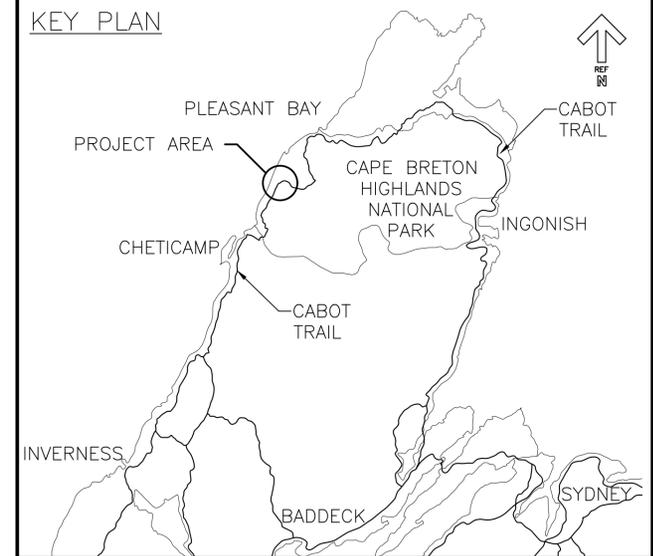




Parks  
Canada

Parcs  
Canada

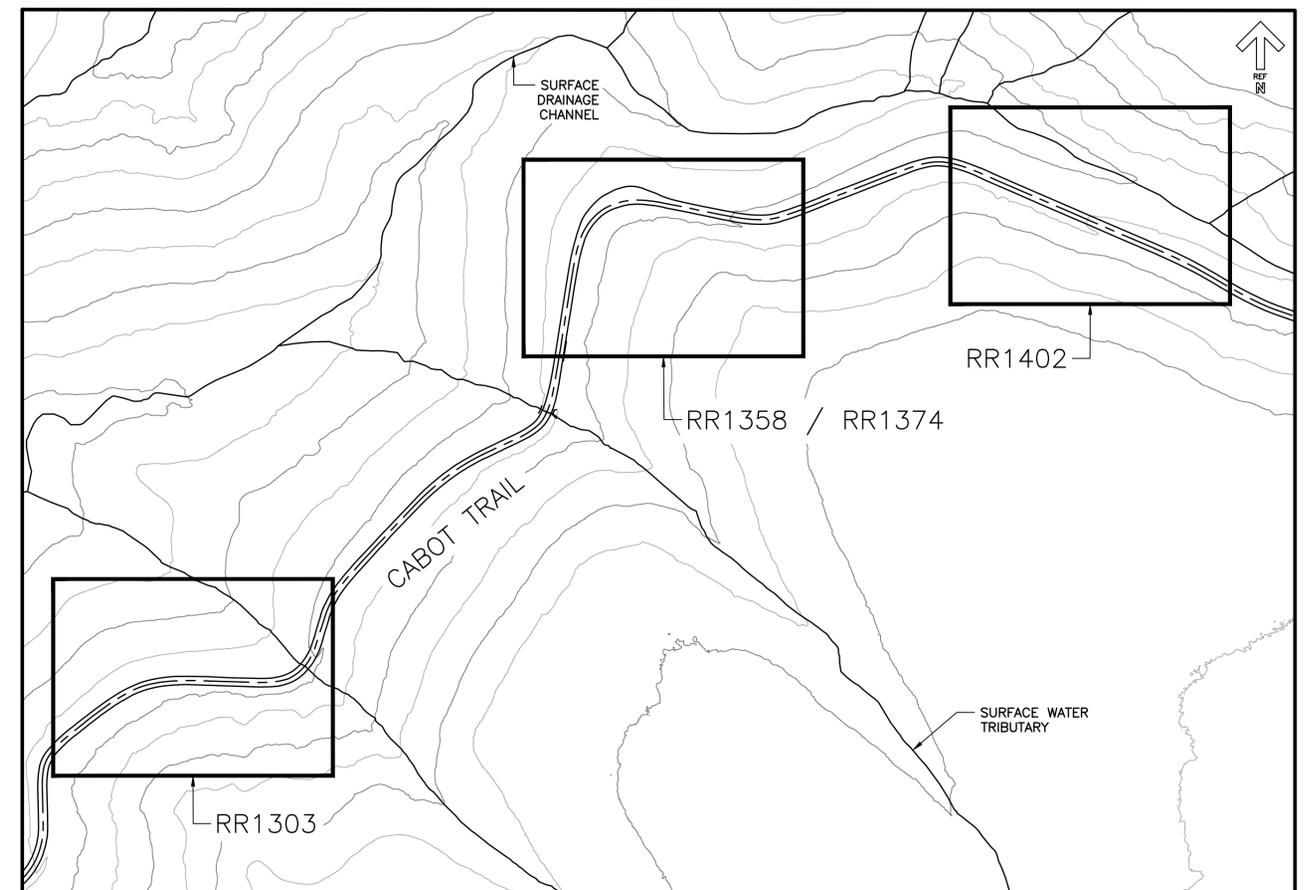


**PHASE 9 - FRENCH MOUNTAIN  
SLOPE STABILIZATION  
RR1303 / RR1358 / RR1372 / RR1402  
CAPE BRETON HIGHLANDS NATIONAL PARK  
INVERNESS COUNTY, NOVA SCOTIA**

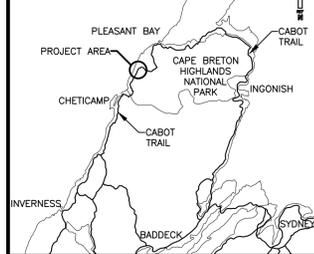
**PROJECT NO. 669**

**DRAWING LIST**

| DWG. NO. | TITLE                     | DWG. NO. | TITLE                                     |
|----------|---------------------------|----------|---|
| G01      | RR1303 SITE PLAN          | G08      | RR1402 SECTIONS                           |
| G02      | RR1303 SITE PHOTOGRAPHS   | G09      | RR1402 SITE PHOTOGRAPHS SHEET 1 OF 2      |
| G03      | RR1358 / RR1372 SITE PLAN | G10      | RR1402 SITE PHOTOGRAPHS SHEET 2 OF 2      |
| G04      | RR1358 / RR1372 SECTIONS  | G11      | CONSTRUCTION NOTES & DETAILS SHEET 1 OF 2 |
| G05      | RR1358 SITE PHOTOGRAPHS   | G12      | CONSTRUCTION NOTES & DETAILS SHEET 2 OF 2 |
| G06      | RR1372 SITE PHOTOGRAPHS   |          |   |
| G07      | RR1402 SITE PLAN          |          |   |



KEY PLAN

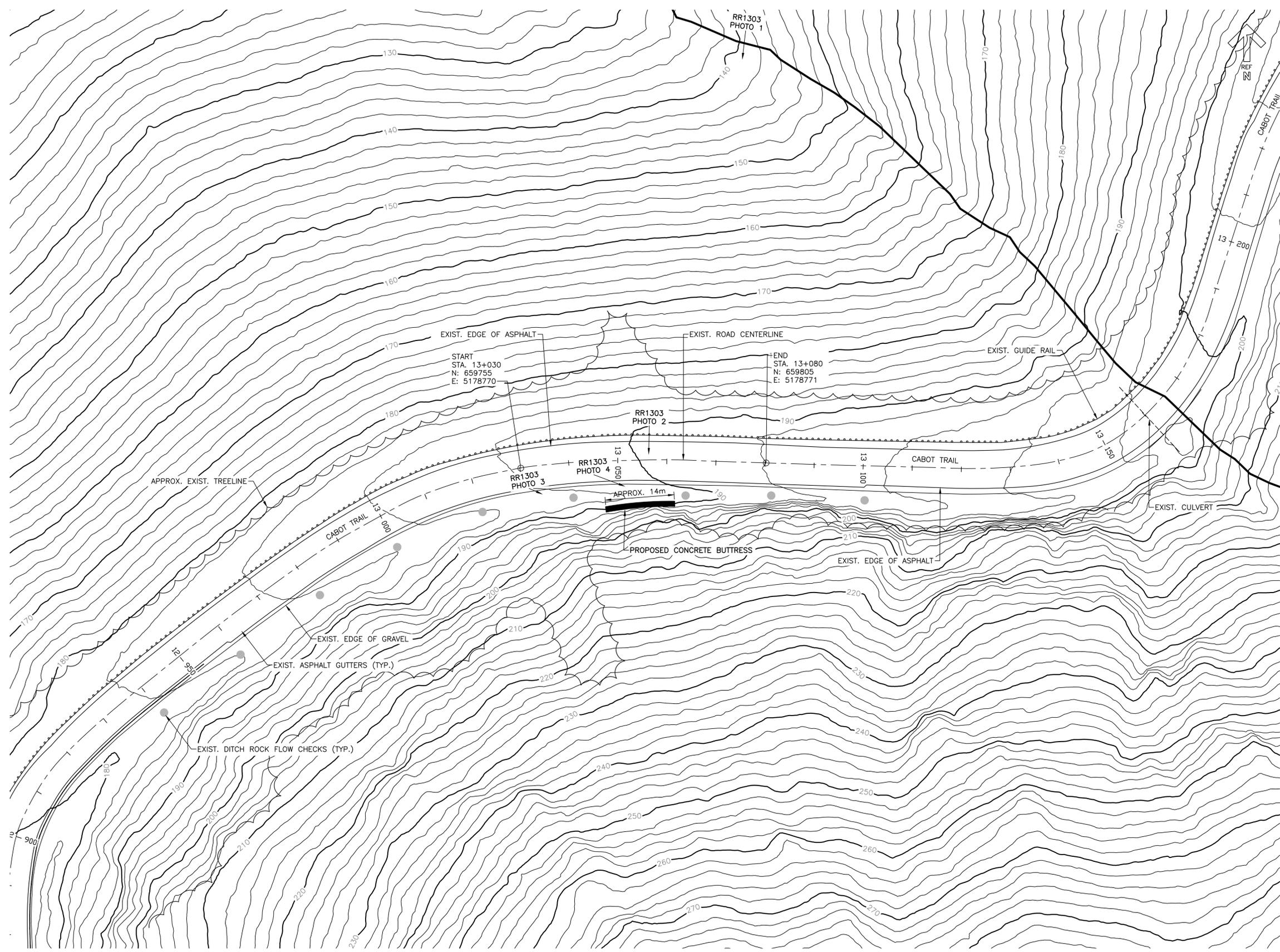


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|-----------|-------------------|-------------|
| 0         | ISSUED FOR TENDER | JUL 27 2020 |
| revisions |                   | date        |
| project   |                   | proj        |

