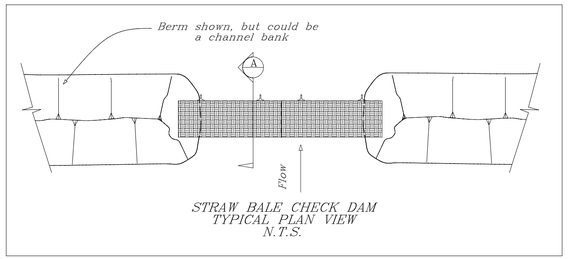
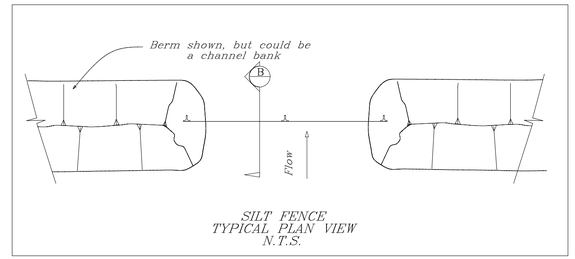
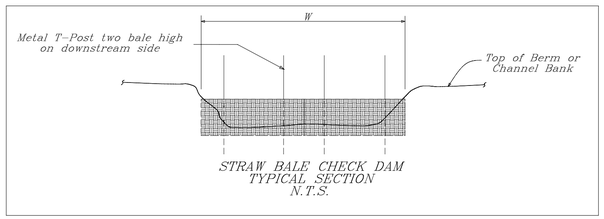


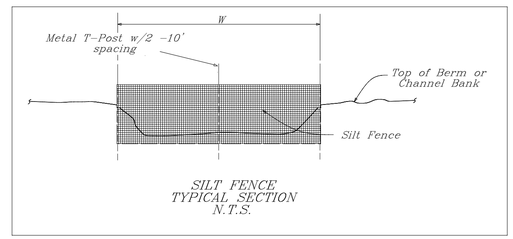
STRAW BALE CHECK DAM
TYPICAL PLAN VIEW
N.T.S.



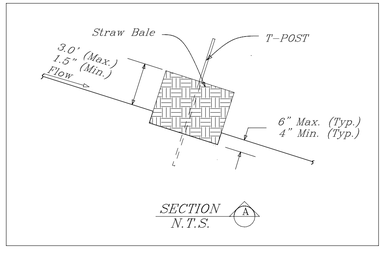
SILT FENCE
TYPICAL PLAN VIEW
N.T.S.



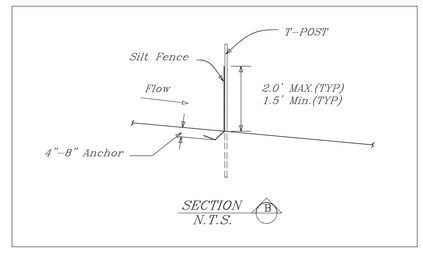
STRAW BALE CHECK DAM
TYPICAL SECTION
N.T.S.



SILT FENCE
TYPICAL SECTION
N.T.S.



SECTION A
N.T.S.



SECTION B
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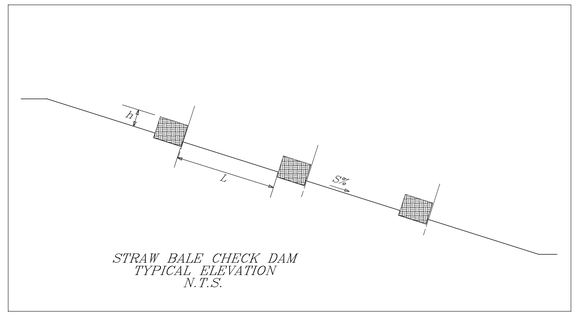
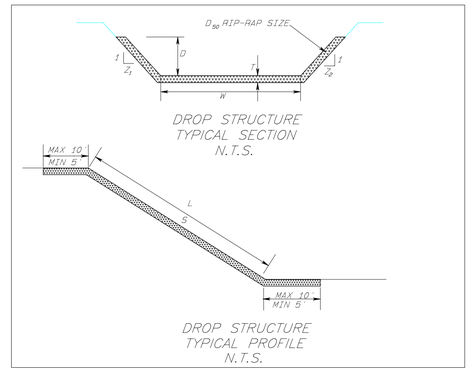


STRAW BALE CHECK DAM
TYPICAL ELEVATION
N.T.S.



DROP STRUCTURE
TYPICAL SECTION
N.T.S.

DROP STRUCTURE
TYPICAL PROFILE
N.T.S.

