SEE SHEET NO. 2 FOR INDEX OF SHEETS

ESCA PROJECT NO. 1259.08

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	1
	ILLINOIS	CONTRACT NO. 78522		

TRAFFIC DATA
SN091-0001 (NB)

FUNCTIONAL CLASSIFICATION: FEDERAL-AID INTERSTATE MAIN ROUTE

ADT:	6920 (2017)
PV:	53.8%
TRUCKS:	46.2%
DESIGN SPEED:	70 MPH
POSTED SPEED:	70 MPH

TRAFFIC DATA
SN091-0002 (SB)

FUNCTIONAL CLASSIFICATION: FEDERAL-AID INTERSTATE MAIN ROUTE

ADT:	6614 (2017)
PV:	58.2%
TRUCKS:	41.8%
DESIGN SPEED:	70 MPH
POSTED SPEED:	70 MPH

TRAFFIC DATA
SHAKE RAG ROAD (TR 277)

FUNCTIONAL CLASSIFICATION: LOCAL ROAD

ADT:	127 (2017)
PV:	96.8%
TRUCKS:	3.2%
DESIGN SPEED:	30 MPH
POSTED SPEED:	30 MPH

TOWNSHIP

UNION COUNTY UNIT ROAD DISTRICT

DESIGN DESIGNATION : N.A.

COORDINATE SYSTEM : NAD 1983 STATE PLANE ILLINOIS EAST FIPS 1201 FEET (HORIZONTAL) NAVD88 (VERTICAL)

POSTED SPEED : 70 MPH

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

PROJECT ENGINEER: DAVID PICHE
PROJECT DESIGNER: ESCA CONSULTANTS, INC.

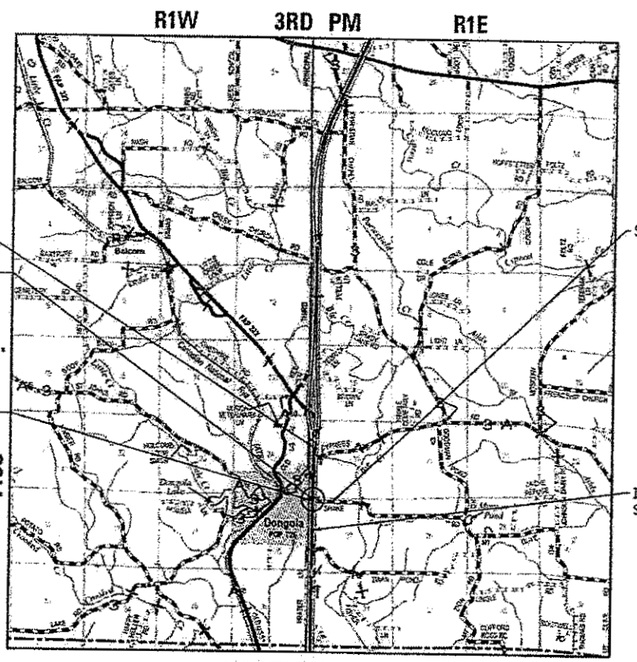
CONTRACT NO. 78522

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED HIGHWAY PLANS

FAI ROUTE 57 (I-57)
SECTION (91-4)B-1
PROJECT NHPP-MN6Q(190)
BRIDGE REPLACEMENT
OVER SHAKE RAG ROAD
UNION COUNTY

C-99-024-16



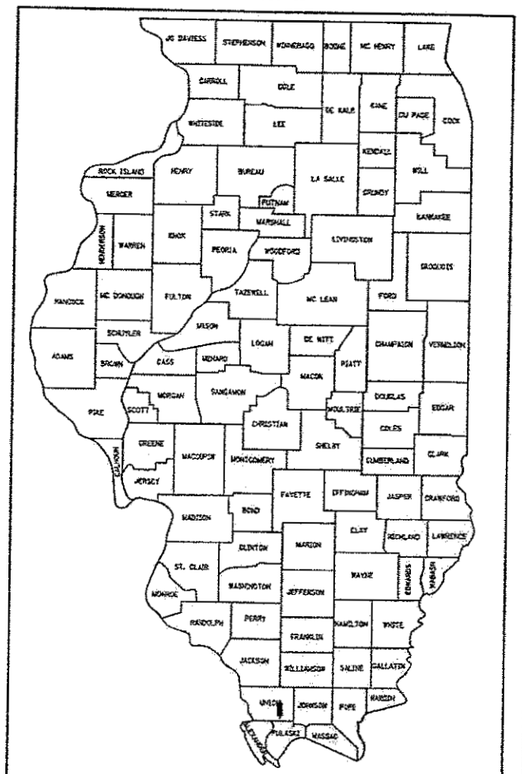
LOCATION MAP

APPROXIMATE SCALE

0 1 2 3 4 5 6 MILES
0 5000 10000 15000 20000 25000 30000 FEET

GROSS LENGTH = 1305.00 FT. = 0.247 MILES
NET LENGTH = 1305.00 FT. = 0.247 MILES

D-99-024-16



LOCATION OF SECTION INDICATED THUS: —

ERIC L. HENKEL
54498
LICENSED PROFESSIONAL ENGINEER
OF
STATE OF ILLINOIS

EXPIRES 11-30-19

SIGNATURE

03-16-18
DATE

ESCA CONSULTANTS, INC.
CIVIL & STRUCTURAL ENGINEERS

ESCA JOB NO. 1259.08

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED March 21 20 18

Jeffrey L Keirn
REGION FIVE ENGINEER

May 11 20 18
for E.A. Ets
ENGINEER OF DESIGN AND ENVIRONMENT

May 11 20 18
Paul E. Wolfe
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

LIST OF ILLINOIS DOT HIGHWAY STANDARDS

STANDARD NO.	DESCRIPTION
000001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
202001-01	EARTH MEDIAN DITCH CHECK
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
420001-09	PAVEMENT JOINTS
420101-06	24' (7.2M) JOINTED PCC PAVEMENT
420401-12	PAVEMENT CONNECTOR (PCC) FOR BRIDGE APPROACH SLAB
421001-03	BAR REINFORCEMENT FOR CRC PAVEMENT
515001-03	NAME PLATE FOR BRIDGES
542401-03	METAL FLARED END SECTION FOR PIPE CULVERTS
542546-01	FLUSH INLET BOX FOR MEDIAN
601001-05	PIPE UNDERDRAINS
601101-02	CONCRETE HEADWALL FOR PIPE UNDERDRAINS
602301-04	INLET - TYPE A
602306-03	INLET - TYPE B
602401-04	PRECAST MANHOLE TYPE A 4' (1.22M) DIAMETER
602402	PRECAST MANHOLE TYPE A 5' (1.52M) DIAMETER
602601-05	PRECAST REINFORCED CONCRETE FLAT SLAB TOP
602701-02	MANHOLE STEPS
604001-04	FRAME AND LIDS TYPE 1
604036-03	GRATE TYPE 8
610001-08	SHOULDER INLET WITH CURB
630001-12	STEEL PLATE BEAM GUARDRAIL
630201-07	PCC/HMA STABILIZATION AT STEEL PLATE BEAM GUARDRAIL
630301-08	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631031-15	TRAFFIC BARRIER TERMINAL, TYPE 6
631033-07	TRAFFIC BARRIER TERMINAL, TYPE 6B
635001-02	DELINEATORS
642001-02	SHOULDER RUMBLE STRIPS, 16 in.
701001-02	OFF-RD OPERATIONS, 2L, 2W, MORE THAN 15' (4.5m) AWAY
701006-05	OFF-RD OPERATIONS, 2L, 2W, 15' (4.5m) TO 24" (600mm) FROM PAVEMENT EDGE
701011-04	OFF-RD MOVING OPERATIONS, 2L, 2W, DAY ONLY
701101-05	OFF-RD OPERATIONS, MULTILANE, 15' (4.5m) TO 24" (600mm) FROM PAVEMENT EDGE
701106-02	OFF-RD OPERATIONS, MULTILANE, MORE THAN 15' (4.5m) AWAY
701201-04	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS ≥ 45 MPH
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701311-03	LANE CLOSURE, 2L, 2W MOVING OPERATIONS - DAY ONLY
701400-09	APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
701401-11	LANE CLOSURE, FREEWAY/EXPRESSWAY
701406-11	LANE CLOSURE, FREEWAY/EXPRESSWAY, DAY OPERATIONS ONLY
701411-09	LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXIT RAMP, FOR SPEEDS ≥ 45 MPH
701416-11	LANE CLOSURE, FREEWAY/EXPRESSWAY, WITH CROSSOVER AND BARRIER
701426-09	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPER., FOR SPEEDS ≥ 45 MPH
701901-07	TRAFFIC CONTROL DEVICES
704001-08	TEMPORARY CONCRETE BARRIER
720011-01	METAL POSTS FOR SIGNS, MARKERS & DELINEATORS
725001-01	OBJECT AND TERMINAL MARKERS
780001-05	TYPICAL PAVEMENT MARKINGS
781001-04	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS
782006	GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS
B.L.R. 21-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

INDEX OF SHEETS

INDEX OF SHEETS (CONT.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PREPARED BY: ______________________
DISTRICT STUDIES & PLANS ENGINEER

EXAMINED BY: ______________________
DISTRICT LAND ACQUISITION ENGINEER

EXAMINED BY: ______________________
DISTRICT PROGRAM DEVELOPMENT ENGINEER

EXAMINED BY: ______________________
DISTRICT OPERATIONS ENGINEER

EXAMINED BY: ______________________
DISTRICT PROJECT IMPLEMENTATION ENGINEER

EXAMINED BY: ______________________
DISTRICT CONSTRUCTION ENGINEER

EXAMINED BY: ______________________
DISTRICT MATERIALS ENGINEER

ESCA CONSULTANTS, INC.	USER NAME = SKM	DESIGNED - SKM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	INDEX OF SHEETS AND HIGHWAY STANDARDS	F.A.I. RTE. 57	SECTION (91-4)B-1	COUNTY UNION	TOTAL SHEETS 160	SHEET NO. 2
	ESCA PROJECT NO. 1259.08	DRAWN - SKM	REVISED -							
	PLOT SCALE = 0.1667 ' / in.	CHECKED - ELH	REVISED -			CONTRACT NO. 78522				
	PLOT DATE = 3/6/2018 8:07:53 AM	DATE - 02/18	REVISED -		SCALE: NA / SHEET NO. 1 OF 1 SHEETS / STA. TO STA.	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

GENERAL NOTES

1. FACTORS USED FOR ESTIMATING PLAN QUANTITIES ARE AS FOLLOWS AND SHALL NOT BE USED FOR THE BASIS OF FINAL QUANTITIES:

ALL HOT-MIX ASPHALT	2.016 TONS/CU YD
ALL AGGREGATE	2.05 TONS/CU YD
EARTH	110 LBS/CU FT
BITUMINOUS MATERIALS:	
ON PAVEMENT	0.05 POUND/SQ FT
INTERMEDIATE LIFTS	0.025 POUND/SQ FT
ON AGGREGATE SURFACE	0.25 POUND/SQ FT

2. THE THICKNESS OF HOT MIX ASPHALT MIXTURE 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 MIX ASPHALT MIXTURE IS PLACED.
3. IF SO DIRECTED BY THE ENGINEER, DITCHES ADJACENT TO EMBANKMENTS SHALL BE CONSTRUCTED PRIOR TO STARTING THE CONSTRUCTION OF THE EMBANKMENT FILL.
4. TREES SHALL BE PRESERVED THROUGHOUT THIS SECTION AS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER. GENERALLY, TREES OUTSIDE THE CLEAR ZONE, OR CONSTRUCTION LIMITS, AND WHICH DO NOT INTERFERE WITH CONSTRUCTION, SHALL NOT BE DISTURBED.
5. PROTECTIVE COAT SHALL BE APPLIED TO ALL GUTTER FLAGS AS NEEDED ACCORDING TO THE SEASONAL REQUIREMENTS OF ARTICLE 420.18.
6. AT ALL LOCATIONS WHERE THE PROPOSED HOT MIX ASPHALT OR CONCRETE PAVEMENT JOINS AN EXISTING HOT MIX ASPHALT OR CONCRETE PAVEMENT, A FULL DEPTH SAWED JOINT SHALL BE CONSTRUCTED. THE COST OF THIS JOINT WILL BE INCLUDED IN THE COST OF THE TYPE OF PAVEMENT BEING CONSTRUCTED.
7. THE CONTRACTOR SHALL STAMP STATIONING IN THE HOT MIX ASPHALT SURFACE AT 300 FT INTERVALS ON THE INSIDE EDGE OF THE OUTSIDE SHOULDER AND AS DIRECTED BY THE ENGINEER. THE STATION SYMBOL STAMPS USED SHALL BE FURNISHED BY THE CONTRACTOR. THEY SHALL BE 5 1/2 IN. TALL OF A DESIGN APPROVED BY THE ENGINEER, AND SHALL REMAIN THE PROPERTY OF THE CONTRACTOR.
8. THE QUANTITY OF SHORT TERM PAVEMENT MARKING SHOWN IN THE PLANS IS BASED ON ONE APPLICATION ON THE COMPLETED SURFACE COURSE AND THAT NECESSARY AFTER REMOVAL OF TRAFFIC CONTROL. SHORT TERM PAVEMENT MARKING ON HMA SURFACE COURSE OR PCC SHALL BE TAPE.
9. EXISTING PIPE UNDERDRAIN OUTLETS IN THE FORESLOPES OR MEDIAN SLOPES SHALL BE PRESERVED AND PROTECTED DURING CONSTRUCTION. ANY DAMAGE TO AN UNDERDRAIN OUTLET RESULTING FROM CONSTRUCTION ACTIVITY SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
10. PRIOR TO PLACEMENT OF THE FINAL PAVEMENT MARKINGS THE RESIDENT ENGINEER SHALL CONTACT THE BUREAU OF OPERATIONS AND ARRANGE FOR INSPECTION AND APPROVAL OF THE PAVEMENT MARKING LAYOUT.
11. THE TOP 6 IN. OF TOPSOIL SHALL BE STRIPPED FROM THE CONSTRUCTION LIMITS AT THE TEMPORARY CROSSOVER LOCATIONS. THIS MATERIAL SHALL BE STOCKPILED OFFSITE AT A LOCATION APPROVED BY THE ENGINEER AND REPLACED AFTER THE CROSSOVERS ARE REMOVED AND MAJOR GRADING OPERATIONS ARE COMPLETED. THIS WORK WILL BE PAID FOR AS TOPSOIL EXCAVATION AND PLACEMENT.
12. CONNECTING OF NEW OR EXISTING STORM SEWER TO NEW OR EXISTING INLETS OR MANHOLES SHALL BE MADE IN A MANNER WHICH RESULTS IN A NEAT AND WATERTIGHT JOINT. WHEN PLACED THROUGH THE WALL OF AN INLET OR MANHOLE, STORM SEWER PIPE SHALL BE PLACED OR CUT FLUSH WITH THE FACE OF THE WALL AND DRESSED WITH MORTAR TO PROVIDE A SMOOTH ROUNDED OR BEVELED EDGE. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED AS INCLUDED IN THE CONTRACT UNIT PRICES OF THE STORM SEWERS OR STRUCTURES INVOLVED.
13. AFTER A LIFT OF HOT MIX ASPHALT HAS BEEN PLACED, THE LANE SHALL REMAIN CLOSED TO TRAFFIC UNTIL THE NEW MAT HAS COOLED TO 150 DEGREES FAHRENHEIT.
14. THERE ARE NO AVAILABLE WASTE SITES ON THE EXISTING RIGHT OF WAY WITHIN THE PROJECT LIMITS. DISPOSAL WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND WASTE MUST BE DISPOSED OF IN ACCORDANCE WITH ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS.
15. 14'-9" MINIMUM CLEARANCE UNDERNEATH BOTH STRUCTURES SHALL BE VERIFIED BY THE ENGINEER.
16. TRIM EDGES OF EXISTING HOT MIX ASPHALT SURFACE FLUSH WITH EXISTING PAVEMENT PRIOR TO CONSTRUCTING NEW BASE COURSE WIDENING.
17. HMA SHOULDERS SHALL BE MILLED TO THE SAME DEPTH AS ADJACENT ROADWAY TO FACILITATE PLACEMENT OF NEW HOT-MIX ASPHALT SHOULDERS.
18. EXISTING TRAFFIC BARRIER TERMINALS TO BE REMOVED SHALL BE PAID FOR AS GUARDRAIL REMOVAL.
19. BEFORE ORDERING PIPE CULVERTS, PIPE DRAINS, OR STORM SEWERS, THE CONTRACTOR SHALL CONSULT THE ENGINEER FOR EXACT LENGTHS.
20. RUMBLE STRIPS SHALL BE CONSTRUCTED ON ALL NEW HMA SHOULDERS ON I-57. RUMBLE STRIPS WILL BE PAID PER FOOT AS SHOULDER RUMBLE STRIPS 16 INCH. THE RUMBLE STRIPS ADJACENT TO BOTH SOUTHBOUND LANES OF I-57 SHALL NOT BE INSTALLED UNTIL AFTER COMPLETION OF STAGE III.
21. REFER TO HIGHWAY STANDARD 420101 FOR CONSTRUCTION DETAILS OF PCC PAVEMENT FOR CROSSOVERS.
22. THE TEMPORARY PAVEMENT MARKING USED WITH HIGHWAY STANDARD 701416 IN STAGES II & III SHALL BE PAINT. SUPPLY, INSTALLATION, AND REMOVAL OF REFLECTORIZED PAVEMENT MARKING PAINT AND TAPE USED FOR TRAFFIC CONTROL AS SHOWN ON THE TRAFFIC CONTROL DRAWINGS WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION.
23. TEMPORARY RAMPS SHALL BE CONSTRUCTED AT LOCATIONS DETERMINED BY THE ENGINEER. THIS WORK SHALL NOT BE PAID FOR SEPARATELY, BUT WILL BE INCLUDED IN THE SQUARE YARD PRICE FOR HOT-MIX ASPHALT SURFACE REMOVAL.
24. THE EXISTING ROAD SIGNS THAT INTERFERE WITH CONSTRUCTION WILL BE REMOVED OR RELOCATED AS DIRECTED BY THE ENGINEER ACCORDING TO ARTICLE 107.25 OF THE STANDARD SPECIFICATIONS. AFTER THE CONSTRUCTION IS COMPLETED, THE CONTRACTOR WILL RE-ERECT THE SIGNS AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
25. EARTH MEDIAN DITCH CHECKS SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.
26. THE COST OF REMOVING THE CONCRETE GUTTER AT THE BASE OF THE EXISTING SLOPE WALL IS INCLUDED IN REMOVAL OF EXISTING STRUCTURES.
27. THE CONTRACTOR SHALL PROTECT THE EXISTING UTILITIES ON SHAKE RAG ROAD, INCLUDING THE WATER LINE, DURING BRIDGE DEMOLITION OPERATIONS.

COMMITMENTS

1. SHAKE RAG ROAD WILL BE GRADED, COMPACTED, AND RESURFACED AS SHOWN IN THE PLANS AFTER THE BRIDGE CONSTRUCTION IS COMPLETE. THE PROPOSED PAVEMENT ELEVATIONS WILL NOT BE HIGHER THAN THOSE SHOWN ON THE PLANS.
2. LETTER OF UNDERSTANDING L-9-18-002 WITH UNION COUNTY.
3. DUE TO THE POTENTIAL PRESENCE OF THE INDIANA BAT AND GRAY BAT, CLEARING OF TREES SHALL BE PROHIBITED FROM APRIL 1 THROUGH SEPTEMBER 30.
4. NO OTHER COMMITMENTS AS OF MARCH 16TH, 2018.

HMA MIXTURES REQUIREMENTS

MIXTURE USE	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE	HOT-MIX ASPHALT SHOULDERS (BOTTOM LIFTS)	HOT-MIX ASPHALT SHOULDERS (TOP LIFT)	POLYMERIZED HOT-MIX ASPHALT BINDER COURSE	HOT-MIX ASPHALT SURFACE COURSE	TEMPORARY PAVEMENT (TOP LIFT)	TEMPORARY PAVEMENT (BOTTOM LIFTS)
AC/PG	SBS PG 76-22	PG 64-22	PG 64-22	SBS PG 76-22	PG 64-22	PG 64-22	PG 64-22
DESIGN AIR VOIDS	4.0% @ Ndes=90	4.0% @ Ndes=70	4.0% @ Ndes=70	4.0% @ Ndes=90	4.0% @ Ndes=70	4.0% @ Ndes=90	4.0% @ Ndes=70
MIX COMPOSITION	IL-9.5	IL-19.0	IL-9.5	IL-19.0	IL-9.5	IL-9.5	IL-19.0
FRICTION AGGREGATE	MIX D	N/A	MIX C	N/A	MIX C	MIX C	N/A
LOCATIONS	I-57 MAINLINE	I-57 SHOULDERS	I-57 SHOULDERS	I-57 MAINLINE	SHAKE RAG ROAD	CROSSOVERS	CROSSOVERS
MIXTURE WEIGHT	112 LBS/SQ YD/IN	112 LBS/SQ YD/IN	112 LBS/SQ YD/IN	112 LBS/SQ YD/IN	112 LBS/SQ YD/IN	112 LBS/SQ YD/IN	112 LBS/SQ YD/IN
ABR% (MAX)	SEE BDE SPECIAL PROVISION	SEE BDE SPECIAL PROVISION	SEE BDE SPECIAL PROVISION	SEE BDE SPECIAL PROVISION	SEE BDE SPECIAL PROVISION	SEE BDE SPECIAL PROVISION	SEE BDE SPECIAL PROVISION
QUALITY MANAGEMENT PROGRAM	QCQA	QCQA	QCQA	QCQA	QCQA	QCQA	QCQA
SUBLOT SIZE	N/A	N/A	N/A	N/A	N/A	N/A	N/A

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE: 90% FEDERAL 10% STATE ROADWAY 0010 ROADWAY	CONSTRUCTION CODE: 90% FEDERAL 10% STATE STRUCTURE 0010 S. N. 091-0075/76
20100500	TREE REMOVAL, ACRES	ACRE	0.25	0.25	
20200100	EARTH EXCAVATION	CU YD	6600	6600	
20400800	FURNISHED EXCAVATION	CU YD	2605	2605	
21101505	TOPSOIL EXCAVATION AND PLACEMENT	CU YD	1875	1875	
25000210	SEEDING, CLASS 2A	ACRE	6.75	6.75	
25000350	SEEDING, CLASS 7	ACRE	6.75	6.75	
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	608	608	
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	608	608	
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	608	608	
25000700	AGRICULTURAL GROUND LIMESTONE	TON	13.5	13.5	
25100115	MULCH, METHOD 2	ACRE	12.5	12.5	
25100630	EROSION CONTROL BLANKET	SQ YD	5097	5097	
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	1350	1350	
28000305	TEMPORARY DITCH CHECKS	FOOT	665	665	

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⊛ SPECIALTY ITEM

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE: 90% FEDERAL 10% STATE ROADWAY 0010 ROADWAY	CONSTRUCTION CODE: 90% FEDERAL 10% STATE STRUCTURE 0010 S.N. 091-0075/76
28000400	PERIMETER EROSION BARRIER	FOOT	220	220	
28000500	INLET AND PIPE PROTECTION	EACH	16	16	
28200200	FILTER FABRIC	SQ YD	56	56	
28300400	AGGREGATE DITCH	TON	40	40	
31100100	SUBBASE GRANULAR MATERIAL, TYPE A	TON	202	202	
31100300	SUBBASE GRANULAR MATERIAL, TYPE A 4"	SQ YD	270	270	
31100700	SUBBASE GRANULAR MATERIAL, TYPE A 8"	SQ YD	5040	5040	
40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	4285	4285	
40600295	POLYMERIZED BITUMINOUS MATERIALS (TACK COAT)	POUND	3492	3492	
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	905	905	
40603240	POLYMERIZED HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90	TON	2205	2205	
40603315	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70	TON	105	105	
40603545	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N90	TON	510	510	
42000080	PAVEMENT CONNECTOR (PCC) FOR BRIDGE APPROACH SLAB	SQ YD	536	536	

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⊛ SPECIALTY ITEM

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE: 90% FEDERAL 10% STATE ROADWAY 0010 ROADWAY	CONSTRUCTION CODE: 90% FEDERAL 10% STATE STRUCTURE 0010 S.N. 091-0075/76
42001300	PROTECTIVE COAT	SQ YD	593	593	
44000100	PAVEMENT REMOVAL	SQ YD	4910	4910	
44000157	HOT-MIX ASPHALT SURFACE REMOVAL, 2"	SQ YD	315	315	
44000400	GUTTER REMOVAL	FOOT	88	88	
44004250	PAVED SHOULDER REMOVAL	SQ YD	732	732	
48101500	AGGREGATE SHOULDERS, TYPE B 6"	SQ YD	2026	2026	
48203100	HOT-MIX ASPHALT SHOULDERS	TON	2200	2200	
50100300	REMOVAL OF EXISTING STRUCTURES NO. 1	EACH	1		1
50100400	REMOVAL OF EXISTING STRUCTURES NO. 2	EACH	1		1
50102400	CONCRETE REMOVAL	CU YD	0.1	0.1	
50104400	CONCRETE HEADWALL REMOVAL	EACH	10	10	
50200100	STRUCTURE EXCAVATION	CU YD	674		674
50300225	CONCRETE STRUCTURES	CU YD	483.8		483.8
50300255	CONCRETE SUPERSTRUCTURE	CU YD	433.6	0.4	433.2

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⊛ SPECIALTY ITEM

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE: 90% FEDERAL 10% STATE ROADWAY 0010 ROADWAY	CONSTRUCTION CODE: 90% FEDERAL 10% STATE STRUCTURE 0010 S.N. 091-0075/76
50300300	PROTECTIVE COAT	SQ YD	2022		2022
50301350	CONCRETE SUPERSTRUCTURE (APPROACH SLAB)	CU YD	251.6		251.6
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1		1
50500505	STUD SHEAR CONNECTORS	EACH	8862		8862
50800105	REINFORCEMENT BARS	POUND	66	66	
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	242,460		242,460
51100100	SLOPE WALL 4 INCH	SQ YD	934		934
51201900	FURNISHING STEEL PILES HP14X89	FOOT	3600		3600
51202000	FURNISHING STEEL PILES HP14X102	FOOT	3839		3839
51202305	DRIVING PILES	FOOT	7439		7439
51203900	TEST PILE STEEL HP14X89	EACH	4		4
51204000	TEST PILE STEEL HP14X102	EACH	4		4
51204650	PILE SHOES	EACH	88		88
51500100	NAME PLATES	EACH	2		2

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⊛ SPECIALTY ITEM

ESCA CONSULTANTS, INC.

USER NAME = SKM	DESIGNED - SKM	REVISED -
ESCA PROJECT NO. 1259.08	DRAWN - KJK	REVISED -
PLOT SCALE = 0.1667 '/ in.	CHECKED - ELH	REVISED -
PLOT DATE = 3/19/2018 12:57:07 PM	DATE - 03/18	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE | SHEET NO. 4 OF 9 SHEETS | STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	7

CONTRACT NO. 78522

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

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE: 90% FEDERAL 10% STATE ROADWAY 0010 ROADWAY	CONSTRUCTION CODE: 90% FEDERAL 10% STATE STRUCTURE 0010 S. N. 091-0075/76
52100505	ANCHOR BOLTS, 5/8"	EACH	112		112
5421D015	PIPE CULVERTS, CLASS D, TYPE 1 15" (TEMPORARY)	FOOT	152	152	
5421D018	PIPE CULVERTS, CLASS D, TYPE 1 18" (TEMPORARY)	FOOT	502	502	
5421D024	PIPE CULVERTS, CLASS D, TYPE 1 24" (TEMPORARY)	FOOT	321	321	
54244405	FLUSH INLET BOX FOR MEDIAN, STANDARD 542546	EACH	3	3	
54262712	METAL FLARED END SECTIONS 12"	EACH	4	4	
550A0120	STORM SEWERS, CLASS A, TYPE 1 24"	FOOT	35	35	
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	124		124
60100060	CONCRETE HEADWALLS FOR PIPE DRAINS	EACH	14	14	
60100945	PIPE DRAINS 12"	FOOT	60	60	
60108100	PIPE UNDERDRAINS 4" (SPECIAL)	FOOT	204	204	
60221100	MANHOLES, TYPE A, 5'-DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	3	3	
61000050	CONCRETE THRUST BLOCKS	EACH	2	2	
61000225	TYPE F INLET BOX, STANDARD 610001	EACH	2	2	

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⊛ SPECIALTY ITEM

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE: 90% FEDERAL 10% STATE ROADWAY 0010 ROADWAY	CONSTRUCTION CODE: 90% FEDERAL 10% STATE STRUCTURE 0010 S.N. 091-0075/76
61000335	TYPE G INLET BOX, STANDARD 610001	EACH	2	2	
⊛ 63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4	4	
63200310	GUARDRAIL REMOVAL	FOOT	363	363	
⊛ 63301210	REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL, TYPE A	FOOT	737.5	737.5	
63500105	DELINEATORS	EACH	7	7	
64200116	SHOULDER RUMBLE STRIPS, 16 INCH	FOOT	5820	5820	
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	27	27	
67100100	MOBILIZATION	L SUM	1	1	
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DAY	25	25	
70300100	SHORT TERM PAVEMENT MARKING	FOOT	2252	2252	
70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	751	751	
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	38700	38700	
70400100	TEMPORARY CONCRETE BARRIER	FOOT	2525	2525	
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	2037.5	2037.5	

⊛ SPECIALTY ITEM

14

ESCA CONSULTANTS, INC.

USER NAME = SKM	DESIGNED - SKM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
ESCA PROJECT NO. 1259.08	DRAWN - KJK	REVISED -	
PLOT SCALE = 0.1667 '/ in.	CHECKED - ELH	REVISED -	
PLOT DATE = 3/19/2018 12:57:07 PM	DATE - 02/18	REVISED -	

SUMMARY OF QUANTITIES

SCALE | SHEET NO. 6 OF 9 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	9

CONTRACT NO. 78522

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

SUMMARY OF QUANTITIES

	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE: 90% FEDERAL 10% STATE ROADWAY 0010 ROADWAY	CONSTRUCTION CODE: 90% FEDERAL 10% STATE STRUCTURE 0010 S. N. 091-0075/76
⊛	70500665	TEMPORARY TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	1	1	
*	72400600	RELOCATE SIGN PANEL ASSEMBLY - TYPE B	EACH	1	1	
⊛	72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	6	6	
⊛	78009004	MODIFIED URETHANE PAVEMENT MARKING - LINE 4"	FOOT	27950	27950	
*	78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	30	30	
	78100200	TEMPORARY RAISED REFLECTIVE PAVEMENT MARKER	EACH	860	860	
*	78100300	REPLACEMENT REFLECTOR	EACH	46	46	
*	78200005	GUARDRAIL REFLECTORS, TYPE A	EACH	18	18	
*	78200010	BARRIER WALL REFLECTORS, TYPE B	EACH	564	564	
	78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	23	23	
	X0301993	REMOVE AND REINSTALL CONCRETE HEADWALL FOR PIPE DRAIN	EACH	2	2	
	X0325299	INLET MODIFICATION	EACH	1	1	
	X0327980	PAVEMENT MARKING REMOVAL - WATER BLASTING	SQ FT	12570	12570	
	X0484300	MEDIAN INLET BOX REMOVAL	EACH	3	3	

⊛ SPECIALTY ITEM

SUMMARY OF QUANTITIES

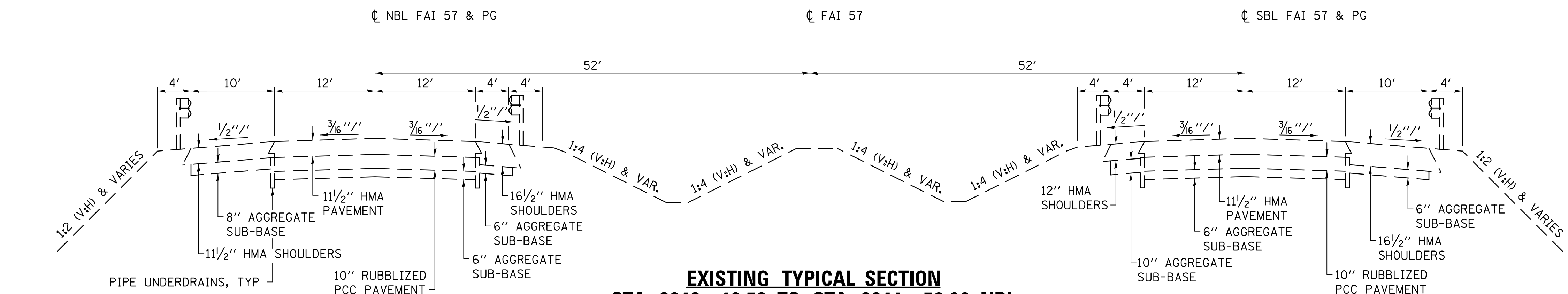
	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE: 90% FEDERAL 10% STATE ROADWAY 0010 ROADWAY	CONSTRUCTION CODE: 90% FEDERAL 10% STATE STRUCTURE 0010 S. N. 091-0075/76
	X2020110	GRADING AND SHAPING SHOULDERS	UNIT	7	7	
❋❋❋	X2503100	MOWING	UNIT	70	70	
	X2800500	INLET PROTECTION, SPECIAL	EACH	5	5	
	X5030250	BRIDGE DECK GROOVING (LONGITUDINAL)	SQ YD	1280		1280
	X5420350	END SECTIONS 18" SPECIAL	EACH	2	2	
	X5420355	END SECTIONS 24" (SPECIAL)	EACH	2	2	
	X5421550	METAL END SECTIONS 15", SPECIAL	EACH	1	1	
	X5860110	GRANULAR BACKFILL FOR STRUCTURES	CU YD	308		308
	X6020073	INLETS, TYPE A, TYPE 8 GRATE, TEMPORARY	EACH	1	1	
	X6024875	TEMPORARY INLET	EACH	1	1	
	X6028104	TEMPORARY MANHOLES, TYPE A, 4'-DIAMETER, TYPE 1 FRAME, OPEN LID	EACH	2	2	
	X6062400	CONCRETE GUTTER (SPECIAL)	FOOT	117	117	
❋	X6311217	TRAFFIC BARRIER TERMINAL, TYPE 6B (SPECIAL)	EACH	1	1	
❋	X6330103	REMOVE AND RE-ERECT TRAFFIC BARRIER TERMINAL, TYPE 1 SPECIAL, TANGENT	EACH	4	4	

❋ SPECIALTY ITEM
❋❋❋ 100% STATE

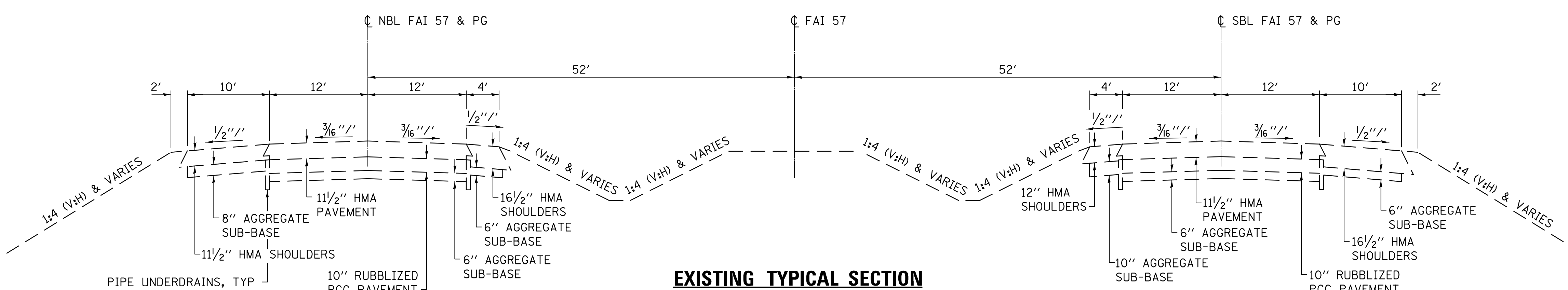
SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE: 90% FEDERAL 10% STATE ROADWAY 0010 ROADWAY	CONSTRUCTION CODE: 90% FEDERAL 10% STATE STRUCTURE 0010 S. N. 091-0075/76
X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1	1	
X7015005	CHANGEABLE MESSAGE SIGN	CAL DAY	84	84	
X7030005	TEMPORARY PAVEMENT MARKING REMOVAL	SQ FT	12900	12900	
⊛ X7050169	TEMPORARY TRAFFIC BARRIER TERMINAL, TYPE 1, SPECIAL (FLARED)	EACH	2	2	
X7830050	RAISED REFLECTIVE PAVEMENT MARKER, REFLECTOR REMOVAL	EACH	46	46	
Z0004556	HOT-MIX ASPHALT SURFACE REMOVAL (DECK)	SQ YD	535		535
Z0016001	DECK SLAB REPAIR (FULL DEPTH, TYPE I)	SQ YD	10		10
Z0016002	DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SQ YD	30		30
Z0029090	DIAMOND GRINDING (BRIDGE SECTION)	SQ YD	2028		2028
Z0046304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	320		320
Z0062456	TEMPORARY PAVEMENT	SQ YD	4320	4320	

⊛ SPECIALTY ITEM

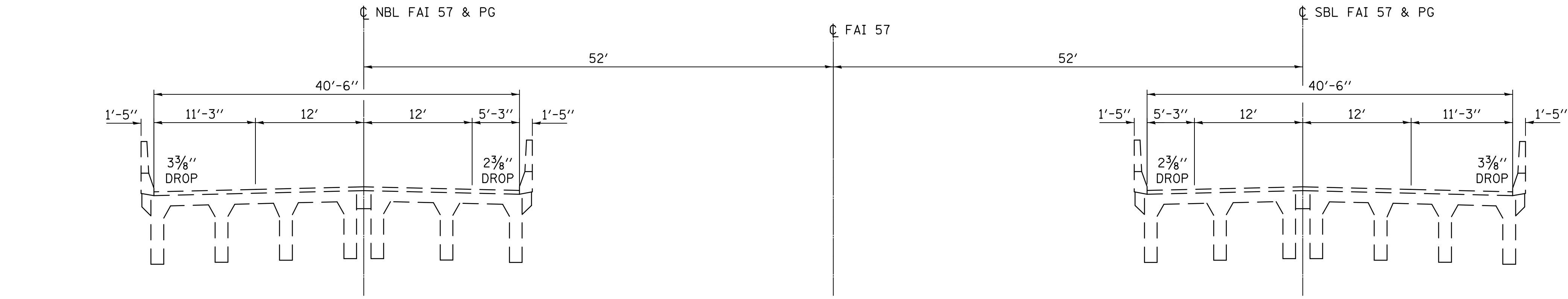


EXISTING TYPICAL SECTION
STA 3043+19.50 TO STA 3044+78.96 NBL
STA 3035+81.39 TO STA 3037+32.00 SBL

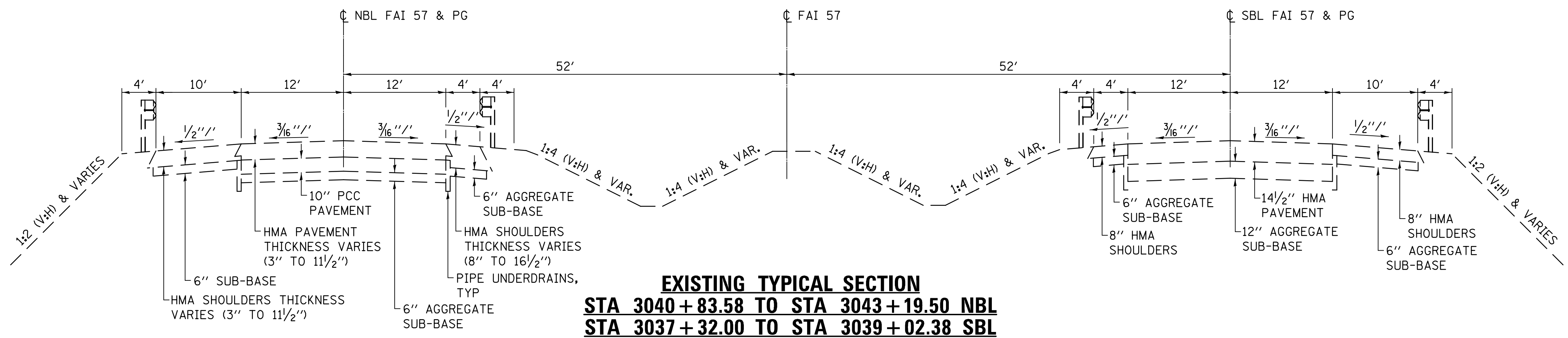


EXISTING TYPICAL SECTION
STA 3026+00.00 TO STA 3037+26.76 NBL
STA 3044+78.96 TO STA 3061+00.00 NBL
STA 3027+00.00 TO STA 3035+81.39 SBL
STA 3041+94.00 TO STA 3061+00.00 SBL

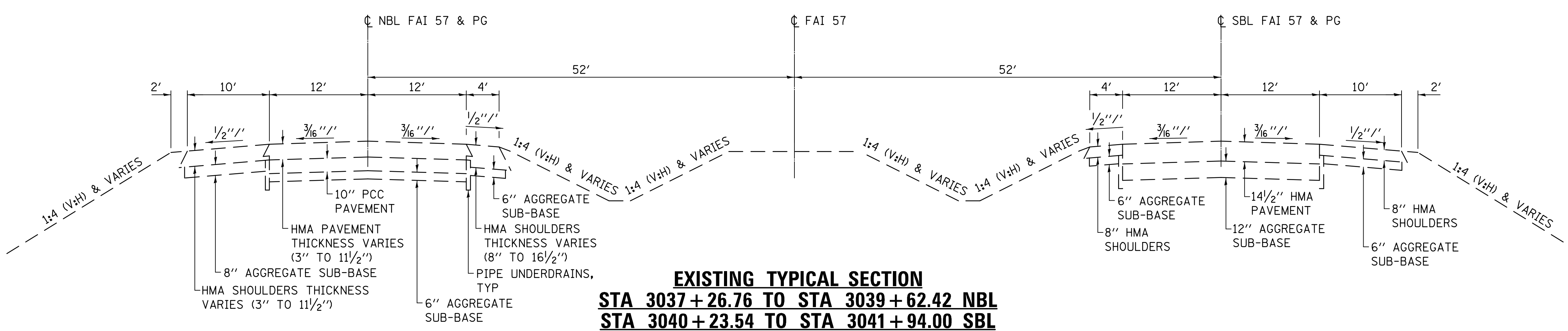
ESCA CONSULTANTS, INC.	USER NAME = SKM	DESIGNED - KJA	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	I-57 TYPICAL SECTIONS	F.A.I. RTE. 57 / SECTION (91-4)B-1 / COUNTY UNION / TOTAL SHEETS 160 / SHEET NO. 13
	ESCA PROJECT NO. 1259.08	DRAWN - KJA	REVISED -			CONTRACT NO. 78522
	PLOT SCALE = 0.1667 ' / in.	CHECKED - ELH	REVISED -		SCALE: NONE / SHEET NO. 1 OF 4 SHEETS / STA. 3026+00.00 TO STA. 3061+00.00	FED. ROAD DIST. NO. / ILLINOIS / FED. AID PROJECT
	PLOT DATE = 3/19/2018 12:57:09 PM	DATE - 12/17	REVISED -			



EXISTING TYPICAL SECTION
STA 3039+62.42 TO STA 3040+83.58 NBL
STA 3039+02.38 TO STA 3040+23.54 SBL



EXISTING TYPICAL SECTION
STA 3040+83.58 TO STA 3043+19.50 NBL
STA 3037+32.00 TO STA 3039+02.38 SBL



EXISTING TYPICAL SECTION
STA 3037+26.76 TO STA 3039+62.42 NBL
STA 3040+23.54 TO STA 3041+94.00 SBL

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ESCA CONSULTANTS, INC.

USER NAME = SKM		DESIGNED - KJA	REVISED -
ESCA PROJECT NO. 1259.08		DRAWN - KJA	REVISED -
PLOT SCALE = 0.1667 ′ / in.		CHECKED - ELH	REVISED -
PLOT DATE = 3/19/2018	12:57:09 PM	DATE - 12/17	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

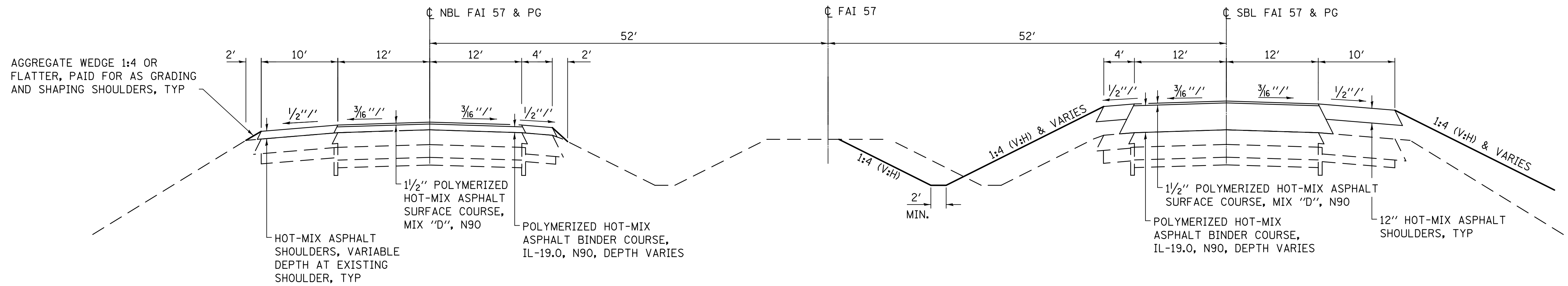
I–57 TYPICAL SECTIONS

SCALE: NONE | SHEET NO. 2 OF 4 SHEETS | STA. 3037+26.76 TO STA. 3043+19.50

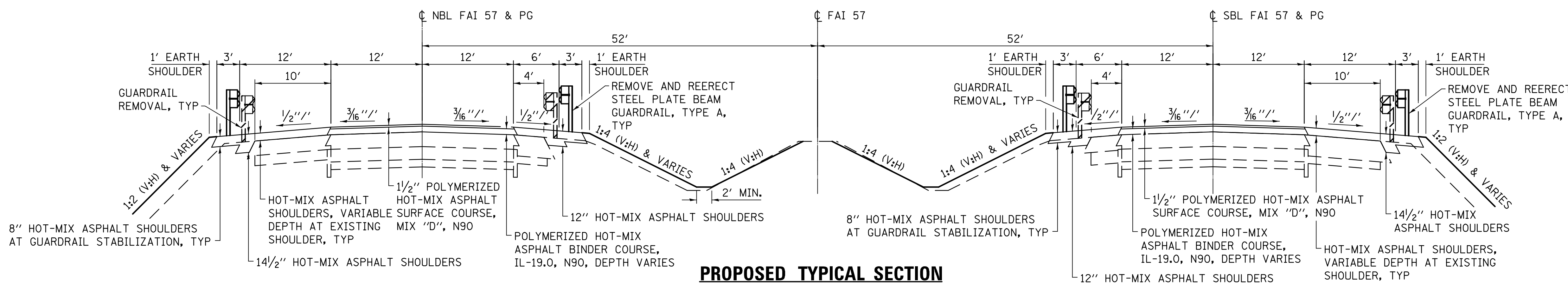
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	14

CONTRACT NO. 78522

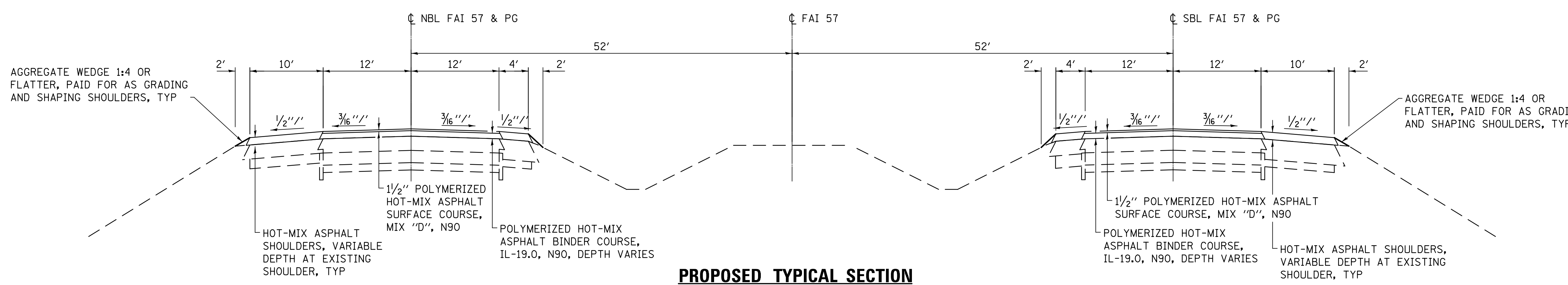
FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT



PROPOSED TYPICAL SECTION
STA 3040+81.23 TO STA 3047+00.00 SBL



PROPOSED TYPICAL SECTION
STA 3041+44.73 TO STA 3043+78.00 NBL
STA 3036+59.00 TO STA 3038+41.23 SBL



PROPOSED TYPICAL SECTION
STA 3037+00.00 TO STA 3039+04.73 NBL
STA 3043+78.00 TO STA 3046+00.00 NBL
STA 3035+00.00 TO STA 3036+59.00 SBL
STA 3047+00.00 TO STA 3048+85.00 SBL

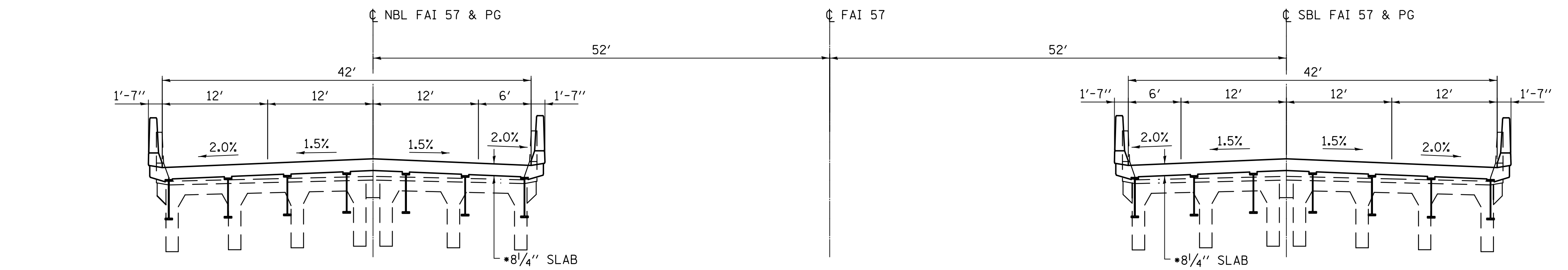
ESCA CONSULTANTS, INC.	USER NAME = SKM	DESIGNED - KJA	REVISED -
	ESCA PROJECT NO. 1259.08	DRAWN - KJA	REVISED -
	PLOT SCALE = 0.1667 ' / in.	CHECKED - ELH	REVISED -
	PLOT DATE = 3/19/2018 12:57:10 PM	DATE - 12/17	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

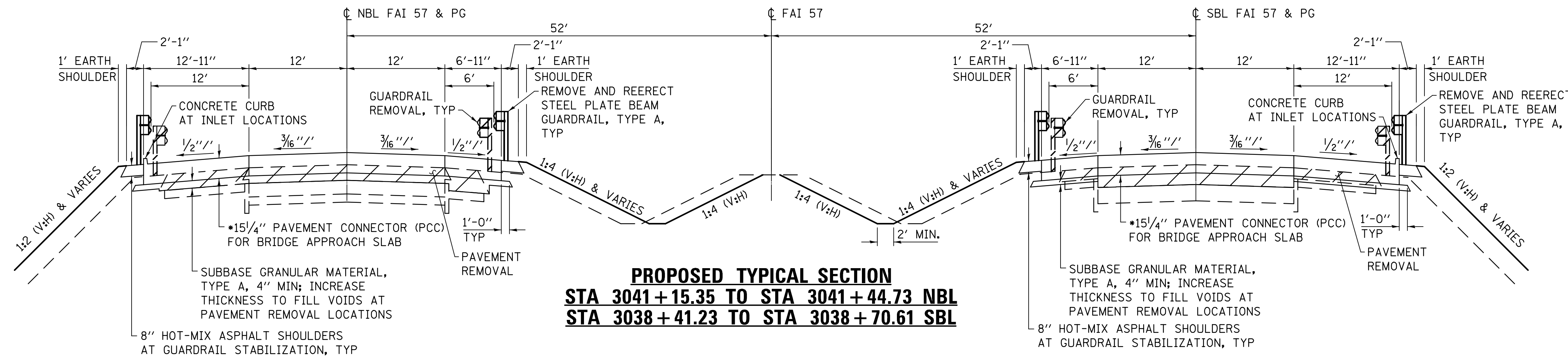
I-57 TYPICAL SECTIONS

SCALE: NONE | SHEET NO. 3 OF 4 SHEETS | STA. 3035+00.00 TO STA. 3048+85.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	15
		CONTRACT NO. 78522		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

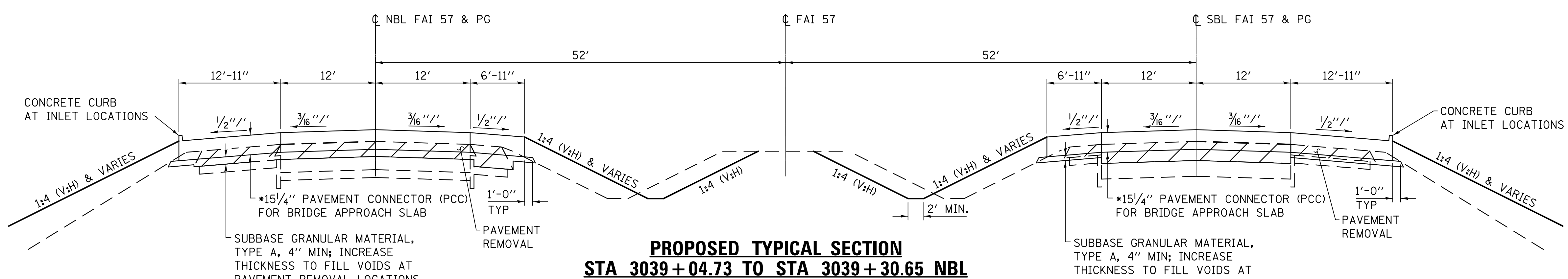


PROPOSED TYPICAL SECTION
STA 3039+59.50 TO STA 3040+86.50 NBL
STA 3038+99.46 TO STA 3040+26.46 SBL



PROPOSED TYPICAL SECTION
STA 3041+15.35 TO STA 3041+44.73 NBL
STA 3038+41.23 TO STA 3038+70.61 SBL

• PRIOR TO GRINDING



PROPOSED TYPICAL SECTION
STA 3039+04.73 TO STA 3039+30.65 NBL
STA 3040+55.31 TO STA 3040+81.23 SBL

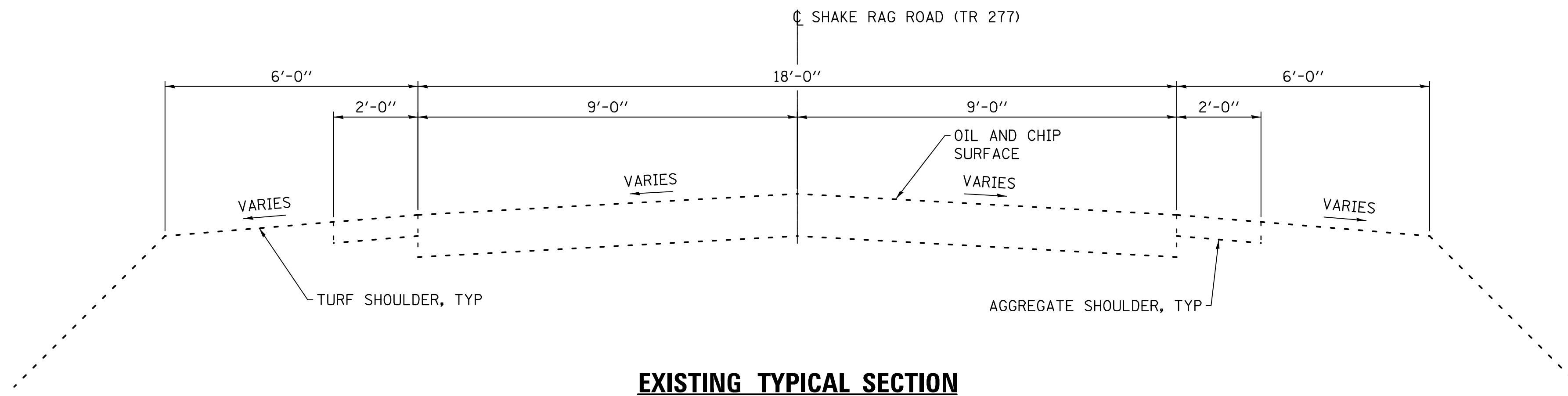
ESCA CONSULTANTS, INC.	USER NAME = SKM	DESIGNED - KJA	REVISED -
	ESCA PROJECT NO. 1259.08	DRAWN - KJA	REVISED -
	PLOT SCALE = 0.1667 ′ / in.	CHECKED - ELH	REVISED -
	PLOT DATE = 3/19/2018 12:57:11 PM	DATE - 02/18	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

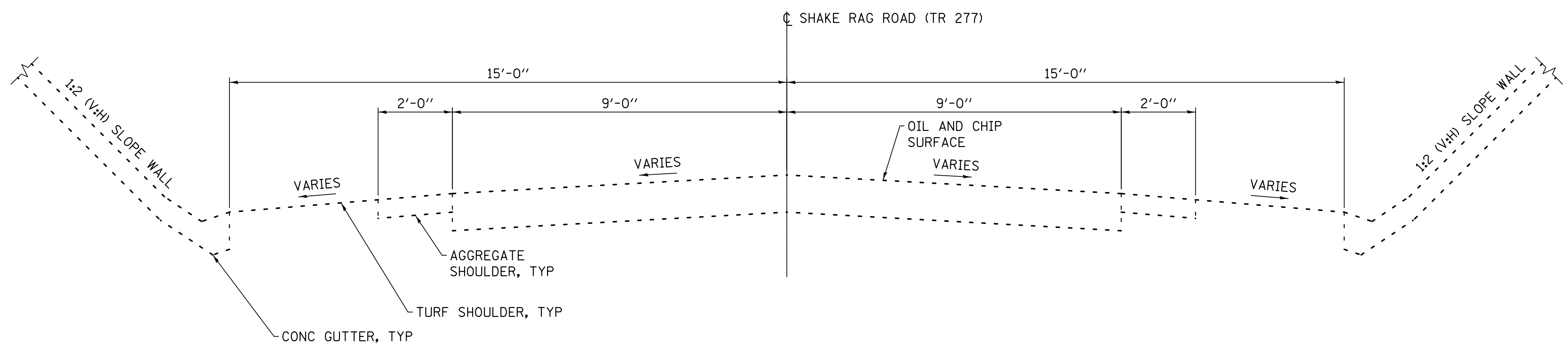
I-57 TYPICAL SECTIONS

SCALE: NONE | SHEET NO. 4 OF 4 SHEETS | STA. 3038+41.23 TO STA. 3041+44.73

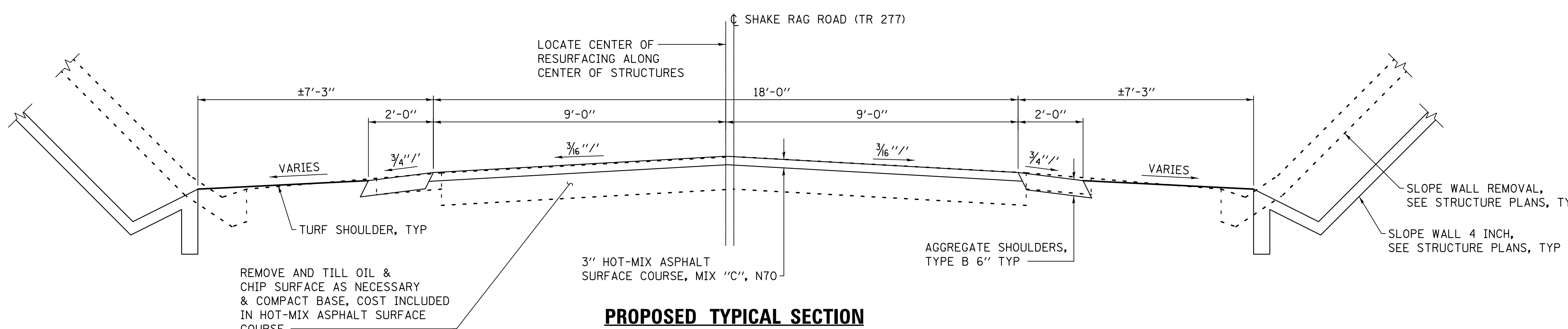
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	16
		CONTRACT NO. 78522		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



EXISTING TYPICAL SECTION
STA 1+00 TO STA 6+50
STA 8+70 TO STA 10+10



EXISTING TYPICAL SECTION
STA 6+50 TO STA 8+70



℄ SHAKE RAG ROAD (TR 277)
LOCATE CENTER OF RESURFACING ALONG CENTER OF STRUCTURES
±7′-3″
18′-0″
±7′-3″
2′-0″
9′-0″
9′-0″
2′-0″
VARIES
3/4″/′
3/16″/′
3/16″/′
3/4″/′
VARIES
SLOPE WALL REMOVAL, SEE STRUCTURE PLANS, TYP
SLOPE WALL 4 INCH, SEE STRUCTURE PLANS, TYP
TURF SHOULDER, TYP
AGGREGATE SHOULDERS, TYPE B 6″ TYP
3″ HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70
REMOVE AND TILL OIL & CHIP SURFACE AS NECESSARY & COMPACT BASE, COST INCLUDED IN HOT-MIX ASPHALT SURFACE COURSE

PROPOSED TYPICAL SECTION
STA 6+00 TO STA 9+00

EARTHWORK SCHEDULE

LOCATION	EARTH EXCAVATION	EXCAVATION TO BE USED IN EMBANKMENT (ADJ FOR SHRINKAGE)	EMBANKMENT	FURNISHED EXCAVATION
	CU YD	CU YD	CU YD	CU YD
NORTH CROSSOVERS	240	892 (1)	1480	265
SOUTH CROSSOVERS	280	903 (1)	1913	680
I-57 NB (LT)	2490	1868	1645	
I-57 SB (RT)	2560	1920	3902	1660
SHAKE RAG RD, LT	660	495	15	
SHAKE RAG RD, RT	370	278	6	
TOTALS	6600	6356	8961	2605

(1) INCLUDES TOPSOIL EXCAVATION AND PLACEMENT

STORM SEWER SCHEDULE

LOCATION	FLUSH INLET BOX FOR MEDIAN	METAL FLARED END SECTIONS 12″	STORM SEWERS, CLASS A, TYPE 1 24″	PIPE DRAINS 12″	MANHOLES, TYPE A, 5′-DIA, T1 FRAME, CLOSED LID	CONCRETE THRUST BLOCKS	TYPE F INLET BOX	TYPE G INLET BOX	MEDIAN INLET BOX REMOVAL
	EACH	EACH	FOOT	FOOT	EACH	EACH	EACH	EACH	EACH
STA 3038+48.15		1		14				1	
STA 3038+48.90		1		10		1	1		
STA 3039+12.23		2		36		1	1	1	
STA 3041+50	1		16		1				1
STA 3043+20					1				1
STA 3043+25	1		9						
STA 3043+31	1		10						
STA 3043+35					1				1
TOTALS	3	4	35	60	3	2	2	2	3

REMOVAL SCHEDULE

LOCATION	TREE REMOVAL, ACRES	GUTTER REMOVAL	PAVED SHOULDER REMOVAL	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	HOT-MIX ASPHALT SURFACE REMOVAL, 2″
	ACRE	FOOT	SQ YD	SQ YD	SQ YD
I-57 SB STA 3030+80 TO STA 3035+00			187		
I-57 SB STA 3035+00 TO STA 3035+35				150	
I-57 NB STA 3037+00 TO STA 3037+62				262	
I-57 NB STA 3037+00 TO STA 3039+65, LT					45
I-57 NB STA 3041+10 TO STA 3052+50, LT					190
I-57 NB STA 3045+58 TO STA 3046+00				180	
I-57 SB STA 3048+11 TO STA 3048+85				313	
I-57 SB STA 3048+85 TO STA 3053+50, RT					80
I-57 SB STA 3050+00 TO STA 3053+34.54			149		
I-57 SB STA 3057+33.66 TO STA 3060+69.29			149		
STA 3044+00, RT	0.25				
STA 3055+75			247		
SHAKE RAG RD STA 6+07 TO STA 6+62, LT		55			
SHAKE RAG RD STA 6+47 TO STA 6+80, RT		33			
TOTALS	0.25	88	732	905	315

MEDIAN CROSSOVERS SCHEDULE

LOCATION	TOPSOIL EXCAVATION AND PLACEMENT	SUBBASE GRANULAR MATERIAL, TYPE A 8″	AGGREGATE SHOULDERS, TYPE B 6″	TEMPORARY PAVEMENT	PIPE CULVERTS, CLASS D, TYPE 1 15″ (TEMPORARY)	PIPE CULVERTS, CLASS D, TYPE 1 18″ (TEMPORARY)	PIPE CULVERTS, CLASS D, TYPE 1 24″ (TEMPORARY)	INLET PROTECTION, SPECIAL	END SECTIONS 18″ SPECIAL	END SECTIONS 24″ (SPECIAL)	METAL END SECTIONS 15″ SPECIAL	INLETS, TYPE A, TYPE 8 GRATE, TEMPORARY	TEMPORARY INLET	TEMPORARY MANHOLES, TYPE A, 4′-DIA, T1 FRAME, OPEN LID	INLET MODIFICATION	PAVEMENT REMOVAL
	CU YD	SQ YD	SQ YD	SQ YD	FOOT	FOOT	FOOT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	SQ YD
NORTH CROSSOVERS	950	2165	423	1850	31	502		1	2		1			1		1664
SOUTH CROSSOVERS	925	2875	501	2470	121		321	4		2		1	1	1	1	2172
TOTALS	1875	5040	924	4320	152	502	321	5	2	2	1	1	1	2	1	3836

PAVING SCHEDULE

LOCATION	BITUMINOUS MATERIALS (TACK COAT)	POLYMERIZED BITUMINOUS MATERIALS (TACK COAT)	POLYMERIZED HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N90
	POUND	POUND	TON	TON	TON
NORTH OF SN 091-0075		368	100		47
SOUTH OF SN 091-0075		820	390		108
NORTH OF SN 091-0076		617	230		82
SOUTH OF SN 091-0076		1447	1485		183
SHAKE RAG RD	270			105	
SN 091-0001		240			90
TOTALS	270	3492	2205	105	510

SEEDING SCHEDULE

LOCATION	SEEDING, CLASS 2A	SEEDING, CLASS 7	NITROGEN FERTILIZER NUTRIENT	PHOSPHORUS FERTILIZER NUTRIENT	POTASSIUM FERTILIZER NUTRIENT	AGRICULTURAL GROUND LIMESTONE	MULCH, METHOD 2
	ACRE	ACRE	POUND	POUND	POUND	TON	ACRE
NORTHEAST QUADRANT	0.20	0.20	18	18	18	0.4	0.30
NORTHWEST QUADRANT	0.15	0.15	14	14	14	0.3	0.25
SOUTHWEST QUADRANT	0.75	0.75	68	68	68	1.5	1.40
SOUTHEAST QUADRANT	0.50	0.50	45	45	45	1	0.55
NORTH MEDIAN	1.85	1.85	166	166	166	3.7	3.50
SOUTH MEDIAN	3.30	3.30	297	297	297	6.6	6.50
TOTALS	6.75	6.75	608	608	608	13.5	12.50

BRIDGE APPROACH SCHEDULE

LOCATION	SUBBASE GRANULAR MATERIAL, TYPE A	PAVEMENT CONNECTOR (PCC) FOR BRIDGE APPROACH SLAB	PROTECTIVE COAT	PAVEMENT REMOVAL
	TON	SQ YD	SQ YD	SQ YD
SN 091-0075 NORTH APPROACH	48	133	134	268
SN 091-0075 SOUTH APPROACH	48	135	136	267
SN 091-0076 NORTH APPROACH	53	133	134	266
SN 091-0076 SOUTH APPROACH	53	135	136	273
TOTALS	202	536	540	1074

SHOULDER SCHEDULE

LOCATION	SUBBASE GRANULAR MATERIAL, TYPE A, 4"	BITUMINOUS MATERIALS (TACK COAT)	AGGREGATE SHOULDERS, TYPE B 6"	HOT-MIX ASPHALT SHOULDERS	SHOULDER RUMBLE STRIPS, 16 INCH	GRADING AND SHAPING SHOULDERS
	SQ YD	POUND	SQ YD	TON	FOOT	UNIT
I-57 NB STA 3046+00 TO STA 3052+50, LT		36		13	650	
I-57 SB STA 3048+85 TO STA 3053+50, RT		35		9	465	
SN 091-0075 NORTHEAST CORNER		175		89	205	2
SN 091-0075 NORTHWEST CORNER		63		35	205	
SN 091-0075 SOUTHEAST CORNER		805		359	456	
SN 091-0075 SOUTHWEST CORNER		480		172	456	
SN 091-0076 NORTHEAST CORNER		455		136	342	
SN 091-0076 NORTHWEST CORNER		510		211	342	2
SN 091-0076 SOUTHEAST CORNER		242		300	804	
SN 091-0076 SOUTHWEST CORNER		605		751	804	3
STA 3055+63, MEDIAN CROSSOVER	270	609		125		
STA 3027+10.12 TO STA 3038+16.04			492			
STA 3030+80 TO STA 3035+00					420	
STA 3050+00 TO STA 3060+69.29			476		671	
SHAKE RAG RD			134			
TOTALS	270	4015	1102	2200	5820	7

PRINT DRIVER = I_PD_E_B_0.pltcfg
PEN TABLE = IDOT_VER02.tbl
MODEL NAME = PLOT
FILE NAME = D978522-sht-schedule02.dgn

ESCA CONSULTANTS, INC.
CIVIL & STRUCTURAL ENGINEERS

USER NAME = SKM	DESIGNED - SKM	REVISED -	
ESCA PROJECT NO. 1259.08	DRAWN - SKM	REVISED -	
PLOT SCALE = 0.1667 ' / in.	CHECKED - ELH	REVISED -	
PLOT DATE = 3/19/2018 12:57:12 PM	DATE - 03/18	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULES OF QUANTITIES

SCALE: NA | SHEET NO. 2 OF 4 SHEETS | STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	19

CONTRACT NO. 78522

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

PIPE UNDERDRAIN SCHEDULE

LOCATION	CONCRETE HEADWALL REMOVAL	CONCRETE HEADWALLS FOR PIPE DRAINS	PIPE UNDERDRAINS 4″ (SPECIAL)	REMOVE AND REINSTALL CONCRETE HEADWALL FOR PIPE DRAIN
	EACH	EACH	FOOT	EACH
STA 3030+07	1	1	44	1
STA 3030+97	1	1	41	
STA 3035+04	2	2	49	
STA 3042+01	1	1	11	
STA 3045+01	1	1	8	
STA 3048+05	1	1	9	
STA 3052+57	1	1	5	
STA 3054+04	1	1	35	1
STA 3060+03	1	1	2	
SN 091-0075		2		
SN 091-0076		2		
TOTALS	10	14	204	2

EROSION CONTROL SCHEDULE

LOCATION	EROSION CONTROL BLANKET	TEMPORARY EROSION CONTROL SEEDING	PERIMETER EROSION BARRIER	TEMPORARY DITCH CHECKS	INLET AND PIPE PROTECTION	FILTER FABRIC	AGGREGATE DITCH
	SQ YD	POUND	FOOT	FOOT	EACH	SQ YD	TON
NORTHEAST QUADRANT	540	40					
NORTHWEST QUADRANT	280	30					
SOUTHWEST QUADRANT	582	150				56	40
SOUTHEAST QUADRANT	2460	100	220				
NORTH MEDIAN	620	370		125	5		
SOUTH MEDIAN	615	660		540	11		
TOTALS	5097	1350	220	665	16	56	40

PAVEMENT MARKING SCHEDULE

LOCATION	SHORT TERM PAVEMENT MARKING		SHORT TERM PAVEMENT MARKING REMOVAL	MODIFIED URETHANE PAVEMENT MARKING - LINE 4″		RAISED REFLECTIVE PAVEMENT MARKER	REPLACEMENT REFLECTOR	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	PAVEMENT MARKING REMOVAL - WATER BLASTING	RAISED REFLECTIVE PAVEMENT MARKER, REFLECTOR REMOVAL
	FOOT		SQ FT	FOOT		EACH	EACH	EACH	SQ FT	EACH
	WHITE	YELLOW		WHITE	YELLOW					
NB I-57										
STA 3026+69 TO STA 3085+00	824	240	355	7300	5840	12	20	8	4380	20
FOR STAGE II									1220	
FOR STAGE III									203	
SB I-57										
SB ENTRANCE RAMP	32		11	600					200	
STA 2997+36 TO STA 3060+69	900	256	385	7910	6300	18	26	15	4740	26
FOR STAGE II									340	
FOR STAGE III									1487	
SUBTOTALS	1756	496	751	15810	12140	30	46	23	12570	46
TOTALS	2252		751	27950		30	46	23	12570	46

GUARDRAIL SCHEDULE

LOCATION	GUARDRAIL REMOVAL	TBT, TYPE 6	REMOVE AND RE-ERECT SPBGR, TYPE A	TEMPORARY TBT, TYPE 6	TERMINAL MARKER - DIRECT APPLIED	GUARDRAIL REFLECTORS, TYPE A	TBT, TYPE 6B (SPECIAL)	REMOVE AND RE-ERECT TBT, TYPE 1 SPECIAL, TANGENT	TEMPORARY TBT, TYPE 1 SPECIAL, (FLARED)
	FOOT	EACH	FOOT	EACH	EACH	EACH	EACH	EACH	EACH
SN 091-0075 SOUTHWEST CORNER	70	1	187.5		1	3		1	
SN 091-0075 SOUTHEAST CORNER	82	1	250.0		1	4		1	
SN 091-0076 NORTHWEST CORNER	144	1	112.5		1	2		1	
SN 091-0076 NORTHEAST CORNER	67	1	187.5		1	3		1	
SN 091-0076 SOUTHEAST CORNER				1	1	3			1
SN 091-0001 NORTHWEST CORNER					1	3	1		1
TOTALS	363	4	737.5	1	6	18	1	4	2

ESCA CONSULTANTS, INC.

