

WM-48



Department of Energy
Albuquerque Operations Office
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Mr. Ramon E. Hall
Director, Uranium Recovery
Field Office
Region IV
U.S. Nuclear Regulatory Commission
P.O. Box 25325
Denver, CO 80225

Dear Mr. Hall:

Enclosed for your information is a copy of the Class II Project Interface Document (PID) No. 03-S-39-01 for the Durango, Colorado, Uranium Mill Tailings Remedial Action site. A revision to the previously submitted PID has been made which includes a cross-section view of the southwestern berm on Ditch No. 2, and the addition of type "B-C" riprap to the outlet on the southeastern edge of Ditch No. 2.

Should you have any questions, please contact Steve Hamp of my staff at FTS 845-5640.

Sincerely,

Mark L. Matthews
Project Manager
Uranium Mill Tailings Remedial Action
Project Office

Enclosure

cc w/o enclosures:
M. Abrams, UMTRA
D. Gillen, NRC
NRC, Region IV

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PDR WASTE
WM-48 PDR

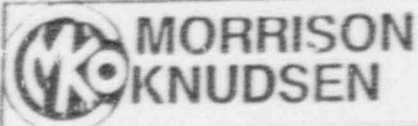
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Certified By Mary C. Hood

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UMTRA PROJECT OFFICE
PROJECT INTERFACE DOCUMENT

PID39REV1.DUR
Sheet 1 of 3

Site Durango	Date 11/06/90	PID No. 03-S-39 Rev1	Site No. 03	Vic Pro No.
Originator and Location M.L. Wesely, SF	Phone (415)442-7517	Organization MKFS	Answer By:	References: Subcontract: Subcontract No: DUR-86-02
Subject 1) Redesign of Drainage Outlet Along Ditch No. 2, 2) Rock Soil Matrix Range for Mixing Ratios, and 3) Add Erosion Protection to the 7:1 Slope Outlet of Section S				

Description of Problem and Recommended Solution Clarification Change

PROBLEM 1: As part of the final site restoration, the southwestern corner of the Durango disposal site will be backfilled with excess material from ditch excavations. This area encompasses a portion of the southern edge of Ditch #2 including a region which had previously been designed as a drainage feature for the ditch. Construction activities in the region had changed the topography from the original contours shown on the construction drawings. Fill will be placed over the entire region at a mild slope flatter than 10:1 horizontal to vertical. The original design of the key trench and drainage feature was to tie into natural topography at a 5:1 slope. The proposed flattening of the slope would change the basic design requirements for erosion protection in this region, the key trench and riprap on the slope would be redundant. Precipitation falling on the area would runoff as sheetflow and not as concentrated flows. Removal of the trench and riprap would also be a cost savings.

Originator M. J. Thompson 11/6/90
Signature _____ Date

Disposition Approved Disapproved Approved as Noted
(If Yes, DOE approval required) Yes No SEE FIG. 2

Class II

CONTROLLED WORK COPY

RAC Site Manager Angelo L. Morris 11/9/90
RAC Project Control William W. ... 11/9/90
RAC Engineering/Design J. H. ... 11/8/90
RAC Construction Engineer Robert E. Cooney 11-9-90
Reviewed for Quality Requirements Eric D. Cook 11/09/90
Signature _____ Date

Distribution	Name	Location	Name	Location	Cost/Time Est.
RAC Site Mgr.	<u>M. J. Thompson</u>		RAC Constr. Engr. Mgr.	<u>R. Cooney</u>	<input type="checkbox"/> Attached
DOE Proj Engr.	<u>J. Hamp</u>		RAC Qual. Mgr.	<u>E. Cook</u>	<input type="checkbox"/> Not Required
TAC Site Mgr.	<u>R. Edge</u>		Other	<u>J. Williams, W. ...</u>	<input type="checkbox"/> DOE Approval Req.
RAC Site Qual. Engr.	<u>T. Harrell</u>			<u>A. ...</u>	
RAC HS&E Mgr.	<u>E. Retelka</u>			<u>M. ...</u>	

SOLUTION 1: Revise Drawings DUR-DS-10-0335 and DUR-DS-10-0337 per attached Figures 1 and 2. Add Note 6 to drawing DUR-DS-10-0337 to read: "6. Fill shall be placed adjacent to Ditch No. 2 to provide sheetflow runoff away from the ditch berm to the existing drainage at the southwest corner of the site." [Add Section Z to drawing DUR-DS-10-0340 and change Section S to Section Z on the southwestern berm on Ditch No. 2 (Figure 3).]*

Comment: The proposed fill was evaluated with respect to slope stability with and without riprap and riprap size requirements to maintain erosion protection. The calculations presented the following allowable changes:

- o Add fill on the south and southwest regions at a gradient of 10:1 or flatter with the tie into the south boundary drainage channel at 2.5:1 or flatter.
- o Remove the previously designed key trench and spillway.

