

Publication No. 7

THE EVOLUTION
OF THE
HALIFAX FORTRESS
1749-1928

By
HARRY PIERS

Revised, edited and completed with
appendices, bibliographies and index

By
G. M. SELF
with the assistance of
PHYLLIS BLAKELEY

Under the direction of
D. C. HARVEY
Archivist.

HALIFAX, N. S.
The Public Archives of Nova Scotia
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PREFACE

THIS account of the evolution of the fortifications in and around the city of Halifax embodies the results of intermittent labour on the part of the late Harry Piers during a period of forty years, and with the exception of a map of the area was left in an unfinished state owing to his sudden death in 1940. Some of the chapters had been read by him at different times to the Nova Scotia Historical Society and revised more or less finally for that purpose; others were unrevised or interlarded with notes for revision; and all were written in very fine script which was difficult to decipher. At the same time, his habit of leaving his working notes in varied drafts with the manuscript and of giving rather indefinite references to his sources made it very difficult to be sure in many instances what would have been the final form of the manuscript if Mr. Piers had lived to revise and complete it.

However, when everything had been deciphered and typed as it stood by Miss Mary Boswell (Mrs. Sellers), I felt that it would be a great pity if so much information and the results of so much patient industry should not be made available to the general public. I therefore arranged to have it edited and completed by Dr. G. M. Self and Miss Phyllis Blakeley, M.A., who have spared no pains to make the work as perfect as possible. They have checked every word with the original manuscripts and every reference that could be identified with the original sources; deleted all repetitions; removed from the text to footnotes anything which interrupted the narrative; incorporated any additional information that could be obtained from the footnotes or working notes; contributed appendices of important documents to most of which frequent reference had been made by Mr. Piers; compiled the bibliographies and prepared an index to the whole work to facilitate its use as a handbook.

In fact the manuscript has been practically rewritten although the greatest care has been taken to preserve the language of the original in the text, except in the few passages enclosed in square brackets (thus: []), and to alter the annotations only to condense or expand them and to make the references more accurate or specific. While, therefore, the finished product is the work of several hands the original research, the original drafts of the manuscript and the contribution to our knowledge of the history of the fortifications are the work of the late Mr. Piers alone; and it is being published by the Public Archives of Nova Scotia, partly as a unique source of information on the early fortifications of Halifax, but also as a belated tribute to the patient and life-long labours of one who loved both his native city and antiquarian research. For the same reason a brief *In Memoriam* and a bibliography of the writings of Mr. Piers, together with a copy of his map on a reduced scale, have been included in this volume. The original map, 50" by 28", which shows the sites of all the forts and batteries and is carefully annotated may be consulted in the Archives.

D. C. HARVEY.

IN MEMORIAM

HARRY PIERS (1870-1940)

[[Reprinted from *Collections of the Nova Scotia Historical Society*, Volume 25. (Halifax, N.S., Imperial Publishing Company, Ltd., 1942), pages xiii-xiv:]]

Harry Piers, Curator of the Provincial Museum and Librarian of the Provincial Science Library, died on January 24, 1940. Born and educated in Halifax, a descendant of one of its founders, he had lived almost three score years and ten in his native city and loved its historical landmarks as a father. His knowledge of its history was encyclopaedic and his greatest delight was to disseminate this knowledge by word or pen.

Mr. Piers began his career as Assistant Librarian of the Legislative Library in 1889, was appointed Curator of the Museum in 1899 and Librarian of the Science Library in 1900. He held the last two positions until his death. Always interested in history he joined the Nova Scotia Historical Society in 1897, became Vice-President in 1921 and President in 1924. He contributed his first paper in 1899 and was a frequent and valued contributor for thirty-five years, in both papers and discussion. Two phases of Nova Scotian history appealed to him especially, the military and the artistic—the former leading to his valuable studies of the fortifications of Halifax and the latter resulting in his paper "Artists in Nova Scotia," presented to this society, and in his illustrated biography of Robert Field published in New York in 1927. In addition to these specialized studies he wrote many general articles on archaeological and scientific subjects, and was an active member of practically every cultural society in Halifax. He was Secretary of the Nova Scotian Institute of Science for forty years and later President, President of the Nova Scotia Society of Artists, of the Nova Scotia Museum of Fine Art, of the local branch of the Canadian Authors' Association, a director of the Nova Scotia College of Art, and Nova Scotian representative on the Geographic Board of Canada.

His main work was done as Curator of the Provincial Museum. During his long tenure of that position he increased the number of specimens from 10,000 to 33,000, including many photographs of historical buildings and personages, agricultural and domestic implements and utensils, Indian relics as well as the usual specimens illustrative of the resources of the province. Only those who are carrying on his work can appreciate the breadth of his interests and the detailed knowledge of his collection as recorded in the accession books of the Museum.

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A BIBLIOGRAPHY OF THE WORKS OF HARRY PIERS

Books Pamphlets, etc.

- American Vessels Captured by the British During the Revolution and War of 1812.*
The Records of the vice-admiralty court at Halifax, N. S. Salem, Mass.,
The Essex Institute, nd. 166 pages.
- Catalogue of the Citizens' Free Library, Halifax, Nova Scotia.* Halifax, NS, Wm.
McNab, 1894. vii plus 311 pages.
- Catalogue of the Library of King's College, Windsor, Nova Scotia . . .* Halifax,
NS, Nova Scotia Printing Co., 1893. xviii plus 560 pages.
- Chronological Table of Dartmouth, Preston and Lawrencetown, County of Halifax,*
N. S. Halifax, NS, np, 1894. 12 pages.
- Descriptive Catalogue of Economic Minerals of Nova Scotia, Canada . . .* Halifax,
NS, King's Printer, 1907. 62 pages.
- Economic Minerals of Nova Scotia. Catalogue and Description of a Collection at*
the Dominion Exhibition, Halifax . . . Halifax, NS, King's Printer, 1906.
62 pages.
- Provincial Exhibition, 1903. Economic Minerals of Nova Scotia . . .* Halifax, NS,
King's Printer, 1903. 39 pages.
- Report on Provincial Museum of Nova Scotia and Science Library for 1900.* Halifax,
NS, np, 16 pages. (The reports for the years 1901-11 are published in the
report of the Mines Department, and the reports for 1912 and 1913 were not
published.)
- Robert Field, portrait painter . . .* New York, Sherman, 1927. 202 pages, illustrated.
- Titus Smith, "The Dutch Village Philosopher," pioneer naturalist of Nova Scotia,*
1768-1850. Halifax, NS, Nova Scotia Institute of Science, July, 1938. 27
pages.

By F. Blake Crofton, assisted by Harry Piers:

- Catalogue of the Books in the Legislative Library of Nova Scotia . . .* Halifax, NS,
Nova Scotia Printing Company, 1890. viii plus 292 pages.

Edited by Harry Piers:

- Biographical Review . . . of Leading Citizens of . . . Nova Scotia.* Boston, Mass.,
Biographical Review Publishing Company, 1900. 488 pages.
- Journal of the Mining Society of Nova Scotia, Volumes 6-19 inclusive.* Halifax
NS, 1902-1914.
- Lawson, Mary Jane (Katzman), *History of the Townships of Dartmouth, Preston*
and Lawrencetown, Halifax, N. S. Halifax, NS, Morton and Co., 1893. vi
plus 260 pages.
- Proceedings and Transactions of the Nova Scotia Institute of Science, Halifax, Nova*
Scotia, Volume X, Part II (1900) to Volume XII, part I (1908).

Edited by Harry Piers and Constance Fairbanks:

- Lawson, Mrs. William (Mary Jane Katzman), *Frankincense and Myrrh. Poems*
by . . . Halifax, NS, 1893. viii plus 152 pages.

Newspaper and Magazine Articles:

- "A Halifax Mystery," *The New Brunswick Magazine*, St. John, NB, Volume I,
Number 6, (December, 1898), pages 363-370, and Volume II, Number 1,
(2 January, 1899), pages 8-21.
- "Annals of the 'City by the Sea' . . .", *The Halifax Herald*, Halifax, NS, 21 June,
1899.
- "A Tramp in the Bush . . .", *The Evening Mail*, Halifax, NS, 11 January, 1889.

"Common Birds of Nova Scotia," *The Evening Mail*, Halifax, NS, Carnival Number, 1889.

"D'Anville's Expedition," *Canadian History*, Educational Review Supplement issued quarterly by *Educational Review*, St. John, NB, Number 3 (September, 1898), pages 68-74.

"Nova Scotia's Mines and Mineral Production in Relation to the War," *The Canadian Mining Journal*, Toronto and Ste. Anne de Bellevue, 23 April, 1919, (volume 40, Number 16), pages 285-9.

Review of "How to Know the Shore Birds, by C. B. Cory . . .", *The Halifax Herald*, Halifax, NS, 20 September, 1898.

"The Cabots and their Voyages," *Canadian History*, St. John, NB, The Educational Review, Number 2, (June, 1898), pages 31-7.

"The College Library—A Treasure House," *Church Work*, Halifax, NS, Volume 44, Number 14, (1 September, 1920), page 6.

"The Discovery of the Continent by John Cabot . . .", *The Halifax Herald*, Halifax, NS, 25 June, 1897.

"The Foundation of Halifax," *Canadian History*, St. John, NB, The Educational Review, Number 6, (June, 1899), pages 152-6.

"The Provincial Museum and Science Library: Their History and Aims," *Journal of the Mining Society of Nova Scotia*, Halifax, NS, Volume VI (1900-1 and 1901-2), pages 94-100.

Articles in the (published) Collections of the Nova Scotia Historical Society:

"Artists in Nova Scotia." Volume XVIII, pages 101-165. Read 22nd May, 1914, Reference in text: 4 n 3.

"Remarks on the Fletcher and related stones of Yarmouth, N. S." Volume XVII, pages 53-6.

"The Fortieth Regiment. Raised at Annapolis Royal in 1717; and Five Regiments Subsequently raised in Nova Scotia." Volume XXI, pages 115-83. Read 14 March, 1924. Reference in text: 1 n 2.

"The Old Peninsular Blockhouses and Road at Halifax in 1751; Their History Description and Location." Volume XXII, pages 97-153. Read 13 May, 1927. Reference in text: 5 n 4.

MSS Articles in the Collections of the Nova Scotia Historical Society, Public Archives of Nova Scotia,

"A Chapter in the Evolution of the Halifax Fortification, 1815-1856." Read 7 January, 1938. A portion of this is included in the present work.

"History of the Citadel Hill." Read 31 July, 1937.

"Military History of Nova Scotia to 1763. Also Notes on the period after 1763." Read 10 January, 1899; 12 December, 1899.

"Nova Scotia Master Gold and Silver Smiths and Their Marks." Read 14 April, 1939. Publication of this paper is under consideration.

"Shubenacadie Canal." Read 27 August, 1932.

Articles in Proceedings and Transactions of the Nova Scotian Institute of Science:

"Aboriginal Remains of Nova Scotia—Illustrated by the Provincial Museum Collections." Volume VII, Part III (1888-9), pages 276-90. Read 13 May, 1889.

"Accidental Occurrence in Nova Scotia of Rock Ptarmigan." Volume XVI (1922-6) pages 1-8. Read 8 January, 1923.

"Accidental Occurrence of the Pygmy Sperm Whale on the Coast of Nova Scotia— . . ." Volume XV (1918-22), pages 95-114. Read 9 February, 1920.

- "Brief Account of the Miemac Indians of Nova Scotia and their Remains." Volume XIII (1910-14), pages 99-125. Read 8 January, 1912.
- "Brief Historical Account of the Nova Scotia Institute of Science . . ." Volume XIII, (1910-14), pages liii-cxii. Read at Commemoration Meeting, 20 January, 1913.
- Biographical Notes:
- Bowman, Maynard, 1843-1918. Volume XV, Part I, (1918-9), pages xviii-xix.
- Downs, Andrew. Volume X, pages cii-cviii.
- Hardy, Major-General Campbell, RA, 1831-1919. Volume XV, Part I (1918-9) pages vii-xviii.
- Haycock, Professor Ernest, 1867-1918. Volume XV, Part I (1918-9), pages xvii-xviii.
- Jones, J. M., Volume X, pages lxxx-lxxxii.
- Prest, Walter Henry, 1856-1920. Volume XV (1918-22), pages xli-xliii.
- Willis, John Robert. Volume VII, Part IV (1889-90), page 406-11.
- "Birds of Nova Scotia," by Andrew Downs, M.Z.S. Volume VII, Part II (1887-8), pages 142-78. Edited by Harry Piers.
- "Coregonus Labradoricus (Sault Whitefish) in Nova Scotia." Volume XVI (1922-6), pages 92-5. Read 14 May, 1924.
- "Fishes and Fish Development." Volume VII, Part II (1887-8), pages 95-9. Read 13 February, 1888.
- "Japanese Magic Mirror." Volume VII, Part II (1887-8), pages 118-9. Read 14 May, 1888.
- "Larva of May Beetle with parasitical Fungus." Volume VII, Part III (1888-9), pages 273-5. Read 10 December, 1888.
- "List of a small Collection of Ants obtained in Queens Co., N. S., by the late Walter H. Prest." Volume XV (1918-22), pages 169-74. Presented 26 May, 1922.
- "Mastodon Remains in Nova Scotia." Volume XIII (1910-14), pages 163-74. Read 13 May, 1912.
- "Notes on Nova Scotian Zoology," Numbers 1-4:
- Number 1. Volume VII, Part IV (1889-90), pages 467-74. Read 15 September, 1890.
- Number 2. Volume VIII, (1890-4), pages 175-84. Read 14 March, 1892.
- Number 3. Volume VIII, (1890-4), pages 395-410. Read 14 May, 1894.
- Number 4. Volume IX, (1894-8), pages 255-67. Read 12 April, 1897.
- "Occurrence of European birds in Nova Scotia." Volume XIII (1910-14), pages 228-39. Read 9 December, 1912; revised to 25 June, 1914.
- "Occurrence of opal in granite near New Ross, Lunenburg Co., N. S." Volume XII (1906-10), pages 446-9. Read 23 May, 1910.
- "On a Fish new to Nova Scotia," Volume X, Part I (1898-9), pages 110-11. Read 8 May, 1899.
- "On a New Tungsten (Scheelite) Deposit at Lower Sackville, Halifax Co., N. S." Volume XVI (1922-6), pages 38-45. Read 21 May, 1923.
- "On the nidification of the Winter Wren in Nova Scotia." Volume VIII (1890-4), pages 203-7. Read 11 April, 1892.
- "On the Occurrence of tin in Nova Scotia." Volume XII (1906-10), pages 239-49. Read 8 May, 1908.
- "Orthoptera of Nova Scotia." Volume XIV, Part III (1915-18), pages 201-354. Read 14 May, 1917.
- "Preliminary Notes on the Orthoptera of Nova Scotia." Volume IX (1894-8), pages 208-18. Read 13 April, 1896.

Presidential Address. Volume XIX (1934-8), pages 199-206 and pages 282-6.

Read 9 October, 1935; 14 October, 1936.

Recording Secretary's Report (in absence of usual presidential address). Volume IX (1894-8), pages xxxi-xxxiii.

"Relics of the Stone Age in Nova Scotia." Volume IX (1894-8), pages 26-58. Read 13 May, 1895.

"Remarks upon Miss Lucy C. Eaton's list of 'The Butterflies of Truro, N. S.'." Volume IX (1894-8), pages xviii-xxi.

"The Blue Crab. Extension of its Range Northward to Near Halifax, N. S." Volume XV (1918-22), pages 142-78. Read 19 January, 1920.

"Three abnormal zoological specimens in the provincial museum . . ." Letter in Volume XI, page xiii. Verbally described 9 March, 1903.

Miscellaneous:

"An Unrecognized Nova Scotian Poet [Joseph Hornsby Armstrong]." Lecture delivered before *The Haliburton Club, King's College, Windsor, NS*, 8 May, 1916. Not published.

"History of Fort Clarence, formerly Eastern Battery, at Dartmouth, Nova Scotia." Halifax, NS, 24 May, 1935. Typescript, *Public Archives of Nova Scotia*. Some paragraphs from this paper have been incorporated into the present work.

THE EVOLUTION OF THE HALIFAX FORTRESS, 1749-1928

Chapter I

The Earliest Defences, 1749-1775

When the Hon. Edward Cornwallis arrived at Chebucto Harbour on 21 June, 1749,¹ accompanied by over twenty-five hundred settlers, one of his first thoughts was to secure the settlement from attacks by marauding Indians, ever ready to molest the British during periods of nominal peace between England and France. At the outset he had only two companies of regulars and Goreham's half-blood Rangers; but in July he was well strengthened by the 29th and 45th regiments, which had just evacuated Louisbourg, bringing with them an abundance of stores, etc.²

He had been supplied with Admiral Durrell's plan of the harbour which indicated both sides of the Narrows as the best sites for forts; but as the ground selected for the town was further to the south such a scheme of defence was untenable.

Cornwallis directed his principal engineer, John Brewse, to prepare a temporary defensive plan suited to the location and the circumstances. In August the settlers were requested to spend a few days in throwing up a protective line about the town in accordance with Brewse's plan, which consisted of a series of five stockaded forts with connecting palisades. They could then build their log houses in security. The proposition, however, was rejected, and all that could be done was to post the troops to guard against a sudden incursion.

Then, about the end of August or beginning of September, the troops were ordered to carry the line of pickets around the town. Alarming intelligence had been brought that the Indians were preparing to attack, and redoubled efforts were made to complete the defences, although this could not be done in a satisfactory manner. By 11 September, 1749, a fort close to the top of the hill had been completed. This was the very humble antecedent of the present *Citadel* or Fort George.

1. [The Gregorian calendar was not adopted in Halifax until 13 August, 1752 (Beamish Murdoch, *A History of Nova Scotia*, Halifax, Jas. Barnes, 1865-7—hereinafter: *Murdoch*—Vol. II, page 210). To bring "old style" dates into line with modern reckoning, for the eighteenth century add eleven days; Cornwallis thus arrived at Chebucto Harbour 2 July, 1749, by our calendar.]

2. [Mr. Piers' MS reads "three regiments (the 29th, 45th and)." A search has failed to identify the missing regiment, if indeed there were at that time more than two at Louisbourg. In 1746 two regiments from Gibraltar came to Louisbourg, as did also two New England regiments, according to Senator McLennan (J. S. McLennan, *Louisbourg from its Foundation to its Fall, 1717-1758*, London, MacMillan, 1918, page 173), but beyond this date information is not immediately available.

"In June, 1749, Halifax was founded by Cornwallis, and in July one company of the Fortieth was sent from Annapolis to the new town where it was joined by the Twenty-Ninth and Forty-Fifth Regiments and perhaps another from Louisbourg." (Harry Piers, "The Fortieth Regiment . . .," *Collections of the Nova Scotia Historical Society*, Vol. XXI, Halifax, N. S., 1927, page 131.)

Captain Goreham and his Rangers, with an armed sloop, were sent to the head of Bedford Basin, where they were to establish themselves for the winter, to keep control of the Basin and to keep open communication with Annapolis via the small post at Minas. This is the origin of the outpost, soon dignified by the name *Fort Sackville*, which ultimately became a look-out post for deserters and finally passed out of existence not many years ago. A palisaded blockhouse was erected there some years afterward.¹ The "fort" was built on a small elevation, 100' above low water.

On 30 September, 1749, Indians attacked men cutting wood at the saw-mill in Dartmouth Cove, killing four. Rewards were offered for these savage foes, dead or alive, and more rangers were raised to cope with the menace.

By 17 October, 1749, two of the stockaded forts about the town had been completed, and a rough *barricade* of felled trees, logs and birchwood, instead of the picketed line originally planned, had been carried entirely around the settlement. The place now began to be secure from surprise, although the settlers had twice refused to assist in strengthening the defences and the work had had to be done by the troops. In December, 1749, a militia force was organized.

The barricade was only a temporary structure, there not having been time in the autumn to run the palisades. By 10 July, 1750, the barricade had been removed and the palisades were being erected. These completed the defences against incursions by Indians or Acadians armed with smooth-bore muskets, and in case of need they could also serve as a check to a better-equipped enemy.

The *palisades* began on the shore-line at the foot of Salter Street and ran west up the hill, in a straight line till they reached Barrington Street immediately south of Masonic Hall. Here stood the stockaded work called *Horseman's Fort* (73' above sea-level), in which was the South gate of the town.² Thence the palisades continued upward to the east side of Grafton Street just south of Blowers Street. There they formed an obtuse salient and

1. [8 December, 1755] "... the Fort is Called Fort Sacvile it Contains Near an Acre of Ground it is Built with Pickquits it is 4 Squared But one Canon & a Few Swivel Guns No Blockhouse & In my opinion may be Easely Taken it is Generaly Garosoned with one Capt one Subaltron & 50 men ..."

("Diary of John Thomas," [a surgeon in Winslow's Expedition of 1755 against the Acadians, reprinted from *The Historical and Genealogical Register of the New England Historic Genealogical Society* in] *Report and Collections of the Nova Scotia Historical Society for the year 1878*, Volume I, Halifax, NS, Morning Herald Office, 1879, page 138.)

[1784] "... and at Sackville, at the head of the Bason, there are barracks for 50 men, besides a small blockhouse ..." (Morse, Lt.-Col. Robert, "A General Description of the Province of Nova Scotia and a Report of the present State of Defences, with Observations leading to the further growth and Security of this Colony, done by Lieutenant COLONEL MORSE, Chief Engineer in America, upon a Tour of the Province in the Autumn of the Year 1783, and the Summer, 1784," *Report on Canadian Archives*, 1884, Ottawa, 1885, [hereinafter: *Morse 1784*] page xlv.)

2. Horseman's Fort was named after Lt-Col John Horseman of one of the regiments from Louisbourg.

then went to the northwest where they abutted on a rear bastion of *Cornwallis' Fort* (144' above sea-level), between the present Artillery Park and the South Barracks.¹ The palisades then proceeded to another salient point opposite to the Artillery Park gate, whence they went north up the hill to the *Citadel*. This work, the first defensive work erected, was located, not on the summit of the hill, but at a spot about 225' above the sea, and just east of the southern ravelin of the present Citadel.

Thence the palisades ran, at about the same level, to another salient which nearly corresponds with the centre of the present eastern redan, north of the Citadel gate. From here they ranged down to a point just west of the present Glacis Barracks, where *Fort Luttrell* (155' above sea-level) was located.² Then, with another intermediate salient near the southwest corner of Jacob and Cogswell Streets, the palisades went down to the corner of Jacob Street and Poplar Grove, where stood the fifth and last work, *Grenadier Fort* (50' above sea-level), whence they again reached the harbour at the foot of Jacob Street. The North gate of the town was just east of Grenadier Fort.

These forts were raised upon a bastioned trace, square and with a bastion at each corner. They were formed of "double pickets," consisting of a row of round timbers, each 10' long and 6" thick, with a second row of like timbers placed against their rear, so that the second row filled in the hollows where the front timbers touched each other. In the walls loop-holes were cut for musketry fire. The average dimensions of the forts were

1. "Apparently in 1760 a small building was completed on the site of Cornwallis Fort, afterwards the Engineers' Square, south of the end of Brunswick Street ("Report of the extent and present state of the Barracks Accommodation at Halifax and Annapolis—Halifax, N. S., 10 November, 1835," in Rice Jones, Lt-Col. CRE, to Inspector General of Fortifications, Halifax, NS, 11 November, 1835, *Public Archives of Nova Scotia* [hereinafter: *PANS*], RE 40, page 190 [reprinted in Appendix V, page 99. Hereinafter: *Jones 1835*]). It was located diagonally, in accordance with the orientation of that old fort, and I was therefore long of the opinion that it may have been one of the original small barracks of 1749, which had survived. It seems to have been used as an artillery hospital or infirmary in 1803, when the site of the proposed Artificers' Barracks was shifted northward so as to avoid it. Subsequently it appears to have served as quarters for the Commandant of Artillery and of Engineers and as officers' quarters. It stood till the beginning of the present century, when it was demolished to make room for the present *Brick Block (C) of the South Barracks* (see within, page 60 and page 60, note 4)."

[This paragraph has been removed from its context after the account of the building of the Red Barracks in 1759 (see within, page 9) for the following reasons: (1) The date 1760 for the building of this barracks depends only on the evidence of *Jones 1835*. (2) Col. Jones has been proved by Mr. Piers to have been wrong in another instance of an early date (within, page 9, note 1). (3) It is to be presumed that Col. Jones, a military administrator, and not an historian, was concerned only with distinguishing between old and very old, and did not bother himself unduly about precise dates. (4) Mr. Piers has noted that the building was located diagonally, in accordance with the orientation of the old fort, and presumably out of line with the other buildings in the square. (5) the tendency of all the armed services, well illustrated throughout this work, is to utilize to the utmost all available accommodation, and not to destroy except where it is intended to replace with something better. (6) the average life of wooden buildings in this climate, given the reasonable care and maintenance they would receive under military administration, is from thirty to forty years, and therefore (7) the original buildings of 1749-50 may be presumed to have been still in good condition in 1760 and, in the absence of other evidence to the contrary, it is not reasonable to assume that one of them would be torn down in 1760 to be replaced by another of exactly the same kind. From these considerations it may be deduced that Mr. Piers' earlier judgement was correct, and that the original Cornwallis Fort Barracks survived until the beginning of the present century.]

2. Fort Luttrell was named after Major Hungerford Luttrell of the 45th Regiment.

as follows: exterior sides, from salient to salient, 193'; sides of square, 125', and of curtains, 75'. Within each fort was barrack accommodation for two companies (100 men).¹

A space of thirty feet without the general line of defence was cleared of trees, in order that there might be no cover for an enemy. The felled trees were thrown up as a barricade.

This emergency system of defence was well suited to the repulse of Indian or Acadian French incursions; Cornwallis himself said that when the work was completed, the place would be as secure against Indian attack as if it had been regularly fortified. Owing to their form, the forts could direct an enfilading fire along the face of their own bastions and curtains; and, as they projected beyond the line of palisades, somewhat as tambours, two sides of each fort could enfilade the line of palisades and at the same time be reciprocally protected by oblique and enfilading fire from the palisades. To guard against hitting a friend in a neighbouring fort, the intermediate line of palisades was redan-shaped, and its salient could, in some cases, almost enfilade the advanced front of the forts.² If the forts were properly manned, and were not surprised, an Indian could never reach the palisades alive.³

In the summer of 1750 Cornwallis proceeded to carry out his intention of fortifying *George's Island*. By 10 July, 1750, he had begun clearing it, and he proposed to erect there some blockhouses and a good *battery*. By 27 November, 1750, seven heavy 32-pounders were in place, and palisades were being erected around them; by May, 1751, the armament had been increased to sixteen guns, 32- and 24-pounders,⁴ powerful siege weapons for those days, although their effective breaching range was not over 800 yards. This was the first attempt to defend the town from attack by sea, and was the origin of what was later called Fort Charlotte. In 1754 £25 19s. was

1. Plan 19 [Town of Halifax], Scale not given, Size 26½" by 21", Volume, "Halifax Maps," *Province of Nova Scotia, Department of Lands and Forests (Crown Lands)*, Halifax, N.S. [This map, prepared in 1762, and with additions variously dated 1772 and 1781 or undated, is one of the few which shows this line of palisades. A tracing, donated by Mr. R. J. Milgate of the Department of Lands and Forests, is in the Map Collection, PANS, Halifax No. 56. Hereinafter: *Crown Lands* 19, 1762].
2. The fair range of muskets at that time was between one and two hundred yards.
3. The line of palisades was removed at some time between 1753, when it was still in existence (Akens, T. B., "History of Halifax City," *Collections of the Nova Scotia Historical Society for the Years 1892-94*, Halifax, NS, Morning Herald Printing and Publishing Company, 1895, [hereinafter: *Akens' Halifax*] page 209) and 1759, as they are not shown in Richard Short's *Views of Halifax*, which are accepted as having been drawn in that year. [Hereinafter: *Short's Views* 1759. Historically the most useful views of 18th century Halifax are those of Short, just referred to (London, 1764; second edition, 1777); of Lt.-Col. Edward Hicks, c. 1780 (London, sometime after 1782. Hereinafter: *Hicks' Views* 1780); of G. J. Parkyns, c. 1800 (London, 29 April, 1801. Hereinafter: *Parkyns' Views* 1800); and of H. N. Binney, dated 1791 (unpublished, but a photographic copy available in PANS), Photograph collection, Halifax Drawer, Provincial Museum of Nova Scotia Accession Number 3699. Hereinafter: *Binney's View* 1791.) (Harry Piers, "Artists in Nova Scotia," *Collections of the Nova Scotia Historical Society*, Vol. XVIII, Halifax, NS, Wm. McNab, 1914, pages 103-110 inclusive).]
4. Probably seven 32-prs. and nine 24-prs.

spent on a "Cavalier at George's Island."¹ In March, 1755, it was reported that the batteries there were not quite finished.²

Dartmouth had been settled in the autumn of 1750, and a *blockhouse* for its defence was built on a rocky hillock at the northwest end of King Street. A sergeant and ten or twelve men of the Dartmouth militia were ordered to mount guard there each night. In spite of this, the village was attacked by Indians on 13 May, 1751, and several settlers were killed. To prevent such a surprise a *line of pickets* was erected along the back of the settlement, to replace an ineffective low barricade of brushwood. These pickets were still in existence in March, 1755.³

In the spring of 1751 the land on the peninsula of Halifax was laid out in 5-acre farm lots and it was expected that the settlers would begin to clear them. To protect them from Indians while so engaged, an advance line of defence was planned. This resulted in the building of the *Peninsular Blockhouses* and the *Peninsular Road*.⁴ The plan called for a chain of three blockhouses, each about 12' or 13' square, and each surrounded by a triangle of double pickets, 60' by 60' by 45', with the acute angle to the front. There was a guard and a small piece of ordnance in each.⁵ These blockhouses were connected by a patrol road which extended across the isthmus, from a little east of Fairview on Bedford Basin to the shore of the Northwest Arm close to its head. The North Blockhouse was on a small spur of a hill, where the gate of Fairview Cemetery is now located; the Middle Blockhouse was on a small hillock a little north of Bayer's Road; and the South Blockhouse was a few rods east of the railway bridge on Chebucto Road.

1. "A Statement of the particular Sums estimated for the Service of Nova Scotia for the Year stating what Articles have been disallowed in the Estimate transmitted from the Province," in Akins, T. B., editor, *Selections from the Public Documents of the Province of Nova Scotia Published under a resolution passed by the House of Assembly passed March 15th, 1865, Halifax, Charles Annand, 1869, [Hereinafter: Akins' Selected Documents], page 691.*

2. "Remarks relative to the Returns of the Forces in Nova Scotia, 30 March, 1755," *loc. cit.*, page 402.

3. *Loc. cit.* In May, 1754, *Lawrencetown*, near Dartmouth, was settled, and a blockhouse within a palisaded square was erected there to protect the settlers. It was abandoned in the latter part of August, 1756.

4. [Harry Piers, "The Old Peninsular Blockhouses and Road at Halifax, 1751: Their History, Description and Location," *Collections of the Nova Scotia Historical Society*, Vol. 22, Halifax, Wm. McNab, 1933, pages 97-153 inclusive, plus a map, two plans, and a perspective restoration of the Middle Blockhouse.]

5. "A Rool of the Indians (of the first Battallion in General Shirleys Provincial Regiment) that are on Command at the Isthmus [Peninsular?] Block House.

"Simon Frost Majr Goldthwaites Company.

"Saml Bumson
"Joshua Unkuss
"Willm George
"Pharaoh Gardner

} Capt. Malcolms

John Conet
Nathan Hood
James Mingo

} Capt. Sturtevant

Simon Cogney
Joab Commetson
John Cowett
Seth obediah
Saml. Tocomana
John Thomas

} Capt. Speakman

(Placed between Winslow to Capt Cox, Halifax, 28 December, 1755, and Lawrence to Winslow, Halifax, 6 January, 1756, in "Journal of Colonel John Winslow," *Report and Collections of the Nova Scotia Historical Society for the years 1882-1883*, Volume III, Halifax, NS, Morning Herald Office, 1883, page 193).

The North Blockhouse was once surprised by Indians when the guard was drinking and playing cards, and the men were killed. Near the South Blockhouse, Indians attacked workmen at a saw-mill on the stream flowing out of Chocolate Lake, and killed one or two of them. The casualties were buried by the guard, but the savages returned in an effort to obtain the scalps.

The Peninsular Blockhouses were occupied probably until the beginning of the next decade, by which time the Indian danger was past. But by that time a greater danger threatened. The strained relations between England and France were about to culminate in that grand struggle for mastery which ended French dominion in Canada. It was necessary that this province should be put into a posture of defence.

It was decided to erect first a strong battery on the Dartmouth shore, opposite George's Island, to co-operate with the works there in defending the eastern channel of the Harbour from a naval attack. Accordingly, in March, 1754, Brewse was ordered by the Lords of Trade to proceed to Halifax and build this work, which was to be speedily completed. This was the origin of the lower section of the fortification known for forty-four years as the *Eastern Battery*, but in 1798 renamed *Fort Clarence*. The original battery was close to the shore, on rising ground about 35' or 40' above sea-level. By the latter part of October, 1754, seven 12-pounders had been mounted, and a request was made to England for 24-pounders to complete the armament. By the following January the battery was nearly completed.¹ Helpful as this work was to the defence of the Harbour, the combined guns of George's Island and the new battery could not then protect the middle of the eastern channel, as the guns of the period were of insufficient range.²

The Eastern Battery being nearly completed, Lt-Governor Lawrence in January, 1755, consulted with Brewse as to the erection of a battery to support the guns on George's Island in defending the front or eastern side of the town from a sea attack. As the front was extensive, with contiguous deep water everywhere, three shore batteries were found to be necessary, and it was proposed to arm each one with ten heavy guns. Work was begun on 25 January, 1755, and completed late in the summer, twenty 24-pounders being mounted in July. The batteries were elongated blunted redans, 12' above high-water mark, with parapets 7' high and 15' thick,

1. But it had not been finished by the end of March. ("Remarks relative to the Return of the Forces in Nova Scotia, 30th March, 1755," *Akins' Selected Documents*, page 402). £2,000 had been estimated for its cost. ("An Account of the particular Sums estimated for . . . the Year 1754 . . ." *loc. cit.*, page 691).

2. The range of the 12-pound muzzle loader was 360 yards point-blank and 1700 yards with a 5° elevation, of the 24-pounder 360 yards point-blank and 1850 yards with a 5° elevation. The battery's broadside was 156 pounds, and its complement of gunners fifty to sixty.

and with embrasures for the guns. They were built of logs and squared timber, earth and sand; 9,500 25' logs were used, 1,280 tons of which were squared. The whole expense was about £5,300, a large amount in those days, and the general opinion appears to have been that the money was wasted.

These works were known respectively as the North Battery, the Middle or Governors Battery (from its proximity to the Governor's residence), and the South or Fourteen-Gun Battery.

The *North Battery* was on a somewhat swampy projection of the shore where the Ordnance Yard now is. It really consisted of two small complementary batteries—giving the idea of one work which had been cut into two parts and displaced out of alignment. The northern part, afterwards called the "Five-Gun Battery," 145' long in the rear and 130' in the front, faced to the northeast, while the southern part, or "Nine-Gun Battery," 150' long in the rear and 130' in the front, faced east. Five guns were mounted on the front of each half, and the southern part had two additional guns on each flank. The guns were on wooden platforms, and access to the slightly elevated terreplein of the batteries was gained by wooden steps at the gorge. They were apparently still in fairly good condition in 1766.¹

The *Middle Battery*, about 230' long with 60' flanks, was on low ground where the King's Wharf now is, and its gorge was nearly flush with the east side of Water Street.² Ten guns defended the front, while two were on the south flank and three on the north, to enfilade the shore.

The *South Battery*, about 280' long with 65' flanks, stood on the shore where Campbell's wharf is situated, at the back of the Halifax Hotel. Ten guns were on the front, three defended the south flank and two the north.

The total number of guns in these three batteries was therefore forty-four.³

On 9 August, 1756, war with France was formally declared at Halifax,⁴ and by October, 1757, much well-founded uneasiness was felt here over the defenceless state of the town against a capable foe. Some of the inhabitants

1. Marr, John, Sub Engineer and Lieut. *Plan of the Store Houses, Ordnance Yard, Batteries and Adjacent Wooden Buildings, at the Foot of Buckingham Street in Halifax, Nova Scotia, 1766* Scale 50' to 1". Size 12¼" by 14¾". Colored, MS, P.A.N.S. Map Collection, Halifax No 5. [Hereinafter: *Marr's Ordnance Yard Plan 1766*].

2. Blaskowitz, Charles, *Plan of the Peninsula upon which the Town Of Halifax is situated, 1784*, Scale 400' to 1". Size 62" by 70". Colored in part, MS, P.A.N.S. Map Collection, Halifax No. 8 [Hereinafter: *Blaskowitz's Plan 1784*]. This plan (along with twelve others, location unknown) was prepared to illustrate *Morse 1784*.

3. The batteries are clearly shown in *Short's Views 1759*. The site of the South Battery was disposed of in Colonel Spry's time (1769-1783), the work being then quite useless. The sites of the other two are still military property: they were utterly ruinous before 1784 and their remains were removed about that time or soon after.

4. Open warfare in this region had actually begun the previous year with the capture in June 1755, of the French-held Fort Beauséjour at Chignecto.

memorialized the Governor to that effect and suggested that a ditch and line of defence be thrown up about the place, and that a proper citadel be erected on the hill.¹ They referred to the vast sums of money granted for fortifying the town, and how ineffectual all had been because of the miserable management of those who had the direction of it. Fortunately in July, 1758, Louisbourg was finally captured, greatly to the relief of Halifax, and in 1760 its famous fortifications and public buildings were demolished and all warlike stores transferred to Halifax.

Land for a *Naval Yard* was acquired in February, 1759, and in the spring extensive buildings began to be erected there. From that time on, the very difficult problem of its protection became of great importance. The site had been unwisely selected. The capable engineer who in 1761 prepared a "Report of the Particulars of the Fortifications of Halifax" said of it: ". . . the ground where the Dock[Yard] stands, is so much seen into all around, that the power of Art cannot make it secure. These objections were made in Spring, 1759, when that work was begun, but were not regarded."² Colonel Morse in 1784 criticized the site as too far north to be properly defended by the short-range guns of the principal defensive works of the town.³

At this time *barrack accommodation* was inadequate and the troops were mostly quartered in the barracks which had been within the original forts, and were thus considerably scattered. In addition to these buildings, there was the *Artillery Barracks*, 80' by 25', a low 1½-storey building at the southwest part of the Grand Parade, where the gunners drilled and parked their field-pieces.⁴

Better quarters for the line regiments were required, and about 1759 two fine long blocks of barracks, facing each other, were built below Fort Luttrell, on the northeast part of Citadel Hill, on the west side of Brunswick Street between the head of Buckingham Street and what is now Jacob Street; their south ends were 122' north of Buckingham Street. They were at first spoken of as the "New Barracks," but were afterwards known as the *Red Barracks*, from their colour. Each block was 200' by 35' and hipped-roofed, probably two stories high and with dormer windows to the attic; each had five porches and was composed of a like number of bays.⁵ The blocks were separated by a high-fenced parade-ground, 165' wide, where

1. The small original stockaded fort on Citadel Hill was now of little or no account, except as a barracks.

2. This whole report is reprinted in Appendix I, pages 65-79. The quotation will be found at page 69.

3. "It is placed too high up the Harbour to be under the immediate cover of any work which may be established upon the Citadel Hill, and is also from the same cause exposed to an enemy which might possess themselves of the opposite side of the Harbour, where the distance across is not above 800 yards." *Morse* 1784, page xlv.

4. *Short's Views* 1759; *Crown Lands* 19, 1762. The north end of the barracks was in a line with the south side of George Street. It had disappeared by 1783.

5. Measurements from various plans.

the troops were inspected or exercised and where, at sunrise, culprits were occasionally lashed. In 1835 these barracks were rated to quarter 1,168 men,¹ but probably their original rating was much greater.

In 1761 an extensive Citadel on the Vauban system was projected to replace the small original "Citadel" erected twelve years before on the southeast slope of the Hill, and now either obsolete or ruinous or both. The new work was to have five bastions and four ravelins, with a hornwork in advance of the eastern curtain; its greatest length was to be 480'. This ambitious undertaking was never proceeded with,² but in 1761 or early 1762 Major-General Bastide* began the construction of a new *Citadel*. This was a system of much elongated, irregular, polygonal fieldworks of earth and sod, possibly revetted with timber or fascines, a poor substitute for the elaborate fortification which had been recommended. The work was stopped in July, 1762.³

Before September, 1761, Bastide erected a small *Barbette Battery* of three 24-pounders on the shore directly opposite to George's Island, at a point 35' above sea-level. This was intended as a support to the guns on the island in defending the narrow western channel, for the three old water-front works were now of little or no use. This was the origin of what later was variously known as MacLean's or the Principal Battery and finally the Grand Battery, at the south end of Lower Water Street, near Fawson Street.⁴

A *Lumber Yard* for fortification service, in which could be stored tools, lumber and other materials, and where workshops and sheds could be built, came into existence in the summer of 1761. From the evidence available, it was located just west of the "new barracks" (Red Barracks), most likely on the site of the present Glacis Barracks. On 1 June, 1761, a little over an acre of ground belonging to Lt. Francis Gildart was valued for this purpose, and was soon afterwards rented by the Crown. On 9 November 1761, Bastide directed that the rights of the Crown be investigated regard-

* An appropriate name for a military engineer. See glossary.

1. Jones 1835. The Red Barracks are noted here as "built in 1761," but they are quite clearly shown in one or two of *Short's Views* 1759. They may also be seen, for comparison, in *Binney's View* 1791.

2. "Fort projected in 1761," *Crown Lands* 19, 1762.

3. [26 June, 1761] "Major-General Bastide desired to obtain a title to the ground he intended for fortifications, and a grant of such portions of citadel hill as had not become private property was recommended." *Murdoch*, Volume II, page 404.
[23 July, 1762] "The works of the fortification of citadel hill were all suspended at this time." *Loc. cit.*, page 418.