**PHASE 9  
FRENCH MOUNTAIN  
SLOPE STABILIZATION  
CAPE BRETON HIGHLANDS  
NATIONAL PARK**

**RR1303  
SITE PLAN**

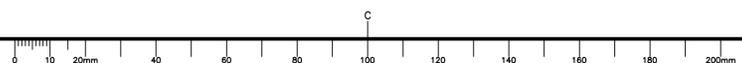
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|---------------------|---------------------------------|---------------|
| designed            | J. MATTHEW                      | conçu         |
| date                | MAR. 3, 2020                    |               |
| drawn               | D. HENDERSON                    | dessiné       |
| date                | MAR. 4, 2020                    |               |
| approved            | M. MATTHEW                      | approuvé      |
| date                | JULY 27, 2020                   |               |
| Tender              | S. BABSTOCK                     | Soumission    |
| PCA Project Manager | Administrateur de projets TPSGC |               |
| project number      | 669                             | no. du projet |
| drawing no.         | G01                             | no. du dessin |

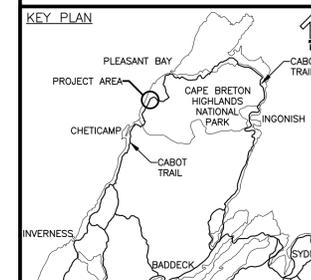


PLAN VIEW RR1303

1  
G01

SCALE: 1:400





PROPOSED CONCRETE BUTTRESS

|  |
|--|
| RR1303 – SLOPE CONDITIONS  |
| SLOPE GEOMETRY IN AREA OF BUTTRESS (APPROX.)   |
| SLOPE LENGTH: 50 m<br>SLOPE HEIGHT: UP TO 20 m<br>SLOPE ANGLE: 45° TO 75° (AVERAGE)  |
| GEOHAZARD DESCRIPTION  |
| <ul style="list-style-type: none"> <li>RAVELLING FROM THE ROCK FACE.</li> <li>ROCK CUT UNDERMINED AT PORTION OF THE TOE RESULTING IN A LARGE, UNSTABLE, OVERHANGING ROCK MASS.</li> <li>PREVIOUS SLOPE STABILIZATION WORK AT RR1303 INCLUDED SCALING, ANCHOR INSTALLATION, DITCH RESTORATION, AND PARTIAL COMPLETION OF REINFORCED CONCRETE BUTTRESS AT OVERHANGING ROCK MASS (INSTALLATION OF TOE PINS ONLY)</li> </ul> |

| RR1303 – REMEDIAL WORK |                   |  |
|------------------------|-------------------|--|
| KEY                    | EST. QUANTITY     |  |
|                        | CONCRETE BUTTRESS | 7 x Ø 26mm x 6 m LONG INCLINED ROCK DOWELS<br>70m³ CONCRETE (FOR DETAILS REFER TO G12) |

PHOTO 1: AERIAL VIEW RR1303 1  
G02



|           |                   |             |
|-----------|-------------------|-------------|
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| project   |                   | projet      |

PHASE 9  
FRENCH MOUNTAIN  
SLOPE STABILIZATION  
CAPE BRETON HIGHLANDS  
NATIONAL PARK

drawing dessin

RR1303  
SITE PHOTOGRAPHS

|                     |          |
|---------------------|----------|
| designed J. MATTHEW | conçu    |
| date MAR. 3, 2020   |          |
| drawn D. HENDERSON  | dessiné  |
| date MAR. 4, 2020   |          |
| approved M. MATTHEW | approuvé |
| date JULY 27, 2020  |          |

Tender Soumission  
S. BABSTOCK  
PCA Project Manager Administrateur de projets TPSGC

project number no. du projet

669

drawing no. no. du dessin

G02



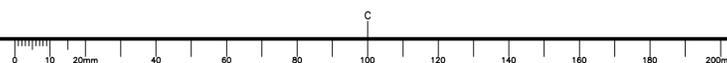
PHOTO 2: RR1303 2  
G02

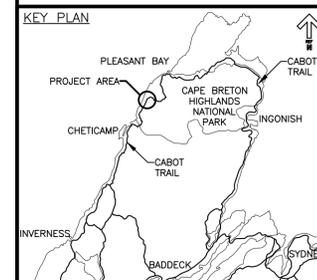


PHOTO 3: RR1303 3  
G02



PHOTO 4: RR1303 4  
G02





|           |                   |             |
|-----------|-------------------|-------------|
| 0         | ISSUED FOR TENDER | JUL 27 2020 |
| revisions |                   | date        |
| project   |                   | proj        |

**PHASE 9  
FRENCH MOUNTAIN  
SLOPE STABILIZATION  
CAPE BRETON HIGHLANDS  
NATIONAL PARK**

drawing dessin

**RR1358 / RR1372  
SITE PLAN**

designed J. MATTHEW conçu

date MARCH 3, 2020

drawn D. HENDERSON dessiné

date MARCH 4, 2020

approved M. MATTHEW approuvé

date JULY 27, 2020

Tender Soumission

S. BABSTOCK Administrateur de projets TPSGC

project number no. du projet

**669**

drawing no. no. du dessin

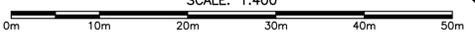
**G03**

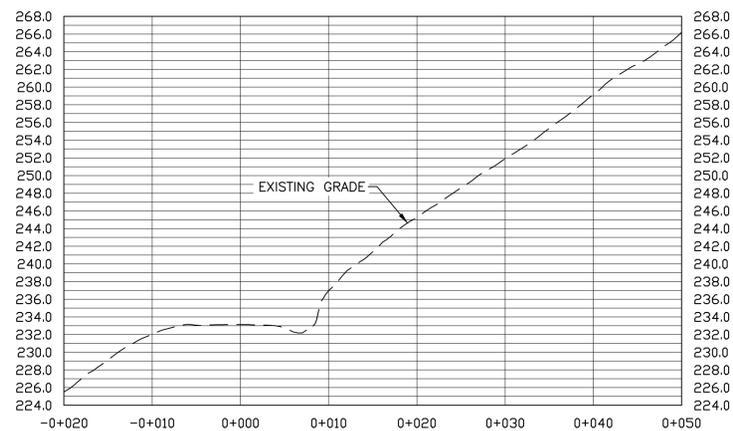
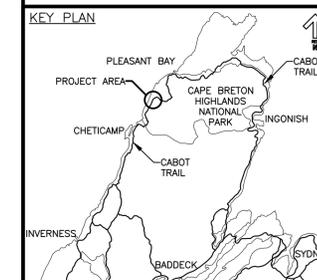


**PLAN VIEW RR1358 / RR1372**

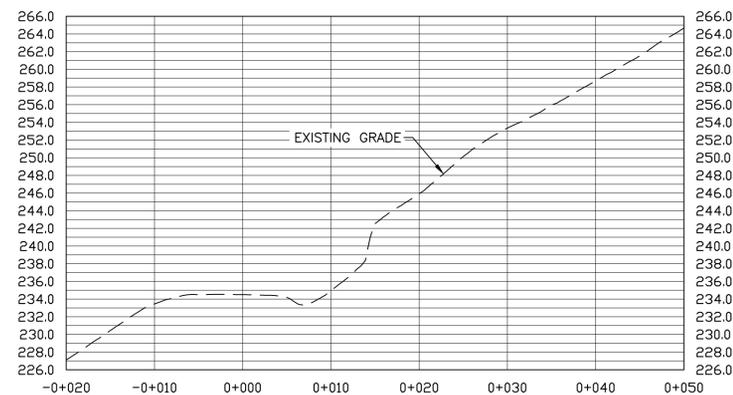
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G03**

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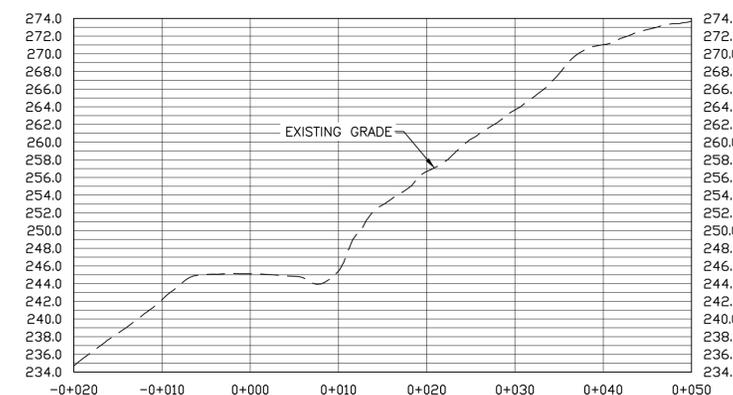




