#1158

Butte, Mont., Nov. 2, 1914.

Mr. A. J. Busch, Supt.,
Gallatin Valley Railway,
Bozeman, Montana.

Dear Sir:

When I was last in Bozeman you asked me about what would be the relative cost of the body and the equipment of your freight locomotive. I said I would take this matter up with the Westinghouse Church Kerr Company, who could probably give us these costs.

Under date of October 29th they replied as per the enclosed copy. I trust this will give you the information which you desire.

Yours truly,

RB-WLS

Electrical Engineer.

#1159

Butte, Mont., Nov. 8, 1914.

Mr. C. F. Loweth,
Chief Engineer,
Chicago, Ill.

Dear Sir:

Referring to your letter of October 13th, with which you sent duplicate prints of your drawing S-45 showing your approved method of supporting cross spans on and attaching these to roof of Great Falls freight house.

Will you please have blue print of this drawing made and deliver to Mr. Goodnow, to whom I am sending copy of this letter with request that he mark the print with his approval if he sees fit and forward it to me for my record and authority to proceed accordingly when the proper time comes.

Yours truly,

RB-WLS

Electrical Engineer.

cc--C.A.G.

#1160

Butte, Mont., Nov. 2, 1914.

Mr. C. A. Goodnow,
Asst. to the President,
Chicago, Illinois.

Dear Sir: Trans. Line Cut-off

Referring to my letter of October 28th I hand you herewith tracing ED-#123 showing transmission line cut-off between Newcomb and a point about one and a half miles east of Janney.

This cut-off was made in order to effect a saving of about $8,000, and also to give a better line and a more easily constructed one. The cut-off is over private property and in this connection I would repeat the statement made in my letter of October 28th regarding the desirability of having Mr. Webster secure the rights as soon as possible.

If the layout is satisfactory will you kindly approve the tracing and return.

Yours truly,

RB-WLS

Electrical Engineer.

#1161

Butte, Mont., Nov. 2, 1914.

Mr. J. T. Crocker,
Purchasing Agent,
Chicago, Illinois.

Dear Sir:

Referring to yours of October 30th, File RM-#8613, AJJ, in regard to trolley pulling clamps furnished by M. Klein & Sons and sample clamp which they have grooved out to fit American Standard Grooved 4/0 Trolley wire, will say that we can use the clamps as modified, provided the grooves are carefully cut so as to be free from imperfections that might injure the wire, the grooves circular in cross section so that they will take wire in any position and that they substitute square head cap screws for hex. as in sample. The hexagon head screws do not stand up under usage and it is always necessary to replace it with square head screws within a short time.

If replacement is made on this basis, please have clamps shipped to me at Three Forks. I am returning you the sample clamp under separate cover as requested.

Yours truly,

REW
WLS

Electrical Engineer.

#1162

Butte, Mont., Nov. 3, 1914.

Mr. J. T. Crocker,
Purchasing Agent,
Chicago, Illinois.

Dear Sir: E.M.S.

Referring to your letter of October 30th. The one inch by six ft. galvanized guy rods for the main line were purchased from the Illinois Electric Company on Invoice #38936 at the rate of $43.00 per hundred pieces. The eight ft. rods were purchased from the Illinois Electric Company, Invoice #30978 for $71.00 per hundred pieces.

Yours truly,

GHL
WLS

Electrical Engineer.

#1163

Butte, Mont., Nov. 3, 1914.

Mr. W. M. Harvey,
Auditor Nat'l Acots.,
Chicago, Illinois.

Dear Sir:

Your letter of October 26th, Form RD-49, Report is blank for the month of September.

Yours truly,

GHL
WLS

Electrical Engineer.

#1164

Butte, Mont., Nov. 3, 1914.

Mr. W. M. Harvey,
Auditor Mat'l Accts.,
Chicago, Illinois.

Dear Sir:

Form RD-#49 Report is blank for the month of October.

Yours truly,

GHL
WLS

Electrical Engineer.

#1165

Butte, Mont., Nov. 3, 1914.

Mr. B. C. Mottern,
Rockdale, Wash.

Dear Sir:

Your letter of October 30th. Our work is still closed down and we do not know when it will be resumed.

I believe the best thing for you to do will be to write me when you complete your work at Rockdale. In the meantime, if anything should open up I will let you know at once.

Yours truly,

GHL
WLS

Electrical Engineer.

#1166

Butte, Mont., Nov. 3, 1914.

Mr. T. J. Kelley,
Master Mechanic,
Deer Lodge, Mont.

Dear Sir:

Please note the attached sketch of a filing case for blue prints in this office.

Before making the requisition and passing it to Mr. Goodnow for approval I would like to get estimate of cost from you. We will wish to place the requisition with you for making the case.

I have noticed several pigeon hole cases in various agent's offices which have sheet iron partitions either vertical or horizontal and wood running the other way. If this is the cheaper method of construction it will be entirely satisfactory to us for you to use the sheet iron wherever convenient.

Will you kindly furnish us with an estimate of cost.

Yours truly,

GHL
WLS

Electrical Engineer.

#1167

November 3, 1914.

Mr. C. J. Hixson,
General Electric Co.,
Schenectady, N. Y.

Dear Sir:

On Purchasing Agent's Order placed with you for Overhead Material for the Great Falls terminal work there was an item of fifteen steady braces. To date we have received only the wood strain insulators of these braces, and I wish you would please advise me regarding the device for connecting to the trolley and bracket arm.

Yours truly,

GHL
WLS

Electrical Engineer.

cc—A.E.L.

November 3, 1914.

Mr. Mott Sawyer, Supt.,
Spokane, Washington.

Dear Sir:

I hand you herewith Bridge Culvert and Tunnel Record Books of the Columbia Division, St. Maries Line and Warden Line.

These books were made up in 1911 and undoubtedly a great many of the timber culverts and bridges have been replaced. If you wish to have the books corrected to date I believe Mr. Pinson's office can loan you their copies for making necessary corrections.

These books are of no use to us and I thought possibly they might contain some information useful to you. If you do not care for them, possibly Mr. Clothier would be glad to have them.

Yours truly,

Chief Clerk.

GHL
WLS

#1169

November 3, 1914.

Mr. A. F. Batchelder, Engr.,
Railway Locomotive Dept.,
General Electric Company,
Schenectady, N. Y.

Dear Sir:

Referring to your letter of October 30th, regarding difficulties you are encountering in satisfactorily arranging uncoupling bars on the Buckeye Underlift draw bar, I have taken this matter up with our Mechanical Department and will advise you further as soon as possible.

Yours truly,

RB-WLS

Electrical Engineer.

#1168

Butte, Mont., Nov. 3, 1914.

Mr. A. E. Manchester,
Supt. of Motive Power,
Milwaukee Shops, Wis.

Dear Sir:

I am sending you herewith copy of the General Electric Company's letter of October 30th with reference to difficulties they are encountering in arranging uncoupling rods with the Buckeye Underlift drawbar which is the one that you suggested using.

Will you kindly advise whether you have a design worked out which does not involve the use of the special lock lever, or in what other way you would suggest getting around the difficulty.

The print to which the General Electric Company refers and which shows the arrangement of uncoupling bars with top lift draw head is attached hereto.

Yours truly,

RB-WLS

Electrical Engineer.

cc--C.A.G.

#1170

Butte, Mont., Nov. 3, 1914.

Mr. E. E. Clothier,
Chief Carpenter,
Malden, Washington.

Dear Sir:

I expect to go to Three Forks sometime before the middle of the month and will see that the big gasoline speeder is loaded and billed to you at Dishman.

The car is the property of the Engineering Department, it having never been billed against us.

Yours truly,

GHL
WLS

Chief Clerk.

#1171

November 4, 1914.

Mr. F. Birdsall, Supt.,
Northern Pacific Railway,
Missoula, Montana.

Dear Sir:

In connection with our electrification work in Montana we desire to make application for the following rights, hereafter described and shown on attached maps:

Crossing over your Alder Branch right-of-way with 100,000 volt transmission line and 3,000 volt trolley line as shown on our map ED-27.

Crossing over your Main Line right-of-way with 100,000 volt transmission line and 3,000 volt trolley line at Sappington as shown on our map ED-#103.

Crossing over your Main Line right-of-way at a point about one-half mile east of Silver Bow station with 100,000 volt transmission line as shown on our map ED-#118.

Detailed drawings referred to on maps are attached as follows: ED-#33; ED-#39; ED-#112 and ED-#113.

In addition to the above, we desire the right to locate on certain portions of your right-of-way as hereinafter described, such poles, anchors, wires and other necessary structures as are required in connection with the construction of our trolley and transmission lines; these will be few in number as compared with the distances given in each case, the descriptions being made so as to be comprehensive as regards the territory involved:

#1171

Beginning at a point west of Willow Creek about 450 feet west of M.P. No. 16 to a point about 3,800 feet west of M.P. No. 17, a distance of about 8,630 ft.

Beginning at a point west of Sappington on the Pony Branch about 2,500 feet east of M. P. No. 1 to a point about 3,400 feet east of M. P. No. 1, a distance of about 900 feet.

Beginning at a point west of Butte about 1,200 feet west of M. P. No. 4, to a point about 4,500 feet west of M. P. No. 4, a total distance of about 3,300 feet.

Beginning at a point west of Butte about 1,900 feet west of M. P. No. 7, to a point about 2,000 feet west of M. P. No. 8, a total distance of about 5,380 feet.

Beginning at a point west of Butte about 4,290 feet west of M. P. No. 8, to a point about 3,300 feet west of M. P. No. 9, a total distance of about 4,290 feet.

Beginning at a point west of Butte about 1,000 feet west of M. P. No. 11, to a point about 4,000 feet west of M. P. No. 12, a total distance of about 8,280 feet.

If approved on your part, will you please have this matter put forward through proper channels for permits to be sent to me and oblige.

Yours very truly,

REW
WLS

Electrical Engineer.

#1172

November 4, 1914.

Mr. J. J. Linsbaugh,
Ry. & Trac. Engr. Dept.,
General Electric Co.,
Schenectady, N. Y.

Dear Sir:

In connection with a report which I am getting up for Mr. Goodnow on electrification I would like very much to have some prints of photographs taken by Mr. Cox and showing the Butte, Anaconda & Pacific overhead work.

If consistent will you please send me as soon as possible two prints each from the following negatives, Nos. 2, 3, 5, 7, 32, 34, 41, 42, 44 and 48.

Yours very truly,

Electrical Engineer.

REW
WLS

#1173

November 5, 1914.

Western Electric Co.,
Chicago, Illinois.

Dear Sir:

I note that you are advertising in the Electric Railway Journal a Carbolineum for the treatment of pole butts.

Will you please advise me at your early convenience, selling price per gallon for this Carbolineum in different quantities and at the same time give me all data in your possession on its record as a preservative, with names and addresses of users.

I would also like comparative data on its application by brush and tank methods, including relative amounts of carbolineum required per average foot length of Idaho Cedar poles, temperature to which Carbolineum is heated when applied with brush, relative penetration, number of coats necessary with brush method and desirable time allowed between application of various coats.

Yours very truly,

REW
WLS

Electrical Engineer.

#1174

Butte, Mont., Nov. 6, 1914.

Mr. C. A. Goodnow,
Asst. to the Pres.,
Chicago, Illinois.

Dear Sir:

Mr. Cochrane of the Montana Power Company called at the office this afternoon and asked us for information relative to railway requirements in connection with accounting for construction work. He also stated that the arrangement about which you spoke to me a week ago last Sunday had gone through.

If this is the case, there are certain things to which we should now pay our attention to complete getting ready for the new arrangement and I would like to know whether you would want preference given to this work or to that of completing the information required for report to be submitted to outside engineer, relative to which I understood you to say that you would advise me further as per my letter of October 31st.

Yours truly,

RB-WLS

Electrical Engineer.

#1175

November 7, 1914.

Hubbard & Company,
Pittsburgh, Mont.

Dear Sirs:

Attached please find sketch of proposed Feed Tap Bracket intended for attaching to $2\frac{1}{2}$ x $2\frac{1}{2}$ x 5/16" T-iron trolley bracket arm and to take insulator for supporting 4/0 bare tap connections between feeders and trolley wire.

This is practically your No. 323 Peirce Brake Arm except that 3/8" U-bolt of proper shape is substituted for two bolts and strap and the drilling of the bracket is changed to suit conditions. It will, of course, be necessary to slot at least one hole in the bracket arm according to your standard practice. The bracket will be fitted with your standard wire thimble for one inch pin hole.

Will you please advise at your early convenience, price on these bracket arms complete in lots of five hundred and less and oblige.

Yours truly,

REW
WLS

Electrical Engineer.

#1176

November 7, 1914.

Elec. Engineer's Equip. Co.,
711-715 West Meridian St.,
Chicago, Illinois.

Dear Sirs:

I have your letter of November 4th and the Bulletins sent therewith.

At the present time we have not in view material of the nature you describe, which is not or will not be included in contracts for substation machinery and other apparatus.

However, we would be pleased to receive your bulletins as they are issued from time to time and if any occasion arises where we could consider the use of your material we would be glad to do so.

Yours very truly,

RB-HLS

Electrical Engineer.

#1170

Butte, Mont., Nov. 7, 1914.

Mr. G. J. Bunting,
Asst. Gen'l Auditor,
Chicago, Illinois.

Dear Sir:

Will you kindly furnish me with four extra copies of the Interstate Commerce Commission Classification of Investment in Road and Equipment of Steam Roads, effective July 1, 1914.

Yours truly,

GHL
WLS

Electrical Engineer.

#1178

Butte, Mont., Nov. 7, 1914.

Mr. J. T. Crocker,
Purchasing Agent,
Chicago, Illinois.

Dear Sir:

Referring to your letter of November 3rd, relative to 40 double headed wrenches returned to Janney, Semple-Hill Company of Minneapolis.

I wish to call your attention to the fact that these wrenches were shipped on my Requisition No. 83, but are just one-half as large as they should be as per my letter of October 27th. I cannot see the necessity of another requisition.

Yours truly,

GHL
WLS

Electrical Engineer.

41178

November 7, 1914.

Western Block Company,
Lockport, N. Y.

Dear Sirs:

This will acknowledge receipt of your letter of November 3rd, also your sample Wood Shell Snatch Block.

Will you kindly furnish us with a price for fifty of these blocks.

Yours truly,

GHL
WLS

Electrical Engineer.

#1180

Butte, Mont., Nov. 6, 1914.

Mr. F. G. Ramsey, Treas.,
Chicago, Illinois.

Dear Sir:

I return herewith C. A. Bill #88739, amount $3.00 account error in July Time Check #6302.

This error was made by a former timekeeper and passed by a former clerk in this office, both of whom left when our work was closed the first of July, consequently we cannot collect the bill.

If necessary that bill be paid, please return it and I will send you a check for $3.00.

Yours truly,

GHY
WLS

Electrical Engineer.

#1182

Butte, Mont., Nov. 7, 1914.

Mr. C. A. Goodnow,
Asst. to the President,
Chicago, Illinois.

Dear Sir;

I am handing you herewith plans of the Three Forks, Piedmont, Donald, East Butte, West Butte and Deer Lodge yards, on which we have indicated the trackage which it is our understanding is to be taken care of in the initial electrification.

The electrified trackage is based on instructions which you gave us in Butte before we had written our specifications for Locomotives and Substation Apparatus and when you were endeavoring to get a line on the copper bar tonnage required.

The estimated figure which we gave you sometime ago is based on trackage as shown on these prints and no provision is made for electrifying to the new Butte passenger station or to the freight station. We have not as yet received any definite data with regard to trackage involved at the new passenger station, but understand the amount is not large. With regard to the freight station, it is our understanding that you stated this was not to be electrified.

If the electrification of tracks as shown meets with your approval, will you kindly approve the prints.

Yours truly,

RB-WLS

Electrical Engineer.

#1182

Butte, Mont., Nov. 7, 1914.

Mr. J. C. Mill,
Signal Engineer,
Milwaukee Shops.

Dear Sir:

Referring to Drawing #6091 and #6092 which you left here when we had our conference in Butte relative to signal matters on October 23rd, the transformer, lightning arresters and fuses as mounted on the pole are evidently shown merely in a conventional manner and drawings are therefore not intended to be to scale.

We would therefore like to know for the sake of uniformity and convenience if it would not be satisfactory to use at these locations the standard three foot arm shown on our Drawing ED-43 which you approved. If this is not satisfactory, we would like detailed dimensions from you as soon as possible so that we can complete our bills of material.

It is our understanding that the arrangement as shown on Drawings #6091 and #6092 is to be provided on poles nearest to present signal foundations in the district between Piedmont and Butte. If, as we understand, your authorization includes the territory from Butte to Finlen, we must of course know as soon as we can exactly where the signal locations in this district will be.

Kindly advise us in this connection as soon as you can.

Yours truly,

RB-WLS

Electrical Engineer.

#1183

Butte, Mont., Nov. 7, 1914.

Mr. C. A. Goodnow,
Asst. to the President,
Chicago, Illinois.

Dear Sir:

We understand from Mr. Hill that authority has been issued for the installation of the new signal system between the points, Piedmont and Finlen.

If this is the case, our bills of material should include lower cross arms, insulators and primary signal wire between these points. In this connection please see copy of my letter to Mr. Hill of October 24th mailed you at that time.

Kindly advise us if bills of material we are making up are to include the material for the district between Piedmont and Finlen, and if this is the only district that you wish provision made for by the Electrification Department.

Yours truly,

RB-WLS

Electrical Engineer.

#1184

Butte, Mont., Nov. 7, 1914.

Mr. C. A. Goodnow,
Asst. to the President,
Chicago, Illinois.

Dear Sir:

We are sending you herewith for approval Drawing ED-#126, showing crossing of signal, primary, feeder and power limiting wires.

This drawing is intended to supersede Drawing ED-#46 of which I enclose a print and which you approved sometime back.

Drawing ED-#46 shows the signal wires crossing the track underground, but in our recent conference with the Signal Department and representatives of the Union Switch and Signal Company, the signal people expressed the opinion that they would very much prefer to have the signal wires run across the track overhead. Kindly see, in this connection, copy of my letter to Mr. Mill of October 24th which was mailed you on that date.

The idea of keeping these primary signal wires overhead instead of underground does away with any troubles which may occur in underground cables caused by lightning or through mechanical injury. Also the wires can very conveniently be inspected.

If you are satisfied with the new arrangement shown on ED-#126, kindly approve same and we will mark ED-#46 superseded.

Yours truly,

RB-WLS

Electrical Engineer.

1185

Butte, Nov.9th.1914

Mr.J.T.Crocker,P.A.

Chicago.

Dear Sir:

Referring to your letter of the 31st.ult. relative to Hangers shipped to me at Great Falls on your order # 5005.

I have taken this matter up with the General Electric Co. and find that they have made two shipments of hangers which I have checked and find correct for the construction of the work.

Invoice # 49413 covers the first shipment, We are holding unloading tally awaiting invoice on the following:

20	Pcs.	II½"	Hangers
280	"	I7"	"
220	"	22½"	"

I persume you are holding invoice for this shipment.

Yours truly,

GBL.L

Electrical Engineer.

1186

Nov.9th.1914

#1186

The Denver Gas & Electric Light Co.

Denver, Colorado.

Gentlemen:

The Mountain States Tel.& Tel.Co.,of Denver, have informed me that you manufacture a by-product of deda oil of coal tar which is used as a wood preservative.

We are considering the advisability of treating our trolley line poles and would thank you to furnish us a price on dead oil.

Yours truly,

Electrical Engineer.

GHL.L.

#1187 Nov.9th.1914.

The C.G.Betts,Co.

Spokane,Wash.

Gentlemen:

We are considering the advisability of treating the butts of about six thousand transmission and trolley line poles. I believe you manufacture a coal tar product which is much cheaper than carbolinium .

Will you kindly advise us your price f o b this company's tracks Spokane.

Yours truly,

Electrical Engineer

GHL.L.

II88.

Nov. 9th.1914.

Mr.Max Hebgen,Genl.Mgr.

Montana Power Co.

Butte, Montana.

Dear Sir:

I hand you herewith blue prints of our drawings II4 and II5 showing proposed changes in your transmission lines near Dalney and Morel.

We are suggesting these changes in order to obtain good crossings for both trolley and transmission lines at these points .

If you see fit will you please have your representative look the ground over and advise me whether in your opinion the proposed methods are best under the conditions. This matter was explained to your Mr.Cochran.

Yours truly,

REW.L.

Electrical Engineer.

#1189 November 9, 1914

Page #2--A.H.A.

Will you please advise in regard to this as soon as possible, as we are making up a final check on bill of material and at the same time will you kindly give me the detailed dimensions of the end of pipe or casting which is inserted into the ear.

Yours truly,

REW
WLS

Electrical Engineer.

cc--C.J.H.

#1189 Nov. 9th.1914

Mr.A.H.Armstrong,

General Electric Co.

Schenectady, N.Y.

Dear Sir:

Referring to yours of October 30th and quotation No. 74611 on pull-off link brackets for use in connection with single pull offs and as covered by Drawing P-1,155,588, also your new single pull-off design as shown on Drawing P-1,155,583, both of which designs involve the use of a new style ear, Drawing K-1,137,957, which, when assembled provides a vertical slot into which is inserted the end of a casting in one case and the flattened end of a one-half inch wrought iron pipe in the other case.

While these designs are attractive as regards simplicity and light weight, I wish to call your attention to one feature which is liable to give serious trouble, both during construction and after installation.

The old style pull-off and ear as well as the angle iron link were assembled by means of a 3/4" cap screw in vertical position which allowed free relative motion between ear and pull-off or link in a horizontal plane when trolley wire moved along track. This motion occurred without injury to any of the parts. The amount of such motion permitted by the new design is extremely limited and it would seem that either the trolley wire would be kinked or the casting or pipe bent if such motion occurred.

Will you please have this matter taken up with the designing engineer and given further consideration, as we have so many of these devices involved in our work that it does not seem good policy to adopt a design which at the beginning appears liable to cause serious trouble.

#1190

November 10, 1914.

Mr. A. H. Armstrong,
General Electric Co.,
Schenectady, N. Y.

Dear Sir:

Where we cross the Butte Electric Railway track at Montana Street, Butte, we have an unusual condition to meet in that there are two trolley wires over the street railway track. One of these wires is used by the regular trolley cars and the other by the Clark Zinc Mill locomotive; both operate at 600 volts, but are on separate watt meters, so that they must be insulated from one another at the crossing in addition to being insulated from our 3,000 volt trolley wire. It will be necessary to arrange this crossing so that it can be controlled by interlocked switches handled by crossing tender.

I am enclosing blue print showing plans of crossing and would like for you to submit rough sketch showing your proposed layout for the crossing.

In this connection, please note that we have never had full details of your new layout for such crossings including interlocked switches.

Will you please let us have the above information at your early convenience.

Yours truly,

REW
WLS

Electrical Engineer.

cc—C.J.H.

#1191

Butte, Mont., Nov. 10, 1914.

Mr. J. T. Crocker,
Purchasing Agent,
Chicago, Illinois.

Dear Sir: File: Jennings

Replying to yours of the 6th instant in regard to inspection of trolley wire ordered for Main Line and Great Falls electrification, in which you state that there is not much that you can inspect outside of the drawings.

Please refer to our specifications for trolley wire dated June 17th, 1914, which were attached to the requisition and which give all details in connection with inspection.

It is particularly necessary to see that the wire is of proper size; that it is free from scales, flaws, splits and other defects; that the tensile strength is up to the required minimum of 8,000 pounds and that the brazed joints are properly made. The particular point about the brazed joints is their mechanical strength, which can be easily followed and this is determined, of course, by length of scarf which is often made too short and by the quality of brazing where there is often poor union between the brazing metal and the copper. Brazed joints are generally the most important feature as the wire is made up in comparatively short lengths and poor brazing is liable to cause serious accidents during construction and many interruptions to traffic after operation is begun.

Another important point to look after is to see to it that the wire is not twisted in the drawing, as with grooved wire it is necessary to cut out and scrap badly twisted sections.

Please advise if there is any further information that you may desire in connection with this inspection.

Yours truly,

RPW-WVO

#1192

November 10, 1914.

Mr. A. H. Armstrong,
General Electric Co.,
Schenectady, N. Y.

Dear Sir: Re: Locomotives CM&StP

Were you figuring on a bus connection between the two halves of our locomotives?

This has a bearing on the matter of crossings with the B. A. & P. and local street railway.

Yours truly,

RB-WLS

Electrical Engineer.

#1193

November 10, 1914.

Mr. H. A. Gallwey, Gen'l Mgr.,
B. A. & P. Railway,
Anaconda, Montana.

Dear Sir:

Referring to crossings between your line and ours, i.e., the Oregon Short Line connection crossing just west of Silver Bow and your timber mill stub track at Rocker:

We are figuring on arranging these crossings so that they may be energized by means of suitable switches in order to allow continuous taking of power from the trolley wire by either you or ourselves, depending upon which way the switches are thrown.

Inasmuch as the track switches are normally set for our Main Line, we presume that we may count upon your men handling these trolley line switches at the same time that they handle the track switches, so that the former will also normally be set for us. We think that probably the switching could be arranged in such a manner that the trolley switches would be handled in one operation, working in conjunction with the track switches.

There is, of course, no reason why these crossings cannot be made entirely reliable as the difference in potential between your line and ours is only 600 volts, and there should therefore be very little strain on the insulation.

Kindly advise if this arrangement would be satisfactory to you.

Yours truly,

RB-WLS

Electrical Engineer.

#1194

November 10, 1914.

Mr. E. A. Galloway, Gen'l Mgr.,
B. A. & P. Railway,
Anaconda, Montana.

Dear Sir:

In connection with the construction of our transmission line, we desire to cross your right-of-way at a point about one-half mile east of your Silver Bow station, as shown on attached map, ED-#117 and detailed Drawing ED-#112.

In designing this crossing we have complied with the general requirements of committees of various National Associations interested in such matters.

If approved, will you please furnish me with necessary permit for crossing, in form suitable to your practice in such matters, and oblige.

Yours truly,

REW
WLS

Electrical Engineer.

#1195

Butte, Mont., Nov. 10, 1914.

Mr. E. O. Reeder,
Asst. Chief Engineer,
Seattle, Washington.

Dear Sir:

Referring to your letter of November 3rd to Mr. Murray relative to Carbolineum now at Bozeman:

Sometime ago in talking to Mr. Busch he informed me that this Carbolineum had been ordered to Bozeman for use on the Howe Truss bridges, but that it was never used.

Upon receipt of this letter will you kindly wire me the brand of Carbolineum used for the Truss bridges and also if you care to turn it over to us, provided we decide to treat our poles. We are anticipating doing work at Great Falls shortly and can probably use the Carbolineum there.

Yours truly,

GHL
WLS

Electrical Engineer.

cc--A.J.B.
E.Murray

#1196

Butte, Mont., Nov. 11, 1914.

Mr. J. C. Mill,
Signal Engineer,
Milwaukee, Wis.

Dear Sir:

Referring to reactance bonds for automatic signals, will these be provided with some sort of a terminal with which our 4/0 negative return may be connected, or must we connect to some cable connection between the bonds themselves?

Will you kindly advise me regarding this.

Yours truly,

RD-WLS

Electrical Engineer.

#1197

Butte, Mont., Nov. 11, 1914.

Mr. C. A. Goodnow,
Asst. to the Pres.,
Chicago, Illinois.

Dear Sir: Overhead System

We are sending you herewith one print each of Drawings ED-#132 and #133, showing electrical switching layouts for Colorado Junction. These prints were secured from Mr. Musson and show the contemplated arrangement of trackage in connection with the new passenger station. You will note that the Milwaukee tracks are, in general shown in yellow and the B.A.& P. tracks in red. A key at the side of the drawing shows just what the other colors and the symbols mean.

On Drawing ED-#132 the electrical switching is, you will note, comparatively simple and is laid out on the basis of the B.A.& P. coming into our new passenger station and operating on our 3,000 volt current, both on the station trackage and on the tracks leading to the Centennial Brewery. With this arrangement switch "A" is kept normally closed and both our own and the B.A.& P. trains make their regular movements without any complications. In case we wish to make a movement from our Main Line to the Freight Yard we close switch "B" and open switch "A", "A" and "B" of course being suitably interlocked in the track switch.

In case of Drawing ED-#133 it is assumed that the B.A.& P. will not enter our passenger station and the operation of trains will be just as at present, except that of course we run into our own passenger station. Under these conditions you will notice that the electrical switching becomes quite complicated, if as provided, for, the B.A.& P. run entirely on their own power and we run entirely on ours. This condition will also hold if we start electrical operation before the new passenger station is completed and the B.A.& P. continues to use the wye which leads to the Centennial Brewery for turning trains and for serving the Brewery.

#2--C.A.G.--11/11/14

The arrangement would be much less complicated if the B.A.& P. could be persuaded to put in a cross-over at some convenient portion of the trackage leading to their station, so as to avoid the use of the wye for turning the cars, merely switching the locomotive from one end of the train to the other. I understand the B.A.& P. are much opposed to this method of operation, but that they might be induced to consider it if they are shown how much simpler the switching can then be made.

Some arrangement will have to be made with the B.A.& P. at least with regard to the interchange of freight cars and we assume the matter of joint use of the passenger station also has come up. We are therefore asking your advice as to what arrangements we are to make so that we can get together with the electrical switch manufacturers and the Signal Department and make whatever provisions may be necessary.

Yours truly,

RB-WLS

Electrical Engineer.

#1196

November 12, 1914.

Mr. F. S. Wheeler,
Ry. & Trac. Engr. Dept.,
General Electric Co.,
Schenectady, N. Y.

Dear Sir:

I have your letter of November 4th with regard to a position in our Electrification Department.

I regret to say that I am not now in a position to offer you anything, and no definite plans with regard to our going ahead with the work have yet been formulated, as far as this Department is concerned.

If any opening should develop a little later, however, in which we might be able to place you, I would be very glad to consider your application. In the meantime you might advise me a little more in detail regarding your technical education and electrical experience.

Yours very truly,

RB-WLS

Electrical Engineer.

#1189

Butte, Mont., Nov. 12, 1914.

Mr. Max Hobgen, Gen'l Mgr.,
Montana Power Company,
Butte, Montana.

Dear Sir: Attention: Mr. Kerr

Following conversation with Mr. Kerr and Mr. Buck several days since, I am enclosing herewith approximate list of material needed in connection with wiring the Great Falls substation.

Mr. Kerr thought possibly you might be able to furnish this from your stock. Will you please advise in regard to this at your early convenience so that we can take care of items which we will have to order and oblige.

Yours truly,

REW
WLS

Electrical Engineer.

#1200 Nov. 13, 1914

Mr. A. F. Batchelor, Engr.,

Railway Locomotive Dept.,

General Electric Co.

Schenectady, N.Y.

Dear Sir:

Referring to your letter of Oct. 30th. and my reply of Nov. 3rd. relative to the use of an underlift drawbar.

I am advised by our Supt. of Motive Power that this company uses no underneath couplers on either locomotive pilots or tenders and therefore request that the electric locomotives be equipped with the top lift type of drawbar, which is the type that our men are already familiar with.

Will you please be governed accordingly?

Yours truly,

Electrical Engineer.

RB.L.

#1201

Butte, Mont., Nov. 16, 1914.

Mr. C. L. Whiting, Supt.,
Lewistown, Montana.

Dear Sir:

The Montana Power Company have a contract for doing the work in connection with Great Falls terminal electrification. They are preparing to start work at the Freight House end this morning; this will consist of distributing poles and digging holes.

They propose to use a motor car and two flat cars from the Street Railway Company for stringing wire over our tracks, and in order for them to do this it will be necessary to make a connection between trolley track and our track where they cross us at intersection of Twenty-seventh Street and Seventh Avenue, north. Our Mr. Wade has explained the details in this connection to Mr. Guinotte and if you will arrange to have the switch and frog installed in our track, the Street Railway Company will take care of the remainder of the work. If you see fit, will you please issue instructions covering our part of the work, arranging to bill us accordingly and advising me so that I can notify the Montana Power Company.

In this connection, the wheels of the Street Railway cars have 2¼" treads and 3/4" flanges. Mr. Guinotte, however, is under the impression that there will be no trouble with these wheels on our tracks.

Yours truly,

REW
WLS

Electrical Engineer.

cc--A.R.C.

#1202

Butte, Mont., Nov. 16, 1914.

Mr. C. L. Whiting, Supt.,
Lewistown, Montana.

Dear Sir:

In connection with Great Falls terminal electrification we will need about 200 cross ties for anchor logs.

