

PROVINCE OF ONTARIO—Continued.

LIST of Officers in the Active Militia who have obtained Certificates at the School of Military Instruction at Toronto during the Year 1880.

Name and Rank.	Corps.	First-Class Certificates and Dates.	Second-Class Certificates and Dates.
Williams, E. E., Lieutenant.....	31st Battalion .....	.....	March 6
Wolfe, James, Lieutenant	36th do .....	.....	Feb. 20
Vosburgh, W. A., Lieutenant.....	19th do .....	.....	March 6

RECAPITULATION.

First-Class Certificates.....	0
Second-Class do	37
Total.....	37

PROVINCE OF QUEBEC.

LIST of Officers in the Active Militia who have obtained Certificates at the School of Military Instruction at Montreal during the Year 1880.

Name and Rank.	Corps.	First Class Certificates and dates.	Second Class Certificates and dates.
Abbott, H. A., 2nd Lieutenant.....	3rd Battalion.....	.....	13th March.
Anderson, J. D., 2nd Lieutenant.....	6th do .....	.....	13th do
Barry, Denis, Lieutenant.....	85th do .....	.....	13th do
Bonhomme, J. B.	64th do .....	.....	13th do
Bourk, Alphonse, Lieutenant.....	55th do .....	.....	1st do
Cadieux, J. Bte., Lieutenant.....	64th do .....	.....	13th do
Campbell, John, Lieutenant.....	54th do .....	.....	23rd February
Campbell, Stewart, 2nd Lieutenant.....	1st do .....	.....	23rd do
Clerk, Alton F., 2nd Lieutenant.....	1st do .....	.....	6th March.
Coursol, C. J., 2nd Lieutenant.....	3rd do .....	.....	6th February.
D'Amour, Charles, Lieutenant.....	76th do .....	.....	6th March.
D'Aoust, Octave, 2nd Lieutenant.....	64th do .....	.....	13th do
Duhaime, Gaudiose, Lieutenant.....	84th do .....	.....	1st do
Eames, John, 2nd Lieutenant.....	54th do .....	.....	13th do
Gagnier, Elias, Lieutenant.....	76th do .....	.....	6th do
Gilbert, John, Captain.....	50th do .....	.....	23rd February.
Giroux, C. A., 2nd Lieutenant.....	65th do .....	.....	6th March.
Giroux, Joseph, Lieutenant.....	65th do .....	.....	23rd February.
Godin, L. W., 2nd Lieutenant.....	83rd do .....	.....	6th do
Hackwell, Lot, Lieutenant.....	79th do .....	.....	6th March
Harte, J. H. M., 2nd Lieutenant.....	6th do .....	.....	23rd February.
Heriot, J. C. A.....	53rd do .....	.....	23rd do
Holland, L. J. M., 2nd Lieutenant.....	53rd do .....	.....	23rd do
Kimball, H. F., 2nd Lieutenant.....	60th do .....	.....	13th March.
Laberge, Francis, 2nd Lieutenant.....	76th do .....	.....	1st do
Lacasse, F. X. O., Lieutenant.....	83rd do .....	.....	1st do
Laidlaw, J. W., 2nd Lieutenant.....	6th do .....	.....	13th do
Lebel, Ernest, Lieutenant.....	Temiscouata Prov'l. Batt.....	.....	1st do
Leduc, A., Lieutenant.....	64th Battalion.....	.....	13th do
Leprohon, C. de B., 2nd Lieutenant.....	1st do .....	.....	23rd February.
Levesque, Chas, Lieutenant.....	86th do .....	.....	1st March.
Mallette, Alex., Lieutenant.....	76th do .....	.....	6th do
Mallette, Antoine, Lieutenant.....	76th do .....	.....	6th do
Martin, J. B. A., Lieutenant.....	65th do .....	.....	6th February.
Michaud, A. T., Lieutenant.....	Kamouraska Prov'l. Batt.....	.....	23rd do
McMartin, John, 2nd Lieutenant.....	11th Battalion.....	.....	13th March.
Paré, Cyprien, Lieutenant.....	81st do .....	.....	6th do
Phelan, A. E., Lieutenant.....	83rd do .....	.....	23rd February.
Piché, E. G., 2nd Lieutenant.....	65th do .....	.....	6th March.
Potvin, Alfred, 2nd Lieutenant.....	Kamouraska Prov'l. Batt.....	.....	23rd February
Rapin, Ludger, 2nd Lieutenant.....	64th Battalion.....	.....	13th March
Redpath, W. Wood, 2nd Lieutenant.....	5th do .....	.....	13th do
Reid, Zotique, 2nd Lieutenant.....	76th do .....	.....	1st do
Rhault, David, 2nd Lieutenant.....	80th do .....	.....	23rd February
Robert, J. C., Lieutenant.....	65th do .....	.....	6th do
Robinson, Jas., Captain.....	60th do .....	.....	6th March.

PROVINCE OF QUEBEC—*Continued.*

LIST of Officers in the Active Militia who have obtained Certificates at the School of Military Instruction at Montreal during the Year 1880.

Name and Rank.	Corps.	First Class Certificates and dates.	Second Class Certificates and dates.
Turpin, W. J., Quartermaster	1st Battalion .....	.....	13th March.
Twose, Stephen, 2nd Lieutenant	53rd do .....	.....	23rd February.
Winslow, H. H., 2nd Lieutenant	53rd do .....	.....	23rd do

RECAPITULATION.

First Class Certificates	0
Second do	49
Total	49

PROVINCE OF NEW BRUNSWICK.

LIST of Officers and Non-Commissioned Officers in the Active Militia, and Candidates for Commissions therein at the School of Military Instruction at St. John, during the year 1880.

Name and Rank.	Corps.	First Class Certificate and Date.	Second Class Certificate and Date.
Chamberlain, W. M., 2nd Lieut.	74th Battalion .....	.....	6th March.
Coffey, Thos. L., 2nd Lieut.	St. George Infantry Co. ....	.....	do
Harding, L. R., 2nd Lieut.	67th Battalion .....	.....	do
Hayward, E. H., Lieut.	74th do .....	.....	do
Kinnear, John M., 2nd Lieut.	74th do .....	.....	do
Lander, T. W., Captain	N. B. Brigade Garrison Artill. ....	.....	do
McGee, Robt. W., Lieut.	St. George Infantry Co. ....	.....	do
McMullin, John, Lieut.	St. Stephen Infantry Co. ....	.....	do
Simonds, E. I., 2nd Lieut.	62nd Battalion .....	.....	do
Sorell, Arthur, 2nd Lieut.	62nd do .....	.....	do
Steven, W. A. D., 2nd Lieut.	N. B. Brigade Garrison Artill. ....	.....	do
Stevenson, Robt., 2nd Lieut.	St. Stephen Infantry Co. ....	.....	do

APPENDIX No. 7.

CERTIFICATES OF BOARDS OF EXAMINERS.

LIST of Officers of the Active Militia, and of Candidates for Commissions who have obtained Certificates from Boards of Examiners therein, during the Year 1880.

Name and Rank.	Corps.	First-Class Certificates and date.	Second-Class Certificates and date.
PROVINCE OF ONTARIO.		1880.	1880.
<i>Infantry Certificates.</i>			
Boulton, John, 2nd Lieutenant	13th Battalion		26th Nov.
Burnham Fred, Lieutenant	28th do		18th Aug.
Carroll, Robt., Lieutenant	27th do		31st Dec.
Cheyne, George, Lieutenant	Windsor Infantry Company		18th Aug.
Clarke, Robt., Lieutenant	28th Battalion	18th Aug.	
Cowan, J. L., Lieutenant	29th do		do
Davey, J. R., Captain	59th do	11th Aug.	
Freeman, W. F., Lieutenant	20th do		26th Nov.
Gibson, Fred. J., 2nd Lieutenant	13th do		do
Light, A. T., Lieutenant	59th do	11th Aug.	
Lindsay, W. H., Captain	25th do	18th do	
MaeFarlane, R., Lieutenant	29th do		18th Aug.
Milden, Geo., Lieutenant	59th do	11th Aug.	
Morphy, H. B., 2nd Lieutenant	28th do		do
Moscrip, W. C., Lieutenant	28th do		do
Nichols, G. I., 2nd Lieutenant	59th do	11th Aug.	
Osborne, R. B., 2nd Lieutenant	13th do		26th Nov.
Petrie, John, Lieutenant	7th do	6th Oct.	
Scott, C. S., 2nd Lieutenant	13th do		do
White, H. A. L., Captain	28th do	18th Aug.	
White, W. W., Captain	30th do	do	
PROVINCE OF QUEBEC.			
<i>Cavalry Certificates.</i>			
Bailey, A. A., Quarter-Master	5th Provisional Regiment	5th Nov.	20th Oct.
Barr, James, Captain	6th do	15th do	
Bush, E. C., Captain	6th do		15th Nov.

LIST of Candidates for Commissions, &c.—Continued.

