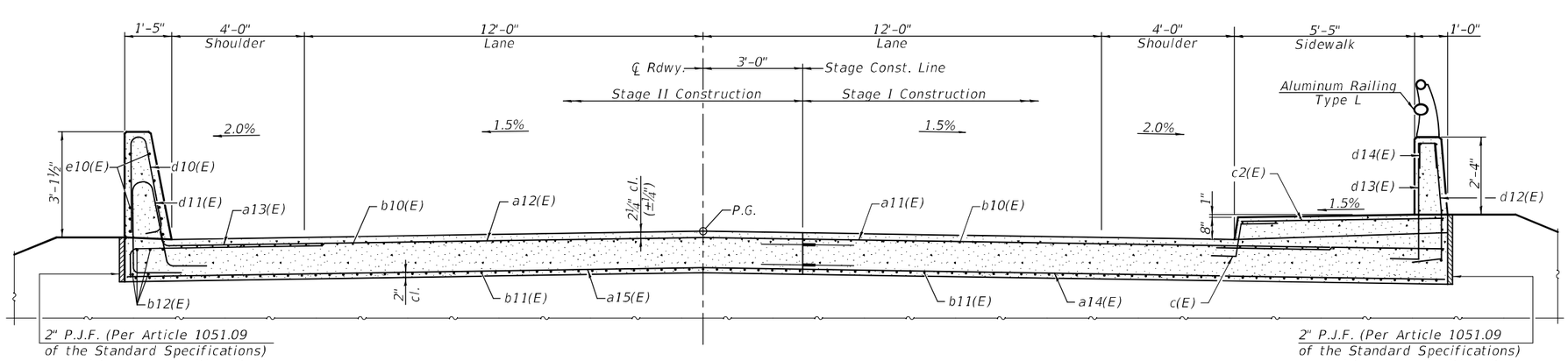


CROSS SECTION

AT APPROACH FOOTING

(Looking South)



2" P.J.F. (Per Article 1051.09 of the Standard Specifications) bonded to wingwall with suitable adhesive as recommended by supplier.

2" P.J.F. (Per Article 1051.09 of the Standard Specifications) bonded to wingwall with suitable adhesive as recommended by supplier.

CROSS SECTION

NEAR ABUTMENT

(Looking South)

MODEL: 68989-045
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PLOT SCALE = _____	DRAWN - JRP	REVISED - _____	
PLOT DATE = March 23, 2023	CHECKED - TRC	REVISED - _____	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH SLAB DETAILS - NORTH ABUTMENT
STRUCTURE NO. 036 - 0074

SHEET NO. 15 OF 37 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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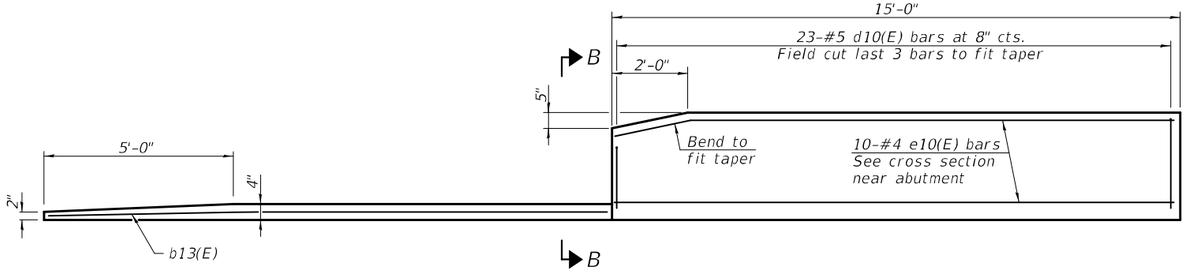
		CONTRACT NO. 68989		
	ILLINOIS	FED. AID PROJECT		



INSIDE ELEVATION OF PARAPET AND CURB

(Looking East)

Notes:

The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the adjustment shall be equal to half the total bridge length plus the length of the bridge approach pavement slab.

Parapet concrete shall be paid for as Concrete Superstructure.

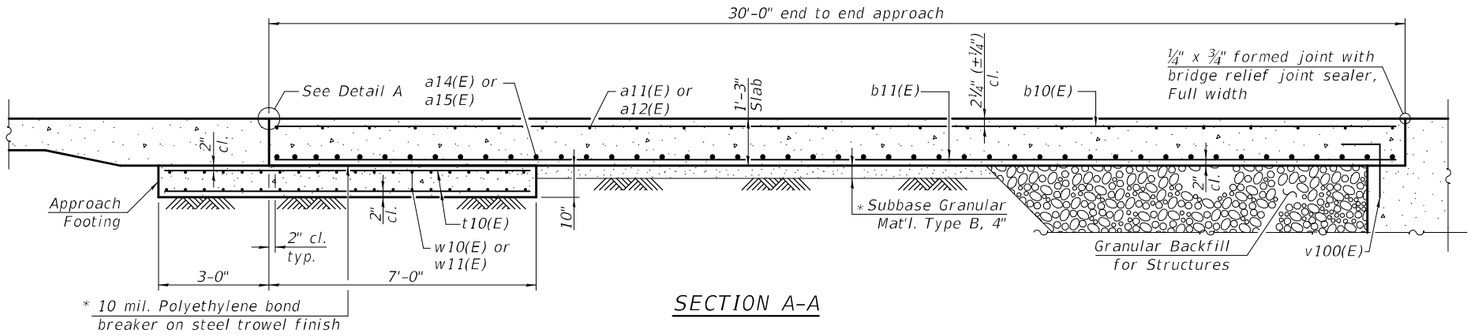
Approach slab shall be paid for as Concrete Superstructure (Approach Slab).

Approach footing concrete shall be paid for as Concrete Structures.

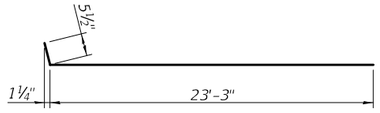
The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.

Cost of excavation for approach footing included with Concrete Structures.

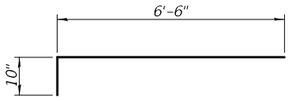
For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 37.



SECTION A-A



BAR a12(E)



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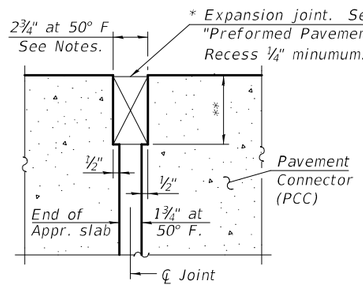
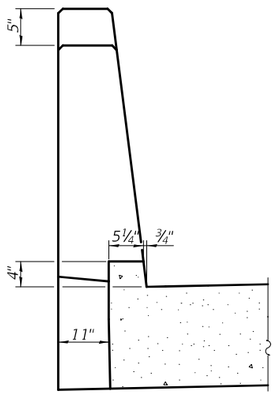
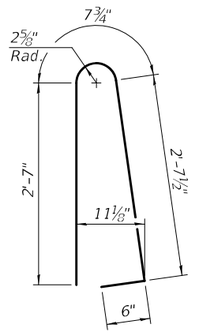


DETAIL A

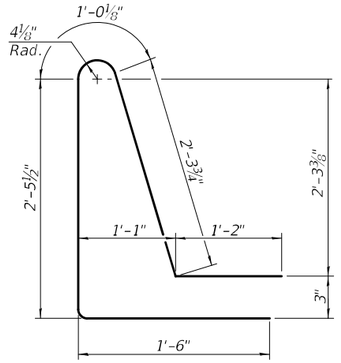
(@ Rt. L's)



VIEW B-B



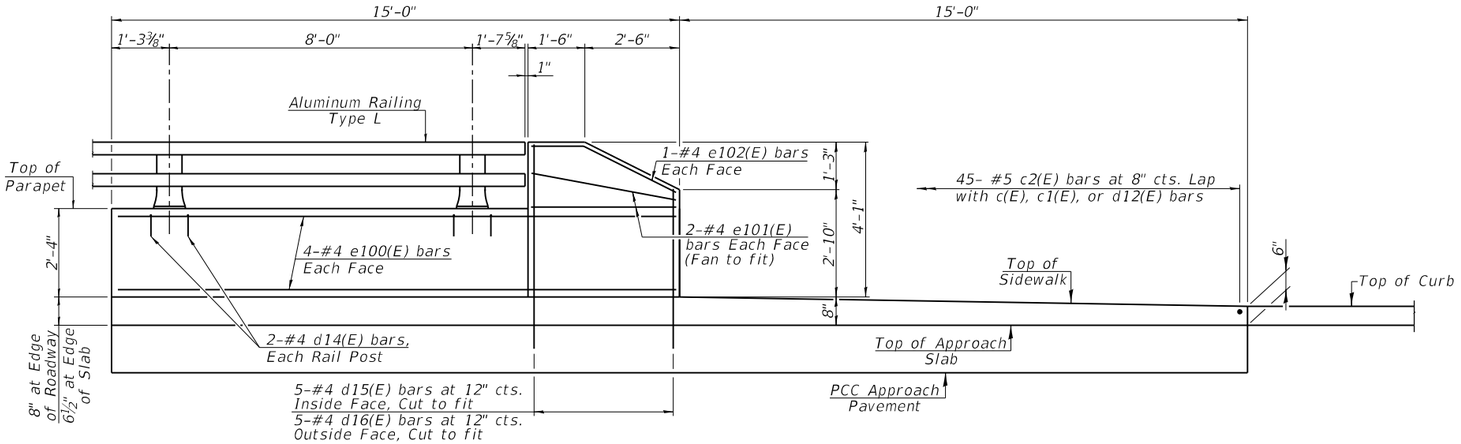
BAR d10(E)



BAR d11(E)

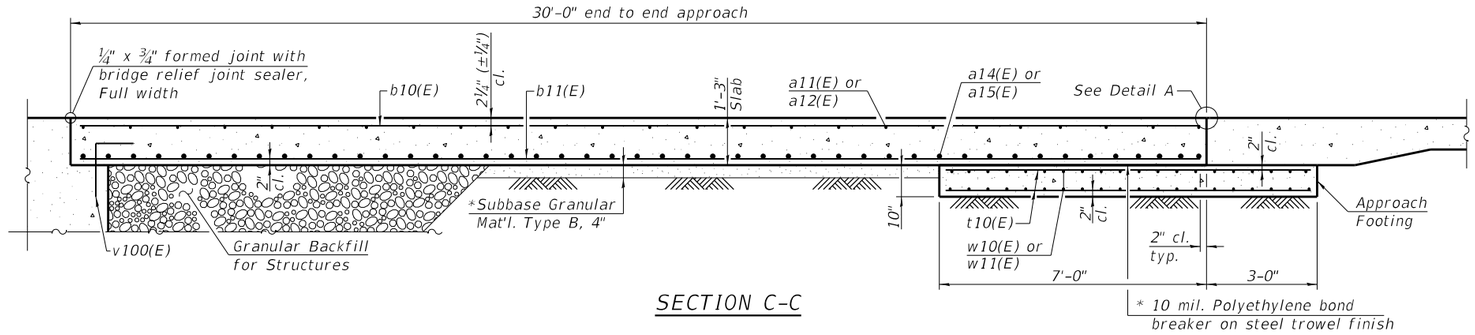
* Cost included with Concrete Superstructure (Approach Slab).

** Per manufacturer recommendations.

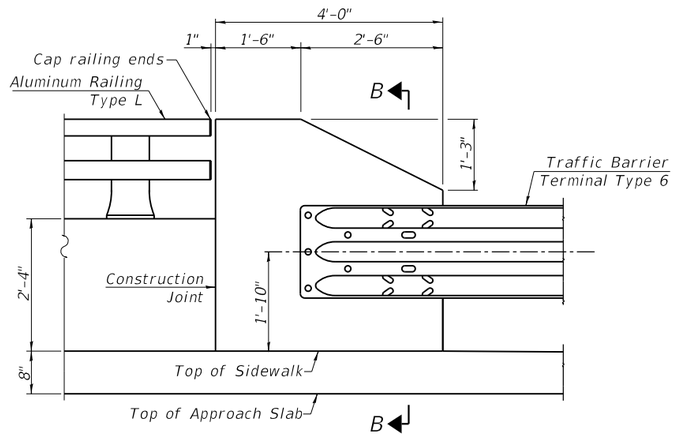


INSIDE ELEVATION OF PARAPET AND SIDEWALK

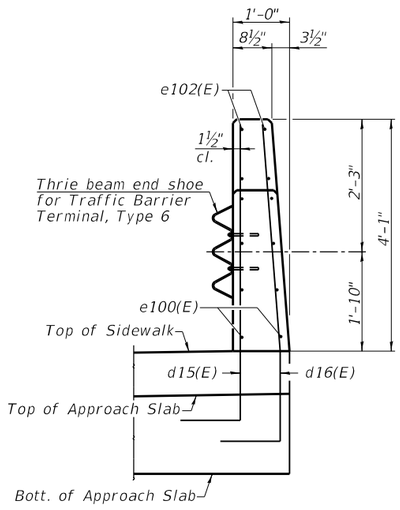
(Looking West)



SECTION C-C



GUARDRAIL TRANSITION DETAIL



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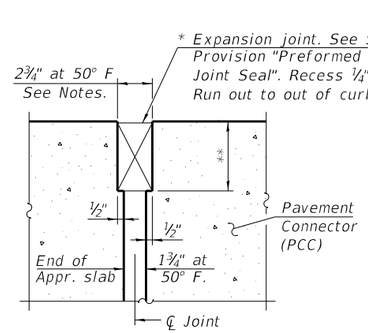


DETAIL A

(@ Rt. ∠'s)

* Cost included with Concrete Superstructure (Approach Slab).

** Per manufacturer recommendations.

Notes:

The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the adjustment shall be equal to half the total bridge length plus the length of the bridge approach pavement slab.

Parapet and sidewalk concrete shall be paid for as Concrete Superstructure.

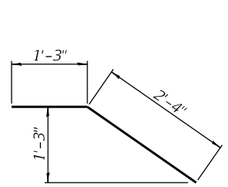
Approach slab shall be paid for as Concrete Superstructure (Approach Slab).

Approach footing concrete shall be paid for as Concrete Structures.

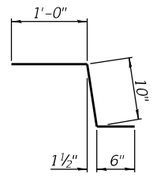
The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.

Cost of excavation for approach footing included with Concrete Structures.

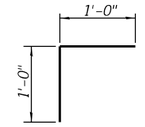
For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 37.



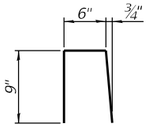
BAR e102(E)



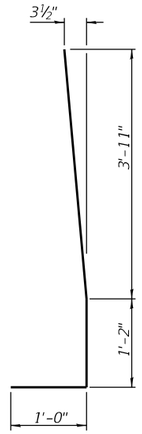
BAR c(E)



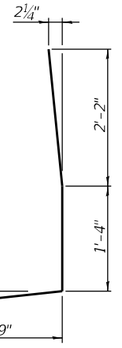
BAR c1(E)



BAR d14(E)



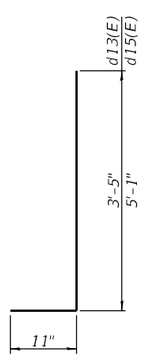
BAR d16(E)



BAR d12(E)

NORTH APPROACH
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a11(E)	39	#5	22'-1"	
a12(E)	39	#5	23'-9"	
a13(E)	19	#5	7'-4"	
a14(E)	52	#8	22'-1"	
a15(E)	52	#8	23'-3"	
b10(E)	58	#5	29'-8"	
b11(E)	92	#9	29'-8"	
b12(E)	4	#5	14'-8"	
b13(E)	1	#4	14'-6"	
c(E)	45	#5	2'-4"	
c1(E)	22	#5	2'-0"	
c2(E)	45	#5	6'-0"	
d10(E)	23	#5	6'-5"	
d11(E)	23	#5	8'-6"	
d12(E)	17	#5	5'-4"	
d13(E)	17	#5	4'-4"	
d14(E)	4	#4	2'-0"	
d15(E)	5	#4	6'-0"	
d16(E)	5	#6	6'-1"	
e10(E)	10	#4	14'-8"	
e100(E)	8	#4	14'-8"	
e101(E)	4	#4	3'-9"	
e102(E)	2	#4	3'-7"	
t10(E)	78	#4	11'-2"	
w10(E)	40	#5	21'-4"	
w11(E)	40	#5	22'-4"	
Concrete Superstructure		Cu. Yd.	4.0	
Concrete Superstructure (Approach Slab)		Cu. Yd.	59.0	
Concrete Structures		Cu. Yd.	13.6	
Reinforcement Bars, Epoxy Coated		Pound	23,090	



BARS d13(E) & d15(E)

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PLOT SCALE =	DRAWN - JRP	REVISED -	
PLOT DATE = March 23, 2023	CHECKED - TRC	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH SLAB DETAILS - NORTH ABUTMENT
STRUCTURE NO. 036-0074

SHEET NO. 17 OF 37 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-2Q)BR	HENDERSON	86	47
		CONTRACT NO. 68989		
		ILLINOIS FED. AID PROJECT		

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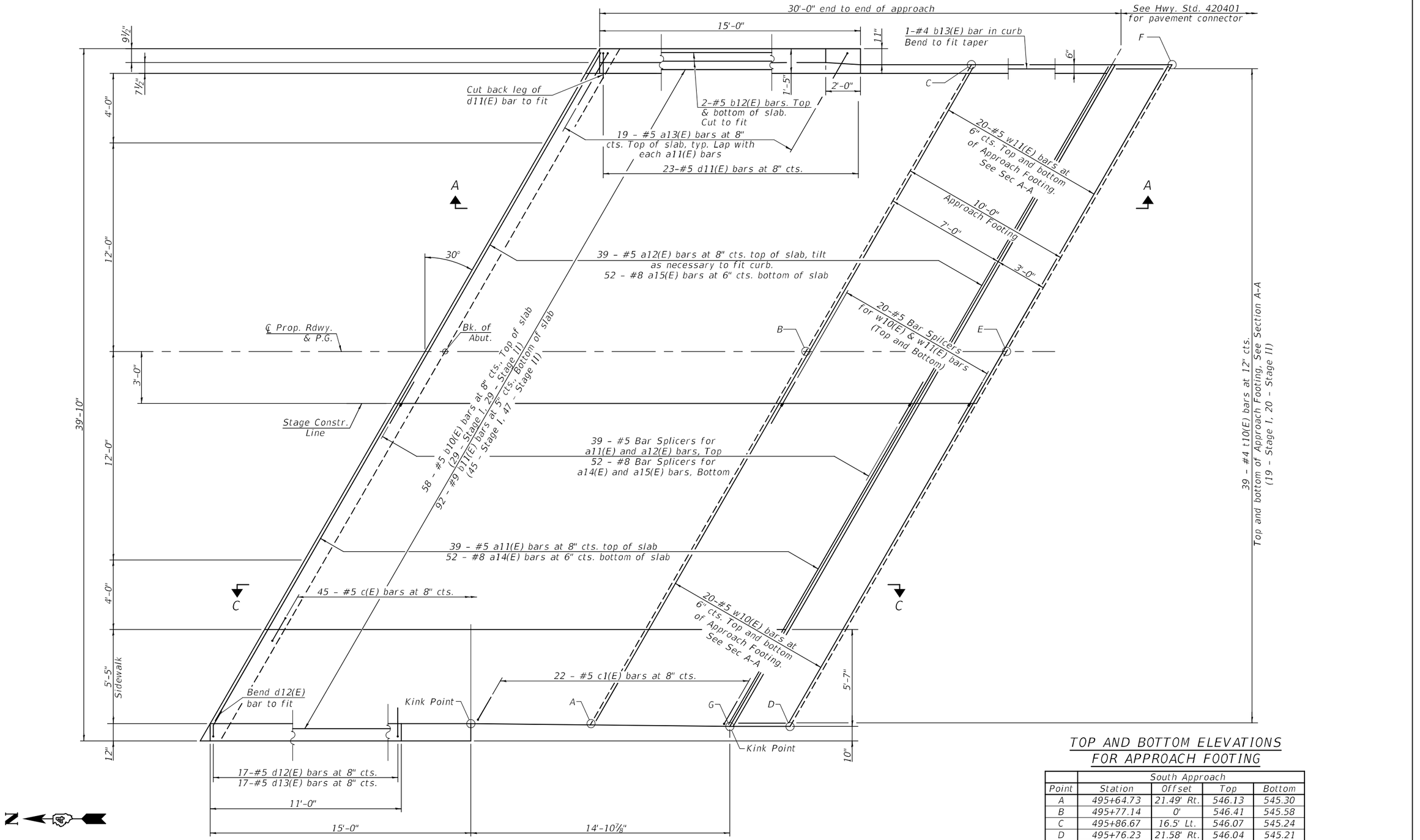

PLAN

See Sheet 20 of 37 for Section A-A
See Section 21 of 37 for Section C-C

TOP AND BOTTOM ELEVATIONS FOR APPROACH FOOTING

	South Approach			
Point	Station	Offset	Top	Bottom
A	495+64.73	21.49' Rt.	546.13	545.30
B	495+77.14	0'	546.41	545.58
C	495+86.67	16.5' Lt.	546.07	545.24
D	495+76.23	21.58' Rt.	546.04	545.21
E	495+88.69	0'	546.33	545.50
F	495+98.22	16.5' Lt.	545.99	545.16
G	495+72.76	21.58' Rt.	546.07	545.24

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IL. Design Firm No. 184-001939

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	CHECKED - VVR	REVISED - _____	
PLOT SCALE = _____	DRAWN - JRP	REVISED - _____	
PLOT DATE = March 23, 2023	CHECKED - TRC	REVISED - _____	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH SLAB DETAILS - SOUTH ABUTMENT
STRUCTURE NO. 036-0074

SHEET NO. 18 OF 37 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-2Q)BR	HENDERSON	86	48
		CONTRACT NO. 68989		
	ILLINOIS FED. AID PROJECT			

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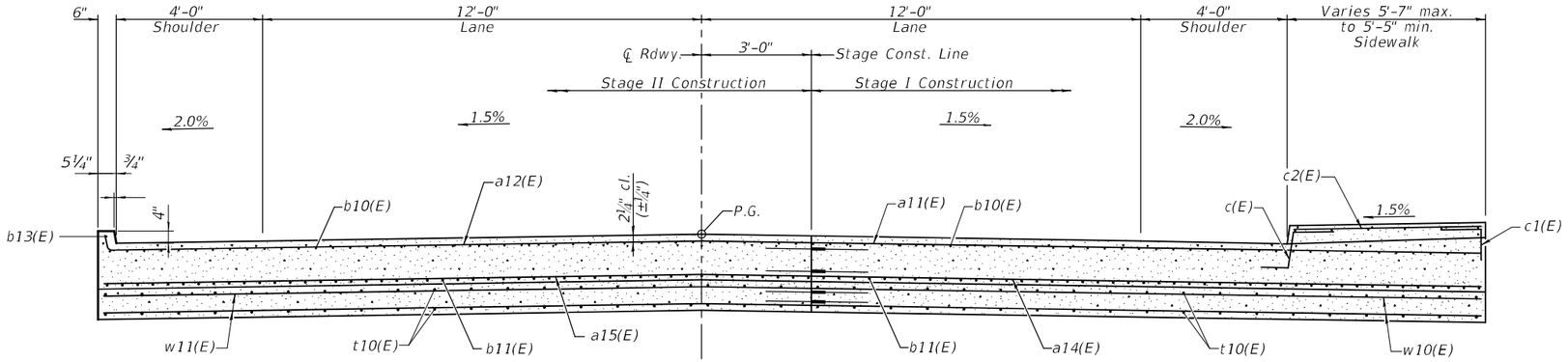
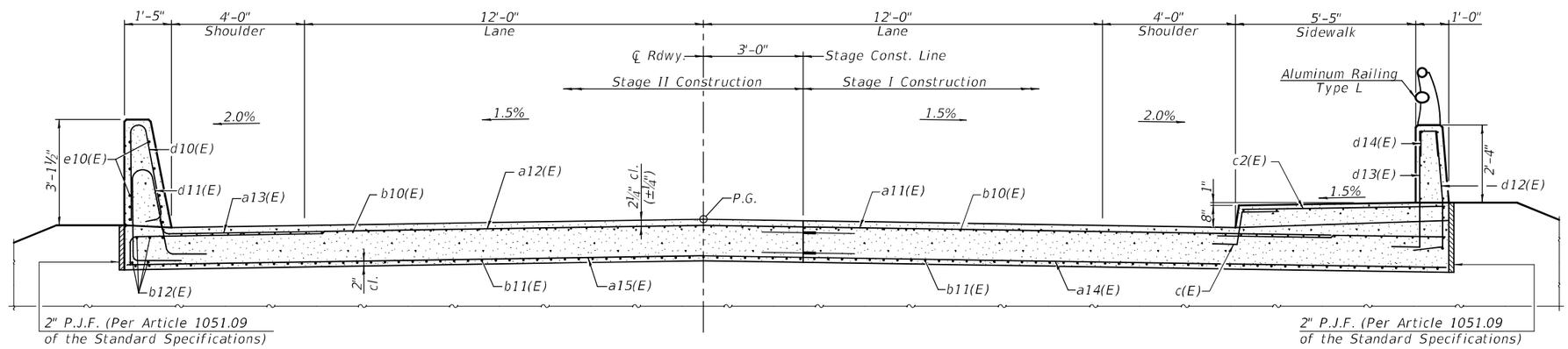


CROSS SECTION

AT APPROACH FOOTING
(Looking South)



2" P.J.F. (Per Article 1051.09 of the Standard Specifications) bonded to wingwall with suitable adhesive as recommended by supplier.

2" P.J.F. (Per Article 1051.09 of the Standard Specifications) bonded to wingwall with suitable adhesive as recommended by supplier.

CROSS SECTION

NEAR ABUTMENT
(Looking South)

MODEL: 68989-049
FILE NAME: Z:\2010 Jobs\IDOT\010-032b CADD\CADD Sheets\010-032b-sht-structure.dgn
3/24/2023 8:55:56 AM

VEENSTRA & KIMM INC.
Springfield, IL. Phone: (217)544-8033
IL. Design Firm No. 184-001939

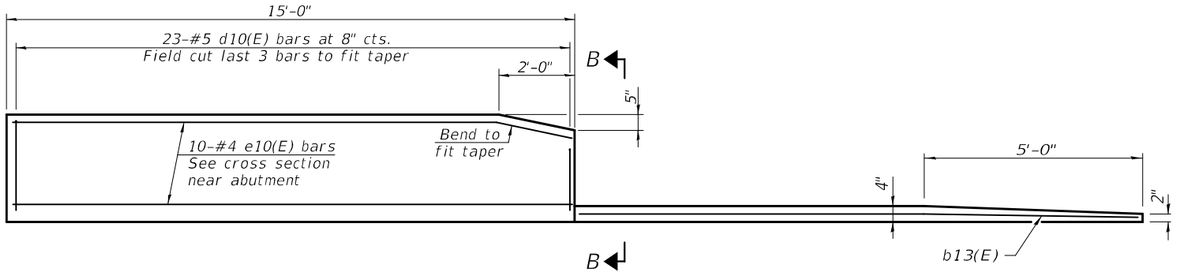
USER NAME = _____	DESIGNED - KES	REVISED - _____	
	CHECKED - VVR	REVISED - _____	
PLOT SCALE = _____	DRAWN - JRP	REVISED - _____	
PLOT DATE = March 23, 2023	CHECKED - TRC	REVISED - _____	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH SLAB DETAILS - SOUTH ABUTMENT
STRUCTURE NO. 036 - 0074

SHEET NO. 19 OF 37 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-2Q)BR	HENDERSON	86	49
		CONTRACT NO. 68989		
	ILLINOIS	FED. AID PROJECT		



INSIDE ELEVATION OF PARAPET AND CURB

(Looking East)

Notes:

The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the adjustment shall be equal to half the total bridge length plus the length of the bridge approach pavement slab.

Parapet concrete shall be paid for as Concrete Superstructure.

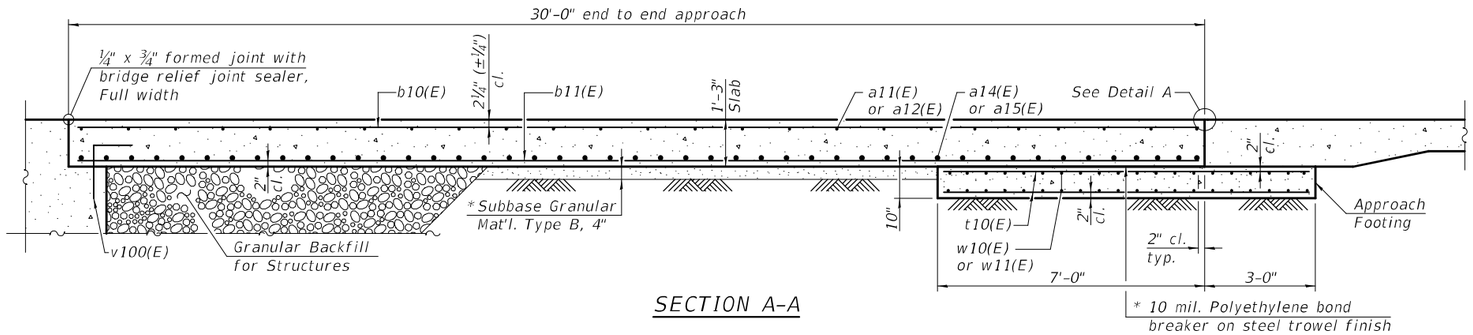
Approach slab shall be paid for as Concrete Superstructure (Approach Slab).

Approach footing concrete shall be paid for as Concrete Structures.

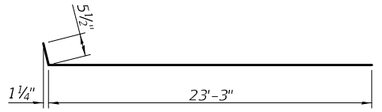
The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.

Cost of excavation for approach footing included with Concrete Structures.

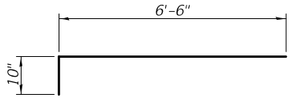
For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 37.



