08-02-13 LETTING ITEM 067

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 30	94-00090 -00-BR	HANCOCK	20	1
	ILLINOIS			

CONTRACT NO. 93604

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PLANS FOR PROPOSED SURFACE TRANSPORTATION BRIDGE PROGRAM

SECTION 94–00090–00–BR
HANCOCK COUNTY
PROJECT NO. BRS–431(103)
C.H. 30 (FAS 431)
C–96–266–10
CONTRACT NO. 93604

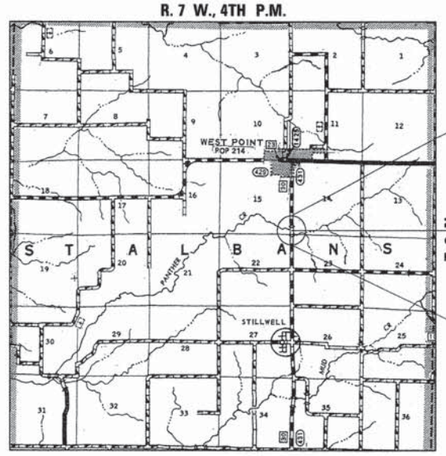
INDEX OF SHEETS

HIGHWAY STANDARDS

280001–07	TEMPORARY EROSION CONTROL SYSTEMS
515001–03	NAME PLATE FOR BRIDGES
630001–10	STEEL PLATE BEAM GUARDRAIL
631032–08	TRAFFIC BARRIER TERMINAL, TYPE 6A
635006–03	REFLECTOR AND TERMINAL MARKER PLACEMENT
665001–02	WOVEN WIRE FENCE
701901–02	TRAFFIC CONTROL DEVICES
BLR 21–9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

SCALES

PLAN	0'	50'	100'
PROFILE HORIZ.	0'	50'	100'
PROFILE VERT.	0'	5'	10'
CROSS SECTIONS	0'	5'	10'



LOCATION PLAN

GROSS LENGTH OF SECTION = 550.00 FEET = 0.104 MILES
NET LENGTH OF SECTION = 550.00 FEET = 0.104 MILES

0 1 2 3 4 5
SCALE IN MILES

LOCATION OF SECTION INDICATED THUS: –

CLASSIFICATION: MAJOR COLLECTOR (NON–URBAN)
DESIGN VOLUME: UNDER 400 ADT
CURRENT ADT: 350 (2013)
DESIGN SPEED: 35 MPH

DESIGN CRITERIA: 3R

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

APPROVED 4-25 2013
Elgin Berry
COUNTY ENGINEER

PASSED May 24, 2013
Ron Ashenbrenner
DISTRICT SIX CONSTRUCTION ENGINEER

PASSED May 22, 2013
Terrence H. Fountain
DISTRICT SIX ENGINEER OF LOCAL ROADS & STREETS

RELEASED FOR BID BASED ON LIMITED REVIEW May 22, 2013
Roger L. Driskell
DEPUTY DIRECTOR OF HIGHWAYS, REGION FOUR ENGINEER

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GARY J. CARTWRIGHT
43408
REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS

Gary J. Cartwright 4-25-13
ILLINOIS PROFESSIONAL NO. 43408
EXPIRES 11-30-13

4440 ASH GROVE
SPRINGFIELD, IL. 62711
(217) 793–8600
www.fehr-graham.com
FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL

*11-220

SUMMARY OF QUANTITIES

	CODE NO.	ITEM	UNIT	TOTAL QUANTITY
	20200100	EARTH EXCAVATION	CU YD	409
	20300100	CHANNEL EXCAVATION	CU YD	874
	28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	31
	28000400	PERIMETER EROSION BARRIER	FOOT	1000
	28100207	STONE RIPRAP, CLASS A4	TON	323
	28200200	FILTER FABRIC	SQ YD	390
	35100100	AGGREGATE BASE COURSE, TYPE A	TON	590
	40600100	BITUMINOUS MATERIALS - PRIME COAT	GALLON	531
	40603080	HOT-MIX ASPHALT BINDER COURSE, IL 19.0, N50	TON	154
	40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C" N50	TON	128
	48100100	AGGREGATE SHOULDERS, TYPE A	TON	155
*	50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
	50300225	CONCRETE STRUCTURES	CU YD	59.2
	50300280	CONCRETE ENCASEMENT	CU YD	36.8
*	50400305	PRECAST PRESTRESSED CONCRETE DECK BEAMS (17" DEPTH)	SQ FT	2850
	50800105	REINFORCEMENT BARS	POUND	8140
	51201400	FURNISHING STEEL PILES HP10X42	FOOT	378
	51201600	FURNISHING STEEL PILES HP12X53	FOOT	462
	51202305	DRIVING PILES	FOOT	840
	51203400	TEST PILE STEEL HP10X42	EACH	1
	51203600	TEST PILE STEEL HP12X53	EACH	1
	51500100	NAME PLATES	EACH	1
	58100200	WATERPROOFING MEMBRANE SYSTEM	SQ YD	323
	58300100	PORTLAND CEMENT MORTAR FAIRING COURSE	FOOT	641
Δ	63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	2
Δ	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
Δ	78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	1100
Δ*	78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
*	X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.2
*	Z0022800	FENCE REMOVAL	FOOT	65
Δ*	XX006199	STEEL BRIDGE RAIL, TYPE SM (SPECIAL)	FOOT	190
Δ*	XX006653	FENCE (SPECIAL)	FOOT	64

*SEE SPECIAL PROVISIONS

Δ SPECIALTY ITEMS

CONSTRUCTION TYPE CODE: 0011
BRIDGE TYPE : X080

GENERAL NOTES

WHERE SECTION OF 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 SEEDED SHALL CONSIST OF ALL DISTURBED EARTH SURFACES WITHIN THE RIGHT OF WAY, AS DIRECTED BY THE ENGINEER.

SEEDING, CLASS 2 (SPECIAL) = 0.2 ACRE

TEMPORARY EROSION CONTROL

THE FOLLOWING QUANTITIES ARE ESTIMATE ONLY, ACTUAL QUANTITIES FOR EROSION CONTROL WILL BE DETERMINED BY THE ENGINEER IN THE FIELD AND THERE WILL BE NO ADJUSTMENT IN ANY PRICE DUE TO A CHANGE IN PLAN QUANTITY.

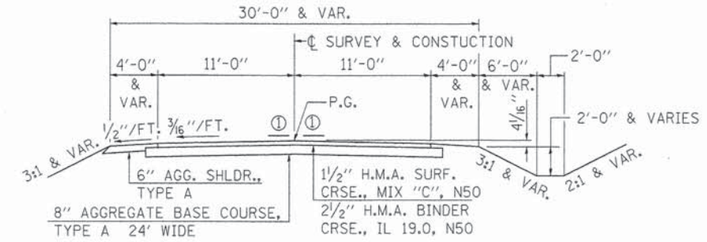
TEMPORARY EROSION CONTROL SEEDING = 31 POUND
PERIMETER EROSION CONTROL BARRIER = 1000 FOOT

FENCING SCHEDULE

LOCATION	FENCE REMOVAL	FENCE (SPECIAL)
	FOOT	FOOT
33' LT. STA. 83+26 TO EXISTING WINGWALL	8	
31' RT. STA. 82+86 TO EXISTING WINGWALL	14.5	
33' LT. STA. 83+94.5 TO EXISTING WINGWALL	13.5	
33' RT. STA. 83+82 TO EXISTING WINGWALL	29	
33' LT. STA. 83+26 TO PROPOSED WINGWALL		25
31' RT. STA. 82+86 TO PROPOSED WINGWALL		12
33' LT. STA. 83+94.5 TO PROPOSED WINGWALL		13
33' RT. STA. 83+82 TO PROPOSED WINGWALL		14
TOTAL	65	64

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

ITEM	H.M.A. BINDER COURSE	H.M.A. SURFACE COURSE
AGGREGATE COMPOSITION:	IL 19.0	IL 9.5 MIX "C"
ASPHALT GRADE:	PG 64-22	PG 64-22
DESIGN AIR VOIDS:	4.0% @ N50	4.0% @ N50



SUGGESTED FILL SECTION
CONSTRUCT AS SHOWN BY STATION CROSS SECTIONS

SUGGESTED CUT SECTION
CONSTRUCT AS SHOWN BY STATION CROSS SECTIONS

TYPICAL PROPOSED CROSS SECTION

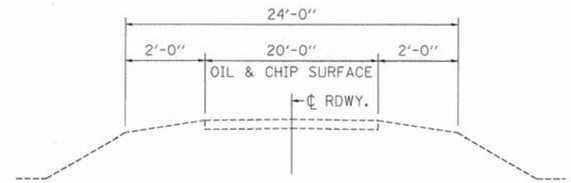
STA. 81+00 TO STA. 82+92.49 AND
STA. 83+89.51 TO STA. 85+50

TRANSITION FROM EXISTING ROADWAY TO PROPOSED ROADWAY TO BE CONSTRUCTED FROM STA. 80+50 TO STA. 81+00 AND FROM STA. 85+50 TO STA. 86+00.

PROPOSED PAINT PAVEMENT MARKING

STA. 80+50 TO STA. 86+00

① SOLID YELLOW PAINT PAVEMENT MARKING - LINE 4"



TYPICAL EXISITNG CROSS SECTION

APPLICATION RATES USED IN QUANTITY CALCULATIONS

AGGREGATE BASE COURSE AND SURFACE COURSE ..... 2.05 TON/CU YD
AGGREGATE SHOULDERS ..... 2.05 TON/CU YD
BITUMINOUS MATERIALS (PRIME COAT) ON AGGREGATE ..... 0.35 GAL/SQ YD/APPLICATION
BITUMINOUS MATERIALS (PRIME COAT) ON HMA ..... 0.10 GAL/SQ YD/APPLICATION
H.M.A. SURFACE COURSE AND BINDER COURSE ..... 112 LBS./SQ YD/IN
STONE RIPRAP ..... 1.50 TON/CU YD

NOTE: THE ABOVE NOTED APPLICATION RATES ARE FOR QUALITY CALCULATIONS ONLY. THE APPLICATION RATE TO BE APPLIED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF PLACEMENT.

FILE NAME = 11-220.SUMTYP.DGN	DESIGNED - G.J.C.	REVISED -	
	DRAWN - R.F.	REVISED -	
	CHECKED - R.J.C.	REVISED -	
	DATE - 08/02/2012	REVISED -	

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ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-005525

FREEPORT, IL ROCKFORD, IL
ROCHELLE, IL SPRINGFIELD, IL
MONROE, WI

SUMMARY OF QUANTITIES, GENERAL NOTES AND TYPICAL CROSS SECTIONS

SCALE: | PROPOSED STRUCTURE @ STA. 83+41

C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
30	94-00090-00-BR	HANCOCK	20	2
		CONTRACT NO. 93604		
	ILLINOIS			

*11-220

NE. 1/4 SEC. 22, T. 3 N., R. 7 W., 4TH P.M.

SE. 1/4 SEC. 15, T. 3 N., R. 7 W., 4TH P.M.

NW. 1/4 SEC. 23, T. 3 N., R. 7 W., 4TH P.M.

SW. 1/4 SEC. 14, T. 3 N., R. 7 W., 4TH P.M.

7" SPIKE NAIL IN EDGE OF ROAD 14.21'

7" SPIKE NAIL IN EDGE OF ROAD 15.04'

℄ SURVEY & CONSTRUCTION

N/BC IN POWER POLE 32.45'

P.O.T. STA. 78+00.00
IRON PIN (FLUSH)

STEPHEN D. & NIDA G. WEID

THOMAS R. KOLLECK

DORIS LEE LUNT TRUST

ALBERTA S. WEID ESTATE

NORTH LINE SEC. 22
SOUTH LINE SEC. 15

NORTH LINE SEC. 23
SOUTH LINE SEC. 14

EAST LINE SEC. 22
WEST LINE SEC. 23

EAST LINE SEC. 15
WEST LINE SEC. 14

POT Sta 78+00.00

POT Sta 88+00.00

POT Sta 90+85.62

EXIST. ROW

TIMBER

PASTURE

GRASS

F.E. (AGG.)

F.E. (GRASS)

IMPROVEMENT BEGINS STA. 80+50.00

IMPROVEMENT ENDS STA. 86+00.00

80+00

85+00

90+00

C.H. 30 (OIL & CHIP)

33'

2'x2' R.C. BOX CULV.

15" CMP

12"

16"

WV

FLOW

PANTHER CREEK

℄ SURVEY & CONSTRUCTION

PROPOSED S.N. 034-3301
STA. 83+41.00 - PRECAST PRESTRESSED CONCRETE DECK BEAM (17") BRIDGE, THREE SPANS @ 26'-6", 42'-0", 26'-6"; 97'-0 1/4" BK.-BK. ABUTS., 30'-0" ROADWAY, SKEW 30° LT.

N/BC IN FENCE POST 38.10'

N/BC IN FENCE POST 43.99'

N/BC IN FENCE POST 37.24'

℄ SURVEY & CONSTRUCTION

P.O.T. STA. 88+00.00
IRON PIN (FLUSH)

EXISTING S.N. 034-3300

STA. 83+41 - SINGLE SPAN R. C. SLAB BRIDGE ON CLOSED CONCRETE ABUTMENTS. 30'-0" BK.-BK. ABUTS., 22'-3" O.-O. DECK; 30° LT. SKEW

REMOVAL OF EXISTING STRUCTURES = 1 EACH

UTILITIES

FRONTIER COMMUNICATIONS
BILL DANIEL 402-250-1095

VILLAGE OF WEST POINT
LARRY WOOD 309-219-2772 (CELL)

CHANNEL EXCAVATION

THE CHANNEL SHALL BE EXCAVATED AS SHOWN WITHIN THE LIMITS OF THE PROPOSED STRUCTURE THEN TAPER TO THE EXISTING CHANNEL AT THE R.O.W. LINES. SUITABLE EXCAVATED MATERIAL TO BE USED IN THE EMBANKMENT AS DIRECTED BY THE ENGINEER.

CHANNEL EXCAVATION = 874 CU. YD.