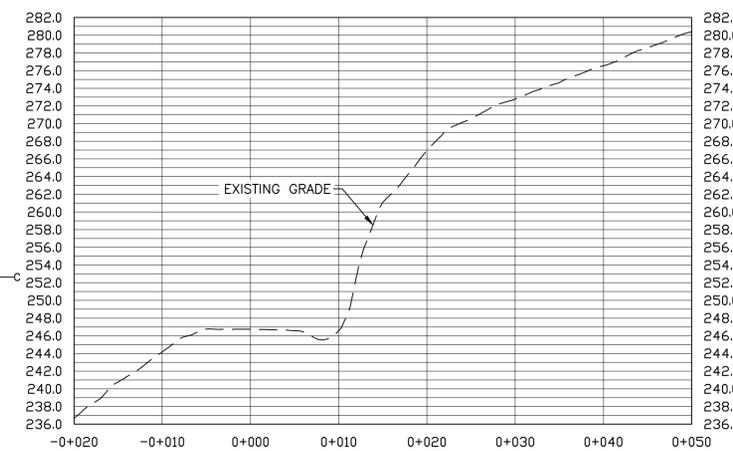
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SCALE: H=1:400 V=1:1  
**1**  
**G04**



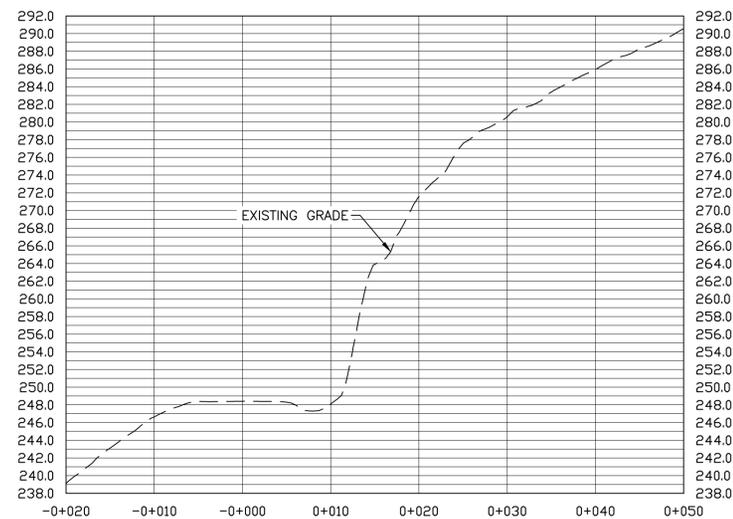
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SCALE: H=1:400 V=1:1  
**2**  
**G04**



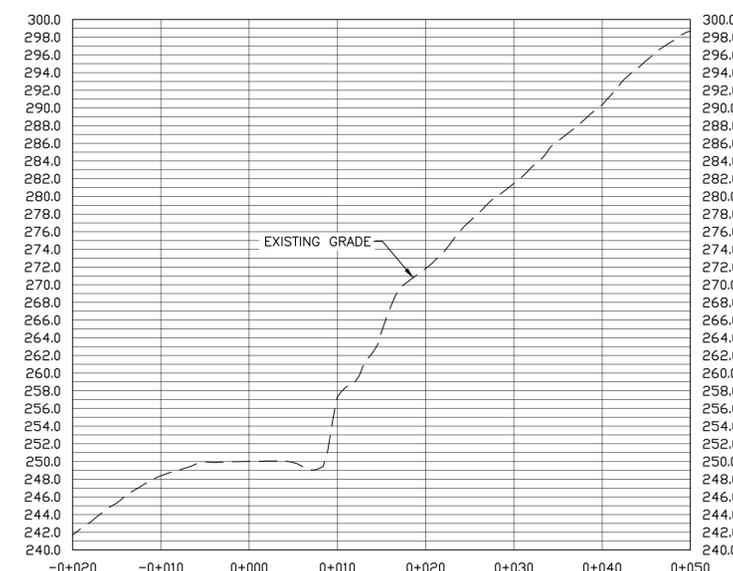
**SECTION C**  
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**3**  
**G04**



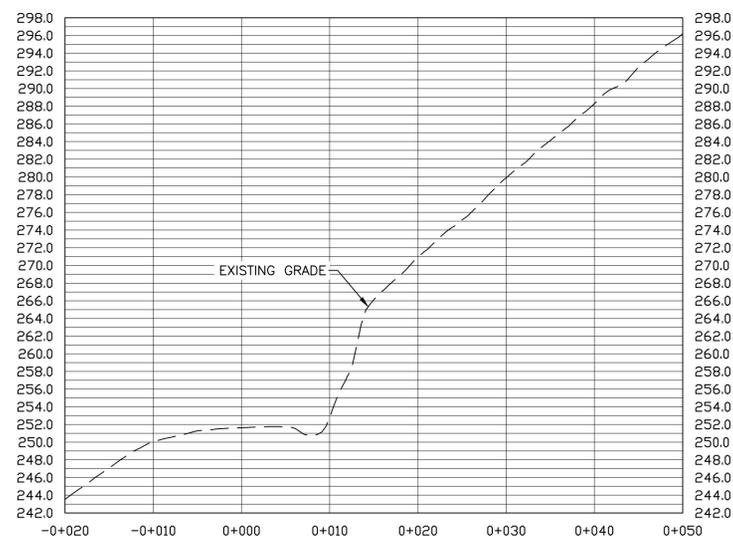
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**G04**



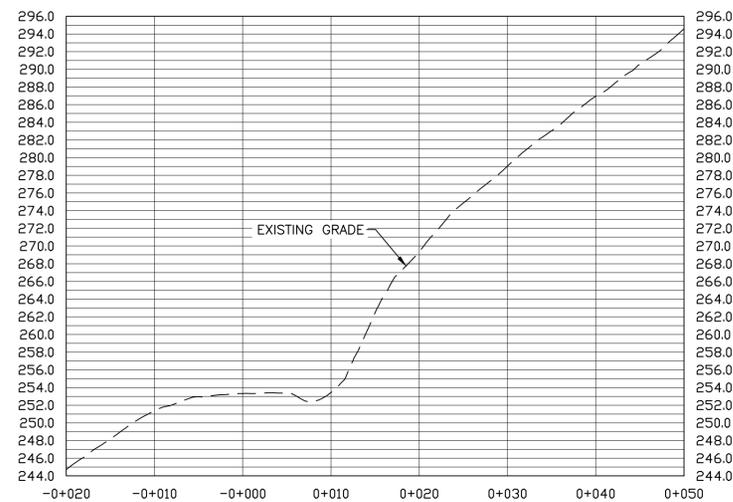
**SECTION E**  
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**5**  
**G04**



**SECTION F**  
SCALE: H=1:400 V=1:1  
**6**  
**G04**



**SECTION G**  
SCALE: H=1:400 V=1:1  
**7**  
**G04**



**SECTION H**  
SCALE: H=1:400 V=1:1  
**8**  
**G04**



|           |                   |             |
|-----------|-------------------|-------------|
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| project   |                   | proj        |

**PHASE 9  
FRENCH MOUNTAIN  
SLOPE STABILIZATION  
CAPE BRETON HIGHLANDS  
NATIONAL PARK**

drawing dessin

**RR1358 / RR1372  
SECTIONS**

designed J. MATTHEW conçu

date MAR. 3, 2020

drawn D. HENDERSON dessiné

date MAR. 4, 2020

approved M. MATTHEW approuvé

date JULY 27, 2020

Tender Soumission

S. BABSTOCK Administrateur de projets TPSGC

project number no. du projet

**669**

drawing no. no. du dessin

**G04**



PHOTO 1: AERIAL VIEW RR1358 1  
G05



PHOTO 2: RR1358 2  
G05



PHOTO 3: RR1358 3  
G05

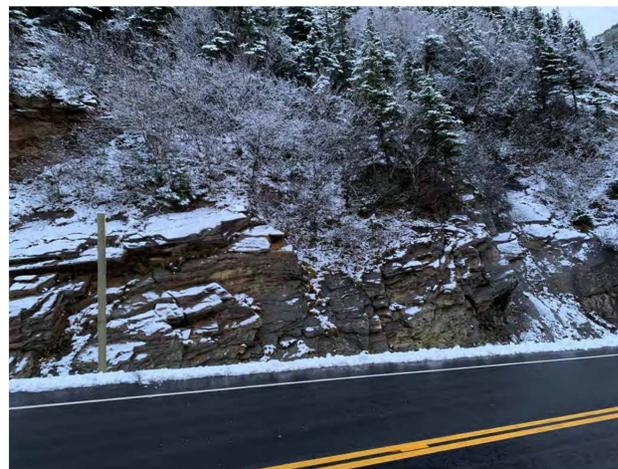


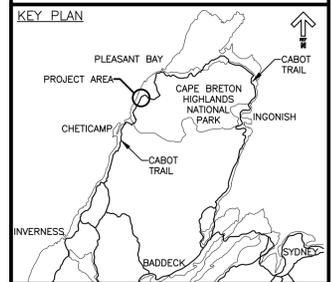
PHOTO 4: RR1358 4  
G05



PHOTO 5: RR1358 5  
G05

|   |
|---|
| RR1358 - SLOPE CONDITIONS   |
| <b>SLOPE GEOMETRY (APPROX.)</b>   |
| SLOPE LENGTH: 60 m<br>SLOPE HEIGHT: UP TO 15 m<br>SLOPE ANGLE: 45° TO 65° (AVERAGE)   |
| <b>GEOHAZARD DESCRIPTION</b>  |
| <ul style="list-style-type: none"> <li>ROCK FOLIATION IS DAYLIGHTING OUT OF THE ROCK CUT RESULTING IN POTENTIAL PLANAR SLIDING FAILURES.</li> <li>RAVELLING FROM THE ROCK FACE.</li> <li>EROSION OF OVERBURDEN AT CREST AND RELEASE OF COBBLES/BOULDERS.</li> </ul> |

| RR1358 - REMEDIAL DESIGN |   |
|--------------------------|---|
| KEY                      | EST. QUANTITY   |
| ---                      | <b>SCALING</b><br>20 HRS ROPE CREW<br>5 HRS BOOMLIFT  |
|                          | <b>ROCK ANCHORS (FOR DETAILS REFER TO G11)</b><br>16 x Φ 26 mm x 6 m LONG (TENSIONED)*<br>8 x Φ 26 mm x 9 m LONG (TENSIONED)*<br>*LOCATION TO BE DETERMINED IN FIELD,<br>POST-SCALING, AS DIRECTED BY THE DEPARTMENTAL REPRESENTATIVE |
|                          | <b>COMMON EXCAVATION</b><br>110 m <sup>3</sup> MATERIAL REMOVED   |



|           |                   |             |
|-----------|-------------------|-------------|
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| project   |                   | projet      |

