

HORIZONTAL BAT GATE LOCATIONS

FEATURE NUMBER	APPROX. MINE OPENING (FT)	APPROX. TS4x2x¼ NEEDED (LINEAR FEET)	APPROX. NO. OF SUPPORT BEAM ENDS	NO. OF REMOVABLE BARS
07_10	8' x 8'	120	4	1
18_04	9' x 8'	200	4	1
18_05	9' x 8'	200	4	1
	TOTAL	520	12	3

ANCHOR INSTALLATION NOTES:

1. SUPPORT BEAMS FOR HORIZONTAL BAT GATES SHALL BE ATTACHED TO THE SURROUNDING ROCK USING HILTI HIT-HY 200 ADHESIVE ANCHORING SYSTEM OR AN APPROVED EQUIVALENT.
2. HILTI HIT-HY 200 ADHESIVE IS AVAILABLE IN TWO OPTIONS, HILTI HIT-HY 200-A, AND HILTI HIT-HY 200-R. BOTH OPTIONS UTILIZE THE SAME TECHNICAL DATA. HILTI HIT-HY 200-A WILL HAVE SHORTER WORKING TIMES AND CURING TIMES THAN HILTI HIT-HY 200-R. THE PACKAGING FOR EACH IS DIFFERENT WHICH HELPS THE USER DISTINGUISH BETWEEN THE TWO ADHESIVES.
3. INJECTABLE ADHESIVE SHALL BE USED FOR INSTALLATION OF THREADED RODS (REBAR) (INSERTS) INTO EXISTING CONCRETE. ADHESIVE SHALL BE FURNISHED IN CONTAINERS WHICH KEEP COMPONENT A AND COMPONENT B SEPARATE. CONTAINERS SHALL BE DESIGNED TO ACCEPT STATIC MIXING NOZZLE WHICH THOROUGHLY BLENDS COMPONENT A AND COMPONENT B AND ALLOWS INJECTION OF THE MIXED ADHESIVE DIRECTLY INTO THE DRILLED HOLE.
4. ONLY INJECTION TOOLS AND STATIC MIXING NOZZLES SUPPLIED BY THE MANUFACTURER MAY BE USED. INJECTION ADHESIVE SHALL BE FORMULATED TO INCLUDE THE RESIN AND HARDENER TO PROVIDE OPTIMAL CURING SPEED, HIGH STRENGTH AND STIFFNESS. INJECTION ADHESIVE ANCHOR SYSTEM SHALL BE HILTI HIT-HY 200 INSTALLED USING HILTI SAFE SET TECHNOLOGY. HIT-HY 200 SYSTEM SHALL BE SUPPLIED BY HILTI.
5. THE ANCHORS SHALL BE HILTI HIT-Z-R ANCHORS RODS ¾" DIAMETER X 9¾" LENGTH. DRILL HOLE LENGTH SHALL BE A 8½" IN LENGTH AND THE DIAMETER SHALL BE 7/8".
6. WHEN USING HILTI HIT-Z-R ANCHOR RODS, DRILLING DUST DOES NOT NEED TO BE REMOVED FOR OPTIMUM CAPACITY WHEN BASE MATERIAL TEMPERATURES ARE GREATER THAN 41° F (5° C) AND A HAMMER DRILL WITH A CARBIDE TIPPED DRILL BIT IS USED. HOWEVER, THE HOLE SHALL BE CLEANED IF ANY OTHER TYPE OF DRILLING METHOD IS USED.
7. THE BOLT SHALL BE TORQUED TO 110 FT-LB.
8. INSTALLATION OF EACH BOLT SHALL UTILIZE TWO WASHERS AND AT LEAST ONE NUT. TAKE MEASURES TO MAKE ALL NUTS UNREMOVABLE SUCH AS DESTROYING THE THREADS OR TACK WELDING.



FEATURE 07_10
(PRE-CONSTRUCTION)



FEATURE 18_05
(PRE-CONSTRUCTION)



**EXAMPLE PHOTO OF COMPLETED
HORIZONTAL BAT GATE**
(GAGE MINE SAFEGUARD PROJECT)



FEATURE 18_04
(PRE-CONSTRUCTION)

ABANDONED MINE LAND PROGRAM			
MINING AND MINERALS DIVISION NEW MEXICO ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT			
SCALE: AS SHOWN	VARIOUS LOCATIONS	DRAWN BY: MWT	
DATE:		REVISED BY:	
HORIZONTAL BAT GATE CLOSURE			
FILE:	LEMITAR MINE SAFEGUARD PROJECT - PH.II	FIGURE: 5	