

SUMMARY OF QUANTITIES

CODE NO.	ITEM DESCRIPTION	UNIT	HBP FUNDS
			80% FED 20% STATE
			BRIDGE 0011
			RURAL
20200100	EARTH EXCAVATION	CU YD	450
20300100	CHANNEL EXCAVATION	CU YD	1304
20800150	TRENCH BACKFILL	CU YD	0.2
25000200	SEEDING, CLASS 2	ACRE	0.35
25000350	SEEDING, CLASS 7	ACRE	0.35
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	46
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	32
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	32
25000700	AGRICULTURAL GROUND LIMESTONE	TON	0.7
25100115	MULCH, METHOD 2	ACRE	0.35
25100630	EROSION CONTROL BLANKET	SQ YD	1388
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	35
28000400	PERIMETER EROSION BARRIER	FOOT	1580
28000510	INLET FILTERS	EACH	2
28100105	STONE RIPRAP, CLASS A3	SQ YD	32
28100107	STONE RIPRAP, CLASS A4	SQ YD	1824
28200200	FILTER FABRIC	SQ YD	1856
35600716	HOT-MIX ASPHALT BASE COURSE WIDENING, 10"	SQ YD	199
40300100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	255
40600645	LEVELING BINDER (MACHINE METHOD), N90	TON	52
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	174
40600990	TEMPORARY RAMP	SQ YD	28
40603320	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N90	TON	118
42001420	BRIDGE APPROACH PAVEMENT CONNECTOR (PCC)	SQ YD	42
44000100	PAVEMENT REMOVAL	SQ YD	127
44004250	PAVED SHOULDER REMOVAL	SQ YD	830
48100700	AGGREGATE SHOULDERS, TYPE A 8"	SQ YD	32
48203029	HOT-MIX ASPHALT SHOULDERS, 8"	SQ YD	321
48203037	HOT-MIX ASPHALT SHOULDERS, 10"	SQ YD	200
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50104650	SLOPE WALL REMOVAL	SQ YD	984

CODE NO.	ITEM DESCRIPTION	UNIT	HBP FUNDS
			80% FED 20% STATE
			BRIDGE 0011
			RURAL
50200100	STRUCTURE EXCAVATION	CU YD	292
50300225	CONCRETE STRUCTURES	CU YD	208.2
50300255	CONCRETE SUPERSTRUCTURE	CU YD	291.4
50300260	BRIDGE DECK GROOVING	SQ YD	675
50300280	CONCRETE ENCASEMENT	CU YD	15.4
50300300	PROTECTIVE COAT	SQ YD	874
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1
50500505	STUD SHEAR CONNECTORS	EACH	2988
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	90,880
50800515	BAR SPLICERS	EACH	901
51201900	FURNISHING STEEL PILES HP14X89	FOOT	1109
51202305	DRIVING PILES	FOOT	1109
51203900	TEST PILE STEEL HP14X89	EACH	2
51500100	NAME PLATES	EACH	1
52100520	ANCHOR BOLTS, 1"	EACH	48
54213447	END SECTIONS 12"	EACH	2
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	54
60100945	PIPE DRAINS 12"	FOOT	135
60600605	CONCRETE CURB, TYPE B	FOOT	12
X6090150	TYPE B INLET BOX, STANDARD 609006 (SPECIAL)	EACH	2
60900515	CONCRETE THRUST BLOCKS	EACH	2
* 63000001	STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 FOOT POSTS	FOOT	425
* 63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4
63200310	GUARDRAIL REMOVAL	FOOT	860
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	7
67100100	MOBILIZATION	L SUM	1
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1

DATE: _____
 BY: _____
 SURVEYED _____
 PLOTTED _____
 TEMPLATE _____
 AREAS CHECKED _____
 PLOTS CHECKED _____
 NO. _____



DATE: _____
 BY: _____
 SURVEYED _____
 PLOTTED _____
 TEMPLATE _____
 AREAS CHECKED _____
 PLOTS CHECKED _____
 NO. _____

FILE NAME =	USER NAME = Cow21283	DESIGNED - JDW	REVISED -
ca\working\cow21283\dms23631\0978141-sh1	SDD.dgn	DRAWN - BKC	REVISED -
	PLOT SCALE = 2.0000 / 1"	CHECKED - MH	REVISED -
	PLOT DATE = 10/01/2010	DATE - 06-30-2010	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

IL-146 (OVER SIMMONS CREEK) SUMMARY OF QUANTITIES

SCALE: NTS SHEET NO. OF SHEETS STA. TO STA.