4. Bastide referred to it as the "South Battery" when the site for a lime kiln was being considered. J. H. Bastide to William Nesbitt, Esq., Halifax, 1st of September, 1761, *P.A.N.S.* RE 1 page 5. See also page 11 and page 11, note 3.

ing land between that rented from Gildart "and the end of the upper side of the New Barracks and the high road leading from the town to the hill," as it was necessary to enlarge the Yard.¹

Timber and cordwood were now being cut for fortification purposes, on the land of Paymaster Joseph Scott and others at Sackville, also near Nine Mile River, Bedford, and at Birch Cove.

As there was also need of a waterside property whereon a *Lime Kiln* could be erected, Bastide, on 1 September, 1761, directed that for that purpose an appraisal be made of land "immediately to the southward of the South Battery, as far as the corner of Mr. Prescott's lands," consisting of "that Ground which the Kings Brewhouse stands upon of about one hundred feet Square, and the Neighbouring Lotts."³ Four lots belonging to Wm. Howard South (with house "worth Twelve pounds per annum"), Capt. A. Calender, R. Wenman and Edmund Whitehand, were accordingly valued on 15 December, 1761.⁴ On 10 May, 1762, a piece of Jonathan

1. J. H. Bastide to William Nesbitt, Esq., Halifax, 9th November, 1761, PANS, RE 1, page 6. To complicate the situation, *Murdoch* (Volume II, page 418) says that "French prisoners were at work upon a wharf at the Lumber Yard." [From the evidence available in the RE Records, PANS, the inference seems to be that the Lumber Yard mentioned here was not enlarged, as desired, but that the Lime Kiln Yard at the corner of Hollis and South Streets (which had the convenience of a new wharf built 1762-3) was used to store the overflow, that the lime kiln was soon abandoned (if indeed it was ever built), and that the Lime Kiln Yard then became the Lumber Yard, the old Lumber Yard on Gildart's land falling into disuse. The following contradictory references are relevant:
 - A. "23 July [1762] . . . French prisoners were at work upon the wharf at the Lumber-Yard . . ." (*Murdoch*, Volume II, page 418).
 - B. 1 February, 1763. Halifax, Beardsley to Richd. Bulkeley, Esq. "All our Cordwood at the Lumber and Lime Kiln Yards being at present nearly expended; and the Bason at the same time being entirely froze over . . . would you be pleased to spare about 15 Cords of hard Wood out of the King's Yard . . ." (PANS, RE A, page 33).
 - C. 22 August, 1763. Halifax, Beardsley to Colonel Forster. "As there is now a Large Wooden fram'd Pier almost ready to be sunk at the Lime Kiln yard . . ." (*Loc. cit.*, page 33).
 - D. 8 September, 1763. Halifax, Beardsley to General Amherst. "A List of such Persons as are judged absolutely necessary to be kept on the Books of this Office, for the Preservation of the different Buildings, Stores, *Wharf* [italics supplied], and whatever else hath already been executed in this Department from going to Ruin." (*Loc. cit.*, page 38).
 - E. "27 Sept. 1763. Beardsley to Lt. Marr, as to what was the best way of securing 'the new Wharf at the Lumber Yard'." (Note by Mr. Piers, marked "From Index of Book Missing" [presumably RE A, in Public Archives of Canada, Nova Scotia Branch, and left to PANS when the NS Branch of the Canadian Archives was closed and its records removed to Ottawa].)
 - F. 27th September, 1763. Halifax, Beardsley to Lt. Marr, Sub-Engr. ". . . the South East part of One of the Piers not being by any means fixed, so as to withstand the Winter Storms, and as no men can be spared from the Troops for that Service, I should therefore be glad to have your Opinion what you imagine would be the Best Way of getting it properly secured . . ." (PANS, RE A, page 44).
 - G. 28th September, 1763. Halifax, Beardsley to Colonel Forster. ". . . the New Wharf at the Lime Kiln yard not being properly secured . . . I must . . . beg you . . . order a few men to attend that Service . . . otherwise the East Part of the South Pier will certainly very soon be demolished by the violence of the Sea . . ." (*Loc. cit.*, page 46).]
2. For the cutting of wood at Sackville: The certificate of John McKinnon, "Lt. 1st: H: Bn. and Overseer," Halifax, 26 October, 1763, PANS, RE 1, page 27. For the cutting of wood at Birch cove: PANS, RE A, *passim*.
3. J. H. Bastide to William Nesbitt, Esq., Halifax, 1 September, 1761, PANS, RE 1, page 5.
4. John Burbidge and Henry Ferguson, Lime Kiln Yard, 15 December, 1761 [property valuation], PANS, RE 1, pages 9-10.

Prescott's land, adjoining his distill-house "near the intended Lime Kiln Yard" was also valued for the same purpose.¹

About April, 1762, Bastide ordered to be built "a great road from the shore up the Hill at the north end of the town." This road probably proceeded upward in a zigzag course just inside the site of the old palisades, about where Jacob Street now is, turned south on the west side of the present Glacis Barracks, and so to the entrance of the Citadel.²

Early in July, 1762, startling news was brought to Halifax: St. John's, Newfoundland, had been surprised and captured by the French. The greatest consternation seized the Haligonians, who believed that their town would be the next to be attacked. A council of war, composed of Lt.-Governor Belcher, Admiral Lord Colville (Commander-in-Chief of HM Ships in North America), Colonel R. Bulkeley of the Halifax militia, Major-General Bastide, RE, Colonel William Forster, commander of the troops, Lt.-Col. Frederick Hamilton, and Lt.-Col. Job Winslow, began to meet on 10 July, 1762, and sat at least until 17 August, 1762. The following precautions were directed to be taken:

1. Thrum Cap Island to be a place of signals,
2. The Provincial Regiment to be employed on the fortifications, to be armed and disciplined,
3. The Halifax militia to be arrayed and 200 of the Lunenburg militia to be brought to Halifax,
4. French Neutral prisoners of war to be collected and lodged,
5. Any French Neutrals who were fishing upon the coast to be brought in,
6. A battery or batteries to be erected at Point Pleasant, and near the Dockyard,
7. Three or more guns to be added to the Three-gun or South Battery,³
8. The batteries on George's Island to be put into a posture of defense, and
9. The walls of the Eastern Redoubt, Dartmouth, to be repaired.⁴

Apparently in this year and probably in accordance with these resolutions *Mauger's Blockhouse*⁵ was erected on a hillock near the foot of North

1. John Burbidge and Jos. Fairbanks, Prescott's Land, Halifax, 10th May, 1762 [property valuation], *P.A.N.S.*, RE 1, pages 13-14. These properties were apparently rented, for they were not purchased until 30 September, 1778 (see within, page 18 and page 18, note 1). They ultimately formed part of the late Lumber Yard near the corner of Hollis and South Streets.

2. *Blaskowitz's Plan* 1784.

3. Bastide's Barbette Battery of September, 1761 (see above, page 9 and page 9, note 4).

4. Council Minutes, 10 July, 12 July, 15 July, 23 July, 1762, *Akins' Selected Documents*, pages 702-706. Also *Murdoch*, Volume II, pages 416 *et seq.*

5. Named, as was also the beach at McNab's Island, after Joshua Mauger, a wealthy merchant then resident in London. Mauger had a distillery near the Blockhouse.

Street and just north of the then Naval Yard. On 21 July, 1762, this block-house was ordered to be entrenched and occupied by a sergeant's guard of fourteen men.

Admiral Lord Colville moved his flagship, *Northumberland* (70 guns) into the mid-channel between Point Pleasant and McNab's Island, so that her guns could co-operate with those of the batteries being built at the Point. He also, before 21 July, 1762, placed a *boom* of timber and chains, 120 fathoms long, across the outer part of the Northwest Arm to prevent vessels passing in to the west of the town; a sloop with eight 6- or 9-pounders and thirty rounds of round- or grape-shot was placed within this barrier, as an added protection. The Point Pleasant end of this boom was anchored on a rock afterwards known as Chain Rock.

Another armed sloop and party was stationed in the Southeast Passage to guard that narrow channel. On 10 August, 1762, Lord Colville left Halifax for Newfoundland.

Hitherto the most advanced works for the defence of the Harbour from naval attack had been those on George's Island, those at the Eastern Battery, and the Barbette Battery at the Lime Kiln Yard. Now the defences were to be pushed further seaward, in order more effectively to enfilade the fairway leading into the inner harbour.

Bastide reported on 23 July, 1762, that in accordance with the Council's orders he had erected two batteries alongside the shore at Point Pleasant, and had had the guns mounted. The one to defend the entrance to the Arm, in conjunction with the armed sloop and the boom, was situated on a bank about 28' above sea-level on the western side of the Point. It was a *Barbette Battery* of ten 9-pounders, begun 13 July, 1762, by a detachment of 112 men of the Provincial Regiment.¹ The other and more important work on the eastern side of the Point was a *Breastwork Battery*, intended to defend the main channel in advance of the older and inner works. It was only about 8' above sea-level, and was much heavier, having eight 24-pounders.²

Bastide reported further that his recently constructed Barbette Battery of three 24-pounders, at the south end of the town, adjoining what was afterwards the Lumber Yard at the ends of Lower Water and Hollis Streets, had been enlarged and had had four 24-pounders added, giving it a total of seven heavy guns.

1. This is the Flagstaff Battery of Morse 1784, and the well-known Northwest Arm Battery of later years, reconstructed a little to the rear of the original position. Its remains are still clearly visible.

2. This is the Fielding's Battery of Morse 1784, later known as Point Pleasant Battery. It still exists, obsolete.

A battery and redoubt armed with ten guns were ordered to be erected on Ives Point, the northwest point of Cornwallis' or McNab's Island, to co-operate with the new work at Point Pleasant. The clearing of the heavily timbered land was begun on 21 July, 1762, by 200 Provincials, but work was suspended on the 30th for lack of men.

By August, 1762, the fear of attack had gradually passed away, although the council-of-war sat until the 17th of that month. Martial law had been in force in Halifax between the 13th and 21st July, 1762.

Peace was finally signed February, 1763, and as one of the consequences General Amherst, at New York, on 3 August, 1763, wrote orders to Lieutenant Beardsley to put a complete stop to all work on fortifications at Halifax. These instructions were received on 21 August, 1763, and all defensive activity came to a sudden standstill, only such services being continued as were necessary for the preservation of stores.¹ Thus closed two and a quarter years of intensive work on the defences of Halifax. In the succeeding twelve years of peace all these earthworks were permitted to decline under the influence of our variable climate.

On 30 September, 1766, Lieutenant John Marr, sub-engineer at Halifax, prepared a plan of, and a report on, a proposed extension of the very inadequate *Ordnance Yard* at the foot of Buckingham Street on the site of the present Pentagon Building. The Yard was only about 100' square, and it was proposed to take in some adjoining unoccupied property of the town.²

From Lieutenant Marr's excellent plan it is to be seen that the North Battery was still apparently in serviceable condition. Just to the south was the Ordnance Yard, and in it (1) a Long Store, 80' by 21', with a pitched roof, (2) a Square Store to the east of it, 50' by 35', with a hipped roof, and (3) a small Armourer's Shop, 20' by 13', obstructing the end of Hollis Street. Without the precincts of the Yard, where Hollis Street bends diagonally to meet Buckingham Street, was (4) a long Bedding Store, directly facing the Long Store and of the same dimensions. Southeast of this was (5) a large U-shaped Laboratory. On the seaward side of Water Street, from the Nine-gun Battery to the site of Black's Wharf, was (6) a 200'-long Storehouse for the Commissary of Victualling for the Army.

The Yard was thus very congested, and the title was not clear for the Commissariat Storehouse. Although Marr's suggestions were carried out

1. Jeffy. Amherst to Lt. Beardsley (Sub-engineer, Halifax), New York, 3 August, 1763, *PANS* RE 2, page 11; Beardsley to Amherst, Halifax, 7 September, 1763, *PANS*, RE A, page 36.

Marr's Ordnance Yard Plan 1766.

in part,¹ Ordnance Stores remained crowded, and ground had to be hired from private persons at excessive rentals.

In 1772 a piece of level ground, 600' by 800', on the west side of the road at the southwest of Citadel Hill, was laid out as an *Exercising Ground* for the troops.²

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1. *Crown Lands* 19, 1762 [a running commentary at least until 1781]; *Blaskowitz's Plan* 1784.
 2. "The Exercising Ground as laid out in 1772," *Crown Lands* 19, 1762. Its site is now occupied by the Wanderers' Athletic Ground and the Garrison Cricket Field, the present Bell Road running through it. It was here that military executions "behind the Citadel Hill" took place for many years, and the poor culprits' bodies were buried in a section of Camp Hill, at the north-east corner of Jubilee Road and Robie Street.

Chapter II

Revolution and War 1775-1815

The American Revolution ushered in a period of marked activity as regards our defences, which had been allowed since 1763 to fall into ruins.¹ On 28 September, 1775, the Council considered a letter from General Gage in which he suggested throwing up some temporary works, making some additions to the "Old Works on the Citadel Hill," and fortifying and entrenching about the Naval Yard. But on the advice of Captain Spry, CRE,² it was decided that the rocky soil and the approach of frost would not make entrenchment of the Yard advisable, and that the only practical method was the erection of temporary blockhouses and palisades, which could be defended by the people of the town and which could afford a retreat for them. In respect to fortifying Citadel Hill, it was decided that the season was too far advanced for such an undertaking, workmen were scarce and troops were wanting for its defence.³

The defence of the *Naval Yard* was taken in hand. To defend it from attack by land, three *detached bastions*, with their salients directed uphill towards the southwest, were erected by Spry, probably in November, 1775.⁴ Two were on the west side of Brunswick Street, one on the east. The south one was at the northwest corner of Gerrish Street, opposite the Dutch church, between 100' and 110' above sea-level; the middle one, which had a small blockhouse in it, was opposite the head of the present Artz Street,⁵ between 110' and 125' above sea-level; the north one was at the southeast corner of Brunswick and North Streets, between 110' and 118' above sea-level.⁶

1. "I must inform your lordship that there is not the least kind of defence about the town. We lay open to the country on every side—that the batteries are dismantled—the carriages of the guns all decayed, and they lying on the ground" (governor Legge to the earl of Dartmouth, August, 1775, *Murdoch*, Volume II, page 555, [the whole of this letter, an interesting comment on the state of Halifax in August, 1775, and on some aspects of the relation of Nova Scotia to the American Revolution, is reprinted in Appendix II, pages 80-1].

2. Spry's name has come down to us through *Spryfield*, the country estate, five and a half miles southwest of Halifax, which he acquired in 1769, and where he built a residence and had the land cleared by soldiers. "On the Memorial of William Spry one of His Majesty's Engineers setting forth that he had lately purchased five hundred Acres of Land at the North West Arm and as there is some good land at the back of it, to which he has been to some expense in making a road, prays that he may have granted to him One thousand Acres at the back and adjoining thereto. GRANTED." (Minutes of the Council, 16 December, 1769, *P.A.N.S.*, Volume 212, page 132.)

3. Minutes of the Council, 28 September, 1775, *P.A.N.S.*, Volume 212, page 360.

4. *Murdoch*, Volume II, page 557. The site for the southern bastion was purchased by Spry for the King's use and later Rev. Dr. Houseal had a house on it, it having been granted by Governor Parr (1782-1791) with the approval of General Campbell. That of the middle one was bought by Spry from a Mr. A. Constable; while that of the northern one was bought from the Widow Burgie, and was later occupied by Commissioner Henry Duncan of the Navy Yard. *P.A.N.S.*, RE Records of Deeds, pages 3, 4, 8, 11.

C. Morris, Junr. *Plan of the North Suburbs of Halifax (commonly called German or Dutch Town) representing the Lots as originally laid out, and such of them as are now become the King's property*, Scale 200' to 1", Size 11" by 14¼", Colored in part, MS, *P.A.N.S.*, Map Collection, Halifax No. 10.

5. Then called Dockyard Lane. It went down to the original gate of the Yard.

6. "In the rear of the Naval Yard there are the remains of three detached bastions, the figures of which are now scarcely to be traced; these were thrown up under the idea of securing the yard, to which however, they never in any degree contributed. They are situated upon the side of the hill laid out into fields full of stone enclosures, from some of which the *Terre Pleine* of the bastions may be seen, at the distance of 40 yards. In one of these bastions there is a blockhouse equally useless." *Morse* 1784, page xlii.

Two blockhouses, each 20' by 20,' were also built in 1775, just outside the southwest and northwest corners of the Naval Yard, at the foot of Gerrish and North Streets. They accommodated 20 men each and enfiladed the front of the palisades, erected around the yard at the same time.¹ *Fort Coote*,² a larger blockhouse, 30' square, within a redoubt about 90' square with three 24-pounders on the parapet facing the Yard was erected about this time as a further defence for the Naval Yard. It accommodated 20 men and was located on the summit of a small hillock about 50' high, 143 yards north of the south side of North Street.³

Bastide's fortifications on the summit of *Citadel Hill* were considerably enlarged, repaired and strengthened by Spry, probably from about 1776. They now became a maze-like system of rambling polygonal earthworks, revetted with fascines, and mounting many guns. They covered much ground, and straggled down the slopes of the hill. A large central octagonal wooden Tower or Blockhouse, 50' in diameter, and apparently armed with guns, was erected, probably at this time, to serve as a keep for the work, and as barracks for 100 men.⁴

The height of the hill was then 257' 7". The fortifications were generally of an elongated form, running northwest and southeast. The parapets were 1300' in extreme length and 430' in greatest width. The eastern section, the largest, consisted of an earthen bastion and a series of many connected irregular redans. On the western side were a small bastion and another line of irregular redans, all built beyond and on somewhat lower ground than the eastern section, which was probably the original work thrown up by Bastide. Well in advance of the main ditch was a line of obstacles, apparently pointed stakes.

On the highest ground in the centre was a square redoubt, with guns, enclosing the tower or blockhouse. Just east of the tower was the flagstaff.

1. In *Morse* 1784, page lv, the North and South Blockhouses at the Naval Yard were rated to quarter 40 men. Captain Straton probably referred to one of these blockhouses when he wrote: "A blockhouse 20 ft. square and 16 ft. high, with a flat roof and a floor in the middle, has contained sixty men for near a year, and I have never heard any complaints of the want of air or the least sickness among them" [Original unavailable in P.A.N.S.]. Each man had just enough space to lie down in, a little less than 7' by 2'. Such a congestion would horrify a modern medical officer.

2. Probably named after Eyre Coote (d. 1783).

3. *Morse* 1784, page lv; *Blaskowitz's Plan* 1784. We might expect Fort Coote to have occupied the site of Mauger's Blockhouse, but it may have been a trifle north of that, judging from some plans. The hill on which the fort was built became known as Observatory Hill and was levelled (1881-2) to form a parade ground.

4. For the tower or blockhouse: *Hicks' View* 1780; also clearly shown in *Binney's View* 1791. The tower was probably not removed until Prince Edward commenced the third Citadel in 1795. For Spry's citadel alterations generally, see also: *Morse* 1784, page xlv; *Blaskowitz's Plan* 1784; and J. Straton, *AGENERAL PLAN of the Works on Citadel Hill shewing in Yellow the Relative situation of the New Works with respect to the Old Ones which are Coloured Red*. [Original is in *Public Archives of Canada*, Ottawa, Ontario, Collected Correspondence of Nova Scotia, Volume 25, page 101, enclosed in letter of 19th May, 1795, H.R.H. Prince Edward to Dundas. A photostatic copy, scale 700' to about 7¼", size 11½" by 17", is in P.A.N.S., Map Collection, Bound Volume, "Photostatic Copies of Nova Scotian Plans from Public Archives of Canada," page 29. Hereinafter: *Straton's Citadel Plan* 1795].

There were also two field magazines for gunpowder and three sheds for provisions, and a well 100' deep.¹

The mounted ordnance in the entire works consisted of sixty-two 24-pounders, two 12-pounders, four 4-pounders, three French brass 6-pounders, and one 5½" brass howitzer; total, 72, with a shot weight of 1566 pounds. The unmounted ordnance was: three 12-pounders, one 9-pounder, and twenty-four brass and iron mortars (12 7/10" to 4 1/2"); total, 28. Grand total, 100 pieces. Most of the heavy guns were directed towards the west, north and south.²

Between 1776 and 1778 *Fort Massey*³ was erected on what was then known as Windmill Hill (115' above sea-level) at the intersection of the present Queen and South Streets.⁴ Its purpose was to command the dangerous deep hollow formed by Freshwater Brook, in which an attacking force might find shelter out of reach of the Citadel's guns.

As a more advanced and commanding landward defence for the vulnerable Naval Yard, and to some extent for the town, *Fort Needham* was thrown up by Spry in the summer of 1778, on James Pedley's hill,⁵ 229' above sea-level, on the east side of the extension of Gottingen Street and about 4/5 mile northwest of the then gate of the Yard. Fort Needham was a small pentagonal earthen redoubt consisting of a 100' gorge with 75' flanks (exterior measurements), and with a salient directed southwest where the ground was quite steep; it mounted two guns on the northwest face and two on the south flank. The entrance was by a wooden bridge over the ditch at the centre of the gorge or rear side. Within the redoubt were two small barracks to accommodate about 50 men.⁶

1. The well, deepened to 160', is in casemate no.18 of the present Citadel, and serves as a point in common for comparison of the two traces. See below, page 42 and page 42, note 6.

2. *Morse* 1784, pages lvi-lvii; *Blaskowitz's Plan* 1784; *Straton's Citadel Plan* 1795.

3. Named after General Eyre Massey.

4. The centre of the work was about at the northeast corner of the two streets, the ground there being rented from a Mr. G. Miller.

NB—this is not the Windmill Hill which later became Camp Hill (see below, page 41, note 3).

5. On 27 July, 1778, Pedley petitioned for a court to ascertain the damages he had sustained and the value of 8 3/4 acres taken for the works at Fort Needham. On 5 August, 1778, jurors of the supreme court awarded him £281.8.4 as the value, including damages and expenses. ("Statement of Property vested in the Secretary of State for War, in the Nova Scotia Royal Engineer District, September, 1875" [location unknown. Hereinafter: *Property Statement* 1875]; "Abstract of Deeds of War Department Property, Halifax, Nova Scotia, January, 1899" [location also unknown. Hereinafter: *WD Property* 1899].)

[“James Pelley [indexed as ‘Pedley’]—Nesbitt for Petitioner, and referred by Lt. Governor to the Supreme Court to proceed thereon pursuant to the Laws of this province to Value and Appraise the Lands of the Petitioner taken for His Majesty's in Building Fortifications &c. on the 28th July 1778—24 Jurors Freeholders sworn in open Court to Value the said Lands and on the 5th of August at a Special Court for the purpose the said Jury return their Verdict and Value the Lands of the said Petitioner at £281.8.4 Currency, which verdict is Recorded by order of Court” *PANS, Province of Nova Scotia, Supreme Court, Judgement Book “1767 to 1788A,”* page 175.] See also: *PANS, RE Records of Deeds*, pages 5, 6].

I think that Pedley lived in a house which then stood on what is now the northeast corner of Gottingen and Young Streets, where Miss Clotilda Jennings, Maude, the local poet, resided lately.

6. *Blaskowitz's Plan* 1784. *Hicks' Views* 1780 for a near view of the gorge of the Fort. “Fort Needham . . . is an old sod works now in ruins” (*Morse* 1784, page xlv).

In September, 1778, Spry purchased the land on which was situated Bastide's *Barbette Battery* of seven 24-pounders together with the adjoining part of the Lumber or Lime-kiln Yard..¹ This, presumably, was preliminary to the enlargements which were made to the battery. On completion of the alterations it had a front of about 350' and could mount sixteen heavy guns.² Its general front was towards the southeast and it could enfilade the Point Pleasant shore. Adjoining it was a shot-furnace and a barracks which could quarter 100 men. This powerful work now received the name of *Maclean's*³ or the *Principal Battery* and with the works on George's Island had the heaviest ordnance in Halifax; having eleven 42-pounders between them the two works could effectively command the western channel and its approaches.⁴

In February, 1780, Lord George Germain stated that a large force was preparing at Brest, and called on the province to guard against surprise. By the end of May, 1780, the fortifications were in great forwardness, and several encampments were formed, 1500 men (militia, I believe) were daily at work; the Halifax militia exerted itself spiritedly, and the bomb batteries were nearly completed. In June, 1780, General Maclean demanded more workmen to complete the fortifications, and more militiamen from the townships were ordered to Halifax.⁵

Fort Massey was enlarged in the spring of 1782. It was then 320' long and 170' in greatest width, lying in a northwest and southeast position, and consisted of two semi-circular works, one at each end, connected by an obtuse redan on each side, all of earth and fascines, with a ditch and bridge. In the southeast circular end was an octagonal blockhouse or keep resembling the larger one at the Citadel, and capable of accommodating thirty men. There was also accommodation for 100 men (two companies) in two or three barrack buildings. Ten 24-pounders, three 12-pounders and four small brass mortars were mounted in the work. Some of the guns were in the southwest redan, and six in the southeast circular part.⁶

1. On 30 September, 1778, Captain Spry, CRE, purchased four lots, presumably those valued in 1761, from R. Whitehead, Capt. I. Callender, and others. *RE Records of Deeds*, page 206.

2. Five 42-pounders, five 32-pounders, and six 24-pounders.

3. Named after General Maclean, at that time commander-in-chief of the forces in Nova Scotia. At some time before 1808, probably in the time of the Duke of Kent, the name of the battery was changed to Grand Battery (see within, page 26, note 4).

4. The western channel is 750 yards wide. The eastern one, 1600 yards wide, could not be thoroughly defended in those days of short-range smooth-bores, whose point-blank range was, about as follows (*Aide Memoire to Military Science*, London, 1853, Volume I, page 64): 32- to 12-pounders, 400 yards; 6-pounders, 360 yards. Elevation greatly increased the range but reduced the effectiveness. [See also above, page 6, note 2].

5. *Murdoch*, Volume II, pages 607-8. An excellent idea of the appearance of one of the encampments is gathered from a view of Halifax from the south in *Hicks' Views* 1780.

6. *Morse* 1784, pages lvi-lvii; *Blaskowitz's Plan* 1784; *Hicks' Views* 1780. The work is referred to as "formerly Fort Massey" in *Plan of the Peninsula and Harbour of Halifax*, latitude 44° 56', Longitude 63° 23', drawn by John G. Toler Draftsman Royal Engineer Department A.D. 1808, Scale 800' to 1", *Public Records of Nova Scotia*, MP 9 [missing from the Map Collection, P.A.N.S. Hereinafter: *Toler's Plan* 1808] and as "in ruins" in one of 1834 [unavailable in P.A.N.S.]. Its barracks and guardhouse were demolished in 1815.

Four small new batteries were thrown up during this period on points of land along the shore of the Harbour and of the Northwest Arm near Point Pleasant.¹ The first was a small earthen, redan-shaped work with embrasures, fronting east, and called *Bayside Battery No. 1*. It mounted two 12-pounders on the left face and three 6-pounders on the right. Its location was a slight projection of the shore north of Steel's Pond, later known as Green Bank.² Further south was a small blunted redan of sod-work called *Bayside Battery No. 2*, mounting two 6-pounders and located on a low mound at the base of Black Rock Point.³ There was also an *entrenchment*, with a flanking redan at each extremity, 560' long and facing south-southeast, a little south of the present Cambridge Battery.

The third and fourth were two small batteries at Chain Rock on the Northwest Arm. The northern one, *Northwest Arm Battery No. 1*, nearest to the rock, was a blunted redan, defended by three 6-pounders; and the other, *Northwest Arm Battery No. 2*, a few rods to the south, was a tiny redan covering two 4-pounders. These works faced south.⁴

In addition to these new defences, there was the old *Barbette Battery*, now renamed *Flagstaff Battery*,⁵ a lunette with two 18-pounders on the faces, two 9-pounders on the flanks, *en barbette*, and a shot-furnace; and the equally old *Breastwork Battery*, now renamed *Fielding's Battery*,⁶ a redan with a subsidiary redan on its left flank, mounting five 24-pounders on the main right face and two 9-pounders on the right face of the flanking extension.

The highly important works on *George's Island* were put in order, improved, and no doubt added to. By 1784 they consisted of an outer, or lower, polygonal series of various connected members on the south, east, and north, having a total length of 710'; together with a lunette on the south, a demi-bastion and an irregular lunette on the east, and a redan on the north or northeast. Within the three sides of this envelope and on higher ground, was an irregular nine-sided cavalier, with a five-sided outwork to the north. The western front of this higher work formed the western front of the entire works. All these were merely field-works of sod, more or less revetted with fascines, like the works on Citadel Hill. A total of 48 guns was mounted: six 42-pounders, twenty-nine 24-pounders, three 18-pounders, nine 12-pounders, and one French brass 6-pounder;

1. Morse 1784, page xliii; *Blaskowitz's Plan* 1784.

2. The battery was demolished in 1930, when Piers 36 to 40 were built. The remains could be distinguished till then, although the battery was in ruins at the time of *Toler's Plan* 1808.

3. It was on this mound that the body of the pirate, Edmund Jordan, was hung in chains in 1809.

4. So far we have no evidence that a chain-boom was placed across the Arm at this time, as we know was done in 1762 and later in 1796.

5. Northwest Arm Battery; see above, page 12 and page 12, note 1.

6. Point Pleasant Battery; see above, page 12 and page 12, note 2.

total weight of shot, 1,116 lbs.¹ Most of the guns on the island defended the 1,600-yards-wide eastern channel, and the outer harbour. There was temporary accommodation for about 150 men, and two poor field magazines. Military stores were removed to the island, for safety, during this period.²

The *Eastern Battery*, at Dartmouth, a blunted redan, 360' long, with rather short flanks, had fifteen 24-pounders in the front and flanks. This lower battery co-operated as well as it could with George's Island in defending the wide eastern channel and outer harbour. On higher ground just in the rear, was a four-sided earthen fort³ with a bastion at the left exterior angle and a demi-bastion at the right, but no ditch. The entrance was on the north side, and within the work was a large H-shaped building probably a barracks until used as a magazine⁴. Outside, to the north of the fortification, were two small barracks built after the powder had been lodged within the work.

The following is a return of the several barracks at *Halifax* in 1784, together with a breakdown of the 2,694 men they were rated to accommodate:

Red Barracks	1,168
Cornwallis Barracks	520
New do	112
Lumber Fort do	100
Lutterel do do	128
Grenadier Fort Barracks	120
Massey do do	100
Coote do do	20
Old Artillery do	96
New do do	160
North and South Blockhouses at the Naval Yard	40
Fort Massey Blockhouse	30
Citadel Hill do	100 ⁵

1. *Morse* 1784, pages lvi-lvii; *Blaskowitz's Plan* 1784. This total weight is not far short of the 1566 lbs. of the Citadel, whose principal armament was only 24-pounders.

2. *Akins' Halifax*, page 73.

3. In later years *The Upper Battery*.

4. "Here was a large wooden barrack that has lately been put into repair, and the gun powder which was lodged in different houses, barns, vessels, &c., &c., in and about the Town of Halifax, has been deposited here, to the amount of nearly 7,000 barrels, till proper magazines may be built, or the powder otherwise disposed of, in which no time should be lost, for, besides the constant danger it is in of taking fire, it is every day perishing." *Morse* 1784, pages xlv-xlv.

5. *Morse* 1784, page lv. The location of the "New" Barracks is not certain; it was probably the west range of the South Barracks, under construction in 1778, and noted in *Jones* 1835 as completed in 1786.

Cornwallis Barracks, demolished in 1795 to make room for the new east block of the South Barracks (see within, page 29 and page 30, note 1) was a long building with five porches on its west front (*Blaskowitz's Plan* 1784). It was probably built at a later period than the Red Barracks (1759).

The *New Artillery Barracks*, 160' long, may have been built during the early part of the Revolutionary War. The *Old Artillery Barracks* (shown in *Short's Views* 1759) was a small building at the southwest corner of Grand Parade; it was probably not demolished until 1813, being used as a storehouse for guns (see within, page 30, note 4).

In 1784 the *Ordnance Yard* was in two sections, separated by the then Water Street.¹ The landward section, comprising nearly all of the old Yard with some additions, had been changed in form to an oddly shaped hexagon, with sides of various lengths and generally of a somewhat jib-form. It still contained the Long and Square Storehouses of 1766, and also a very small building to the west, which probably was a new Armourer's shop, replacing the one which had obstructed the end of Hollis Street. Outside the Yard, across the street to the south, still stood the Bedding Store and the north limit of the Laboratory. The seaward section, a very narrow strip of land on which were the remains of batteries, contained three small buildings (each about 40' long) and two wharves. To the north, on what was then private land, was a large L-shaped storehouse; to the south, the old Victualling Store seems to have been replaced by a shorter building. All of these buildings were probably of wood.

The peace of 1783-4 brought all activity to a standstill, where it remained for about a decade. But the period of renewed warfare from 1793 to the great peace of 1815 saw the erection of many new fortifications at Halifax, while all of the existing ones which were of value were added to, or otherwise improved or strengthened. Several large barracks were also built, as well as guard-rooms, offices, workshops, magazines, laboratories, etc.

Fort Ogilvie (between 70' and 80' above sea-level) was erected as a masked barbette battery in the woods near Steel's Pond during the summer of 1793.² Its purpose was to augment the cross-channel fire from Point Pleasant Battery,³ and as first built it was a small crescent-shaped earthen battery 130' long, with a short straight extension 80' long on the left flank, thus resembling in form Maclean's Battery. It mounted six 24-pounders on traversing platforms in the crescent.⁴

Possibly about the same time a square earthen redoubt, called *Fort Duncan*, about 160' square, was thrown up at a point close to the Dartmouth

1. *Blaskowitz's Plan 1784*. A note thereon, referring to the Ordnance Yard, reads: "The remains of the Lower Battery: in the rear of this are the Ordnance Storehouses, the enclosing of which was lately objected to by the Magistracy." The old water-front batteries were probably removed about 1783 (*Akins' Halifax*, page 211).

2. [Gov. Wentworth to Brigadier General Ogilvie, Halifax, 3 September, 1793, *P.A.N.S.* Volume 50: The Lieutenant Governor will readily consent to the use of his land for "the Battery you propose erecting" and Wentworth has ordered 100 men from the militia "to act under the direction of the Engineer in erecting the proposed Battery."] General James Ogilvie was the commander-in-chief till the summer of 1794. He appears to have been a cautious man and not popular, and to have lacked the great influence and constructive genius of his successor.

3. From Fort Ogilvie to Ives Point is 2200 yards.

4. *Plans of the Several batteries at Point Pleasant*, no date, Scale 120' to 1", Size 20¼" by 28½", Colored, MS, *P.A.N.S.* Map Collection, Halifax-Point Pleasant No. 9 (Hereinafter: *Point Pleasant Plans*, *nd*). Hitherto guns had been mounted on wooden standing garrison carriages, which could be traversed only with handpikes and slowly. The use of traversing platforms whose trucks rolled on radial racers appears to have begun about this time; this greatly facilitated the rapid laying of the guns and increased the range of the traverse

shore directly opposite Fort Coote, with which it could co-operate in defence of the Naval Yard.¹

On 28 June, 1794,² *Prince Edward*, afterwards Duke of Kent, became commander-in-chief at Halifax, remaining in this post until August, 1800. His prestige enabled him to obtain large sums of money for defensive and other military purposes, and, although at the time not twenty-seven years of age, he undertook the military improvement of his command so wholeheartedly that occasionally he acted even in advance of the receipt of authority from England.

At some time between 1793 and April of 1795 a small crescent-shaped earthen battery 230' long was erected as an advanced post on the commanding summit of a rugged granite cliff, about 150' above sea-level, near *Sandwich Point* on the west side of the Harbour's entrance and 3 3/4 miles from the town.³ It mounted eight 24-pounder guns, on traversing platforms with fraises in front. On 1 April, 1795, a sergeant and eleven men of the Royal Nova Scotia Regiment were stationed at "Point Sandwich,"⁴ and in July 1797, 91 men of the regiment were there. In 1798 a barracks for an officer and thirty men was built.⁵

By far the most important of all the Prince's defensive projects was the entire reconstruction of the *Citadel* on a wholly new, simpler and much better plan. It was the third fortification placed on the commanding hill above the town.

The old-maze-like polygonal fieldworks were in hopeless ruins after the neglect of nearly a decade of peace.⁶ Each year's rain and frost had

1. Fort Duncan was named after Commander Henry Duncan, RN (see Appendix VIII). It does not appear in *Blaskowitz's Plan* 1784 and is shown as "dismantled" in *Toler's Plan* 1808 and in Collyer, Lieut. G. Royle engineer, *Plan of Ground on the Eastern Side of the Harbour of Halifax with the Traverses of the Shore to Cole Harbour and the Road from Dartmouth*, 1808, Scale 800' to 1", Size 36 7/8" by 73 1/4", Colored, MS, P.A.N.S. Map Collection, Halifax No. 14.

2. "His Royal Highness Prince Edward returned to Halifax the 28th inst. and assumed the military command to the great happiness of all orders of people in Church & State; . . ." Wentworth to John King, Esq., Halifax, 2 July, 1794, P.A.N.S. Volume 51, page 153.

3. *York Redoubt*, Scale 13' to 1", Size 29 7/8" by 19 5/8", Colored, undated, MS, P.A.N.S. Map Collection, Halifax-York Redoubt No. 24. The name *York Redoubt* was not applied to the battery until 1798 (see within, page 28).

The military title to the property is based on "occupation since 1793," but investigation shows that this is founded on a much later letter from Surveyor-General Morris who merely says that the military erected works there "after the outbreak of the war of 1793," and therefore the date is not a definite one.

4. "Weekly State of the Royal Nova Scotia Regiment," 1 April, 1795, P.A.N.S. *Monthly Return Book R.N.S. Regt.* 1 January, 1795—1 March, 1799. This is the first return in this book to include "Distribution of the Serjeants, Drummers, Rank & File."

5. *Jones* 1835.

6. "At the back of the town about 880 yards distance from the shore there is a very commanding height which is called the Citadel Hill, offering a most advantageous situation for a fortress. This height is at present occupied by an irregular field work composed principally of fascines, built and enlarged at different times, but mostly during the late war, and is at present in ruins, having nothing substantial in it excepting a large octagonal blockhouse, which will contain about 100 men. A particular plan of these works is subjoined No. 3. There are 75 pieces of cannon, mostly heavy ones, and 25 mortars of different calibres mounted on these works—here are two field magazines for gun powder, and three temporary sheds for provisions, within the exterior envelope. These having been built during the war, and whilst attacks were threatened, are very unsubstantial, and the magazines are all damp." *Morse* 1784, page xlvie

broken down the earthen parapets and rotted the fascines with which they were revetted. The Prince and his chief engineer, Straton, saw, as had Morse before them, that it was folly to waste further repair on the over-long lines of the intricate works. They therefore determined upon a simpler and more compact new fort.

Accordingly, on 19 May, 1795, Prince Edward forwarded to the Secretary of State for War, plans, profiles and estimates, prepared by Captain Straton, for a new "Field Work for Citadel Hill" at Halifax "to contain a thousand men with log bomb-proofs for 650 men, a magazine for powder to contain 1200 barrels, and one for provisions to contain all kinds of species for three months."¹ The estimated cost was £9,339. It was thought that it might be made defensible in three months if sufficient workmen were available, and it was proposed to finish first the bastions, because in case of sudden attack they could be converted into redoubts by closing the gorges.

During the summer the Prince employed the town and country militia on the erection and repair of various works, and on 27 October, 1795, he wrote that great progress had been made on all of these, "with the exception of the fort on Citadel Hill, to which their means have been inadequate."²

The next spring (1796) he renewed the work on the defences and apparently much progress was made on the Citadel. On 15 August, 1796, he reported the recent arrival of stalwart "Maroon negroes" from Jamaica, and wrote that some of them were employed on the "new works on Citadel Hill."³ These people constructed one of the bastions, known thereafter

1. Prince Edward to Dundas, Halifax, 19 May, 1795, *Public Archives of Canada*, "Collected Correspondence of Nova Scotia," Volume 25, page 82; noted in *Report on Canadian Archives*, 1894, (Ottawa, 1895), page 513. Straton's Citadel Plan 1795, enclosed with this letter, states that "the greatest part of the Old Works already level'd & the formation of the Terre-Plain in great forwardness."

2. Prince Edward to Sec'y of State, Halifax, 27th October, 1795, *Report on Canadian Archives*, 1894 (Ottawa, 1895), page 518.

3. *Ibid.*, 15 August, 1796, *loc. cit.*, page 526.

[At the time of the British conquest of Jamaica in 1655, a considerable body of the Spaniards' negro slaves escaped into the interior of the island, where from time to time they were joined by slaves who had escaped from the British. Known locally as Maroons, they were practically untouched by British authority, although regarded as a menace. Eventually the Jamaican government determined to hunt them out with bloodhounds. Hearing of this the Maroons negotiated terms of surrender, stipulating particularly that they should not be deported from the island. So much importance did they attach to this that they exacted an oath to that effect from General Walpole, commanding the expedition against them. Unfortunately for the good name of British authority the Jamaican legislature did not feel itself bound by its commanding general's oath and deported the Maroons to Nova Scotia. The Jamaican authorities bought 5,000 acres of land at Preston, near Dartmouth, and spent £3,000 on buildings (an initial payment of £25,000 had been deposited to the account of the Nova Scotian agents). At first the Maroons appear to have been loyal and inoffensive, and Governor Wentworth was particularly impressed with their good qualities. But they had neither aptitude nor desire for life in the rigorous climate of Nova Scotia, and their economic condition deteriorated. As their lot became poorer, their discontent grew, and eventually in 1800 they were again deported, this time to Sierra Leone, where they seem to have taken root successfully. Considering their background and the deception which had been practised on them, the Maroons behaved with the utmost credit during their wanderings. On their arrival in Sierra Leone in October, 1800, their loyalty enabled the governor to put down an insurrection in that colony. Two years later a committee of the House of Commons reported them to be "active and intrepid . . . prodigal of their lives, confident of their strength, proud of the character of their body, and fond, though not jealous of their independence." (Quoted in Ex-Governor Archibald, "Story of Deportation of Negroes from Nova Scotia to Sierra Leone," *Collections of the Nova Scotia Historical Society for the Years 1889-91*, Volume VII (Halifax, N.S., Morning Herald Printing and Publishing Company, 1891), page 153. For the general history of the Maroons in Nova Scotia; *loc. cit.*, pages 150-154 inclusive; *Murdoch*, Volume III, *passim*.)]

as the "Maroon Bastion."¹ Work was continued in 1797; in September, 1797, eleven acres of land were purchased from James Creighton, to form the glacis on Cogswell Street; in December, 1797, Edward sent to England estimates for "completing the works on Citadel Hill, George's Island, the new Tower at Point Pleasant, and new Artillery Barracks."² The fort was completed in the autumn of 1798.