SEDIMENT/DRAINAGE CONTROL STRUCTURE SCHEDULE

Structure ID and Location	Structure Type	W (ft)	D (ft)	Z 1	Z 2	L (ft)	S (%)	D50 PLACED	T (ft)
DS-94L	Rip-rapped drop str	3.0	0.75	4	4	12	19	0.75	1.0
DS-95L	Rip-rapped drop str	6.0	1.5	3	3	21	8	0.75	1.0
DS-110L	Rip-rapped drop str	4.0	1.5	3	4	21	5	0.75	1.0
DS-110R	Rip-rapped drop str	2.0	1.0	3	3	56	23	0.75	1.0
DS-134R	Rip-rapped drop str	12.0	0.75	4	3	12	15	0.75	1.5
DS-134+80R	Rip-rapped drop str	2.0	1.0	4	4	22	10	0.75	1.5
DS-165L	Rip-rapped drop str	5.0	2.0	3	3	12	10	0.75	1.50
DS-167+50L	Rip-rapped drop str	8.0	1.0	2	2	10	2	0.75	1.50
DS-249L	Rip-rapped drop str	5.0	1.00	3	3	15	13	0.50	0.5
DS-251L	Rip-rapped drop str	5.0	1.00	3	3	10	10	0.50	0.5
DS-258R	Rip-rapped drop str	2.0	1.5	3	3	619	11	0.75	1.0
DS-267L	Rip-rapped drop str	2.0	1.00	3	3	10	12	0.75	0.5
DS-294R	Rip-rapped drop str	1.0	1.00	3	3	192	7	0.75	1.0
DS-330L	Rip-rapped drop str	4.0	2.00	3	3	31	6	0.75	1.0
DS-333R	Rip-rapped drop str	4.0	1.50	3	3	26	15	0.75	1.0
DS-6L H. Spur	Rip-rapped drop str	6.0	1.00	3	3	129	7	0.75	1.0
DS-393L	Rip-rapped drop str	3.0	1.50	3	3	15	16	0.50	0.75
DS-438L	Rip-rapped drop str	3.0	1.00	3	3	70	5	0.50	0.75
DS-438R	Rip-rapped drop str	5.0	1.00	3	3	42	12	0.75	1.0
DS-439L	Rip-rapped drop str	3.0	1.00	3	3	52	4	0.50	0.75
DS-439R	Rip-rapped drop str	5.0	1.00	3	3	68	10	0.75	1.0
DS-472+50L	Rip-rapped drop str	0.0	1.00	3	3	65	11	0.75	1.0
DS-473+40L	Rip-rapped drop str	0.0	1.0	3	3	100	12	0.75	1.0
DS-480L	Rip-rapped drop str	6.0	1.0	3	3	47	14	0.50	0.75
DS-481+25L	Rip-rapped drop str	8.0	1.00	3	3	25	6	0.50	0.75
DS-481+50L	Rip-rapped drop str	6.0	1.00	3	3	60	20	0.75	1.0
DS-484R	Rip-rapped drop str	3.0	1.5	3	3	109	7	0.75	1.0
DS-484L	Rip-rapped drop str	10.0	1.50	3	3	467	9	0.75	1.0
DS-550+00R	Rip-rapped drop str	5.0	1.50	3	3	140	16	0.75	1.50
DS-551L	Rip-rapped drop str	4.5	1.50	3	3	122	17	0.75	1.0
DS-552L	Rip-rapped drop str	4.5	1.5	3	3	27	17	0.75	1.0
DS-565L	Rip-rapped drop str	3.0	2.0	3	3	221	19	0.75	1.5
DS-613+50L	Rip-rapped drop str	8.0	1.00	3	2	30	10	0.50	0.75
DS-652+90R	Rip-rapped drop str	8.0	1.00	4	4	29	15	0.75	1.0

Structure ID and Location	Structure Type	W (ft)	L (ft)	S (%)
SB-241R	Straw bale ck. dam	8-24	20	24.0
SB-551L	Straw bale ck. dam	4-24	15	30.0
SB-552R	Straw bale ck. dam	12	25	35.0
SB-553L	Straw bale ck. dam	8-12	20	18.0
SB-554R	Straw bale ck. dam	12-16	64	15.0
SB-561+50L	Straw bale ck. dam	4	10	5.0
SB-562+80L	Straw bale ck. dam	4-28	20	7.0
SB-564+50R	Straw bale ck. dam	4-16	25	32.0
SB-565+50R	Straw bale ck. dam	8-12	20	30.0