F.A.P. RTE. 885	SECTION 6B-2	COUNTY POPE	TOTAL SHEETS 48	SHEET NO. 3
CONTRACT NO. 78141				Rev.

* Rev. 1-4-11 * Specialty Items

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

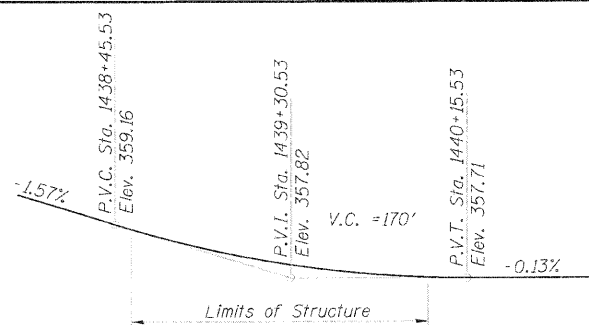
B.M.#16: Chiseled "□" on the N.E. Corner of the S.W. wingwall of Existing Structure No. 076-0023. El. 359.95

Existing Structure (No. 076-0023):

Originally constructed in 1923, replaced in 1980, and overlaid in 1991. The original 1923 structure was removed to below grade in 1980 and replaced with a 0° Skew, 3 span, 133'-9" Bk.-Bk. PPCDB structure, having span lengths of 25'-9", 70'-0" & 38'-0" and an out to out width of 36'-0". The existing C of Structure is at Station 1439+28.17. The existing abutments are pile supported stub abutments on steel HP piles. The existing piers are pile bent supported with a solid encased wall around steel HP piles.

Structure is to be removed and replaced using stage construction.

The 7 existing supporting steel beams shall be salvaged and stockpiled on the construction site.



PROFILE GRADE - IL. RTE. 146

WATERWAY INFORMATION TABLE

NORMAL DEPTH OR 10 YEAR BACKWATER FOR OHIO RIVER

Flood		Freq. Yr.	Q	C.F.S.	Opening Sq. Ft.	Nat. H.W.E.	Head - Ft.	Headwater El.	
								Exist.	Prop.
1. Ten-Year		10	3486	850	883	345.11	0.34	0.33	345.45 345.44
1. Design		50	5339	888	924	345.52	0.74	0.72	346.26 346.24
2. Base		100	6149	936	976	346.03	0.87	0.84	346.90 346.88
Overtopping									
2. Max. Calc.		500	8265	1066	1117	347.36	1.16	1.11	348.52 348.47

- 10 Year Ohio River Backwater used for 10 and 50 year events.
- Normal Depth Ohio River used for 100 and 500 year events.

WATERWAY INFORMATION TABLE

50 YEAR OHIO RIVER BACKWATER

Flood		Freq. Yr.	Q	C.F.S.	Opening Sq. Ft.	Nat. H.W.E.	Head - Ft.	Headwater El.	
								Exist.	Prop.
Ten-Year		10	3486	1420	1499	350.68	0.11	0.09	350.79 350.77
Design		50	5339	1426	1505	350.73	0.26	0.21	350.99 350.94
Base		100	6149	1429	1509	350.76	0.34	0.28	351.10 351.04
Overtopping									
Max. Calc.		500	8265	1440	1520	350.85	0.62	0.51	351.47 351.35

