- SHAFT G14: 4.5' DIAMETER SHAFT IN INTERIOR OF FEATURE WIDENING TO 9' AND 11' LONG PIT. FEATURE IS 14' DEEP FROM TOP OF PIT.
- SHAFT G23: 35' DEEP FROM TOP OF PIT.

2. MINIMIZE THE AMOUNT OF ROCK AND OTHER DEBRIS THAT FALL INTO THE MINE OPENING DURING CONSTRUCTION.

3. TRIM AND REMOVE VEGETATION AROUND MINE FEATURE AS REQUIRED TO CONSTRUCTION CLOSURE.

4. INSTALL THE INNER CSP AGAINST THE SHAFT'S COLLUVIUM SIDE WALLS WITH POLYURETHANE FOAM (PUF). ALLOW PU TO CURSE AND COVER ALL PU SURFACES COMPLETELY WITHIN ONE HOUR OF INSTALLATION TO PREVENT UV DEGRADATION.

5. AFTER INSTALLATION OF INNER CSP, EXCAVATE WASTE PILE TO UNDISTURBED COLLUVIUM AS DIRECTED BY THE AML PROGRAM.

6. INSTALL OUTER CSP ON TOP OF DRAINAGE AGGREGATE. FILL VOID SPACE BETWEEN COLLUVIUM AND COLLUVIUM WITH SCORIA.

7. BACKFILL OUTSIDE OF OUTER CSP USING UNCLASSIFIED FILL, COMPACT AS DIRECTED BY AML PROGRAM.

8. THOROUGHLY COMPACT ALL FILL UNDERNEATH THE CONCRETE COLLAR.

9. SLOPE THE FINISH GRADE TO DRAIN WATER DOWNHILL AND AWAY FROM THE COLLAR.

10. PUT 1/2" CHAMFER ON CONCRETE EDGE.

11. FOR DRAINAGE, DRAIN THIS 2" DIAMETER HOLES IN CSP JUST ABOVE PU PLUG. TREAT CUT/DRILLED AREAS IN CSP WITH ZINC-RICH PAINT AS PER ASTM A780.
ARROYO BANK COLLUVIUM CONSISTING OF WEAKLY CEMENTED SILT, GRAVEL, AND COBBLES FORMS THE BACK AND RIBS OF THE ADIT. USE CAUTION TO NOT DISTURB THE BACK OR RIBS OF THE ADIT. DO NOT REMOVE ROCK FROM THE GROUND SURFACE ABOVE THE ADIT OR FROM THE BACK OR RIBS INSIDE OF THE ADIT UNLESS APPROVED BY THE PROJECT MANAGER OR PROJECT ENGINEER.

3. AN HISTORIC ROCK WALL IS LOCATED APPROXIMATELY 12' WITHIN THE ADIT. DO NOT DISTURB THIS FEATURE.

4. STEEL PLATES AND SHAPES FOR THE BAT GATE ASSEMBLY SHALL BE WEATHERING STEEL AS SPECIFIED. WELD ALL JOINTS. PLATES FOR BOLTS, BOLTS AND NUTS SHALL BE WEATHERING OR STAINLESS STEEL DOUBLE-NUT ALL BOLTS. ROUND OR CHAMFER ALL EXPOSED EDGES AND CORNERS. CONSTRUCT THE BAT GATE TO ELIMINATE SURFACES ON WHICH MOISTURE OR DEBRIS CAN BE TRAPPED.

5. GROUTED ROCK BULKHEAD SHALL BE CONSTRUCTED FROM NON-SHRINK GROUT AND SOUND, DURABLE NATIVE ROCK FROM THE VICINITY OF THE FEATURE AS LARGE AS PRACTICABLE AND NO SMALLER THAN 6" IN LEAST DIMENSION. PLACE ROCK BULKHEAD AS SHOWN AND ACROSS FULL HEIGHT AND WIDTH OF ADIT OPENING. DO NOT BLOCK THE CSP OPENING.

6. BAT GATE ELEVATION SCALE: 1" = 1'-0" GENERAL NOTES:
1. THE SHAPE AND DIMENSIONS SHOWN FOR THE ADIT OPENING ARE APPROXIMATE, AND ARE SHOWN FOR FEATURE G25 SPECIFICALLY. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS BEFORE FABRICATION. APPROXIMATE DIMENSIONS OF THE ADIT ARE 10' WIDE X 4.5' TALL. COLLUVIUM SHALL BE CENTERED IN OPENING.

2. THE ADIT IS LOCATED WITHIN AN ARROYO BANK. WEAKLY CEMENTED COLLUVIUM CONSISTING OF SILT, GRAVEL, AND COBBLES FORMS THE BACK AND RIBS OF THE ADIT. USE CAUTION TO NOT DISTURB THE BACK OR RIBS OF THE ADIT. DO NOT REMOVE ROCK FROM THE GROUND SURFACE ABOVE THE ADIT OR FROM THE BACK OR RIBS INSIDE OF THE ADIT UNLESS APPROVED BY THE PROJECT MANAGER OR PROJECT ENGINEER.

