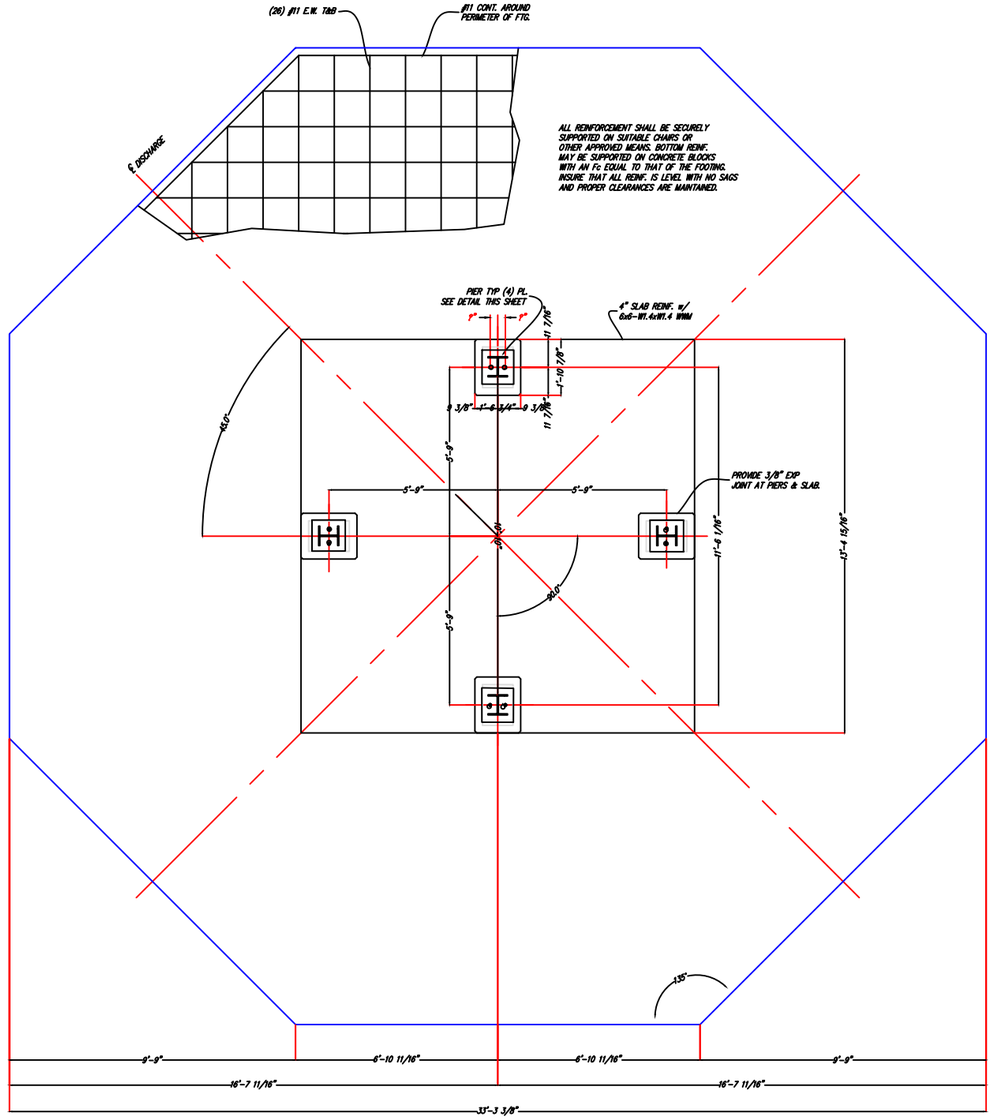
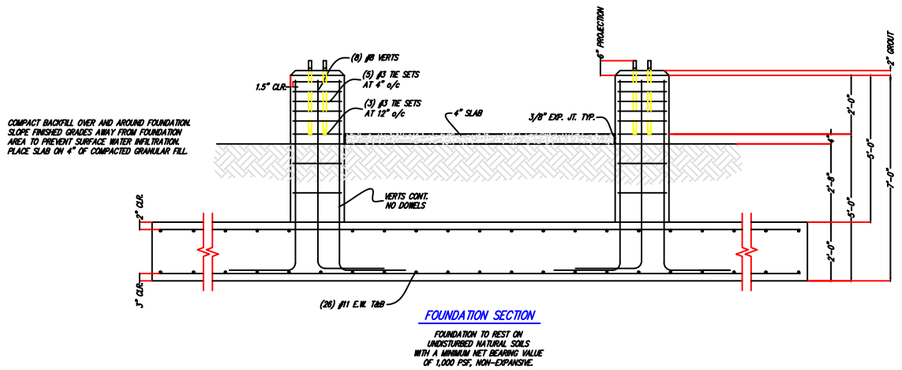


FOUNDATION PLAN



FOUNDATION SECTION

FOUNDATION TO REST ON UNDISTURBED NATURAL SOILS WITH A MINIMUM NET BEARING VALUE OF 1,000 PSF, NON-EXPANSIVE.

