

91300

**INDEX OF SHEETS**

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6	ABUTMENT DETAILS
7	PIER DETAILS
8	STEEL RAILING
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11a	EROSION CONTROL PLAN

**STANDARDS**

STD. NO.	DESCRIPTION
280001-02	TEMPORARY EROSION CONTROL SYSTEMS
515001-02	NAME PLATE FOR BRIDGES
630301-03	SHOULDER WIDENING FOR TY I (SPECIAL) GUARDRAIL TERMINALS
631026-02	TRAFFIC BARRIER TERMINAL TYPE 5 & 5A
702001-05	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
BLR 21-6	TRAFFIC CONTROL
BLR 22-4	TRAFFIC CONTROL
BLR 23-1	TRAFFIC BARRIER TERMINAL TYPE I

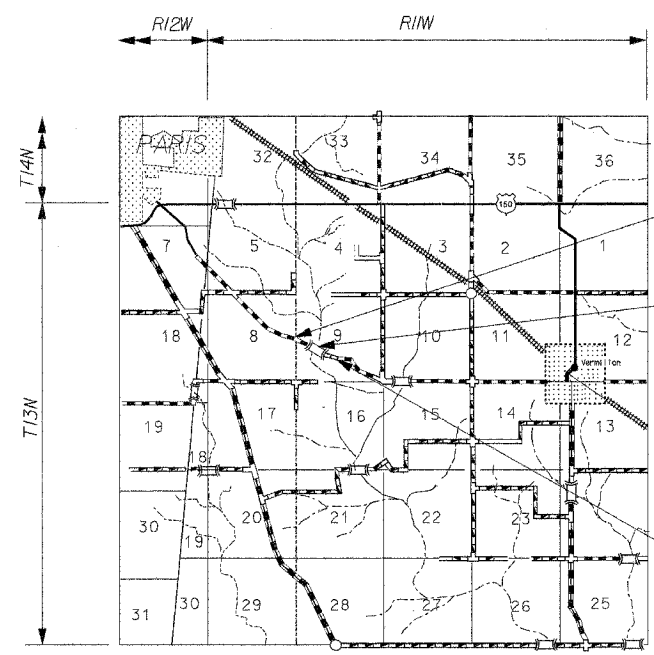
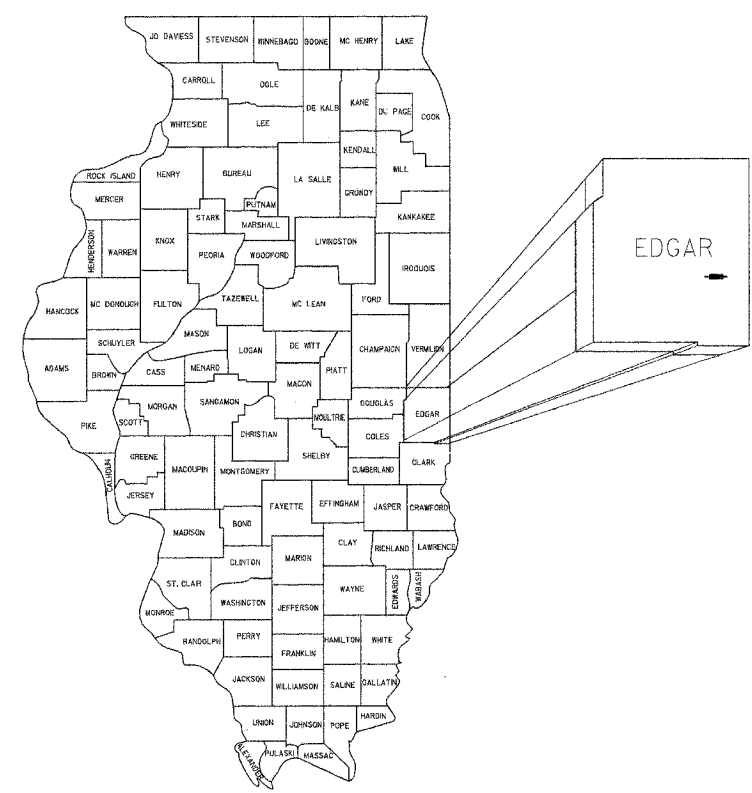
**STATE OF ILLINOIS  
PLANS FOR THE  
PROPOSED BRIDGE REPLACEMENT  
AND REHABILITATION PROGRAM**

PROJECT NO. BROS-045(39)  
JOB NO. C-95-104-03

**SULPHUR SPRINGS ROAD  
OVER SUGAR CREEK  
SECTION 98-13116-00-BR  
STRATTON TOWNSHIP  
EDGAR COUNTY**

**SUMMARY OF QUANTITIES**

CODE NO.	ITEMS	UNIT	QUANTITY
20100110	TREE REMOVAL (6-15 UNITS DIA)	UNITS	230
20100210	TREE REMOVAL (OVER 15 UNITS DIA)	UNITS	98
20200100	EARTH EXCAVATION	CU.YD.	48
20300100	CHANNEL EXCAVATION	CU.YD.	1308
20400800	FURNISHED EXCAVATION	CU.YD.	813
20700110	POROUS GRANULAR EMBANKMENT	TON.	279
25001000	SEEDING CLASS 2 (SPECIAL)	ACRE	0.7
28000300	TEMPORARY DITCH CHECKS	EACH	4
28000400	PERIMETER EROSION BARRIER	FOOT	871
28100209	STONE RIPRAP, CLASS A-5	TON.	1900
35101400	AGGREGATE SURFACE COURSE, TYPE B	TON	552
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50200100	STRUCTURE EXCAVATION	CU.YD.	84.3
50300225	CONCRETE STRUCTURES	CU.YD.	40.1
50400405	PRECAST PRESTRESSED CONC. DECK BEAMS, 2" (DEPTH)	SQ. FT.	3015
50800105	REINFORCEMENT BARS	POUND	3970
50900205	STEEL RAILING, TYPE SI	FOOT	224
51201500	FURNISHING STEEL PILES, HP 10X57	FOOT	548
51202700	DRIVING STEEL PILES	FOOT	548
51203500	TEST PILE STEEL, HP 10X57	EACH	2
51204315	CONCRETE ENCASEMENT	CU.YD.	15.4
51500100	NAME PLATES	EACH	1
63100075	TRAFFIC BARRIER TERMINAL, TYPE 5A	EACH	4
63100167	TRAFFIC BARRIER TERMINAL, TYPE I, (SPECIAL) TANGENT	EACH	4
67000520	ENGINEERS FIELD OFFICE, TYPE B	CAL MO	4
78201000	TERMINAL MARKER DIRECT APPLIED	EACH	4



SECTION 98-13116-00-BR  
ENDS STATION 7+00

PROPOSED STRUCTURE: 023-5213  
TRIPLE SPAN 2" PRECAST PRESTRESSED  
DECK BEAM BRIDGE ON SPILL-THRU  
ABUTMENTS. SPAN LENGTHS:  
28'-4", 50'-0", 28'-4", SKEWED 0°

SECTION 98-13116-00-BR  
BEGINS STATION 0+00

**LOCATION MAP**

SCALE 1 INCH = 1 MILE

NET LENGTH OF SECTION = 600 FEET (0.114 MILES)  
FUNCTIONAL CLASSIFICATION: LOCAL ROAD > 400

**UTILITY COMPANIES**

\*\* VERIZON, INC.  
212 EAST GROVE  
RANTOUL, ILLINOIS 61866

\*\* ENERSTAR POWER  
11597 IL HWY 1  
PARIS, ILLINOIS 61944

CLARK-EDGAR RURAL WATER DEPARTMENT.  
C/O FRANCIS & ASSOCIATES  
330 N. CENTRAL AVENUE  
PARIS, ILLINOIS 61944

\*\* BELONGS TO JULLIE.

TOLL FREE JOINT UTILITY  
LOCATING INFORMATION  
FOR EXCAVATORS (JULLIE)  
TELEPHONE 1-800-892-0123

I hereby certify that these plans were prepared by me or under my direct personal supervision and that I am a duly licensed structural and professional engineer under the laws of the State of Illinois.

*Robert L. McClintock* DATE 2-01-05

Robert L. McClintock  
P.E. LICENSE EXP. 11-30-2005 P.E. # 24158  
S.E. LICENSE EXP. 11-30-2006 S.E. # 3137

**CONTRACT # 91300**



EDGAR COUNTY HIGHWAY DEPT.  
APPROVED: *[Signature]* 2/1/05  
COUNTY ENGINEER

APPROVED: *[Signature]*  
ROAD DISTRICT COMMISSIONER

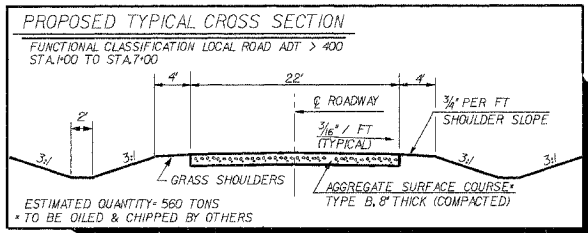
PASSED: 2/1/05  
*[Signature]*  
DISTRICT ENGINEER OF LOCAL ROADS & STREETS

APPROVED: Feb 8 2005  
*[Signature]*  
REGISTERED ENGINEER

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

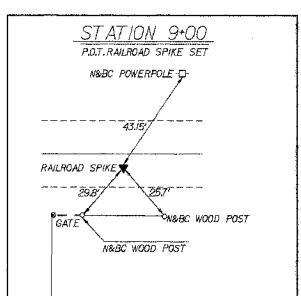
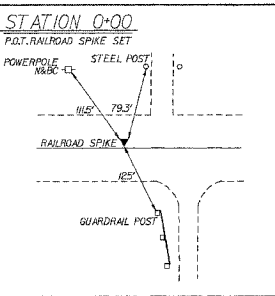
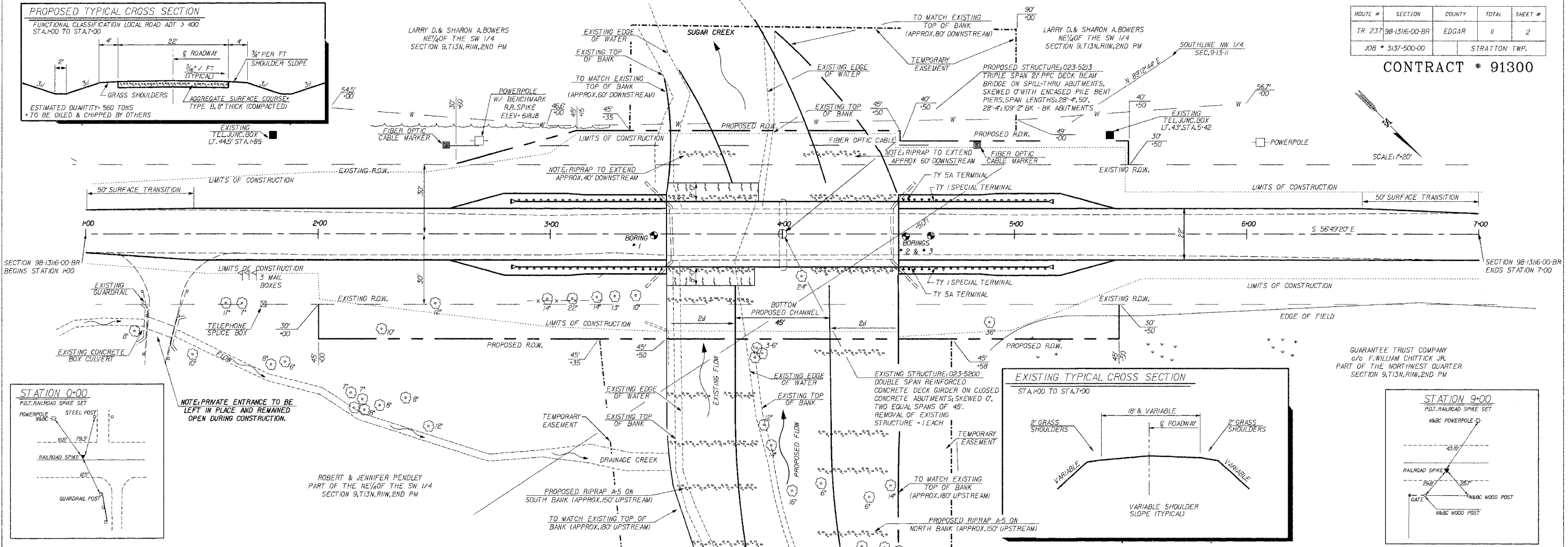
McCLINTOCK  
CIVIL ENGINEERING SERVICE  
404 SHAW AVENUE, PARIS, IL 61944  
PHONE (217) 466-6110

DRN TLC DATE 06/03/03 SHEET 1 OF 11  
CK. SCALE JOB NO. 3137-500-00  
APPR.



ROUTE #	SECTION	COUNTY	TOTAL	SHEET #
TR 237	98-1316-00-BR	EDGAR	11	2
JOB # 3137-500-00		STRATFON TWP.		

