

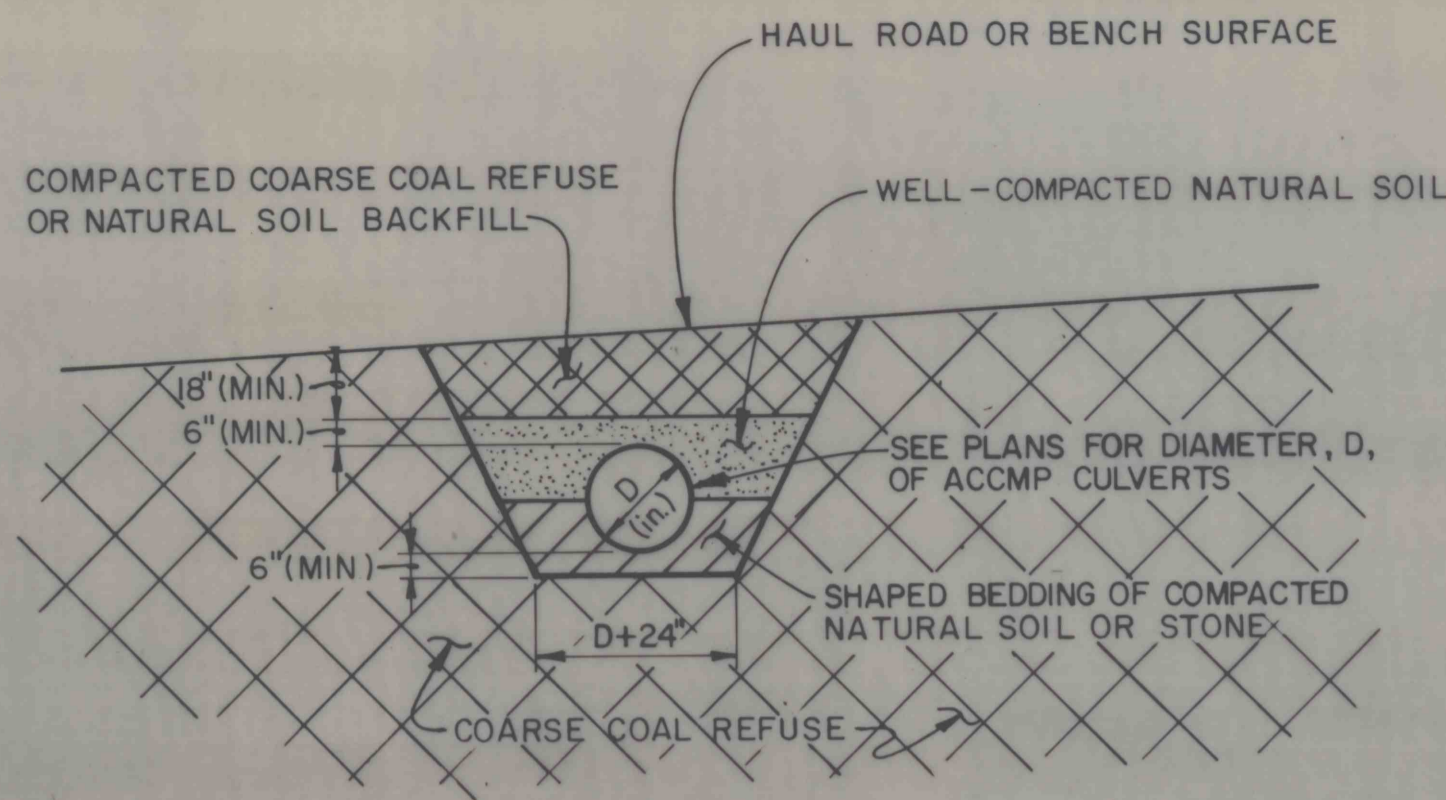
DRAWING NUMBER
B77-801-E9

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