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# GREAT WESTERN RAILROAD

OF

## CANADA.

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### REPORT OF THE DIRECTORS

FOR THE YEAR ENDING JUNE, 1853.

WITH

ENGINEER'S REPORT ATTACHED.

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LONDON:

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Report of the Directors

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WITH

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*At the Annual Meeting of Shareholders in the Great Western Railway Company, held on Monday, the 6th of June, 1853, at the Office of the Company, King Street, Hamilton, Canada, for the purpose of electing Directors for the ensuing year,—*

*The President of the Company, ROBERT WILLIAM HARRIS, Esq., having been called to the chair, after explaining the object of the Meeting, read the notice calling the same, and requested the Secretary to read the Report of the retiring Directors, together with the Report of the Chief Engineer.*

*After which the following resolutions were adopted :—*

Moved by ROBERT WILLIAM HARRIS, Esq., seconded by JAMES OSBORNE, Esq.,—

Resolved—That the Report and Accounts this day read be approved and adopted, and that the same be printed and circulated amongst the proprietors.

Moved by J. B. EWART, Esq., seconded by J. VANSITTART, Esq.,—

Resolved—That it be a recommendation to the Board to issue their Report and Accounts one week previous to the day of holding the annual meeting.

Moved by ROBERT WILLIAM HARRIS, Esq., seconded by Mr. SHERIFF THOMAS,—

Resolved—That the Directors be authorised to enter into an arrangement with the Grand Trunk Company, if satisfactory terms can be agreed upon, as indicated in the Report this day read.

Moved by ROBERT WILLIAM HARRIS, Esq., seconded by HUGH C. BAKER, Esq.,—

Resolved—That the lease of the Hamilton and Toronto Railway, to the Great Western Railway Company on the terms arranged be approved, and the Directors requested to affix the Seal of the Company to the Lease, and to take all necessary steps to carry the same into effect.

Moved by ROBERT WILLIAM HARRIS, Esq., seconded by A. KER, Esq.,—

Resolved—That the Directors be authorised to take the necessary steps for the completion of the Line from London to Sarnia, at such time, and upon such terms, as they shall consider most conducive to the interests of the Company.

Moved by HENRY MCKINSTRY, Esq., seconded by GEO. S. TIFFANY, Esq.,—

Resolved—That A. C. CAMPBELL, Esq., and HUGH C. BAKER, Esq., be appointed to take the votes of the Stockholders for the election of 11 Directors for the ensuing year.

Moved by DR. MCKELCAN, seconded by A. C. CAMPBELL, Esq.,—

Resolved—That the thanks of this Meeting be given to the President and Directors, for the manner in which they have conducted the operations of the Company.

*A Ballot having been taken, the scrutineers declared, by certificate, the following gentlemen duly elected Directors for the ensuing year :—*

Robert W. Harris, Esq. . . . .	Liverpool.	Sir Allan N. McNab. . . . .	Dundurn.
Richard Juson, Esq. . . . .	Hamilton.	H. McKinstry Esq. . . . .	Hamilton.
Erastus Corning, Esq. . . . .	Albany.	J. W. Brooks, Esq. . . . .	Detroit.
John M. Forbes, Esq. . . . .	Boston.	W. P. McLaren, Esq. . . . .	Hamilton.
Isaac Buchanan, Esq. . . . .	Hamilton.	C. J. Brydges, Esq. . . . .	Hamilton.
		George S. Tiffany, Esq.,	Hamilton.

*At a subsequent Meeting of the Directors, ROBT. WM. HARRIS, Esq., was re-elected President, and C. J. BRYDGES, Esq., Vice-President.*



## REPORT OF DIRECTORS

TO THE

### SHAREHOLDERS OF THE GREAT WESTERN RAILWAY.

THE Directors, in submitting the usual financial statement made up to the 30th April last, will, in explaining their proceedings during the past year, endeavour to place before the Stockholders the exact and real position of every matter connected with the road.

The amount expended up to the date of the last Report, in June, 1852, was .....	£383,039 8 5
From the accounts this day submitted, it will be seen that the total expenditure to the 30th of April, 1853, was .....	1,322,758 2 10
There has consequently been expended during the past twelve months.....	939,718 14 5

It will thus be seen that a very large amount of work has been performed since the last Annual Meeting, and the progress made up to this time has been such as to admit of the works being pressed forward during the present season with the greatest possible rapidity. All the large and important structures are advancing rapidly towards completion—the grading of a considerable portion of the line is in a forward state—so much so that the superstructure has been commenced at several points, and arrangements are in a forward state for vigorously carrying on this work along the whole line. By far the largest portion of the rails, which are of a very excellent description, and were purchased at a low price, before the late extraordinary advance in the price of iron, is delivered at various points on the line, and the balance is now on its way from England *via* Quebec.