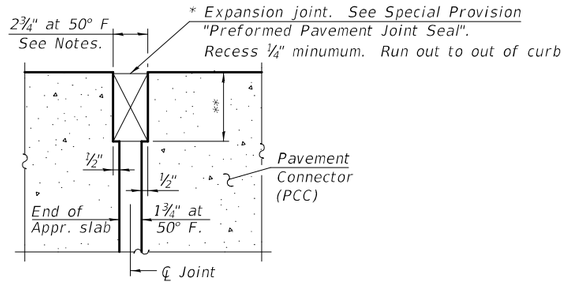
SECTION A-A



BAR a12(E)



BAR a13(E)

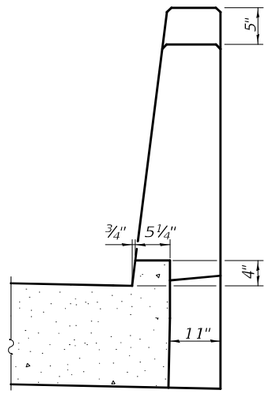


DETAIL A

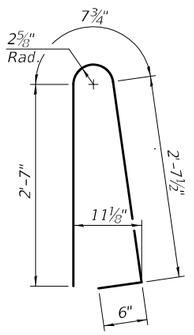
(@ Rt. L's)

* Cost included with Concrete Superstructure (Approach Slab).

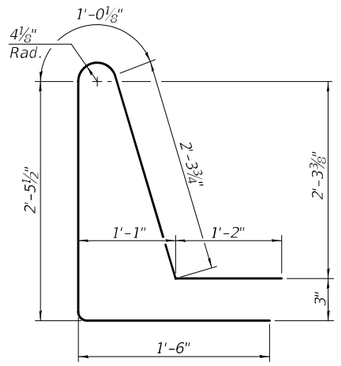
** Per manufacturer recommendations.



VIEW B-B



BAR d10(E)



BAR d11(E)

MODEL: 68989-050
FILE NAME: Z:\2010 Jobs\IDOT\010-032b CADD\CADD Sheets\010-032b-sht-structure.dgn

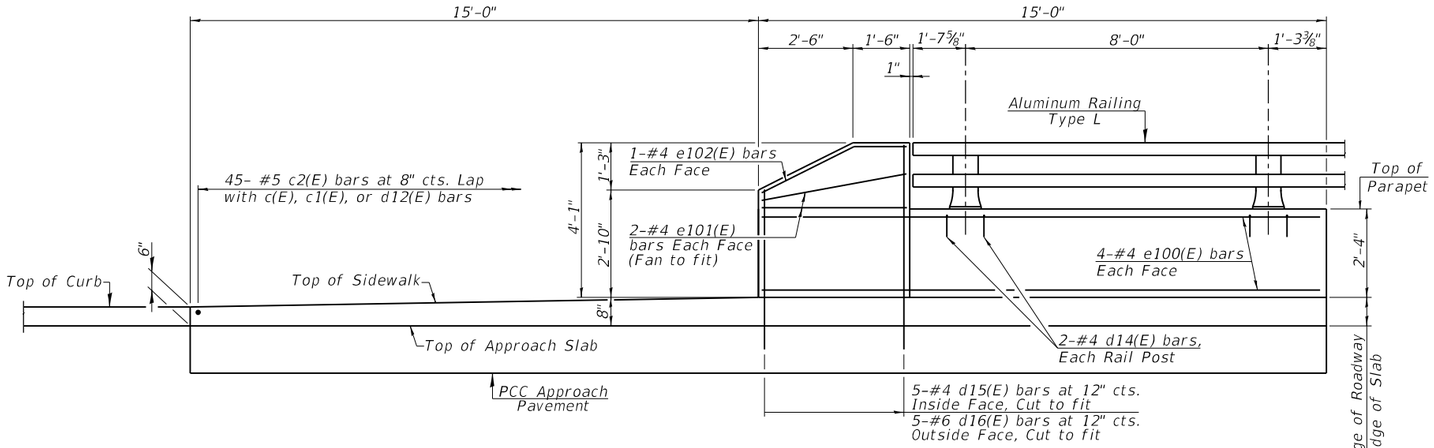
3/24/2023 8:55:57 AM

VEENSTRA & KIMM INC. Springfield, IL. Phone: (217)544-8033 IL. Design Firm No. 184-001939	USER NAME = _____	DESIGNED - KES	REVISED - _____	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
		CHECKED - VVR	REVISED - _____	
	PLOT SCALE = _____	DRAWN - JRP	REVISED - _____	
	PLOT DATE = March 23, 2023	CHECKED - TRC	REVISED - _____	

BRIDGE APPROACH SLAB DETAILS - SOUTH ABUTMENT
STRUCTURE NO. 036-0074

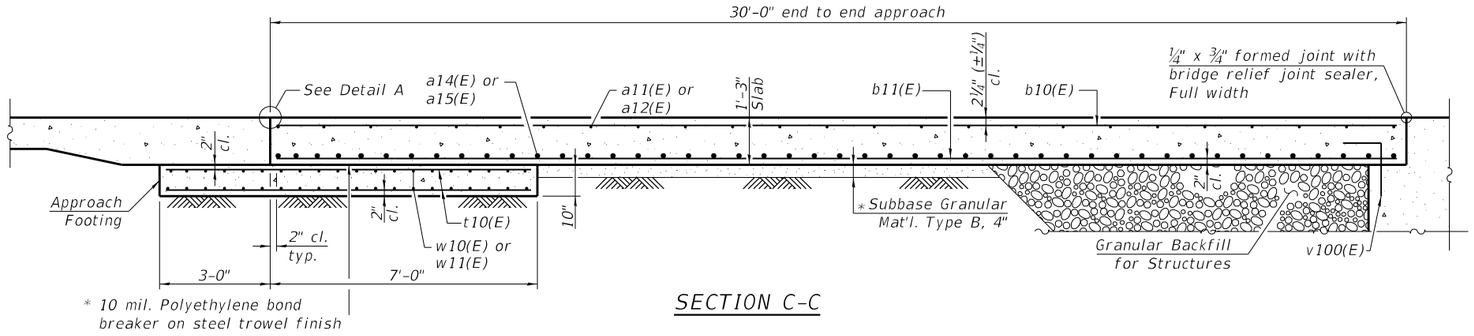
SHEET NO. 20 OF 37 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-2Q)BR	HENDERSON	86	50
		CONTRACT NO. 68989		
	ILLINOIS	FED. AID PROJECT		



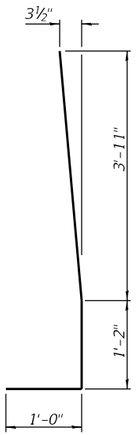
INSIDE ELEVATION OF PARAPET AND SIDEWALK

(Looking West)

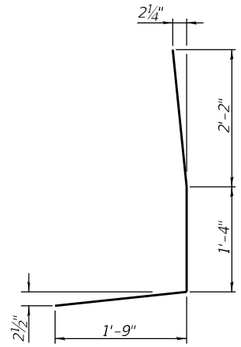


* 10 mil. Polyethylene bond breaker on steel trowel finish

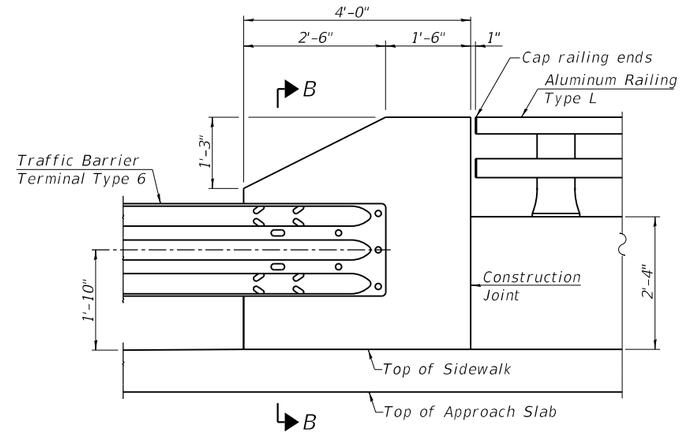
SECTION C-C



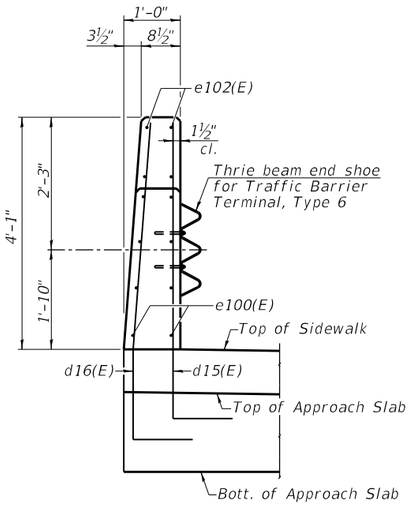
BAR d16(E)



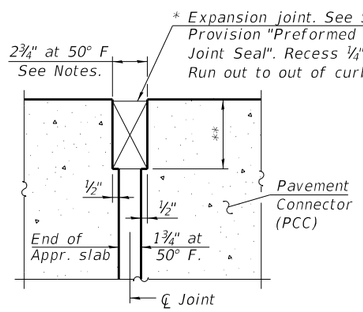
BAR d12(E)



GUARDRAIL TRANSITION DETAIL

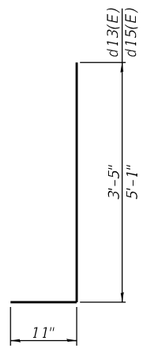


VIEW B-B



DETAIL A

(@ Rt. ∠'s)



BARS d13(E) & d15(E)

* Cost included with Concrete Superstructure (Approach Slab).

** Per manufacturer recommendations.

Notes:

The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the adjustment shall be equal to half the total bridge length plus the length of the bridge approach pavement slab.

Parapet concrete shall be paid for as Concrete Superstructure.

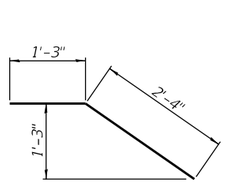
Approach slab shall be paid for as Concrete Superstructure (Approach Slab).

Approach footing concrete shall be paid for as Concrete Structures.

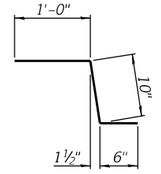
The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.

Cost of excavation for approach footing included with Concrete Structures.

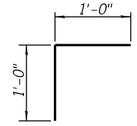
For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 37.



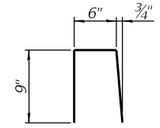
BAR e102(E)



BAR c(E)



BAR c1(E)



BAR d14(E)

SOUTH APPROACH
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a11(E)	39	#5	22'-1"	
a12(E)	39	#5	23'-9"	
a13(E)	19	#5	7'-4"	
a14(E)	52	#8	22'-1"	
a15(E)	52	#8	23'-3"	
b10(E)	58	#5	29'-8"	
b11(E)	92	#9	29'-8"	
b12(E)	4	#5	14'-8"	
b13(E)	1	#4	14'-6"	
c(E)	45	#5	2'-4"	
c1(E)	22	#5	2'-0"	
c2(E)	45	#5	6'-0"	
d10(E)	23	#5	6'-5"	
d11(E)	23	#5	8'-6"	
d12(E)	17	#5	5'-4"	
d13(E)	17	#5	4'-4"	
d14(E)	4	#4	2'-0"	
d15(E)	5	#4	6'-0"	
d16(E)	5	#6	6'-1"	
e10(E)	10	#4	14'-8"	
e100(E)	8	#4	14'-8"	
e101(E)	4	#4	3'-9"	
e102(E)	2	#4	3'-7"	
t10(E)	78	#4	11'-2"	
w10(E)	40	#5	21'-4"	
w11(E)	40	#5	22'-4"	
Concrete Superstructure		Cu. Yd.	4.0	
Concrete Superstructure (Approach Slab)		Cu. Yd.	58.3	
Concrete Structures		Cu. Yd.	13.6	
Reinforcement Bars, Epoxy Coated		Pound	23,090	

MODEL: 0360074-68989-051
FILE NAME: Z:\2010 Jobs\IDOT\010-032b CADD\CADD Sheets\0360074-68989.dgn
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VEENSTRA & KIMM INC.
Springfield, IL. Phone: (217)544-8033
IL. Design Firm No. 184-001939

USER NAME =
PLOT SCALE =
PLOT DATE = March 23, 2023

DESIGNED - KES
CHECKED - VVR
DRAWN - JRP
CHECKED - TRC

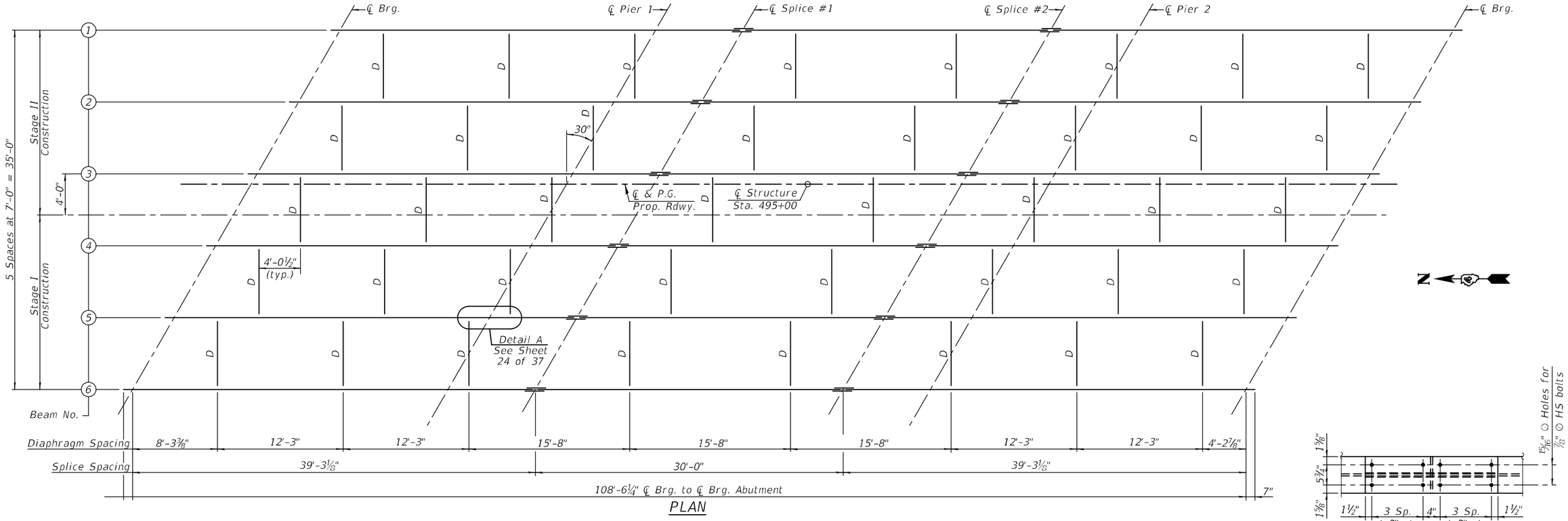
REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH SLAB DETAILS - SOUTH ABUTMENT
STRUCTURE NO. 036-0074

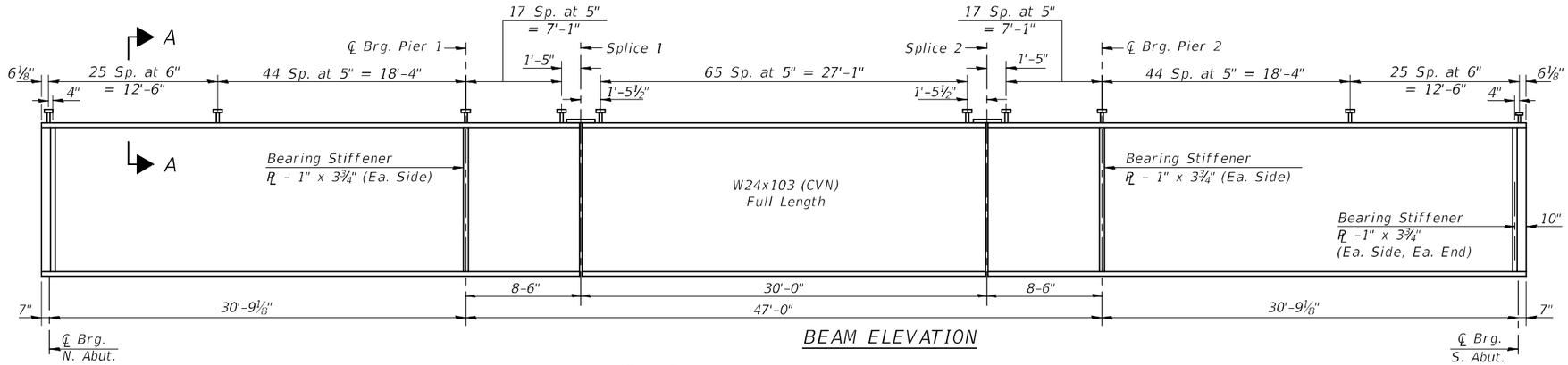
SHEET NO. 21 OF 37 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-2Q)BR	HENDERSON	86	51
		CONTRACT NO. 68989		
	ILLINOIS FED. AID PROJECT			

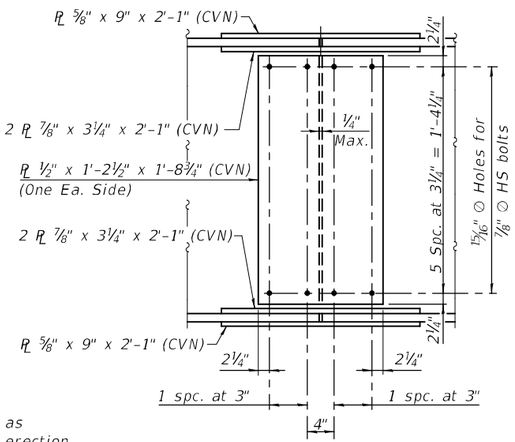


PLAN

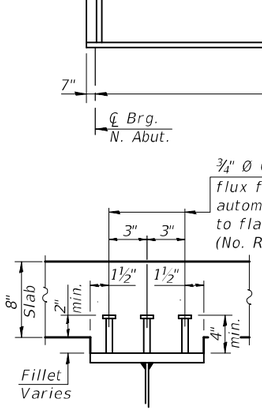
PLAN
(Top and bottom)



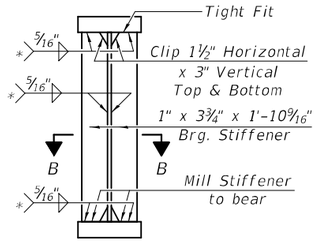
BEAM ELEVATION



ELEVATION
SPLICES 1 & 2
(12 required)

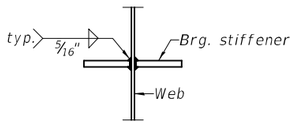


SECTION A-A



SECTION AT PIERS AND ABUTMENTS

* Terminate ¼" (±⅛") from the end of plate intersects.



SECTION B-B

Notes:
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.
Load carrying components designated "CVN" shall conform to the Charpy-V-Notch Impact Energy Requirements, Zone 2.
All beams and splice plates shall be AASHTO M 270 Grade 50, Galvanized.

G-1 2-17-2017

VEENSTRA & KIMM INC. Springfield, IL. Phone: (217)544-8033 IL. Design Firm No. 184-001939	USER NAME = _____	DESIGNED - KES	REVISED - _____
		CHECKED - VVR	REVISED - _____
	PLOT SCALE = _____	DRAWN - JRP	REVISED - _____
	PLOT DATE = March 23, 2023	CHECKED - TRC	REVISED - _____

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRUCTURAL STEEL
STRUCTURE NO. 036 - 0074
SHEET NO. 22 OF 37 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-2Q)BR	HENDERSON	86	52
		CONTRACT NO. 68989		
	ILLINOIS	FED. AID PROJECT		

MODEL: 68989-052
FILE NAME: Z:\2010 Jobs\IDOT\010-032b CADD\CADD Sheets\010-032b-sht-structure.dgn
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INTERIOR BEAM MOMENT TABLE				
		0.4 Sp. 1 & 0.6 Sp. 3	Pier 1 & 2	0.5 Sp. 2
Is	(in^4)	3000	3000	3000
Ic(n)	(in^4)	9518	9518	9518
Ic(3n)	(in^4)	7198	7198	7198
Ic(Cr)	(in^4)	---	---	---
Ss	(in^3)	245	245	245
Sc(n)	(in^3)	389	389	389
Sc(3n)	(in^3)	352	352	352
Sc(Cr)	(in^3)	---	---	---
DC1	(k/')	0.850	0.850	0.850
MDC1	('k)	43	139	96
DC2	(k/')	0.269	0.269	0.269
MDC2	('k)	12	44	30
DW	(k/')	0.267	0.267	0.267
MDW	('k)	13	44	30
LLDF		0.707	0.678	0.656
M(L + IM	('k)	311	313	356
Mu (Strength I)	('k)	633	842	825
Ø*f* Mn	('k)	1855	---	1855
*f*s DC1	(ksi)	2.1	6.8	4.7
*f*s DC2	(ksi)	0.4	1.5	1.0
*f*s DW	(ksi)	0.4	1.5	1.0
*f*s (L+IM)	(ksi)	9.6	9.6	11.0
*f*s(Service II)	(ksi)	15.4	22.3	21.0
0.95Rh Fyf	(ksi)	47.5	47.5	47.5
*f*s (Total)(Strength I)	(ksi)	20.6	29.5	27.9
Ø*f* Fn	(ksi)	---	50.0	---
Vf	(k)	18.3	22.2	18.4

BEAM REACTION TABLE					
		N. & S. Abuts.		Pier1 & 2	
		Interior	Exterior	Interior	Exterior
LLDF		0.743	0.526	0.743	0.526
OCF		---	1.112	---	---
RDC1	(k)	8.4	8.0	36.8	35.3
RDC2	(k)	2.7	2.7	11.9	11.9
RDW	(k)	2.7	2.7	11.8	11.8
R L	(k)	46.5	32.9	72.0	50.2
R_{IM}	(k)	12.9	9.1	16.2	11.5
RTotal	(k)	73.1	55.4	148.6	120.7

* TOP OF BEAM ELEVATIONS

Location	℄ Brg. N. Abut.	℄ Brg. Pier 1	℄ Splice 1	℄ Splice 2	℄ Brg. Pier 2	℄ Brg. S. Abut.
Beam 1	546.65	546.89	546.87	546.91	546.95	546.80
Beam 2	546.74	546.99	546.97	547.03	547.09	546.95
Beam 3	546.80	547.08	547.06	547.14	547.20	547.09
Beam 4	546.68	546.97	546.96	547.06	547.13	547.03
Beam 5	546.51	546.82	546.82	546.94	547.01	546.94
Beam 6	546.32	546.71	546.71	546.85	546.93	546.87

* For fabrication only

Is, Ss: Non-composite moment of inertia and section modulus of the steel section used for computing fs(Total-Strength I, and Service II) due to non-composite dead loads ($in.^4$ and $in.^3$).

Ic(n), Sc(n): Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing fs(Total-Strength I, and Service II) due to short-term composite live loads ($in.^4$ and $in.^3$).

Ic(3n), Sc(3n): Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing fs(Total-Strength I, and Service II) in uncracked sections due to long-term composite (superimposed) dead loads ($in.^4$ and $in.^3$).

Ic(cr), Sc(cr): Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing fs (Total-Strength I and Service II) in cracked section, 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(L + IM : Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

Mu (Strength I): Factored design moment (kip-ft.).
1.25 (MDC1 + MDC2) + 1.5 MDW + 1.75 M(L + IM

ØfMn: 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).

fs DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).
MDC1 / Snc

fs DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).
MDC2 / Sc(3n) or MDC2 / Sc(cr) as applicable.

fs DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).
MDW / Sc(3n) or MDW / Sc(cr) as applicable.

fs (L+IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live plus impact loads as calculated below (ksi).
M(L + IM)/ Sc(n) or M(L + IM)/Sc(cr) as applicable.

fs (Service II): Sum of stresses as computed below (ksi).
fsDC1 + fsDC2 + fsDW + 1.3 fs (L + IM)

0.95RhFyf: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).

fs (Total)(Strength I): Sum of stresses as computed below on non-compact section (ksi).
1.25 (fsDC1 + fsDC2) + 1.5 fsDW + 1.75 fs (L + IM)

*Ø*f* Fn:* Non-Compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7 or 6.10.8 (ksi).

Vf: Maximum factored shear range in composite portion of span computed according to Article 6.10.10.

LLDF: Live load distribution factor for moment and shear

OCF: Obtuse correction factor

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IL. Design Firm No. 184-001939

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DESIGNED - KES
CHECKED - VVR
DRAWN - JRP
CHECKED - TRC

REVISED - _____
REVISED - _____
REVISED - _____
REVISED - _____

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRUCTURAL STEEL DETAILS
STRUCTURE NO. 036-0074

SHEET NO. 23 OF 37 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-2Q)BR	HENDERSON	86	53
		CONTRACT NO. 68989		
	ILLINOIS	FED. AID PROJECT		

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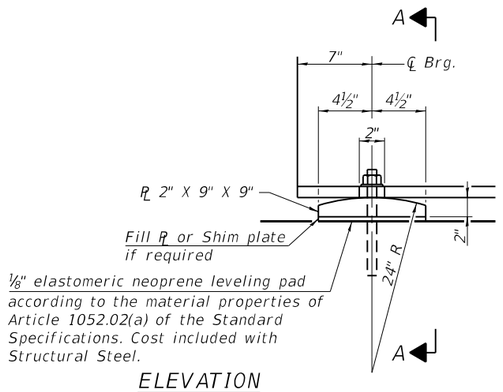
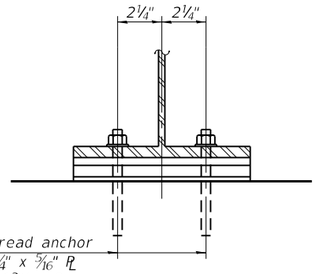


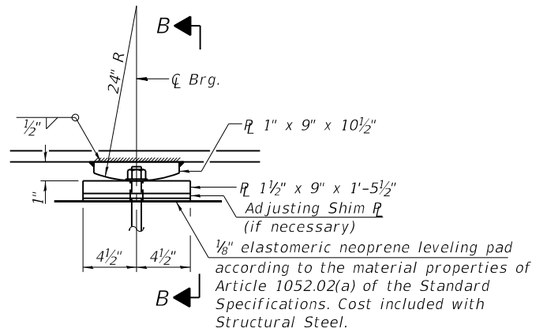
ELEVATION



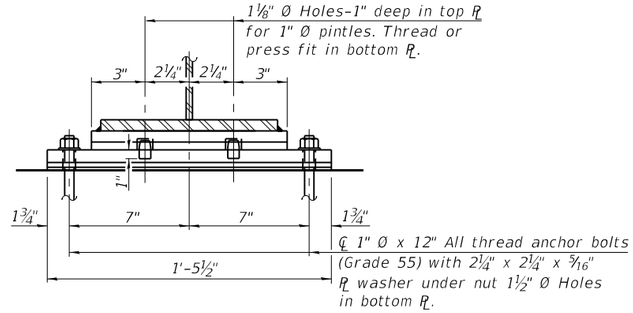
SECTION A-A

FIXED BEARING AT ABUTMENTS

(12 Required)



ELEVATION AT PIER



SECTION B-B

FIXED BEARING AT PIERS

(12 Required)

Notes:

Anchor bolts shall be according to Article 521.06 of the Standard Specifications.

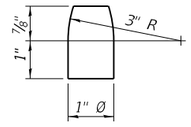
Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Anchor bolts at all supports shall be installed as each member is erected unless an equivalent temporary means of lateral restraint is used.

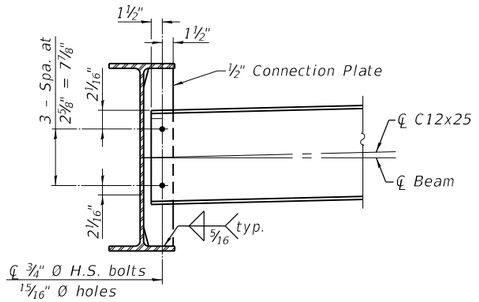
All (embedded and separate) bearing plates, side retainers, anchor bolts, nuts, washers, and pintels shall be galvanized according to AASHTO M111 or M232 as applicable.

Two ⅛" adjusting shims shall be provided for each bearing in addition to all oyher plates or shims and placed as shown on bearing details.

The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 50, Galvanized.

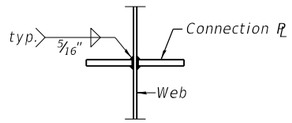


PINTLE

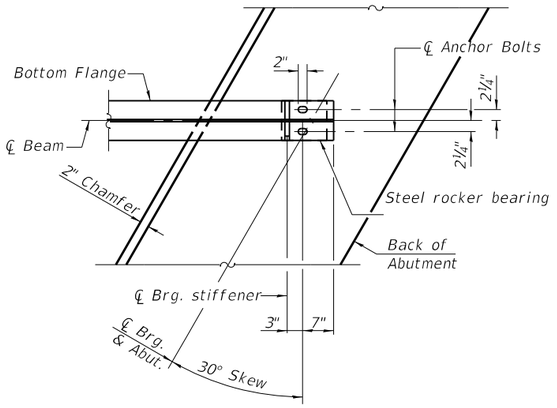


DIAPHRAGM D

(40 Required)



WEB WELD DETAIL



PLAN AT ABUTMENT

(Showing bottom flange of beam)

FILL PLATES

Beam No.	North Abutment	South Abutment
3	¾"	¾"

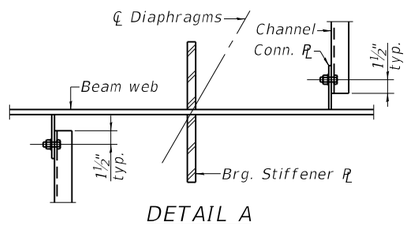
BILL OF MATERIAL

Item	Unit	Total
Anchor Bolts, 1"	Each	48

Note:

Two hardened washers required for each set of oversized holes.

Alternate channels of equal depth and larger weight are permitted to facilitate material aquisistion. Alternate channels, if utilzed, shall be provided at no additional cost to the Department.