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PLOT DATE = 3/19/2018 12:57:13 PM	DATE - 03/18	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULES OF QUANTITIES

SCALE: NA | SHEET NO. 3 OF 4 SHEETS | STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	20

CONTRACT NO. 78522

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

TEMPORARY PAVEMENT MARKING SCHEDULE

LOCATION	TEMPORARY PAVEMENT MARKING - LINE 4"		TEMPORARY PAVEMENT MARKING REMOVAL
	FOOT		SQ FT
	WHITE	YELLOW	
AFTER STAGE II			
NB I-57			
STA 3035+08 TO STA 3085+00		5000	1667
STA 3037+00 TO STA 3052+50	1550		517
STA 3038+50 TO STA 3085+00	1200		400
SB I-57			
SB ENTRANCE RAMP	600		200
STA 3011+14 TO STA 3021+14	1250		417
STA 3021+14 TO STA 3060+75	4930	3960	2962
AFTER STAGE III			
NB I-57			
STA 3026+69 TO STA 3070+69	5500	4400	3300
STA 3070+69 TO STA 3080+69	1260		420
SB I-57			
STA 2997+36 TO STA 3053+50	3210	5580	2930
STA 3053+50 TO STA 3056+06		260	87
SUBTOTALS	19500	19200	12900
TOTALS	38700		12900

TEMPORARY RAISED REFLECTIVE PAVEMENT MARKER SCHEDULE

LOCATION	TEMPORARY RAISED REFLECTIVE PAVEMENT MARKER	
	EACH	
	WHITE	YELLOW
STAGE I		
NORTH TAPER		66
SOUTH TAPER		66
STAGE II		
NORTH TAPER	51	
SOUTH TAPER		51
NORTH CROSSOVERS	43	43
SOUTH CROSSOVERS	55	55
STAGE III		
NORTH TAPER		51
SOUTH TAPER	51	
NORTH CROSSOVERS	43	43
SOUTH CROSSOVERS	55	55
STAGE IV		
NORTH TAPER		66
SOUTH TAPER		66
SUBTOTALS	298	562
TOTALS	860	

TEMPORARY CONCRETE BARRIER SCHEDULE

LOCATION	TEMPORARY CONCRETE BARRIER	RELOCATE TEMPORARY CONCRETE BARRIER	BARRIER WALL REFLECTORS, TYPE B
	FOOT	FOOT	EACH
STAGE II TRAFFIC CONTROL			
STA 3035+08 TO STA 3055+34	2037.5		249
STAGE III TRAFFIC CONTROL			
STA 3030+87 TO STA 3056+06	487.5	2037.5	315
TOTALS	2525	2037.5	564

CONCRETE GUTTER SCHEDULE

LOCATION	CONCRETE GUTTER (SPECIAL)	PROTECTIVE COAT
	FOOT	SQ YD
SHAKE RAG RD STA 5+89 TO 6+58, LT	71	32
SHAKE RAG RD STA 6+35 TO 6+78, RT	46	21
TOTALS	117	53

CONCRETE WINGWALL EXTENSION SCHEDULE

LOCATION	CONCRETE REMOVAL	CONCRETE SUPERSTRUCTURE	REINFORCEMENT BARS
	CU YD	CU YD	POUND
SN 091-0001 NORTHWEST WINGWALL	0.1	0.4	66
TOTALS	0.1	0.4	66

PRINT DRIVER = I_PD_E_B_0.pltcfg
PEN TABLE = IDOT_VER02.tbl
MODEL NAME = PLOT
FILE NAME = D978522-sht-schedule04.dgn

ESCA CONSULTANTS, INC. CIVIL & STRUCTURAL ENGINEERS

USER NAME = SKM	DESIGNED - SKM	REVISED -	
ESCA PROJECT NO. 1259.08	DRAWN - SKM	REVISED -	
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PLOT DATE = 3/19/2018 12:57:13 PM	DATE - 03/18	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

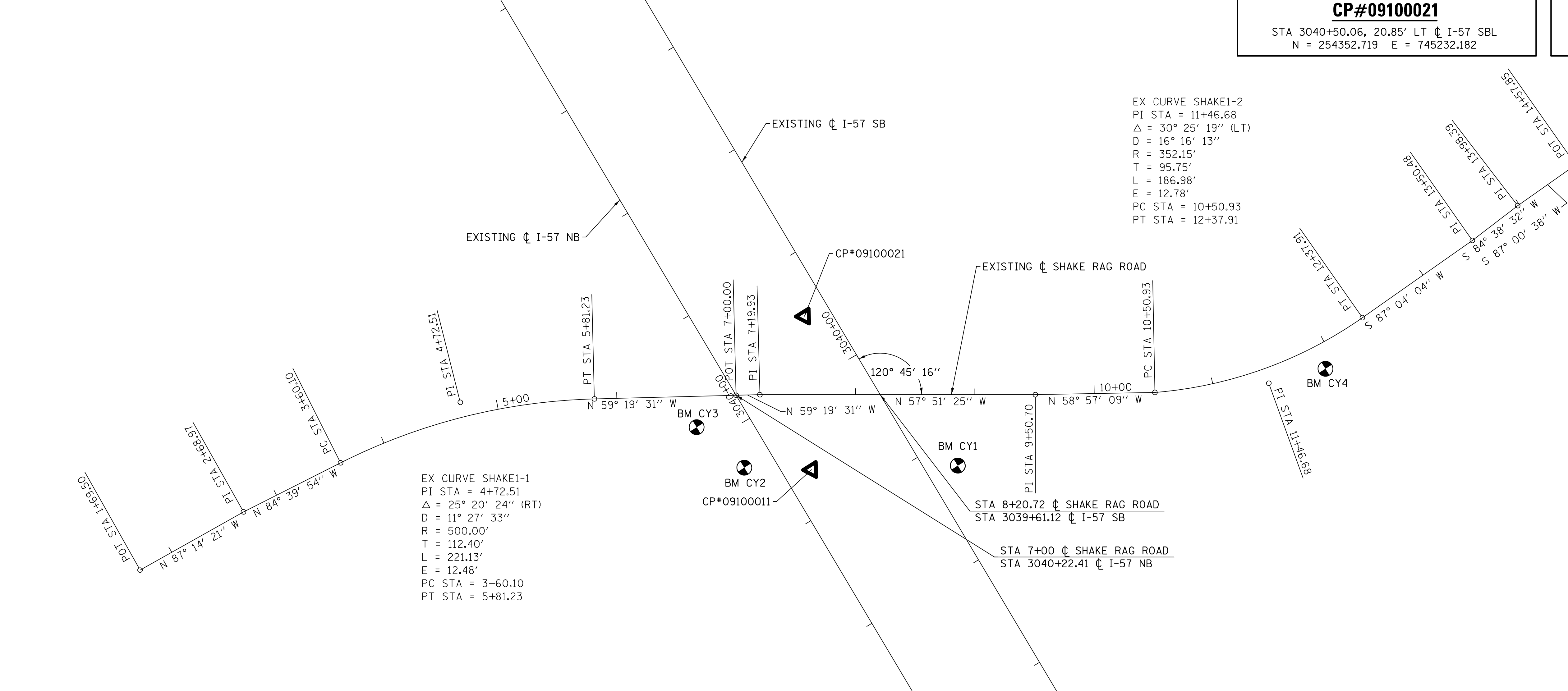
SCHEDULES OF QUANTITIES

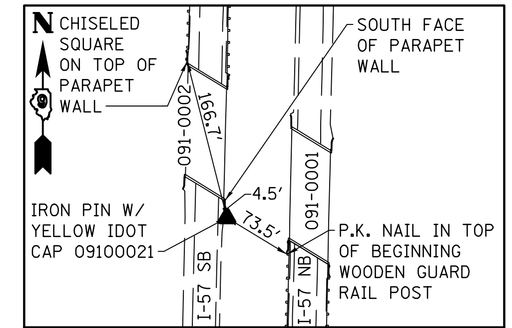
SCALE: NA | SHEET NO. 4 OF 4 SHEETS | STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	21

CONTRACT NO. 78522

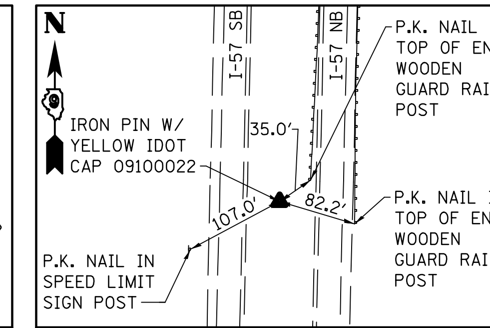
FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT





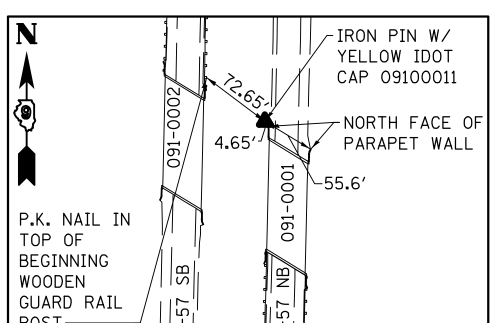
CP#09100021

STA 3040+50.06, 20.85′ LT ℄ I-57 SBL
N = 254352.719 E = 745232.182



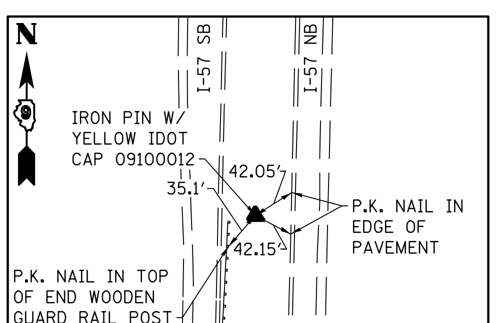
CP#09100022

STA 3045+22.36, 50.53′ LT ℄ I-57 SBL
N = 253879.847 E = 745250.407



CP#09100011

STA 3039+36.47, 22.52′ RT ℄ I-57 NBL
N = 254464.813 E = 745295.550



CP#09100012

STA 3034+64.01, 53.39′ RT ℄ I-57 NBL
N = 254937.887 E = 745276.141

BENCHMARKS

NAVD 88

BM CY1 - "□" TOP OF WEST PARAPET WALL, NW CORNER OF SN 091-0002, NE CORNER OF APPROACH PARAPET, EL 423.17

BM CY2 - "□" TOP OF EAST PARAPET WALL, NE CORNER OF SN 091-0001, NE CORNER OF APPROACH PARAPET, EL 422.96

BM CY3 - "□" TOP SE CORNER OF HEADWALL OF 24" DIA. RCP, NORTH SIDE DITCH, NE QUAD OF SN 091-0001, EL 403.36

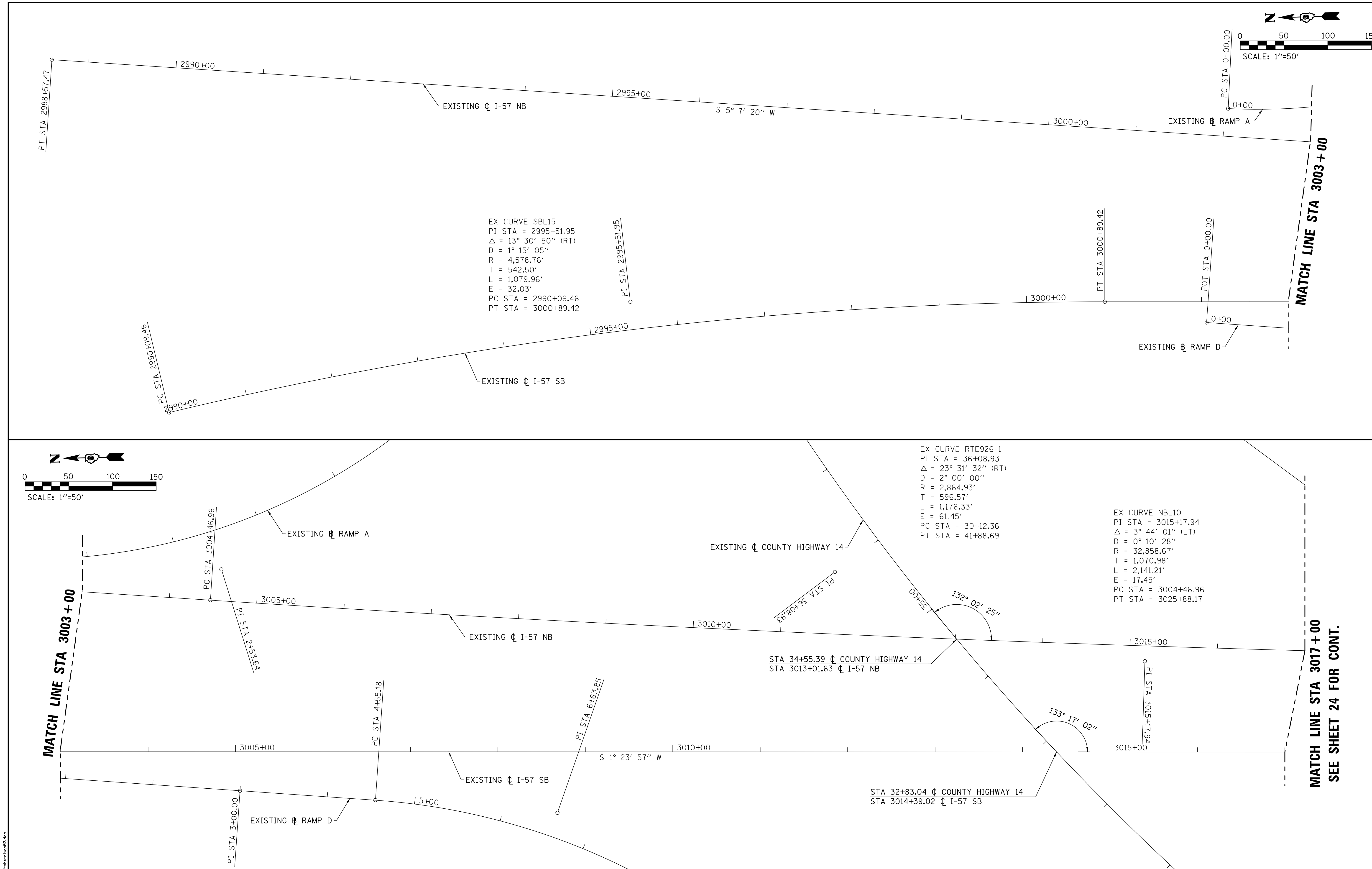
BM CY4 - RAILROAD SPIKE IN NORTH SIDE OF POWER POLE, NW QUAD OF INTERSECTION OF SHAKE RAG ROAD AND EAST STREET, EL 425.98

ESCA CONSULTANTS, INC.	USER NAME = SKM	DESIGNED - KAH	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	ESCA PROJECT NO. 1259.08	DRAWN - KAH	REVISED -	
	PLOT SCALE = 0.1667 ′ / in.	CHECKED - ELH	REVISED -	
	PLOT DATE = 3/19/2018	DATE - 09/17	REVISED -	

ALIGNMENT, TIES, AND BENCHMARKS

SCALE: 1″=50′ | SHEET NO. 1 OF 4 SHEETS | STA. 1+69.50 TO STA. 14+57.85

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	22
		CONTRACT NO. 78522		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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PEN TABLE = IDOT_VER02.tbl
MODEL NAME = PLOT
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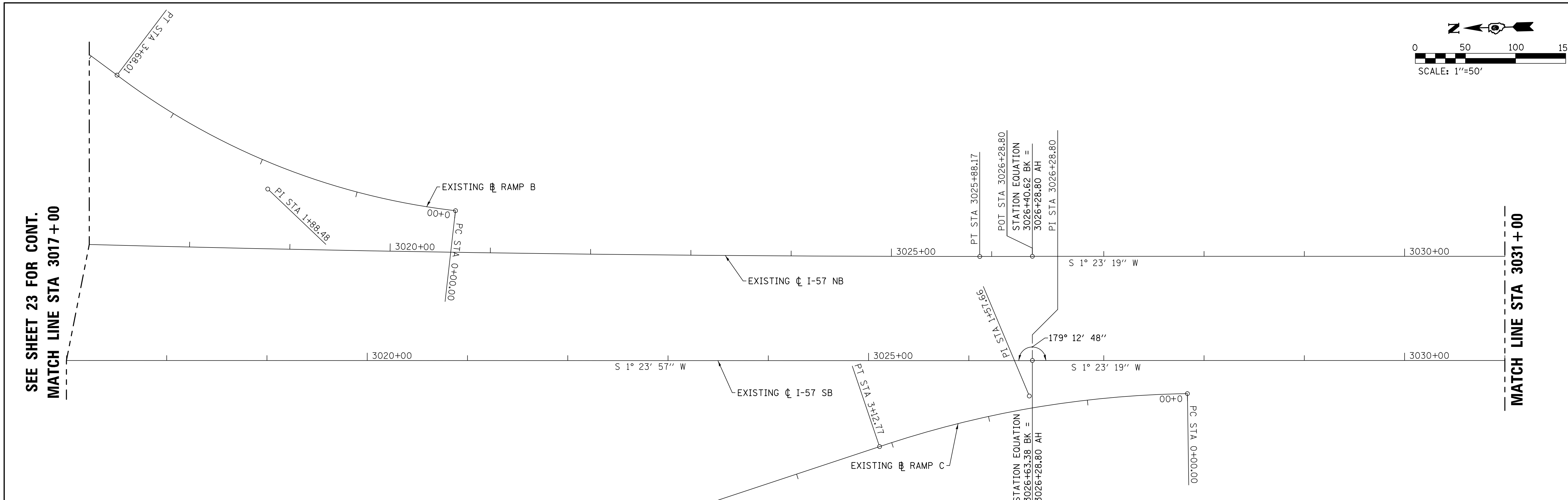
ESCA CONSULTANTS, INC. CIVIL & STRUCTURAL ENGINEERS	USER NAME = SKM	DESIGNED - KAH	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	ESCA PROJECT NO. 1259.08	DRAWN - KAH	REVISED -	
	PLOT SCALE = 0.1667 ' / in.	CHECKED - ELH	REVISED -	
	PLOT DATE = 3/19/2018	DATE - 09/17	REVISED -	

ALIGNMENT, TIES, AND BENCHMARKS

SCALE: 1"=50' | SHEET NO. 2 OF 4 SHEETS | STA. 2988+57.47 TO STA. 3017+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	23
		CONTRACT NO. 78522		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



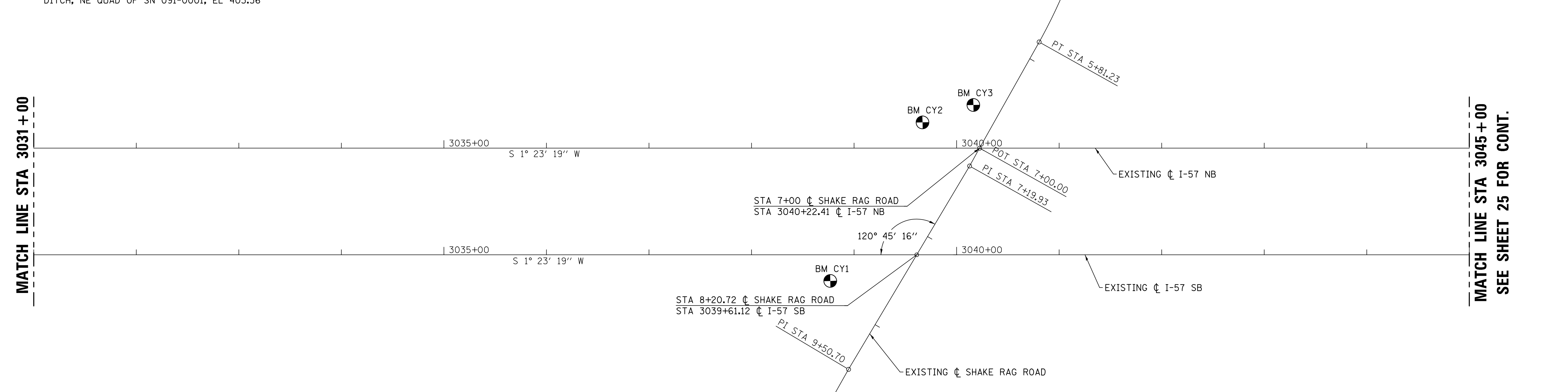
BENCHMARKS

NAVD 88

BM CY1 - "□" TOP OF WEST PARAPET WALL, NW CORNER OF SN 091-0002, NE CORNER OF APPROACH PARAPET, EL 423.17

BM CY2 - "□" TOP OF EAST PARAPET WALL, NE CORNER OF SN 091-0001, NE CORNER OF APPROACH PARAPET, EL 422.96

BM CY3 - "□" TOP SE CORNER OF HEADWALL OF 24" DIA. RCP, NORTH SIDE DITCH, NE QUAD OF SN 091-0001, EL 403.36

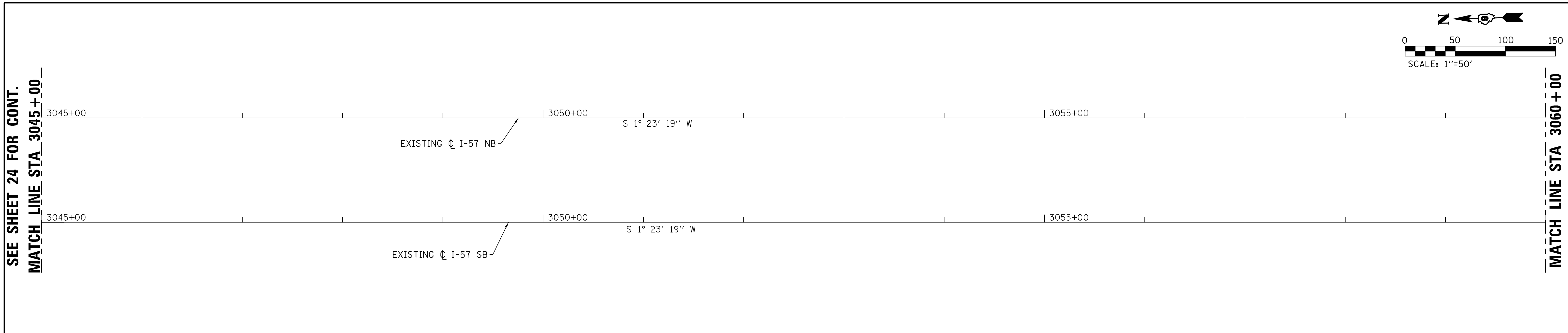


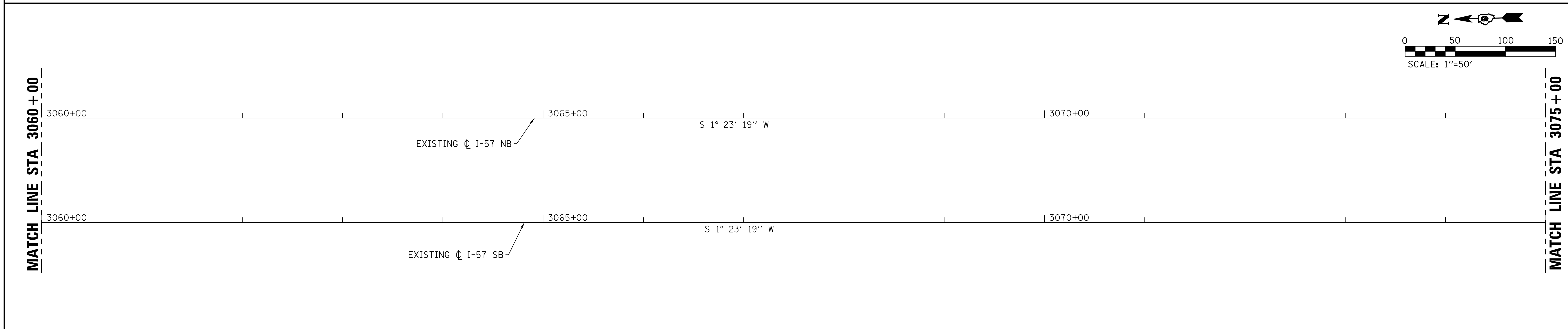
ESCA CONSULTANTS, INC.	USER NAME = SKM	DESIGNED - KAH	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	ESCA PROJECT NO. 1259.08	DRAWN - KAH	REVISED -	
	PLOT SCALE = 0.1667 ' / in.	CHECKED - ELH	REVISED -	
	PLOT DATE = 3/19/2018	DATE - 09/17	REVISED -	

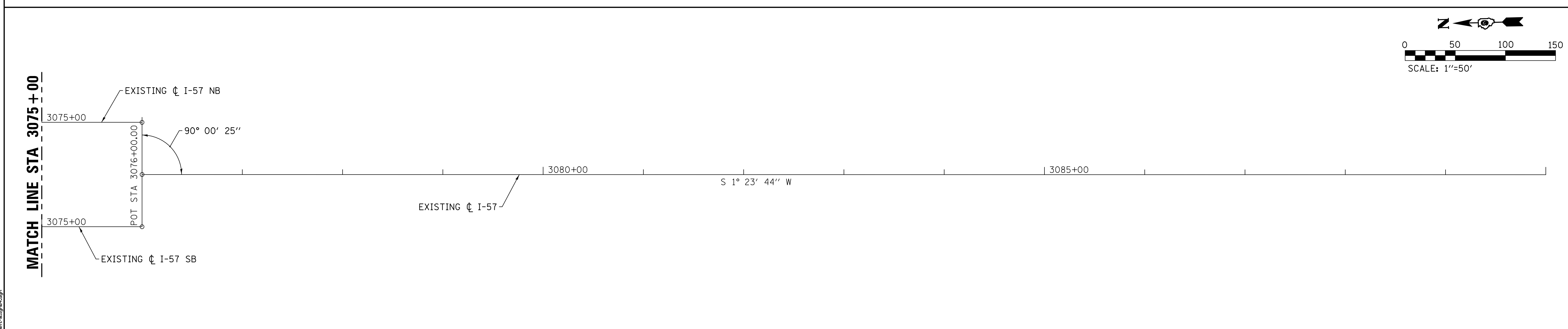
ALIGNMENT, TIES, AND BENCHMARKS

SCALE: 1''=50' | SHEET NO. 3 OF 4 SHEETS | STA. 3017+00 TO STA. 3045+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	24
		CONTRACT NO. 78522		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		







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PEN TABLE = IDOT_VER02.tbl
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FILE NAME = D978522-sht-align04.dgn

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ESCA PROJECT NO. 1259.08	DRAWN - KAH	REVISED -
PLOT SCALE = 0.1667 ' / in.	CHECKED - ELH	REVISED -
PLOT DATE = 3/19/2018	DATE - 09/17	REVISED -

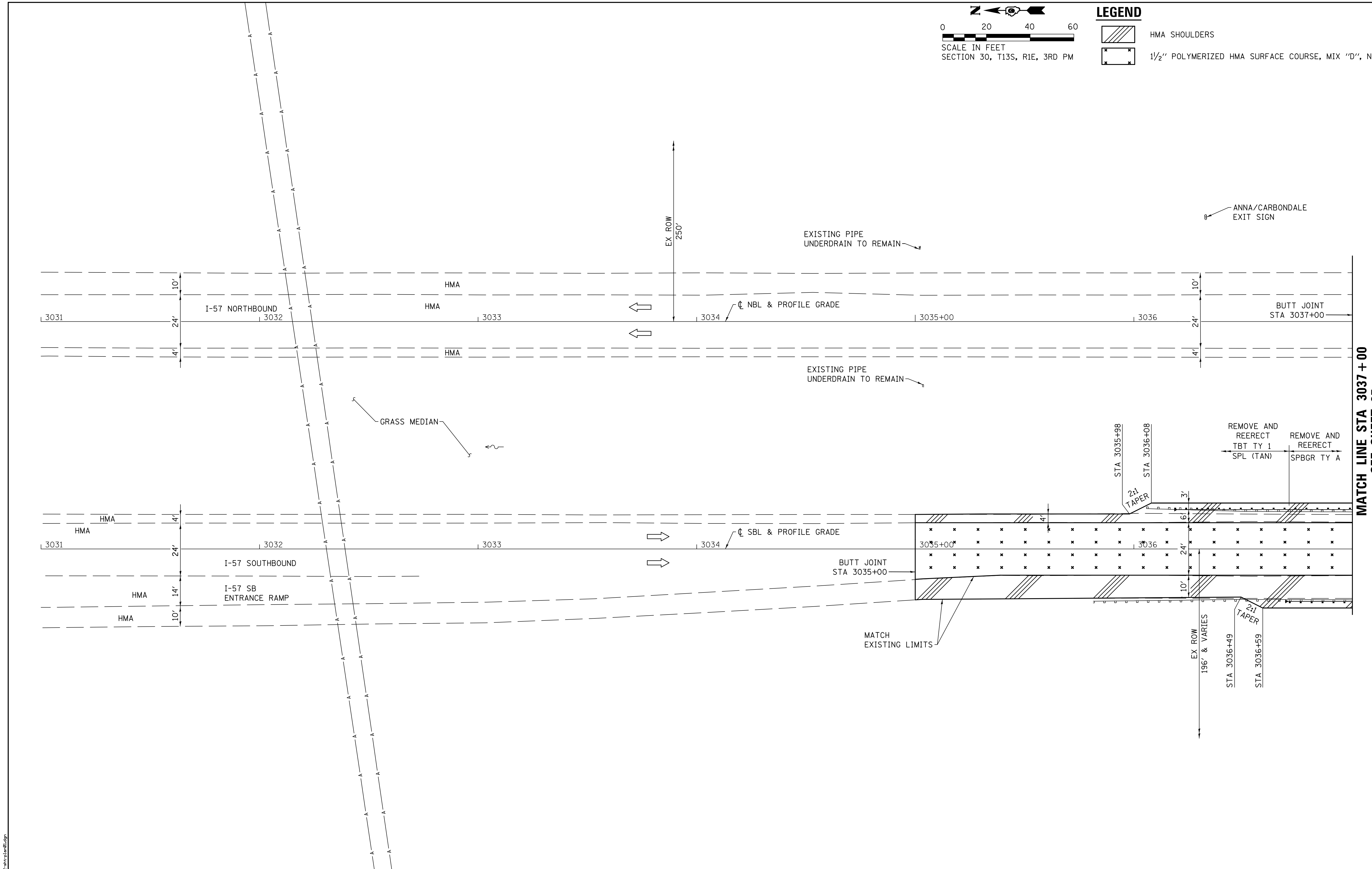
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ALIGNMENT, TIES, AND BENCHMARKS

SCALE: 1''=50' | SHEET NO. 4 OF 4 SHEETS | STA. 3045+00 TO STA. 3090+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	25
		CONTRACT NO. 78522		

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



ESCA CONSULTANTS, INC.

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ESCA PROJECT 1259.08	DRAWN - KJA/SKM	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - ELH	REVISED -
PLOT DATE = 3/19/2018	DATE - 02/18	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

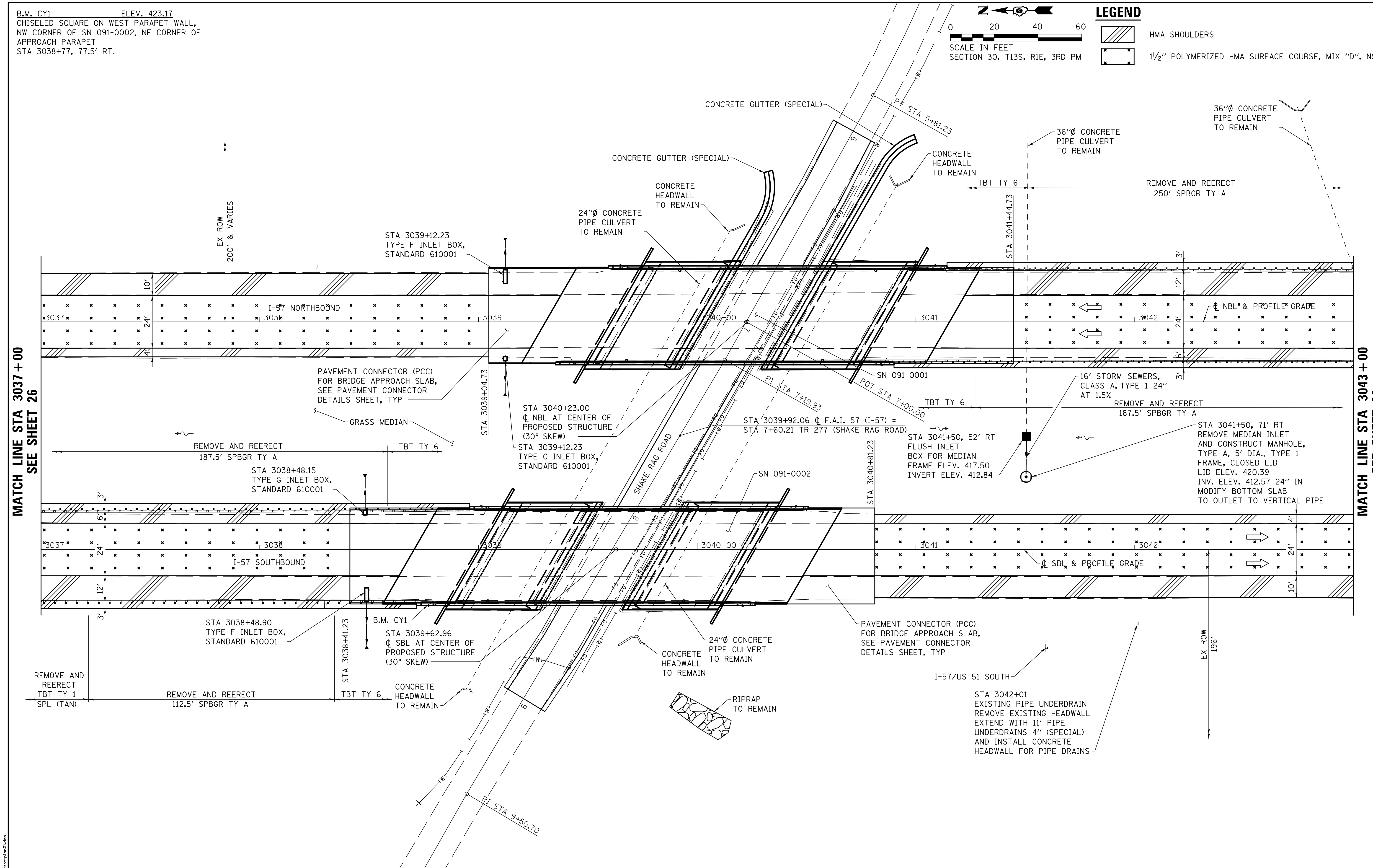
I-57 PLAN

SCALE: 1"=20' | SHEET NO. 1 OF 3 SHEETS | STA. 3031+00 TO STA. 3037+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	26

CONTRACT NO. 78522

ILLINOIS FED. AID PROJECT


B.M. CY1 ELEV. 423.17
CHISELED SQUARE ON WEST PARAPET WALL, NW CORNER OF SN 091-0002, NE CORNER OF APPROACH PARAPET
STA 3038+77, 77.5' RT.
0 20 40 60
SCALE IN FEET
SECTION 30, T13S, R1E, 3RD PM
LEGEND
HMA SHOULDERS
1½" POLYMERIZED HMA SURFACE COURSE, MIX "D", N90
CONCRETE GUTTER (SPECIAL)
PT STA 5+81.23
CONCRETE HEADWALL TO REMAIN
36"Ø CONCRETE PIPE CULVERT TO REMAIN
TBT TY 6
REMOVE AND REERECT 250' SPBGR TY A
STA 3041+44.73
EX ROW 200' & VARIES
24"Ø CONCRETE PIPE CULVERT TO REMAIN
STA 3039+12.23 TYPE F INLET BOX, STANDARD 610001
I-57 NORTHBOUND
℄ NBL & PROFILE GRADE
SN 091-0001
PI STA 7+19.93
POT STA 7+00.00
16' STORM SEWERS, CLASS A, TYPE 1 24" AT 1.5%
REMOVE AND REERECT 187.5' SPBGR TY A
MATCH LINE STA 3037+00 SEE SHEET 26
MATCH LINE STA 3043+00 SEE SHEET 28
PAVEMENT CONNECTOR (PCC) FOR BRIDGE APPROACH SLAB, SEE PAVEMENT CONNECTOR DETAILS SHEET, TYP
GRASS MEDIAN
STA 3039+04.73
STA 3040+23.00 ℄ NBL AT CENTER OF PROPOSED STRUCTURE (30° SKEW)
STA 3039+12.23 TYPE G INLET BOX, STANDARD 610001
STA 3039+92.06 ℄ F.A.I. 57 (I-57) = STA 7+60.21 TR 277 (SHAKE RAG ROAD)
STA 3041+50, 52' RT FLUSH INLET BOX FOR MEDIAN FRAME ELEV. 417.50 INVERT ELEV. 412.84
STA 3041+50, 71' RT REMOVE MEDIAN INLET AND CONSTRUCT MANHOLE, TYPE A, 5' DIA., TYPE 1 FRAME, CLOSED LID LID ELEV. 420.39 INV. ELEV. 412.57 24" IN MODIFY BOTTOM SLAB TO OUTLET TO VERTICAL PIPE
REMOVE AND REERECT 187.5' SPBGR TY A
STA 3038+48.15 TYPE G INLET BOX, STANDARD 610001
SHAKE RAG ROAD
SN 091-0002
STA 3040+81.23
I-57 SOUTHBOUND
℄ SBL & PROFILE GRADE
STA 3038+48.90 TYPE F INLET BOX, STANDARD 610001
STA 3038+41.23
B.M. CY1
STA 3039+62.96 ℄ SBL AT CENTER OF PROPOSED STRUCTURE (30° SKEW)
CONCRETE HEADWALL TO REMAIN
24"Ø CONCRETE PIPE CULVERT TO REMAIN
PAVEMENT CONNECTOR (PCC) FOR BRIDGE APPROACH SLAB, SEE PAVEMENT CONNECTOR DETAILS SHEET, TYP
EX ROW 196'
I-57/US 51 SOUTH
REMOVE AND REERECT TBT TY 1 SPL (TAN)
REMOVE AND REERECT 112.5' SPBGR TY A
TBT TY 6
CONCRETE HEADWALL TO REMAIN
RIPRAP TO REMAIN
STA 3042+01 EXISTING PIPE UNDERDRAIN REMOVE EXISTING HEADWALL EXTEND WITH 11' PIPE UNDERDRAINS 4" (SPECIAL) AND INSTALL CONCRETE HEADWALL FOR PIPE DRAINS
PI STA 9+50.70

ESCA CONSULTANTS, INC.	USER NAME = SKM	DESIGNED - KJA/SKM	REVISED -
	ESCA PROJECT 1259.08	DRAWN - KJA/KAH/SKM	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED - ELH	REVISED -
	PLOT DATE = 3/19/2018	DATE - 02/18	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

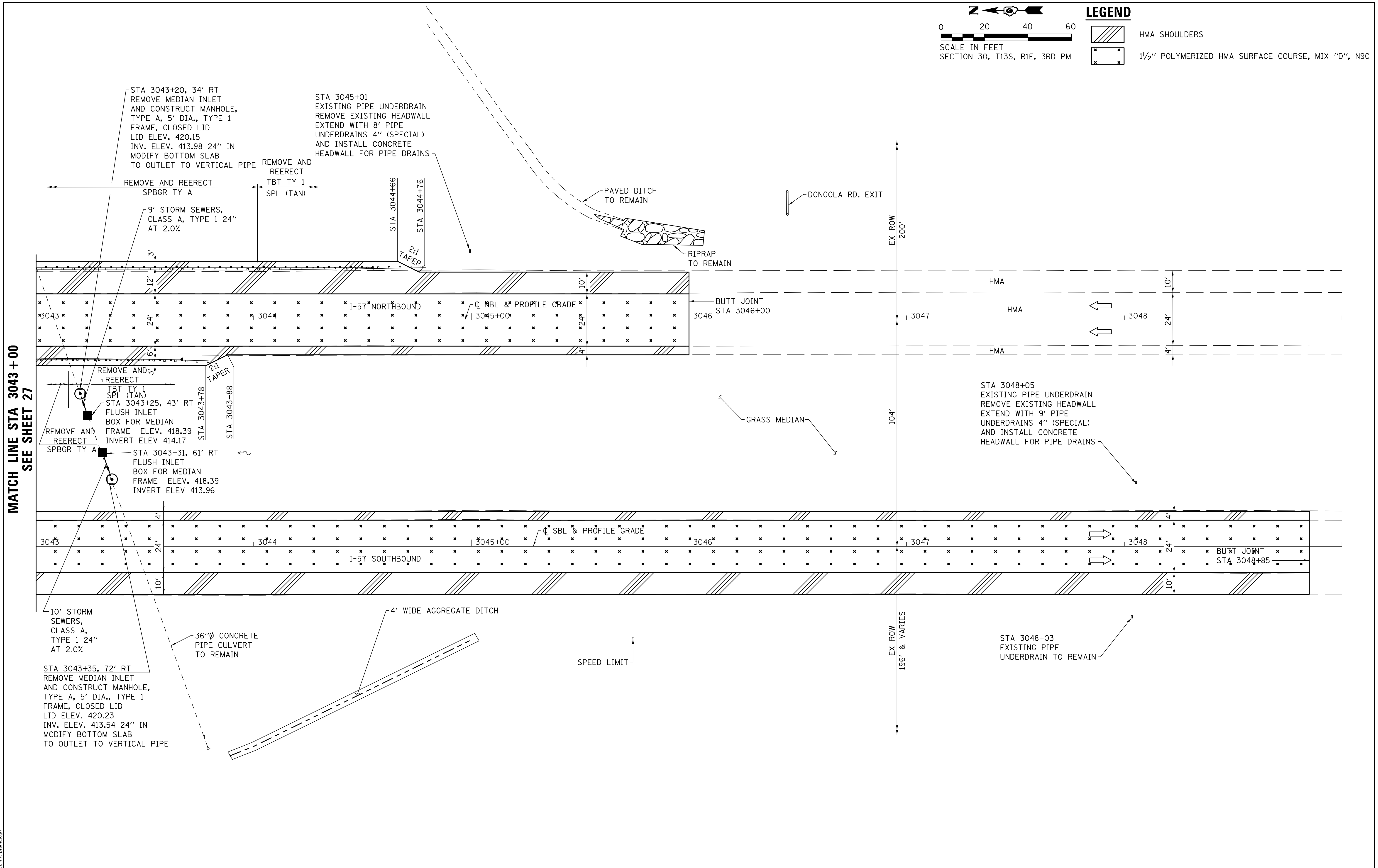
I-57 PLAN

SCALE: 1"=20' | SHEET NO. 2 OF 3 SHEETS | STA. 3037+00 TO STA. 3043+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	27

CONTRACT NO. 78522

ILLINOIS FED. AID PROJECT



ESCA CONSULTANTS, INC.

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ESCA PROJECT 1259.08	DRAWN - KJA/SKM	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED - ELH	REVISED -	
PLOT DATE = 3/19/2018	DATE - 02/18	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

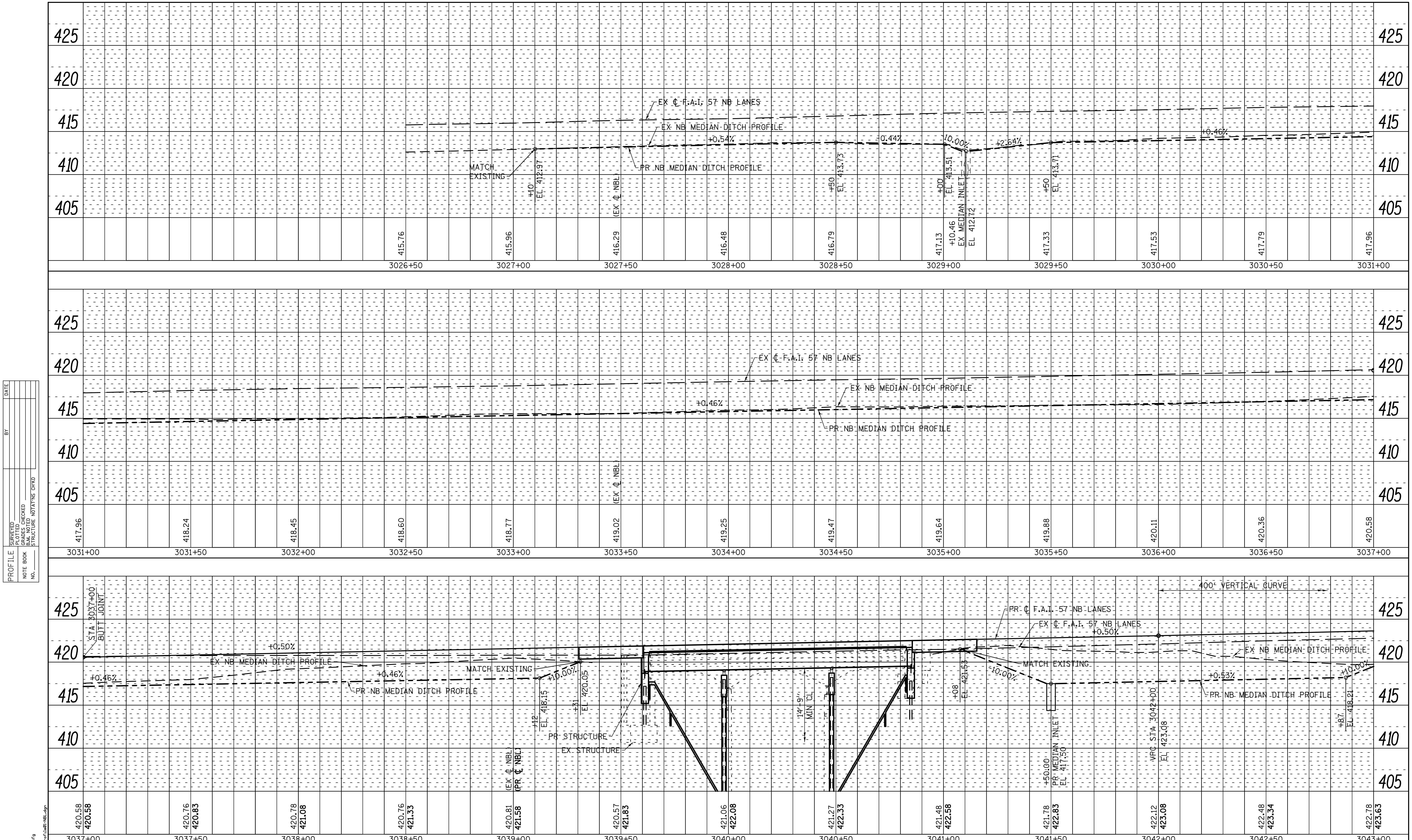
I-57 PLAN

SCALE: 1"=20' | SHEET NO. 3 OF 3 SHEETS | STA. 3043+00 TO STA. 3049+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	28

CONTRACT NO. 78522

ILLINOIS FED. AID PROJECT



ESCA CONSULTANTS, INC.

USER NAME = SKM	DESIGNED - KJA/SKM	REVISED -	
ESCA PROJECT 1259.08	DRAWN - KJA/SKM	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED - ELH	REVISED -	
PLOT DATE = 3/19/2018	DATE - 12/17	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

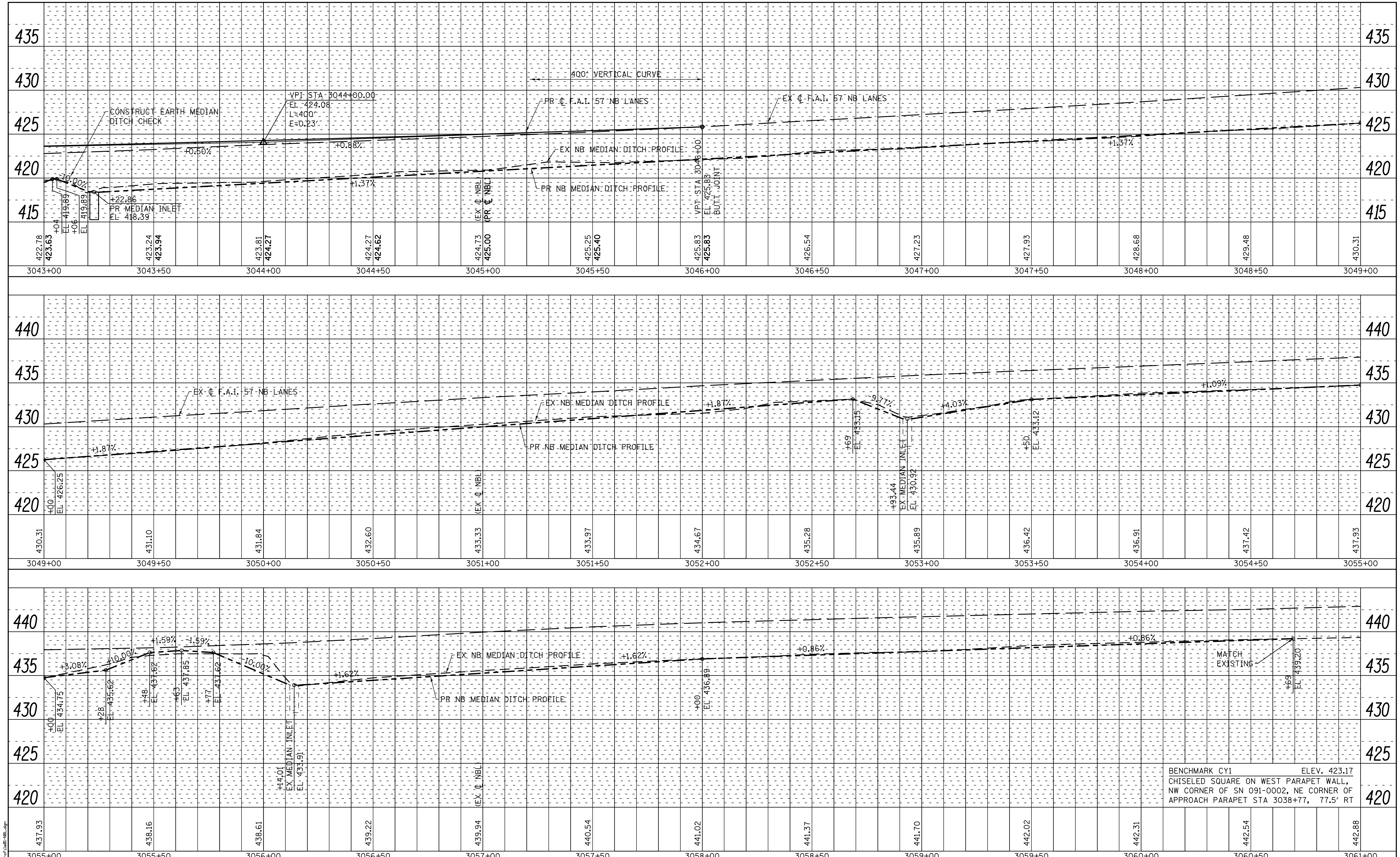
I-57 NORTHBOUND PROFILE

SCALE: AS SHOWN | SHEET NO. 1 OF 2 SHEETS | STA. 3026+50 TO STA. 3043+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	29

CONTRACT NO. 78522

ILLINOIS FED. AID PROJECT



PROFILE — NOTE BOOK NO. ____ — SURVEYED / PLOTTED / GRADES CHECKED / B.M. NOTED / STRUCTURE NOTAT'NS CHK'D — BY — DATE

ESCA CONSULTANTS, INC.

USER NAME = SKM	DESIGNED - KJA/SKM	REVISED -	
ESCA PROJECT 1259.08	DRAWN - KJA/SKM	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED - ELH	REVISED -	
PLOT DATE = 3/19/2018	DATE - 12/17	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

I-57 NORTHBOUND PROFILE

SCALE: AS SHOWN | SHEET NO. 2 OF 2 SHEETS | STA. 3043+00 TO STA. 3061+00

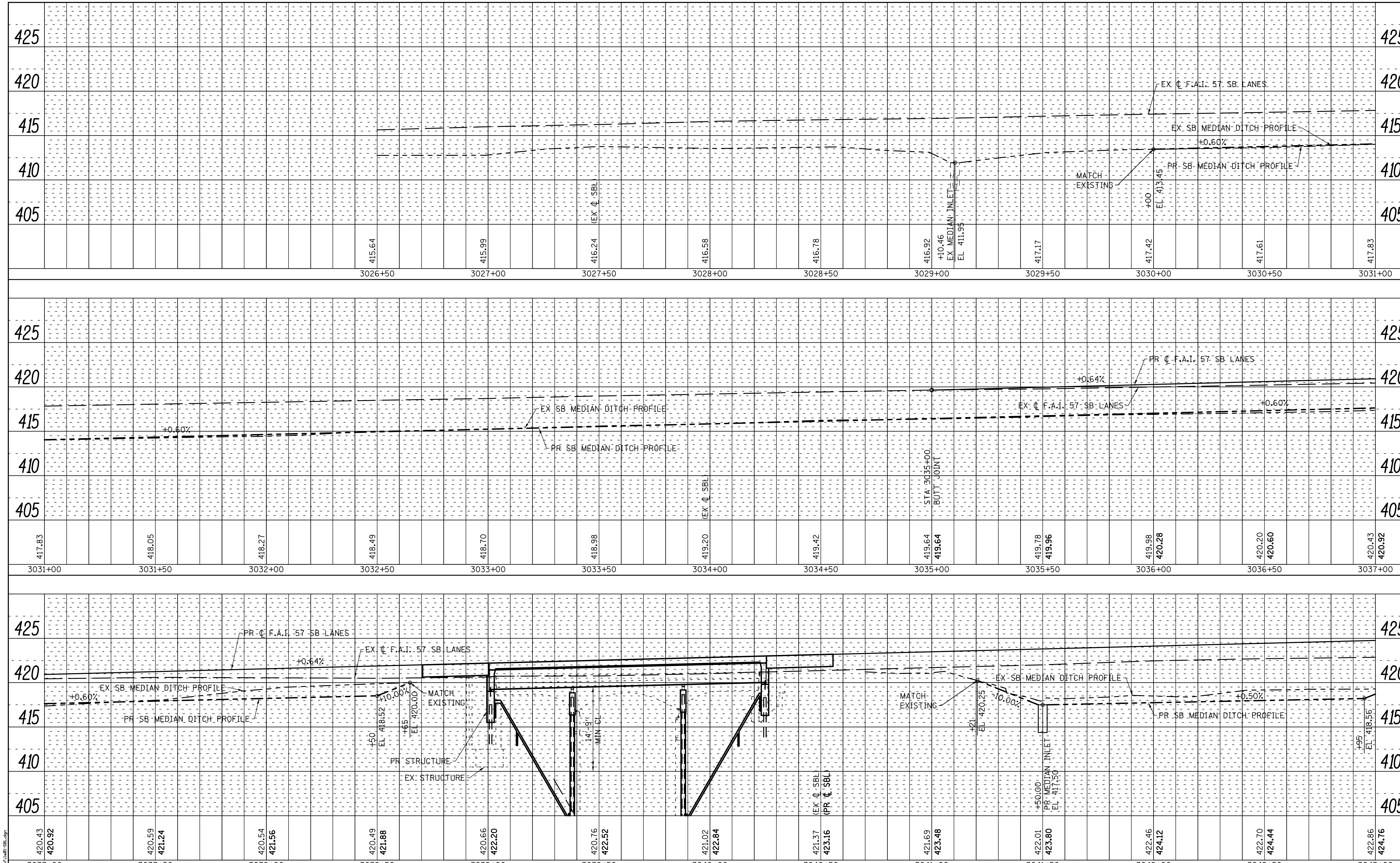
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	30
		CONTRACT NO. 78522		
	ILLINOIS FED. AID PROJECT			

PROFILE

NOTE BOOK NO. ______

SURVEYED
PLOTTED
GRADES CHECKED
B.M. NOTED
STRUCTURE NOTAT'NS CHK'D

BY	DATE



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FILE NAME = ...profile01-SBL.dgn

ESCA CONSULTANTS, INC.

USER NAME = SKM	DESIGNED - KJA/SKM	REVISED -
ESCA PROJECT 1259.08	DRAWN - KJA/SKM	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - ELH	REVISED -
PLOT DATE = 3/19/2018	DATE - 12/17	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

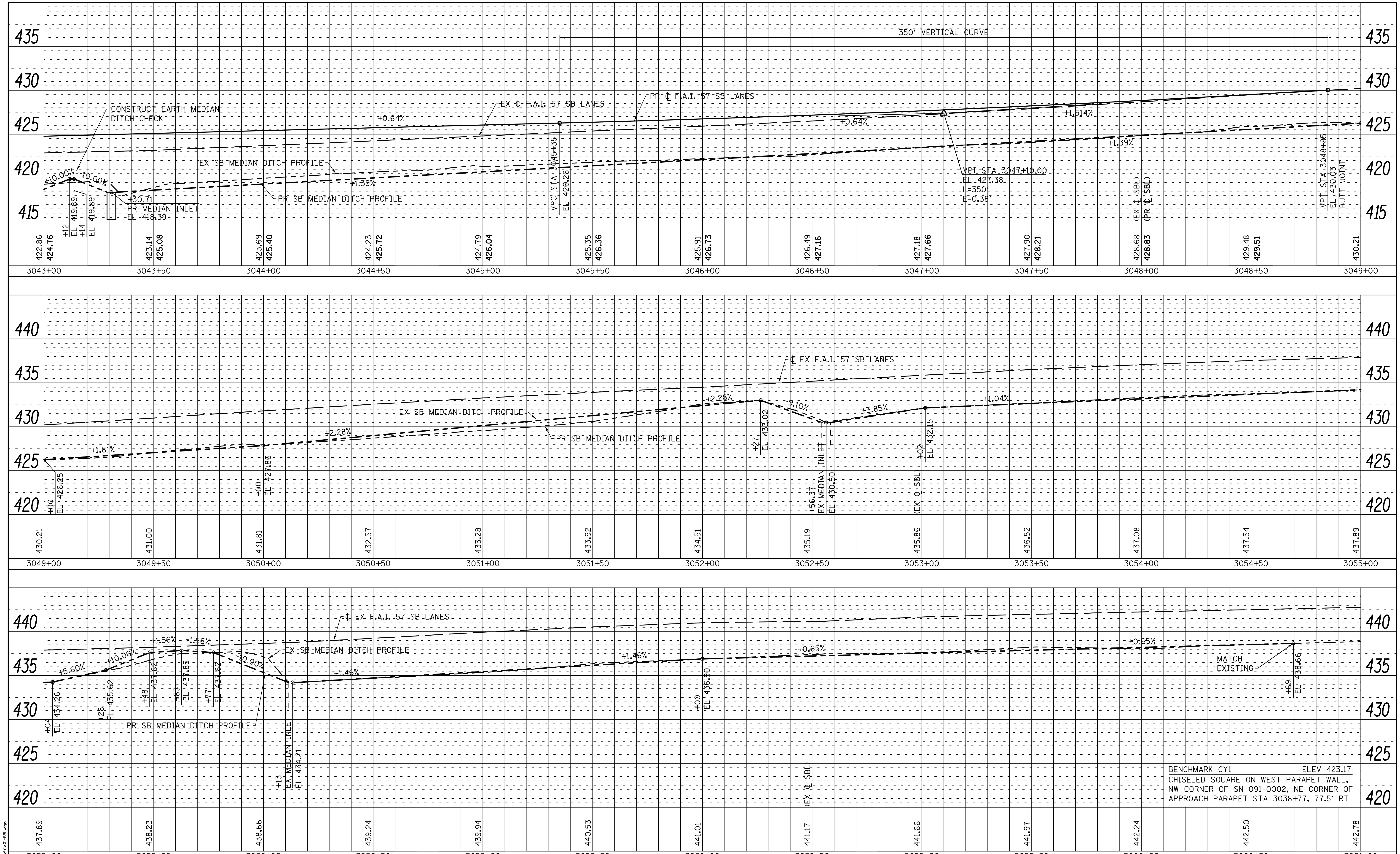
I-57 SOUTHBOUND PROFILE

SCALE: AS SHOWN | SHEET NO. 1 OF 2 SHEETS | STA. 3026+50 TO STA. 3043+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	31

CONTRACT NO. 78522

ILLINOIS FED. AID PROJECT



BENCHMARK CY1 ELEV 423.17
CHISELED SQUARE ON WEST PARAPET WALL, NW CORNER OF SN 091-0002, NE CORNER OF APPROACH PARAPET STA 3038+77, 77.5' RT

PROFILE	
NOTE BOOK	SURVEYED
NO. ____	PLOTTED
	GRADES CHECKED
	B.M. NOTED
	STRUCTURE NOTAT'NS CHK'D
BY	DATE

ESCA CONSULTANTS, INC.

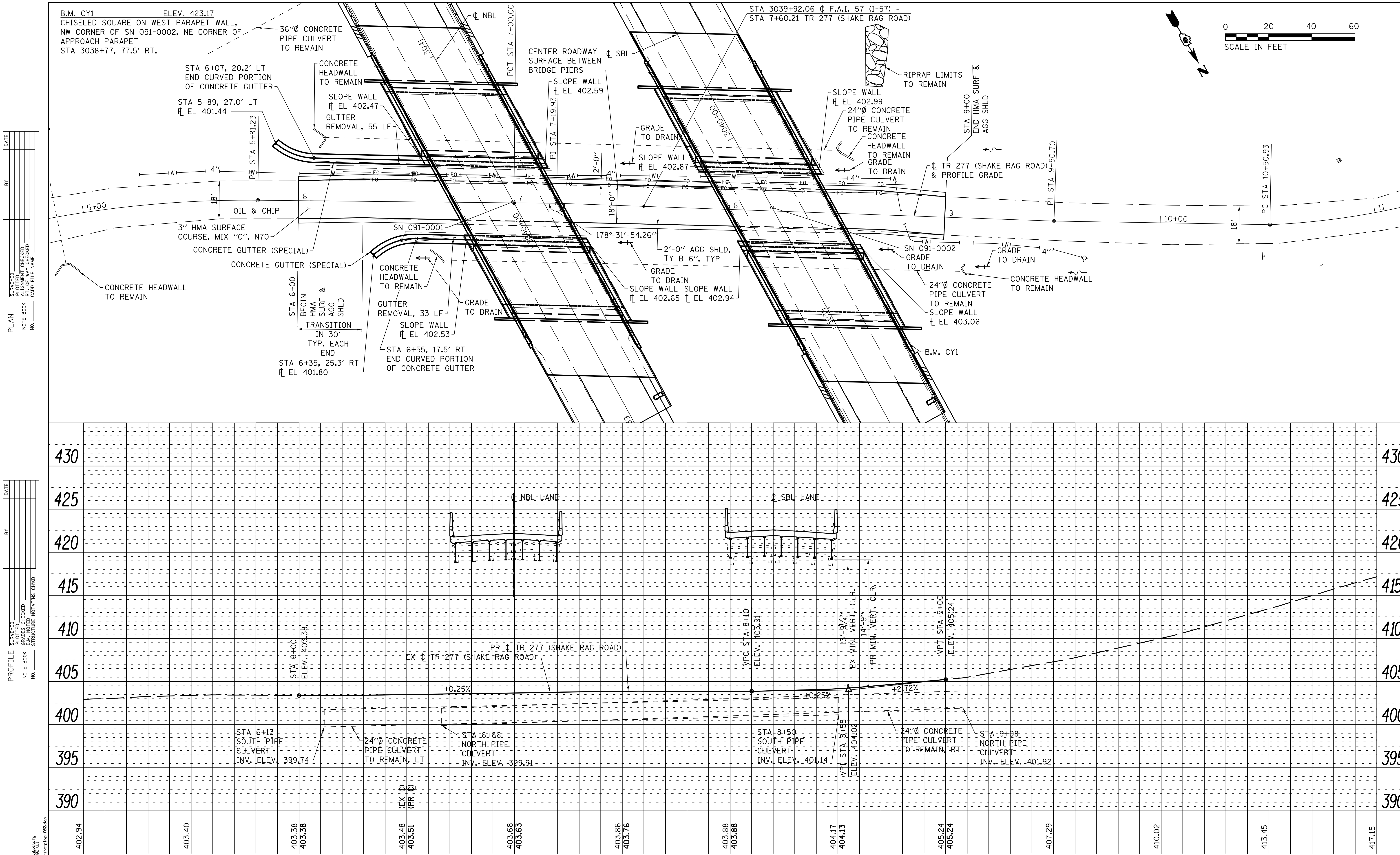
USER NAME = SKM	DESIGNED - KJA/SKM	REVISED -
ESCA PROJECT 1259.08	DRAWN - KJA/SKM	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - ELH	REVISED -
PLOT DATE = 3/19/2018	DATE - 12/17	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

I-57 SOUTHBOUND PROFILE

SCALE: AS SHOWN | SHEET NO. 2 OF 2 SHEETS | STA. 3043+00 TO STA. 3061+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	32
		CONTRACT NO. 78522		
		ILLINOIS FED. AID PROJECT		



B.M. CY1 ELEV. 423.17
CHISELED SQUARE ON WEST PARAPET WALL, NW CORNER OF SN 091-0002, NE CORNER OF APPROACH PARAPET
STA 3038+77, 77.5' RT.
36"Ø CONCRETE PIPE CULVERT TO REMAIN
℄ NBL
POT STA 7+00.00
STA 3039+92.06 ℄ F.A.I. 57 (I-57) = STA 7+60.21 TR 277 (SHAKE RAG ROAD)
RIPRAP LIMITS TO REMAIN
SCALE IN FEET
0 20 40 60
N
STA 6+07, 20.2' LT END CURVED PORTION OF CONCRETE GUTTER
CONCRETE HEADWALL TO REMAIN
SLOPE WALL ℄ EL 402.47
GUTTER REMOVAL, 55 LF
STA 5+89, 27.0' LT ℄ EL 401.44
PI STA 5+81.23
CENTER ROADWAY SURFACE BETWEEN BRIDGE PIERS
℄ SBL
SLOPE WALL ℄ EL 402.59
PI STA 7+19.93
GRADE TO DRAIN
SLOPE WALL ℄ EL 402.87
SLOPE WALL ℄ EL 402.99
24"Ø CONCRETE PIPE CULVERT TO REMAIN
CONCRETE HEADWALL TO REMAIN
GRADE TO DRAIN
STA 9+00 END HMA SURF & AGG SHLD
℄ TR 277 (SHAKE RAG ROAD) & PROFILE GRADE
PI STA 9+50.70
PC STA 10+50.93
4"
2'-0"
18'-0"
18'
5+00
6
7
8
9
10+00
11
OIL & CHIP
3" HMA SURFACE COURSE, MIX "C", N70
CONCRETE GUTTER (SPECIAL)
CONCRETE GUTTER (SPECIAL)
SN 091-0001
178°-31'-54.26"
2'-0" AGG SHLD, TY B 6", TYP
GRADE TO DRAIN
SN 091-0002
GRADE TO DRAIN
GRADE TO DRAIN
24"Ø CONCRETE PIPE CULVERT TO REMAIN
CONCRETE HEADWALL TO REMAIN
SLOPE WALL ℄ EL 403.06
CONCRETE HEADWALL TO REMAIN
CONCRETE HEADWALL TO REMAIN
GUTTER REMOVAL, 33 LF
GRADE TO DRAIN
SLOPE WALL ℄ EL 402.53
SLOPE WALL ℄ EL 402.65
SLOPE WALL ℄ EL 402.94
STA 6+00 BEGIN HMA SURF & AGG SHLD
TRANSITION IN 30' TYP. EACH END
STA 6+35, 25.3' RT ℄ EL 401.80
STA 6+55, 17.5' RT END CURVED PORTION OF CONCRETE GUTTER
B.M. CY1
3041
3040+00
PLAN
NOTE BOOK NO.
SURVEYED PLOTTED ALIGNMENT CHECKED RT. OF WAY CHECKED CADD FILE NAME
BY DATE
PROFILE
NOTE BOOK NO.
SURVEYED PLOTTED GRADES CHECKED CA. NOTED STRUCTURE NOTATNS CHKD
BY DATE
430 425 420 415 410 405 400 395 390
℄ NBL LANE
℄ SBL LANE
STA 6+00 ELEV. 403.38
EX ℄ TR 277 (SHAKE RAG ROAD)
PR ℄ TR 277 (SHAKE RAG ROAD)
+0.25%
+0.25%
+2.72%
VPC STA 8+10 ELEV. 403.91
13'-9¼" EX MIN. VERT. CLR.
14'-9" PR MIN. VERT. CLR.
VPT STA 9+00 ELEV. 405.24
STA 6+13 SOUTH PIPE CULVERT INV. ELEV. 399.74
24"Ø CONCRETE PIPE CULVERT TO REMAIN, LT
STA 6+66 NORTH PIPE CULVERT INV. ELEV. 399.91
STA 8+50 SOUTH PIPE CULVERT INV. ELEV. 401.14
VPI STA 8+55 ELEV. 404.02
24"Ø CONCRETE PIPE CULVERT TO REMAIN, RT
STA 9+08 NORTH PIPE CULVERT INV. ELEV. 401.92
(EX ℄) (PR ℄)
402.94
403.40
403.38 403.38
403.48 403.51
403.68 403.63
403.86 403.76
403.88 403.88
404.17 404.13
405.24 405.24
407.29
410.02
413.45
417.15
5+00 5+50 6+00 6+50 7+00 7+50 8+00 8+50 9+00 9+50 10+00 10+50 11+00

ESCA CONSULTANTS, INC.

USER NAME = SKM	DESIGNED - KJA/ELH/SKM	REVISED -	
ESCA PROJECT 1259.08	DRAWN - KJA/KAH/SKM	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED - ELH	REVISED -	
PLOT DATE = 3/19/2018	DATE - 03/18	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

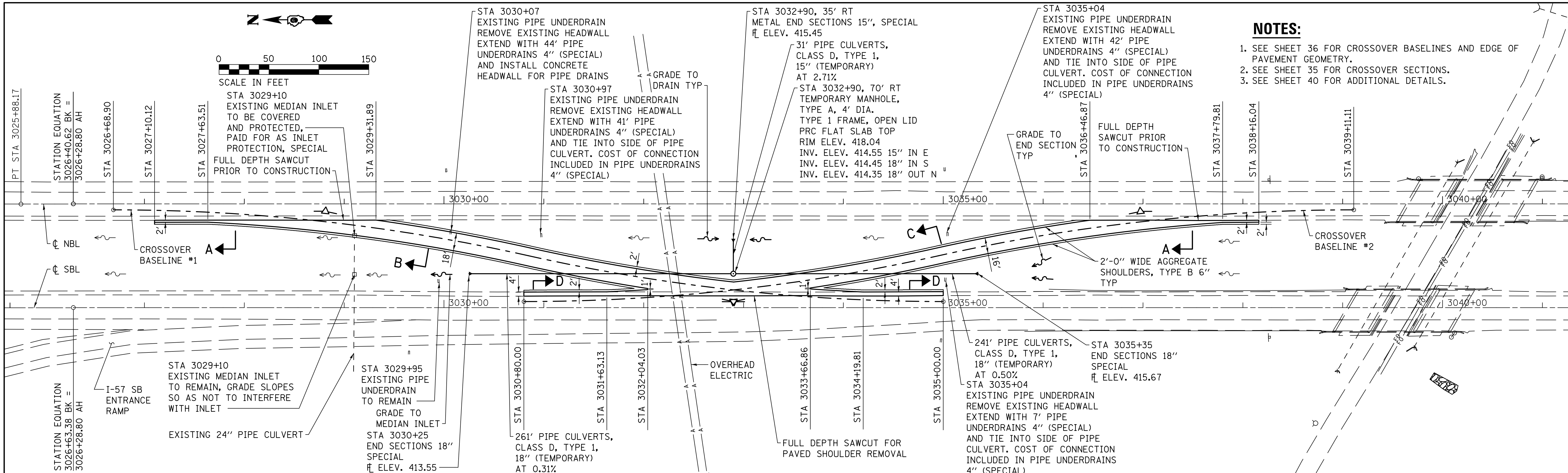
SHAKE RAG ROAD PLAN AND PROFILE

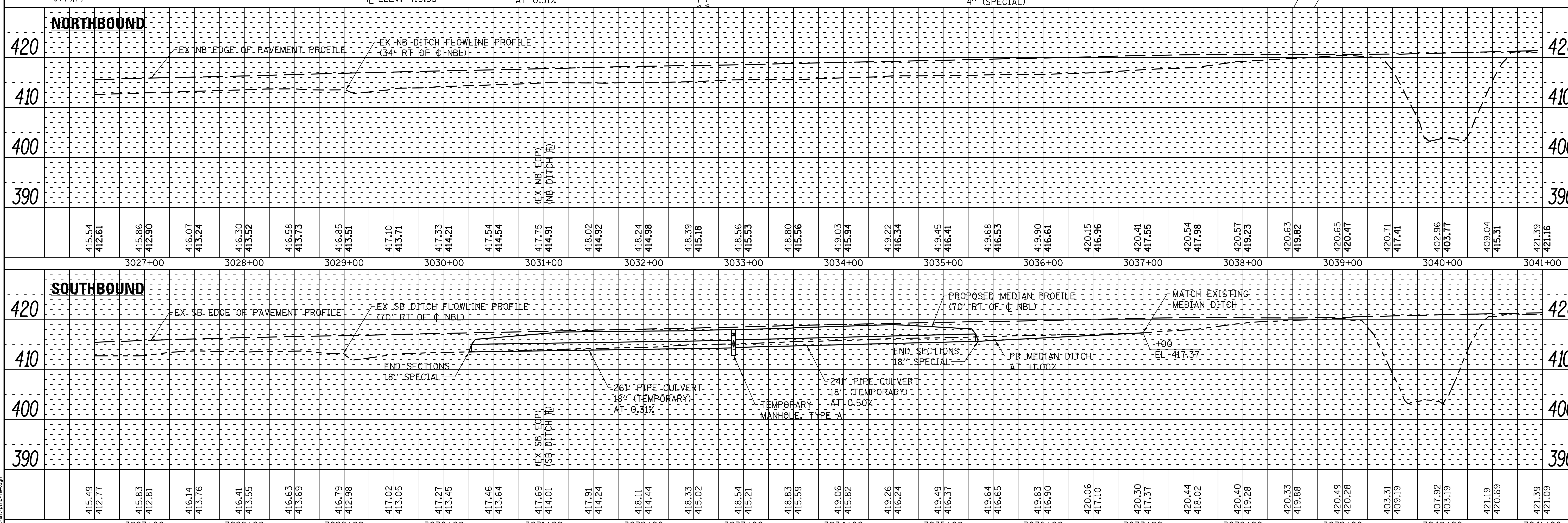
SCALE: AS SHOWN | SHEET NO. 1 OF 1 SHEETS | STA. 5+00 TO STA. 11+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	33

CONTRACT NO. 78522

ILLINOIS FED. AID PROJECT





ESCA CONSULTANTS, INC.