The Directors therefore feel themselves justified in expressing a strong and confident belief, that by the adoption of the most energetic measures to press on the work, they will, if no unforeseen contingencies arise, be in a position to open the line from Niagara to the Detroit River by the 1st of January next.

As that period is, however, beyond the date contemplated in the Report of last year, the Directors must enter into some explanation upon this matter; but as in the question is involved that of the increased estimate of the ultimate cost of the line, which is announced in the Report from the Chief Engineer to be read to the meeting, the Directors will allude to the latter point before offering any explanation as to the difference in their views between now and last year.

It is right, in the first place, to remind the stockholders that the line was first surveyed by Mr. Stuart, who, up to the end of the month of September, 1851, remained the chief engineer of the line. Mr. Stuart rendered an estimate of the cost of the road, and made the plans upon which it was proposed to construct it. Those plans were for a single line of way throughout; and his estimates (adding the cost of providing rolling stock) amounted to about £1,326,000. In September, 1851, before the financial position of the Company admitted of the work being carried on to any considerable extent, Mr. R. G. Benedict was appointed successor to Mr. Stuart; and early in 1852 he was

instructed to press forward the work on the whole line. Mr. Benedict subsequently received instructions to make the structures as far as possible available for a double line of way; and in his report of June, 1852, he stated that he had also modified and improved many of the contemplated plans, so as to increase the stability of the road. In Mr. Benedict's report of June, 1852, which was laid before the stockholders in the same month, he informed the Board, that after making the necessary allowance for the alterations above alluded to, he had come to the conclusion, after carefully considering the estimate of his predecessor, that it would be sufficient to complete the line; and that the latter might be opened throughout by the month of August, 1853. Mr. Benedict, up to that time, had not rendered any detailed estimate of the cost of the road, made up from calculations procured by himself as to the extent of work to be done on the various sections of the line. The Directors at that time entertained the greatest confidence in Mr. Benedict, and they fully believed his statement, that after full consideration of his predecessor's estimate, he would complete the line in accordance therewith. They, however, thought it right to require Mr. Benedict to furnish them with a detailed estimate of the entire cost of the line, made up from actual measurement of the quantity of work to be performed; and the resolution calling for such detailed estimate was passed by the Board immediately after the receipt of Mr. Benedict's report, laid before the last meeting. These detailed statements were handed in by Mr. Benedict, in a report, under date of the 30th September, 1852, and the Board were exceedingly surprised to find, that in place of the figures showing that the line could be completed for Mr. Stuart's estimate, as stated by Mr. Benedict in June, 1852, the cost would exceed the original estimate by no less a sum than about £286,000 currency. This state of matters necessarily led the Directors to make the most careful investigations into the engineering department, which resulted in the resignation of Mr. Benedict; and Mr. I. T. Clark, who had been some time previously appointed as commissioner, and who had consequently, while so acting, obtained considerable knowledge of the line and works, was appointed chief engineer. Mr. Clark is, an engineer of high standing in the United States, and has had very large experience in the construction of extensive public works there; and these facts, combined with the knowledge which he had acquired of the Great Western line, rendered him the most eligible person to fill the office to which he has been appointed. He accordingly was intrusted with the charge of the whole of the works early in November last, and he has been directed carefully to examine the plans upon which the various works were being constructed, making such alterations and improvements as his experience might suggest, and also to render a detailed estimate of the entire cost of the line, made up from carefully ascertained measurements of the extent of the work to be executed. The Directors must refer the proprietors to Mr. Clark's report of the 4th inst. for full and detailed information upon these points, and also as to the contracts. From this it will be seen that the cost of the road will exceed the amended estimate of Mr. Benedict, of September, 1852, by £336,295 currency; and these, making the gross excess over his estimate of June, 1852, amount to £621,295 currency. They exceedingly regret having been made the medium of deceiving the stockholders by transmitting such loose and unreliable statements of our prospects, but they confidently believe that the extent of the deception may be measured by the ascertained extra cost and loss of time, and that you may entirely rely upon the statements and estimates of our present able and efficient chief engineer.