DETAIL A

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PLOT SCALE =
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DRAWN - JRP | REVISED -
CHECKED - TRC | REVISED -

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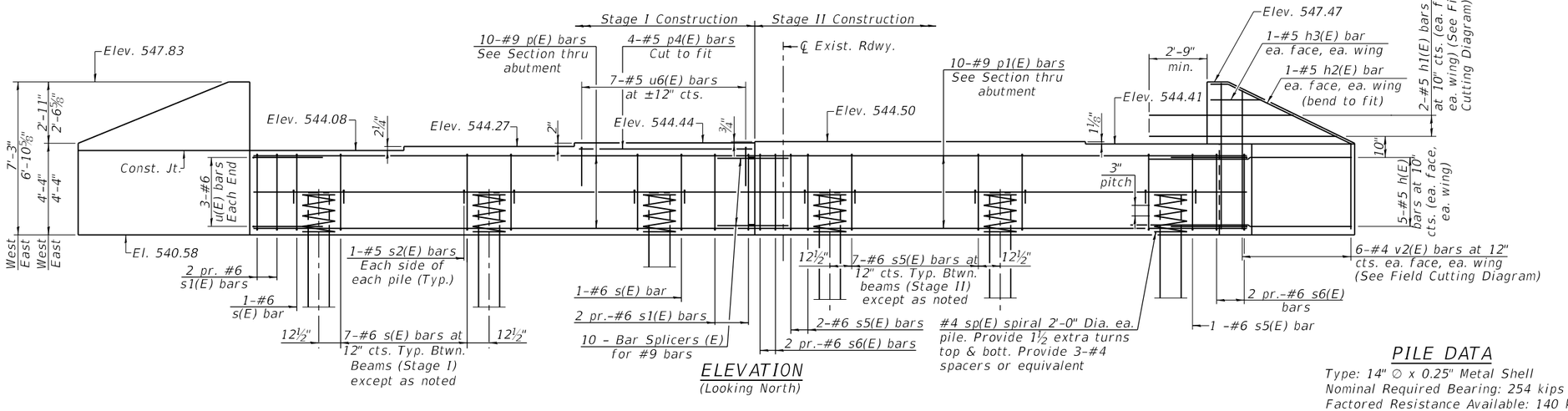
DEPARTMENT OF TRANSPORTATION

STRUCTURAL STEEL DETAILS
STRUCTURE NO. 036-0074
SHEET NO. 24 OF 37 SHEETS

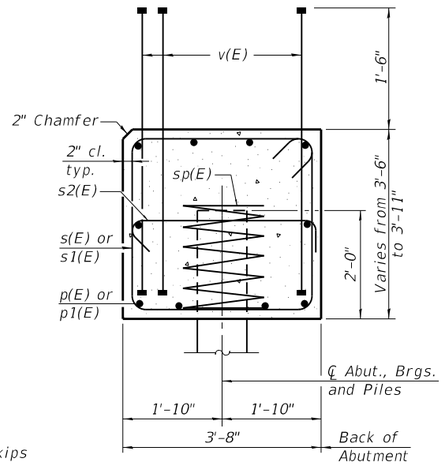
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-2Q)BR	HENDERSON	86	54
		CONTRACT NO. 68989		
ILLINOIS	FED. AID PROJECT			



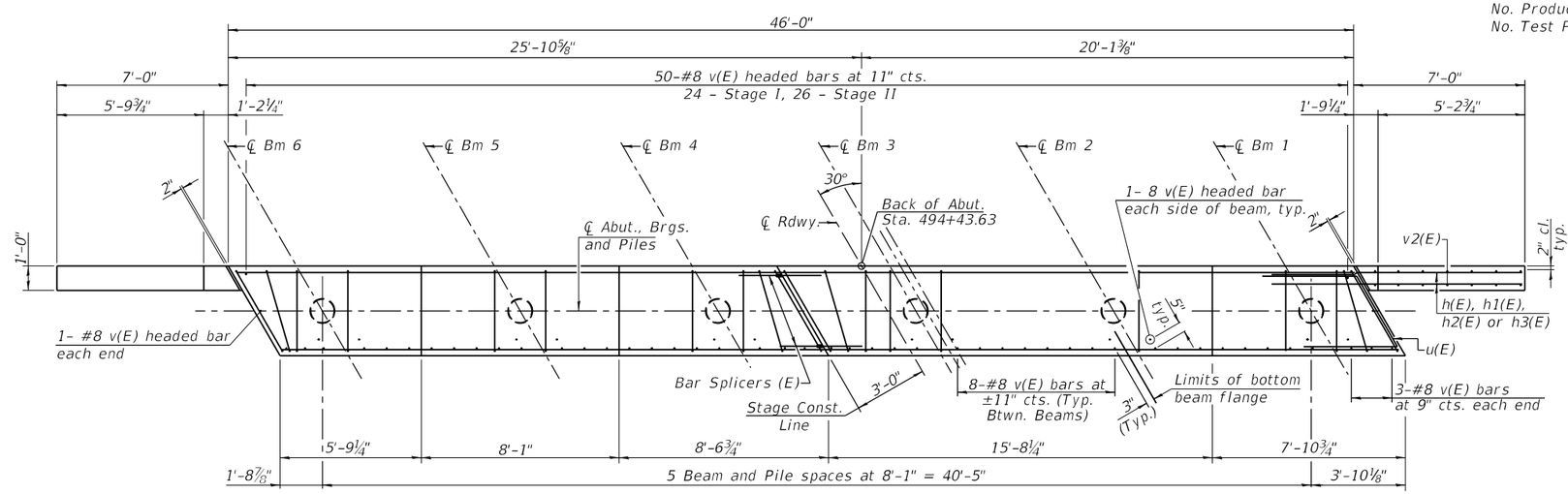
ELEVATION
(Looking North)

PILE DATA

Type: 14" ∅ x 0.25" Metal Shell
Nominal Required Bearing: 254 kips
Factored Resistance Available: 140 kips
Est. Length: 53'
No. Production Piles: 5
No. Test Piles: 1



SEC. THRU ABUT.
Dimensions at right angles to abutment.



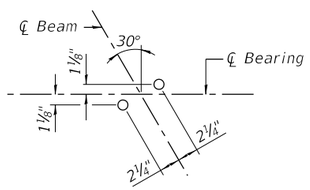
PLAN

BILL OF MATERIAL

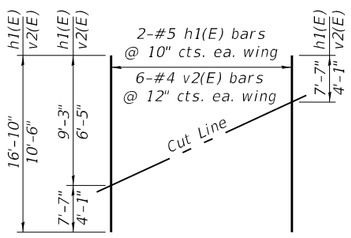
Bar	No.	Size	Length	Shape
h(E)	20	#5	9'-8"	
h1(E)	4	#5	16'-10"	
h2(E)	4	#5	7'-4"	
h3(E)	4	#5	2'-11"	
p(E)	10	#9	22'-1"	
p1(E)	10	#9	23'-3"	
p4(E)	4	#5	8'-2"	
s(E)	16	#6	14'-4"	
s1(E)	8	#6	9'-8"	
s2(E)	12	#5	4'-4"	
s5(E)	17	#6	15'-0"	
s6(E)	8	#6	10'-0"	
* sp(E)	6	#4	2'-0"	
u(E)	6	#6	11'-3"	
u6(E)	7	#5	8'-4"	
v(E)	110	#8	4'-9"	
v1(E)	4	#4	6'-11"	
v2(E)	12	#4	10'-6"	
Structure Excavation	Cu. Yd.		150.0	
Concrete Structures	Cu. Yd.		26.5	
Reinforcement Bars, Epoxy Coated	Pound		4,850	
Furnishing Metal Shell Piles 14"x0.25"	Foot		265	
Driving Piles	Foot		265	
Test Pile Metal Shell	Each		1	

Notes:
For details of piles see Sheet 30 of 37.
Pour steps monolithically with cap.
Headed bars shall conform to ASTM A970 with threaded attachments, Class HA, and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.

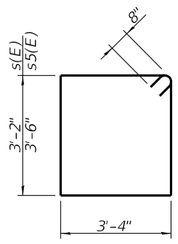
* Length is height of spiral.



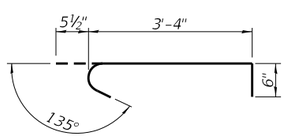
ANCHOR BOLT LAYOUT



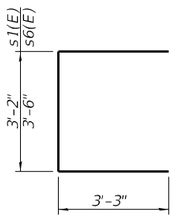
FIELD CUTTING DIAGRAM
Order h1(E) and v2(E) full length. Cut as shown and use remainder of bars in opposite face.



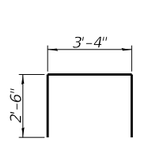
BAR s(E) & s5(E)



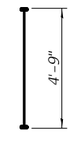
BAR s2(E)



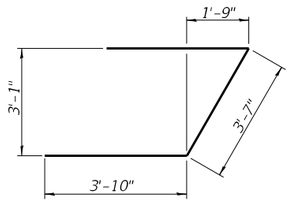
BAR s1(E) & s6(E)



BAR u6(E)



BAR v(E)
(Headed)



BAR u(E)

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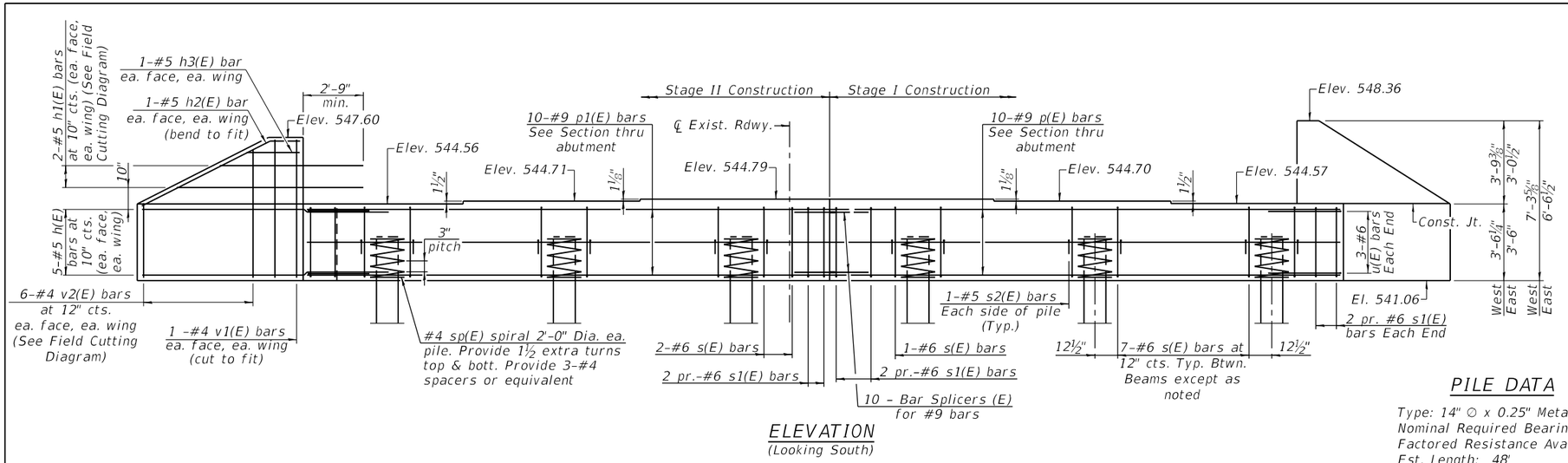
		CHECKED - VVR	REVISED -
	PLOT SCALE =	DRAWN - JRP	REVISED -
	PLOT DATE = March 23, 2023	CHECKED - TRC	REVISED -

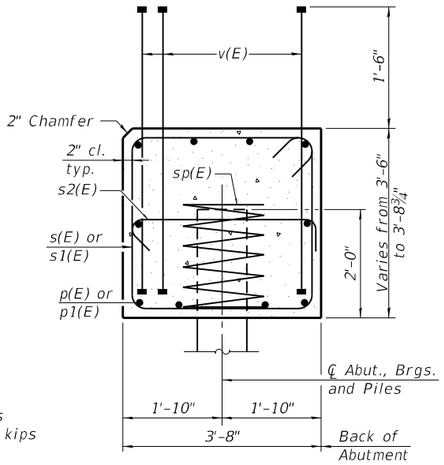
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH ABUTMENT
STRUCTURE NO. 036-0074
SHEET NO. 25 OF 37 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-2Q)BR	HENDERSON	86	55
		CONTRACT NO. 68989		
		ILLINOIS	FED. AID PROJECT	



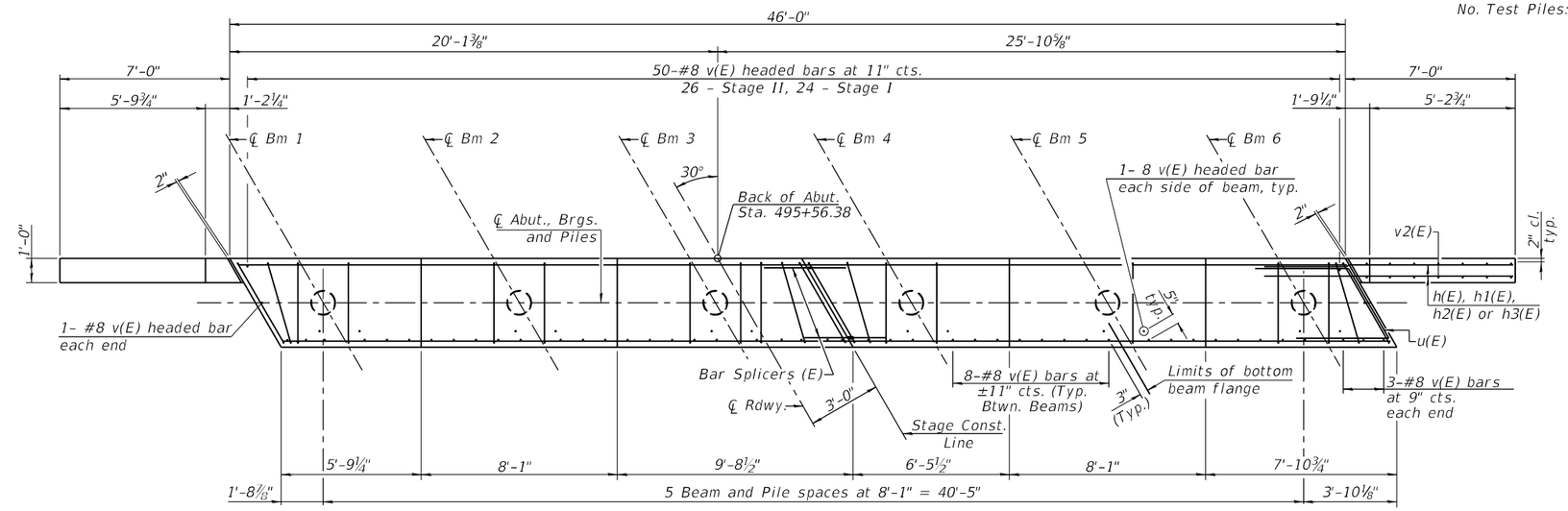
ELEVATION
(Looking South)



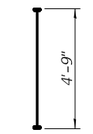
SEC. THRU ABUT.
Dimensions at right angles to abutment.

PILE DATA

Type: 14" ∅ x 0.25" Metal Shell
Nominal Required Bearing: 254 kips
Factored Resistance Available: 140 kips
Est. Length: 48'
No. Production Piles: 6
No. Test Piles: 0



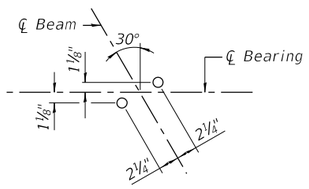
PLAN



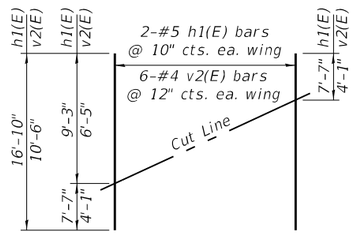
BAR v(E)
(Headed)

BILL OF MATERIAL

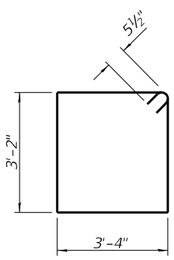
Bar	No.	Size	Length	Shape
h(E)	20	#5	9'-8"	
h1(E)	4	#5	16'-10"	
h2(E)	4	#5	7'-4"	
h3(E)	4	#5	2'-11"	
p(E)	10	#9	22'-1"	
p1(E)	10	#9	23'-3"	
s(E)	31	#6	14'-4"	
s1(E)	16	#6	9'-8"	
s2(E)	12	#5	4'-4"	
* sp(E)	6	#4	2'-0"	
u(E)	6	#6	11'-3"	
v(E)	110	#8	4'-9"	
v1(E)	4	#4	6'-11"	
v2(E)	12	#4	10'-6"	
Structure Excavation	Cu. Yd.		150.0	
Concrete Structures	Cu. Yd.		25.5	
Reinforcement Bars, Epoxy Coated	Pound		4,690	
Furnishing Metal Shell Piles 14"x0.25"	Foot		288	
Driving Piles	Foot		288	



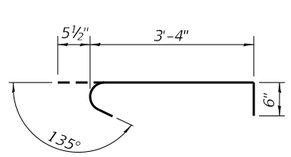
ANCHOR BOLT LAYOUT



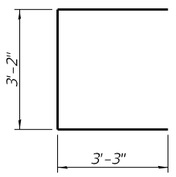
FIELD CUTTING DIAGRAM
Order h1(E) and v2(E) full length. Cut as shown and use remainder of bars in opposite face.



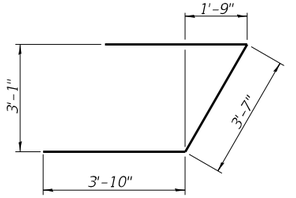
BAR s(E)



BAR s2(E)



BAR s1(E)



BAR u(E)

Notes:
For details of piles see Sheet 30 of 37.
Pour steps monolithically with cap.
Headed bars shall conform to ASTM A970 with threaded attachments, Class HA, and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.

* Length is height of spiral.

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PLOT DATE =	March 23, 2023	CHECKED - TRC	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH ABUTMENT
STRUCTURE NO. 036-0074
SHEET NO. 26 OF 37 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-2Q)BR	HENDERSON	86	56
		CONTRACT NO. 68989		
	ILLINOIS	FED. AID PROJECT		

MODEL: 036074-68989-056
FILE NAME: Z:\2010 Jobs\IDOT\010-032b CADD\CADD Sheets\036074-68989.dgn
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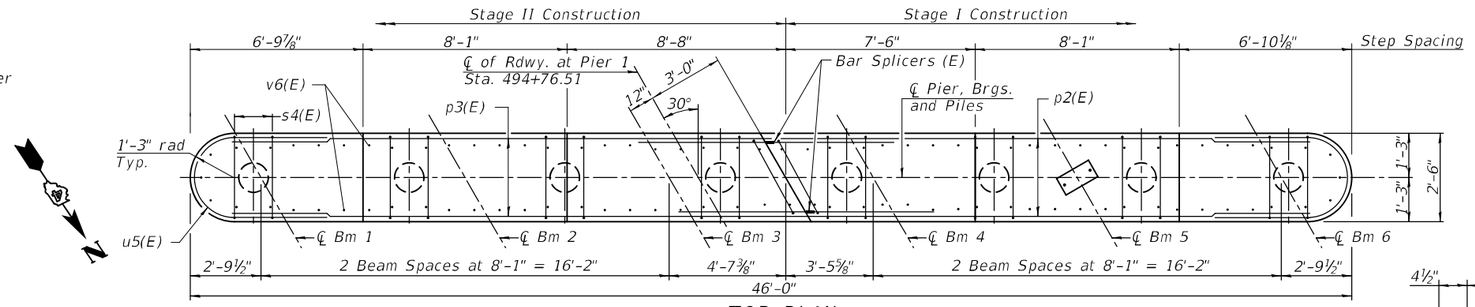
NOTES

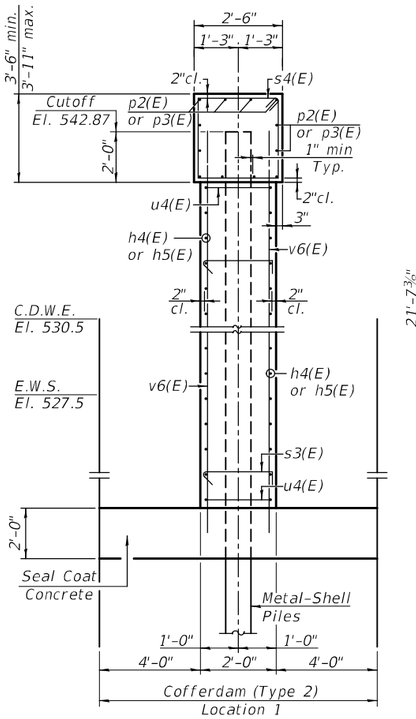
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
All exposed edges shall have standard ¾" chamfer except as noted.
For details of piles, see Sheet 30 of 37.

PILE DATA

	Pier 1
Type:	Metal Shell 14"∅x0.25"
Nominal Required Bearing:	390 Kips
Factored Resistance Available:	210 Kips
Est. Length:	65'
No. Production:	8
No. Test Piles:	0

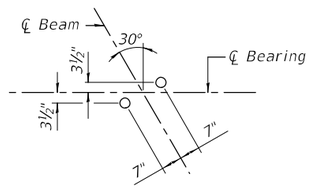


TOP PLAN

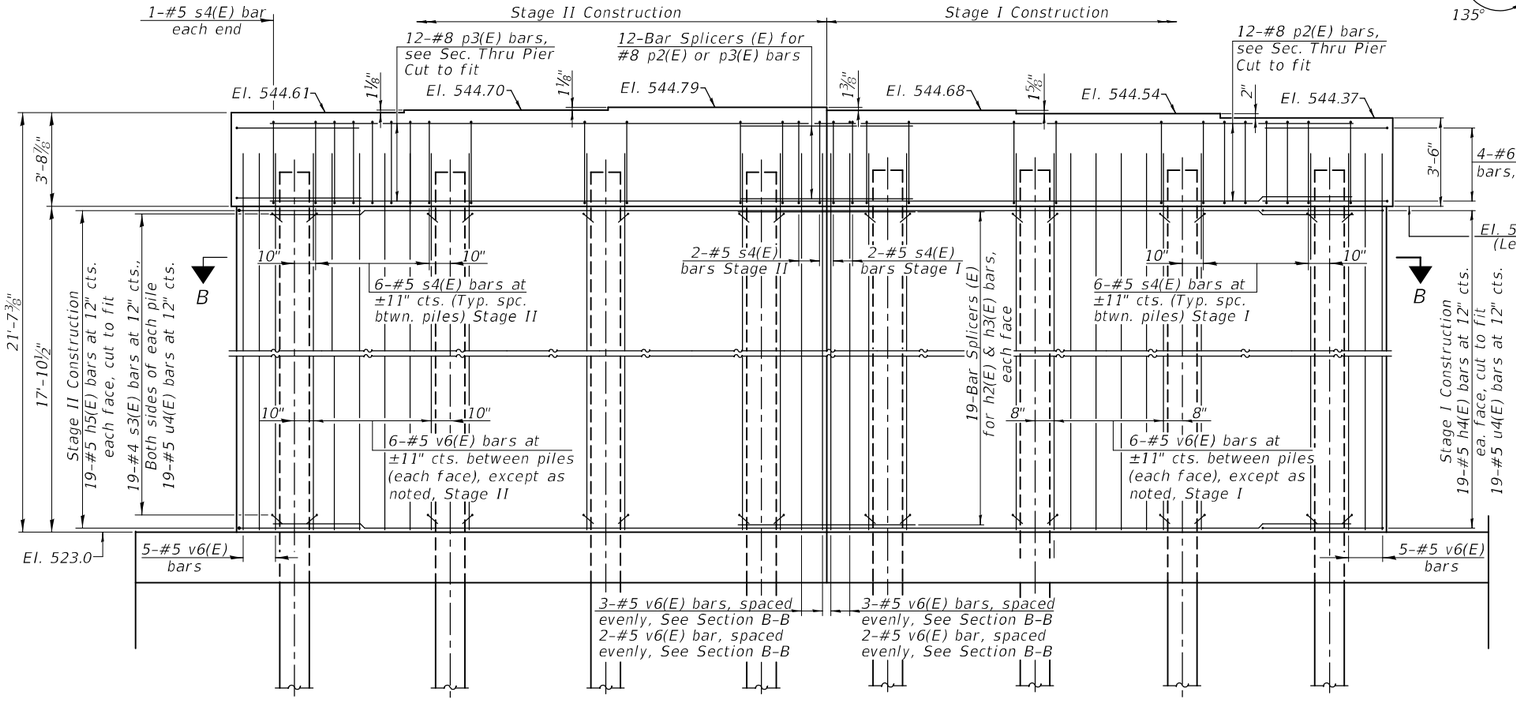


SECTION THRU PIER

(Dimensions are at Rt. L's)

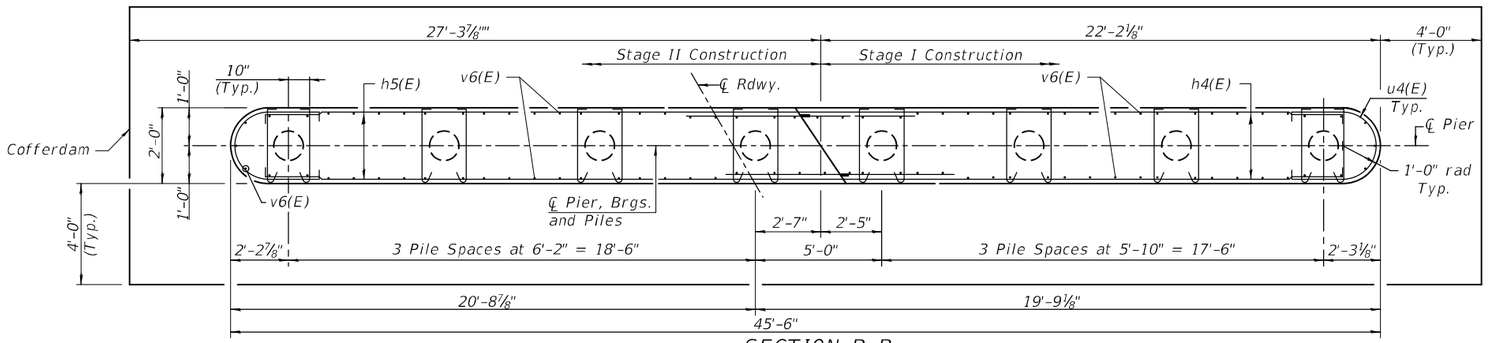


ANCHOR BOLT LAYOUT



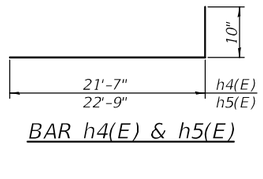
ELEVATION

(Looking South)

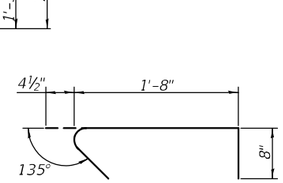


SECTION B-B

(Dimensions are measured at the ℄ of pier)



BAR h4(E) & h5(E)



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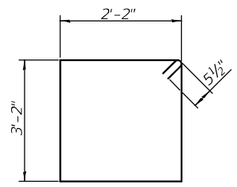

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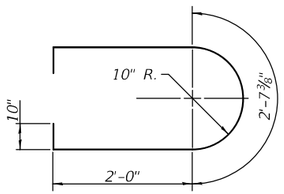
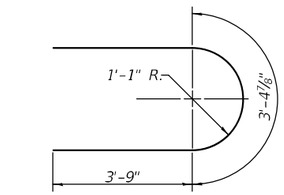


BAR u4(E)



BAR u5(E)

BILL OF MATERIAL
PIER 1

BAR	NO.	SIZE	LENGTH	SHAPE
h4(E)	38	#5	22'-5"	
h5(E)	38	#5	23'-7"	
p2(E)	12	#8	21'-6"	
p3(E)	12	#8	22'-8"	
s3(E)	304	#4	2'-9"	
s4(E)	78	#5	11'-7"	
u4(E)	38	#5	8'-4"	
u5(E)	8	#6	10'-11"	
v6(E)	92	#5	20'-0"	
Cofferdam Excavation		Cu. Yd.	139	
Cofferdam (Type 2) (Location - 1)		Each	1	
Concrete Structures		Cu. Yd.	78.9	
Reinforcement Bars, Epoxy Coated		Pound	7,120	
Furnishing Metal Shell Piles 14"x0.250"		Foot	520	
Driving Piles		Foot	520	

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Springfield, IL. Phone: (217)544-8033
IL. Design Firm No. 184-001939

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PLOT DATE = March 23, 2023 | DRAWN - JRP | REVISED - _____
CHECKED - TRC | REVISED - _____

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER - 1
STRUCTURE NO. 036 - 0074
SHEET NO. 27 OF 37 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-2Q)BR	HENDERSON	86	57
		CONTRACT NO. 68989		
		ILLINOIS	FED. AID PROJECT	

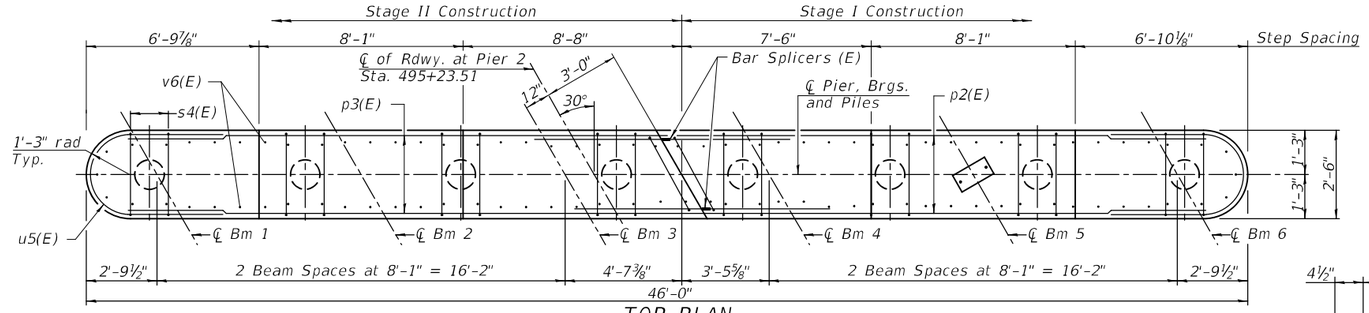
MODEL: 68989-057
FILE NAME: Z:\2010 Jobs\IDOT\010-032b CADD\CADD Sheets\010-032b-sht-structure.dgn
3/24/2023 8:56:07 AM

NOTES

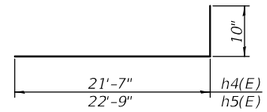
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
All exposed edges shall have standard ¾" chamfer except as noted.
For details of piles, see Sheet 30 of 37.

