

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS
C.H. 23	94-00087-00-BR	HANCOCK	43
ROAD DIST.	ILLINOIS		

STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

PLANS FOR PROPOSED MAJOR BRIDGE PROGRAM

COUNTY HIGHWAY C.H. 23(FAS RTE. 429)
SECTION 94-00087-00-BR
HANCOCK COUNTY
PROJECT NO. BRS-429(102)
JOB NO. C-96-205-06

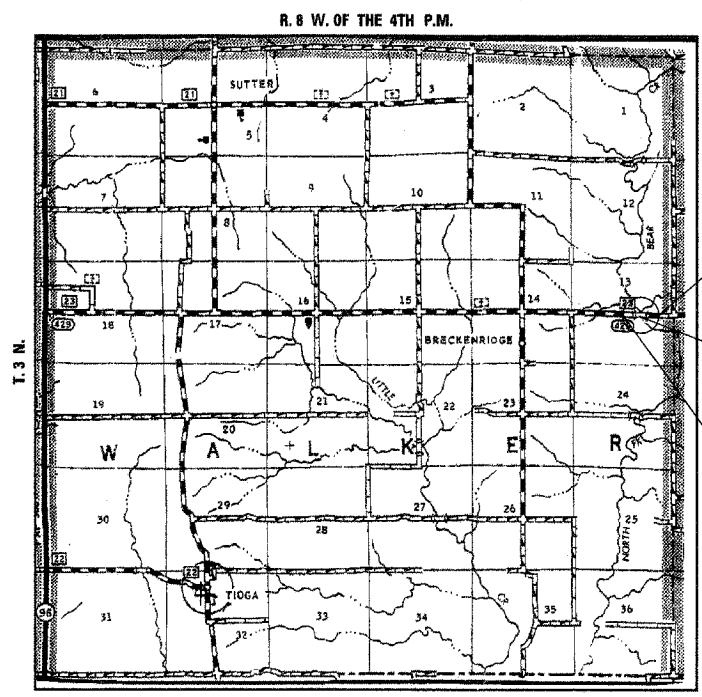
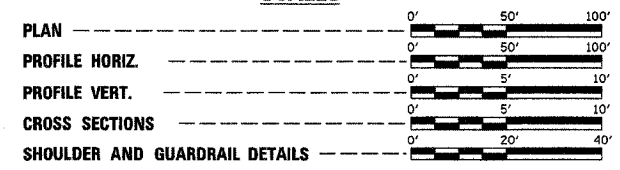
<u>INDEX OF SHEETS</u>	
<u>SHEET NO.</u>	<u>TITLE</u>
1.	COVER SHEET
2.	SUMMARY OF QUANTITIES, GENERAL NOTES & TYPICAL SECTIONS
3.	ENTRANCE DETAILS
4.-5.	PLAN AND PROFILE
6.	SHOULDER AND GUARDRAIL DETAILS
7.-26.	BRIDGE PLANS
27.-40.	STATION CROSS SECTIONS
41.	EROSION CONTROL PLAN
42.-43.	TEMPORARY FENCE

STANDARDS:

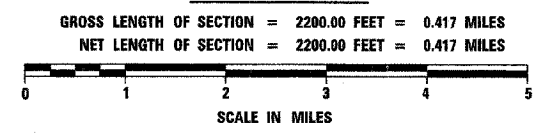
- 280001-02
- 420001-06
- 420401-05

- 515001-02
- 601101
- 630001-05
- 631011-02
- 631026-02
- 635006-02
- 702001-05
- BLR 21-6

SCALES



LOCATION PLAN



MAJOR COLLECTOR (UNDER 400 ADT)
CURRENT ADT 242 (2005)
DESIGN SPEED 40 MPH

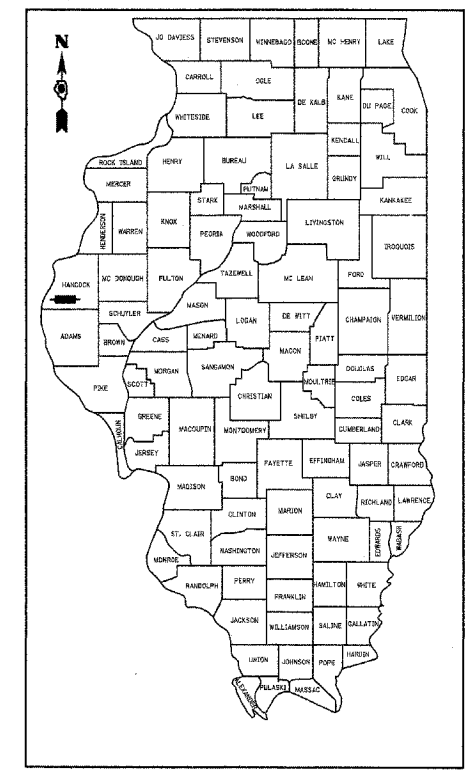
**IMPROVEMENT ENDS
STA. 320 + 50**

**STA. 313 + 34 - SPECIAL BRIDGE DESIGN
CONTINUOUS STEEL COMPOSITE WIDE FLANGE
BEAM BRIDGE; 5 SPANS AT 72',90',90',
90',72'; SKEW = 0°; 30'-0" ROADWAY
EXISTING S.N. 034-3230
PROPOSED S.N. 034-3231**

**IMPROVEMENT BEGINS
STA. 298 + 50**



Gary J. Cartwright 10-17-05
ILLINOIS PROFESSIONAL ENGINEER NO. 43408
EXPIRES 11-30-05



LOCATION OF SECTION INDICATED THUS: —

TOLL FREE JOINT UTILITY LOCATING
INFORMATION FOR EXCAVATORS (J.U.L.I.E.)
TELEPHONE NUMBER 1-800-892-0123

APPROVED	10-13	2005
	<i>Paul E. Sy</i> COUNTY ENGINEER	
PASSED	Oct 30	2005
	<i>Tommy Ford</i> DISTRICT ENGINEER OF LOCAL ROADS & STREETS	
PASSED	Oct 25	2005
	<i>E. B. Fung</i> DISTRICT SIX ENGINEER OF CONSTRUCTION	
RELEASING FOR BID BASED ON LIMITED REVIEW	Oct 26	2005
	<i>Christine M. Reed</i> DEPUTY DIRECTOR OF HIGHWAYS, REGION FOUR ENGINEER	
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		

SUMMARY OF QUANTITIES

NUMBER	ITEM	UNIT	QUANTITY
20101000	TEMPORARY FENCE	FOOT	2,176
20200100	EARTH EXCAVATION	CU YD	1,308
20300100	CHANNEL EXCAVATION	CU YD	1532
20400800	FURNISHED EXCAVATION	CU YD	3,167
20700220	POROUS GRANULAR EMBANKMENT	CU YD	124
* 25001000	SEEDING, CLASS 2 (SPECIAL)	ACRE	2.3
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	530
28000300	TEMPORARY DITCH CHECKS	EACH	7
28000400	PERIMETER EROSION BARRIER	FOOT	3,732
28000500	INLET AND PIPE PROTECTION	EACH	3
28100209	STONE RIPRAP, CLASS A5	TON	490
28200200	FILTER FABRIC	SQ YD	389
35100100	AGGREGATE BASE COURSE, TYPE A	TON	2,088
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	109
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	1,605
40800040	INCIDENTAL BITUMINOUS SURFACING	TON	19
4200165	BRIDGE APPROACH PAVEMENT	SQ YD	200
48101200	AGGREGATE SHOULDERS, TYPE B	TON	672
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50200100	STRUCTURE EXCAVATION	CU YD	292
50300160	NEOPRENE EXPANSION JOINT 4"	FOOT	60
50300225	CONCRETE STRUCTURES	CU YD	202.7
50300255	CONCRETE SUPERSTRUCTURE	CU YD	355.9
50300260	BRIDGE DECK GROOVING	SQ YD	1,384
50300300	PROTECTIVE COAT	SQ YD	1,541
* 50300320	ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	10
* 50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1
50500505	STUD SHEAR CONNECTORS	EACH	4,530
* 50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	97,560
* 50901002	STEEL BRIDGE RAIL, SPECIAL	FOOT	842
51201600	FURNISHING STEEL PILES HP12X53	FOOT	976
51201800	FURNISHING STEEL PILES HP14X73	FOOT	2,160
51202700	DRIVING STEEL PILES	FOOT	3,136
51203600	TEST PILE STEEL HP12X53	EACH	2
51203800	TEST PILE STEEL HP14X73	EACH	4
51204315	CONCRETE ENCASEMENT	CU. YD.	64.6
51500100	NAME PLATES	EACH	1
542D0223	PIPE CULVERTS, CLASS D, TYPE 1 18"	FOOT	38
542D1063	PIPE CULVERTS, CLASS D, TYPE 2 18"	FOOT	130
58700200	BRIDGE SEAT SEALER	SQ FT	166
63000000	STEEL PLATE BEAM GUARDRAIL, TYPE A	FOOT	87.5
63100045	TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	2
63100075	TRAFFIC BARRIER TERMINAL, TYPE 5A	EACH	4
63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 SPECIAL (TANGENT)	EACH	2
67100100	MOBILIZATION	L SUM	1
* 70101830	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21	L SUM	1
* 78201000	TERMINAL MARKER-DIRECT APPLIED	EACH	4
* X4066414	BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "C", N50	TON	353
* X4066614	BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE, IL-19.0, N50	TON	1,059
* X5020501	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION NO. 1	EACH	1
* X5020502	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION NO. 2	EACH	1
* X5020503	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION NO. 3	EACH	1
* X5020504	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION NO. 4	EACH	1

*SEE SPECIAL PROVISIONS

CONSTRUCTION TYPE CODE: X071-2A

APPLICATION RATES USED IN QUANTITY CALCULATIONS

STONE RIPRAP, CLASS A5	1.50 TON/CU YD
AGGREGATE BASE	2.05 TON/CU YD
AGGREGATE SURFACE AND AGGREGATE SHOULDERS	1.75 TON/CU YD
BITUMINOUS MATERIALS (PRIME COAT)	0.35 GAL/SQ YD
BITUMINOUS CONCRETE (BINDER & SURFACE COURSE)	112#/SQ YD-IN

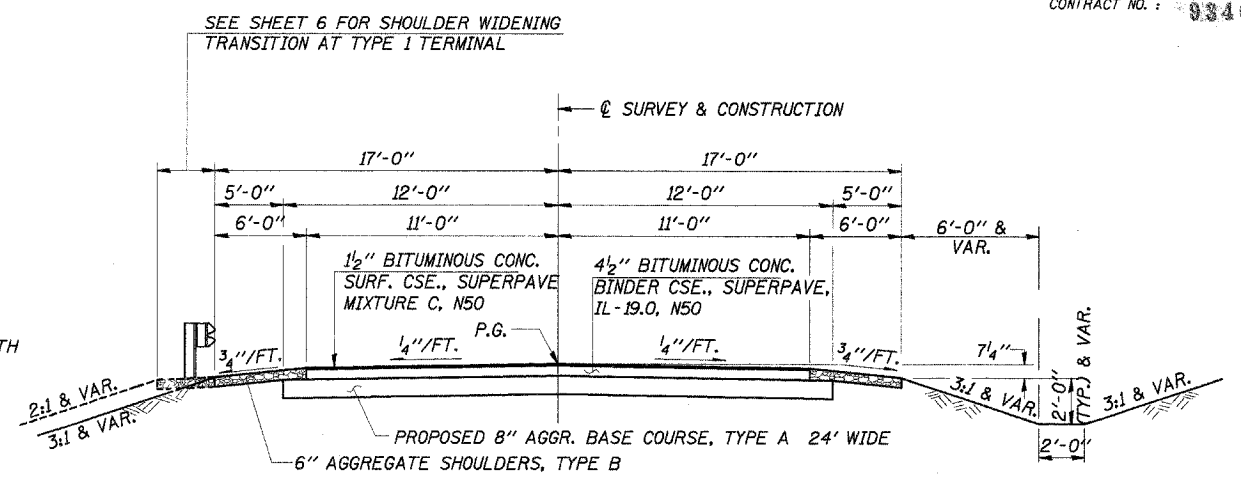
GENERAL NOTES

WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKS AND MONUMENTS UNTIL THE OWNER, AND AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.

THE AREA TO BE SEEDING SHALL CONSIST OF ALL DISTURBED EARTH SURFACES WITHIN THE RIGHT OF WAY, AS DIRECTED BY THE ENGINEER.

SEEDING, CLASS 2 (SPECIAL) = 2.3 ACRE

PAVEMENT MARKING/STRIPING WILL BE DONE BY OTHERS.



TYPICAL FILL SECTION CONSTRUCT AS SHOWN ON STATION CROSS SECTIONS.

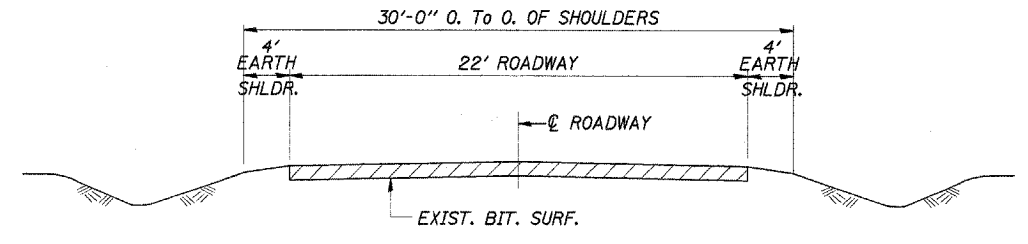
TYPICAL PROPOSED ROADWAY CROSS SECTION

TYPICAL CUT SECTION CONSTRUCT AS SHOWN ON STATION CROSS SECTIONS.

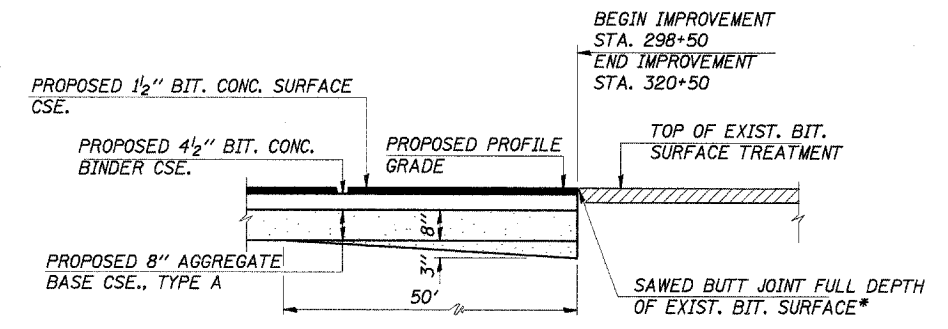
STA. 299+00 TO STA. 310+94.62
 STA. 315+73.37 TO STA. 320+00

TRANSITION FROM EXISTING ROADWAY TO PROPOSED ROADWAY FROM STA. 298+50 TO STA. 299+00 AND FROM STA. 320+00 TO 320+50.

SEE STANDARD 420401 FOR BRIDGE APPROACH PAVEMENT (NO CURB) FROM STA. 310+94.62 TO STA. 311+24.62 AND FROM STA. 315+43.37 TO STA. 315+73.37



TYPICAL EXISTING ROADWAY CROSS SECTION



ELEVATION AT BEGINNING AND END OF IMPROVEMENT

JOINT DETAIL

* Cost included in "Earth Excavation"

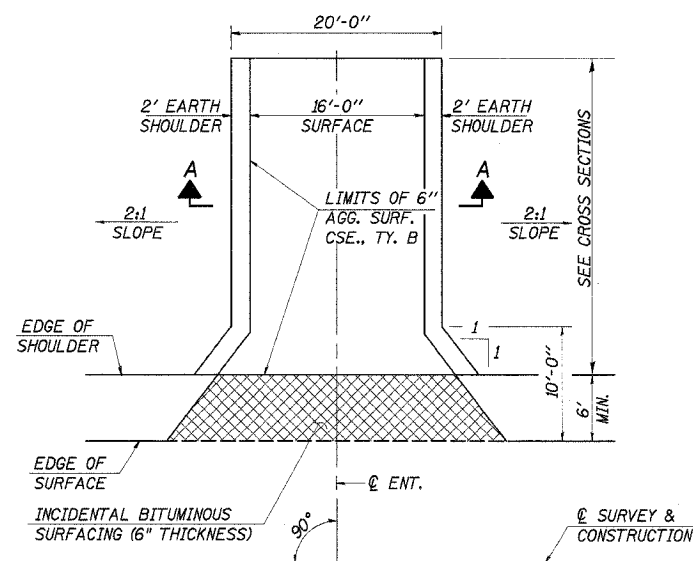
BITUMINOUS MIXTURE REQUIREMENTS			
ITEM	ASPHALT GRADE	ALLOWABLE RAP	VOIDS
BINDER, SUPERPAVE IL-19.0, N50	P.G. 64-22	15%	4.0%
SURFACE, SUPERPAVE MIX C, N50	P.G. 64-22	15%	4.0%

SUMMARY OF QUANTITIES, GENERAL NOTE AND TYPICAL CROSS SECTION

C.H. 23
 SECTION 94-00087-00-BR
 HANCOCK COUNTY
 STATION 313+34

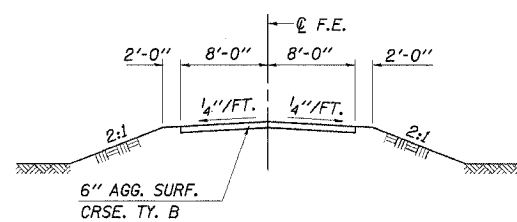
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 23	94-00087-00-BR	HANCOCK	43	3
ROAD DIST.	ILLINOIS			

CONTRACT NO. : 93401

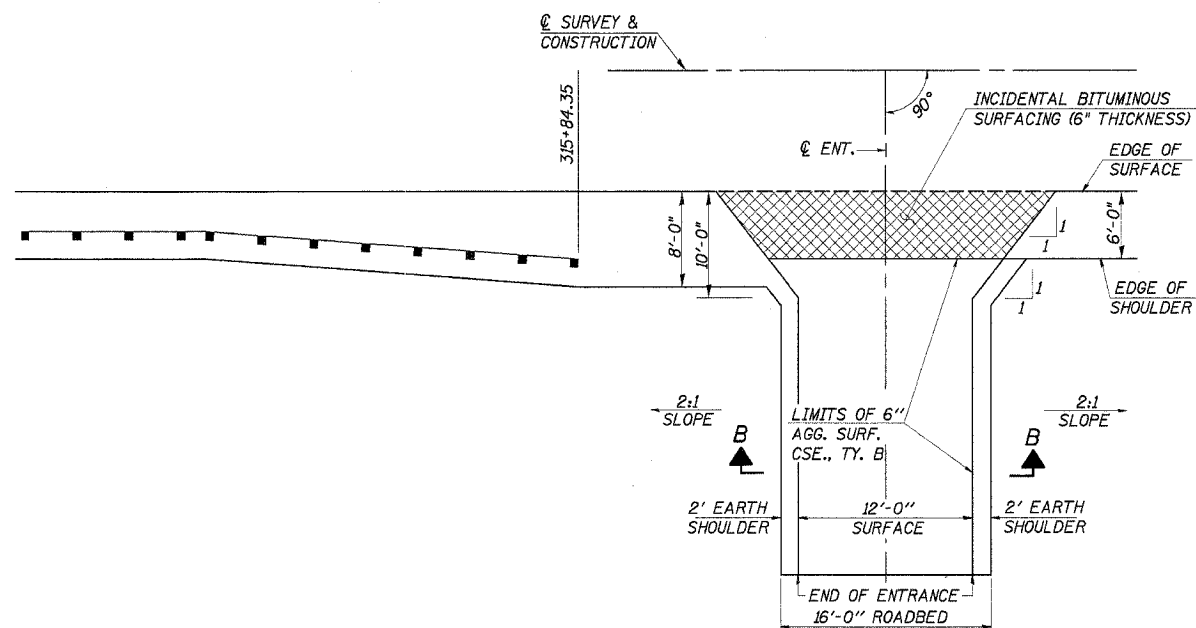


FIELD ENTRANCE DETAIL

F.E. RT. STA. 303+11
 F.E. LT. STA. 303+23
 F.E. RT. STA. 307+74
 F.E. LT. STA. 319+68

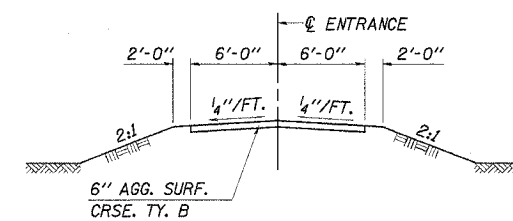


SECTION A-A

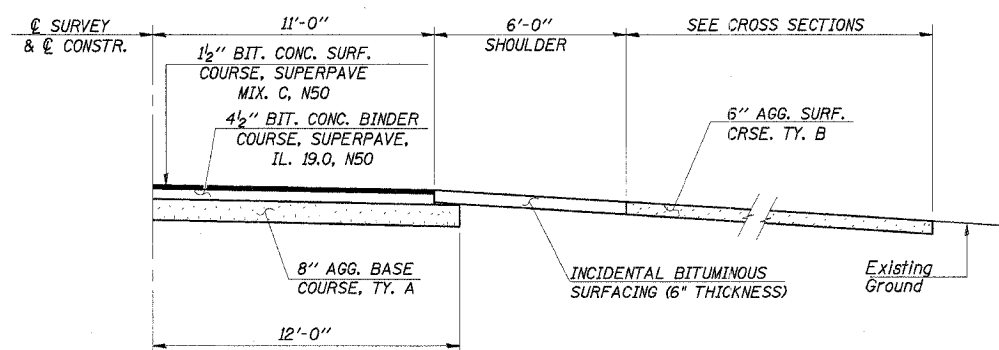


LEVEE ENTRANCE DETAIL

RT. STA. 316+08



SECTION B-B



TYPICAL SECTION THRU ENTRANCE

ENTRANCE DETAILS

C.H. 23
 SECTION 94-00087-00-BR
 HANCOCK COUNTY
 STATION 313+34

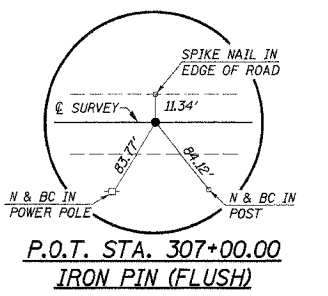
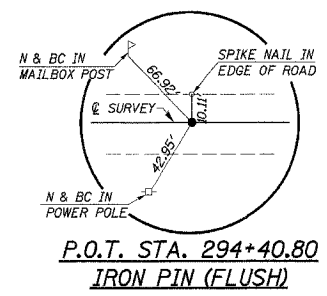
4440 ASH GROVE
 SPRINGFIELD, IL 62711
 (217) 793-8600
 casino@famvid.com

OZYURT AND STONE, INC.
 CONSULTING ENGINEERS

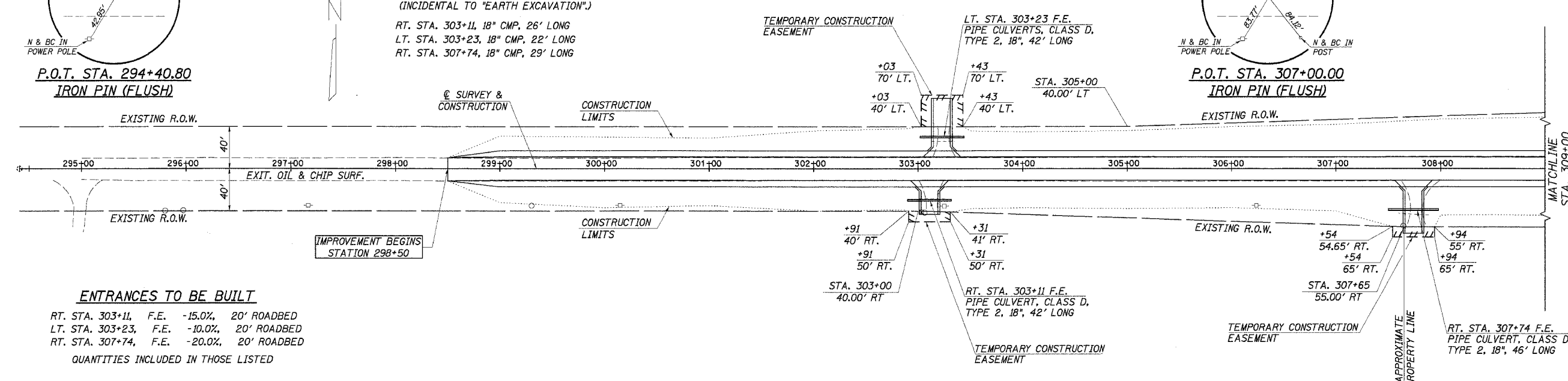
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 DATE: 08-24-05

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 22	94-00087	HANCOCK	43	4
FAS 429	00-BR			
STA. 295+00	TO STA. 309+00			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. : 93401				

N. 1/2 SECTION 13, T. 3 N., R. 8 W., 4TH P.M.
EDWIN F., IREAN R., WILLIS A., & ALTA ANN LINNENBURGER



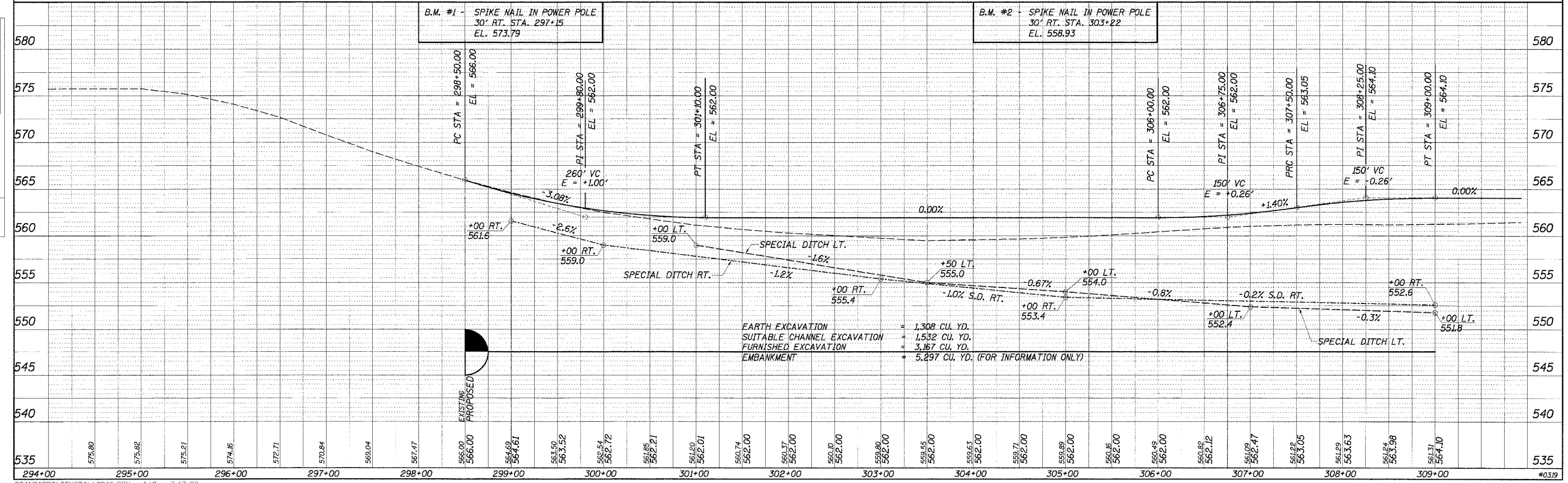
PIPES TO BE REMOVED
 (INCIDENTAL TO "EARTH EXCAVATION")
 RT. STA. 303+11, 18" CMP, 26' LONG
 LT. STA. 303+23, 18" CMP, 22' LONG
 RT. STA. 307+74, 18" CMP, 29' LONG



ENTRANCES TO BE BUILT
 RT. STA. 303+11, F.E. -15.0%, 20' ROADBED
 LT. STA. 303+23, F.E. -10.0%, 20' ROADBED
 RT. STA. 307+74, F.E. -20.0%, 20' ROADBED
 QUANTITIES INCLUDED IN THOSE LISTED

INDICATES TEMPORARY CONSTRUCTION EASEMENT TO BE ACQUIRED

RAYMOND F. & NAOMI M. KLINGLER
 S. 1/2 SECTION 13, T. 3 N., R. 8 W., 4TH P.M.

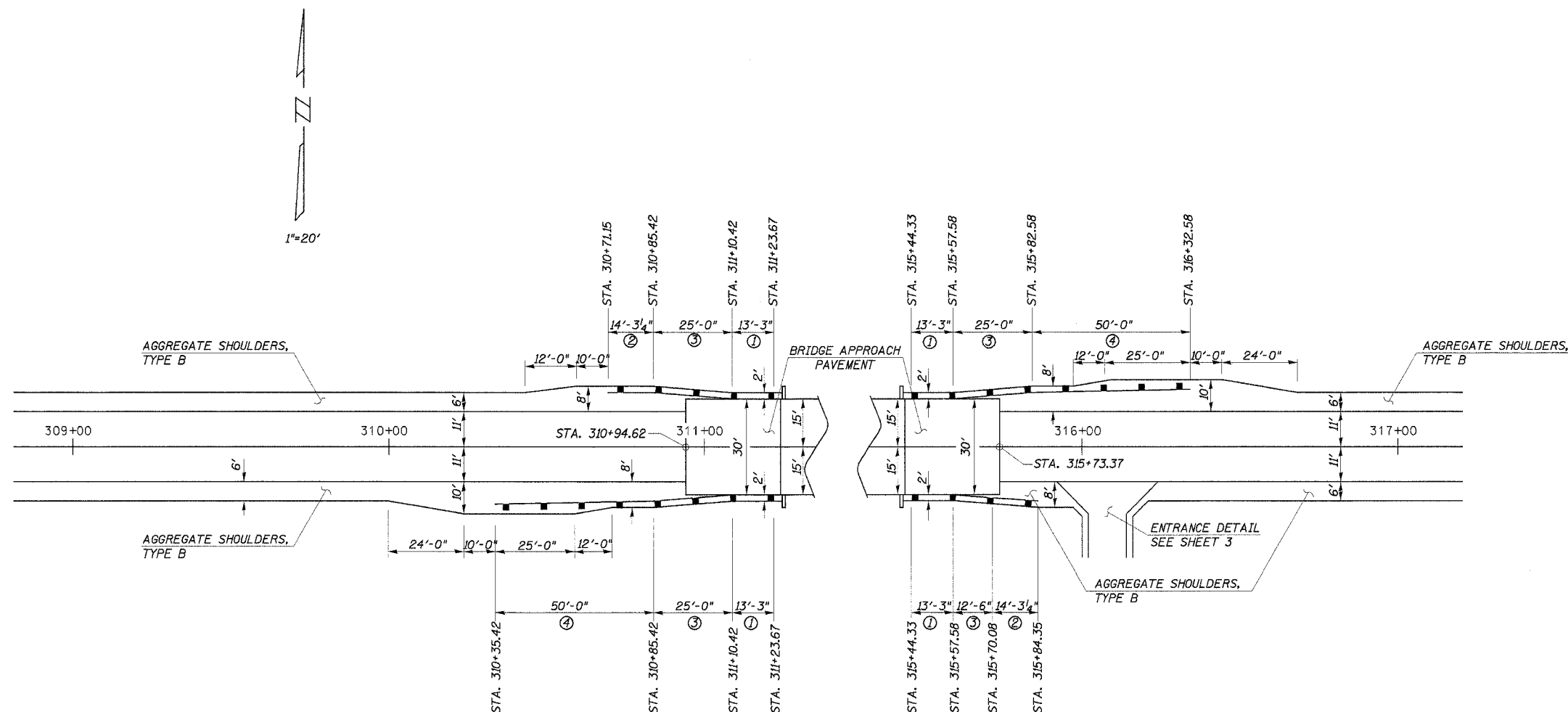


DATE	
BY	
PLANNED	
SURVEYED	
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DATE	
BY	
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PLANNED	
NOTED	

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 23	94-00087-00-BR	HANCOCK	43	6
ROAD DIST.	ILLINOIS			

CONTRACT NO. : 93401



SHOULDER AND GUARDRAIL DETAIL

STEEL PLATE BEAM GUARD RAIL, TYPE A
 17' RT. STA. 310+85.42 TO 15' RT. STA. 311+10.42 = 25 FOOT
 17' LT. STA. 310+85.42 TO 15' LT. STA. 311+10.42 = 25 FOOT
 15' RT. STA. 315+57.58 TO 16' RT. STA. 315+70.08 = 12.5 FOOT
 15' LT. STA. 315+57.58 TO 17' LT. STA. 315+82.58 = 25 FOOT
 TOTAL = 87.5 FOOT

TRAFFIC BARRIER TERMINAL, TYPE 5A
 15' RT. STA. 311+10.42 TO 15' RT. STA. 311+23.67 = 1 EACH
 15' LT. STA. 311+10.42 TO 15' LT. STA. 311+23.67 = 1 EACH
 15' RT. STA. 315+44.33 TO 15' RT. STA. 315+57.58 = 1 EACH
 15' LT. STA. 315+44.33 TO 15' LT. STA. 315+57.58 = 1 EACH
 TOTAL = 4 EACH

TRAFFIC BARRIER TERMINAL, TYPE 2
 17' LT. STA. 310+71.15 TO 17' LT. STA. 310+85.42 = 1 EACH
 16' RT. STA. 315+70.08 TO 17' RT. STA. 315+84.35 = 1 EACH
 TOTAL = 2 EACH

TRAFFIC BARRIER TERMINAL, TYPE 1, SPECIAL (TANGENT)
 18' RT. STA. 310+35.42 TO 17' RT. STA. 310+85.42 = 1 EACH
 17' LT. STA. 315+82.58 TO 18' LT. STA. 316+32.58 = 1 EACH
 TOTAL = 2 EACH

LEGEND

NOTE : ALL DIMENSIONS REFER TO FRONT FACE OF PROPOSED RAILING.