This officer, with the aid of our Managing Director, has arranged most important and favourable changes, both in the system upon which our contracts are based, and in the practical prosecution of the work; and although in so large an undertaking absolute certainty cannot be expected, they believe the estimates, submitted in the Engineers' Report herewith, are amply sufficient for opening the road for business at the time named.

They shall, however, be much disappointed if the operations of the road do

not develop so large a traffic, that before many years, or perhaps months, considerably more outlay will be required to accommodate it.

The Directors, in leaving this question, cannot avoid expressing their conviction that, when complete, the line will be able satisfactorily to compare with any existing works on this side of the Atlantic; and also, that it is a matter worthy of congratulation, that the whole cost of the line, including the equipment for the conduct of the traffic, will not much exceed £7,500 sterling a mile—a rate that would sound startling to those acquainted with the cost of European Railways.

Contracts have been made for the building of a number of locomotive engines, passenger and freight cars, and other vehicles needed for the operating of the road. Some of these have been already completed, others are in an advanced state of construction, and the whole will be delivered in ample time. Buildings are now being erected at Hamilton, London, and other places, for the repairs of the rolling stock; and contracts will be at once made for the erection of the necessary station-buildings. At Hamilton and London, which, from their position, must always command a very large business, and be the points where the principal workshops of the Company must be established, permanent and substantial structures have been contracted for; but at all other places unexpensive buildings will, in the first place, be erected, so that, as the amount of business becomes ascertained, the extent of accommodation may be proportionately increased.

The arrangements mentioned in the Report of June, 1852, in reference to the issue of shares in England, were fully completed; and, in the early part of the present year, a further amount of shares and bonds were offered to our own shareholders, and readily subscribed for, making the present number of shares held in England, and the amount of convertible bonds (the issue of which are authorised by distinct legislative enactment) equal to about £1,200,000 currency, the various calls upon which have been paid with the utmost regularity; and this fact, coupled with the favourable position held by our shares in the English market, sufficiently attest the confidence which capitalists there entertain of the soundness of the enterprise.

During the present Session of the Provincial Legislature, an act was obtained amending some of the provisions of the original charter, and conferring upon the Company certain necessary powers in regard to the working of the railway. The act also provides for the increase of the capital stock of the Company from £1,500,000 to £2,000,000 currency, a provision which the Directors thought it prudent to secure whilst other amendments were being obtained.

During the present Session, an application was made for a charter for a railway from Brantford to Malden, which would form an extension of the Buffalo and Brantford line through the Southern part of Western Canada. As this line, if granted, would have tended seriously to injure the prospects of a future extension of a well defined system of railways in this country, and would also have had a prejudicial effect upon the interests of this company, your Directors strenuously opposed the granting of the Bill, and they are happy in being able to report that their efforts were successful.

It appears to your Directors that the Legislature are now aroused to the fact that railway competition would inevitably produce most injurious results to this Province; and they have strong grounds for believing that such a line of policy will be adopted in future as, whilst the public interests are amply protected, will fully secure the value and stability of railway property.

The Guelph and Sarnia Line, for which an act was obtained during the last Session, has been incorporated into the Grand Trunk Prospectus lately brought forward in England; and, upon the appearance of that prospectus, the President of this Company, Mr. Peter Buchanan, Mr. Laing, M.P., and other influential shareholders, placed themselves in communication with Mr. Glynn and Mr. Baring, the representatives of the English Board of the Grand Trunk Company, and also with the Hon. John Ross, Solicitor General for Canada, who is the

President of the Trunk Company, and also understood to represent the views of the Government upon that question.

The result of this negotiation was that a memorandum of arrangement was agreed to be recommended to the respective Boards of the two Companies, by which a friendly agreement would be formed between them, preventing either from interfering or competing with the other.

Your Directors are prepared to accept the spirit of this memorandum of arrangement, as the basis of a properly considered agreement between the two Companies, with such qualifications as may prevent future misunderstandings, and they recommend that they be authorised to enter into such an agreement with the Grand Trunk Company, believing that it will tend greatly to add to the security and value of the properties of both.

The proceedings of the Grand Trunk Company rendered it exceedingly important to this Company to secure the control of the Hamilton and Toronto Railway; and accordingly it has been arranged that this Company take a lease of that line at a rent of six per cent. on its guaranteed cost, with an equal participation in all dividends paid by the Great Western Company.