CONTRACT # 91300



**ROADWAY EXCAVATION**  
 EARTH EXCAVATION = 48 CY  
 ROADWAY EMBANKMENT = 752 X 125 = 940 CY  
 (SHRINKAGE FACTOR 125)  
 FURNISHED EXCAVATION = 892 CY

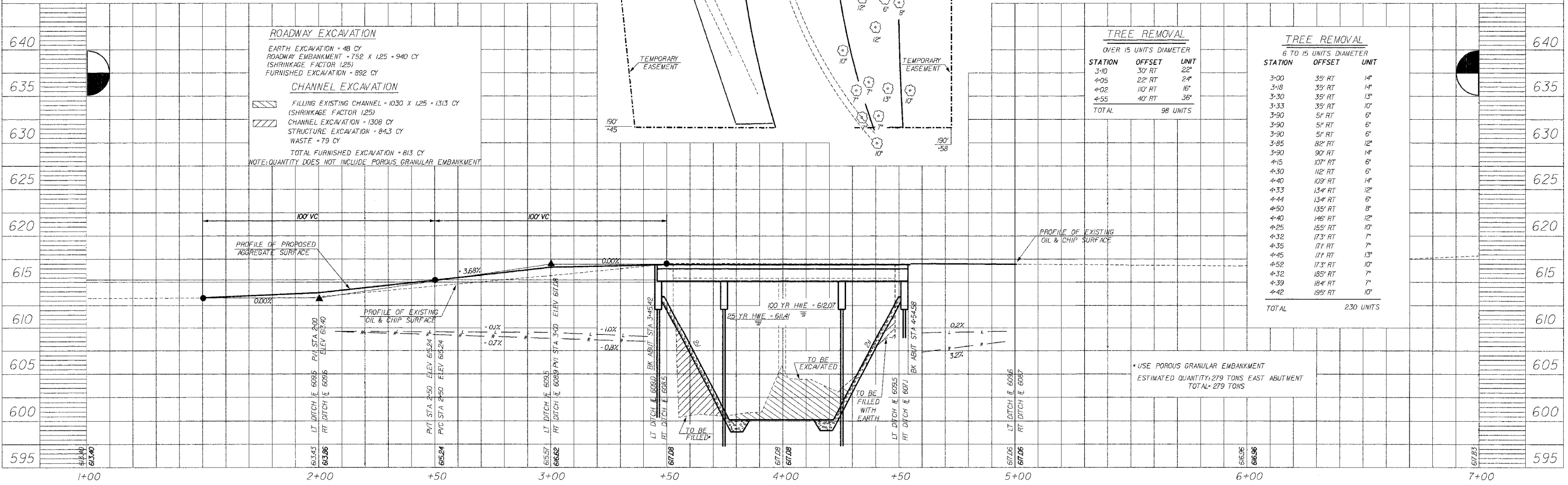
**CHANNEL EXCAVATION**  
 FILLING EXISTING CHANNEL = 1030 X 125 = 1313 CY  
 (SHRINKAGE FACTOR 125)  
 CHANNEL EXCAVATION = 1308 CY  
 STRUCTURE EXCAVATION = 843 CY  
 WASTE = 79 CY  
 TOTAL FURNISHED EXCAVATION = 813 CY  
 NOTE: QUANTITY DOES NOT INCLUDE POROUS GRANULAR EMBANKMENT

**TREE REMOVAL**  
 OVER 15 UNITS DIAMETER

STATION	OFFSET	UNIT
3+10	30' RT	22'
4+05	22' RT	24'
4+02	10' RT	16'
4+55	40' RT	38'
TOTAL		98 UNITS

**TREE REMOVAL**  
 6 TO 15 UNITS DIAMETER

STATION	OFFSET	UNIT
3+00	35' RT	14'
3+18	35' RT	14'
3+30	35' RT	13'
3+33	35' RT	10'
3+90	5' RT	6'
3+90	5' RT	6'
3+90	5' RT	6'
3+85	82' RT	12'
3+90	90' RT	14'
4+15	107' RT	6'
4+30	112' RT	6'
4+40	109' RT	14'
4+33	134' RT	12'
4+44	134' RT	6'
4+50	135' RT	8'
4+40	146' RT	12'
4+25	155' RT	10'
4+32	173' RT	7'
4+35	171' RT	7'
4+45	171' RT	13'
4+52	173' RT	10'
4+32	185' RT	7'
4+39	184' RT	7'
4+42	195' RT	10'
TOTAL		230 UNITS

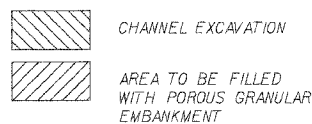
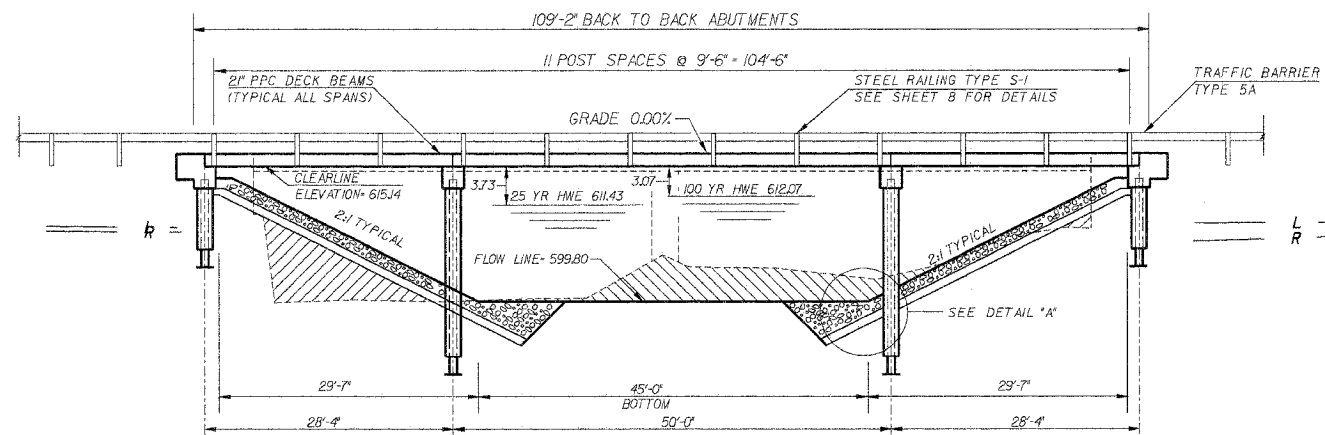


USE POROUS GRANULAR EMBANKMENT  
 ESTIMATED QUANTITY: 279 TONS EAST ABUTMENT  
 TOTAL = 279 TONS

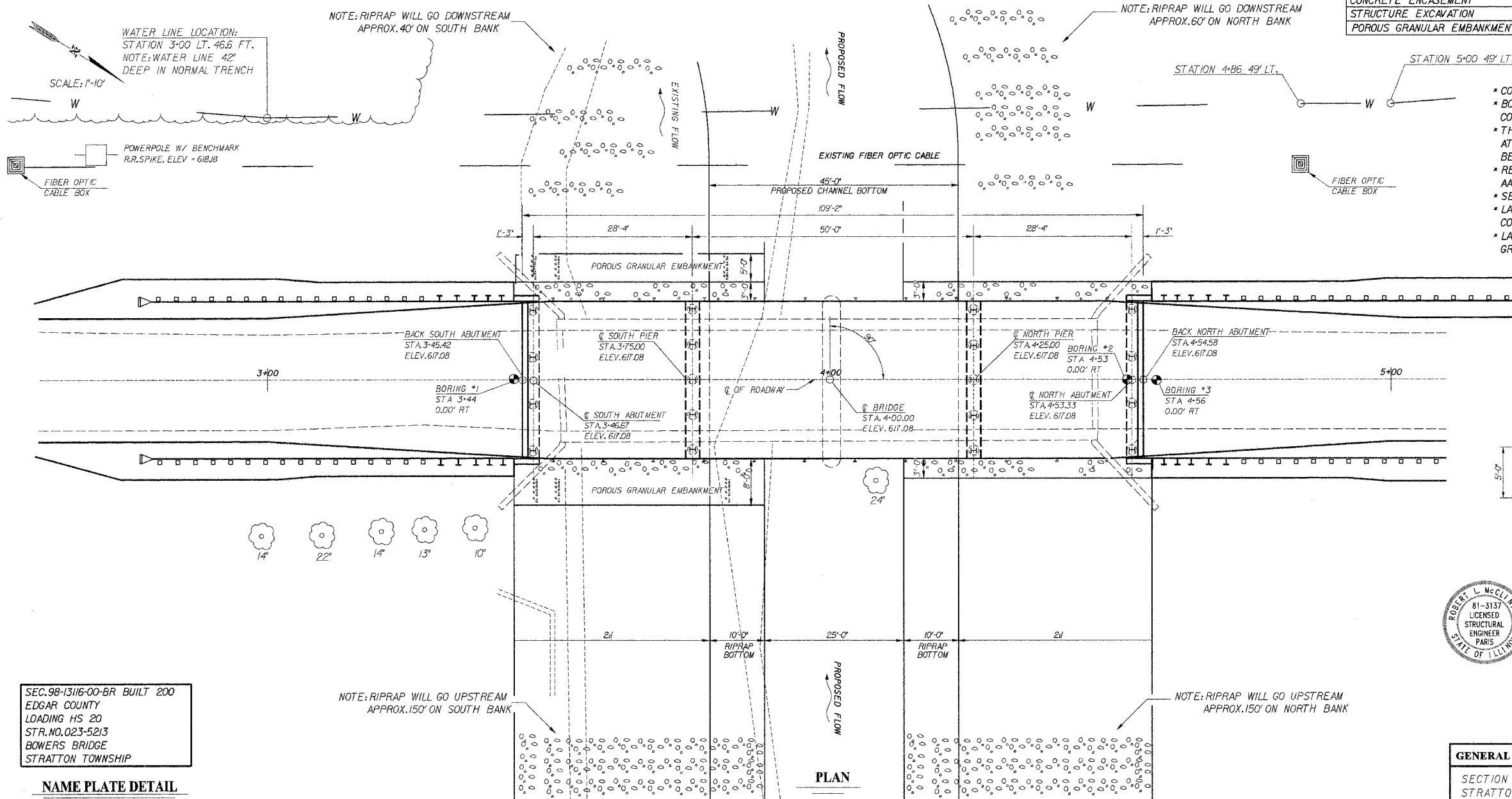
**DESIGN STRESSES**

$f'_c = 5,000$	P.S.I. (PRESTRESSED BEAMS)
$f'_{cl} = 4,300$	P.S.I. (PRESTRESSED BEAM END SPANS)
$f'_{cl} = 4,700$	P.S.I. (PRESTRESSED BEAMS)
$f'_c = 3,500$	P.S.I. (CONCRETE STRUCTURES)
$f'_s = 270,000$	P.S.I. (PRESTRESSED STRANDS)
$f'_{sl} = 189,000$	P.S.I. (PRESTRESSED STRANDS)
$f'_y = 60,000$	P.S.I. (REINFORCEMENT BARS)

LOADING HS 20-44 DESIGN SPECS. 1996 AASHTO AND 1997 THROUGH 2002 INTERIMS



**ELEVATION**



**WATERWAY INFORMATION**

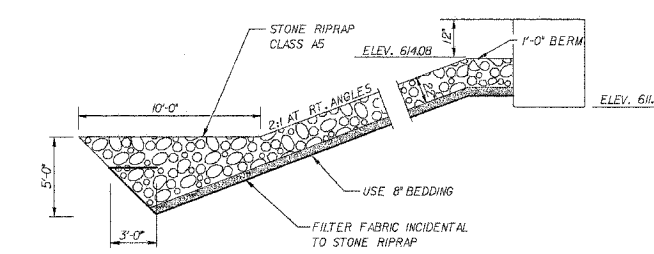
DRAINAGE AREA = 32.01 MI.		LOW GRADE ELEV. 613.40 AT STATION 1+00					
FLOOD	FREQ. YR.	0 C.F.S.	OPENING SQ. FT.	NAT. H.W.E.	HEAD - FOOT	HEADWATER EL.	
		EXISTING	PROP	EXISTING	EXIST.	PROP.	PROP.
DESIGN	25	2884	751	758	611.43	0.53	611.96
BASE	100	3782	811	855	612.08	0.77	612.86

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH)	SQ. FT.	3015		3015
CONCRETE STRUCTURES	CU. YD.		40J	40J
REINFORCEMENT BARS	POUND		3970	3970
STEEL RAILING, TYPE S-1	FOOT	224		224
NAME PLATES	EACH		1	1
FURNISHING STEEL PILES, HP 10x57	FOOT		548	548
TEST PILE STEEL, HP 10x57	EACH		2	2
DRIVING STEEL PILES	FOOT		548	548
STONE RIPRAP, CLASS A-5	TON		1900	1900
CHANNEL EXCAVATION	CU. YD.		1308	1308
CONCRETE ENCASUREMENT	CU. YD.		15.4	15.4
STRUCTURE EXCAVATION	CU. YD.		84.3	84.3
POROUS GRANULAR EMBANKMENT	TON		279	279

**GENERAL NOTES**

- CONCRETE STRUCTURES SHALL BE USED IN THE ABUTMENTS AND PIERS.
- BORING DATA IS SHOWN ONLY AS A GUIDE TO BIDDERS IN ESTIMATING SOIL CONDITIONS WHICH MAY BE ENCOUNTERED DURING CONSTRUCTION.
- THE CONTRACTOR SHALL DRIVE ONE TEST PILE IN A PERMANENT LOCATION AT THE NORTH ABUTMENT AND PIER AS DIRECTED BY THE ENGINEER BEFORE ORDERING THE REMAINDER OF THE PILES.
- REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M31, M42 OR M53 GRADE 60.
- SEE SPECIAL PROVISION FOR POROUS GRANULAR MATERIAL.
- LAYOUT OF RIPRAP MAY BE VARIED IN THE FIELD TO SUIT GROUND CONDITIONS AS DIRECTED BY THE ENGINEER.
- LAYOUT OF THE SLOPE PROTECTION SYSTEM MAY BE VARIED TO SUIT GROUND CONDITIONS IN THE FIELD, AS DIRECTED BY THE ENGINEER.