PILE DATA

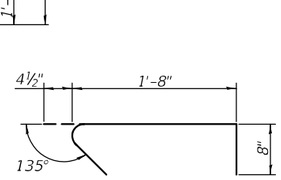
	Pier 2
Type:	Metal Shell 14"∅x0.25"
Nominal Required Bearing:	390 Kips
Factored Resistance Available:	210 Kips
Est. Length:	65'
No. Production:	7
No. Test Piles:	1



TOP PLAN



BAR h4(E) & h5(E)



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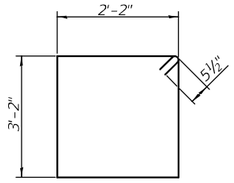
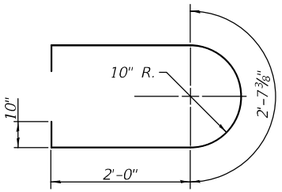
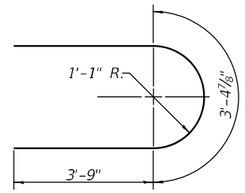


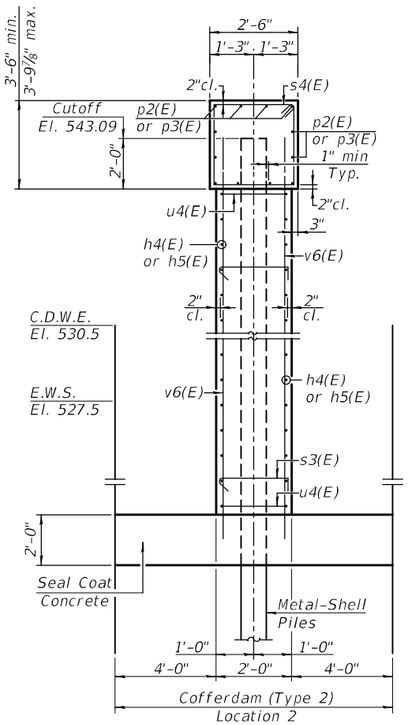
BAR s4(E)



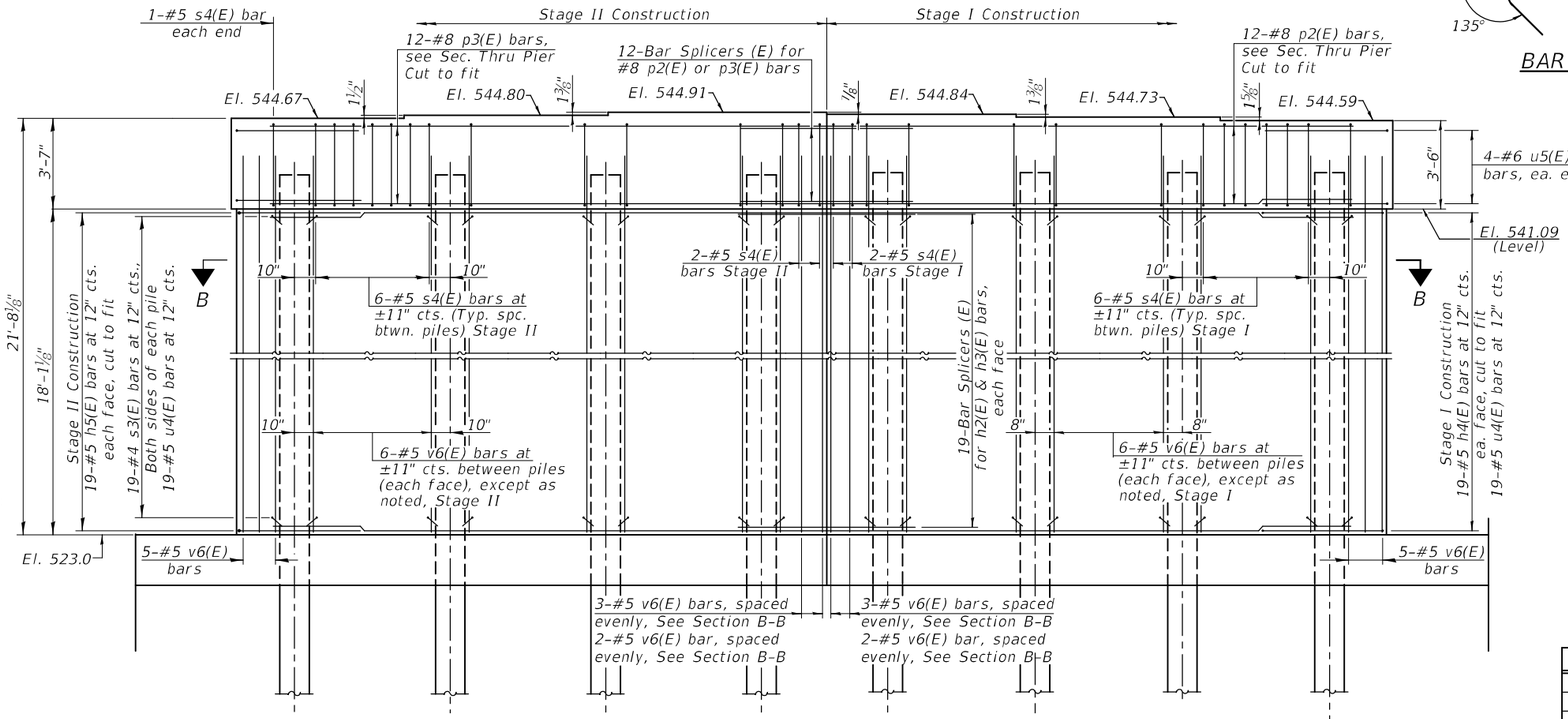
BAR u4(E)



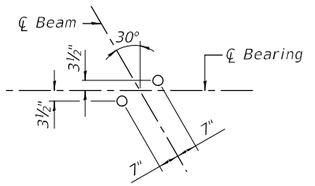
BAR u5(E)



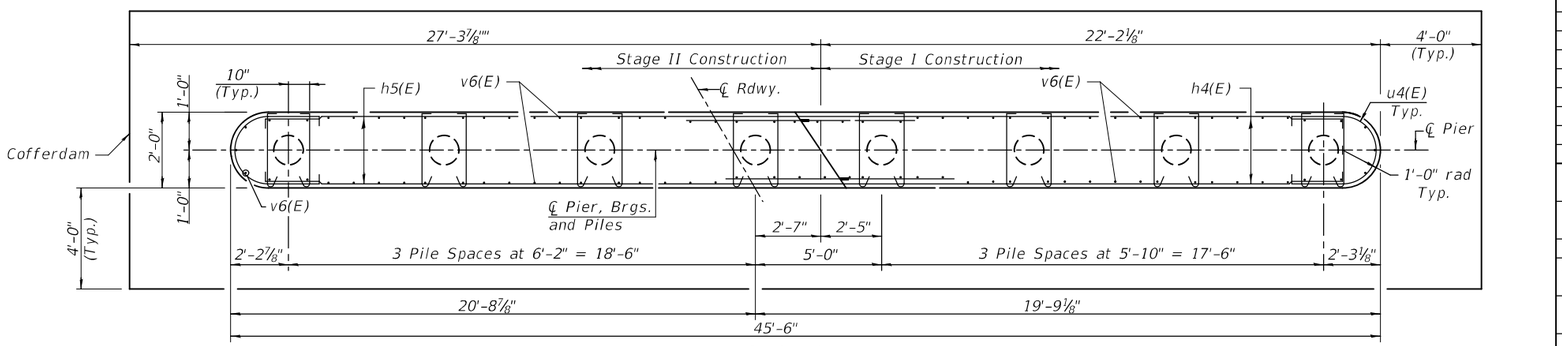
SECTION THRU PIER
(Dimensions are at Rt. ∠'s)



ELEVATION
(Looking South)



ANCHOR BOLT LAYOUT



SECTION B-B
(Dimensions are measured at the ℄ of pier)

BILL OF MATERIAL
PIER 2

BAR	NO.	SIZE	LENGTH	SHAPE
h4(E)	38	#5	22'-5"	
h5(E)	38	#5	23'-7"	
p2(E)	12	#8	21'-6"	
p3(E)	12	#8	22'-8"	
s3(E)	304	#4	2'-9"	
s4(E)	78	#5	11'-7"	
u4(E)	38	#5	8'-4"	
u5(E)	8	#6	10'-11"	
v6(E)	92	#5	20'-0"	

Cofferdam Excavation	Cu. Yd.	139
Cofferdam (Type 2) (Location - 2)	Each	1
Concrete Structures	Cu. Yd.	76.7
Reinforcement Bars, Epoxy Coated	Pound	7,120
Furnishing Metal Shell Piles 14"x0.250"	Foot	455
Driving Piles	Foot	455
Test Pile Metal Shells	Each	1

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Springfield, IL. Phone: (217)544-8033
IL. Design Firm No. 184-001939

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		CHECKED - VVR	REVISED -		
PLOT SCALE =		DRAWN - JRP	REVISED -		
PLOT DATE =	March 23, 2023	CHECKED - TRC	REVISED -		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER - 2
STRUCTURE NO. 036 - 0074
SHEET NO. 28 OF 37 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-2Q)BR	HENDERSON	86	58
		CONTRACT NO. 68989		
		ILLINOIS	FED. AID PROJECT	

MODEL: 68989-058
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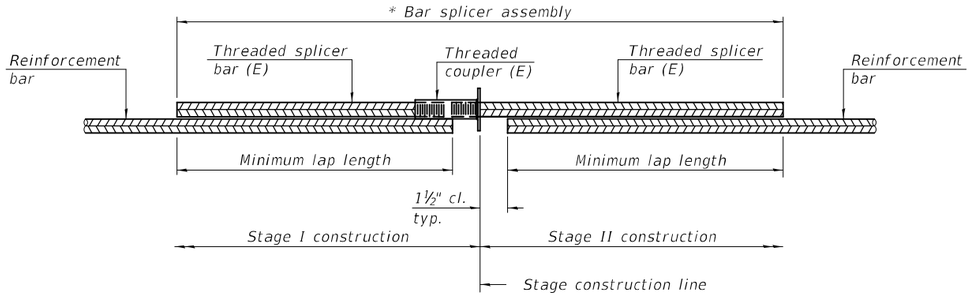


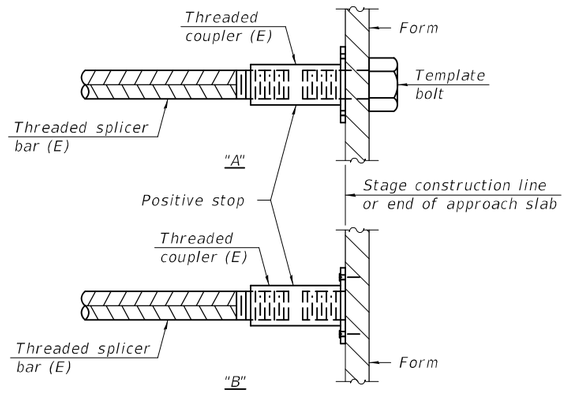
STANDARD BAR SPLICER ASSEMBLY PLAN

(All components shall be provided from one supplier)

Threaded splicer bar length = min. lap length + 1½" + thread length

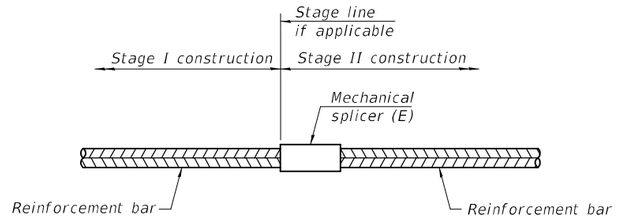
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
Approach Slab (Top)	#5	78	3'-6"
Deck	#5	346	3'-6"
Approach Slab (Bottom)	#8	104	4'-9"
Approach Slab (Footing)	#5	80	3'-2"
Abutment Diaphragm	#6	14	4'-0"
Abutments	#9	20	6'-5"
Pier Cap	#8	24	5'-9"
Pier Web Wall	#5	76	3'-7"



INSTALLATION AND SETTING METHODS

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



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required

Notes:
Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.
All reinforcement shall be lapped and tied to the splicer bars.
Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.
See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1

1-1-2020

VEENSTRA & KIMM INC.
Springfield, IL. Phone: (217)544-8033
IL. Design Firm No. 184-001939

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	CHECKED - VVR	REVISED - _____	
PLOT SCALE = _____	DRAWN - JRP	REVISED - _____	
PLOT DATE = March 23, 2023	CHECKED - TRC	REVISED - _____	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 036-0074

SHEET NO. 29 OF 37 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-2Q)BR	HENDERSON	86	59
		CONTRACT NO. 68989		
	ILLINOIS	FED. AID PROJECT		

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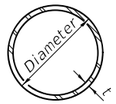
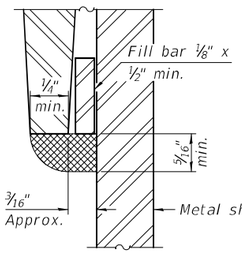
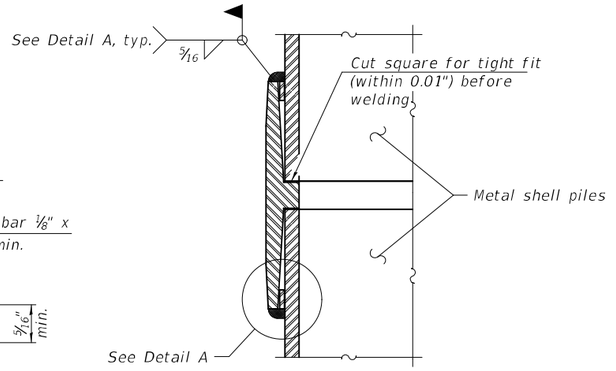


METAL SHELL PILE TABLE

Designation and outside diameter	Wall thickness t	Weight per foot (Lbs./ft.)	Inside volume (yd.³/ft.)
PP12	0.250"	31.37	0.0267
PP14	0.250"	36.71	0.0368
PP14	0.312"	45.61	0.0361
PP16	0.312"	52.32	0.0478
PP16	0.375"	62.64	0.0470

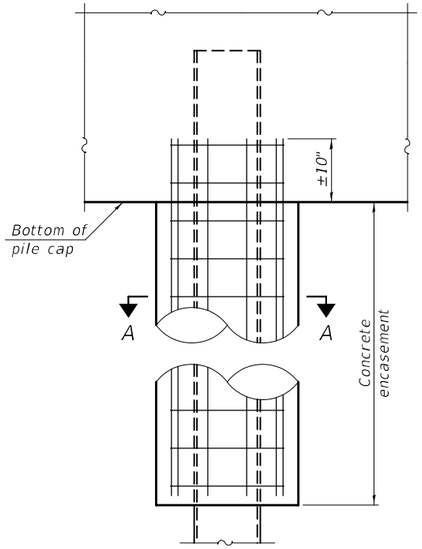


DETAIL A

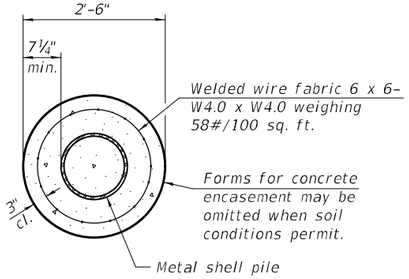


WELDED COMMERCIAL SPLICE

Notes:
The ⅛" x ½" min. fill bar may be constructed of 2 bars with a ⅛" max. gap between them.
Pile segments shall be driven to solid contact with splicer before welding.



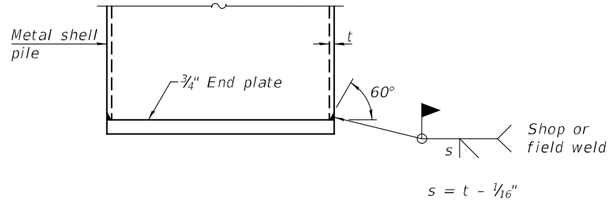
ELEVATION



SECTION A-A

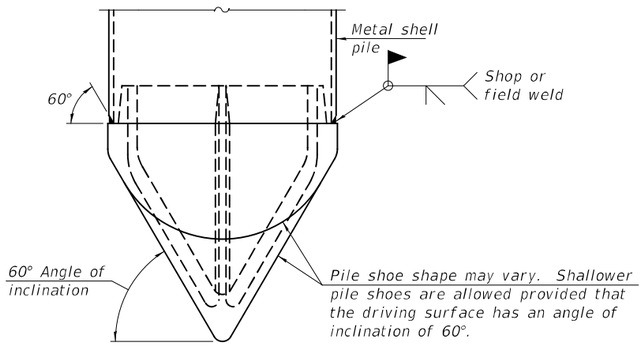
INDIVIDUAL PILE CONCRETE ENCASEMENT

(When specified)



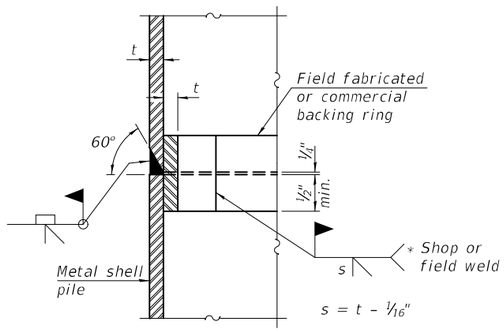
s = t - 1/16"

END PLATE ATTACHMENT



PILE SHOE ATTACHMENT

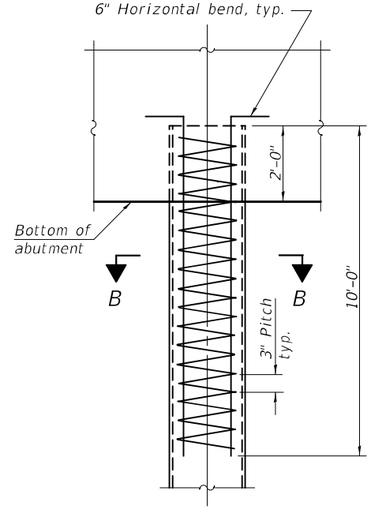
(When called for on the plans, the Contractor shall furnish metal shell pile shoes consisting of a single piece conical pile point as shown. The pile shoes shall be cast in one piece steel according to either ASTM A 148 Grade 80-50 or AASHTO M 103 Grade 65-35 and shall provide full bearing over the full circumference of the metal shell pile. The pile shoe shall have tapered leads to assure proper alignment and fitting and shall be secured to the pile with a circumferential weld).



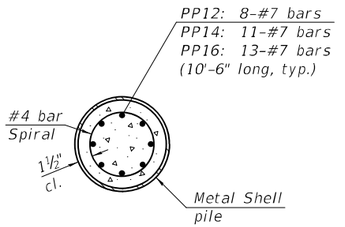
s = t - 1/16"

COMPLETE PENETRATION WELD SPLICE

* Field fabricated backing ring may be made from pile shell by removing segment to allow reducing circumference and vertically rejoin with partial joint penetration weld.



ELEVATION



SECTION B-B

REINFORCEMENT AT ABUTMENTS

(Omit when concrete encasement is specified)

Note:
The metal shell piles shall be according to Article 1006.05 of the Standard Specifications.

F-MS 1-1-2020

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IL. Design Firm No. 184-001939

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CHECKED - VVR REVISED - _____
PLOT SCALE = _____ DRAWN - JRP REVISED - _____
PLOT DATE = March 23, 2023 CHECKED - TRC REVISED - _____

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

METAL SHELL PILE DETAILS
STRUCTURE NO. 036-0074
SHEET NO. 30 OF 37 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-2Q)BR	HENDERSON	86	60

CONTRACT NO. 68989
ILLINOIS | FED. AID PROJECT

MODEL: 68989-060
FILE NAME: z:\2010 Jobs\IDOT\010-0320\b CADD\CADD Sheets\010-0320-sht-structure.dgn
3/24/2023 8:56:09 AM

Illinois Department of Transportation
Division of Highways
Terracon

SOIL BORING LOG

Date 3/17/20

ROUTE FAP 522 (Carman Road) DESCRIPTION Structure boring for bridge replacement LOGGED BY GS (Terracon)

SECTION (14-2Q)I LOCATION Carman Road over Dugout Creek, SEC. 15, TWP. 68N, RNG. 6W, 4th PM, Latitude 40°40'54"N, Longitude 91° 04'13"W

COUNTY Henderson DRILLING METHOD HSA to 24' then Mud Rotary HAMMER TYPE Automatic

STRUCT. NO. 036-3003 (EX) 036-0074 (PR)
Station 495+00

BORING NO. SB-1
Station 496+02
Offset 17.0 ft LT
Ground Surface Elev. 553.00 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 529.0 ft ▼
Upon Completion ft
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				FILL - SILTY CLAY LOAM: dark brown, moist, with traces of sand and gravel (USCS - Silty Clay with Sand, CL-ML)
	2			
	3		21	
	2			
	3			- grayish brown at 6.5 feet
-5	3		18	
	4			
	1			
	2		28	
545.00	3			
				CLAY LOAM: grayish brown, moist, soft to medium stiff, with traces of sand and gravel (USCS - Lean Clay with Sand, CL)
	1			
-10	2	0.4	17	
	2			
	2			
540.50	5	0.8	20	
	6		7	SAND: brown, moist, loose to medium dense, with traces of gravel (USCS - Silty Sand, SM)
	3			
	3			
-15	4		8	
	3			
	5			
	4		4	
	4			
	3			
-20	6		5	

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
	4			SAND: brown, moist, loose to medium dense, with traces of gravel (USCS - Silty Sand, SM) *(continued)*
	4			
	4			
	5			
▼				
	3			- wet at 24 feet
-25	3		19	
	4			
	6			
	6		21	
	7			
	5			
-30	6		25	
	6			
	3			
	3		28	
-35	4			
	3			
	4		23	
513.00 -40	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)

Date 3/17/20

ROUTE FAP 522 (Carman Road) DESCRIPTION Structure boring for bridge replacement LOGGED BY GS (Terracon)

SECTION (14-2Q)I LOCATION Carman Road over Dugout Creek, SEC. 15, TWP. 68N, RNG. 6W, 4th PM, Latitude 40°40'54"N, Longitude 91° 04'13"W

COUNTY Henderson DRILLING METHOD HSA to 24' then Mud Rotary HAMMER TYPE Automatic

STRUCT. NO. 036-3003 (EX) 036-0074 (PR)
Station 495+00

BORING NO. SB-1
Station 496+02
Offset 17.0 ft LT
Ground Surface Elev. 553.00 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 529.0 ft ▼
Upon Completion ft
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				SAND: brown, wet, loose, with traces of gravel (USCS - Silty Sand, SM)
	3			
	3		23	
-45	4			
	4			
	4		24	
-50	4			
500.00				
	4			SAND: brown, wet, medium dense, with traces of gravel (USCS - Poorly Graded Sand, SP)
	6		18	
-55	7			
	5			
	8		20	
-60	8			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				SAND: brown, wet, medium dense, with traces of gravel (USCS - Poorly Graded Sand, SP) *(continued)*
	7			
	9		18	
-65	9			
	7			
	8			
-70	8			
	7			
	8		16	
-75	10			
	8			
	9		20	
-80	9			

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)

Date 3/17/20

ROUTE FAP 522 (Carman Road) DESCRIPTION Structure boring for bridge replacement LOGGED BY GS (Terracon)

SECTION (14-2Q)I LOCATION Carman Road over Dugout Creek, SEC. 15, TWP. 68N, RNG. 6W, 4th PM, Latitude 40°40'54"N, Longitude 91° 04'13"W

COUNTY Henderson DRILLING METHOD HSA to 24' then Mud Rotary HAMMER TYPE Automatic

STRUCT. NO. 036-3003 (EX) 036-0074 (PR)
Station 495+00

BORING NO. SB-1
Station 496+02
Offset 17.0 ft LT
Ground Surface Elev. 553.00 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 529.0 ft ▼
Upon Completion ft
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				SAND: brown, wet, medium dense, with traces of gravel (USCS - Poorly Graded Sand, SP) *(continued)*
	7			
	13		21	
-85	14			
466.00				
				SAND: brown, wet, medium dense, with traces of gravel (USCS - Poorly Graded Sand with Gravel, SP)
	11			
	11		13	
-90	11			
	10			
	11		19	
-95	8			
	11			
	9		13	
End of Boring 453.00 -100	6			

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)

MODEL: 68989-061
FILE NAME: Z:\2010 Jobs\IDOT\010-032b CADD\CADD Sheets\010-032b-shl-structure.dgn
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VEENSTRA & KIMM INC.
Springfield, IL. Phone: (217)544-8033
IL. Design Firm No. 184-001939

USER NAME =		DESIGNED - KES	REVISED -
		CHECKED - VVR	REVISED -
PLOT SCALE =		DRAWN - JRP	REVISED -
PLOT DATE =	March 23, 2023	CHECKED - TRC	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOG - SB - 1
STRUCTURE NO. 036 - 0074
SHEET NO. 31 OF 37 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-2Q)BR	HENDERSON	86	61
		CONTRACT NO. 68989		
		ILLINOIS	FED. AID PROJECT	

Illinois Department of Transportation
Division of Highways
Terracon

SOIL BORING LOG

Date 3/17/20

ROUTE FAP 522 (Carman Road) DESCRIPTION Structure boring for bridge replacement LOGGED BY GS (Terracon)

SECTION (14-2Q)I LOCATION Carman Road over Dugout Creek, SEC. 15, TWP. 68N, RNG. 6W, 4th PM, Latitude 40°40'55"N, Longitude 91° 04'13"W

COUNTY Henderson DRILLING METHOD HSA to 19' then Mud Rotary HAMMER TYPE Automatic

STRUCT. NO. 036-3003 (EX) 036-0074 (PR)
Station 495+00

BORING NO. SB-2
Station 495+33
Offset 35.0 ft RT
Ground Surface Elev. 548.00 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 529.0 ft ▼
Upon Completion ft
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				FILL - SILTY CLAY LOAM: grayish brown, moist, soft, with traces of sand and gravel (USCS - Silty Clay, CL-ML)
	1			
	1		25	
	1			
	1			- dark brown at 4 feet
-5	1		41	
	1	0.16		
542.00				
				CLAY LOAM: dark brown, moist, soft to medium stiff, with traces of sand and gravel (USCS - Lean Clay with Sand, CL)
	1			
	2		24	
	3	0.44		
	1			
-10	2		21	
	3	0.82		
	2			
	3		21	
535.00	5	0.91		
				SAND: brown, moist, loose, with traces of gravel (USCS - Silty Sand, SM)
	5			
-15	5		6	
	5			
	4			
	5		9	
	5			
▼				- wet at 19 feet
528.00 -20	1			
	2		19	

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				SAND: brown, wet, medium dense to loose, with traces of gravel (USCS - Silty Sand, SM)
	4			
	5			
	6		24	
	5			
	3			
	4		22	
-25	4			
	4			
	5		24	
	5			
	4			
	4		22	
-30	3			
	3			
	3			
-35	3			
510.00				
				SAND: brown, wet, medium dense, with traces of gravel (USCS - Poorly Graded Sand, SP)
	7			
	6		19	
-40	5			

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)

Illinois Department of Transportation
Division of Highways
Terracon

SOIL BORING LOG

Date 3/17/20

ROUTE FAP 522 (Carman Road) DESCRIPTION Structure boring for bridge replacement LOGGED BY GS (Terracon)

SECTION (14-2Q)I LOCATION Carman Road over Dugout Creek, SEC. 15, TWP. 68N, RNG. 6W, 4th PM, Latitude 40°40'55"N, Longitude 91° 04'13"W

COUNTY Henderson DRILLING METHOD HSA to 19' then Mud Rotary HAMMER TYPE Automatic

STRUCT. NO. 036-3003 (EX) 036-0074 (PR)
Station 495+00

BORING NO. SB-2
Station 495+33
Offset 35.0 ft RT
Ground Surface Elev. 548.00 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 529.0 ft ▼
Upon Completion ft
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				SAND: brown, wet, medium dense, with traces of gravel (USCS - Poorly Graded Sand, SP) *(continued)*
	6			
-45	7		14	
	7			
	6			
	7		17	
-50	8			
	4			
	7		21	
-55	9			
	5			
	8		21	
-60	9			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				SAND: brown, wet, medium dense, with traces of gravel (USCS - Poorly Graded Sand, SP) *(continued)*
	7			
-65	10		19	
	9			
	11			
	13		16	
-70	9			
	7			
	11		19	
-75	15			
	10			
	13		20	
-80	12			
468.00				End of boring

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)

VEENSTRA & KIMM INC. Springfield, IL. Phone: (217)544-8033 IL. Design Firm No. 184-001939	USER NAME = _____	DESIGNED - KES	REVISED - _____	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
		CHECKED - VVR	REVISED - _____	
	PLOT SCALE = _____	DRAWN - JRP	REVISED - _____	
	PLOT DATE = March 23, 2023	CHECKED - TRC	REVISED - _____	

BORING LOG - SB - 2
STRUCTURE NO. 036 - 0074
SHEET NO. 32 OF 37 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-2Q)BR	HENDERSON	86	62
		CONTRACT NO. 68989		
	ILLINOIS	FED. AID PROJECT		

Illinois Department of Transportation
Division of Highways
Terracon

SOIL BORING LOG

Date 3/17/20

ROUTE FAP 522 (Carman Road) DESCRIPTION Structure boring for bridge replacement LOGGED BY GS (Terracon)

SECTION (14-2Q)I LOCATION Carman Road over Dugout Creek, SEC. 15, TWP. 68N, RNG. 6W, 4th PM, Latitude 40°40'56"N, Longitude 91° 04'13"W

COUNTY Henderson DRILLING METHOD HSA to 24' then Mud Rotary HAMMER TYPE Automatic