**PHASE 9  
FRENCH MOUNTAIN  
SLOPE STABILIZATION  
CAPE BRETON HIGHLANDS  
NATIONAL PARK**

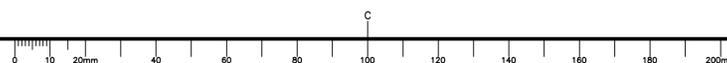
RR1358  
SITE PHOTOGRAPHS

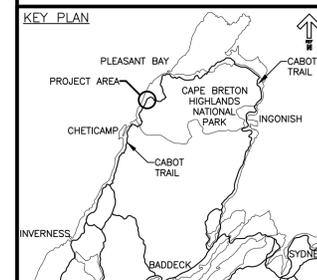
|                     |          |
|---------------------|----------|
| designed J. MATTHEW | conçu    |
| date MARCH 3, 2020  |          |
| drawn D. HENDERSON  | dessiné  |
| date MARCH 4, 2020  |          |
| approved M. MATTHEW | approuvé |
| date JULY 27, 2020  |          |

Tender Soumission  
S. BABSTOCK  
PCA Project Manager Administrateur de projets TPSGC

project number no. du projet  
**669**

drawing no. no. du dessin  
**G05**





|  |
|--|
| RR1372 - SLOPE CONDITIONS  |
| <b>SLOPE GEOMETRY (APPROX.)</b>  |
| SLOPE LENGTH: 120 m  |
| SLOPE HEIGHT: UP TO 30 m   |
| SLOPE ANGLE: 65° TO 70° (AVERAGE)  |
| <b>GEOHAZARD DESCRIPTION</b>   |
| <ul style="list-style-type: none"> <li>RAVELLING FROM THE ROCK FACE.</li> <li>INTERSECTING JOINT SETS DAYLIGHTING OBLIQUELY TO SLOPE FACE FORMING SEVERAL LARGE WEDGES THAT ARE POTENTIALLY UNSTABLE.</li> <li>EROSION OF FRACTURED ROCK. BOULDERS AND OVERBURDEN FROM HEAVILY VEGETATED CREST.</li> </ul> |

| RR1372 - REMEDIAL DESIGN |  |
|--------------------------|--|
| KEY                      | EST. QUANTITY  |
| ---                      | <b>SCALING</b><br>90 HRS MANUAL<br>10 HRS BOOMLIFT   |
|                          | <b>ROCK ANCHORS (FOR DETAILS REFER TO G11)</b><br>13 x Ø 26 mm x 9 m LONG (TENSIONED)*<br>27 x Ø 26 mm x 6 m LONG (TENSIONED)*<br>*LOCATION TO BE DETERMINED IN FIELD,<br>POST-SCALING, AS DIRECTED BY THE DEPARTMENTAL REPRESENTATIVE |
|                          | <b>COMMON EXCAVATION</b><br>550 m <sup>3</sup> MATERIAL REMOVED  |

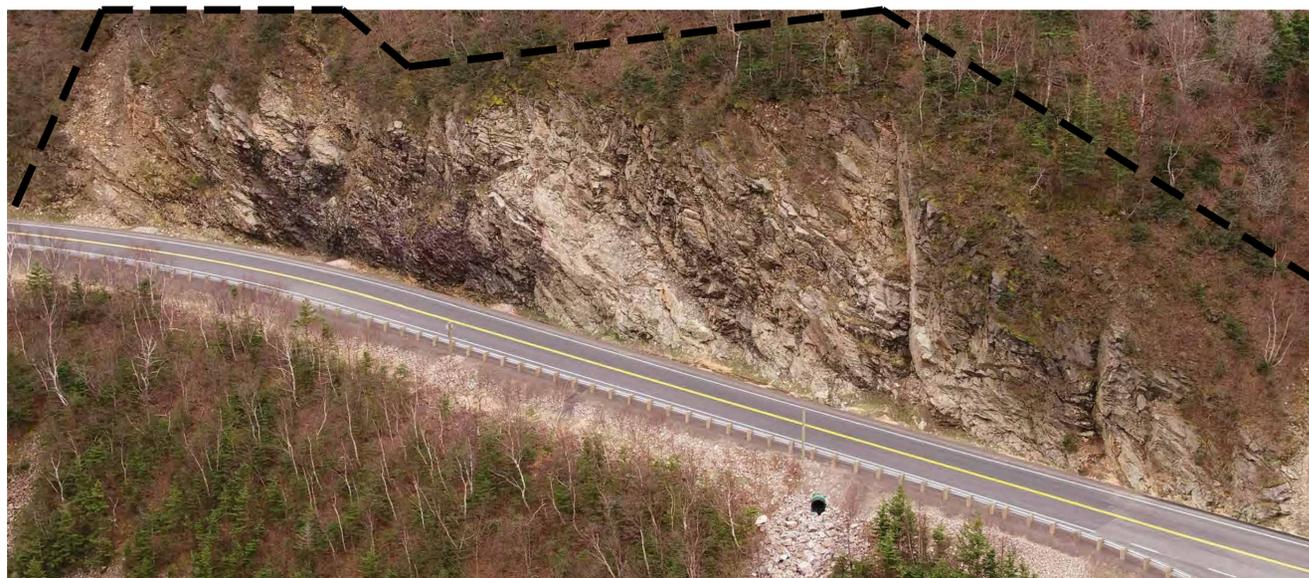


PHOTO 1: AERIAL VIEW RR1372 1  
G06

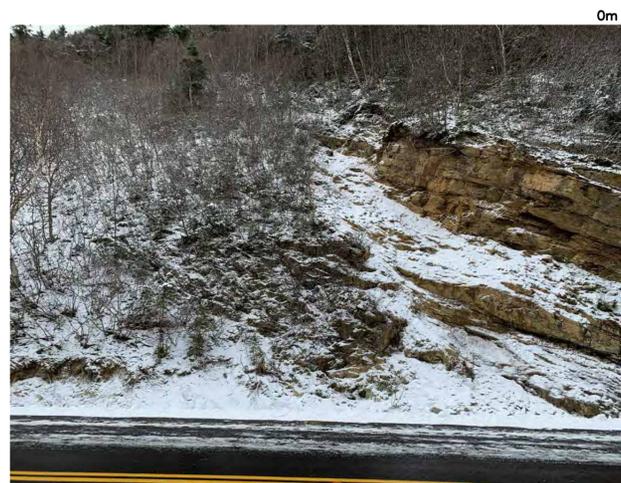


PHOTO 2: RR1372 2  
G06



PHOTO 3: RR1372 3  
G06



PHOTO 4: RR1372 4  
G06



PHOTO 5: RR1372 5  
G06

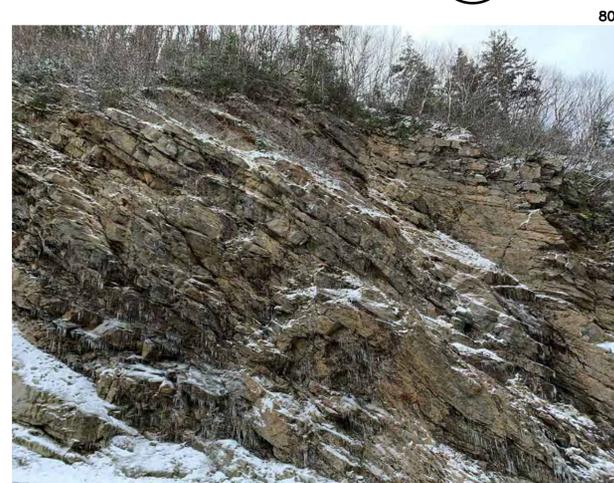


PHOTO 6: RR1372 6  
G06

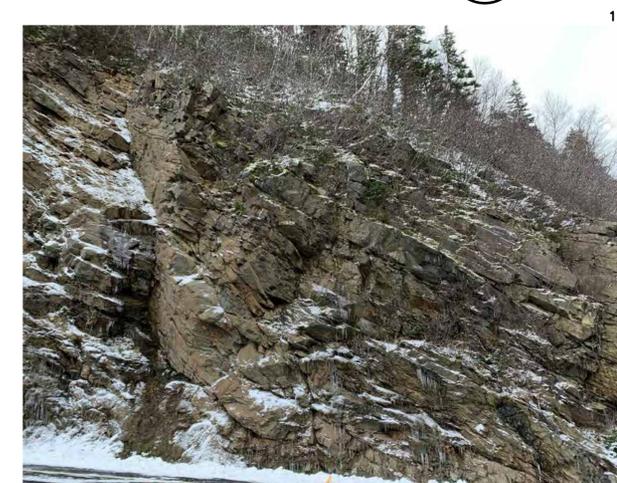


PHOTO 7: RR1372 7  
G06



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| revisions |                   | date        |
| project   |                   | projet      |