PROBLEM 2: For the rock soil matrix, the exact 1:1 mixing ratios for Type A and bedding cannot be consistently met. Even a 0.99 to 1.01 ratio would be out of compliance. A range needs to be established for these two materials that would provide the required mixture of rock and soil for the vegetative cover.

SOLUTION 2: Revise the table in specification Section 02937, Subsection 2.3 to read as follows:

<u>MATERIAL</u>	<u>RATIO BY WEIGHT**</u>
Type "A" riprap	0.8-1.2
Bedding Material	1-1.5
Topsoil	4-4.5

** Average in-situ weight, not dry weight

Comment:

Calculation 03-591-30-00 revised to establish ranges for type "A" riprap and bedding material.

[]* Rev. 1

PROBLEM 3: Potential erosion is foreseen on the unarmored 7:1 slope of the outlet of cross-section S on the southeastern edge of Ditch No. 2.

SOLUTION 3: Add Riprap B-C to the bottom of the Section S outlet on Drawing DUR-DS-10-0339 and Drawing DUR-DS-10-0337 similar to the riprap apron of Ditch No. 1 (Figures 4 & 5). Change corresponding elevation contours on Drawing DUR-DS-10-0335 to reflect addition of 1 ft of Riprap B-C and 6 inches of bedding.] *

[]* Rev.1

CURVE	CURVE DATA				P.I. COORDINATES	
	Δ	R	T	L	NORTH	EAST
(A)	50°37'34"	677.08	320.25'	598.27	42,394.96	44,851.21
(B)	41°25'52"	600.00'	226.91'	433.86'	41,842.80	45,568.24
(1)	45°00'00"	300.00'	145.00'	274.90'	42,036.04	44,844.80
(2)	41°25'52"	600.00'	226.90'	433.90'	41,804.79	45,542.27
3 N EDGE	45°00'00"	300.00'	124.26'	235.60'	41,881.31	47,009.89
5 S EDGE	45°00'00"	300.00'	124.26'	235.60'	41,854.12	46,947.21