USER NAME = SKM	DESIGNED - SKM	REVISED -	
ESCA PROJECT NO. 1259.08	DRAWN - SKM	REVISED -	
SCALES: (HORIZ) 1"=50' (VERT) 1"=10'	CHECKED - ELH	REVISED -	
PLOT DATE = 3/19/2018 12:57:21 PM	DATE - 12/17	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

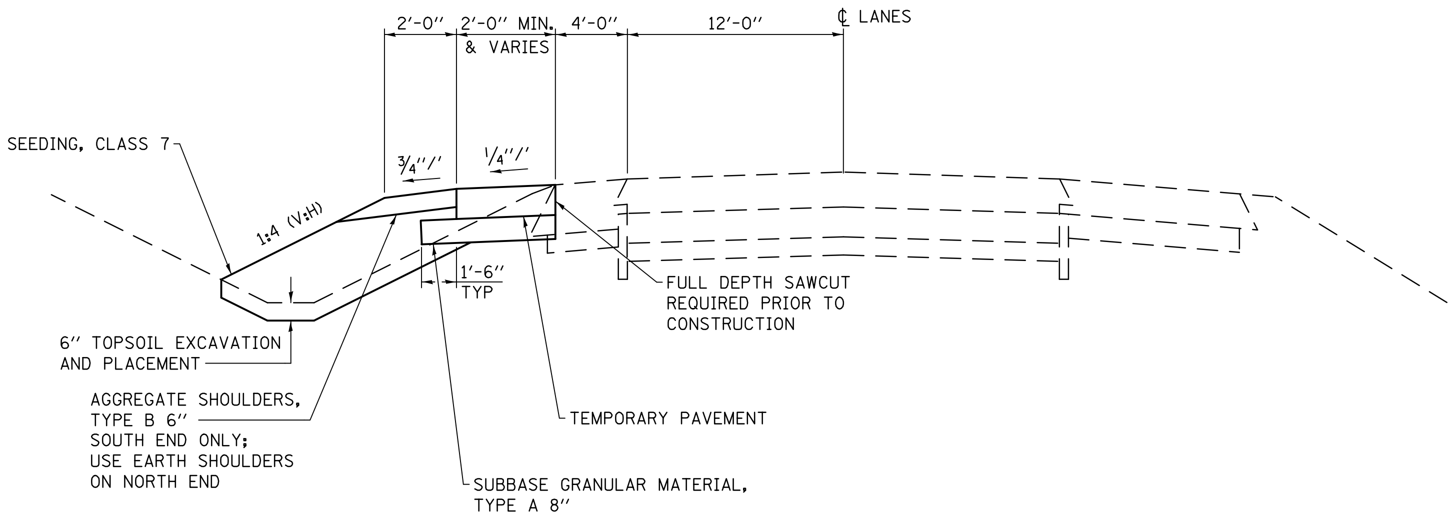
NORTH CROSSOVERS
PLAN AND PROFILE

SCALE: AS SHOWN | SHEET NO. 1 OF 1 SHEETS | STA. 3026+28.80 TO STA. 3041+00.00

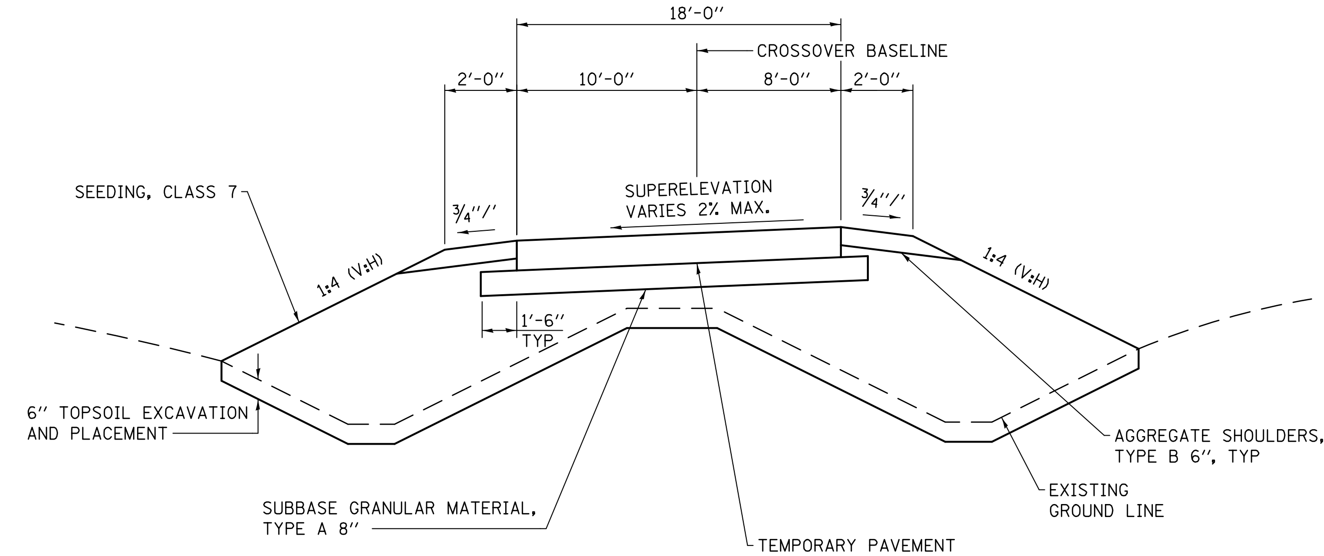
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	34

CONTRACT NO. 78522

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

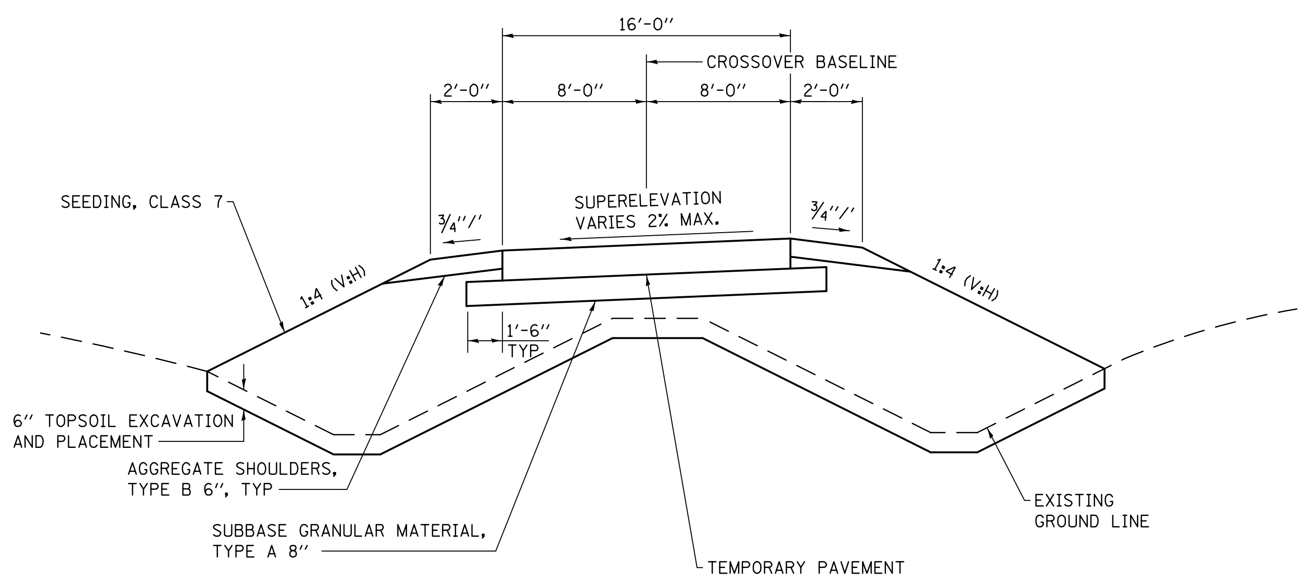


NORTH CROSSOVERS SECTION A

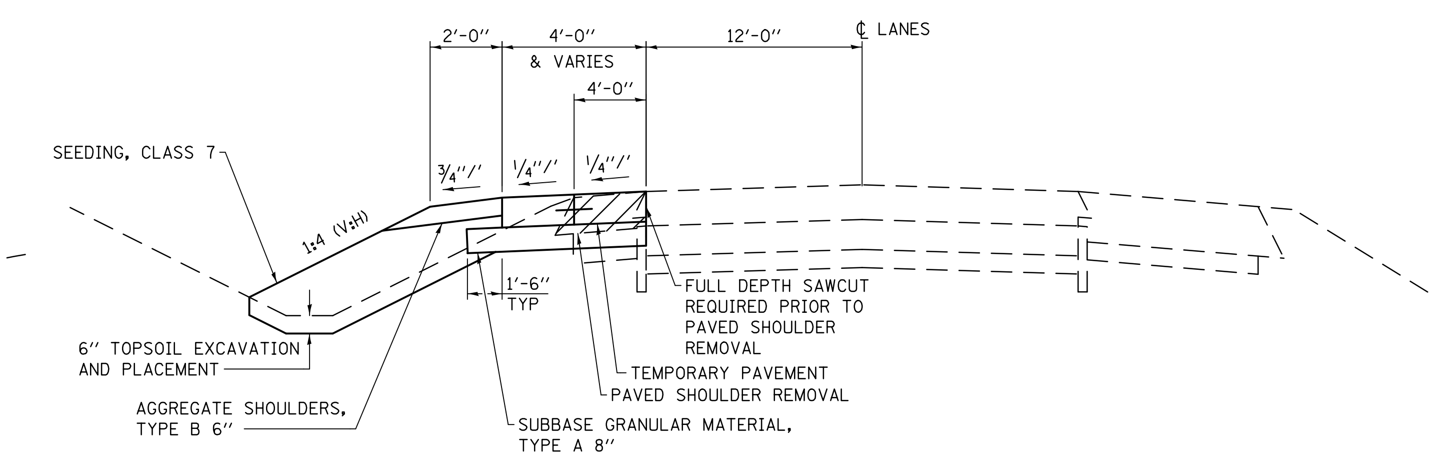


NORTH CROSSOVERS SECTION B

NOTE: CONTRACTOR MAY CONSTRUCT 10" JOINTED PCC PAVEMENT (SHOWN) OR 13¼" FULL DEPTH HMA PAVEMENT AS TEMPORARY PAVEMENT



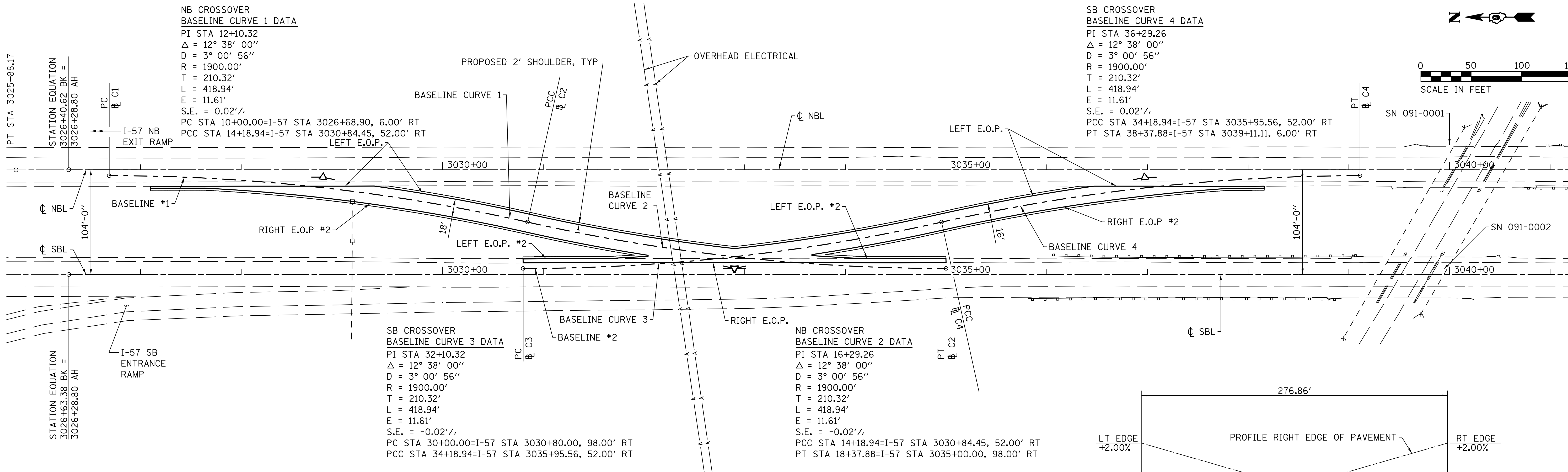
NORTH CROSSOVERS SECTION C



NORTH CROSSOVERS SECTION D

ESCA CONSULTANTS, INC.	USER NAME = SKM	DESIGNED - SKM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	NORTH CROSSOVERS SECTIONS
	ESCA PROJECT NO. 1259.08	DRAWN - SKM	REVISED -		
	PLOT SCALE = 0.1667 ' / in.	CHECKED - ELH	REVISED -		
	PLOT DATE = 4/25/2018	DATE - 04/18	REVISED -		SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. 3026+00.00 TO STA. 3041+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	35
		CONTRACT NO. 78522		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

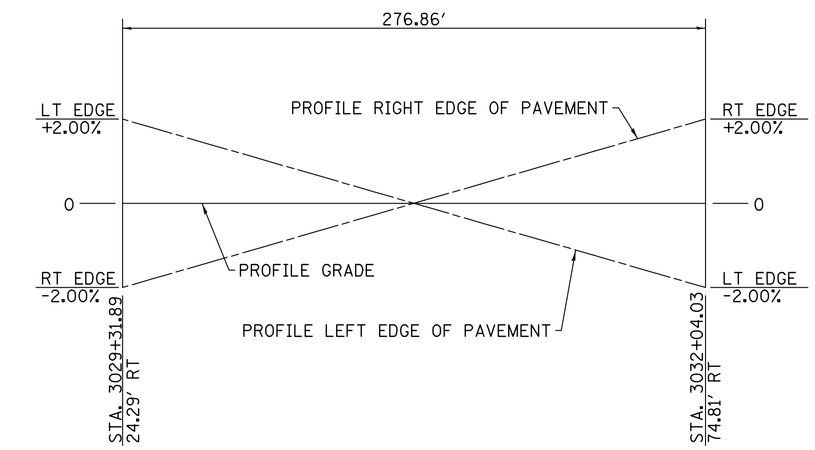


ELEVATION AND OFFSET DATA

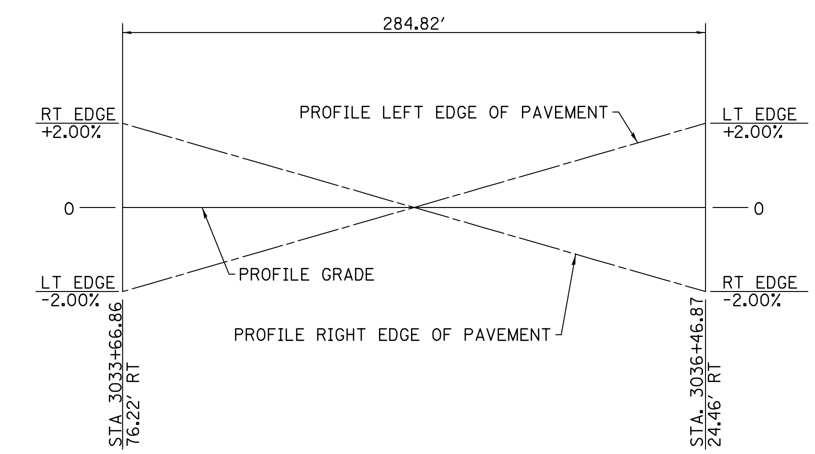
℄ NBL	BASELINE #1		BASELINE #2		LEFT E.O.P.			RIGHT E.O.P. #2			LEFT E.O.P. #2			RIGHT E.O.P.		
STATION	OFFSET (FT)		OFFSET (FT)		OFFSET (FT)		ELEVATION	OFFSET (FT)		ELEVATION	OFFSET (FT)		ELEVATION	OFFSET (FT)		ELEVATION
3026+68.90	6.00	RT	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3027+10.12	6.45	RT	-	-	16.45	RT	415.73	18.45	RT	415.68	-	-	-	-	-	-
3027+63.51	8.36	RT	-	-	16.37	RT	416.00	18.37	RT	415.96	-	-	-	-	-	-
3028+00.00	10.53	RT	-	-	16.32	RT	416.14	20.55	RT	416.05	-	-	-	-	-	-
3028+50.00	14.65	RT	-	-	16.31	RT	416.40	24.70	RT	416.23	-	-	-	-	-	-
3028+66.61	16.32	RT	-	-	16.32	RT	416.53	26.37	RT	416.32	-	-	-	-	-	-
3029+00.00	20.11	RT	-	-	16.32	RT	416.77	30.18	RT	416.48	-	-	-	-	-	-
3029+31.89	24.29	RT	-	-	16.21	RT	416.90	34.39	RT	416.52	-	-	-	-	-	-
3029+50.00	26.91	RT	-	-	18.82	RT	416.94	37.02	RT	416.62	-	-	-	-	-	-
3030+00.00	35.07	RT	-	-	26.95	RT	417.07	45.23	RT	416.89	-	-	-	-	-	-
3030+50.00	44.61	RT	-	-	36.45	RT	417.20	54.82	RT	417.15	-	-	-	-	-	-
3030+80.00	51.01	RT	98.00	RT	42.82	RT	417.29	61.25	RT	417.32	88.52	RT	417.53	92.52	RT	417.61
3030+84.45	52.00	RT	97.99	RT	43.80	RT	417.29	62.25	RT	417.33	88.48	RT	417.55	92.48	RT	417.63
3031+00.00	55.42	RT	97.89	RT	47.23	RT	417.33	65.65	RT	417.41	88.35	RT	417.61	92.35	RT	417.69
3031+63.13	67.90	RT	96.18	RT	59.77	RT	417.50	78.06	RT	417.76	88.17	RT	417.89	92.17	RT	417.97
3032+04.03	74.81	RT	93.95	RT	66.71	RT	417.60	84.93	RT	417.98	85.93	RT	418.00	92.16	RT	418.13
3032+28.27	78.47	RT	92.21	RT	70.38	RT	417.79	-	-	-	-	-	-	92.21	RT	418.24
3032+50.00	81.48	RT	90.38	RT	73.41	RT	417.95	-	-	-	-	-	-	92.25	RT	418.34
3032+90.00	86.36	RT	86.36	RT	78.31	RT	418.22	-	-	-	-	-	-	92.21	RT	418.51
3033+49.15	92.00	RT	78.84	RT	70.76	RT	418.38	-	-	-	-	-	-	92.00	RT	418.82
3033+66.86	93.33	RT	76.22	RT	68.13	RT	418.41	84.31	RT	418.75	85.31	RT	418.77	92.05	RT	418.91
3034+19.81	96.31	RT	67.37	RT	59.23	RT	418.71	75.50	RT	418.91	88.30	RT	419.06	92.38	RT	419.15
3034+50.00	97.34	RT	61.63	RT	53.47	RT	418.88	69.78	RT	419.01	88.23	RT	419.20	92.40	RT	419.28
3034+95.56	97.99	RT	52.00	RT	43.80	RT	419.14	60.20	RT	419.17	88.02	RT	418.40	92.04	RT	419.48
3035+00.00	98.00	RT	51.01	RT	42.82	RT	419.16	59.20	RT	419.18	88.00	RT	419.36	92.00	RT	419.50
3035+50.00	-	-	40.63	RT	32.48	RT	419.44	48.78	RT	419.34	-	-	-	-	-	-
3036+00.00	-	-	31.64	RT	23.53	RT	419.72	39.75	RT	419.50	-	-	-	-	-	-
3036+46.87	-	-	24.46	RT	16.39	RT	419.99	32.54	RT	419.65	-	-	-	-	-	-
3037+00.00	-	-	17.76	RT	16.30	RT	420.25	25.81	RT	420.05	-	-	-	-	-	-
3037+12.99	-	-	16.36	RT	16.36	RT	420.26	24.40	RT	420.09	-	-	-	-	-	-
3037+50.00	-	-	12.84	RT	16.63	RT	420.30	20.87	RT	420.21	-	-	-	-	-	-
3037+79.81	-	-	10.54	RT	16.56	RT	420.33	18.56	RT	420.29	-	-	-	-	-	-
3038+00.00	-	-	9.25	RT	16.47	RT	420.34	18.47	RT	420.30	-	-	-	-	-	-
3038+16.04	-	-	8.38	RT	16.39	RT	420.38	18.39	RT	420.34	-	-	-	-	-	-
3038+50.00	-	-	6.98	RT	-	-	-	-	-	-	-	-	-	-	-	-
3039+00.00	-	-	6.03	RT	-	-	-	-	-	-	-	-	-	-	-	-
3039+11.11	-	-	6.00	RT	-	-	-	-	-	-	-	-	-	-	-	-

NOTE:

THE CONTRACTOR SHALL CONSTRUCT THIS MEDIAN CROSSOVER USING THE ELEVATION AND OFFSET DATA TABLE FOUND ON THIS SHEET. VALUES SHOWN ARE BASED ON THE ORIGINAL ROADWAY PLANS AND FIELD SURVEY. CONTRACTOR MAY MAKE MINOR ADJUSTMENTS IN THE FIELD AS APPROVED BY THE ENGINEER.



SUPERELEVATION TRANSITION DETAIL BASELINE #1



SUPERELEVATION TRANSITION DETAIL BASELINE #2

ESCA CONSULTANTS, INC.	USER NAME = SKM	DESIGNED - SKM	REVISED -
	ESCA PROJECT NO. 1259.08	DRAWN - SKM	REVISED -
	PLOT SCALE = 0:2 ′/″ / in.	CHECKED - ELH	REVISED -
	PLOT DATE = 3/19/2018 12:57:23 PM	DATE - 12/17	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH CROSSOVERS
ELEVATIONS AND OFFSETS

SCALE: 1″=50′-0″ | SHEET NO. 1 OF 1 SHEETS | STA. 3026+00.00 TO STA. 3041+00.00

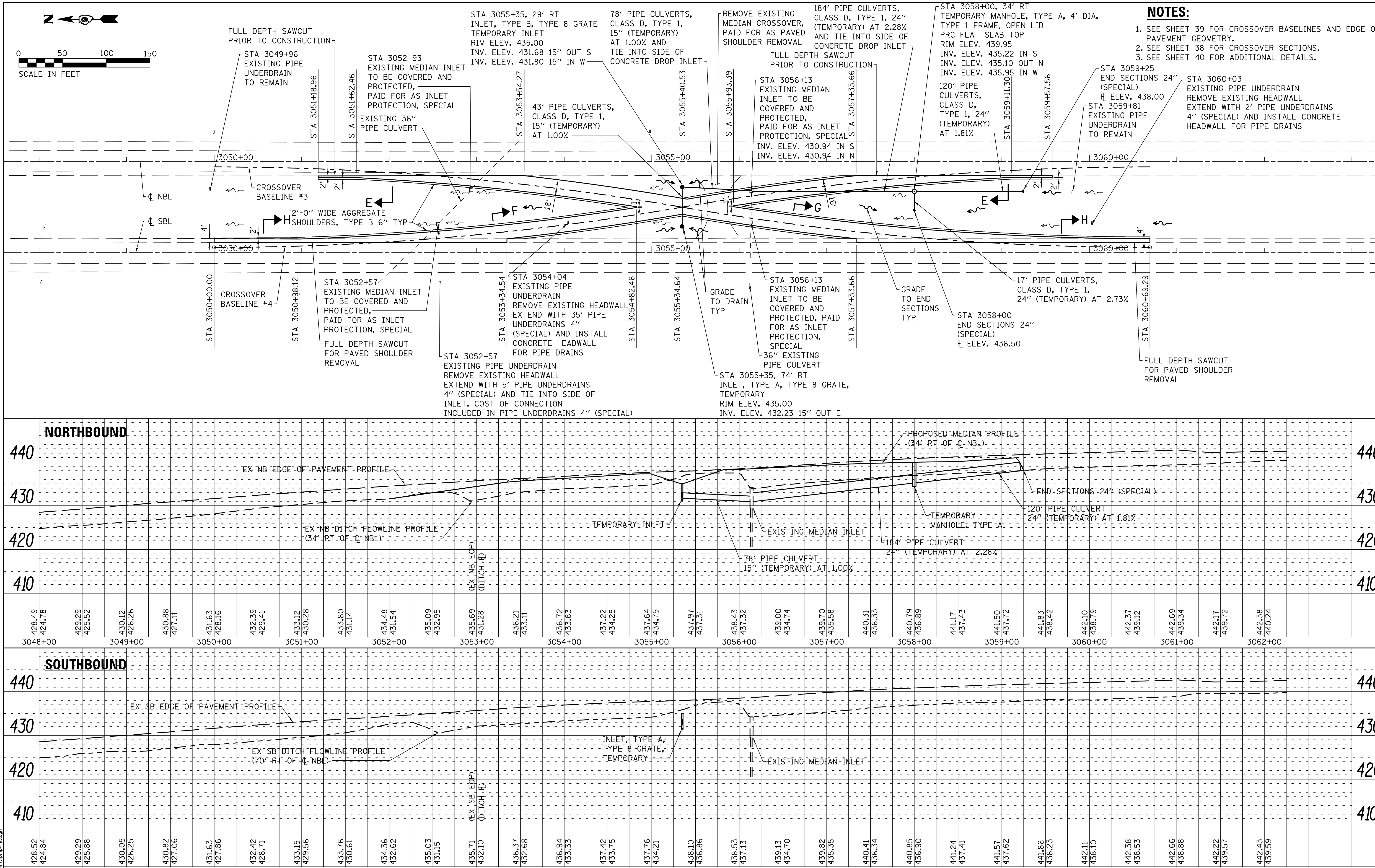
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	36

CONTRACT NO. 78522

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

NOTES:

1. SEE SHEET 39 FOR CROSSOVER BASELINES AND EDGE OF PAVEMENT GEOMETRY.
2. SEE SHEET 38 FOR CROSSOVER SECTIONS.
3. SEE SHEET 40 FOR ADDITIONAL DETAILS.



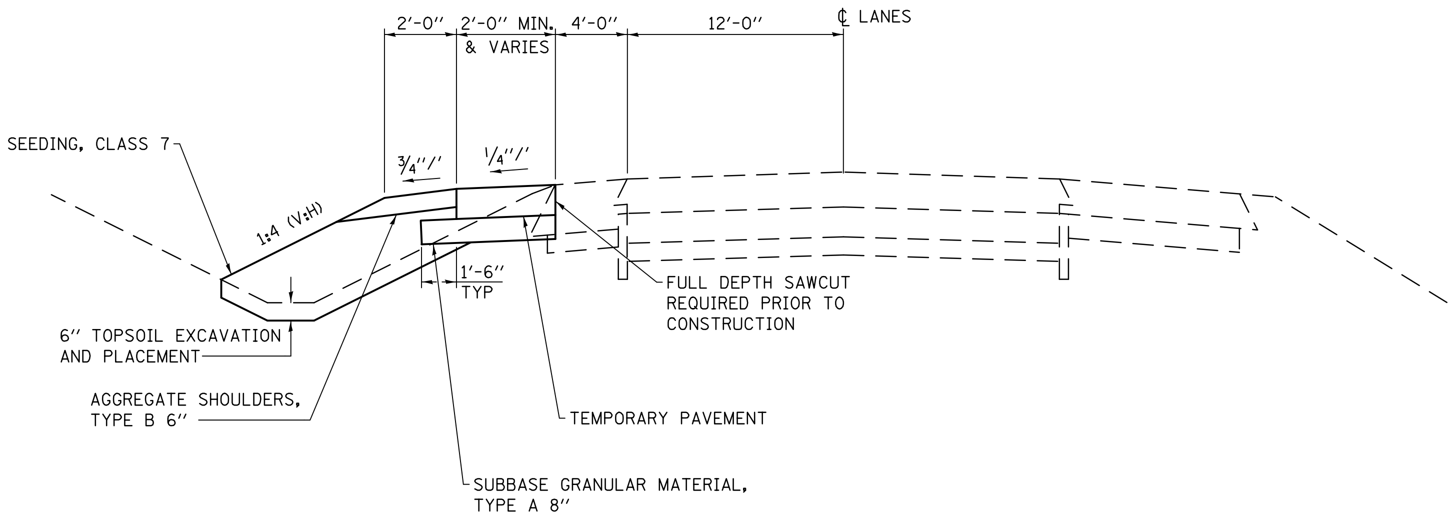
ESCA CONSULTANTS, INC.	USER NAME = SKM	DESIGNED - SKM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	ESCA PROJECT NO. 1259.08	DRAWN - SKM	REVISED -	
	SCALES: (HORIZ) 1"=50' (VERT) 1"=10'	CHECKED - ELH	REVISED -	
	PLOT DATE = 3/19/2018 12:57:24 PM	DATE - 03/18	REVISED -	

SOUTH CROSSOVERS PLAN AND PROFILE

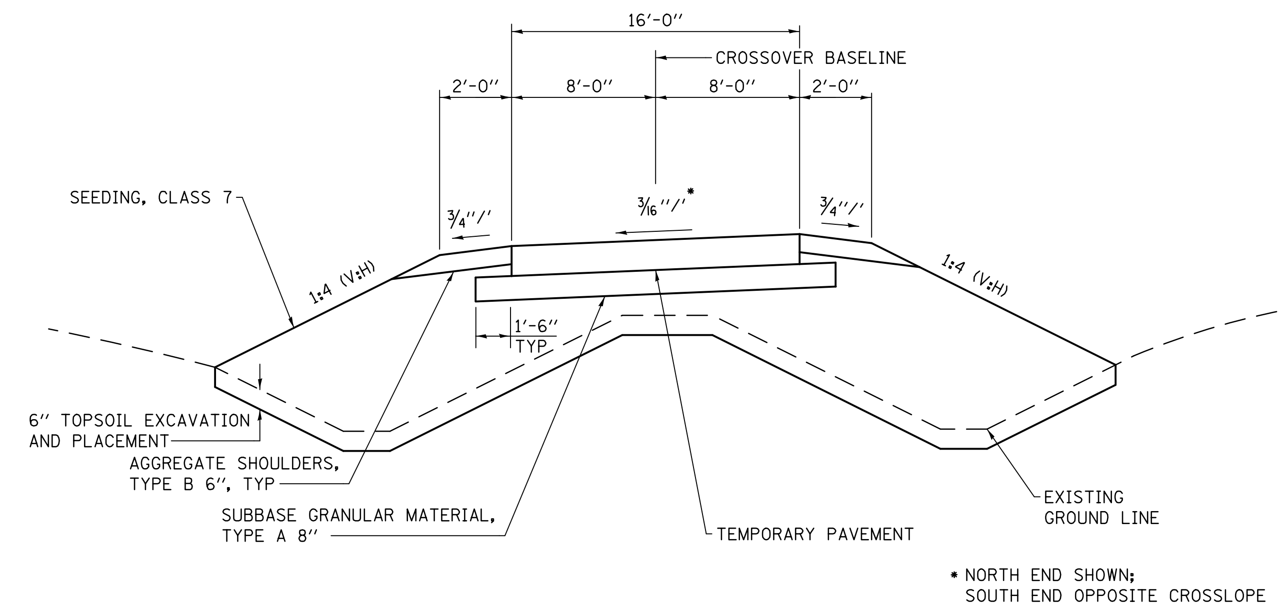
SCALE: AS SHOWN | SHEET NO. 1 OF 1 SHEETS | STA. 3048+00.00 TO STA. 3063+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	37
		CONTRACT NO. 78522		

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

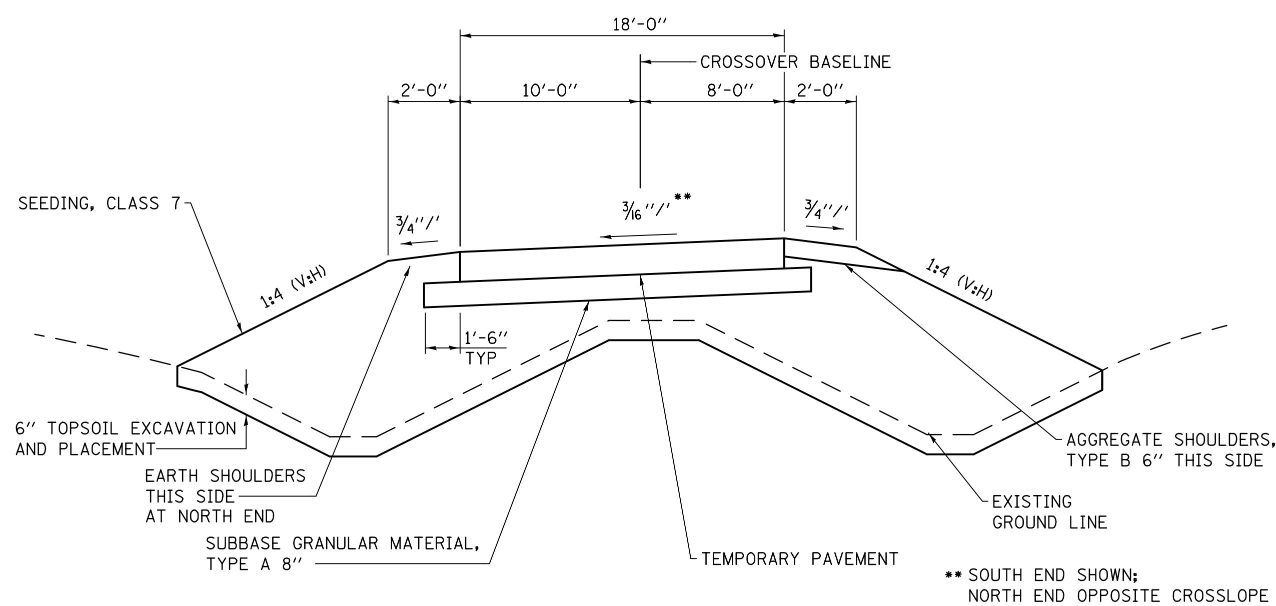


SOUTH CROSSOVERS SECTION E

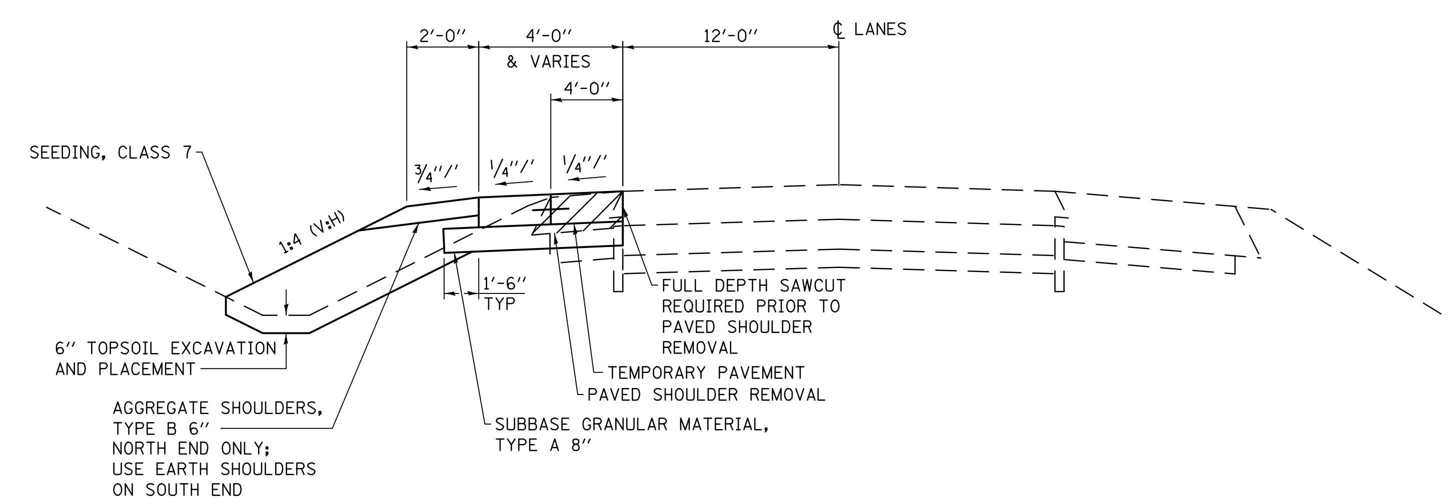


SOUTH CROSSOVERS SECTION F

NOTE: CONTRACTOR MAY CONSTRUCT 10" JOINTED PCC PAVEMENT (SHOWN) OR 13¼" FULL DEPTH HMA PAVEMENT AS TEMPORARY PAVEMENT



SOUTH CROSSOVERS SECTION G



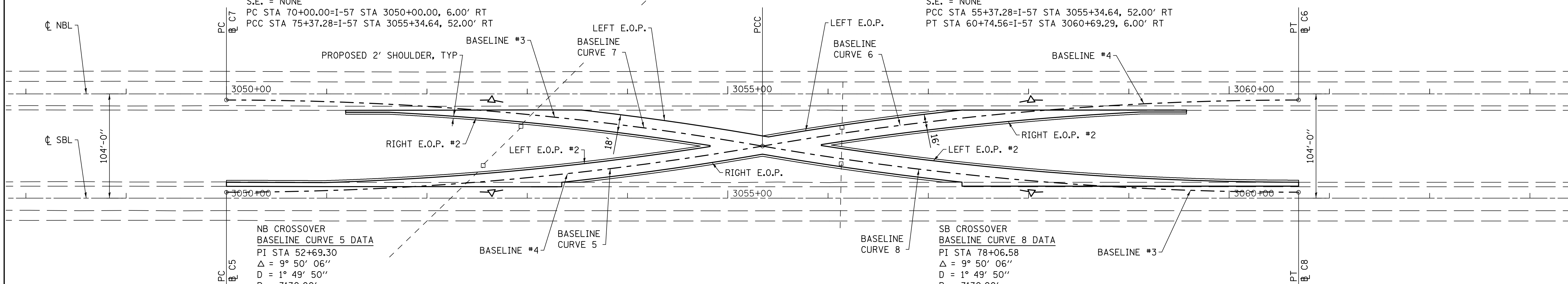
SOUTH CROSSOVERS SECTION H

ESCA CONSULTANTS, INC.	USER NAME = SKM	DESIGNED - SKM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SOUTH CROSSOVERS SECTIONS
	ESCA PROJECT NO. 1259.08	DRAWN - SKM	REVISED -		
	PLOT SCALE = 0.1667 ' / in.	CHECKED - ELH	REVISED -		
	PLOT DATE = 4/25/2018	DATE - 04/18	REVISED -		SCALE: NONE / SHEET NO. 1 OF 1 SHEETS / STA. 3048+00.00 TO STA. 3063+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	38
		CONTRACT NO. 78522		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SB CROSSOVER
BASELINE CURVE 7 DATA
PI STA 72+69.30
Δ = 9° 50′ 06″
D = 1° 49′ 50″
R = 3130.00′
T = 269.30′
L = 537.28′
E = 11.56′
S.E. = NONE
PC STA 70+00.00=I-57 STA 3050+00.00, 6.00′ RT
PCC STA 75+37.28=I-57 STA 3055+34.64, 52.00′ RT

NB CROSSOVER
BASELINE CURVE 6 DATA
PI STA 58+06.58
Δ = 9° 50′ 06″
D = 1° 49′ 50″
R = 3130.00′
T = 269.30′
L = 537.28′
E = 11.56′
S.E. = NONE
PCC STA 55+37.28=I-57 STA 3055+34.64, 52.00′ RT
PT STA 60+74.56=I-57 STA 3060+69.29, 6.00′ RT



NB CROSSOVER
BASELINE CURVE 5 DATA
PI STA 52+69.30
Δ = 9° 50′ 06″
D = 1° 49′ 50″
R = 3130.00′
T = 269.30′
L = 537.28′
E = 11.56′
S.E. = NONE
PC STA 50+00.00=I-57 STA 3050+00.00, 98.00′ RT
PCC STA 55+37.28=I-57 STA 3055+34.64, 52.00′ RT

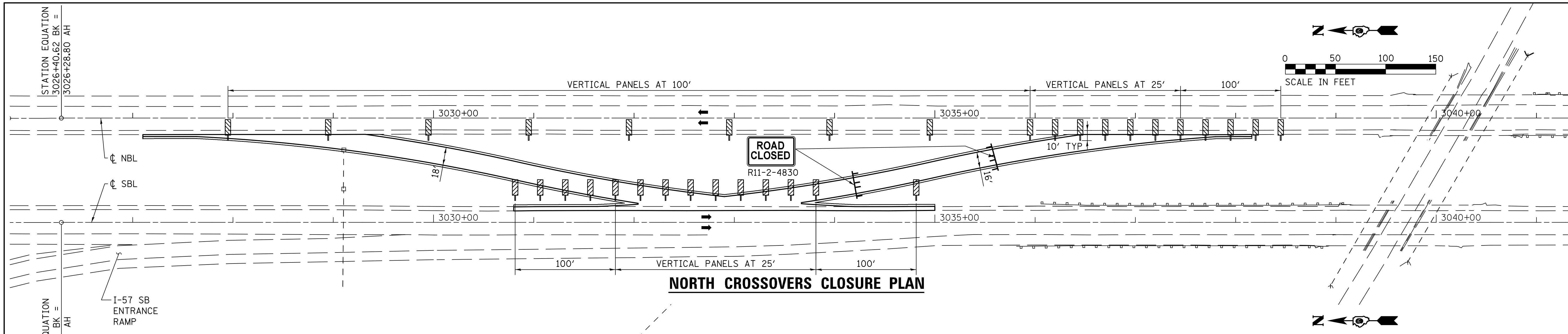
SB CROSSOVER
BASELINE CURVE 8 DATA
PI STA 78+06.58
Δ = 9° 50′ 06″
D = 1° 49′ 50″
R = 3130.00′
T = 269.30′
L = 537.28′
E = 11.56′
S.E. = NONE
PCC STA 75+37.28=I-57 STA 3055+34.64, 52.00′ RT
PT STA 80+74.56=I-57 STA 3060+69.29, 98.00′ RT

ELEVATION AND OFFSET DATA

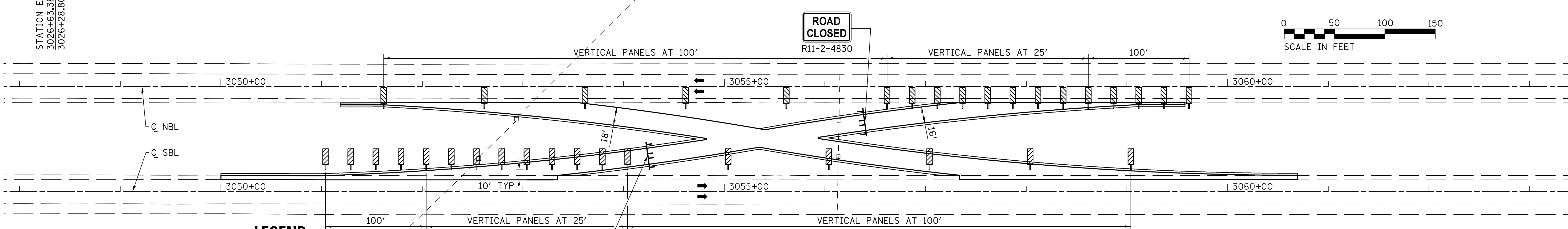
℄ NBL	BASELINE #3		BASELINE #4		LEFT E.O.P.			RIGHT E.O.P. #2			BREAK POINT			LEFT E.O.P. #2			RIGHT E.O.P.		
STATION	OFFSET (FT)		OFFSET (FT)		OFFSET (FT)		ELEVATION	OFFSET (FT)		ELEVATION	OFFSET (FT)		ELEVATION	OFFSET (FT)		ELEVATION	OFFSET (FT)		ELEVATION
3050+00.00	6.00	RT	98.00	RT	-	-	-	-	-	-	-	-	-	88.13	RT	431.46	92.13	RT	431.65
3050+50.00	6.40	RT	97.60	RT	-	-	-	-	-	-	-	-	-	88.29	RT	432.37	92.29	RT	432.45
3050+98.12	7.54	RT	96.46	RT	-	-	-	-	-	-	-	-	-	88.46	RT	433.08	92.46	RT	433.16
3051+18.96	8.26	RT	95.74	RT	16.27	RT	433.15	18.27	RT	433.11	-	-	-	87.73	RT	433.29	92.48	RT	433.39
3051+62.46	10.22	RT	93.78	RT	16.23	RT	433.70	18.23	RT	433.66	-	-	-	85.77	RT	433.78	92.47	RT	433.92
3051+86.03	11.53	RT	92.47	RT	16.21	RT	434.00	19.55	RT	433.93	-	-	-	84.45	RT	434.03	92.47	RT	434.2
3052+00.00	12.40	RT	91.60	RT	16.20	RT	434.18	20.41	RT	434.09	-	-	-	83.59	RT	434.19	92.47	RT	434.37
3052+51.04	16.08	RT	87.92	RT	16.08	RT	434.84	24.11	RT	434.67	-	-	-	79.89	RT	434.80	92.52	RT	435.06
3053+00.00	20.41	RT	83.59	RT	15.96	RT	435.44	28.45	RT	435.18	-	-	-	75.55	RT	435.38	92.57	RT	435.73
3053+34.54	23.93	RT	80.07	RT	16.00	RT	435.85	31.98	RT	435.52	-	-	-	72.02	RT	435.68	92.58	RT	436.16
3053+34.54	23.93	RT	80.07	RT	16.00	RT	435.85	31.98	RT	435.52	-	-	-	72.02	RT	435.68	88.12	RT	436.02
3053+54.27	26.11	RT	77.89	RT	16.05	RT	436.07	34.17	RT	435.69	-	-	-	69.83	RT	435.94	85.94	RT	436.20
3054+00.00	31.66	RT	72.34	RT	21.58	RT	436.50	39.73	RT	436.21	-	-	-	64.27	RT	436.35	80.40	RT	436.61
3054+50.00	38.52	RT	65.48	RT	28.41	RT	437.03	46.60	RT	436.74	-	-	-	57.40	RT	436.84	73.57	RT	437.10
3054+82.46	43.41	RT	60.59	RT	33.29	RT	437.27	51.50	RT	437.16	52.00	RT	437.16	52.50	RT	437.17	68.69	RT	437.41
3055+00.00	46.19	RT	57.81	RT	36.06	RT	437.41	-	-	-	52.00	RT	437.33	-	-	-	65.91	RT	437.55
3055+34.64	52.00	RT	52.00	RT	41.85	RT	437.83	-	-	-	52.00	RT	437.67	-	-	-	60.12	RT	437.80
3055+40.53	53.02	RT	50.99	RT	42.87	RT	437.87	-	-	-	51.90	RT	437.73	-	-	-	61.13	RT	437.87
3055+93.39	61.61	RT	42.39	RT	34.30	RT	438.50	50.49	RT	438.26	50.99	RT	438.25	51.49	RT	438.26	69.70	RT	438.48
3056+50.00	69.79	RT	34.21	RT	26.14	RT	439.06	42.28	RT	438.80	-	-	-	59.70	RT	438.81	77.86	RT	439.10
3057+00.00	76.14	RT	27.86	RT	19.81	RT	439.55	35.92	RT	439.29	-	-	-	66.07	RT	439.34	84.19	RT	439.63
3057+33.66	79.95	RT	24.05	RT	16.00	RT	439.92	32.09	RT	439.58	-	-	-	69.90	RT	439.64	88.00	RT	440.02
3057+33.66	79.95	RT	24.05	RT	16.00	RT	439.92	32.09	RT	439.58	-	-	-	69.90	RT	439.64	92.00	RT	440.22
3057+50.00	81.67	RT	22.33	RT	16.00	RT	440.13	30.37	RT	439.83	-	-	-	71.62	RT	440.00	92.00	RT	440.42
3058+00.00	86.39	RT	17.61	RT	16.00	RT	440.61	25.64	RT	440.41	-	-	-	76.36	RT	440.53	92.00	RT	440.86
3058+19.29	88.00	RT	16.00	RT	16.00	RT	440.75	24.03	RT	440.58	-	-	-	77.97	RT	440.72	92.00	RT	441.01
3058+50.00	90.31	RT	13.69	RT	16.00	RT	440.97	21.71	RT	440.85	-	-	-	80.28	RT	441.01	92.00	RT	441.25
3058+75.58	92.00	RT	12.00	RT	16.00	RT	441.14	20.02	RT	441.06	-	-	-	81.98	RT	441.20	92.00	RT	441.41
3059+11.30	94.01	RT	9.99	RT	16.00	RT	441.38	18.00	RT	441.34	-	-	-	84.00	RT	441.47	92.00	RT	441.64
3059+57.56	96.01	RT	7.99	RT	16.00	RT	441.66	18.00	RT	441.62	-	-	-	86.00	RT	441.77	92.00	RT	441.90
3060+00.00	97.23	RT	6.77	RT	-	-	-	-	-	-	-	-	-	87.23	RT	442.02	92.00	RT	442.12
3060+50.00	97.94	RT	6.06	RT	-	-	-	-	-	-	-	-	-	87.94	RT	442.30	92.00	RT	442.38
3060+69.29	98.00	RT	6.00	RT	-	-	-	-	-	-	-	-	-	88.00	RT	442.34	92.00	RT	442.48

NOTE:

THE CONTRACTOR SHALL CONSTRUCT THIS MEDIAN CROSSOVER USING THE ELEVATION AND OFFSET DATA TABLE FOUND ON THIS SHEET. VALUES SHOWN ARE BASED ON THE ORIGINAL ROADWAY PLANS AND FIELD SURVEY. CONTRACTOR MAY MAKE MINOR ADJUSTMENTS IN THE FIELD AS APPROVED BY THE ENGINEER.



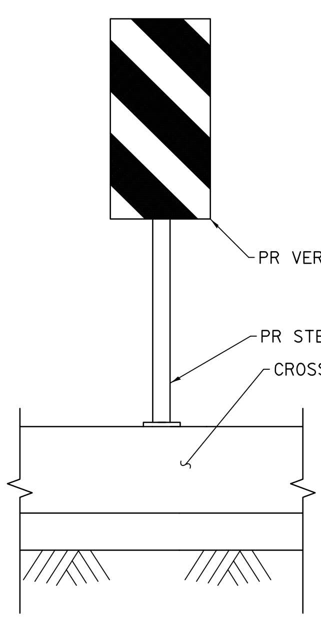
NORTH CROSSOVERS CLOSURE PLAN



SOUTH CROSSOVERS CLOSURE PLAN

LEGEND

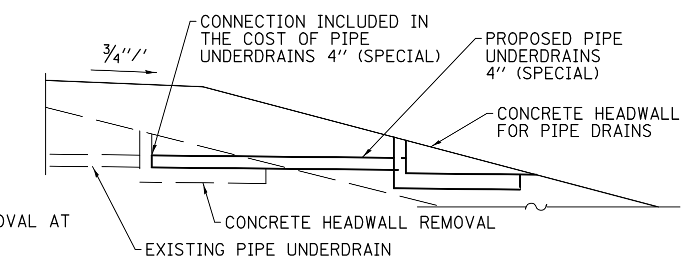
- VERTICAL SIGN PANEL
- TYPE III BARRICADE
- TRAFFIC FLOW ARROW



NOTE: FOR INSTALLATION OF VERTICAL PANELS IN AREAS OF CROSSOVER PAVEMENT, CONTRACTOR SHALL SUBMIT A CONNECTION DETAIL TO THE ENGINEER FOR APPROVAL. PAVEMENT CORING WILL NOT BE ALLOWED. AT LOCATIONS OTHER THAN PAVEMENT, TELESCOPING STEEL POLES WILL BE PLACED 1" BELOW SURFACE, AND WORK SHALL BE DONE TO THE SATISFACTION OF THE ENGINEER. WHEN OPENING CROSSOVER, PANELS WILL BE REMOVED. COST OF PANELS, POSTS, SLEEVES, POST CONNECTION, TYPE III BARRICADES AND SIGNS SHALL BE INCLUDED IN TRAFFIC CONTROL AND PROTECTION, (SPECIAL).

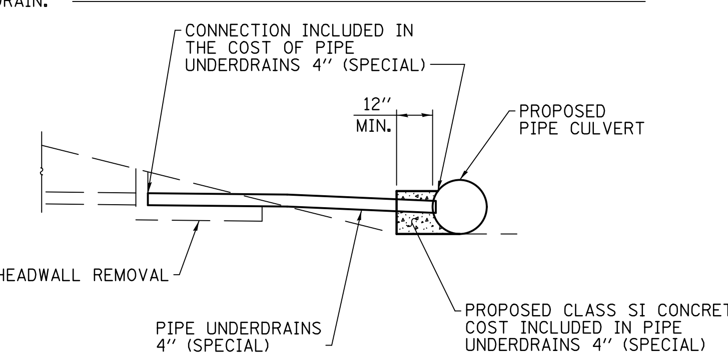
CROSSOVER CLOSURE SCHEDULE

LOCATION	VERTICAL SIGN PANELS	TELESCOPING STEEL SIGN SUPPORTS	TYPE III BARRICADES	SIGN PANEL, TYPE 2
	EACH	EACH	EACH	SQ FT
NORTH CROSSOVERS	33	33	4	20
SOUTH CROSSOVERS	36	36	4	20
TOTALS	69	69	8	40



NOTE: DURING CROSSOVERS REMOVAL AT UNDERDRAIN EXTENSIONS, THE PROPOSED PIPE UNDERDRAIN 4" (SPECIAL) EXTENSION SHALL BE REMOVED. THE CONCRETE HEADWALL FOR PIPE DRAINS SHALL BE REINSTALLED AT THE ORIGINAL END OF THE UNDERDRAIN. THIS WORK WILL BE PAID FOR AS REMOVE AND REINSTALL CONCRETE HEADWALL FOR PIPE DRAIN.

UNDERDRAIN EXTENSION AT CROSSOVERS



NOTE: DURING CROSSOVERS REMOVAL AT UNDERDRAIN CULVERT CONNECTIONS, THE PROPOSED PIPE UNDERDRAIN 4" (SPECIAL) SHALL BE REMOVED. A NEW CONCRETE HEADWALL FOR PIPE DRAINS SHALL BE REINSTALLED AT THE ORIGINAL END OF THE UNDERDRAIN. THIS WORK WILL BE PAID FOR AS CONCRETE HEADWALLS FOR PIPE DRAINS.

UNDERDRAIN CONNECTION TO MEDIAN CULVERT

ESCA CONSULTANTS, INC.

USER NAME = SKM	DESIGNED - SKM	REVISED -
ESCA PROJECT NO. 1259.08	DRAWN - SKM	REVISED -
PLOT SCALE = 0.2 ' / in.	CHECKED - ELH	REVISED -
PLOT DATE = 3/19/2018 12:57:26 PM	DATE - 02/18	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSSOVERS DETAILS

SCALE: AS SHOWN | SHEET NO. 1 OF 1 SHEETS | STA. 3026+00.00 TO STA. 3063+00.00

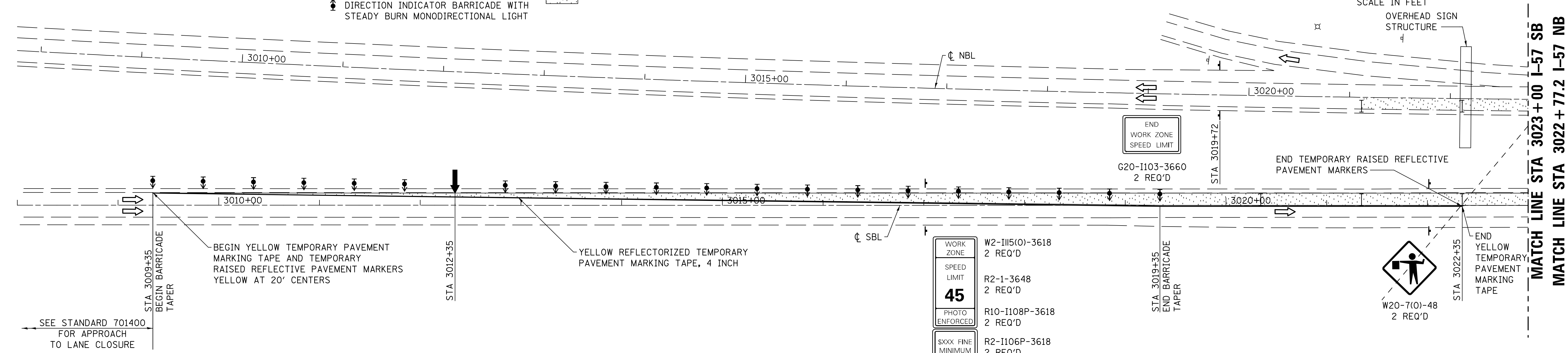
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	40

CONTRACT NO. 78522

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

LEGEND

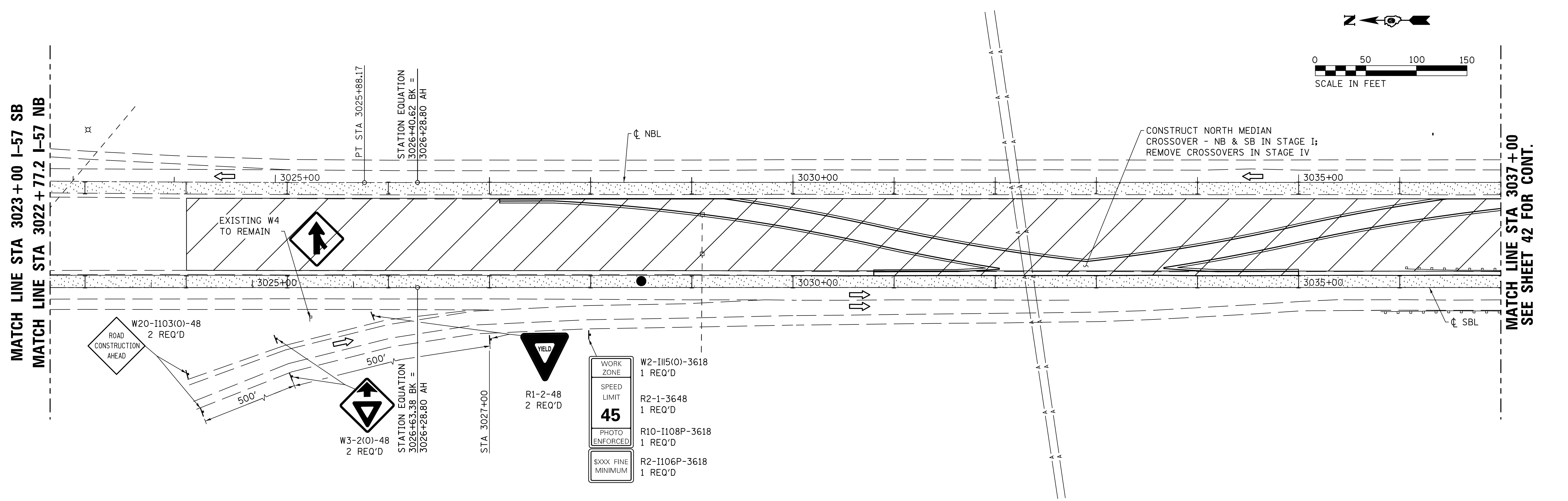
- ARROW BOARD
- WORK AREA
- SIGN
- DIRECTION INDICATOR BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
- TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE
- FLAGGER WITH TRAFFIC CONTROL SIGN
- LANE CLOSED TO TRAFFIC



NOTE:
SEE STANDARD 701401 AND SPECIAL PROVISIONS FOR FURTHER INFORMATION

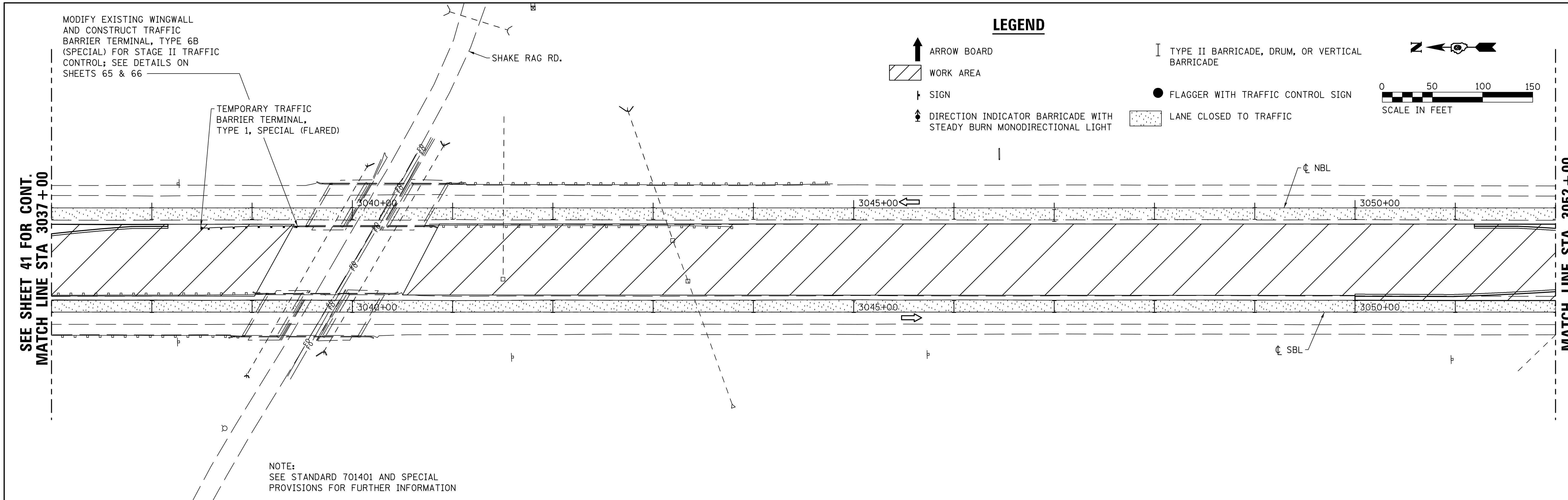
NOTE:
THE SPEED LIMIT 45 SIGNS SHALL BE REMOVED OR COVERED WHEN NO WORKERS ARE PRESENT

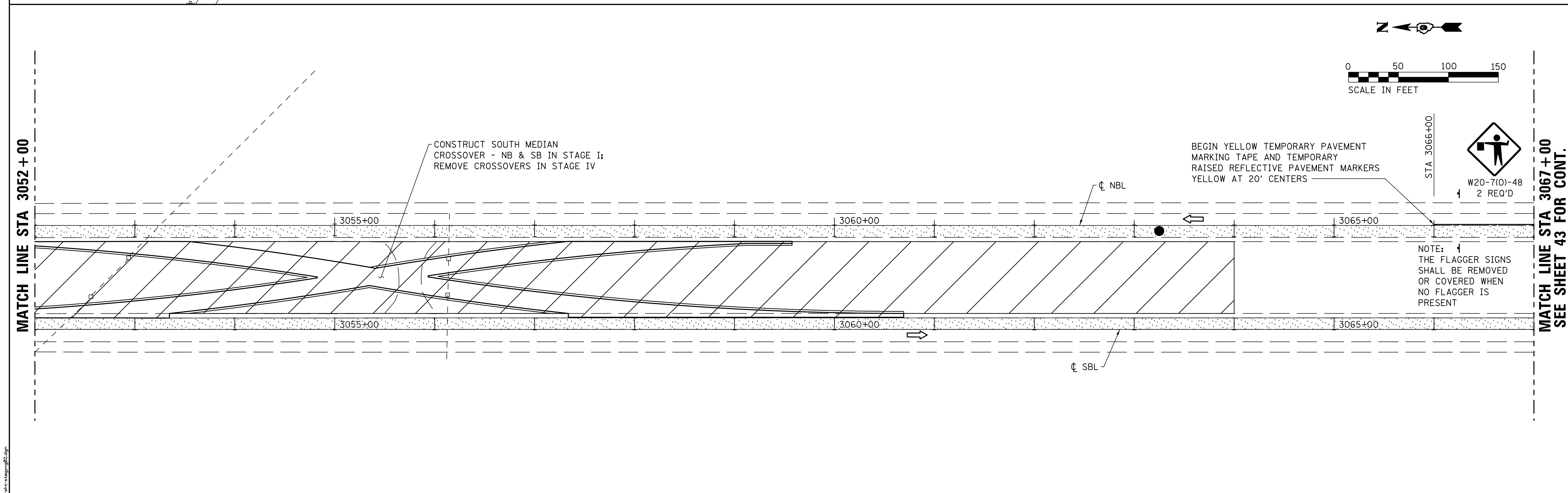
NOTE:
THE FLAGGER SIGNS SHALL BE REMOVED OR COVERED WHEN NO FLAGGER IS PRESENT



ESCA CONSULTANTS, INC.	USER NAME = SKM	DESIGNED - SKM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STAGES I AND IV TRAFFIC CONTROL
	ESCA PROJECT NO. 1259.08	DRAWN - SKM	REVISED -		
	PLOT SCALE = 0.1667 ' / in.	CHECKED - ELH	REVISED -		
	PLOT DATE = 3/19/2018	DATE - 12/17	REVISED -		SCALE: 1"=50' SHEET NO. 1 OF 3 SHEETS STA. 3008+00 TO STA. 3037+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	41
		CONTRACT NO. 78522		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



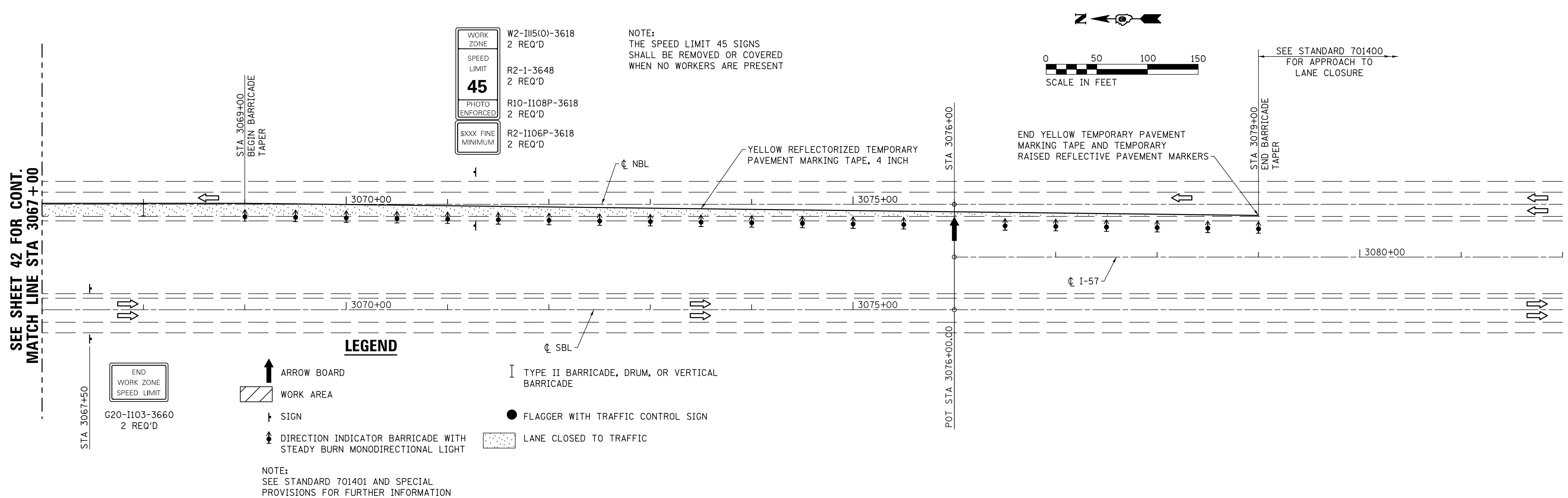


ESCA CONSULTANTS, INC.	USER NAME = SKM	DESIGNED - SKM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	ESCA PROJECT NO. 1259.08	DRAWN - SKM	REVISED -	
	PLOT SCALE = 0.1667 ' / in.	CHECKED - ELH	REVISED -	
	PLOT DATE = 3/19/2018	DATE - 12/17	REVISED -	

STAGES I AND IV TRAFFIC CONTROL

SCALE: 1"=50' | SHEET NO. 2 OF 3 SHEETS | STA. 3037+00 TO STA. 3067+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	42
		CONTRACT NO. 78522		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



ESCA CONSULTANTS, INC.	USER NAME = SKM	DESIGNED - SKM	REVISED -
	ESCA PROJECT NO. 1259.08	DRAWN - SKM	REVISED -
	PLOT SCALE = 0.1667 ' / in.	CHECKED - ELH	REVISED -
	PLOT DATE = 3/19/2018	DATE - 12/17	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGES I AND IV TRAFFIC CONTROL

SCALE: 1"=50' | SHEET NO. 3 OF 3 SHEETS | STA. 3067+00 TO STA. 3082+00

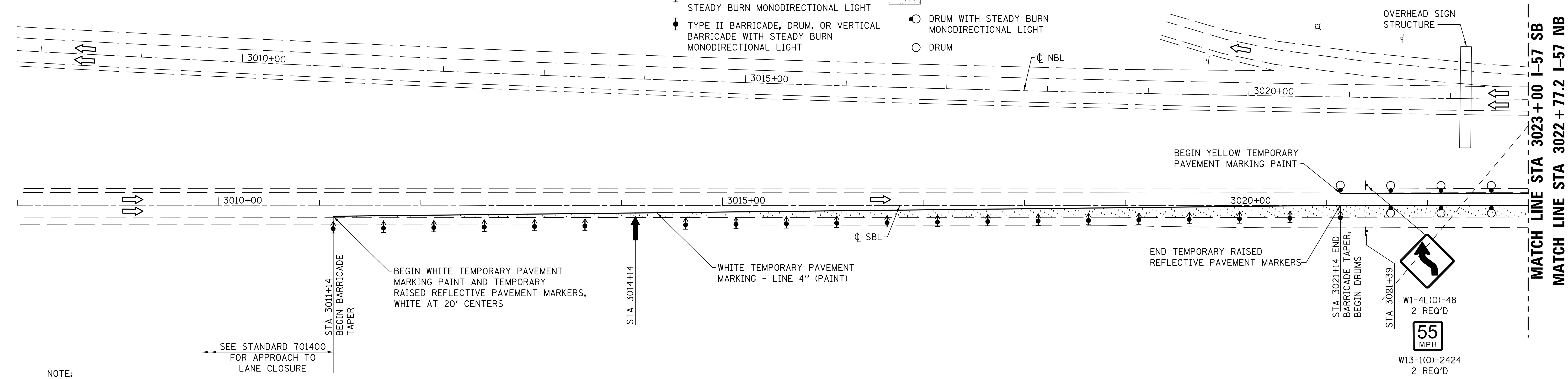
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	43

CONTRACT NO. 78522

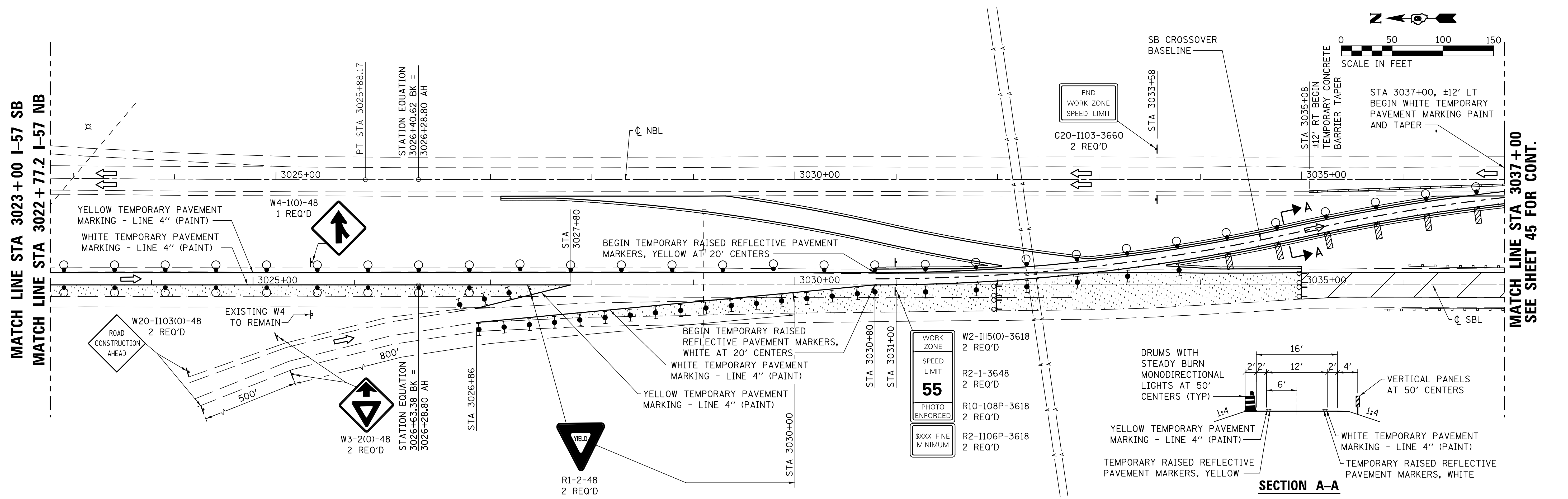
FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT

LEGEND

- ARROW BOARD
- WORK AREA
- SIGN
- DIRECTION INDICATOR BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
- TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
- VERTICAL PANEL (BACK TO BACK)
- TYPE III BARRICADE WITH FLASHING LIGHTS
- TEMPORARY CONCRETE BARRIER
- LANE CLOSED TO TRAFFIC
- DRUM WITH STEADY BURN MONODIRECTIONAL LIGHT
- DRUM



NOTE:
SEE STANDARDS 701416, 701411 AND SPECIAL PROVISIONS FOR FURTHER INFORMATION



ESCA CONSULTANTS, INC.	USER NAME = SKM	DESIGNED - SKM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	ESCA PROJECT NO. 1259.08	DRAWN - SKM	REVISED -	
	PLOT SCALE = 0.1667 ' / in.	CHECKED - ELH	REVISED -	
	PLOT DATE = 3/19/2018	DATE - 02/18	REVISED -	

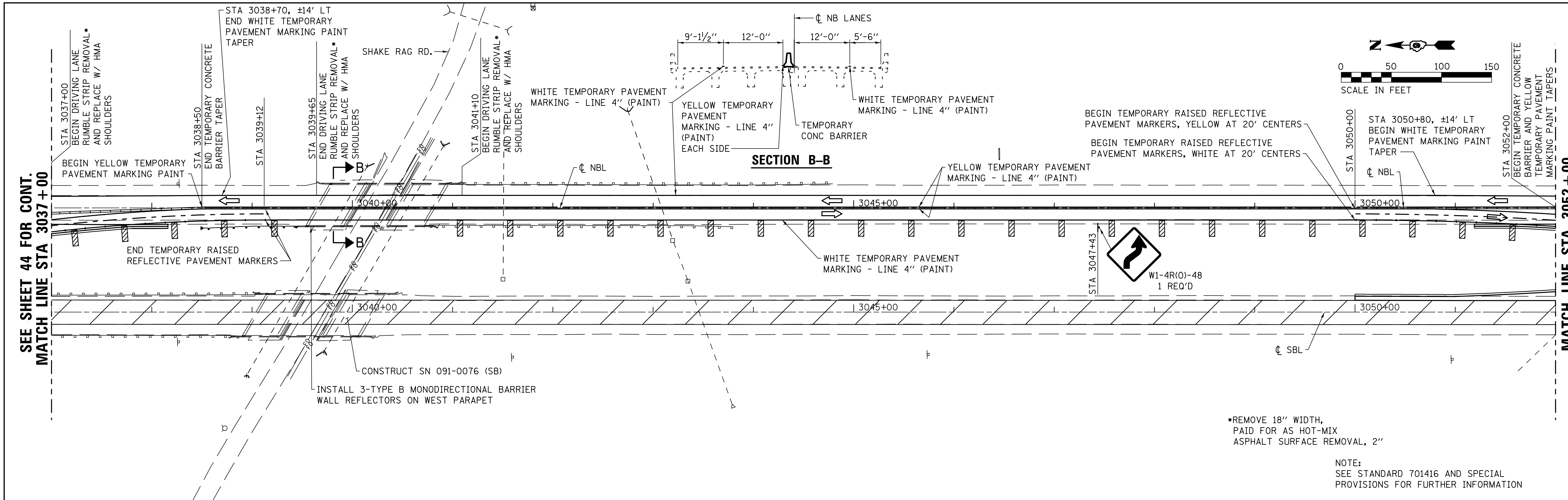
STAGE II TRAFFIC CONTROL

SCALE: 1"=50' | SHEET NO. 1 OF 3 SHEETS | STA. 3008+00 TO STA. 3037+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	44

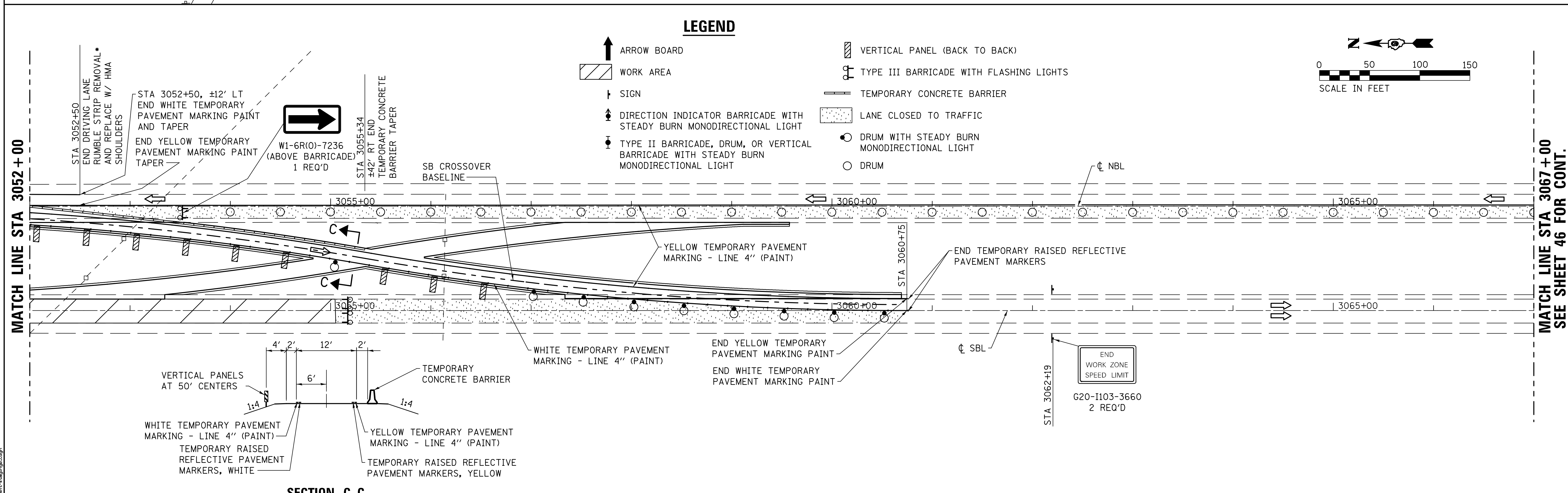
CONTRACT NO. 78522

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



•REMOVE 18'' WIDTH, PAID FOR AS HOT-MIX ASPHALT SURFACE REMOVAL, 2''

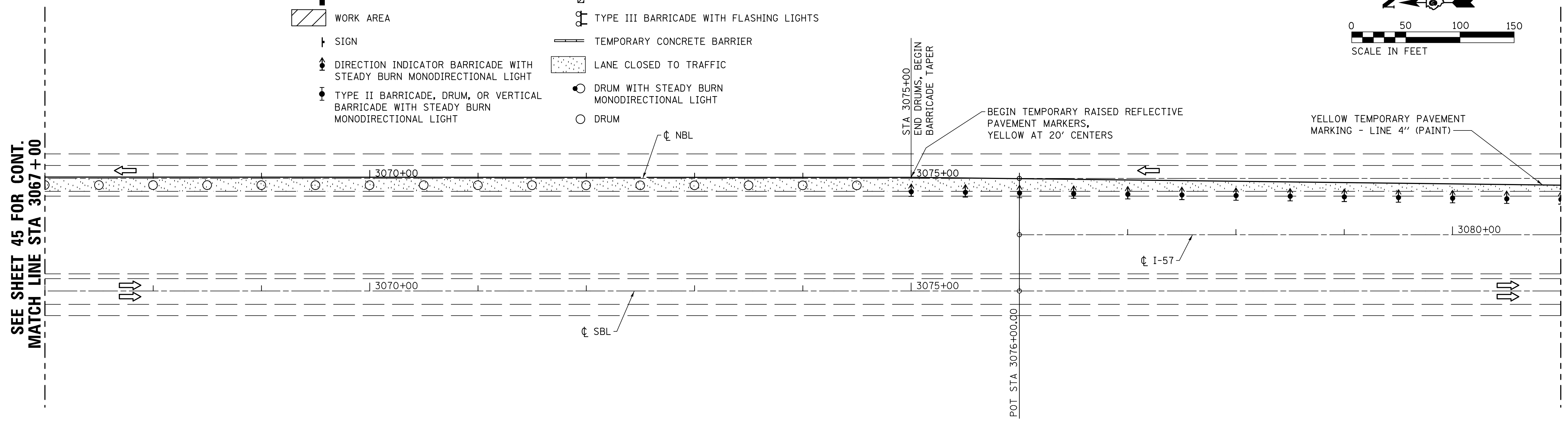
NOTE:
SEE STANDARD 701416 AND SPECIAL PROVISIONS FOR FURTHER INFORMATION



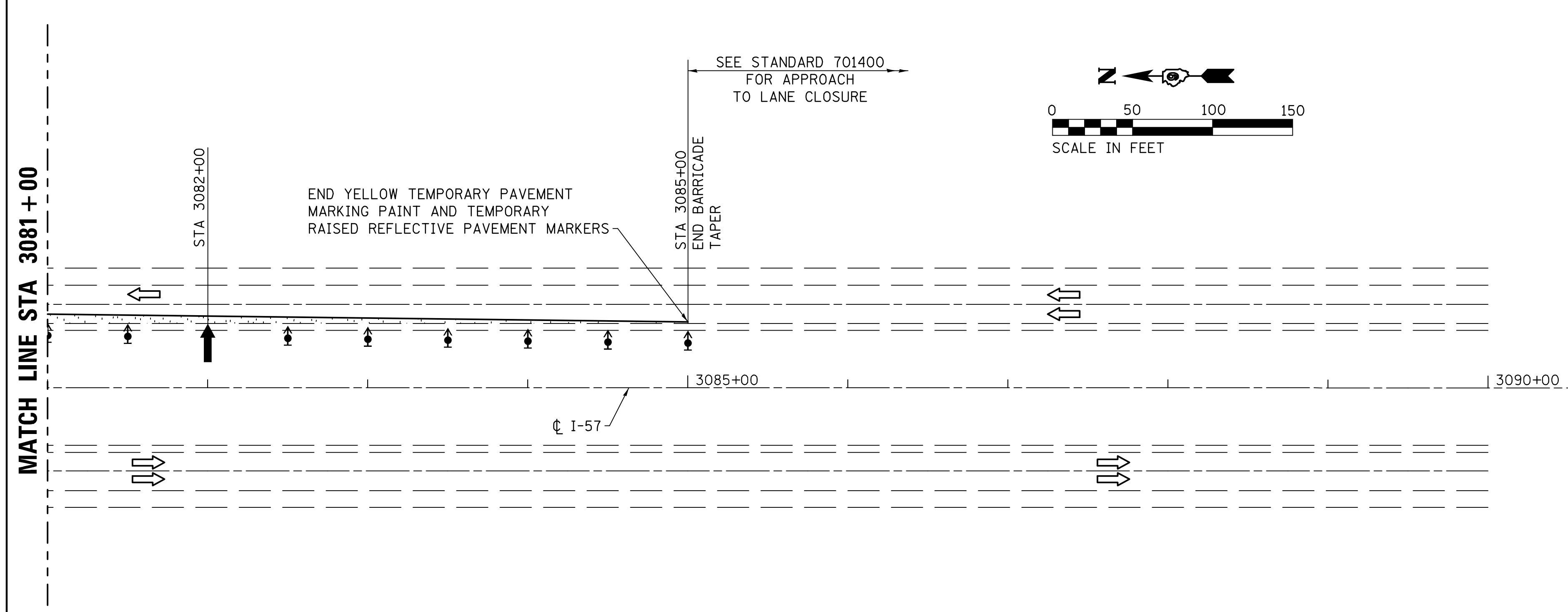
ESCA CONSULTANTS, INC.	USER NAME = SKM	DESIGNED - SKM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STAGE II TRAFFIC CONTROL	F.A.I. RTE. 57 / SECTION (91-4)B-1 / COUNTY UNION / TOTAL SHEETS 160 / SHEET NO. 45
	ESCA PROJECT NO. 1259.08	DRAWN - SKM	REVISED -			CONTRACT NO. 78522
	PLOT SCALE = 0.1667 ' / in.	CHECKED - ELH	REVISED -		SCALE: 1''=50'	SHEET NO. 2 OF 3 SHEETS
	PLOT DATE = 3/19/2018	DATE - 02/18	REVISED -		STA. 3037+00 TO STA. 3067+00	FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

LEGEND

- ARROW BOARD
- WORK AREA
- SIGN
- DIRECTION INDICATOR BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
- TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
- VERTICAL PANEL (BACK TO BACK)
- TYPE III BARRICADE WITH FLASHING LIGHTS
- TEMPORARY CONCRETE BARRIER
- LANE CLOSED TO TRAFFIC
- DRUM WITH STEADY BURN MONODIRECTIONAL LIGHT
- DRUM



NOTE:
SEE STANDARD 701416 AND SPECIAL PROVISIONS FOR FURTHER INFORMATION



ESCA CONSULTANTS, INC.