**DETAIL "A"**



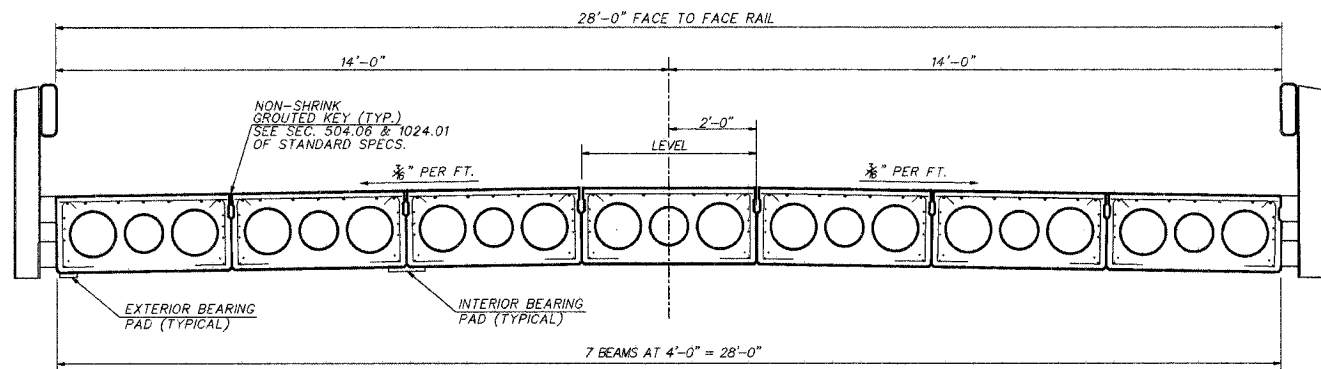
I certify that to the best of my knowledge, information, and belief, this bridge design is structurally adequate for the design loading shown on the plan. The design is an economical one for the style of structure and complies with requirements of the current A.A.S.H.T.O. Standard Specifications for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

*Robert L. McClintock* Date: 2-01-05  
 Robert L. McClintock, IL S.E. #3137  
 LICENSE EXPIRES 11-30-06

SEC. 98-13116-00-BR BUILT 200  
 EDGAR COUNTY  
 LOADING HS 20  
 STR. NO. 023-5213  
 BOWERS BRIDGE  
 STRATTON TOWNSHIP

**NAME PLATE DETAIL**  
 SEE STANDARD 515001

<b>GENERAL PLAN AND ELEVATION</b>		<b>McCLINTOCK</b> CIVIL ENGINEERING SERVICE 404 SHAW AVENUE, PARIS, IL 61944 PHONE (217) 466-6110	
SECTION 98-13116-00-BR STRATTON TOWNSHIP EDGAR COUNTY	DRN TLC GK, RLMO APPR.	DATE 1/13/05 SCALE 1/10	SHEET 3 OF 11 JOB NO. 3137-500-00

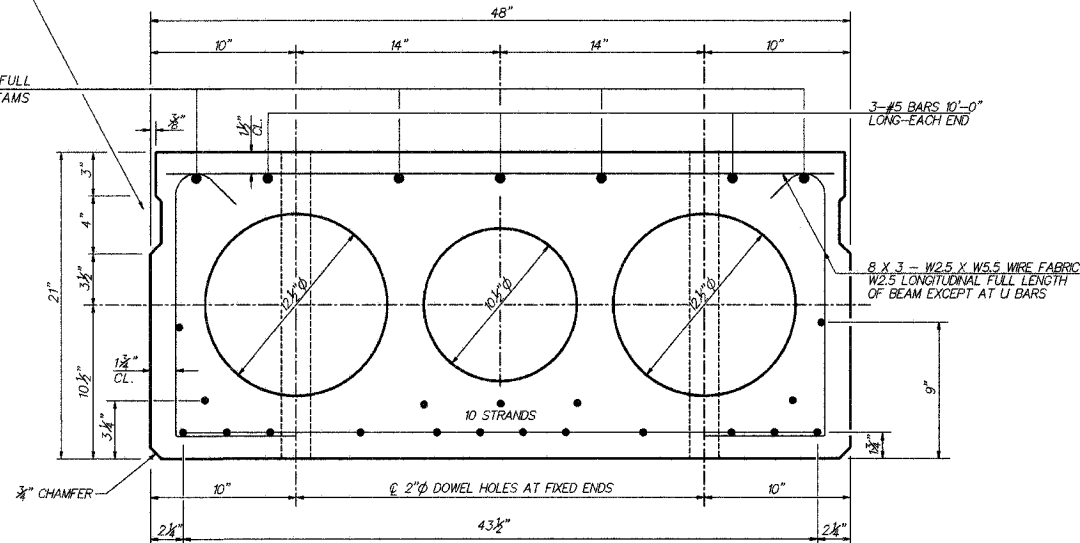


CROSS SECTION

OMIT KEY ON OUTSIDE FACE OF EXTERIOR BEAMS.

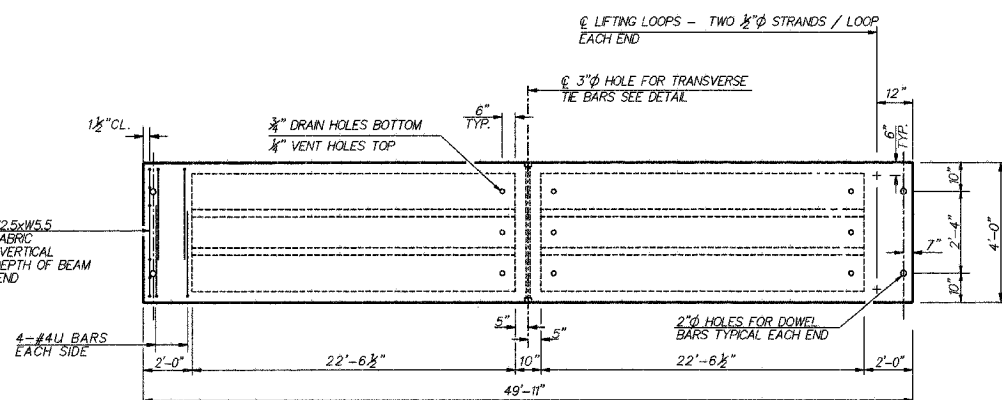
SEE SHEET 5 FOR COMPLETE RAIL DETAILS

4-#9D BARS FULL LENGTH OF BEAMS

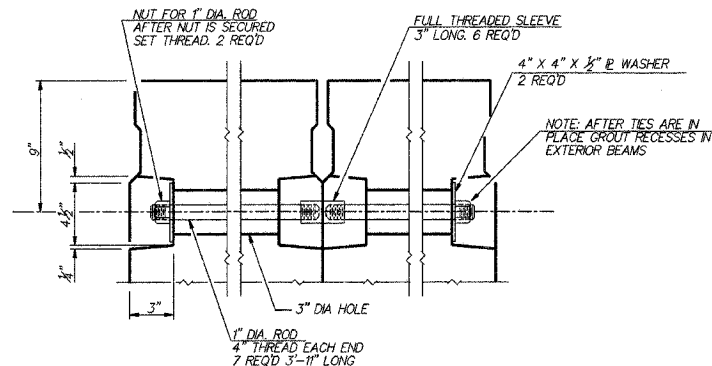


TYPICAL SECTION

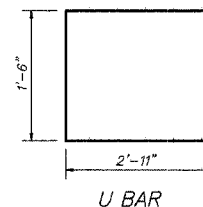
19 - 7 WIRE 1/2" STRANDS STRESSED TO 28,900 POUNDS 12 1/8" UP., 5 3/4" UP.  
2, 9" UP., USE STANDARD GRID PATTERN



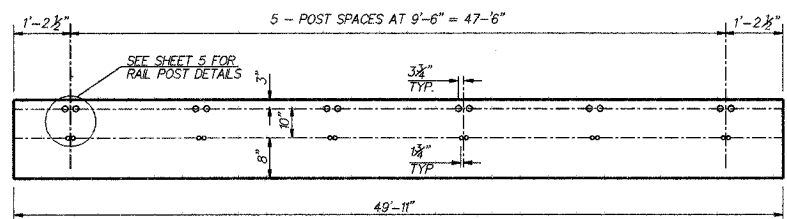
TYPICAL PLAN OF BEAMS



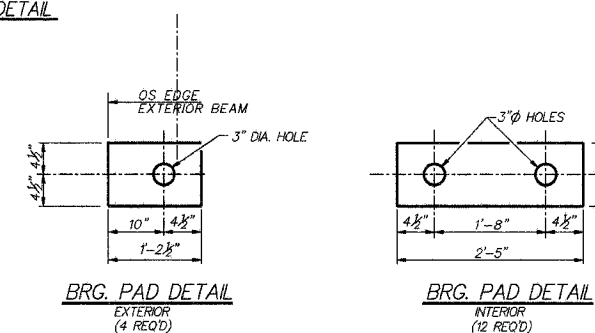
TRANSVERSE TIE BAR DETAIL



U BAR

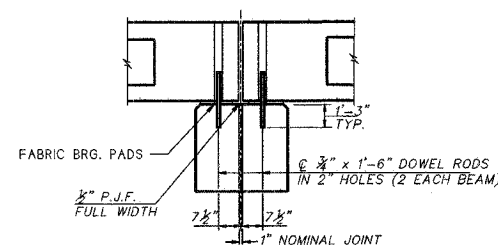


ELEVATION OF OUTSIDE BEAMS  
SHOWING RAIL POST SPACING

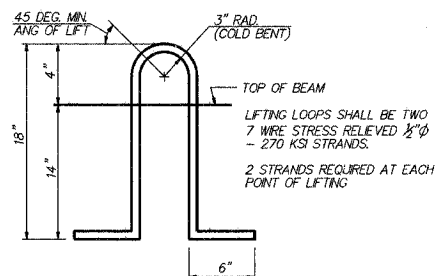


BRG. PAD DETAIL  
EXTERIOR  
(4 REQ'D)

BRG. PAD DETAIL  
INTERIOR  
(12 REQ'D)



SECTION AT PIERS  
ALONG & BEAMS



LIFTING LOOP DETAIL  
APPROVED ALTERNATE MAY BE  
SUBSTITUTED FOR ABOVE

PRESTRESSING STEEL SHALL BE NON-GALVANIZED HIGH STRENGTH, STRESS-RELIEVED 7-WIRE STRAND, GRADE 270.

THE NOMINAL DIAMETER SHALL BE 1/2" AND THE NOMINAL CROSS-SECTIONAL AREA SHALL BE 0.153 SQ. IN.

LIFTING LOOPS SHALL BE 3/8" DIAMETER, 6x25 CLASS WIRE ROPE WITH FIBER CORE AND SHALL HAVE A MINIMUM ULTIMATE TENSILE STRENGTH OF 33,000 LBS. OR 2-1/2" 270 KSI STRANDS, AS SHOWN.

KEYWAY SURFACES SHALL BE CLEANED TO REMOVE FORM OIL OR OTHER BOND BREAKING MATERIAL PRIOR TO SHIPMENT OF THE BEAMS. CLEANING SHALL BE DONE BY SANDBLASTING THE KEYWAY AREAS BETWEEN TOP OF THE BEAM AND THE BOTTOM EDGE OF THE KEY.

THE 1" DIAM. RODS IN THE TRANSVERSE TIE ASSEMBLY SHALL BE TIGHTENED TO A SNUG FIT AND THE THREADS SET. POCKETS THAT RECEIVE TRANSVERSE TIE ASSEMBLY SHALL BE FILLED WITH GROUT AFTER TRANSVERSE TIE ASSEMBLY IS IN PLACE.

REINFORCEMENT BARS SHALL CONFORM TO AASHTO: M-31, M-42 OR M-53, GRADE 60.

THE BEARING SEAT SURFACES SHALL BE ADJUSTED BY SHIMMING TO ASSURE FIRM AND EVEN BEARING. TWO 1/4" FABRIC ADJUSTING SHIMS OF THE DIMENSIONS OF THE EXTERIOR BEARING PAD SHALL BE PROVIDED FOR EACH BEARING.

AN EQUAL SUBSTITUTION OF THE LOW-RELAXATION STRANDS FOR THE STRESS-RELIEVED STRANDS WILL BE PERMITTED.

A CALCIUM NITRIDE CORROSION INHIBITOR, AS COVERED IN THE SPECIAL PROVISIONS SHALL BE USED IN THE CONCRETE FOR PRECAST PRESTRESSED CONCRETE DECK BEAMS.