As a preliminary to the building of the new fort, the old works had been levelled and the top of the hill cut down 15', until it was 242' 7" above sea-level, instead of 257' 7" as in 1784. On this flat terreplein, an elongated, symmetrical earthwork with four bastions, but without ravelins, was thrown up, the escarp revetment being in some parts of fascines, and in others of plank. It was much smaller, but more regular, than the work it superseded, and it was planted firmly on the top of the hill, instead of running far down the glacis as its predecessors did. It was located in the middle of the former work's length and on the eastern half of its width, the western curtain passing through the site of the blockhouse which had been close to the former summit. The length, as before, was northwest and southeast, in conformity with the contour of the ground.

The measurements of the exterior sides were: east, 725' (crest, 622'); west, 700' (crest, 654'); north and south, 332' crest, 303')³ The parapet of the western curtain had a command of ten feet over the eastern one. The two bastions on the western front were much larger than the two on the eastern one, which made the west curtain much the shorter. The northern and southern curtains were each 85' long. The ditch was wide and shallow (10' deep) and along its bottom ran a line of palisades, while fraises projected horizontally at the top of the escarp. The entrance was under the centre of the east curtain, and from it a straight road led down the hill to the head of Buckingham Street, towards which point the whole work faced.⁴

A large *Cavalier Barracks* of heavy timber, 200' by 40', and about 13' to the roof, was built in the centre of the parade ground. It accommodated 650 men, and was made bomb-proof by being heavily banked with earth.⁵ On its roof were mounted, *en barbette*, twenty 24-pounder guns, half of them

1. Demolished, of course, with the rest of Prince Edward's Citadel when it was levelled to make room for the present Citadel. See within, page 42, note 6.

2. Prince Edward to Sec'y of State, Halifax, 22 December, 1795, *Report on Canadian Archives*, 1894 (Ottawa, 1895), page 542.

3. The extreme measurements of the old work had been 1290' by 430'; *Straton's Citadel Plan 1795*.

4. The road existed until the present Citadel was built.

5. The banking appears to have been removed in later years. The cavalier itself was torn down by Nicolls in the spring and early summer of 1813; see within, page 34.

directed west and half east.¹ A "telegraph" was also erected on the south end of the roof, and a flagstaff at the north end. The ensign staff was just inside the centre of the western curtain.

In each of the western bastions was a subterranean magazine, the southern one for 1200 barrels of gunpowder and the northern one for three months' provisions. Besides the principal battery on the Cavalier, twenty 12-pounders were mounted on the earthen parapets, on the flanks of the bastions to enfilade the ditch and the remainder of the fort; one 6-pounder commanded the road up the hill. There were also five 10" and 13" mortars.²

In 1795 an earthen *Star Fort* was begun on George's Island.³ This fort, the only one of its kind here, replaced the central or upper portion of the irregular, polygonal works which had been there since before 1784. The Star Fort, which could accommodate 300 men, had eight salients, alternately large and small, and the distance between the related salients was respectively 225' and 190'. The ditch was defended by obstacles—fraises and pickets. In the centre of the work was a Blockhouse of one storey, 40' square and 10' high, to serve as a guard-house for an officer and forty men. Beneath the blockhouse was a cellar for stores.⁴ A barracks for six officers and 92 men also appears to have been completed on the Island in 1799.⁵

It was at first intended to let the surrounding lower batteries remain, as they were commanded by the new fort. As the work progressed, however, this intention was abandoned. The lower batteries were therefore also levelled, and in their place were constructed, in advance of and in the rear of the Star Fort, a semi-circular *South Battery* of twenty 24-pounder guns with two shot furnaces, and a smaller similar *North Battery* of ten 24-pounders. This ordnance was on traversing platforms.⁶

About the same time alterations were made at the *Eastern Battery*, and its form changed from that of a blunted redan to a crescent shape. Its armament, though reduced from fifteen to ten 24-pounders, was made

1. As the platform became decayed the number of guns was reduced, only fifteen remaining in 1810.
2. Toler, John George, draftsman Royle Engr Dept, *Section of Fort George, Citadel Hill, Section of the Cavalier*, Scale 15' to 1", Size 8" by 26", Colored in part, MS, P.A.N.S., Map Collection, Halifax—Citadel (Fort George) No. 2; *Straton's Citadel Plan 1795; Parkyns' Views 1801*.
3. Plans, profile and estimates (the last dated 25 May) were enclosed in Prince Edward to Dundas, Halifax, 19 May, 1795, *Report on Canadian Archives*, 1894 (Ottawa, 1895), page 513.
4. J. Straton, *PLAN of GEORGE'S ISLAND in HALIFAX HARBOUR* Shewing . . . the New Projected Star Fort & Blockhouse . . . ; original in *Public Archives of Canada*, Ottawa, Ontario, "Collected Correspondence of Nova Scotia," Volume 25, page 98; a photostatic copy, scale 500' to about 5 1/4", size 8" by 12", in P.A.N.S., Map Collection, Bound Volume, "Photostatic copies of Nova Scotian Plans in Public Archives of Canada," page 85. *Toler's Plan 1808; Parkyns' Views 1801*.
5. Jones 1835.
6. The form of these two powerful batteries is transmitted to us in the outline of the present fortifications.

more effective from the guns being placed on traversing platforms. The redoubt in the rear (35' above sea-level) had a redan on the east side added to the two demi-bastions on the west front. The entrance was on the north.¹ Within the redoubt a Martello Tower² was constructed, and in 1798 a barracks for sixteen men was completed.³

It was probably at this time that the form of the main section of *Maclean's Battery* was changed to a crescent, but the embrasures were retained.⁴ The armament of the battery appears to have been reduced from sixteen to eleven, eight on the curved principal front and three on the short eastern extension. There was a guard-house and a shot furnace in the rear.⁵

A new and picturesque feature was now introduced into our fortifications. The manner in which the round stone tower at Mortella Point in Corsica resisted a heavy bombardment by the English fleet under Lord Hood in 1794 focussed attention on the usefulness of such structures for coast defence. From 1796 onwards several such towers, mounting one gun on a traversing platform, were built in England, and during the same period three were commenced in Halifax. They were called Martello Towers, a corruption of the name Mortella.

The *first Martello Tower in Halifax* was built between 1796 and 1798,⁶ and consisted of two storeys with an embrasured parapet, constructed of uncovered rubble metamorphosed slate, or ironstone, backed with brick-work.⁷ It was erected on the highest ground (125' above sea-level) in the centre of what is now *Point Pleasant Park*, and commanded the Northwest Arm and Point Pleasant Batteries and Fort Ogilvie. It was 71' in diameter at the base, 69' at the parapet, and 28' high, while the massive walls were 8' thick at the base and 6' 3" thick at the parapet. It consisted of two storeys, with a parapet pierced by about ten embrasures about the upper gun-platform or roof.⁸ The second storey had three gunports and the

1. *Toler's Plan* 1808.

2. See below. pages 28 and 29.

3. *Jones* 1835.

4. Probably during the regime of Prince Edward, and at least before 1808, the name of *Maclean's Battery* was changed to *Grand Battery*.

5. The grass-covered ramparts could be plainly seen when the land was taken for railway purposes; but by 1930 almost the last vestiges had disappeared.

6. "... the tower now building at Point Pleasant ..." (J. Hale M[ilitary] S[ecretary] to Captain Straton, Halifax, 4 September, 1796, *PANS*, RE 3, page 21). In December, 1797, Prince Edward sent to England estimates for completing the "new tower at Point Pleasant" so that it was probably not completed until the next year. [?"December 22, 1797, Halifax. Prince Edward to Secretary of State (Portland) ... Encloses estimates for completing the works; copies have been forwarded to the Master General of Ordnance. Col. Cor. N. S., Vol. 30, p. 193. *Enclosed*. Estimate for works on Citadel, George's Island, new tower at Point Pleasant and new Artillery Barracks. 195." *Report on Canadian Archives*, 1894, (Ottawa, 1895), pages 541-542.]

7. The parapet was first built of wood.

8. These embrasures were a poor feature as they limited the degree of traverse of the guns. The weakness was remedied in 1811-1812; see below, page 35. Another weakness was the lack of flank defence, remedied in the 1860's by the addition to some of the towers of flanking and machicolation balconies; see below, page 51.

main entrance.¹ In the centre was a vertical cylindrical hollow shaft, about 13' in diameter, for hoisting ammunition from the magazine.² A staircase in the wall led from the first to the second storey, and the gun-platform was reached through the central shaft. The tower could house about 200 men.³ The early armament consisted of four 68-pounder carronades and two 24-pounder guns, on the roof apparently, and four 6-pounder guns on the second floor.⁴

At some time before October, 1798, a *Martello Tower* was built on the site of the H-shaped barracks in the centre of the redoubt (about 63' above sea-level) at the *Eastern Battery* to which it served as a dominating cavalier or keep as well as a barracks. This tower differed from all others at Halifax in having three storeys as well as the gun platform on top. An additional storey or basement went some 7' below the terreplein, and around this basement was a circular ditch 7' wide with a vertical 8' counterscarp containing two caponiers to flank the ditch.⁵ There were musketry loopholes in the walls of the basement and of the next two storeys. The tower was the only one constructed of sandstone,⁶ the others being built of ironstone or granite.

The original measurements were: diameter, 50' at base and top; height above bottom of ditch, 42'; and above the terreplein, 35'; wall, 6' thick.⁷ The parapet of the top platform originally had several embrasures for carronades; the upper barrack-floor had four gunports, and the lower or ground barrack-floor had three,⁸ these openings being below the interval between the upper ones; while the basement contained the powder magazine. In the centre was the usual vertical, cylindrical ammunition hoist, about

1. There was another entrance in the first storey, but this may have been added later. A series of openings in the lower storey, now blocked in, may have been loopholes.
2. *Point Pleasant Plans*, nd. The magazine was very damp.
3. [The tower's normal complement was small, as were those of all the batteries.] In case of attack the guns were to be served by volunteers from the town as well as by Royal Artillerymen.
4. "It has been found necessary (since last report) to remove the 4-68 Pounder Carronades from the Roof it having given way." ("Halifax, Nova Scotia, January, 1810. Report of the State and Strength of the Forts and Batteries & Co Comprising the Ordnance Establishment in the Provinces of Nova Scotia and New Brunswick and the Islands of Cape Breton and Prince Edwards." *P.A.N.S.* RE 52 [a semi-annual inspectional report, apparently demanded first in 1810 and discontinued in 1814, except for one demanded in 1835 and others of a later date yet, not in RE series, *P.A.N.S.* Hereinafter: *Inspectional Report*, followed by date. The whole of the Nova Scotian section of *Inspectional Report*, 1 July, 1812, is published herein as Appendix IV, pages 84-93 inclusive].)
5. This is the first instance here of the use of this method of flank defence.
6. Probably from Pictou.
7. *Plan and section of the roof on the Tower at Fort Clarence, Engineers Office, Halifax April 22nd 1823, Scale 4' to 1", Size 21 3/8" by 15 3/8", Colored in part, MS, P.A.N.S. Map Collection* [Halifax-Fort Clarence No. 1. MP 84 [a military plan missing from the Map Collection, *P.A.N.S.* says of it: "Tower built of freestone, 50 ft. diameter, 32 feet high, 3 floors." The basement is at present 37' 4" in inside diameter, with wall 6' 2" thick. The name *Fort Clarence* was not applied to the battery until 1798; see below.
8. At the beginning there may have been four gun-ports on the ground floor.

8' in diameter. This tower would accommodate 164 men.¹ The early armament consisted of four 32-pounder carronades (probably on the top platform), four 24-pounder carronades, and two 8" brass howitzers, all on standing carriages.²

In 1798, or shortly before, another *Martello Tower* was erected to the rear of the eight-gun battery near Sandwich Point, and the two works were connected by two radial lines of palisades, each line flanked by small redan-shaped tambours. The elevated site placed this fortification largely out of reach of naval guns.

The tower was of uncovered rubble, ironstone masonry. It was 40' or 50' in diameter, about 30' high, and it consisted of two storeys. The embrasured parapet of the gun-platform was originally of wood.³ The barrack-storey was pierced by three gunports and there was an entrance on the landward side. In the centre was an ammunition hoist. There was space for 100 men. The armament consisted of six 12-pounder carronades on traversing slides on the platform, and two 6-pounder guns inside.⁴

In 1796 a boom was again placed across the Northwest Arm from Chain Rock, as had been done in 1762.⁵ To defend it, the *Chain Battery*, a blunted redan with four guns, was built on the site of Spry's Northwest Arm Battery No 1.⁶

The erection of fortifications undertaken by Prince Edward was now finished, and definite names were assigned to the new works. The Prince, in general orders of 20 October, 1798, the day before he embarked for England, directed that the works should be distinguished in all future orders by the following names: the Fort on Citadel Hill, *Fort George* (after the King); the Star Fort on George's Island, *Fort Charlotte* (after the Queen); the Martello Tower at Point Pleasant, *Prince of Wales' Tower*; the enclosed work at Point Sandwich, *York Redoubt*, and the accompanying Martello

1. In case of attack the guns at the fort were to be served by a local volunteer corps along with Royal Artillerymen.

2. *Inspectional Report*, January, 1810.

3. The wood had rotted by 1807, and had to be replaced. "... the Timbers ... support the wooden Parapet (now eight years standing) ... I found the extremities of them ... to be in a very decayed and Wretched State ... the necessity of removing the whole joist, if the external part is condemned ... If I thought it any advantage to the service I would have suggested to you Sir whether the Wooden projection should be again continued, or the Alteration, now proposed should be executed in Stone Work, but the *building stone* of this country is so weak and bad and expensive that I feel little inclination to recommend it, and particularly as I believe there is scarce a probability of the part in question being exposed to Batter owing to its great height (260 feet) above the level of the Sea ... " (MacLauchlan to Lt. General Morse, IGF, Halifax, 8 October, 1807, *PANS*, RE 5, pages 36-37.)

4. *Inspectional Report*, January, 1810.

5. "The part [of Prince Edward's dispatches] relating to the fortifications, sent to the Ordnance, does not include the booms to the North West Arm, as these were caused by an emergency, and the cost will be defrayed by the Treasury." Secretary of State (Portland) to Prince Edward, Whitehall, 15 December, 1796, *Report on Canadian Archives*, 1894 (Ottawa, 1895), page 531.

6. *Point Pleasant Plans*, nd.

Tower, *Duke of York's Tower* (after a brother of the Prince); the Eastern Battery, *Fort Clarence*, and the accompanying Martello Tower, *Duke of Clarence's Tower* (after the brother who later became king as William IV).¹

The Prince inaugurated a series of *signal stations* between Halifax and the outposts, manned, in part at least, by men of the Royal Nova Scotia Regiment. On 1 August, 1795, two men of this regiment were stationed at Duncan's Cove, Chebucto Head; on 1 July, 1796, three men were located at Sambro Island Lighthouse; and on 1 January, 1797, three rank and file were stationed as signalmen on Citadel Hill.² There was also a "telegraph" on the hill behind the Prince's Lodge near Birch Cove. Although called a telegraph in those days, the system was actually one of visual signals, possibly the system of ball signals adopted by the British in 1795.³

Besides directing the erection of fortifications and signal stations, the Prince, through his engineers, built, reconstructed, or greatly improved very many military buildings at Halifax. This was the great era of barrack building in England, and the activity was echoed in Halifax. The old wooden barracks, out of repair, were very largely replaced with new ones of the same material, with verandahs for shade in the summer and for parades in the winter. Estimates for the rebuilding of the *North Barracks* were forwarded to England 17 April, 1795; for the *South Barracks*, 25 May, 1795.

The two buildings of the *North Barracks*, a large east-west block at the north side (200' by about 25') and another block at the south side, were evidently not completed until 1800.⁴ Together with the two 2 1/2-storey buildings of the old Red Barracks built in 1759, the new buildings completed four sides of a square enclosing a parade ground 210' by 165', the whole located near the southwest corner of Brunswick and Cogswell Streets. The new buildings were 4 1/2 storeys high, pedimented, with a lower and upper verandah on their inner fronts. The entrance to the square was apparently through the centre of the block on Brunswick Street.

The 2 1/2-storey, 310' long east block of the *South Barracks*, for which estimates had been forwarded in 1795, was not completed until 1802.⁵ Its site was 50' further east than that of the Cornwallis Barracks which it

1. General Orders, Headquarters, Halifax, 28 August-27 November, 1798, *PANS*, HQ 3.

2. Monthly Returns of the Royal Nova Scotia Regiment: 1 August, 1795; 1 July, 1796; 1 January, 1797; "Monthly Return Book, RNS Regt., 1 January, 1795-1 March, 1799," *PANS*. A barracks for eight men was built at Camperdown, above Portuguese Cove, in 1798, and one for eight men at Sambro in 1814; *Jones* 1835.

3. [On the subject of these signal stations, Miss Margaret Ells has permitted a quotation from her unpublished *History of Nova Scotia, 1782-1812*. See Appendix III, pages 82-3.

4. *Jones* 1835.

5. *Loc. cit.*

replaced.¹ The 1 1/2-storey west block, built in 1786,² was lengthened to 310'. Between the two buildings was a parade ground, 310' by 125'. These two buildings still stand at the southwest corner of Market and Sackville Streets, and have long been used as quarters for the Engineers.

Estimates for new Artillery Barracks were forwarded to England, 22 December, 1797,³ and a number of smaller wooden barracks buildings with verandahs were erected during the following year.⁴ The old *guard-room and cells* at the entrances of the Artillery Park and of the King's Wharf, and the one, now demolished, just beyond the south end of Gottingen Street, were probably built during this period. The old Grenadier Barracks on Jacob Street passed to James Creighton, probably on 15 September, 1797, in exchange for £50 and eleven acres of land on the north slope of Citadel Hill, required to extend the Glacis.⁵ Other buildings erected by the Prince during this period were: the old *RE Workshop* on the south side of Cogswell Street; his own *Town House* nearby; and the *Government Offices*⁶ at the southeast corner of Gottingen and Cogswell Streets.

On 1 December, 1796, the harbour-side strip of the *Ordnance Yard* was extended northwest to its present boundary by the purchase from John Butler Butler (formerly Dight), for £2,115, of a piece of land which included the site of the subsequent Storekeeper's House on the corner of Water Street and Marchinton's (Bell's) Lane.⁷

On 28 April, 1800, the property now known as *Bellevue House* on Spring Garden Road was purchased by the Prince. The old house (agreeing in dimensions with the present structure) which had been on the property at least since 1784 was evidently not satisfactory to the Prince, for a "new Quarters" was erected for him under the direction of Captain Fenwick.⁸

1. See above, page 20, note 5.

2. *Jones* 1835.

3. Prince Edward to Sec y of State, Halifax, 22 December, 1797, *Report on Canadian Archives*, 1894, (Ottawa, 1895), page 542. I do not think that the construction of these buildings was proceeded with, as further estimates were sent 7 November, 1801. See below.

4. See the buildings listed under 1798 and 1799 in *Jones* 1835. Most of these buildings replaced older, decayed structures.

5. The old building was demolished when Trinity Church was built.

6. The Government Offices afterwards housed the Garrison Institute and are now demolished.

7. *Property Statement*, 1875. *Toler's Plan* 1808 shows a very few buildings on the water side of the then Water Street, one of them probably at the site of No. 1 Store. The Long Store is still to be seen in the old Ordnance Yard where the Pentagon Building now is. The first house for the Storekeeper may have been built soon after Toler's time, as it had to be replaced in 1825-6.

8. The former town-house of the Duke was converted into a hospital (see below). That Bellevue House was erected by the military in 1800 or 1801 is apparently to be inferred from a docket by Captain W. Fenwick, CRE, dated Halifax, 1801, in which he refers to "the enclosed deeds relative to the property upon which the Commandant's new Quarters were erected under my direction." (*WD Property*, 1899).

On midnight of 10 March, 1885, the building was gutted by fire, but was rebuilt during the next two years, during which reconstruction an addition was made to the front.

The Garrison Clock, for generations known as the Town Clock, was completed in 1803. Prince Edward had instructed the Commanding Royal Engineer to prepare plans for a building for a garrison clock, and to forward them to England for approval. On 21 April, 1801, Lieutenant General Bowyer, then in command here, was notified that the plans, with some minor alterations, had been approved, and that he was to proceed with the erection of the building. Bowyer made preparations to erect it on the side of the old guard-house which was then situated on the west side of the road leading from the Citadel to the Artillery Barracks. Governor Sir John Wentworth at once took objection to that site, and insisted on its present location.

The clock, which was made in London, arrived here in *HMS Dart*, Captain Skene, on 10 June, 1803, and was landed at the King's Wharf. The building was completed and the clock installed 20 October, 1803.¹

On 7 November, 1801, Captain Wm. Fenwick, CRE, prepared estimates for a series of buildings in Artillery Park, and the building of the new *Artillery Barracks* probably began in 1802. This 110'-long, 2 1/2-storey building, with two verandahs, was completed by October, 1803, and still stands as the middle wooden block in Artillery Park. In April, 1804, work was commenced on the 100'-long, 1 1/2-storey Quarters for the Commanding Officer and Adjutant of the Royal Artillery, just east of the Artillery Barracks.²

1804 an 80' by 25', verandahed barracks for the Royal Military Artificers (afterwards the *Royal Sappers and Miners*) was completed just west of the South Barracks.³

In 1806 alterations to the new (*Military*) *General Hospital*, a building about 95' long and 55' wide, above the North Barracks, were finished,

1. The building was used for many years as a guardhouse by the Citadel guard, and, when they moved out, by a succession of resident clock-keepers, among whom was Master Smith Gossip of the Royal Engineers. When the garrison was handed over to Canada in 1906 the clock went with it: the Department of National Defence transferred it to the city of Halifax. "Occasional," *Acadian Recorder*, Halifax, NS, 5 October, 1929, page 1, column 7.

Howe wrote a poem about the clock. Howe, Hon. Joseph, *Poems and Essays*, Montreal, John Lovell, 1874, page 165; reprinted in Borrett, W. C., *More Tales Told Under the Old Town Clock*, Halifax, Imperial Publishing Co., 1943, page ix.

2. W. Fenwick, CRE, to Lt. Gen. Morse, Inspector General of Fortifications, Halifax, 14 April, 1804, *PA NS*, RE 4, page 70. Lt.-Col. Charleton, RA, was in possession of his quarters in the building by 25 February, 1805; *Ibid.*, 25 February, 1805, *loc. cit.*, page 131. [But much to the gallant Colonel's annoyance only two of the rooms were papered. "... Paper Hangings and Borderings were so extravagantly high here I have only paper'd two of Lt. Col. Charleton's Rooms until I receive your further orders on this Head, for altho it is customary and the Col. Thinks he is therefore fully entitled to have all his Rooms paper'd I have Judged it best to decline doing more than two, the more so as the Ordnance Storekeeper has signified that he proposes to call the attention of the Board to this Expence already incur'd amounting to £13.10.6" *Loc. cit.*] This is probably the section noted in Jones 1835 as having been built in 1808.

These buildings replaced the New Artillery Barracks of Morse 1784 (see above, page 20, note 5), but the Old Artillery Barracks were permitted to remain as a gun storehouse until further alterations were made between 1812 and 1816 (see within, pages 35-6).

3. Jones 1835. The Royal Sappers and Miners were also accommodated in the old Cornwallis Fort Barracks (see above, page 3, note 1; also Jones 1835).

and the hospital staff moved in.¹ It had been built in 1794 as the town house of Prince Edward, and had been a fine residence having a wide portico with Corinthian columns on the west front.² A large garden adjoined it on the north. This new hospital replaced the old one on the south side of Blowers Street, between Argyle and Barrington Streets.³

In the latter part of 1807 and early part of 1808 an irregular pentagonal redoubt at *Fort Needham* was again thrown up over the ruins of the earlier fort. Its parapets measured about 70' on each front, 75' on the flanks and 110' on the gorge. There was fraising on the berm. It had four 12-pounder guns on traversing carriages, probably one on each face and each flank. There was a newly built barracks in the centre for sixty men.⁴

As there was a deep hollow to the north of the hill, along which an enemy might easily approach under cover from the guns of the fort, a musket-proof blockhouse was erected in the spring of 1808, on the shoulder of the hill some 400' in advance (NNW) of the redoubt, with which it was connected by a roadway. It was defended by two 12-pounder carronades on the upper platform and was loopholed for musketry fire in the lodging room below.⁵

On a commanding hill⁶ overlooking Bedford Basin near the present Fairview, Captain Maclauchlan, CRE, by direction of Major General Hunter, built a large pentagonal *blockhouse*, nearly completed by 2 March, 1808,⁷ and named *Fort McAlpine* after an old soldier, John McAlpine, who had built an inn⁸ nearby and who owned the hill. The blockhouse was built of heavy squared timber, with the upper storey projecting beyond

1. Bennett to Lt. General Morse, Halifax, 18 October, 1806, *P.A.N.S.*, RE 5, page 10. On 31 May, 1800, Prince Edward had purchased from Robert Milne an island in Bedford Basin (variously known as Miller's, Stevens' and finally Navy Island), as a location for an infectious disease hospital; in after years the island was leased to the Navy for rifle practice.

2. "Observations Relative to the said Ground and Buildings," signed J. Straton, Major, enclosure to Straton to R. H. Crew, Esq., London, 27th March, 1797, *P.A.N.S.*, RE B, page 132.

3. It apparently also did duty as a Naval Hospital, from the time of the destruction by fire in November, 1819, of the old Naval Hospital near the Naval Yard until the building of the brick Naval Hospital, probably in 1867.

4. J. Maclauchlan, CRE, to Lt. General Morse, Halifax, 8 November, 1807, *P.A.N.S.*, RE 5, page 51; *Ibid.*, 2 March, 1808, *loc. cit.*, pages 58-60. Fort Needham had an important situation commanding the approach to the Narrows and covering the approach to the Dockyard. It served during most of the war, but was completely out of repair by 1815, although the barrack buildings were still there. Its remains are still to be seen, one of the last vestiges of the old earthworks.

5. *Loc. cit.* It was in good condition in 1813, but the greater part had been carried off by people of the neighbourhood before Lt. Colonel Arnold arrived in June, 1818; and on 18 July, 1825, he reported that the rotten remains had recently been blown down (Lt. Colonel Arnold to Lt. General Mann, Halifax, 18 July, 1825, *P.A.N.S.*, RE 7, page 221). A deep hollow still plainly shows its site.

6. 179' 7" above sea-level.

7. Maclauchlan to Morse, Halifax, 2 March, 1808, *P.A.N.S.*, RE 5, page 61.

8. Edward's Valley Inn. McAlpine acquired the land here about 1798. In 1801 he was employed by the military in transporting money to Annapolis. He died about July, 1827.

the lower one to furnish space for machicolations. Two 12-pounder caronades were mounted in the upper section and the lower barracks storey was loopholed for musketry fire. It had no roof. Its purpose was to command the approach by the Windsor Road and so prevent the transportation of guns. Apart from the Citadel it was the last work built especially to resist an attack from the interior.¹

By 28 August, 1809, all the storehouses at the *Ordnance Yard*, except the "Blue Store" were "fast falling into decay," and accommodation had to be rented from townsmen.² On 12 December, 1809, Nicolls sent to England estimates for erecting at the Yard the following buildings: "Storehouse and filling in the wharf," £1,893 3s 1 3/4d; another storehouse, £1,756 16s 9 1/2d; "Storehouse for small arms & the Armoury," £1,443 3s 10d; total, £5,093 3s 9 1/4d. These were evidently to be of masonry. There were also to be: "a Smith and Carpenter's shop," £328 2s 4d; and a "Shed for Gun-Carriages," £77 12s.³

A new Ordnance Storehouse was accordingly built in 1811,⁴ and the other ironstone storehouses and shops were probably built soon after. The present Office Building (formerly a store, guard-room and porter's quarters) of ironstone with freestone trimmings, about 112' by 15' and lying NW and SE to the SE of the main gate, is probably the second storehouse referred to by Nicolls;⁵ and the old Armoury (now a machine shop, designated F) of ironstone with freestone trimmings, about 78' by 30, and built on the site of the old Nine-gun battery alongside the SE disused

1. As a result of the building of Fort McAlpine, the name *Blockhouse Hill*, previously applied to the lower spur of the hill on which had been situated the North Peninsular Blockhouse (see above, pages 5-6), was transferred to the main eminence. The remains of McAlpine's Blockhouse were still visible about 1820 and are shown on a map of 1826 or 1827, [not available in *P.A.N.S.*], but neighbouring farmers, the Bayers, used its timbers for firewood. Its site is still distinguishable as a depression about 100' square.

2. Col. Nicolls to General Morse, Halifax, 28 August, 1809, *P.A.N.S.*, RE 5, page 100. An estimate was enclosed for the building of a stone storehouse.

3. Nicolls to the Board of Ordnance, Halifax, 12 December, 1809, *P.A.N.S.*, RE 5, page 106.

4. It is situated on the land which was bought from Butler in December, 1796 (see above, page 30). [Nicolls to General Mann, Halifax, 16 November, 1810, *P.A.N.S.*, RE 5, page 121: "As soon as the season will permit" he will begin erecting the storehouse adjoining the Ordnance Wharf, for which £2,000 had been estimated for 1811.] This building I take to be at least part of the present A (formerly No. 1) Storehouse, lying SW and NE on the NW boundary line. Of 2 1/2 storeys, 170' by 35', the present structure is substantially built of ironstone with granite trimmings (a little freestone in the two end gables) and has sixteen arched entrances on its southeast flank, for the reception of gun-carriages. Its pitched roof bears a prominent, octagonal wooden clock-tower, whose four-faced time-piece, still running, is inscribed "Jno. Thwaites & Co., Clerkenwell, London, 1813." In the seaward gable is a free-stone block inscribed "M. Brunner, RE."

If the granite window lintels and sills, etc., were in the building originally, it is the earliest use of cut stone of that variety in Halifax. But the freestone trimmings may be the original ones, and the granite a later addition; I do not think that granite was used here before Nicolls used it in Sherbrooke Tower in 1814. There is evidence, moreover, that the present store was built at two not-very-widely-separate periods, although it is awkward to determine which is the older part. The seaward section is constructed of axe-hewn timbers and its rubble masonry is of smaller stone, but the landward section has the 1813 clock, and the 1812 wall (see below) follows the contour of its north end.

5. One of its ends rests on the site of the Five-gun battery and crosses the site of the old Water Street, indicating at least that it was built after Water Street was enclosed in 1812.

gate, is probably Nicolls' "Storehouse for small arms & the Armoury." These two masonry buildings are built on firm ground, so no filling in of the shore was required.¹

The fact that the Yard was in two parts, separated by the original Water Street, was a source of concern to the Ordnance Department, and from January, 1811, there was considerable correspondence on the subject. Nicolls proposed enclosing this section of Water Street, and rerouting the street.² The town objected, and the proposal was abandoned for the moment, to be finally settled when the construction of the present substantial ironstone wall and gates was begun on 1 January, 1812,³ and the metes and bounds of the Ordnance Yard thereby became fixed. That part of Water Street which had gone through the Yard was absorbed into the Yard, and in its stead the street was given a right-angled turn up to Hollis Street. There the military relinquished a strip of land about 40' wide fronting on Hollis Street and thus the diagonal end of Hollis Street became the new section of Water Street and swept over the site of the ancient Armoury and Long Store.

Early in 1812 orders were given to put the forts in repair. The *Citadel* was again in a dilapidated condition, and was temporarily repaired and otherwise patched up. In 1812 Nicolls built there, at the south end of the Cavalier, a stone bomb-proof magazine for 1,344 barrels of powder.⁴ In the spring and early summer of 1813 the Cavalier was demolished, having been declared unsafe.

¹ They are indicated on a plan of 1827 [unavailable in PANS]. As there was no activity in military construction in Halifax between 1815 and 1828, it may be inferred that they were built soon after 1812.

The present smaller Carpenter's Shop, 60' by 21', and the Smithy, 35' by 20', both 1 1/2-storey buildings of ironstone with freestone trimmings, are on made ground to the seaward of the old Armoury, and may be of a later date [but they agree in character with the other buildings, and Nicolls' estimate of £328 2s 4d is reasonable for two buildings of their material and dimensions. Moreover, the tone of dissatisfaction of a letter of Nicolls to Mann in late 1813 suggests a complete rebuilding of the Yard]: "... the Storehouse recommended on the Ordnance Wharf, and the Engineer Office and Carpenter Shop ... the state of ruin to which every part of the Ordnance Establishment was suffered to fall into these few Years past renders such Buildings indispensably necessary ..." Nicolls, CRE, to Lt. General Mann, Halifax, 29 October, 1813, PANS, RE 5, page 175.

[Construction at the Ordnance Yard seems to have gone on from 1811 through 1816.] In 1815 an advertisement appeared for tenders for materials for a store at the Ordnance. In order to confirm the title of that part which had till then been founded only on long military occupancy, the Lieutenant-Governor on 27 December, 1816, covered the property by a grant of three acres, twenty-three perches, together with the water-lot in front (by deposition of stone, etc., and the construction of a broad wharf, the Yard has gained much more than its original size in made-ground—it is all made-ground outside a convex line from the Armoury or present Machine Shop to the main gate); this grant was of course exclusive of the lot purchased from Butler in 1796, about which no doubt as to title existed.

"... the new Store now remaining to be built in the Ordnance Yard ...", Wright to Mann, Halifax, 1 February, 1816, PANS, RE 5, page 196.

Nicolls to Lt. Governor Prevost, Halifax, 9 January, 1811, PANS, RE 5, page 123.

² [The authority for building the wall was dated 6 January, 1812, and the wall had been completed by 1 October, 1812; Respective Officers to the Board of Ordnance, Halifax, 1 October, 1812, *loc. cit.*, page 141.]

⁴ *Plan shewing the Situation of a Magazine proposed to be built on Citadel Hill, Copy of a Plan No. 4 Halifax—Nova Scotia dated 18 April 1811 and Copy of a Plan No. 4 dated 9 Nov., 1811, Scale 100' to 1", Size 26 3/8" by 35 1/8", Colored, MS, PANS, Map Collection, Halifax—Citadel (Fort George) No. 1.* Nicolls' magazine lasted until the present Citadel was commenced in 1828 (see within, pages 37, 38, and 42).

Meanwhile drastic changes were being made in *Fort Charlotte* on George's Island, then considered one of the key positions. On 1 July, 1811, work was begun on levelling the Star Fort¹ and central blockhouse which had been erected in 1795, preparatory to building a *Martello Tower* and forming a new parapet to connect the semi-circular north and south batteries.² The result was a symmetrical oval polygonal fort of ten faces (four of which formed a lunette for the south battery), with five caponiers to enfilade the ditch, three to the south and two to the north. The old batteries formed part of the new work. In April, 1812, the artillery barracks, the 45'-square blockhouse in the centre of the fort, was being removed to make room for the tower; by 1 July, 1812, the masonry of the tower was 6' above ground; and before the end of the year it was completed. It was 50' in diameter, probably 30' high, had walls about 5' or 6' thick, and probably had an *en barbette* parapet.³

The old *Prince of Wales' Tower* in Point Pleasant Park was altered and repaired in the summer of 1811, the embrasures on the parapet being, I believe, blocked up.⁴ In the early part of 1812 the embrasures in the parapet of the *Duke of Clarence's Tower* were filled in, a staircase around the outside of the tower was discarded, and an entrance and a drawbridge added.⁵ A magazine was also built within the tower.

The row of two barracks in *Artillery Park* was extended in 1812 by the building of a 1 1/2-storey quarters for two captains and two subalterns of the Artillery.⁶ The western end of the Park was enlarged in 1812 by shifting the location of what is now Queen Street, so that the street became curved for a distance of 310' between Artillery Place and Sackville Street. The land was obtained from J. G. Pyke for £823 by a jury award of 20 April, 1812, and the alteration in the highway was authorized by an act of the Assembly.⁷ This gave room for the erection between 1814 and the early

1. By 1815 the star trace was regarded as obsolete.

2. As recommended by a Committee of Royal Engineers, 4 March, 1810. The work was still going on in 1813 ('the works ordered to be performed on George's Island,' Nicolls to Mann, Halifax, NS, 29 October, 1813, PANS, RE 5, page 175.)

3. On its top were to be mounted four 24-pounder carronades and four 12-pounder carronades; *Inspectional Report*, January, 1814.

4. "I take leave to suggest for your better judgement to decide whether upon an Elevated Spot not under command an *en barbette* parapet is not infinitely of more advantage to a work and particularly a Sea Battery than one constructed with Embrasures, which confine the Line of Fire to a limited space, the latter System however has been universally adopted here, which I own with much diffidence does not appear to me so Consistent as the one upon the former Plan, and this Idea alone has induced me to dwell thus minutely upon the Subject." Mac- lauchlan to Lt. Col. Bruyeres, &c-&c-&c, Royal Engineers Office, Halifax, 18 April, 1808, PANS, RE 5, page 68. See also within, page 51. For the armament after these alterations had been effected, see Appendix IV, page 87.

5. For the armament at this time, Appendix IV, pages 88-9.

6. Jones 1835.

7. "... the New Road made and possession taken of the Ground added to the Artillery Park according to the Orders of the Honble Board of 22nd June 1812." Respective Officers to the Board of Ordnance, Halifax, 1 October, 1812, PANS, RE 5, page 141. Re Records of Deeds, pages 70-3 inclusive.

summer of 1816 of the 110'-long, 1 1/2-storey RA Officers' Quarters and Mess Room.¹

On 8 May, 1812, the limits of the *Grand Battery* and of the old *Lumber Yard* were extended south by the purchase of over three acres of land from the heirs of the Hon. James Brenton,² and the new area was laid out as a *Royal Engineers' Yard*. Several new wooden buildings were erected in the Yard, and one of stone—the Engineers' Office and Carpenter Shop, an ironstone building of 1 1/2 storeys, 90' by 30', the construction of which was begun by contract in 1815.³

In April, 1814,⁴ Nicolls began constructing the foundation of the last of the five Martello towers in Halifax, Sherbrooke Tower,⁵ on the extremity of Mauger's Beach, McNab's Island, opposite York Redoubt and commanding the fairway to the inner harbour. It is the only tower which was originally bomb-proof, having been constructed of squared granite facing outside of brick.⁶ Nicolls originally estimated only £2440 for a rough masonry tower like the others, but that material was not quite satisfactory and Lieutenant Colonel Wright, his successor, started the walls with squared granite. He found, however, that the expense of the construction in the new material so much exceeded the original estimate that in September, 1815, he was forced to halt construction at the second storey, pending approval from London.⁷

In the meantime the general peace of 1815 brought quiet to most of the world, and further expenditure on defensive works was almost entirely put aside for more than a decade.

1. *Inspectional Reports*: 1 July, 1814; 31 July, 1815; 1 January, 1816; 1 July, 1816 ("lately finished"); P.A.N.S. RE 53. This completed an east-west row of four buildings:

- (a) RA Commanding Officer's Quarters (1804-8)
- (b) Enlisted Men's Barracks (1803-4)
- (c) Officers' Quarters (1812)
- (d) Officers' Quarters and Mess Room (1814-16)

2. *Property Statement*, 1875; *WD Property*, 1899; Nicolls to Governor Sir George Prevost, Halifax, 29th April, 1811, P.A.N.S. RE 5, page 126; Respective Officers to R. H. Crew, Esq., Halifax, 3 June, 1812, *loc. cit.*, page 138.

3. Toler, John G. Draftsman Royl Engr Department, *Plan of the Grand Battery and Ground Contiguous to the same, Lumber Yard and Wharf, Engineers Yard and Wharf, with the several buildings*, . . . January 1816, Scale 30' to 1", Size 16 1/4" by 27 1/2", Colored in part, MS, P.A.N.S. Map Collection, Halifax No. 17.

Before 1815, the Engineers' Office was in an east-west wooden building alongside the gate at the northwest end of the old Lumber Yard. The new masonry building, the only one of its kind in the Yard, continued to be used as the office of the CRE and staff until the Canadian National Railways acquired the property in 1914. Nearly all of the buildings in the Yard occupied the sites shown in Toler's plan and probably dated from that time. They were all demolished a few years ago.

4. "Date of commencement April 1814
completion 30 June 1828

Colonel Nicolls Comm. R. Engineers."

(Extract from the inscription on the brass plate on the entrance door of Sherbrooke Tower.)

4. Named after Sir John Coape Sherbrooke.

6. This is the first definite instance of the use of granite for building in Halifax, although "A" Storehouse in the Ordnance Yard may be earlier (see above, page 33, note 4).

7. ". . . I had recourse to a very fine Granite Stone from a Quarry in what is called the north West Arm, and which is procured on the most economical principles being brought from thence by the vessels and Boats belonging to the Department manned by the military, after being quarried by detachments of the Royal Sappers & Miners assisted by Troops of the Line but from the very hard nature of the stone I find that the expence is likely so much to exceed the original Estimate, that for the present I do not intend to proceed further in the construction of the Building than the second course, and shall await your further instructions on the subject . . ."; Lt-Colonel Wright to Lt General Mann, Halifax, 2 September, 1815, P.A.N.S. RE 5, page 189. [Approval was received from England in a letter dated 4 October, 1815 (Wright to Mann, Halifax, 15 January, 1816, *loc. cit.*, page 198), but the work proceeded slowly ("The Walls of this [i.e. Sherbrooke] Tower are in progress but the Work will be slow from its being necessary to quarry the Granite Stone, with which it is faced for want of a Contract for the same." *Inspectional Report*, 1 January, 1817, P.A.N.S. RE 53), and was soon dropped altogether, not to be resumed until 1826 (see within, pages 45 and 46).]