Name and Rank.	Corps.	First-Class Certificates and date.	Second-Class Certificates and date.
PROVINCE OF QUEBEC—Continued.		1880.	1880.
<i>Cavalry Certificates—Continued.</i>			
Derrick, H. H., Sergeant	6th Provisional Regiment		15th Nov.
Kincaid, R. M., Sergeant	6th do		do
Learned, J. F., Lieutenant	5th do	5th Nov.	20th Oct.
Locke, F. W., Sergeant	5th do		do
Mansur, D. A., Lieutenant	5th do	5th Nov.	do
Moulton, J. W., 2nd Lieutenant	5th do	do	do
Pope, L. C., Captain	5th do	do	do
Shepard, C. W., Captain	5th do	20th Oct.	
Stimson, F. S., Captain	5th do	5th Nov.	do
Wood, Israel, Captain	5th do	20th Oct.	
<i>Infantry Certificates.</i>			
Ahern, G. V., 2nd Lieutenant	3rd Battalion		4th June.
Bagg, R. S. C., Captain	5th do	28th April.	
Baudet, G. L. A., Lieutenant	65th do		10th Nov.
Beaudry, A., Captain	81st do	15th March.	
Bell, Richard E., Captain	79th do	29th Dec.	16th Jan.
Bisaillon, E. M., 2nd Lieutenant	21st do		31st March.
Bourassa T., Captain	85th do		do
Bowen, C. M., Sergeant	52nd do		19th March.
Brooks, H. L., Sergeant	79th do		16th Jan.
Brooks, Lyman, Captain	79th do	29th Dec.	
Brown, A. J., 2nd Lieutenant	79th do		do
Brown, J. McC., Captain	79th do		do
Caverhill, F., Captain	5th do	28th April.	
Cross, Selkirk, Lieutenant	5th do	do	
D'Amour, Chas. Lieutenant	76th do	31st March.	
Davison, A., 2nd Lieutenant	52nd do		19th March.
Des Rivières, A., Captain	65th do		10th Nov.
Foucher, J. U., Major	83rd do	30th Jan.	
Galbraith, Joseph, Captain	79th do	29th Dec.	
Galbraith, Jos. R., 2nd Lieutenant	79th do	do	
Galbraith, W. J. A., Sergeant	79th do		16th Jan.
Geddes, U. G., Captain	5th do	28th April.	
Giroux, Jos., Lieutenant	65th do	31st March.	
Globensky, Eug., 2nd Lieutenant	65th do		10th Nov.
Hunt, A. F., Lieutenant	8th do	3rd March.	
Joly, E. G., 2nd Lieutenant	8th do		9th July.
Knowlton, W. K., Lieutenant	79th do	29th Dec.	16th Jan.
Lefebvre, M., Lieutenant	85th do		31st March.

LIST of Candidates for Commissions, &c.—Continued.

Name and Rank.	Corps.	First-Class Certificate and date.	Second-Class Certificate and date.
PROVINCE OF QUEBEC—Continued.		1880.	1880.
<i>Infantry Certificates—Continued.</i>			
Lewis, L. L. M., Lieut.....	5th Battalion.....	28th April.	
Macfarlane, W., Lieutenant.....	52nd do		19th March.
Martin, J. B. A., Lieutenant.....	65th do	31st March.	
Martin, S. S., 2nd Lieutenant.....	79th do		16th Jan.
Martin, Wilfred, 2nd Lieutenant.....	85th do		31st March.
McConville, L. A., Major.....	83rd do	30th Jan.	
McGrail, O. J., Sergeant.....	79th do		16th Jan.
McLeod, R., 2nd Lieutenant.....	58th do		20th Oct.
Paterson, R. MacD., 2nd Lieutenant.....	3rd do		27th April.
Picard, J. O., Lieutenant.....	58th do		5th Nov.
Prevost, Hector, Captain.....	65th do		10th do
Robert, Jos. C., Lieutenant.....	65th do	28th April.	
Rouillard, C. C., Captain.....	65th do	30th Jan.	
Roy, Alex'r, 2nd Lieutenant.....	65th do		10th Nov.
Sincennes, D., 2nd Lieutenant.....	1st do		31st March.
Sorel, Aimé, Sergeant.....	85th do		31st do
Sweet, G. L., Col.-Sergt.....	52nd do		19th do
Sylvestre, J. H. A., Lieutenant.....	21st do		31st do
Thibaudeau, A. A., 2nd Lieutenant.....	65th do		10th Nov.
Whitcombe, H. N., 2nd Lieutenant.....	79th do	29th Dec.....	16th Jan.
Whitehead, A. J., Lieutenant.....	79th do	do	do
PROVINCE OF NOVA SCOTIA.			
Kenny, E. G., 2nd Lieutenant.....	66th do		9th April.
Mackinlay, A., 2nd Lieutenant.....	66th do		do
Mackinlay, C. H., 2nd Lieutenant.....	66th do		do
Silver, H. St. C., 2nd Lieutenant.....	63rd do		do
Walsb, T. J., Captain.....	63rd do	22nd June.	

RECAPITULATION.

First-Class "Cavalry" Certificates.....	9
Second-Class do	10
First-Class "Infantry" do	31
Second-Class do	48
Total.....	98

APPENDIX No. 8.

ROYAL MILITARY COLLEGE OF CANADA.

YEARLY REPORT 1880.

From Commandant Royal Military College, to Major-General R. Luard, President Royal Military College, and commanding Militia of Canada.

KINGSTON, Ont., 13th November 1880.

SIR,—(1) I have the honour to submit the following report of the Royal Military College of Canada, for the year 1880:—

Appendices—Subjects referred to.

(2) Addendum 1.—Professional tour of Cadets.

Addendum 2.—Report on Engineer Corps, 2nd and 5th Military Districts, attached for instruction to Royal Military College.

Appendix A.—List of Cadets who have joined the College during 1880, shewing establishments in which they were educated, &c., &c.

Appendix B.—List of Cadets to whom promotions, prizes, or honorary distinctions have been awarded during 1880.

Appendix C 1

do C 2

do C 3

do C 4

do C 5

do C 6

do C 7

do C 8

Gives full information relative to the graduating class of the June, 1880, examination, and of the term work and intermediate examination of 1880 to that date.

Appendix D.—Shows the Cadets arranged according to their present classes, and their relative position in those classes.

Appendix E.—Is a complete list of the Cadets on the College Rolster, 15th September, 1880, with detailed information relative to each.

Appendix F 1

do F 2

do F 3

Are the syllabus of the several courses of instruction.

&c., &c.

Details of numbers of Cadets and Classes.

(3) The total number of Cadets on the roll at the commencement of the year 1880, was 92, divided as follows:—

1st Class.	{ Senior Division.....	11
	{ Junior do	8
2nd Class.	{ Senior do	6
	{ Junior do	10
3rd Class.	{ Senior do	11
	{ Junior do	16
4th Class.	{ Senior do	13
	{ Junior do	17

Recruits.

(4) Seventeen candidates having successfully passed the entrance examination held in December, 1879, joined the College as Cadets in February, 1880, and sixteen additional candidates having passed the entrance examination in June, 1880, joined the College in September, 1880.

The standard of education of these gentlemen, especially those who joined in February, continues to exhibit the general improvement which has marked the Cadets who have recently joined.

Casualties.

Three Cadets failed in the examination held in June, 1880, to come up to the required standard of their respective terms, and in accordance with regulations, were withdrawn from the College.

One Cadet who had completed his full term of four years' service, failed to qualify at his final examination in June, and, consequently, left the College *without a Certificate of Graduation*.

Three Cadets have been permitted to voluntarily withdraw from the College during the year on payment of the regulated sum of \$100, for the privilege of exemption from completing the full term of their engagement.

During the same period two Cadets have been withdrawn on account of medical unfitness for further service.

Change of Organization Carried Out as Approved.

(6) The following changes of organization recommended by the Board of Visitors for 1879-80, and also in my annual report for 1879, and in previous reports; having been approved, have been carried into effect during the year.

A.—Approximation of maximum and minimum age for candidates for admission to Royal Military College.

B.—Substitution of annual for semi-annual examinations for admission to the college.

C.—Appointment of officers of the Instructional staff to the charge of companies of Cadets.

(7) The successful candidates at the examination which took place in June were (in accordance with the new regulations), within the limits of 15 and 18 years, on the 1st January *preceding* that examination, instead of 15 and 20 on the 1st day of the *month* (June) of examination as heretofore; and from September, 1880, inclusive, 15½ and 19½ will be the extreme limit of age for Cadets at the date of their joining the Royal Military College, viz: in September of each year.

The first of the annual, instead of the semi-annual, competitive examination for admission to the College, took place on June, 1880.

The titles of the staff now correspond with the duties required to be performed, and the incongruity of these which hitherto existed, and which (as is always the case, but especially in military organizations) prejudicially affected the college, has ceased.

