

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	1
		ILLINOIS	CONTRACT NO. 85688	

FOR INDEX OF SHEETS, SEE SHEET NO. 2

11-08-2019 LETTING ITEM 087

FOR LIST OF HIGHWAY STANDARDS, SEE SHEET NO. 2

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED FEDERAL AID HIGHWAY

FAU 5011A (POPLAR GROVE ROAD)
BRIDGE REPLACEMENT
OVER KISHWAUKEE RIVER

SECTION 17-00093-00-BR
BOONE COUNTY
PROJECT OADL(367)
JOB # C-92-067-18

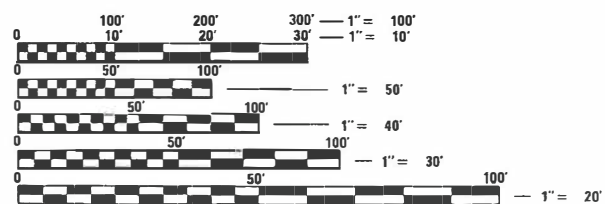
FUNCTIONAL CLASSIFICATION: COLLECTOR
DESIGN YEAR (2040) ADT: 3500
7% TRUCKS
DESIGN SPEED = 35 MPH



BY: *[Signature]* DATE: 8/30/19
HANSON PROFESSIONAL SERVICES INC.
DRAWINGS: 1-17, 20, & 51-71
LICENSE EXPIRES NOV. 30, 2019

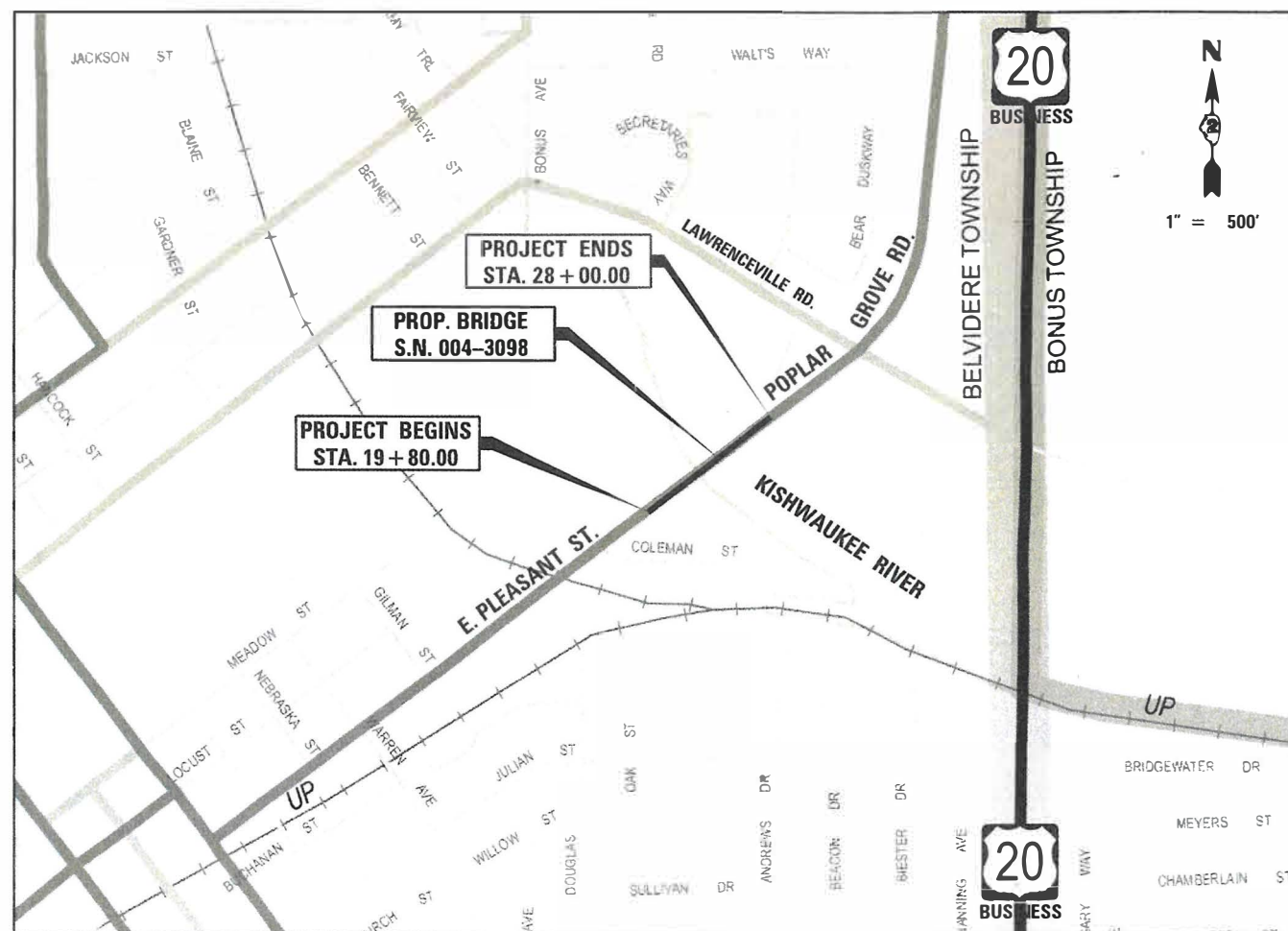


BY: *[Signature]* DATE: 8/30/19
HANSON PROFESSIONAL SERVICES INC.
DRAWINGS: 18-19
LICENSE EXPIRES NOV. 30, 2019



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

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



T-44N, R-3E, SEC. 25

LOCATION MAP

GROSS LENGTH = 820.00 FT. = 0.16 MILE
NET LENGTH = 820.00 FT. = 0.16 MILE

CONTRACT NO. 85688

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

APPROVED Aug. 30 20 19
[Signature]
BOONE COUNTY, COUNTY ENGINEER

PASSED Sept. 3 20 19
[Signature]
DISTRICT 2 ENGINEER OF LOCAL ROADS AND STREETS

RELEASED FOR BID
BASED ON LIMITED
REVIEW Sept. 3 20 19
[Signature]
DEPUTY DIRECTOR OF HIGHWAYS, REGION 2 ENGINEER

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

GENERAL NOTES

- ALL BORROW/WASTE/USE SITES MUST BE APPROVED BY THE DEPARTMENT PRIOR TO REMOVING ANY MATERIAL FROM THE PROJECT OR INITIATING ANY EARTHMOVING ACTIVITIES, INCLUDING TEMPORARY STOCKPILING OUTSIDE THE LIMITS OF CONSTRUCTION.
- THE FINAL TOP FOUR INCHES OF SOIL IN ANY RIGHT-OF-WAY AREA DISTURBED BY THE CONTRACTOR MUST BE CAPABLE OF SUPPORTING VEGETATION. THE SOIL MUST BE FROM THE A HORIZON (ZERO TO 2' DEEP) OF SOIL PROFILES OF LOCAL SOILS. THE COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT PRICES BID AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- IT IS ESTIMATED THAT 216 CUBIC YARDS OF EARTH WILL BE HAULED TO THE JOB FROM OUTSIDE THE PROJECT LIMITS. A SHRINKAGE FACTOR OF 25% HAS BEEN USED.
- THE CONTRACTOR SHALL SEED ALL DISTURBED AREAS WITHIN THE PROJECT LIMITS. SEEDING CLASS 4 OR 2A SHALL BE USED, EXCEPT IN FRONT OF PROPERTIES WHERE THE GRASS WILL BE MOWED, THEN USE SEEDING, CLASS 1A. CLASS 2A SHALL BE USED ON FRONT SLOPES AND DITCH BOTTOMS. CLASS 4 SHALL BE USED BEHIND TYPE A GUTTER, ON ALL BACKSLOPES AND AREAS BEHIND THE BACKSLOPE, AND BEYOND THE TOE OF FRONT SLOPE ON FILL SECTIONS WITHOUT DITCHES.
- FERTILIZER NUTRIENTS SHALL BE APPLIED AT THE RATE SPECIFIED IN SECTIONS 250 AND 252 OF THE STANDARD SPECIFICATIONS. THIS SHALL BE INCLUDED IN THE COST OF THE SEEDING OR SODDING.
- ALL "AGGREGATE SUBGRADE IMPROVEMENT" (SECTION 303), SHALL BE COMPLETED IN ACCORDANCE WITH ARTICLES 311.04, 311.05, 311.05(a), 311.06 AND 311.07. ALL AGGREGATE SUBGRADE THICKNESSES EQUAL TO OR LESS THAN 12 INCHES SHALL BE CONSTRUCTED OF AGGREGATE OF CA02 GRADATION. ALL AGGREGATE SUBGRADE THICKNESSES GREATER THAN 12 INCHES SHALL BE CONSTRUCTED OF CS02.
- ALL EMBANKMENT CONSTRUCTED OF COHESIVE SOIL SHALL BE CONSTRUCTED WITH NOT MORE THAN 110% OF OPTIMUM MOISTURE CONTENT, DETERMINED BY THE STANDARD PROCTOR TEST. COHESIVE SOIL SHALL BE DEFINED AS ANY SOIL WHICH CONTAINS GREATER THAN 10% PARTICLES BY WEIGHT PASSING THE 75 #M (#200 SIEVE). THE 110% OF OPTIMUM MOISTURE LIMIT MAY BE WAIVED IN FREE-DRAINING GRANULAR MATERIAL WHEN APPROVED BY THE ENGINEER.
- ON FULL DEPTH PAVEMENT, SHOULDER WIDTHS OF 6 FT. OR LESS MAY BE PLACED, AT THE CONTRACTOR'S OPTION, SIMULTANEOUSLY WITH THE ADJACENT TRAFFIC LANE FOR BOTH THE BINDER AND SURFACE COURSES, PROVIDED THE CROSS SLOPE OF BOTH THE PAVEMENT AND SHOULDER CAN BE SATISFACTORILY OBTAINED. THE SHOULDER WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD FOR HOT-MIX ASPHALT SHOULDERS OF THE THICKNESS SPECIFIED ON THE PLANS.
- A NATIONWIDE 404 PERMIT HAS BEEN ISSUED FOR THIS PROJECT AND THE CONDITIONS OF THAT PERMIT MUST BE ADHERED TO.
- THE NEW NUMBER FOR THIS STRUCTURE WILL BE 004-3098.
- THE ADDITIONAL THICKNESS OF PROPOSED PAVEMENT REQUIRED TO MATCH THE BRIDGE APPROACH PAVEMENT, SHOWN IN STANDARD 420406, SHALL BE INCLUDED IN THE COST OF THE PROPOSED PAVEMENT AND NOT PAID FOR SEPARATELY.
- BARRIER WALL REFLECTORS, TYPE B SHALL BE INSTALLED ON THE TOP OF BRIDGE PARAPET WALLS. THE MARKERS, THE COLOR, AND THE SPACING SHALL BE ACCORDING TO STANDARD 782006, EXCEPT THE MINIMUM IS 2 PER SIDE.
- CULVERT & BRIDGE FLOWS MUST BE MAINTAINED THROUGHOUT THE PROJECT. NORMAL FLOW SHALL BE ALLOWED TO PASS AT THE RATE IT ENTERS THE JOBSITE. HIGH FLOWS SHALL BE ALLOWED TO PASS WITHOUT CAUSING DAMAGE TO UPSTREAM PROPERTIES.
- THE COST OF MAKING STORM SEWER CONNECTIONS TO EXISTING DRAINAGE STRUCTURES SHALL BE INCLUDED IN THE VARIOUS CONTRACT UNIT PRICES FOR STORM SEWER.
- THE NEW MANHOLE LIDS ON THIS PROJECT SHALL HAVE THE WORD "STORM", "SANITARY", OR "WATER" ON THE LID. THE WORD TO BE USED IS NOTED ON THE PLANS. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE WORD TO BE USED ON OTHER LIDS NOT NOTED ON THE PLANS. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THIS WORK.
- ALL PROPOSED MANHOLES ON THIS PROJECT SHALL BE CAST-IN-PLACE OR PRECAST. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR MANHOLE OF THE TYPE AND SIZE SPECIFIED.
- THE CONTRACTOR SHALL FIELD VERIFY EXISTING DRAINAGE STRUCTURE CONDITIONS, LOCATIONS, PIPE SIZES, INVERTS, AND ELEVATIONS PRIOR TO ORDERING ANY PROPOSED STRUCTURES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO ORDERING.
- DELINEATORS SHALL BE INSTALLED AS SHOWN IN STANDARD 635001, EXCEPT THAT THE POST SHALL BE ROTATED 180° AND ONLY METAL-BACKED DELINEATORS SHALL BE PERMITTED. DELINEATORS SHALL BE PLACED AT THE ENDS OF APPROACH GUARDRAIL TERMINAL SECTIONS, AND AT EACH HEADWALL OR END SECTION OF ACROSS-ROAD CULVERTS. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR DELINEATORS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COLLECTING AND MAINTAINING AN ELECTRONIC LOG OF ALL STAKEOUT SURVEY THAT IS PERFORMED ON THE JOB, EITHER BY HIM/HER OR ANY SUB-CONTRACTOR PERFORMING THE STAKEOUT. UPON REQUEST, ALL LOGS SHALL BE SUBMITTED TO THE ENGINEER. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THIS WORK, BUT SHALL BE CONSIDERED INCLUDED IN THE COST FOR CONSTRUCTION LAYOUT.

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING UTILITY PROPERTY DURING CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.39 OF THE STANDARD SPECIFICATIONS. A MINIMUM OF 48 HOURS ADVANCE NOTICE IS REQUIRED FOR NON-EMERGENCY WORK. THE JULIE NUMBER IS 800-892-0123. THE FOLLOWING LISTED UTILITIES LOCATED WITHIN THE PROJECT LIMITS OR IMMEDIATELY ADJACENT TO THE PROJECT CONSTRUCTION LIMITS ARE MEMBERS OF JULIE:

CITY OF BELVIDERE
ROADWAY LIGHTING & STORM SEWERS
BRENT ANDERSON, 815-544-9256

FRONTIER COMMUNICATIONS
OVERHEAD FIBER OPTIC & UNDERGROUND COPPER
PAULO JAVIER, 815-547-0395

GENERAL MILLS
OVERHEAD & UNDERGROUND ELECTRIC, SANITARY SEWERS, & STORM SEWERS
BILL BECK
815-544-7360

NICOR (2" GAS MAIN ON EAST SIDE)
BRUCE KOPPANG
630-388-3046

- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE MUNICIPALITY TO DETERMINE APPROVED METHODS OF UTILITY STRUCTURE ADJUSTMENT. UTILITY STRUCTURES MAY INCLUDE, BUT ARE NOT LIMITED TO, MANHOLES, WATER VALVES, HANDHOLES, ETC. ALL MATERIALS AND WORK NECESSARY TO COMPLETE ADJUSTMENTS PER MUNICIPALITY REQUIREMENTS SHALL BE CONSIDERED INCLUDED IN THE COST OF THE ASSOCIATED ADJUSTMENT PAY ITEM.
- THE CONTRACTOR SHALL SAW CUT PAVEMENT, SIDEWALKS, AND CURB AND GUTTER AT LOCATIONS SPECIFIED BY THE ENGINEER TO A DEPTH SPECIFIED BY THE ENGINEER AS NECESSARY TO PROVIDE A CLEAN EDGE BETWEEN EXISTING AND PROPOSED ROADWAY AND SIDEWALK FEATURES. SAW CUTTING SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE OF THE RESPECTIVE REMOVAL ITEM.
- THE CONTRACTOR SHALL KEEP A SECTION OF THE KISHWAUKEE RIVER OPEN TO BOATING TRAFFIC AT ALL TIMES. IN NO CASE SHALL BOAT PASSAGE BE COMPLETELY OBSTRUCTED FOR MORE THAN ONE CONTINUOUS HOUR AT ANY TIME, UNLESS APPROVED IN ADVANCE BY BOONE COUNTY.
- THE TEMPORARY EASEMENT AND TEMPORARY WETLAND IMPACTS SHOWN IN THE PLANS NORTH OF THE RIVER AND WEST OF THE ROADWAY ARE PROVIDED FOR CONSTRUCTION ACCESS TO THE RIVER.

INDEX OF SHEETS

1	COVER SHEET
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LIST OF ILLINOIS DOT HIGHWAY STANDARDS

280001-07	TEMPORARY EROSION CONTROL SYSTEMS
420406	PAVEMENT CONNECTOR (HMA) FOR BRIDGE APPROACH SLAB
515001-03	NAME PLATE FOR BRIDGES
542301-03	PRECAST REINFORCED CONCRETE FLARED END SECTION
601101-02	CONCRETE HEADWALL FOR PIPE UNDERDRAINS
602306-03	INLET, TYPE B
602401-06	PRECAST MANHOLE TYPE A 4' DIAMETER
602601-06	PRECAST REINFORCED CONCRETE FLAT SLAB
602701-02	MANHOLE STEPS
604001-04	FRAME AND LIDS TYPE 1
604006-05	FRAME AND GRATE, TYPE 3
606001-07	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
631031-15	TRAFFIC BARRIER TERMINAL, TYPE 6
635001-02	DELINEATORS
701001-02	OFF-RD OPERATIONS, 2L, 2W MORE THAN 15' AWAY
701006-05	OFF-RD OPERATIONS, 2L, 2W 15' TO 24" FROM PAVEMENT EDGE
701011-04	OFF-RD MOVING OPERATIONS, 2L, 2W, DAY ONLY
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701801-06	SIDEWALK, CORNER OR CROSSWALK CLOSURE
701901-08	TRAFFIC CONTROL DEVICES
720001-01	SIGN PANEL MOUNTING DETAILS
720006-04	SIGN PANEL ERECTION DETAILS
720011-01	METAL POSTS FOR SIGNS, MARKERS AND DELINEATORS
725001-01	OBJECT AND TERMINAL MARKERS
728001-01	TELESCOPING STEEL SIGN SUPPORT
729001-01	APPLICATIONS OF TYPES A AND B METAL POSTS (FOR SIGNS & MARKERS)
780001-05	TYPICAL PAVEMENT MARKINGS
781001-04	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS
782006	GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS
BLR 21-9	TYP. APPL. OF TRAFFIC CONTROL DEVICES FOR CONSTR. ON RURAL HWYS.
BLR 22-7	TYP. APPL. OF TRAF. CONT. DEVICES FOR CONSTR. ON RURAL LOCAL HWYS.
BLR 23-4	TRAFFIC BARRIER TERMINAL TYPE 1
BLR 26-3	STEEL PLATE BEAM GUARDRAIL 29" HEIGHT

LIST OF ILLINOIS DISTRICT 2 STANDARDS

10.2	INLETS, SPECIAL
41.1	TYPICAL PAVEMENT MARKINGS
50.4	TYPICAL BENCHING DETAIL ON EXISTING EMBANKMENT



DESIGNED	KMA	6/6/19
DRAWN	KMA	8/22/19
REVIEWED	DRM	8/28/19

FILE NAME =	USER NAME = Ander-00833	DESIGNED - KMA	REVISED -
D2-16L05048-shr-gennote.dgn		DRAWN - KMA	REVISED -
	PLOT SCALE = 2.0000' / in.	CHECKED - DRM	REVISED -
	PLOT DATE = 8/29/2019	DATE - 8/30/19	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

INDEX AND GENERAL NOTES

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

GEN-01			
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS
5011A	17-00093-00-BR	BOONE	71
			SHEET NO. 2
CONTRACT NO. 85688			
ILLINOIS FED. AID PROJECT			

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE	
				80% FEDERAL 20% LOCAL	80% FEDERAL 20% LOCAL
				ROADWAY	STRUCTURES
				0004 URBAN	0010 URBAN
20101000	TEMPORARY FENCE	FOOT	260	260	0
20101100	TREE TRUNK PROTECTION	EACH	5	5	0
20200100	EARTH EXCAVATION	CU YD	820	820	0
20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	70	70	0
SP 20400800	FURNISHED EXCAVATION	CU YD	190	190	0
20700220	POROUS GRANULAR EMBANKMENT	CU YD	70	70	0
20800150	TRENCH BACKFILL	CU YD	36	36	0
21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	1,826	1,826	0
25000110	SEEDING, CLASS 1A	ACRE	0.18	0.18	0
25000210	SEEDING, CLASS 2A	ACRE	0.19	0.19	0
25000314	SEEDING, CLASS 4B	ACRE	0.22	0.22	0
25100630	EROSION CONTROL BLANKET	SQ YD	1,792	1,792	0
25100900	TURF REINFORCEMENT MAT	SQ YD	29	29	0
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	236	236	0
28000400	PERIMETER EROSION BARRIER	FOOT	1,800	1,800	0
28000510	INLET FILTERS	EACH	9	9	0
SP 28100107	STONE RIPRAP, CLASS A4	SQ YD	620	0	620
SP 28100807	STONE DUMPED RIPRAP, CLASS A4	TON	528	0	528
28200200	FILTER FABRIC	SQ YD	620	0	620
SP 30300112	AGGREGATE SUBGRADE IMPROVEMENT 12"	SQ YD	2,198	2,198	0
31102000	SUBBASE GRANULAR MATERIAL, TYPE C	CU YD	18	18	0
35102000	AGGREGATE BASE COURSE, TYPE B 8"	SQ YD	186	186	0
40201000	AGGREGATE FOR TEMPORARY ACCESS	TON	140	140	0
40600275	BITUMINOUS MATERIALS (PRIME COAT)	POUND	4,100	4,100	0
40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	1,500	1,500	0
SP 40604060	HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "D", N50	TON	23	23	0
40701861	HOT-MIX ASPHALT PAVEMENT (FULL-DEPTH), 9"	SQ YD	1,642	1,642	0
44000100	PAVEMENT REMOVAL	SQ YD	1,974	1,974	0

SP SEE SPECIAL PROVISION
* SPECIALTY ITEM

DESIGNED	KMA	6/6/19
DRAWN	KMA	8/22/19
REVIEWED	DRM	8/28/19

FILE NAME =	02-16L0504B-sht-S00-01.dgn
USER NAME =	Ander00833
PLOT SCALE =	2.0000' / 1in.
PLOT DATE =	8/29/2019

DESIGNED -	KMA	REVISED -
DRAWN -	KMA	REVISED -
CHECKED -	DRM	REVISED -
DATE -	8/30/19	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

SCALE: NTS SHEET NO. 1 OF 4 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	3
ILLINOIS FED. AID PROJECT			CONTRACT NO. 85688	

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE	
				80% FEDERAL 20% LOCAL	80% FEDERAL 20% LOCAL
				ROADWAY	STRUCTURES
				0004 URBAN	0010 URBAN
44000200	DRIVEWAY PAVEMENT REMOVAL	SQ YD	156	156	0
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	504	504	0
44000600	SIDEWALK REMOVAL	SQ FT	487	487	0
48203021	HOT-MIX ASPHALT SHOULDERS, 6"	SQ YD	327	327	0
SP 50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1	0	1
50200100	STRUCTURE EXCAVATION	CU YD	272	0	272
50200300	COFFERDAM EXCAVATION	CU YD	548	0	548
50201121	COFFERDAM (TYPE 2) (LOCATION-1)	EACH	1	0	1
50201122	COFFERDAM (TYPE 2) (LOCATION-2)	EACH	1	0	1
50300225	CONCRETE STRUCTURES	CU YD	302.8	0	302.8
50300255	CONCRETE SUPERSTRUCTURE	CU YD	444.1	0	444.1
50300260	BRIDGE DECK GROOVING	SQ YD	1,158	0	1,158
50300265	SEAL COAT CONCRETE	CU YD	170.0	0	170.0
50300300	PROTECTIVE COAT	SQ YD	1,691	0	1,691
50301350	CONCRETE SUPERSTRUCTURE (APPROACH SLAB)	CU YD	111.8	0	111.8
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1	0	1
50500505	STUD SHEAR CONNECTORS	EACH	4,950	0	4,950
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	171,550	0	171,550
* 50900105	ALUMINUM RAILING, TYPE L	FOOT	312	0	312
51201610	FURNISHING STEEL PILES HP12X63	FOOT	540	0	540
51201900	FURNISHING STEEL PILES HP14X89	FOOT	550	0	550
51202305	DRIVING PILES	FOOT	1,090	0	1,090
51203610	TEST PILE STEEL HP12X63	EACH	2	0	2
51203900	TEST PILE STEEL HP14X89	EACH	2	0	2
51204650	PILE SHOES	EACH	38	0	38
51500100	NAME PLATES	EACH	1	0	1
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	12	0	12
52100520	ANCHOR BOLTS, 1"	EACH	24	0	24

SP SEE SPECIAL PROVISION
* SPECIALTY ITEM

DESIGNED	KMA	6/6/19
DRAWN	KMA	8/22/19
REVIEWED	DRM	8/28/19

FILE NAME = 02-16L05048-sht-S00-02.dgn	USER NAME = Ander00833	DESIGNED - KMA	REVISIONS -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - KMA	REVISIONS -					5011A	17-00093-00-BR	BOONE	71	4
		CHECKED - DRM	REVISIONS -		SCALE: NTS			SHEET NO. 2 OF 4 SHEETS			STA.	TO STA.
		DATE - 8/30/19	REVISIONS -		ILLINOIS FED. AID PROJECT							

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE	
				80% FEDERAL 20% LOCAL	80% FEDERAL 20% LOCAL
				ROADWAY	STRUCTURES
				0004 URBAN	0010 URBAN
52100530	ANCHOR BOLTS, 1 1/4"	EACH	24	0	24
54213657	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 12"	EACH	2	2	0
550A0050	STORM SEWERS, CLASS A, TYPE 1 12"	FOOT	268	268	0
550A0070	STORM SEWERS, CLASS A, TYPE 1 15"	FOOT	21	21	0
SP 55100400	STORM SEWER REMOVAL 10"	FOOT	14	14	0
SP 58600101	GRANULAR BACKFILL FOR STRUCTURES	CU YD	178	0	178
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	90	0	90
60218400	MANHOLES, TYPE A, 4'-DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	1	1	0
60240220	INLETS, TYPE B, TYPE 3 FRAME AND GRATE	EACH	2	2	0
60255500	MANHOLES TO BE ADJUSTED	EACH	1	1	0
60500060	REMOVING INLETS	EACH	1	1	0
60604400	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.18	FOOT	30	30	0
60605000	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24	FOOT	534	534	0
* 63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	12.5	12.5	0
* 63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	1	1	0
* 63500105	DELINEATORS	EACH	1	1	0
* 66400305	CHAIN LINK FENCE, 6'	FOOT	200	200	0
* 66900200	NON-SPECIAL WASTE DISPOSAL	CU YD	280	280	0
* 66900530	SOIL DISPOSAL ANALYSIS	EACH	3	3	0
* 66901001	REGULATED SUBSTANCES PRE-CONSTRUCTION PLAN	LSUM	1	1	0
* 66901002	ON-SITE MONITORING OF REGULATED SUBSTANCES	CAL DA	3	3	0
* 66901003	REGULATED SUBSTANCES FINAL CONSTRUCTION REPORT	LSUM	1	1	0
SP 67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	8	0	8
67100100	MOBILIZATION	L SUM	1	0	1
SP * 70107025	CHANGEABLE MESSAGE SIGN	CAL DA	22	22	0
* 72000100	SIGN PANEL - TYPE 1	SQ FT	38	38	0
* 72400100	REMOVE SIGN PANEL ASSEMBLY - TYPE A	EACH	1	1	0
* 72400200	REMOVE SIGN PANEL ASSEMBLY - TYPE B	EACH	1	1	0

SP SEE SPECIAL PROVISION
* SPECIALTY ITEM

DESIGNED	KMA	6/6/19
DRAWN	KMA	8/27/19
REVIEWED	DRM	8/28/19

FILE NAME = 02-16L05048-sht-S00-03.dgn	USER NAME = Ander00833	DESIGNED - KMA	REVISIONS -
		DRAWN - KMA	REVISIONS -
	PLDT SCALE = 2.0000' / 1in.	CHECKED - DRM	REVISIONS -
	PLDT DATE = 9/9/2019	DATE - 8/30/19	REVISIONS -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

SCALE: NTS SHEET NO. 3 OF 4 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	5
CONTRACT NO. 85688			ILLINOIS FED. AID PROJECT	

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE	
				80% FEDERAL 20% LOCAL	80% FEDERAL 20% LOCAL
				ROADWAY	STRUCTURES
				0004 URBAN	0010 URBAN
* 72400310	REMOVE SIGN PANEL - TYPE 1	SO FT	18	18	0
* 72400500	RELOCATE SIGN PANEL ASSEMBLY - TYPE A	EACH	1	1	0
* 72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	1	1	0
* 72800100	TELESCOPING STEEL SIGN SUPPORT	FOOT	79	79	0
* 72900100	METAL POST - TYPE A	FOOT	30	30	0
* 78008200	POLYUREA PAVEMENT MARKING TYPE I - LETTERS AND SYMBOLS	SO FT	47	47	0
* 78008210	POLYUREA PAVEMENT MARKING TYPE I - LINE 4"	FOOT	2,787	2,787	0
* 78008240	POLYUREA PAVEMENT MARKING TYPE I - LINE 8"	FOOT	210	210	0
81200230	CONDUIT EMBEDDED IN STRUCTURE, 2" DIA., PVC	FOOT	325	0	325
81300830	JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 18" X 18" X 8"	EACH	2	0	2
SP 89502400	REMOVE EXISTING FLASHING BEACON INSTALLATION COMPLETE	EACH	1	1	0
SP * LR631020	TRAFFIC BARRIER TERMINAL, TYPE 1	EACH	1	1	0
SP X2111100	TOPSOIL EXCAVATION AND PLACEMENT, SPECIAL	CU YD	340	340	0
SP X4404200	PAVED FLUME REMOVAL	FOOT	34	34	0
SP X6024240	INLETS, SPECIAL	EACH	6	6	0
SP X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1	1	0
SP Z0005216	HOT-MIX ASPHALT STABILIZATION 6" AT STEEL PLATE BEAM GUARD RAIL	SQ YD	66	66	0
SP Z0013798	CONSTRUCTION LAYOUT	L SUM	1	0	1
SP Z0022800	FENCE REMOVAL	FOOT	200	200	0
SP Z0046304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	186	0	186

SP SEE SPECIAL PROVISION
* SPECIALTY ITEM

DESIGNED	KMA	8/22/19
DRAWN	KMA	8/22/19
REVIEWED	DRM	8/28/19

FILE NAME = 02-16L05048-shr-S00-04.dgn	USER NAME = Ander00833	DESIGNED - KMA	REVISIONS -
		DRAWN - KMA	REVISIONS -
		CHECKED - DRM	REVISIONS -
		DATE - 8/30/19	REVISIONS -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES			
SCALE: NTS	SHEET NO. 4 OF 4 SHEETS	STA.	TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BODNE	71	6
CONTRACT NO. 85688			ILLINOIS FED. AID PROJECT	

DRIVEWAY PAVEMENT REMOVAL SCHEDULE

SHEET	LOC.	SIDE	AREA (SQ FT)	AREA (SQ YD)
REM-1	20+60.33	LT	605.2	67.2
REM-1	20+81.48	RT	795.7	88.4
TOTAL				156

COMB. CURB AND GUTTER REMOVAL SCHEDULE

SHEET	FROM	TO	SIDE	LENGTH (FOOT)
REM-1	19+80.00	22+92.80	LT	313.5
REM-1	19+80.00	22+92.80	RT	190.0
TOTAL				504.0

SIDEWALK REMOVAL SCHEDULE

SHEET	STA	SIDE	AREA (SQ FT)
REM-1	21+93.60	LT	195.1
REM-1	21+80.33	RT	291.9
TOTAL			487.0

HOT-MIX ASPHALT SHOULDERS, 6" SCHEDULE

SHEET	FROM	TO	SIDE	AREA (SQ FT)	AREA (SQ YD)
RDY-2	26+08.92	28+00.00	LT	1470.3	163.4
RDY-2	26+08.92	28+00.00	RT	1470.3	163.4
TOTAL					327

HMA STAB. 6" AT STEEL PLATE BEAM GUARD RAIL SCHEDULE

SHEET	FROM	TO	SIDE	AREA (SQ FT)	AREA (SQ YD)
RDY-1	21+54.67	22+61.58	RT	589.5	65.5
TOTAL					66

SEEDING, CLASS 1A SCHEDULE

SHEET	FROM	TO	SIDE	AREA (SQ FT)
ECP-1	19+80.00	20+39.26	LT	517.5
ECP-1	19+80.00	20+57.52	RT	449.0
ECP-1	20+80.00	22+76.58	LT	3837.6
ECP-1	21+00.58	22+76.58	RT	3179.2
TOTAL (SQ FT)				7,983
TOTAL (ACRE)				0.18

SEEDING, CLASS 2A SCHEDULE

SHEET	FROM	TO	SIDE	AREA (SQ FT)
ECP-1	25+67.87	28+00.00	LT	4099.1
ECP-1	25+67.87	28+00.00	RT	4271.3
TOTAL (SQ FT)				8,370
TOTAL (ACRE)				0.19

SEEDING, CLASS 4B SCHEDULE

SHEET	FROM	TO	SIDE	AREA (SQ FT)
ECP-1	24+85.80	28+51.00	LT	8683.1
ECP-1	24+97.70	25+61.30	RT	558.5
ECP-1	25+98.17	26+03.67	LT	78.4
ECP-1	25+98.17	26+03.67	RT	54.6
TOTAL (SQ FT)				9,375
TOTAL (ACRE)				0.22

PERIMETER EROSION BARRIER SCHEDULE

SHEET	FROM	TO	SIDE	LENGTH (FOOT)
ERO-1	19+80.50	20+39.60	LT	69
ERO-1	19+75.00	20+56.90	RT	89
ERO-1	20+74.20	23+10.00	LT	301
ERO-1	21+00.60	23+10.00	RT	301
ERO-1	25+30.00	28+48.00	LT	473
ERO-1	25+30.00	28+15.00	RT	392
ERO-1		REPAIRS		175
TOTAL				1800

DESIGNED	KMA	6/6/19
DRAWN	KMA	8/22/19
REVIEWED	DRM	8/28/19

FILE NAME =	USER NAME = Ander00833	DESIGNED - KMA	REVISED -
D2-16L0504B-sh-t-SCH-02.dgn		DRAWN - KMA	REVISED -
	PLOT SCALE = 2.0000' / in.	CHECKED - DRM	REVISED -
	PLOT DATE = 8/29/2019	DATE - 8/30/19	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULES OF QUANTITIES

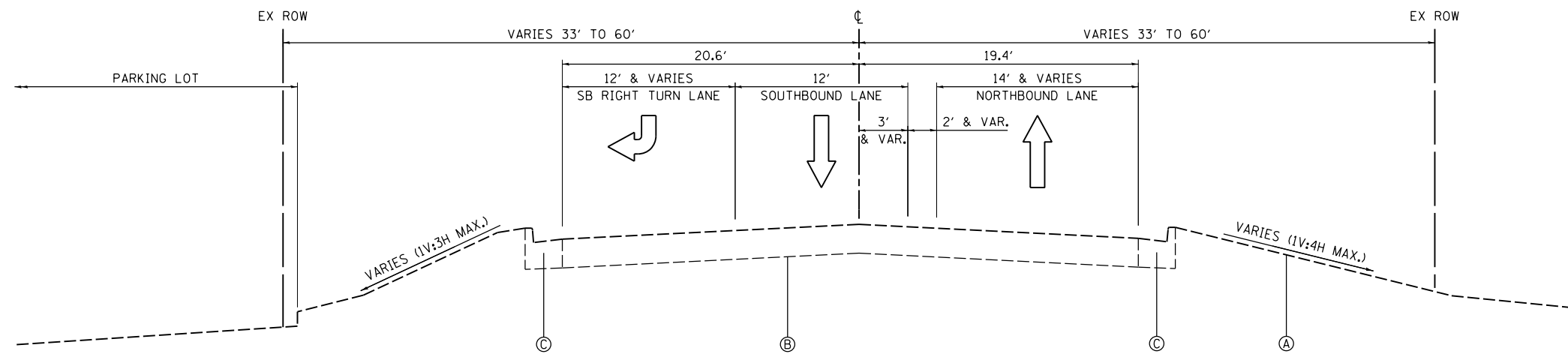
SCALE: NTS SHEET NO. 2 OF 2 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	8
CONTRACT NO. 85688				
ILLINOIS FED. AID PROJECT				

SCH-02

EXISTING LEGEND

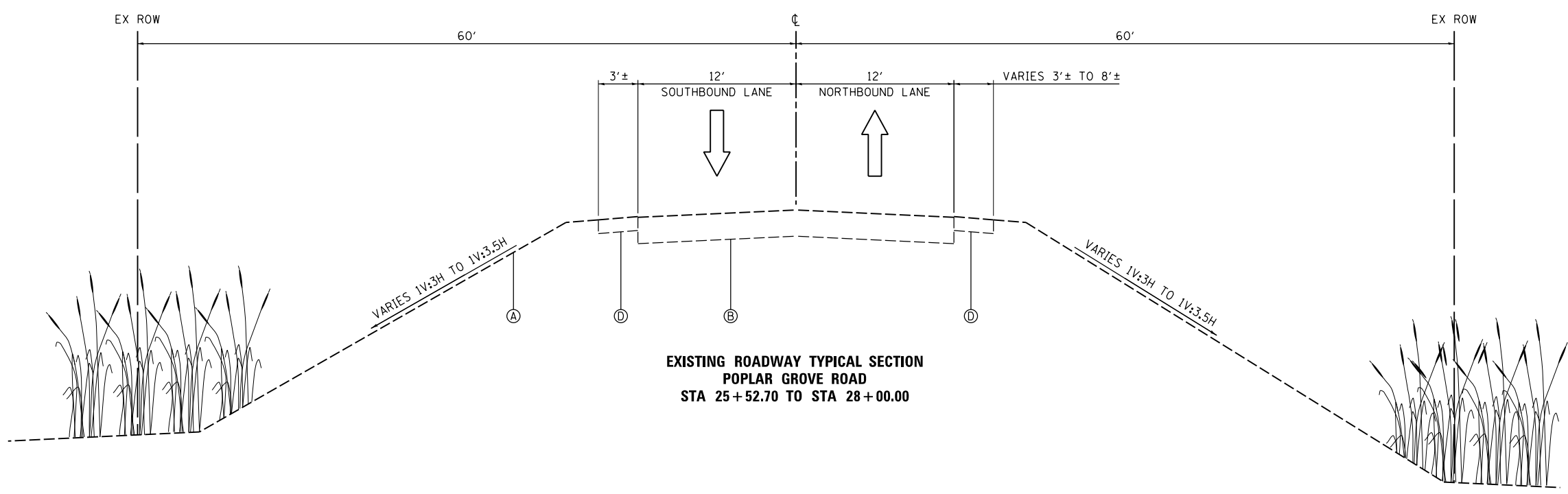
- (A) GROUND
- (B) PAVEMENT, HOT MIX ASPHALT (SEE TABLE FOR ESTIMATED DEPTH)
- (C) CONCRETE CURB & GUTTER, TYPE B6.24
- (D) AGGREGATE SHOULDER



**EXISTING ROADWAY TYPICAL SECTION
 POPLAR GROVE ROAD / PLEASANT STREET
 STA 19+80.00 TO STA 22+93.80
 (OMIT BRIDGE STA 22+93.80 TO STA 25+52.70)**

STATION LIMITS		HOT-MIX ASPHALT PAVEMENT
FROM	TO	
19+80.00	22+93.80	6"
25+52.70	28+00.00	8"

APPROXIMATE EXISTING PAVEMENT DEPTH



**EXISTING ROADWAY TYPICAL SECTION
 POPLAR GROVE ROAD
 STA 25+52.70 TO STA 28+00.00**

DESIGNED	KMA	6/6/19
DRAWN	KMA	8/22/19
REVIEWED	DRM	8/28/19

FILE NAME =	USER NAME = Ander-00833	DESIGNED - KMA	REVISED -
D2-16L0504B-shr-TypEx-01.dgn		DRAWN - KMA	REVISED -
		CHECKED - DRM	REVISED -
		DATE - 8/30/19	REVISED -

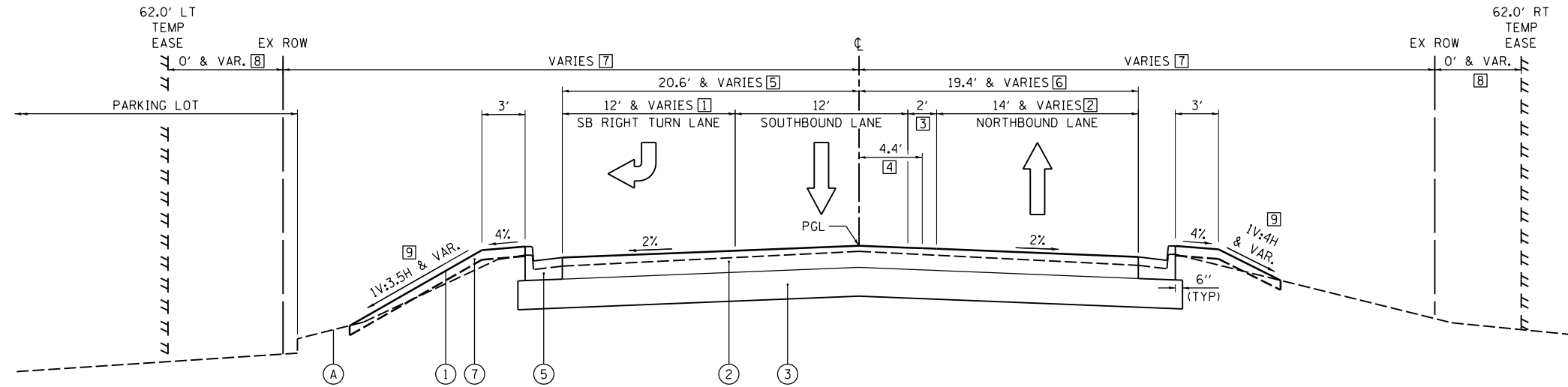
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

EXISTING TYPICAL SECTIONS

SCALE: NTS SHEET NO. 1 OF 3 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	9
CONTRACT NO. 85688			ILLINOIS FED. AID PROJECT	

TYP-01



**PROPOSED ROADWAY TYPICAL SECTION
 POPLAR GROVE ROAD /PLEASANT STREET
 STA 19+80.00 TO STA 22+46.58
 (OMIT BRIDGE AND APPROACH SLABS
 STA 22+46.58 TO STA 25+93.91)**

EXISTING LEGEND

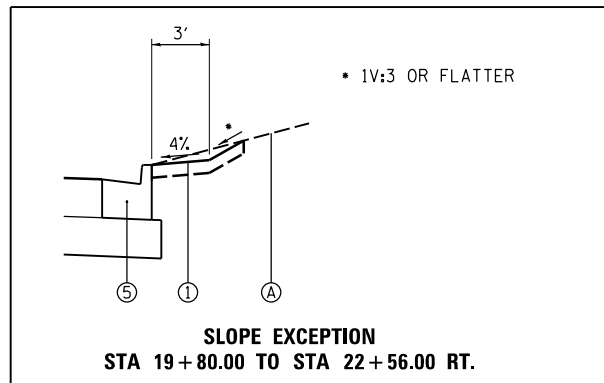
(A) GROUND

PROPOSED LEGEND

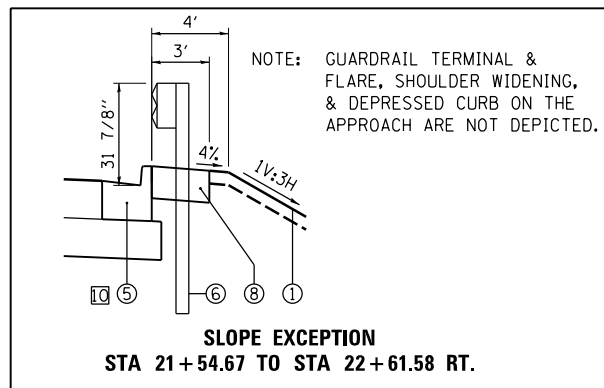
- (1) GROUND
- (2) HOT-MIX ASPHALT PAVEMENT (FULL-DEPTH), 9" (40701861)
(2" SURFACE; 7" BINDER)
- (3) AGGREGATE SUBGRADE IMPROVEMENT 12" (30300112)
- (4) CURB AND GUTTER, TYPE B-6.18 (60604400)
- (5) CURB AND GUTTER, TYPE B-6.24 (60605000)
- (6) STEEL PLATE BEAM GUARDRAIL (HWY. STD. BLR-26) (63000001)
- (7) TOPSOIL FURNISH AND PLACE 4" (21101615)
& SEEDING, CLASS 2A (25000210)
- (8) HOT-MIX ASPHALT SHOULDER STABILIZATION 6"
AT STEEL PLATE BEAM GUARD RAIL (20005216)
- (9) HOT-MIX ASPHALT SHOULDER, 6" (48203021)
- (10) SUBBASE GRANULAR MATERIAL, TYPE C (31102000)
- (11) POROUS GRANULAR EMBANKMENT, SUBGRADE (20700220)
& REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL (20201200)

NOTES

- 1. TEMPORARY EASEMENTS ON SOUTHERLY SIDE OF BRIDGE ARE INTENDED FOR REMOVAL OF STAIRS, SIDEWALKS, AND FLUME.

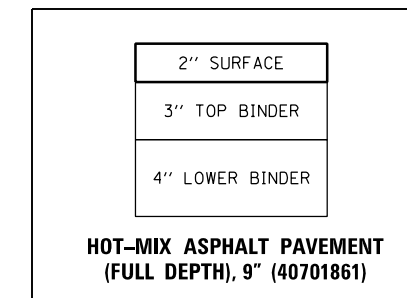


- (1) LANE WIDTH
 STA 19+80.00 TO STA 21+10.00 = 12.0'
 STA 21+10.00 TO STA 22+46.58 = VARIES 12.0' TO 2.0'
- (2) LANE WIDTH
 STA 19+80.00 TO STA 20+18.00 = 14.0'
 STA 20+18.00 TO STA 20+92.81 = VARIES 14.0' TO 12.0'
 STA 20+92.81 TO STA 22+46.58 = 12.0'
 (THE 0' TO 2' SHOULDER STA 21+80.00 TO STA 22+46.58 IS NOT DEPICTED)
- (3) PAINTED MEDIAN WIDTH
 STA 19+80.00 TO STA 20+92.80 = 2.0'
 (DOUBLE YELLOW 24" C-C)
 STA 20+92.80 TO STA 21+22.80 = VARIES 2.0' TO 0.0'
 (DOUBLE YELLOW VARIES 24" C-C TO 12" C-C)
 STA 21+22.80 TO STA 22+46.58 = 0.0'
 (DOUBLE YELLOW 12" C-C)
- (4) OFFSET FROM C TO CENTER OF MEDIAN/DOUBLE YELLOW
 STA 19+80.00 TO STA 21+07.80 = 4.4'
 STA 21+07.80 TO STA 22+39.80 = VARIES 4.4' TO 0.0'
 STA 22+39.80 TO STA 22+46.58 = 0.0'
- (5) DISTANCE FROM CENTERLINE TO EOP
 STA 19+80.00 TO STA 22+00.00 = 20.6'
 STA 22+00.00 TO STA 22+45.00 = VARIES 20.6' TO 14.0'
 STA 22+45.00 TO STA 22+46.58 = 14.0'
- (6) DISTANCE FROM CENTERLINE TO EOP
 STA 19+80.00 TO STA 20+18.00 = 19.4'
 STA 20+18.00 TO STA 21+80.00 = VARIES 19.4' TO 14.0'
 STA 21+80.00 TO STA 22+46.58 = 14.0'
- (7) RIGHT-OF-WAY WIDTH
 STA 19+00.00 TO STA 22+90.00 = VARIES 33.0' TO 50.0'
- (8) TEMPORARY EASEMENT WIDTH
 STA 21+80.00 LT TO STA 22+17.00 LT = VARIES 16.8' TO 15.2'
 STA 21+60.00 RT TO STA 21+80.00 RT = VARIES 17.7' TO 16.8'
- (9) FORESLOPE
 STA 19+80.00 LT TO STA 20+56.00 LT = 1V:4H
 STA 20+56.00 LT TO STA 22+00.00 LT = 1V:3.5H
 STA 22+00.00 LT TO STA 22+75.58 LT = TRANSITION
 STA 22+75.58 LT = 1V:2H (BACK OF WINGWALL)
 STA 20+56.00 RT TO STA 21+00.00 RT = 1V:4H
 STA 21+00.00 RT TO STA 22+00.00 RT = VARIES 1V:4H TO 15% TO 1V:3H
 STA 22+00.00 RT TO STA 22+50.00 RT = 1V:3H
 STA 22+50.00 RT TO STA 22+75.58 RT = TRANSITION
 STA 22+75.58 RT = 1V:2H (BACK OF WINGWALL)
- (10) DEPRESSED CURB AND GUTTER FOR GUARDRAIL TERMINAL
 STA 21+50.00 RT TO STA 22+24.68 RT



HOT-MIX ASPHALT MIXTURE REQUIREMENTS

Location(s) and Mixture Use(s)	Full Depth Pavement			Shoulder		DRIVEWAY
	Surface	Top Binder	Lower Binder	Surface	Binder	Surface
PG:	SBS PG 64-28	SBS PG 64-28	PG 64-22	PG 64-22	PG 64-22	PG 64-22
Design Air Voids:	4.0 @ N50	4.0 @ N50	4.0 @ N50	4.0 @ N50	4.0 @ N50	4.0 @ N50
Mixture Composition: (Mixture Gradation)	IL 9.5	IL 19.0	IL 19.0	IL 9.5	IL 19.0	IL 9.5
Friction Aggregate:	C	N/A	N/A	C	N/A	D
Mixture Weight:	112 lbs/sy/in			112 lbs/sy/in		112 lbs/sy/in
Quality Management Program:	QC / QA	QC / QA	QC / QA	QC / QA	QC / QA	QC / QA
Soblot Size:	N/A	N/A	N/A	N/A	N/A	N/A
Number of Roller Passes:	N/A	N/A	N/A	N/A	N/A	N/A



DESIGNED	KMA	6/6/19
DRAWN	KMA	8/22/19
REVIEWED	DRM	8/28/19

FILE NAME =	USER NAME = Ander-00833	DESIGNED - KMA	REVISED -
D2-16L0504B-sht-TypPr-01.dgn		DRAWN - KMA	REVISED -
		CHECKED - DRM	REVISED -
		DATE - 8/30/19	REVISED -

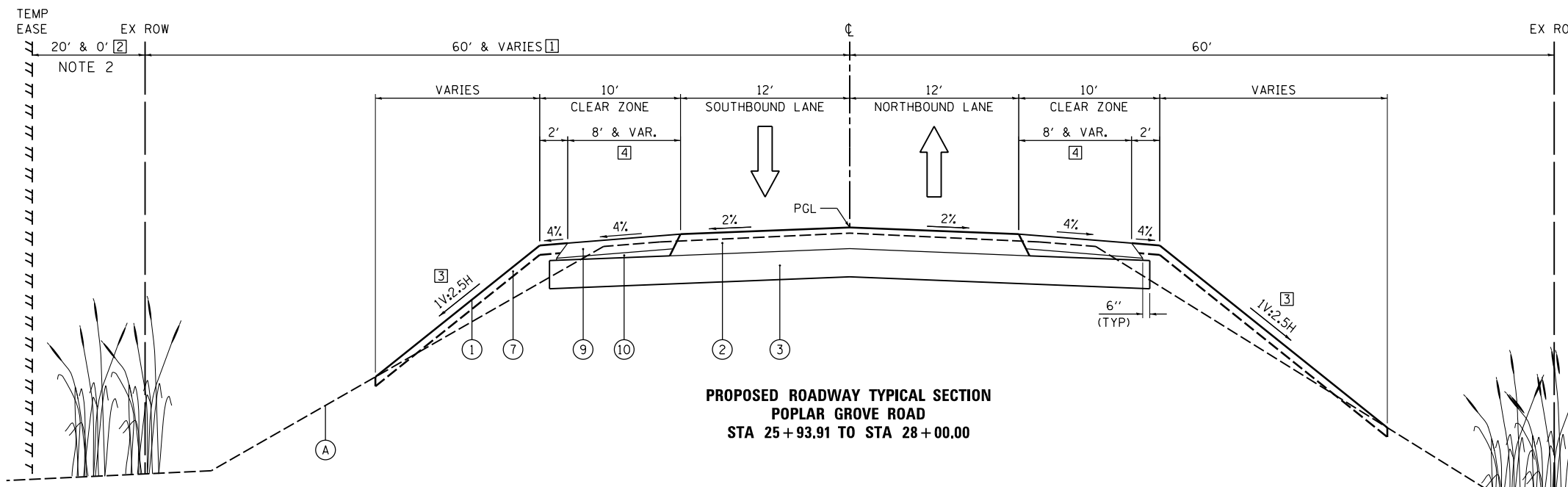
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

PROPOSED TYPICAL SECTIONS

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	10
ILLINOIS FED. AID PROJECT			CONTRACT NO. 85688	

TYP-02



EXISTING LEGEND

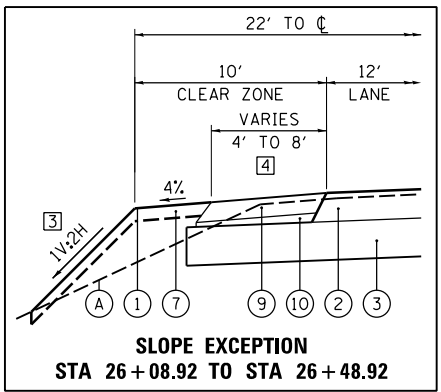
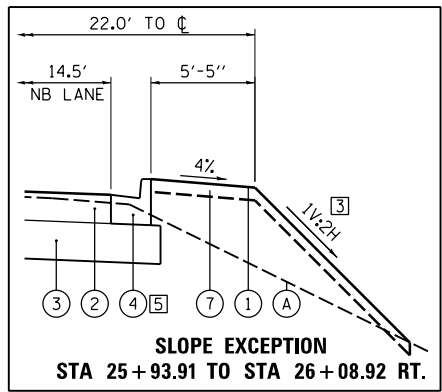
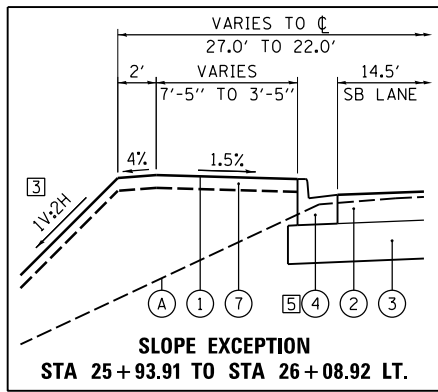
(A) GROUND

PROPOSED LEGEND

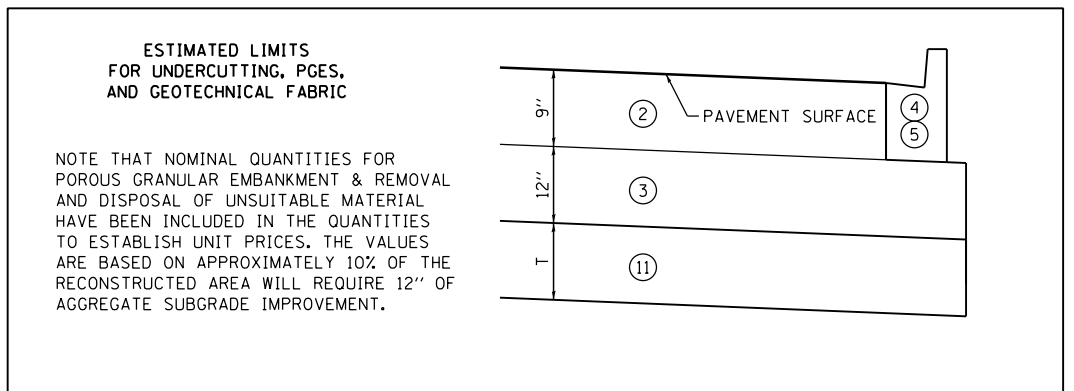
- (1) GROUND
- (2) HOT-MIX ASPHALT PAVEMENT (FULL-DEPTH), 9" (40701861) (2" SURFACE; 7" BINDER)
- (3) AGGREGATE SUBGRADE IMPROVEMENT 12" (30300112)
- (4) CURB AND GUTTER, TYPE B-6.18 (60604400)
- (5) CURB AND GUTTER, TYPE B-6.24 (60605000)
- (6) STEEL PLATE BEAM GUARDRAIL (HWY. STD. BLR-26) (63000001)
- (7) TOPSOIL FURNISH AND PLACE 4" (21101615) & SEEDING, CLASS 2A (25000210)
- (8) HOT-MIX ASPHALT SHOULDER STABILIZATION 6" AT STEEL PLATE BEAM GUARD RAIL (20005216)
- (9) HOT-MIX ASPHALT SHOULDER, 6" (48203021)
- (10) SUBBASE GRANULAR MATERIAL, TYPE C (31102000)
- (11) POROUS GRANULAR EMBANKMENT, SUBGRADE (20700220) & REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL (20201200)

NOTES

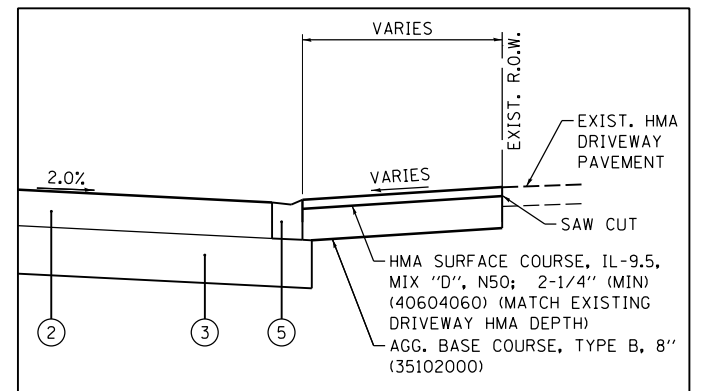
1. VARIABLE CURB HEIGHTS WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE COST OF THE RESPECTIVE CURB AND GUTTER PAY ITEM.
2. TEMPORARY EASEMENT ON NORTHERLY SIDE OF BRIDGE IS INTENDED TEMPORARY ACCESS FOR BRIDGE CONSTRUCTION EQUIPMENT.