PLAN
SURVEYED
PLOTTED
ALIGNMENT CHECKED
ALL MEAS. CHECKED
CADD FILE NAME
NOTE BOOK
NO.
BY
DATE

PROFILE
SURVEYED
PLOTTED
GRADES CHECKED
B.M. NOTED
STRUCTURE NOTATNS CKED
NOTE BOOK
NO.
BY
DATE

B.M. #1 - SPIKE NAIL IN POWER POLE
30' RT. STA. 77+88
EL. 640.08

B.M. #2 - CHISELED "□" ON TOP OF NORTHWEST WINGWALL
EL. 628.34

B.M. #3 - SPIKE NAIL IN GATE POST
34' LT. STA. 86+32
EL. 629.90

EARTH EX. = 409 CU YD
SUITABLE CHANNEL EX. = 138 CU YD
EMBANKMENT (INFO. ONLY) = 410 CU YD

650
645
640
635
630
625
620
615
610

EXISTING PROFILE GRADE

P.O.T. STA. 80+50.00 EL. 633.42

P.C. STA. 80+75.00 EL. 632.46

P.I. STA. 81+75.00 EL. 628.60

P.T. STA. 82+75.00 EL. 628.60

P.C. STA. 84+50.00 EL. 628.60

P.I. STA. 81+50.00 EL. 628.60

P.T. STA. 86+00.00 EL. 630.33

3.86%

L=200'
E=0.97'
K=52

20 YR. H.W.E. 621.7

100 YR. H.W.E. 622.9

+0.00%

L=150'
E=0.43'
K=64

+2.31%

PROPOSED PROFILE GRADE

CHANNEL EXCAVATION

*2:1 @ RT. ℄'S

FLOWLINE EL. 612.3

	EXISTING	PROPOSED
76+00	656.06	
	652.24	
77+00	648.43	
	645.36	
78+00	642.28	
	640.12	
79+00	638.27	
	636.48	
80+00	635.02	
	633.42	633.42
+75 81+00	632.46	632.46
	631.72	631.56
+75 82+00	630.18	630.11
	629.57	629.09
+75 83+00	629.14	
	628.70	628.66
	628.60	628.66
84+00	628.60	628.44
	628.60	628.60
	628.50	628.60
85+00 +25	628.53	628.60
	628.66	628.60
86+00	628.83	628.79
	629.03	629.41
87+00	629.37	
	630.33	630.33
88+00	631.92	
	634.41	
89+00	637.52	
	641.18	
90+00	645.25	
	649.53	
	652.74	
	655.81	

FILE NAME = 11-220_P&P.DGN	DESIGNED - G.J.C.	REVISED -
PLOTTED BY = S.A.P.	DRAWN - S.A.P.	REVISED -
CHECKED BY = R.J.C.	CHECKED - R.J.C.	REVISED -
PLOT DATE = 01/20/12	DATE -	REVISED -

4440 ASH GROVE
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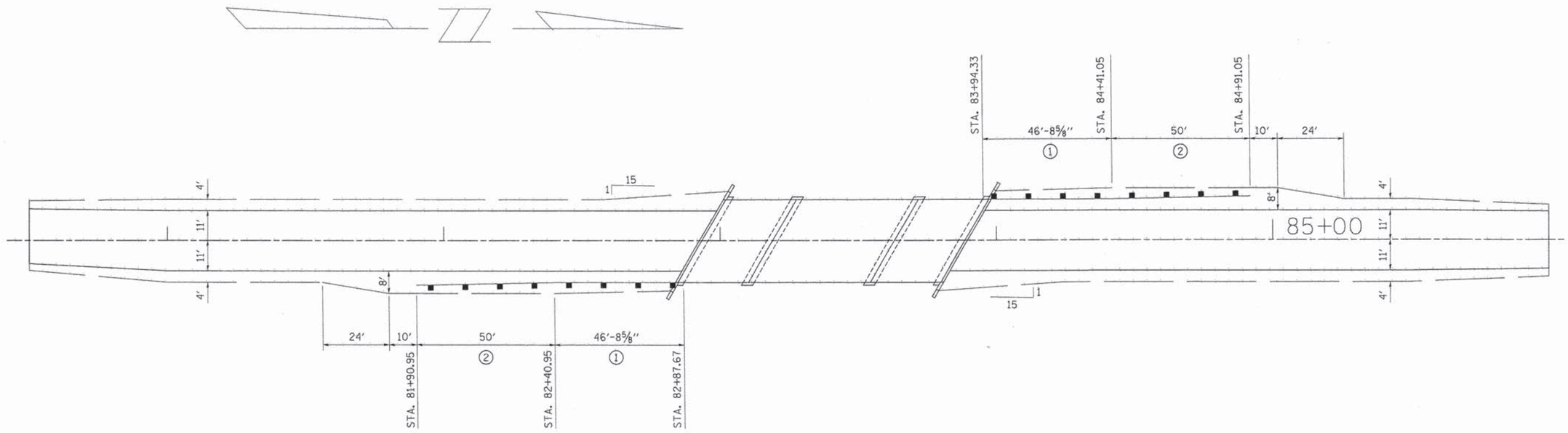
MONROE, WI

PLAN & PROFILE – C.H. 30 (F.A.S. RTE. 431)

STA. 76+00.00 TO STA. 90+85.62

C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
30	94-00090-00-BR	HANCOCK	20	3
		CONTRACT NO. 93604		
		ILLINOIS		

*11-220



GUARDRAIL & SHOULDER DETAIL

TRAFFIC BARRIER TERMINAL, TYPE 6A

15' RT. STA. 82+40.95 TO 15' RT. STA. 82+87.67 = 1 EACH
15' LT. STA. 83+94.33 TO 15' LT. STA. 84+41.05 = 1 EACH
TOTAL = 2 EACH

TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT

16' RT. STA. 81+90.95 TO 15' RT. STA. 82+40.95 = 1 EACH
15' LT. STA. 84+41.05 TO 16' LT. STA. 84+91.05 = 1 EACH
TOTAL = 2 EACH

LEGEND

① TRAFFIC BARRIER TERMINAL, TYPE 6A

② TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT

FILE NAME = 09-203_SHLDR.DGN	DESIGNED - GC	REVISED -
	DRAWN - AS	REVISED -
	CHECKED - RF	REVISED -
	DATE -	REVISED -

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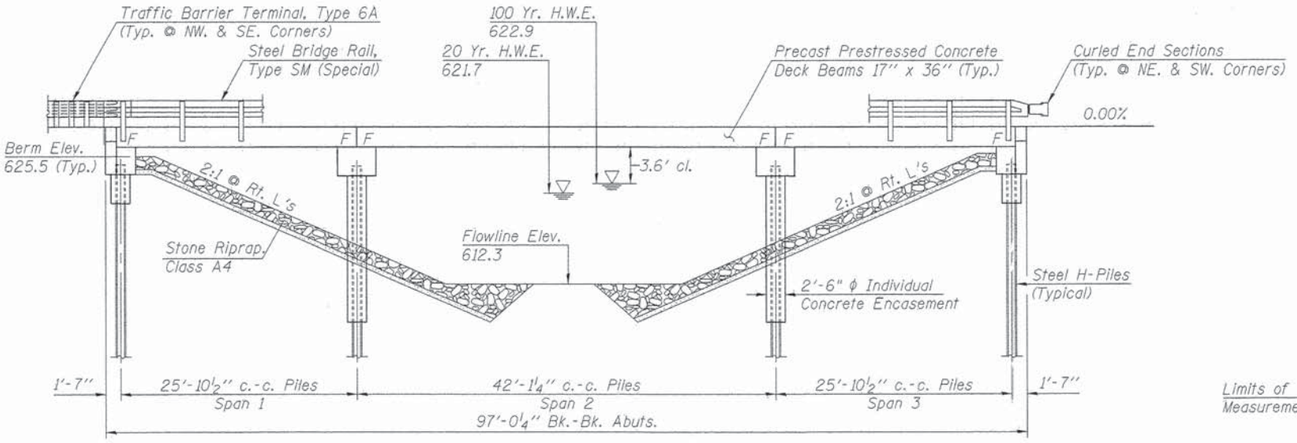
MONROE, WI

SHOULDER AND GUARDRAIL DETAIL

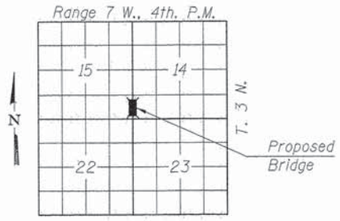
SCALE: | PROPOSED STRUCTURE @ STA. 83+41

C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
30	94-00090-00-BR	HANCOCK	20	4
		CONTRACT NO. 93604		
		ILLINOIS		

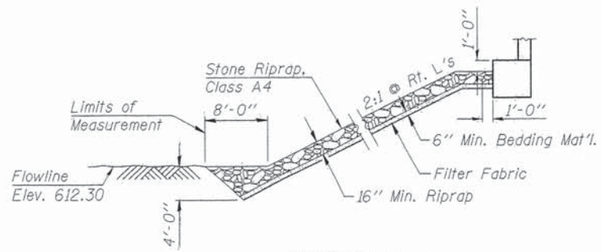
II-220



ELEVATION



LOCATION PLAN



SECTION A-A

Note: Excavation and aggregate bedding will not be paid for as separate items and shall be considered as included in Stone Riprap, Class A4.

GENERAL NOTES

See proposal for Boring data.

Reinforcement bars shall conform to the requirements of ASTM A706 Grade 60.

The Contractor shall drive one steel HP10x42 test pile in a permanent location at the North abutment and one steel HP12x53 test pile in a permanent location at Pier #1 as directed by the Engineer, before ordering the remainder of piles.

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

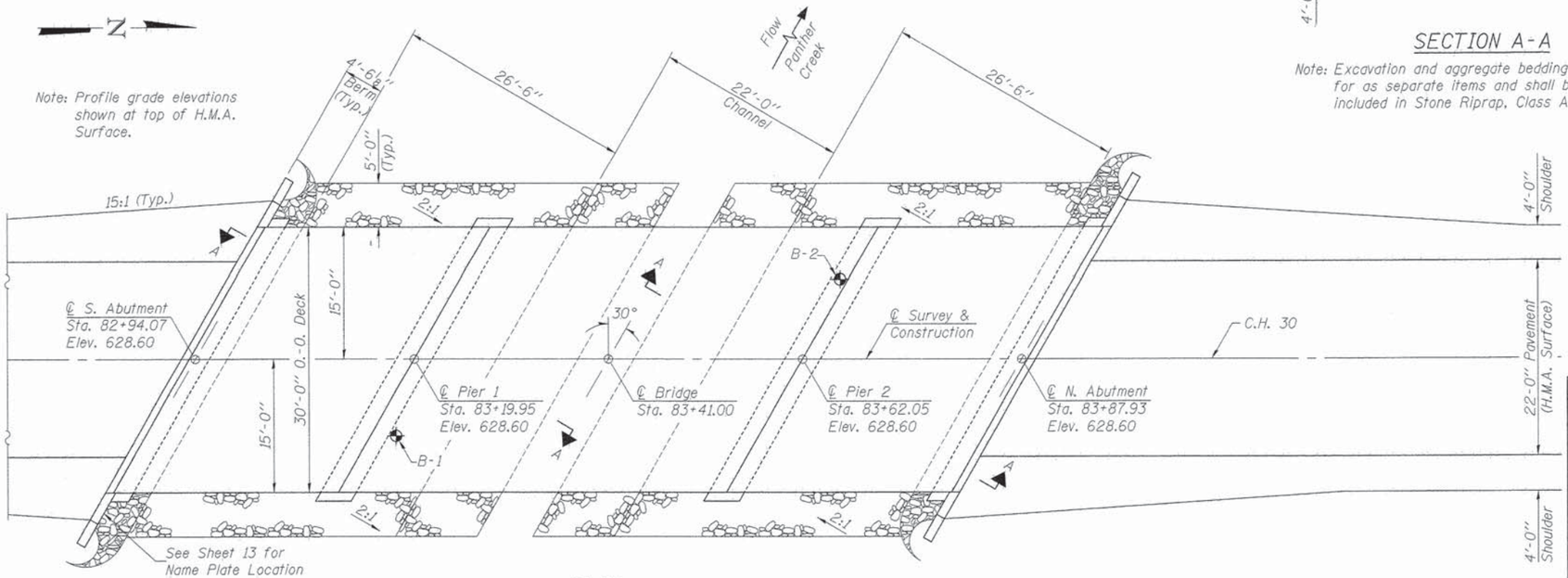
Reinforcement bars designated (E) shall be epoxy coated.

Structure Excavation will not be measured for payment but shall be included in the unit price bid for "Concrete Structures" or "Concrete Encasement."

PANTHER CREEK
BUILT 20__ BY
HANCOCK COUNTY
SEC. 94-00090-00-BR
F.A.S. RT. 431
STR. NO. 034-3301
LOADING HL-93

LETTERING FOR NAME PLATE

See Std. 515001



PLAN

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Precast Prestressed Concrete Deck Beams (17" Depth)	Sq. Ft.	2850		2850
Concrete Structures	Cu. Yd.		59.2	59.2
Reinforcement Bars	Pound		8140	8140
Steel Bridge Rail, Type SM (Special)	Foot	190		190
Name Plates	Each		1	1
Furnishing Steel Piles HP 10x42	Foot		378	378
Furnishing Steel Piles HP 12x53	Foot		462	462
Driving Piles	Foot		840	840
Test Pile Steel HP 10x42	Each		1	1
Test Pile Steel HP 12x53	Each		1	1
Stone Riprap, Class A4	Ton		323	323
Filter Fabric	Sq. Yd.		390	390
Concrete Encasement	Cu. Yd.		36.8	36.8
Hot Mix Asphalt Surface Course, Mix "C", N50	Ton	36		36
Portland Cement Mortar Fairing Course	Foot	641		641
Waterproofing Membrane System	Sq. Yd.	323		323

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	S. Abut.	Pier 1	Pier 2	N. Abut.
	623.8	602.8	602.8	623.8

WATERWAY INFORMATION

Drainage Area ..... 3.56 Sq. Mi.
Existing Opening (20 Yr.) ..... 211 Sq. Ft.
Required Opening (20 Yr.) ..... 360 Sq. Ft.
Proposed Opening (20 Yr.) ..... 360 Sq. Ft.
Design Discharge (20 Yr.) ..... 1,081 C.F.S.
Created Head (20 Yr.) ..... 0.0 Ft.
100 Year Discharge ..... 1,660 C.F.S.
100 Yr. Created Head ..... 0.0 Ft.

DESIGN STRESSES

f'_c = 6,000 p.s.i. (Prestressed Beams)
f'_{ci} = 5,000 p.s.i. (Prestressed Beams)
f'_s = 270,000 p.s.i. (Prestressed Strands)
f_{si} = 201,960 p.s.i. (Prestressed Strands)
f'_c = 3,500 p.s.i. (Concrete -- Field Units)
f_y = 60,000 p.s.i. (Reinf. Bars)
LOADING HL-93
Design Specifications: 2012 AASHTO LRFD
50#/Sq. Ft. included in dead load for future wearing surface.

SEISMIC DATA

Seismic Performance Zone (SPZ) = 2
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.162 g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.260 g
Soil Site Class = E

"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 specified 'AASHTO LRFD Bridge Design Specifications'".