(8) The full benefits to be derived from the changes will not be attained until the transitional stage necessary to introduce and perfect the system has passed over, but the results so far have in every respect realized the anticipated benefits, and have proved to be thoroughly satisfactory, and the obvious advantages, pointed out by the Board of Visitors, attained in each instance.

The college is now for the first time in a sound state as regards organization, and may be considered to have passed through its inchoate period, and to have thrown off the conditions necessary to, but only fitted for, its early stages of development.

(9) The changes from semi-annual to annual entrance examinations, enabled the number of classes to be reduced from eight to four.

To complete this change at as early a date as possible, and so shorten the period of transition, the former eight classes have been designated senior and junior divisions of four classes, and arrangements made by which the junior divisions will be gradually eliminated, and the complete amalgamation of divisions into four unified classes be consummated in June, 1881.

Performance of Duty by Cadet N.-C. Officers.

(10) The knowledge and performance of their duties by the N.-C. officers has been much more satisfactory during this than in previous years, and the increasing sense of duty and of responsibility of office which is developing among them is very noticeable.

This is attributable, not only to the increased experience of the Cadet N.-C. officers, but largely to the organization into distinct and separately commanded companies.

In consequence of this I have been able to augment the privileges, and to entrust increased disciplinary powers to the senior ranks of the Cadet N.-C. officers with good results.

Conduct of Cadets.

(11) The conduct of the cadets during the year has been (with one exception) thoroughly satisfactory.

I have also to notice two cases of copying at examinations.

I trust that the punishment inflicted for this offence will prevent a recurrence of conduct alike dishonorable in itself and fatal to the prospects of those who allow themselves to commit it.

Theoretical Course of Instruction—Subjects Consisting of—Now Complete.

(12) During the current year it has been possible, for the first time, to commence for each class the course of theoretical instruction as originally intended, and it will now take but a short time to perfect the working in each.

The separate subjects of theoretical instruction have been:—

Mathematics and Mechanics.

Geometrical Drawing and Descriptive Geometry.

Fortification and Military Engineering.

Theory and Construction of Artillery.

Strategy, Tactics, Military Administration and Law.

Military Topography and Surveying.

Reconnaissance.

French.

German.

Chemistry.

Physics.

Geology.

Freehand Drawing and Painting.

Civil Engineering.

Architecture.

Practical Course of Instruction—Subjects Consisting of—Partially Incomplete.

(13) The practical course of instruction during the year has been:—

Infantry, including.... { Rifle instruction, guard mounting, out-post duty, route marching, infantry and cavalry sword exercises.

Artillery, including.... { Field and garrison gun drill, movement of heavy ordnance.

Engineer drills, including.. { Model and full size bridging, signalling, sand modelling, tracing batteries, &c., construction of obstacles, &c., &c.

Gymnastics, including boxing and fencing.
Swimming.

The cadets have been put through their annual course (2 rounds common, 1 shrapnel shell each cadet) of target practice with 9-pr R.M.L. field gun, and also annual course (60 rounds each cadet) of rifle instruction, including judging distance, &c.

The result of annual course of artillery target practice was excellent. The annual rifle practice was carried out very late in the season, but under the circumstances, good.

The cadets also fired with 9-pr. R.M.L., and competed in shifting ordnance for Dominion Artillery Association prizes. In the target practice 9-pr R.M.L. field guns, Cadet Corporal Hodgins made the highest individual score in the Dominion. The squad of sixteen, selected for competition against similar squads throughout the Dominion, also made the highest aggregate score. The competition in shifting ordnance resulted in the cadets executing the shift in the shortest time and winning the Dominion prize.

The practical course is still, however, incomplete in two important respects, viz.: Equitation and torpedo or submarine mining.

The absence of horses for riding is the more to be regretted, as the cadets comprising the graduates of 1880, viz., those who joined the college in June, 1876, have left the institution without having had an opportunity of becoming proficient in so essential a military acquirement as riding.

Having previously obtained the permission of the Commandant, most of the graduates hired horses at their own expense, and placed themselves for instruction under a non-commissioned officer of the R. M. College staff, who is a qualified riding instructor, thus shewing a praiseworthy anxiety to render themselves efficient horsemen.

This, although the best that could be done, is not in principle a satisfactory method of obtaining instruction, and the results necessarily very inferior to a regular course.

The practical engineering course has unavoidably been considerably curtailed in consequence of the requisite instruments, stores, etc., not yet having been received, and especially for want of a separate shed for engineer work, sand modelling, and storage of material.

The want of instruments and material for submarine mining or torpedoes has also been a serious drawback.

I trust that these impediments to the completion of the practical course may be remedied shortly by the Royal School of Gunnery at Kingston being enabled to provide horses for cadets' riding instruction, and by the supply of engineer stores, and erection of engineer drill and modelling shed.

The engineer stores and shed will be of equal service to the active militia of that branch of the service as to the cadets; indeed, without this adequate instruction cannot be given to either force.

The Board of Visitors, 1879, recommended the provision of both these facilities for instruction.

Sanitary Condition.

(14) There has been a good deal of sickness during the early part of the year, at times rising to a very high percentage. Much of this may be attributed to deficient ventilation.

Water Supply.

(15) The method and service of water supply has been defective, but I understand that works are in due time to be commenced to remedy this evil.

Lighting.

(16) The method of lighting is still by coal oil. Several narrow escapes from fire have occurred during the year consequent on lamp explosions. The labor of tending over 300 lamps is also arduous.

Oil has the further disadvantage of not producing sufficient heat to satisfactorily carry out instruction and experiments in physics and chemistry.

I therefore trust this means of lighting may be superseded by gas at the earliest possible opportunity.

The Board of Visitors, 1879, comment on this deficiency.

Building Accommodation—Deficiencies and Requirements.

(17)² Several class and professors' rooms are occupied as dormitories, and many of the cadets' sleeping-rooms which were originally constructed for only one cadet are now occupied by two, thus giving to each cadet a fewer number of feet of air space than is allowed for troops of Her Majesty's Service.

The only room in which cadets can, as originally intended, be assembled in a body for lecture, or other purposes, is now appropriated as a double class-room, and next term may have to be used as a bed-room.

The porches of the north building are utilized as model rooms and work rooms.

The professors have not separate rooms for study or change of clothing, and as almost all these gentlemen necessarily reside at great distances from the college, this want is the more felt.

Cadets have at times to draw plans, etc., in the corridors, and no proper rooms exist for either laboratory, library, or museum. Valuable scientific instruments and apparatus have to be kept in the corridors.

The construction of an additional block for cadet dormitories, including under the same roof quarters for two members of the staff most required to reside within the college, would provide much that is required, and would free the north building from occupation for purposes not originally contemplated, and allow it to revert to the purposes for which it was designed.

It would at the same time effect an economy in annual expenditure.

I cannot too strongly urge that these defects and deficiencies may be remedied, and that the several additional buildings so urgently and frequently referred to in previous reports as being much needed, and which were also strongly recommended by the Board of Visitors, 1879, may be commenced at the earliest possible date.

Nothing has been done during recent years towards providing additional accommodation to meet the always anticipated requirements due to the periodical increase of the college as legislated for at its institution.

The direct and indirect evils and difficulties arising from insufficient accommodation cannot be exaggerated, and naturally increases every term.

Result of Examination.

(18) The general result of the examination and of the work during the year has been satisfactory, that of the junior classes more especially so.

Some of the cadets have, however, not only sacrificed their present position, but imperilled their future prospects by neglecting to apply themselves with earnestness to subjects or portions of subjects which it is essential for the objects of the college that they should acquire proficiency in, but the necessity for, and immediate advantage of, which is not so apparent to them as that of some other subjects.

By so doing they have necessarily failed to do full credit to themselves.

Tour of Instruction by Cadets.

(19) The Government having sanctioned a tour of professional military and civil practical instruction being made by a limited number of cadets—ten of the most efficient graduates were selected as specially likely to profit by this privilege.

The tour realized the intention and objects desired to be fulfilled in every respect. Those who took part in it have acquired most valuable practical information and greatly enlarged views, not only of military and civil works in the Dominion, but also of its resources and extent, and of the different character and conditions of its component Provinces, and they thoroughly appreciated the privilege of the opportunity afforded to them.

A detailed description of this tour is given in Addendum No. 1 to this report.

Governor General's Medals for General Proficiency, 1880.

(20) The medals generously presented by their Excellencies the late and present Governor-General of Canada for 1880, to be awarded to the cadets who are respectively 1st, 2nd and 3rd in general proficiency, *i.e.*, for conduct, discipline, and intellectual and physical qualities combined, as determined from the date of joining to that of graduating, have been won by the under named gentlemen:

Company Sergeant-Major A. B. Perry, Gold Medal.

Company Sergeant-Major D. McPherson, Silver Medal.

Company Sergeant-Major J. Spelman, Bronze Medal.

Honours won by four years' steady and close competition need no comment.

His Excellency has notified that three similar medals will be presented by him for 1881.