Mr. Goodnow advises that we can obtain these from your stock at Great Falls. We could, of course, use ties which have been in service in material tracks, etc., and which have been damaged only to the extent of being spiked. We must, however, have new stock.

If consistent, will you please issue instructions to your representative at Great Falls to deliver these ties on order from our representative, Mr. A. N. Crowder who will be located there.

Please advise in regard to this, giving me the name of your representative and oblige.

Yours truly,

REW
WLS

Electrical Engineer.

cc--A.N.C.

#1303

Butte, Mont., Nov. 16, 1914.

Mr. C. L. Whiting, Supt.,
Lewistown, Montana.

Dear Sir:

When the Montana Power Company takes up the stringing of trolley and messenger wire over our tracks at Great Falls terminal, it may be possible to effect some economy for this Company by changing the hours of switching between the Falls Yard and the City Freight Yard.

The working hours on the electrification will be between the hours of 8 a.m. and 5:00 p.m., with an hour off at Noon. Any time worked outside of these hours will call for overtime for electrical workers and helpers. While it may be more economical for this latter force to lose time than to re-arrange your switching hours, will you please have this matter investigated and advise.

The wire which is to be strung will come in one-half mile lengths and when a reel is started it is necessary to finish stringing it, and if switching is done during working hours, no doubt the switching crew will be delayed.

At the same time, the Power Company now contemplates stringing this wire with current on, and if this idea is successful, it will necessitate putting into clear at Twenty-seventh Street and Seventh Avenue until the wire is strung to the first spur track on the Freight House end. This information in connection with the subject in general.

Yours truly,

Electrical Engineer.

REW
WLS

#1204

November 16, 1914.

Mr. R. F. Morris, Div. Mgr.,
The Mountain States Tel. Co.,
Helena, Montana.

Dear Sir:

In connection with our Great Falls terminal electrification, we desire to set three or four poles in line with your poles on the alley between Ninth Avenue South and Grand Avenue, Blocks 507, 508 and 509; these poles to take attachments for supporting our trolley wire and your cable.

Our representative on the ground is Mr. A. E. Crowder, who can explain to your local representative in Great Falls just what we desire. We will have Mr. Crowder get in touch with your local representative and would thank you to instruct him accordingly and advise me at your early convenience thereafter if we can place poles as desired.

Copy of this letter is being sent to Mr. Crowder who will confer with your representative at Great Falls and take up details on the ground.

Yours very truly,

REW
WLS

Electrical Engineer.

cc--A.N.C.

#1205

Butte, Mont., Nov. 16, 1914.

Mr. J. T. Crocker,
Purchasing Agent,
Chicago, Illinois.

Dear Sir:

File Jennings: Referring to your letter of the 12th instant relative to three dynamometers to be shipped on my Requisition #86, your Order #3965.

It is O. K. to ship one dynamometer to Great Falls and two to Three Forks, unless shipment has already started, in which case we can make re-shipment from Three Forks.

Yours truly,

GHL
WLS

Electrical Engineer.

cc--A.E.L.

#1206

Butte, Mont., Nov. 16, 1914.

Mr. A. E. Long,
% Frt. Agent, CM&St.P.,
Great Falls, Montana.

Dear Sir:

M. Klein & Sons will ship twenty trolley pulling clamps to Great Falls on our Requisition No. 86 which calls for 100 clamps. The balance will be shipped to Three Forks.

Yours truly,

GHL
WLS

Electrical Engineer.

#1207

Butte, Mont., Nov. 16, 1914.

Mr. E. E. Clothier,
Chief Carpenter,
St. Maries, Ida.

Dear Sir:

Referring to your letter of the 5th inst., I wish to advise you that on Saturday, November 14th I billed the Four Cylinder Gas Motor Car from Three Forks to you at St. Maries in Car #42034. I wish you luck.

Yours truly,

GHL
WLS

Chief Clerk.

#1208

Butte, Mont., Nov. 16, 1914.

Mr. A. J. Busch, Supt.,
Gallatin Valley Railway,
Bozeman, Montana.

Dear Sir:

On November 14th we billed one reel containing 6,000 feet of ½" S.M. Strand from our Stock at Three Forks to you at Bozeman. It seems that this reel was included in a shipment but it has never been billed against us. Have you received the bill?

Yours truly,

GHL
WLS

Electrical Engineer.

cc--A.E.L.

#1209

November 16, 1914.

The C. G. Betts Company,
Erie St. and N. P. Tracks,
Spokane, Washington.

Dear Sirs:

I have your letter of the 14th inst., and will be glad to receive the sample of pole treating material which you are shipping us.

I wish you would please advise me what this paint is made of, how it compares with Carbolineum and what tests as regards a wood preservative it has been subjected to.

Our poles are already distributed along the track over the mountain and it will be necessary to apply the treating material with a brush. We figure on heating the material but not the poles, and it is quite likely the poles will be damp.

Yours very truly,

GHL
WLS

Electrical Engineer.

1212
~~41110~~

November 16, 1914.

Mr. Thos. Cooper,
Land Commissioner,
Northern Pacific Railway,
St. Paul, Minnesota.

Dear Sir:

Will you kindly furnish me with about three of your blank electric line crossing permits, (permanent).

I wish to make copies of your permit #38046 for our various officials.

Thanking you in advance, I remain,

Yours truly,

GHL
WLS

Electrical Engineer.

1111
~~41111~~

Butte, Mont., Nov. 16, 1914.

Mr. R. D. Coulter,
Chief Carpenter,
Lewistown, Mont.

Dear Sir:

Referring to your letter of November 2nd and returning herewith plan showing supports for trolley wire on the Great Falls freight house.

Will you kindly proceed to erect this support, buying what material you may require at Great Falls. Assistant Engineer, A. N. Crowder of this Department is at Great Falls and will make the necessary purchases for this Department.

In addition to parts shown on the plan, we will wish four I-bolts set in the roof, which will be explained to you by Mr. Crowder.

We would like to have this work done at once, and if there is any further information which you require, I wish you would kindly take up at once in order that the work will not be delayed.

Yours truly,

GHL
WLS

Electrical Engineer.

cc—R. D.
A. N. C.

1212
~~Files~~

Butte, Mont., Nov. 16, 1914.

Mr. A. E. Long,
% Frt. Agent, CM&St.P.,
Great Falls, Montana.

Dear Sir:

According to my records we are short only the copper wire on Requisition #108, 100 pieces three bolt clamps on Requisition #107 and twelve trolley anchor clamps on Requisition #109 to make the Great Falls material complete.

Of course we are short the ends of the trolley insulator attachments which are now on the road.

Please advise if you know of anything else which we are short at Great Falls.

Yours truly,

GHL
WLS

Electrical Engineer.

#1213

Butte, Mont., Nov. 16, 1914.

Mr. T. J. Kelly, Storekeeper,
Deer Lodge, Montana.

Dear Sir:

Confirming our telephone conversation this date, will you kindly arrange to put the following outfit cars in shape for this Department:

2 Dining Cars
1 Foreman's Car
5 Bunk Cars
1 Tool Car
1 Water Car.

The floors of the cars should be covered with a heavy building paper and then floored with a cheap grade of 1" boards. It is also probably advisable to turn the paper up the sides of the car for at least one board width similar to a mop board.

The ordinary type of wood bunk construction can be used, placing ten bunks in a car. Caboose stove, coal box and wash stand should be installed. The outside of the car should be covered with a heavy building paper and in fact, made as comfortable as possible at a reasonable expense.

It is quite probable that the Western Commissary Company will furnish board and for this they have kitchen and commissary cars already outfitted and stored somewhare near Miles City. If necessary to have these fixed further, we will send them to you later.

I am ordering Car #0379 shipped to you from Three Forks. This is an extra large foreman's car which we wish to have fitted up into a club or loafing car for the men. I wish you would please make three or four small tables, benches, book racks, etc., as well as furnish caboose stove, and in fact whatever you think is proper to make this a good loafing car without too much expense.

#1113

The Foreman's car should have a desk, a few shelves and bunking space for four men. Double deck bunks may be used.

Mr. Wade will probably be in Deer Lodge before you have completed work on the outfit cars and can go over the matter with you then.

Yours truly,

GHL
WLS

Electrical Engineer.

1214
~~#1114~~

Butte, Nov. 17, 1914.

Agent,
Three Forks, Mont.

Dear Sir:

Please bill the large Foreman's Outfit Car which is stored with our old outfit cars west of the Round House to T. J. Kelly, Storekeeper at Deer Lodge. I believe this car is No. 0378.

Yours truly,

GHL
WLS

Electrical Engineer.

1215
~~#1115~~

Butte, Mont., Nov. 17, 1914.

Mr. R. B. Hayes,
Rockdale, Wash.

Dear Sir:

The Paymaster has made a bill against me for $2.00, account overpayment on July CG #6302 which you issued for $12.53 instead of $10.53. I endeavored to get the Paymaster to cancel the bill, but he has come back at me and I wish you would please forward the $2.00 to cover the error.

Yours truly,

GHL
WLS

Electrical Engineer.

#1216

November 17, 1914.

The R. Thomas & Sons Co.,
Old Colony Building,
Chicago, Illinois.

Dear Sirs:

Kindly refer to your letter of October 17th in reference to the tests on 4½" Spacing Units.

Having heard nothing from you, and being anxious to secure information in regard to your tests, I am again calling the matter to your attention.

Yours very truly,

GHL
WLS

Electrical Engineer.

#1317

Butte, Mont., Nov. 17, 1914.

Mr. A. J. Busch, Supt.,
Gallatin Valley Railway,
Bozeman, Montana.

Dear Sir:

On October 7th the Thompson-Levering Company advised me that they were shipping a bond tester to you at Bozeman for trial.

Will you kindly advise me if you have received this tester.

Yours truly,

GHL
WLS

Electrical Engineer.

Butte, Mont., Nov. 17, 1914.

Mr. R. Beeuwkes,
Electrical Engineer,
% C. A. Goodnow, Chicago.

Dear Sir:

We have received a couple of our tracings back from Mr. Goodnow's office and they are somewhat damaged on account of a wet letter being wrapped with them. As in most offices, I presume it is their practice to make an impression copy of the letter before mailing it and then same is mailed before being allowed to become dry, which is going to spoil our drawings. I believe you had better speak to Mr. Kirkland about this.

Yours truly,

GHL-WLS

Chief Clerk.

#1218

Butte, Mont., Nov. 17, 1914.

Montana Power Company,
Butte, Montana.

Dear Sirs: Attention Mr. Kerr

I hand you herewith two copies of list of tools shipped to Great Falls from our Three Forks storehouse on November 15th.

You will please note the percentage value opposite each tool. When the Great Falls work is completed we will wish to inventory these tools and charge the Great Falls work with depreciation and shortage.

Any tools that are purchased during the construction period will be added to this list.

Yours truly,

GHL-WLS Electrical Engineer.

cc--A.W.C.

#1219

Butte, Mont., Nov. 17, 1914.

Mr. Max Hebgen, Gen'l Mgr.,
Montana Power Company,
Butte, Montana.

Dear Sir:

Confirming conversation with Mr. Kerr this morning, please note that the height of trolley wire at Great Falls has been made 24' 8" above top of track rail instead of twenty-five feet, as originally intended.

In this connection, the platform of your tower car can be twenty feet above the top of track rail instead of twenty-one feet, as originally intended.

Yours truly,

REW
WLS

Electrical Engineer.

cc—A.N.C.

#1220

Butte, Mont., Nov. 17, 1914.

Mr. Max Hebgen, Gen'l Mgr.,
Montana Power Company,
Butte, Montana.

Dear Sir:

Referring to connection between trolley track and our track at Twenty-seventh Street and Seventh Avenue, North, Valeria Way, Great Falls, as desired by Mr. Buck in connection with Great Falls terminal electrification work, so as to permit the use of Street Railway motor car in stringing trolly messenger.

I have taken this matter up with our Division Superintendent, Mr. Whiting. He requests that we take this up with you further with the idea of locating the switch in our track so that it will be permanent if it is found desirable to have such a permanent connection between the Street Railway and steam track.

Will you please have this matter investigated and advise at your early convenience so that we can advise Superintendent Whiting accordingly.

Yours truly,

REW
WLS

Electrical Engineer.

cc--A.H.C.

#1221

Butte, Mont., Nov. 17, 1914.

Mr. R. Beeuwkes,
Electrical Engineer,
% C. A. Goodnow, Chicago.

Dear Sir:

While you are in Chicago and in direct touch with Mr. Goodnow, I wish to remind you of the fact that we will very soon reach the point where we will have to increase our force by the addition of inspectors who will represent us on trolley and transmission work and later on substation work.

Not being familiar with the plans for prosecuting this work, I can make no suggestions as to when these men will be needed. We expect to get hold of Strong the latter part of this week and can use him for staking and inspecting on pole setting, and if the work of guying, putting up spans and insulation of trolley and messenger wire is to follow as soon as possible after the work is taken up, we should make our plans at once to secure the services of the necessary men who are experienced in overhead work, preferably catenary work and who will know more about the work than the foreman employed by the Montana Power Company. We cannot get such men in this part of the country as far as I know, and I would suggest that authority be obtained from Mr. Goodnow for putting them on at the proper rate of pay and that we get in touch with a number of such men so as to have them available when needed. I believe you know one or two such men.

When substation work is undertaken we should of course have a man at each substation who can look after both building and electrical work, unless you have planned to the contrary.

We are, at the present time, very poorly prepared to take care of the Main Line work, with Crowder at Great Falls, unless our office work is cut and Williams is assigned to transmission staking, as we will have pole setting and pole distribution on our hands at the same time and staking for both trolley and transmission poles cannot be done by Civil engineers hired locally.

#1221

I would suggest your getting in touch with possibilities for inspectors through the Chicago office of the General Electric Company or some other of the large companies in that City.

Yours truly,

REW-WLS

Assistant Engineer.

#1222

Butte, Mont., Nov. 17, 1914.

Mr. R. Beeuwkes,
Electrical Engineer,
% C. A. Goodnow, Chicago.

Dear Sir:

Referring to your message of the 17th in regard to unloading poles at Deer Lodge and releasing cars, I have not wired you as it is hard to cover this matter properly in that way.

I wired you yesterday in regard to grading of transmission line on curves, which Curtis tells me you were to investigate Saturday morning, though under the circumstances I presume you were unable to do anything in this connection.

With this matter unsettled we are not in a position to properly distribute poles for transmission line. In the same message I called your attention to the fact that Mr. Goodnow's approval of Survey on Private Property between Silver Bow Canyon and a point east of Colorado Junction is necessary before we can distribute poles for that section. He returned the map of this survey without his approval, stating that he desired further information as he anticipated a high cost for right-of-way along the N. P. track.

As you know, a large percentage of the trolley and transmission stakes are missing; the pole lengths on transmission line have been changed on the list and not in the field and in view of the above facts, we are not in a position to undertake pole distribution until curve grading is definitely settled, Mr. Goodnow has approved survey and in reality, the right-of-way secured and even with the above data in hand, we should have the services of Strong, unless Williams and myself both leave the office and take up the staking. This cannot be done as we are in the midst of negotiations with Mr. Hebgen, and therefore I consider it advisable to defer the distribution of poles on hand at Deer Lodge until your return, if you are to be here by the first of next week.

#1222

Page #2--R.B.--11/17/14

In regard to pole requisitions, we have arranged with Mr. Wilder to complete our old requisitions and begin shipments as soon as Inspector arrives on the ground. In the meantime, I have made a summary of poles required and find that we will require small quantities in addition, of all sizes up to 75 feet.

Owing to the unsettled conditions in regard to private location of transmission line and grading of line on curves, it would seem best to hold the placing or orders for these small quantities of poles until your return as we are amply prepared to take care of Mr. Hebgen's forces if that plan is followed.

Yours truly,

REW-WLS

Electrical Engineer.

#1223

Butte, Mont., Nov. 19, 1914.

Mr. W. L. Slater, Inspr.,
St. Maries, Idaho.

Dear Sir:

I hand you herewith a copy of our pole specifications which same I believe were furnished you by Mr. Wilder. In case his are not the same as the attached, please use the attached which is correct.

My records show that there is due 142 forty-five foot poles from the Valentine Clark Company.

After these poles are inspected, loaded and shipped, you should go to Bovill and inspect poles being loaded by the E. T. Chapin Company who should ship 735 pieces of forty foot poles and 607 pieces forty-five foot poles in order to complete requisition placed with them.

The National Pole Company of Fernwood will have to ship 311 pieces of forty foot poles and 16 pieces forty-five foot poles to complete their order.

The Milwaukee Land Company of St. Joe, Idaho have an order for one load of fifty-five ft. poles and one load of fifty-five and sixty foot poles, approximately half and half.

All poles are to be billed to this Department in my care at Deer Lodge, you to mail me notice of each load shipped, showing shipper, date loaded and contents.

Yours truly,

GHL
WLS

Electrical Engineer.

cc--G.F.W.

Butte, Mont., Nov. 19, 1914.

Mr. A. N. Crowder,
Assistant Engineer,
% Frt. Agt., Great Falls.

Dear Sir:

I hand you herewith two blueprints from the General Electric Company showing dimensions of hangers and struts for catenary construction.

Yours truly,

GHL
WLS

Electrical Engineer.

#1224

November 19, 1914.

Mr. C. C. Beck,
Ohio Brass Company,
Mansfield, Ohio.

Dear Sir:

Kindly refer to your letter of October 13th in reply to mine of October 3rd relative to designs of a housing for outdoor switches.

We have not received your sketches and thought possibly they might have become lost in the mail.

Will you please advise whether they were sent us.

Yours truly,

GHL
WLS

Electrical Engineer.

We will give you as much advance information in regard to future requisitions as we possibly can. Mr. Beeuwkes is now in Chicago and it may be possible that he can give you information in regard to Requisitions #56 and 60 before leaving for Butte.

Yours truly,

GHL
WLS

Electrical Engineer.

#1226

Butte, Mont., Nov. 19, 1914.

Mr. J. T. Crocker,
Purchasing Agent,
Chicago, Illinois.

Dear Sir:

Jennings: Referring to your letter of the 14th inst., relative to shipment of balance of material on my requisitions; I have gone over our records thoroughly and the following shows material due on requisitions for Main Line electrification:

Requisition #14:

3088 Bracket Socket Castings;
3088 Tension Rod Castings
2106 Insulated Pin Castings with
J-bolt and nut.

Requisition #34:

26 Pieces 12' 6" T-iron
252 " 13' 6" T-iron
50 " 5/8 x 12' 3" round guy rods.

Requisition #53:

844,000 Lineal ft. ½" H.S.Strand
45,000 " " ½" S. M. Strand
427,200 " " 3/8" S. M. Strand
32 Pieces 1" x 6' anchor rods
2330 pieces 3" x 3" x ¼" sq. washers.

The 30,000 Lineal Feet of 5/8" Strand is being held up pending further decision.

Requisitions #56 and #60:

Copper wire and Splicing Sleeves awaiting further decision.

Requisition #30:

3100 ½" x 5" Black Lag Screws.

apparatus in north end of building would be pretty well shut off from door and pretty well crowded in case of heavy repairs. Also the railway M. G. Set would be crowded for heavy repair work. I submit this matter to you for further advice.

The Montana Power Company is unable to furnish some of the wiring material required based on our former layout. This requisition, however, will have to be held up until location of machinery is decided. If you wish this matter to proceed in your absence, kindly advise me just what kind of wire you wish used as regards insulating material and braiding, and whether solid or stranded, so that requisition can be placed for such material as the Montana Power Company cannot furnish.

Local Master Mechanic says he can operate steam apparatus as re-located.

In regard to change in location of present transformers, Mr. Kerr tells me that these transformers are indoor type, though they were supposed to be furnished for outdoor and therefore the change should be made. He also brings up the question of duplicate power line to substation with control switch on our end. We can take up this latter question when you return.

Yours truly,

REW
WLS

Assistant Engineer.

#1227

Butte, Mont., Nov. 19, 1914.

Mr. R. Beeuwkes,
Electrical Engineer,
% C. A. Goodnow, Chicago.

Dear Sir:

Referring to your telegrams of the 16th and 18th in which you state that Mr. Goodnow is anxious to locate railway apparatus in room containing present Motor Generator Set, and refer to the proposed location of transformers inside of building.

I am enclosing herewith blueprints of Drawing ED-#137 in duplicate which shows a suggested arrangement so as to locate railway apparatus in so called engine room. This layout was made after Curtis had been to Great Falls and looked over the ground with local Master Mechanic Arnold in regard to re-location of feed water pump and steam trap.

The dimensions shown on drawing indicate actual floor space required for different apparatus involved and the clearances between are on this basis. You will note that this involves changing location of present switchboard and small motor generator set in addition to the steam apparatus and in this connection the present electrical apparatus has just recently been permanently installed.

An examination of the drawing will show you that there will be very little space left in this room if railway apparatus is located therein, and I submit to you the available clearance around railway M. G. Set.

It will probably cost about $200.00 for changing feed pump and steam trap; $80.00 for relocating present electrical apparatus and $150.00 for railway M. G. Set foundation.

The cost of foundations for the railway M. G. set will of course be higher than it would be over the old boiler foundation. In this connection I wish to call your attention to the fact that steam

#1238

Butte, Mont., Nov. 20, 1914.

Mr. W. B. Foster,
General Superintendent,
Seattle, Washington.

Dear Sir:

Following instructions from Mr. Goodnow I have taken up with Mr. Barrett the question of tracks to be electrified in the larger yards between Deer Lodge and Three Forks.

I am enclosing under separate cover blue-prints of yards in question and except as otherwise noted the tracks specified by Mr. Barrett are marked in yellow. If the entire layout meets with your approval, will you please have these prints sent direct to Mr. Goodnow, and if not, please return them to me so that I can, if you so desire, take the matter up again with Mr. Barrett and afterwards send them to Mr. Goodnow. We are, of course, anxious to have this matter settled as soon as possible as the Montana Power Company will take up the electrification work between the points mentioned as soon as they can get necessary equipment together.

In general the blue prints as marked are self-explanatory. I will call your attention, however, to Alloy Yard and Butte Classification Yard: Before reaching a decision in regard to these two yards, Mr. Barrett wishes to discuss them with you and Mr. Goodnow. I enclose them, however, for your information in connection with the subject.

Will you please advise me if you send these prints direct to Mr. Goodnow.

Yours truly,

REW
WLS

Electrical Engineer.

cc--CAC*EHB

#1239

Butte, Mont., Nov. 20, 1914.

Mr. J. T. Crocker,
Purchasing Agent,
Chicago, Illinois.

Dear Sir:

Enclosed herewith please find specifications for 2/0 Hemp Core Copper Strand for transmission conductor following my conversation with you in Chicago.

Yours truly,

REW
WLS

Electrical Engineer.

November 20, 1914.

Mr. M. E. Buck,
Montana Power Company,
Butte, Montana.

Dear Sir:

This will introduce to you Mr. Robt. R. Henrich who is looking for a position as timekeeper, and about whom Mr. Barrett asked me to speak to you yesterday.

Yours truly,

REW
WLS

Assistant Engineer.

#1230

Butte, Mont., Nov. 20, 1914.

Mr. A. J. Busch, Supt.,
Gallatin Valley Railway,
Bozeman, Montana.

Dear Sir:

On November 13th the Westinghouse people shipped from their East Pittsburgh works to you at Bozeman by express, five armature coils, Style #8530 for No. 49 Railway motor.

Will you kindly make requisition confirming this purchase. I presume shipment has been received by this time.

Yours truly,

GHL
WLS

Electrical Engineer.

#1331

Butte, Mont., Nov. 20, 1914.

Mr. F. Urban,
531 Market St.,
Milwaukee, Wis.

Dear Sir:

I hand you herewith October Payroll #6202 together with check #83368 in your favor, amount $70.89. Kindly receipt the payroll, returning same to Paymaster direct in the enclosed envelope.

Yours tr[illegible]y,

GHL
WLS

Electrical Engineer.

#1232

Butte, Mont., Nov. 20, 1914.

Mr. A. N. Crowder,
% Frt. Agent, CM&StP Ry.,
Great Falls, Montana.

Dear Sir:

I hand you herewith October Payroll #6201 together with pay check #93364 in your favor, amount $99.00. Kindly sign the enclosed roll, returning same direct to the Paymaster by railway mail in the enclosed envelope.

Yours truly,

GHL
WLS

Electrical Engineer.

#1233

Butte, Mont., Nov. 21, 1914.

Mr. E. H. Barrett,
Asst. Gen'l Supt.,
Butte, Montana.

Dear Sir:

Please furnish permit for Conductors Trains No. 15 and No. 16 to honor transportation held by Mrs. R. Beauwkes, wife of Electrical Engineer, Butte to Lombard and return, this date.

Yours truly,

GHL
WLS

Electrical Engineer.

November 21, 1914.

Mr. H. R. Sanderson,
Western Development & Sup. Co.,
716 Joshua Green Bldg.,
Seattle, Washington.

Dear Sir:

I have your letter of the 19th inst., relative to your pole treating material and am sorry to advise you that we have decided to erect our poles without treatment.

Thanking you for your interest in this matter, I am,

Yours truly,

GHL
WLS

Electrical Engineer.

Butte, Mont., Nov. 21, 1914.

Mr. E. Murray, Asst. Engr.,
B. & B. Department,
Miles City, Montana.

Dear Sir:

Referring to your letter of the 19th inst., relative to six barrels of Carbolineum stored at Manhattan.

Mr. Goodnow has decided that we are to erect our poles without treating, and consequently we will be unable to use this material.

Yours truly,

GHL
MLS

Electrical Engineer.

cc—EOR
AJB

#1234

November 21, 1914.

The C. G. Betts Co.,
Erie Street and N. P. Trks.,
Spokane, Washington.

Dear Sirs:

I have your letter of the 19th inst., also sample can of Creosote oil and wish to thank you very much for your prompt advise regarding your product.

However, I am sorry to state that we have decided to erect our poles without treating and consequently will not be in the market for this material.

I will keep your advise on file and if it is decided to treat poles on another Division, we will be glad to take the matter up with you then.

Yours truly,

GHL
WLS

Electrical Engineer.

#1235

Butte, Mont., Nov. 21, 1914.

Mr. C. L. Whiting, Supt.,
Lewistown, Mont.

Dear Sir:

I have your letter of the 17th inst., relative to placing a conductor with the working crew of the Montana Power Company while electrifying the Great Falls terminal.

This work is being handled similar to a Force Account proposition and the expense of a conductor would have to be borne by the Railway Company. As we wish to keep the cost of the Great Falls construction at the lowest possible figure, I hope you can give your switching crew such instructions as will obviate all possibilities of danger to the Power Company's men.

Yours truly,

GHL
WLS

Electrical Engineer.

cc--E.H.B.

#1338

Butte, Mont., Nov. 21, 1914.

Mr. J. T. Crocker,
Purchasing Agent,
Chicago, Illinois.

Dear Sir:

On my Requisition No. 109, your Order #5006, placed with the General Electric Company, item for 32 pieces double flexible pull-offs with ears.

These pull-offs have been received without the ears. Will you please have the G. E. Company rush the ears to Great Falls at the earliest possible moment.

Work has already commenced there and we do not wish to delay it.

Yours truly,

GHL
WLS

Electrical Engineer.

cc--A.N.C.

#1237

Butte, Mont., Nov. 21, 1914.

Mr. A. N. Crowder,
Assistant Engineer,
Great Falls, Mont.

Dear Sir:

I hand you herewith Great Northern Annual Pass No. 8741. Please sign the enclosed card, returning it to the Vice President of the Great Northern at St. Paul as per instructions on the card.

Yours truly,

GHL
WLS

Electrical Engineer.

Butte, Mont., Nov. 31, 1914.

Mr. E. W. Adams, Sec'y,
Milwaukee, Wis.

Dear Sir:

I hand you herewith original executed permit running from the Northern Pacific Railway Company to this Company, granting us permission to construct our power line over their right of way near Dempsey, Montana.

I have retained a copy of this agreement for my own files.

Yours truly,

GHL
WLS

Electrical Engineer.

cc--CAG

#1238

Butte, Mont., Nov. 21, 1914.

Mr. R. H. Dudley,
Ticket Auditor,
Chicago, Illinois.

Dear Sir:

Recently it was necessary for us to issue the following construction passes for trips of employes in this Department which should not be billed against the electrification work. This on account of employes traveling on pleasure rather than on Company business.

Mr. Sewall recently advised that in such cases we are to secure trip passes from Mr. Barrett's office. However, the following construction passes were issued prior to these instructions and I wish you would please see that they are not included in bill against this Department for transportation furnished.

Passes #401305-6, favor M. Curtis, Butte to Missoula and return.

Passes #401317-8, favor W. L. Scott and wife, Butte to Missoula and return.

Yours truly,

GHL
WLS

Electrical Engineer.

#1238

Butte, Mont., Nov. 23, 1914.

Mr. C. A. Goodnow,
Asst. to the Pres.,
Chicago, Illinois.

Dear Sir:

Had a conference with Mr. Hebgen yesterday and brought up the matter of timekeeping, discussing same along the lines we talked in Chicago.

Mr. Hebgen felt that the timekeeper should be a man employed by the Montana Power Company and on their roll; this because they feel that the timekeeper should be subject in every way to the direction of the foreman and because they will take on and let off the men. Also they wish to employ the timekeeper at such times as he is available on other work which the foreman may have to handle. They further feel that it would be very undesirable for a second man to be employed on the job keeping time or checking it, because they consider that the labor statements as rendered to us monthly should be accepted just as they stand and not be subject to the constant checking of a second man employed by us, between whom and the Montana Power Company's timekeeper there might sometimes arise differences of opinion. They consider that the proper way to handle this matter is for our Inspector who accompanies the gang to periodically make such a check as he considers necessary to assure himself that no errors are being made.

Mr. Hebgen, to whom this letter was shown before mailing to you, states that the arrangement proposed by him is the one which is, in his opinion, in accordance with the intention of the contract and with discussions which were held in connection therewith.

Inasmuch as we could make any private investigations which might be considered necessary, it seems to me that if this method does not conflict with Interstate Commerce Commission or similar requirements, the plan as suggested would give the desired results. The matter is therefore being submitted to you for further instructions.

Yours truly,

RB-WLS
cc--Mr. Hebgen

Elect. c. Engineer.

#1340

Butte, Mont., Nov. 24, 1914.

Mr. C. E. Ceesford,
Master Mechanic,
Deer Lodge, Mont.

Dear Sir:

Referring to galvanized steel castings which Mr. Wade looked over yesterday with Mr. Geo. Cooley of the Store room, it was found that there were 654 of the attachment castings which are provided with eye on one end and two holes for bolting. The condition of these castings is as follows:

Those O.K. and needing no attention	159
Those with holes to be reamed to take 5/8" galvanized bolt	397
Holes to be reamed and finns removed from eye	76
Finns only to be removed from eye	18
Scrapped	4

The castings which are O.K. were placed in one pile near the door.

A total of 496 clevis castings were inspected, all of which need attention as follows: The jaws to be ground so as to give free clearance over three parts of angle iron bracket which is bolted together and in store room 262

Grind jaws for clearance and remove finns from eyes	28
Grind jaws and ream holes so as to give free clearance for 5/8" galvanized bolt	165
Grind jaws, straighten and ream holes	7
Grind jaws and straighten	5
Grind jaws, ream holes and remove finns	25
Scrap	4

Mr. Cooley is thoroughly familiar with details of what is to be done to all castings, and I also spoke to Mr. Davis about this matter.

#2--C.E.C.--11/24/14

Will you please give me as soon as possible a rough liberal estimate on the cost of doing the work specified on these castings, as we wish to take the matter up further with Chicago and get this entire matter straightened out. We do not wish any work done on these castings until we advise you further.

Yours truly,

REW
WLS

Electrical Engineer.

#1241

November 24, 1914.

Mr. Edwin G. Hatch,
149 Broadway,
New York City.

Dear Sir:

I have your letter of November 17th in connection with material for transmission line and power house.

Our substation apparatus, including all wiring and conduit is included in one contract which has been let. Our transmission line material such as poles and cross arms have been taken care of by our Purchasing Agt. Our high tension insulators will be covered by requisition accompanied by specifications which have already been submitted to the manufacturing companies and in connection with which bids have been received.

There will be very little extra material such as special switches and fuses, which I understand you are interested in, all of such material being included in that described above.

I am interested to learn that Mr. Rowland is now in Rio Janerio, S. A., and hope he is engaged in very congenial work.

