



**NOTE:**  
 FLOWS SHOWN ARE FOR  
 NORMAL OPERATING CONDITIONS.

**LEGEND**  
 GPM  
 m<sup>3</sup>/HR.

|                                                                                                                                                                                   |  |               |  |                                                                                                                                 |     |      |                      |   |   |   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------|--|---------------------------------------------------------------------------------------------------------------------------------|-----|------|----------------------|---|---|---|
| NO.                                                                                                                                                                               |  | BY            |  | CHK                                                                                                                             | APP | DATE | REVISION DESCRIPTION |   |   |   |
| I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A FULL REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. |  |               |  |                                                                                                                                 |     |      |                      |   |   |   |
| DATE                                                                                                                                                                              |  | REG. NO.      |  |                                                                                                                                 |     |      |                      |   |   |   |
| RELEASED TO/FOR                                                                                                                                                                   |  | DATE RELEASED |  | A                                                                                                                               | B   | C    | 0                    | 1 | 2 | 3 |
| CLIENT                                                                                                                                                                            |  | BID           |  | BARR ENGINEERING CO.<br>555 WEST 27TH STREET<br>HIBBING, MN 55746<br>P.H. 1-800-228-1986<br>F.X. (218) 262-3460<br>WWW.BARR.COM |     |      |                      |   |   |   |
| PROJECT OFFICE                                                                                                                                                                    |  | DATE          |  | MINNESOTA STEEL INDUSTRIES<br>HIBBING, MINNESOTA                                                                                |     |      |                      |   |   |   |
| SCALE                                                                                                                                                                             |  | NONE          |  | IRON ORE PROCESSING PLANT<br>NASHWAUK, MINNESOTA<br>WATER USE FLOW SHEET<br>CRUSHER AND CONCENTRATOR                            |     |      |                      |   |   |   |
| DRAWN                                                                                                                                                                             |  | 2/10/05       |  | BARR PROJECT NO. 23/31-286-E002<br>CLIENT PROJECT NO. FIGURE NO. 13-3<br>DWG. NO. MF-002<br>REV. NO. A                          |     |      |                      |   |   |   |
| CHECKED                                                                                                                                                                           |  | JDP:etick     |  |                                                                                                                                 |     |      |                      |   |   |   |
| DESIGNED                                                                                                                                                                          |  |               |  |                                                                                                                                 |     |      |                      |   |   |   |
| APPROVED                                                                                                                                                                          |  |               |  |                                                                                                                                 |     |      |                      |   |   |   |