Certificates of Graduating—Record of Attainments.

(21) The certificates given to cadets on graduation show on the face of them and in such a manner as to render personation or forgery impossible, the exact qualification of the holder in *each subject of instruction*, and the college records do the same in the most minute particular throughout each term of the full course of 4 years.

Should the Government, business firms, or professional men require men specially qualified in any particular branch—for instance, Mathematics, Physics, Chemistry, Civil Engineering, Architecture, Modern Languages, or Drawing; graduates of the Royal Military College proved to be *specially* qualified in any of these points, and with the additional assurance of character and physique, can be selected from among its graduates with certainty.

Graduates of 1880.

(22) Of the 18 cadets who joined the Royal Military College in June, 1876, and who graduated, or might if successful have graduated, in June, 1880, 11 have obtained 1st class certificates, 3 have obtained 2nd class certificates, 1 withdrew voluntarily, and 3 failed to qualify at some period of their course.

The undernamed cadets who joined the college in June, 1876, having successfully passed their final examination, have received certificates of graduation with the distinctions specified against their names.

GRADUATES, 1880.

Reg. No.	Rank.	Names. (The final order of precedence on Graduation.)	Marks counted from date of joining R. M. College to date of Graduation.	Class of Certifi- cate.	Special Distinctions and Subject.	
					Honors.	Special Mention.
13	Co. Ser.-Maj.	A. B. Perry.....	42,285	1st..	Conduct, Discipline, Drills and Exercises, Mathematics, Fortifi- cation, Military His- tory, Military Topo- graphy, Geometrical Drawing, Artillery (Theory and Con- struction of), Physics, Chemistry, Civil En- gineering.	Freehand Drawing.
18	do	D. McPherson....	39,789	1st..	Conduct, Discipline, Drills and Exercises, Fortification, Artillery (Theory and Con- struction of), Military History, Physics, Civil Engineering.	Military Topography, Chemistry, Geometri- cal Drawing.
11	do	J. Spelman.....	35,530	1st..	Geometrical Drawing...	Conduct, Mathematics, Drills and Exercises, Fortification, Artillery (Theory and Construc- tion of).
3	do	H. E. Wise.....	30,353	1st..	Conduct, Discipline, Drills and Exercises.	Freehand Drawing, Mil- itary History, French.
12	Sergt.....	C. O. Fairbank..	29,562	1st..	Conduct, Discipline, Drills and Exercises.	Civil Engineering.
4	do	W. M. Davis.....	29,542	1st..	Conduct, Drills and Exercises.	Discipline.
9	do	C. DesBrisay.....	29,356	1st..	Conduct	Drills and Exercises, Civil Engineering.
1	Corp.....	A. G. Wurtele...	28,077	1st..	Conduct, Geometrical Drawing.	Nil.
14	Sergt.....	J. Cochrane.....	27,257	1st..	Drills and Exercises....	Conduct, Discipline, Chemistry, Physics.
2	do	H. C. Freer.....	26,896	1st..	French, Drills and Ex- ercises.	Nil.
17	Bgd. S. Maj.	H. W. Keefer.....	25,710	1st..	Conduct, Discipline.....	Drills and Exercises.
10	Sergt.....	V. Rivers.....	24,274	2nd.	Conduct, Discipline.....	Drills and Exercises, Freehand Drawing.
15	Corp.....	F. Dixon.....	20,022	2nd.	Nil.....	Nil.
8	Sergt.....	F. Davis.....	17,510	2nd.	Nil.....	Conduct, Discipline.

Graduates gazetted to Commissions in Her Majesty's Regular Army.

(23) The four commissions in Her Majesty's Regular Army, *viz.*, one in the Royal Engineers, one in the Royal Artillery, and two in the Cavalry or Infantry, which are available annually to those cadets of the Royal Military College of Canada who may prove themselves to be qualified for this honour, have been accepted as follows:—

Company Sergt.-Major A. B. Perry, Royal Engineers.

Sergt. C. Fairbank, Royal Artillery.

Company Sergt.-Major H. Wise, Infantry.

Sergt. H. Freer, Infantry.

I will only remark relative to these gentlemen that I am confident that in receiving the honour of these commissions they will, each one, by their bearing and by the performance of their duties as British officers, do honour alike to Canada, to the Royal Military College and to their corps.

Company Sergt.-Major Wise might, by seniority, have obtained a commission in the Royal Artillery, but preferred the Infantry.

Company Sergeants-Major McPherson and Spelman might, by seniority, have obtained commissions in the Royal Artillery or Infantry, and any two of the following Cadets might have obtained commissions in the Cavalry or Infantry, but for various reasons these gentlemen did not desire to accept them, viz.:—

Sergt. Davis, W.
Sergt. DesBrisay, C.
Corporal Wurtele.
Sergt. Cochrane.

Graduates obtaining commissions in Her Majesty's Regular Army—Advantage of.

(24) The few who may obtain commissions in Her Majesty's Regular Army only leave Canada to gain that most valuable of all educations for any career, but especially for that of a soldier, viz., a practical knowledge of different countries and peoples, and the management of men, and the varied experiences arising therefrom.

In a military point, the advantage of being in direct contact with, or of hearing daily as a matter of immediate interest of highly-trained troops and organizations kept in constant readiness for active service, cannot be overrated.

These officers will most certainly return to Canada, should any emergency require their services in this country.

Commissions in Militia and Military Employment in Canada for Graduates.

(25) The notification in the *Gazette* of 7th February, 1880, of the intention to appoint graduates of the Royal Military College to commissions in the Militia, with subsequent regular periodical promotion, provided they annually perform certain military duties, and also to record in the Army List the class of certificate and special honours they have obtained, together with the decision to appoint graduates of the college, *when qualified by the necessary age, rank and seniority*, (but not till then), to all permanent Militia appointments, affords valuable encouragement to, and is a source of emulation among the cadets.

In accordance with this regulation, the whole of the graduates of 1880, except the four who have joined Her Majesty's Regular Army, have been gazetted to commissions in the Militia from 17th July, 1880.

Dissemination in Canada of Military Knowledge by Graduates.

(26) There can be no question but that the graduates will not only be (as required by the law of the Dominion) *compulsory* members of the Militia reserve, but will instinctively take their place alongside the more stirring and militarily inclined of their fellow-citizens in the several corps of the active militia; and thus the work of the Military College will be disseminated throughout the entire country.

The graduates fairly represent all classes of the community, and from their interest and position are more certain to remain in Canada than any other young men.

The graduates of June who were respectively 1st and 2nd on the list, happen to be representatives of the great source of wealth in Canada, viz., agriculture, and both are men of high ability, industry, character and physique.

Selected Graduates Recommended to be Temporarily Attached to Garrison at Halifax.

(27) If a few graduates holding commissions in militia, and specially selected for their fitness, could be attached temporarily for duty, perhaps a couple of years with Her Majesty's troops at Halifax, it would materially increase their fitness for future employment on the staff of Her Majesty's College, or for instructional and higher staff pur-

poses with the active militia generally; more especially if, in addition to ordinary regimental work, facilities were offered for the officers to become conversant with the practical working of the Staff and Departmental Offices at Halifax.

This, together with a little special instruction from the Royal Engineers and Royal Artillery, and a familiarity with the extensive defensive military works, war-vessels, &c., at Halifax, would (*being grafted on previously prepared minds*) form an excellent finish to the military course of the cadets, by affording practical experience, and preparation for future responsible military employ.

Variety of Employment of Graduates raises Intellectual Standard of Cadets.

(28) Every employment offered to graduates directly increases the competition for admission to the college and among the cadets themselves, and therefore raises the general intellectual standard of the graduates.

The commissions in H.M. Regular Forces, and the promise of employment in the permanent militia organization of the Dominion, are valuable to this end, but other occupations should also be opened for those who cannot obtain, or do not desire *continuous* military employment.

Employment other than Military for Graduates.

(29) The cadets have gained their entrance to the college by *open competition* throughout the Dominion, without favoritism, personal or political, they have improved, maintained, or lost their original position by four years' keen competition among themselves, and I therefore trust that, as it is not possible for Canada to afford permanent military employment to *all* the graduates of the college, she will employ those (at least the best of them) who do not obtain it, in such other capacities as their *college records* denote their being most fitted for.

Temporary Employment for Selected Graduates in Preparation of Military Maps, and Assistant Instructors in Royal Military College.

(30) A few selected graduates might be advantageously employed for a few years in completing the unfinished military maps of the frontier, but more especially of the contoured plans of the ground in the vicinity of Kingston, Quebec, Halifax, Montreal, and Toronto.

This is a work of great importance to Canada, and since the withdrawal of the regular forces no opportunity has presented itself of carrying it out until the present time.

One or two graduates holding militia commissions might be most advantageously employed at the Royal Military College as assistant instructors.

