

**DRAINAGE AREA**  
SCALE: 1" = 500'

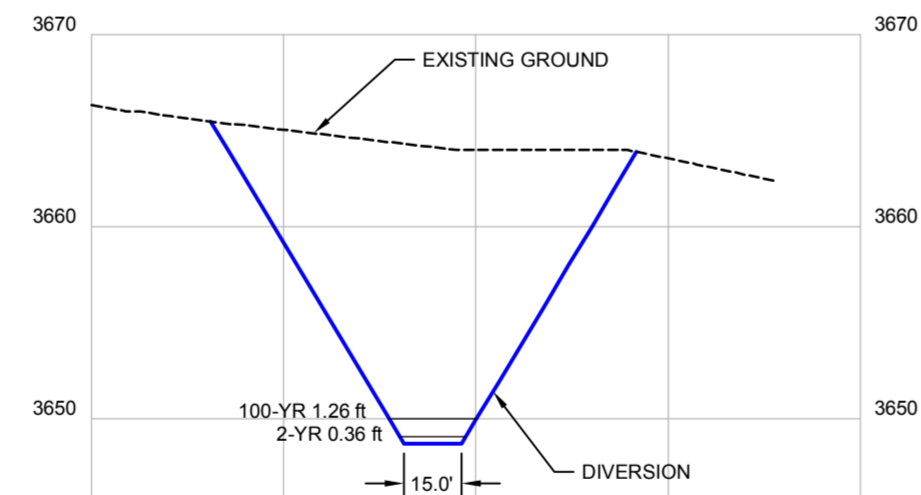
**DIVERSION CROSS SECTION**

$$Q = \frac{1.49}{n} AR^{2/3} S^{1/2}$$

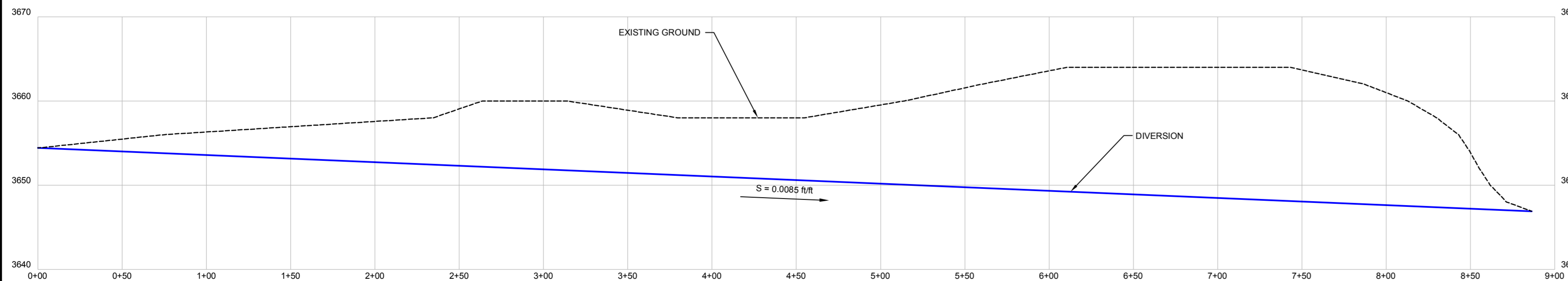
2-yr, 6-hr		100-yr, 24-hr	
Q = 13.00 cfs	A = 5.86 ft <sup>2</sup>	Q = 110.20 cfs	A = 23.66 ft <sup>2</sup>
n = 0.030	WP = 17.30 ft	n = 0.030	WP = 22.97 ft
S = 0.0085 ft/ft	R = 0.34 ft	S = 0.0085 ft/ft	R = 1.03 ft
b = 15 ft	V = 2.22 fps	b = 15 ft	V = 4.66 fps
Yn = 0.36 ft		Yn = 1.26 ft	

