06-13-2025 LETTING ITEM 172

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	21-00107-00-BR	MACOUPIN	54	1
		CONTRACT NO. 93828		
	ILLINOIS FED. AID PROJECT U881(385)			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED
BRIDGE REPLACEMENT
LOCAL BRIDGE FORMULA PROGRAM

CH 34 (HAGAMAN ROAD) OVER SOLOMON CREEK
SECTION 21-00107-00-BR
MACOUPIN COUNTY
PROJECT: U881(385)

C-96-006-25

INDEX OF SHEETS

STANDARDS (IN PROPOSAL)

000001-08	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
515001-04	NAME PLATE FOR BRIDGES
542301-03	PRECAST REINFORCED CONCRETE FLARED END SECTION
630301-09	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
665001-02	WOVEN WIRE FENCE
701901-10	TRAFFIC CONTROL DEVICES
725001-01	OBJECT AND TERMINAL MARKERS
BLR 21-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
BLR 27-1	TRAFFIC BARRIER TERMINAL TYPE 5A

UTILITY COMPANIES:

MJM ELECTRIC COOPERATIVE
P.O. BOX 80
CARLINVILLE, IL 62626
PHONE: 217-707-6156

FRONTIER COMMUNICATIONS
CONTACT: KALIN HINSHAW
PHONE: 815-895-1515

100' 200' 300' — 1"= 100'
0 10' 20' 30' — 1"= 10'
0 50' 100' — 1"= 50'
0 50' 100' — 1"= 40'
0 50' 100' — 1"= 30'
0 50' 100' — 1"= 20'

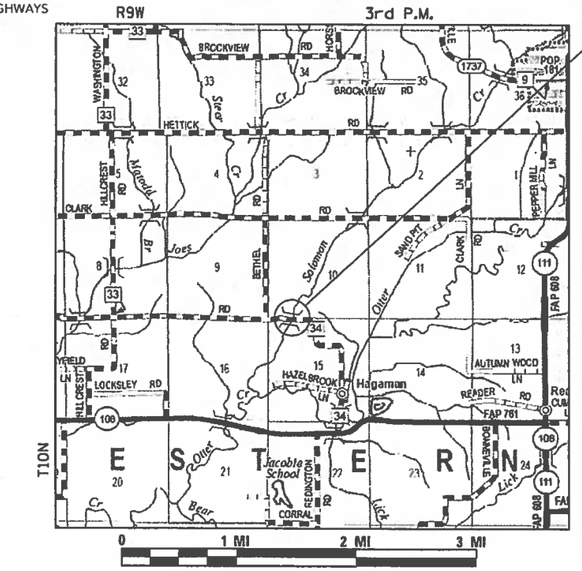
FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

PROJECT MANAGER: MARK R. LEIGHTON, P.E., P.L.S.

CONTRACT NO. 93828

design firm no. 184001036
whks
engineers + planners + land surveyors



LOCATION MAP

PROPOSED
SECTION 21-00107-00-BR
BEGINS STA. 37+20.50
ENDS STA. 55+25.00
PROP. S.N. 059-3337
EXIST. S.N. 059-3037

TOTAL LENGTH = 1,804.50 FEET (0.342 MI)
NET LENGTH = 1,804.50 FEET (0.342 MI)

THE WORK CONSISTS OF REMOVING THE EXISTING BRIDGE AND CONSTRUCTING A NEW STRUCTURE (S.N. 059-3337) AT STA. 49+50.00 WITH A THREE-SPAN PRECAST PRESTRESSED CONCRETE DECK BEAM BRIDGE ON CONCRETE PILE BENT ABUTMENTS, 27'-0" CLEAR ROADWAY WIDTH AND 182'-0" BACK TO BACK OF ABUTMENTS, 0° SKEW, VARIABLE WIDTH TRANSITION APPROACHES AND OTHER COLLATERAL WORK.

LOCATION OF SECTION INDICATED THUS: –

FUNCTIONAL CLASSIFICATION = LOCAL ROAD
ADT = 50
DESIGN SPEED = 30 MPH
3R GUIDELINES

N

MARK R. LEIGHTON
062-048930
LICENSED PROFESSIONAL ENGINEER
ILLINOIS
Expires: 11/30/2026 2-25-25

APPROVED February 25 2025
Thomas A Reinhard
COUNTY ENGINEER

PASSED March 19, 2025
Brian C. Wright
DISTRICT SIX ENGINEER OF LOCAL ROADS AND STREETS

Released For Bid Based on Limited Review March 19, 2025
Lora Reading P.E.
REGION FOUR ENGINEER

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Filename: C:\SP\WHKS & CD\Jobs-Spring - Projects\Macoupin County\V841 Macoupin Co. CH 34 over Solomon Creek\CADD\CAD_Sheets\V841-sht-cover.dgn Dates: 2/25/2025 Operators: b.johnson

GENERAL NOTES

1. EXCEPT AS NOTED ON THE PLANS, PAVEMENT GRADES SHOWN ARE AT THE TOP OF PAVEMENT SURFACES.

2. ALL ELEVATIONS ARE BASED ON NAVD 88-DATUM.

3. ABANDONED UNDERGROUND UTILITIES THAT CONFLICT WITH CONSTRUCTION SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE RIGHT OF WAY ACCORDING TO ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF CONTRACT ITEMS INVOLVED.

4. THE FOLLOWING APPLICATION RATES HAVE BEEN USED IN CALCULATING PLAN QUANTITIES:
   TEMPORARY EROSION CONTROL SEEDING: 100 LB/ACRE
   AGGREGATE SURFACE COURSE: 2.05 TONS/CU YD
   BITUMINOUS MATERIALS (PRIME COAT): 0.25 LB/SQ FT
   BITUMINOUS MATERIALS (COVER AND SEAL COAT): 0.25 LB/SQ FT
   COVER COAT & SEAL COAT AGGREGATE: 23 LB/SQ YD
   RIPRAP: 1.50 TONS/CU YD

5. THE CONTRACTOR'S OPERATIONS AND TEMPORARY STORAGE ACTIVITIES SHALL BE LIMITED TO THE WORK AREA AND/OR CONSTRUCTION LIMITS. ANY ADDITIONAL STAGING AREAS ADJACENT TO THE PROJECT AREA ARE SUBJECT TO PRIOR APPROVAL BY THE ENGINEER AND MUST NOT CONFLICT WITH EXISTING SIDE ROADS, INTERSECTIONS, DRIVEWAYS, OR DRAINAGE. ALL OPERATIONS SHALL BE SUBJECT TO REGULATORY REQUIREMENTS PERMITTED FOR THIS PROJECT. NO ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR FOR COMPLIANCE WITH THE ABOVE REQUIREMENTS.

6. DISTURBED AREAS SHALL RECEIVE PERMANENT STABILIZATION WITHIN 7 DAYS OF COMPLETION OF CONSTRUCTION ACTIVITIES. TEMPORARY STABILIZATION OF WORK AREAS IS REQUIRED FOR ALL AREAS REMAINING UNDISTURBED FOR 14 DAYS, UNLESS WORK RESUMES PRIOR TO 21 DAYS. TEMPORARY STABILIZATION MUST BE APPROVED BY THE ENGINEER.

7. THE CONTRACTOR SHALL RELOCATE OR REMOVE AND REPLACE ALL SIGNS THAT INTERFERE WITH THE CONSTRUCTION OPERATIONS AND TEMPORARILY RESET ALL SUCH SIGNS DURING ALL STAGES OF CONSTRUCTION AS DIRECTED BY THE ENGINEER. THE ENGINEER WILL DETERMINE THE PERMANENT LOCATION FOR EXISTING SIGNS TO BE RE-ERECTED.

8. CONTRACTOR SHALL FOLLOW CONSTRUCTION REQUIREMENTS OF SECTION 611 WHEN EXISTING FIELD TILE IS ENCOUNTERED. ALL FIELD TILES ENCOUNTERED SHALL BE CAREFULLY PRESERVED, REPAIRED AND CONNECTED TO THE PROPOSED DRAINAGE STRUCTURES, SEWERS OR DITCHES AS DIRECTED BY THE ENGINEER. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE VARIOUS DRAINAGE ITEMS OR AS DIRECTED BY THE ENGINEER.

9. THE LOCATIONS OF EXISTING WATER MAINS, GAS MAINS, SEWERS, ELECTRIC POWER LINES, TELEPHONE LINES AND OTHER UTILITIES AS SHOWN ON THE PLANS ARE BASED ON THE BEST INFORMATION AVAILABLE, BUT THEY ARE NOT GUARANTEED. UNLESS ELEVATIONS ARE SHOWN. ALL UTILITY LOCATIONS SHOWN ON THE CROSS SECTIONS ARE BASED ON THE APPROXIMATE DEPTH SUPPLIED BY THE UTILITY COMPANY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN THEIR EXACT LOCATION FROM THE UTILITY COMPANIES AND BY FIELD INSPECTION.

10. EMBANKMENTS ON HILLSIDES OR SLOPES SHALL BE CONSTRUCTED ACCORDING TO ARTICLE 205.03.

11. CONTRACTOR SHALL INSTALL ALL EROSION CONTROL MEASURES PRIOR TO STARTING ANY OTHER CONSTRUCTION WORK AT SITE.

12. CONTRACTOR SHALL VERIFY THE LENGTH OF REQUIRED PIPE CULVERTS AND PIPE DRAINS PRIOR TO ORDERING.

13. WHERE PERMANENT SURVEY MARKERS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE DISTURBED. THE CONTRACTOR SHALL PROTECT AND PRESERVE ALL PROPERTY MARKERS AND MONUMENTS UNTIL THE OWNER AND AN AUTHORIZED SURVEYOR HAS WITNESSED OR OTHERWISE REFERENCED THE LOCATION.

GENERAL NOTES

14. THE CONTRACTOR SHALL USE CARE IN ALL REMOVAL ACTIVITIES NEAR ALL EXISTING ITEMS WHICH WILL REMAIN. ANY DAMAGE DONE TO EXISTING ITEMS BY THE CONTRACTOR SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE.

15. THE EXISTING A-3 ROAD SURFACE AT ALL LOCATIONS WITHIN THE PROJECT LIMITS SHALL BE DISCED, PLOWED, SCARIFIED OR OTHERWISE BROKEN UP TO A DEPTH OF NOT LESS THAN 6 INCHES PRIOR TO THE INCORPORATION OF ADDITIONAL EMBANKMENT AS DIRECTED BY THE ENGINEER. THE COST SHALL BE INCLUDED WITH PAVEMENT REMOVAL.

16. PAVEMENT REMOVAL TO INCLUDE THE EXISTING AGGREGATE BASE COURSE AND OIL AND CHIP SURFACE TREATMENT.

17. THE CONTRACTOR SHALL AVOID ANY WETLAND DISTURBANCE OUTSIDE THE ANTICIPATED CONSTRUCTION LIMITS SHOWN ON THE PLANS. FURTHER WETLAND DISTRUBURANCE IS NOT IN COMPLAINCE WITH THE AUTHORIZED ACTIVITIES OF THE NATIONWIDE PERMIT AND MAY RESULT IN PERMIT REVOCATION. THE WETLAND AREAS TO BE DISTURBED HAVE BEEN COMPENSATED FOR BY PURCHASING 2.67 ACRE OF WETLAND CREDITS FROM AN APPROVED MITIGATION BANK. DOCUMENTATION FOR THE MITIGATION CREDITS HAVE BEEN PROVIDED TO THE USACE - ST. LOUIS REGULATORY BRANCH.

COMMITMENTS

1. TREES THREE (3) INCHES IN DIAMETER AT BREAST HEIGHT SHALL NOT BE CLEARED FROM APRIL 1ST THROUGH SEPTEMBER 30TH OF ANY GIVEN YEAR.

2. THE BRIDGE BAT ASSESSMENT EXPIRES TWO YEARS AFTER COMPLETION. A VALID ASSESSMENT IS REQUIRED PRIOR TO PERFORMING ANY WORK UNDER THE EXISTING BRIDGE DECK SURFACE. THE CURRENT ASSESSMENT EXPIRES ON 2/24/2027.

MODEL: Default
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design firm no. 184001036
whks
engineers + planners + land surveyors

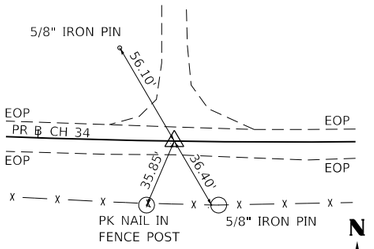
USER NAME = bjohnson	DESIGNED - MRL	REVISED -
	DRAWN - GSJ	REVISED -
PLOT SCALE = 1200.0000 ' / ft.	CHECKED - MRL	REVISED -
PLOT DATE = 2/27/2025	DATE - 2/27/2025	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES AND COMMITMENTS
CH 34 (HAGAMAN ROAD) OVER SOLOMON CREEK

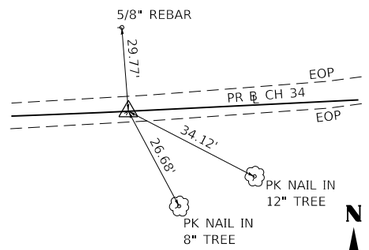
SCALE: 1" = 50' | SHEET 1 OF 1 SHEETS | STA. | TO STA.

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	21-00107-00-BR	MACOUPIN	54	2
		CONTRACT NO.93828		
	ILLINOIS	FED. AID PROJECT		



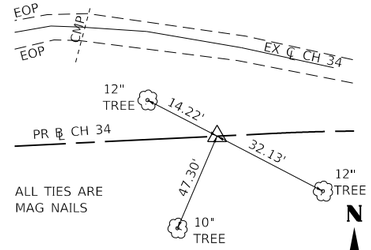
CONTROL POINT #PLBL87

IRON PIN
STA 36+69.73, 0.00' RT (PR ℄ CH 34)
N 966176.8056
E 2317446.5902



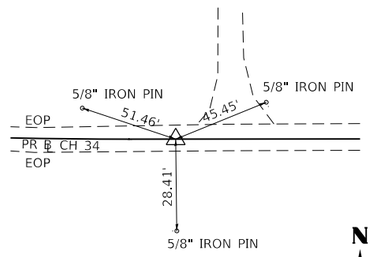
CONTROL POINT #PLBL84

SPIKE NAIL
STA 39+27.67, 0.00' LT (PR ℄ CH 34)
N 966181.1300
E 2317704.4500



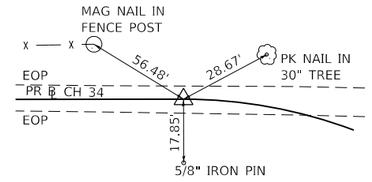
CONTROL POINT #PLBL142

IRON PIN
STA 45+48.28, 0.00' LT (PR ℄ CH 34)
N 966211.5348
E 2318324.3141



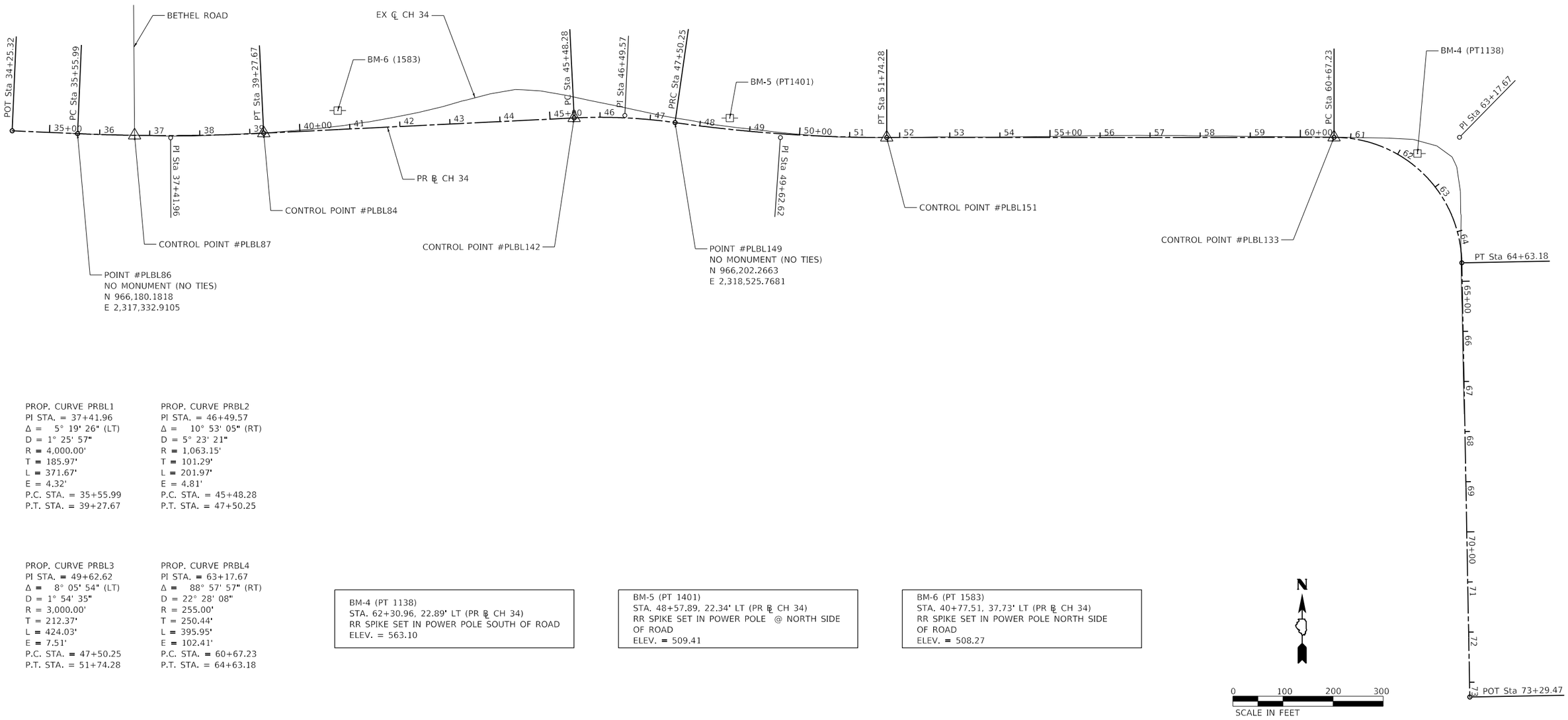
CONTROL POINT #PLBL151

IRON PIN
STA 51+74.28, 0.00' LT (PR ℄ CH 34)
N 966172.5100
E 2318948.4000



CONTROL POINT #PLBL133

IRON PIN
STA 60+67.23, 0.00' RT (PR ℄ CH 34)
N 966172.8500
E 2319841.3500



PROP. CURVE PRBL1
PI STA. = 37+41.96
Δ = 5° 19' 26" (LT)
D = 1° 25' 57"
R = 4,000.00'
T = 185.97'
L = 371.67'
E = 4.32'
P.C. STA. = 35+55.99
P.T. STA. = 39+27.67

PROP. CURVE PRBL2
PI STA. = 46+49.57
Δ = 10° 53' 05" (RT)
D = 5° 23' 21"
R = 1,063.15'
T = 101.29'
L = 201.97'
E = 4.81'
P.C. STA. = 45+48.28
P.T. STA. = 47+50.25

PROP. CURVE PRBL3
PI STA. = 49+62.62
Δ = 8° 05' 54" (LT)
D = 1° 54' 35"
R = 3,000.00'
T = 212.37'
L = 424.03'
E = 7.51'
P.C. STA. = 47+50.25
P.T. STA. = 51+74.28

PROP. CURVE PRBL4
PI STA. = 63+17.67
Δ = 88° 57' 57" (RT)
D = 22° 28' 08"
R = 255.00'
T = 250.44'
L = 395.95'
E = 102.41'
P.C. STA. = 60+67.23
P.T. STA. = 64+63.18

BM-4 (PT 1138)
STA. 62+30.96, 22.89' LT (PR ℄ CH 34)
RR SPIKE SET IN POWER POLE SOUTH OF ROAD
ELEV. = 563.10

BM-5 (PT 1401)
STA. 48+57.89, 22.34' LT (PR ℄ CH 34)
RR SPIKE SET IN POWER POLE @ NORTH SIDE OF ROAD
ELEV. = 509.41

BM-6 (PT 1583)
STA. 40+77.51, 37.73' LT (PR ℄ CH 34)
RR SPIKE SET IN POWER POLE NORTH SIDE OF ROAD
ELEV. = 508.27

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design firm no. 184001036 whks engineers + planners + land surveyors

USER NAME = bjohnson	DESIGNED - MRL	REVISED -	
	DRAWN - GSJ	REVISED -	
PLOT SCALE = 2400.0000 ' / ft.	CHECKED - MRL	REVISED -	
PLOT DATE = 2/27/2025	DATE - 2/27/2025	REVISED -	

MACOUPIN COUNTY HIGHWAY DEPARTMENT

ALIGNMENT, TIES, BENCHMARKS AND ENTRANCE DETAILS
CH 34 (HAGAMAN ROAD) OVER SOLOMON CREEK

SCALE: 1" = 100' | SHEET 1 OF 2 SHEETS | STA. | TO STA.

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	21-00107-00-BR	MACOUPIN	54	3
		CONTRACT NO.93828		
	ILLINOIS	FED. AID PROJECT		

Beginning chain PRBL description
==========

Point PRBL010 N 966,185.9174 E 2,317,202.3627 Sta 34+25.32

Course from PRBL010 to PRBL86 S 87° 29' 03.51" E Dist 130.6738

Point PRBL86 N 966,180.1818 E 2,317,332.9105 Sta 35+55.99

Curve Data

Curve PRBL1
P.I. Station = 37+41.96 N 966,172.0189 E 2,317,518.7023
Delta = 5° 19' 25.84" (LT)
Degree = 1° 25' 56.62"
Tangent = 185.9710
Length = 371.6744
Radius = 4,000.0000
External = 4.3208
Long Chord = 371.5407
Mid. Ord. = 4.3162
P.C. Station = 35+55.99 N 966,180.1818 E 2,317,332.9105
P.T. Station = 39+27.67 N 966,181.1300 E 2,317,704.4500
C.C. N 970,176.3267 E 2,317,508.4826
Back = S 87° 29' 03.51" E
Ahead = N 87° 11' 30.66" E
Chord Bear = N 89° 51' 13.57" E

Point PRBL84 N 966,181.1300 E 2,317,704.4500 Sta 39+27.67

Course from PRBL84 to PRBL142 N 87° 11' 30.66" E Dist 620.6093

Point PRBL142 N 966,211.5348 E 2,318,324.3141 Sta 45+48.28

Curve Data

Curve PRBL2
P.I. Station = 46+49.57 N 966,216.4972 E 2,318,425.4826
Delta = 10° 53' 05.03" (RT)
Degree = 5° 23' 21.35"
Tangent = 101.2901
Length = 201.9707
Radius = 1,063.1467
External = 4.8143
Long Chord = 201.6671
Mid. Ord. = 4.7926
P.C. Station = 45+48.28 N 966,211.5348 E 2,318,324.3141
P.T. Station = 47+50.25 N 966,202.2663 E 2,318,525.7681
C.C. N 965,149.6648 E 2,318,376.3996
Back = N 87° 11' 30.66" E
Ahead = S 81° 55' 24.31" E
Chord Bear = S 87° 21' 56.83" E

Point PRBL149 N 966,202.2663 E 2,318,525.7681 Sta 47+50.25

Curve Data

Curve PRBL3
P.I. Station = 49+62.62 N 966,172.4291 E 2,318,736.0308
Delta = 8° 05' 54.23" (LT)
Degree = 1° 54' 35.49"
Tangent = 212.3692
Length = 424.0311
Radius = 3,000.0000
External = 7.5074
Long Chord = 423.6782
Mid. Ord. = 7.4886
P.C. Station = 47+50.25 N 966,202.2663 E 2,318,525.7681
P.T. Station = 51+74.28 N 966,172.5100 E 2,318,948.4000
C.C. N 969,172.5098 E 2,318,947.2577
Back = S 81° 55' 24.31" E
Ahead = N 89° 58' 41.46" E
Chord Bear = S 85° 58' 21.42" E

Point PRBL151 N 966,172.5100 E 2,318,948.4000 Sta 51+74.28

Course from PRBL151 to PRBL133 N 89° 58' 41.46" E Dist 892.9501

Point PRBL133 N 966,172.8500 E 2,319,841.3500 Sta 60+67.23

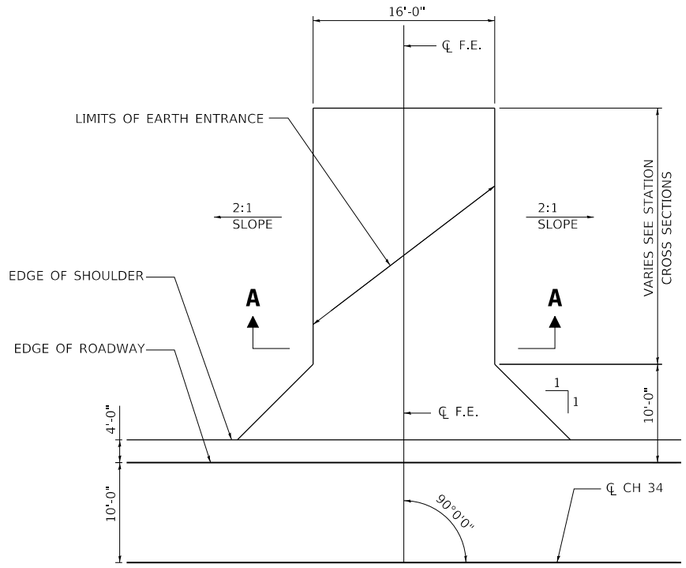
Curve Data

Curve PRBL4
P.I. Station = 63+17.67 N 966,172.9454 E 2,320,091.7880
Delta = 88° 57' 56.69" (RT)
Degree = 22° 28' 08.16"
Tangent = 250.4380
Length = 395.9500
Radius = 255.0000
External = 102.4132
Long Chord = 357.3550
Mid. Ord. = 73.0677
P.C. Station = 60+67.23 N 966,172.8500 E 2,319,841.3500
P.T. Station = 64+63.18 N 965,922.5499 E 2,320,096.4038
C.C. N 965,917.8500 E 2,319,841.4471
Back = N 89° 58' 41.46" E
Ahead = S 1° 03' 21.85" E
Chord Bear = S 45° 32' 20.19" E

Point PRBL131 N 965,922.5499 E 2,320,096.4038 Sta 64+63.18

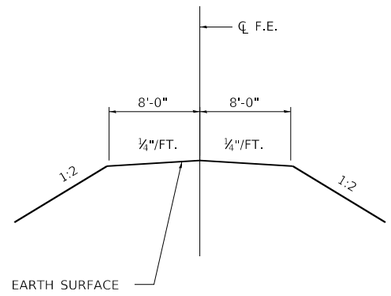
Course from PRBL131 to PRBL65 S 1° 03' 21.85" E Dist 866.2900

Point PRBL65 N 965,056.4070 E 2,320,112.3702 Sta 73+29.47
==========
Ending chain PRBL description



FIELD ENTRANCE

F.E. LT. STA. 52+32



SECTION A–A

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design firm no. 184001036 whks engineers + planners + land surveyors

USER NAME = bjohnson	DESIGNED - MRL	REVISED -	
	DRAWN - GSJ	REVISED -	
PLOT SCALE = 2400.0000 ' / ft.	CHECKED - MRL	REVISED -	
PLOT DATE = 2/27/2025	DATE - 2/27/2025	REVISED -	

MACOUPIN COUNTY HIGHWAY DEPARTMENT

ALIGNMENT, TIES, BENCHMARKS AND ENTRANCE DETAILS
CH 34 (HAGAMAN ROAD) OVER SOLOMON CREEK

SCALE: 1" = 100' | SHEET 2 OF 2 SHEETS | STA. | TO STA.

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	21-00107-00-BR	MACOUPIN	54	4
		CONTRACT NO. 93828		
	ILLINOIS FED. AID PROJECT			

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTR. CODE BRIDGE 0010 S.N. 059-3337
20100500	TREE REMOVAL, ACRES	ACRE	1.5	1.5
20200100	EARTH EXCAVATION	CU YD	1022	1022
20300100	CHANNEL EXCAVATION	CU YD	965	965
20400800	FURNISHED EXCAVATION	CU YD	7343	7343
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	555	555
28000305	TEMPORARY DITCH CHECKS	FOOT	428	428
28000400	PERIMETER EROSION BARRIER	FOOT	3900	3900
28000500	INLET AND PIPE PROTECTION	EACH	4	4
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	1677	1677
* 44000100	PAVEMENT REMOVAL	SQ YD	1248	1248
* 50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1	1
* 50105220	PIPE CULVERT REMOVAL	FOOT	90	90
50200100	STRUCTURE EXCAVATION	CU YD	32	32
50300225	CONCRETE STRUCTURES	CU YD	50	50

* SEE SPECIAL PROVISIONS + SPECIALTY ITEM

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design firm no. 184001036 whks engineers + planners + land surveyors

USER NAME = bjohnson	DESIGNED - MRL	REVISED -	
	DRAWN - GSJ	REVISED -	
PLOT SCALE = 1200.0000 '/ in.	CHECKED - MRL	REVISED -	
PLOT DATE = 2/27/2025	DATE - 2/27/2025	REVISED -	

MACOUPIN COUNTY HIGHWAY DEPARTMENT

SUMMARY OF QUANTITIES
CH 34 (HAGAMAN ROAD) OVER SOLOMON CREEK
SCALE: 1" = 50' | SHEET 1 OF 3 SHEETS | STA. | TO STA.

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	21-00107-00-BR	MACOUPIN	54	5
		CONTRACT NO.93828		
	ILLINOIS	FED. AID PROJECT		

	CONSTR. CODE

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	BRIDGE 0010 S.N. 059-3337
50300280	CONCRETE ENCASEMENT	CU YD	9.5	9.5
50400505	PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH)	SQ FT	4860	4860
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	6800	6800
+ 50900205	STEEL RAILING, TYPE S1	FOOT	364	364
51200959	FURNISHING METAL SHELL PILES 14" X 0.312"	FOOT	684	684
51202305	DRIVING PILES	FOOT	684	684
51203200	TEST PILE METAL SHELLS	EACH	4	4
51500100	NAME PLATES	EACH	1	1
54213675	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 30"	EACH	2	2
54213681	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 36"	EACH	4	4
542A0235	PIPE CULVERTS, CLASS A, TYPE 1 30"	FOOT	40	40
542A0241	PIPE CULVERTS, CLASS A, TYPE 1 36"	FOOT	90	90
542D1069	PIPE CULVERTS, CLASS D, TYPE 2 24"	FOOT	40	40
59300100	CONTROLLED LOW-STRENGTH MATERIAL	CU YD	45	45

* SEE SPECIAL PROVISIONS + SPECIALTY ITEM

MODEL: Default
FILE NAME: C:\SP\WHKS & CO\Jobs\Spring - Projects\Macoupin County\9541 Macoupin Co. CH 34 over Sbhonon Creek\CADD\CAD Sheets\95411-SHT-SOQ.dgn

design firm no. 184001036 whks engineers + planners + land surveyors

USER NAME = bjohnson	DESIGNED - MRL	REVISED -	
	DRAWN - GSJ	REVISED -	
PLOT SCALE = 1200.0000 '=' / ft.	CHECKED - MRL	REVISED -	
PLOT DATE = 2/27/2025	DATE - 2/27/2025	REVISED -	

MACOUPIN COUNTY HIGHWAY DEPARTMENT

SUMMARY OF QUANTITIES
CH 34 (HAGAMAN ROAD) OVER SOLOMON CREEK
SCALE: 1" = 50' | SHEET 2 OF 3 SHEETS | STA. | TO STA.

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	21-00107-00-BR	MACOUPIN	54	6
		CONTRACT NO.93828		
	ILLINOIS FED. AID PROJECT			

	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTR. CODE BRIDGE 0010 S.N. 059-3337
+	63100075	TRAFFIC BARRIER TERMINAL, TYPE 5A	EACH	2	2
+	63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	2	2
	67100100	MOBILIZATION	L SUM	1	1
+	72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	4	4
	LR403200	BITUMINOUS MATERIALS (PRIME COAT)	TON	4	4
	LR403400	BITUMINOUS MATERIALS (COVER AND SEAL COATS)	TON	7.9	7.9
	LR403500	COVER COAT AGGREGATE	TON	43	43
	LR403600	SEAL COAT AGGREGATE	TON	43	43
*	X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	2.0	2.0
*	X2810206	STONE RIPRAP, CLASS A3 (SPECIAL)	TON	24	24
*	X2810208	STONE RIPRAP, CLASS A4 (SPECIAL)	TON	812	812
+ *	X6650208	WOVEN WIRE FENCE REMOVAL AND REPLACEMENT	FOOT	465	465
*	X7011800	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21	L SUM	1	1
#	Z0076600	TRAINEES	HOUR	1000	1000
	Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1
#	Z0076604	TRAINEES TRAINING PROGRAM GRADUATE	HOUR	1000	1000

* SEE SPECIAL PROVISIONS + SPECIALTY ITEM # 0042

design firm no. 184001036 whks engineers • planners • landsurveyors

USER NAME = bjonsson	DESIGNED - MRL	REVISED -	
	DRAWN - GSJ	REVISED -	
PLOT SCALE = 1200.0000 '/ IN.	CHECKED - MRL	REVISED -	
PLOT DATE = 2/27/2025	DATE - 2/27/2025	REVISED -	

MACOUPIN COUNTY HIGHWAY DEPARTMENT

SUMMARY OF QUANTITIES
CH 34 (HAGAMAN ROAD) OVER SOLOMON CREEK

SCALE: 1" = 50' | SHEET 3 OF 3 SHEETS | STA. | TO STA.

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	21-00107-00-BR	MACOUPIN	54	7
		CONTRACT NO.93828		
		ILLINOIS FED. AID PROJECT		

USER: bjonsson
FILE NAME: C:\Projects\Macoupin County\19541 Hacoupin Co. CH 34 over Solomon Creek\MICROCAD\CAD Sheets\9541-SHT-SOD.dgn

LOCATION	20200100	20300100	FOR INFORMATION ONLY		20400800
	EARTH EXCAVATION	CHANNEL EXCAVATION	EXCAVATION TO BE USED IN EMBANKMENT (ADJUSTED FOR SHRINKAGE) (EXC. x 0.75)	EMBANKMENT (FILL)	EARTHWORK BALANCE WASTE(+) AND SHORTAGE (-)
	CU. YD.	CU. YD.	CU. YD.	CU. YD.	CU. YD.
STA. 37+20.50 TO STA. 48+58.99	459		345	5212	-4867
STA. 48+58.99 TO STA. 50.+41.01		965	* 365		365
STA. 50+41.01 TO STA. 55+25.00	563		420	3261	-2841
TOTAL	1022	965	1130	8473	-7343

EARTH EXCAVATION SHRINKAGE FACTOR = 25%

* CHANNEL EXCAVATION USED IN EMBANKMENT = 50%

EXISTING BITUMINOUS ROADWAY SURFACE TO BE REMOVED INCLUDED IN PAVEMENT REMOVAL - SEE GENERAL NOTES.