**PHASE 9  
FRENCH MOUNTAIN  
SLOPE STABILIZATION  
CAPE BRETON HIGHLANDS  
NATIONAL PARK**

drawing dessin

**RR1372  
SITE PHOTOGRAPHS**

designed J. MATTHEW conçu

date MARCH 2, 2020

drawn D. HENDERSON dessiné

date MARCH 3, 2020

approved M. MATTHEW approuvé

date JULY 27, 2020

Tender Soumission

S. BABSTOCK

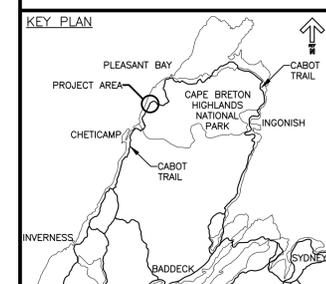
PCA Project Manager Administrateur de projets TPSGC

project number no. du projet

**669**

drawing no. no. du dessin

**G06**



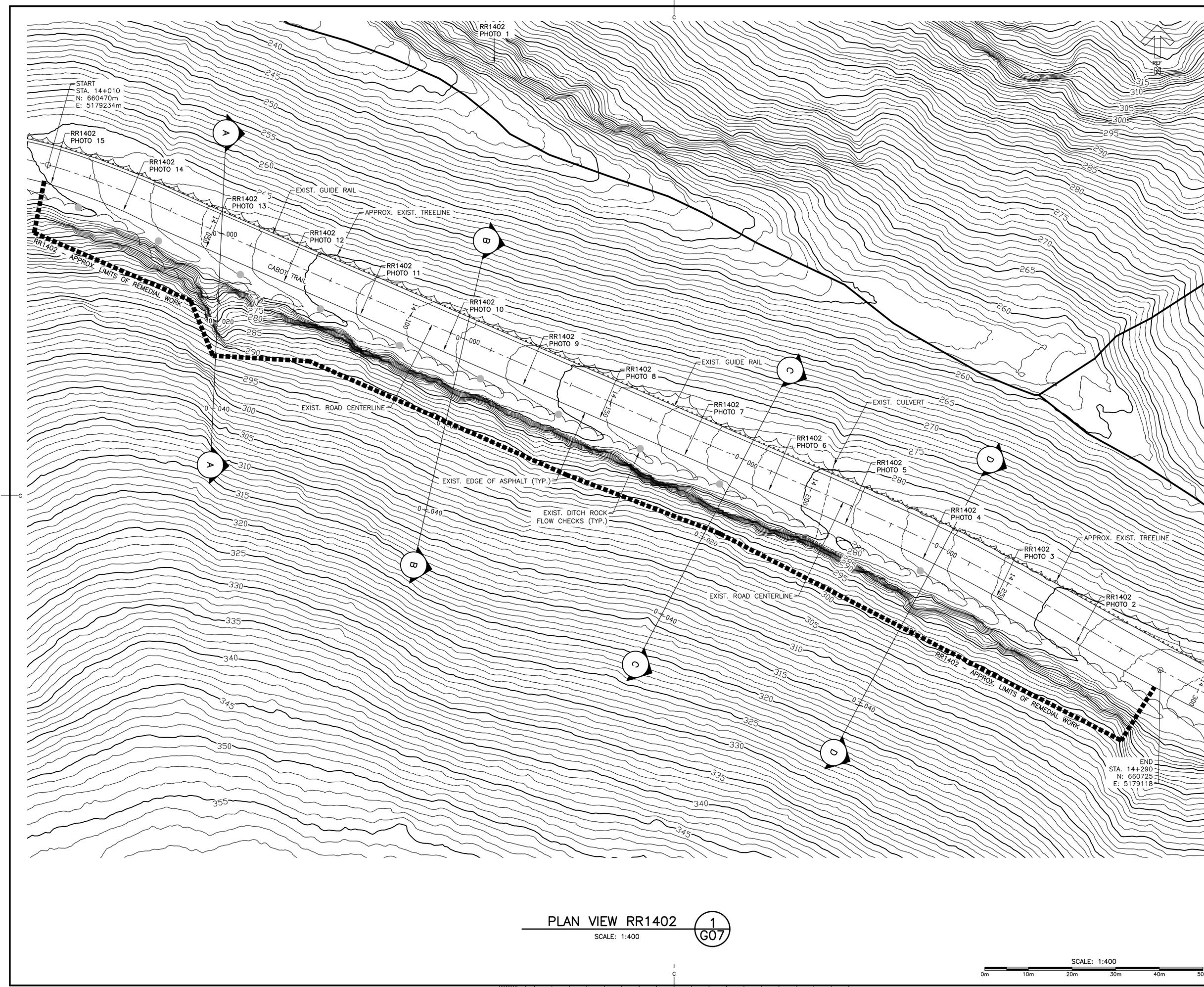
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|-----------|-------------------|-------------|
| 0         | ISSUED FOR TENDER | JUL 27 2020 |
| revisions |                   | date        |
| project   |                   | proj        |

**PHASE 9  
FRENCH MOUNTAIN  
SLOPE STABILIZATION  
CAPE BRETON HIGHLANDS  
NATIONAL PARK**

drawing no. dessin

**RR1402  
SITE PLAN**

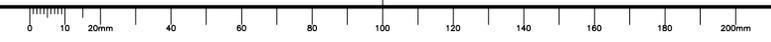
|                     |                                 |               |
|---------------------|---------------------------------|---------------|
| designed            | J. MATTHEW                      | conçu         |
| date                | MARCH 3, 2020                   |               |
| drawn               | D. HENDERSON                    | dessiné       |
| date                | MARCH 4, 2020                   |               |
| approved            | M. MATTHEW                      | approuvé      |
| date                | JULY 27, 2020                   |               |
| Tender              | S. BABSTOCK                     | Submission    |
| PCA Project Manager | Administrateur de projets TPSGC |               |
| project number      | 669                             | no. du projet |
| drawing no.         | G07                             | no. du dessin |

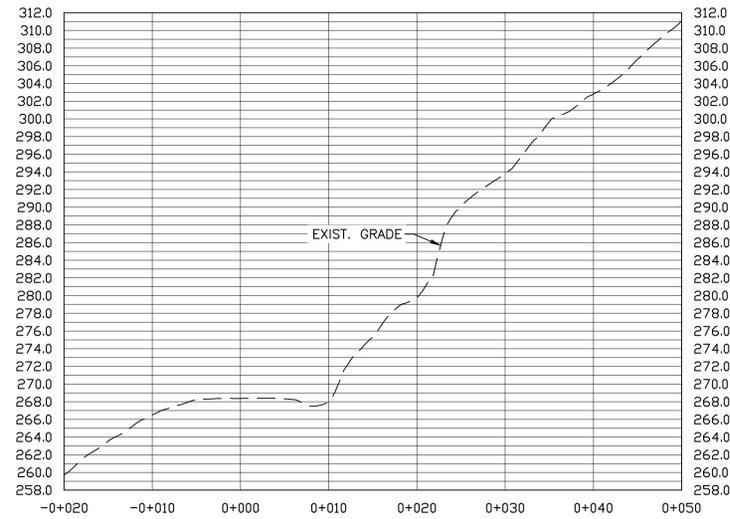
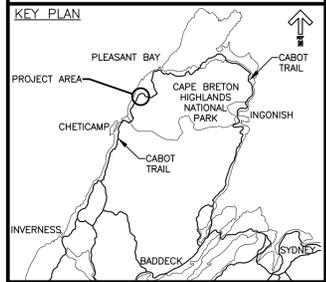


**PLAN VIEW RR1402**

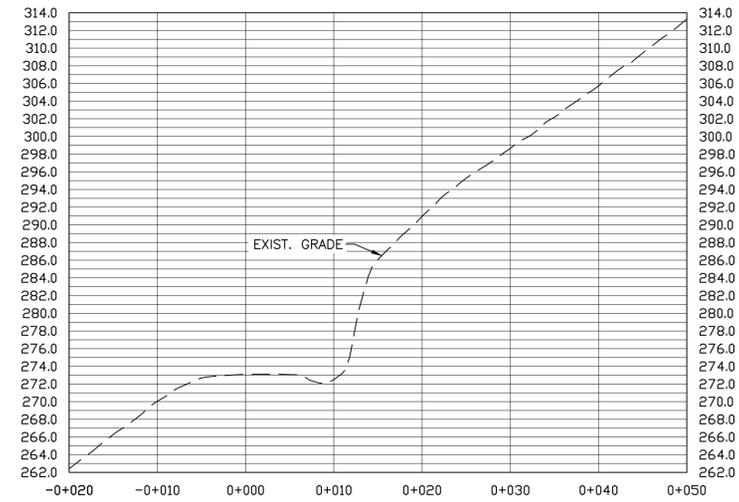
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G07**

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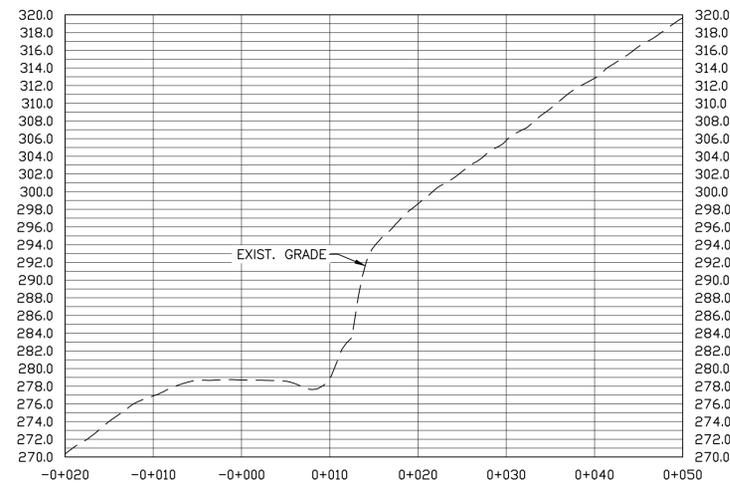