Chapter III

THE PRESENT CITADEL, 1828-1856

The present *Citadel* is the fourth fortification which has occupied its notably commanding situation. The first was a small and primitive stockaded fort; the second a long, irregular series of fieldworks, forever needing repairs; and the third a better but still temporary structure of earth and fascines, thrown up on a regular bastion trace. By 1825 there had been expended on this hill some three hundred thousand pounds in constructing, re-erecting and again renewing temporary works there, all of which, except a magazine built in 1812, were in 1825 "wholly extinct."¹

The fourth work was intended to be a modern, strong, permanent fortress, which could effectively command the town and much of the harbour, and which could resist any force likely to be brought against it.

In August and September, 1825, Colonel James Carmichael Smyth and a committee of engineers were in Nova Scotia inspecting the fortifications with a view to further construction, if necessary. Their report, 9 September, 1825, drew attention to the importance of Citadel Hill. Colonel Gustavus Nicolls, who the previous month had returned to Halifax as Commanding Royal Engineer, was soon directed to prepare plans, sections and estimates for a permanent masonry work of an approved type, to serve as a central keep for the whole defences.

On 20 December, 1825, he forwarded to General Mann, Inspector General of Fortifications, his designs and estimates for "re-erecting in Masonry, Fort George, on Citadel Hill," at a cost of £115,999 16s 3 3/4d. His estimate was based on the "workmanship" being done "3/4 by Civil Artificers, 1/4 Military," the "labour" to be done by the military. He doubted that civilian labour would be as cheap as military, and recommended that the principal part of the work be done by the Royal Sappers and Miners. As to bricks, he suggested that they be sent out from England as ballast in any transport ship, "as the Bricks here are of a very inferior quality."²

Not until 15 July, 1828, did the Board of Ordnance approve the plans and estimates, and £15,000 was then granted by Parliament to begin the work.

Nicolls' original trace was a modification of a bastion one, formed to answer the extent and nature of the ground, rather than to be precisely in accord with any regular system of fortification. It consisted of four

1. F. W. Mulcaster to R. Byham, Esq., London, 26 August, 1835, *PAN* 7 RE 54, page 142.

2. Nicolls to Mann, Halifax, 20 December, 1825, *PAN* S, RE 54, pages 1-11 inclusive.

demi-bastions, with an eastern and a western curtain, and four ravelins in advance of the curtains and of the northern and southern re-entrant angles. The north, south and west ravelins had casemated guard-houses at their gorges. Demi-bastions were selected instead of full ones owing to the necessarily short northern and southern fronts, which did not admit the application there of regular flanks. Those fronts were therefore flanked by four small casemates, or gun rooms, of reverse fire from the counter-scarp; while the ditches of the ravelins were flanked by sixteen other casemates, arranged in eight couples in the escarp of the body of the work. There were also loopholed musketry galleries, 6 1/2 feet wide, in the counter-scarp; and from them branched out, at right angles, short galleries, 20' long, for mines under the glacis. The entire ditch was thus subject to a searching fire of small guns and muskets. The ditch was deep and wide.

Within the work he proposed to erect two casemated cavaliers, with guns on top, as quarters for the garrison (one for officers, the other for 320 enlisted men), there having been originally no provision for casemates beneath the ramparts other than the sixteen casemates of defence. For the storage of gunpowder he expected to utilize the bombproof magazine which he had built in the old fort in 1812.

The western and short northern fronts were then most open to attack and the weakest strategically, the southern front being supported by the powerful batteries on George's Island. Nicolls had in view the re-erection of other supporting works at Fort Needham (2733 yards north) and at Fort Massey (1066 yards south) but this was never done.

On receiving authority to proceed with the work Nicolls lost no time. Preliminary work was begun shortly before 7 October, 1828, by excavating for the ditch of the western ravelin, the lowest part of the western front.¹ That front was considered the most important as it faced Windmill (Camp) Hill, 185' high and 666 yards distant, "the most favourable situation for breaking ground against the Fort."² Only £627 was spent in 1828.

By May, 1829, work had begun in earnest and £11,453 was spent that year. On 9 June, 1829, detachments of the Royal Staff Corps and of the Royal Sappers and Miners arrived from England to assist in the work. Operations continued under various contractors each spring, summer, and

1. Nicolls to Mann, Halifax, 7 October, 1828, *PANS*, RE 54, page 17.

2. *Ibid.* to Inspector General of Fortifications, Halifax, 7 October, 1828, *loc. cit.*, page 20. Windmill or Camp Hill was acquired by the military authorities 5 December, 1839.

autumn for nearly thirty years. All the granite work was done by Royal Sappers and Miners, the work on buildings partly by civilian labour under contract.¹

The remains of the old earth and timber parapets of Prince Edward's Fort George were demolished and the top of the hill cut down and levelled to a height of 225' above sea-level.² The material, year by year excavated from the ditches, interior, and elsewhere, was carefully spread outside to form the beautifully symmetrical glacis which we now see, every foot of which could be swept by gun and musketry fire from the ramparts. Tens of thousands of tons of choice squared granite and quarry-faced ironstone were brought from the King's Quarries, northeast of Purcell's Cove on the west side of the Northwest Arm. These quarries had been acquired for this purpose, by grant or license to occupy, on 18 November, 1828. Their excellent stone was used in the high revetments of the escarp and counterscarp, the interior retaining walls, the buildings, and other parts of the work.

Unexpected difficulties were very soon met with. Most of these were the result of the escarp revetments having been planned much too thin to stand up when loaded with the ramparts, particularly when subject to our severe climate. Neither had their foundations been laid deep enough. A very large part of the earlier work proved to be a failure, and after 1832 much or most of it had to be pulled down and rebuilt at great extra expense.³

1. Hill, Lt. Col. Arthur, CRE: *Ground Plan, the Citadel or Fort George, Halifax; Block Plan, the Citadel or Fort George, Halifax*. Two plans, each dated 19.10.91, each to scale 40' to 1", photozincographed [unavailable in PANS. Hereinafter: *Hill's Citadel Plans* 1891]. In 1831 civil laborers for excavating received 2s 6d a day, and army laborers for the same work 10d. [but despite this discrepancy in cash wage, civilian labour is regarded as the cheaper by military authorities, and is used whenever possible, unless there is at the moment a body of enlisted men surplus to military requirements, or unless some other military consideration intervenes. The point is that the obligation of the military authorities to a civilian laborer extends only for the duration of his employ, which may be terminated at will, and is discharged by means of a cash payment only, whereas an enlisted man is victualled and clothed in addition to receiving a cash wage, has had to be trained at the country's expense, and is guaranteed a permanent employment and a pension at the end of a definite period of service. Nicolls was forced to argue for the employ of military labour on the fortifications: "... what part of the *Workmanship* may be performed by contract, which if I may offer my opinion, as to works of Fortifications I consider not likely to be more economical or the works to be equally well performed as by Military Artificers. . . ." (Nicolls to General Mann, Halifax, 20 December, 1825, PANS, RE 54, page 4).]

2. The height of the hill in 1776, presumably the original height, had been 257' 7" (see above, page 16); as a preliminary to the building of Prince Edward's Fort George the hill had been cut down 15' to 242' 7" (above, page 24); this final levelling took off a further 17' 7". [The hill was therefore cut down to the height above sea-level of the site of the first citadel (above, page 3). See also within, pages 67, 68 and 71]. The body of the present citadel is similar to, and very nearly coincidental with that of Prince Edward's Fort George; the present work is about 20' larger in outside measurements.

3. A constant annoyance for a number of years. A circular letter of the Inspector General of Fortifications in November, 1842, called the attention of Commanding Royal Engineers in North America to the very discreditable failures which had occurred at different stations from defective construction and faulty execution of masonry which in several instances required to be taken down and rebuilt within a few years after first erection. He instanced the Halifax Citadel where "very extensive portions of the escarp wall have already been rebuilt after having fallen, and a similar failure has lately occurred in respect to a part of the interior retaining wall" (E. Matson, Brigade Major, to CRE Halifax, Pall Mall, 7 November, 1842, PANS, RE 54, page 155). The 25' high escarp and the 18' high counterscarp are now variously constructed either of squared ironstone with granite coping and quoins, or of squared granite. The sections constructed of granite have very much better stood the ravages of time, while the ironstone revetment in one part has recently collapsed and in others has had to be shored up.

In September, 1831, Nicolls proposed an important change from his original trace, to increase accommodation for men and stores. This was that the proposed ravelin on the harbour front be replaced by a *redan* with strong casemates, and a *couvre porte*. The redan was accordingly begun a few years later, and when completed contained sixteen upper and twelve lower casemates, including casemates of defence.

The strong casemated *Cavalier Barracks* is still a prominent feature of the interior of the fort. Nicolls had originally planned two cavaliers, one facing west and the other north, as those fronts, unsupported by out-lying forts, were open to attack. They would serve as a keep for the work, and their guns, which would command the ramparts, would increase the diverging fire, weak owing to the smallness of the enceinte. In July, 1828, the Inspector General of Fortifications suggested four cavaliers, one facing the capital of each demi-bastion; but Nicolls compromised by proposing three, the large western one, and two smaller flanking ones, facing north and south. Only the western one was actually constructed.

The cavalier was practically complete in the autumn of 1831, although an additional casemate, for cookhouses and cells, was added at each end at some time prior to 1843. It still stands, venerable and sombre, on the northern part of the west side of the parade ground.¹ It is constructed of dark-grey ironstone masonry, and measures 205' by 50' in ground area, 33' 8" to the top of the stone parapet; the west wall is 6' thick at the base and the east one about 3' thick. Above the two-storey body of the building is the parapet, now with a pitched roof and a clock in front. On the front of the cavalier are colonnaded verandahs 9' wide.

It contains, besides the cook-houses and cells, seven barrack casemates on the ground floor and the same number on the next one, the original capacity of all of which was 322 men, since reduced to 143 to conform with present day hygienic requirements. There are also sergeants' quarters in a restricted third storey at each end.

On the top were to be mounted, *en barbette*, seven 24-pounder guns on traversing platforms, five of which faced west so they could be brought to bear over the capitals of the west ravelin and the northwest and southwest demi-bastions.²

Nicolls now wished to proceed with the cavalier to the south, in which he proposed to quarter the officers and their servants.³ This brought up

1. The large brick barracks to the rear of the cavalier is of recent construction. (See below, page 61). During World War I Germans were interned in the Cavalier barracks.

2. A shingled roof was added in 1835, and replaced by another of the same kind twenty years later.

3. P.A.N.S. RE 54 [?Boteler to Major General Bryce, Halifax, 14 February, 1832, *loc. cit.*, page 33, notes that Cavalier BB, constructing, has quarters for four captains and four subalterns.]

the question of barrack accommodation in general. In March, 1832, the Inspector General of Fortifications recommended the construction of *casemates* in the ramparts of the north and south fronts in lieu of the projected additional cavaliers. This would economize space and relieve the weak and troublesome revetments from the pressure of a solid earth backing and rampart. At the same time he also suggested dispensing with the counterscarp gallery and countermines on the east and south fronts, as these were least likely to be attacked.

Work on other cavaliers was therefore abandoned. The new casemates were constructed in blocks at various times in the following years and their support tended to lessen the likelihood of failure in the escarp revetments. Exclusive of those in the redan, they occupy the whole of the Northeast Salient, while some are in the ends of the west curtain and a few are elsewhere. Although the south front had been suggested as a suitable place, hardly any were constructed there. There are now altogether about fifty-eight casemates, upper and lower, for the accommodation of staff, officers, mess-room, soldiers, stores, guard-rooms, etc.¹ These are in addition to about twenty casemates of defence, or gun-rooms, in pairs, to flank the ditches of the ravelins and redan; sixteen of these had been in the original plan of 1825. The total number of casemates is therefore about seventy-eight in the body of the work, some of them beneath the level of the parade-ground, with others above them.²

About 1832 the old Blue Bell Road, originally a continuation of Queen Street, was diverted westward to pass over the eastern part of the old Exercising Ground of 1772 and to give room for the glacis of the new Citadel.

On 9 November, 1833, the Royal Staff Corps left for England after having been stationed here since 9 June, 1829, during which time their technical skill had been applied to work connected with the building of the new Citadel, to the expenses of which their pay had been charged.

But the work at the Fort had only begun, and much yet remained to be done; the greater part of the eastern section towards the harbour had not even been commenced by 1834; neither the South Ravelin by 1835.³ Large sums were still being spent annually on work in various parts, £15,887 in 1842, the largest expenditure for a single year.

1. There are sixteen upper casemates and twelve lower casemates in the redan.

2. It is difficult to say just when these blocks of casemates were begun or completed; in the estimates for 1844-5 is provision for seven in the east front of the redan (already constructed) and a few in the re-entrant angles. The estimates for 1846-7 included four additional casemates in the west front and two in the south, as well as cellars under the officers' quarters in the northern half of the redan; "Report and Estimate of works to be carried on at the Citadel, Halifax, Nova Scotia, For the Year 1846-7", Item 1, PANS, RE 56.

3. "Revised Estimate for completing Halifax Citadel according to the Master-General & Board's Order, dated 7th September, 1835," originally prepared March, 1834; revised 1835; signed by Col. Rice Jones, 1 February, 1836; PANS, RE 56. From August to October, 1834, cholera prevailed at Halifax and many deaths occurred. The troops were placed under canvas and many of them were camped on Windmill Hill, which thereafter became known as Camp Hill. Circles on the ground, left by the tents, could be distinguished down to about 1880.

Nicolls had not provided for a new magazine, hoping to utilize the one built by him in the former fort in 1812. But in 1835 this was reported to stand 10' higher than the then terreplein. It was in consequence demolished not long after, and there were erected two bomb-proof *magazines* of granite, each 68' by 41', exterior measurement, with a combined capacity of 3,920 barrels of gunpowder. These were expected to be completed in 1843. One ("A") is in the northwest and the other ("B") in the southwest demi-bastion.¹ In 1847-8 shifting rooms were provided just without the porches of these buildings.²

In the 1847-8 estimates was a large item for pulling down and rebuilding parts of the north and east fronts, which had no doubt become afflicted with the old ailment of unsteadiness.³ In 1848 the west ravelin, which appears to have given much trouble, was supposed to have been completed at a cost of £10,000; but in 1849-50 there had to be expended on it a further sum of £4,377. For securing arches and casemates £999 was spent in 1849, and £3,511 in 1851.⁴

The construction of large *rain-water tanks* for the supply of the garrison now occupied the attention of the builders, and in the years 1849-50 there was spent £6,818 on this highly necessary equipment, as well as a further sum in 1854. There are three of these tanks beneath the parade-ground on the east side, two large ones with attached filters, and a third for a reserve supply, the total capacity being 195,079 gallons.⁵ There is also a well 160' deep and of 18,850 gallons capacity in No. 18 casemate, north front; and another of 11,016 gallons in the guard-room at the gate.⁶

1. "A" magazine was demolished by relief workers about 1932 or 1933.

2. "Report and Estimates of Work to be carried on at the Citadel, Halifax, Nova Scotia, For the Year 1847-8," PANS, RE 56.

3. *Loc. cit.*

4. *MS Notes from Royal Engineer Records, 1803-1890* [location unknown; hereinafter: *MS Notes*]. The items of expenditure on Fort George from 1848 to 1861 have been taken almost entirely from this source as "Citadel Expenses Commencing Year 1835 and Ending Year 1847-8" (PANS, RE 55) gives no figures beyond 1847-8. As the fiscal year ended 31 March, whenever a double year (e.g. 1851-2) is given in *MS Notes*, the earlier year (in this case, 1851) has been accepted as the date of construction.

5. After the city's high-service water supply was inaugurated in 1868, the tanks were connected with it by a pipe from Artillery Park gate.

6. The well in No. 18 casemate deserves more than passing notice, for it is an ancient one, probably the oldest in Halifax. It existed, then 106' deep, in the northern section of the second citadel of 1762-1795 (see above, page 17, and page 17, note 1), and was retained in the north ditch of the third citadel of 1795-1798 (*Straton's Citadel Plan 1795*). It furnishes a definite point by which we can accurately superimpose the plans of the last three citadels.

There is no subterraneous passage for men, as local tradition so fondly believes, leading either to the harbour or to George's Island. There is, however, a large and carefully constructed *brick sewer* which connects with a 12" main proceeding from the closets on each side of the northern sally-port in the west curtain and passing around by way of the northern ditch; from beneath the bottom of the ditch at the redan salient it leads down the glacis to the head of Buckingham Street, where it connects with a large stone drain (on the site of an ancient stream); thence it passes downhill until it reaches the harbour via the Ordnance Yard (it is uncertain whether the Citadel drainage is carried by the drain under the Yard gate, or by another under the southern part of the Yard). A man, by stooping, can pass through this capacious conduit, but it was not constructed for the passage of troops in time of emergency.

Speaking of such persistent fairy-tales, there is no Maroon Bastion in the present fort, it having been part of Prince Edward's Fort George (see above, page 23-4). Neither, quite obviously, were French prisoners from the eighteenth century wars confined in the old cells in one of the casemates of defence.

Six narrow passages or sally-ports pass beneath the ramparts and down to the ditch, to furnish access to the bomb-proof guard-houses in the three ravelins and also to the loop-holed galleries in the counterscarp. One of these ports is a little beyond each end of the redan, two are in the curtain, and one each in the north and south re-entrant angles.

In 1852, £4,106 was spent on various details of the work; in 1853, £3,513. The reduced annual expenditure during the last few years indicated that the great task was drawing to a close. In 1854 work on the casemates and tanks took £1,366; forming the parade-ground, £1,316; and erecting the cavalier's colonnade, £1,256. In 1855 £600 was spent on putting the glacis in order and on work on the casemates, while £427 was spent on finishing the parade-ground. In after years the Citadel was considered to have been "completed" in 1856,¹ although from 1857 to 1861 at least £2,000 was spent on completing the glacis, the west area of which had been left full of holes and was the last to receive attention.²

From its commencement in 1828 to the fiscal year 1846-7, the cost amounted to £183,055 2s 9 1/4d, of which amount £165,801 18s 6 3/4d (or 89 1/2%) was spent in Halifax, and £17,253 4s 2 1/2d for stores from England.³ The figures from 1847-8 to 1856 are not so easily or precisely obtainable, but amount at least to £48,827.⁴ This, with the £2,000 spent 1857-61, makes a *grand total expenditure* from 1828 to 1861 of at least £233,882, of which £209,324 must have been spent in Halifax. As the original estimate had been £115,999, the actual expenditure was in excess by at least £117,883; that is to say, the Citadel cost more than twice what was estimated.⁵

1. Marginal notes on *Hill's Citadel Plans* 1891.

2. *MS Notes*.

3. "Statement showing the Citadel Votes and Expenditures, 1828 - 1846-7," *PANS*, RE 55.

4. This compares interestingly with the total authorized estimates for these years, which may be for the whole Maritime Provinces command (*MS Notes*):

Fiscal Year	Authorized Estimate	
1848	£ 16,146	
1849-51	18,423	
1851-2	16,194	
1852-3	21,598	including £ 8,191 for barracks.
1853-4	22,240	16,295 " "
1854-5	24,601	15,756 " "
1855-6	23,640	18,481 " "
1856-7	9,170	
1857-8	4,915	58,723, of which Wellington Barracks
		(within: page 48 note 5)
	156,927	accounted for 52,943

5. A large part of this excess was due to the failure and consequent re-erection of extensive portions of the escarp, etc., matters for which the earlier CRE's had been largely to blame, as they had not taken into due consideration the climatic conditions. See above, page 39, and page 39. note 3.

The *final trace* was one having demi-bastions at the northwest and southwest corners, with a curtain between, and plain salients at the northeast and southeast corners, with the redan between, the impressive gate with its drawbridge being at the southern end of the redan. There are three ravelins, one opposite the western curtain, and the other two opposite the north and south re-entrant angles. At the gorge of each ravelin is a casemated defensible guard-house, through which access is gained from the ditch below. The official names of these various parts are: Northwest Demi-bastion, Southwest Demi-bastion, Northeast Salient, Southeast Salient, the Redan and the North, West, and South Ravelins.¹

The approximate *dimensions* at present are: western exterior front, 777'; eastern, 830'; northern, 415'; southern, 428'; curtain, 317'; extreme length, north to south ravelin, 1,113'; extreme width, west ravelin to redan, 654'. Width of the ditches: west front, 43'; north and south fronts, 47' each; east front, 35'; ravelins, 27'. The escarp of the body of the work is about 25' high and the counterscarp about 18', the revetments of the ravelins being a few feet lower. Altitudes above sea-level: the bottom of the ditch varies from about 183' at the redan salient to 212' at the west curtain; parade ground, 209' to 219'; crest of the glacis, 225' dropping to 209' at the redan salient; crest of the ravelin parapet, 239'; crest of the body of the work, an average of 245'.²

The *armament* of the Citadel in September, 1855, was: five 8'' guns; forty-five 32-pounders, twenty 24-pounders, and one 12-pounder signal gun; a total of seventy-one guns.³

The *accommodation* of the Citadel was reported in June, 1856, to be: two field officers, sixteen officers, eight sergeants, and 756 NCO's and privates. Of this number the fourteen casemates of the cavalier could contain 280 NCO's and privates, and three staff sergeants. There were twenty store rooms in various casemates.

The *first troops quartered there* appear to have been a part of the 76th Foot, the remainder of the regiment lying in the South Barracks. On 2 June, 1856, they marched out to go under canvas at Point Pleasant, and their place in the Fort was taken by the heavily-bearded, war-scarred Crimean veterans of the 63rd, who, with the 62nd, had that day disembarked.⁴

1. Although these names are not accurate with respect to the true bearings, they are so well-accepted that in writing of the present Citadel I have departed somewhat from my practice of always having reference to true bearings.

2. *Hill's Citadel Plans* 1891. Personal observation.

3. Probably mounted as follows:

5 8'' on the 5 salients of the body of the work.

45 32-pounders on the faces of the salients and on the ravelins.

20 24-pounders in couples in the escarp, to enfilade the ditches (7 24-pounders on ravelins)

1 12-pounder as a signal gun

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4. General Order, 2 June, 1856, *P.A.N.S.*, HQ 48.

On its completion the Citadel occupied a most enviable position among the more powerful of Great Britain's colonial defence. Such, however, was the progress of gunnery, and its consequent effect upon the design of fortifications, that this fine fortress did not for many years enjoy the unqualified admiration and approval of military engineers. The application of rifling to artillery in 1859 presaged the final passing of the time honoured bastion and later polygonal systems of defence, and with its large-scale application in 1870-71 their death knell was positively sounded. Simplicity of trace is observable in all fortifications since then. By 1870 the Citadel was virtually obsolete, although not till some years later yet, say about 1886, was this grudgingly admitted. To-day it could be battered to pieces in a few hours of shell-fire. So pass into littleness the things our fathers once thought great!

* * * * *

Other military works had also been prosecuted during this period. The *Ordnance-Storekeeper's House*, which stood back from the street at the southwest corner of Upper Water Street and Bell's Lane had become dilapidated, and by Board Order of 20 October, 1824, was replaced by a commodious residence built between June, 1825, and 1826 at a cost of £1,615. The new house was of rough ironstone masonry with freestone quoins, etc., measured 40' by 33', and contained eight rooms, kitchen, cellar and attic.¹

[*Sherbrooke Tower*, McNab's Island, was not completed until 1828, construction having been resumed in 1826 after a ten-year lapse.² On 27 February, 1826, the committee on lighthouses recommended a lighthouse for McNab's Island,³ and £1,500 was appropriated for this purpose by the Legislature. Nicolls, learning of this, immediately wrote to the Lieutenant-Governor, pointing out that, "as there is a prospect of its [the tower, i.e.] being Completed," there was no possible location for the lighthouse which would not interfere with the military use of the tower in time of emergency. He suggested that the lighthouse be built on top of the tower, thereby permitting both a commanding site for the light, and a free sweep for the

1. R. M. Parsons, Lt. Rl. Engineers, *Halifax, N. S. Sketch of the Ordnance Land at the Ordnance Yard & Storekeeper's House &c., shewing the Ordnance Boundaries . . . To accompany the 9 State-ments called for by Board Order Dated 10th January, 1851, June 14th, 1851, Scale 80' to 1", Size 16 3/4" by 20 3/8"*, Colored in part, MS, P.A.N.S., Map Collection, Halifax No. 23. In 1851 the house was being used as the Ordnance Office, later (until 1858) as the Garrison Library, and in 1870 it was known as the Purveyor's premises. The rear portion of the lot was disposed of about 1867 or soon after when the Lockman Street extension was made. The stone building and remainder of the land were parted with in comparatively recent years and the building was demolished to make way for a section of the Wentzell Building.

2. ". . . although this might have been advisable, while the Tower partly built there, remained in its present state, as it has done! or ten years . . ."; Nicolls to Sir James Kempt, Halifax, 13 April, 1826, P.A.N.S., RE 28, page 11.

3. H. W. Hewitt, "History of Meagher's Beach . . .", (No. 4 in a series, "History of McNab's Island"), *The Dartmouth Patriot*, Dartmouth, NS, 25 May, 1901.

tower's guns over the whole of the channel.¹ The Lieutenant-Governor and the Inspector General both agreed,² and this compromise was effected.³ On 1 April, 1828, the lighthouse commenced operation,⁴ and on 30 June, 1828, the tower was completed.^{5]}

Its diameter is 50' at the base and 48' 6" at the top, and its height 32' 7". Its walls are heavier than those of the other towers, 7' 6" at the base. There are three floors: the basement, containing magazines and a water tank; the middle one intended for four 24-pounders lodged within the wall and firing through portholes; and the top floor for three 24-pounders on racers, firing over the parapet. The ceiling of the middle room is vaulted. In the centre was a core. The hoists were near the outside wall. There was an iron portcullis in the doorway, and also at each of the four carronade ports. The height to the summit of the lighthouse tower was 39'.⁶ On 26 September, 1828, the tower was struck by lightning, which fractured the king-post of the lantern cupola and did other damage.⁷

During the '40's an attempt was made to clarify the question of *title to military lands* in Nova Scotia and Cape Breton. On 29 March, 1843, the Assembly passed the Vesting Act of 1843, whereby title to land in possession of the military should be vested in "the Principal Officers of Her Majesty's Ordnance for the time being."⁸ Military land had been held by a variety of tenures: original reservation for military purposes, long military occupation, grant from the crown, or purchase. The Vesting Act of 1843 cleared the question as to which persons were entitled to make a valid sale of the land, but apparently the title to the actual land itself was occasionally not clear. In 1849, finally, the Ordnance Commissioner caused surveys to be made of all parts of the military property in Nova

1. Nicolls to Sir James Kempt, Halifax, 13 April, 1826, *PANS*, RE 28, page 11.

2. Jas. Kempt, Lt General, to Colonel Nicolls, Halifax, 29 April, 1826, *loc. cit.*, page 158; Nicolls to General Mann, Halifax, 13 May, 1826, *PANS*, RE 8, page 7; Mann to Nicolls, 84 Pall Mall, 4 July, 1826, *PANS*, RE 24, IGF Order No. 16.

3. "That on the Tower being built and the guns mounted thereon, the Province might be allowed at its own expense to put a roof over the whole to be constructed so as not to obstruct the firing of the guns, placing their light in such position thereon as would best answer the purpose intended; the Province to keep the roof in good order without any expense to the Ordnance, and should it ever be required for Military purposes, the lantern, etc., must be subject to removal." Resolution of the Executive Council passed 21 December, 1827, *PANS*, Province of Nova Scotia, "Minutes of the [Executive] Council, 1826-32," page 113.

4. H. W. "Hewitt", *History of Meagher's Beach*, *loc. cit.*

5. Inscription on the brass plate on the entrance door of the tower (see above, page 36, note 4).

6. Henry Wentworth Lieut. Royal Engineers, *Sherbrooke Tower, Maugher's Beach, Halifax Harbour, as completed in 1828*, Scale 10' to 1", Size 20" by 26 3/4", Colored, MS, *PANS*, Map Collection, Halifax—McNab's Island (Maugher's Beach) No. 2. Machicolation galleries were never added to this tower.

7. Nicolls to General Mann, Halifax, 10 October, 1828, *PANS*, RE 8, page 89. "... The effects of Lightning are rare near Halifax. The Town not having for many Years back suffered in any instance sufficient to cause particular investigation and record of the same ... Under the above circumstances it must be supposed that Lightning rods are rarely used, indeed, I have not observed any except to the public magazines." *Loc. cit.* The tower does not seem to have been greatly damaged.

8. "An Act relating to certain Lands belonging to Her Majesty, and for vesting the title to the same in the Principal Officers of Her Majesty's Ordnance Department." Passed the 29th day of March, 1843. *Province of Nova Scotia, Acts of the General Assembly, 1843, Chapter L* (page 70).

Scotia and Cape Breton about which "information was deficient" and had them compared with information in the Crown Land Office. He then applied to the Provincial Secretary for an Executive Council Minute to the effect that the lands listed in the schedule attached to his letter¹ were those intended by the Act of 1843 to be vested in the Officers of Ordnance in trust for the Crown. The Commissioner of Crown Lands was "not aware of any objection" and on 13 June, 1849, Council passed the required resolution.²

Before 1830 the troops had attended religious service in the various churches of the town.³ From about November, 1830, to about November, 1837, an old building was leased, and fitted up as a Garrison Chapel.⁴ In July, 1835, Lt. Colonel Jones sent to England plans and estimates, £1,980 4s 1/2d, for a Military or *Garrison Chapel* to be erected near the foot of the Citadel glacis.⁵ It was intended to afford ample accommodation for 724 persons, the galleries being for the officers and their families and the ground floor for the NCO's and men. The corner-stone was laid on 23 October, 1844, and the building completed (at a cost of £1,897 2s 2d) on 16 January, 1846, and opened for service 18 June, 1847. Its site was in from the northwest corner of Brunswick and Cogswell Streets.⁶ It was built of wood, about 100' by 60', designed in a classic style, the recessed portico beneath the pediment on the east front having large fluted Doric columns.⁷

The destruction by fire (11 December, 1850⁸) of the soldiers' quarters

1. "Return of all lands in Nova Scotia and Cape Breton now in occupation of the Ordnance Department or heretofore occupied for Military purposes which are vested in the Principal Officers of Her Majesty's Ordnance under the Provisions of the Provincial Statute passed on 29th March 1843," *P.A.N.S.*, "Minutes of Council, 1848-51," pages 244-251, inclusive. Enclosure to Elliott, Ordnance Commissioner, to the Provincial Secretary, Halifax, 9th June, 1849, *loc. cit.*, pages 243-4.
2. Council Minutes, 13th June, 1849, *loc. cit.*, page 242.
3. Chiefly St. Paul's, but occasionally St. George's after its erection in 1800.
4. The building is mentioned in Lt. Colonel Boteler to Lt. Colonel Harris, CRE, Halifax, 8 May, 1832, *P.A.N.S.*, RE 40, page 44. On 4 December, 1835, an estimate was forwarded to A. G. Blair, acting military secretary, for £677 4s 1 1/2d for repairs to the chapel, *loc. cit.*, pages 182-184, inclusive.
5. Rice Jones, Lt. Colonel, CRE, Halifax, to the Inspector General of Fortifications, Halifax, 18 July, 1835, *loc. cit.*, pages 176-177 inclusive.
6. On part of a lot bought 3 May, 1798, from George Bayer, a well-to-do baker. The original lot contained 6 acres, 103 square yards, and the western part included the site of the Garrison Hospital. On 15 September, 1797, Bayer had sold to the military another lot, 1 acre 20 square rods, which extended 137 feet south of Cogswell Street to the North Barracks; on it had been built the Pavilion Range of the North Barracks (now Barrack Stores), R. E. Workshops, etc. See above, page 30.
7. After the departure of the Imperial troops the Chapel was sold to Trinity Church Corporation. On 5 March, 1928, this landmark, with its many military memorial tablets, was totally destroyed by fire.
8. "... the late calamitous fire, by which the whole of the North Barracks, with the adjoining Officers' Quarters, Mess Rooms, and the contiguous buildings were entirely consumed ...", General Orders, 13 December, 1850, *P.A.N.S.*, HQ 43. This was the largest fire, connected with a military building, which has ever occurred in Nova Scotia; I know of only five others of any moment in Halifax: that at the old Hospital, November, 1866; Belle Vue House, 1885; Citadel cavalier, 1889; the tower at York Redoubt; and the Citadel redan, February, 1899.
An engraved view of the fire of 1850, after a painting by Captain W W Lyttleton, appeared on the membership certificate of the late Union Fire Engine Company of Halifax. [The copperplate from which the certificates of service in this volunteer fireman's company were printed is in the Halifax Room, *P.A.N.S.* It shows the same view]. It depicts the north facade of the north block of the barracks as a high building of 4 1/2 storeys, with a pediment over the middle section, a Palladian window in the middle of the second storey, and several small entrance porches on the front; the Pavilion Range of the North Barracks is shown at the right.
Apparently the Pavilion Range, a detached north-south building on Cogswell Street later used for barrack stores, was not destroyed by this fire. Although known in later years as the "Old Officers' Quarters," it may not have been used as such at the time of the fire. *The Acadian Recorder*, Halifax, NS, 13 December, 1850; *The Nova Scotian*, Halifax, NS, 16 December, 1850 (page 386).

at the North Barracks very seriously reduced the available accommodation for the large force on the station, but it was not until seventeen years later that the erection of the present Pavilion Barracks or Married Soldiers Quarters was begun on the site of the old building.¹ Almost immediately after the fire the Halifax Hotel on Hollis Street was leased as quarters and mess for the officers, and an uproarious time they had there. The rank and file were accommodated thus: the 7th Royal Fusiliers in casemates at the Citadel; the 88th in South Barracks; and the 35th, two companies at George's Island and other harbour forts, one in the Naval Hospital, and one on the ground floor of the Pavilion Range of the North Barracks.

Fortunately steps had already been taken to build in another part of the town large and thoroughly modern permanent barracks, later named *Wellington Barracks*.² On 17 July, 1850, Lt. Colonel Savage had sent to England a full description and plans for permanent barracks for a battalion of infantry, to be erected on the Ordnance Field, Gottingen Street, south of Fort Needham; officers' quarters to accommodate two field officers, twenty-four officers and twenty-six servants, enlisted men's barracks for 555 NCO's and privates, and a 40-bed hospital.³ Authority to proceed with the work was given 30 December, 1850, and the preparation of the site apparently begun in 1851. In June, 1852, the tender of Peters, Blaiklock, and Peters, of Quebec,⁴ £43,271, was accepted, and they commenced work about 1 August, 1852, under the superintendence of Captain Barry, RE. The buildings were not completed until April, 1860.⁵

1. [To be distinguished, apparently, from the Pavilion Range of the North Barracks, also, on occasion, called the Pavilion Barracks].

2. This property (16 acres), together with the 5-acre Magazine Field on the east side of Campbell Road, had been purchased on 20 May, 1807 from Albert Leizer (price, £975). As early as 18 April, 1835, Lt. Colonel Jones had prepared plans and estimates for a permanent masonry barracks in two blocks for 37 officers and 1,059 men, to be located there (Jones to Inspector General of Fortifications, Halifax, 18 April, 1835, Appendix V, pages 94-85), but nothing had come of the project.

3. Savage to Inspector General of Fortifications, Halifax, 17 July, 1850, *PANS*, RE 42, pages 122-153 inclusive.

4. Simon and Henry Peters and Fred Blaiklock, later well known builders at Halifax. [The military were displeased at the delay, beyond the contracted time, in finishing these barracks, as well as at the considerable increase beyond the contracted price, and the contract of Peters, Blaiklock and Peters was terminated, being permitted to be revived only on the posting of security by the contractors. There seem to have been wheels within wheels in the matter, for their Quebec security, the only kind they were able to post, was accepted only after the intercession of Mr. M. B. Almon, MLC. *PANS*, RE 48, *passim*; in particular the memorial (5 April, 1856) of Peters, Blaiklock and Peters to the Lieutenant Governor and Commander-in-Chief, *loc. cit.*, pages 307-310 inclusive, and the Commander-in-Chief's note to his military secretary, Govt. House, 8 April, 1856, *loc. cit.*, page 310, as well as the Military Secretary to Col. Stothard, CRE, Halifax, 9 April, 1856, *loc. cit.*, page 311. Peters, Blaiklock and Peters finished this contract in 1860, but do not seem to have received any further military contracts. After that date the principal military contractor in Halifax was the Yorkshireman, John Brookfield, who arrived in Halifax in the middle '60's after a period of railway construction in New Brunswick. The most of the works described in Chapter IV of this study were built by John Brookfield or by his son, Samuel Manners Brookfield. The civilian activities of the Brookfields are described in J. S. Scott, "The Foundation and Structure of a Building Business," *Port and Province*, Halifax, Nova Scotia, September, 1937, pages 8-9 and 30-35].

5. In 1856 the main building was apparently nearly completed, as the glass windows were in. The actual cost had by then mounted to £52,943 14s 9d.

On 7 October, 1856, *Melville Island*, with its old prison for prisoners-of-war, was transferred from the Admiralty to the War Department, and since then military offenders have been lodged there.¹

About July, 1857, land at the Southeast Passage was leased for seven years for a camp for exercise and for musketry practice. It was known as *Camp Cobham*.

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1. Toler, John G., *Plan of Melville Island Situated in the North West Arm Near the Town of Halifax Nova Scotia*, 31 August, 1812, Scale 40' to 1", Size 12 7/8" by 20", Colored, MS, PANS, Map Collection, Halifax-Melville Island No. 1.

Logan, Major H., "Melville Island, the Military Prison of Halifax," *The Annual Journal of the United Services Institute*, Sixth Year, 1933, Halifax, NS, n. d., pages 12-34 inclusive.

Chapter IV

THE DEVELOPMENT OF MODERN ORDNANCE, 1856-1928

The introduction of rifled ordnance in 1859¹ was followed almost immediately by a period of radical reconstruction of fortifications, characterized by extensive use of massive masonry and concrete substructures and casemates.

Cambridge Battery was authorized in July, 1862, and begun 5 August, 1862,² on a site about midway between the Prince of Wales' Tower on the one hand and Point Pleasant and the old Northwest Arm Batteries on the other, but with a greater command (65' to 75' above high water) than the two latter seaside works.³ Work on the new fort was continued for over six years until it was completed 31 December, 1868, at a total cost of £8,120.

It was planned as an irregular, 4-faced lunette, almost like a detached bastion, with a palisaded gorge. The principal right face enfiladed the main channel out to sea, the left one fronted across channel towards Ives Point, while the short right flank commanded the entrance of the Northwest Arm, and the short left one was intended for light flanking guns.⁴

It was powerfully armed with the new, ponderous, rifled muzzle-loading guns—five heavy 10" ones of 18 tons, and three 7" ones of seven tons.

An entire reconstruction and extensive enlargement of the original *Fort Ogilvie* was also authorized in July, 1862, and begun 5 August, 1862. It was completed 31 March, 1870, at a total cost of £10,248. This practically new work covered ground varying from 70' to 95' above sea-level. Its trace was also an irregular 4-faced lunette with palisades at the gorge. Of the two principal faces, the left one faced Ives Point, and the right one enfiladed the main ship channel, while the guns of the left flanking face (on the site of the old work) cleared George's Island, and the short right one was armed with light flanking guns.⁵ It received a battery of five 9" and five 7" rifled muzzle loaders.⁶

1. Armstrong's breech-loading system of 1858 proved faulty, and rifled muzzle loaders were introduced in 1863; the 7" gun was adopted in 1865, the 9" in 1866, and the 10" in 1868.

2. *Inspectional Report*, 1886 [location unknown]. The Battery was named after the Duke of Cambridge, cousin to Queen Victoria, and at the time general commander-in-chief in England.

3. The site of the Battery is just north of the long entrenchment built in the 1780's (see above, page 19).

4. W. Innes Lt. RE, S. J. Westmacott Col. CRE, *Contoured plan of Point Pleasant . . . To accompany CRE's Report (No. 2354) dated 17 April 1862, 18 March, 1862, Scale 80' to 1", Size 28 1/2" by 50"*, Colored in part, MS, PANS, Map Collection, Halifax—Point Pleasant No. 5 [Hereinafter: *Innes' Point Pleasant Plan 1862*].

5. *Innes' Point Pleasant Plan 1862*.

6. In 1930, outside Fort Ogilvie, I noticed three abandoned old RML guns, two 9" and one 7"; one of the 9" guns bore the date 1876.

These two powerful works caused the old Point Pleasant and Northwest Arm Batteries to be almost useless, but a proposal to erect a smaller work immediately above the old Chain Battery on the Northwest Arm was abandoned.¹

The old *Prince of Wales' Tower*, altered in 1811, was "improved" in 1862 at a cost of £1,537.² Four small machicolation galleries of granite, a prominent feature of the tower to-day, were probably added at this time. Their purpose was to direct downward fire in front of the entrance and of the three portholes, and also to have flanking and frontal fire through loopholes.

In 1863 £3,500 was spent on new and much-needed magazine accommodation at Halifax, and an additional £1,100 in 1864.³ The large bomb-proof *Wellington Magazine*, below the Barracks on the west side of Campbell Road, was constructed under these items of expenditure. It is of ironstone, probably with brick arches.⁴

Under War Office authority of 31 March, 1863, *Fort Clarence* was entirely reconstructed in masonry at a cost of £55,835—the largest expenditure on any one work in this period. The old and entirely obsolete earthen Upper Fort was demolished, leaving only the central tower, and the new permanent work was then built. Its shape was much altered from the original, the old-fashioned demi-bastions being discarded and the entire eastern front becoming a full-width redan. The north and south faces were made parallel, and a short oblique face took the place of the southwest salient, this face being opposite to and parallel with the three-gun section of the proposed battery in front. The whole work thus became a semi-regular hexagon, or oblong rectangle, with its entire eastern side projecting in triangular form and its southwest angle truncated. The approximate dimensions, from escarp to escarp, are: total north-south length, 305'; greatest east-west depth to salient of redan, 255'; west front, 260'; short southwest front, 65'; north front, 180'; south front, 130'; and each face of the redan, 165'.

The whole redoubt was surrounded by a deep dry-ditch, mostly 30' wide, with vertical ironstone masonry escarp, 12' 6" high, and counter-escarp, 18' 6" high; and the crest of the overlying earthen parapet was 28'

1. A plan of the proposed battery is included on *Innes' Point Pleasant Plan 1862*.

2. *Inspectional Report*, 1869 [location unknown]. The projecting machicolation galleries are not shown in a small water-colour view of the Tower, dated 1845, in the Photograph Collection, P.A.N.S. (Halifax Drawer, Provincial Museum Accession No. 5054b); neither are any embrasures shown in the parapet.