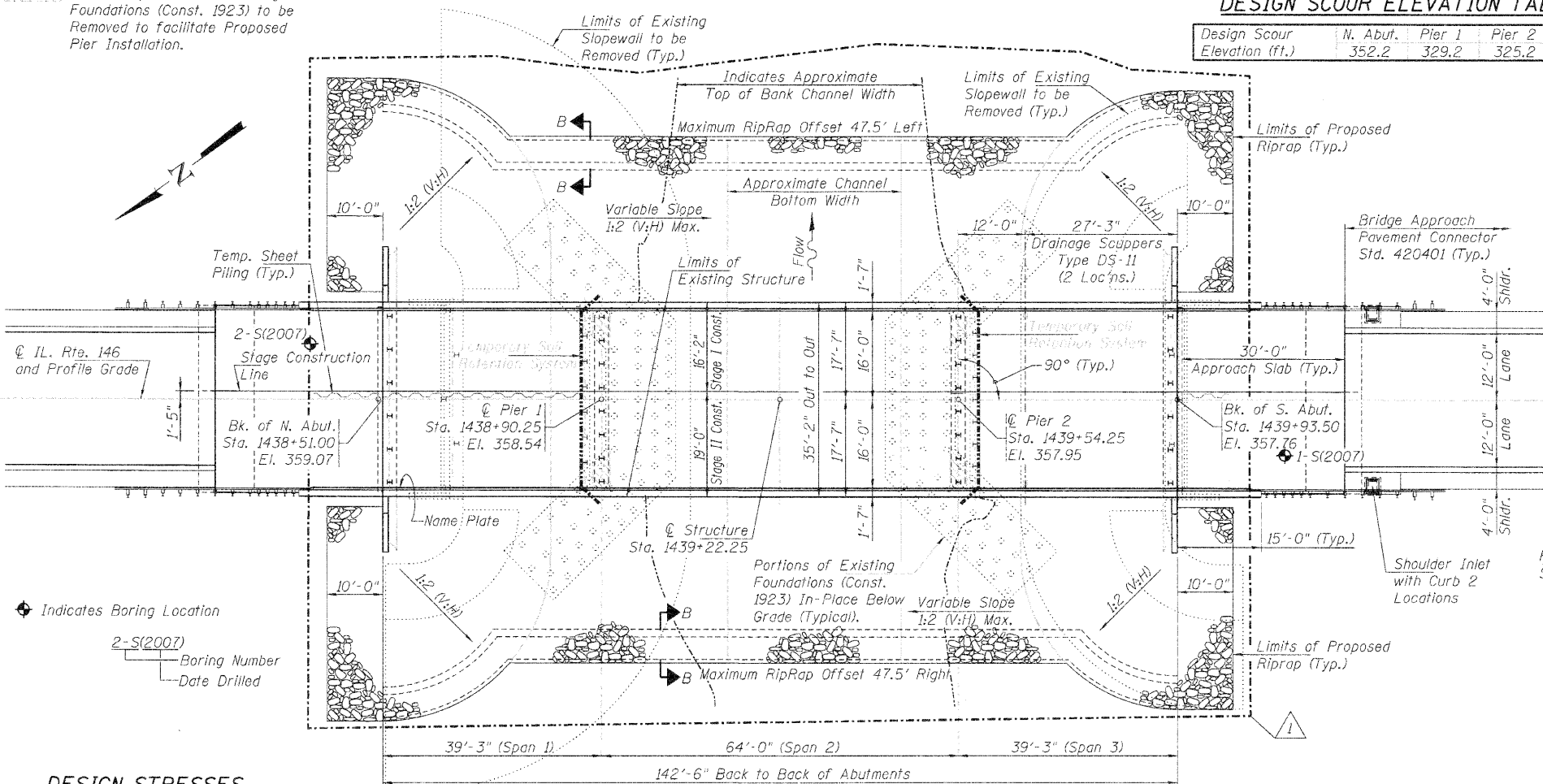
DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	N. Abut.	Pier 1	Pier 2	S. Abut.
	352.2	329.2	325.2	350.9

LEGEND

Indicates portions of Existing Foundations (Const. 1923) to be Removed to facilitate Proposed Pier Installation.

ELEVATION



PLAN

DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)
 $f_y = 50,000$ psi (M270 Grade 50W)

LOADING HL-93

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

DESIGN SPECIFICATIONS

2007 AASHTO LRFD Bridge Design Specifications with 2008 & 2009 Interims

SEISMIC DATA

Seismic Performance Zone (SPZ) = 2
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.29
Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.80
Soil Site Class = C

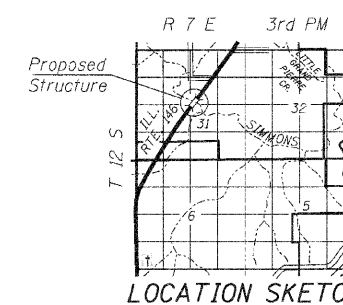


APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Signature: *Ralph E. Anderson (TDP)*
ENGINEER OF BRIDGES AND STRUCTURES

