

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 23	*	MACON	22	1
STA. #05-04163-00-BR		ILLINOIS	PROJECT	

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED HIGHWAY BRIDGE PROGRAM

FRIENDS CREEK ROAD DISTRICT FRIENDS CREEK TOWNSHIP SECTION 05-04163-00-BR TR 23 OVER FRIENDS CREEK MACON COUNTY

PROJECT NO. BROS-115 (64) JOB NO. C-97-057-08

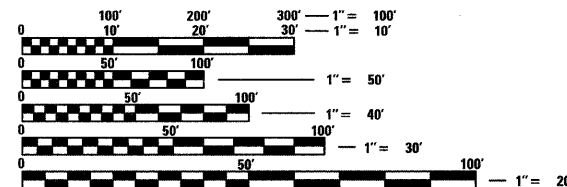
INDEX OF SHEETS

- 1 COVER SHEET
- 2 GENERAL NOTES AND QUANTITIES
- 3 TYPICAL SECTIONS & DETAILS
- 4 GRADING PLAN
- 5 PLAN AND PROFILE
- 6-12 BRIDGE PLANS
- 13-22 CROSS SECTIONS

STANDARDS

- 515001-02 NAME PLATE FOR BRIDGES
- 635006-02 REFLECTOR AND TERMINAL MARKER PLACEMENT
- 701901 TRAFFIC CONTROL DEVICES
- 720001 SIGN PANEL MOUNTING DETAILS
- 720006-01 SIGN PANEL ERECTION DETAILS
- 720011 METAL POSTS FOR SIGNS, MARKERS AND DELINEATORS
- 729001 APPLICATIONS OF TYPES A & B METAL POSTS (FOR SIGNS AND MARKERS)
- BLR 21-7 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
- BLR 27 TRAFFIC BARRIER TERMINAL TYPE 5A**