3. *MS Notes*.

4. Additions were made to it in 1872-3, and the whole structure was then heavily banked with earth. See within, page 57.

above the ditch, thus giving the work much greater command and relief. An imposing granite-and-ironstone gateway, 8' wide, and a sliding draw-bridge over the ditch, were on the north side, the drawbridge on two rails and operated by a windlass turned by two hand cranks in a pit beneath the rails and just inside the gate. From a postern opposite this gateway a narrow, ramped, subterraneous passageway led down to a door in the west side of the base of the round tower, from which point it turned at a right angle and went further west to another postern and drawbridge, in the middle of the west escarp opposite the Lower Battery, to which it formed the only entrance.¹

The ditch was thoroughly enfiladed by four smooth-bore guns, probably 24-pounder carronades from the tower, located in small gun-rooms at the southeast and northeast angles of the counterscarp; and for additional security many sections of the counterscarp and of the western escarp were provided with loopholed musketry galleries. The Lower Battery and the adjoining wider part of the ditch, which here formed a parade ground, were isolated by two transverse, walled sub-ditches, 16' wide, obliquely crossing the main ditch, one at the northwest angle and the other at the southwest angle. The entire counterscarp, including the rear wall of the casemated battery, formed a moderately regular seven-sided polygon enclosing the hexagonal interior work.

The Lower Battery became a massive, slightly irregular, blunted redan, two of the faces being equal in length (each about 158'), and the third, the southwest one, being shorter (about 118'), in accordance with the number of guns assigned to each section. Here were constructed three underground bomb-proof casemates or gun rooms, of masonry and concrete with brick arches, thickly covered with earth, and having widely splayed embrasures in front, for eleven 9" 12-ton rifled muzzle-loaders. Four of these ranged towards George's Island, four directly to the front (west-south-west), and three towards the outer approaches of the harbour.²

The upper storey of the *Duke of Clarence's Tower* was removed at this time, and the truncated tower was reconstructed as a barracks and magazine. The ground floor storey (entrance on the north side) was made into accom-

1. The key-stone over this second postern or sally-port is inscribed "V. R. 1864-8."

2. E. O. Hewett Capt RE 3rd Novr 1865, S. J. Westmacott Col. CRE, *Revised project for Completion of Fort Clarence. To accompany report dated 3rd Nov. 1865 and CRE Memo dated Nov. 2, 1865 (No. 1546), Scale of ground plan, 20' to 1", Scale of sections 1/120 and 1/240, Scale of rough sketch shewing relative position of works, 3 1/2 cables to 1", Size 28" by 48 1/4", Colored, MS, PANS, Map Collection, Halifax—Fort Clarence No. 7. These guns were probably not in place until 1874.*

modation for eighteen men, and the basement was strengthened by brick arches and used as a magazine.¹

York Redoubt was also completely altered in plan, greatly enlarged, and entirely reconstructed between 3 August, 1863, and 6 January, 1877, at a total cost of £25,027.² It now became a defence worthy of its commanding location, being built on an entirely new and modern plan, with a long semi-straight east front, a circular northern flank (occupying about the same ground as the original crescent-shaped battery), a short right-angled southern flank, and a straight gorge closed by a loopholed wall on the west, and a lunette-shaped caponier defending the east ditch. The old tower, with a loopholed brick parapet and an east-west brick machicolation gallery, projected from the west wall and was flanked by two attached loopholed caponiers which enfiladed the west wall. Henceforth *York Redoubt* was one of the most important of our defences. Its armament consisted of three 10" (18-ton) and eight 9" (12-ton) rifled muzzle loaders. These guns were not in casemates, but fired over embrasures in the parapet³ and were accurate for a couple of miles or so.⁴

In 1865⁵ *Ives Point Battery* was begun at the northwest end of McNab's Island at a point well situated to cross fire with the forts at Point Pleasant, with Fort Clarence, and with *York Redoubt*, in defence of the fairway leading to the inner harbour and the Arm.⁶ The new battery, authorized 4 January, 1864, was completed in 1870 at a total cost of £21,806,⁷ and was armed with six 9" and three heavy 10" rifled muzzle loaders firing through deep embrasures fitted with iron screens.⁸ On the southern flank were three barrack casemates, and a fourth used as a laboratory, and surmounting these were two of the guns. The gorge was closed with a stockade. The fort's buildings were of brick.

1. E. O. Hewett, Capt RE, 10th October 1867, R. Burnaby Col. CRE, 6 Nov. 1867, *Plan for Completion of Interior and reconstruction of tower*, Scale 20' to 1", Size 33 1/4" by 23", Colored, MS, PANS, Map Collection, Halifax—Fort Clarence No. 13.

Survey of the War Department Property at Fort Clarence . . . Scale 40' to 1", Size 34" by 47 1/2", Colored in part, MS, PANS, Map Collection, Halifax—Fort Clarence No. 23.

The tower was cut down 10' below its original height of 42' from the bottom of the ditch, leaving it still 22' above the terreplein. The soft sandstone of which it was built was probably not wearing well, and the tower would have been useless as a defence against the fire of the new type of artillery.

2. Of which £22,347 had been accounted for by 1869.

3. Personal recollections of H. S. Tremaine. The 10" guns were mounted on full circle racers.

4. By 1878 a large pentagonal south caponier had been erected at the south end, beyond which was located the main magazine, protected by a stockade.

5. H. W. Hewitt, "History of McNab's Island," Article No. 7, *The Dartmouth Patriot*, Dartmouth, NS, 15 June, 1901. The site was made up of two small parcels of land, one bought June, 1863, from the old Quoit Club, the other March, 1864, from Peter McNab. Ives Point was named after Captain Benjamin Ives, an officer who served with Pepperell at Louisbourg, an original settler of Halifax and one-time "Captain of the Port" (Hewitt, *loc. cit.*)

6. Ives Point Battery is equidistant (2200 yards) from Forts Ogilvie and Clarence.

7. MS Notes.

8. These iron screens were a new idea, not afterwards used at Halifax.

Fort Charlotte, on George's Island, was reconstructed on its seaward face between about 1864 and 1869 at the heavy total cost of £51,353.¹ As this is the second largest expenditure for the period the work done must have been very extensive. Between about 1864 and 1866 the old semi-circular South Battery was demolished and replaced by a much improved one of horse-shoe shape for eight modern 7" rifled muzzle loaders.² This became known as the Upper Battery. Between 1866 and 1869 the construction of a new four-gun casemate battery for heavy 10" guns accounted for £17,639. This section, now called the Lower Battery, is built in the south part of the counterscarp and is connected with the upper work through the south caponier. The old semicircular North Battery was not altered, but its eight smoothbore guns were removed in 1878. The Martello tower seems to have been demolished during these drastic changes, for by 1877 its site was occupied by a large earthbanked magazine.³

A few words about the armament of these new or remodeled forts: at various times between 1867 and 1870 each of them was armed with the latest patterns of the recently introduced rifled muzzle loading coast defence guns, of steel tube and wrought-iron coil construction, which fired elongated, conical Palliser shells bearing brass studs to take the rifling and so produce rotation. Their range and penetration vastly exceeded those of the obsolete cast-iron smoothbores with their spherical shot. Their calibres were 10" (18 tons), 9" (12 tons), and 7" (7 tons), the 9" being the most numerous (38).⁴ Their ranges were 6,000 and 5,500 yards, and their penetration of wrought-iron, at 1,000 yards, was 12", 10" and 8" respectively.

1. *MS Notes.*

2. S. J. Westmacott Col. CRE, W. Innes Lt. RE, 1st Feby 1866 R. Burnaby Lt. Col. C. R. E. 13 Feby 1867, *Halifax Harbour, Fort Charlotte, Progress Plan*, Scale 20' to 1", Size 28" by 37 1/4", Colored, MS, PANS, Map Collection, Halifax—Fort Charlotte No. 7.

3. Reconstruction of forts, 1862-70 (*MS Notes*):

Fort Clarence.....	£ 55,835
Fort Charlotte.....	51,353
York Redoubt.....	22,347
Ives Point Battery.....	21,806
Fort Ogilvie.....	10,248
Cambridge Battery.....	8,120
Citadel rearmament.....	2,052
Prince of Wales' Tower.....	1,537

173,298

4. The 7" RML gun was introduced in 1865, the 9" in 1866, and the 10" in 1868. The 9" RML took a charge of fifty pounds of prism black-powder, the weight of its projectile was 256 pounds, and its muzzle velocity 1,440 feet per second.

The RML's in Halifax were disposed as follows according to pocket plans of the RE Department, 1877-8, [not available in PANS]:

	10"	9"	7"	Total
Cambridge.....	5		3	8
Ogilvie.....		5	5	10
Ives Point.....	3	6		9
Charlotte.....				12
Upper.....		8		
Casemates.....	4			
Clarence.....		11		11
York.....	3	8		11
	15	38	8	61

In addition to the above, an additional plan of 1881 [unavailable in PANS] shows two 64-pounders on Moncrieff carriages at Fort Clarence (see within, page 58 and page 58, note 1). The dates on the trunnions of a number of these guns lying around Halifax forts are 1869 and 1870. They remained in nearly all of the forts until the turn of the century, when they were unceremoniously cast out to make room for the modern long breech-loaders. I am told that the 10" RML's at Cambridge Battery were last fired in 1904.

In March, 1858, leave was given for the Staff and Departmental Officers to occupy temporarily the Officers' Quarters, *Wellington Barracks*, apparently just then completed. About 1859 an additional sum of £6,145 was spent on outbuildings, and the high granite-capped, hammer-dressed, ironstone wall on Gottingen Street was erected in the same year. It was apparently not until April, 1860, that the barracks were occupied by troops, the first tenant being the war-scarred 62nd Foot; on 9th April one of its companies went there from the Pavilion Barracks, on the 18th two companies from the Citadel, and finally, on the 20th, headquarters and the remaining seven companies from the South Barracks.

The two very substantial and dignified main buildings of the *Wellington Barracks*, each 3 1/2 storeys high, are built of red pressed brick trimmed with dressed granite.¹ Each wing of the soldiers' block contained about twenty-four barrack rooms, each to contain either eleven or sixteen men, with recreation rooms, etc. On the east side is a colonnade, with corridors above, and beneath the centre is an arcade.² When all the buildings were completed, including three smaller wooden ones for married soldiers' quarters (Blocks A, B, and C) on the northern side of the spacious parade-ground, there was, according to present-day standards (600 cu. ft. per person), accommodation for 28 officers, 569 NCO's and men, and 44 married soldiers, a total of 641 military. In actual fact a full battalion was quartered there.³

The *Glacis Barracks*, on the northeast slope of the Citadel, consists of two long detached blocks, each 2 1/2 storeys high and each about 150' by 30', somewhat meanly constructed of battened wood. One block (No. 1) lies in a north-south direction, and the other (No. 2) east-west. Although alike in appearance and nearly so in size, they were not built at the same time, as might be supposed. The older north-south block was built between 1858 and 1866.⁴ The east-west block was begun 4 October, 1867, and com-

1. This was, I believe, the first military building in Halifax to be constructed entirely of brick. The excellent bricks were supplied by Hornsby's Wellington Brickworks at Eastern Passage, Dartmouth.

2. [The soldiers' quarters, *Wellington Barracks*, are now (1946) the seamen's barracks, *HMCS STADACONA*. Because of the tropical appearance of this colonnade, a legend has grown up amongst naval enlisted men that the War Office confused the plans with those for a barracks being built at the same time in Bermuda. The legend is amusing, but unfortunately for its truth the colonnade and arcade are included in the original plans submitted from Halifax in Savage to Inspector General of Fortifications, Halifax, 17 July, 1850, *PANS*, RE 42, pages 122-153 inclusive].

3. During this time, and until February, 1884, two line battalions were stationed in Halifax. One occupied *Wellington Barracks*, the other the Citadel and *Glacis Barracks*. At stated intervals they exchanged quarters, and when they met on Gottingen Street, the junior corps opened out to allow the senior to pass through its ranks.

4. There seems to be no record in the engineer department of the date of construction of this building. It is not shown on an RE plan of 1858, and on a plan of 1867 it is referred to as an "old barracks used as a temporary hospital," i.e. from the destruction of the old hospital in November, 1866, until the occupation of the new one soon after 1870 (see below, page 56). [But would an eight-year old building be referred to as "old"? Neither of these plans is available in *PANS*.]

pleted 30 September, 1868, at a cost of £3,460. It is just south of the older block, and occupied part of the site of the hospital, burnt in 1866, the centre of the block being on the spot where the north end of the hospital had stood.

The *Pavilion Barracks*, or *Pavilion Married Quarters* were begun 24 July, 1867, and completed 31 December, 1870, the cost being £19,688.¹ Although they occupied the site of the old North Barracks on the south-west corner of Brunswick and Cogswell Streets (and are still commonly called the North Barracks), they were not all built on the old foundations, but were built in three detached blocks (A, B, and C) instead of four, the southern side being left open except for a small wash-house. They were of wood, 2 1/2 storeys high, with lower and upper verandahs on the fronts which faced on the central parade ground. Brick partitions separated them into several bays or sections, to guard against the progress of fire. Between June and December in 1874 a small block (D) was added at a cost of £2,004, at the north-east corner, thereby connecting the northern and eastern blocks; and between July and November, 1876, an additional block (E) was built at a cost of £2,000 at the south end of the eastern block, which thereby was extended to the head of Buckingham Street. A small *infants' school* was built about the same time. From the completion of the original three blocks to the present day, these barracks seem to have been occupied as Married Soldiers' Quarters.

The destruction by fire, 10 November, 1866, of the old General Hospital on the Citadel Glacis, used for that purpose since 1806, made it imperative to erect a building for the care of sick soldiers.² A temporary hospital was immediately fitted up in the adjoining north-south block of the Glacis Barracks, to serve until adequate quarters should be provided, and between July, 1867, and December, 1870, the fine, large, substantial *Garrison Hospital*, or *Station Hospital*, as it sometimes called, 350' by 30', of brick covered with stucco, was built on the northeast corner of Cogswell and Gottingen Streets, at a total cost of £31,972. It is still in use.⁴ To make way for the new structure, the old Barrack Master's Quarters on Gottingen Street (once occupied, I believe, by the Commandant), its attached stables, and a building containing a fives court in the northwest corner of the lot, were demolished.

In 1871-72 the recently constructed *Fort Cambridge* was "altered,"³ and in 1877 alterations to *York Redoubt* were also completed. In the 1872-3

1. C. MacKenzie, contractor.

2. This was the town house of Prince Edward, converted into a hospital (see above, pages 31 and 32). As early as 1835 it had been reported as "In a state of great decay & becoming unsafe from the Frame being shaken & gradually giving way"; Jones 1835.

3. *Inspectional Report*, 1886 [location unknown].

4. [Not since the winter of 1946-7. The building (June, 1947) houses the local offices of the federal Department of Veterans' Affairs.]

estimates £2,500 was authorized for store magazines, etc. In 1873 £2,000 was spent on such magazines; a two-arched bomb-proof masonry addition to the east side of *Wellington (C) Magazine* was erected and the entire structure then heavily banked with earth.¹ In 1872 or '73 there was also built a brick *Small Arms Magazine* between two old masonry Naval Magazines (A and B) at *Richmond*. In 1876 the retaining-wall terreplein at the *Citadel* was rebuilt at a cost of £1,380; and in 1878 and 1879, £2,000 and £1,000 respectively was spent on mounting light guns.²

On 4 October, 1870, the headquarters of the Commander-in-Chief in British North America was transferred from Canada to Halifax, Sir Hastings Doyle being the Commander-in-Chief at that time.³

After 1878 long breech-loading guns superseded the old rifled muzzle-loaders in coast defence. This introduced a new factor into fortifications, which had to be met by further drastic changes in construction and armament. Other improvements followed in short order: high explosives in 1885, quick-fire guns in 1887, magazine rifles in 1888, and smokeless powder in 1890. Electricity began to take a prominent part in warfare, and the telegraph and the telephone, as well as electrically controlled mine-fields and powerful searchlights, came into use.⁴ The system of our fortifications had therefore to be revised and radically improved, a problem which was not resolved by the War Office until 1884.⁵

1. See above, page 51. In 1884 the magazine was heated with hot water. It was vacated after the Halifax Explosion, December, 1917.

2. *MS Notes*.

3. "By 1871 all British garrisons were withdrawn from Canada, and thereafter British troops remained only at the naval stations of Halifax and Esquimaux" (Hon. Newton W. Rowell, "Canada and the Empire 1884-1921," *Cambridge History of the British Empire*, Volume VI, Cambridge, University Press, 1930, page 717).

It may be noted here that from 1870 to about 1885 a large number of official photographs were made of nearly all the military buildings and forts at Halifax, as well as of the buildings in the Dockyard. [There is a large collection of military photographs in the Photograph Collection, *P.A.N.S.*, probably including a number of this series].

4. Searchlights were necessary to assist gun-fire and mine-field observers because of the torpedo-boat menace, these craft having been introduced in 1877.

5. As a preliminary, careful contoured surveys were begun in 1872 by Lieutenant Valentine Rowe, of the district from Grand Lake to Sambro, and from Chezzetcook to near Aspotogan, St. Margaret's Bay, an area 40 miles square with Halifax in the centre. A fine map from this survey ("Halifax and Adjoining Country, 1886. Scale 2" to 1 mile. Survey by Lt. V. F. Rowe, R. E., in 1872. Drawn by E. Hopkins in 1886") still hangs in the District Engineer's Office. Then, beginning in 1877 and continuing probably through 1884, an extremely accurate detail survey of the Halifax peninsula and neighbouring districts was made by a party of Royal Engineers headed by Sergeant E. Hopkins, the capable draughtsman who had drawn the map from Rowe's survey. The bench-marks from this survey are still to be seen about the city. By June, 1886, this admirable survey had been plotted by Hopkins on some fifteen or twenty large sheets (photozincographed at Southampton: the section showing the Citadel is dated 1891. Same slight checking of these surveys was being done as late as 1892) on a scale of 1/2500 or 25.344" to 1 mile, with contour intervals of 10', the standard scale adopted by the Ordnance Survey for cultivated districts. At the same time a plan of the district surrounding the town was drawn in ten sheets, each sheet covering an area six miles by four miles, on a scale of 1/10,560 or 6" to 1 mile, the standard scale of the Ordnance Survey for areas in general. Also a fine Index Map to the 6" sheets was photozincographed on a scale of 1 1/2" to 1 mile, with 50' contours, by the Ordnance Survey, Southampton (*Co. Halifax, Nova Scotia*. Surveyed and drawn by E. Hopkins, Sergeant R. E. (Signed) Chas. S. Akers Col. C. R. E. 5 June 1886. Photozincographed at the Ordnance Survey Office, Southampton, 1889. . . . published by the Intelligence Division, War Office, No. 764. Re-printed in 1894-9. [Shows Harbour from Campdown to Devil's Island, and back to the head of Bedford Basin]. Scale, 3520' to 1", Size 24 3/4" by 27". Part Colored, *P.A.N.S.* Map Collection, Halifax No. 46).

The municipality of Halifax was asked to bear a small share of the expense of preparing these plans, in order to have the right to use them apart from the plotting of the forts. This offer was declined.

In the meantime a number of light guns had been mounted in 1878 and 1879 at a cost of £3,000; telegraphic communication between the outlying forts and the Citadel was established in 1879 (£400), some of the cables being landed at the North Wharf, Engineers' Yard; and concrete emplacements or pits for two 64-pounder guns¹ on Moncrieff counterweight or disappearing carriages were made on the eastern parapet of the upper battery of *Fort Clarence* in 1880 (£1,000). Preparations were made for laying a submarine mine field in the main harbour channel; a gun-cotton tank and store were accordingly built on George's Island in 1885 and 1886, at cost of £450 and £1,350; test rooms were erected there in 1885 (£208) and at York Redoubt (£1,120). Powerful search-lights were provided for Point Pleasant Battery, and an expensive "electric light engine-house" was constructed there in 1886 (£4,375); lamp rooms were fitted at the harbour forts in 1886 (£322). Some years later a search-light emplacement was constructed on the cliff at York Redoubt.²

In 1888 or 1889³ and for five years thereafter, *York Redoubt* was extensively remodelled and extended onto higher ground to the south and south-west. Under War Office authority of 10 June, 1889, observing stations for position finding apparatus in connection with the observation mine field, were established there.⁴ Under War Office authority of 22 May, 1890, a Quick-firing Battery was also constructed there at a cost of £1,321. About 1900 two small casemates or gun-rooms, with embrasures, were excavated in the solid face of the granite cliff on the southern side of Sleepy Cove⁵. The two guns were intended to enfilade the shore to the north, but as the casemates proved to be very damp, the guns were never placed, and the work was abandoned. Some years later a search-light emplacement was made on the cliff in front of the main fort.

The fort had been made the principal unit of defence here, and was now of an irregular, elongated form, extending much south of the original location, the length from north to south being nearly 1/3 mile, and the greatest

1. These were converted 32-pounders, intended as a defence against a possible land attack from the Eastern Passage Road.

2. *MS Notes*.

3. The following expenditures were authorized by the War Office at various times in 1888 (*MS Notes*):

5 April, 1888	York Redoubt.....	£19,670
27 June, 1888	Fort Charlotte.....	3,609
do.	Ives Point Battery.....	2,518
do.	Fort Clarence.....	2,099
do.	York Redoubt.....	960
13 July, 1888	Fort Ogilvie.....	914
do.	Fort Cambridge.....	450
		30,220

4. Another one was erected in Fort Ogilvie in 1890 (authority, 1 November, 1889), while a site for yet another was obtained just south of the present Fort Hugonin on McNab's Island (*MS Notes*).

5. Personal recollection of J. Perrin, and of Patrick Hayes; Hayes worked on this excavation.

width at the south end, where the keep was located, being $1/8$ mile. The height above sea-level at the old north end was about 150', and at the south end (Position Hill), 234'.¹ In 1894 eight 9" and 10" breech-loading guns were mounted at the fort. The old *Duke of York's Tower* was suffered to remain for a few years until, a fire having injured the upper storey, all but the lower storey was demolished.² Up to 1879, when telegraphic communication was established between the forts, the tower was used as a relay signal station between Camperdown and the Citadel.

Extensive improvements to *Fort Charlotte* on George's Island must have been made at this time, to account for the expenditure of the £3,609 authorized in June, 1888, but I am unaware what form they took.

In 1888, alterations and other improvements were begun at *Ives Point Battery*. The magazines were protected by concrete, the deep embrasures with their iron shields were filled in, and the guns mounted so as to fire over the parapet.³ In 1890, when these alterations had been completed, a new battery for 6" breech-loading guns was constructed at a cost of £1,498, adjoining the north end of the old work.⁴ It is often spoken of as a quick-firing battery.⁵ The old guns in Fort Ives were the very heavy, rifled muzzle-loaders of 9" and 10" calibre. The 9" guns were taken out between 1899 and 1902 and modern breech-loading guns mounted in their stead.⁶

In 1889, or possibly in the following year, the now ineffective northern four-gun casemates at *Fort Clarence*, directed towards George's Island, were converted into barrack-rooms; and in the same year the remaining ground-floor storey of the *Duke of Clarence's Tower* was removed, the basement being allowed to remain as a magazine.⁷ In 1889 the old magazine in the fort was condemned and a new stone magazine built in the redan. From this time on, as new forts were constructed further out the harbour, the value of Fort Clarence decreased.⁸

1. Hopkins, E., Sergeant, RE, Co. Halifax, Nova Scotia, Scale 3520' to 1", Size 24 $\frac{3}{4}$ " by 27". Part colored, Southampton, Ordnance Survey, 1889.
2. In 1896, as Patrick Hayes told me, although others place the demolition three or four years earlier yet. The lower storey of the tower is now used as a coal shed.
3. No doubt all these modern works have their guns mounted according to the inconspicuous Barbette system, the older system of casemates and deep embrasures having by this time gone out of vogue.
4. The authority was dated 23 January, 1890; MS Notes.
5. The 6" was the biggest QF gun (Mark II; Nominal Weight, 7 tons; Cordite charge, 13 lbs., 4 oz.; Weight of projectile, 100 lbs.; Muzzle velocity, 2,154 ft. per sec.; Penetration of wrought iron at 1000 yards, 11.6 inches; Range, 10,000 yards; Article "Guns," *The Harmsworth Encyclopaedia* (Edinburgh, Nelson, n. d.), Volume V, page 389, Table IX).
6. At some time during World War I, two new guns were put in. There are now, I believe, only four in the older part of the work, the three old 10" guns remaining over the casemates.
7. MS Notes. It may still be seen there. J. Perrin told me that the stone from the barrack-storey was used to construct a wharf at Ives Point, but was so fragile that it split to pieces in a year, and had to be replaced with ironstone.
8. A use was found for a section of the upper work. In November, 1900, two 4.7" QF guns were mounted on concrete emplacements on the parapet of the short southsouthwest or seaward front of the Redoubt. They were to repel torpedo-boats, aided by the neighbouring search-lights, and for this purpose were fitted with appliances for rapid sighting at night. But by 1906, when the whole Halifax Fortress was turned over to Canadian control, the garrison of Fort Clarence consisted of one corporal and two gunners. Between 1906 and 1913 the fort was completely stripped of its armament and other equipment, and finally, by deed dated 17 June, 1927, Fort Clarence, with its surrounding 34.04 acres of land and the water-lot in front, was sold by the Crown for \$19,000 to the Imperial Oil Company which, on 1 July, 1916, had established a large refining plant on the adjoining property to the southeast. I am glad to be able to say that the Fort has been left by the company as it was at the time of sale.

Fort McNab was begun about 1889, under War Office authority of 8 November, 1888, on a hill about 113' high in the centre of the south part of McNab's Island;¹ and some five years were devoted to its construction.² This advanced unit, 4 3/8 miles from the centre of the city and at the time the farthest seaward of our forts, was designed to command the entrance and entire offing of the harbour, from Chebucto Head and Sambro Ledges to Cole Harbour and Lawrencetown. Its fire could search the shore underneath York Redoubt, and also the coast-line from Sandwich Point to Chebucto Head, a vulnerable area not dominated by York.

The casemates are of concrete, bearing heavy parapets of earth. All of the armament consists of modern long, lean, wire-bound breech-loaders, whose rate of discharge is rapid and who fire over the parapet. The original armament consisted of one 10" breech-loader, landed 8 December, 1890,³ two secondary 6" breech-loaders, and a few lighter ones.

Just before *Fort McNab* was completed,⁴ another most important new work called *Sandwich Battery*, but colloquially referred to as "Spion Kop," was begun on the summit of a bleak granite hill (217' above sea-level) overlooking Sandwich Point nearly half a mile south of York Redoubt. It is the same distance from the city as *Fort McNab* and has about the same elevation as the high south end of York. When completed it was armed with 9.2" and 6" breech-loaders of the most modern type and since then it has been much strengthened until it has become the most notable unit in our defensive system. At the shore of Sandwich Point is now a Practice Battery.

Fort Hugonin was constructed in 1899 on a small elevation just above the shore between Ives Point and McNab's Cove on the west side of McNab's Island.⁵ It was built mainly that its rapid fire, aided if necessary by that of *Fort McNab*, could search the inadequately defended shore near the foot of York Redoubt, where an enemy could safely land from deep water just off the point, and also that its guns might bear on the shore to the north-

1. The £24,000 estimated for its construction was charged by the British Government against the profits from its Suez Canal shares.

2. Personal recollections of Simon Gregoire [of Eastern Passage, who seems to have had an intimate acquaintance with Fort Clarence. A number of stories told by him were included in a news story, "Once Proud Bastion Saved Canada from Invading Foe," *The Halifax Mail* Halifax, NS, 19 September, 1945, page 2.]

3. *MS Notes*. The original 10" gun has been replaced by a still more wicked 9.2" gun of improved ballistic properties, still supported by the two 6" guns.

It is a strange contrast to find in a small enclosure within the fort the private burial ground of the McNab family, still used by them as it has been since the days of old Peter McNab.

4. According to the personal recollection of J. Perrin.

5. H. W. Hewitt, "History of McNab's Island," 8th in a series of articles on the history of McNab's Island, *The Dartmouth Patriot*, Dartmouth, NS, 22 June, 1901. *Fort Hugonin* was named after Captain Roderick Hugonin, who married a daughter of the Hon. Peter McNab, and who built the large house near the McNab property, now the property of Mr. F. Perrin.

west as well as on fast small craft passing up the fairway to the inner harbour. The fort has concrete casemates surmounted by low, but heavy, earthen parapets. All of its guns are 4.7" quick-firers, the largest real quick-firers in the service.

Many improvements and additions were made to the accommodations during this period.¹ *Cambridge Library*, on Queen Street, RA Park, was begun on 3 November, 1885, and completed 24 November, 1886, the estimated cost having been £1,350.² Besides the Library, the Park also gained a fine building for *Artillery and Engineer Officers' Quarters*, erected between 8 May, 1901, and 26 March, 1903, at a cost of £7,105.³ and to the east, on what had been the Royal Engineers' Square, arose the long *Brick Block (C) of the South Barracks* (quarters for both single and married soldiers), built between 15 July, 1904, and 30 April, 1905, at a cost of £6,928.⁴

In the *Ordnance Yard*, where since 1811 ironstone construction has always prevailed, the small Tube and Fuse Store was built in 1885-6; No. 3 (Shell) Store and No. 4 (Oil) Store, both in 1886-7; the Armourer's Shop in 1892; and the Guard Room at the gate, in 1896-7.

In the evening of 25 March, 1889, the roof and upper storey of the old cavalier at the *Citadel* was burnt, but the damage was soon repaired.⁵ Later a greatly needed addition was made when a large, substantial, well-lighted brick Barracks, 3 1/2 storeys with a pediment, was erected on the parade-ground south of the old grey cavalier. It has six large rooms, and is capable of accommodating over 100 men. The casemated quarters in the ramparts of this fort had always been damp, musty, and unhealthy, and the new quarters were welcomed by the garrison.⁶

About Cogswell and Brunswick Streets several new brick buildings came into being. A large *Military Gymnasium*, 120' by 55', was begun 6 May, 1901, and completed 28 February, 1902, at a cost of £4,990, on the

1. After February, 1884, the number of line battalions in Halifax was reduced from two to one.

2. Built, I think, by J. Shand. The library had originally been housed in the Ordnance Store keeper's House (see above, page 45, note 1), and from 1858 on had been in an east-west building, now gone, at the north end of what is now the Glacis Barracks Square.

3. Until 1929 the building served also as District Headquarters. To make room for its north end, about two-thirds of the eastern part of the old wooden Officers' Quarters between the Mess and the Soldiers' Barracks, had been demolished.

4. Its construction necessitated the removal of the former R. E. Officers' Quarters and of the ancient, diagonally-placed, small wooden structure south of there which had once been the quarters of the Commandants of Artillery and of Engineers, and which I strongly believe, from its odd orientation, was either a survival of, or had some connection with, the primitive Cornwallis Fort of 1749. (See above, page 3, note 1).

5. *The Evening Mail*, Halifax, NS, 25 March, 1889; *MS Notes*.

6. The Citadel has for a number of years been garrisoned by the Artillery. The date of construction of this barracks is difficult to determine. On the night of 10 February, 1899, a fire broke out in the Redan, causing considerable damage. Among the supplementary estimates brought down in the House of Commons, Ottawa, 30 April, 1910, was \$15,000 for new quarters for single men at the Halifax Citadel, possibly a portion of the cost of construction of the new barracks. [But ex-Battery-Sergeant-Major Joseph Jessup, caretaker, *P.A.N.S.*, remembers the barracks as complete and occupied when he arrived in Halifax, 1900, with the 17th Western Company, Royal Artillery].

site of the old fives court demolished in 1883.¹ West of Glacis Barracks a *Warrant Officers' Residence and Army Service Corps Office* was erected by RE labour at a cost of £1,243 between April, 1901, and February, 1902. An L-shaped brick *stable* was later erected near there.² A *Supply Depot Building*, E-shaped, and just west of the Gymnasium, was commenced 21 April, 1902, and completed 14 February, 1903, at a cost of £3,911 19s 15d. Other new buildings were: a *brick addition* (begun April, 1902; completed January, 1903; cost £2,581) to the old wooden *infant school* near Brunswick Street; the small but neat brick *quarters for Medical Corps Sergeant-Major*; and on Brunswick Street, just north of the Garrison Chapel, the block of neat and comfortable married soldiers' quarters known as *Church-field Barracks*, consisting of twelve residences in four bays.

At *Wellington Barracks* some buildings, manual-training workshops, I believe, and probably new married soldiers' quarters, were added; while at *Melville Island Prison* a couple of tidy Wardens' Quarters under one roof were erected near the mainland end of the bridge, and also a block of new stone cells, well lighted, ventilated, and heated.³

The last building erected here by the Imperial authorities was the large ironstone Reserve Arms Store in the *Ordnance Yard*, constructed in 1906 just east of the Tube and Fuse Store.

The fortress had now been put into first-class condition and the entire establishment thoroughly renovated for a new tenant. On 16 January, 1906, the Fortress of Halifax was formally turned over to the control of the Dominion of Canada and administration was assigned to the Canadian Department of Militia and Defence. Financial control went into effect 1 February, 1906, and shortly after that date the last Imperial troops at Halifax embarked for England.⁴

1. See above, page 56. The fives court, variously known also as the Racquet Court or the Ball Court, had measured about 63' by 31', had been about 30' high at the front or north wall and about 15' high at the back wall.

The new gymnasium took the place of the ramshackle wooden one just to the east of the Garrison Institute, built 1798 (see above, page 30, note 6). Later the Institute building and the old gymnasium were demolished to make room for a waggon-yard.

2. Its construction necessitated the removal of the old wooden guard room (48' by 20', built 1798), and of a coal store.

3. These were in addition to the long, pitched-roof building, erected in 1809 to accommodate French prisoners-of-war, which still stands.

4. The withdrawal commenced 15 November, 1905, when the first party of the Royal Garrison Regiment embarked from Halifax for Liverpool ("Royal Garrison Regiment Sail for Old England," *Halifax Daily Echo*, Halifax, NS, 15 November, 1905, page 3). The Canadian Department of Militia and Defence took over Wellington Barracks 3 December, 1905. The last Imperial troops in Canada [numbers transferred to the Canadian Army] left Victoria, BC, 20 May, 1906.

[The militia had always been under the control of the Dominion (before 1867, the provincial) authorities, but prior to the assumption of military control of the Halifax area at this time, the only buildings constructed by the Department of Militia and Defence in this city had been] the Militia Armouries [which] were built on Cunard Street by the Dominion in 1899.

Before World War I, only one new military work of any importance was undertaken here by the Canadian Department of Militia and Defence.¹ This was *Connaught Battery*,² above the shore at Falkland village, between York Redoubt and Purcell's Cove, begun in 1912³ and primarily intended, I believe, to assist in preventing an enemy landing under Fort McNab, and also intended to defend the fairway against small swift craft. The armament consisted of a battery of three 4.7" quick-firing guns mounted *en barbette*.⁴ It was not completed until 1917.

In the meantime the World War had brought about a great deal of military activity here. Mine-fields were laid down in the channel between McNab's Island and Point Pleasant; submarine nets were suspended from booms across the harbour, east and west from George's Island and from the Terminals Breakwater to Ives Point; and powerful electric search-lights swept the sea from their various locations. There were several search-lights in front of the quick-firing battery at Ives Point, two near the shore at Fort McNab, one below Connaught Battery where it had recently been moved from an earlier position at the base of the cliff at York Redoubt; for a short time there may have been a search-light at Sandwich Point.⁵

Outposts were established at various places in the surrounding country. One, consisting of about three companies, was stationed in huts just below the low-water-service dam at Chain Lake near the head of the Northwest Arm. At the southeast corner of the Prospect and St. Margaret's Bay Roads a machine gun was mounted, with shelter-trenches and barbed-wire entanglements below. Sentries were placed on the high- and low-service water mains at the head of the Arm. Another outpost of one company in huts was located at Long Lake dam, Spryfield, and detachments were posted in No. 1 Blockhouse (constructed of logs, backed with earth and stones) at the east side of the junction of the Spryfield and Herring Cove Roads, as well as in No. 2 Blockhouse on the north side of the junction of the Sambro and Spryfield Roads at Dart's. Another detachment was posted at the intake of the high-service pipe-line at Spruce Hill Lake. At Herring Cove was a post with a 1-pounder gun, and a guard was also maintained at Camperdown Signal Station, far to the south.

About 1917 there was erected on Camp Hill a large but lightly constructed hospital for casualties from overseas. Another hospital, never

1. Its construction may have been one of the conditions of the deed of transfer.

2. Named after the Duke of Connaught, brother to Edward VII, and Governor-General of Canada in 1911.

3. Patrick Hayes, a local informant, disagrees, and says positively that it was begun in the autumn of 1914. He agrees, however, that it was not finished until 1917.

4. Two of these guns were transferred from Fort Clarence (see above, page 59, note 8), and the third from George's Island.

5. Personal recollection of J. Perrin.

used as such, was erected next to Belle Vue House at the end of the war.¹ Many temporary wooden barracks suddenly sprang up on the North Commons towards the close of the war, to house troops training for overseas; they were used for a time also when the troops returned for demobilization.² They have since been removed. The YMCA erected a large temporary wooden building opposite Government House, to serve as a canteen and recreation-room for the soldiers either stationed here or passing through the city.³

Since the war military affairs have gone back to the old status quo, we have lost the greater part of the Royal Canadian Regiment, and we see evidences of deterioration in the old buildings. But the lesson of the past is still with us as we survey the Halifax Fortress. Since 1749, Halifax has never been invested or even attacked. While the city may not have the glorious associations, romantic atmosphere, and stirring traditions, so abundantly connected with venerable places like Louisbourg or Annapolis Royal, we can only be most heartily thankful for our safety. We must never forget, however, that our nearly two centuries of peace has been due in large measure to our military strength.

9 p.m., 20 December, 1928.

1. It was rented for some time by the federal Department of Public Works, and since 1929 has been used as Officers' Quarters.
2. Wellington Barracks had been rendered unsafe by the Halifax Explosion (3 December, 1917), was evacuated, and has not since been used as a military barracks.
3. During the War the Survey Division of the Department of Militia and Defence made a very careful contoured survey of the district for many miles around Halifax; the survey was subsequently published, the Halifax sheet appearing in 1918, scale 2 1/2" to the mile, with 25' contour intervals. New charts of the harbour were also prepared.

NOTE—The expansion of the military and naval establishment in Halifax during World War II was enormous, and the changes were almost kaleidoscopic in their speed. It is not the purpose of this publication to bring the account up to date, or indeed to do other than to present Mr. Piers' researches in orderly form. It may not be amiss, however, to note a few of the more prominent changes in what might be termed the miscellaneous military installations:

1. *Wellington Barracks*. Early in the war this was absorbed into *HMCS Stadacona*. Together with with Admiralty House and the new "permanent" RCN Hospital it comprised the principal establishment of the "depot ship" itself (as distinguished from *HMC Dockyard* and other organizations which were "borne additional" in *Stadacona*). On the grounds a number of new "permanent" buildings (mostly schools of one kind or another, but including also a magnificent gymnasium) were built, as well as a vast miscellany of "temporary" ones. The men's and officers' quarters of the old barracks were retained (the one as a seamen's barracks, the other as an auxiliary to "Ad" House), as were the other brick buildings. The wall also was retained.
2. *Ordnance Yard*. This also was absorbed into the naval establishment, and was allocated to the CVD (Central Victualling Depot). The wall was retained but, with one exception now (July, 1947) used as a canteen, the old buildings were demolished and replaced by a number of "temporary" structures.
3. *Artillery Park (RA Park)*. In the autumn of 1946 the old red frame buildings (presumably those noted by Mr. Piers as built during the period 1800-15), having become completely unserviceable, were demolished, to the vast improvement of the appearance of the Park.
4. *Cogswell St. Hospital*. This was finally abandoned by the military in the winter of 1946-7, and now occupied by certain of the offices of the (federal) Department of Veterans' Affairs.
5. *Camp Hill Hospital*. For over a year now a large "permanent" hospital has been building on this site, intended, it is understood, to supplement rather than to replace the "temporary" one built in 1917.

Appendix I

INSPECTIONAL REPORT, 29th MAY, 1761

[P A N S, RED:]

Halifax, Nova Scotia,

29th May, 1761.

A Report of the particulars relating to the fortifying of this Place, made according to Instructions from the Hon-ble Board of His Majestie's Ordnance dated 23rd May, 1758 and by order of His Excellency Major General Amherst dated 14th September, 1760.

By a Report made of this place dated 12th April, 1759, it appeared that all the Fortifications which had hitherto been raised (a few Batteries excepted) were of a temporary kind, and intended as a security only against the sudden Incursions of Canadians and Indians with small arms, and were then unfit even for that purpose from the decay'd condition they were in. It is unnecessary to repeat the several particulars relating to them mentioned in that report; it is sufficient to tell, that nothing remains now at Halifax, which can be consider'd as a Fortification or as any part of one, so that the Business is not (in terms of the Instructions) "to form a general design for the repairing or reforming each Fort and its Buildings" but to form Designs of a Fortification entirely new. There have as yet been no particular Directions for this purpose, and the Designs that are made, may possibly not tally with the Ends proposed, for according to the uses and services that may be expected from a Fortification, it is obvious that the Designs ought to be calculated as nearly as possible.

Halifax may be fortify'd for three different purposes. 1st.

These services may be comprehended under Designs of three different Classes; the first only to protect the Inhabitants of the Town from the sudden Incursions of Canadians & Indians, such as the original Design was, and in that Case Stockade lines with some Blockhouses properly placed with Ditches to the whole, may answer the purpose without going to more expense. The second may be a Design to secure a Post which shall prevent an Enemy from taking Possession of, or settling upon the Harbour, without bringing a considerable Armament; for this purpose a Fort capable of containing from 500 to 1500 men, such as was mentioned in the Report of 1759, might answer. The third may be a Design of more general and extensive use, that is, a Repository of Sea and Land Service Stores for a Fleet and an Army, with proper Arsenals for their preservation and a Garrison, sufficient for their Defence in time of War, from three to five thousand men, which can afford to send small Detachments to other parts of the Province or even to the Continent if occasion should require.