THE INITIAL PRESTRESSING FORCE APPLIED TO EACH STRAND SHALL BE THE SAME AS FOR THE STRESS RELIEVED STRANDS (28,900 LBS.)

RAIL POST ANCHOR DEVICES SHALL BE CAST INTO OUTSIDE BEAM AS ELSEWHERE SPECIFIED

REQUIRED RELEASE STRENGTH, f'ci, SHALL BE 4,000 PSI

BILL OF MATERIAL

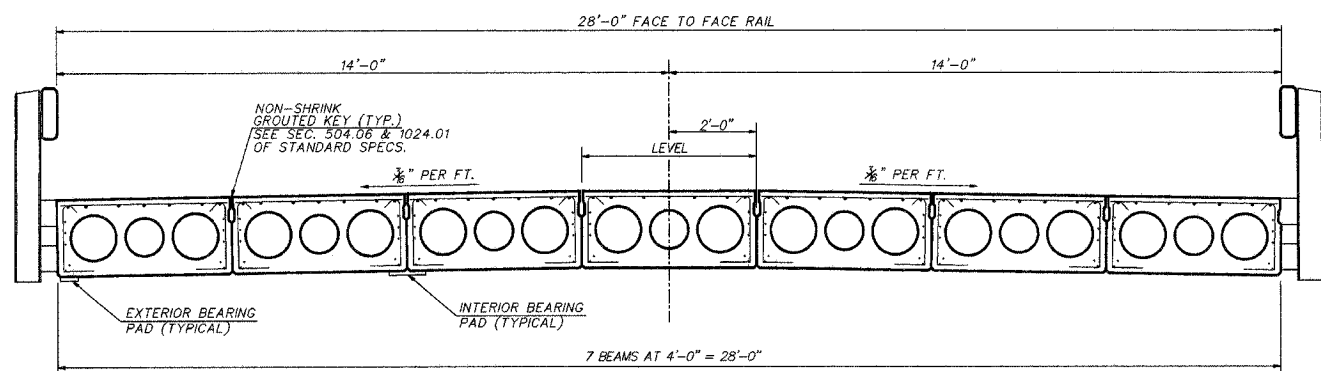
ITEM	UNT	QUANTITY
PRECAST PRESTRESSED CONCRETE		
DECK BEAMS (21" DEPTH)	SQ. FT.	1398

SUPERSTRUCTURE DETAILS  
MIDDLE SPAN  
SECTION 99-13116-00-BR  
STRATTON TOWNSHIP  
EDGAR COUNTY

McCLINTOCK  
CIVIL ENGINEERING SERVICE  
404 SHAW AVE. PARSIPpany, NJ 07654  
PHONE (201) 466-0110

DRN TLC  
CK RLMc  
DATE 4/22/03  
SCALE

SHEET 4 OF 11  
JOB NO. 3137-500-00

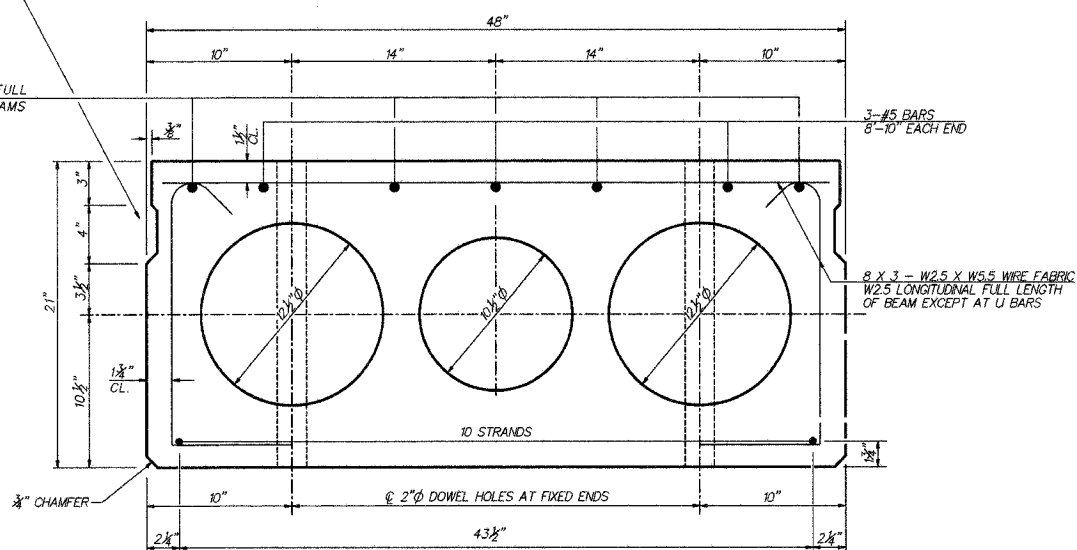


CROSS SECTION

OMIT KEY ON OUTSIDE FACE OF EXTERIOR BEAMS.

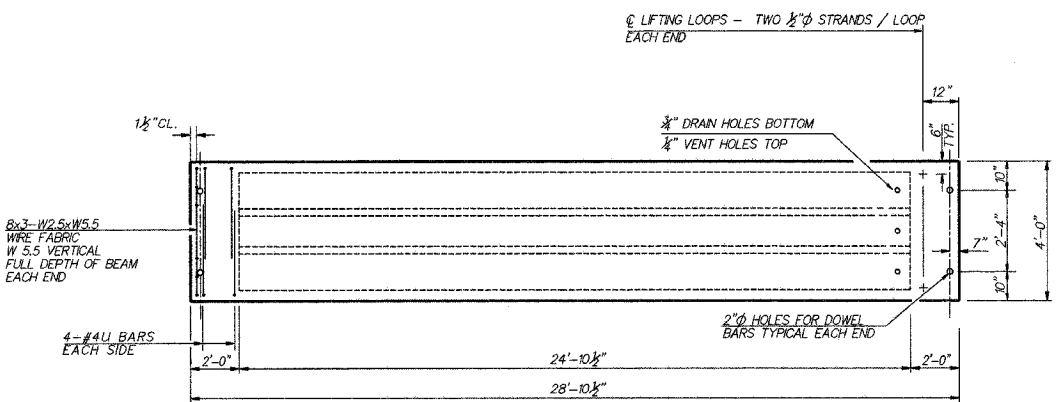
SEE SHEET 5 FOR COMPLETE RAIL DETAILS

4-#5D BARS FULL LENGTH OF BEAMS

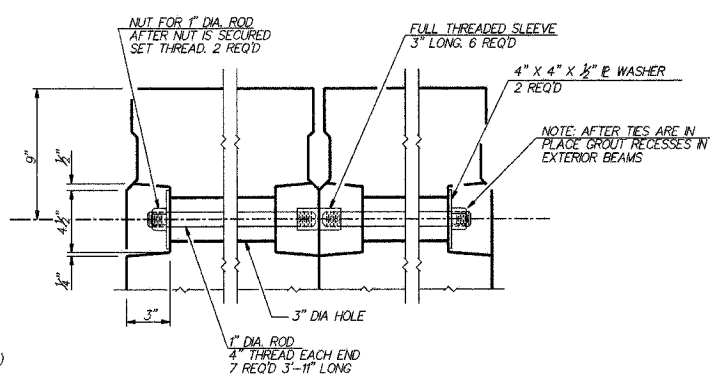


TYPICAL SECTION

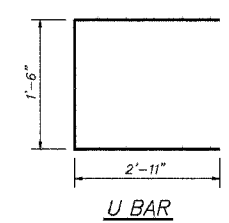
13 - 7 WIRE 1/2" STRANDS STRESSED TO 28,900 POUNDS 1 1/2" UP. USE STANDARD GRID PATTERN



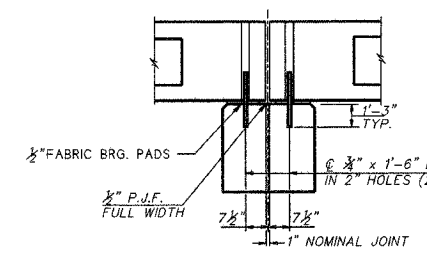
TYPICAL PLAN OF BEAMS



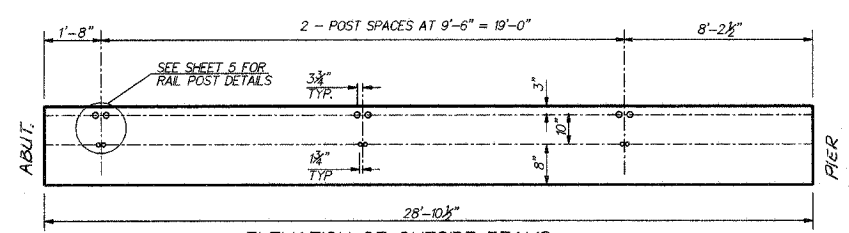
TRANSVERSE TIE BAR DETAIL



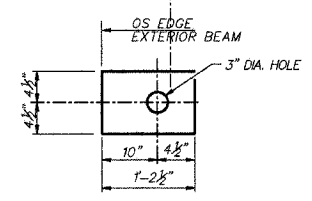
U BAR



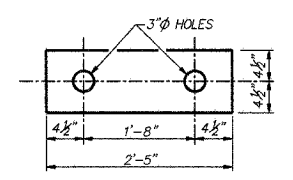
SECTION AT PIERS ALONG Q BEAMS



ELEVATION OF OUTSIDE BEAMS SHOWING RAIL POST SPACING



BRG. PAD DETAIL EXTERIOR (8 REQ'D)



BRG. PAD DETAIL INTERIOR (24 REQ'D)

PRESTRESSING STEEL SHALL BE NON-GALVANIZED HIGH STRENGTH, STRESS-RELIEVED 7-WIRE STRAND, GRADE 270.

THE NOMINAL DIAMETER SHALL BE 1/2" AND THE NOMINAL CROSS-SECTIONAL AREA SHALL BE 0.153 SQ. IN.

LIFTING LOOPS SHALL BE 3/8" DIAMETER, 6x25 CLASS WIRE ROPE WITH FIBER CORE AND SHALL HAVE A MINIMUM ULTIMATE TENSILE STRENGTH OF 33,000 LBS, OR 2-1/2" - 270 KSI STRANDS, AS SHOWN.

KEYWAY SURFACES SHALL BE CLEANED TO REMOVE FORM OIL OR OTHER BOND BREAKING MATERIAL PRIOR TO SHIPMENT OF THE BEAMS. CLEANING SHALL BE DONE BY SANDBLASTING THE KEYWAY AREAS BETWEEN TOP OF THE BEAM AND THE BOTTOM EDGE OF THE KEY.

THE 1" RODS IN THE TRANSVERSE TIE ASSEMBLY SHALL BE TIGHTENED TO A SNUG FIT AND THE THREADS SET. POCKETS THAT RECEIVE TRANSVERSE TIE ASSEMBLY SHALL BE FILLED WITH GROUT AFTER TRANSVERSE TIE ASSEMBLY IS IN PLACE.

REINFORCEMENT BARS SHALL CONFORM TO AASHTO: M-31, M-42 OR M-53, GRADE 60.

THE BEARING SEAT SURFACES SHALL BE ADJUSTED BY SHIMMING TO ASSURE FIRM AND EVEN BEARING. TWO 1/2" FABRIC ADJUSTING SHIMS OF THE DIMENSIONS OF THE EXTERIOR BEARING PAD SHALL BE PROVIDED FOR EACH BEARING.

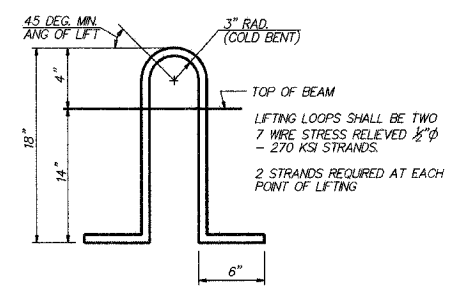
AN EQUAL SUBSTITUTION OF THE LOW-RELAXATION STRANDS FOR THE STRESS-RELIEVED STRANDS WILL BE PERMITTED.

A CALCIUM NITRIDE CORROSION INHIBITOR, AS COVERED IN THE SPECIAL PROVISIONS SHALL BE USED IN THE CONCRETE FOR PRECAST PRESTRESSED CONCRETE DECK BEAMS.

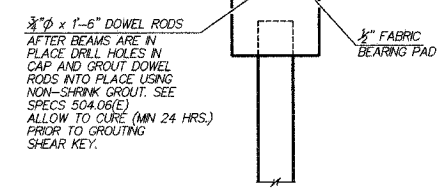
THE INITIAL PRESTRESSING FORCE APPLIED TO EACH STRAND SHALL BE THE SAME AS FOR THE STRESS RELIEVED STRANDS (28,900 LBS.)