Your Directors strongly recommend this lease for your adoption, believing that it will have the effect of cementing together the Great Western interests, and tend materially to maintain the whole in a profitable and independent position.

The sanction of the line from Guelph to Sarnia, led the Directors some time ago to see the necessity of placing themselves in a position to proceed with this Company's branch from London to Sarnia, which formed part of the original scheme, and which, from its position and route, cannot fail to become an exceedingly valuable portion of this Company's system, although its immediate prosecution had been delayed, as is it was necessary to concentrate every effort on the completion of the main line.

In order, therefore, to be prepared for any contingency in regard to the best mode of carrying out this object, an act was procured in the present session, authorising the construction of the line by a separate Company, with power to amalgamate with the Great Western Company, so that the line might be constructed under this or under the original powers of the Great Western, as found desirable.

The Directors have reason to believe that satisfactory arrangements can be made by this Company for the completion of the Sarnia line under the original charter. And they accordingly recommend that authority be given them to commence the construction of that line, at such time and upon such terms as may upon full consideration seem to be most conducive to the general interests of the Company.

Your Directors having now explained their proceedings during the last year, and laid before you the state of the works at the present time, cannot close their Report without briefly glancing at the prospects of the Company, and pointing out the circumstances which have occurred during the past year to place those prospects in a more favourable and encouraging light.

In the autumn of last year the Hamilton and Toronto Company was put into full and satisfactory prosecution, an English contractor, of great experience and respectability, having entered into a contract to complete the line in a most efficient and permanent manner, by the summer of 1854. From Toronto the Grand Trunk Line is chartered to Montreal, there to form a connection with railways to Quebec, and to Portland, on the Atlantic sea-board. The preliminary steps for the construction of the Grand Trunk Line are now being taken in England; and it must be evident that the construction of lines of railway of such great extent, and which join this line at Hamilton, cannot fail to add materially to the profits of this Company. The Great Western Line itself runs through the most fertile part of Canada, and the portion of it which is most rapidly extending in population and in wealth. It will draw from a large and most flourishing district a vast amount of agricultural produce to the city of Hamilton, which is a most admirably situated shipping port, placed at the very head of navigation; and from which

heavy goods, which always find water their cheapest mode of transit, will be passed to the St. Lawrence and the various ports on Lake Ontario. In addition to this, and the fact of its being a part of the Main Trunk Line through the Province, it has the advantage of forming a connection with the American States at Niagara, and again at the other end of the line, at the Western extremity of Canada. The connection thus formed by this line between two parts of the American States, is the shortest and best route that can be anywhere procured, and provides the only link wanting to complete communication with the fertile Western region by the most favourable natural route. The Niagara end of your road is the point upon which the principal lines from New York and Boston converge, those lines passing along the only valley by the aid of which a good line of railway can avoid the chain of mountains which separate the Eastern from the Western States. Lately an amalgamation of between five hundred and six hundred miles of those railways (with which this company is in friendly connection) has been effected, by which facilities for the conduct of the traffic will be materially enhanced, thus tending to increase the business which will be passed over your line of road. At the other extremity of your line the most extensive ramifications of railways are now in operation, or rapidly approaching completion; and shortly, a great part of the traffic from the fertile States of Michigan, Wisconsin, Indiana, Illinois and Ohio, including the important and rapidly rising cities of St. Louis, Chicago, Cincinnati, Milwaukee, &c. (from which there are railways to Galena and the far West) will be drawn to Detroit as a centre, and from thence passed over your road as forming the best and cheapest connection between those points and the sea-ports and marts of commerce on the Atlantic.

In brief it may be said that no line of railway on this continent is, perhaps, so favourably placed as the Great Western Railway, passing as it does through a rich and thriving province, forming a part of the great highway of travel through that country, and also forming the shortest possible connecting link between the great commercial and manufacturing districts of America, and those magnificent Western Territories into which Europe has for the last twenty years been pouring its redundant population, and which are now probably the most prosperous agricultural communities in the world.

All of which is respectfully submitted.

(Signed,)

ROBERT W. HARRIS,  
President.



## ENGINEER'S REPORT.

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### TO THE PRESIDENT AND DIRECTORS OF THE GREAT WESTERN RAILWAY COMPANY.