Yours very truly,

MB-WLS

Electrical Engineer.

#1242

November 24, 1914.

John A. Roebling's Sons Co.,
165 W. Lake St.,
Chicago, Illinois.

Dear Sirs:

I have your letter of November 20th regarding hemp core cable, but it does not seem quite proper to me to write you a letter referring to any particular cases of failure.

Our Purchasing Department is sending out certain specifications covering our needs and requirements as regards this wire, and if you can conform to such requirements, we would be very glad to receive a bid from you.

I can only say regarding the failures that some people have experienced with hemp core wire that our investigations have not disclosed evidence that the core itself was responsible for such failures.

I trust this letter will meet your requirements and that you will be able to give our Purchasing Department a bid.

Yours truly,

RB-WLS

Electrical Engineer.

cc--J.T.C.

#1242 1/2

November 24, 1914.

Mr. Arnold van Schenk,
140 East End Avenue,
New York City.

My dear van Schenk:

I have your letter of November of the 17th inst., but regret very much to say that just at present we have no openings.

It might be possible, however, when we begin to build our locomotives and substation apparatus and substations, that a suitable opening will occur and if such is the case I will certainly be glad to let you know.

You might write me again in, say about a month. With best wishes, I remain,

Yours very truly,

RB-WLS

#1243

Butte, Mont., Nov. 24, 1914.

Mr. G. Ranney, Paymaster,
Chicago, Illinois.

Dear Sir:

I return herewith October Folio #6203. All checks on this roll have been delivered.

Yours truly,

GHL
WLS

Electrical Engineer.

#1244

Butte, Mont., Nov. 24, 1914.

Mr. H. J. Voyer,
Assistant Foreman,
Keechelus, Wash.

Dear Sir:

We are about to resume our construction work and do not wish to employ any of the radicals which were in your gang at the time of our trouble last July.

Will you please write me the names of any of these men which you can remember.

Yours truly,

GHL
WLS

Electrical Engineer.

#1245

Butte, Mont., Nov. 24, 1914.

Mr. F. A. Winters,
1005 Western Ave.,
Seattle, Washington.

Dear Sir:

I have your letter of the 18th inst., in regard to returning to this work.

We have contracted all labor to the Montana Power Company and I will see what can be done in the way of securing a position for you with them.

Mr. Rice is no longer with this Department, but I understand is spending the winter in Florida. I do not know his address.

We do not wish to employ the leaders of the strike of last summer, and if you can recall the names of the more radical ones I wish you would please furnish me with this information in order that we can see that they are not given employment.

Yours truly,

CHL
WLS

Electrical Engineer.

#1246

November 24, 1914.

Westinghouse Electric Co.,
165 Broadway,
New York City.

Dear Sir: Attention Mr. Shepard

Will you kindly refer to my letter of October 12th in which I requested that you return our specifications for electric locomotives and substation apparatus, together with the various maps and blueprints which were furnished you.

We will be able to use these specifications to great advantage in a report which we are getting up and if you will kindly return same it will save us a great deal of expense and labor. There were only a few copies gotten out at the time we made the call for bids.

Yours very truly,

GHL
WLS

Electrical Engineer.

#1247

Butte, Mont., Nov. 24, 1914.

Mr. E. A. Patterson,
Supt. of Telegraph,
Milwaukee, Wisconsin.

Dear Sir:

You will recall that we endeavored to fix up a private telephone line for the exclusive use of this Department during our construction work last Spring. This line was never satisfactory as we got very little use out of it. I believe they used what is known as your Block Phone Line for this purpose and it cost us a considerable amount of money endeavoring to put it in operation.

We have now resumed construction work and wish to secure a serviceable line for our own use. Will you kindly advise me your recommendations and if possible, give me an estimate of what it will cost for us to secure a line for this use.

Yours truly,

GHL
WLS

Electrical Engineer.

cc--J.W.F.--Seattle

#1248

Butte, Mont., Nov. 24, 1914.

Mr. J. T. Crocker,
Purchasing Agent,
Chicago, Illinois.

Dear Sir:

Referring to your letter of November 13th, relative to 6,000 feet ¼" S. M. Strand shipped to Three Forks in car #307323 which should have gone to Mr. A. J. Busch at Bozeman. I wish to advise you that this strand was shipped to Mr. Busch on the 16th inst., and he has now received same.

Yours truly,

GHL
WLS

Electrical Engineer.

#1249

Butte, Mont., Nov. 24, 1914.

Mr. H. B. Earling, V. P.,
Seattle, Washington.

Dear Sir:

I return herewith pass application blank covering Annual Pass No. G-#823, furnished to our Pole Inspector, W. L. Slater. Have signed the request as requested.

Yours truly,

GHL-WLS

Electrical Engineer.

#1350

Butte, Mont., Nov. 24, 1914.

Mr. F. E. Kirkland,
Chicago, Ill.

Dear Sir:

Please note the attached note addressed to Mr. Beeuwkes while he was in Chicago in regard to wrapping damp or wet letters with tracings.

When a tracing becomes wet it is impossible to do further drawing on it, and as most of them represent a considerable amount of money and labor, we must be very careful to preserve them.

Will you be so kind as to bear this in mind when mailing future tracings.

Yours truly,

Chief Clerk.

CHL
WLS

#1251

Butte, Mont., Nov. 24, 1914.

Mr. B. A. Dousman,
General Auditor,
Chicago, Illinois.

Dear Sir:

Referring to your letter of the 12th inst., and returning herewith Bill #89738, amount $2.00 against us for over-payment of July "CG".

Since writing my letter of November 7th we have located one of the timekeepers who has very kindly paid the bill.

I hand you herewith two one dollar bills in payment of the shortage.

Yours truly,

GHL
WLS

Electrical Engineer.

Enc.
Register

#1252

Butte, Mont., Nov. 24, 1914.

Mr. A. N. Crowder,
Assistant Engineer,
% Frt. Agt., Great Falls.

Dear Sir:

I have yours of the 18th in regard to $2.80 miscellaneous expense on daily report for the 17th.

I notice that they have contracted $1.10 more of this expense on the 21st. I will endeavor to get this matter straightened out and advise you at an early date.

I thought possibly the first expense was incurred because of the fact that they did not know you were to purchase this material. If this was the case, how does it happen that you did not buy the material on the 21st?

It is our intention that you buy this by invoice and I do not believe this will interfere in any way with the Montana Power Company's instructions to their foremen.

Yours truly,

GHL
WLS

Electrical Engineer.

#1253

November 24, 1914.

Mr. Edwin G. Eaton, M.E.,
149 Broadway,
New York City.

Dear Sir:

Referring to your letter of the 13th inst. regarding the use of steel reinforced concrete poles.

The information contained in your letter as well as the accompanying illustration is very interesting and no doubt should prove satisfactory in operation.

However, I must inform you that our authorized work has already been furnished with cedar poles and consequently we cannot be in the market for a pole of the kind you mention.

Yours truly,

GHL
WLS

Electrical Engineer.

#1254

November 24, 1914.

Mr. F. S. Wheeler,
General Electric Co.,
Schenectady, N. Y.

Dear Sir:

I have your letter of the 19th inst., furnish me with a statement of your education and experience.

I am sorry to advise you that our work has taken on a different aspect, in that all labor has been contracted to the Montana Power Company and consequently we will increase our engineering force to such a small extent that we can offer you nothing at present.

However, I am keeping your application on file and if anything shows up in the future, will take the matter up with you then.

Yours very truly,

GHL
WLS

Electrical Engineer.

#1255

Butte, Mont. Nov. 24, 1914.

Mr. A. J. Busch, Supt.,
Gallatin Valley Railway,
Bozeman, Montana.

Dear Sir:

I am sending you herewith copy of a letter dated November 23rd, from the Westinghouse Electric & Manufacturing Company.

You will note that the Westinghouse Company states that with forced ventilation the continuous tractive effort capacity of the locomotive can be increased from about 3,000 to about 6,600 pounds, a very material increase. You will further note, however, that the capacity for short heavy over-loads will not be changed. What I understand you to mean however, is the continuous capacity.

If my understanding is correct, kindly check over the blue print which I am sending you and which shows the arrangement of the blower and the ducts, and let me know if we have room to install the ducts as shown. We will then be in a position to take this matter up with Mr. Goodnow.

Yours truly,

RB-WLS

Electrical Engineer.

cc--C.A.G.

#1256

Butte, Mont., Nov. 24, 1914.

Mr. C. A. Goodnow,
Asst. to the Pres.,
Chicago, Illinois.

Dear Sir: Re: Great Falls

I am sending you herewith print of Drawing ED-#137, showing the Motor Generator and Switch Board located in present Motor Generator room instead of in the space which was reserved for the extra boiler.

To get the machine in involves moving the feed water pump, the present motor generator set and present switch board, rebuilding foundations for these and building foundations for the new machine.

There is not much space shown between the feed water tank and between the steam trap, but the dotted lines include two ft. clearance so that the walking space is considerably larger than that shown. Of course things are crowded this way, but the layout was carefully gone over with Mr. Arnold, the roundhouse foreman and the arrangement is satisfactory to him.

I took up with Mr. Walker, who was in my office on other business today, the matter of building the foundations, and he stated he could arrange to take care of this matter.

You might possibly wish me to secure approval of this print from the Motive Power Department. If this is not necessary and the arrangement meets with your approval, kindly so advise and put through the requisition hereto attached which covers substation installation material which is not procurable in Great Falls or Butte.

Yours truly,

RB-WLS

Electrical Engineer..

#1257

Butte, Mont., Nov. 24, 1914.

Mr. C. A. Goodnow,
Asst. to the Pres.,
Chicago, Illinois.

Dear Sir:

I have your letter of November 17th regarding a position for Mr. F. A. Tucker. You sent me a letter regarding Mr. Tucker on September 2nd and I have again referred to it.

I have thought the matter over carefully but I do not see how we can advantageously use Mr. Tucker just now. I have got some extra men out staking for the transmission line and trolley poles but of course this is only temporary and does not give a man the chance to learn very much.

If you wish to take Mr. Tucker on to do this kind of work and other similar odd jobs which we might have we could probably keep him busy, but I would suggest that he wait until our substation building work commences, when it is much more likely we may be able to use him.

Yours truly,

RB-WLS

Electrical Engineer.

#1358

Butte, Mont., Nov. 24, 1914.

Mr. C. A. Goodnow,
Asst. to the President,
Chicago, Illinois.

Dear Sir: Re: Substations

In accordance with our conversation of last Thursday morning, I saw Mr. Loweth Thursday afternoon and talked with him concerning the question of the erection of substation buildings.

I gave Mr. Loweth a description of the building and explained to him that the electrical work in the stations would be done through the Montana Power Company by Union men. I further talked to Mr. Loweth about labor conditions as regards the building trades.

Mr. Loweth stated that he would take this matter up with Mr. Walker and have the latter discuss the matter with me in detail. Mr. Walker called this morning and went over the work to be done. He was of the opinion that it could very readily be handled by the B. & B. Department who have a large amount of equipment on hand and ready for business and who he was sure could do the work much more cheaply than it could be contracted for.

With the B. & B. Department doing the work we could start same before all our detailed plans were completed, whereas, with outside contractor doing the work, all plans would have to be completed in great detail before the work could start and there would be the delay incident to securing the bids, etc. Furthermore, shortly after our consultation with the General Electric Company here in Butte, we would be in a position to furnish Mr. Loweth's Department with information which would enable him to design the details of the building shell and steel work in same while we were doing the electrical detailing and of course check Mr. Loweth's drawings as they were made.

It seems to me that an arrangement such as this would be a desirable one, provided of course, that it was made clear that this Department would have

the supervision of the work and it were understood that all important drawings were to be approved by us.

Regarding the labor conditions, I thought that at least with regard to Janney substation, which is within the jurisdiction of the Butte Workingmen's Union, we might immediately have trouble if non-union men were employed on the building work, but Mr. Hebgen with whom I discussed the matter, feels that we would have no trouble, no matter what kind of labor we used. I am not so sure about this myself, but Mr. Walker states that cheap labor would be advantageously employed in the construction of the foundations only, and that as regards the superstructure, it would be difficult for us to find suitable non-union brick layers and steel workers.

From what I can see at present, it would certainly seem that there is little doubt that the proper way to build these stations is to have the Company's forces do the work. I will communicate with you further as soon as I hear from Mr. Loweth.

Yours truly,

RB-WLS

Electrical Engineer.

#1259

November 25, 1914.

Mr. E. W. Kramer,
District Forestry Engr.,
Missoula, Montana.

Dear Sir:

I am sending you under separate cover duly executed map in duplicate on tracing linen and three print copies and field notes in triplicate, comprising the formal application for a right of way across the Deer Lodge National Forest Reserve in Silver Bow County, Montana for our proposed transmission line.

In accordance with telephone conversation of even date, the application is complete except for the Articles of Association, a Certificate of the Compliance with the laws of the State of Montana and a true list of the officers of the Company. These, however, will be mailed you at an early date, enabling you in the meantime to check over the maps and field notes, avoiding the delay of holding them over in my office.

As I am very anxious to get this work under way, may I assume that it is alright to order the material and get it on the ground, pending the issuing of the permit?

Yours very truly,

HWW
WLS

Electrical Engineer.

cc--C.A.G.

#1260

November 25, 1914.

Local Land Agent,
For the Dept. of the Interior,
Helena, Montana.

Dear Sir:

I am sending you under separate cover the following maps and papers:

One copy of the Articles of Association, Chicago, Milwaukee & St. Paul Railway Co.

Certificate of the filing of the Articles of Association with the Secretary of State of the State of Montana.

A true list of the Officers of the Company.

Two duly endorsed maps on tracing linen in duplicate and three print copies of each and field notes in triplicate for each map.

These comprise the formal application for a right of way over lands shown thereon for our proposed transmission line.

As I am very anxious to get this work under way, may I assume that it is alright to order the material and get it on the ground pending the issuance of the permit.

Yours very truly,

RWW
WLS

Electrical Engineer.

cc--C.A.C.

#1261

Butte, Mont., Nov. 25, 1914.

Mr. D. B. Rivers, Storekeeper,
Miles City, Montana.

Dear Sir:

Referring to your telegram of yesterday in regard to kitchen utensils belonging to Mr. Walker, now stored at Miles City.

Mr. Walker was in this office yesterday and told me of this and said that so far as he was concerned the utensils were available for our use. It is quite urgent that we have the attached list on hand at Three Forks Monday morning and I would thank you to kindly make shipment accordingly, sending by baggage if necessary. When you receive this letter, will you kindly wire me any items which you cannot furnish, also if shipment can be made on time as requested.

3 Large Fry Pans,
2 Four Gal Stew Kettles with covers
3 Two " " "
1 Large Tea Kettle
2 " Dish Pans
1 Medium Dish Pan
2 Ten Inch Butcher Knives
2 Sixteen Inch Butcher Knives,
1 Meat Saw
1 " Cleaver
2 Can Openers
7 Doz. Table Knives
7 " " Forks
100 Tea Spoons
100 Soup " and dish up
7 Doz. Mush bowls
7 " Cups
7 " Saucers
15 Two qt. Coffee Pots
12 Two qt. Tea Pots
25 Medium Platters
1 Large China Cap
1 " Collander
36 Medium Dish up pans
100 Plates

#2--D.B.R.--11/25/14

2 Doz. Galv. Water Pails
1 " Dippers
2 Heavy Cake Turners
18 Salt Shakers
18 Pepper Shakers
3 Large Kitchen Meat Forks
6 Large Kitchen Spoons
6 Galv. Wash Tubs
6 Wash Boards
1 Large Flour Sieve
1 Common Sieve
2 Lemon Graters
2 Nutmeg Graters

Yours truly,

GHL
WLS

Electrical Engr.

#1262

Butte, Mont., Nov. 25, 1914.

Mr. A. N. Crowder,
Assistant Engineer,
% Frt. Agt., Gt. Falls.

Dear Sir:

It is our understanding that you have all material on hand for construction of Great Falls with the exception of the following:

12 Mechanical Trolley Anchor Clamps
32 Ears for Double Flexible Pull Offs
30 Ends or connections to fit steady braces.

You now have the wood strain insulator part only. If there is anything wrong with the above list or if you are short any other material, please wire me at once.

Yours truly,

GHL
WLS

Electrical Engr.

#1263

Butte, Mont., Nov. 25, 1914.

Mr. G. F. Wilder,
Asst. Purchasing Agt.,
Seattle, Washington.

Dear Sir:

We will require the following poles for the completion of our present authorized work:

131	Pieces	40	ft.	poles
262	"	45	"	"
114	"	50	"	"
55	"	55	"	"
50	"	65	"	"
17	"	70	"	"
10	"	75	"	"

On November 23rd I wired you for seven 65 ft. poles, four 70 ft. poles and two 75 ft. poles. These few poles are included in the above order, and if you have already placed the order according to my wire of the 23rd, please subtract from the above order for poles to complete our work. However, we wish a hurried delivery on the poles as listed in my wire of the 23rd.

Will you please wire me how soon we can get delivery on these poles. I am requesting Mr. Goodnow to wire you authority to purchase the whole amount.

Yours truly,

GHL
WLS

Electrical Engineer.

#1364

Butte, Mont., Nov. 27, 1914.

Mr. E. A. Patterson,
Supt. of Telegraph,
Seattle, Washington.

Dear Sir: Re: Overhead Crossing Specifications.

Referring to our conversation of yesterday evening regarding specifications to be complied with in the construction of overhead crossings over our right of way, it seems to me such crossings may be divided into three general kinds, as follows:

1. Lines, of any kind, crossing electrified tracks to be electrified.

2. Light and Power lines crossing tracks not to be electrified and crossing our telegraph and telephone lines.

3. Telegraph and telephone lines crossing tracks not to be electrified and crossing our telegraph and telephone lines.

The Electrification Department is particularly interested in crossings of the first kind. We wish to be sure that lines crossing over our trolley and transmission lines will be constructed with such factors of safety as will reasonably insure that such crossing lines will not drop on our own and with such clearance as may be necessary for proper operation and maintenance. For any given case the factors of safety and clearances should be the same, regardless of the kind of circuit which crosses.

Regarding the form of specification, I quote as follows from the October, 1914 Report of the Committee on Electrical Working of the American Railway Association:

"In the Spring of 1912 the Association adopted as recommended practice specifications for overhead crossings of electric light and power lines. These specifications were subsequently adopted by the American Railway Engineering Association, the National Electric Light

#1264

#2--E.A.P.--11/27/14

Association and the American Institute of Electrical Engineers. The American Railway Engineering Association in 1913 adopted a specification differing in some respects from the foregoing. This amended specification has been the subject of consideration by our Sub-Committee in conference with similar Committees of the other associations, in order to effect the adoption of a standard specification by all bodies interested. Their joint report recommends the adoption of the American Railway Engineering Association specification, and your Committee endorses this recommendation and the adoption of the new specification as the recommended practice of the Association."

We have examined the specifications referred to in this quotation in detail and believe they fairly well cover our requirements. They would at least form a satisfactory basis on which an applicant could base his crossing calculations. We would, in addition, want the applicant to furnish a drawing of similar information showing profile of his line at or near the crossing, locations of all poles interested, clearances from other lines and such other data as would enable us to check his stress calculations. These specifications you will note have been adopted a standard by representative associations after careful study and investigation, and as far as the Electrification Department is concerned we would like to see them adopted by the Idaho Commission, it being explained to the Commission at the same time that we would desire the drawing and additional information as mentioned above.

I understand you will wire me definitely as to whether or not you will attend the meeting in Idaho and represent both your interests and our own.

Yours truly,

RB-WLS

Electrical Engineer.

#1285

Butte, Mont., Nov. 27, 1914.

Mr. C. F. Loweth,
Chief Engineer,
Chicago, Ill.

Dear Sir:

Referring to your letter of November 24th to which was attached an application for work by Daniel Ferrara.

We are using our own railway men as far as possible, and so far we have been able to obtain them in the West.

If we need men we cannot get here, I would be glad to communicate with you. However, I believe the only men that we will further need are those with electrical experience.

Yours truly,

KB-WLS

Electrical Engineer.

#1866

Butte, Mont., Nov. 27, 1914.

Mr. C. F. Loweth,
Chief Engineer,
Chicago, Ill.

Dear Sir:

I have your telegram of November 25th: We will want to start putting these supports on the bridges promptly so that our contractor may proceed with the location of the poles when he gets to the bridges and not have to go back again. You will remember that the idea was to have the B. & B. Department do this work.

I would suggest that you have Mr. Walker or someone else confer with me in this connection as soon as possible.

Yours truly,

RB-WLS

Electrical Engineer.

cc--C.A.C.

#1267

November 27, 1914.

Electric Service Supplies Co.,
417 So. Dearborn Street,
Chicago, Illinois.

Dear Sirs:

Referring to your letter of November 20th, we are very well acquainted with the Locke Insulator Manufacturing Company's products and no doubt these will figure in the bids to be received by our Purchasing Department.

We will need a large number of insulators for the support of 500,000 and 700,000 C.M. 3,000 volt bare feeder and also insulators for the support of bare solid No. 4, 2300 volt transmission line.

We expect to have the requisition in the hands of our Purchasing Department for this material during the following week and suggest you confer with that Department in this connection.

Yours very truly,

RS-WLS

Electrical Engineer.

#1368

November 27, 1914.

Edison Storage Battery Co.,
2025 Michigan Avenue,
Orange, N. J.

Dear Sirs:

I have your letter of November 24th regarding Storage Battery for Control Circuit of Electric Locomotives.

Our Electric Locomotives have been contracted for and will consist of two one-half units each, containing a control M. G. set. You will , therefore, see that just at present we do not contemplate the use of storage battery connection.

In our substations we will use some storage battery in connection with emergency lighting system and the present intention is to use your apparatus for this purpose.

Yours very truly,

RB-WLS

Electrical Engineer.

#1269

Butte, Mont., Nov. 27, 1914.

Mr. J. T. Crocker,
Purchasing Agent,
Chicago, Illinois.

Dear Sir:

Referring to the accompanying Requisition No. RS-137, for transmission line suspension insulators, I am handing you herewith copy of the Ohio Brass Company's proposition referred to in this requisition. Prices will be f.o.b. Mansfield, Ohio, as follows:

5,550	Ball and Socket Suspension Six Section Insulators @ 85¢ per disk, or $5.10 per insulator	$28,305.00
1,065	Ball and Socket Strain Seven Section Insulators @ 85¢ per disk, or $5.95 per insulator	6,336.75
6,700	Locking Tower Hooks @ .035 ea.	234.50
5,550	Type S. Form 1, Suspension Clamps for .45" diameter cable @ 50¢ ea.	2,775.00
1,065	Type E, Form 1, Strain Clamps for .45" diameter cable @ 95¢ ea.	1,011.75
400	Suspension Single Section Insulators with clevis connection and one clevis pin ea. @ 85¢ ea.	340.00

These prices are in accordance with the Ohio Brass Company's telegram of November 25th, 1914, copy of which is attached, and their wire of the inst., copy of which is also attached..

Regarding deliveries you will note that the Ohio Brass Company expects to begin same about the middle of December, completing in five or six weeks. I will write you further when we get definite advice. These insulators will all have to be carefully inspected and I will advise you further about arrangements for this inspection as soon as I have conferred with the Ohio Brass Company's representative who will be here shortly.

Yours truly,

RB-WLS

Electrical Engineer.

#1270

Butte, Mont., Nov. 28, 1914.

Mr. C. A. Goodnow,
Asst. to the Pres.,
Chicago, Illinois.

Dear Sir:

Referring to the attached requisition for transmission line insulators, we sent out our specifications for these on June, to the Locke Insulator Manufacturing Company, the Pittsburgh High Voltage Insulator Company, the R. Thomas & Sons Company and the Ohio Brass Company. These specifications called for 5,350 suspension insulators and 250 strain insulators. All of the Companies, practically, recommended the same disc for both suspension and strain purposes; six discs for the suspension and seven for the strain insulators, making 33,850 discs althgether.

For your information I have tabulated the bids as shown on the attached sheet.

All the insulators listed are of the same general type, originally gotten out by the Ohio Brass Company. This type of insulator was the one offered by the Ohio Brass Company to the Montana Power Company several years ago in competition with several other manufacturers, who submitted different types. The Montana Power Company made comparative tests, the results of which were very much in favor of the Ohio Brass type of insulator, which was adopted by the Power Company. I believe they gave some of their order to other companies, but the latter had to furnish the Ohio Brass type.

You will note there are material differences as to price in the bids listed. The R. Thomas Company offered a subsequent unsolicited verbal reduction of three cents per disk and the Ohio Brass Company a reduction (see requisition attached) of two cents per disc, both asking that these reductions be treated as strictly confidential. Of course, basing the comparison merely on price, it would not be fair to consider these reductions, as the other companies might also make

#1270

reductions if the matter were put up to them.

Regardless of the price differences, I recommended to you in Chicago that the insulator be purchased from the Ohio Brass Company. This is because I feel that in view of the troubles which have developed with suspension insulators, even after some years of service, we cannot afford to purchase any but the best. The wide experience of the Ohio Brass Company and the unusually careful study and testing they give their insulators makes the extra expenditure we must make justifiable.

If you agree with me, kindly approve the requisition, and I will have the Ohio Brass Company's representative here to arrange with him regarding inspection.

Yours truly,

RB-WLS

Electrical Engineer.

C. R. Strong, Three Fks.
A. E. Long, "

Butte, Nov. 27, 1914.

Dear Sir:

I am sending you blueprint of ED-#136, also revised blueprints of ED-#19, #20 and #21. Please destroy the prints of #19, #20 and #21 ~~that~~ you have as they are obsolete.

MC-WLS

R. Beauwles, Elec. Engr.

#1271

Butte, Mont., Nov. 28, 1914.

Mr. A. N. Crowder,
Assistant Engineer,
Great Falls, Mont.

Dear Sir:

Storekeeper Kroha is shipping you three track drills by baggage from Tacoma; these being shipped yesterday, they should reach Great Falls by Monday or Tuesday.

There is also a shipment of three machines going to you by freight and as this shipment will be so long in reaching you, we had the storekeeper ship three more by baggage.

Please return three of the machines to Storekeeper A. J. Kroha at Tacoma by freight, advising.

Yours truly,

GHL
WLS

Electrical Engineer.

#1272

November 28, 1914.

E. T. Chapin Co.,
Bovill, Ida.

Dear Sirs:

Referring to your letter of the 24th inst., I am glad to see that you are loading the forty foot poles promptly and note that Mr. Wilder has given you a further order for some sixty-five, seventy and seventy-five foot poles.

We are going to require these on the first part of our work and I would like to have them come along with the forty foot poles in advance of the balance of your own order.

Yours very truly,

CHL
WLS

Electrical Engineer.

#1273

Butte, Mont., Nov. 28, 1914.

Mr. W. L. Slater,
Pole Inspector,
Bovill, Idaho.

Dear Sir:

I am glad to see that you have started shipping the forty foot poles from Bovill. As I wired you yesterday you should include the 65, 70 and 75 foot poles which Mr. Wilder recently ordered with the forty foot poles which you are shipping.

All of these shipments should be billed to me at Three Forks. After this, you may bill the balance of the Chapin order to me at Deer Lodge.

We have been in a hurry for this amount of the shipment, but believe that there will be no hurry in completing the balance of the order; that is, we can allow the Pole Company to make good progress in shipping without rushing them as we have been doing.

I will keep you advised as to how we wish shipments to come and wish you would wire me each day just what has been loaded, giving me car numbers. If nothing has been done, please wire me, stating the reason.

Yours truly,

GHL
WLS

Electrical Engineer.

P.S. -- It will be alright to ship poles up to and including 9" top, but nothing larger.
R.B.

#1274

Butte, Mont., Nov. 28, 1914.

Mr. J. T. Crocker,
Purchasing Agent,
Chicago, Illinois.

Dear Sir:

Referring to my conversation with Mr. Jennings on November 19th, I believe you understand exactly what we want in regard to transmission wire splicing sleeves, i.e. that these are to be for 2/0 Hemp Core Cable .45 inch in diameter.

We advised you before purchasing the sleeves for the No. 0 wire originally intended to be used for transmission line that the size of the wire would be changed, but through some oversight you placed an order for some of the sleeves for the No. 0 wire.

We will, therefore, arrange to return these sleeves as soon as possible, but in the meantime you should not delay sending us the correct ones. Kindly advise us if this matter is thoroughly understood.

Yours truly,

RB-WLS

Electrical Engineer.

#1275

Butte, Mont., Nov. 28, 1914.

Mr. W. P. Warner,
A. G. F. & P. A.,
Spokane, Washington.

Dear Sir:

I have yours of the 24th inst., File #1205½-B. I presume you are aware of the fact that our work has been contracted to the Montana Power Company, they to do all the labor and we to furnish the material.

At present they have established a camp at Great Falls for electrifying the Great Falls terminal yards and should complete that overhead work by the latter part of January.

We are outfitting cars at Deer Lodge and shipping them to Three Forks where the Power Company will establish a camp of fifty men and begin working on the Main Line.

I do not know what your object is in asking me in regard to this, but if it has anything to do with applications for positions, you may as well answer all inquiries in the negative. We are receiving hundreds of applications both in person and by mail, and it is practically impossible to do anything for the job seekers.

Yours truly,

GHL
WLS

Chief Clerk.

#1276

Butte, Mont., Nov. 28, 1914.

Mr. J. T. Crocker,
Purchasing Agent,
Chicago, Illinois.

Dear Sir:

Referring to Requisition RB-#138, I have a letter from the Locke Insulator Manufacturing Company of Victor, N. Y., under date of September 18th in which they quote prices on Items #1 and #2 as follows:

For #3361 Strain Insulator, 17¢ each;
For #3573 " " 24¢ "

I presume you will place this order direct with the manufacturer in order to obtain the benefit of their direct guarantee and best delivery.

Referring to Items #3 and #4 covering Pin Insulators, these are covered by the specifications and are open to competition. I would suggest, however, that bids be confined to the Locke, Thomas and Ohio Brass Companies.

Item #5, Locust Cross Arm Pins: The Pins furnished on our Requisition #26 were very satisfactory and I would suggest that this order be placed with the same firm.

Item #14: You will note from attached letter that we have been corresponding with the Hubbard Company that that they are familiar with the type of bracket we desire.

Items #16 and #17: The type of Expansion Eye Bolt desired is one provided with lag screw thread which is used with malleable iron shield. Each eye-bolt to be furnished complete with a shield.

Yours truly,

REW

Electrical Engineer.

WLS

#1277

Butte, Mont., Nov. 28, 1914.

Mr. J. T. Crocker,
Purchasing Agent,
Chicago, Illinois.

Dear Sir:

Referring to Requisition RB-#141, Item #1, calling for Wood Lignumvitae Shieve Snatch Blocks, will you please get a statement on delivery from the makers when placing the order, advising me at once if any extraordinary delay is involved.

Yours truly,

REW
WLS

Electrical Engineer.

#1278

November 28, 1914.

Mr. Max Hebgen, Gen'l Mgr.,
The Montana Power Company,
Butte, Montana.

Dear Sir:

According to our power contract, you are to deliver power to us at five points between Deer Lodge and Harlowton, Montana.

Our initial electrified trackage will extend from Three Forks to Deer Lodge, and our substations for this initial electrification will be located at Eustis, at the N. P. Crossing of our line one and one-fourth miles east of Piedmont Station, at Janney and at Morel.

As to the amount of power required at each substation, you will appreciate that all of our substations will be tied together by means of a tie line and the amount of power delivered at any particular point will depend, not only on the distribution of our loads, but on the impedance and other characteristics of your own lines.

The capacities of our substations will be as follows: Eustis and Morel, normal capacity 4,000 K. W.; two hour over-load capacity, 6,000 K. W.; five minute capacity, 12,000 K. W. At Piedmont and Janney each, normal 4,500 K.W.; two hour load, 6750 K.W.; five minute load, 13,500 K.W.

The exact stationing of these substations will be settled very shortly.

Yours very truly,

RB-WLS

Electrical Engineer.

cc--C.A.G.

#1279

Butte, Mont., Nov. 28, 1914.

Mr. A. N. Crowder,
Asst. Engineer,
Great Falls, Mont.

Dear Sir:

We shipped from Deer Lodge on November 25th to you at Great Falls by Parcel Post six Haven Champs. Acknowledge Receipt.

Yours truly,

GHL
WLS

Electrical Engineer.

#1280

Butte, Mont., Nov. 30, 1914.

Mr. H. J. Voyer,
% J. W. Fry,
Seattle, Wash.