This would not only afford much needed relief to the Professors from some of the elementary work, but afford the very best means for these assistant instructors to become more efficient officers in every respect by being themselves instructors, and at the same time afford them an opportunity of prosecuting to a higher point certain branches of instruction.

This system is followed at the United States Military Academy at West Point, and is allowed to be not the least valued part of the institution.

Instruction at Royal Military College of Militia Officers.

(31) In my annual report, 1879, I represented that the college would shortly be in a position to afford instruction to Officers of Militia in the following subjects, viz.:—

Fortification and Military Engineering.
Military Topography.
Reconnaissance.

Tactics and Strategy.

Military Administration and Law.

French.

Freehand Drawing.

I trust that before long several officers will avail themselves of this privilege, and I believe there are several who, while unable to leave their occupations for a long period are extremely desirous to increase their qualifications for the highest rank in their regiments, and would make an effort to undergo a course of say six months.

It need hardly be said that only an elementary course is possible in so short a time, but regimental officers could not be expected to attempt more even if it were requisite for them to do so.

The extension of military instruction to officers of militia as well as cadets has always been a recognized feature of the college. Circumstances have necessarily prevented the carrying out of this object up to the present time, but it may be expected to develop itself.

Insufficiency of accommodation is the great hindrance to the college showing its full power in this as in other matters.

Necessity for a Country to Possess Trained Officers.

(32) Two facts are not only avowedly realized by all qualified persons of thinking and practical minds, and of patriotic feeling, but are also acted upon invariably by all nations, great and small, and when this sentiment is wanting or where it is failed to be carried into deeds, a nation can neither be built up or preserved.

1st. That at no period of history so much as at the present epoch, has it been so necessary for a country to possess a certain number of highly and specially trained and disciplined officers.

2nd. That this necessity is greater according as the defensive forces of a nation are deficient in completeness and thoroughness of organization, and where circumstances may require, with brief notice for preparation, a rapid expansion of military forces from a small nucleus.

Training of Active Militia in Connection with the College.

(33) The Royal Military College desires to become, and ought to be, the training school, the centre and head of the militia force, and it is difficult to conceive any person whether in or out of the force being indifferent to, much less jealous of, its work and success.

It is with peculiar pleasure, therefore, that I have welcomed what I trust is only the first step towards an extended movement, viz., the arrival in camp at the college for purposes of instruction, of representatives of the active militia of the 2nd and 5th Military Districts, viz., the Montreal and Toronto Engineer Corps.

The senior officer of these two corps reported to me his deficiency in officers, and to meet this emergency two cadets were detailed to do duty as officers while these corps were in camp, and I received assurance that this duty was performed in a satisfactory manner.

Detachment of Embodied Engineers at Royal Military College.

(34) I wish again to draw attention to the great advantage (indeed almost necessity) to the college and also to the militia generally, for a detachment of engineers (if only a couple of dozen men) to be attached to it.

Kingston is admirably adapted for engineering work, and as both military and civil engineering is taught at the college, it is peculiarly suited to be the station for the school of the engineer branch of the militia in a manner at once effective and uncostly.

Attainment of full Object of Royal Military College.

(35) Paragraphs 25 to 32 point out that this military knowledge will be spread by the graduates of the college among the officers of the militia and throughout the Dominion generally, and paragraphs 33 and 34 how the advantage of its institution may be extended to corps organizations, and thus the full object of the college to even a greater extent than was anticipated will be attained.

Services of Staff—Acknowledgement of.

(36) I desire to offer my special thanks to all the members of the Staff, military and civil, for the manner in which they have aided me, not only in the ordinary work of the year, but in carrying out the improved organization and the changes consequent thereon.

I am aware that in so doing they have been governed solely by the desire to benefit the college, and in several instances have, from a sense of duty, subordinated their private inclinations and ease for its welfare.

Conduct of Graduates, 1880, while at Royal Military College.

(37) It is especially gratifying to me to be able to conclude my report with a few words relative to the gentlemen who, for four years, have been entrusted by their country and parents to my charge, and who left the College in June last.

Their conduct throughout has been most excellent, the best of feeling has existed between them and the staff of the college, and between them and their younger comrades.

They have shewn great aptitude for military exercises, and have with promptitude and good feeling, submitted themselves to a discipline and habits of life entirely different to that to which they had hitherto been accustomed, and while so doing have acquitted themselves well.

The character and tone of the first graduates must necessarily influence that of their successors during the early years of an institution, and I am happy to say that the College has just cause to be proud of the example set by those who have now left it.

Though all cannot be equal in ability, the graduates as a whole possess intellectual and physical qualities which can bear favourable comparison with any body of young men in this or the European continent; and far more important than this, I have just reason to know that confidence may be placed in their honourable feeling and conduct.

Some of the graduates will assuredly make their marks in this country in the future, whether their career be in military or civil life.

In using these words, I express the views not of myself only, but of the entire staff.

I have the honor to be, Sir,

Your obedient servant,

E. O. HEWETT, Lieut.-Colonel,

Commandant, Royal Military College.

ADDENDUM No. 1 TO ANNUAL REPORT ROYAL MILITARY COLLEGE OF
CANADA, FOR YEAR, 1880.

Tour of Instruction of Cadets.

From Commandant Royal Military College, to Major-General R. Luard, President
Royal Military College and Commanding Militia.

KINGSTON, 13th November, 1880.

SIR,—1. I have the honor to submit the following report of the tour of professional instruction of selected cadets of the graduating class of June, 1880, and also a journal giving the dates of the journeys, the names of places visited and the objects inspected.

2. The party left Kingston on the afternoon of the 3rd, and returned on the afternoon of the 20th July.

3. The tour was conducted strictly in conformity with the directions contained in your letter No. 391, 15th June, 1880, authorizing the service, and with my letter 648, of 23rd July, 1880, to which it referred.

4. It will be seen from the journal that the tour embraced a great diversity of objects of importance and interest, embracing civil works, such as harbour, canal and water-works, railway bridges and lines, iron foundries and rolling mills, and coal, iron and gold mines; and in military works, war vessels, torpedo establishments, forts and batteries (land and sea), military positions, &c.; and at Montreal the conversion of S.B. 32-pr. guns into 64-pr. R.M.L.

5. Each cadet was required to take, and to submit to the Officer in charge, notes of every object inspected.

The party was subject to military discipline throughout the tour, so far as applicable to the circumstances.

6. The conduct of the cadets and the interest they displayed throughout the tour was most satisfactory, and they thoroughly appreciated the opportunity afforded them of acquiring general information.

7. Public service which could not be postponed prevented my proceeding with the party on the 3rd, but I followed on the 7th.

I therefore detailed Major Walker, Professor Military Engineering, to take charge of the party and of military subjects of instruction, at Montreal and Quebec.

I assumed these duties from the latter place till the end of the tour, and Major Walker returned to Kingston on being relieved by me.

8. The gentlemen in charge of the several civil engineering works, mines, &c., visited, offered every possible facility to the party to inspect, and obtain insight into, the working of their charges and establishments.

9. At Quebec, the officer in temporary command of the Royal School of Gunnery accompanied the party during their inspection of the fortifications and military positions.

10. At Halifax, N.S., the Admiral Commanding-in-Chief sanctioned a full inspection of the Fleet, and with permission of Captain Fisher, R.N., Flag Captain Commanding H.M.S. "Northampton," the Gunnery and Torpedo-Instructing Officers, and the Chief Engineer, most kindly devoted several hours to the explanation to the cadets of their special charges.

H.M.S. "Northampton" is especially adapted for illustrating the latest type of a naval fighting machine as adapted to special circumstances. The construction of her hull and engines is on the most scientific principles, whilst in addition to the ordinary artillery armament of 10-inch and lighter guns, she possesses torpedo boats of very great speed, and "Whitehead" or "Fish" torpedoes, and also "Nordenfeld" and Gatling guns.

11. With permission of the General Officer Commanding Her Majesty's Regular Forces in Canada; the Officer Commanding Royal Artillery, and the Commanding

Royal Engineer, were authorized to afford special opportunities for enabling the cadets to increase their practical military knowledge.

12. The Officer Commanding Royal Artillery ordered special target practice with the 64-pr. R.M.L. converted gun; and also from Fort Ogilvie at 4,000 yards range with the 9-inch 12-ton R.M.L. gun throwing a projectile of about 250 lbs.

The numerous magazines, laboratories, stores, &c., were also thrown open to inspection, and the system of care and supply adopted, explained.

13. The Commanding Royal Engineer placed two officers of the Royal Engineers entirely at my disposal for four days, and also steam transport for visiting the harbours, forts, war-ships, &c.

These officers fully explained in detail in a most painstaking and thorough manner, the arrangements of the permanently organized submarine mining or defensive torpedo establishment at Halifax, and the instruments and stores employed, and also lectured on the subject.

The services of the section of the 4th (Submarine Mining) Company Royal Engineers, stationed at Halifax were given, and special electric contact mines of from 5 to 150 lbs. of gun-cotton were laid out and fired for practical illustration and instruction.

