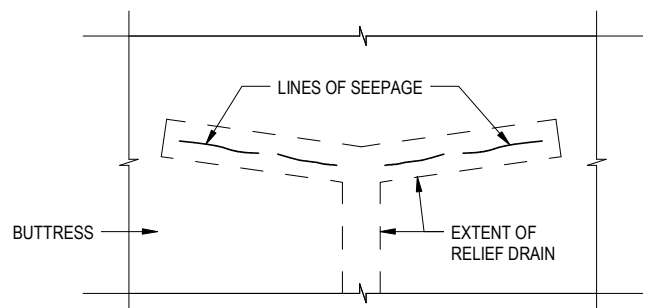


NOTES:


1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. THE ENGINEER IS TO PROVIDE THE FOLLOWING INFORMATION:
 - i) DIMENSIONS, SURFACE INCLINATION OR OUTLINE OF BUTTRESS ON ROCK FACE;
 - ii) CONCRETE SURFACE FINISH REQUIREMENT e.g. COLOUR AND PATTERN;
 - iii) DOWEL REQUIREMENT;
 - iv) THE EXTENT OF THE RELIEF DRAIN AND WEEPHOLE; &
 - v) OTHER FACING REQUIREMENT e.g. MASONRY FACING.
3. FOR SMOOTH SURFACE FINISH, A GROOVE SHALL BE FORMED FROM THE RELIEF DRAIN PIPE TO LEAD THE WATER DOWN TO THE BOTTOM OF THE BUTTRESS, GROOVE TO BE CO-ORDINATED WITH ANY SURFACE PATTERN.
4. MINIMISE PROTRUDING SURFACES, SO THAT SURFACE OF BUTTRESS IS AS FLUSH WITH SURROUNDING ROCK FACES AS POSSIBLE.
5. BUTTRESS SHALL BE FOUNDED ON GRADE III OR BETTER ROCK, OTHERWISE ENGINEER SHALL MAKE ANY NECESSARY CHANGES TO SUIT SITE CONDITIONS.
6. FOR BUTTRESS FOUNDED ON MATERIALS OTHER THAN GRADE III OR BETTER ROCK, ENGINEER SHALL INCLUDE PROVISION TO MITIGATE POSSIBLE EROSION OF THE FOUNDING MATERIALS, e.g. ADEQUATE EMBEDMENT OR NO-FINES CONCRETE APRON AT THE TOE OF BUTTRESS.
7. GENERAL DETAILS OF DOWEL ARE SHOWN ON THIS DRAWING. ENGINEER SHALL MAKE ANY NECESSARY CHANGES TO SUIT SITE CONDITIONS.



TYPICAL ELEVATION OF RELIEF DRAIN

| | | | |
|------|---------------------------|-----------------|---------|
| C | BIM REVISION. | Original Signed | 12.2025 |
| B | NOTE 6 ADDED. | Original Signed | 07.2019 |
| A | FORMER DRG. NO. C2203/1G. | Original Signed | 03.2015 |
| REF. | REVISION | SIGNATURE | DATE |

**TYPICAL DETAILS OF
CONCRETE BUTTRESS
TYPE A**

| | |
|--|--------------------|
|  CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT | |
| SCALE DIAGRAMMATIC | DRAWING NO. |
| DATE JAN 1991 | C2203C |