John A. Morris 4-25-13
ILLINOIS STRUCTURAL NO. 4277 (Expires 11/30/14)

LICENSED STRUCTURAL ENGINEER
JOHN A. MORRIS
NO. 81-4277
STATE OF ILLINOIS

GENERAL PLAN & ELEVATION
COUNTY HIGHWAY 30 (F.A.S. RT. 431)
SECTION 94-00090-00-BR
HANCOCK COUNTY
STATION 83+41.00
S.N. 034-3301

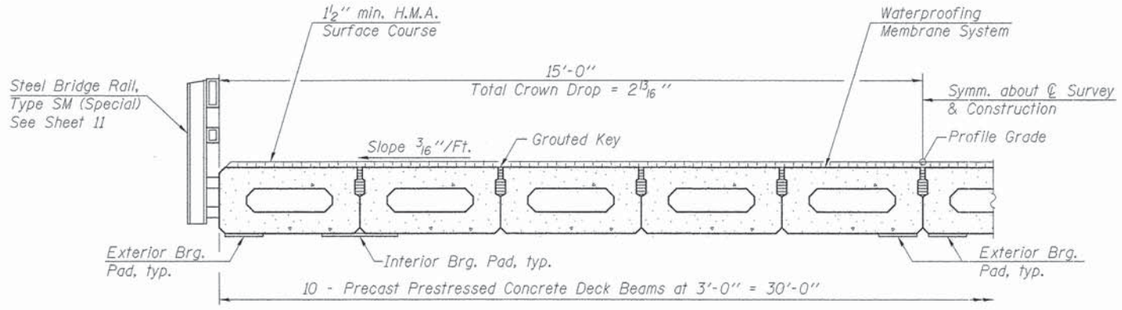
FILE NAME = 11-220_GPE.DGN	USER NAME = rfitzenko	DESIGNED - R.E.A. J.A.M.	REVISED -	
11-220_GPE.dgn		CHECKED - J.A.M. A.R.K.	REVISED -	
	PLOT SCALE = #SCALE#	DRAWN - A.D.S.	REVISED -	
	PLOT DATE = 4/26/2013	CHECKED - R.E.A. J.A.M. A.R.K.	REVISED -	

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
FREEPORT, IL ROCKFORD, IL
ROCHELLE, IL SPRINGFIELD, IL
MONROE, WI

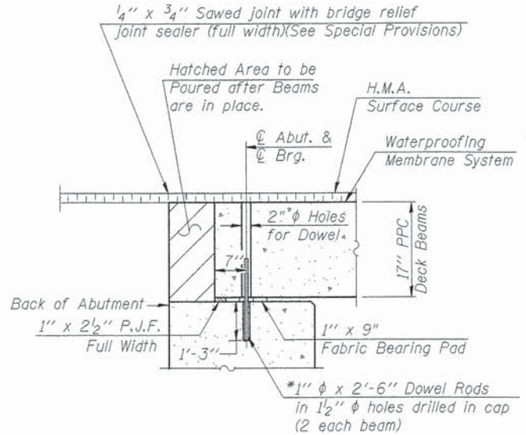
GENERAL PLAN & ELEVATION
S.N. 034-3301

C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
30	94-00090-00-BR	HANCOCK	20	5
		CONTRACT NO. 93604		
		ILLINOIS FED. AID PROJECT		

#11-220



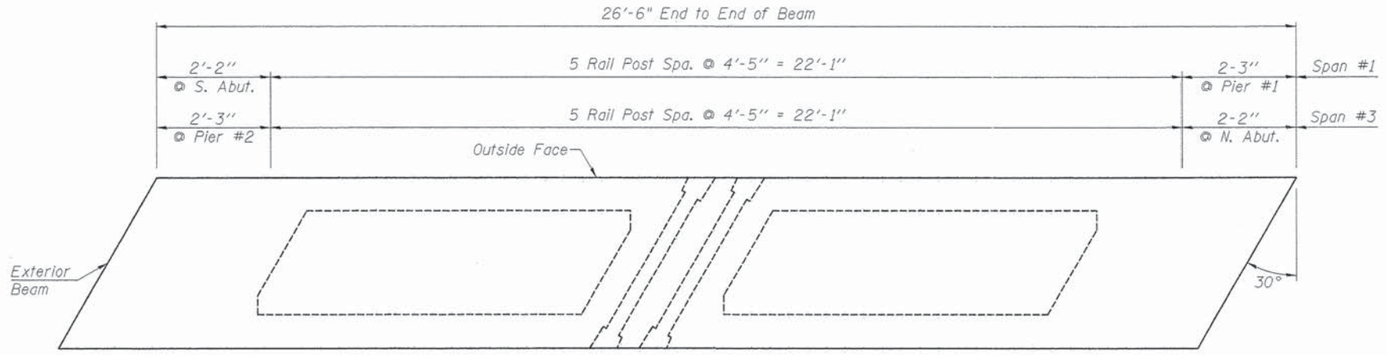
HALF CROSS SECTION



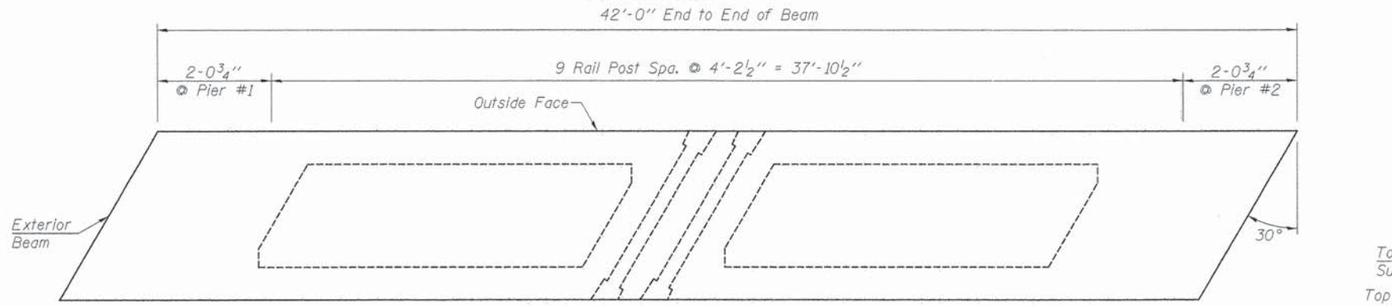
SEC. THRU ABUT.

(℄ Rt. L's)

* Note: After beams are in place, 1½" holes shall be drilled into the Substructure, and the dowel rods grouted in place and allowed to cure (Min. 24 Hrs.) prior to grouting shear key.

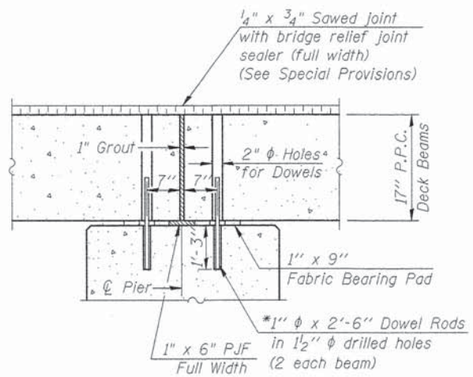


SPAN #1 & #3



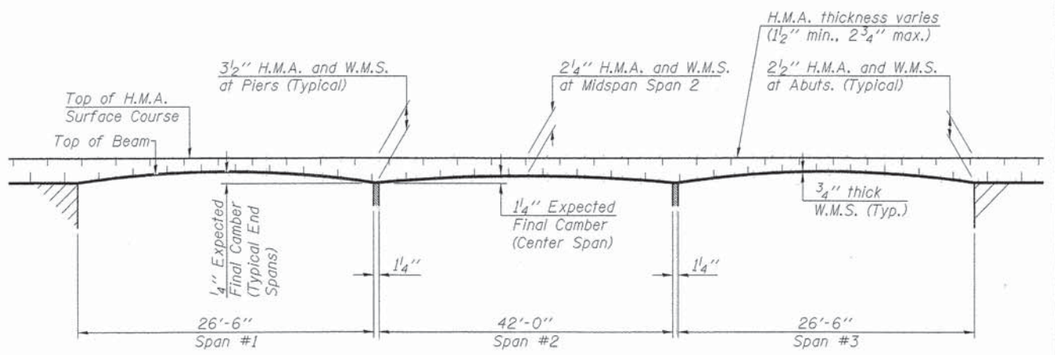
SPAN #2

RAIL POST SPACING PLAN



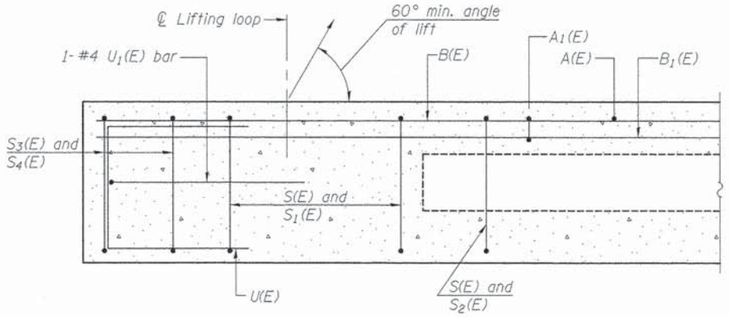
SEC. AT PIER

(℄ Rt. L's)

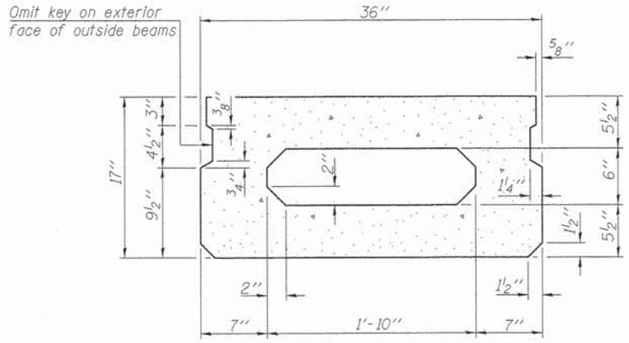


HOT-MIX ASPHALT SURFACE PROFILE

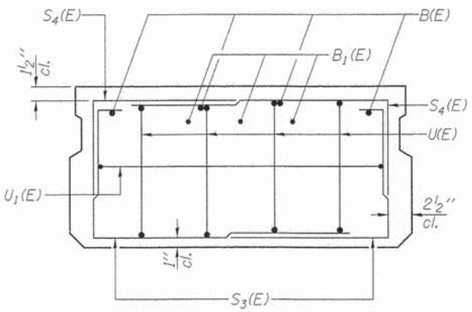
FILE NAME = 11-220_SUPER.dgn	USER NAME = rfitzenko	DESIGNED - R.E.A.	REVISED -	FEHR GRAHAM ENGINEERING & ENVIRONMENTAL ILLINOIS DESIGN FIRM NO. 184-003525 FREEPORT, IL ROCKFORD, IL ROCHELLE, IL SPRINGFIELD, IL MONROE, WI	SUPERSTRUCTURE S.N. 034-3301	C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED - J.A.M.	REVISED -			30	94-00090-00-BR	HANCOCK	20	6
	PLOT SCALE = @SCALE@	DRAWN - A.D.S.	REVISED -					CONTRACT NO. 93604		
	PLOT DATE = 4/26/2013	CHECKED - R.E.A. J.A.M.	REVISED -					ILLINOIS FED. AID PROJECT		



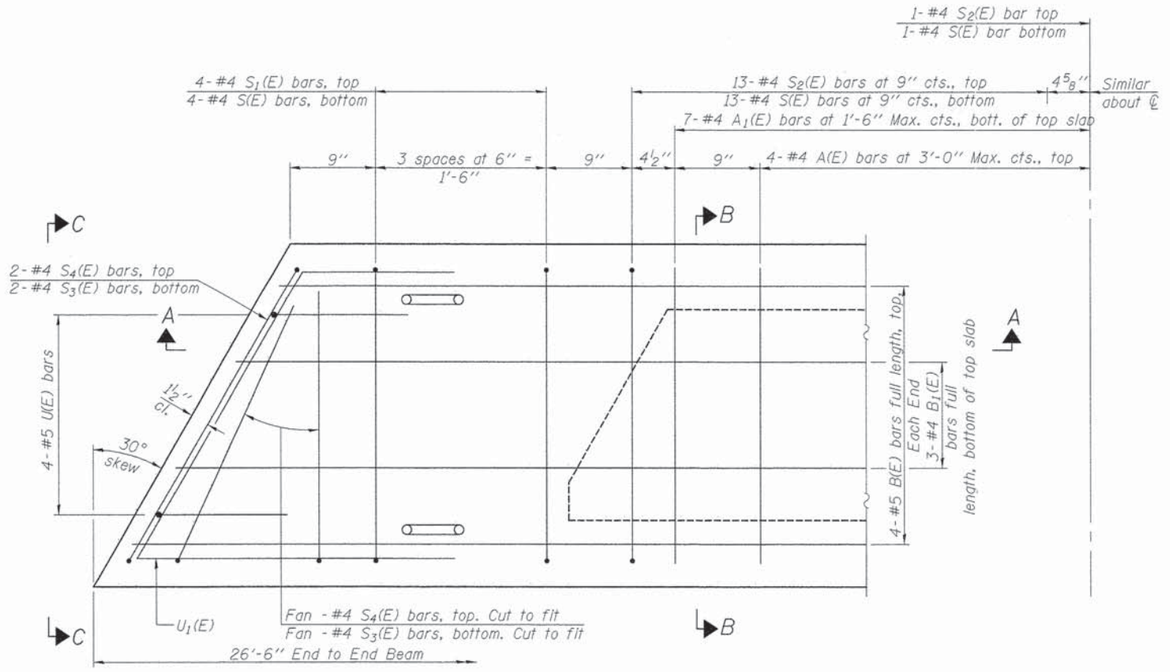
SECTION A-A



SECTION B-B
(Showing dimensions)

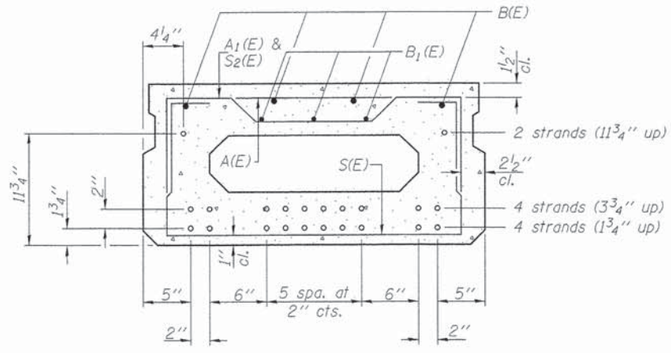


VIEW C-C



PLAN VIEW

Notes: Spacing of S(E) and $S_2(E)$ bars may be adjusted up to 4″ in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.



Use 10-½″ ϕ strands at the locations shown.

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

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

MINIMUM BAR LAP
#4 bar = 2′-0″
#5 bar = 2′-6″

BAR LIST
ONE BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
A(E)	7	#4	2′-7″	—
$A_1(E)$	13	#4	2′-10″	~
B(E)	4	#5	26′-2″	—
$B_1(E)$	3	#4	26′-2″	—
S(E)	35	#4	5′-9″	⊐
$S_1(E)$	8	#4	4′-3″	⊐
$S_2(E)$	27	#4	4′-6″	⊐
$S_3(E)$	12	#4	4′-2″	⌋
$S_4(E)$	12	#4	3′-5″	⌋
U(E)	8	#5	3′-8″	⊏
$U_1(E)$	2	#4	6′-10″	∠

Note:
See sheet 8 for additional details and Bill of Material.
Reinforcement bars designated (E) shall be epoxy coated.