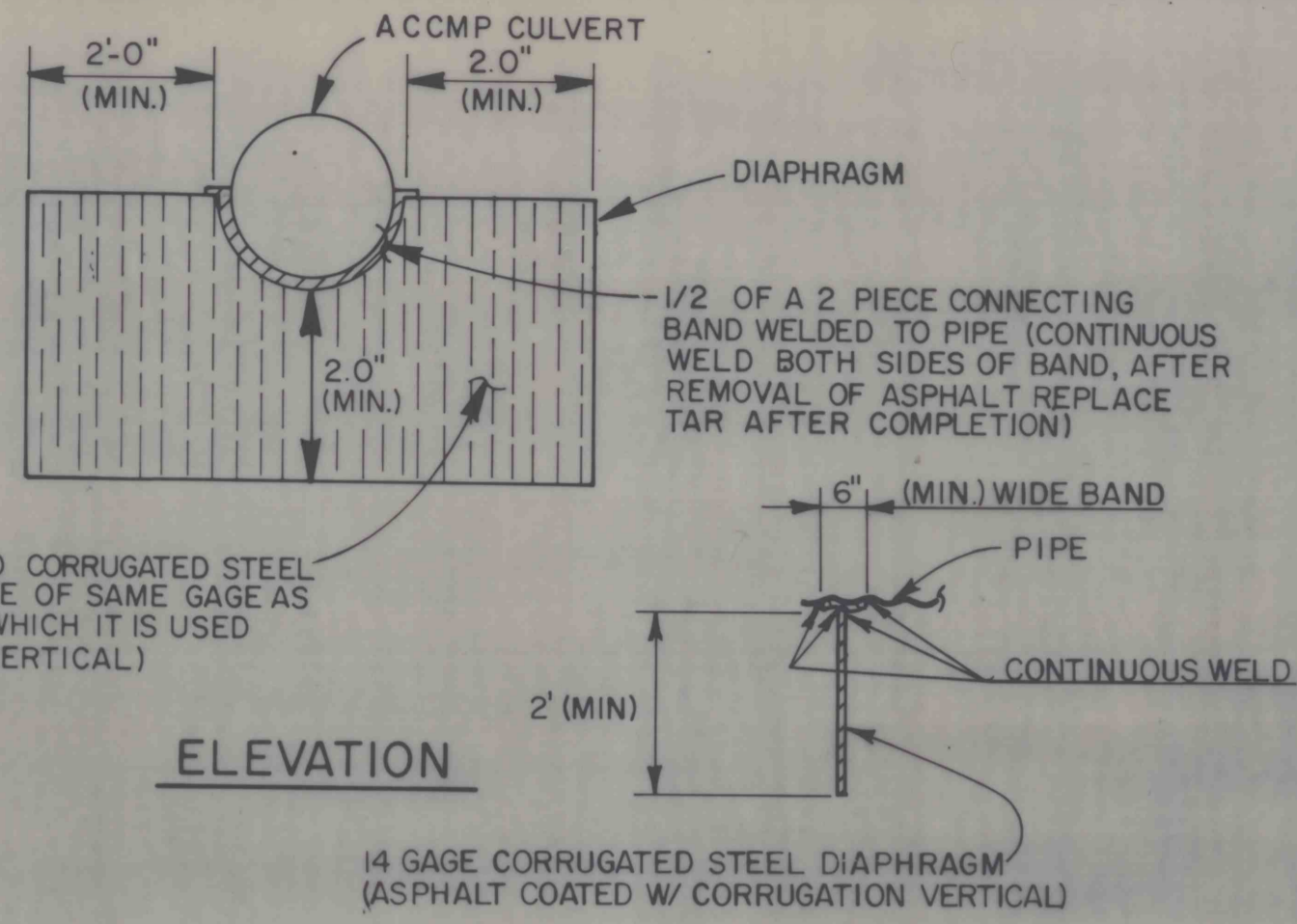
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APPROVED BY