**LEGEND**

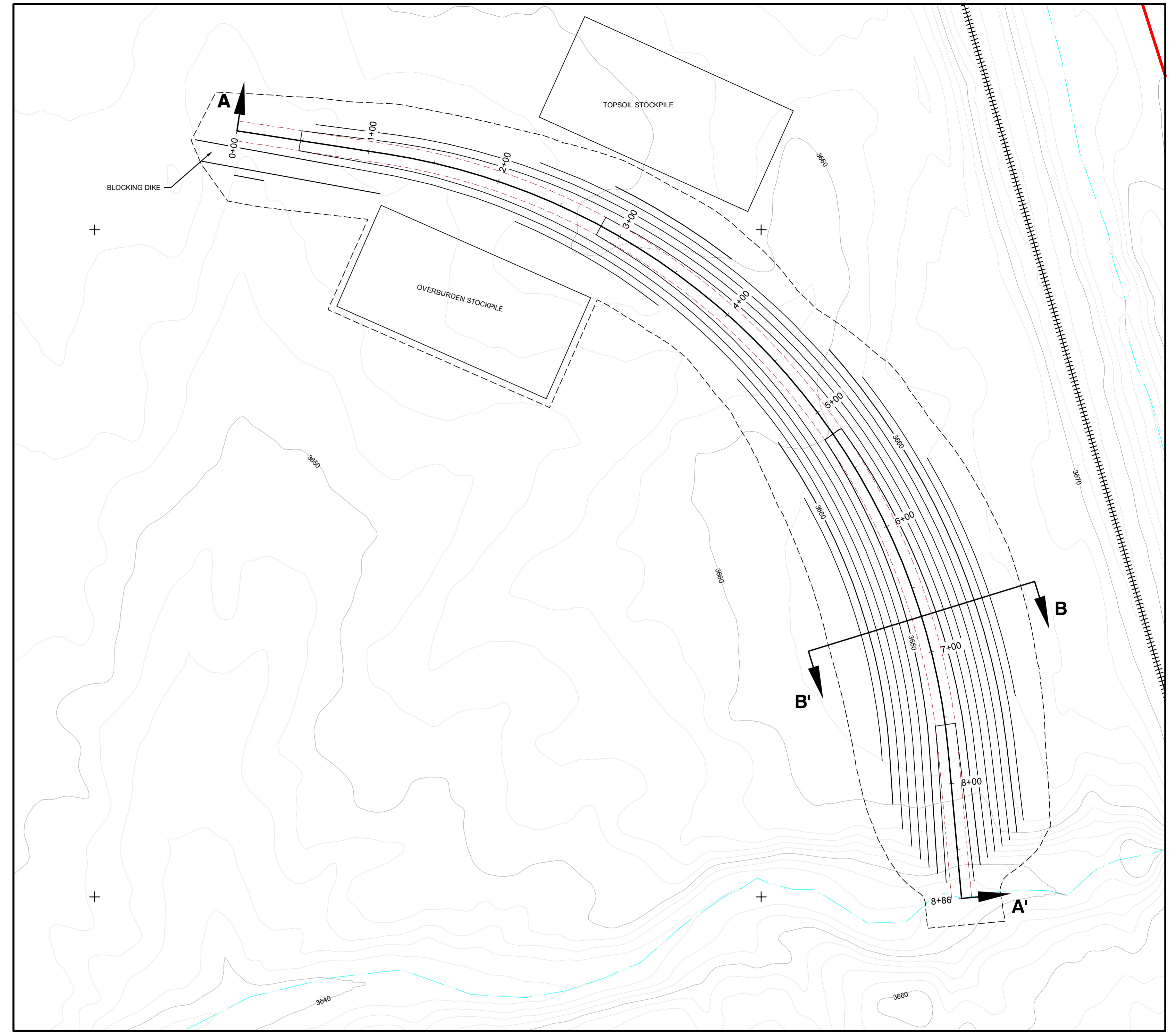
- COUNTY ROAD
- RAILROAD
- CENTER PIVOT
- SPARE CENTER PIVOT
- ORE BODY
- FACILITY POND



**CROSS SECTION B-B'**  
SCALE: HORIZ. 1" = 50', VERT. 1" = 10'



**SECTION A-A' DIVERSION PROFILE**  
SCALE: HORIZ. 1" = 50', VERT. 1" = 30'



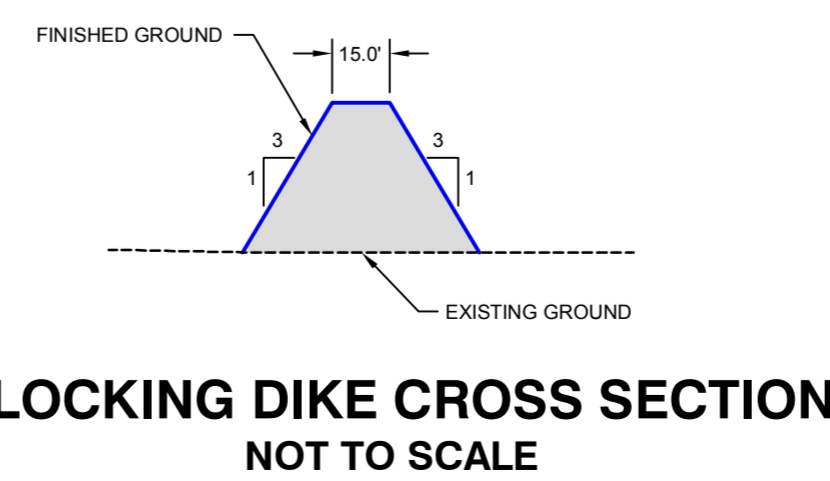
**SITE PLAN**  
SCALE: 1" = 50'

**HYDROLOGIC DESIGN STORM CALCULATIONS**

SWS NO.	DRAINAGE AREA (sq-mi)	CURVE NO. (CN)	WATERSHED LAG TIME (Min)	2-YR, 6-HR STORM			100-YR, 24-HR STORM		
				2-YR, 6-HR PRECIP. (in)	PEAK INFLOW (cfs)	RUNOFF VOLUME (ac-ft)	100-YR, 24-HR PRECIP. (in)	PEAK INFLOW (cfs)	RUNOFF VOLUME (ac-ft)
2-1	0.114	79	33.50	1.45	13.0	1.6	4.8	110.2	16.0

NOTE: RUNOFF VOLUMES AND PEAK INFLOWS WERE COMPUTED BY THE HEC-HMS COMPUTER PROGRAM USING THE SCS TYPE II RAINFALL DISTRIBUTION.

This plate is provided to fulfill the requirements of ARSD 74:29:02:11(9).



**BLOCKING DIKE CROSS SECTION**  
NOT TO SCALE



 CONSULTANT <b>WWC ENGINEERING</b>	<b>REVISIONS</b> # DRAWN CHECKED APPROVED DATE		 <b>Powertech (USA) Inc.</b> <b>Plate 5.3-10b</b> Diversion No. 2 Land Application Option Dewey-Burdock Project
	SIGNATURE OF PREPARER <i>Dale E. Brown</i>		
CHECK SCALES If this bar does not measure 1 inch this map is not at its original scale.	PLOT DATE: 27 September 2012 DRAWN: DAVE C. JOHNSON PREPARER: DALE E. BROWN	DATE: 27 September 2012 PDF FILE CAD FILE: K:\Powertech\11270\DWGS\DIV_2_LA_EXHIBIT.dwg	COORDS: NAD 27, South Dakota State Plane South (feet)