- ① TRAFFIC BARRIER TERMINAL, TYPE 5A
- ② TRAFFIC BARRIER TERMINAL, TYPE 2
- ③ STEEL PLATE BEAM GUARD RAIL, TYPE A
- ④ TRAFFIC BARRIER TERMINAL, TYPE 1, SPECIAL (TANGENT)

SHOULDER AND GUARDRAIL DETAILS

C.H. 23
 SECTION 94-00087-00-BR
 HANCOCK COUNTY
 STATION 313+34

4440 ASH GROVE
 SPRINGFIELD, ILL. 62711
 (217) 795-8600
 oasinc@famvid.com

OZYURT AND STONE, INC.
 CONSULTING ENGINEERS

JOB NO.: 0319
 FILE: shldr.dgn
 DATE: 08-24-05

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 429 C.H. 23	94-00087 -00-BR	HANCOCK	43	7
ROAD DIST.	ILLINOIS			

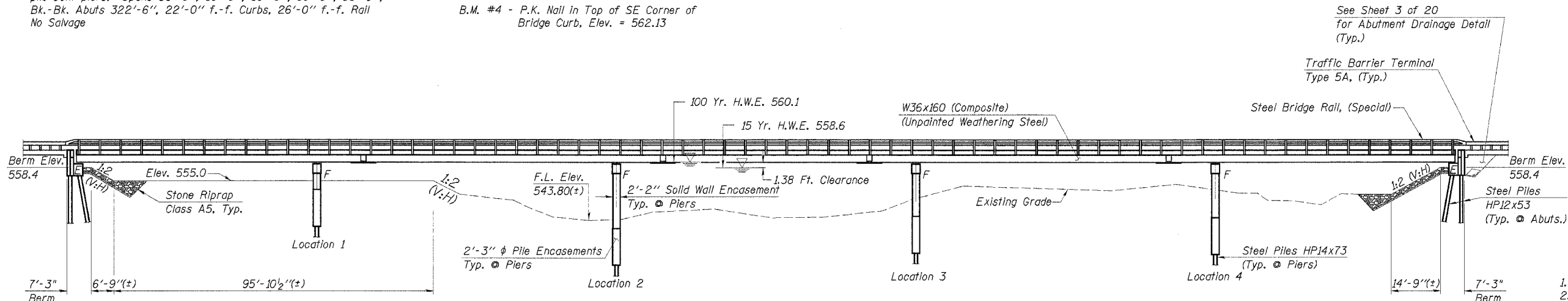
Contract No. 93401
Sheet 1 of 20

Existing Structure No. 034-3230

Sta. 314+03.25 - 5-Span Continuous Steel Wide Flange Beam Bridge (W27x106) with Concrete Deck on closed timber abutments & concrete pile bent piers. Spans 56'-0", 69'-0", 69'-0", 69'-0", 56'-0"; Bk.-Bk. Abuts 322'-6", 22'-0" f.-f. Curbs, 26'-0" f.-f. Rail No Salvage

B.M. Descriptions

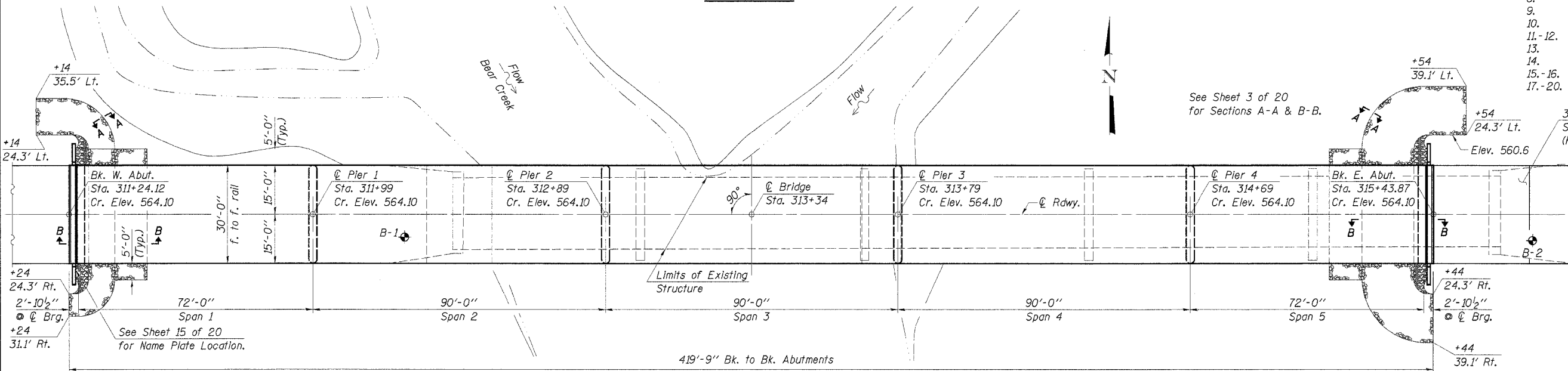
B.M. #3 - Spike in Wingwall Post
12' Rt. Sta. 312+26, Elev. = 563.60
B.M. #4 - P.K. Nail in Top of SE Corner of Bridge Curb, Elev. = 562.13



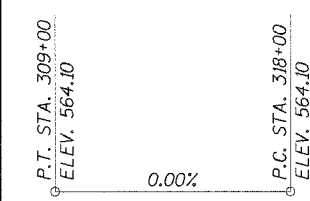
ELEVATION

INDEX OF SHEETS

1. General Plan & Elevation
2. General Notes & Bill of Materials
3. Miscellaneous Details
- 4.-7. Top of Slab Elevations
8. Superstructure
9. Expansion Joint Details
10. Steel Bridge Rail (Special)
- 11.-12. Structural Steel
13. Bearing Details
14. Anchor Bolt Details
- 15.-16. Abutments
- 17.-20. Piers



PLAN



PROFILE GRADE

DESIGNED	A.R.K.
CHECKED	S.F.M., F.J.S.
DRAWN	S.A.P.
CHECKED	A.R.K., F.J.S.

LOADING HS20-44
Allow 25#/sq. ft. for future wearing surface.

WATERWAY INFORMATION

Drainage Area	127.73 Sq. Mi.
Existing Opening (15 Yr.)	2,618 Sq. Ft.
Required Opening (15 Yr.)	3,149 Sq. Ft.
Proposed Opening (15 Yr.)	3,149 Sq. Ft.
Design Discharge (15 Yr.)	8,325 C.F.S.
Created Head (15 Yr.)	0.1 Ft.
100 Year Discharge	12,950 C.F.S.
100 Yr. Created Head	0.2 Ft.

Construction Permits: The requirements of the IDNR - Office of Water Resources have been fulfilled in accordance with Statewide Permit No. 2

DESIGN SPECIFICATIONS

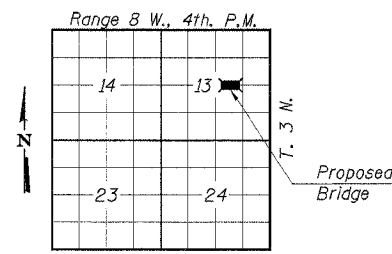
2002 AASHTO

DESIGN STRESSES

$f'_c = 3,500$ p.s.i. (Concrete)
 $f_y = 60,000$ p.s.i. (Reinforcement Bars)
 $f_y = 50,000$ p.s.i. AASHTO M270 GR 50W (Structural Steel)

SEISMIC DATA

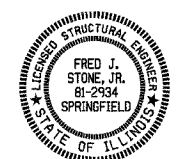
Seismic Performance Category (S.P.C.) = A
Bedrock Acceleration Coefficient (A) = 0.04
Site Coefficient (S) = 1.0



LOCATION PLAN

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

Fred J. Stone, Jr. (10-12-05)
ILLINOIS STRUCTURAL NO. 2934 (Expires 11/30/06)



**BEAR CREEK
BUILT 200 BY
HANCOCK COUNTY
SEC. 94-00087-00-BR
F.A. PROJ. BRS-429(102)
LOADING HS20
STR. NO. 034-3231**

LETTERING FOR NAME PLATE
See Std. 515001

GENERAL PLAN & ELEVATION

SECTION 94-00087-00-BR
COUNTY HIGHWAY 23 - FAS ROUTE 429
HANCOCK COUNTY
STA. 313+34

4440 ASH GROVE SPRINGFIELD, IL 62711 (217) 793-8600 oasinc@famvid.com	OZYURT AND STONE, INC. CONSULTING ENGINEERS	JOB NO.: 0319 FILE: GPE.DGN DATE: 10/12/05
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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 429 C.H. 23	94-00087 -00-BR	HANCOCK	43	8
ROAD DIST.	ILLINOIS			

Contract No. 93401
Sheet 2 of 20

GENERAL NOTES

Fasteners shall be high strength bolts (AASHTO M 164, Type 3). Bolts $\frac{7}{8}$ " ϕ , open holes $\frac{7}{8}$ " ϕ , unless otherwise noted.

Calculated weight of Structural Steel = 377,050 Pound AASHTO M270 Grade 50W

All structural steel shall be AASHTO M 270 Grade 50W.

AASHTO M 270 Grade 50W structural steel shall only be painted, for a distance of three times the depth of the beams (but not exceeding 10 feet) each way from deck joints. All structural steel shall be cleaned as specified in the Special Provision "Surface Preparation and Painting Requirements for Weathering Steel."

Field welding of construction accessories will not be permitted to the bottom flange of beams nor to the top flange for a distance equal to one-fourth the span length each way from the pier supports. Field welding in other areas will be permitted only when approved by the Engineer.

Anchor bolts shall be set before bolting diaphragms over supports.

The structural steel bearing plates of the Elastomeric Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 50W.

The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are the wide flange beams, and all splice plate material except fill plates.

Reinforcement bars shall conform to the requirements of AASHTO M-31 or M-322, Grade 60.

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

The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the abutments.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $\frac{1}{8}$ inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two $\frac{1}{8}$ " adjusting shims, of the dimension of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims.

The contractor shall drive one steel HP12x53 test pile in a permanent location at each abutment and one steel HP14x73 test pile in a permanent location at each pier as directed by the Engineer before ordering the remainder of piles.

Bridge Seat Sealer shall be applied to the seat area of the abutments.

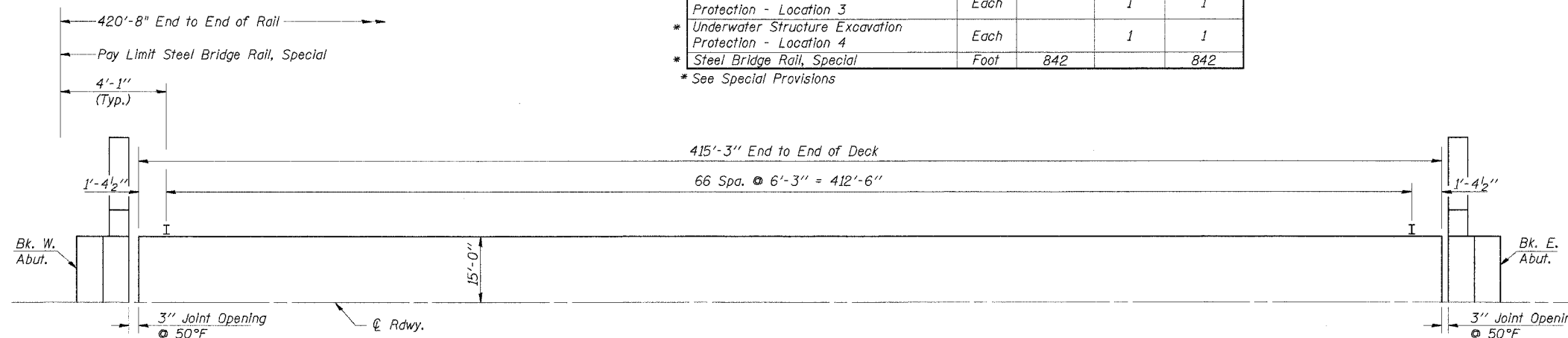
All exposed portions of abutments, wing walls, and piers shall receive a rubbed finish in accordance with Article 503.16 (b) of the standard specifications. Cost to be included in cost of Concrete Structures.

See Proposal for soil boring information.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment	Cu. Yd.		124	124
Stone Riprap, Class A5	Ton		490	490
Filter Fabric	Sq. Yd.		389	389
Removal of Existing Structures	Each		1	1
Structure Excavation	Cu. Yd.		292	292
Neoprene Expansion Joint 4"	Foot	60		60
Concrete Structures	Cu. Yd.		202.7	202.7
Concrete Superstructure	Cu. Yd.	355.9		355.9
Bridge Deck Grooving	Sq. Yd.	1,384		1,384
Protective Coat	Sq. Yd.	1,527	14	1,541
* Elastomeric Bearing Assembly, Type II	Each		10	10
* Furnishing and Erecting Structural Steel	L. Sum	1		1
Stud Shear Connectors	Each	4,530		4,530
* Reinforcement Bars, Epoxy Coated	Pound	82,490	15,070	97,560
Furnishing Steel Piles HP12x53	Foot		976	976
Furnishing Steel Piles HP14x73	Foot		2,160	2,160
Driving Steel Piles	Foot		3,136	3,136
Test Pile Steel HP12x53	Each		2	2
Test Pile Steel HP14x73	Each		4	4
Concrete Encasement	Cu. Yd.		64.6	64.6
Name Plates	Each		1	1
Bridge Seat Sealer	Sq. Ft.		166	166
* Underwater Structure Excavation Protection - Location 1	Each		1	1
* Underwater Structure Excavation Protection - Location 2	Each		1	1
* Underwater Structure Excavation Protection - Location 3	Each		1	1
* Underwater Structure Excavation Protection - Location 4	Each		1	1
* Steel Bridge Rail, Special	Foot	842		842

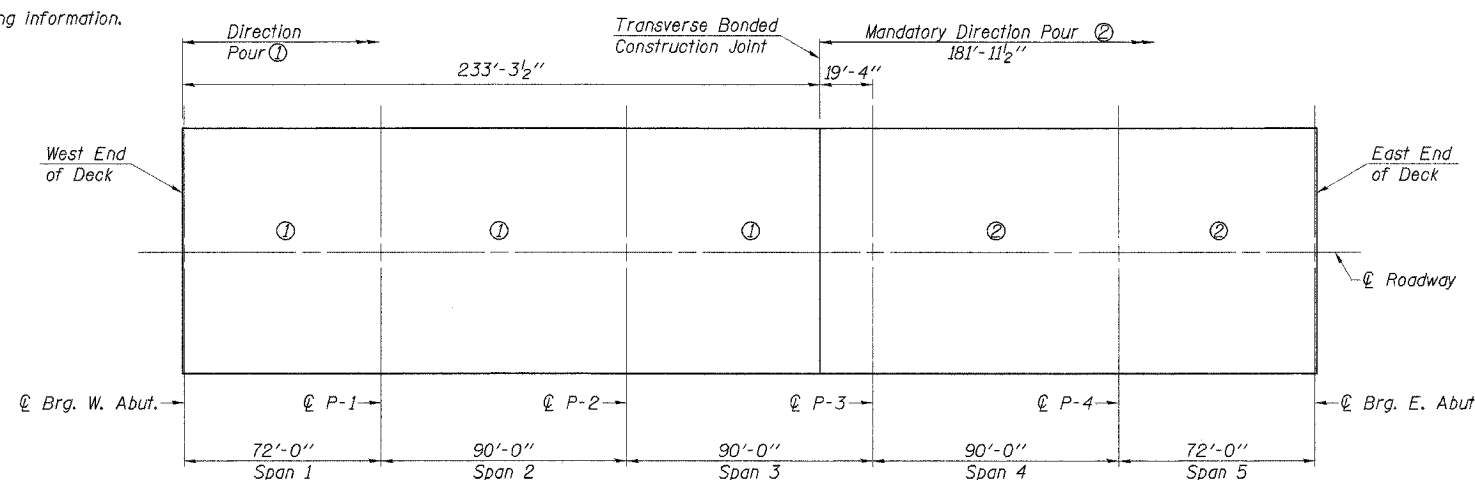
* See Special Provisions



PLAN - RAIL POST SPACING

POURING SEQUENCE NOTES:

- The deck shall be poured in the numerical sequence indicated.
- When the deck pour is stopped for the day at one or more of the Transverse Bonded Construction Joints in the deck pouring sequence as shown, the next pour shall not be made until both of the following requirements are met:
 - At least 72 hours shall have elapsed from the end of the previous pour.
 - The concrete strength shall have attained a minimum modulus of rupture of 650 p.s.i. or a minimum compressive strength or 3500 p.s.i.



DECK POURING SEQUENCE

DESIGNED	A.R.K.
CHECKED	S.F.M., F.J.S.
DRAWN	S.A.P.
CHECKED	A.R.K., F.J.S.

GENERAL NOTES & BILL OF MATERIAL

SECTION 94-00087-00-BR
COUNTY HIGHWAY 23 - FAS ROUTE 429
HANCOCK COUNTY
STA. 313+34

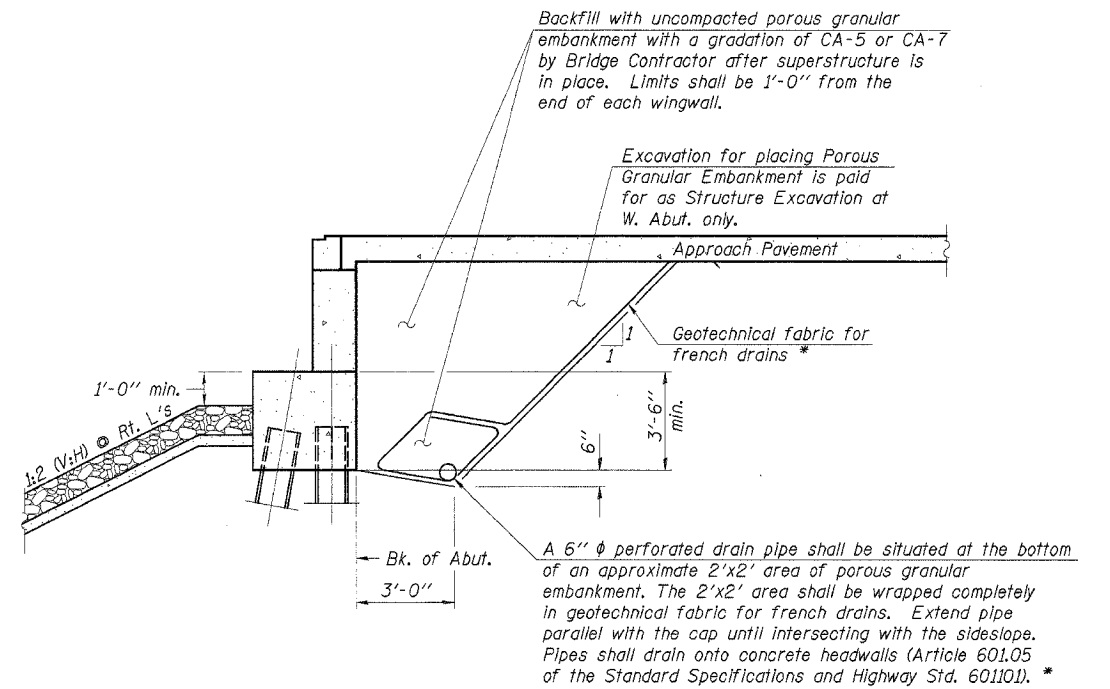
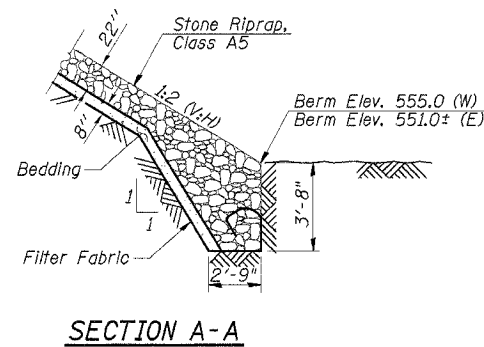
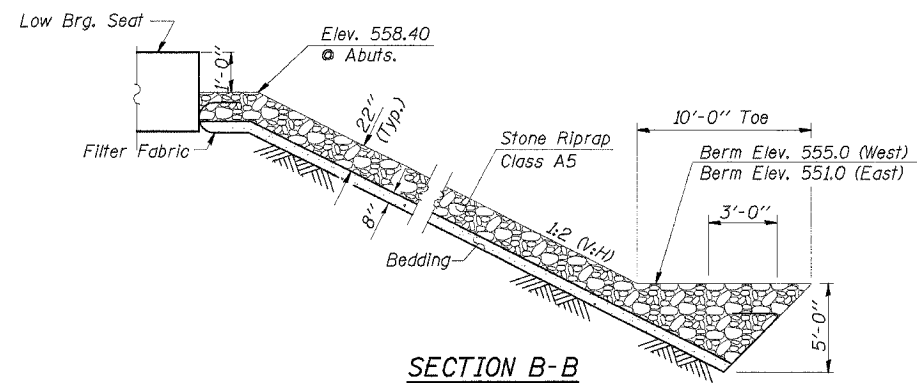
4440 ASH GROVE
SPRINGFIELD, IL 62711
(217) 793-8600
oasinc@tamvic.com

OZYURT AND STONE, INC.
CONSULTING ENGINEERS

JOB NO.: 0399
FILE: 03190NOTES.DWG
DATE: 10/12/05

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 429 C.H. 23	94-00087 -00-BR	HANCOCK	43	9
ROAD DIST.		ILLINOIS		

Contract No. 93401
Sheet 3 of 20



* Included in the cost of Porous Granular Embankment.

DESIGNED	A.R.K.
CHECKED	S.F.M., F.J.S.
DRAWN	S.A.P.
CHECKED	A.R.K., F.J.S.

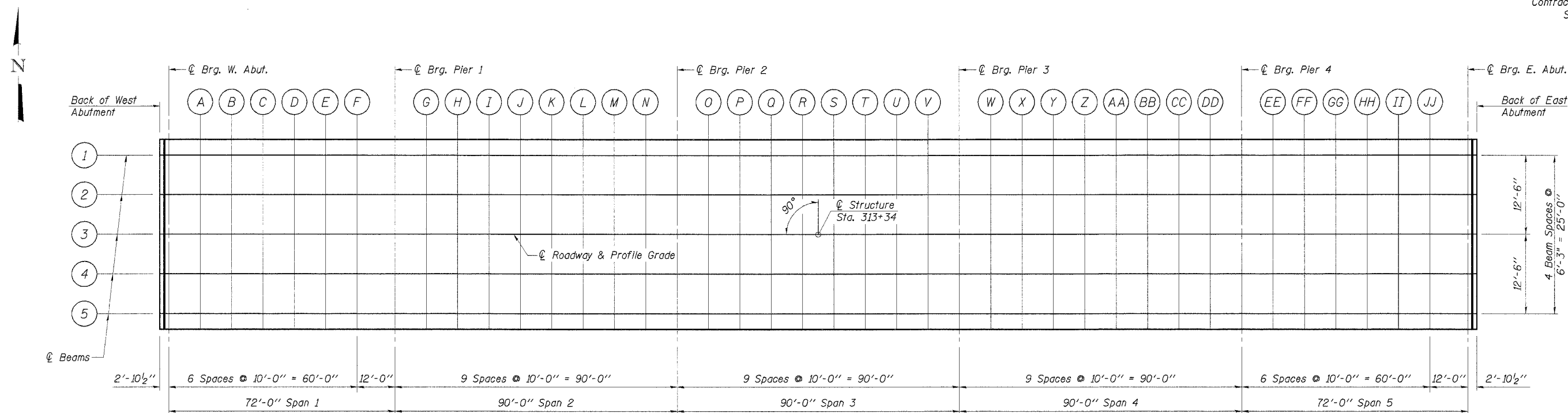
MISCELLANEOUS DETAILS

SECTION 94-00087-00-BR
COUNTY HIGHWAY 23 - FAS ROUTE 429
HANCOCK COUNTY
STA. 313+34

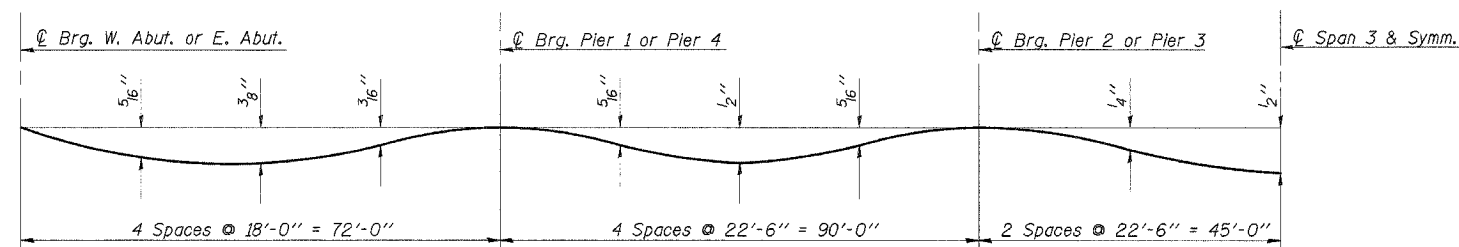
4440 ASH GROVE SPRINGFIELD, IL 62711 (217) 793-8600 oasinc@tamvid.com	OZYURT AND STONE, INC. CONSULTING ENGINEERS	JOB NO.: 0319 FILE: 0319DETAIL.DGN DATE: 08/24/05
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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 429	94-00087	HANCOCK	43	10
C.H. 23	-00-BR			
ROAD DIST.	ILLINOIS			

Contract No. 93401
Sheet 4 of 20



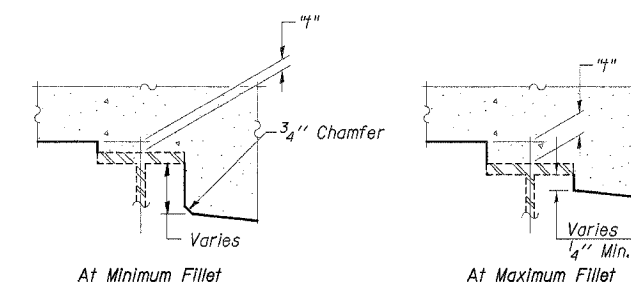
PLAN



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only)

Note: The above deflections are not to be used in the field if the Engineer is working from the grade elevations adjusted for dead load deflections as shown on sheets 5, 6, & 7 of 20.



To determine "h": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown above. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on Sheet 5, 6, & 7 of 20, minus slab thickness, equals the fillet heights "h" above top of beam flange.

FILLET HEIGHTS

DESIGNED	A.R.K.
CHECKED	S.F.M., F.J.S.
DRAWN	S.A.P.
CHECKED	A.R.K., F.J.S.

TOP OF SLAB ELEVATIONS	
SECTION 94-00087-00-BR COUNTY HIGHWAY 23 - FAS ROUTE 429 HANCOCK COUNTY STA. 313+34	
4440 ASH GROVE SPRINGFIELD, IL 62711 (217) 793-8600 oasinc@amvic.com	OZYURT AND STONE, INC. CONSULTING ENGINEERS
JOB NO.: 0319 FILE: 0319SLABEL1.DGN DATE: 08/24/05	

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 429 C.H. 23	94-00087 -00-BR	HANCOCK	43	11
ROAD DIST.	ILLINOIS			

Contract No. 93401
Sheet 5 of 20

BEAM 1

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION
Bk. W. Abut.	31124.125	-12.500	563.905	563.905
⊕ Brg. W. Abut	31127.000	-12.500	563.905	563.905
A	31137.000	-12.500	563.905	563.921
B	31147.000	-12.500	563.905	563.934
C	31157.000	-12.500	563.905	563.937
D	31167.000	-12.500	563.905	563.935
E	31177.000	-12.500	563.905	563.924
F	31187.000	-12.500	563.905	563.915
⊕ Brg. Pier 1	31199.000	-12.500	563.905	563.905
G	31209.000	-12.500	563.905	563.916
H	31219.000	-12.500	563.905	563.927
I	31229.000	-12.500	563.905	563.936
J	31239.000	-12.500	563.905	563.945
K	31249.000	-12.500	563.905	563.945
L	31259.000	-12.500	563.905	563.936
M	31269.000	-12.500	563.905	563.927
N	31279.000	-12.500	563.905	563.916
⊕ Brg. Pier 2	31289.000	-12.500	563.905	563.905
O	31299.000	-12.500	563.905	563.915
P	31309.000	-12.500	563.905	563.926
Q	31319.000	-12.500	563.905	563.935
R	31329.000	-12.500	563.905	563.943
S	31339.000	-12.500	563.905	563.943
T	31349.000	-12.500	563.905	563.935
U	31359.000	-12.500	563.905	563.926
V	31369.000	-12.500	563.905	563.915
⊕ Brg. Pier 3	31379.000	-12.500	563.905	563.905
W	31389.000	-12.500	563.905	563.916
X	31399.000	-12.500	563.905	563.927
Y	31409.000	-12.500	563.905	563.936
Z	31419.000	-12.500	563.905	563.945
AA	31429.000	-12.500	563.905	563.945
BB	31439.000	-12.500	563.905	563.936
CC	31449.000	-12.500	563.905	563.927
DD	31459.000	-12.500	563.905	563.916
⊕ Brg. Pier 4	31469.000	-12.500	563.905	563.905
EE	31479.000	-12.500	563.905	563.914
FF	31489.000	-12.500	563.905	563.922
GG	31499.000	-12.500	563.905	563.933
HH	31509.000	-12.500	563.905	563.937
II	31519.000	-12.500	563.905	563.934
JJ	31529.000	-12.500	563.905	563.924
⊕ Brg. E. Abut.	31541.000	-12.500	563.905	563.905
Bk. E. Abut.	31543.875	-12.500	563.905	563.905

BEAM 2

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION
Bk. W. Abut.	31124.125	-6.250	564.003	564.003
⊕ Brg. W. Abut	31127.000	-6.250	564.003	564.003
A	31137.000	-6.250	564.003	564.018
B	31147.000	-6.250	564.003	564.031
C	31157.000	-6.250	564.003	564.034
D	31167.000	-6.250	564.003	564.032
E	31177.000	-6.250	564.003	564.022
F	31187.000	-6.250	564.003	564.013
⊕ Brg. Pier 1	31199.000	-6.250	564.003	564.003
G	31209.000	-6.250	564.003	564.014
H	31219.000	-6.250	564.003	564.025
I	31229.000	-6.250	564.003	564.034
J	31239.000	-6.250	564.003	564.042
K	31249.000	-6.250	564.003	564.042
L	31259.000	-6.250	564.003	564.034
M	31269.000	-6.250	564.003	564.024
N	31279.000	-6.250	564.003	564.013
⊕ Brg. Pier 2	31289.000	-6.250	564.003	564.003
O	31299.000	-6.250	564.003	564.013
P	31309.000	-6.250	564.003	564.023
Q	31319.000	-6.250	564.003	564.032
R	31329.000	-6.250	564.003	564.040
S	31339.000	-6.250	564.003	564.040
T	31349.000	-6.250	564.003	564.032
U	31359.000	-6.250	564.003	564.023
V	31369.000	-6.250	564.003	564.013
⊕ Brg. Pier 3	31379.000	-6.250	564.003	564.003
W	31389.000	-6.250	564.003	564.013
X	31399.000	-6.250	564.003	564.024
Y	31409.000	-6.250	564.003	564.034
Z	31419.000	-6.250	564.003	564.042
AA	31429.000	-6.250	564.003	564.042
BB	31439.000	-6.250	564.003	564.034
CC	31449.000	-6.250	564.003	564.025
DD	31459.000	-6.250	564.003	564.014
⊕ Brg. Pier 4	31469.000	-6.250	564.003	564.003
EE	31479.000	-6.250	564.003	564.011
FF	31489.000	-6.250	564.003	564.020
GG	31499.000	-6.250	564.003	564.030
HH	31509.000	-6.250	564.003	564.035
II	31519.000	-6.250	564.003	564.032
JJ	31529.000	-6.250	564.003	564.021
⊕ Brg. E. Abut.	31541.000	-6.250	564.003	564.003
Bk. E. Abut.	31543.875	-6.250	564.003	564.003

DESIGNED	A.R.K.
CHECKED	S.F.M., F.J.S.
DRAWN	S.A.P.
CHECKED	A.R.K., F.J.S.

