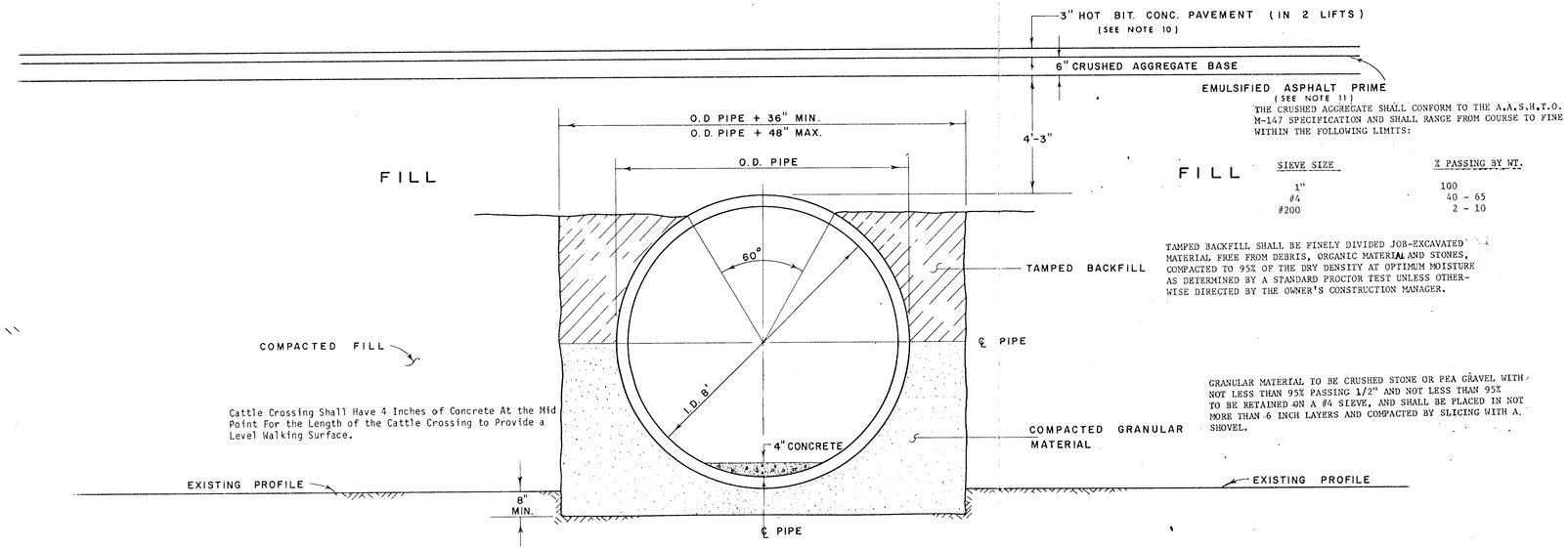
CATTLE CROSSING (CP-66)
CROSS SECTION



THE CRUSHED AGGREGATE SHALL CONFORM TO THE A.A.S.H.T.O. M-147 SPECIFICATION AND SHALL RANGE FROM COURSE TO FINE WITHIN THE FOLLOWING LIMITS:

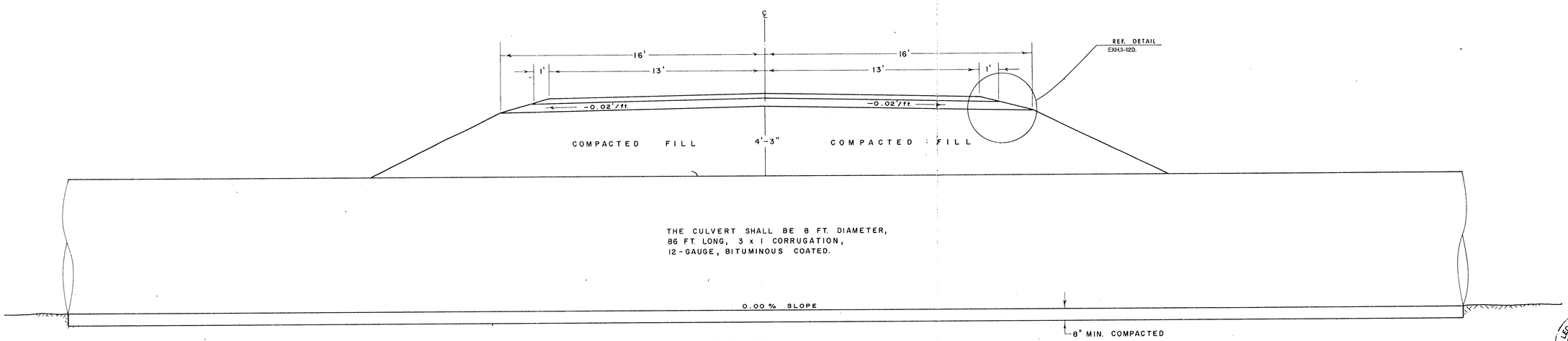
SIEVE SIZE	% PASSING BY WT.
1"	100
#4	40 - 65
#200	2 - 10