PD-1736-L 7-1-10

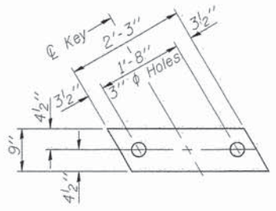
FILE NAME = 11-220_SUPER.dgn	USER NAME = rfitzenko	DESIGNED - R.E.A.	REVISED -
		CHECKED - J.A.M.	REVISED -
	PLOT SCALE = $SCALE$	DRAWN - A.D.S.	REVISED -
	PLOT DATE = 4/26/2013	CHECKED - R.E.A. J.A.M.	REVISED -

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
FREEPORT, IL ROCKFORD, IL
ROCHELLE, IL SPRINGFIELD, IL
MONROE, WI

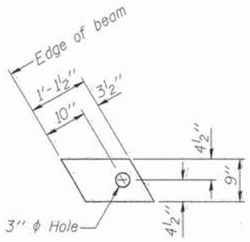
17″ x 36″ PPC DECK BEAM, SPAN 1 & 3
S.N. 034-3301

C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
30	94-00090-00-BR	HANCOCK	20	7
		CONTRACT NO. 93604		
	ILLINOIS FED. AID PROJECT			

*11-220



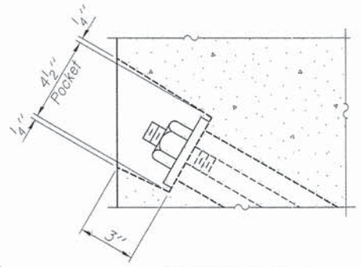
FABRIC BEARING PAD
(Interior)
(16 Required)



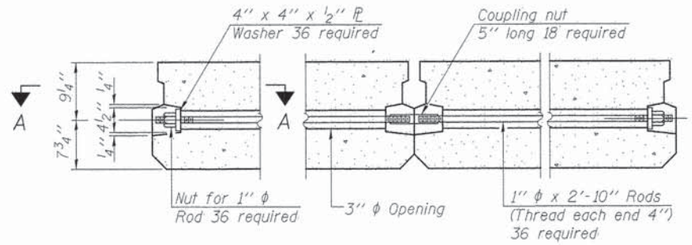
FABRIC BEARING PAD
(Exterior)
(32 Required)

FIXED

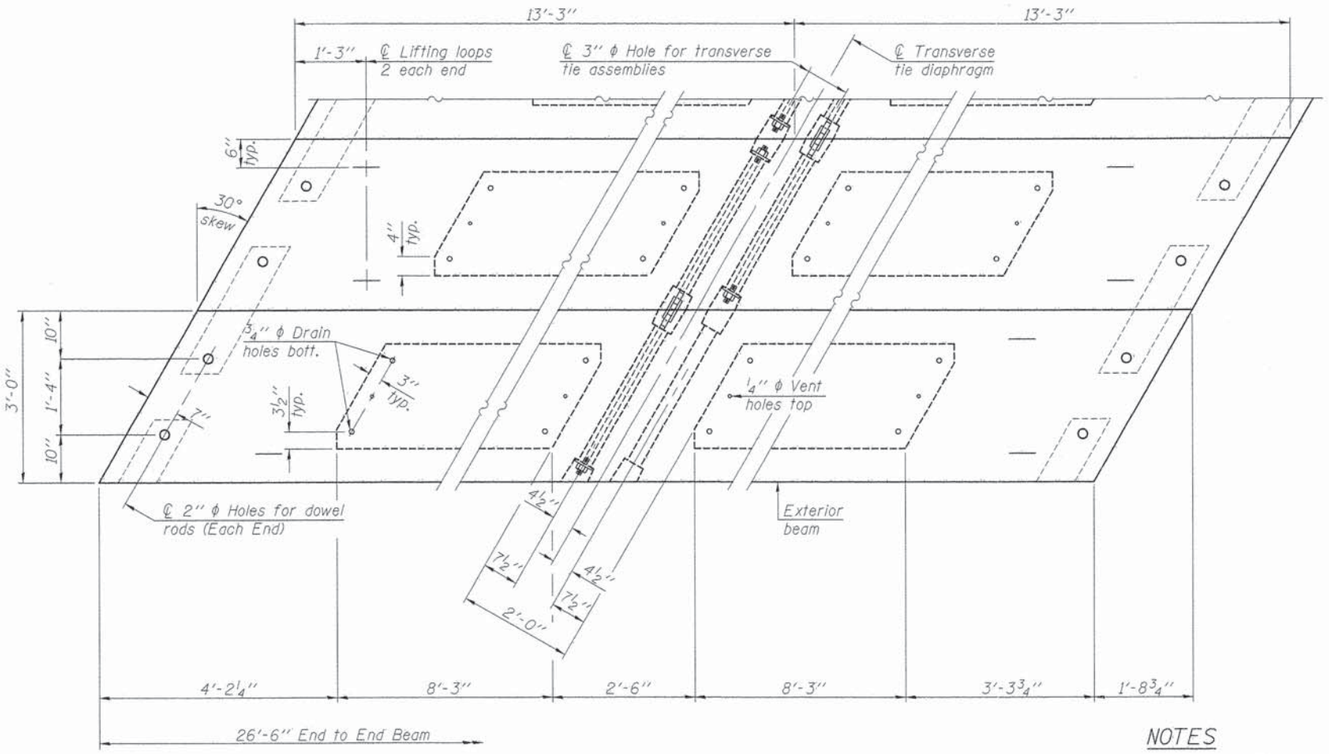
Notes:
All bearing pads shall be 1" thick.



SECTION A-A

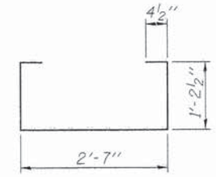


TYPICAL TRANSVERSE TIE ASSEMBLY

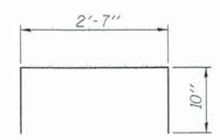


PLAN VIEW

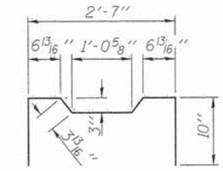
Note: Connect beams in pairs with the transverse tie configuration shown.



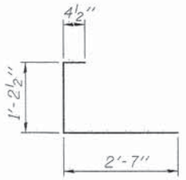
BAR S(E)



BAR S_1(E)



BAR S_2(E)



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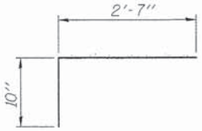
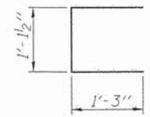
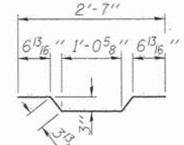


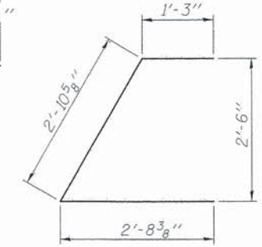
BAR S_4(E)



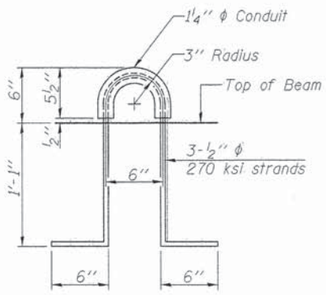
BAR U(E)



BAR A_1(E)



BAR U_1(E)



LIFTING LOOP DETAIL

NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be ½" and the nominal cross-sectional area shall be 0.153 sq. in.

The 1" ϕ rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.

Reinforcement bars shall conform to ASTM A 706, Grade 60.

Two ⅛" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location. (96 Required)

A minimum 2½" ϕ lifting pin shall be used to engage the lifting loops during handling.

Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.

Compressive strength of prestressed concrete, f'c, shall be 6000 psi.

Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.

Rail post inserts, specified elsewhere, shall be cast into the exterior face of the outside beams.

See Special Provisions for review and distribution of shop drawings.

BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. (17" depth)	Sq. Ft.	1.590

Estimated Total Weight (One Beam) = 15,000 Pounds

PD-1736-LD 7-1-10

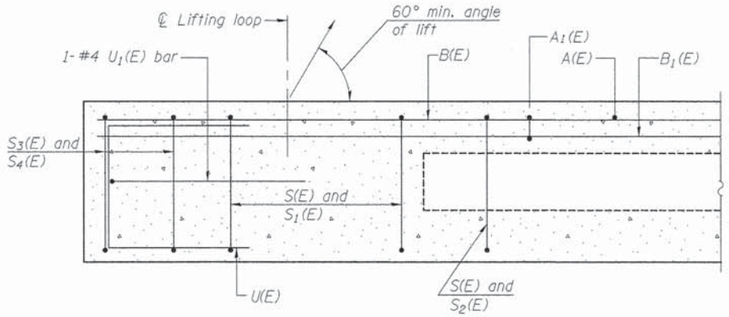
FILE NAME = 11-220.SUPER.dgn	USER NAME = rfitzenko	DESIGNED - R.E.A.	REVISED -
		CHECKED - J.A.M.	REVISED -
	PLOT SCALE = $SCALE$	DRAWN - A.D.S.	REVISED -
	PLOT DATE = 4/26/2013	CHECKED - R.E.A. J.A.M.	REVISED -

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
FREEPORT, IL ROCKFORD, IL
ROCHELLE, IL SPRINGFIELD, IL
MONROE, WI

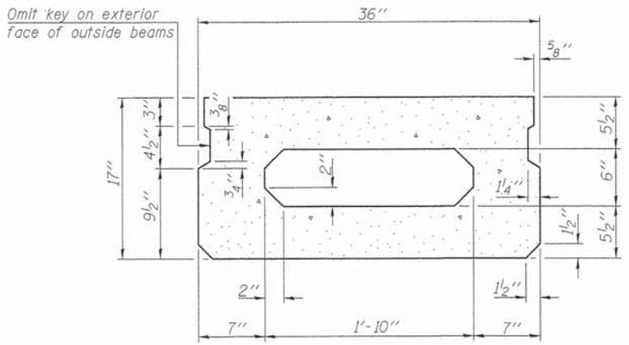
17" x 36" PPC DECK BEAM DETAILS, SPAN 1 & 3
S.N. 034-3301

C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
30	94-00090-00-BR	HANCOCK	20	8
		CONTRACT NO. 93604		
		ILLINOIS FED. AID PROJECT		

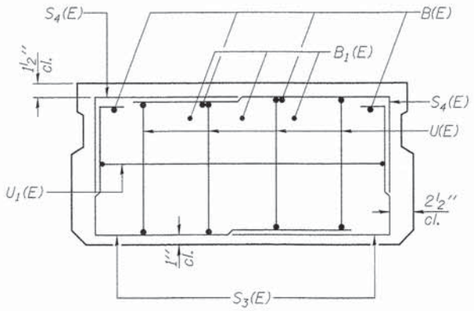
*11-220



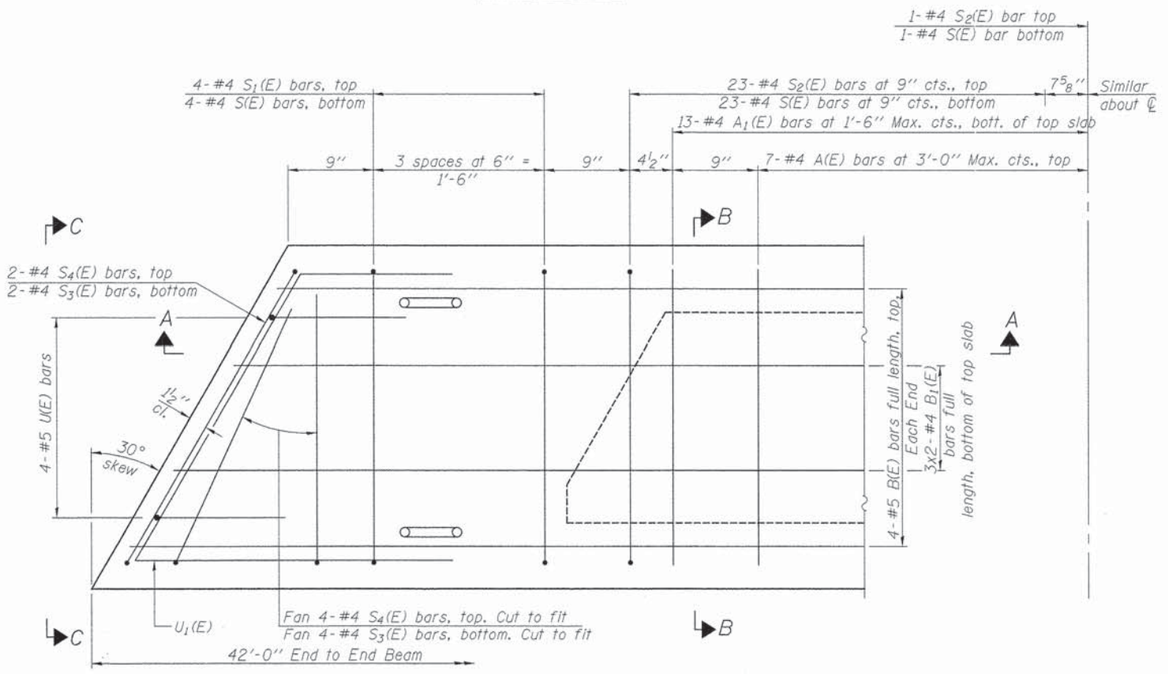
SECTION A-A



SECTION B-B
(Showing dimensions)



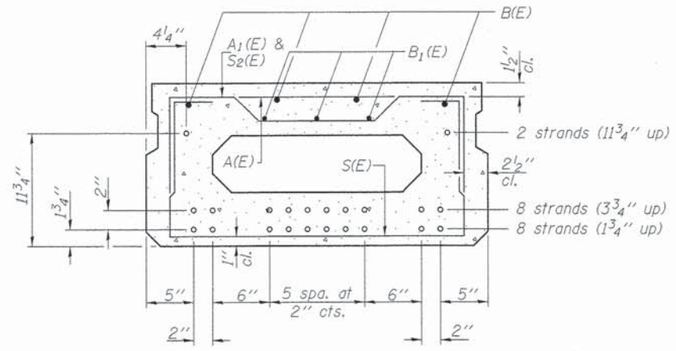
VIEW C-C



PLAN VIEW

Notes: Spacing of S(E) and $S_2(E)$ bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

Bars indicated thus, 3x2-#4 bars etc., indicates 3 lines of bars with 2 lengths per line.



Use 18-½" ϕ strands at the locations shown.

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

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

MINIMUM BAR LAP
#4 bar = 2'-0"
#5 bar = 2'-6"

BAR LIST
ONE BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
A(E)	13	#4	2'-7"	—
$A_1(E)$	25	#4	2'-10"	⌒
B(E)	4	#5	41'-8"	—
$B_1(E)$	6	#4	22'-0"	—
S(E)	55	#4	5'-9"	⊏
$S_1(E)$	8	#4	4'-3"	⊐
$S_2(E)$	47	#4	4'-6"	⊐
$S_3(E)$	12	#4	4'-2"	⊐
$S_4(E)$	12	#4	3'-5"	⊐
U(E)	8	#5	3'-8"	⊓
$U_1(E)$	2	#4	6'-10"	⊏

Note:
See sheet 10 for additional details and Bill of Material.
Reinforcement bars designated (E) shall be epoxy coated.