Dear Sir:

Referring to your letter of the 22nd inst., the Montana Power Company have contracted for the labor on our work and will hire all of the men. I have talked to them in regard to a position for you and on account of the trouble which we had last summer we believe it would not be advisable for you to return here at present.

If matters develop in such a way that we think it would be safe for you to return on this work, we will be glad to take the matter up with you then.

I understand that you are now employed by Mr. Fry and not out of work.

Yours truly,

GHL
WLS

Electrical Engineer.

#1279

Butte, Mont., Nov. 30, 1914.

Mr. C. R. Strong,
Asst. Engineer,
Three Forks, Mont.

Dear Sir:

On November 25th we shipped three pair of hip boots under Baggage Register No. 85200 from Deer Lodge to you at Three Forks. Please acknowledge receipt.

Yours truly,

GHL
WLS

Electrical Engineer.

#1281

Butte, Mont., Nov. 30, 1914.

Mr. G. F. Wilder,
Asst. Pur. Agt.,
Seattle, Wash.

Dear Sir:

Referring to the attached letter from the Seattle Hardware Company relative to saws which they shipped on my Requisition No. 19, your Order #73652. I now find that we have never received these saws and it will be satisfactory to have the Seattle Hardware Company will make shipment to us at Three Forks. We have never received invoice covering the material.

Yours truly,

GHL
WLS

Electrical Engineer.

#1282

Butte, Mont., Nov. 30, 1914.

Mr. A. J. Kroha, Storekeeper,
Tacoma, Washington.

Dear Sir:

Your Circular #25: We have no special forms printed exclusively for this Department, but are using standard forms and adjusting them to our needs. Presume you will not require a copy of these.

Yours truly,

GHL
WLS

Electrical Engineer.

#1283

Butte, Mont., Nov. 30, 1914.

Mr. J. T. Crocker,
Purchasing Agent,
Chicago, Illinois.

Dear Sir:

We are returning to you by registered baggage the sample grip received from M. Klein & Sons referred to in your letter of November 19, 1914.

This grip is of the general type we want except that it must be furnished to take a wire forty-five hundredths of an inch (.45") in diameter and this wire will be stranded. The sample grip is marked "not for strand wire". The reason for this no doubt is that the jaws are corrugated and would injure the strand.

The type of grip is alright if furnished with jaws suitable for strand cable .45" in diameter. Please wire me if this letter is understood.

Yours truly,

RB-WLS

Electrical Engineer.

#1384

November 30, 1914.

Kerite Insulated Wire & Cable Co.,
Peoples Gas Building,
Chicago, Illinois.

Dear Sirs: Attention: Mr. Hamilton

Will you please advise at your early convenience price and detailed dimensions for No. 4 B. & S. Two Conductor Cable made up round. Data is to apply to both 2300 and 5000 volt insulation and cable is to be used in tunnels suspended from Messenger wire by ordinary cable grips.

In this connection please bear in mind that tunnels will be free from locomotive exhaust and gases within any reasonable time after cable is installed.

Yours very truly,

RB-WLS Electrical Engineer.

#1285

November 30, 1914.

The R. Thomas & Sons Co.,
Old Colony Building,
Chicago, Illinois.

Dear Sirs:

Regarding the matter of high tension insulators, after giving this very careful consideration, we have decided that for our first order at least, it will be best to use a make already extensively and satisfactorily used in this territory on the lines which will connect with our own.

I wish to thank you, however, for the interest you have taken in connection with this matter.

Yours very truly,

RB-WLS

Electrical Engineer.

#1286

November 30, 1914.

American Steel & Wire Co.,
Elec. & Wire Rope Dept.,
208 South La Salle St.,
Chicago, Illinois.

Dear Sirs:

I have your letter of November 28th regarding copper wire with steel core and thank you for this information.

After carefully investigating the matter, however, we have decided on the use of another type of cable, and same has been covered by requisition. No doubt you have heard from our Purchasing Department in this connection.

Yours very truly,

RB-WLS

Electrical Engineer.

#1287

Butte, Mont., Nov. 30, 1914.

Mr. J. C. Mill,
Signal Engineer,
Milwaukee Shops, Wis.

Dear Sir:

I have your letter of November 25th regarding connections to impedance bonds and the prints referred to in Mr. Dean's letter.

I note in the fourth paragraph of Mr. Dean's letter that he is waiting for load curves which will enable him to recommend bond sizes. This is not in accordance with what we finally settled at our conference in Butte. In this connection kindly refer to my letter of October 24th, clause "Third" which shows that for the district between Piedmont substation and Newcomb, 1,000 amperes bond would be used and in other locations the 500.

You do not refer in your letter to the other matters taken up in my letter of November 7th. I understood you to say, when I saw you on No. 15 a few days ago that you would be satisfied to use our standard feeder arm at signal locations, but I would like also to know whether you could give me signal locations between Butte and Finlen.

Yours truly,

RB-WLS

Electrical Engineer.

#1288

Butte, Mont., Nov. 30, 1914.

Mr. C. A. Coodnow,
Asst. to the Pres.,
Chicago, Illinois.

Dear Sir:

I received last Saturday from your office in Chicago, a telegram reading as follows:

"Advertising Dept. would like several pictures concerning electrification our line, power stations, dams, etc. Can you obtain and send Chicago?"

This telegram was no doubt sent by someone in your office, but I think you would like to hear from me before I send anything. If you wish the photographs sent, I will endeavor to obtain from Mr. Hebgen such photographs as he might have of the power station work and we also might send along a white print showing the preliminary dimensions of one of our locomotives. What do you think of this?

Yours truly,

RB-WLS

Electrical Engineer.

#1289

Butte, Mont., Nov. 30, 1914.

Mr. H. C. Cochrane,
Montana Power Co.,
Butte, Montana.

Dear Sir:

Referring to our various conversations regarding the possibility of your being able to use power limiting scheme, in connection with which I gave you a description on October 24th.

Transmission wiring could most conveniently and economically be done at the time the other wire is strung.

I would therefore like to hear from you in this connection as soon as possible.

Yours truly,

RB-WLS

Electrical Engineer.

November 30, 1914.

Mr. W. T. Dean,
Dist. Mgr. P. & M. Dept.,
General Electric Co.,
Schenectady, N. Y.

Dear Mr. Dean:

I have your letter of November 27th but regret very much to say that just at present I am not in a position to take on any more men.

As you know, we have been working on our plans through the summer and the same are now in such shape that the men who have been doing the office work can now be used on the outside.

It is probable that we will need some additional assistance, but this has already been arranged for. If I ever find that I can do anything for Mr. Collins I will be very glad to do it.

Yours very truly,

RB-WLS

Electrical Engineer.

#1290

Butte, Mont., Nov. 30, 1914.

Mr. J. T. Crocker,
Purchasing Agent,
Chicago, Illinois.

Dear Sir:

Referring to your letter of the 18th inst. relative to one hundred miles of American Standard Grooved 4/0 Copper trolley wire ordered on my Requisition #56.

Please note that the additional trolley wire required is ordered on my Requisition #148 and note on requisition states that it is in addition to Requisition #56.

Yours truly,

GHL
WLS

Electrical Engineer.

Butte, Mont., Nov. 30, 1914.

#1291

Mr. J. T. Crocker,
Purchasing Agent,
Chicago, Illinois.

Dear Sir:

Referring to my Requisition #60, also Requisition #142, please note that Requisition #142 cancels items #1 and #2 on Requisition #60, these items being 315 miles of H. D. No. "0" Seven Strand Copper Wire and 350 Seamless Splicing Sleeves.

I do not know what sized splicing sleeves the Clark Electrif & Mfg. Company shipped to Three Forks, but will receive this information from our Material Clerk shortly, and if they have shipped sleeves for the No. "0" wire on Requisition #60, we will return them, but if they are sleeves for 4/0 on the same requisition, we will keep them.

Please bear in mind that the last two items on Requisition #60, i.e., 131 miles of 19 strand 4/0 H. D. Copper wire and 150 seamless splicing sleeves for that wire are to be furnished and shipped to Three Forks.

Yours truly,

GHL
WLS

Electrical Engineer.

#1293

Butte, Mont., Nov. 30, 1914.

Mr. G. F. Wilder,
Asst. Purchasing Agt.,
Seattle, Washington.

Dear Sir:

Referring to your letter of the 28th inst. relative to specifications for 75 ft. poles, also your telegram of this date relative to specifications for 35 ft. poles.

I wired you in regard to the 35 ft. poles and am attaching herewith corrected pole specifications which now include lengths 25' to 75 ft.

Yours truly,

GHL
WLS

Electrical Engineer.

cc--W. L. Slater, also specifications.

#1293

November 30, 1914.

Mr. M. E. Buck,
Montana Power Company,
Butte, Montana.

Dear Sir:

Referring to our recent conversation in regard to men formerly employed by this Department who were the ring-leaders in the labor trouble.

So far I have been able to find the names of only two of these men, which are, Willets and J. Locke. These men were in the gang working out of Deer Lodge and were the ring-leaders in that disturbance.

Yours truly,

GHL
WLS

Electrical Engineer.

Butte, Mont., Nov. 30, 1914.

Mr. H. W. Waslosky,
Sappington, Mont.

Dear Sir:

Mainly on account of errors in pole list you will have to make the following changes:

1016 - 25 should read - 75.
1137 - 55 " " - 75.
1140 - 01 " " - 61.
1258 - 00 ---- 43' 6" to be staked (omitted on list)
1290 - 90 should read 1291 - 00
1672 - 00 " " 1671 - 50
1751 - 00 " " 1751 - 50
1754 - 00 " " 1754 - 50
1758 - 25 " " 1757 - 25
1877 - 00 " be marked 36' 6"
1880 - 00 --- 34' 3" to be staked (omitted on list)
1990 - 00 should read 38' 9"

Yours truly,

REW-WLS

Assistant Engineer.

#1294

November 30, 1914.

Mr. Max Hebgen, Gen'l Mgr.,
The Montana Power Company,
Butte, Montana.

Dear Sir:

For your information I attach hereto copy of our Circular Letter in regard to the separation of charges on the different pieces of work coming under this office.

You will please understand that each of these jobs is covered by a separate "Authority for Expenditure" and consequently it is absolutely necessary that we keep all costs separated.

Will you kindly issue instructions accordingly in connection with the particular pieces of work you are interested in.

Yours truly,

RB-WLS

Electrical Engineer.

Butte, Mont., Nov. 30, 1914.

Mr. C. R. Strong,
Assistant Engineer,
Three Forks, Mont.

Dear Sir:

I hand you herewith voucher check, amount $53.45, same to cover expenses incurred by you during the month of October.

Yours truly,

GHL
WLS

Electrical Engineer.

#1295

December 1, 1914.

Thompson-Levering Company,
323 Arch Street,
Philadelphia, Pa.

Dear Sirs:

Kindly refer to your letter No. 683 dated October 7th.

Will you please advise if you are now in a position to furnish us with this instrument, or if you would rather not ship it at all.

Yours truly,

GHL
WLS

Electrical Engineer.

#1296

Butte, Mont., Dec. 1, 1914.

Mr. C. A. Goodnow,
Asst. to the President,
Chicago, Illinois.

Dear Sir:

We have not been requested to furnish a list of Annual Passes required for this Department for 1915, but as other Departments have had their list in for sometime, I presume we should do likewise. The following is a list of passes with which I believe we should be furnished:

R. Decuwkes, Elec. Engr.
C. M. & St. P. Ry., -- Sleeper.
Northern Pacific Ry.
Great Northern Ry.
O. S. L.
L. S. & M. S. Ry.
N. A. & P. Ry.
N. Y. C. & H. R. R.

R. E. Wade, Asst. Engr.
C. M. & St. P. Ry. -- Sleeper
Northern Pacific Ry.
Great Northern Ry.

A. N. Crowder, Asst. Engr.
Great Northern Ry.
C. M. & St. P. Ry.

Geo. H. Long, Chief Clerk, C. M. & St. P. Ry.
C. R. Strong and three, Asst. Engr. C.M.& St.P.Ry.
M. Curtis, Draftsman, "
H. W. Williams, "
W. L. Slater, Pole Inspector "
A. E. Long, Mat'l Checker "

Quite frequently it is necessary that we send men out on the Olympian or lose a day on the work. Mr. Barrett's office has recently received strict instructions to issue Olympian permits in case of sickness or death only, and consequently is not in a position to furnish us with these permits any more.

#1296

Page #2--C.A.G.--12/1/14

Do you care to make some kind of an arrangement whereby we can fix it so our men can use No. 15 and No. 16? Not only does it affect men going out from this office but on account of the short time between arrival and departure of Nos. 34 and 33 on the east end of the Division it necessitates our men waiting over a day before returning to Butte.

Yours truly,

RB-ELS

Electrical Engineer.

#1297

December 1, 1914.

Mr. A. H. Armstrong,
General Electric Co.,
Schenectady, N. Y.

Dear Sir:

Will you kindly furnish and mail to our Chief Engineer, Mr. C. F. Loweth at #1359 Railway Exchange Building, Chicago, Ill., a white line print of the electric locomotive which you are building for operation on this Division.

Yours truly,

GHL
WLS

Electrical Engineer.

Butte, Mont., Dec. 1, 1914.

Mr. C. A. W. Musson,
Assistant Engineer,
Butte, Montana.

Dear Sir:

This will acknowledge receipt of voucher checks sent me with your letter of November 28th. I am today forwarding same to parties in whose favor checks are drawn.

Yours truly,

GHL
WLS

Electrical Engineer.

#1298

December 1, 1914.

McDonald Commissary Co.,
Rockdale, Wash.

Dear Sirs:

Your letter of the 25th ult. received and in reply wish to state that the Montana Power Company have contracted all labor from this Department and in accordance with their custom, have established their own camps.

Yours very truly,

GHL
WLS

Electrical Engineer.

December 1, 1914.

Engineering and Contracting,
608 South Dearborn St.,
Chicago, Illinois.

Dear Sirs:

Referring to your letter of the 18th inst. and returning herewith bill, amount $2.00 covering subscription to your magazine from November 1, 1914 to October 31, 1915.

There is also enclosed check in your favor for $2.00 and I wish you would please enter my name on your subscription list for the above dates, returning receipted bill to me promptly.

Yours truly,

GHL
WLS

Electrical Engineer.

#1299

December 1, 1914.

Western Block Company,
Lockport, N. Y.

Dr Dear Sirs:

Referring to your letter of November 24th relative to Wood Shell, Lignumvitae Sheave Snatch Blocks.

I wish to advise that we have made requisition on our Purchasing Agent Mr. J. T. Crocker of Chicago, specifying fifty of the above blocks. Presume you will hear from Mr. Crocker direct.

Yours truly,

GHI
VLS

Electrical Engineer.

1300

December 1, 1914.

Mr. C. C. Headley, Mgr.,
Western Union Telegraph Co.,
Ashtabula, Ohio.

Dear Sir:

Will you kindly refer to my letter of September 15th relative to charge on message sent from Ashtabula on July 26th to the Continental Telegraph Company at Chicago, message not being received.

Will you please advise when we are to expect this refund.

Yours truly,

Electrical Engineer.

SHL
WLS

Butte, Mont., Dec. 1, 1914.

Mr. C. F. Loweth,
Chief Engineer,
Chicago, Illinois.

Dear Sir:

Referring further to my letter to you of the 27th ult. relative to securing men from the Engineering Department when we are in need of more help.

We have secured several from Mr. Musson as well as through Mr. Reeder's office and always let them know our wants even if for only rodmen or tapeman, before hiring new men. As a matter of fact, with a very few exceptions, all of our men are old employes of the road.

Yours truly,

GHL
ZLS

Electrical Engineer.

cc—E.O.R.

December 1, 1914.

Mr. M. M. Jones,
The Stratford Hotel,
Chicago, Illinois.

Dear Sir:

This will acknowledge receipt of your letter of the 31st ult., advising me that you had forwarded my shirts to me by American Express.

I wish to thank you for your promptness and courtesy in this matter.

Yours very truly,

RB-WLS

December 1, 1914.

Mr. B. C. Mottern,
% J. I. Morrocks,
Rockdale, Wash.

Dear Sir:

At present we will be unable to use you in this Department. We have taken on no new parties, but have returned C. R. Strong.

It may be that we will require another party at a later date and I will take the matter up with you then. Please remember that we have you in mind and it is our intention to hire the old men first.

Yours truly,

GHL
WLS

Electrical Engineer.

#1301

Butte, Mont., Dec. 1, 1914.

Mr. A. E. Long,
Material Checker,
Three Forks, Mont.

Dear Sir:

Please mail a report each day showing poles on hand at Three Forks. These need not be in the form of a letter, but simply a note like the attached.

Yours truly,

GHL
WLS

Electrical Engineer.

#1303

Butte, Mont., Dec. 1, 1914.

Mr. A. E. Long,
Material Checker,
Three Forks, Mont.

Dear Sir:

In future you will deliver tools or material to the Montana Power Company's employes only when they present a written order signed by Mr. Buck or the Foreman of his crew.

Yours truly,

GUL-WLC

Electrical Engineer.

cc--H.E.B.

#1303

Butte, Mont., Dec. 1, 1914.

Mr. A. E. Long,
Material Checker,
Three Forks, Mont.

Dear Sir:

On the 25th of each month please make up and send me a statement of all material shipped from your storehouse to the gangs on the line.

Yours truly,

GHL-WLS

Electrical Engineer.

#1304

December 1, 1914.

Barrett Manufacturing Co.,
Chicago, Illinois.

Dear Sirs:

Referring to your letter of November 28th relative to a wood preservative for use on our poles.

I wish to state that we have given this matter thorough consideration and have decided to use the untreated poles.

Yours truly,

CHL
WLS

Electrical Engineer.

Butte, Mont., Dec. 1, 1914.

Mr. J. T. Crocker,
Purchasing Agent,
Chicago, Illinois.

Dear Sir:

Will you please advise what is being done about the fifty 12' 3" Guy Rods short from the Interstate Iron & Steel Company, my Requisition #34, your Order #3075, my letter to you of October 17th.

Yours truly,

GHL
WLS

Electrical Engineer.

Butte, Mont., Dec. 1, 1914.

Mr. J. T. Crocker,
Purchasing Agent,
Chicago, Illinois.

Dear Sir:

Kindly refer to my letter of October 17th. Will you please advise if you have received results of tests made on six anchor rods by Mr. Allen at Milwaukee Shops. These rods were furnished on my Requisition #53 and we registered a complaint with you on account of their being under size in diameter. We are getting ready to use the rods and would like to know the results of these tests.

Yours truly,

CRL
WLS

Electrical Engineer.

#1305

Butte, Mont., Dec. 3, 1914.

Mr. C. A. Goodnow,
Asst. to the Pres.,
% H. B. Earling, Seattle.

Dear Sir:

I saw Mr. Hebgen regarding the matter of points at which his transmission lines will connect to our system and particularly about the matter of another connection at Piedmont.

Mr. Hebgen has three transmission lines running near our Piedmont substation which connect with his Parrot switching station about a mile off from us. The arrangement of the lines is shown on the attached print ED-#120. The three lines referred to are not the correct voltage for our line and it would be necessary for us to use transformer and oil switches, for which, if this is made an additional point of connection, we would have to pay.

I have made a very rough estimate of the cost of this apparatus and this, with the increase in size of substation involved would amount to probably $35,000. In this amount is included two step-down transformers of 3,000 K. W. each. This capacity is sufficient to take care of not only the Piedmont station, but of 3,000 additional K. W. to be distributed to adjacent subetations.

As I told you, we are figuring on contract points of connection at Morel, Janney and Eustis and later at Summit and Two Dot.

You spoke of the use of Helena Power at Summit and Great Falls power at Two Dot. Mr. Hebgen has not yet settled just in which way he will run his transmission line with respect to Helena and Great Falls. He might run them both to Great Falls and he might run one to Helena and one to Great Falls, but inasmuch as the whole system is tied together, this point, it does not seem to me, is so very important.

Kindly advise me if it will be satisfactory to tell Mr. Hebgen that our five contract points will be

#1305

#2---C.A.C.---12/2/14

Morel, Janney, Eustis, Summit and Two Dot and advise me also if you want to spend the additional money to get a connection at Piedmont. Of course this additional connection will be a very desirable thing to have.

As I explained to you on the train, the reason for my desiring a connection at Eustis regardless of whether or not we had one at Piedmont is that on this first electrification, if we did not have a Power Company connection at Eustis, we would have there only one feed, i.e., our own transmission line.

There is another point which Mr. Hebgen brought out, i.e., he considers that he must be prepared to furnish the full amount of power contracted for at each one of the five contract points. This understanding, of course, is one which is very desirable to us.

Yours truly,

RB-WLS

Electrical Engineer.

MAILOGRAM

Butte, Dec. 2, 1914.

F. E. Willard, Supt.,
Missoula.

The following cars of poles were loaded at Bovill on the dates shown and are billed to me at Three Forks. As soon as cars reach Avery will you please do all you can to hurry them to destination, advising me when you get track of them: #60105, November 26th
478817 " "
30279 " "
29599 " 30th.

R. Beeuwkes.

MAILOGRAM

Butte, Dec. 2, 1914.

G. F. West,
Car Service Agt., Seattle.

Car P.R.R. #577710 containing copper trolley wire billed from Detroit in this Company's care to St. Paul for re-consignment to me at Great Falls. Car left Detroit November 23rd. Will you please do all you can to hurry car to destination.

R. Beeuwkes.

Butte, Mont., Dec. 2, 1914.

Mr. F. B. Walker,
Assistant Engr.,
Gt. Falls, Mont.

Dear Sir:

Referring to your note of November 30th, the changes in foundations for the Great Falls power house are waiting certain approvals. As soon as I have received same I will take up with you the matter of construction.

Yours truly,

RB-WLS

Electrical Engineer.

#1306

Butte, Mont., Dec. 2, 1914.

Mr. C. A. Goodnow,
Asst. to the Pres.,
% H. B. Earling, Seattle.

Dear Sir:

I have received the following from Mr. Walker under date of November 30th:

"I have been advised by Mr. Loweth to arrange to make the changes and put in the foundations for the electrification work in the Great Falls power house. I would be pleased to have the plan showing just what you require as soon as possible."

When Mr. Walker was here not long ago I asked him if he still had force and equipment at Great Falls with which to make the changes required in the foundations of the present Motor Generator room to accommodate the new Motor Generator. He replied he would look into the matter.

I do not know whether or not Mr. Loweth has spoken to you about this matter, but will you kindly let me know if this way of doing the work is satisfactory to you. If so, I will give Mr. Walker the information he needs when I receive approval from the Motor Power Department of the layout.

Yours truly,

RB-WLS

Electrical Engineer.

#206 Lewisohn Building

December 2,1914.

Electric Railway Journal,
239 W. 39th Street,
New York City.

Dear Sirs:

Will you kindly furnish me with six copies of the November 21st issue of the Electric Railway Journal, enclosing me bill for same and greatly oblige.

Yours truly,

RB-WLS

Electrical Engineer.

#1308

Butte, Mont., Dec. 2, 1914.

Mr. W. L. Slater,
Pole Inspector,
Bovill, Idaho.

Dear Sir:

Referring to our recent wires in regard to loading the long poles, possibly you have not understood our desire to get these long poles on the job in spite of the fact that they are not shipped as economically as if they were combined with forty ft. poles.

I have wired you again today to get them started and from this I hope you will load them at once, making a double load on the forty ft. flats which will very easily accommodate the long lengths. I hope you will get these started at once, regardless of whether or not you can load forty ft. poles with them. Please wire me car numbers as soon as these poles are loaded in order that I can take up with the Car Department and get them hurried to Three Forks.

Relative to your wire of the 30th: I do not understand what you mean by "Four cars of forty ft. gone out today", but I presume you mean the cars of forty ft. poles which you loaded on the 26th and 28th as well as the one loaded on the 30th. If this is the case, will you please advise me why the cars loaded on the 26th and 28th were not shipped promtly instead of laying in the yards until the 30th. These are the poles which we wanted moved in a hurry.

Do not forget to mail a daily, a report of cars loaded, also see that they get started on the road.

Yours truly,

GHL
WLS

Electrical Engineer.

#1309

December 2, 1914.

Mr. F. F. Rohrer,
Westinghouse Elec. Co.,
East Pittsburgh, Pa.

Dear Sir:

I have your letter of November 28th and acknowledge receipt of return of our specifications for electric locomotives.

In addition to the specifications we furnished you with a profile and other maps of our line, Harlowton to Deer Lodge. If you have these blueprints in your files we would thank you very much to return them.

Yours truly,

GHL-WLS

Electrical Engineer.

#1310

December 8, 1914.

The Locke Insulator Mfg. Co.,
Victor, N. Y.

Dear Sirs:

Referring to your letter of November 28th relative to the purchase of High Tension Insulators for this work.

After giving this matter very careful consideration, we have decided that for our first order at least, it would be best to use another type.

I wish to thank you for the interest and many courtesies you have shown in connection with the furnishing of the insulators.

Yours very truly,

GHL
WLS

Electrical Engineer.

41307

Butte, Mont., Dec. 2, 1914.

Mr. A. N. Crowder, Inspector,
% Frt. Agt., CM&St.P.Ry.,
Great Falls, Montana.

Dear Sir:

Referring to your November Expense Account, you left Butte about the Middle of the month of November and had made certain arrangements with regard to your room and some of your board which made it necessary for you to pay certain amounts up to the end of the month. I told you that I would endeavor to see that you were reimbursed for these amounts.

On this basis, it does not seem to me that your meals at Great Falls should have been included for the latter part of November.

Kindly advise me about this.

Yours truly,

RB-WLS

Electrical Engineer.

#1311

Butte, Mont., Dec. 2, 1914.

Mr. H. J. Voyer,
c/o J. W. Fry,
Seattle, Wash.

Dear Sir:

As requested in your letter, following is a list of names of men who were on your payroll for the month of July. Please mark which of these men are the radicals:

Peter Beggs	E. E. Johnson
C. S. Eylers	Roy MacMahon
F. E. Kelly	Guy Orten
H. W. Bode	C. Miller
T. J. Boyd	George Gets
Bob Manning	Ed Dougherty
J. W. Stout	T. Moffat
W. R. Boyd	C. Koth
Joe Luther	John Daley
C. E. Overholtzer	J. Finnegan
Cris Bode	C. Minue
John Melchin	Sam Owen
R. L. Decaire	William Richter
H. B. Ellis	R. S. Hite
E. M. McDonald	L. De Schampe
Frank Wolf	T. Thompson
John Bohn	J. Reynolds
J. B. Barton	Ole Geyland
L. W. Schnieder	J. C. Schuers
E. W. Gilpin	Paul Legult
Frank Hoague	Ed Hall
F. Erickson	E. Harding
W. Lurns	W. E. Dillon
Ed. Davis	T. J. Forbes
W. J. McArthur	Tom Ryan
R. Keller	David Gregg
C. Staley	H. Skinner
J. McMahon	R. A. West
John Wickman	H. Jensen

Yours truly,

GHL
WLS

Electrical Engineer.

Mailogram

Butte, Dec. 2, 1914.

J. T. Crocker, P. A.,
Chicago.

I do not know whether my Requisition #37 has ever reached you or not. This requisition was made May 23rd for overhead material and should now be cancelled, as all material is covered by my requisition #140.

R. Beauwkes.

MAILOGRAM

Butte, Dec. 2, 1914.

J. T. Crocker,
Chicago.

Your wire 1st. Car P.R.R. #577710 out of Detroit November 23rd containing copper trolley wire for me at Great Falls. Will you please have car department trace and hurry forward all possible advising me when car reaches Mobridge so I can take up with Mr. West to hurry from there.

R. Beauwkes.

#1313

Butte, Mont., Dec. 3, 1914.

Mr. E. O. Reeder,
Asst. Chief Engr.,
Seattle, Wash.

Dear Sir:

I hand you herewith two K. & E. hand levels belonging to this Department.

You will please note they are both in need of new bubbles and one of them needs a new eye-piece.

I would thank you very much to send these to the party who repairs instruments for you and have them put in usable condition and returned to me at the earliest possible moment, sending me invoice and I will arrange payment.

Yours truly,

GHL
WLS

Electrical Engineer.

#1314

December 3, 1914.

Mr. J. W. Kramer,
District Forestry Engr.,
Missoula, Montana.

Dear Sir:

In accordance with my letter of November 25th I hand you herewith one copy of the "Articles of Association", a true list of the officers and a "Certificate of the Compliance with the Laws of the State of Montana, and these documents will complete the application sent you on that date.

Referring to yours of the 1st, I am proceeding with the work with the understanding outlined therein.

Yours very truly,

HWW
WLS

Electrical Engineer.

#1315

December 3, 1914.

Mr. W. S. Johnson,
General Electric Co.,
Schenectady, N. Y.

Dear Sir:

Drawing E-1672440 shows a speed limit device. Inasmuch as we are going to have only one machine I do not exactly see why we need this device.

The device is shown arranged to open up the D. C. end in case of over-speeding, and consequently would not take care of the machine in case of over-speeding of the power station generators, and such over-speeding in this case would be extremely unlikely to occur.

If the device is of no use in our case I do not think we want it, as it has been practically decided that we will never install a second machine.

If you see no reason for the use of the speed limiting device, kindly let me know what deduction would apply to the contract price for its omission.

Another point we notice in connection with the wiring of the device as shown is that it would be possible, with an open circuit in the low voltage release coil on the circuit, practically to get 1500 volts potential at the speed limiting device.

Yours truly,

RB-WLS

Electrical Engineer.

$1x16

December 3, 1914.

Mr. A. H. Armstrong,
General Electric Co.,
Schenectady, N. Y.

Dear Sir:

Referring to Power Indicating and Limiting System for our Main Line, we have had up with the Montana Power Company the question of the possibility of their also using this system for metering purposes.

The Montana Power Company have decided that the measuring and controlling of the load on the D. C. side prevents the system as laid out from being suitable for their purposes.

This confirms what I told you when I saw you in Chicago. You stated then that you still had hopes of getting your Designing Department to devise an A. C. Watt Meter which would enable the controling to take place from the A. C. end, in which case the system, as I understand from my conversations with Mr. Cochrane would probably be suitable for his measuring purposes.

We are, therefore, unable to do anything in this matter until we get further information from you. Can you give me an idea of when we may hear from you.

Yours truly,

EB-ELS

Electrical Engineer.

cc--K.C.C.

#1317

December 3, 1914.

Mr. E. S. Johnson,
General Electric Co.,
Schenectady, N. Y.

Dear Sir:

Referring to switchboard and substation apparatus for Great Falls Power Station please advise me date when you will be ready for our Inspector to inspect this apparatus and witness tests.

Yours truly,

RB-WLS

Electrical Engineer.

MAILOGRAM

Butte, Dec. 3, 1914.

J. T. Crocker,
Chicago.

Referring to your letter of November 12th relative to three dynamometers on my Requisition #86, your Order #3965. These instruments have not been received. We require one at Great Falls quick. Will you please have shipment rushed.

R. Beeuwkes.

#1318

Butte, Mont., Dec. 3, 1914.

Mr. J. J. Murphy, Supt.,
Three Forks, Mont.

Dear Sir:

Will you please advise the extent of water supply at Morel, Janney, Piedmont Crossing and Eustis. I wish this in connection with locating our substations. An early reply will be appreciated.

Yours truly,

GHL-WLS

Electrical Engineer.

Butte, Mont., Dec. 3, 1914.

Mr. H. W. Waslosky,
Willow Creek, Mont.

Dear Sir:

I hand you herewith Annual Pass #2039 favor F. R. Nicholas and three men. This pass will do for you and your party to travel on over this Division. Please furnish me with a statement at the end of the month showing trips and men carried on this pass.

Yours truly,

GHL
WLS

Electrical Engineer.

Butte, Mont, Dec. 3, 1914.

Mr. H. W. Waslosky,
Willow Creek, Mont.

Dear Sir:

Herewith fifty ft. Metallic Tape. There are no boxes in this office but have instructed Storekeeper Long at Three Forks to furnish you one on application. Advise him where you wish it mailed.

Yours truly,

GHL
WLS

Electrical Engineer.

MAILOGRAM

Butte, Dec. 3, 1914.

J. T. Crocker,
Chicago.

Regarding Car #577710 containing copper wire for Great Falls. Please advise quick contents of this car. I presume it contains all 2/0 and 4/0 grooved copper trolley wire and also 4/0 19 wire soft and H. D. Copper strand on my Requisition #108. I believe you were going to add some 4/0 Copper Trolley wire from Requisition #56 to this load.