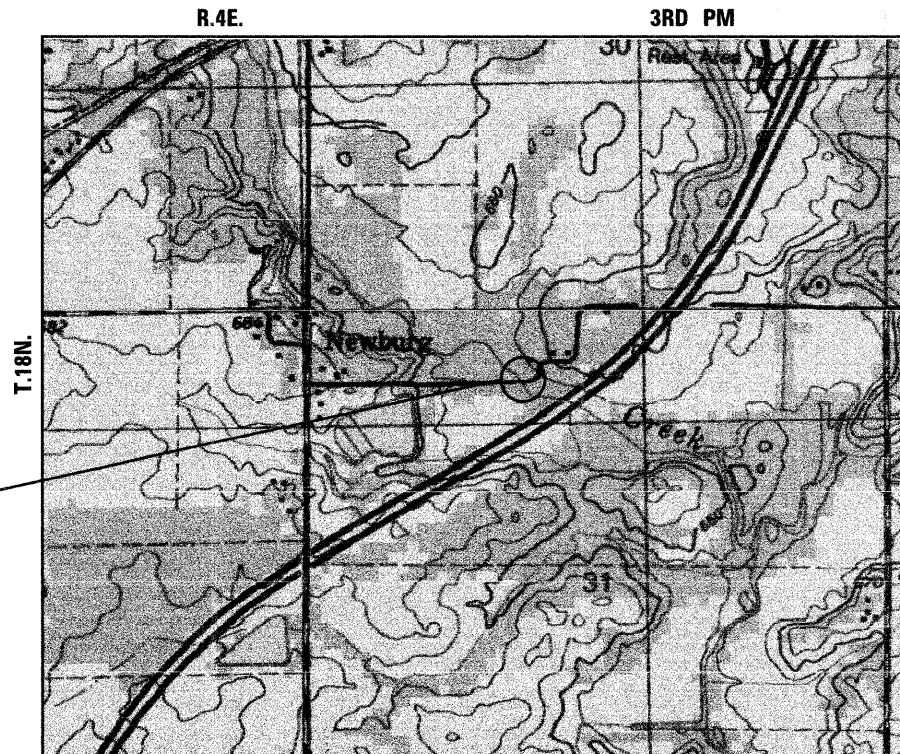
Revised 4-2-08



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

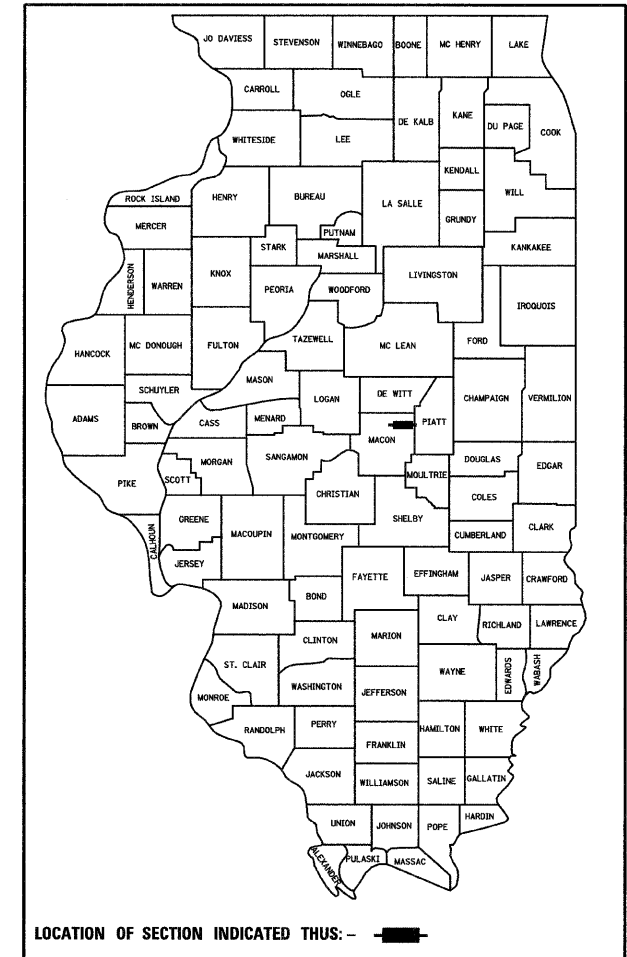
HLC PROJECT NO. 5129
HLC FIELD BOOK NO. 314



LOCATION MAP

TOTAL LENGTH 510.00 FEET = 0.10 MILES
NET LENGTH 510.00 FEET = 0.10 MILES

THE PROPOSED IMPROVEMENT CONSISTS OF REMOVAL OF EXISTING STRUCTURE AND REPLACEMENT WITH 3 SPAN PRECAST PRESTRESSED CONCRETE DECK BEAM (21" DEPTH) BRIDGE, PILE BENT PIERS, PILE BENT ABUTMENTS, 24' CLEAR ROADWAY AND 152' BACK TO BACK ABUTMENTS, 35 DEGREE SKEW, AND OTHER MINOR COLLATERAL WORK.



LOCATION OF SECTION INDICATED THUS: - [black rectangle] -

FUNCTIONAL CLASSIFICATION - LOCAL ROAD
2008 ADT = 0 (BRIDGE CLOSED)
2028 ADT = 25
DESIGN SPEED = 30 MPH



APPROVED FEBRUARY 20 20 08
[Signature]
COUNTY ENGINEER

PASSED 2-20-08
[Signature] 20
DISTRICT SEVEN ENGINEER OF
LOCAL ROADS AND STREETS

Releasing For
Bid Based on
Limited Review 2/20 20 08
[Signature]
DEPUTY DIRECTOR OF HIGHWAYS
REGION FOUR ENGINEER
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HOMER L. CHASTAIN & ASSOCIATES, LLP
CONSULTING ENGINEERS
DECATUR (217) 422-8544
CHICAGO (773) 714-0050
ROCKFORD (815) 489-0050
184-001397

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 23	*	MACON	22	2
FED. ROAD DIST. NO.		LINKS	PROJECT	