PD-1736-L 7-1-10

FILE NAME = 11-220_SUPER.dgn	USER NAME = rfitzenko	DESIGNED - R.E.A.	REVISED -
		CHECKED - J.A.M.	REVISED -
	PLOT SCALE = $SCALE$	DRAWN - A.D.S.	REVISED -
	PLOT DATE = 4/26/2013	CHECKED - R.E.A. J.A.M.	REVISED -

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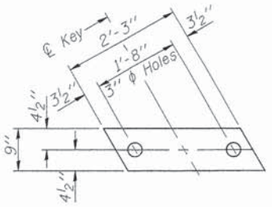
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
FREEPORT, IL ROCKFORD, IL
ROCHELLE, IL SPRINGFIELD, IL
MONROE, WI

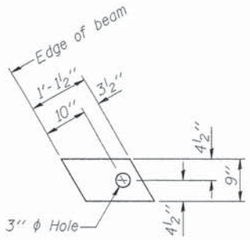
17" x 36" PPC DECK BEAM, SPAN 2
S.N. 034-3301

C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
30	94-00090-00-BR	HANCOCK	20	9
		CONTRACT NO. 93604		
		ILLINOIS FED. AID PROJECT		

*11-220

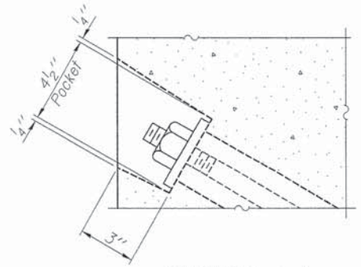


FABRIC BEARING PAD
(Interior)
(8 Required)

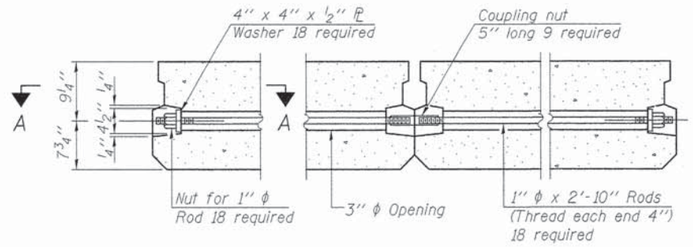


FABRIC BEARING PAD
(Exterior)
(16 Required)

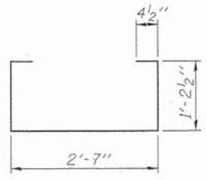
FIXED



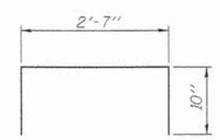
SECTION A-A



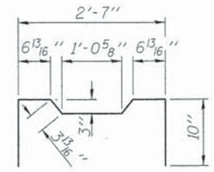
TYPICAL TRANSVERSE TIE ASSEMBLY



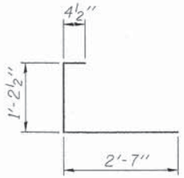
BAR S(E)



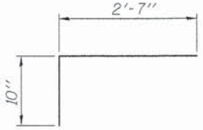
BAR S_1(E)



BAR S_2(E)



BAR S_3(E)



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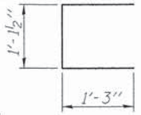

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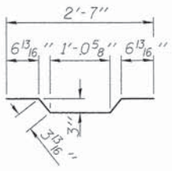

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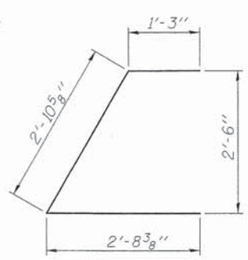
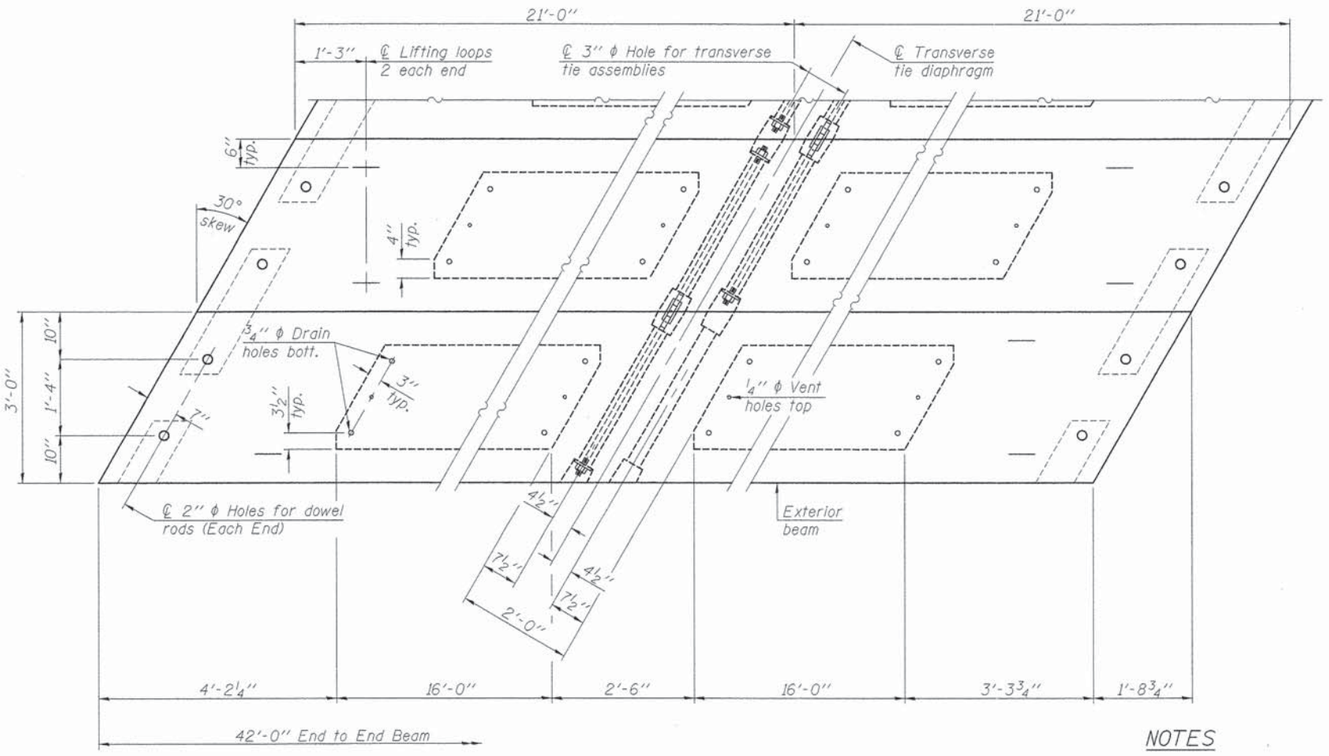
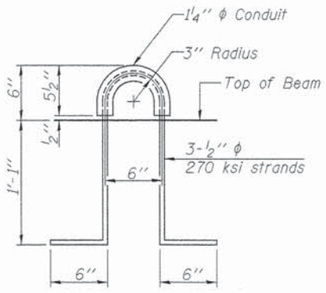


BAR U_1(E)



PLAN VIEW

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



LIFTING LOOP DETAIL

NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be ½" and the nominal cross-sectional area shall be 0.153 sq. in.

The 1" ϕ rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.

Reinforcement bars shall conform to ASTM A 706, Grade 60.

Two ⅛" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location. (48 Required)

A minimum 2½" ϕ lifting pin shall be used to engage the lifting loops during handling.

Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.

Compressive strength of prestressed concrete, f'c, shall be 6000 psi.

Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.

Rail post inserts, specified elsewhere, shall be cast into the exterior face of the outside beams.

See Special Provisions for review and distribution of shop drawings.

BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. (17" depth)	Sq. Ft.	1,260

Estimated Total Weight (One Beam) = 23,000 Pounds

PD-1736-LD 7-1-10

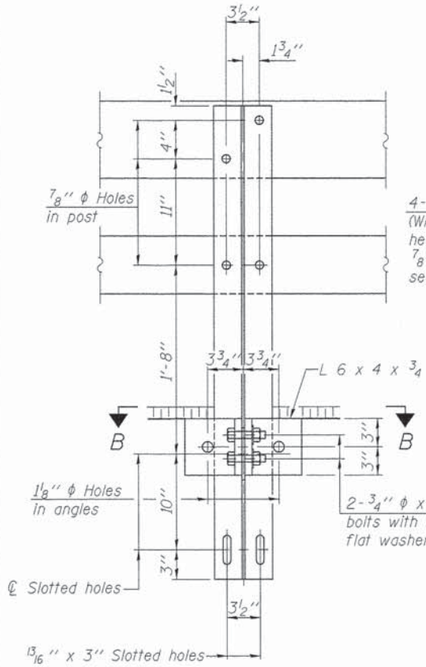
FILE NAME = 11-220.SUPER.dgn	USER NAME = rfitzenko	DESIGNED - R.E.A.	REVISED -
		CHECKED - J.A.M.	REVISED -
	PLOT SCALE = $SCALE$	DRAWN - A.D.S.	REVISED -
	PLOT DATE = 4/26/2013	CHECKED - R.E.A. J.A.M.	REVISED -

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
FREEPORT, IL ROCKFORD, IL
ROCHELLE, IL SPRINGFIELD, IL
MONROE, WI

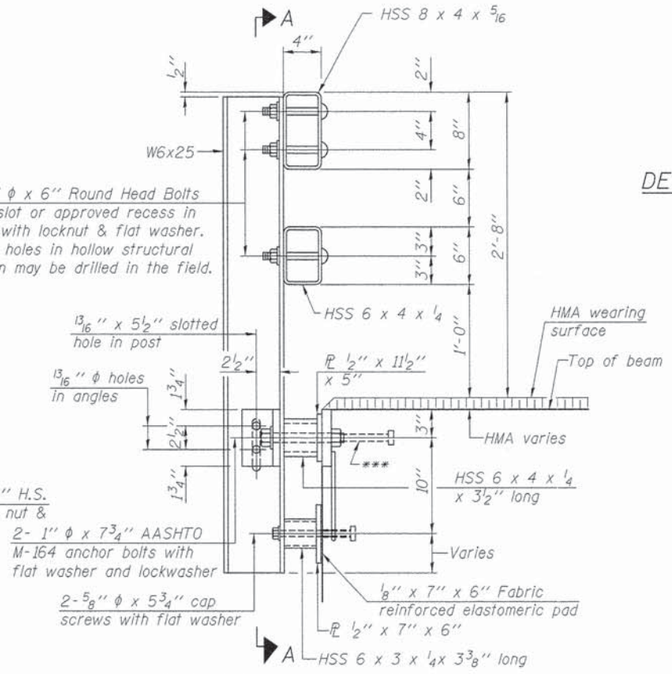
17" x 36" PPC DECK BEAM DETAILS, SPAN 2
S.N. 034-3301

C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
30	94-00090-00-BR	HANCOCK	20	10
		CONTRACT NO. 93604		
		ILLINOIS FED. AID PROJECT		

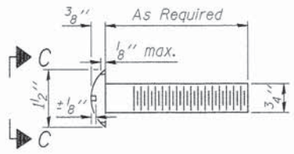
*11-220



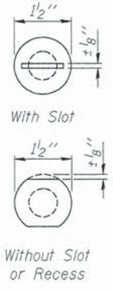
SECTION A-A



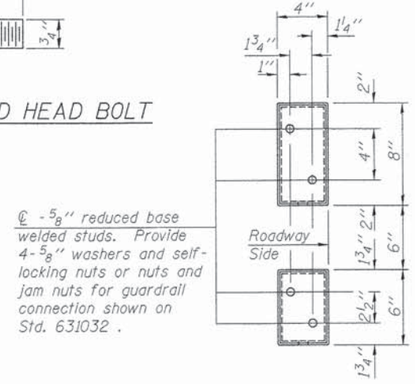
SECTION AT RAIL POST



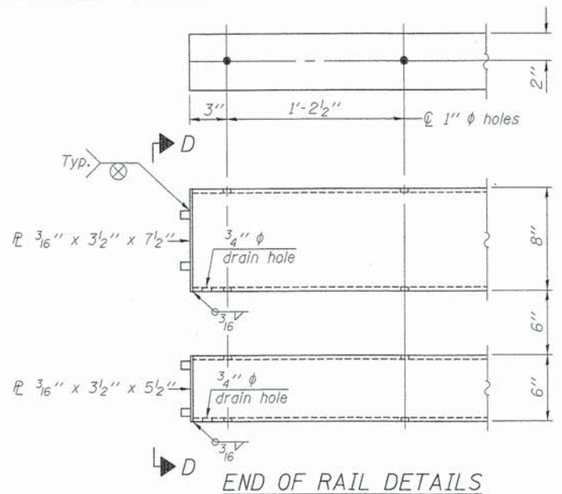
DETAIL OF ¾" ϕ ROUND HEAD BOLT



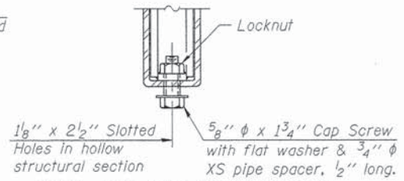
VIEW C-C



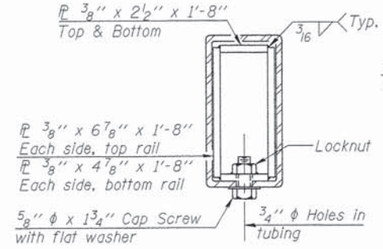
VIEW D-D



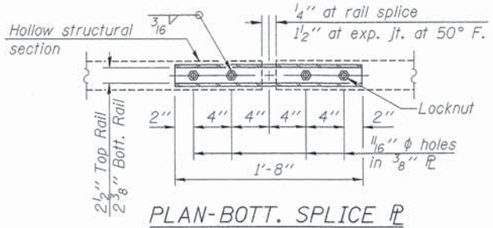
END OF RAIL DETAILS



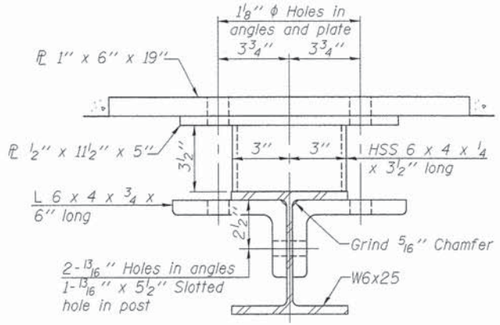
RAIL SPLICE CONNECTION AT EXPANSION JT.



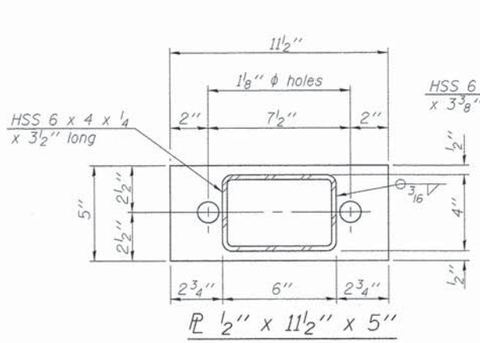
SECTION AT RAIL SPLICE



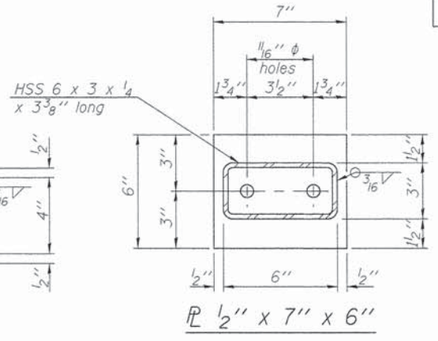
PLAN-BOTT. SPLICE PL TYPICAL



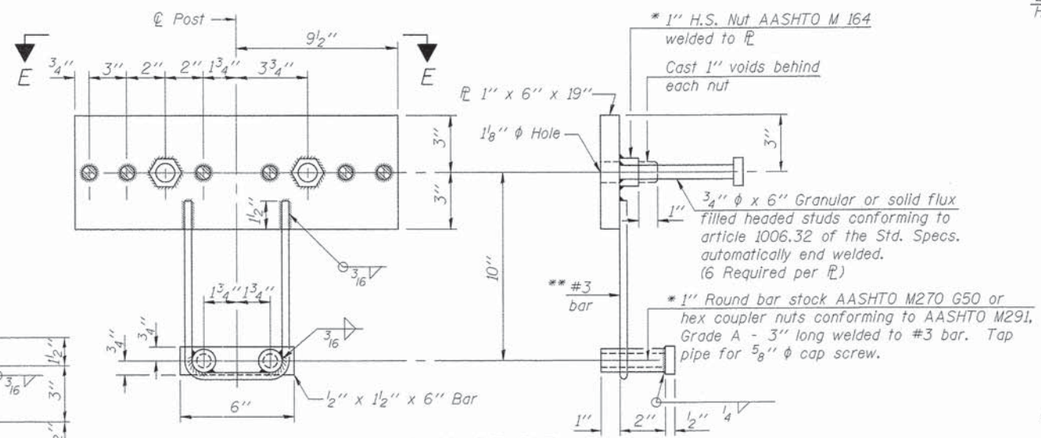
SECTION B-B



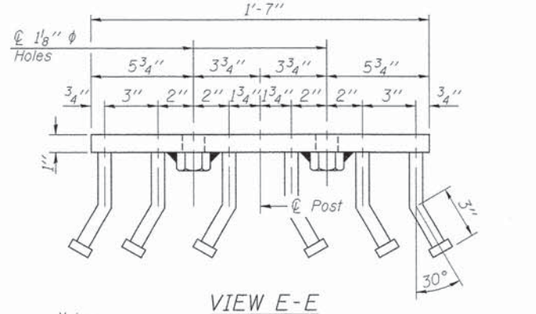
PL ½" x 11½" x 5"



PL ½" x 7" x 6"



ANCHOR DEVICE



VIEW E-E

See sheet 12 for Rail Post Spacing, End of Rail Details and Curled End Section Details.