- (1) RIGHT-OF-WAY WIDTH
 STA 24+83.89 LT TO STA 29+00.79 LT = VARIES 66.5' TO 60.0'
- (2) TEMPORARY EASEMENT WIDTH
 STA 24+83.89 LT TO STA 27+45.68 LT = 20.0'
- (3) FORESLOPE
 STA 25+93.29 RT TO STA 26+00.00 RT = 1V:2H
 STA 26+00.00 RT TO STA 26+50.00 RT = TRANSITION
 STA 26+50.00 RT TO STA 28+00.00 RT = 1V:2.5H
- (4) HMA SHOULDER WIDTH
 STA 26+08.92 = 4'-7"
 STA 26+08.92 TO STA 26+48.92 = TRANSITION
 STA 26+43.09 TO STA 28+00.00 = 8.0'
- (5) CURB HEIGHT
 LEFT SIDE CURB HEIGHT TRANSITIONS
 FROM 8" TO 6" OVER 2' AT THE APPROACH SLAB
 LEFT & RIGHT SIDE CURB HEIGHT TRANSITIONS
 FROM 6" TO 0" OVER 4' AT THE SHOULDER



AGGREGATE SUBGRADE IMPROVEMENT DETAIL



HMA ENTRANCE DETAIL

SEE PLANS AND CROSS SECTIONS FOR LOCATIONS AND GRADES

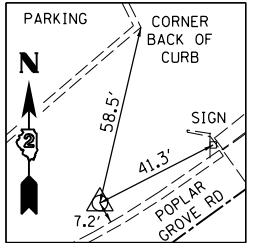
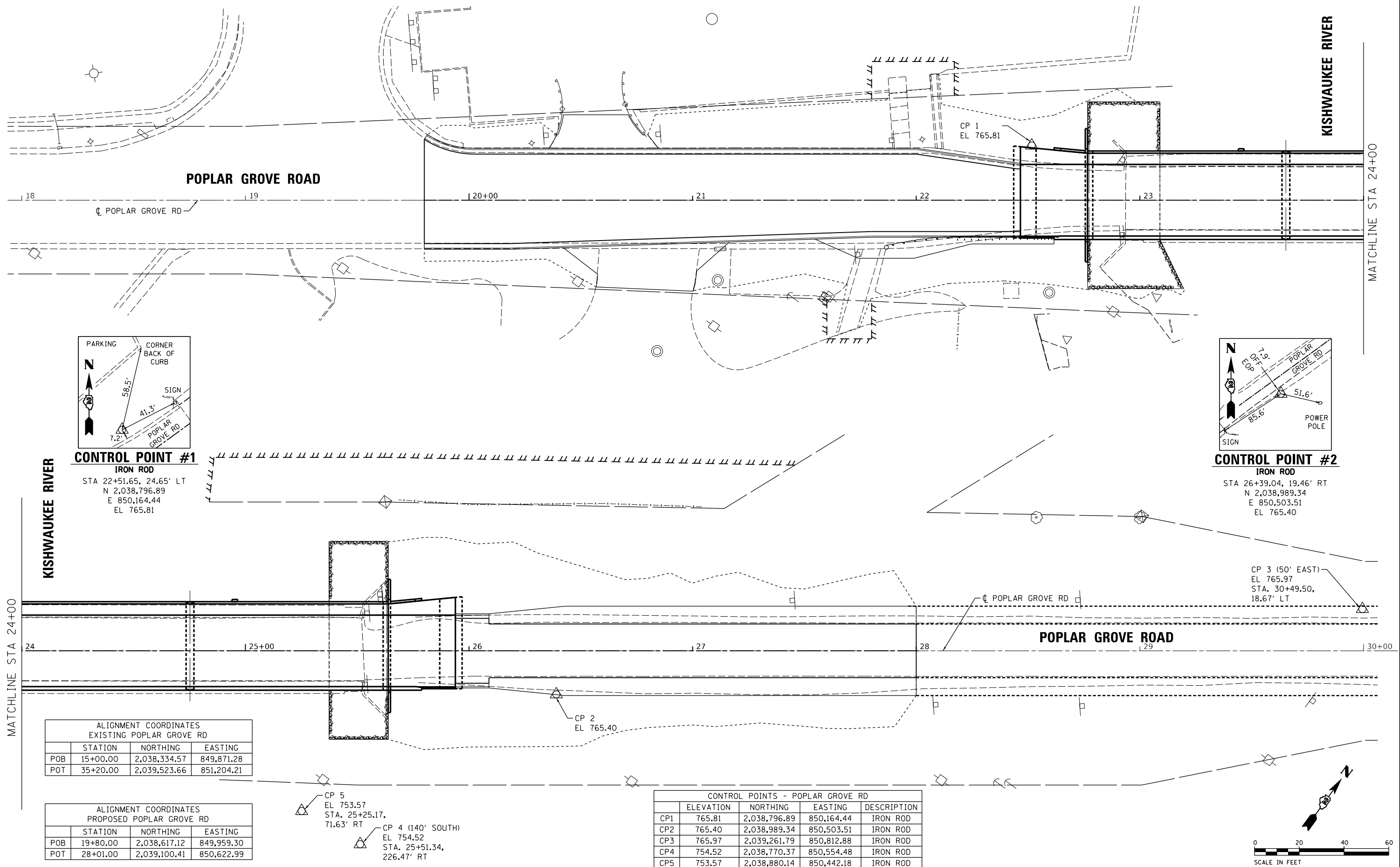
DESIGNED - KMA	USER NAME = Ander-00833	DESIGNED - KMA	REVISED -
DRAWN - KMA		DRAWN - KMA	REVISED -
REVIEWED - DRM		CHECKED - DRM	REVISED -
		DATE - 8/30/19	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

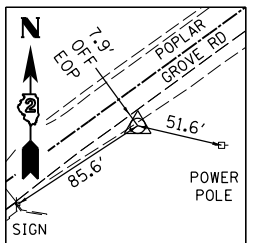
PROPOSED TYPICAL SECTIONS	
SCALE: NTS	SHEET NO. 3 OF 3 SHEETS
STA.	TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	11
CONTRACT NO. 85688				
ILLINOIS FED. AID PROJECT				

TYP-03



CONTROL POINT #1
 IRON ROD
 STA 22+51.65, 24.65' LT
 N 2,038,796.89
 E 850,164.44
 EL 765.81



CONTROL POINT #2
 IRON ROD
 STA 26+39.04, 19.46' RT
 N 2,038,989.34
 E 850,503.51
 EL 765.40

CP 3 (50' EAST)
 EL 765.97
 STA. 30+49.50,
 18.67' LT

ALIGNMENT COORDINATES
 EXISTING POPLAR GROVE RD

	STATION	NORTHING	EASTING
POB	15+00.00	2,038,334.57	849,871.28
POT	35+20.00	2,039,523.66	851,204.21

ALIGNMENT COORDINATES
 PROPOSED POPLAR GROVE RD

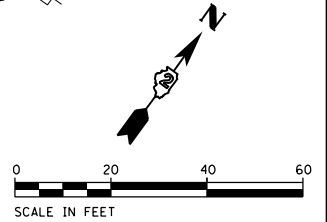
	STATION	NORTHING	EASTING
POB	19+80.00	2,038,617.12	849,959.30
POT	28+01.00	2,039,100.41	850,622.99

CONTROL POINTS - POPLAR GROVE RD

	ELEVATION	NORTHING	EASTING	DESCRIPTION
CP1	765.81	2,038,796.89	850,164.44	IRON ROD
CP2	765.40	2,038,989.34	850,503.51	IRON ROD
CP3	765.97	2,039,261.79	850,812.88	IRON ROD
CP4	754.52	2,038,770.37	850,554.48	IRON ROD
CP5	753.57	2,038,880.14	850,442.18	IRON ROD

CP 5
 EL 753.57
 STA. 25+25.17,
 71.63' RT

CP 4 (140' SOUTH)
 EL 754.52
 STA. 25+51.34,
 226.47' RT



DESIGNED	MWH	6/6/19
DRAWN	MWH	8/22/19
REVIEWED	DRM	8/28/19

FILE NAME =	D2-16L05048-sht-atb.dgn	USER NAME =	Ander-00833	DESIGNED -	MWH	REVISED -	
		PLOT SCALE =	40.0000' / in.	DRAWN -	MWH	REVISED -	
		PLOT DATE =	8/29/2019	CHECKED -	DRM	REVISED -	
				DATE -	8/30/19	REVISED -	

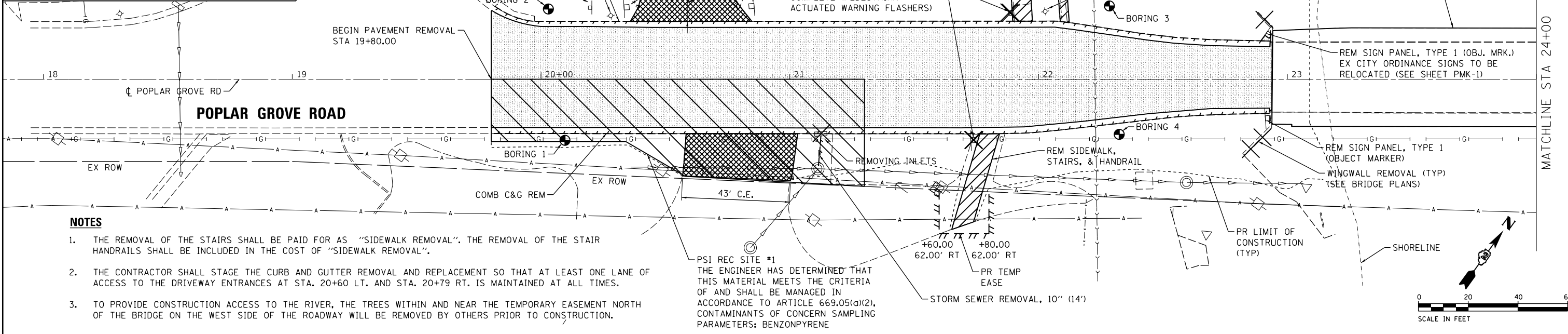
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

ALIGNMENT AND TIES

SCALE: 1" = 20' SHEET NO. 1 OF 1 SHEETS STA. 18+00 TO STA. 30+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	12
CONTRACT NO. 85688			ATB-01	
ILLINOIS FED. AID PROJECT				

REGULATED SUBSTANCES BILL OF MATERIALS		
NON-SPECIAL WASTE DISPOSAL	280	CU YD
SOIL DISPOSAL ANALYSIS	3	EACH
REGULATED SUBSTANCES PRE-CONSTRUCTION PLAN	1	L SUM
ON-SITE MONITORING OF REGULATED SUBSTANCES	3	CAL DA
REGULATED SUBSTANCES FINAL CONSTRUCTION REPORT	1	L SUM
EARTH EX. MATERIALS SHALL REMAIN AND BE UTILIZED WITHIN THE CONSTRUCTION LIMITS ACCORDING TO ARTICLE 669.09(a)(1). SEE SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.		



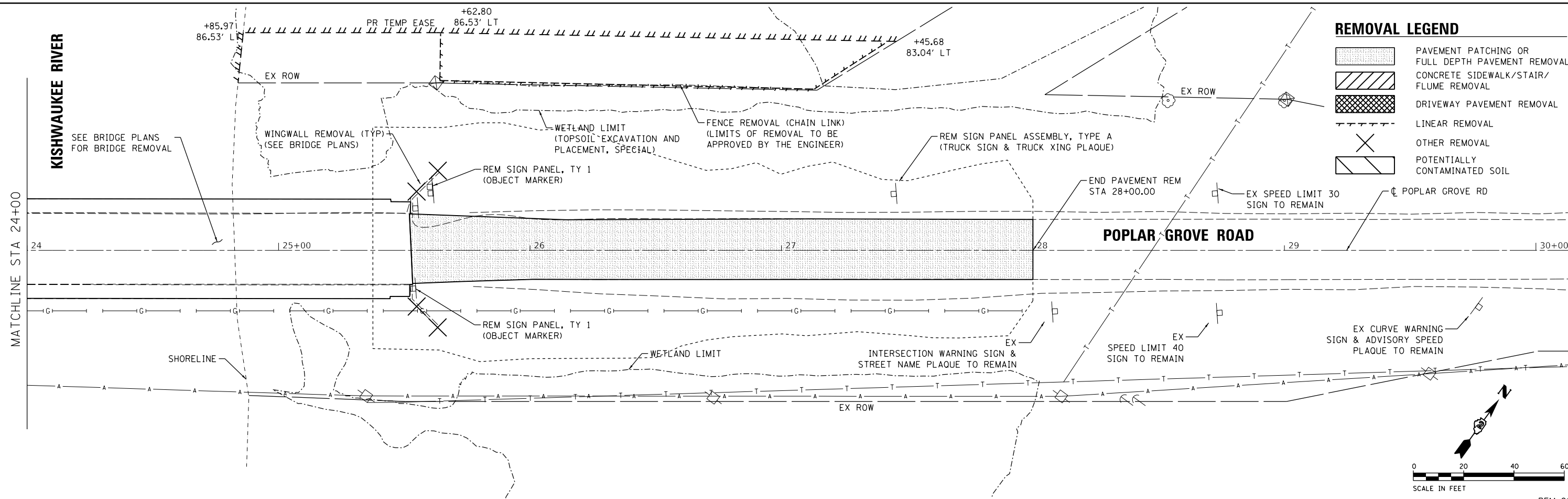
NOTES

1. THE REMOVAL OF THE STAIRS SHALL BE PAID FOR AS "SIDEWALK REMOVAL". THE REMOVAL OF THE STAIR HANDRAILS SHALL BE INCLUDED IN THE COST OF "SIDEWALK REMOVAL".
2. THE CONTRACTOR SHALL STAGE THE CURB AND GUTTER REMOVAL AND REPLACEMENT SO THAT AT LEAST ONE LANE OF ACCESS TO THE DRIVEWAY ENTRANCES AT STA. 20+60 LT. AND STA. 20+79 RT. IS MAINTAINED AT ALL TIMES.
3. TO PROVIDE CONSTRUCTION ACCESS TO THE RIVER, THE TREES WITHIN AND NEAR THE TEMPORARY EASEMENT NORTH OF THE BRIDGE ON THE WEST SIDE OF THE ROADWAY WILL BE REMOVED BY OTHERS PRIOR TO CONSTRUCTION.

PSI REC SITE #1
 THE ENGINEER HAS DETERMINED THAT THIS MATERIAL MEETS THE CRITERIA OF AND SHALL BE MANAGED IN ACCORDANCE TO ARTICLE 669.05(a)(2), CONTAMINANTS OF CONCERN SAMPLING PARAMETERS: BENZOPYRENE

REMOVAL LEGEND

- PAVEMENT PATCHING OR FULL DEPTH PAVEMENT REMOVAL
- CONCRETE SIDEWALK/STAIR/FLUME REMOVAL
- DRIVEWAY PAVEMENT REMOVAL
- LINEAR REMOVAL
- OTHER REMOVAL
- POTENTIALLY CONTAMINATED SOIL



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DESIGNED	KMA	6/6/19
DRAWN	PL	8/22/19
REVIEWED	DRM	8/28/19

FILE NAME =	USER NAME = Ander-00833	DESIGNED - KMA	REVISED -
D2-16L0504B-sht-rem.dgn		DRAWN - PL	REVISED -
		CHECKED - DRM	REVISED -
		DATE - 8/30/19	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

REMOVAL PLAN

SCALE: 1" = 20' SHEET NO. 1 OF 1 SHEETS STA. 19+80 TO STA. 28+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	13
CONTRACT NO. 85688				
ILLINOIS FED. AID PROJECT				

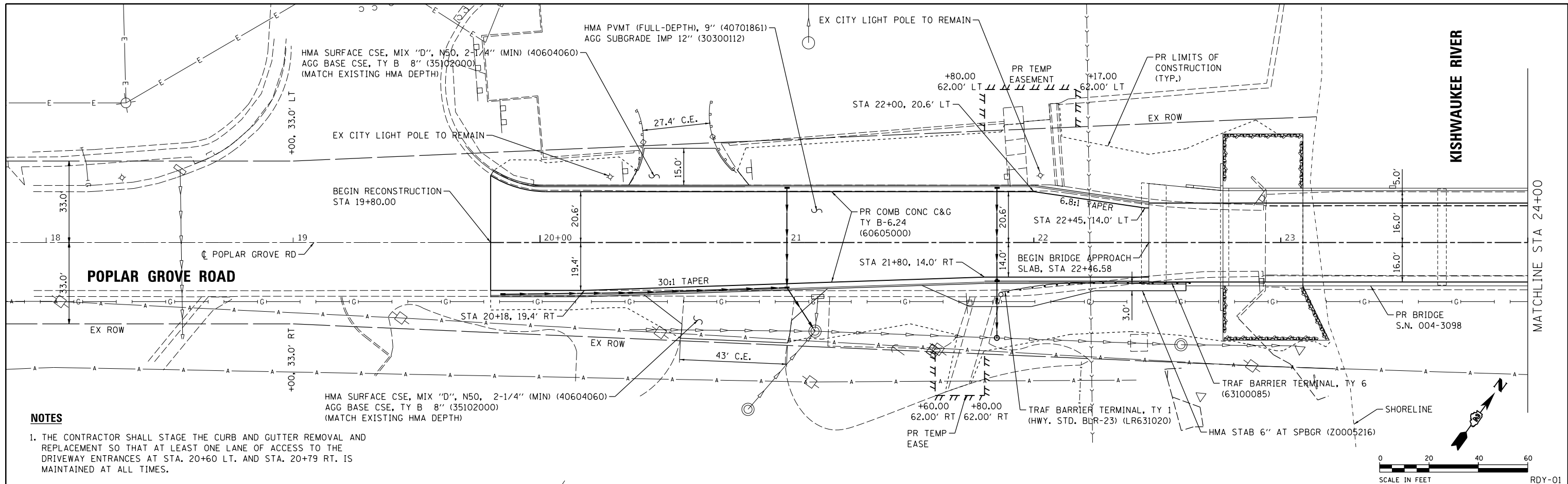
REM-01

DATE	
BY	
PLAN	SURVEYED
	PLOTTED
	ALIGNED
	CHECKED
	DESIGNED
	FILE NAME
	NO.



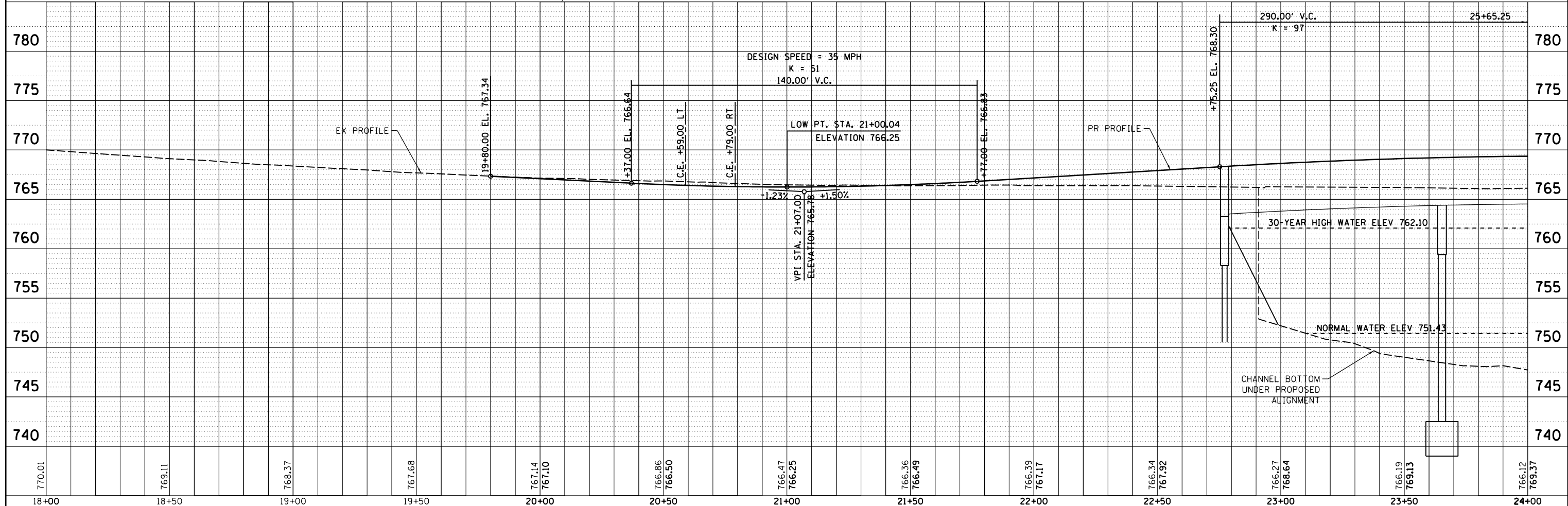
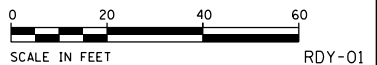
DATE	
BY	
PROFILE	SURVEYED
	PLOTTED
	GRADES CHECKED
	STRUCTURE
	NOTATIS CHKD
	NO.

DESIGNED	KMA	6/6/19
DRAWN	PL	8/22/19
REVIEWED	DRM	8/28/19



NOTES

1. THE CONTRACTOR SHALL STAGE THE CURB AND GUTTER REMOVAL AND REPLACEMENT SO THAT AT LEAST ONE LANE OF ACCESS TO THE DRIVEWAY ENTRANCES AT STA. 20+60 LT. AND STA. 20+79 RT. IS MAINTAINED AT ALL TIMES.



FILE NAME =	USER NAME = Ander-00833	DESIGNED - KMA	REVISED -
D2-16L0504B-sht-plnprf-01.dgn		DRAWN - PL	REVISED -
		CHECKED - DRM	REVISED -
		DATE - 8/30/19	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

PLAN AND PROFILE

SCALE: 1"=20' (HORIZ) 1"=5' (VERT) SHEET NO. 1 OF 2 SHEETS STA. 19+80 TO STA. 24+00

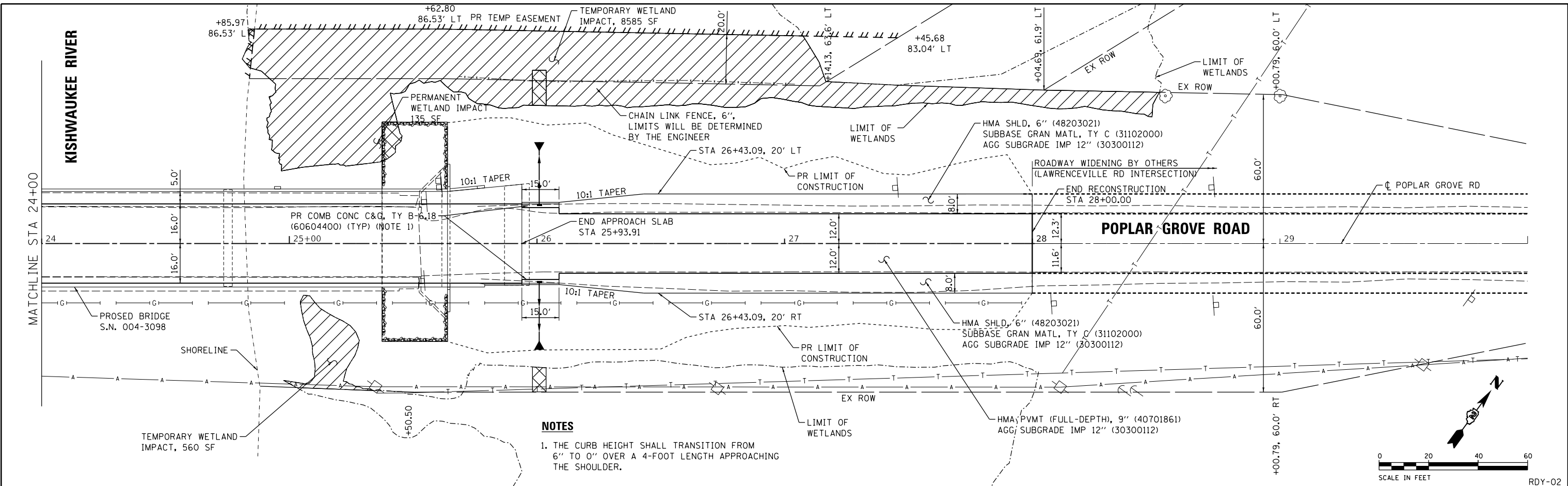
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	14
CONTRACT NO. 85688			ILLINOIS FED. AID PROJECT	

DATE	
BY	
SURVEYED	
PLOTTED	
ALIGNED	
CHECKED	
NO. / DATE	



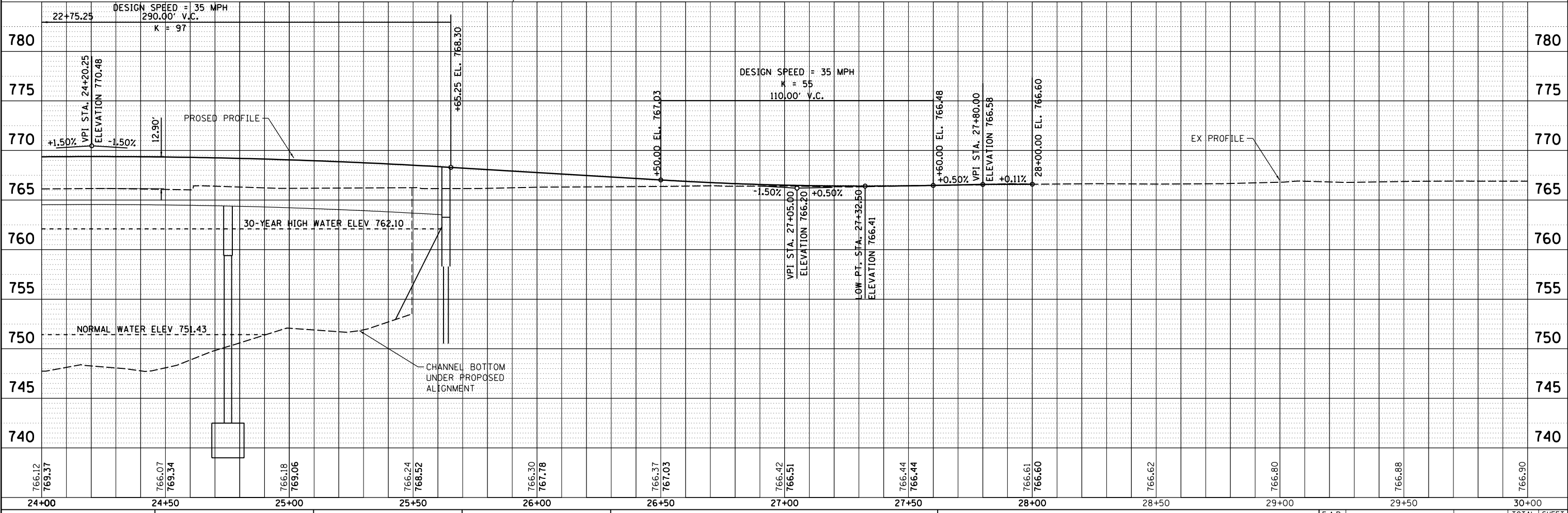
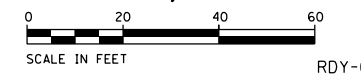
DATE	
BY	
SURVEYED	
PLOTTED	
GRADES CHECKED	
STRUCTURE	
NO. / DATE	

DESIGNED	KMA	6/6/19
DRAWN	PL	8/22/19
REVIEWED	DRM	8/28/19



NOTES

1. THE CURB HEIGHT SHALL TRANSITION FROM 6" TO 0" OVER A 4-FOOT LENGTH APPROACHING THE SHOULDER.



FILE NAME = D2-16L0504B-sht-plnprf-02.dgn	USER NAME = Ander-00833	DESIGNED - KMA	REVISIED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PLAN AND PROFILE	F.A.P. RTE. 5011A	SECTION 17-00093-00-BR	COUNTY BOONE	TOTAL SHEETS 71	SHEET NO. 15
PLOT SCALE = 40.0000' / in.	CHECKED - DRM	REVISIED -	SCALE: 1"=20' (HORIZ) 1"=5' (VERT)			SHEET NO. 2 OF 2 SHEETS	STA. 24+00 TO STA. 28+00	CONTRACT NO. 85688		ILLINOIS FED. AID PROJECT
PLOT DATE = 8/29/2019	DATE = 8/30/19	REVISIED -								

SCHEDULE OF DETOUR SIGNS

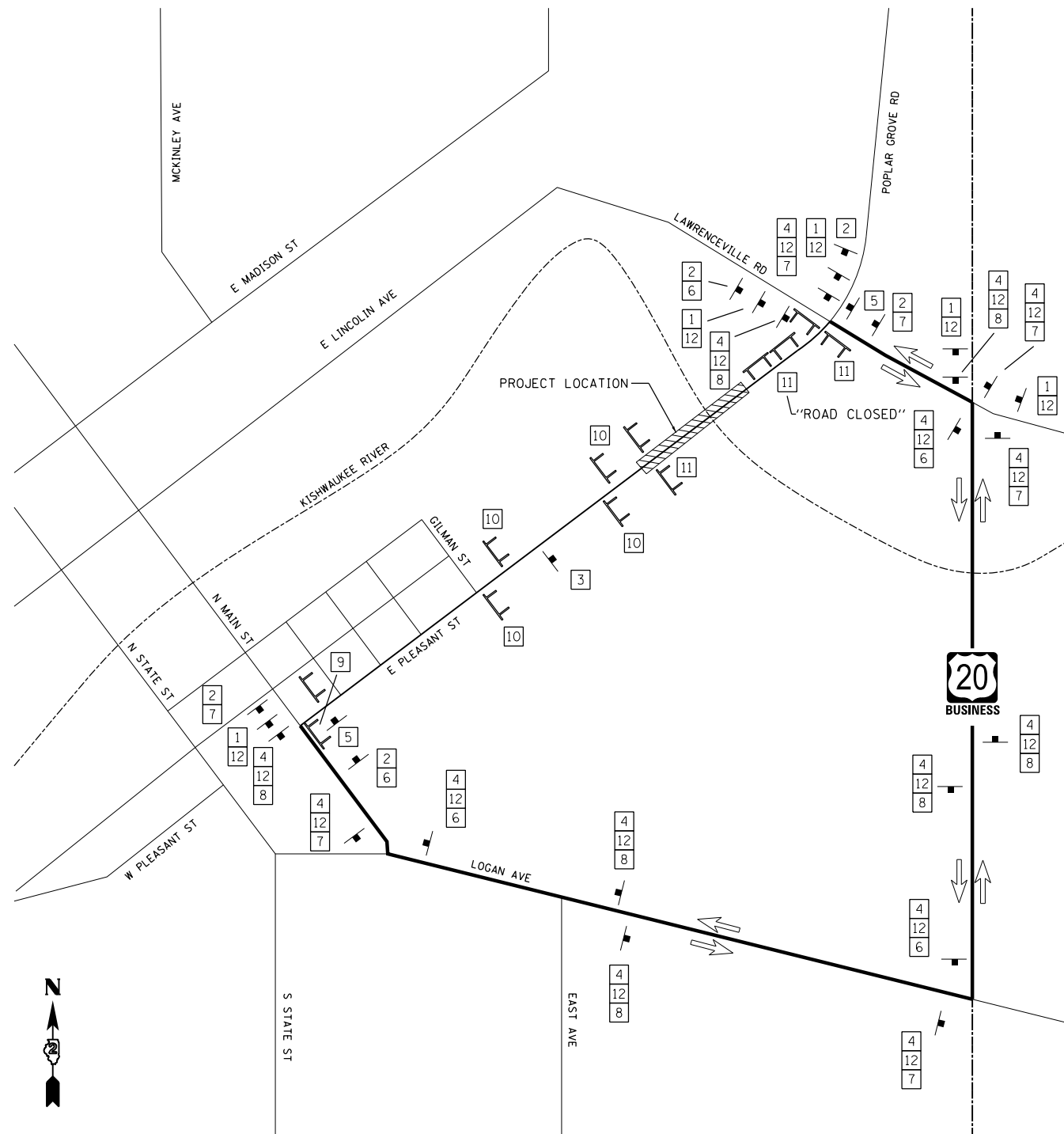
SIGN NO.	SIGN	MUTCD CODE	SIZE
1	DETOUR AHEAD	W20-2 (ORANGE)	48" X 48"
2	ROAD CLOSED AHEAD	W20-3 (ORANGE)	48" X 48"
3	ROAD CLOSED 500 FT	W20-3 (ORANGE)	48" X 48"
4	DETOUR	M4-8 (ORANGE)	24" X 12"
5	END DETOUR	M4-8A (ORANGE)	24" X 18"
6	→	M6-1R (ORANGE)	24" X 18"
7	←	M6-1L (ORANGE)	24" X 18"
8	↑	M6-3 (ORANGE)	24" X 18"
9	BRIDGE OUT 0.5 MILES AHEAD LOCAL TRAFFIC ONLY	R11-3B	60" X 30"
10	ROAD CLOSED TO THRU TRAFFIC	R11-4	60" X 30"
11	BRIDGE CLOSED	R11-2	48"X30"
12	POPLAR GROVE RD	D3 (ORANGE)	60"x12"

NOTES

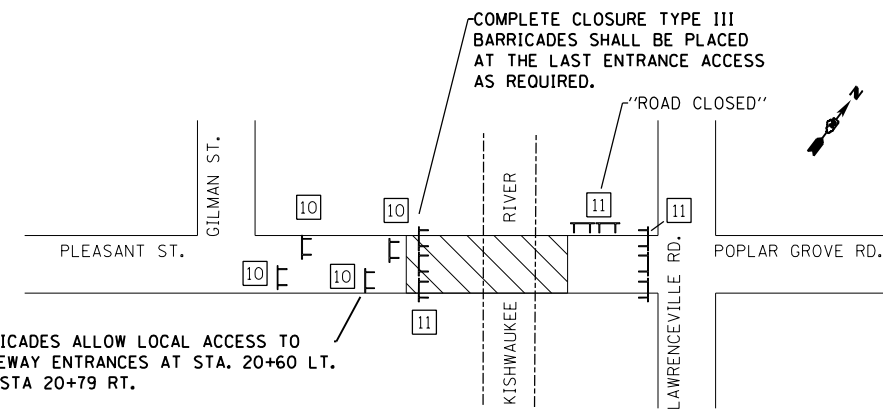
- ALL WARNING, DETOUR, AND DIRECTION SIGNS SHALL HAVE A BLACK LEGEND AND AN ORANGE REFLECTORIZED BACKGROUND.
- REFER TO HWY. STDS. BLR-21 & BLR-22 FOR ADDITIONAL ROAD CLOSURE SIGNAGE DETAILS.
- THE CONTRACTOR SHALL STAGE THE CURB AND GUTTER REMOVAL AND REPLACEMENT SO THAT AT LEAST ONE LANE OF ACCESS TO THE DRIVEWAY ENTRANCES AT STA. 20+60 LT. AND STA. 20+79 RT. IS MAINTAINED AT ALL TIMES.
- THE CONTRACTOR SHALL COORDINATE DETOUR SIGN LOCATIONS WITH THE CONTRACTOR OF THE ADJACENT LAWRENCEVILLE ROAD INTERSECTION IMPROVEMENT PROJECT.

LEGEND

- ☒ SIGN NUMBER
- ▬ SIGN PANEL OR SIGN PANEL ASSEMBLY
- ⊥ TYPE III BARRICADE



DETOUR ROUTE
NTS



BARRICADES ALLOW LOCAL ACCESS TO DRIVEWAY ENTRANCES AT STA. 20+60 LT. AND STA 20+79 RT.

BARRICADE DETAIL
NTS

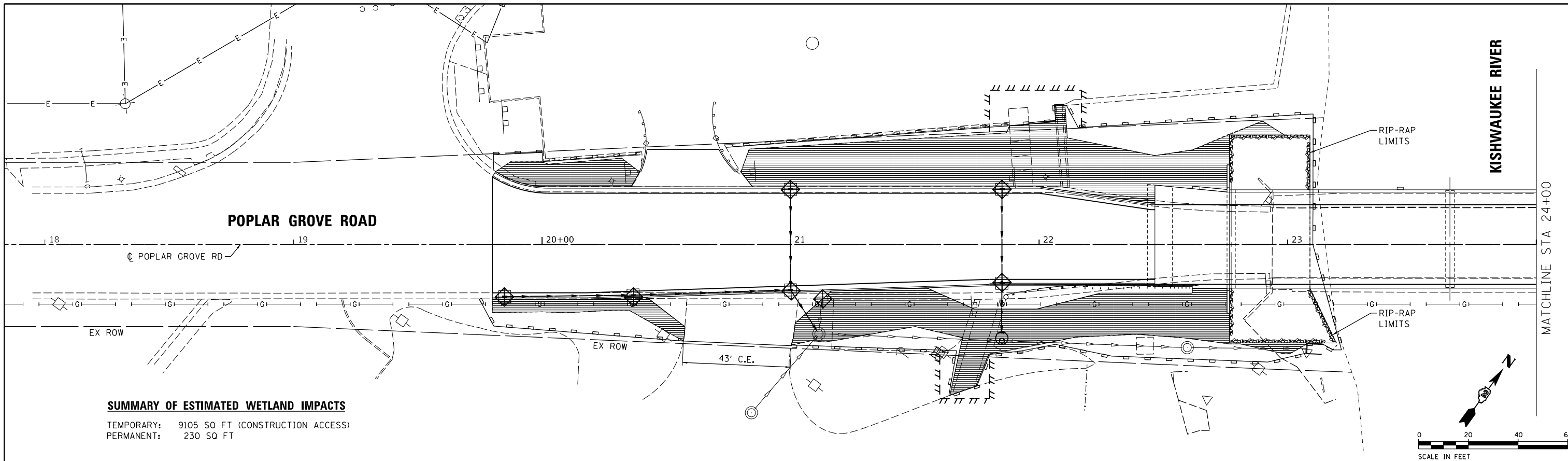
DESIGNED	PL	6/6/19
DRAWN	PL	8/22/19
REVIEWED	KMA	8/28/19

FILE NAME =	USER NAME = Ander00833	DESIGNED - PL	REVISED -
D2-16L05048-sht-1-Detour.dgn		DRAWN - PL	REVISED -
		CHECKED - KMA	REVISED -
		DATE - 8/30/19	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

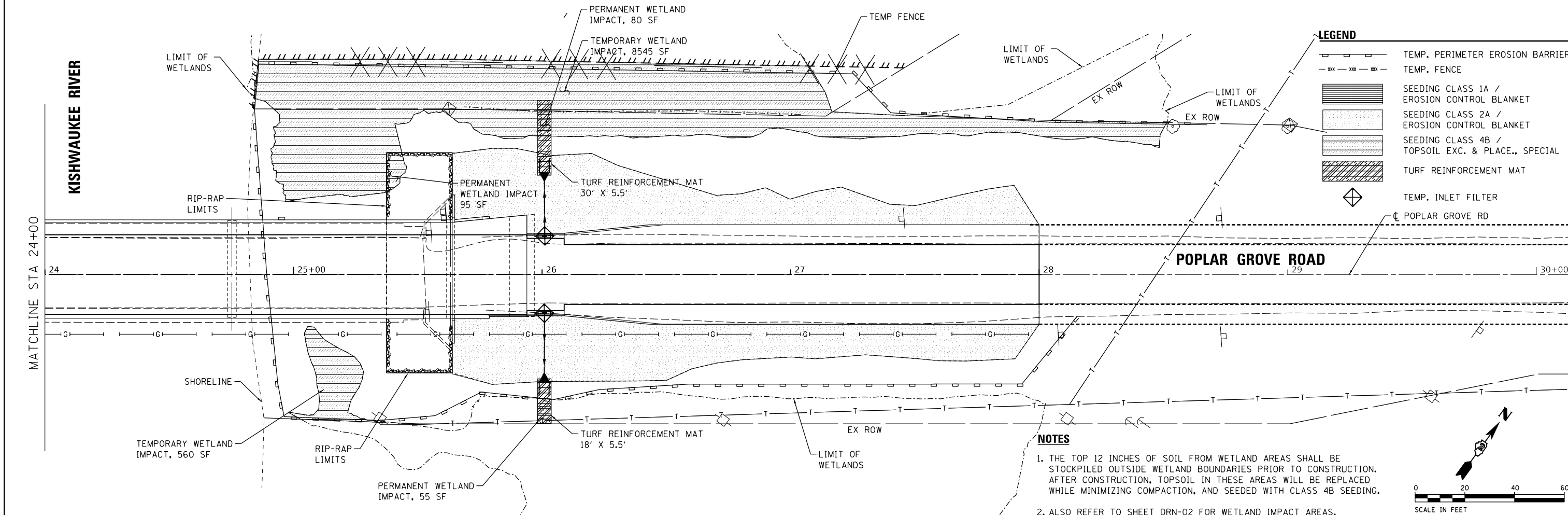
DETOUR PLAN	
SCALE: NTS	SHEET NO. 1 OF 1 SHEETS
STA.	TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	16
CONTRACT NO. 85688			ILLINOIS FED. AID PROJECT	



SUMMARY OF ESTIMATED WETLAND IMPACTS

TEMPORARY: 9105 SQ FT (CONSTRUCTION ACCESS)
 PERMANENT: 230 SQ FT



LEGEND

- TEMP. PERIMETER EROSION BARRIER
- TEMP. FENCE
- SEEDING CLASS 1A / EROSION CONTROL BLANKET
- SEEDING CLASS 2A / EROSION CONTROL BLANKET
- SEEDING CLASS 4B / TOPSOIL EXC. & PLACE., SPECIAL
- TURF REINFORCEMENT MAT
- TEMP. INLET FILTER
- POPLAR GROVE RD

NOTES

1. THE TOP 12 INCHES OF SOIL FROM WETLAND AREAS SHALL BE STOCKPILED OUTSIDE WETLAND BOUNDARIES PRIOR TO CONSTRUCTION. AFTER CONSTRUCTION, TOPSOIL IN THESE AREAS WILL BE REPLACED WHILE MINIMIZING COMPACTION, AND SEEDING WITH CLASS 4B SEEDING.
2. ALSO REFER TO SHEET DRN-02 FOR WETLAND IMPACT AREAS.

DESIGNED	KMA	6/6/19
DRAWN	PL	8/22/19
REVIEWED	DRM	8/28/19

FILE NAME =	D2-16L05048-sht-ero.dgn
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USER NAME =	Ander-00833
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DESIGNED -	KMA
DRAWN -	PL
CHECKED -	DRM
DATE -	8/30/19

REVISED -	
REVISED -	
REVISED -	
REVISED -	

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

EROSION CONTROL PLAN

SCALE: 1" = 20' SHEET NO. 1 OF 1 SHEETS STA. 19+80 TO STA. 24+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	17
				CONTRACT NO. 85688
ILLINOIS FED. AID PROJECT				

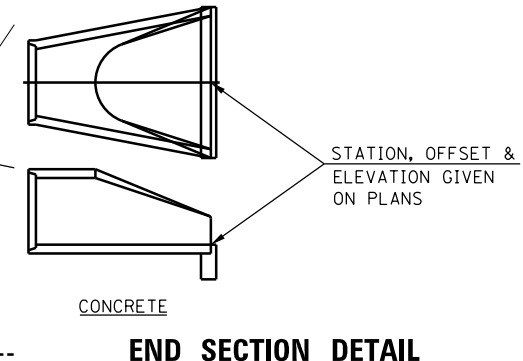
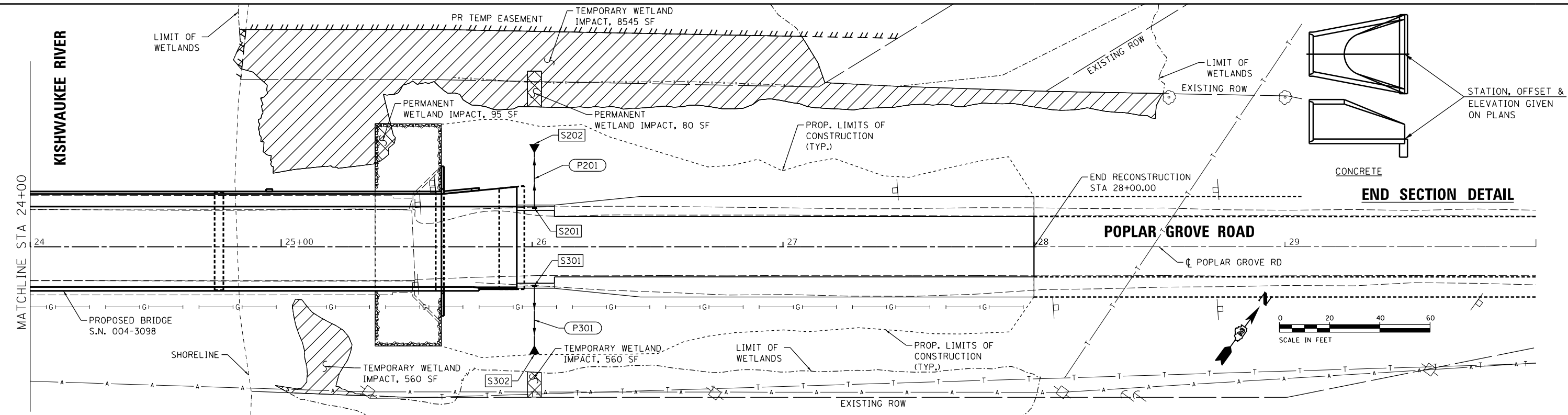
ERO-01

DATE	
BY	
PLAN	SURVEYED
	ALIGNED
	CHECKED
	DESIGNED
	NO. _____
	CARD FILE NAME _____

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Hanson Professional Services Inc.

DATE	
BY	
PROFILE	SURVEYED
	GRADES CHECKED
	STRUCTURE
	STATUS CHKD
	NO. _____

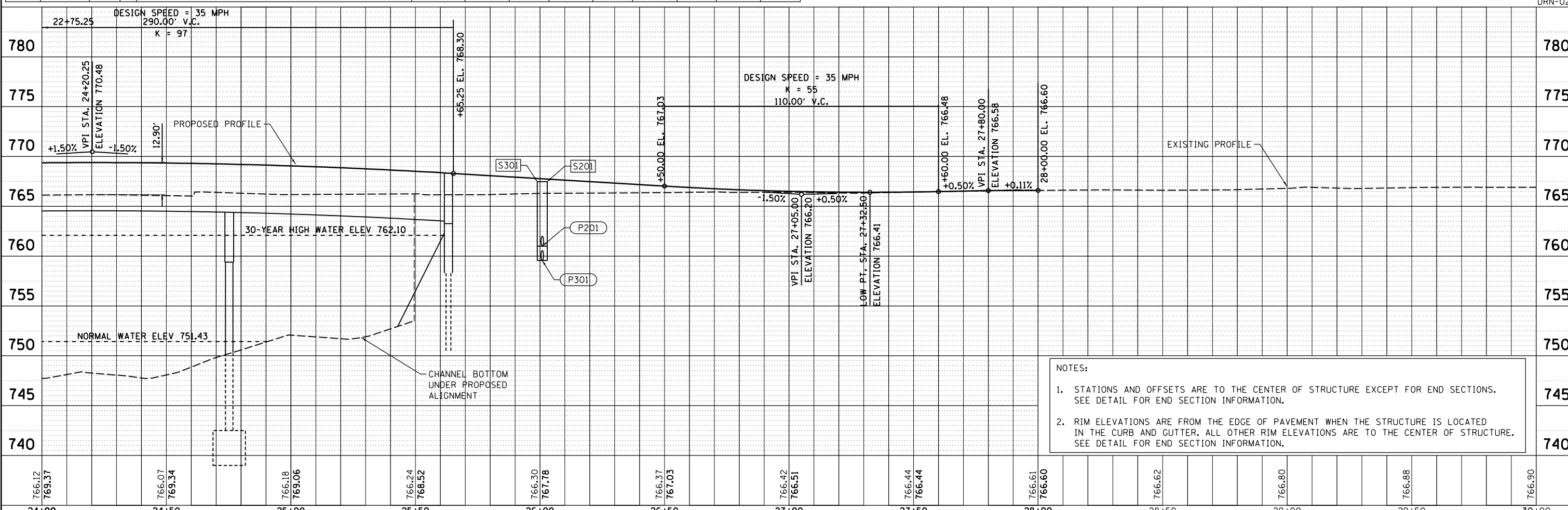
DESIGNED	JAD	5/17/19
DRAWN	RLA	5/17/19
REVIEWED	BAB	5/17/19



STR. NO.	STATION	OFFSET	STRUCTURE TYPE	RIM ELEVATION	INVERT ELEVATIONS											
					INV. IN	US PIPE	INV. IN	US PIPE	INV. IN	US PIPE	INV. OUT	DS PIPE				
S201	26+00.92	15.58' LT	INLETS, TYPE B, TYPE 3 FRAME AND GRATE	767.47												
S202	26+00.92	40.90' LT	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 12"	759.75	759.75	P201						781.00	P201			
S301	26+00.92	15.58' RT	INLETS, TYPE B, TYPE 3 FRAME AND GRATE	767.47												
S302	26+00.92	42.90' RT	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 12"	757.40	757.40	P301										

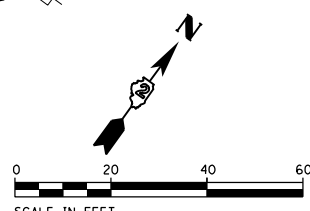
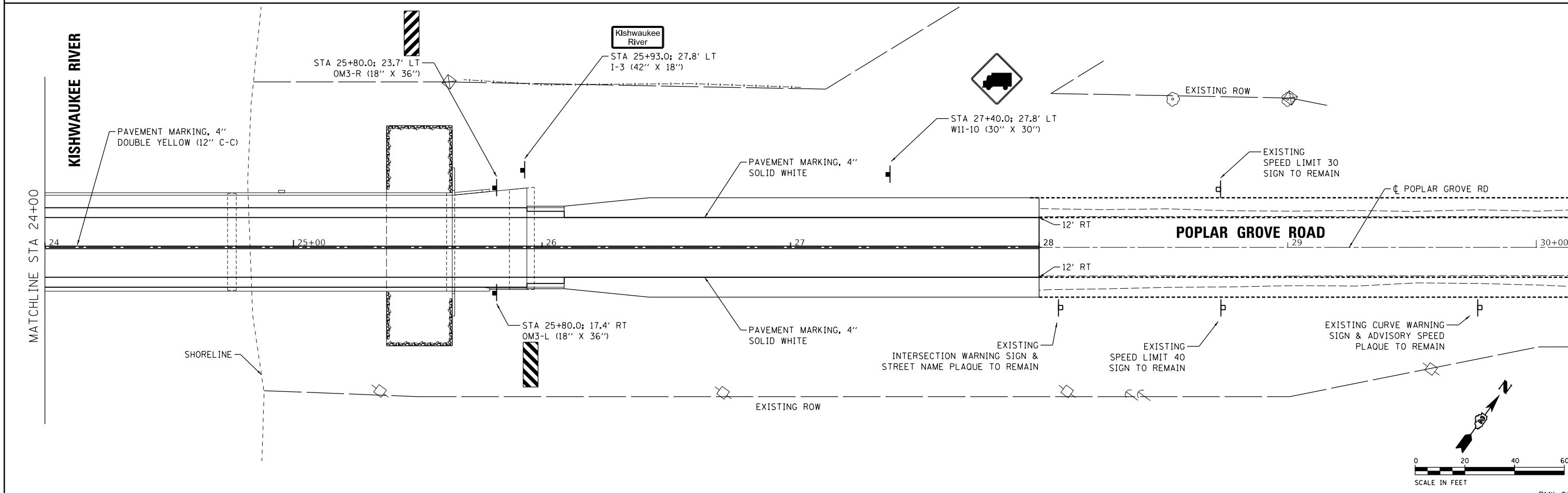
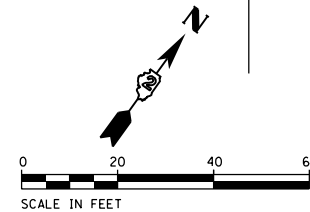
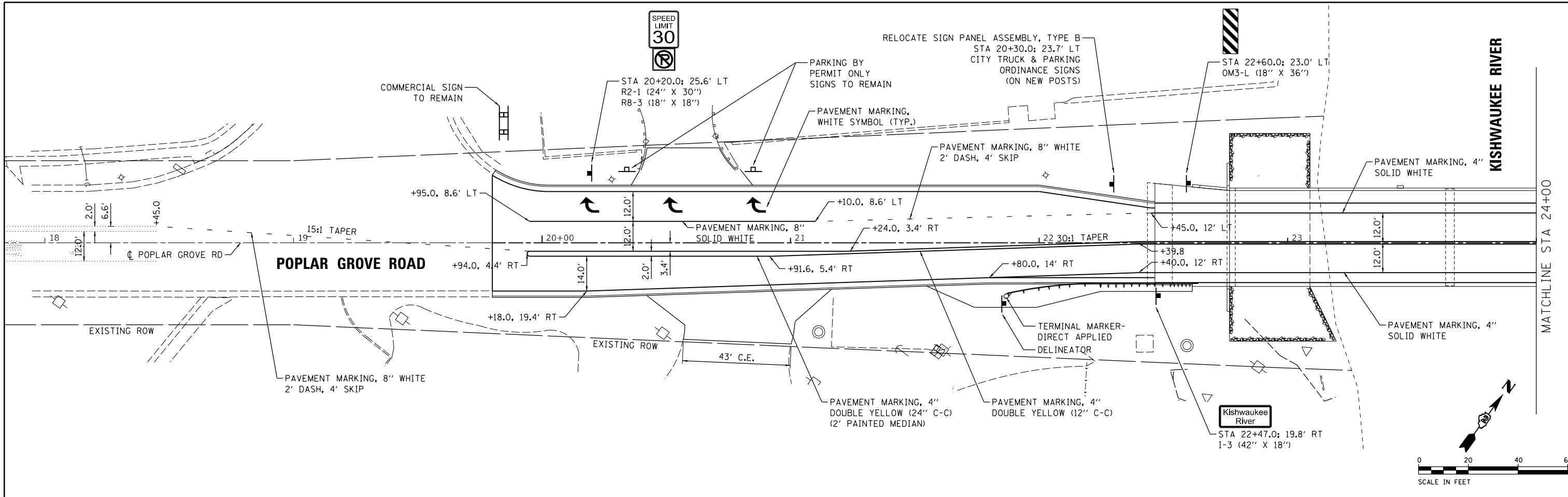
PIPE NO.	FROM STR.	U/S INVERT	TO STR.	D/S INVERT	CLASS / TYPE	DIA.	LENGTH	SLOPE	TBF (CY)
P201	S201	761.00	S202	759.75	STORM SEWERS, CLASS A, TYPE 1	12	25	5.00%	3
P301	S301	759.56	S302	757.40	STORM SEWERS, CLASS A, TYPE 1	12	27	8.00%	4

PIPE LENGTHS SHOWN IN SCHEDULE ARE FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE. PIPE LENGTHS INCLUDE END SECTION LENGTH.



- NOTES:
- STATIONS AND OFFSETS ARE TO THE CENTER OF STRUCTURE EXCEPT FOR END SECTIONS. SEE DETAIL FOR END SECTION INFORMATION.
 - RIM ELEVATIONS ARE FROM THE EDGE OF PAVEMENT WHEN THE STRUCTURE IS LOCATED IN THE CURB AND GUTTER. ALL OTHER RIM ELEVATIONS ARE TO THE CENTER OF STRUCTURE. SEE DETAIL FOR END SECTION INFORMATION.

FILE NAME =	USER NAME = Ander00833	DESIGNED - JAD	REVISIED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DRAINAGE PLAN AND PROFILE	SCALE: 1" = 20' (HORIZ) 1/2" = 5' (VERT)	SHEET NO. 2 OF 2 SHEETS	STA. 24+00 TO STA. 28+00	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
D2-16L0504B-shd-drain-02.dgn	PLOT SCALE = 40.0000' / in.	DRAWN - RLA	REVISIED -						5011A	17-00093-00-BR	BOONE	71	19
PLOT DATE = 8/29/2019	DATE = 8/30/19	CHECKED - BAB	REVISIED -						CONTRACT NO. 85688				
									ILLINOIS FED. AID PROJECT				



DESIGNED	KMA	6/6/19
DRAWN	PL	8/22/19
REVIEWED	DRM	8/28/19

FILE NAME =	USER NAME = Ander-00833	DESIGNED - KMA	REVISED -
D2-16L0504B-sht-pmk.dgn		DRAWN - PL	REVISED -
		CHECKED - DRM	REVISED -
		DATE - 8/30/19	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**PAVEMENT MARKING
 AND SIGNING PLAN**

SCALE: 1" = 20' SHEET NO. 1 OF 1 SHEETS STA. 19+80 TO STA. 28+00

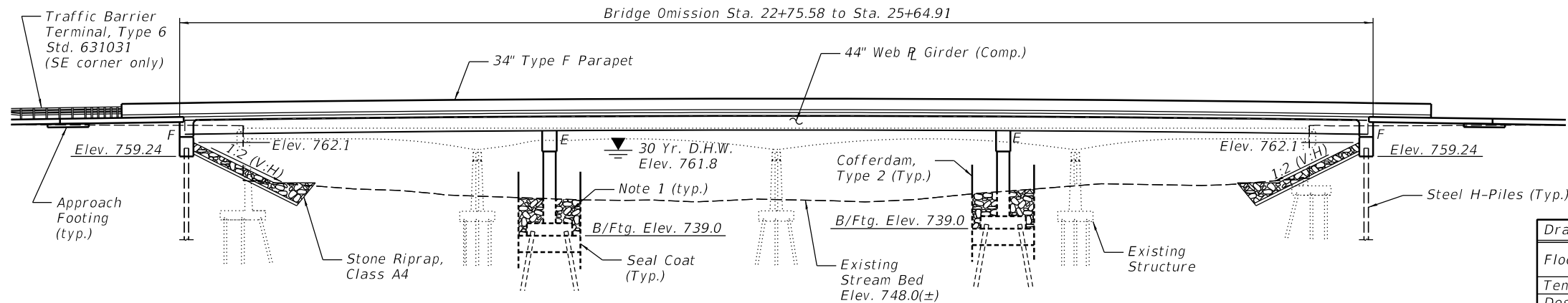
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	20
CONTRACT NO. 85688			ILLINOIS FED. AID PROJECT	

PMK-01

B.M.- Spike in T. P. 40 Lt. Station 28+50, Elev. 765.81

Existing Structure - Structure No. 004-3003. Originally constructed in 1964 and consists of a four-span concrete tee beam superstructure on concrete piers and abutments. The bridge is 39'-8" wide and the length is 260'-6", bk.-to-bk. of abutments. Existing structure to be removed and replaced. Road will be closed during construction.

Salvage- None



Estimated Water Surface Elevation (EWSE) = 753.8

Note 1: Fill cofferdam with Class A4 Stone Dumped Riprap prior to removing sheeting.

ELEVATION
(Looking West)

DESIGN SPECIFICATIONS

2017 AASHTO LRFD Bridge Design Specifications, 8th Edition

LOADING HL-93

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

DESIGN STRESSES

f'c = 4,000 p.s.i. (Superstructure)
f'c = 3,500 p.s.i. (Substructure)
fy = 60,000 p.s.i. (Reinforcement)
fy = 50,000 p.s.i. (M270 Grade 50W)

SEISMIC DATA

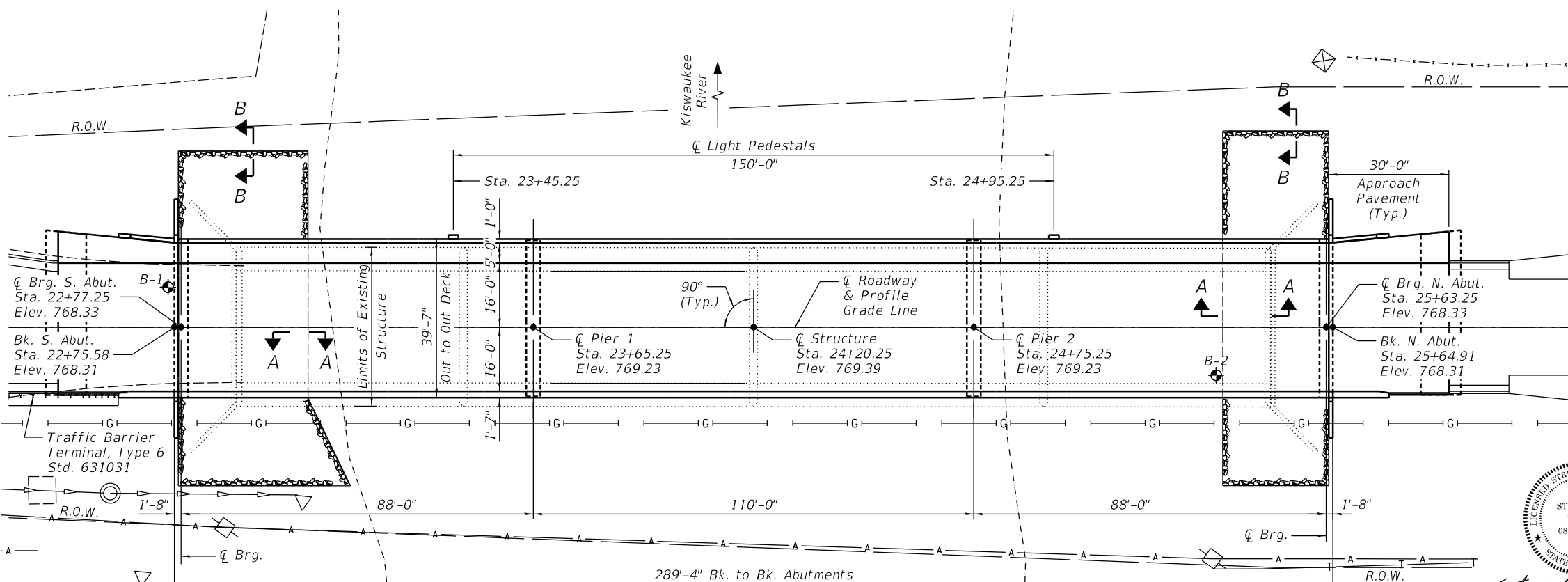
Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec (SD1) = 0.079
Design Spectral Acceleration at 0.2 sec (SDs) = 0.135
Soil Site Class = D

WATERWAY INFORMATION

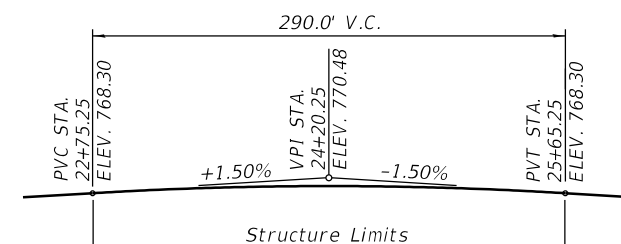
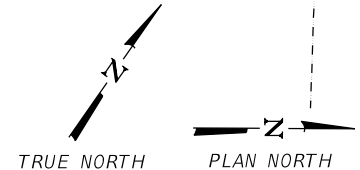
Drainage Area = 533 Sq. Mi.		Low Grade Elev. = 766.2							
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Prop.	Nat. H.W.E.	Head - Ft. Exist.	Prop.	Headwater El. Exist.	Prop.
Ten-Year	10	9080	2362	2391	759.5	0.2	0.1	759.7	759.6
Design	30	13060	2913	3015	761.8	0.2	0.2	762.0	762.0
Base	100	17400	3122	3466	763.5	0.4	0.2	763.9	763.7

DESIGN SCOUR ELEVATION TABLE

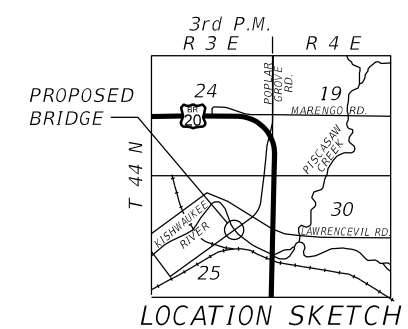
Event / Limit State	Design Scour Elevations (ft.)				Item 113
	W. Abut.	Pier 1	Pier 2	E. Abut.	
Q100	759.21	733.5	734.5	759.21	5
Q200	759.21	730.7	731.7	759.21	
Design	759.21	733.5	734.5	759.21	
Check	759.21	730.7	731.7	759.21	



PLAN

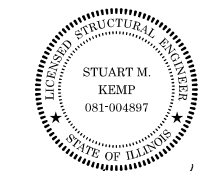


PROPOSED PROFILE
(Along C of Roadway)



GENERAL PLAN

**POPLAR GROVE ROAD
OVER KISHWAUKEE RIVER
FAU 5011 - SEC. 17-00093-00-BR
BOONE COUNTY
STATION 24+20.25
STRUCTURE NUMBER 004-3098**



Stuart M. Kemp
SIGNATURE
8/30/19
DATE

LIC. EXP. DATE: 11/30/20

"I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current AASHTO Standard Specifications for Highway Bridges."

DESIGNED	SMK	03/19
DRAWN	MGM	05/19
REVIEWED	SMK	8/30/19

FILE NAME = 0043098-16L0504B-S001-CP&E.dgn	USER NAME = morey00259	DESIGNED - SMK	REVISED -
		CHECKED -	REVISED -
		DRAWN - MGM	REVISED -
		CHECKED - SMK	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**GENERAL PLAN
STRUCTURE NO. 004-3098**
SHEET NO. 1 OF 30 SHEETS

F.A.U. RTE. 5011A	SECTION 17-00093-00-BR	COUNTY BOONE	TOTAL SHEETS 71	SHEET NO. 21
			CONTRACT NO. 85688	
ILLINOIS FED. AID PROJECT				

GENERAL NOTES

Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts, in painted areas and ASTM A325 Type 3 in unpainted areas. Bolts 7/8" Ø, holes 1 1/16" Ø, unless otherwise noted.
 Calculated weight of Structural Steel = 324,060 lbs (AASHTO M270 Grade 50W)
 Calculated weight of Structural Steel = 15,640 lbs (AASHTO M270 Grade 36W)
 No field welding is permitted except as specified in the contract documents.
 Reinforcement bars designated (E) shall be epoxy coated.
 Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 inch (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.
 Structural steel shall only be painted for a distance equal to the depth of embedment into the concrete cap plus 18 inches. Painted areas shall be primed in the shop with a Department approved zinc rich primer. Field painting will not be required.

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

The Contractor shall obtain a construction permit from the Illinois Department of Natural Resources (IDNR), Office of Water Resources for any temporary construction activity placed in the water except cofferdams. This shall include the placement of material for run-arounds, causeways, etc. Any permit application by the Contractor shall refer to the IDNR 3704 Floodway Construction permit number allowing permanent construction as shown in the contract plans.

Seal coat thickness design is based on the Estimated Water Surface Elevation (EWSE). Cofferdam design details and proposed changes in seal coat thickness shall be submitted to the Engineer for approval with the cofferdam design.

Protective coat shall be applied to the entire top surface of the bridge deck, the face and top surface of the sidewalk and the top and inside faces of both parapets.

Slipforming of parapets is not allowed.