*05-04163-00-BR

SUMMARY OF QUANTITIES

X080-2A

CODE NUMBER	PAY ITEM	UNIT	TOTAL
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	86
20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	48
20200100	EARTH EXCAVATION	CU YD	363
20300100	CHANNEL EXCAVATION	CU YD	3232
20400800	FURNISHED EXCAVATION	CU YD	1089
* 25001000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.6
28100207	STONE RIPRAP, CLASS A4	TON	796
28200200	FILTER FABRIC	SQ YD	1098
35101400	AGGREGATE BASE COURSE, TYPE B	TON	330
48101200	AGGREGATE SHOULDERS, TYPE B	TON	89
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50200100	STRUCTURE EXCAVATION	CU YD	70
50300225	CONCRETE STRUCTURES	CU YD	39.9
50400405	PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH)	SQ FT	3600
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	3710
50900205	STEEL RAILING, TYPE S1	FOOT	300
51201105	FURNISHING METAL SHELL PILES, 14"	FOOT	585
51202305	DRIVING PILES	FOOT	585
51203200	TEST PILE METAL SHELL	EACH	2
51500100	NAME PLATES	EACH	1
59300100	CONTROLLED LOW-STRENGTH MATERIAL	CU YD	48
Δ 63100075	TRAFFIC BARRIER TERMINAL, TYPE 5A	EACH	2
66500105	WOVEN WIRE FENCE, 4'	FOOT	409
66502300	WOVEN WIRE FENCE REMOVAL	FOOT	408
* 67100100	MOBILIZATION	L SUM	1
* 70101830	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21	L SUM	1
72000100	SIGN PANEL - TYPE 1	SQ FT	10
72500100	OBJECT MARKER - TYPE 1	EACH	2
72900100	METAL POSTS - TYPE A	FOOT	44
Δ * 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4

Revised 9-2-08

Δ Specialty Items

GENERAL NOTES

1. The Engineer shall not guarantee the work of any Contractor or Subcontractor, shall have no supervision of the persons doing the work, shall have no charge of the work, shall not be responsible for safety in, on, or about the job site or have any control of the safety or adequacy of any equipment, building component, scaffolding, support, forms or other work aids. In addition, the Standard Specifications for Road and Bridge Construction shall be modified as follows:

Under Section 105, add the following sentence: Nothing contained herein shall relieve the Contractor of his/her duties to observe and comply with all applicable laws, nor shall the Engineer be responsible for the Contractor's compliance with such laws.

Under Article 107.01, add the following sentence: The Engineer shall not be responsible for the Contractor's duty to observe and comply with the provisions of this article, or for the Contractor's failure to do so.

2. All elevations are based on U.S.G.S. Mean Sea Level datum. The proposed grade elevations shown on the plan and profile sheets and station cross sections are the elevations for the finished surface at the locations indicated.

3. The following rates were used in calculating quantities for this project:

Aggregate Base Course/Aggregate Shoulders: 2.05 Tons/ CU YD
Riprap: 1.5 Tons/ CU YD

4. Proposed profile grade is shown at the top of the aggregate base course.

5. Woven wire fence that is not to be salvaged and stockpiled shall become the property of the Contractor and shall be removed and disposed of according to the requirements of Article 202.03. Fence removal and disposal shall be paid for at the contract unit price per foot as Woven Wire Fence Removal.

EARTHWORK SCHEDULE

LOCATION	1	2	3	4
	20200100 EARTH EXCAVATION (CU YD)	*EXCAVATION TO BE USED IN EMBANKMENT (ADJUSTED FOR SHRINKAGE) (COL 1 X 0.75) (CU YD)	*EMBANKMENT (FILL) (CU YD)	20400800 FURNISHED EXCAVATION (COL 2 - COL 3) (CU YD)
6+50.00 TO 11+60.00	363	272	1361	1089
EARTH EXCAVATION SHRINKAGE FACTOR = 25%				
ITEMS MARKED WITH AN ASTERISK (*) ARE FOR INFORMATIONAL PURPOSES ONLY				

GENERAL NOTES AND QUANTITIES

REVISIONS		SECTION 05-04163-00-BR	TR 23 OVER FRIENDS CREEK	DRAWN BY DATE
No.	DATE	INITIALS	MACON COUNTY	D.L.B. 07/06
1				CHECKED BY DATE
2				GLF 07/06
3				BOOK NUMBER
4				314
5				PROJECT No.
6				5129
7				SHEET No.
8				
9				
10				