Notes:

All field drilled holes shall be coated with an approved zinc rich paint before erection.

For multi-span bridges, sufficient ¼" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type SM (Special).

All steel rail members shall be galvanized according to Article 509.05 of the Standard Specifications.

*** The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Bridge Rail, Type SM (Special)	Foot	190

R-34HMAWS 7-1-10 (6'-3" Maximum Post Spacing) (1¼" minimum to 3⅛" maximum HMA thickness)

*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 ½".

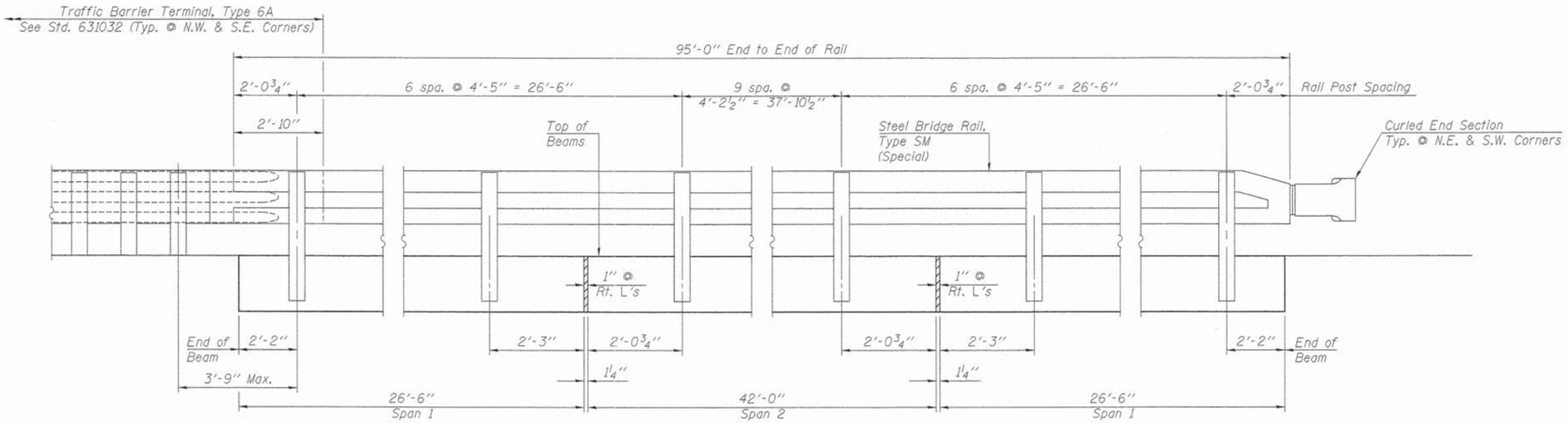
FILE NAME = 11-220_RAIL.dgn	USER NAME = rfitzenko	DESIGNED - R.E.A.	REVISED -
		CHECKED - J.A.M.	REVISED -
	PLOT SCALE = $SCALE$	DRAWN - A.D.S.	REVISED -
	PLOT DATE = 4/26/2013	CHECKED - R.E.A. J.A.M.	REVISED -

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
FREEPORT, IL ROCKFORD, IL ROCHELLE, IL SPRINGFIELD, IL MONROE, WI

STEEL BRIDGE RAIL, TYPE SM (SPECIAL)
S.N. 034-3301

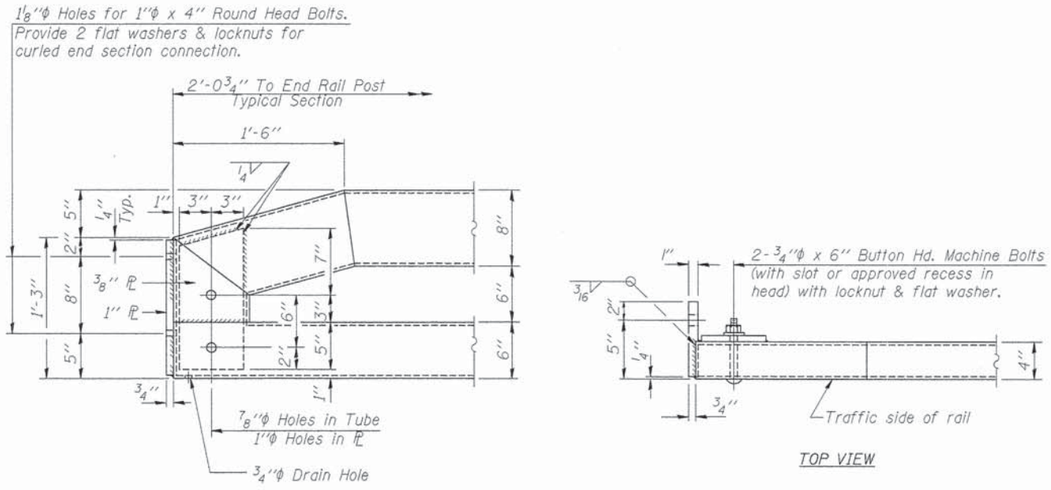
C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
30	94-00090-00-BR	HANCOCK	20	11
		CONTRACT NO. 93604		
		ILLINOIS FED. AID PROJECT		

*11-220



ELEVATION

(All Dimensions along centerline, except as noted)

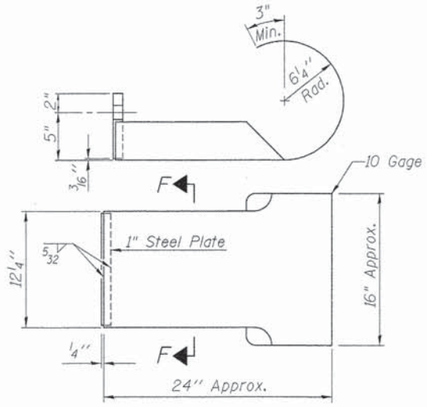


ELEVATION

TOP VIEW

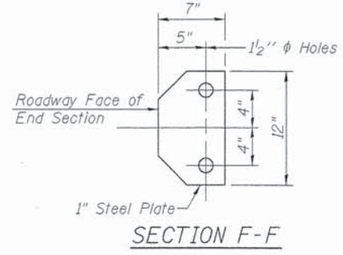
END OF RAIL DETAILS

DEPARTURE ENDS



CURLED END SECTION DETAILS

(2 Required)



SECTION F-F

See sheet 11 for Steel Bridge Rail Details.

FILE NAME = 11-220_RAIL.dgn	USER NAME = rfitzenko	DESIGNED - R.E.A.	REVISED -
		CHECKED - J.A.M.	REVISED -
	PLOT SCALE = $SCALE$	DRAWN - A.D.S.	REVISED -
	PLOT DATE = 4/26/2013	CHECKED - R.E.A. J.A.M.	REVISED -

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
FREEPORT, IL ROCKFORD, IL
ROCHELLE, IL SPRINGFIELD, IL
MONROE, WI

STEEL BRIDGE RAIL, TYPE SM (SPECIAL)
S.N. 034-3301

C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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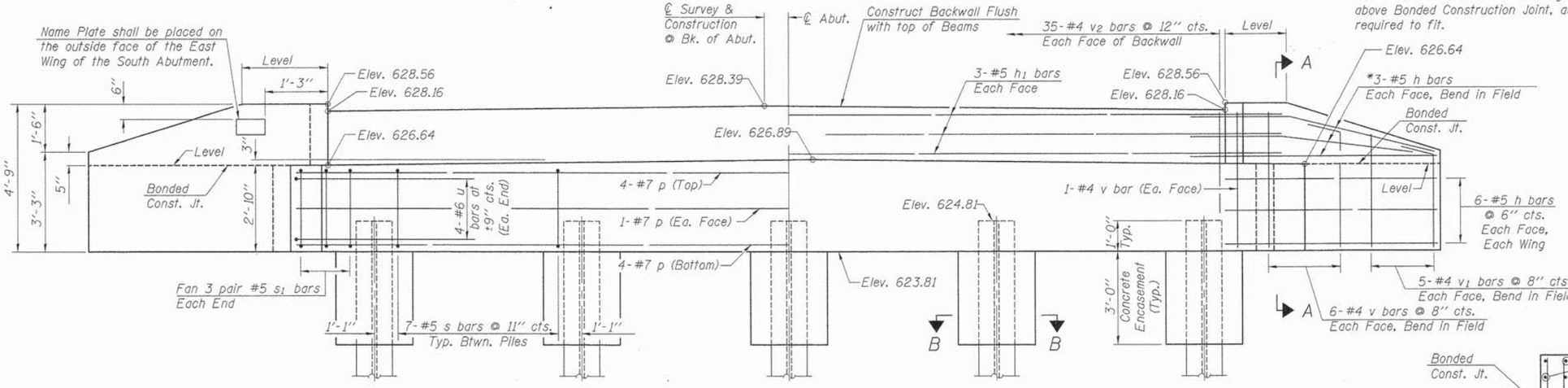
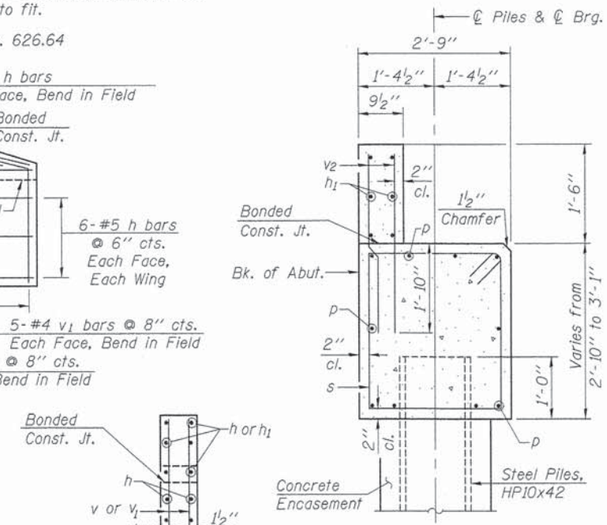
		CONTRACT NO. 93604		
		ILLINOIS FED. AID PROJECT		

*11-220



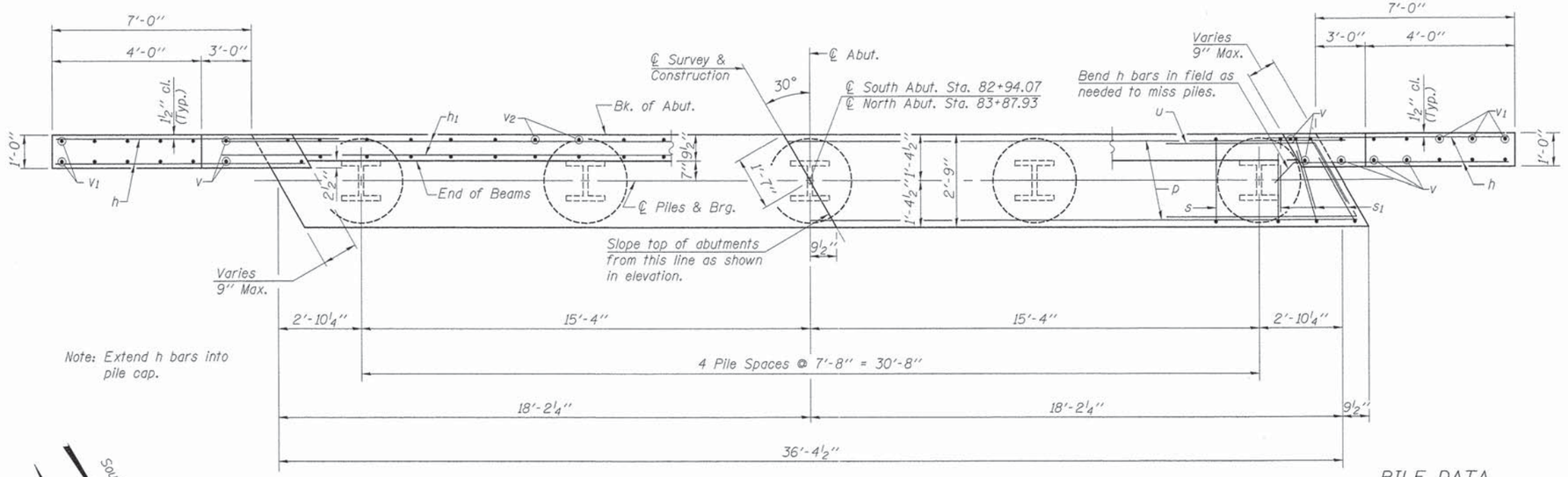
ELEVATION

Note: After beams are in place and dowel rods grouted, the backwall and the portions of the wingwalls above the Bonded Construction Joint shall be poured.



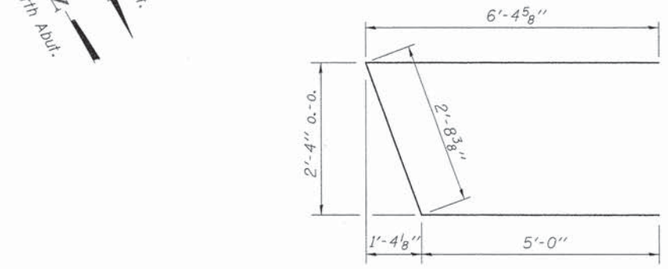
SECTION THRU ABUT.

SECTION A-A

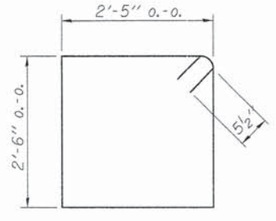


Note: Extend h bars into pile cap.

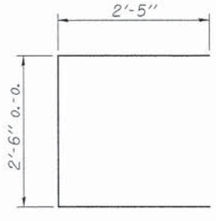
PLAN



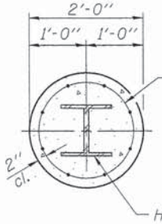
BAR u



BAR s



BAR s1



SECTION B-B
Concrete Encasement

Welded wire fabric 6 x 6-W4.0 x W4.0 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 permit. Extend welded wire fabric 1'-0" min. into Abutment cap.

PILE DATA

Type & Size	Steel HP10x42
No. Req'd. (2 Abuts.)	*10
Nominal Required Bearing	335 kips
Factored Resistance Available	184 kips
Estimated Length	42 Ft./Pile

*Includes 1 Test Pile to be driven in a permanent location at the North abutment.