Structure ID and Location	Structure Type	W (ft)	S (%)
SF-93+50L	Silt Fence	14	1.0
SF-95+47L	Silt Fence	17	3.0
SF-115L	Silt Fence	10	4
SF-144L	Silt Fence (Existing)	19	5.0
SF-140+29L	Silt Fence	18	3.0
SF-164+43L	Silt Fence	22	2.0
SF-164+87L	Silt Fence	12	2.0
SF-193+58L	Silt Fence	17	1.5
SF-239+54R	Silt Fence	13	1.5
SF-239+54L	Silt Fence	20	2.0
SF-242R	Silt Fence (Existing)	8 - 35	2 - 9
SF-243+57R	Silt Fence	9	1.0
SF-245+70R	Silt Fence (Existing)	30	10.0
SF-268R	Silt Fence (Existing)	16	11.0
SF-280R	Silt Fence (Existing)	25	10.0
SF-335+87R	Silt Fence	8	1.0
SF-339R	Silt Fence	5	2.0
SF-438R	Silt Fence	25	6.0
SF-447+16L	Silt Fence	14	3.0
SF-461+55R	Silt Fence	17	6.0
SF-486L	Silt Fence	15	1.5
SF-562+50L	Silt Fence (Existing)	6	1.0
SF-559R	Silt Fence (Existing)	40	13.0
SF-570R	Silt Fence (Existing)	5	1.0
SF-570+80R	Silt Fence (Existing)	6	1.0
SF-571+40R	Silt Fence	6.0	1.5
SF-620+98R	Silt Fence	22	2.0
SF-5+82R	Silt Fence (Hosteen Coal Stkpl)	15	13
SF-249+34L (2)	Silt Fence	8 - 10	9 - 9
SF-249+45L (2)	Silt Fence	8 - 10	9 - 9
SF-253+75R	Silt Fence	25	2
SF-641+98R	Silt Fence	25	2
SF-648+61R	Silt Fence	25	2
SF-648+95R	Silt Fence	30	2
SF-654+64R	Silt Fence	45	2

CERTIFICATION STATEMENT

I, Ron C. Van Valkenburg, hereby certify that the erosion and drainage control structures have been constructed in accordance with the approved design plans, except as noted below.

NOTES:

1. ENERGY DISSIPATORS WERE INSTALLED AT THE OUTLET ENDS OF DOWNDRAIN DD7, 8, 9, 10, 11, AND 12.
2. THE RECLAMATION OF THE DISTURBED AREAS ALONG THE RAILROAD AT APPROXIMATELY STATION 114+00, 550+00, AND 558+00 WILL NOT OCCUR UNTIL THE ENTIRE RAIL-ROAD IS REMOVED AND RECLAIMED.
3. GENERALLY LARGER SIZE ROCKS THAN SPECIFIED BY DESIGN WERE PLACED AT THE DROP STRUCTURES. ONLY THE DROP STRUCTURES WITH SIGNIFICANT INCREASE IN SLOPE (4% OR MORE) WERE RE-CHECKED. SEE APPENDIX 11-U. THE LARGER SIZE ROCK PLACED IS ADEQUATE TO STABILIZE THE STEEPER SLOPES.
4. FOR OTHER DEVIATIONS FROM THE DESIGN SEE THE NOTES ON THE SEDIMENT/DRAINAGE CONTROL STRUCTURE SCHEDULE ABOVE.

RON C. VAN VALKENBURG
NEW MEXICO
9263
LICENSED PROFESSIONAL ENGINEER

REVISION	DATE
1 AS-BUILT	7-27-07
2 Change Finish and subtitle to 60% for review	12-7-06
3 Change Subtitle and add title	8-21-06
4 60% for Review	
5	

PROJECT MANAGER: COREY NELSON
ENGR. of RECORD: LEONARD RAYMOND
REG. NO: 6500
SRVYR of RECORD:
REG. NO:

BHP-NAVAJO COAL CO.

PO BOX 155, FRUITLAND, NEW MEXICO, 87416

ACCOUNT: -
DATE: JAN. 01, 2001
DESIGNED BY: PHAZTIE
DRAWN BY: -
CHECKED BY: LEONARD RAYMOND
APPROVED BY: LEONARD RAYMOND

PLAN VIEW

EXHIBIT 11-14T
NAVAJO MINE RAILROAD
EROSION AND DRAINAGE
CONTROL STRUCTURES
AS-BUILT

DRAWING
S-2

SHEET 2
OF 2 0

Project Desc: RAILROAD REV Path: \\ENGNWSRV-SRV02\data\Departments\Civil\SUBMITTED\PROJ\Ch_11 AND EXHIBITS\11-014H-RR SEDMT CNTRL-DDH\REV-AS-BUILT 2008\EXH-11-14H_As-Built-Rev.dwg Plot time: Fri Oct 24 14:05:55 2008