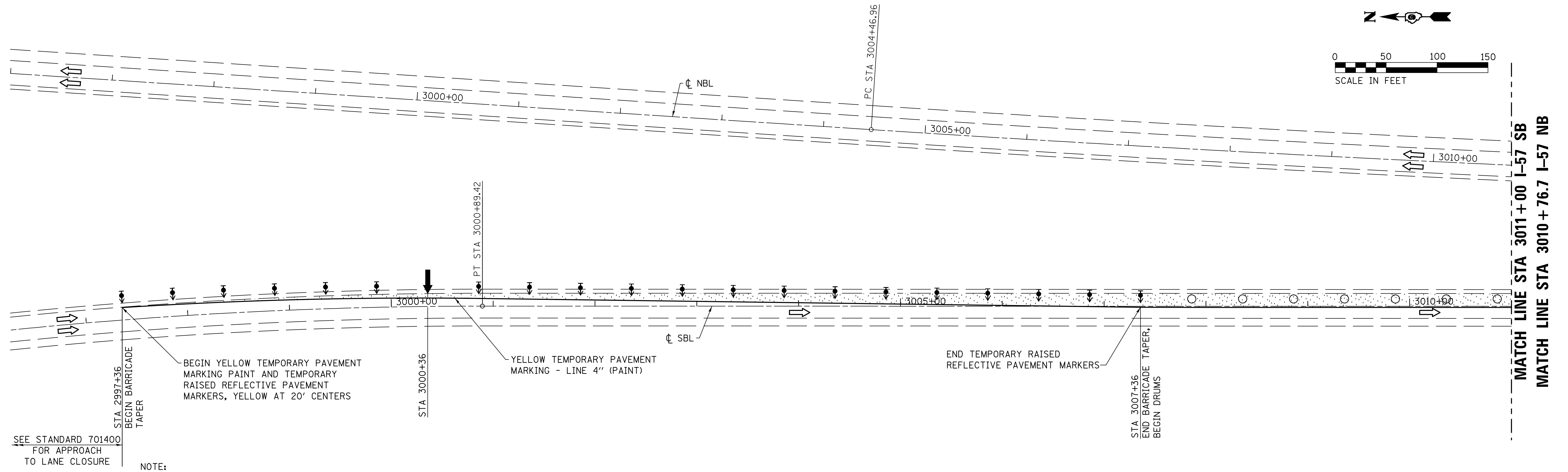
USER NAME = SKM	DESIGNED - SKM	REVISED -	
ESCA PROJECT NO. 1259.08	DRAWN - SKM	REVISED -	
PLOT SCALE = 0.1667 ' / in.	CHECKED - ELH	REVISED -	
PLOT DATE = 3/19/2018	DATE - 02/18	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE II TRAFFIC CONTROL

SCALE: 1"=50' | SHEET NO. 3 OF 3 SHEETS | STA. 3067+00 TO STA. 3090+00

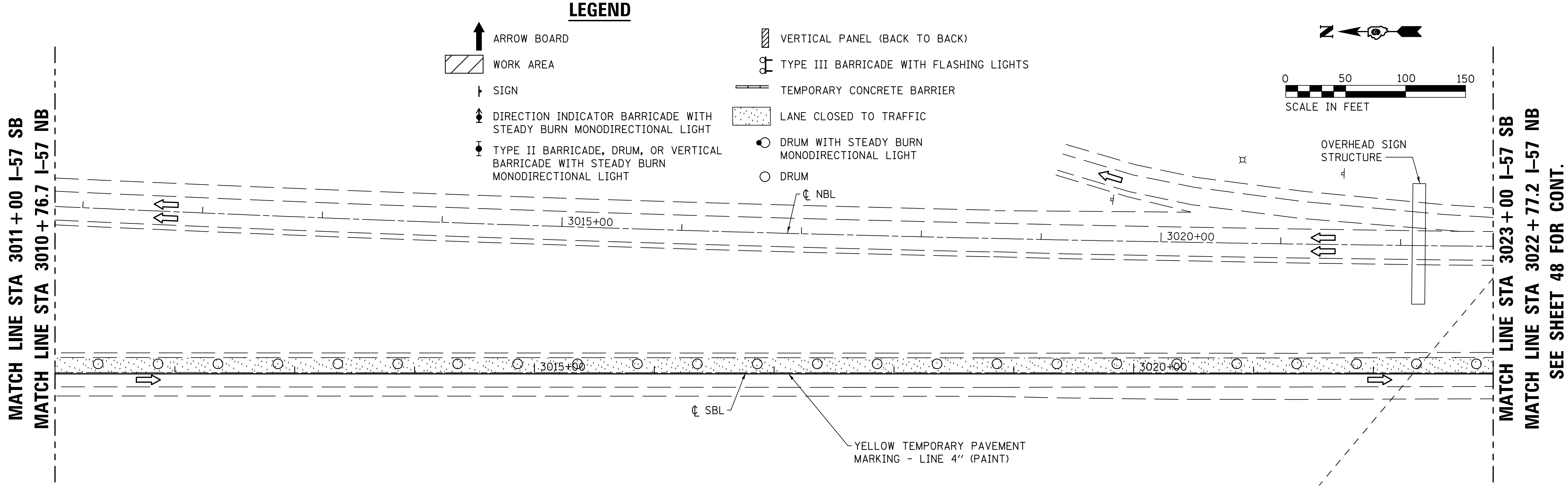
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	46
		CONTRACT NO. 78522		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



NOTE:
SEE STANDARD 701416 AND SPECIAL PROVISIONS FOR FURTHER INFORMATION

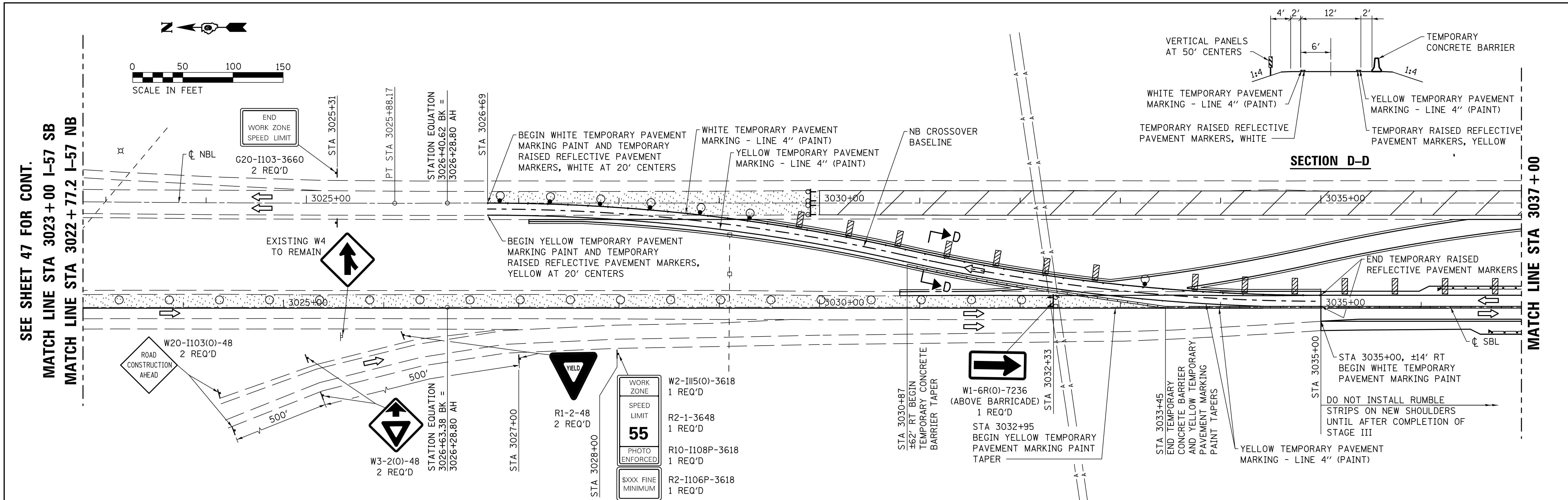
LEGEND

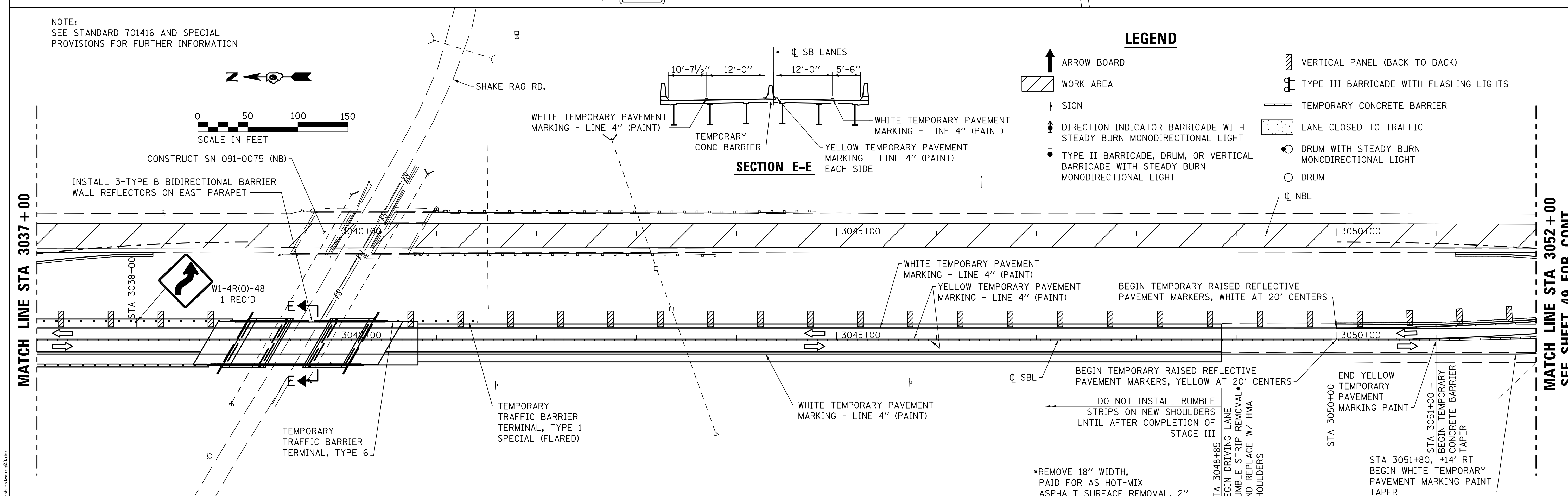
- ARROW BOARD
- WORK AREA
- SIGN
- DIRECTION INDICATOR BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
- TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
- VERTICAL PANEL (BACK TO BACK)
- TYPE III BARRICADE WITH FLASHING LIGHTS
- TEMPORARY CONCRETE BARRIER
- LANE CLOSED TO TRAFFIC
- DRUM WITH STEADY BURN MONODIRECTIONAL LIGHT
- DRUM



ESCA CONSULTANTS, INC.	USER NAME = SKM	DESIGNED - SKM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STAGE III TRAFFIC CONTROL
	ESCA PROJECT NO. 1259.08	DRAWN - SKM	REVISED -		
	PLOT SCALE = 0.1667 ' / in.	CHECKED - ELH	REVISED -		
	PLOT DATE = 3/19/2018	DATE - 02/18	REVISED -		SCALE: 1"=50' SHEET NO. 1 OF 3 SHEETS STA. 2996+00 TO STA. 3023+00

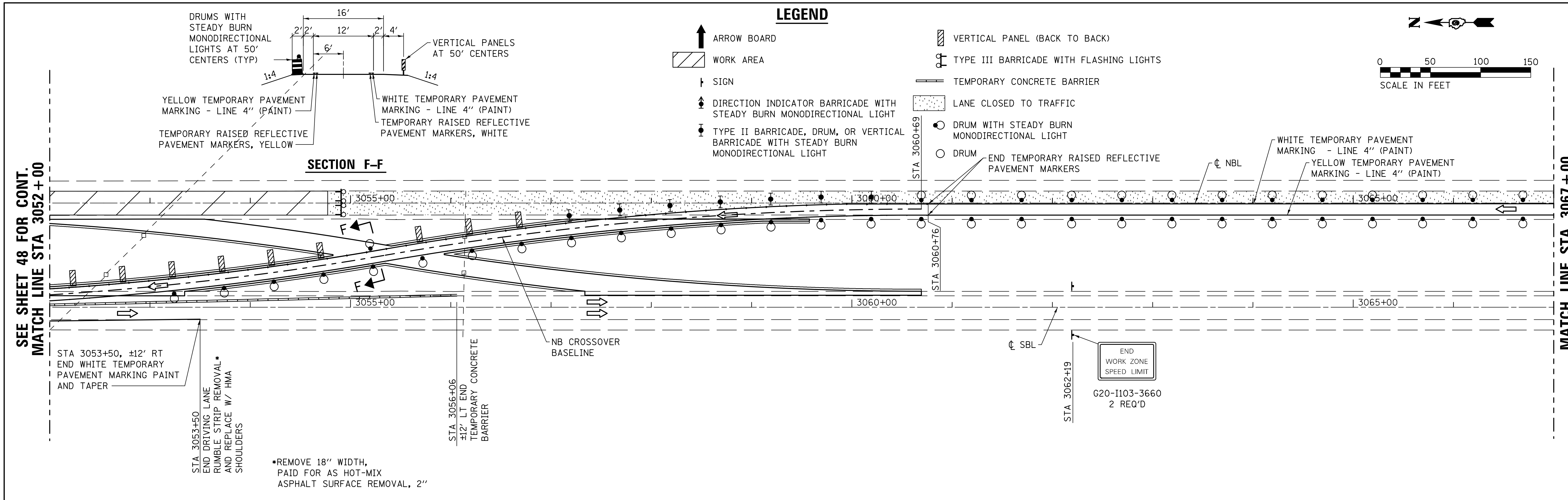
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	47
		CONTRACT NO. 78522		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

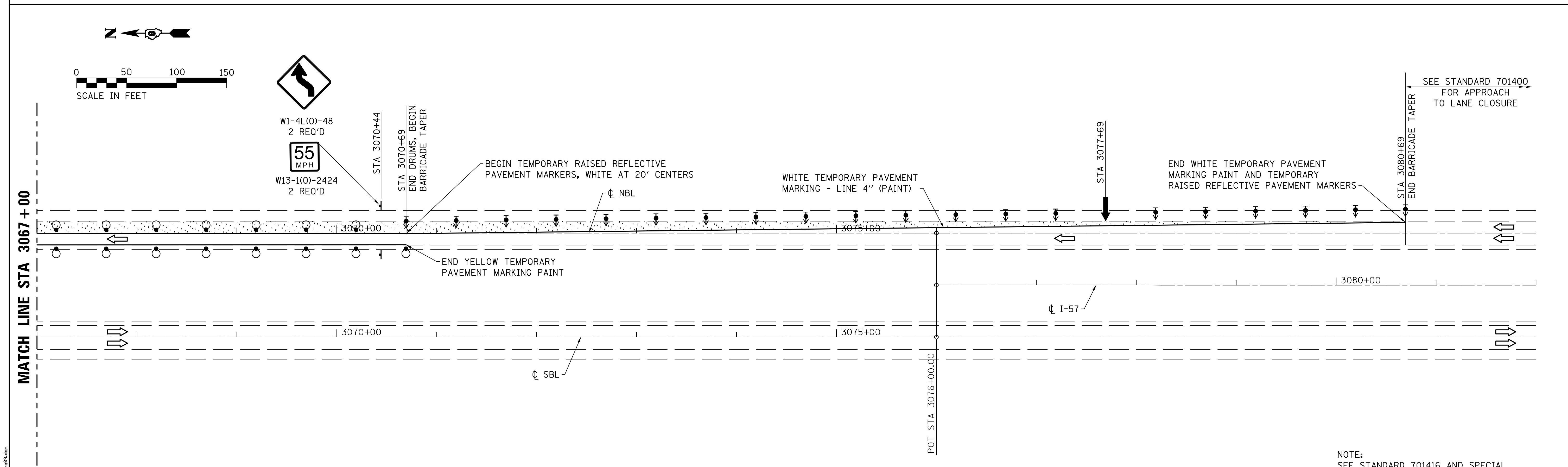

SCALE IN FEET
0 50 100 150
SEE SHEET 47 FOR CONT.
MATCH LINE STA 3023+00 I-57 SB
MATCH LINE STA 3022+77.2 I-57 NB
MATCH LINE STA 3037+00
END WORK ZONE SPEED LIMIT
G20-I103-3660
2 REQ'D
℄ NBL
STA 3025+31
PT STA 3025+88.17
STATION EQUATION 3026+40.62 BK = 3026+28.80 AH
STA 3026+69
BEGIN WHITE TEMPORARY PAVEMENT MARKING PAINT AND TEMPORARY RAISED REFLECTIVE PAVEMENT MARKERS, WHITE AT 20' CENTERS
WHITE TEMPORARY PAVEMENT MARKING - LINE 4" (PAINT)
YELLOW TEMPORARY PAVEMENT MARKING - LINE 4" (PAINT)
NB CROSSOVER BASELINE
3025+00
3030+00
3035+00
EXISTING W4 TO REMAIN
BEGIN YELLOW TEMPORARY PAVEMENT MARKING PAINT AND TEMPORARY RAISED REFLECTIVE PAVEMENT MARKERS, YELLOW AT 20' CENTERS
D
D
END TEMPORARY RAISED REFLECTIVE PAVEMENT MARKERS
℄ SBL
ROAD CONSTRUCTION AHEAD
W20-I103(0)-48
2 REQ'D
500'
500'
W3-2(0)-48
2 REQ'D
STATION EQUATION 3026+63.38 BK = 3026+28.80 AH
STA 3027+00
YIELD
R1-2-48
2 REQ'D
STA 3028+00
WORK ZONE
SPEED LIMIT 55
PHOTO ENFORCED
$XXX FINE MINIMUM
W2-I115(0)-3618
1 REQ'D
R2-1-3648
1 REQ'D
R10-I108P-3618
1 REQ'D
R2-I106P-3618
1 REQ'D
STA 3030+87 ±62' RT BEGIN TEMPORARY CONCRETE BARRIER TAPER
W1-6R(0)-7236 (ABOVE BARRICADE)
1 REQ'D
STA 3032+33
STA 3032+95 BEGIN YELLOW TEMPORARY PAVEMENT MARKING PAINT TAPER
STA 3033+45 END TEMPORARY CONCRETE BARRIER AND YELLOW TEMPORARY PAVEMENT MARKING PAINT TAPERS
YELLOW TEMPORARY PAVEMENT MARKING - LINE 4" (PAINT)
STA 3035+00
STA 3035+00, ±14' RT BEGIN WHITE TEMPORARY PAVEMENT MARKING PAINT
DO NOT INSTALL RUMBLE STRIPS ON NEW SHOULDERS UNTIL AFTER COMPLETION OF STAGE III
4' 2' 12' 2'
6'
1:4
1:4
VERTICAL PANELS AT 50' CENTERS
TEMPORARY CONCRETE BARRIER
WHITE TEMPORARY PAVEMENT MARKING - LINE 4" (PAINT)
YELLOW TEMPORARY PAVEMENT MARKING - LINE 4" (PAINT)
TEMPORARY RAISED REFLECTIVE PAVEMENT MARKERS, WHITE
TEMPORARY RAISED REFLECTIVE PAVEMENT MARKERS, YELLOW
SECTION D-D


NOTE:
SEE STANDARD 701416 AND SPECIAL PROVISIONS FOR FURTHER INFORMATION
SCALE IN FEET
0 50 100 150
SHAKE RAG RD.
MATCH LINE STA 3037+00
MATCH LINE STA 3052+00
SEE SHEET 49 FOR CONT.
CONSTRUCT SN 091-0075 (NB)
INSTALL 3-TYPE B BIDIRECTIONAL BARRIER WALL REFLECTORS ON EAST PARAPET
10'-7½" 12'-0" 12'-0" 5'-6"
℄ SB LANES
WHITE TEMPORARY PAVEMENT MARKING - LINE 4" (PAINT)
TEMPORARY CONC BARRIER
YELLOW TEMPORARY PAVEMENT MARKING - LINE 4" (PAINT) EACH SIDE
WHITE TEMPORARY PAVEMENT MARKING - LINE 4" (PAINT)
SECTION E-E
3040+00
3045+00
3050+00
℄ NBL
STA 3038+00
W1-4R(0)-48
1 REQ'D
E
E
WHITE TEMPORARY PAVEMENT MARKING - LINE 4" (PAINT)
YELLOW TEMPORARY PAVEMENT MARKING - LINE 4" (PAINT)
BEGIN TEMPORARY RAISED REFLECTIVE PAVEMENT MARKERS, WHITE AT 20' CENTERS
℄ SBL
BEGIN TEMPORARY RAISED REFLECTIVE PAVEMENT MARKERS, YELLOW AT 20' CENTERS
TEMPORARY TRAFFIC BARRIER TERMINAL, TYPE 6
TEMPORARY TRAFFIC BARRIER TERMINAL, TYPE 1 SPECIAL (FLARED)
WHITE TEMPORARY PAVEMENT MARKING - LINE 4" (PAINT)
DO NOT INSTALL RUMBLE STRIPS ON NEW SHOULDERS UNTIL AFTER COMPLETION OF STAGE III
STA 3048+85 BEGIN DRIVING LANE RUMBLE STRIP REMOVAL• AND REPLACE W/ HMA SHOULDERS
•REMOVE 18" WIDTH, PAID FOR AS HOT-MIX ASPHALT SURFACE REMOVAL, 2"
STA 3050+00
END YELLOW TEMPORARY PAVEMENT MARKING PAINT
STA 3051+00 BEGIN TEMPORARY CONCRETE BARRIER TAPER
STA 3051+80, ±14' RT BEGIN WHITE TEMPORARY PAVEMENT MARKING PAINT TAPER
LEGEND
ARROW BOARD
WORK AREA
SIGN
DIRECTION INDICATOR BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
VERTICAL PANEL (BACK TO BACK)
TYPE III BARRICADE WITH FLASHING LIGHTS
TEMPORARY CONCRETE BARRIER
LANE CLOSED TO TRAFFIC
DRUM WITH STEADY BURN MONODIRECTIONAL LIGHT
DRUM

ESCA CONSULTANTS, INC.	USER NAME = SKM	DESIGNED - SKM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STAGE III TRAFFIC CONTROL
	ESCA PROJECT NO. 1259.08	DRAWN - SKM	REVISED -		
	PLOT SCALE = 0.1667 ' / in.	CHECKED - ELH	REVISED -		
	PLOT DATE = 3/19/2018	DATE - 02/18	REVISED -		SCALE: 1"=50' SHEET NO. 2 OF 3 SHEETS STA. 3023+00 TO STA. 3052+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	48
		CONTRACT NO. 78522		
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			





NOTE:
SEE STANDARD 701416 AND SPECIAL PROVISIONS FOR FURTHER INFORMATION

ESCA CONSULTANTS, INC.	USER NAME = SKM	DESIGNED - SKM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	ESCA PROJECT NO. 1259.08	DRAWN - SKM	REVISED -	
	PLOT SCALE = 0.1667 ' / in.	CHECKED - ELH	REVISED -	
	PLOT DATE = 3/19/2018	DATE - 02/18	REVISED -	

STAGE III TRAFFIC CONTROL

SCALE: 1"=50' | SHEET NO. 3 OF 3 SHEETS | STA. 3052+00 TO STA. 3082+00

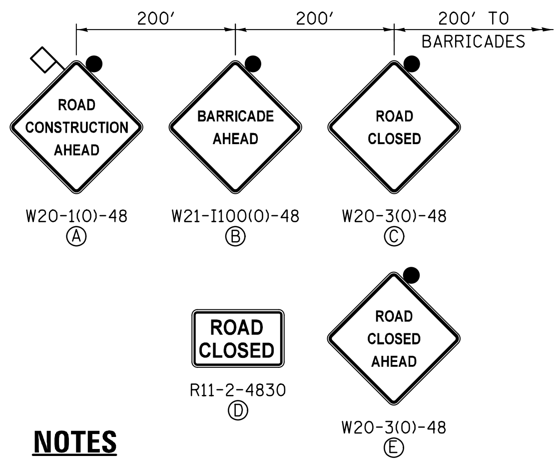
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	49

CONTRACT NO. 78522

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

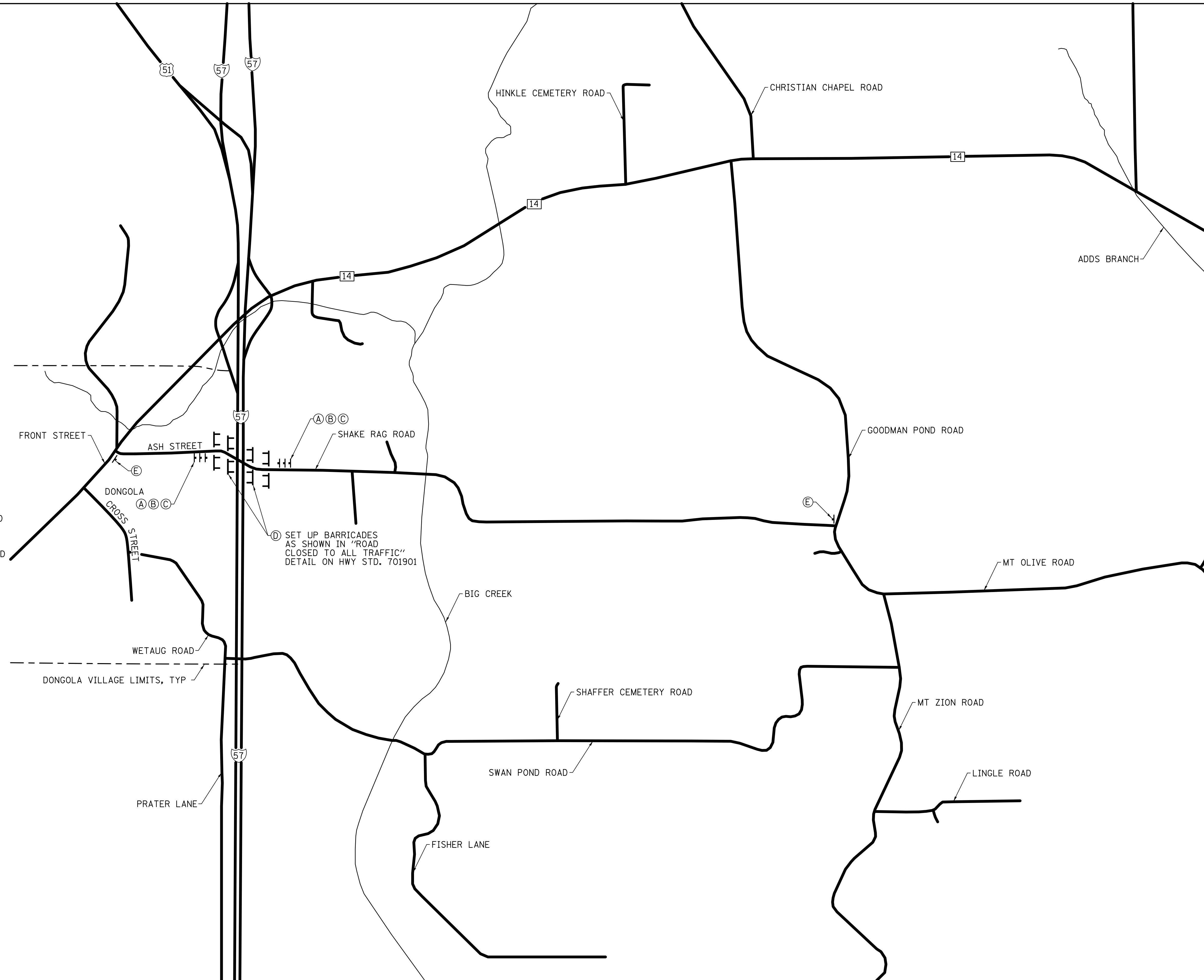
LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADES WITH FLASHING LIGHTS



NOTES

1. ALL TRAFFIC CONTROL DEVICES SHALL BE FURNISHED, ERECTED, MAINTAINED, AND REMOVED BY THE CONTRACTOR.
2. ALL SIGNS NOT ATTACHED TO BARRICADES SHALL BE POST MOUNTED.
3. LOCATIONS OF TRAFFIC CONTROL DEVICES MAY BE ADJUSTED BY THE ENGINEER.
4. SEE STANDARD 701901 FOR ADDITIONAL DETAILS.
5. ALL TRAFFIC CONTROL SHOWN ON THIS SHEET SHALL BE INCLUDED IN THE LUMP SUM AMOUNT FOR TRAFFIC CONTROL AND PROTECTION, (SPECIAL).
6. SHAKE RAG ROAD MAY BE CLOSED INTERMITTENTLY WHEN REQUIRED FOR BRIDGE CONSTRUCTION. SEE SPECIAL PROVISIONS.



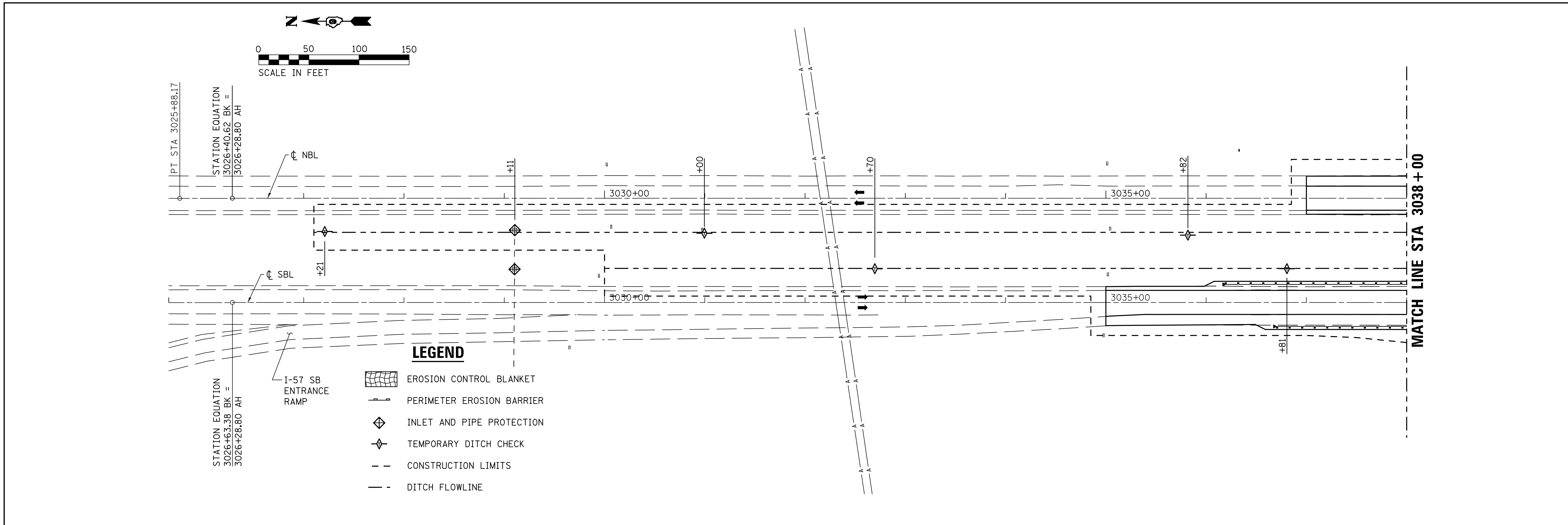
ESCA CONSULTANTS, INC.	USER NAME = SKM	DESIGNED - ELH	REVISED -
	ESCA PROJECT NO. 1259.08	DRAWN - KAH	REVISED -
	PLOT SCALE = 0.2 ' / in.	CHECKED - RDP	REVISED -
	PLOT DATE = 3/19/2018 12:57:35 PM	DATE - 12/17	REVISED -

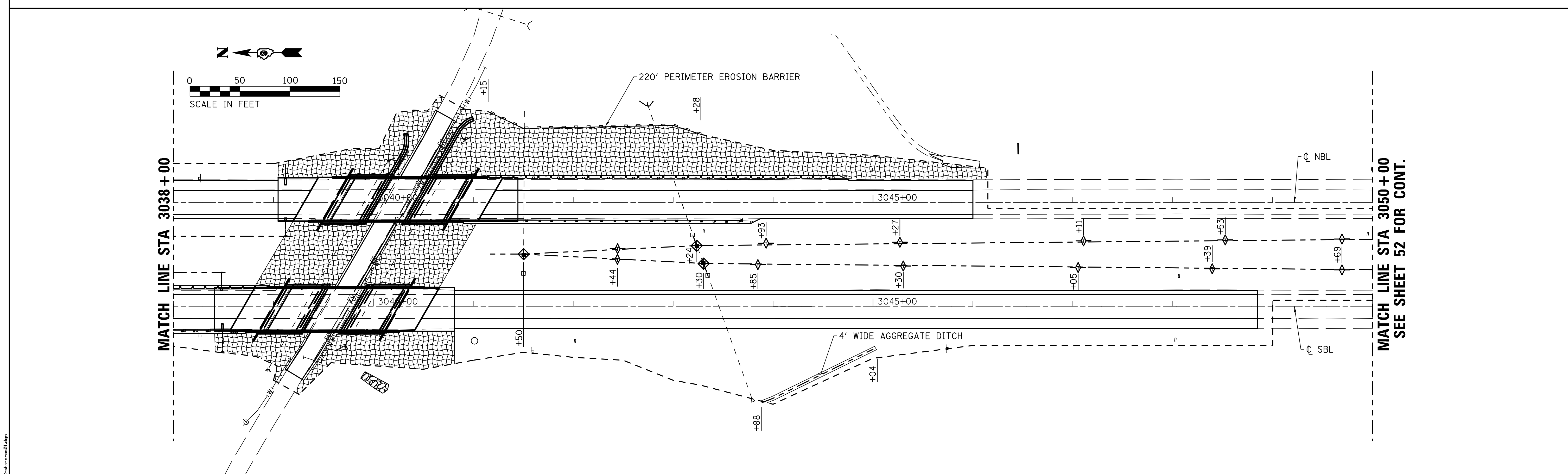
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHAKE RAG ROAD CLOSURE PLAN

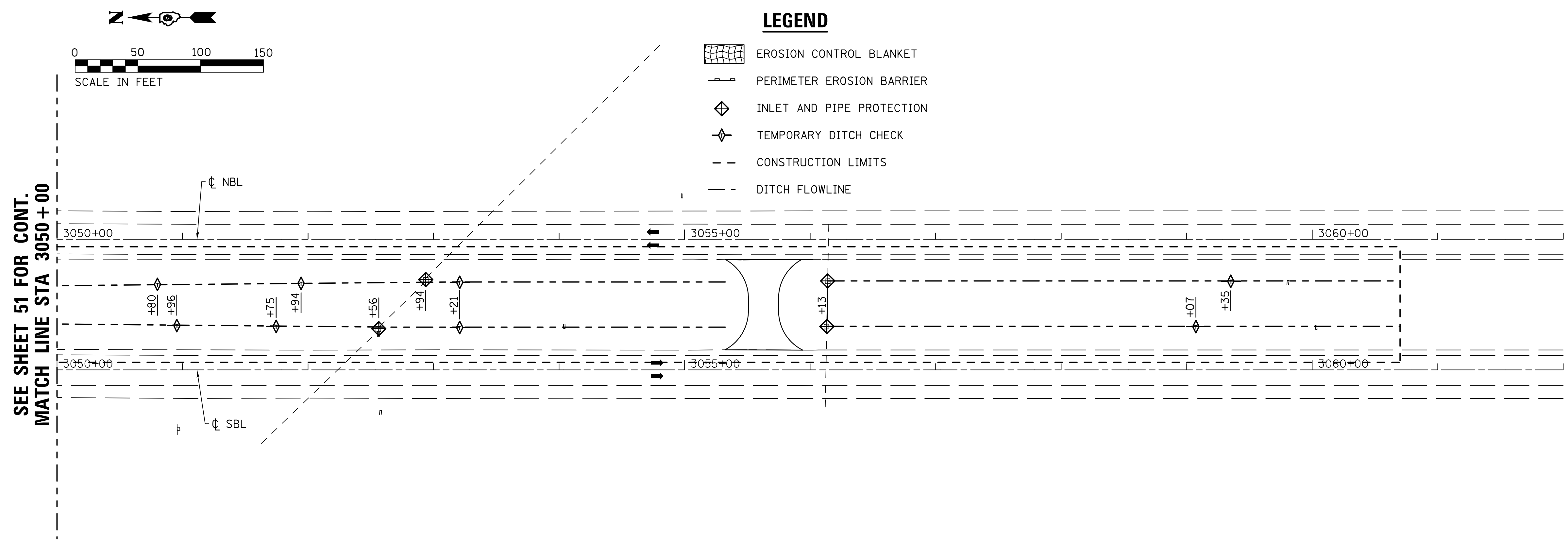
SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	50
		CONTRACT NO. 78522		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

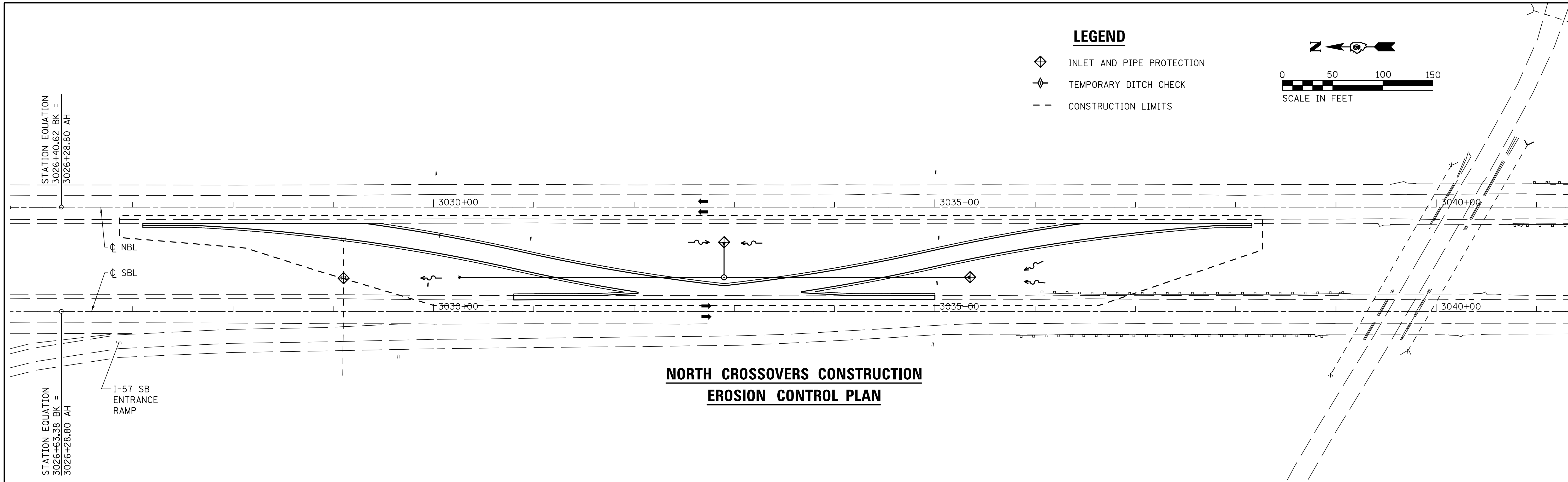




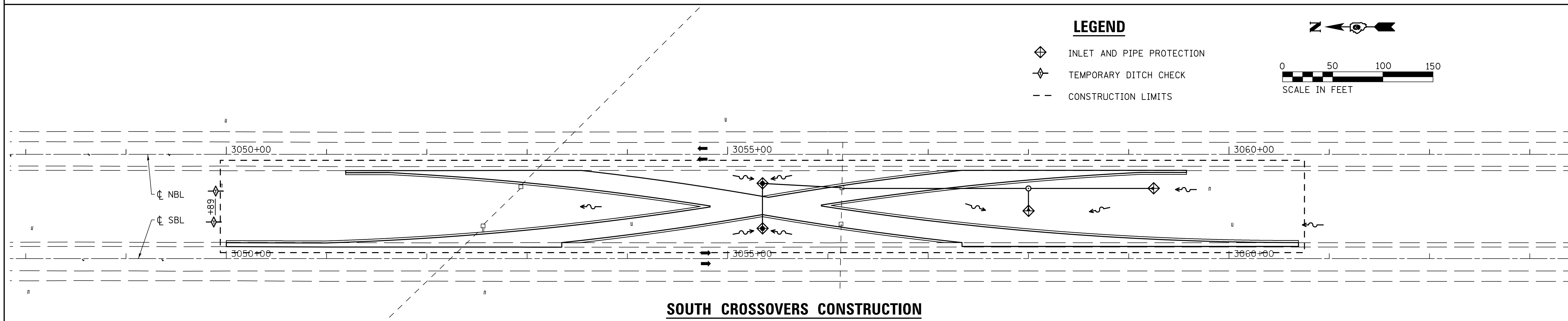
ESCA CONSULTANTS, INC.	USER NAME = SKM	DESIGNED - SKM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EROSION CONTROL PLANS	F.A.I. RTE. 57 / SECTION (91-4)B-1 / COUNTY UNION / TOTAL SHEETS 160 / SHEET NO. 51
	ESCA PROJECT NO. 1259.08	DRAWN - SKM	REVISED -			CONTRACT NO. 78522
	PLOT SCALE = 0:2 ' / in.	CHECKED - ELH	REVISED -		SCALE: 1"=50'-0" SHEET NO. 1 OF 3 SHEETS STA. 3026+00.00 TO STA. 3050+00.00	FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT
	PLOT DATE = 3/19/2018 12:57:36 PM	DATE - 03/18	REVISED -			



ESCA CONSULTANTS, INC.	USER NAME = SKM	DESIGNED - SKM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EROSION CONTROL PLANS	F.A.I. RTE. 57 / SECTION (91-4)B-1 / COUNTY UNION / TOTAL SHEETS 160 / SHEET NO. 52
	ESCA PROJECT NO. 1259.08	DRAWN - SKM	REVISED -			CONTRACT NO. 78522
	PLOT SCALE = 0.2 ' / in.	CHECKED - ELH	REVISED -			
	PLOT DATE = 3/19/2018 12:57:37 PM	DATE - 12/17	REVISED -		SCALE: 1"=50'-0" / SHEET NO. 2 OF 3 SHEETS / STA. 3050+00.00 TO STA. 3062+00.00	FED. ROAD DIST. NO. / ILLINOIS / FED. AID PROJECT



NORTH CROSSOVERS CONSTRUCTION EROSION CONTROL PLAN



SOUTH CROSSOVERS CONSTRUCTION EROSION CONTROL PLAN

PRINT DRIVER = I_PD_E_B_0.pltcfg
PEN TABLE = IDOT_VER02.tbl
MODEL NAME = PLOT
FILE NAME = D978522-sht-eros03.dgn

ESCA CONSULTANTS, INC. CIVIL & STRUCTURAL ENGINEERS

USER NAME = SKM	DESIGNED - SKM	REVISED -
ESCA PROJECT NO. 1259.08	DRAWN - SKM	REVISED -
PLOT SCALE = 0:2 ':" / in.	CHECKED - ELH	REVISED -
PLOT DATE = 3/19/2018 12:57:38 PM	DATE - 03/18	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

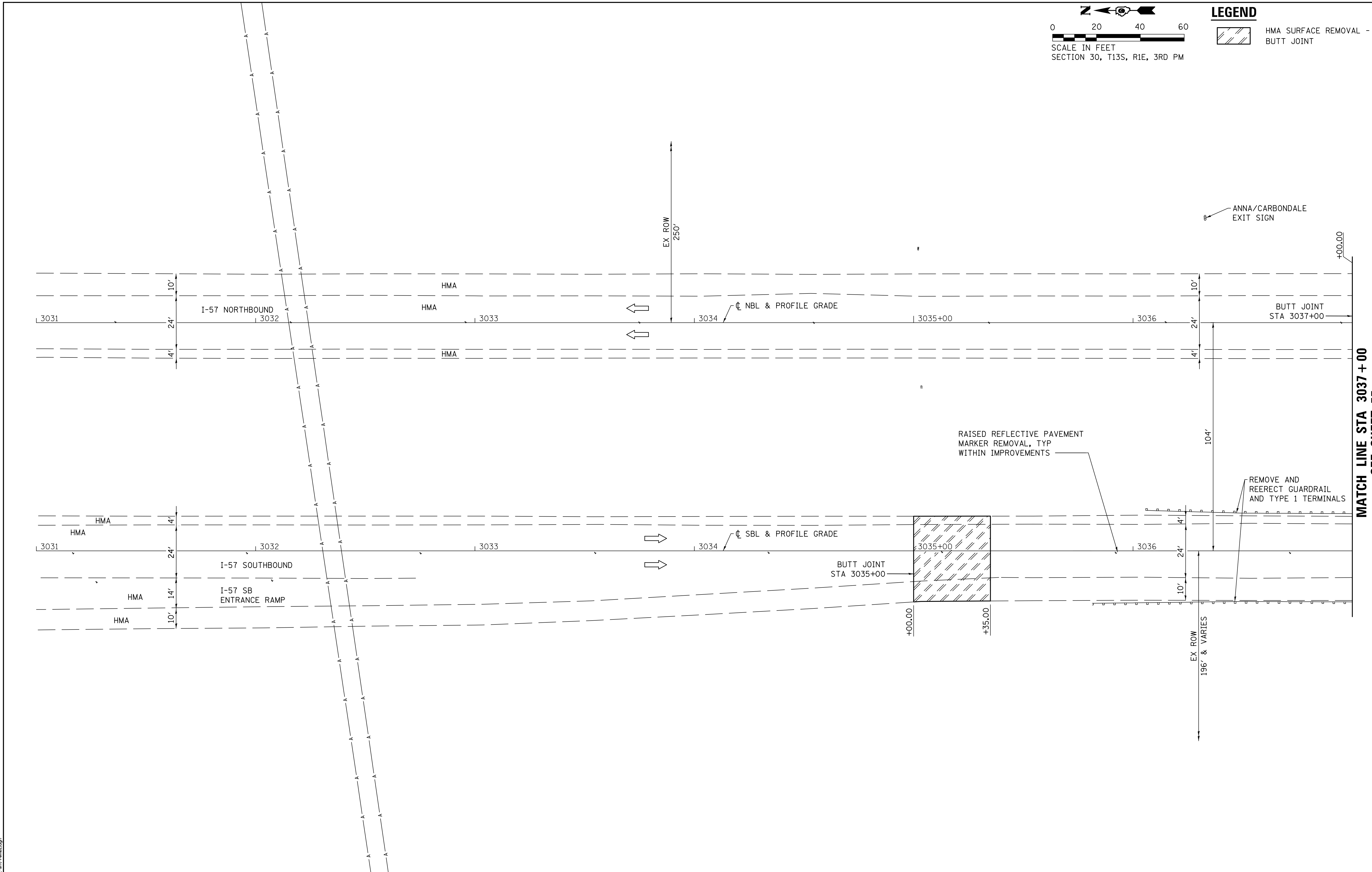
EROSION CONTROL PLANS

SCALE: 1"=50'-0" | SHEET NO. 3 OF 3 SHEETS | STA. 3026+00.00 TO STA. 3063+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	53

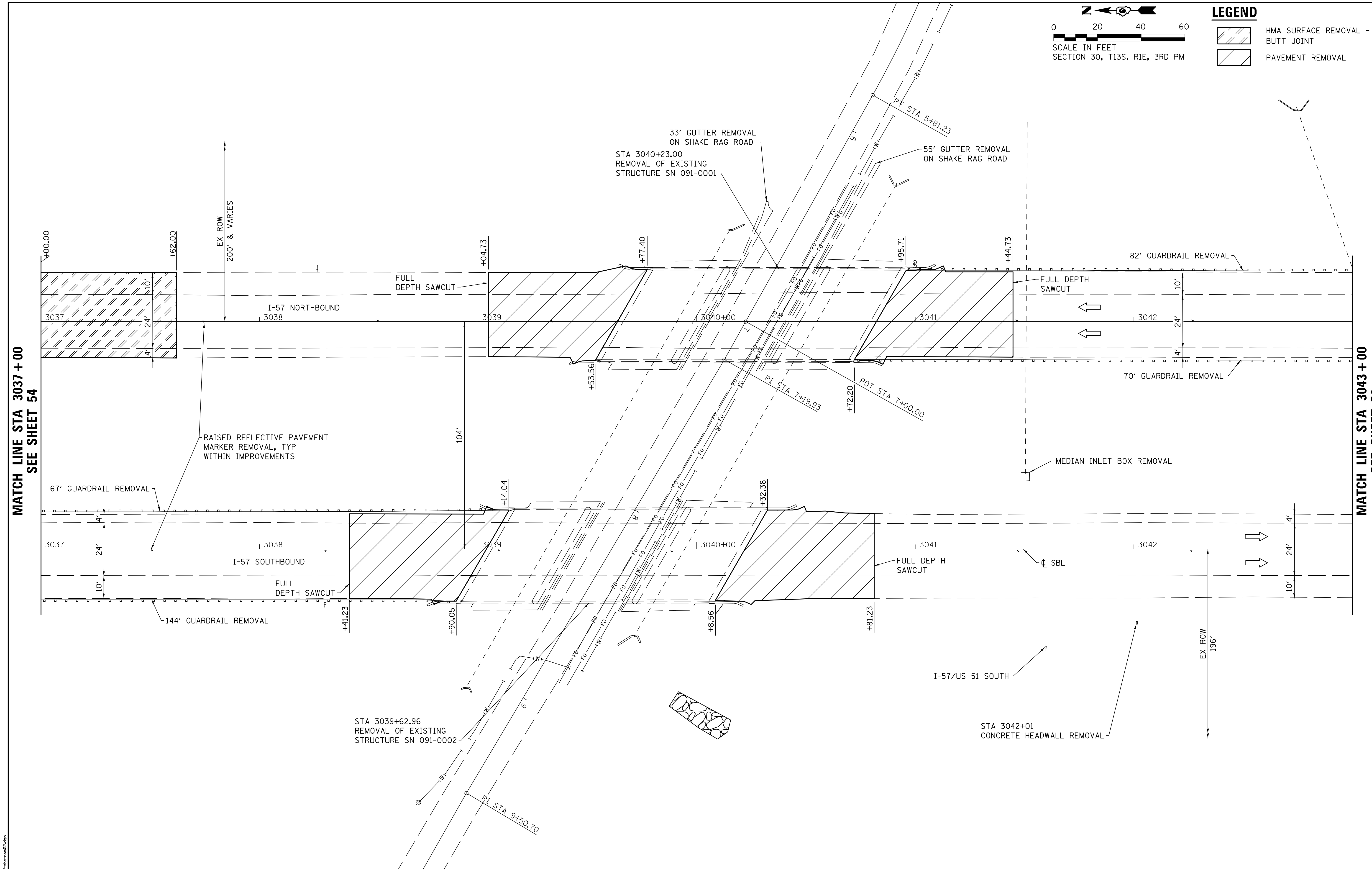
CONTRACT NO. 78522

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



ESCA CONSULTANTS, INC.	USER NAME = skm	DESIGNED - SKM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	REMOVAL PLANS
	ESCA PROJECT 1259.08	DRAWN - SKM	REVISED -		
	PLOT SCALE = 40.0000 ' / in.	CHECKED - ELH	REVISED -		
	PLOT DATE = 3/19/2018	DATE - 03/18	REVISED -		SCALE: 1"=20' SHEET NO. 1 OF 3 SHEETS STA. 3031+00 TO STA. 3037+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	54
		CONTRACT NO. 78522		
		ILLINOIS FED. AID PROJECT		



ESCA CONSULTANTS, INC.

USER NAME = skm	DESIGNED - SKM	REVISED -
ESCA PROJECT 1259.08	DRAWN - SKM	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - ELH	REVISED -
PLOT DATE = 3/19/2018	DATE - 03/18	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

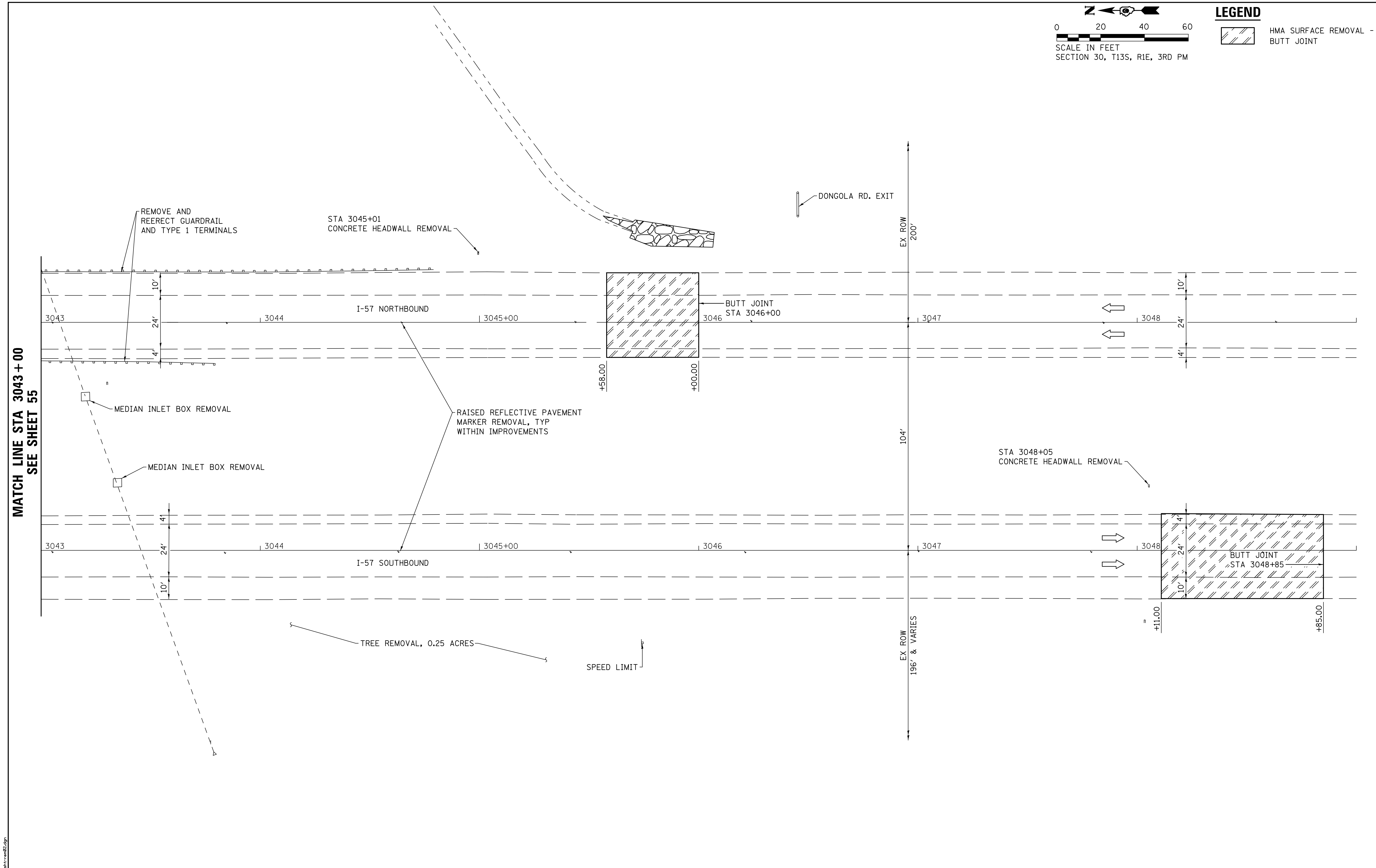
REMOVAL PLANS

SCALE: 1"=20' | SHEET NO. 2 OF 3 SHEETS | STA. 3037+00 TO STA. 3043+00

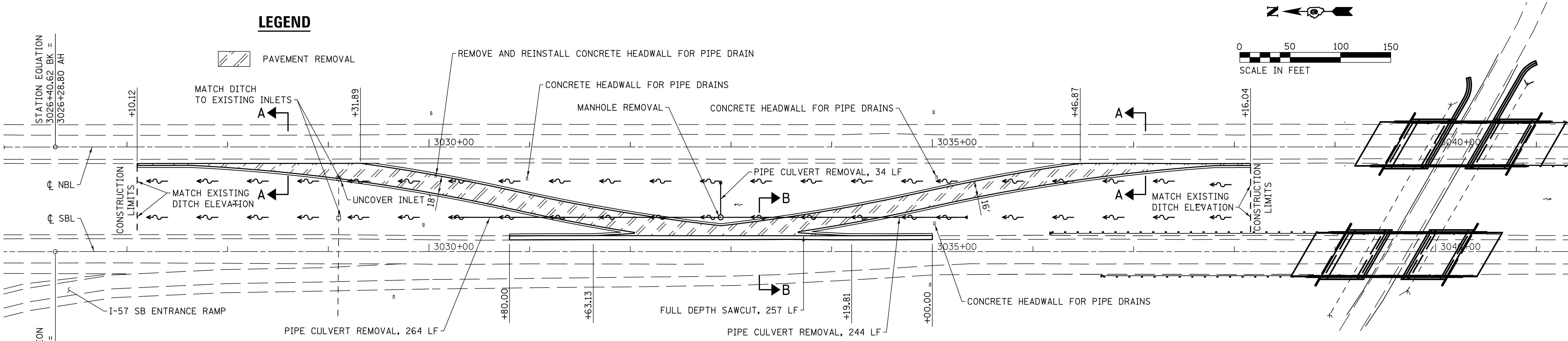
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	55

CONTRACT NO. 78522

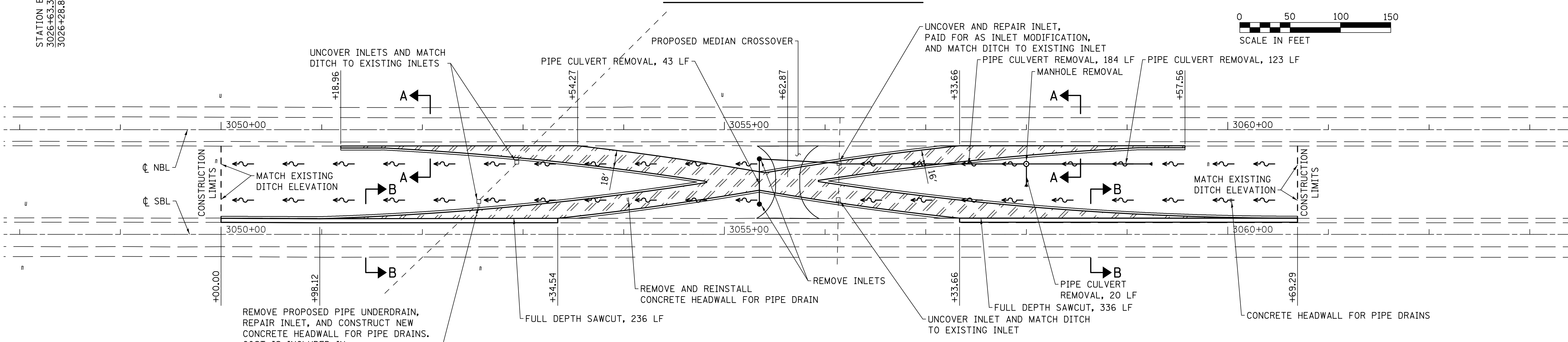
ILLINOIS FED. AID PROJECT



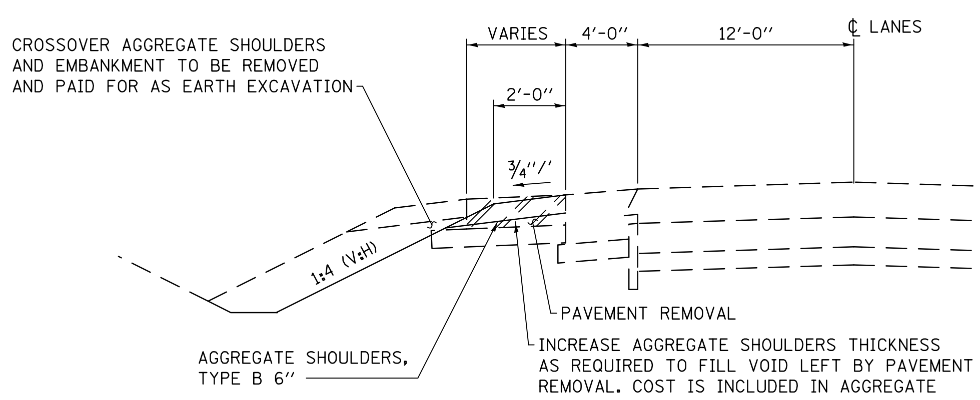
ESCA CONSULTANTS, INC.	USER NAME = skm	DESIGNED - SKM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	REMOVAL PLANS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	ESCA PROJECT 1259.08	DRAWN - SKM	REVISED -			57	(91-4)B-1	UNION	160	56
	PLOT SCALE = 40.0000 ' / in.	CHECKED - ELH	REVISED -			CONTRACT NO. 78522				
	PLOT DATE = 3/19/2018	DATE - 03/18	REVISED -		SCALE: 1"=20' SHEET NO. 3 OF 3 SHEETS STA. 3043+00 TO STA. 3049+00	ILLINOIS FED. AID PROJECT				



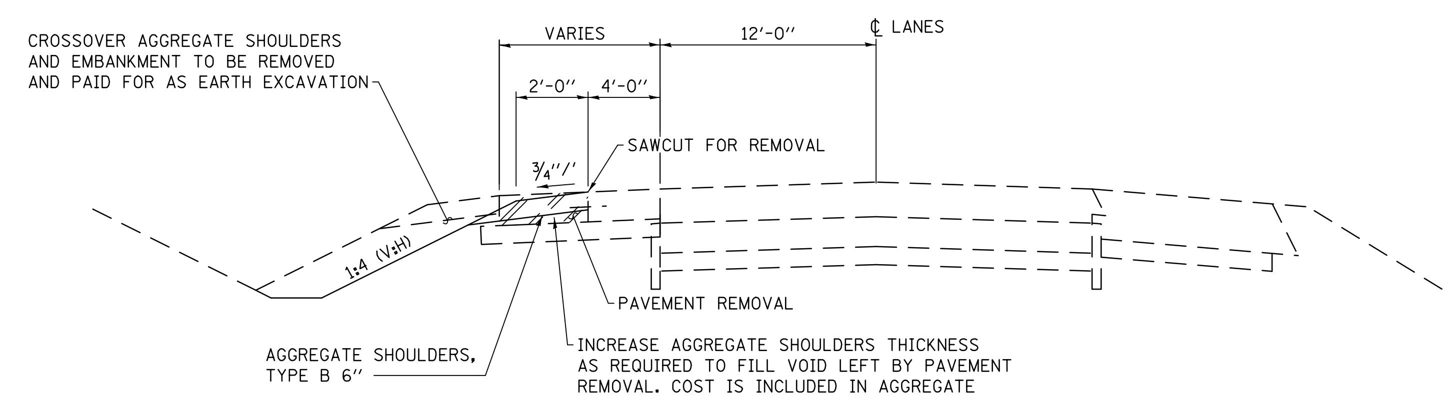
NORTH CROSSOVERS REMOVAL PLAN



SOUTH CROSSOVERS REMOVAL PLAN



SECTION A–A



SECTION B–B

ESCA CONSULTANTS, INC.

USER NAME = SKM	DESIGNED - SKM	REVISED -
ESCA PROJECT NO. 1259.08	DRAWN - SKM	REVISED -
PLOT SCALE = 0:2 '/' / in.	CHECKED - ELH	REVISED -
PLOT DATE = 3/19/2018 12:57:52 PM	DATE - 03/18	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

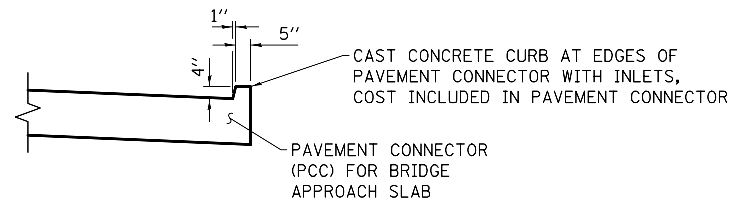
CROSSOVERS
REMOVAL PLANS

SCALE: 1"=50'-0" | SHEET NO. 1 OF 1 SHEETS | STA. 3026+00.00 TO STA. 3063+00.00

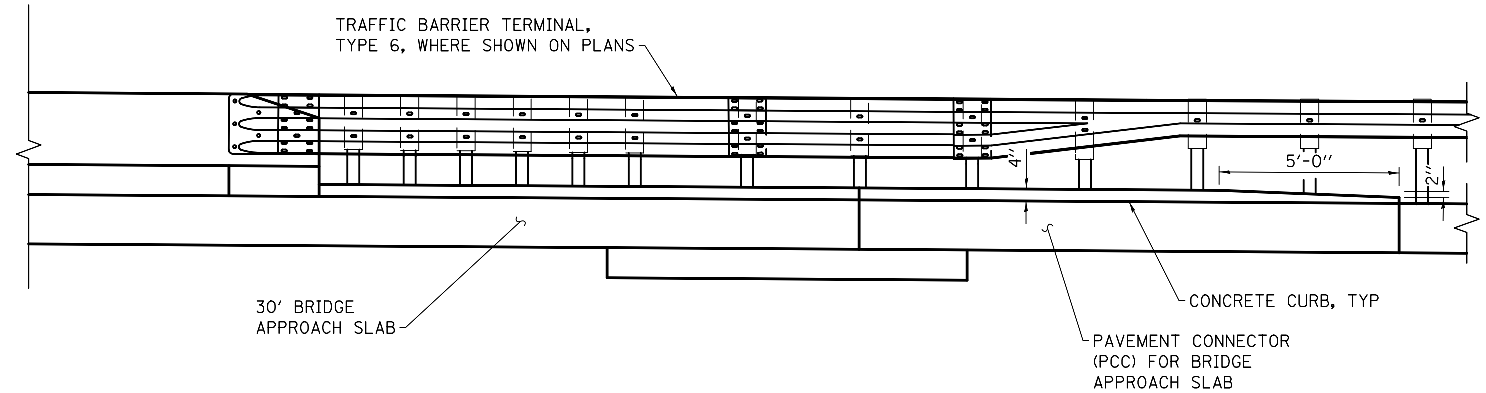
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	57

CONTRACT NO. 78522

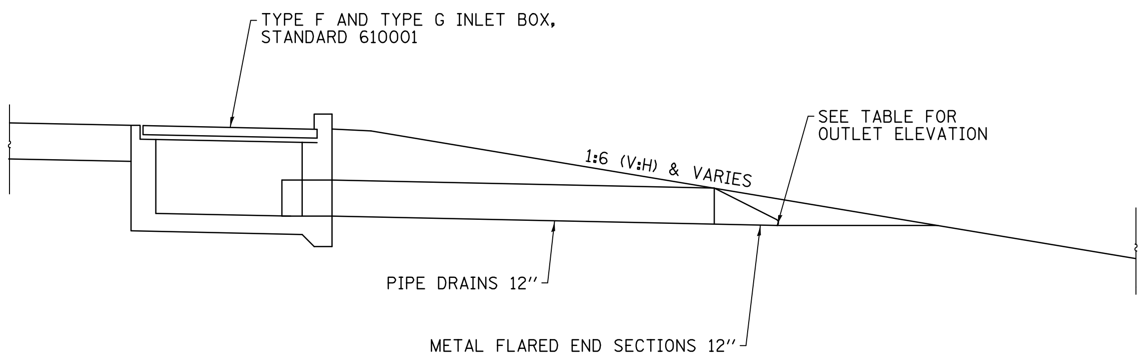
FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT



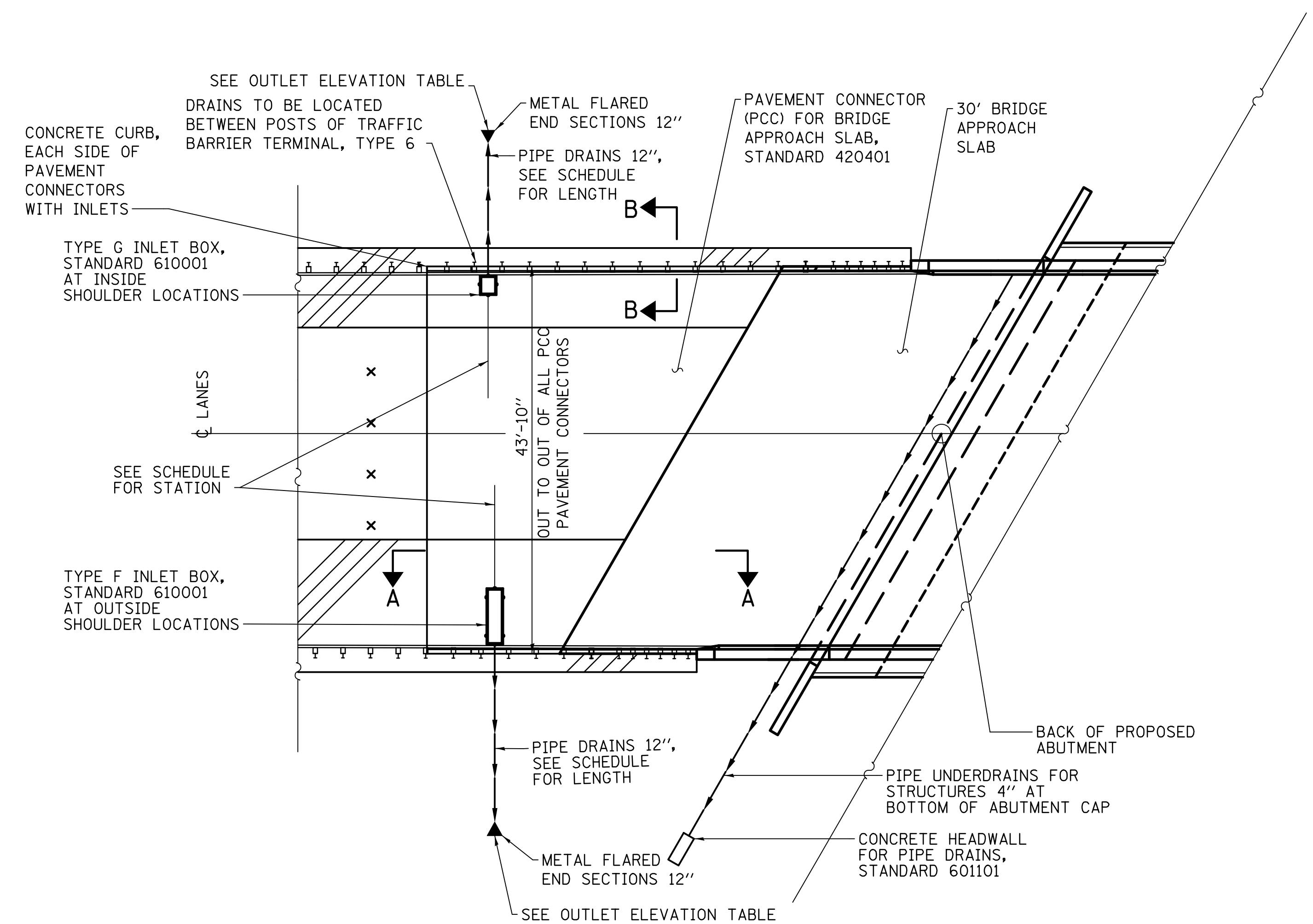
SECTION B–B



SECTION A–A



SECTION AT TYPE F AND TYPE G INLET BOX



PLAN

(NORTH ABUTMENT OF SOUTHBOUND SN 091-0076 SHOWN; OTHER LOCATIONS SIMILAR)

PCC PAVEMENT CONNECTOR DRAINAGE SCHEDULE

LOCATION			INLET BOX, STD. 610001		CONCRETE THRUST BLOCKS	PIPE DRAINS 12''	METAL FLARED END SECTIONS 12''
			TYPE G	TYPE F			
STATION	LANE	OFFSET	EACH	EACH	EACH	FOOT	EACH
3038+48.15	SBL	LEFT	1			14	1
3038+48.90	SBL	RIGHT		1	1	10	1
3039+12.23	NBL	LEFT		1	1	20	1
3039+12.23	NBL	RIGHT	1			16	1
		TOTALS	2	2	2	60	4

OUTLET ELEVATION TABLE

LOCATION			OUTLET ELEVATION
STATION	LANE	OFFSET	
3038+48.15	SBL	LEFT	418.50
3038+48.90	SBL	RIGHT	417.35
3039+12.23	NBL	LEFT	418.15
3039+12.23	NBL	RIGHT	418.35

ESCA CONSULTANTS, INC.

USER NAME = skm	DESIGNED - SKM	REVISED -
ESCA PROJECT NO. 1259.08	DRAWN - SKM	REVISED -
PLOT SCALE = 0.1667 ' / in.	CHECKED - ELH	REVISED -
PLOT DATE = 3/19/2018	DATE - 12/17	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

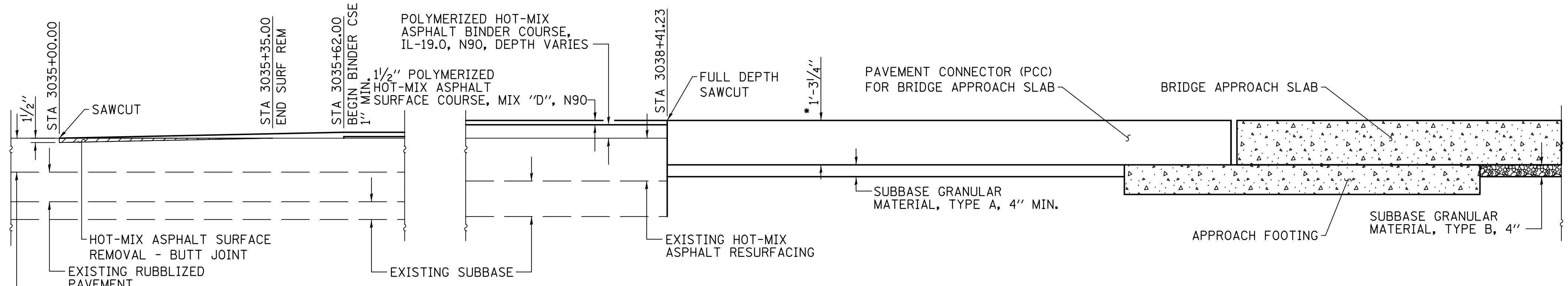
PAVEMENT CONNECTOR DETAILS

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	58

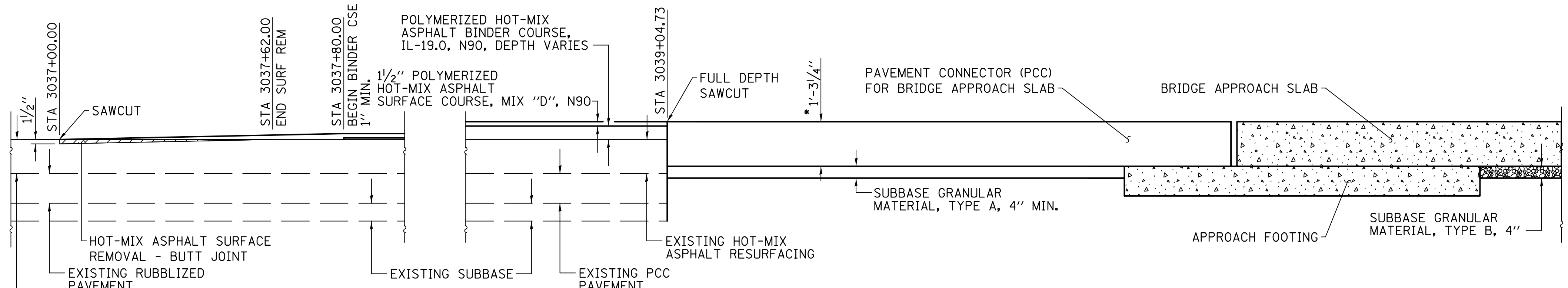
CONTRACT NO. 78522

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



LONGITUDINAL SECTION

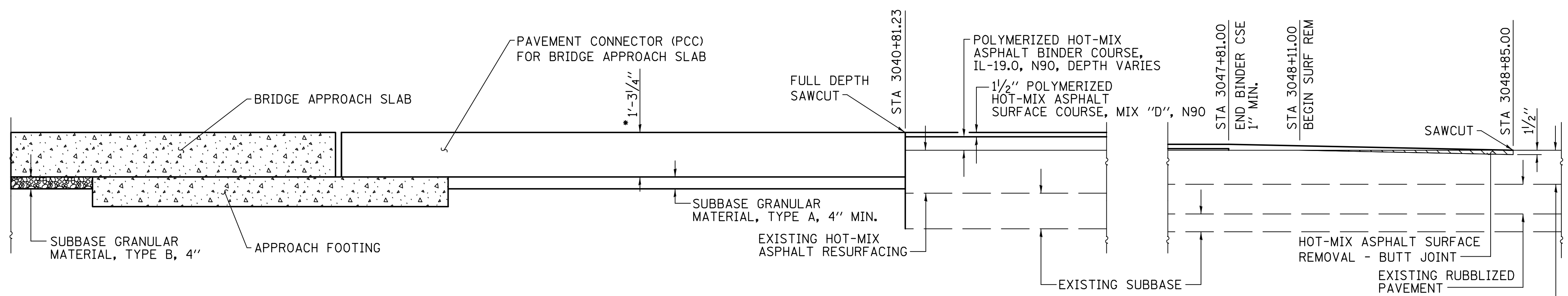
SBL I-57 STA 3035+00.00 TO STA 3038+41.23



LONGITUDINAL SECTION

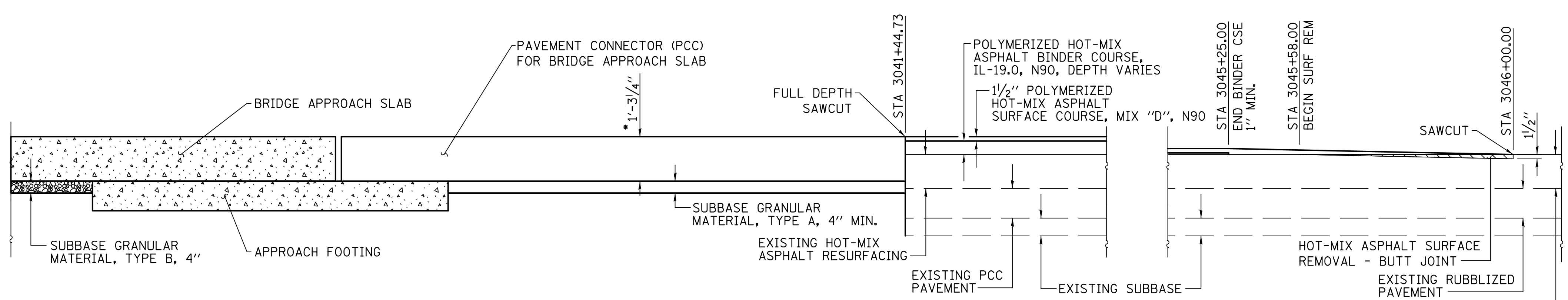
NBL I-57 STA 3037+00.00 TO STA 3039+04.73

• PRIOR TO GRINDING



LONGITUDINAL SECTION

SBL I-57 STA 3040+81.23 TO STA 3048+85.00



LONGITUDINAL SECTION

NBL I-57 STA 3041+44.73 TO STA 3046+00.00

ESCA CONSULTANTS, INC.