STRUCT. NO. 036-3003 (EX) 036-0074 (PR)
Station 495+00

BORING NO. SB-3
Station 493+97
Offset 29.0 ft RT
Ground Surface Elev. 552.00 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 528.5 ft ▼
Upon Completion ft
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
FILL - SANDY CLAY LOAM: grayish brown, moist, with traces of sand and gravel (USCS - Sandy Lean Clay, CL)			
	3		
	4		17
	2		
- dark brown at 4 feet	4		
-5	10		14
	11	0.78	11
545.50			
CLAY LOAM: dark brown, moist, soft, with traces of sand and gravel (USCS - Lean Clay with Sand, CL)	1		
	1		28
	1	0.26	
	1		
-10	1		25
	1	0.25	
	2		
	3		15
	2	0.46	
	4		
-15	4		15
	3	0.32	
	2		
	2		20
534.00	2	0.16	
SAND: brown, moist, loose, with traces of gravel (USCS - Silty Sand, SM)			
	2		
-20	3		20

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
SAND: brown, moist, loose, with traces of gravel (USCS - Silty Sand, SM) *(continued)*			
	4		9
	4		
	5		8
	4		
▼			
- wet at 24 feet	1		
-25	1		19
	2		
	5		
	4		28
	4		
	4		
	4		27
-30	4		
	4		
	4		21
-35	4		
	3		
	4		26
512.00 -40	4		

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)

Illinois Department of Transportation
Division of Highways
Terracon

SOIL BORING LOG

Date 3/17/20

ROUTE FAP 522 (Carman Road) DESCRIPTION Structure boring for bridge replacement LOGGED BY GS (Terracon)

SECTION (14-2Q)I LOCATION Carman Road over Dugout Creek, SEC. 15, TWP. 68N, RNG. 6W, 4th PM, Latitude 40°40'56"N, Longitude 91° 04'13"W

COUNTY Henderson DRILLING METHOD HSA to 24' then Mud Rotary HAMMER TYPE Automatic

STRUCT. NO. 036-3003 (EX) 036-0074 (PR)
Station 495+00

BORING NO. SB-3
Station 493+97
Offset 29.0 ft RT
Ground Surface Elev. 552.00 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 528.5 ft ▼
Upon Completion ft
After Hrs. ft

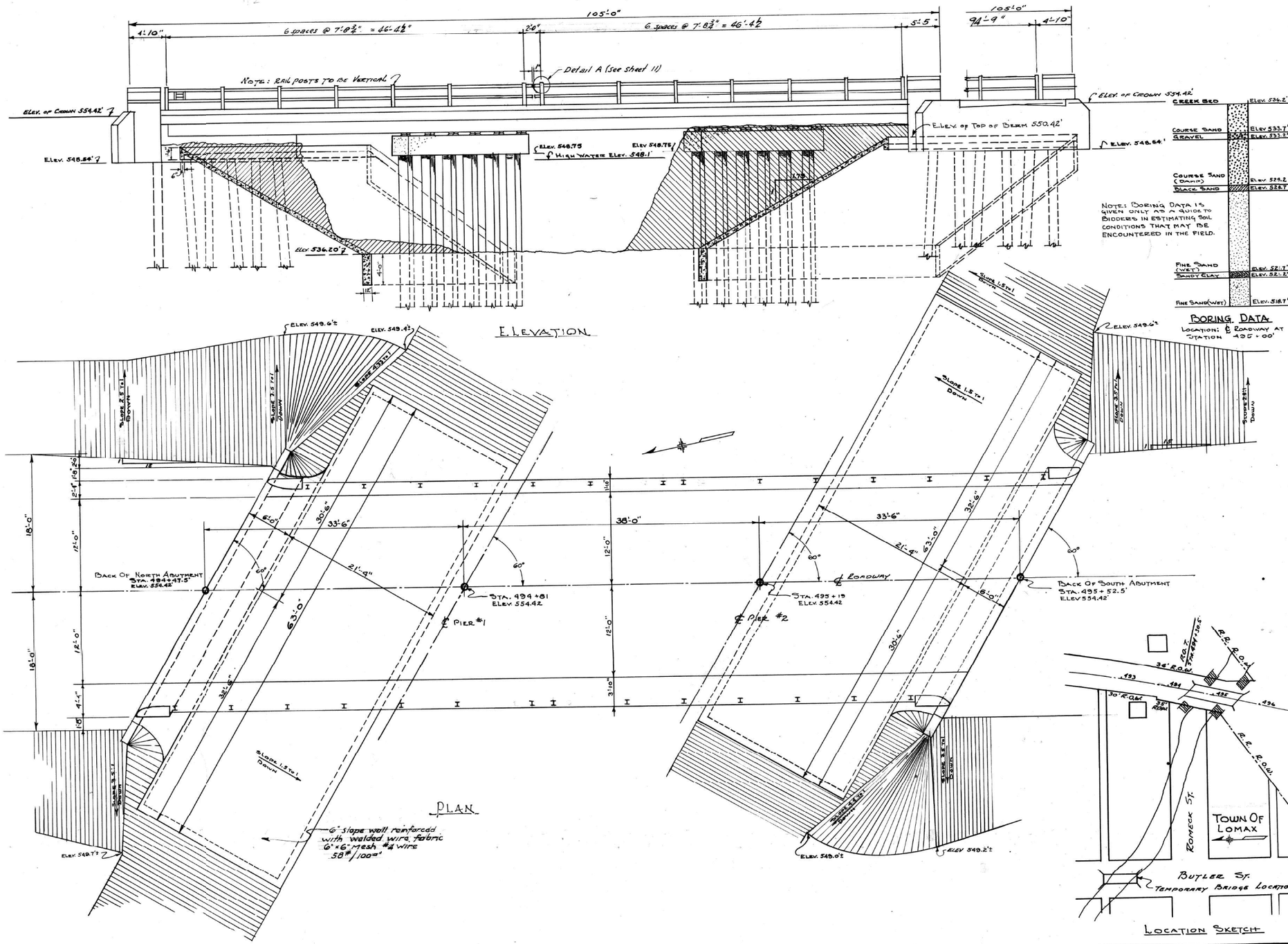
DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
SAND: brown, wet, loose, with traces of gravel (USCS - Silty Sand, SM)			
	3		
	3		26
-45	4		
	4		
	4		16
-50	5		
499.00			
SAND: brown, wet, medium dense, with traces of gravel (USCS - Poorly Graded Sand, SP)	6		
	10		16
-55	12		
	6		
	8		23
-60	9		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
SAND: brown, wet, medium dense, with traces of gravel (USCS - Poorly Graded Sand, SP) *(continued)*			
	4		
	6		19
-65	8		
	7		
	10		14
-70	11		
	10		
	11		22
-75	10		
	8		
	10		16
End of Boring 472.00 -80	11		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 418	14-2Q	Henderson	12	8
STA.	494+47.5		495+52.5	
PROJ. ROAD DIST. NO. 7	ILLINOIS	FAS PROJECT	S40(4)	



Boring Data

Location: ℄ Roadway at Station 495+00'

General Notes:

ALL CONCRETE SHALL BE CLASS X CONCRETE. THE FLOOR SLAB SHALL BE POURED IN ONE CONTINUOUS OPERATION BETWEEN CONSTRUCTION JOINTS INDICATED AND FINISHED IN ACCORDANCE WITH ART. 51.18(a) OF THE STAND. SPECS.

ALL CONNECTIONS SHALL BE RIVETED, EXCEPT AS NOTED. RIVETS SHALL BE 7/8" ϕ, AND HOLES 15/16" EXCEPT IN FLANGE SPLICE PL'S, WHERE RIVETS SHALL BE 7/8" ϕ AND HOLES 15/16" ϕ.

ALL SPLICES FOR STRINGERS SHALL HAVE RIVET HOLES PUNCHED 11/16" ϕ & REAMED TO PROPER SIZE, WITH ALL STRINGERS OF A CONTINUOUS UNIT ASSEMBLED IN THE SHOP IN THEIR PROPER POSITIONS, AND, WITH OR WITHOUT, DIAPHRAGMS IN PLACE, LEAVE ASSEMBLED FOR SHOP INSPECTION.

ALL ROLLERS, ROCKERS, BEARING PLATES, LEAD PLATES AND ANCHOR BOLTS SHALL BE FURNISHED PAINTED AND SET IN ACCORDANCE W/ ART. 51.14 OF THE STAND. SPEC'S, AND ARE INCLUDED FOR PAYMENT AS "STRUCTURAL STEEL"

STRUCTURAL STEEL SHALL RECEIVE ONE SHOP COAT OF RED LEAD PAINT AND TWO FIELD COATS OF ALUMINUM PAINT. ALL PAINT SHALL BE FURNISHED AND APPLIED BY CONTRACTOR.

THE CONTRACTOR SHALL DRIVE TWO TEST PILES, AS DIRECTED BY THE ENGINEER, BEFORE ORDERING OR CASTING THE REMAINDER OF THE PILES (TEST PILES TO BE IN PERMANENT LOCATION)

LAYOUT OF SLOPE WALLS MAY BE VARIED AS NECESSARY TO CONFORM TO GROUND SURFACE AFTER THE CHANNEL HAS BEEN EXCAVATED, IF SO DIRECTED BY ENGINEER.

ANCHOR BOLTS SHALL BE SET BEFORE RIVETING DIAPHRAGMS OVER ABUTMENTS AND PIERS.

CHANNEL TO BE EXCAVATED AS SHOWN AT RIGHT & LEFT OF BRIDGE ℄. EXCAVATED MATERIALS SHALL BE USED TO COMPLETE EMBANKMENTS AT SLOPE WALLS AND ABUTMENTS. THE REMAINDER BEING UTILIZED OR SPOILED AS MAY BE INDICATED ON ROAD PLANS.

INSPECT. OF STEEL STR. BY DEPT. OF ILL. HWYS. BEFORE PAINTING.

Waterway Information:

Drainage Area	13,000 Acres
Character	Hilly
Opening Req'd. For "C" = 0.5 (Talbot)	609 Sq.Ft.
Present Bridge Opening	665 Sq.Ft.
Proposed Bridge Opening (Below High Water)	610 Sq.Ft.

Design Data: H-15-44

Steel Design: Tension in member subjected to bending; 18,000 P.S.I.
Compression in member subjected to bending; 16,000 P.S.I.
Unit Shear in web of stringer; 11,000 P.S.I.
And as modified by Sec. 3-4.2 of A.A.S.H.O.

Concrete Design: f_s = 20,000 P.S.I.
f_c = 1,200 P.S.I.
n = 10

Bench Mark:

This existing bench mark is at the top of a spike in top of wing piling Rt. Sta. 495+50 Elev. 552.08 Engineer will transfer to convenient location.

Existing & Temporary Bridge

3 spans 12', 24', & 24' with creosoted timber abutment at one end, steel handrail, wooden deck, steel treads, 17 creosoted piling, 16-12" I x 24' & 15 0'I x 12' Existing bridge to be removed. Materials from existing bridge to be used to construct a temporary bridge in location shown. Any material needed other than that at existing bridge shall be included in the unit price for the temporary bridge. Suitable approaches shall also be included in unit price. Upon completion of project all materials from the existing bridge shall be salvaged and stored at the bridge site pending removal by the County Supt. of Highways.

FOR INFORMATION ONLY

VEENSTRA & KIMM INC. Springfield, IL. Phone: (217)544-8033 IL. Design Firm No. 184-001939	USER NAME = _____	DESIGNED - KES	REVISED - _____	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
		CHECKED - VVR	REVISED - _____	
	PLOT SCALE = _____	DRAWN - JRP	REVISED - _____	EXISTING STRUCTURE PLANS STRUCTURE NO. 036-0074
	PLOT DATE = March 23, 2023	CHECKED - TRC	REVISED - _____	SHEET NO. 34 OF 37 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-2Q)BR	HENDERSON	86	64
			CONTRACT NO. 68989	
		ILLINOIS	FED. AID PROJECT	

MODEL: 68989-064
FILE NAME: Z:\2010 Jobs\IDOT\010-032b CADD\CADD Sheets\010-032b-sht-structure.dgn
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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 418	14-2-Q	Henderson	12	9
STA.		TO STA.		
FED. ROAD DIST. NO. 7	ILLINOIS	FAS PROJECT	S40 (4)	

BAR SCHEDULE

R. Mk.	No. Pcs.	Size	Length	Type	Diagram Dimensions	A	B	C	Location
R1	20	#7	31'-0"	Straight	31'-0"	—	—	—	Piers
R2	62	#4	2'-5½"	4	8'-10"	2'-1"	2'-5"	3"	"
R3	16	#6	5'-6"	5	13'-0"	5'-6"	2'-0"	—	"
R4	72	#4	4'-0"	Straight	4'-0"	—	—	—	Abmn't Wall
R5	6	#4	36'-0"	Straight	36'-0"	—	—	—	Abmn't Wall
R6	72	#4	3'-5"	4	11'-6"	3'-5"	2'-1"	3"	Abumn't
R7	14	#7	35'-0"	Straight	35'-0"	—	—	—	" "
R8	16	#6	6'-6"	6	17'-0"	6'-6"	4'-0"	—	" "
R9	28	#4	5'-9"	Straight	5'-9"	—	—	—	Wing Wall
R10	8	#4	5'-3"	Straight	5'-3"	—	—	—	" "
R11	8	#4	4'-6"	Straight	4'-6"	—	—	—	" "
R12	40	#4	5'-0"	Straight	5'-0"	—	—	—	" "

Note: Does not include end posts

Type 4 Type 5 Type 6 BAR 60° TYPES

PLAN

ELEVATION

DETAILS OF PIERS.

SECTION AA

12"Φ CREOSOTED TIMBER PILES
19 Ton - Estimated Lgth. 32'
No Req'd 13

DETAILS OF PRECAST CONCRETE PILES
No Req'd 11

PLAN

SECTION BB

ELEVATION

DETAILS of ABUTMENTS
North Abutment as shown
South Abutment opposite hand

DETAILS OF RAILPOST SEC. C

FOR INFORMATION ONLY

VEENSTRA & KIMM INC.
Springfield, IL. Phone: (217)544-8033
IL. Design Firm No. 184-001939

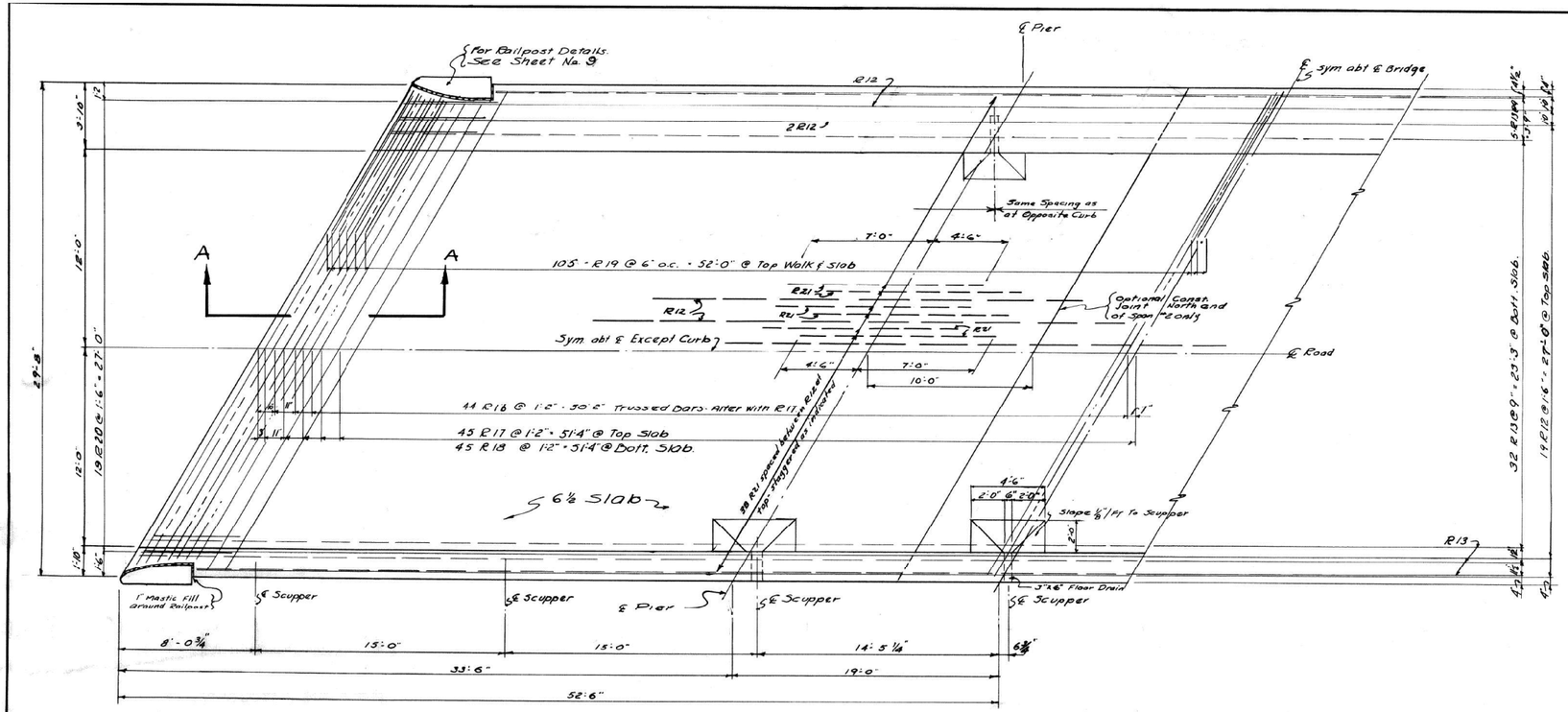
USER NAME =	DESIGNED - KES	REVISED -	
	CHECKED - VVR	REVISED -	
PLOT SCALE =	DRAWN - JRP	REVISED -	
PLOT DATE = March 23, 2023	CHECKED - TRC	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

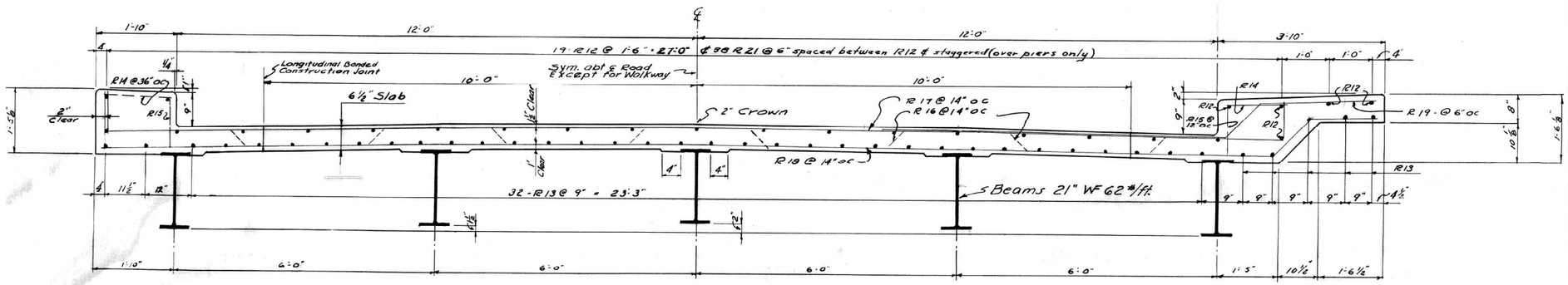
EXISTING STRUCTURE PLANS
STRUCTURE NO. 036-0074
SHEET NO. 35 OF 37 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-2Q)BR	HENDERSON	86	65
			CONTRACT NO. 68989	
		ILLINOIS	FED. AID PROJECT	

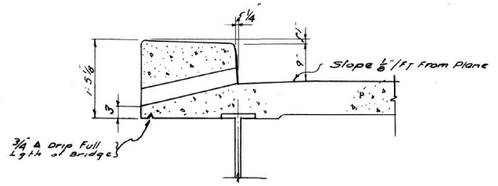
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 418	14-2-Q	Henderson	12	10
STA.				
FED. ROAD DIST. NO. -	ILLINOIS	FAS PROJECT	S40(4)	



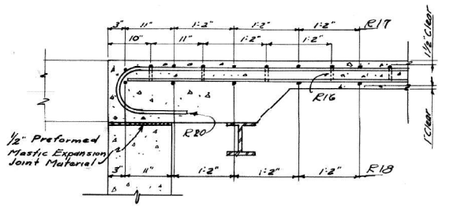
HALF PLAN of BRIDGE SLAB



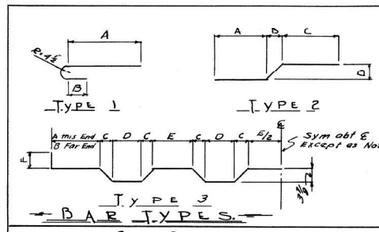
CROSS SECTION OF BRIDGE



TYPICAL SECTION SHOWING CURB & FLOOR DRAIN.



SECTION AA



BAR TYPES.

BAR SCHEDULE

Bar Mk.	No. Pcs	Size	Cutting Length	Type	Stock Length	A	B	C	D	E	F	Location
R12	75	#5	36'-3"	Straight	36'-3"	–	–	–	–	–	–	Top Slab Lgt.
R13	117	#4	36'-3"	Str.	36'-3"	–	–	–	–	–	–	Bott. Slab Lgt.
R14	70	#4	1'-5"	Str.	1'-5"	–	–	–	–	–	–	Top Walk & Curb
R15	200	#4	1'-2"	Str.	1'-2"	–	–	–	–	–	–	Walk & Curb
R16	90	#5	31'-6⅝"	3	34'-0¾"	33½"	33¾"	4½"	3'-4"	2½"	9"	Truss Bar Lgt. Slab
R17	92	#5	31'-6¾"	Str.	31'-6¾"	–	–	–	–	–	–	Top Slab
R18	92	#5	23'-10⅛"	2	24'-1"	24'-0"	23⅞"	1'-0"	10½"	–	–	Bott. Slab Lgt.
R19	210	#6	14'-0"	2	14'-3⅜"	14'-0"	13⅞"	10½"	3'-1"	9"	–	Top Walk
R20	38	#5	4'-4½"	1	5'-10"	4'-0"	5"	–	–	–	–	End Slab
R21	76	#6	11'-6"	Str.	11'-6"	–	–	–	–	–	–	Top Slab at Piers

FOR INFORMATION ONLY

VEENSTRA & KIMM INC. Springfield, IL. Phone: (217)544-8033 IL. Design Firm No. 184-001939	USER NAME =	DESIGNED - KES	REVISED -
		CHECKED - VVR	REVISED -
	PLOT SCALE =	DRAWN - JRP	REVISED -
	PLOT DATE = March 23, 2023	CHECKED - TRC	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
STRUCTURE NO. 036-0074
SHEET NO. 36 OF 37 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-2Q)BR	HENDERSON	86	66
		CONTRACT NO. 68989		
	ILLINOIS	FED. AID PROJECT		

MODEL: 68989-066
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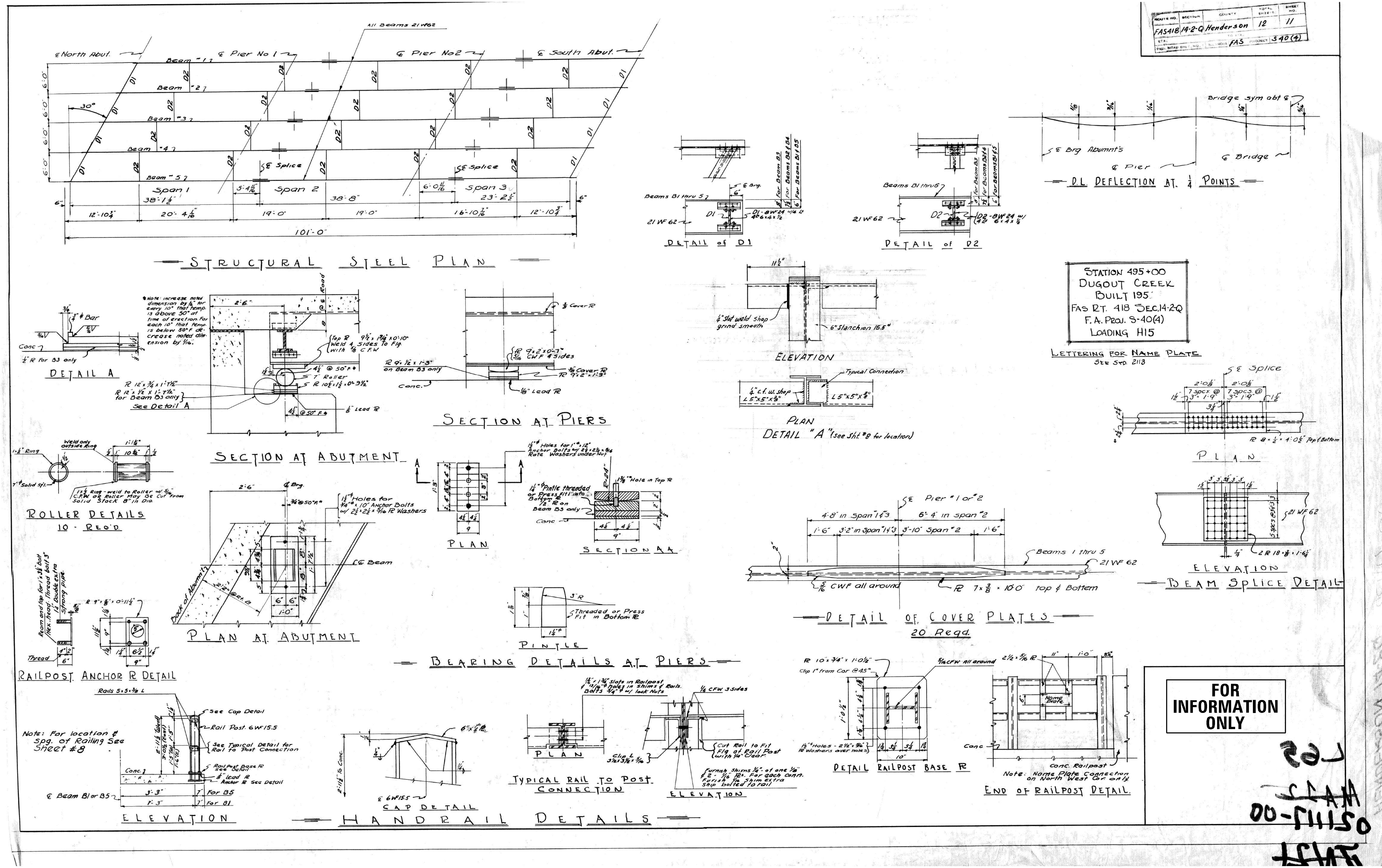


MODEL: 68989-067
FILE NAME: Z:\2010 Jobs\IDOT\010-032b CADD\CADD Sheets\010-032b-sht-structure.dgn

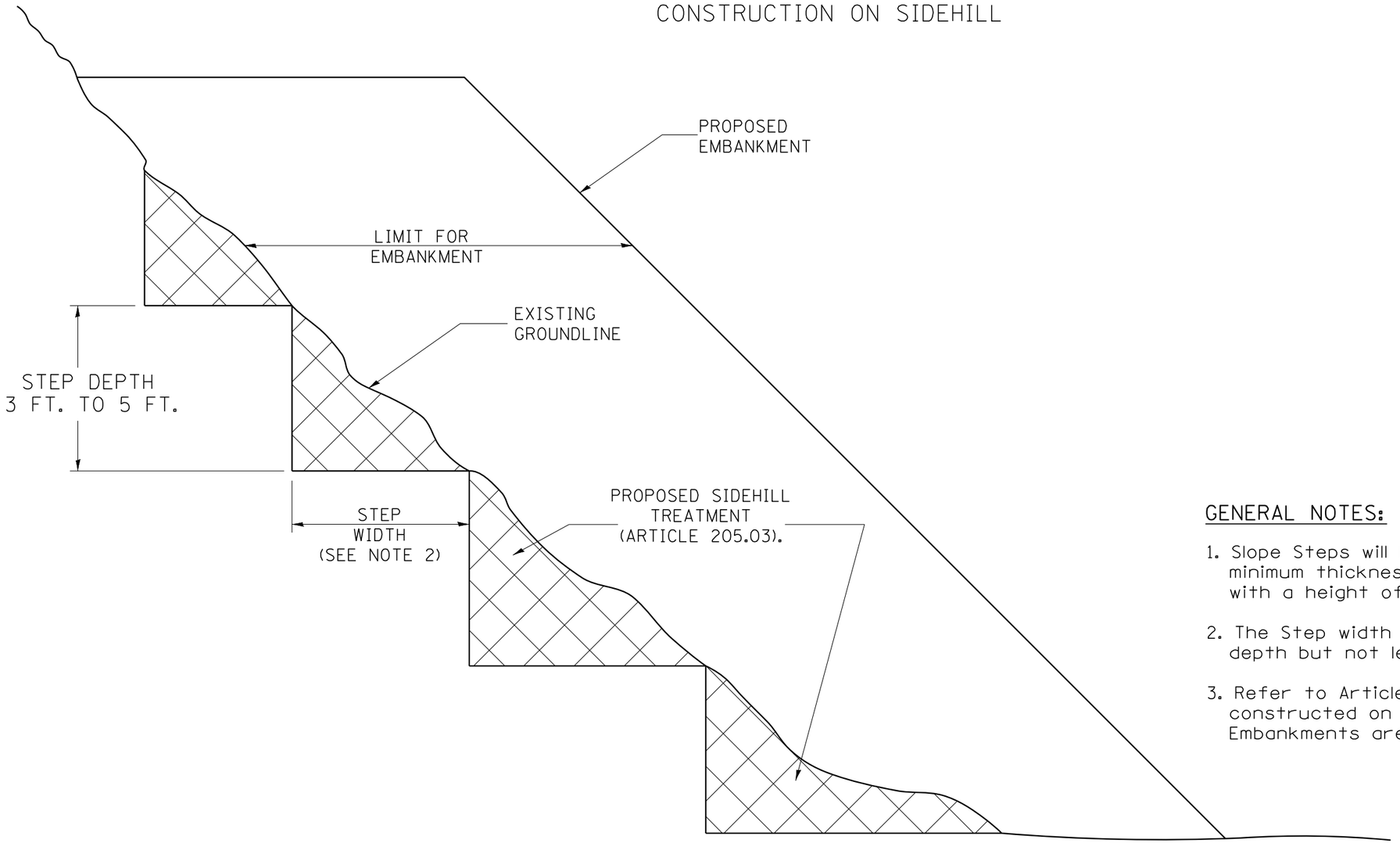
VEENSTRA & KIMM INC. Springfield, IL. Phone: (217)544-8033 IL. Design Firm No. 184-001939	USER NAME =	DESIGNED - KES	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING STRUCTURE PLANS STRUCTURE NO. 036-0074
		CHECKED - VVR	REVISED -		
	PLOT SCALE =	DRAWN - JRP	REVISED -		
	PLOT DATE = March 23, 2023	CHECKED - TRC	REVISED -		SHEET NO. 37 OF 37 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-2Q)BR	HENDERSON	86	67
		CONTRACT NO. 68989		
		ILLINOIS	FED. AID PROJECT	

3/24/2023 8:56:36 AM

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 all 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.