The First not Necessary.

The first of these Designs seems now to be no longer wanted therefore need not be spoke to.

The 2nd of a Limited use.

The second is of a limited use and will scarce answer any purpose from which considerable Advantages can be drawn; the smallness of the Garrison will not admit of its giving much assistance without tho' wanted, and the smallness of the Fort will not admit of its containing more Stores within it than will be necessary for its own Defence, and these perhaps with Difficulty.

The 3rd of an extensive use.

The third Design seems to merit our chief or perhaps our only Attention, and the next questions are, whether such a Fortification is wanted in North America? and whether Halifax is a proper place for it. As far as an Engineer may speak to the first of these, it may be answered, that one such place in North America must be of great service both in War and peace, in War as a place of Rendezvous to make up Fleets and Armies and to supply their wants occasionally without losing the time of sending to Europe, and in peace not only as a ready check to any future attempts of an Enemy, but likewise as an additional weight to keep our Dominions in proper subordination.

Halifax Proper for the 3rd.

To the other question, Whether Halifax is a proper place for a Fortification of this Importance, It is answered, that the Coast of Nova Scotia, by all accounts, affords the best or rather the only Harbours in North America fit for a numerous Fleet with water for larger ships, and is by far the most commodious coast for protecting and carrying on that fix'd object of our Attention the Cod-Fishing.

I have had a Description, which shall be annexed, of all the Harbours along the Coast from a person reputed a good Pilot who has used them for many years. It appears by his Description which is confirmed by others, that Halifax Harbour is by far the most spacious of the whole, and is in all other respects equal to the best and superior to most of them. It has no large rivers running into it and is therefore the less lyable to have Banks and shoals form'd within it, The situation of it is centrical [sic], and may have ready communication to the most fertile parts of the Province; It keeps open throughout the Winter and has a peculiar advantage in the remarkableness of its Coast, which is easier distinguish'd than any other by ships coming from sea, and this advantage is now assisted by a Light-House lately built on Sambro Island.

The Objections against Halifax

Halifax with these advantages as a Port, labours under several difficulties for being fortify'd which must be taken likewise under consideration; they are as follows.

1st. The Entrance of the Harbour is too wide to be defended from the land, so as to prevent ships from getting in.

2nd. The situation which must be chosen must occasion a great deal of extraordinary Expense, which is that of cutting down the Citadel Hill and demolishing a great part of the Town.

3rd. That situation will be attended with the Disadvantage of a hollow way or Gulley which may facilitate an Enemys approach.

4th. From the declivity of the Ground towards the Harbour, a considerable part of the Works will be liable to be enfiladed by shipping.

5th. The Dockyard lately built and at an considerable Expense cannot be surrounded by the Fortifications nor receive any Defence from them.

6th. The Expense of fortifying will be very great, as Handicrafts Labour and most sorts of Materials are at an exorbitant price.

7th. The Barrenness of the Land round the Harbour, must be a great hindrance to its supplying the Garrison, or any forces that may be assembling, with proper Refreshments.

There may be several other objections made but they are of so little consequence that they are not worth mentioning, and these perhaps may be remedy'd so as not to leave reasons sufficient for giving or laying aside so publick and so usefull an undertaking.

Objections answer'd.

The 1st objection, viz. the wideness of the Entrances, a fault more common than is generally imagined, for there are very few ports free from it even of those that are thought so, and the best method of hindering ships from getting in to a Harbour whose Entrance is not narrow enough to be shut up with Booms, is by mooring Hulks or floating Batterys carrying a good number of guns, in the Channel, and to prevent their laying before the place, the only method is by bringing a superior fire upon them, and from different points if possible, and this I think very practicable here.

The 2nd objection, viz. the Expense of cutting down the Citadel Hill and demolishing the Houses. There is no remedy to this objection, for there is no other situation upon the Harbour that is not either commanded or at too great a distance from the Water to give the anchoring Ground any defence. It must be observ'd, that not only the Houses standing in the line of the Works, but likewise all the Houses within Canon shot of them, must be demolish'd. Some of them as I am inform'd have been built at the

Proprietor's risk without any Grant and these need not be paid for, unless the Government pleases. Others which have been built by a Grant must be paid for, probably according to the Decision of Apprizers, and what the value of them may amount to, there is no judging with any Certainty. The Houses are all Wood, and many of them rotten and decay'd, consequently of little value. The Expense of removing or demolishing them will be a Trifle for such as are left by the Proprietors will be carry'd off by the Soldiery and poorer inhabitants for Firing. There must be some reasonable time given to the Proprietors of these Houses to procure other Habitations; there is room enough for them to build, and at a sufficient distance from the Works, both towards the Bason and towards Point Pleasant. The hithermost Bank of the N. W. Arm will likewise be extremely commodious for such as get their livelihood upon the Water.

All the Lands upon the Peninsula have already been given away to individuals, but all upon condition of being given back when required for His Majesty's service and receiving a reasonable allowance for the Expense of clearing the Ground. This cannot be considered as an Extraordinary Expense, because if it had not been done, it would be to do.

It may perhaps be objected that the Inhabitants if removed so far from the place will not receive proper protection from it, to which it is answer'd that the Experience of latter times has exploded the custom of fortifying places for the sake of the Inhabitants, because their Extent must generally be such, that they are scarce ever fortify'd or garrison'd in any due proportion as they ought to be, on account of their great expense, and very seldom hold out above a few days for that reason, and there are few situations so perfect as to admit of inclosing a great Extent of Ground without undergoing some capital disadvantage that may hasten the loss of the place when besieged, which would be the case here if the Works were extended beyond certain Bounds, and all that is proposed to be contain'd within this place is, such a Garrison and Arsenals as have been already mentioned, the publick officers and offices of the Government, and only as many Inhabitants as there may be room for without crouding or incommoding These, and the rest must take their chance and be contented in so good a Neighbourhood.

The 3rd Objection was that of a Hollow Way which may facilitate the approach of an Enemy. This Hollow Way is the Trough or Gulley of Fresh Water River, behind the Windmill Hill, express'd upon the Plan, it is considerably too deep to be filled up, and the properest thing to be done, is to keep as far from it as the Ground will allow. It is the less dangerous as this Hill is above 100 feet lower than some parts of our Works will be. There are likewise a few more Hollows but they are of little consequence, for they may be filled at a small Expense.

The 4th objection is that the Declivity of the Ground will make a part of the Works lyable to be enfiladed by shipping. This objection may be remedied in the usual way by Traverses, but it is more than probable, that ships cannot be very troublesome in this respect, until they have silenced our Batteries towards the Water, and when that happens there will be little more for them to do, and for that reason the anchoring Ground cannot be too well defended, nor too much fire made to bear it from the Land.

The 5th objection is that the Dock yard lately built at a great Expense, cannot come within the Works without making them too extensive and even untenable. The Ground where the Dock stands is so much seen into all round, that the power of Art cannot make it secure. These objections were made in Spring, 1759, when that work was begun, but were not regarded. After laying out so much money there, it may appear extravagant to throw that Dock aside, and go to the Expense of making another within the Works now designed or within reach of its Fire, if so, the most advisable thing that occurs is to build Magazines for the most valuable stores within the Works, and let Masts and Timber of all sorts which may be readily replaced if lost, remain in the Dock, as they now are, which may be enclosed with a Wall of Masonry in place of its present wooden Fence, to secure it from petty Incendiaries.

The 6th objection was the great Expense of Fortifying on account of the high prices of Handicrafts, Labour and most sorts of materials. This objection is not peculiar to Halifax, but must take place perhaps equally in any other Harbour upon the Coast. The value of Labour can be reduced by employing Troops, and no other way, both as Artificers and Labourers. There will be abundance of difficulty to make them do enough for their money when fixed at low wages, for notwithstanding all that officers and overseers can do, they will be so artfully lazy that with apparent diligence they will scarce do two pence worth of work in a day. This may be remedied in works that can be done by Task, but in such as cannot it must and will certainly take place less or more, let officers and overseers be ever so attentive and Judicious.

With regard to materials and transporting them, it must be expected that two or three years Experience will give more insight towards procuring of them in a cheap manner, than anything that a stranger can strike out with all the Intelligence he can pick up amongst the workmen and people of the place, whose Informations are often, if not always attended with some selfish view that conceals part of the truth, or rather whose abilities are so confined that they must be contented with doing things as they can Tho' at a Disadvantage. Therefore all that is to be done at present is to give an account of what materials can be got, from whence, and at what price, which account shall be annex'd.

The 7th and last objection was the barrenness of the Ground round Halifax to supply any considerable number of people with proper refreshments. It is agreed that this soil is the worst upon the whole coast, but it is allowed at the same time that after a few years Cultivation it will feed Cattle and yield milk and vegetables enough for any Garrison, especially during the summer which used to be the scarcest season, and what it cannot be supply'd with during the winter either within itself or from Lunenburg, it may have at reasonable rates from Boston and the Neighbouring parts of the Continent; and when there is a practicable road opened to the back part of the Country which is very fertile and now settling, I can see no danger of the Garrison's being in any sort of want of any refreshments that are necessary. It is not pretended that the soil round Halifax is fit for Corn, or ever will be, without an immense Expense, but if it had the same Ground that produced Corn [.] will in the neighbourhood of such a place as this must probably be in a few years, be converted much more advantageously to Grass and Gardens, for they can never feel a want of Corn in the neighbourhood of so many Corn Countries.

Two Methods of Fortifying Halifax

Supposing these objections answered so as to leave no doubt about fortifying Halifax with such a Fortification as has been mentioned, fit to contain a Garrison, from 3000 to 5000 men, the next thing that occurs, is the manner of doing it, which may consist of two methods. The First is in one continued Line consisting of Bastions and Curtains with as many outworks as may be judged necessary. The second is with a Citadel upon the most commanding Ground, and the remainder to be enclosed with Bastions and Curtains &c., as in the first method, or with Bastion Redoubts join'd with slight Curtains as proposed in the Report of April, 1759.

Their advantages and disadvantages

Each of these methods has its peculiar advantages and disadvantages. The advantages of the first are, that it is less expensive, and that part of it, which takes up the Ground, where the Citadel must stand in the second method, will consist of extensive works that will yield a more respectable defence towards the Country than a Citadel can. The disadvantages of the method are, that it can be capable of little or no defence untill the whole is finished, and then the Garrison must always be strong, for if it should be attacked with a weak Garrison, there is not that resource which a Citadel affords. The same advantages and disadvantages are revers'd in the second method, for the Citadel when finished will of itself be fit to make a considerable Defence and will protect the carrying on of the other Works afterwards as conveniency will permit, and in the case of leaving the place with a small Garrison upon an Emergency, the Citadel as has been observed before,

will be a great addition to their security. The Citadel has the advantage likewise of being less lyable to be surprized and of giving a good deal of Defence to the Harbour which the other method cannot. The principal disadvantage with regard to the Citadel, besides the Expense, is the small extent it must have on account of the Ground which is the defect of the Citadel proposed upon the area of the 40 ft. Line in the Report of 1759, and this cannot be remedy'd without the additional Expense of cutting the Hill a good deal lower down and destroying the two upper streets of the Town to give it a proper Esplanade.

The advantages and disadvantages of each of these methods being stated, the choice may be the more readily determined, the sum of them is, that the first method will be considerably the cheapest, and with a compleat Garrison, equally strong if not stronger than the other. The second method will yield a Defence in less time and may occasionally be trusted with a smaller Garrison, and will have a greater command of ye Harbour.

Precautions for Planning the Works

In planning the Works it must in general be observed for either method, that the Poligons going up from the water to the South end of the Hill must have their Lines of Defence ranged so as to throw off the Enfilade of Georges Island; and those going up to the North end, so as to throw off the Enfilade of the low Ground where the Dock stands, both these Enfilades will take place unless they are carefully avoided, and it is for this reason that the contour of the figure is fix'd upon in the manner laid down, keeping at the same time the command of the Ground. It must be likewise observed that the Poligons upon the Citadel Hill of the first method are kept considerably within the 40 ft. Line, to have the Ravelins the more spacious; this for a Citadel cannot be done because it will augment the fault it already has, which is that of being too small.

Precautions for the Profiles

The Profiles must vary in different parts of the Works and the Heights must be kept so as to give each part a proper command of the Ground without and no more, so that the Counterscarp shall cover the Scarp as high as possible; but if there are Casemates, this rule must be broke through, then the Ramparts must be high enough to make room for their being Bomb-proof, otherwise they will be of little use, and this is a reason why a Citadel must be very Expensive, for it must be casemated, and the Ramparts of it must consequently be raised higher than those of a Simple Line, not but Casemates will be of great use in all Fortifications, for it is a defect to want them, but Citadels in particular never ought to be without them.

The Parapet above the Cordon I think will be best of Sod, it is easiest repaired and least hurtfull in time of Service, and for the more convenient repairing of it, the sod-work may be kept three or four feet within the Cordon which will leave room for Fascine-work clear of the Masonry for a new facing.

Line to the Water

The Line towards the Water has a Ditch, counterscarp places of arms and a Glacis before it contrary to the usual method, the advantages of which are, that the place is the less liable to be insulted or surprized from the water and the Parapets are so covered with the Counterscarp that the fire of shipping can have but a small effect upon them in proportion to those that are exposed from Top to Bottom as Sea Batteries commonly are.

There are peer-heads run out for the conveniency of shipping for loading and unloading Stores and there may be a very good Carreening Wharf where ships of any Burthen may be Carreen'd.

It is allow'd that some share of the strength of a Fortification must depend upon the goodness of workmanship and materials; good workmanship may with proper care be procured anywhere, but the materials are commonly taken as the place affords them, and the best or cheapest made choice of according to the consequence of the place.

Materials for Revetments or Facings

The different materials used for the facing or Revetment of a Fortification are, Sod, Timber, Brick or Stone. The facing is that part which of all other requires most Firmness and Duration and while that stands good, any other want may be easily remedy'd. Each of these materials have their advantages and inconveniences.

Sod. Sod is chosen either for cheapness or want of other materials, but it is of short duration, especially in Countrys where the frosts are violent and of long continuance, and it is in all Countrys the most lyable to surprizes.

Timber. Timber is chosen in woody Countrys for Cheapness and Dispatch, in which respect it answers at first, but in the End, I think none lyable to greater disadvantages. When the timber rots, which commonly happens in twelve or fifteen years at farthest, the whole drops, probably about the same time, and perhaps when its services are most wanted, and the Expense of repairing it then, is to a trifle equal to the first Cost, for it cannot be done properly without taking down the whole almost as low as the foundation, so that after a period of forty or fifty years, it will probably cost more than if it had been built of the most durable materials at first, and all subsequent repairs become a dead loss. Annapolis in its

present condition is a proof of this Assertion. It may be farther observed that Timber revetments are easier demolished by Howitzers than any other, and may suffer by fire.

Sod and Timber proper for Particular Parts

Notwithstanding these objections to Sod and Timber, it is not meant that the use of them shall be entirely excluded, on the contrary, for some certain parts of the Work, they may be made use of with advantage, for Sod-work is by all means the properest in Parapets above the Cordon for the reasons mentioned on page 19th, and even that is as much as can be completed at Halifax, where most part of the Ground has been so lately cleared, that very little sod has as yet acquired a sufficient texture for purposes of that kind.

Timber may very safely be used in retaining walls within the Works and such parts of the Counterscarp as are to be raised to a small Height. Timber with dry stone must likewise be used in the Counterscarp along the water and in the Peer-heads, where its decay will be of less dangerous consequence and may be easier repaired, for it would be a very great Expense to do this work in Brick or Stone as they must be laid in Terrass.

Brickwork necessary for particular uses

Brickwork is of shorter duration than masonry and much more Expensive, it is therefore seldom used where stone can be got, but for some uses it is absolutely necessary, such as Fire-places and Partitions in Dwelling-houses, arches of Powder-Magazines, Casemates and other subteraneans that are to be used for dry stores or occasionally for lodging places.

Masonry Preferable to Other Materials

From what has been said of these Materials, it is obvious that Masonry must be recommended for the Facings of the Works, for tho' it will at first be very expensive, yet as the place is supposed to be intended for duration, it must in the End answer both for economy and service far beyond any other; it must be observ'd that from the long severe frosts of this Climate masonry is apt to suffer in a few years, unless it is properly taken care of, this is to be done by building it with as little slope as possible, and rough casting it every three or four years, especially the parts most exposed to the North and West; it has likewise been a practise, to cover it with a casing of thin boards, but the other method is probably more effectual and less expensive; a few years' experience must show which is preferable. One most necessary Precaution is, to begin and End the Works, so as to Let the Mortar dry, without letting the frost get in to it.

Everything that occurs worth observing upon this subject being now mentioned, the Description of the Harbours, and the Account of Materials promised in pages 5th and 13th, shall be inserted.

A description of the harbours upon the east coast of Nova Scotia from the Gut of Canso to the Harbour of Fourchu, showing the number of large ships that each may contain, by Thomas Fryar, Pilot.

	Large Ships
Gut of Canso,	200
Entrance easy and wide at both ends. Anchoring very good all along from ten to twenty fathoms water, but the currents are strong. Remarks, There is Plaster of Paris in the Straits of the Gut on Breton Island side.	
Canso, Milford or Chedabucto,	40
Entrance difficult. Anchoring very good in the Bay and likewise in the Harbour when well known.	
Isaac's Harbour,	7 or 8
Entrance rocky but deep, Anchoring good within.	
White-Head Harbour,	100
Entrance very rocky. Anchoring good when well known and the Harbour very well sheltered.	
Torbay,	
Open to the sea, full of shoals and rocks and very wild.	
Country Harbour,	200
Entrance rocky. Anchoring good in 10 fathoms water, but the ground is somewhat foul and must be well known; this Harbour runs a good way up the Country.	
Lipscomb Harbour,	70
Entrance a mile wide. Anchoring good in between 8 and 10 Fathoms water. Remarks. Starboard side going in, is high land, the Larboard is low land, there is none of the land cleared.	
Beaver Harbour.	
Not fit for ships to go in, but good anchoring without.	
Popes Harbour,	60
Entrance half a mile wide. Anchoring very good in between 7 & 8 fathoms water. The ground muddy. Remarks. The east side of the entrance is a high head of white rocks, the other side low Islands.	
Tangier, not fit for ships.	
Owls Head,	Do.

Large Ships

Great Jedore, for a 20 gun ship only. Remarks. Little Jedore in the neighbourhood is excellent land and was well settled.

Halifax, 400 or 500

Entrance easie when known and is half a mile wide in the narrowest part. Anchoring very good and well shelter'd. Remarks. This is reckond the best Harbour and the worst land on all the coast.

Margaret's Bay, 200

Anchoring good in 7 fathoms water and in all weathers and good holding ground. Entrance four miles wide, and bold, from side to side. Remarks. The land round is very good but none cleared. The timber is good.

Mahon Bay, Not fit for large ships.

Lunenburg or Maligash, not fit for ships above 20 guns.

La Have, 30 or 40

Entrance easie. Anchoring very good. Remarks. Good land all round.

Port Metway or Maltois, not fit for shipping. Remarks, good land round it.

Port Senior or Rossignol, not fit for shipping. Remarks, the land round it good.

Port Mutton, not fit for shipping.

Port Hebere, or **Port aux Ours**, Do.

Port Rosenway or Port Razoir, 100

Entrance very good. Anchoring very good in between 8 and 9 fathoms water. Remarks. The land round of a moderate height and very good. No settlements.

Cape Negro or Rabadousse, 100

Entrance good. Anchoring good in five fathoms water. Remarks. The best part of the Harbour is high up, the lands round are good and of a moderate height. No settlements.

Port La Tour,	}	Not fit for ships.
Cape Sable, East Passage		
West passage		
Pubnico,		
Fourchu,		

**Prices of Materials and Workmanship at Halifax in Nova Scotia
at the Beginning of the Present War**

	Halifax Currency		
	£	s.	d.
Carpenter's Materials.			
Timber.			
Fir, Pine or Spruce from 9 In. scantling and upwards per ton of 40 ft. cub.	15	0	
Ranging from 6½ to 9½ In. scantling per cd. ft. running,	15	0	
Joisting of 4 by 4½ ins. scantling per cd. ft. running,	4	6	
Clap Boards, per M	£ 3		
Boards, ft. sup. per M	1	18	0
Shingles, per M		12	0
N.B. That ton timber of fir, pine or spruce is now sold from 18 to 22s. per ton, and oak timber from 50s to £3.			
Carpenter per diem,		4	0
Do Apprentice,		2	0
Mason's or Bricklayers Materials.			
Rubble stone walling laid in mortar one ft. high and two ft. thick per rod running,	12	6	
N.B. The same quantity of work costs at present 29s.			
Laying bricks in walling per M,	1	0	0
Do in chimneys "	1	5	0
Do in funnels of two Stores per M	2	0	0
Do arches of Magazines per M	3	12	
Lathing and Plaistering with two coats per yd. sup.		2	2
Bricks standard at a wharf per M	1	16	
Do New England " " "	1	0	0
N.B. The Bricks are in general very bad, and those of New England are very short of the standard.			
Lime per Hhd. of 10 bush,	1	8	0
N.B. Lime is now above 30s per Hhd.			
Sand per "		2	6
Laths per M		8	0
Hair per Bush.		2	0

	Halifax Currency		
	£	s.	d.
Mason or Bricklayer per Diem,		5	0
Do. apprentice “		2	0
Labourer, “		2	6

Smith's Work is never below 5d per lb. for rough forged work, and is often sold for 6d. and 7d. Filed work and screw work runs from 15d. to 30d.

	H. Currency		
	£	s.	d.
Painting.			
Outside with two coats per yd. sup.	0	0	7
Inside, sizing, priming and finishing, p. yd. sup.	0	0	10
Glazing.			
Squares of 8 and 10 per sq.	0	0	4½
Setting & putty,	0	0	2½
Per single sq. Glass & setting,	0	0	10
Wateridge.			
Lighters of 18 tons per diem,	0	7	6
Do 10 Do. “	0	5	0
Stones for Masons landed at a wharf per ton,	0	2	0
Do round for filling in “ “	0	1	6

Carting.	To the Parade			Upper Street			Citadel Hill		
	£	s.	d.	£	s.	d.	£	s.	d.
Boards p. M	0	3	0	3	9		5		
Tun timber per tun,		1	8	2			2	6	
Shingles per M			4		5			7	
Clap Boards per M		1	8	2			2	6	
Load of other materials,		2		2	6		3		

N.B. The proportion of Halifax Currency to Sterling, reckoning the Dollar at 4s. 8d. is, as 15 to 14, that is £15, Halifax Currency, is equal to £14 sterling.

Upon comparing the foregoing prices with those commonly given in England, it will be found, that timber excepted, they are in general about cent per cent higher, and Lime in particular about 500 per cent. The only practicable method of reducing them, has been pointed out in page 12, viz. by employing Troops, and this is to be understood only for workmen's wages, and the materials that are to be had upon the spot or in the neighbourhood, such as timber in all its articles, stone, sand, and clay for

Bricks; but as to foreign articles that must come from Europe or the Continent, the only method for reducing them is by having them from the first hand.

Iron and Iron Work to be got from Europe

By these articles I mean Iron and Iron Work of all sorts, Tools included, Glass, Paint and Lead, and to get them at the best hand, I believe they must be got from Europe, for most of those that are to be got in this Country come from thence, and are sold at a high rate.

Lime

With regard to Lime, if it is got from the Continent, it cannot probably fall much in its price, and for this reason there ought to be no Experiment left untry'd to get it nearer at hand, & the sea Coast of the Province ought to be searched narrowly from Bay verte to Cape Sable, and if it is not to be found there, it must be got from Spanish river in the Island of Cape Breton, or from St. John's River in the Bay of Fundi, the former of which I believe is the readiest Navigation, if we keep that Country.

With regard to the Articles that are to be found at Halifax & in its neighbourhood, I shall only say a few words, as the Engineers to be employed there will probably after a short Experience, discover more than I have hitherto been able to learn.

Stone

The Stone hitherto chiefly used came from Chebucto Head, which is both slaty and metalick. There is another kind at Cape Sambro', resembling the Moor Stone in England that seems to be much better in all respects, it is very hard and must last for Ages; this makes it difficult to work; but there will be no occasion to work more of it than is necessary for the Cordon, Angles, and Gateways; the rest of the work may be done in rough Rubble of this stone for two or three feet of the outside, and of the best of the common stone for the inner side and counterforts. The common stone that seemd to me the best, is on the west side of the narrows towards the town, there is likewise a tolerable good vein that runs through Doctor Breynton's Field; there is enough of it to be found sufficiently good for the purpose, without going out of the Harbour.

If it is thought necessary to have free stone for an particular use, there is enough to be got in several parts of the Bay of Fundy and from the Island of Cape Breton, opposite to the Isle just au Corps.

Sand

There is neither Pit nor River sand at Halifax in any quantity, so that they have hitherto been obliged to use sea-sand. This is to be found

both coarse and fine, in the north east passage and in several other places. It has been proposed to gather magazines of it heap'd up in a commodious manner, so as to let it receive a year's rain and snow, to wash the salt out before it is used, which must certainly improve it, for outside Work especially. I've been informed of a small vein of sand which runs through the Governor's Garden and paddock, about three feet broad and as much in depth. This might be open'd with little trouble for the experiment's sake.

Clay

Clay for making Bricks will become a very necessary Article, and is to be found in several places, particularly Cornwallis's Island, where there were Bricks formerly made, and about Fort-Sackville. There is likewise a vein of very pure Clay found at Chester last Winter, which is said to be of a finer and better kind than is common.

Timber

The greatest part of the sizable good timber about Halifax, is now almost run out, or so far from the water that they often prefer going to Lunenburg, Chester and along that Coast to supply their Demands. Chester Timber of all sorts, is reckon'd the best in the Country. There still remains about Halifax, a good deal of Hemlock and small Timber the former of which is reckoned best for wharfing and rough Works, and the latter will be very necessary for scaffolding & other little occasional uses. It is to be observed that Timber is much more durable for being Fell'd in the Fall of the year when the sap is down, at which season there ought to be a number of men appropriated for that business.

APPENDIX II
STATE OF NOVA SCOTIA, 1775.

[*PANS*, Volume 44, document no. 76:]

No. 46

Halifax

August 19th 1775

My Lord,

As the affairs in America are become more and more interesting, I thought it my indispensable duty to inform Your Lordship of the critical situation this Colony is in at present—the Troops in Boston are confined to very narrow limits being now surrounded by the Rebels with an Army consisting by the last accounts of 19,750 men, intrenched and cannot be attacked without sustaining such losses as at present would be irretrievable. The last attack at Charlestown tho' a Victory was gained it was purchased with the loss of a Thousand of the best Troops killed and wounded, and such another Victory would put it out of the power of the King's Troops to act but on the defensive part; their cutting off all communication with the Country leaves the Troops destitute of having any supplies but from the Province of Nova Scotia, who do not abound, but a quantity has been sent, and more ready to Sail but have been prevented from Vessels fitted out in the Eastern Coasts of New England cruizing in the Bay. It seems the supply of Provisions for the Army from Nova Scotia has enraged the Americans throughout and they have marked us out as objects of their resentment. I am well informed by Captain Doddington of the *Senegal*, who was at Penobscott with four Transports taking in Wood for the supply of the Troops, and from whence he was obliged to remove to this place to complete their loading, that there were four armed vessels but they kept in Shoal Water out of his reach; he was informed by one of the Inhabitants that they had 700 men armed and prepared in that Bay, and that 900 more were assembled at Casco Bay under Colonel Prebble, and by advices since my last from Mechias it appears without doubt that they are meditating an attempt against this Province.

I take the liberty to enclose Your Lordship copy of my letters to the General and his letters to me on the subject of affairs in this Colony.

I cannot but observe to Your Lordship the great importance I conceive the preserving this Province will be to His Majesty's interests in America, the only Port where Ships can be cleaned and have a supply of Masts and other Timber, all other resource in America being entirely at an end, and where the Troops can retreat, should that happen to be the case, but is at present the only place from whence they can be supplied

with any kind of refreshments for which the Army at present suffer greatly for want of the Vessels which have been loaded these three weeks and dare not depart.

Upon all these considerations My Lord, I think it absolutely necessary that fortifications for the security of the Naval Yard, the protection of the Magazines in the Town, Cannon and other Military Stores, should be erected for I conceive that the Magazines when thus protected will be the only safe place in America for their deposit.

I think My Lord discretional orders to the Governor here, upon sudden emergencies to spend Money and to draw on the Treasury will be absolutely necessary; I cannot depend on the Militia here, but General Gage advises me to employ them. and write home about their pay; can Men be retained in the King's Service without pay? I proposed to him 12d per day while on duty to which I received no answer.

Your Lordship will also perceive the absolute necessity there is of having the Troops which are stationed here entirely under my command and the expediency of the proposal I have made of making a Regiment purely for the defence of Nova Scotia. The small number of Troops here are insignificant and disobedient of which Your Lordship will have examples in my letters to General Gage.

I must inform Your Lordship that there is not the least kind of defence about the Town, we lay open to the Country on every side, that the batteries are dismantled the Carriages of the Guns all decayed and they lying on the Ground.

As Mr. Burrow who now comes with the Despatches is comptroller of the Customs here; and under the department of the Treasury, I humbly request of Your Lordship that leave of absence may be obtained for him from the Treasury Board for such time as his residence at Home may be judged necessary.

I have &c

Signed) Frans Legge

The Right Honorable The Earl of Dartmouth

&c - &c - &c

APPENDIX III

PRIUCE EDWARD'S "TELEGRAPH SYSTEM", 1795-1802

[From Miss Margaret Ells' unpublished *History of Nova Scotia, 1782-1812*:]

A great though fleeting innovation in rapid communication was made during the 'nineties in the setting up of a system of telegraphy. Beginning in 1795 as a means of transmitting military orders between Citadel Hill, in Halifax, and the outposts, the telegraphs spread from hill to hill until by the Spring of 1800 one series of them connected the capital with Annapolis,¹ while another branched off at Cornwallis by way of Cape Chignecto, the Bay of Fundy, and Martin's Head to St. John.² When the telegraph was still limited to the area around Halifax, a number of beacons for the transmission of warnings and emergency orders was established. Details of the system are lacking; both the Lt.-Governor and Prince Edward reported that the latter was erecting beacons which Prince Edward stated extended "all along the coast" of Nova Scotia.³ Beacons could be used by night for a few simple messages, but the telegraph was probably usable only by day.

From a description of the telegraph at Prince's Lodge, near Halifax,⁴ it appears that the equipment consisted of a wooden structure about twenty feet high, supporting a flag-staff and yard-arms. On these the messages were transmitted by means of flags and balls, and received with the aid of a telescope. Since six men were required to staff a station, and the distance between stations was not greater than seventeen and sometimes as short as four miles, the expenditure in manpower in keeping up such a system, apart from other costs, made it impracticable for ordinary purposes. During a war, it was possible for the Duke of Kent to use the state of emergency as a reason for establishing such a system and manning the

1. "The Duke returned on Saturday, what he has been about so much longer than he proposed I have not heard, but I am told they have established Telegraphs all the way to Annapolis, so that there was a continual communication kept up of ordering and counter orders while he was away even to the approval of courts martial and ordering the men to be flogged. I was at the Barracks on Saturday night to pay a visit to Col. Burrows when on looking out the window I saw preparations making that I did not understand, on asking what it meant the Col. told me it was a punishment going on. Expressing my surprize at it during the Duke's absence, I was told the men were to be flogged by Telegraph. So though an hundred miles off, the Duke still was acquainted with what was going on, and giving orders the same as usual. You will have this mode of communication all the way to Fredericton very soon . . ." Captain D^l Lyman to Edward Winslow, Halifax, 3 February, 1800, in Rev. W. O. Raymond, editor, *Winslow Papers, AD 1776-1826*, St. John, NB, The Sun Printing Company, Ltd., 1901, pages 441-2.
2. Lieut. O. H. Clements to Major Murray, OC the King's NB Regiment, Sussex Vale, 31st May, 1800, reporting that telegraph buildings were under construction at Cape Chignecto, and about to be begun at Martin's Head and Sussexvale, in *Winslow Papers*, page 449. Jonas Howe ("The King's New Brunswick Regiment, 1793-1802", *Collections of the New Brunswick Historical Society*, Volume I, St. John, NB, Daily Telegraph Steam Book and Job Print, 1894, pages 20-21) states that these New Brunswick stations were manned by the New Brunswick Regiment.
3. Prince Edward to Sec'y of State, Halifax, 19 May, 1795, *Great Britain, Public Records Office, War Office Records*, W.O. 1/17, page 86; Wentworth to James King, Esq., Halifax, 29 April, 1795, *Loc. cit.*, *Colonial Office Records*, C.O. 217/36.
4. G. E. Fenerty, *Life and Times of the Hon. Joseph Howe*, St. John, NB, E. S. Carter, 1896, page 81.

posts with soldiers; when he tried to extend it beyond St. John, Gov. Carleton rejected it as too wasteful of men and money, and unsatisfactory because of fog and storms on the Fundy coast.¹ Thus, although at the turn of the century messages could travel across Nova Scotia at the rate of one hundred and forty miles an hour, this brief interlude of telegraphic communication in an ox-cart age had no lasting effect on the province.²

1. "General Carleton's Observations, Feb. 10, 1802" in *Winslow Papers*, pages 458-9.

2. "The 'Semaphore' which was one of a number placed along the road from Halifax to Annapolis was standing on Fort Hill in the year 1811": Thos. F. Draper, *Essay on the History of Hants County*, 1881, (Typescript, *PANS*), pages 38-39.

NOTE—See also Raddall, T. H., "Nova Scotia's First Telegraph System", *The Dalhousie Review*, Halifax, N. S., July, 1947, (Volume XXVII,) Number 2, pages 131-142. Mr. Raddall, the well-known Nova Scotian novelist and short story writer was, he tells us, a wireless telegraphist at Camperdown in 1922. His account has therefore the double merit of having been written from the point of view of a professional both in communierions and in history. There are also here some interesting notes on the condition of the signal stations around Halifax in the between-wars period.

Neither George III nor his government liked the way the Duke of Kent slathered money around in his fortification building. Mr. Raddall has uncovered an amusingly expressed caution delivered by the old King to his son when Edward was going out to Gibraltar in 1802: "Now, Sir, when you go to Gibraltar do not make such a trade of it as when you went to Halifax!"

APPENDIX IV

INSPECTIONAL REPORT, 1st. JULY, 1812

[Between the years 1810 and 1817, detailed inspectional reports were rendered to the Inspector General of Fortifications. Office copies of these reports are retained in two vellum bound letter books in *PANS*, numbered RE 52 and RE 53. The reports were of two types, the more detailed being rendered semi annually on the 1st days of January and July, and the less detailed one between the 1st and 5th of April. The Nova Scotian section of the Inspectional Report for 1 July 1812, *PANS*, RE 52, follows:]

Halifax Nova Scotia 1st July 1812

Report of the State and Strength of the Forts and Batteries Sea Composing the Ordnance Establishment in the Province of Nova Scotia and New Brunswick and the Islands of Cape Breton and Prince Edwards.

NOVA SCOTIA

Fort George Citadel Hill The Situation of this This Fort as Commanding the Town, Harbour and Country Adjacent is a very Eligible one, but in its present State revetted with Timber and Fascines, the former of which is quite decayed, it cannot be considered capable of making any defence.

In its Center is a Wooden Building called the Cavalier, the Top or Platform of which formerly served as a Good Battery, but is now falling to pieces.—

On the Cavalier there are

Ordnance Guns	Iron	24 Pounders	15 English	{	Mounted	5
					dismounted	10

The Carriages of the dismounted Guns have been used to replace such as had become unserviceable at the other Posts

On the Works are Mounted

Mortars.....	Brass 13 inch.....	1 French
	Iron ".....	1 English
	" 10.....	3 ditto
Guns.....	12 Pounders.....	20 ditto
Brass.....	6 ".....	1 French

Ammunition The whole of the Carriages are new prepared for each Piece of Ordnance, deposited in Travelling Magazines.

There are not any Regular Barracks in the Fort the lower part of the Cavalier being intended as such, and capable of containing 600

Men, was used as an Ordnance Store, but is now in such a Ruinous State as to render it necessary to remove the Stores and which have been placed in the Shed put up in the Royal Artillery Square.

At the end of the Building is a small Guard House in which a Serjeants Guard Mounts.

Grand Battery This Work is well situated at the Southern Extremity of the Town for the defence of the Harbour more particularly for that Branch of the Channel to the Westward of Georges Island, it has a Furnance for heating Shot.—It is necessary to remark that the Kings Lumber Yard is immediately under the Battery, and that the Work Shops and Buildings erected, with the Quantity of Lumber it at all times contains, are directly in the Line of Fire.

Ordnance There are mounted on the Works the following Ordnance
Viz

Guns	Iron	32 Pounders	.....	9	English
Howitzer	Brass	10 inch	.....	2	ditto

which with their Carriages are Serviceable. The 32 Pounders are mounted on Iron carriages.

Ammunition One Hundred Rounds of Ammunition are in Readiness for each piece of Ordnance a proportion of which is deposited in Travelling Magazines the Remainder in a Wooden Building which was formerly a Guardhouse, in the Rear of the Battery, but given up by the Contingent Branch to the Ordnance for the Purpose of a Magazine.

The Side Arms and Stores are in good order and complete—

Battery called Fort Ogilvie Is a Small Half Moon Barbet Battery with a Furnace for heating Shot well Situated on the West Side of the Harbour leading to Point Pleasant Distant from Fort Charlotte about a Mile enclosed on the Land Side with a Picket Fence, there is a Guardhouse in the Rear.

The Battery is faced with sod and in good Repair.

Ordnance In this Battery are mounted the following Ordnance
Viz

Guns	English—24 Pounders	6
------	---------------------	-------	---

which with their carriages of wood are in a good State.

The Guns are mounted on Traversing Platforms—all which are in good Order.

Ammunition One Hundred Rounds of Ammunition are prepared for each Piece of Ordnance. Forty in Travelling Magazines on the Battery and the Remainder lodged in a Magazine about 300 Yards distant in

a convenient Situation to Supply Point Pleasant the North West Arm Battery, Fort Ogilvie, and the Prince of Wales' Tower, being nearly at an equal distance from each.

This Magazine will contain 300 barrl of Powder, it is quite dry, originally built with a Dry Wall and pointed. it has bulged in many Places.

Point Pleasant Battery This Battery is well Situated on a low Point of Land, near the Waters edge with Rocks extending a Considerable distance into the Harbour in its front its Rear is enclosed with a Picket Fence.

It has a Furnace for heating Shot the object of this work is to dispute a passage up the North West Arm as well as the Entrance of the Harbour.

It is faced with Sod and in good Repair.

Ordnance In this Work as mounted the following ordnance

Guns	Iron	24 Pounds	.....	6
		12 "	.....	1

all of which are Serviceable.

Six 24 Pounds are mounted on Traversing Platforms, there are 3 more on the Battery ready for the Guns the 12 Pounder is on an Iron Carriage.

There are One Hundred Rounds of Ammunition, prepared for each Piece of Ordnance, Forty in Travelling Magazines on the Battery, the Residue in the Stone Magazine already described.—

Buildings Within this Battery is a Barrack & Guard Room, not belonging to the Ordnance capable of Containing a Captains Command. One Serjeant and six Gunners of the Royal Artillery are Stationed here in charge of the Ordnance and Stores belonging to the Batteries of Point Pleasant and N W Arm, Fort Ogilvie and Prince of Wales' Tower. The Stores are in Good Order and Complete.

North West Arm Battery This is a low Battery well situated to prevent an Enemy from passing up the *North West Arm* it is enclosed on the Land side by a Picket Fence and is about 400 Yards distant from Point Pleasant.

Ordnance It Has a Furnace for heating Shot.

On this Battery are mounted the following ordna Viz

Guns Iron 18 Pounds 3 English

which are Serviceable and are mounted on Iron Carriages which are in good Repair.

since last Report 4 Embrasures have been filled up and Traversing Platforms are ready on the Battery for 4. 24 Pounders, which will be mounted immediately. This Battery is in good Order.—

Ammunition There are One Hundred Rounds of Ammunition prepared for each piece of Ordnance part in Travelling Magazines near the Battery the Rest in a Stone Magazine before mentioned

The Side Arms & Stores &c are ready for immediate Service.

The Detachment of Artillery at Point Pleasant have likewise charge of this Post.

Buildings There is a Barrack for a Subaltern and 36 Men in the Rear of this Battery.

There is a Furnace for heating Shot.

Prince of Wales' Tower This Tower is Built on a Height it commands Fort Ogilvie, Point Pleasant and the N West Arm Batteries, also the passage of the North West Arm.

The Alterations ordered by the Honourable Board the 25 July 1810 are nearly Completed.

Two 24 Pounders on Traversing Platforms and Six 24 Pounder Carronades on Traversing Slides have been mounted on the Top of of this Tower

In Case of Attack the Guns in the Tower Point Pleasant and N W Arm Batteries and Fort Ogilvie are expected to be Manned by Volunteer Artillery, Inhabitants from the Town, and a few Royal Artillery.

Fort Charlotte Georges Island Is a Star Work having Two Strong Batteries below it, one opposite the Entrance of the Harbour mounting 20. 24 Pounder Guns, the other to the Northward, which would do great Execution to the Ships having Passed, or an Enemy attempting to Cross the Harbour from Dartmouth

The Batteries on this Island Form a Principal part of the Defences of the Harbour This Work is faced with Sod, which has given way in many Places.

In the Southern Battery are two furnaces for Heating Shot

Ordnance On these Batteries the following Ordnance is mounted

Viz

Guns	Iron	24 Pounders	30	} Mounted on Wood carriages
Carronades	.....	12	4
Howitzer Brass	.....	8 inch	2

All which are Serviceable as are their Carriages, the 24 Pounders on the Southern Battery are mounted on Traversing Platforms.

There are One Hundred Rounds of Ammunition prepared for each Piece of Ordnance, Forty of which are in Travelling Magazines the Remainder in the Grand Magazine

The Side Arms and other Stores are Complete and ready for Service. on the North part of the Island is a Magazine outside the works, used to receive the Powder belonging to the Kings Ships and Capable of holding 1200 barrels of Powder. It is built of wood, the situation a very improper one as several of the Guns point directly over it within the distance of 80 Yards.—

Buildings The Barrack within the Star Fort has been taken down this Year, and the Tower now building is six feet above the Ground.