USER NAME = SKM	DESIGNED - SKM	REVISED -
ESCA PROJECT NO. 1259.08	DRAWN - SKM	REVISED -
PLOT SCALE = 0.1667 '/ in.	CHECKED - ELH	REVISED -
PLOT DATE = 3/19/2018	DATE - 03/18	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT TRANSITION DETAILS

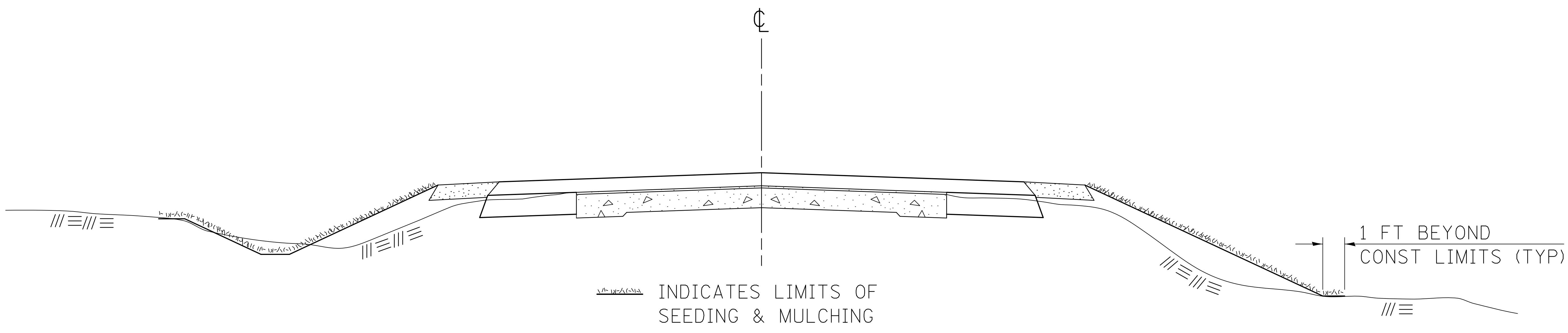
SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. 3035+00 TO STA. 3048+85

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	59

CONTRACT NO. 78522

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

SEEDING & MULCHING



GENERAL NOTES

IN GENERAL, ALL EARTH SURFACES DISTURBED DURING CONSTRUCTION OPERATIONS SHALL BE SEEDED AND MULCHED UPON COMPLETION OF ALL GRADING OPERATIONS.

FERTILIZER NUTRIENTS AND LIMESTONE SHALL BE APPLIED TO ALL SEEDED AREAS.

SECTIONS 250 AND 251 OF THE STANDARD SPECIFICATIONS SHALL GOVERN THIS WORK EXCEPT AS SPECIFIED HEREIN OR AS NOTED IN THE SPECIAL PROVISIONS.

STD. 9-12

REVISIONS	
REDRAWN	2-15-89
REVISED	8-15-94
REVISED	6-3-99
REVISED	3-27-08

PRINT DRIVER = I_PD_E_B_0.pltcfg
PEN TABLE = IDOT_VER02.tbl
MODEL NAME = PLOT
FILE NAME = D978522-sht-details01.dgn

ESCA CONSULTANTS, INC. CIVIL & STRUCTURAL ENGINEERS

USER NAME = SKM	DESIGNED - ELH	REVISED -
ESCA PROJECT NO. 1259.08	DRAWN - KAH	REVISED -
PLOT SCALE = 0.1667 ' / in.	CHECKED - RDP	REVISED -
PLOT DATE = 3/19/2018	DATE - 09/17	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

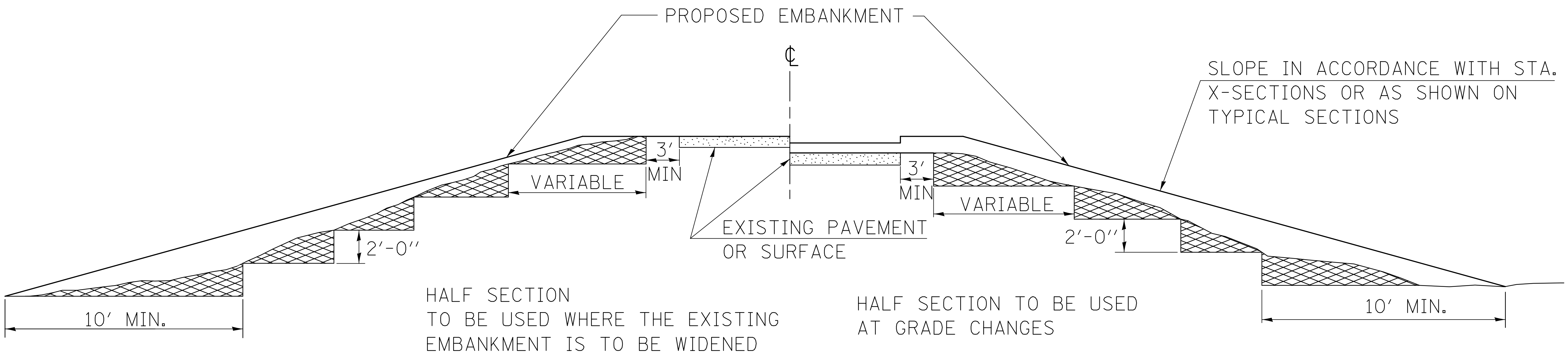
SEEDING AND MULCHING DETAILS

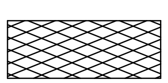
SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	60
		CONTRACT NO. 78522		

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

TYPICAL CROSS SECTION SHOWING STEP CONSTRUCTION ON EXISTING FILL





MATERIAL TO BE REMOVED AND REPLACED IN THE EMBANKMENT IN ACCORDANCE WITH ART. 205.04 OF THE STANDARD SPECIFICATION. COST TO BE INCLUDED IN THE VARIOUS ITEMS OF EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED BECAUSE OF THIS WORK.

STD. 9-16

REVISIONS	
REDRAWN	2-15-89
REVISED	8-15-94
CHECKED	6-3-99
RESIZED	5-7-08

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PEN TABLE = IDOT_VER02.tbl
MODEL NAME = PLOT
FILE NAME = D978522-sht-details02.dgn

ESCA CONSULTANTS, INC. CIVIL & STRUCTURAL ENGINEERS

USER NAME = SKM	DESIGNED - ELH	REVISED -
ESCA PROJECT NO. 1259.08	DRAWN - KAH	REVISED -
PLOT SCALE = 0.1667 ′ / in.	CHECKED - RDP	REVISED -
PLOT DATE = 3/19/2018	DATE - 09/17	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STEP CONSTRUCTION ON EXISTING FILL DETAILS

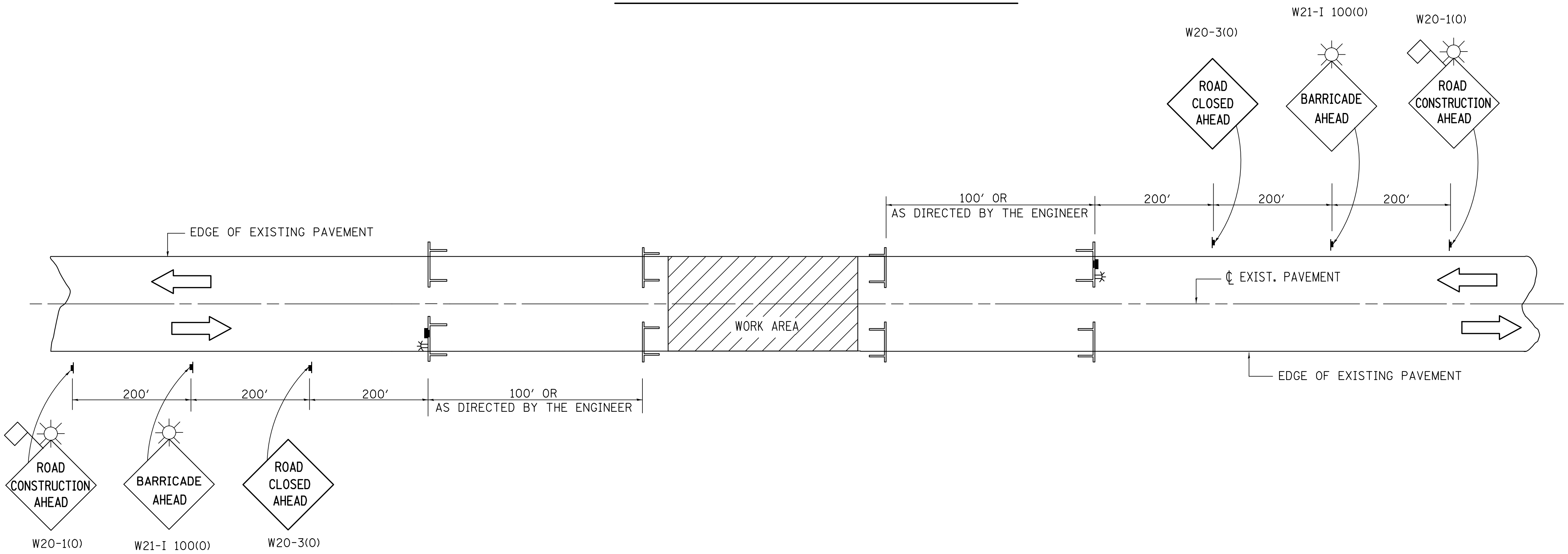
SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	61

CONTRACT NO. 78522

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

TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR BRIDGE OR ROAD CLOSURE



GENERAL NOTES

1. FLASHING BEACONS SHALL BE INSTALLED ABOVE THE TYPE III BARRICADES AT THE LOCATIONS SHOWN ABOVE. THE BEACONS SHALL BE ATTACHED 18 TO 24 INCHES ABOVE THE BARRICADES IN ALIGNMENT WITH TRAFFIC APPROACHING FROM EACH DIRECTION.

2. EACH BEACON SHALL HAVE A YELLOW LENS WITH A NOMINAL DIAMETER OF 8 INCHES, A PARABOLIC REFLECTOR, AN AC POWERED CLEAR LAMP WITH A MINIMUM RATING OF 64 WATTS, AND A CONTROLLER WHICH IS SET TO PROVIDE BETWEEN 50 AND 60 FLASHES PER MINUTE WITH EQUAL ON AND OFF INTERVALS. THE BEACONS WILL BE KEPT BURNING 24 HOURS PER DAY.

3. THE CONTROLLER SHALL BE HOUSED IN A WEATHERPROOF CABINET AND MOUNTED ON A POST OR POLE. THE ELECTRICAL CABLE MUST EITHER BE AERIALLY SUSPENDED, OR BURIED WITH A MINIMUM OF 2 INCHES OF COVER.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ARRANGEMENTS AND COST OF 110 VOLT ELECTRICAL SERVICE.

5. THE ENGINEER MAY REQUIRE THAT DRUMS, EITHER 55 GALLON OR 30 GALLON, BE USED TO SUPPLEMENT THE BARRICADES IF THE CLOSURE TIME EXCEEDS FOUR DAYS.

6. ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.

7. FLASHING LIGHTS SHALL BE USED ON EACH APPROACH IN ADVANCE OF THE WORK AREA DURING HOURS OF DARKNESS. THESE LIGHTS SHALL BE INSTALLED ABOVE THE FIRST TWO SIGNS IN EACH SERIES.

8. WHEN A SIDE ROAD INTERSECTS THE HIGHWAY ON WHICH WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROL DEVICES SHALL BE ERECTED AS DIRECTED BY THE ENGINEER.

9. LONGITUDINAL DIMENSIONS MAY BE ADJUSTED SLIGHTLY TO FIT FIELD CONDITIONS.

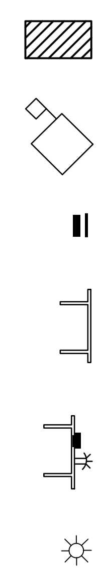
10. ALL WARNING SIGNS SHALL HAVE MINIMUM DIMENSIONS OF 48 IN. BY 48 IN. AND SHALL HAVE A BLACK LEGEND AND BORDER ON AN ORANGE REFLECTORIZED BACKGROUND.

11. FORMS BT 725 AND 726 ARE REQUIRED.

12. ALL ITEMS NECESSARY TO COMPLETE THIS DETAIL SHALL BE INCLUDED IN THE LUMP SUM AMOUNT FOR TRAFFIC CONTROL AND PROTECTION, (SPECIAL).

13. TYPE III BARRICADES AND R11-2 SIGNS SHALL BE POSITIONED AS SHOWN IN "ROAD CLOSED TO ALL TRAFFIC" DETAIL ON HIGHWAY STANDARD 701901.

SYMBOLS



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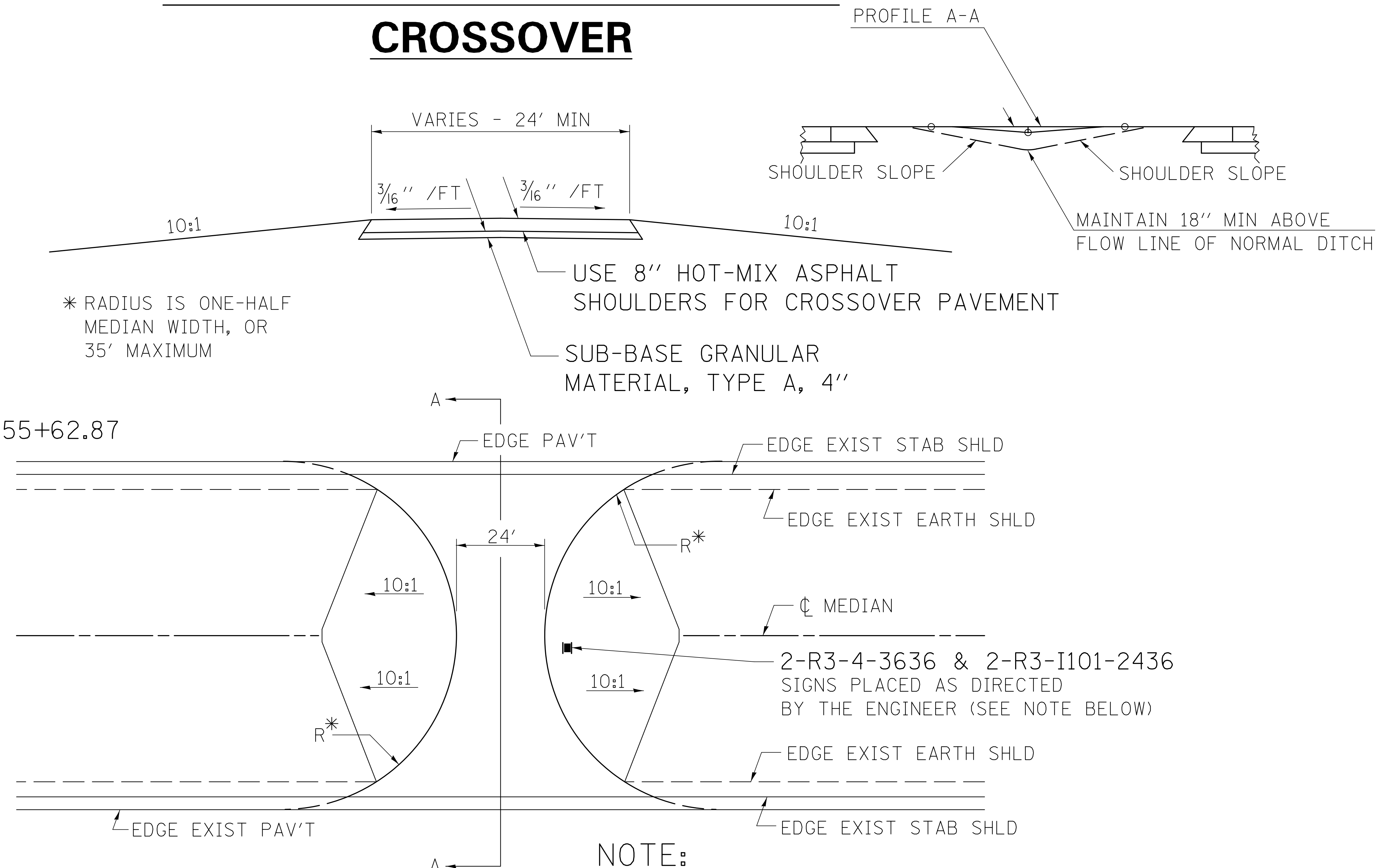
MODEL NAME = PLOT
FILE NAME = D978522-sht-details03.dgn

ESCA CONSULTANTS, INC. CIVIL & STRUCTURAL ENGINEERS	USER NAME = SKM	DESIGNED - SKM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BRIDGE OR ROAD CLOSURE DETAILS
	ESCA PROJECT NO. 1259.08	DRAWN - SKM	REVISED -		
	PLOT SCALE = 0.167 '/ in.	CHECKED - ELH	REVISED -		
	PLOT DATE = 3/19/2018	DATE - 11/17	REVISED -		SCALE: NONE — SHEET NO. 1 OF 1 SHEETS — STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	62
		CONTRACT NO. 78522		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

DETAIL OF PROPOSED MEDIAN CROSSOVER



TO BE USED: STA 3055+62.87

NOTE:

THE PROPOSED CROSSOVER SURFACE SHALL BE BUTTED TO THE EDGE OF THE EXISTING STABILIZED SHOULDER. SEE SHEET NO. 18 FOR EARTHWORK SCHEDULE.

EARTHWORK SHALL BE COMPACTED TO THE SATISFACTION OF THE ENGINEER.

NOTE:

THE SIGN ASSEMBLY FOR EACH LOCATION SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR "RELOCATE SIGN PANEL ASSEMBLY-TYPE B" EXISTING SIGN SUPPORTS SHALL BE USED FOR NEW INSTALLATION.

STD. 9-55

REVISIONS

DRAWN	8-30-89
REVISED	01-10-07
REVISED	3-26-08
REVISED	

PRINT DRIVER = I_PD_E_B_0.pltcfg
PEN TABLE = IDOT_VER02.tbl
MODEL NAME = PLOT
FILE NAME = D978522-sht-details05.dgn

ESCA CONSULTANTS, INC.
CIVIL & STRUCTURAL ENGINEERS

USER NAME = SKM	DESIGNED - ELH	REVISED -
ESCA PROJECT NO. 1259.08	DRAWN - SKM	REVISED -
PLOT SCALE = 0.167 ′/ in.	CHECKED - RDP	REVISED -
PLOT DATE = 3/19/2018	DATE - 10/17	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED MEDIAN CROSSOVER DETAILS

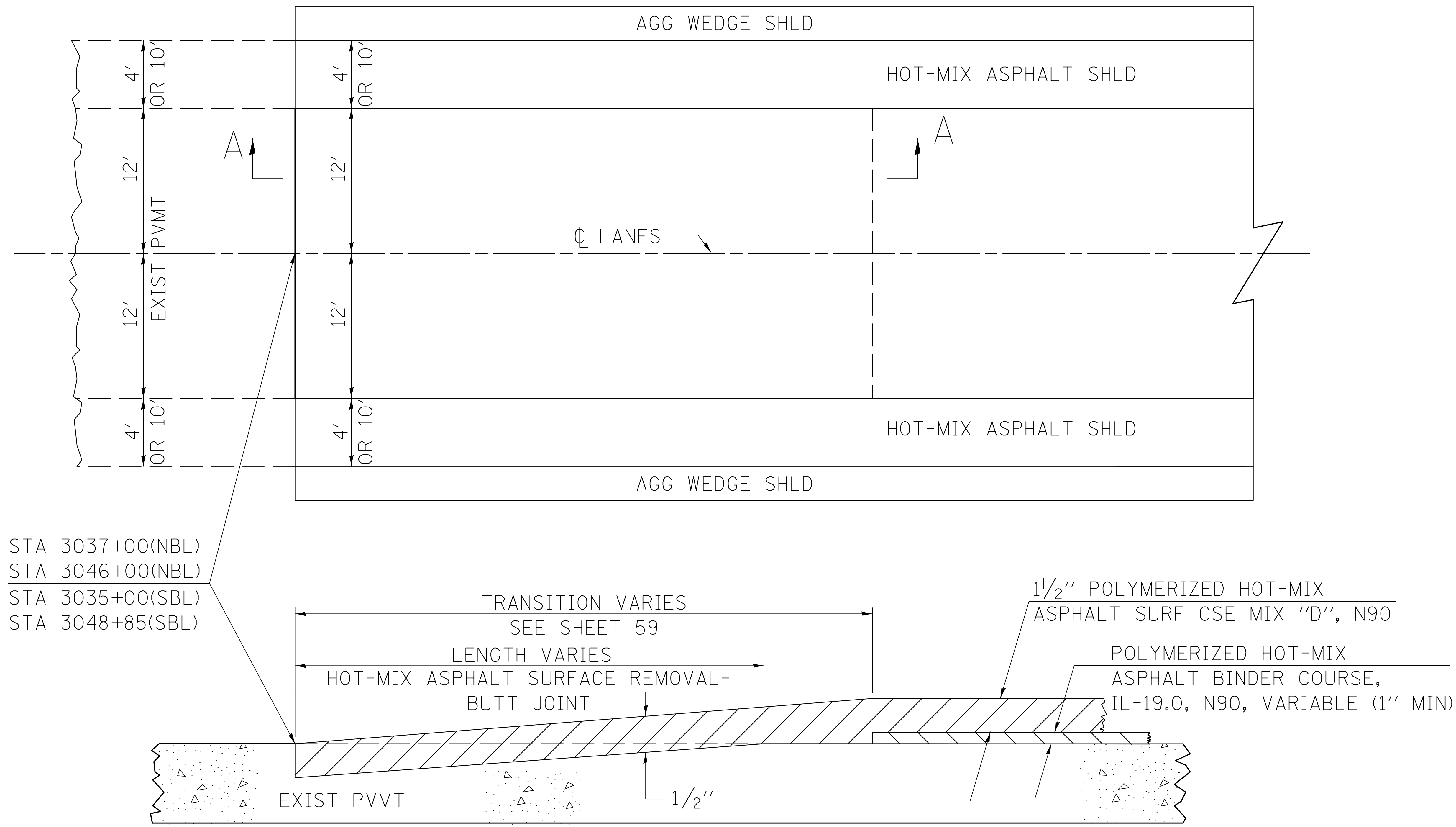
SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	63

CONTRACT NO. 78522

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

BUTT JOINT



SECTION A-A

ESCA CONSULTANTS, INC. CIVIL & STRUCTURAL ENGINEERS	USER NAME = SKM	DESIGNED - SKM	REVISED -
	ESCA PROJECT NO. 1259.08	DRAWN - SKM	REVISED -
	PLOT SCALE = 0.167 ′/ in.	CHECKED - ELH	REVISED -
	PLOT DATE = 3/19/2018	DATE - 03/18	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BUTT JOINT DETAILS

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	64

CONTRACT NO. 78522

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

PRINT DRIVER = I_PD_E_B_0.pltcfg
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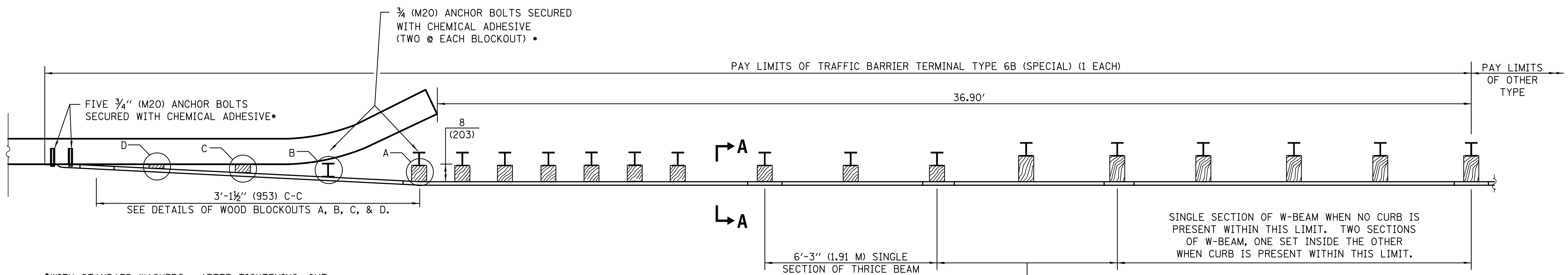
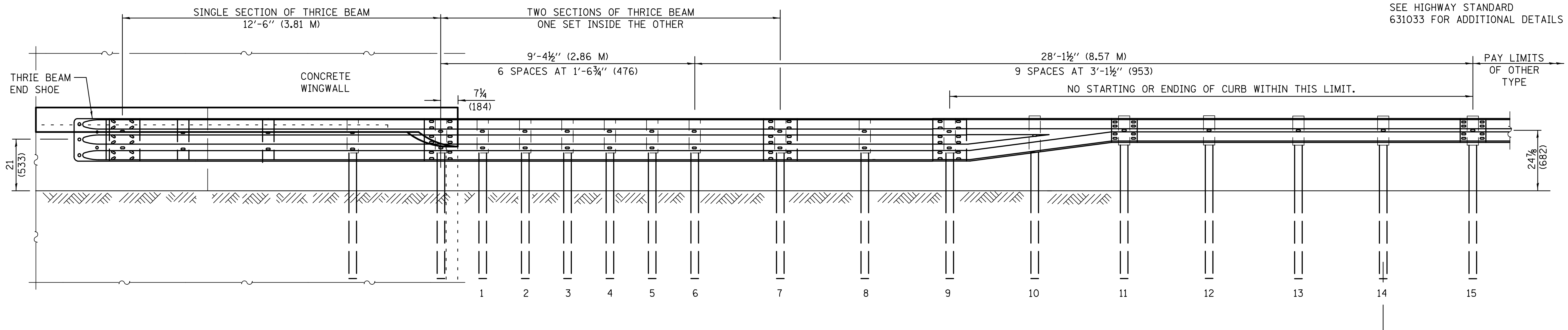


•WITH STANDARD WASHERS. AFTER TIGHTENING, CUT THE ANCHOR BOLTS FLUSH WITH THE NUTS AND DAMAGE THE NUTS TO PREVENT THEM FROM LOOSENING.

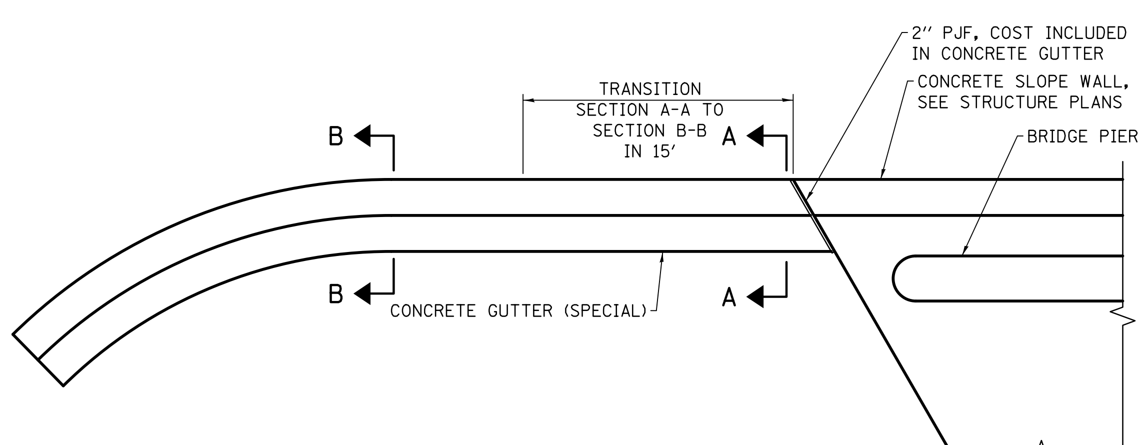
PLAN

SEE HIGHWAY STANDARD 631033 FOR ADDITIONAL DETAILS



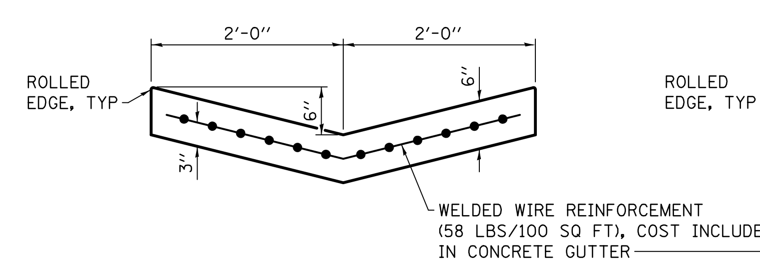
ELEVATION

TRAFFIC BARRIER TERMINAL, TYPE 6B (SPECIAL)

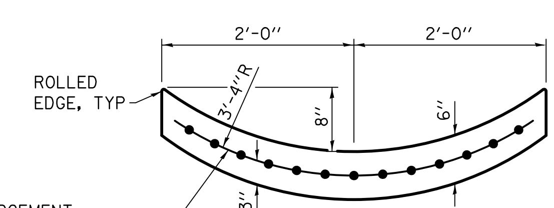


PLAN

NORTH GUTTER SHOWN; SOUTH GUTTER SIMILAR



SECTION A–A

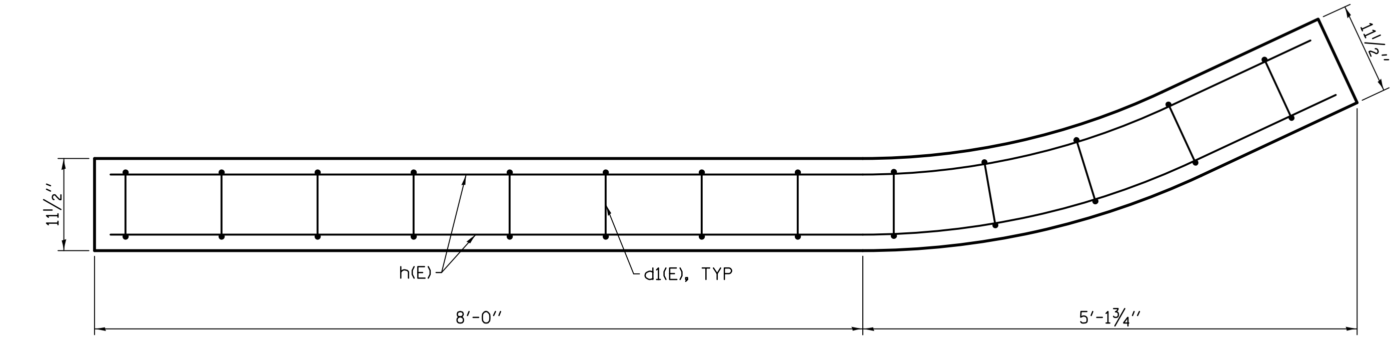


SECTION B–B

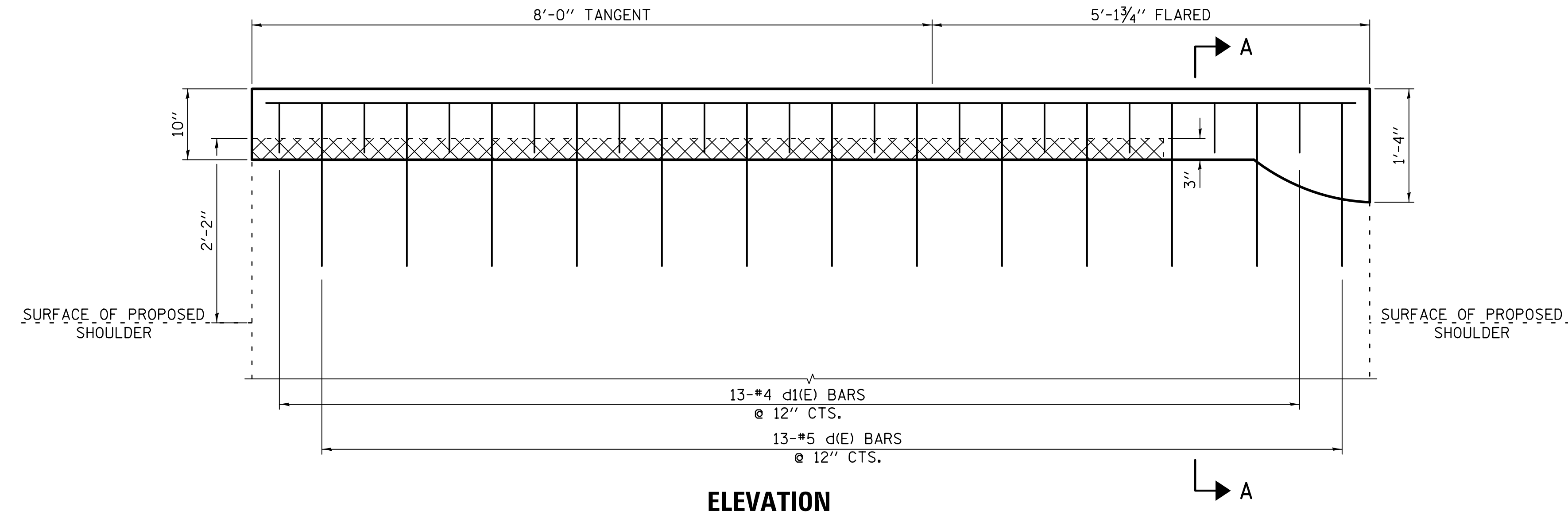
CONCRETE GUTTER (SPECIAL)

ESCA CONSULTANTS, INC.	USER NAME = SKM	DESIGNED - ELH	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ROADWAY DETAILS
	ESCA PROJECT NO. 1259.08	DRAWN - KAH	REVISED -		
	PLOT SCALE = 0.1667 ' / in.	CHECKED - ELH	REVISED -		
	PLOT DATE = 3/19/2018	DATE - 03/18	REVISED -		SCALE: NONE / SHEET NO. 1 OF 2 SHEETS / STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	65
		CONTRACT NO. 78522		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

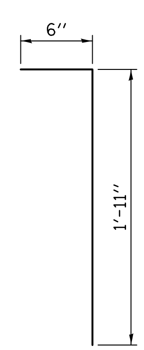


PLAN

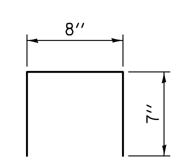


ELEVATION

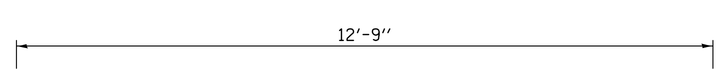
CONCRETE REMOVAL



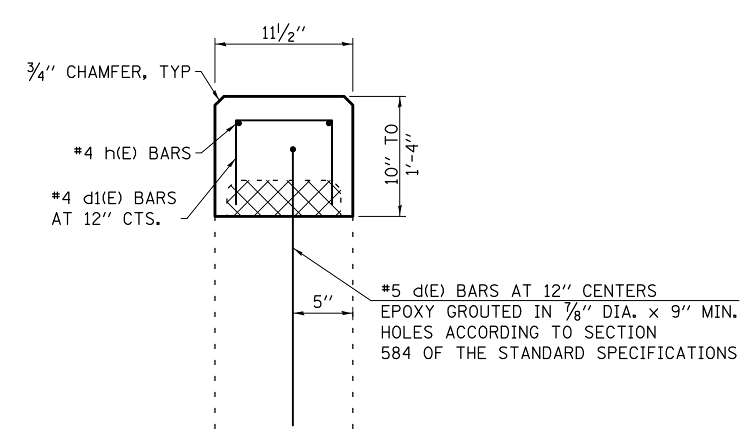
d(E) BARS



d1(E) BARS



h(E) BARS
(BEND IN FIELD TO FIT)



SECTION A-A

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
d(E)	13	5	2'-5"	┌──
d1(E)	13	4	1'-10"	┌┐
h(E)	2	4	12'-9"	──
CONCRETE REMOVAL			CU YD	.1
CONCRETE SUPERSTRUCTURE			CU YD	.4
REINFORCEMENT BARS			POUND	66

NORTHWEST WINGWALL EXTENSION ON SN091-0001

ESCA CONSULTANTS, INC.	USER NAME = SKM	DESIGNED - ELH	REVISED -
	ESCA PROJECT NO. 1259.08	DRAWN - KAH	REVISED -
	PLOT SCALE = 0.1667 ' / in.	CHECKED - ELH	REVISED -
	PLOT DATE = 3/19/2018	DATE - 12/17	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

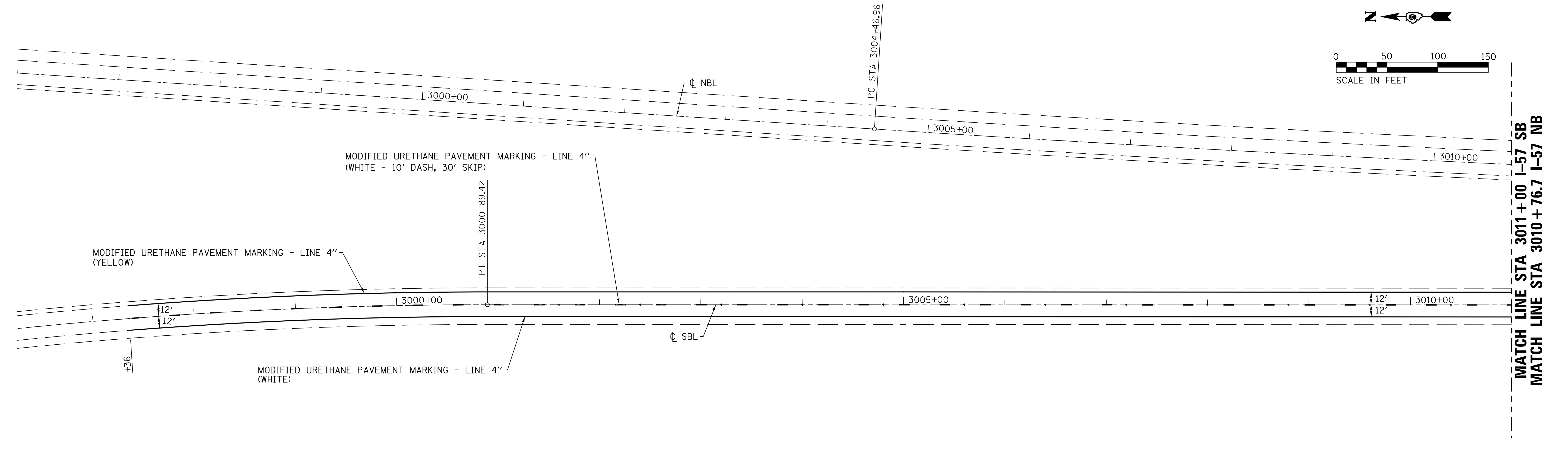
ROADWAY DETAILS

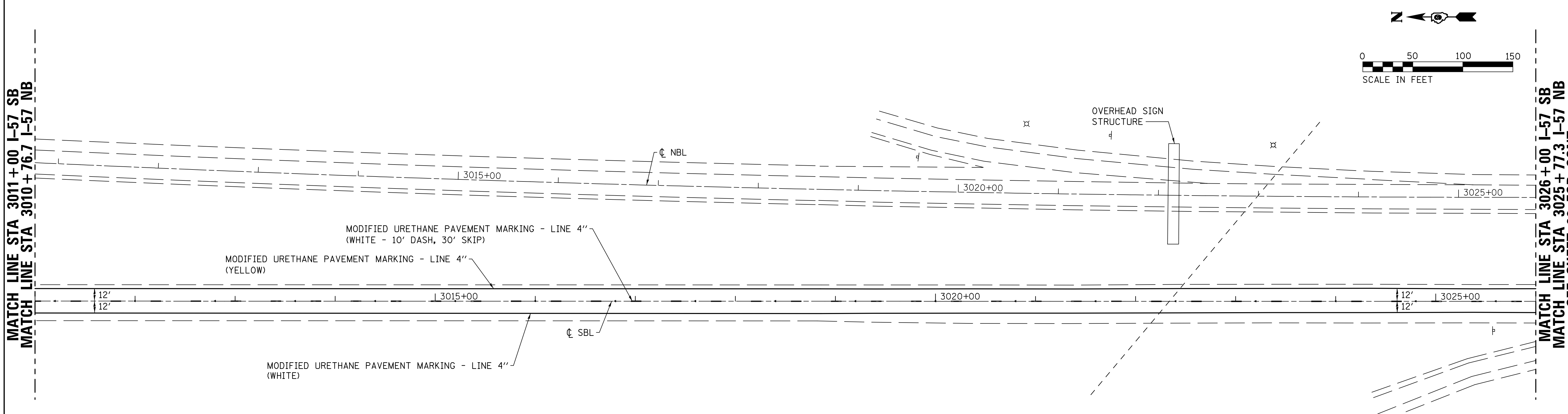
SCALE: NONE | SHEET NO. 2 OF 2 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	66

CONTRACT NO. 78522

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





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MODEL NAME = PLOT
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ESCA CONSULTANTS, INC.
CIVIL & STRUCTURAL ENGINEERS

USER NAME = SKM	DESIGNED - SKM	REVISED -
ESCA PROJECT NO. 1259.08	DRAWN - SKM	REVISED -
PLOT SCALE = Ø.1667 ' / in.	CHECKED - ELH	REVISED -
PLOT DATE = 3/19/2018	DATE - 03/18	REVISED -

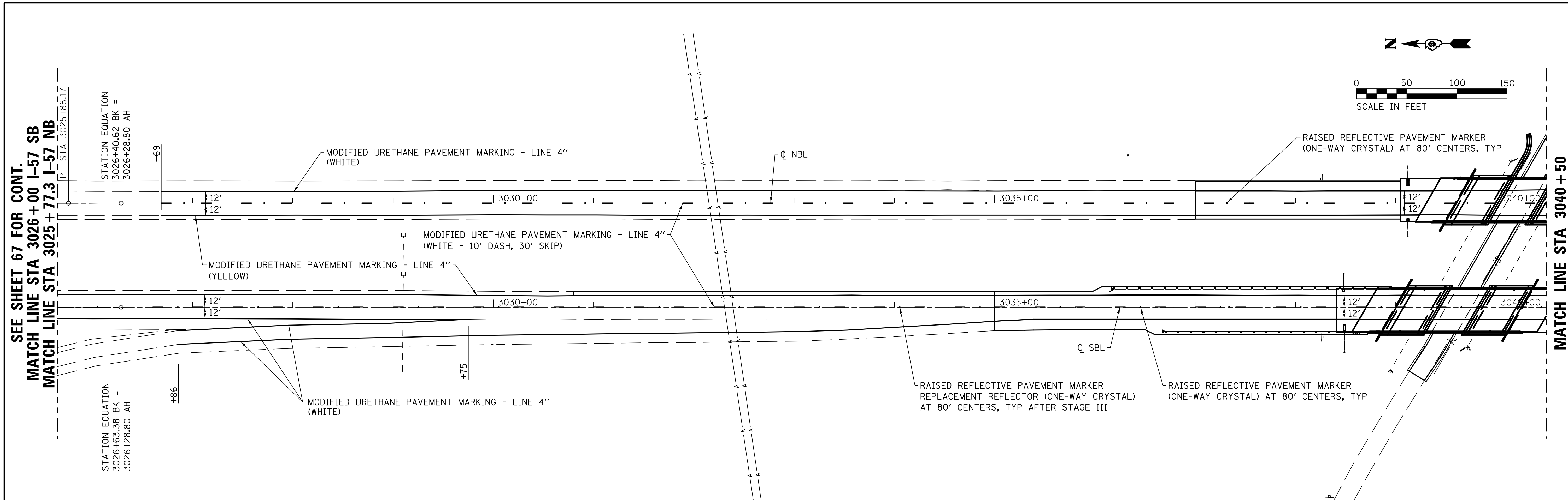
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

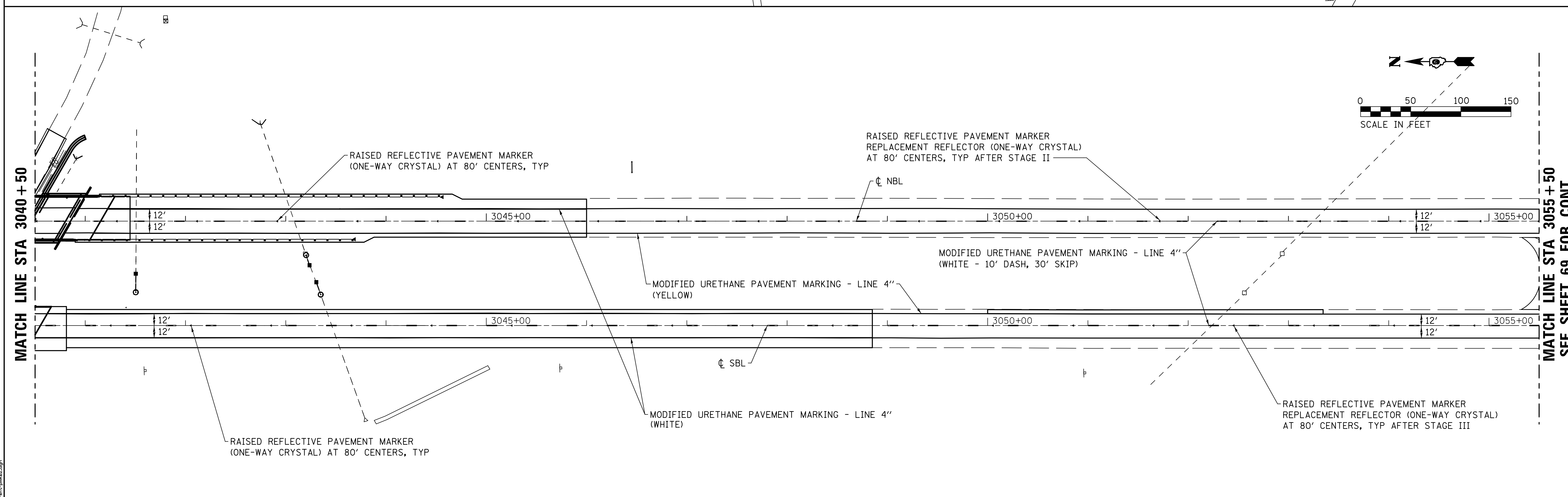
PAVEMENT MARKING PLANS

SCALE: 1"=50' | SHEET NO. 1 OF 3 SHEETS | STA. 2996+00 TO STA.3026+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	67
		CONTRACT NO. 78522		

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


SEE SHEET 67 FOR CONT.
MATCH LINE STA 3026+00 I-57 SB
MATCH LINE STA 3025+77.3 I-57 NB
PT STA 3025+88.17
STATION EQUATION
3026+40.62 BK =
3026+28.80 AH
+69
MODIFIED URETHANE PAVEMENT MARKING - LINE 4″
(WHITE)
℄ NBL
RAISED REFLECTIVE PAVEMENT MARKER
(ONE-WAY CRYSTAL) AT 80′ CENTERS, TYP
12′
12′
3030+00
3035+00
3040+00
MODIFIED URETHANE PAVEMENT MARKING - LINE 4″
(WHITE - 10′ DASH, 30′ SKIP)
MODIFIED URETHANE PAVEMENT MARKING - LINE 4″
(YELLOW)
3045+00
℄ SBL
+75
+86
STATION EQUATION
3026+63.38 BK =
3026+28.80 AH
MODIFIED URETHANE PAVEMENT MARKING - LINE 4″
(WHITE)
RAISED REFLECTIVE PAVEMENT MARKER
REPLACEMENT REFLECTOR (ONE-WAY CRYSTAL)
AT 80′ CENTERS, TYP AFTER STAGE III
RAISED REFLECTIVE PAVEMENT MARKER
(ONE-WAY CRYSTAL) AT 80′ CENTERS, TYP
MATCH LINE STA 3040+50
0
50
100
150
SCALE IN FEET


MATCH LINE STA 3040+50
RAISED REFLECTIVE PAVEMENT MARKER
(ONE-WAY CRYSTAL) AT 80′ CENTERS, TYP
RAISED REFLECTIVE PAVEMENT MARKER
REPLACEMENT REFLECTOR (ONE-WAY CRYSTAL)
AT 80′ CENTERS, TYP AFTER STAGE II
℄ NBL
12′
12′
3045+00
3050+00
3055+00
MODIFIED URETHANE PAVEMENT MARKING - LINE 4″
(WHITE - 10′ DASH, 30′ SKIP)
MODIFIED URETHANE PAVEMENT MARKING - LINE 4″
(YELLOW)
℄ SBL
MODIFIED URETHANE PAVEMENT MARKING - LINE 4″
(WHITE)
RAISED REFLECTIVE PAVEMENT MARKER
(ONE-WAY CRYSTAL) AT 80′ CENTERS, TYP
RAISED REFLECTIVE PAVEMENT MARKER
REPLACEMENT REFLECTOR (ONE-WAY CRYSTAL)
AT 80′ CENTERS, TYP AFTER STAGE III
MATCH LINE STA 3055+50
SEE SHEET 69 FOR CONT.
0
50
100
150
SCALE IN FEET

PRINT DRIVER = I_PD_E_B_0.pltcfg
PEN TABLE = IDOT_VER02.tbl
MODEL NAME = PLOT
FILE NAME = D978522-sht-pmk02.dgn

ESCA CONSULTANTS, INC. CIVIL & STRUCTURAL ENGINEERS

USER NAME = SKM	DESIGNED - SKM	REVISED -
ESCA PROJECT NO. 1259.08	DRAWN - SKM	REVISED -
PLOT SCALE = 0.1667 ′/ in.	CHECKED - ELH	REVISED -
PLOT DATE = 3/19/2018	DATE - 03/18	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

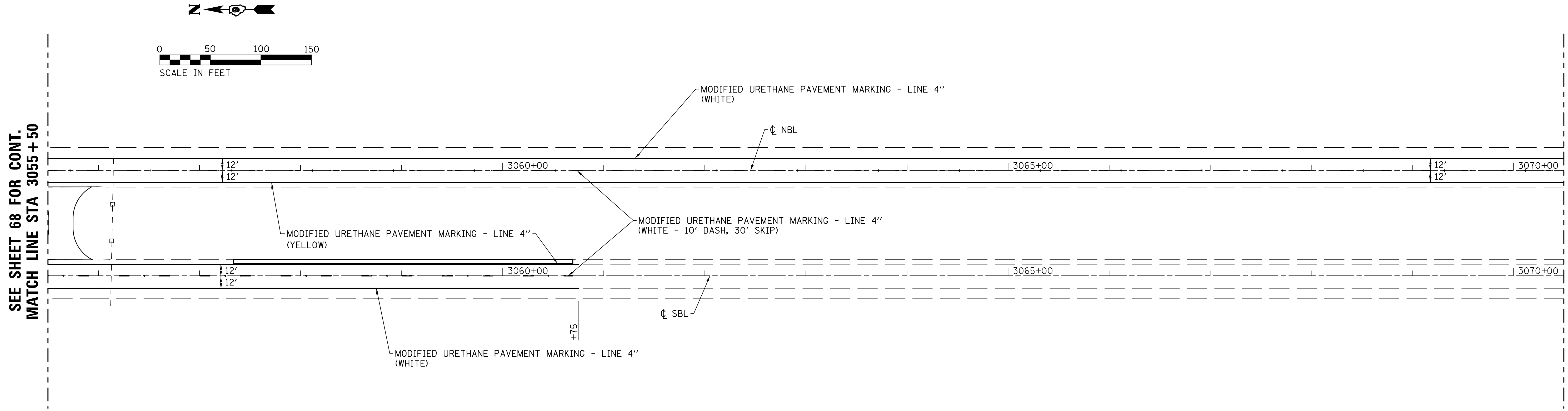
PAVEMENT MARKING PLANS

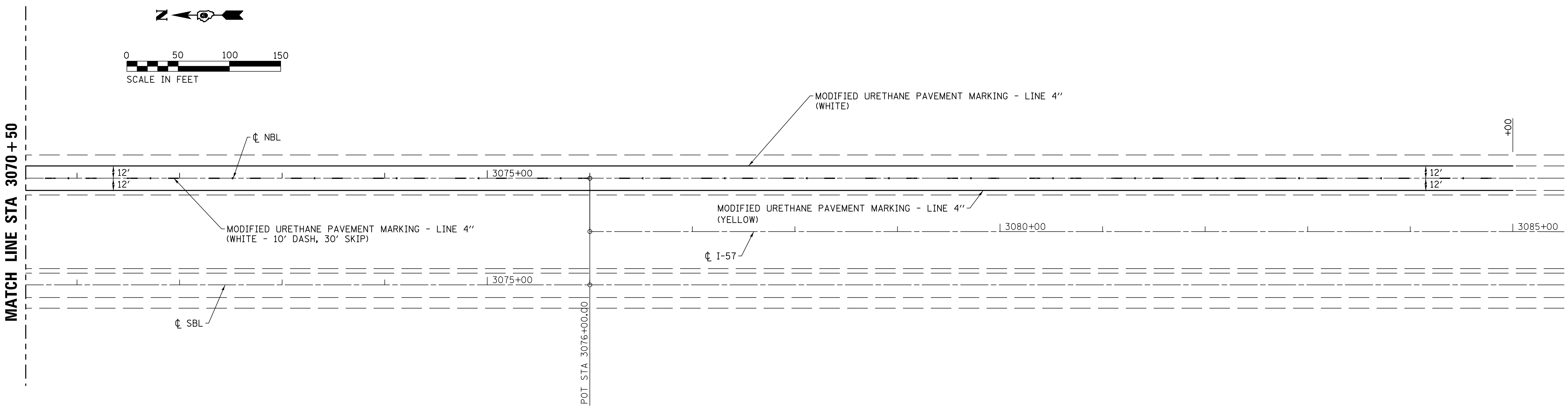
SCALE: 1″=50′ | SHEET NO. 2 OF 3 SHEETS | STA. 3026+00 TO STA.3055+50

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	68

CONTRACT NO. 78522

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





ESCA CONSULTANTS, INC.

USER NAME = SKM	DESIGNED - SKM	REVISED -	
ESCA PROJECT NO. 1259.08	DRAWN - SKM	REVISED -	
PLOT SCALE = 0.1667 ' / in.	CHECKED - ELH	REVISED -	
PLOT DATE = 3/19/2018	DATE - 03/18	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING PLANS

SCALE: 1″=50′ | SHEET NO. 3 OF 3 SHEETS | STA. 3055+50 TO STA. 3085+50

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	69

CONTRACT NO. 78522

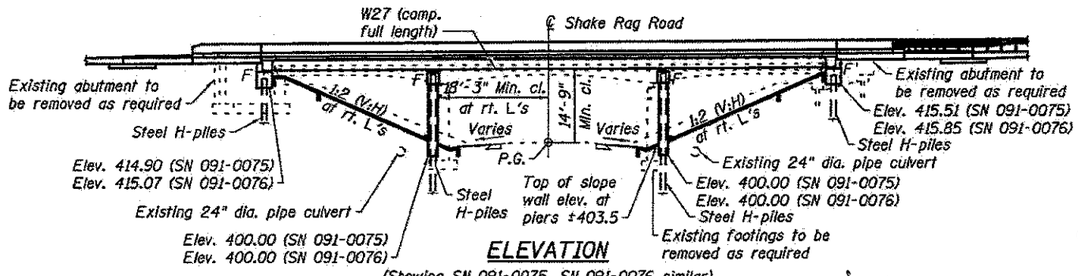
FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT

BENCHMARK: CY1 - Chiseled square on the west parapet wall, NW corner of SN 091-0002, NE corner of approach parapet. Sta. 3038+77, 77.5' RT, Elev. 423.17

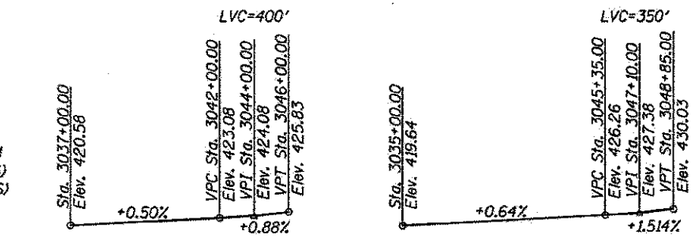
EXISTING STRUCTURES:
SN 091-0001 and SN 091-0002 were orginally built in 1957 as F.A.I. 57, Section 91-4HB-2. The three-span structures consist of concrete decks, each supported by seven haunched concrete T-beams. The concrete spans are supported by concrete wall piers and open abutments. The piers and north abutments are supported on spread footings. The south abutments are supported on steel piles. Back to back abutments is 121'-2". The superstructure width is 40'-6" between parapets. The skew is 30°. Interstate traffic shall be maintained utilizing crossovers. Shake Rag Road shall be closed as necessary.

No salvage.

Up to ¼" may be ground off the bridge deck, the bridge approach slabs, and the pavement connectors.

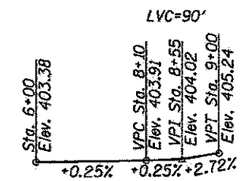


ELEVATION
(Showing SN 091-0075, SN 091-0076 similar)

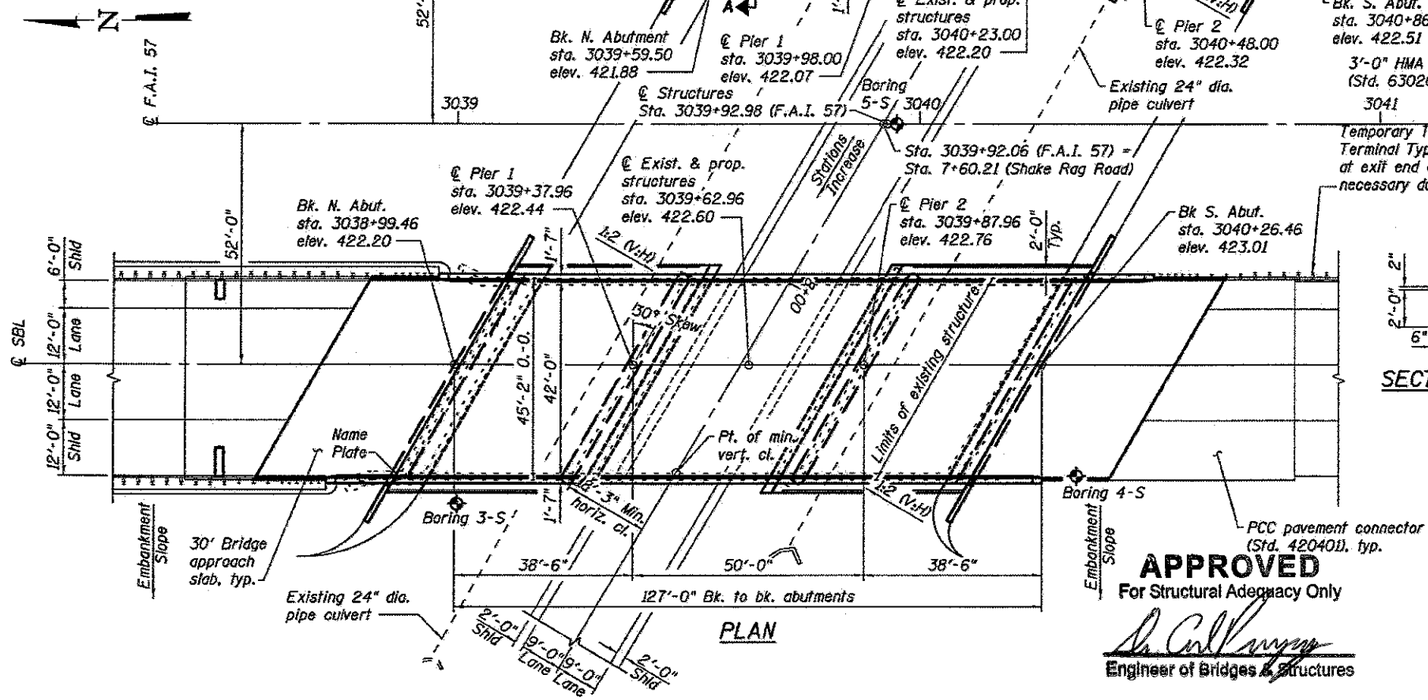


NBL PROFILE GRADE
(Along ℄ lanes)
(PG shows the final elevations after grinding)

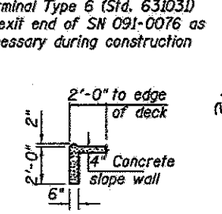
SBL PROFILE GRADE
(Along ℄ lanes)
(PG shows the final elevations after grinding)



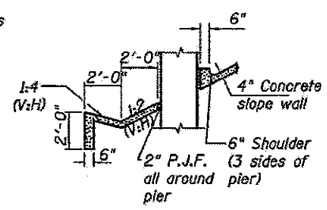
SHAKE RAG ROAD PROFILE GRADE
(Along ℄ roadway)
(Proposed PG for inlay resurfacing, approximately matches existing PG)



PLAN



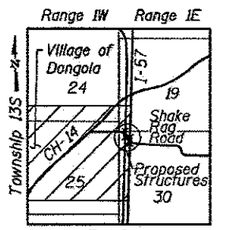
SECTION A-A



SECTION B-B

APPROVED
For Structural Adequacy Only
Engineer of Bridges & Structures

STATE OF ILLINOIS ERIC L. HENKEL No. 6159 LICENSED STRUCTURAL ENGINEER
EXPIRES 11-30-18
SIGNATURE
03-16-18
DATE



LOCATION SKETCH

DESIGN SPECIFICATIONS
2014 AASHTO LRFD
Bridge Design Specifications
7th Edition with 2015 and 2016 Interims

DESIGN STRESSES
FIELD UNITS
f'c = 3,500 psi (substructure)
f'c = 4,000 psi (superstructure)
fy = 50,000 psi (AASHTO M270 Grade 50)
fy = 60,000 psi (reinforcement)

SEISMIC DATA
Seismic Performance Zone (SPZ) = 4
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.898g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 1.214g
Soil Site Class = E

LOADING HL-93
Allow 50 psf for future wearing surface

GENERAL PLAN & ELEVATION
I 57 & US 51 OVER SHAKE RAG ROAD
FAI ROUTE 57 SECTION (91-4)B-1
UNION COUNTY
STATION 3039+92.98
STRUCTURE NO. 091-0075 (NB)
STRUCTURE NO. 091-0076 (SB)

ESCA CONSULTANTS, INC.

USER NAME = SKM	DESIGNED - RTM	11/17	REVISED -	
ESCA PROJECT NO. 1259.88	CHECKED - RDP	11/17	REVISED -	
PLOT SCALE = 0.2 '/ in.	DRAWN - KAH	11/17	REVISED -	
PLOT DATE = 3/19/2018 12:58:18 PM	CHECKED - RTM/ELH	03/18	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 37 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	70
		CONTRACT NO. 78522		
		ILLINOIS FED. AID PROJECT		

GENERAL NOTES

1. Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts. Bolts $^7/_8$" ϕ, holes $^{15}/_{16}$" ϕ, unless otherwise noted.
2. Calculated weight of Structural Steel = 155,800 lbs. (Grade 50) Calculated weight of Structural Steel = 18,200 lbs. (Grade 36)
3. No field welding is permitted except as specified in the contract documents.
4. Reinforcement bars designated (E) shall be epoxy coated.
5. 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.
6. The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
7. The Inorganic Zinc Rich Primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat for all interior steel surfaces shall be gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Interstate Green, Munsell No. 7.5G 4/8.
8. The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.
9. Slipforming of the parapets is not allowed.
10. Removal of SN 091-0001 (NB) will be paid for as Removal of Existing Structures No. 1, and removal of SN 091-0002 (SB) will be paid for as Removal of Existing Structures No. 2.
11. 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.
12. Slope wall shall be reinforced with welded wire fabric, 6 in. x 6 in. - W4.0 x W4.0, weighing 58lbs. per 100 sq. ft.
13. Quantities of Hot-Mix Asphalt Surface Removal (Deck) and Deck Slab Repair are included to repair 091-0001 prior to allowing two-way traffic over the structure. The entire deck of 091-0001 shall be milled to allow a patching survey and then resurfaced after repairs. Quantities of Deck Slab Repair are included to repair 091-0002 as necessary. See Roadway Plans for quantity and requirements of Hot-Mix Asphalt Surface Course. The quantities used shall be determined by the Engineer.
14. The cost of removal of all construction debris is included in Removal of Existing Structures. This includes existing debris from previous deck patching and maintenance operations.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Structures No. 1	Each			1
Removal of Existing Structures No. 2	Each			1
Structure Excavation	Cu. Yd.		674	674
Concrete Structures	Cu. Yd.	62.6	421.2	483.8
Concrete Superstructure	Cu. Yd.	433.2		433.2
Protective Coat	Sq. Yd.	2,022		2,022
Concrete Superstructure (Approach Slab)	Cu. Yd.	251.6		251.6
Furnishing and Erecting Structural Steel	L Sum	1		1
Stud Shear Connectors	Each	8,862		8,862
Reinforcement Bars, Epoxy Coated	Pound	194,700	47,760	242,460
Slope Wall 4 Inch	Sq. Yd.		934	934
Furnishing Steel Piles HP14x102	Foot		3,839	3,839
Furnishing Steel Piles HP14x89	Foot		3,600	3,600
Driving Piles	Foot		7,439	7,439
Test Pile Steel HP14x102	Each		4	4
Test Pile Steel HP14x89	Each		4	4
Pile Shoes	Each		88	88
Name Plates	Each	2		2
Anchor Bolts, $^5/_8$"	Each	112		112
Geocomposite Wall Drain	Sq. Yd.		124	124
Bridge Deck Grooving (Longitudinal)	Sq. Yd.	1,280		1,280
Granular Backfill for Structures	Cu. Yd.		308	308
Diamond Grinding (Bridge Section)	Sq. Yd.	2,028		2,028
Pipe Underdrains for Structures 4"	Foot		320	320
Hot-Mix Asphalt Surface Removal (Deck)	Sq. Yd.	535		535
Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	10		10
Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	30		30

STATION 3040+23.00
BUILT 201_ BY
STATE OF ILLINOIS
F.A.I. RT. 57 SEC. (91-4)B-1
LOADING HL-93
STR. NO. 091-0075

NORTHBOUND

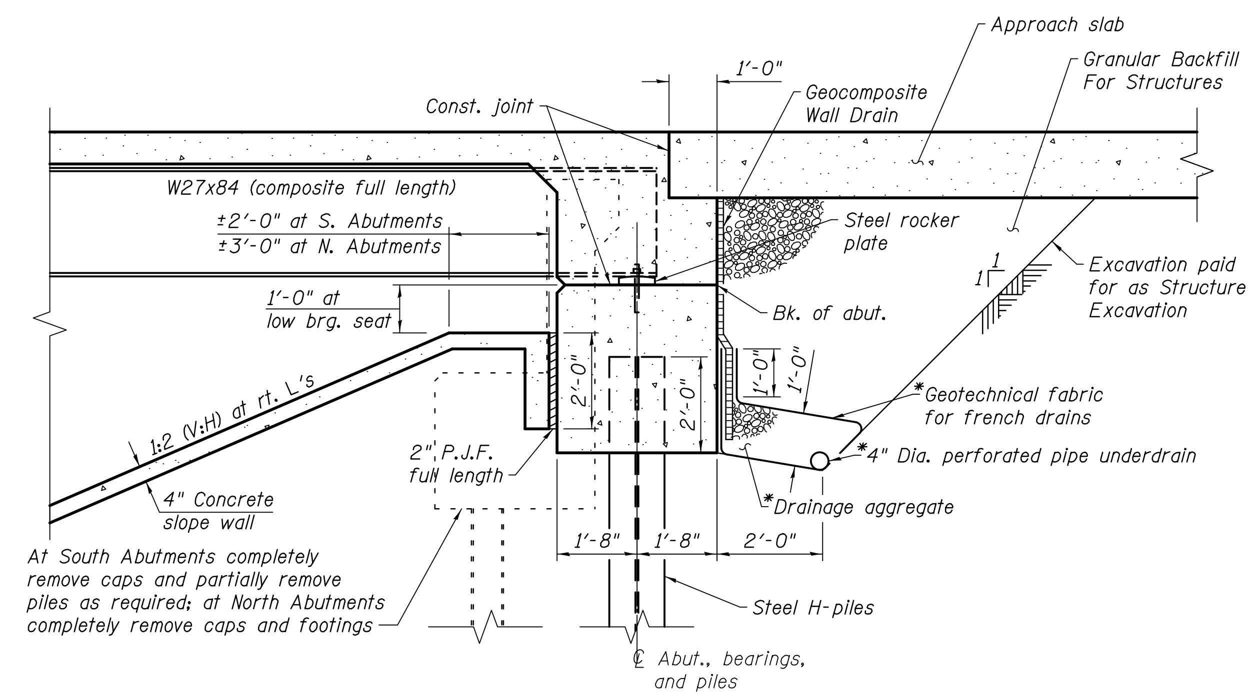
STATION 3039+62.96
BUILT 201_ BY
STATE OF ILLINOIS
F.A.I. RT. 57 SEC. (91-4)B-1
LOADING HL-93
STR. NO. 091-0076

SOUTHBOUND

NAME PLATES

See Std. 515001

STRUCTURE INDEX OF SHEETS

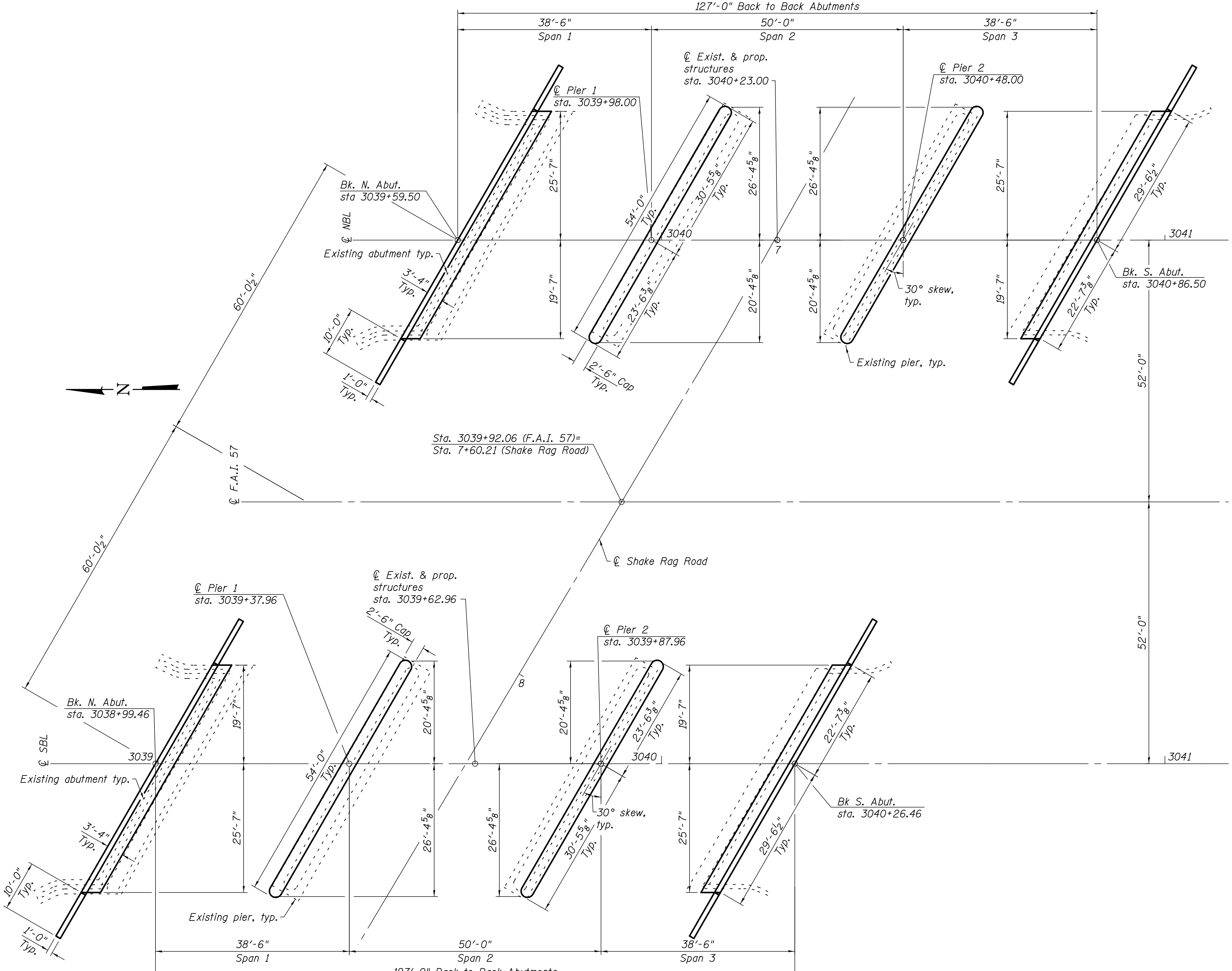


SECTION THROUGH ABUTMENT

(Horizontal dimensions at rt. L's)

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).