14. The military positions, the several forts and batteries together with their armament, magazines, stores, &c., were carefully examined, and the objects of each, and the reasons for differences between them, explained.

The forts at Halifax mount over sixty 9 and 10-inch rifled guns of respectively 12 and 18 tons weight, throwing projectiles of about 250 and 400 lbs. respectively, and the works and armament being properly kept and in service, with ammunition, &c., complete, constitutes a valuable subject of military study.

Many of these guns in the open batteries are protected by iron shields, and about 15 are in casemates with iron shields.

Rifled 64-prs. and guns mounted on *counterweight* carriages (sometimes known as Moncrieff) are also in position in the works.

Halifax also possesses a fully-equipped submarine mining station, with mines, stores, explosives, instruments, &c., &c., complete, and also a powerful electric light apparatus and engine suitable for war purposes.

15. I am satisfied that the important objects of the tour have been fully attained, and that the cadets who were fortunate enough to take part in it, have, both by the increased knowledge of the extent and resources of their country, and by the enlarged technical and special practical information obtained of important military and civil subjects, derived immense advantage, not only to themselves, but of such a nature as cannot fail to be of ultimate benefit to the Dominion, and amply repay the expenses and trouble incurred.

The entire cost of the tour was somewhat less than the estimate.

16. When not actually travelling between places, and exclusive of time occupied in writing notes, the party worked (Sundays excepted) some 10 hours a day. This was necessary, the available time being limited.

17. For any future tour over the same course, the time would be better extended three or four days, as the constant travelling and inspecting so many new and different objects, somewhat over-fatigued the cadets, and gave rather too little time to distinguish between, and yet to assimilate so much new matter.

18. Coming at the end of their four years' course of instruction, and the best men only being selected, those who took part in it were consequent on their broad and high general education, not only capable of understanding and grasping the bearing of the subjects brought to their notice; but also by their special training, not alone conversant with the theory, but also possessing considerable practical technical knowledge of the details of the same.

To men, less highly prepared, much of the value of the tour would be wanting.

I have the honour to be, Sir,

Your obedient servant,

E. O. HEWETT, Lieut.-Colonel.

Commandant, Royal Military College.

PROFESSIONAL TOUR OF CADETS.

JOURNAL.

Day.	Date.	Place.	Objects Inspected.
Saturday & Sunday.	July 3 & 4	{ Depart Kingston, arrive Montreal. }	Nil.
Sunday.	do 4	Montreal.	Nil.
Monday	do 5	do	Docks and Marine Works, Water Works, Lachine Canal Works, Victoria Railway Bridge, Messrs. Gilbert & Sons, Canada Marine Works, conversion of 32-pr. S.B. Gun into 64-pr. R.M.L.
Monday & Tuesday.	do 5 & 6	{ Depart Montreal, arrive Quebec. }	Nil.
Tuesday	do 6	Quebec.	Inspected Citadel and Town Fortifications, and Military positions generally in vicinity of Quebec.
Wednesday	do 7	do	Inspected Harbour Works, Quebec, Graving Dock, Louise Embankment and Docks, Point Lévis Forts Nos. 1, 2 and 3, and Military position generally.
Thursday & Friday.	do 8 & 9	{ Depart Quebec, arrive Londonderry. }	Nil.
Friday	do 9	Londonderry.	Acadia Iron and Steel Works, Iron Mines, Smelting Works, Rolling Mills.
		{ Depart Londonderry, arrived Halifax. }	Nil.
Saturday	do 10	Halifax.	Visited Montague Gold Mines. Inspected Citadel and general Military position, Halifax.
Sunday.	do 11	do	Nil.
Monday	do 12	do	Examined Plans of Fortifications, &c., in Royal Engineers Office. Inspected Cambridge Battery, Fort Ogilvie, Prince Edward Tower and Magazine. Witnessed practice 64-pr. R.M.L., York Redoubt, Fort Charlotte, George's Island.
Tuesday	do 13	do	Inspected Submarine Mining Establishment, George's Island. Witnessed laying out and firing Submarine Mines. Visited H.M.S. "Northampton."
Wednesday	do 14	do	Inspected Ives Point Battery and general Military position, McNab's Island. Witnessed laying out and firing of Submarine Mines.
Thursday	do 15	do	Witnessed Target Practice from Cambridge Battery with 9-inch (12 tons) R.M.L. Gun.
Friday	do 16	{ Depart Halifax, arrive Springhill. }	Visited Springhill Coal Mine.
Friday & Saturday.	do 16 & 17	{ Depart Springhill, arrived Metapedia. }	Nil.
Saturday	do 17	Metapedia.	Inspected Restigouche Railway Bridge (Phoenixville Truss), Railway Cutting and Snow Shed.
do	do 17	{ Depart Metapedia, arrive Campbelltown. }	Nil.
do	do 17	Campbelltown.	Inspected Mill Creek Railway Bridge (Warren Order) and Embankment Rail Line.
Sunday.	do 18	do	Nil.
Monday & Tuesday.	do 19 & 20	{ Dep't Campbelltown arrive Kingston. }	Nil.

ADDENDUM No. 2 TO ANNUAL REPORT ROYAL MILITARY COLLEGE OF CANADA FOR YEAR 1880.

ACTIVE MILITIA ATTACHED FOR INSTRUCTION TO ROYAL MILITARY COLLEGE, JUNE, 1880.

From Lieut-Colonel E. O. Hewett, R. E., Commandant Royal Military College, to Major-General R. G. A. Luard, President Royal Military College and Commander of Militia.

ROYAL MILITARY COLLEGE,
KINGSTON, 13th November, 1880.

SIR,—1. By minute Adjutant-General 10th June, 1880, the Engineer Corps of the 2nd and 5th Military Districts were placed under the Commandant Royal Military College for discipline and instruction while in camp at the Royal Military College, Kingston.

2. The 2nd District corps arrived in camp at the College on the 25th June, and left on the 2nd July, 1880.

The 5th District Engineer Corps arrived on the 24th June and left on the 1st July, 1880.

3. I intentionally left great latitude to the senior officer of the combined corps, and interfered as little as possible with the arrangements of either corps, not only because they had, I believe, been in camp together before, but in order to ascertain what degree of organization, system and knowledge existed.

4. Certain general directions and orders were given by me to the senior officer of the combined corps for the conduct of camp, and these were generally complied with.

5. The usual daily camp states were, however, not forwarded with the regularity and completeness which should have been.

6. The interior economy and detail discipline of the camp I left to the senior officer of the combined corps. This officer did not bring to my notice any serious breaches of discipline, and from my own observation, and from general report, I have pleasure in recording the good conduct and discipline of the men of both the 2nd and 5th District corps equally within camp, and in the neighborhood of it.

7. Having specified the general nature of instruction in military engineering, I detailed the Professor Military Engineering, Royal Military College, (Major Walker, R.E.) to make detail arrangements for carrying it out, and to superintend the actual instruction. In this duty, Major Walker was assisted by Captain Sankey, R.E., and Sergeant-Major Birtles, late R.E., respectively instructor and N.C.O. instructor of military engineering at the College.

8. The practical instruction given to, and the work performed by the Engineer Militia, consisted of—

The construction of shelter trenches, gun-pits and splinter-proofs. Obstacles, such as entanglements, *chevaux de frise*, military pits, placing wall in a state of defence, fougasse or stone mine, single deep sap, tracing first parallel and four-gun batteries, extending working parties, detailing tasks and reliefs, use of explosives, signalling, fixed and floating bridges.

The ordinary infantry drills were also practised every day, and both corps took part, and acquitted themselves satisfactorily in a general review of troops in the 3rd District on Dominion Day.

9. Lectures were also given by Major Walker, R.E., Captain Sankey, R.E., and by Major Jones, R.A. (Professor Military History at Royal Military College), and, had the period of training of the militia been more extended, and so admitted of it, these officers were prepared to give further instruction in this manner.

I may here remark that the officers and non-commissioned officers named, although at the time specially engaged in both instruction and examination at the College, devoted several hours a day to work with the militia.

It is gratifying to report this labor was voluntarily and cheerfully given, and that this was understood and appreciated by those for whose benefit it was given.

This feeling conduces to unity of purpose of the Royal Military College with the militia generally, and also creates an esprit between the military engineers of Her Majesty's Regular Service and those of the Dominion of Canada.

10. The 2nd District Engineer Corps came into camp practically ineffective as regards officers, two or three having, I believe, resigned very shortly before marching, and one officer only joined the day before coming into camp. This depletion of officers must necessarily have been a great disadvantage to the corps.

In consequence of this, and at the request of the commanding officer, I detailed two gentlemen cadets of the Royal Military College (viz., Company Sergt.-Majors Wise and McPherson) for duty as officers with this (2nd District) corps, which duty the officer commanding the corps reported to me as having been satisfactorily performed.