RW
1-20-81

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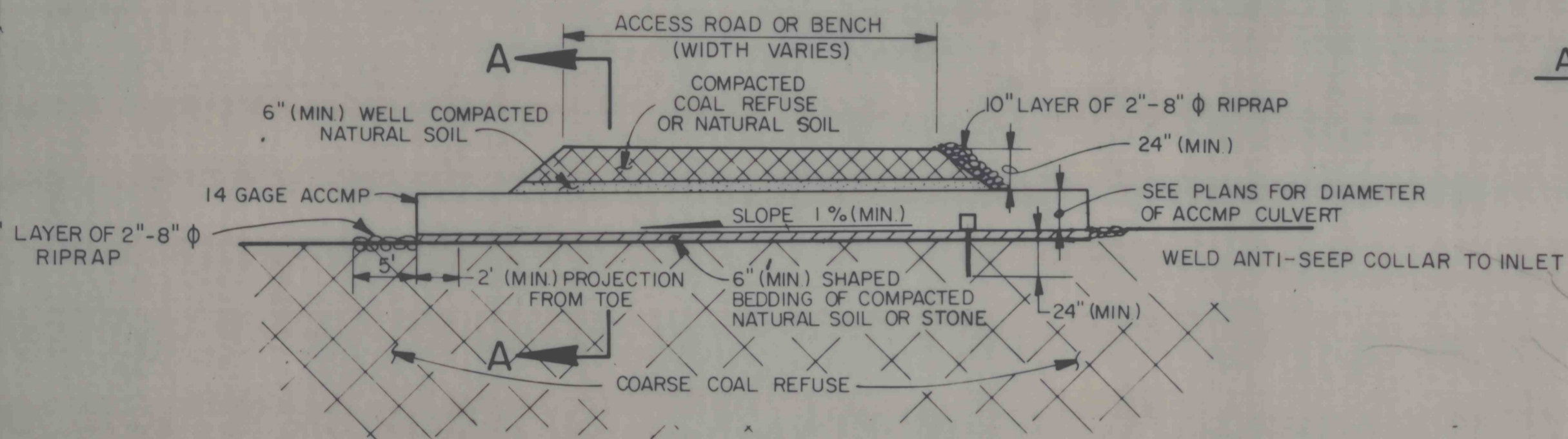
SECTION A-A
SCALE: 1"=4'