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



PLAN

USER NAME = SKM	DESIGNED - KJA 10/17	REVISED -	
ESCA PROJECT NO. 1259.08	CHECKED - RDP 11/17	REVISED -	
PLOT SCALE = 0:2 ':" / in.	DRAWN - KAH 10/17	REVISED -	
PLOT DATE = 3/19/2018 12:58:18 PM	CHECKED - KJA 12/17	REVISED -	

ESCA CONSULTANTS, INC. CIVIL & STRUCTURAL ENGINEERS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBSTRUCTURE LAYOUT
STRUCTURE NO. 091–0075 (NB) & 091–0076 (SB)

SHEET NO. 3 OF 37 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	72
		CONTRACT NO. 78522		
		ILLINOIS FED. AID PROJECT		

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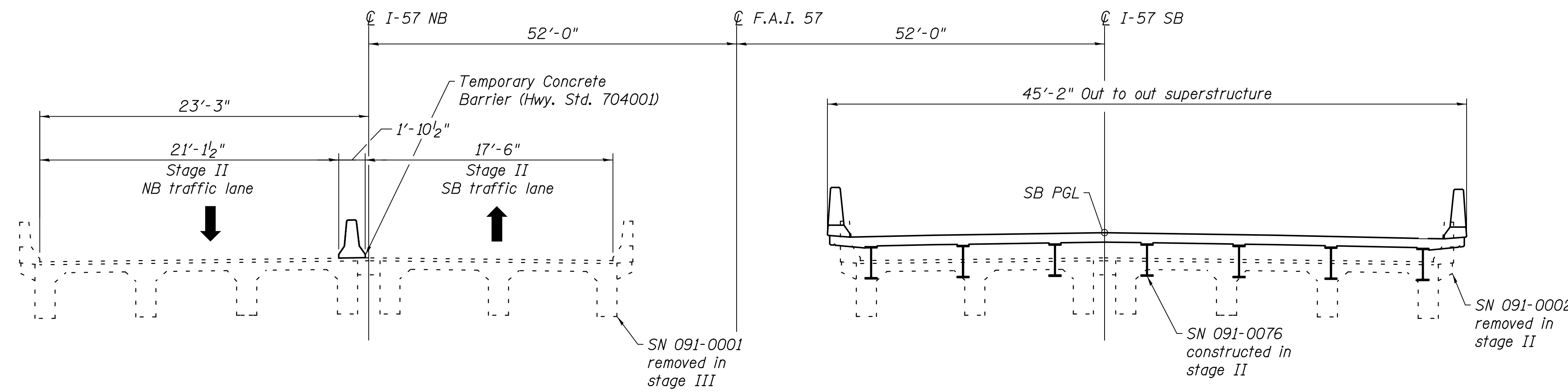
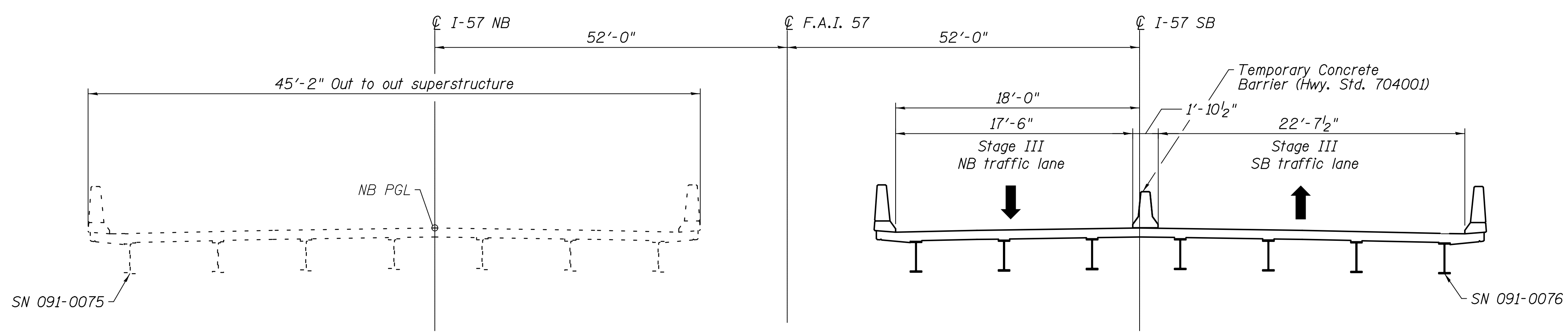


STAGE II REMOVAL AND CONSTRUCTION



STAGE III REMOVAL AND CONSTRUCTION

STAGE CONSTRUCTION NOTES

1. All sections are looking south.
2. See roadway plans for limits and quantities of Temporary Concrete Barrier.

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MODEL NAME = PLOT
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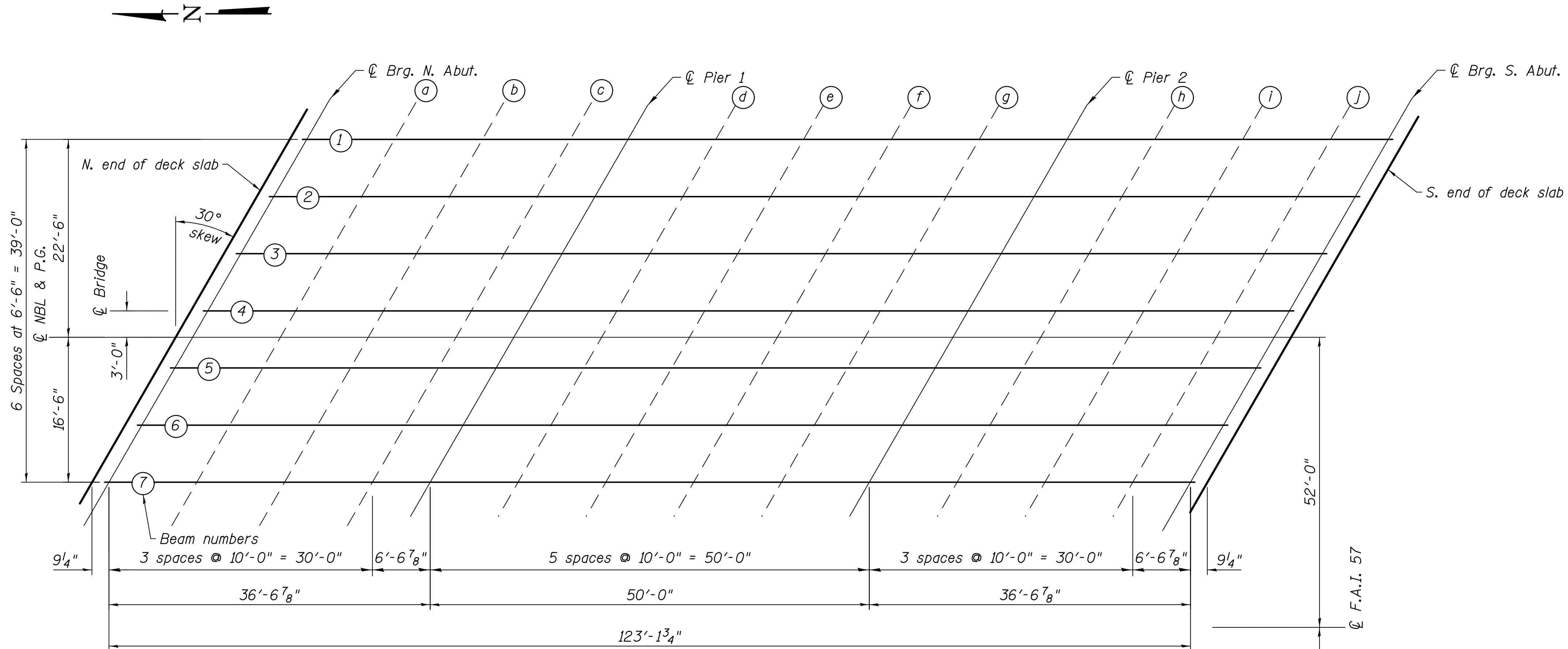
ESCA CONSULTANTS, INC. CIVIL & STRUCTURAL ENGINEERS

USER NAME = SKM	DESIGNED - RTM 11/17	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
ESCA PROJECT NO. 1259.08	CHECKED - RDP 11/17	REVISED -	
PLOT SCALE = 0:2 ':" / in.	DRAWN - KAH 11/17	REVISED -	
PLOT DATE = 3/19/2018 12:58:18 PM	CHECKED - RTM/ELH 03/18	REVISED -	

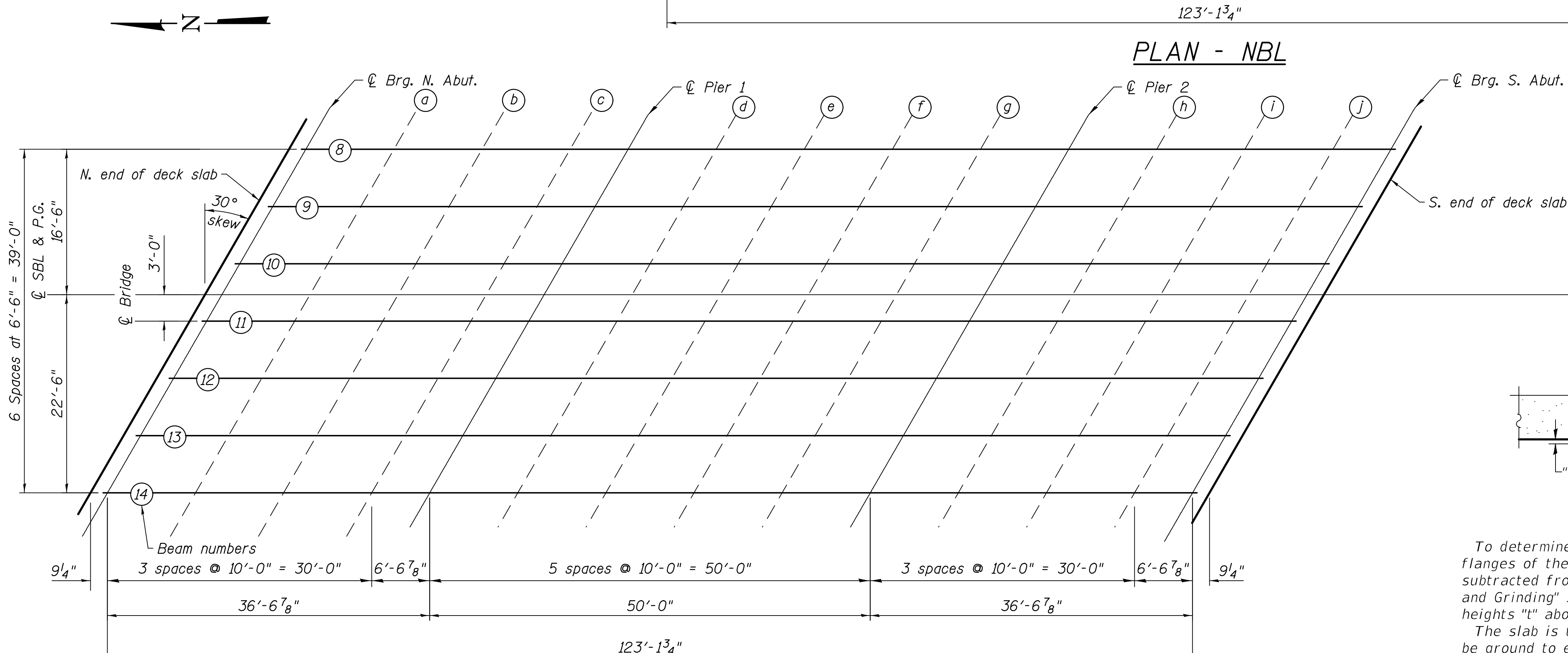
STAGE CONSTRUCTION DETAILS
STRUCTURE NO. 091-0075 (NB) & 091-0076 (SB)

SHEET NO. 4 OF 37 SHEETS

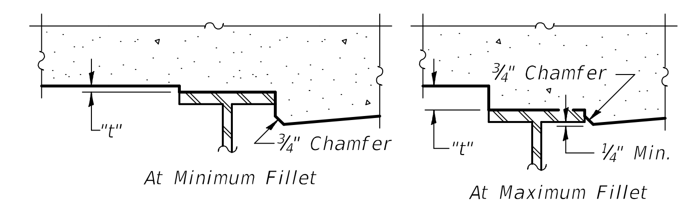
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	73
		CONTRACT NO. 78522		
		ILLINOIS FED. AID PROJECT		



PLAN - NBL



PLAN - SBL



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

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

FILLET HEIGHTS

ESCA CONSULTANTS, INC.	USER NAME = SKM	DESIGNED - RTM 11/17	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TOP OF SLAB ELEVATIONS STRUCTURE NO. 091-0075 (NB) & 091-0076 (SB)
	ESCA PROJECT NO. 1259.08	CHECKED - RDP 11/17	REVISED -		
	PLOT SCALE = 0:2 ' / in.	DRAWN - KAH 11/17	REVISED -		
	PLOT DATE = 3/19/2018 12:58:19 PM	CHECKED - RTM/ELH 11/17	REVISED -		SHEET NO. 5 OF 37 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	74
CONTRACT NO. 78522				
ILLINOIS FED. AID PROJECT				

BEAM 1

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
N. end of slab	3039+73.64	-22.50	421.56	421.58
℄ Brg. N. Abut.	3039+74.41	-22.50	421.56	421.58
a	3039+84.41	-22.50	421.61	421.64
b	3039+94.41	-22.50	421.66	421.69
c	3040+04.41	-22.50	421.71	421.73
℄ Pier 1	3040+10.99	-22.50	421.74	421.77
d	3040+20.99	-22.50	421.79	421.83
e	3040+30.99	-22.50	421.84	421.89
f	3040+40.99	-22.50	421.89	421.94
g	3040+50.99	-22.50	421.94	421.98
℄ Pier 2	3040+60.99	-22.50	421.99	422.02
h	3040+70.99	-22.50	422.04	422.07
i	3040+80.99	-22.50	422.09	422.13
j	3040+90.99	-22.50	422.14	422.17
℄ Brg. S. Abut.	3040+97.56	-22.50	422.18	422.20
S. end of slab	3040+98.34	-22.50	422.18	422.20

BEAM 2

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
N. end of slab	3039+69.89	-16.00	421.67	421.69
℄ Brg. N. Abut.	3039+70.66	-16.00	421.67	421.69
a	3039+80.66	-16.00	421.72	421.75
b	3039+90.66	-16.00	421.77	421.80
c	3040+00.66	-16.00	421.82	421.85
℄ Pier 1	3040+07.23	-16.00	421.86	421.88
d	3040+17.23	-16.00	421.91	421.94
e	3040+27.23	-16.00	421.96	422.01
f	3040+37.23	-16.00	422.01	422.06
g	3040+47.23	-16.00	422.06	422.09
℄ Pier 2	3040+57.23	-16.00	422.11	422.13
h	3040+67.23	-16.00	422.16	422.18
i	3040+77.23	-16.00	422.21	422.24
j	3040+87.23	-16.00	422.26	422.28
℄ Brg. S. Abut.	3040+93.81	-16.00	422.29	422.31
S. end of slab	3040+94.59	-16.00	422.29	422.31

BEAM 3

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
N. end of slab	3039+66.13	-9.50	421.77	421.79
℄ Brg. N. Abut.	3039+66.90	-9.50	421.77	421.79
a	3039+76.90	-9.50	421.82	421.85
b	3039+86.90	-9.50	421.87	421.90
c	3039+96.90	-9.50	421.92	421.94
℄ Pier 1	3040+03.48	-9.50	421.95	421.98
d	3040+13.48	-9.50	422.00	422.04
e	3040+23.48	-9.50	422.05	422.10
f	3040+33.48	-9.50	422.10	422.15
g	3040+43.48	-9.50	422.15	422.19
℄ Pier 2	3040+53.48	-9.50	422.20	422.23
h	3040+63.48	-9.50	422.25	422.28
i	3040+73.48	-9.50	422.30	422.34
j	3040+83.48	-9.50	422.35	422.38
℄ Brg. S. Abut.	3040+90.05	-9.50	422.39	422.41
S. end of slab	3040+90.84	-9.50	422.39	422.41

BEAM 4

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
N. end of slab	3039+62.38	-3.00	421.85	421.87
℄ Brg. N. Abut.	3039+63.15	-3.00	421.85	421.87
a	3039+73.15	-3.00	421.90	421.93
b	3039+83.15	-3.00	421.95	421.98
c	3039+93.15	-3.00	422.00	422.02
℄ Pier 1	3039+99.73	-3.00	422.03	422.05
d	3040+09.73	-3.00	422.08	422.12
e	3040+19.73	-3.00	422.13	422.18
f	3040+29.73	-3.00	422.18	422.23
g	3040+39.73	-3.00	422.23	422.27
℄ Pier 2	3040+49.73	-3.00	422.28	422.30
h	3040+59.73	-3.00	422.33	422.36
i	3040+69.73	-3.00	422.38	422.42
j	3040+79.73	-3.00	422.43	422.46
℄ Brg. S. Abut.	3040+86.30	-3.00	422.47	422.49
S. end of slab	3040+87.08	-3.00	422.47	422.49

BEAM 5

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
N. end of slab	3039+58.63	3.50	421.82	421.84
℄ Brg. N. Abut.	3039+59.40	3.50	421.82	421.85
a	3039+69.40	3.50	421.87	421.91
b	3039+79.40	3.50	421.92	421.96
c	3039+89.40	3.50	421.97	422.00
℄ Pier 1	3039+95.97	3.50	422.01	422.03
d	3040+05.97	3.50	422.06	422.09
e	3040+15.97	3.50	422.11	422.16
f	3040+25.97	3.50	422.16	422.21
g	3040+35.97	3.50	422.21	422.24
℄ Pier 2	3040+45.97	3.50	422.26	422.28
h	3040+55.97	3.50	422.31	422.33
i	3040+65.97	3.50	422.36	422.39
j	3040+75.97	3.50	422.41	422.44
℄ Brg. S. Abut.	3040+82.55	3.50	422.44	422.46
S. end of slab	3040+83.33	3.50	422.44	422.46

BEAM 6

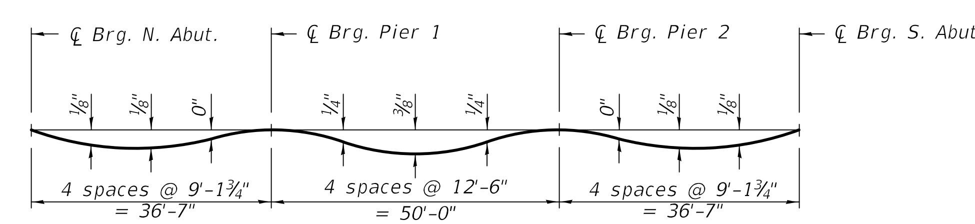
Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
N. end of slab	3039+54.88	10.00	421.70	421.73
℄ Brg. N. Abut.	3039+55.65	10.00	421.71	421.73
a	3039+65.65	10.00	421.76	421.79
b	3039+75.65	10.00	421.81	421.84
c	3039+85.65	10.00	421.86	421.88
℄ Pier 1	3039+92.22	10.00	421.89	421.91
d	3040+02.22	10.00	421.94	421.98
e	3040+12.22	10.00	421.99	422.04
f	3040+22.22	10.00	422.04	422.09
g	3040+32.22	10.00	422.09	422.13
℄ Pier 2	3040+42.22	10.00	422.14	422.16
h	3040+52.22	10.00	422.19	422.22
i	3040+62.22	10.00	422.24	422.27
j	3040+72.22	10.00	422.29	422.32
℄ Brg. S. Abut.	3040+78.79	10.00	422.32	422.34
S. end of slab	3040+79.58	10.00	422.33	422.35

BEAM 7

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
N. end of slab	3039+51.12	16.50	421.57	421.59
℄ Brg. N. Abut.	3039+51.89	16.50	421.57	421.59
a	3039+61.89	16.50	421.62	421.65
b	3039+71.89	16.50	421.67	421.70
c	3039+81.89	16.50	421.72	421.74
℄ Pier 1	3039+88.47	16.50	421.75	421.77
d	3039+98.47	16.50	421.80	421.84
e	3040+08.47	16.50	421.85	421.90
f	3040+18.47	16.50	421.90	421.95
g	3040+28.47	16.50	421.95	421.99
℄ Pier 2	3040+38.47	16.50	422.00	422.02
h	3040+48.47	16.50	422.05	422.08
i	3040+58.47	16.50	422.10	422.13
j	3040+68.47	16.50	422.15	422.18
℄ Brg. S. Abut.	3040+75.04	16.50	422.19	422.21
S. end of slab	3040+75.82	16.50	422.19	422.21

PROFILE GRADE NBL

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
N. end of slab	3039+60.65	0.00	421.88	421.90
℄ Brg. N. Abut.	3039+61.42	0.00	421.89	421.91
a	3039+71.42	0.00	421.94	421.97
b	3039+81.42	0.00	421.99	422.02
c	3039+91.42	0.00	422.04	422.06
℄ Pier 1	3039+98.00	0.00	422.07	422.09
d	3040+08.00	0.00	422.12	422.16
e	3040+18.00	0.00	422.17	422.20
f	3040+28.00	0.00	422.22	422.25
g	3040+38.00	0.00	422.27	422.29
℄ Pier 2	3040+48.00	0.00	422.32	422.34
h	3040+58.00	0.00	422.37	422.40
i	3040+68.00	0.00	422.42	422.45
j	3040+78.00	0.00	422.47	422.50
℄ Brg. S. Abut.	3040+84.57	0.00	422.50	422.52
S. end of slab	3040+85.35	0.00	422.51	422.53



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

Note:
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections and grinding as shown.

ESCA CONSULTANTS, INC.	USER NAME = SKM	DESIGNED - RTM 11/17	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TOP OF SLAB ELEVATIONS (NB) STRUCTURE NO. 091-0075 (NB)
	ESCA PROJECT NO. 1259.08	CHECKED - RDP 11/17	REVISED -		
	PLOT SCALE = 0:2 ' / in.	DRAWN - KAH 11/17	REVISED -		
	PLOT DATE = 3/19/2018 12:58:20 PM	CHECKED - RTM/ELH 02/18	REVISED -		SHEET NO. 6 OF 37 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	75
		CONTRACT NO. 78522		
		ILLINOIS FED. AID PROJECT		

BEAM 8

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
N. end of slab	3039+10.14	-16.50	421.99	422.02
℄ Brg. N. Abut.	3039+10.91	-16.50	422.00	422.02
a	3039+20.91	-16.50	422.06	422.10
b	3039+30.91	-16.50	422.13	422.16
c	3039+40.91	-16.50	422.19	422.21
℄ Pier 1	3039+47.49	-16.50	422.23	422.25
d	3039+57.49	-16.50	422.30	422.33
e	3039+67.49	-16.50	422.36	422.41
f	3039+77.49	-16.50	422.43	422.48
g	3039+87.49	-16.50	422.49	422.53
℄ Pier 2	3039+97.49	-16.50	422.55	422.57
h	3040+07.49	-16.50	422.62	422.64
i	3040+17.49	-16.50	422.68	422.71
j	3040+27.49	-16.50	422.75	422.77
℄ Brg. S. Abut.	3040+34.06	-16.50	422.79	422.81
S. end of slab	3040+34.83	-16.50	422.79	422.81

BEAM 9

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
N. end of slab	3039+06.39	-10.00	422.09	422.11
℄ Brg. N. Abut.	3039+07.16	-10.00	422.10	422.12
a	3039+17.16	-10.00	422.16	422.19
b	3039+27.16	-10.00	422.22	422.25
c	3039+37.16	-10.00	422.29	422.31
℄ Pier 1	3039+43.73	-10.00	422.33	422.35
d	3039+53.73	-10.00	422.39	422.43
e	3039+63.73	-10.00	422.46	422.51
f	3039+73.73	-10.00	422.52	422.57
g	3039+83.73	-10.00	422.59	422.62
℄ Pier 2	3039+93.73	-10.00	422.65	422.67
h	3040+03.73	-10.00	422.71	422.74
i	3040+13.73	-10.00	422.78	422.81
j	3040+23.73	-10.00	422.84	422.87
℄ Brg. S. Abut.	3040+30.31	-10.00	422.88	422.90
S. end of slab	3040+31.08	-10.00	422.89	422.91

BEAM 10

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
N. end of slab	3039+02.64	-3.50	422.16	422.19
℄ Brg. N. Abut.	3039+03.41	-3.50	422.17	422.19
a	3039+13.41	-3.50	422.23	422.26
b	3039+23.41	-3.50	422.30	422.33
c	3039+33.41	-3.50	422.36	422.38
℄ Pier 1	3039+39.98	-3.50	422.40	422.42
d	3039+49.98	-3.50	422.47	422.50
e	3039+59.98	-3.50	422.53	422.58
f	3039+69.98	-3.50	422.60	422.65
g	3039+79.98	-3.50	422.66	422.69
℄ Pier 2	3039+89.98	-3.50	422.72	422.74
h	3039+99.98	-3.50	422.79	422.81
i	3040+09.98	-3.50	422.85	422.88
j	3040+19.98	-3.50	422.92	422.94
℄ Brg. S. Abut.	3040+26.55	-3.50	422.96	422.98
S. end of slab	3040+27.33	-3.50	422.96	422.98

BEAM 11

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
N. end of slab	3038+98.88	3.00	422.15	422.17
℄ Brg. N. Abut.	3038+99.65	3.00	422.15	422.17
a	3039+09.65	3.00	422.22	422.25
b	3039+19.65	3.00	422.28	422.31
c	3039+29.65	3.00	422.34	422.37
℄ Pier 1	3039+36.23	3.00	422.39	422.41
d	3039+46.23	3.00	422.45	422.49
e	3039+56.23	3.00	422.51	422.56
f	3039+66.23	3.00	422.58	422.63
g	3039+76.23	3.00	422.64	422.68
℄ Pier 2	3039+86.23	3.00	422.71	422.73
h	3039+96.23	3.00	422.77	422.80
i	3040+06.23	3.00	422.83	422.87
j	3040+16.23	3.00	422.90	422.93
℄ Brg. S. Abut.	3040+22.80	3.00	422.94	422.96
S. end of slab	3040+23.57	3.00	422.95	422.97

BEAM 12

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
N. end of slab	3038+95.13	9.50	422.03	422.05
℄ Brg. N. Abut.	3038+95.90	9.50	422.03	422.05
a	3039+05.90	9.50	422.10	422.13
b	3039+15.90	9.50	422.16	422.19
c	3039+25.90	9.50	422.22	422.25
℄ Pier 1	3039+32.48	9.50	422.27	422.29
d	3039+42.48	9.50	422.33	422.36
e	3039+52.48	9.50	422.39	422.44
f	3039+62.48	9.50	422.46	422.51
g	3039+72.48	9.50	422.52	422.56
℄ Pier 2	3039+82.48	9.50	422.59	422.61
h	3039+92.48	9.50	422.65	422.68
i	3040+02.48	9.50	422.71	422.75
j	3040+12.48	9.50	422.78	422.81
℄ Brg. S. Abut.	3040+19.05	9.50	422.82	422.84
S. end of slab	3040+19.82	9.50	422.82	422.85

BEAM 13

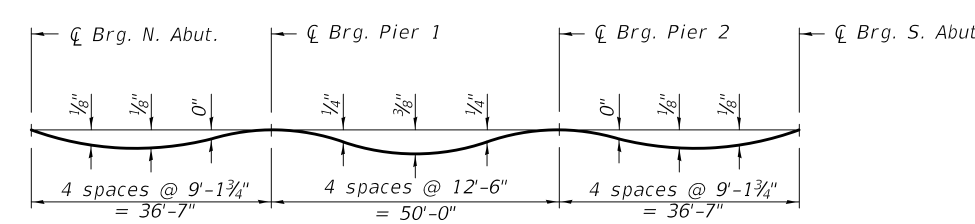
Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
N. end of slab	3038+91.38	16.00	421.88	421.91
℄ Brg. N. Abut.	3038+92.15	16.00	421.89	421.91
a	3039+02.15	16.00	421.95	421.99
b	3039+12.15	16.00	422.02	422.05
c	3039+22.15	16.00	422.08	422.10
℄ Pier 1	3039+28.72	16.00	422.12	422.14
d	3039+38.72	16.00	422.19	422.22
e	3039+48.72	16.00	422.25	422.30
f	3039+58.72	16.00	422.32	422.37
g	3039+68.72	16.00	422.38	422.42
℄ Pier 2	3039+78.72	16.00	422.44	422.46
h	3039+88.72	16.00	422.51	422.53
i	3039+98.72	16.00	422.57	422.60
j	3040+08.72	16.00	422.64	422.66
℄ Brg. S. Abut.	3040+15.29	16.00	422.68	422.70
S. end of slab	3040+16.07	16.00	422.68	422.70

BEAM 14

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
N. end of slab	3038+87.62	22.50	421.73	421.75
℄ Brg. N. Abut.	3038+88.40	22.50	421.74	421.76
a	3038+98.40	22.50	421.80	421.83
b	3039+08.40	22.50	421.86	421.89
c	3039+18.40	22.50	421.93	421.95
℄ Pier 1	3039+24.97	22.50	421.97	421.99
d	3039+34.97	22.50	422.03	422.07
e	3039+44.97	22.50	422.10	422.15
f	3039+54.97	22.50	422.16	422.21
g	3039+64.97	22.50	422.23	422.26
℄ Pier 2	3039+74.97	22.50	422.29	422.31
h	3039+84.97	22.50	422.35	422.38
i	3039+94.97	22.50	422.42	422.45
j	3040+04.97	22.50	422.48	422.51
℄ Brg. S. Abut.	3040+11.54	22.50	422.52	422.54
S. end of slab	3040+12.32	22.50	422.53	422.55

PROFILE GRADE SBL

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
N. end of slab	3039+00.61	0.00	422.20	422.22
℄ Brg. N. Abut.	3039+01.39	0.00	422.21	422.23
a	3039+11.39	0.00	422.27	422.30
b	3039+21.39	0.00	422.34	422.37
c	3039+31.39	0.00	422.40	422.42
℄ Pier 1	3039+37.96	0.00	422.44	422.46
d	3039+47.96	0.00	422.51	422.54
e	3039+57.96	0.00	422.57	422.60
f	3039+67.96	0.00	422.63	422.68
g	3039+77.96	0.00	422.70	422.73
℄ Pier 2	3039+87.96	0.00	422.76	422.78
h	3039+97.96	0.00	422.83	422.85
i	3040+07.96	0.00	422.89	422.92
j	3040+17.96	0.00	422.95	422.98
℄ Brg. S. Abut.	3040+24.53	0.00	423.00	423.02
S. end of slab	3040+25.31	0.00	423.00	423.02



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

Note:
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections and grinding as shown.

NORTH APPROACH SLAB (NB)

EAST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
N. end of N. Appr.	3039+44.51	-24.00	421.38	421.40
A1	3039+54.51	-24.00	421.43	421.45
A2	3039+64.51	-24.00	421.48	421.50
S. End of N. Appr.	3039+74.51	-24.00	421.53	421.55

EAST EDGE OF ROADWAY

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
N. end of N. Appr.	3039+37.58	-12.00	421.59	421.61
A1	3039+47.58	-12.00	421.64	421.66
A2	3039+57.58	-12.00	421.69	421.71
S. End of N. Appr.	3039+67.58	-12.00	421.74	421.76

℄ NBL & P.G.

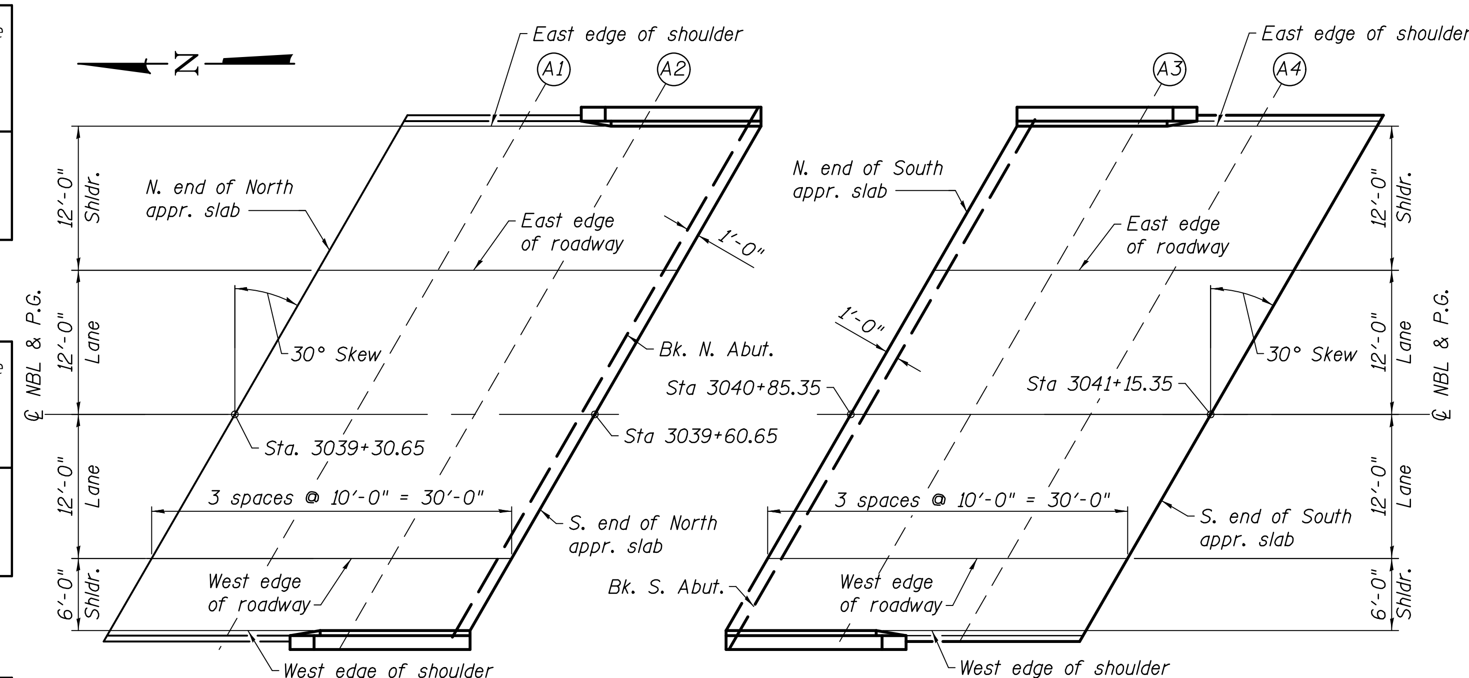
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
N. end of N. Appr.	3039+30.65	0.00	421.73	421.75
A1	3039+40.65	0.00	421.78	421.80
A2	3039+50.65	0.00	421.83	421.85
S. End of N. Appr.	3039+60.65	0.00	421.88	421.90

WEST EDGE OF ROADWAY

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
N. end of N. Appr.	3039+23.72	12.00	421.52	421.54
A1	3039+33.72	12.00	421.57	421.59
A2	3039+43.72	12.00	421.62	421.64
S. End of N. Appr.	3039+53.72	12.00	421.67	421.69

WEST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
N. end of N. Appr.	3039+20.26	18.00	421.38	421.40
A1	3039+30.26	18.00	421.43	421.45
A2	3039+40.26	18.00	421.48	421.50
S. End of N. Appr.	3039+50.26	18.00	421.53	421.55



N. APPROACH SLAB   PLAN   S. APPROACH SLAB

SOUTH APPROACH SLAB (NB)

EAST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
N. end of S. Appr.	3040+99.20	-24.00	422.16	422.18
A3	3041+09.20	-24.00	422.21	422.23
A4	3041+19.20	-24.00	422.26	422.28
S. End of S. Appr.	3041+29.20	-24.00	422.31	422.33

EAST EDGE OF ROADWAY

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
N. end of S. Appr.	3040+92.27	-12.00	422.36	422.38
A3	3041+02.27	-12.00	422.41	422.43
A4	3041+12.27	-12.00	422.46	422.48
S. End of S. Appr.	3041+22.27	-12.00	422.51	422.53

℄ NBL & P.G.

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
N. end of S. Appr.	3040+85.35	0.00	422.51	422.53
A3	3040+95.35	0.00	422.56	422.58
A4	3041+05.35	0.00	422.61	422.63
S. End of S. Appr.	3041+15.35	0.00	422.66	422.68

WEST EDGE OF ROADWAY

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
N. end of S. Appr.	3040+78.42	12.00	422.29	422.31
A3	3040+88.42	12.00	422.34	422.36
A4	3040+98.42	12.00	422.39	422.41
S. End of S. Appr.	3041+08.42	12.00	422.44	422.46

WEST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
N. end of S. Appr.	3040+74.95	18.00	422.15	422.18
A3	3040+84.95	18.00	422.20	422.23
A4	3040+94.95	18.00	422.25	422.28
S. End of S. Appr.	3041+04.95	18.00	422.30	422.33

NORTH APPROACH SLAB (SB)

EAST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
N. end of N. Appr.	3038+81.01	-18.00	421.78	421.80
A1	3038+91.01	-18.00	421.84	421.86
A2	3039+01.01	-18.00	421.91	421.93
S. End of N. Appr.	3039+11.01	-18.00	421.97	421.99

EAST EDGE OF ROADWAY

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
N. end of N. Appr.	3038+77.55	-12.00	421.88	421.90
A1	3038+87.55	-12.00	421.94	421.96
A2	3038+97.55	-12.00	422.00	422.03
S. End of N. Appr.	3039+07.55	-12.00	422.07	422.09

℄ SBL & P.G.

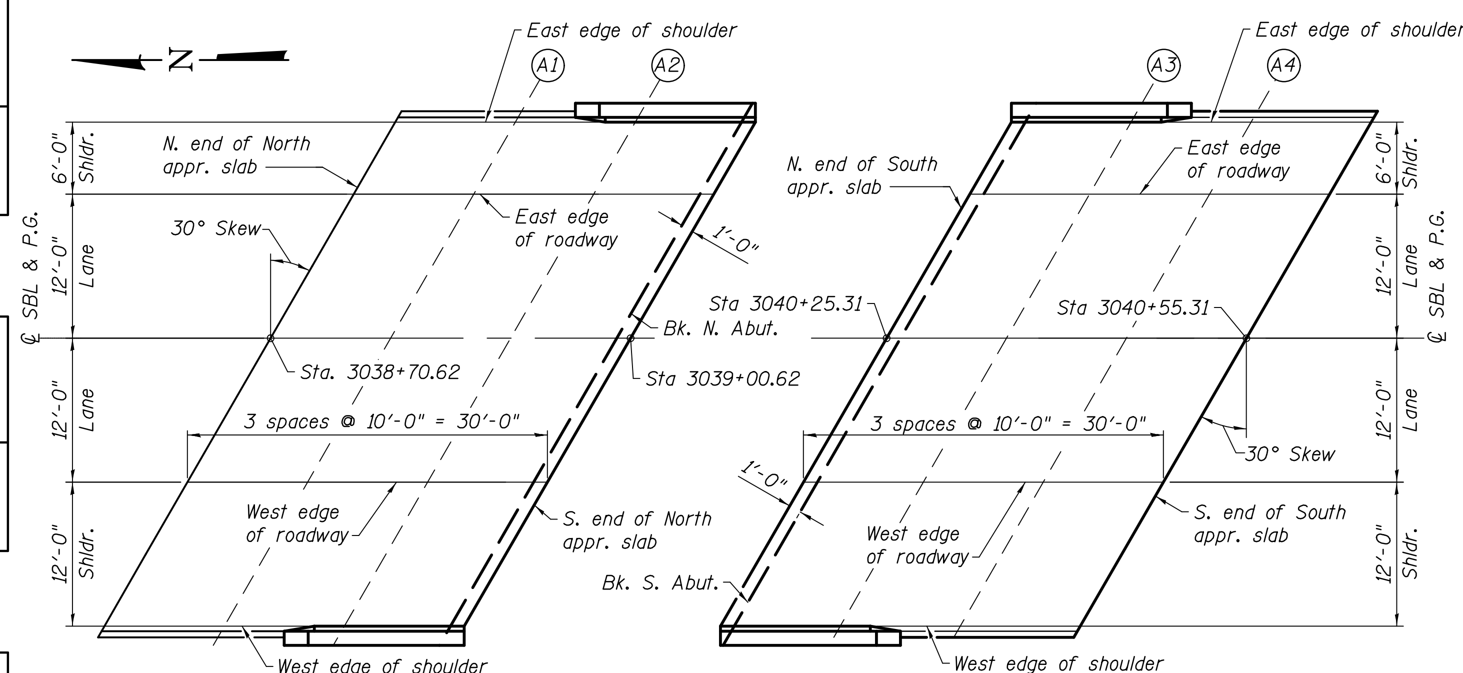
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
N. end of N. Appr.	3038+70.62	0.00	422.01	422.03
A1	3038+80.62	0.00	422.08	422.10
A2	3038+90.62	0.00	422.14	422.16
S. End of N. Appr.	3039+00.62	0.00	422.20	422.22

WEST EDGE OF ROADWAY

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
N. end of N. Appr.	3038+63.69	12.00	421.79	421.81
A1	3038+73.69	12.00	421.85	421.87
A2	3038+83.69	12.00	421.92	421.94
S. End of N. Appr.	3038+93.69	12.00	421.98	422.00

WEST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
N. end of N. Appr.	3038+56.76	24.00	421.50	421.52
A1	3038+66.76	24.00	421.57	421.59
A2	3038+76.76	24.00	421.63	421.65
S. End of N. Appr.	3038+86.76	24.00	421.70	421.72



N. APPROACH SLAB

PLAN

S. APPROACH SLAB

SOUTH APPROACH SLAB (SB)

EAST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
N. end of S. Appr.	3040+35.70	-18.00	422.77	422.79
A3	3040+45.70	-18.00	422.83	422.85
A4	3040+55.70	-18.00	422.90	722.92
S. End of S. Appr.	3040+65.70	-18.00	422.96	722.98

EAST EDGE OF ROADWAY

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
N. end of S. Appr.	3040+32.24	-12.00	422.87	422.89
A3	3040+42.24	-12.00	422.93	422.95
A4	3040+52.24	-12.00	422.99	423.02
S. End of S. Appr.	3040+62.24	-12.00	423.06	423.08

℄ SBL & P.G.

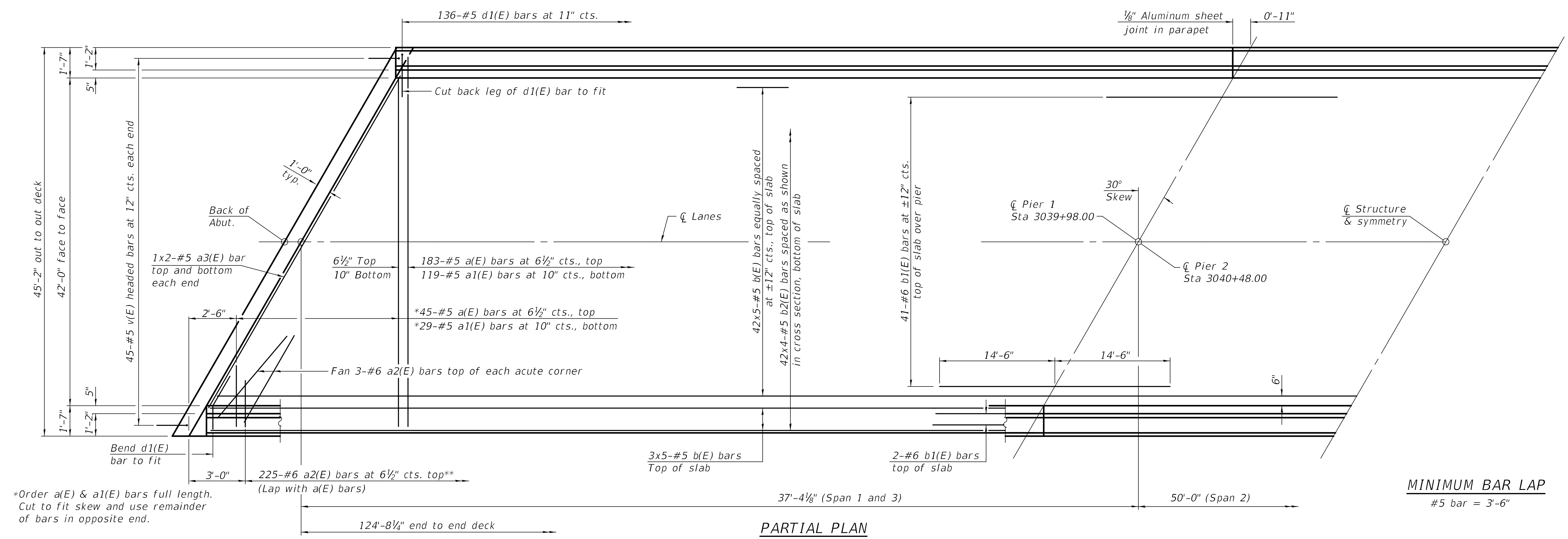
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
N. end of S. Appr.	3040+25.31	0.00	423.00	423.02
A3	3040+35.31	0.00	423.07	423.09
A4	3040+45.31	0.00	423.13	423.15
S. End of S. Appr.	3040+55.31	0.00	423.19	423.21

WEST EDGE OF ROADWAY

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
N. end of S. Appr.	3040+18.38	12.00	422.78	422.80
A3	3040+28.38	12.00	422.84	422.86
A4	3040+38.38	12.00	422.91	422.93
S. End of S. Appr.	3040+48.38	12.00	422.97	422.99

WEST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
N. end of S. Appr.	3040+11.45	24.00	422.49	422.51
A3	3040+21.45	24.00	422.56	422.58
A4	3040+31.45	24.00	422.62	422.64
S. End of S. Appr.	3040+41.45	24.00	422.69	422.71



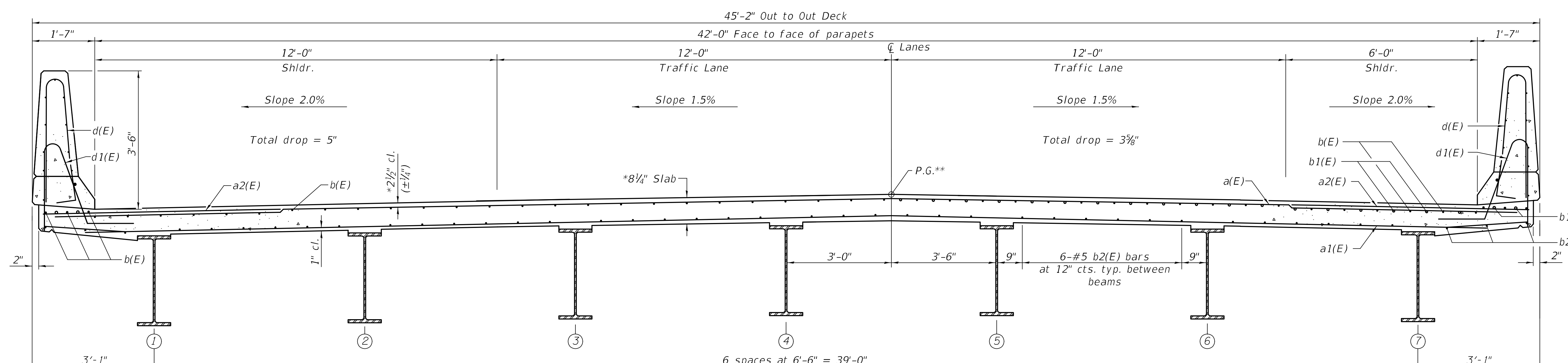
*Order a(E) & a1(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.

**Field cut to fit as required at end of deck

PARTIAL PLAN

MINIMUM BAR LAP

#5 bar = 3'-6"



NEAR MIDSPAN

NEAR PIER

CROSS SECTION

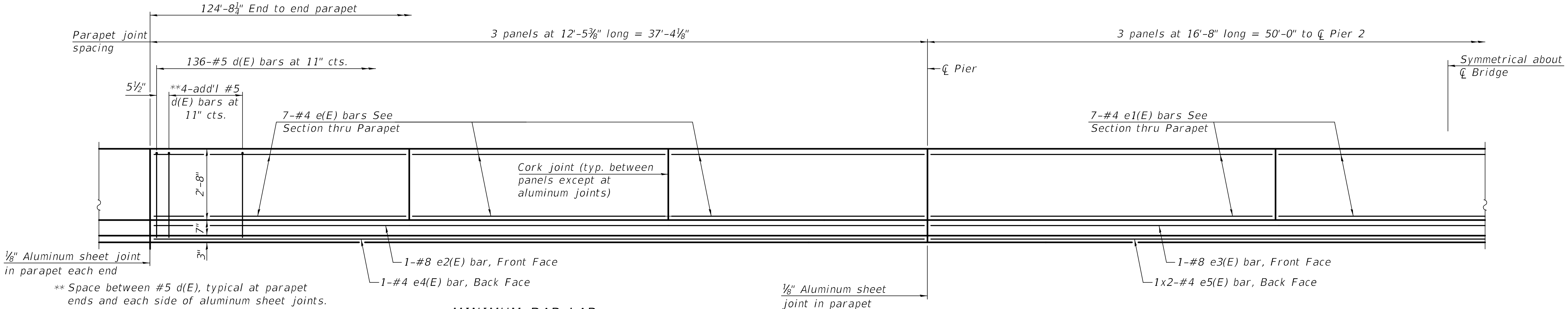
(SN 091-0075 looking south)

*Prior to grinding
**After grinding

Notes:
See sheet 11 of 37 for superstructure details and Bill of Material.
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.

ESCA CONSULTANTS, INC.	USER NAME = SKM	DESIGNED - RTM	11/17	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUPERSTRUCTURE (NB) STRUCTURE NO. 091-0075 (NB)
	ESCA PROJECT NO. 1259.08	CHECKED - RDP	11/17	REVISED -		
	PLOT SCALE = 0:2 ' / in.	DRAWN - KAH	11/17	REVISED -		
	PLOT DATE = 3/19/2018 12:58:23 PM	CHECKED - RTM/ELH	02/18	REVISED -		SHEET NO. 10 OF 37 SHEETS

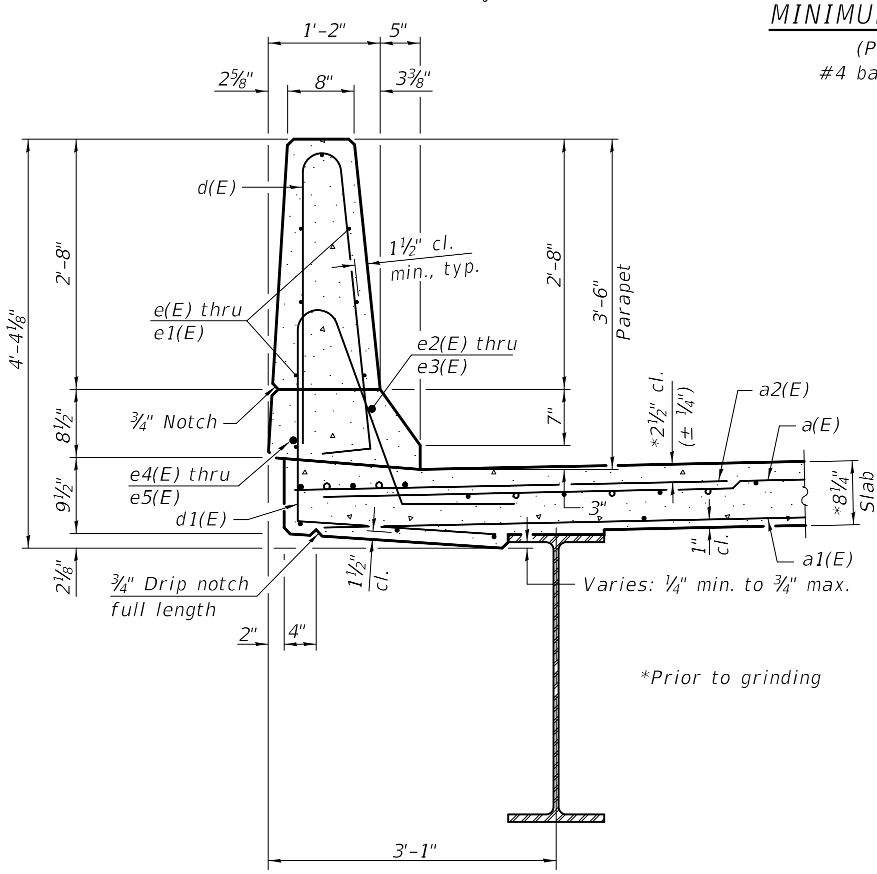
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	79
		CONTRACT NO. 78522		
		ILLINOIS FED. AID PROJECT		



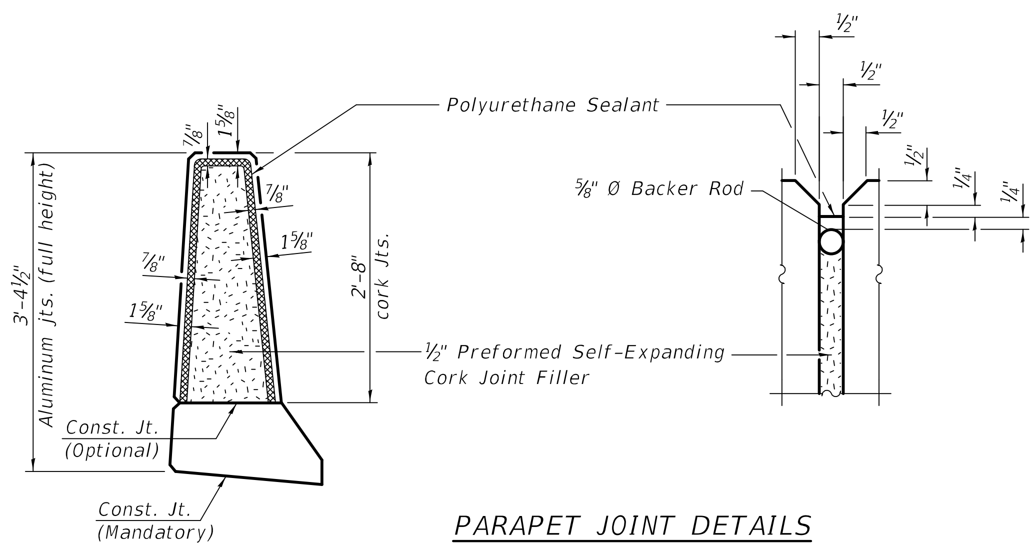
MINIMUM BAR LAP

(Parapet)
#4 bar = 2'-5"

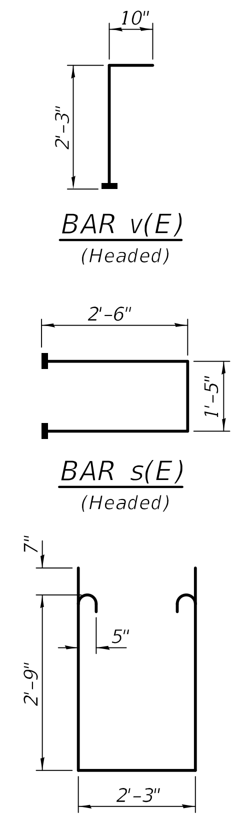
INSIDE ELEVATION OF PARAPET

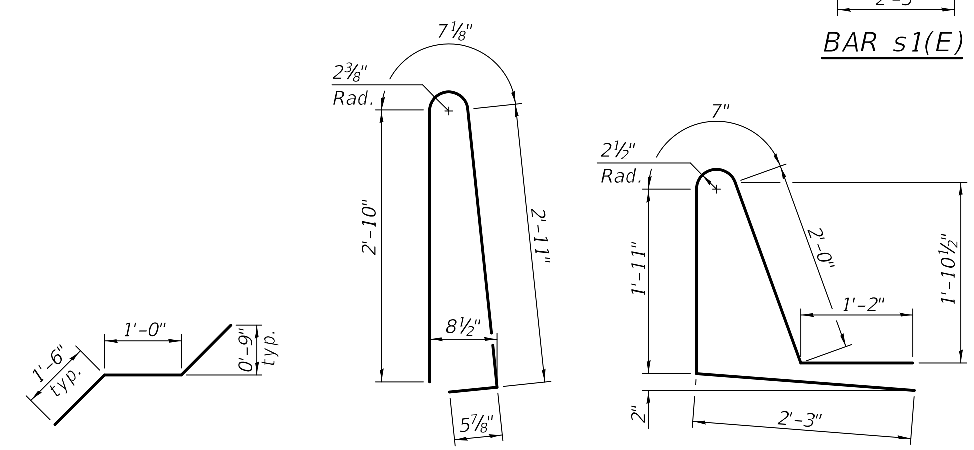


SECTION THRU PARAPET



PARAPET JOINT DETAILS





SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	228	#5	44'-6"	———
a1(E)	148	#5	44'-0"	———
a2(E)	456	#6	6'-6"	———
a3(E)	8	#5	27'-8"	———
b(E)	240	#5	27'-9"	———
b1(E)	90	#6	29'-0"	———
b2(E)	168	#5	33'-9'	———
d(E)	288	#5	6'-10"	
d1(E)	272	#5	7'-11"	
e(E)	84	#4	12'-1"	———
e1(E)	42	#4	16'-4"	———
e2(E)	4	#8	37'-0"	———
e3(E)	2	#8	49'-8"	———
e4(E)	4	#4	37'-0"	———
e5(E)	4	#4	26'-1"	———
m(E)	12	#6	27'-10"	———
m1(E)	24	#6	7'-0"	———
m2(E)	8	#6	3'-2"	———
m3(E)	28	#5	4'-0"	
s(E)	88	#5	6'-5"	
s1(E)	88	#5	8'-11"	
v(E)	90	#5	3'-1"	
Reinforcement Bars, Epoxy Coated		Lbs.	46010	
Concrete Superstructure		Cu. Yds.	208.9	

Bars indicated thus 1 x 2-#8 etc. indicates 1 line of bars with 2 lengths per line.

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.

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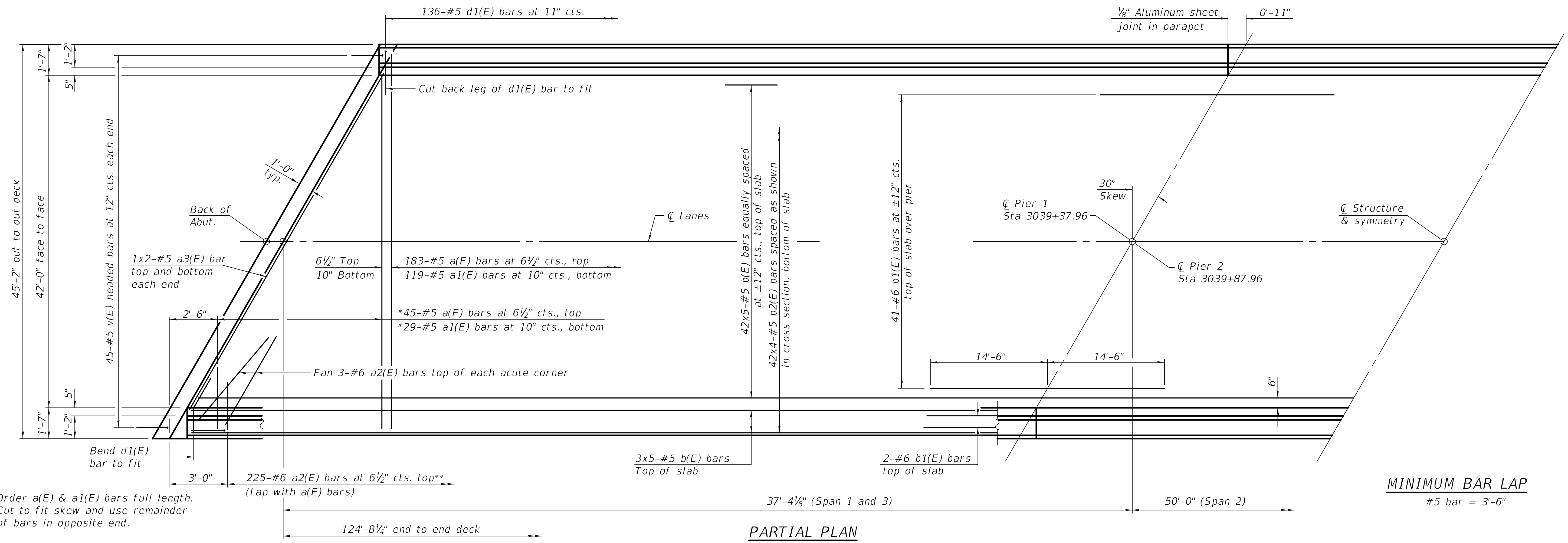
	ESCA PROJECT NO. 1259.08	CHECKED - RDP 11/17	REVISED -		
	PLOT SCALE = 0.2 ' / in.	DRAWN - KAH 11/17	REVISED -		
	PLOT DATE = 3/19/2018 12:58:24 PM	CHECKED - RTM/ELH 11/17	REVISED -		SHEET NO. 11 OF 37 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	80
CONTRACT NO. 78522				
ILLINOIS FED. AID PROJECT				



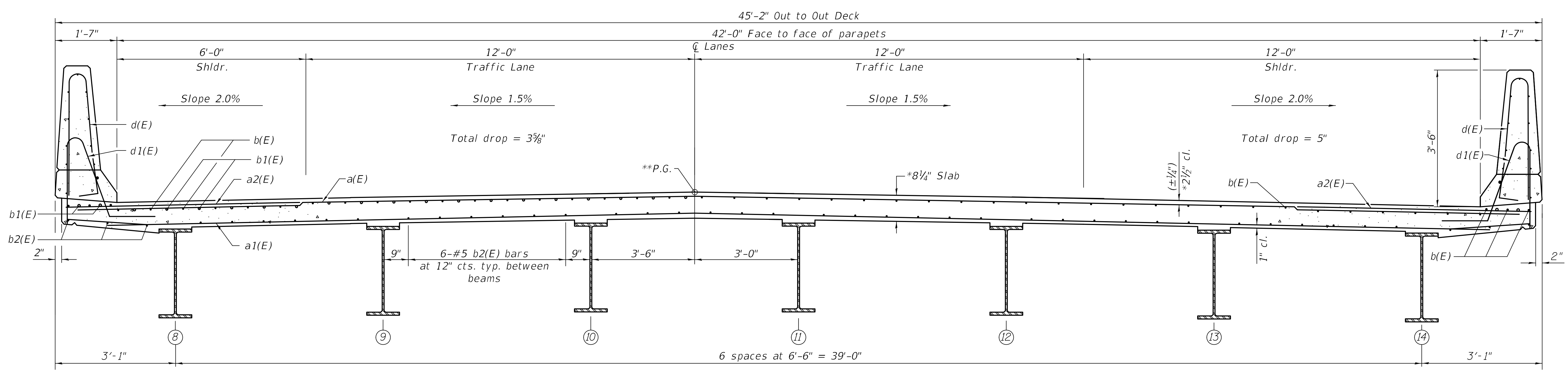
*Order a(E) & a1(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.

**Field cut to fit as req'd at end of deck

PARTIAL PLAN

MINIMUM BAR LAP

#5 bar = 3'-6"



CROSS SECTION

(SN 091-0076 looking south)

*Prior to grinding
**After grinding

Notes:
See sheet 13 of 37 for superstructure details and Bill of Material.
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.

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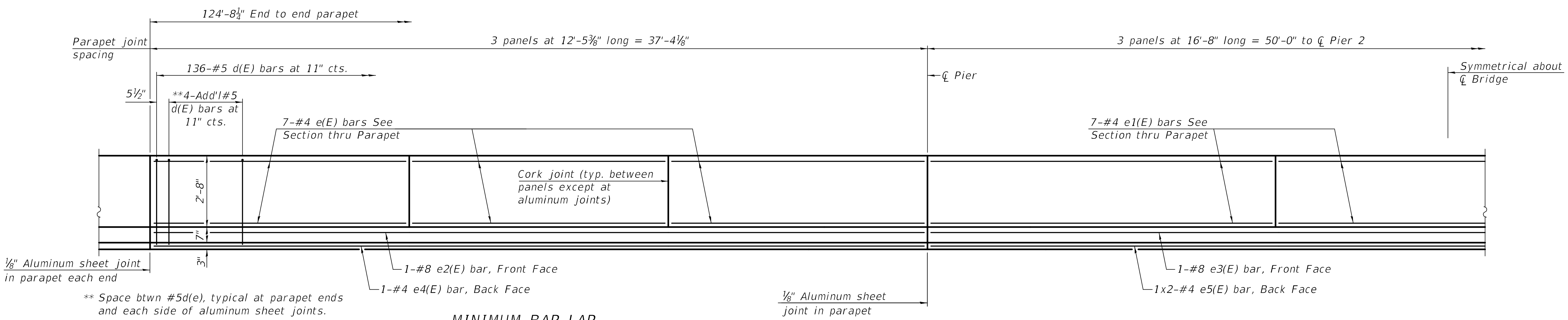
	ESCA PROJECT NO. 1259.08	CHECKED - RDP 11/17	REVISED -	
	PLOT SCALE = 0.2 ' / in.	DRAWN - KAH 11/17	REVISED -	
	PLOT DATE = 3/19/2018 12:58:25 PM	CHECKED - RTM/ELH 02/18	REVISED -	

SUPERSTRUCTURE (SB)
STRUCTURE NO. 091-0076 (SB)
SHEET NO. 12 OF 37 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	81

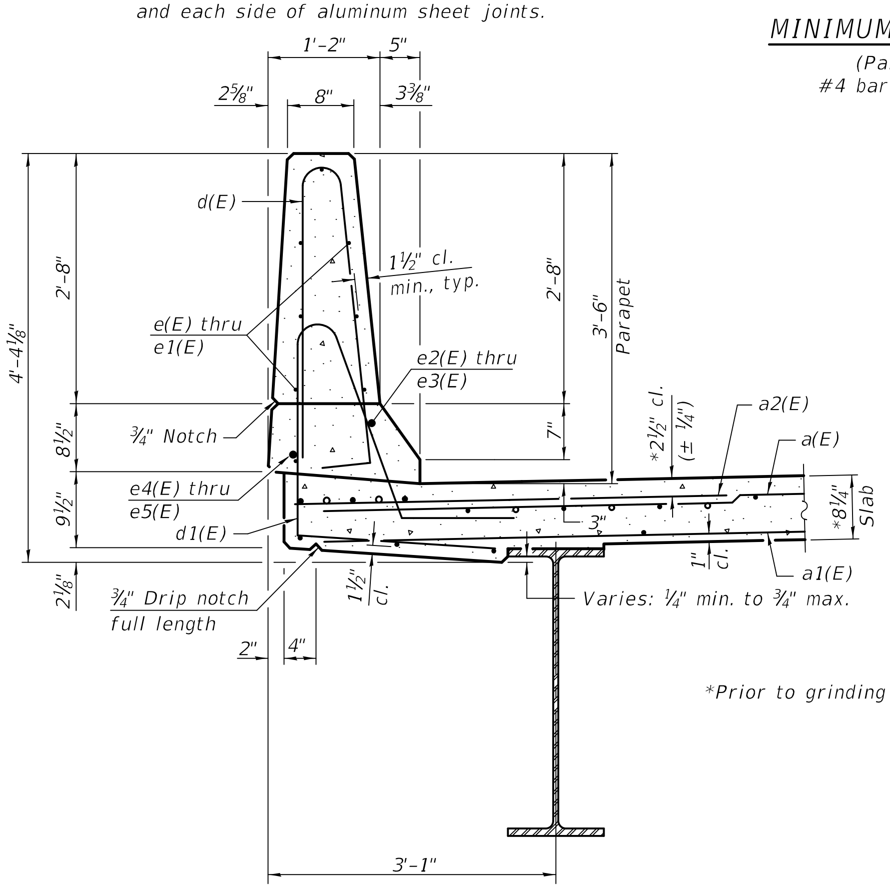
CONTRACT NO. 78522
ILLINOIS FED. AID PROJECT



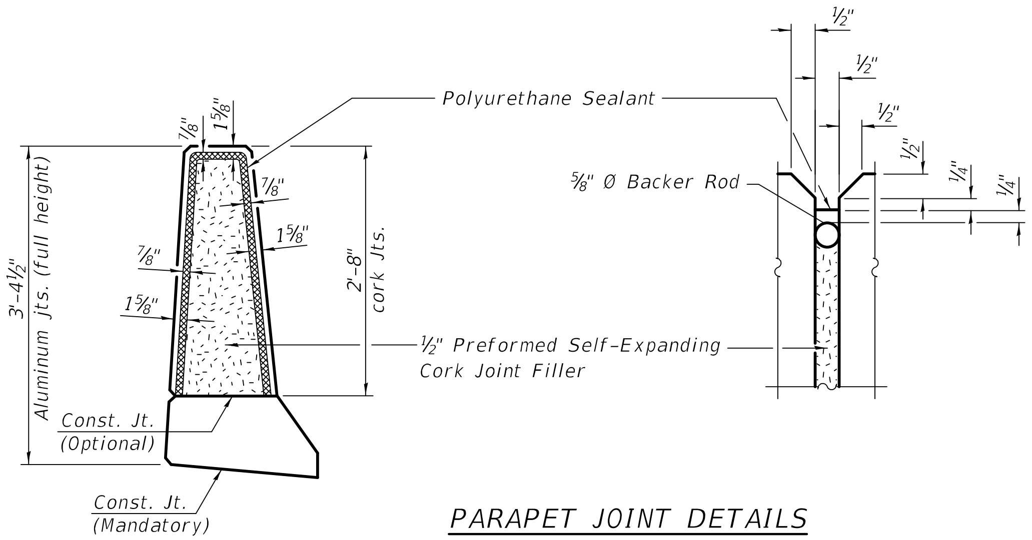
MINIMUM BAR LAP

(Parapet)
#4 bar = 2'-5"

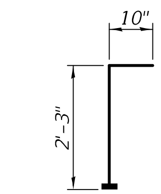
INSIDE ELEVATION OF PARAPET



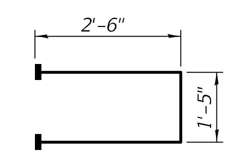
SECTION THRU PARAPET



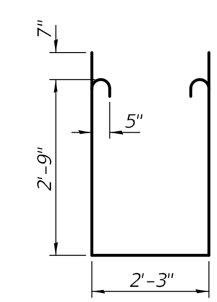
PARAPET JOINT DETAILS



BAR v(E)
(Headed)



BAR s(E)
(Headed)



BAR s1(E)

SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	228	#5	44'-6"	
a1(E)	148	#5	44'-0"	
a2(E)	456	#6	6'-6"	
a3(E)	8	#5	27'-8"	
b(E)	240	#5	27'-9"	
b1(E)	90	#6	29'-0"	
b2(E)	168	#5	33'-9"	
d(E)	288	#5	6'-10"	
d1(E)	272	#5	7'-11"	
e(E)	84	#4	12'-1"	
e1(E)	42	#4	16'-4"	
e2(E)	4	#8	37'-0"	
e3(E)	2	#8	49'-8"	
e4(E)	4	#4	37'-0"	
e5(E)	4	#4	26'-1"	
m(E)	12	#6	27'-10"	
m1(E)	24	#6	7'-0"	
m2(E)	8	#6	3'-2"	
m3(E)	28	#5	4'-0"	
s(E)	88	#5	6'-5"	
s1(E)	88	#5	8'-11"	
v(E)	90	#5	3'-1"	
Reinforcement Bars, Epoxy Coated			Lbs.	46010
Concrete Superstructure			Cu. Yds.	208.9

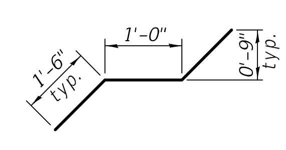
Bars indicated thus 1 x 2-#8 etc. indicates 1 line of bars with 2 lengths per line.

Notes:

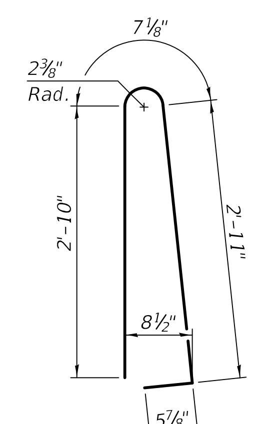
The ⅛" Aluminum sheet shall be ASTM B 209 alloy 3003-H14 and coated to minimize reaction with wet concrete. Cost included with Concrete Superstructure.

The Polyurethane Sealant shall be according to Article 1050.04 of the Std. Spec. and the color shall be gray.

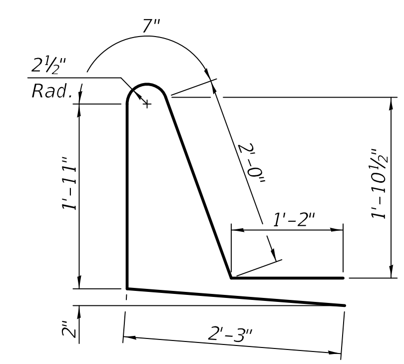
Headed bars shall conform to ASTM A970 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.



BAR m3(E)



BAR d(E)



BAR d1(E)

ESCA CONSULTANTS, INC.

USER NAME = SKM	DESIGNED - RTM 11/17	REVISED -	
ESCA PROJECT NO. 1259.08	CHECKED - RDP 11/17	REVISED -	
PLOT SCALE = 0.2 ' / in.	DRAWN - KAH 11/17	REVISED -	
PLOT DATE = 3/19/2018 12:58:25 PM	CHECKED - RTM/ELH 02/18	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

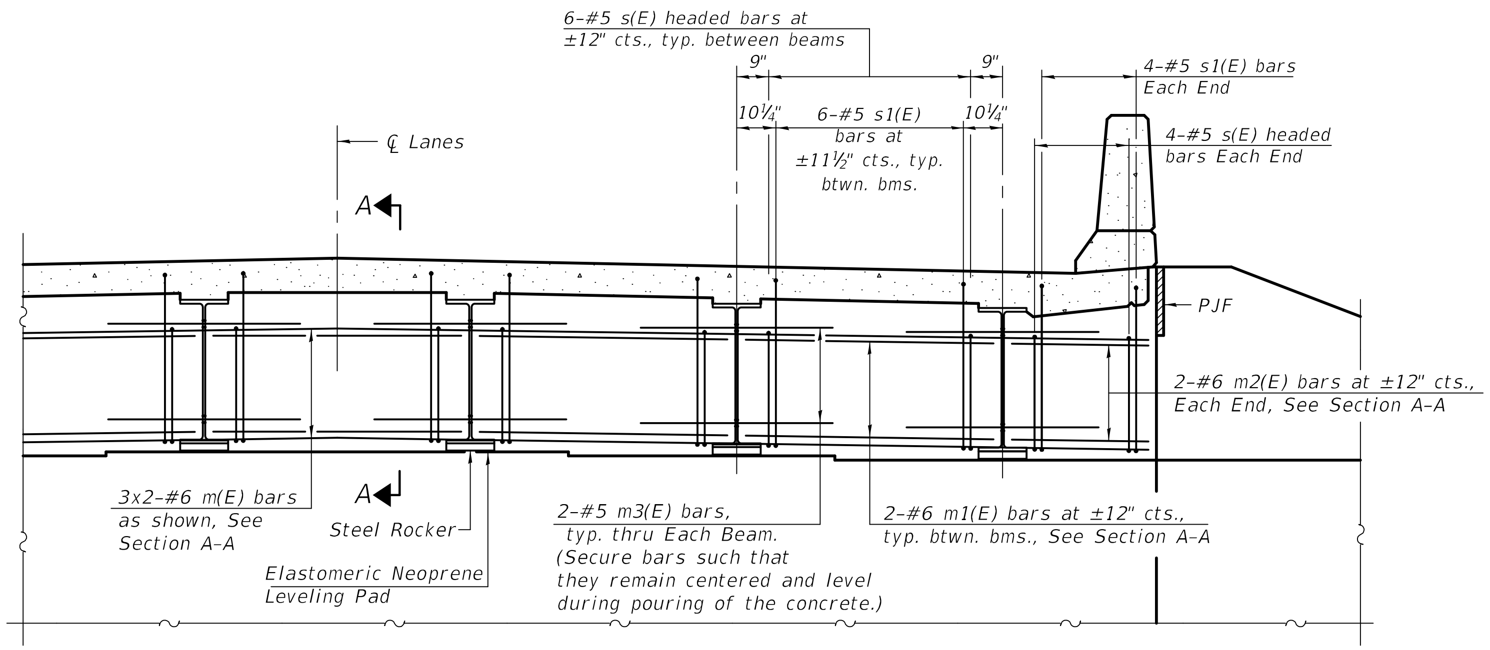
SUPERSTRUCTURE DETAILS (SB)
STRUCTURE NO. 091-0076 (SB)

SHEET NO. 13 OF 37 SHEETS

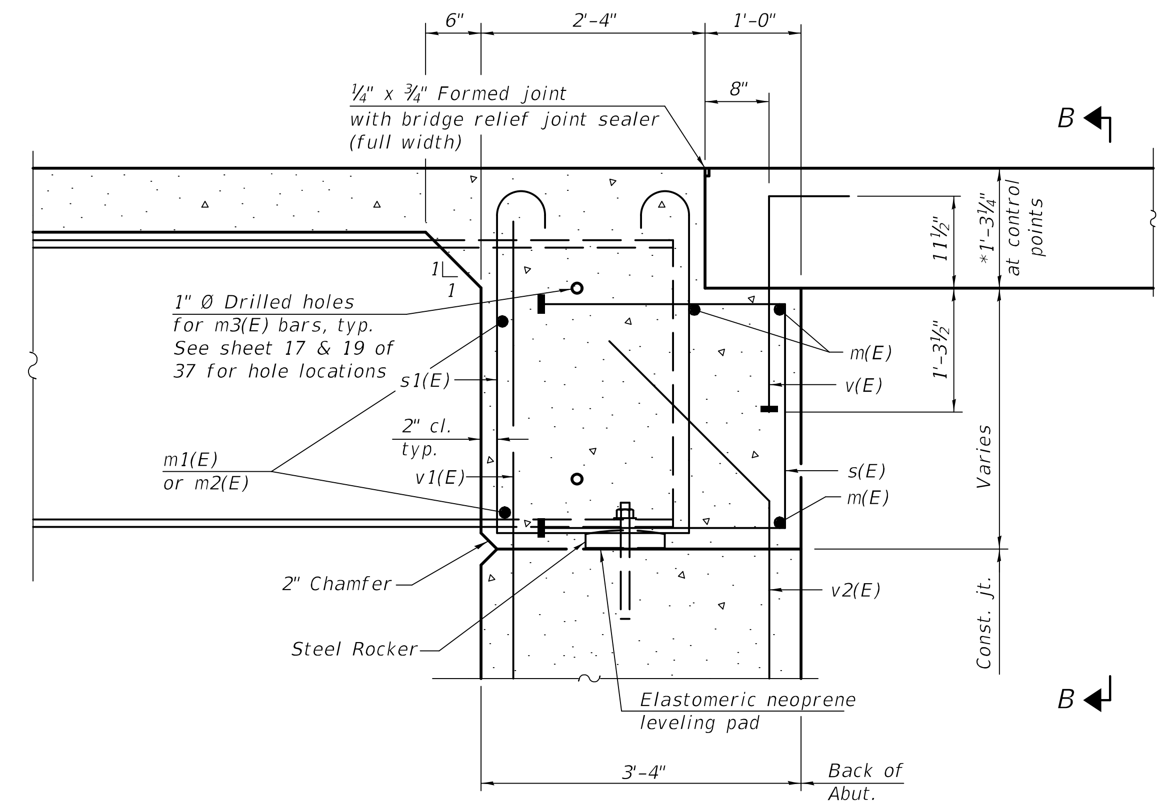
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	82

CONTRACT NO. 78522

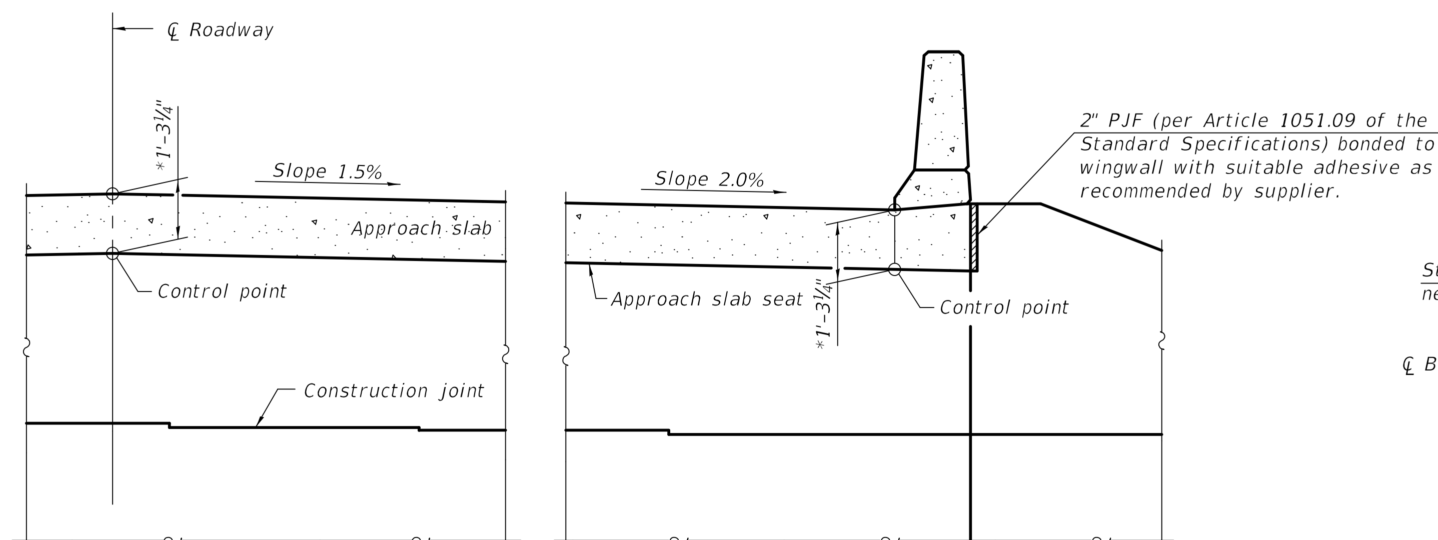
ILLINOIS FED. AID PROJECT



DIAPHRAGM AT ABUTMENT

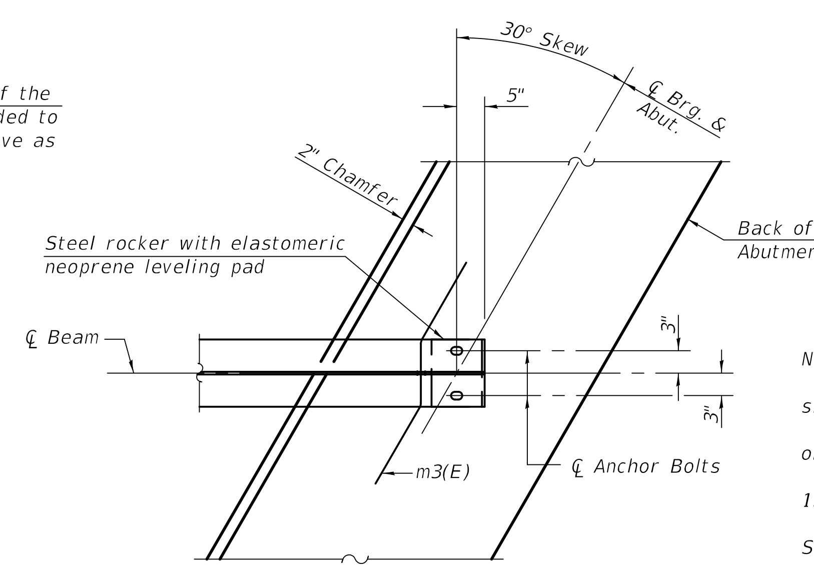


SECTION A-A
(at Rt. ∠'s)



SECTION B-B

*Prior to grinding



PLAN AT ABUTMENT
(Showing bottom flange of beam)

Notes:
Reinforcement bars in diaphragm are billed with superstructure on sheets 11 and 13 of 37.
Concrete in diaphragm is included with Concrete Superstructure on sheet 11 and 13 of 37.
For details of bars s(E), s1(E), m3(E), and v(E) see sheets 11 and 13 of 37.
The s(E) and s1(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.
The approach slab seat shall have a constant slope determined from the control points shown.
For bearing details see sheets 21 and 22 of 37.
Beams shall be braced for stability during erection and remain braced until deck is poured and cured.
The v1(E) and v2(E) bars are included with the abutment drawings on sheets 23, 24, 25, and 26 of 37.