R. Beeuwkes.

$1:10

Butte, Mont., Dec. 3, 1914.

Mr. E. A. Tomm, Agt.,
Butte, Mont.

Dear Sir:

Will you kindly forward November CO favor C. R. Strong to the Agent at Three Forks and November CO's for H. W. Waslosky and Jack Jones to the Agent at Piedmont. These CO's were issued by Mr. Hupson and forwarded to you by E. O. Reeder, Asst. Chief Engr.

Yours truly,

CHL-WLS

Electrical Engineer.

cc--CRS*JJ*HWW

I320

Butte, Nov. 4 th. 1914

Mr. M. E. Buck,
Montana Power Co.
Butte, Montana.

Dear Sir:

Will you kindly furnish us with a copy of your foreman's daily work report for the gang working near Three Forks the same as is furnished us from the Great Falls job? We wish to get all back reports covering all work since starting over there and persumd you understood that this was to be done.

We also want a daily report of work train service, stating class of engine, between what hours engine is out of round house in our service, any delays due to layouts for operating trains and what work was performed with work train during the day. This information is very important for our reports to the operating department and if attended to daily will take very little of your timekeeper's time. I neglected to state that the engine number should also be shown.

Will you kindly have these reports sent us promptly?

Yours truly,

GHL.

Electrical Engr.

1321

Butte, 18/ 4/14.

Mr. M. E. Buck,
Mont. Power Co.
Butte, Mont.

Dear Sir:

Will you kindly furnish me with a list ,giving car numbers, of all cars in your outfit train stating what each car is fitted and being used for.

When your outfit train is moved by regular billing and handled by one of the way freights we will be assessed freight charges for the shipment, but when outfit is moved by work engine which you are using the cost is covered by engine rental. We therefore wish to be furnished with a statement at the end of each month of all camp moves made during that month stating whether move was made by regular freight or by our work train service. Dates should also be shown.

Yours truly,

GHL.

Electrical Engineer.

1322

Butte.Dec. 4th.1914.

Mr.M.E.Buck,
Mont.Power Co.
Butte, Montana.

Dear Sir:

Will you kindly furnish me dates and car numbers of poles as they are unloaded, also state between what stations car was unloaded.

Owing to the fact that poles are not taken into stock at the material yards ,but are shipped direct to the distributing gangs we have to depend upon our foremen to report them received on the job, otherwise cars could be diverted to other purposes without our knowledge.

Undoubtedly you have instructed your men to unload first cars in first, this in order to cut the demurrage as low as possible.

Yours truly,

GHL.

Electrical Engineer.

Butte, Dec. 4th. 1914.

A.N.Crowder, Inspector.
Great Falls, Montana.

Dear Sir:
Car PHR # 577710, shipped from Detroit November 23rd, supposed to contain:

1600	Lin.Ft.	4/0	B&S	19	Wire,	SD	Bare copper	Strand	Tinned
800	" "	4/0	"	19	"	HD	"	"	"
12000	" "	2/0	"	Grooved		Hd	copper trolley wire		
55000	" "	4/0	"	"		HD	"	"	"

When this car is received you will please unload all but ~~xxxx~~ 31000 lin ft of the 4/0 trolley wire which you will at once bill ~~xx~~ in my care to Three Forks advising.

GHL. R.BEEUWKES.

1334

Butte, Montana. Dec.4,1914.

Mr.Walter V.Wilson,
Asst.General Auditor,
Chicago.

Dear Sir:

Referring to your letter of November 28th. relative to proper manner of making out pay rolls and the issuing of time checks when men are not leaving the service.

I believe we have followed the proper method heretofore when a man works at two rates during a month and would refer you to our October folio 6203 in the case of F.Urban for omitted time for the month of Sept. being taken up on Oct. rolls which on account of different number of days in the two months makes a different rate. I know of no case where we have not shown this correctly and wish you would please advise me in order that I may look it up and see to what you refer.

Will discontinue the issuing of OK's to men not leaving the service as requested.

Yours truly,

GHL

Electrical Engineer.

#1326

December 4, 1914.

Mr. K. Adelberg,
221 Occidental Ave.,
Seattle, Washington.

Dear K.A.:

Your letter of the 1st received. The construction work has all been contracted to the Montana Power Company, and so far they have established one gang at Great Falls and one at Three Forks.

The Power Company have a number of old men idle and I understand they are having a hard time to keep these busy.

If you wish to take the matter up with the Power Company, you had best write to Mr. K. E. Buck in their care at Butte.

Yours very truly,

GHL
WLS

Chief Clerk.

#1326

Butte, Mont., Dec. 4, 1914.

Mr. F. M. Adams, Gen'l Claim Agt.,
Seattle, Wash.

Mr. J. J. Murphy, Supt.,
Three Forks, Mont.

Dear Sir:

I hand you herewith Injury Report Form #171 showing injury to C. C. Miller, Roman this Department. This is very slight injury and release will be sent you as soon as secured.

Yours truly,

CHL-FLB

Electrical Engineer.

#1327

Butte, Mont., Dec. 4, 1914.

C. R. Strong, Asst. Engr.,
Three Forks, Mont.

Dear Sir:

Your Injury Report Form #171 showing injury to Miller received and am returning herewith Form #245, Release, which please have Miller sign all three copies and return to me promptly.

Yours truly,

GHL-WLS

Electrical Engineer.

#1328

December 4, 1914.

Mr. W. S. Pierce, Div. Lineman,
C. M. & St. P. Railway,
Minneapolis, Minnesota.

Dear Sir:

I have your letter of the 27th ult., and wish to notify you that all of our work has been contracted to the Montana Power Company who attend to hiring the men as well as superintending the construction.

They have more linemen and other classes of labor required than they can find work for and consequently am afraid we cannot do anything for the men you mention.

We are also receiving hundreds of applications which it is impossible even to answer, consequently our position on the labor question.

Yours truly,

GHL
WLS

Electrical Engineer.

#1329

Butte, Mont., Dec. 4, 1914.

Mr. C. A. Goodnow,
Asst. to the Pres.,
Chicago, Illinois.

Dear Sir:

I hand you herewith my Requisition #148. These Trolley Sleeves were omitted from our Requisition #109 covering trolley wire and overhead material for construction Great Falls Terminal, and in order to save a delay of several days I wired the General Electric Company direct to ship the twelve sleeves by Parcel Post. These sleeves will cost in the neighborhood of $1.00 each.

Yours truly,

GHL-WLS

Electrical Engineer.

#1331

Butte, Mont., Dec. 5, 1914.

AGENT THREE FORKS:

The Butte Agent sent you E.O.R. CC's #7806 and #7807 favor Jack Jones and H. W. Waslosky on December 4th. Please forward these to Agent Piedmont.

Yours truly,

GHL
WLS

Electrical Engineer.

cc--AGT. PIEDMONT

#1338

December 5, 1914.

National Pole Company,
Spokane, Washington.

Dear Sirs:

I have your telegram of December 3rd relative to balance of poles to be furnished this Company on Mr. Wilder's Order No. 33898.

I have checked the quantities still due and find you are correct in stating that there are 311 pieces of forty ft. poles and 16 pieces forty-five ft. poles yet to be shipped.

We are not working as large a crew in the field now as we were last summer and consequently can handle poles from one yard at a time only.

At present our Inspector is inspecting poles at Bovill and he will be there for probably three or four weeks more before that shipping is completed. As soon as we can, we will get him to your yards and begin shipping your poles. Will advise you in plenty of time in order that you can prepare to make shipments.

Yours truly,

GHL
WLS

Electrical Engineer.

#332½

Butte, Mont., Dec. 5, 1914.

Mr. A. E. Manchester,
Supt. of Motive Power,
Milwaukee Shops, Wis.

Dear Sir:

The Railway Company's material specifications, as you know, are to govern in the construction of the mechanical parts.

You sent me, among other specifications, numbers #107 and #450, the former referring to "Steel Driving Axles", the latter to "Heat Treated Carbon Steel Axles, Shafts and similar parts".

Will you kindly advise me to which of the two specifications the driving axles are to conform. I understand specification #450 applies for all axles, shafts, etc. which do not form parts of special apparatus and which would have to be made up by the General Electric Company.

Kindly advise.

Yours truly,

GHL
WLS

Electrical Engineer.

#1333

December 5, 1914.

Mr. A. H. Armstrong,
General Electric Co.,
Schenectady, N. Y.

Dear Sir:

Will you kindly furnish Mr.Goodnow with a print of the locomotive which is to be used on our Main Line electrification, at the same time writing him that this print is to be used by the Advertising Department.

Thanking you in advance, I am,

Yours very truly,

GHL
WLS

Electrical Engineer.

#1333½

Butte, Mont., Dec. 5, 1914.

Mr. J. T. Crocker,
Purchasing Agent,
Chicago, Illinois.

Dear Sir:

Referring to your letter of December 2nd, RM-8718, relative to return of twenty Chicago Grips to M. Klein & Sons Company, Chicago, on my Requisition #82.

Twenty of these grips were packed in a small box and bound with rope and shipped by freight to M. Klein & Sons from Butte to Chicago. We are positive that the full twenty grips were shipped as two of the men from this office went down to the Freight House and inspected and packed the grips. Evidently the shortage has occurred between Butte and Chicago and as they left Butte in good condition, I do not know how to trace to find where shortage occurred.

If you wish me to take this matter up with the Freight Department, will you please advise me with whom we shall take it up. The shipment left here on October 29th.

Referring to the latter part of your letter in regard to the No. 358-N Grip. Of course you had not received my letter of November 30th in which I advised you that the N Grip was not what we required. My letter of October 29th gives reference to the No. 358-K Grip, suitable for pulling the No."0" H. D. Copper Strand. The sample #358 which Klein's sent me is no good for this as explained in my letter of November 30th.

Yours truly,

GHL

Electrical Engineer.

WLS

December 5, 1914.

Mr. Jas. G. Biddle,
1211 Arch Street,
Philadelphia, Pa.

Dear Sir:

Referring to your letter of November 30th. I am sorry that we have neglected answering yours of the 2nd ult. more promptly but owing to lack of decision this matter has been held up for sometime.

I wish to thank you very much for your courtesy in this matter, but am sorry to state that we cannot use the instrument. We are arranging for such tests and inspection to be made at the factory.

Yours truly,

GEL
WLS

Electrical Engineer.

#1336

Butte, Mont., Dec. 5, 1914.

Mr. W. D. Foster,
General Superintendent,
Seattle, Washington.

Dear Sir:

I hand you herewith Pass Request favor W. L. Scott and wife, Butte, Montana to Spokane, Washington and return good until December 30th.

We do not have trip passes in this office but have instructions to secure them from Mr. Barrett. As you know, it is impossible for a person to make a trip from Butte to Spokane and return on the Columbian within a reasonable time on account of its being a daylight run both ways, and as we cannot allow a sufficient number of days vacation at this time, I would thank you very much if you can see your way clear to furnish us this pass on the Olympian. Mr. Scott will then be able to do his traveling at night and get his trip in in much less time which will benefit the office very much.

If you do not wish to issue the pass, kindly advise and I will secure same from Mr. Barrett and forward to you for making good on the Olympian for this trip.

Yours truly,

GHL
WLS

Electrical Engineer.

Butte, Mont., Dec. 5, 1914.

Mr. A. E. Long,
Nat'l Checker,
Three Forks.

Dear Sir:

The 104 splicing sleeves that you have received applying on Requisition #142 are for 4/0 strand and can be used on our Transmission Line. You should therefore keep them, putting them in stock. I believe I notified you that the first two items of Requisition #142 had been cancelled but that the last two items would be filled.

Yours truly,

GHL
WLS

Electrical Engineer.

#1336

Butte, Mont., Dec. 5, 1914.

Mr. A. E. Long,
Nat'l Checker,
Three Forks.

Dear Sir:

Please arrange to ship the ten Twisting Tools for twisting sleeves for No. "0" copper strand to the Clark Electric & Mfg. Co., #3 Lombardy St., Brooklyn, N. Y., via Wells Fargo Express.

Do not return the handles and please remember that you have ten Twisting Tools for a 4/0 Sleeve which you should keep.

The No. "0" wrench is the smaller of the two. Please attend to this shipment at once, advising me when done.

Yours truly,

CHL
WLS

Electrical Engineer.

#1337

Butte, Mont., Dec. 5, 1914.

Mr. J. T. Crocker,
Purchasing Agent,
Chicago, Illinois.

Dear Sir:

Referring to your letter of December 2nd and October 24th, File RM-#8664, relative to Twisting Tools furnished on my Requisition #82, your No. #3864, by the Clark Electric & Mfg. Co.

I wish to advise you that I am today ordering our Material Clerk at Three Forks to ship the ten Twisting Tools without handles for the No. "0" copper strand to the Clark Electric Mfg. Co., #3 Lombardy St., Brooklyn, N. Y., via Wells Fargo Express Company, express prepaid.

Will you kindly arrange to have these exchanged for an equal number of wrenches good for twisting sleeves for a S/C Hemp core strand, outside diameter .447 inch.

Yours truly,

GLL
WLS

Electrical Engineer.

cc--AEL

#1338

Butte, Mont., Dec. 5, 1914.

Mr. A. J. Kroha, Storekeeper,
Tacoma, Washington.

Dear Sir:

Referring to your letter of December 2nd relative to Form numbers of Standard Form Stationery which we are using, following is a list stating the form numbers we use and for what purpose used:

FORM NO.	B L A N K S	HOW USED
3	Request for Pass	As Intended.
15	Time Certificates	"
40	Vouchers	"
41	"	"
43	Payrolls	"
43½	"	"
49	Requisition for Postage Stamps	"
58	Shipping Tags	"
61	Requisition	"
94	Unloading Tally	"
96	Telegram	"
137	Board Bill	"
159	"	"
171	Report of Injury to Persons	"
238	Tally Sheet	"
245	Release	"
530	Requisition	"
531	"	"
300	Car Record Book for keeping track of requisition and shipments	
347	Telegram Book	Memo Book
353	Time Book	As Intended
376-7-8	Impression books for copying requisitions, vouchers and payrolls.	
394	Time Check Record	As Intended

Engineering Department Forms as follows:

#3	Expense Account Blank	As Intended
5	Property Report	"
35	Time Sheet	"
350	Monthly Time Books	"

In addition to the above forms, we keep a set of books of all expenditures made on this work, and in fact these are a duplicate of the records kept in the Chicago accounting offices. We also use material books and invoice record books made up of most any books we can adapt to the service. We use old Road Department forms RD-#15, #25, #66 and #67 in getting out our labor and material monthly reports.

Later we may request a special tool report, daily work report and progress report, printed for our special use, but do not intend doing this at present.

Yours truly,

GHL
WLS

Electrical Engineer.

#1341

December 5, 1914.

Way-Clark Wire Co.,
Elizabeth, N. J.

Dear Sirs:

I understand from the Montana Power Company that you furnished a considerable amount of a No."0" Hemp Core Cable used on their line.

Will you kindly let me have a description of specifications covering your recommendations and the make-up of the Hemp Core and the Strand.

Thanking you in advance for this information, I remain,

Yours very truly,

RB-WLS

Electrical Engineer.

cc--HCC

#1340

December 5, 1914.

Mr. F. Urban,
531 Market St.,
Milwaukee, Wis.

Dear Sir:

We will shortly be ready to inspect a large number of Suspension Insulators for use on our Transmission Line.

I would like you to advise me at once if you could handle the inspection of these in accordance with detail specifications which I would give you.

Please reply by wire.

Yours very truly,

RB-WLS

Electrical Engineer.

#1339

Butte, Mont., Dec. 7, 1914.

Mr. J. T. Crocker,
Purchasing Agent,
Chicago, Illinois.

Dear Sir: File:---Jennings

Referring to your letter of November 30th regarding 2/0 Transmission Line Strand, kindly note as follows, the references being to the paragraphs in your letter:

Paragraph #3

We should of course get a pound of copper wire for a pound of bar. The word "strand" in our specifications in this particular instance meaning the conductor itself.

Paragraph #4

The make-up of the cable as given by us is simply supposed to be data on which the manufacturer may furnish the cable. We would allow the usual variation in diameter, which for this wire would be approximately seventy-five hundredths of one percent.

Paragraphs #5, #6 and #7

We want the manufacturer to furnish the type of core he considers best. The Montana Power Company have bought Hemp Core Cables from the Waclark Wire Company, the American Steel & Wire Company and the Roebling Company. They have never specified the make-up of the Hemp Core and the manufacturer is in the best position to judge this. I believe that if we get from a reliable manufacturer, the kind of core he considers best for this purpose, the results will be satisfactory. I might say that the Montana Power Company has had particularly satisfactory experience with some cable which they purchased from the Waclark Wire Company, Elizabeth, N. J.

Paragraph #8

The specification for the lay of the strand as given by us is an entirely customary one and is a matter which should be left to the manufacturer.

#2--J.T.C.--12/7/14

Paragraph #9

We had no idea of having the Wire Company pay the expenses and time of the Railway Company's inspecting representative, and I understood you would arrange for this inspection with the Hunt Company or similar company doing this class of work. Of course the expense incurred by the factory in making the tests should be borne by the factory and no doubt this is the way that we both understand it.

There is only one point in the specifications which, if it involves no delay, we might modify, i.e., we would like the tensile strength of the individual strands to be 48,000 to 50,000 pounds per sq. inch instead of 62,500 pounds as it would usually run for this size strand.

Yours truly,

RB-WLS

Electrical Engineer.

#1342

December 8, 1914.

Mr. A. H. Armstrong,
General Electric Co.,
Schenectady, N. Y.

Dear Sir:

In connection with determining the overhead layout for our new passenger station and certain other trackage in the same vicinity, we would like to know if the 2400 volt electric locomotives of the B. A. & P. would operate satisfactorily on our trolley voltage of 3,000. Of course this voltage would be on the B.A.& P. only for short periods during the day when moving trains in and out of our passenger station and in switching freight cars on tracks where the layout could be much simplified by the use of our current instead of that of the B.A.& P.

It might possibly be better for the whole trackage in question to be energized by the 2400 volt current of the B.A.& P. System instead of from our system. You are acquainted in detail with the layout of the B.A.& P. system substation capacity, etc., and could probably answer this question.

We would like this information as soon as possible so that we can get this matter promptly settled up, in connection with the ordering of our material.

Yours truly,

PB-TLS

Electrical Engineer.

Butte, Mont., Dec. 7, 1914.

A. E. Long, Nat'l Checker,
Three Forks.

C. R. Strong, Asst. Engr.,
Three Forks.

H. E. Buck, Montana Power Co. Butte.

I am enclosing you herewith blueprint of E. D. 430, revised to date. Please destroy the copy you already have as it has been changed in regard to bracket rods.

Yours truly,

HC-WLS

Electrical Engineer.

#1343

Butte, Mont., Dec. 7, 1914.

Mr. C. A. Goodnow,
Asst. to the Pres.,
Chicago, Illinois.

Dear Sir:

Referring to your message of December 5th in reply to mine of the same date, I am sending herewith Requisition #152 covering the additional poles which, as far as we can tell, may be needed extra over those already ordered.

You will note the number of additional poles is small. This is because we thought we had ordered pretty close to just what was wanted and felt it would be cheaper to order the small number of additional poles required as the need of these developed.

Of course the poles ordered are based on the yard layouts as we judge they will finally be approved and on the cut-off west of Butte being run as per print sent you sometime ago and in connection with which Mr. Webster is now working, securing the right of way.

Yours truly,

RB-WLS

Electrical Engineer.

December 7, 1914.

Mr. H. P. Ballow,
7701 Normal Blvd.,
Chicago, Illinois.

Dear Sir:

Referring to your letter of November 27th making application for a position on our electrification forces, we have no vacancies at present, but I would suggest that you send us a detailed account of your experience, so that we may refer to same in case a vacancy should occur.

Yours very truly,

RB-WLS

Electrical Engineer.

1/2/15

December 7, 1914.

Mr. Homer O. Blair,
5312 - 18th Ave., N. E.,
Seattle, Washington.

Dear Sir:

Referring to your letter of November 3rd addressed to Mr. Goodnow regarding a position on our electrification forces, just at present we have no vacancies.

In case an opening should occur, we will be glad to refer to your application.

Yours very truly,

RB-WLS

Electrical Engineer.

December 7, 1914.

Mr. J. P. Fish,
132 Sixth Ave.,
Brooklyn, N. Y.

Dear Sir:

Referring to your letter of November 24th addressed to Mr. Goodnow, regarding a position on our electrification forces, just at present we have no vacancies.

In case an opening should occur, we will be glad to refer to your application.

Yours very truly,

RB-WLS

Electrical Engineer.

December 7, 1914.

Mr. L. S. Boggs,
P. O. Box #99,
New Rochelle, N.Y.

Dear Sir:

Referring to your letter to Mr. Goodnow making application for a position on our electrification forces, I regret to say that just at present we have no vacancies.

In case an opening should occur a little later when our construction is in full swing, I will be glad to consider your application.

Yours very truly,

RB-WLS

Electrical Engineer.

December 7, 1914.

Mr. F. C. Owen,
521 W. Main St.,
Chattanooga, Tenn.

Dear Sir:

Referring to your letter of the 25th ult. making application for a position on the construction of our substations.

This work will not be started for sometime. In case an opening should then arise, we shall be glad to consider your application.

Yours very truly,

RB-WLS

Electrical Engineer.

December 7, 1914.

Mr. Robt. N. M. Burtnett,
% Gibbs & Hill,
Bluefield, W. Va.

Dear Sir:

Referring to your letter of November 24th addressed to Mr. Goodnow, making application for position on our electrification forces.

We have no vacancies open just at present, but in case one should occur, we will be glad to give your application consideration.

Would suggest that you write us for our file a more detailed account of your experience.

Yours truly,

RB-WLS

Electrical Engineer.

#1345 Butte, Mont., Dec. 7, 1914.

Mr. J. J. Moulding,
Road Accountant,
Chicago, Illinois.

Dear Sir:

Referring to your statement of vouchers charged to my stock during the month of October.

Please note that you have charged me with voucher favor C. A. Goodnow, amount $101.41. Voucher shows that only $91.21 should be charged to my stock of Material and this amount is also included in your statement.

I have, therefore, subtracted the first named voucher from your list, which will show a total of $394.83 charged my stock by your statement instead of $496.34.

Yours truly,

GHL
WLS

Electrical Engineer.

cc--W.M.H.

#1346

December 7, 1914.

The M. W. Kellogg Co.,
50 Church Street,
New York City.

Dear Sirs:

Referring to your letter of November 27th relative to high pressure steam piping.

I wish to advise you that our substations will in no way have steam connected with them. The power is furnished from power plants already existing and is carried on transmission line across the country to our substations.

Yours very truly,

GHL
WLS

Electrical Engineer.

Butte, Mont., Dec. 7, 1914.

Mr. G. F. Wilder, A.P.A.,
Seattle, Washington.

Dear Sir:

Kindly send me six pads of your large invoice forms.

Yours truly,

GHL
WLS

Electrical Engineer.

December 7, 1914.

Mr. Wm. Henry,
Western Commissary Co.,
164 Jackson St., Seattle, Wn.

Dear Henry:

When you shipped beef and other perishables by Baggage under your contract with us, how did you pay the transportation charges?

I am quite sure we have never reimbursed you for express charges paid, and believe you handled this in some way through the Freight Agent.

Very truly yours,

GHL
WLS

Chief Clerk.

#1347

Butte, Mont., Dec. 7, 1914.

Mr. C. F. Loweth,
Chief Engineer,
Chicago, Ill.

Dear Sir:

Referring to your letter of November 30th and vandykes of your drawings, Nos. D-7762-3 and #8102, covering details showing the manner of supporting poles for electrification on steel and timber bridges.

I will arrange to purchase all necessary material and erect the supports on the timber bridges, and will depend upon your Department to attend to supports on steel bridges.

Yours truly,

GHL
WLS

Electrical Engineer.

cc--E.O.R.

1345

Butte, Mont., Dec. 7, 1914.

Mr. A. N. Crowder, Insp'r.,
% Frt. Agt., CM&StP Ry.,
Great Falls, Montana.

Dear Sir:

Referring to your letter of December 4th, we have inquired of the local insurance agents and find that they do not increase insurance rates on account of guy wires being fastened to buildings, especially where you have double insulation. This way of guying is practiced quite extensively by street car companies and no mention has ever been made of it by Insurance companies.

Yours truly,

GHL-WLS

Electrical Engineer.

#1349

Butte, Mont., Dec. 7, 1914.

Mr. F. M. Adams, Gen'l Claim Agt.,
Seattle, Wash.

Mr. J. J. Murphy, Supt.,
Three Forks, Mont.

Dear Sir:

Following my letter of December 4th, I hand you herewith Release Form #345 properly executed. This covers injury to Mr. G. G. Miller.

Yours truly,

CHL-WLS

Electrical Engineer.

#1350

December 7, 1914.

Mr. S. W. R. Dally,
475 - 477 Globe Bldg.,
Seattle, Washington.

Dear Sir:

Referring to your letter of November 25th addressed to Mr. Goodnow.

I believe we had the matter of wood preservative up with you sometime ago, and it was my intention to write you to the effect that we have decided to use the plain Cedar pole without any treating whatever. However, I neglected to do this and will take this opportunity of advising you that we will not be in the market for a wood preservative of any kind.

Yours very truly,

GHL
WLS

Electrical Engineer.

December 7, 1914.

Mr. W. J. Jordan, Trainmaster,
Tacoma, Washington.

Dear Bill:

I have your note of the 4th relative to employment of an electrician friend of yours.

As stated in my note to you the other day, our labor has all been contracted to the Montana Power Company and they are working only one gang, of fifty men, which of course leaves any number of electricians in Butte out of work.

This Company has not put a man on their work and we furnish no labor transportation. If your friend were in Butte, I could probably fix it with the Power Company to give him a job, but as he is in Chicago, it is impossible for us to furnish his transportation out here and the way things are now, it might be a little risky for him to pay his fare.

We have had to discontinue answering applications, either by mail or in person, as it would take up two stenographer's time to handle that business alone.

If your man wishes to come to Butte and take a chance, I will do the best I can for him.

Yours very truly,

GHL-WLS

Chief Clerk.

#1351

December 8, 1914.

Mr. F. L. Collins,
Dominion Iron & Steel Co.,Ltd.,
Sydney, Cape Breton, Canada.

Dear Sir:

I have your letter of December 2nd relative to a position on our electrification forces, and this letter gives me the information that I would need in case an opening should develop.

I explained to Mr. Dean that we had no such opening just at present, but that I would be glad to receive from you an account of your electrical experience, to be used at the proper time.

Yours very truly,

RB-WLS

Electrical Engineer.

#1352

Butte, Mont., Dec. 8, 1914.

Mr. J. T. Crocker,
Purchasing Agent,
Chicago, Ill.

Dear Sir:

File:--A.J.J.

Referring to yours of December 3rd regarding copper clad steel wire. We will not be able to use any of this.

Yours truly,

RB-WLS

Electrical Engineer.

#1353

Butte, Mont., Dec. 8, 1914.

Mr. C. R. Strong, Asst. Engr.,
Three Forks, Mont.

Dear Sir:

You brought up the question in regard to ED-#21 with Mr. Wade as to what the guys will be. If you will note the revised note on it of 11-12-14, it clearly says it is to include one degree curve, and for guys to refer to ED-#18 and #20. This drawing includes tangent and curves up to one degree. Anything over one degree takes curve construction.

Yours truly,

MC-WLS

Electrical Engineer.

At Butte, Montana,
December 9, 1914.

Mr. G. E. Dunbar,
515 South West St.,
Kalamazoo, Mich.

Dear Sir:

Replying to your letter of the 4th inst. addressed to A. J. Earling, Pres., in which you ask whether a certain item which you enclose in your letter relative to electrification is correct or not.

The item as printed is substantially correct.

Yours very truly,

CAG-ELS

Asst. to the Pres.

At Butte, Mont.,
December 9, 1914.

Mr. E. W. Adams, Sec'y,
Milwaukee, Wis.

Dear Sir:

I hand you herewith some correspondence relative to the sale of some property at Bozeman to E. J. Owenhouse.

The price named by the Commission is satisfactory. Will you please do what is necessary to complete this transaction.

Yours truly,

CAC-WLS

President.

#1354

December 8, 1914.

The Continental Oil Co.,
Butte, Montana.

Dear Sirs:

Confirming our phone conversation this date, kindly arrange to instruct your Agent at Three Forks to deliver one barrel of gasoline to our warehouse in charge of A. E. Long at Three Forks, sending your invoice in quadruplicate to this office.

Yours truly,

GHL
WLS

Electrical Engineer.

#1355

Butte, Mont., Dec. 9, 1914.

Mr. J. T. Crocker,
Purchasing Agent,
Chicago, Illinois.

Dear Sir:

As per my telegram to you yesterday, I am sending you today by registered baggage one eye-bolt which was shipped on my Requisition No. 38.

This eye-bolt measures only one-half inch in diameter and hole is only one inch in diameter instead of being made according to my drawing ED-#23.

Yours truly,

GHL
WLS

Electrical Engineer.

December 9, 1914.

Mr. R. T. Morris,
% The Transportation Club,
Bailey Bldg., Seattle, Wn.

Dear Sir:

Referring to your letter of December 5th, making application for a position with this Department.

I am sorry to inform you that at present we have more engineers than we can use, and we expect to decrease rather than increase our forces.

Yours very truly,

CHL
WLS

Electrical Engineer.

Butte, Mont., Dec. 9, 1914.

Mr. H. N. Waslosky,
Piedmont, Mont.

Dear Sir:

I hand you herewith voucher checks, Nos. 6806 and #6807, favor yourself and Jack Jones, covering your November expense accounts while in the Engineering Department.

Yours truly,

GHL-WLS

Electrical Engineer.

#1356

December 9, 1914.

The National Pole Co.,
1201 Old Nat'l Bank Bldg.,
Spokane, Washington.

Dear Sirs:

I have your letter of December 7th and wish to inform you that it will be proper for you to resume shipments of poles on Mr. Wilder's Order #33898 upon being informed by our Pole Inspector, Mr. W. L. Slater that he is ready to inspect the poles.

We expect him to begin inspecting your poles within the next few days.

Yours very truly,

GHL
WLS

Electrical Engineer.

Copy to Slater

#1357

Butte, Mont., Dec. 9, 1914.

Mr. C. A. Goodnow,
Asst. to the Pres.,
Chicago, Illinois.

Dear Sir:

Referring to our various conversations regarding awarding order for overhead material.

On June 17, 1914, we sent out specifications and invitations to bid to the following: Ohio Brass Company, the Westinghouse Electric & Manufacturing Company and the General Electric Company. Bids were received from the Ohio Brass and General Electric Companies and the enclosed tabulation shows these bids reduced to what is, in our opinion a comparative basis.

You will note that in the total difference of $3,603.60, there is an amount of $3,547.00 applying on the hangers alone.

Since the receipt of the bids we have been corresponding with the two companies regarding unsatisfactory items in their bids, and as far as the General Electric Company is concerned have secured satisfactory alternates.

I explained to you in Chicago that there was a difference of about $3000.00 in the bids, most of which was in the hangers, and that outside of the hangers the material was of a more or less special nature and that, in taking up questions in connection with the designing of this special material, we had been securing the better results from the General Electric Company. This is no doubt largely on account of that Company's experience with other High Tension D. C. installations. We thought therefore, that it would be advisable to purchase this special material from the General Electric Company, and that it would also be highly advisable, in order to not divide responsibility, to get the hangers from the G. E. Company if they would make a satisfactory reduction in the price of the hangers.

Mr. Armstrong stated in Chicago that he thought this reduction could be arranged, and I have today received complete revised prices and same are given in a letter attached to Requisition RB-#140 herewith on which I would like to receive your approval.

The Ohio Brass Company also were to send revised unit prices and thought they might be able to make some reductions over former figures, but these unit prices have not yet been received, and in any event I think that, as per our conversation, we will get much the better results by awarding the General Electric Company the order.

Yours truly,

RB-WLS

Electrical Engineer.

#1358

December 9, 1914.

Mr. H. P. Hoffman,
D. E. Fryer & Co.,
604 Paulsen Bldg.,
Spokane, Washington.

Dear Sir:

I have your letter of the 5th inst. relative to the use of self centering material for roof construction on our substations, and must again inform you that this matter is still undecided.

I cannot now set a date when this will definitely be settled, but can assure you that your product will be given full consideration.

Yours very truly,

GSL
WLS

Electrical Engineer.