20100500 TREE REMOVAL, ACRES

CH 34 (HAGAMAN ROAD)					ACRE
RT	37+67.00	TO	RT	49+77.00	0.9
LT	37+87.50	TO	LT	38+61.00	0.1
LT	49+60.00	TO	LT	49+88.00	0.1
LT	50+20.00	TO	LT	51+25.00	0.1
RT	50+03.00	TO	RT	55+11.00	0.2
LT	52+38.00	TO	LT	53+27.00	0.1
				TOTAL	1.50

28000250 TEMPORARY EROSION CONTROL SEEDING

CH 34 (HAGAMAN ROAD)					POUND
LT	37+20.50	TO	LT	48+58.99	255
RT	37+20.50	TO	RT	48+58.99	120
LT	50+41.01	TO	LT	55+25.00	90
RT	50+41.01	TO	RT	55+25.00	90
ASSUMES 3 APPLICATIONS				TOTAL	555

28000305 TEMPORARY DITCH CHECKS

CH 34 (HAGAMAN ROAD)					FOOT
LT	37+65.00	8	RT	37+60.00	8
LT	37+80.00	8	RT	37+70.00	8
LT	37+95.00	8	RT	37+80.00	8
LT	38+10.00	8	RT	37+90.00	8
LT	38+25.00	8	RT	38+00.00	8
LT	38+40.00	8	RT	55+15.00	*64
LT	38+55.00	8	RT	54+25.00	*56
LT	38+70.00	8	RT	53+50.00	8
LT	38+85.00	8	RT	53+35.00	8
LT	39+00.00	8	RT	53+20.00	8
LT	55+15.00	*64	RT	53+05.00	8
LT	54+25.00	*32			
LT	53+75.00	*52			
LT	53+00.00	8			
*PLACE MULTIPLE CHECKS @ 10'-0" SPACING				TOTAL	428

28000400 PERIMETER EROSION BARRIER

CH 34 (HAGAMAN ROAD)					FOOT
LT	37+20.50	TO	LT	48+58.99	1,350
RT	37+20.50	TO	RT	48+58.99	1,350
LT	50+41.01	TO	LT	55+25.00	600
RT	50+41.01	TO	RT	55+25.00	600
				TOTAL	3,900

28000500 INLET AND PIPE PROTECTION

CH 34 (HAGAMAN ROAD)			EACH
LT	43+31.99		1
LT	44+35.35		1
LT	47+51.94		1
LT	52+51.00		1
		TOTAL	4

40200800 AGGREGATE SURFACE COURSE, TYPE B

CH 34 (HAGAMAN ROAD)					TON
CL	37+20.50	TO	CL	38+20.50	94
CL	38+20.50	TO	CL	48+58.99	1,087
CL	50+41.01	TO	CL	54+25.00	402
CL	54+25.00	TO	CL	55+25.00	94
				TOTAL	1,677

44000100 PAVEMENT REMOVAL

CH 34 (HAGAMAN ROAD)					SQ YD
LT	40+74.44	TO	LT	48+58.99	1,248
				TOTAL	1,248

50105220 PIPE CULVERT REMOVAL

CH 34 (HAGAMAN ROAD)			FOOT
LT	43+28.00		30
LT	44+50.00		30
LT	47+52.00		30
		TOTAL	90

54213675 PRECAST REINFORCED CONCRETE FLARED END SECTIONS 30"

CH 34 (HAGAMAN ROAD)			EACH
LT	43+31.99		1
RT	43+47.87		1
		TOTAL	2

54213681 PRECAST REINFORCED CONCRETE FLARED END SECTIONS 36"

CH 34 (HAGAMAN ROAD)			EACH
LT	44+35.35		1
RT	44+24.23		1
LT	47+52.00		1
RT	47+52.00		1
		TOTAL	4

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design firm no. 184001036
whks
engineers + planners + land surveyors

USER NAME = bJohnson	DESIGNED - MRL	REVISED -
	DRAWN - GSJ	REVISED -
PLOT SCALE = 1200:0.0000 ':" / ft.	CHECKED - MRL	REVISED -
PLOT DATE = 2/27/2025	DATE - 2/27/2025	REVISED -

MACOUPIN COUNTY HIGHWAY DEPARTMENT

SCHEDULE OF QUANTITIES
CH 34 (HAGAMAN ROAD) OVER SOLOMON CREEK

SCALE: 1" = 50' | SHEET 1 OF 2 SHEETS | STA. | TO STA.

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	21-00107-00-BR	MACOUPIN	54	8
		CONTRACT NO.93828		
		ILLINOIS FED. AID PROJECT		

542A0235 PIPE CULVERTS, CLASS A, TYPE 1 30"

CH 34 (HAGAMAN ROAD)					FOOT
CL	43+39.87				40
				TOTAL	40

542A0241 PIPE CULVERTS, CLASS A, TYPE 1 36"

CH 34 (HAGAMAN ROAD)					FOOT
CL	44+30.00				38
CL	47+52.00				52
				TOTAL	90

542D1069 PIPE CULVERTS, CLASS D, TYPE 2 24"

CH 34 (HAGAMAN ROAD)					FOOT
LT	52+11.00	TO	LT	52+51.00	40
				TOTAL	40

63100075 TRAFFIC BARRIER TERMINAL, TYPE 5A

CH 34 (HAGAMAN ROAD)					EACH
RT	48+45.74	TO	RT	48+58.99	1
LT	50+41.01	TO	LT	50+54.26	1
				TOTAL	2

63100167 TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT

CH 34 (HAGAMAN ROAD)					EACH
RT	47+95.74	TO	RT	48+45.74	1
LT	50+54.26	TO	LT	51+04.26	1
				TOTAL	2

67100100 MOBILIZATION

CH 34 (HAGAMAN ROAD)	L SUM
TOTAL	1

X2501000 SEEDING, CLASS 2 (SPECIAL)

CH 34 (HAGAMAN ROAD)					ACRE
LT	37+20.50	TO	LT	48+58.99	0.6
RT	37+20.50	TO	RT	48+58.99	0.6
LT	50+41.01	TO	LT	55+25.00	0.4
RT	50+41.01	TO	RT	55+25.00	0.3
* TOTAL PER MIN. DEGREE OF ACCURACY				TOTAL	2.0

X2810206 STONE RIPRAP, CLASS A3 (SPECIAL)

CH 34 (HAGAMAN ROAD)					TON
LT	43+31.99				4
RT	43+47.87				4
LT	44+35.35				4
RT	44+24.23				4
LT	47+52.00				4
RT	47+52.00				4
				TOTAL	24

X6650208 WOVEN WIRE FENCE REMOVAL AND REPLACEMENT

CH 34 (HAGAMAN ROAD)					FOOT
LT	53+35.12	TO	LT	55+07.57	198
RT	52+51.31	TO	RT	55+05.52	267
				TOTAL	465

X7011800 TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21

CH 34 (HAGAMAN ROAD)	L SUM
TOTAL	1

Z0013798 CONSTRUCTION LAYOUT

CH 34 (HAGAMAN ROAD)	L SUM
TOTAL	1

LR403200 BITUMINOUS MATERIALS (PRIME COAT)

CH 34 (HAGAMAN ROAD)					TON
CL	37+20.50	TO	CL	38+20.50	0.2
CL	38+20.50	TO	CL	48+58.99	2.6
CL	50+41.01	TO	CL	54+25.00	1.0
CL	54+25.00	TO	CL	55+25.00	0.2
				TOTAL	4.0

LR403400 BITUMINOUS MATERIALS (COVER AND SEAL COATS)

CH 34 (HAGAMAN ROAD)					TON
CL	37+20.50	TO	CL	38+20.50	0.4
CL	38+20.50	TO	CL	48+58.99	5.2
CL	50+41.01	TO	CL	54+25.00	1.9
CL	54+25.00	TO	CL	55+25.00	0.4
				TOTAL	7.9

LR403500 COVER COAT AGGREGATE

CH 34 (HAGAMAN ROAD)					TON
CL	37+20.50	TO	CL	38+20.50	3
CL	38+20.50	TO	CL	48+58.99	27
CL	50+41.01	TO	CL	54+25.00	10
CL	54+25.00	TO	CL	55+25.00	3
				TOTAL	43

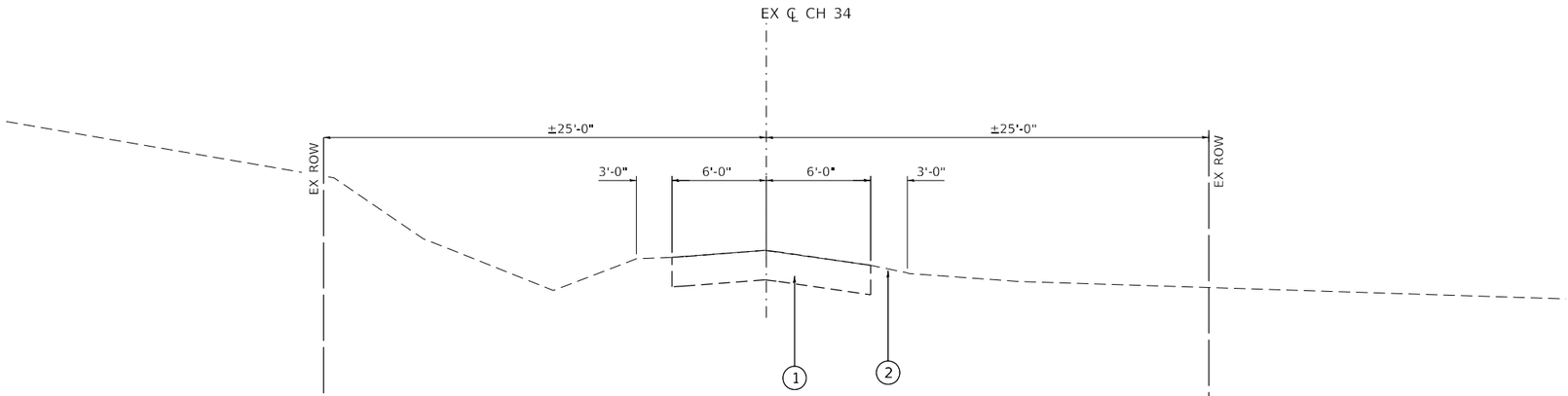
LR403600 SEAL COAT AGGREGATE

CH 34 (HAGAMAN ROAD)					TON
CL	37+20.50	TO	CL	38+20.50	3
CL	38+20.50	TO	CL	48+58.99	27
CL	50+41.01	TO	CL	54+25.00	10
CL	54+25.00	TO	CL	55+25.00	3
				TOTAL	43

LEGEND

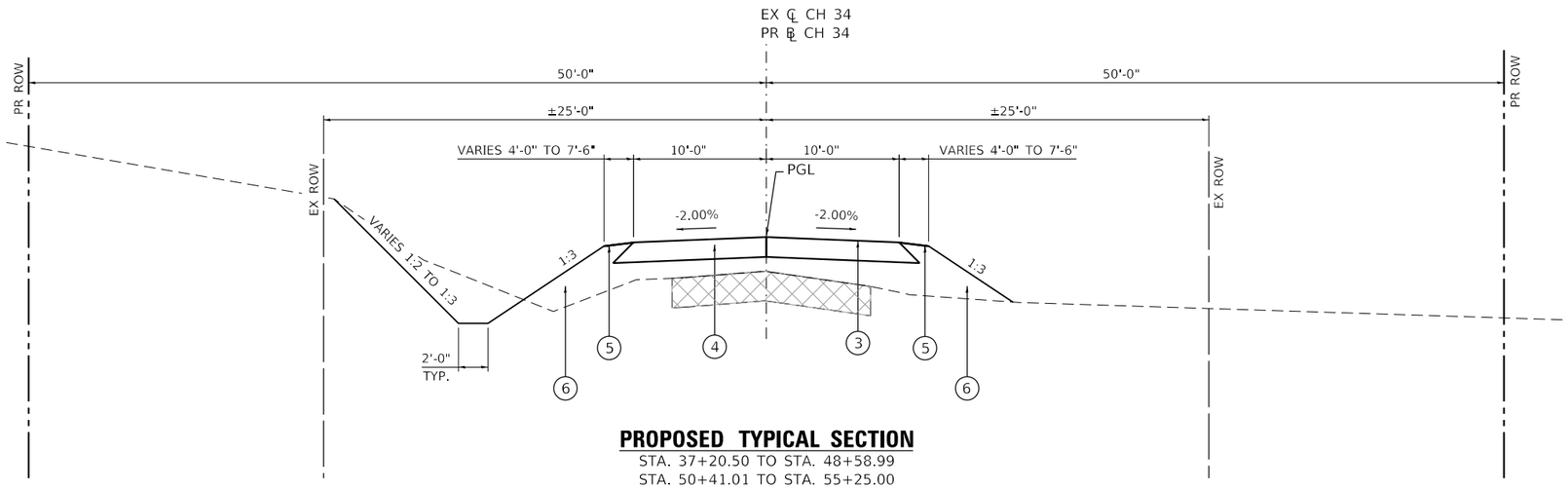
1. EX OIL AND CHIP
2. EARTH SHOULDER
3. A-2 BITUMINOUS SURFACE TREATMENT
4. 8" AGGREGATE SURFACE COURSE, TYPE B
5. EARTH SHOULDERS
6. FURNISHED EXCAVATION

PAVEMENT REMOVAL



EXISTING TYPICAL SECTION
STA. 37+20.50 TO STA. 49+76.08
STA. 50+23.92 TO STA. 55+25.00
(LOOKING EAST)

BRIDGE OMISSION:
STA. 48+58.99 TO STA. 50+41.01 (SN 059-3337)



PROPOSED TYPICAL SECTION
STA. 37+20.50 TO STA. 48+58.99
STA. 50+41.01 TO STA. 55+25.00
(LOOKING EAST)

NOTES:
1. EXISTING TYPICAL STATIONS REFER TO THE PROPOSED BASELINE OF CONSTRUCTION

MODEL: Default
FILE NAME: c:\SP\WHKS & CO\Jobs-Spring - Projects\Macoupin County\9541 Macoupin Co. CH 34 over Solomon Creek\CADD\CAD Sheets\9541-sht-TYP.dgn

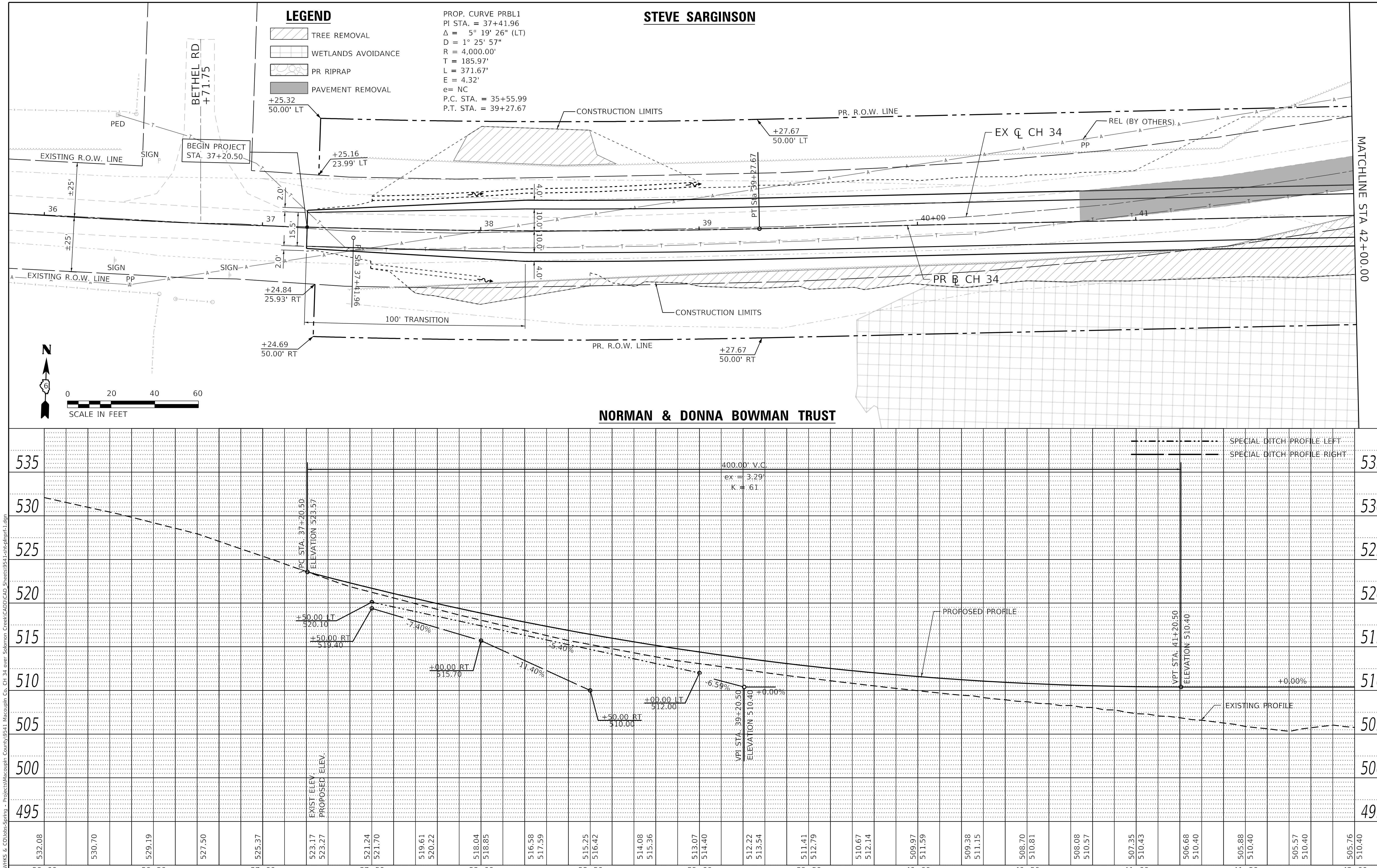
design firm no. 184001036 whks engineers + planners + land surveyors

USER NAME = bjohnson	DESIGNED - MRL	REVISED -	
	DRAWN - GSJ	REVISED -	
PLOT SCALE = 120.0000 ' / ft.	CHECKED - MRL	REVISED -	
PLOT DATE = 2/27/2025	DATE - 2/27/2025	REVISED -	

MACOUPIN COUNTY HIGHWAY DEPARTMENT

TYPICAL SECTIONS
CH 34 (HAGAMAN ROAD) OVER SOLOMON CREEK
SCALE: 1" = 10' | SHEET 1 OF 1 SHEETS | STA. | TO STA.

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	21-00107-00-BR	MACOUPIN	54	10
		CONTRACT NO.93828		
	ILLINOIS FED. AID PROJECT			



PLAN — NOTE BOOK NO. — SURVEYED, PLOTTED, ALIGNMENT CHECKED, RT. OF WAY CHECKED, CADD FILE NAME — BY — DATE

PROFILE — NOTE BOOK NO. — SURVEYED, PLOTTED, GRADES CHECKED, B.M. NOTED, STRUCTURE NOTAT'NS CH'KD — BY — DATE

MODEL: Default
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design firm no. 184001036 — whks engineers + planners + land surveyors

USER NAME = bjohnson	DESIGNED - MRL	REVISED -
	DRAWN - GSJ	REVISED -
PLOT SCALE = 480.0000 ' / ft.	CHECKED - MRL	REVISED -
PLOT DATE = 2/27/2025	DATE - 2/27/2025	REVISED -

MACOUPIN COUNTY HIGHWAY DEPARTMENT

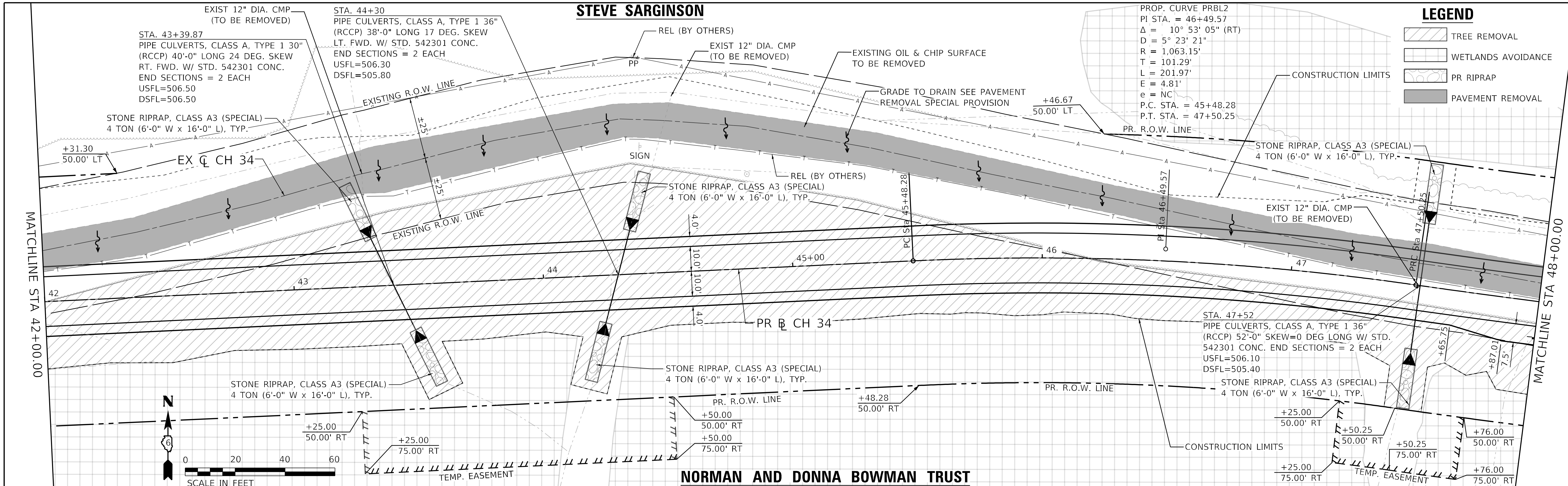
PLAN AND PROFILE
CH 34 (HAGAMAN ROAD) OVER SOLOMON CREEK

SCALE: 1" = 20' | SHEET 1 OF 4 SHEETS | STA. TO STA.

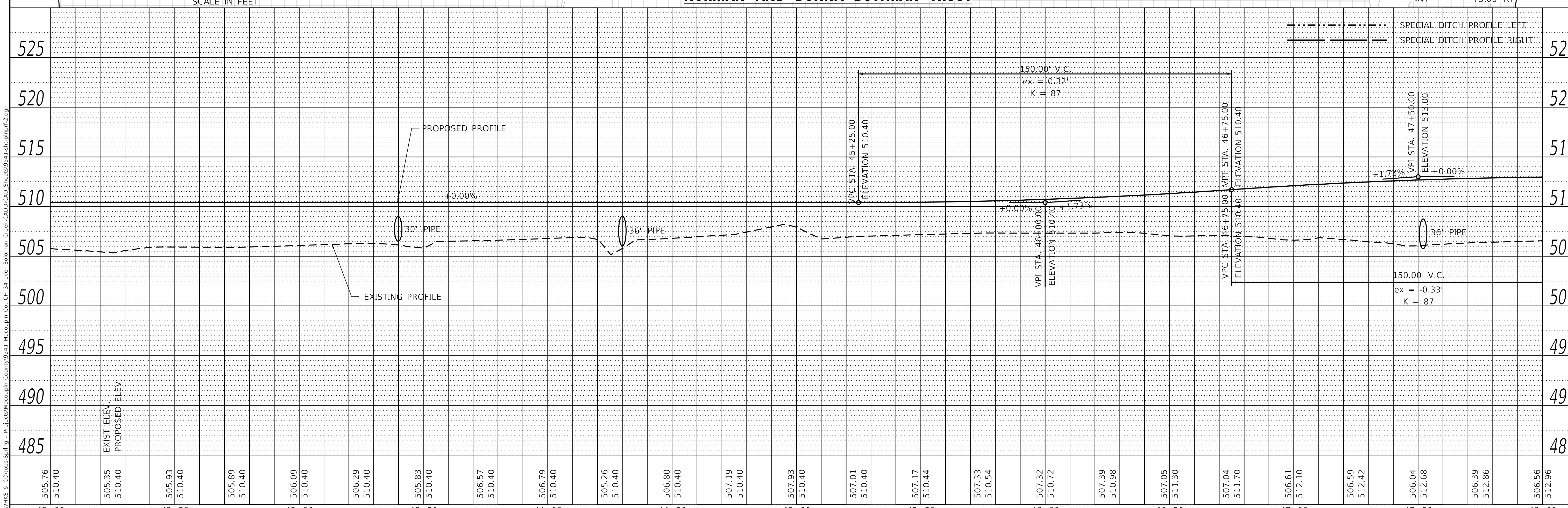
C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	21-00107-00-BR	MACOUPIN	54	11

CONTRACT NO.93828

ILLINOIS | FED. AID PROJECT



STEVE SARGINSON
EXIST 12" DIA. CMP (TO BE REMOVED)
STA. 44+30 PIPE CULVERTS, CLASS A, TYPE 1 36" (RCCP) 38'-0" LONG 17 DEG. SKEW LT. FWD. W/ STD. 542301 CONC. END SECTIONS = 2 EACH USFL=506.30 DSFL=505.80
STA. 43+39.87 PIPE CULVERTS, CLASS A, TYPE 1 30" (RCCP) 40'-0" LONG 24 DEG. SKEW RT. FWD. W/ STD. 542301 CONC. END SECTIONS = 2 EACH USFL=506.50 DSFL=506.50
REL (BY OTHERS)
EXIST 12" DIA. CMP (TO BE REMOVED)
EXISTING OIL & CHIP SURFACE TO BE REMOVED
GRADE TO DRAIN SEE PAVEMENT REMOVAL SPECIAL PROVISION
EXISTING R.O.W. LINE
STONE RIPRAP, CLASS A3 (SPECIAL) 4 TON (6'-0" W x 16'-0" L), TYP.
+31.30 50.00' LT
EX ℄ CH 34
SIGN
REL (BY OTHERS)
STONE RIPRAP, CLASS A3 (SPECIAL) 4 TON (6'-0" W x 16'-0" L), TYP.
PROP. CURVE PRBL2
PI STA. = 46+49.57
Δ = 10° 53' 05" (RT)
D = 5° 23' 21"
R = 1,063.15'
T = 101.29'
L = 201.97'
E = 4.81'
e = NC
P.C. STA. = 45+48.28
P.T. STA. = 47+50.25
LEGEND
TREE REMOVAL
WETLANDS AVOIDANCE
PR RIPRAP
PAVEMENT REMOVAL
CONSTRUCTION LIMITS
+46.67 50.00' LT
PR. R.O.W. LINE
STONE RIPRAP, CLASS A3 (SPECIAL) 4 TON (6'-0" W x 16'-0" L), TYP.
EXIST 12" DIA. CMP (TO BE REMOVED)
MATCHLINE STA 42+00.00
MATCHLINE STA 48+00.00
PC Sta 45+48.28
PI Sta 46+49.57
PT Sta 47+50.25
42
43
44
45+00
46
47
4.0'
10.0'
10.0'
4.0'
±25'
±25'
PR ℄ CH 34
STA. 47+52 PIPE CULVERTS, CLASS A, TYPE 1 36" (RCCP) 52'-0" SKEW=0 DEG LONG W/ STD. 542301 CONC. END SECTIONS = 2 EACH USFL=506.10 DSFL=505.40
+65.75
+87.01
7.5'
STONE RIPRAP, CLASS A3 (SPECIAL) 4 TON (6'-0" W x 16'-0" L), TYP.
STONE RIPRAP, CLASS A3 (SPECIAL) 4 TON (6'-0" W x 16'-0" L), TYP.
STONE RIPRAP, CLASS A3 (SPECIAL) 4 TON (6'-0" W x 16'-0" L), TYP.
+48.28 50.00' RT
PR. R.O.W. LINE
PR. R.O.W. LINE
+50.00 50.00' RT
+50.00 75.00' RT
+25.00 50.00' RT
+25.00 75.00' RT
+25.00 50.00' RT
+50.25 50.00' RT
+50.25 75.00' RT
+76.00 50.00' RT
+25.00 75.00' RT
+76.00 75.00' RT
CONSTRUCTION LIMITS
TEMP. EASEMENT
TEMP. EASEMENT
N
6
0 20 40 60
SCALE IN FEET
NORMAN AND DONNA BOWMAN TRUST



SPECIAL DITCH PROFILE LEFT
SPECIAL DITCH PROFILE RIGHT
525
520
515
510
505
500
495
490
485
150.00' V.C.
ex = 0.32'
K = 87
PROPOSED PROFILE
+0.00%
VPC STA. 45+25.00 ELEVATION 510.40
VPT STA. 46+75.00 ELEVATION 510.40
VPI STA. 47+50.00 ELEVATION 513.00
+1.73%
+0.00%
+0.00%
+1.73%
30" PIPE
36" PIPE
36" PIPE
VPI STA. 46+00.00 ELEVATION 510.40
VPC STA. 46+75.00 ELEVATION 510.40
150.00' V.C.
ex = -0.33'
K = 87
EXISTING PROFILE
EXIST ELEV.
PROPOSED ELEV.
505.76 510.40
505.35 510.40
505.93 510.40
505.89 510.40
506.09 510.40
506.29 510.40
505.83 510.40
506.57 510.40
506.79 510.40
505.26 510.40
506.80 510.40
507.19 510.40
507.93 510.40
507.01 510.40
507.17 510.44
507.33 510.54
507.32 510.72
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506.61 512.10
506.59 512.42
506.04 512.68
506.39 512.86
506.56 512.96
42+00
42+50
43+00
43+50
44+00
44+50
45+00
45+50
46+00
46+50
47+00
47+50
48+00

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

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

FILE NAME: C:\SPWHKS & CO\Jobs-Spring - Projects\Macoupin County\9541 Macoupin Co. CH 34 over Solomon Creek\CADD\CAD_Sheets\9541-sht-plnprf-2.dgn
MODEL: Default

design firm no. 184001036
whks
engineers • planners • land surveyors

USER NAME = bjohnson	DESIGNED - MRL	REVISED -	
	DRAWN - GSJ	REVISED -	
PLOT SCALE = 480.0000 ' / ft.	CHECKED - MRL	REVISED -	
PLOT DATE = 2/27/2025	DATE - 2/27/2025	REVISED -	

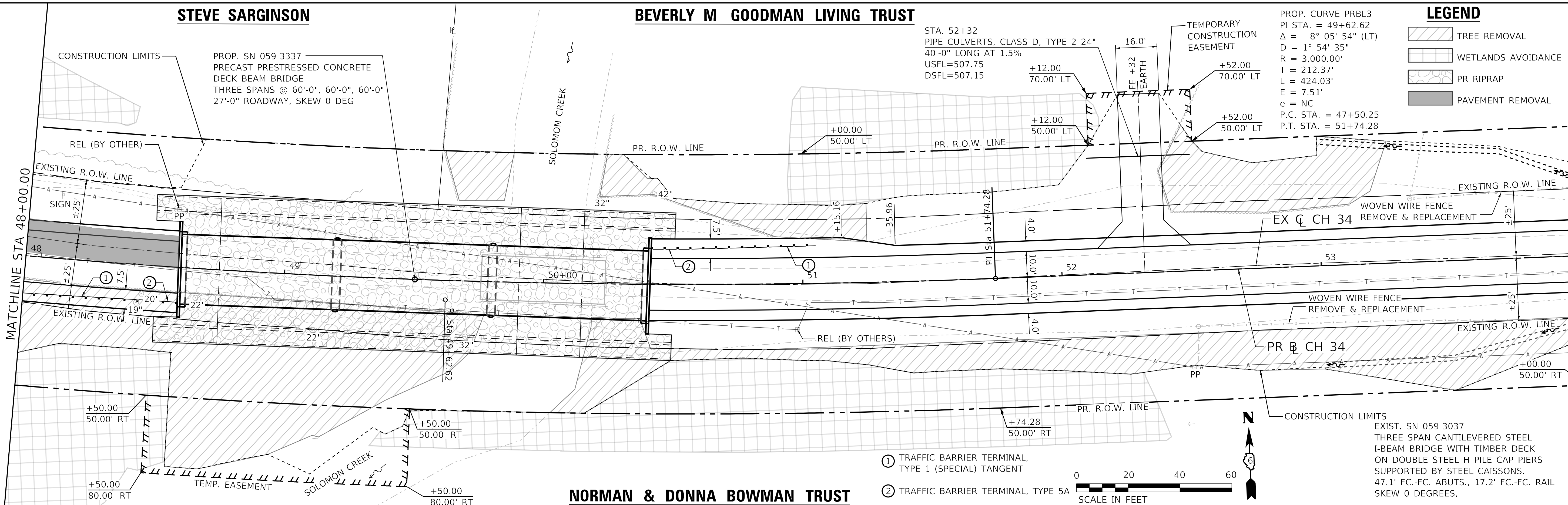
MACOUPIN COUNTY HIGHWAY DEPARTMENT

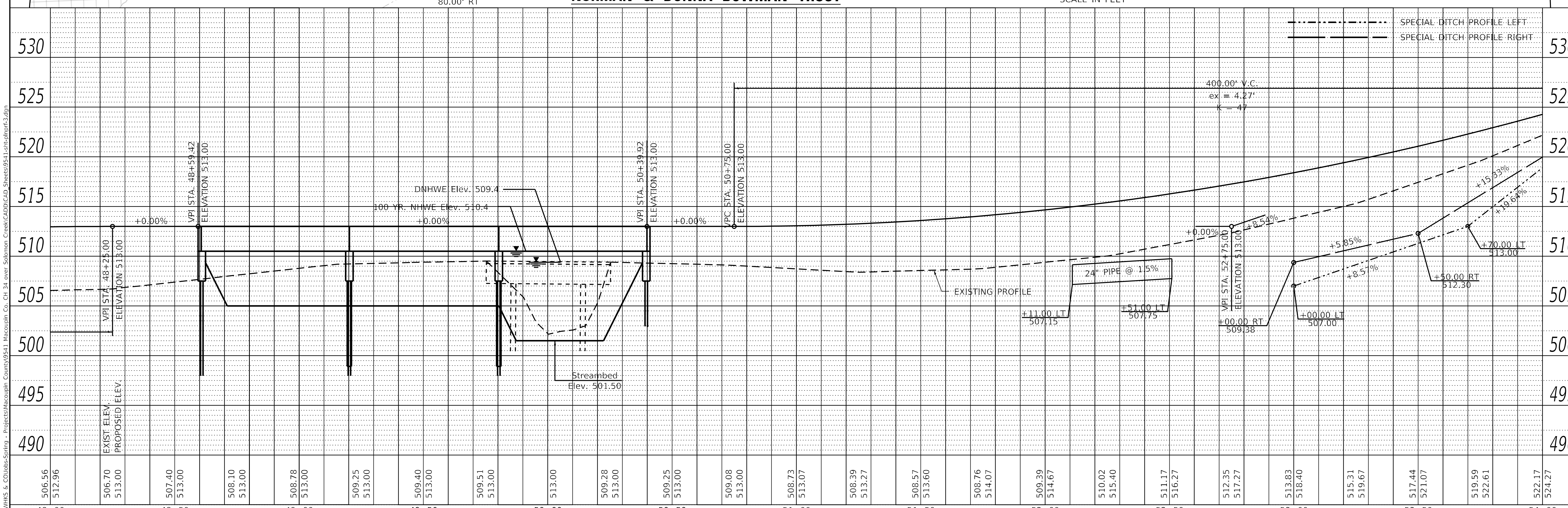
PLAN AND PROFILE
CH 34 (HAGAMAN ROAD) OVER SOLOMON CREEK

SCALE: 1" = 20' | SHEET 2 OF 4 SHEETS | STA. TO STA.