TOP OF SLAB ELEVATIONS

SECTION 94-00087-00-BR
COUNTY HIGHWAY 23 - FAS ROUTE 429
HANCOCK COUNTY
STA. 313+34

4440 ASH GROVE SPRINGFIELD, IL 62711 (217) 993-8600 oasinc@famvid.com	OZYURT AND STONE, INC. CONSULTING ENGINEERS	JOB NO.: 0319 FILE: 0319SLABEL2.DGN DATE: 08/24/05
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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 429	94-00087	HANCOCK	43	12
C.H. 23	-00-BR			
ROAD DIST.	ILLINOIS			

Contract No. 93401
Sheet 6 of 20

☉ ROADWAY & PROFILE GRADE (BEAM 3)

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION
Bk. W. Abut.	31124.125	.000	564.100	564.100
☉ Brg. W. Abut	31127.000	.000	564.100	564.100
A	31137.000	.000	564.100	564.116
B	31147.000	.000	564.100	564.129
C	31157.000	.000	564.100	564.132
D	31167.000	.000	564.100	564.130
E	31177.000	.000	564.100	564.119
F	31187.000	.000	564.100	564.110
☉ Brg. Pier 1	31199.000	.000	564.100	564.100
G	31209.000	.000	564.100	564.111
H	31219.000	.000	564.100	564.122
I	31229.000	.000	564.100	564.131
J	31239.000	.000	564.100	564.140
K	31249.000	.000	564.100	564.140
L	31259.000	.000	564.100	564.131
M	31269.000	.000	564.100	564.122
N	31279.000	.000	564.100	564.111
☉ Brg. Pier 2	31289.000	.000	564.100	564.100
O	31299.000	.000	564.100	564.110
P	31309.000	.000	564.100	564.121
Q	31319.000	.000	564.100	564.130
R	31329.000	.000	564.100	564.138
S	31339.000	.000	564.100	564.138
T	31349.000	.000	564.100	564.130
U	31359.000	.000	564.100	564.121
V	31369.000	.000	564.100	564.110
☉ Brg. Pier 3	31379.000	.000	564.100	564.100
W	31389.000	.000	564.100	564.111
X	31399.000	.000	564.100	564.122
Y	31409.000	.000	564.100	564.131
Z	31419.000	.000	564.100	564.140
AA	31429.000	.000	564.100	564.140
BB	31439.000	.000	564.100	564.131
CC	31449.000	.000	564.100	564.122
DD	31459.000	.000	564.100	564.111
☉ Brg. Pier 4	31469.000	.000	564.100	564.100
EE	31479.000	.000	564.100	564.109
FF	31489.000	.000	564.100	564.117
GG	31499.000	.000	564.100	564.128
HH	31509.000	.000	564.100	564.132
II	31519.000	.000	564.100	564.129
JJ	31529.000	.000	564.100	564.119
☉ Brg. E. Abut.	31541.000	.000	564.100	564.100
Bk. E. Abut.	31543.875	.000	564.100	564.100

BEAM 4

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION
Bk. W. Abut.	31124.125	6.250	564.003	564.003
☉ Brg. W. Abut	31127.000	6.250	564.003	564.003
A	31137.000	6.250	564.003	564.018
B	31147.000	6.250	564.003	564.031
C	31157.000	6.250	564.003	564.034
D	31167.000	6.250	564.003	564.032
E	31177.000	6.250	564.003	564.022
F	31187.000	6.250	564.003	564.013
☉ Brg. Pier 1	31199.000	6.250	564.003	564.003
G	31209.000	6.250	564.003	564.014
H	31219.000	6.250	564.003	564.025
I	31229.000	6.250	564.003	564.034
J	31239.000	6.250	564.003	564.042
K	31249.000	6.250	564.003	564.042
L	31259.000	6.250	564.003	564.034
M	31269.000	6.250	564.003	564.024
N	31279.000	6.250	564.003	564.013
☉ Brg. Pier 2	31289.000	6.250	564.003	564.003
O	31299.000	6.250	564.003	564.013
P	31309.000	6.250	564.003	564.023
Q	31319.000	6.250	564.003	564.032
R	31329.000	6.250	564.003	564.040
S	31339.000	6.250	564.003	564.040
T	31349.000	6.250	564.003	564.032
U	31359.000	6.250	564.003	564.023
V	31369.000	6.250	564.003	564.013
☉ Brg. Pier 3	31379.000	6.250	564.003	564.003
W	31389.000	6.250	564.003	564.013
X	31399.000	6.250	564.003	564.024
Y	31409.000	6.250	564.003	564.034
Z	31419.000	6.250	564.003	564.042
AA	31429.000	6.250	564.003	564.042
BB	31439.000	6.250	564.003	564.034
CC	31449.000	6.250	564.003	564.025
DD	31459.000	6.250	564.003	564.014
☉ Brg. Pier 4	31469.000	6.250	564.003	564.003
EE	31479.000	6.250	564.003	564.011
FF	31489.000	6.250	564.003	564.020
GG	31499.000	6.250	564.003	564.030
HH	31509.000	6.250	564.003	564.035
II	31519.000	6.250	564.003	564.032
JJ	31529.000	6.250	564.003	564.021
☉ Brg. E. Abut.	31541.000	6.250	564.003	564.003
Bk. E. Abut.	31543.875	6.250	564.003	564.003

DESIGNED	A.R.K.
CHECKED	S.F.M., F.J.S.
DRAWN	S.A.P.
CHECKED	A.R.K., F.J.S.

TOP OF SLAB ELEVATIONS

SECTION 94-00087-00-BR
COUNTY HIGHWAY 23 - FAS ROUTE 429
HANCOCK COUNTY
STA. 313+34

4440 ASH GROVE SPRINGFIELD, IL 62711 (217) 793-8600 ossinc@famvid.com	OZYURT AND STONE, INC. CONSULTING ENGINEERS	JOB NO.: 0319 FILE: 0319SLABEL3.DGN DATE: 08/24/05
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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 429 C.H. 23	94-00087 -00-BR	HANCOCK	43	13
ROAD DIST.	ILLINOIS			

Contract No. 93401
Sheet 7 of 20

BEAM 5

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION
Bk. W. Abut.	31124.125	12.500	563.905	563.905
⊕ Brg. W. Abut	31127.000	12.500	563.905	563.905
A	31137.000	12.500	563.905	563.921
B	31147.000	12.500	563.905	563.934
C	31157.000	12.500	563.905	563.937
D	31167.000	12.500	563.905	563.935
E	31177.000	12.500	563.905	563.924
F	31187.000	12.500	563.905	563.915
⊕ Brg. Pier 1	31199.000	12.500	563.905	563.905
G	31209.000	12.500	563.905	563.916
H	31219.000	12.500	563.905	563.927
I	31229.000	12.500	563.905	563.936
J	31239.000	12.500	563.905	563.945
K	31249.000	12.500	563.905	563.945
L	31259.000	12.500	563.905	563.936
M	31269.000	12.500	563.905	563.927
N	31279.000	12.500	563.905	563.916
⊕ Brg. Pier 2	31289.000	12.500	563.905	563.905
O	31299.000	12.500	563.905	563.915
P	31309.000	12.500	563.905	563.926
Q	31319.000	12.500	563.905	563.935
R	31329.000	12.500	563.905	563.943
S	31339.000	12.500	563.905	563.943
T	31349.000	12.500	563.905	563.935
U	31359.000	12.500	563.905	563.926
V	31369.000	12.500	563.905	563.915
⊕ Brg. Pier 3	31379.000	12.500	563.905	563.905
W	31389.000	12.500	563.905	563.916
X	31399.000	12.500	563.905	563.927
Y	31409.000	12.500	563.905	563.936
Z	31419.000	12.500	563.905	563.945
AA	31429.000	12.500	563.905	563.945
BB	31439.000	12.500	563.905	563.936
CC	31449.000	12.500	563.905	563.927
DD	31459.000	12.500	563.905	563.916
⊕ Brg. Pier 4	31469.000	12.500	563.905	563.905
EE	31479.000	12.500	563.905	563.914
FF	31489.000	12.500	563.905	563.922
GG	31499.000	12.500	563.905	563.933
HH	31509.000	12.500	563.905	563.937
II	31519.000	12.500	563.905	563.934
JJ	31529.000	12.500	563.905	563.924
⊕ Brg. E. Abut.	31541.000	12.500	563.905	563.905
Bk. E. Abut.	31543.875	12.500	563.905	563.905

DESIGNED	A.R.K.
CHECKED	S.F.M., F.J.S.
DRAWN	S.A.P.
CHECKED	A.R.K., F.J.S.

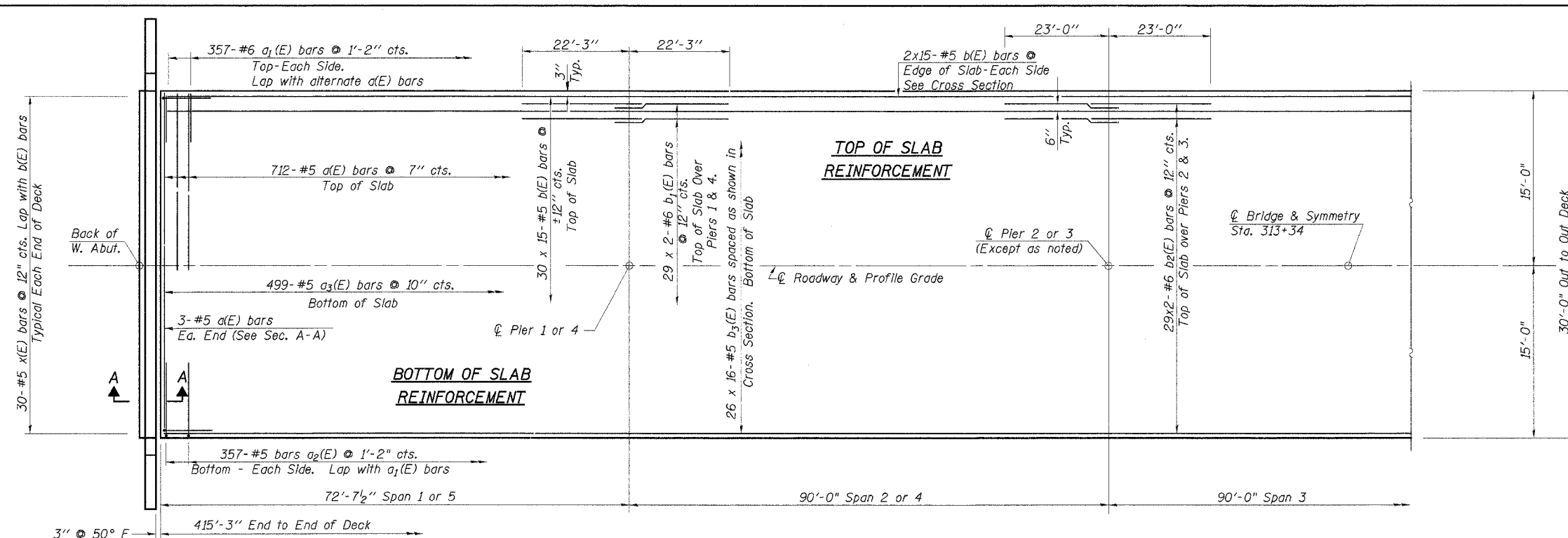
TOP OF SLAB ELEVATIONS

SECTION 94-00087-00-BR
COUNTY HIGHWAY 23 - FAS ROUTE 429
HANCOCK COUNTY
STA. 313+34

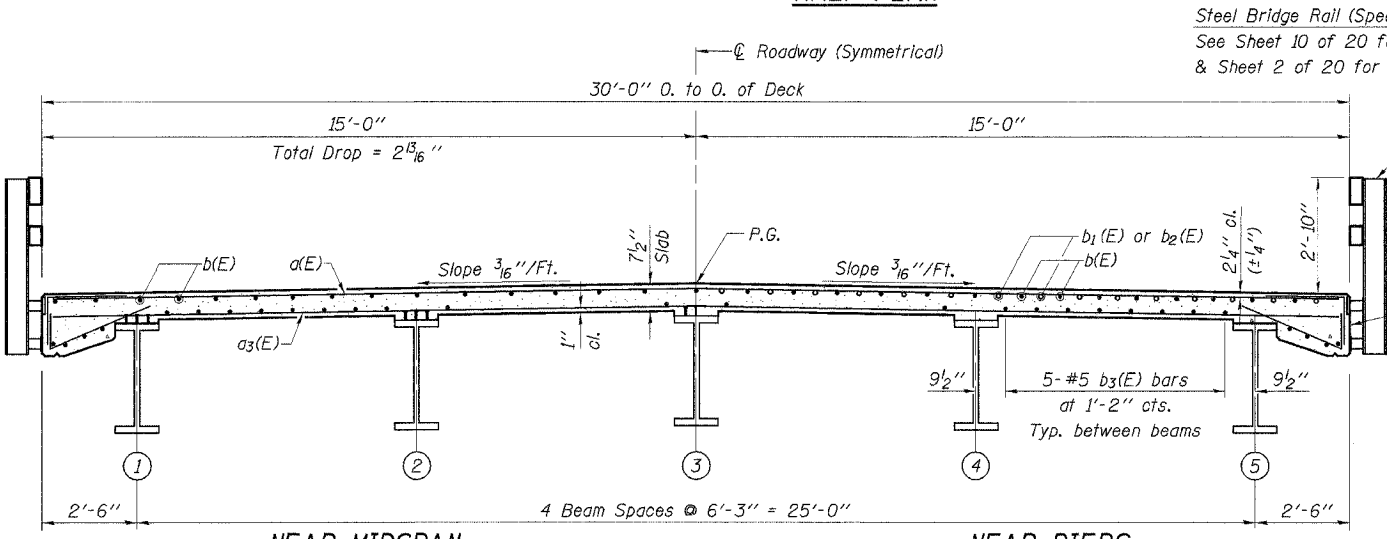
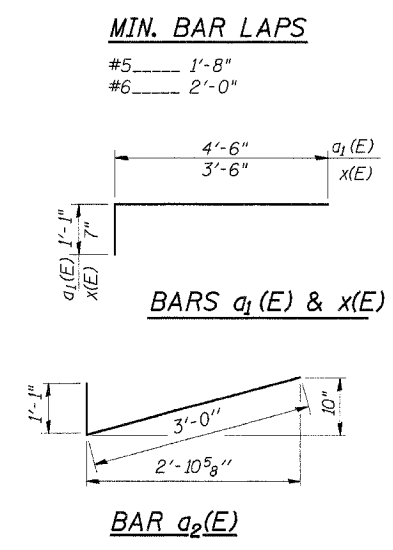
4440 ASH GROVE SPRINGFIELD, IL 62711 (217) 993-6600 oasinc@famvid.com	OZYURT AND STONE, INC. CONSULTING ENGINEERS	JOB NO.: 0319 FILE: 0319SLABEL4.DGN DATE: 08/24/05
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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 429	94-00087	HANCOCK	43	14
C.H. 23	-00-BR			
ROAD DIST.	ILLINOIS			

Contract No. 93401
Sheet 8 of 20

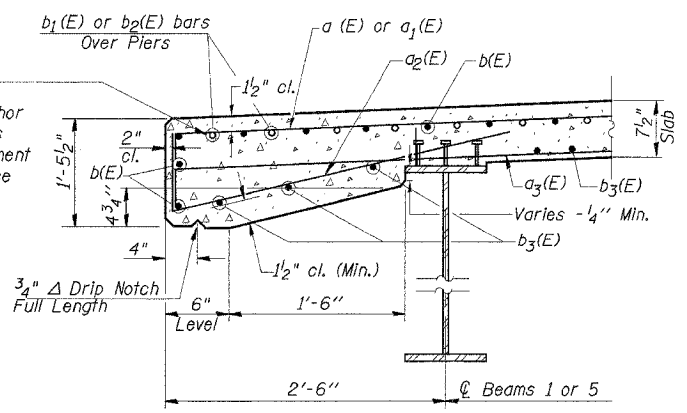


HALF PLAN

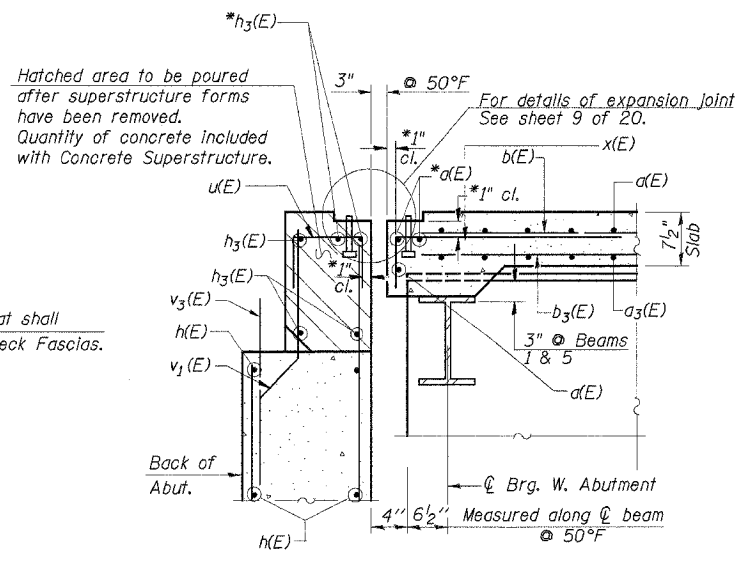


CROSS SECTION
(Looking East)

Reinforcement bars in the top of the deck shall be placed with a 1 1/2" minimum clearance in the area of the rail post anchor devices. The studs of the anchor device shall be placed below the top reinforcement bars a(E) and a1(E) and the outermost longitudinal reinforcement bar b(E) shall be placed directly above the anchor device studs.



SECTION THRU EDGE OF SLAB



SECTION A-A
(Shown @ West Abutment
East Abutment similar)

* Place a(E) and h3(E) bars in back of anchor bolts as shown as required to maintain 1" cl. (+0" - 1/8"). Anchor bolts should be tied to a(E) and h3(E) bars.

SUPERSTRUCTURE
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	718	#5	29'-8"	—
a1(E)	714	#6	5'-7"	—
a2(E)	714	#5	4'-1"	—
a3(E)	499	#5	29'-4"	—
b(E)	510	#5	29'-3"	—
b1(E)	116	#6	23'-3"	—
b2(E)	116	#6	24'-0"	—
b3(E)	416	#5	27'-6"	—
x(E)	60	#5	4'-1"	—
Protective Coat		Sq. Yd.	1,527	
Conc. Superstructure		Cu. Yd.	355.9	
Reinforcement Bars, Epoxy Coated		Pound	82,490	
Bridge Deck Grooving		Sq. Yd.	1,384	

Reinforcement Bars designated (E) shall be epoxy coated.
Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with 3 lengths per line.

SUPERSTRUCTURE

SECTION 94-00087-00-BR
COUNTY HIGHWAY 23 - FAS ROUTE 429
HANCOCK COUNTY
STA. 313+34

DESIGNED	A.R.K.
CHECKED	S.F.M., F.J.S.
DRAWN	S.A.P.
CHECKED	A.R.K., F.J.S.

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OZYURT AND STONE, INC.
CONSULTING ENGINEERS

JOB NO.: 0319
FILE: 0319SUPER.DGN
DATE: 10/12/05

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 429 C.H. 23	94-00087 -00-BR	HANCOCK	43	15
ROAD DIST.	ILLINOIS			

Contract No. 93401
Sheet 9 of 20

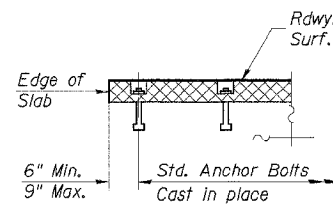
Joint Size	"C" at 50°F	"D" at 50°F
2"	2"	1½" Min.
2½"	2½"	1¾" Min.
4"	3"	2½" Min.

© W. & E. Abuts.

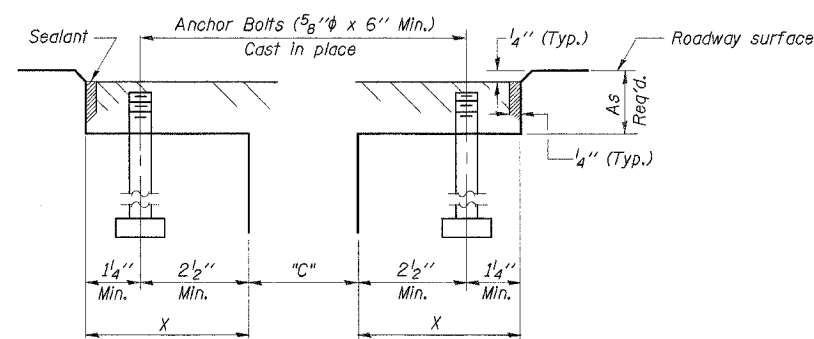
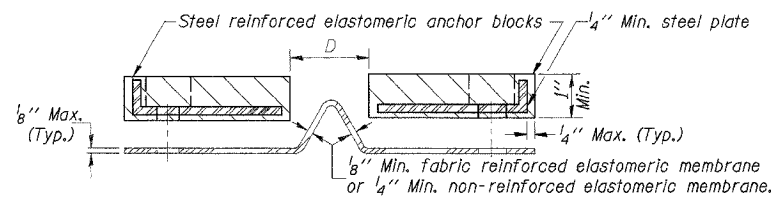
INSTALLATION NOTES

- ① Install continuous seal in roadway.
- ② Install anchor blocks as indicated.

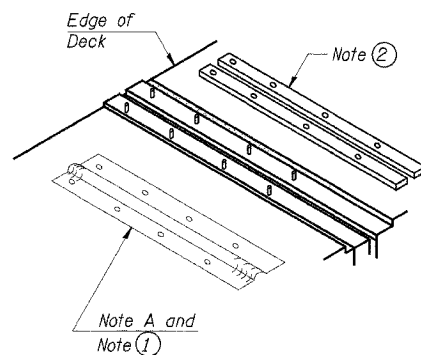
NOTE A: Maximum spacing of anchor bolts shall be 12" centers.



AT EDGE OF SLAB



**CROSS SECTION
NEOPRENE EXPANSION JOINT**



AT EDGE OF DECK

GENERAL NOTES

Continuous Seal Neoprene Expansion Joint shall consist of molded anchor blocks of elastomer and steel, field assembled over continuous lengths of elastomeric membrane.

The elastomeric membrane shall be premolded with a single or a double upward convolution that will have a "memory" to return to its molded position upon joint closure.

The convolution length shall be such that the extended length will not be greater than the manufactured length when the joint is fully expanded in its design range and will not protrude above the anchor blocks when the joint is fully compressed.

Joint openings shall be adjusted in accordance with Article 503.10(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Neoprene Expansion Joint 4"	Foot	60

DESIGNED	A.R.K.
CHECKED	S.F.M., F.J.S.
DRAWN	S.A.P.
CHECKED	A.R.K., F.J.S.

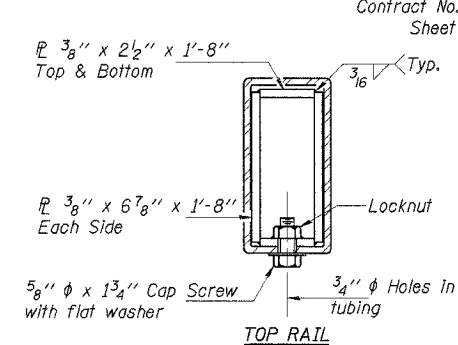
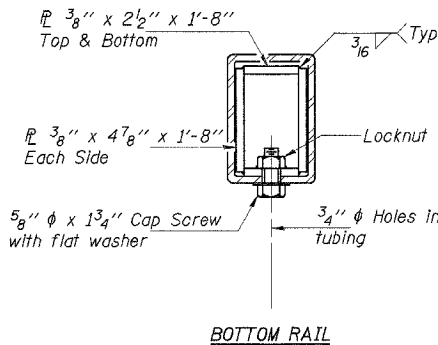
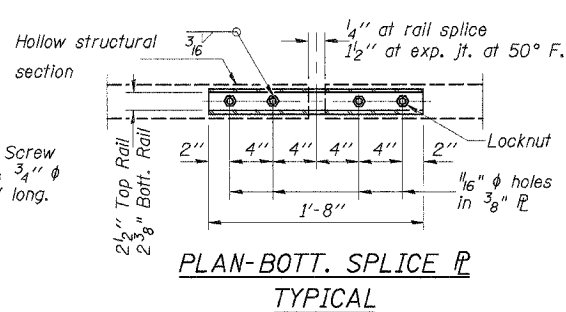
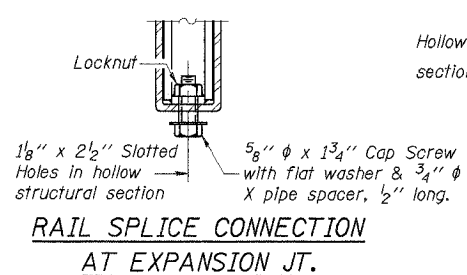
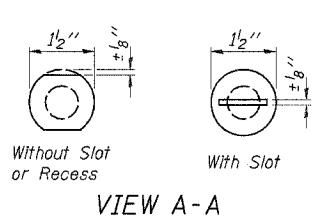
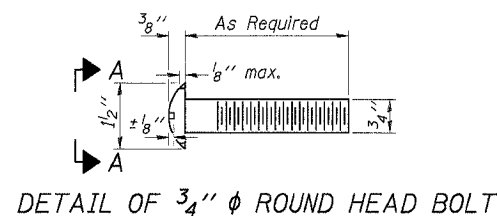
EXPANSION JOINT DETAIL

SECTION 94-00087-00-BR
COUNTY HIGHWAY 23 - FAS ROUTE 429
HANCOCK COUNTY
STA. 313+34

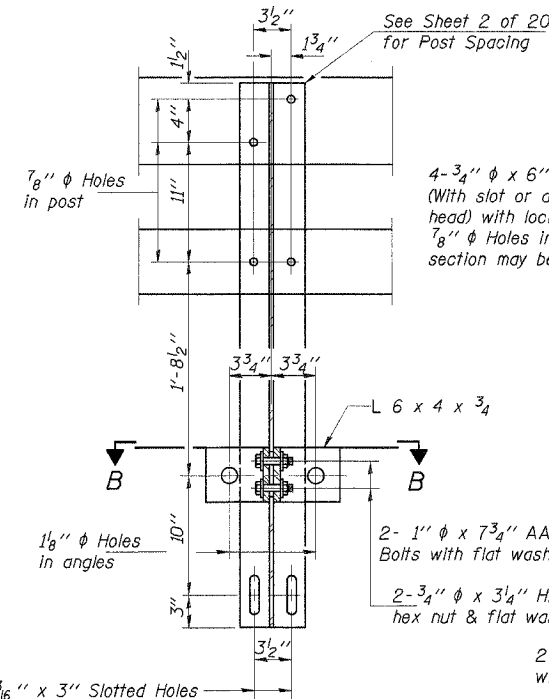
4440 ASH GROVE SPRINGFIELD, IL 62711 (217) 793-8600 oasinc@amvid.com	OZYURT AND STONE, INC. CONSULTING ENGINEERS	JOB NO.: 0319 FILE: 0319JOINT.DGN DATE: 08/24/05
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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 429	94-00087	HANCOCK	43	16
C.H. 23	-00-BR			
ROAD DIST.	ILLINOIS			

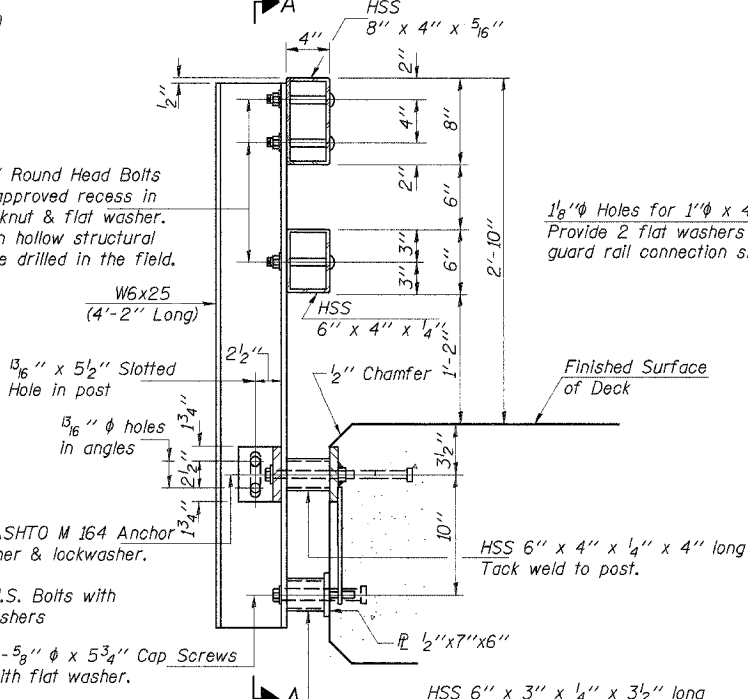
Contract No. 93401
Sheet 10 of 20



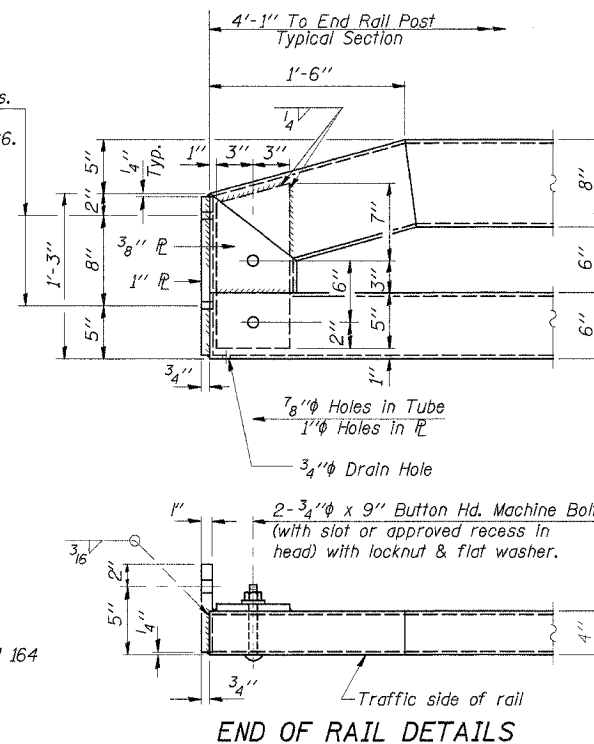
SECTIONS AT RAIL SPLICE



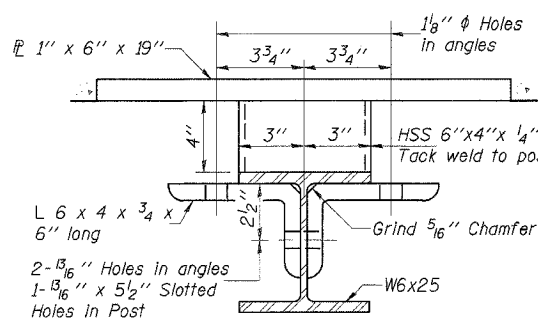
SECTION A-A



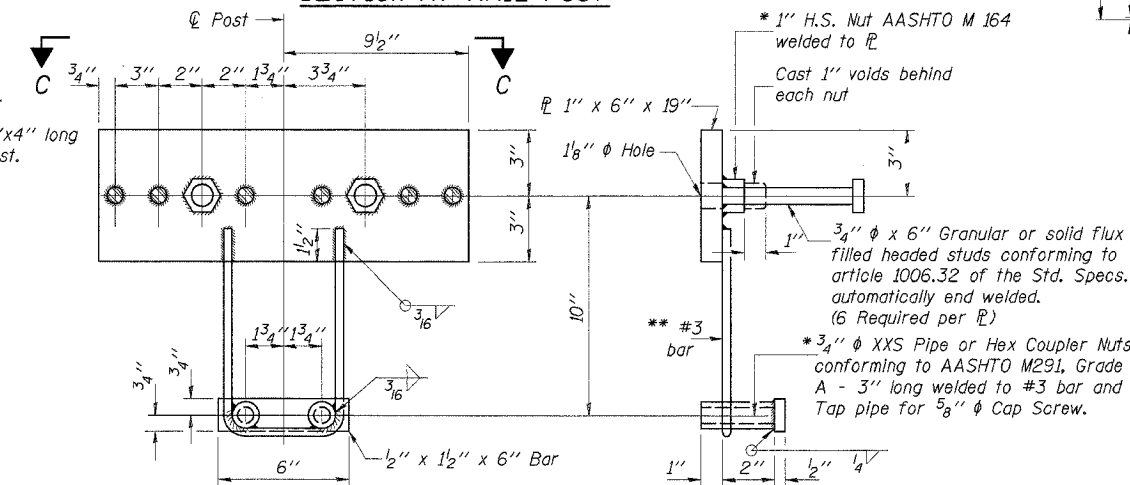
SECTION AT RAIL POST



END OF RAIL DETAILS



SECTION B-B



ANCHOR DEVICE

* Threaded areas shall be plugged or blocked off during casting of beam. Galvanized after fabrication.