RAIL POST ANCHOR DEVICES SHALL BE CAST INTO OUTSIDE BEAM AS ELSEWHERE SPECIFIED

REQUIRED RELEASE STRENGTH, 1'ci, SHALL BE 4,000 PSI



LIFTING LOOP DETAIL APPROVED ALTERNATE MAY BE SUBSTITUTED FOR ABOVE



SECTION AT ABUTMENT

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
PRECAST PRESTRESSED CONCRETE		
DECK BEAMS (21" DEPTH)	SQ. FT.	1617

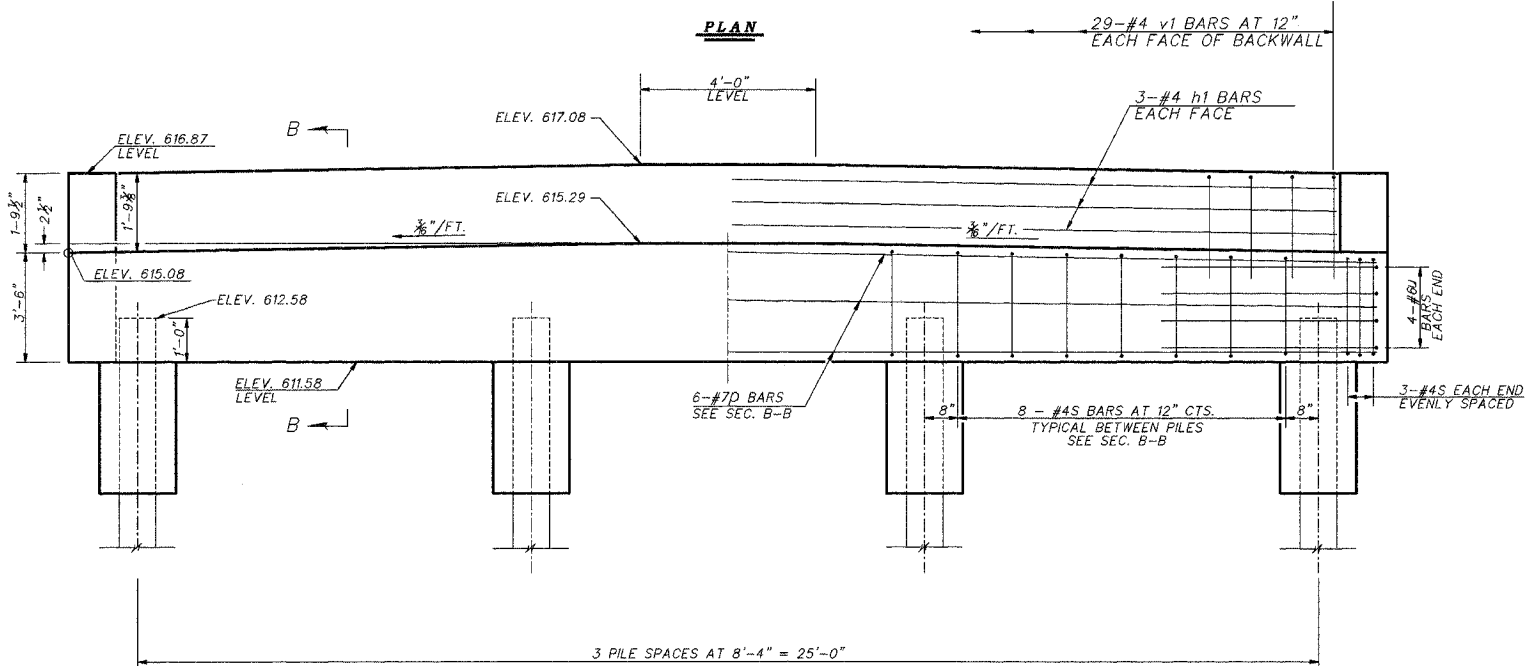
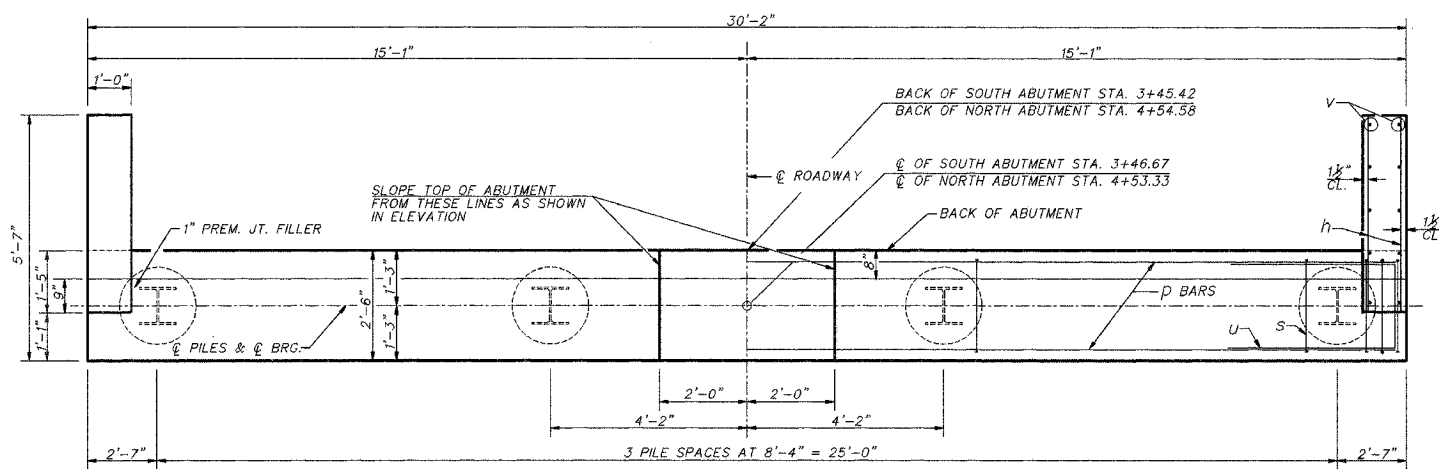
SUPERSTRUCTURE DETAILS  
END SPANS  
SECTION 99-13116-00-BR  
STRATTON TOWNSHIP  
EDGAR COUNTY

McCLINTOCK  
CIVIL ENGINEERING SERVICE  
404 SHAW AVE. PARIS, IL 61944  
PHONE (217) 466-010

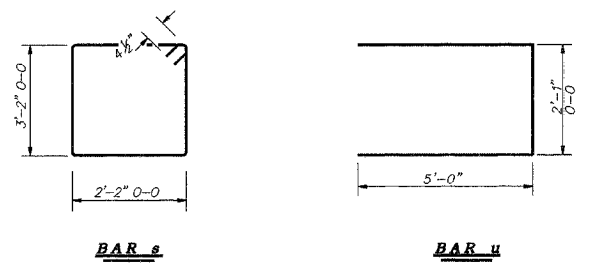
DRN TLC  
CK

DATE 4/22/03  
SCALE

SHEET 5 OF 11  
JOB NO. 3137-500-00



**ELEVATION**



**BAR s**

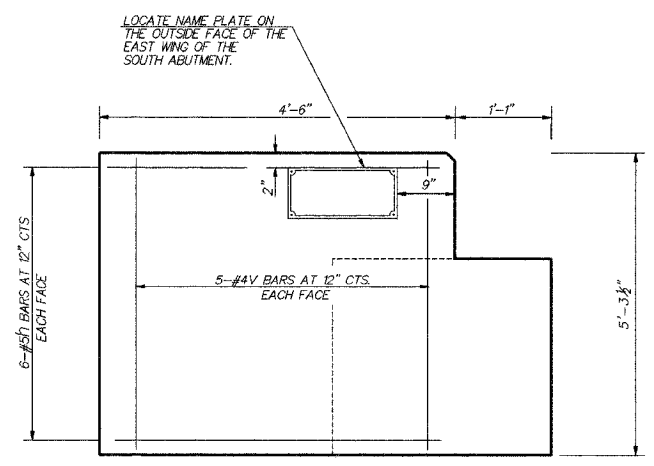
**BAR u**

**PILE DATA**

**BOTH ABUTMENTS**

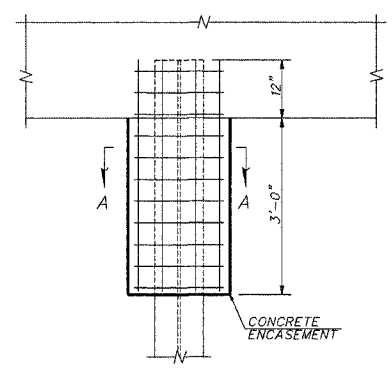
TYPE	HP10 x 57
NO. REQUIRED	8 *
DESIGN CAPACITY	29 TON/PILE**
EST. LENGTH	25 FT. FOR NORTH ABUTMENT
EST. LENGTH	34 FT. FOR SOUTH ABUTMENT

\*INCLUDES ONE TEST PILE TO BE DRIVEN AT A PERMANENT LOCATION IN THE SOUTH ABUTMENT  
 \*\*DRIVE TO 44 (TON/PILE)

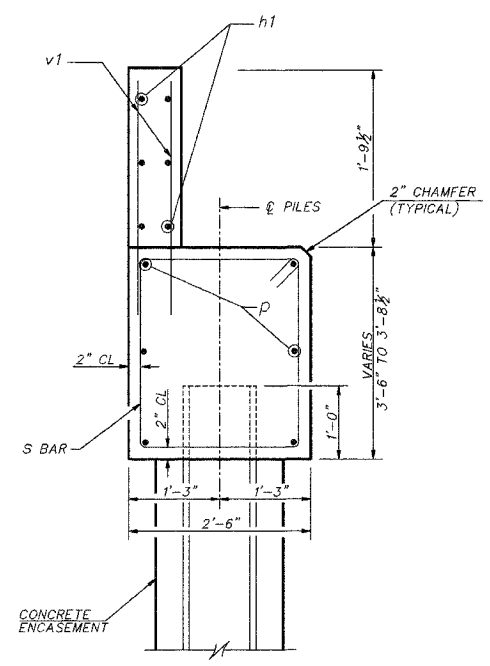


**WINGWALL ELEVATION**

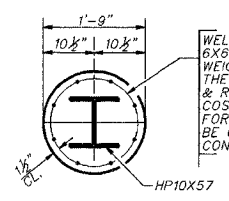
TIE 3-#5h BARS & 2-#4V EACH FACE IN ABUTMENT BARREL FOR WINGWALL TO TIE IN WITH.



**PILE ENCASEMENT DETAIL**



**SECTION B - B**  
SECTION THROUGH ABUTMENT



**SECTION A - A**

WELDED WIRE FABRIC 6X6-W4.0 X W4.0 WEIGHING 58#/100 SQ. FT. THE COST OF EXCAVATION, & REINF. IS INCIDENTAL TO THE COST OF FURNISHING PILES. FORMS FOR ENCASEMENT MAY BE OMITTED WHEN SOIL CONDITIONS PERMIT.

**BILL OF MATERIAL**  
TWO ABUTMENTS

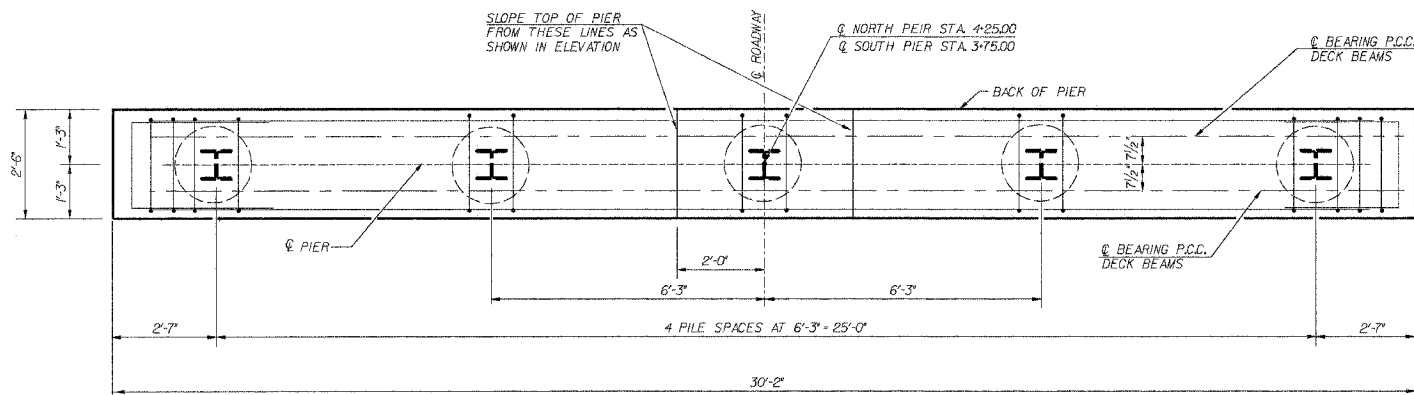
BAR	NO.	SIZE	LENGTH	SHAPE
h	48	#5	4'-2"	—
h1	12	#4	27'-10"	—
D	12	#7	29'-10"	—
S	60	#4	11'-5"	□
U	16	#6	12'-1"	□
V	40	#4	5'-0"	—
V1	116	#4	3'-3"	—
CONCRETE STRUCTURES			CU. YD.	25.5
REINFORCEMENT BARS			POUND	2300
FUR. STEEL PILES HP10x57			FOOT	202
TEST PILE STEEL HP10x57			EACH	1
DRIVING STEEL PILES			FOOT	202
CONCRETE ENCASEMENT			CU. YD.	2.1
STRUCTURE EXCAVATION			CU. YD.	84.3

NOTES: THE BACKWALL AND THE WINGS SHALL BE POURED AFTER THE DECK BEAMS ARE IN PLACE. ALL EXPOSED EDGES SHALL BE CHAMFERED 2" UNLESS OTHERWISE NOTED.