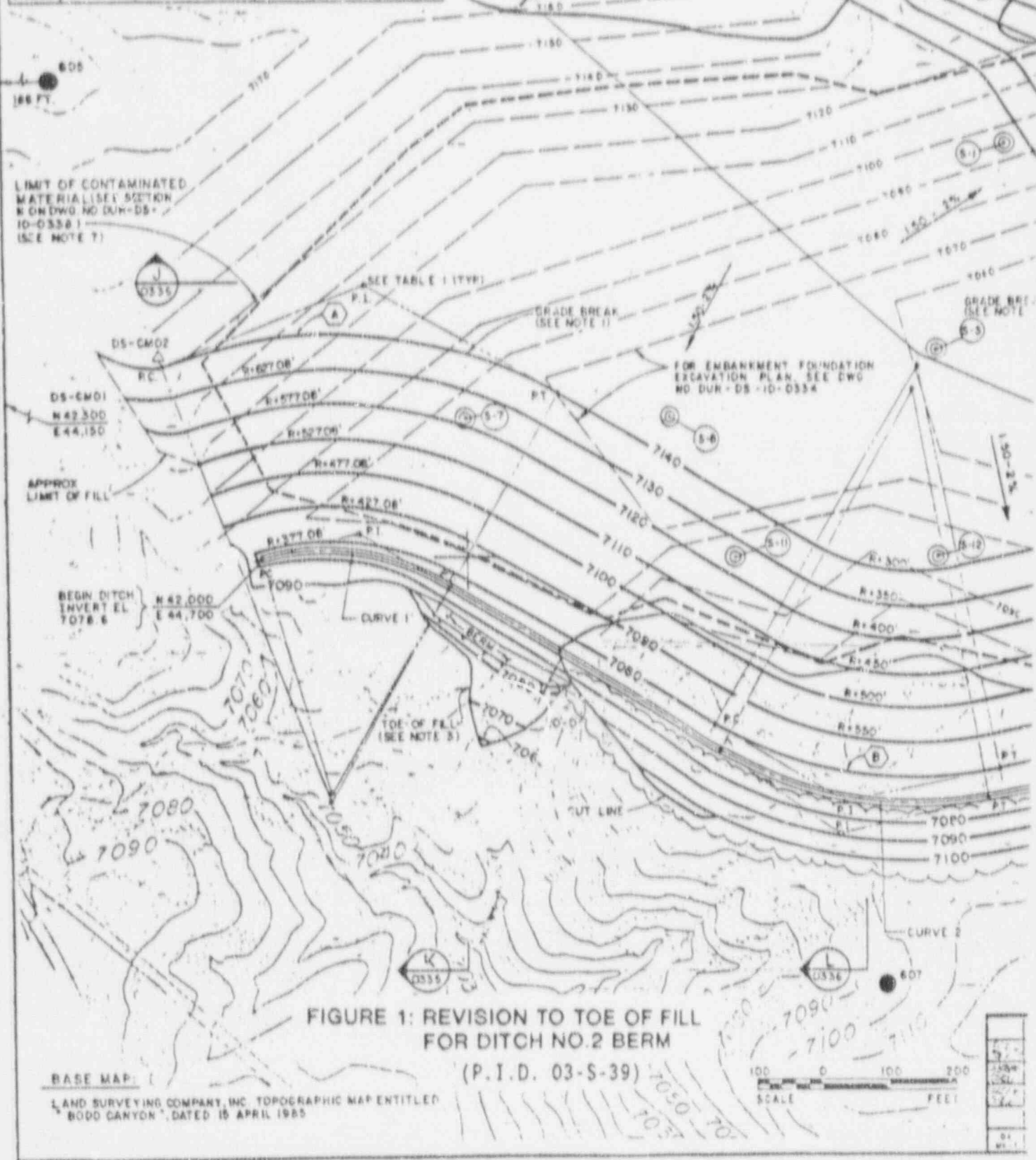


FIGURE 1: REVISION TO TOE OF FILL FOR DITCH NO.2 BERM (P.I.D. 03-S-39)