There is a Barraek on the Island which will contain 200 Men, in which a Detachment of Royal Artillery, Consisting of an Officer, N:C: Officer and 14 Gunners, and an Officer N:C: Officer and 17 R: Military Artificers are constantly Stationed.

In Case of Attack the Guns to be manned principally by Seamen from the Kings Ships and a Portion of Royal Artillery.—

Fort Clarence This Work consists of a Redoubt a Circular Battery below and a Strong Tower within the Redoubt to defend the whole

It is well situated to prevent vessels from coming up the South East Passage and from passing up the Harbour and the Eastern Shore

The Works are of Sod and in good Repair

Guns	Iron	24 Pounders	10	wth	Wood Carriages
	"	12	.....	4	Wood—do
	Brass	6	.....	4	Wood—do
	Howitzers	8	.....	2	Serviceable

On the Tower

Carronades—Iron	32 Pounders—4	Wood Carriages
	24 " —4	" "
Howitzer—Brass	8 inch —2	" "

all which are Serviceable.

The Embrasures have been filled up and Ten 24 Pounders mounted on Traversing Platforms and a small Brick Magazine built within the Tower, since last return .—

Ammunition One Hundred Rounds of Ammunition are prepared for each piece of ordnance, Forty in Travelling Magazines on the Battery, and the Remainder in the Tower.

The Side Arms and Stores are Complete and fit for Service

In Case of Attack the Troops intended for the Defence of this Post, must be lodged in the Tower, which will contain 164 Men, in

which are placed for the defence of the Post, Two hundred Musquets a Proportion of Pistols and boarding Pikes, with 20,000 Musquet Ball Cartridges

There is a Pump of Excellent Water close to the Tower.

Buildings There is a Temporary Barrack built of wood about 150 Yards from the Fort (not belonging to the Ordnance), in which a Captains Command is Quartered.

One Subaltern one Serjeant and 14 Men of the Royal Artillery are stationed at this Post, in charge of the Ordnance and Stores.

In case of Attack the Guns to be manned principally by a Company of Volunteer Artillery formed by the Inhabitants living on that side of the Water, and a portion of Royal Artillery.

York Redoubt Is situated on Point Sandwich on a Height on the West side of the Harbour and has a Circular Tower to Protect it. The Battery is faced with Sod, and in good Repair

On it are Mounted the following ordnance Viz

Guns—Iron 24 Poundrs.....	8
3 “	1

On the Tower

Carronades—Iron 12 Poundrs.....	6
6 “	2

The Carronades are mounted on Traversing Slides, and the 24 Pounder Guns, on Traversing Platforms which are in good Order. The Ground Platforms are in a state of decay.

Ammunition There are One Hundred Rounds of Ammunition prepared for each piece of Ordnance except the 3 Pounder which has only 30 Rounds part of which are deposited in Travelling Magazines the Remainder lodged in a Subterraneous one in the Rear of the Battery.—

The Side Arms and Stores are complete and fit for Service, the Magazine incapable of containing 50 barrels of Powder, it is constructed of Stone lined with Square Timber, not Bomb proof but in Good Repair and tolerably dry—

Buildings There is a small Barrack built of Stone within the Work, with a Guard Room not belonging to the Ordnance, A Subalterns Command is Quartered here.

The Troops intended for the defence of the Post, must be lodged in the Tower which will accommodate 100 men. One Serjeant and Six Men of the Royal Artillery are Quartered here in charge of the Ordnance and Stores.—

In Case of Attack the Guns are expected to be manned principally by Inhabitants from Herring Cove some of whom have been exercised to the Great Guns

The Cove is about a Mile distant from the Post

In the Tower are placed for the defence of the Post one Hundred and Eleven Musquets and a proportion of Pistols and Boarding Pikes with 10,000 Ball Cartridges

Fort Needham On this Hill a small Redoubt was thrown up in the Year 1808 with Fraising on its Berm—

The Situation is important as Commanding the Passage of the Narrows, and covering the approach to the Dock Yard, and Merits a much more considerable Work.

Blockhouse A Blockhouse has been Constructed in Advance to Fort Needham to Secure the Battery below and oppose an Enemy in his progress towards the Edge of the Bason—

Ordnance On this Blockhouse the following ordnance are Mounted Viz

Carronades—12 Pounders—2 English
which with their Carriages &ca are Serviceable

There are Forty Rounds of Ammunition prepared for each Piece of Ordnance, Stored in a Hand Magazine inside the Blockhouse.

McAlpins On this Hill at the further Extremity of the Isthmus near Bedford Bason a Blockhouse was Erected by Order of Major General Hunter commanding in the Spring 1808.—

Ordnance There is intended for this Blockhouse the undermentioned ordnance Viz.

Carronades—12 Pounders—2 English

Artillery Park

Consists of

Medium.....	12 Pounders.....	Brass.....	4
Light.....	6 ditto.....	ditto.....	10
Light.....	3 ditto.....	ditto.....	4 N P
Heavy.....	3 ditto.....	ditto.....	4
Light.....	3 ditto.....	ditto O P.....	6
Ditto.....	5½ inch Howitzer d ^o		5

Ammunition There are attached to each of the 12 Pounders 336 Rounds of Ammunition the whole of which is packed in Shot Boxes.

For each of 5 of the Light 6 Pounders there are 400 Rounds of Ammunition (200 of which are packed in Ammunition Boxes on the

Limbers Cars &c and the Remainder in Shot Boxes, for the other 5 Light Six Pounders, there are 158 Rounds of Ammunition packed in the Ammunition Boxes on the Limbers &c The Light 3 Pounders have 110 Rounds P Gun

The Heavy 3 Pounders 120 Rounds each and the Light 3 Pounders o p 100 each. For One of the Howitzers there are 400 Rounds of Ammunition for 2 others there are 74 Rounds each, and the Remaining are intended to be Completed from the Ammunition in Depot.

There are in Depot for the General Service

4155 Rounds of 6 Pounder Ammunition

5307 Rounds of 3 Pounder Ammunition

1419 Rounds of 5½ inch Howitzer Ammunition

The Brigades have been stowed away for the Winter and taken to pieces with the Exception of the 2d Car Brigade consisting of 5 Light 6 Pounders and One Howitzer, and 10 Light 3 Pounders, the whole in Good Order and fit for Service.

Buildings in the Artillery Park Within the Square which is encompassed with a Fence 10 feet high are several Buildings belonging to the Ordnance Viz.

A Guard Room to the Right of the Entrance at the Gateway for a serjeants guard to the left of the Entrance is a Corresponding Building with Solitary Cells.

Field Officers Quarters On the Right of the Mens Barrack on the same line is a Building for the Field Officer of Artillery who Commands

Captain & Subalterns Quarters. . . . On the left of the Mens Barrack and in the same line is a Building for the residence of Two Captains and two Subalterns

A Building to contain officers Quarters and Mess Room is now Erecting.—

Mens Barracks Opposite to the Gateway are the Mens Barracks, consisting of 12 Rooms with Births [sic] in each for 16 Men, with 6 Celler Rooms which are occupied by the Married Soldiers.

In the rear of the Barrack is a Cooking House for the Detachments. In the west angle of the Square enclosed with a Fence is the Hospital Erected for the Ordnance Department it consists of 4 Wards to contain Twenty four Patients, below it is the Kitchen, Surgery and Nurse Room.

Storehouses On the East and West sides of the Square are Stores in which are Stored part of the Horse Harness belonging to the Brigades, and part of the Guns &c are lodged in them during the winter.

On the East and West sides of the Entrance are Sheds for Housing Part of the Field Artillery in Winter

Old Laboratory This Building is now used for Stores and Intrenching Tools.—

New Laboratory A New Laboratory according to the Boards order, has been Constructed: near the Laboratory stands a Stone Building Principally for extra stores, and appointments of Field Brigades.

Well In the Center of the Square is a Well with good water and a Pump in it.—

We cannot conclude this Report without remarking that the principal part of the Powder in this Place is lodged on board the Inflexible Floating Magazine and in a Slight Wooden Magazine at Fort Massey, built by order of General Ogilvie when commanding in the year 1793.

A Stone Bomb Proof Magazine on Citadel Hill is in hand.

W. D.

G. N.

Fort Anne Annapolis Royal Was built by the French near a Century ago, and appears to have been a Regular square, with four Bastions, and a Ravelin before three of its Curtains, it is now entirely in Ruins, and its original Form scarcely discernable.—

Ordnance on this Work are mounted the following ordnance Viz.

Guns....12 Pounders—Iron....4 English
all of which are Serviceable.

Ammunition There are 40 Rounds of ammunition for each Piece of Ordnance, placed in a Stone Magazine, built Bomb Proof, which is capable of holding 250 barrels of Powder, but its present situation is so near the Officers Quarters, that there is danger in consequence.

Buildings This Building belongs to the Ordnance.

In the Body of the Work on the East and South Sides there are several Wood Buildings allotted for Officers Quarters

There is a shed to hold the Field Artillery put up by the Ordnance in 1809.

On the West side are the Soldiers Barracks, containing 400 Men built on 4 Bomb Proofs.

On the outside of the Works is a small Building used as a Store, belonging to the ordnance Department.

Blockhouse Stands in the North East Bastion the Foundation was laid by the French, the lower story is applied as a guard Room, the Middle and upper stories have been built within these few years, the first is Pierced for 8 Guns but has only 6 four Pounders mounted which with their Carriages [sic]

Ammunition Ammunition and Stores are in a Serviceable State. The upper Story is Pierced for four Guns, Two Four Pounders only are Mounted.

A Corporal and 10 Men of the Royal Artillery, are Stationed here in charge of the Stores.

Field Artillery Consists of the following Viz

Guns—Brass—6 Pounders English 2

which with their Carriages and Side Arms are Complete.—

Report of the State of the Forts Batteries Ordnance, Ammunition &c composing the Ordnance Establishment in the Island of

CAPE BRETON

Coal Mines Battery at Sydney Is situated on the Spanish River three Miles below the Bar and about Nine from the Town of Sydney.

It is a Barbette Work and mounts the following ordnance Viz.

Ordnance Guns...Iron...12 Pounders 4 English

The Carriages and Traversing Platforms are serviceable and the Battery has been put in good Order since last Report.

Block House In the rear of the Battery is a Block House, with the following ordnance mounted thereon

Ordnance Guns...Iron...4 Pounders...4 English

which with their Carriages &c are in a good State and a sufficient Proportion of Ammunition in Readiness for each piece.

Field Artillery In the Island

6 Pounders...Light...2 English

which with their Carriages are Serviceable

Ammunition There is a sufficient Portion of Ammunition attached to the above Pieces of Ordnance.

Signed

Wm Dixon Major

Royal Artillery

Gusts Nicolls

Capt & Commanding R Engineer

The Rt Honble
the Principal Officers of His
Majestys Ordnance

APPENDIX V

BARRACK ACCOMODATION, 1835-36

[PANS, RE 40, pages 170-173, inclusive:]

The Commdg Royal Engineer in Nova Scotia &c to the Inspector General of Fortifications reporting the bad state of the Infantry Barracks at Halifax, and Transmitting Plans and an Estimate for building Permanent Barracks in their stead.

Halifax Nova Scotia
18th April 1835

Sir,

The old wooden buildings composing the North & South Barracks at this place, the former of which was originally constructed in 1761 and the latter in 1786 but since raised upon and altered in various ways, are now become so decayed from age and long use as with difficulty to be Kept in a fit state for occupation by Troops, and that only at very great Annual expense which must go on increasing as the buildings get older and more decayed, and therefore I consider it my duty to bring under consideration the urgent necessity of providing other Barrack accommodation for Two out of Three Regiments ordinarily in Garrison at Halifax, the Citadel not being calculated to contain more than one Regiment with a proportion of Artillery, and, with this view I beg to submit the accompanying Plans and an Estimate, amounting to £40,325, 5, 1 1/4 Stg for building a permanent Barrack for 37 Officers and 1,059 Men, upon part of the Ordnance Land near Fort Needham now rented by the Storekeeper, which Major General Sir C Campbell K. C. B. Commdg the Forces in this Province, concurs with me in considering the most eligible situation in the vicinity, the ground being nearly level, well calculated for building upon and conveniently near to and covering the Magazines, Dock Yard, and other Public Establishments, the duties of which could not easily be carried on during Winter by Troops stationed at such a distance as Point Pleasant, where it was formerly intended to erect new Barracks whenever it become necessary to replace the present ones, which are in a confined space and immediately contiguous to the Worst parts of the Town.

2. The expense of permanent Buildings with slated roofs will ultimately be more than compensated by the reduced annual expenditure for incidental repairs and the periodical painting the whole exterior of Wooden Buildings, the frequent renewal of Shingling &c and besides will give the advantage of comparative security from Fires, by which the Barracks in this Country have so often been destroyed.

3. Masonry faced with roughly wrought Granite is proposed for the Walls as being quite as cheap and far more durable than Brick Work, which is found to suffer from the effects of Weather in this country.

4. To obviate the necessity of outside steps with Porches and Sunken Areas, which are very objectionable in a climate so subject to heavy drifts of snow, with extreme and sudden changes of Weather during many months of the Year, a Colonnade of Two Stories, the upper one giving access to the Quarters on the first and second floors, is proposed for the Officers Barracks and a Piazza along the front of the Soldiers' Barrack where the Troops may parade under Shelter which is of essential importance and has never been dispensed with here.

5. No Hospital Establishment has been provided for in the Estimate, as the new General Hospital that must soon be built to replace the present one which is in a very dilapidated state, may be placed so as to be available for the Sick of the Troops occupying the principal Barracks and thereby save the expense of separate Regimental Hospitals.

6. There are no parts of the old Barracks fit to be made use of in constructing new, nor can any value be safely put upon the old materials, as it must depend upon the state they are found to be in when the Buildings are taken down and the Demand for them at the time.

I have the honor to be

&c &c &c

(Signed) Rice Jones Lt. Colonel

Commg R Engineer

Inspector Genl of Fortifications

&c - &c - &c

[Enclosure to above, *PA NS*, RE 40, page 174:]

Statement shewing the occupation and the Annual Estimated expense of repairs to the Barracks in Nova Scotia, with the authorised and actual expenditure for the same, from the Year 1825 (when the Barracks were taken into the charge of the Ordnance) until 1834.

Year	Occupied by		Amount	
	Officers	Men	Estimated	Authorised
			£ S D	£ S D
1825	87	1902	6781-0-0	5423-0-0
1826	73	1740	2551-0-0	2493-0-0
1827	87	2237	3611-0-0	2850-0-0
1828	60	1446	3643-0-0	2155-0-0
1829	46	1740	3641-0-0	2452-0-0
1830	61	2149	3923-0-0	3460-0-0
1831	57	1576	4095-0-0	3496-0-0
1832	57	1718	4489-0-0	3534-0-0
1833	49	1276	3501-0-0	2477-0-0
1834	55	1638	5510-0-0	3558-0-0
			£41745-0-0	32198-0-0 [sic]
Deduct Savings on the above				1523-0-0
				£ 30675-0-0

(Signed) Rice Jones Lt. Colonel
Commg Royal Engr

Royal Engineer Office

Halifax, N. S. 18 April, 1835.

[PA NS, RE 25, IGF Order No. 369:]

Forwarded to the Comag Rl Engineer in Nova Scotia for his information and guidance, and for his report with respect to the Barracks at Halifax and Annapolis.

By order of the Insp. Genl
Edw. Fanshawe

84 Pall Mall

1st June 1835

Recd 7 July 1835

Extract of Inspector General of Fortifications letter of 10th April 1835 to the Board.—

Nova Scotia

Before any Barracks be abandoned at Halifax I recommend a full report upon their state, and what may be looked forward to as the permanent accommodation of the Garrison when the Citadel Casemates shall be brought into occupation.

At Annapolis there is much surplus Barrack Accommodation reported "condemned" but as those are of a permanent construction I propose calling for a Report upon their state, the nature of the objections; and whether they should be disposed of. All the Barracks in this Province are upheld by Repairs provided for in the Annual Estimates.

New Brunswick

No part of the Barrack Accommodation can be dispensed with.—Its maintenance is provided for in the Annual Estimates, and next year it will be necessary to rebuild the Mess House at Fredericton which has been destroyed by Fire.

Extract of Master General & Board's order of 8th May 1835 $\frac{\text{M.G.}}{130}$
to the Inspector General.—

Nova Scotia

The Master General & Board approve of your observations on this Province, and of your calling for reports with respect to the Barracks at Halifax and Annapolis.

New Brunswick

They likewise concur in the observations offered on this Colony.—

"In conclusion I am desired to inform you, a Copy of your Report has been forwarded to the Secretary of State, with an Expression of the opinion of the Master General and Board, that it is entirely satisfactory."

[PA NS, RE 40, pages 187-189, inclusive:]

The Commandg Engineer at Nova Scotia &c to the Inspector General of Fortifications transmitting a Report of the extent & present state of the Barrack accommodation at Halifax and Annapolis.

Halifax Nova Scotia,
11 November 1835

Sir

In compliance with your order of the 1st June last No. 369 I have the honor to transmit the enclosed Report of the extent and present state of the Barrack accommodation at Halifax and Annapolis.

With respect to the Barracks at Halifax I have in my letter of the 16th April 1835 explained the necessity, which is becoming more & more urgent, for erecting permanent Barracks to contain, in addition to the Citadel Casemates, the number of Troops usually in the Garrison and so do away with the necessity of keeping up the old Buildings, comprising the North & South Barracks, which may then be abandoned. 2. At Annapolis the only accommodation for Troops is the wooden Building that formed the Officers Barracks previous to the destruction of the Soldiers Barrack by Fire in 1829. It is in tolerable repair but like all the other old wooden buildings, going to decay and will soon require to be renewed, which I would recommend to be done in a permanent manner of Stone or Brick upon a Plan similar to that proposed for a permanent Barrack at Halifax which I consider equally adapted for the other Stations in this Country. The expense of erecting a Barrack of such a construction to accommodate the Six Service companies of a Regiment of Infantry, the Force it would seem advisable particularly in case of War with the United States to have stationed at a point of such importance as regards the communication with, and the mutual Defence of the two Provinces of Nova Scotia & New Brunswick, may be estimated at about £25,000 varying of course a little according as local circumstances may affect the facilities of obtaining Workmen & Materials—

3. The Barrack accommodation at Annapolis reported “condemned” consists of a Brick Building of two Stories, raised in 1797 upon an old French Bombproof, which is unoccupied & has been left without Repair as uninhabitable since 1825. The outer Walls have bulged considerably being in some parts more than a foot out of the perpendicular, so that the Girders, Joists and Flooring have become quite detached from the Walls, which are too far decayed to admit of tying in, and the Masonry of the Bombproof is so much shaken, the Courses of the Arches being cut through for Chimney flues as not to be worth preserving and therefore I recommend the whole Building as it now stands being disposed of, to be taken down & removed by public Contract or if that cannot be effected upon reasonable terms, the Walls should be pulled down, and the Bricks cleaned & stacked ready to be made use of, whenever permanent Buildings shall be commenced, for I consider the Walls to be in danger of falling, if left much longer in a neglected state.

**Report of the extent and present state of the Barracks accommodation at Halifax and Annapolis—
Halifax, N. S., 10 November, 1835**

	When Built	Accommodation					Of What Materials Constructed	General State and Condition	
		Field Officers	Officers	Non Comd Officers Privates	Horses	Hospitals			
illery	1804 1808 & 1812	1	6	206	11	16	Wood upon rough Stone foundations and covered with Shingles	In good repair	
rs & rack	1760 & 1804 1786 &	1	2	38				do	
rack	1802 1761 & 1800	1	37	548 699				Old but in good Repair Decaying fast & only kept habitable by constant repair	
ospital	1799					120		In a state of great decay & becoming unsafe from the Frame being shaken & gradually giving way	
land	1799		6	92				Old but in good repair	
asant	1798		1	20				Decaying but in tolerable Repair	
st Arm	1798		1	20				Decayed & unworthy Repairs	
ence	1798			16					
oubt	1798		1	30				In tolerable repair	
	1814			8				do	Signal
own	1798			8				do	
	1798		1	32				do	An ou
	1797		1	80				do	ceptin

Inspector General of Fortifications
&c &c &c

Sd Rice Jones
Lt Col Comg Rl Engr.

[*PANS*, RE 25, IGF Order No. 390:]

84 Pall Mall
15 April 1836

Sir.

With reference to your report of the 18th April 1835, submitting Plans and an Estimate amounting to £40,325-5-1 1/4 for building a permanent Barrack for 37 Officers and 1059 Men upon a part of the Ordnance Land near Fort Needham, I am directed by the Inspector General to acquaint you, that the Master General and Board have in view the providing eventually for the accommodation of one Battalion only on the site proposed by you, and that "another Regiment should be stationed at Point Pleasant immediately in the rear of the Batteries and ready to support them in case of need;" and they have directed that a Plan and Estimate be forthwith prepared and transmitted for the erection of a Barrack for one Battalion accordingly at Point Pleasant, in the first instance consulting with the General Officer in Command at the Station as to the Site.

In order to provide against the necessity of a further reference for information, as to the details of the Buildings and Estimates, I am desired to request your particular attention to par: 10.11. & 27 of Sect: VIII of the Engineer Code—and that the fitting up of the Officers and Soldiers accommodation should comprise those points of construction which have been authorised for the comfort of the Troops—

I am, Sir,
your most obedient,
humble Servant,
V. G. Ellicombe

[PANS, RE 40, page 199:]

The Commanding Royal Engineer in Nova Scotia to the Inspector General of Fortifications transmitting Plans and an Estimate for erecting Barracks for a Battalion of Infantry at Point Pleasant.

Halifax Nova Scotia
9th September 1836

Sir,

In obedience to your order of the 15th April 1836—No 390. I have the honor to transmit the enclosed Estimate amounting to £33052-17-1— with Plans and Sections of Barracks for the Service Companies of a Battalion of Infantry, to be erected in rear of the Batteries at Point Pleasant, to which site the Major General Commanding sees no objection, although, he still considers the ground near Fort Needham a preferable situation, as affording greater facilities for carrying on the Garrison Duties during the severe Winter of this Climate, and avoiding the expense & inconvenience of victualing the Troops at such a distance.

I have &c

(Sd) Rice Jones

Lt. Col. Comg R Engr

Major General Sir F Mulcaster

&c &c &c

APPENDIX VI

Condensed chronology of the construction and major alteration of military installations in Halifax.

Forts on Citadel Hill:

1. 1st Citadel, September, 1749.
2. 2nd Citadel, 1761-3; enlarged and strengthened, 1774.
3. 3rd Citadel, 1795-8; torn down, 1813.
4. 4th and present Citadel, 1828-56; rearmed, 1867.

Original fortifications:

1. At Dartmouth, a blockhouse, 1750.
2. At Lawrencetown, a blockhouse, May, 1754; abandoned August, 1756.
3. At Sackville (head of Bedford Basin), a fort, September, 1749; later, a blockhouse.
4. Between the head of the Northwest Arm and the nearest point on Bedford Basin, three Peninsular Blockhouses and a road, Spring, 1751; abandoned about 1760.
5. In Halifax:
 - a. Barricade, October, 1749.
 - b. Line of palisades, 1750; torn down before 1759.
 - c. In the line of palisades:
Horseman's Fort, Cornwallis Fort, Fort Luttrell, Grenadier Fort, and the 1st Citadel.
 - d. To protect the harbour: North, Middle and South Batteries, 1755.

Green Bank Area (south end of town before Point Pleasant):

1. Barbette Battery, 3-gun, 1762; increased to 7 guns, July, 1762; to 16 guns, 1778. Called South Battery by Bastide in 1762 (not the South Battery of 1755), Maclean's or the Principal Battery by Morse in 1784, and finally the Grand Battery.
2. Fort Massey, 1776-8; enlarged, 1782.
3. Green Bank Battery, August, 1778.
4. Lumber Yard and Lime Kiln Yard, 1762 (original lumber yard on Citadel hill, 1762; soon after moved to Lime Kiln Yard, from 1778 onwards known as the Lumber Yard).

Point Pleasant Area:

1. Northwest Arm Battery, July, 1762; later known as Flagstaff Battery.
2. Point Pleasant Battery, July, 1762; later known as Fielding's Battery.

3. Black Rock Battery, August, 1778.
4. Chain Battery, August, 1778; boom across Northwest Arm: 1762, 1796.
5. Entrenchment, August, 1778.
6. Fort Ogilvie, summer, 1793; remodelled and enlarged, 1862-70.
7. Martello Tower (Prince of Wales' Tower), 1796-8; altered and repaired, 1811; "improved," 1862.
8. Cambridge Battery, 1862-62; altered, 1871-2.

Purcell's Cove Area:

1. York Redoubt, before April, 1795; entirely rebuilt 1867-9; altered, 1877; remodelled, 1888-93; QF Battery added, 1890; Martello Tower.
2. Sandwich Battery, 1892.
3. Connaught Battery, 1912-17.

McNab's Island:

1. Unfinished battery at NW end of island, July, 1762.
2. Martello Tower (Sherbrooke Tower), used also as lighthouse: built 1814, not completed until 1828.
3. Ives Point Battery, 1864-70; 1888-90; QF battery added, 1890.
4. Fort McNab, 1889-93.
5. Fort Hugonin, 1899.

George's Island:

1. First fortifications: July, 1750 to May, 1751; additions, 1774.
2. Fort Charlotte (star fort and north and south circular batteries), 1795; star fort demolished and batteries casemated, 1811; reconstructed and lower battery built, 1864-70.
3. Martello tower built in Fort Charlotte, 1811; removed, 1877.

Dartmouth Shore:

1. Eastern Battery (Fort Clarence), summer, 1754; altered to crescent and redan added, 1795; reconstructed, 1866-70; 2 Moncrieff guns added, 1880.
2. Martello Tower (Duke of Clarence's Tower), 1796-8; removed, 1889.

North end of Halifax:

1. Mauger's Blockhouse, 1762.
2. Three detached bastions and two blockhouses near Naval Yard, 1776.
3. Fort Coote (blockhouse), 1776.
4. Fort Needham, summer, 1778; again thrown up, 1807-8; blockhouse at Fort Needham, 1807-8.

5. Fort Duncan, summer, 1793; abandoned by 1808.
6. Fort McAlpine (blockhouse), 1808.
7. North Ordnance Magazine, 1863.

Barracks:

1. Red Barracks, before 1759.
2. Cornwallis Barracks, after 1759. Demolished, 1795.
3. North and South Barracks, 1795; North Barracks burned, December, 1850.
4. Artillery Barracks, 1798-1803.
5. Wellington Barracks, 1851-1860.
6. Glacis Barracks, 1867-8.
7. Pavilion Barracks, 1867-70.

Miscellaneous buildings:

1. Bellevue House, bought in 1800; burned.
2. General Hospital (ex-town house Prince Edward), 1806; burned, 1866; new General Hospital, Cogswell Street, 1867-70.
3. Garrison Chapel, 1844-6.

Communications, etc.:

1. Duncan's Cove and Sambro occupied, 1795.
2. Chain of signal stations established, 1797.
3. Telegraphic communication between forts and Citadel, 1879.
4. Submarine mine fields, 1885-9.
5. Search-lights emplaced, 1886.

APPENDIX VII **MARTELLO TOWERS AT HALIFAX, N. S.**

	Prince of Wales' Tower Point Pleasant Capt. James Straton, C.R.E. 1796-8	Duke of Clarence's Tower In Fort Clarence (Dartmouth) Capt. James Straton, C.R.E. Before Oct. 1798	Duke of York's Tower At York Redoubt Capt. James Straton, C.R.E. Before Oct. 1798	Tower at Fort Charlotte In Fort Charlotte (George's Island) Capt. Gustavus Nicolls 1812	Sherbrooke Tower Mauger's (McNab's) Col. Gustavus Nicolls April 1812 June 30 still standing during war II
sea level	1811, 1862 still standing ironstone	1812, 1863-9 1889 sandstone	1863-1877 Circa 1892 ironstone	1877 stone (unspecified)	
ground	125'	63'	190'		
use	28'	35'; by 1867, 22'	30'	30'	32'
p	71'	50'	40'-50'	45'-50'	50'
alls—at top	69'	50'			
at base	6' 3"	6'			
t	8'	6'			
bottom of ditch	6'	6'			
		Originally 42', by 1867 it was 32'			
		7'			
		8'			
galleries	4	3	2		
reys	2				
on	200 men	164 men	100 men		
s		Embrasures for guns. Narrow ditch at its base. 1863-9 upper storey removed and tower reconstructed as a barracks and magazine.	From 1797-1879 tower was used as a relay signal station between Camperdown and Citadel.	<i>en barbette</i> parapet. 4 Howitzers on the top.	Bomb Used as house containing 1 April

APPENDIX VIII

List, in chronological order and with other biographical data, of military and other persons connected with the military establishment in Halifax. [The dates in the Halifax column are only those which it has been possible to authenticate, and are not to be considered as all-inclusive.]

Authorities: (1) RE Records, *PANS*,
 (2) *Dictionary of National Biography*,
 (3) Porter, Major-General Whitworth, RE, *History of the Corps of Royal Engineers*, London and New York, Longmans, Green and Company, 1889, 2 volumes.

Engineers' titles, daily rate of pay, and their usual equivalent military rank, after 1759: Chief engineer, 27s6d, major-general; Director, 20s, lieutenant-colonel; Sub-director, 15s, major; Engineer in Ordinary, 10s, Captain; Engineer Extraordinary, 6s, Captain-Lieutenant; Sub-Engineer, 4s8d, Lieutenant; Practitioner, 3s8d, Ensign (Porter, *op. cit.*, Volume I, page 188).

Name	Period in Halifax and position held	Remarks (previous and subsequent career)
BREWSE, John	Sub-engineer and engineer, 1749-50, 1754-5, 1758, 1772-??	Began career in Navy 1745, 2nd engineer, Nfld. 1755, chief engineer, siege of Beauséjour 1757, Lieutenant 1758, Captain-lieutenant, with Bastide and MacKellar at siege of Louisbourg 1777, Lieutenant-colonel 1778, Chief engineer, Minorca 1784, Colonel, member of Committee at Tower (the principal fortification planning body of the Corps, under the Master General of Ordnance; Porter, <i>op. cit.</i> Vol. II, Part II, Chap. (V)
BULKELEY, Richard	Director and Manager of Public Works at Halifax, 1752	Appointment may have included supervision of the fortifications.

Name	Period in Halifax and position held	Remarks (previous and subsequent career)
TONGE, Winckworth (died 1792)	Ensign, 1752-92	In Warburton's Regiment 1752, engineer, Fort Lawrence 1755, sub-engineer, siege of Beauséjour Superintended fortification work throughout Nova Scotia. Became Member of Assembly and Naval Officer
BONTEIN, William	Sub-engineer, December, 1755	1758, Captain-Lieutenant, siege of Louisbourg
DIXON, Matthew	Engineer-Extraordinary December, 1755	1758, Captain, siege of Louisbourg 1784, CRE, Plymouth, England
MACKELLAR, Patrick (1717-78)	Major, chief engineer, 1760-1	1758, 2nd engineer, Louisbourg, succeeded Bastide in command at Louisbourg 1759, chief engineer at Quebec, dangerously wounded 1762, chief engineer, expedition to Martinique Chief engineer, Minorca
DEBBIEG, Hugh (1731-1810)	Captain, 1760-2 Temporary chief engineer in Bastide's absence	1758, Louisbourg 1759-60, Quebec and Montreal 1762, Newfoundland 1793, Major-General 1803, General

Name	Period in Halifax and position held	Remarks (previous and subsequent career)
BASTIDE, John Henry	Major-General and Chief Engineer in North America; Sent by Amherst, 1761-2, to superintend forti- fications at Halifax	1744, Engineer in ordi- nary and lieutenant, Sowles' Regiment, An- napolis 1745, Granted £140 by Massachusetts for ser- vices 1745, Helped in plans for capture of Louisbourg 1748, Sub-director 1756, Chief Engineer, Minorca 1757, Director, Lieut- Colonel 1758, Chief Engineer, Louisbourg, wounded 1761, Major-General 1767, Director of Corps of Royal Engineers 1770, Lieutenant-General
SCOTT, Joseph	Paymaster, 1761-3	
BEARDSLEY, Samuel	Lieutenant, Sub-engi- neer, CRE Halifax, 1762-4	
MARR, John	Lieutenant, 1762-6	1763, Sub-engineer, An- napolis
SPRY, William	Captain, 1769-1783. CRE Halifax 1775?-1783	1755, Praetitioner 1757, Ensign 1758, Lieutenant, Louis- bourg 1784, Lt-Colonel, mem- ber of Committee at Tower 1802, Major-General
MASSEY, Eyre (1719-1804)	General, Commander- in-Chief, 1776-8	Afterwards Baron Clar- ina
MCLEAN, Francis (d. Halifax, 1781)	Brigadier-General, Com- mander-in-Chief, 1778-81	

Name	Period in Halifax and position held	Remarks (previous and subsequent career)
DUNCAN, Henry	Commander, RN, Commissioner of Navy Yard, 1782-98	
MORSE, Robert (1743-1818)	Lt-Colonel, Chief Engineer in America; Halifax, 1783-4	1759, West Indies 1782, Quebec, Chief Engineer in America 1783, Lt-Colonel 1791, Gibraltar, Commanding Engineer 1802, Inspector General of Fortifications (office created 21 April, 1802) 1808, General
BLASKOWITZ, Charles	Captain, c. 1784	1765-1770's, One of Major Samuel Holland's surveyors. 1784, thirteen plans to illustrate <i>Morse</i> 1784.
BOOTH, William	Lieutenant, 1784	1789, Captain-Lieutenant, Shelburne, NS
CAMPBELL, John	Captain, 1784 CRE Halifax, 1789	
SUTHERLAND, Alexander	Captain, CRE Halifax, 1789-92.	
OGILVIE, James	Brigadier-General, Commander-in-Chief, 1789-94	
BARTLET, W.	Lieutenant, CRE Halifax, 1792-5	
EDWARD, HRH Prince	Lt-General and Commander - in - Chief, 1794-1800	1799, Duke of Kent
PREVOST, Augustus	Lieutenant, Assistant Engineer, 1795	7th Royal Fusiliers
STRATON, James	Captain, CRE Halifax, 1795-9	1790- , North America 1797, Major

Name	Period in Halifax and position held	Remarks (previous and subsequent career)
FENWICK, William	Captain, Temporary CRE Halifax, 1796-7, CRE Halifax, 1799- 1806.	1791- , North America later (after 1806), Col- onel.
BENNETT, William	Captain, 1805-1807 CRE Halifax, 1806- 1807	
MACLAUHLAN, James	Lieutenant, temporary CRE Halifax, 1807-8; temporary CRE Hali- fax, 1814.	1814, Castine 1817, Captain, CRE New Brunswick.
NICOLLS, Gustavus	Captain, CRE Halifax, 1808-14; Lt-Colonel, CRE Halifax, 1825-31	1814, Castine 1814, Canada 1850, Colonel Command- ant of Corps of Royal Engineers
TOLER, John George	Draftsman, RE Depart- ment, 1808, 1811, 1816, 1826	
STREATFIELD, C. O.	Lieutenant, Temporary CRE Halifax, 1814	
WRIGHT, George	Major, later Lt-Col., CRE Halifax, 1814-17	Hfx to Leeward Islands
GREGORY, William	Lieutenant, Temporary CRE Halifax, 1817	
WALKER, A.	Captain, Temporary, CRE Halifax, 1817-8	
ARNOLD, ¹ James Robertson	Lt-Colonel, CRE Hali- fax, 1818-25	Son of Benedict Arnold 1788, member of first class admitted to King's College, Windsor 1798, entered Army 1801, sieges of Alexandria and Cairo

1. Lorenzo Sabine, *The American Loyalists*, Boston, 1867, p. 134; A. W. H. Eaton, *The Church . . . in Nova Scotia . . .* New York, 1891, pp. 205-6; R. V. Harris, *History of Kings Col-
legiate School*, Middleton, N. S., 1938, pp. 50-1.

Name	Period in Halifax and position held	Remarks (previous and subsequent career)
		1816-18, Bermuda, severely wounded 1841, transferred from Royal Engineers 1846, Major-General
CREED, Richard	Clerk of Works, 1819-32	Builder 1806, Assistant Clerk & Overseer of Works at Faversham, Eng.
Barry, P.	Captain, Temporary CRE Halifax, 1822-3	1822, CRE New Brunswick 1824, invalided to England
GOSSIP, William	Master-smith, 1823-32	1806, taken into the Works 1812, foreman of smiths, Plymouth 1821, discharged
PIERS, Henry	Captain, Royal Staff Corps, in command, Halifax detachment, 1829-33	
BOTELER, R. (d. 1833— drowned en route to England)	Lt-Colonel, CRE Halifax, 1831-3	1807, South America 1808, Peninsula 1809, Corunna, Flushing 1811, 1st siege of Badajoz 1812, siege of San Sebastian
PEAKE, L.	Captain, Temporary CRE Halifax, 1833	
JONES, Rice	Lt-Colonel, CRE Halifax, 1833-42	Peninsula: Torres Vedras, Busaco, Ciudad Rodrigo, siege of Badajoz 1862, Colonel Commandant of Corps of Royal Engineers

Name	Period in Halifax and position held	Remarks (previous and subsequent career)
CALDER, Patrick	Lt-Colonel, CRE Hali- fax, 1842-8	Had served at Flushing
SAVAGE, Henry John	Lt-Colonel, CRE Hali- fax, 1848-54	1814, Passage of Adour
BARRY	Captain, 1852, superin- tended construction of Wellington Bar- racks	
STOTHERD Richard John	Lt-Colonel, CRE Halifax, 1854-8	1885, Director-General of Survey, later Colonel Commandant of Corps, Dover
NELSON, Richard John	Lt-Colonel, CRE Hali- fax, 1858-61	
WESTMACOTT, Spencer	Colonel, CRE Halifax, 1861-6	1837-8, Canadian Rebel- lion
BURNABY, Richard	Lt-Colonel, CRE Hali- fax, 1866-71	
ROWE, Valentine Francis (1841-??)	Lieutenant, in charge of surveys, 1868-72	1876, Captain 1877-83, instructor of military drawing, Roy- al Military Academy, Woolwich 1884, retired, Lt-Colonel
HAMILTON, Robert George	Colonel, CRE Halifax, 1871-2(?)	
MONTAGU, Horace William	Colonel, CRE Halifax, 1872-5	Had served in Crimea
LOVELL, John Williamson	Colonel, CRE Halifax, 1875-80	
HOPKINS, E.	Sergeant, surveyor, 1877-84	
MAINGUY, Frederick Beckwith	Major, CRE (ty?) Hali- fax, 1880	

Name	Period in Halifax and position held	Remarks (previous and subsequent career)
BELFIELD, Edward	Colonel, CRE Halifax, 1880-1	1850, Kaffir War 1856, Ass't Inspector of Fortifications
AKERS, Chas. Styles	Colonel, CRE Halifax, 1881-6	
O'BRIEN, E. D. C.	Lt-Colonel, CRE Hali- fax, 1886-90	
MAYCOCK, Stuart Murdo	Major, 1889-93, super- intended construction of Fort McNab	1900, Lt-Colonel
BOR, Edward John	Major, c. 1890-7, plan- ned Fort McNab, Ives Point, Sandwich	1897, Lt-Colonel
HILL, A.	Lt-Colonel, CRE Hali- fax, 1890-3	
DOPPING-HEPENSTALL, Lambert John	Captain, 1891-4	1882, Egyptian War
LEACH, Edward Pember- ton, VC, CB	Colonel, CRE Halifax, 1893-7	Service in India, Afghan- istan and the Sudan; twice wounded se- verely 1879, VC, Afghanistan 1900-5, Major-General, GOC Belfast District
WAGHORN (?), Frederick Herbert	Surveyor and Architect, Royal Engineer De- partment, 1895-1900	
WILKINSON, Charles	Lt-Colonel, CRE Hali- fax, 1897-1901	
NAISH, Theodore Edward	Captain, 1897-1904, su- perintended building of Sandwich Battery	
ENGLISH, Charles Ernest	Major, 1898-1903(?); in- stalled guns in Fort McNab; 1903, lectur- ed on gunnery	

Name	Period in Halifax and position held	Remarks (previous and subsequent career)
SEYMOUR, Lord William	Lieut-General, commander-in-chief in Canada, 1899-1900	1854, midshipman, Baltic Fleet 1882, Egyptian campaign 1902, Lieutenant of the Tower, London
BISCOE, V. R.	Colonel, Chief Staff Officer, 1898-1902, temporary commander-in-chief in Canada, 1901-2	
CONNER, William Daniel	Brevet-Colonel, CRE Halifax, 1901-5	1878-80, Afghan War
PARSONS, Sir Chas. S. B., KCMG	Major-General, Commander-in-chief in Canada, 1902-6	Had served in Zulu, Transvaal, Egyptian, and South African Wars
CARTWRIGHT, G. S.	Major, 1904-6, in command of last Imperial garrison at Halifax, 1906.	
WARD, Bernard Rowland	Major, RE, 1904-7; CRE Halifax, under Canadian control, 1906-7	1900, professor of fortification and geometrical drawing, RMA, Woolwich 1902, published <i>Notes on Fortification, with a Synoptical Chart</i>
BOWLES, Frederick William	Lt-Colonel, CRE Halifax, 1905-6	
DRURY, Charles William CB	Colonel, in command of Maritime Provinces area, 1906-10	Native of St. John, NB. Had served in Northwest Rebellion and South African War
WEATHERBEE, Paul	Lt-Colonel, commanding RCE at Halifax, 1907-10	Graduate of Royal Military College, Kingston, Ontario.
BINGAY, HB, CB	Captain, 1912(?), designed Connaught Battery	Native of Yarmouth, NS.

APPENDIX IX

Catalogue of the Royal Engineers Records Deposited in the Public Archives of Nova Scotia, Halifax, N. S.