** 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".

NOTES

Hollow structural sections shall conform to the requirements of ASTM designation A 500 Grade B Structural Steel Tubing and shall meet the longitudinal CVN requirements of 15 ft-lbs at 0° F.
All other steel shapes and plates shall conform to the requirements of AASHTO M 270 Grade 36 except posts and angles shall conform to AASHTO M 270, Grade 50.
Bolts, cap screws, and nuts shall conform to the requirements of ASTM designation A 307 except for high strength bolts, nuts and washers noted which shall conform to AASHTO M 164.
All bolts, nuts, cap screws, washers and lock washers shall be galvanized according to AASHTO M 232.
All posts, railing, rail splices, anchor devices and angles shall be galvanized after shop fabrication according to AASHTO M 111 and ASTM A 385. Galvanized rail shall not be painted.
Railing shall be according to Section 509 of the Standard Specifications, except as noted, and will be paid for at the contract unit price per foot for Steel Bridge Rail, Special.
All field drilled holes shall be coated with an approved zinc rich paint before erection.
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 included with Steel Bridge Rail, Type SM.
The 1/2" x 7" x 6" plates that come in contact with concrete shall receive two coats of asphalt paint conforming to Section 1060.07 Type II or place 1/8" fabric bearing pads between the plates and concrete.
The 3/4" high strength bolts used to connect the 6 x 4 x 3/4 angles to the post shall be tightened according to Article 505.04(FX2) of the Standard Specifications. The 1" 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" cap screws in bottom of posts shall be tightened to a snug fit only.

NOTE:
See Sheet 2 of 20 for Post Spacing

BILL OF MATERIAL

Item	Unit	Quantity
Steel Bridge Rail, Special	Foot	842

STEEL BRIDGE RAIL, SPECIAL

SECTION 94-00087-00-BR
COUNTY HIGHWAY 23 - FAS ROUTE 429
HANCOCK COUNTY
STA. 313+34

DESIGNED	A.R.K.
CHECKED	S.F.M., F.J.S.
DRAWN	S.A.P.
CHECKED	A.R.K., F.J.S.

R-34 9-01-03 (6'-3" Maximum Post Spacing)

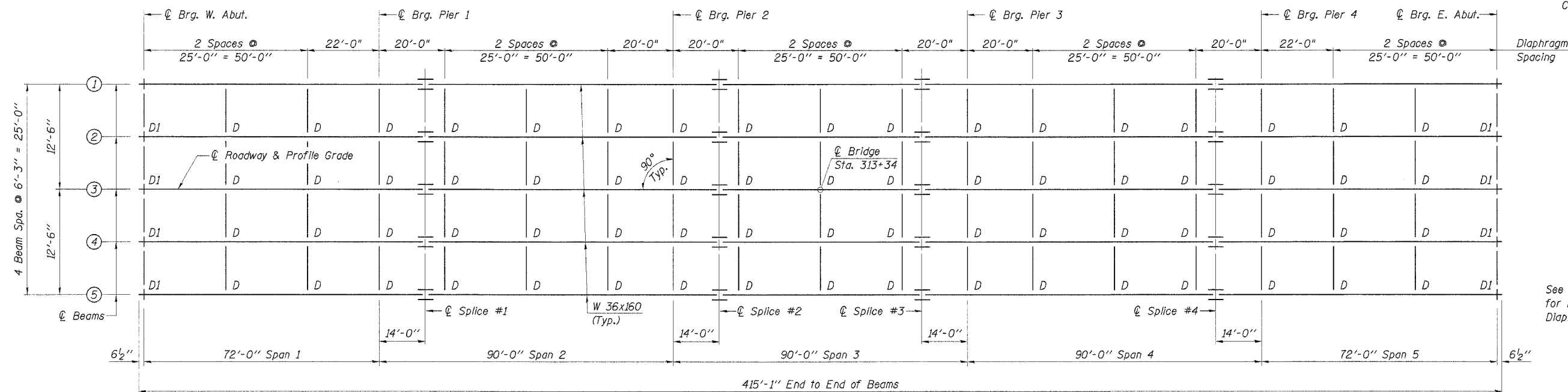
4440 ASH GROVE
SPRINGFIELD, IL 62711
(217) 793-8600
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OZYURT AND STONE, INC.
CONSULTING ENGINEERS

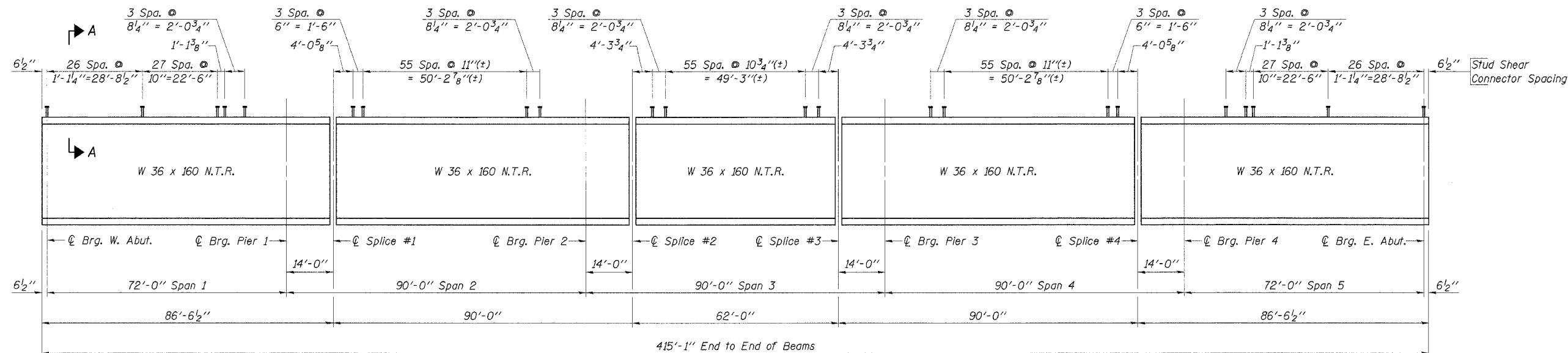
JOB NO.: 0319
FILE: 0319RAIL.DGN
DATE: 08/24/05

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 429	94-00087	HANCOCK	43	17
C.H. 23	-00-BR			
ROAD DIST.	ILLINOIS			

Contract No. 93401
Sheet 11 of 20



FRAMING PLAN

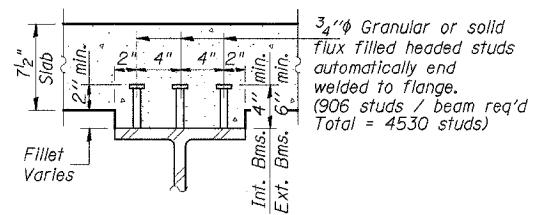


ELEVATION

N.T.R. denotes sections to which notch toughness requirements are applicable.

TOP OF BEAM ELEVATIONS
(For fabrication only)

	Beam 1 or 5	Beam 2 or 4	Beam 3
⊖ Brg. W. Abut.	562.98	563.25	563.34
⊖ Brg. Pier 1	562.98	563.25	563.34
Splice #1	562.98	563.25	563.34
⊖ Brg. Pier 2	562.98	563.25	563.34
Splice #2	562.98	563.25	563.34
Splice #3	562.98	563.25	563.34
⊖ Brg. Pier 3	562.98	563.25	563.34
Splice #4	562.98	563.25	563.34
⊖ Brg. Pier 4	562.98	563.25	563.34
⊖ Brg. E. Abut.	562.98	563.25	563.34



SECTION A-A

Typical Shear Connector Detail

DESIGNED	A.R.K.
CHECKED	S.F.M., F.J.S.
DRAWN	S.A.P.
CHECKED	A.R.K., F.J.S.

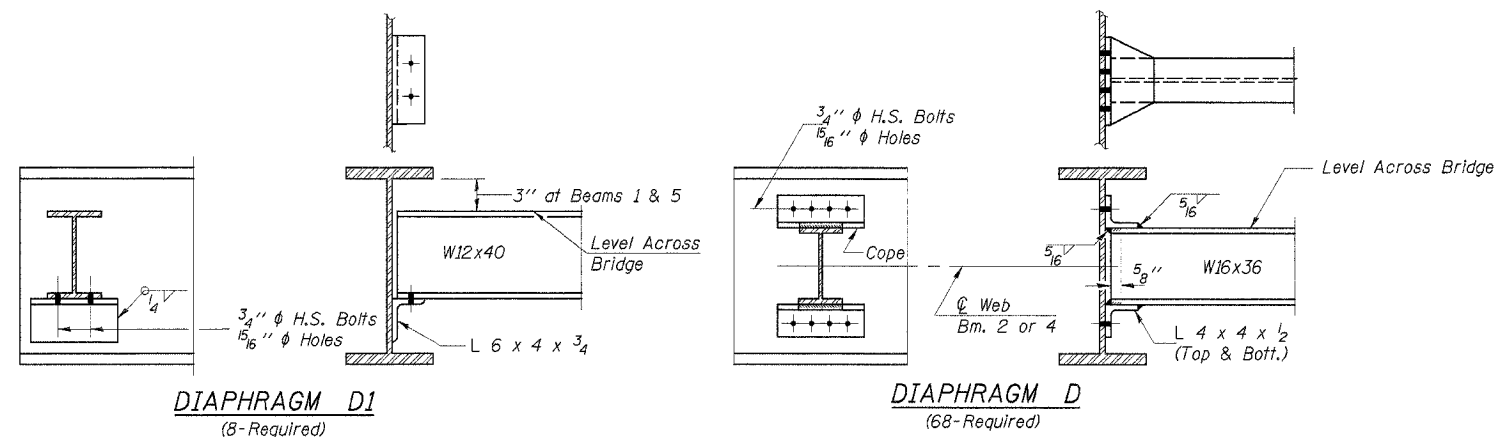
STRUCTURAL STEEL
SECTION 94-00087-00-BR
COUNTY HIGHWAY 23 - FAS ROUTE 429
HANCOCK COUNTY
STA. 313+34

4440 ASH GROVE
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OZYURT AND STONE, INC.
CONSULTING ENGINEERS

JOB NO.: 0319
FILE: 0319STEEL.DGN
DATE: 08/24/05

See Sheet 12 of 20
for Beam Splice and
Diaphragm Details.

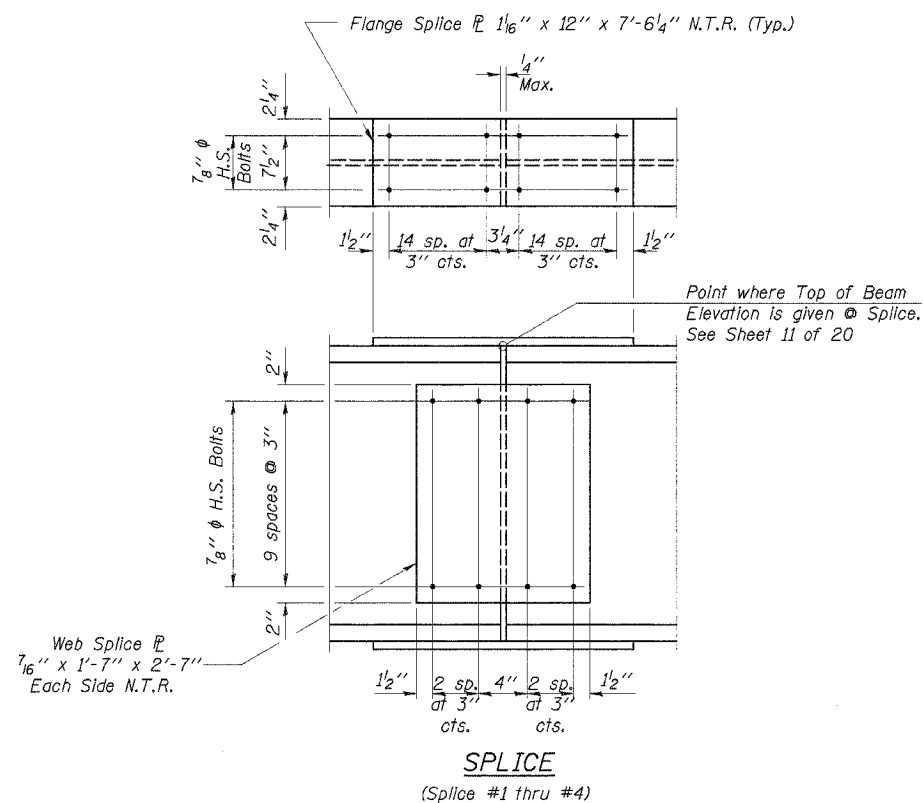


Note:
Two hardened washers shall be required over all oversize holes for diaphragms.

	0.4 Span 1 or 0.6 Span 5	Pier 1 or Pier 4	0.5 Span 2 or Span 4	Pier 2 or Pier 3	0.5 Span 3
I_s	(in ⁴) 9,750	9,750	9,750	9,750	9,750
I_c (n)	(in ⁴) 23,350	—	23,350	—	23,350
I_c (sn)	(in ⁴) 17,026	—	17,026	—	17,026
S_s	(in ³) 542	542	542	542	542
S_c (n)	(in ³) 760	—	760	—	760
S_c (sn)	(in ³) 684	—	684	—	684
\bar{D}	(k/ft.) 1.025	1.265	1.025	1.265	1.025
M_R	(k) 366	817	351	841	343
s_R	(k/ft.) 0.240	—	0.240	—	0.240
$M_s R$	(k) 94	—	101	—	97
M_t	(k) 527	353	577	389	583
M (Imp)	(k) 134	86	134	90	135
$S_3[M_t + M(\text{Imp})]$	(k) 1,102	732	1,185	798	1,197
M_a	(k) 2,031	2,014	2,128	2,131	2,128
M_u	(k) 3,165	—	3,165	—	3,165
$f_s R$ non-comp (k.s.i.)	8.1	18.1	7.8	18.6	7.6
$f_s R$ (comp) (k.s.i.)	1.6	—	1.8	—	1.7
$f_s S_3$ (k+Imp) (k.s.i.)	17.4	16.2	18.7	17.7	18.9
f_s (Overload) (k.s.i.)	27.1	34.3	28.3	36.3	28.2
f_s (Total) (k.s.i.)	—	44.6	—	47.2	—
VR	(k) 51.4	—	41.0	—	40.9

	Abut.	Pier 1 or 4	Pier 2 or 3
R_R	(k) 34.2	113.6	114.1
R_t	(k) 37.3	51.6	53.8
Imp.	(k) 9.5	12.5	12.5
R (Total)	(k) 81.0	177.6	180.4

I_s and S_s are the moment of inertia and section modulus of the steel section used in computing f_s (Total & Overload).
 $I_c(n)$ and $S_c(n)$ are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.
 $I_c(sn)$ and $S_c(sn)$ are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads.
 VR is the maximum Live Load + Impact shear range in the composite portion of the span.
 M_a (Applied Moment) = $1.3[M_R + M_s R + S_3(M_t + M_{\text{Imp}})]$.
The plastic moment capacity (M_u) is computed according to AASHTO 10.48.1 and 10.50.1.1
 f_s (Overload) is the sum of the stresses due to $M_R + M_s R + S_3(M_t + M_{\text{Imp}})$.
 f_s (Total) (Non-compact section) is the sum of the stresses due to $1.3[M_R + M_s R + S_3(M_t + M_{\text{Imp}})]$.



DESIGNED	A.R.K.
CHECKED	S.F.M., F.J.S.
DRAWN	S.A.P.
CHECKED	A.R.K., F.J.S.

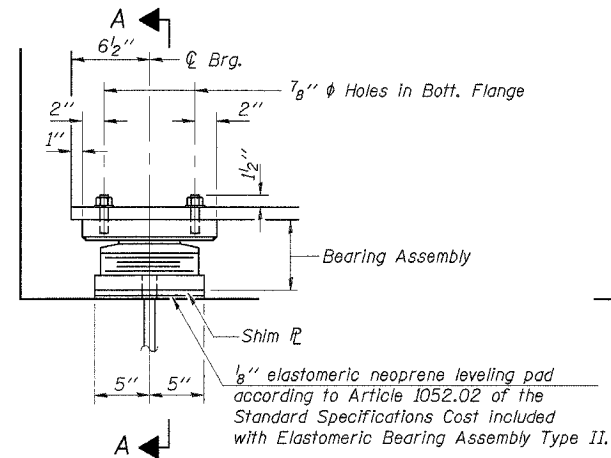
STRUCTURAL STEEL

SECTION 94-00087-00-BR
COUNTY HIGHWAY 23 - FAS ROUTE 429
HANCOCK COUNTY
STA. 313+34

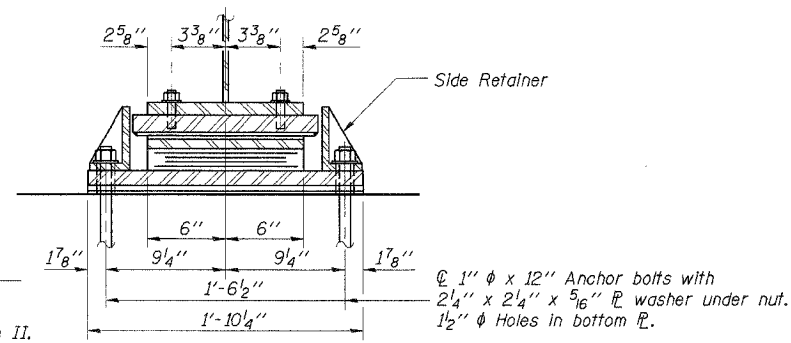
4440 ASH GROVE SPRINGFIELD, IL 62711 (217) 793-8600 oasinc@famvid.com	OZYURT AND STONE, INC. CONSULTING ENGINEERS
JOB NO.: 0319 FILE: 03BSTEEL2.DWG DATE: 08/24/05	

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 429	94-00087	HANCOCK	43	19
C.H. 23	-00-BR			
ROAD DIST.	ILLINOIS			

Contract No. 93401
Sheet 13 of 20



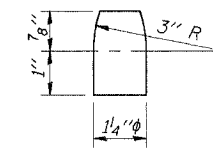
ELEVATION AT ABUT.



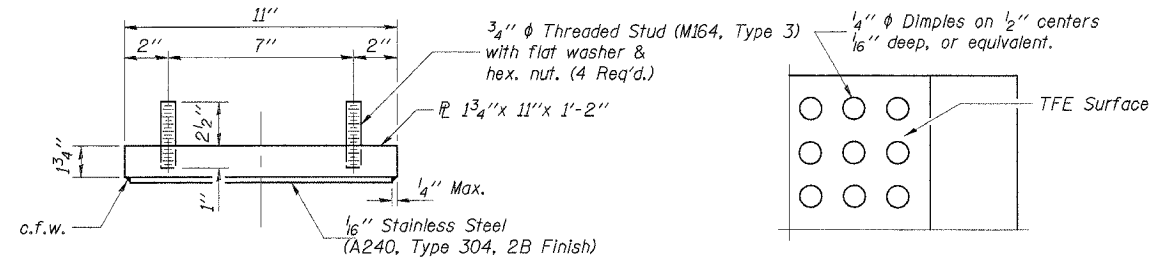
SECTION A-A

TYPE II ELASTOMERIC EXP. BRG.

(10 Required)

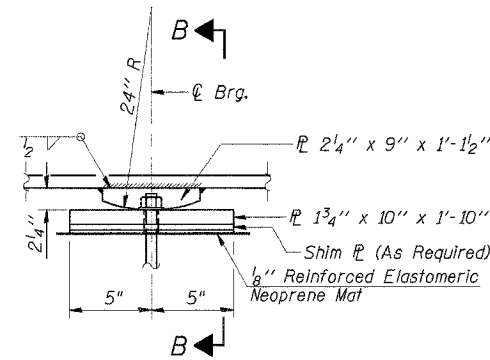


PINTLE

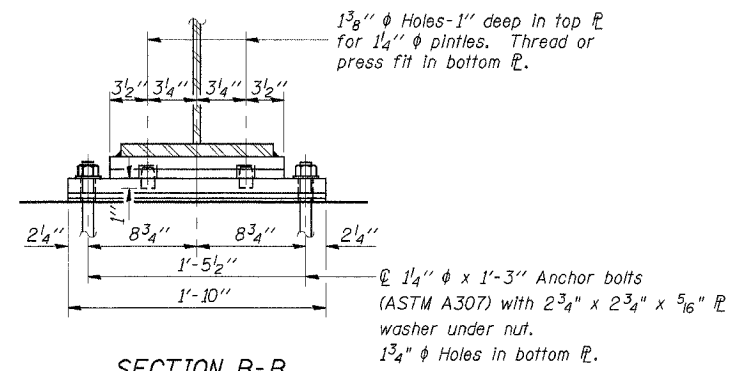


TOP BEARING ASSEMBLY

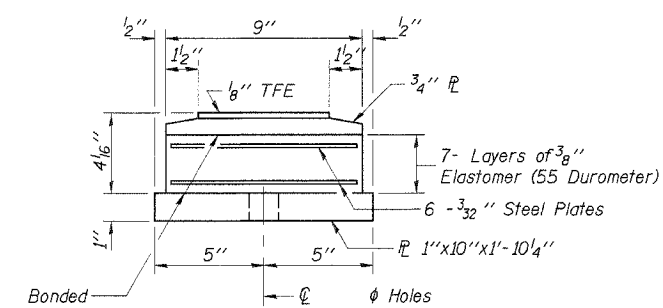
PLAN-TFE SURFACE



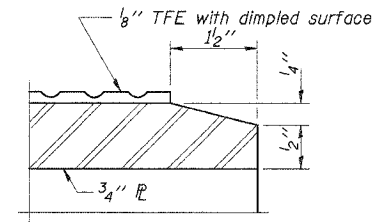
ELEVATION AT PIERS 1, 2, 3, & 4



SECTION B-B



BOTTOM BEARING ASSEMBLY



SECTION THRU TFE

FIXED BEARING

(20 Required)
Weight included with Structural Steel.

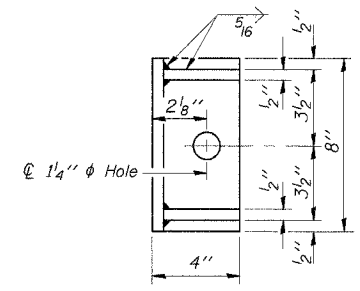
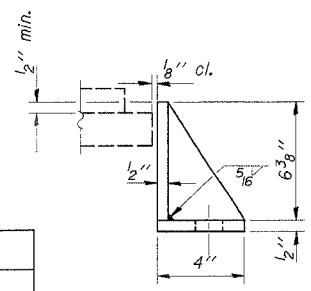
Notes: Anchor bolts at fixed bearings may be built into the masonry. See sheet 14 of 20 for Anchor Bolt installation.

Note: The 1/8" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of 1/8" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

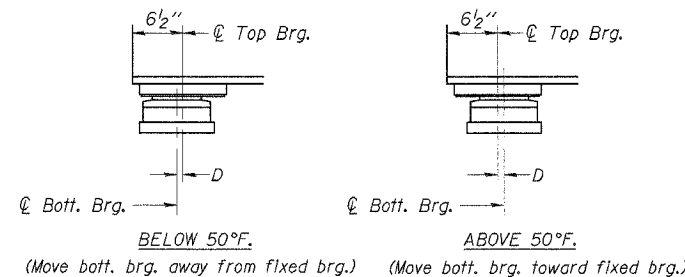
BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	10



SIDE RETAINER - ABUTMENTS

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with Structural Steel.



SETTING ANCHOR BOLTS AT EXP. BRG.

D = 1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

DESIGNED	A.R.K.
CHECKED	S.F.M., F.J.S.
DRAWN	S.A.P.
CHECKED	A.R.K., F.J.S.
I-2-E2	9-1-03

BEARING DETAILS

SECTION 94-00087-00-BR
COUNTY HIGHWAY 23 - FAS ROUTE 429
HANCOCK COUNTY
STA. 313+34

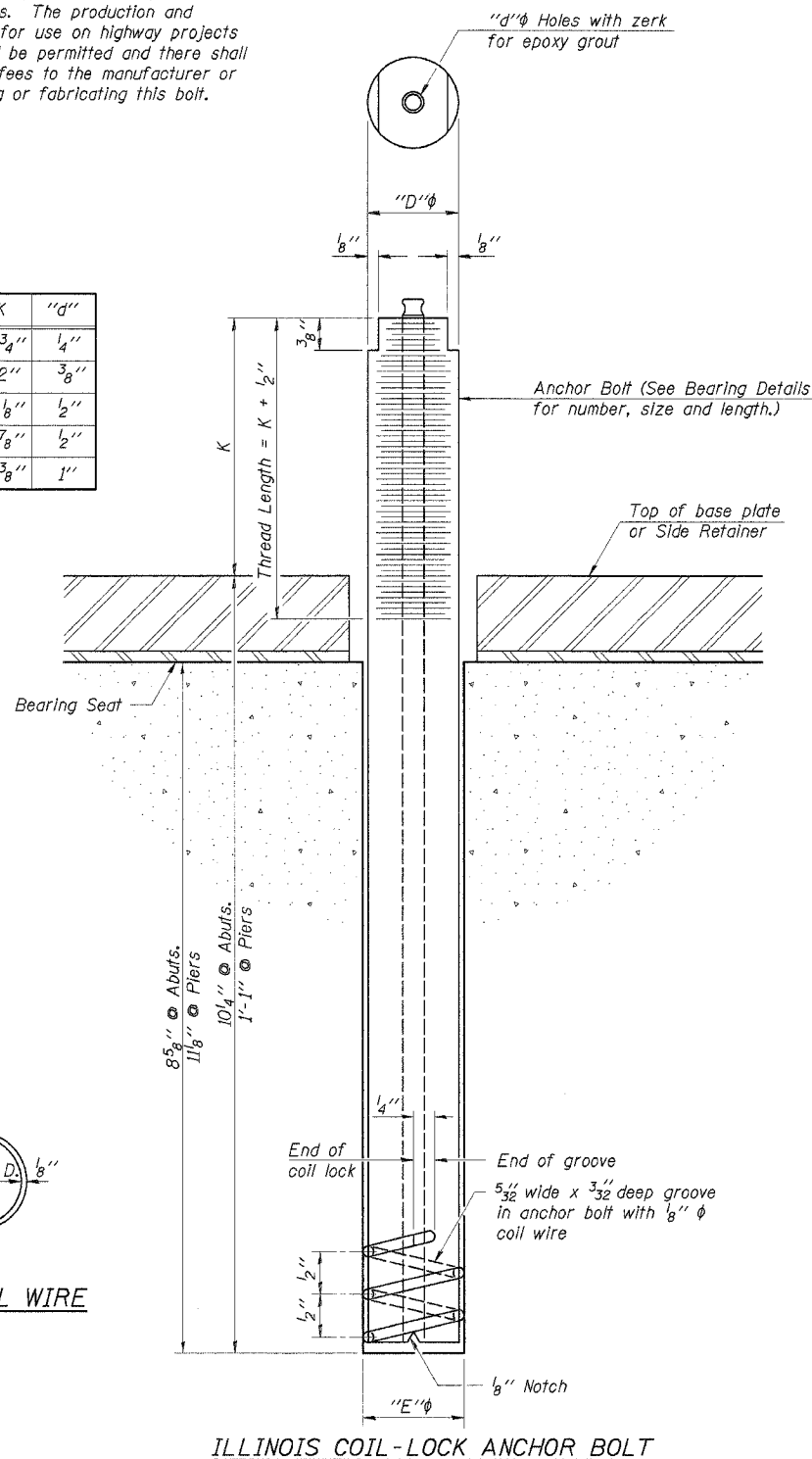
4440 ASH GROVE SPRINGFIELD, IL 62711 (217) 933-6600 oasinc@amvid.com	OZYURT AND STONE, INC. CONSULTING ENGINEERS	JOB NO.: 0319 FILE: 03BRBG.DGN DATE: 08/24/05
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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 429	94-00087	HANCOCK	43	20
C.H. 23	-00-BR			
ROAD DIST.	ILLINOIS			

Contract No. 93401
Sheet 14 of 20

The Illinois Coil-Lock Anchor Bolt is a proprietary item which is the property of the Illinois Department of Transportation. Use, reproduction or disclosure without express written permission is prohibited and protected under Federal copyright laws. The production and the fabrication of this bolt for use on highway projects in the State of Illinois shall be permitted and there shall be no incurred charges or fees to the manufacturer or the fabricator for producing or fabricating this bolt.