BASE MAP: LAND SURVEYING COMPANY, INC. TOPOGRAPHIC MAP ENTITLED "BODO CANYON", DATED 15 APRIL 1985

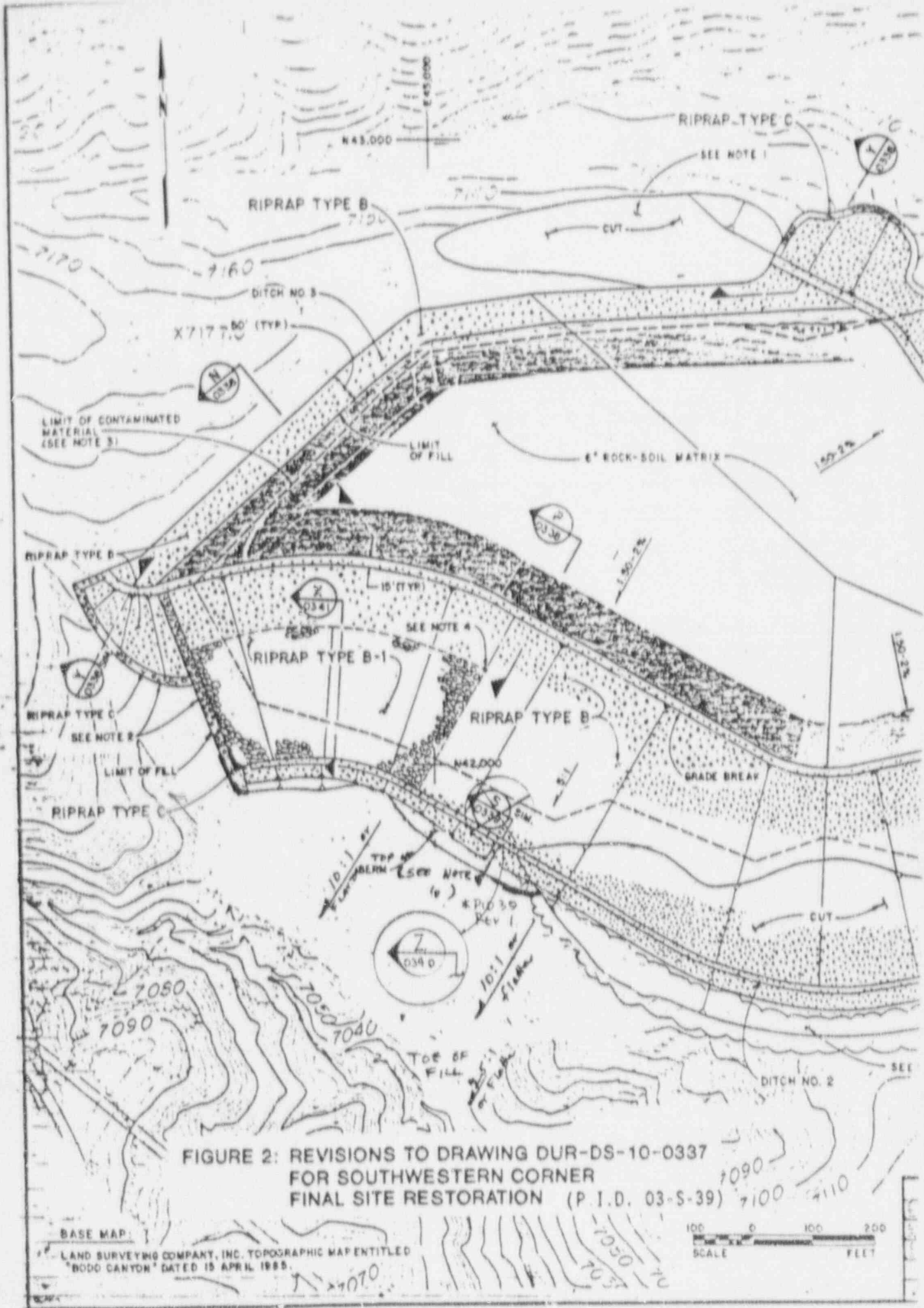


FIGURE 2: REVISIONS TO DRAWING DUR-DS-10-0337 FOR SOUTHWESTERN CORNER FINAL SITE RESTORATION (P.I.D. 03-S-39)

BASE MAP:
 LAND SURVEYING COMPANY, INC. TOPOGRAPHIC MAP ENTITLED
 "BODO CANYON" DATED 15 APRIL 1985

100 0 100 200
 SCALE FEET

RAP TYPE B
ING

4 3 FINAL TOP ELEVATION OF BERM DETERMINED FROM FINAL QUANTITY OF FILL FOR SITE GRADING.