#1358

December 9, 1914.

Mr. F. Urban,
531 Market St.,
Milwaukee, Wis.

Dear Sir:

Your wire of this date received. As soon as we obtain information from Mr. Crocker as to when shipments of insulators will commence we will wire you to come to Butte for instructions and specifications and you will then return to the factory.

We expect to hear from Mr. Crocker tomorrow.

Yours truly,

CHL-WLS

Electrical Engineer.

#1360

Butte, Mont., Dec. 10, 1914.

Mr. J. T. Crocker,
Purchasing Agent,
Chicago, Illinois.

Dear Sir:

I am handing you herewith my requisition RB-#140 covering certain trolley material which is to be purchased from the General Electric Company.

The unit prices applying on this material are as shown in the letter by the General Electric Company dated December 8th and addressed to myself, which is also attached hereto. The individual pages of this letter, you will note, have been initialed by Mr. Goodnow.

We have a statement of deliveries on the different items of this requisition, but the General Electric Company expects to better these deliveries and will shortly give us a revised statement which I will then forward to you.

Yours truly,

RB-WLS

Electrical Engineer.

cc--C.A.G.

Butte, Mont., Dec. 10, 1914.

Mr. R. Beeuwkes, Elec. Engr.,
Butte, Montana.

Dear Sir:

I hand you herewith a report on the oil drying and testing outfit and the transformer dryer as recommended by the General Electric Company.

The information was obtained from their letters to you, bulletins and from opinions personally expressed by their Butte Manager, Mr. Wolcott.

I hope that this will serve your purpose, so that you may readily decide upon the apparatus best suited for the requirements.

Yours very truly,

MC-WLS

Draftsman.

#1361

Butte, Mont., Dec. 10, 1914.

Mr. C. A. Goodnow,
Asst. to the Pres.,
Chicago, Illinois.

Dear Sir:

I sent you copy of my letter of November 23rd to Mr. Manchester, asking for instructions regarding type and size of lettering to be placed on the Great Falls locomotive. Mr. Manchester replied under date of December 5th as per copy attached.

I thought I had better make sure about the lettering. We have always referred to this electrified line as the Great Falls Terminal Railway. Should the letters be "C. M. & St. P" as stated, or "G.F.T.R."?

Yours truly,

RB-WLS

Electrical Engineer.

#1362

Butte, Mont., Dec. 10, 1914.

Mr. A. E. Manchester,
Supt. Motive Power,
Milwaukee Shops, Wis.

Dear Sir:

Referring to your letter of December 5th, you state that the letters should be of the same size and type as now used on our locomotives.

Kindly send me a print or some other information which I can transmit to the General Electric Company which will show this type and size.

Yours truly,

RR-WLS

Electrical Engineer.

cc---C.A.G.

#1363

Butte, Mont., Dec. 10, 1914.

Mr. A. N. Crowder, Inspr.,
Great Falls, Mont.

Dear Sir:

Please find herewith a little sketch showing an alternate layout of apparatus in the engine room at Great Falls to accommodate the new M. G. set, switchboard, etc.

You will note that the space occupied by the present M. G. and switchboard is shown taken up by the new M. G. and switchboard apparatus, while the present M. G. and switchboard have been moved to the space adjacent to the air compressor, the feed water pump being assumed moved to the location suggested by Mr. Arnold.

Please see Mr. Arnold about this new layout and find out if he has any objection to it. Possibly you can locate the present M. G. and switchboard without moving the feed water pump.

Return the sketch as soon as possible with dimensions on it locating present M. G. and switchboard, both with feed pump removed and with feed pump in its present location.

Please do this as soon as possible, as we have been authorized to proceed with the change in foundation as soon as this matter is settled.

Yours truly,

RB-WLS

Electrical Engineer.

December 10, 1914.

General Electric Co.,
Butte, Montana.

Dear Sirs:

Attention:
Mr. Wolcott

Regarding delivery of overhead material, we understand that you expect to considerably improve the deliveries given on your original proposition, and that you will advise us as soon as possible what these new deliveries will be.

The idea of course, is to get some of all the different kinds of material as soon as possible, so that we can start on the trolley construction, the remainder of the material to be delivered as this construction proceeds.

Yours truly,

RB-WLS

Electrical Engineer.

cc--E.S.J.

#1365

Butte, Mont., Dec. 10, 1914.

Mr. A. J. Busch, Supt.,
Gallatin Valley Railway,
Bozeman, Montana.

Dear Sir:

Referring to your letter of December 1st regarding the Montana Power Company's line to Salesville, there is certain general information that I wish to get from you and I was going over to see you when Mr. Black stopped in the office on his way back to Bozeman.

I explained to Mr. Black just what additional information we wished and gave him some notes, asking him to take the matter up with you.

If you can kindly let me have this information by mail, it will save me a trip to Bozeman. We are very busy just now getting started on our work.

Yours truly,

RB-WLS

Electrical Engineer.

#1366

Butte, Mont., Dec. 11, 1914.

Mr. E. H. Barrett,
Asst. Gen'l Supt.,
Butte, Montana.

Dear Sir:

It is my understanding that all curves in track between Newcomb and Three Forks have been given proper super-elevation and that they will be maintained as they now are in that respect.

I understand further that curves between Three Forks and Eustis, and Newcomb and Deer Lodge have yet to be given proper super-elevation.

Will you please advise if I am correct in my understanding in connection with building trolley wire over all curves.

Yours truly,

REW
ELS

Electrical Engineer.

#1367

Butte, Mont., Dec. 10, 1914.

Mr. E. C. Reeder,
Asst. Chief Engineer,
Seattle, Washington.

Dear Sir:

In addition to list of bridges already given you for attachments for trolley poles, we will have to have one attachment to steel bridge CC-$293 and one attachment to steel bridge DC-$300, both located between Three Forks and Bustle.

The locations for these attachments will be given the bridge man when they come to do the work.

This information in order to have sufficient material provided.

Yours truly,

Electrical Engineer.

HEW
HLS

cc—C.F.L.
E.Murray

#1368

Butte, Mont., Dec. 11, 1914.

Mr. C. R. Strong,
Asst. Engineer,
Three Forks, Mont.

Dear Sir:

Referring to the question of right and left hand curve material for transmission line, I find that Crowder's estimate is based on looking or going from Deer Lodge towards Eustis, therefore, in classifying a curve you will have to stand on the Deer Lodge end facing east.

In order for us to keep up our corrections on transmission profile, it will be necessary for you to report all changes you make in location and length of poles very promptly. I believe that you have made a number of changes already that you have not reported.

Where the transmission line goes over cliffs and it is questionable as to whether it is on our Right-of-Way, arrange to get distance of poles from center of track in this section at your early convenience and advise, referring to pole numbers and stations on Right-of-Way map including the section in question.

In grading trolley poles in Three Forks Yard it will be better to set the 50 ft. poles 5' 6" in the ground, as I think otherwise we will be limited in length of pole available. Confirming conversation, do not forget to have all poles, including transmission, shaved at a point east of Passenger Station where third track connects with Main Line, to a point where transmission line crosses freight house track.

I wish to call your attention to the absolute necessity for seeing to it that the Montana Power Company's men, including their sub-contractors take all precautions for protecting every inch of the work against trains by flagging. This includes raising poles, blasting holes, and all such movements on the track that could be flagged. You had better

talk this entire matter over with Mr. Murphy, explaining to him just what the different features of the work consist of, and see that proper protection is provided, if this has not already been taken care of. We of course want to do this flagging as cheaply as possible and avoid the use of expensive railroad men as far as possible.

Yours truly,

REW-WLS

Assistant Engineer.

#1369

Butte, Mont., Dec. 11, 1914.

Mr. J. J. Murphy, Supt.,
Three Forks, Mont.

Dear Sir:

I have your note of December 8th about a Mr. Campbell. The only way that we might possibly do anything for him is for the Montana Power Company to use him. They will want to know, however, what kind of work he has been doing, and I would suggest that you have him give us an account of his experience.

Yours truly,

RB-WLS

Electrical Engineer.

Butte, Mont., Dec. 11, 1914.

Mr. Stevens,
Section Foreman,
Butte Yards.

Dear Sir:

Confirming my telephone conversation with your wife this morning, will you kindly arrange to load and ship our gasoline speeder to Three Forks on the first local freight going east.

We are very anxious to get this car to Three Forks in a hurry, and would appreciate your loading and billing it promptly.

Yours truly,

GHL
WLS

Electrical Engineer.

cc--A.E.L.

#1370

Butte, Mont., Dec. 11, 1914.

Mr. Stevens,
Section Foreman,
Butte Yards.

Dear Sir:

Will you kindly ship a 100 percent 90 pound rail joint to the American Steel & Wire Company as Worcester, Massachusetts. Shipping tag is enclosed herewith, and shipment should be made to them by Wells Fargo Express, collect.

Mr. Barrett informs me that you may furnish this joint from your stock.

Yours truly,

Electrical Engineer.

GHL
WLS

#1373

December 11, 1914.

Mr. M. E. Buck,
The Montana Power Co.,
Butte, Montana.

Dear Sir:

I hand you herewith my letter to our former foreman, Mr. M. J. Voyer, in regard to former men working in his gang who caused trouble last summer.

You will please note Mr. Voyer has marked this letter, showing the names of the men whom it will be undesirable to re-employ.

Yours truly,

CHL
WLS

Electrical Engineer.

December 11, 1914.

Mr. B. H. Ryder,
American Steel & Wire Co.,
208 So. LaSalle St.,
Chicago, Illinois.

Dear Sir:

As requested in your letter of the 5th inst., I am requesting our Section Foreman at Butte Yards to ship to your Company at Worcester, Mass. by Wells Fargo Express, collect, one 100% 90# rail joint.

I hope that this joint will meet with your requirements.

Yours very truly,

CHL
WLS

Electrical Engineer.

#1374

Butte, Mont., Dec. 11, 1914.

Mr. J. T. Crocker,
Purchasing Agent,
Chicago, Ill.

Dear Sir: Attention: Mr. Jennings

Referring to your letter of November 30th, enclosing reports from Robt. W. Hunt & Company covering wire tests on Order #5553, RB-#108. These tests are satisfactory to us and I return herewith one copy of same which has been OK'd by me.

Yours truly,

GHL-WLS

Electrical Engineer.

Butte, Mont., Dec. 11, 1914.

Mr. J. J. Murphy, Supt.,
Three Forks, Mont.

Dear Sir:

Referring to the attached. Kindly furnish me with a supply of Form #1089. In this connection I wish to state that Mr. Bulwinkle advised that as long as the man returns to work and especially on account of our having furnished you with release form #245, that Form #1089 is not necessary. He states that the #1089 Report should be issued only when the injured party does not return to work within ten days from date of injury.

What are your wishes in regard to this?

Yours truly,

GHL
WLS

Electrical Engineer.

Butte, Mont., Dec. 11, 1914.

Mr. A. N. Crowder, Inspr.,
Great Falls, Mont.

Dear Sir:

Kindly refer to my letter #1204 dated November 16th to Mr. R. F. Morris of the Mountain States Telephone Company at Helena, copy of which was sent you. Under date of December 7th Mr. Morris replied as per the attached copy.

Yours truly,

GHL
WLS

Electrical Engineer.

Butte, Mont., Dec. 11, 1914.

Mr. H. J. Voyer,
% J. W. Fry,
Seattle, Wash.

Dear Sir:

There has been considerable talk in regard to tools left in the Jefferson River Canyon when your gang was disbanded last summer. Will you please advise me what you know about this and what tools were left there, also location.

Yours truly,

GHL
WLS

Electrical Engineer.

Butte, Mont., Dec. 11, 1914.

A G E N T,
Deer Lodge.

Dear Sir:

The following cars containing poles are either in your yards or enroute from the Bovill Yards, and should be held at Deer Lodge until such time as a sufficient quantity is on hand to warrant our sending a work train and unloading crew to distribute them.

None of these cars should be shipped east, as we have a sufficient supply at Three Forks.

#29539	47623
47709	28907
29303	29105
47543	47855
29311	29112
29201	29531
47997	28965
29327	

A great many of these cars are now billed to Three Forks, but at present the only cars on the road which I wish to have pass your station are cars #734 and #60089, which is a double load containing poles up to 75 ft. in length.

Yours truly,

GHL
WLS

Electrical Engineer.

December 11, 1914.

Milwaukee Land Co.,
St. Joe, Idaho.

Dear Sirs:

I wired you yesterday as follows:

"Want poles soon as we can get them on Requisition #76. Please advise when to send Inspector. See Wilder for further orders."

When my requisition #76 was cancelled last summer it was our intention to notify you that we would wish to resume shipments on this requisition whenever the work was started again, cancellation being only temporary.

We are now well supplied with practically every length of poles required with the exception of 55 ft. and 60 ft. poles on this requisition, and would like to get you to ship them at once.

Our Inspector, Mr. W. L. Slater is now inspecting poles at Fernwood and as soon as you can possibly make this shipment, I wish you would please advise Mr. Slater and get your cars ready and he will attend to the inspection at once.

Yours very truly,

CHL
WLS

Electrical Engineer.

cc--W.L.S.

#1375 Butte, Mont., Dec. 11, 1914.

Mr. C. A. Goodnow,
Asst. to the Pres.,
Chicago, Illinois.

Dear Sir:

Last summer we were furnished with two three-cylinder Fairbanks-Morse standard gasoline motor cars. These cars are of a large heavy type suitable for carrying eight or ten men, and are being used to great advantage by the erection gang east of Three Forks.

Prior to sending one of these cars to Three Forks we had been using it for various trips out of Butte for Engineering Department employes and in cases where we had work to do within a radius of twenty miles or so, it saved considerable time, instead of waiting for trains. However, this car was considerably larger than we care for for this work as it necessitated taking several men along in order to take it off the track when meeting a train.

I should like very much to secure a small speeder such as is manufactured by Fairbanks-Morse or Buda and which is designed to carry about three men. This car is very light and inexpensive. I believe Mr. Crocker is furnished with special prices on them.

If you approve, will you kindly advise and I will send you requisition for approval.

Yours truly,

RB-WLS Electrical Engineer.

Butte, Mont., Dec. 11, 1914.

Mr. C. A. Goodnow,
Asst. to the Pres.,
Chicago, Illinois.

Dear Sir:

As requested in your telegram of yesterday, I cancelled the room at the Thornton and paid your bill which amounted to $8.85, receipt for which is attached.

Will you kindly make check in favor of Geo. H. Long.

Yours truly,

RB-WLS

Electrical Engineer.

#1376

Butte, Mont., Dec. 11, 1914.

Mr. C. A. Goodnow,
Asst. to the Pres.,
Chicago, Illinois.

Dear Sir:

I hand you herewith my Voucher #112, amount $36.70, this to cover blueprinting furnished by a local concern for us during the month of November.

This bill is excessively large on account of our resuming work, making it necessary to furnish several sets of standard plans and maps to the men in the field as well as to the Montana Power Company officials.

The local people charged us six cents per sq. ft. for this printing which is entirely too high a rate for us to pay. I believe that we can secure a rate of about 2½ cents per sq. ft. in Spokane and as we are going to have a considerable amount of printing on our large maps and profiles, I am looking into this matter with a view of sending our tracings over there.

I believe this can be accomplished with a delay of one day more than by being done by the local concern. We will then have only the emergency prints made in Butte.

Yours truly,

RB-WLS

Electrical Engineer.

#1377

December 11, 1914.

Jno. W. Graham & Co.,
Spokane, Washington.

Dear Sirs: Attention:--Mr. Orr

We are considering the possibility of sending you our tracings of standard plans and maps for blue printing and I wish you would kindly furnish me at once with prices for blue printing from tracings or vandykes and for making vandykes from tracings.

If we decide to give you this business we will mail our tracings at Butte so that they will arrive in Spokane on the Olympian at eight o'clock in the morning, notifying you that they have been mailed and will expect you to make prints as requested and see that they are mailed to us on the Olympian on the same night, so that we will have them the following morning. Of course this means any number of prints within reason.

This business will be handled on our Company trains, Dead-head instead of by mail, and it will be necessary for you to call at the Union Station baggage room to get the tracings and return them likewise.

We took this matter up with you last summer but owing to the fact that our trains did not run directly into Spokane at that time, we were unable to complete negotiations. Kindly advise us at an early date if you can handle in this manner.

Yours very truly,

GHL-WLS Electrical Engineer.

#1278

December 10, 1914.

Mr. Max Hebgen, Gen'l Mgr.,
The Montana Power Co.,
Butte, Montana.

Dear Sir:

According to our power contract you are to deliver power to us at five points between Deer Lodge and Harlowton, Montana.

Our initial electrified trackage will extend from Three Forks to Deer Lodge, and our substations for this initial electrification will be located at Eustis, at the N. P. Crossing with our line about one and one-fourth miles east of Piedmont Station, at Janney and at Morel.

Please arrange to deliver power at Eustis, Janney and Morel substations.

The exact location of these substations at the above points will be settled shortly, but this need not delay the construction of your transmission lines.

Yours very truly,

RB-WLS

Electrical Engineer.

#1378 11a

Butte, Mont., Dec. 11, 1914.

Mr. C. A. Goodnow,
Asst. to the Pres.,
Chicago, Illinois.

Dear Sir:

Please find herewith views showing dams and power stations, etc. of the Montana Power Company. These are the views requested by the Advertising Department.

A description of each set of photographs is attached thereto and I do not see that there is anything that we can say for the Advertising Department except that all these plants will be tied together through the Montana Power Company's transmission lines and will join and feed into our own high tension transmission tie line.

There is one set of pictures which is not accompanied by a description. This set of photographs covers work on the new Great Falls station now in process of erection.

In my letter of December 5th to Mr. Armstrong, of which letter I sent you a copy, I requested Mr. Armstrong to send you an outline of the locomotive, and no doubt you have received this outline by this time. I thought this also might be of interest to the Advertising Department.

Yours truly,

RB-WLS

Electrical Engineer.

#1379

Butte, Mont., Dec. 12, 1914.

Mr. C. A. Goodnow,
Asst. to the Pres.,
Chicago, Illinois.

Dear Sir:

The Western Commissary Company were furnished with a Dead Head baggage permit which allowed them to ship beef and other perishables from their supply houses to the various camps along the line by baggage.

The Montana Power Company will run their own camps, and some arrangement should be made whereby they can ship beef and other perishables by baggage. At present all of their supplies are being shipped to them by freight. They are paying full tariff rates and will make bill against us for these charges.

I believe it would be advisable for us to furnish them with a baggage permit similar to the one furnished the Commissary Company.

If you agree, will you kindly have permit sent me or some arrangement made whereby they can ship perishables by baggage.

Yours truly,

RB-WLS

Electrical Engineer.

#1380

Butte, Mont., Dec. 12, 1914.

Mr. G. E. Cessford,
Master Mechanic,
Deer Lodge, Mont.

Dear Sir:

Will you please advise what progress you are making grinding the imperfect castings belonging to this Department. We wish to ship about 300 of the castings and 200 of the clevises to Three Forks for immediate use.

Yours truly,

GHL
WLS

Electrical Engineer.

#1381

Butte, Mont., Dec. 12, 1914.

Mr. J. T. Crocker,
Purchasing Agent,
Chicago, Illinois.

Dear Sir:

Please see my mailogram of December 3rd regarding your letter of November 11th, my Requisition #86, your Order #3965 for three dynamometers.

I cannot understand what is delaying this shipment as you ordered shipment forward on November 12th. A month has elapsed and the dynamometers have not been received.

Will you please have these hurried forward.

Yours truly,

GHL
WLS

Electrical Engineer.

#1383 Butte, Mont., Dec. 12, 1914.

Mr. J. T. Crooker,
Purchasing Agent,
Chicago, Illinois.

Dear Sir:

Kindly refer to your letter of November 21st, J., my Requisition #109, item of twelve mechanical trolley anchor clamps for Great Falls.

You have advised me that this material left Schenectady on November 14th, We are in urgent need of these clamps and as a month has already elapsed, I wish you would please see what you can do to hurry them to destination.

Yours truly,

GHL
WLS

Electrical Engineer.

#1383½

Butte, Mont., Dec. 12, 1914.

Mr. J. T. Crocker,
Purchasing Agent,
Chicago, Illinois.

Dear Sir:

Please see my telegram to you of November 25th, your letter RM-#8749, November 17th, my Requisition #109, shortage of 100 three-bolt clamps for Great Falls.

It was my understanding that this material was going to be hurried, but to date the shipment is still short.

Will you please have this matter attended to at once as we are in urgent need of the material.

Yours truly,

Electrical Engineer.

GHL
WLS

December 12, 1914.

Mr. M. P. Flannery,
Carney Pole Company,
Paulsen Bldg., Spokane, Wn.

Dear Flannery:

Referring to your letter of the 10th inst. relative to future orders for poles from this Department.

Since resuming our work we have furnished Mr. Wilder with about three requisitions for additional poles required, and no doubt these are the requisitions on which you placed a b bid. I am quite certain that we will place no more requisitions for the piece of work we are now engaged on, and if you want any of the pole business it will be necessary for you to secure some of these last orders.

Of course we will be in the market for poles again when we get on to the next Division but that may be a year or two from now.

Very truly yours,

GHL
WLS

Chief Clerk.

#1384

Butte, Mont., Dec. 12, 1914.

Mr. J. C. Mill,
Signal Engineer,
Milwaukee Shops.

Dear Sir:

You asked for us to provide two Bristol meters, one in each circuit on the signal panel in each substation. Kindly let me know if it will be satisfactory to you to provide meters of the Bristol type.

Yours truly,

RB-WLS

Electrical Engineer.

#1385

Butte, Mont., Dec. 13, 1914.

Mr. A. E. Manchester,
Supt. of Motive Power,
Milwaukee Shops, Wis.

Dear Sir:

Our contract for locomotives calls for the furnishing by the General Electric Company of Speed Indicators "to be of make specified by purchaser at price not exceeding $250.00 and sold subject to maker's guarantee".

This speed indicator should of course be connected in some way to the leading truck of the locomotive and I would like to know what type of indicator you would recommend for this purpose.

The General Electric Company sometime ago started on the development of an indicator which involves the use of a small electric A. C. Generator attached to the leading truck and furnishing power to a little synchronous motor mounted in the speed indicator. This little Generator could probably be very conveniently mounted and its action is such that the speed furnished to the motor would be bound at all times to be absolutely correct, thus making any variations in the correct speed as registered by the indicator entirely dependent on the mechanism between the motor and the speed dial.

The General Electric Company will investigate as to the status of the development on this indicating system and will advise us as soon as they can as to its feasibility. In the meantime I would like to get your views on the matter.

Yours truly,

RB-WLS

Electrical Engineer.

cc--C.A.G.

#1386

Butte, Mont., Dec. 12, 1914.

Mr. W. M. Harvey,
Auditor Nat'l Accts.,
Chicago, Illinois.

Dear Sir:

Referring to our correspondence during the month of October in regard to statement furnished you by this office, showing charges made to A.F.E. #1301 P.S. This correspondence finally developed into the matter of transportation charges on material and your letter of November 3rd is the last one on the subject.

Since then we have been working on our accounts and have taken journal entries covering transportation of material and hire of equipment into our stock and disbursed them on our RD-#25 Material Reports.

We have entered charges shown on RD-#25 and Payroll Distribution only in our accounts and attached sheet is a summary showing amounts charged from July to November, inclusive, both by months and by totals to date.

There is also a statement at the bottom of this sheet which shows the items that go in to make up each month's charges. Up to July 1st when the new Road Accounts were put into effect we had we had disbursed $34,314.00. This expenditure was reported to you and I believe you checked same correct so that it was not necessary to detail charges previous to July 1st.

Will you kindly have this statement checked with the Chicago records, advising us promptly of any corrections which you wish to make, in order that we can take care of them in our December accounts. I believe you will find the statement correct throughout.

Yours truly,

GHL-WLS

Electrical Engineer.

#1387

Butte, Mont., Dec. 12, 1914.

Mr. A. J. Kroha,
Gen'l Storekeeper,
Tacoma, Washington.

Dear Sir:

I return herewith Invoice #52054 and #55880, covering profile paper shipped to Butte.

We are receiving so much of this material that I cannot tell whether these invoices are O. K. or not unless my requisition number is shown. Recently we had some trouble by receiving an inferior grade of profile paper which necessitated about four exchanges with Chicago. Consequently I am of the opinion that one of these invoices should be cancelled, but can tell nothing unless my requisition number is shown as there are several rolls of paper here which have not been paid for.

Why is it that the Chicago Purchasing Agent sends these invoices to you instead of billing them against us direct, the same as any other material?

Yours truly,

GHL
WLS

Electrical Engineer.

December 14, 1914.

Electric Service Supplies Co.,
117 South Dearborn St.,
Chicago, Illinois.

Dear Sirs:

I beg to acknowledge receipt of your letter of the 5th, together with sample insulators and pins by express, for which I am very much obliged.

In regard to material of this nature, I will say that requisitions have all been placed and that it was practically all covered by general contract.

Yours very truly,

REW
WLS

Electrical Engineer.

#1389

Butte, Mont., Dec. 14, 1914.

Mr. C. A. Goodnow,
Asst. to the Pres.,
Chicago, Illinois.

Dear Sir:

There is a certain point in connection with the electric locomotives which the General Electric Company would like to have settled at the earliest possible moment, as it involves the whole design of the locomotive.

Each locomotive is equipped with two exciters used for regeneration purposes, one in each half. It is proposed to use the regenerator exciter of one-half of the passenger locomotive for lighting the train. This permits full regeneration and lighting on both one and two percent grades with an eight hundred ton train, one locomotive being used on the one percent grades and two locomotives on the two percent grades. With a six hundred ton passenger train and one locomotive on both grades, it would be necessary on the two percent grade to run the lights on the ~~new~~ batteries, which would seem to me to be permissible.

With this arrangement there would not have to be a separate lighting generator and there would be a saving of some thousand dollars made in the cost per passenger locomotive and those freight locomotives equipped with lighting facilities.

If the arrangement is satisfactory to you, kindly so advise me by wire.

Yours truly,

RB-WLS

Electrical Engineer.

on file.

#1320

Butte, Mont., Dec. 14, 1914.

Mr. A. E. Manchester,
Supt. of Motive Power,
Milwaukee Shops, Wis.

Dear Sir:

Kindly refer to Print #13250-E which you sent me to be incorporated in our specifications for electric locomotives and which the General Electric Company is using in connection with the design of the lighting arrangements to be provided in the passenger locomotives and in certain of the freight locomotives.

The present operation of the system, as we understand it is as follows: There are two negative and one positive busses running through all cars. The batteries in the baggage car and other cars, also the turbo-generator are connected across the positive and one of the negative busses. The remaining negative bus is connected to the negative bus above mentioned through a resistance located in the baggage car and worked by the baggage man to control the voltage delivered to the lights.

There are three methods of arranging the lighting facilities in the electric locomotive as follows:

First: The Generator in the electric locomotive simply to be arranged to furnish a constant voltage and to be connected to the same busses as the turbo-generator. With this arrangement the baggage master would control the voltage on the lights by means of the present resistance just as he does now, but he would not be able to control the voltage of the generator in the electric locomotive.

Second: A resistance similar to that in the baggage car to be located in the electric locomotive and worked by the engine men in just the same way that the baggage man handles the present resistance located in the baggage car. This involves running all three busses to the locomotive.

Third: Field control wires and two of the busses to be brought from the electric locomotive through to the baggage car so that the baggage man can control the

voltage of the electric generator, the operation to then be handled by the baggage man as at present.

The advantage of the first method is that it is the simplest of the three, but I do not know whether it will be satisfactory to simply maintain a constant voltage.

The second arrangement, however, appears to conform to the present practice most satisfactorily, and simply means that the helper instead of the baggage man controls the lighting.

The General Electric Company are very anxious to settle on the lighting arrangements to be provided as soon as possible, so that there will be no delay in getting out instructions for building apparatus, and I would like very much to have you wire me which of the above three schemes you recommend.

Yours truly,

RB-WLS

Electrical Engineer.

cc--E.S.J.

#1391

Butte, Mont., Dec. 14, 1914.

Mr. A. E. Manchester,
Supt. of Motive Power,
Milwaukee Shops, Wis.

Dear Sir:

Referring to my letter of today regarding train lighting arrangement on the electric locomotives, there is one further point to which I would like to call your attention.

It will, of course, be necessary to cut in either permanently or temporarily, fish or similar cars between the locomotive and baggage car. If fish cars of other lines were cut in, we would have to use some sort of a temporary cable arranged so it could readily be attached to the cars and run across or under same to the baggage car.

Yours truly,

RB-WLS

Electrical Engineer.

cc--E.S.J.

#18[illegible]

Personal

December 15, 1914.

Mr. C. F. Loweth,
Chief Engineer,
Chicago, Illinois.

Dear Sir:

In May of this year Mr. H. S. Williams was transferred from Mr. F. H. Walker's Department in Great Falls to my office to work on our electric sub-station designs. I took Mr. Williams on at $135.00 per month. He states that on December 1st of last year he was transferred to Lewistown under Mr. Walker as Architectural Inspector at the rate of $140.00 per month, and that after January 1st he accepted a temporary reduction to $125.00 per month, a rate which was more consistent with the scale being paid at Lewistown, this with the understanding that he was to receive additional compensation which would balance up on the Great Falls work later on. He states he was subsequently transferred to the Passenger Depot work at Great Falls in April at the rate of $125.00 with the understanding that his rate would be raised to $130.00 after the work was well started, which would have been June or July 1st.

If Mr. Williams' views of the matter are as you understood them, it seems that it would only be fair for us to pay him the $130.00. Will you kindly advise me about it.

Yours truly,

RB-WLC

Electrical Engineer.

#1393

Butte, Mont., Dec. 15, 1914.

Mr. J. T. Crocker,
Purchasing Agent,
Chicago, Illinois.

Dear Sir:

The following is a schedule which we would like to have followed regarding shipment of copper:

No. 2/0 for Transmission Line:

Make complete shipment of 75 miles as soon as possible, following at the rate of 75 miles per month until full order is shipped, the last shipment to be on the ground by June 1, 1915.

No. 4/0 Strand:

Ship 50 miles as soon as possible, and an additional 50 miles within such time as to be on the ground February 1st; the remaining 34 miles to be on the ground by March 1st.

500,000 C. M.:

Ship 57 miles as soon as possible, the remainder to be on the ground by February 1st.

No. 4 Solid:

Ship 36 miles as soon as possible; a second shipment ~~of~~ 36 miles to be on the ground by February 1st, the remainder to be on the ground by March 1st.

700,000 C. M.:

Ship one-third as soon as possible; a second one-third within one month thereafter, and the final one-third to be on the ground by March 1st.

No. 4/0 Trolley Wire:

~~Make equal monthly shipments, the last shipment to be on the ground by July 1st.~~ Start shipments as soon as possible, completing delivery on the ground by July 1st, with uniform rate of shipment throughout.

#2--J.T.C.--12/15/14

Kindly advise if this gives you the information you wish. Of course the exact amounts of cable to be covered in each shipment will depend to some extent on what arrangement you can make with regard to securing full carloads, though it of course should be understood that we could not have any material deviation on this account.

We trust that this will enable you to give us the exact detailed schedule of shipments.

Yours truly,

RB-WLS

Electrical Engineer.

December 15, 1914.

Mr. S. L. Stuart,
N. 125 Crestline St.,
Spokane, Washington.

Dear Sir:

I have your letter of December 1st regarding a position on our electrification forces, but it will be next Spring before we start on the installation of our substation machinery, so that I would not be in a position at present to do anything for you.

I would be glad to take the matter up with you at a later date should there be an opening available. With best regards I remain,

Yours truly,

RB-WLS

Electrical Engineer.

#1396

~~#1395~~

[redacted]

Mr. C. A. Goodnow,
Asst. to the Pres.,
Chicago, Illinois.

Dear Sir:

In accordance with our conversation in Butte, the date set for the completion of the overhead construction and transmission line is October 1st of next year.

We have gone carefully into this matter with the Montana Power Company and figure that it would be desirable about the first of the year to put on a second pole erecting gang to work from the Deer Lodge end. We wish to start the second gang from the Deer Lodge end so as to work in the low country during the more severe part of the winter.

We will also figure that we should have a third outfit train ready as soon as our first shipments of feeder copper and transmission wire arrive, which will be about the middle of next January.

It may possibly be better to string the transmission line separate from the trolley wire, in which case there would be two stringing gangs.