HOMER L. CHASTAIN & ASSOCIATES, LLP
CONSULTING ENGINEERS
184-001977

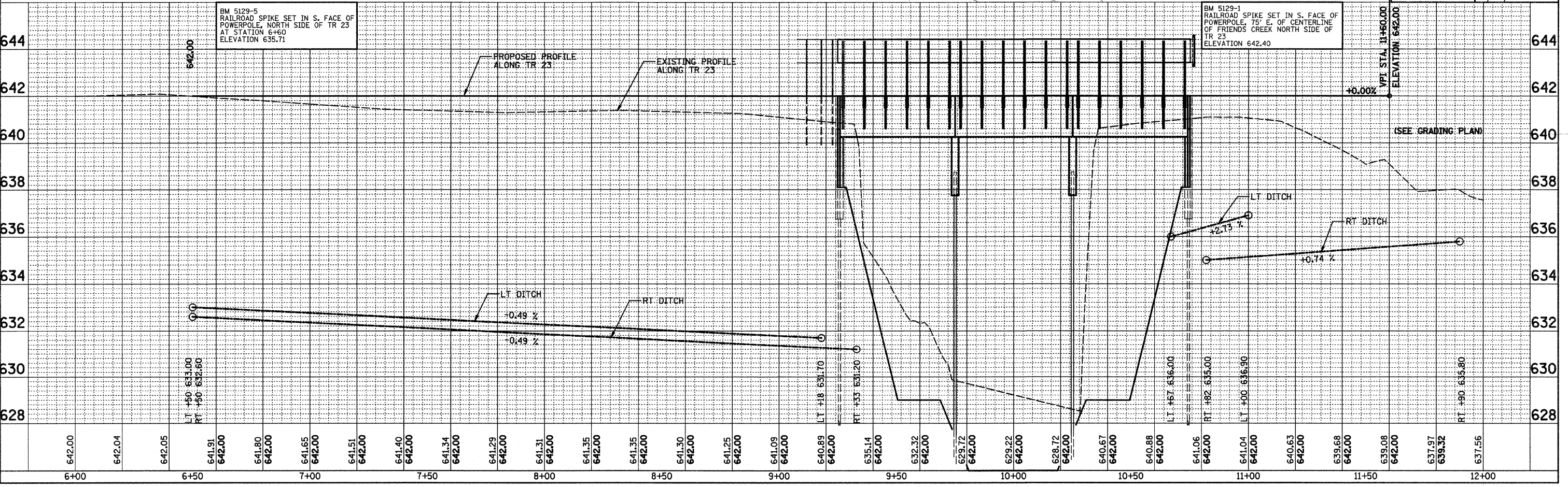
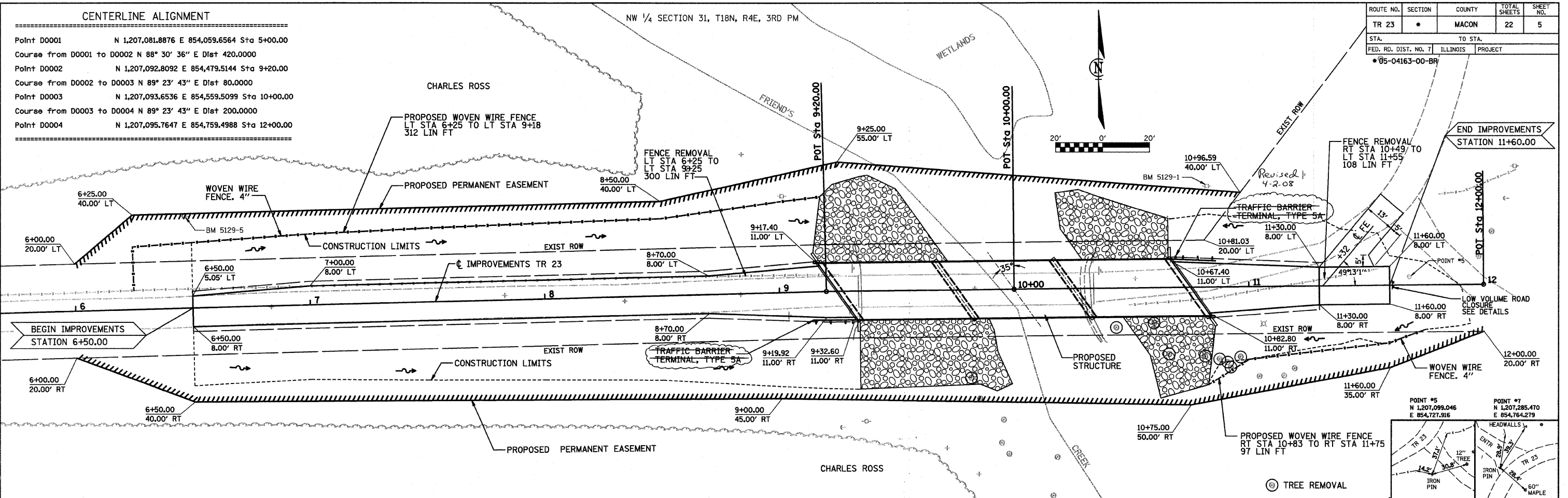
DECATUR CHICAGO
(217) 422-8544 (773) 714-0050
ROCKFORD
(815) 489-0050