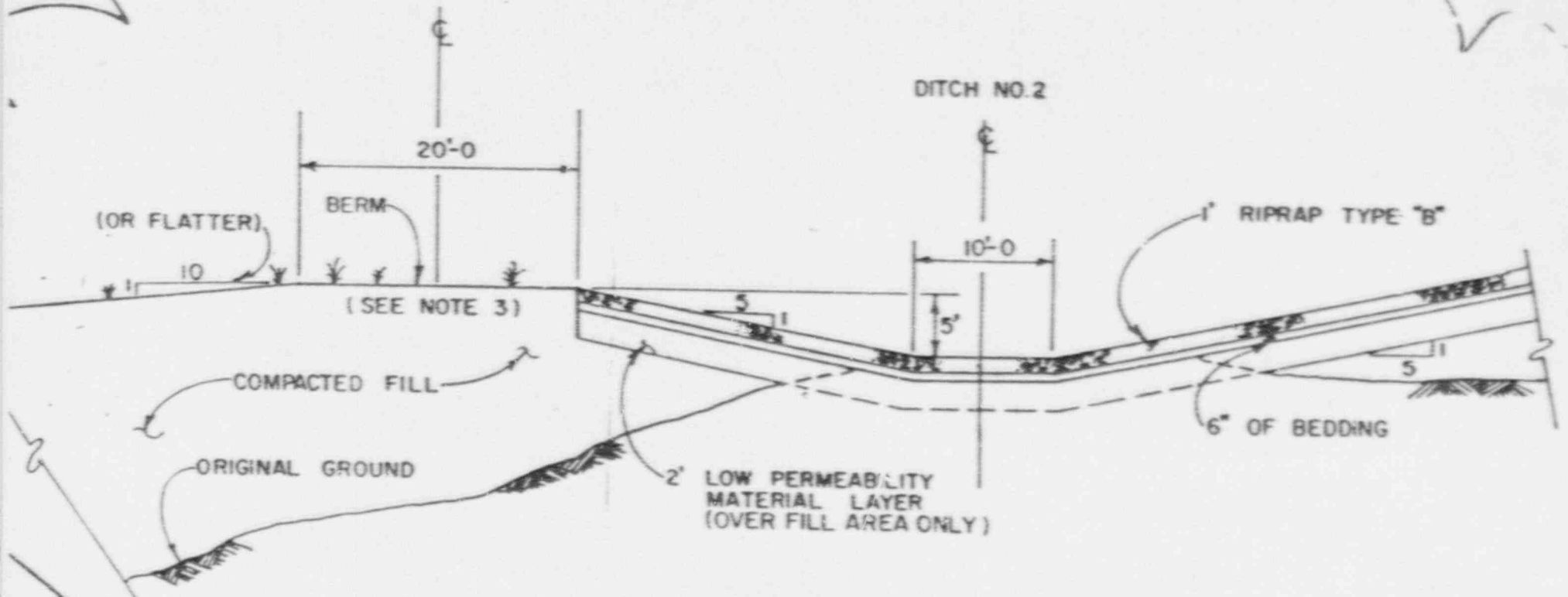


FIGURE 3

SECTION Z
0337



TYPICAL

SECT

NOT T

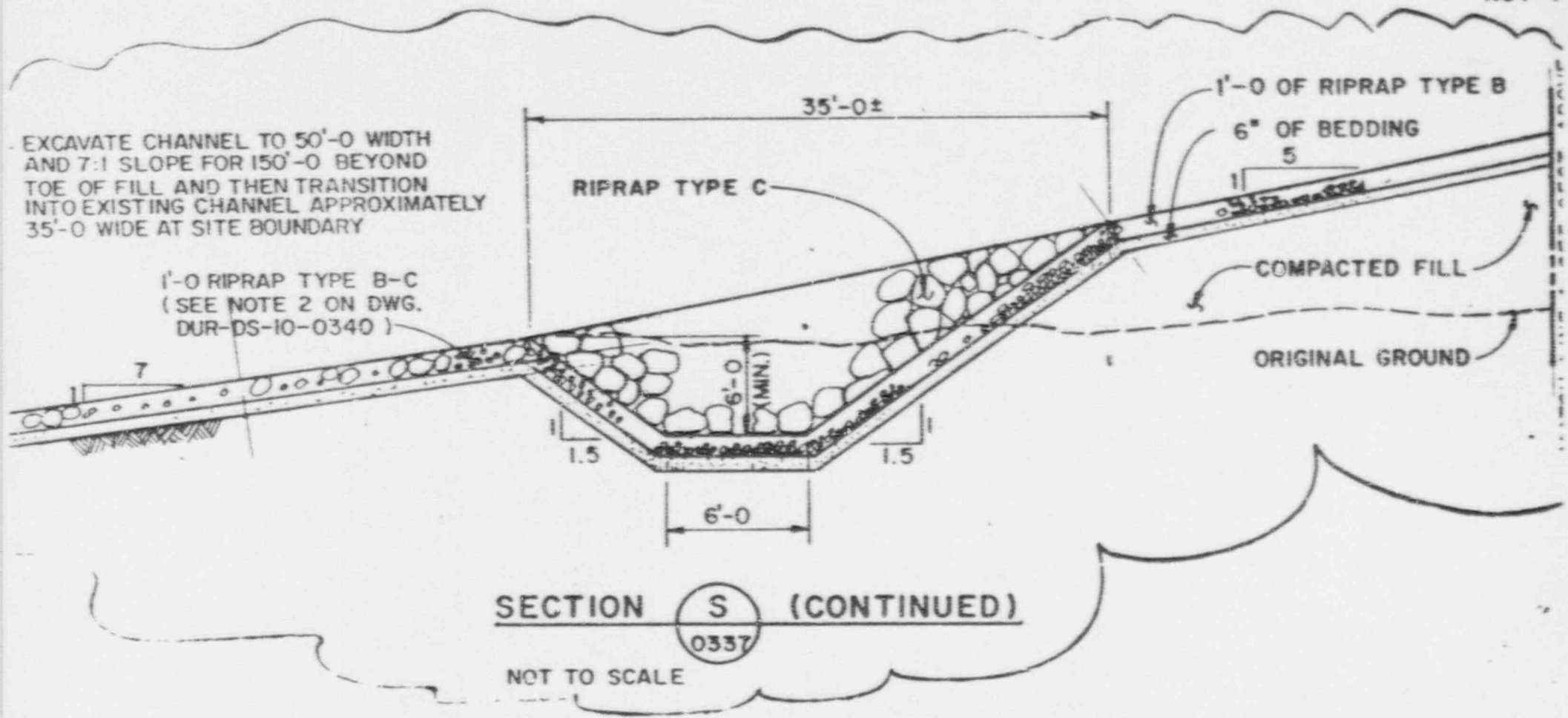