GENTLEMEN,—In submitting a Report of the progress of the work on the line of the Great Western Railway, since my appointment as Chief Engineer on the 9th day of November, 1852, I hope to be pardoned while indulging in a few preliminary observations, in regard to the condition and progress of the work, on the whole line of the road from Niagara Falls to Windsor, two hundred and twenty-eight miles; and the Galt Branch, extending a distance of twelve miles, from Fairchild's Creek on section 8, to the town or village of Galt.

While acting as your Commissioner, I had, during the spring and summer of 1852, visited the whole line of your road, including the Galt Branch, and bestowed a careful examination on all the prominent structures, as well as into the nature and character of the material encountered by the contractors in the progress of their work.

From a pretty large experience, both professionally and as a contractor on public works, I had supposed myself familiar with many hard and difficult points of execution; but I am fully satisfied that, with the exception of rock excavation, more difficult obstacles, and inveterate and extended in their character, are seldom found, even on as extended lines as the Great Western, than are encountered between Niagara Falls and Windsor.

But very small and detached portions of the grading, on any part of the line, had been completed by the close of the year 1852, although the whole line of the road was under contract; and the contractors, as appears by the Report of my predecessor, had been notified to commence their work as early as February, 1852; and the work of construction was "being vigorously carried on, on every section of the line from Niagara to the Detroit rivers." But, unfortunately, no very considerable portion of the grading on any part of the line was in readiness to receive the superstructure at the close of 1852. It was not until about the 1st of last month that we commenced laying down the permanent superstructure of the road, at two points on the central and western divisions.

Unfortunately, the glowing anticipations and confident expectations of the late chief engineer were not realised, and the shareholders and the public have been doomed to encounter a most grievous disappointment.

The light grading upon the Eastern division from Hamilton to the Twenty Mile Creek, according to the last annual report of my predecessor, was to have been ready for the superstructure by the first day of October last; but some time must yet elapse before that portion of the line will be fully prepared for the rails. Had this grading been finished even in November last, the advantages would have been essentially useful.

This would have given time for the banks to settle, and allowed us to lay down the superstructure early in the spring, and thus have afforded a cheap and easy transfer of iron and other materials, as well as facilities for ballasting the road bed.

In consequence of the change in the character and style of the work from that contemplated in the contracts on many parts of the line, the prices to be paid for masonry and some other structures were to be fixed by the chief engineer; or that officer, by the terms of the contract, was to decide upon the prices to be paid for work and materials. This feature was deemed so objectionable, that early efforts were commenced by the undersigned to bring about an adjustment whereby a price for all work of this kind should be fixed by agreement between the Company and the contractors.

The classification of the materials excavated, embracing several items as specified in the contract, presented another serious difficulty, developing itself as the work progressed, and producing complaints on the part of contractors of wrong or mistaken classification and estimates of quantities. All our experience in the construction of canals and railways on this continent, has shown the improvidence of these classifications, and with the assent of our most experienced and ablest civil engineers, as well as contractors, these classifications have been abandoned, except in special cases where the destructive character of the material to be excavated and moved was so marked and defined as to leave no doubt whatever of what was intended by the parties.

The New York and Erie Railroad in the State of New York, however, is an exception; on that road an assortment of classifications were in use; and for the obvious reason that contractors had much to do in making their own terms, receiving but little cash in payment, but taking largely of stock and bonds in payment for work performed. The result is an immense capital stock, with a fair prospect of a rapid increase.

I am happy to inform you that by amicable arrangements, made by the Managing Director between the Company and the Contractors on the entire Eastern Division, and a portion of the Central and Western Divisions, the prices to be paid for masonry have been established, and the classification so reduced and arranged as, on the completion of the contracts, the work can be measured up and quantities ascertained with so much certainty as to leave no reasonable grounds of complaint in any quarter, and thus avoiding vexatious, expensive, and interminable litigations, paralyzing to the energies of the Company, and deeply injurious to the best interests of the shareholders.

Although I did not fully concur in all the details of these arrangements, I am fully of opinion they will prove as a whole highly advantageous to the Company.

The late period in 1852 at which I assumed the duties of Chief Engineer left but little time hitherto, except during those seasons of the year unfavourable to operations of this kind, to press forward the work on the line with as much energy and expedition as was desirable.

Some difficulties have existed during the past fall and winter with some of the Contractors on the Western Division of the road; but these have been adjusted, and the work is in full progress on that portion of the line—its completion may be reasonably anticipated at the period hereinafter named.