Description	Date	Contents	References
Handwritten copy Authenticated by Col. E. C. O'Brien, C.R.E., 1891	29 May 1761	"Report of the particulars relating to the fortifying of this place. . . ."	Complete text in pages, 65-79 in
Bound volume	4 Nov. 1762-2 Jan. 1764	"Fortifications Halifax." Letters written by C.R.E., Halifax, to Gen. Sir Jeffrey Amherst, Col. Forster, Commanding H. M.'s forces in N. S., and others in Nova Scotia.	10 nn 1, 2; 13 n
Bound volume	16 October 1789-25 May 1803	"Royal Engineers Halifax." C. R. E., Halifax, to Board of Ordnance, England; some local letters to Prince Edward & others; a few copies of Board Orders.	32 n 2
Letter Book	1 June 1761- 7 May 1764	Letters etc. relating to Lands taken for H. M. Fortification Service, despatched and received by Royal Engineer Department, Halifax.	9 n 4; 10 nn 1-4
Letter Book	21 Nov. 1762-18 Jan. 1764	Letters and Orders on Fortification Service received by C. R. E., Halifax.	13 n 1
Letter Book	4 May 1789-18 Sept. 1808	Contingent letters from Officers at Halifax and outposts in other parts of the Nova Scotian command, to C.R.E., Halifax.	26 n 6
R. E. 13	13 June 1803-24 August 1857	Ordnance Letters from C. R. E., Halifax, mostly to I. G. F., England, but some to local officers.	

	Description	Date			Contents	References
4	Letter Book	13 June	1803-30 June	1806		31 n 2
5	Letter Book	22 August	1806- 4 Dec.	1817		28 n 3; 32 n nn 2-4; 34 nn 24, 4, 7; 36 nn
6	Letter Book	3 March	1818-29 Dec.	1821		
7	Letter Book	4 Jan.	1822-23 Dec.	1825		32 n 5
8	Letter Book	23 Jan.	1826-24 Feb.	1832		46 n 2, 7
9	Letter Book	19 March	1832-31 Dec.	1838		
10	Letter Book	18 Jan.	1839-17 May	1845		
11	Letter Book	16 May	1845-29 Nov.	1848		
12	Letter Book	29 Nov.	1848-25 Sept.	1854		
13	Letter Book	12 Oct.	1854-21 Oct.	1857		
to R. E. 23		4 June	1806- 4 Nov.	1858	Ordinance Letters from Board of Ord- nance, England, and some letters from various parts of the Nova Scotia com- mand (Nova Scotia, Cape Breton, New Brunswick, and Prince Edward Island) to the C. R. E. Halifax and Respective Officers, Halifax.	
14	Letter Book	4 June	1806-29 May	1814		
15	Letter Book	11 Aug.	1814- 2 March	1820		
16	Letter Book	8 Dec.	1819-14 Feb.	1824		
17	Letter Book	1 Jan.	1824- 2 May	1829		
18	Letter Book	30 April	1829- 5 Sept.	1833		
19	Letter Book	11 Sept.	1833- 4 April	1838		
20	Letter Book	20 April	1838-18 August	1843		
21	Letter Book	11 August	1843- 2 June	1847		
22	Letter Book	18 June	1847-31 August	1852		
23	Letter Book	24 August	1852- 4 Nov.	1858		

Description	Date			Contents	References
Folder	31 January	1826-22 March	1830	Numbered Orders (Nos. 1-150) from I. G. F., England, to C. R. E., Halifax, N. S.	46 n 2
Folder	24 March	1834- April	1839	Numbered Orders (Nos. 331-470) from I. G. F., England, to C. R. E., Halifax.	96-7, 100
Folder	April	1839- December	1846	Numbered Orders (Nos. 471-825) from I. G. F., England, to C. R. E., Halifax. (A few of these are missing.)	
Folder	21 April	1851-24 December	1855	Numbered Orders (Nos. 1143-1304) from I. G. F., England to C. R. E., Halifax.	
R. E. 33	13 April	1826-29 November	1855	Local Ordnance Orders despatched and received: C. R. E., Halifax, to Military Officers at Halifax and elsewhere in the Nova Scotian command; and from the latter to the C. R. E., Halifax.	45 n 2; 46 nn 1,
Letter Book	13 April	1826-31 July	1828		45 n 2; 46 nn
Letter Book	1 August	1828-21 Sept.	1832		
Letter Book	30 August	1832-31 Jan.	1839		
Letter Book	31 January	1839-21 April	1845		
Letter Book	5 May	1845-20 October	1851		
Letter Book	16 October	1851-29 November	1855		
Letter Book	8 March	1826-23 September	1831	Local Ordnance Letters despatched and received: C. R. E., Halifax to outposts in N. S. (Windsor, Annapolis, Sydney) N. B., and P. E. I.; and from outposts to C. R. E., Halifax.	

Description	Date			Contents	References
Letter Book	12 May	1842-26 July	1850	Local Ordnance Letters despatched and received: C. R. E., Halifax, to outposts in N. S., N. B., and P. E. I.; and from outposts to C. R. E., Halifax.	
Letter Book	20 May	1843-25 Sept.	1852	Local Ordnance Letters from C. R. E., Halifax, to Engineer Officer at outpost at St. John, N. B.	
Folder	January 1834- February 1844-	September 1841 October 1846		Local Ordnance Letters and other papers from Halifax, N. S., New Brunswick, and other out-stations of the Nova Scotian command to C. R. E., Halifax. (no letters for 1835)	
Folder	January 1852-	December 1855		Local Ordnance and Barrack Letters and other papers from Halifax, New Brunswick, and other out-stations of the Nova Scotian command to C. R. E., Halifax.	
R. E. 43	16 September 1825-	15 November 1856		Barrack Letters from C. R. E., Halifax, mostly to I. G. F., England, but also to Halifax officials and officers in the Nova Scotian command.	
Letter Book	16 September 1825-	25 October 1831			
Letter Book	15 November 1831-	19 November 1838			47 n 4, 5; 94-9,
Letter Book	14 January 1839-	12 December 1848			
Letter Book	22 December 1848-	17 August 1853			48 n 3; 55 n 2
Letter Book	18 August 1853-	15 November 1856		(Location unknown)	

Description		Date		Contents	References
R. E. 46	5 March	1823-29 October	1831	Barrack Letters from the Board of Ordnance and I. G. F., England, to the C. R. E., and Respective officers, Halifax. Most of the letters from the Board are directed to the I. G. F. and transmitted to the C. R. E., Halifax, for his guidance.	
	20 July	1839-19 August	1859		
Letter Book	5 March	1823-29 October	1831		
Letter Book	20 July	1839- 2 March	1847		
Letter Book	29 March	1847-19 August	1859		
R. E. 49	26 January	1828-26 October	1858	Local Barrack Letters from Halifax and other parts of the Nova Scotian command, to C. R. E. and Respective officers of the Ordnance, Halifax. There are some letters from the War Office, England.	
Letter Book	26 January	1828-24 November	1845		
Letter Book	13 December	1845- 8 December	1856		48 n 4
Letter Book	12 December	1856-26 October	1858		
Letter Book	16 February	1832-14 October	1856	Local Barrack Letters from C. R. E., Halifax, to New Brunswick and other out-stations of the Nova Scotian command.	
Letter Book	1 July	1844-27 August	1858	Local Barrack Letters from New Brunswick and other out-stations of the Nova Scotian command, to C. R. E., Halifax.	

Description	Date		Contents	References
vellum covered book, containing office copies of the reports.	January 1810-	1 January 1814	Semi-Annual Reports of the State and Strength of Forts and Batteries etc. composing the Ordnance Establishment in the Provinces of N. S. and N. B., and in the Islands of Cape Breton and Prince Edward, rendered by the Respective Officers, Halifax, to the Board of Ordnance England.	27 n 4; 28 nn 2.
vellum covered book	1 July 1814-	1 January 1817 13 August 1834	The same. Appended to the volume is a "Return of the Defences in Provinces of Nova Scotia, New Brunswick, and Prince Edward Island," made by C. R. E., Halifax, to H. M. Ordnance, England, on August 13, 1834	35 n 3; 36 nn Appendix IV
Letter Book	20 December 1825-	22 May 1843	"Citadel Correspondence." Letters and estimates from C. R. E., Halifax, to I. G. F., England, and from I. G. F. and Board of Ordnance, Pall Mall.	37 nn 1, 2; 38 nn 1, 3; 40 n 3
Loose sheets in a paper cover.		1828-1847	Statement of the Citadel Expenditure at Halifax each year, from its commencement in 1828 to the end of 1834; and annual expenditure from 1835 to 1847-8.	42 n 4, 43 n 3
Letter Book		1835-1847, 1855	Reports and Estimates of Works to be carried on at the Citadel, Halifax, with sketches of details.	41 n 2, 3; 42 n

Description	Date	Contents	References
Folder	28 June 1856- 4 Nov. 1858	Letters etc. regarding Military Lands, from various officers of the Nova Scotian command, War Department Orders, and letters from I. G. F., England, relating to lands, addressed to C. R. E., Halifax, N. S.	
	3 December 1822- circa 1848	Deeds and Warrants relating to Military Lands at Quebec, Canada. (Location unknown)	
s Vellum bound book	1778-1858	Deeds and warrants relating to military lands in the Nova Scotia Command.	15 n 4, 17 n 5,

HEADQUARTERS PAPERS

H. Q. 94	18 May	1783-23 October 1903	General Orders issued from Headquarters at Halifax, N. S.	H.Q. 3-29 n 47 n 8; H.Q.
o H. Q. 164	19 May	1810-29 January 1903	Garrison Orders issued at Halifax, N. S. Some Garrison orders for 19 May 1810 to 4 July 1811 will be found in H. Q. 8; and for 4 July 1812 to 27 February 1813 in H. Q. 11.	

BIBLIOGRAPHY

References in Text

Printed sources, official:

- [[Brymner, Douglas, Archivist, "Calendar of Nova Scotian State Papers, 1603-1801"], *Report on Canadian Archives*, 1894 (Ottawa, 1895), xxii plus 573 pages. 23 nn 1-3, 24 n 2, 25 n 3, 26 n 6, 28 n 2, 30 n 3
- Morse, Lt-Colonel [Robert], "A General Description of the Province of Nova Scotia and a Report of the Present State of Defence . . . 1783, and . . . 1784," *Report on Canadian Archives*, 1884 (Ottawa, Maclean, Roger & Co., 1885), pages xxvii-lix. 2 n 1; 8, 8 n 3; 12 nn 1, 2; 15 n 6; 16 nn 1, 3, 4; 17 n 2, 6; 18 n 6; 19 n 1; 20 nn 1, 4 5; 22 n 6; 31 n 2
Short title in text: *Morse* 1784.
- Province of Nova Scotia. Akins, T. B., editor, *Selections from the Public Documents of Nova Scotia*, (Halifax, NS, Charles Annand, 1869), ii plus 755 pages. Published under a resolution of the House of Assembly passed March 15, 1865. Short title in text: *Akins' Selected Documents*. 5 nn 1-3; 6 n 1; 11 n 4
- Province of Nova Scotia, *Acts of the General Assembly of the Province of Nova-Scotia*. 1843 (Halifax, Royal Gazette Office, nd). 46 n 8

Printed Books, Magazine Articles, etc.:

- Akins, T. B. "History of Halifax City," *Collections of the Nova Scotia Historical Society for the years 1892-94*, (Halifax, NS, Morning Herald Printing and Publishing Company, 1895), pages 1-320 inclusive. Short title in text: *Akins' Halifax*. 4 n 3, 20 n 2, 21 n 1
- Archibald, [Hon. Sir Adams G.], "Story of Deportation of Negroes from Nova Scotia to Sierra Leone," *Collections of the Nova Scotia Historical Society for the Years 1889-91*, Volume VII (Halifax, NS, Morning Herald Printing and Publishing Company, 1891), pages 129-154 inclusive. 23 n 3
- Aide-Memoire to Military Science*, London, 1853, three volumes. 18 n 4
- Borrett, William C., *More Tales Told Under the Old Town Clock*, Halifax, NS, The Imperial Publishing Co., Ltd., 1943. 31 n 1
- Eaton, A. W. H., *The Church of England in Nova Scotia and the Tory Clergy of the Revolution*, New York, Thos. Whittaker, 1891. 110 n 1
- Harris, R. V., *The History of King's Collegiate School Windsor 1788-1938*, Middleton, NS, "The Outlook," 1938. 110 n 1

References in Text

- Hewitt, H. W., "History of McNab's Island", *The Dartmouth Patriot*, Dartmouth, NS, 4 May, 1901-29 June, 1901. A copy, with MS additions, is filed under the author's name in the Collections of the Nova Scotia Historical Society, P.A.N.S. 45 n 3, 46 n 4, 53 n 5, 60 n 5
- Howe, the Hon. Joseph, *Poems and Essays*, Montreal, John Lovell, 1874. 31 n 1
- Logan, Major H., "Melville Island, The Military Prison of Halifax", *The Annual Journal of the United Services Institute*. Sixth Year, 1933 (Halifax, NS, nd), pages 12-34 inclusive. 49 n 1
- McLennan, J. S., *Louisburg From its Foundation to its Fall, 1717-1758*, London, MacMillan and Company, 1918. 1 n 2
- Murdoch, Beamish, QC, *A History of Nova Scotia*, Halifax, NS, James Barnes, 1865-1867, three volumes. Short title in text: *Murdoch*. 1 n 1, 9 n 3, 10 n 1; 11 n 4 15 nn, 1, 4; 23 n 3.
- Porter, Major-General Whitworth, RE, *History of the Corps of Royal Engineers*, London and New York, Longmans, Green and Company, 1889, two volumes, xviii plus 553 pages and xii plus 548 pages. A third volume by Colonel Sir Charles M. Watson (Chatham, Royal Engineer Institute, 1915): vii plus 409 pages. Appendix VIII
- Rowell, Hon. Newton W., "Canada and the Empire, 1844-1921", *Cambridge History of the British Empire*, Volume VI (Cambridge, University Press, 1930), pages 704-737 inclusive. 57 n 3
- Sabine, Lorenzo, *The American Loyalists*, Boston, Little, Brown and Company, 1867. 110 n 1
- Scott, J. S., "The Foundation and Structure of a Building Business", *Port and Province* (Halifax, Nova Scotia), September, 1937, pages 8-9 and 30-35. 48 n 4
- Thomas, John, "Diary of John Thomas", [a surgeon in Winslow's Expedition of 1755 against the Acadians, reprinted from *The Historical and Genealogical Register* of the New England Historic Genealogical Society in] *Report and Collections of The Nova Scotia Historical Society for the Year 1878*, Volume I (Halifax, NS, Morning Herald Office, 1879), pages 119-140 inclusive. 2 n 1

References in Text

- Winslow, John. "Diary of John Winslow . . . 1755", 5 n 5
Report and Collections of the Nova Scotia Historical Society for the year 1878, (Halifax, NS, Morning Herald Office, 1879), pages 119-140 inclusive.

Encyclopaedias:

- The Dictionary of National Biography* Appendix VIII
 Article "Guns", *The Harmsworth Encyclopaedia*, Vol- 59 n 5
 ume V (Edinburgh, Thos. Nelson, nd), pages 382-392 inclusive.
The Shorter Oxford Dictionary, Oxford, Clarendon Press, 1933, two volumes. Glossary

Newspapers:

- The Acadian Recorder*, Halifax, NS. 31 n 1, 47 n 8
The Evening Mail, later *The Halifax Mail*, Halifax, NS 60 n 2, 61 n 5
The Halifax Daily Echo, Halifax, NS 62 n 4
The Nova Scotian, Halifax, NS 47 n 8
 See also under "Hewitt", **Printed Books, etc.**

Published views:

- Hicks, Lt. Col. Edward, London, England, c. 1782. 4 n 3, 16 n 4; 17 n 6;
 Short title in text: *Hicks' Views* 1781. "North West 18 nn 5, 6;
 Aspect of the Citadel, &c., Halifax, Nova Scotia, 1781", a copy of a print in the Stokes Collection, New York, is available in *PANS*, Photograph Collection, Halifax Drawer.
 Lyttleton, Captain W. W., *View of the Conflagration at 47 n 8*
the North Barracks, 12 December, 1850, [Halifax], McAlpine Publishing Company, nd.
 Parkyns, G. J., [Views of Halifax], London, England, 4 n 3; 25 nn, 2, 4
 29 April, 1801. Short title in text: *Parkyns' Views* 1801.
 Short, R[ichard], [Six aspects of the town and harbour 4 n 3, 7 n 3, 8 n 4, 9 n 1,
 of Halifax], London, Eng., published by R. Short, 20 n 5
 1 March, 1764 (a second edition, London, 1777).
 Short title in text: *Short's Views* 1759.

Published plans:

- Hill, Lt. Col. Arthur, CRE, *Ground Plan, the Citadel 39 n 1, 43 n 1, 44 n 2*
or Fort George, Halifax; Block Plan, the Citadel or Fort George, Halifax. Two plans, each dated 19. 10.91, each to scale 40' to 1", photozincographed [unavailable in *PANS*]. Short title in text: *Hill's Citadel Plans* 1891.

References in Text

- Hopkins, Sergeant E, RE, (signed also Chas. S. Akers, 57 n 5, 59 n 1
Col. CRE, 5 June, 1886), *Co. Halifax, Nova Scotia*,
Southampton, England, Ordnance Survey Office,
1889 . . . published by the Intelligence Division,
War Office, No. 764. A copy from the second
edition, 1894-9, scale 3520' to 1'', size 24 3/4'' by
27'', Part colored, is in *PANS*, Map Collection,
Halifax No. 46.

MS Sources, Province of Nova Scotia (PANS, MS Room):

- Despatches of the Lieutenant Governor to the Secretary of
State*,
Volume 44 (1772-1775) Appendix II
Volume 50 (1792-1793) 21 n 2
Volume 51 (1793-1796) 22 n 2
- Minutes of the [Executive] Council*,
Volume 212 (1766-1783) 15 nn 2, 3
Unnumbered volume; (1826-32) 46 n 3,
(1848-51) 47 nn 1, 2
- Supreme Court of Nova Scotia, Judgement Book, 1767 to* 17 n 5
1778 A.
- Royal Nova Scotia Regiment, Monthly Return Book* 22 n 4, 29 n 2
(1 January, 1795-1 March, 1799)

Royal Engineer Records:

RE Series, *PANS*:
See Appendix IX.

RE Records unavailable in *PANS* [location unknown]:

- MS Notes from Royal Engineer Records 1803-1890*, 42 n 4; 43 nn 2, 4; 51 n 2;
12 pages. Short title in text: *MS Notes*. 53 n 7; 54 nn 1, 3; 57 n 2;
58 n 2, 3, 4; 59 nn 4, 7; 60
n 3; 61 n 5
- Inspectional Report, 1869* 51 n 2
Inspectional Report, 1886 50 n 2, 56 n 3
Statement of Property vested in the Secretary of State
for War, in the Nova Scotia Royal Engineer District,
September, 1875. Short title in text: Property
Statement, 1875. 17 n 5, 30 n 7, 36 n 2
- Abstract of Deeds of War Department Property,* 17 n 5, 30 n 8, 36 n 2
Halifax, Nova Scotia, January, 1899. Short title
in text: WD Property, 1899.

Other MS Sources:

- Ells, Margaret, *History of Nova Scotia, 1782-1812.* 29 n 3, Appendix III
Unpublished; title may be changed on publication.

References in Text

Unpublished Views:

- Binney, H. N., *A View of the Town of Halifax from the Dartmouth Shore*, 1791, Photographic copy in PANS, Photograph Collection, Halifax Drawer. Short title in text: *Binney's View* 1791. 4 n 3, 9 n 1, 16 n 4
- Tower, Point Pleasant, Halifax*, 1845, Water-colour view, Size 2" by 3", PANS, Photograph Collection, Halifax Drawer, Provincial Museum Accession No. 5054b. 51 n 2

MS Plans available in PANS, Map Collection:

Halifax (general):

5. Marr, John, Sub-Engineer and Lieut. *Plan of the Store House, Ordnance Yard, Batteries and Adjacent Wooden Buildings, at the Foot of Buckingham Street in Halifax, Nova Scotia*, 1766, Scale 50' to 1", Size 12 1/4" by 14 1/8", Colored. Short title in text: *Marr's Ordnance Yard Plan* 1766. 7 n 1, 13, 13 n 2
8. Blaskowitz, Charles, *Plan of the Peninsula upon which the Town of Halifax is situated*, 1784, Scale 400' to 1", Size 62" by 71", Colored in part. Short title in text: *Blaskowitz's Plan* 1784. 7 n 2; 11 n 2; 14 n 1; 16 n 3; 17 nn 2, 6; 18 n 6; 19 n 1; 20 nn 1, 5; 21 n 1; 22 n 1
10. Morris, C., Junr., *Plan of the North Suburbs of Halifax (commonly called German or Dutch Town) representing the Lotts as originally laid out, and such of them as are now become the King's property*, Scale 200' to 1", Size 11" by 14 1/4", Colored in part. 15 n 4
14. Collyer, Lieut G., Royl Engineer, *Plan of Ground on the Eastern Side of the Harbour of Halifax with the Traverses of the Shore to Cole Harbour and the Road from Dartmouth*, 1808, Scale 800' to 1", Size 36 7/8" by 73 1/4", Colored. 22 n 1
17. Toler, John G., Draftsman Royl Engr Department, *Plan of the Grand Battery and Ground Contiguous to the same, Lumber Yard and Wharf, Engineers Yard and Wharf, with the several buildings . . . January 1816*, Scale 30' to 1", Size 16 1/4" by 27 1/2", Colored in part. 36 n 3
23. Parsons, R. M., Lt. Rl. Engineers, *Halifax, N.S. Sketch of the Ordnance Land at the Ordnance Yard and Storekeeper's House &c., shewing the* 45 n 1

References in Text

Ordnance Boundary . . . To accompany the 9 Statements called for by Board's Order Dated 10th January 1851, June 14th, 1851, Scale 80' to 1", Size 16 3/4" by 20 3/8", Colored in part.

56. A colored tracing, made and donated to P A N S 4 n 1; 8 u 4; 9 n 2; 14 nn 1, 2
by Mr. R. J. Milgate, of Plan No. 19, [Town of Halifax], Volume "Halifax Maps", *Province of Nova Scotia, Department of Lands and Forests (Crown Lands)*, Halifax, NS, 1762, with additions variously dated 1772, 1781, or undated, Scale not given in original, Size of tracing 26 1/2" by 21". Short title in text: *Crown Lands 19, 1762.*

Halifax—Citadel (Fort George):

1. *Plan shewing the Situation of a Magazine proposed to be built on Citadel Hill, Copy of a Plan No. 4 Halifax-Nova Scotia dated 18 April 1811 and Copy of a Plan No. 4 dated 9 Nov., 1811, Scale 100' to 1", Size 26 3/8" by 35 1/8", Colored.* 34 n 4
2. Toler, John George, draftsman Royl Engr Dept, 25 n 2
Section of Fort George, Citadel Hill, Section of the Cavalier, Scale 15' to 1", Size 8" by 26", Colored in part.
See also under "Straton" in photostatic copies, below.

Halifax—Fort Clarence:

1. *Plan and section of the roof on the Tower at Fort Clarence, Engineers Office Halifax April 22nd 1823, Scale 4' to 1", Size 21 3/8" by 15 3/8", Colored in part.* 27 n 7
7. Hewett, Capt. E. O., RE, S. J. Westmacott 52 n 2
Col. C. R. E., *Revised Project for Completion of Fort Clarence. To accompany report dated 3rd Nov. 1865 and C. R. E. Memo dated Nov. 2, 1865 (No. 1546), Scale of ground plan 20' to 1", Scale of sections 1/120 and 1/240, Scale of rough sketch shewing relative position of works, 3 1/2 cables to 1", Size 28" by 48 1/4", Colored.*
13. Hewett, Capt. E. O., RE, 10th October, 1867, 53 n 1
R. Burnaby Col. C. R. E. 6 Nov. 1867, *Fort Clarence, Plan for Completion of Interior and reconstruction of the tower, Scale 20' to 1", Size 33 1/4" by 23", Colored.*

References in Text

23. *Survey of the War Department Property at Fort Clarence . . .*, Scale 40' to 1", Size 34" by 47 1/2", Colored in part. 53 n 1
- Halifax—George's Island (Fort Charlotte):
7. S. J. Westmacott Col. C. R. E., W. Innes Lt. R. E. 1st Feby 1866, R. Burnaby Lt. Col. C. R. E. 13 Feby 1867, *Halifax Harbour. Fort Charlotte. Progress Plan*, Scale 20' to 1", Size 28" by 37 1/4", Colored. 54 n 2
- See also under "Straton" in photostatic copies, below
- Halifax—McNab's Island (Mauger's Beach):
2. Wentworth, Henry, Lieut. Royal Engineers, *Sherbrooke Tower, Mauger's Beach, Halifax Harbour; as completed in 1828*, Scale 10' to 1", Size 20" by 26 3/4", Colored. 46 n 6
- Halifax—Melville Island:
1. Toler, John G., *Plan of Melville Island Situated in the North West Arm Near the Town of Halifax Nova Scotia*, 31 August, 1812, Scale 40' to 1", Size 12 7/8" by 20", Colored. 49 n 1
- Halifax—Point Pleasant:
5. Innes, Lt. W., RE, S. J. Westmacott, Col. CRE, *Contoured plan of Point Pleasant . . . To accompany C. R. E.'s Report (No. 2354) dated 17 April 1862, 18 March 1862*, Scale 80' to 1", Size 28 1/2" by 50", Colored in part. Short title in text: *Innes' Point Pleasant Plan 1862*. 50 nn 4, 5; 51 n 1,
9. *Plans of the Several Batteries at Point Pleasant*, no date given, Scale, 120' to 1", Size 20 1/4" by 28 1/2", Colored. Short title in text: *Point Pleasant Plans*, nd 21 n 4, 27 n 2, 28 n 6
- Halifax—York Redoubt:
24. *York Redoubt*, undated, Scale 13' to 1", Size 29 7/8" by 19 5/8", Colored. 22 n 3
- Bound volume, "Photostatic Copies of Nova Scotian Plans from Public Archives of Canada":
- Page 29. Straton, J. A *GENERAL PLAN of the WORKS on Citadel Hill Shewing in Yellow the Relative situation of the New Works with respect to the Old Ones which are Coloured Red*, Scale 700' to about 7 1/4', 16 n 4; 17 n 2, 23 n 1; 24 n 3, 25 n 2, 42 n 6

Size 11 1/2" by 17", uncolored, (reference: Col. Cor. N. S. Vol. 25, page 101). Short title in text: *Straton's Citadel Plan 1795*.

- Page 85. Straton, J., *PLAN of GEORGE'S ISLAND* 25 n 4
in HALIFAX HARBOUR Shewing
the New Projected Star Fort & Blockhouse,
 Scale 500' to about 5 1/4", Size 8" by 12",
 (reference: Col. Cor. N. S., Vol. 25, page
 98, enclosure in letter of 19th May, 1795,
 Prince Edward to Dundas).

Other MS Plans:

- Rowe, Lt. V., RE, 1872, Hopkins, Sergeant E., RE, 57 n 5
 1886, *Halifax and Adjoining Country*, 1886, Scale
 2" to 1 mile, *Halifax, NS, Military District No. 6,*
District Engineer's Office.
- Toler, John G(eorge), *Plan of the Peninsula and Har-* 18 n 6, 19 n 2, 22 n 1,
bour of Halifax, latitude 44° 56', Longitude 63° 23', 25 n 4, 30 n 7
drawn by John G. Toler Draftsman Royal Engineer
Department A. D. 1808, Scale 800' to 1", Public
Records of Nova Scotia, MP No. 9. Short title in
text: Toler's Plan 1808. [When the present Public
Archives Building was built in 1930, the Public
Records of Nova Scotia were transferred there.
The maps and plans were all sorted, renumbered,
and a catalogue was issued (Bulletins of the Public
Archives of Nova Scotia, Volume I, Number 3,
Halifax, 1938). The old numbers were, however,
retained, and MP No. 9 is missing].
- Public Records of Nova Scotia, MP 84 [missing].* 27 n 7
Pocket Plans of RE Dept., 1877-8, 1881 [location 54 n 4
unknown].

GLOSSARY OF MILITARY AND OTHER TERMS USED

The definitions chiefly derived from *The Shorter Oxford Dictionary*

- ballistic—a. 1775. of or pertaining to the throwing of missiles; projectile.
- banquette. 1629. A raised way running along the inside of a parapet, or bottom of a trench, on which soldiers stand to fire at the enemy.
- barbette—sb. 1772. A platform within a fortification on which guns are raised for firing over the parapet.
- barbette battery—One with guns so mounted as to fire over the parapet.
en barbette—(of guns) So mounted as to fire over the parapet.
- bastide—*F. bastide*, a small fort or a fortified house or tower.
- bastion—1598. A projecting part of a fortification, consisting of an earthwork in the form of an irregular pentagon, having its base in the main line or at an angle of the fortification. Its "flanks" are the two sides which spring from the base, and are shorter than the "faces" which meet in the frontal angle. Hence, bastioned—furnished with or defended by bastions.
- battery—1. A number of guns placed in juxtaposition for combined action.
 2. The platform or fortified work, on or within which artillery is mounted. (Sometimes including the artillery there mounted).
- bed plate—(Mech.) The foundation or support of any mechanical structure.
- bench mark—1864. A surveyor's mark, cut in rock or other durable material, to indicate the starting or other point in a line of levels for the determination of altitudes over the face of a country. It consists of a broad arrow with a horizontal bar through its apex. When below sea-level the mark is inverted.
- berm—A narrow space or ledge; *esp. in Fortif.* a space from 3 to 8 feet wide, sometimes left between the ditch and the base of the parapet.
- blockhouse—1. *orig.* a detached fort blocking a strategical point.
 2. later: An edifice constructed chiefly of timber, loopholed and embrasured for firing.
- break ground—to commence the siege of a place by opening trenches, etc.
- breastwork—A fieldwork thrown up breast-high for defence; a parapet.
- breech—That part of a cannon, or other firearm, behind the bore. 1575.
- capital—An imaginary line bisecting the salient angle of a work. 1706.
- caponier (*F. caponière*)—A covered passage across a ditch, serving to shelter communication with outworks, and affording a flanking fire to the ditch.
- carronade[f. Carron in Scotland, where first cast.] A short piece of ordnance, usually of large calibre, having a chamber for the powder like a mortar; chiefly used on shipboard.
- casemate—A vaulted chamber built in the thickness of the ramparts of a fortress, with embrasures for the defence of the place; used as a barrack, or a battery, or both. Hence: casemated provided with casemates, strongly fortified. Comb: casemate of defence; barrack casemate.
- cavalier—A work generally raised higher than the rest of the works to command all the adjacent works and the country around. 1560.
- clear—no definition available.
- contour—b. 1662. The outline of any figure, *esp.* the line separating the differently coloured parts of a design.
 v. 1871. To mark with contour lines.
- coping—sb. 1661. *Archit.* The uppermost course of masonry or brickwork in a wall, usually of a sloping form to throw off rain.

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- corbel—sb. *M E Archt.* A projection jutting out from the face of a wall to support a superincumbent weight.
- cordon—A chain of military posts. 1758.
- countermine—sb. 1648. A mine or subterranean excavation made by the defenders of a fortress, to intercept a mine made by the besiegers.
v. 1580—to make a countermine.
- counterscarp—sb. 1571. The outer wall or slope of the ditch which supports the covered way; sometimes the whole covered way within the glacis.
- counter scarp gallery—no definition available.
- couvere port—no definition available.
- cover—v. To stand in line with, from a point of sight. 1796.
- covert—a. Hidden, disguised.
- curtain—The part of the wall which connects two bastions, towers, gates etc. 1569.
- demi-lune—See half-moon.
- diverging—Proceeding in different directions from a common point, so as to become more and more widely separate.
- Doric—One of the three Greek styles of architecture, of which it is the oldest, strongest, and simplest.
- embrasure—An opening, widening from within, made in an epaulement or parapet so that a gun can be fired through it. 1702.
- enceinte—An enclosure, chiefly in *Fortif.*
- enfilade—To rake (a line of works, or troops, a road etc.) from end to end with a fire in the direction of its length. 1706.
- epaulement—A covering mass raised to protect from the fire of the enemy.
- escarp—sb. 1688. A steep bank or wall immediately in front of and below the ramparts . . . generally the inside of the ditch.
v. 1728. To form into a steep slope or escarp.
- face—(*face of a place*) the front that is comprehended between the flanked angles of two neighbouring bastions. 1489.
(*faces of a work*) those parts which form a salient angle projecting towards the country. 1676.
- fairway—1584. A navigable channel in a river, or between rocks, sandbanks, etc.
- fascine—1688. A long cylindrical faggot of brushwood or the like, firmly bound together, used in filling up ditches, constructing batteries etc. Used in plural.
- fathom—The length of the outstretched arms; hence 6 feet; now chiefly used in taking soundings.
- field-officer—1656. An officer above the rank of captain and under that of general.
- fieldwork—A temporary fortification thrown up by troops operating in the field. 1819.
- flank—*Mil.* The extreme left or right side of an army or body of men in military formation; a wing, 1548.
Fortif. Any part of a work so disposed as to defend another by a flanking fire; *esp.* the part of a bastion reaching from the curtain to the face and defending the opposite face. 1590.
- flute—*Arch.* A channel or furrow in a pillar, resembling the half of a flute split lengthwise, with the concave side outwards.
- fraise—sb. 1775. A palisade, made horizontal or slightly inclining to the horizon, placed for defence round a work near the berm.
- freestone—Any fine-grained sandstone or limestone that can be cut or sawn easily.

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- garrison**—A body of soldiers stationed in a place for its defence. Comb.: garrison-artillery, garrison-gun, etc.
- glacis**—1688. The parapet of the covered way extended in a long slope to meet the natural surface of the ground, so that every part of it shall be swept by the fire of the ramparts.
- gorge**—1669. The neck of a bastion or other outwork; the entrance from the rear to the platform or body of a work.
- gudgeon**—A pivot, usually of metal, fixed on or let into the end of a beam, spindle, axle, etc., and on which a wheel turns, a bell swings, or the like.
- half moon**—*Fortif.* Demilune 1642. An outwork resembling a bastion with a crescent shaped gorge, to protect a bastion or curtain. 1727.
- handspike**—A wooden bar, used as a lever or crow, chiefly on shipboard, and in artillery service.
- hornwork**—1641. An outwork, consisting of two demi-bastions connected by a curtain and joined to the main work by two parallel wings.
- howitzer**—1695. A short, comparatively light gun, which fires a heavy projectile at a high angle of elevation and low velocity.
- ironstone**—1522. The name given to various hard iron ores containing admixtures of silica, clay, etc.
- keep**—The innermost and strongest structure or central tower of a mediaeval castle, serving as a last defence.
- laboratory**—1716. A department of an arsenal for the manufacture and examination of ammunition and combustible stores.
- lay**—To set (a gun etc.) in the correct position for hitting a mark. 1480.
- limber**—The detachable fore part of a gun-carriage, consisting of two wheels and an axle, a pole for the horses, and a frame which holds one or two ammunition chests. 1497.
- v. mil.* to attach the limber to (a gun), to fasten together the two parts of a gun-carriage, in order to move away.
- loophole**—1591. A narrow vertical opening, usually widening inwards, cut in a wall, etc., for shooting through.
- lunette**—1704. A work larger than a redan, consisting of two faces and two flanks.
- machicolation**—1788. *Arch.* An opening between the corbels which support a projecting parapet, or in the floor of a gallery or in the roof of a portal, through which combustibles, molten lead, stones, etc., were dropped upon assailants. Also a projecting structure containing such openings.
- mete**—A boundary, limit; a boundary stone or mark; *esp.* in phr. *metes and bounds*—common in legal use. 1471.
- mine**—a receptacle filled with dynamite or the like, moored beneath, or floating on or near the surface of the water to destroy an enemy vessel.
- mortar**—originally *m-piece*: A short piece of ordnance with a large bore and with trunnions on its breech for throwing shells at high angles. 1558.
- outwork**—Any detached or advanced work forming part of the defence of a place.
- offing**—1627. The part of the visible sea distant from the shore or beyond the anchoring ground.
- palisade**—A strong pointed wooden stake of which a number are fixed deeply in the ground in a close row, as a defence. 1697.
- palladian**—a. 1731. Of, belonging to or according to the school of the Italian architect Andrea Palladio (1518-80), who imitated ancient Roman architecture without

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regard to architectural principles.

parade—sb. 1. A muster of troops for inspection or display.

2. A march or procession.

parapet—A defence of earth or stone to cover troops from the enemy's observation and fire.

park—v. 1526. To arrange compactly (artillery, wagons, etc.) in a park.

pediment—The triangular part, resembling a low gable, crowning the front of a building in the Grecian style of architecture, esp. over a portico.

portico—An ambulatory consisting of a roof supported by columns placed at regular intervals, usually attached as a porch to a building; a colonnade.

postern—a tunnel serving as a means of access to the ditch and outworks. 1704.

profile—a. A transverse vertical section of a fort. 1669.

b. The comparative thickness of an earthwork or the like. 1810.

quoin—1. An external angle of a building or wall; also one of the stones or bricks serving to form the angle; a corner stone.

2. A wedge or wedge-shaped block used variously as; ...b. Gunnery, to raise or lower or fix the breech of a gun. 1627.

racer—A rail, forming a horizontal arc, on which the carriage or traversing-platform of a gun is moved. 1861.

rampart—sb. 1583. A mound of earth raised for the defence of a place, capable of resisting cannon-shot, wide enough on the top for the passage of troops, guns, etc. and usually surmounted by a stone parapet.

ravelin—1589. An outwork consisting of two faces which form a salient angle, constructed beyond the main ditch and in front of the curtain.

recessed—Set in a niche or alcove.

redan—a simple form of field-work, having two notches which form a salient angle.

redoubt—1608. a. A small work made in a bastion or ravelin of a permanent fortification, or (detached r.) at some distance beyond the glacis, but within musket-shot from the covert-way.

b. A species of out-work or field-work, usually of a square or polygonal shape, and with little or no means of flanking defense.

re-entrant—a. and sb. 1781.

1. adj. R. angle. An angle pointing inwards.

2. sb. A re-entrant angle in a fortification. 1900.

relief—The height to which works are raised above the bottom of the ditch.

Respective Officers—"In the later years of its [i.e. the Board of Ordnance's] existence a miniature counterpart of the Board was set up in every garrison, consisting of the Commanding Officers of Artillery and Engineers, with the Storekeeper. The powers of this Committee, known by the title of the Respective Officers, were on many points very extensive. They only recognized the Board as their masters, and reported direct to that body, without any reference to their own immediate chiefs. It may well be imagined that such a system, being as it was an *imperium in imperio*, worked badly, and was the source of constant irritation. The Honourable Board were, moreover, jealous of any interference with the powers of their subordinates, and supported them most energetically whenever they came into collision with their military superiors. 'The presence in every garrison of that band of conspirators known as the Respective Officers, who represented the obstructive Board, and whose opinion carried far more weight than that of the General commanding, was enough

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to irritate that unhappy officer into detestation of the Honourable Board and all connected with it (Duncan)'. Porter, Major-General Whitworth, RE, *History of the Corps of Royal Engineers*, London and New York, Longmans, Green and Company, 1889, Volume II, page 90.

retaining-wall—A wall built to support a mass of earth or water.

revet—v. 1812. To face (an embankment or wall) with masonry or other material, *esp.* in fortification.

revetment—A retaining-wall (of masonry etc.) supporting the face of an earthen rampart or the side of a ditch.

rifle—sb. 1751. To form spiral grooves in the barrel of a gun or the bore of a cannon.

rifling—sb. the spiral grooving itself.

salient—a. and sb. *Obs.* or *arch.* 1672. Of an angle: Pointing outward, as an ordinary angle of a polygon (opp. to re-entrant); chiefly in *Fortif.*, pointing away from the centre of the fortification. So *s. point* etc. 1687.

sally port—1649. An opening in a fortified place for the passage of troops when making a sally; sometimes used for "postern."

screen—A partition of wood or stone pierced by one or more doors, dividing a room or building (e.g. a church) into two parts.

shifting-room—no definition available.

shot-furnace—no definition available.

site—v. 1598 [f. the sb. or back formation from *sited*]

1. trans. To locate, to place.

2. intrans. To be situated or placed, to lie—1630.

sited—a. 1455. Of buildings, countries, etc. Having a (certain) site or situation; situated.

star-fort—A small fort having alternate salient and re-entrant angles.

talus—The sloping side of a wall or earthwork, which gradually increases in thickness from above downwards.

tambour—A small defensive work formed of palisades or earth, usu. in the form of a redan, to defend an entrance or passage. 1834.

terreplein—(f. *terre* earth *plein* full) 1591.

1. *orig.* The talus or sloping bank of earth behind a wall or rampart; hence, the surface of a rampart behind the parapet; and strictly, the level space on which the guns are mounted, between the banquette and the inner talus.

2. The level *base* (above, on, or below the natural surface of the ground) on which a battery is placed in field fortification; sometimes, the natural surface of the ground. 1669.

torpedo-boat—1810. A vessel carrying one or more torpedoes (the original torpedo was a towed or drifting submarine mine).

trace—in *Fortif.*, the ground-plan of a work. 1774.

traverse—A barrier or barricade thrown across an approach, the line of fire, etc. as a defence; *spec.* (pl.) parapets of earth raised at intervals across the terreplein of a rampart or the covered way of a fortress, to prevent its being enfiladed. 1599.

trunnion—chiefly in *pl.* 1625. Each of a pair of opposite gudgeons on the sides of a cannon, upon which it is pivoted upon its carriage. (Disused in large modern guns.)

A LIST OF ABBREVIATIONS USED IN TEXT

CRE	-	-	Commanding Royal Engineer.
HQ	-	-	Headquarters.
IGF	-	-	Inspector General of Fortifications, 84 Pall Mall, London, England.
n	-	-	footnote number (23n4—page 23, footnote number 4).
np	-	-	no publisher's name on title page.
nd.	-	-	no date of publication given.
PANS	-	-	Public Archives of Nova Scotia, Dalhousie Uni- versity, Halifax, Nova Scotia.
QF	-	-	Quickfire.
RA.	-	-	Royal Artillery.
RE	-	-	Royal Engineers.
RMA	-	-	Royal Military Academy.
RML	-	-	Rifled muzzle loading.

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