The 2nd District Corps mustered 1 Lieut.-Colonel, 1 captain, 1 officer (charge of mounted detachment), 1 surgeon, 9 sergeants, 57 rank and file, 20 horses and carriages.

This corps being in possession of certain carriages, harness and apparatus, I beg to recommend that the request of the officer commanding (Lieut.-Colonel Scoble) that his corps be gazetted as a field company, be sanctioned.

This officer has shown great perseverance in providing sufficient material, &c., to justify his corps being recommended for this organization.

11. The 5th District Engineer Corps came into camp with 3 officers, 5 sergeants, and 36 rank and file.

The unremitting zeal and attention to the works, of the officers of this (5th District) corps came under the notice of myself and of the instructing officer, and merit special commendation; their example had an excellent effect on the men.

12. I was much struck with the manner in which the non-commissioned officers and men of both (2nd and 5th District) corps took to work entirely new to, and I fancy almost equally unexpected by them.

I think that many of the men realized for the first time that they were military engineers, and that in order to be able to instruct their comrades of the other branches of the service, and to justly entitle them to bear the distinctive name and uniform of Engineers, a good deal of hard work has to be done, and knowledge and skill (only to be acquired by practice) attained.

This fact may possibly cause the withdrawal of some of the less earnest members, but it will result in the increased efficiency of those who remain and in better men joining; and also, cause among all ranks a greater pride in their corps, and, in the estimation of the public, a higher appreciation of their value.

13. One great fault was apparent, viz.: the few men detailed by the officer commanding the camp for military engineering parades.

The number of men present for what was called Commanding Officer's parade (which consisted of a little infantry drill), was reasonable, but the strictly engineer parades, the number present, especially of the 2nd District Engineer Corps, was not half what it should have been.

A good deal sometimes depends on the use of a word. There appears to be, especially in the 2nd District Engineer Corps, a confusion of ideas between "Engineer Instruction" and "Fatigue Duties;" the latter term being used alike for engineer instruction and for barrack or camp fatigue parades.

The word "Fatigue" should be strictly limited to barrack and camp routine duties; the engineer instructional parades, whether with or without arms, are a purely military parade as those for infantry drill only.

14. Where only a few days are available for training it is imperative for a corps, but especially for engineers, that camp duties and casualties of all kinds be reduced to a minimum. Camp fatigues, unless strictly watched, are apt to become both numerous and nominal in necessity, and easily pass into lounging in camp and listening to bands.

The period of training now allowed for engineer corps is altogether inadequate.

15. It appears to be necessary that the relative positions of two or more Militia engineer corps, when they are *doing duty together*, should be defined, as apparently it is not clearly understood at present, and confusion and want of harmony may arise from this source.

Command, the higher disciplinary powers, and ultimate responsibility devolve on the senior officer of the combined corps, and the camp guard and general routine duties must be detailed by him as if the separate companies were actually one.

On the other hand, after the foregoing has been done, when separate corps assemble at the same time and place for their course of *annual training*, it is essential that each corps should make its own separate parade state and returns of work performed (forwarded through the senior officer of the combined corps) for the information of the inspecting or instructing officer as the case may be. If this is not done it is not possible for these officers to ascertain the relative efficiency of the several companies and to determine the amount of credit, or otherwise, due to the officers and men of the separate corps.

Without this all emulation and comparison ceases, and efficiency may be lost in a possibly dead low level, to the detriment of more active corps or zealous members of them.

The returns of annual courses of instruction of engineer companies can and ought to be as separate as those of regiments or batteries, without in any way losing the regimental or corps organization of the engineer force, or lessening or infringing on the proper position of the senior officer of the combined corps.

16. There is much room for more accuracy in the preparation and punctuality in transmissions of these returns.

This may appear a trifling matter, but it is the uncertainty and unreliability of such that leads to carelessness in greater matters and to misapplied force, and in the end to greatly increased work.

17. I consider that the bringing together at Kingston of the Engineer Corps of the 2nd and 5th Districts has been of great advantage, and if continued will go a long way towards making the engineer branch of the Militia of the Dominion of Canada a reality, instead of what it has hitherto been—an unreality.

In employing the word "unreality" it must be clearly understood that it does not reflect any discredit whatever on the officers, non-commissioned officers or men of the Engineer force of Canada. On the contrary, *the highest possible praise* is due to them for the zeal, energy and sacrifice of means, which alone have kept up their organization to the present date.

The inadequate results obtained from this excellent spirit is simply due to the hitherto entire absence of all means of instruction for, and encouragement of, the engineer force.

18. The duty of reporting on the 2nd and 5th District Engineer Corps, recently placed under my command for instruction, naturally and necessarily leads to the consideration of the general organization of that branch of the service, and I respectfully submit the following remarks for serious consideration.

19. The military engineer service being essentially a real and onerous one, and necessarily involving work and somewhat less show than other branches of the service, presents less attraction to some men, but, on the other hand, it is for this very reason, more interesting to others.

The nature of the instructions required, the higher rate of wages most members of the engineer corps can command in civil life, and also the small number of officers compared with a battalion, must of themselves make the maintenance of this force more expensive to its officers than any other branch of the service, and, therefore, to become efficient it needs more, rather than less, assistance than the artillery, cavalry, and infantry.

20. The existence of a fictitious engineer force can only prove a broken reed, and be a great danger; and to become a reality, such a force needs some special aids in organization and training, and the provision of necessary stores.

Without this it had better cease to exist.

21. The whole tendency of modern war (notably and primarily illustrated in the civil war on this continent) is the development of field engineering in its *general* and broad sense.

Torpedoes, submarine mining, telegraphs, signalling, &c., have also developed themselves in an extraordinary degree as special branches of engineering, and have become essential to the safety of an army or State.

22. To carry out both these objects (*viz.*, special and general engineer instruction) in Canada, it is imperative to commence by placing the Engineer militia on a reasonably efficient basis.

23. To do this in the most economical way, consistent with utility, and keeping in view that no one arm should be developed to the entire neglect of others, I beg to submit the following:

A.—The establishment of a small permanent enrolled nucleus of a school for engineering, say one or two officers, and from 25 to 50 men.

These men must all be highly trained, and some be specialists, and all must be available for instruction of the militia force generally.

The natural advantages of Kingston, and the existence of the R.M. College, point clearly that the nucleus should be at Kingston, and that it should be intimately connected with the College, as not only is an engineer detachment necessary for the College, but the latter is able to afford facilities for the training of engineers.

B.—The instruction of the engineer corps during annual training, and occasionally at other times, by competent instructors. These instructors to be obtained from Her Majesty's regular service, till the force alluded to under head A becomes capable of affording it.

C.—The compulsory annual training *in camp* of such engineer corps for a period of not less than

For Effectives, 14 days. { Sundays and days of marching inclusive, and
For Recruits, 21 days. { pay be allowed for the full period.

D.—The accumulation of a small depot of engineer stores at the headquarters of engineer instruction, *viz.*:—Kingston.

E.—All the engineer stores, carriages, &c., issued to, or obtained by engineer corps, to be drawn in the first instance from this store, or if direct purchase is sanctioned, then only on recommendation of a qualified and responsible officer of that branch of the Service.

F.—Annual inspection by qualified officers of the engineer branch of the Service.

G.—Within a reasonable number of years every officer of the Militia Engineers should be *required* to obtain qualifying certificates in the following subjects:—

- (a) Performance of regular duty, and knowledge of interior economy of corps.
- (b) Artillery drills and practical gunnery.
- (c) Infantry drills.
- (d) Military surveying.
- (e) Military administration.
- (f) Tactics.
- (g) Field engineering in its principal branches.

The instruction and certificates for *a*, *b* and *c* could at present be best obtained from the Royal School of Gunnery, *d*, *e*, *f* and *g* from the Royal Military College and Engineer School in connection with it.

The standard need not be high at first.

H.—The organization of Engineer corps at the places and of the description specified as follows:—

Toronto	{ One Field Company, One Garrison Company. One Submarine Mining Section.
Kingston	{ One Garrison Company, One Submarine Mining Section.

Montreal	{ One Field Company, One Garrison Company, One Submarine Section.
Quebec	{ One Garrison Company, One Submarine Section.
St. John, N.B. ...	{ One Garrison Company, One Submarine Section.
Halifax, N.S. ...	{ One Garrison Company, One Submarine Section.

24. The foregoing paragraph merely suggests in outline what appears to be essential and feasible at the *present* time, and as a basis from which a more perfect and complete organization might, on any emergency threatening, be developed.

It would be well if Quebec and St. John, N.B. could each ultimately raise a Field Company, and the suggested nucleus of a School of Engineering at Kingston be somewhat enlarged.

I strongly recommend the organization, as soon as possible, of a Company of Militia Engineers at Kingston.

This corps would have special facilities for rapidly becoming effective, and I have reason to think it would be easily recruited.

25. In course of time, and in connection with this force, the military works of this country might, if considered advisable, be economically, rapidly, and efficiently carried out. This, however, has no necessary connection with the organization of the Military Engineering Force of the Militia.