REINFORCED CONCRETE

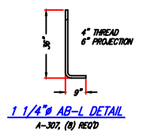
1. REINFORCED CONCRETE SHALL BE DESIGNED, MIXED AND PLACED IN ACCORDANCE WITH THE LATEST EDITION OF THE ACI CODE AND APPLICABLE ASTM STANDARDS.
2. ALL REINFORCING BARS BEING PLACED BY THE CONTRACTOR, #4 OR LARGER, SHALL BE NEW GRADE 60 DEFORMED BARS. #3 BARS MAY BE GRADE 40 DEFORMED BARS, WHICH CONFORM TO ASTM A615.
3. REINFORCING BARS SHALL NOT BE BENT OR STRAIGHTENED IN ANY MANNER WHICH WOULD BE INJURIOUS TO THE STEEL. BARS WITH KINKS OR BENDS NOT SHOWN ON THE BAR BENDING DIAGRAMS SHALL NOT BE PLACED. THE USE OF HEAT TO STRAIGHTEN OR BEND REINFORCING STEEL WILL NOT BE PERMITTED UNLESS SPECIFICALLY APPROVED BY THE ENGINEER.
4. CONCRETE FOR THE PROJECT SHALL BE AS FOLLOWS:

   ASTM C150, TYPE I-II PORTLAND CEMENT WITH A WATER/CEMENT RATIO (W/C) NOT TO EXCEED 0.49, AND A MINIMUM 28 DAY COMPRESSIVE STRENGTH AS FOLLOWS:

   FOUNDATION ELEMENTS = 4,000 PSI
   SLAB-ON-GRADE ELEMENTS = 3,500 PSI

   ALL CONCRETE SHALL CONTAIN 5.0% (± 1.0%) ENTRAINED AIR AT THE POINT OF PLACEMENT. AIR ENTRAINING AGENT SHALL BE SHOWN IN THE DESIGN MIX. CONCRETE SHALL BE MIXED IN APPROVED TRANSIT MIXERS. MAXIMUM ELAPSED TIME FROM THE TIME THAT WATER IS ADDED TO THE MIX UNTIL THE CONCRETE IS DEPOSITED IN THE WORK SHALL NOT EXCEED 90 MINUTES. ONLY THOSE ADMIXTURES SPECIFIED IN THE CONTRACTORS MIX DESIGN SUBMITTAL SHALL BE USED. CONCRETE SHALL BE MIXED FOR NOT LESS THAN 100 NOR MORE THAN 300 REVOLUTIONS AT MIXING SPEED PRIOR TO PLACEMENT. NOM. MAX. SLUMP SHALL NOT EXCEED 4" FOR FOUNDATION ELEMENTS, AND 5" FOR FLOOR SLAB ELEMENTS.
5. ENGINEER'S PRIOR APPROVAL MUST BE SECURED FOR ALL SUBSTITUTIONS.
6. UNLESS OTHERWISE NOTED, THE MINIMUM CLEAR DISTANCE BETWEEN THE FACE OF CONCRETE AND THE OUTSIDE OF THE REINFORCING BARS SHALL BE 1".
7. CONSTRUCTION JOINTS NOT SHOWN ON THE DRAWINGS SHALL BE LOCATED TO LEAST IMPAIR THE STRENGTH OF THE STRUCTURE AND THE LOCATION MUST BE APPROVED BY THE ENGINEER.
8. BEFORE ANY CONCRETE IS PLACED, APPLICABLE DRAWINGS SHALL BE CHECKED TO DETERMINE THAT ANCHOR BOLTS, EMBEDDED STEEL, PIPING, CONDUITS, GROUNDING WIRES, OPENINGS, ETC. ARE PROPERLY PLACED.
9. LATERAL SUPPORT SHALL BE PROVIDED FOR ALL WALLS DURING BACKFILLING AND CONSTRUCTION OPERATIONS.
10. FOR CATHODIC PROTECTION, ALL UNDERGROUND CONCRETE WITH EMBEDDED PIPING OR INSERTS WHICH ARE A PART OF THE PIPING SHALL HAVE A MINIMUM OF 1-1/2" CLEARANCE BETWEEN REBARS AND SUCH INSERTS. ANCHOR BOLTS SHALL BE SET BY TEMPLATES.
11. ANCHOR BOLT MATERIAL SHALL CONFORM TO THE REQUIREMENTS OF ASTM A307 OR ASTM A36. MATERIAL FOR ANCHOR BOLTS SHALL BE AS INDICATED ON A PARTICULAR DRAWING. IF NO MATERIAL IS SPECIFIED ASTM A-307 SHALL BE USED. ANCHOR BOLTS AND OTHER PROJECTING EMBEDMENTS SHALL BE SET WITH TEMPLATES OR OTHER APPROVED METHODS TO PREVENT DISPLACEMENT DURING CONCRETE PLACEMENT.
12. WELDING OF REINFORCING, PIPE SLEEVES, ETC. TO ANCHOR BOLTS WILL NOT BE PERMITTED UNLESS OUTLINED ELSEWHERE IN THESE NOTES.
13. ALL EXPOSED UNFORMED CONCRETE SURFACES SHALL BE OF UNIFORM FINISH AND COLOR. ALL FORMED SURFACES SHALL HAVE DEFECTS AND BLEMISHES PATCHED AND REPAIRED IN A WORKMAN LIKE MANNER. ALL EXPOSED EDGES AND CORNERS SHALL BE CHAMFERED 3/4" U.N.
14. WELDED PLAIN WIRE FABRIC FOR CONCRETE REINFORCEMENT SHALL CONFORM TO ASTM A185.
15. WATERSTOP SHALL BE POLYVINYL CHLORIDE WITH HIGH POLYMER RESINS, RIBBED, WITH A BULB TYPE CENTER IN CONFORMANCE WITH ASTM D412 UNLESS OTHERWISE INDICATED ON THE DESIGN DRAWINGS.
16. SPLICES IN REINFORCING STEEL SHALL BE IN ACCORDANCE WITH DETAILS SHOWN ON THE DRAWINGS OR IN ACCORDANCE WITH THE ACI DETAILING MANUAL (LATEST ED.). LOCATION OF SPLICES NOT SHOWN ON THE DRAWING SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER. MINIMUM LAP SPLICE LENGTHS FOR REINFORCING BARS SHALL BE IN ACCORDANCE WITH ACI SP-66 (88), ACI DETAILING MANUAL, TABLE 10 THRU TABLE 15, UNLESS OTHERWISE SHOWN ON THE DESIGN DRAWINGS.
17. CONTRACTOR SHALL SUBMIT MIX DESIGN FOR EACH CLASS OF CONCRETE TO THE ENGINEER FOR REVIEW PRIOR TO PLACEMENT OF ANY CONCRETE.
18. BASE PLATES RESTING ON CONCRETE FOUNDATIONS SHALL RECEIVE A MIN. OF 1" STRUCTURAL NON-SHRINK GROUT UNLESS OTHERWISE NOTED ON THE DESIGN DRAWINGS. STRUCTURAL GROUT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 5000 PSI AT 28 DAYS.
19. NO SUBSURFACE SOILS INVESTIGATION WAS AVAILABLE FOR FOUNDATION DESIGN. THE FOOTINGS HAVE BEEN SIZED FOR BEARING ON STABLE, NON-EXPANSIVE SOILS WITH A MINIMUM NET BEARING VALUE OF 1,000 PSF.

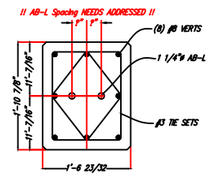
2ft Thick HEX PAD 67.90 cubic yards ~(917.5314 square ft x 2' Thick = 1,835.0628 cubic ft x .037 = 67.897 cubic yds)
4in Thick Center Pad 2.20 cubic yards ~(179.8728 square ft x (4" ÷ 12) .33' Thick = 59.358024 cubic feet x .037 = 2.196 cubic yards)
5ft x 2ft Leg 2.029 cubic yards x 4 = 8.12 cubic yards ~(10.9688 square ft x 5' Thick = 54.844 cubic feet x .037 = 2.029 cubic yards)
Total = 78.22 cubic yards



1 1/4"ø AB-L DETAIL
A-307, (8) REQ'D

USE STEEL SHIMS FOR BASE PLATE LEVELING

!!!! L BOLT SPACING ON CURRENT PAD IS NOT UNIFORM !!!!



TYPICAL PIER DETAIL
(4) REQ'D, SEE PLAN FOR ORIENTATION

DRAWN	
DATE	BY
4/1/22	WLO
REVISED	
DATE	BY

ARCH WEST ELK

5174 Highway 133
Somerset, CO 81434
Operated by Mountain Coal Company, L.L.C.
A subsidiary of Arch Resources, Inc.

West Elk Mine
1980's Dust Silo Pad
-! REVIEW !-

FILE NO.
FOOT PLATE LAYOUT.DWG

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