On this basis we will have the feed wire pretty well strung before starting in on the stringing of the trolley wire, and the gangs used for stringing feeder could thus, at the proper time, be used for stringing the trolley, the latter work to commence possibly about next April.

Kindly wire me if it is satisfactory to you for me to arrange for the handling of the work and for ordering outfit trains accordingly.

Yours truly,

RB-WLS

Electrical Engineer.

#1395

Personal

Butte, Mont., Dec. 15, 1914.

Mr. C. A. Goodnow,
Asst. to the Pres.,
Chicago, Illinois.

Dear Sir:

On page three of the Great Falls power contract there is a clause as follows:

"It is agreed that the Railway Company shall install in its sub-stations such transforming or converting apparatus as, in its judgment, will best meet the requirements of its railway operations, provided that such apparatus shall comprise sufficient synchronous machines or other equivalent means to secure eighty per cent.(80%) lagging or eighty per cent.(80%) leading power factor of the apparatus affect. The Railway Company hereby grants to the Power Company the right to install and maintain at the sole cost of the Power Company, in the sub-stations that may be established by the Railway Company, Tirrell regulators or such other equivalent device as will operate the Railway Company's synchronous apparatus at any power factor between eighty per cent.(80%) lagging and eighty per cent. (80) leading of the apparatus affected."

To conform with this clause would require the use of a synchronous motor having a considerably larger capacity and higher cost than the one figured on, which is based on giving unity power factor instead of eighty percent leading power factor.

When we had our conference with the General Electric representatives in Butte previous to the writing of our specifications for locomotives and substation apparatus, this point came up and you decided that consideration of it should be waived in the preparation of our specifications, the latter to call for a capacity sufficient to maintain 100% power factor under the various load conditions for which the motor is guaranteed, (see page fifteen of our specifications).

Inasmuch as the contract grants the right to the Power Company to install apparatus which will hold an 80% leading power factor, the Power Company might want to keep up their voltage by installing such apparatus

#1395

#2--C.A.G.--12/15/14

and then our synchronous motor would not stand it. This matter was thoroughly discussed, but I thought best to refer to it again, so that you might be in a position to handle any situation which might possibly develop in our dealings with the Power Company.

Yours truly,

RB-WLS

Electrical Engineer.

#1397

Butte, Mont., Dec. 15, 1914.

Mr. J. T. Crocker,
Purchasing Agent,
Chicago, Illinois.

Dear Sir:

Referring to your letter of December 11th regarding lightning arresters on my Requisition #133, this type was decided upon after careful consideration and we supposed that the arresters were well on the way to their destination by this time. I regret that this is not the case as we will probably now have to install these arresters after our line gang has been dismissed, thus entailing re-hiring of the men and extra expense.

Yours truly,

RB-WLS

Electrical Engineer.

December 15, 1914.

Mr. D. F. Whitehurst,
General Electric Co.,
Cincinnati, Ohio.

My dear Mr. Whitehurst:

I have your letter of December 10th in connection with a position in our Electrification Department. We were in the Testing Department together and I remember you very well.

I am very sorry, however, to say that the prospects of our requiring additional help for sometime to come are very meager. I will certainly be glad to bear you in mind and if any opening should develop, will connect with you.

Wishing you much prosperity, I am,

Yours very truly,

RB-WLS

Electrical Engineer.

#1398

Butte, Mont., Dec. 15, 1914.

Mr. J. T. Crocker,
Purchasing Agent,
Chicago, Illinois.

Dear Sir:

Referring to your letter of December 1st regarding the type of axles specified for electric locomotives, these will probably be Hammered Open-hearth Steel and in accordance with our specification No. 107 for steel driving axles.

This question, among certain other similar ones will be definitely settled shortly.

Yours truly,

RB-WLS

Electrical Engineer.

December 15, 1914.

Mr. H. R. Rowlands,
635 So. 20th St.,
Newark, N. J.

My dear Rowlands:

I have just received your letter of December 6th and am very sorry to learn that things look so dull in our old department.

I have no opening now in which I could place you and the chances for an opening in the future do not look very bright, inasmuch as there will be a great many men already connected with the Railway whom the Company wishes to take care of and from whom we must make our first pick for positions. There may possibly be some chance when we start the building of our substations, which will be next Spring, and you might take the matter up again at that time.

I certainly hope that it will not be necessary for them to lay off a man who has been with the Company as long as you have and that things will soon become better. I would advise you to hold on to your present job as long as you can. We have had hundreds of applications for positions on our work and the larger part of them are from men already out of work, so that I presume things are very dull all over.

Wishing you all kinds of prosperity and a Merry Christmas and Happy New Year, I remain,

Yours very truly,

RB-WLS. Electrical Engineer.

P.S.--Give my regards to Gus and the rest of the men.

R.B.

December 15, 1914.

Mr. A. H. Armstrong,
General Electric Co.,
Schenectady, N. Y.

Dear Sir:

I have your letter of December 8th regarding Mr. Carter, and thank you for the trouble you have taken in this matter.

I have taken a copy of Mr. Carter's letter to Mr. Keyes, and will consider Mr. Carter's name as soon as we are ready to come to a decision regarding an inspector.

Yours very truly,

RB-WLS

Electrical Engineer.

#1399

December 15, 1914.

Mr. E. S. Johnson,
General Electric Co.,
Schenectady, N. Y.

Dear Sir:

In connection with making our arrangements for inspection of Main Line Electric Locomotives and Substation Apparatus, we would like to know at what Works the different portions will be constructed, and when actual construction will commence. Kindly advise.

Yours truly,

RB-WLS

Electrical Engineer.

#1400

Butte, Mont., Dec. 15, 1914.

Mr. C. A. Goodnow,
Asst. to the Pres.,
Chicago, Illinois.

Dear Sir:

Referring to the attached expense account of Mr. A. N. Crowder, Mr. Crowder went to Great Falls with the understanding that the latter place would be made his headquarters and that his living expenses would be assumed by himself. He had to leave here rather suddenly, however, and I told him that if he had to incur additional expense on account of having made previous arrangements with regard to his room and board at Butte for the rest of November, I would endeavor to have him reimbursed for such additional amounts.

You will note that Mr. Crowder's expense account covers more than I had told him I would endeavor to get him reimbursed for, but on talking to him about the matter, I find that his expenses in Great Falls are unusually high, his room alone costing him $13.00 per month more than his Butte room, so that I would like to put through this expense account as it stands.

Further, if you feel that we could make him some allowance, say $25.00 per month, toward his expenses during the rest of the time he is in Great Falls, I would like, considering his high expenses and the way he is handling his work, to make such an allowance.

Yours truly,

RB-WLS

Electrical Engineer.

MAILOGRAM

Butte, Dec. 15, 1914.

J. T. Crocker,
Chicago.

Kindly hurry stationery ordered on my Requisition #135. This material is urgently needed in the Drafting Room.

R. Beeuwkes.

MAILOGRAM

Butte, Dec. 15, 1914.

T. J. Kelly,
Storekeeper, Deer Lodge.

How is the manufacturer of our drafting room filing cabinet progressing? We are having a hard time to take care of tracings which are quite valuable and would appreciate your shipping this cabinet as soon as it is out of the shops.

R. Beeuwkes.

#1401

December 15, 1914.

Mr. P. R. Hicks,
Engr. in Forest Products,
Missoula, Mont.

Dear Sir:

I return herewith your office copy of Forest Service Bulletin No. 84, on the "Preservation of Poles".

This bulletin was sent me with your letter of November 13th.

I wish to thank you very much for the use of same.

Yours very truly,

GHL
WLS

Electrical Engineer.

#1402

Butte, Mont., Dec. 15, 1914.

Mr. G. E. Cessford,
Dist. Master Mechanic,
Deer Lodge, Mont.

Dear Sir:

I have your note of the 14th inst. advising me that the work of grinding the castings for this Department has been completed.

Can you advise me how much you will bill us for this work? The Factory people are very anxious to know what we are going to charge them.

Yours truly,

GHL
WLS

Electrical Engineer.

#1403

Butte, Mont., Dec. 16, 1914.

Mr. D. B. Rivers,
Storekeeper,
Miles City.

Dear Sir:

Will you kindly furnish me with about two hundred Forms #1089, Report to General Supt. to be made ten days after injury to a person.

On our recent requisition we received only a small supply of Form #171 and #345 from you, and I would thank you to furnish us with at least three hundred copies of each form in addition. This on account of our having resumed work of a sudden and we should not be without the forms.

Yours truly,

GHL
WLS

Electrical Engineer.

December 15, 1914.

C. G. Bette Company,
Erie & N. P. Tracks,
Spokane, Wash.

Dear Sirs:

Referring to your letter of December 11th relative to the matter of treating poles.

I shall be glad to use some of your product on a few poles, but at present we are in no position to apply the material, because of the fact that our poles are scattered along the line and we will have zero weather probably for several months. We have no way of heating either the paint or the poles without too great an expense and it will therefore be necessary for me to put this matter off until next summer.

We expect to continue electrificatio on other Divisions and will be setting poles for sometime to come. I would advise you to take this matter up again with us probably during May of the coming year.

Very truly yours,

GHL
WLS

Electrical Engineer.

#1404

December 15, 1914.

E. T. Slagin Company,
Duluth, Minn.

Dear Sirs:

I have your invoice dated November 28th, amount $670.00, covering shipment of One Hundred Thirty-four 40 ft. poles contained in a triple load on cars #73329, #47447 and #47400.

I have been able to locate the first car only, which contains sixty-six 40 ft. poles. I have no record of either of the other two cars being on the road or of their having been reported by our Pole Inspector.

Will you please advise if you have not made an error in furnishing us car numbers.

Yours truly,

GHL
WLS

Electrical Engineer.

cc--W.L.S.

#1405

Butte, Mont., Dec. 15, 1914.

Mr. C. F. Loweth,
Chief Engineer,
Chicago, Ill.

Dear Sir:

Referring to your letter of the 10th inst. in which you ask how many and at what points poles will be located on steel bridges, in order that you may order the necessary brackets, etc.

My letter to you of August 18th enclosing blue print of my Drawing ED-#44 shows pole locations on steel bridges CC-#326, #346 and #348. In addition to these three bridges, my letter of December 10th to Mr. Reeder, copy to you, states that we have one attachment to steel bridge CC-#298 and one attachment to steel bridge CC-#300, both of these bridges being located between Three Forks and Rustic.

The location of poles on the two latter bridges will be given to the men when they arrive on the work.

I am attaching another blue print of my Drawing ED-#44 which shows locations on the first three bridges.

Yours truly,

GHL
WLS

Electrical Engineer.

#1406

Butte, Mont., Dec. 15, 1914.

Mr. J. T. Crocker,
Purchasing Agent,
Chicago, Illinois.

Dear Sir:

Kindly refer to your Invoice #58306, Janney-Semple Hill Company covering 40 wrenches shipped on my Requisition #130, these wrenches being exchanged for incorrect sized wrenches furnished on my Requisition #82.

Please note that this invoice charges us $14.10, making no mention of credit for the 40 wrenches returned to them.

Will you please see that I am furnished with a proper credit covering the forty wrenches returned on Requisition #82.

Yours truly,

GHL
WLS

Electrical Engineer.

Butte, Mont., Dec. 15, 1914.

Agent--Fernwood

Dear Sir:

I hand you herewith December CC #6203 favor of W. L. Slater, amount $42.83. Through error I neglected to show Mr. Slater on our November payrolls and consequently issued the CC during December as omitted November time.

Yours truly,

GHL-WLS

Electrical Engineer.

cc--W.L.Slater

#1407

Butte, Mont., Dec. 15, 1914.

Mr. J. T. Crocker,
Purchasing Agent,
Chicago, Illinois.

Dear Sir:

Kindly refer to your Invoice #56647, Joslyn Mfg. & Supply Company, amount $8.00, covering shipment of one hundred 3-bolt clamps to me at Great Falls, my Requisition #107.

Please note that you have already charged us with these clamps on Joslyn Mfg. Co. Invoice #41880, amount $517.87.

We are entitled to a credit for the $8.00 shown on Invoice #56647. Please advise.

Yours truly,

GHL
WLS

Electrical Engineer.

#1408

Butte, Mont., Dec. 15, 1914.

Mr. A. J. Krcha,
Gen'l Storekeeper,
Tacoma, Wash.

Dear Sir:

Kindly refer to your November Folio 13/1. You are charging me with stationery furnished on Invoice #46818, Butte, also on your November Folio 13/2 you are charging me with stationery furnished on Invoice #55580 and #52057.

Will you kindly furnish me with copy of all three of these invoices, showing my Requisition number, in order that we may check them.

From the information shown on your bill, I can tell nothing regarding the receipt of the material.

Yours truly,

GHL
WLS

Electrical Engineer.

#1409

December 15, 1914.

Mr. M. E. Buck,
Montana Power Co.,
Butte, Montana.

Mr. C. R. Strong,
Asst. Engineer,
Three Forks, Mont.

Dear Sir:

I hand you herewith statement showing poles required for cut-offs between the various stations.

Please note each cut-off is numbered and at the bottom of this statement is data which will doubtlessly assist you in the distributing of the poles.

Yours truly,

GHL
WLS

Electrical Engineer.

#1410

Butte, Mont., Dec. 16, 1914.

Mr. C. A. Goodnow,
Asst. to the Pres.,
Chicago, Illinois.

Dear Sir:

We have furnished the Montana Power Company with two gasoline speeders capable of carrying eight men each, for transporting their men from their camp to the work. The Power Company states that this number is insufficient and are requesting a larger car capable of carrying up to fourteen men, such is now in use by several Departments on this road. They state that with trailers on the three speeders, they will be able to handle all the men in their present gang at a great saving to the work. As it now is, they lose a considerable amount of time going to and from work on hand cars, which loss is greatly increased because of frosty rails.

Kindly advise if you approve, and I will make requisition for the car.

Yours truly,

RB-WLS

Electrical Engineer.

Butte, Mont., December 16, 1914.

Mr. C. R. Strong,
Asst. Engineer,
Three Forks, Mont.

Dear Sir:

You will please furnish us with a statement of material used during each month by the construction gang.

Please bear in mind that you must keep separate the charges east and west of Three Forks. We will use for the dividing point the East Switch at the East end of the Three Forks Yard.

This statement should be made up promptly at the close of each month, and should show size and definite description of all material used.

Please acknowledge receipt.

Yours truly,

GHL
WLS

Electrical Engineer.

#1411

Butte, Mont., Dec. 16, 1914.

Mr. C. A. Goodnow,
Asst. to the Pres.,
Chicago, Illinois.

Dear Sir:

I am just in receipt of a letter from Mr. Hogan, Mr. Hebgen's secretary, dated December 13th and reading as follows:

> "I am enclosing herewith copy of letter and statement sent to Mr. Goodnow by Mr. Hebgen on December 13th. I overlooked sending you this copy yesterday."

I note in the last paragraph of Mr. Hebgen's letter to you of the 13th that he asks who is the representative to whom he is to send vouchers, invoices, etc. I should think this would have been made clear enough by your letter of November 18th. However, I did not think it best to talk to Mr. Hebgen about this matter before writing you.

Of course the itemized statement with Mr. Hebgen's letter of December 13th must be properly entered in our books and turned in by us to the Accounting Department on the regular forms.

I presume you are advising Mr. Hebgen to turn over this data to me in the future, but thought I had better write you the circumstances in connection with this matter.

Yours truly,

RB-WLS

Electrical Engineer.

#1412

Butte, Mont., Dec. 16, 1914.

Mr. C. A. Goodnow,
Asst. to the Pres.,
Chicago, Illinois.

Dear Sir:

May we put on an office boy at the rate of $30.00 per month? Formerly we paid our office boy $25.00, but on account of messengers and all other office boys receiving $30.00, it will be necessary for us to pay the same rate in order to get a good boy.

I believe the $30.00 spent this way will more than be saved on trips and errands now being made by our clerks and draftsmen.

Yours truly,

RB-WLS

Electrical Engineer.

#1413

December 16, 1914.

Valentine Clark Co.,
St. Maries, Ida.

Dear Sir:

According to my records you have still 71 forty-five ft. poles to ship to complete orders now placed with you.

Our Mr. Slater is now inspecting poles at Bovill and should be in St. Maries the latter part of this week. He will be on his way to the Coast and can spend very little time in St. Maries.

As you are no doubt anxious to complete this shipment, will you please have a car on hand and have your poles yarded in order that you will be able to load the poles promptly.

I am advising Mr. Slater to wire you the date he will be in St. Maries, giving all advance notice possible.

Yours very truly,

GHL
WLS

Electrical Engineer.

cc--W.L.Slater

#1414

Butte, Mont., Dec. 16, 1914.

Mr. W. L. Slater,
Pole Inspector,
Bovill, Idaho.

Dear Sir:

According to my records you have only 185 forty ft. poles yet to ship from Fernwood, which will complete the National Pole Company's order. This is taking into account only the two loads about which you wired me on December 15th.

As soon as you can get these few poles loaded, please go to St. Maries and clean up the Valentine Clark Company. Note my letter to them, copy to you, advising them that you will wire them giving all notice possible, when you are ready to ship the last of their poles.

Yours truly,

GHL
WLS

Electrical Engineer.

#1415

Butte, Mont., Dec. 16, 1914.

Mr. W. L. Slater,
Pole Inspector,
Bovill, Ida.

Dear Sir:

Mr. Wilder has wired me that he has placed the orders for poles on my Requisition #139 and #151 with pole firms on the Coast and he wishes to begin shipment as soon as possible. I have wired him that you will be over there the first of next week.

You are about through at Fernwood and should so arrange your work that you can load the one car at St. Maries with only a delay of one day, going to Mr. Wilder's office and getting instructions in regard to loading of poles on requisitions #139 and #151.

Please start on Requisition #151 and ship poles of 55', 65', 70' and 75 ft. lengths first. After loading these four lengths, please ship the 35 ft. poles on Requisition #139.

I am arranging matters this way because of the fact that we have a sufficient supply of forty, forty-five and fifty ft. poles on hand, but are in urgent need of the longer lengths.

Yours truly,

GHL
WLS

Electrical Engineer.

December 16, 1914.

Milwaukee Land Co.,
St. Maries, Ida.

Dear Sir:

Referring to your letter of December 12th relative to our Requisition #76.

Mr. Wilder has just placed a large order for poles with firms on the Coast and it will be necessary for us to take our Pole Inspector away from Idaho. We would like very much to get these fifty-five and sixty ft. poles before he leaves and wish you would wire me at once if you cannot load these two cars on next Monday and I will arrange to have Slater wherever you are to load.

Yours very truly,

GHL
WLS

Electrical Engineer.

December 18, 1914.

Mr. R. H. Bennett,
317 South Lincoln St.,
Spokane, Washington.

Dear Sir:

Referring to your letter of December 12th, we received your letter of several days prior, but owing to the fact that we received so many applications and have absolutely nothing to offer, even to old employes, and on account of other work, we are forced to leave letters of application go unanswered.

As you know, there are several old employes now with this Department and whenever we increase our force we always see to it that the old men are given preference.

Your name was brought to Butte with Mr. Rice last Spring and we still have it with our list of old employes. Although the prospects at present are very poor, we will bear you in mind and will get in touch with you at the first opportunity.

Yours very truly,

GHL
WLS

Electrical Engineer.

#1416

Butte, Mont., Dec. 16, 1914.

Mr. M. Sawyer, Supt.,
Spokane, Wash.

Dear Sir:

On account of the extremely high prices which we are obliged to pay in Butte for making blue prints, we are arranging to send our tracings to Jno. W. Graham & Company at Spokane whenever possible.

It is our intention to mail them our tracings in the evening on the Olympian and we will want them to call at the baggage room for them on arrival of the train at Spokane on the following morning, in order that they can make the prints and get them on the West-bound Olympian the same night.

Of course we cannot afford to telegraph them direct and I would like to know if you would be so kind as to call up Mr. Virgil R. Hoar in the Office Supply Department at Graham's any time that we might send you a wire advising you that tracings will be on the train for Graham's.

Yours truly,

GHL
WLS

Electrical Engineer.

December 16, 1914.

Mr. F. S. Taylor,
R.F.D. #4, % E.S.Johnson Co.,
Duluth, Minnesota.

Dear Frank:

I have your letter of the 10th inst., relative to securing a position with this Department.

I am sorry to inform you that matters are really in a worse condition than when you were here last summer. This is because of the fact that other departments have been forced to reduce their crews and this leaves a great many old employes out of work. Just at this time our work started up and as a consequence we got more men than we could take care of.

I will keep you in mind and if there is any chance of using you later, or if I can recommend you to anyone, I shall be pleased to let you know.

Yours very truly,

GHL
WLS

Chief Clerk.

Butte, Mont., Dec. 17, 1914.

Mr. T. C. Laughlin,
Agent--Deer Lodge.

Dear Sir:

In addition to Cars #22212 and #16781, we should shortly receive cars #24716 and #111153 which also contain steel strand. Will you please advise me when the last two cars arrive.

Yours truly,

GHL-WLS

Electrical Engineer.

Butte, Mont., Dec. 17, 1914.

Mr. A. E. Long,
Material Checker,
Three Forks.

Dear Sir:

We now have two cars of strand at Deer Lodge and will have two more there within the next few days.

Please advise me if you can arrange your work so as to be away from Three Forks for two days the first part of next week to go to Deer Lodge and unload these four cars, or does your present occupation take up all your time?

Yours truly,

GHL-WLS

Electrical Engineer.

#1417

Butte, Mont., Dec. 17, 1914.

Mr. G. F. Wilder,
Assistant Purchasing Agt.,
Seattle, Wash.

Dear Sir:

Attached is copy of my wire to you of this date in answer to yours regarding shipping of poles on Requisition #152.

According to my best estimate, Mr. Slater should finish the National Pole Company at Fernwood today or tomorrow. The Valentine Clark Company at St. Maries have only one car to load and I have advised them that Mr. Slater would wire them the date he can be in St. Maries and that we will complete the shipment provided they have their poles yarded and car spotted in such a way that Mr. Slater will not be delayed more than one day at St. Maries.

I have instructed Mr. Slater to report to you at Seattle as soon as he completes this loading and have also instructed him to first load the poles from 55 ft. to 75 ft. in length on either Requisition #153 or #151.

We also have an order placed with the Milwaukee Land Company for two cars of 55 ft. and 60 ft. poles, but do not anticipate that we can get them to make this shipment for at least three weeks. It may be advisable for Mr. Slater to return and load these poles at that time.

Upon this basis Mr. Slater should arrive in Seattle not later than Tuesday of next week and I hope that he can go at once to the pole yards and begin shipments on the long lengths on Requisition #152.

Yours truly,

GHL
WLS

Electrical Engineer.

Butte, Dec. 17, 1914.

Mr. A. N. Crowder, Inspr.,
Great Falls, Mont.

Dear Sir:

Lightning arresters on Requisition #133 will be shipped from Schenectady on December 21st. This for your information.

Yours truly,

GHL-WLS

Electrical Engineer.

Butte, Mont., Dec. 17, 1914.

Mr. Beauwkes:

Referring to the attached letter from Mr. Hebgen to Mr. Goodnow. On December 10th you wrote Mr. Busch asking for information in regard to this line. I cannot find the file and thought possibly you had taken it with you. Also you may wish to advise Mr. Goodnow in regard to this.

Yours truly,

Geo. H. Long, Chief Clerk.

Butte, Mont., Dec. 17, 1914.

Mr. Beeuwkes:

We have not as yet received reply from Mr. Foster to our letter of November 30th in regard to the tracks to be electrified in the larger yards between Deer Lodge and Three Forks.

G. H. Long, Chief Clerk.

Butte, Mont., Dec. 17, 1914.

Mr. Beeuwkes:

	Butte	Spokane
Blue print from tracing	6¢ sq.ft.	3¢ sq.ft.
" " " van dyke	9¢ " "	5¢ " "
Van Dyke from tracing	9¢ " "	8¢ " ""

Curtis says it will be hard to get his prints made in Spokane on account of the delay, which is only one day. However, I believe he can get used to this and anticipate his wants.

Please note what Mr. Goodnow says about having prints made in Chicago. Possibly you will want to talk this over with him as I doubt if we can do much business with a delay of five or six days.

G. H. Long

Butte, Mont., Dec. 17, 1914.

Mr. Beeuwkes:

Herewith papers and blue print in regard to the lettering on the Great Falls locomotive.

Please note Mr. Goodnow's lettering of December 14th and his notation on ours of December 10th.

Possibly you will wish to answer the General Electric Company's letter of November 16th before returning to Butte as I believe they are anxious to get the lettering on that locomotive.

Geo. H. Long

#1418

December 17, 1914.

Pacific Creosoting Co.,
White Building,
Seattle, Wash.

Dear Sirs:

Referring to your letter of the 2nd inst. relative to the use of a fir pole treated with Creosote.

We have not considered the use of anything but a cedar pole and have placed orders for all poles required for the electrification of this Division.

On account of the additional costs in freight and erecting, I should think the Cedar pole would have a great advantage over the fir pole, even though we do not consider the longer life of the cedar.

If you have any information comparing the two or giving any facts in regard to the fir pole, I would be glad to receive from you such information and will look it over before placing orders for poles for future electrification work. You might also state prices of poles in five ft. lengths, ranging from forty to seventy-five ft. f.o.b. cars at some point on this Company's line.

Yours very truly,

GHL
WLS

Electrical Engineer.

Butte, Mont., Dec. 17, 1914.

Mr. A. J. Kroha,
Gen'l Storekeeper,
Tacoma, Washington.

Dear Sir:

Referring to yours of the 15th inst. regarding three track drilling machines shipped to Great Falls. This material should not have been billed to the Montana Power Company as in our contract with them we furnish all tools and material. Please make bill against us in the usual manner.

Yours truly,

GHL

Electrical Engineer.

WLS

#1418 Butte, Mont., Dec. 17, 1914.

Mr. A. N. Crowder, Inspr.,
Great Falls, Mont.

Dear Sir:

The three track drills which were shipped by freight have been at Great Falls for sometime. Mr. Buck advised me several days ago that they were in use.

Please see previous correspondence in regard to these drills, and turn in "Material Received Report".

It will be alright for you to keep the machines for your present work, but as soon as you get three out of service, they should be returned promptly to A. J. Kroha, Storekeeper, Tacoma, Dead Head Company Material, freight.

Yours truly,

GHL
WLS

Electrical Engineer.

December 17, 1914.

Electric Railway Journal,
239 W. 39th Street,
New York City.

Dear Sirs:

I return herewith your bill, amount 60¢, also check in your favor to cover same.

Kindly return receipted bill to me.

Yours truly,

GHL
WLS

Electrical Engineer.

Butte, Mont., Dec. 17, 1914.

Mr. G. F. Wilder, A.P.A,
Seattle, Washington.

Dear Sir:

I return herewith invoice from the Seattle Hdw. Co., "no charge" , same being sent me with your letter of December 14th. I wish to advise that these saws are now on hand at Three Forks.

Yours truly,

GHL-WLS

Electrical Engineer.

#1420

December 18, 1914.

Local Land Agent,
Dept. of the Interior,
Helena, Montana.

Dear Sir:

On November 25th I wrote you enclosing formal application for a Right-of-way over Government lands for our proposed transmission line, at which time I asked if we might assume that it was alright for us to order the material and get it on the ground, pending the issuance of the permit.

To date I have received no answer to our letter, nor have I received acknowledgment of receipt of the application. As we are quite anxious to get this work under way, will you kindly favor us with an immediate answer and oblige.

Yours very truly,

HWW
WLS

Electrical Engineer.

[illegible]

December 18, 1914.

Mr. W. G. Carey,
General Electric Co.,
Schenectady, N. Y.

Dear Sir:

Our Requisition #106, Purchasing Agent's Order No. 5000, of September 5th calls for fifteen Steady Braces.

You furnished us a blueprint of Drawing No. X-1,163,084, showing assembly of this device, involving use of extension bracket and casting for 2½" x 2½" x 5/16 T-iron bracket arm. I assume that the catalog number of this casting is #130648.

Mr. Hixson wired us that Great Falls shipment would be completed on the next Saturday's Chicago car, therefore complete shipment should have left Schenectady November 28th.

We have not received the bracket castings and need them badly for the work, which is nearing completion.

Please advise in regard to this item at once so that we can make our plans accordingly.

Yours truly,

RTW
WLS

Electrical Engineer.

cc--C.J.H.

#1422

Butte, Mont., Dec. 18, 1914.

Mr. C. R. Strong,
Assistant Engr.,
Three Forks, Mont.

Dear Sir:

We have your revised profile for transmission line, Stations 441 - 70, to 450 - 00.

You do not, however, state whether or not you have really located poles in this section with new framing lengths. It would seem desirable to locate one pole at 443 - 30, framing length 38' 9" and one at 446 - 10, framing length 38' 9". The latter pole would come on top of rock West of Station 450 - 00.

Advise promptly just what the status of this matter is so that we can make proper changes in profile.

I understand that an angle in transmission line on cliffs west of Eustis was improperly marked on profile as to direction, and guy improperly located. Please advise in regard to this so that correction can be made and in future check all such details on the ground before giving stakes or instructions to the men in the field.

Yours truly,

REW-WLS

Assistant Engineer.

December 18, 1914.

M. E. Buck, Butte.

C. R. Strong, Three Forks.

A. E. Long, " ".

Blue print of Drawing ED-#10 showing wrought iron plate to be used in connection for pole socket casting for trolley bracket arm was issued through error, as the pole socket casting should be installed without this plate.

Please destroy blue print of ED-#10 which you have.

Yours truly,

MEW-WLS

Electrical Engineer.

1423

Butte, Mont., Dec. 18, 1914.

Mr. J. T. Crocker,
Purchasing Agent, Chicago.

Dear Sir:

Following my wire of the 16th relative to shipment of bar copper from the Great Falls Smelter. Please note copy of letter from the A.C.M. Company of December 16th which is attached giving contents of these cars.

Yours truly,

GHL-WLS

Electrical Engineer.

#1434

Butte, Mont., Dec. 18, 1914.

Mr. J. T. Crocker,
Purchasing Agent,
Chicago, Ill.

Dear Sir:

Referring to your letter of the 15th inst. in regard to insulator pins, my Requisition #144, and returning letter from the Electric Engineers' Equipment Co.

I cannot see what more information these people want. This pin is shown on their catalog No. 2 dated December 1, 1911, page #44. There is an illustration of this pin which shows that it is catalog number 4003, has a height of 7/8 inches, pin top 15/16 inches for mounting insulator on a 1½ inch pipe. I cannot see why the Equipment Company claim that our information is not clear as we give their catalog number on our requisition.

This pin is a wood top inculator pin for clamping to iron pipe for voltages up to 13,200. If they will furnish pin as listed in catalog it will fill the bill. We would like an early delivery.

Yours truly,

GHL
WLS

Electrical Engineer.

December 18, 1914.

Mr. M. E. Buck,
Montana Power Co.,
Butte, Montana.

Dear Sir:

Recently you requested Storekeeper Long to furnish you with a supply of Hardwood Bucking Boards.

We have no such article in stock and wish you would please furnish us with dimensions and kind of wood from which you wish these boards made, also the number required.

Please bear in mind that Hard Wood is not easily obtained in this country, and consider the feasibility of using fir or other native timber.

Yours truly,

GHL-WLS

Electrical Engineer.

#1425

Butte, Mont., Dec. 18, 1914.

Mr. C. R. Strong,
Assistant Engineer,
Three Forks.

Dear Sir:

Herewith transmission profile in duplicate from Station 0 to 465, inclusive, Three Forks west.

Keep one set and turn one over to the Montana Power Company. This for information in connection with distribution of poles and construction.

These are supposed to be correct. Arrange, however, to advise promptly of any discrepancies which you may discover in the field.

Yours truly,

REW-WLS

Electrical Engineer.

cc--M.E.B.

#1426

Butte, Mont., Dec. 18, 1914.

Mr. J. T. Crocker,
Purchasing Agent,
Chicago, Ill.

Dear Sir:

Referring to your letter of the 5th inst., file #8708 in regard to the cost of grinding castings furnished on Order #3357-38.

The Storekeeper advises that the total cost of grinding these castings will be $17.00. He will make bill against us for this amount and presume you will arrange to collect same from the Steel Company, allowing us credit through invoice.

If you prefer that we make a bill, kindly advise.

Yours truly,

GHL
WLS

Electrical Engineer.

#1427

Butte, Mont., Dec. 18, 1914.

Mr. J. T. Crocker,
Purchasing Agent,
Chicago, Illinois.