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	21-00107-00-BR	MACOUPIN	54	12

CONTRACT NO.93828
ILLINOIS FED. AID PROJECT





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PROFILE | SURVEYED | PLOTTED | GRADES CHECKED | B.M. NOTED | STRUCTURE NOTAT'NS CH'KD | NOTE BOOK | NO. | BY | DATE

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design firm no. 184001036
whks
engineers + planners + land surveyors

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	DRAWN - GSJ	REVISED -	
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PLOT DATE = 2/27/2025	DATE - 2/27/2025	REVISED -	

MACOUPIN COUNTY HIGHWAY DEPARTMENT

PLAN AND PROFILE

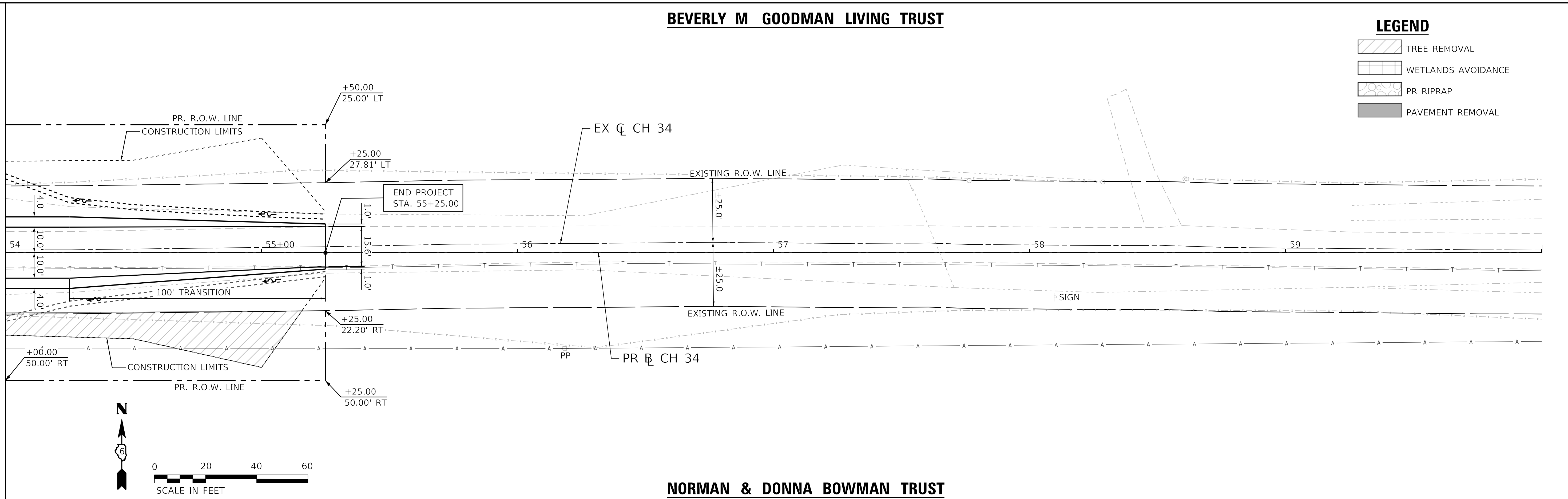
CH 34 (HAGAMAN ROAD) OVER SOLOMON CREEK

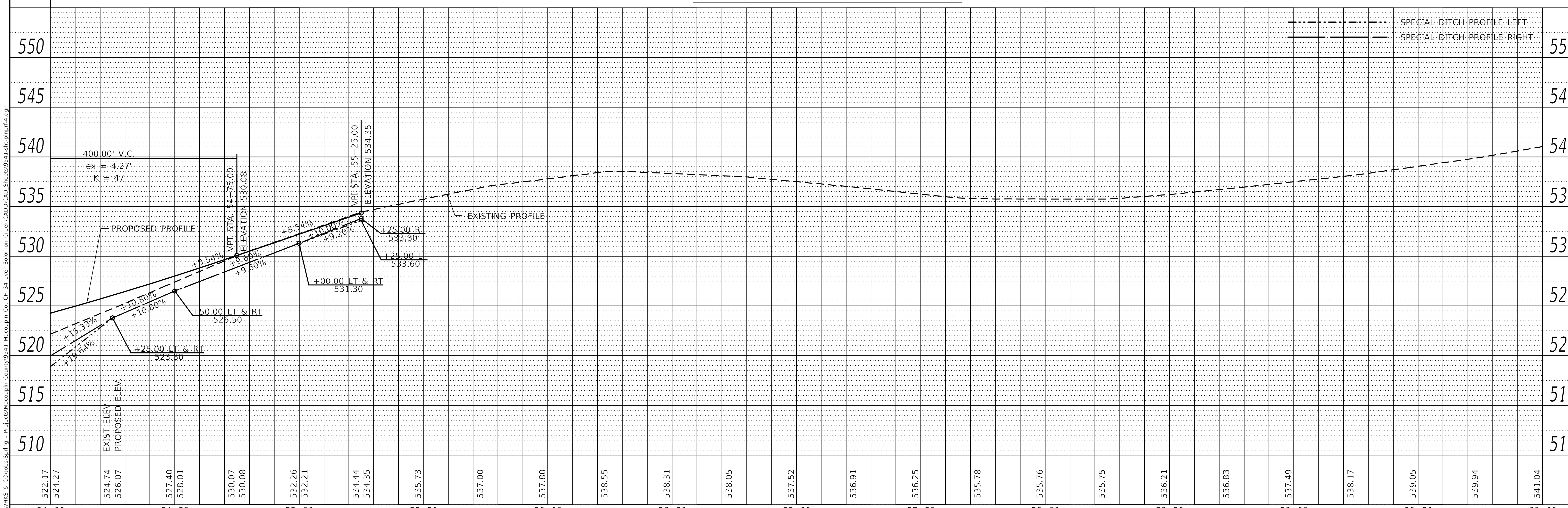
SCALE: 1" = 20' | SHEET 3 OF 4 SHEETS | STA. TO STA.

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	21-00107-00-BR	MACOUPIN	54	13

CONTRACT NO.93828

ILLINOIS | FED. AID PROJECT





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		DRAWN - GSJ	REVISED -
	PLOT SCALE = 480.0000 ' / ft.	CHECKED - MRL	REVISED -
	PLOT DATE = 2/27/2025	DATE - 2/27/2025	REVISED -

MACOUPIN COUNTY HIGHWAY DEPARTMENT

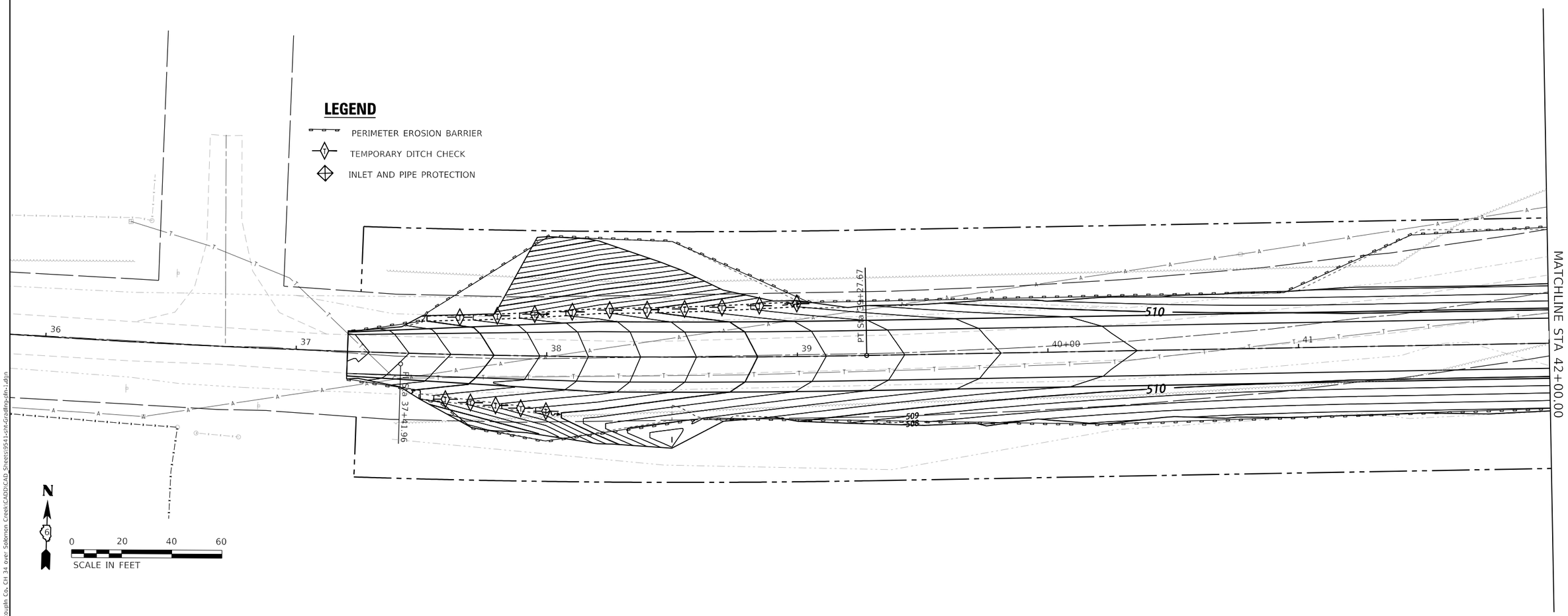
PLAN AND PROFILE
CH 34 (HAGAMAN ROAD) OVER SOLOMON CREEK

SCALE: 1" = 20' | SHEET 4 OF 4 SHEETS | STA. TO STA.

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	21-00107-00-BR	MACOUPIN	54	14
		CONTRACT NO.93828		
	ILLINOIS	FED. AID PROJECT		

LEGEND

- PERIMETER EROSION BARRIER
- TEMPORARY DITCH CHECK
- INLET AND PIPE PROTECTION



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design firm no. 184001036 — whks engineers + planners + land surveyors

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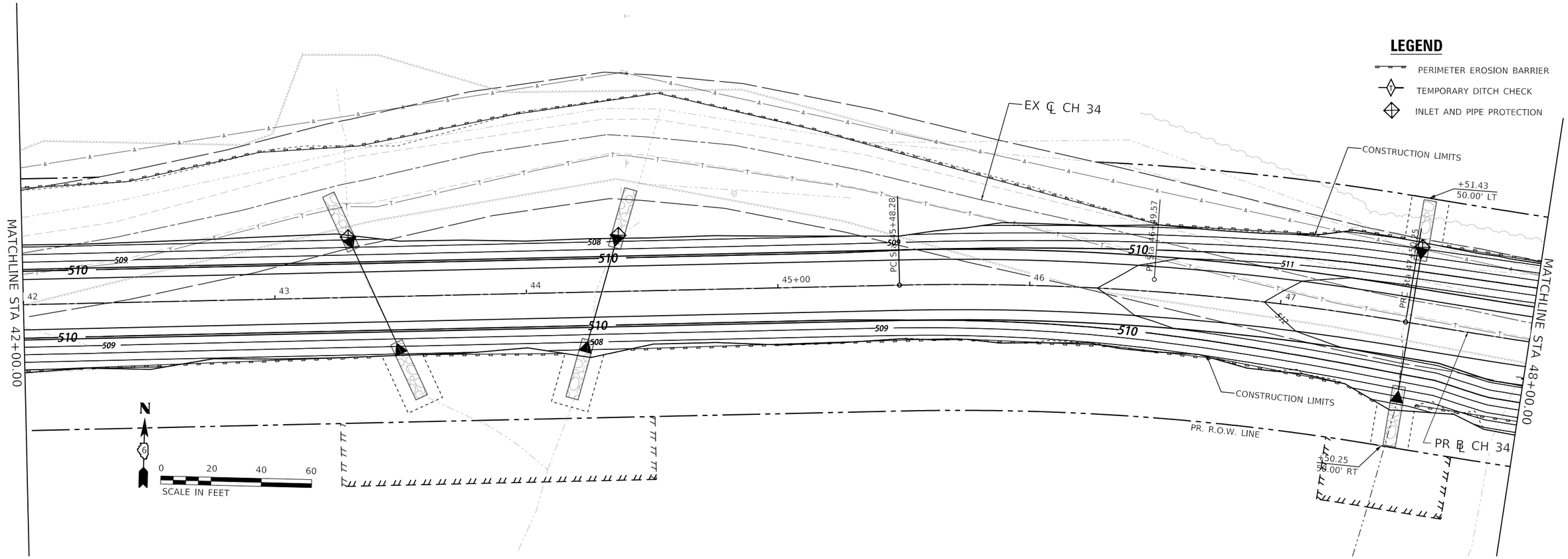
PLOT DATE = 2/27/2025	DATE - 2/27/2025	REVISED -	

MACOUPIN COUNTY HIGHWAY DEPARTMENT

EROSION CONTROL AND GRADING PLAN
CH 34 (HAGAMAN ROAD) OVER SOLOMON CREEK

SCALE: 1" = 20' | SHEET 1 OF 4 SHEETS | STA. | TO STA.

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	21-00107-00-BR	MACOUPIN	54	15
		CONTRACT NO. 93828		
	ILLINOIS FED. AID PROJECT			



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design firm no. 184001036 whks engineers + planners + land surveyors

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PLOT DATE = 2/27/2025	DATE - 2/27/2025	REVISED -	

MACOUPIN COUNTY HIGHWAY DEPARTMENT

EROSION CONTROL AND GRADING PLAN
CH 34 (HAGAMAN ROAD) OVER SOLOMON CREEK

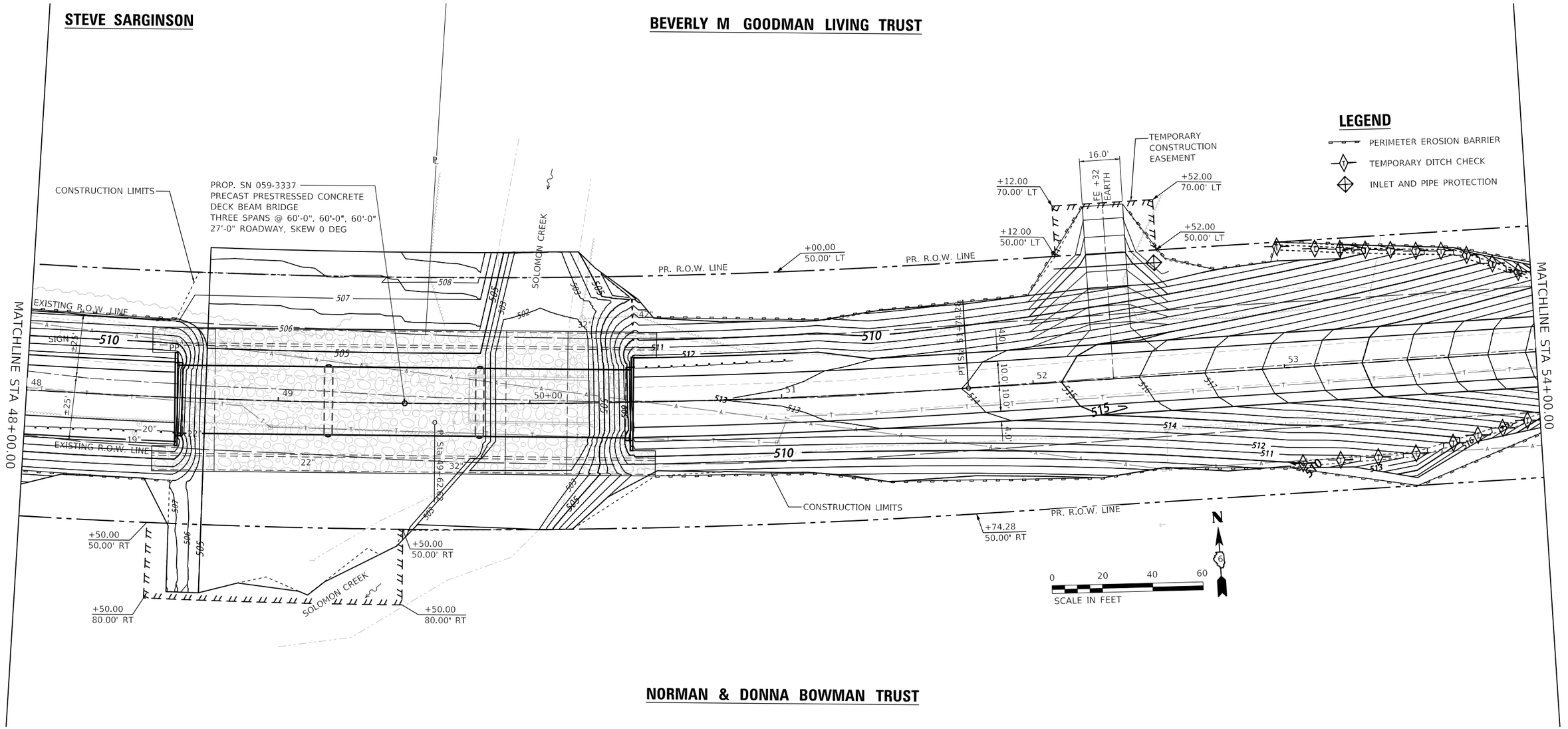
SCALE: 1" = 20' | SHEET 2 OF 4 SHEETS | STA. | TO STA.

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	21-00107-00-BR	MACOUPIN	54	16
		CONTRACT NO.93828		
	ILLINOIS	FED. AID PROJECT		

STEVE SARGINSON

BEVERLY M GOODMAN LIVING TRUST

NORMAN & DONNA BOWMAN TRUST



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design firm no. 184001036 whks engineers + planners + land surveyors

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PLOT SCALE = 40.0000 ' / in.	CHECKED - MRL	REVISED -	
PLOT DATE = 2/27/2025	DATE - 2/27/2025	REVISED -	

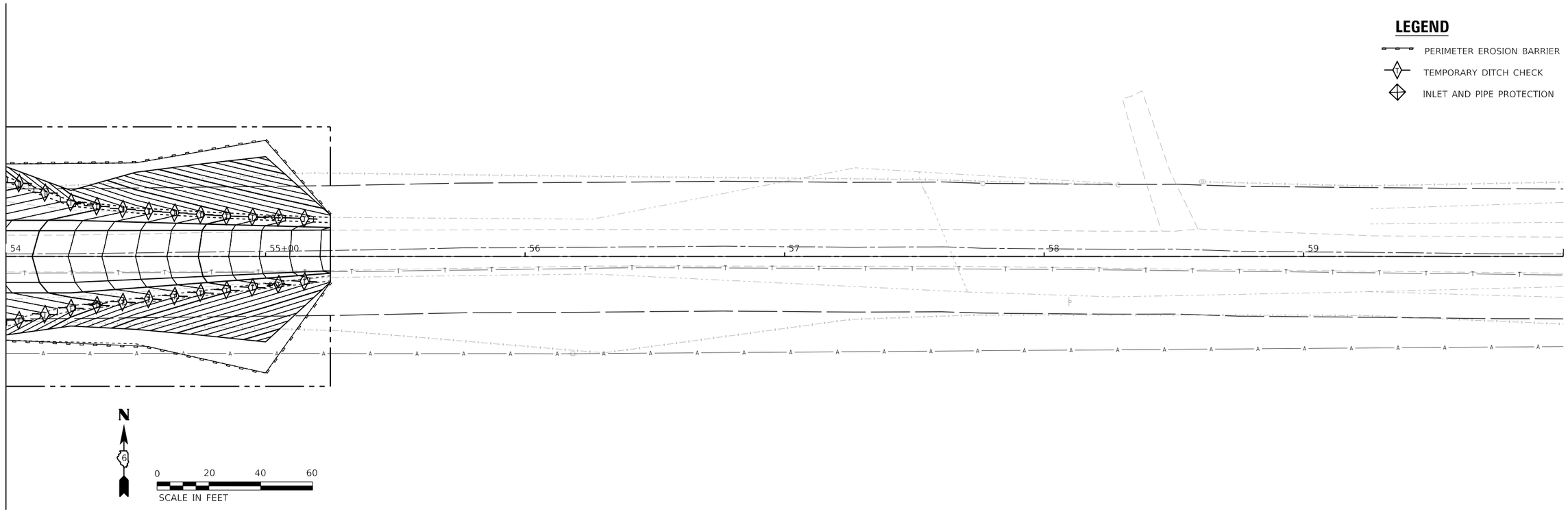
MACOUPIN COUNTY HIGHWAY DEPARTMENT

EROSION CONTROL AND GRADING PLAN
CH 34 (HAGAMAN ROAD) OVER SOLOMON CREEK

SCALE: 1" = 20' | SHEET 3 OF 4 SHEETS | STA. TO STA.

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	21-00107-00-BR	MACOUPIN	54	17
		CONTRACT NO. 93828		
	ILLINOIS FED. AID PROJECT			

MATCHLINE STA 54+00.00



LEGEND

- PERIMETER EROSION BARRIER
- TEMPORARY DITCH CHECK
- INLET AND PIPE PROTECTION

N

0 20 40 60

SCALE IN FEET

MODEL: Default
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design firm no. 184001036 whks engineers + planners + land surveyors

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	DRAWN - GSJ	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED - MRL	REVISED -	
PLOT DATE = 2/27/2025	DATE - 2/27/2025	REVISED -	

MACOUPIN COUNTY HIGHWAY DEPARTMENT

EROSION CONTROL AND GRADING PLAN
CH 34 (HAGAMAN ROAD) OVER SOLOMON CREEK

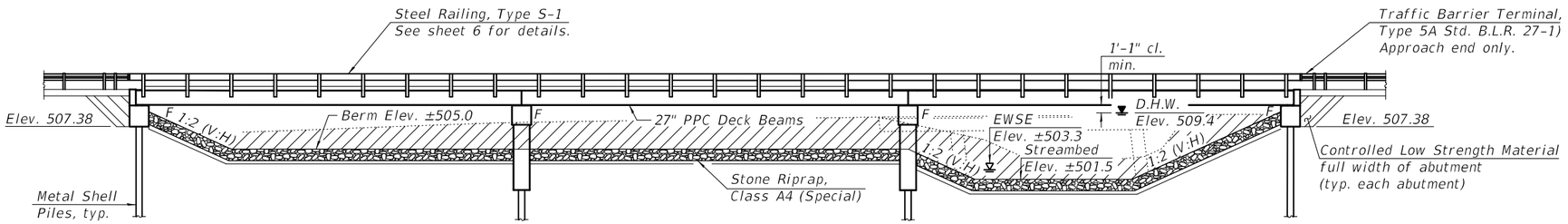
SCALE: 1" = 20' | SHEET 4 OF 4 SHEETS | STA. | TO STA.

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	21-00107-00-BR	MACOUPIN	54	18
		CONTRACT NO.93828		
	ILLINOIS	FED. AID PROJECT		

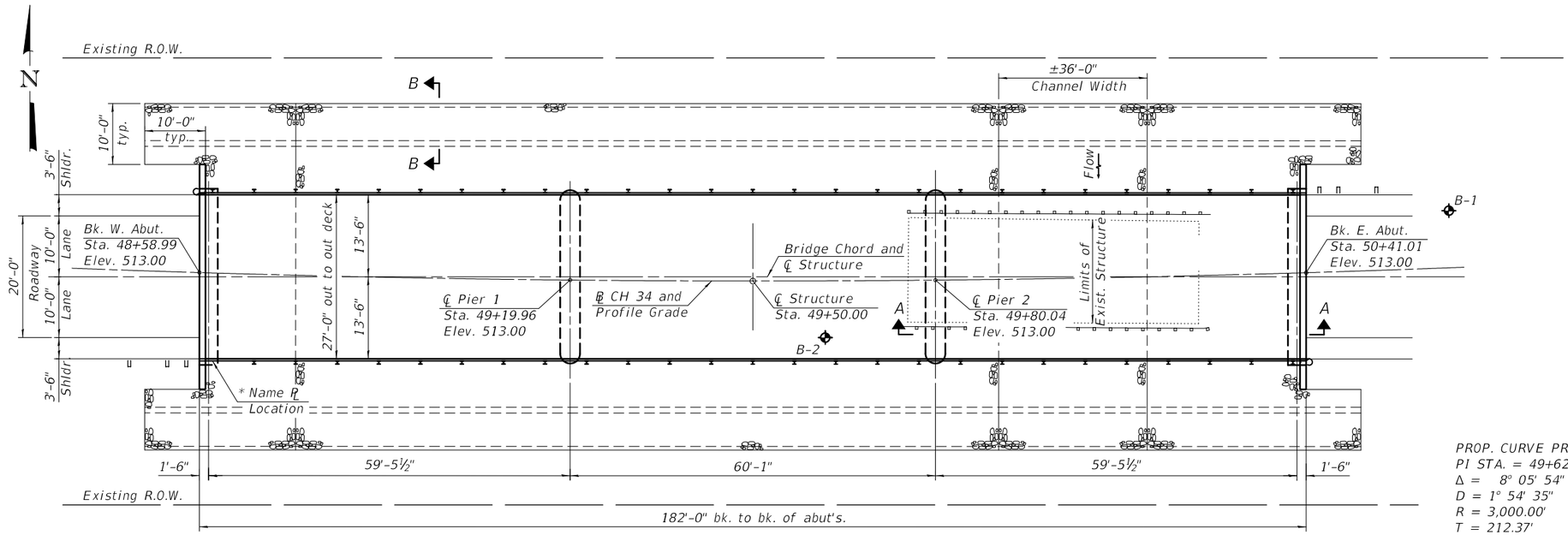
Benchmark: See Roadway Plans.

Existing Structure: SN 059-3037 was built with an unknown construction date at Station 50+00. The structure is a three-span cantilever steel I-beam bridge with timber decking supported by double steel H-Pile caps founded on steel caissons. The bridge is 48'-0" back-to-back of abutments with an out-to-out bridge width of 18'-0". Structure to be removed and replaced. Road to be closed during construction.

Salvage: None



ELEVATION



*Place on back side of 12" rail

PLAN

INDEX OF SHEETS

DESIGN SPECIFICATIONS

2020 AASHTO LRFD Bridge Design Specifications
9th Edition

LOADING HL-93

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

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

PRECAST UNITS

f'c = 6,000 psi
f'ci = 5,000 psi
f'pu = 270,000 psi (½" low lax strands)
f'pbt = 201,960 psi (½" low lax strands)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 2
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.256g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.544g
Soil Site Class = E

PROP. CURVE PRBL3
PI STA. = 49+62.62
Δ = 8° 05' 54" (LT)
D = 1° 54' 35"
R = 3,000.00'
T = 212.37'
L = 424.03'
E = 7.51'
e = NC
P.C. STA. = 47+50.25
P.T. STA. = 51+74.28

LICENSED STRUCTURAL ENGINEER
BRENTON R. DAVIS
081-007742
STATE OF ILLINOIS
12-27-2023
Brenton R Davis
Expires: 11/30/2024

WATERWAY INFORMATION

Drainage Area = 26.78 SQ MI

Exist. Low Grade Elev. 505.26 at Sta. 44+25.00
Prop. Low Grade Elev. 510.40 at Sta. 44+25.00

Flood	Freq. Yr.	Q C.F.S.	Opening Ft² Exist.	Opening Ft² Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	3,720	109	832	509.1	0.1	0.0	509.2	508.9
Design	15	4,330	109	884	509.4	0.1	0.0	509.5	509.2
	20	4,740	109	901	509.5	0.1	0.1	509.6	509.6
	30	5,320	109	954	509.8	0.1	0.1	509.9	509.9
	50	5,970	109	988	510.0	0.1	0.2	510.1	510.2
Base/Prop. OT*	100	6,990	109	1,041	510.4	0.1	0.3	510.5	510.7
Check	200	8,040	109	1,058	510.8	0.1	0.4	510.9	511.2
Max. Calc.	500	9,480	109	1,058	511.2	0.1	0.8	511.3	512.0

* All Flood Events overtop the roadway for existing condition.

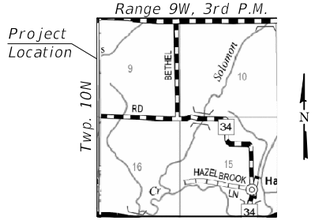
10yr Velocity through Existing: 1.5 ft/s
10 yr Velocity through Proposed: 4.6 ft/s

DESIGN SCOUR ELEVATION TABLE

Event / Limit State	Design Scour Elevations (ft.) W. Abut.	Pier 1	Pier 2	E. Abut.	Item 113
Q100	-	496.01	496.01	-	5
Q200	-	501.80	501.80	-	
Design	507.38	496.01	496.01	507.38	
Check	507.38	501.80	501.80	507.38	

SOLOMON CREEK
BUILT 20 BY
MACOUPIN COUNTY
SEC. 21-00107-00-BR
STA. 49+50.00
STR. NO. 059-3337 LOADING HL93

NAME PLATE
See Std. 515001



LOCATION SKETCH

GENERAL PLAN AND ELEVATION
CH 34 OVER SOLOMON CREEK
SECTION 21-00107-00-BR
MACOUPIN COUNTY
STATION 49+50.00
STRUCTURE NO. 059-3337

FILE NAME: C:\SP\WHKS & CO\Jobs-Spring - Projects\Macoupin County\0541 Macoupin Co. CH 34 over Solomon Creek\CADD\CAD_Sheets\SN 059-3337.dgn

design firm no. 184001036
whks engineers + planners + land surveyors

USER NAME = bJohnson		DESIGNED - GEM		REVISED -	
		CHECKED - -		REVISED -	
PLOT DATE = 2/28/2025		DRAWN - JLM		REVISED -	
PLOT DATE = 8:36:33 AM		CHECKED - GEM		REVISED -	

MACOUPIN COUNTY HIGHWAY DEPARTMENT

STRUCTURE NO. 059-3337

SHEET 1 OF 13 SHEETS

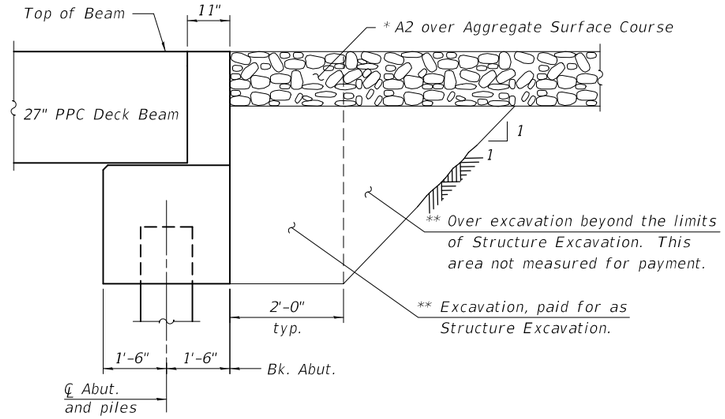
CH RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	21-00107-00-BR	MACOUPIN	54	19
		CONTRACT NO. 93828		
	ILLINOIS	FED. AID PROJECT		

GENERAL NOTES

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Layout of the slope protection may be varied in the field to suit ground conditions as directed by the Engineer.
3. The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to address the presence of lead on this project.

TOTAL BILL OF MATERIAL

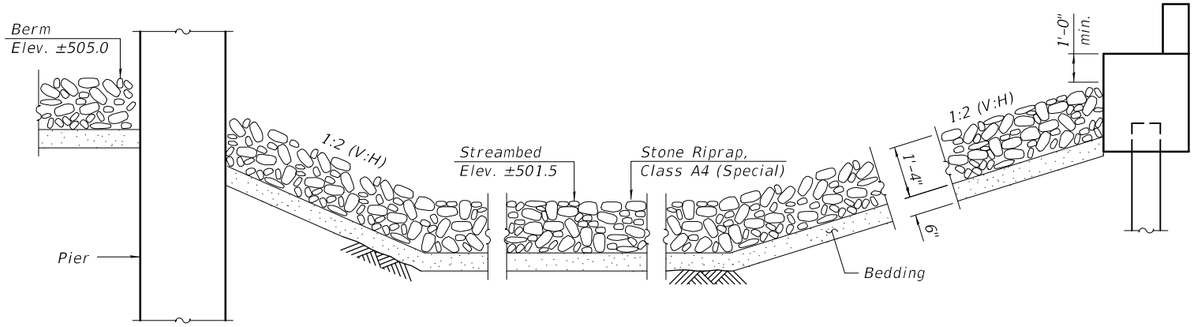
Item	Unit	Super	Sub	Total
Channel Excavation	Cu. Yd.		965	965
Removal of Existing Structures	Each	1		1
Structure Excavation	Cu. Yd.		32	32
Concrete Structures	Cu. Yd.		50	50
Concrete Encasement	Cu. Yd.		9.5	9.5
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq. Ft.	4,860		4,860
Reinforcement Bars, Epoxy Coated	Pound		6,800	6,800
Steel Railing, Type S1	Foot	364		364
Furnishing Metal Shell Piles 14" X 0.312"	Foot		684	684
Driving Piles	Foot		684	684
Test Pile Metal Shells	Each		4	4
Name Plates	Each	1		1
Controlled Low-Strength Material	Cu. Yd.		45	45
Terminal Marker - Direct Applied	Each	4		4
Stone Riprap, Class A4 (Special)	Ton		812	812



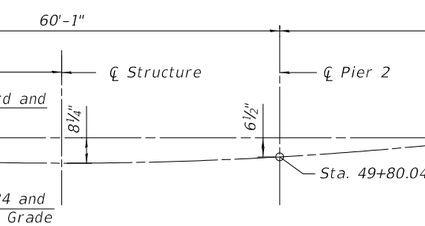
SECTION AT ABUTMENT

* See Roadway Plans

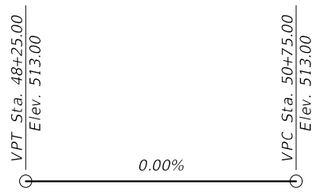
** Backfill with Controlled Low-Strength Material (CLSM) (Mix 2) full width of abutment cap only, typ. each abutment.



SECTION A-A



SECTION B-B



PROPOSED PROFILE GRADE

(Along ℄ CH 34)

OFFSET SKETCH

FILE NAME: C:\SP\WHKS & CO\Jobs-Spring - Projects\Macoupin County\9541 Macoupin Co, CH 34 over Salomon Creek\CADD\CAD_Sheets\SN 059-3337.dgn

design firm no. 184001036 whks engineers + planners + land surveyors	USER NAME = bjohnson	DESIGNED - GEM	REVISED -	MACOUPIN COUNTY HIGHWAY DEPARTMENT	GENERAL DATA STRUCTURE NO. 059-3337 SHEET 2 OF 13 SHEETS
		CHECKED - -	REVISED -		
	PLOT DATE = 2/28/2025	DRAWN - JLM	REVISED -		
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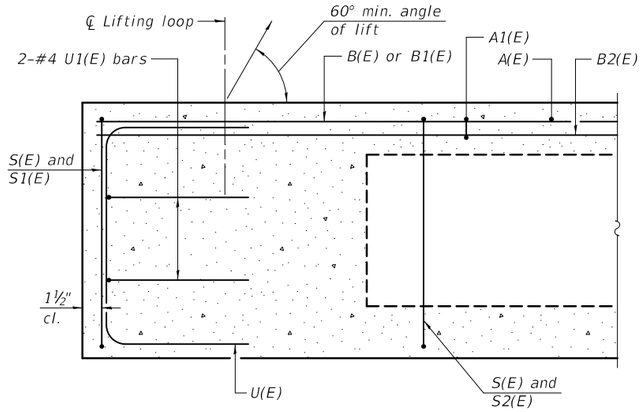
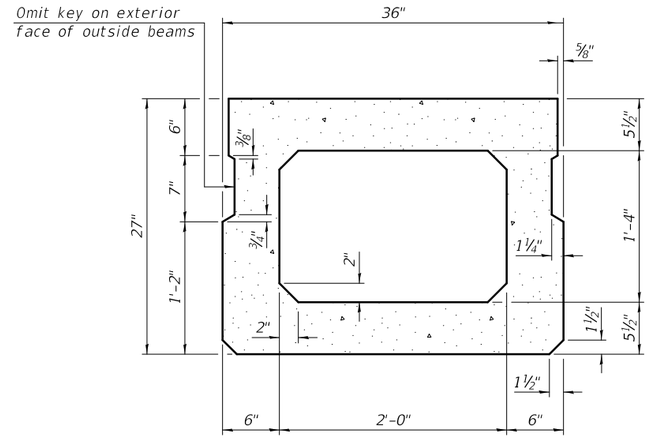
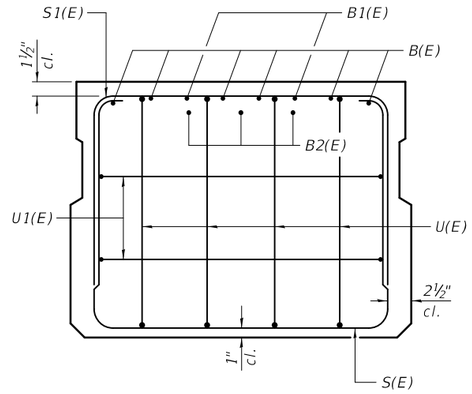
CH RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	21-00107-00-BR	MACOUPIN	54	20
		CONTRACT NO. 93828		
	ILLINOIS	FED. AID PROJECT		



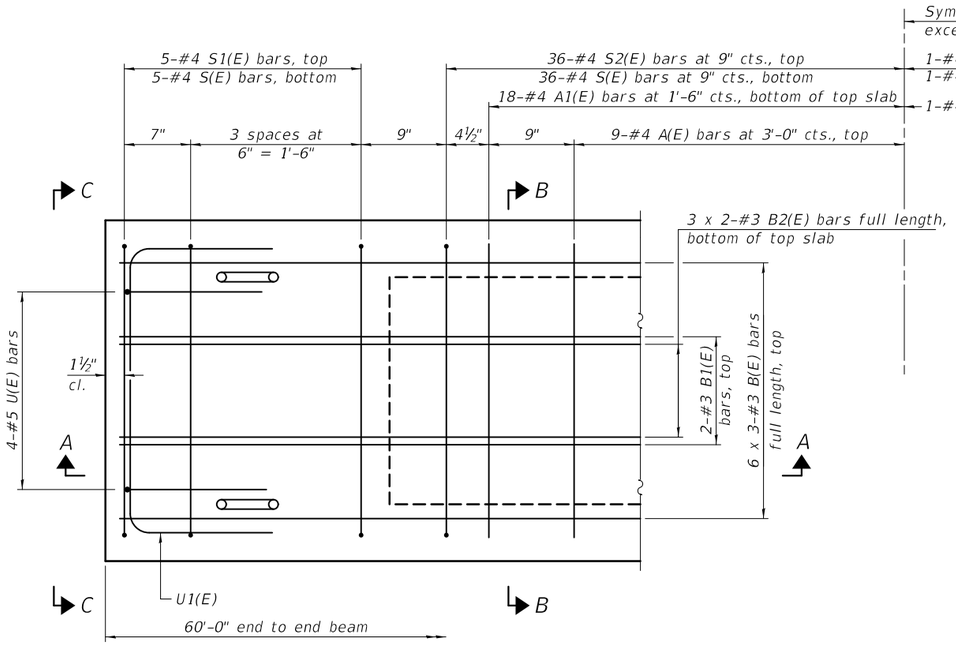
SECTION A-A



SECTION B-B
(Showing dimensions)

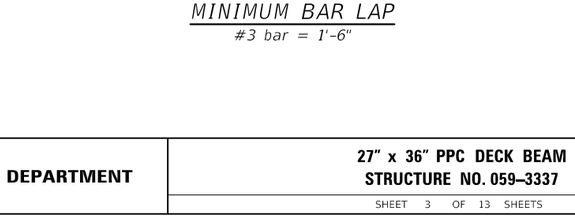


VIEW C-C



PLAN VIEW

Note:
Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.