D	E	H	K	"d"
1"	1 1/8"	1 3/16"	1 3/4"	1/4"
1 1/4"	1 3/8"	1 1/16"	2"	3/8"
1 1/2"	1 5/8"	1 5/16"	2 1/8"	1/2"
2"	2 1/8"	1 3/16"	2 7/8"	1/2"
2 1/2"	2 5/8"	2 5/16"	3 3/8"	1"



ILLINOIS COIL-LOCK ANCHOR BOLT

MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A 519, Grade 1026, CW and supplied with hexagonal nuts and cut washers.
The coil wire shall be made of any suitable soft steel wire.
The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed.
The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C 881, Type I, Grade 1 and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

1. With the coil wire in place, the bolt shall be inserted into the hole and turned clockwise to a snug fit in the hole. Nut and washer shall be placed on the bolt. The nut shall be tensioned until the steel base plates are held securely to the concrete bearing seat.
2. Epoxy grout shall be pumped through the zerk fitting with a pressure gun. Pumping shall continue until the epoxy overflows the hole around the bolt shank. After pumping is discontinued, excess epoxy shall be immediately wiped off.

ALTERNATE ANCHOR BOLTS

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures.

- The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:
1. A threaded rod stud with nut and washer of the type specified.
 2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

Location	Type
Abuts.	A-307
Piers	A-307

ASTM F 1554 Grade 105, ASTM A 449 and AASHTO M 314 Grade 105 anchor bolts may be substituted for the anchor bolts shown above.

GENERAL NOTES

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or according to the manufacturer's recommendation after beams or girders have been erected and adjusted.
Prior to setting the bolts, the holes shall be dry and all dust and loose particles shall be removed by the use of compressed air or vacuuming.
The anchor bolts, furnished and installed and including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for Furnishing and Erecting Structural Steel.

DESIGNED	A.R.K.
CHECKED	S.F.M., F.J.S.
DRAWN	S.A.P.
CHECKED	A.R.K., F.J.S.

ABB-1 4-30-99

ANCHOR BOLT DETAILS

SECTION 94-00087-00-BR
COUNTY HIGHWAY 23 - FAS ROUTE 429
HANCOCK COUNTY
STA. 313+34

4440 ASH GROVE
SPRINGFIELD, ILL. 62711
(217) 793-8600
oasinc@famvid.com

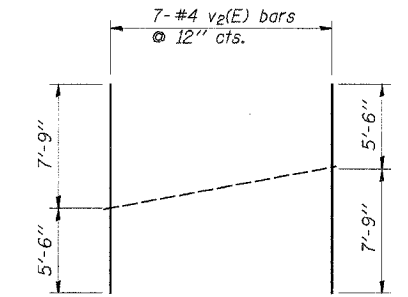
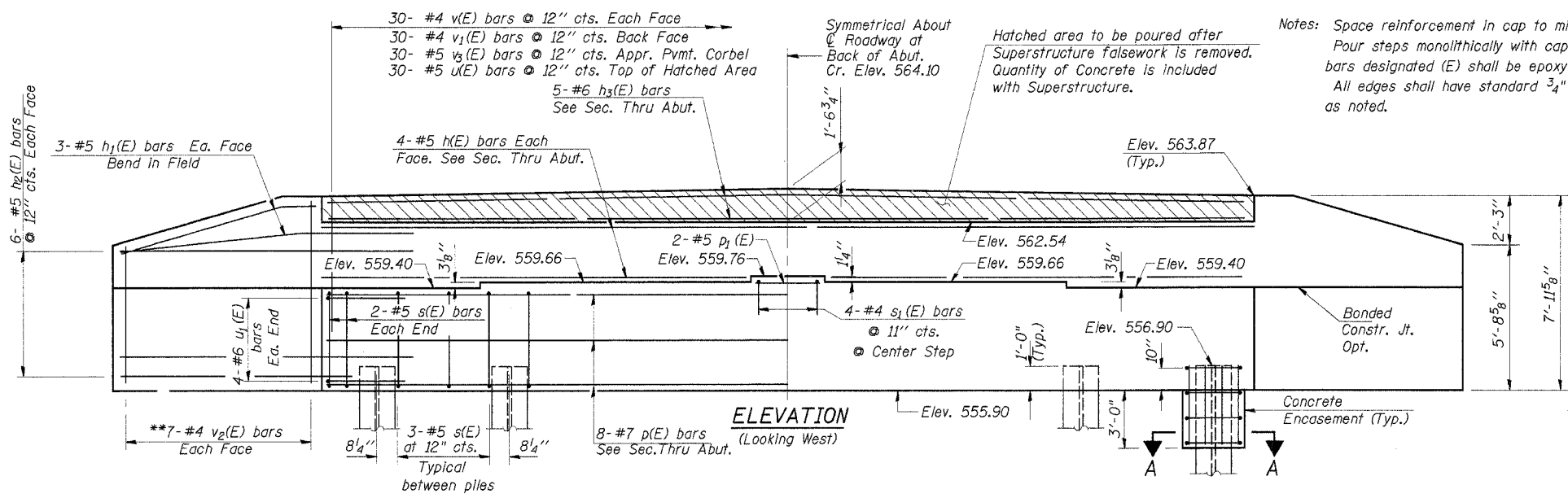
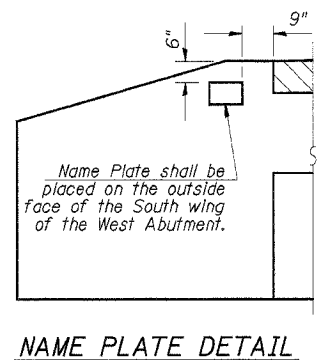
OZYURT AND STONE, INC.
CONSULTING ENGINEERS

JOB NO.: 0319
FILE: 0319ABOLT.DGN
DATE: 08/24/05

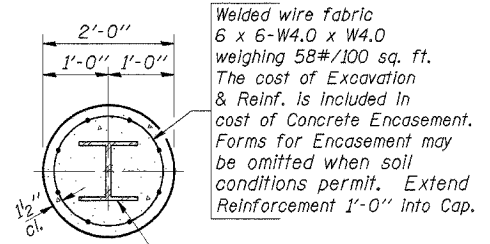
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FAS 429 C.H. 23	94-00087 -00-BR	HANCOCK	43	21
ROAD DIST.		ILLINOIS		

Contract No. 93401
Sheet 15 of 20

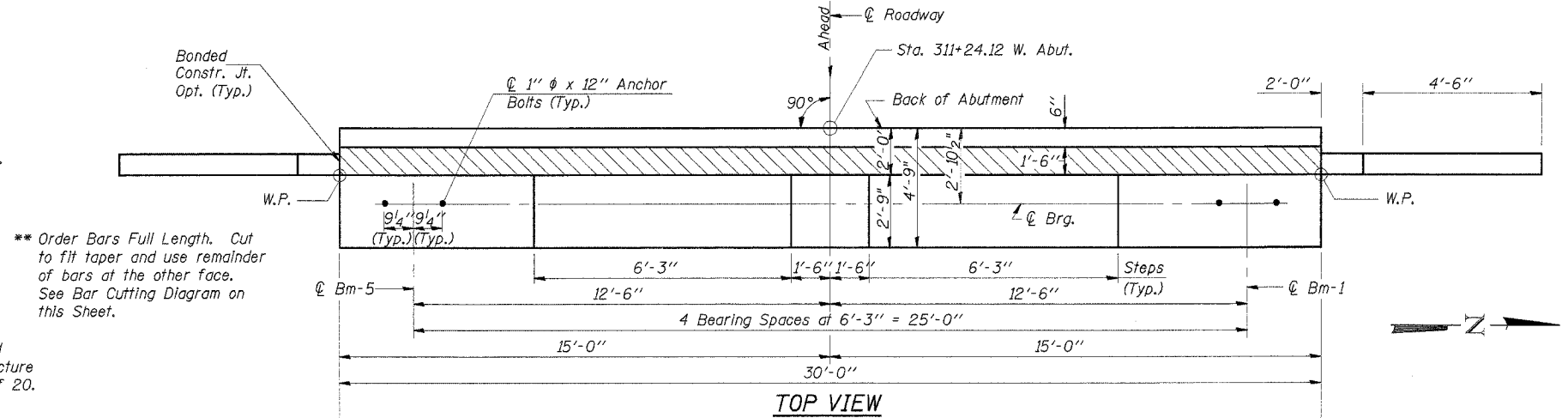
Notes: Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap. Reinforcement bars designated (E) shall be epoxy coated.
All edges shall have standard 3/4" chamfers except as noted.



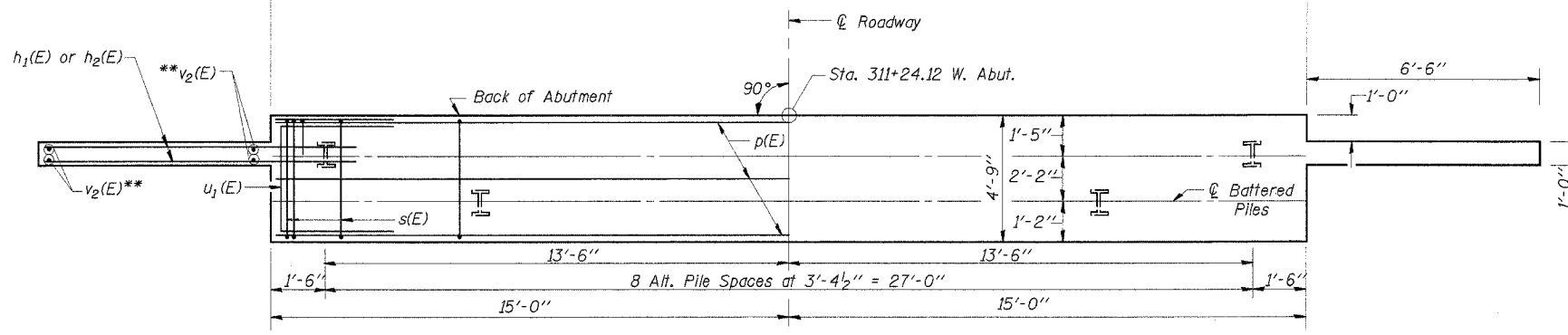
BAR CUTTING DIAGRAM



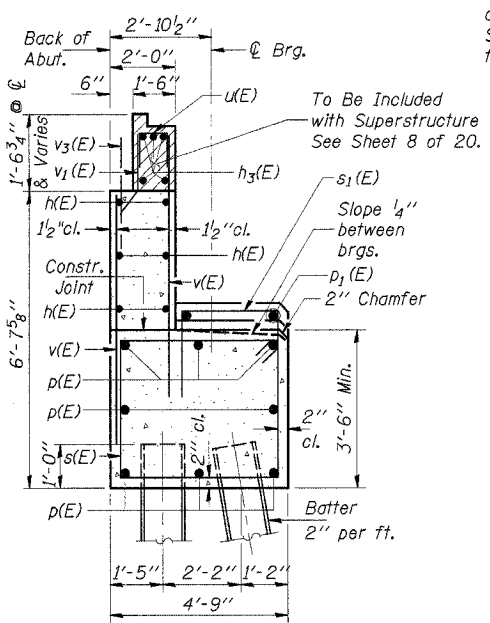
SECTION A-A



TOP VIEW



PLAN-CAP

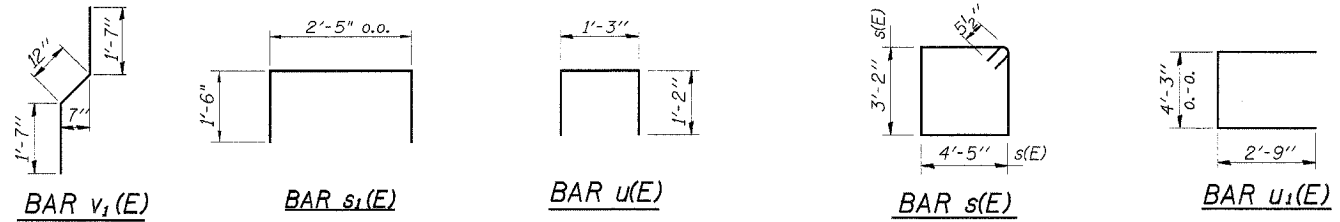


SEC. THRU ABUT.

PILE DATA

Type: Steel HP12x53
Capacity: Design 35 Ton/Pile
Driven 53 Ton/Pile
Est. Length: 62 Ft/Pile
No. Required: 9*
* Includes 1 Test Pile to be driven to 80 Ton capacity in a permanent location.

DESIGNED	A.R.K.
CHECKED	S.F.M., F.J.S.
DRAWN	S.A.P.
CHECKED	A.R.K., F.J.S.



BILL OF MATERIAL

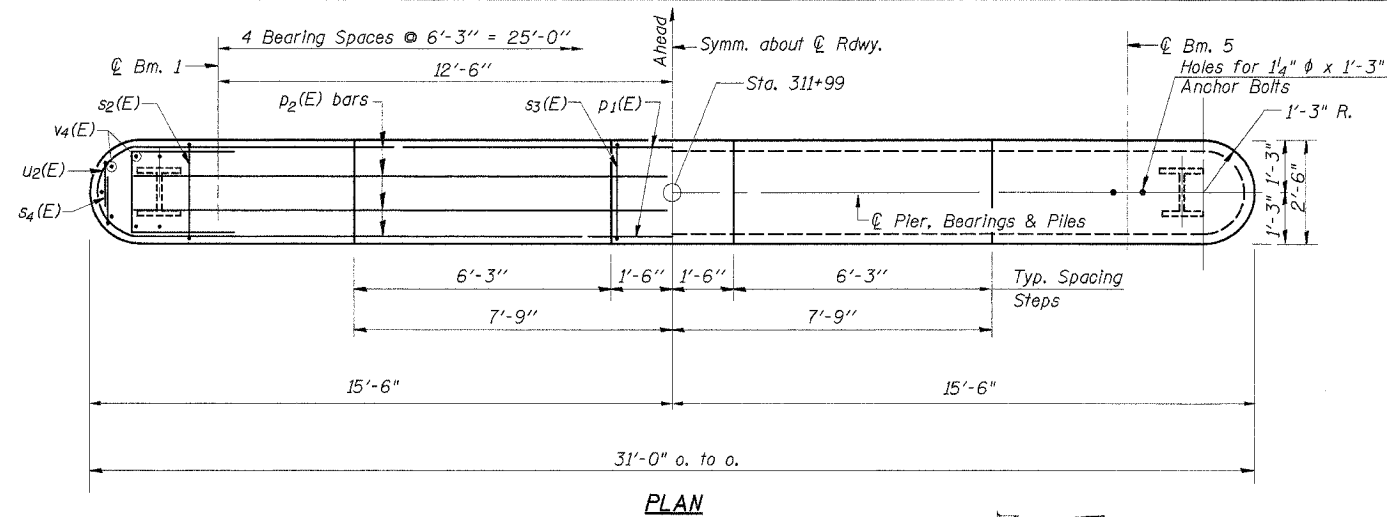
Bar	No.	Size	Length	Shape
v(E)	8	#5	29'-9"	
h1(E)	12	#5	6'-3"	
h2(E)	24	#5	8'-0"	
h3(E)	5	#6	29'-9"	
p(E)	8	#7	29'-8"	
p1(E)	2	#5	2'-8"	
s(E)	28	#5	16'-1"	
s1(E)	4	#4	5'-5"	
u(E)	30	#5	3'-7"	
u1(E)	8	#6	9'-9"	
v1(E)	60	#4	6'-3"	
v2(E)	30	#4	4'-2"	
v3(E)	14	#4	13'-3"	
v3(E)	30	#5	3'-0"	
Name Plates	Each		1	
Bridge Seat Sealer	Sq. Ft.		83	
Concrete Structures	Cu. Yd.		29.4	
Reinforcement Bars, Epoxy Coated	Pound		2,510	
Steel Piles HP12x53	Foot		496	
Test Piles Steel HP12x53	Each		1	
Protective Coat	Sq. Yd.		7	
Structure Excavation	Cu. Yd.		118	
Concrete Encasement	Cu. Yd.		3.1	

WEST ABUTMENT
SECTION 94-00087-00-BR
COUNTY HIGHWAY 23 - FAS ROUTE 429
HANCOCK COUNTY
STA. 313+34

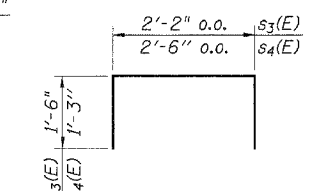
4440 ASH GROVE SPRINGFIELD, IL 62711 (217) 793-8600 oasinc@amvid.com	OZYURT AND STONE, INC. CONSULTING ENGINEERS	JOB NO.: 0319 FILE: 0319ABUT.DGN DATE: 10/12/05
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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 429 C.H. 23	94-00087 -00-BR	HANCOCK	43	23
ROAD DIST.		ILLINOIS		

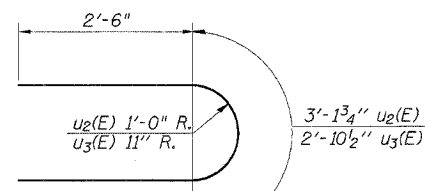
Contract No. 93401
Sheet 17 of 20



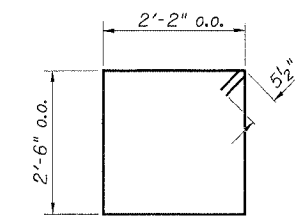
PLAN



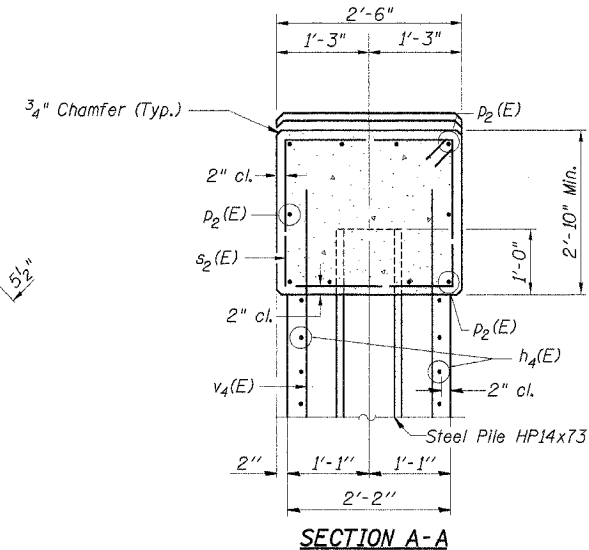
BAR s3(E) or s4(E)



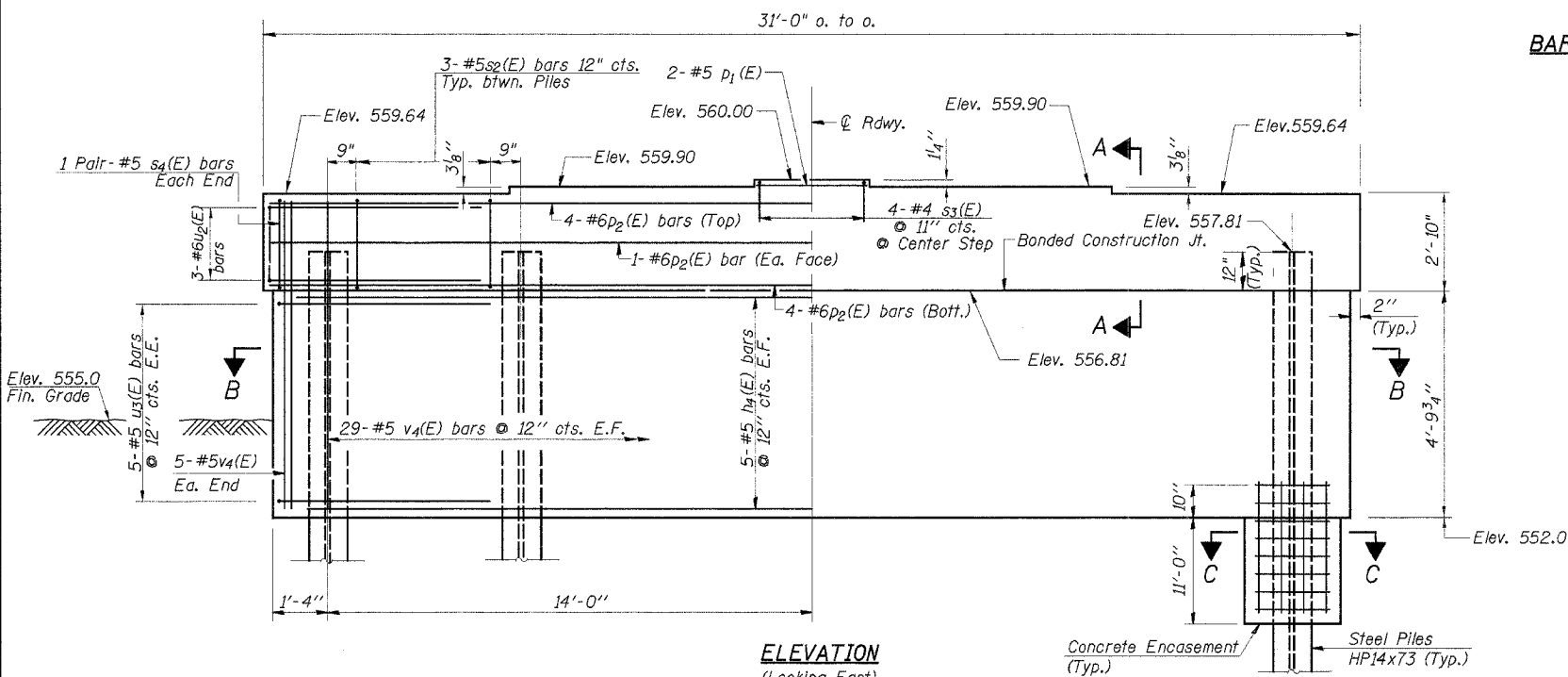
BAR u2(E) & u3(E)



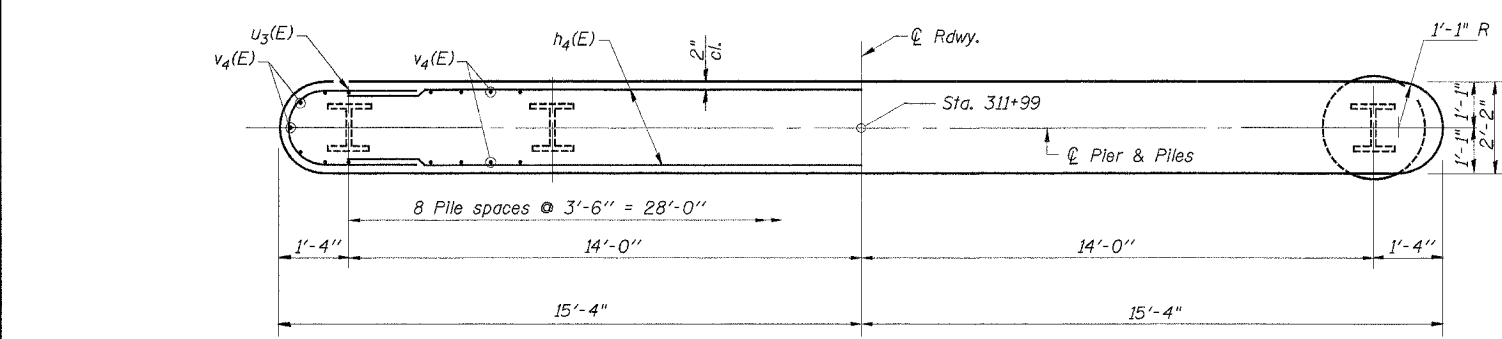
BAR s2(E)



SECTION A-A



ELEVATION
(Looking East)



SECTION B-B

DESIGNED	A.R.K.
CHECKED	S.F.M., F.J.S.
DRAWN	S.A.P.
CHECKED	A.R.K., F.J.S.

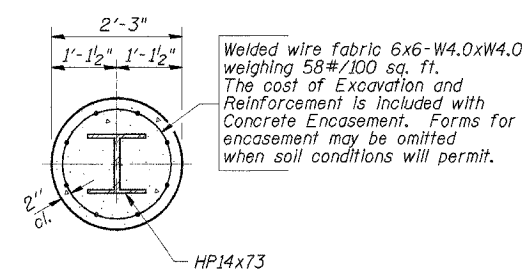
NOTES

- Space Reinforcement in cap to miss Anchor Bolts.
- Pour Steps monolithically with cap.
- All edges shall have the standard 3/4" Chamfer except as noted.
- Anchor Bolts at fixed bearings may be built into the masonry.

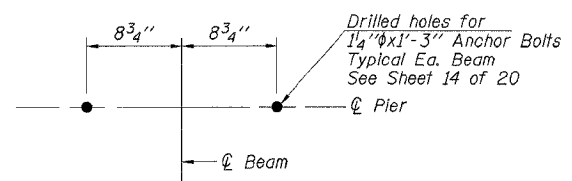
PILE DATA

Type: Steel HP14x73
Capacity: Design-47 Ton/Pile
Drive-70 Ton/Pile
Est. Length: 68 Ft./Pile
No. Required: 9*

* Includes 1 Test Pile to be driven to 105 Ton/Pile in a permanent location.



SECTION C-C



ANCHOR BOLT HOLES

MIN. BAR LAP

#5	1'-4"
#6	1'-7"

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
h4(E)	10	#5	26'-4"	—
p1(E)	2	#5	2'-8"	—
p2(E)	10	#6	26'-8"	—
s2(E)	24	#5	10'-3"	□
s3(E)	4	#4	5'-2"	□
s4(E)	4	#5	5'-0"	□
u2(E)	6	#6	8'-2"	U
u3(E)	10	#5	7'-11"	U
v4(E)	68	#5	6'-0"	—

Concrete Structures	Cu. Yd.	19.8
Reinforcement Bars, Epoxy Coated	Pound	1,550
Steel Piles HP14x73	Foot	544
Test Piles Steel HP14x73	Each	1
Underwater Structure Excavation Protection - Location 1	Each	1
Structure Excavation	Cu. Yd.	24
Concrete Encasement	Cu. Yd.	14.6

Reinforcement bars designated (E) shall be Epoxy Coated

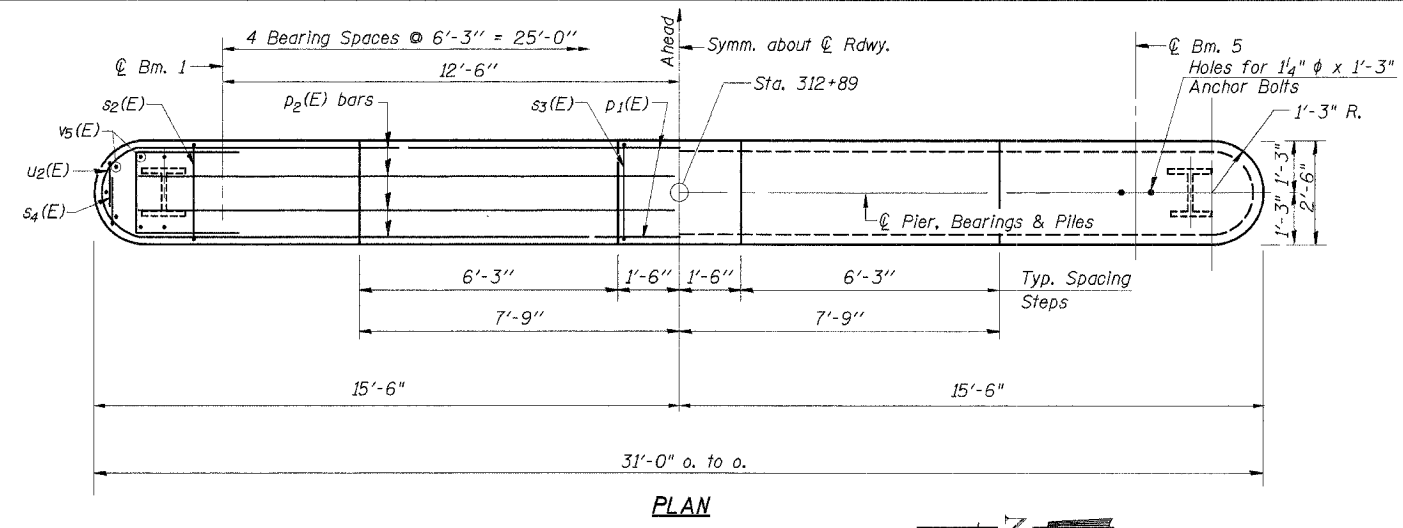
PIER 1

SECTION 94-00087-00-BR
COUNTY HIGHWAY 23 - FAS ROUTE 429
HANCOCK COUNTY
STA. 313+34

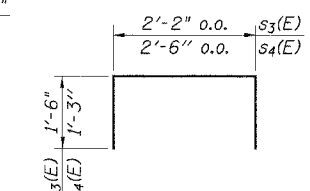
4440 ASH GROVE SPRINGFIELD, IL, 62711 (217) 793-6600 oasinc@famvid.com	OZYURT AND STONE, INC. CONSULTING ENGINEERS	JOB NO.: 0319 FILE: 0319PIER1.DGN DATE: 10/12/05
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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 429	94-00087	HANCOCK	43	24
C.H. 23	-00-BR			
ROAD DIST.	ILLINOIS			

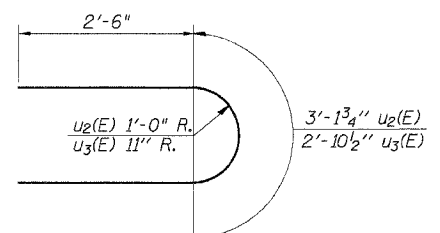
Contract No. 93401
Sheet 18 of 20



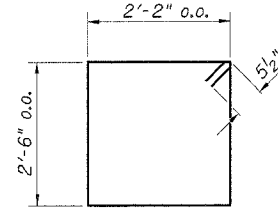
PLAN



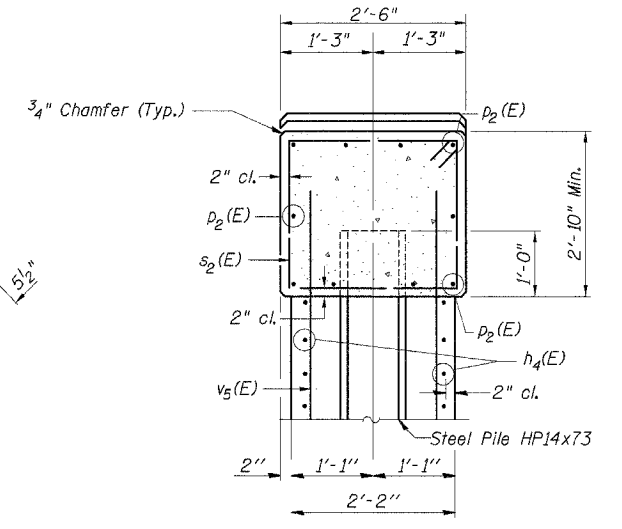
BAR s3(E) or s4(E)



BAR u2(E) & u3(E)



BAR s2(E)



SECTION A-A

NOTES

- Space Reinforcement in cap to miss Anchor Bolts.
- Pour Steps monolithically with cap.
- All edges shall have the standard 3/4" Chamfer except as noted.
- Anchor Bolts at fixed bearings may be built into the masonry.