INDEX OF SHEETS

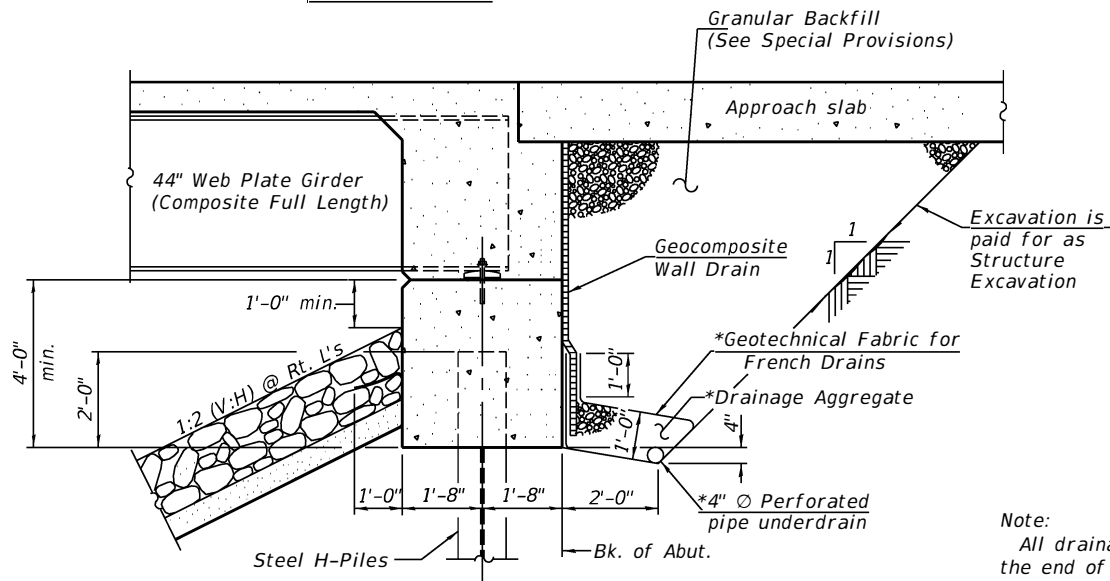
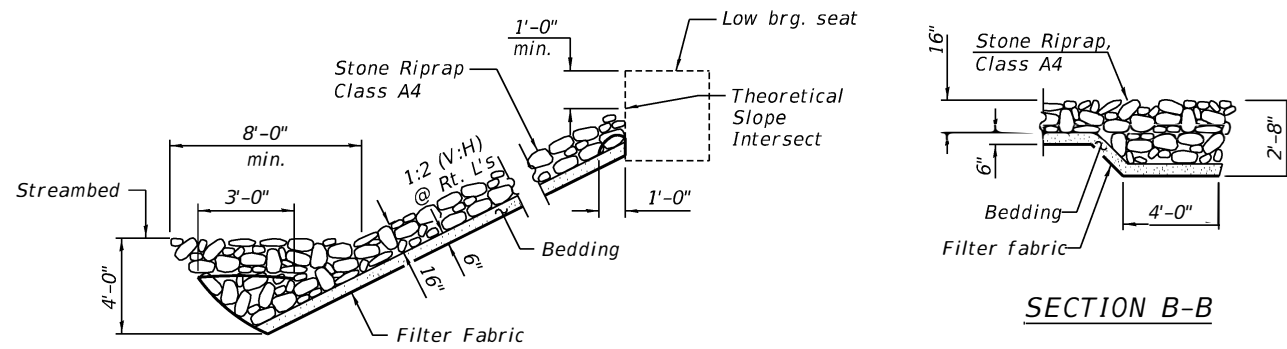
1. General Plan and Elevation
2. General Notes and Bridge Bill of Materials
- 3 - 5. Top of Deck Elevations
- 6 - 7. Top of Approach Slab Elevations
8. Superstructure
- 9 - 10. Superstructure Details
11. Integral Abutment Diaphragm Details
- 12 - 14. Bridge Approach Slab Plan & Details
15. Aluminum Railing, Type L
16. Structural Steel
17. Structural Steel Details
18. Bearing Details
19. South Abutment
20. North Abutment
21. Piers
22. Steel H-Pile Details
23. Boring Logs
- 24 - 30. Existing Bridge Plans

TOTAL BILL OF MATERIAL

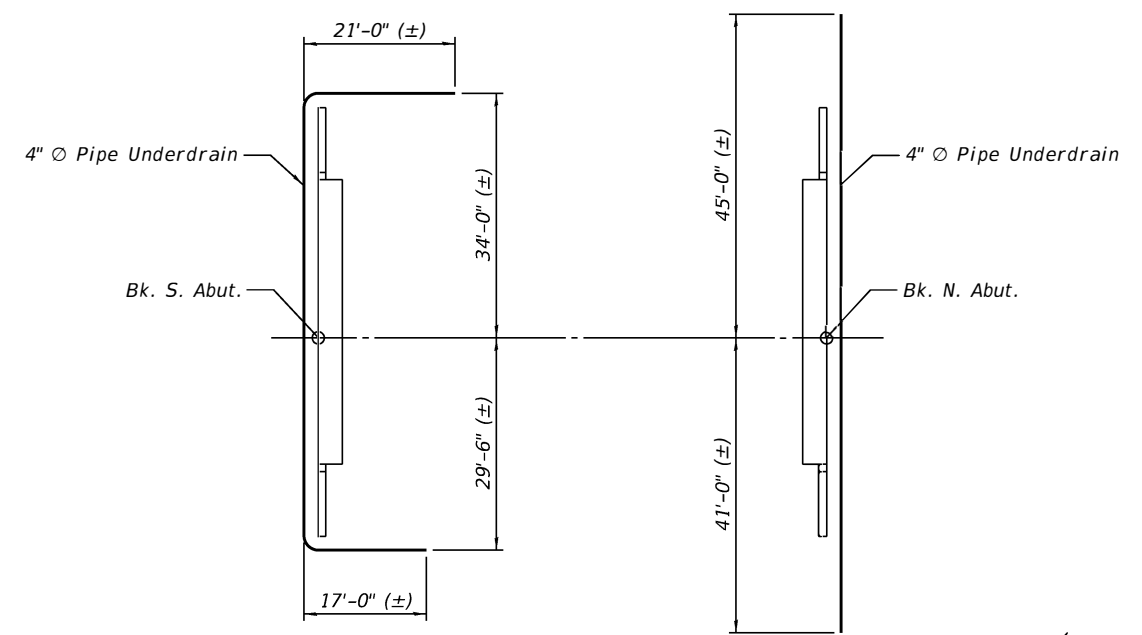
ITEM	UNIT	SUPER	SUB	TOTAL
Stone Riprap, Class A4	Sq. Yd.	—	620	620
Stone Dumped Riprap, Class A4	Ton	—	528	528
Filter Fabric	Sq. Yd.	—	620	620
Removal of Existing Structures	Each	1	—	1
Structure Excavation	Cu. Yd.	—	272	272
Cofferdam Excavation	Cu. Yd.	—	548	548
Cofferdam (Type 2) (Location - 1)	Each	—	1	1
Cofferdam (Type 2) (Location - 2)	Each	—	1	1
Concrete Structures	Cu. Yd.	33.2	269.6	302.8
Concrete Superstructure	Cu. Yd.	444.1	—	444.1
Bridge Deck Grooving	Sq. Yd.	1158	—	1158
Seal Coat Concrete	Cu. Yd.	—	170.0	170.0
Protective Coat	Sq. Yd.	1691	—	1691
Concrete Superstructure (Approach Slab)	Cu. Yd.	111.8	—	111.8
Furnishing and Erecting Structural Steel	L. Sum	1	—	1
Stud Shear Connectors	Each	4950	—	4950
Reinforcement Bars, Epoxy Coated	Pound	138,690	32,860	171,550
Aluminum Railing, Type L	Foot	312	—	312
Furnishing Steel Piles, HP 12x63	Foot	—	540	540
Furnishing Steel Piles, HP 14x89	Foot	—	550	550
Driving Piles	Foot	—	1090	1090
Test Pile Steel HP 12x63	Each	—	2	2
Test Pile Steel HP 14x73	Each	—	2	2
Pile Shoes	Each	—	38	38
Name Plates	Each	1	—	1
Elastomeric Bearing Assembly, Type I	Each	12	—	12
Anchor Bolts, 1"	Each	—	24	24
Anchor Bolts, 1 1/4"	Each	—	24	24
Geocomposite Wall Drain	Sq. Yd.	—	90	90
Conduit Embedded in Structure, 2" Dia., PVC	Foot	325	—	325
Junction Box, Stainless Steel, Attached to Structure, 18x18x8	Each	2	—	2
Granular Backfill for Structures	Cu. Yd.	—	178	178
Pipe Underdrains for Structures 4"	Foot	—	186	186

KISHWAUKEE RIVER
 BUILT 20__ BY
 BOONE COUNTY
 SEC. 17-00093-00-BR
 F.A.U. 5011A STA. 24+20.25
 STR. NO. 004-3098 LOADING HL-93

NAME PLATE
 See Std. 515001



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).



PLAN - SHOWING PIPE UNDERDRAINS

SECTION THRU INTEGRAL ABUTMENT
 (Horiz. dim. @ Rt. L's)

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

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HANSON
 Hanson Professional Services Inc.

DESIGNED	SMK	03/19
DRAWN	MGM	05/19
REVIEWED	SMK	8/20/19

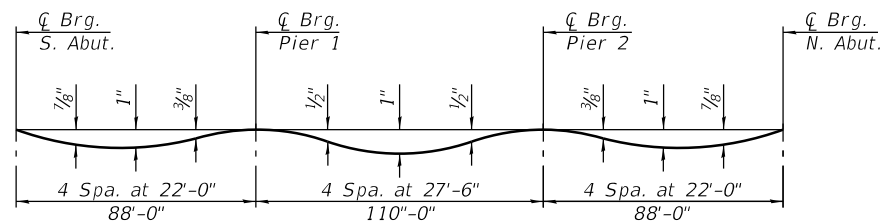
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		CHECKED -	REVISED -
	PLOT SCALE = 0.2,0000 1" = 10'	DRAWN - MGM	REVISED -
	PLOT DATE = 8/26/2019	CHECKED - SMK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES AND BRIDGE BILL OF MATERIALS
STRUCTURE NO. 004-3098

SHEET NO. 2 OF 30 SHEETS

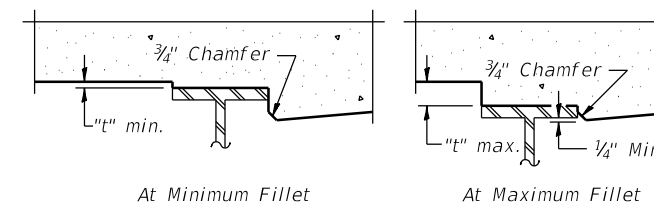
F.A.U. RTE. 5011A	SECTION 17-00093-00-BR	COUNTY BOONE	TOTAL SHEETS 71	SHEET NO. 22
			CONTRACT NO. 85688	
ILLINOIS FED. AID PROJECT				



INTERIOR GIRDER DEAD LOAD DEFLECTION DIAGRAM

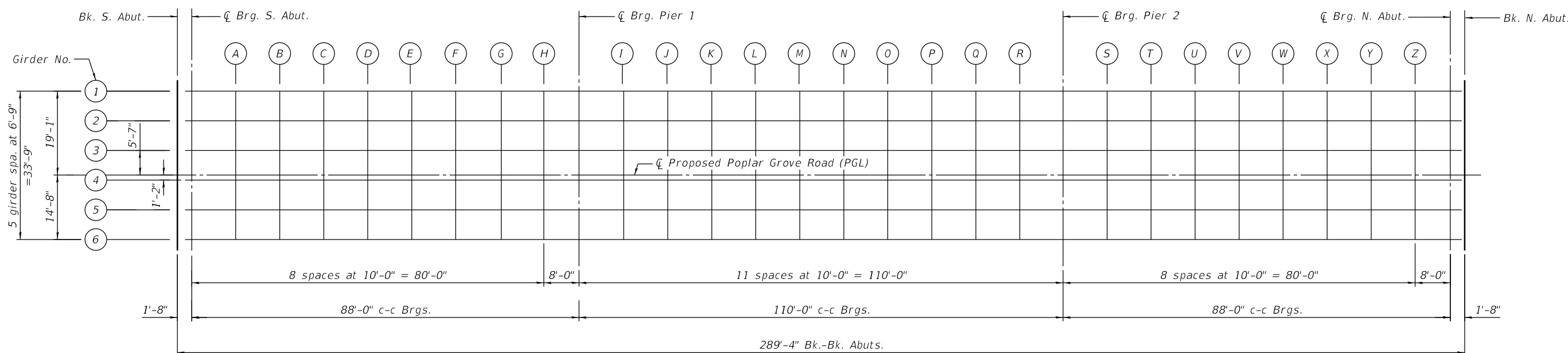
(Includes weight of concrete only.)

Note: The above deflections are not to be used in the field if the engineer is working from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection."



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

FILLET HEIGHTS



PLAN



DESIGNED	SMK	03/19
DRAWN	MGM	05/19
REVIEWED	SMK	8/30/19

FILE NAME =	USER NAME = morey00259	DESIGNED - SMK	REVISED -
0043098-16L0504B-S003-TOS PLAN.dgn		CHECKED -	REVISED -
	PLOT SCALE = 0.2:0000 '1' = 1"	DRAWN - MGM	REVISED -
	PLOT DATE = 8/26/2019	CHECKED - SMK	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**TOP OF DECK ELEVATIONS (SHEET 1 OF 3)
 STRUCTURE NO. 004-3098**

SHEET NO. 3 OF 30 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	23
CONTRACT NO. 85688			ILLINOIS FED. AID PROJECT	

GIRDER 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut	22+75.58	-19.08	768.09	768.09
☒ Brg. S. Abut.	22+77.25	-19.08	768.12	768.12
a	22+87.25	-19.08	768.26	768.70
b	22+97.25	-19.08	768.39	769.18
c	23+07.25	-19.08	768.51	769.49
d	23+17.25	-19.08	768.63	769.62
e	23+27.25	-19.08	768.73	769.58
f	23+37.25	-19.08	768.82	769.42
g	23+47.25	-19.08	768.90	769.21
h	23+57.25	-19.08	768.97	769.05
☒ Pier 1	23+65.25	-19.08	769.02	769.02
i	23+75.25	-19.08	769.07	769.17
j	23+85.25	-19.08	769.11	769.43
k	23+95.25	-19.08	769.14	769.74
l	24+05.25	-19.08	769.16	770.00
m	24+15.25	-19.08	769.17	770.15
n	24+25.25	-19.08	769.17	770.15
o	24+35.25	-19.08	769.16	770.00
p	24+45.25	-19.08	769.14	769.74
q	24+55.25	-19.08	769.11	769.43
r	24+65.25	-19.08	769.07	769.17
☒ Pier 2	24+75.25	-19.08	769.02	769.02
s	24+85.25	-19.08	768.96	769.07
t	24+95.25	-19.08	768.88	769.25
u	25+05.25	-19.08	768.80	769.46
v	25+15.25	-19.08	768.71	769.60
w	25+25.25	-19.08	768.60	769.61
x	25+35.25	-19.08	768.49	769.44
y	25+45.25	-19.08	768.37	769.09
z	25+55.25	-19.08	768.23	768.59
☒ Brg. N. Abut.	25+63.25	-19.08	768.12	768.12
Bk. N. Abut.	25+64.92	-19.08	768.09	768.09

GIRDER 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut	22+75.58	-12.33	768.06	768.06
☒ Brg. S. Abut.	22+77.25	-12.33	768.08	768.08
a	22+87.25	-12.33	768.23	768.66
b	22+97.25	-12.33	768.36	769.14
c	23+07.25	-12.33	768.48	769.46
d	23+17.25	-12.33	768.59	769.59
e	23+27.25	-12.33	768.69	769.55
f	23+37.25	-12.33	768.78	769.38
g	23+47.25	-12.33	768.87	769.18
h	23+57.25	-12.33	768.94	769.02
☒ Pier 1	23+65.25	-12.33	768.98	768.98
i	23+75.25	-12.33	769.04	769.13
j	23+85.25	-12.33	769.08	769.40
k	23+95.25	-12.33	769.11	769.71
l	24+05.25	-12.33	769.13	769.97
m	24+15.25	-12.33	769.14	770.12
n	24+25.25	-12.33	769.14	770.12
o	24+35.25	-12.33	769.13	769.97
p	24+45.25	-12.33	769.11	769.71
q	24+55.25	-12.33	769.08	769.40
r	24+65.25	-12.33	769.04	769.13
☒ Pier 2	24+75.25	-12.33	768.98	768.98
s	24+85.25	-12.33	768.92	769.04
t	24+95.25	-12.33	768.85	769.22
u	25+05.25	-12.33	768.77	769.42
v	25+15.25	-12.33	768.67	769.57
w	25+25.25	-12.33	768.57	769.58
x	25+35.25	-12.33	768.46	769.41
y	25+45.25	-12.33	768.33	769.06
z	25+55.25	-12.33	768.20	768.55
☒ Brg. N. Abut.	25+63.25	-12.33	768.08	768.08
Bk. N. Abut.	25+64.92	-12.33	768.06	768.06

GIRDER 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut	22+75.58	-5.58	768.20	768.19
☒ Brg. S. Abut.	22+77.25	-5.58	768.22	768.22
a	22+87.25	-5.58	768.36	768.80
b	22+97.25	-5.58	768.49	769.28
c	23+07.25	-5.58	768.62	769.59
d	23+17.25	-5.58	768.73	769.73
e	23+27.25	-5.58	768.83	769.68
f	23+37.25	-5.58	768.92	769.52
g	23+47.25	-5.58	769.00	769.31
h	23+57.25	-5.58	769.07	769.15
☒ Pier 1	23+65.25	-5.58	769.12	769.12
i	23+75.25	-5.58	769.17	769.27
j	23+85.25	-5.58	769.21	769.54
k	23+95.25	-5.58	769.24	769.84
l	24+05.25	-5.58	769.26	770.10
m	24+15.25	-5.58	769.27	770.25
n	24+25.25	-5.58	769.27	770.25
o	24+35.25	-5.58	769.26	770.10
p	24+45.25	-5.58	769.24	769.84
q	24+55.25	-5.58	769.21	769.54
r	24+65.25	-5.58	769.17	769.27
☒ Pier 2	24+75.25	-5.58	769.12	769.12
s	24+85.25	-5.58	769.06	769.18
t	24+95.25	-5.58	768.98	769.35
u	25+05.25	-5.58	768.90	769.56
v	25+15.25	-5.58	768.81	769.70
w	25+25.25	-5.58	768.71	769.71
x	25+35.25	-5.58	768.59	769.54
y	25+45.25	-5.58	768.47	769.19
z	25+55.25	-5.58	768.33	768.69
☒ Brg. N. Abut.	25+63.25	-5.58	768.22	768.22
Bk. N. Abut.	25+64.92	-5.58	768.20	768.19

DESIGNED	SMK	03/19
DRAWN	MGM	05/19
REVIEWED	SMK	8/30/19

FILE NAME = 0043098-16L05048-S004-T05-E1tbl-1.dgn	USER NAME = morey00259	DESIGNED - SMK	REVISIED -
		CHECKED -	REVISIED -
PLOT SCALE = 0:2.0000 '1' = 1in.		DRAWN - MGM	REVISIED -
PLOT DATE = 8/26/2019		CHECKED - SMK	REVISIED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**TOP OF DECK ELEVATIONS (SHEET 2 OF 3)
 STRUCTURE NO. 004-3098**

SHEET NO. 4 OF 30 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	24
			CONTRACT NO. 85688	
ILLINOIS FED. AID PROJECT				

PGL

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut	22+75.58	0.00	768.31	768.30
☉ Brg. S. Abut.	22+77.25	0.00	768.33	768.33
a	22+87.25	0.00	768.47	768.91
b	22+97.25	0.00	768.60	769.39
c	23+07.25	0.00	768.73	769.71
d	23+17.25	0.00	768.84	769.84
e	23+27.25	0.00	768.94	769.79
f	23+37.25	0.00	769.03	769.63
g	23+47.25	0.00	769.11	769.42
h	23+57.25	0.00	769.18	769.26
☉ Pier 1	23+65.25	0.00	769.23	769.23
i	23+75.25	0.00	769.28	769.38
j	23+85.25	0.00	769.32	769.65
k	23+95.25	0.00	769.36	769.95
l	24+05.25	0.00	769.38	770.21
m	24+15.25	0.00	769.39	770.37
n	24+25.25	0.00	769.39	770.37
o	24+35.25	0.00	769.38	770.21
p	24+45.25	0.00	769.36	769.95
q	24+55.25	0.00	769.32	769.65
r	24+65.25	0.00	769.28	769.38
☉ Pier 2	24+75.25	0.00	769.23	769.23
s	24+85.25	0.00	769.17	769.29
t	24+95.25	0.00	769.10	769.46
u	25+05.25	0.00	769.01	769.67
v	25+15.25	0.00	768.92	769.82
w	25+25.25	0.00	768.82	769.82
x	25+35.25	0.00	768.70	769.66
y	25+45.25	0.00	768.58	769.31
z	25+55.25	0.00	768.44	768.80
☉ Brg. N. Abut.	25+63.25	0.00	768.33	768.33
Bk. N. Abut.	25+64.92	0.00	768.31	768.30

GIRDER 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut	22+75.58	1.17	768.29	768.28
☉ Brg. S. Abut.	22+77.25	1.17	768.31	768.31
a	22+87.25	1.17	768.45	768.89
b	22+97.25	1.17	768.58	769.36
c	23+07.25	1.17	768.70	769.68
d	23+17.25	1.17	768.82	769.81
e	23+27.25	1.17	768.92	769.77
f	23+37.25	1.17	769.01	769.61
g	23+47.25	1.17	769.09	769.40
h	23+57.25	1.17	769.16	769.24
☉ Pier 1	23+65.25	1.17	769.21	769.21
i	23+75.25	1.17	769.26	769.35
j	23+85.25	1.17	769.30	769.62
k	23+95.25	1.17	769.33	769.93
l	24+05.25	1.17	769.35	770.19
m	24+15.25	1.17	769.36	770.34
n	24+25.25	1.17	769.36	770.34
o	24+35.25	1.17	769.35	770.19
p	24+45.25	1.17	769.33	769.93
q	24+55.25	1.17	769.30	769.62
r	24+65.25	1.17	769.26	769.35
☉ Pier 2	24+75.25	1.17	769.21	769.21
s	24+85.25	1.17	769.15	769.26
t	24+95.25	1.17	769.07	769.44
u	25+05.25	1.17	768.99	769.65
v	25+15.25	1.17	768.90	769.79
w	25+25.25	1.17	768.79	769.80
x	25+35.25	1.17	768.68	769.63
y	25+45.25	1.17	768.56	769.28
z	25+55.25	1.17	768.42	768.78
☉ Brg. N. Abut.	25+63.25	1.17	768.31	768.31
Bk. N. Abut.	25+64.92	1.17	768.29	768.28

GIRDER 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut	22+75.58	7.92	768.15	768.15
☉ Brg. S. Abut.	22+77.25	7.92	768.17	768.17
a	22+87.25	7.92	768.31	768.75
b	22+97.25	7.92	768.45	769.23
c	23+07.25	7.92	768.57	769.55
d	23+17.25	7.92	768.68	769.68
e	23+27.25	7.92	768.78	769.64
f	23+37.25	7.92	768.87	769.47
g	23+47.25	7.92	768.95	769.26
h	23+57.25	7.92	769.02	769.10
☉ Pier 1	23+65.25	7.92	769.07	769.07
i	23+75.25	7.92	769.12	769.22
j	23+85.25	7.92	769.17	769.49
k	23+95.25	7.92	769.20	769.79
l	24+05.25	7.92	769.22	770.06
m	24+15.25	7.92	769.23	770.21
n	24+25.25	7.92	769.23	770.21
o	24+35.25	7.92	769.22	770.06
p	24+45.25	7.92	769.20	769.79
q	24+55.25	7.92	769.17	769.49
r	24+65.25	7.92	769.12	769.22
☉ Pier 2	24+75.25	7.92	769.07	769.07
s	24+85.25	7.92	769.01	769.13
t	24+95.25	7.92	768.94	769.30
u	25+05.25	7.92	768.86	769.51
v	25+15.25	7.92	768.76	769.66
w	25+25.25	7.92	768.66	769.67
x	25+35.25	7.92	768.55	769.50
y	25+45.25	7.92	768.42	769.15
z	25+55.25	7.92	768.29	768.64
☉ Brg. N. Abut.	25+63.25	7.92	768.17	768.17
Bk. N. Abut.	25+64.92	7.92	768.15	768.15

GIRDER 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut	22+75.58	14.67	768.02	768.01
☉ Brg. S. Abut.	22+77.25	14.67	768.04	768.04
a	22+87.25	14.67	768.18	768.62
b	22+97.25	14.67	768.31	769.09
c	23+07.25	14.67	768.43	769.41
d	23+17.25	14.67	768.55	769.54
e	23+27.25	14.67	768.65	769.50
f	23+37.25	14.67	768.74	769.34
g	23+47.25	14.67	768.82	769.13
h	23+57.25	14.67	768.89	768.97
☉ Pier 1	23+65.25	14.67	768.94	768.94
i	23+75.25	14.67	768.99	769.08
j	23+85.25	14.67	769.03	769.35
k	23+95.25	14.67	769.06	769.66
l	24+05.25	14.67	769.08	769.92
m	24+15.25	14.67	769.09	770.07
n	24+25.25	14.67	769.09	770.07
o	24+35.25	14.67	769.08	769.92
p	24+45.25	14.67	769.06	769.66
q	24+55.25	14.67	769.03	769.35
r	24+65.25	14.67	768.99	769.08
☉ Pier 2	24+75.25	14.67	768.94	768.94
s	24+85.25	14.67	768.88	768.99
t	24+95.25	14.67	768.80	769.17
u	25+05.25	14.67	768.72	769.38
v	25+15.25	14.67	768.63	769.52
w	25+25.25	14.67	768.52	769.53
x	25+35.25	14.67	768.41	769.36
y	25+45.25	14.67	768.29	769.01
z	25+55.25	14.67	768.15	768.51
☉ Brg. N. Abut.	25+63.25	14.67	768.04	768.04
Bk. N. Abut.	25+64.92	14.67	768.02	768.01

DESIGNED	SMK	03/19
DRAWN	MGM	05/19
REVIEWED	SMK	8/30/19

FILE NAME = 0043098-16L05048-S005-T05-E1tbl-2.dgn	USER NAME = morey00259	DESIGNED - SMK	REVISED -
		CHECKED -	REVISED -
	PLOT SCALE = 0:2.0000 '1" = 100'	DRAWN - MGM	REVISED -
	PLOT DATE = 8/26/2019	CHECKED - SMK	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**TOP OF DECK ELEVATIONS (SHEET 3 OF 3)
 STRUCTURE NO. 004-3098**

SHEET NO. 5 OF 30 SHEETS

F.A.U. RTE. 5011A	SECTION 17-00093-00-BR	COUNTY BOONE	TOTAL SHEETS 71	SHEET NO. 25
			CONTRACT NO. 85688	
ILLINOIS FED. AID PROJECT				

WEST EDGE OF SLAB

Location	Station	Offset	Theoretical Grade Elevations
Free End S. Appr.	22+46.58	-24.00	767.39
A	22+56.58	-23.00	767.56
B	22+66.58	-23.00	767.71
Abut. End of S. Appr.	22+76.58	-22.00	767.88

FACE OF SIDEWALK

Location	Station	Offset	Theoretical Grade Elevations
Free End S. Appr.	22+46.58	-16.00	767.55
A	22+56.58	-16.00	767.70
B	22+66.58	-16.00	767.85
Abut. End of S. Appr.	22+76.58	-16.00	768.00

WEST EDGE OF LANE

Location	Station	Offset	Theoretical Grade Elevations
Free End S. Appr.	22+46.58	-12.00	767.63
A	22+56.58	-12.00	767.78
B	22+66.58	-12.00	767.93
Abut. End of S. Appr.	22+76.58	-12.00	768.08

CL ROAD & PGL

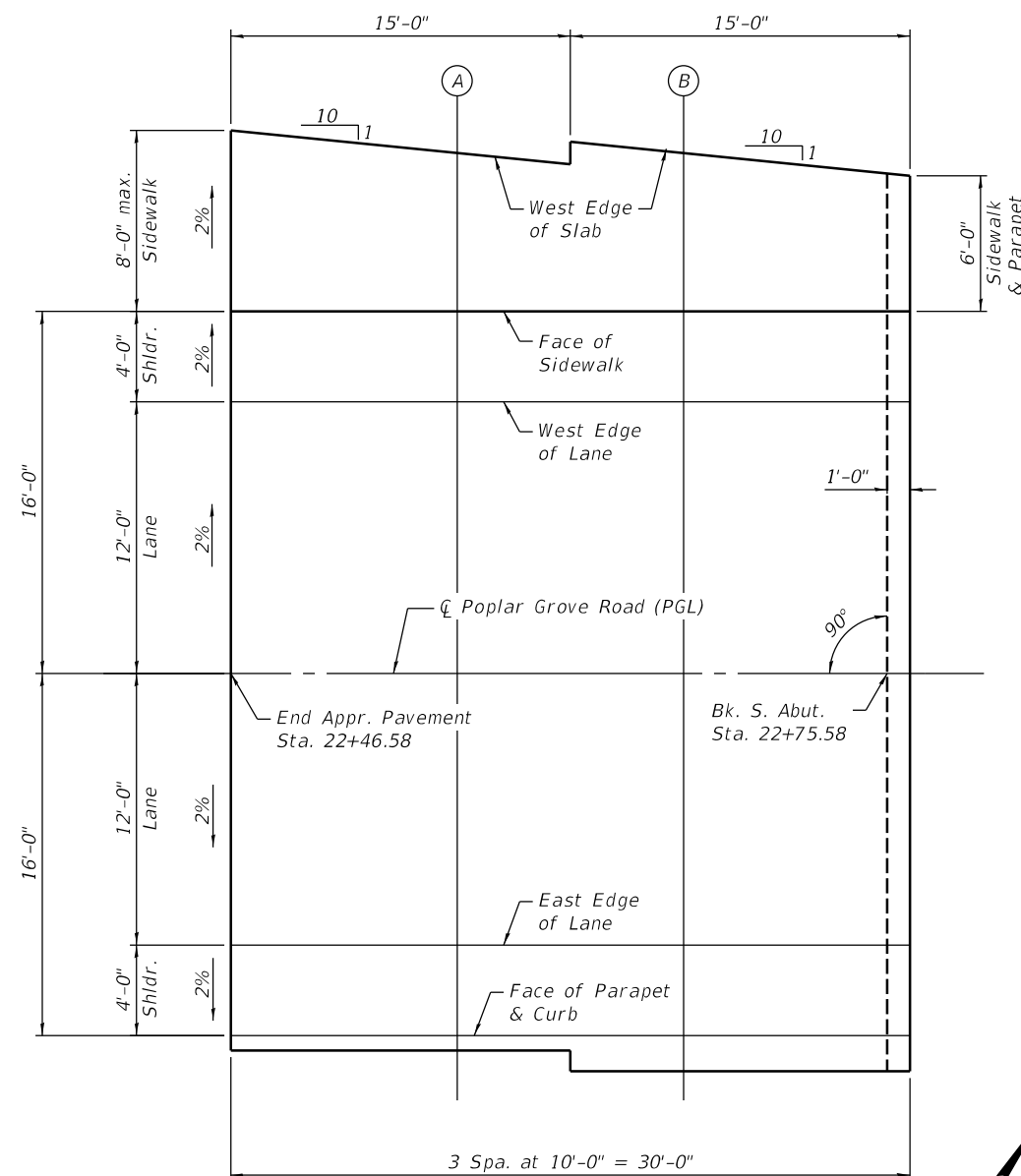
Location	Station	Offset	Theoretical Grade Elevations
Free End S. Appr.	22+46.58	0.00	767.87
A	22+56.58	0.00	768.02
B	22+66.58	0.00	768.17
Abut. End of S. Appr.	22+76.58	0.00	768.32

EAST EDGE OF LANE

Location	Station	Offset	Theoretical Grade Elevations
Free End S. Appr.	22+46.58	12.00	767.63
A	22+56.58	12.00	767.78
B	22+66.58	12.00	767.93
Abut. End of S. Appr.	22+76.58	12.00	768.08

FACE OF PARAPET & CURB

Location	Station	Offset	Theoretical Grade Elevations
Free End S. Appr.	22+46.58	16.00	767.55
A	22+56.58	16.00	767.70
B	22+66.58	16.00	767.85
Abut. End of S. Appr.	22+76.58	16.00	768.00



SOUTH APPROACH PLAN



DESIGNED	SMK	03/19
DRAWN	MGM	05/19
REVIEWED	SMK	8/30/19

FILE NAME = 0043098-16L05048-S006-T0S South Appr.dgn	USER NAME = morey00259	DESIGNED - SMK	REVISED -
		CHECKED -	REVISED -
	PLOT SCALE = 0:2.0000 '1' = 1"	DRAWN - MGM	REVISED -
	PLOT DATE = 8/26/2019	CHECKED - SMK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SOUTH APPROACH SLAB ELEVATIONS
STRUCTURE NO. 004-3098

SHEET NO. 6 OF 30 SHEETS

F.A.U. RTE. 5011A	SECTION 17-00093-00-BR	COUNTY BOONE	TOTAL SHEETS 71	SHEET NO. 26
			CONTRACT NO. 85688	
ILLINOIS FED. AID PROJECT				

WEST EDGE OF SLAB

Location	Station	Offset	Theoretical Grade Elevations
Abut. End of N. Appr.	25+63.91	-22.00	767.88
A	25+73.91	-23.00	767.71
B	25+83.91	-23.00	767.56
Free End N. Appr.	25+93.91	-24.00	767.39

FACE OF SIDEWALK

Location	Station	Offset	Theoretical Grade Elevations
Abut. End of N. Appr.	25+63.91	-16.00	768.00
A	25+73.91	-16.00	767.85
B	25+83.91	-16.00	767.70
Free End N. Appr.	25+93.91	-16.00	767.55

WEST EDGE OF LANE

Location	Station	Offset	Theoretical Grade Elevations
Abut. End of N. Appr.	25+63.91	-12.00	768.08
A	25+73.91	-12.00	767.93
B	25+83.91	-12.00	767.78
Free End N. Appr.	25+93.91	-12.00	767.63

CL ROAD & PGL

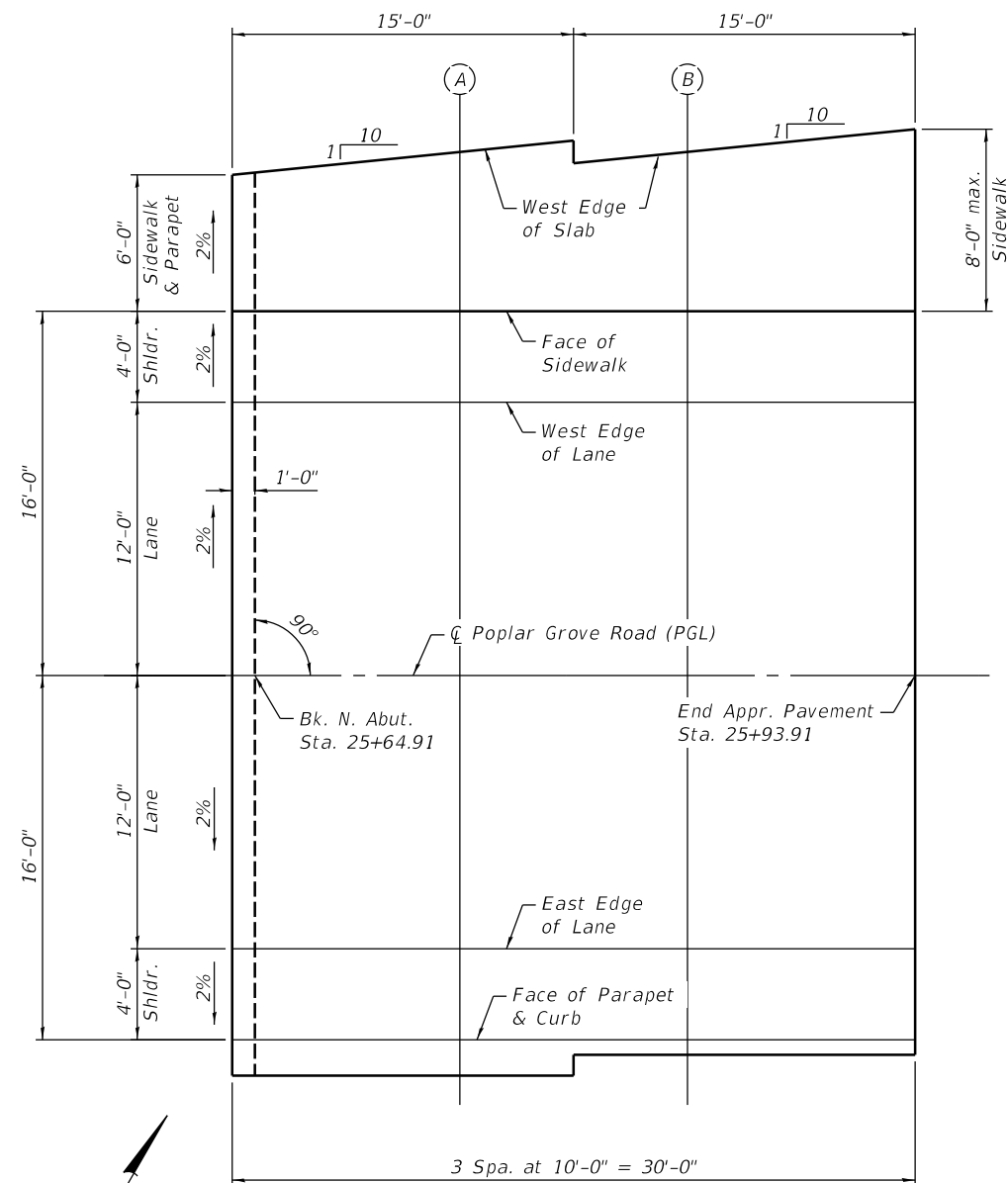
Location	Station	Offset	Theoretical Grade Elevations
Abut. End of N. Appr.	25+63.91	0.00	768.32
A	25+73.91	0.00	768.17
B	25+83.91	0.00	768.02
Free End N. Appr.	25+93.91	0.00	767.87

EAST EDGE OF LANE

Location	Station	Offset	Theoretical Grade Elevations
Abut. End of N. Appr.	25+63.91	12.00	768.08
A	25+73.91	12.00	767.93
B	25+83.91	12.00	767.78
Free End N. Appr.	25+93.91	12.00	767.63

FACE OF PARAPET & CURB

Location	Station	Offset	Theoretical Grade Elevations
Abut. End of N. Appr.	25+63.91	16.00	768.00
A	25+73.91	16.00	767.85
B	25+83.91	16.00	767.70
Free End N. Appr.	25+93.91	16.00	767.55

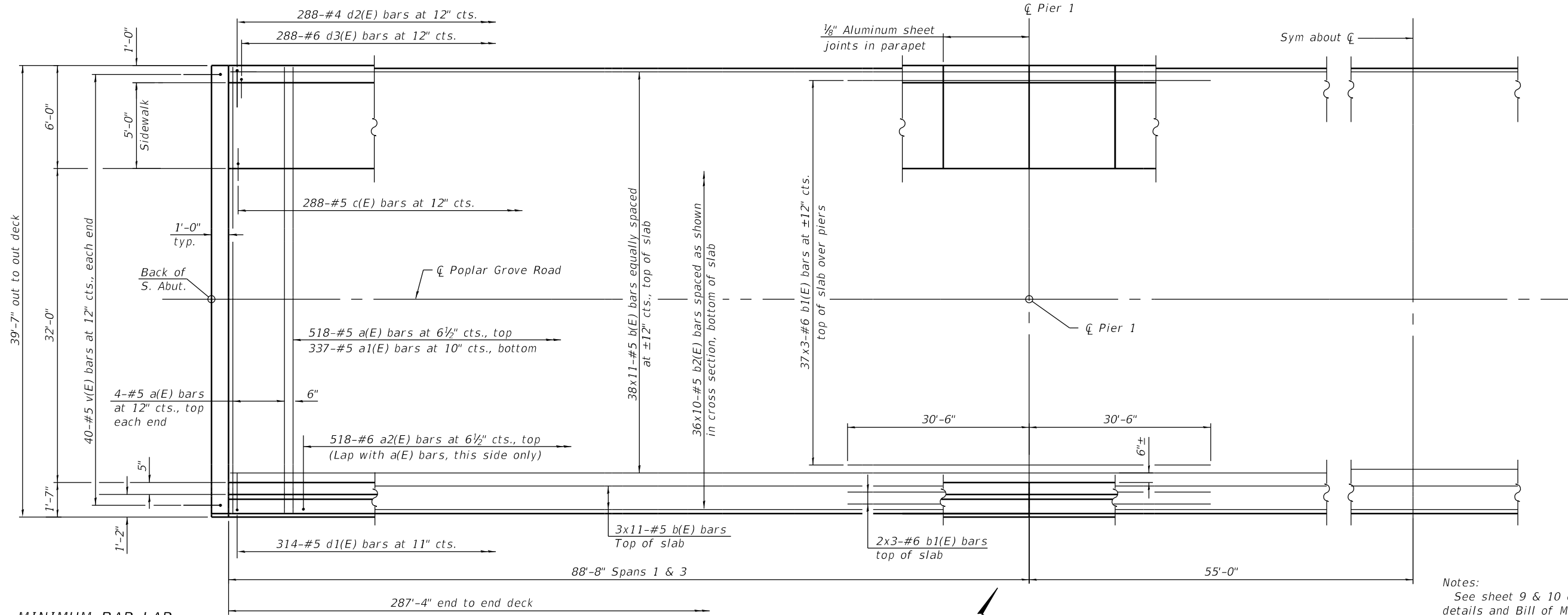


NORTH APPROACH PLAN

DESIGNED	SMK	03/19
DRAWN	MGM	05/19
REVIEWED	SMK	8/30/19

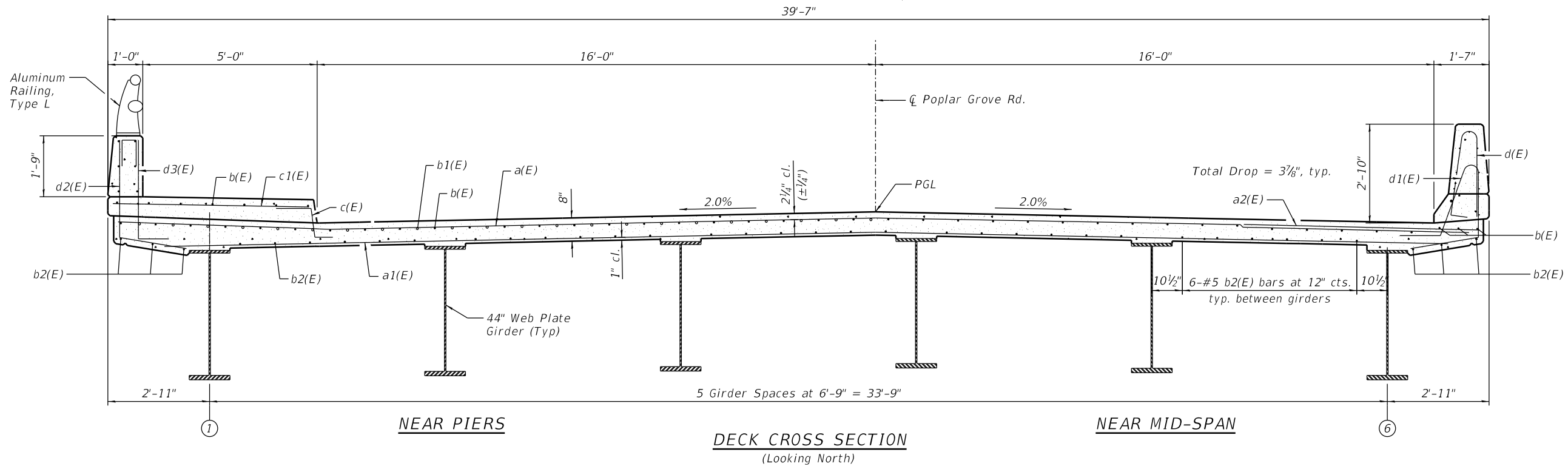
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	PLOT DATE = 8/26/2019	CHECKED - SMK	REVISED -

F.A.U. RTE. 5011A	SECTION 17-00093-00-BR	COUNTY BOONE	TOTAL SHEETS 71	SHEET NO. 27
			CONTRACT NO. 85688	
ILLINOIS FED. AID PROJECT				



MINIMUM BAR LAP
 #5 bar = 3'-6"
 #6 bar = 3'-7"

Notes:
 See sheet 9 & 10 of 30 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.



DESIGNED	SMK	03/19
DRAWN	MGM	05/19
REVIEWED	SMK	8/30/19

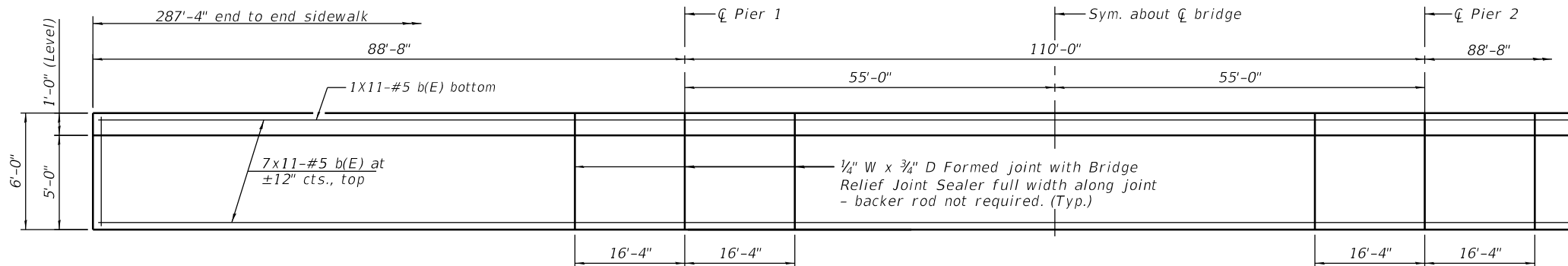
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PLOT SCALE = 0:2.0000 '1' = 1"		DRAWN - MGM	REVISED -
PLOT DATE = 8/26/2019		CHECKED - SMK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE
STRUCTURE NO. 004-3098

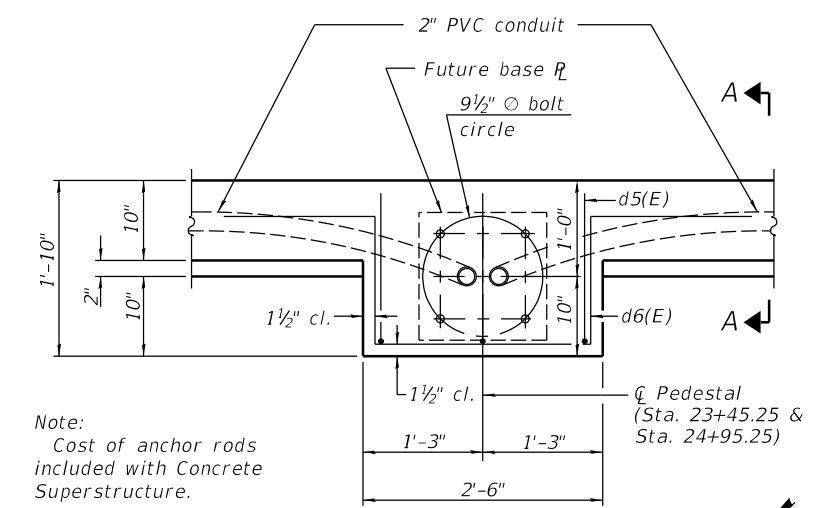
SHEET NO. 8 OF 30 SHEETS

F.A.U. RTE. 5011A	SECTION 17-00093-00-BR	COUNTY BOONE	TOTAL SHEETS 71	SHEET NO. 28
CONTRACT NO. 85688			ILLINOIS FED. AID PROJECT	



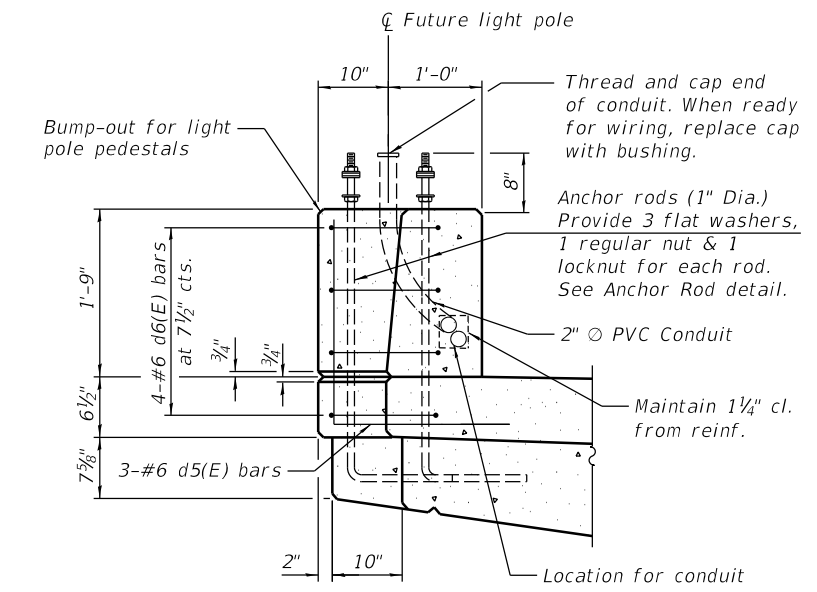
SIDEWALK PLAN

MINIMUM BAR LAP
 #5 bar = 3'-0"

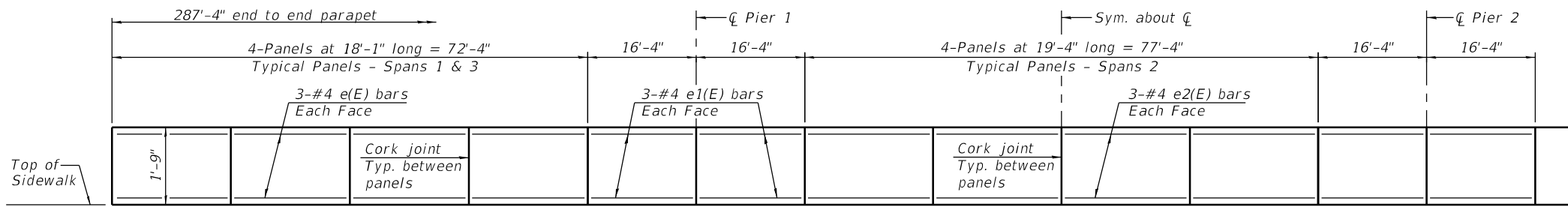


LIGHT PEDESTAL PLAN

Note:
 Cost of anchor rods included with Concrete Superstructure.

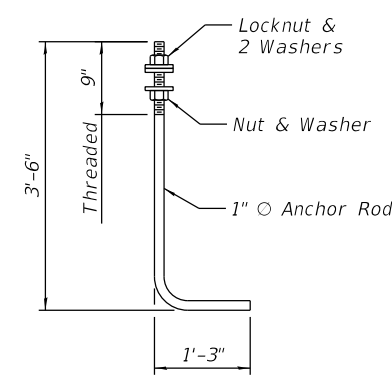


SECTION A-A
 (Looking North)

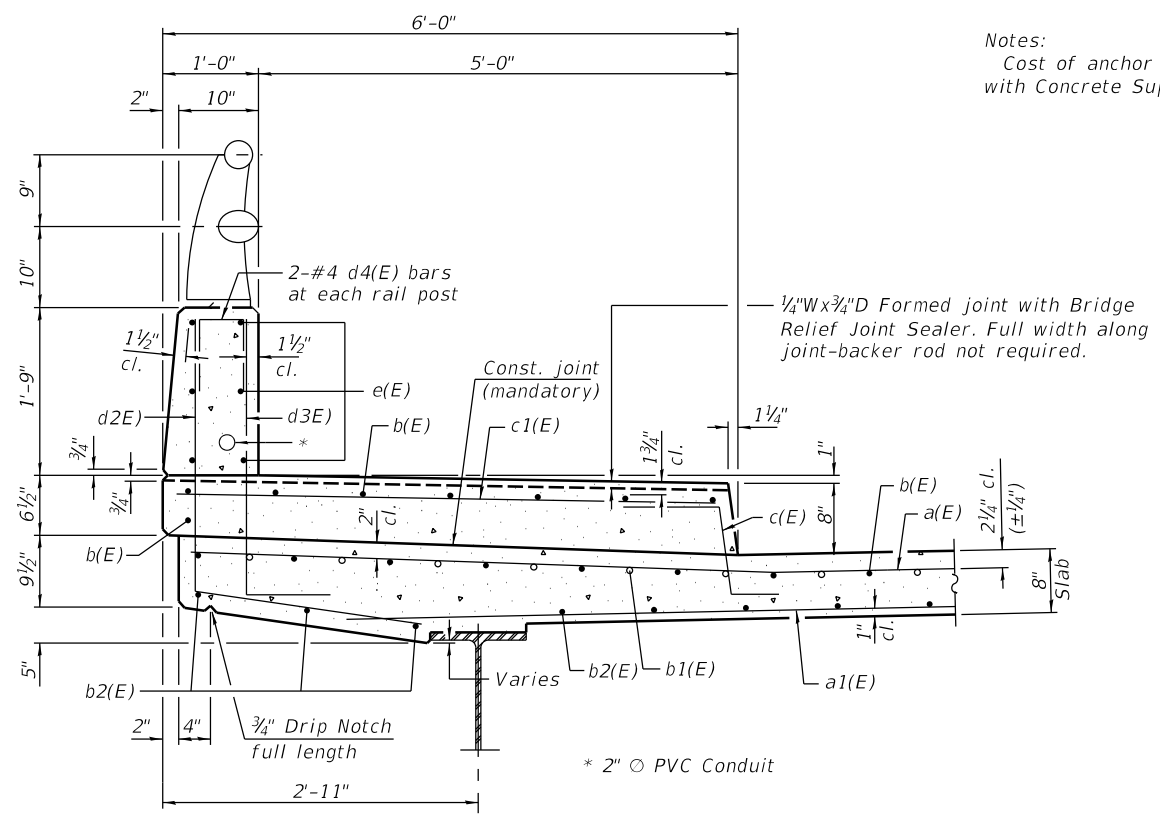


INSIDE ELEVATION OF SIDEWALK PARAPET

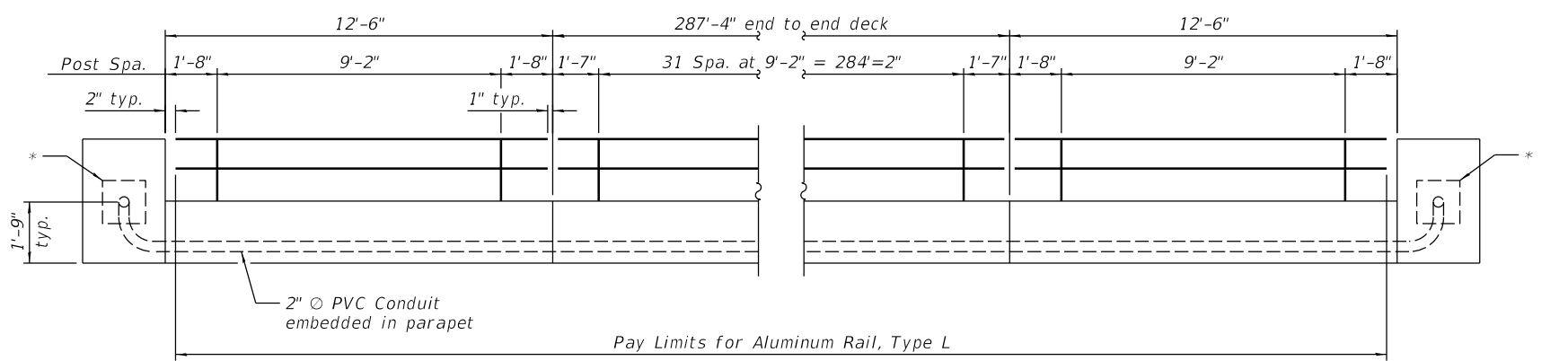
Notes:
 Cost of anchor rods is included with Concrete Superstructure.



ANCHOR ROD
 (ASTM F 1554 Grade 105) Full length hot dipped galvanized



SECTION THRU SIDEWALK
 (Looking North)



INSIDE ELEVATION OF SIDEWALK PARAPET
 (Showing rail post spacing)

* 18"x18"x8" Stainless Steel Junction Box

DESIGNED	SMK	03/19
DRAWN	MGM	05/19
REVIEWED	SMK	8/30/19

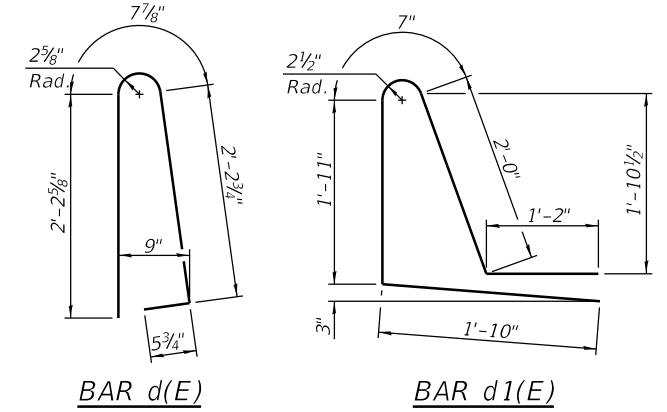
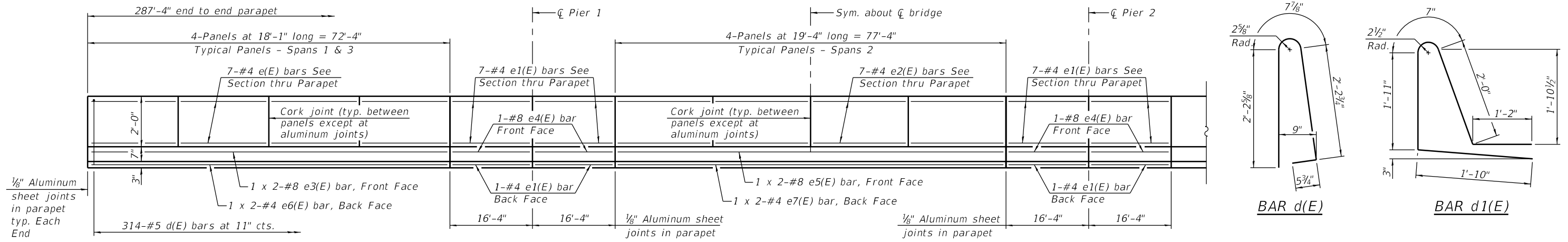
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USER NAME =	morey00259	
DESIGNED -	SMK	REVISÉD -
CHECKED -	-	REVISÉD -
DRAWN -	MGM	REVISÉD -
CHECKED -	SMK	REVISÉD -
PLOT SCALE =	0:2.0000	1" = 1'-0"
PLOT DATE =	8/26/2019	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS (SHEET 1 OF 2)
STRUCTURE NO. 004-3098

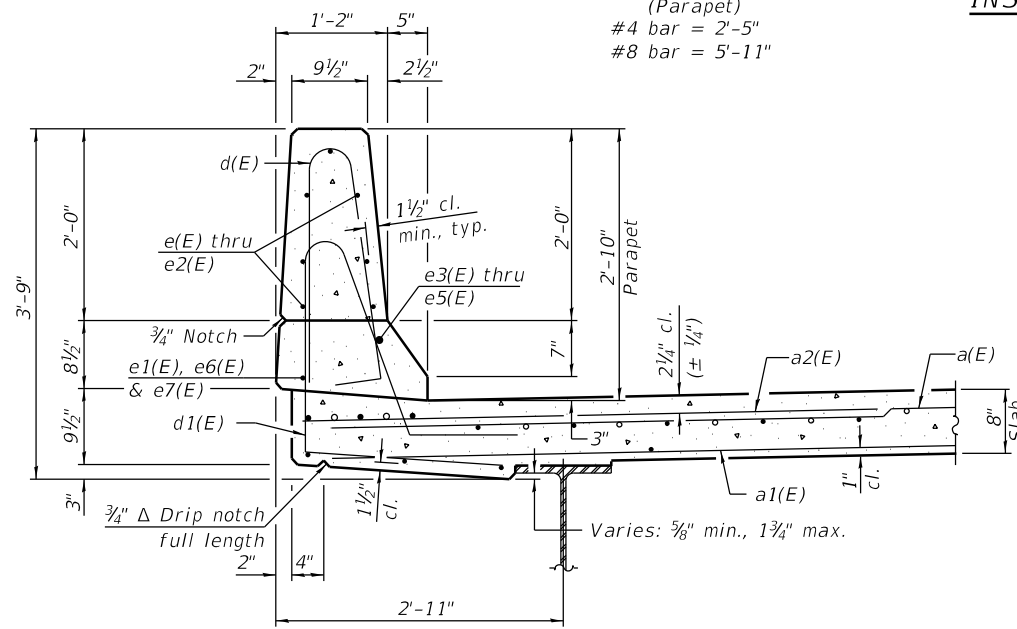
SHEET NO. 9 OF 30 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	29
CONTRACT NO.			85688	
ILLINOIS FED. AID PROJECT				

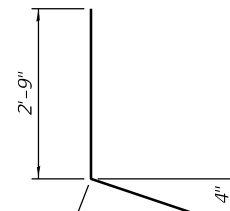


MINIMUM BAR LAP
 (Parapet)
 #4 bar = 2'-5"
 #8 bar = 5'-11"

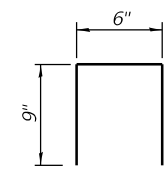
INSIDE ELEVATION OF EAST PARAPET



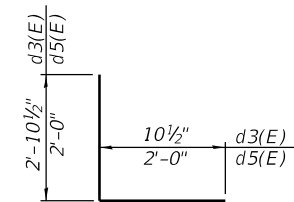
SECTION THRU EAST PARAPET



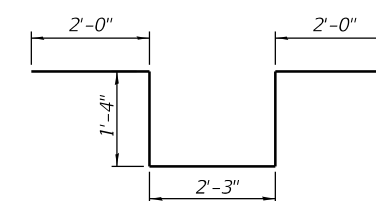
BAR d2(E)



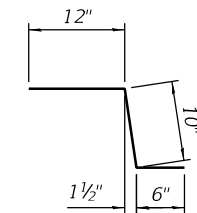
BAR d4(E)



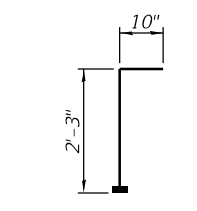
BAR d3(E) & d5(E)



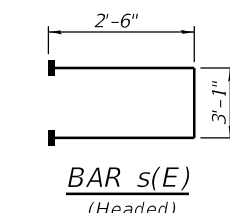
BAR d6(E)



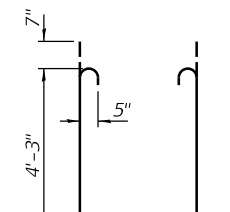
BAR c(E)



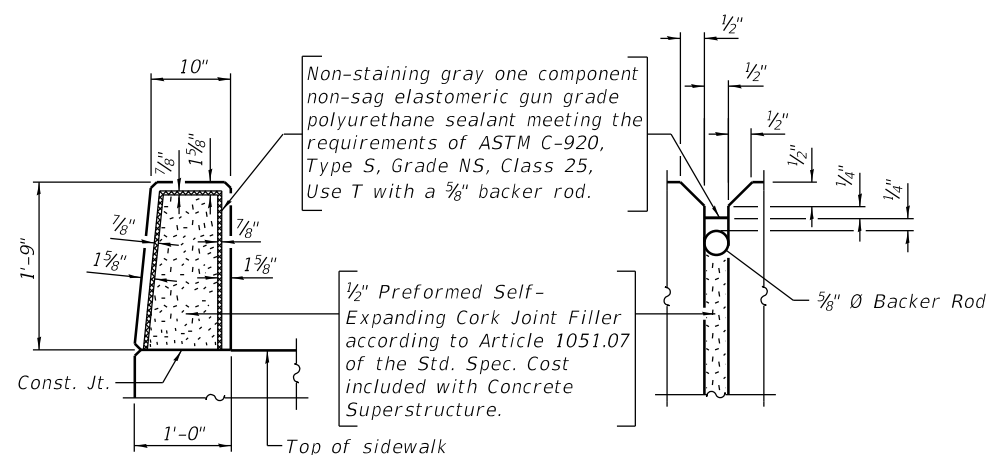
BAR v(E)
(Headed)



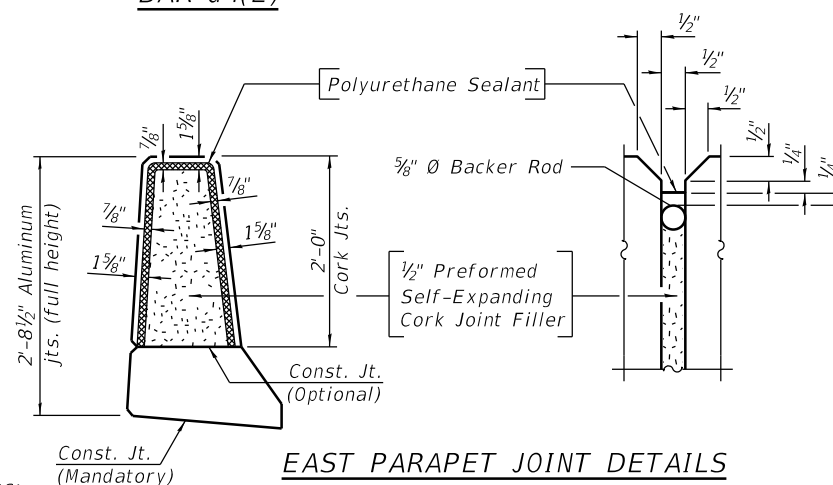
BAR s(E)
(Headed)



BAR s1(E)



SIDEWALK PARAPET JOINT DETAILS



EAST PARAPET JOINT DETAILS

Notes:

The 1/8" 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.

SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	526	#5	38'-11"	—
a1(E)	337	#5	37'-7"	—
a2(E)	518	#6	6'-6"	—
b(E)	539	#5	29'-4"	—
b1(E)	234	#6	22'-9"	—
b2(E)	360	#5	31'-11"	—
c(E)	288	#5	2'-4"	—
c2(E)	288	#5	5'-7"	—
d(E)	314	#5	5'-7"	—
d1(E)	314	#5	7'-6"	—
d2(E)	288	#4	4'-7"	—
d3(E)	288	#6	3'-9"	—
d4(E)	64	#4	2'-0"	—
d5(E)	6	#6	4'-0"	—
d6(E)	8	#6	8'-11"	—
e(E)	104	#4	17'-9"	—
e1(E)	56	#4	16'-0"	—
e2(E)	52	#4	19'-0"	—
e3(E)	4	#8	29'-0"	—
e4(E)	4	#8	16'-0"	—
e5(E)	2	#8	41'-6"	—
e6(E)	4	#4	37'-3"	—
e7(E)	2	#4	39'-9"	—
m(E)	10	#6	39'-3"	—
m1(E)	40	#6	6'-5"	—
m2(E)	16	#6	2'-7"	—
m3(E)	48	#5	4'-0"	—
s(E)	72	#5	8'-1"	—
s1(E)	72	#5	11'-8"	—
v(E)	80	#5	3'-1"	—
Reinforcement Bars, Epoxy Coated			Lbs.	91,910
Concrete Superstructure			Cu. Yds.	426.7

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

DESIGNED	SMK	03/19
DRAWN	MGM	05/19
REVIEWED	SMK	8/30/19

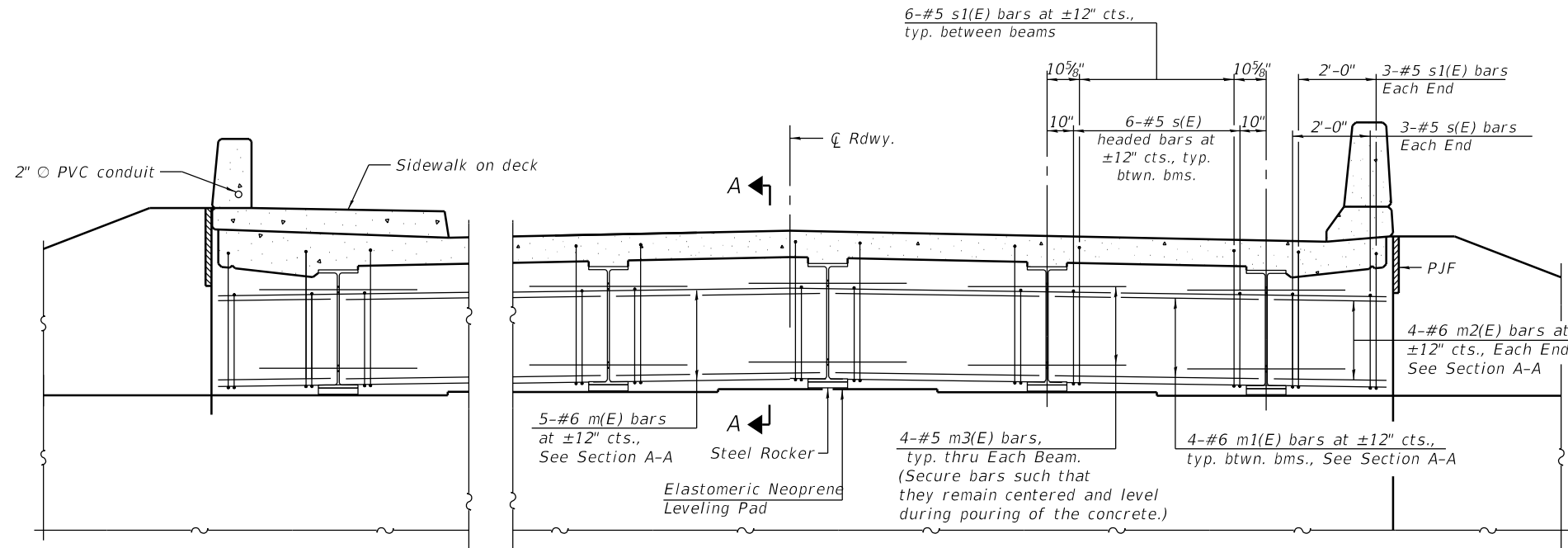
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PLOT SCALE = 0.2:0000 1" = 10'	PLOT DATE = 8/26/2019	CHECKED -	REVISED -
		DRAWN - MGM	REVISED -
		CHECKED - SMK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

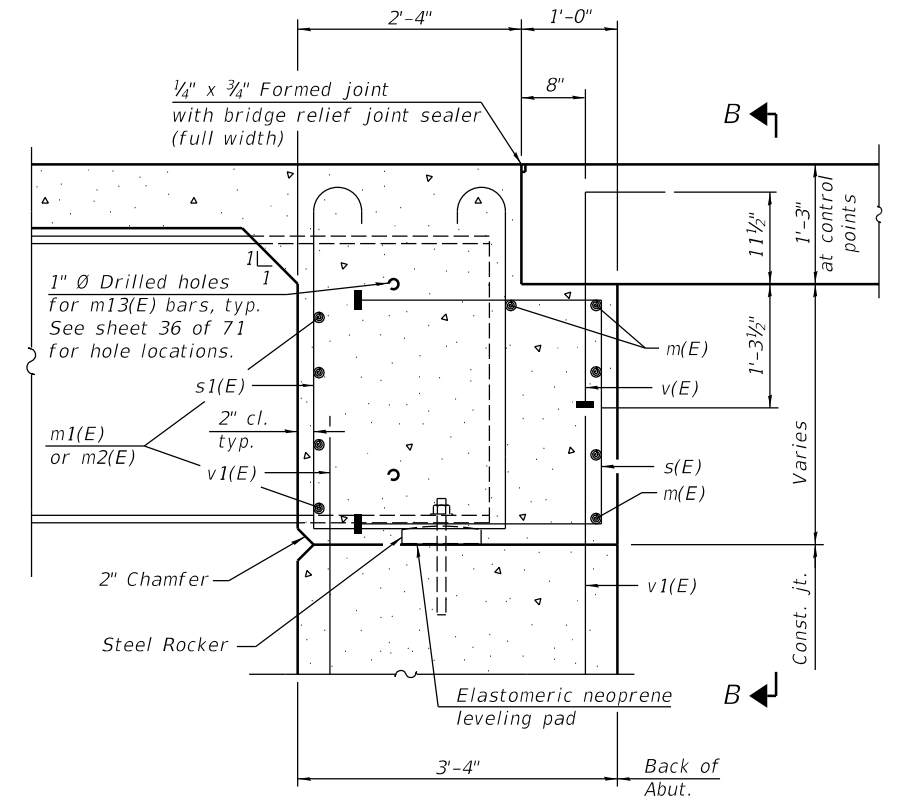
SUPERSTRUCTURE DETAILS (SHEET 2 OF 2)
STRUCTURE NO. 004-3098

SHEET NO. 10 OF 30 SHEETS

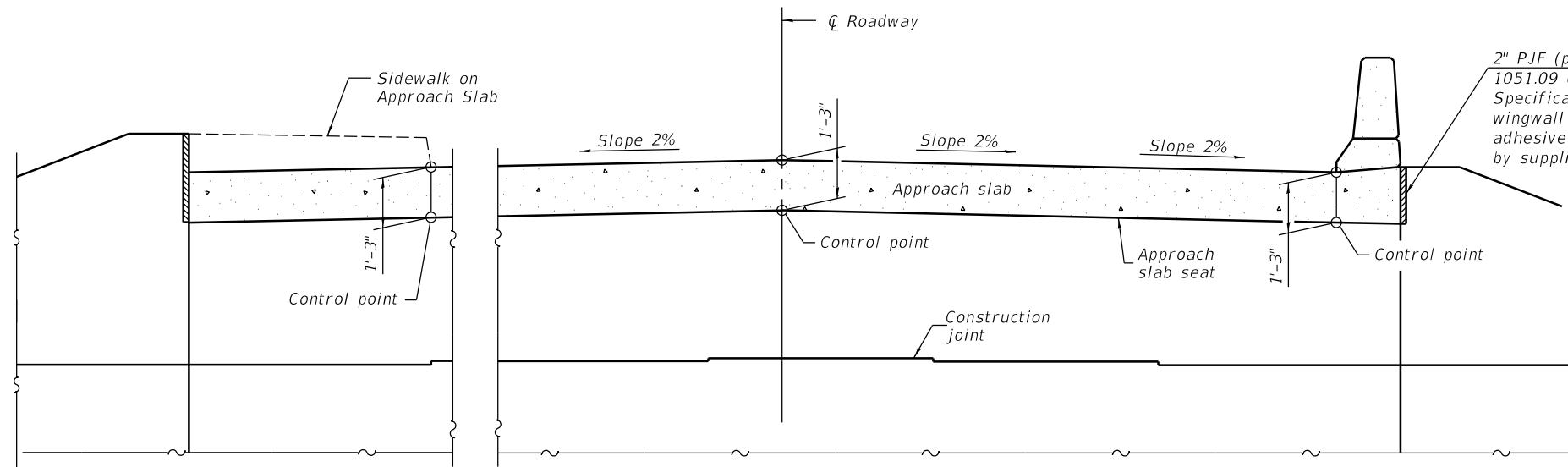
F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	30
CONTRACT NO.			85688	
ILLINOIS FED. AID PROJECT				



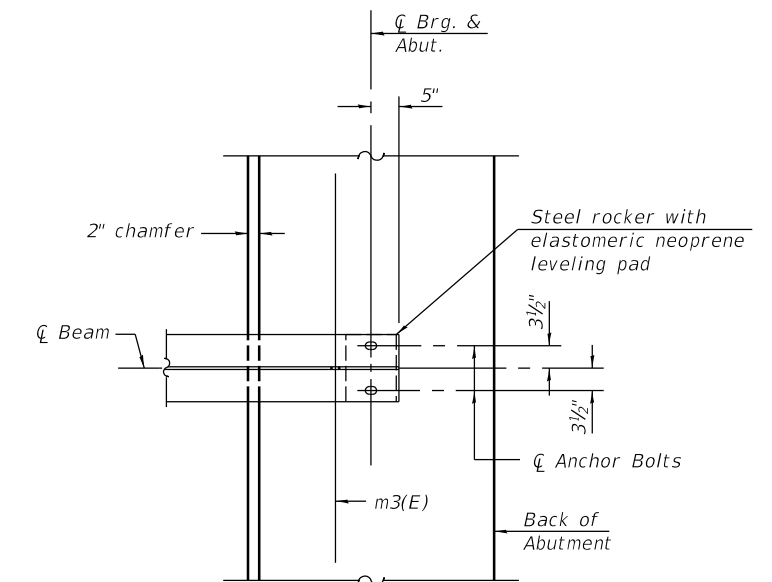
DIAPHRAGM AT ABUTMENT
 (N. Abut. Looking N.; S. Abut. sim.)



SECTION A-A



SECTION B-B



PLAN AT ABUTMENT
 (Showing bottom flange of beam)

Notes:

- Reinforcement bars in diaphragm are billed with superstructure on sheet 10 of 30.
- Concrete in diaphragm is included with Concrete Superstructure on sheet 10 of 30.
- For details of bars s(E), s1(E) and v(E) see sheet 10 of 30.
- The approach slab seat shall have a constant slope determined from the control points shown.
- For bearing details see sheet 18 of 30.
- Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

DESIGNED	SMK	03/19
DRAWN	MGM	05/19
REVIEWED	SMK	8/30/19

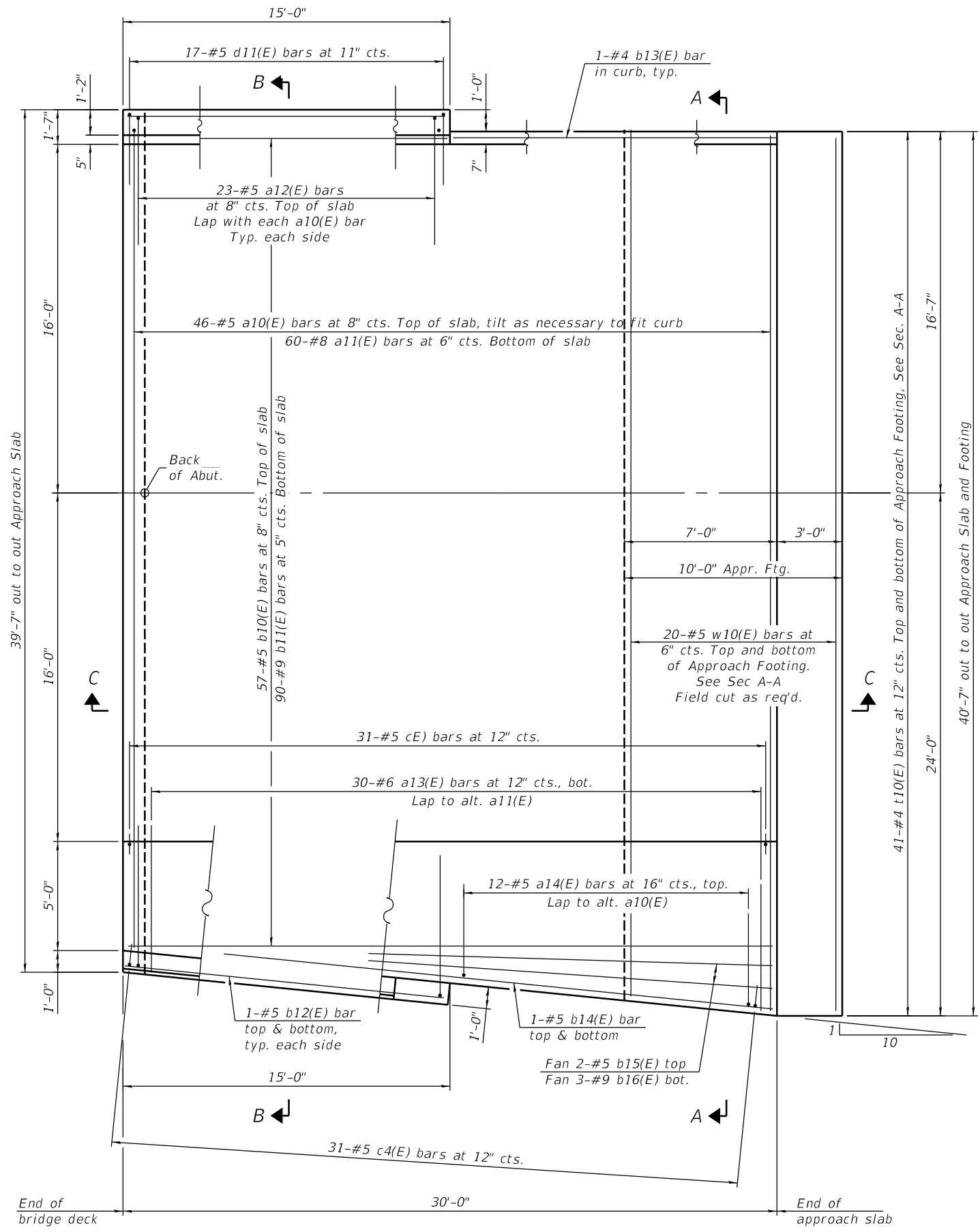
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

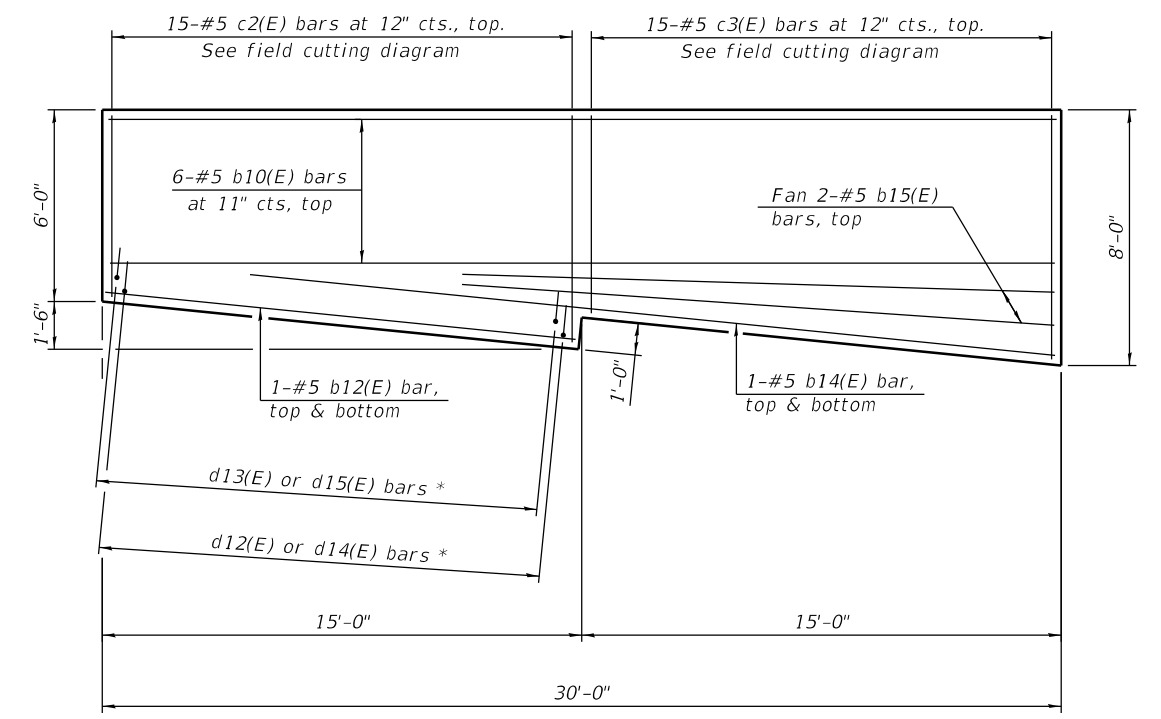
DIAPHRAGM DETAILS
STRUCTURE NO. 004-3098

SHEET NO. 11 OF 30 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	31
CONTRACT NO.			85688	
ILLINOIS FED. AID PROJECT				



SOUTH APPROACH PLAN
 (S. Approach shown, N. Approach sim.)



APPROACH SIDEWALK REINFORCEMENT PLAN
 (S. Approach shown, N. Approach sim.)

* See Inside Elevation of S.W. Approach Parapet on Sheet 14 of 30.

DESIGNED	SMK	03/19
DRAWN	MGM	05/19
REVIEWED	SMK	8/30/19

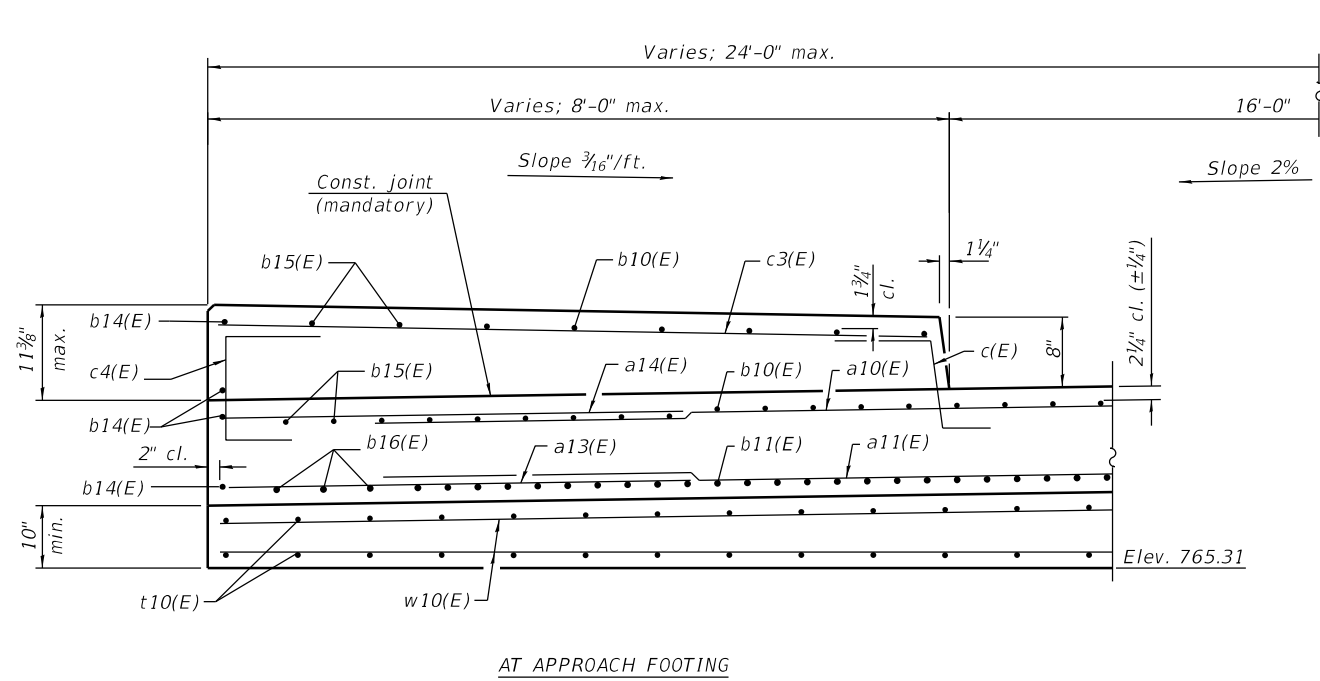
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

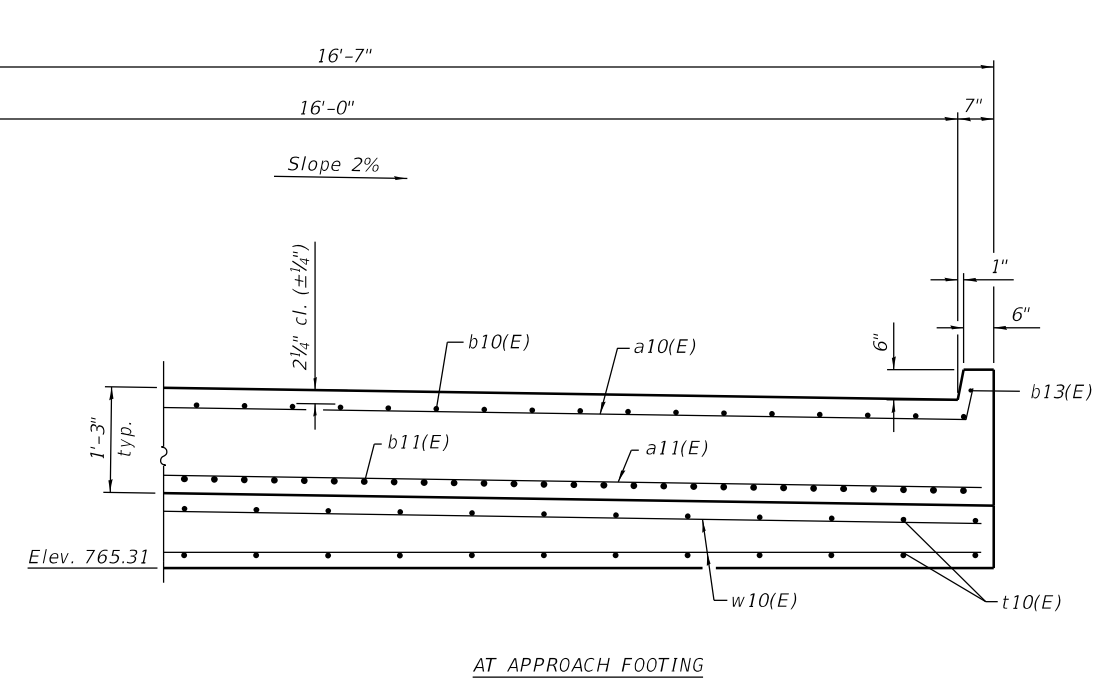
SOUTH BRIDGE APPROACH SLAB PLAN
STRUCTURE NO. 004-3098

SHEET NO. 12 OF 30 SHEETS

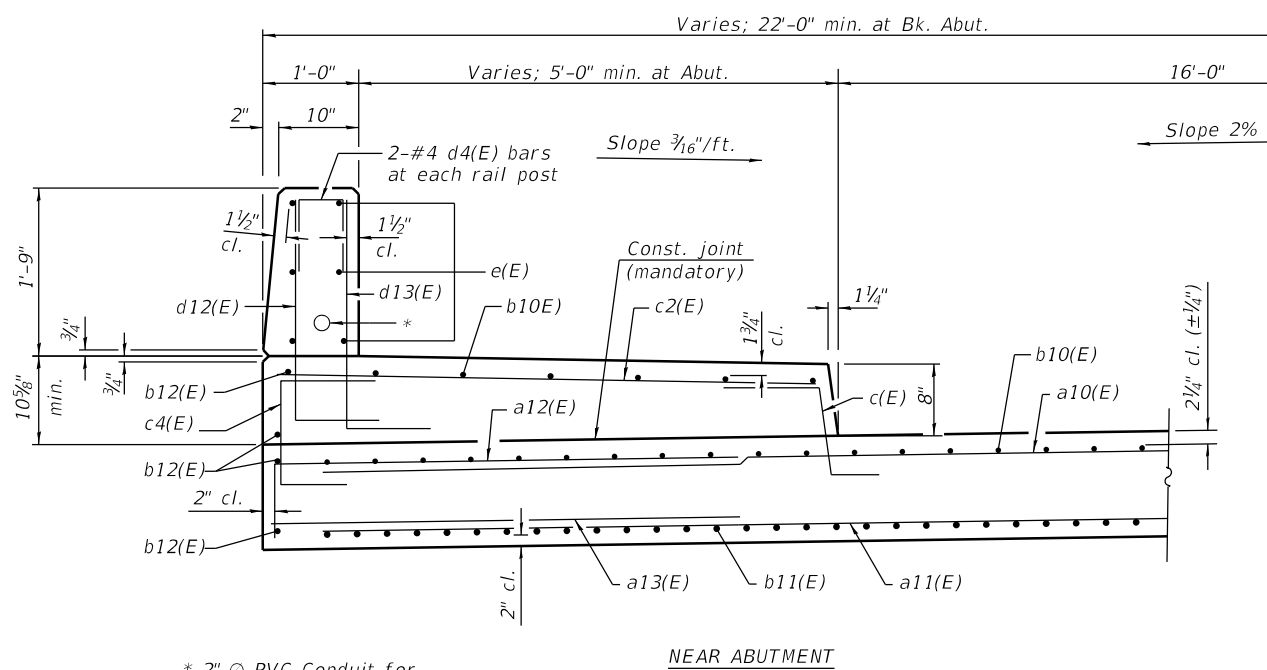
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	32
CONTRACT NO. 85688			ILLINOIS FED. AID PROJECT	



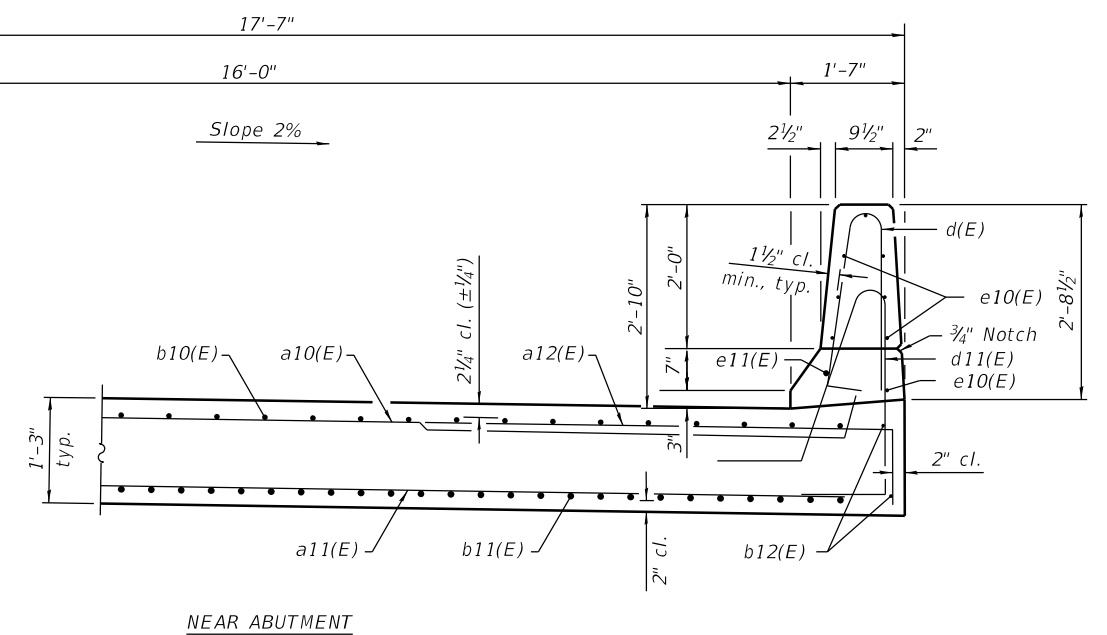
SECTION A-A
 (Looking North)



AT APPROACH FOOTING



SECTION B-B
 (Looking North)



NEAR ABUTMENT

* 2" O PVC Conduit for future bridge lighting

DESIGNED	SMK	03/19
DRAWN	MGM	05/19
REVIEWED	SMK	8/30/19

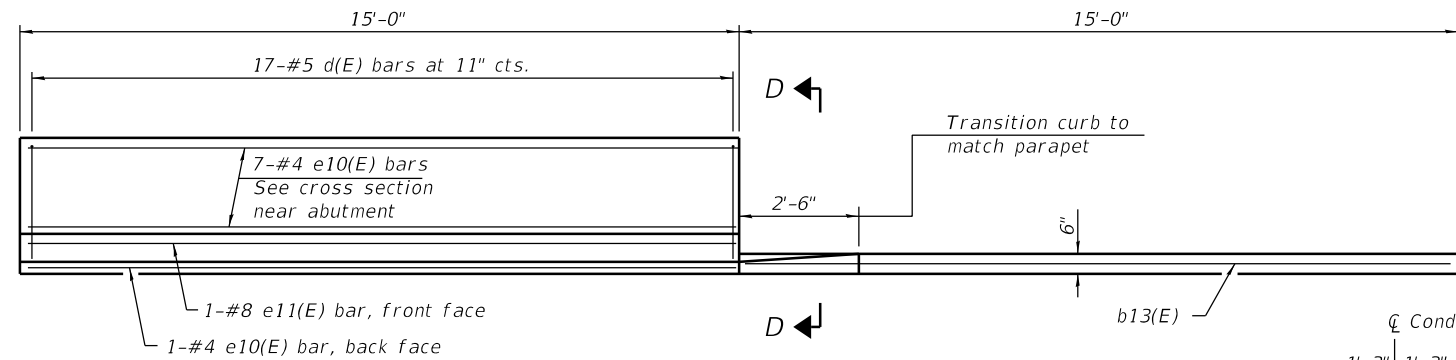
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0043098-16L05048-S013-Appr. Details-2of3.dgn		CHECKED -	REVISED -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

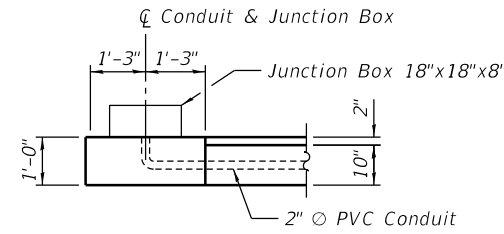
SOUTH BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO.

SHEET NO. 13 OF 30 SHEETS

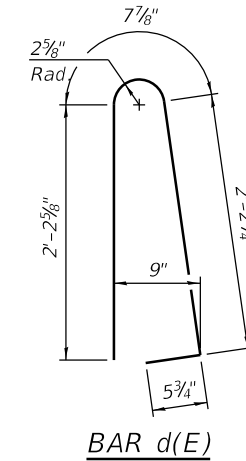
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	33
CONTRACT NO. 85688			ILLINOIS FED. AID PROJECT	



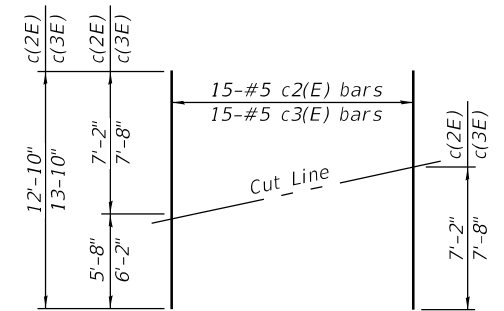
INSIDE ELEVATION OF S.E. APPROACH PARAPET AND CURB
 (N.E. Parapet & Curb sim)



VIEW E-E

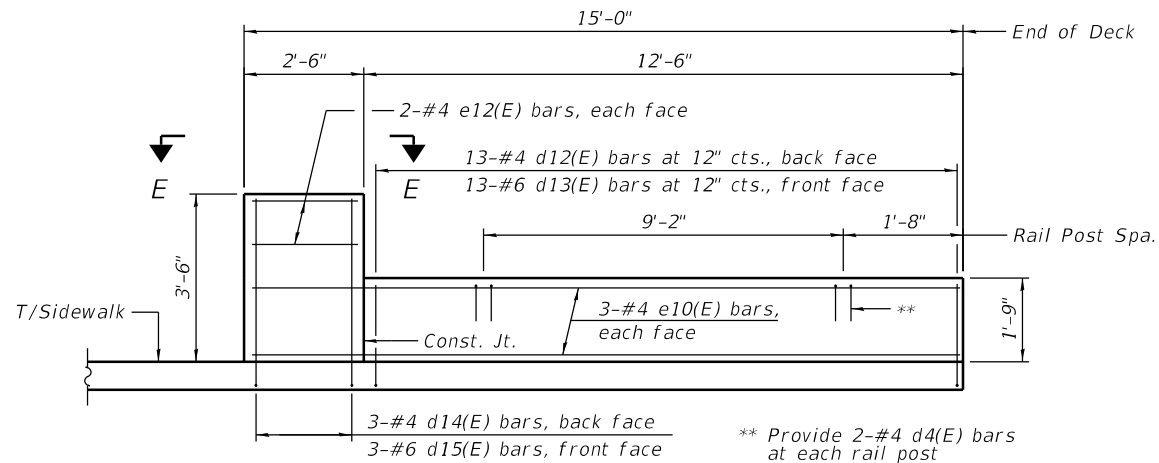


BAR d(E)

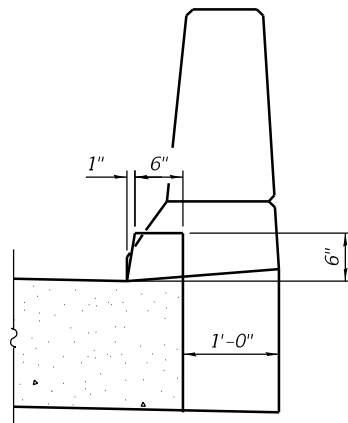


FIELD CUTTING DIAGRAM

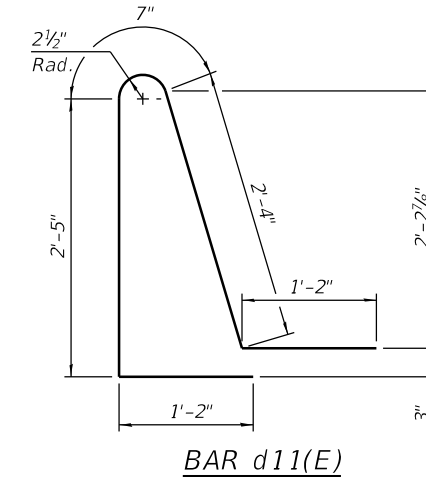
Order bars full length. Cut as shown and use remainder of bars in opposite approach slab.



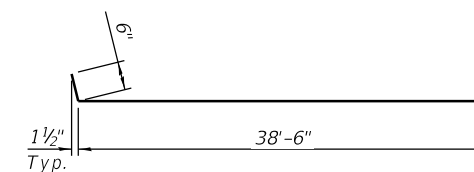
INSIDE ELEVATION OF S.W. APPROACH PARAPET
 (N.W. Parapet sim.)



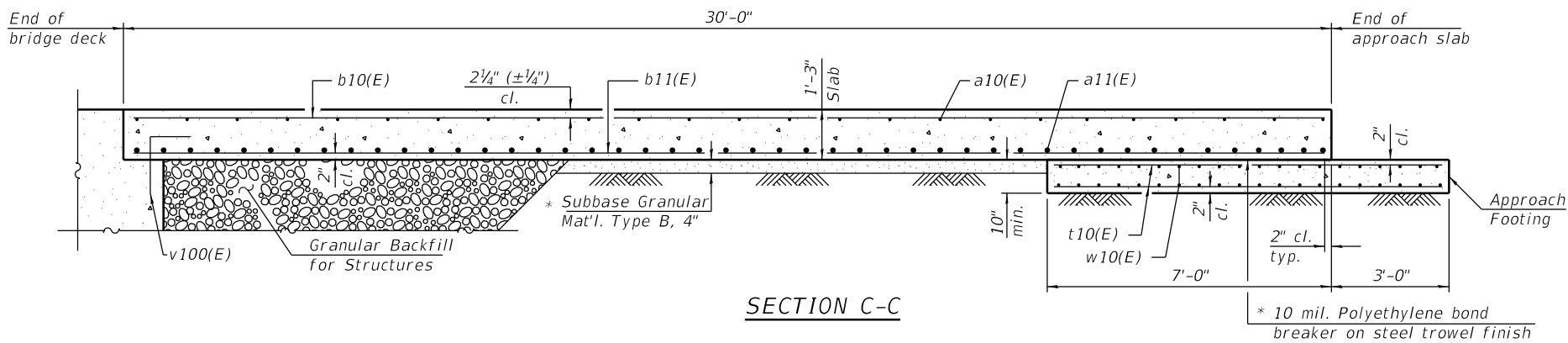
VIEW D-D



BAR d11(E)

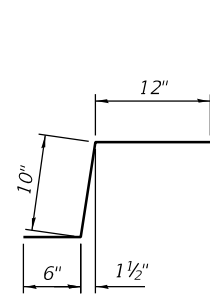


BAR a10(E)

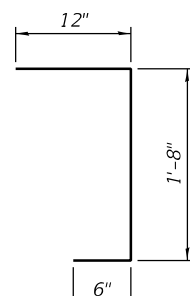


SECTION C-C

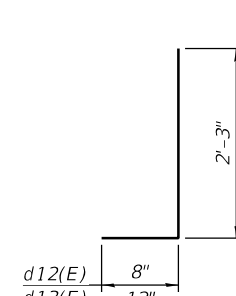
* 10 mil. Polyethylene bond breaker on steel trowel finish



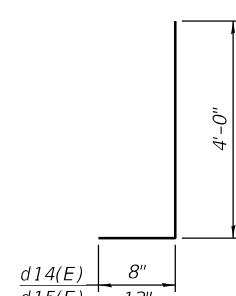
BAR c(E)



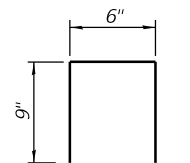
BAR c4(E)



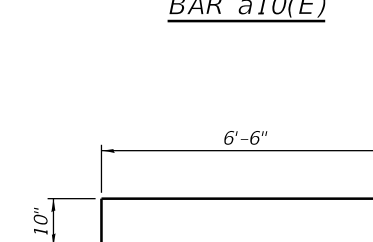
BAR d12(E) & d13(E)



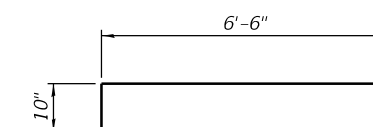
BAR d14(E) & d15(E)



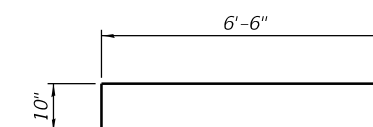
BAR d4(E)



BAR a12(E)



BAR a12(E)



BAR a12(E)

**TWO APPROACHES
 BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a10(E)	92	#5	39'-0"	
a11(E)	120	#8	38'-9"	
a12(E)	92	#5	7'-4"	
a13(E)	60	#6	5'-8"	
a14(E)	24	#5	5'-3"	
b10(E)	126	#5	29'-8"	
b11(E)	180	#9	29'-8"	
b12(E)	12	#5	14'-8"	
b13(E)	2	#4	14'-8"	
b14(E)	8	#5	24'-0"	
b15(E)	8	#5	18'-0"	
b16(E)	6	#9	19'-0"	
c(E)	62	#5	2'-4"	
c2(E)	15	#5	12'-10"	
c3(E)	15	#5	13'-10"	
c4(E)	62	#5	3'-2"	
d(E)	34	#5	5'-7"	
d4(E)	8	#4	2'-0"	
d11(E)	34	#5	7'-8"	
d12(E)	26	#4	2'-11"	
d13(E)	26	#6	3'-3"	
d14(E)	6	#4	4'-8"	
d15(E)	6	#6	5'-0"	
e10(E)	28	#4	14'-8"	
e11(E)	2	#8	14'-8"	
e12(E)	8	#4	2'-2"	
t10(E)	164	#4	9'-8"	
w10(E)	80	#5	40'-3"	
Concrete Superstructure		Cu. Yd.	17.4	
Concrete Superstructure (Approach Slab)		Cu. Yd.	111.8	
Concrete Structures		Cu. Yd.	33.2	
Reinforcement Bars, Epoxy Coated		Pound	46,780	

DESIGNED	SMK	03/19
DRAWN	MGM	05/19
REVIEWED	SMK	8/20/19

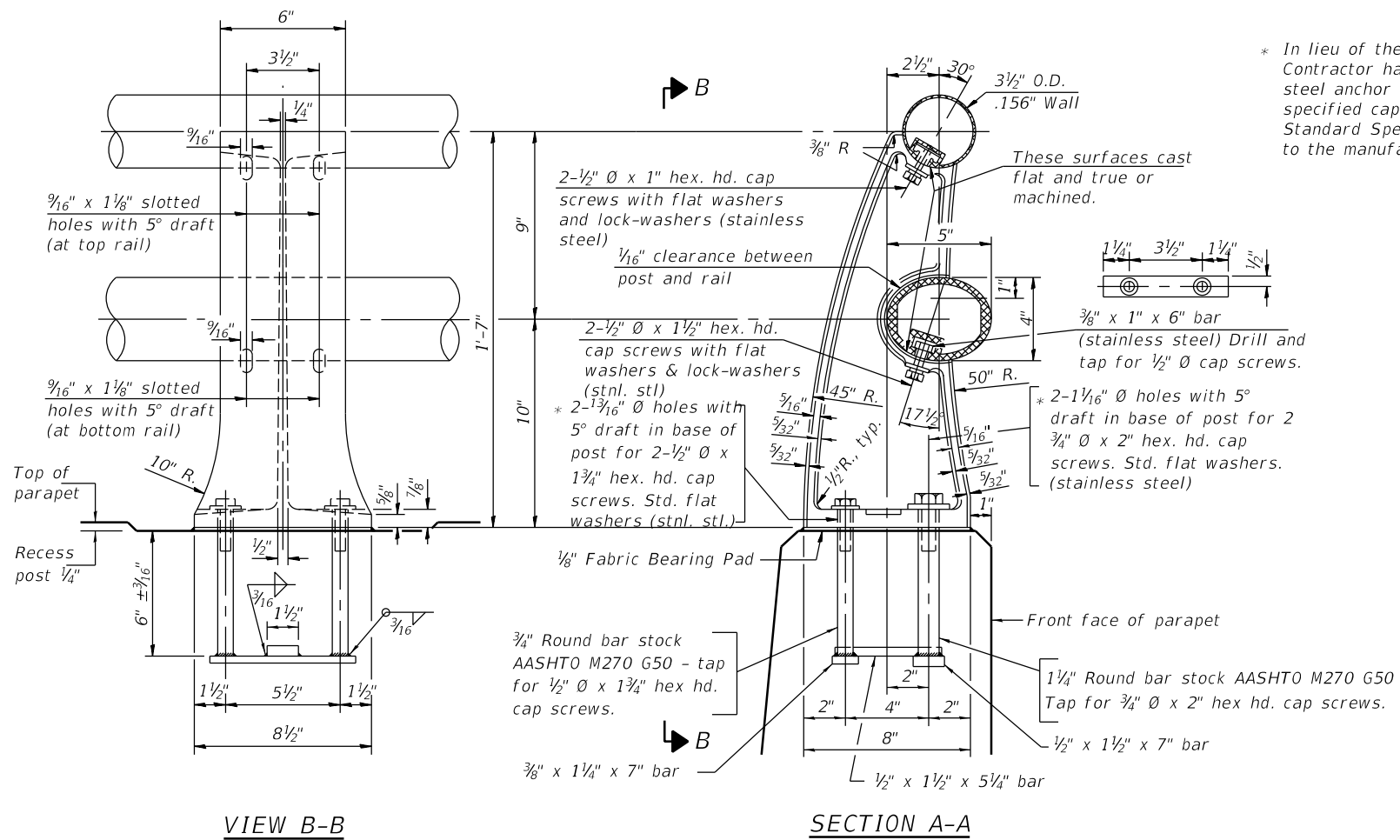
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USER NAME =	morey00259
DESIGNED -	SMK
CHECKED -	-
PLOT SCALE =	0:2.0000' = 1"
PLOT DATE =	8/26/2019
DESIGNED -	SMK
CHECKED -	-
DRAWN -	MGM
REVIEWED -	SMK

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**BRIDGE APPROACH SLAB DETAILS
 STRUCTURE NO. 004-3098**

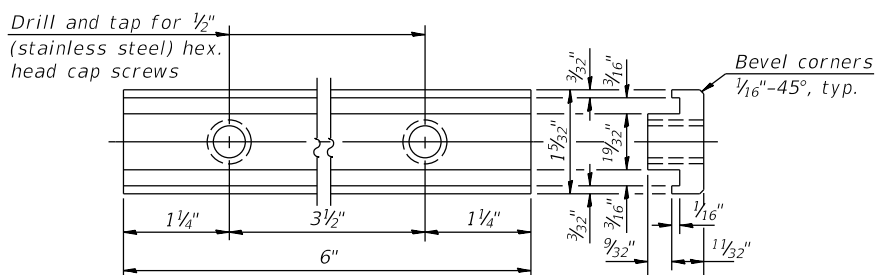
SHEET NO. 14 OF 30 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	34
			CONTRACT NO. 85688	
ILLINOIS FED. AID PROJECT				

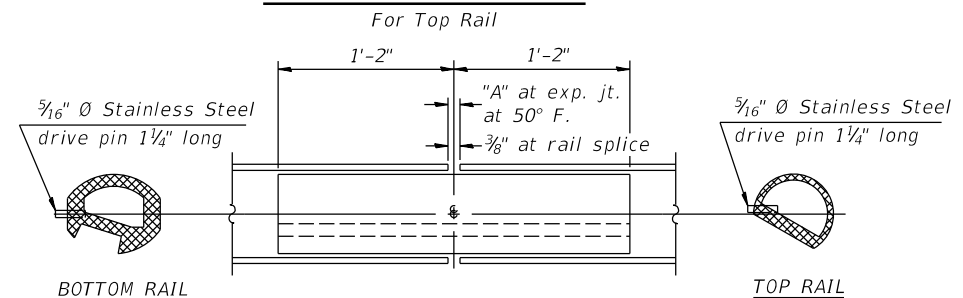


* In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting stainless steel anchor rods of the same diameter and grade as the specified cap screws according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's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

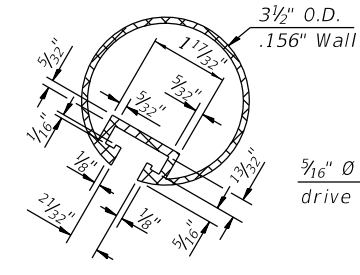
RAIL POST DETAILS



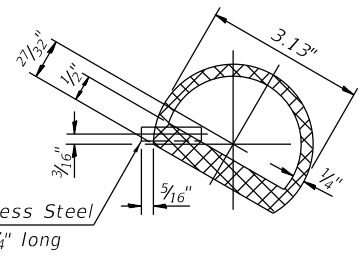
RAIL POST CLAMP BAR



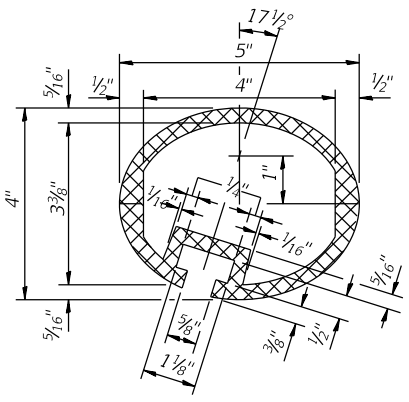
RAIL SPLICE



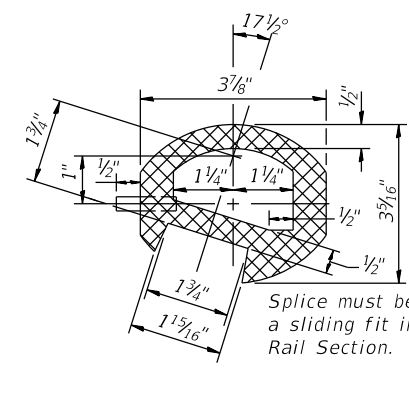
SECTION THRU TOP RAIL



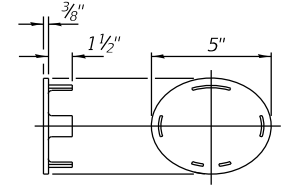
SECTION THRU SPLICE



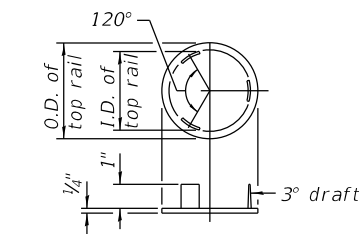
SEC. THRU ELLIPTICAL RAIL SECTION



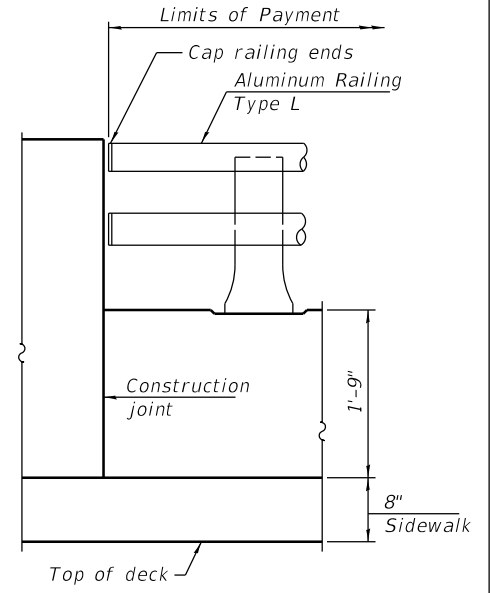
SEC. THRU SPLICE



CAST END CAP
For bottom rail
DRIVE FIT TYPE



CAST END CAP
For top rail



RAIL END TREATMENT

BILL OF MATERIAL

Item	Unit	Quantity
Aluminum Railing, Type L	Foot	312

Notes:
 All Posts shall be normal to parapet.
 All joints in rail shall be spliced per detail.
 All exposed rail ends shall be capped per detail.
 Provide 1-1/8" and 2-1/16" Aluminum Shims for 25% of the Posts. Rail elements shall be parallel to Grade-high spots will be ground and low spots shimmed.
 See sheet 10 of 24 for rail post spacing.

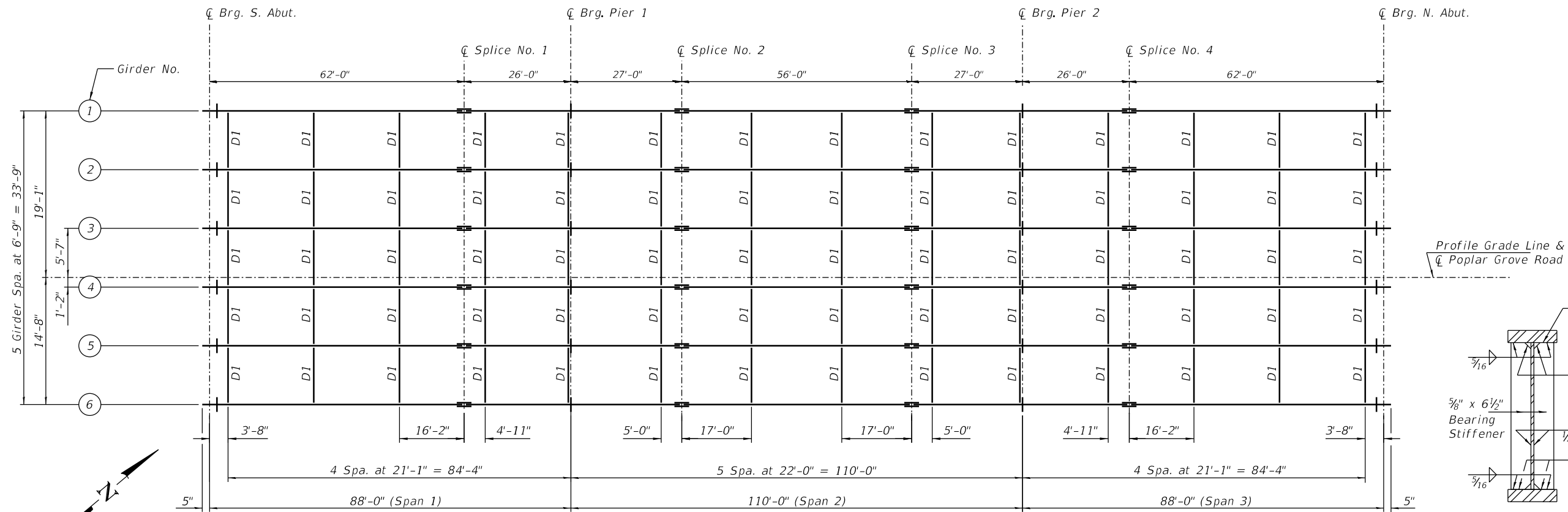
DESIGNED	SMK	03/19
DRAWN	MGM	05/19
REVIEWED	SMK	8/30/19

FILE NAME = 0043098-16L05048-S015-Alum Railing.dgn	USER NAME = morey00259	DESIGNED - SMK	REVISED -
		CHECKED -	REVISED -
		DRAWN - MGM	REVISED -
		CHECKED - SMK	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

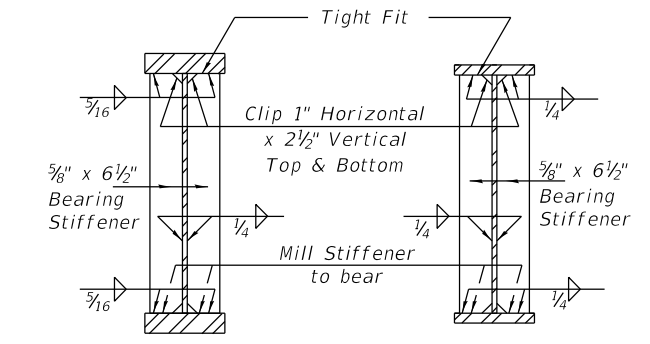
ALUMINUM RAILING, TYPE L
 STRUCTURE NO. 004-3098
 SHEET NO. 15 OF 30 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	35
			CONTRACT NO.	85688
ILLINOIS FED. AID PROJECT				



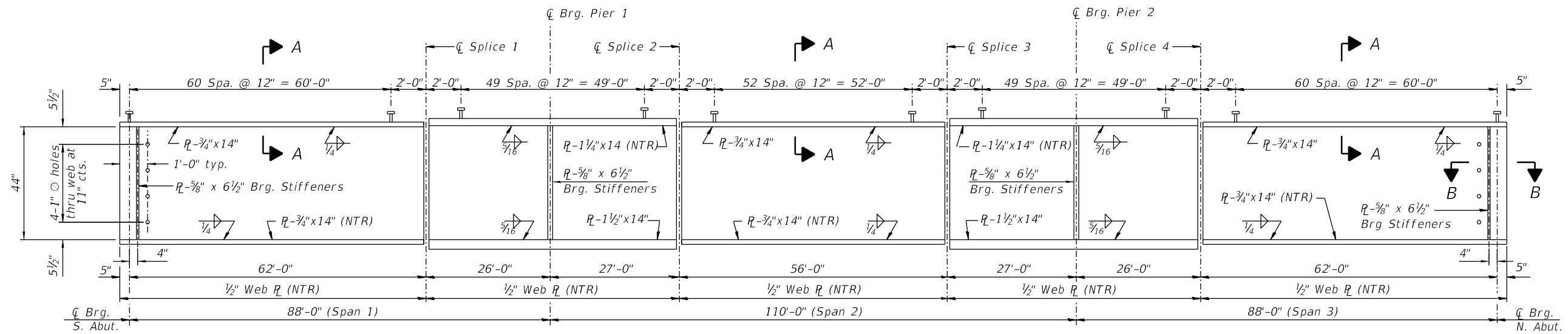
FRAMING PLAN

Profile Grade Line &
 ☐ Poplar Grove Road

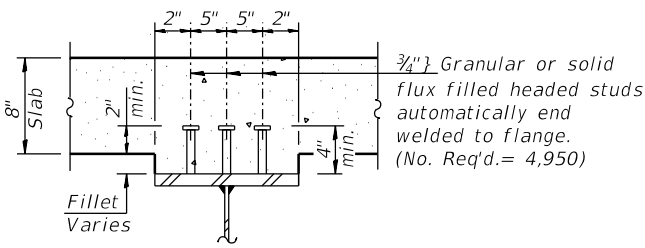


**BRG. STIFFENERS
 AT PIERS**

**BRG. STIFFENERS
 AT ABUTMENTS**

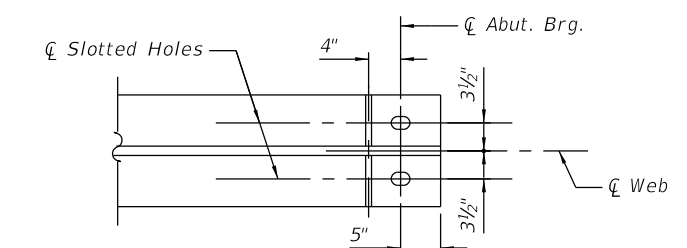


GIRDER ELEVATION



SECTION A-A

Notes:
 All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.
 Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.
 All girders and splice plates shall be AASHTO M270, Grade 50W.