Signature: *Michael N. Mendinhall*
DATE: 12/21/10

LIC. EXP. DATE: 11/30/12



GENERAL PLAN
IL. ROUTE 146 over SIMMONS CREEK
F.A.P. ROUTE 885 - SECTION 6B-2
POPE COUNTY
STATION 1439+22.25
STRUCTURE NO. 076-0029

PROFESSIONAL DESIGN FIRM LICENSE #184-001084

Copyright Hanson Professional Services Inc. 2010



DATE	SHEET NO.	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
08/10/13	1	885	6B-2	Pope	48	20
05/21/10	29					

CONTRACT NO. 78141
ILLINOIS FED. AID PROJECT

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts in painted areas and M164 Type 3 in unpainted areas. Bolts 7/8 in. ϕ , holes 15/16 in. ϕ , unless otherwise noted.

Calculated weight of Structural Steel = 91,480 lbs.

All structural steel shall be AASHTO M 270 Grade 50W. All structural steel shall be cleaned as specified in the Special Provision for "Surface Preparation and Painting Requirements for Weathering Steel".

No field welding is permitted except as specified in the contract documents.

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.

Reinforcement bars designated (E) shall be epoxy coated.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 inch (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.

Structural steel shall only be painted for a distance equal to the depth of embedment into the concrete cap plus 3 inches. Painted areas shall be primed in the shop with a Department approved zinc rich primer. Field painting will not be required.

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

In lieu of the hammer selection criteria and use of the FHWA Modified Gates formula specified in Section 512 of the Standard Specifications, the Contractor shall conduct a wave equation analysis to establish the driving criteria at all pile foundations which specify a nominal required bearing above 600 kips. The analysis and calculations shall be submitted to the Engineer for approval.

Slipforming of parapets is not allowed.

Current Ratings on File for Existing Structure

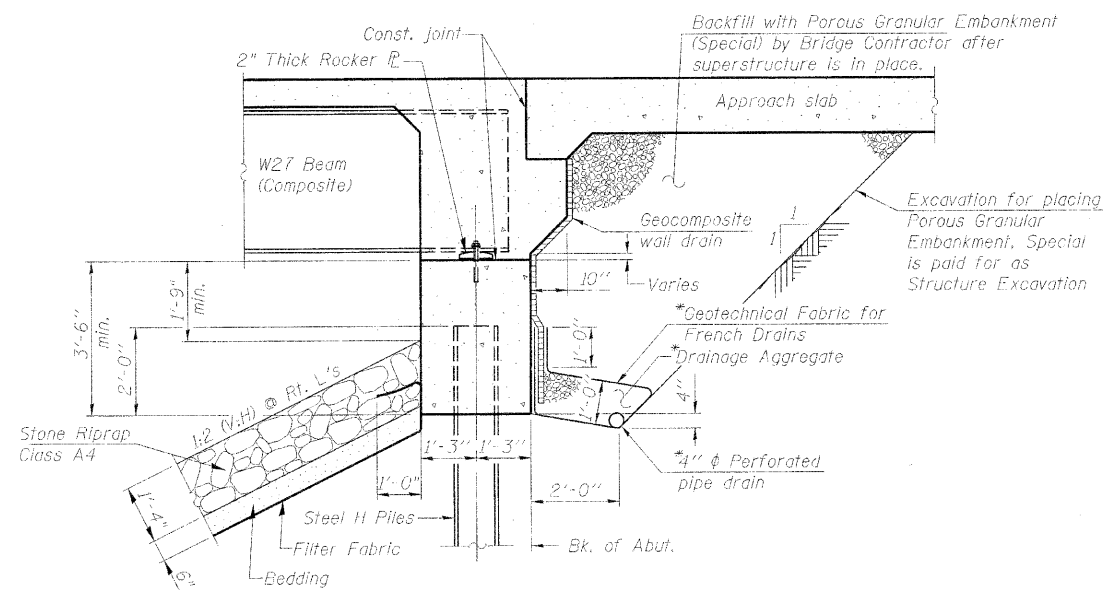
Inventory: HS-5.1

Operating: HS-12.7

Live Load Restrictions: No

Inventory and Operating Ratings and Live Load Restrictions are provided for information only. Inventory and Operating Ratings are based on HS loading and configuration. Live load Restrictions are based on Illinois legal loads and configurations. The Ratings and Live Load Restrictions are not necessarily representative of capacities to support Contractor's equipment.