SECTION B-B
(Showing reinforcement and permissible strand locations)

Note:
Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

MINIMUM BAR LAP
#3 bar = 1'-6"

BAR LIST
ONE BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
A(E)	18	#4	2'-7"	—
A1(E)	37	#4	2'-10"	~
B(E)	18	#3	20'-11"	—
B1(E)	4	#3	10'-0"	—
B2(E)	6	#3	30'-8"	—
S(E)	83	#4	7'-5"	⊔
S1(E)	10	#4	5'-11"	⊓
S2(E)	73	#4	6'-2"	⊓
U(E)	8	#5	4'-6"	⊏
U1(E)	4	#4	5'-0"	⊓

Note:
See sheet 4 of 13 for additional details and Bill of Material.

FILE NAME: C:\SP\WHKS & CO\Jobs-Sprfld - Projects\Macoupin County\09541 Macoupin Co, CH 34 over Salomon Creek\CADD\CAD_Sheets\SN 059-3337.dgn

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PLOT DATE = 2/28/2025	DRAWN - JLM	REVISED -
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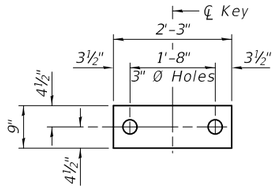
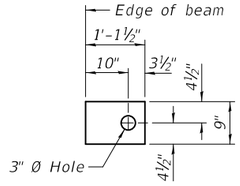
MACOUPIN COUNTY HIGHWAY DEPARTMENT

27" x 36" PPC DECK BEAM
STRUCTURE NO. 059-3337
SHEET 3 OF 13 SHEETS

CH RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	21-00107-00-BR	MACOUPIN	54	21
		CONTRACT NO. 93828		
	ILLINOIS	FED. AID PROJECT		



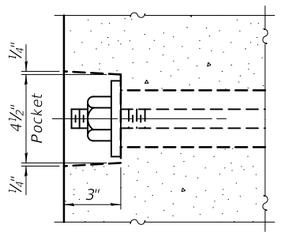
FABRIC BEARING PAD
(Interior)



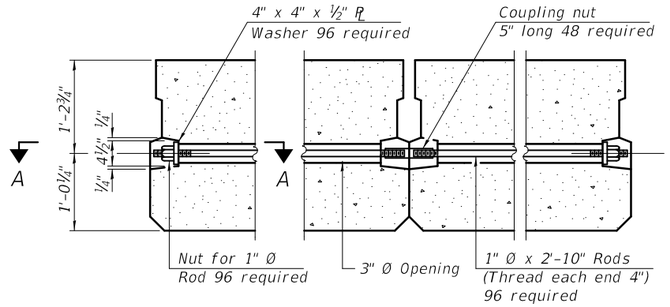
FABRIC BEARING PAD
(Exterior)

FIXED

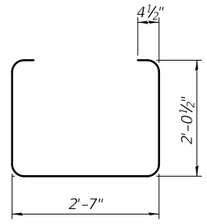
Notes:
All bearing pads shall be 1" thick.
Omit holes when using expansion bearings.
Expansion bearing pads shall be bonded to the substructure.



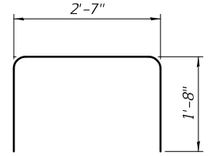
SECTION A-A



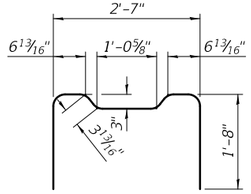
TYPICAL TRANSVERSE TIE ASSEMBLY



BAR S(E)



BAR S1(E)



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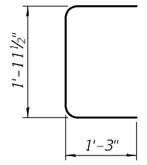
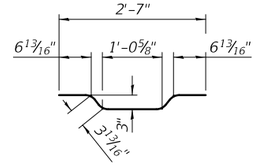


BAR U(E)



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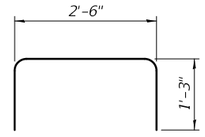

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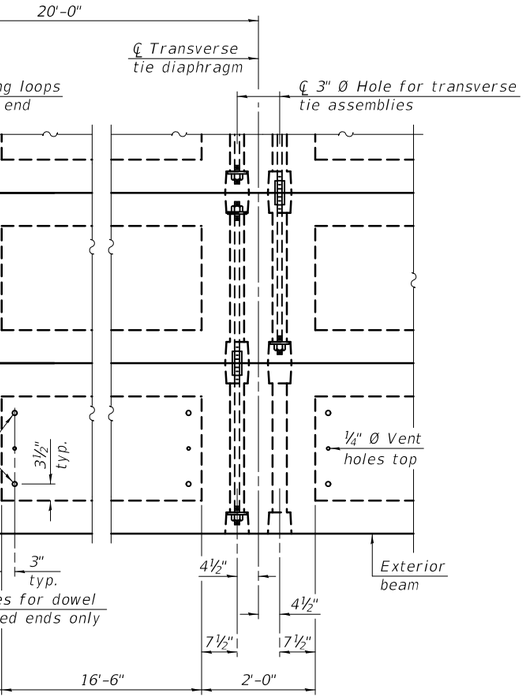
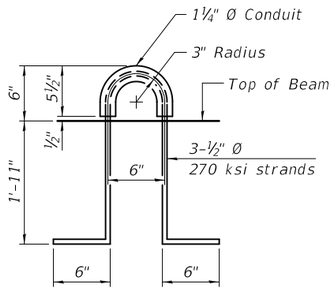


PLAN VIEW

Note:
Connect beams in pairs with the transverse tie configuration shown.

NOTES

1. Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be ½" and the nominal cross-sectional area shall be 0.153 sq. in.
2. The 1" Ø rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
3. Two ⅛" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
4. A minimum 2½" Ø lifting pin shall be used to engage the lifting loops during handling.
5. Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
6. Compressive strength of prestressed concrete, f'c, shall be 6000 psi.
7. Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.



LIFTING LOOP DETAIL

BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. (27" depth)	Sq. Ft.	4,860

FILE NAME: C:\SP\WHKS & CO\Jobs-Spring - Projects\Macoupin County\9541 Macoupin Co. CH 34 over Salmon Creek\CADD\CAD_Sheets\SN 059-3337.dgn

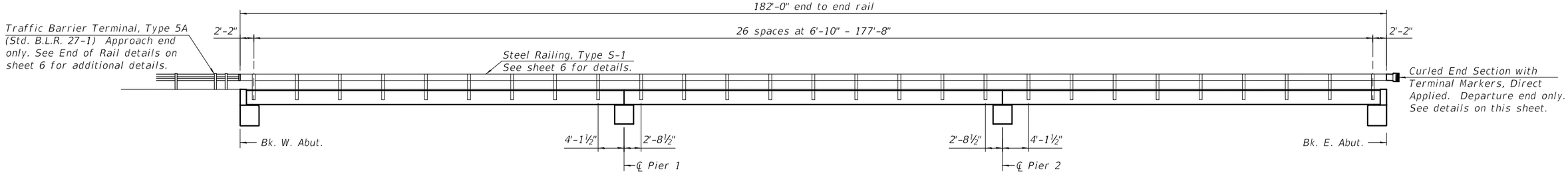
design firm no. 184001036
whks engineers + planners + land surveyors

USER NAME = bjohnson		DESIGNED - GEM		REVISED -	
		CHECKED - -		REVISED -	
PLOT DATE = 2/28/2025		DRAWN - JLM		REVISED -	
PLOT DATE = 8:36:34 AM		CHECKED - GEM\SBC		REVISED -	

MACOUPIN COUNTY HIGHWAY DEPARTMENT

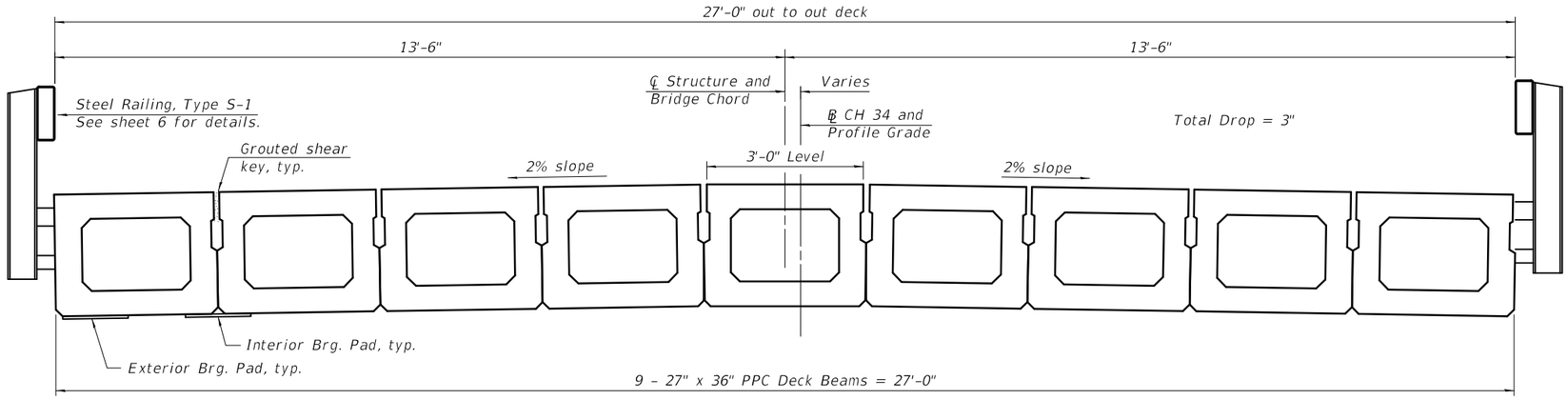
27" x 36" PPC DECK BEAM
STRUCTURE NO. 059-3337
SHEET 4 OF 13 SHEETS

CH RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	21-00107-00-BR	MACOUPIN	54	22
		CONTRACT NO. 93828		
	ILLINOIS	FED. AID PROJECT		

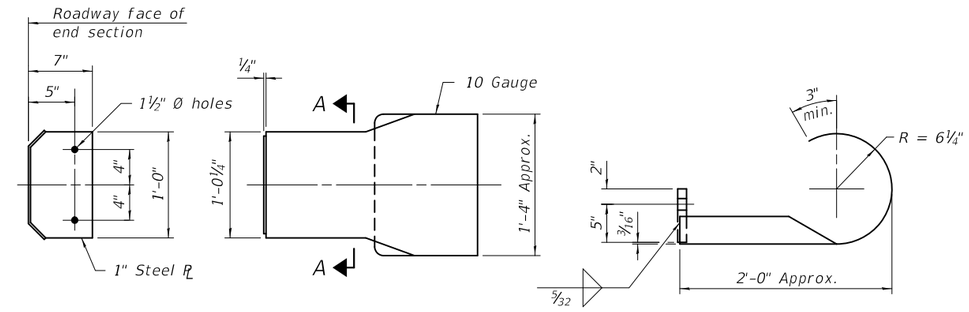


RAIL POST SPACING

(Looking at south face, north face similar)



CROSS SECTION



SECTION A-A

ELEVATION

PLAN

DETAILS OF CURLED END SECTION

(Cost included with Steel Railing, Type S-1)

FILE NAME: C:\SP\WHKS & CO\Jobs-Sprfld - Projects\Macoupin County\9541 Macoupin Co, CH 34 over Salomon Creek\CADD\CAD_Sheets\SN 059-3337.dgn

design firm no. 184001036 — whks engineers + planners + land surveyors

USER NAME = bjohnson	DESIGNED - GEM	REVISED -	
	CHECKED - -	REVISED -	
PLOT DATE = 2/28/2025	DRAWN - JLM	REVISED -	
PLOT DATE = 8:36:34 AM	CHECKED - GEMSBC	REVISED -	

MACOUPIN COUNTY HIGHWAY DEPARTMENT

SUPERSTRUCTURE DETAILS
STRUCTURE NO. 059-3337
SHEET 5 OF 13 SHEETS

CH RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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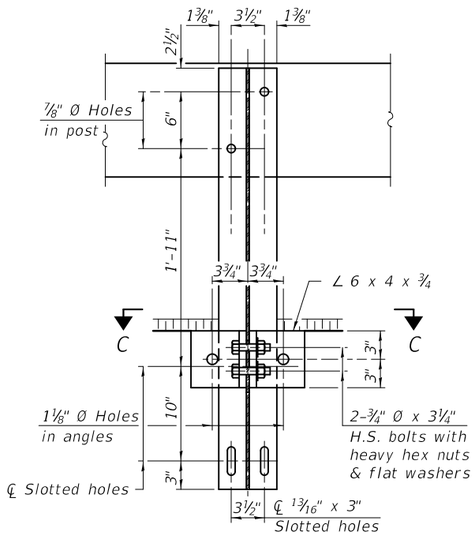
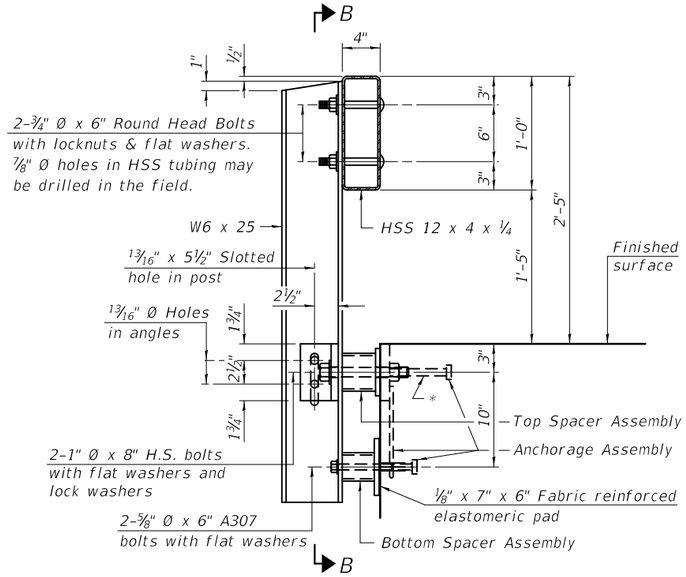
		CONTRACT NO. 93828		
	ILLINOIS	FED. AID PROJECT		

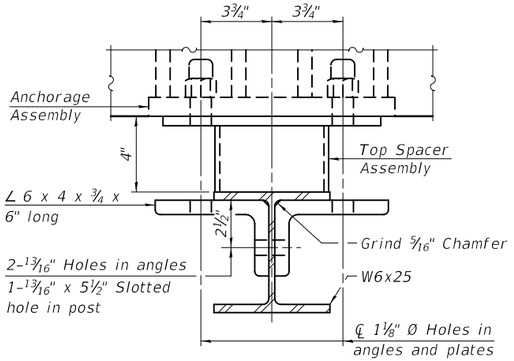


SECTION B-B

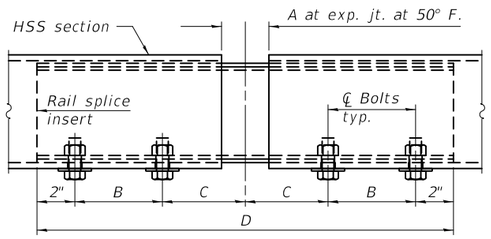


SECTION AT RAILING POST

* *The outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchorage assembly. The anchorage studs may be bent down ½" to accommodate the top reinforcement bar placement.*

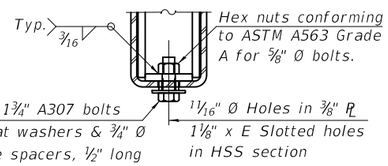


SECTION C-C



RAIL SPLICE ELEVATION

SECTION AT RAIL SPLICE



RAIL SPLICE CONNECTION AT EXPANSION JT.

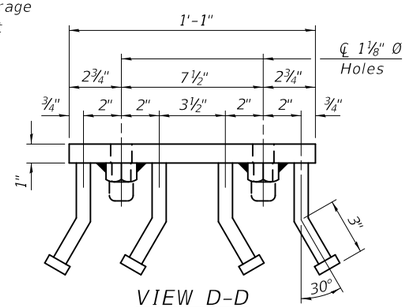
SPLICE DIMENSIONS

Location	T	A	B	C	D	E
All locs. not over exp. jts.	0	¼"	4"	4"	1'-8"	–
Over Strip Seal Jt.	≤4"	2½"	4⅜"	4⅜"	1'-10"	3 1⁄16"
Over Finger or Modular Jt.	≤9½"	5½"	7⅜"	7¼"	2'-9¼"	5 7⁄16"
Over Finger or Modular Jt.	≤15"	8¼"	10⅛"	10"	3'-8¼"	8 9⁄16"

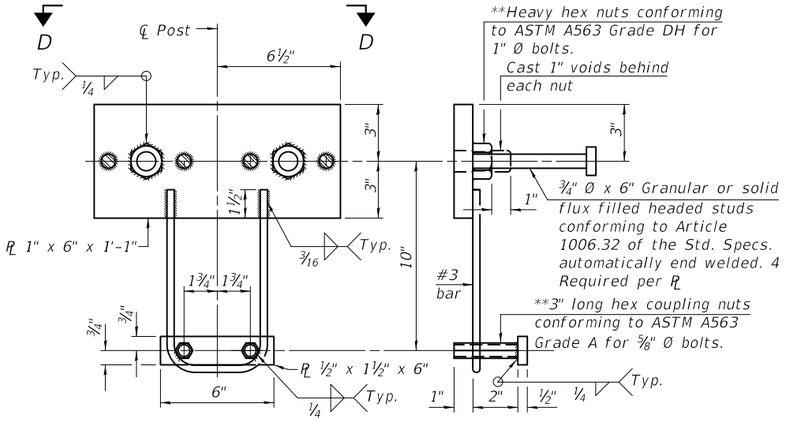
T = ; total movement along centerline of roadway at expansion joint.

RAILING CRITERIA

NCHRP 350 Test Level	2
Railing Weight (plf)	50
Max Post Spacing	10'-9"
HMA thickness range (in)	1¼ - 3⅛

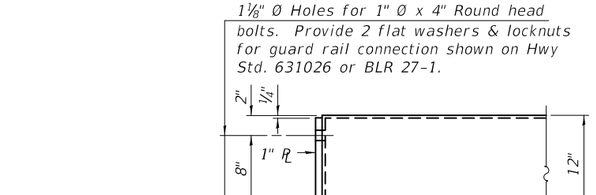


VIEW D-D



ANCHORAGE ASSEMBLY

** *Threaded areas shall be plugged or blocked off during casting of concrete.*



END OF RAIL DETAILS

Notes:

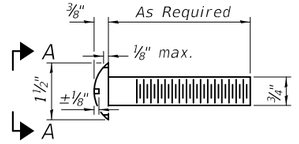
A sufficient number of shims of various thicknesses, sized to fit behind the top spacer assembly, 5" x 11½", and bottom spacer assembly, 6" x 7", shall be provided to adjust posts for proper alignment. If the summation of shims is greater than ¼" (top) or ½" (bottom), longer bolts are required. Cost included with Steel Railing, Type S-1.

All steel rail elements including shims shall be galvanized according to Article 509.05 of the Standard Specifications.

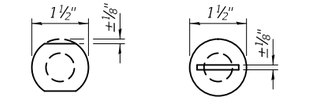
All HSS tubing serving as railing shall be CVN tested according to Article 1006.34(b) of the Standard Specifications.

Rail splice inserts may be built out of 2 -⅜" bent plates in lieu of the 4 plate rail splice inserts shown, provided the outside dimensions are matched.

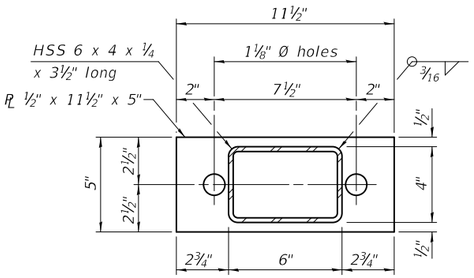
All round head bolts shall be ASTM A307 with locknuts according to ASTM A563 grade A.



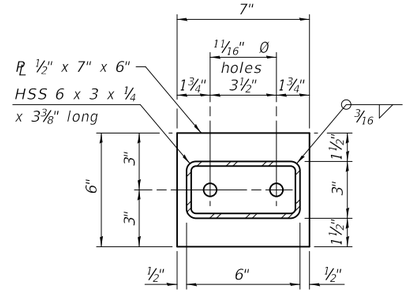
ROUND HEAD BOLT DETAIL



VIEW A-A



TOP SPACER ASSEMBLY



BOTTOM SPACER ASSEMBLY

BILL OF MATERIAL

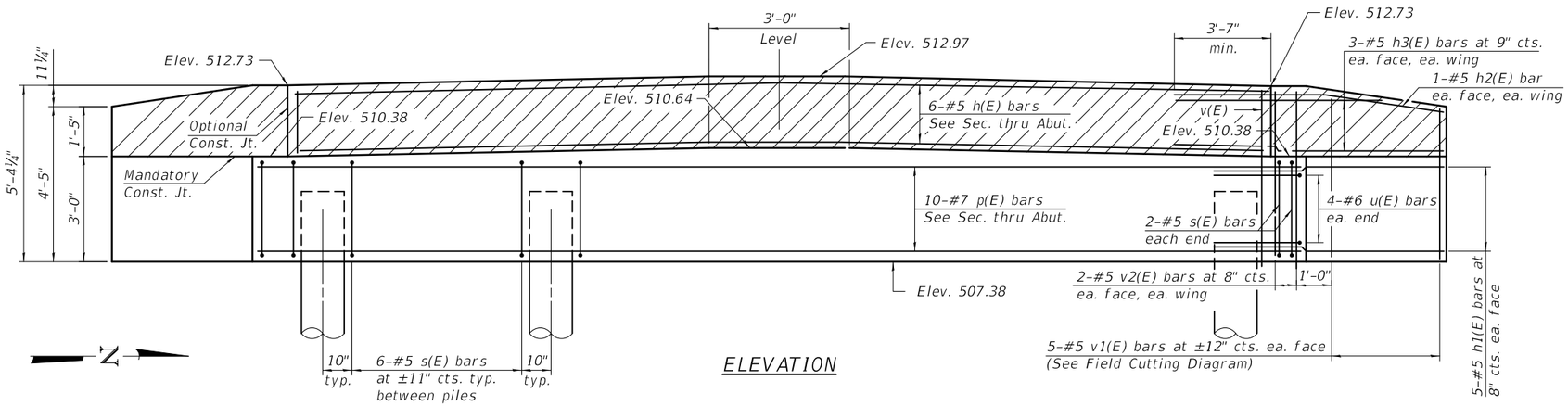
Item	Unit	Quantity
Steel Railing, Type S-1	Foot	364

FILE NAME: C:\SP\WHKS & CO\Jobs-Spring - Projects\Macoupin County\19541 Macoupin Co. CH 34 over Solomon Creek\CADD\CAD_Sheets\SN 059-3337.dgn

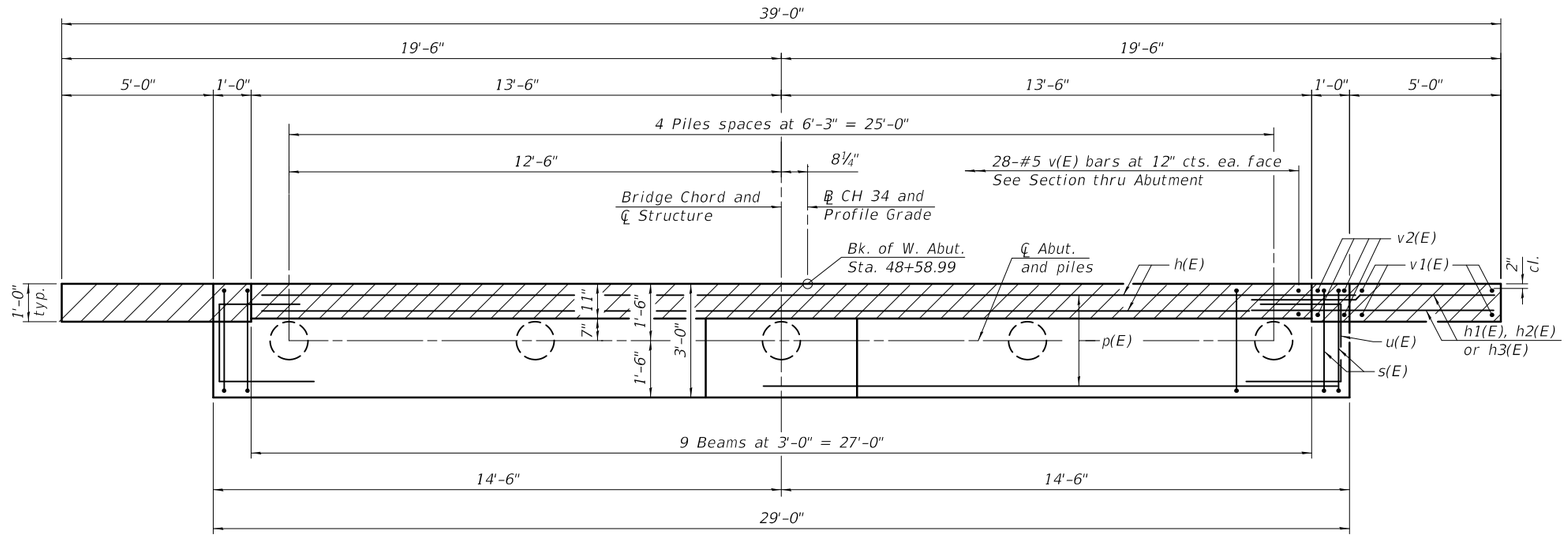
design firm no. 184001036

whks engineers + planners + land surveyors

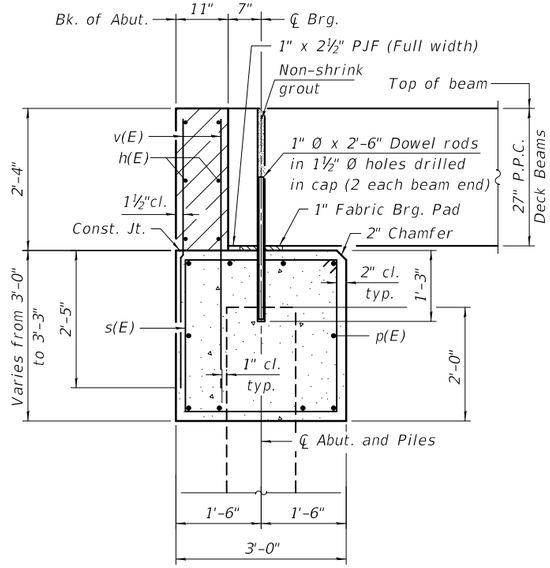
USER NAME = bjohnson	DESIGNED - GEM	REVISED -	MACOUPIN COUNTY HIGHWAY DEPARTMENT	STEEL RAILING, TYPE S-1 STRUCTURE NO. 059-3337 SHEET 6 OF 13 SHEETS	CH RTE. 34 / SECTION 21-00107-00-BR / COUNTY MACOUPIN / TOTAL SHEETS 54 / SHEET NO. 24
	CHECKED - -	REVISED -			CONTRACT NO. 93828
PLOT DATE = 2/28/2025	DRAWN - JLM	REVISED -			ILLINOIS | FED. AID PROJECT
PLOT DATE = 8:36:35 AM	CHECKED - GEM/SBC	REVISED -			



ELEVATION



PLAN



SECTION THRU ABUTMENT

See sheet 4 of 13 for Fabric Bearing Pad details.

BILL OF MATERIAL

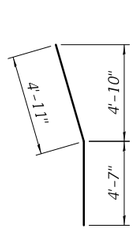
Bar	No.	Size	Length	Shape
h(E)	6	#5	26'-8"	
h1(E)	20	#5	8'-5"	
h2(E)	4	#5	9'-6"	
h3(E)	12	#5	9'-5"	
p(E)	10	#7	28'-8"	
s(E)	28	#5	11'-7"	
u(E)	8	#6	11'-2"	
v(E)	56	#5	4'-7"	
v1(E)	10	#5	9'-0"	
v2(E)	8	#5	5'-0"	
Structure Excavation			Cu. Yd.	8
Concrete Structures			Cu. Yd.	14.2
Reinforcement Bars, Epoxy Coated			Pound	1,970
Furnishing Metal Shell Piles 14" Ø x 0.312" walls			Foot	164
Driving Piles			Foot	164
Test Pile, Metal Shells			Each	1

PILE DATA

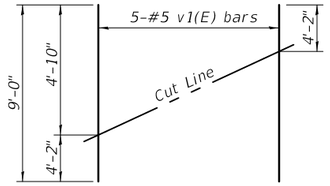
Type: Metal Shell 14" Ø w/ 0.312" walls
Nominal Required Bearing: 480 kips
Factored Resistance Available: 264 kips
Est. Length: 41 ft.
No. Production Piles: 4
No. Test Piles: 1

Notes:

1. The hatched area shall be poured after the beams are in place. The backwall and wingwalls shall be cast against the beams.
2. Dowel holes in beams shall be filled with non-shrink grout to the top of the beam and allowed to cure for a minimum of 24 hours prior to grouting the keyways. Cost included with Precast Prestressed Concrete Deck Beams (27" Depth).
3. If pile interferes with dowel embedment, reduce dowel embedment at location of interference to 1'-0".
4. For details of piles, see sheet 11 of 13.
5. The Contractor is alerted that hard driving conditions are anticipated as the piles near the Nominal Required Bearing (NRB) and pile tip elevation corresponding to the estimated pile length. The Contractor shall closely monitor the Nominal Driven Bearing during pile driving to avoid exceeding the NRB and possibly damaging the piles.

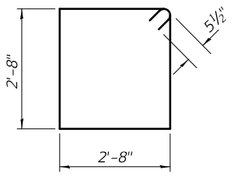


BAR h2(E)

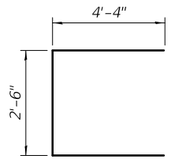


FIELD CUTTING DIAGRAM

Order v1(E) bars full length. Cut as shown and use remainder of bars in opposite wing.



BAR s(E)



BAR u(E)

AD-SB-0 6-15-2019

FILE NAME: C:\SP\WHKS & CO\Jobs-Spring - Projects\Macoupin County\19541 Macoupin Co. CH 34 over Solomon Creek\CADD\CAD_Sheets\SN 059-3337.dgn

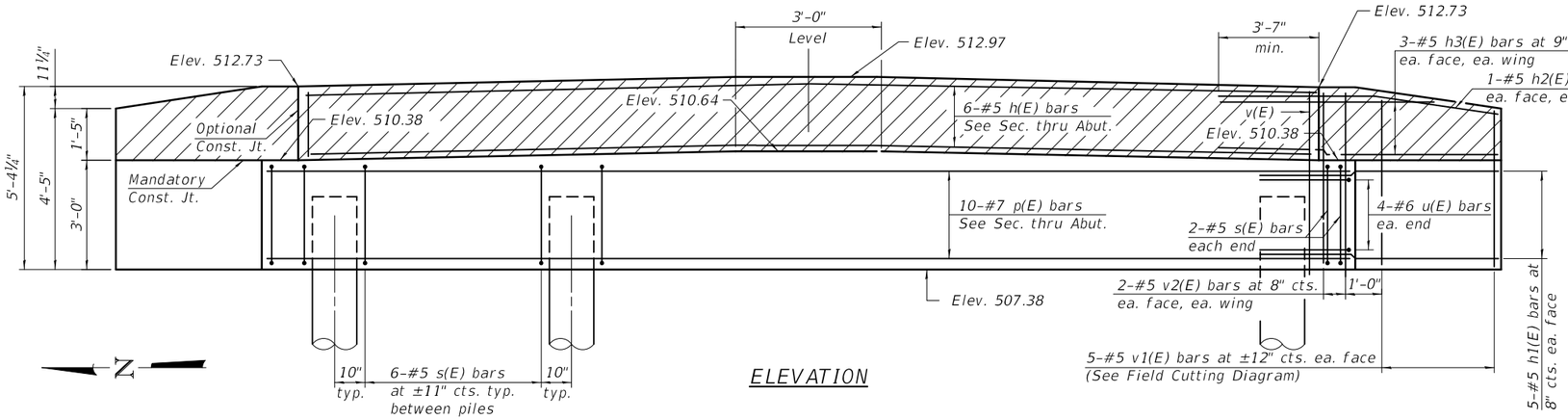
design firm no. 184001036
whks
engineers + planners + land surveyors

USER NAME = bjohnson	DESIGNED - GEM	REVISED -	
	CHECKED - -	REVISED -	
PLOT DATE = 2/28/2025	DRAWN - JLM	REVISED -	
PLOT DATE = 8:36:35 AM	CHECKED - GEM	REVISED -	

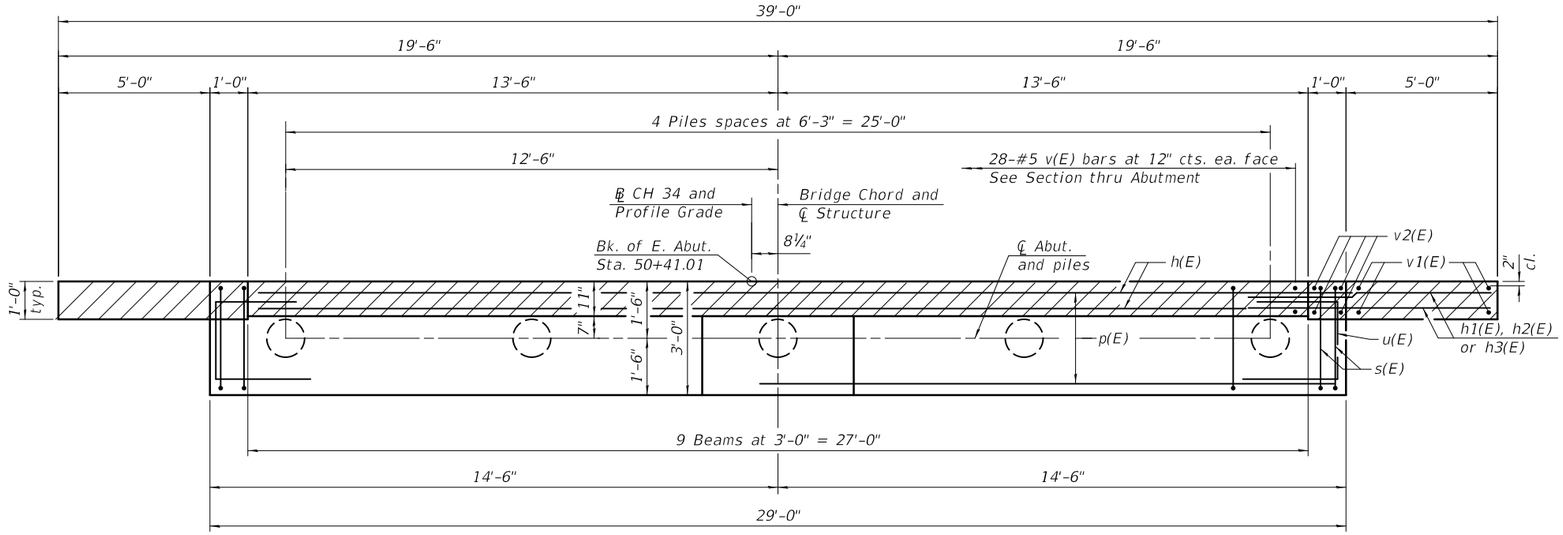
MACOUPIN COUNTY HIGHWAY DEPARTMENT

WEST ABUTMENT
STRUCTURE NO. 059-3337
SHEET 7 OF 13 SHEETS

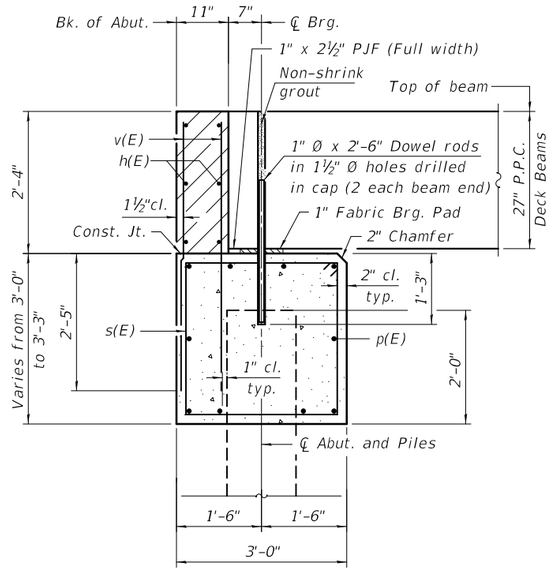
CH RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	21-00107-00-BR	MACOUPIN	54	25
		CONTRACT NO. 93828		
		ILLINOIS	FED. AID PROJECT	



ELEVATION



PLAN



SECTION THRU ABUTMENT

See sheet 4 of 13 for Fabric Bearing Pad details.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	6	#5	26'-8"	
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p(E)	10	#7	28'-8"	
s(E)	28	#5	11'-7"	
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v(E)	56	#5	4'-7"	
v1(E)	10	#5	9'-0"	
v2(E)	8	#5	5'-0"	
Structure Excavation		Cu. Yd.	24	
Concrete Structures		Cu. Yd.	14.2	
Reinforcement Bars, Epoxy Coated		Pound	1,970	
Furnishing Metal Shell Piles 14" Ø x 0.312" walls		Foot	192	
Driving Piles		Foot	192	
Test Pile, Metal Shells		Each	1	

PILE DATA

Type: Metal Shell 14" Ø w/ 0.312" walls
Nominal Required Bearing: 480 kips
Factored Resistance Available: 264 kips
Est. Length: 48 ft.
No. Production Piles: 4
No. Test Piles: 1

Notes:

1. The hatched area shall be poured after the beams are in place. The backwall and wingwalls shall be cast against the beams.
2. Dowel holes in beams shall be filled with non-shrink grout to the top of the beam and allowed to cure for a minimum of 24 hours prior to grouting the keyways. Cost included with Precast Prestressed Concrete Deck Beams (27" Depth).
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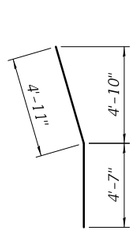
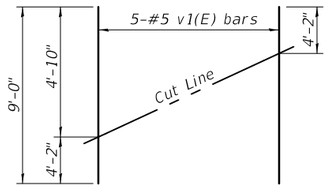
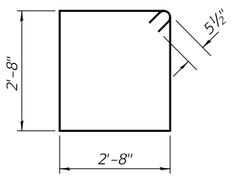


BAR h2(E)



FIELD CUTTING DIAGRAM

Order v1(E) bars full length. Cut as shown and use remainder of bars in opposite wing.