The line of your road cannot be opened for use by the time indicated in the last annual report from this office, nor has there ever been a period within the last twelve months when any such opinion ought reasonably to have been entertained. Even the grading on the one hundred miles from the Detroit river, east, has not yet been completed, and probably will not be before the 1st of September next.

The report and estimate made by my predecessor on the 30th of September last gives an estimated increase in the cost of the road of 1,129,173,01 dollars—exceeding any sum before deemed necessary to complete the enterprise. The amount of work required to be done under this increased outlay no doubt satisfied every friend of the road familiar with works of this kind that the opening of the whole line by the close of the year 1853 would be exceedingly problematical, and dependent upon contingencies that might defeat all the applications of science, skill and labour, that could well be devoted to the accomplishment of an object so anxiously desired, and so important to the interest of the Company. This

being perceived, every precautionary measure deemed essential, and within my power, has been adopted to expedite the progress and completion of the work, that a strict regard to economy in expenditure and the permanence of the road combined, has seemed to be required.

As the periodical subsidence of the waters of the western lakes had not occurred in 1852, and it probably will not, according to all former experience, during the present year, a plan was adopted by my predecessor, for piling about fourteen miles of the line over the wet prairies west of Chatham, on the Western Division.

The slow progress made in the work, and its probable insecurity and want of permanence, for the purposes of operating the road with desirable security, safety, and expedition, induced me to recommend a change in the plan of construction; and the whole distance through the prairies, with the exception of a mile and a half, will be graded in a permanent manner, either by taking materials to form the embankment from the prairies adjacent to the line of road, by means of coffer-dams and pumping, and with dredging-machines, or by hauling beach sand from the shore of the lake. This change will increase the cost of construction on that part of the line considerably above the sum estimated by my predecessor for a pile road; that being only one dollar per lineal foot; but the cost, I think, will not exceed what would eventually be required to render a pile track safe for the rapid transmission of trains.

The one is permanent for all time to come, the other temporary, and will require filling in within a few years.

The points on the Eastern Division of the road, which it is feared will present serious obstructions to opening the line on the first day of January, 1854, are the grading and masonry on sections 6, 7 and 8, east of St. Catharine's, and section 11, west of that place. There never has been a time since the commencement of the work, that the rate of progress would justify the expectation of passing a train of cars over these sections in the year 1853. Although the contractors have heretofore given the strongest assurances, and even now maintain the same opinion, that the entire Eastern Division will be completed and ready for use in the month of November next, by adopting a temporary grade and trestle-work on section 7. But I take this occasion to reiterate the opinion expressed on former occasions, that, according to the former and present progress of the work, the assurances and expectations of the Contractors will not be realised. Nor do I believe that the entire Eastern Division will be in a condition to open for traffic in all the year 1853. But it is practicable to complete the grading and masonry on section 11, Eastern Division, by the first of December; and by constructing temporary trestle-work at the ten and twelve mile creeks, the whole line of the Eastern Division may be got ready for use in December next. The cost of the trestle-work is estimated as follows:—

900 lineal feet at Ten Mile Creek, \$12 per foot . . . . .	\$10,800
500 lineal feet at Twelve Mile Creek, \$18 per foot . . . . .	9,000
	\$19,800

The completion of the City Section on the Central Division, in connection with the opening of the new channel of the Desjardines Canal, through Burlington heights, and the drawbridge connected therewith, have continued to excite my most lively solicitude. Under favorable auspices, and with the application of proper means and an adequate force, this work can be got ready for laying down the superstructure in time to connect with other portions of the line westward, by the 1st day of January, 1854. In order to avoid obstructions and embarrassments, as well as to guard against a large expenditure of money consequent on the heavy slides on sections three and four, near Dundas, slight alterations have been made in the line of the road, with the view, at some future period, after the surface water shall have a proper drainage, and the moving mass

has become settled and compact, of placing the track upon the original lines, if deemed necessary.

Sections 5 and 6, central division, embracing the Copetown work, which has heretofore attracted some attention, have thus far presented obstacles serious in their character, and difficult to overcome.

The increased quantities of material required to be excavated and moved, occasioned by the large and continued slides of earth in the deep cutting, and the piling necessary to protect the foot of the slopes and maintain the required width of the road way, will enhance very much the cost of this work beyond all former estimates.

This work, however, is in such a state of forwardness, as to justify the expectation that no serious delay in opening the line on this division will be occasioned by the obstacles there to be encountered and overcome.

