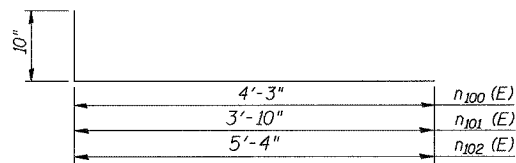
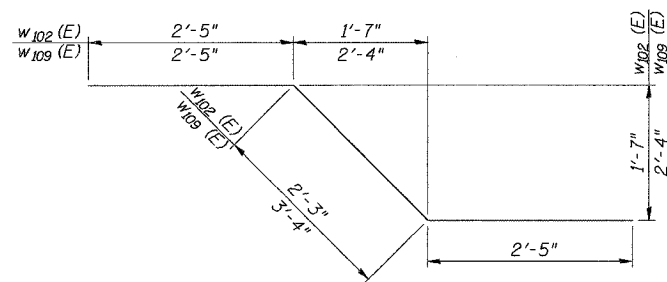


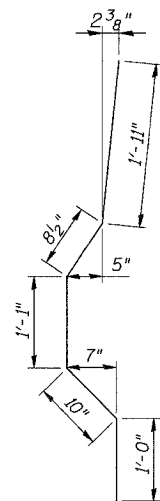
BARS $w_{101}(E)$, $w_{107}(E)$, $w_{108}(E)$



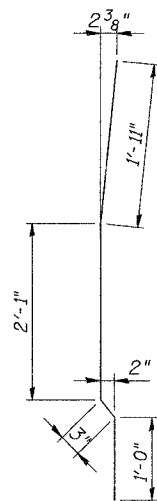
BARS $n_{100}(E)$, $n_{101}(E)$, $n_{102}(E)$



BARS $w_{102}(E)$, $w_{109}(E)$



BAR $d_{101}(E)$



BAR $d_{102}(E)$

**NORTHWEST RETAINING WALL
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
$d_{100}(E)$	182	#6	5'-6"	—
$d_{101}(E)$	179	#6	5'-7"	~
$d_{102}(E)$	3	#6	5'-3"	~
$e_{100}(E)$	24	#4	32'-5"	—
$e_{101}(E)$	12	#4	29'-8"	—
$h_{100}(E)$	52	#4	32'-5"	—
$h_{101}(E)$	26	#4	29'-8"	—
$n_{100}(E)$	366	#5	5'-1"	—
$t_{100}(E)$	243	#6	5'-8"	—
$t_{101}(E)$	122	#6	6'-8"	—
$v_{100}(E)$	244	#5	3'-10"	—
$v_{102}(E)$	122	#5	5'-6"	—
$w_{101}(E)$	7	#4	6'-5"	~
$w_{102}(E)$	7	#4	7'-1"	~
$w_{103}(E)$	70	#4	25'-11"	—
$w_{104}(E)$	48	#4	22'-2"	—
Porous Granular Embankment (Special)	Cu. Yd.	11		
Structure Excavation	Cu. Yd.	296		
Concrete Structures	Cu. Yd.	110.8		
Protective Coat	Sq. Yd.	79		
Reinforcement Bars, Epoxy Coated	Pound	14,320		
Geocomposite Wall Drain	Sq. Yd.	9		

**SOUTHWEST RETAINING WALL
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
$d_{100}(E)$	182	#6	5'-6"	—
$d_{101}(E)$	179	#6	5'-7"	~
$d_{102}(E)$	3	#6	5'-3"	~
$e_{100}(E)$	24	#4	32'-5"	—
$e_{101}(E)$	12	#4	29'-8"	—
$h_{100}(E)$	52	#4	32'-5"	—
$h_{101}(E)$	26	#4	29'-8"	—
$n_{100}(E)$	364	#5	5'-1"	—
$t_{100}(E)$	183	#6	5'-8"	—
$t_{101}(E)$	182	#6	6'-8"	—
$v_{100}(E)$	182	#5	3'-10"	—
$v_{101}(E)$	182	#5	5'-3"	—
$w_{101}(E)$	120	#4	24'-9"	—
$w_{101}(E)$	7	#4	6'-5"	~
$w_{102}(E)$	7	#4	7'-1"	~
Porous Granular Embankment (Special)	Cu. Yd.	17		
Structure Excavation	Cu. Yd.	317		
Concrete Structures	Cu. Yd.	116.4		
Protective Coat	Sq. Yd.	79		
Reinforcement Bars, Epoxy Coated	Pound	14,510		
Geocomposite Wall Drain	Sq. Yd.	13		