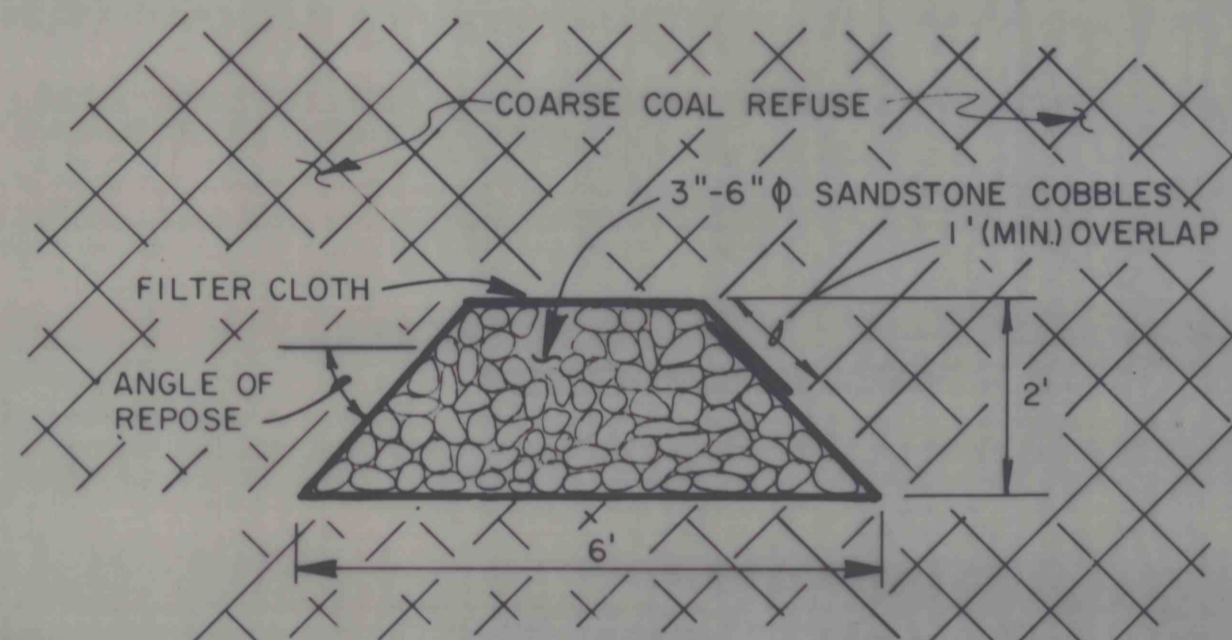
ELEVATION

SECTION

ANTI-SEEP COLLAR
SCALE: 1"=2'



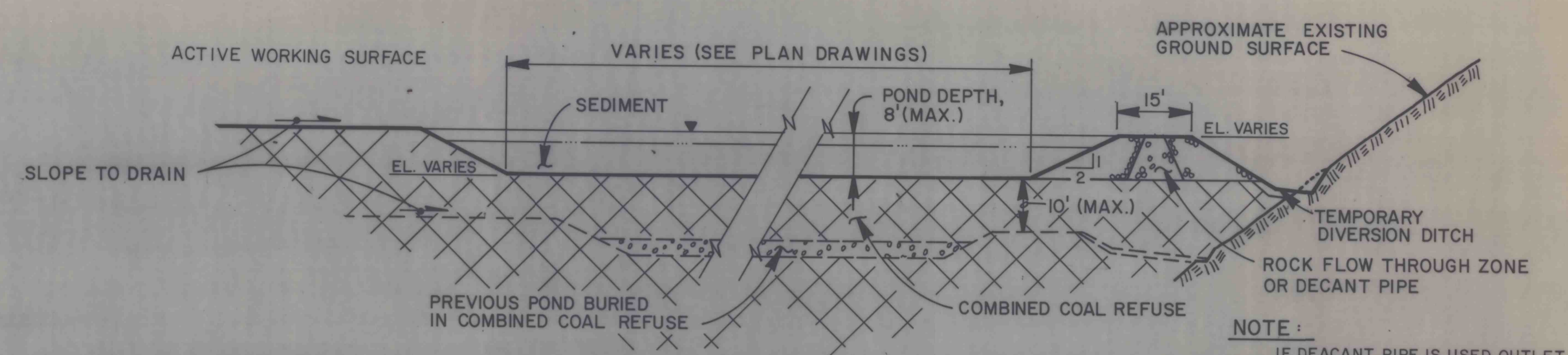
DETAIL 10
TYPICAL CULVERT INSTALLATION
SCALE: 1"=10'



NOTES:

1. THIS DETAIL APPLIES FOR ROCK UNDERDRAIN AND INTERNAL DRAINS.
2. THE DRAIN CROSS-SECTION SHOWN HERE MAY BE MODIFIED TO SUIT FIELD CONDITIONS. THE MINIMUM CROSS-SECTIONAL AREA REQUIRED IS 8 SQUARE FEET.
3. UPON COMPLETION OF ROCK UNDERDRAIN INSTALLATION, THE UPSTREAM END OF THE DRAIN WHICH DAYLIGHTS IN THE IMPOUNDMENT SHOULD BE COVERED WITH A MINIMUM OF 4 FEET OF COARSE REFUSE TO MINIMIZE DRAIN CONTAMINATION DURING STORM EVENTS.