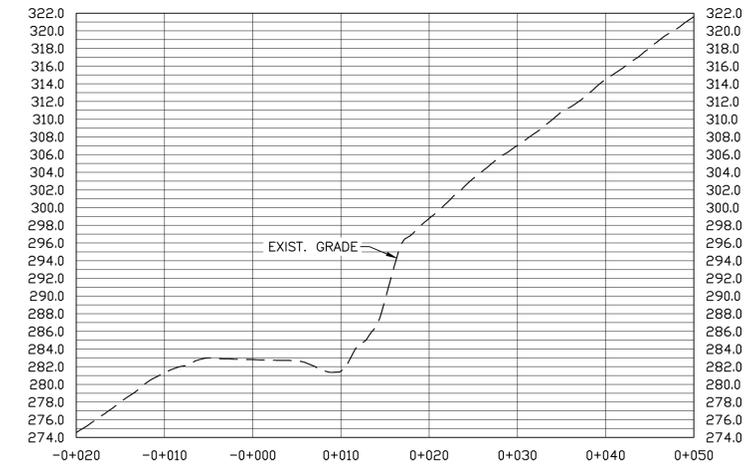
SECTION A 1  
SCALE: H=1:400 V=1:1 G08



SECTION B 2  
SCALE: H=1:400 V=1:1 G08



SECTION C 3  
SCALE: H=1:400 V=1:1 G08



SECTION D 4  
SCALE: H=1:400 V=1:1 G08



|           |                   |              |
|-----------|-------------------|--------------|
| 0         | ISSUED FOR TENDER | JUL. 27 2020 |
| revisions |                   | date         |
| project   |                   | projct       |

**PHASE 9  
FRENCH MOUNTAIN  
SLOPE STABILIZATION  
CAPE BRETON HIGHLANDS  
NATIONAL PARK**

drawing dessin

**RR1402  
SECTIONS**

|                     |          |
|---------------------|----------|
| designed J. MATTHEW | conçu    |
| date MARCH 3, 2020  |          |
| drawn D. HENDERSON  | dessiné  |
| date MARCH 4, 2020  |          |
| approved M. MATTHEW | approuvé |
| date JULY 27, 2020  |          |

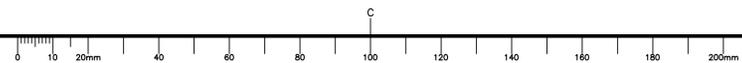
Tender S. BABSTOCK  
PCA Project Manager Administrateur de projets TPSGC

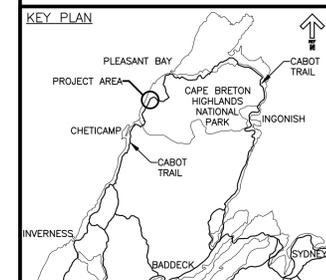
project number no. du projet

**669**

drawing no. no. du dessin

**G08**





|           |                   |             |
|-----------|-------------------|-------------|
| 0         | ISSUED FOR TENDER | JUL 27 2020 |
| revisions |                   | date        |
| project   |                   | projet      |

**PHASE 9  
FRENCH MOUNTAIN  
SLOPE STABILIZATION  
CAPE BRETON HIGHLANDS  
NATIONAL PARK**

drawing dessin

**RR1402  
SITE PHOTOGRAPHS  
SHEET 1 OF 2**

|   |               |
|---|---------------|
| designed J. MATTHEW                                 | conçu         |
| date MARCH 3, 2020                                  |               |
| drawn D. HENDERSON                                  | dessiné       |
| date MARCH 4, 2020                                  |               |
| approved M. MATTHEW                                 | approuvé      |
| date JULY 27, 2020                                  |               |
| Tender S. BABSTOCK                                  | Soumission    |
| PCA Project Manager Administrateur de projets TPSGC |               |
| project number                                      | no. du projet |
| <b>669</b>  |               |
| drawing no.   | no. du dessin |
| <b>G09</b>  |               |

|   |
|---|
| RR1402 – SLOPE CONDITIONS   |
| <b>SLOPE GEOMETRY (APPROX.)</b>   |
| SLOPE LENGTH: 280 m   |
| SLOPE HEIGHT: UP TO 20 m  |
| SLOPE ANGLE: 40° TO 60° (AVERAGE)   |
| <b>GEOHAZARD DESCRIPTION</b>  |
| <ul style="list-style-type: none"> <li>RAVELLING FROM ROCK FACE.</li> <li>FAILURE OF INDIVIDUAL ROCK BLOCKS OR ROCK.</li> </ul> |

| RR1402 – REMEDIAL DESIGN |  |
|--------------------------|--|
| KEY                      | EST. QUANTITY  |
| ---                      | <b>SCALING</b><br>60 HRS MANUAL<br>10 HRS BOOMLIFT   |
|                          | <b>ROCK ANCHORS</b><br>26 x Ø 26 mm x 6 m LONG (UN-TENSIONED)*<br>8 x Ø 26 mm x 9 m LONG (UN-TENSIONED)*<br>*LOCATION TO BE DETERMINED IN FIELD,<br>POST-SCALING, AS DIRECTED BY THE DEPARTMENTAL REPRESENTATIVE |
|                          | <b>COMMON EXCAVATION</b><br>850 m <sup>3</sup> MATERIAL REMOVED  |



PHOTO 1: AERIAL VIEW RR1402 1  
G09



PHOTO 2: RR1402 2  
G09



PHOTO 3: RR1402 3  
G09



PHOTO 4: RR1402 4  
G09



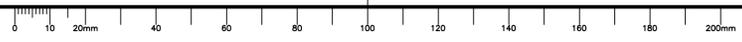
PHOTO 5: RR1402 5  
G09

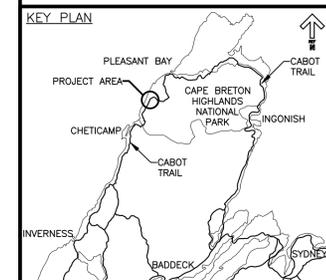


PHOTO 6: RR1402 6  
G09



PHOTO 7: RR1402 7  
G09





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|-----------|-------------------|-------------|
| 0         | ISSUED FOR TENDER | JUL 27 2020 |
| revisions |                   | date        |
| project   | project           |             |

**PHASE 9  
FRENCH MOUNTAIN  
SLOPE STABILIZATION  
CAPE BRETON HIGHLANDS  
NATIONAL PARK**

**RR1402  
SITE PHOTOGRAPHS  
SHEET 2 OF 2**

|                     |                                 |               |
|---------------------|---------------------------------|---------------|
| designed            | J. MATTHEW                      | conçu         |
| date                | MARCH 3, 2020                   |               |
| drawn               | D. HENDERSON                    | dessiné       |
| date                | MARCH 4, 2020                   |               |
| approved            | M. MATTHEW                      | approuvé      |
| date                | JULY 27, 2020                   |               |
| Tender              | S. BABSTOCK                     | Soumission    |
| PCA Project Manager | Administrateur de projets TPSGC |               |
| project number      | 669                             | no. du projet |
| drawing no.         | G10                             | no. du dessin |



PHOTO 8: RR1402 (1) G10



PHOTO 9: RR1402 (2) G10



PHOTO 10: RR1402 (3) G10



PHOTO 11: RR1402 (4) G10



PHOTO 12: RR1402 (5) G10



PHOTO 13: RR1402 (6) G10

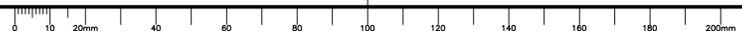


PHOTO 14: RR1402 (7) G10



PHOTO 15: RR1402 (8) G10

C



**GENERAL NOTES:**

1. ALL DIMENSIONS AND COORDINATES ARE METRIC UNITS UNLESS OTHERWISE NOTED.
2. ALL COORDINATES IN ACCORDANCE WITH NAD83 (CSRS) UTM ZONE 20.
3. ALL SITE PHOTOGRAPHS TAKEN NOVEMBER 2019.
4. ALL SITE CONDITIONS, DIMENSIONS AND ELEVATIONS SHOWN ON THE DRAWINGS SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR. CONTRACTOR TO REPORT ANY DISCREPANCIES TO THE DEPARTMENTAL REPRESENTATIVE.

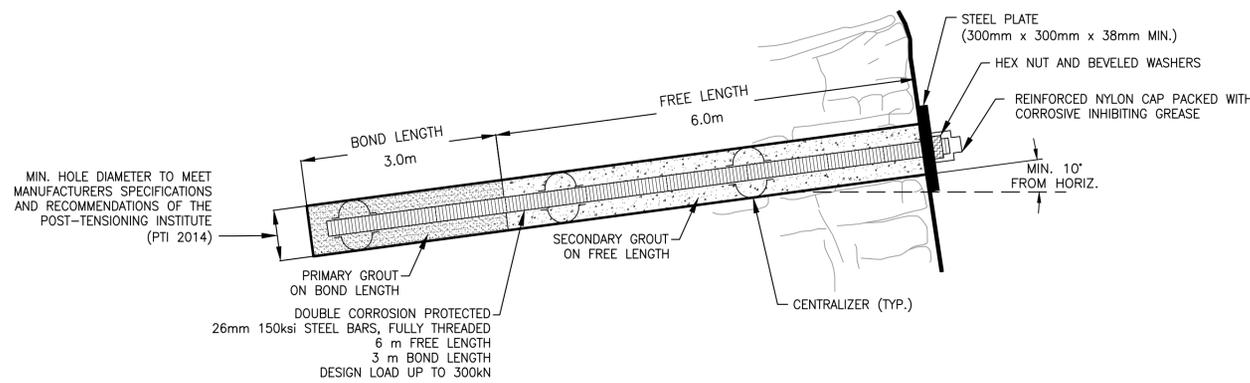
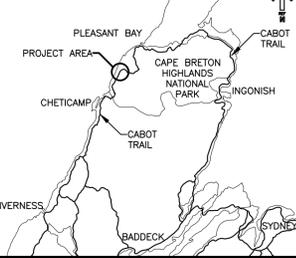
**CONSTRUCTION NOTES:**