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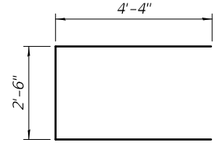


BAR u(E)

AD-SB-0 6-15-2019

FILE NAME: C:\SP\WHKS & CO\Jobs-Spring - Projects\Macoupin County\9541 Macoupin Co, CH 34 over Salomon Creek\CADD\CAD_Sheets\SN 059-3337.dgn

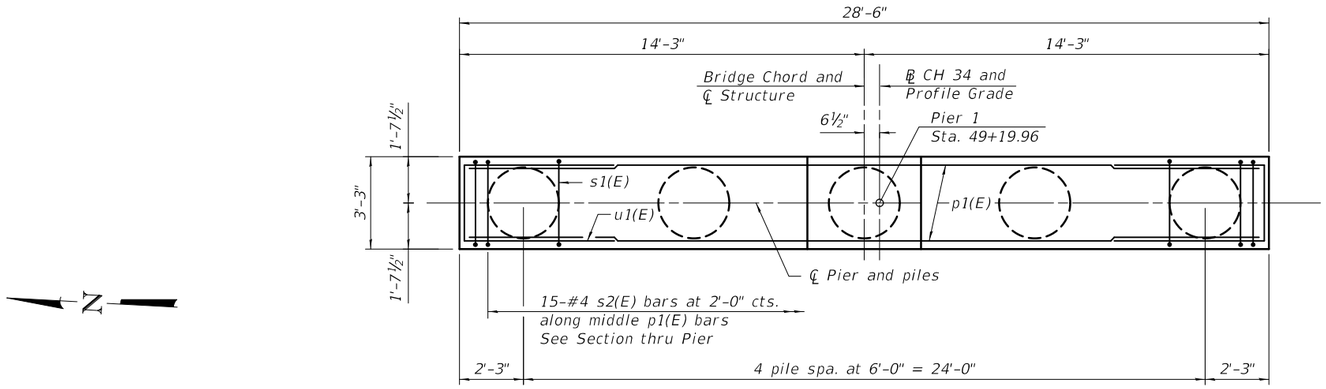
design firm no. 184001036 whks engineers + planners + land surveyors

USER NAME = bjohnson	DESIGNED - GEM	REVISED -	
	CHECKED - -	REVISED -	
PLOT DATE = 2/28/2025	DRAWN - JLM	REVISED -	
PLOT DATE = 8:36:36 AM	CHECKED - GEM	REVISED -	

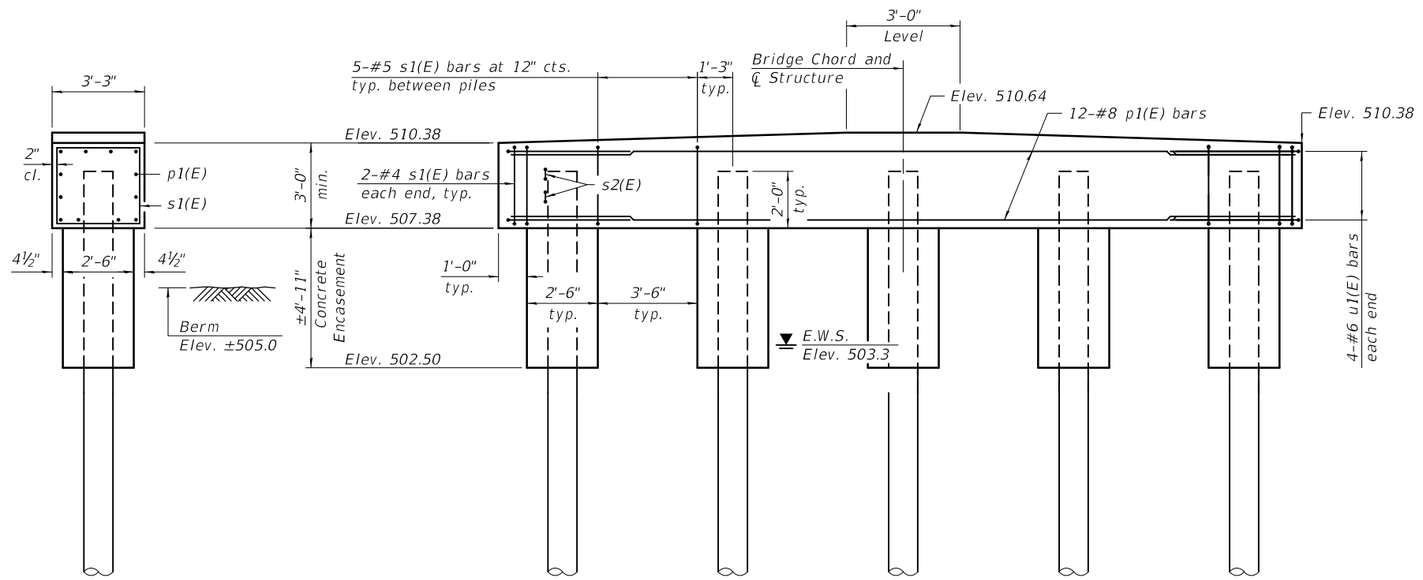
MACOUPIN COUNTY HIGHWAY DEPARTMENT

EAST ABUTMENT
STRUCTURE NO. 059-3337
SHEET 8 OF 13 SHEETS

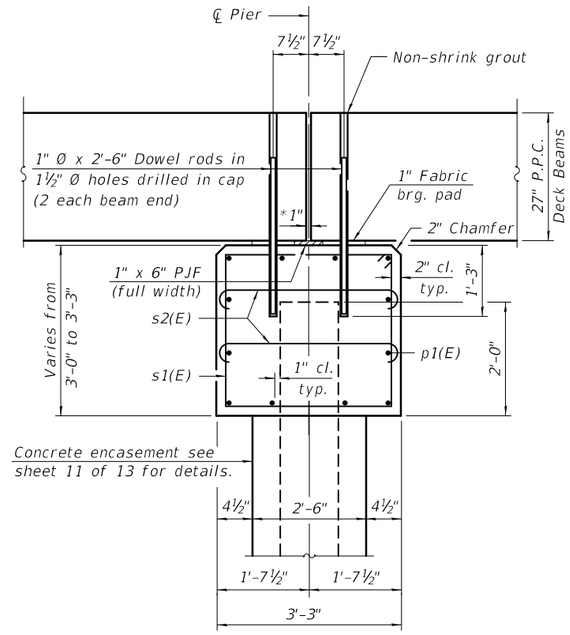
CH RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	21-00107-00-BR	MACOUPIN	54	26
		CONTRACT NO. 93828		
	ILLINOIS	FED. AID PROJECT		



PLAN



ELEVATION
(Looking East)



SECTION THRU PIER

(See sheet 4 of 13 for fabric bearing pad details.)

*1" Joint shall be filled with non-shrink grout. 1" dimension may vary to accommodate tolerance in beam length.

BILL OF MATERIAL

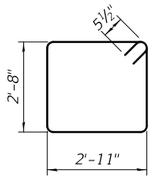
Bar	No.	Size	Length	Shape
p1(E)	12	#8	28'-2"	
s1(E)	24	#5	12'-1"	
s2(E)	30	#4	3'-11"	
u1(E)	8	#6	11'-5"	
Concrete Structures			Cu. Yd.	10.8
Concrete Encasement			Cu. Yd.	3.5
Reinforcement Bars, Epoxy Coated			Pound	1,430
Furnishing Metal Shell Piles 14" Ø x 0.312" walls			Foot	164
Driving Piles			Foot	164
Test Pile, Metal Shells			Each	1

PILE DATA

Type: Metal Shell 14" Ø w/ 0.312" walls
Nominal Required Bearing: 445 kips
Factored Resistance Available: 245 kips
Est. Length: 41 ft.
No. Production Piles: 4
No. Test Piles: 1

Notes:

1. Dowel holes in beams shall be filled with non-shrink grout to the top of the beam and allowed to cure for a minimum of 24 hours prior to grouting the keyways. Cost included with Precast Prestressed Concrete Deck Beams (27" Depth).
2. If pile interferes with dowel embedment, reduce dowel embedment at location of interference to 1'-0".
3. For details of piles and concrete encasement, see sheet 11 of 13.
4. If a portion of the concrete encasements are underwater, concrete shall be tremied under water into forms according to article 503.08 of the standard specifications to an elevation of 1'-0" above the water line at the time of construction.
5. The Contractor is alerted that hard driving conditions are anticipated as the piles near the Nominal Required Bearing (NRB) and pile tip elevation corresponding to the estimated pile length. The Contractor shall closely monitor the Nominal Driven Bearing during pile driving to avoid exceeding the NRB and possibly damaging the piles.



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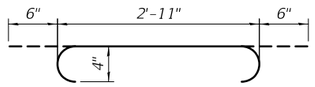

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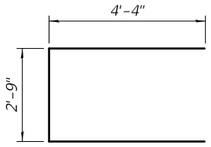


BAR u1(E)

FILE NAME: C:\SP\WHKS & CO\Jobs\Spring - Projects\Macoupin County\0541 Macoupin Co, CH 34 over Salomon Creek\CADD\CAD_Sheets\SN 059-3337.dgn

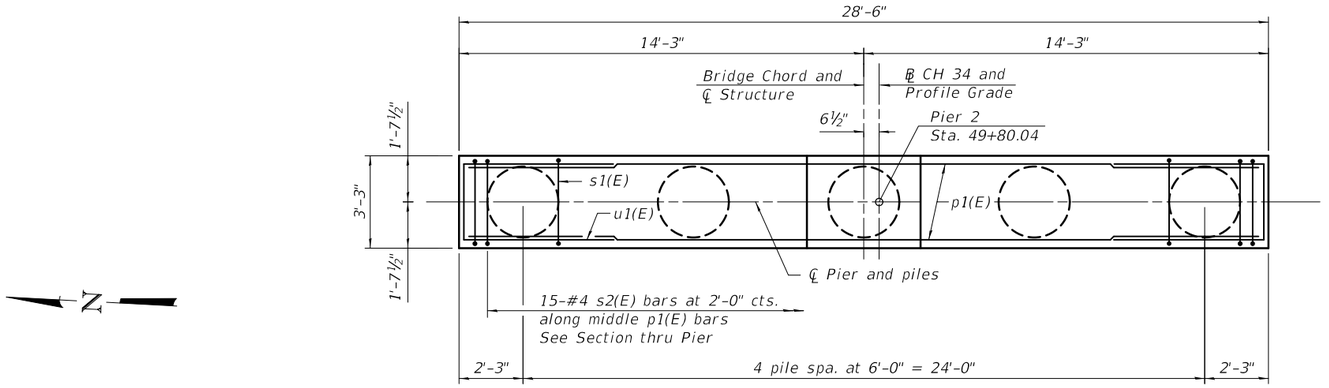
design firm no. 184001036
whks
engineers + planners + land surveyors

USER NAME = bjohnson	DESIGNED - GEM	REVISED -	
	CHECKED - -	REVISED -	
PLOT DATE = 2/28/2025	DRAWN - JLM	REVISED -	
PLOT DATE = 8:36:36 AM	CHECKED - GEM	REVISED -	

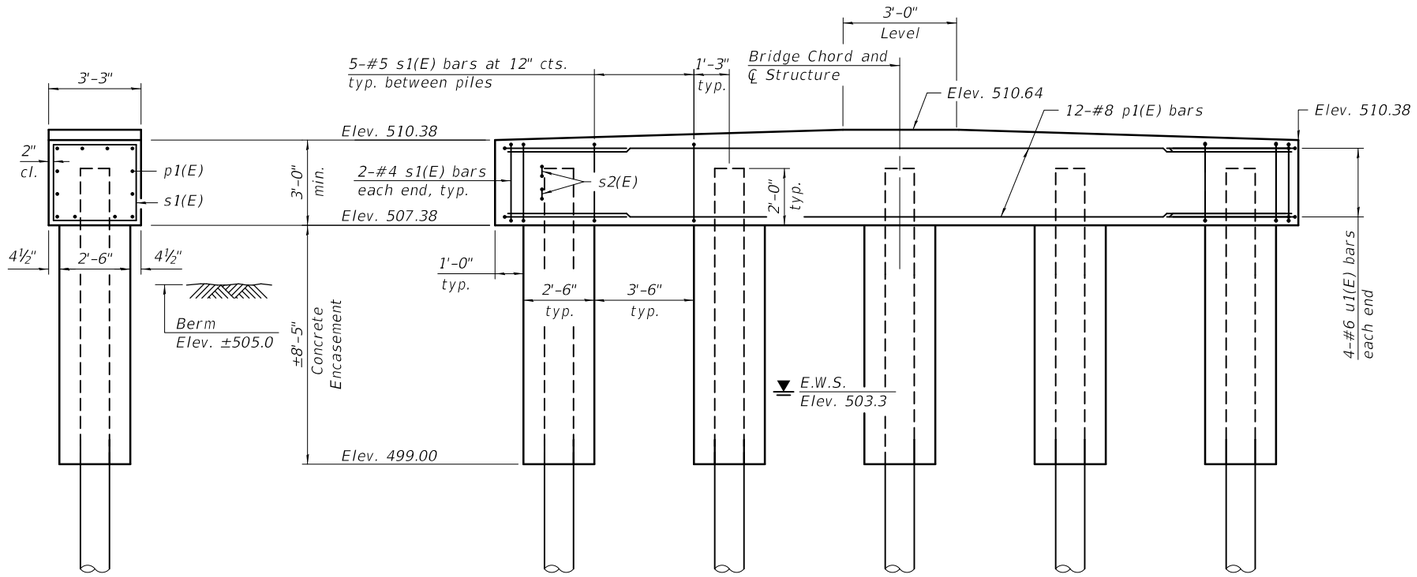
MACOUPIN COUNTY HIGHWAY DEPARTMENT

PIER 1
STRUCTURE NO. 059-3337
SHEET 9 OF 13 SHEETS

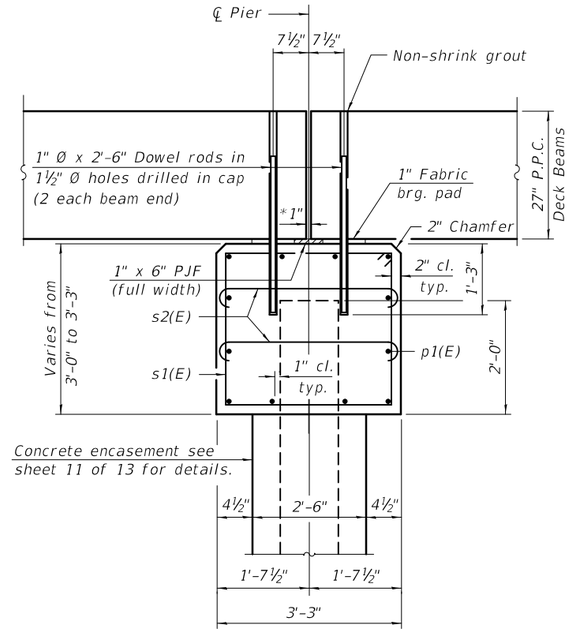
CH RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	21-00107-00-BR	MACOUPIN	54	27
		CONTRACT NO. 93828		
	ILLINOIS	FED. AID PROJECT		



PLAN



ELEVATION
(Looking East)



SECTION THRU PIER
(See sheet 4 of 13 for fabric bearing pad details.)

*1" Joint shall be filled with non-shrink grout. 1" dimension may vary to accommodate tolerance in beam length.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
p1(E)	12	#8	28'-2"	
s1(E)	24	#5	12'-1"	
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Test Pile, Metal Shells			Each	1

PILE DATA

Type: Metal Shell 14" Ø w/ 0.312" walls
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Est. Length: 41 ft.
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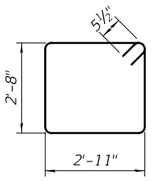
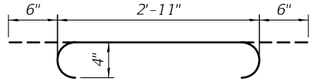
5. The Contractor is alerted that hard driving conditions are anticipated as the piles near the Nominal Required Bearing (NRB) and pile tip elevation corresponding to the estimated pile length. The Contractor shall closely monitor the Nominal Driven Bearing during pile driving to avoid exceeding the NRB and possibly damaging the piles.



BAR s1(E)



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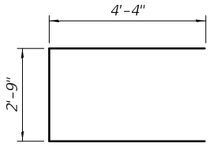

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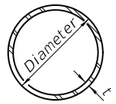
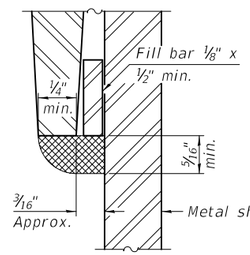
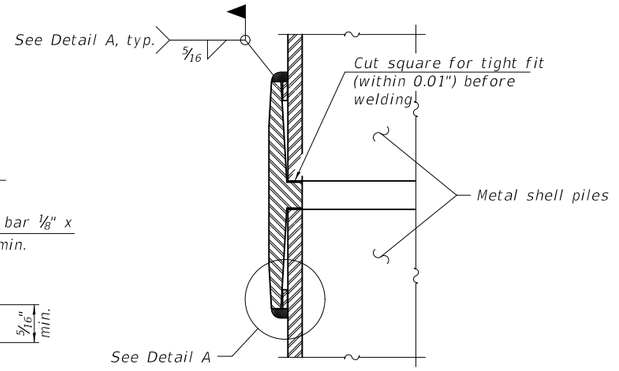


METAL SHELL PILE TABLE

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

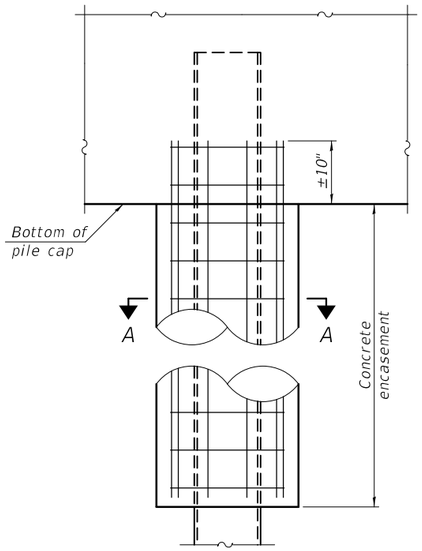


DETAIL A



WELDED COMMERCIAL SPLICE

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



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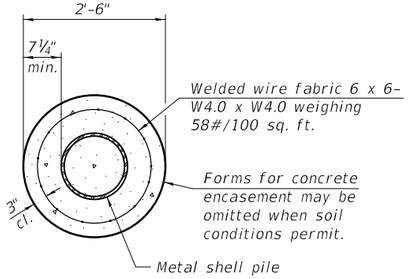
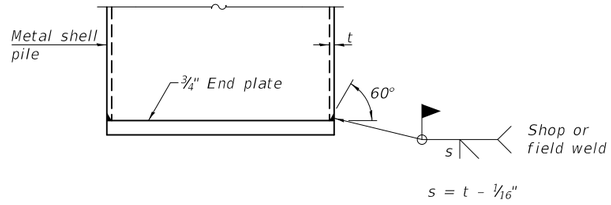


SECTION A–A

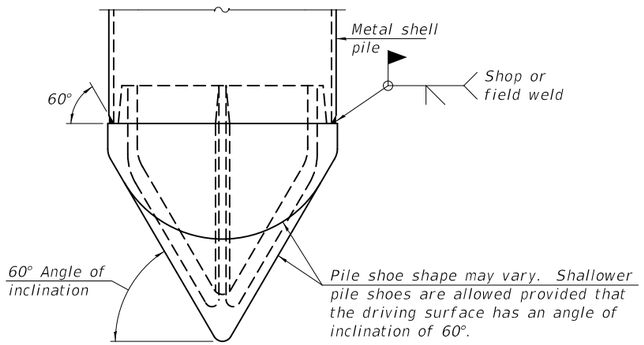
INDIVIDUAL PILE CONCRETE ENCASEMENT

(When specified)



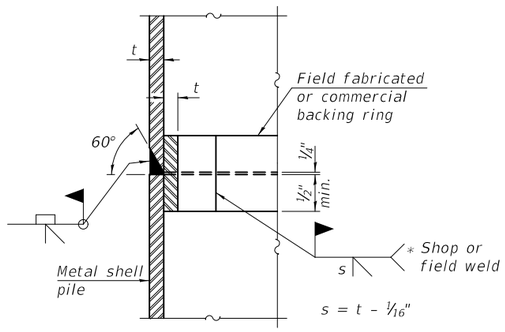
s = t – 1/16"

END PLATE ATTACHMENT



PILE SHOE ATTACHMENT

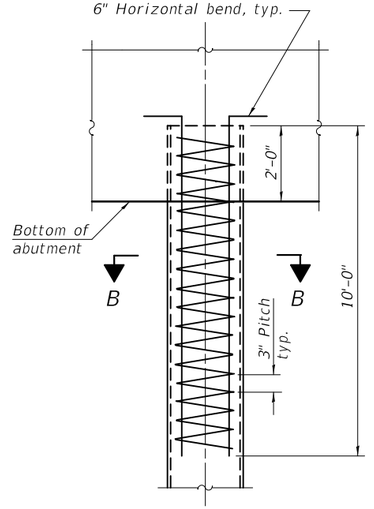
(When called for on the plans, the Contractor shall furnish metal shell pile shoes consisting of a single piece conical pile point as shown. The pile shoes shall be cast in one piece steel according to either ASTM A 148 Grade 80–50 or AASHTO M 103 Grade 65–35 and shall provide full bearing over the full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



s = t – 1/16"

COMPLETE PENETRATION WELD SPLICE

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



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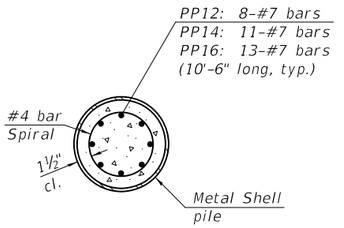

SECTION B-B

REINFORCEMENT AT ABUTMENTS

(Omit when concrete encasement is specified)

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

F–MS 1-1-2020

FILE NAME: C:\SP\WHKS & CO\Hibbs-Sprhg - Projects\Macoupin County\9541 Macoupin Co, CH 34 over Salomon Creek\CADD\CAD_Sheets\SN 059-3337.dgn

design firm no. 184001036
whks engineers + planners + land surveyors

USER NAME = bJohnson	DESIGNED - GEM	REVISED -	
	CHECKED - -	REVISED -	
PLOT DATE = 2/28/2025	DRAWN - JLM	REVISED -	
PLOT DATE = 8:36:37 AM	CHECKED - GEM	REVISED -	

MACOUPIN COUNTY HIGHWAY DEPARTMENT

METAL SHELL PILE DETAILS
STRUCTURE NO. 059–3337
SHEET 11 OF 13 SHEETS

CH RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	21-00107-00-BR	MACOUPIN	54	29

CONTRACT NO. 93828
ILLINOIS | FED. AID PROJECT

B-1 Approximate Boring Elevation = 506.02'

Proffesional Services Industries Inc
480 North Street
Springfield, IL 62704
Telephone: 217-544-6663
Fax: 217-544-6418

LOG OF BORING B-1

Sheet 1 of 2

PSI Job No.: 020-45045
Project: Proposed Bridge Replacement
Location: County Highway 34
Macoupin County
Structure No. 059-3037

Drilling Method: 3 1/4" Hollow Stem Auger
Sampling Method: Split Spoon
Hammer Type: Automatic
Boring Location: 60' E of E edge of bridge deck
10' N of centerline of CH 34

WATER LEVELS
While Drilling 16 feet
See Remarks Below - -
See Remarks Below - -

Elevation, (feet)	Depth, (feet)	Graphic Log	Sample Type	Sample No.	Recovery (inches)	MATERIAL DESCRIPTION	USCS Classification	SPT Blows per 12" (N value)	Moisture, %	STANDARD PENETRATION TEST DATA N in blows/ft @ Moisture PL LL (1 25 50) STRENGTH, tsf Qu Qp (0 2.0 4.0)	Additional Remarks
	0			1	12	**SURFACE**, dense vegetation to -5" Brown clayey SILT, trace sand, fine to medium (FILL)	ML	5-6-4 N=10	9		
	5			2	16	Brown/gray silty **CLAY**, trace fine sand, stiff	ML	3-3-3 N=6	20		
				3	18			1-1-2 N=3	23		Qu = 1.4 tsf
				4	18		CL-ML	2-2-3 N=5	20		Qu = 1.9 tsf
	10			5	18			1-2-2 N=4	20		Qu = 1.6 tsf
				6	18	Brown/gray fine to course **SAND**, trace silty clay, loose consistency		1-1-1 N=2			
	15			7	18			0-0-0 N=0			
				8	18		SP-SC	1-1-0 N=1			
	20			9	18			2-2-3 N=5			
	25			10	18			1-2-4 N=6			

Continued Next Page

Completion Depth: 50.0 ft
Date Boring Started: 5/10/04
Date Boring Completed: 5/10/04
Logged By: Jon McGrath
Drilling Contractor: PSI

Sample Types:
Auger Cutting
Split-Spoon
Rock Core
Shelby Tube
Hand Auger

Remarks: Water levels could not be accurately measured upon completion because the augers had to be charged with water to prevent sand from flowing up the augers

Proffesional Services Industries Inc
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Telephone: 217-544-6663
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LOG OF BORING B-1

Sheet 2 of 2

PSI Job No.: 020-45045
Project: Proposed Bridge Replacement
Location: County Highway 34
Macoupin County
Structure No. 059-3037

Drilling Method: 3 1/4" Hollow Stem Auger
Sampling Method: Split Spoon
Hammer Type: Automatic
Boring Location: 60' E of E edge of bridge deck
10' N of centerline of CH 34

WATER LEVELS
While Drilling 16 feet
See Remarks Below - -
See Remarks Below - -

Elevation, (feet)	Depth, (feet)	Graphic Log	Sample Type	Sample No.	Recovery (inches)	MATERIAL DESCRIPTION	USCS Classification	SPT Blows per 12" (N value)	Moisture, %	STANDARD PENETRATION TEST DATA N in blows/ft @ Moisture PL LL (1 25 50) STRENGTH, tsf Qu Qp (0 2.0 4.0)	Additional Remarks
	25			11	18	Brown/gray fine to course **SAND**, trace silty clay, loose consistency		1-1-1 N=2			
				12	18	Gray silty **CLAY**, some fine sand, firm to stiff		0-1-4 N=5	34		
	30			13	18			1-0-1 N=1	28		Qu = 0.8 tsf
				14	18		CL-ML	1-2-2 N=4	21		
	35			15	18			12-10-7 N=17	10		
				16	17	Gray silty **CLAY**, trace medium sand, hard (TILL)		18-39-50/5"	12		Qu = 8.9 tsf
	40			17	18		CL-ML	17-25-41 N=66	11		Qu = 6.6 tsf
	45			18	11			25-50/5"	10		Qu = 11.6 tsf
	50			19	11	End of Boring @ -50'		39-50/5"	8		Qu = 11.4 tsf

Completion Depth: 50.0 ft
Date Boring Started: 5/10/04
Date Boring Completed: 5/10/04
Logged By: Jon McGrath
Drilling Contractor: PSI

Sample Types:
Auger Cutting
Split-Spoon
Rock Core
Shelby Tube
Hand Auger

Remarks: Water levels could not be accurately measured upon completion because the augers had to be charged with water to prevent sand from flowing up the augers

FILE NAME: C:\SP\WHKS & CO\Jobs-Spring - Projects\Macoupin County\9541 Macoupin Co. CH 34 over Salomon Creek\CADD\CAD_Sheets\SN 059-3337.dgn

design firm no. 184001036
whks engineers + planners + land surveyors

USER NAME = bjohnson	DESIGNED - GEM	REVISED -	
	CHECKED - -	REVISED -	
PLOT DATE = 2/28/2025	DRAWN - JLM	REVISED -	
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MACOUPIN COUNTY HIGHWAY DEPARTMENT

BORING LOGS
STRUCTURE NO. 059-3337
SHEET 12 OF 13 SHEETS

CH RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	21-00107-00-BR	MACOUPIN	54	30
		CONTRACT NO. 93828		
	ILLINOIS	FED. AID PROJECT		

B-2Approximate Boring Elevation = 508.02'

Proffesional Services Industries Inc
480 North Street
Springfield, IL 62704
Telephone: 217-544-6663
Fax: 217-544-6418

LOG OF BORING B-2

PSI Job No.: 020-45045
Project: Proposed Bridge Replacement
Location: County Highway 34, Macoupin County, Structure No. 059-3037

Drilling Method: 3 1/4" Hollow Stem Auger
Sampling Method: Split Spoon
Hammer Type: Automatic
Boring Location: 18' W of W edge of bridge deck, 10' S of centerline of CH 34

WATER LEVELS
While Drilling 11 feet
See Remarks Below
See Remarks Below

Elevation, (feet)	Depth, (feet)	Graphic Log	Sample Type	Sample No.	Recovery (inches)	MATERIAL DESCRIPTION	USCS Classification	SPT Blows per 12" (N value)	Moisture, %	STANDARD PENETRATION TEST DATA N in blows/ft @ Moisture PL LL; STRENGTH, tsf Qu Qp	Additional Remarks
	0					**SURFACE**: dense vegetation to -6.5"	CL-ML				
				1	4	Black silty **CLAY**, trace crushed stone and brick (FIIL)	CL-ML	6-3-2 N=5	8		
				2	7	Gray/brown silty **CLAY**, few fine to medium sand (FILL?)	CL-ML	2-2-2 N=4	13		
	5					Grey/brown clayey **SILT**, trace fine sand, firm					
				3	15		ML	0-0-0 N=0	28		Qu = 0.8 tsf
				4	18			0-0-0 N=0	29		
	10										
				5	18	Gray/brown silty **CLAY**, some fine sand, firm	CL-ML	1-2-1 N=3	22		Qu = 1.0 tsf
	15					Brown **SAND**, fine to coarse, very loose to loose consistency					
				6	18		SP	0-2-2 N=4			
				7	18			0-0-0 N=0			
	20					Gray **SAND**, fine, very loose consistency					
				8	18		SP	1-2-1 N=3			
				9	18			1-1-0 N=1			
						Gray silty **CLAY**, trace fine sand					
	25			10	18		CL-ML	0-0-1 N=1	22		

Continued Next Page

Completion Depth: 75.0 ft
Date Boring Started: 5/13/04
Date Boring Completed: 5/13/04
Logged By: Jon McGrath
Drilling Contractor: PSI

Sample Types: Auger Cutting, Split-Spoon, Rock Core, Shelby Tube, Hand Auger

Remarks: Water levels could not be accurately measured upon completion because the augers had to be charged with water to prevent sand from flowing up the augers

PSI Job No.: 020-45045
Project: Proposed Bridge Replacement
Location: County Highway 34, Macoupin County, Structure No. 059-3037

Drilling Method: 3 1/4" Hollow Stem Auger
Sampling Method: Split Spoon
Hammer Type: Automatic
Boring Location: 18' W of W edge of bridge deck, 10' S of centerline of CH 34

WATER LEVELS
While Drilling 11 feet
See Remarks Below
See Remarks Below

Elevation, (feet)	Depth, (feet)	Graphic Log	Sample Type	Sample No.	Recovery (inches)	MATERIAL DESCRIPTION	USCS Classification	SPT Blows per 12" (N value)	Moisture, %	STANDARD PENETRATION TEST DATA N in blows/ft @ Moisture PL LL; STRENGTH, tsf Qu Qp	Additional Remarks
	25			11	18	Gray fine to course **SAND**, trace silty clay, loose to medium consistency	SP	2-3-1 N=4			
				12	18			2-6-5 N=11			
	30			13	18			4-4-6 N=10			
				14	18	Gray **SAND**, fine to course, trace gravel and clayey silt, loose to medium consistency		6-6-5 N=11			
	35			15	18			3-5-7 N=12			
				16	6	Gray **SAND**, fine to coarse, very dense consistency		2-4-6 N=10			
	40			17	10			40-40-50/5"			
				18	10			40-50/5"			>>
	45			19	12			6-50/5"			>>
				20	18			48-50/5"			>>
	50										