CENTERLINE ALIGNMENT

Point D0001 N 1,207,081.8876 E 854,059.6564 Sta 5+00.00
 Course from D0001 to D0002 N 88° 30' 36" E Dist 420.0000
 Point D0002 N 1,207,092.8092 E 854,479.5144 Sta 9+20.00
 Course from D0002 to D0003 N 89° 23' 43" E Dist 80.0000
 Point D0003 N 1,207,093.6536 E 854,559.5099 Sta 10+00.00
 Course from D0003 to D0004 N 89° 23' 43" E Dist 200.0000
 Point D0004 N 1,207,095.7647 E 854,759.4988 Sta 12+00.00

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 23	*	MACON	22	5

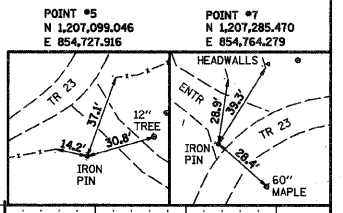
STA.	TO STA.
FED. RD. DIST. NO. 7	ILLINOIS PROJECT
*05-04163-00-BR	



DATE: _____
 BY: _____
 PLAN
 SURVEYED _____
 NOTED _____
 NO. _____

CHASTAIN & ASSOCIATES, L.P.
 REGISTERED PROFESSIONAL ENGINEERS
 CHICAGO, ILLINOIS 60611
 PHONE: (773) 754-9900
 FAX: (773) 754-9900