SECTION B-B

DESIGNED	SMK	03/19
DRAWN	MGM	05/19
REVIEWED	SMK	8/30/19

FILE NAME =	USER NAME = morey00259	DESIGNED - SMK	REVISED -
0043098-16L0504B-S016-Str-Steel.dgn		CHECKED -	REVISED -
		DRAWN - MGM	REVISED -
		CHECKED - SMK	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**STRUCTURAL STEEL
 STRUCTURE NO. 004-3098**

SHEET NO. 16 OF 30 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	36
CONTRACT NO.			85688	
ILLINOIS FED. AID PROJECT				

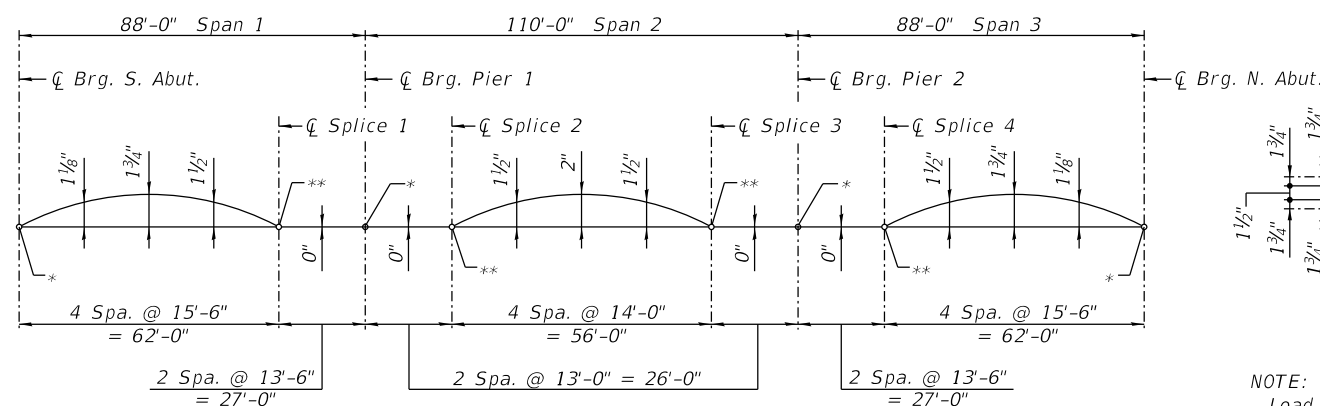
INTERIOR GIRDER MOMENT TABLE				
		0.4 Span 1 or 0.6 Span 3	Piers 1 & 2	0.5 Span 2
<i>I_s</i>	(in ⁴)	14064	23272	14064
<i>I_c(n)</i>	(in ⁴)	34595	-	34595
<i>I_c(3n)</i>	(in ⁴)	26076	-	26076
<i>I_c(cr)</i>	(in ⁴)	-	27903	-
<i>S_s</i>	(in ³)	618	1051	618
<i>S_c(n)</i>	(in ³)	860	-	860
<i>S_c(3n)</i>	(in ³)	789	-	789
<i>S_c(cr)</i>	(in ³)	-	1119	-
<i>DC1</i>	(k/ft)	0.846	0.906	0.846
<i>MDC1</i>	(k)	427	996	368
<i>DC2</i>	(k/ft)	0.280	0.280	0.280
<i>MDC2</i>	(k)	139	303	120
<i>DW</i>	(k/ft)	0.270	0.270	0.270
<i>MDW</i>	(k)	134	292	116
<i>LLDF</i>		0.541	0.547	0.511
<i>M_L + I_M</i>	(k)	1012	1291	942
<i>M_u (Strength I)</i>	(k)	2680	4321	2433
<i>Øf Mn</i>	(k)	4271	-	4312
<i>f_s DC1</i>	(ksi)	8.29	11.37	7.14
<i>f_s DC2</i>	(ksi)	2.12	3.25	1.83
<i>f_s DW</i>	(ksi)	2.04	3.13	1.77
<i>f_s (L+IM)</i>	(ksi)	14.12	13.84	13.14
<i>f_s (Service II)</i>	(ksi)	30.80	35.75	27.82
<i>0.95*<i>R_h</i> *<i>F_{yf}</i></i>	(ksi)	47.50	47.50	47.50
<i>f_s (Total)(Strength I)</i>	(ksi)	-	47.20	-
<i>F_f F_n</i>	(ksi)	-	-	-
<i>V_f</i>	(k)	27.3	30.6	22.5

INTERIOR GIRDER REACTION TABLE				
		S. Abut.	Piers 1 & 2	N. Abut.
<i>LLDF</i>	(k)	0.725	0.725	0.725
<i>OCF</i>	(k)	-	1.0	-
<i>RDC1</i>	(k)	27.8	100.0	27.8
<i>RDC2</i>	(k)	8.9	31.2	8.9
<i>RDW</i>	(k)	8.6	30.1	8.6
<i>R_L</i>	(k)	63.7	125.5	63.7
<i>R_{IM}</i>	(k)	14.9	23.1	14.9
<i>RTotal</i>	(k)	123.9	309.9	123.9

TOP of WEB ELEVATIONS TABLE

For Fabrication Only

Girder Number	Ø Brg. S. Abut.	Ø Splice No. 1	Ø Brg. Pier 1	Ø Splice No. 2	Ø Splice No. 3	Ø Brg. Pier 2	Ø Splice No. 4	Ø Brg. N. Abut.
1	767.15	767.83	767.98	768.13	768.13	767.98	767.83	767.15
2	767.28	767.96	768.11	768.26	768.11	767.96	767.28	767.28
3	767.42	768.10	768.25	768.40	768.40	768.25	768.10	767.42
4	767.51	768.19	768.34	768.49	768.49	768.34	768.19	767.51
5	767.37	768.05	768.20	768.35	768.35	768.20	768.05	767.37
6	767.24	767.92	768.07	768.22	768.22	768.07	767.92	767.24

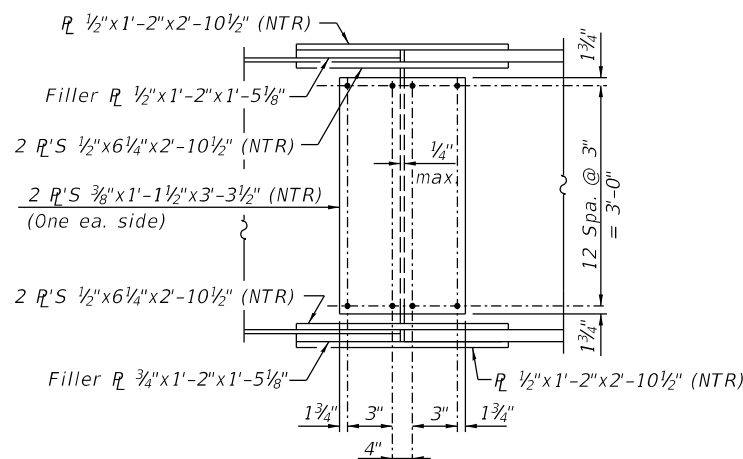
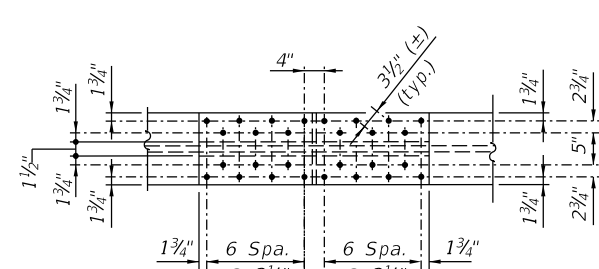


CAMBER DIAGRAM

* See Table for Final Top of Web Elevations at abutments and piers.
 ** Theoretical Top of Web Elevations before dead load deflections.

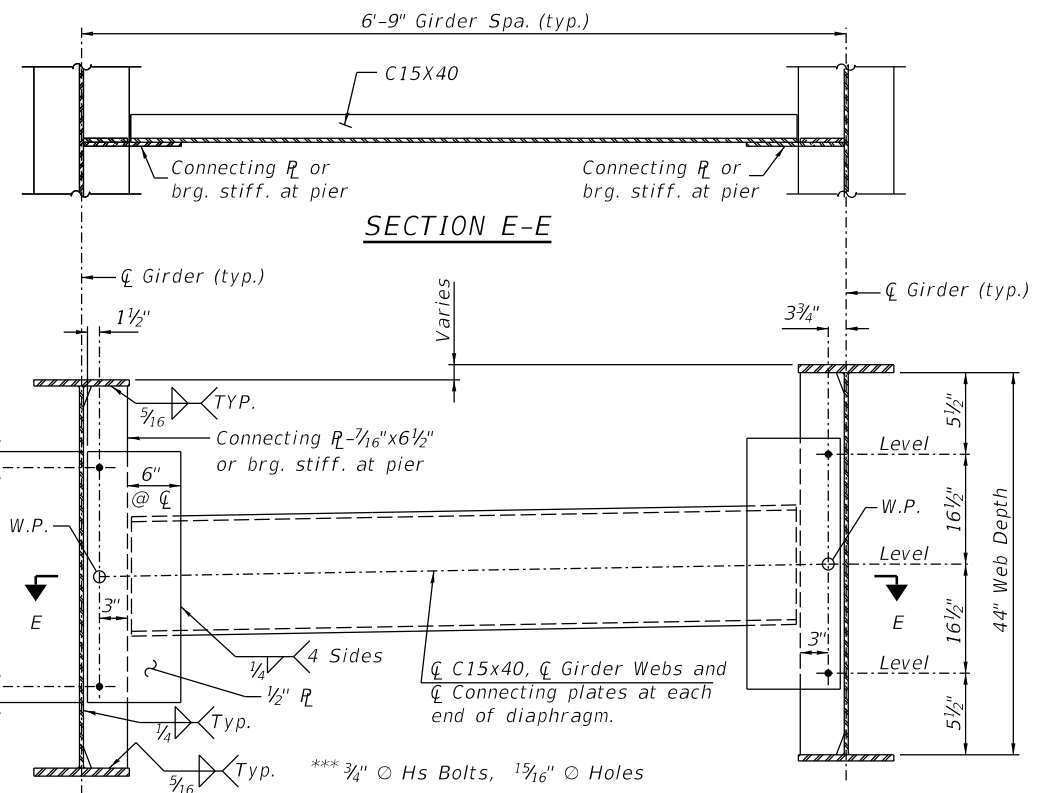
I_s, S_s: Non-composite moment of inertia and section modulus of the steel section used for computing *f_s*(Total-Strength I, and Service II) due to non-composite dead loads (in.⁴ and in.³).
I_c(n), S_c(n): Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing *f_s*(Total-Strength I, and Service II) due to short-term composite live loads (in.⁴ and in.³).
I_c(3n), S_c(3n): Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing *f_s*(Total-Strength I, and Service II) due to long-term composite (superimposed) dead loads (in.⁴ and in.³).
DC1: Un-factored non-composite dead load (kips/ft.).
MDC1: Un-factored moment due to non-composite dead load (kip-ft.).
DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).
MDC2: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).
DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).
MDW: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).
M_L + I_M: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

M_u (Strength I): Factored design moment (kip-ft.).
 $1.25 (MDC1 + MDC2) + 1.5 MDW + 1.75 M_L + I_M$
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.).
f_s DC1: Un-factored stress at edge of flange for controlling steel live load due to vertical non-composite dead loads as calculated below (ksi).
 $MDC1 / S_{nc}$
f_s DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).
 $MDC2 / S_c(3n)$.
f_s DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).
 $MDW / S_c(3n)$.
f_s (L+IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live plus impact loads as calculated below (ksi).
 $M_L + I_M / S_c(n)$.
f_s (Service II): Sum of stresses as computed below (ksi).
 $f_s DC1 + f_s DC2 + f_s DW + 1.3 f_s L + I_M$
 $0.95 R_h F_{yf}$: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).
f_s (Total)(Strength I): Sum of stresses as computed below on non-compact section (ksi).
 $1.25 (f_s DC1 + f_s DC2) + 1.5 f_s DW + 1.75 f_s L + I_M$
Øf F_n: Non-Compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7 or 6.10.8 (ksi).
V_f: Maximum factored shear range in composite portion of span computed according to Article 6.10.10.



DETAIL - FIELD SPLICE

NOTE:
 Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.
 Use 7/8" Ø h.s. bolts with 1 1/16" Ø holes for all splice connections.
 Splice plates shall conform to the requirements of AASHTO M270, Grade 50W.



INTERIOR DIAPHRAGM - 'D1'

NOTES:
 All diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual diaphragms at supports may be temporarily disconnected to install bearing anchor rods.
 All connecting plates & diaphragm members may conform to the requirements of AASHTO M270, grade 36.
 Alternate channels C15x50 are permitted to facilitate material acquisition. Calculated weight of structural steel is based on C15x40 sections. The alternate, if utilized, shall be provided at no extra cost to the department.
 Two hardened washers are required for each set of oversized holes.

DESIGNED	SMK	03/19
DRAWN	MGM	05/19
REVIEWED	SMK	8/30/19

FILE NAME = 0043098-16L0504B-S017-Str-Steel-Dets.dgn	USER NAME = morey00259	DESIGNED - SMK	REVISOR -
PLOT SCALE = 0.2:0.000 '1' = 1"	DRAWN - MGM	CHECKED -	REVISOR -
PLOT DATE = 8/26/2019	CHECKED - SMK	REVISOR -	REVISOR -

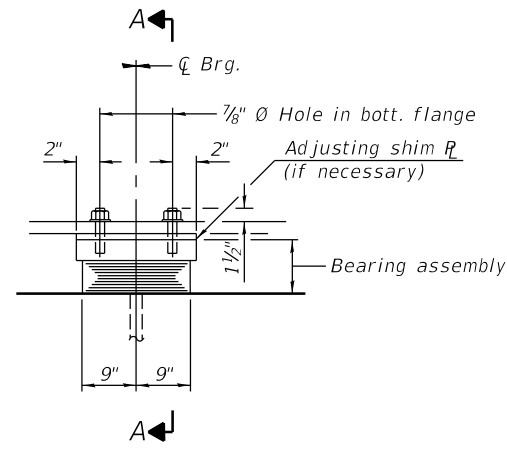
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**STRUCTURAL STEEL DETAILS
 STRUCTURE NO. 004-3098**

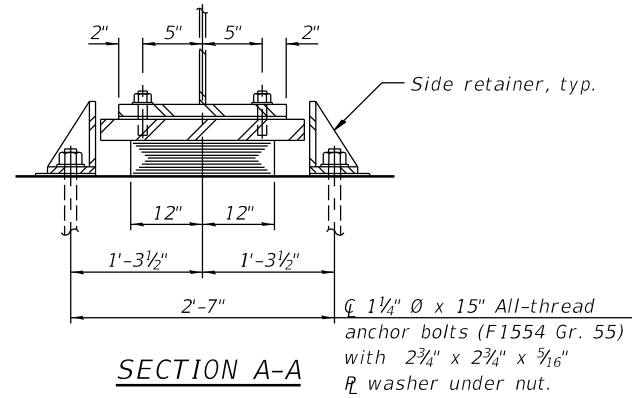
SHEET NO. 17 OF 30 SHEETS

F.A.U. RTE. 5011A	SECTION 17-00093-00-BR	COUNTY BOONE	TOTAL SHEETS 71	SHEET NO. 37
			CONTRACT NO. 85688	

ILLINOIS FED. AID PROJECT

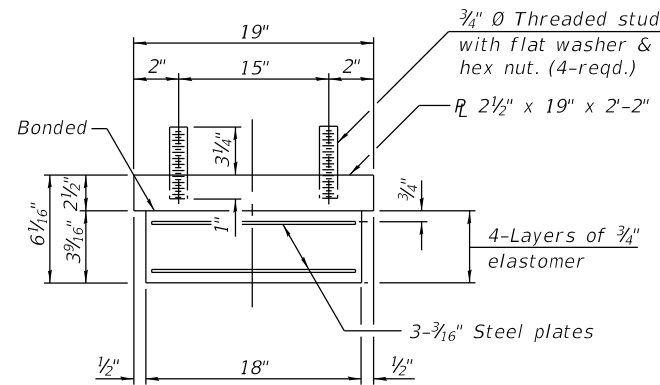


ELEVATION AT PIER



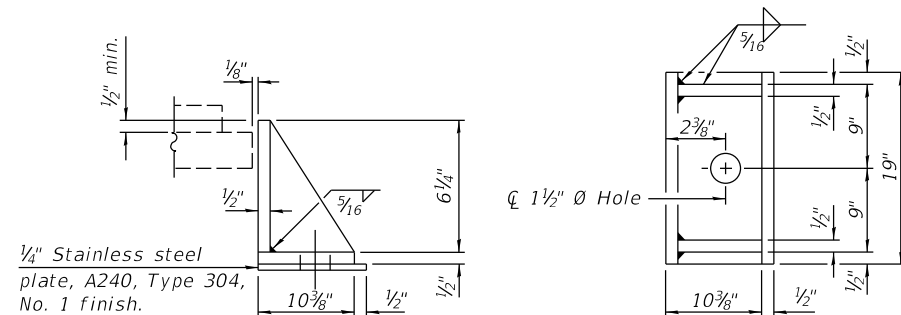
SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.



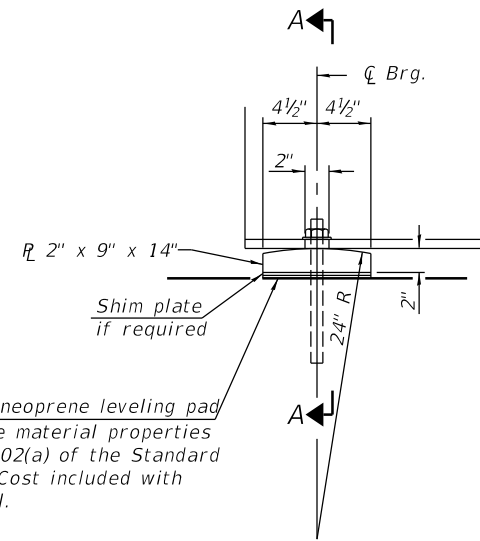
BEARING ASSEMBLY

Note:
 Shim plates shall not be placed under bearing assembly.



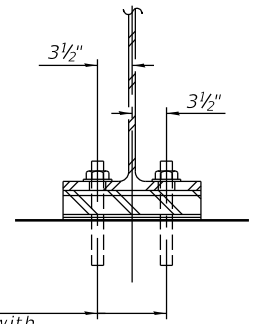
SIDE RETAINER

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



ELEVATION AT ABUTMENT

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



SECTION A-A

FIXED BEARING

Notes:
 Anchor bolts shall be according to Article 521.06 of the Standard Specifications
 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.
 Side retainers and other steel members required for the elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.
 Beams shall be braced for stability during erection and remain braced until deck is poured and cured.
 Anchor bolts and side retainers at all supports shall be installed as each member is erected unless an equivalent temporary means of lateral restraint is used.
 The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 50W.
 Two 1#8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

BILL OF MATERIAL

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

DESIGNED	SMK	03/19
DRAWN	MGM	05/19
REVIEWED	SMK	8/30/19

FILE NAME = 0043098-16L0504B-S018-Bearing-Dets.dgn	USER NAME = morey00259	DESIGNED - SMK	REVISED -
		CHECKED -	REVISED -
	PLOT SCALE = 0:2.0000 "/td> <td>DRAWN - MGM</td> <td>REVISED -</td>	DRAWN - MGM	REVISED -
	PLOT DATE = 8/26/2019	CHECKED - SMK	REVISED -

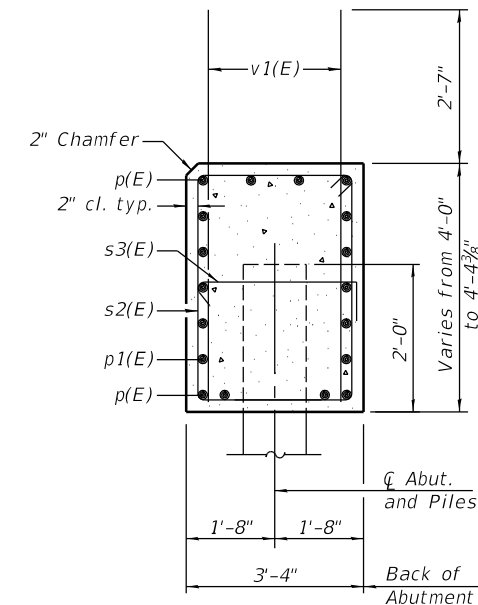
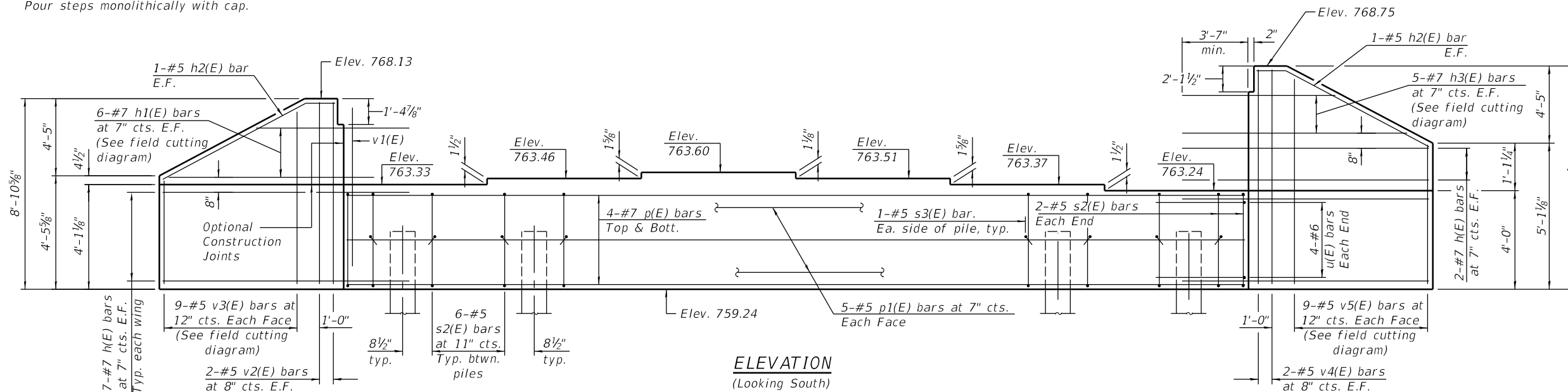
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**BEARING DETAILS
 STRUCTURE NO. 004-3098**

SHEET NO. 18 OF 30 SHEETS

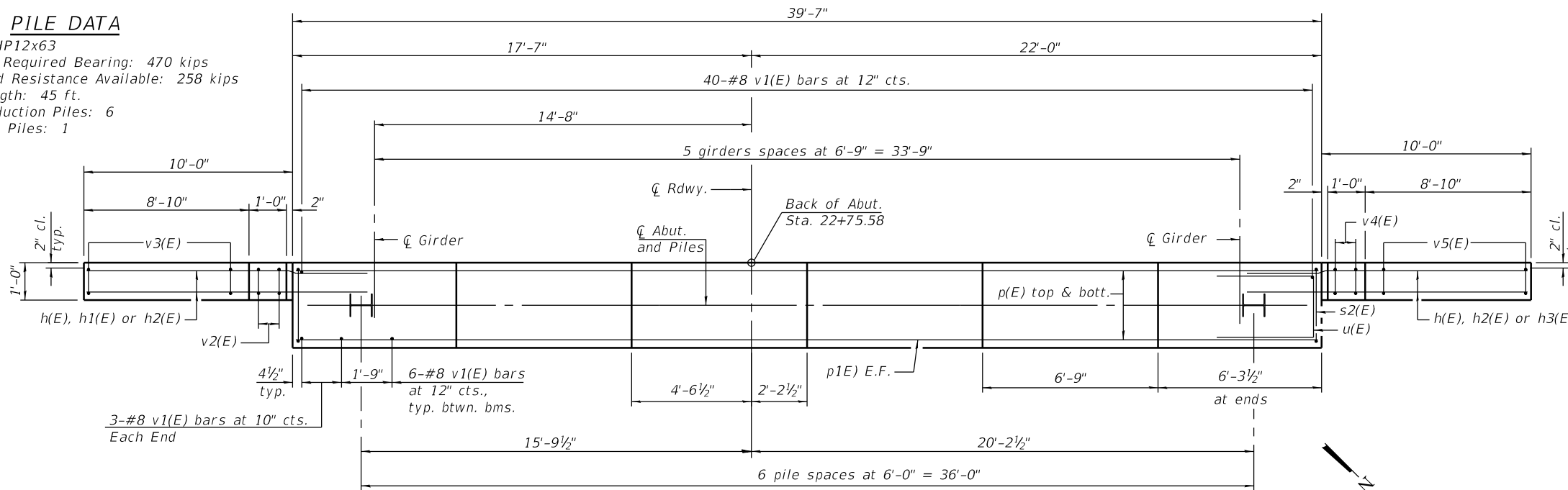
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	38
			CONTRACT NO. 85688	
ILLINOIS FED. AID PROJECT				

Notes:
Pour steps monolithically with cap.



PILE DATA

Type: HP12x63
Nominal Required Bearing: 470 kips
Factored Resistance Available: 258 kips
Est. Length: 45 ft.
No. Production Piles: 6
No. Test Piles: 1



SEC. THRU ABUT.

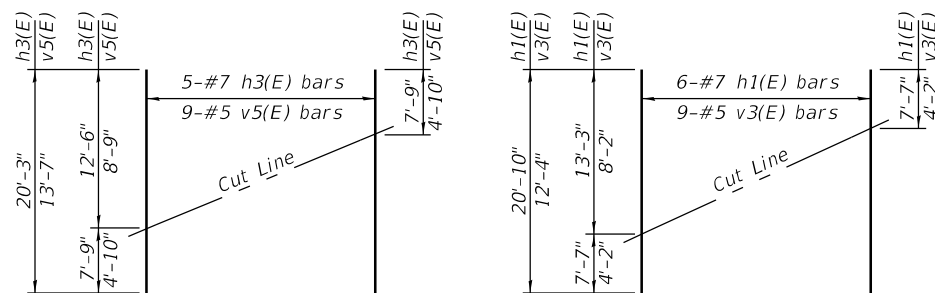
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	32	#7	13'-5"	—
h1(E)	6	#7	20'-10"	—
h2(E)	4	#5	10'-7"	—
h3(E)	5	#7	20'-3"	—
p(E)	8	#7	39'-3"	—
p1(E)	10	#5	39'-3"	—
s2(E)	40	#5	14'-3"	□
s3(E)	14	#5	4'-0"	◁
u(E)	8	#6	10'-6"	□
v1(E)	76	#8	6'-5"	—
v2(E)	4	#5	8'-7"	—
v3(E)	9	#5	12'-4"	—
v4(E)	4	#5	9'-2"	—
v5(E)	9	#5	13'-7"	—
Structure Excavation		Cu. Yd.	138	
Concrete Structures		Cu. Yd.	25.8	
Reinforcement Bars, Epoxy Coated		Pound	4,830	
Furnishing - Piles, HP12x63		Foot	270	
Driving Piles		Foot	270	
Test Pile, HP12x63		Each	1	
Pile Shoes		Each	7	

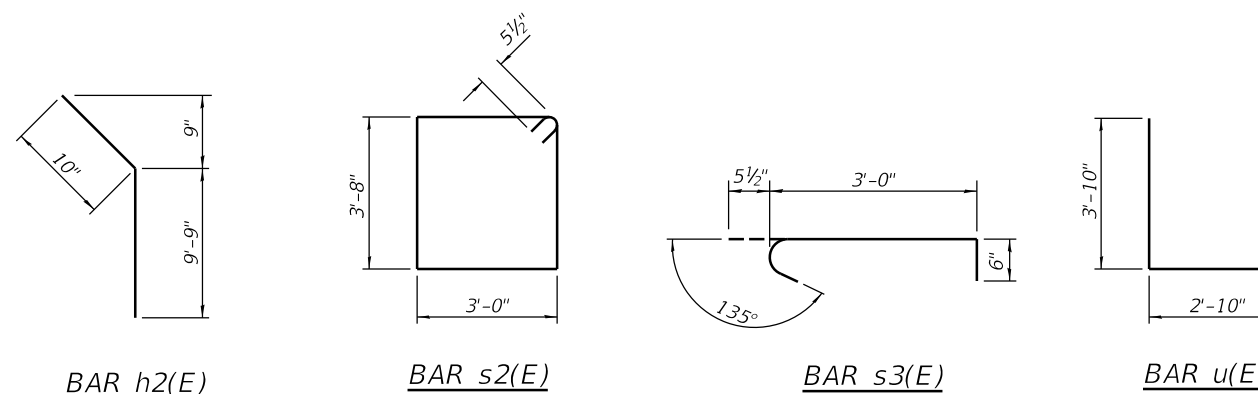
For details of piles see sheet 22 of 30.

FIELD CUTTING DIAGRAMS

Order h1(E), h3(E), v3(E) and v5(E) full length. Cut as shown and use remainder of bars in opposite face.



PLAN



DESIGNED	SMK	03/19
DRAWN	MGM	05/19
REVIEWED	SMK	8/20/19

FILE NAME = 0043098-16L05048-S019-S-Abut.dgn

USER NAME = morey00259
PLOT SCALE = 0.2:0000' / 1" = 1'
PLOT DATE = 8/26/2019

DESIGNED - SMK
CHECKED - -
DRAWN - MGM
CHECKED - SMK

REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

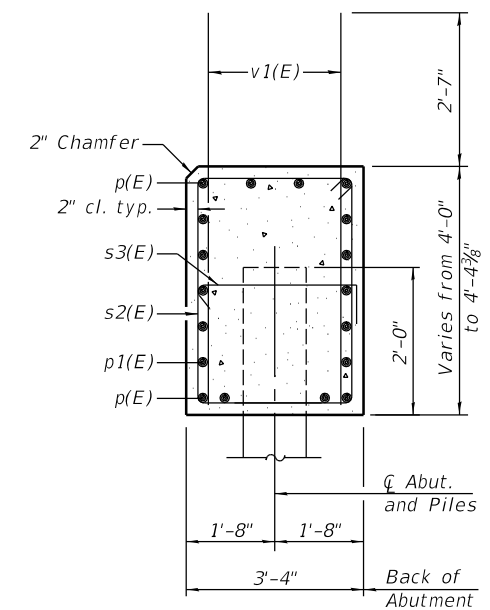
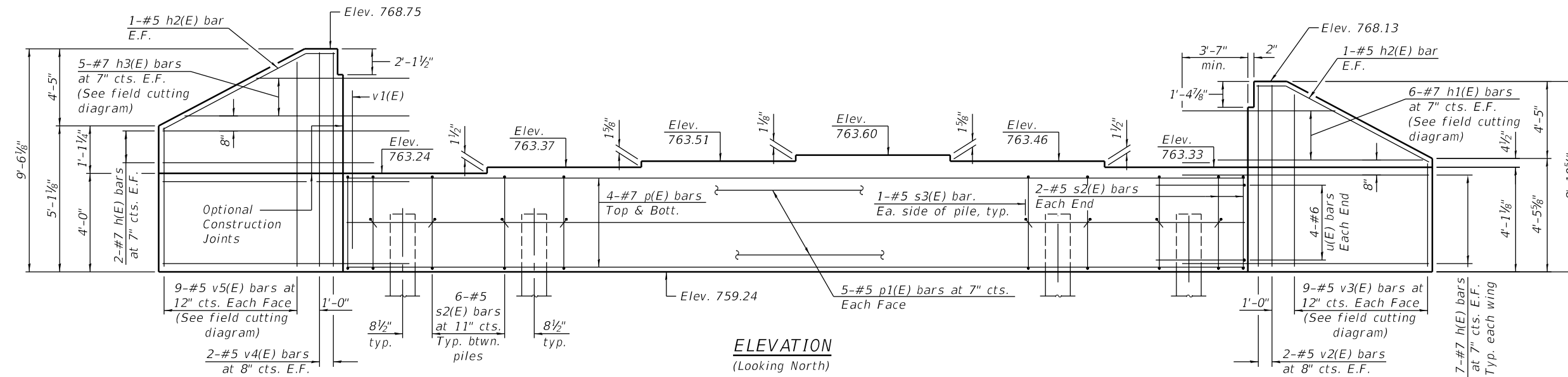
SOUTH ABUTMENT
STRUCTURE NO. 004-3098

SHEET NO. 19 OF 30 SHEETS

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	39
CONTRACT NO.			85688	

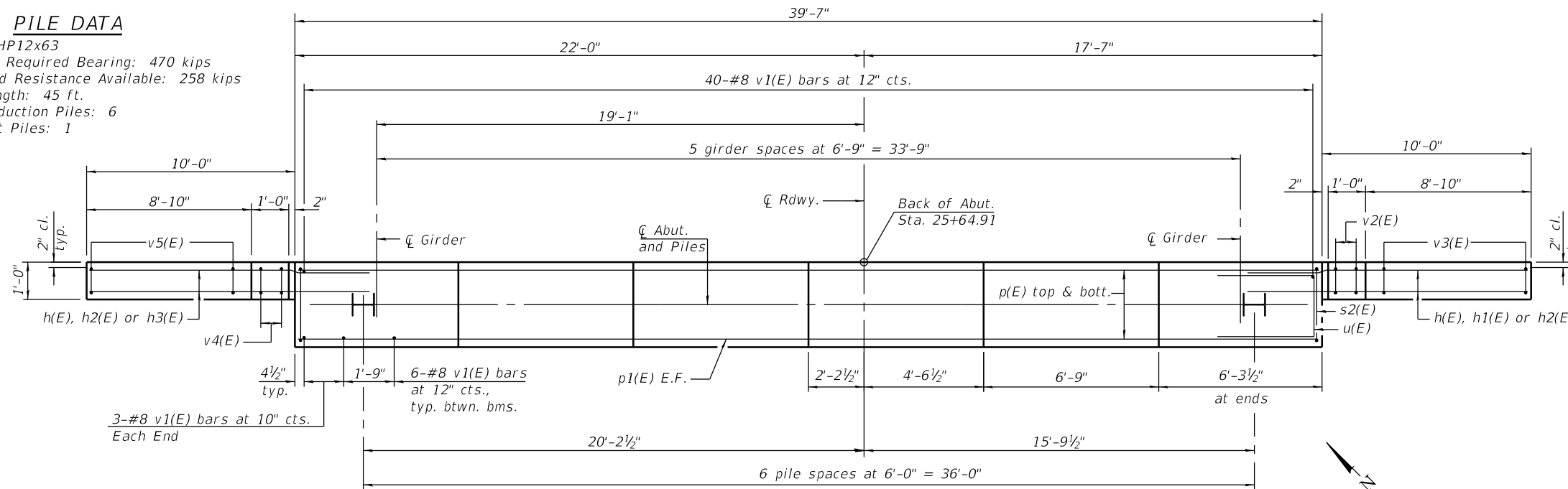
ILLINOIS FED. AID PROJECT

Notes:
Pour steps monolithically with cap.



PILE DATA

Type: HP12x63
Nominal Required Bearing: 470 kips
Factored Resistance Available: 258 kips
Est. Length: 45 ft.
No. Production Piles: 6
No. Test Piles: 1



SEC. THRU ABUT.

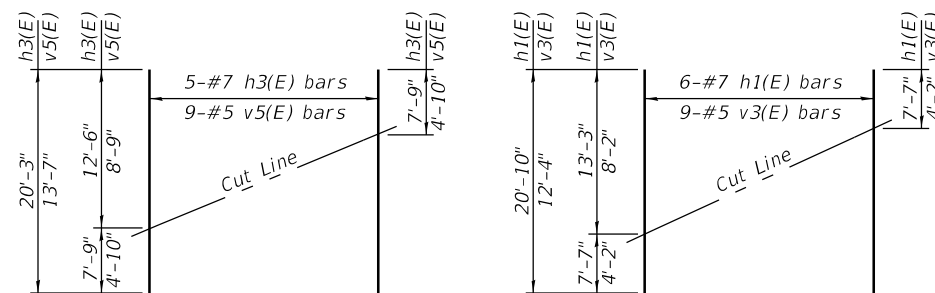
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	32	#7	13'-5"	—
h1(E)	6	#7	20'-10"	—
h2(E)	4	#5	10'-7"	—
h3(E)	5	#7	20'-3"	—
p(E)	8	#7	39'-3"	—
p1(E)	10	#5	39'-3"	—
s2(E)	40	#5	14'-3"	□
s3(E)	14	#5	4'-0"	◁
u(E)	8	#6	10'-6"	□
v1(E)	76	#8	6'-5"	—
v2(E)	4	#5	8'-7"	—
v3(E)	9	#5	12'-4"	—
v4(E)	4	#5	9'-2"	—
v5(E)	9	#5	13'-7"	—
Structure Excavation		Cu. Yd.	134	
Concrete Structures		Cu. Yd.	25.8	
Reinforcement Bars, Epoxy Coated		Pound	4,830	
Furnishing - Piles, HP12x63		Foot	270	
Driving Piles		Foot	270	
Test Pile, HP12x63		Each	1	
Pile Shoes		Each	7	

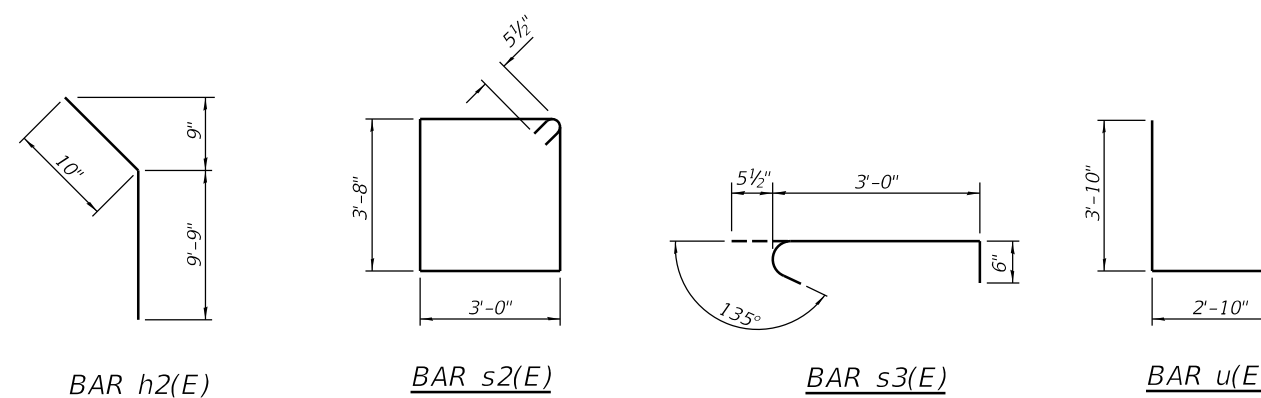
For details of piles see sheet 22 of 30.

FIELD CUTTING DIAGRAMS

Order h1(E), h3(E), v3(E) and v5(E) full length. Cut as shown and use remainder of bars in opposite face.



PLAN



DESIGNED	SMK	03/19
DRAWN	MGM	05/19
REVIEWED	SMK	8/20/19

FILE NAME = 0043098-16L0504B-S020-N-Abut.dgn

USER NAME = morey00259
PLOT SCALE = 0.2:0000 '1\"/>

DESIGNED - SMK
CHECKED -
DRAWN - MGM
CHECKED - SMK

REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH ABUTMENT
STRUCTURE NO. 004-3098

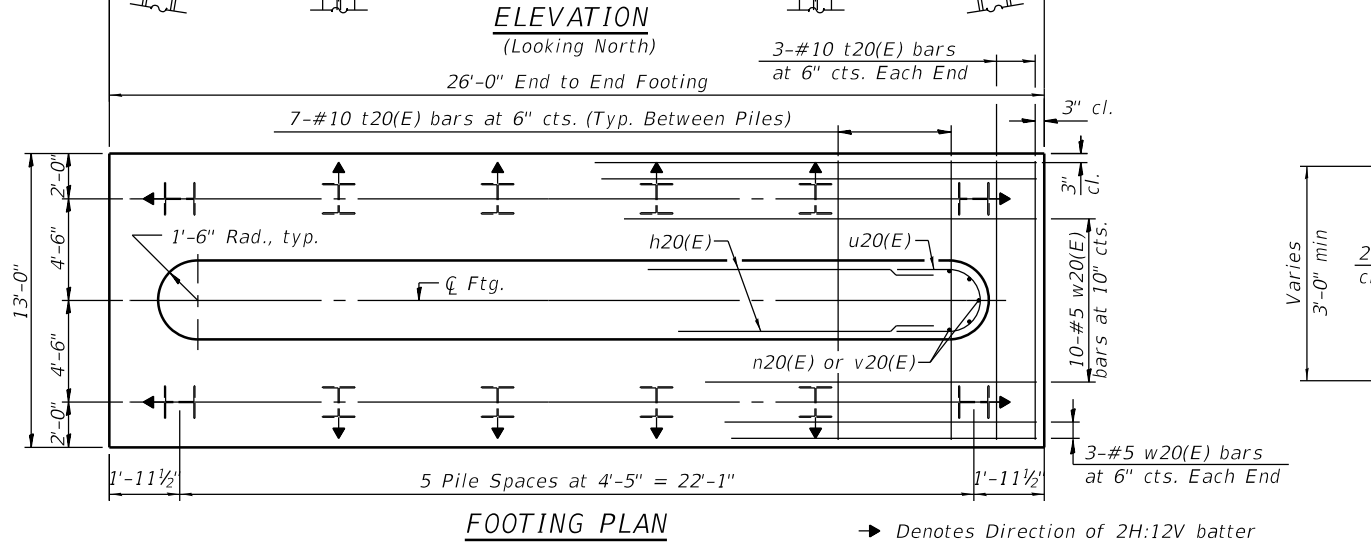
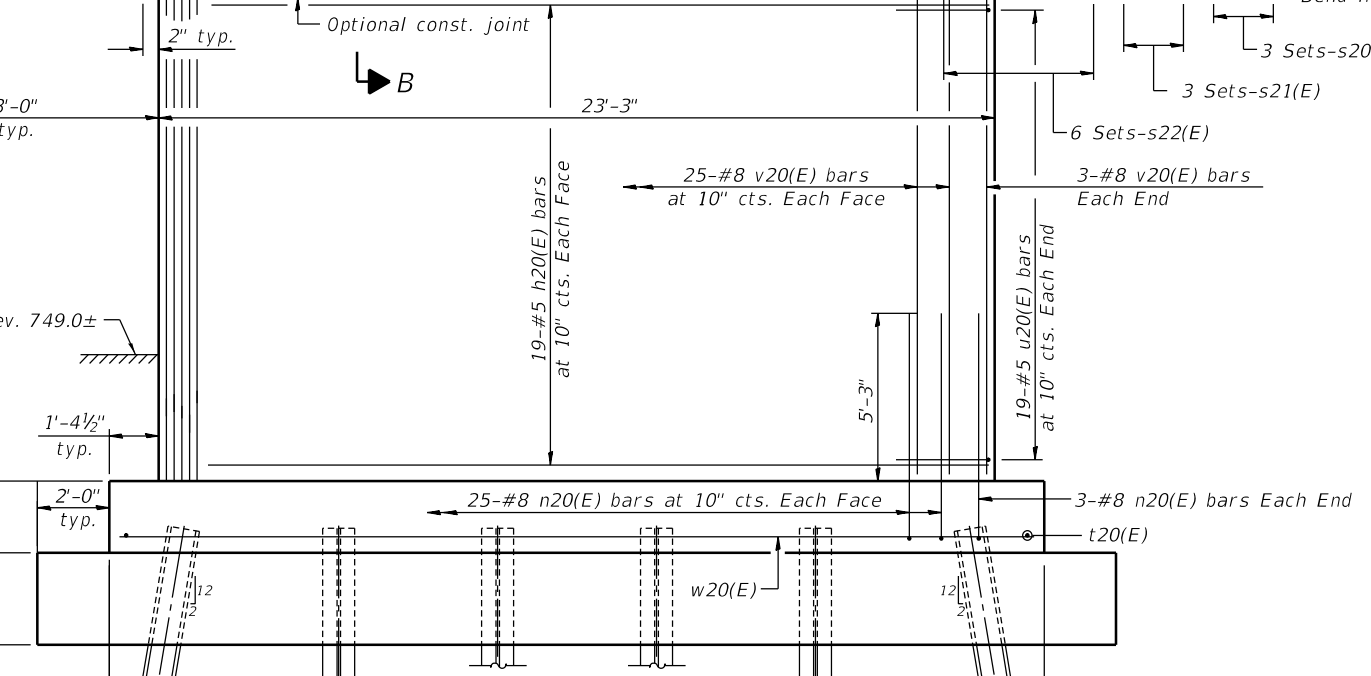
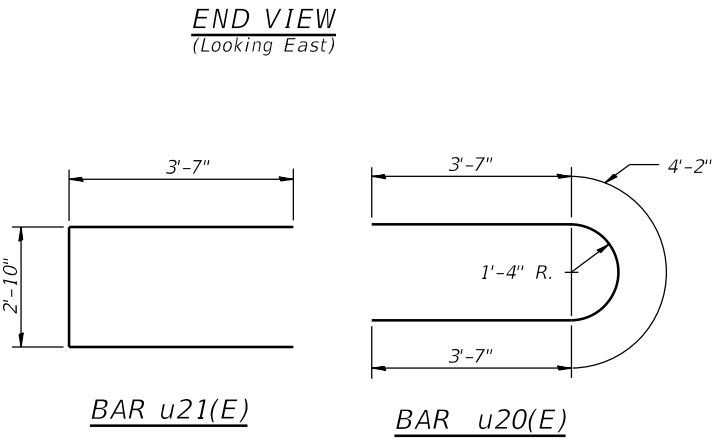
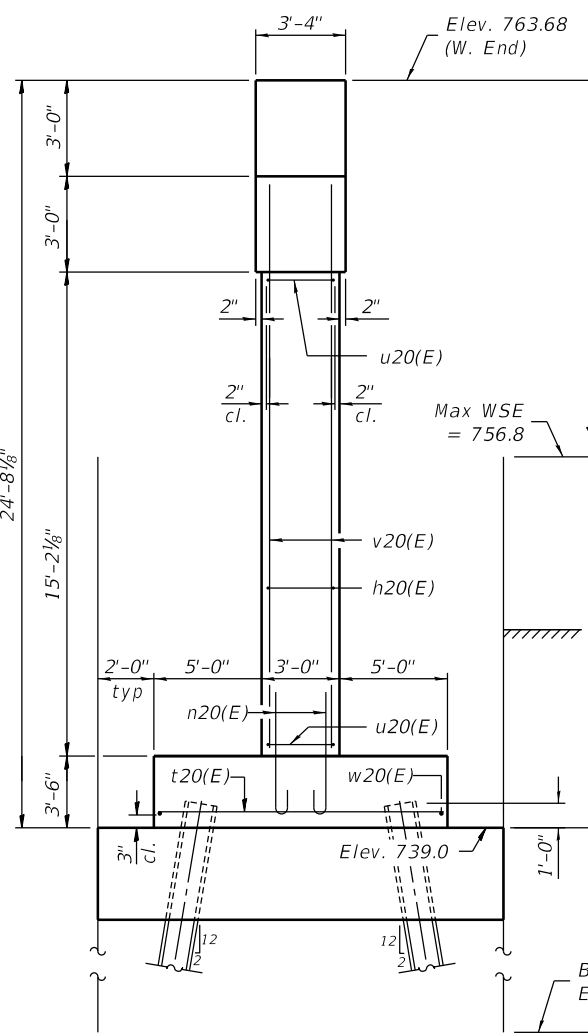
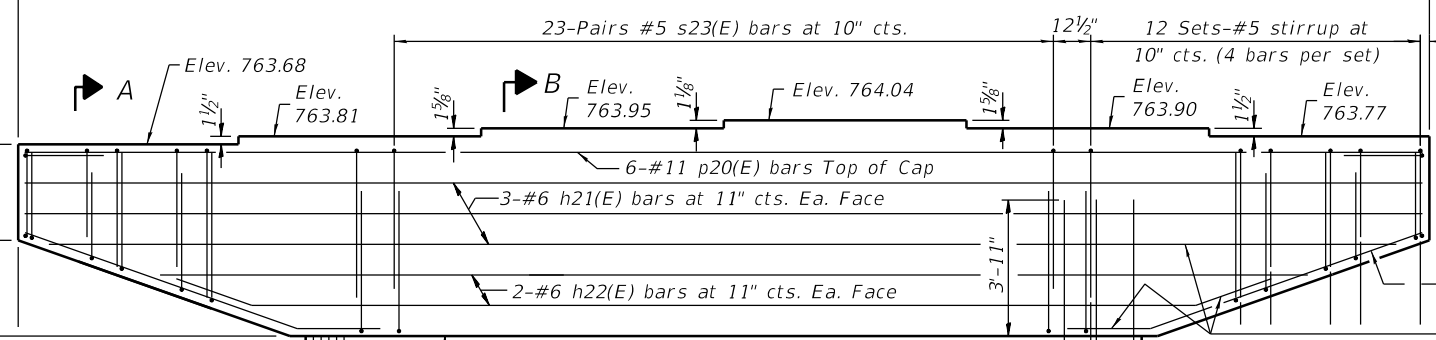
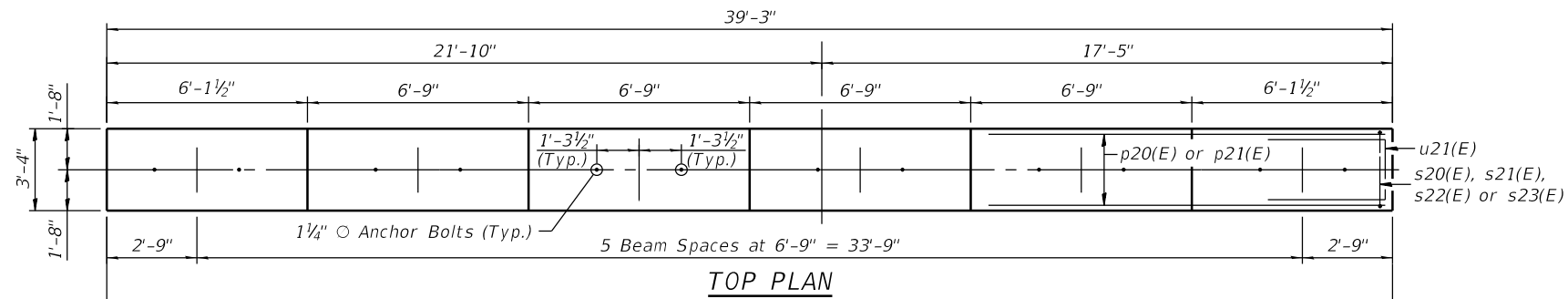
SHEET NO. 20 OF 30 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	40
CONTRACT NO.			85688	
ILLINOIS FED. AID PROJECT				

Notes:
 Space reinforcement in cap to miss anchor bolts.
 Pour steps monolithically with cap.
 For details of piles, see sheet 22 of 30.

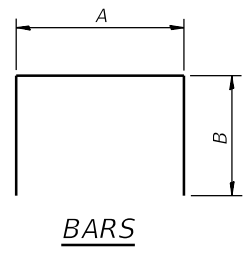
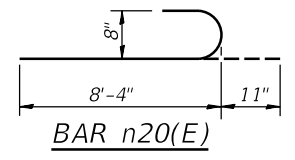
PILE DATA

Type: HP14x89
 Nominal Required Bearing: 705 kips
 Factored Resistance Available: 388 kips
 Est. Length: 25'
 No. Production Piles: 11 per pier
 No. Test Piles: 1 per pier



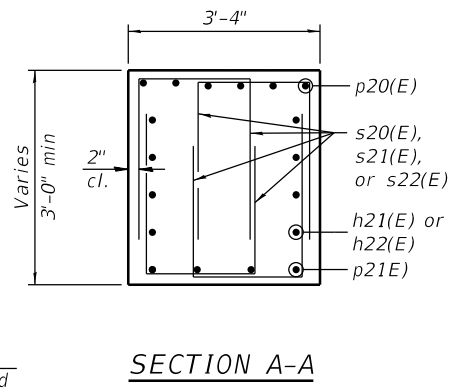
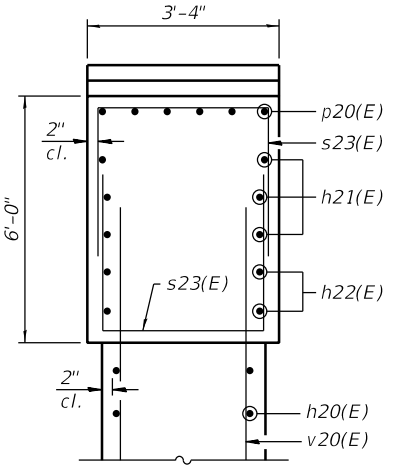
BILL OF MATERIAL (2 PIERS)

Bar	No.	Size	Length	Shape
h20(E)	76	#5	20'-0"	—
h21(E)	12	#5	38'-11"	—
h22(E)	8	#5	32'-3"	—
n20(E)	112	#8	9'-3"	U
p20(E)	12	#11	38'-11"	—
p21(E)	16	#6	12'-6"	—
s20(E)	48	#5	7'-6"	□
s21(E)	48	#5	9'-4"	□
s22(E)	96	#5	11'-4"	□
s23(E)	92	#5	12'-4"	□
t20(E)	82	#10	12'-8"	—
u20(E)	76	#5	11'-4"	U
u21(E)	16	#6	10'-0"	U
v20(E)	112	#8	19'-0"	—
w20(E)	32	#5	25'-8"	—
Cofferdam Excavation	Cu. Yd.		548	
Cofferdam (Type 2) (Location 1)	Each		1	
Cofferdam (Type 2) (Location 2)	Each		1	
Concrete Structures	Cu. Yd.		218.0	
Reinforcement Bars, Epoxy Coated	Pound		23,200	
Furnishing - Piles, HP14x89	Foot		550	
Driving Piles	Foot		550	
Test Pile, HP14x89	Each		2	
Seal Coat Concrete	Cu. Yd.		170.0	
Pile Shoes	Each		24	



A & B DIMENSIONS

Bar	A	B
s20(E)	2'-0"	2'-9"
s21(E)	2'-0"	3'-8"
s22(E)	2'-0"	4'-8"
s23(E)	3'-0"	4'-8"



DESIGNED	SMK	03/19
DRAWN	MGM	05/19
REVIEWED	SMK	8/20/19

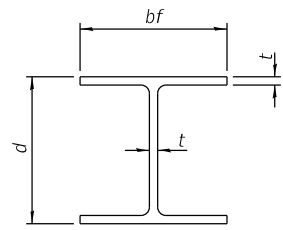
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USER NAME =	morey00259
DESIGNED -	SMK
CHECKED -	-
PLOT SCALE =	0.2:0.000 1" = 10'
PLOT DATE =	8/26/2019
REVISIONS	
1	DESIGNED - SMK
2	CHECKED - -
3	DRAWN - MGM
4	CHECKED - SMK
5	REVISIONS -
6	REVISIONS -
7	REVISIONS -
8	REVISIONS -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

PIERS
 STRUCTURE NO. 004-3098

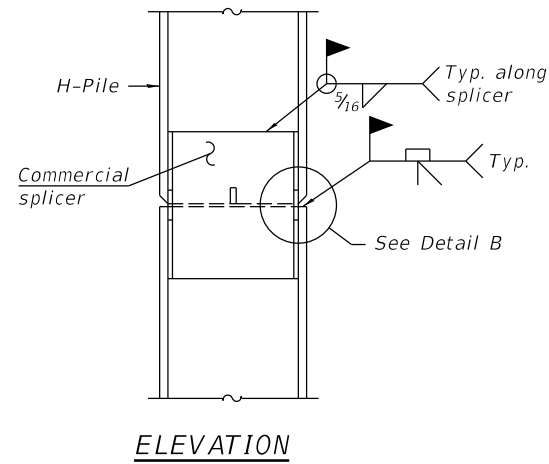
SHEET NO. 21 OF 30 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	41
			CONTRACT NO. 85688	
ILLINOIS FED. AID PROJECT				

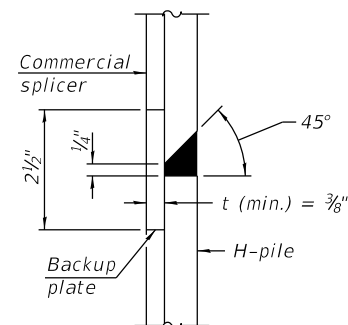


STEEL PILE TABLE

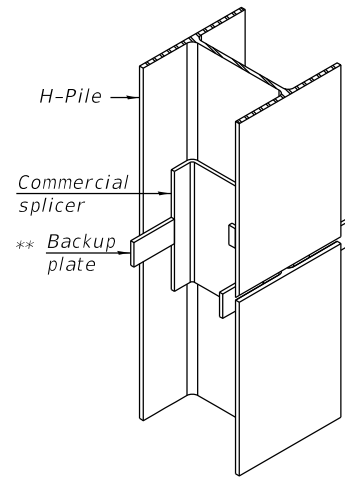
Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	1 3/16"	30"
x102	14"	14 3/4"	1 1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1 1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"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



ELEVATION

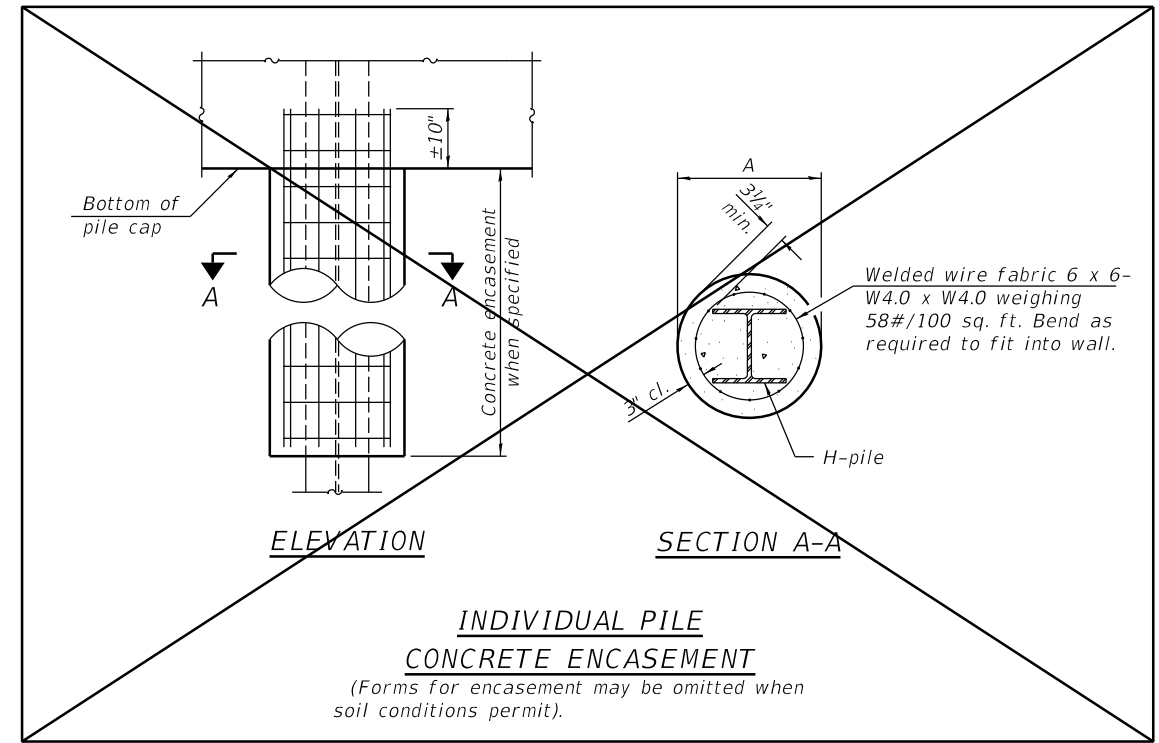


DETAIL "B"

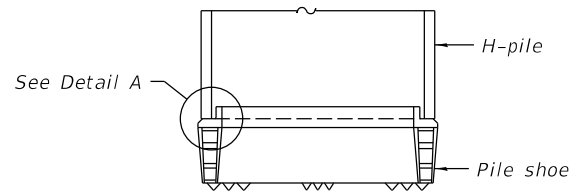


ISOMETRIC VIEW

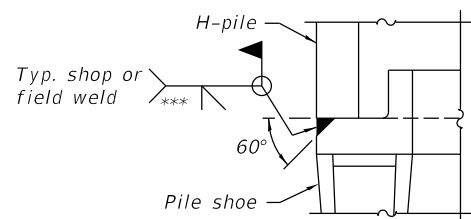
WELDED COMMERCIAL SPLICE



INDIVIDUAL PILE CONCRETE ENCASUREMENT
(Forms for encasement may be omitted when soil conditions permit).



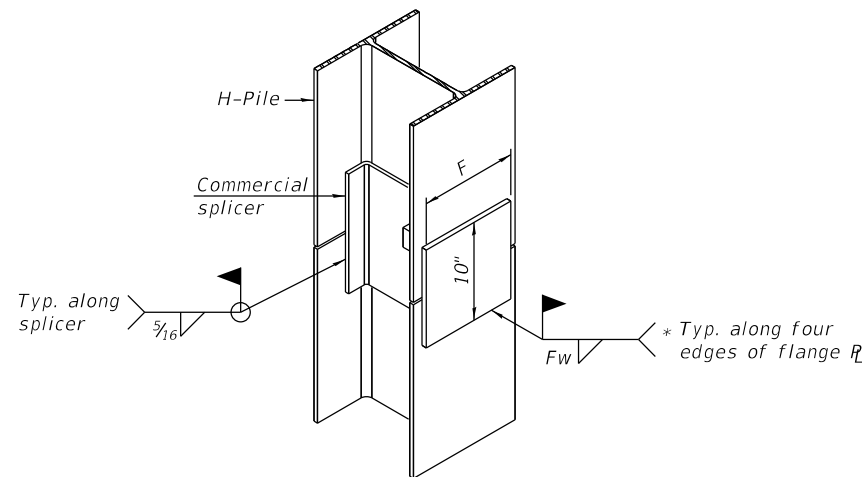
ELEVATION



DETAIL A

SHOE ATTACHMENT

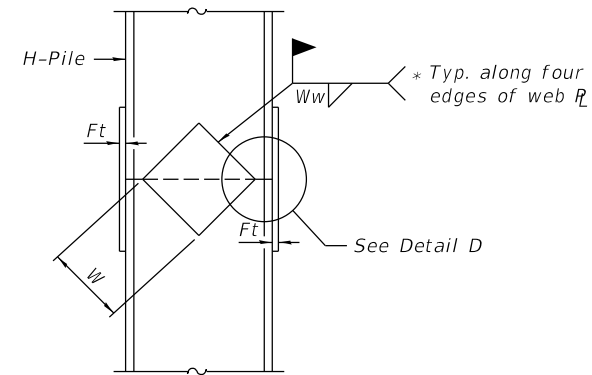
Note:
The steel H-piles shall be according to AASHTO M270 Grade 50.



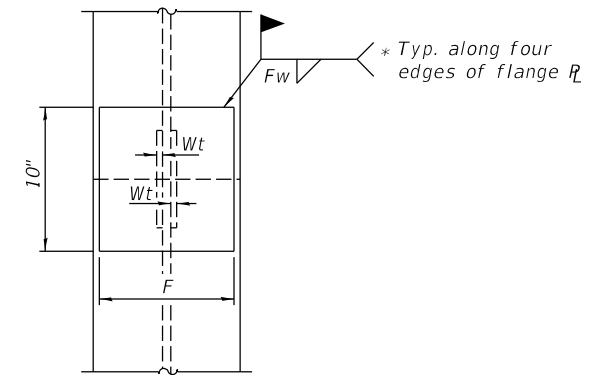
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

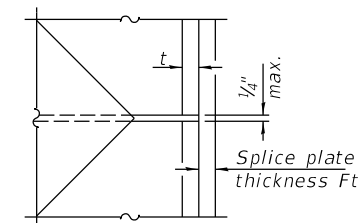
- * Interrupt welds 1/4" from end of web and/or each flange.
- ** Remove portions of backup plates that extend outside the flanges.
- *** Weld size per pile shoe manufacturer (5/16" min.).



ELEVATION



END VIEW



DETAIL D

WELDED PLATE FIELD SPLICE

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

DESIGNED	SMK	03/19
DRAWN	MGM	05/19
REVIEWED	SMK	8/30/19

FILE NAME = 0043098-16L0504B-S022-H-PILES.dgn	USER NAME = morey00259	DESIGNED - SMK	REVISD -
		CHECKED -	REVISD -
	PLOT SCALE = 0:2.0000 '1' = 1"	DRAWN - MGM	REVISD -
	PLOT DATE = 8/26/2019	CHECKED - SMK	REVISD -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**HP PILE DETAILS
STRUCTURE NO. 004-3098**

SHEET NO. 22 OF 30 SHEETS

F.A.U. RTE. 5011A	SECTION 17-00093-00-BR	COUNTY BOONE	TOTAL SHEETS 71	SHEET NO. 42
CONTRACT NO. 85688			ILLINOIS FED. AID PROJECT	

BORING NO. 1
(Sta. 22+74)

Boring No. <u>1</u> Station <u>22+74</u> Offset <u>10' E. of G.</u>		Elevation	N	Qu t/s.f.	w (%)	Surface Water El. _____	Groundwater El. at Completion _____	After _____ Hours _____	Elevation	N	Qu t/s.f.	w (%)
Ground Surface	121.92	0										
Gravel Fill												
		96.42	-25									
Loose Grey SANDY CLAY LOAM	117.92	-5	4			Medium Dense Very Coarse GRAVEL						
	115.92						93.92					26
Medium Dense Grey SANDY LOAM						Dense Coarse Angular GRAVEL						
	113.92		10									
		-10										
Very Dense Brown Sandy GRAVEL			52									
		52					86.42					
						Medium Dense GRAVEL						
	106.42	-13	104									
Dense Grey Very Fine SAND						Dense GRAVEL						
	103.92		48									
Medium Dense Coarse Grey SAND						Fractured Limestone						
		-20	20				79.42					
						Limestone (Cored 30% Recovery)						
							73.42					
		-45										

N - Standard Penetration Test - Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140# hammer falling 30".

Qu - Unconfined Compressive Strength - t/sf

w - Water Content - percentage of oven dry weight - %

Type failure:
B - Bulge Failure
S - Shear Failure
E - Estimated Value

BORING NO. 2
(Sta. 25+36)

Boring No. <u>2</u> Station <u>25+36</u> Offset <u>12' E. of G.</u>		Elevation	N	Qu t/s.f.	w (%)	Surface Water El. _____	Groundwater El. at Completion <u>111.01</u>	After _____ Hours _____	Elevation	N	Qu t/s.f.	w (%)
Ground Surface	118.21	0										
Gravel Fill												
		93.21	-25									
Medium Dense Grey SANDY CLAY LOAM	111.71					Medium Dense GRAVEL						
	113.21	-5	16									
Soft Brown SILTY CLAY LOAM												
	110.71		7									
Black Peat with Grey Sand Layers												
	108.21	-10	3									
						Medium Dense GRAVEL						
		26				Dense GRAVEL						
	103.21	-15	20									
Very Stiff Grey CLAY						Limestone Fragments						
	100.71		19	B	2.48							
Stiff Grey CLAY												
	98.21	-20	8	B	1.75							
Medium Dense Grey SAND												
		-45										

N - Standard Penetration Test - Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140# hammer falling 30".

