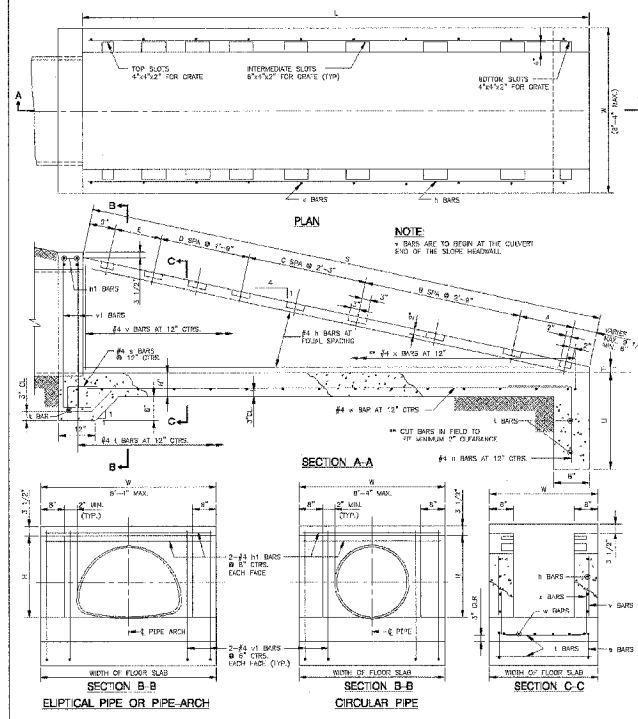


F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
303	I29K	WINNEBAGO	585	272
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



**DIMENSIONS AND QUANTITIES IN TWO WINGWALLS 4:1 SLOPE**

RISE	SPACING	NO. OF BARS	TYPE	LENGTH	NO. OF BARS	TYPE	LENGTH	NO. OF BARS	TYPE	LENGTH	NO. OF BARS	TYPE	LENGTH	NO. OF BARS	TYPE	LENGTH
3'-0"	12'-0"	12	1	12'-0"	12	1	12'-0"	12	1	12'-0"	12	1	12'-0"	12	1	12'-0"
3'-6"	14'-0"	14	1	14'-0"	14	1	14'-0"	14	1	14'-0"	14	1	14'-0"	14	1	14'-0"
4'-0"	16'-0"	16	1	16'-0"	16	1	16'-0"	16	1	16'-0"	16	1	16'-0"	16	1	16'-0"
4'-6"	18'-0"	18	1	18'-0"	18	1	18'-0"	18	1	18'-0"	18	1	18'-0"	18	1	18'-0"
5'-0"	20'-0"	20	1	20'-0"	20	1	20'-0"	20	1	20'-0"	20	1	20'-0"	20	1	20'-0"
5'-6"	22'-0"	22	1	22'-0"	22	1	22'-0"	22	1	22'-0"	22	1	22'-0"	22	1	22'-0"
6'-0"	24'-0"	24	1	24'-0"	24	1	24'-0"	24	1	24'-0"	24	1	24'-0"	24	1	24'-0"

**GENERAL NOTES:**

- TYPE 2 #4 BARS SHALL BE ORDERED FULL LENGTH AND CUT IN THE FIELD. THE REMAINING PORTION OF THE #4 BARS SHALL BE USED IN THE OTHER WALL.
- THE LONG LEGS OF THE #4 BARS SHALL BE VERTICAL.
- SEE STANDARD DRAWING SD 11-352 FOR DETAIL.
- #4 BARS ARE IDENTIFIED BY AN ASTERISK (\*).
- ALL CONCRETE SHALL BE CLASS SP.