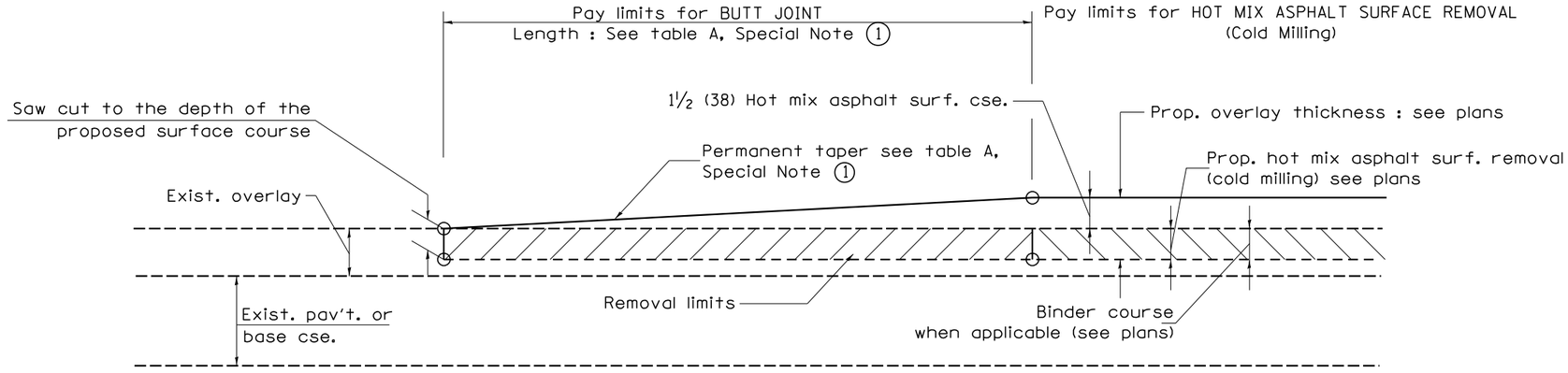
REPLACEMENT MATERIAL:

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

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

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

1-1-97	RENUM. L-5.03, NEW REVISION BOX, REVISED TITLE	T.P.				STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SLOPE STEPS DETAIL	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	BOX, REVISED GENERAL NOTES.							522	(14-20)I	HENDERSON	83	67A
10-16-06	REVISED TO 2007 SPEC.	M.A.								CONTRACT NO. 68989		
5-30-18	MINOR CORRECTION	R.D.					NOT TO SCALE CADD STD. 205001-D4	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



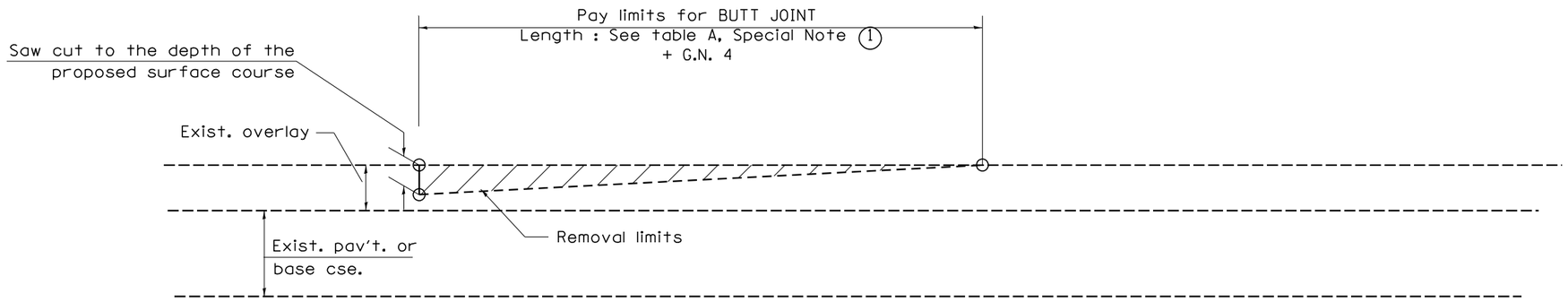
CASE 1 : WITH HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)

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.
5. Temporary ramps are paid for separately and not included in the cost of the butt joints.



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

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

01-01-97	RENUM. C-23.01, NEW REVISION BOX	T.P.
04-01-97	CORRECTION TO DEPTH	J.A.
09-15-05	REVISED DESIGNER NOTE	M.M.A.
10-16-06	REVISED TO 2007 SPEC.	M.A.
08-21-13	MAJOR MODIFICATIONS	R.D.
04-12-16	MINOR CORRECTIONS	R.D.
02-14-17	ADDED NOTE 5	R.D.
07-16-19	Wording and Spelling corrections	R.D.

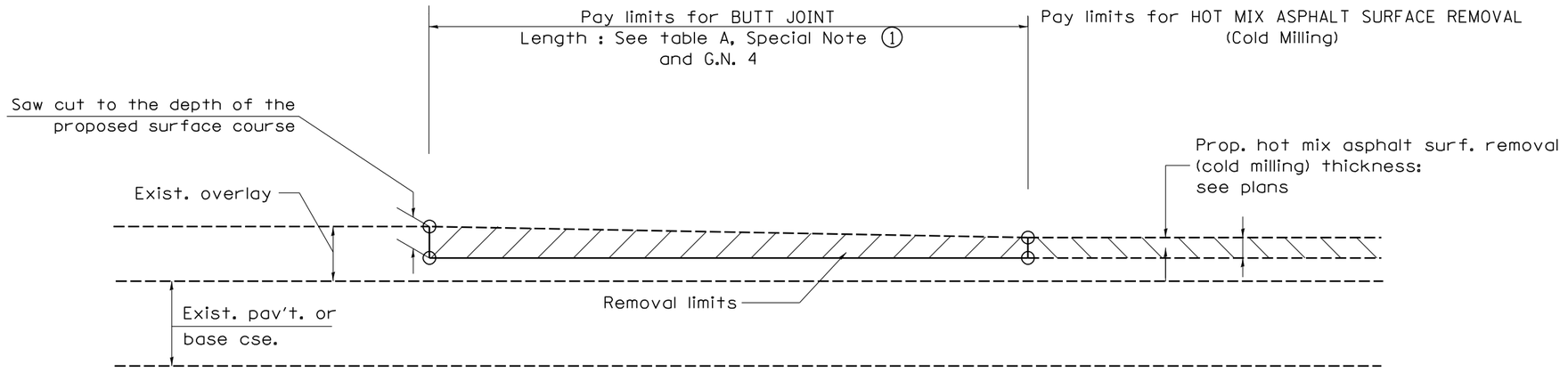
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NOT TO SCALE

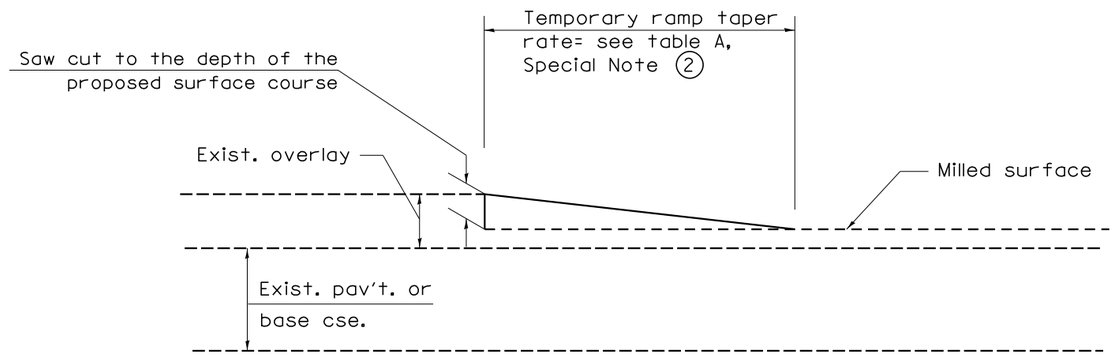
BUTT JOINTS

SHT. 1 OF 3
CADD STD. 406101-D4

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-20)BR	HENDERSON	86	68
		CONTRACT NO. 68989		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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



DETAIL TEMPORARY RAMP

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

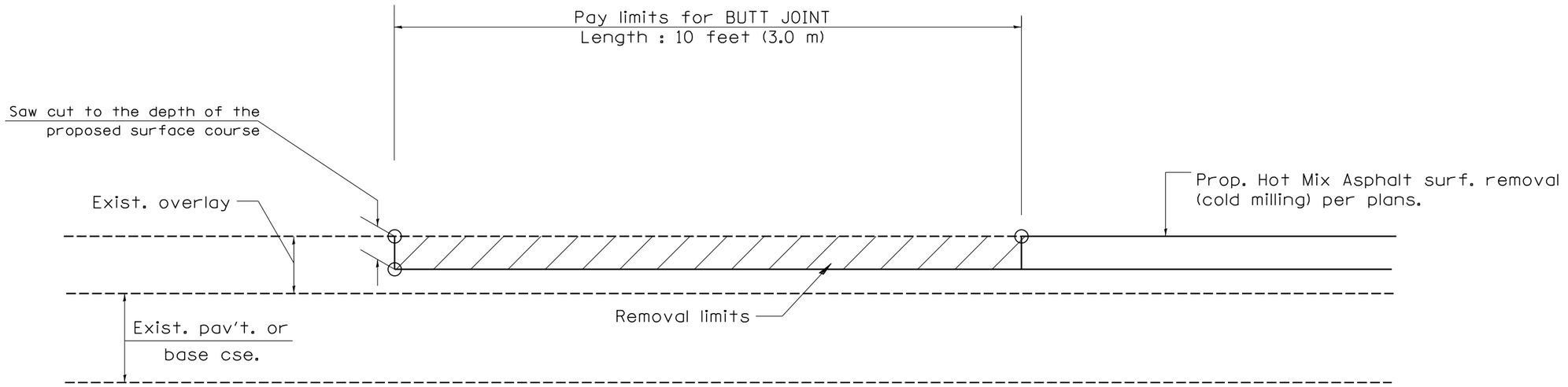
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BUTT JOINTS

NOT TO SCALE

SHT. 2 OF 3
CADD STD. 406101-D4

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-20)BR	HENDERSON	86	69
		CONTRACT NO. 68989		
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.

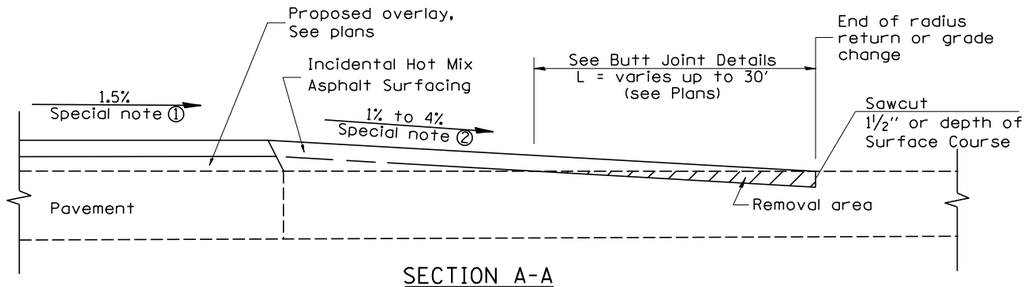
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BUTT JOINTS

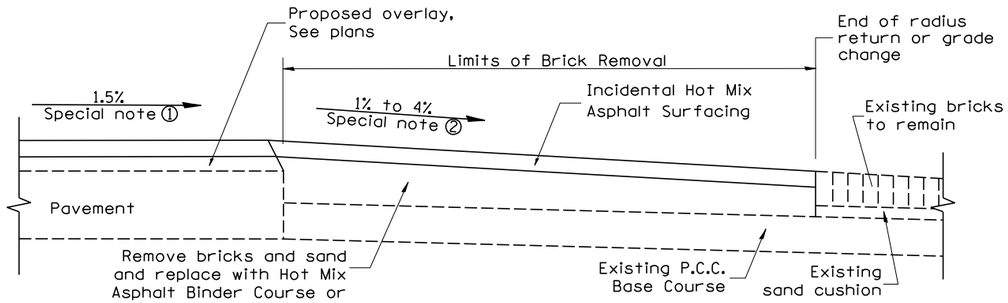
NOT TO SCALE

SHT. 3 OF 3
CADD STD. 406101-D4

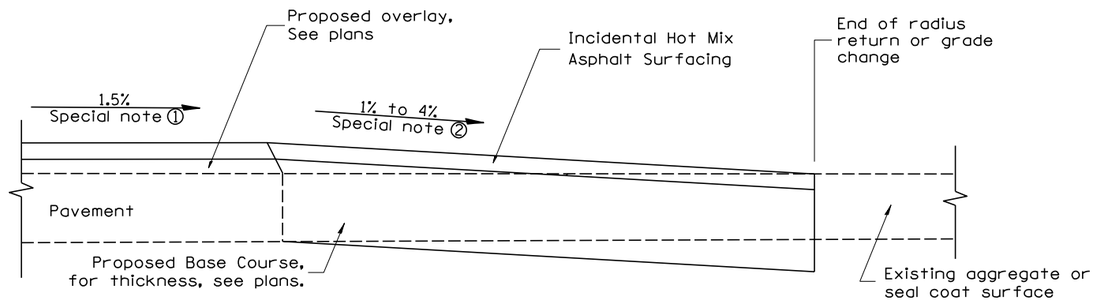
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-20)BR	HENDERSON	86	70
		CONTRACT NO. 68989		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



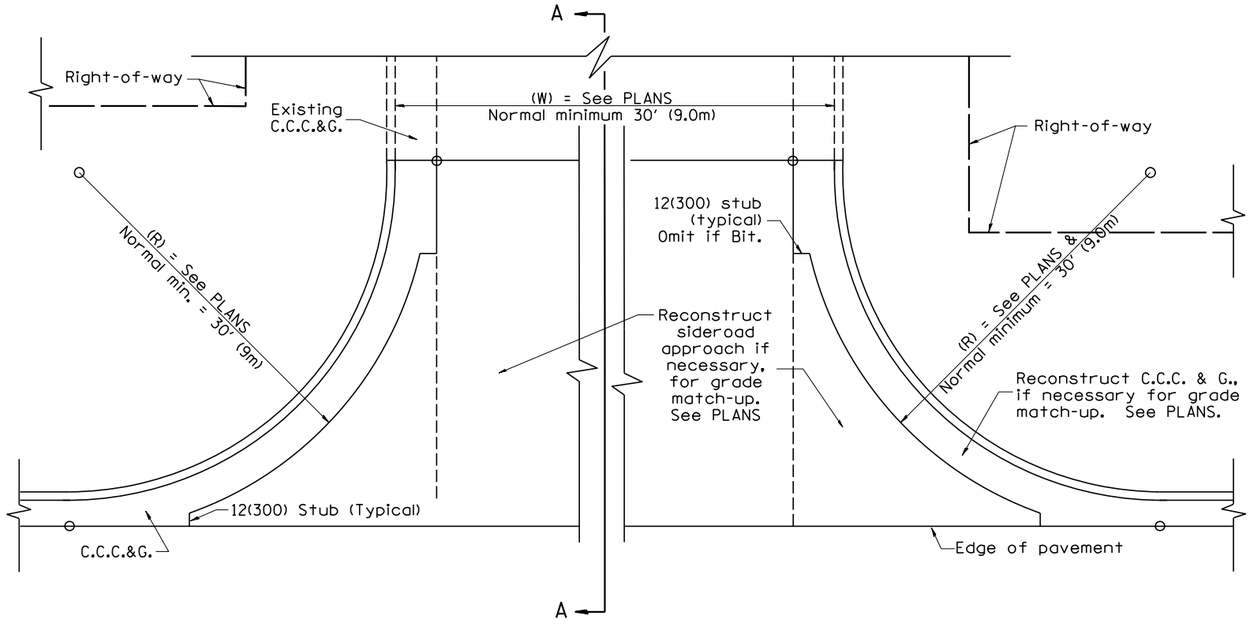
SECTION A-A
EXISTING PCC OR HOT MIX ASPHALT SIDEROAD



SECTION A-A
EXISTING BRICK SIDEROAD



SECTION A-A
EXISTING AGGREGATE OR SEALCOAT SIDEROAD



PLAN

SPECIAL NOTES

① The mainline pavement cross-slope is 1.5% for tangent alignment. See Plans for cross-slope on superelevated horizontal curves.

② The sideroad profile should drain away from the mainline at 1% to 4% for 50' (15.0m) to 100' (30.0m), or as a minimum to the end of the radius return. When the sideroad is on the high side of a mainline superelevated curve, - 2% maximum should be provided in order to minimize breakover at the pavement edge. See plans for sideroad profiles.

DESIGNER NOTES:
1. DESIGNER SHOULD CONSULT CHAPTER 49 OF THE BDE FOR 3R POLICY.
2. DESIGNER SHOULD REVIEW CHAPTER 38 FOR ADA
3. STATE STANDARD 424001 SHOULD BE INCLUDED IN THE PLANS TO SUPPLEMENT THIS DRAWING, IF SIDEWALKS ARE TO BE CONSTRUCTED INITIALLY.
4. THIS CADD STANDARD IS FOR 3R PROJECTS AND NOT INTENDED FOR SMART OR 3P.

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

01-01-97	RENUM. C-105.01, NEW REVISION BOX	T.P.	02-14-17	MINOR REVISIONS	R.D.
07-01-97	REVISE DESIGNER NOTES	J.A.			
09-15-05	REVISED DESIGNER NOTE	M.M.A.			
10-16-06	REVISED TO 2007 SPEC.	M.A.			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

URBAN SIDEROADS FOR "3R" PROJECTS

NOT TO SCALE — CADD STD. 406501-D4

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-20)BR	HENDERSON	86	71
		CONTRACT NO. 68989		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

DESIGNER NOTES:
1. DESIGNER SHOULD REVIEW "HANDBOOK FOR THE POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS" 1:1 FLARES ARE RECOMMENDED FOR CURBLINE SIDEWALKS.
2. DESIGNER SHOULD REVIEW CHAPTER 58 OF BDE FOR THE ADA REQUIREMENTS.
3. INCLUDE STATE STANDARD 606001 AND APPLICABLE SIDEWALK STANDARDS.

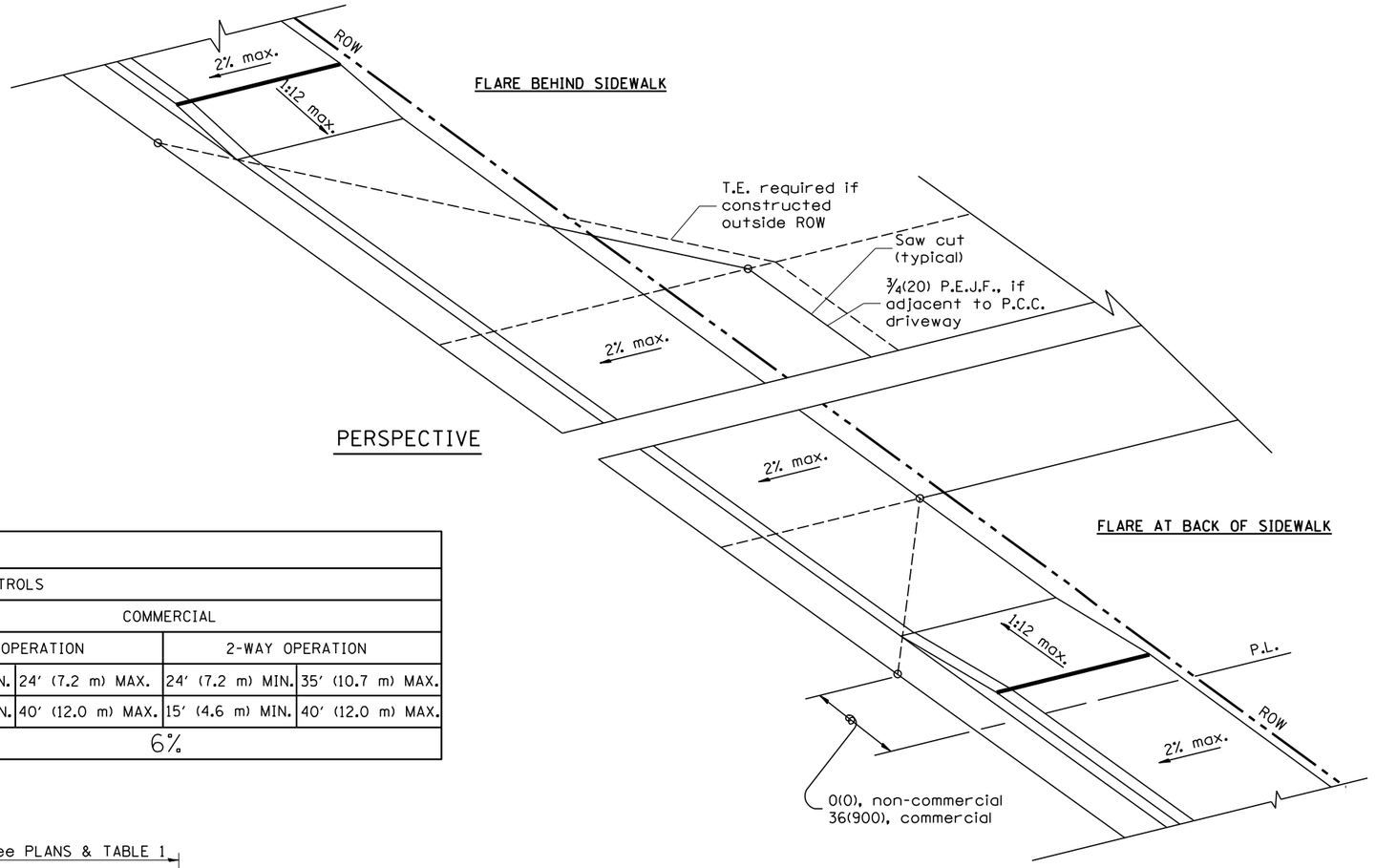
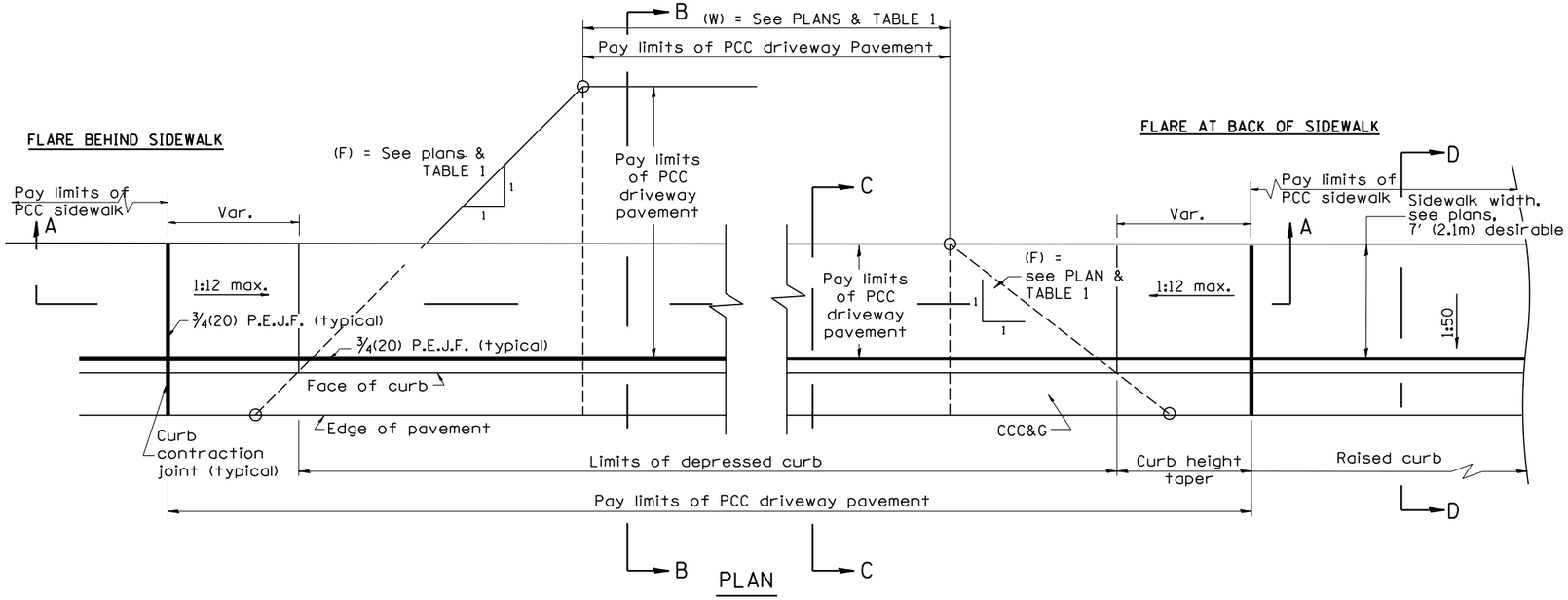


TABLE 1						
URBAN ENTRANCE DESIGN CONTROLS						
ELEMENT	NON-COMMERCIAL		COMMERCIAL			
			1-WAY OPERATION		2-WAY OPERATION	
WIDTH (W)	12′ (3.6 m) MIN.	24′ (7.2 m) MAX.	14′ (4.3 m) MIN.	24′ (7.2 m) MAX.	24′ (7.2 m) MIN.	35′ (10.7 m) MAX.
RADIUS EQUIVALENT 1:1 FLARE (F)	5′ (1.5 m) MIN.	25′ (7.6 m) MAX.	15′ (4.6 m) MIN.	40′ (12.0 m) MAX.	15′ (4.6 m) MIN.	40′ (12.0 m) MAX.
MAX. GRADE (G)	8%		6%			



GENERAL NOTES

1. The sidewalk area located within the pay limits of P.C.C. Driveway Pavement will be of the same thickness and construction as the P.C.C. Driveway Pavement.
2. Combination Concrete Curb & Gutter shall be depressed in accordance with Standard 606001.
3. Exceptions to the radius flare/property line relationship are as shown in the plans for common entrances, with jointly executed access permits.
4. Refer to State Standard 424026 for detectable warnings at busy commercial entrances.