**NORTHEAST RETAINING WALL
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
$d_{100}(E)$	182	#6	5'-6"	—
$d_{101}(E)$	179	#6	5'-7"	~
$d_{102}(E)$	3	#6	5'-3"	~
$e_{100}(E)$	24	#4	32'-5"	—
$e_{101}(E)$	12	#4	29'-8"	—
$h_{100}(E)$	52	#4	32'-5"	—
$h_{101}(E)$	26	#4	29'-8"	—
$n_{100}(E)$	366	#5	5'-1"	—
$t_{100}(E)$	243	#6	5'-8"	—
$t_{101}(E)$	122	#6	6'-8"	—
$v_{100}(E)$	244	#5	3'-10"	—
$v_{102}(E)$	122	#5	5'-6"	—
$w_{101}(E)$	7	#4	6'-5"	~
$w_{102}(E)$	7	#4	7'-1"	~
$w_{103}(E)$	70	#4	25'-11"	—
$w_{104}(E)$	48	#4	22'-2"	—
Porous Granular Embankment (Special)	Cu. Yd.	12		
Structure Excavation	Cu. Yd.	308		
Concrete Structures	Cu. Yd.	110.8		
Protective Coat	Sq. Yd.	79		
Reinforcement Bars, Epoxy Coated	Pound	14,320		
Geocomposite Wall Drain	Sq. Yd.	9		

**SOUTHEAST RETAINING WALL
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
$d_{100}(E)$	304	#6	5'-6"	—
$d_{101}(E)$	301	#6	5'-7"	~
$d_{102}(E)$	3	#6	5'-3"	~
$e_{100}(E)$	36	#4	32'-5"	—
$e_{101}(E)$	24	#4	29'-8"	—
$h_{100}(E)$	82	#4	32'-5"	—
$h_{101}(E)$	54	#4	29'-8"	—
$h_{102}(E)$	16	#4	2'-0"	—
$n_{100}(E)$	124	#5	5'-1"	—
$n_{101}(E)$	184	#5	4'-8"	—
$n_{102}(E)$	304	#5	6'-2"	—
$t_{100}(E)$	182	#6	5'-8"	—
$t_{101}(E)$	123	#6	6'-8"	—
$t_{102}(E)$	302	#7	7'-8"	—
$v_{103}(E)$	184	#5	4'-3"	—
$v_{104}(E)$	124	#5	4'-6"	—
$v_{105}(E)$	304	#5	5'-11"	—
$w_{100}(E)$	56	#4	24'-9"	—
$w_{105}(E)$	48	#4	21'-6"	—
$w_{106}(E)$	108	#4	27'-4"	—
$w_{107}(E)$	7	#4	5'-11"	~
$w_{108}(E)$	8	#4	7'-2"	~
$w_{109}(E)$	8	#4	8'-2"	~
Porous Granular Embankment (Special)	Cu. Yd.	62		
Structure Excavation	Cu. Yd.	723		
Concrete Structures	Cu. Yd.	242.5		
Protective Coat	Sq. Yd.	132		
Reinforcement Bars, Epoxy Coated	Pound	27,180		
Geocomposite Wall Drain	Sq. Yd.	47		

TOTAL BILL OF MATERIAL

ITEMS	UNITS	TOTAL
Porous Granular Embankment (Special)	Cu. Yd.	102
Structure Excavation	Cu. Yd.	1,644
Concrete Structures	Cu. Yd.	580.5
Protective Coat	Sq. Yd.	369
Reinforcement Bars, Epoxy Coated	Pound	70,330
Geocomposite Wall Drain	Sq. Yd.	78

DESIGNED	S.D.H.
CHECKED	J.A.Z.
DRAWN	M.S.M.
CHECKED	S.D.H.

RETAINING WALL DETAILS II
 IL Route 176 over the Kishwaukee River
 F.A.P. RTE 533, SECTION 119R-2B
 McHENRY COUNTY
 STA. 7+71.50 TO STA. 13+48.50
 DATE: 10-05-07
 GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
 CHICAGO ILLINOIS