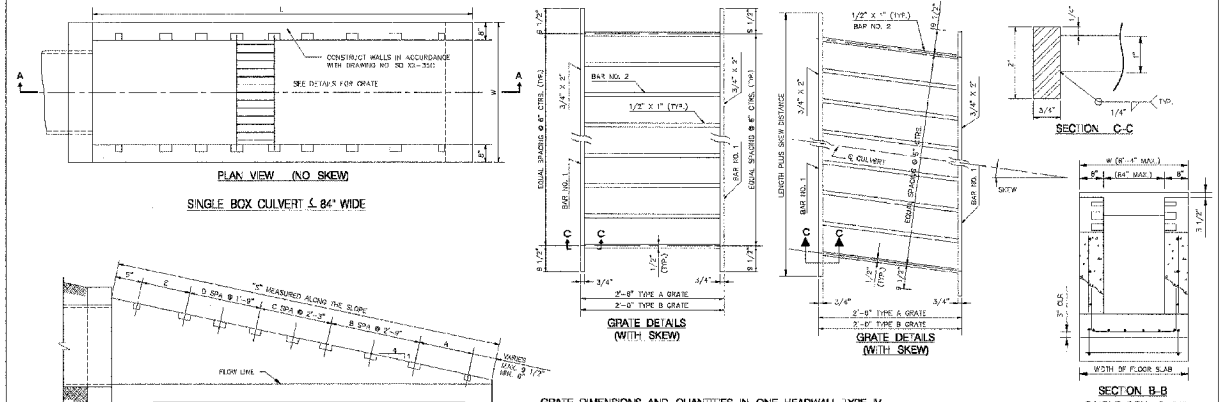
**TABLE OF BARS IN SLAB 4:1 SLOPE (PER FT. OF FLOOR SLAB WIDTH)**

H	MARK	TYPE	NO. REQ'D	LENGTH	h	b	REQ'D	CT. CONC.
3'-0"	4.1	STR.	1	W-(D-2)	1'-4"	8"	55	36
3'-0"	4.2	STR.	1	W-(D-2)	2'-0"	8"	55	43
3'-0"	4.3	STR.	1	W-(D-2)	2'-0"	8"	55	43
3'-0"	4.4	STR.	1	W-(D-2)	2'-0"	8"	55	43
3'-0"	4.5	STR.	1	W-(D-2)	2'-0"	8"	55	43

**TABLE OF BARS IN ONE WINGWALL 4:1 SLOPE**

H	MARK	TYPE	NO. REQ'D	LENGTH	h	b	REQ'D	CT. CONC.
3'-0"	4.6	STR.	4	W-(D-2)	1'-4"	8"	55	36
3'-0"	4.7	STR.	4	W-(D-2)	2'-0"	8"	55	43
3'-0"	4.8	STR.	4	W-(D-2)	2'-0"	8"	55	43
3'-0"	4.9	STR.	4	W-(D-2)	2'-0"	8"	55	43
3'-0"	4.10	STR.	4	W-(D-2)	2'-0"	8"	55	43
3'-0"	4.11	STR.	4	W-(D-2)	2'-0"	8"	55	43
3'-0"	4.12	STR.	4	W-(D-2)	2'-0"	8"	55	43
3'-0"	4.13	STR.	4	W-(D-2)	2'-0"	8"	55	43
3'-0"	4.14	STR.	4	W-(D-2)	2'-0"	8"	55	43
3'-0"	4.15	STR.	4	W-(D-2)	2'-0"	8"	55	43
3'-0"	4.16	STR.	4	W-(D-2)	2'-0"	8"	55	43
3'-0"	4.17	STR.	4	W-(D-2)	2'-0"	8"	55	43
3'-0"	4.18	STR.	4	W-(D-2)	2'-0"	8"	55	43
3'-0"	4.19	STR.	4	W-(D-2)	2'-0"	8"	55	43
3'-0"	4.20	STR.	4	W-(D-2)	2'-0"	8"	55	43
3'-0"	4.21	STR.	4	W-(D-2)	2'-0"	8"	55	43
3'-0"	4.22	STR.	4	W-(D-2)	2'-0"	8"	55	43
3'-0"	4.23	STR.	4	W-(D-2)	2'-0"	8"	55	43
3'-0"	4.24	STR.	4	W-(D-2)	2'-0"	8"	55	43
3'-0"	4.25	STR.	4	W-(D-2)	2'-0"	8"	55	43
3'-0"	4.26	STR.	4	W-(D-2)	2'-0"	8"	55	43
3'-0"	4.27	STR.	4	W-(D-2)	2'-0"	8"	55	43
3'-0"	4.28	STR.	4	W-(D-2)	2'-0"	8"	55	43
3'-0"	4.29	STR.	4	W-(D-2)	2'-0"	8"	55	43
3'-0"	4.30	STR.	4	W-(D-2)	2'-0"	8"	55	43

APPROVED: [Signature] DATE: 5-22-2004  
 CTE ENGINEERS  
 THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY  
 2700 DOON AVENUE  
 DOWNER GROVE, ILLINOIS 60419