MIN. BAR LAP

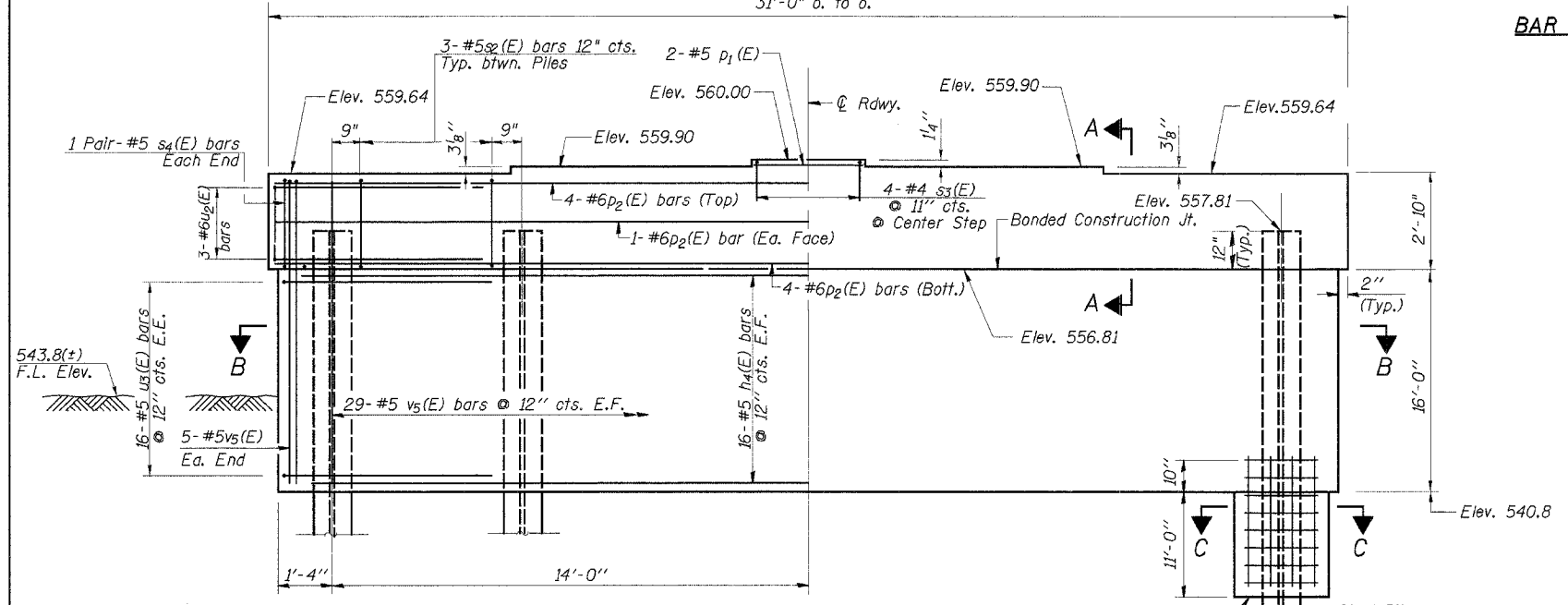
- #5 ----- 1'-4"
- #6 ----- 1'-7"

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
h4(E)	32	#5	26'-4"	—
p1(E)	2	#5	2'-8"	—
p2(E)	10	#6	26'-8"	—
s2(E)	24	#5	10'-3"	⊏
s3(E)	4	#4	5'-2"	⊏
s4(E)	4	#5	5'-0"	⊏
u2(E)	6	#6	8'-2"	⊏
u3(E)	32	#5	7'-11"	⊏
v5(E)	68	#5	17'-0"	—

Concrete Structures	Cu. Yd.	46.5
Reinforcement Bars, Epoxy Coated	Pound	3,120
Steel Piles HP14x73	Foot	576
Test Piles Steel HP14x73	Each	1
Underwater Structure Excavation Protection - Location 2	Each	1
Structure Excavation	Cu. Yd.	24
Concrete Encasement	Cu. Yd.	14.6

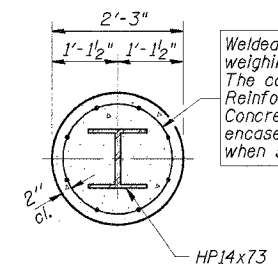
Reinforcement bars designated (E) shall be Epoxy Coated



ELEVATION (Looking East)

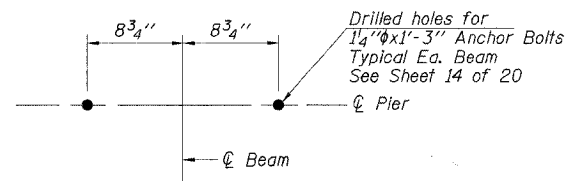
PILE DATA

- Type: Steel HP14x73
- Capacity: Design-56 Ton/Pile, Drive-83 Ton/Pile
- Est. Length: 72 Ft./Pile
- No. Required: 9*
- * Includes 1 Test Pile to be driven to 125 Ton/Pile in a permanent location.

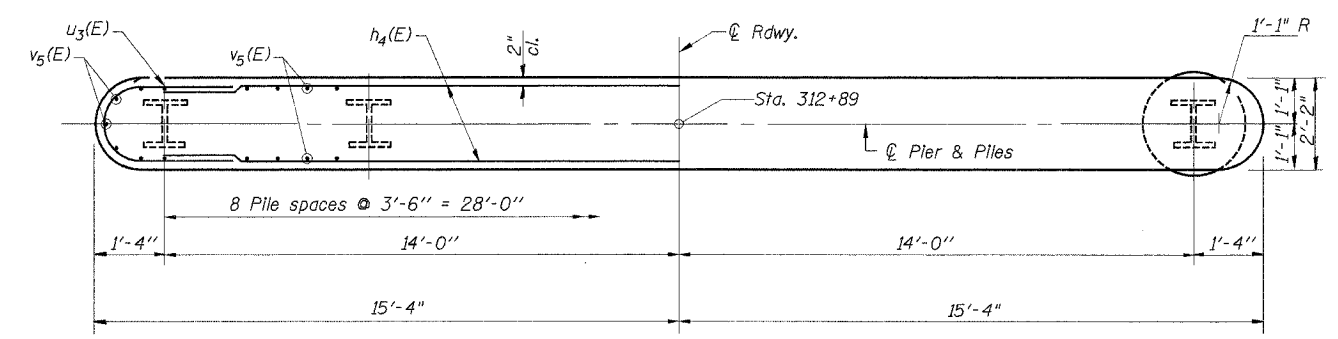


SECTION C-C

Welded wire fabric 6x6-W4.0xW4.0 weighing 58#/100 sq. ft. The cost of Excavation and Reinforcement is included with Concrete Encasement. Forms for encasement may be omitted when soil conditions will permit.



ANCHOR BOLT HOLES



SECTION B-B

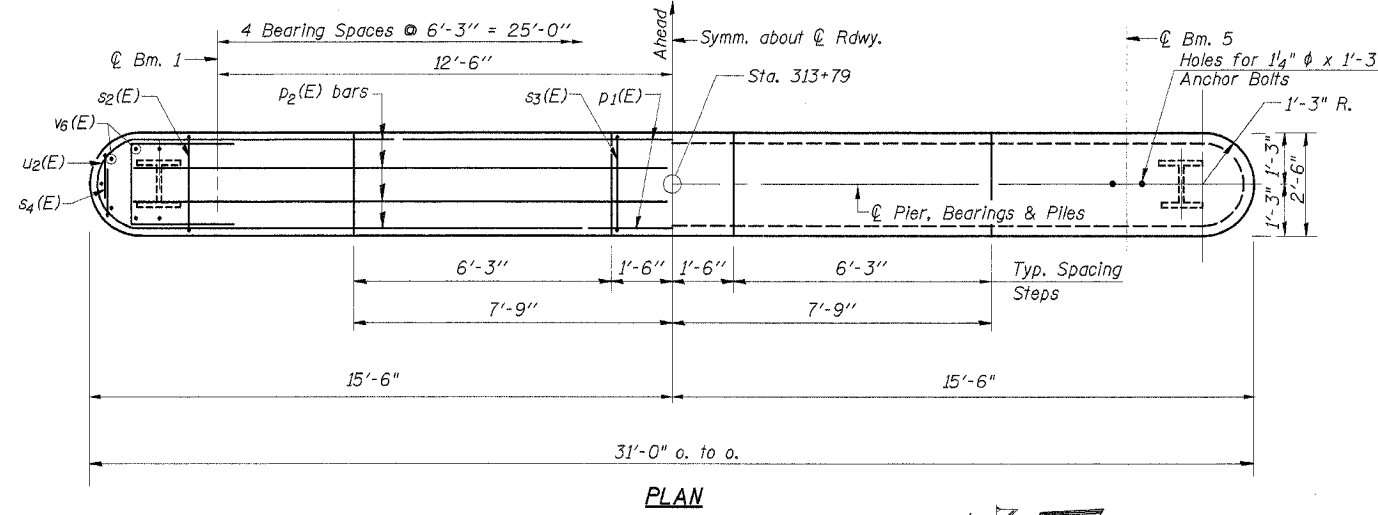
DESIGNED	A.R.K.
CHECKED	S.F.M., F.J.S.
DRAWN	S.A.P.
CHECKED	A.R.K., F.J.S.

PIER 2
SECTION 94-00087-00-BR
COUNTY HIGHWAY 23 - FAS ROUTE 429
HANCOCK COUNTY
STA. 313+34

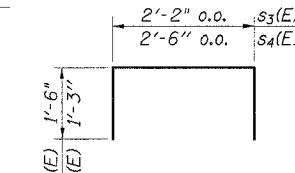
4440 ASH GROVE SPRINGFIELD, IL 62711 (217) 793-8800 oasinc@tamvid.com	OZYURT AND STONE, INC. CONSULTING ENGINEERS	JOB NO.: 0319 FILE: 0319PIER2.DGN DATE: 10/12/05
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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 429	94-00087	HANCOCK	43	25
C.H. 23	-00-BR			
ROAD DIST.	ILLINOIS			

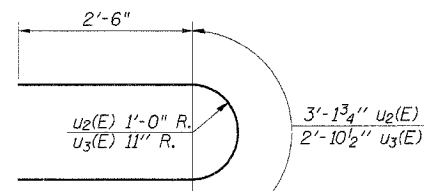
Contract No. 93401
Sheet 19 of 20



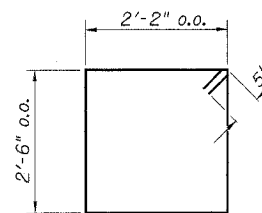
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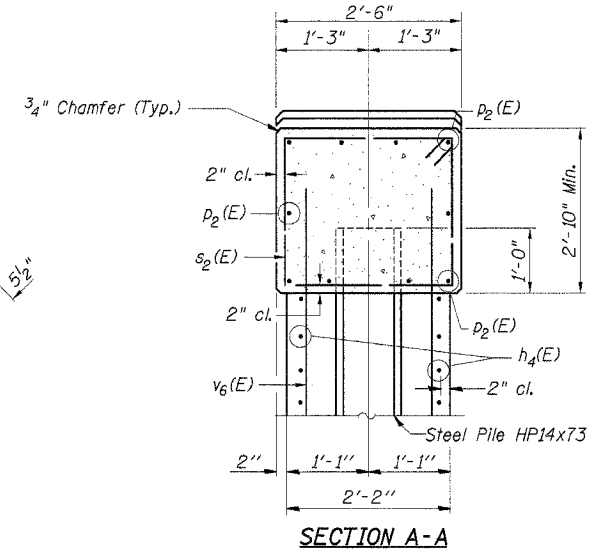
BAR s3(E) or s4(E)



BAR u2(E) & u3(E)



BAR s2(E)



SECTION A-A

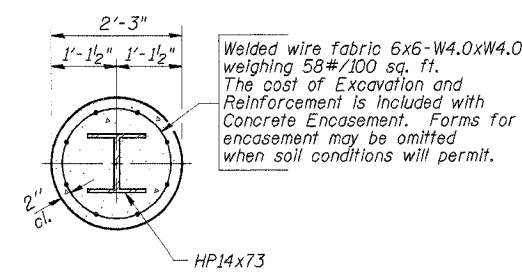
NOTES

- Space Reinforcement in cap to miss Anchor Bolts.
- Pour Steps monolithically with cap.
- All edges shall have the standard 3/4" Chamfer except as noted.
- Anchor Bolts at fixed bearings may be built into the masonry.

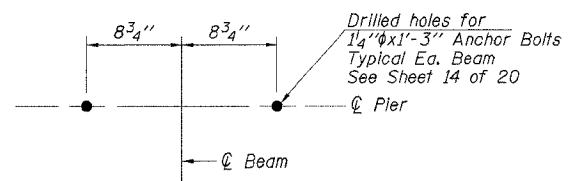
PILE DATA

Type: Steel HP14x73
Capacity: Design-54 Ton/Pile
Drive-81 Ton/Pile
Est. Length: 68 Ft./Pile
No. Required: 9*

* Includes 1 Test Pile to be driven to 122 Ton/Pile in a permanent location.



SECTION C-C



ANCHOR BOLT HOLES

MIN. BAR LAP

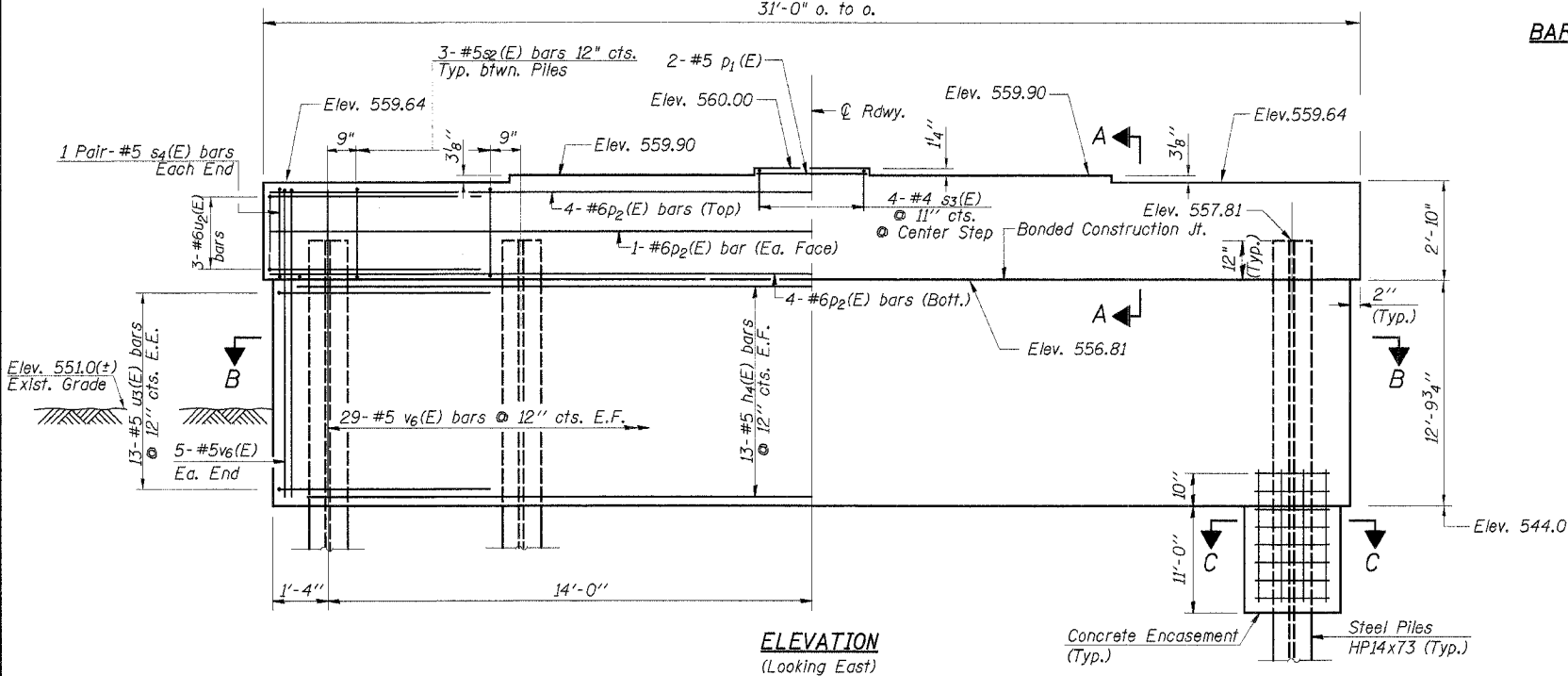
#5 1'-4"
#6 1'-7"

BILL OF MATERIAL

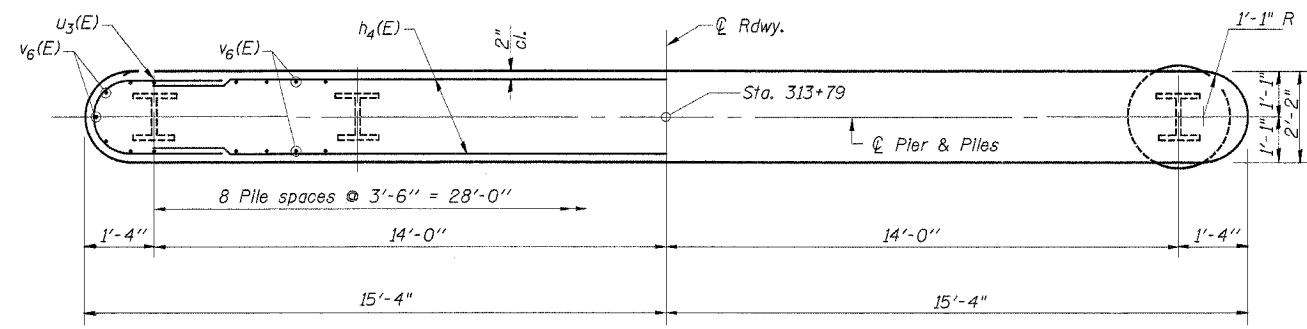
BAR	NO.	SIZE	LENGTH	SHAPE
h4(E)	26	#5	26'-4"	—
p1(E)	2	#5	2'-8"	—
p2(E)	10	#6	26'-8"	—
s2(E)	24	#5	10'-3"	□
s3(E)	4	#4	5'-2"	□
s4(E)	4	#5	5'-0"	□
u2(E)	6	#6	8'-2"	U
u3(E)	26	#5	7'-11"	U
v6(E)	68	#5	14'-0"	—

Concrete Structures	Cu. Yd.	38.8
Reinforcement Bars, Epoxy Coated	Pound	2,690
Steel Piles HP14x73	Foot	544
Test Piles Steel HP14x73	Each	1
Underwater Structure Excavation Protection - Location 3	Each	1
Structure Excavation	Cu. Yd.	55
Concrete Encasement	Cu. Yd.	14.6

Reinforcement bars designated (E) shall be Epoxy Coated



ELEVATION (Looking East)



SECTION B-B

DESIGNED	A.R.K.
CHECKED	S.F.M., F.J.S.
DRAWN	S.A.P.
CHECKED	A.R.K., F.J.S.

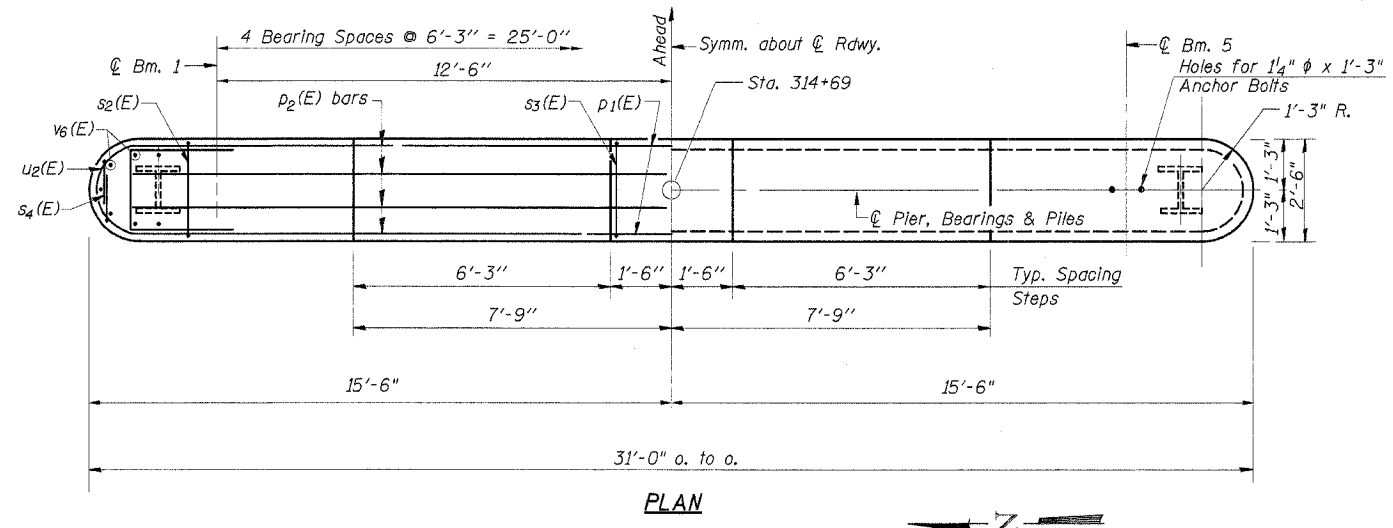
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SECTION 94-00087-00-BR
COUNTY HIGHWAY 23 - FAS ROUTE 429
HANCOCK COUNTY
STA. 313+34

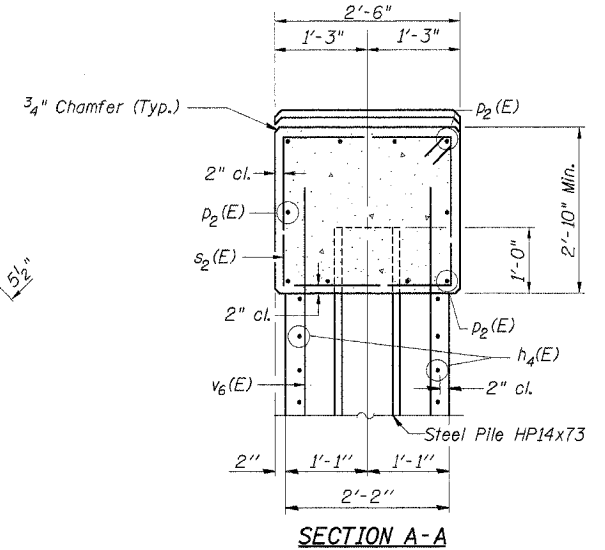
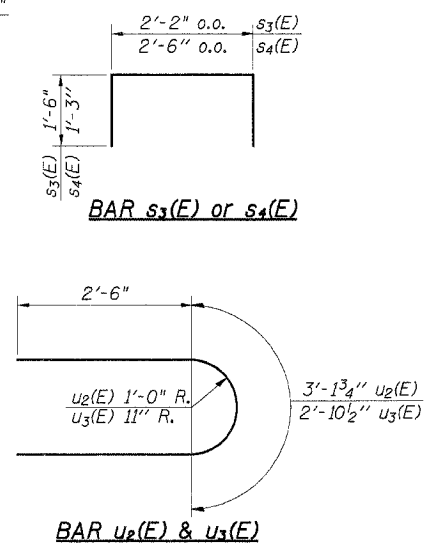
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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 429	94-00087-00-BR	HANCOCK	43	26
C.H. 23				
ROAD DIST.	ILLINOIS			

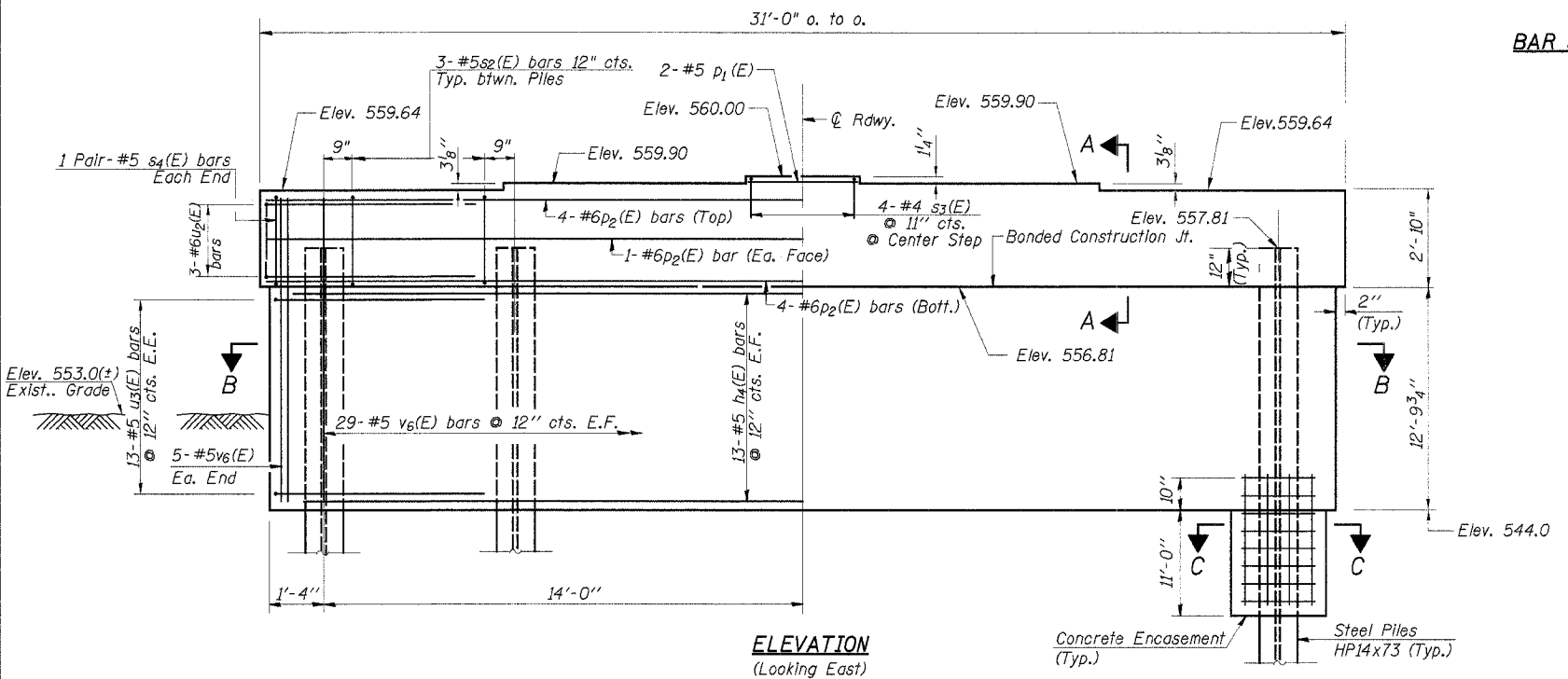
Contract No. 99401
Sheet 20 of 20



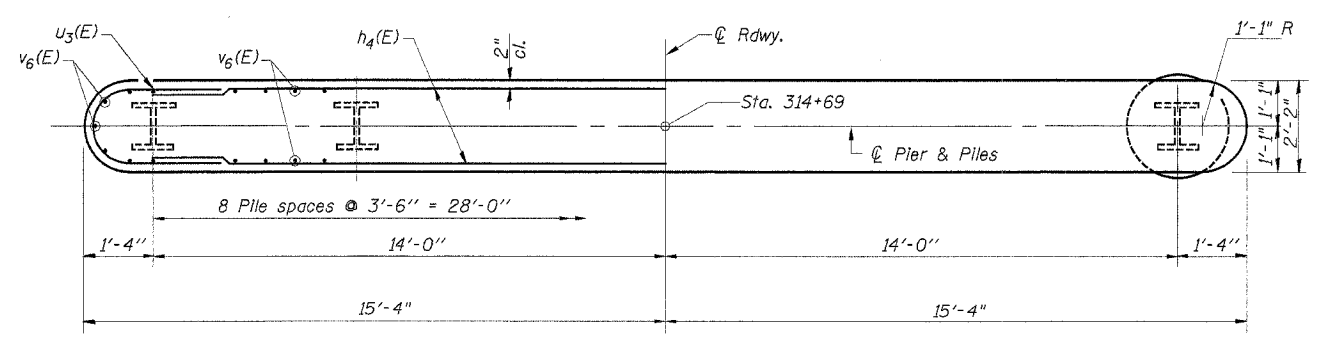
PLAN



SECTION A-A



ELEVATION (Looking East)



SECTION B-B

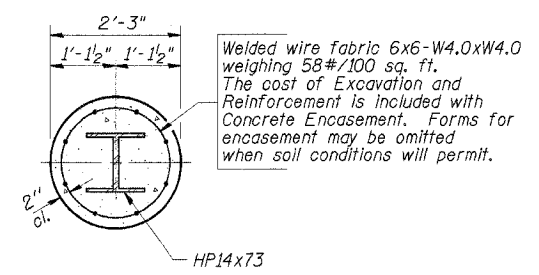
NOTES

- Space Reinforcement in cap to miss Anchor Bolts.
- Pour Steps monolithically with cap.
- All edges shall have the standard 3/4" Chamfer except as noted.
- Anchor Bolts at fixed bearings may be built into the masonry.

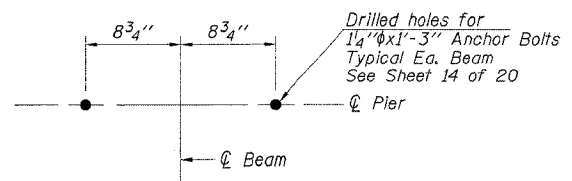
PILE DATA

Type: Steel HP14x73
Capacity: Design-51 Ton/Pile
Drive-77 Ton/Pile
Est. Length: 62 Ft./Pile
No. Required: 9*

* Includes 1 Test Pile to be driven to 115 Ton/Pile in a permanent location.



SECTION C-C



ANCHOR BOLT HOLES

MIN. BAR LAP

#5 1'-4"
#6 1'-7"

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
h4(E)	26	#5	26'-4"	—
p1(E)	2	#5	2'-8"	—
p2(E)	10	#6	26'-8"	—
s2(E)	24	#5	10'-3"	□
s3(E)	4	#4	5'-2"	□
s4(E)	4	#5	5'-0"	□
u2(E)	6	#6	8'-2"	U
u3(E)	26	#5	7'-11"	U
v6(E)	68	#5	14'-0"	—

Concrete Structures	Cu. Yd.	38.8
Reinforcement Bars, Epoxy Coated	Pound	2,690
Steel Piles HP14x73	Foot	496
Test Piles Steel HP14x73	Each	1
Underwater Structure Excavation Protection - Location 4	Each	1
Structure Excavation	Cu. Yd.	71
Concrete Encasement	Cu. Yd.	14.6

Reinforcement bars designated (E) shall be Epoxy Coated

DESIGNED	A.R.K.
CHECKED	S.F.M., F.J.S.
DRAWN	S.A.P.
CHECKED	A.R.K., F.J.S.