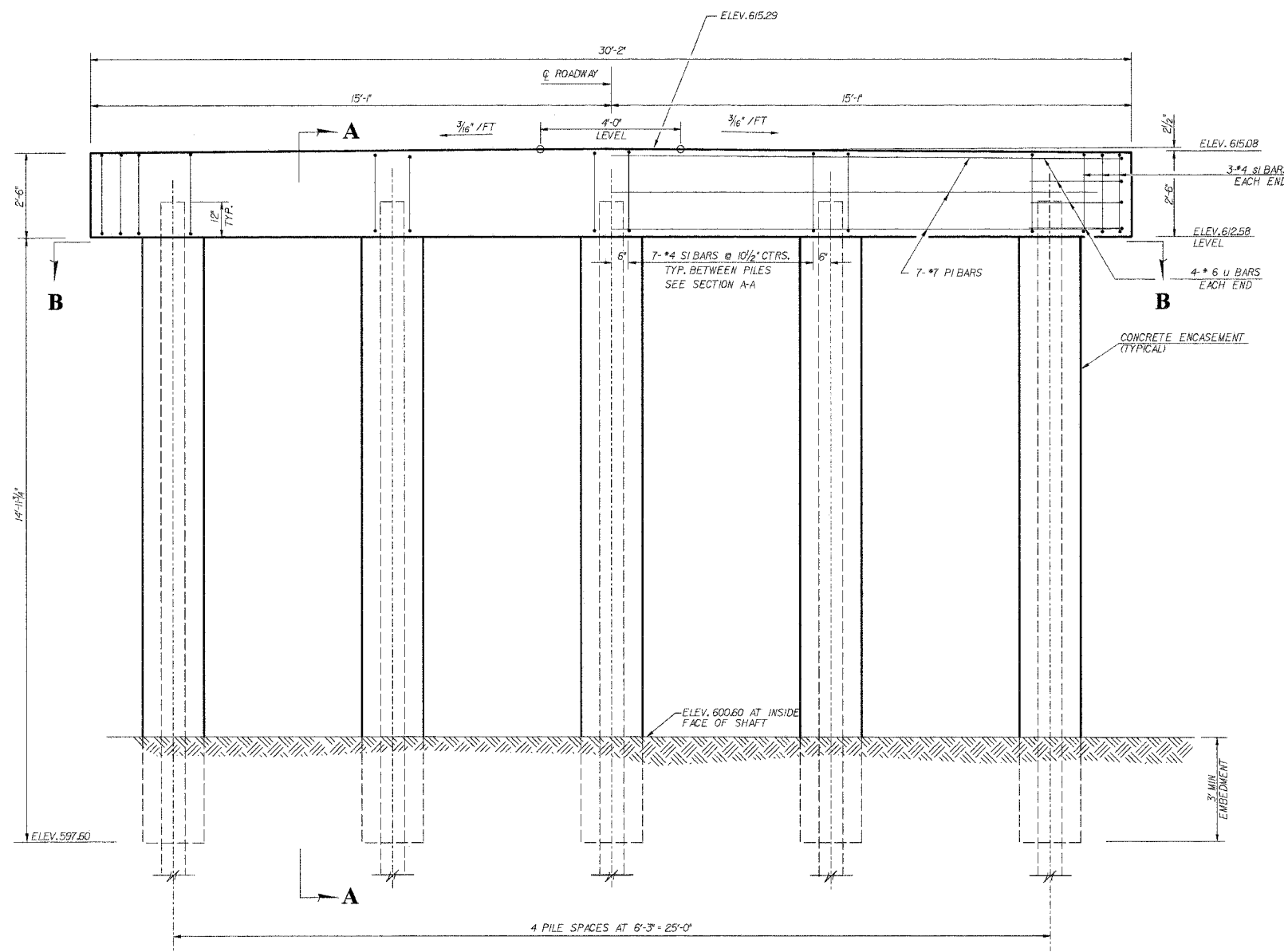
ABUTMENT DETAILS  
 SECTION 98-13116-00-BR  
 STRATTON TOWNSHIP  
 EDGAR COUNTY

**McCLINTOCK**  
 CIVIL ENGINEERING SERVICE  
 404 SHAW AVE. PARSIPPAN, N.J. 07944  
 PHONE (201) 465-6100

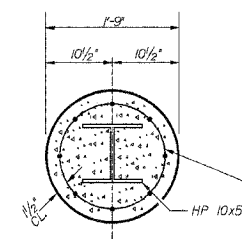
DRN: TLC DATE: 4/11/03 SHEET 6 OF 11  
 CK: RLM: SCALE: JOB NO. 3137-500-00  
 REPRD: 1/14/05



PLAN

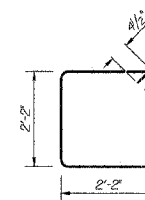


ELEVATION

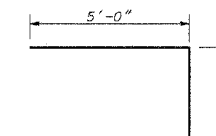


SECTION B-B

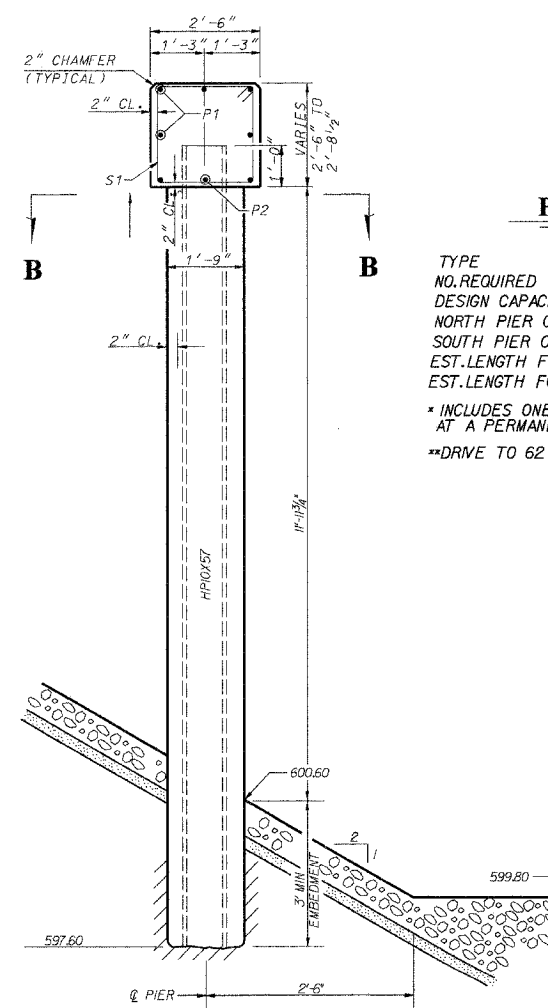
WELDED WIRE FABRIC 6x6-W40xW40 WEIGHING 58#/100 SQ.FT. THE COST OF EXCAVATION AND REINFORCEMENT IS INCIDENTAL TO THE COST OF CONCRETE ENCASEMENT IF A PORTION OF THE PILE ENCASEMENT IS UNDERWATER, CONCRETE SHALL BE TREMMIED UNDERWATER INTO FORMS AS NECESSARY. COFFERDAMS ARE NOT REQUIRED FOR THIS WORK.



BAR S1



BAR U



SECTION A-A

PILE DATA

TYPE STEEL HP10x57  
 NO. REQUIRED 10\*  
 DESIGN CAPACITY 41.3 TON/PILE\*\*  
 NORTH PIER CAPACITY 41 TON/PILE DRIVEN TO 62 TON BEARING  
 SOUTH PIER CAPACITY 41 TON/PILE DRIVEN TO 62 TON BEARING  
 EST. LENGTH FOR NORTH PIER: 44 FEET  
 EST. LENGTH FOR SOUTH PIER: 34 FEET  
 \* INCLUDES ONE TEST PILE TO BE DRIVEN AT A PERMANENT LOCATION IN NORTH PIER  
 \*\* DRIVE TO 62 TON/PILE

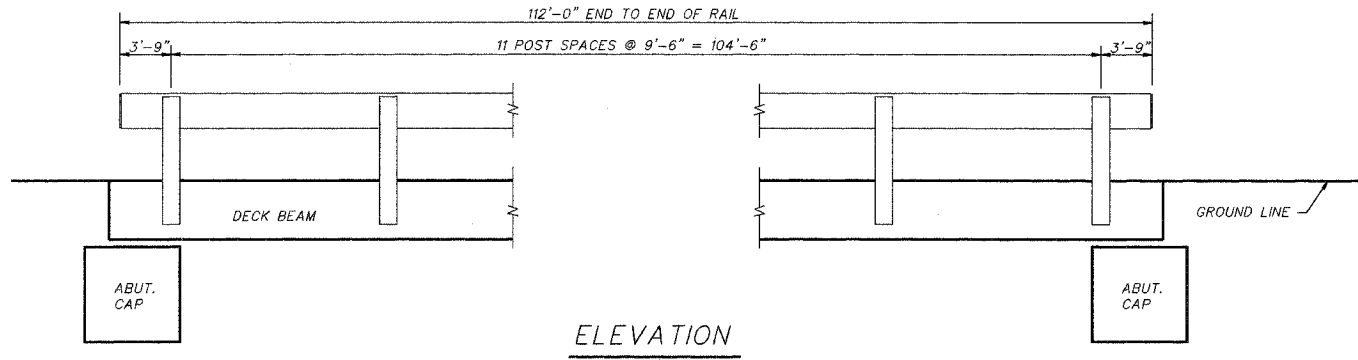
BILL OF MATERIALS

TWO PIERS				
BAR	NO.	SIZE	LENGTH	SHAPE
p1	14	#7	29'-10"	—
p2	8	#7	5'-11"	—
s1	68	#4	9'-5"	□
u	16	#6	12'-1"	□
CONCRETE STRUCTURES			CU. YD.	14.6
REINFORCEMENT BARS			POUND	1670
TEST PILE, ST. HP10x57			EACH	1
FUR STEEL PILES HP10x57			FOOT	346
DRIVE STEEL PILES			FOOT	346
CONCRETE ENCASEMENT			CU. YD.	13.3

NOTE: ALL EXPOSED EDGES SHALL HAVE STANDARD 2" CHAMFER

<b>PIER DETAILS</b> SECTION 98-13116-00-BR STRATTON TOWNSHIP EDGAR COUNTY	<b>McCLINTOCK</b> CIVIL ENGINEERING SERVICE 404 SHAW AVENUE, PARIS, ILL. 61944 PHONE (217) 468-6110	
	DRN TLC DATE 4/21/03 REVISED: SDE 8/14/03 APPR.	SHEET 7 OF 11 JOB NO. 3137-500-00