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

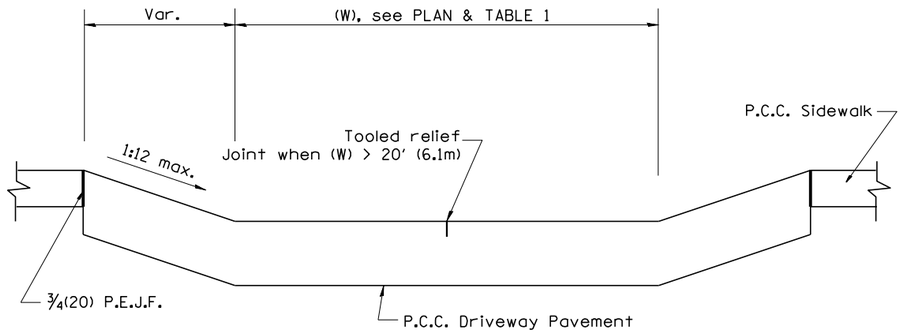
01-01-97	RENUM. C-103.02, NEW REVISION BOX.	T.P.	03-15-12	REMOVED HATCHING ON RAMPS	R.D.
	REVISED GENERAL NOTES				
09-15-05	REVISED DESIGNER NOTE	M.M.A.			
10-16-06	REVISED TO 2007 SPEC.	M.A.			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

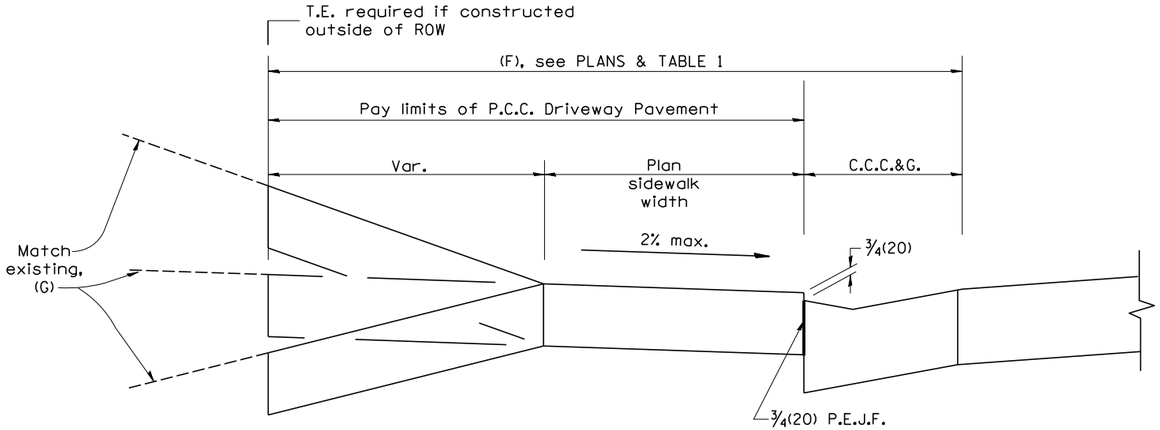
URBAN ENTRANCES, ACCESSIBLE TO THE DISABLED, FOR CURBLINE SIDEWALKS

SHT. 1 OF 2
NOT TO SCALE
CADD STD. 423101-D4

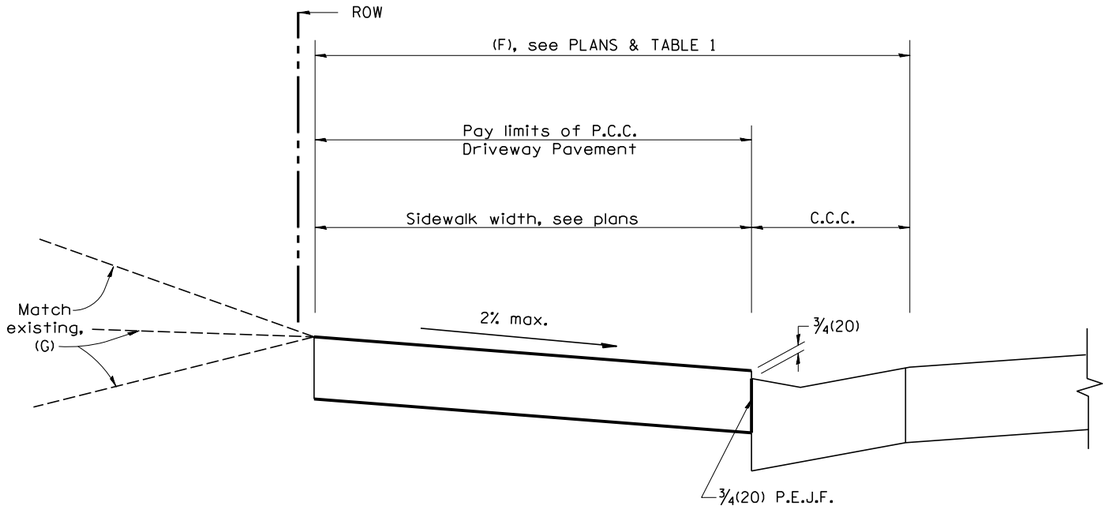
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-20)BR	HENDERSON	86	72
		CONTRACT NO. 68989		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



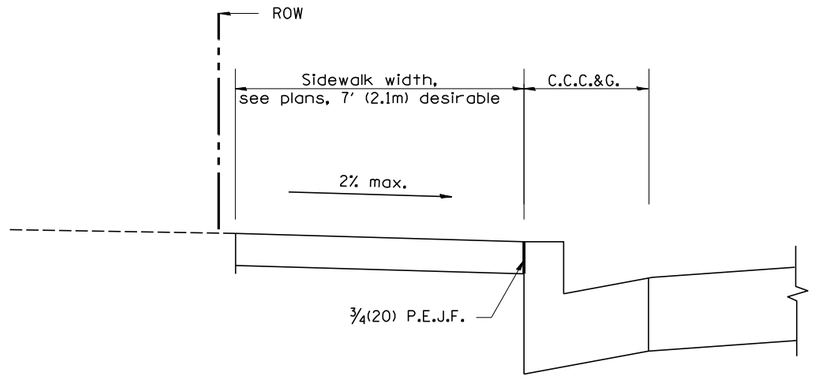
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

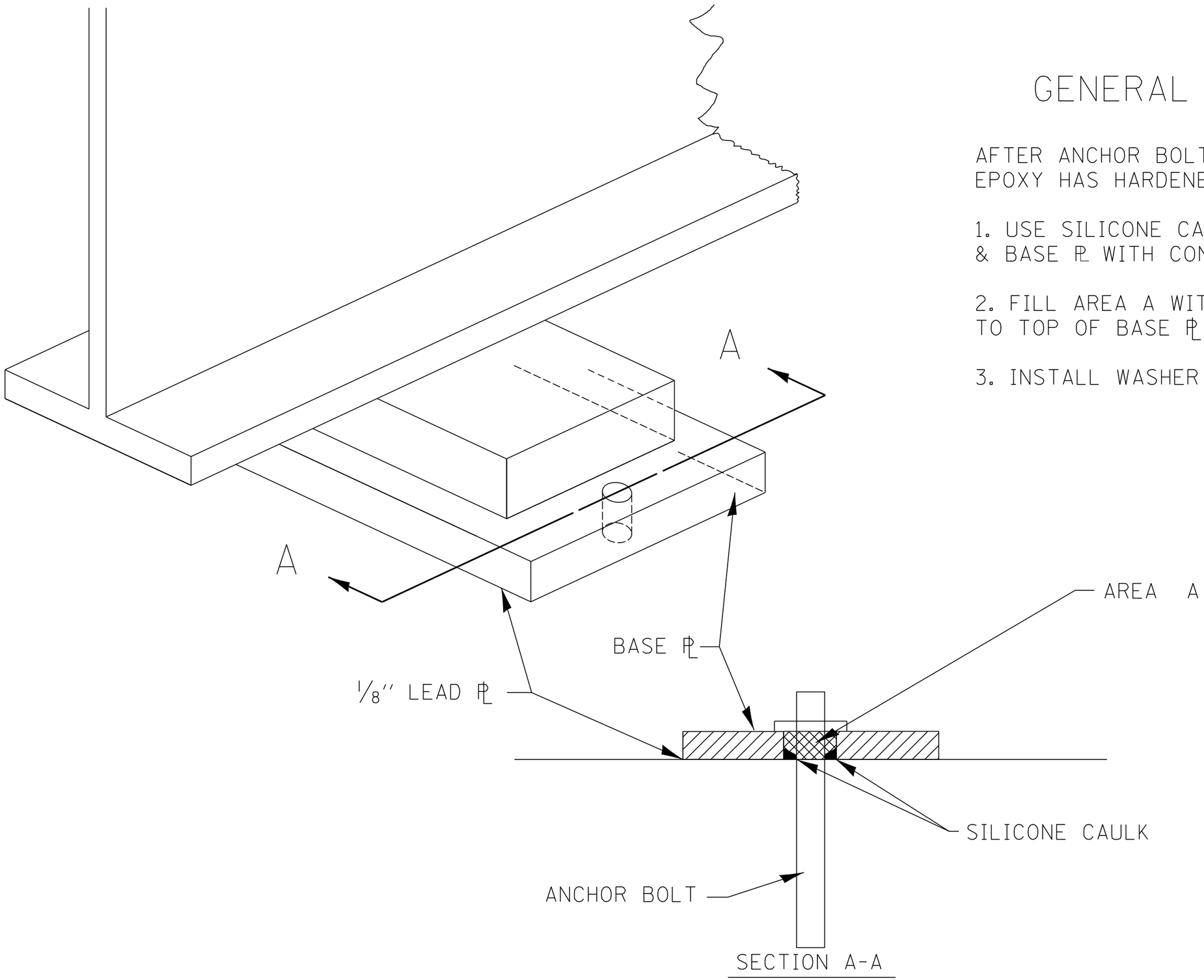
URBAN ENTRANCES, ACCESSIBLE TO THE DISABLED, FOR CURBLINE SIDEWALKS

SHT. 2 OF 2

NOT TO SCALE

CADD STD. 423101-D4

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-20)BR	HENDERSON	86	73
		CONTRACT NO. 68989		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



SECTION A-A

GENERAL NOTES

AFTER ANCHOR BOLT IS INSTALLED & EPOXY HAS HARDENED

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

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

3. INSTALL WASHER & NUT

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

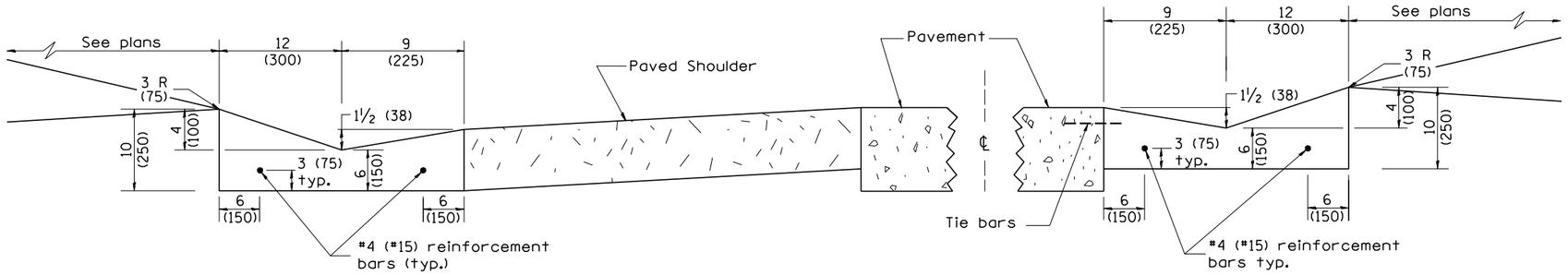
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEARING PLATE DETAIL

NOT TO SCALE

CADD STD. 505001-D4

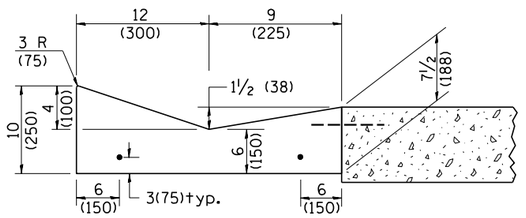
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-20)BR	HENDERSON	86	74
		CONTRACT NO. 68989		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



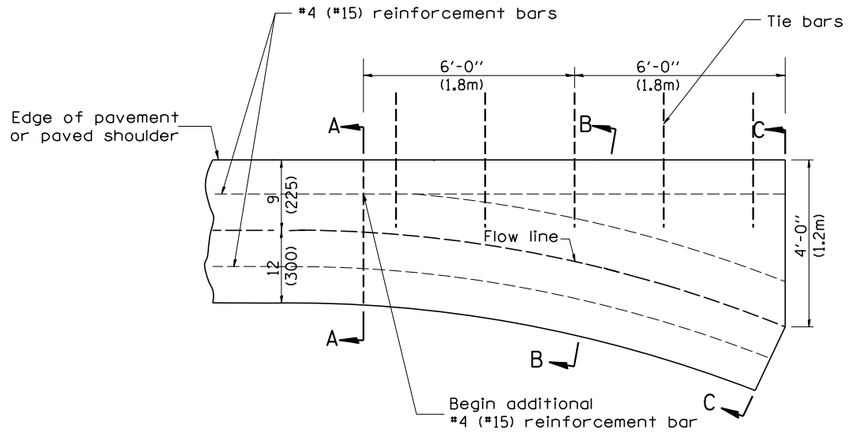
SHOULDER EDGE GUTTER

PAVEMENT EDGE GUTTER

CONCRETE GUTTER, TYPE B, (SPECIAL)



SECTION A-A

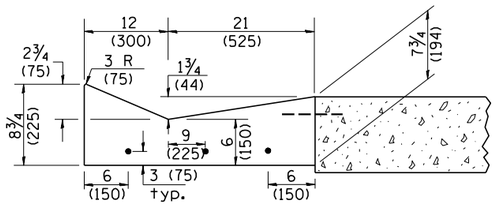


PLAN

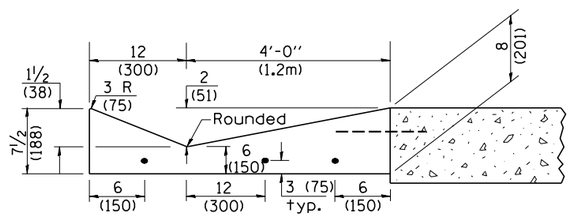
QUANTITY
Section C-C to A-A=
0.73 cu. yd. concrete.

GENERAL NOTES:

1. CONCRETE GUTTER, TYPE B (SPECIAL) shall conform to the the applicable portions of Section 606.
2. Tie bars shall be No. 6x24 (No. 19x600) at 36" (900mm) centers unless otherwise shown.
3. Gutter, gutter inlets, gutter outlets, and gutter entrances shall be tied to rigid pavement in accordance with details shown on Standard 420001.
4. Joints shall be constructed in accordance with Article 606.06.
5. Welded wire fabric shall conform to Article 1006.10(c)(1), and shall not be less than 58 lbs/100 sq.ft. (2.83 kg/m²).



SECTION B-B



SECTION C-C

QUANTITIES
CALC. BY: _____ DATE:
CHECKED BY: _____ DATE:
QUANTITY CALCULATIONS ARE ON FILE AT THE DISTRICT 4 OFFICE; BUREAU OF PROJECT IMPLEMENTATION; DOCUMENTATION SECTION

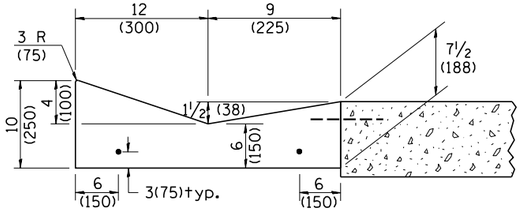
DESIGNER NOTES:
1. INCLUDE STATE std. 420001.

INLET

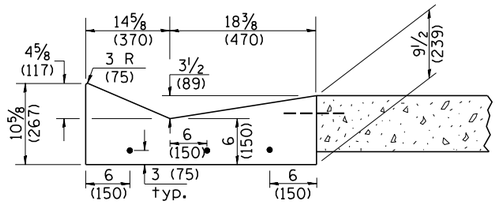
All dimensions are in inches (millimeters) unless otherwise noted.

01-01-97	RENUM. A-1.01, NEW REVISION BOX, ELIMINATED	T.P.	10-16-06	REVISED TO 2007 SPEC.	M.A.	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CONCRETE GUTTER, TYPE B, (SPECIAL) (INLET, OUTLET & ENTRANCE)
	EXPANSION ANCHOR TIES		11-16-07	REVISED QUANTITY	M.A.		
03-06-98	CORRECT DIMENSIONING	J.A.	02-15-11	CHANGED MODIFIED TO SPECIAL	R.D.		
03-10-06	REVISED QUANTITY	M.A.	01-31-18	REVISED TIE BAR SIZE & SPACING	R.D.		NOT TO SCALE SHT. 1 OF 3 CADD STD. 606201-D4

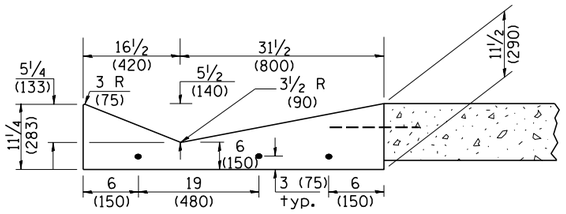
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-20)BR	HENDERSON	86	75
		CONTRACT NO. 68989		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



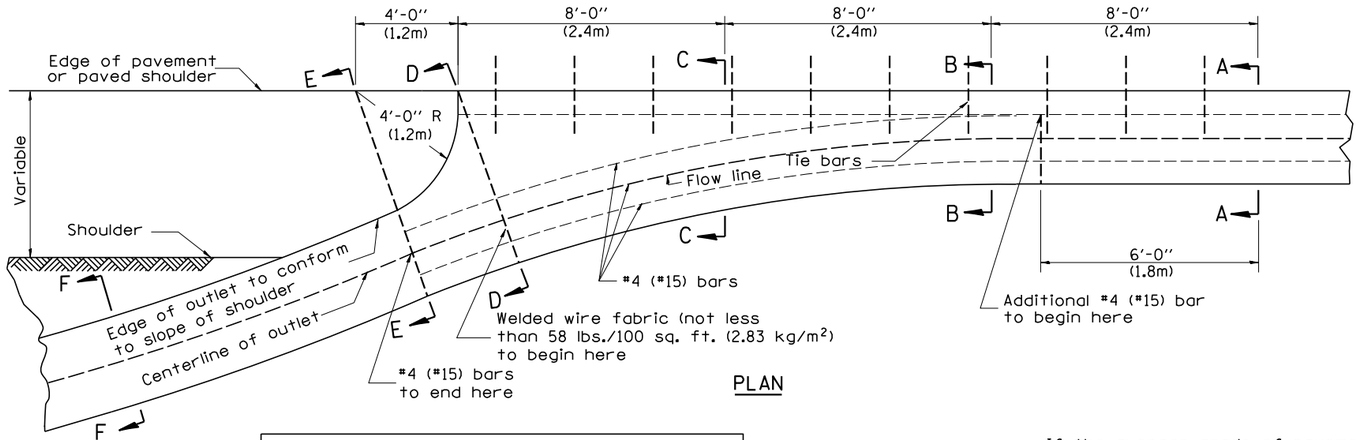
SECTION A-A



SECTION B-B



SECTION C-C

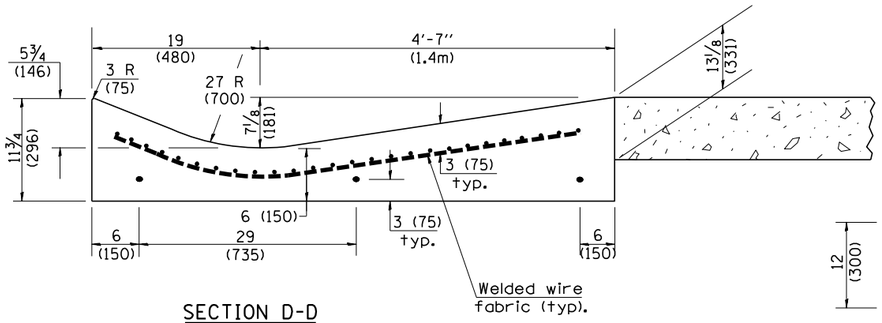


PLAN

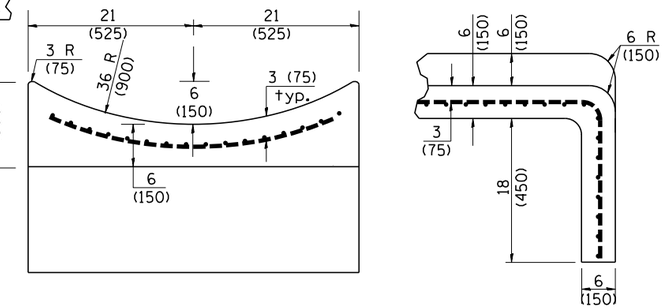
QUANTITY

Section A-A to E-E= 2.81 cu. yd. concrete.
Section E-E to F-F= 0.09 cu. yd./ft. concrete.

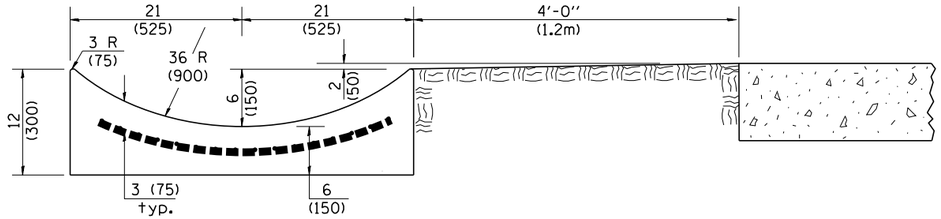
If the average grade of pavement for the distance from section A-A to section D-D exceeds 2%, this distance shall be increased 6 ft. (1.8m) for each 1% increase in grade. A quantity adjustment is required.



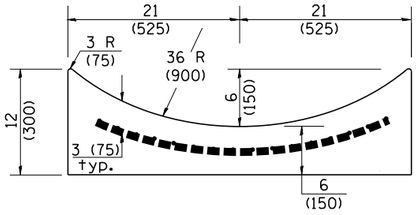
SECTION D-D



SECTIONS AT END OF OUTLET
(CURTAIN WALL)



SECTION E-E



SECTION F-F

QUANTITY

Curtain Wall =
0.1 cu. yd. concrete.

QUANTITIES

CALC. BY: _____ DATE:

CHECKED BY: _____ DATE:

QUANTITY CALCULATIONS ARE ON FILE AT THE DISTRICT 4 OFFICE; BUREAU OF PROJECT IMPLEMENTATION; DOCUMENTATION SECTION

OUTLET

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

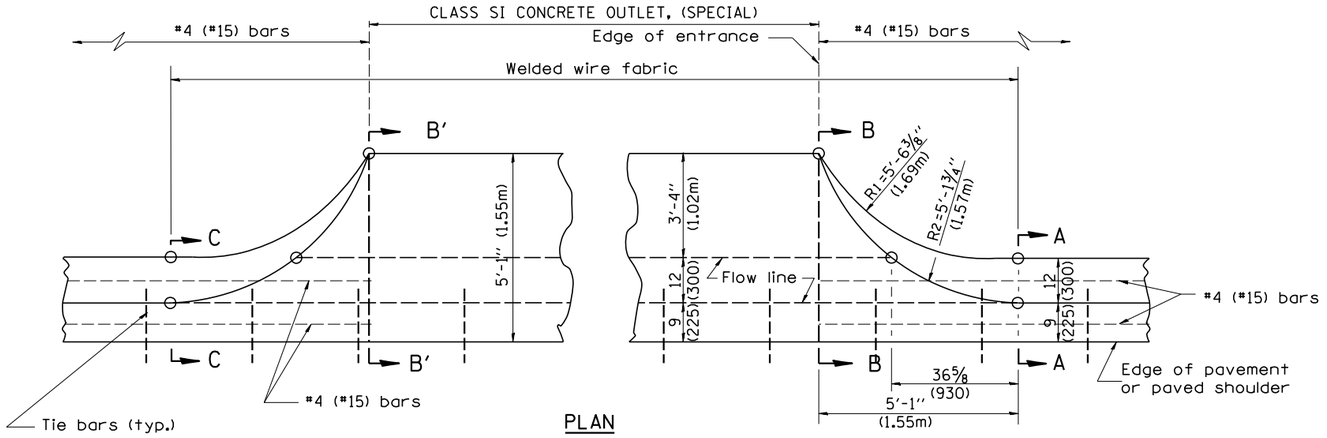
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CONCRETE GUTTER, TYPE B, (SPECIAL)
(INLET, OUTLET & ENTRANCE)

NOT TO SCALE

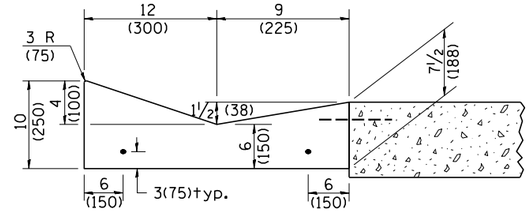
SHT. 2 OF 3
CADD STD. 606201-D4

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-20)BR	HENDERSON	86	76
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



PLAN

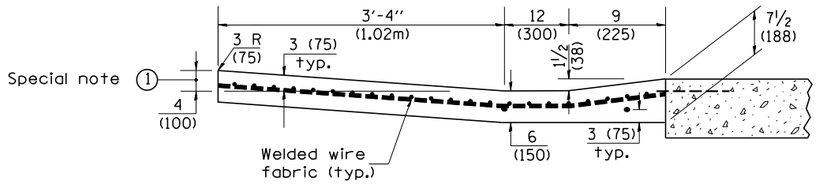
TYPICAL URBAN ENTRANCE



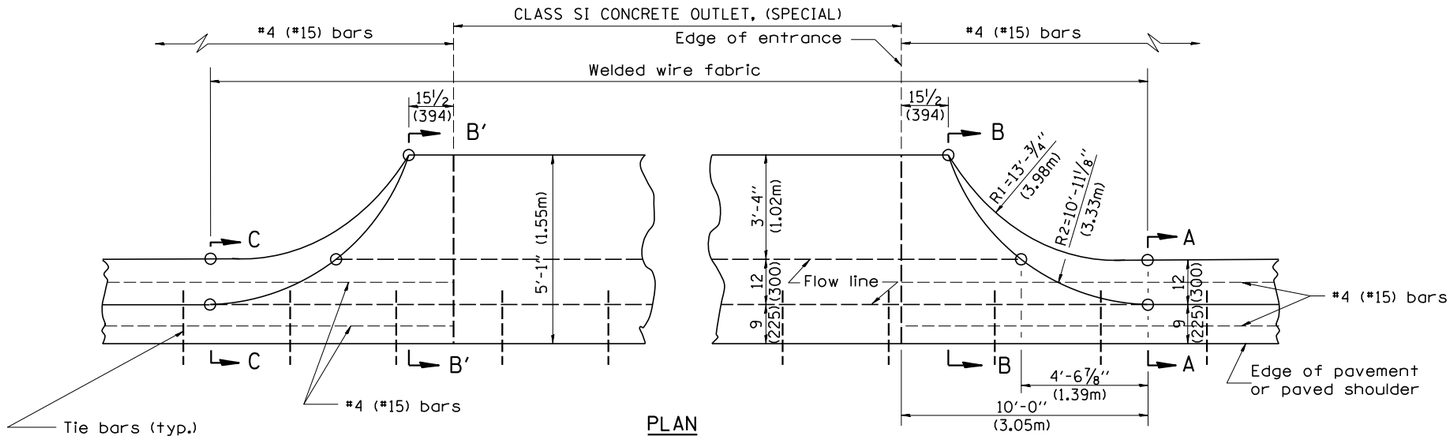
SECTION A-A & C-C

QUANTITY
URBAN ENTRANCE

Section B'-B' to B-B=
0.1 cu. yd./ft.
Section C-C to B'-B' + B-B to A-A=
0.69 cu. yd.



SECTION B-B & B'-B'



PLAN

TYPICAL RURAL ENTRANCE

QUANTITY
RURAL ENTRANCE

Section B'-B' to B-B=
0.1 cu. yd./ft.
Section C-C to B'-B' + B-B to A-A=
1.19 cu. yd.

SPECIAL NOTES:

(1) 4 (100) is the normal dimension. If specified in the plans, the following shall be used for improved entrance match-up: Minimum - 2 1/2 (65)
Maximum - 5 (125)

QUANTITIES
CALC. BY: _____ DATE:
CHECKED BY: _____ DATE:
QUANTITY CALCULATIONS ARE ON FILE AT THE DISTRICT 4 OFFICE; BUREAU OF PROJECT IMPLEMENTATION; DOCUMENTATION SECTION

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

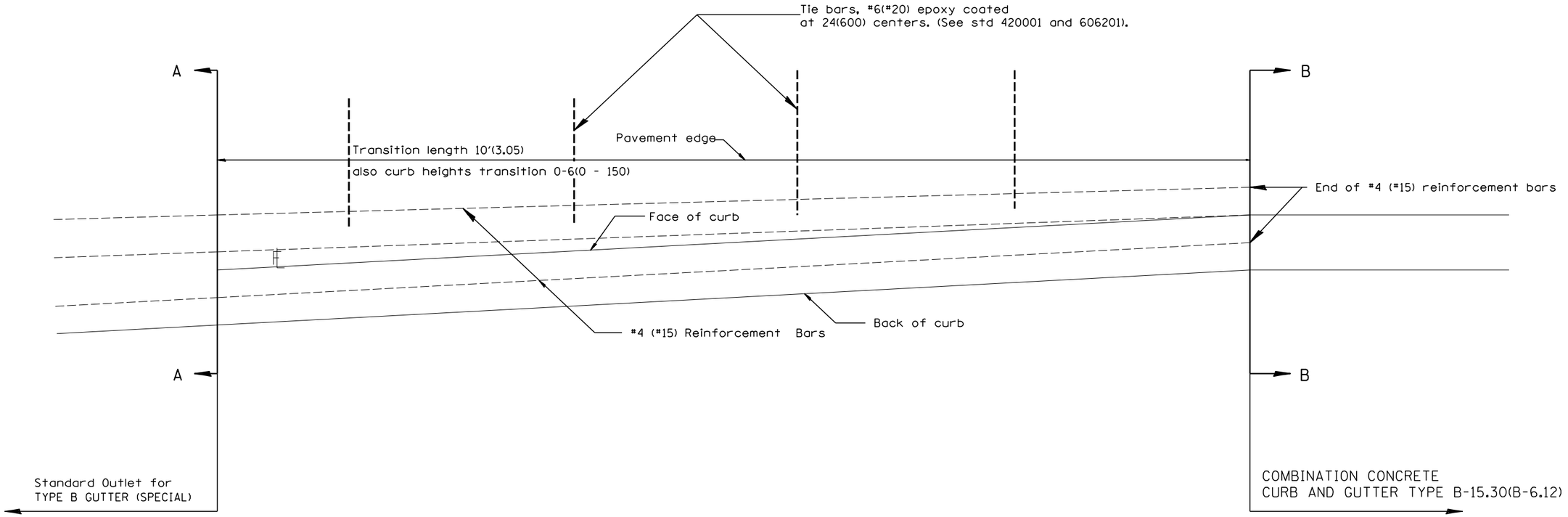
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

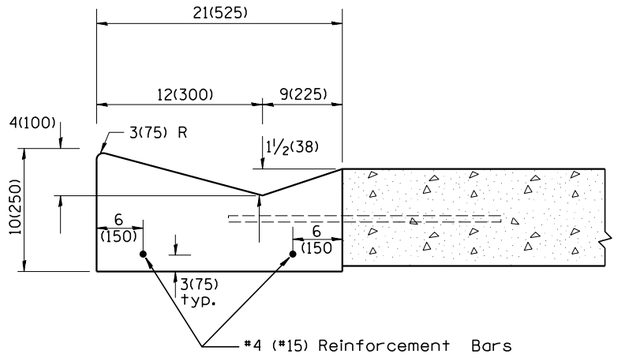
CONCRETE GUTTER, TYPE B, (SPECIAL)
(INLET, OUTLET & ENTRANCE)

NOT TO SCALE

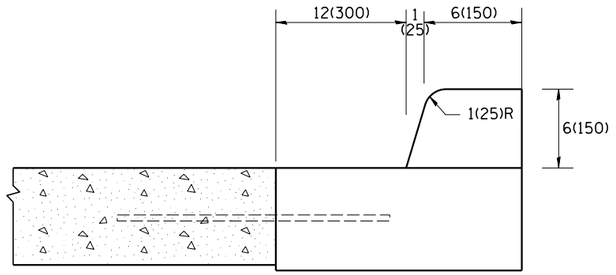
SHT. 3 OF 3
CADD STD. 606201-D4

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-20)BR	HENDERSON	86	77
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		





SECTION A - A



SECTION B - B

GENERAL NOTES:

1. Tie bars shall be constructed in accordance with details for BULKHEAD LONGITUDINAL CONSTRUCTION JOINT shown on Standard 420001.
2. Adjacent to sound existing p.c.c. pavement, tie bars shall installed in drilled holes in accordance with article 420.10(b).
3. Construction and expansion joints shall be installed in prolongation with joints in the pavement. Joint shall be constructed in accordance with the aplicable portion of Art. 606.06 of the Standard Specifications.