The Contractor is advised that the existing structure contains members that are in a deteriorated condition with reduced load carrying capacity. It is the Contractor's responsibility to account for the condition of the existing structure when developing construction procedures for the complete or partial removal, or replacement of the structure. An Existing Structure Information Package is available upon request as noted in the Special Provisions.

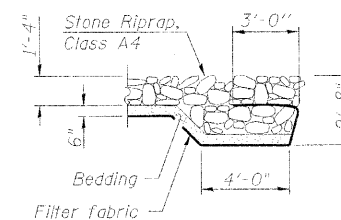


SECTION THRU INTEGRAL ABUTMENT
(Horiz. dim. @ Rt. L's)

*Included in the cost of Pipe Underdrains for Structures.

Note:

All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slope. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101)



SECTION B-B

INDEX OF SHEETS

- 1 General Plan
- 2 General Data
- 3 Substructure Layout and Temporary Sheet Piling Details
- 4-5 Stage Construction Details
- 6 Temporary Concrete Barrier for Stage Construction
- 7-9 Top of Slab Elevations - Bridge Deck
- 10-11 Top of Slab Elevations - Approach Slabs
- 12-14 Superstructure Details
- 15-16 Bridge Approach Slab Details
- 17 Drainage Scuppers Details
- 18-19 Structural Steel Details
- 20 Bearing Details
- 21 North Abutment
- 22 South Abutment
- 23 Pier 1
- 24 Pier 2
- 25 HP Pile Details
- 26 Bar Splicer Assembly and Mechanical Splicer Details
- 27 Cantilever Forming Brackets
- 28-29 Boring Logs

STATION 1439+22.25
BUILT 20__ BY
STATE OF ILLINOIS
F.A.P. RT. 885 SEC. 6B-2
LOADING HL93
STRUCTURE NO. 076-0029

NAME PLATE
See Std. 515001

GENERAL DATA
STRUCTURE NO. 076-0029

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment, Special	Cu. Yd.	-	86	86
Stone Riprap, Class A4	Sq. Yd.	-	1824	1824
Filter Fabric	Sq. Yd.	-	1824	1824
Removal of Existing Structures	Each	-	-	1
Scopewall Removal	Sq. Yd.	-	984	984
Structure Excavation	Cu. Yd.	-	292	292
Concrete Structures	Cu. Yd.	-	208.2	208.2
Concrete Superstructure	Cu. Yd.	291.4	-	291.4
Bridge Deck Grooving	Sq. Yd.	675	-	675
Concrete Encasement	Cu. Yd.	-	15.4	15.4
Protective Coat	Sq. Yd.	874	-	874
Furnishing and Erecting Structural Steel	L. Sum	1	-	1
Stud Shear Connectors	Each	2988	-	2988
Reinforcement Bars, Epoxy Coated	Pound	70420	20460	90880
Bar Splicers	Each	731	170	901
Furnishing Steel Piles HP14x89	Foot	-	1109	1109
Driving Piles	Foot	-	1109	1109
Test Pile Steel HP14x89	Each	-	2	2
Temporary Sheet Piling	Sq. Ft.	-	1102	1102
Name Plates	Each	1	-	1
Anchor Bolts, 1"	Each	48	-	48
Geocomposite Wall Drain	Sq. Yd.	-	54	54
Pipe Underdrains for Structures 4"	Foot	-	130	130
Drainage Scuppers, DS-II	Each	2	-	2
Temporary Soil Retention System	Sq. Ft.	-	467	467
Mechanical Splicers	Each	-	156	156

PROFESSIONAL DESIGN FIRM LICENSE #184-001084 © Copyright Hanson Professional Services Inc. 2010		JOB NO. 08HC131	SHEET NO. 2	F.A.P. RTE. 885	SECTION 6B-2	COUNTY Pope	TOTAL SHEETS 48	SHEET NO. 21
Hanson Professional Services Inc.		DATE 05/21/10	29 SHEETS	ILLINOIS FED. AID PROJECT		CONTRACT NO. 78141		