**MATERIAL REQUIREMENTS**

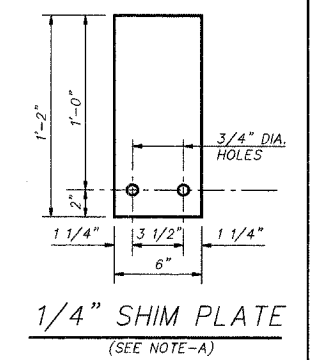
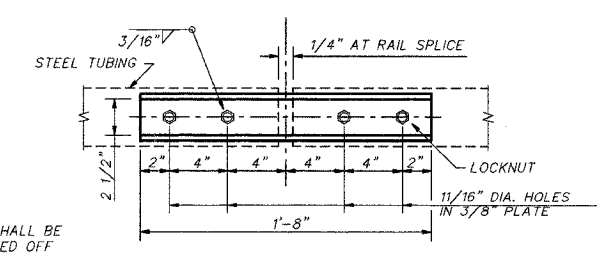
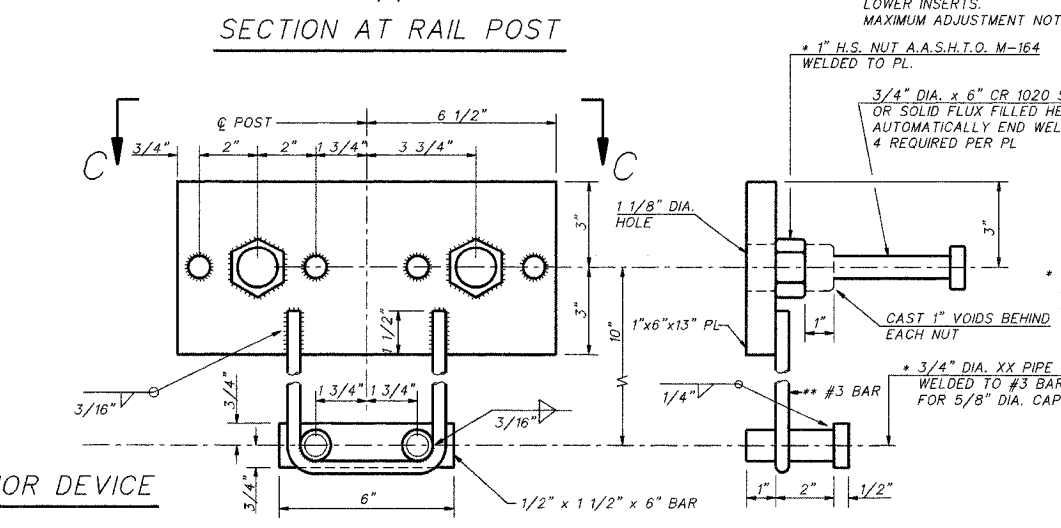
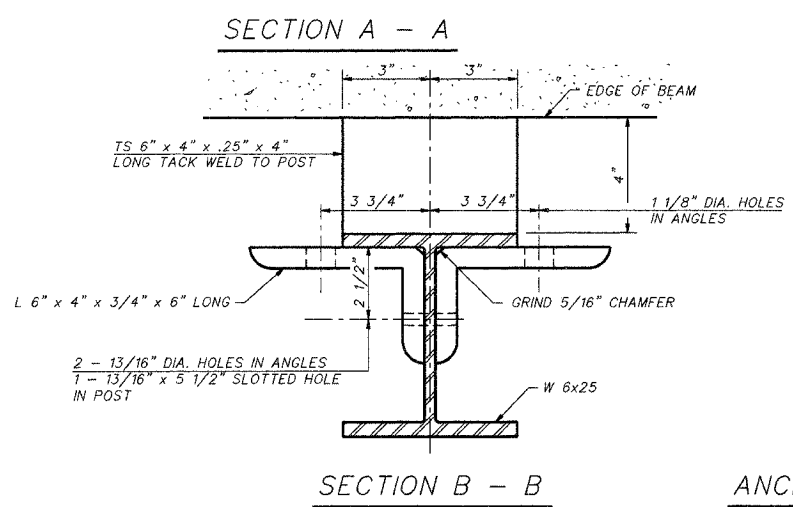
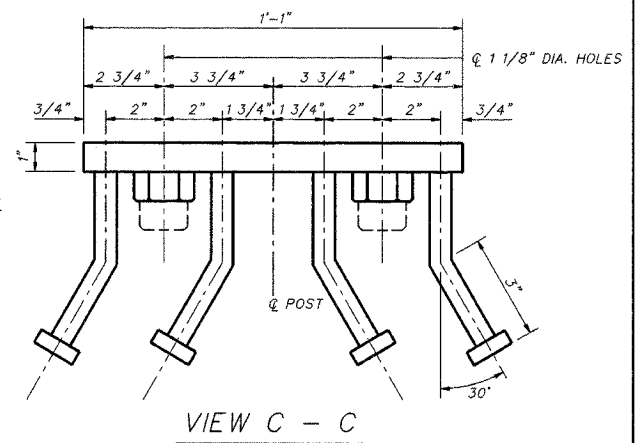
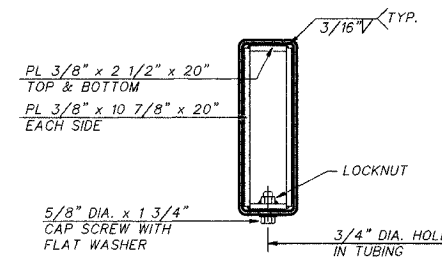
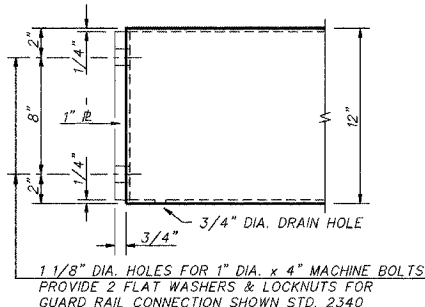
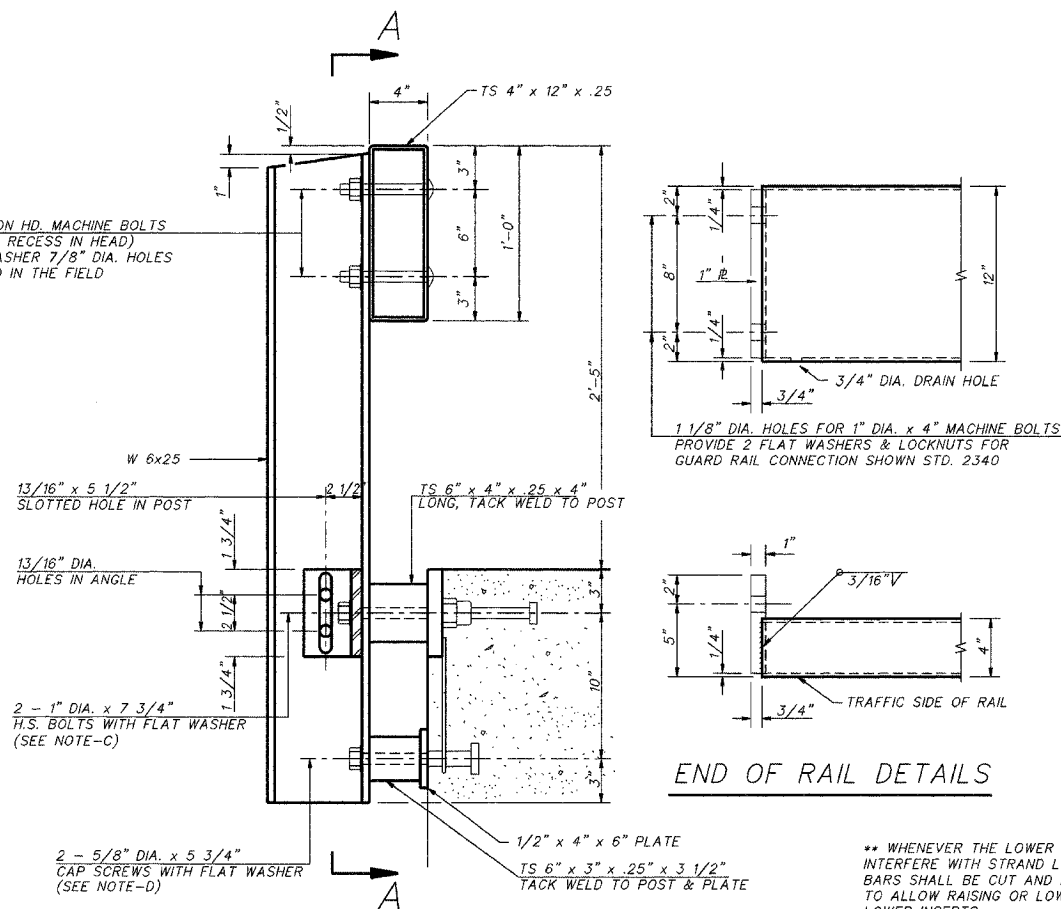
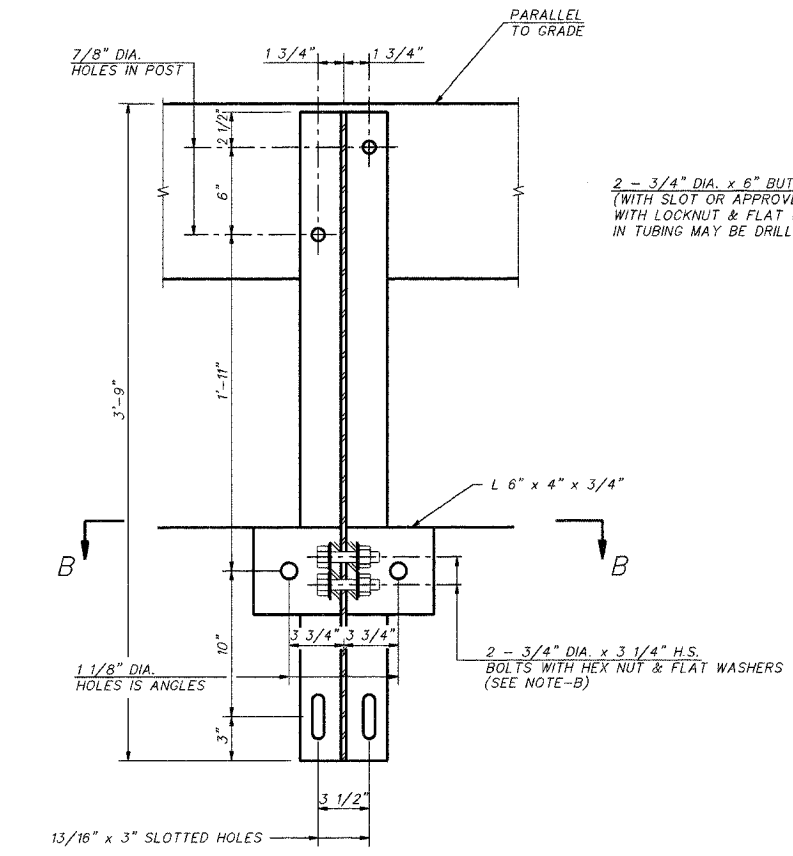
HOLLOW STRUCTURAL STEEL TUBING SHALL CONFORM TO THE REQUIREMENTS OF A.S.T.M. DESIGNATION A-500 GRADE B STRUCTURAL STEEL TUBING.  
 ALL OTHER STEEL SHAPES AND PLATES SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. M-183 EXCEPT POSTS AND ANGLES SHALL CONFORM TO A.A.S.H.T.O. M-223, GRADE 50.  
 BOLTS, CAP SCREWS AND NUTS SHALL CONFORM TO THE REQUIREMENTS OF A.S.T.M. DESIGNATION A-307 EXCEPT FOR HIGH STRENGTH BOLTS, NUTS AND WASHERS NOTED WHICH SHALL CONFORM TO A.A.S.H.T.O. M-164.  
 ALL BOLTS, NUTS, CAP SCREWS, WASHERS AND LOCK WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH A.A.S.H.T.O. M-232.  
 ALL POST, RAILING, RAIL SPLICES, ANCHOR DEVICES AND ANGLES SHALL BE GALVANIZED AFTER SHOP FABRICATION IN ACCORDANCE WITH A.A.S.H.T.O. M-111 AND A.S.T.M. A-385. GALVANIZED RAIL SHALL NOT BE PAINTED.

**INSTALLATION NOTES**

- (A) FOR MULTI-SPAN BRIDGES, SUFFICIENT 1/4" x 6" x 1'-2" GALVANIZED STEEL SHIMS SHALL BE PROVIDED TO ALIGN RAIL BETWEEN ADJACENT SPANS. COST INCIDENTAL TO STEEL RAILING. ALL FIELD DRILLED HOLES SHALL BE COATED WITH AN APPROVED ZINC RICH PAINT BEFORE ERECTION. THE 1/2" x 4" x 6" PLATES THAT COME IN CONTACT WITH CONCRETE SHALL RECEIVE TWO COATS OF ASPHALT PAINT CONFORMING TO SECTION 760.07 TYPE II OR PLACE 1/8" FABRIC BEARING PADS BETWEEN THE PLATES AND CONCRETE.
- (B) THE 3/4" DIA. HIGH STRENGTH BOLTS USED TO CONNECT THE 6"x4"x3/4" ANGLES TO THE POST SHALL BE TIGHTENED IN ACCORDANCE WITH ARTICLE 505.04 (f)(3) OF THE STANDARD SPECIFICATIONS.
- (C) THE 1" DIA. HIGH STRENGTH BOLTS CONNECTING THE ANGLES TO THE CONCRETE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL 1/8 TURN. THE 5/8" DIA. CAP SCREWS IN BOTTOM OF POSTS SHALL BE TO A SNUG FIT ONLY.
- (D) THE MAXIMUM ALLOWABLE RAIL POST SPACING SHALL BE 10'-9".

**BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
STEEL RAILING, TYPE S-1	FOOT	224



\*\* WHENEVER THE LOWER INSERT ASSEMBLIES INTERFERE WITH STRAND LOCATIONS, THE #3 BARS SHALL BE CUT AND ADJUSTED IN ORDER TO ALLOW RAISING OR LOWERING OF THE LOWER INSERTS. MAXIMUM ADJUSTMENT NOT TO EXCEED 1/2"

\* 1" H.S. NUT A.A.S.H.T.O. M-164 WELDED TO PL.