The test piles shall be driven to 110 percent of the Nominal Required Bearing indicated above.

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

2 ABUTMENTS BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h	72	#5	10'-0"	——
h1	12	#5	42'-0"	——
p	20	#7	36'-0"	——
s	56	#5	10'-9"	□
s1	24	#5	7'-4"	⊏
u	16	#6	14'-1"	⌐
v	56	#4	4'-5"	——
v1	40	#4	4'-0"	——
v2	140	#4	3'-2"	——
Concrete Structures			Cu. Yd.	29.7
Concrete Encasement			Cu. Yd.	3.5
Reinforcement Bars			Pound	4470
Furnishing Steel Piles HP10x42			Foot	378
Driving Piles			Foot	378
Name Plates			Each	1
Test Pile Steel HP10x42			Each	1

See Sheet 15 for Pile Details.

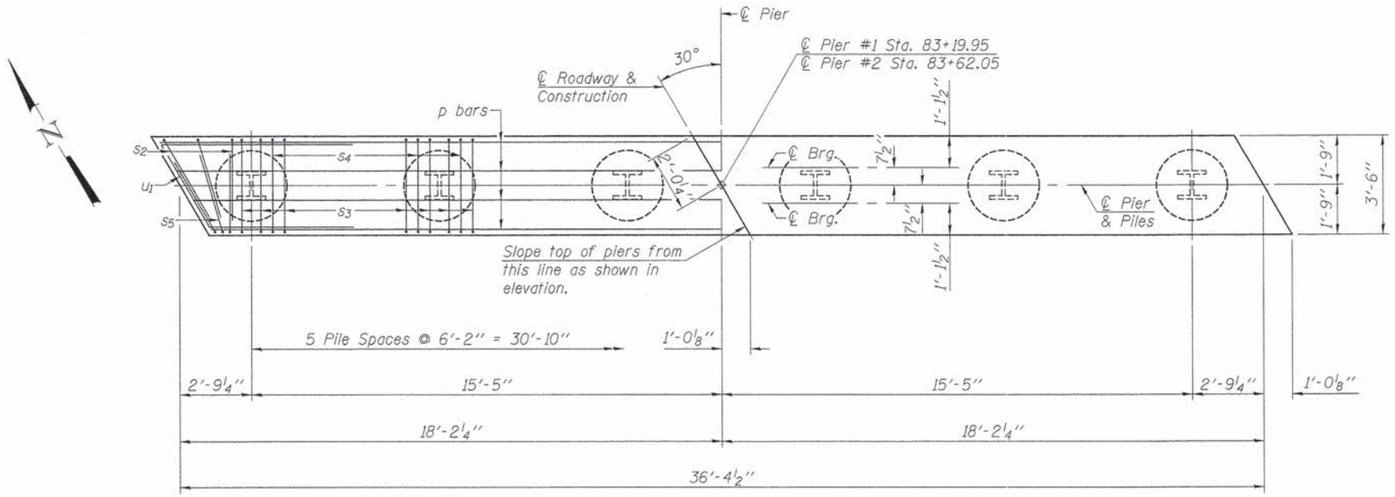
FILE NAME = 11-220_ABUTMENTS.dgn	USER NAME = rfitzenko	DESIGNED - J.A.M.	REVISED -
		CHECKED - A.R.K.	REVISED -
	PLOT SCALE = $SCALE$	DRAWN - A.D.S.	REVISED -
	PLOT DATE = 4/26/2013	CHECKED - J.A.M. A.R.K.	REVISED -

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
FREEPORT, IL ROCKFORD, IL ROCHELLE, IL SPRINGFIELD, IL MONROE, WI

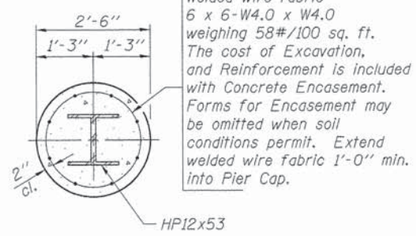
ABUTMENTS
S.N. 034-3301

C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
30	94-00090-00-BR	HANCOCK	20	13
		CONTRACT NO. 93604		
		ILLINOIS FED. AID PROJECT		

*11-220

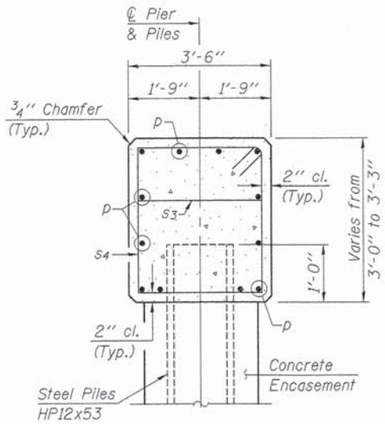


PLAN

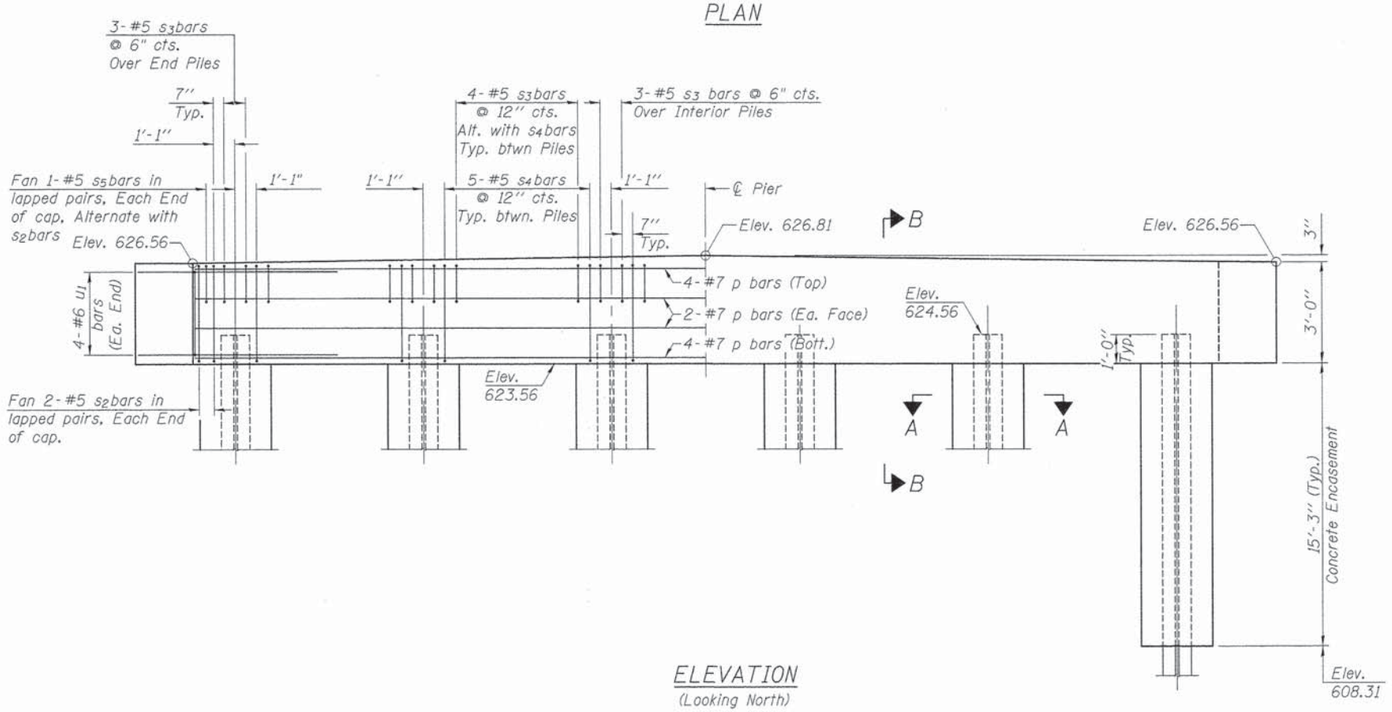


Welded wire fabric 6 x 6-W4.0 x W4.0 weighing 58#/100 sq. ft. The cost of Excavation, and Reinforcement is included with Concrete Encasement. Forms for Encasement may be omitted when soil conditions permit. Extend welded wire fabric 1'-0" min. into Pier Cap.

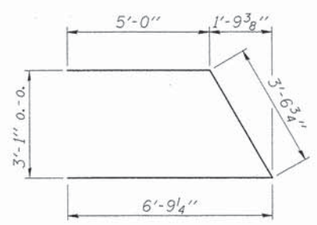
SECTION A-A
PILE ENCASEMENT DETAIL



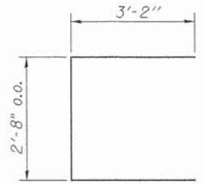
SECTION B-B



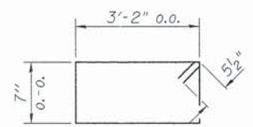
ELEVATION
(Looking North)



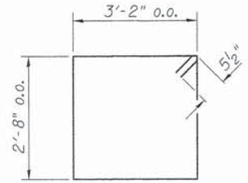
BAR u1



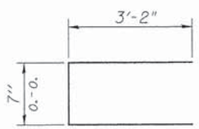
BAR s2



BAR s3



BAR s4



BAR s5

PILE DATA

Type:	Steel HP12x53
No. Required (2 Piers)	*12
Nominal Required Bearing:	419 kips
Factored Resistance Available:	230 kips
Est. Length:	42 Foot/Pile

*Includes 1 Test Pile to be driven in a permanent location at Pier #1

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

The test piles shall be driven to 110 percent of the Nominal Required Bearing indicated above.

2 PIERS
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
p	24	#7	36'-0"	
s2	16	#5	9'-0"	
s3	76	#5	8'-5"	
s4	50	#5	12'-7"	
s5	8	#5	6'-11"	
u1	16	#6	15'-4"	
Concrete Structures			Cu. Yd.	29.5
Reinforcement Bars			Pound	3670
Furnishing Steel Piles HP12x53			Foot	462
Driving Piles			Foot	462
Test Pile Steel HP12x53			Each	1
Concrete Encasement			Cu. Yd.	33.3

See Sheet 15 for Pile Details.

FILE NAME = 11-220_PIERS.dgn	USER NAME = rfitzenko	DESIGNED - J.A.M.	REVISED -
		CHECKED - A.R.K.	REVISED -
	PLOT SCALE = $SCALE$	DRAWN - A.D.S.	REVISED -
	PLOT DATE = 4/26/2013	CHECKED - J.A.M. A.R.K.	REVISED -

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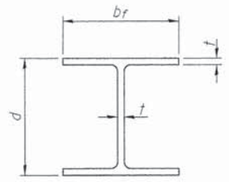
PIERS
S.N. 034-3301

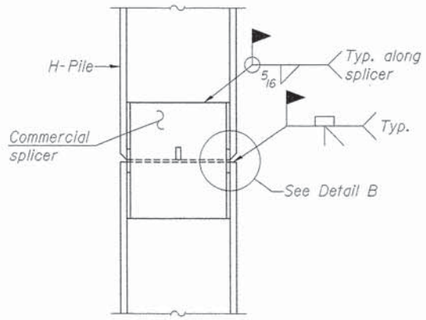
C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
30	94-00090-00-BR	HANCOCK	20	14
		CONTRACT NO 93604		
	ILLINOIS FED. AID PROJECT			

*11-220

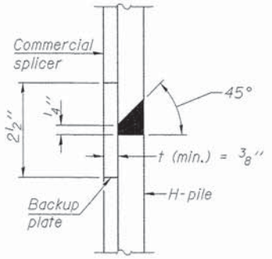


STEEL PILE TABLE

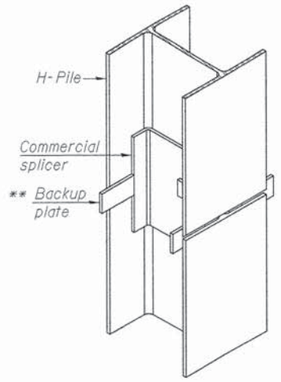
Designation	Depth d	Flange width b_f	Web and Flange thickness t
HP 14x117	14 1/4"	14 7/8"	13/16"
x102	14"	14 3/4"	11/16"
x89	13 7/8"	14 3/4"	5/8"
x73	13 5/8"	14 5/8"	1/2"
HP 12x84	12 1/4"	12 1/4"	11/16"
x74	12 1/8"	12 1/4"	5/8"
x63	12"	12 1/8"	1/2"
x53	11 3/4"	12"	7/16"
HP 10x57	10"	10 1/4"	9/16"
x42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



ELEVATION

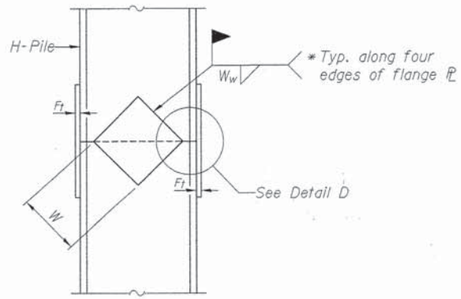


DETAIL "B"

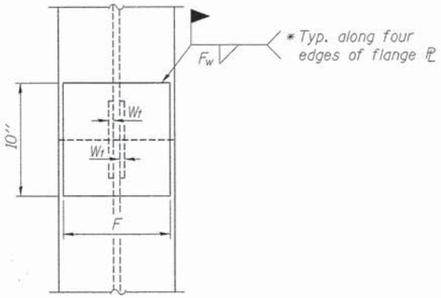


ISOMETRIC VIEW

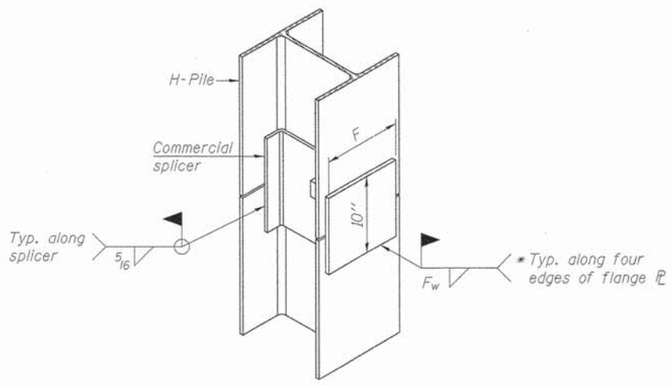
WELDED COMMERCIAL SPLICE



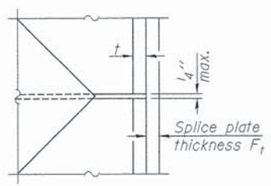
ELEVATION



END VIEW



ISOMETRIC VIEW



DETAIL D

Designation	F	F_t	F_w	W	W_t	W_w
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	11/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	11/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	11/16"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

WELDED PLATE FIELD SPLICE

WELDED COMMERCIAL SPLICE ALTERNATE

* Interrupt welds 1/4" from end of web and/or each flange.