Qu - Unconfined Compressive Strength - t/sf

w - Water Content - percentage of oven dry weight - %

Type failure:
B - Bulge Failure
S - Shear Failure
E - Estimated Value

NOTES:

Boring logs are from the the existing bridge plans.
Elevations on boring logs must be increased by 641.30 to be consistent with vertical datum used on plans.

DESIGNED	SMK	03/19
DRAWN	MGM	05/19
REVIEWED	SMK	8/30/19

FILE NAME =	USER NAME = morey00259
0043098-16L05048-S023-BORING LOGS.dgn	

DESIGNED - SMK	REVISIONS -
CHECKED -	REVISIONS -
DRAWN - MGM	REVISIONS -
DATE = 8/26/2019	REVISIONS -

DESIGNED - SMK	REVISIONS -
CHECKED -	REVISIONS -
DRAWN - MGM	REVISIONS -
DATE = 8/26/2019	REVISIONS -

DESIGNED - SMK	REVISIONS -
CHECKED -	REVISIONS -
DRAWN - MGM	REVISIONS -
DATE = 8/26/2019	REVISIONS -

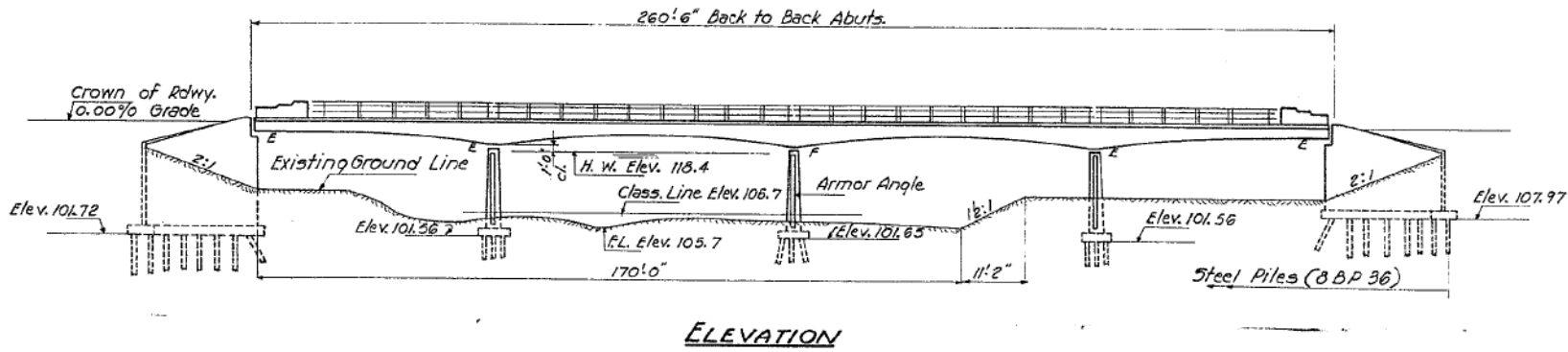
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	43
				CONTRACT NO. 85688
ILLINOIS FED. AID PROJECT				

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

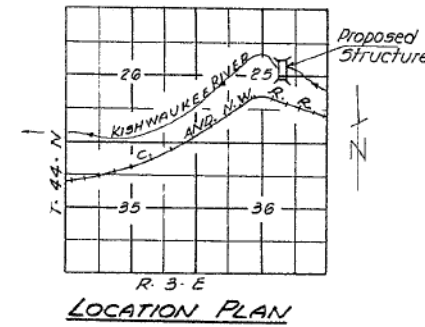
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 6
F.A.S. 32	28	BOONE	15	6	15 SHEETS
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT: 5-32(102)			

B.M. Spike in T.R. 40 Lt. station 28+50
Elevation 116.00

Existing structure: Two Pony Truss Spans on
Closed R.C. Abutments and Mason Pier.
Roadway 16'-0" Total Length 150'-0"

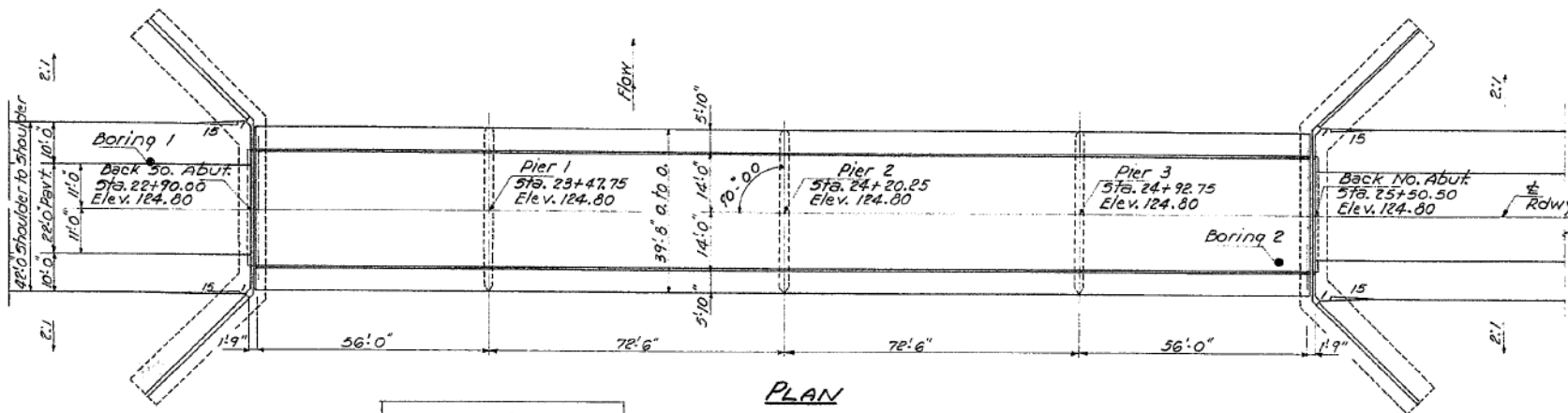


ELEVATION



LOCATION PLAN

GENERAL NOTES
Class-X Concrete shall be used throughout except in Piers.
Class-A Concrete shall be used in Piers.
Coarse aggregate which is to be used in end posts must be free of chert flint, limonite, lignite, and soft limestone.
The concrete floor slab shall be finished in accordance with Art. 51.19 of the Standard Specifications.
Permanent forms will not be permitted in forming the concrete floor.
All rockers, bolsters, bearing plates, lead plates, pintles and anchor bolts shall be fabricated and set in accordance with Art. 51.15 of the Standard Specifications and are included in quantity of Structural Steel, Est. Wt. 13,776 Lbs.
Expansion Guards shall be fabricated and erected in accordance with Art. 51.13 (c) of the Standard Specifications.
Expansion Guards are included in the quantity of Structural Steel, Est. Wt. 1544 Lbs.
Armor Angles are included in the quantity of Structural Steel, Est. Wt. 1900 Lbs. except as otherwise provided all structural steel shall receive one shop coat of red lead paint and two field coats of aluminum paint. See Arts. 56.1 to 56.5 inclusive of the Standard Specifications.
The Contractor shall drive three steel test piles in permanent locations as directed by the Engineer before ordering remainder of piles. One test pile at each Abutment and one at Pier 2.
The following surfaces of the Abutments shall be waterproof back of breast and wing walls to the ground line. Waterproofing shall be done in accordance with Art. 51.21 of the Standard Specifications.
All reinforcement bars shall be lapped 20 diameters unless otherwise shown.
The exposed surfaces of the expansion guard and armor angles shall be given two shop coats of red lead paint. The contact surfaces shall be given one coat of red lead paint. Anchor studs shall not be painted.
All structural steel shall conform to ASTM designation A-36.



PLAN

STATION 24+20.25
KISHWAUKEE RIVER
BUILT 1964
F.A.S. RT. 52 SEC. 28
PROJECT 5-32(102)
LOADING H20-516

NAME PLATE
See Standard 2113-1

WATERWAY INFORMATION

Required Opening (25 Yr. Flood) 2500 Sq. Ft.
Present Opening 21900 Sq. Ft.
Proposed Opening 2500 Sq. Ft.
Ordinary Water Elev. 106.5
Low Water Elev. 105.7

DESIGN STRESSES
fc - - - 1400 #/sq. Super. & Sub.
vc - - - 75 #/sq. Footing
fs - - - 20000 #/sq. Reinf.
fs - - - 20000 #/sq. Struct.
n - - - 10

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER.	SUBST.	TOTAL
Removal of Existing Structures	Each			1
Class-A Excavation for Structures	Cu. Yds.	865		865
Class-B Excavation for Structures	Cu. Yds.	521		521
Structural Steel	Lbs.	15320	1900	17220
Class-A Concrete	Cu. Yds.	2533	2533	
Class-X Concrete	Cu. Yds.	700.0	880.9	1580.9
Metal Handrail	Lin. Ft.	485	250.0	485
Reinforcement Bars	Lbs.	164234	33553	197787
Steel Piles (8 BP 36)	Lin. Ft.		3746	3746
Test Piles Steel (8 BP 36)	Each		3	3
Name Plates	Each		1	1
Protective Coat	Sq. Yds.	1205		1205

DESIGNED	M. E. Hanadon	EXAMINED	SEPT 10 1962
CHECKED	[Signature]	PASSED	[Signature]
DRAWN	M. E. Miller	APPROVED	[Signature]
CHECKED	[Signature]		

FOR REFERENCE ONLY

Loading H20-516-44

GENERAL PLAN & ELEVATION
COLEMAN BRIDGE-PLEASANT ST.
F.A.S. RT. 32 OVER KISHWAUKEE RIVER
BELVIDERE TOWNSHIP
BOONE COUNTY
STATION 24+20.25

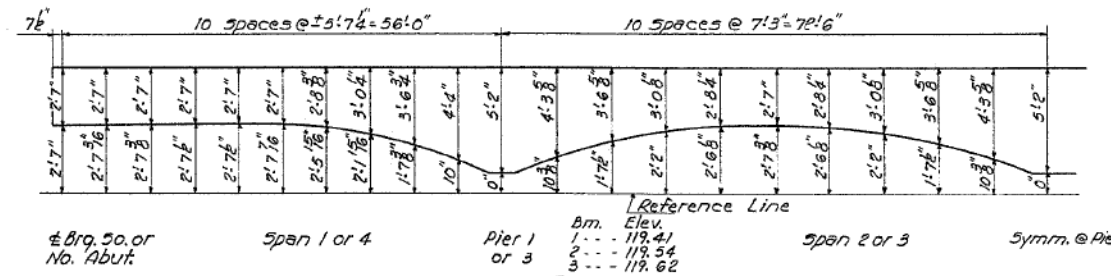
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DRAWN	MGM	05/19
REVIEWED	SMK	8/30/19

FILE NAME = 0043098-16L05048-5024-Existing Plans-1.dgn	USER NAME = morey00259	DESIGNED - SMK	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING PLANS STRUCTURE NO. 004-3098	F.A.U. R.T.E. 5011A	SECTION 17-00093-00-BR	COUNTY BOONE	TOTAL SHEETS 71	SHEET NO. 44
PLOT SCALE = 0.2:0000 1" = 100'	PLOT DATE = 8/26/2019	DRAWN - MGM	REVISED -			CONTRACT NO. 85688		ILLINOIS FED. AID PROJECT		
		CHECKED - SMK	REVISED -		SHEET NO. 24 OF 30 SHEETS					

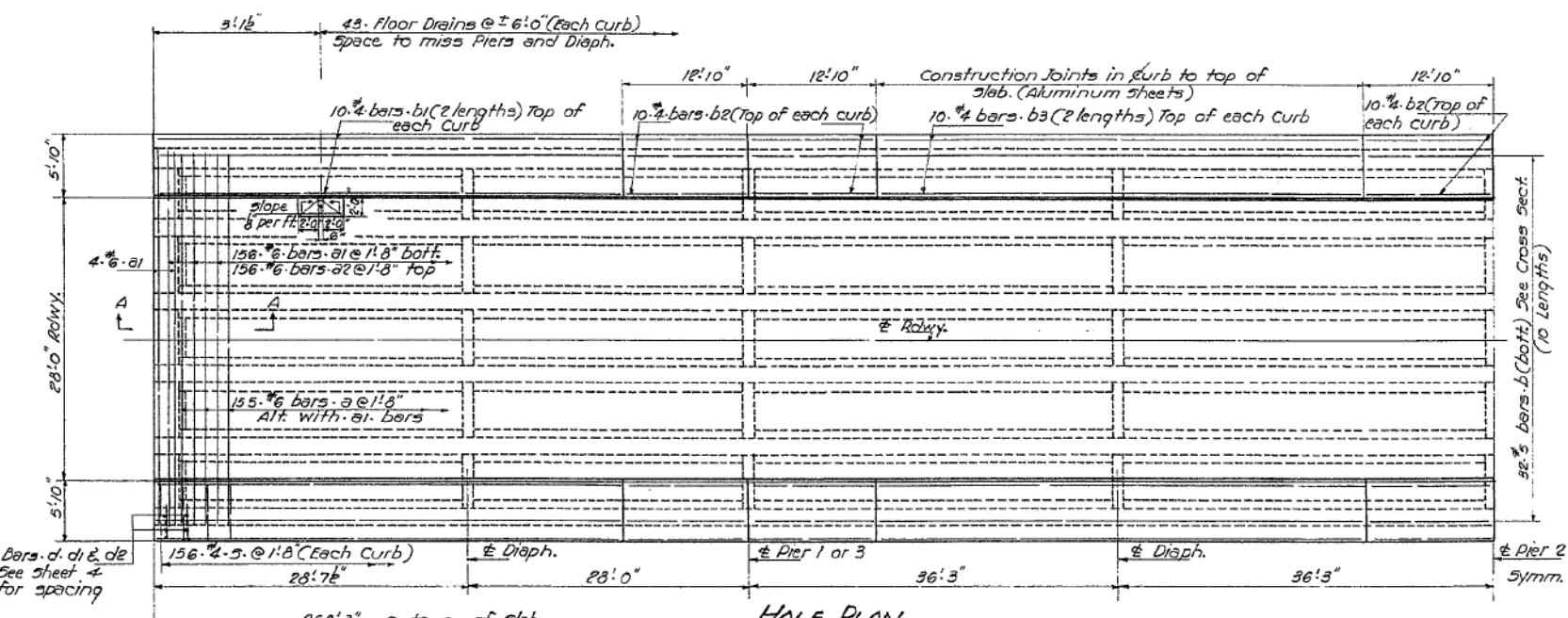
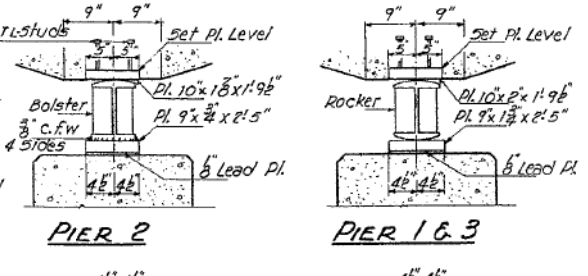
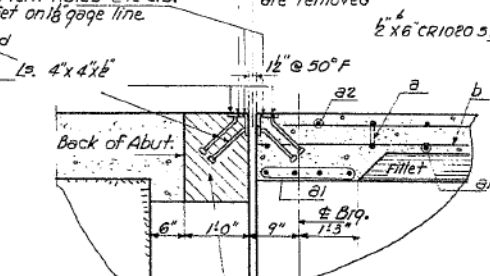
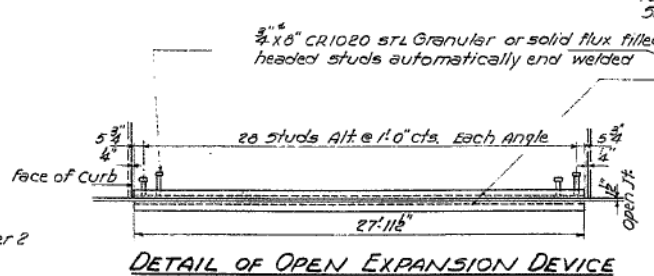
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1 S. 32	2 B	BOONE	15	7
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT: S-32(102)	

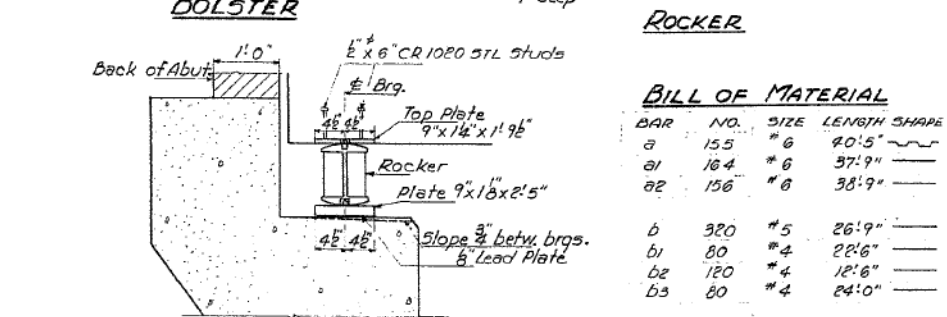
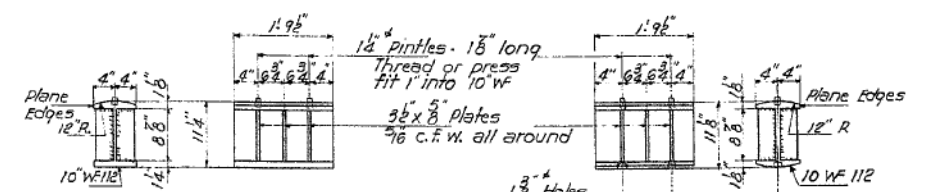
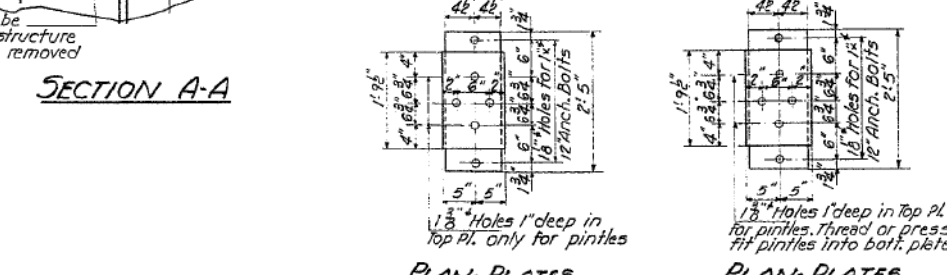
SHEET NO. 7
15 SHEETS



Ordinates include Dead Load Deflection.
Contractor shall allow for settlement of forms and shrinkage



FOR REFERENCE ONLY

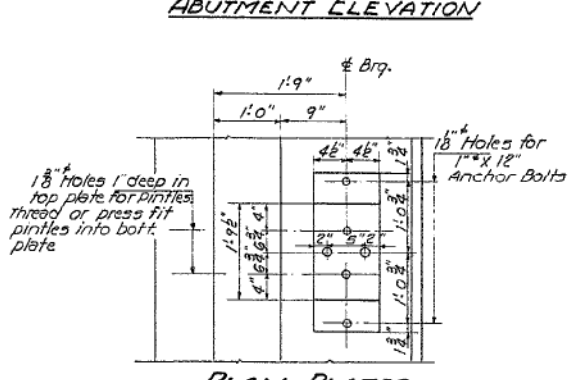
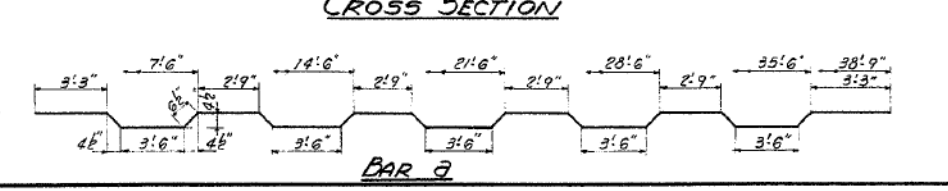
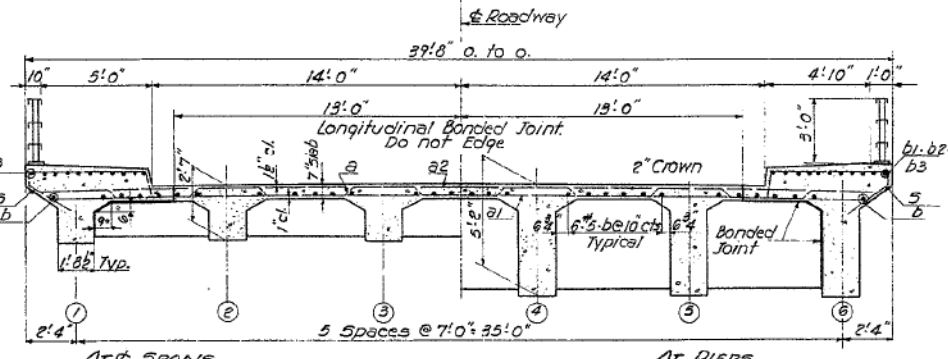
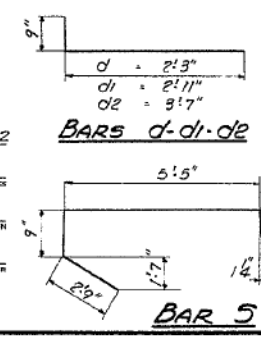
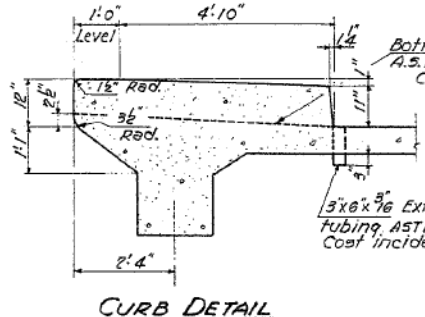


BILL OF MATERIAL

BAR NO.	SIZE	LENGTH	SHAPE
a	155 #6	40:5"	—
a1	164 #6	37:9"	—
a2	156 #6	38:9"	—
b	320 #5	26:9"	—
b1	80 #4	22:6"	—
b2	120 #4	12:6"	—
b3	80 #4	24:0"	—
c	312 #4	10:0"	└
d	24 #5	3:0"	└
d1	24 #5	3:3"	└
d2	16 #5	4:4"	└

Class X Concrete Cu. Yds. 736.4
Reinforcement Bars Lbs. 164115
Structural Steel Lbs. 15320

Name Plates Each 1



SUPERSTRUCTURE
F.A.S. RT. 32
BOONE COUNTY
STATION 24+20.25

DESIGNED: M.E. Canadian
CHECKED: [Signature]
DRAWN: M.E. Miller
CHECKED: [Signature]

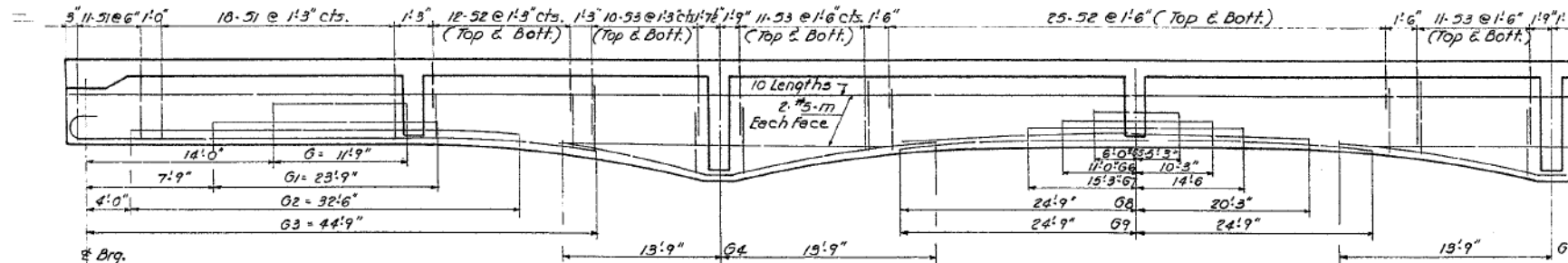
SEPT 10 1962
EXAMINED: N.E. Beermann
PASSED: [Signature]
APPROVED: [Signature]

HANSON
Professional Services Inc.

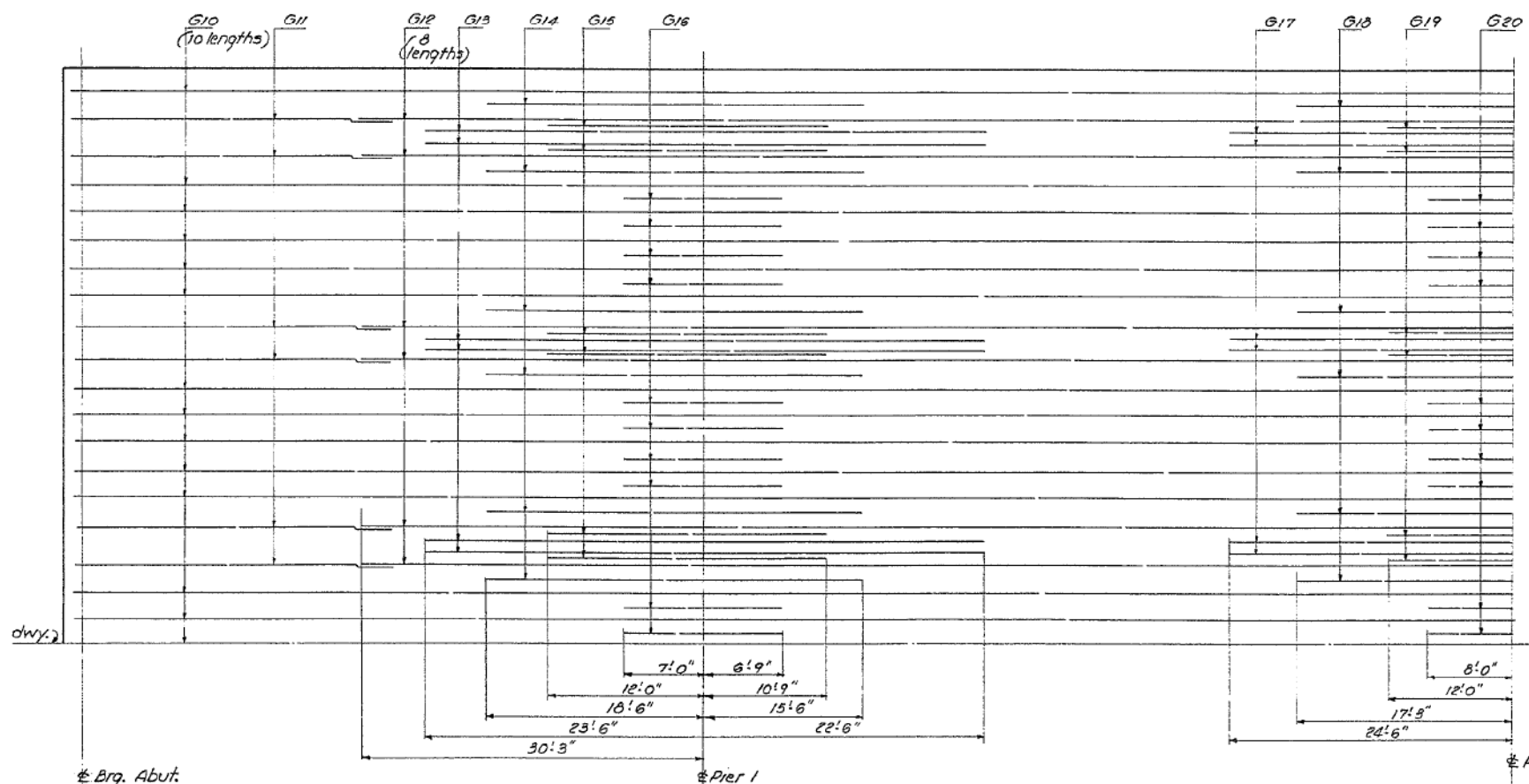
DESIGNED	SMK	03/19
DRAWN	MCM	05/19
REVIEWED	SMK	8/30/19

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.A.I. P.S. 32	28	BOONE	15	8
SHEET NO. 8		15 SHEETS		
FED. AID PROJ. NO. 5-32		ILLINOIS		

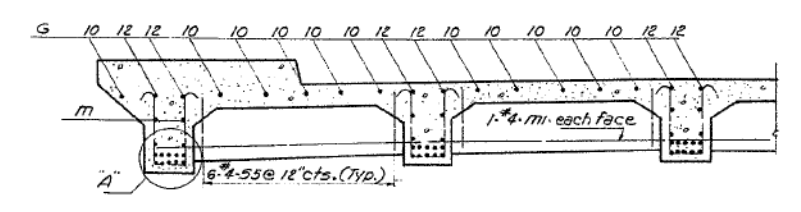
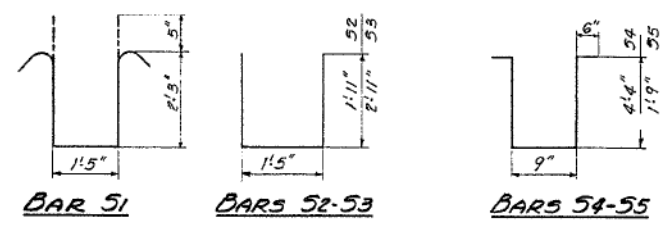


HALF ELEVATION OF GIRDERS

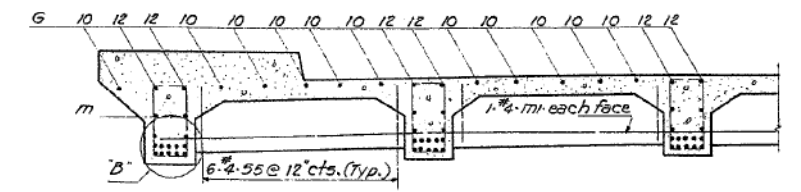


QUARTER PLAN
Showing Reinforcement Top of Slab

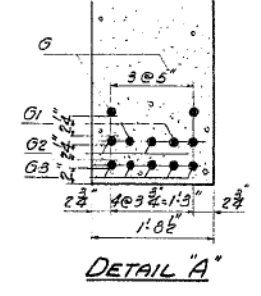
FOR REFERENCE ONLY



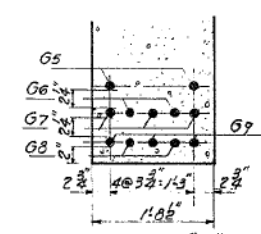
HALF SECTION AT END SPANS



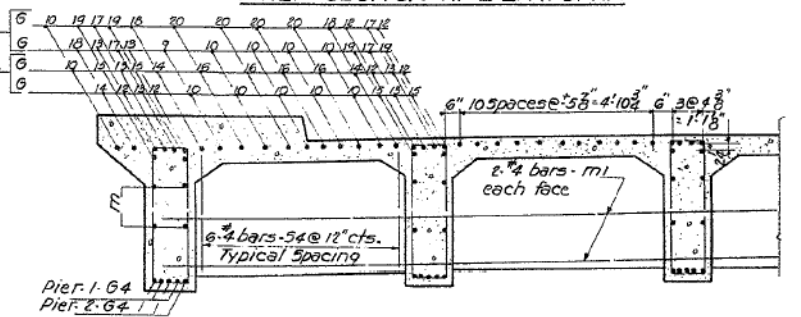
HALF SECTION AT INT. SPAN



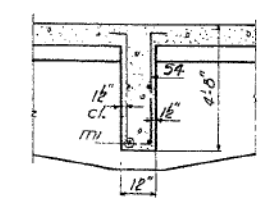
DETAIL "A"



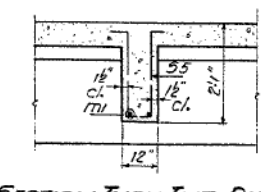
DETAIL "B"



HALF SECTION AT PIERS



SECTION THRU DIAPHR. AT PIERS



SECTION THRU INT. DIAPHR.

BAR LIST				
BAR NO.	SIZE	LENGTH	SHAPE	
G	24	#9	11'9"	
G1	24	#11	23'9"	
G2	36	#11	32'6"	
G3	60	#11	46'10"	C
G4	78	#11	28'0"	
G5	24	#9	11'3"	
G6	24	#10	21'3"	
G7	36	#10	29'9"	
G8	24	#11	45'0"	
G9	36	#11	49'6"	
G10	270	#6	27'0"	
G11	24	#9	28'3"	
G12	96	#11	27'9"	
G13	24	#11	46'0"	
G14	24	#10	34'0"	
G15	24	#10	22'9"	
G16	40	#8	15'9"	
G17	12	#11	49'0"	
G18	12	#10	34'6"	
G19	12	#10	24'0"	
G20	20	#8	16'0"	
m	156	#5	26'9"	
m1	40	#4	19'6"	

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HANSON
Hanson Professional Services Inc.

DESIGNED	<i>M. E. Hanahan</i>	EXAMINED	<i>W. E. Baumann</i>
CHECKED	<i>D. Altmull</i>	PASSED	<i>W. E. Baumann</i>
DRAWN	<i>M. E. Miller</i>	APPROVED	<i>W. E. Baumann</i>
CHECKED			

SEPT 10 1962

DESIGNED	SMK	03/19
DRAWN	MGM	05/19
REVIEWED	SMK	8/30/19

FILE NAME =	USER NAME = morey00259	DESIGNED - SMK	REVISED -
0043098-16L05048-S026-Existing Plans-3.dgn		CHECKED -	REVISED -
		DRAWN - MGM	REVISED -
		CHECKED - SMK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

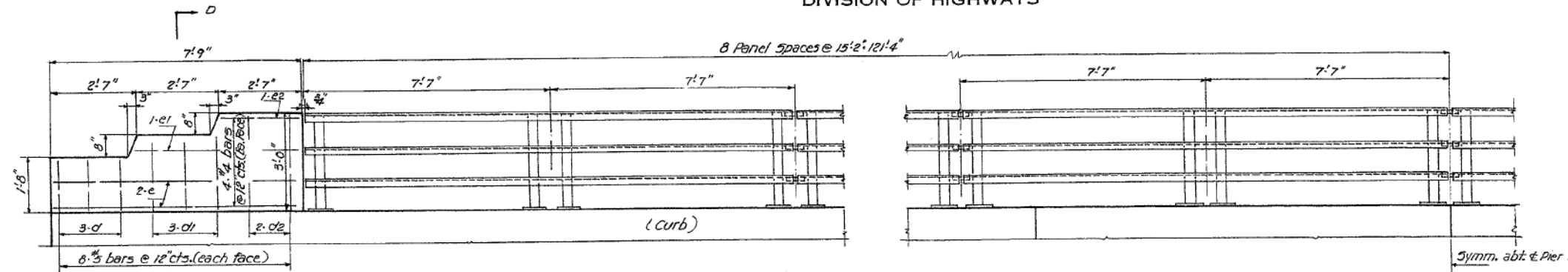
EXISTING PLANS
STRUCTURE NO. 004-3098
SHEET NO. 26 OF 30 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	46
				CONTRACT NO. 85688
ILLINOIS FED. AID PROJECT				

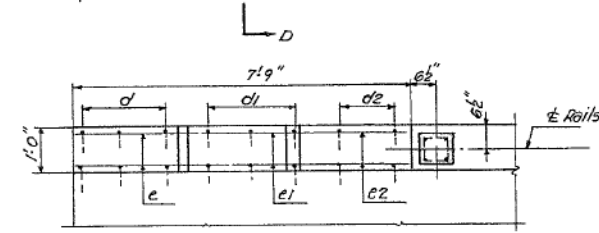
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. R. 1 F.A.S. 32	2B	BOONE	15	9
FED. AID PROJ. NO. 1	ILLINOIS	FED. AID PROJ. NO.	S-32(102)	

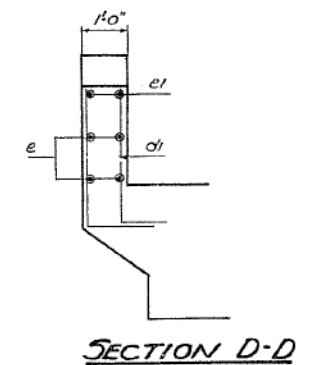
SHEET NO. 9
15 SHEETS



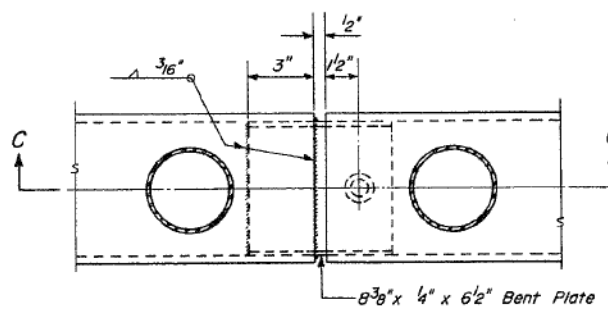
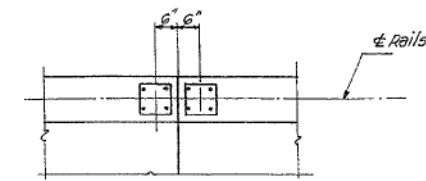
HALF ELEVATION



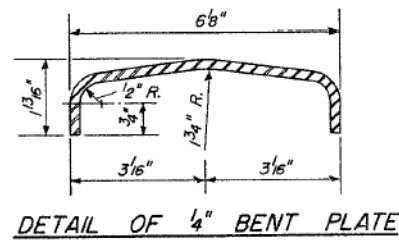
PARTIAL PLAN



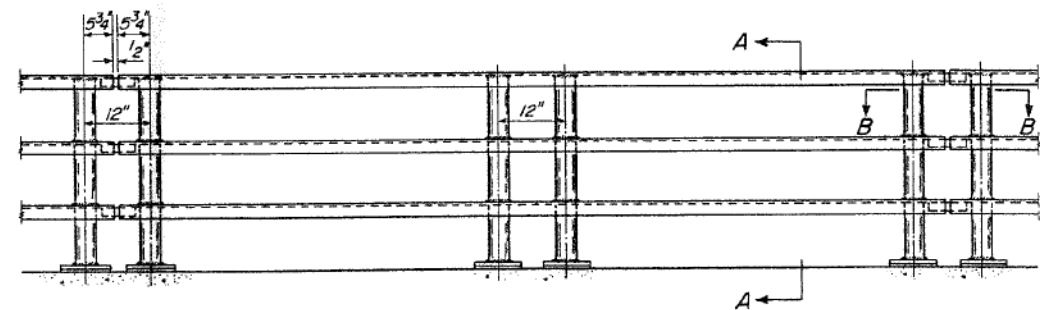
SECTION D-D



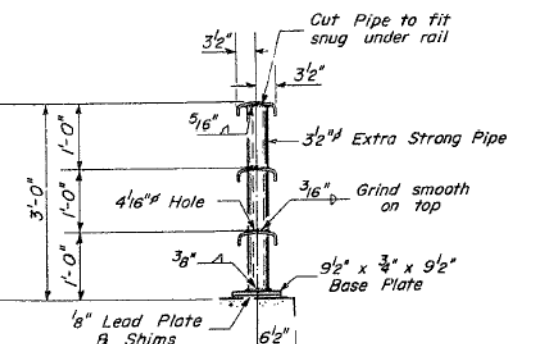
SECTION B-B



DETAIL OF 1/4" BENT PLATE



ELEVATION TYPICAL PANEL



SECTION A-A

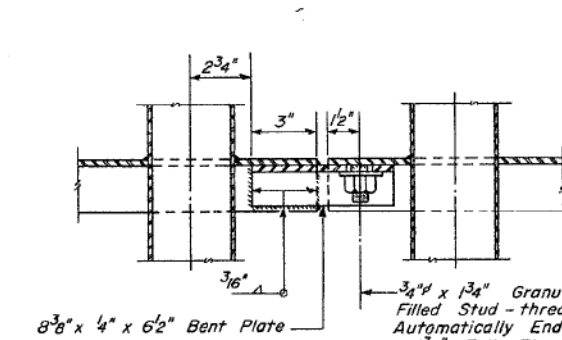
GENERAL NOTES

After erection all Bolts and Washers shall be spot painted with one coat of red lead and two coats of aluminum paint.
Provide 1-9" and 2-16" Shims for 50% of the Posts.

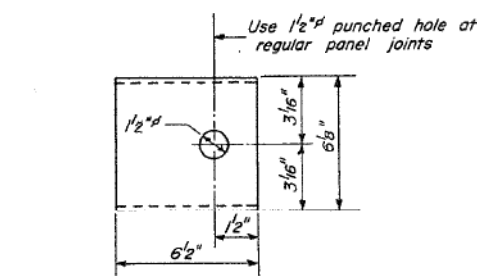
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
e	16	#4	7'6"	---
e1	8	#4	5'0"	---
e2	8	#4	2'3"	---
Reinforcement Bars - Lbs.				1190
Metal Handrail				Ltn. Ft. 485
Class-X Concrete				Cu. Yds. 3.6

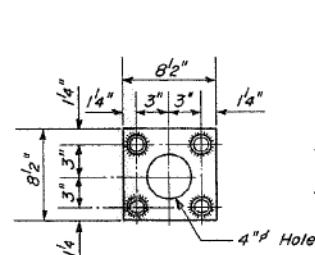
Note: Bars e1-e2 are billed on Sheet 2



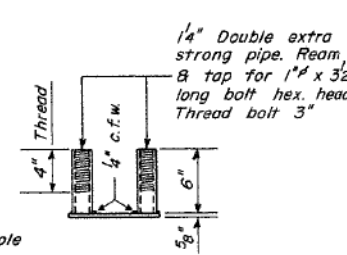
SECTION C-C



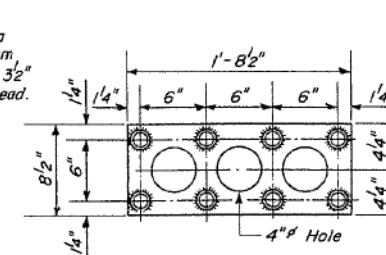
PLAN



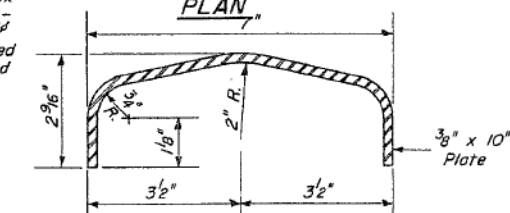
ANCHOR DEVICE
For Single Post at each End of Panel



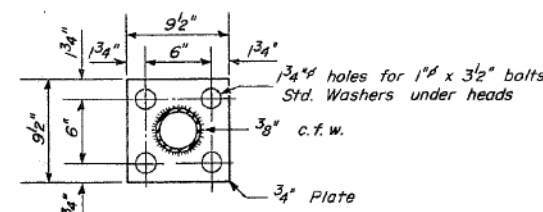
END VIEW



ANCHOR DEVICE
For Double Posts within Each Panel



DETAIL OF RAIL



BASE PLATE
ALL POSTS

HANDRAIL
F.A.S. ROUTE 32
BOONE COUNTY
STATION 24+20.25

FOR REFERENCE ONLY

DESIGNED	M. E. Lonsdale	EXAMINED	H. E. Brummann
CHECKED	M. A. Sausamal	PASSED	E. J. Smith
DRAWN	W. A. Sausamal	APPROVED	M. Brummann
CHECKED			

SEPT 10 1962

DESIGNED	SMK	03/19
DRAWN	MGM	05/19
REVIEWED	SMK	8/30/19

FILE NAME =	USER NAME = morey00259	DESIGNED - SMK	REVISED -
0043098-16L05048-5027-Existing Plans-4.dgn		CHECKED -	REVISED -
PLOT SCALE = 0:2.0000 '1' = 1"		DRAWN - MGM	REVISED -
PLOT DATE = 8/26/2019		CHECKED - SMK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

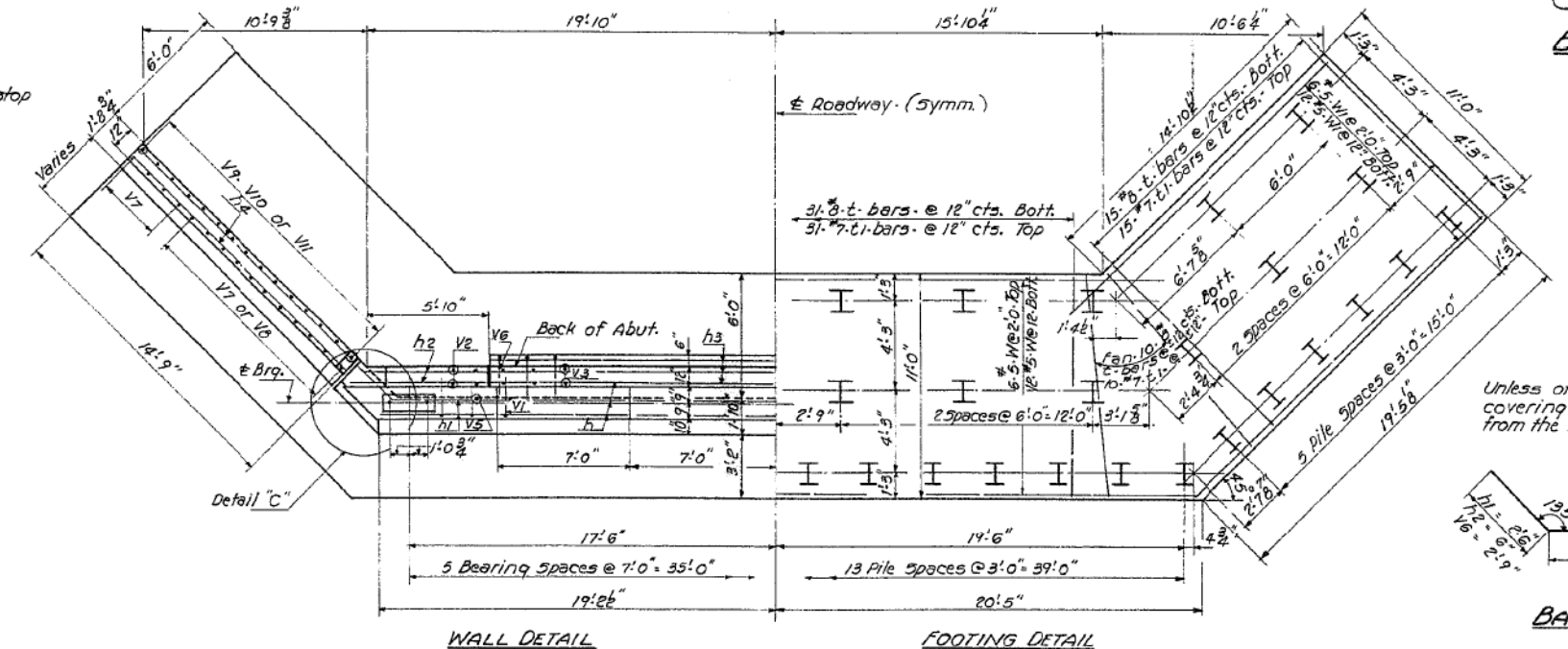
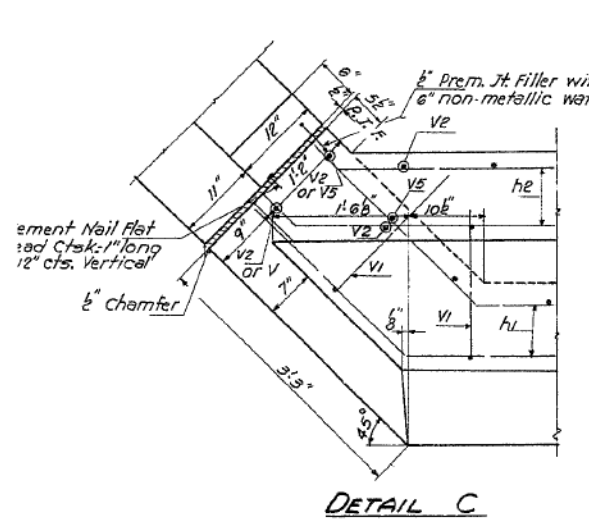
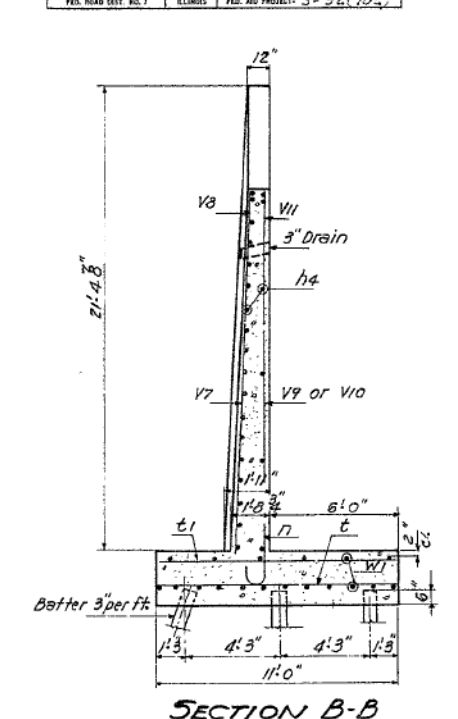
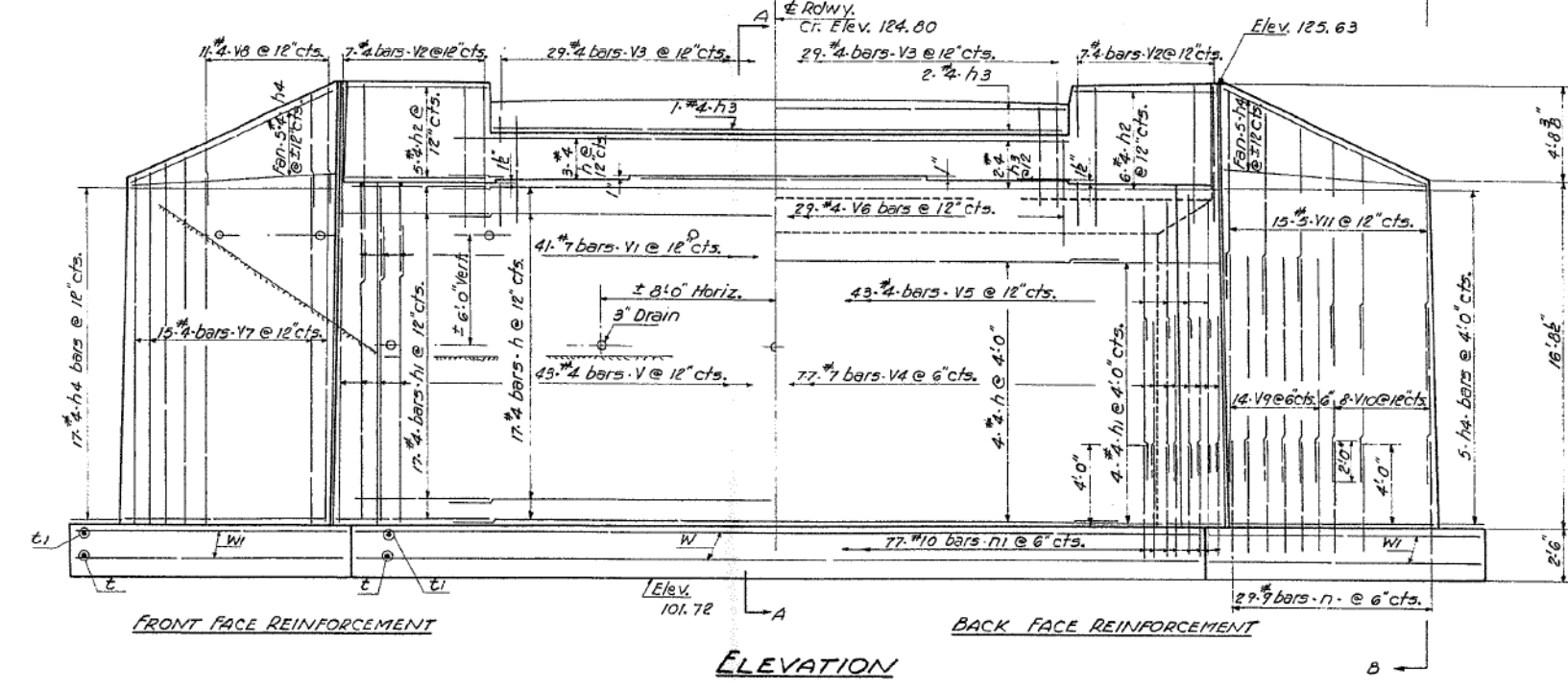
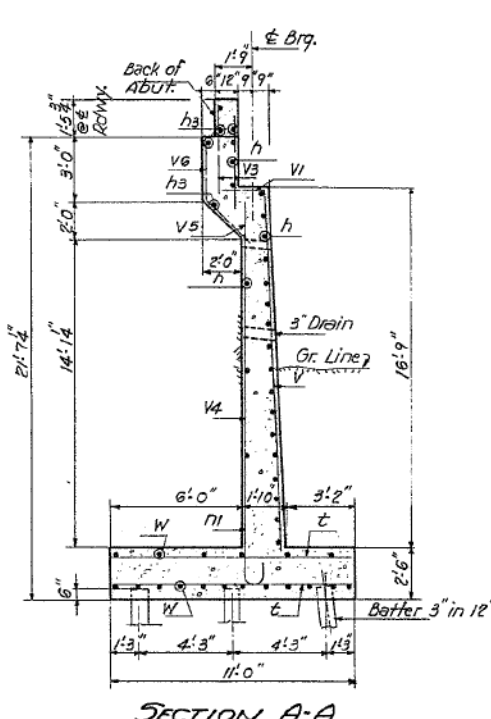
EXISTING PLANS
STRUCTURE NO. 004-3098

SHEET NO. 27 OF 30 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	47
			CONTRACT NO. 85688	
ILLINOIS FED. AID PROJECT				

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 10
F.A.S. 32	23	BOONE	15	10	15 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT: 5-92(192)		



BARS n-n1

BAR NO.	SIZE	LENGTH	SHAPE
h	#4	30'0"	—
h1	#4	6'9"	—
h2	#4	6'3"	—
h3	#4	27'9"	—
h4	#4	14'6"	—
V	#4	12'6"	—
W	#7	7'0"	—
V2	#4	5'6"	—
V3	#4	4'3"	—
V4	#7	8'0"	—
V5	#4	6'0"	—
V6	#4	5'9"	—
V7	#4	16'6"	—
V8	#4	5'6"	—
V9	#8	11'0"	—
V10	#8	8'6"	—
V11	#5	10'3"	—
n	#9	7'0"	—
n1	#10	7'2"	—
t	#8	10'9"	—
t1	#7	10'9"	—
W	#5	20'9"	—
Wi	#5	19'5"	—

BARS h1-h2-V6

h1	#4	4'3"	—
h2	#5	5'9"	—
V6	#4	3'0"	—

PILE DATA
Type - 8BP36 (Steel)
Capacity - Driver to refusal.
Est. Length - 22 Ft.
No. Req'd - 48 (including 1 test pile)

DESIGNED: M.E. Shanahan
CHECKED: J. Abmal
DRAWN: M.E.G. Miller
CHECKED: [Signature]

EXAMINED: W.E. Beaumont
PASSED: [Signature]
APPROVED: [Signature]

SEPT 10 1962

FOR REFERENCE ONLY

SOUTH ABUTMENT
F.A.S. RT. 32
BOONE COUNTY
STATION 24+20.25

Revised 10-20-64 by M.E.G. Corrected Quantity of Class X Conc.

DESIGNED: SMK 03/19
DRAWN: MCM 05/19
REVIEWED: SMK 8/30/19

FILE NAME = 0043098-16L05048-5028-Existing Plans-5.dgn	USER NAME = morey00259	DESIGNED - SMK	REVISED -
		CHECKED -	REVISED -
		DRAWN - MCM	REVISED -
		CHECKED - SMK	REVISED -

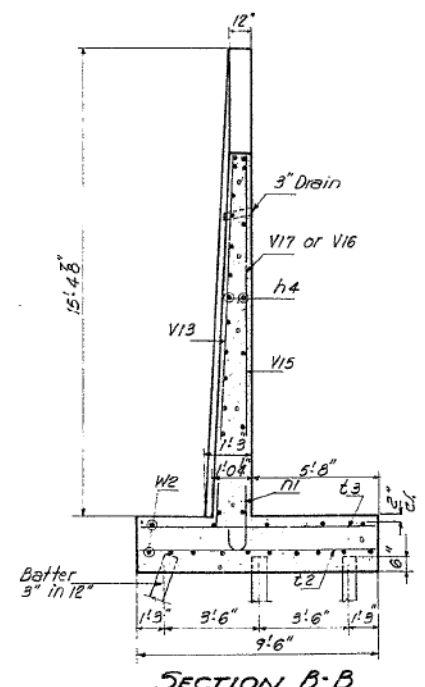
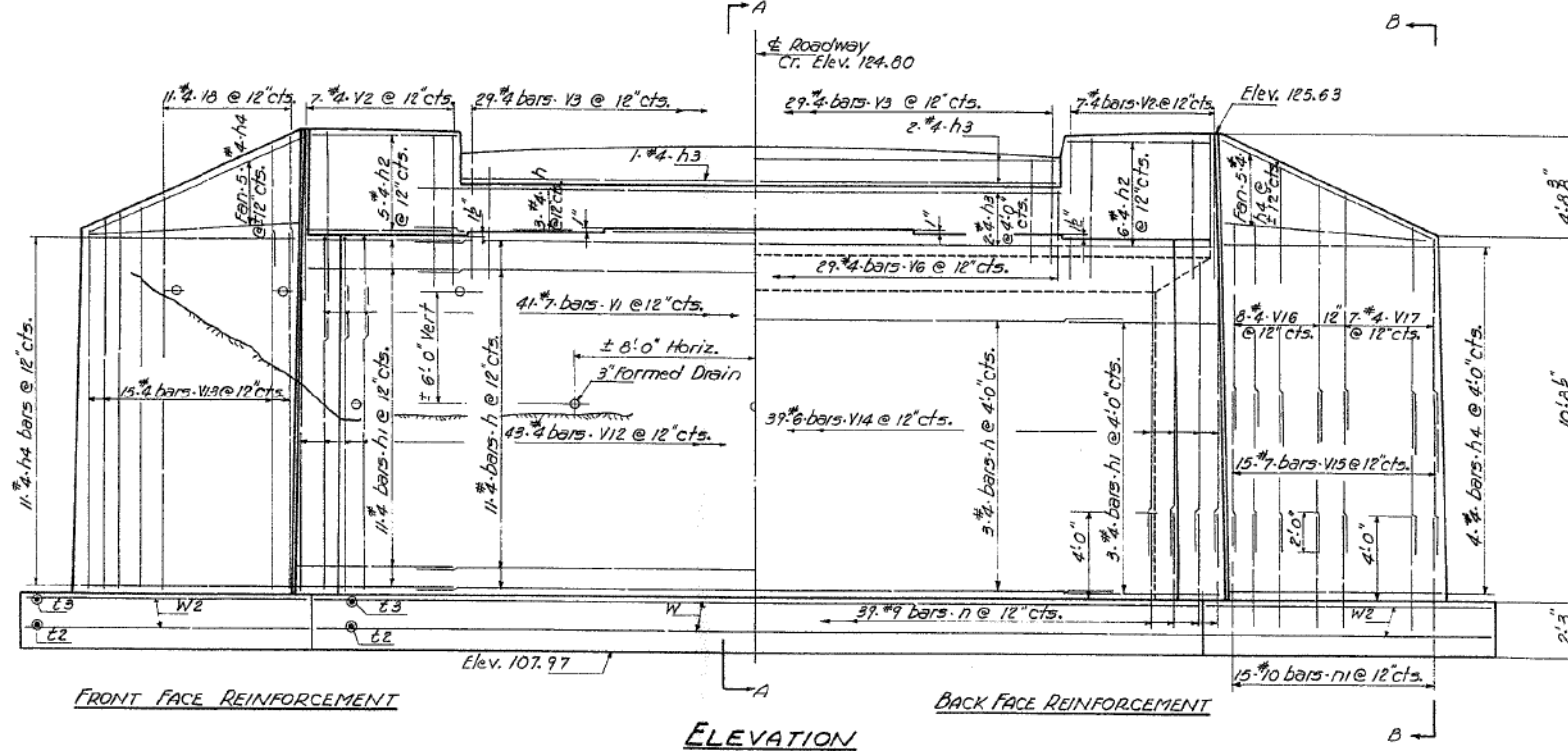
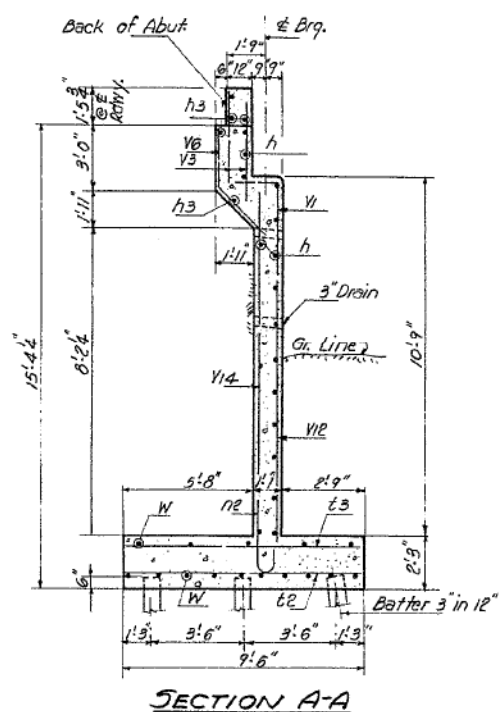
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLANS
STRUCTURE NO. 004-3098
SHEET NO. 28 OF 30 SHEETS

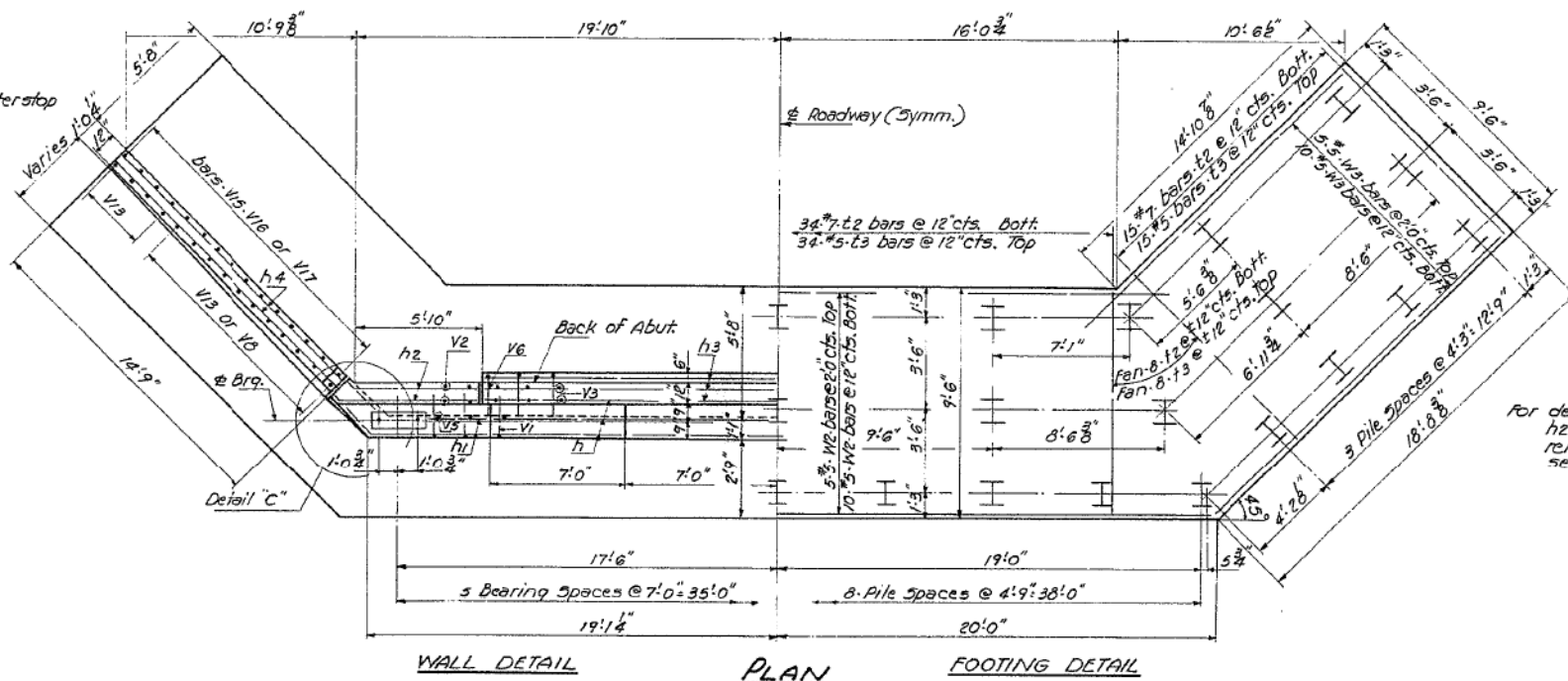
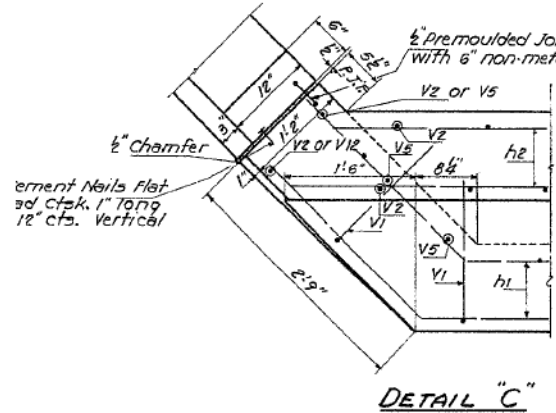
F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	48
CONTRACT NO. 85688			ILLINOIS FED. AID PROJECT	

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
111	2 B	BOONE	15	11
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT: S-32 (102)	SHEET NO. 11 15 SHEETS



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Note:
For detail of bars n-n1-h1-h2-V6-V7 and note on reinforcement clearance see sheet 5

BILL OF MATERIAL

BAR NO.	SIZE	LENGTH	SHAPE
h	#4	30'0"	—
h1	#4	6'9"	—
h2	#4	6'3"	—
h3	#4	27'9"	—
h4	#4	14'6"	—
W	#7	7'0"	—
W2	#4	5'6"	—
V3	#4	4'3"	—
V6	#4	5'9"	—
V8	#4	5'6"	—
V12	#4	6'6"	—
V13	#4	10'6"	—
V14	#6	7'6"	—
V15	#7	5'6"	—
V16	#4	9'6"	—
V17	#4	7'6"	—
n	#9	7'0"	—
n1	#10	7'2"	—
t2	#7	9'3"	—
t3	#5	9'3"	—
W	#5	20'9"	—
W2	#5	13'6"	—

Class-X Concrete Cu. Yds. 283-99.2
Reinforcement Bars Lbs. 8374
Steel Piles (8BP36) Lin. Ft. 952
Test Piles (Steel) 8BP36 Each 1

DESIGNED: M.E. Lamaden
CHECKED: [Signature]
DRAWN: M.E. Miller
CHECKED: [Signature]

EXAMINED: H.G. Bannerman
PASSED: [Signature]
APPROVED: [Signature]

SEPT 10 1962

FOR REFERENCE ONLY

PILE DATA
Type: 8BP36 (Steel)
Capacity: Driven to refusal
Est. Length: 28 Ft.
No. Req'd: 35 (Including 1 Test Pile.)