FIGURE 4 - ADDITION OF RIPRAP B-C TO 7:1 SLOPE

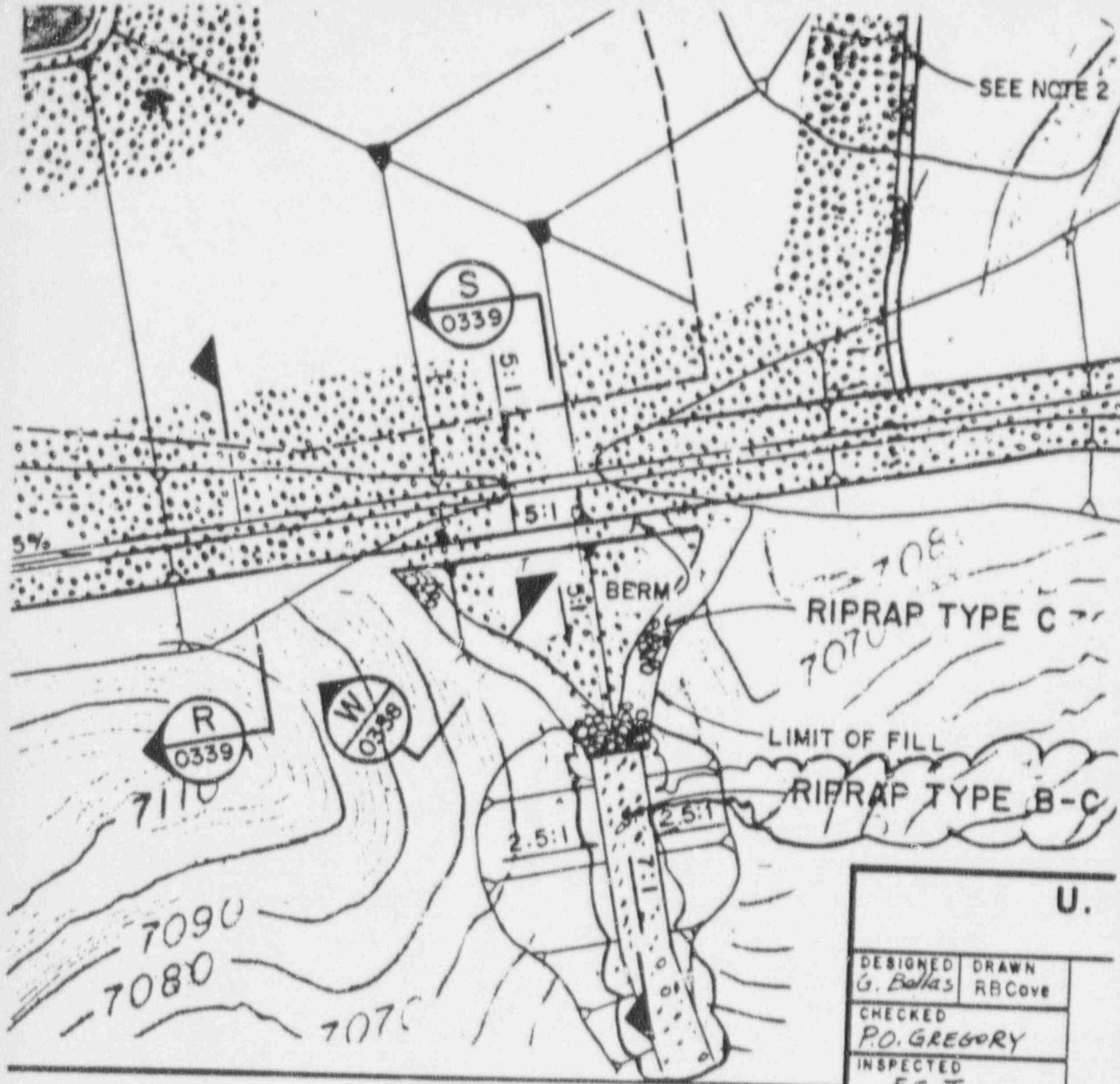


FIGURE 5 : ADDITION OF RIPRAP B-C TO BERM OUTLET