Designer Notes:
1. Use in conjunction with CAD DRAWING for Standard 606206, CONCRETE GUTTER TRANSITION (SPECIAL) outlet for CONCRETE GUTTER, TYPE B, (SPECIAL)
2. Include std 420001.
3. Pay item for Transitions is 60603200.

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

01-01-97	RENUM. A-7.11, METRICS, NEW REVISION BOX, REVISED	T.P.
	GENERAL NOTES, ELIMINATED EXPANSION TIE ANCHORS	
10-16-06	REVISED TO 2007 SPEC.	M.A.
02-15-11	CHANGED MODIFIED TO SPECIAL	R.D.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

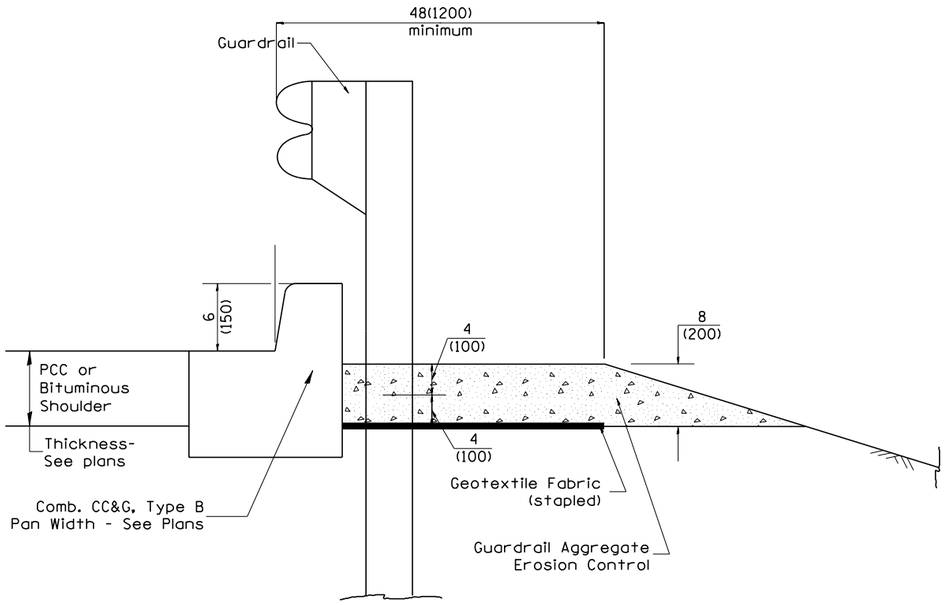
TRANSITION FROM CONCRETE CURB AND GUTTER TYPE B-6.12 (B-15.30) TO OUTLET FOR TYPE B GUTTER (SPECIAL)

NOT TO SCALE — CADD STD. 606206-D4

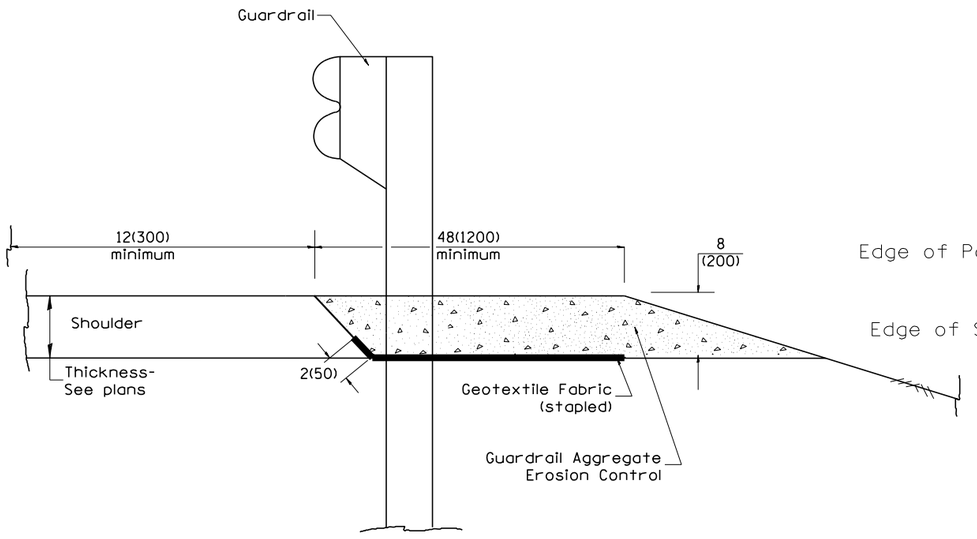
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-20)BR	HENDERSON	86	78
		CONTRACT NO. 68989		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

DESIGNER NOTES:

1. CONSIDER USING A "B" CURB PAY ITEM AT GUARDRAIL INSTALLATIONS WHERE GRADES ARE EQUAL TO OR GREATER THAN 1% AND AT INLETS. (INCLUDE DISTRICT SPECIAL PROVISION)
2. USE "GUARDRAIL AGGREGATE EROSION CONTROL" AT GUARDRAIL INSTALLATIONS WHERE GRADES ARE LESS THAN 1% (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
   SEEPAGE COLLARS FOR EXPOSED PIPES; CONCRETE THRUST BLOCKS AND PIPE ELBOW.
5. INCLUDE DISTRICT SPECIAL PROVISION - "AGGREGATE QUALITY" FOR PROJECTS LOCATED IN THE WESTERN AREA OF THE DISTRICT - APPROX. DIVIDING LINE IS IL 97.
6. DELETE DESIGNER NOTES WHEN INSERTING INTO PLAN FILES.
7. OPERATIONS PREFERS USE OF PIPE OUTLETTING ONTO FORESLOPE WITH RIPRAP. USE NON-METALLIC PIPE WHEN POSSIBLE BECAUSE OF FUTURE CORROSION ISSUES.
8. IF NO OTHER SEEDING IS PAID FOR ON THE CONTRACT, USE DISTRICT SPECIAL PROVISION FOR SEEDING, MINOR AREAS



TYPICAL SECTION WITH COMBINATION CONCRETE CURB & GUTTER



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.

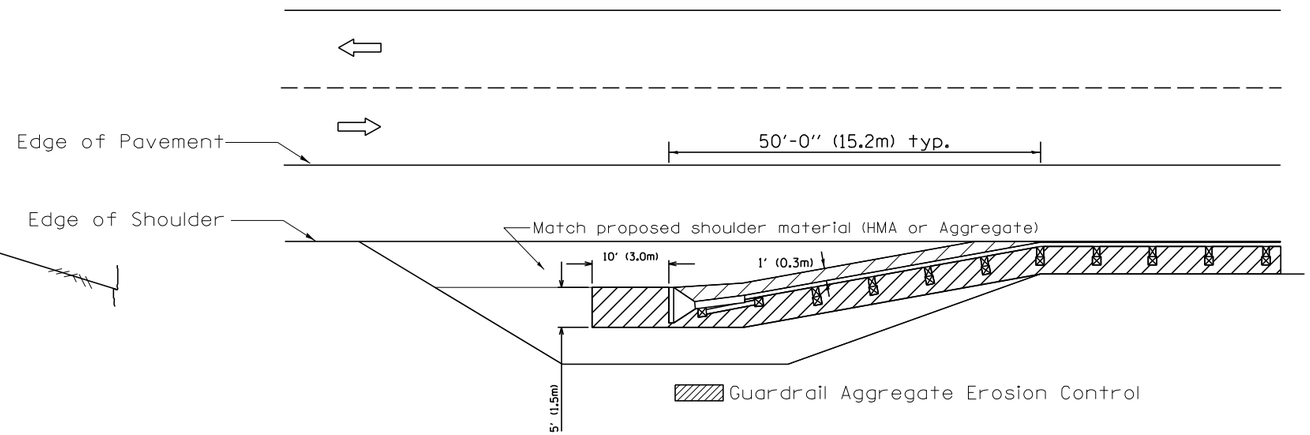
4. The aggregate shall be deposited, compacted and shaped by either mechanical or hand methods, in a manner reasonably true to line and grade.

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.

03-07-11	ADDED DETAIL SHOWING PLAN VIEW	R.D.	5-30-18	CHANGE B CURB TO CC&G	R.D.
08-10-12	REVISED CURB "B" AND AGGREGATE	R.D.	07-16-19	SPELLING CORRECTIONS	R.D.
07-15-15	ADDRESSED SHOULDER INLET CURB	R.D.			
01-26-17	REVISED	R.D.			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GUARDRAIL EROSION CONTROL TREATMENTS

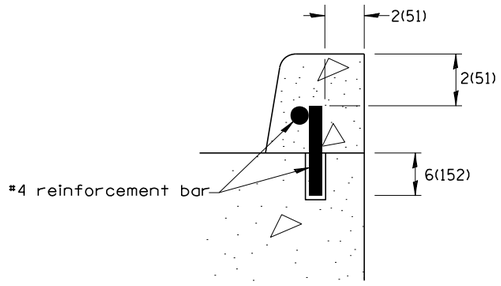
NOT TO SCALE

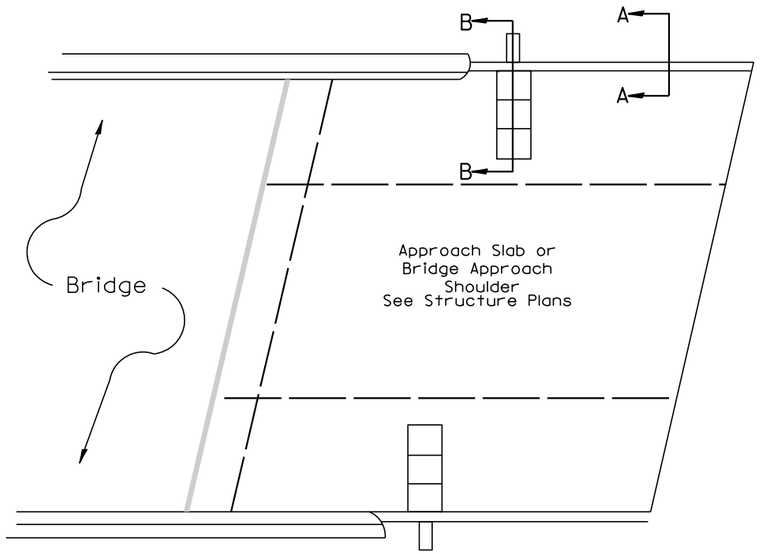
SHT. 1 OF 2
CADD STD. 630101-D4

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-20)BR	HENDERSON	86	79
		CONTRACT NO. 68989		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

DETAIL ''A''

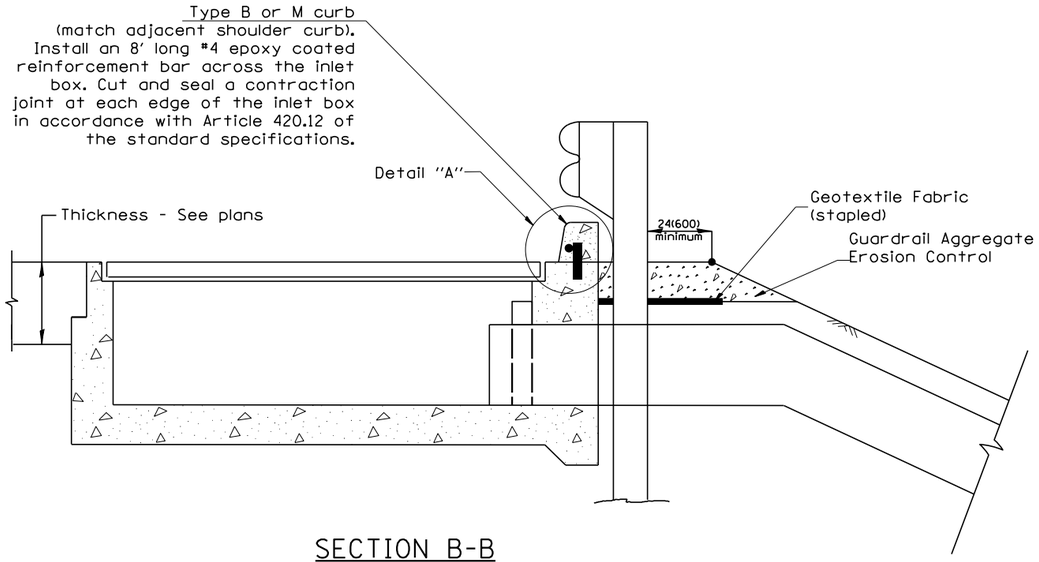
#4 reinforcement bars may be cast in PCC apron and precast inlet box or drilled and anchored with an approved chemical adhesive at 2' spacing. Cost of curb and reinforcement are included in the cost of shoulder inlet.





PLAN VIEW

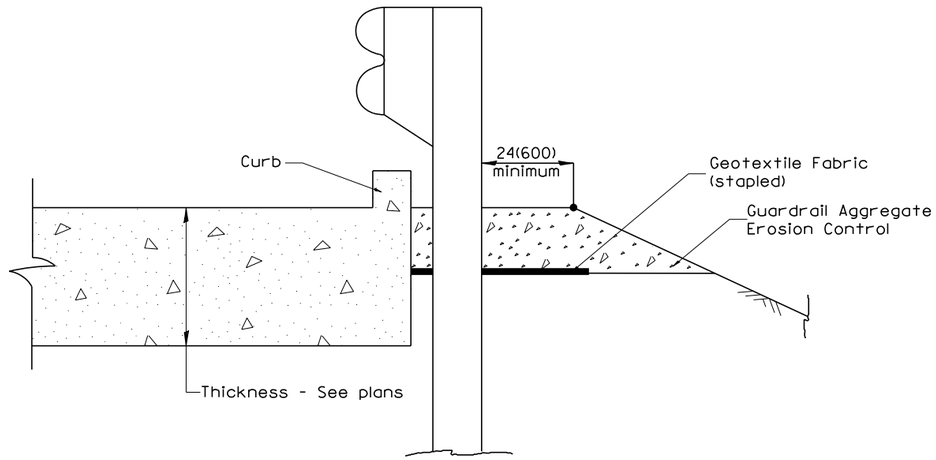
APPROACH SLAB OR SHOULDER PLACEMENT



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.

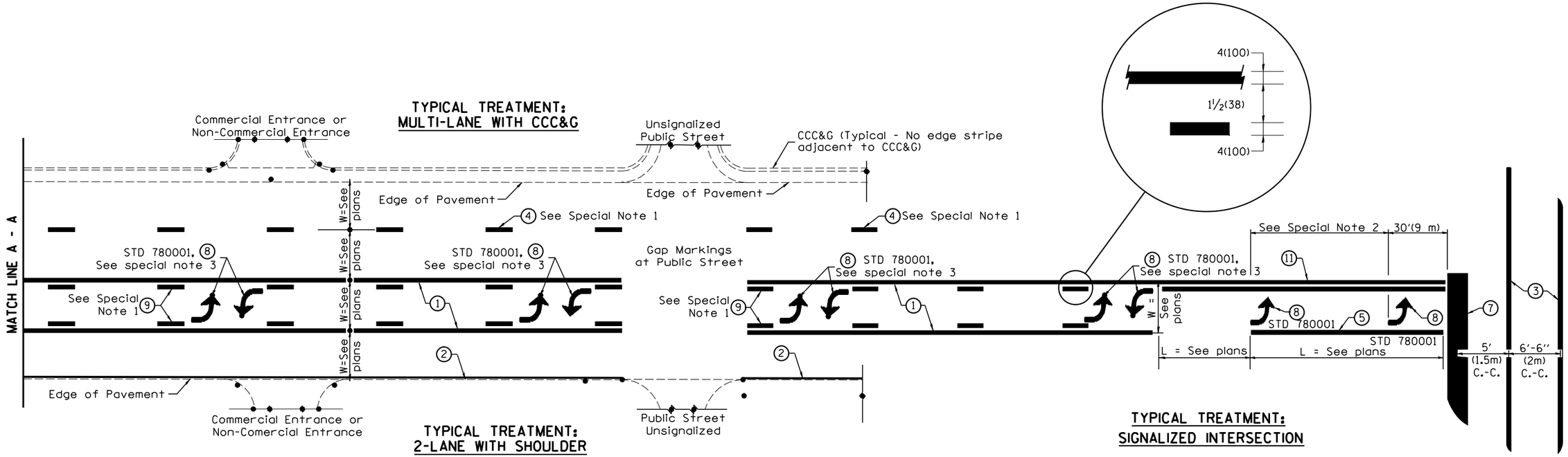
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GUARDRAIL EROSION CONTROL TREATMENTS

NOT TO SCALE

SHT. 2 OF 2
CADD STD. 630101-D4

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-20)BR		86	80
			CONTRACT NO. 68989	
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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) — 10' (3.05m) / 30' (9.14m) / 10' (3.05m) (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 — 33' (10m) (See Std. 780001 and Special Notes 2 & 3)
9. 4(100) Skip-Dash (Yellow) — 10' (3.05m) / 30' (9.14m) / 10' (3.05m) (See Special Note 1)
10. 12(300) Diagonal (Yellow) (See Table A) — 45°, 11(280) C.-C., See Table A
11. 4(100) Double Solid (Yellow)

SPECIAL NOTES

1. Skip-Dash markings will be centered between both ends of city blocks and shall be placed in alignment transversely across the pavement.
2. 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.
3. 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

1. Refer to State Standard 780001 for additional Pavement Markings including letters & arrows.
2. See Plans for Pavement Markings adjacent to curbed islands and medians, and through lane reductions.
3. Refer to Article 780.13 for letter, number and symbol areas (sq. ft.)
4. 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)

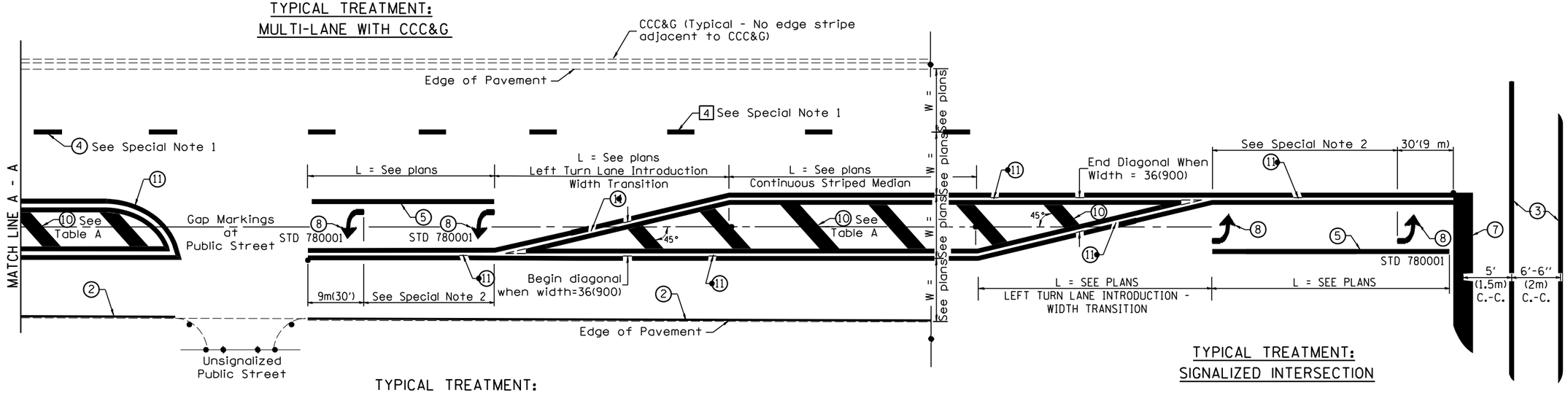
DESIGNER NOTES:
1. Include State Standard 780001 (Typical Pavement Markings)

01-01-97	RENUM. F-8.03, NEW REVISION BOX	T.P.	10-16-06	REVISED TO 2007 SPEC.		
02-07-97	ADD BI DIRECTIONAL DIMENSION	J.A.	2/29/16	ADDED GROOVING AREAS	R.D.	
10-97	CORRECT BI DIRECTIONAL DIMENSION	J.A.	07-16-19	SPELLING CORRECTIONS	R.D.	
08-02	ADD CROSSWALK DMNS. WITH T.S.	M.A.				

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL PAVEMENT MARKINGS
NOT TO SCALE
SHT. 1 OF 2
CADD STD. 780001-D4

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-20)BR	HENDERSON	86	81
		CONTRACT NO. 68989		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

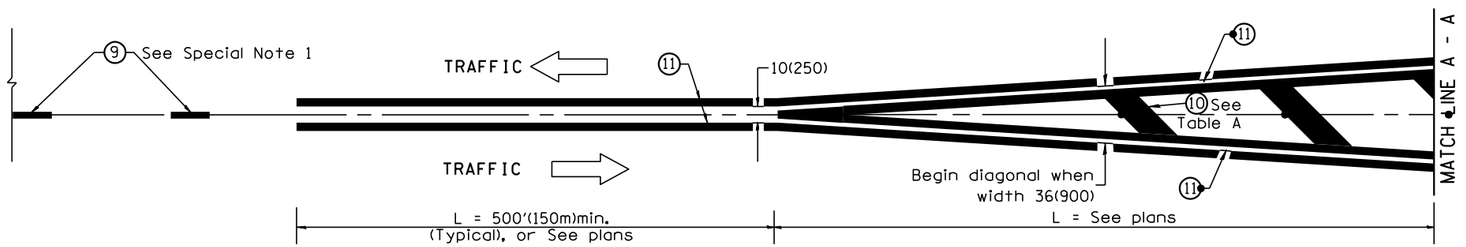


FLUSH PAVED MEDIAN: RESTRICTED LEFT TURN LANE

TABLE A

RECOMMENDED SPACING BETWEEN DIAGONAL LINES

SPEED LIMIT RANGE	CONTINUOUS	INTERSECTION CHANNELIZATION (Includes Width Transitions for Median and Left Turn Lane Introductions)
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.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL PAVEMENT MARKINGS

NOT TO SCALE

SHT. 2 OF 2
CADD STD. 780001-D4

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-20)BR	HENDERSON	86	82
		CONTRACT NO. 68989		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

BY	DATE

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

BY	DATE

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

545

540

PROJECT BEGINS – STA. 493+19

EX ROW

546.64

546.28

C = 8
F = 4

3.00 %

3.00 %

545.92

TS = 6.3

TS = 5.9

EX ROW

493+20.00

EX FIBER OPTIC

EX TELEPHONE

STA. 493+20 17' RT
INSTALL INLET TYPE B WITH
TYPE 11 FRAME & GRATE
FRAME EL. 545.94
± EL. 543.00

EX CABLE

EX GAS LINE

EX WATER MAIN

PRIVATE ENTRANCE

493+02.00

EX ROW

EX CABLE

EX GAS LINE

EX WATER MAIN

EX ROW

493+00.00

EX CABLE

EX GAS LINE

EX TELEPHONE

EX FIBER OPTIC

EX WATER MAIN

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

Veenstra & Kimm, Inc.
Springfield, IL Phone: (217)544-8033

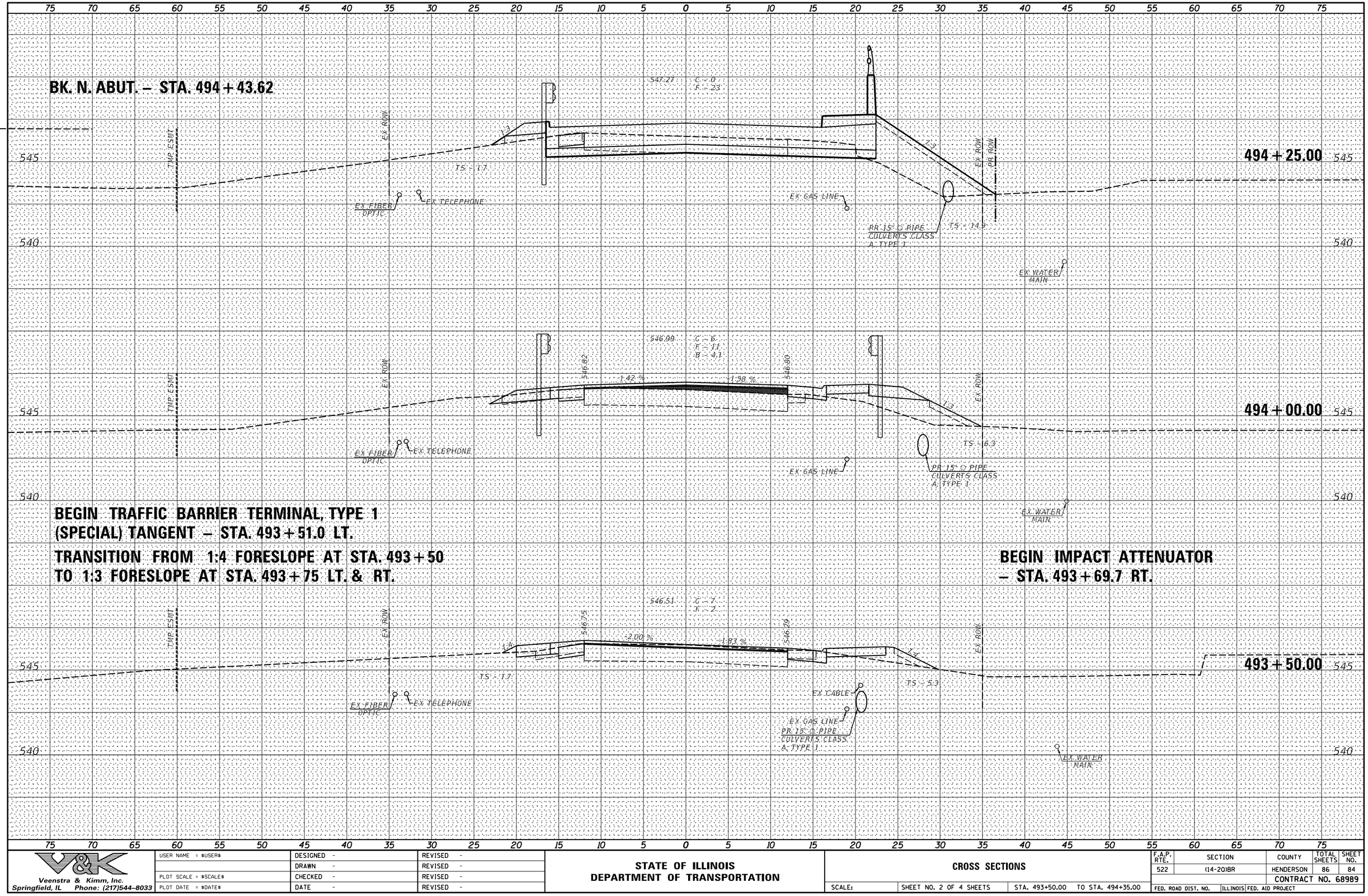
USER NAME = $USER$	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = $SCALE$	CHECKED -	REVISED -
PLOT DATE = $DATE$	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SCALE: | SHEET NO. 1 OF 4 SHEETS | STA. 492+50.00 TO STA. 493+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-20)BR	HENDERSON	86	83
		CONTRACT NO. 68989		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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

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

Veenstra & Kimm, Inc. Springfield, IL Phone: (217)544-8033	USER NAME = $USER$	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = $SCALE$	CHECKED -	REVISED -
	PLOT DATE = $DATE$	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SCALE: | SHEET NO. 2 OF 4 SHEETS | STA. 493+50.00 TO STA. 494+35.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-20)BR	HENDERSON	86	84
		CONTRACT NO. 68989		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

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

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

550 545 540

TMP. ESMT. EX. ROW EX. ROW PR. ROW

496 + 50.00

547.26 C = 1.3 F = 1.2 B = 1.0

EX. FIBER OPTIC EX. TELEPHONE

STA. 496+35 BACK INSTALL INLET TYPE B WITH TYPE 11 FRAME AND GRATE FRAME EL. 546.97 I.E. EL. 543.4

543.80 T.S. = 9.2

EX. WATER MAIN

EX

END TRAFFIC BARRIER TERMINAL TYPE 1 (SPECIAL) TANGENT – STA. 496 + 46.1 LT.

496 + 00.00

547.50 C = 3 F = 2.3 B = 8.3

1:3 1:4

T.S. = 13.5

EX. FIBER OPTIC EX. TELEPHONE

PR. 15" ○ PIPE CULVERTS CLASS A, TYPE 1

543.30 T.S. = 10.9

EX. GAS LINE EX. WATER MAIN

TRANSITION FROM 1:3 FORESLOPE AT STA. 495 + 70 TO 1:4 FORESLOPE AT STA. 496 + 00 LT.

495 + 70.00

547.71 C = 3 F = 4.2

1:3 1:4

T.S. = 19.7

EX. FIBER OPTIC EX. TELEPHONE

543.00 T.S. = 9.4

PR. 15" ○ PIPE CULVERTS CLASS A, TYPE 1

EX. GAS LINE EX. WATER MAIN

BK. S. ABUT. – STA. 495 + 56.39

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

Veenstra & Kimm, Inc.
Springfield, IL Phone: (217)544-8033

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SCALE: | SHEET NO. 3 OF 4 SHEETS | STA. 495+65.00 TO STA. 496+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-20)BR	HENDERSON	86	85
		CONTRACT NO. 68989		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

FIRST STREET

498 + 00.00

545

EX ROW

EX FIBER OPTIC

EX. TELEPHONE

550 **ROADWAY IMPROVEMENT ENDS – STA. 497 + 50**

SIDEWALK ENDS – STA. 497 + 79 RT.

497 + 50.00

545

EX TELEPHONE

EX FIBER OPTIC

547.15 C – 20 F – 0

497 + 00.00

EX WATER MAIN

STA. 496+71 BACK
INSTALL INLET TYPE B WITH
TYPE 11 FRAME AND GRATE
FRAME EL 546.50
T. EL. 543.00

RUSSELL STREET ALONG ℄

496 + 69.00

547.19

END TRAFFIC BARRIER TERMINAL TYPE 1 (SPECIAL) TANGENT – STA. 496 + 67.5 LT.

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

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

Veenstra & Kimm, Inc.
Springfield, IL Phone: (217)544-8033

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SCALE: | SHEET NO. 4 OF 4 SHEETS | STA. 496+50.00 TO STA. 496+73.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-20)BR	HENDERSON	86	86
		CONTRACT NO. 68989		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		