The sinking of the embankment on section 11, central division, into a deep morass or subterranean lake, has heretofore shown unmistakable evidences of serious difficulties. A new plan for carrying forward the work has been recently adopted, which promises fair, not only to expedite it, but very much reduce the expense. This has been done by constructing an extensive platform of evergreen trees and brush, so interwoven with earth as to prevent the loss of material by its own displacement, which was occasioned by the nature of the material used, and the superabundant weight put upon the base of the embankment beyond its capacity to sustain.

Present indications show the entire success of the plan; and we hope to complete the grading at that place by the first of September next.

The work on the Western division is of such a character, and in such a state of progress, with the exception of the deep and difficult excavations on sections 2 and 3, near London, as to present no serious apprehensions that this portion of the line will not be in condition to be operated upon by the close of the present year. And as to those points, new arrangements have been made with the contractors to facilitate the progress of the work; and, if need be, further attainable means may be resorted to by the application of a night force, so that the opening of the line West of London may be simultaneous with that between Hamilton and London.

On the whole, then, if the financial arrangements of the Company shall be such as to allow the work on this part of the line to be pushed to the extent required, and no other casualties or obstruction shall intervene or occur than such as may be reasonably anticipated and guarded against, I see no just cause to doubt you can be gratified with the opening of the whole line from Windsor to Niagara by the close of the present year.

The following buildings have been erected at Hamilton for manufacturing cars—the same having been leased to Fisher, Brainard, Williams, and Co., to the first of November next, the time limited for the execution of their contract—to wit: a car factory and blacksmith shop, a setting up shop, and two paint shops; an engine house, machine shop, locomotive blacksmiths' shop and freight house, located at Hamilton, are under contract to be completed by the 1st of December next. Plans for the buildings at London, with the exception of the passenger house, were prepared and ready for contract early in April; but notice for tenders has been omitted for want of action in procuring the law necessary to authorize a change in the width of streets, which is so essential for the convenience and accommodation of all parties interested.

Plans for all the intermediate station buildings are matured, and early notice may be given for tenders.

These plans for station buildings are deemed sufficient to accommodate the business of the road for a long time to come, with the exception of the engine house and machine shop at Hamilton; and possibly the freight house there may require extending to accommodate the increase of freight traffic in future.

A contract has been entered into with Fisher, Brainard, Williams, and Co., for



building at the company's car factory, at Hamilton, the following amount of rolling stock, to wit: twenty-five eight-wheel passenger cars, four eight-wheel express and mail cars, eight eight-wheel baggage cars, twenty eight-wheel emigrant cars, one hundred eight-wheel platform cars, one hundred and fifty eight-wheel house freight cars, one hundred four-wheel gravel cars, twenty-five four-wheel repair cars, and fifteen hand cars; some of these are already finished and delivered, and the whole will probably be completed before they will be required for use.

In addition to these I have estimated for five passenger cars, one hundred house freight cars, and one hundred gravel cars.

Twenty locomotive engines are contracted for—fourteen with the agent of the Schenectady Locomotive Works at Schenectady, New York, and six with the Treasurer of the Lowell Machine Shop, at Lowell, Massachusetts. Four engines have been received at Hamilton, Windsor, and Baptiste Creek, two are now ready for delivery, and the remaining fourteen will be delivered between this and the middle of November next. A further supply of engines will be required early in the ensuing Spring. I have provided, in my estimate of rolling stock, for six additional service engines, at \$9,000 each.

A special agent has been employed to purchase a supply of fuel for the motive power. He reports having contracted for about twenty-one thousand cords, first quality of hard wood, to be delivered at different points upon the line of road, by first of February next. This will be amply sufficient for the opening of the line, and afford sufficient time to make future contracts for the constant supply of wood.

In accordance with a verbal request of the President of the Company, I submitted, on the 14th day of December last, to that gentleman, an estimate of what I judged would be the cost of the opening of the road. That statement was based upon, and compiled from such data as were then within my reach. In that statement or estimate, the cost of the road was put down at \$7,038,584.57, which covered the items of grading, masonry, bridging, superstructure, fencing station buildings, and engineering. This sum exceeds the same items embraced in Mr. Benedict's estimate of the 30th of September last, by \$592,589.85, that being \$6,445,894.66.

Early in April last, I directed the several resident engineers on the line to make minute and accurate measurements of quantities, so far as practicable, on their respective divisions, with liberal allowances for the settling and sliding of embankments, especially on the heavy clay banks on the eastern division, together with such sums as would cover all other contingencies connected with the work as to grading, masonry and bridging.