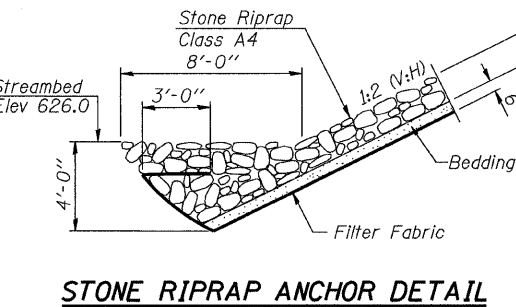
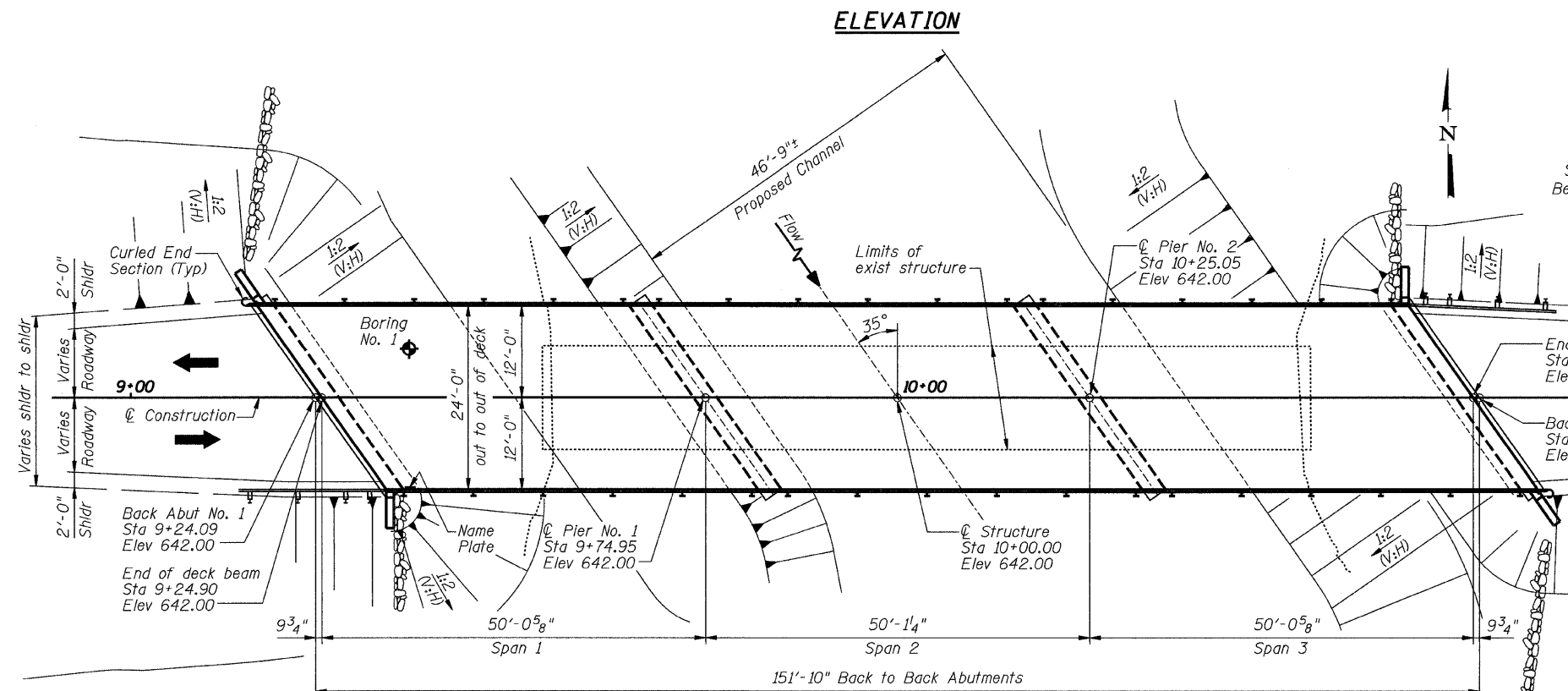
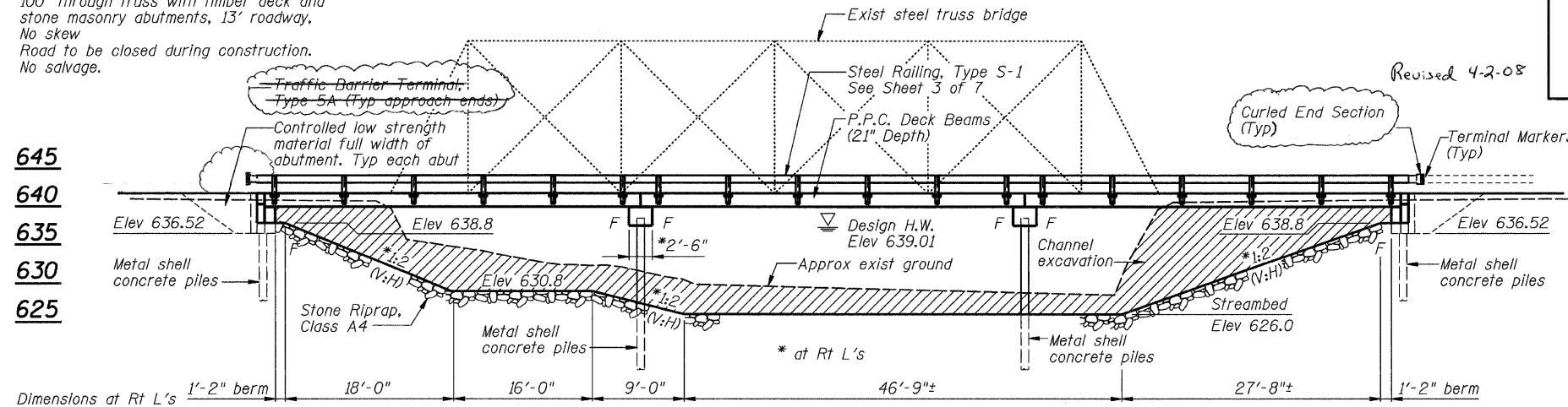
DATE: _____
 BY: _____
 PROFILE
 SURVEYED _____
 NOTED _____
 NO. _____