DETAIL 12
SUBSURFACE DRAINS
SCALE 1"=2'

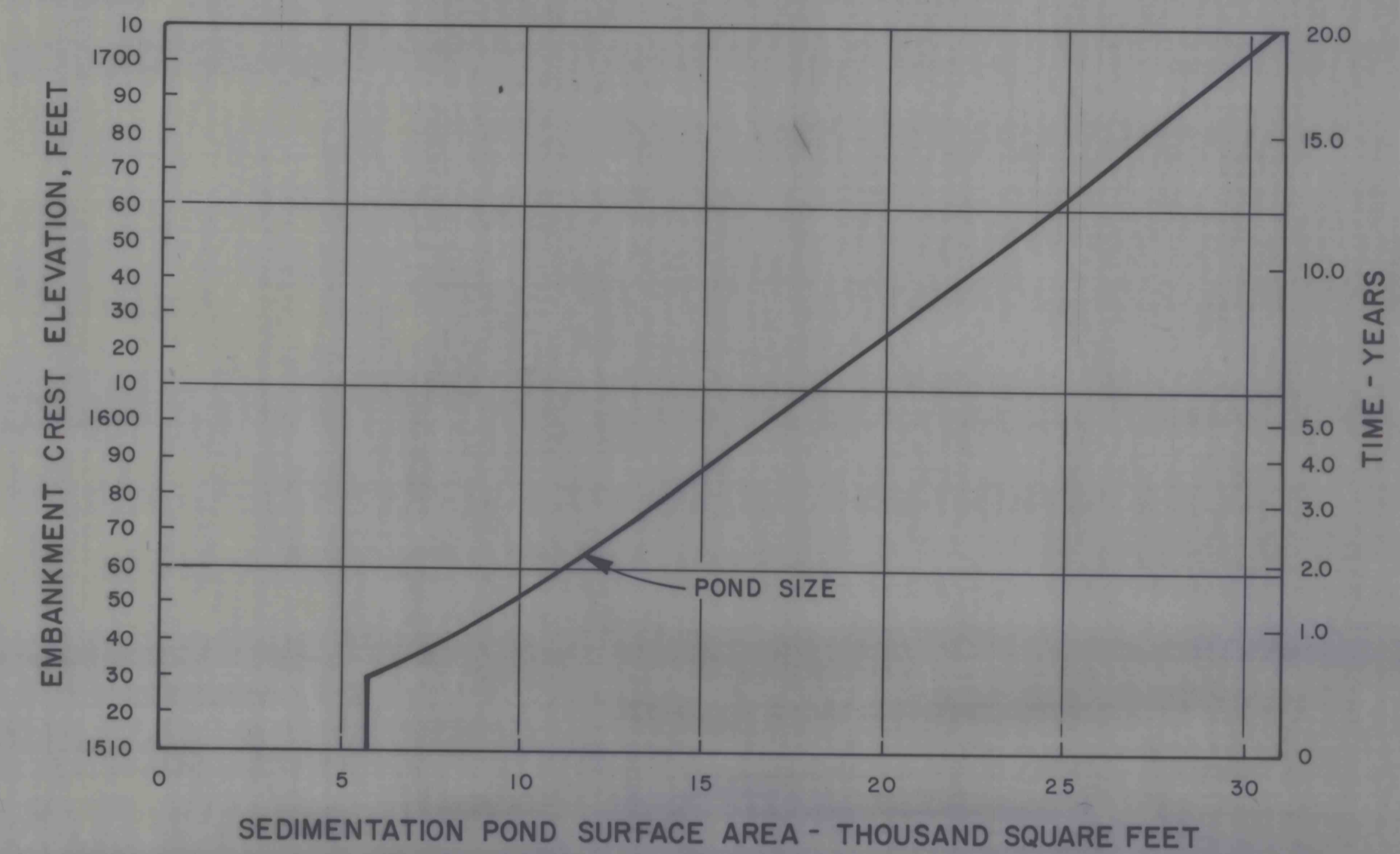


DETAIL 13

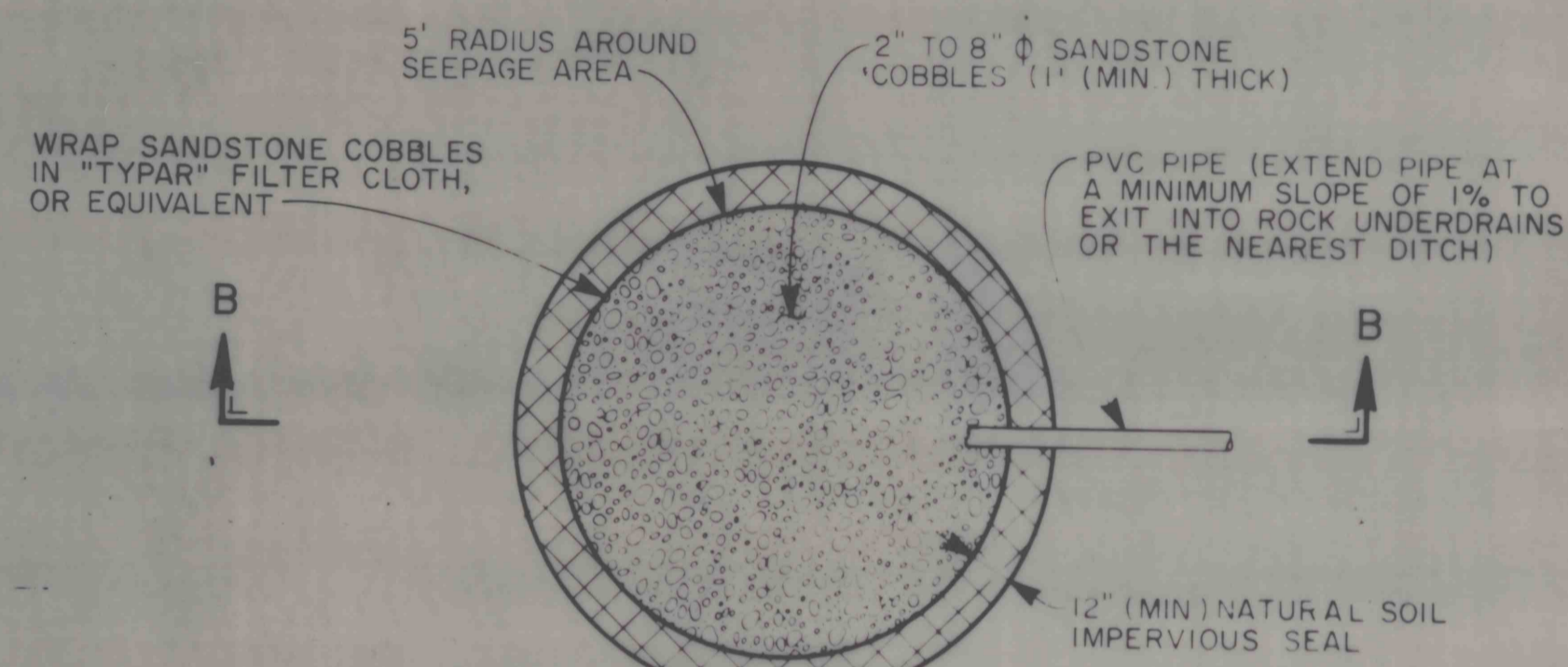
TYPICAL WORKING SURFACE SEDIMENTATION POND

SCALE: 1"=20'

NOTE:
IF DECANT PIPE IS USED, OUTLET MUST BE LOCATED ABOVE INVERT OF TEMPORARY DIVERSION DITCH.