Continued Next Page

Completion Depth: 75.0 ft
Date Boring Started: 5/13/04
Date Boring Completed: 5/13/04
Logged By: Jon McGrath
Drilling Contractor: PSI

Sample Types: Auger Cutting, Split-Spoon, Rock Core, Shelby Tube, Hand Auger

Remarks: Water levels could not be accurately measured upon completion because the augers had to be charged with water to prevent sand from flowing up the augers

PSI Job No.: 020-45045
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Location: County Highway 34, Macoupin County, Structure No. 059-3037

Drilling Method: 3 1/4" Hollow Stem Auger
Sampling Method: Split Spoon
Hammer Type: Automatic
Boring Location: 18' W of W edge of bridge deck, 10' S of centerline of CH 34

WATER LEVELS
While Drilling 11 feet
See Remarks Below
See Remarks Below

Elevation, (feet)	Depth, (feet)	Graphic Log	Sample Type	Sample No.	Recovery (inches)	MATERIAL DESCRIPTION	USCS Classification	SPT Blows per 12" (N value)	Moisture, %	STANDARD PENETRATION TEST DATA N in blows/ft @ Moisture PL LL; STRENGTH, tsf Qu Qp	Additional Remarks
	50			21	6	Gray **SAND**, fine to coarse, very dense consistency		50/6"			>>
				22	12			41-50/5"			>>
	55			23	0			50/0"			>>
				24	18	Gray silty **CLAY**, trace gravel and medium sand, very stiff to stiff (TILL)		12-22-31 N=53	13		Qu = 3.1 tsf
	60			25	18			16-19-34 N=53	13		Qu = 2.7 tsf
				26	2			18-23-31 N=54	17		
	65			27	18		CL-ML	14-19-30 N=49	15		
				28	18			12-18-26 N=44	13		Qu = 0.8 tsf
	70			29	18			11-25-33 N=58	14		Qu = 1.9 tsf
				30	18	End of Boring @ -75'		26-22-24 N=46	15		Qu = 1.4 tsf
	75										

Completion Depth: 75.0 ft
Date Boring Started: 5/13/04
Date Boring Completed: 5/13/04
Logged By: Jon McGrath
Drilling Contractor: PSI

Sample Types: Auger Cutting, Split-Spoon, Rock Core, Shelby Tube, Hand Auger

Remarks: Water levels could not be accurately measured upon completion because the augers had to be charged with water to prevent sand from flowing up the augers

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design firm no. 184001036 whks engineers + planners + land surveyors

USER NAME = bjohnson	DESIGNED - GEM	REVISED -
	CHECKED - -	REVISED -
PLOT DATE = 2/28/2025	DRAWN - JLM	REVISED -
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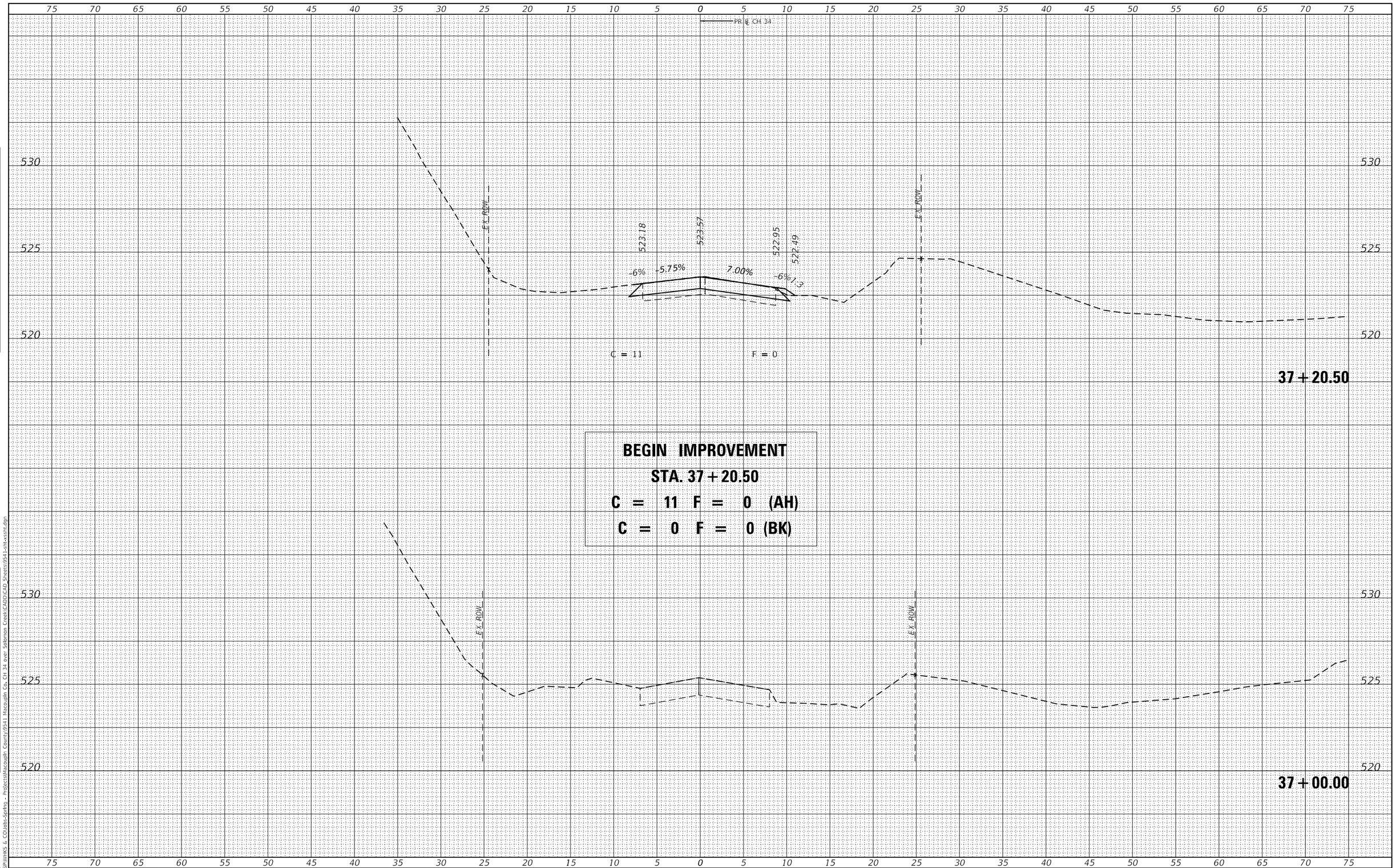
MACOUPIN COUNTY HIGHWAY DEPARTMENT

BORING LOGS
STRUCTURE NO. 059-3337
SHEET 13 OF 13 SHEETS

CH RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	21-00107-00-BR	MACOUPIN	54	31
		CONTRACT NO. 93828		
	ILLINOIS	FED. AID PROJECT		



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	SURVEYED	
	PLOTTED	
	TEMPLATE	
	AREAS	
	AREAS CHECKED	

BY	DATE

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

BY	DATE

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design firm no. 184001036 whks engineers + planners + land surveyors

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PLOT DATE = 2/25/2025	DATE - 2/25/2025	REVISED -	

MACOUPIN COUNTY HIGHWAY DEPARTMENT

CROSS SECTIONS
CH 34 (HAGAMAN ROAD) OVER SOLOMON CREEK

SCALE: 1" = 5' | SHEET 1 OF 23 SHEETS | STA. 37+00.00 | TO STA. 37+20.50

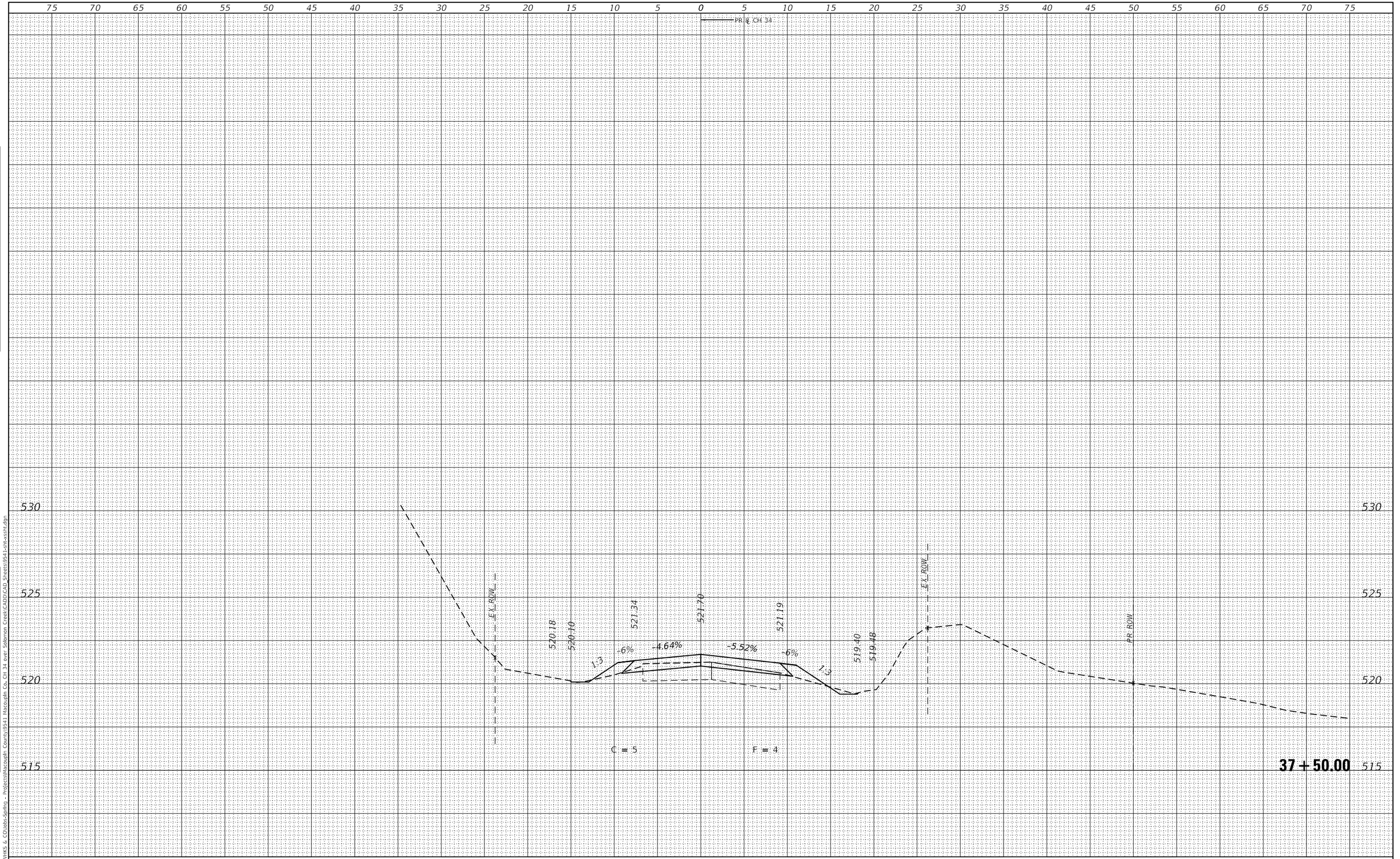
C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	21-00107-00-BR	MACOUPIN	54	32
		CONTRACT NO.93828		
		ILLINOIS	FED. AID PROJECT	

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

BY	DATE

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

BY	DATE



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design firm no. 184001036 whks engineers + planners + land surveyors

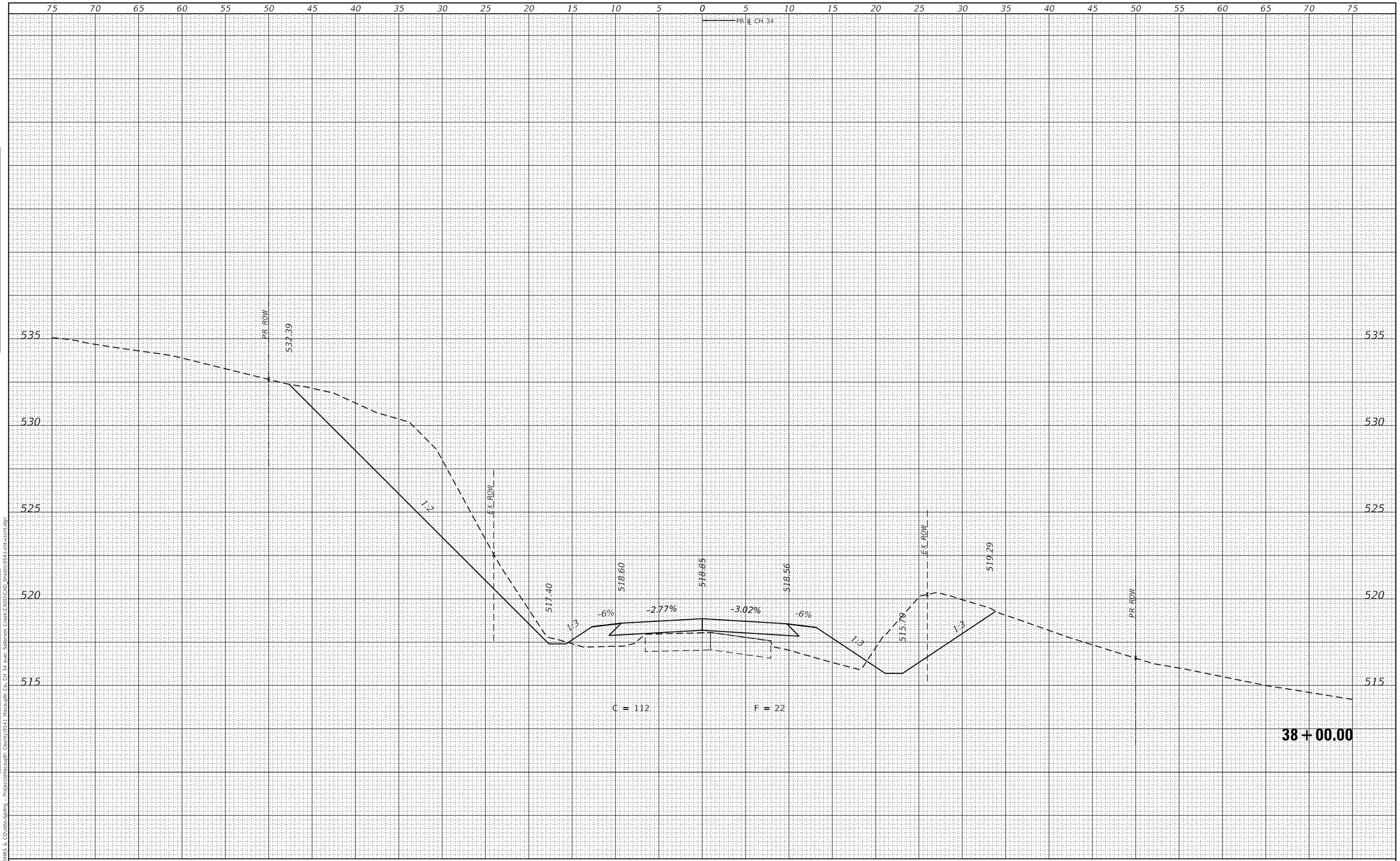
USER NAME = bJohnson	DESIGNED - MRL	REVISED -	
	DRAWN - GSJ	REVISED -	
PLOT SCALE = 120.000 ' / ft.	CHECKED - MRL	REVISED -	
PLOT DATE = 2/25/2025	DATE - 2/25/2025	REVISED -	

MACOUPIN COUNTY HIGHWAY DEPARTMENT

CROSS SECTIONS
CH 34 (HAGAMAN ROAD) OVER SOLOMON CREEK

SCALE: 1" = 5' | SHEET 2 OF 23 SHEETS | STA. 37+50.00 | TO STA. 37+50.00

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	21-00107-00-BR	MACOUPIN	54	33
		CONTRACT NO.93828		
		ILLINOIS	FED. AID PROJECT	



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

FINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
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design firm no. 184001036
whks
engineers + planners + land surveyors

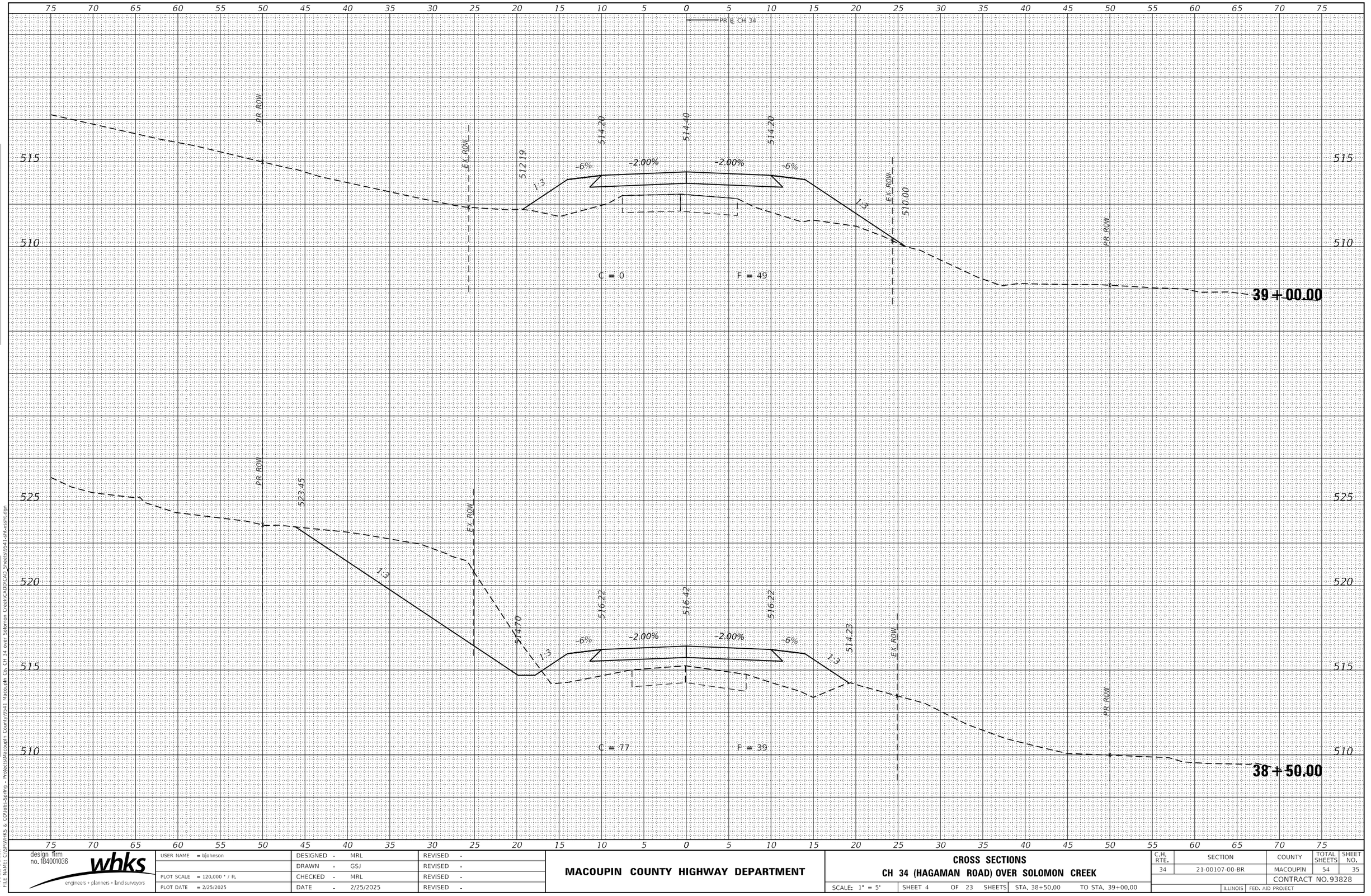
USER NAME = bJohnson	DESIGNED - MRL	REVISED -	
	DRAWN - GSJ	REVISED -	
PLOT SCALE = 120.000 ' / ft.	CHECKED - MRL	REVISED -	
PLOT DATE = 2/25/2025	DATE - 2/25/2025	REVISED -	

MACOUPIN COUNTY HIGHWAY DEPARTMENT

CROSS SECTIONS
CH 34 (HAGAMAN ROAD) OVER SOLOMON CREEK

SCALE: 1" = 5' | SHEET 3 OF 23 SHEETS | STA. 38+00.00 | TO STA. 38+00.00

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	21-00107-00-BR	MACOUPIN	54	34
		CONTRACT NO.93828		
		ILLINOIS	FED. AID PROJECT	



design firm no. 184001036 whks engineers + planners + land surveyors	USER NAME = bjohnson	DESIGNED - MRL	REVISED -	MACOUPIN COUNTY HIGHWAY DEPARTMENT	CROSS SECTIONS CH 34 (HAGAMAN ROAD) OVER SOLOMON CREEK
		DRAWN - GSJ	REVISED -		
	PLOT SCALE = 120.000 ' / ft.	CHECKED - MRL	REVISED -		SCALE: 1" = 5' | SHEET 4 OF 23 SHEETS | STA. 38+50.00 TO STA. 39+00.00
	PLOT DATE = 2/25/2025	DATE - 2/25/2025	REVISED -		

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	21-00107-00-BR	MACOUPIN	54	35
		CONTRACT NO.93828		
	ILLINOIS	FED. AID PROJECT		

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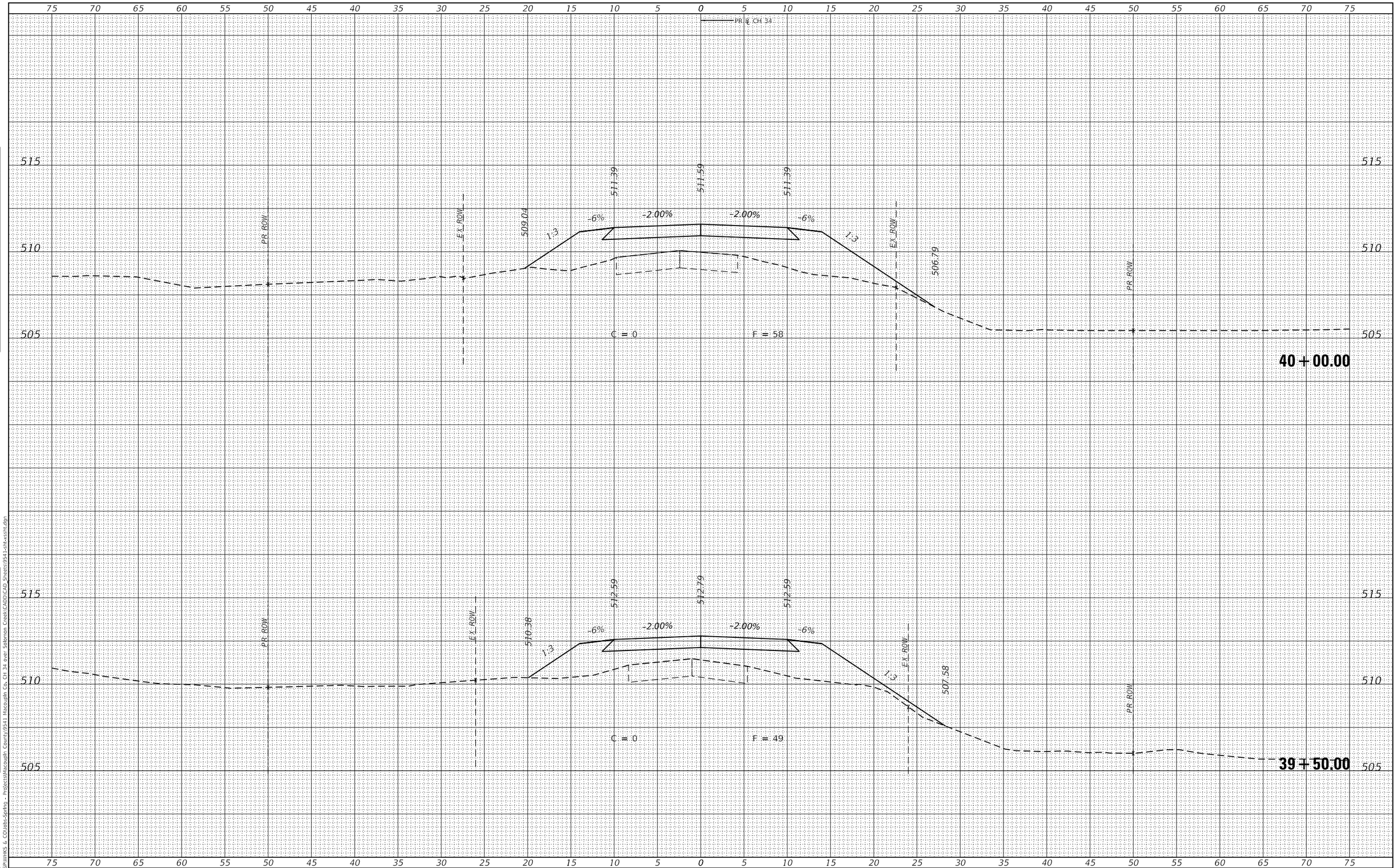

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design firm no. 184001036 — whks — engineers + planners + land surveyors

USER NAME = bJohnson	DESIGNED - MRL	REVISED -	
	DRAWN - GSJ	REVISED -	
PLOT SCALE = 120.000 ' / ft.	CHECKED - MRL	REVISED -	
PLOT DATE = 2/25/2025	DATE - 2/25/2025	REVISED -	

MACOUPIN COUNTY HIGHWAY DEPARTMENT

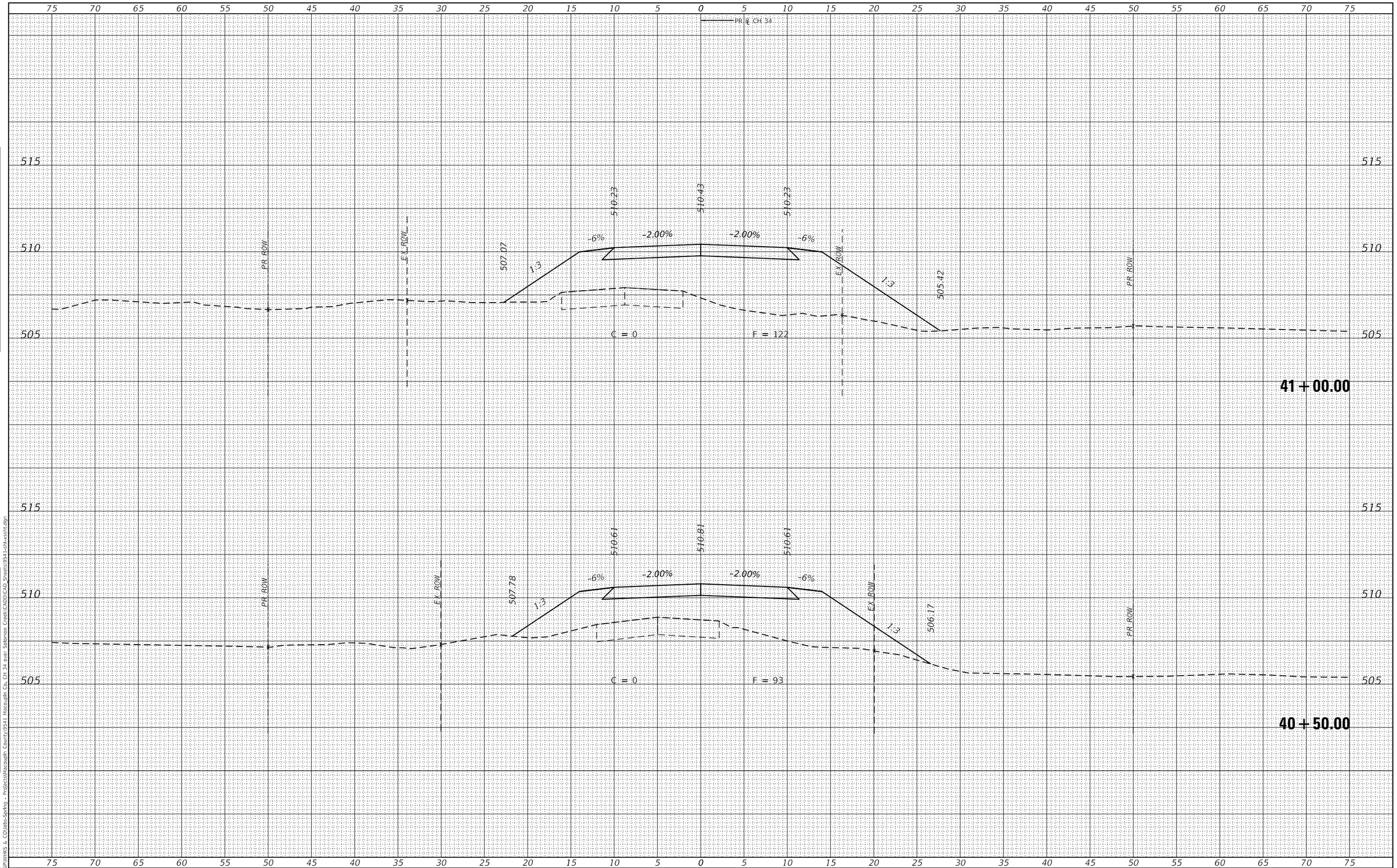
CROSS SECTIONS
CH 34 (HAGAMAN ROAD) OVER SOLOMON CREEK

SCALE: 1" = 5' | SHEET 5 OF 23 SHEETS | STA. 39+50.00 | TO STA. 40+00.00

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	21-00107-00-BR	MACOUPIN	54	36

CONTRACT NO. 93828

ILLINOIS | FED. AID PROJECT



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PLOT SCALE = 120.000 ' / ft.	CHECKED - MRL	REVISED -	
PLOT DATE = 2/25/2025	DATE - 2/25/2025	REVISED -	

design firm no. 184001036 — whks — engineers + planners + land surveyors

CROSS SECTIONS
CH 34 (HAGAMAN ROAD) OVER SOLOMON CREEK

SCALE: 1" = 5' | SHEET 6 OF 23 SHEETS | STA. 40+50.00 | TO STA. 41+00.00

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	21-00107-00-BR	MACOUPIN	54	37
		CONTRACT NO.93828		
		ILLINOIS	FED. AID PROJECT	

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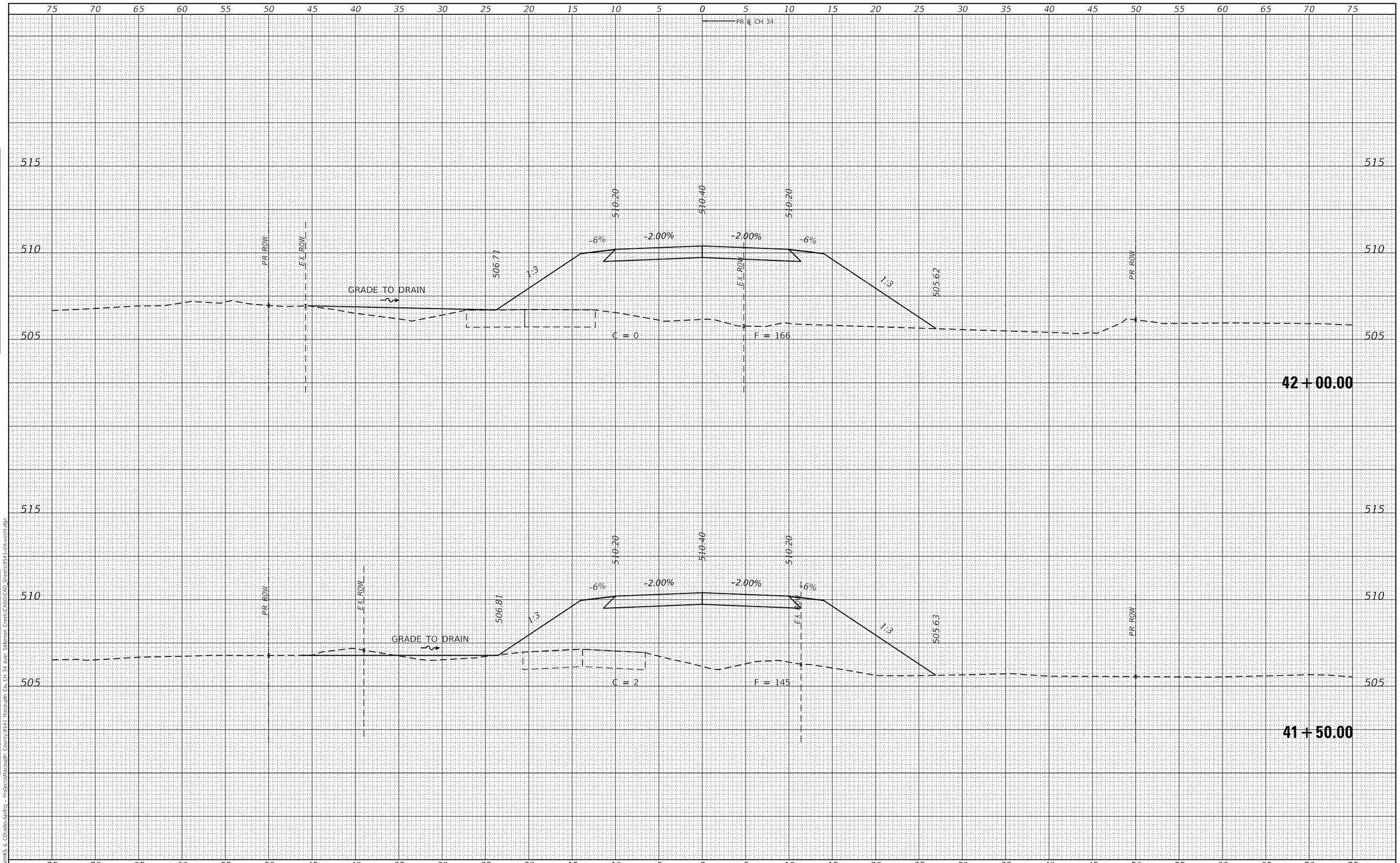

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AREAS CHECKED		

BY	DATE

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design firm no. 184001036

whks
engineers + planners + land surveyors

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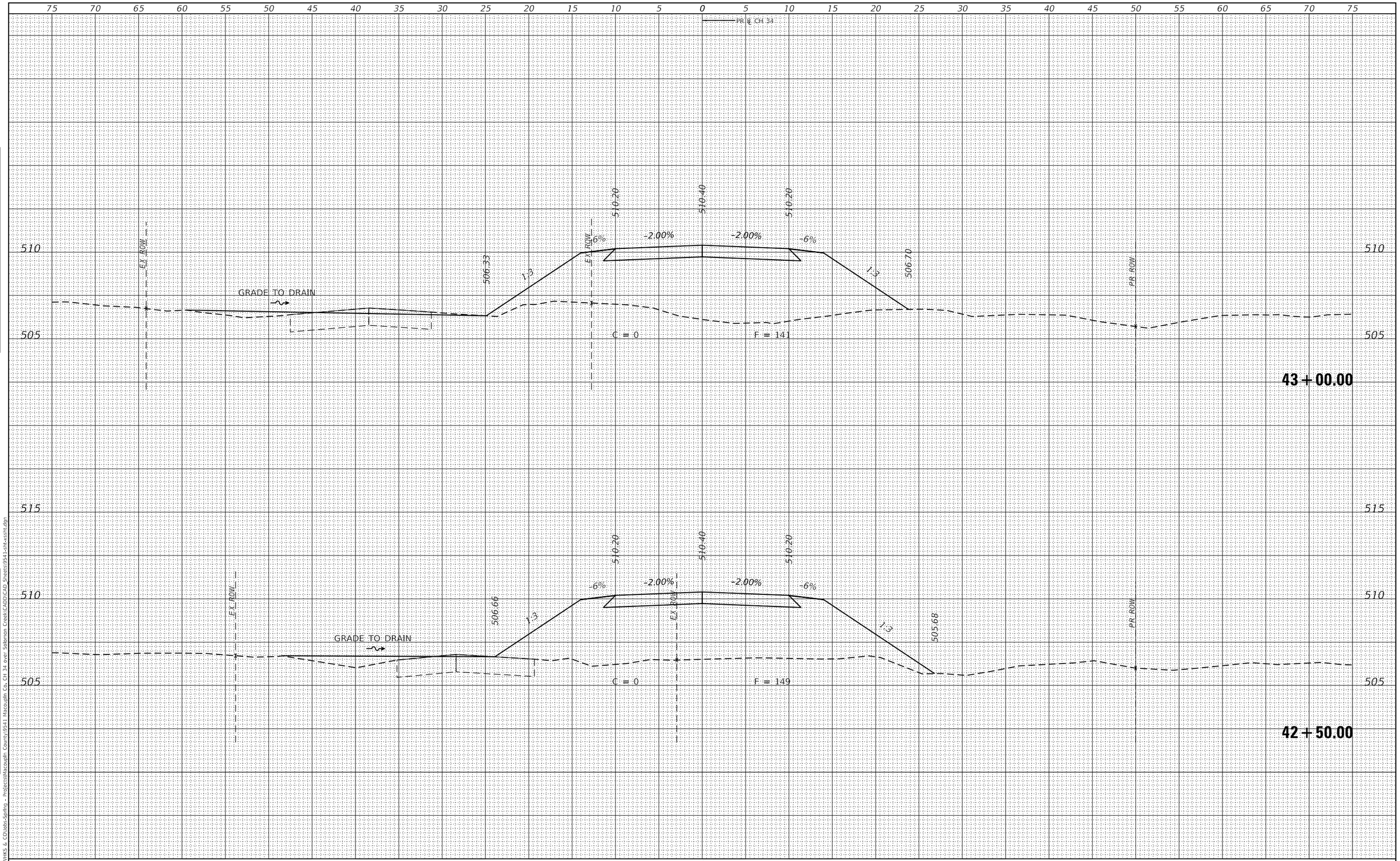
PLOT SCALE = 120.000 ' / ft.	CHECKED - MRL	REVISED -	
PLOT DATE = 2/25/2025	DATE - 2/25/2025	REVISED -	