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PEN TABLE = IDOT_VER02.tbl
MODEL NAME = PLOT
FILE NAME = 0910075-78522-14-DiaphDtls.dgn

ESCA CONSULTANTS, INC.
CIVIL & STRUCTURAL ENGINEERS

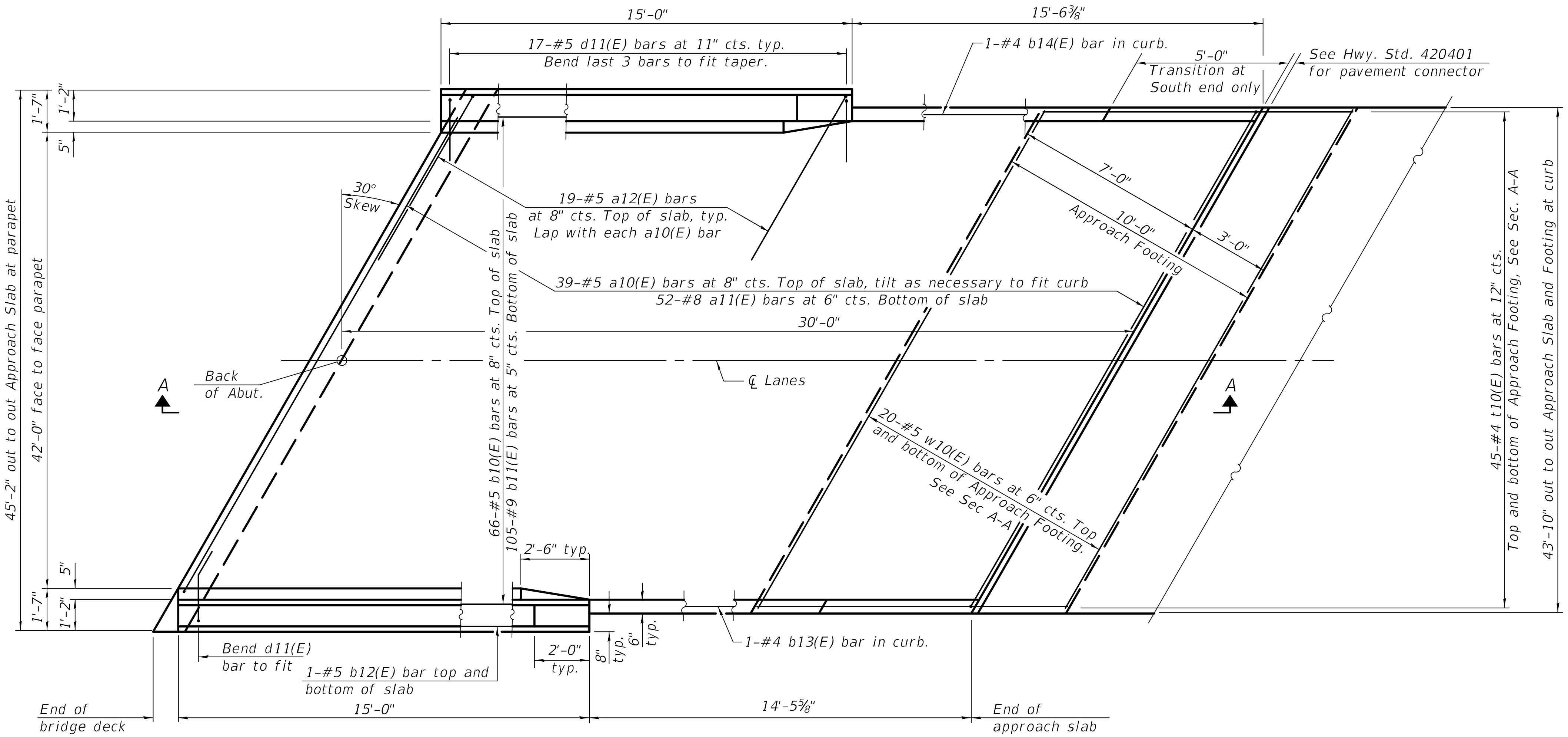
USER NAME = SKM	DESIGNED - RTM 11/17	REVISED -
ESCA PROJECT NO. 1259.08	CHECKED - RDP 11/17	REVISED -
PLOT SCALE = 0:2 ':" / in.	DRAWN - KAH 11/17	REVISED -
PLOT DATE = 3/19/2018 12:58:26 PM	CHECKED - RTM/ELH 02/18	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DIAPHRAGM DETAILS
STRUCTURE NO. 091-0075 (NB) & 091-0076 (SB)

SHEET NO. 14 OF 37 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	83
		CONTRACT NO. 78522		
		ILLINOIS FED. AID PROJECT		



PLAN

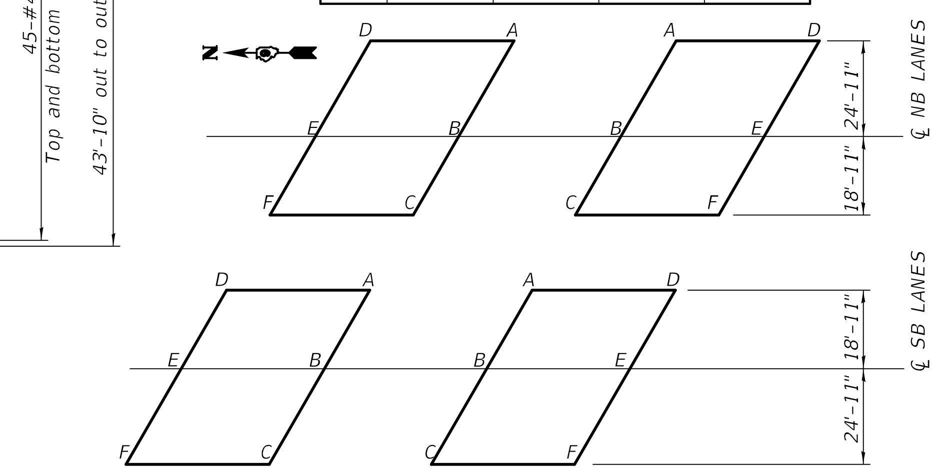
See sheet 16 of 37 for Section A-A, bill of material and additional details

NORTHBOUND (NB) TOP AND BOTTOM ELEVATIONS FOR APPROACH FOOTING

	North Approach		South Approach	
Point	Top	Bottom	Top	Bottom
A	420.14	419.31	420.98	420.15
B	420.52	419.69	421.37	420.54
C	420.14	419.31	420.98	420.15
D	420.08	419.25	421.04	420.21
E	420.47	419.64	421.42	420.59
F	420.08	419.25	421.04	420.21

SOUTHBOUND (SB) TOP AND BOTTOM ELEVATIONS FOR APPROACH FOOTING

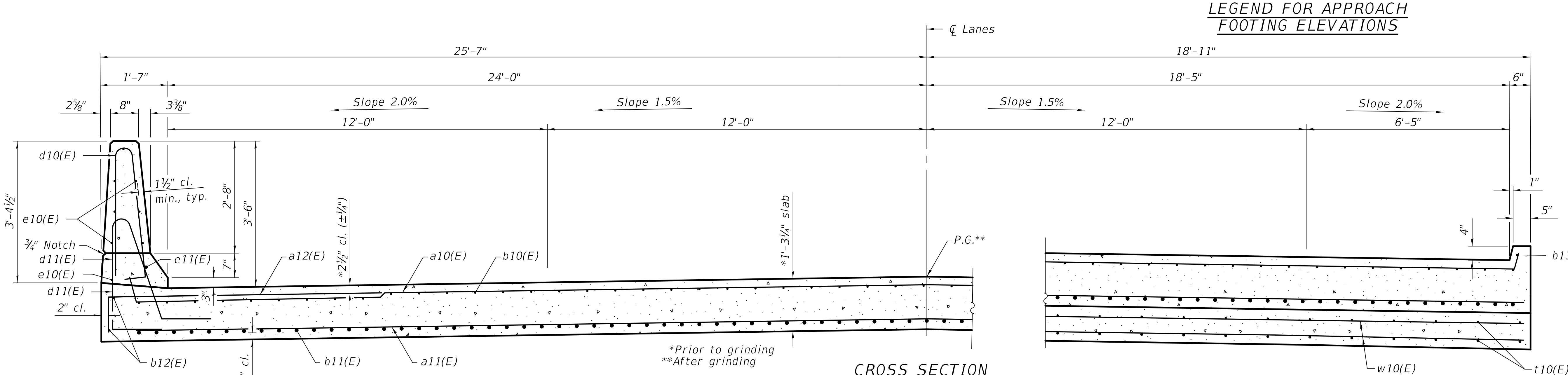
	North Approach		South Approach	
Point	Top	Bottom	Top	Bottom
A	420.56	419.73	421.63	420.80
B	420.81	419.98	421.89	421.06
C	420.28	419.45	421.34	420.51
D	420.49	419.66	421.70	420.87
E	420.74	419.91	421.97	421.14
F	420.20	419.37	421.42	420.59



NORTH APPROACH FOOTINGS

SOUTH APPROACH FOOTINGS

LEGEND FOR APPROACH FOOTING ELEVATIONS



NEAR ABUTMENT

CROSS SECTION

(Northbound Looking South)
(Southbound Looking North)

AT APPROACH FOOTING

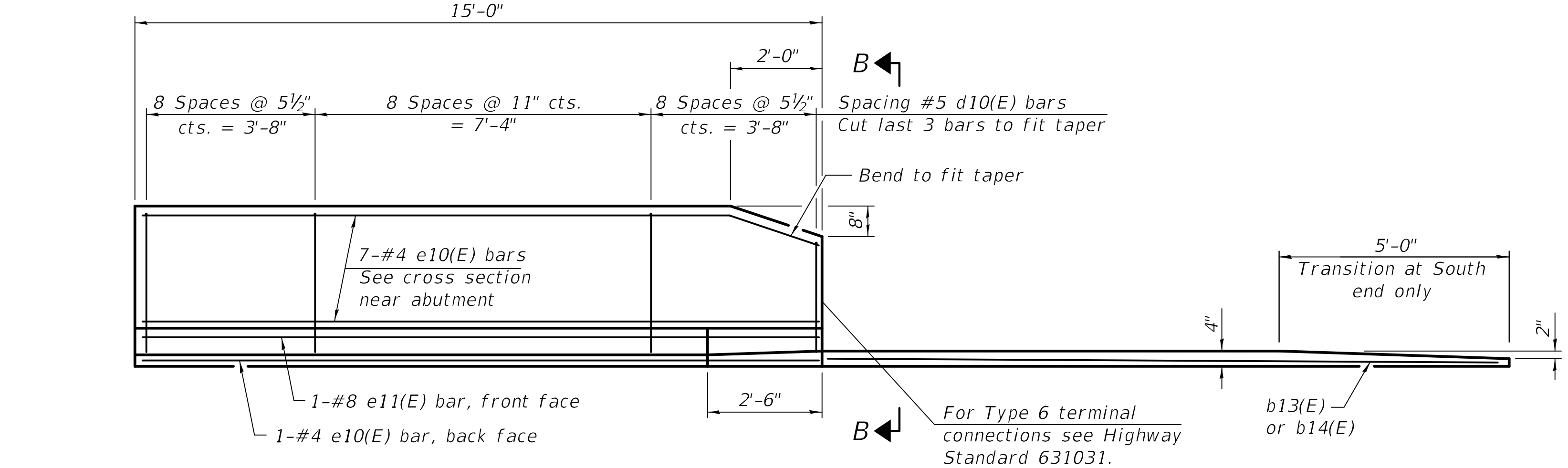
(Sheet 1 of 2)

ESCA CONSULTANTS, INC.	USER NAME = SKM	DESIGNED - RTM 11/17	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	ESCA PROJECT NO. 1259.08	CHECKED - RDP 11/17	REVISED -	
	PLOT SCALE = 0.2 ' / in.	DRAWN - KAH 11/17	REVISED -	
	PLOT DATE = 3/19/2018 12:58:27 PM	CHECKED - RTM/ELH 03/18	REVISED -	

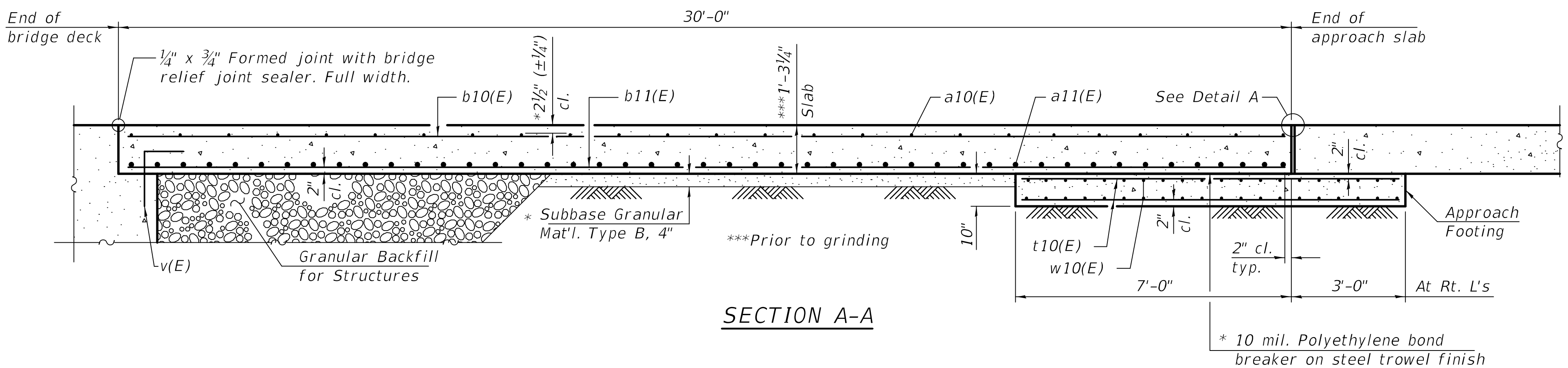
BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 091-0075 (NB) & 091-0076 (SB)

SHEET NO. 15 OF 37 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	84
		CONTRACT NO. 78522		
		ILLINOIS FED. AID PROJECT		



INSIDE ELEVATION OF PARAPET AND CURB



SECTION A-A

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 slab.

Parapet concrete shall be paid for as Concrete Superstructure.

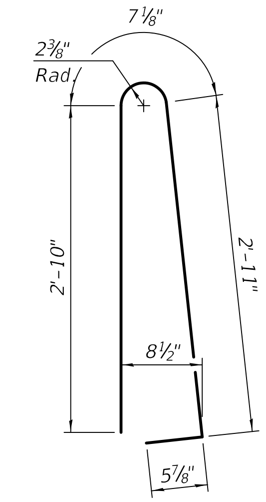
Approach slab shall be paid for as Concrete Superstructure (Approach Slab).

Approach footing concrete shall be paid for as Concrete Structures.

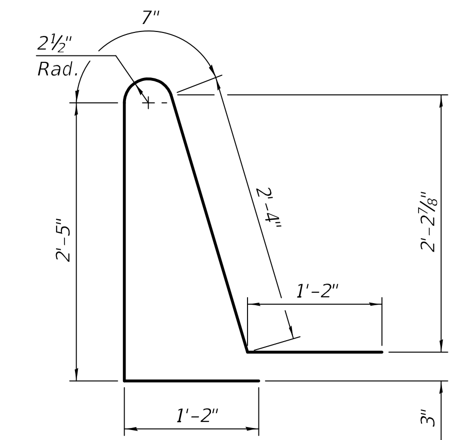
The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.

Cost of excavation for approach footing included with Concrete Structures.

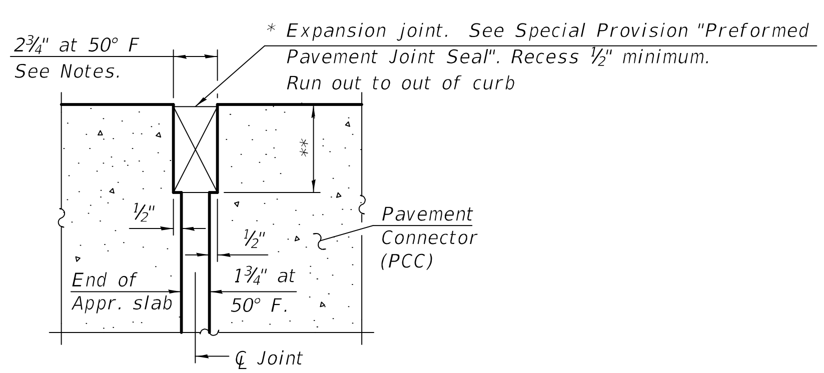
For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 37.



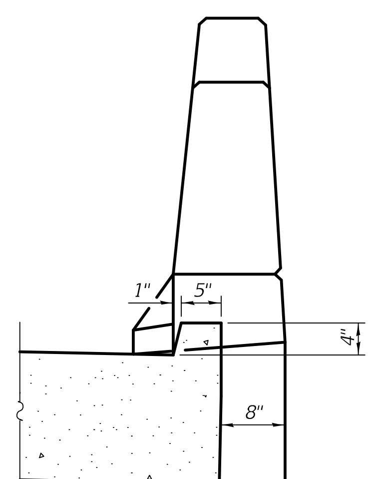
BAR d10(E)



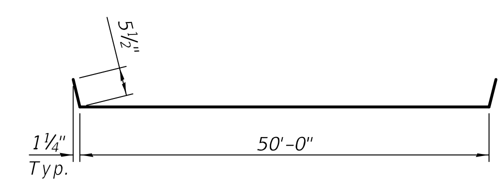
BAR d11(E)



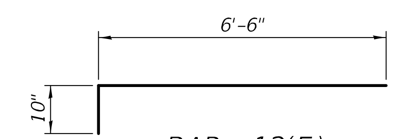
DETAIL A
(At Rt. L's)



VIEW B-B



BAR a10(E)



BAR a12(E)

* Cost included with Concrete Superstructure (Approach Slab).

** Per manufacturer recommendations

NORTHBOUND (NB)
TWO APPROACHES
BILL OF MATERIAL

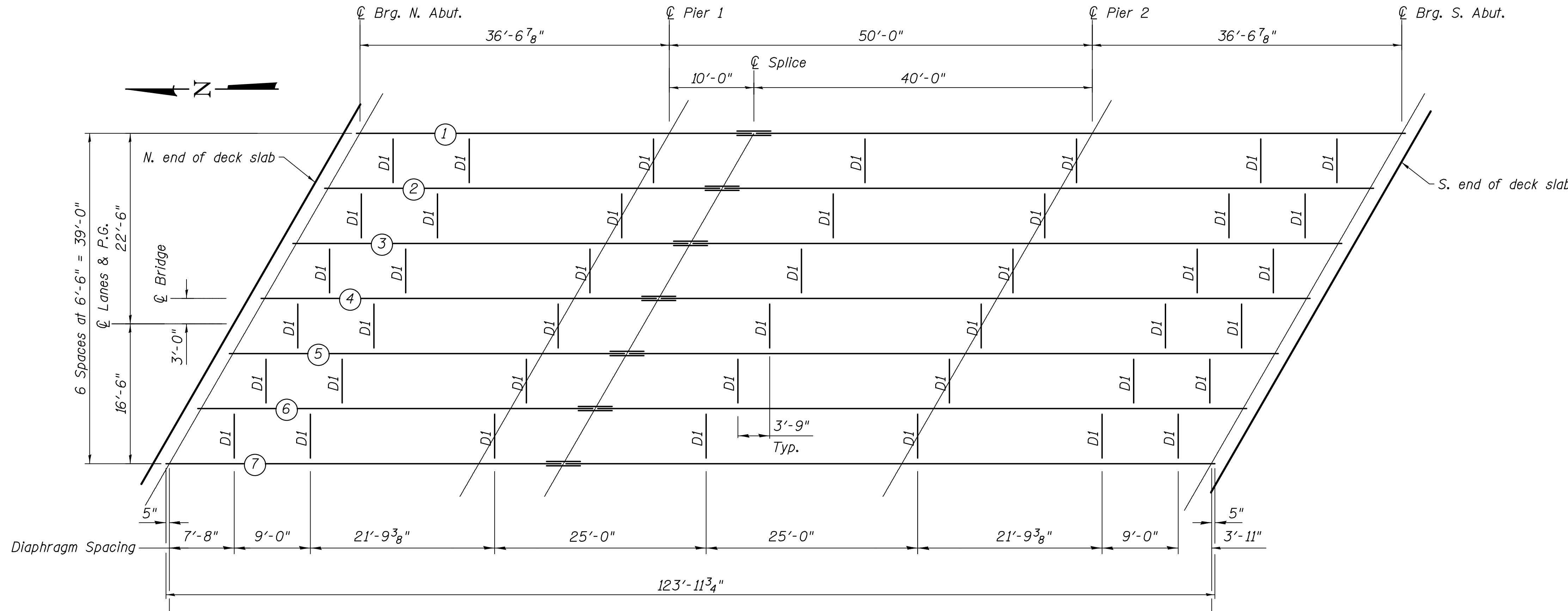
Bar	No.	Size	Length	Shape
a10(E)	78	#5	50'-11"	
a11(E)	104	#8	50'-2"	
a12(E)	76	#5	7'-4"	
b10(E)	132	#5	29'-8"	
b11(E)	210	#9	29'-8"	
b12(E)	8	#5	14'-8"	
b13(E)	2	#4	14'-1"	
b14(E)	2	#4	15'-2"	
d10(E)	100	#5	6'-10"	
d11(E)	68	#5	7'-8"	
e10(E)	32	#4	14'-8"	
e11(E)	4	#8	14'-8"	
t10(E)	180	#4	11'-2"	
w10(E)	80	#5	50'-2"	
Concrete Superstructure		Cu. Yd.	7.7	
Concrete Superstructure (Approach Slab)		Cu. Yd.	125.8	
Concrete Structures		Cu. Yd.	31.3	
Reinforcement Bars, Epoxy Coated		Pound	51340	

SOUTHBOUND (SB)
TWO APPROACHES
BILL OF MATERIAL

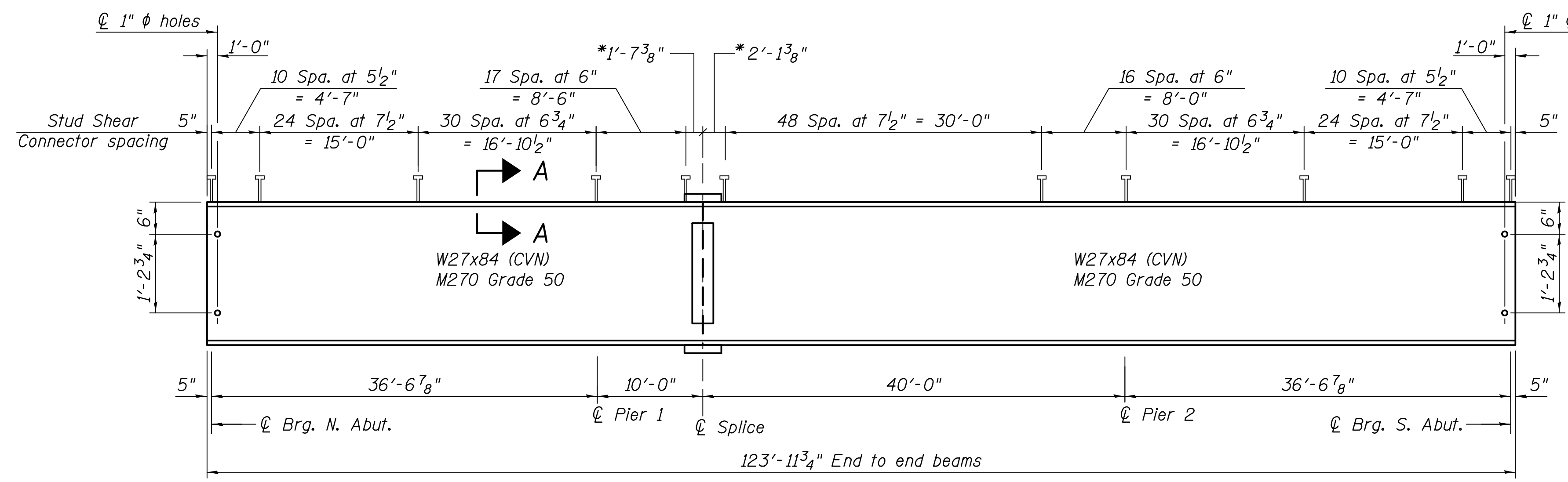
Bar	No.	Size	Length	Shape
a10(E)	78	#5	50'-11"	
a11(E)	104	#8	50'-2"	
a12(E)	76	#5	7'-4"	
b10(E)	132	#5	29'-8"	
b11(E)	210	#9	29'-8"	
b12(E)	8	#5	14'-8"	
b13(E)	2	#4	14'-1"	
b14(E)	2	#4	15'-2"	
d10(E)	100	#5	6'-10"	
d11(E)	68	#5	7'-8"	
e10(E)	32	#4	14'-8"	
e11(E)	4	#8	14'-8"	
t10(E)	180	#4	11'-2"	
w10(E)	80	#5	50'-2"	
Concrete Superstructure		Cu. Yd.	7.7	
Concrete Superstructure (Approach Slab)		Cu. Yd.	125.8	
Concrete Structures		Cu. Yd.	31.3	
Reinforcement Bars, Epoxy Coated		Pound	51340	

(Sheet 2 of 2)

Notes:
See sheet 18 of 37 for additional steel details.
Alll 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) denotes Charpy-V-Notch impact energy requirements, zone 2.

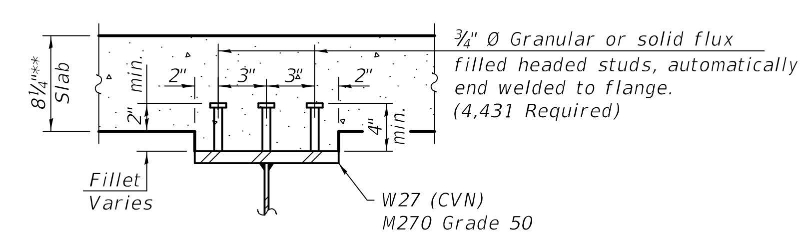


STEEL FRAMING PLAN



BEAM ELEVATION

* Omit shear connectors over splices



SECTION A-A

**Prior to grinding

TOP OF BEAM ELEVATIONS
(For fabrication only)

Beam	℄ Brg. N. Abut.	℄ Pier 1	℄ Splice	℄ Pier 2	℄ Brg. S. Abut.
1	420.81	420.99	421.04	421.24	421.43
2	420.92	421.10	421.15	421.36	421.54
3	421.03	421.21	421.25	421.45	421.64
4	421.11	421.29	421.33	421.53	421.72
5	421.08	421.26	421.31	421.51	421.69
6	420.96	421.14	421.19	421.39	421.57
7	420.82	421.00	421.05	421.25	421.44

Notes:
Elevations shown do not include deflection and are intended only for use in fabrication of steel beams.
Elevations at splice locations are top of flange (not splice plate).

ESCA CONSULTANTS, INC.

USER NAME = SKM	DESIGNED - RTM 11/17	REVISED -	
ESCA PROJECT NO. 1259.08	CHECKED - RDP 11/17	REVISED -	
PLOT SCALE = 0:2 ' / in.	DRAWN - KAH 11/17	REVISED -	
PLOT DATE = 3/19/2018 12:58:29 PM	CHECKED - RTM/ELH 03/18	REVISED -	

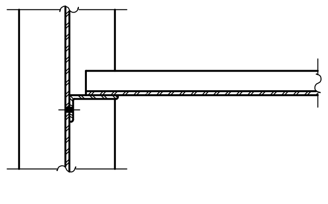
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STEEL FRAMING PLAN & DETAILS (NB)
STRUCTURE NO. 091-0075 (NB)

SHEET NO. 17 OF 37 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	86

CONTRACT NO. 78522
ILLINOIS FED. AID PROJECT



SECTION A-A

GIRDER REACTION TABLE					
		Abut.		Pier	
		Interior	Exterior	Interior	Exterior
LLDF		0.707	0.530	0.707	0.530
OCF		1.12	1.12	–	–
RDC1	(k)	10.1	9.9	37.8	37.4
RDC2	(k)	1.9	1.9	7.2	7.2
RDW	(k)	3.9	3.9	14.6	14.6
R℄	(k)	46.7	35.0	79.3	59.4
R_{IM}	(k)	13.2	9.9	18.9	13.4
R_{Total}	(k)	75.8	60.6	157.8	132.0

INTERIOR GIRDER MOMENT TABLE				
		0.4 Sp. 1 or 0.6 Sp. 3	Pier	0.5 Sp. 2
Is	(in^4)	2850	2850	2850
Ic(n)	(in^4)	9262	9262	9262
Ic(3n)	(in^4)	7033	7033	7033
Ic(cr)	(in^4)	–	4515	–
Ss	(in^3)	213	213	213
Sc(n)	(in^3)	344	344	344
Sc(3n)	(in^3)	313	313	313
Sc(cr)	(in^3)	–	264	–
DC1	(k/')	0.755	0.755	0.755
MDC1	('k)	65.0	150.0	90.8
DC2	(k/')	0.148	0.148	0.148
MDC2	('k)	12.4	28.8	17.5
DW	(k/')	0.300	0.300	0.300
MDW	('k)	25.2	58.3	35.4
LLDF		0.650	0.631	0.615
$M_{℄ + IM}$	('k)	327.3	400.1	350.1
Mu (Strength I)	('k)	705.7	1011.2	800.3
Øf Mn	('k)	1793.3	1338.3	1793.3
fs DC1	(ksi)	3.66	6.82	5.12
fs DC2	(ksi)	0.49	1.31	0.67
fs DW	(ksi)	0.99	2.65	1.36
fs (℄+IM)	(ksi)	11.60	18.18	12.20
fs (Service II)	(ksi)	20.22	34.41	23.01
0.95Rh Fyf	(ksi)	47.50	47.50	47.50
fs (Total)(Strength I)	(ksi)	26.97	45.95	30.63
Øf Fn	(ksi)	50	50	50
Vf	(k)	21.72	20.77	–

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) in uncracked sections 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 sections, due to both short-term composite live loads and long-term composite (superimposed) dead loads ($in.^4$ and $in.^3$).

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

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

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

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

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

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

$M_{℄ + IM}$: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

Mu (Strength I): Factored design moment (kip-ft.).
$1.25\ (MDC1 + MDC2) + 1.5\ MDW + 1.75\ M_{℄ + IM}$

Øf Mn: 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 (℄+IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live load plus impact loads as calculated below (ksi).
$M_{℄ + IM}$ / Sc(n) or $M_{℄ + IM}$ / Sc(cr) as applicable.

fs (Service II): Sum of stresses as computed below (ksi).
$fsDC1 + fsDC2 + fsDW + 1.3\ fs(_{℄ + IM})$

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).
$1.25\ (fsDC1 + fsDC2) + 1.5\ fsDW + 1.75\ fs(_{℄ + IM})$

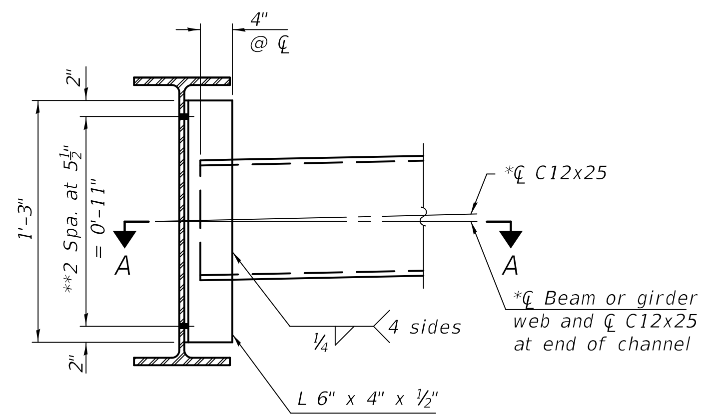
Øf Fn: Non-Compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7 or 6.10.8 (ksi).

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

LLDF: Live Load Distribution factor computed according to Table 4.6.2.2.2b-1 and Table 4.6.2.2.2d-1.

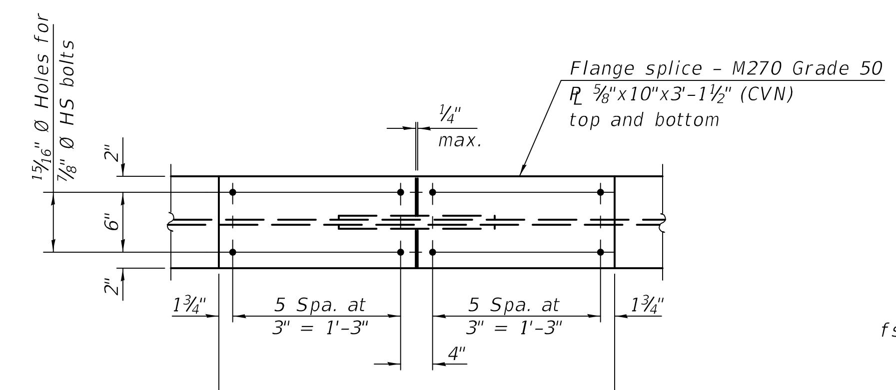
OCF: Obtuse correction factor computed according to Table 4.6.2.2.3c-1 or as simplified in Section 3.3.1 of the Bridge Manual.

Note:
$M_{℄}$ and $R_{℄}$ include the effects of centrifugal force and superelevation.

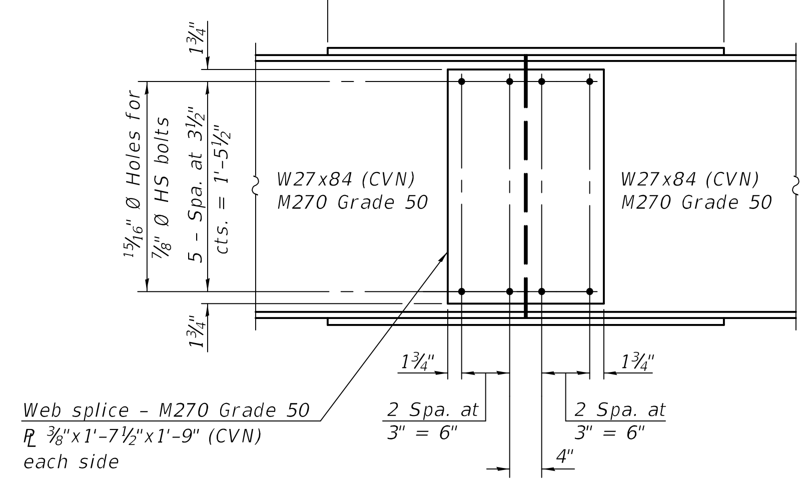


INTERIOR DIAPHRAGM (D1)
(42 Required)

Note:
Two hardened washers required for each set of oversized holes.
*Alternate channels are permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section.
The alternate, if utilized, shall be provided at no additional cost to the Department.
**¾" Ø HS bolts, 15⁄16" Ø holes



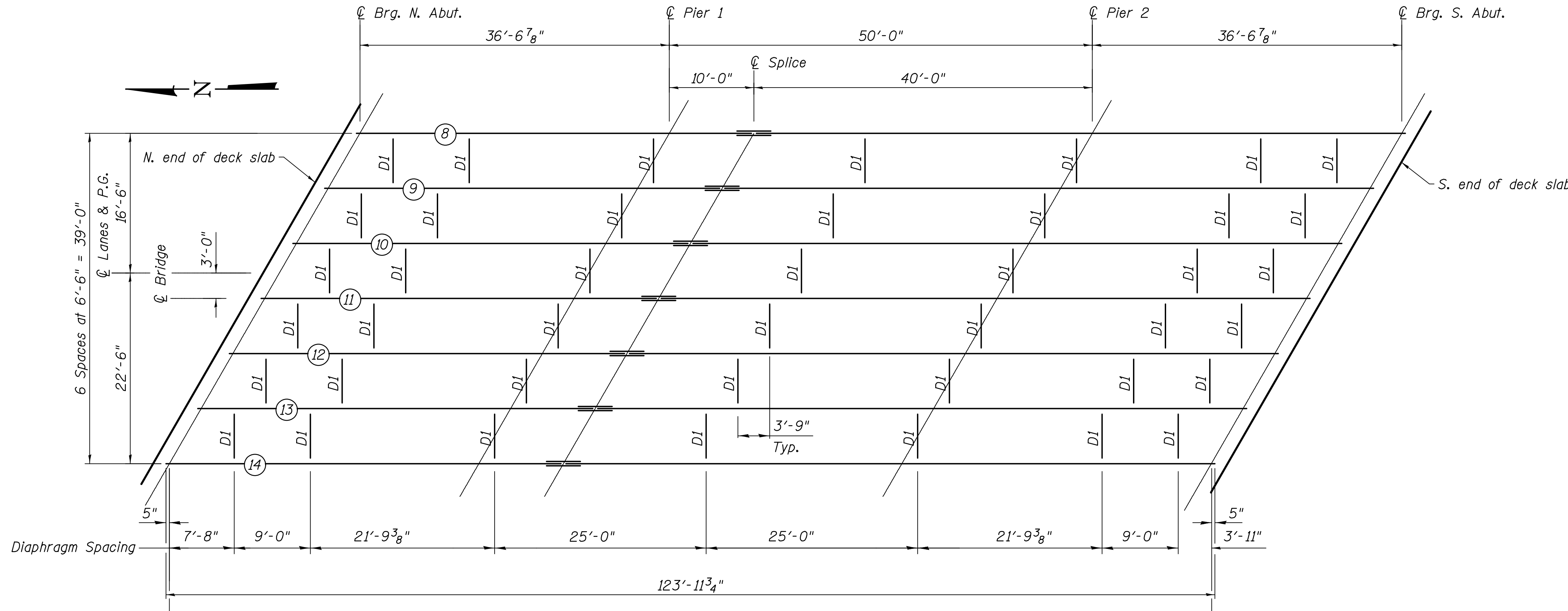
PLAN



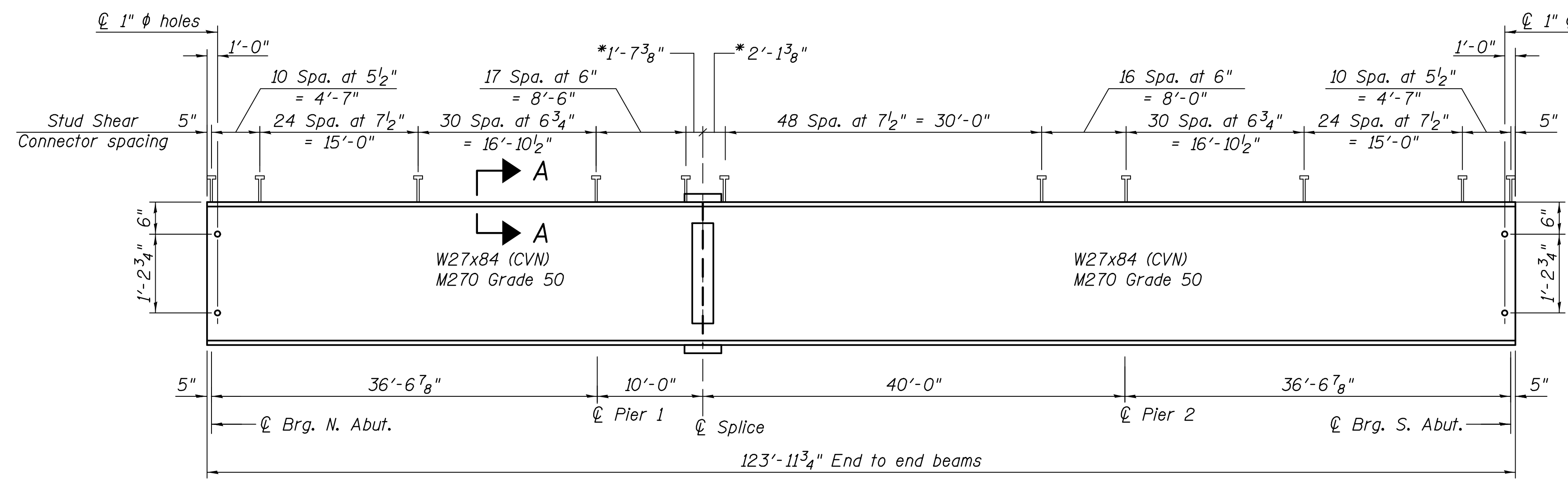
ELEVATION

SPLICE DETAIL
(7 Required)

Notes:
See sheet 20 of 37 for additional steel details.
Alll 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) denotes Charpy-V-Notch impact energy requirements, zone 2.



STEEL FRAMING PLAN



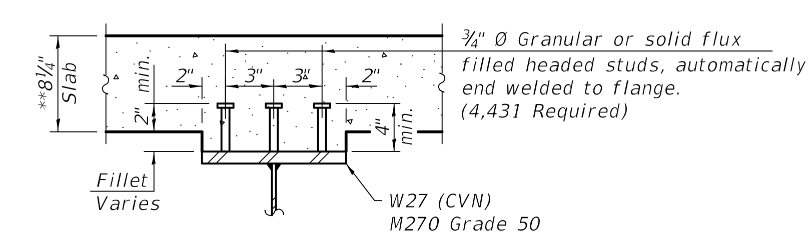
BEAM ELEVATION

* Omit shear connectors over splices

TOP OF BEAM ELEVATIONS

(For fabrication only)

Beam	℄ Brg. N. Abut.	℄ Pier 1	℄ Splice	℄ Pier 2	℄ Brg. S. Abut.
8	421.25	421.48	421.55	421.80	422.04
9	421.35	421.58	421.65	421.90	422.13
10	421.42	421.65	421.72	421.97	422.21
11	421.40	421.64	421.71	421.96	422.19
12	421.28	421.52	421.59	421.84	422.07
13	421.14	421.37	421.44	421.69	421.93
14	420.99	421.22	421.29	421.54	421.77



SECTION A-A

**Prior to grinding

Notes:
Elevations shown do not include deflection and are intended only for use in fabrication of steel beams.
Elevations at splice locations are top of flange (not splice plate).

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USER NAME = SKM	DESIGNED - RTM 11/17	REVISED -	
ESCA PROJECT NO. 1259.08	CHECKED - RDP 11/17	REVISED -	
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PLOT DATE = 3/19/2018 12:58:30 PM	CHECKED - RTM/ELH 03/18	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

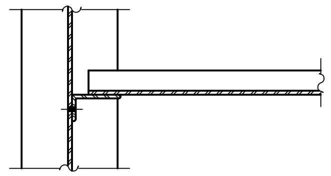
STEEL FRAMING PLAN & DETAILS (SB)
STRUCTURE NO. 091-0076 (SB)

SHEET NO. 19 OF 37 SHEETS

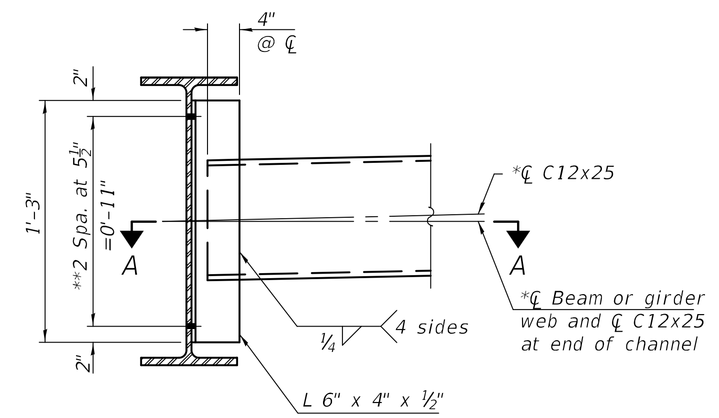
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	88

CONTRACT NO. 78522

ILLINOIS FED. AID PROJECT



SECTION A-A



INTERIOR DIAPHRAGM (D1)

(42 Required)

Note:

Two hardened washers required for each set of oversized holes.

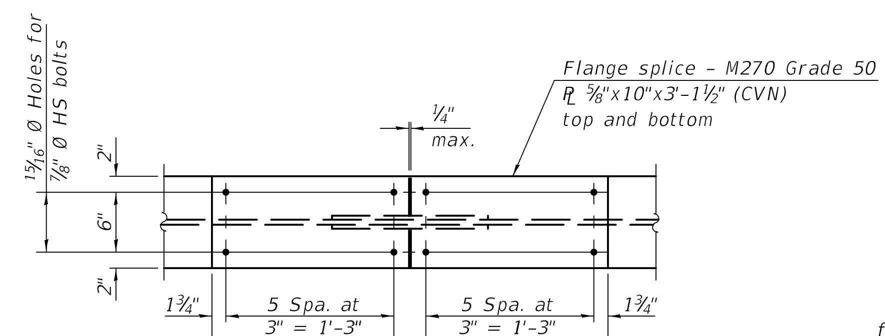
*Alternate channels are permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section.

The alternate, if utilized, shall be provided at no additional cost to the Department.

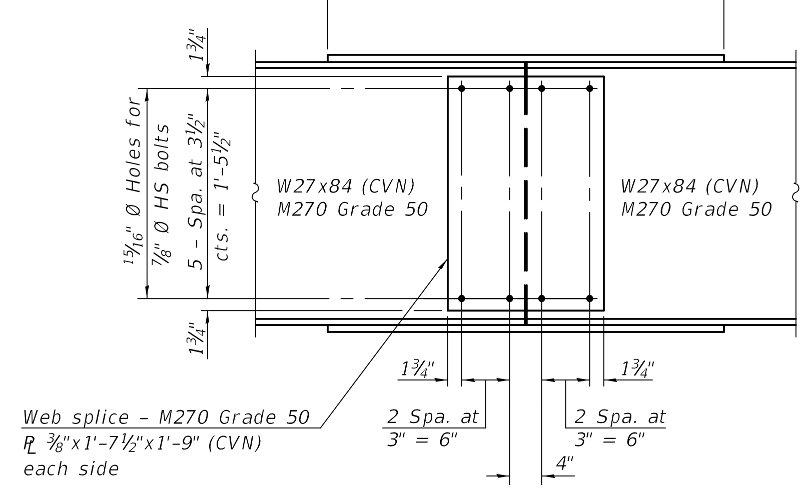
**¾" Ø HS bolts, 15⁄16" Ø holes

GIRDER REACTION TABLE					
		Abut.		Pier	
		Interior	Exterior	Interior	Exterior
LLDF		0.707	0.530	0.707	0.530
OCF		1.12	1.12	-	-
RDC1	(k)	10.1	9.9	37.8	37.4
RDC2	(k)	1.9	1.9	7.2	7.2
RDW	(k)	3.9	3.9	14.6	14.6
R_{LL}	(k)	46.7	35.0	79.3	59.4
R_{IM}	(k)	13.2	9.9	18.9	13.4
R_{Total}	(k)	75.8	60.6	157.8	132.0

INTERIOR GIRDER MOMENT TABLE				
		0.4 Sp. 1 or 0.6 Sp. 3	Pier	0.5 Sp. 2
Is	(in^4)	2850	2850	2850
Ic(n)	(in^4)	9262	9262	9262
Ic(3n)	(in^4)	7033	7033	7033
Ic(cr)	(in^4)	-	4515	
Ss	(in^3)	213	213	213
Sc(n)	(in^3)	344	344	344
Sc(3n)	(in^3)	313	313	313
Sc(cr)	(in^3)	-	264	
DC1	(k/')	0.755	0.755	0.755
MDC1	('k)	65.0	150.0	90.8
DC2	(k/')	0.148	0.148	0.148
MDC2	('k)	12.4	28.8	17.5
DW	(k/')	0.300	0.300	0.300
MDW	('k)	25.2	58.3	35.4
LLDF		0.650	0.631	0.615
M_{LL+IM}	('k)	327.3	400.1	350.1
Mu (Strength I)	('k)	705.7	1011.2	800.3
Øf Mn	('k)	1793.3	1338.3	1793.3
fs DC1	(ksi)	3.66	6.82	5.12
fs DC2	(ksi)	0.49	1.31	0.67
fs DW	(ksi)	0.99	2.65	1.36
fs (LL+IM)	(ksi)	11.60	18.18	12.20
fs (Service II)	(ksi)	20.22	34.41	23.01
0.95Rh Fyf	(ksi)	47.50	47.50	47.50
fs (Total)(Strength I)	(ksi)	26.97	45.95	30.63
Øf Fn	(ksi)	50	50	50
Vf	(k)	21.72	20.77	-



PLAN



ELEVATION

SPLICE DETAIL

(7 Required)

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) in uncracked sections 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 sections, due to both short-term composite live loads and long-term composite (superimposed) dead loads (in.⁴ and in.³).

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

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

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

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

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

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

M_{LL+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_{LL+IM}

Øf Mn: 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 (LL+IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live load plus impact loads as calculated below (ksi).
M_{LL+IM} / Sc(n) or M_{LL+IM} / Sc(cr) as applicable.

fs (Service II): Sum of stresses as computed below (ksi).
fsDC1 + fsDC2 + fsDW + 1.3 $fs_{(LL+IM)}$

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 $fs_{(LL+IM)}$

Øf 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 span computed according to Article 6.10.10.

LLDF: Live Load Distribution factor computed according to Table 4.6.2.2.2b-1 and Table 4.6.2.2.2d-1.

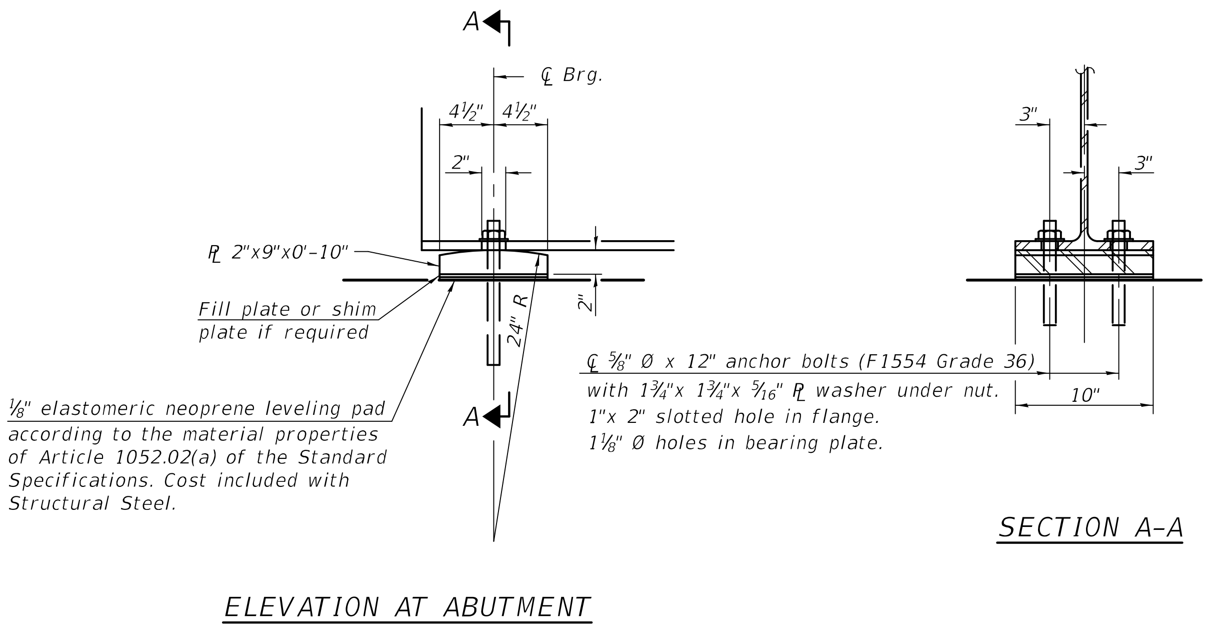
OCF: Obtuse correction factor computed according to Table 4.6.2.2.3c-1 or as simplified in Section 3.3.1 of the Bridge Manual.

Note:
M_{LL} and R_{LL} include the effects of centrifugal force and superelevation.

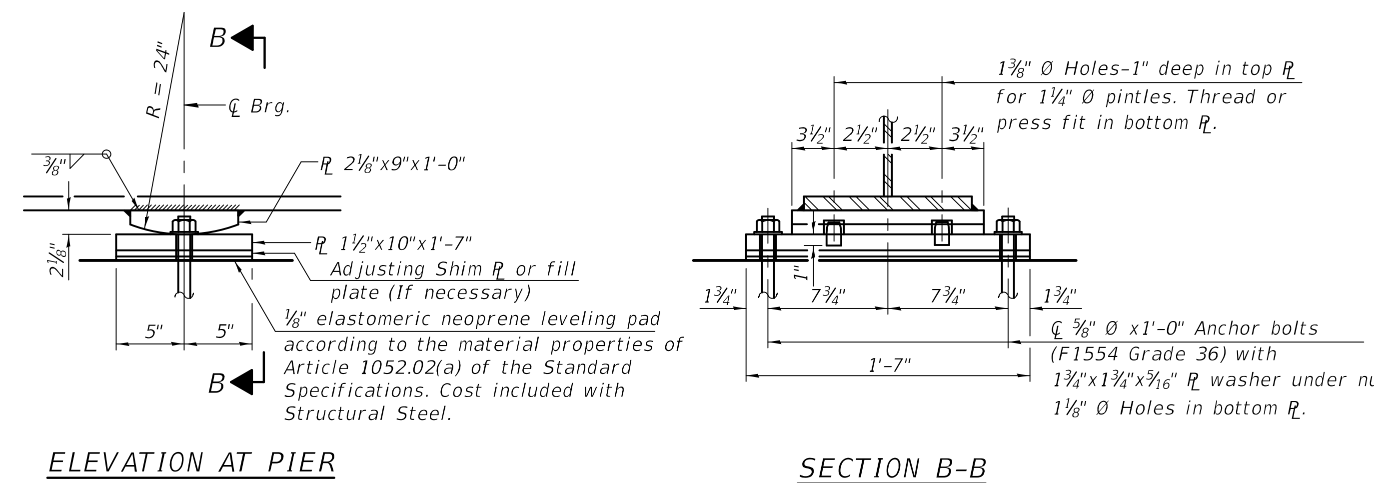
ESCA CONSULTANTS, INC.	USER NAME = SKM	DESIGNED - RTM 11/17	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	ESCA PROJECT NO. 1259.08	CHECKED - RDP 11/17	REVISED -	
	PLOT SCALE = 0.2 ' / in.	DRAWN - KAH 11/17	REVISED -	
	PLOT DATE = 3/19/2018 12:58:31 PM	CHECKED - RTM/ELH 03/18	REVISED -	

STEEL FRAMING DETAILS (SB)
STRUCTURE NO. 091-0076 (SB)
SHEET NO. 20 OF 37 SHEETS

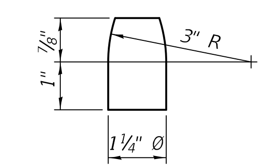
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	89
		CONTRACT NO. 78522		
		ILLINOIS FED. AID PROJECT		



FIXED BEARING AT ABUTMENT



FIXED BEARING AT PIER



PINTLE

BEARING FILL PLATES

Location		Thickness
North Abutment	Beam 4	⅜"
Pier 1	Beam 4	⅜"
Pier 2	Beam 4	⅜"
South Abutment	Beam 4	⅜"

Notes:

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

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.

Fill plates are required at the locations shown in the table on this sheet and shall be placed as shown on bearing details.

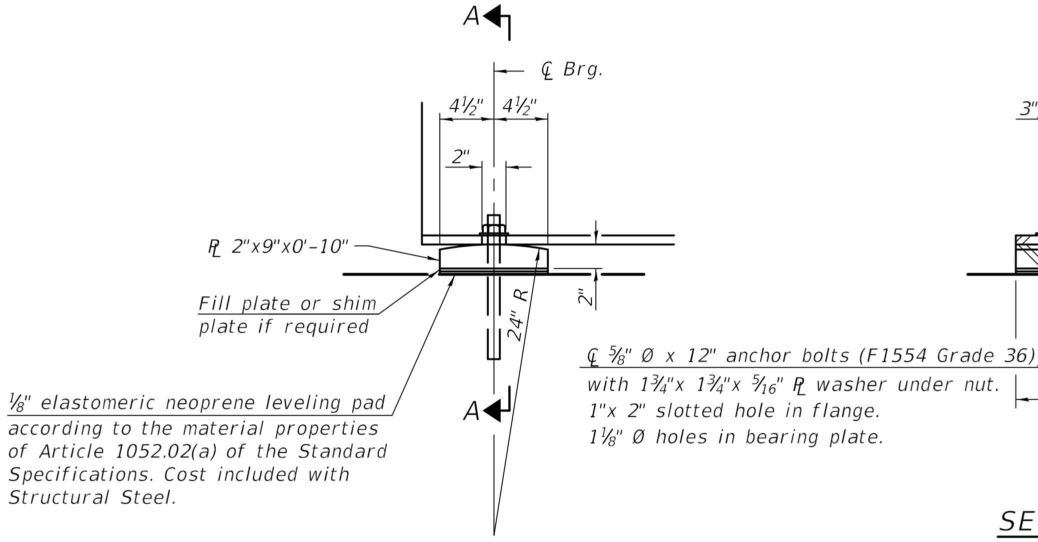
Two ⅛ in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

The anchor bolt sizes and grades shown in the Fixed Bearing at Pier detail constitute a calculated seismic structural fuse. Substitution of higher diameter and/or grade anchor bolts will not be allowed.

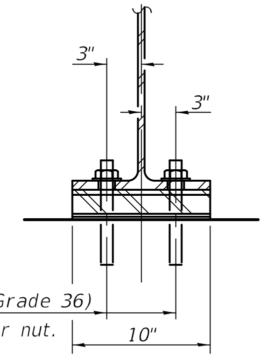
The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M270 Grade 50.

BILL OF MATERIAL

Item	Unit	Total
Anchor Bolts, ⅝"	Each	56

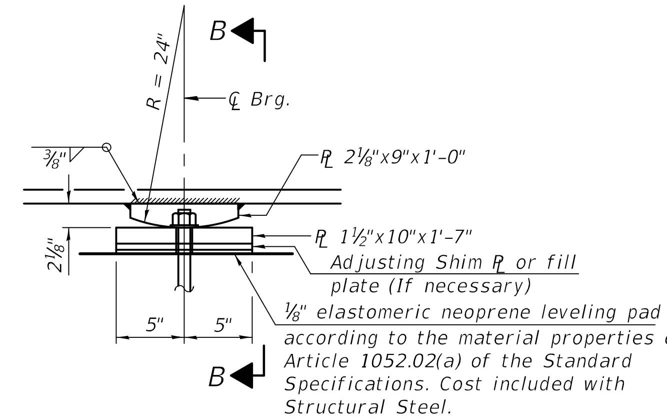


ELEVATION AT ABUTMENT

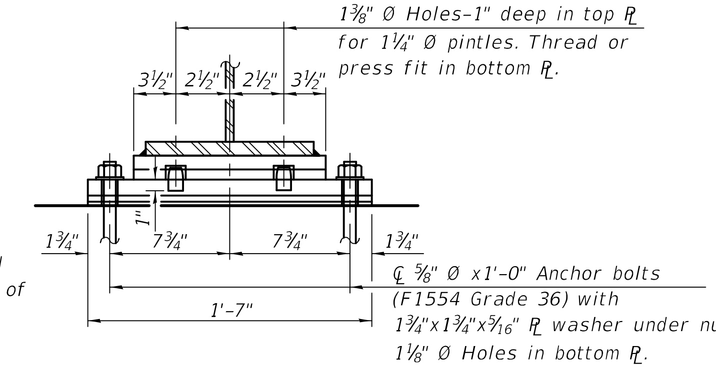


SECTION A-A

FIXED BEARING AT ABUTMENT

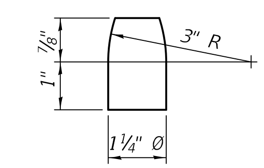


ELEVATION AT PIER



SECTION B-B

FIXED BEARING AT PIER



PINTLE

BEARING FILL PLATES

Location		Thickness
North Abutment	Beam 10	¼"
Pier 1	Beam 10	¼"
Pier 2	Beam 10	¼"
South Abutment	Beam 10	¼"

Notes:
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

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.

Fill plates are required at the locations shown in the table on this sheet and shall be placed as shown on bearing details.

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

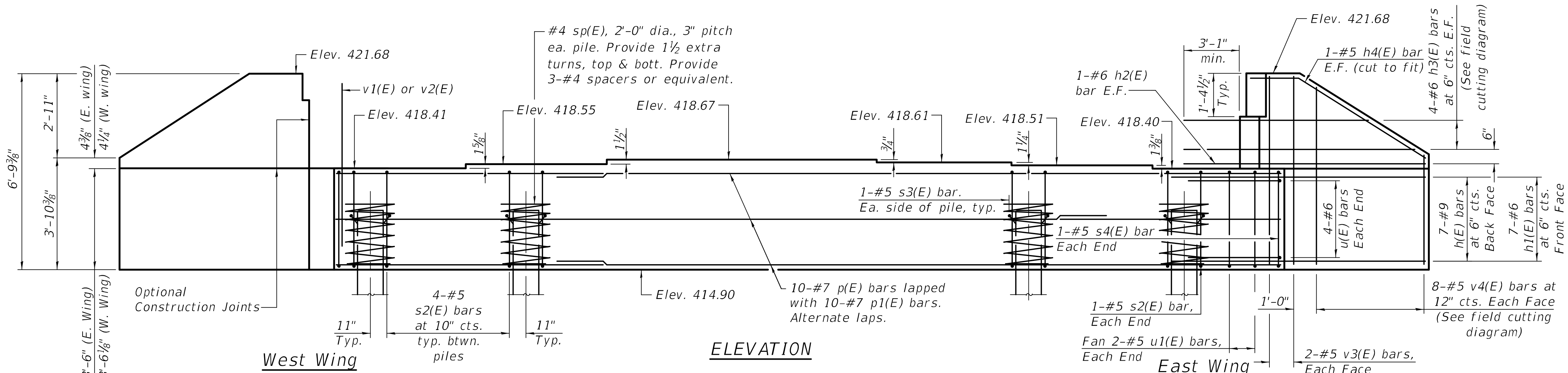
The anchor bolt sizes and grades shown in the Fixed Bearing at Pier detail constitute a calculated seismic structural fuse. Substitution of higher diameter and/or grade anchor bolts will not be allowed.

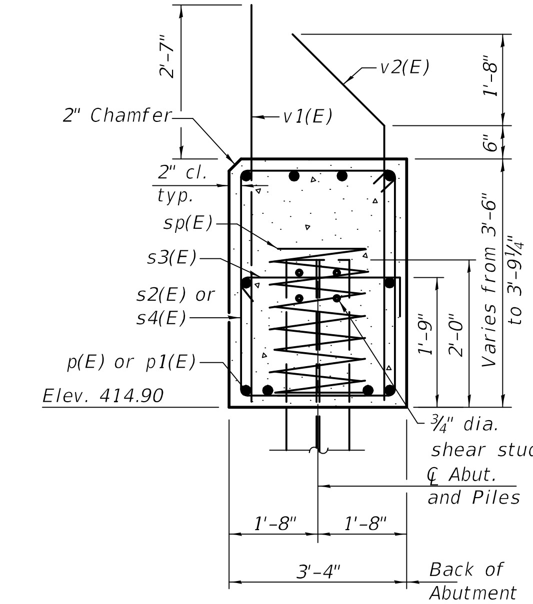
The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M270 Grade 50.

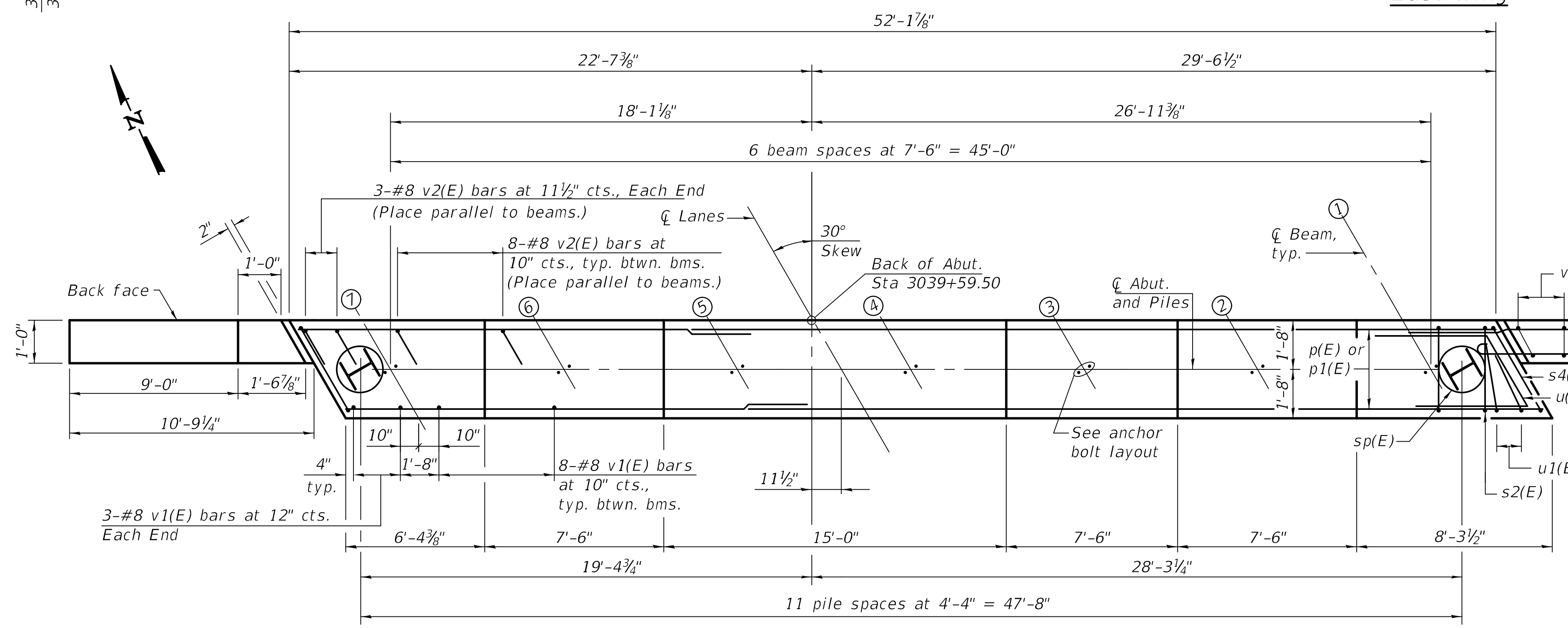
BILL OF MATERIAL

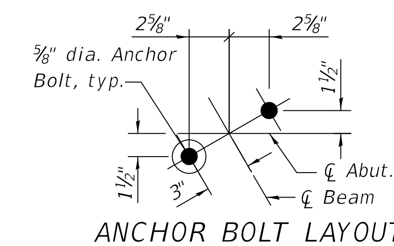
Item	Unit	Total
Anchor Bolts, ⅝"	Each	56

Notes:
Pour steps monolithically with cap.
For details of piles see sheet 31 of 37.
Space reinforcement in cap to miss anchor bolts.









MINIMUM BAR LAP

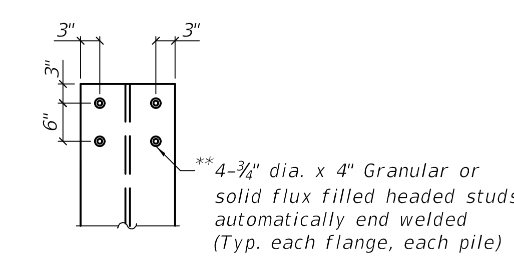
#7 bars = 3'-10"

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	14	#9	16'-0"	
h1(E)	14	#6	11'-8"	
h2(E)	4	#6	13'-5"	
h3(E)	8	#6	21'-0"	
h4(E)	4	#5	10'-1"	
p(E)	10	#7	36'-0"	
p1(E)	10	#7	19'-10"	
* sp(E)	12	#4	2'-0"	
s2(E)	46	#5	13'-3"	
s3(E)	24	#5	4'-5"	
s4(E)	2	#5	14'-2"	
u(E)	8	#6	11'-0"	
u1(E)	4	#5	8'-2"	
v1(E)	54	#8	5'-11"	
v2(E)	54	#8	6'-2"	
v3(E)	8	#5	6'-5"	
v4(E)	16	#5	9'-7"	

Structure Excavation	Cu. Yd.	117
Concrete Structures	Cu. Yd.	27.8
Reinforcement Bars, Epoxy Coated	Pound	5900
Furnishing Steel Piles, HP 14x102	Foot	1089
Driving Piles	Foot	1089
Pile Shoes	Each	12
Test Pile, Steel HP 14x102	Each	1

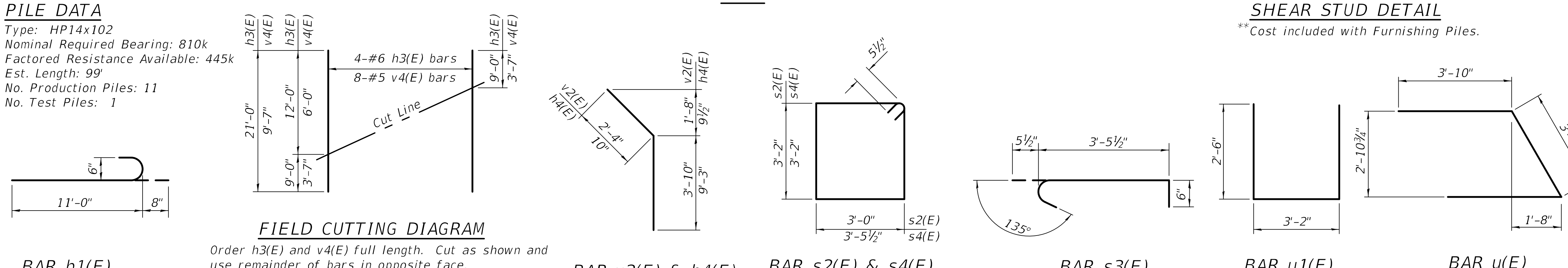
*Length is height of spiral



**Cost included with Furnishing Piles.

PILE DATA

Type: HP14x102
Nominal Required Bearing: 810k
Factored Resistance Available: 445k
Est. Length: 99'
No. Production Piles: 11
No. Test Piles: 1



Order h3(E) and v4(E) full length. Cut as shown and use remainder of bars in opposite face.

ESCA CONSULTANTS, INC.

USER NAME = SKM	DESIGNED - KJA	11/17	REVISED -
ESCA PROJECT NO. 1259.08	CHECKED - RDP	11/17	REVISED -
PLOT SCALE = 0:2 '/' / in.	DRAWN - KAH	11/17	REVISED -
PLOT DATE = 3/19/2018 12:58:34 PM	CHECKED - KJA/ELH	03/18	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

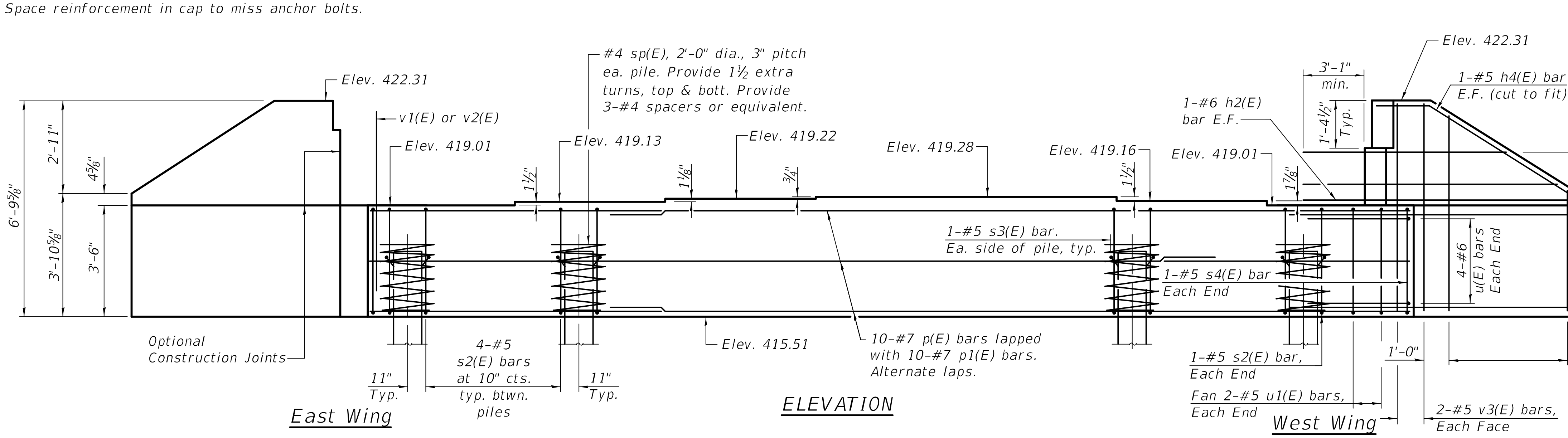
NORTH ABUTMENT (NB)
STRUCTURE NO. 091-0075 (NB)

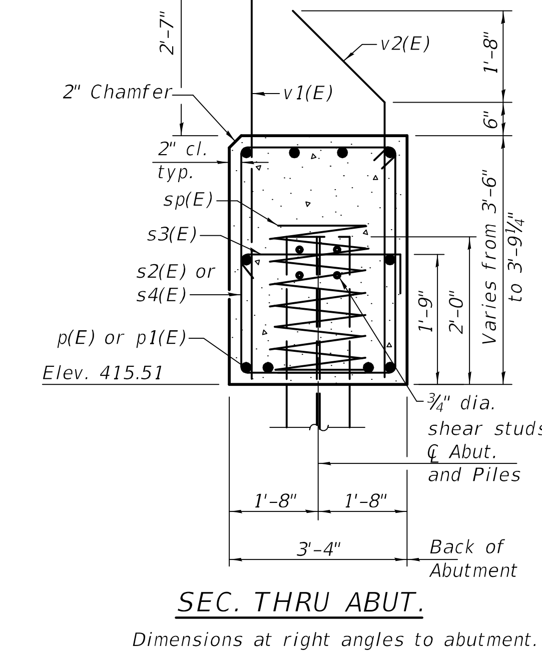
SHEET NO. 23 OF 37 SHEETS

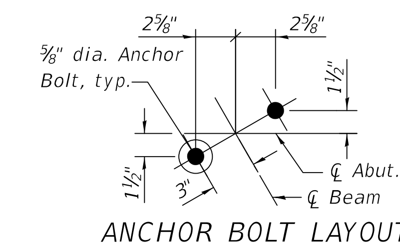
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	92

CONTRACT NO. 78522
ILLINOIS FED. AID PROJECT

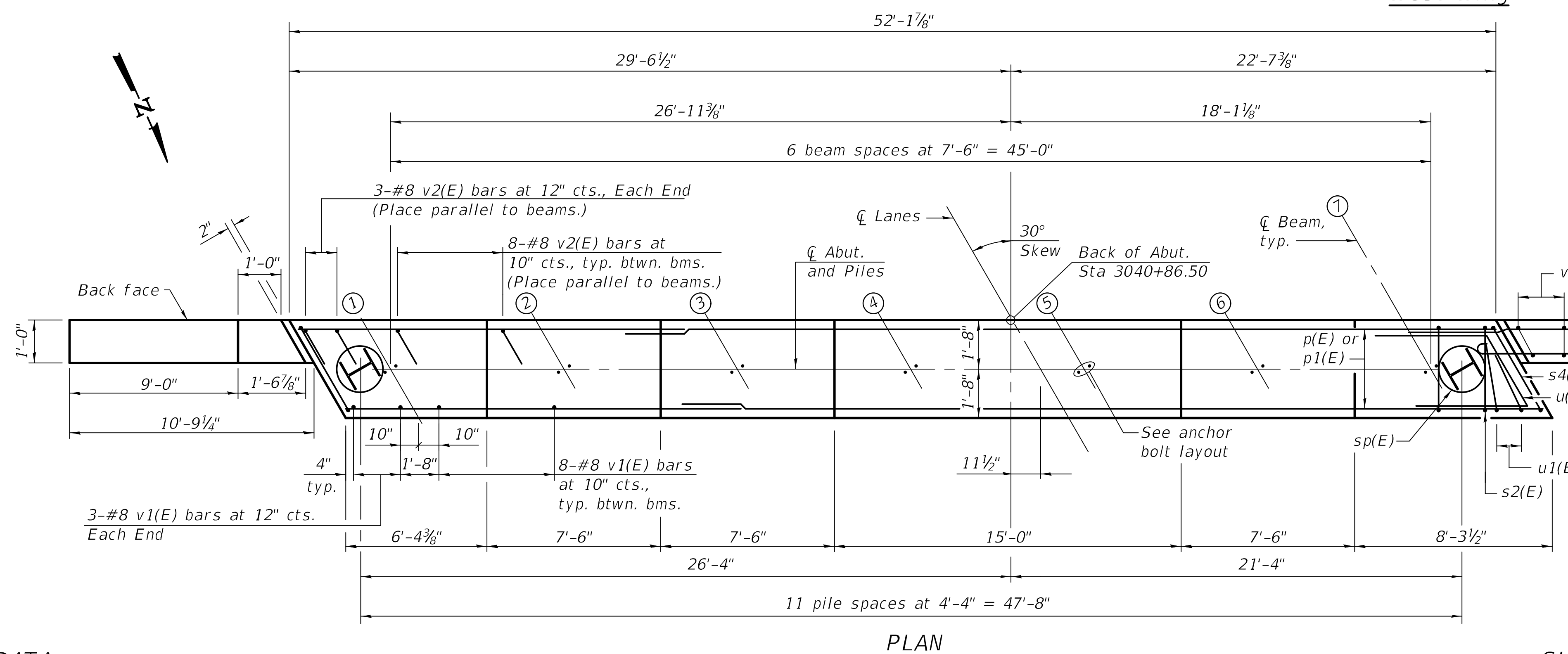
Notes:
Pour steps monolithically with cap.
For details of piles see sheet 31 of 37.
Space reinforcement in cap to miss anchor bolts.

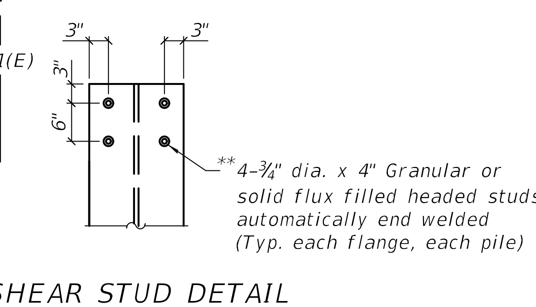






MINIMUM BAR LAP
#7 bars = 3'-10"





**Cost included with Furnishing Piles.

BILL OF MATERIAL

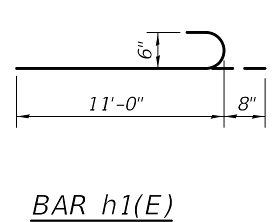
Bar	No.	Size	Length	Shape
h(E)	14	#9	16'-0"	
h1(E)	14	#6	11'-8"	
h2(E)	4	#6	13'-5"	
h3(E)	8	#6	21'-0"	
h4(E)	4	#5	10'-1"	
p(E)	10	#7	36'-0"	
p1(E)	10	#7	19'-10"	
* sp(E)	12	#4	2'-0"	
s2(E)	46	#5	13'-3"	
s3(E)	24	#5	4'-5"	
s4(E)	2	#5	14'-2"	
u(E)	8	#6	11'-0"	
u1(E)	4	#5	8'-2"	
v1(E)	54	#8	5'-11"	
v2(E)	54	#8	6'-2"	
v3(E)	8	#5	6'-5"	
v4(E)	16	#5	9'-7"	

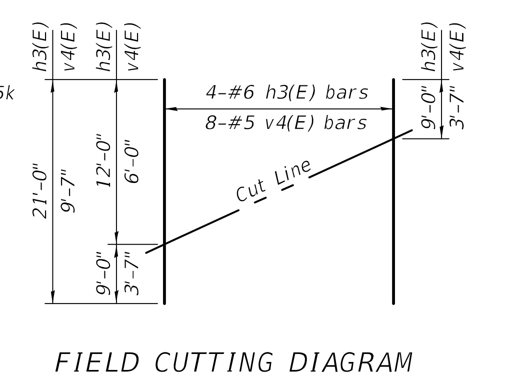
Structure Excavation	Cu. Yd.	121
Concrete Structures	Cu. Yd.	27.8
Reinforcement Bars, Epoxy Coated	Pound	5900
Furnishing Steel Piles, HP 14x102	Foot	1089
Driving Piles	Foot	1089
Pile Shoes	Each	12
Test Pile, Steel HP 14x102	Each	1

*Length is height of spiral

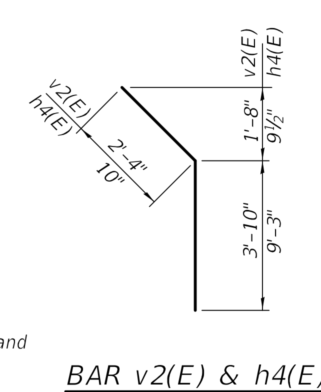
PILE DATA

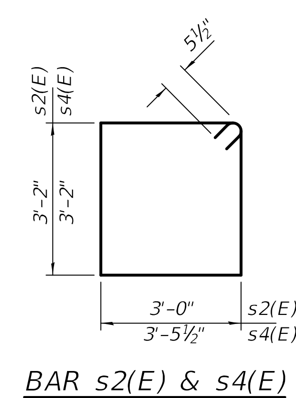
Type: HP14x102
Nominal Required Bearing: 810k
Factored Resistance Available: 445k
Est. Length: 99'
No. Production Piles: 11
No. Test Piles: 1

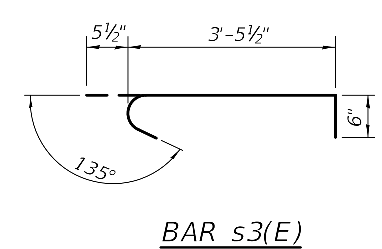


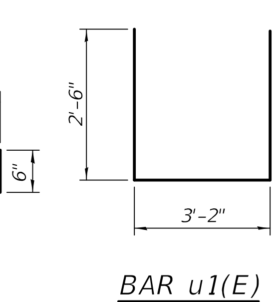


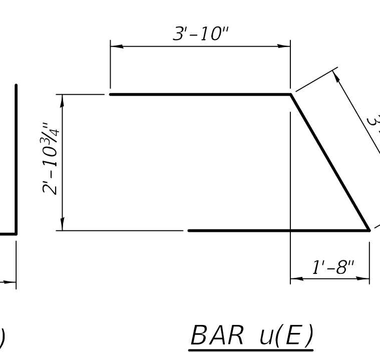
Order h3(E) and v4(E) full length. Cut as shown and use remainder of bars in opposite face.