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 23	*	MACON	22	6
FED. ROAD DIST. NO.		ILLINOIS PROJECT		
*05-04163-00-BR				

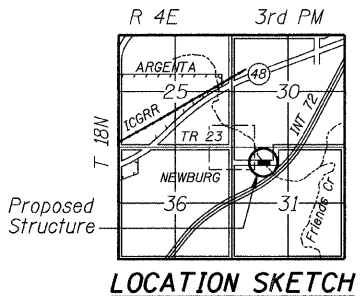
Bench Mark 5129-1:
Railroad spike set in S. face of powerpole, 75' E. of centerline of Friends Creek north side of TR 23 Elev 642.40

Existing Structure:
100' through truss with timber deck and stone masonry abutments, 13' roadway. No skew. Road to be closed during construction. No salvage.



WATERWAY INFORMATION
Drainage Area = 114.1 sq mi Low Grade Elev. 642.00 - @ Sta. 10+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.		Head - Ft.		Headwater El.	
			Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	Exist.	Prop.
Design	30	5730	945	1054	639.01	0.13	0.05	639.14	639.06	
Base	100	7699	990	1165	640.01	0.37	0.13	640.38	640.14	
Max. Calc.	500	10083	990	1194	640.92	0.86	0.42	641.78	641.34	



**FRIENDS CREEK
BUILT 20 BY
FRIENDS CREEK ROAD DISTRICT
MACON COUNTY
SECTION 05-04163-00-BR
STA 10+00.00
STR. NO. 058-3383 LOADING HS20**

NAME PLATE
See Std. 515001

LOADING HS20
Allow 50 lb/sq. ft. for future wearing surface.

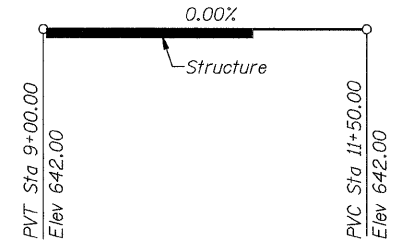
DESIGN SPECIFICATIONS
2002 AASHTO 17th Edition

DESIGN STRESSES
FIELD UNITS
f'c = 3,500 psi
fy = 60,000 psi (reinforcement)

PRECAST PRESTRESSED UNITS
f'c = 6,000 psi
f'ci = 5,000 psi
f's = 270,000 psi (1/2" φ low-relaxation strands)
f'si = 202,000 psi (1/2" φ low-relaxation strands)

SEISMIC DATA
Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = .048
Site Coefficient (S) = 1.5

GENERAL NOTES:
For Soil Boring Data see Special Provisions.
Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). See BDE Special Provisions.
Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
The top surface of the beams shall be finished according to Article 504.06 of the Standard Specifications except that the surface shall not be roughened by brooming. The finished surface shall be free of depressions or high spots with sharp corners, and the top edge of keys shall be rounded or chamfered a minimum of 1/4".
The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at substructures specified or approved by the Engineer before ordering the remainder of piles.
All Construction joints shall be bonded.
See Roadway Plans for channel excavation limits and quantities.
See Roadway Plans for additional riprap limits and quantities.



TOTAL BILL OF MATERIAL

Item	Unit	Quantity
Removal of Existing Structures	Each	1
Structure Excavation	Cu Yd	70
Concrete Structures	Cu Yd	39.9
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq Ft	3600
Reinforcement Bars, Epoxy Coated	Pound	3710
Steel Railing, Type S-1	Foot	300
Furnishing Metal Pile Shells 14"	Foot	585
Driving Piles	Foot	585
Test Pile Metal Shells	Each	2
Name Plates	Each	1
Terminal Marker - Direct Applied	Each	4
Controlled Low-Strength Material	Cu Yd	48

Thomas E. Szokor
Professional Engineer
CHICAGO STRUCTURAL ENGINEERS
4941
DATE: 2/20/08
EXP 11/30/08

GENERAL PLAN AND ELEVATION

SECTION 05-04163-00-BR		FRIENDS CREEK ROAD DISTRICT		DRAWN BY	DATE
MACON		SN 058-3383		R KING	11/07
		COUNTY		CHECKED BY	DATE
				JMG	11/07
				BOOK NUMBER	
				314	
				PROJECT NO.	
				5129	
				SHEET NO.	