NORTH ABUTMENT
F.A.S. Rt. 92
BOONE COUNTY
STATION 24+20.25

DESIGNED	SMK	03/19
DRAWN	MGM	05/19
REVIEWED	SMK	8/30/19

FILE NAME = 0043098-16L05048-5029-Existing Plans-6.dgn	USER NAME = morey00259	DESIGNED - SMK	REVISED -
		CHECKED -	REVISED -
		DRAWN - MGM	REVISED -
		CHECKED - SMK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLANS
STRUCTURE NO. 004-3098

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	49
CONTRACT NO. 85688			ILLINOIS FED. AID PROJECT	

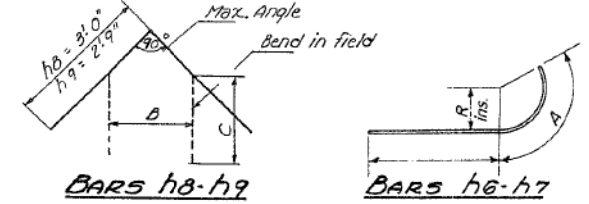
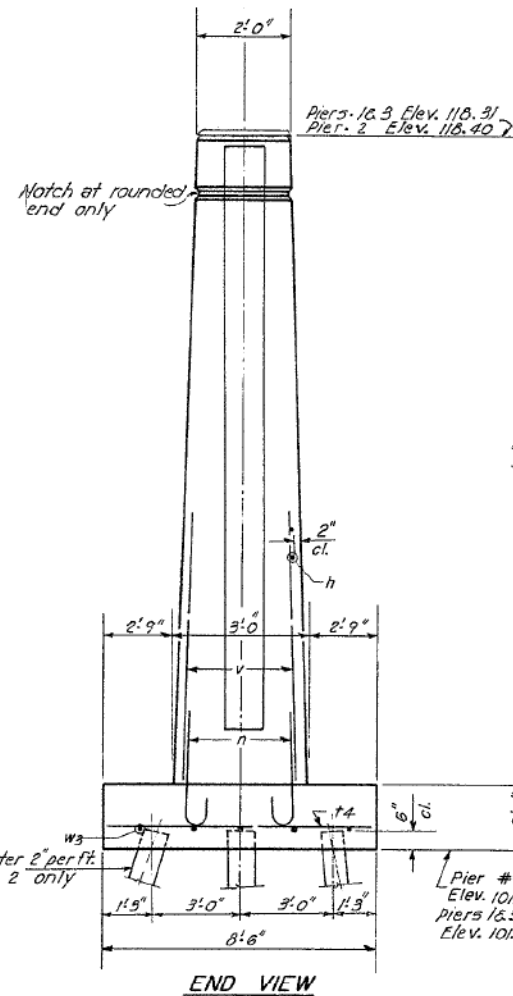
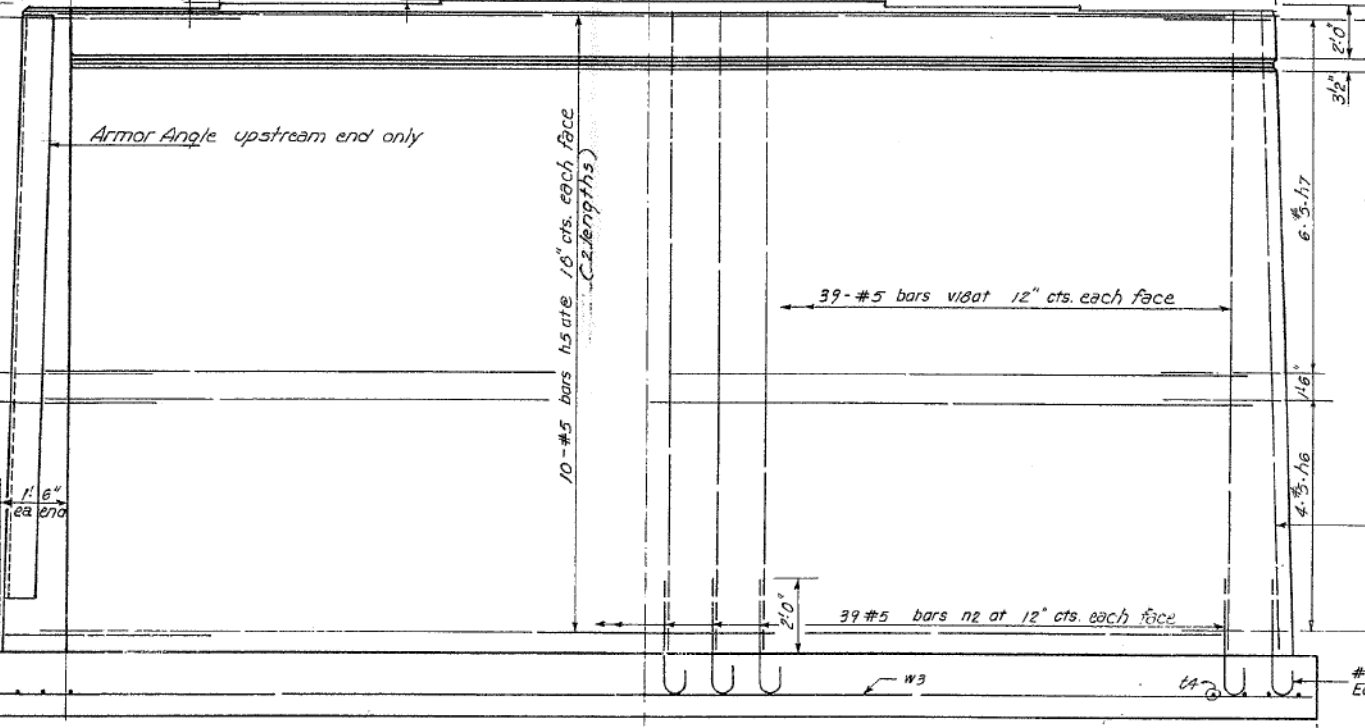
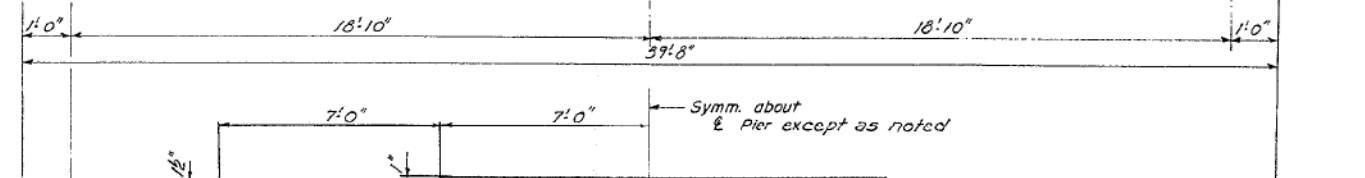
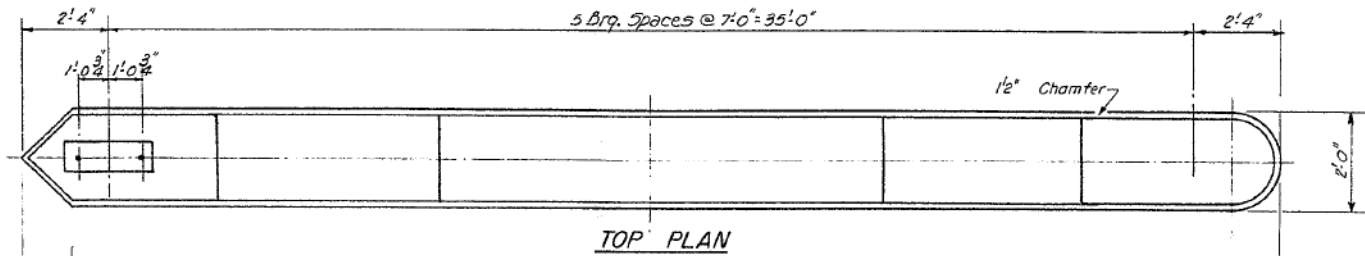
SHEET NO. 29 OF 30 SHEETS

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

FILE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. 32	2B	BOONE	15	12
FILE ROAD DIST NO.	LAUREL	FED. AID PROJECT	S-32(102)	

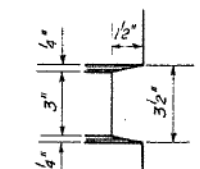
SHEET NO. 12
15 SHEETS

PILE DATA
Type - 8 BP 56 Steel
Capacity - Driven to refusal.
Est. Length - 22 Ft.
No. Req'd. - 81 (3 Piers)
*Including 1 Test Pile at Pier 2



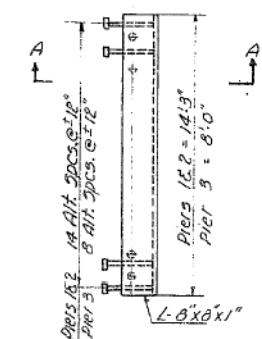
BARS h8-h9

BARS h6-h7



NOTCH DETAIL

Bar	R	A
h6	1'-4"	2'-9"
h7	1'-1"	2'-5"
h8	2'-8"	1'-2"
h9	2'-7"	1'-3"
h10	2'-6"	1'-3"
h11	2'-4"	1'-4"



ARMOR ANGLES (ASTM: A-242)

3 Piers
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h6	24	#5	4'-9"	U
h7	36	#5	4'-1"	U
h8	24	#5	7'-6"	U
h9	36	#5	6'-6"	U
h10	120	#5	19'-6"	U
h11	252	#5	4'-6"	U
t4	126	#5	8'-3"	U
v18	252	#5	14'-0"	U
w3	30	#5	2'-6"	U

Class A Concrete Cu. Yds. 253.8
Reinforcement Bars Lbs. 9764
Steel Piles (BDP 36) Lin. Ft. 1760
Test Piles steel (BDP 36) Each 1
Structural Steel Lbs. 1900

BAR N2

DESIGNED M.E. Stansel
CHECKED [Signature]
DRAWN W.A. Sausaman
CHECKED [Signature]

EXAMINED H.E. Blummann
PASSED [Signature]
APPROVED [Signature]

SEPT 10 1962

FOR REFERENCE ONLY

FOOTING PLAN

PIERS 1-2-3
F.A.S. RT. 32
BOONE COUNTY
STATION 24+20.25

P-1 Re-drawn 7-21-59 Rev. 11-25-59

DESIGNED	SMK	03/19
DRAWN	MCM	05/19
REVIEWED	SMK	8/30/19

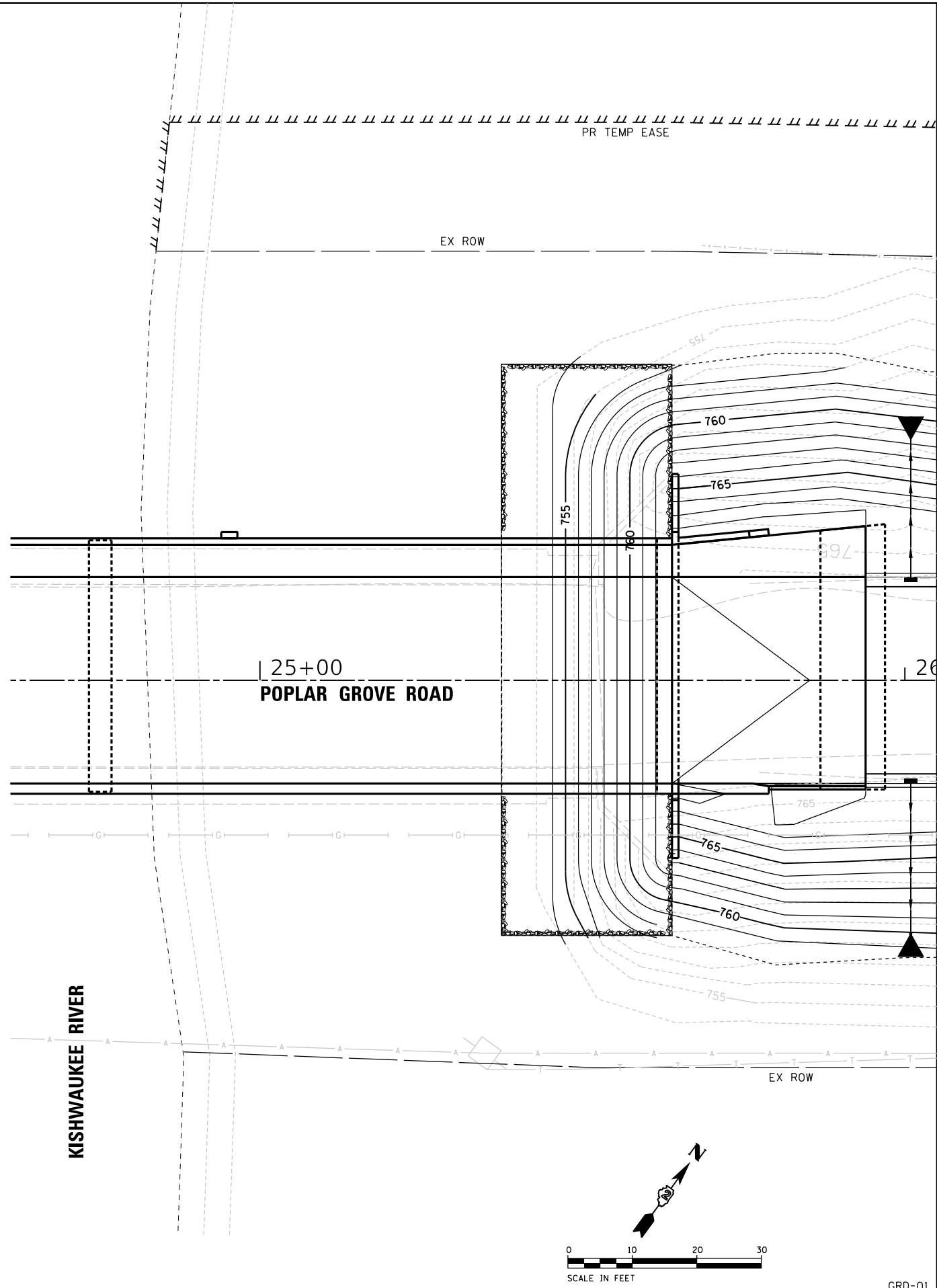
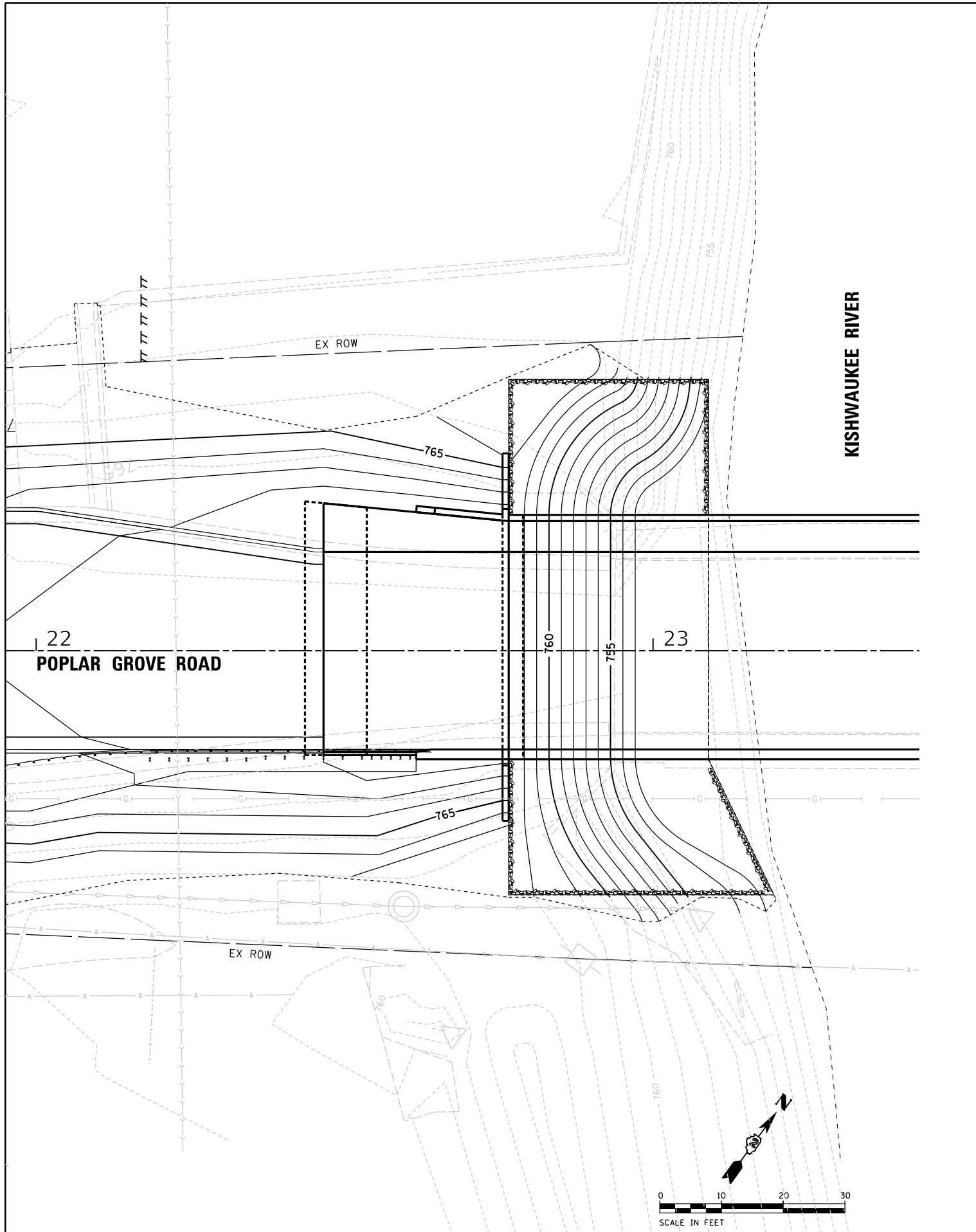
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PLOT SCALE = 02.0000 1' = 1"	PLOT DATE = 8/26/2019	CHECKED -	REVISED -
		DRAWN - MCM	REVISED -
		CHECKED - SMK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLANS
STRUCTURE NO. 004-3098

SHEET NO. 30 OF 30 SHEETS

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	50
CONTRACT NO. 85688			ILLINOIS FED. AID PROJECT	



DESIGNED	KMA	6/6/19
DRAWN	KMA	6/6/19
REVIEWED	DRM	6/21/19

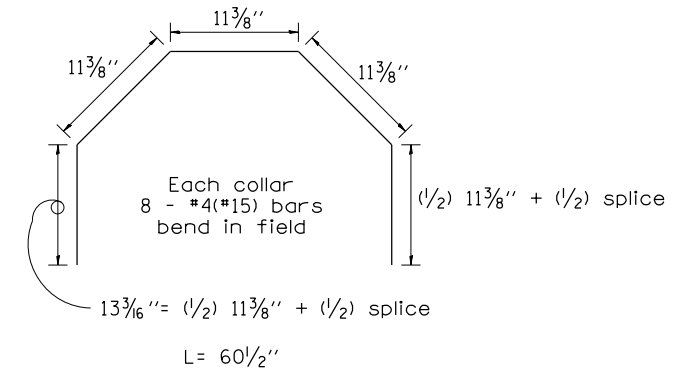
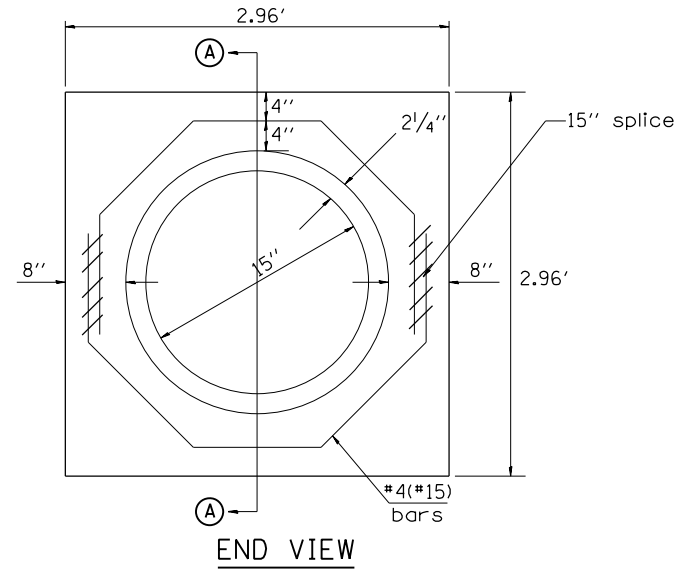
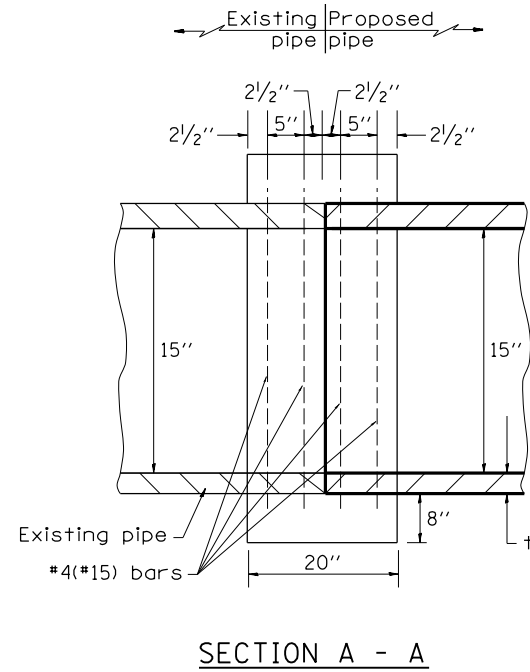
FILE NAME =	USER NAME = Ander00833	DESIGNED - KMA	REVISED -
D2-16L05048-sht-Grading.dgn		DRAWN - KMA	REVISED -
		CHECKED - DRM	REVISED -
		DATE - 8/30/19	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

GRADING PLAN

SCALE: 1" = 10' SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	51
CONTRACT NO. 85688			GRD-01	
ILLINOIS FED. AID PROJECT				



CONCRETE COLLAR DETAIL

GENERAL NOTES

1. THE COLLAR SHALL BE CONSTRUCTED ENTIRELY OF CLASS SI CONCRETE IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF SECTION 503 OF THE STANDARD SPECIFICATIONS. REINFORCEMENT BARS SHALL CONFORM TO SECTION 508.

DESIGNED	JAD	5/17/19
DRAWN	RLA	5/17/19
REVIEWED	BAB	5/17/19

FILE NAME =	USER NAME = Ander-00833	DESIGNED - JAD	REVISED -
D2-16L0504B-sht-det-01.dgn		DRAWN - RLA	REVISED -
		CHECKED - BAB	REVISED -
		DATE - 8/30/19	REVISED -

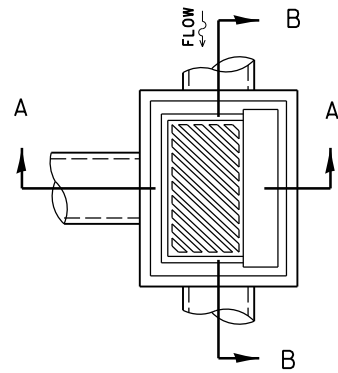
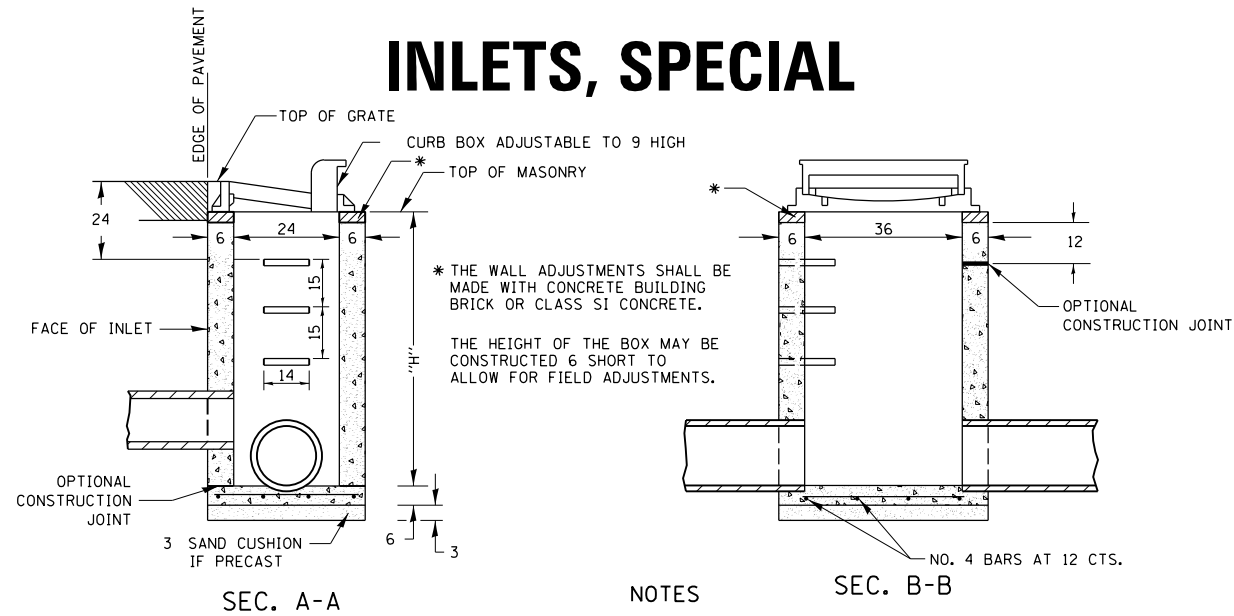
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

DRAINAGE DETAILS

SCALE: NTS SHEET NO. 1 OF 7 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	52
CONTRACT NO. 85688			DET-01	
ILLINOIS FED. AID PROJECT				

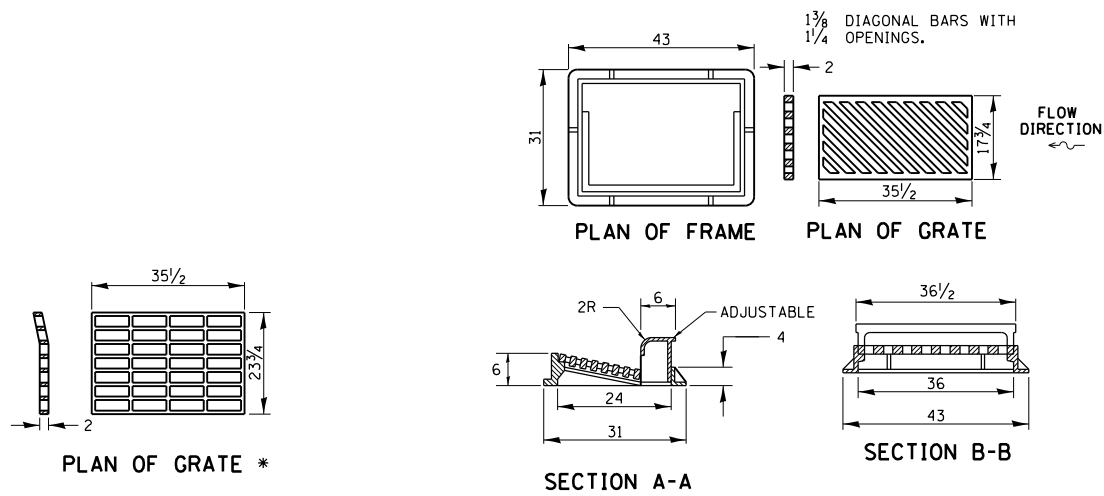
INLETS, SPECIAL



NOTES

- SEE STANDARD 602701 FOR DETAILS OF STEPS.
- EXCEPT AS NOTED HEREON INLET SPECIAL SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 602 OF THE STANDARD SPECIFICATIONS.
- THE SIDE WALLS MAY BE BUILT AS PRECAST SEGMENTED SECTIONS.
- ALL VOIDS AROUND PIPE ENTRANCE, BOTH INSIDE AND OUTSIDE, SHALL BE SEALED WITH MORTAR.
- WEIGHT OF CAST IRON FRAME & GRATE = 530 lbs. ± . STEPS SHALL BE OMITTED WHEN DEPTH OF "H" IS LESS THAN 5 ft.
- CLASS SI CONCRETE OR PRECAST CONCRETE SHALL BE USED THROUGHOUT. PRECAST CONCRETE SHALL BE IN ACCORDANCE WITH ARTICLES 504.01 THRU 504.05 OF THE STANDARD SPECIFICATIONS EXCEPT THAT CONCRETE STRENGTH SHALL BE 4,000 psi AFTER 28 DAYS.
- THE CONTRACT UNIT PRICE EACH FOR INLETS, SPECIAL SHALL INCLUDE THE COST OF CONSTRUCTING THE INLET BOX, FURNISHING AND INSTALLING THE FRAME AND GRATE, THE CAST IRON STEPS (IF USED), THE PRECAST FLOOR SLABS, SAND CUSHION (WHEN USED) AND REINFORCEMENT BARS.

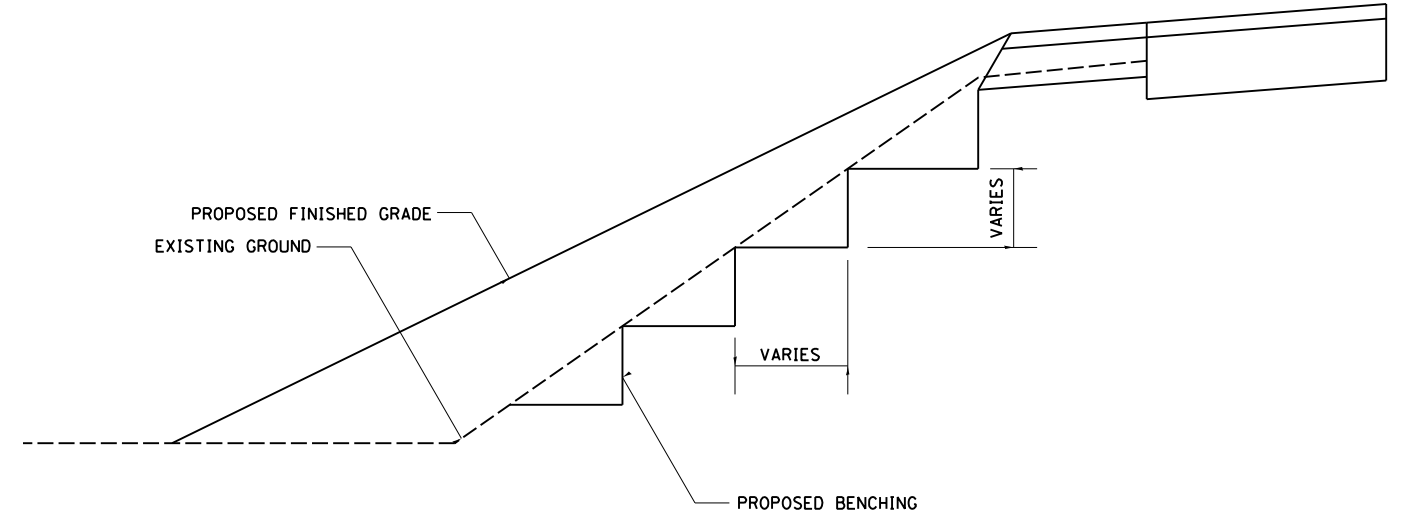
DETAIL OF FRAME & GRATE



REVISED - 1-05-16
 REVISED - 6-27-14
 REVISED - 10-13-11

INLETS, SPECIAL 10.2

TYPICAL BENCHING ON EXISTING EMBANKMENT



REVISED - 2-22-06

TYPICAL BENCHING ON EXISTING EMBANKMENT 50.4

DESIGNED	PL	6/6/13
DRAWN	PL	6/6/13
REVIEWED	KMA	6/6/13

FILE NAME =	USER NAME = Ander00833	DESIGNED - PL	REVISED -
D2-16L0504B-sh1-D2s-tandards-01.dgn		DRAWN - PL	REVISED -
		CHECKED - KMA	REVISED -
		DATE - 8/30/19	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

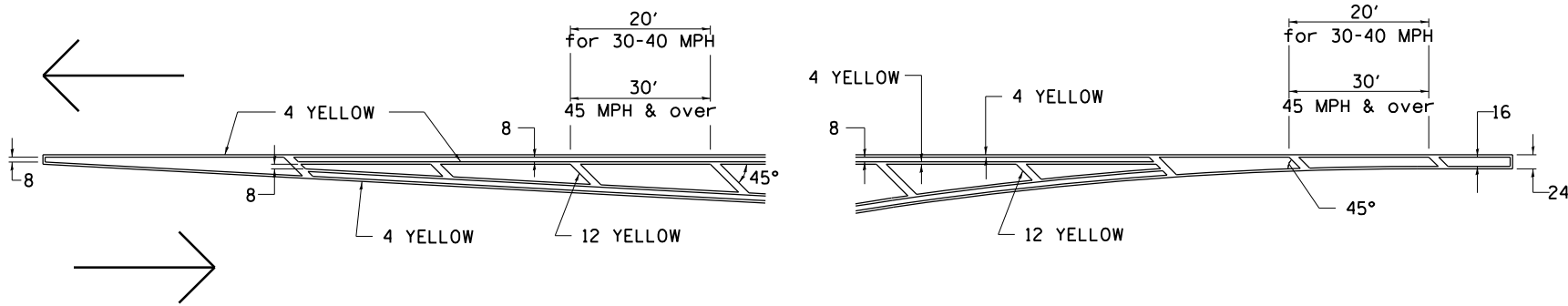
DISTRICT TWO STANDARD DETAILS			
SCALE: NTS	SHEET NO. 2 OF 7 SHEETS	STA.	TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	53
CONTRACT NO. 85688				
ILLINOIS FED. AID PROJECT				

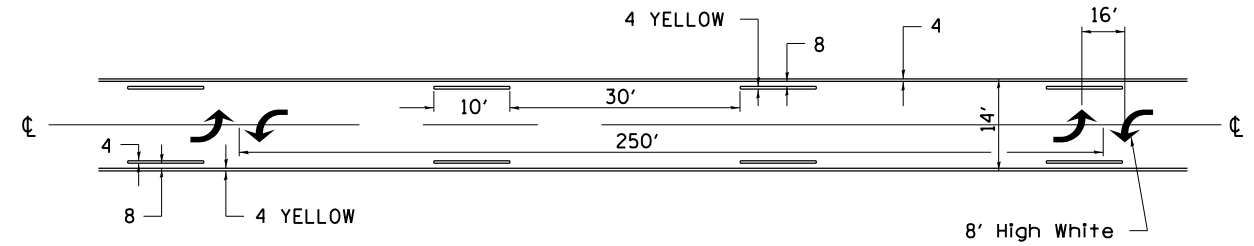
DET-02

TYPICAL PAVEMENT MARKINGS

TYPICAL PAVEMENT MARKING FOR FLUSH MEDIAN AT LEFT TURN LANE

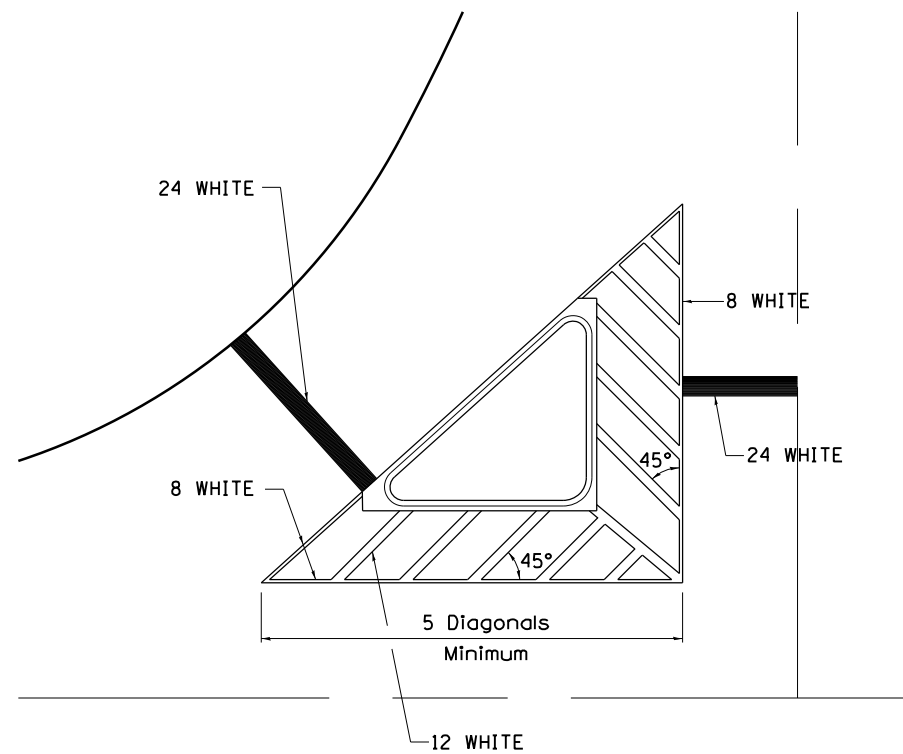


MEDIAN PAVEMENT MARKING



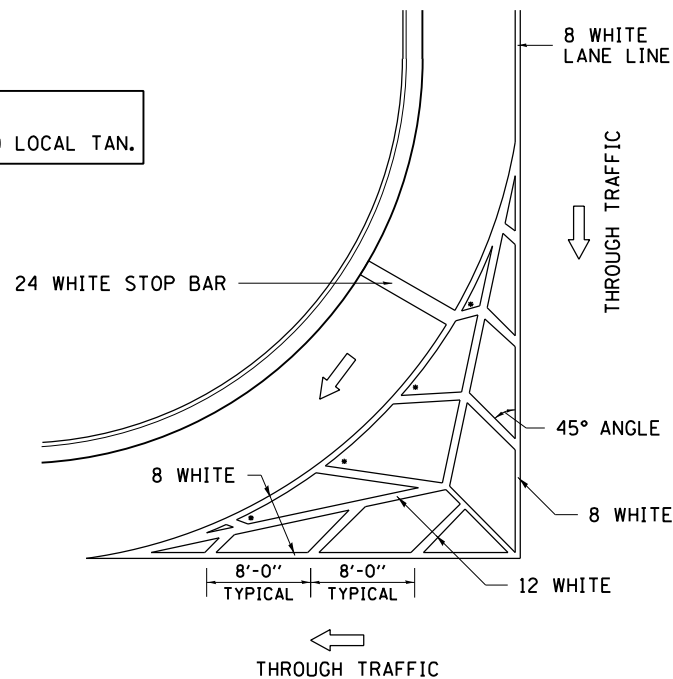
•• ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

TYPICAL ISLAND OFFSET SHOULDER WIDTH



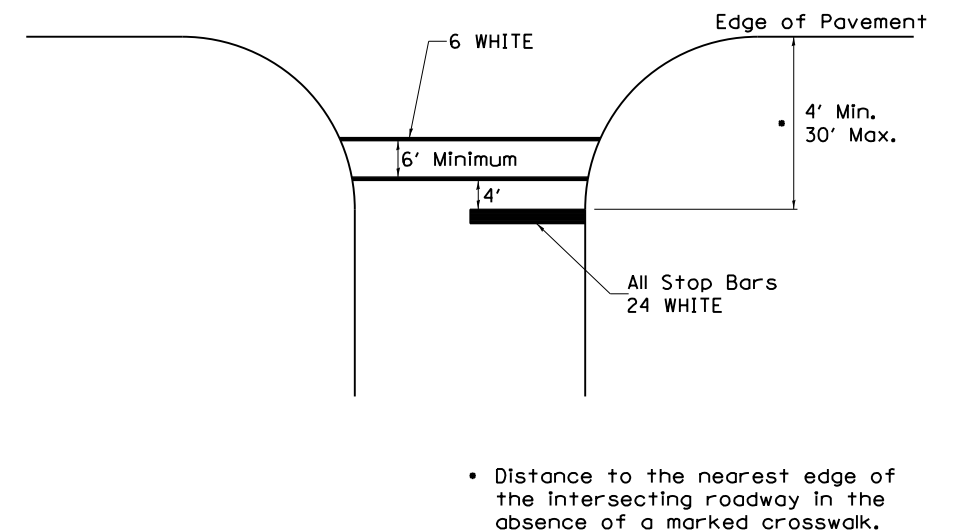
TYPICAL MARKING FOR PAINTED ISLANDS

NOTE:
* 45° TO LOCAL TAN.



STANDARD CROSSWALK MARKING

See Schedules for Locations



• Distance to the nearest edge of the intersecting roadway in the absence of a marked crosswalk.

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Hanson Professional Services Inc.

DESIGNED	PL	6/6/19
DRAWN	PL	6/6/19
REVIEWED	KMA	6/6/19

FILE NAME =	USER NAME = Ander00833	DESIGNED - PL	REVISED - 6-27-14
D2-16L0504B-sht-D2s-tandar-ds-02.dgn		DRAWN - PL	REVISED - 3-05-12
		CHECKED - KMA	REVISED -
		DATE - 8/30/19	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL PAVEMENT MARKINGS SHEET 1 OF 3 41.1

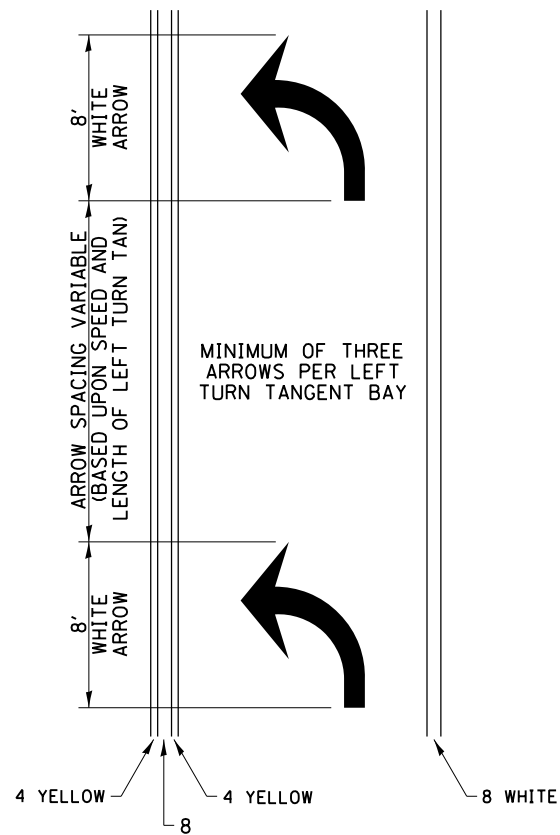
DISTRICT TWO STANDARD DETAILS	
SCALE: NTS	SHEET NO. 3 OF 7 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	54
CONTRACT NO. 85688			ILLINOIS FED. AID PROJECT	

DET-03

TYPICAL PAVEMENT MARKINGS

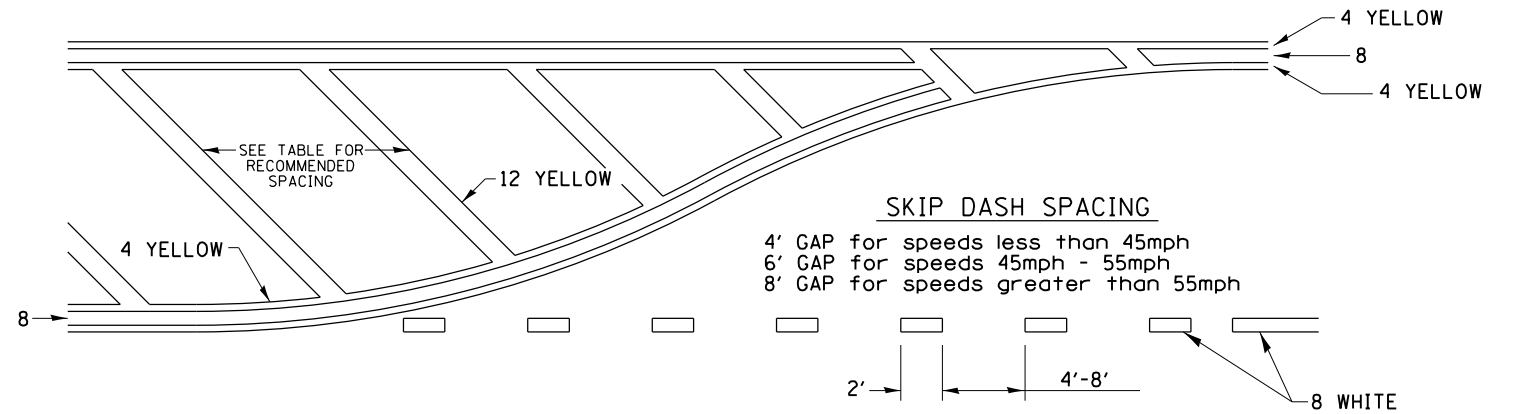
ARROW LAYOUT



- ◀ ONE-WAY AMBER MARKER
- ◁ ONE-WAY CRYSTAL MARKER
- ◆ TWO-WAY AMBER MARKER

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

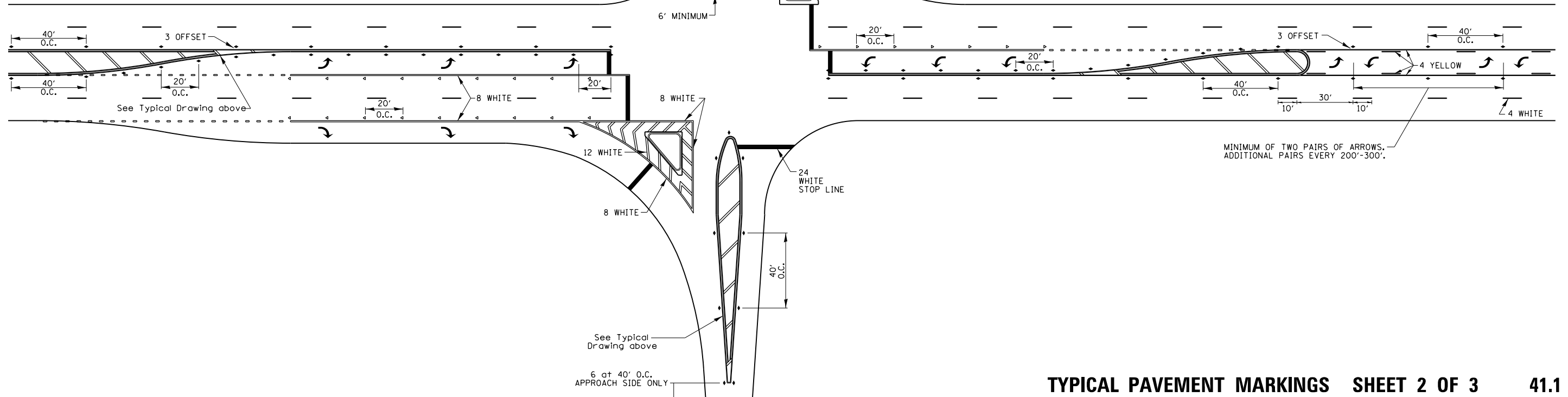
TYPICAL PAVEMENT MARKING FOR FLUSH MEDIAN



RECOMMENDED SPACING BETWEEN DIAGONALS (IN FEET)

Speed Limit Range	Continuous Median Area	Intersection Channelization	Objects (Islands)
less than 30MPH	50'	15'	10'
30-40MPH	75'	20'	15'
45MPH & over	75'	30'	20'

NOTE: if the spacing recommended in the Table does not permit at least five diagonal lines in the area being marked, the spacing from the next lowest speed range should be used. The recommended spacing is measured parallel to the pavement center line.



TYPICAL PAVEMENT MARKINGS SHEET 2 OF 3

41.1

DET-04

DESIGNED	PL	6/6/19
DRAWN	PL	6/6/19
REVIEWED	KMA	6/6/19

FILE NAME =	D2-16L05048-sh1-D2s tander ds-03.dgn	USER NAME =	Ander00833	DESIGNED -	PL	REVISD -	6-27-14
		DRAWN -	PL	REVISD -		REVISD -	3-05-12
		CHECKED -	KMA	REVISD -		REVISD -	
		PLOT DATE =	8/29/2019	DATE -	8/30/19	REVISD -	

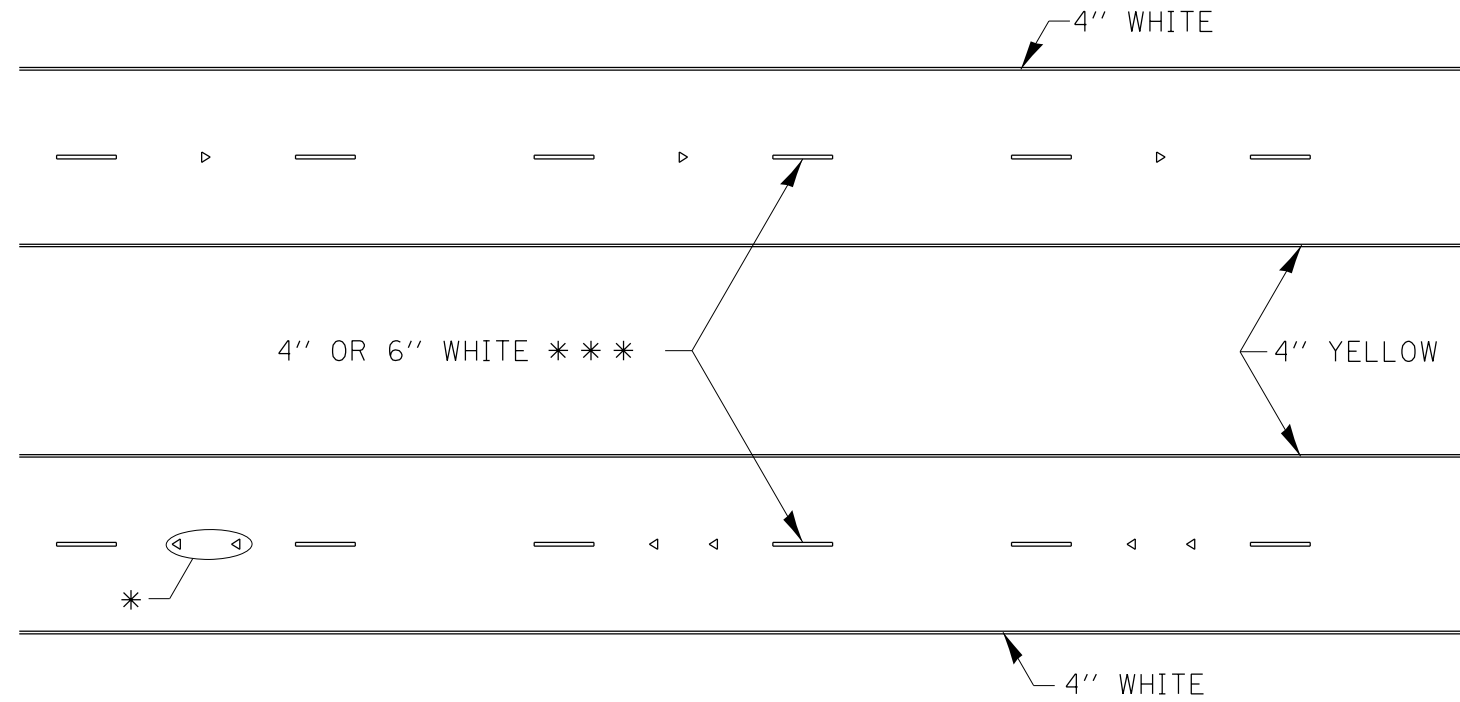
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT TWO
STANDARD DETAILS

SCALE: NTS SHEET NO. 4 OF 7 SHEETS STA. TO STA.

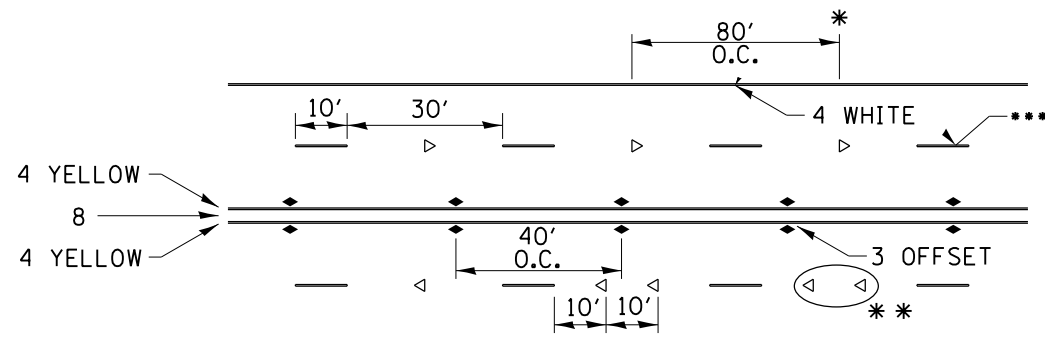
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	55
CONTRACT NO. 85688			ILLINOIS FED. AID PROJECT	

TYPICAL PAVEMENT MARKINGS



* SEE HIGHWAY STANDARD 781001 FOR SPACING DETAILS.
USE DOUBLE MARKERS WHEN ADT > 20,000.

MULTI-LANE / DIVIDED

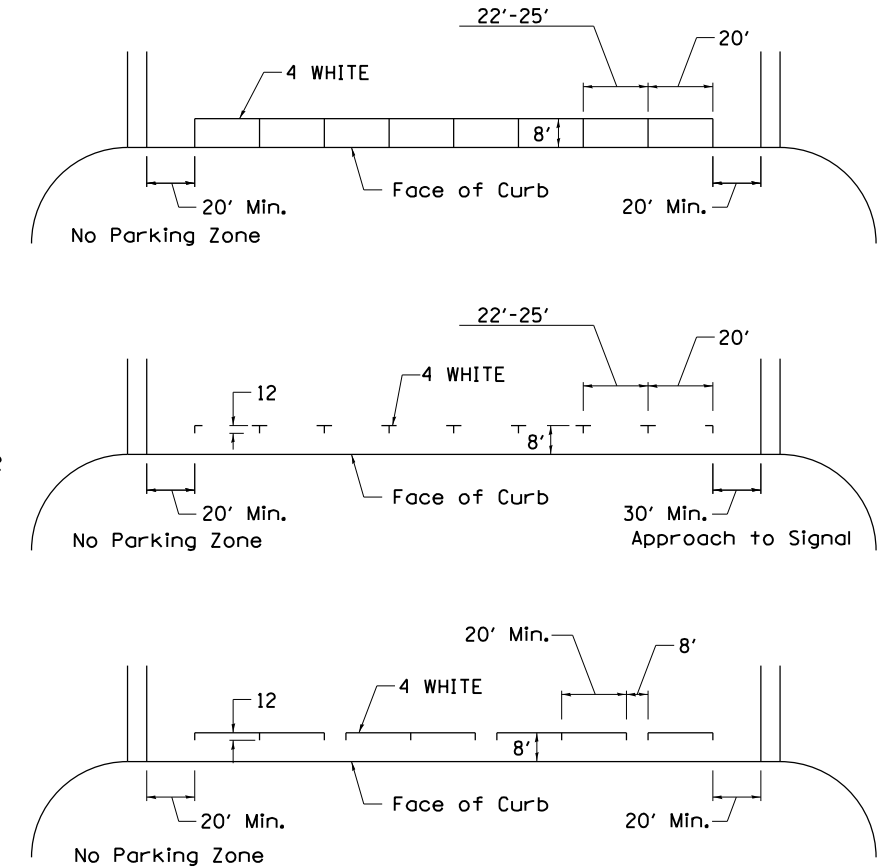


- REDUCE TO 40' O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 10 MPH LOWER THAN POSTED SPEEDS.
- USE DOUBLE MARKERS WHEN ADT ≥ 20,000
- CENTERLINE SKIP DASH PAVEMENT MARKING SPEED LIMIT LESS THAN 40 MPH USE 4" LINE. SPEED LIMIT 40 MPH AND OVER USE 6" LINE.