**GRADE DIMENSIONS AND QUANTITIES IN ONE HEADWALL TYPE IV BASED ON A 1 FOOT WIDTH, 4:1 SLOPE AND SKEW**

H	MARK	TYPE	NO. REQ'D	LENGTH	h	b	REQ'D	CT. CONC.
3'-0"	5.1	STR.	1	W-(D-2)	1'-4"	8"	55	36
3'-0"	5.2	STR.	1	W-(D-2)	2'-0"	8"	55	43
3'-0"	5.3	STR.	1	W-(D-2)	2'-0"	8"	55	43
3'-0"	5.4	STR.	1	W-(D-2)	2'-0"	8"	55	43
3'-0"	5.5	STR.	1	W-(D-2)	2'-0"	8"	55	43
3'-0"	5.6	STR.	1	W-(D-2)	2'-0"	8"	55	43
3'-0"	5.7	STR.	1	W-(D-2)	2'-0"	8"	55	43
3'-0"	5.8	STR.	1	W-(D-2)	2'-0"	8"	55	43
3'-0"	5.9	STR.	1	W-(D-2)	2'-0"	8"	55	43
3'-0"	5.10	STR.	1	W-(D-2)	2'-0"	8"	55	43
3'-0"	5.11	STR.	1	W-(D-2)	2'-0"	8"	55	43
3'-0"	5.12	STR.	1	W-(D-2)	2'-0"	8"	55	43
3'-0"	5.13	STR.	1	W-(D-2)	2'-0"	8"	55	43
3'-0"	5.14	STR.	1	W-(D-2)	2'-0"	8"	55	43
3'-0"	5.15	STR.	1	W-(D-2)	2'-0"	8"	55	43
3'-0"	5.16	STR.	1	W-(D-2)	2'-0"	8"	55	43
3'-0"	5.17	STR.	1	W-(D-2)	2'-0"	8"	55	43
3'-0"	5.18	STR.	1	W-(D-2)	2'-0"	8"	55	43
3'-0"	5.19	STR.	1	W-(D-2)	2'-0"	8"	55	43
3'-0"	5.20	STR.	1	W-(D-2)	2'-0"	8"	55	43

**DIMENSIONS FOR 'S' SLOPE 4:1 FOR VARIOUS CULVERT SIZES AND SKEWS**

H	NO. REQ'D	TYPE	LENGTH	h	b	REQ'D	CT. CONC.
3'-0"	12	1	12'-0"	12	1	12'-0"	12
3'-6"	14	1	14'-0"	14	1	14'-0"	14
4'-0"	16	1	16'-0"	16	1	16'-0"	16
4'-6"	18	1	18'-0"	18	1	18'-0"	18
5'-0"	20	1	20'-0"	20	1	20'-0"	20
5'-6"	22	1	22'-0"	22	1	22'-0"	22
6'-0"	24	1	24'-0"	24	1	24'-0"	24

APPROVED: [Signature] DATE: 5-22-2004  
 CTE ENGINEERS  
 THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY  
 2700 DOON AVENUE  
 DOWNER GROVE, ILLINOIS 60419

**GENERAL NOTES:**

- ALL CONCRETE SHALL BE CLASS SP. STANDARD SPECIFICATION.
- ALL EXPOSED CONCRETE EDGES SHALL HAVE A 3/4" x 6" chamfer. CHAMFER ON UPPER EDGES SHALL BE CONTINUED A MINIMUM OF ONE FOOT BELOW FINISHED GRADE LEVEL. CORNER FROM THE FACE OF CONCRETE TO FACE OF REINFORCEMENT BARS SHALL BE 2" RADIUS. OTHER EDGES SHALL BE 1/4" RADIUS.
- CONCRETE QUANTITIES SHOWN ARE FOR CIRCULAR PIPES, PIPE ARCHES AND ELLIPTICAL PIPE CULVERT HEADWALLS.
- THE COST OF REQUIRED EXCAVATION, BACKFILLING, REMOVAL AND DISPOSAL OF EXCESS MATERIAL, AND RESTORATION SHALL BE CONSIDERED INCLUDED IN THE UNIT PRICES FOR HEADWALLS.
- TYPE IV PAY ITEM.
- REINFORCEMENT FOR HEADWALL TYPE IV WILL BE MADE AT THE CONTRACT UNIT PRICE PER CUBIC YARD FOR CONCRETE HEADWALLS AND COLLARS (CLASS SP). PER FOOT FOR REINFORCING STEEL AND PER POUND FOR WELDING AND ERECTING STRUCTURAL STEEL (EXCLUDING LOSS).
- REMOVAL OF EXISTING HEADWALL SHALL BE PAID FOR PER CUBIC YARD FOR CONCRETE REMOVAL. PAY ITEM 803.
- ALL STRUCTURAL STEEL SHALL BE ASTM A36, GRADE 50.
- ALL STRUCTURAL STEEL SHALL BE GALVANIZED AFTER FABRICATION. IN ACCORDANCE WITH AASHTO AND AISC REQUIREMENTS DURING TRANSPORT AND ERECTION SHALL BE REPAIRED IN ACCORDANCE WITH AASHTO AND AISC REQUIREMENTS.
- FOR QUANTITY CALCULATION DIMENSION "h" SHALL BE MEASURED IN FEET.
- QUANTITIES FOR SKEWED HEADWALLS NOT SHOWN.
- PAY ITEMS ARE IDENTIFIED BY AN ASTERISK (\*).
- SEE DRAWING NO. SD 10-352 (HEADWALL TYPE IV) FOR INSTALLATION OF CULVERT HEADWALLS.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**ISTHA STANDARDS**  
 SCALE: VERT. N/A  
 HORIZ. N/A  
 DATE: SEPTEMBER 14, 2005  
 DRAWN BY: KRL  
 CHECKED BY: PDS