PIER 4

SECTION 94-00087-00-BR
COUNTY HIGHWAY 23 - FAS ROUTE 429
HANCOCK COUNTY
STA. 313+34

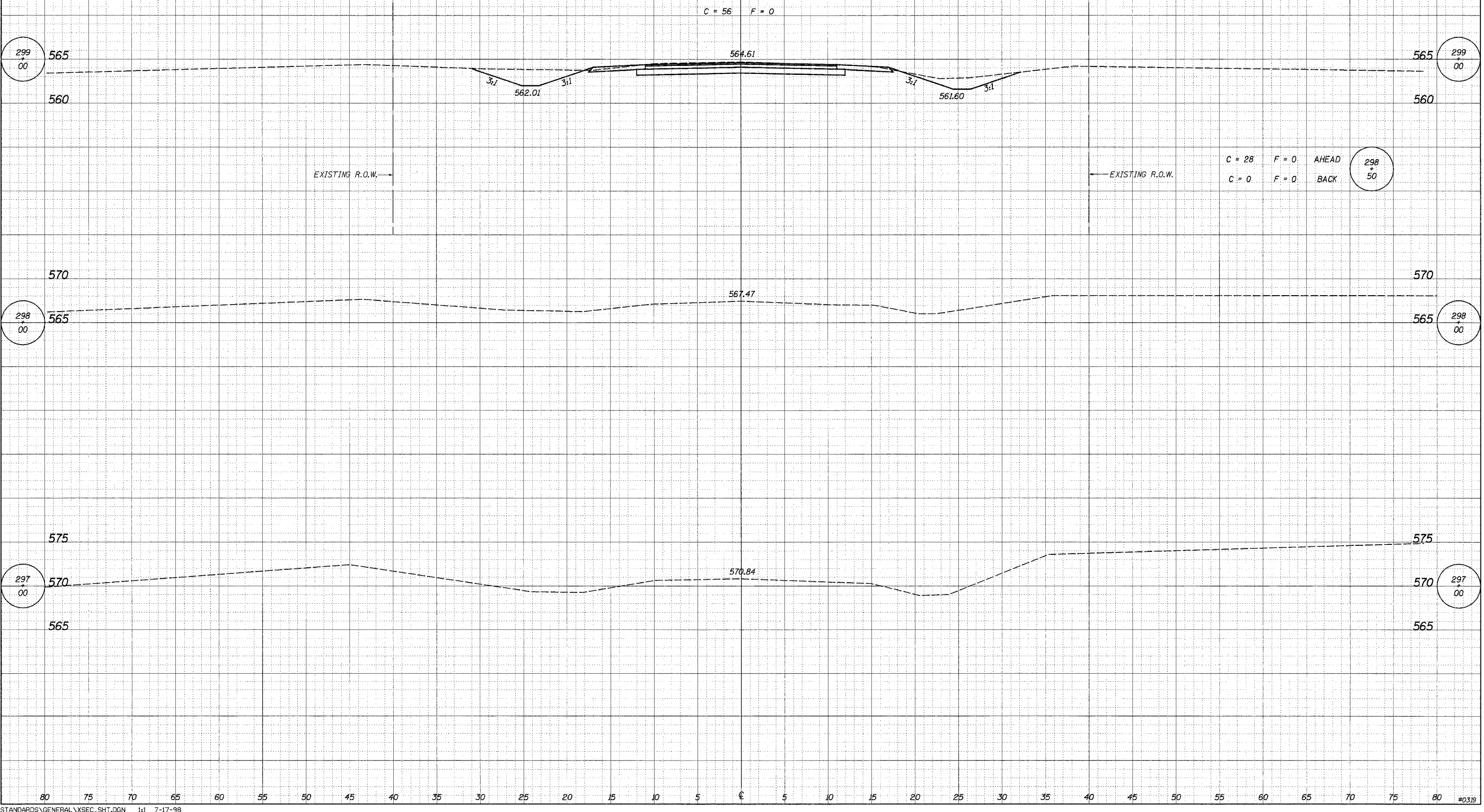
4440 ASH GROVE SPRINGFIELD, IL 62711 (217) 789-8600 oasinc@famvid.com	OZYURT AND STONE, INC. CONSULTING ENGINEERS	JOB NO.: 0319 FILE: 0319PIER4.DGN DATE: 10/12/05
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80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
23	94-00087-00-BP	HANCOCK	43	27
STA. 297+00 TO STA. 299+00				
ROAD DIST. ILLINOIS				
CONTRACT NO. : 93401				

DATE	BY
FINAL SURVEY	
NOTE BOOK	
NO.	

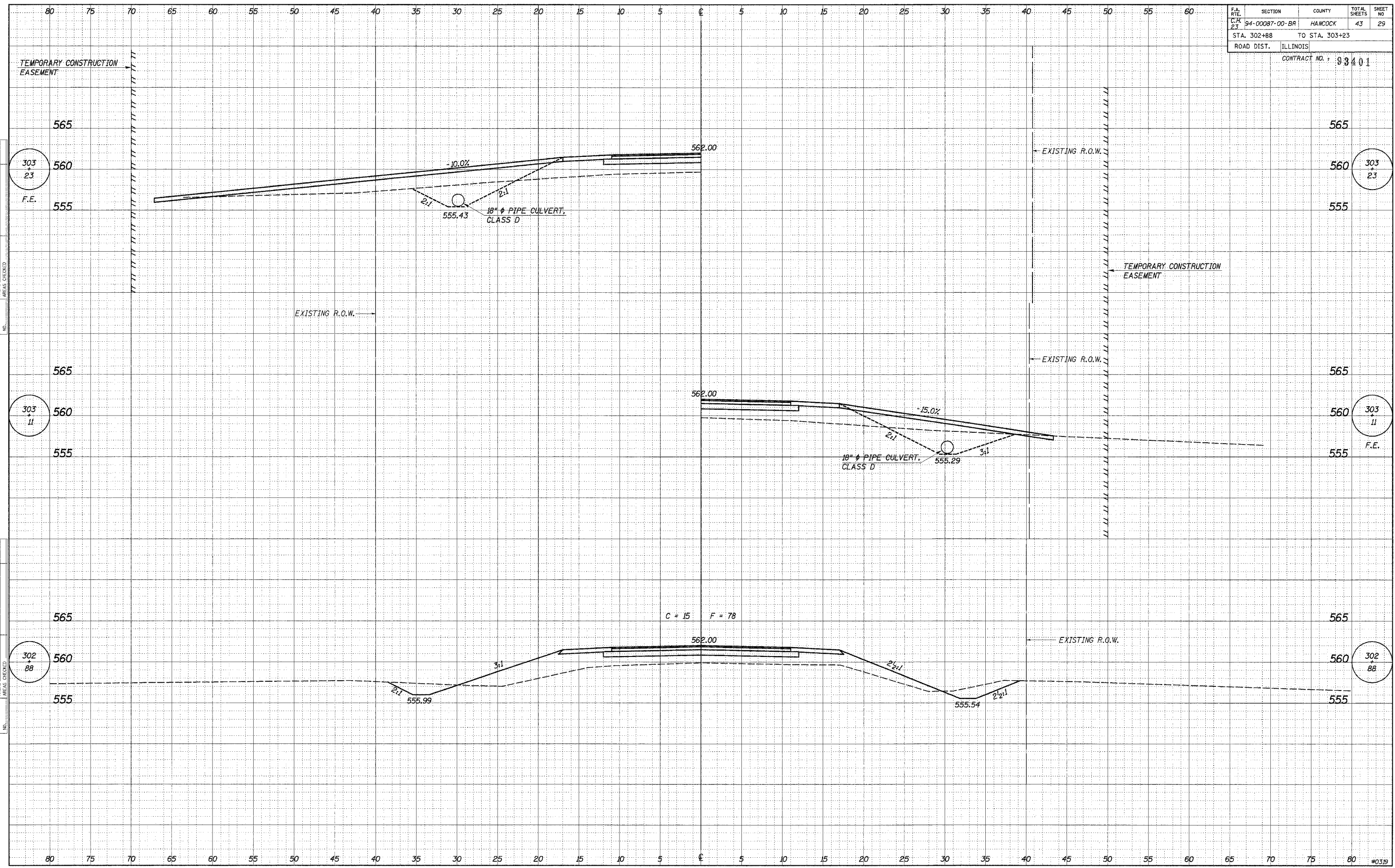
DATE	BY
ORIGINAL SURVEY	
NOTE BOOK	
NO.	



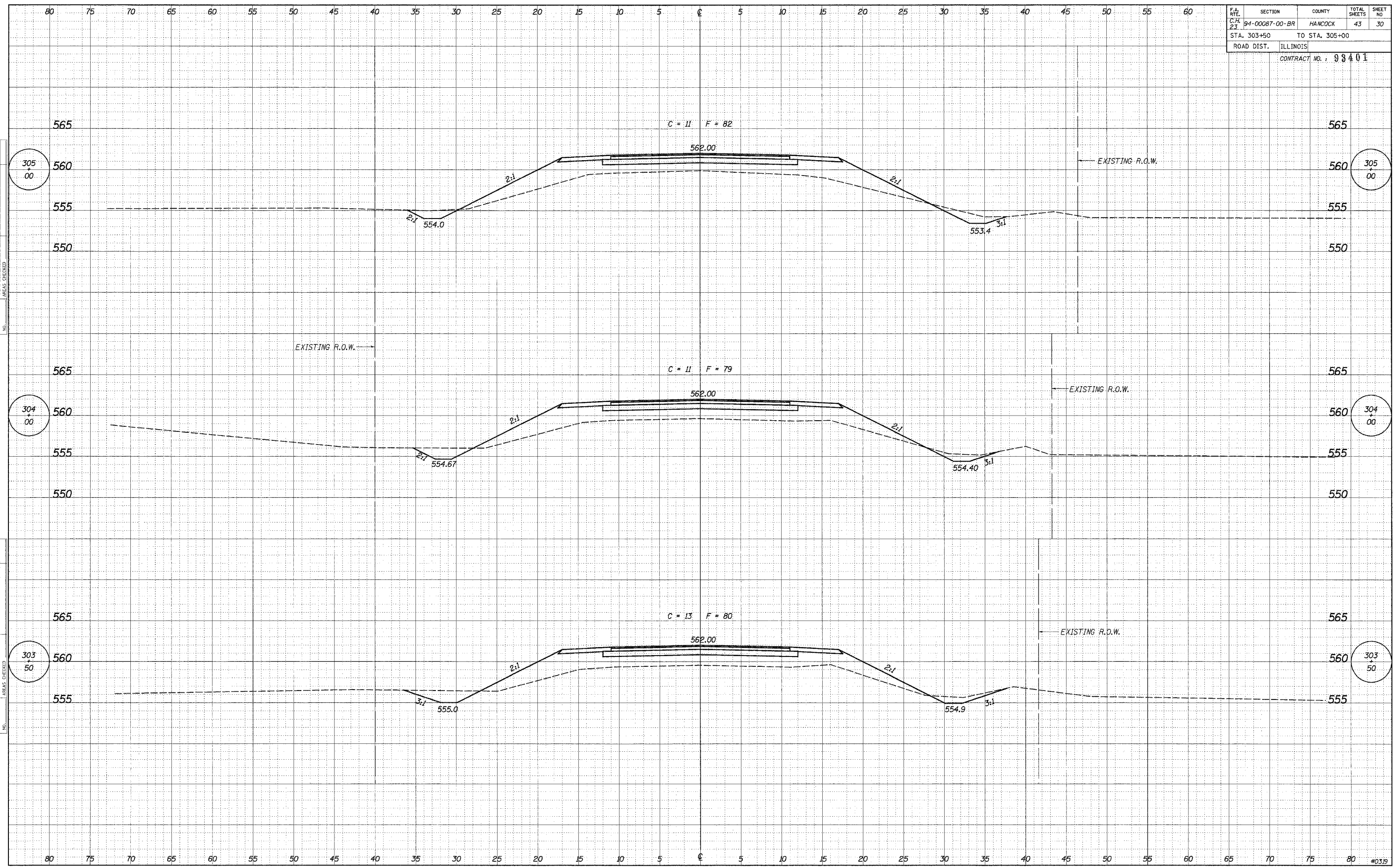
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
23	94-00087-00-BR	HAMCOCK	43	29
STA. 302+88		TO STA. 303+23		
ROAD DIST.		ILLINOIS		
CONTRACT NO. : 93401				

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

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



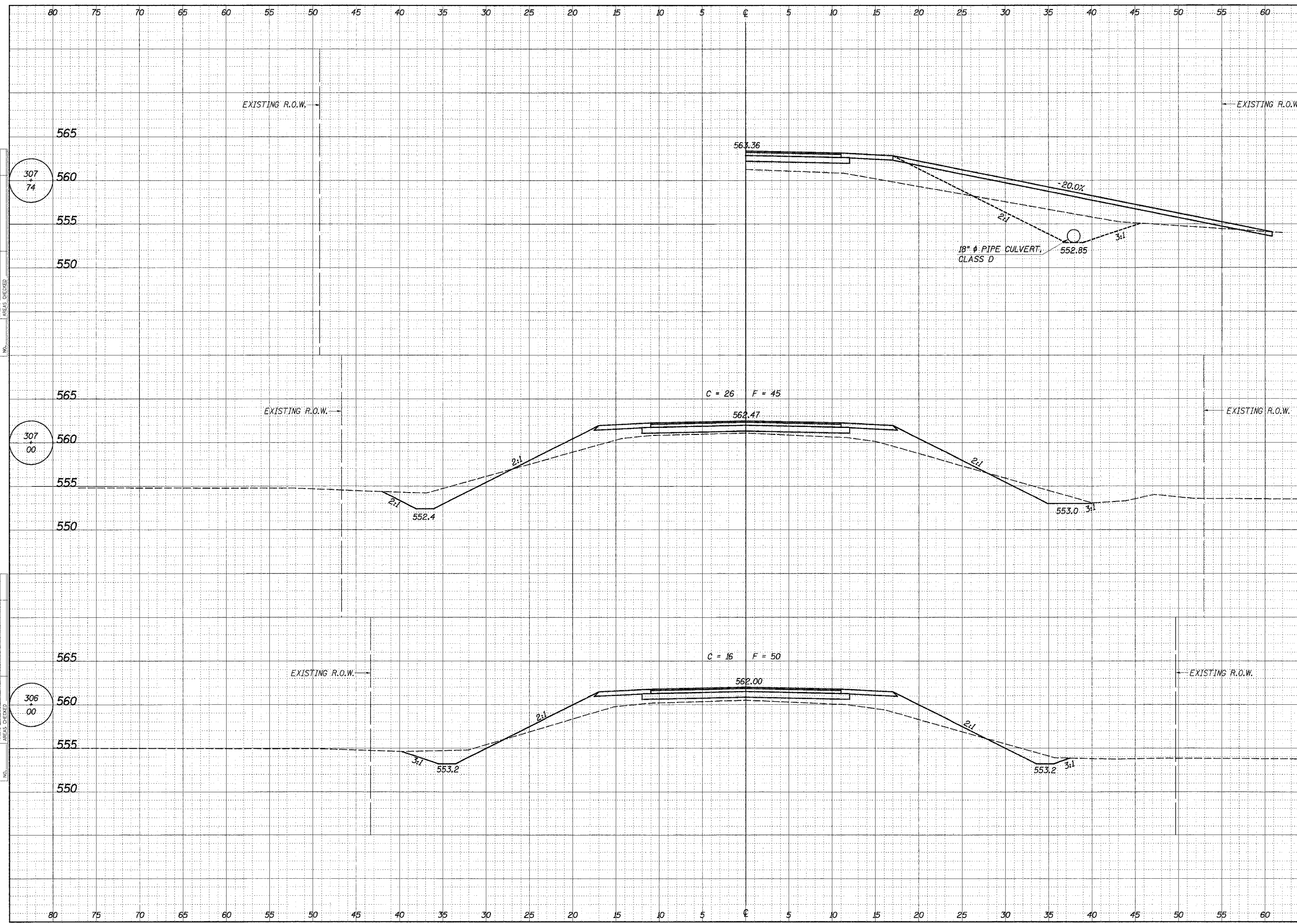
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.P. 23	94-00087-00-BR	HANCOCK	43	30
STA. 303+50		TO STA. 305+00		
ROAD DIST.		ILLINOIS		
CONTRACT NO. : 93401				



DATE	BY
FINAL SURVEY	SURVEYED
NOTE BOOK	TEMPLE
NO.	AREAS CHECKED

DATE	BY
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	TEMPLE
NO.	AREAS CHECKED

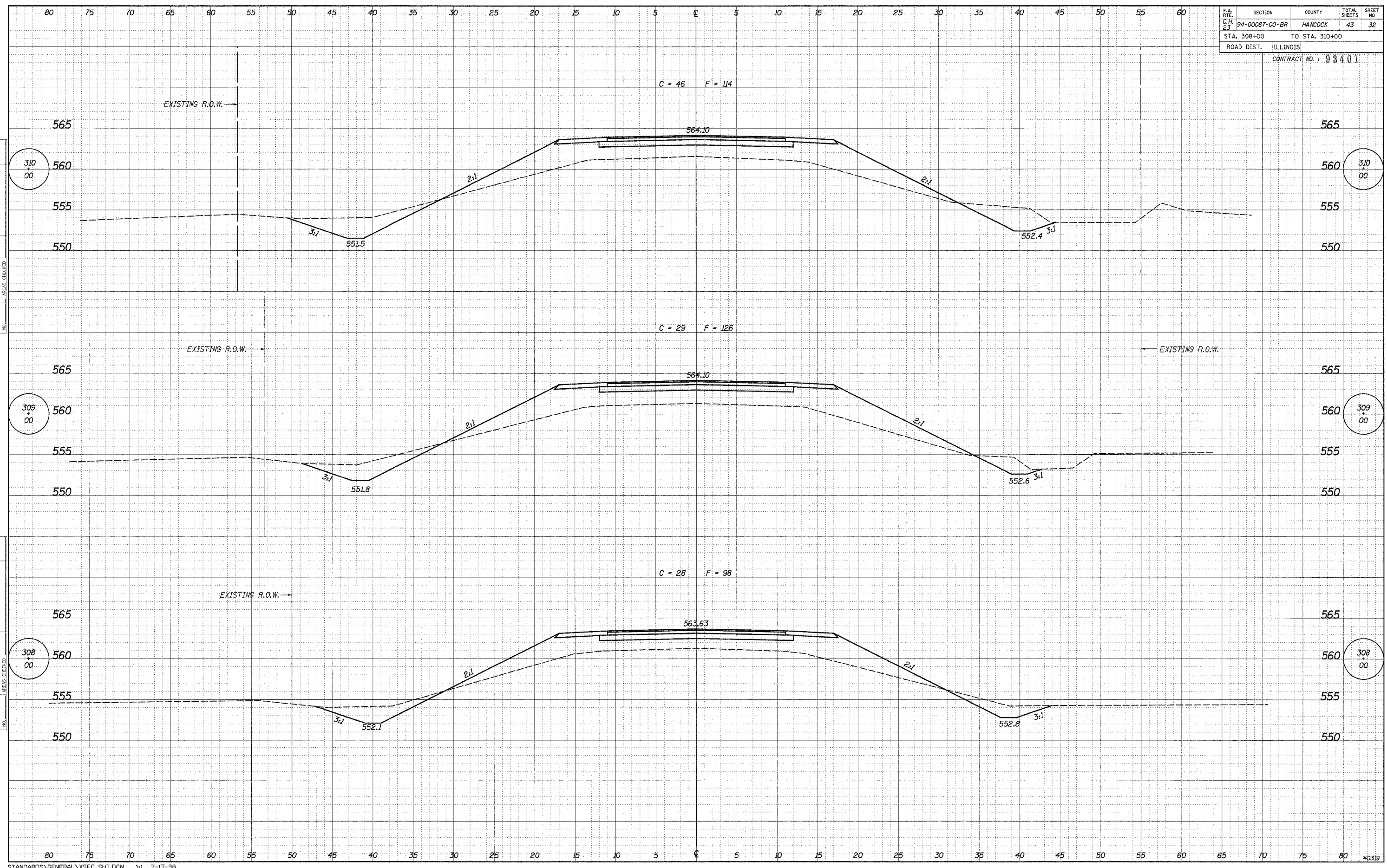
F.A. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
23	94-00087-00-BR	HANDOCK	43	31
STA. 306+00		TO STA. 307+74		
ROAD DIST. ILLINOIS		CONTRACT NO. : 93401		



DATE
BY
FINAL SURVEY
SURVEYED
NOTE BOOK
TEMPLATE
AREAS
CHECKED

DATE
BY
ORIGINAL SURVEY
SURVEYED
NOTE BOOK
TEMPLATE
AREAS
CHECKED

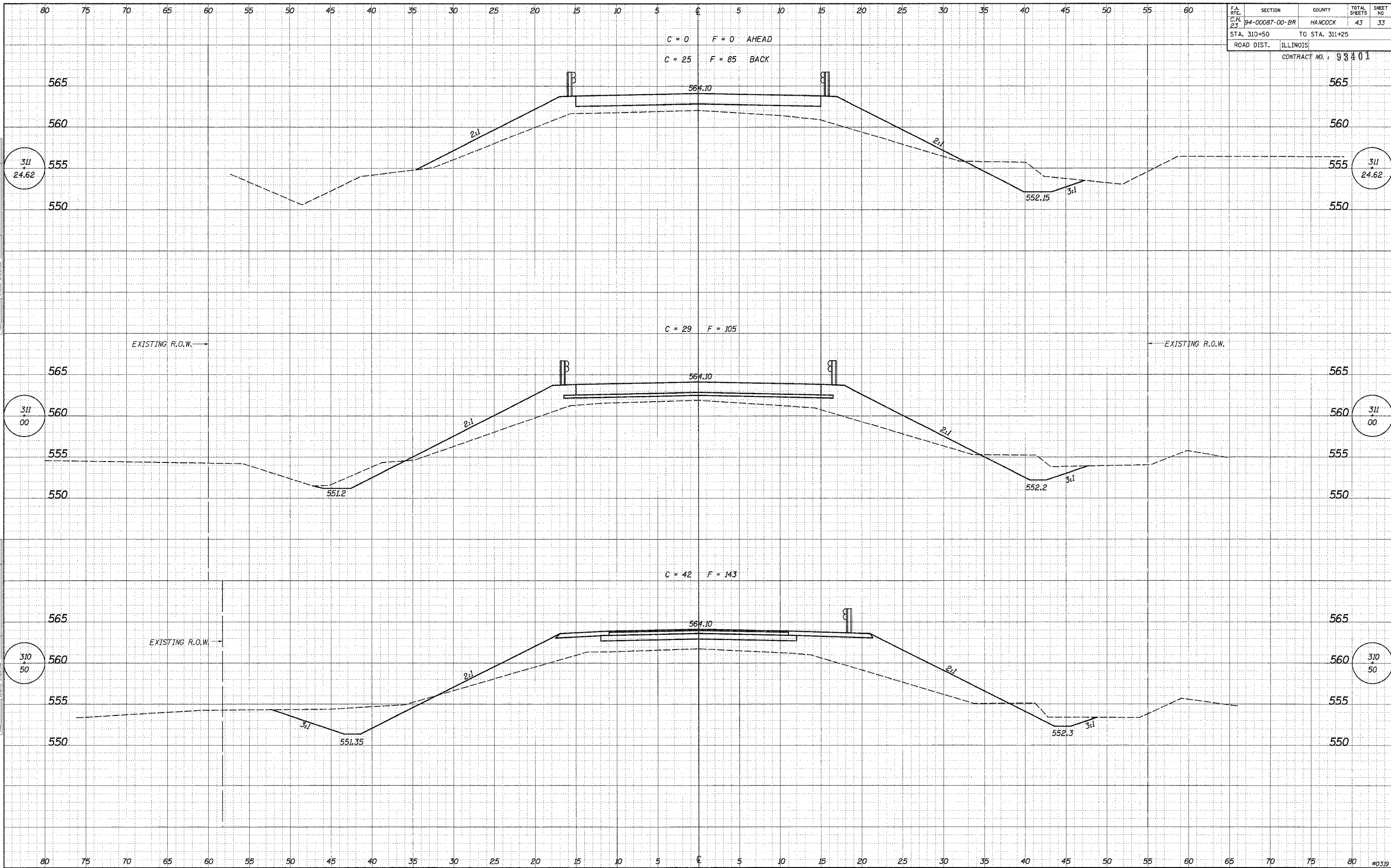
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 23	94-00087-00-BR	HANCOCK	43	32
STA. 308+00		TO STA. 310+00		
ROAD DIST.		ILLINOIS		
CONTRACT NO.: 93401				



FINAL SURVEY
 SURVEYED
 NOTE BOOK
 NO.

ORIGINAL SURVEY
 SURVEYED
 NOTE BOOK
 NO.

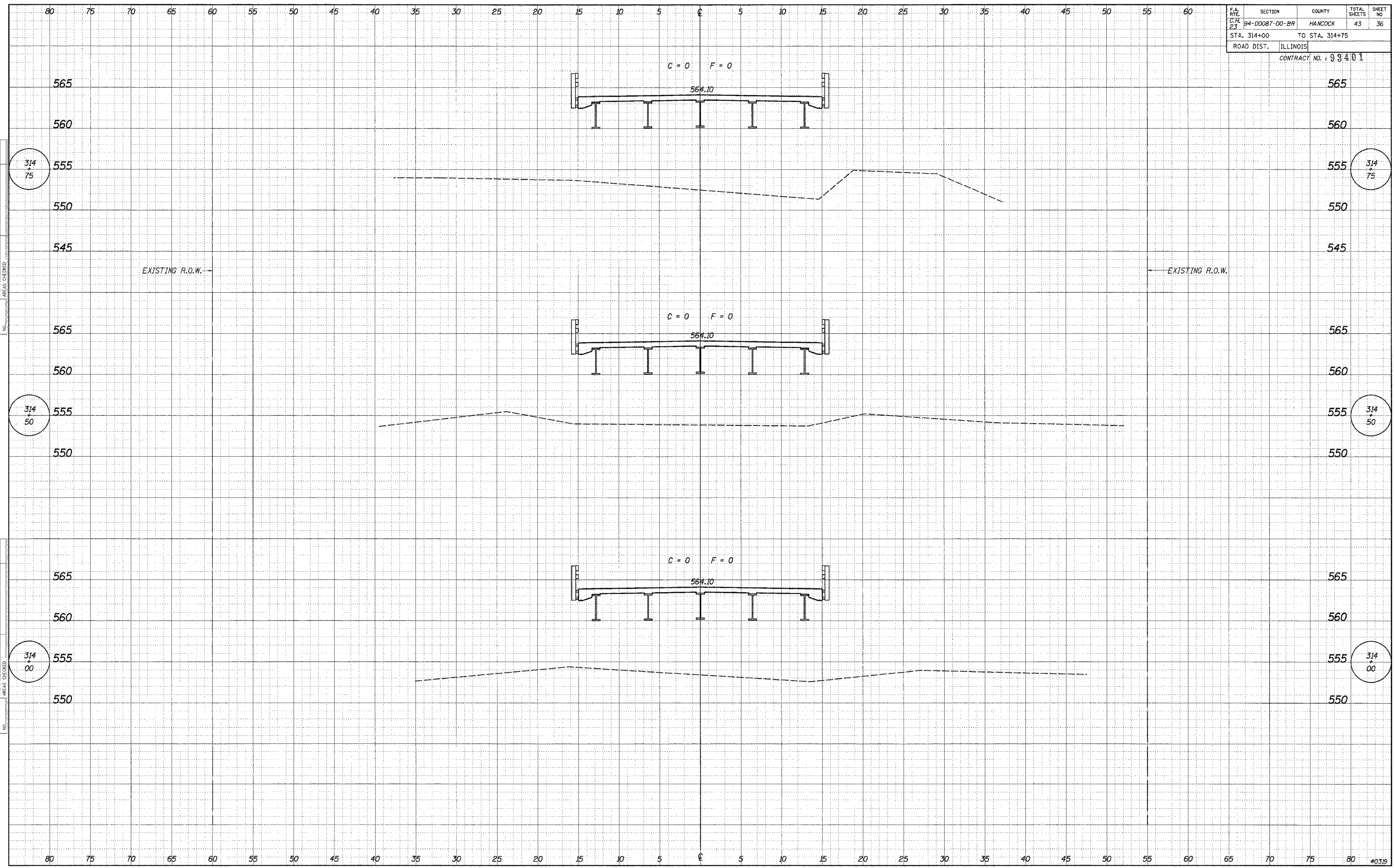
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.P. 23	94-00087-00-BR	HANCOCK	43	33
STA. 310+50		TO STA. 311+25		
ROAD DIST. ILLINOIS		CONTRACT NO. 93401		



DATE _____ BY _____
 SURVEYED _____
 PLOTTED _____
 NOTE BOOK _____
 AREAS CHECKED _____

DATE _____ BY _____
 SURVEYED _____
 PLOTTED _____
 NOTE BOOK _____
 AREAS CHECKED _____

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.R. 23	94-00087-00-BR	HANCOCK	43	36
STA. 314+00		TO STA. 314+75		
ROAD DIST.		ILLINOIS		
CONTRACT NO. : 99401				



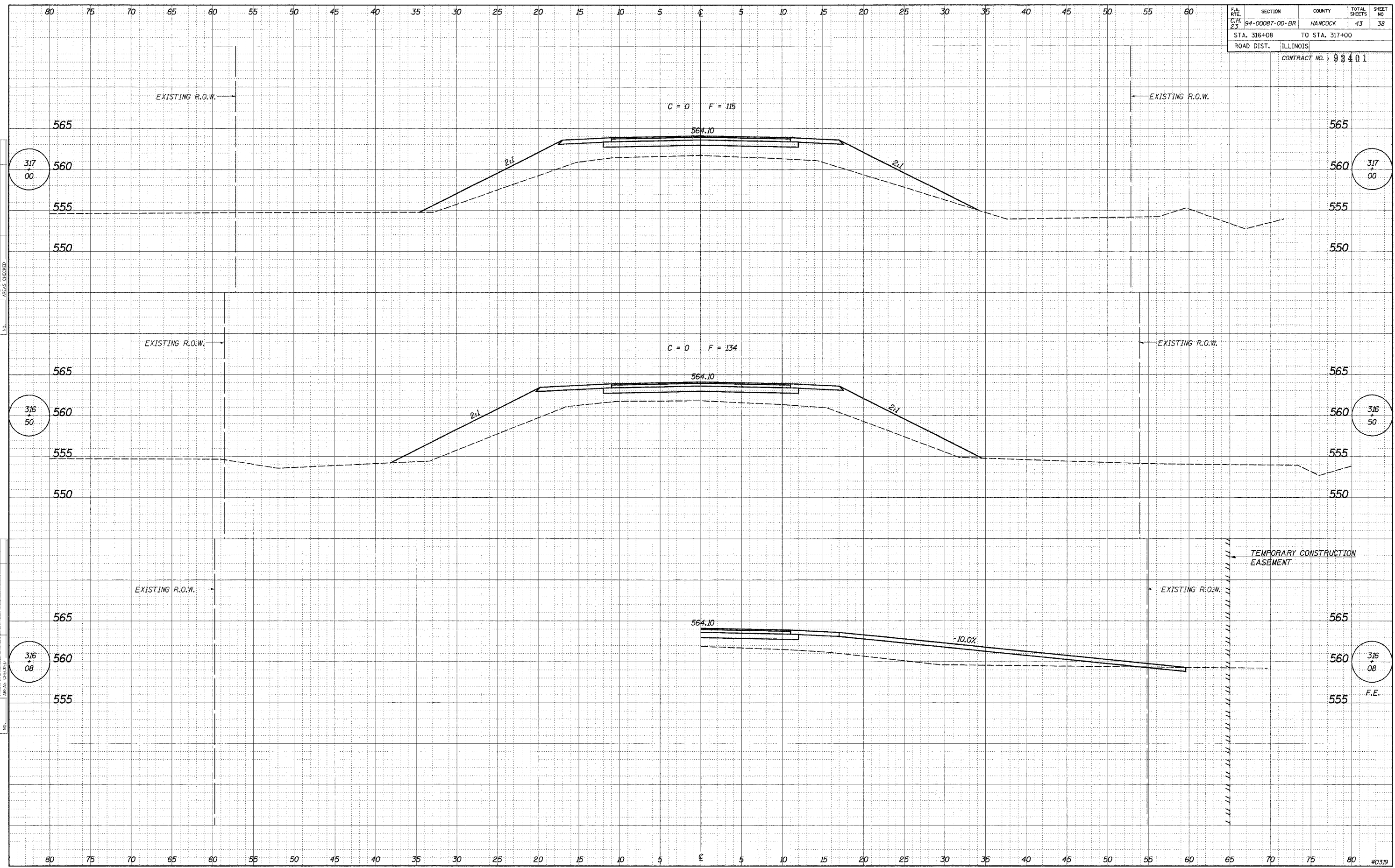
DATE	BY
FINAL SURVEY	SURVEYED
NOTE BOOK	AREAS
	TEMPLE
	AREAS CHECKED

DATE	BY
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	AREAS
	TEMPLE
	AREAS CHECKED