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6. BAT GATE SECTION SCALE: 1" = 1'-0"

GROUT SHALL BE QUIKRETE NON-SHRINK GROUT, OR APPROVED EQUIVALENT. GROUT SHALL BE MIXED TO FLOWABLE CONSISTENCY FOR FILLING IN OUTER GAPS OF BAT GATE, AND TO PLASTIC CONSISTENCY FOR CONSTRUCTION OF BULKHEAD. GROUT SHALL BE MIXED ACCORDING TO MANUFACTURER'S INSTRUCTIONS.

7. PAINT VISIBLE PORTIONS OF CSP (INSIDE AND OUTSIDE) WITH NATURAL STAIN OR APPROVED EQUIVALENT FOR CAMOUFLAGE. COLOR SHOULD BLEND IN WITH THE BULKHEAD AS DIRECTED BY THE PROJECT MANAGER.

8. INSTALL SURVEY MARKER INTO GROUT OR ADJACENT COMPETENT ROCK AS DIRECTED BY THE PROJECT MANAGER.

MINING AND MINERALS DIVISION
ABANDONED MINE LAND PROGRAM
NEW MEXICO ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT

SCALE: 1/2" = 1'-0"
1. The shapes and dimensions shown for the adit opening are approximate, and are shown for feature G26 specifically. All work shall verify all dimensions before completion. Approximate dimensions of the adits G26 and G27 are 3'-0" wide x 1.5' tall x 15'-0" deep.

2. The adit is located within an arroyo bank, weakly cemented colluvium consisting of silt, gravel, and cobbles forms the back and ribs of the adit. Use caution to not disturb the back or ribs of the adit. Do not remove rock from the ground surface above the adit or from the back or ribs inside of the adit unless approved by the project manager or project engineer.

3. Overexcavate bottom of adit approximately 12" to make room for bulkhead. Excavate beyond end of culvert to make room for bat flight. Culvert shall be centered in excavated opening.

4. Steel plates and shapes for the bat gate assembly shall be weathering steel as specified. Weld all plates for bolts, bolts and nuts shall be weathering or stainless steel. Double-nut all bolts. Round or chamfer all exposed edges and corners. Construct the bat gate to eliminate surfaces on which moisture or debris can be trapped.

5. Grouted rock bulkhead shall be constructed from non-shrink grout. Suitable native rock from the vicinity of the feature as large as practicable and no smaller than 6" in least dimension; however, rock approximately 2" in size may be used on bulkhead on top of adit due to space restrictions. Place rock bulkhead as shown and across full height and width of adit opening. Do not block the CSP opening.

6. Grout shall be quikrete non-shrink grout, or approved equivalent. Grout shall be mixed according to manufacturer’s instructions.

7. Paint visible portions of CSP (inside and outside) with native stain or approved equivalent for camouflage. Color should blend in with the bulkhead as directed by the project manager.

8. Install survey marker into grout or adjacent competent rock as directed by the project manager.
**General Notes:**

1. Steel plates and shapes shall be weathering steel. Weld all joints, except as otherwise indicated. Construct the lock to eliminate surfaces on which moisture or debris can be trapped. Joints shall be tight so that moisture cannot enter between the plies of material. Round or chamfer all exposed sharp corners and edges.

2. "Manganese" bars shall be high manganese steel with 12% to 14% manganese. Each bar shall extend the full length of each removable crossbar.

3. Along the bottom of each removable crossbar, drill 1\(\frac{1}{8}\)" diameter holes at 1'-0" O.C.

4. The contractor shall provide the nuts (\(\frac{5}{8}\"\) - 11 UNC CLASS 2A THREAD). The project manager will supply the locking bolts.

5. Coat the threads of the locking bolts with LPS1 lubricant and install firmly with 50 to 75 pounds of torque.
DEPRESSED BACKFILL DESIGN
(TYPICAL SECTION)

GENERAL NOTES:
1. THE ALL AT AND ABOVE SHUNT LEVELS SHALL CONSIST OF THE
   EASIEST MATERIAL AVAILABLE. SMALLEST MATERIAL MAY BE USED
   ELSEWHERE. SEE THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
2. AS PRACTICAL, SHAPE THE REMAINING MINE WASTE MATERIAL TO
   RESERVE AN UNDISTURBED MINE WASTE PIECE.
3. THE LENGTH AND WIDTH OF THE TOP OF THE GROUND SHALL BE
   EQUAL TO OR GREATER THAN THE INTERNAL SHUNT LENGTH AND WIDTH
   RESPECTIVELY.

ABANDONED MINE LAND PROGRAM
MINING AND MINERALS DIVISION
NEW MEXICO DEPARTMENT OF ENVIRONMENTAL REGULATION

SCALE: 1/8" = 1'-0"

VARIOUS LOCATIONS
ALBUQUERQUE, NM

FILE: SAN PEDRO CHEMICAL PROJECT No. 1
FIGURE 3