26. Whatever course may be deemed advisable to adopt with reference to the Engineer Militia of Canada; it cannot be too clearly realized that skilled work or men, whether military or civil, cannot be satisfactorily controlled or good results accrue, if placed under less trained or untrained superintendence.

I have the honor to be, Sir,

Your obedient servant,

E. O. HEWETT, Lieut.-Colonel, R. E.

Commandant Royal Military College.

To the Minister of Militia and Defence.

MEMO.:—In forwarding, for consideration and publication, the valuable Annual Report of the Commandant of the Royal Military College, Kingston, the following are points to which I beg to call especial attention:

The necessity of providing instruction in Equitation.

The advisability of providing instruction in submarine mining, torpedoes, &c.

The requirements of a modelling shed.

The very serious want of a supply of *pure water*, for sanitary reasons.

The economy and *safety* of a supply of gas, instead of oil lamps.

The very serious requirement of more accommodation in their dormitories for the cadets.

The desirability of rooms at or near the College for the Professors.

The importance of providing *civil* occupation for graduated cadets in addition to the Military commissions already given by the Imperial Government.

I beg to call also marked attention to Addendum No. 2, regarding the instruction at Kingston of the Engineers of the Active Militia of the Dominion. Lieut.-Colonel Hewett's suggestions on this head I consider most valuable and practical.

R. G. A. LUARD, Major-General.

November 15th, 1880,

APPENDIX A.

ROYAL MILITARY COLLEGE OF CANADA.

List of Successful Candidates for Cadetships during the Year 1880.

Names of Cadets.	Age on Joining Royal Military College.	Where Educated.	Marks Obtained at Examina- tion for En- trance to R. M. College.	Remarks.
	Yrs. Mos.			
Stewart, W. J.....	17 1	Collegiate School, Ottawa.....	9,799	Joined, 5th Feb., 1880..
Leonard, R. W.....	19 11	Collegiate Institute, Brantford.....	9,048	
Gray, P. E.....	16 8	Collegiate School, Windsor.....	7,398	
Twining, P. G.....	17 5	High School, Halifax.....	6,958	
Lambe, L. M.....	16 6	Mr. Boodles's School, Montreal.....	6,366	
Woodman, J.....	18 4	Collegiate School, Ottawa.....	5,607	
Powell, W. F.....	17 2	Upper Canada College, To- ronto.....	5,494	
Casgrain, P. H.....	15 9	Laval Normal School, Que- bec.....	5,458	
Almon, M. B.....	18 9	P. H. Coddington, Hartford- shire, England.....	5,369	
Ryan, M.....	16 11	Collegiate School, Kingston.....	4,302	
McDougall, J. C.....	16 8	Collegiate Institute, Kingston.....	4,299	Joined, 9th Sept., 1880.
White, J.....	17 0	Grammar School, Ingersoll.....	3,877	
Brough, W. C.....	19 3	Dr. Tassi's School, Galt.....	3,822	
Baker, J. H.....	18 1	Grady's School, Durham.....	3,217	
Chalmers, T. W.....	17 4	High School, Picton.....	3,161	
Van Straubenzee, B. W..	15 4	Trinity College School, Port Hope.....	2,789	
Weller, J. L.....	18 0	Collegiate Institute, Cobourg..	2,574	
Van Iffland, W. A.....	16 11	Lennoxville, Quebec.....	7,035	
Van Buskirk, W. F.....	19 0	Collegiate Institute, St. Tho- mas.....	6,835	
Crawford, F. L.....	16 3	MacTavish's School, Montreal, Mr. Boodles, Head Master.....	5,467	
Carey, H. C.....	15 8	High School, Victoria, B.C.....	5,132	Joined, 9th Sept., 1880.
Hearn, J., jun.....	17 6	Commercial Academy, Quebec.....	4,564	
Cartwright, C. E.....	15 10	Mr. Hay's School, Kingston.....	4,490	
Warner, W. G.....	15 6	MacTavish's School, Montreal, Mr. Boodles, Head Master.....	4,453	
Smith, E. O.....	16 1	do do.....	4,399	
Sanders, G. E.....	16 9	Coatham Grammar School, England.....	4,263	
Davidson, R.....	18 3	Trinity College School, Port Hope.....	4,194	
Abbott, F. W.....	17 0	High School, Halifax.....	3,949	
White, F. N.....	16 3	Durham School, Peterboro'.....	3,266	
Laidlaw, J. W.....	18 7	Dr. Jassi's School, Galt.....	3,076	
ameron, K. B.....	17 6	Derby Grammar School, Eng- land.....	3,052	
rayner, F.....	16 10	Upper Canada College, Toronto.....	2,987	
emner, A. P.....	17 5	High School, Halifax.....	2,974	

E. O. HEWETT, Lieut.-Colonel,
Commandant, Royal Military College.

KINGSTON, 15th November, 1880.

APPENDIX B.

ROYAL MILITARY COLLEGE OF CANADA.

RETURN of Gentlemen Cadets who have been Promoted or have received Prizes and Honorary Distinction during the Year 1880.

Rank.	Names.	Term.	Class.	Division.	Date of Award.	Subject of Award.	Nature of Distinction.	Remarks.
Corporal.	Campbell, H.	5	4	.....	1879. Christmas	1st Mathematics. 1st Military Engineering. 1st Theory and Construction of Artillery. 1st Geometrical Drawing. 1st French. 1st Freehand Drawing. 2nd Civil Engineering. 2nd Military Topography and Civil Surveying.	Class Prize. Badge (2 stars).	
Cadet	Duffus, G.	3	6	.....	do	1st Mathematics. 1st Military Engineering. 1st Theory and Construction of Artillery. 1st Geometrical Drawing. 1st French.	Class Prize. Badge (2 stars).	
do	Lang, J.	1	8	.....	do	1st French. 2nd Mathematics. 2nd Freehand Drawing.	Class Prize. Badge (1 star).	
do	Latimer, F.	2	7	.....	do	1st Military Engineering. 2nd Military Topography and Civil Surveying. 2nd Mathematics.	Class Prize. Badge (2 stars).	
Corporal	Laurie, R.	6	3	.....	do	Theory and Construction of Artillery. Geometrical Drawing and Descriptive Geometry.	Prize for complete course. do	
Lance-Corporal	Mackay, H.	4	5	.....	do	1st Mathematics. 1st Military Topography and Civil Surveying. 1st German. 1st Chemistry. 1st Civil Engineering.	Class Prize. Badge (2 stars).	
Sergeant	McPherson, D.	7	2	.....	do	Theory and Construction of Artillery. 1st Military Topography and Civil Surveying. 1st Geometrical Drawing. 1st Freehand Drawing. 1st French.	Class Prize. Badge (2 stars).	
Lance-Corporal	Anderson, F.	5	2	O Aug. 3	1880.	1st German. 1st Chemistry. 1st Civil Engineering. 2nd Military Engineering. 2nd Electricity. 2nd Geology.	Class Prize. Badge (1 star). Promoted Lance-Corporal.	

Co. Sergt.-Major	Campbell, H.	6	2	A	Feb. 4	Theory and Construction of Artillery. Geometrical Drawing and Descriptive Geometry. 1st Mathematics. 1st Fortification. 1st German. 1st Military History. 1st Physics. 1st Chemistry. 2nd Military Topography and Civil Surveying.	Prize for complete course. do	
Corporal	Cartwright, R.	7	1	B	July 31	.....	Class Prize. Badge (2 stars).	
Co. Sergt.-Major	Clark, G.	5	2	.....	Feb. 3	.....	Promoted Co. Sergt.-Major. Lance-Corporal.	
Sergeant	Coryell, J.	7	2	.....	May 1	.....	do	
do	Daniel, A.	8	1	A	Oct. 5	.....	do	
Lance-Corporal	Denison, E.	7	2	A	Feb. 29	.....	do	
Co. Sergt.-Major	Doucet, A.	8	1	A	Oct. 3	.....	do	
Corporal	Drury, E.	6	3	A	July 30	.....	do	
do	Duff, G.	5	2	A	Aug. 1	.....	do	
do	Duffus, G.	4	3	A	May 1	.....	do	
Sergeant	Dunscomb, W.	7	2	A	Feb. 6	.....	do	
do	Freer, H.	8	1	.....	Mar. 1	.....	do	
do	Gibson, J.	8	1	A	Aug. 28	.....	do	
Lance-Corporal	Greenwood, H.	5	2	A	Oct. 30	.....	do	
do	Greig, W.	7	1	C	July 29	.....	do	
Corporal	Hodgins, A.	5	2	A	Aug. 2	.....	do	
Sergeant	Hogan, H.	6	1	C	Oct. 9	.....	do	
do	Hubble, E.	6	2	C	Aug. 10	.....	do	
Btn. Sergt.-Maj.	Keefer H.	8	1	.....	Aug. 4	.....	do	

SAINT JOHN'S