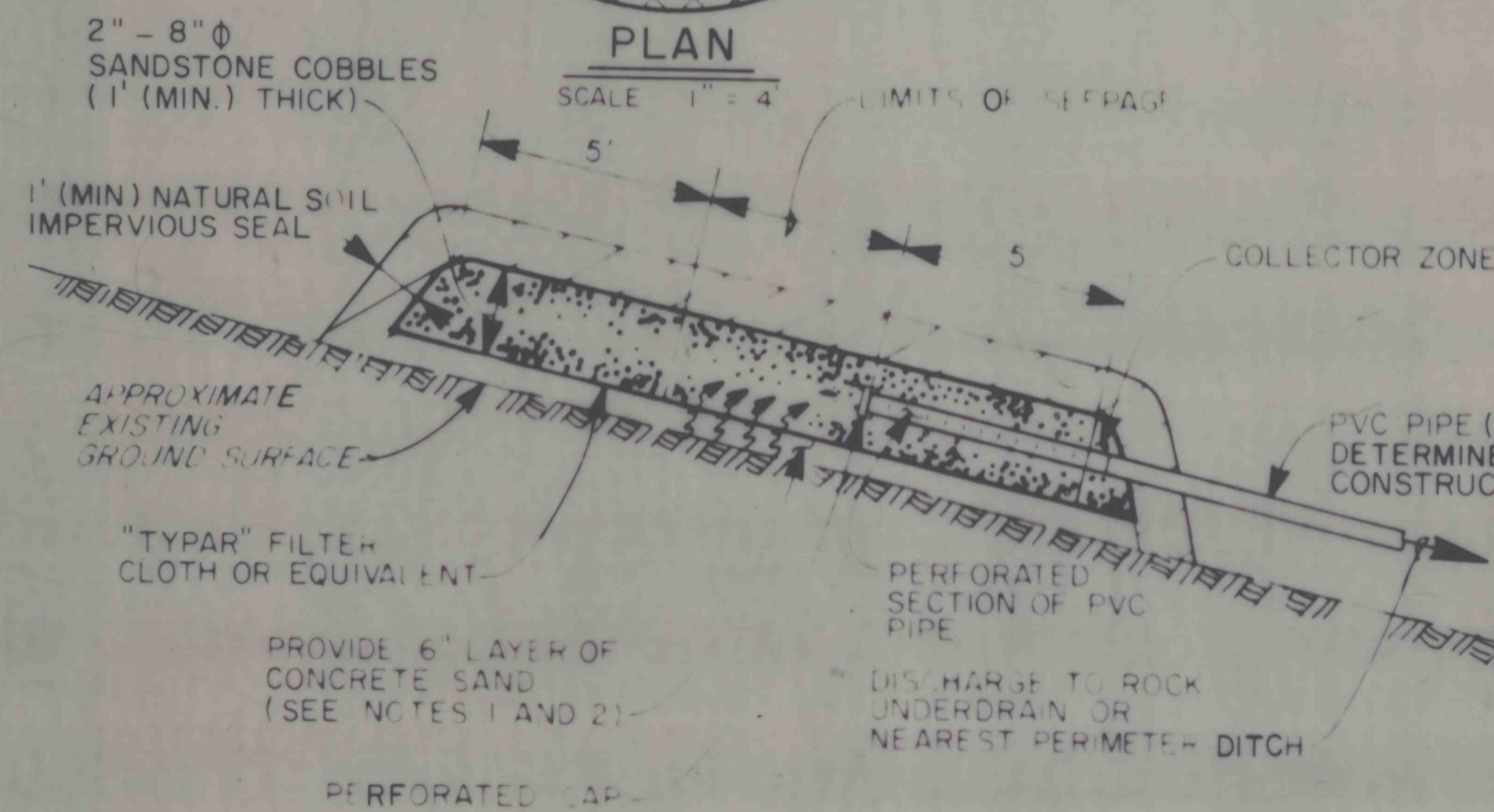


WORKING SURFACE SEDIMENTATION POND REQUIREMENTS



PLAN

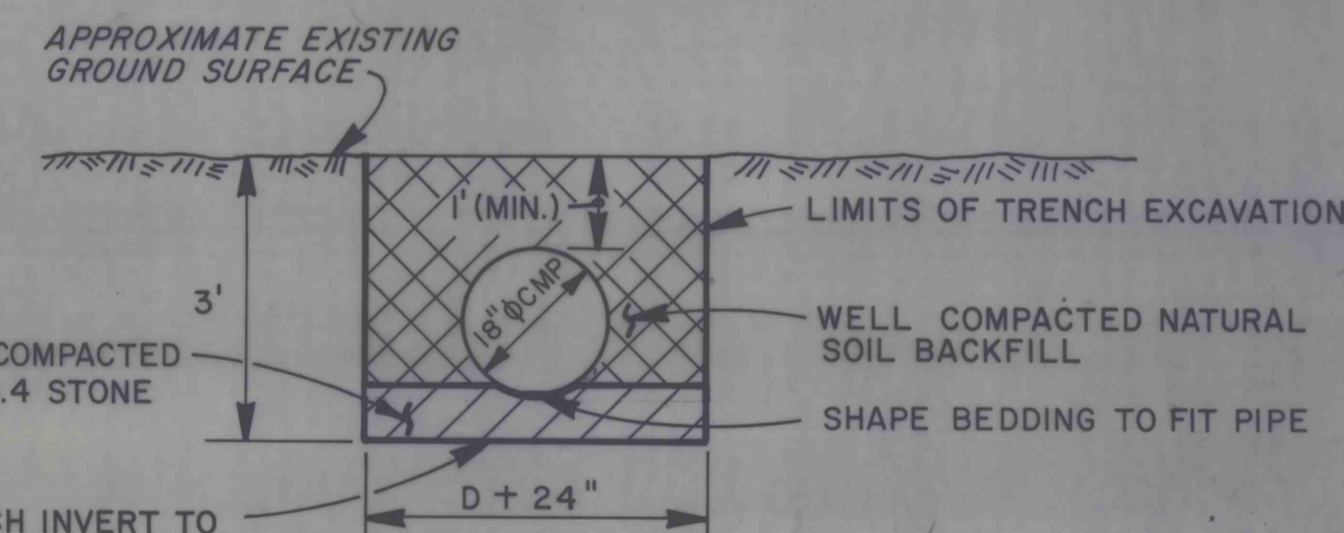
SCALE: 1"=4'



SECTION B-B

DETAIL 11
SPRING COLLECTOR ZONE
SCALE 1"=4'

1. OVER SPRINGS OR OTHER WET SEEPAGE DISCHARGE AREAS, EXPAND THE COLLECTION ZONE AS REQUIRED TO COVER THE WET AREA. STABILIZE SOFT AREAS BY EXCAVATION AND BACKFILLING WITH STONE.
2. PLACE A 6"-THICK LAYER OF CONCRETE SAND OVER THE SEEPAGE AREA BEFORE PLACING THE "TYPAR" FILTER CLOTH, OR EQUIVALENT.
3. PIPE SIZE TO BE ESTABLISHED AFTER DETERMINING FLOW RATE.



DETAIL 14

EXTENSION OF EXISTING DIVERSION PIPE

NOTE:
THIS PIPE WILL BE USED ONLY INTERMITTENTLY DURING THE LIFE OF THE FACILITY DURING THE CONSTRUCTION OF NEW DIVERSION DITCHES.

| ROCK UNDERDRAIN | | |
|-----------------|------------------|-------|
| TYPE | DIMENSIONS, FEET | |
| | HEIGHT | WIDTH |
| MAIN | 6 | 2 |
| INTERNAL | 3 | 3 |
| COLLECTOR | 2 | 2 |



DRAWING NO. B77-801-E9
SHEET NO. 8 of 12
FIGURE NO. 12

DETAILS
SHEET 2 OF 2
COAL REFUSE DISPOSAL FACILITY
MINE NO. 81
BETHLEHEM MINES CORPORATION
DRENNEN, WEST VIRGINIA
PREPARED FOR

BETHLEHEM MINES CORPORATION
NICHOLAS DIVISION
CHARLESTON, WEST VIRGINIA

D'APPOLONIA