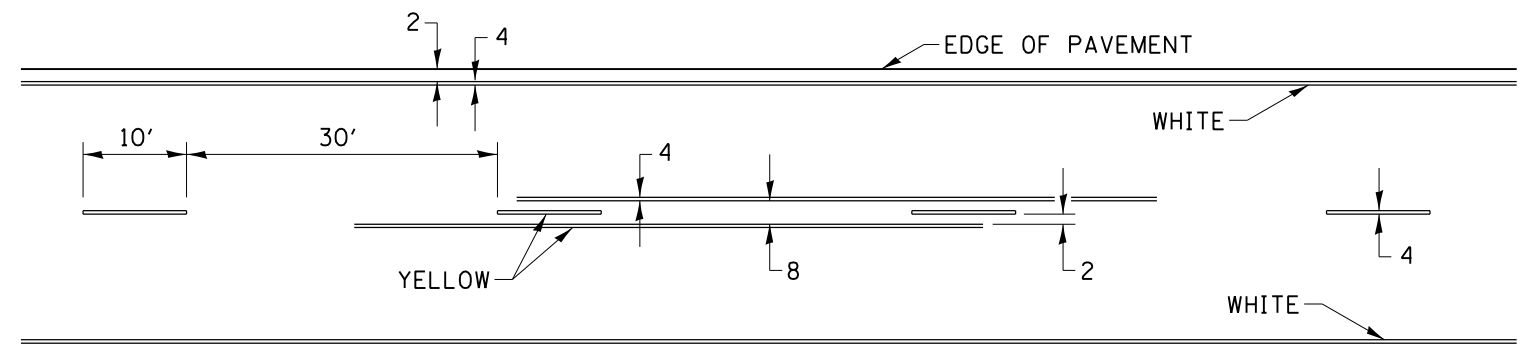
MULTI-LANE / UNDIVIDED & ONE WAY

(FOR MULTI-LANE UNDIVIDED HIGHWAYS USE THIS
DETAIL NOT HIGHWAY STANDARD 781001)

TYPICAL PARKING SPACING



TYPICAL PAVEMENT MARKING FOR TWO LANE SECTION – NO PASSING ZONES



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DESIGNED	PL	6/6/13
DRAWN	PL	6/6/13
REVIEWED	KMA	6/6/13

FILE NAME =	D2-16L0504B-sh1-D2standard-04.dgn
-------------	-----------------------------------

USER NAME =	Ander00833
PLOT SCALE =	2.0000' / in.
PLOT DATE =	8/29/2019

DESIGNED -	PL	REVISD -	6-27-14
DRAWN -	PL	REVISD -	8-27-13
CHECKED -	KMA	REVISD -	11-28-12
DATE -	8/30/19	REVISD -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

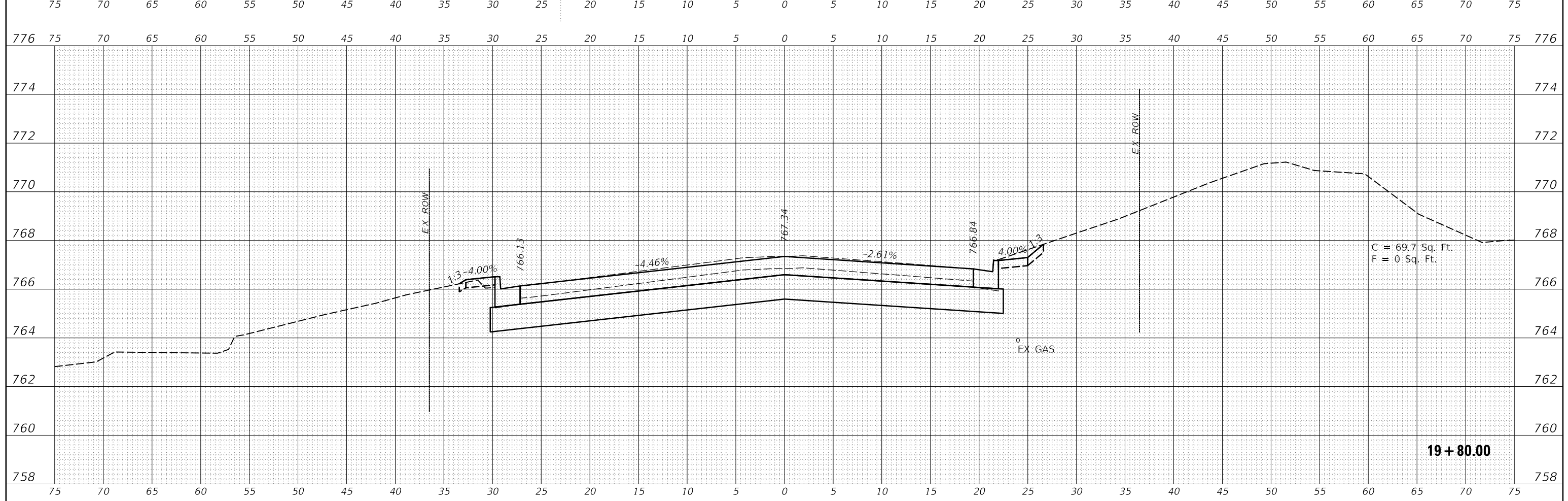
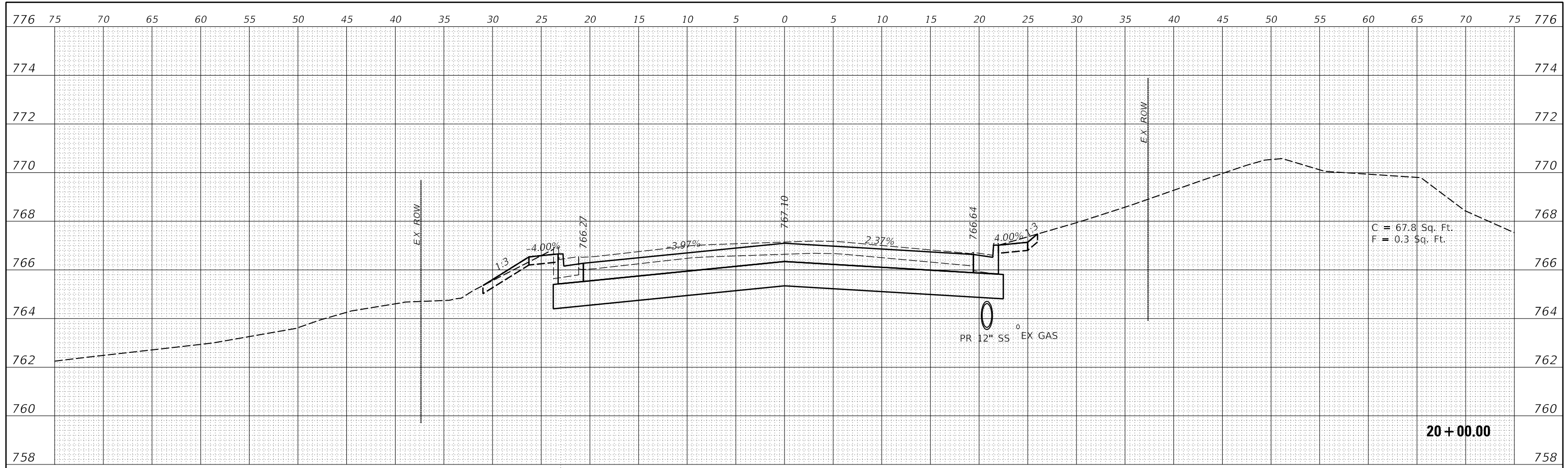
TYPICAL PAVEMENT MARKINGS SHEET 3 OF 3

41.1

SCALE: NTS	SHEET NO. 5 OF 7 SHEETS	STA.	TO STA.
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	56
CONTRACT NO. 85688			ILLINOIS FED. AID PROJECT	

DET-05



DESIGNED	PL	6/6/19
DRAWN	PL	8/19/19
REVIEWED	KMA	8/22/19

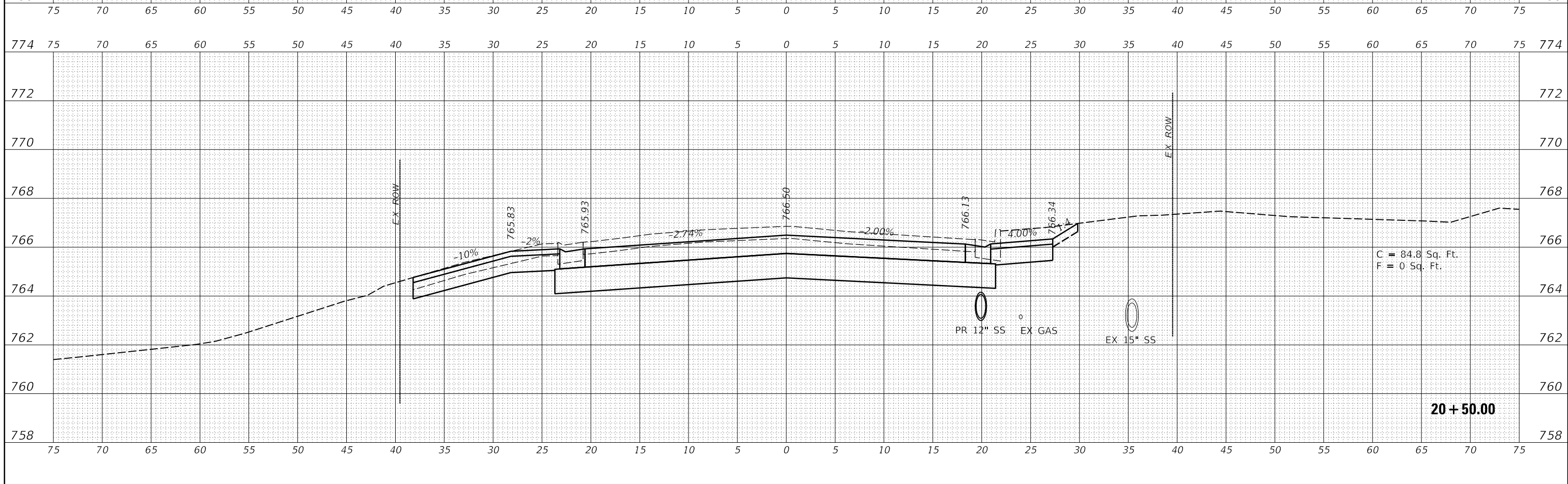
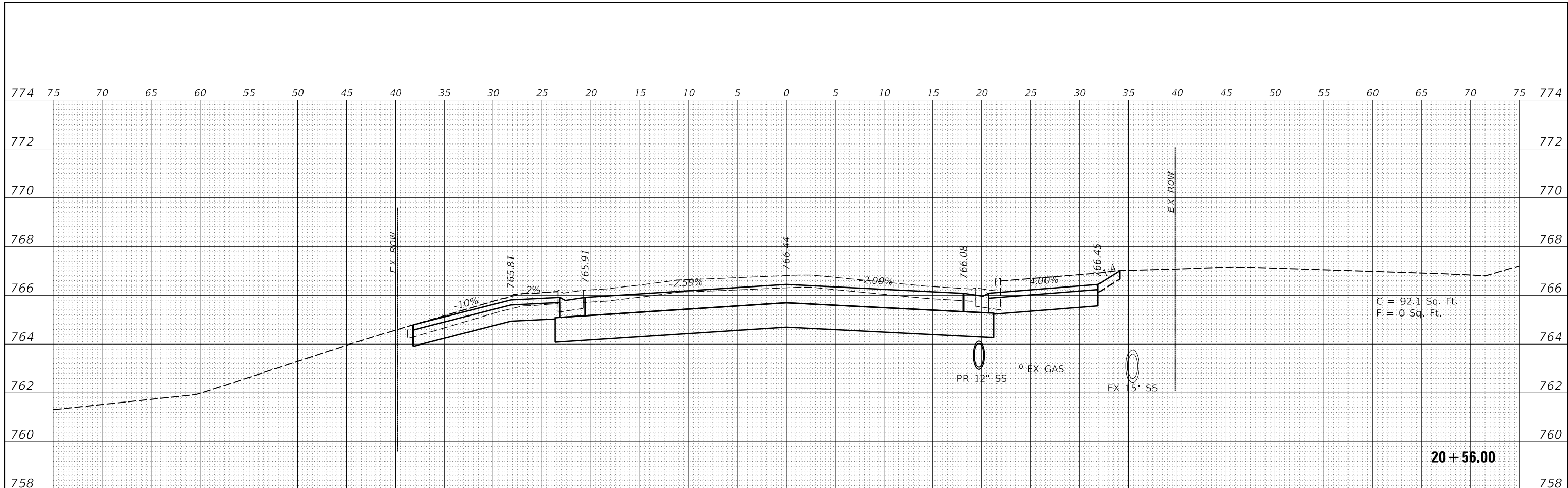
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		CHECKED -	KMA	CHECKED -	KMA	REVISED -	
		DATE -	8/30/19	DATE -	8/30/19	REVISED -	

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS

SCALE: 1/4" = 5' (HORIZ) 1/2" = 2' (VERT) SHEET 1 OF 15 SHEETS STA. 19+80.00 TO STA. 20+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	57
CONTRACT NO. 85688			ILLINOIS FED. AID PROJECT	



DESIGNED	PL	6/6/19
DRAWN	PL	8/19/19
REVIEWED	KMA	8/22/19

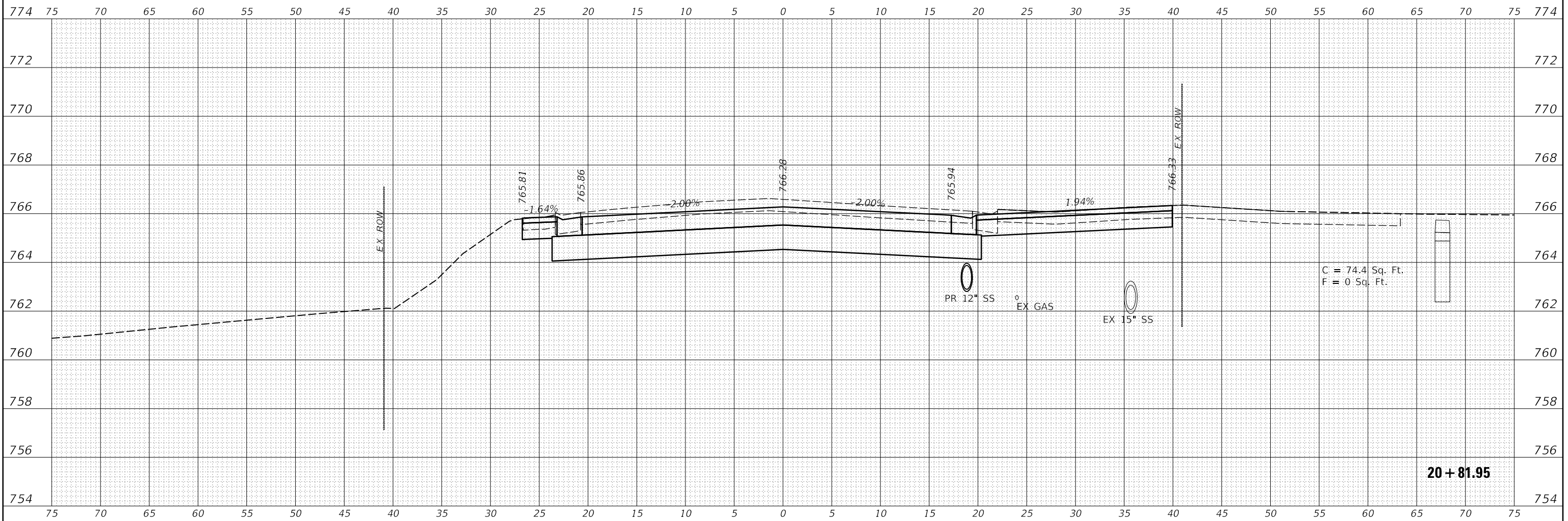
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Default	PLOT SCALE = 10.0000' / in.	CHECKED - KMA	REVISED -
	PLOT DATE = 8/29/2019	DATE - 8/30/19	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS

SCALE: 1/2" = 5' (HORIZ) 1/2" = 2' (VERT) SHEET 2 OF 15 SHEETS STA. 20+50.00 TO STA. 20+56.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	58
CONTRACT NO. 85688				
ILLINOIS FED. AID PROJECT				



DESIGNED	PL	6/6/19
DRAWN	PL	8/19/19
REVIEWED	KMA	8/22/19

FILE NAME =	D2-16L0504B-sht-xs-01.dgn
USER NAME =	Anderson0833
DESIGNED -	PL
DRAWN -	PL
CHECKED -	KMA
DATE -	8/30/19

REVISIED -	
REVISIED -	
REVISIED -	
REVISIED -	

PLOT SCALE =	10.0000' / in.
DATE	8/30/19

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

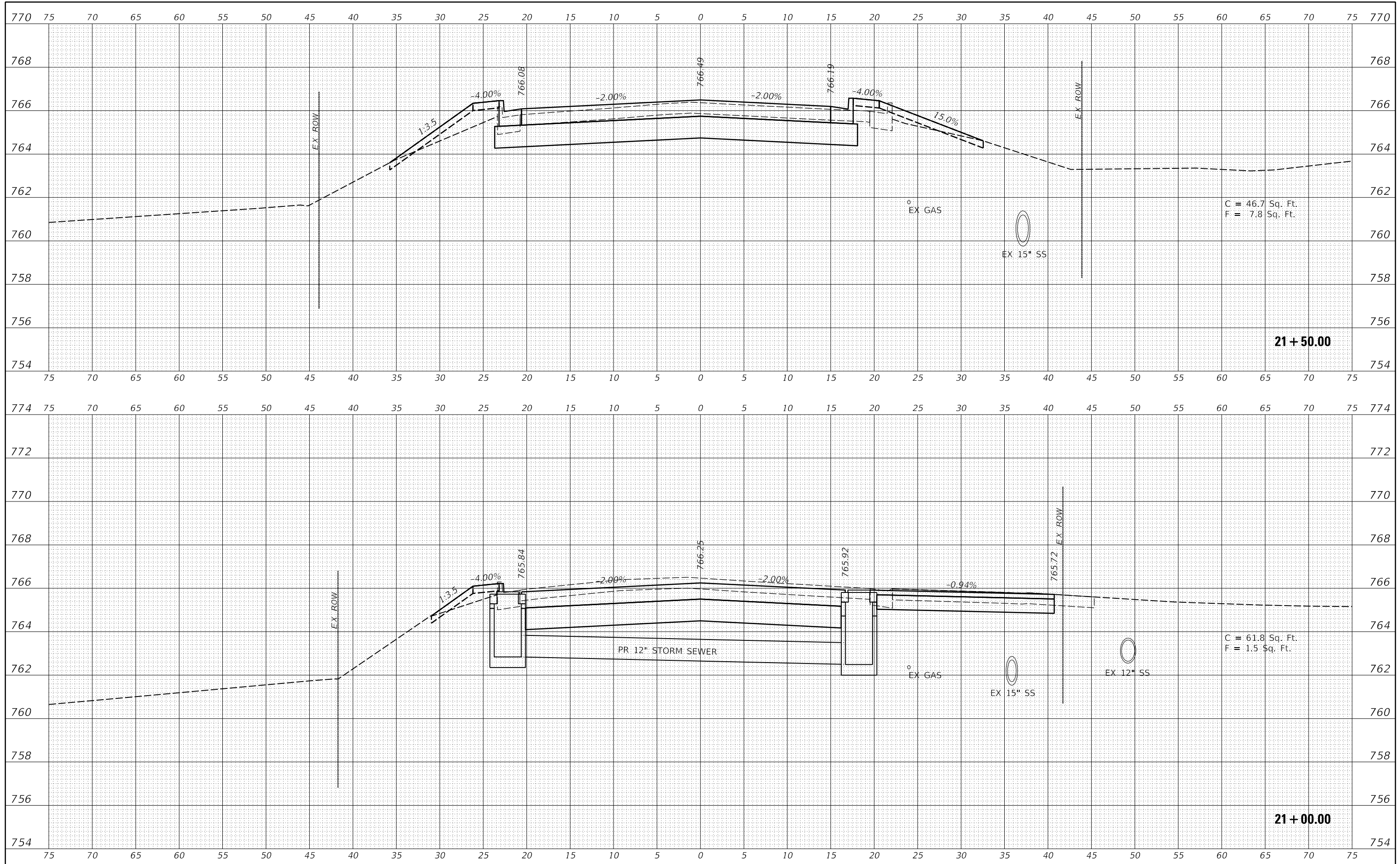
CROSS SECTIONS

SCALE: 1/2" = 5' (HORIZ)
 1/4" = 2' (VERT) SHEET 3 OF 15 SHEETS STA. 20+81.95 TO STA. 20+81.95

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	59
CONTRACT NO. 85688			ILLINOIS FED. AID PROJECT	

20 + 81.95

C = 74.4 Sq. Ft.
 F = 0 Sq. Ft.



DESIGNED	PL	6/6/19
DRAWN	PL	8/19/19
REVIEWED	KMA	8/22/19

FILE NAME =	D2-16L0504B-sht-xs-01.dgn
USER NAME =	Ander-00833
DESIGNED -	PL
DRAWN -	PL
CHECKED -	KMA
DATE -	8/30/19

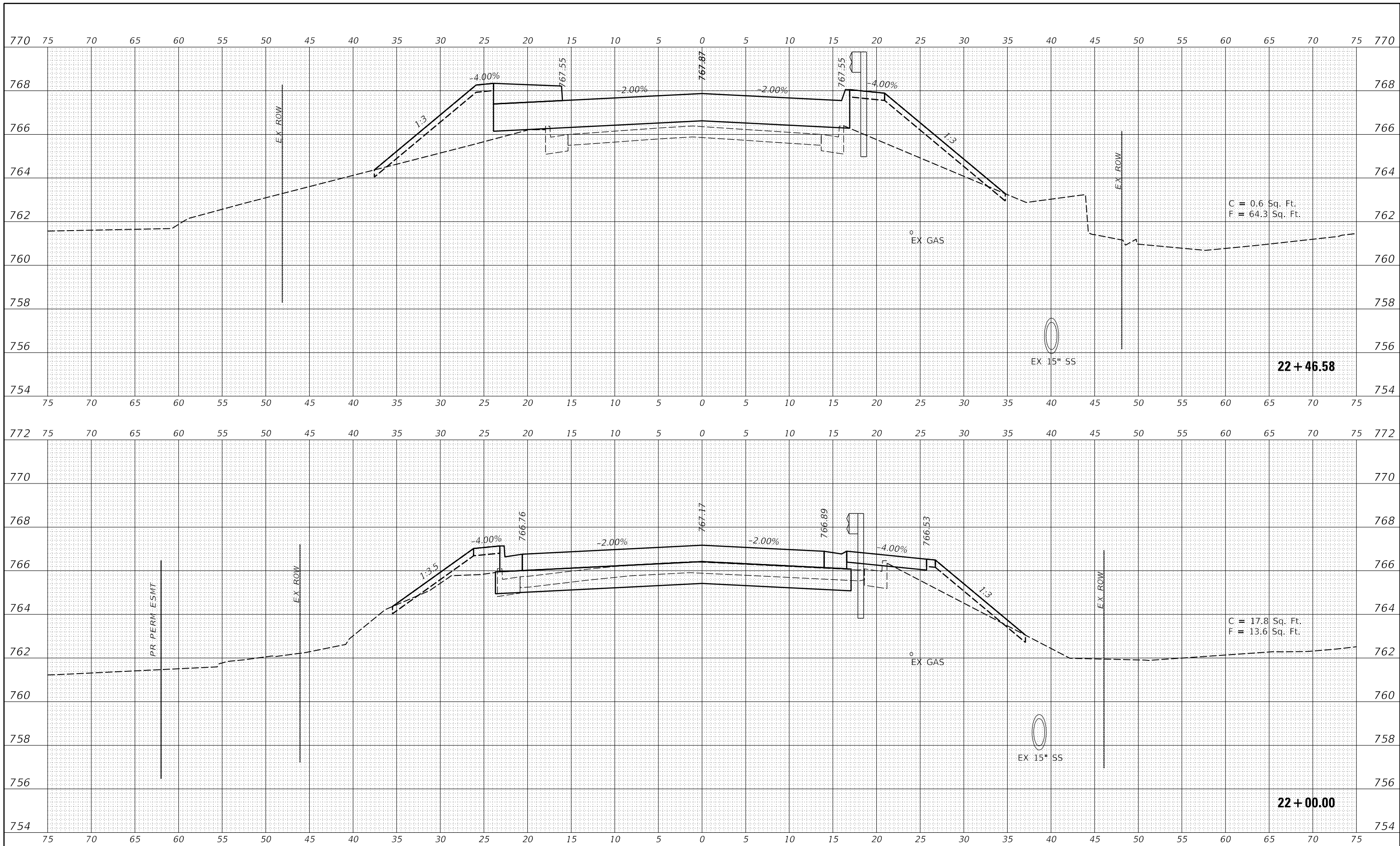
REVIS	NO.	DATE	BY
REVIS	-	-	-
REVIS	-	-	-
REVIS	-	-	-

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS

SCALE: 1/2" = 5' (HORIZ)
 1/2" = 2' (VERT) SHEET 4 OF 15 SHEETS STA. 21+00.00 TO STA. 21+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	60
CONTRACT NO. 85688				
ILLINOIS FED. AID PROJECT				



C = 0.6 Sq. Ft.
 F = 64.3 Sq. Ft.

C = 17.8 Sq. Ft.
 F = 13.6 Sq. Ft.

DESIGNED	PL	6/6/19
DRAWN	PL	8/19/19
REVIEWED	KMA	8/22/19

FILE NAME = D2-16L0504B-sht-xs-01.dgn
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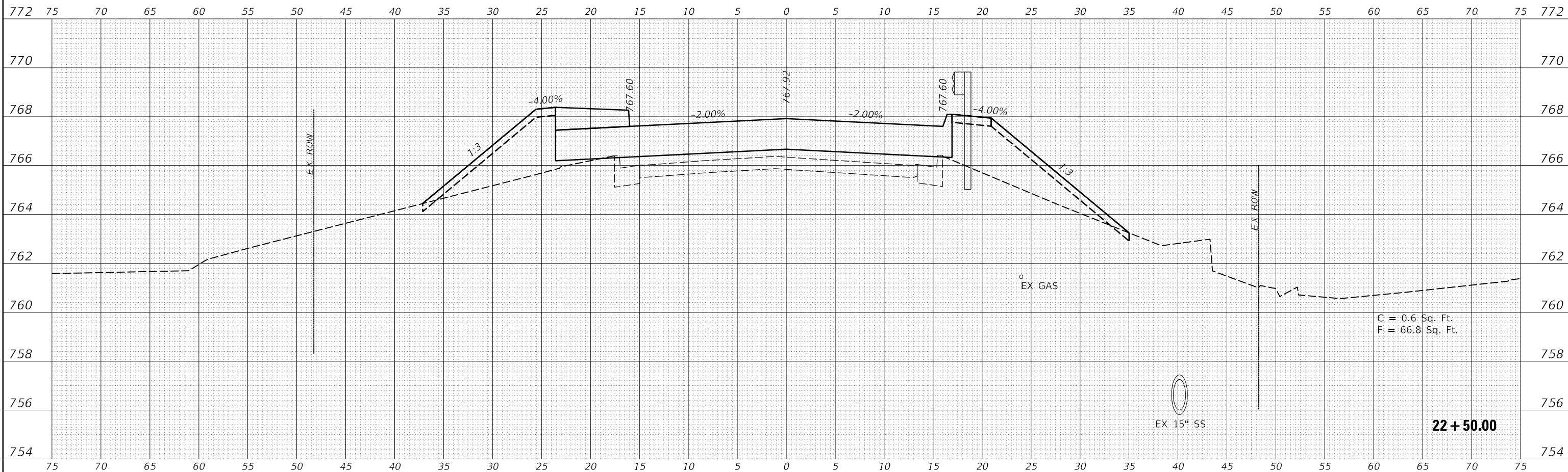
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PLOT DATE = 8/29/2019	CHECKED - KMA	REVISED -
	DATE - 8/30/19	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS

SCALE: 1/2" = 5' (HORIZ)
 1/4" = 2' (VERT) SHEET 5 OF 15 SHEETS STA. 22+00.00 TO STA. 22+46.58

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	61
CONTRACT NO. 85688			ILLINOIS FED. AID PROJECT	



C = 0.6 Sq. Ft.
 F = 66.8 Sq. Ft.

EX 15" SS

22 + 50.00

DESIGNED	PL	6/6/19
DRAWN	PL	8/19/19
REVIEWED	KMA	8/22/19

FILE NAME =	D2-16L0504B-sht-xs-01.dgn
USER NAME =	Ander-00833

DESIGNED -	PL
DRAWN -	PL
CHECKED -	KMA
DATE -	8/30/19

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REVISED -	
REVISED -	

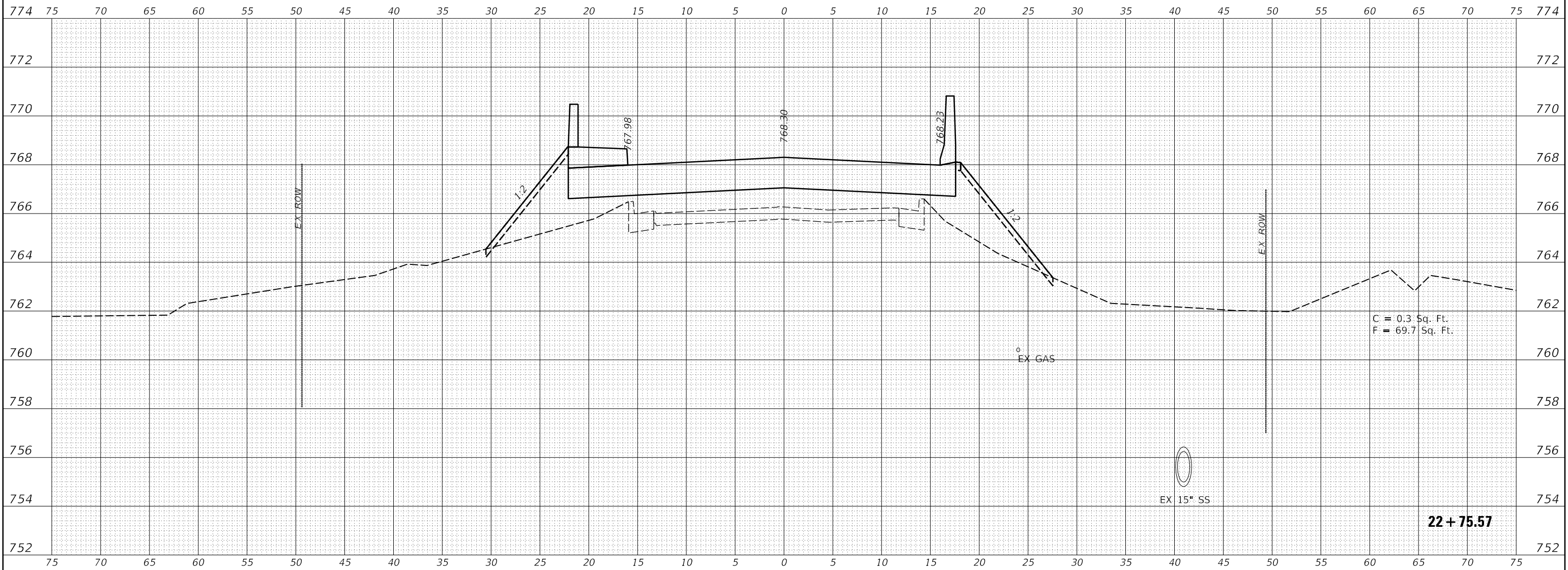
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DRAWN -	PL
CHECKED -	KMA
DATE -	8/30/19

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS

SCALE: 1/4" = 5' (HORIZ)
 1/2" = 2' (VERT) SHEET 6 OF 15 SHEETS STA. 22+50.00 TO STA. 22+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	62
CONTRACT NO. 85688				
ILLINOIS FED. AID PROJECT				



C = 0.3 Sq. Ft.
 F = 69.7 Sq. Ft.

EX 15" SS

22 + 75.57

DESIGNED	PL	6/6/19
DRAWN	PL	8/19/19
REVIEWED	KMA	8/22/19

FILE NAME =	D2-16L0504B-sht-xs-01.dgn
USER NAME =	Ander-00833
DESIGNED -	PL
DRAWN -	PL
CHECKED -	KMA
DATE -	8/30/19

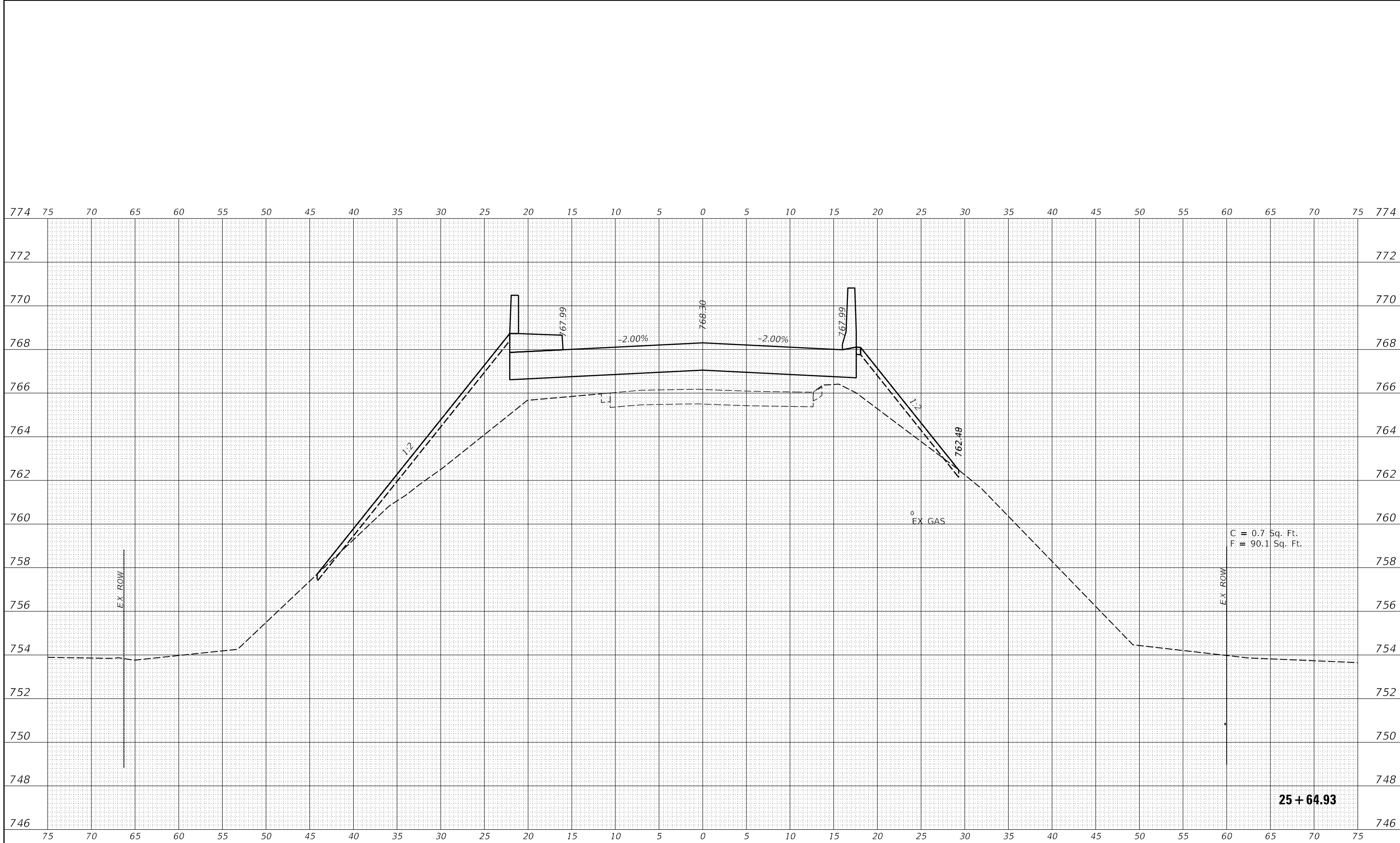
REVIS	NO.	DATE	BY
REVIS	NO.	DATE	BY
REVIS	NO.	DATE	BY

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS

SCALE: 1/2" = 5' (HORIZ)
 1/2" = 2' (VERT) SHEET 7 OF 15 SHEETS STA. 22+75.57 TO STA. 22+75.57

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	63
CONTRACT NO. 85688				
ILLINOIS FED. AID PROJECT				



DESIGNED	PL	6/6/19
DRAWN	PL	8/19/19
REVIEWED	KMA	8/22/19

FILE NAME =	D2-16L0504B-sht-xs-01.dgn
USER NAME =	Ander-00833

DESIGNED -	PL
DRAWN -	PL
CHECKED -	KMA
DATE -	8/30/19

REVISED -	
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PLOT SCALE =	10.0000' / in.
PLOT DATE =	8/29/2019

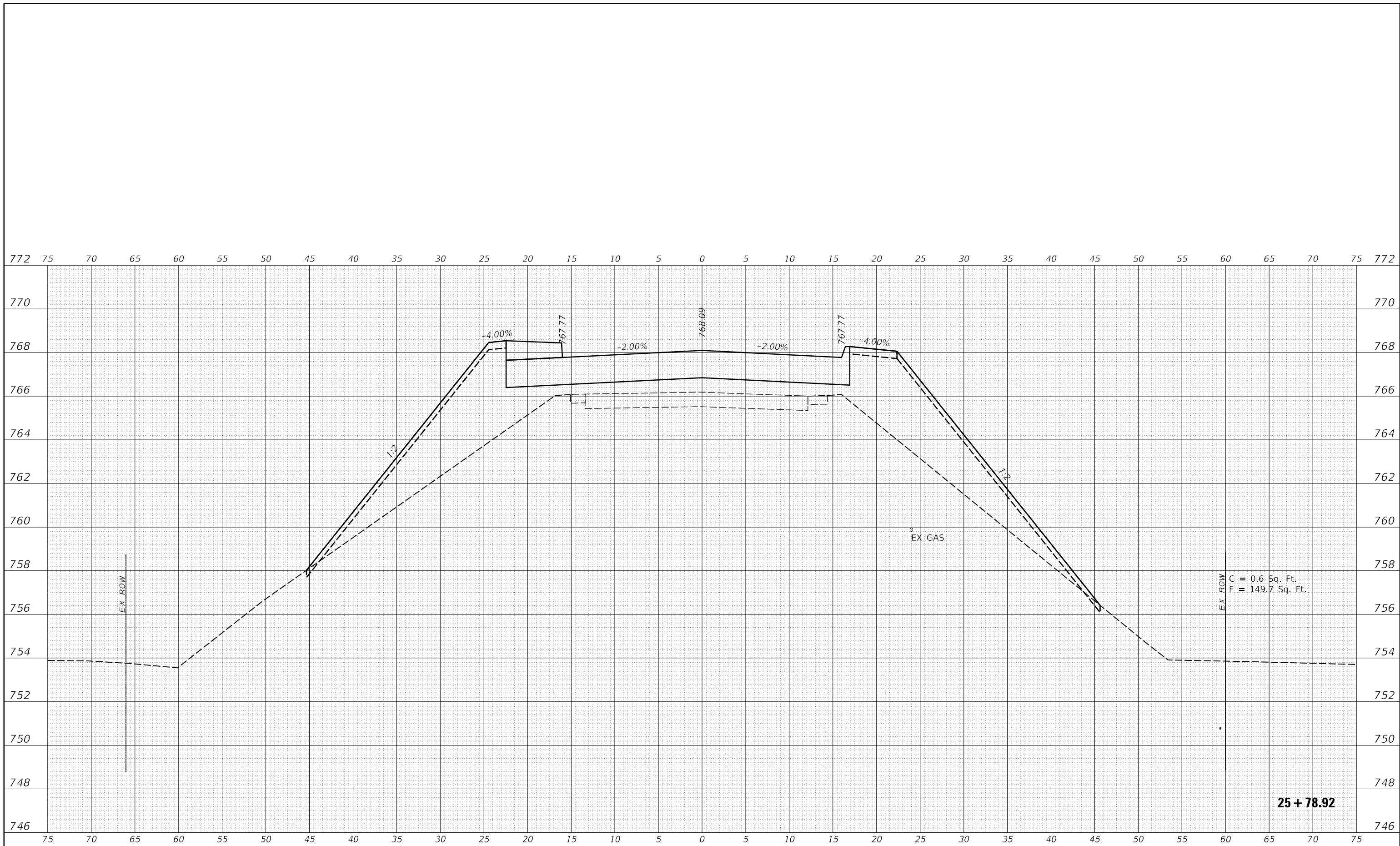
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS

SCALE: 1/4" = 5' (HORIZ) 1/8" = 2' (VERT) SHEET 8 OF 15 SHEETS STA. 25+64.93 TO STA. 25+64.93

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	64
CONTRACT NO. 85688				
ILLINOIS FED. AID PROJECT				

25 + 64.93



DESIGNED	PL	6/6/19
DRAWN	PL	8/19/19
REVIEWED	KMA	8/22/19

FILE NAME =	D2-16L0504B-sht-xs-01.dgn
USER NAME =	Ander-00833

DESIGNED -	PL
DRAWN -	PL
CHECKED -	KMA
DATE -	8/30/19

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REVISIED -	
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REVISIED -	

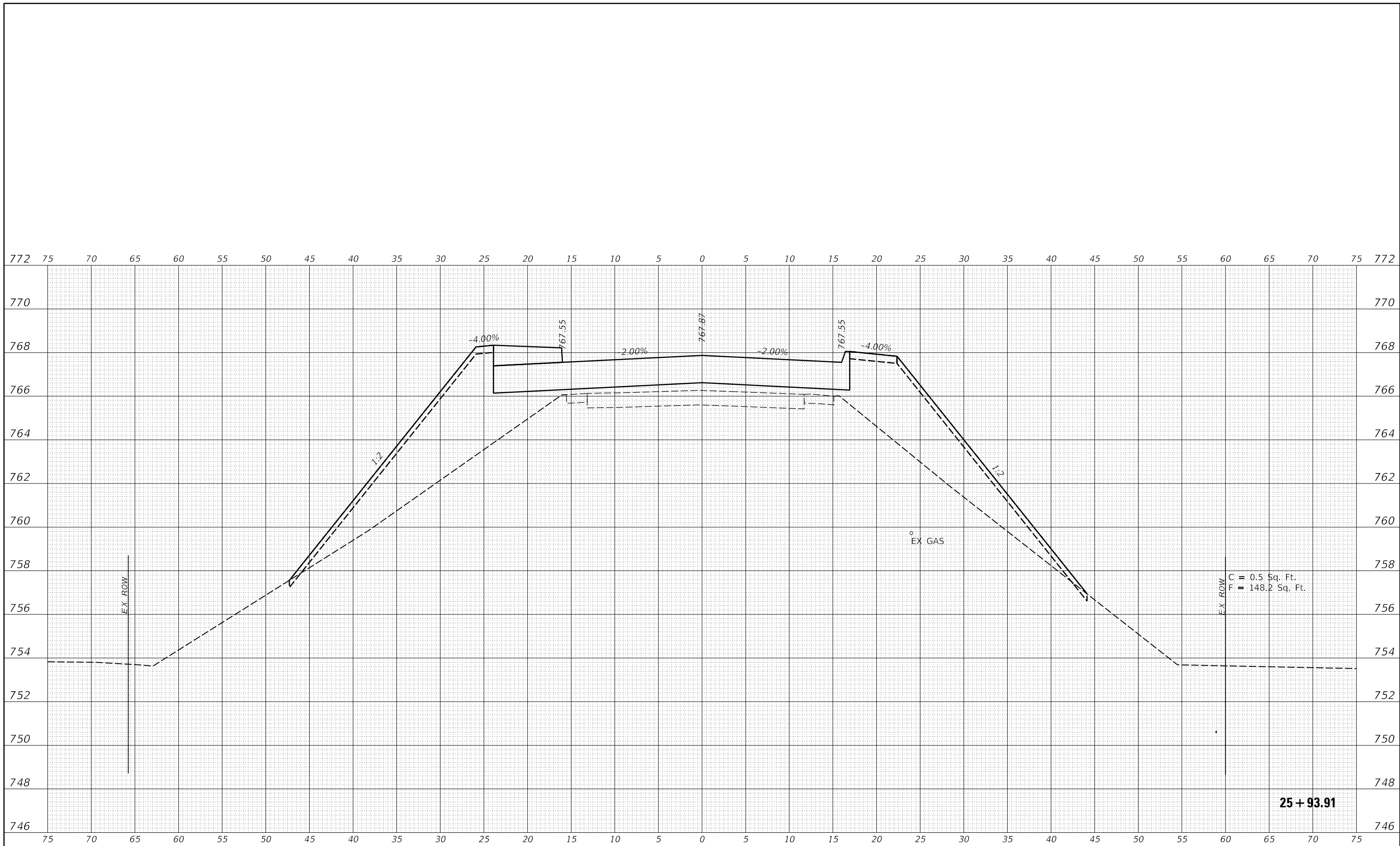
PLOT SCALE =	10.0000' / in.
PLOT DATE =	8/29/2019

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS		
SCALE: 1/2" = 5' (HORIZ)	SHEET 9	OF 15 SHEETS
SCALE: 1/2" = 2' (VERT)	STA. 25+78.92 TO STA. 25+78.92	

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	65
CONTRACT NO. 85688			ILLINOIS FED. AID PROJECT	

25 + 78.92



DESIGNED	PL	6/6/19
DRAWN	PL	8/19/19
REVIEWED	KMA	8/22/19

FILE NAME =	D2-16L0504B-sht-xs-01.dgn
USER NAME =	Ander00833

DESIGNED -	PL
DRAWN -	PL
CHECKED -	KMA
DATE -	8/30/19

REVISED -	
REVISED -	
REVISED -	
REVISED -	

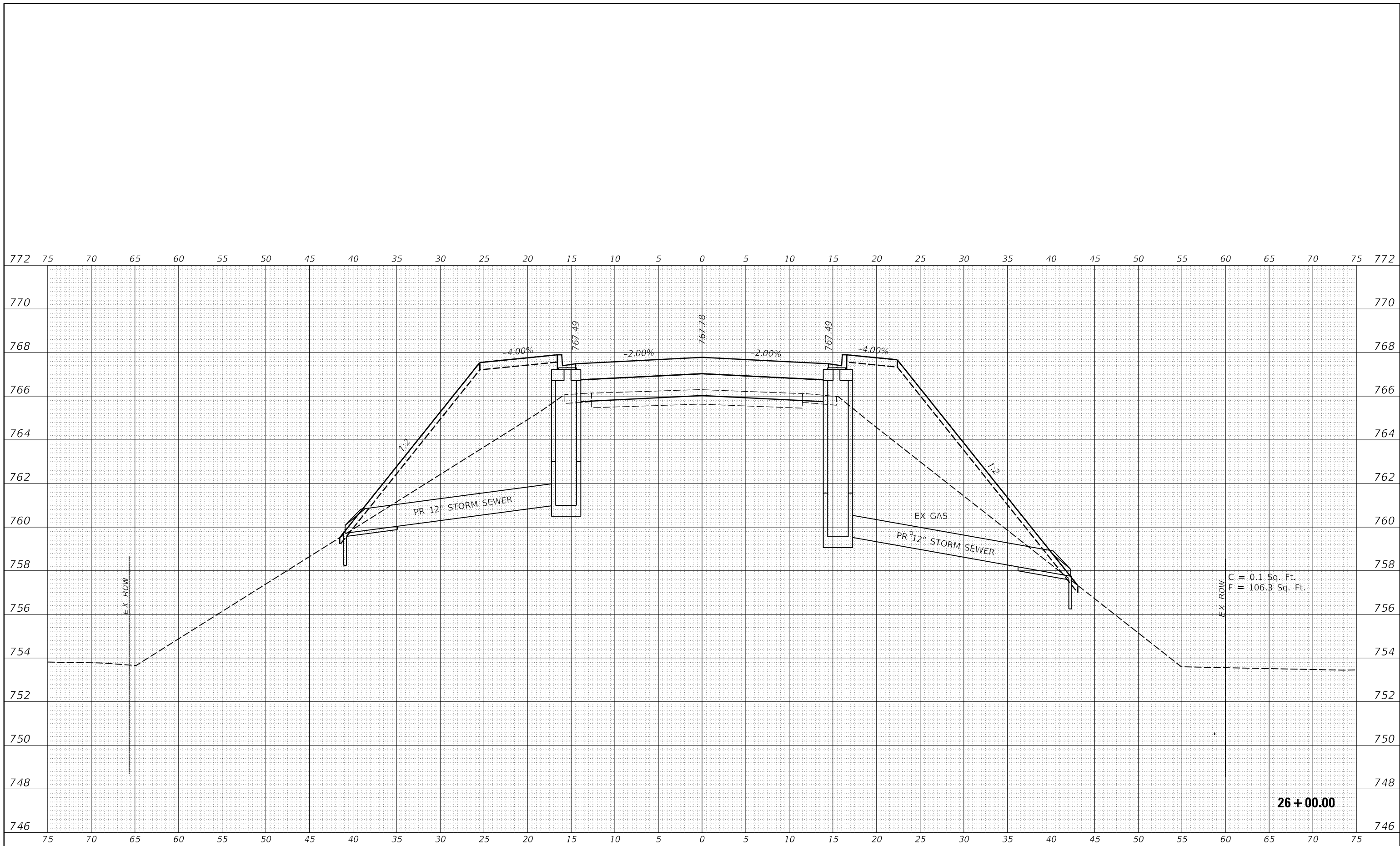
PLOT SCALE =	10.0000' / in.
PLOT DATE =	8/29/2019

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS

SCALE: 1/2" = 5' (HORIZ) / 1/4" = 2' (VERT) SHEET 10 OF 15 SHEETS STA. 25+93.91 TO STA. 25+93.91

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	66
CONTRACT NO. 85688				
ILLINOIS FED. AID PROJECT				



DESIGNED	PL	6/6/19
DRAWN	PL	8/19/19
REVIEWED	KMA	8/22/19

FILE NAME =	D2-16L0504B-sht-xs-01.dgn
USER NAME =	Ander00833

DESIGNED -	PL
DRAWN -	PL
CHECKED -	KMA
DATE -	8/30/19

REVISED -	
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REVISED -	
REVISED -	

PLOT SCALE =	10.0000' / in.
PLOT DATE =	8/29/2019

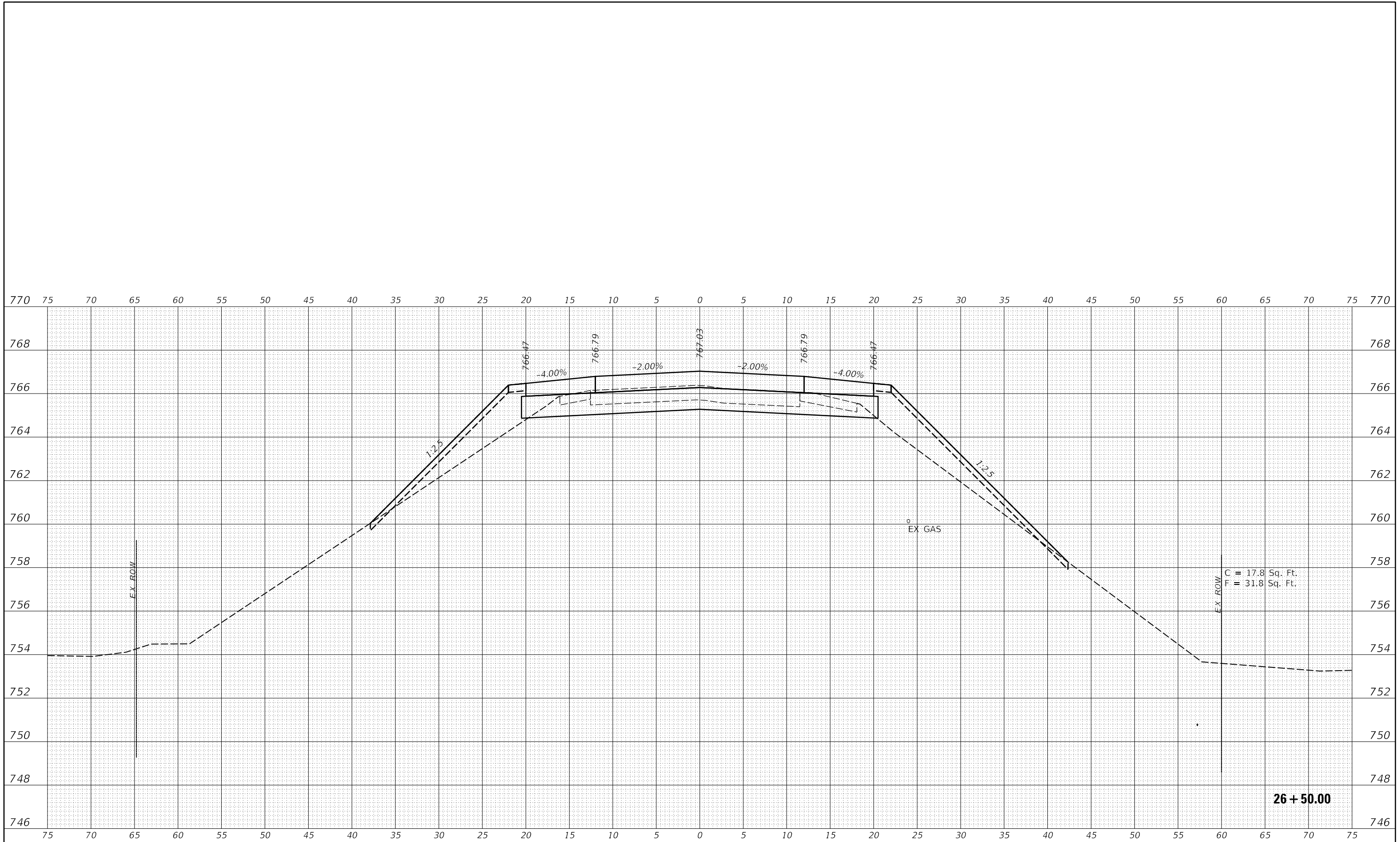
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS		
SCALE:	1/2" = 5' (HORIZ) 1/2" = 2' (VERT)	SHEET 11 OF 15 SHEETS
		STA. 26+00.00 TO STA. 26+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	67
CONTRACT NO. 85688				
ILLINOIS FED. AID PROJECT				

26 + 00.00

C = 0.1 Sq. Ft.
 F = 106.8 Sq. Ft.



DESIGNED	PL	6/6/19
DRAWN	PL	8/19/19
REVIEWED	KMA	8/22/19

FILE NAME =	D2-16L0504B-sht-xs-01.dgn
USER NAME =	Ander00833
DESIGNED -	PL
DRAWN -	PL
CHECKED -	KMA
DATE -	8/30/19

DESIGNED -	PL
DRAWN -	PL
CHECKED -	KMA
DATE -	8/30/19

DESIGNED -	PL
DRAWN -	PL
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DATE -	8/30/19

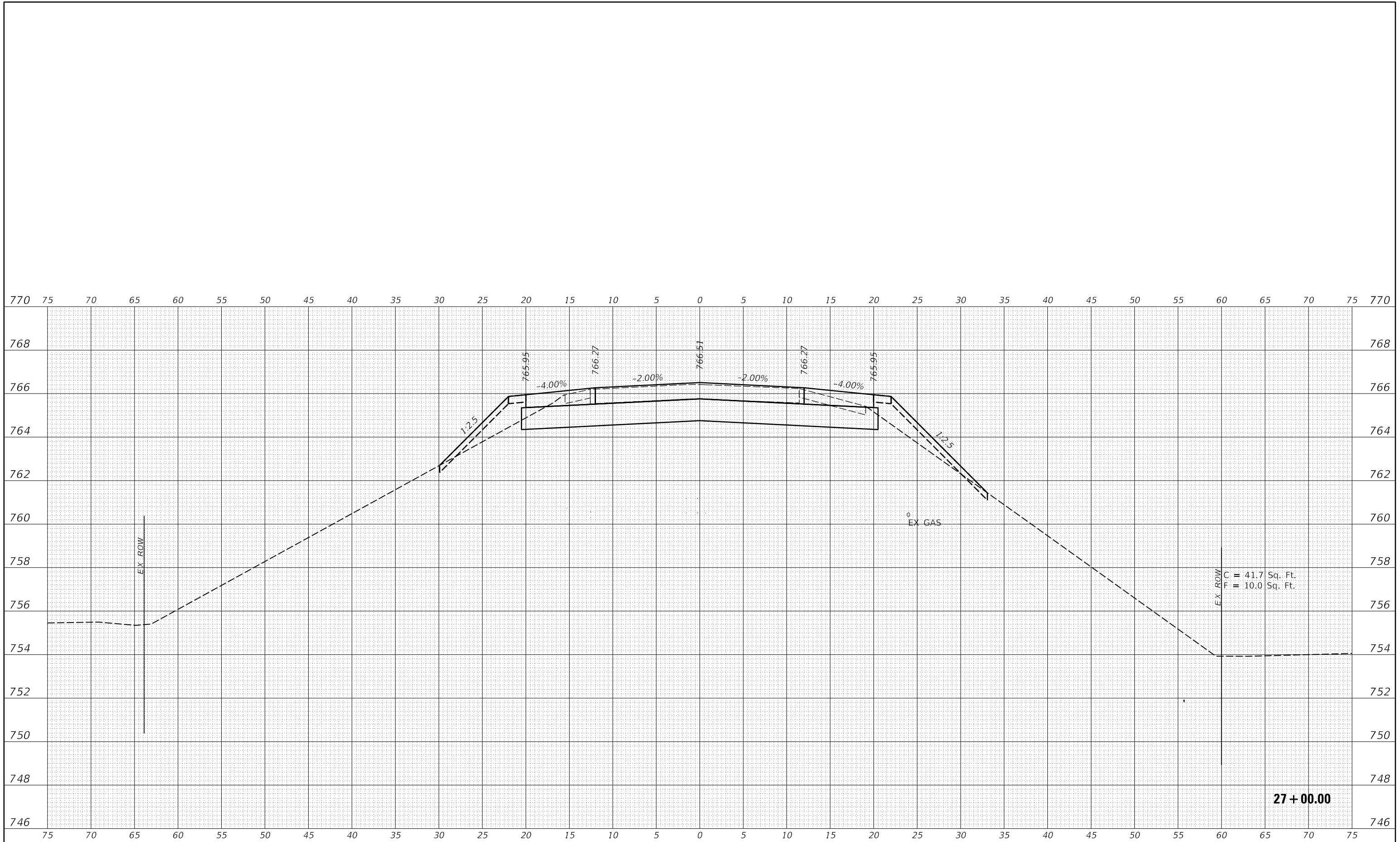
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CHECKED -	KMA
DATE -	8/30/19

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS	
SCALE: 1/2" = 5' (HORIZ) 1/4" = 2' (VERT)	SHEET 12 OF 15 SHEETS
STA. 26+50.00 TO STA. 26+50.00	

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	68
CONTRACT NO. 85688				
ILLINOIS FED. AID PROJECT				

26 + 50.00



DESIGNED	PL	6/6/19
DRAWN	PL	8/19/19
REVIEWED	KMA	8/22/19

FILE NAME =	D2-16L0504B-sht-xs-01.dgn
USER NAME =	Ander-00833

DESIGNED -	PL
DRAWN -	PL
CHECKED -	KMA
DATE -	8/30/19

REVISED -	
REVISED -	
REVISED -	
REVISED -	

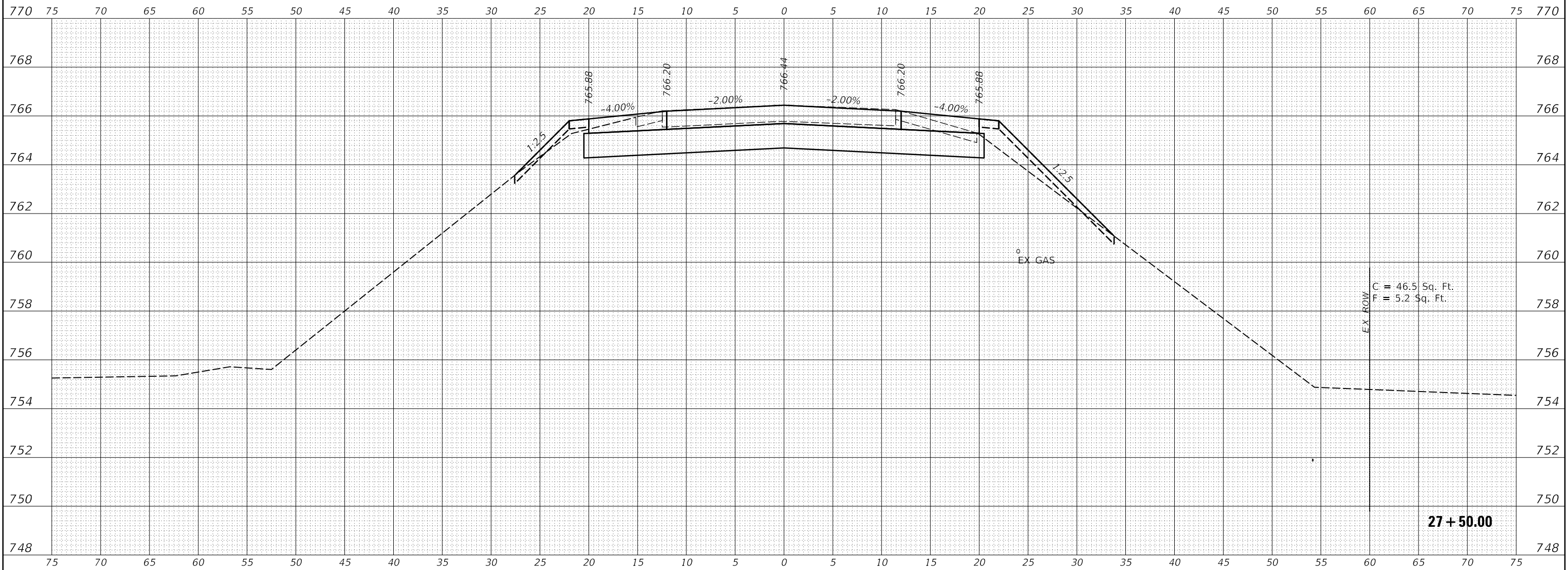
PLOT SCALE =	10.0000' / in.
PLOT DATE =	8/29/2019

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS

SCALE: 1/2" = 5' (HORIZ)
 1/4" = 2' (VERT) SHEET 13 OF 15 SHEETS STA. 27+00.00 TO STA. 27+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	69
CONTRACT NO. 85688				
ILLINOIS FED. AID PROJECT				



DESIGNED	PL	6/6/19
DRAWN	PL	8/19/19
REVIEWED	KMA	8/22/19

FILE NAME =	D2-16L0504B-sht-xs-01.dgn
USER NAME =	Ander-00833

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CHECKED -	KMA
DATE -	8/30/19

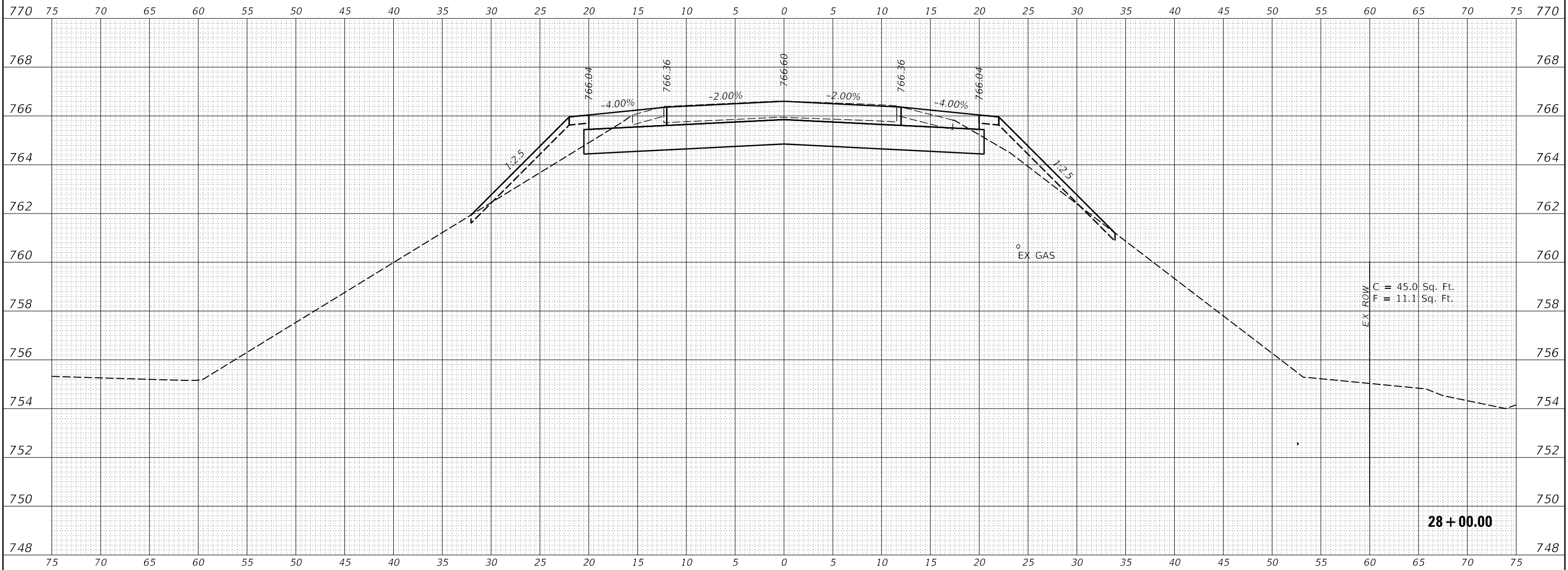
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REVISED -	
REVISED -	
REVISED -	

PLOT SCALE =	10.0000' / in.
PLOT DATE =	8/29/2019

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS		
SCALE: 1/2" = 5' (HORIZ)	SHEET 14	OF 15 SHEETS
1/2" = 2' (VERT)	STA. 27+50.00 TO STA. 27+50.00	

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	70
CONTRACT NO. 85688			ILLINOIS FED. AID PROJECT	



DESIGNED	PL	6/6/19
DRAWN	PL	8/19/19
REVIEWED	KMA	8/22/19

FILE NAME =	D2-16L0504B-sht-xs-01.dgn
USER NAME =	Andar00833
DESIGNED -	PL
DRAWN -	PL
CHECKED -	KMA
DATE -	8/30/19

REVISOR	REVISION
REVISOR	REVISION
REVISOR	REVISION
REVISOR	REVISION

DESIGNED -	PL
DRAWN -	PL
CHECKED -	KMA
DATE -	8/30/19

REVISOR	REVISION
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REVISOR	REVISION
REVISOR	REVISION

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS

SCALE: 1/2" = 5' (HORIZ)
 1/2" = 2' (VERT) SHEET 15 OF 15 SHEETS STA. 28+00.00 TO STA. 28+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5011A	17-00093-00-BR	BOONE	71	71
CONTRACT NO. 85688			ILLINOIS FED. AID PROJECT	