These estimates have been received, carefully examined and revised, and such additions made thereto as circumstances seemed to require.

I have also made a carefully revised estimate of the cost of superstructure, based upon the actual cost of the iron rails, chains, spikes and rivets delivered on the line of road, as reported by D. C. Gunn, Esq., who has special charge of the shipment and delivery of these materials. This estimate greatly exceeds any former one made of the cost of superstructure, but it is no more than sufficient to cover the actual expense.

I submit herewith a detailed estimate of the cost of the entire line between the Niagara and Detroit rivers, two hundred and twenty-eight miles, and the Galt branch, twelve miles. This estimate is intended to cover all items of expenditure requisite to put the line in complete operation, with buildings and equipments complete, including the docking and filling in depôt grounds at Hamilton and Windsor, and the extension of the line down the Detroit river to a point opposite the Michigan Central Railroad Station.

The right of way, land and land damages, and the incidental and contingent expenses of the Company, are not included in the estimate.

According to this estimate, the cost of two hundred and forty miles of single track-road, with an allowance of seventeen miles of superstructure for side-



tracks, &c., will amount to the sum of \$7,791,075.14, which is composed of the following items:—

Grading, masonry, and bridging .....	\$4,477,138.49
Superstructure .....	1,795,186.65
Fencing and gates .....	153,600
Station buildings, engine and freight houses, machine shop, car factory, &c.....	375,000
Stationary engines, machinery, tools, and turn tables..	48,000
Rolling stock .....	662,150
Engineering expenses and pay of inspectors of work..	280,000
	<hr/>
	\$7,791,075.14

The increase on Mr. Benedict's estimate of the 30th September last, is as follows:—

On grading, masonry, and bridging .....	\$653,799.83
superstructure .....	320,717.65
fencing .....	20,413
buildings .....	115,000
rolling stock.....	195,250
engineering expenses .....	40,000
	<hr/>
	\$1,345,180.48

In submitting this report I have felt compelled to speak plainly and explicitly on all topics discussed; in my judgment this was a duty alike due to the Board of Directors, the shareholders and myself. All my exertions must be directed to the promotion of the permanent interests of those who furnish the means to carry forward to completion the great work in which you are engaged. Notwithstanding the increased outlay, according to the estimates now submitted, will reach a sum considerably larger than had ever been anticipated by the friends of the enterprise, we may indulge in the well grounded hope, that with the application of reasonable economy in our future operations, and with an energetic and cordial co-operation among all the official departments of the Company, the whole line of road will be open for traffic at an early day, and this noble enterprise may be made to yield a fair increase on the capital invested.

Respectfully submitted,

(Signed)

JOHN T. CLARK,  
Chief Engineer.

Engineer's Office, G. W. R.,  
Hamilton, 4th June, 1853.

## EXPENDITURE TO 30TH APRIL, 1853.

To Expenditure on—		
Construction account—on whole Line	£730,047	1 5
Engineering	272,225	11 5
Cost of Iron	84,033	11 5
Cost of Cast and Machinery	84,033	11 11
Cost of Locomotives and Machinery for repairs	34,557	10 0
Interest paid on Shares and Bonds	11,656	14 7
Disbursements for sundries, viz.:	...	...
Parliamentary and Law expenses, Surveys of Line, Office expenses and Salaries to Officers of the Company, London Agency, negotiation of Shares and Debentures, and other contingent expenses to 31st May	£1,192,046	12 6
Less Premium on sale of £200,000 Provincial Bonds	89,544	9 6
	£9,411	9 10
	£1,282,292	11 10

£s.

## CAPITAL ACCOUNT.

Expended as above		
Balance of Assets—	£1,292,292	...
To be realised	£451,155	...
	385,982	...
	837,117	...
	£2,129,319	...

Currency ... £2,129,319

Shares.	Paid.	To be paid.	Total.
Shares held in United States	£403,288	£288,262	£691,550
Canada, and reserved for	438,625	37,000	527,225
Shares held in England	...	...	1,225,575
Debentures Convertible, until	...	...	265,500
May, 1855, due October, 1857	...	...	175,000
ditto, 1856, due October, 1852	...	...	212,500
Debentures, due in 1853...	...	...	244,444
Government Loan	...	...	...
			Currency ... £2,129,319

GEORGE HARKNESS, Secretary.