

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
358	86-00075-00-AS	WOODFORD	74	28
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

TOTAL BILL OF MATERIAL - BOX CULVERT

ITEM	UNIT	TOTAL
Removal and Disposal of Unsuitable Material	Cu Yd	234
Porous Granular Embankment, Special	Cu Yd	231
Geotechnical Fabric for Ground Stabilization	Sq Yd	336
Stone Riprap, Class A4	Sq Yd	350
Filter Fabric	Sq Yd	350
Removal Of Existing Structures No. 1	Each	1
Reinforcement Bars	Pound	42,800
Name Plates	Each	1
Concrete Box Culverts	Cu Yd	222.5

GENERAL NOTES

- At least 10'-0" of this culvert barrel shall be poured monolithically with the wingwalls.
- Exposed edges shall be beveled 3/4".
- Optional use of Precast Concrete Box Culverts is not allowed.
- Reinforcement Bars shall conform to the requirements of ASTM A706, Grade 60 (IL Modified). See Special Provision.
- For backfilling and embankment, see Standard Specifications and Roadway Plans.
- It shall be the responsibility of the Contractor to divert the stream flow and any storm sewer flow during construction in order to keep the construction areas free of water. The method of water diversion shall be subject to the approval of the Engineer and the cost shall be included with "Concrete Box Culverts".
- Contractor to field locate all utilities before starting construction and protect all utilities. Contractor to submit information regarding protecting utilities to the Engineer before starting construction.
- The pay item "Removal And Disposal Of Unsuitable Material" shall include the excavation of unsuitable material for a depth of 2'-0" below the structure for a width of approximately 25'-6" within the limits of the toe walls as shown on the plans. The actual amount shall be determined in the field by the Engineer.
- The pay item "Porous Granular Embankment, Special" shall include the placement of CA-1 and CA-7 below the structure for a width of 25'-6" within the limits of the toe walls as shown on the plans. The actual amount shall be determined in the field by the Engineer.
- F.F. denotes Front Face B.F. denotes Back Face E.F. denotes Each Face
- There will be no additional compensation should any reinforcement need to be cut or bent in the field.
- Construction Joints shall be bonded in accordance with Section 503.09 (b) of the Standard Specifications.
- The layout of the channel pavement may be varied in the field to suit ground conditions as directed by the Engineer.
- Minimum bar lap lengths are as follows, unless noted otherwise.

Barrels:	Bar Size	Min. Lap Length	Wingwalls:	Bar Size	Min. Lap Length
	#4	1'-4"		#4	1'-8"
	#5	1'-8"		#5	2'-2"
	#6	2'-0"		#6	2'-7"
	#7	2'-9"		#7	3'-5"
	#8	3'-8"		#8	4'-6"
	#9	4'-7"		#9	5'-9"

STATION 1803+33.20
BUILT 200 BY
WOODFORD COUNTY
F.A.S. RTE. 358
SECTION 86-00075-00-AS
LOADING HS20
STR. NO. 102-5035

NAME PLATE
See Standard 515001

BAR BENDING DIAGRAMS

Bar	a	b	Diagram
d	2'-8"	1'-9"	
h13	9'-8"	3'-0"	
h14	5'-0"	3'-0"	
v	4'-9"	10"	

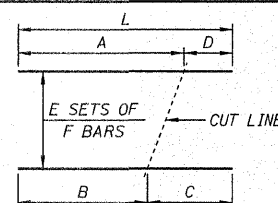
Bar	a	b	c	Diagram
a	21'-2"	8"	6"	
a3	20'-6"	8"	6"	
a5	21'-0"	8"	6"	

Bar	a	b	c	Diagram
s	1'-4"	9"	4 1/2"	

Bar	a	b	c	d	Diagram
h9	27'-10"	3'-0"	1'-0 1/4"	2'-9 3/4"	
h11	23'-2"	4'-8"	2'-8"	3'-9 3/4"	
h12	18'-6"	3'-0"	1'-0 1/4"	2'-9 3/4"	
h15	9'-1"	3'-0"	1'-8 5/8"	2'-5 1/2"	
h20	23'-8"	3'-9"	2'-7 3/4"	2'-7 3/4"	

Bar	a	b	c	d	e	f	Diagram
s1	11 1/2"	9"	4 1/2"	1'-4"	4 1/2"	4 1/2"	

BAR CUTTING DIAGRAM



BAR	A	B	C	D	E	F	L
a3	19'-5"	1'-1"	19'-5"	1'-1"	1	12	20'-6"
a4	20'-3"	1'-11"	20'-3"	1'-11"	2	12	22'-2"
a5	19'-10"	1'-2"	19'-10"	1'-2"	1	17	21'-0"
a6	20'-5"	1'-9"	20'-5"	1'-9"	2	17	22'-2"
h2	16'-6"	2'-3"	16'-6"	2'-3"	1	28	18'-9"
h3	22'-9"	2'-4"	22'-9"	2'-4"	1	28	25'-1"
v1	7'-9"	6'-5"	7'-9"	6'-5"	1	25	14'-2"
v2	7'-9"	5'-9"	7'-9"	5'-9"	1	10	13'-6"
v4	7'-9"	4'-3"	7'-9"	4'-3"	1	25	12'-0"

Note: "L" dimension does not take into account the hook length for the hooked bars a3 and a5.

BAR LIST

Bar	No.	Size	Length	Shape
a	174	#6	22'-6"	
a1	346	#6	21'-2"	
a2	194	#6	6'-0"	
a3	12	#6	21'-10"	
a4	24	#6	22'-2"	
a5	17	#6	22'-4"	
a6	34	#6	22'-2"	
a7	3	#5	25'-0"	
a8	3	#5	29'-0"	
d	42	#4	4'-5"	
h	232	#5	26'-3"	
h1	290	#5	21'-4"	
h2	28	#5	18'-9"	
h3	28	#5	25'-1"	
h4	4	#5	25'-4"	
h5	4	#5	29'-6"	
h6	24	#4	23'-9"	
h7	24	#4	20'-10"	
h8	16	#4	26'-3"	
h9	6	#6	30'-10"	
h10	11	#6	24'-6"	
h11	5	#6	27'-10"	
h12	6	#6	21'-6"	
h13	8	#6	12'-8"	
h14	8	#6	8'-0"	
h15	8	#6	12'-1"	
h16	6	#6	9'-8"	
h17	6	#6	28'-0"	
h18	4	#6	8'-0"	
h19	5	#6	25'-6"	
h20	5	#6	27'-5"	
h21	12	#6	24'-8"	
h22	6	#6	14'-8"	
s	30	#4	4'-11"	
s1	26	#4	4'-9"	
v	365	#5	5'-7"	
v1	25	#4	14'-2"	
v2	10	#4	13'-6"	
v3	2	#4	7'-3"	
v4	25	#4	12'-0"	

NOTE:

Work this sheet with Sheets B1 and B3-B8.

REVISIONS	NAME	DATE

BILL OF MATERIAL, GENERAL NOTES AND DETAILS
F.A.S. 358 (C.H. 18)
SECTION 86-00075-00-AS
WOODFORD COUNTY
STATION 1803+33.20
STRUCTURE NO. 102-5035

DESIGNED BY: MSW DRAWN BY: DJM
DATE: 04/08/09 CHECKED BY: MSW