1. SCALING
  - 1.1. SEE PROJECT SPECIFICATION SECTION 31 23 20.
2. ROCK ANCHORS
  - 2.1. SEE PROJECT SPECIFICATION SECTION 31 33 13.
  - 2.2. INSTALL ROCK ANCHORS FROM THE TOP DOWN UNLESS OTHERWISE APPROVED BY THE DEPARTMENTAL REPRESENTATIVE.
  - 2.3. CONTRACTOR IS TO ASSUME THE POTENTIAL FOR POOR ROCKMASS CONDITIONS CONTAINING WEAK ROCK, VOIDS, SAND SEAMS AND CLOSELY SPACED FRACTURES, AND TAKE SPECIAL MEASURES INCIDENTAL TO ROCK ANCHOR INSTALLATION TO MAINTAIN OPEN DRILL HOLES, SEAL HOLES AND PREVENT ANCHOR GROUT LOSS, INCLUDING: TEMPORARY CASING TO STABILIZE DRILL HOLE SIDEWALLS, THE USE OF GROUT SOCKS, MODIFICATION OF THE GROUT MIXTURE (ADMIXTURES, ETC.), AND PRE-GROUTING AND RE-DRILLING. SPECIAL MEASURES REQUIRE THE REVIEW AND APPROVAL OF THE DEPARTMENTAL REPRESENTATIVE.
3. EXCAVATION OF SLOPE DEBRIS
  - 3.1. SEE PROJECT SPECIFICATION SECTION 31 23 16.
  - 3.2. ROAD SHOULDERS AND CATCHMENT DITCHES SHALL BE CLEANED OF ALL DEBRIS AND REINSTATED TO PRE-CONSTRUCTION CONDITIONS. TO VERIFY REINSTATEMENT OF CATCHMENT DITCHES, A SURVEY SHALL BE COMPLETED PRIOR TO THE START OF WORK AND AFTER THE COMPLETION OF EXCAVATION ACTIVITIES. AS A MINIMUM, THE SURVEY SHALL INCLUDE THE COLLECTION OF SECTIONS AT 5 m STATIONS (EDGE OF ASPHALT, TOP OF FORESLOPE, TOE OF FORESLOPE, TOE OF BACKSLOPE) AND RELEVANT FEATURES (CHECK DAMS, CULVERTS, ETC.).
  - 3.3. ALL CULVERTS SHALL BE IDENTIFIED AND PROVIDED WITH ADEQUATE PROTECTION TO PREVENT DAMAGE.
  - 3.4. ALL BURIED UTILITIES WITHIN THE ROAD SHOULDER SHALL BE IDENTIFIED AND PROTECTED WITH BLASTING MATS IN AREAS OF ACTIVE SLOPE WORK TO PREVENT DAMAGE.
  - 3.5. ALL DITCH CHECK DAMS TO BE IDENTIFIED AND PROTECTED / REINSTATED POST-CONSTRUCTION.
  - 3.6. EXISTING ASPHALT AND RAP SHOULDER SURFACES TO BE PROTECTED DURING THE WORK.
  - 3.7. ANY DAMAGE AS A RESULT OF THE CONTRACTOR MUST BE REPAIRED PRIOR TO CONTRACT COMPLETION AT NO COST TO PCA.

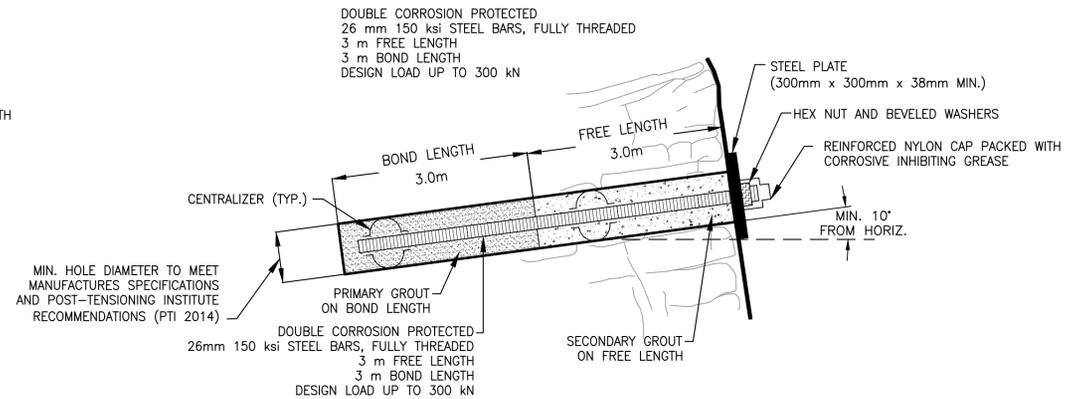
**CONSTRUCTION NOTES CONTINUED:**

4. CONCRETE BUTTRESS
  - 4.1. SEE PROJECT SPECIFICATION SECTION 32 32 13.
  - 4.2. PARTIALLY COMPLETED CONCRETE BUTTRESS AT RR1303 TO BE COMPLETED AS PER PROJECT DRAWING G12 AND PROJECT SPECIFICATIONS. THE SLOPE FACE WAS SCALED AND VERTICAL BUTTRESS DOWELS (SHEAR PINS) WERE INSTALLED AT THE TOE OF THE PROPOSED BUTTRESS DURING PREVIOUS WORK. ALL REMAINING WORK TO BE COMPLETED BY THE CONTRACTOR (INCLINED BUTTRESS DOWELS, FORMWORK, REINFORCED CONCRETE, ETC.).
  - 4.3. CONCRETE PIGMENTATION TO REDUCE COLOUR CONTRAST WITH THE ADJACENT ROCK WAS PREVIOUSLY SELECTED. CONTRACTOR SHALL USE PREVIOUSLY APPROVED PIGMENT WITH AN APPROVED COMPATIBLE CONCRETE MIX, OR MAY, AT NO COST TO PCA, PROPOSE AN ALTERNATE PIGMENT SUBJECT TO THE REQUIREMENTS OF SECTION 32 32 13.

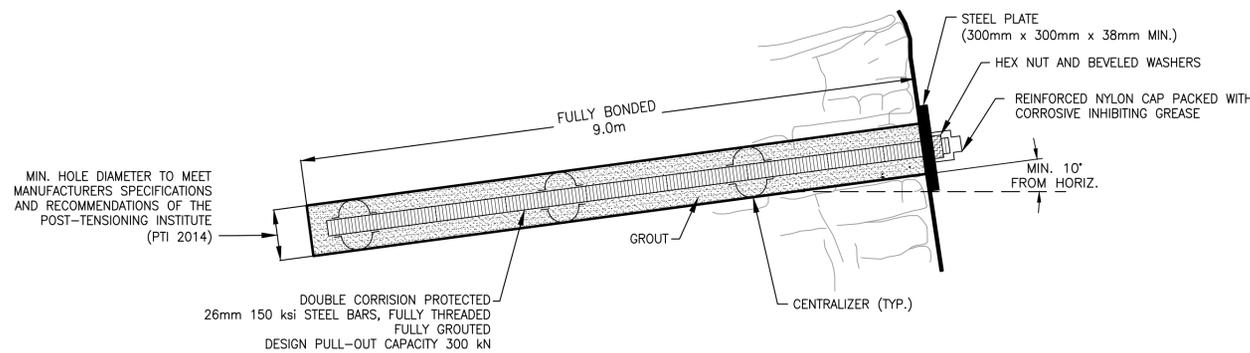
**KEY PLAN**



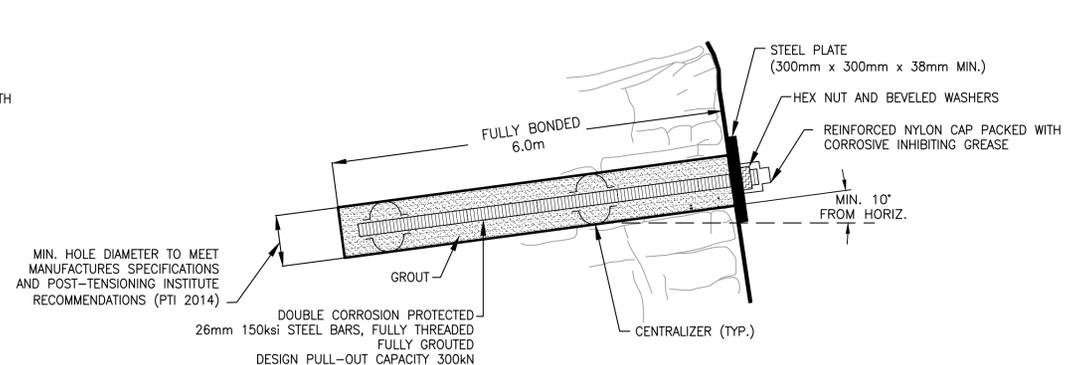
**9m LONG 26mm DIA. TENSIONED ROCK ANCHOR (1A)**  
(NOT TO SCALE) **G11**



**6m LONG 26mm DIA. TENSIONED ROCK ANCHOR (2A)**  
(NOT TO SCALE) **G11**



**9m LONG 26mm DIA. UN-TENSIONED ROCK ANCHOR (1B)**  
(NOT TO SCALE) **G11**



**6m LONG 26mm DIA. UN-TENSIONED ROCK ANCHOR (2B)**  
(NOT TO SCALE) **G11**

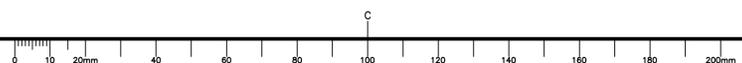


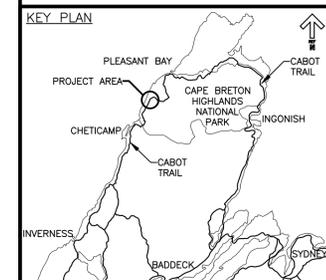
|           |                   |             |
|-----------|-------------------|-------------|
| 0         | ISSUED FOR TENDER | JUL 27 2020 |
| revisions |                   | date        |
| project   |                   | projct      |