** Remove portions of backup plates that extend outside the flanges.

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

F-HP 7-1-10

FILE NAME = 11-220_PILES.dgn	USER NAME = rfitzenko	DESIGNED - J.A.M.	REVISED -
		CHECKED - A.R.K.	REVISED -
	PLOT SCALE = $SCALE$	DRAWN - A.D.S.	REVISED -
	PLOT DATE = 4/26/2013	CHECKED - J.A.M. A.R.K.	REVISED -

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HP PILE DETAILS
S.N. 034-3301

C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
30	94-00090-00-BR	HANCOCK	20	15
		CONTRACT NO. 93604		
	ILLINOIS FED. AID PROJECT			

*11-220

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

BY	DATE

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

BY	DATE

FILE NAME = 11-220_EX-XS.SHEETS.DGN	DESIGNED - GC	REVISED -
PLOTTED BY = S.A.P.	DRAWN - AS	REVISED -
CHECKED BY = R.J.C.	CHECKED - RF	REVISED -
PLOT DATE = 01/20/12	DATE -	REVISED -

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ROADWAY CROSS SECTIONS – C.H. 30

STA. 80+50.00 TO STA. 81+50.00

C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
30	94-00090-00-BR	HANCOCK	20	16
		CONTRACT NO. 93604		
	ILLINOIS			

*11-220

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

BY

DATE

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 65 70 75

C = 0 F = 0 AHEAD
C = 24 F = 51 BACK

82 + 92.49

630
625
620

C = 24 F = 51

628.66

VAR.

VAR.

82 + 50.00

82 + 50.00

EXISTING ROW LINE

EXISTING ROW LINE

635
630
625
620

C = 21 F = 35

629.14

VAR.

VAR.

82 + 00.00

82 + 00.00

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

BY

DATE

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 65 70 75

FILE NAME = 11-220_EX-XS_SHEETS.DGN	DESIGNED - GC	REVISED -
PLOTTED BY = S.A.P.	DRAWN - AS	REVISED -
CHECKED BY = R.J.C.	CHECKED - RF	REVISED -
PLOT DATE = 01/20/12	DATE -	REVISED -

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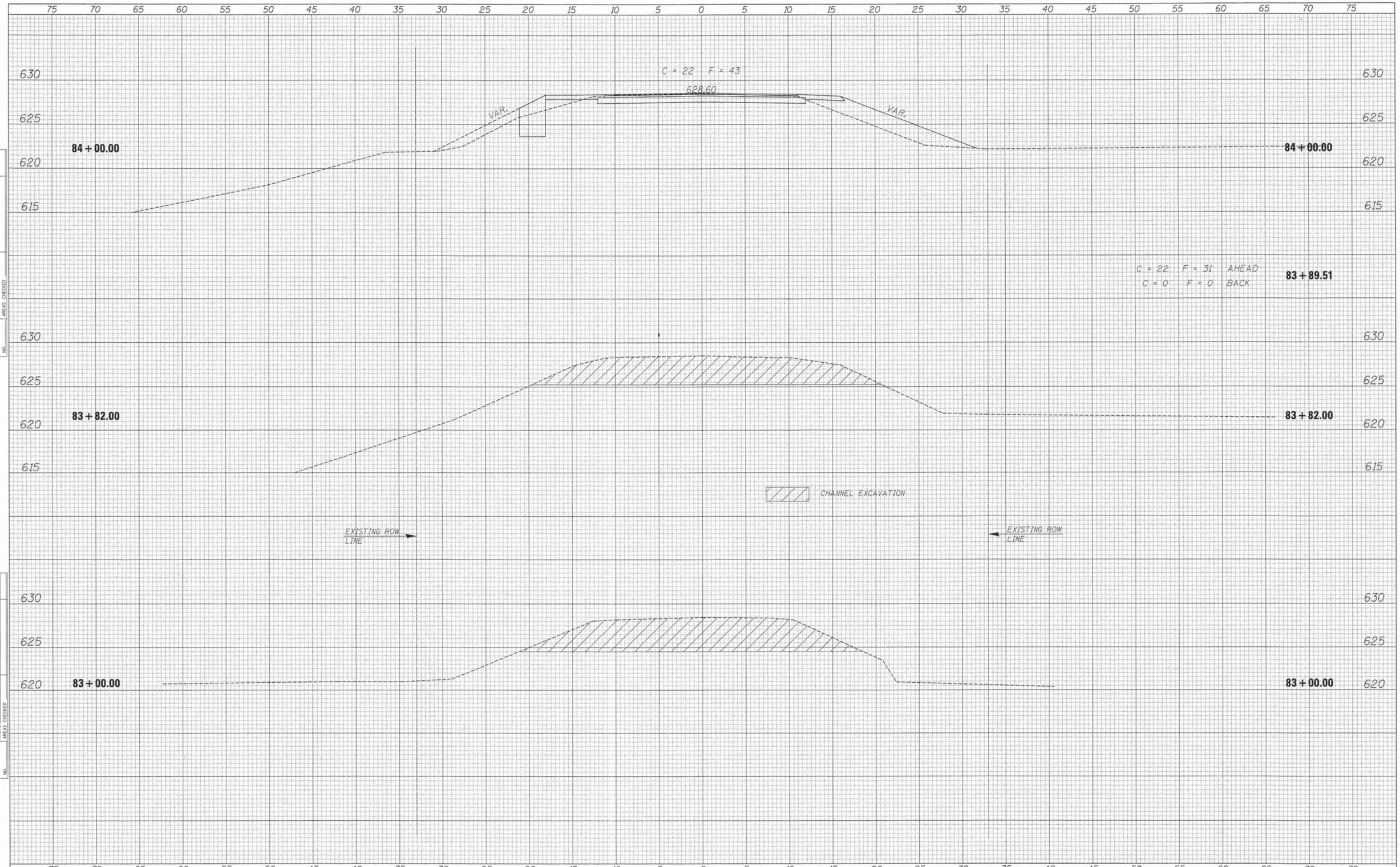
ROADWAY CROSS SECTIONS – C.H. 30

STA. 82+00.00 TO STA. 82+50.00

C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
30	94-00090-00-BR	HANCOCK	20	17
		CONTRACT NO. 93604		
		ILLINOIS		

*11-220

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



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

FILE NAME = 11-220_EX-XS_SHEETS.DGN	DESIGNED - GC	REVISED -
PLOTTED BY = S.A.P.	DRAWN - AS	REVISED -
CHECKED BY = R.J.C.	CHECKED - RF	REVISED -
PLOT DATE = 01/20/12	DATE -	REVISED -

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ROADWAY CROSS SECTIONS – C.H. 30

STA. 83+00.00 TO STA. 84+00.00

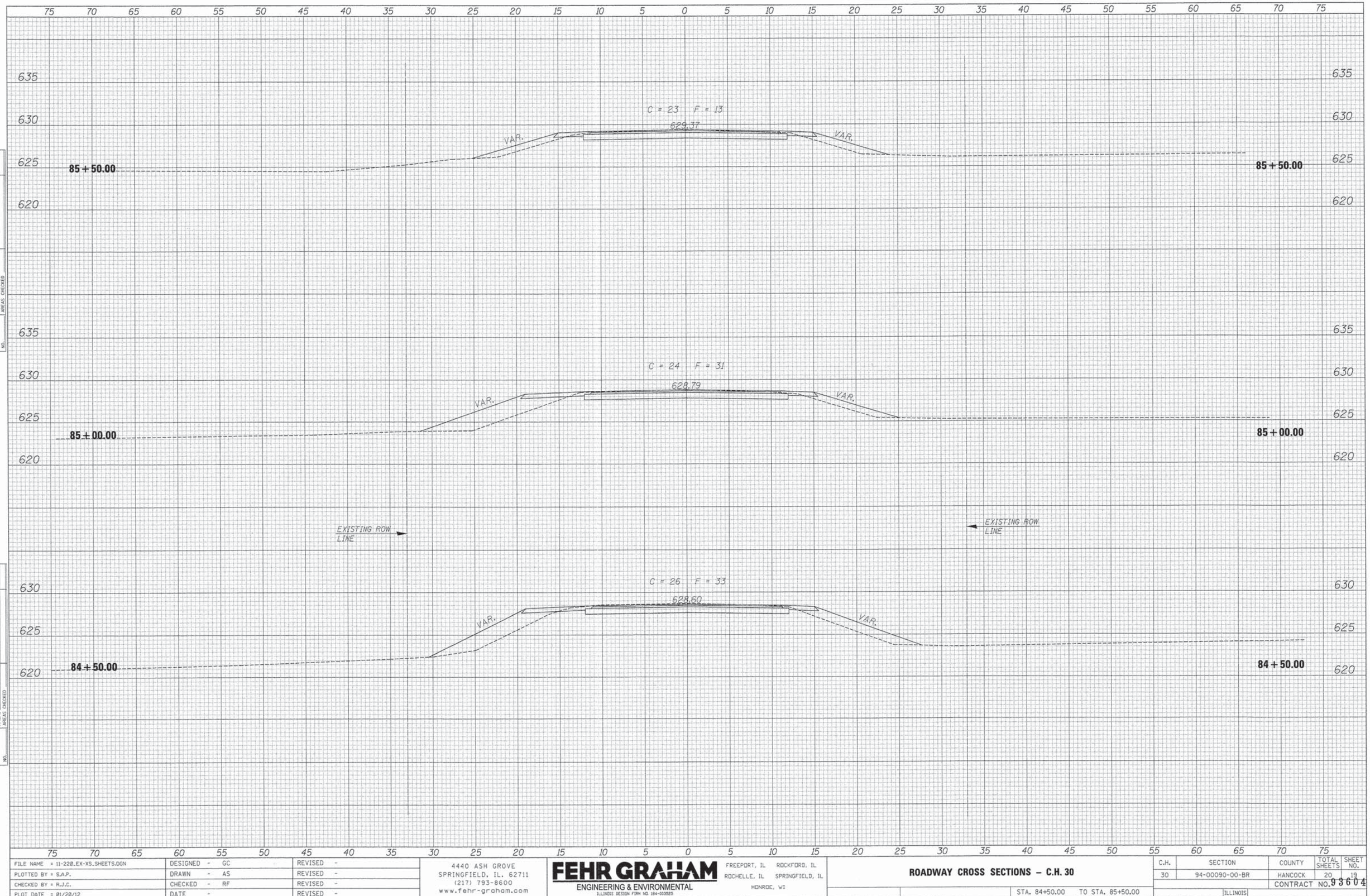
C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
30	94-00090-00-BR	HANCOCK	20	18

ILLINOIS CONTRACT NO. 93604

*11-220

FINAL SURVEY	NOTE BOOK	SURVEYED	PLOTTED	TEMPLATE	AREAS	CHECKED
NO.						

BY	DATE



ORIGINAL SURVEY	NOTE BOOK	SURVEYED	PLOTTED	TEMPLATE	AREAS	CHECKED
NO.						

BY	DATE

FILE NAME = 11-220.EX-XS_SHEETS.DGN	DESIGNED - GC	REVISED -
PLOTTED BY = S.A.P.	DRAWN - AS	REVISED -
CHECKED BY = R.J.C.	CHECKED - RF	REVISED -
PLOT DATE = 01/20/12	DATE -	REVISED -

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MONROE, WI

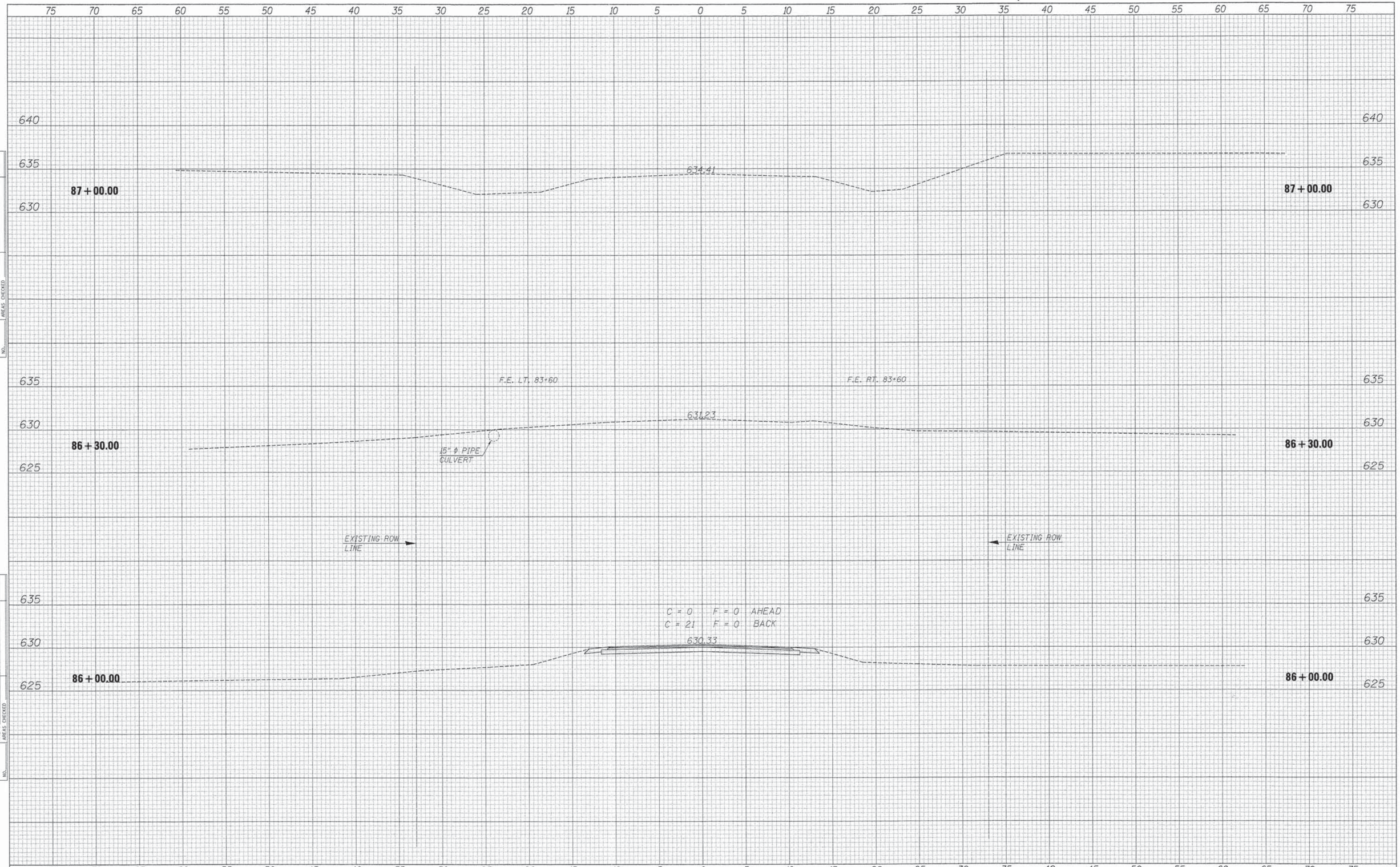
ROADWAY CROSS SECTIONS – C.H. 30

STA. 84+50.00 TO STA. 85+50.00

C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
30	94-00090-00-BR	HANCOCK	20	19
		CONTRACT NO. 93604		
	ILLINOIS			

*11-220

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



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

FILE NAME = 11-220_EX-XS_SHEETS.DGN	DESIGNED - GC	REVISED -
PLOTTED BY = S.A.P.	DRAWN - AS	REVISED -
CHECKED BY = R.J.C.	CHECKED - RF	REVISED -
PLOT DATE = 01/20/12	DATE -	REVISED -

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ROADWAY CROSS SECTIONS – C.H. 30

STA. 86+00.00 TO STA. 87+00.00

C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
30	94-00090-00-BR	HANCOCK	20	20

CONTRACT NO. 93604

ILLINOIS

*11-220