3/4" DIA. x 6" CR 1020 STEEL GRANULAR OR SOLID FLUX FILLED HEADED STUDS AUTOMATICALLY END WELDED. 4 REQUIRED PER PL

\* 3/4" DIA. XX PIPE - 3" LONG WELDED TO #3 BAR AND TAP FOR 5/8" DIA. CAP SCREW

STEEL RAILING, TYPE S-1

SEC. 98-1316-00-BR STRATTON TOWNSHIP EDGAR COUNTY

**McCLINTOCK**  
 CIVIL ENGINEERING SERVICE  
 404 SHAW AVENUE, PARSIPpany, NJ 07654  
 PHONE (201) 466-8170

DRN TLC DATE 4/11/03 SHEET 8 OF 11  
 REVISED 1/6/05 SCALE: NTS  
 APPR. JOB NO. 3137-500-00



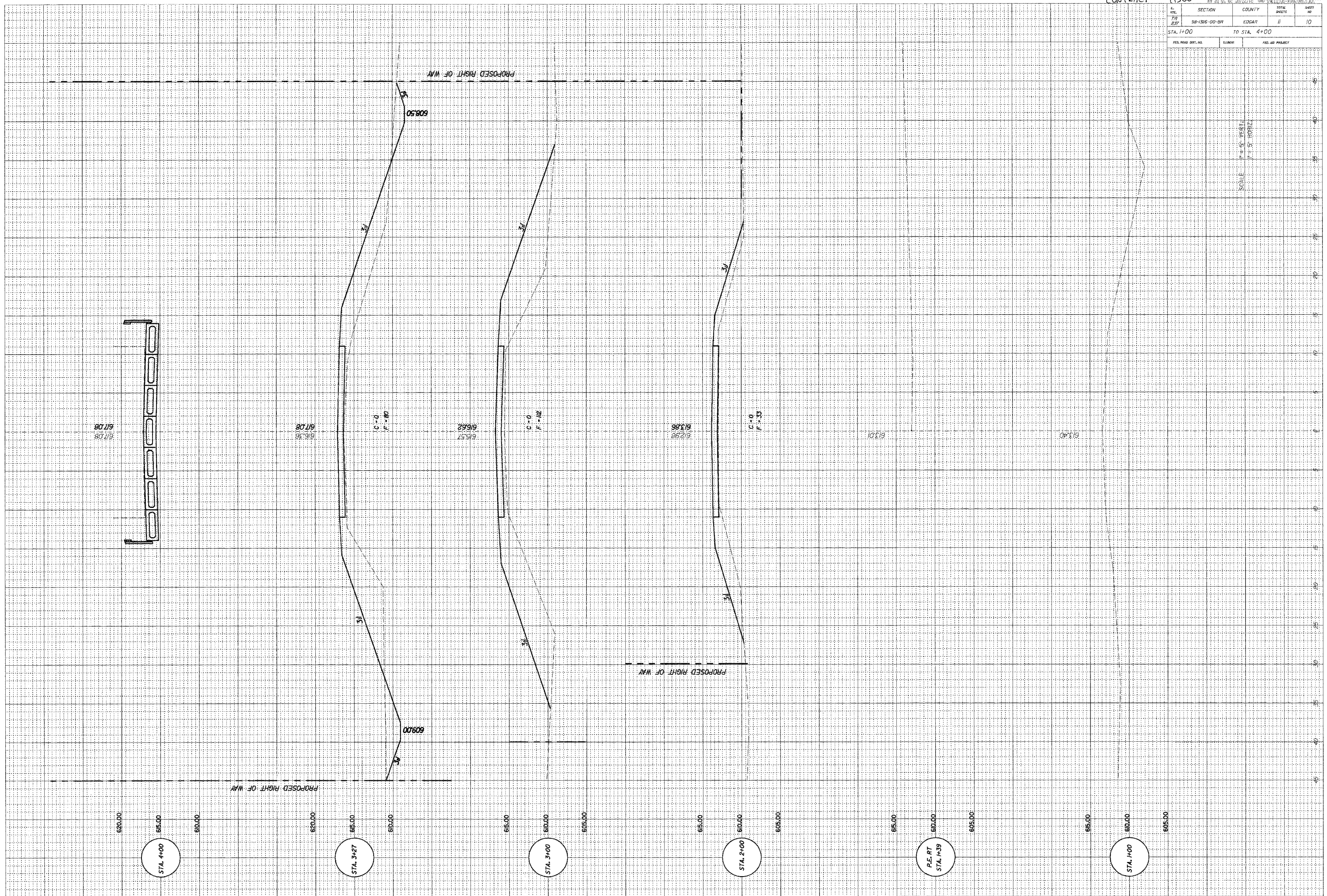


Contract # 91300

L. FILE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
227	98+30E-00-BR	EDGAR	11	10

STA. 1+00 TO STA. 4+00

FED. ROAD DIST. NO.	BLKNO.	FED. RD. PROJECT



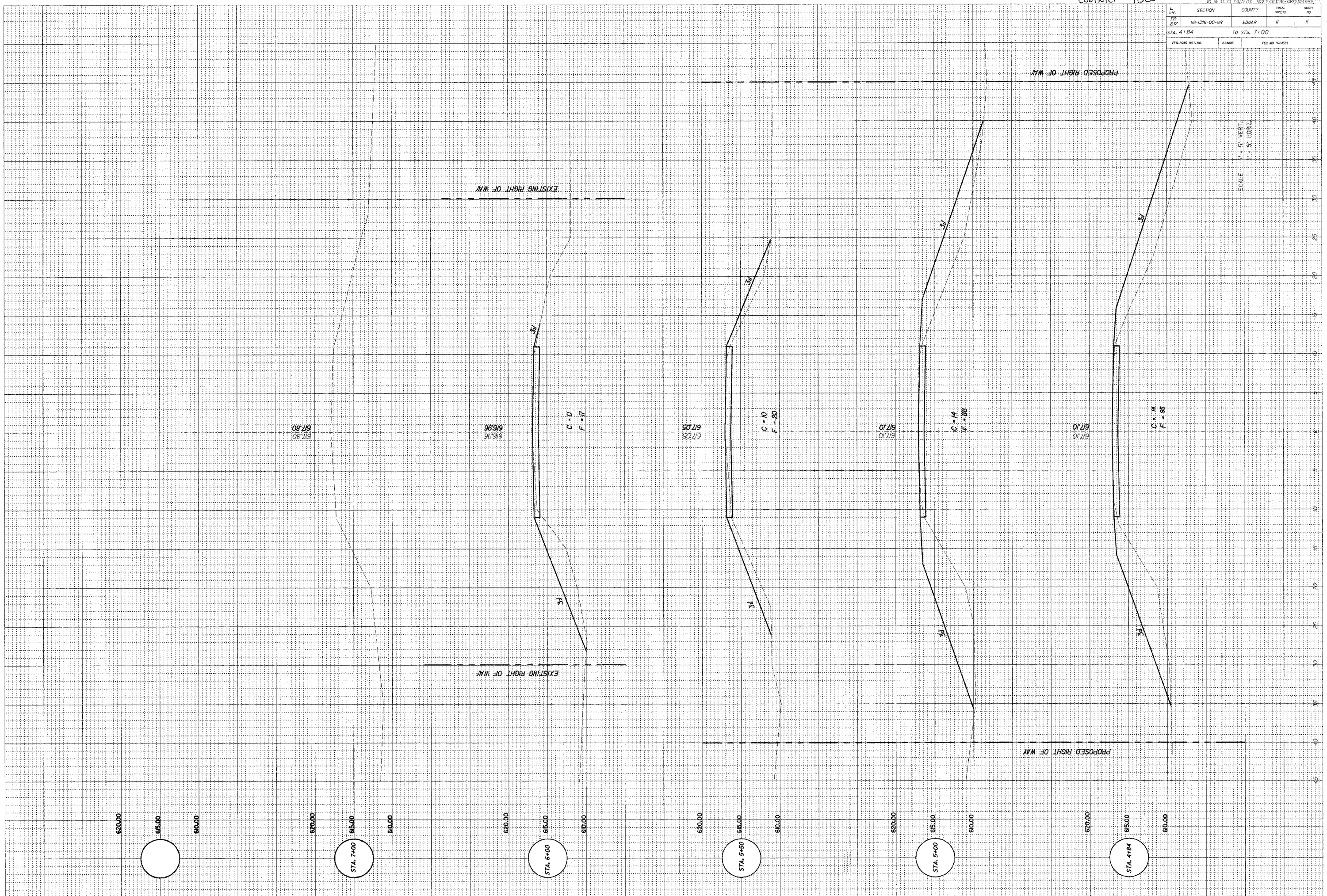


CONTRACT # 91300

L. SHEET NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
257	98-1316-00-B9	EDGAR	11	11

STA. 4+84 TO STA. 7+00

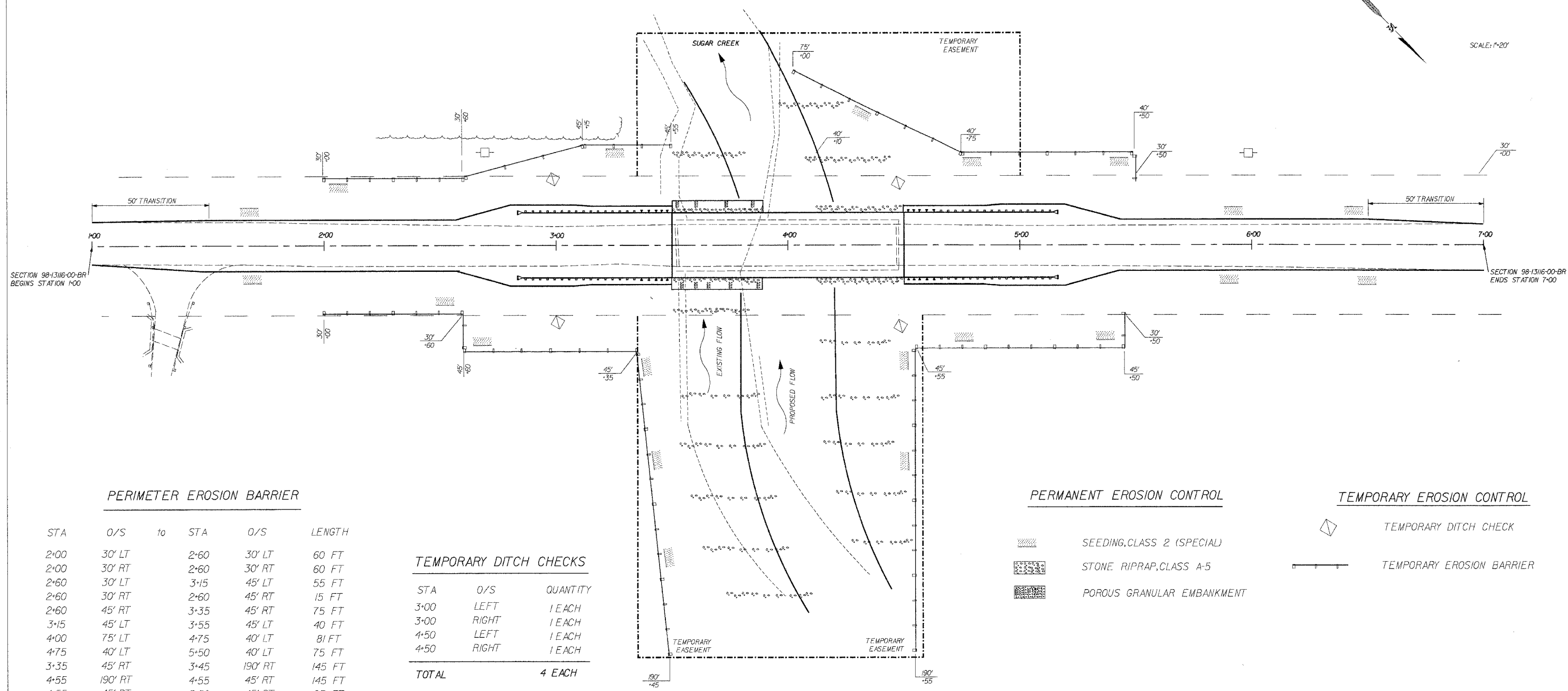
FED. ROAD DIST. NO. KILMORIS FED. AID PROJECT



ROUTE #	SECTION	COUNTY	TOTAL	SHEET #
TR 237	98-1316-00-BR	EDGAR	11	11a
JOB # 3137-500-00		STRATTON TWP.		



SCALE: 1"=20'



PERIMETER EROSION BARRIER

STA	O/S	to	STA	O/S	LENGTH
2+00	30' LT		2+60	30' LT	60 FT
2+00	30' RT		2+60	30' RT	60 FT
2+60	30' LT		3+15	45' LT	55 FT
2+60	30' RT		2+60	45' RT	15 FT
2+60	45' RT		3+35	45' RT	75 FT
3+15	45' LT		3+55	45' LT	40 FT
4+00	75' LT		4+75	40' LT	81 FT
4+75	40' LT		5+50	40' LT	75 FT
3+35	45' RT		3+45	190' RT	145 FT
4+55	190' RT		4+55	45' RT	145 FT
4+55	45' RT		5+50	45' RT	95 FT
5+50	40' LT		5+50	30' LT	10 FT
5+50	45' RT		5+50	30' RT	15 FT
<b>TOTAL</b>					<b>871 FT</b>

TEMPORARY DITCH CHECKS

STA	O/S	QUANTITY
3+00	LEFT	1 EACH
3+00	RIGHT	1 EACH
4+50	LEFT	1 EACH
4+50	RIGHT	1 EACH
<b>TOTAL</b>		<b>4 EACH</b>

PERMANENT EROSION CONTROL

- SEEDING, CLASS 2 (SPECIAL)
- STONE RIPRAP, CLASS A-5
- POROUS GRANULAR EMBANKMENT

TEMPORARY EROSION CONTROL

- TEMPORARY DITCH CHECK
- TEMPORARY EROSION BARRIER

<u>TEMPORARY EROSION CONTROL</u>		
<u>BILL OF MATERIALS</u>	<u>UNIT</u>	<u>QUANTITY</u>
TEMPORARY DITCH CHECKS	EACH	4
PERIMETER EROSION BARRIER	FOOT	871

GENERAL NOTES

- 1) SEE SPECIAL PROVISIONS
- 2) SEE STANDARD 280001-02

**McCLINTOCK**  
 CIVIL ENGINEERING SERVICE  
 404 SHAW AVENUE, PARIS, IL 61944  
 PHONE (217) 466-6110

**EROSION CONTROL PLAN**