MACOUPIN COUNTY HIGHWAY DEPARTMENT

CROSS SECTIONS
CH 34 (HAGAMAN ROAD) OVER SOLOMON CREEK

SCALE: 1" = 5' | SHEET 7 OF 23 SHEETS | STA. 41+50.00 | TO STA. 42+00.00

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	21-00107-00-BR	MACOUPIN	54	38
		CONTRACT NO.93828		
		ILLINOIS	FED. AID PROJECT	



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

FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
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design firm no. 184001036 — whks engineers + planners + land surveyors

USER NAME = bJohnson	DESIGNED - MRL	REVISED -	
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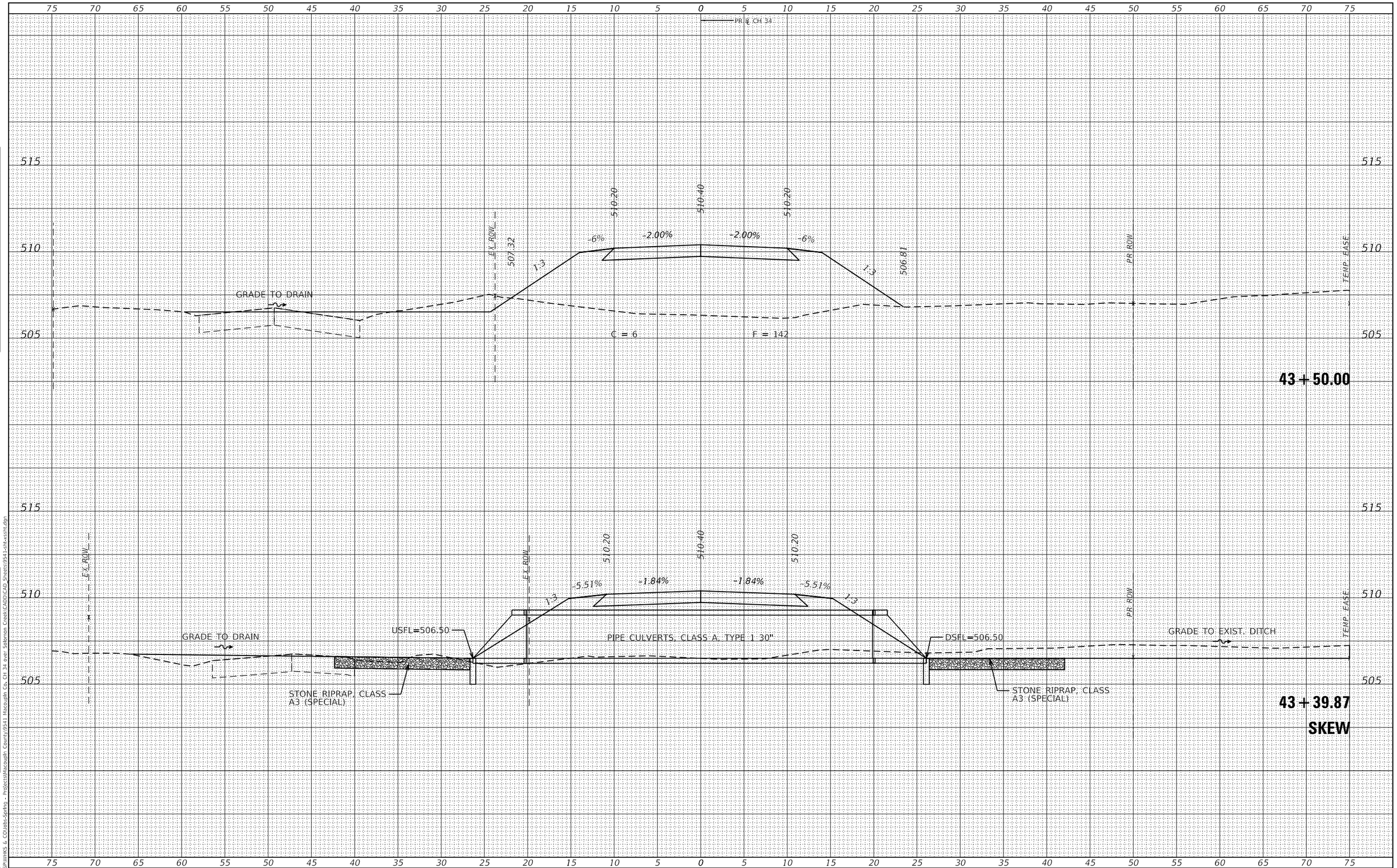
PLOT SCALE = 120.000 ' / ft.	CHECKED - MRL	REVISED -	
PLOT DATE = 2/25/2025	DATE - 2/25/2025	REVISED -	

MACOUPIN COUNTY HIGHWAY DEPARTMENT

CROSS SECTIONS
CH 34 (HAGAMAN ROAD) OVER SOLOMON CREEK

SCALE: 1" = 5' | SHEET 8 OF 23 SHEETS | STA. 42+50.00 | TO STA. 43+00.00

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	21-00107-00-BR	MACOUPIN	54	39
		CONTRACT NO.93828		
		ILLINOIS	FED. AID PROJECT	



design firm no. 184001036 whks engineers + planners + land surveyors	USER NAME = bJohnson	DESIGNED - MRL	REVISED -	MACOUPIN COUNTY HIGHWAY DEPARTMENT
		DRAWN - GSJ	REVISED -	
	PLOT SCALE = 120.000 ' / ft.	CHECKED - MRL	REVISED -	
	PLOT DATE = 2/25/2025	DATE - 2/25/2025	REVISED -	

CROSS SECTIONS
CH 34 (HAGAMAN ROAD) OVER SOLOMON CREEK

SCALE: 1" = 5' | SHEET 9 OF 23 SHEETS | STA. 43+30.00 | TO STA. 43+50.00

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	21-00107-00-BR	MACOUPIN	54	40
		CONTRACT NO. 93828		
		ILLINOIS	FED. AID PROJECT	

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

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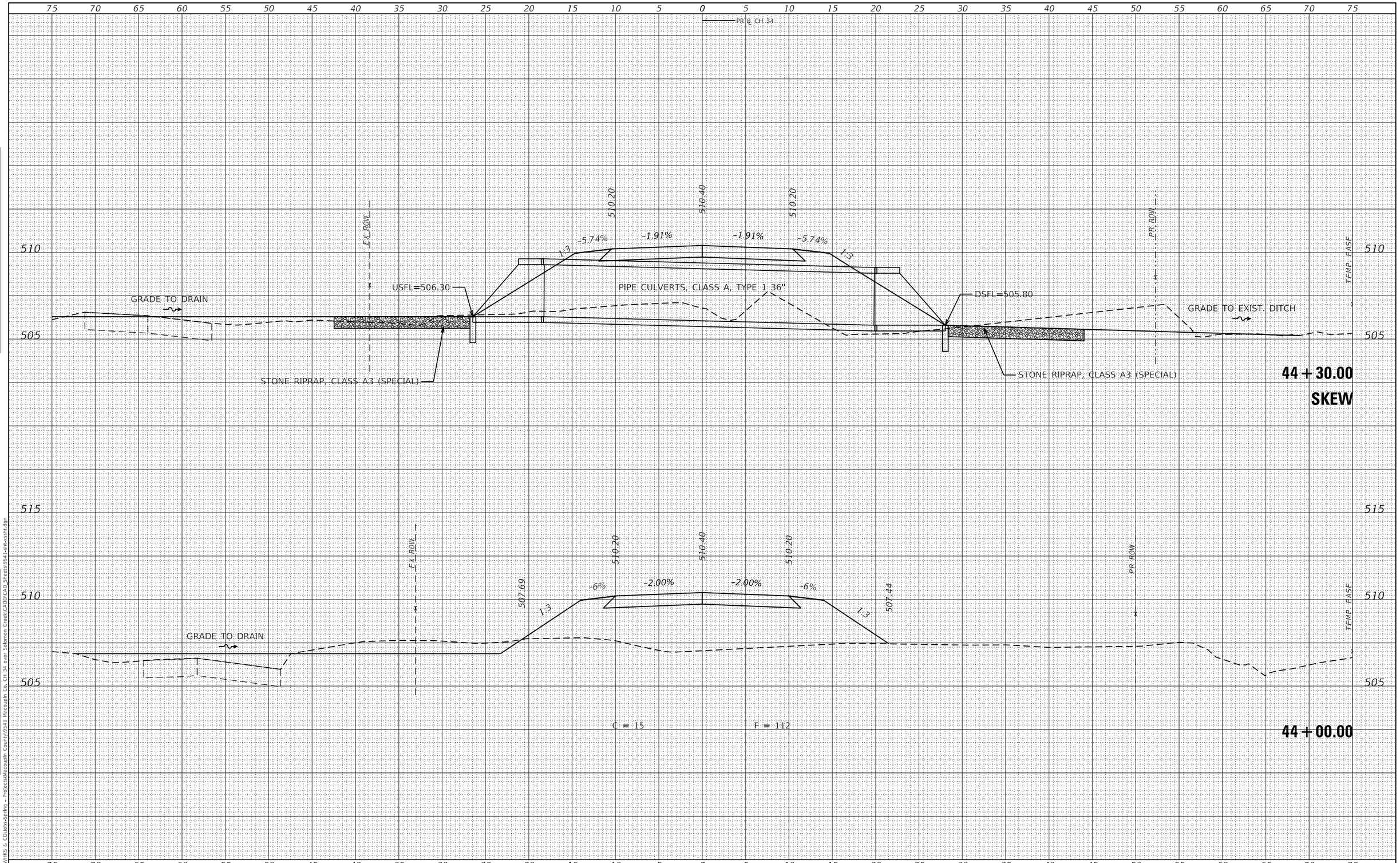

FINAL SURVEY	NOTE BOOK	NO.
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	PLOTTED	
	TEMPLATE	
	AREAS	
	AREAS CHECKED	

ORIGINAL SURVEY	NOTE BOOK	NO.
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	TEMPLATE	
	AREAS	
	AREAS CHECKED	

BY	DATE

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design firm no. 184001036 — whks — engineers + planners + land surveyors

USER NAME = bjohnson	DESIGNED - MRL	REVISED -	
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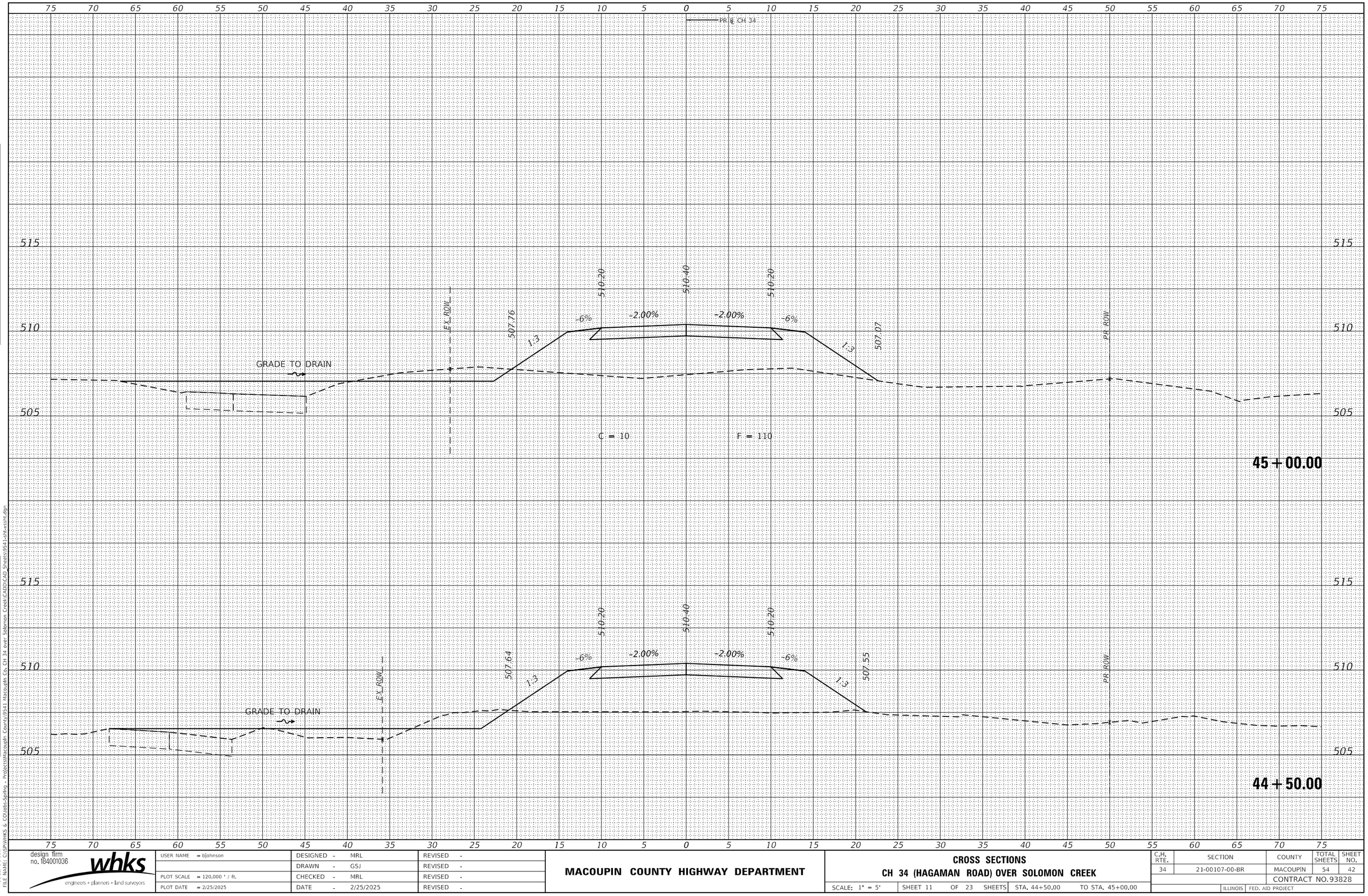
PLOT DATE = 2/25/2025	DATE - 2/25/2025	REVISED -	

MACOUPIN COUNTY HIGHWAY DEPARTMENT

CROSS SECTIONS
CH 34 (HAGAMAN ROAD) OVER SOLOMON CREEK

SCALE: 1" = 5' | SHEET 10 OF 23 SHEETS | STA. 44+00.00 | TO STA. 44+30.00

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	21-00107-00-BR	MACOUPIN	54	41
		CONTRACT NO.93828		
		ILLINOIS	FED. AID PROJECT	



FINAL SURVEY

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

ORIGINAL SURVEY

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

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design firm no. 184001036 whks engineers + planners + land surveyors

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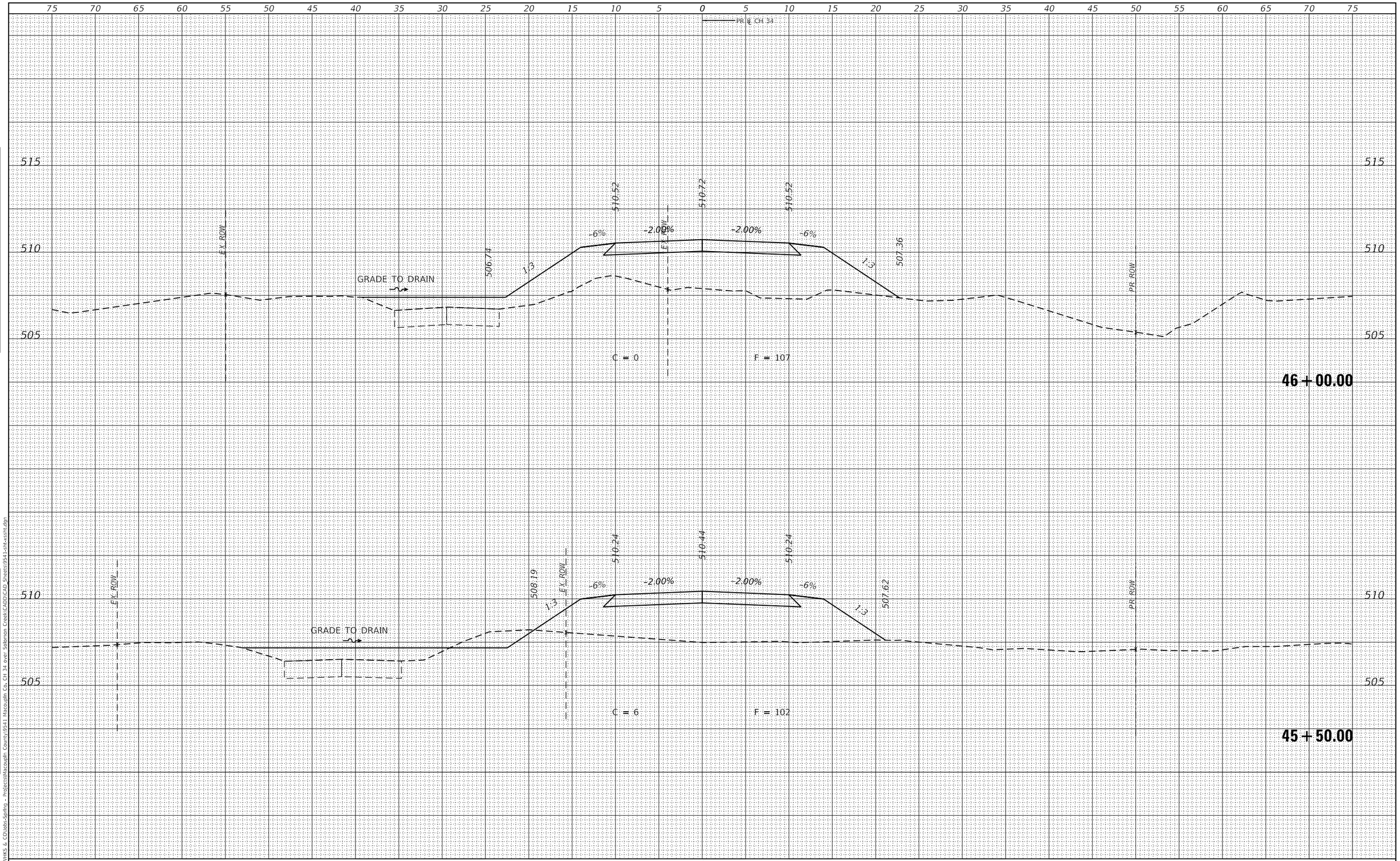
PLOT SCALE = 120.000 ' / ft.	CHECKED - MRL	REVISED -	
PLOT DATE = 2/25/2025	DATE - 2/25/2025	REVISED -	

MACOUPIN COUNTY HIGHWAY DEPARTMENT

CROSS SECTIONS
CH 34 (HAGAMAN ROAD) OVER SOLOMON CREEK

SCALE: 1" = 5' | SHEET 11 OF 23 SHEETS | STA. 44+50.00 | TO STA. 45+00.00

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	21-00107-00-BR	MACOUPIN	54	42
		CONTRACT NO.93828		
	ILLINOIS	FED. AID PROJECT		



FINAL SURVEY	NOTE BOOK	NO.
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TEMPLATE		
AREAS		
AREAS CHECKED		

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

DATE	BY

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design firm no. 184001036
whks
engineers + planners + land surveyors

USER NAME = bjohnson	DESIGNED - MRL	REVISED -	
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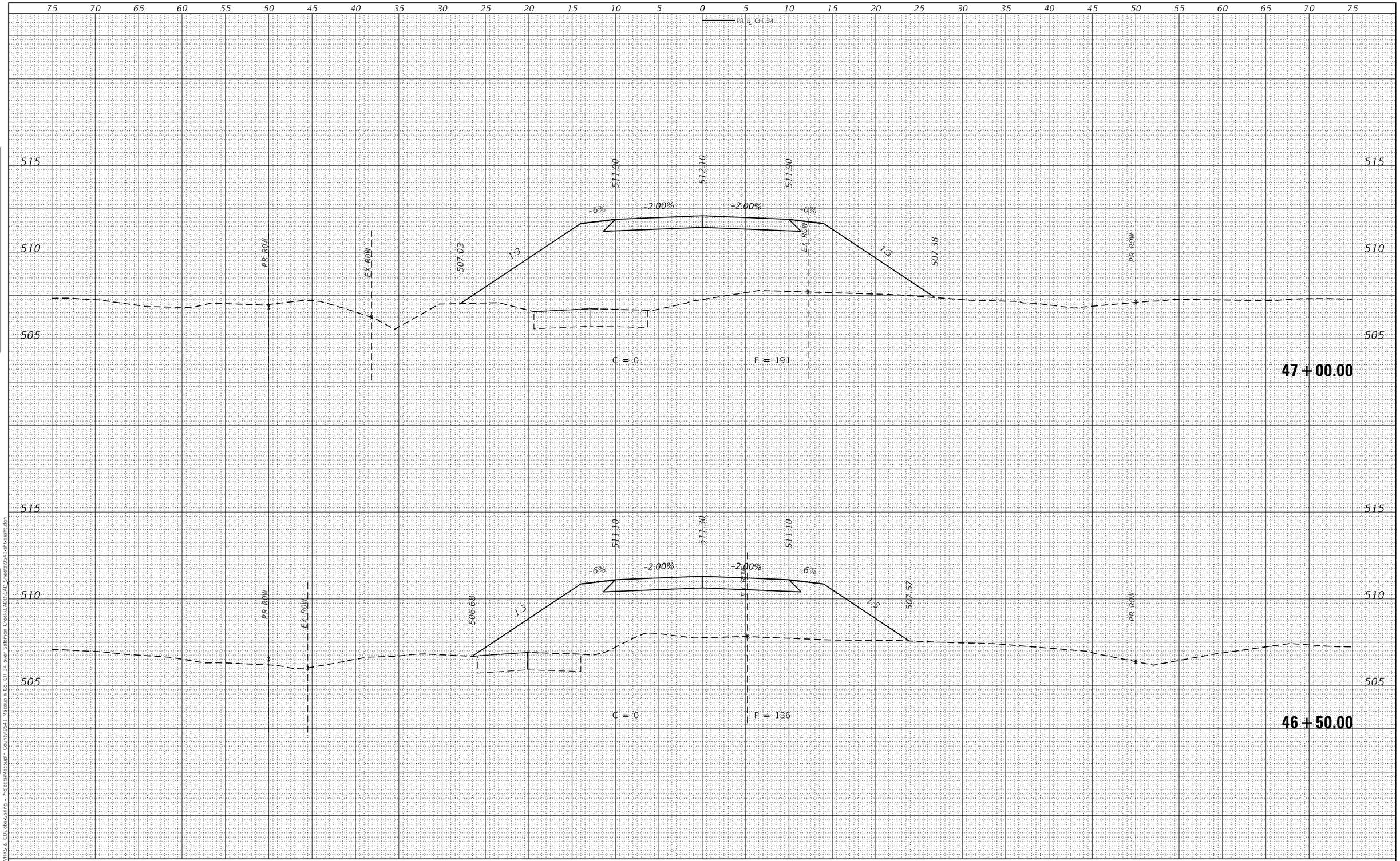
PLOT SCALE = 120.000 ' / ft.	CHECKED - MRL	REVISED -	
PLOT DATE = 2/25/2025	DATE - 2/25/2025	REVISED -	

MACOUPIN COUNTY HIGHWAY DEPARTMENT

CROSS SECTIONS
CH 34 (HAGAMAN ROAD) OVER SOLOMON CREEK

SCALE: 1" = 5' | SHEET 12 OF 23 SHEETS | STA. 45+50.00 | TO STA. 46+00.00

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	21-00107-00-BR	MACOUPIN	54	43
		CONTRACT NO.93828		
		ILLINOIS	FED. AID PROJECT	



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

BY	DATE

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

BY	DATE

MODEL: Default
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design firm no. 184001036 whks engineers + planners + land surveyors

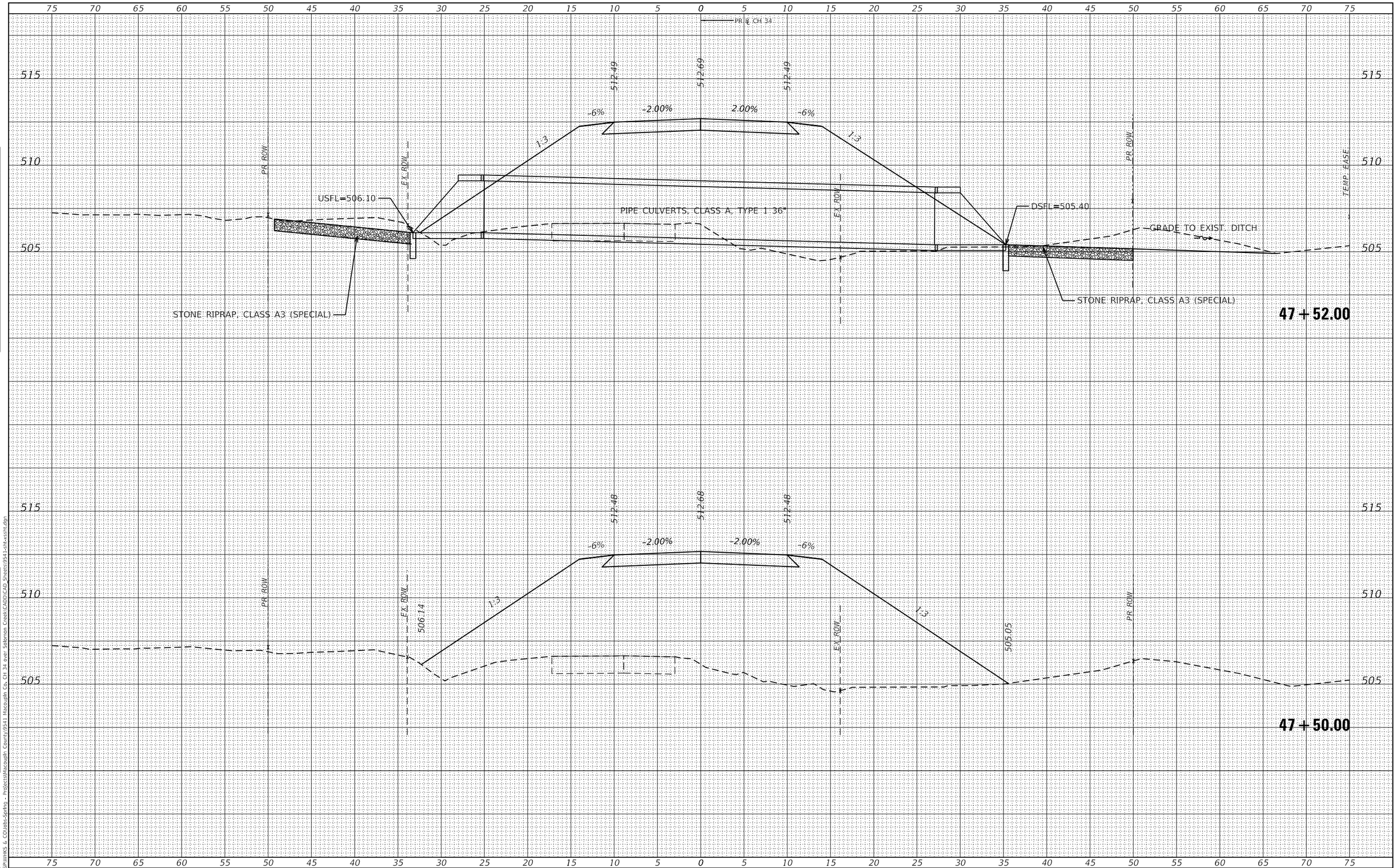
USER NAME = bJohnson	DESIGNED - MRL	REVISED -	
	DRAWN - GSJ	REVISED -	
PLOT SCALE = 120.000 ' / ft.	CHECKED - MRL	REVISED -	
PLOT DATE = 2/25/2025	DATE - 2/25/2025	REVISED -	

MACOUPIN COUNTY HIGHWAY DEPARTMENT

CROSS SECTIONS
CH 34 (HAGAMAN ROAD) OVER SOLOMON CREEK

SCALE: 1" = 5' | SHEET 13 OF 23 SHEETS | STA. 46+50.00 | TO STA. 47+00.00

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	21-00107-00-BR	MACOUPIN	54	44
		CONTRACT NO.93828		
		ILLINOIS	FED. AID PROJECT	



FINAL SURVEY	NOTE BOOK	NO.
SURVEYED		
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TEMPLATE		
AREAS		
AREAS CHECKED		

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

DATE	BY

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design firm no. 184001036 whks engineers + planners + land surveyors

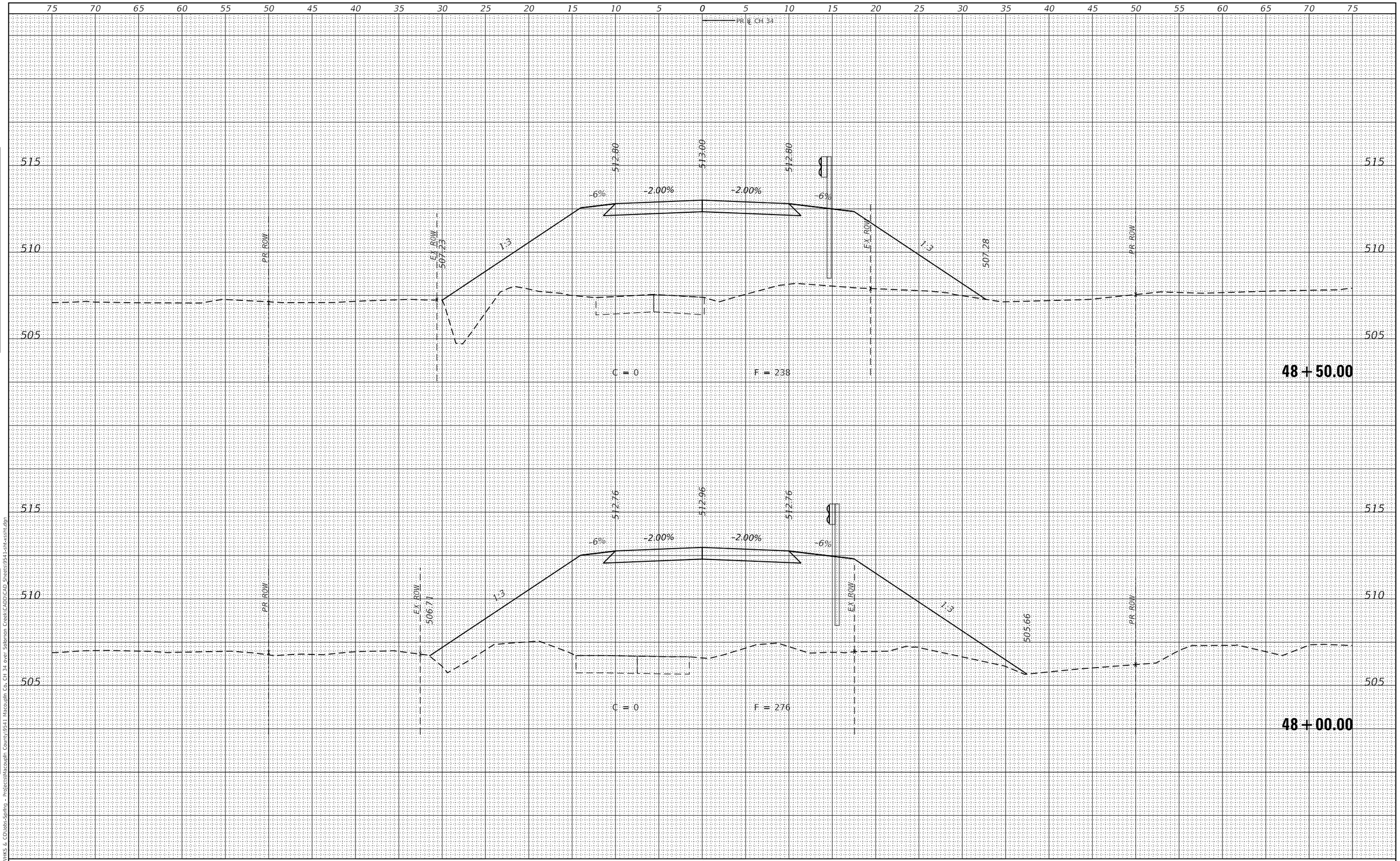
USER NAME = bJohnson	DESIGNED - MRL	REVISED -	
	DRAWN - GSJ	REVISED -	
PLOT SCALE = 120.000 ' / ft.	CHECKED - MRL	REVISED -	
PLOT DATE = 2/25/2025	DATE - 2/25/2025	REVISED -	

MACOUPIN COUNTY HIGHWAY DEPARTMENT

CROSS SECTIONS
CH 34 (HAGAMAN ROAD) OVER SOLOMON CREEK

SCALE: 1" = 5' | SHEET 14 OF 23 SHEETS | STA. 47+50.00 | TO STA. 47+52.00

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	21-00107-00-BR	MACOUPIN	54	45
		CONTRACT NO.93828		
		ILLINOIS	FED. AID PROJECT	



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

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

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design firm no. 184001036 whks engineers + planners + land surveyors