USER NAME = SKM	DESIGNED - KJA 11/17	REVISED -	
ESCA PROJECT NO. 1259.08	CHECKED - RDP 11/17	REVISED -	
PLOT SCALE = 0.2 ' / in.	DRAWN - KAH 11/17	REVISED -	
PLOT DATE = 3/19/2018 12:58:34 PM	CHECKED - KJA/ELH 03/18	REVISED -	

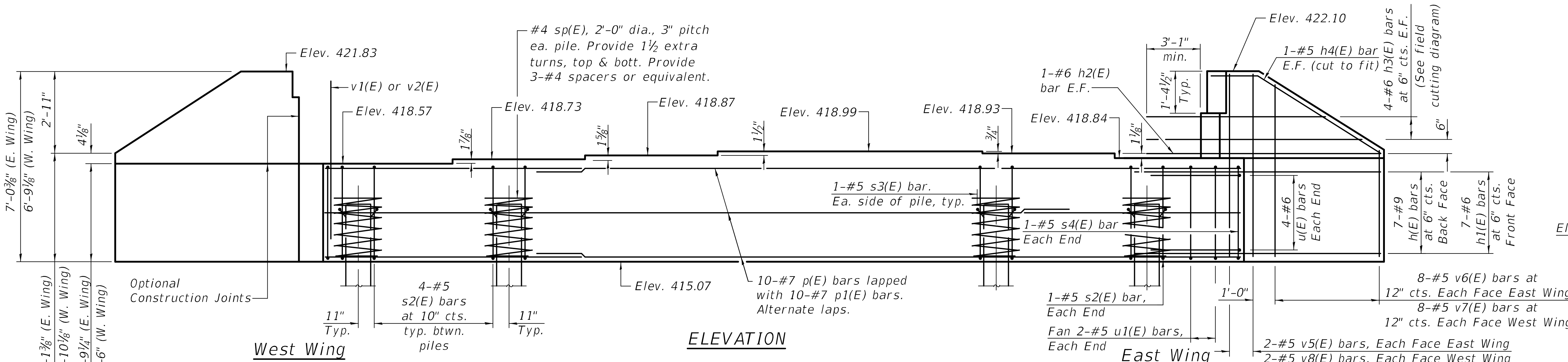
ESCA CONSULTANTS, INC.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

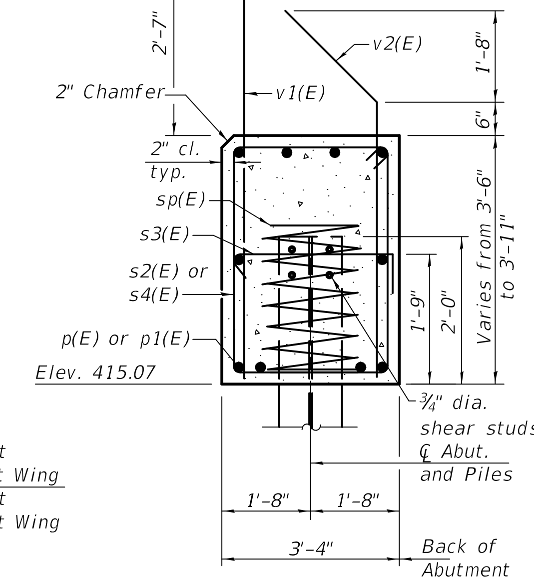
SOUTH ABUTMENT (NB)
STRUCTURE NO. 091-0075 (NB)
SHEET NO. 24 OF 37 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	93
		CONTRACT NO. 78522		
		ILLINOIS FED. AID PROJECT		

Notes:
Pour steps monolithically with cap.
For details of piles see sheet 31 of 37.
Space reinforcement in cap to miss anchor bolts.

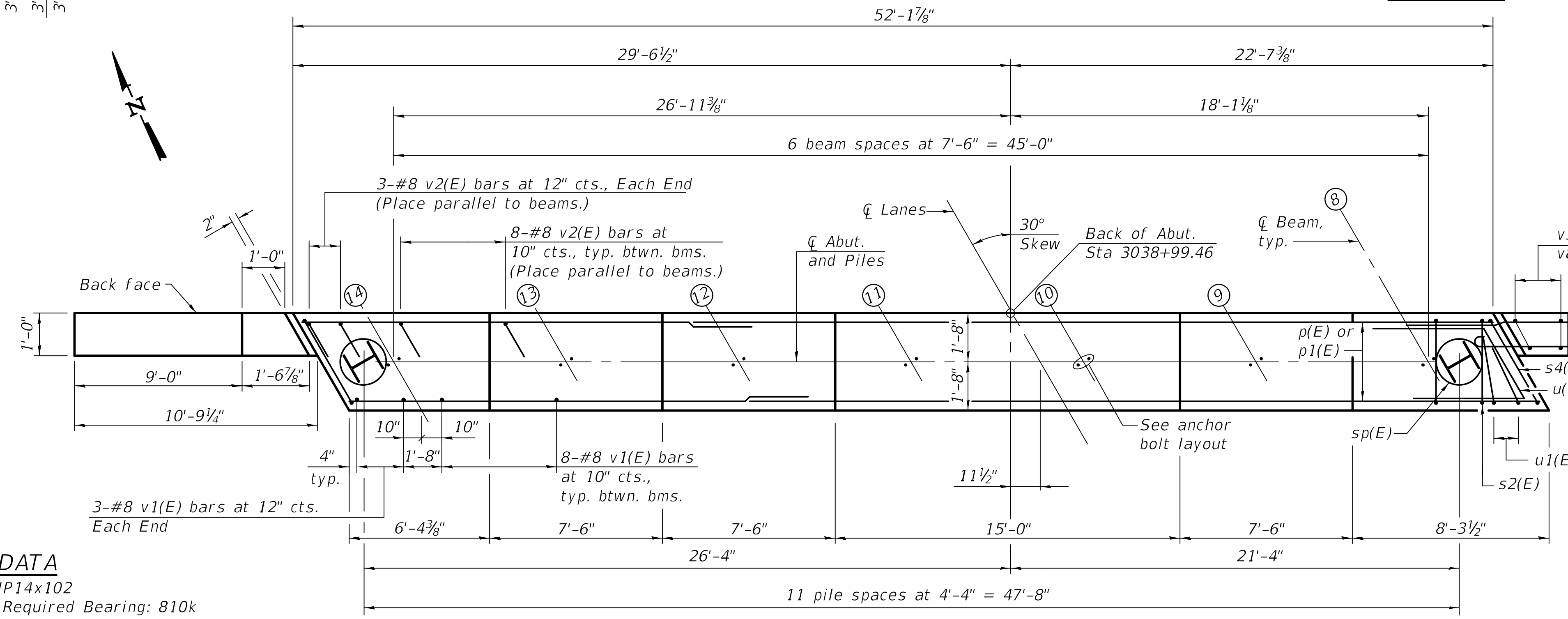


ELEVATION



SEC. THRU ABUT.

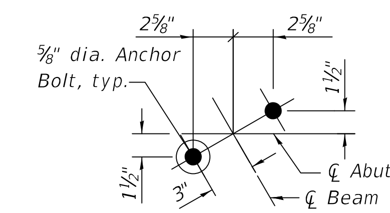
Dimensions at right angles to abutment.



PLAN

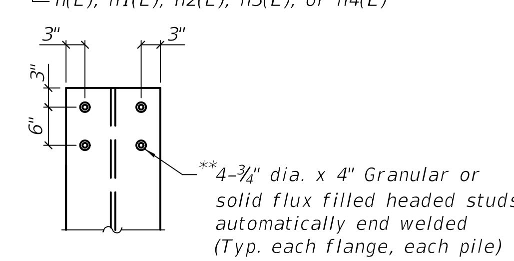
PILE DATA

Type: HP14x102
Nominal Required Bearing: 810k
Factored Resistance Available: 445k
Est. Length: 51'
No. Production Piles: 11
No. Test Piles: 1



ANCHOR BOLT LAYOUT

MINIMUM BAR LAP
#7 bars = 3'-10"



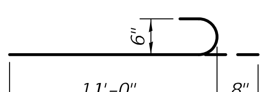
SHEAR STUD DETAIL
**Cost included with Furnishing Piles.

BILL OF MATERIAL

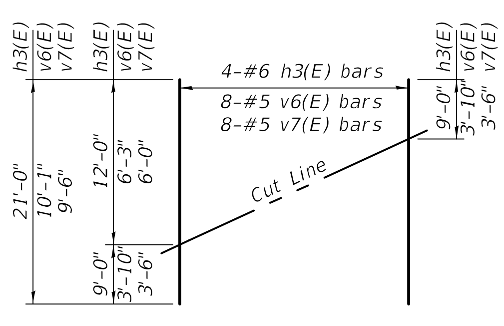
Bar	No.	Size	Length	Shape
h(E)	14	#9	16'-0"	
h1(E)	14	#6	11'-8"	
h2(E)	4	#6	13'-5"	
h3(E)	8	#6	21'-0"	
h4(E)	4	#5	10'-1"	
p(E)	10	#7	36'-0"	
p1(E)	10	#7	19'-10"	
* sp(E)	12	#4	2'-0"	
s2(E)	46	#5	13'-3"	
s3(E)	24	#5	4'-5"	
s4(E)	2	#5	14'-2"	
u(E)	8	#6	11'-0"	
u1(E)	4	#5	8'-2"	
v1(E)	54	#8	5'-11"	
v2(E)	54	#8	6'-2"	
v5(E)	4	#5	6'-8"	
v6(E)	8	#5	10'-1"	
v7(E)	8	#5	9'-6"	
v8(E)	4	#5	6'-5"	

Structure Excavation	Cu. Yd.	113
Concrete Structures	Cu. Yd.	28.7
Reinforcement Bars, Epoxy Coated	Pound	5800
Furnishing Steel Piles, HP 14x102	Foot	561
Driving Piles	Foot	561
Pile Shoes	Each	12
Test Pile, Steel HP 14x102	Each	1

*Length is height of spiral

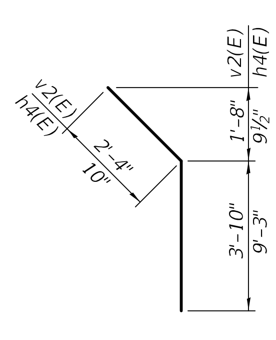


BAR h1(E)

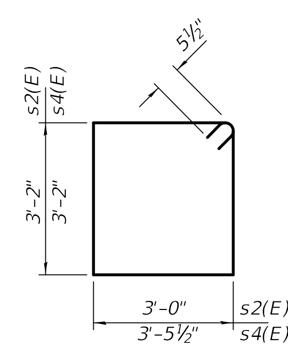


FIELD CUTTING DIAGRAM

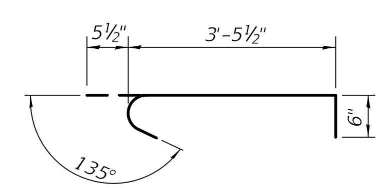
Order h3(E), v6(E) and v7(E) full length. Cut as shown and use remainder of bars in opposite face.



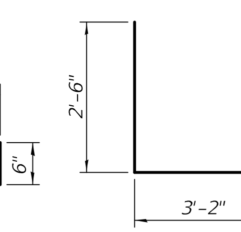
BAR v2(E) & h4(E)



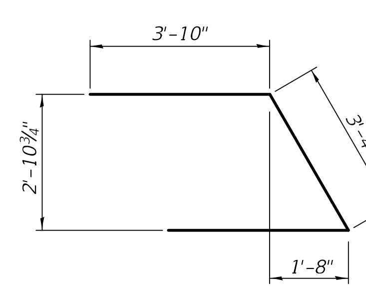
BAR s2(E) & s4(E)



BAR s3(E)



BAR u1(E)



BAR u(E)

USER NAME = SKM	DESIGNED - KJA	11/17	REVISED -
ESCA PROJECT NO. 1259.08	CHECKED - RDP	11/17	REVISED -
PLOT SCALE = 0.2 ' / in.	DRAWN - KAH	11/17	REVISED -
PLOT DATE = 3/19/2018 12:58:35 PM	CHECKED - KJA/ELH	03/18	REVISED -

ESCA CONSULTANTS, INC.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH ABUTMENT (SB)
STRUCTURE NO. 091-0076 (SB)

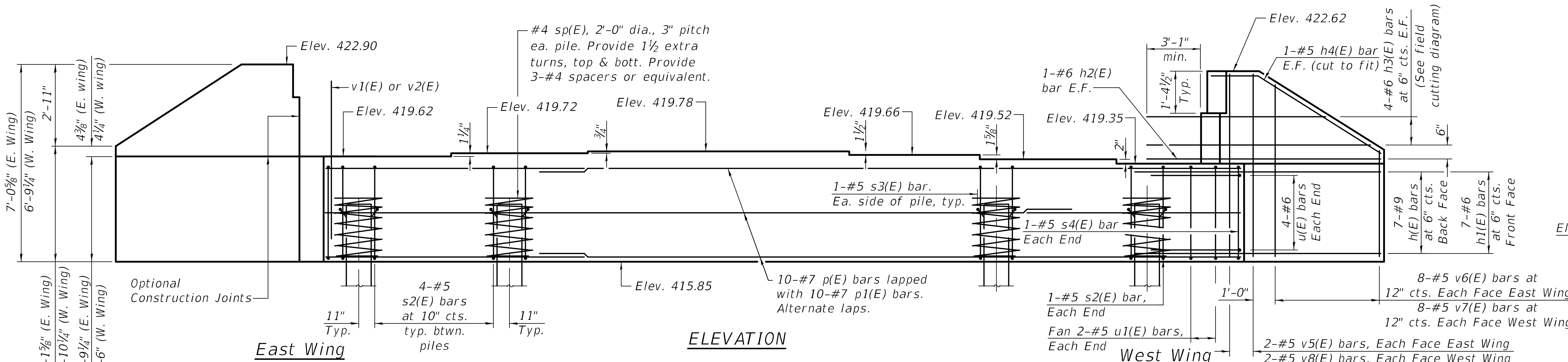
SHEET NO. 25 OF 37 SHEETS

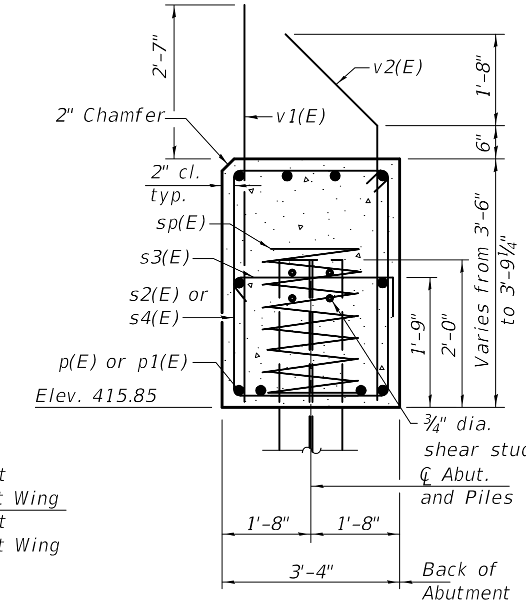
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	94

CONTRACT NO. 78522

ILLINOIS FED. AID PROJECT

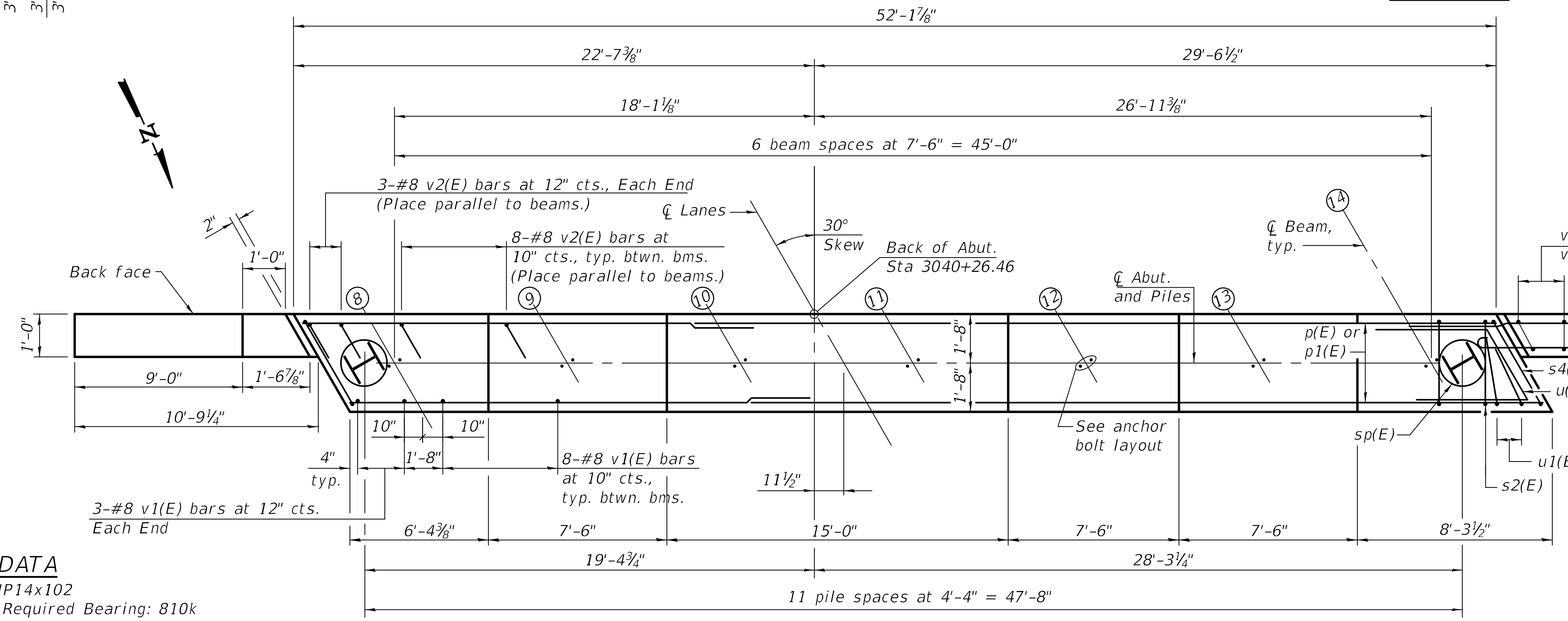
Notes:
Pour steps monolithically with cap.
For details of piles see sheet 31 of 37.
Space reinforcement in cap to miss anchor bolts.



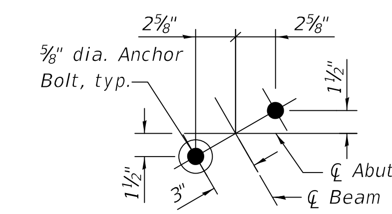


SEC. THRU ABUT.

Dimensions at right angles to abutment.

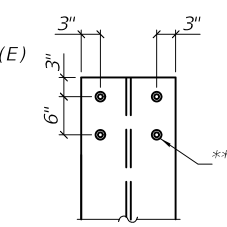


PLAN



ANCHOR BOLT LAYOUT

MINIMUM BAR LAP
#7 bars = 3'-10"



SHEAR STUD DETAIL

**Cost included with Furnishing Piles.

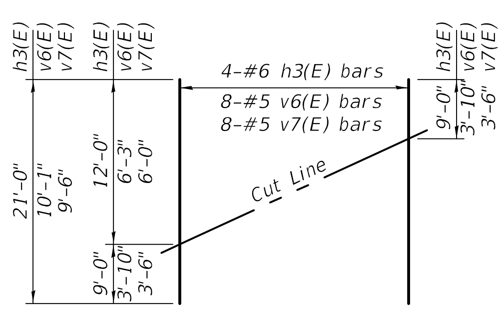
PILE DATA
Type: HP14x102
Nominal Required Bearing: 810k
Factored Resistance Available: 445k
Est. Length: 100'
No. Production Piles: 11
No. Test Piles: 1

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	14	#9	16'-0"	
h1(E)	14	#6	11'-8"	
h2(E)	4	#6	13'-5"	
h3(E)	8	#6	21'-0"	
h4(E)	4	#5	10'-1"	
p(E)	10	#7	36'-0"	
p1(E)	10	#7	19'-10"	
* sp(E)	12	#4	2'-0"	
s2(E)	46	#5	13'-3"	
s3(E)	24	#5	4'-5"	
s4(E)	2	#5	14'-2"	
u(E)	8	#6	11'-0"	
u1(E)	4	#5	8'-2"	
v1(E)	54	#8	5'-11"	
v2(E)	54	#8	6'-2"	
v5(E)	4	#5	6'-8"	
v6(E)	8	#5	10'-1"	
v7(E)	8	#5	9'-6"	
v8(E)	4	#5	6'-5"	

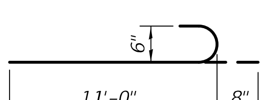
Item	Unit	Quantity
Structure Excavation	Cu. Yd.	107
Concrete Structures	Cu. Yd.	28.7
Reinforcement Bars, Epoxy Coated	Pound	5800
Furnishing Steel Piles, HP 14x102	Foot	1100
Driving Piles	Foot	1100
Pile Shoes	Each	12
Test Pile, Steel HP 14x102	Each	1

*Length is height of spiral

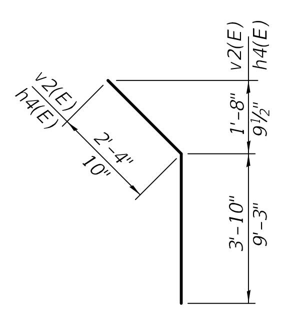


FIELD CUTTING DIAGRAM

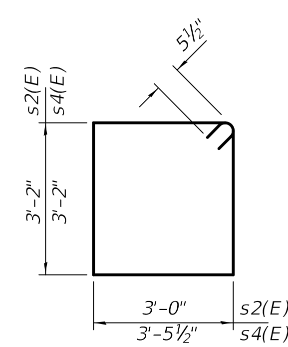
Order h3(E), v6(E) and v7(E) full length. Cut as shown and use remainder of bars in opposite face.



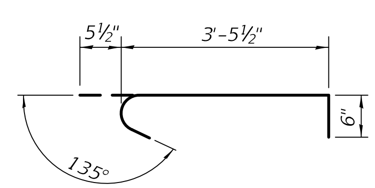
BAR h1(E)



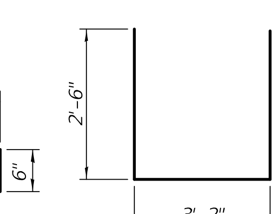
BAR v2(E) & h4(E)



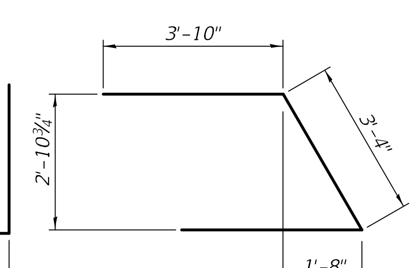
BAR s2(E) & s4(E)



BAR s3(E)



BAR u1(E)



BAR u(E)

USER NAME = SKM	DESIGNED - KJA	11/17	REVISED -	
ESCA PROJECT NO. 1259.08	CHECKED - RDP	11/17	REVISED -	
PLOT SCALE = 0.2 '/' in.	DRAWN - KAH	11/17	REVISED -	
PLOT DATE = 3/19/2018 12:58:36 PM	CHECKED - KJA/ELH	03/18	REVISED -	

ESCA CONSULTANTS, INC.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH ABUTMENT (SB)
STRUCTURE NO. 091-0076 (SB)

SHEET NO. 26 OF 37 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	95

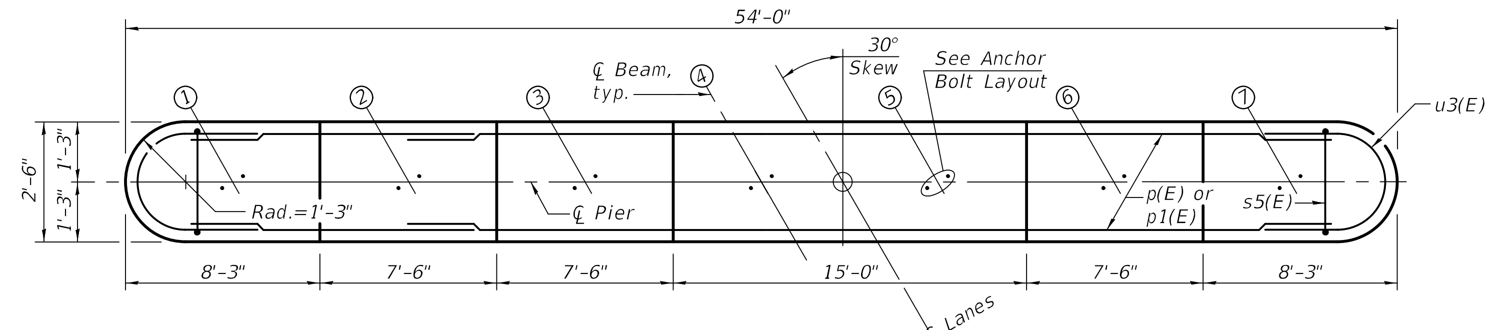
CONTRACT NO. 78522

ILLINOIS FED. AID PROJECT

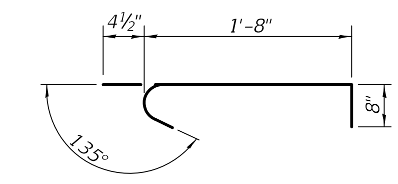
Notes:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
For details of piles, see sheet 31 of 37.
Bars indicated thus 10x2-#7 etc. indicates 10 lines of bars with 2 lengths per line.

PILE DATA

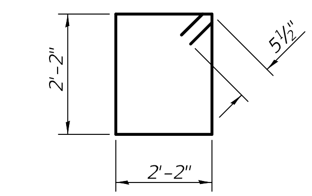
Type: HP14x89
Nominal Required Bearing: 705kips
Factored Resistance Available: 388kips
Est. Length: 100'
No. Production Piles: 9
No. Test Piles: 1



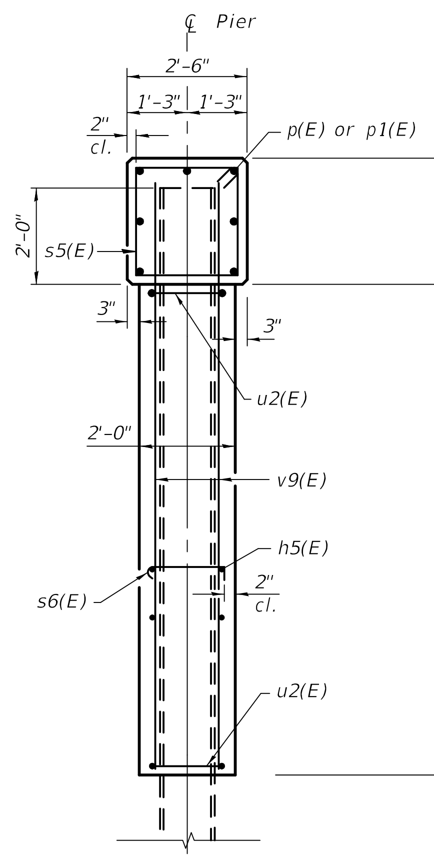
TOP PLAN



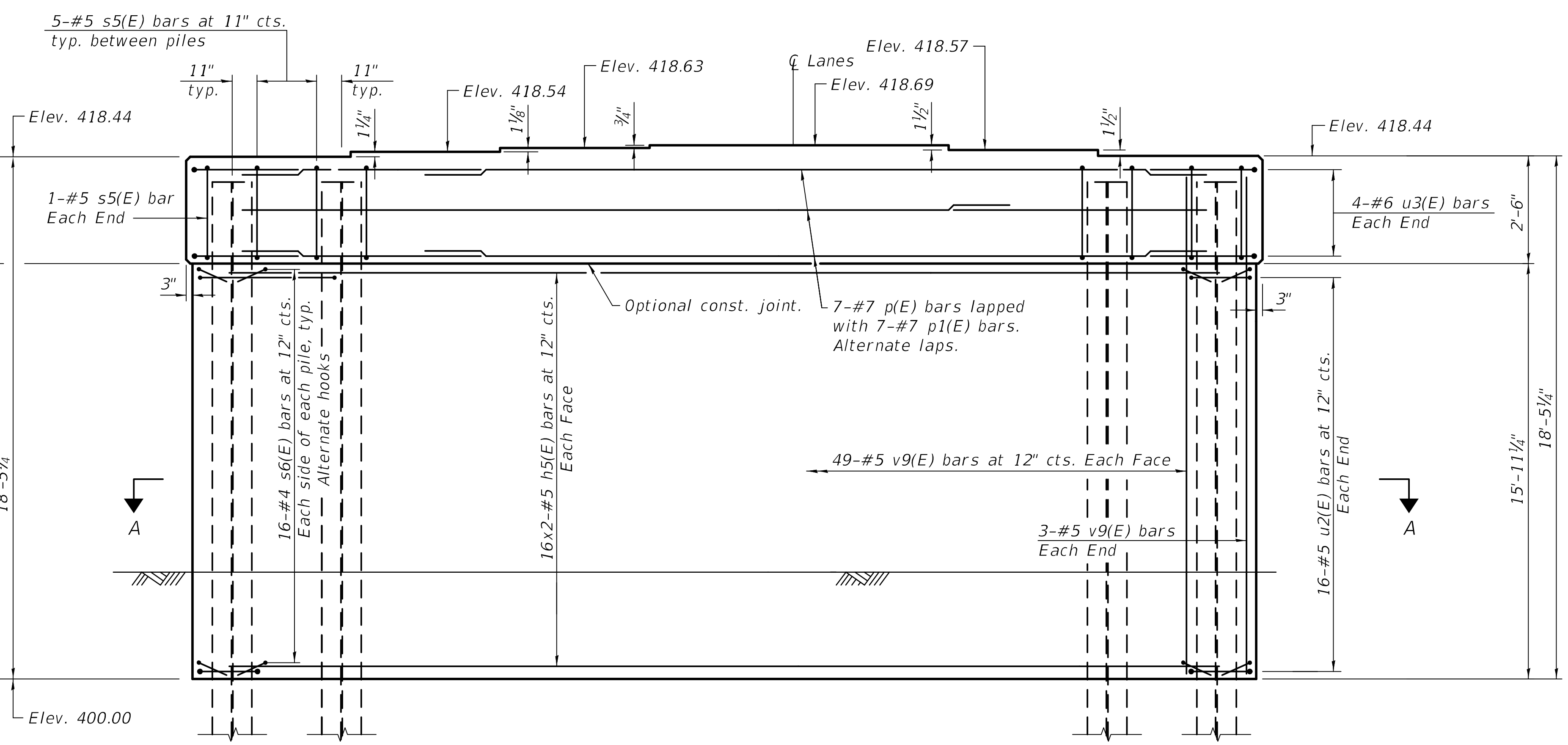
BAR s6(E)



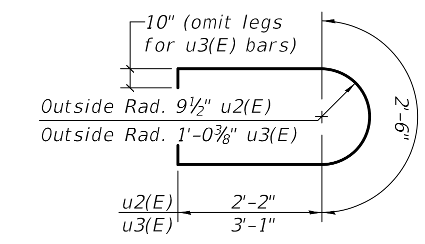
BAR s5(E)



END VIEW



ELEVATION
(Looking South)

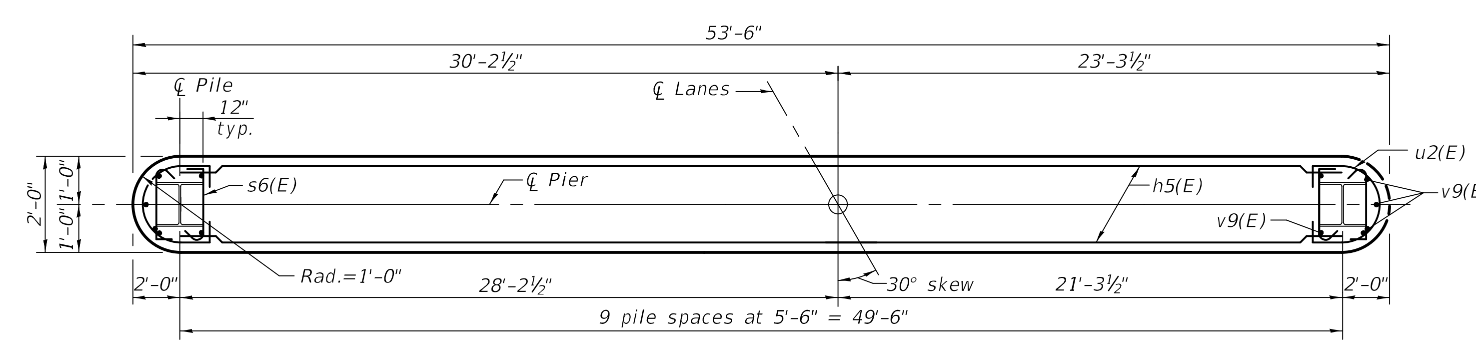


BARS u2(E) & u3(E)

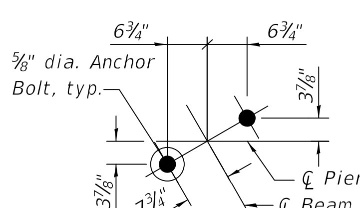
MINIMUM BAR LAP
#5 bars = 3'-7"
#7 bars = 3'-10"

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h5(E)	64	#5	27'-7"	—
p(E)	7	#7	36'-0"	—
p1(E)	7	#7	19'-10"	—
s5(E)	47	#5	9'-7"	◻
s6(E)	320	#4	2'-9"	⌐
u2(E)	32	#5	8'-6"	⊃
u3(E)	8	#6	9'-5"	⊃
v9(E)	104	#5	18'-1"	—
Structure Excavation			Cu. Yd.	56
Concrete Structures			Cu. Yd.	75.7
Reinforcement Bars, Epoxy Coated			Pound	6060
Furnishing Steel Piles, HP14x89			Foot	900
Driving Piles			Foot	900
Piles Shoes			Each	10
Test Pile, Steel HP 14x89			Each	1



SECTION A-A



ANCHOR BOLT LAYOUT

ESCA CONSULTANTS, INC.	USER NAME = SKM	DESIGNED - KJA 11/17	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	ESCA PROJECT NO. 1259.08	CHECKED - RDP 11/17	REVISED -	
	PLOT SCALE = 0.2 ' / in.	DRAWN - KAH 11/17	REVISED -	
	PLOT DATE = 3/19/2018 12:58:37 PM	CHECKED - KJA/ELH 02/18	REVISED -	

PIER 1 (NB)
STRUCTURE NO. 091-0075 (NB)

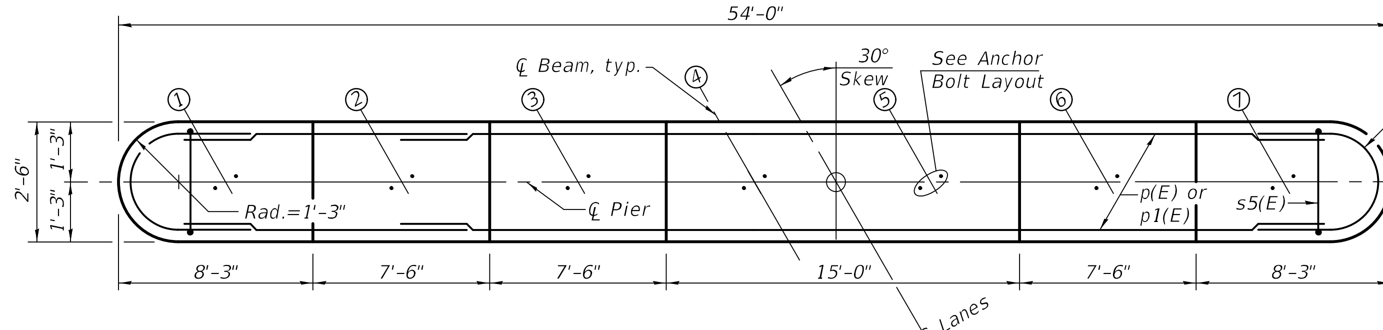
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	96

CONTRACT NO. 78522
ILLINOIS FED. AID PROJECT

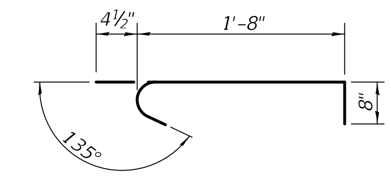
Notes:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
For details of piles, see sheet 31 of 37.
Bars indicated thus 10x2-#7 etc. indicates 10 lines of bars with 2 lengths per line.

PILE DATA

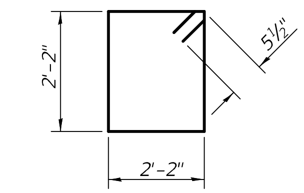
Type: HP14x89
Nominal Required Bearing: 705kips
Factored Resistance Available: 388kips
Est. Length: 100'
No. Production Piles: 9
No. Test Piles: 1



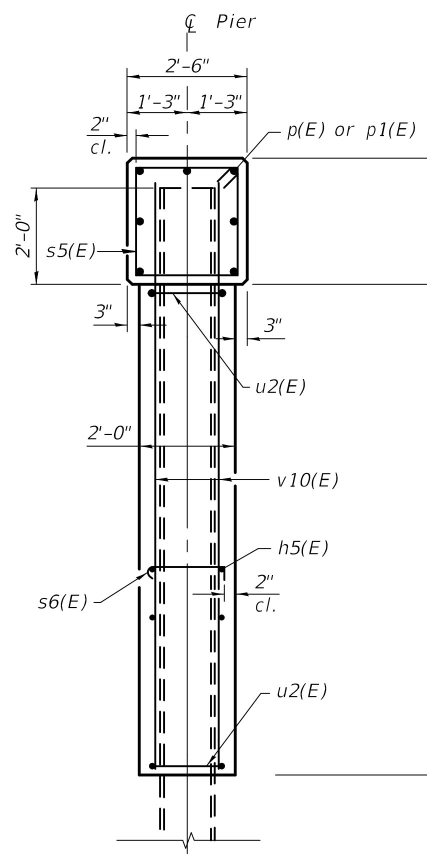
TOP PLAN



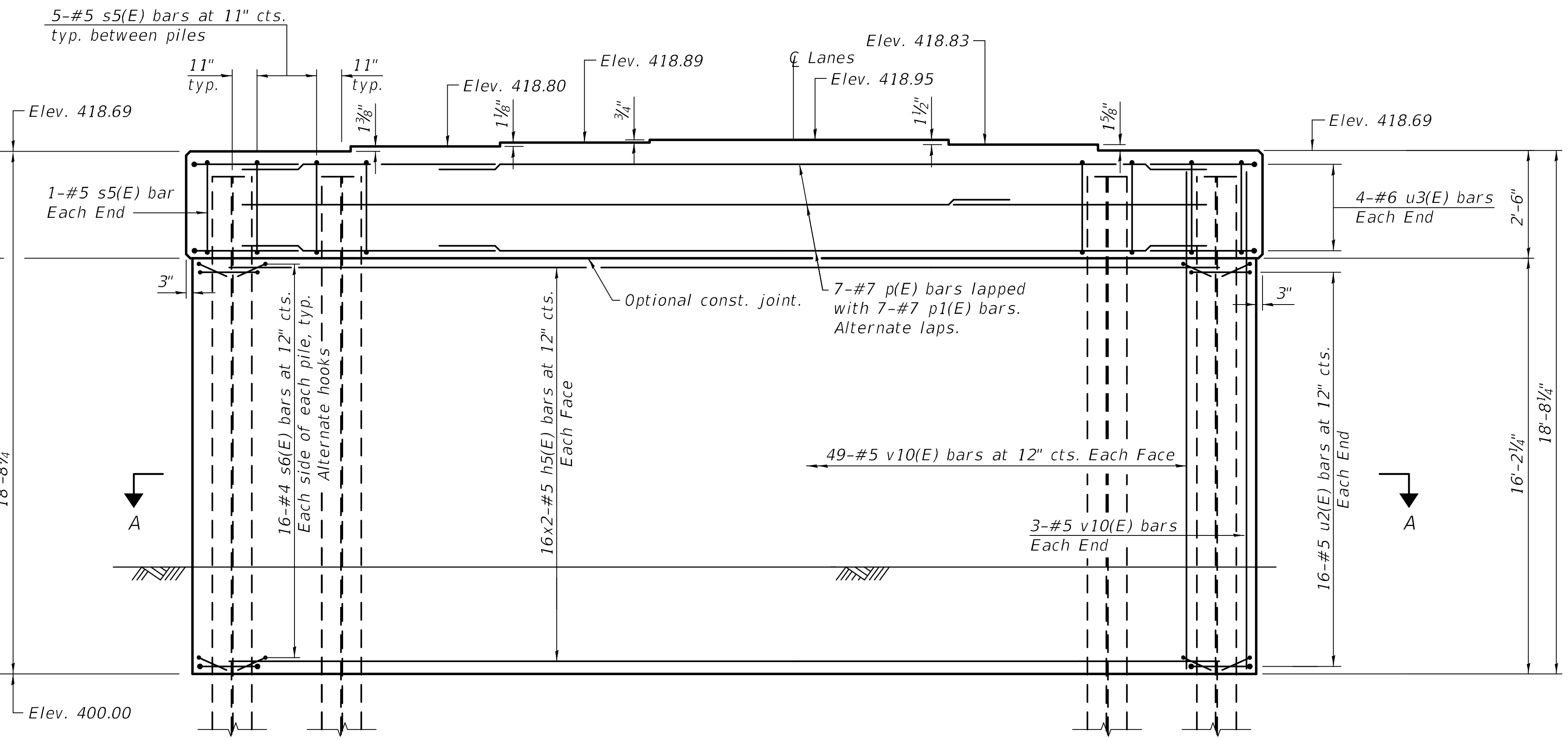
BAR s6(E)



BAR s5(E)

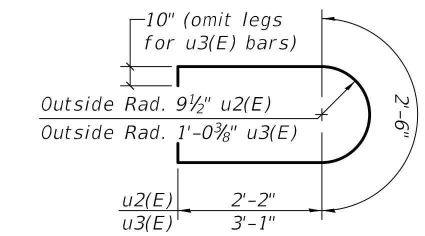


END VIEW



ELEVATION

(Looking South)



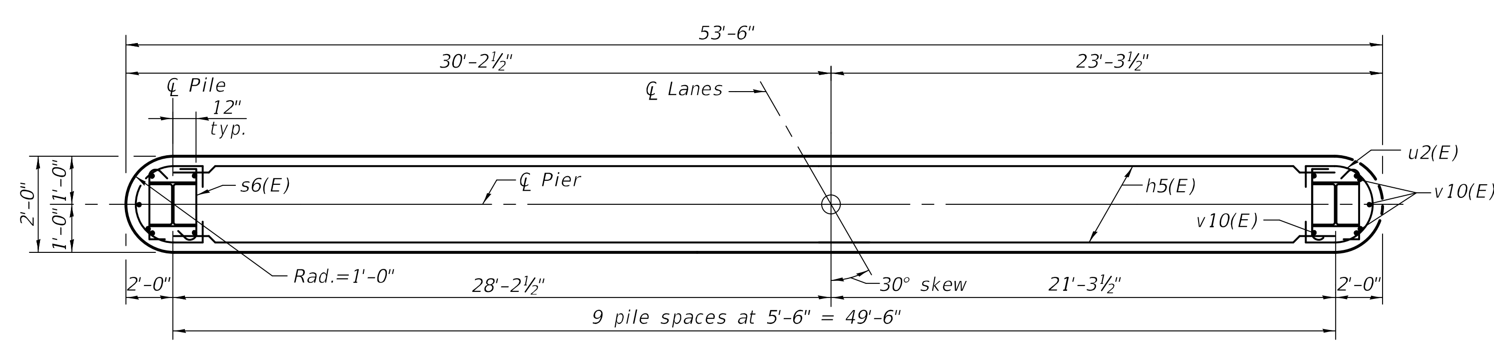
BARS u2(E) & u3(E)

MINIMUM BAR LAP

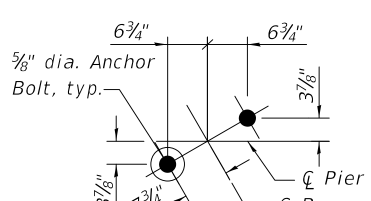
#5 bars = 3'-7"
#7 bars = 3'-10"

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h5(E)	64	#5	27'-7"	—
p(E)	7	#7	36'-0"	—
p1(E)	7	#7	19'-10"	—
s5(E)	47	#5	9'-7"	◻
s6(E)	320	#4	2'-9"	⌐
u2(E)	32	#5	8'-6"	⊃
u3(E)	8	#6	9'-5"	⊃
v10(E)	104	#5	18'-4"	—
Structure Excavation			Cu. Yd.	55
Concrete Structures			Cu. Yd.	76.7
Reinforcement Bars, Epoxy Coated			Pound	6090
Furnishing Steel Piles, HP14x89			Foot	900
Driving Piles			Foot	900
Piles Shoes			Each	10
Test Pile, Steel HP 14x89			Each	1



SECTION A-A



ANCHOR BOLT LAYOUT

ESCA CONSULTANTS, INC.	USER NAME = SKM	DESIGNED - KJA 11/17	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	ESCA PROJECT NO. 1259.08	CHECKED - RDP 11/17	REVISED -	
	PLOT SCALE = 0:2 ' / in.	DRAWN - KAH 11/17	REVISED -	
	PLOT DATE = 3/19/2018 12:58:37 PM	CHECKED - KJA/ELH 01/18	REVISED -	

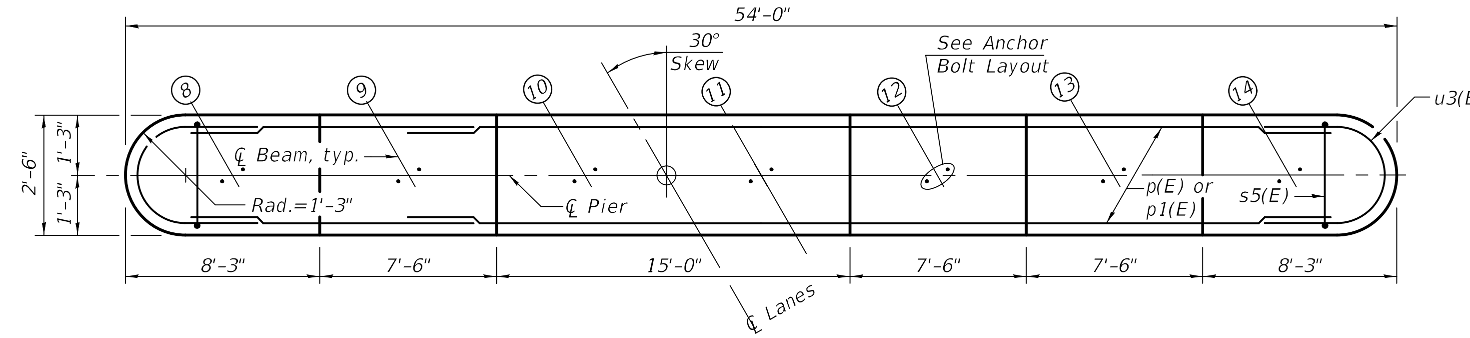
PIER 2 (NB)
STRUCTURE NO. 091-0075 (NB)
SHEET NO. 28 OF 37 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	97
		CONTRACT NO. 78522		
		ILLINOIS FED. AID PROJECT		

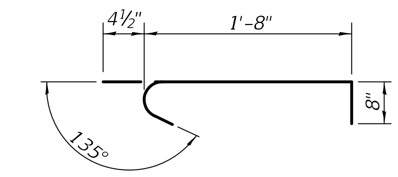
Notes:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
For details of piles, see sheet 31 of 37.
Bars indicated thus 10x2-#7 etc. indicates 10 lines of bars with 2 lengths per line.

PILE DATA

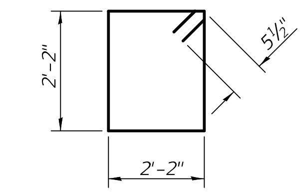
Type: HP14x89
Nominal Required Bearing: 705kips
Factored Resistance Available: 388kips
Est. Length: 100'
No. Production Piles: 9
No. Test Piles: 1



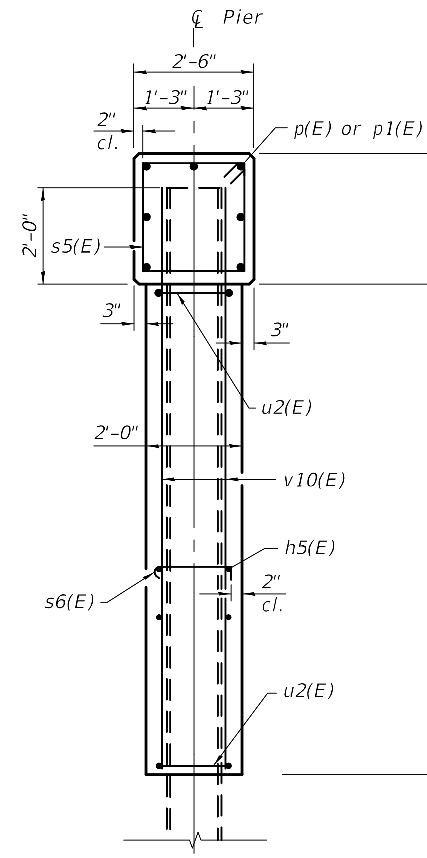
TOP PLAN



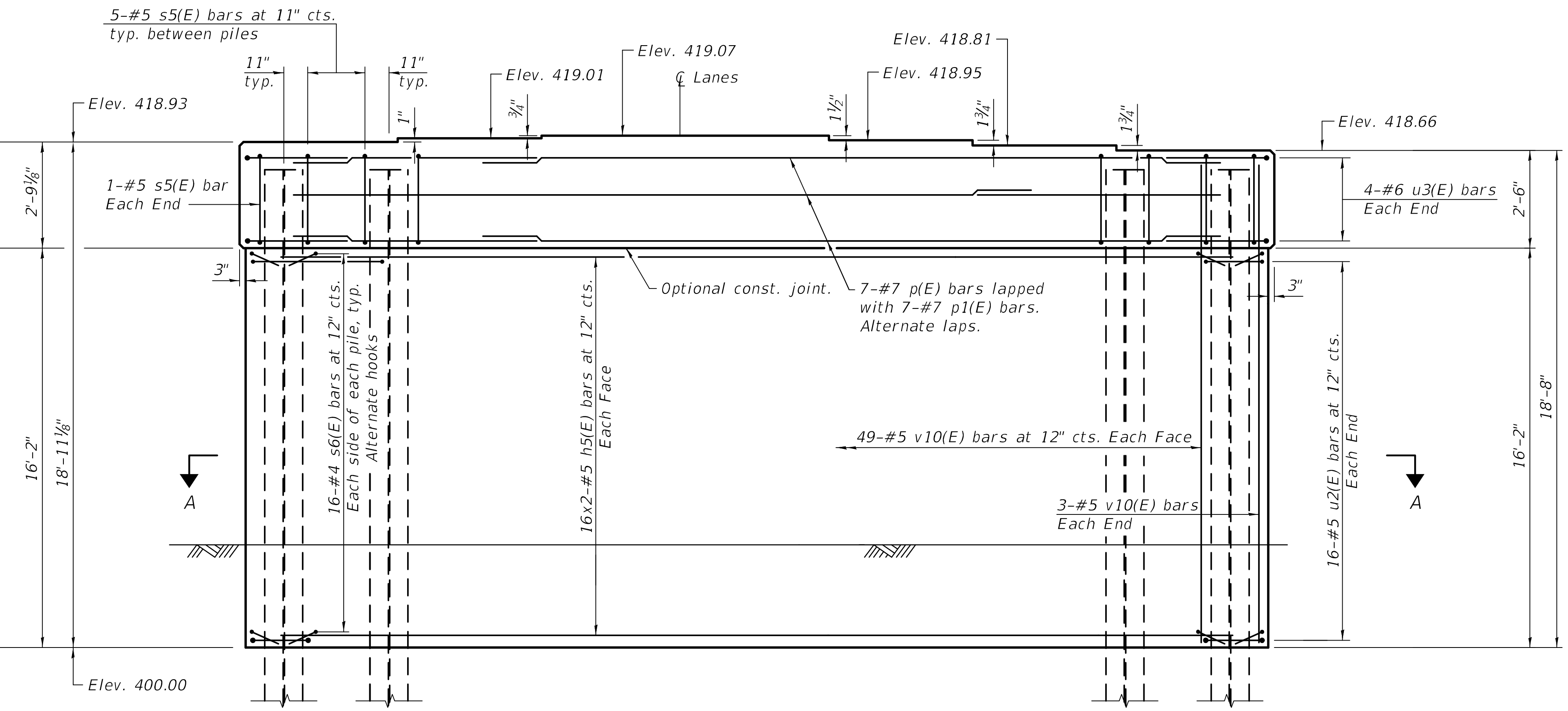
BAR s6(E)



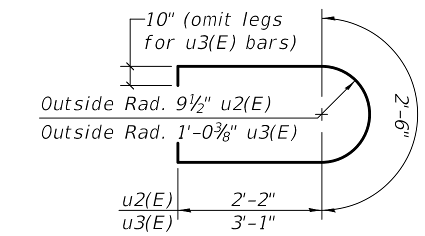
BAR s5(E)



END VIEW



ELEVATION
(Looking South)



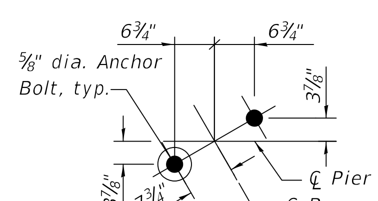
BARS u2(E) & u3(E)

MINIMUM BAR LAPS

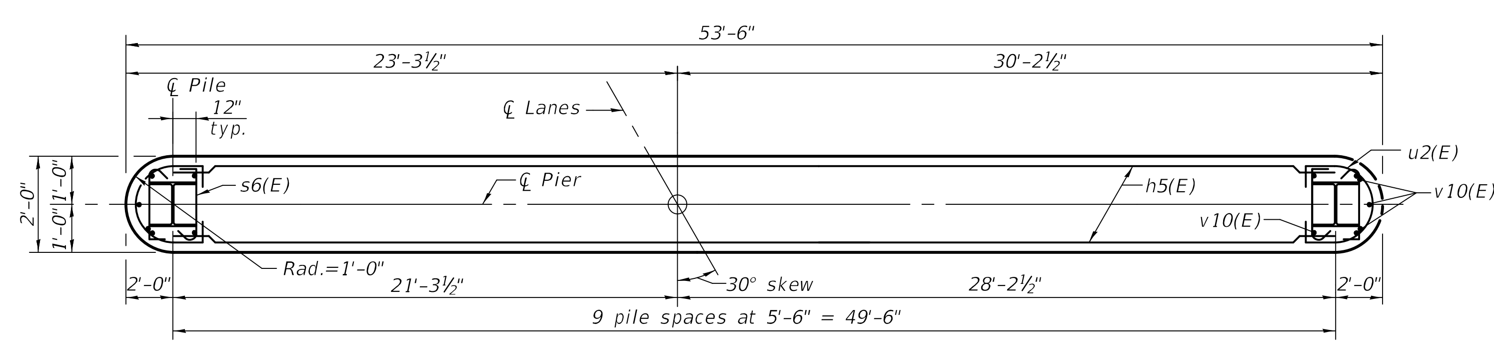
#5 bars = 3'-7"
#7 bars = 3'-10"

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h5(E)	64	#5	27'-7"	
p(E)	7	#7	36'-0"	
p1(E)	7	#7	19'-10"	
s5(E)	47	#5	9'-7"	
s6(E)	320	#4	2'-9"	
u2(E)	32	#5	8'-6"	
u3(E)	8	#6	9'-5"	
v10(E)	104	#5	18'-4"	
Structure Excavation			Cu. Yd.	50
Concrete Structures			Cu. Yd.	77.3
Reinforcement Bars, Epoxy Coated			Pound	6090
Furnishing Steel Piles, HP14x89			Foot	900
Driving Piles			Foot	900
Piles Shoes			Each	10
Test Pile, Steel HP 14x89			Each	1



ANCHOR BOLT LAYOUT



SECTION A-A

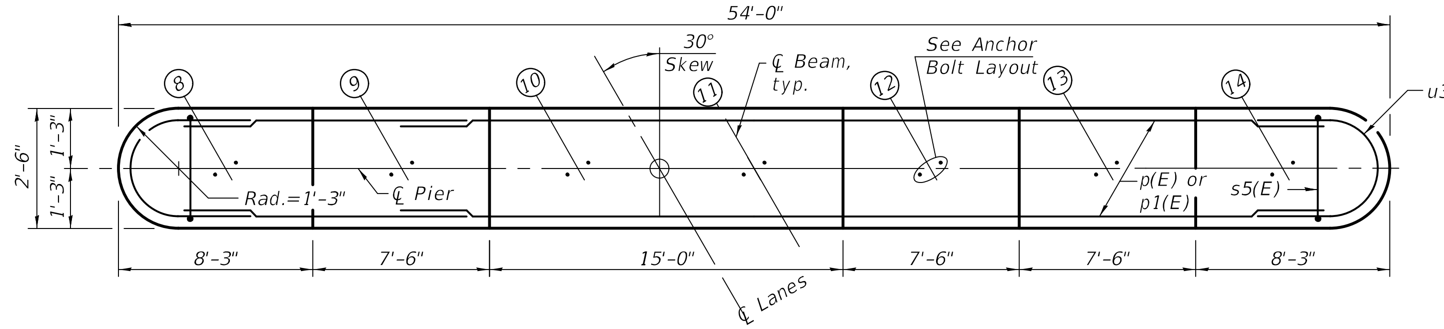
ESCA CONSULTANTS, INC.	USER NAME = SKM	DESIGNED - KJA 11/17	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PIER 1 (SB) STRUCTURE NO. 091-0076 (SB)
	ESCA PROJECT NO. 1259.08	CHECKED - RDP 11/17	REVISED -		
	PLOT SCALE = 0.2 ' / in.	DRAWN - KAH 11/17	REVISED -		
	PLOT DATE = 3/19/2018 12:58:38 PM	CHECKED - KJA/ELH 01/18	REVISED -		SHEET NO. 29 OF 37 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	98
		CONTRACT NO. 78522		
		ILLINOIS FED. AID PROJECT		

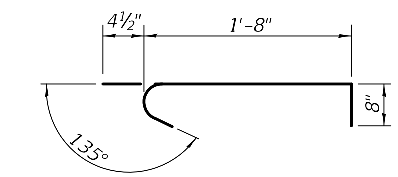
Notes:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
For details of piles, see sheet 31 of 37.
Bars indicated thus 10x2-#7 etc. indicates 10 lines of bars with 2 lengths per line.

PILE DATA

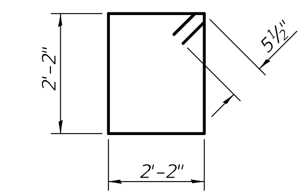
Type: HP14x89
Nominal Required Bearing: 705kips
Factored Resistance Available: 388kips
Est. Length: 100'
No. Production Piles: 9
No. Test Piles: 1



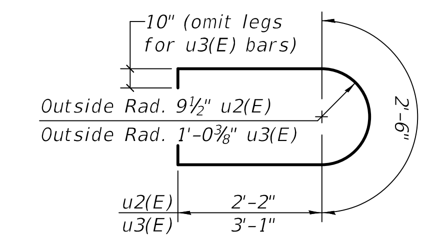
TOP PLAN



BAR s6(E)



BAR s5(E)



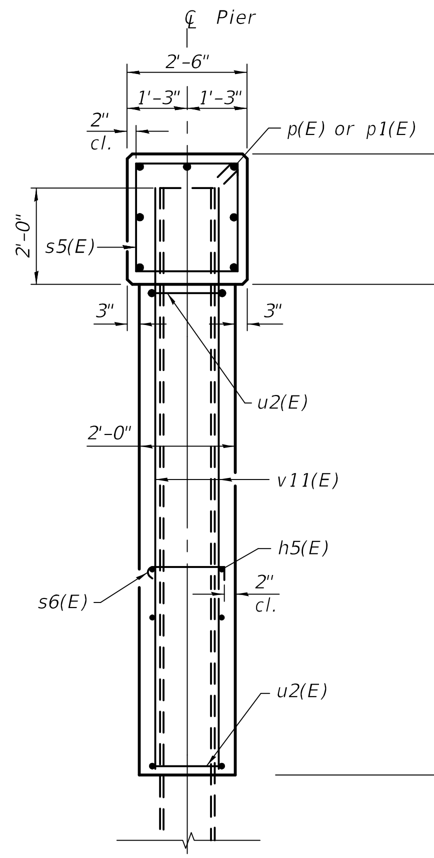
BARS u2(E) & u3(E)

MINIMUM BAR LAP

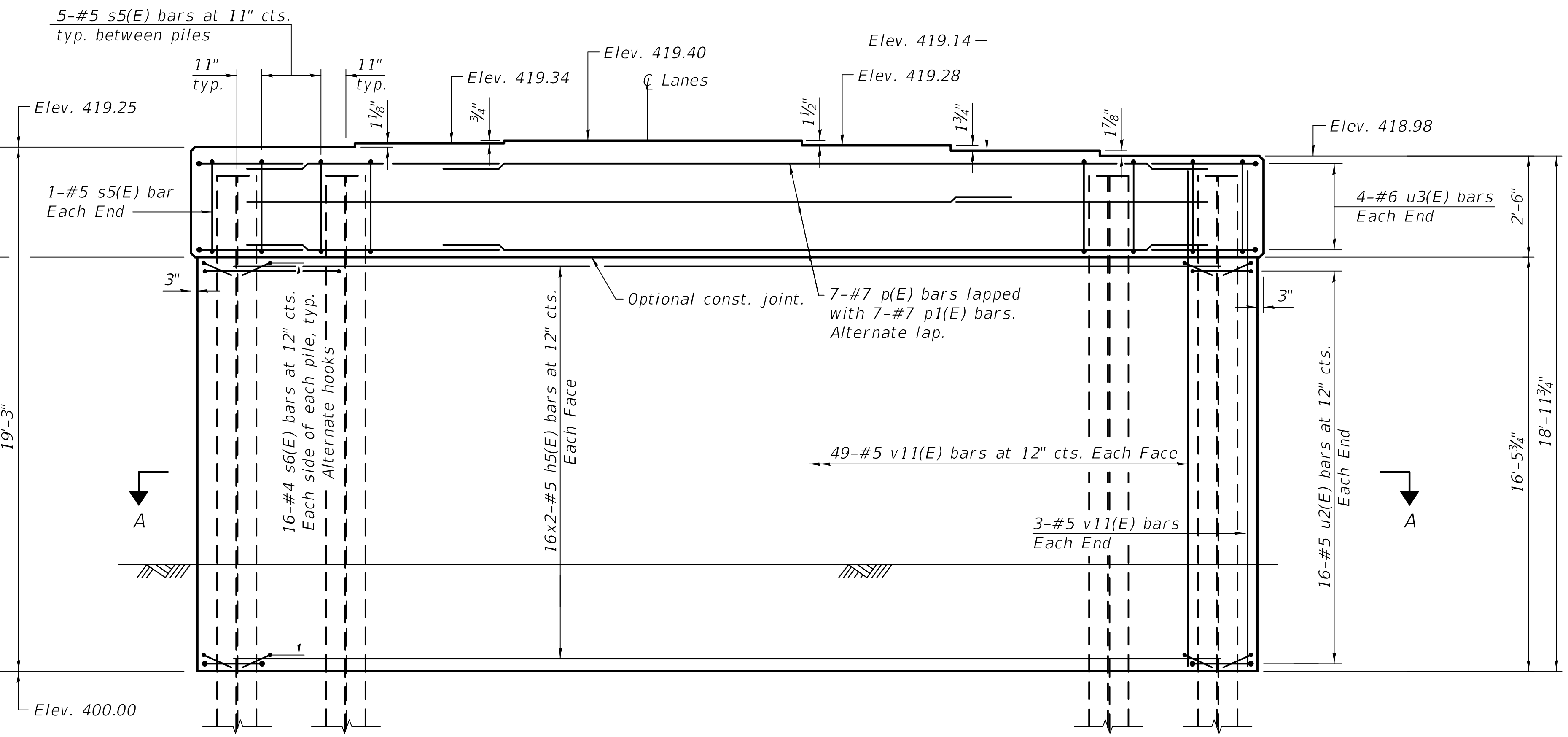
#5 bars = 3'-7"
#7 bars = 3'-10"

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h5(E)	64	#5	27'-7"	——
p(E)	7	#7	36'-0"	——
p1(E)	7	#7	19'-10"	——
s5(E)	47	#5	9'-7"	◻
s6(E)	320	#4	2'-9"	⌐
u2(E)	32	#5	8'-6"	⊃
u3(E)	8	#6	9'-5"	⊃
v11(E)	104	#5	18'-8"	——
Structure Excavation		Cu. Yd.	55	
Concrete Structures		Cu. Yd.	78.5	
Reinforcement Bars, Epoxy Coated		Pound	6120	
Furnishing Steel Piles, HP14x89		Foot	900	
Driving Piles		Foot	900	
Piles Shoes		Each	10	
Test Pile, Steel HP 14x89		Each	1	

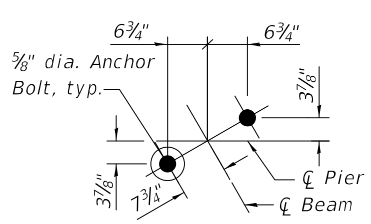


END VIEW

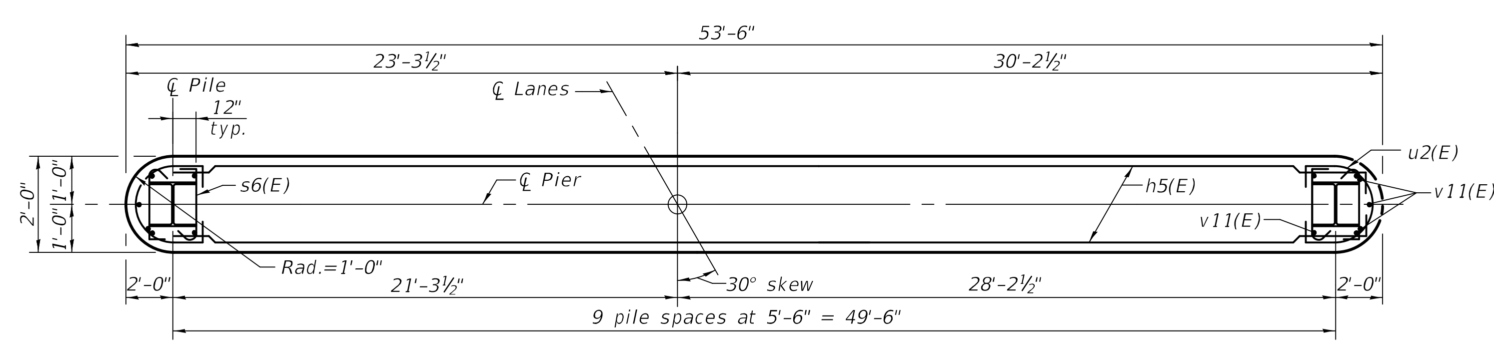


ELEVATION

(Looking South)



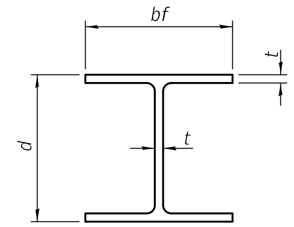
ANCHOR BOLT LAYOUT



SECTION A-A

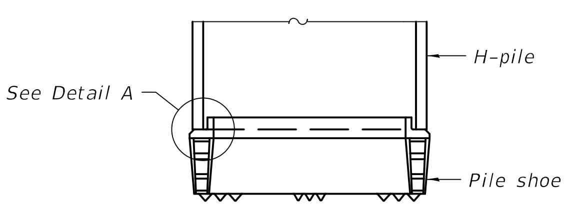
ESCA CONSULTANTS, INC.	USER NAME = SKM	DESIGNED - KJA 11/17	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PIER 2 (SB) STRUCTURE NO. 091-0076 (SB)
	ESCA PROJECT NO. 1259.08	CHECKED - RDP 11/17	REVISED -		
	PLOT SCALE = 0.2 ' / in.	DRAWN - KAH 11/17	REVISED -		
	PLOT DATE = 3/19/2018 12:58:39 PM	CHECKED - KJA/ELH 01/18	REVISED -		SHEET NO. 30 OF 37 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(91-4)B-1	UNION	160	99
		CONTRACT NO. 78522		
		ILLINOIS FED. AID PROJECT		

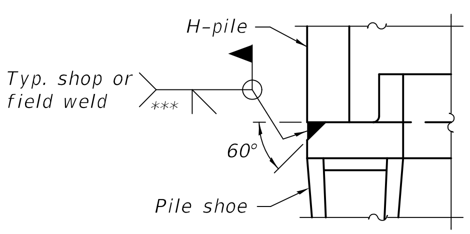


STEEL PILE TABLE

Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 14x117	14¼"	14⅞"	13/16"	30"
x102	14"	14¾"	11/16"	30"
x89	13⅞"	14¾"	5/8"	30"
x73	13⅝"	14⅝"	1/2"	30"
HP 12x84	12¼"	12¼"	11/16"	24"
x74	12⅛"	12¼"	5/8"	24"
x63	12"	12⅛"	1/2"	24"
x53	11¾"	12"	7/16"	24"
HP 10x57	10"	10¼"	9/16"	24"
x42	9¾"	10⅛"	7/16"	24"
HP 8x36	8"	8⅛"	7/16"	18"



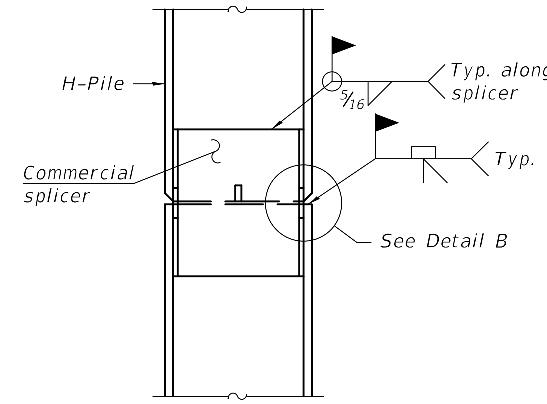
ELEVATION



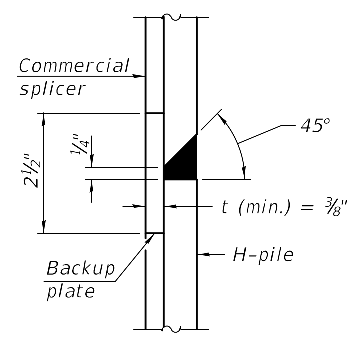
DETAIL A

SHOE ATTACHMENT

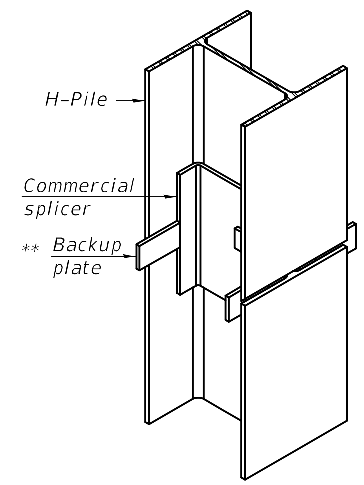
Note:
The steel H-piles shall be according to AASHTO M270 Grade 50.



ELEVATION

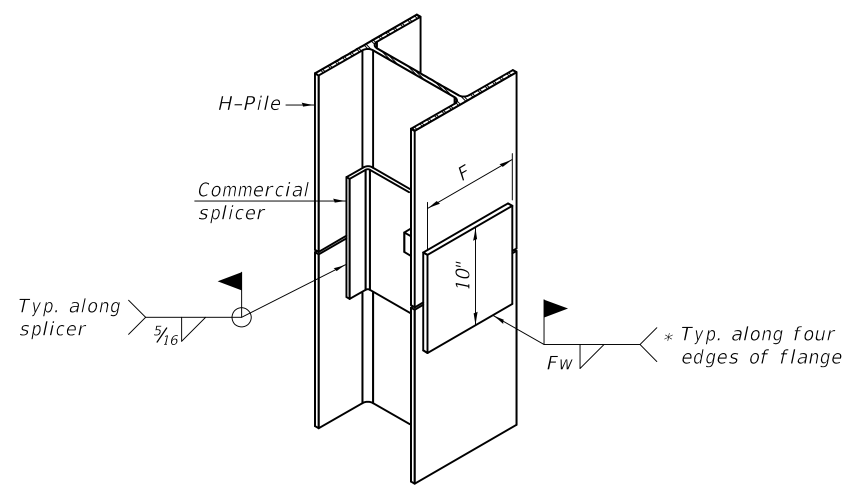


DETAIL "B"



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



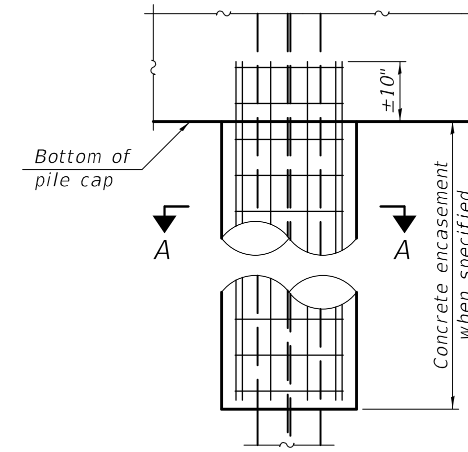
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

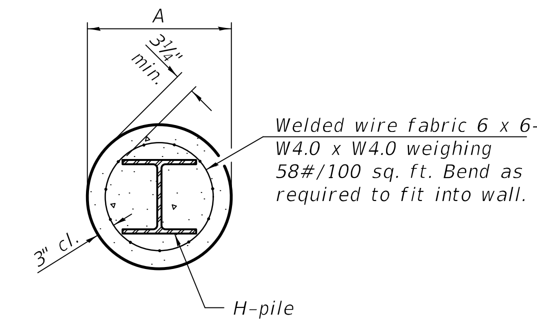
* Interrupt welds ¼" from end of web and/or each flange.

** Remove portions of backup plates that extend outside the flanges.

*** Weld size per pile shoe manufacturer (5/16" min.).



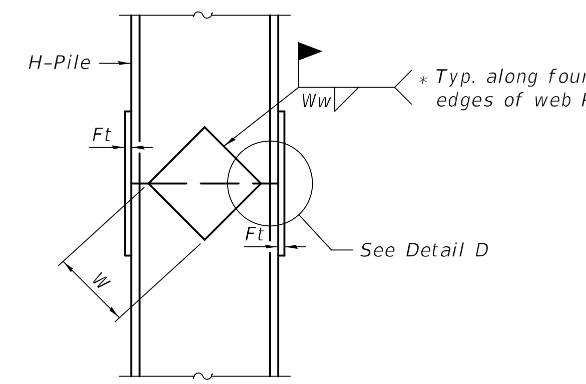
ELEVATION



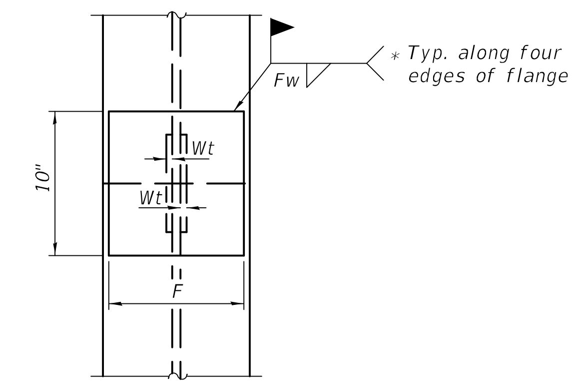
SECTION A-A

INDIVIDUAL PILE CONCRETE ENCASEMENT

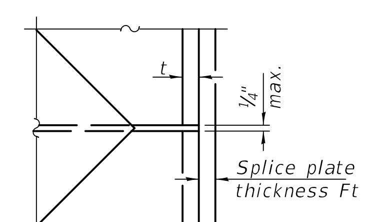
(Forms for encasement may be omitted when soil conditions permit).



ELEVATION



END VIEW



DETAIL D

Designation	F	Ft	Fw	W	Wt	Ww
HP 14x117	12½"	1"	7/8"	7¾"	5/8"	1/2"
x102	12½"	7/8"	3/4"	7¾"	5/8"	1/2"
x89	12½"	3/4"	11/16"	7¾"	5/8"	1/2"
x73	12½"	5/8"	9/16"	7¾"	5/8"	1/2"
HP 12x84	10"	7/8"	11/16"	6½"	5/8"	1/2"
x74	10"	7/8"	11/16"	6½"	5/8"	1/2"
x63	10"	5/8"	1/2"	6½"	1/2"	3/8"
x53	10"	5/8"	1/2"	6½"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5¼"	1/2"	3/8"
x42	8"	5/8"	9/16"	5¼"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4¼"	1/2"	3/8"

WELDED PLATE FIELD SPLICE

F-HP   8-11-2017