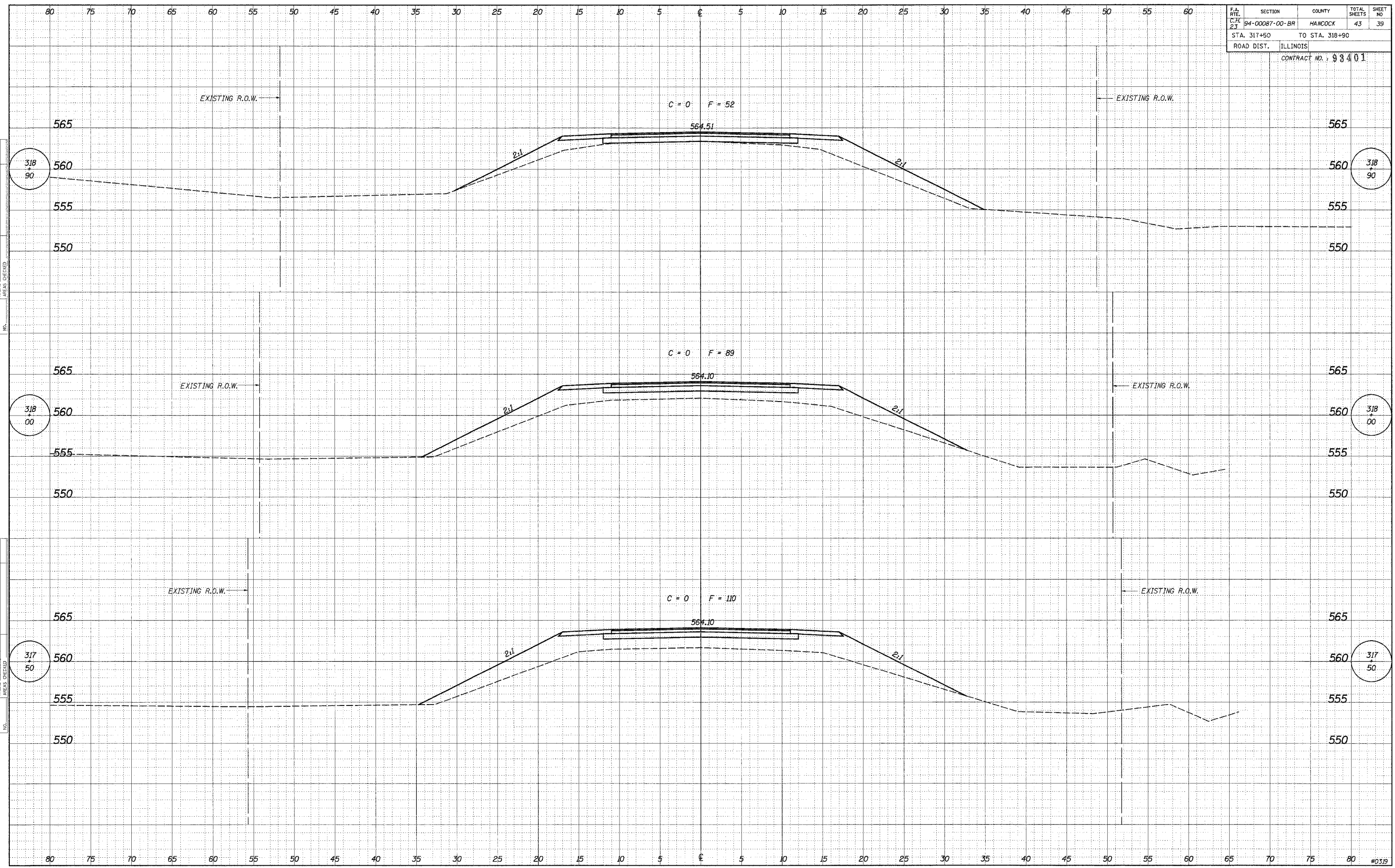
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
23	94-00087-00-BR	HANCOCK	43	38
STA. 316+08		TO STA. 317+00		
ROAD DIST. ILLINOIS		CONTRACT NO. : 93401		

DATE: _____ BY: _____
 SURVEYED: _____
 SURVEY: _____
 NOTE BOOK: _____
 NO. _____
 AREAS CHECKED: _____

DATE: _____ BY: _____
 SURVEYED: _____
 SURVEY: _____
 NOTE BOOK: _____
 NO. _____
 AREAS CHECKED: _____



F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
23	94-00087-00-BR	HANCOCK	43	39
STA. 317+50		TO STA. 318+90		
ROAD DIST.		ILLINOIS		
CONTRACT NO. 93401				



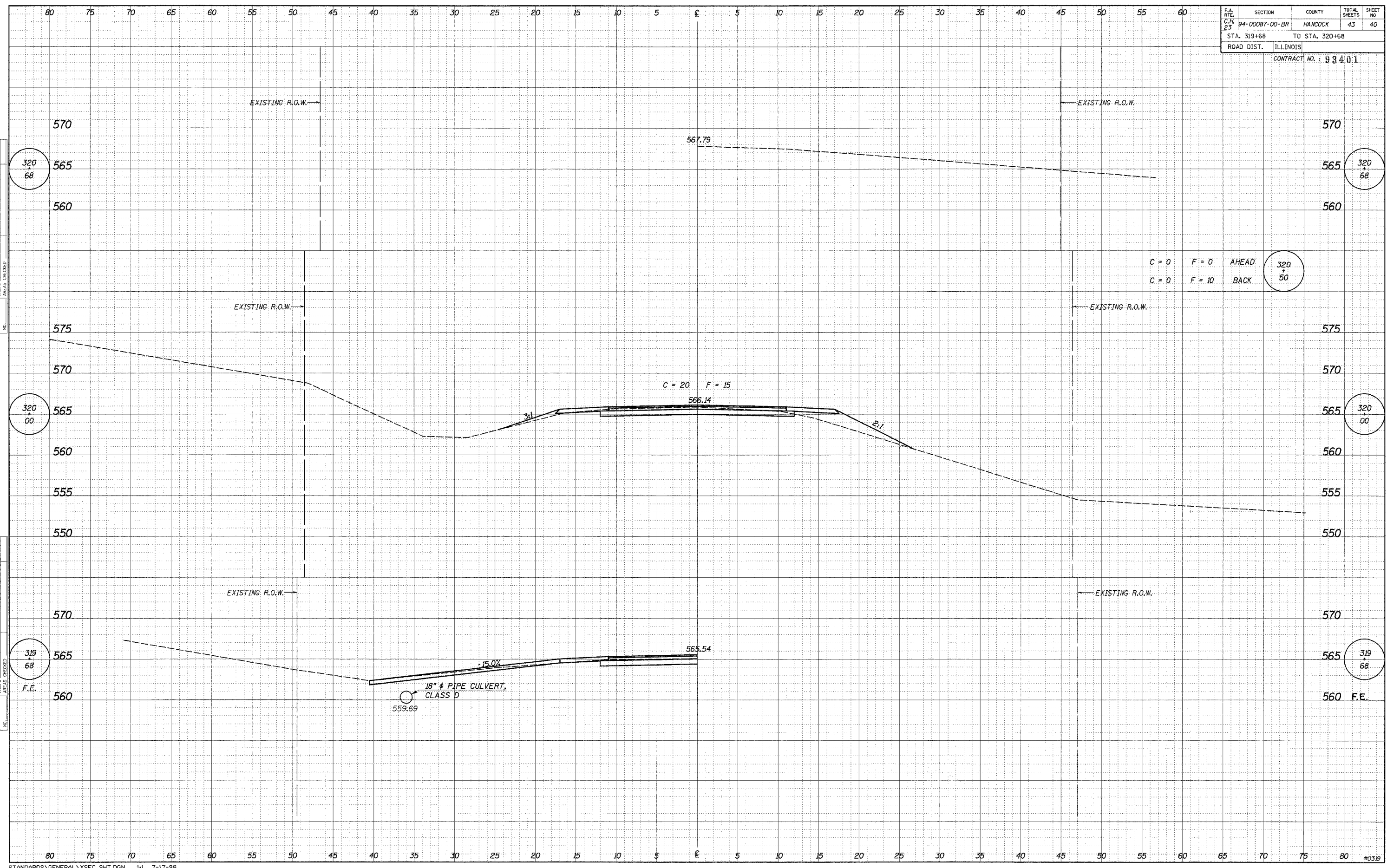
BY _____ DATE _____
 SURVEYED _____
 SURVEY _____
 TEMPLATE _____
 AREAS CHECKED _____
 FINAL SURVEY _____
 NOTE BOOK _____
 NO. _____

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 23	94-00087-00-BR	HANCOCK	43	40
STA. 319+68		TO STA. 320+68		
ROAD DIST.		ILLINOIS		
CONTRACT NO. : 93401				

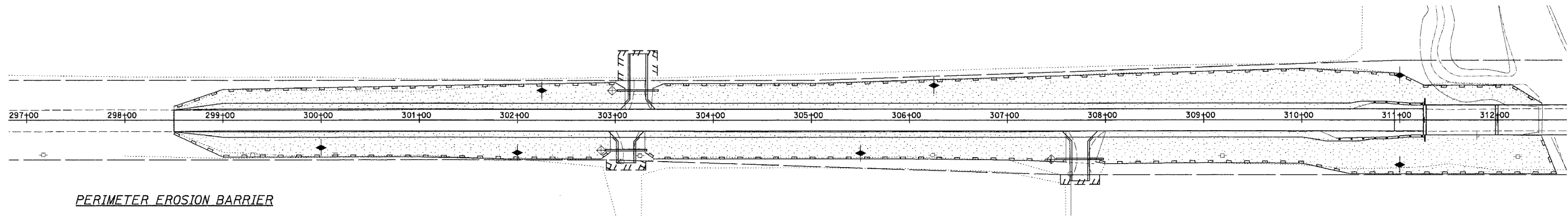
FINAL SURVEY
 SURVEYED BY: _____
 DATE: _____
 NOTE BOOK NO.: _____
 TEMPLATE: _____
 AREAS CHECKED: _____

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



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 23	94-00087-00-BR	HANCOCK	43	41
ROAD DIST.	ILLINOIS			

CONTRACT NO. : 99401



PERIMETER EROSION BARRIER

- 14' LT. STA. 298+50 TO 31' LT. STA. 299+00 = 53'
 - 31' LT. STA. 299+00 TO 38' LT. STA. 303+00 = 400'
 - 38' LT. STA. 303+00 TO 32' LT. STA. 303+10 = 12'
 - 32' LT. STA. 303+38 TO 37' LT. STA. 303+50 = 13'
 - 37' LT. STA. 303+50 TO 37' LT. STA. 305+00 = 150'
 - 37' LT. STA. 305+00 TO 52' LT. STA. 310+50 = 550'
 - 52' LT. STA. 310+50 TO 47' LT. STA. 311+50 = 50'
 - 47' LT. STA. 311+00 TO 35' LT. STA. 311+25 = 26'
 - 35' LT. STA. 311+25 TO 35' LT. STA. 312+15 = 90'
 - 35' LT. STA. 312+15 TO 17' LT. STA. 312+45 = 35'
- SUBTOTAL = 1,379 FOOT

- 14' RT. STA. 298+50 TO 37' RT. STA. 299+00 = 55'
 - 37' RT. STA. 299+00 TO 37' RT. STA. 301+00 = 200'
 - 37' RT. STA. 301+00 TO 39' RT. STA. 302+00 = 100'
 - 39' RT. STA. 302+00 TO 39' RT. STA. 302+85 = 85'
 - 39' RT. STA. 302+85 TO 32' RT. STA. 302+95 = 12'
 - 32' RT. STA. 303+30 TO 39' RT. STA. 303+40 = 12'
 - 39' RT. STA. 303+40 TO 39' RT. STA. 306+00 = 260'
 - 39' RT. STA. 306+00 TO 40' RT. STA. 307+00 = 100'
 - 40' RT. STA. 307+00 TO 42' RT. STA. 307+60 = 60'
 - 42' RT. STA. 307+90 TO 44' RT. STA. 308+00 = 10'
 - 44' RT. STA. 308+00 TO 43' RT. STA. 309+00 = 100'
 - 43' RT. STA. 309+00 TO 43.5' RT. STA. 310+00 = 100'
 - 43.5' RT. STA. 310+00 TO 54' RT. STA. 310+50 = 51'
 - 54' RT. STA. 310+50 TO 54' RT. STA. 312+60 = 210'
 - 54' RT. STA. 312+60 TO 17' RT. STA. 312+45 = 40'
- SUBTOTAL = 1,395 FOOT

- 17' LT. STA. 315+60 TO 40' LT. STA. 315+85 = 34'
 - 40' LT. STA. 315+85 TO 37' LT. STA. 316+50 = 65'
 - 37' LT. STA. 316+50 TO 35' LT. STA. 316+60 = 10'
 - 35' LT. STA. 316+60 TO 35' LT. STA. 318+00 = 140'
 - 35' LT. STA. 318+00 TO 30' LT. STA. 319+45 = 145'
 - 30' LT. STA. 319+45 TO 32' LT. STA. 319+50 = 5'
 - 32' LT. STA. 319+85 TO 25' LT. STA. 320+00 = 17'
 - 25' LT. STA. 320+00 TO 14' LT. STA. 320+50 = 51'
- SUBTOTAL = 467 FOOT

- 17' RT. STA. 315+60 TO 55' RT. STA. 315+88 = 47'
 - 55' RT. STA. 316+28 TO 34' RT. STA. 316+28 = 21'
 - 34' RT. STA. 316+28 TO 34' RT. STA. 317+00 = 72'
 - 34' RT. STA. 317+00 TO 32' RT. STA. 317+50 = 50'
 - 32' RT. STA. 317+50 TO 32' RT. STA. 318+00 = 50'
 - 32' RT. STA. 318+00 TO 35' RT. STA. 318+90 = 90'
 - 35' RT. STA. 318+90 TO 27' RT. STA. 320+00 = 110'
 - 27' RT. STA. 320+00 TO 14' RT. STA. 320+50 = 51'
- SUBTOTAL = 491 FOOT
- TOTAL = 3,732 FOOT

TEMPORARY DITCH CHECKS

- RT. STA. 300+00 = 1 EACH
- RT. STA. 302+00 = 1 EACH
- LT. STA. 302+25 = 1 EACH
- RT. STA. 305+50 = 1 EACH
- LT. STA. 306+25 = 1 EACH
- LT. & RT. STA. 311+00 = 2 EACH

TOTAL = 7 EACH

INLET AND PIPE PROTECTION

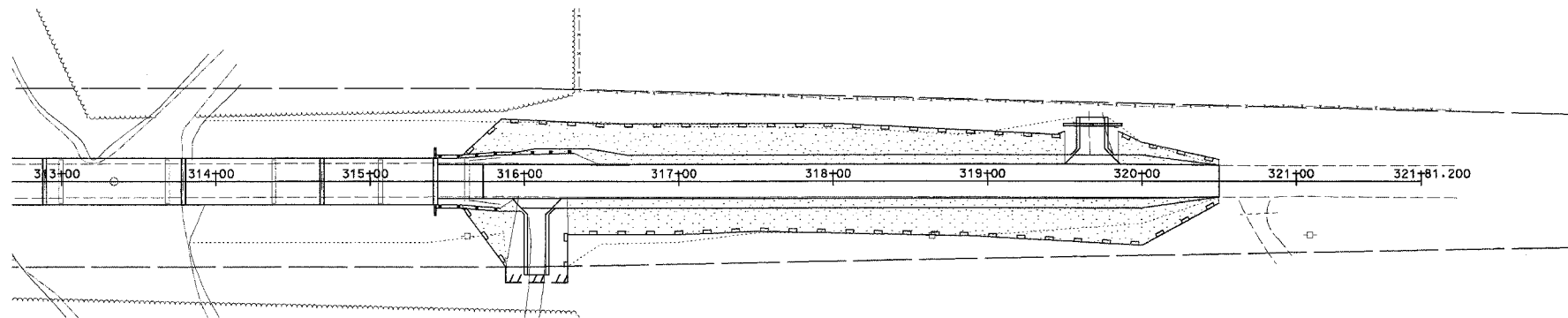
- RT. STA. 302+90 = 1 EACH
- LT. STA. 303+02 = 1 EACH
- RT. STA. 307+50 = 1 EACH

TOTAL = 3 EACH

TEMPORARY EROSION CONTROL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
TEMPORARY DITCH CHECKS	EACH	7
PERIMETER EROSION BARRIER	FOOT	3,732
TEMPORARY EROSION CONTROL SEEDINGS	POUND	530
INLET AND PIPE PROTECTION	EACH	3

SEE SHEETS 42 & 43 FOR PLACEMENT OF TEMPORARY FENCE



DESCRIPTION OF INTENDED SEQUENCE OF MAJOR CONSTRUCTION ACTIVITIES WHICH WILL DISTURB EARTH AND LEAD TO POSSIBLE EROSION FOR MAJOR PORTIONS OF THE CONSTRUCTION SITE:

1. PLACEMENT OF PERIMETER EROSION BARRIER AND TEMPORARY FENCE PRIOR TO THE COMMENCEMENT OF ANY ROAD OR BRIDGE WORK.
2. REMOVAL OF EXISTING STRUCTURE.
3. CONSTRUCTION OF THE REPLACEMENT STRUCTURE.
4. PLACEMENT OF ROADWAY EMBANKMENT TO RAISE THE ROADWAY TO THE PROPOSED GRADE.
5. DRAINAGE STRUCTURES, INCLUDING DITCHES, WILL BE INSTALLED BEFORE AND/OR DURING THE COMPLETION OF THE EMBANKMENT.
6. PLACEMENT AND MAINTENANCE OF TEMPORARY EROSION CONTROL.
7. PLACEMENT OF PERMANENT EROSION CONTROL.
8. REMOVAL AND PROPER CLEAN UP OF TEMPORARY EROSION CONTROL.
9. FINAL GRADING, PLACING AGGREGATE, PLACING BITUMINOUS AND SURFACE COURSES AND OTHER MISCELLANEOUS ITEMS.

TEMPORARY EROSION CONTROL:

- ▬ PERIMETER EROSION BARRIER
- ◆ TEMPORARY DITCH CHECK
- ⊕ INLET AND PIPE PROTECTION

PERMANENT EROSION CONTROL:

- ▨ SEEDING CLASS 2, FERTILIZERS, & MULCH, METHOD 2

EROSION CONTROL PLAN
 C.H. 23
 SECTION 94-00087-00-BR
 HANCOCK COUNTY
 STATION 313+34

4440 ASH GROVE
 SPRINGFIELD, IL 62711
 (217) 793-8600
 oasinc@amvid.com

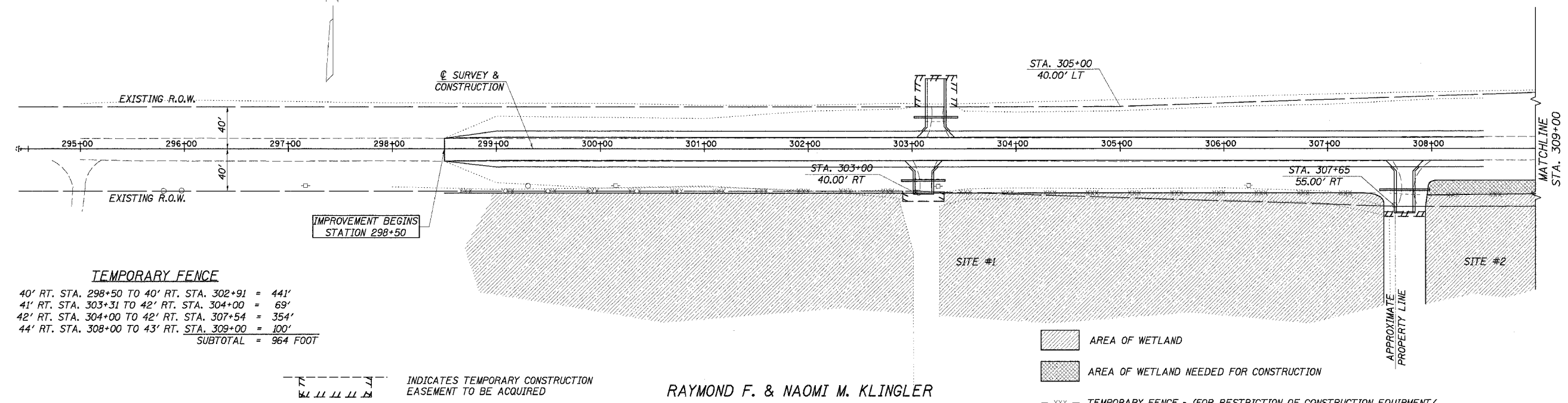
OZYURT AND STONE, INC.
 CONSULTING ENGINEERS

JOB NO.: 0329
 FILE: erosion.dgn
 DATE: 10-12-05

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 22	94-00087	HANCOCK	43	42
FAS 429-00-BR				
STA. 295+00 TO STA. 309+00				
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. : 93401				

N. 1/2, SECTION 13, T. 3 N., R.8 W., 4TH P.M.
 EDWIN F., IREAN R., WILLIS A., & ALTA ANN LINNENBURGER

DATE	
BY	
REVISION	
DATE	
BY	
REVISION	
DATE	
BY	
REVISION	



TEMPORARY FENCE

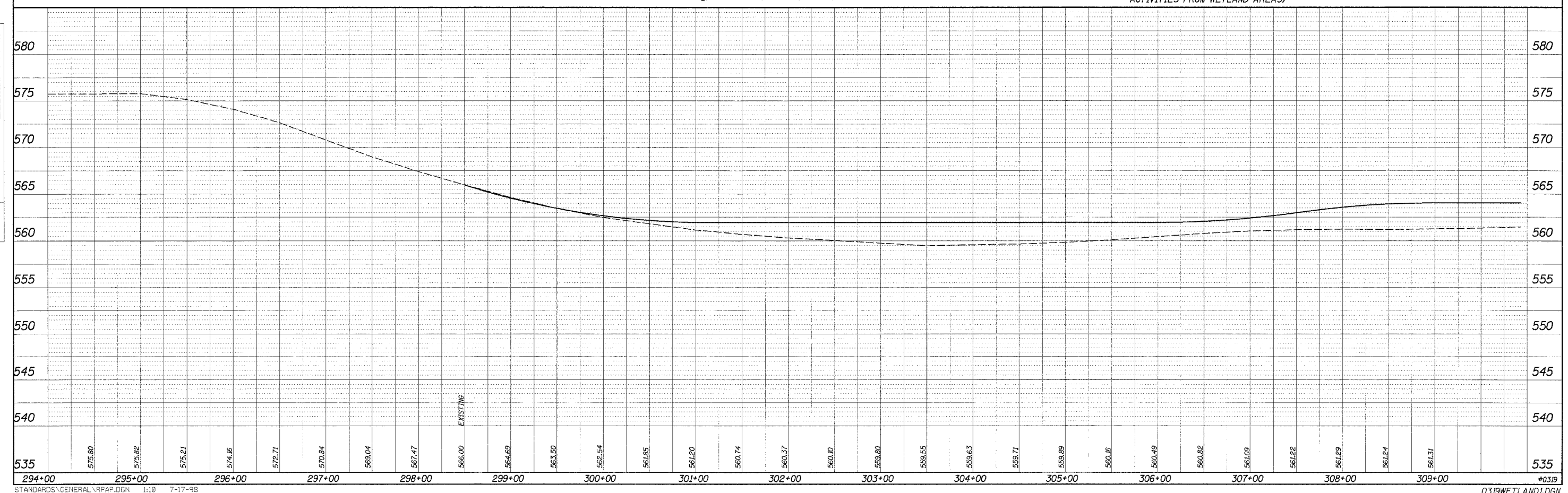
40' RT. STA. 298+50 TO 40' RT. STA. 302+91	= 441'
41' RT. STA. 303+31 TO 42' RT. STA. 304+00	= 69'
42' RT. STA. 304+00 TO 42' RT. STA. 307+54	= 354'
44' RT. STA. 308+00 TO 43' RT. STA. 309+00	= 100'
SUBTOTAL	= 964 FOOT

INDICATES TEMPORARY CONSTRUCTION EASEMENT TO BE ACQUIRED

RAYMOND F. & NAOMI M. KLINGLER
 S. 1/2, SECTION 13, T. 3 N., R.8 W., 4TH P.M.

- AREA OF WETLAND
- AREA OF WETLAND NEEDED FOR CONSTRUCTION
- xxx - TEMPORARY FENCE - (FOR RESTRICTION OF CONSTRUCTION EQUIPMENT/ACTIVITIES FROM WETLAND AREAS)

DATE	
BY	
REVISION	
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REVISION	
DATE	
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REVISION	

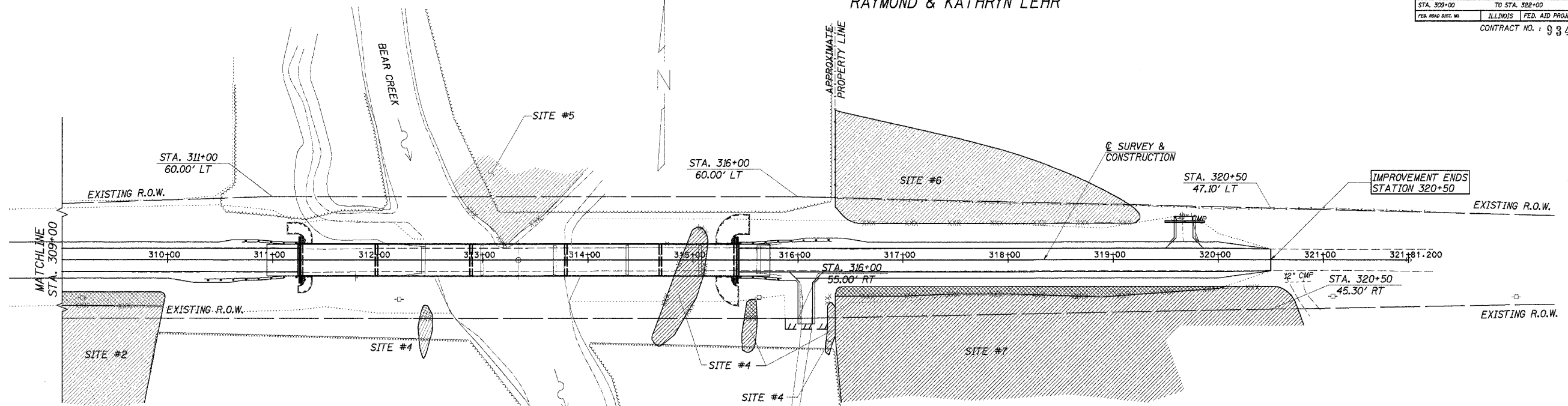


EDWIN F., IREAN R., WILLIS A., & ALTA ANN LINNENBURGER

N. 1/2, SECTION 13, T. 3 N., R. 8 W., 4TH P.M.

RAYMOND & KATHRYN LEHR

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 23	94-00087	HANCOCK	43	43
FAS429	-00-BR			
STA. 309+00	TO STA. 322+00			
ILLINOIS FED. AID PROJECT				
CONTRACT NO. : 93401				



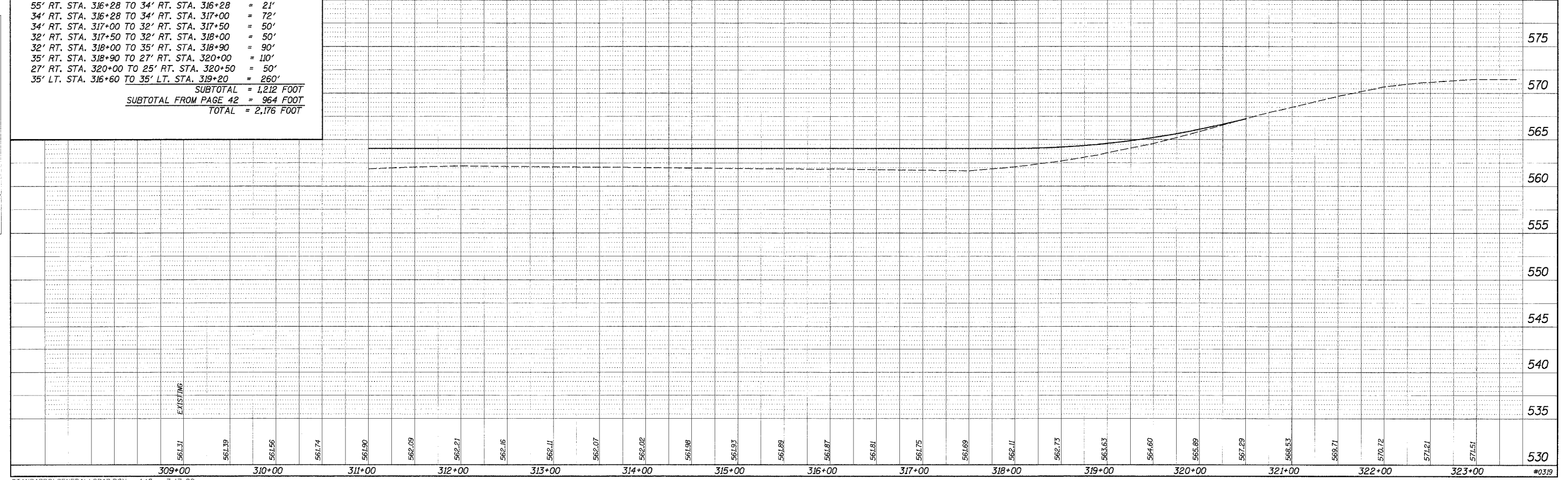
- AREA OF WETLAND
- AREA OF WETLAND NEEDED FOR CONSTRUCTION
- xxx - TEMPORARY FENCE - (FOR RESTRICTION OF CONSTRUCTION EQUIPMENT/ACTIVITIES FROM WETLAND AREAS)

TEMPORARY FENCE

43' RT. STA. 309+00 TO 43.5' RT. STA. 310+00	= 100'
55' RT. STA. 312+30 TO 55' RT. STA. 312+60	= 30'
LT. STA. 312+78 TO LT. STA. 313+75	= 136'
(AROUND NOSE OF SAND BAR)	
RT. STA. 314+60 TO LT. STA. 315+10	= 193'
(AROUND WETLAND)	
55' RT. STA. 315+38 TO 55' RT. STA. 315+88	= 50'
55' RT. STA. 316+28 TO 34' RT. STA. 316+28	= 21'
34' RT. STA. 316+28 TO 34' RT. STA. 317+00	= 72'
34' RT. STA. 317+00 TO 32' RT. STA. 317+50	= 50'
32' RT. STA. 317+50 TO 32' RT. STA. 318+00	= 50'
32' RT. STA. 318+00 TO 35' RT. STA. 318+90	= 90'
35' RT. STA. 318+90 TO 27' RT. STA. 320+00	= 110'
27' RT. STA. 320+00 TO 25' RT. STA. 320+50	= 50'
35' LT. STA. 316+60 TO 35' LT. STA. 319+20	= 260'
SUBTOTAL	= 1,212 FOOT
SUBTOTAL FROM PAGE 42	= 964 FOOT
TOTAL	= 2,176 FOOT

S. 1/2, SECTION 13, T. 3 N., R. 8 W., 4TH P.M.

ROGER D. & SHARON K. THURMAN



PLAN
 SURVEYED BY: _____ DATE: _____
 CHECKED BY: _____ DATE: _____
 ALIGNED BY: _____ DATE: _____
 PROFILE
 SURVEYED BY: _____ DATE: _____
 CHECKED BY: _____ DATE: _____
 GRADES BY: _____ DATE: _____
 NOTE BOOK NO. _____
 FIELD NO. _____
 PROJECT NO. _____