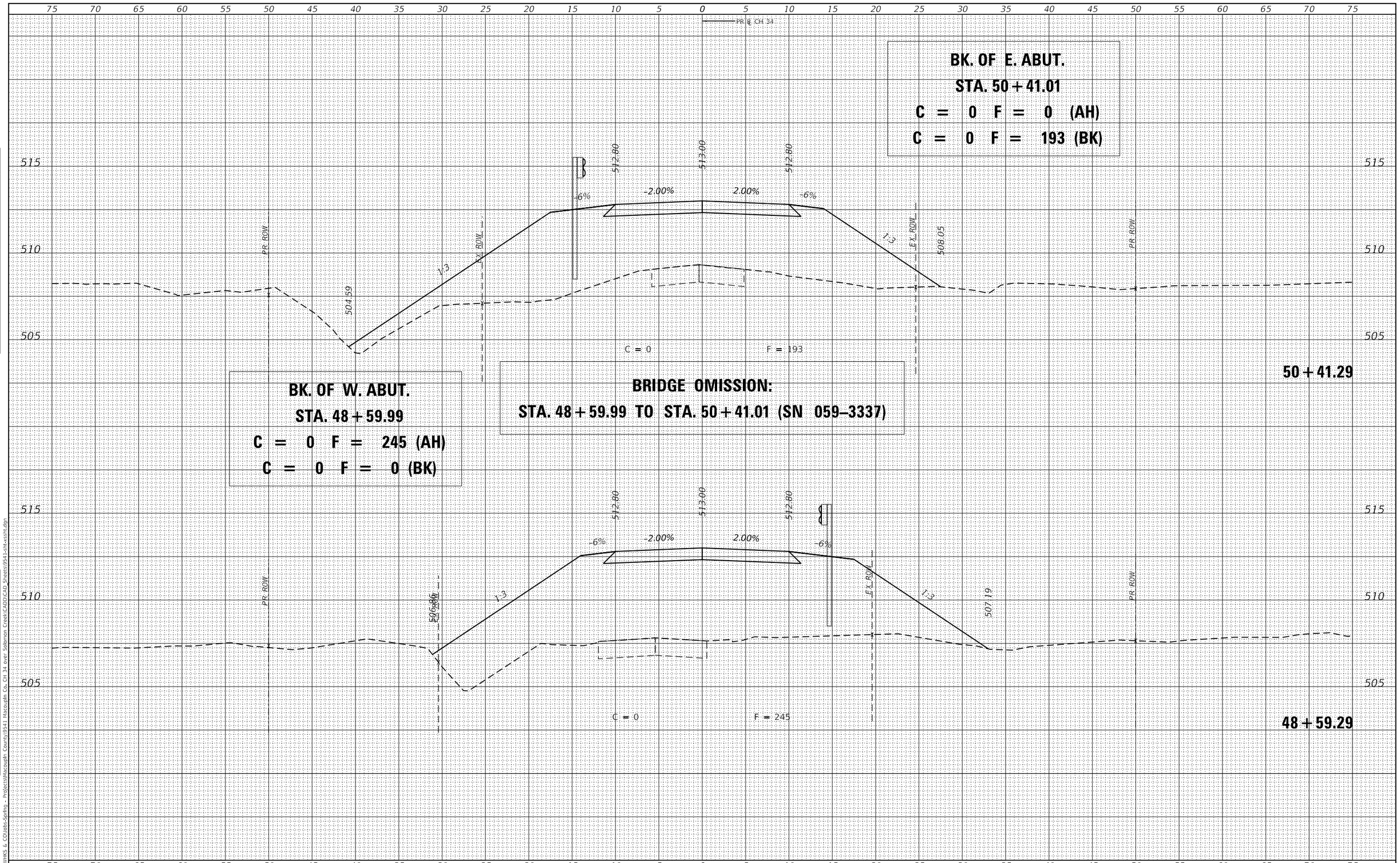
USER NAME = bJohnson	DESIGNED - MRL	REVISED -	
	DRAWN - GSJ	REVISED -	
PLOT SCALE = 120.000 ' / ft.	CHECKED - MRL	REVISED -	
PLOT DATE = 2/25/2025	DATE - 2/25/2025	REVISED -	

MACOUPIN COUNTY HIGHWAY DEPARTMENT

CROSS SECTIONS
CH 34 (HAGAMAN ROAD) OVER SOLOMON CREEK

SCALE: 1" = 5' | SHEET 15 OF 23 SHEETS | STA. 48+00.00 | TO STA. 48+50.00

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	21-00107-00-BR	MACOUPIN	54	46
		CONTRACT NO.93828		
		ILLINOIS	FED. AID PROJECT	



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

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design firm no. 184001036

whks
engineers + planners + land surveyors

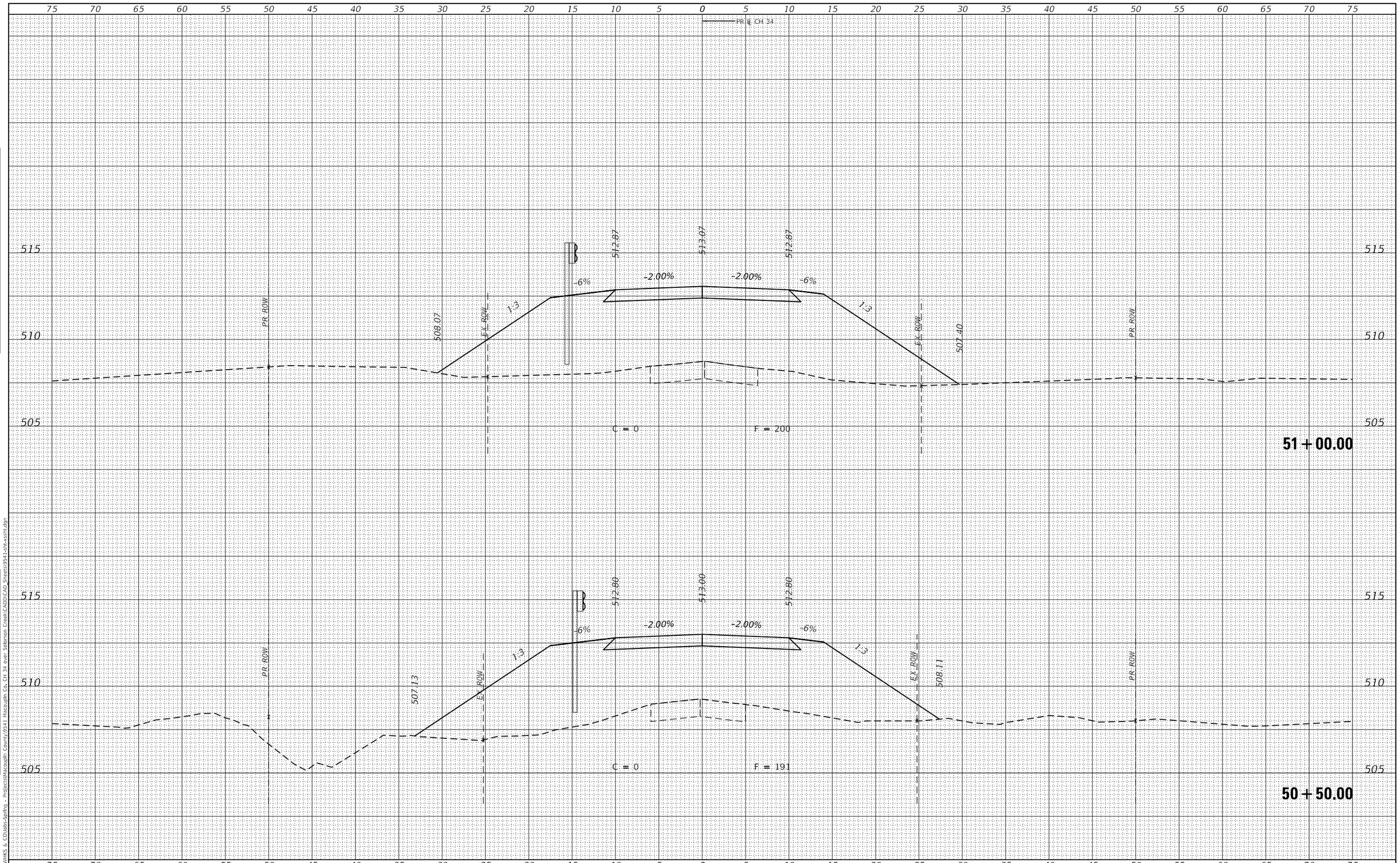
USER NAME = bjohnson	DESIGNED - MRL	REVISED -
	DRAWN - GSJ	REVISED -
PLOT SCALE = 120.000 ' / ft.	CHECKED - MRL	REVISED -
PLOT DATE = 2/25/2025	DATE - 2/25/2025	REVISED -

MACOUPIN COUNTY HIGHWAY DEPARTMENT

CROSS SECTIONS
CH 34 (HAGAMAN ROAD) OVER SOLOMON CREEK

SCALE: 1" = 5' | SHEET 16 OF 23 SHEETS | STA. 48+59.29 | TO STA. 50+41.29

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	21-00107-00-BR	MACOUPIN	54	47
		CONTRACT NO. 93828		
		ILLINOIS	FED. AID PROJECT	



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

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

MODEL: Default
FILE NAME: C:\SP\WHKS & CO\Jobs-Spring - Projects\Macoupin County\9541 Macoupin Co. CH 34 over Solomon Creek\CADD\CAD Sheets\9541-sht-xssh.dgn

design firm no. 184001036
whks
engineers + planners + land surveyors

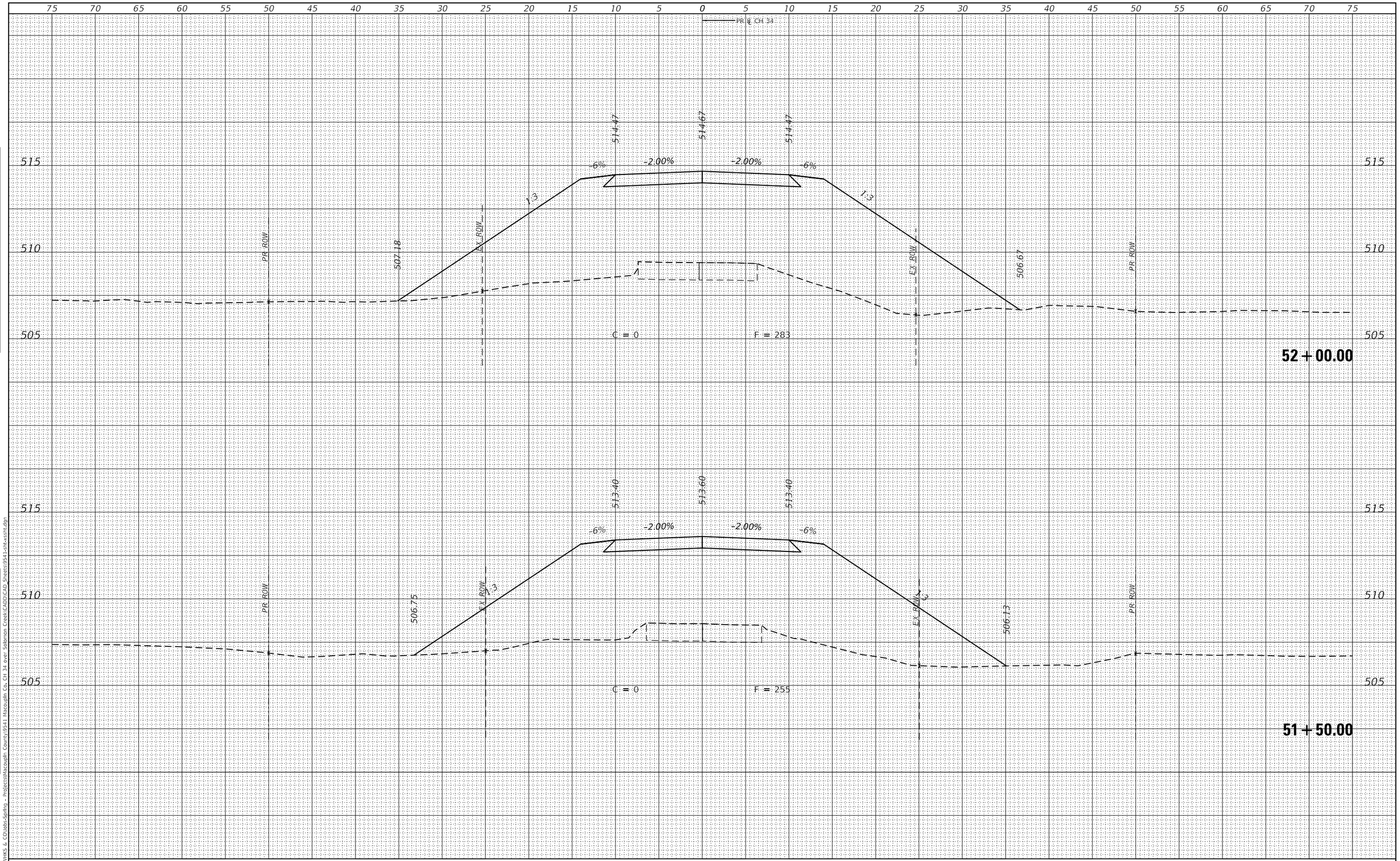
USER NAME = bJohnson	DESIGNED - MRL	REVISED -	
	DRAWN - GSJ	REVISED -	
PLOT SCALE = 120.000 ' / ft.	CHECKED - MRL	REVISED -	
PLOT DATE = 2/25/2025	DATE - 2/25/2025	REVISED -	

MACOUPIN COUNTY HIGHWAY DEPARTMENT

CROSS SECTIONS
CH 34 (HAGAMAN ROAD) OVER SOLOMON CREEK

SCALE: 1" = 5' | SHEET 17 OF 23 SHEETS | STA. 50+50.00 | TO STA. 51+00.00

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	21-00107-00-BR	MACOUPIN	54	48
		CONTRACT NO.93828		
		ILLINOIS	FED. AID PROJECT	



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

BY	DATE

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

BY	DATE

MODEL: Default
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design firm no. 184001036 whks engineers + planners + land surveyors

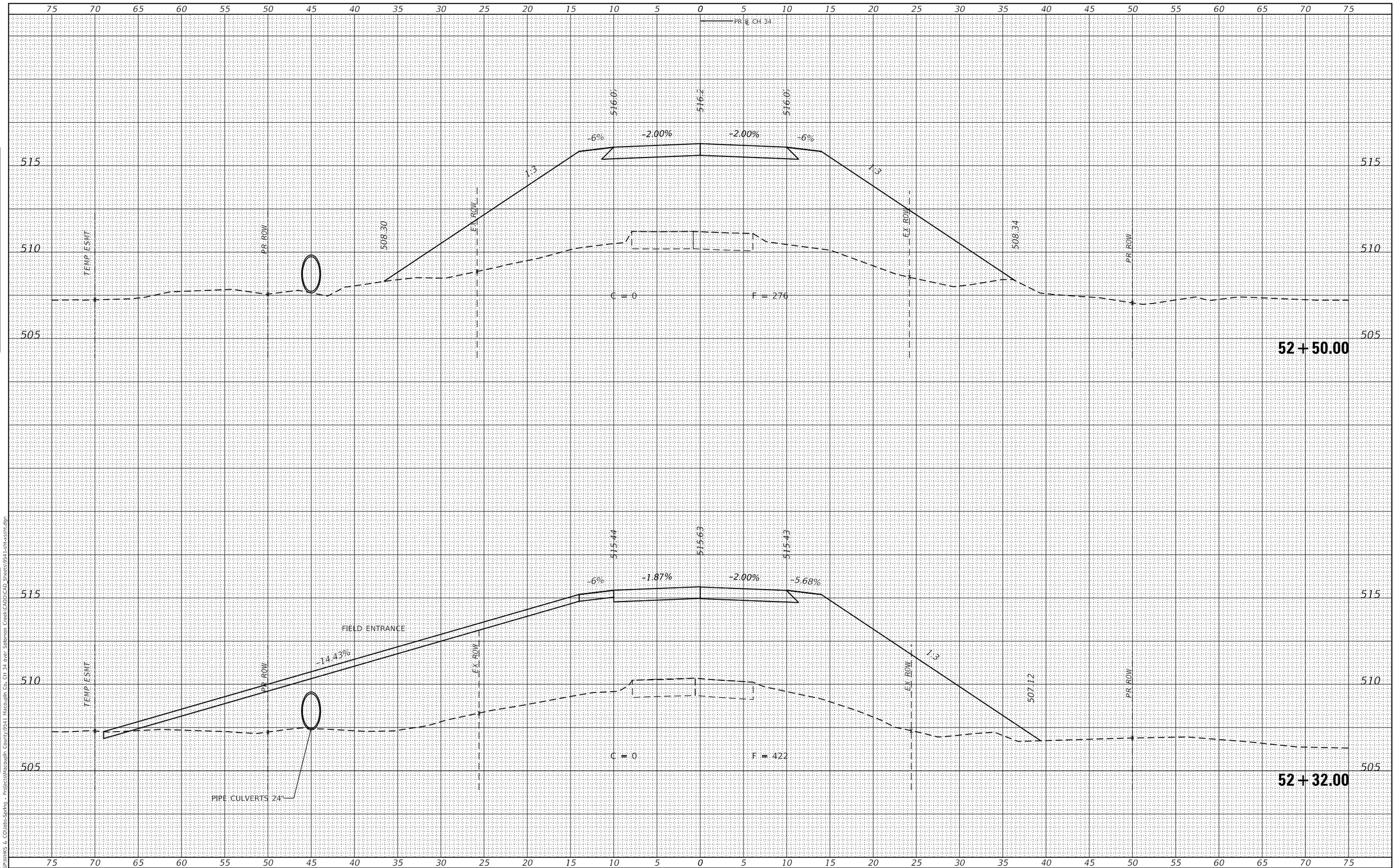
USER NAME = bJohnson	DESIGNED - MRL	REVISED -
	DRAWN - GSJ	REVISED -
PLOT SCALE = 120.000 ' / ft.	CHECKED - MRL	REVISED -
PLOT DATE = 2/25/2025	DATE - 2/25/2025	REVISED -

MACOUPIN COUNTY HIGHWAY DEPARTMENT

CROSS SECTIONS
CH 34 (HAGAMAN ROAD) OVER SOLOMON CREEK

SCALE: 1" = 5' | SHEET 18 OF 23 SHEETS | STA. 51+50.00 | TO STA. 52+00.00

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	21-00107-00-BR	MACOUPIN	54	49
		CONTRACT NO.93828		
		ILLINOIS	FED. AID PROJECT	



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

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design firm no. 184001036 — whks — engineers + planners + land surveyors

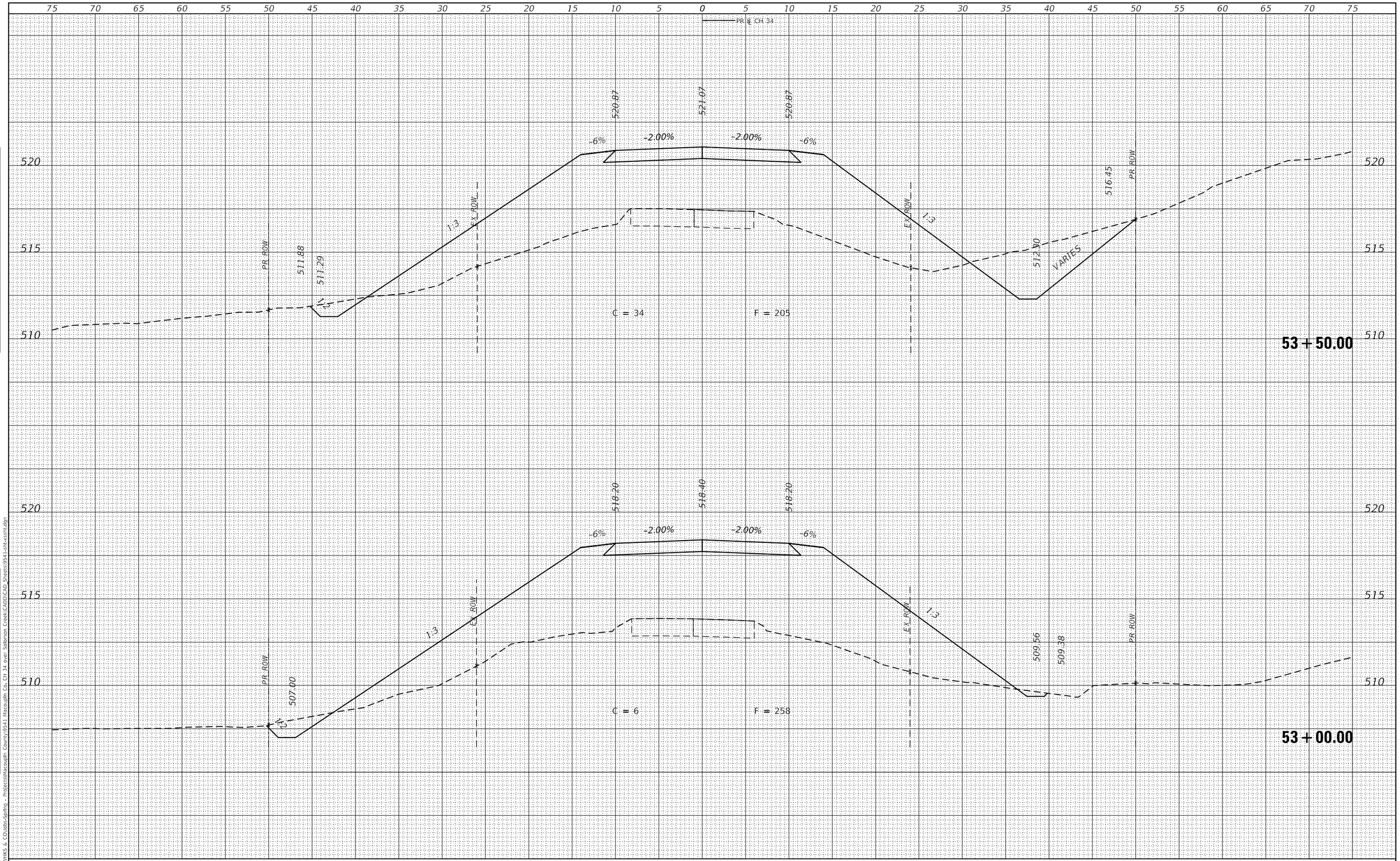
USER NAME = bJohnson	DESIGNED - MRL	REVISED -	
	DRAWN - GSJ	REVISED -	
PLOT SCALE = 120.000 ' / ft.	CHECKED - MRL	REVISED -	
PLOT DATE = 2/25/2025	DATE - 2/25/2025	REVISED -	

MACOUPIN COUNTY HIGHWAY DEPARTMENT

CROSS SECTIONS
CH 34 (HAGAMAN ROAD) OVER SOLOMON CREEK

SCALE: 1" = 5' | SHEET 19 OF 23 SHEETS | STA. 52+32.00 | TO STA. 52+50.00

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	21-00107-00-BR	MACOUPIN	54	50
		CONTRACT NO.93828		
		ILLINOIS	FED. AID PROJECT	



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

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design firm no. 184001036 — whks — engineers + planners + land surveyors

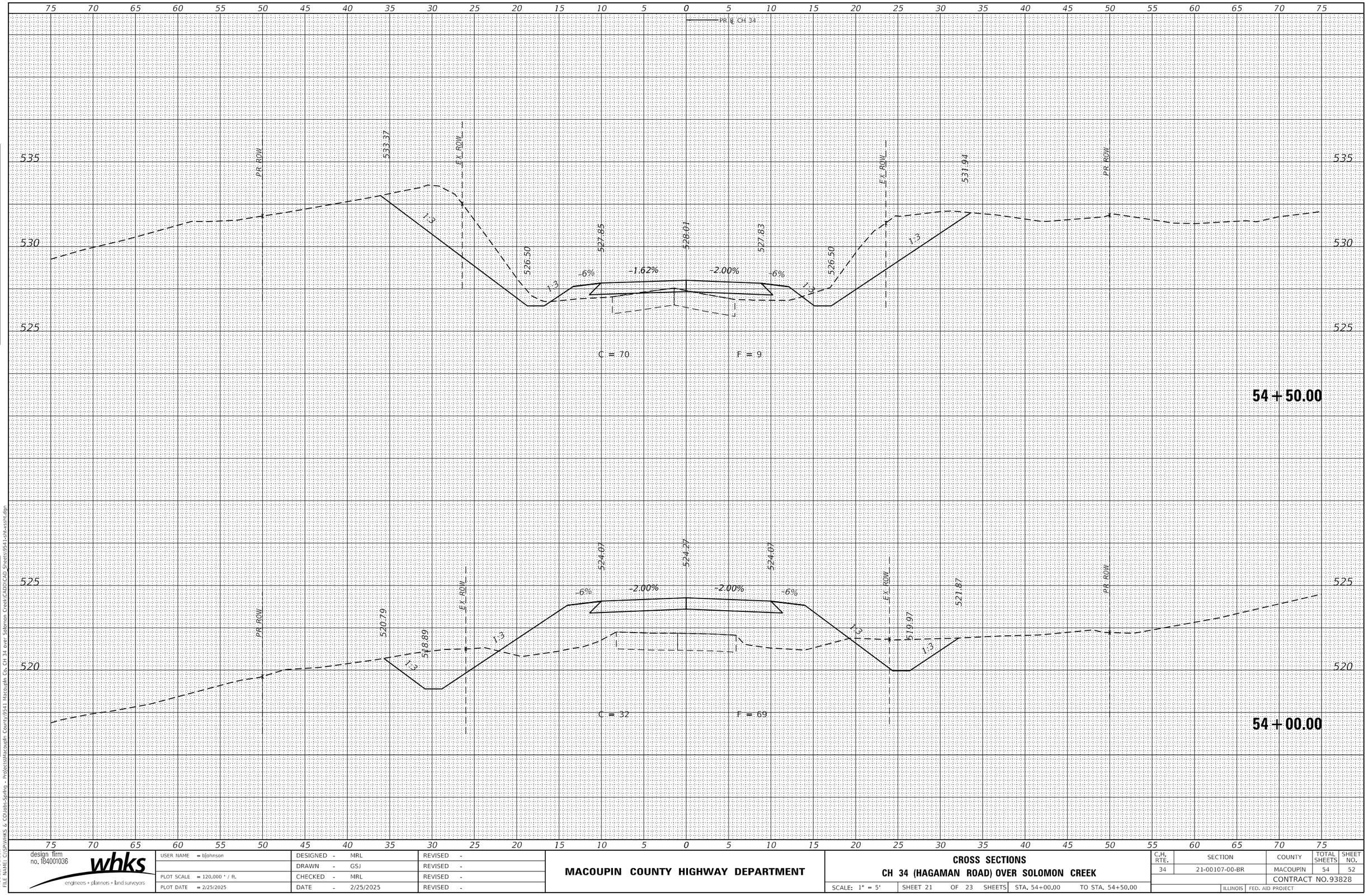
USER NAME = bjohnson	DESIGNED - MRL	REVISED -	
	DRAWN - GSJ	REVISED -	
PLOT SCALE = 120.000 ' / ft.	CHECKED - MRL	REVISED -	
PLOT DATE = 2/25/2025	DATE - 2/25/2025	REVISED -	

MACOUPIN COUNTY HIGHWAY DEPARTMENT

CROSS SECTIONS
CH 34 (HAGAMAN ROAD) OVER SOLOMON CREEK

SCALE: 1" = 5' | SHEET 20 OF 23 SHEETS | STA. 53+00.00 | TO STA. 53+50.00

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	21-00107-00-BR	MACOUPIN	54	51
		CONTRACT NO.93828		
		ILLINOIS	FED. AID PROJECT	



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

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

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design firm no. 184001036 whks engineers + planners + land surveyors

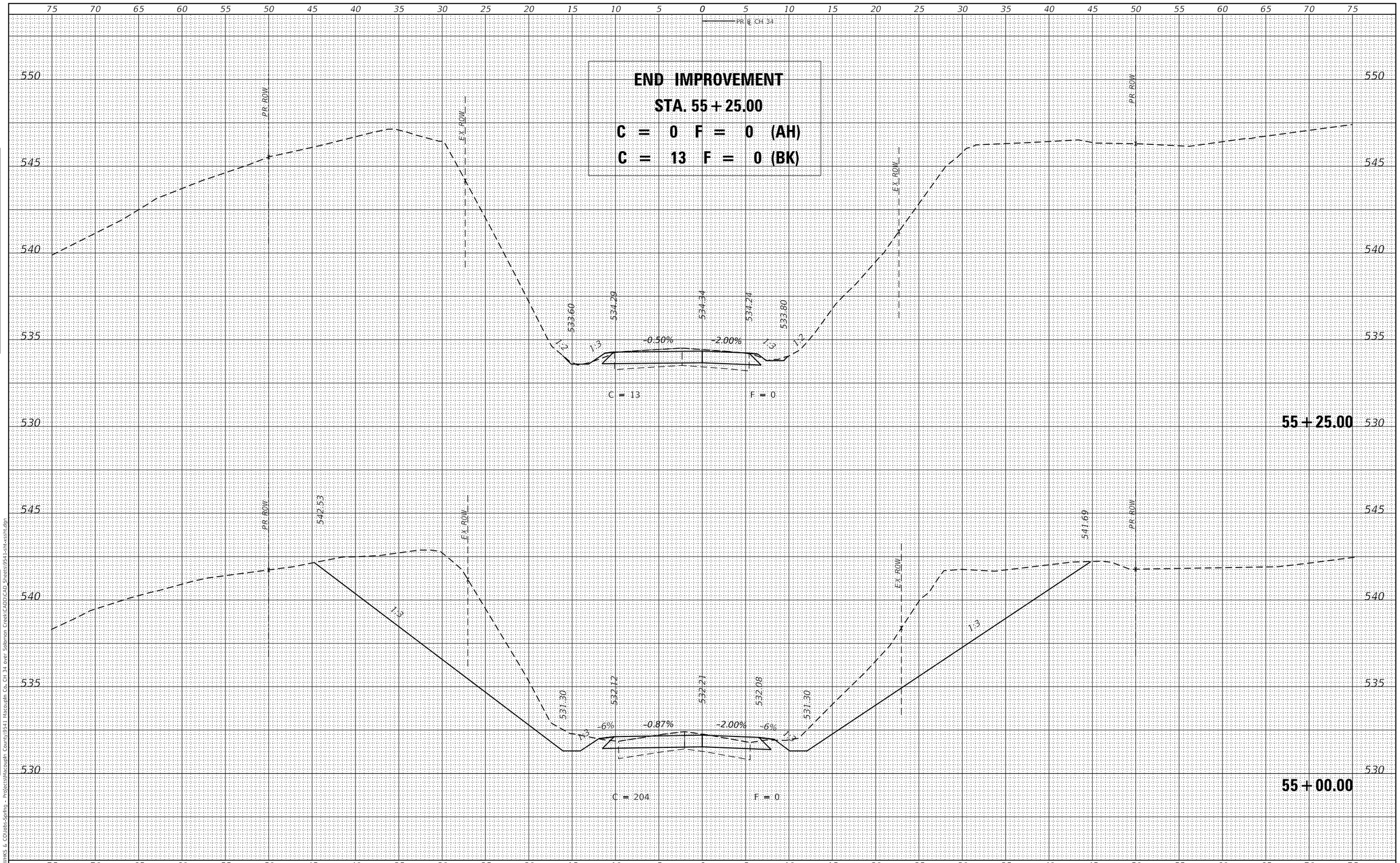
USER NAME = bJohnson	DESIGNED - MRL	REVISED -	
	DRAWN - GSJ	REVISED -	
PLOT SCALE = 120.000 ' / ft.	CHECKED - MRL	REVISED -	
PLOT DATE = 2/25/2025	DATE - 2/25/2025	REVISED -	

MACOUPIN COUNTY HIGHWAY DEPARTMENT

CROSS SECTIONS
CH 34 (HAGAMAN ROAD) OVER SOLOMON CREEK

SCALE: 1" = 5' | SHEET 21 OF 23 SHEETS | STA. 54+00.00 | TO STA. 54+50.00

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	21-00107-00-BR	MACOUPIN	54	52
		CONTRACT NO.93828		
		ILLINOIS	FED. AID PROJECT	



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

BY	DATE

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

BY	DATE

MODEL: Default
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design firm no. 184001036 whks engineers + planners + land surveyors

USER NAME = bJohnson	DESIGNED - MRL	REVISED -	
	DRAWN - GSJ	REVISED -	
PLOT SCALE = 120.000 ' / ft.	CHECKED - MRL	REVISED -	
PLOT DATE = 2/25/2025	DATE - 2/25/2025	REVISED -	

MACOUPIN COUNTY HIGHWAY DEPARTMENT

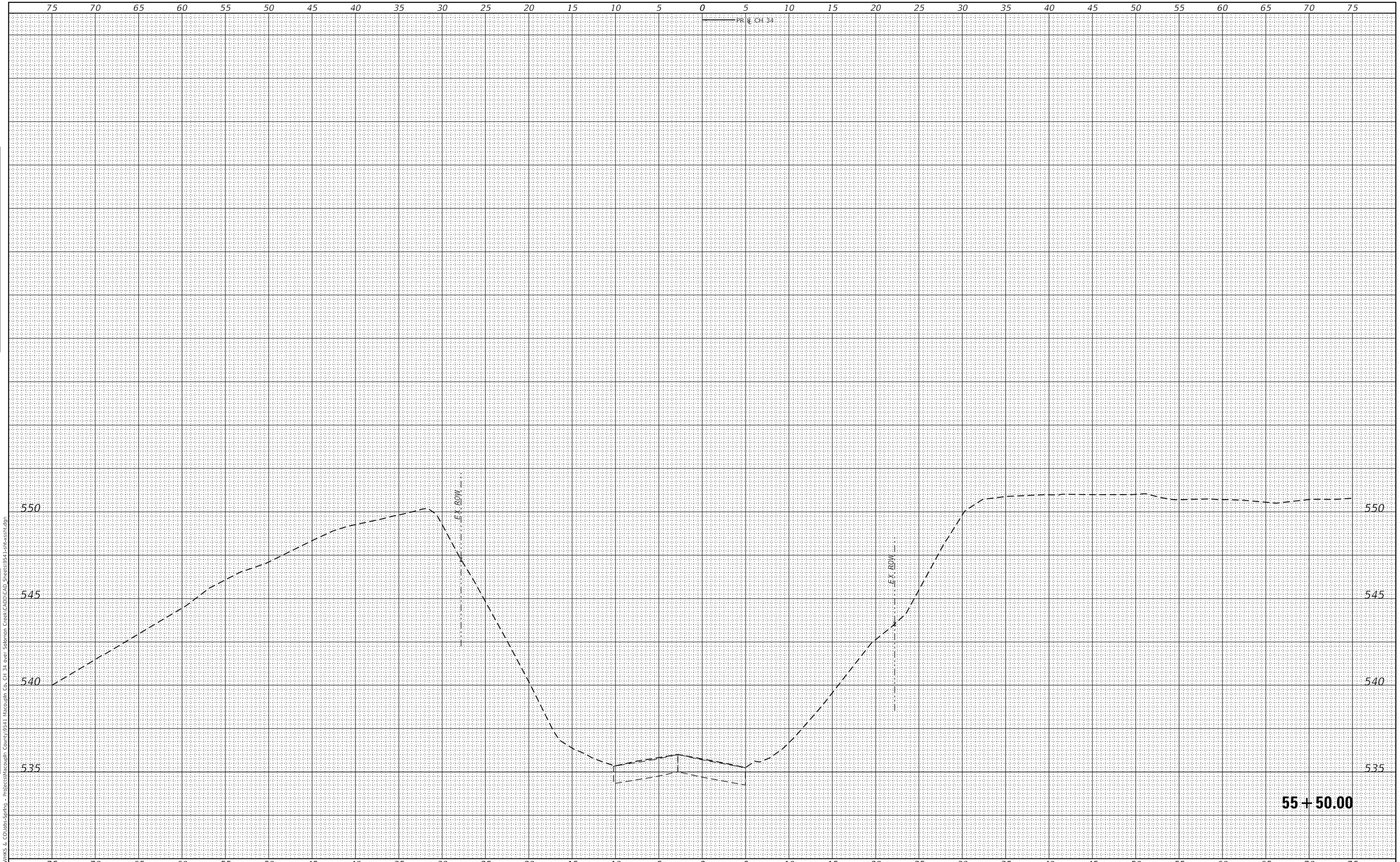
CROSS SECTIONS
CH 34 (HAGAMAN ROAD) OVER SOLOMON CREEK

SCALE: 1" = 5' | SHEET 22 OF 23 SHEETS | STA. 55+00.00 | TO STA. 55+25.00

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	21-00107-00-BR	MACOUPIN	54	53
		CONTRACT NO.93828		
		ILLINOIS	FED. AID PROJECT	

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

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



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design firm no. 184001036 whks engineers + planners + land surveyors

USER NAME = bJohnson	DESIGNED - MRL	REVISED -	
	DRAWN - GSJ	REVISED -	
PLOT SCALE = 120.000 ' / ft.	CHECKED - MRL	REVISED -	
PLOT DATE = 2/25/2025	DATE - 2/25/2025	REVISED -	

MACOUPIN COUNTY HIGHWAY DEPARTMENT

CROSS SECTIONS
CH 34 (HAGAMAN ROAD) OVER SOLOMON CREEK

SCALE: 1" = 5' | SHEET 23 OF 23 SHEETS | STA. 55+50.00 | TO STA. 55+50.00

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	21-00107-00-BR	MACOUPIN	54	54
		CONTRACT NO.93828		
		ILLINOIS	FED. AID PROJECT	