**PHASE 9  
FRENCH MOUNTAIN  
SLOPE STABILIZATION  
CAPE BRETON HIGHLANDS  
NATIONAL PARK**

**CONSTRUCTION DETAILS  
SHEET 1 OF 2**

|                     |                                 |               |
|---------------------|---------------------------------|---------------|
| designed            | J. MATTHEW                      | conçu         |
| date                | MARCH 3, 2020                   |               |
| drawn               | D. HENDERSON                    | dessiné       |
| date                | MARCH 4, 2020                   |               |
| approved            | M. MATTHEW                      | approuvé      |
| date                | JULY 27, 2020                   |               |
| Tender              | S. BABSTOCK                     | Soumission    |
| PCA Project Manager | Administrateur de projets TPSGC |               |
| project number      | 669                             | no. du projet |
| drawing no.         | G11                             | no. du dessin |



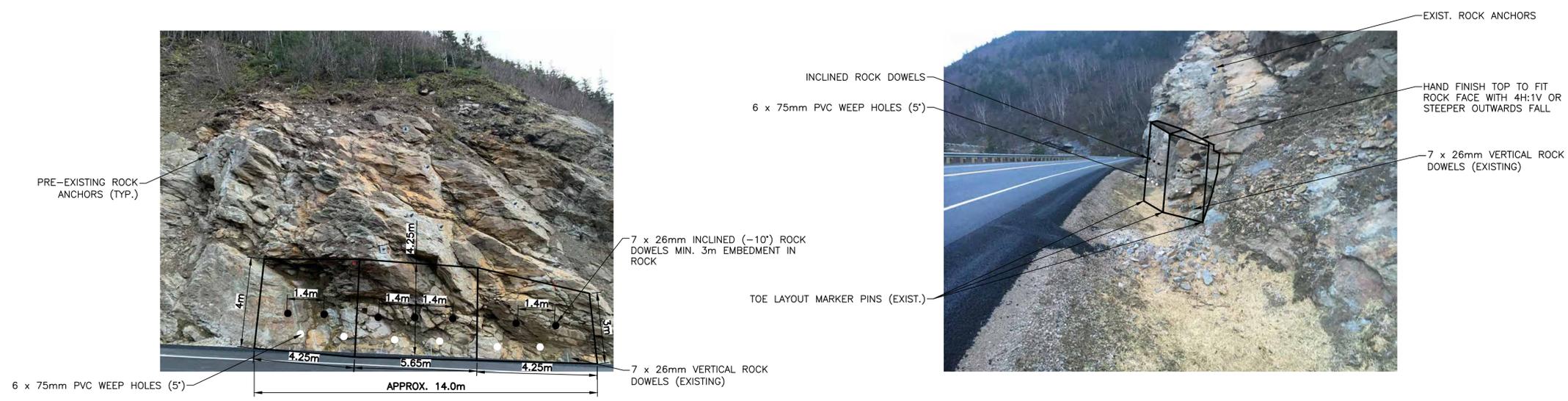


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|-----------|-------------------|-------------|
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project  
**PHASE 9  
 FRENCH MOUNTAIN  
 SLOPE STABILIZATION  
 CAPE BRETON HIGHLANDS  
 NATIONAL PARK**

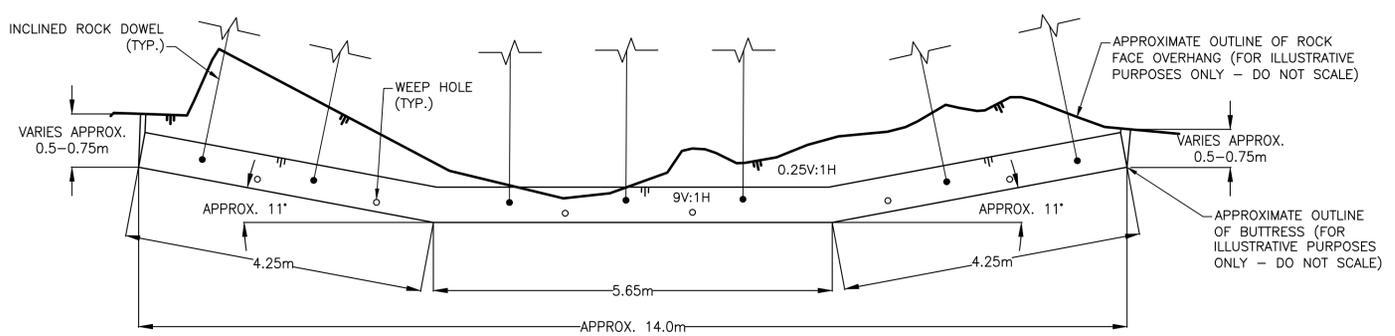
drawing  
**CONSTRUCTION DETAILS  
 SHEET 2 OF 2**

|                     |                                 |               |
|---------------------|---------------------------------|---------------|
| designed            | J. MATTHEW                      | conçu         |
| date                | MARCH 3, 2020                   |               |
| drawn               | D. HENDERSON                    | dessiné       |
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| approved            | M. MATTHEW                      | approuvé      |
| date                | JULY 27, 2020                   |               |
| Tender              | S. BABSTOCK                     | Soumission    |
| PCA Project Manager | Administrateur de projets TPSGC |               |
| project number      | 669                             | no. du projet |
| drawing no.         | G12                             | no. du dessin |

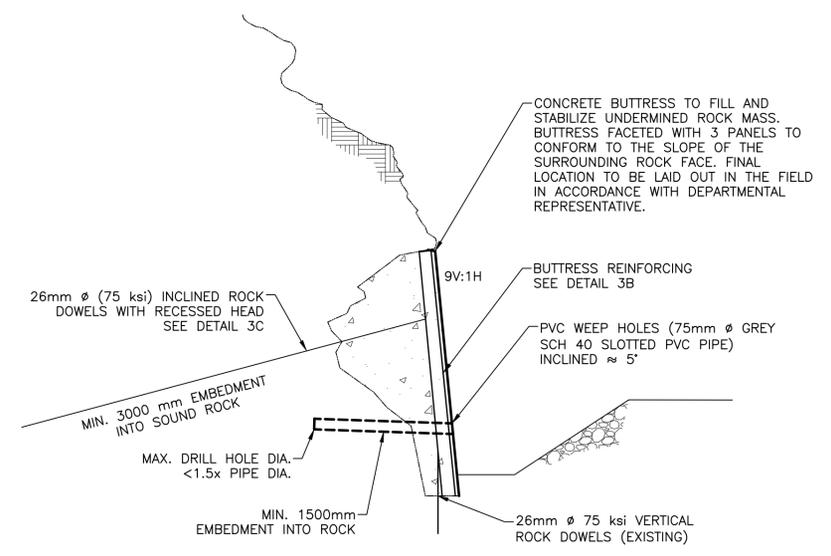


**BUTTRESS SCHEMATIC FRONT VIEW** (1) G12

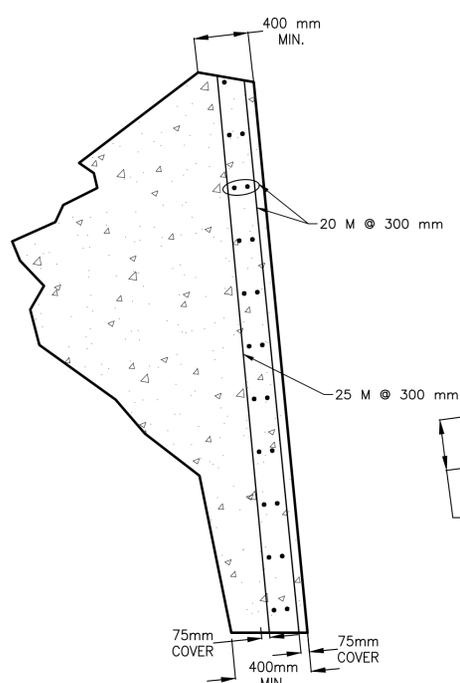
**BUTTRESS SCHEMATIC SIDE VIEW** (2) G12



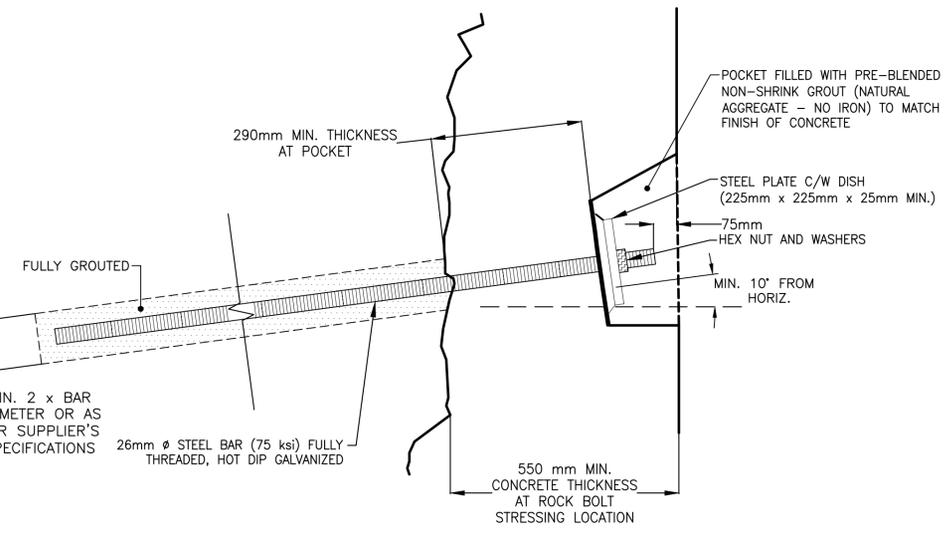
**BUTTRESS SCHEMATIC TOP VIEW** (3) G12



**REINFORCED CONCRETE BUTTRESS DETAIL (PROFILE VIEW)** (4A) G12



**REINFORCING DETAIL** (4B) G12



**ROCK DOWEL DETAIL** (4C) G12