TAMPED BACKFILL SHALL BE FINELY DIVIDED JOB-EXCAVATED MATERIAL FREE FROM DEBRIS, ORGANIC MATERIAL AND STONES, COMPACTED TO 95% OF THE DRY DENSITY AT OPTIMUM MOISTURE AS DETERMINED BY A STANDARD PROCTOR TEST UNLESS OTHERWISE DIRECTED BY THE OWNER'S CONSTRUCTION MANAGER.

GRANULAR MATERIAL TO BE CRUSHED STONE OR PEA GRAVEL WITH NOT LESS THAN 95% PASSING 1/2" AND NOT LESS THAN 95% TO BE RETAINED ON A #4 SIEVE, AND SHALL BE PLACED IN NOT MORE THAN 6 INCH LAYERS AND COMPACTED BY SLICING WITH A SHOVEL.

SECTION A-A

SCALE: 1" = 2'



SECTION B-B

SCALE: 1" = 3'

NOTES:

1. FOR ROAD PLAN AND PROFILE SEE EXH. 11-12A THRU 11-12C.
2. FOR TYPICAL CROSS SECTION SEE EXH.11-12D.
3. CATTLE CROSSING IS TO BE CORRUGATED METAL PIPE, 86 FT. LONG, 12 GAUGE, 3 x 1 CORRUGATIONS, BITUMINOUS COATED.
4. FOR CUT SECTION C-C SEE EXH.11-12G.
5. ALL SUBGRADE SOILS, TO A DEPTH OF MINIMUM 6 IN., SHOULD BE THOROUGHLY COMPACTED TO A DENSITY EQUIVALENT TO AT LEAST 95% OF A.A.H.T.O. 180 (A.S.T.M. D 1557 "MODIFIED PROCTOR").
6. COMPACTION OPERATION OF THE CRUSHED STONE BASE SHOULD CONTINUE UNTIL THE BASE HAS A DRY WEIGHT DENSITY OF NOT LESS THAN 100% OF THE MAXIMUM LABORATORY DENSITY AT OPTIMUM MOISTURE (± 1.5%) AS DETERMINED BY A.S.T.M. D 1557, METHOD D (A.S.S.H.T.O. T-180).

   IN PLACE, DENSITY SHOULD BE MEASURED BY A.S.T.M. D 2167 METHOD D OR OTHER SUITABLE METHODS.
7. HOT MIXED BITUMINOUS MIXTURES SHALL BE SPREAD AND COMPACTED WITH APPROVED EQUIPMENT AT THE TEMPERATURES AND WEATHER LIMITATIONS SET IN ACCORDANCE WITH B.I.A. HIGHWAY DEPARTMENT SPECIFICATIONS.
8. THE BITUMINOUS MATERIAL SHALL BE ASPHALT CEMENT OF AN APPROPRIATE GRADE CONFORMING TO A.S.T.M. SPECIFICATION D 946 (A.S.S.H.T.O. M-20).
9. THE COMPOSITE MIXTURE OF CRUSHED STONE AGGREGATES, MINERAL FILLER (IF NEEDED) AND BITUMINOUS MATERIAL SHALL CONFORM TO AN APPROPRIATE B.I.A. HIGHWAY DEPARTMENT GRADING SPECIFICATION, OR TO AN APPROPRIATE GRADING FROM A.S.T.M. STANDARD D 1663. IT SHALL ALSO CONFORM TO AN APPROVED JOB MIX FORMULA WITHIN A RANGE OF TOLERANCES PERMITTED BY THE LOCAL HIGHWAY DEPARTMENT.
10. RECOMMENDED SEAL: SS-1 OIL AT 50% DILUTION .10 GALLON PER SQUARE YARD OR APPROVED EQUILIBRIUM.
11. USE .25 GALLON PER SQUARE YARD OF MC-70 OR APPROVED EQUAL.

MAR 1996 APPROVED

LEONARD RAYMOND NEW MEXICO 6600 REGISTERED PROFESSIONAL ENGINEER

EXHIBIT 11-112F

BHP MINERALS INTERNATIONAL INC.

NAVAJO MINE

FRUITLAND, NEW MEXICO

SHOP/OFFICE ACCESS ROAD
CATTLE CROSSING
CROSS-SECTION

DRAWN BY J.GOLBE	SCALE AS SHOWN		
APPROVED BY	DATE 6/3/82		
DRAWING NO.		LOCATION NO.	

REV. 2A	03-08-1996	ADDED EXHIBIT NUMBER.	
REV. 1	7-12-82		