Dear Sir:

Referring to your letter of the 15th inst., file RM-#8663 and returning herewith correspondence relative to shortage of fifty bars on Order #3078-34, Interstate Iron & Steel Company.

I note what the Steel Company has to say in regard to their completing the order as per their contract and presume that we will have to abide by their decision, if this is the extent of their reliability.

We have shown by actual weights that they have charged us with more bars than we received in addition to their not having filled the order, which goes to show that all of their correspondence in regard to the shortage has been based simply on their desire to get out of completing the order. In other words we have paid them for more iron than we actually received and so far as this is concerned this is an over-charge which it seems to me you should collect.

We are going to require more of these bars than the fifty short and will therefore consider Requisition #34 closed and will include the fifty that we are short in a new requisition which we will make shortly.

Yours truly,

GHL
WLS

Electrical Engineer.

#1428

Butte, Mont., Dec. 18, 1914.

Mr. G. F. Wilder,
Asst. Pur. Agent,
Seattle, Washington.

Dear Sir:

On December 15th the National Pole Company at Fernwood loaded car #47717 with forty-nine pieces of 40 ft. poles and sixteen pieces of 45 ft. poles.

Mr. Slater had culled one of the 40 ft. poles and the National Pole Company refused to take it out of the load.

Will you please see that invoice is passed for only forty-eight pieces 40 ft. poles.

Yours truly,

GHL
WLS

Electrical Engineer.

#1422

December 18, 1914.

Mr. Geo. O. Freeman, Receiver,
Department of the Interior,
U. S. Land Office,
Helena, Montana.

Dear Sir:

Yours of the 16th inst. enclosing letter from the Commissioner of the General Land Office at Washington received today. You will note that there has been some delay in our receiving this letter, owing to the fact that it had been misdirected. Please see that the address which you are using is changed to the one given on this letter, for by doing so, further delays in correspondence will be eliminated.

In regard to the additional data asked for by the Commissioner, I wish to say that this will be forwarded to you at an early date.

In regard to complying with Regulation 6, Circular January 6, 1913, I am not quite clear as to the requirements for the statement of the terms and conditions asked for in this paragraph. Will you therefore please send me such information as is necessary for the making up of this statement. Have you a standard form which applies to this particular part of the application? If so, will you please send me one.

In our letter of November 25th enclosing the formal application we ask if, in your opinion, it would be alright for us to order the material and get it on the ground pending the issuance of the permit. Our reason for asking this was that we anticipated the possibility of our not meeting all the technicalities in the first draft of the application and as we are quite anxious to get the work under way, we could see no reason why we should not take these preliminary steps toward construction.

Will you please favor us with an early reply and in it state your precedence as to this matter.

Yours very truly,

HWW
WLS

Electrical Engineer.

Butte, Mont., Dec. 19, 1914.

Mr. Beeuwkes:

I am enclosing a copy of letter received from the Commissioner of the Department of the Interior of Washington, D. C., in which he asks for additional data, etc.

Taking up his requirements in the order given: In regard to the Act under which we are filing, it should be under the Act of March 4, 1911 (36 Stat. 1253). The data required in paragraphs E & H, Regulation 9, (Act of Feb. 15, 1901) will have to be supplied by E. W. Adams and will you please call his attention to the wording of Paragraph "H", in regard to Paragraphs "E" and "G"; I have prepared the Certificates (Form 7) in triplicate to accompany the Field Notes and am enclosing them to you to be signed by Mr. Goodnow and yourself; as to the statement of the terms and conditions required in Regulation 6 of the Circular of June 6, 1913, am writing to the Helena Land office for information to make up this statement, and if I do not receive a reply from them within a day or so, I will go to Helena and obtain the information in person.

For your information the following maps and papers were filed with the Government: One copy of the Articles of Association, Regulation 9 (A); a Certificate of Filing Articles with the Secretary of State, Regulation 9 (C); a True list of the Officers, Regulation 9 (F); Two tracing maps in duplicate and three print copies and the field notes in triplicate for each map.

I am also enclosing one copy each of the Regulations for the Act of February 15, 1901 and the Act of March 4, 1911, which are the copies that were enclosed with the letter from the Department of the Interior, which I would advise your retaining and returning to this office for our files, as they are more up to date than the ones we have been working with.

I have marked with blue prncil the paragraphs with which we have already complied. I anticipate your seeing Mr. Adams and getting the necessary documents from him. You will notice that we have but thirty days to furnish data required and I take it that we will have to hurry all possible.

Yours truly,

HWW-WLS

Asst. Engineer.

Butte, Mont., Dec. 19, 1914.

Mr. Beauwkes:

Herewith detail estimate figures on electrification Harlowton to Eustis.

Please note that cost of substation apparatus is based on Johnson's figures, $126,000 each plus $27,500 for installation, also that Power Limiting apparatus is placed at $6,000 installed complete and that separate allowance of $13,000 is made for Power Limiting Circuit and $5,000 for tools and supplies.

I think the detail figures will answer all other questions.

Yours truly,

REW-WLS

Assistant Engineer.

Butte, Mont., Dec. 19, 1914.

Mr. C. R. Strong,
Assistant Engineer,
Three Forks, Mont.

Dear Sir:

Referring to Daily Reports on cost of work you no doubt have noticed that unit costs are very high on some of these reports. This no doubt is largely due to local conditions, but you must see to it that in all such cases proper notes are made on reports explaining any such high costs.

Yours truly,

REW-WLS

Assistant Engineer.

#1430

Butte, Mont., Dec. 19, 1914.

Mr. J. T. Crocker,
Purchasing Agent,
Chicago, Illinois.

Dear Sir:

Kindly note your Invoice #47186, United Metals Selling Company, amount $5,546.31. This invoice covers 40,147 lbs. of bar copper which was shipped to the Detroit Copper and Brass Rolling Mills.

We are now in receipt of three invoices, i.e. #56618-19-20 from the Rolling Mills for drawing strand and shipping it to Great Falls. These three invoices are for 1,565 lbs, 5,363 lbs. and 34,708 lbs. which shows that they have received only 40,147 lbs. of copper whereas they returned to us in the strand 41,636 lbs., or 1,489 lbs. more than they actually received.

I am presuming that the copper furnished them was an insufficient amount to make the reels come out even and that they went ahead and used some of their own copper intending to subtract it from the next shipment made them.

Will you kindly look into this matter and advise me at the next opportunity.

Yours truly,

GHL-WLS

Electrical Engineer.

#1431

December 19, 1914.

Mr. C. A. Lemmon, Chief Engr.,
B. A. & P. Railway,
Anaconda, Montana.

Dear Sir:

Will you please send me two prints each from tracing showing tower car and reel car used on B.A.& P. work, which tracing I believe you have in your file.

I wish these for the Montana Power Company in connection with getting out their equipment.

Yours truly,

REW-WLS

Assistant Engineer.

#1432

Butte, Mont., Dec. 19, 1914.

Mr. C. R. Strong,
Assistant Engineer,
Three Forks, Mont.

Dear Sir:

In order to properly locate signals, the Signal Department will have to know just what we have in the way of span and bracket construction between Piedmont and Deer Lodge.

The section between Colorado Junction and point just east of bridge #29,BA&P, is of course taken care of except for a short strip of right of way at Silver Bow Depot. For the remainder, however, we will have to make up a list starting at Piedmont and giving this information, this list to be made as follows:

Starting at initial point, state whether tangent or curve, type construction, bracket or span, and if bracket, whether located on the north or south side of track.

If we start at Piedmont station we will have tangent span construction for the first item, tangent bracket on south or north side as may be for second item, and so on throughout the territory mentioned.

Please arrange to furnish me this from your field note book on trolley staking as soon as possible so that I can forward it to the Signal Department.

Yours truly,

REW
WLS

Electrical Engineer.

Butte, Mont., Dec. 19, 1914.

Mr. A. E. Long,
Material Checker,
Three Forks.

Dear Sir:

I note that 5/8" Plate Washers can be used under button heads of bracket truss rods without cutting the washers. You do not, however, give the number of plate washers on hand.

At the same time I wish to ask if you have compared the opening in a 5/8" washer with the opening in the bracket rod casting, as I think you will find that these are practically the same dimensions, and if so it will hardly be necessary to use a washer.

Please measure eight or ten of the castings and let me have this information promptly, together with the number of 5/8" plate washers which you have on hand.

In regard to size of reels, when you go to Deer Lodge, obtain and send to me all dimensions of reels for one-half inch High Strength Steel Strand.

Yours truly,

REW-WLS

Electrical Engineer.

December 19, 1914.

E. T. Chapin Company,
Spokane, Wash.

Dear Sirs:

Referring to your letter of the 18th relative to poles loaded on cars #29529, #47447 and #47400.

I cannot locate the last two cars but find that the correct number of the car with the poles on it is #47709.

Yours truly,

GHL
WLS

Electrical Engineer.

Butte, Mont., Dec. 19, 1914.

H. W. Waelosky,
Piedmont, Mont.

Dear Sir:

I hand you herewith November Folio #6303 together with checks #85719-20-21, favor yourself, Derringer and Jones. Kindly receipt payroll, returning same to me promptly.

Yours truly,

GHL-WLS

Electrical Engr.

#1433

Butte, Mont., Dec. 12, 1914.

The Montana Power Co.,
Butte, Mont.

Dear Sirs: Attention Mr. Buck

I hand you herewith supply of Injury Report Forms #171, also Release Form #275.

Whenever a person is injured it will be necessary for Reports Form #171 to be sent to this office showing nature of injury, causes, etc. We will require seven copies of this form.

If the party injured wishes to return to work at once and is in condition to do so, he should first sign the Form #245, Release, before you allow him to return to work and for all minor injuries the Release and Injury Report may be made out at the same time. We will require four copies of Form #245.

Each time a person is injured we must know the date he returns to work, also how much actual time injured party has lost. If, at the expiration of ten days from date of injury, party does not return to work, we should be furnished with this information.

Yours truly,

GHL-WLS Electrical Engineer.

cc—A.N.C.
C.R.S.

#1434

Butte, Mont., Dec. 19, 1914.

Mr. A. R. Willoughby,
Traffic Department,
Minneapolis, Minn.

Dear Sir:

Referring to your letter of the 16th inst. addressed to Mr. Daniels, relative to the electrification of the Rocky Mountain Division.

The General Electric Company have the contract for furnishing locomotives and a large amount of the overhead material. The balance of the hardware has been purchased from miscellaneous manufacturers.

The Montana Power Company of Butte have a contract for constructing the transmission and distribution systems and will hire all labor necessary for the work.

I hope this will give you the information desired.

Yours truly,

GHL-WLS

Electrical Engineer.

#1436

Butte, Mont., Dec. 19, 1914.

Mr. J. T. Kelley,
Storekeeper,
Deer Lodge.

Dear Sir:

Mr. Buck of the Montana Power Company advises me that there is an outfit car at Deer Lodge that is in very good shape for family living quarters, and that you offered it to his Department at the time we were making up our outfit train there.

We have an Inspector with that gang who is without quarters and wishes to take his wife on the work with him.

If this car is available I would be glad to get it and wish you would please bill same to me at Three Forks, letting me know car number and in what shape the car is in.

Yours truly,

GHL-WLS

Electrical Engineer.

#1435

Butte, Mont., Dec. 19, 1914.

Mr. J. S. Butler,
Auditor Nat'l Accts.,
Chicago, Ill.

Dear Sir:

Referring to your letter of December 11th and returning herewith your bill amounting to $4195.63.

I do not understand these charges as our records show that none of the payrolls from this office amount to $635.00 each month as per the statement. I do not understand the bill from the Dining Car Department, as I know of no employe of this Department making such charges. The May Store Department bill for $70.35 cannot be located in our file and in order that I can tell of what the material consists it will be necessary that I have a copy of that bill. Will you kindly furnish me with the information in regard to all of the items on this bill and on the Store Department Bill and I will take into my Stock of Material and disburse on my RD-#25 Report.

Yours truly,

GHL
WLS

Electrical Engineer.

Butte, Mont., Dec. 21, 1914.

C. R. Strong,
Asst. Engineer,
Three Forks, Mont.

Dear Sir:

You will recall one pole attachment to timber bridge between Deer Lodge and Finlen. Please give me number or location of this bridge with number of pole attachments at once.

Yours truly,

Assistant Engineer.

REW

WLS

December 31, 1914.

Mr. R. Wende, Supt.C.H.L.& S.,
The C. L. S. & S. B. Ry. Co.,
Michigan City, Indiana.

Dear Sir:

I have your letter of the 17th inst. making further inquiry relative to a position on our electrification forces.

This work has been resumed under contract by the Montana Power Company of Butte, Mont., and that Company will furnish all labor in connection therewith.

We are unable, therefore, as far as this office is concerned, to offer you a position at this time.

Yours very truly,

REW
WLS

Assistant Engineer.

Butte, Mont., Dec. 22, 1914.

Mr. A. J. Kroha,
Gen'l Storekeeper,
Tacoma, Wash.

Dear Sir:

As per your wire of November 28th we have shipped you by freight from Great Falls one box containing three track drilling machines, shipment being made December 19th. I have received your November Store Bill showing charge for three drills received by baggage and I presume no bill will be made against us for the three which came by freight and which we are returning.

Yours truly,

GHL-WLS

Electrical Engineer.

December 22, 1914.

Mr. M. E. Buck,
Montana Power Co.,
Butte, Mont.

Dear Sir:

We have requested a baggage permit from our General Baggage Agent to be issued in your favor for transporting meat and other perishables from Butte to your camps by baggage. This should arrive within the next few days. This for your information.

Yours truly,

GHL
WLS

Electrical Engineer.

#1437

Butte, Mont., Dec. 22, 1914.

Mr. C. A. W. Musson,
Assistant Engineer,
Butte, Montana.

Dear Sir:

Will you please advise at once just what changes, if any, are contemplated in surveys on grade and alignment of track between Three Forks and Harlowton, also if you know of any contemplated changes at passing and yard tracks between these points, or changes in elevation of rail on outside of curves.

Please advise at the sametime cross sections of tunnels and if you know of any contemplated changes in these tunnels, including lining with concrete. Also if there are any timber bridges which are to be filled.

Yours truly,

REW
WLS

Electrical Engineer.

Butte, Mont., Dec. 22, 1914.

Mr. C. R. Strong,
Assistant Engineer,
Three Forks, Mont.

Dear Sir:

Please send me at once free-hand sketch showing location of trolley poles as regards north and south side of track, feeder crossings and bracket and span work between Three Forks and Rustis, so that I can correct my map.

Yours truly,

REW-WLS

Electrical Engineer.

December 28, 1914.

Mr. C. A. Lemmon, Chief Engr.,
B. A. & P. Railway,
Anaconda, Montana.

Dear Sir:

I beg to acknowledge receipt of two prints showing tower and reel car used on the B. A. & P. work as per my letter of the 19th inst.

Thanking you for your courtesy in this matter, I remain,

Yours truly,

REW
WLS

Assistant Engineer.

#1438

Butte, Mont., Dec. 22, 1914.

Mr. E. O. Reeder,
Asst. Chief Engr.,
Seattle, Washington.

Dear Sir:

Will you kindly send me three prints of profile, Three Forks to Harlowton. If you have these on vandykes we would prefer such print to one from the tracing.

We also would like two prints of the right of way map Three Forks to Lombard and one print of the right of way map, Three Forks to Harlowton. If you have a 2,000 ft. map of this section, we would also like a print of it.

I have taken this matter up with Mr. Musson and find that he has not a complete profile or other prints named in his office, and on account of the high cost of printing in Butte, we would prefer to have the printing done in Seattle,

Will you kindly have this matter attended to at your earliest opportunity and send us the bill.

Yours truly,

GHL
WLS

Electrical Engineer.

#1441

Butte, Mont., Dec. 22, 1914.

Mr. J. T. Crocker,
Purchasing Agent,
Chicago, Illinois.

Dear Sir:

Referring to your letter of the 19th, relative to shields for expansion eye bolts, my requisition #138, Drawing ED-#119. The malleable expansion bolt shield shown in Bulletin #74, Western Electric Company, page #22 is the shield which we desire.

Yours truly,

GHL-WLS

Electrical Engineer.

#1439

Butte, Mont., Dec. 23, 1914.

Mr. J. T. Crocker, P.A.,
Chicago, Illinois.

Dear Sir:

Kindly refer to General Electric Company's Invoice #37346, covering insulator pins and castings shipped on my Requisition #14, your order #3516.

Please note that these people show shipment was made in July, 1914.

We have received the 1,244 insulator pins O.K., but have received only one-half of castings PT-11 and PT-12. They are still short 212 of each.

Will you kindly have them advise regarding this shipment.

Yours truly,

GHL
WLS

Electrical Engineer.

#1440

December 28, 1914.

Mr. Andrew Platt, Contr.,
Three Forks, Mont.

Dear Sir:

This is to advise you that we will accept your proposal of the 17th inst. for furnishing all material and constructing an office in the corner of our storehouse at Three Forks for the sum of $89.35, all work to be done in a thoroughly workmanlike manner and to the satisfaction of our representative Mr. A. E. Long.

Yours very truly,

GHL
WLS

Electrical Engineer.

cc--A.E.L.

#1442

December 22, 1914.

Mr. A. E. Suiter,
Box #473,
Deer Lodge, Mont..

Dear Sir:

Referring to your letter of the 21st inst. All labor for the electrification, Deer Lodge to Three Forks has been contracted to the Montana Power Company, and they will hire all help required.

You should, therefore, take the matter in regard to blacksmiths up with them.

Yours very truly,

GHL
WLS

Electrical Engineer.

#1443

December 22, 1914.

Mr. F. R. Nicholas,
416 North Arthur Ave.,
Pocatello, Ida.

Dear Sir:

Yesterday we endeavored to get you by Western Union but found that you had left Pocatello and gone to Salt Lake. We have been unable to find your address in Salt Lake and wish that you would wire us collect as soon as you receive this letter, advising us the earliest date you can be in Butte.

Mr. Beaubien is in Chicago and wishes to see you in Butte on Thursday of this week. However, as you cannot receive this letter in time to be here by Thursday, it will be best for you to send a telegram and we will wire you further instructions.

Yours very truly,

GHL
WLS

Electrical Engineer.

#1444

Butte, Mont., Dec. 23, 1914.

Mr. J. T. Crooker,
Purchasing Agent,
Chicago, Illinois.

Dear Sir: File: Jennings

I am sending you today length of Hemp Core Copper Strand which has been in service on the Montana Power Company's lines from which was cut small sample which I had with me in Chicago.

Yours truly,

REN-WLS Electrical Engineer.

Butte, Mont., Dec. 23, 1914.

Mr. J. I. Horrocks,
Supt. of Construction,
Rockdale, Wash.

Dear Sir:

Regarding Mottern: Mr. Beauwkes simply wired us from Chicago to see if we could not secure Mottern and did not mention late that he would like to get him, but I am positive that he would like to have him here the first of next week. Mr. Beauwkes will be in Butte tomorrow night and we will wire you further regarding him either Friday or Saturday.

Yours truly,

GHL-WLS

Chief Clerk.

Butte, Mont., Dec. 23, 1914.

Mr. G. F. Wilder, A.P.A.,
Seattle, Wash.

Dear Sir:

Kindly advise me if you have comparative prices for drafting materials such as tracing cloth, pencils, profile paper, etc, comparing the prices in Seattle with those of Chicago. We are experiencing considerable trouble in receiving the right kind of material from Chicago and unless prices are prohibitive, wish to see what we can do towards buying this in Seattle.

Yours truly,

CHL-TLS

Electrical Engineer.

#1446

Butte, Mont., Dec. 23, 1914.

Mr. J. T. Crocker,
Purchasing Agent,
Chicago, Illinois.

Dear Sir:

Kindly refer to my Requisition No. 135. I am returning to you today by Wells Fargo express one roll of tracing cloth which was furnished by the American Blueprint Company.

Please note my requisition calls for Imperial tracing cloth and I would thank you to exchange this for the K. & E. Imperial tracing cloth and have same shipped to me as soon as possible.

The roll which I am returning is of such a poor grade that it is of no use to us.

On this same requisition we ordered two bottles of Higgins Vermillion Water-proof drawing ink. Instead of Vermillion we received black, necessitating our purchasing the Vermillion in Butte. Also instead of receiving Koh-i-noor pencils as specified we received the Castell, which, while of a good quality, are not to be compared with the Koh-i-noor for drafting purposes.

It seems that you have considerable trouble securing the drafting materials which we specify on our requisitions and I wish you would please advise me if you cannot secure the K. & E. material in Chicago. If not, I will see what I can do, as it is never economy to buy the poor grade drafting materials. The difference in first costs is very easily overcome by the superior quality, both in wear and appearance.

Yours truly,

GHL-WLS

Electrical Engineer.

Butte, Mont., Dec. 23, 1914.

Mr. G. Ranney, Paymaster,
Chicago, Illinois.

Dear Sir:

I return herewith November Folios #6201 and #6202. Checks on both of these rolls have been delivered and same are receipted in full.

Yours truly,

GHL
WLS

Electrical Engineer.

Butte, Mont., Dec. 23, 1914.

Mr. C. R. Strong,
Assistant Engineer,
Three Forks, Mont.

Dear Sir:

Please note the attached from J. T. Kelly relative to bunk car for your use.

Mr. Kelly states that he has shipped this car to Three Forks and possibly you can locate it in the yards. However, if you cannot, please advise and get the best description of the car from Mr. Buck you can and I will see what kind of a car we can get for you.

There are a great many cars not in use at Deer Lodge and if you get a chance while off duty, I believe it would be best for you to go to Deer Lodge and pick one out.

Yours truly,

GHL
WLS

Electrical Engineer.

#1447

Butte, Mont., Dec. 23, 1914.

Mr. A. E. Long,
Material Checker,
Three Forks, Mont.

Dear Sir:

We now have three cars of strand at Deer Lodge. They are, Cars #22212, #16781 and #87650.

Please go to Deer Lodge the first day you can get away from Three Forks and attend to the unloading of these cars.

I have asked Storekeeper Kelly to have them spotted so that they can be unloaded with the rest of our strand and to give you assistance in securing a few men to do the work.

Mr. Kelly is very short of help and you should arrange to hire whatever men are needed, sending CG's to this office in the usual manner.

Yours truly,

GHL
WLS

Electrical Engineer.

cc--J.T.Kelly

December 23, 1914.

Mr. M. R. Buck,
Montana Power Co.,
Butte, Montana.

Dear Sir:

Kindly advise me if Mr. J. R. Beatson is in your gang at Three Forks.

This is the man who was formerly employed by our Telegraph Department at that station and I simply want to know if he is in the service and if so, what the chances are of his remaining there, this having bearing on his connection with the Telegraph Department.

Yours truly,

GHL
WLS

Electrical Engineer.

December 23, 1914.

Mr. R. B. Skinner,
℅ Oxford Hotel,
Seattle, Wash.

Dear Sir:

Your letter of the 20th received. We have contracted all of the work to the Montana Power Company and of course they have a complete organization.

I am holding all applications of old employes in a separate file and as fast as work shows up we are giving them preference. We will give you the first thing that shows up.

Yours truly,

CHL-WLS

Electrical Engineer.

December 23, 1914.

Mr. Wm. N. Aird,
Ross Shire Hotel,
Seattle, Wash.

Dear Aird:

Referring to your letter of the 20th inst. While the work of electrifying this Division is going ahead rapidly, still we are requiring very few engineers, but in securing them we always endeavor to give the old employes preference, and I will see that your application is put with them in order that we can give you the first position that shows up.

It may be possible that we would want to get hold of a draftsman sometime within the next month and I am quite sure that you could well fill the position.

If you change your address you had best drop me a note. With kindest regards, I remain,

Yours in haste,

GHL
WLS

Chief Clerk.

Dec 24 1914

Montana Power Co
Butte Montana

Attention Mr.Buck.

Gentlemen:

I enclose herewith dead head baggage permit j 466 ,effective Jan I 1915.

This permit is issued you for the purpose of transporting meat and other perishables to your construction camps between Deer Lodge and Three Forks.

As no express or freight will be charged you for shipments made on this frank, it will be necessary for us to assess such charges through reports to the auditing department made in this office. Will you therefore keep a record of all shipments made and at the end of each month furnish us with a statement showing : weight of each shipment, hauled from ------- station to -------- station. Statement to be sent us as soon as possible after the close of the callendar month.

Yours truly

Electrical Engineer.

GHL.L.
cc— Mr Hebgen.

Dec 24 1914

Mr J T Crocker
Purchasing Agent
Chicago.

Dear Sir:

Yesterday we returned to you by express one roll of tracing cloth which you purchased and shipped me on my requisition I35.

In specifying "Imperial Tracing Cloth" we should have stated "as made by Keuffel & Esser Co" The cloth wich we have returned is of a very inferior grade ,being too heavy for quick blue printing, does not take the ink w ell and will not stand the wear the better grade of cloth will. In making a tracing the labor cost is the greatest expense and on that account alone it is always economy to use the best cloth inorder to get the longest life possible and the best service out of the tracing made.

Will you kindly have this roll exchanged and ship me the"K & E Imperial"

Yours Truly,

Electrical Engineer.

GHL.L.

Butte Dec 26 1914.

Mr C A Goodnow,
Asst to the Pres.
Chicago, Ill.

Dear Sir:

Referring to your telegram of the twenty-fourth, instructing us to make requisition for 1915 passes for use by officials of the Montana Power Co.

I have taken this matter up with Mr Hebgen and he advises they will wish annuals for:

Max Hebgen, account Genl. Mgr. M.P.Co.
F.M.Kerr " Genl. Supt. "
M.E.Buck " Genl. Foreman. "

They will also require transportation for various other employees and ~~xxxx~~ we both think it advisable to furnish such employees with construction trip passes as they are required and for this purpose they should be furnished with a book of construction passes or if you think best the can arrange to get such passes from this office.

Yours truly

GHL

Electrical Engineer.

Butte Dec 26 1914

Mr C A Goodnow,
Asst. to the Pres.
Chicago, Ill.

Dear Sir:

Will you kindly add the name of F R Nicholas and ten men, to the list already sent you, for 1915 annual passes required for employees of this department; account Asst Engr and Party Electrification Dept.

Yours truly

Electrical Engineer.

GHL

Butte Dec 28 1914.

J J Murphy, Sup't.
Three Forks, Mont.

Dear Sir:

Mr Goodnow has decided for the present we will furnish the Montana Power Co. construction gangs with a conductor to accompany them when making trips to and from camp on their gasoline s speeders.

The duties of this conductor will be to see that cars are kept out of the way of trains and keep his own operations before the train dispatcher. I believe one man will be sufficient for the present gang but more should be put on as necessity arises. This conductor should be paid standard wages and will be carried on the Montana Power Co's rolls.

Mr Buck will please stop in your office and make the necessary arrangments.

Yours truly

GHL

Electrical Engineer.

cc- Mr Hebgen
Mr Buck

Butte Dec 26 1914

A.N.Crowder, Inspector.
Great Falls,

Dear Sir:

It has been decided to allow you all expenses while at Great Falls as Inspector and am accordingly enclosing check in your favor for $54.25 to cover your November expense account.

Please turn in your expense account at the end of each month, promptly. also do not overlook existing instructions to "receipt your expense account before sending same to this office"

Yours truly

GHL

Electrical Engineer.

#1448

December 27, 1914.

Mr. A. H. Armstrong,
General Electric Co.,
Schenectady, N. Y.

Dear Sir:

I have been in Chicago for a week and have, therefore, only just received your letter of December 16th, regarding Mr. Murphy.

Mr. Goodnow has a man in mind he would like to use for this position if possible, but if this arrangement falls through, I would be glad to consider Mr. Murphy.

Yours very truly,

RB-WLS

Electrical Engineer.

#1449

December 27, 1914.

Mr. E. S. Johnson,
General Electric Co.,
Schenectady, N. Y.

Dear Sir:

I told you that I would make sure that meters of the Bristol type would be satisfactory for signal panels in substations.

The Signal Department is satisfied with these instruments.

Yours truly,

RB-WLS

Electrical Engineer.

#1450

December 27, 1914.

Mr. A. H. Armstrong,
General Electric Co.,
Schenectady, N. Y.

Dear Sir:

Referring to yours of December 14th regarding running of B.A.& P. locomotives on 3,000 volts.

Messrs. Linebaugh and Johnson were requested to find out whether it would not be possible to arrange merely the two B.A.& P. passenger locomotives to run on three thousand volt service.

We are urgently in need of this information and anything that you can do to rush it along will be appreciated.

Yours truly,

RB-WLS

Electrical Engineer.

#1451

Butte, Mont., Dec. 27, 1914.

Mr. J. C. Mill,
Signal Engineer,
Milwaukee, Wis.

Dear Sir:

I have been absent in Chicago and have therefore only just received yours of the 14th inst.

Our switches will be arranged in such a manner that I think a momentary interruption of current will not have any effect on the signals.

With regard to having the Primary feeders open at the middle point, I thought this might be necessary on account of the Primary wires tying together two substations so that if High Tension power should go off of one, the adjacent station would endeavor to run the former over the signal bus.

The resistance of the Signal Primary, however, is so high that I do not think enough current would flow to cause any trouble. We simply wish to be prepared to meet the condition if necessary.

Yours truly,

RB-WLS

Electrical Engineer.

#1452

Butte, Mont., Dec. 27, 1914.

General Electric Co.,
Schenectady, N. Y.

Dear Sirs:

I have not yet heard from you regarding synchronous speed indicating device for electric locomotives. When may I expect to receive this information.

Yours truly,

RB-WLS

Electrical Engineer.

cc--CAC
AEM

#1453

Butte, Mont., Dec. 27, 1914.

Mr. C. A. Goodnow,
Asst. to the Pres.,
Chicago, Illinois.

Dear Sir:

I am sending you herewith copy of registered letter of December 19th received from the Telegraph Department of the N. P. Railway Company.

I would like particularly to call your attention to the third paragraph of this letter in which Mr. Clapp states that he assumes we would assume "some responsibility, at least, for any inductive effects that you might cause in connection with our telegraph and telephone lines".

This matter must be carefully handled as we desire some privileges from the N. P. in the way of crossings, etc., and it would not seem advisable to incur the Northern Pacific's displeasure. I would suggest that we tell Mr. Clapp that we will do our share towards eliminating any troubles which may develop in his telegraph lines on account of our High Tension lines.

You will remember that for some distance near Willow Creed we run very near to the N. P. telegraph lines and it may be necessary to move the latter to the other side of the N. P. track. If such a thing were necessary, I presume it would be our policy to bear part of the expense. Kindly let me hear from you in this connection.

Regarding the fourth paragraph of Mr. Clapp's letter, it is my understanding that we would bear the expense of changing the N. P. telegraph wires where necessary to secure additional clearance over our line, provided, of course, that the N. P. telegraph wires were in existance before our line was run through, or provided that the N. P. secured approval from us for running their wires over our tracks in cases where the latter existed first. Kindly advise.

Yours truly,

BR-WLS

Electrical Engineer

41454

December 27, 1914.

Mr. M. H. Clapp, Supt.,
Northern Pacific Ry.Co.,
Telegraph Department,
St. Paul, Minn.

Dear Sir:

I have been absent in Chicago for sometime and your letter of December 15th has only therefore just been received.

Proper and prompt consideration will be given to the points brought up in your letter and I will advise you in connection therewith as soon as possible.

Yours very truly,

RB-WLS

Electrical Engineer.

#1456

Butte, Mont., Dec. 27, 1914.

Mr. C. A. Goodnow,
Asst. to the Pres.,
Chicago, Ill.

Dear Sir:

Please note herewith copies of letters of December 14th and 15th, by Mr. T. C. Martin, Secretary of the National Electric Light Association.

Before deciding to become a member of this sub-committee, I thought it proper to ask whether you would have any suggestions or comments to make in this connection.

Yours truly,

RB-WLS

Electrical Engineer.

Corrected Copy

41455

December 27, 1924.

Mr. T. C. Martin, Sec'y,
Nat'l Elec. Light Assn.,
29 W. 39th St., New York.

Dear Sir:

Yours of December 14th and 15th regarding organization of sub-committee on Electrification of Main Lines of Railroad have, owing to my continued absence in Chicago just been received by me.

I will give proper consideration to this matter and write you later.

Yours very truly,

RB-WLS

Electrical Engineer.

#1457

Butte, Mont., Dec. 27, 1914.

Mr. C. A. Goodnow,
Asst. to the Pres.,
Chicago, Ill.

Dear Sir:

The following is a telegram of December 12th received from Mr. Patterson regarding telephone service:

> "It will cost 175.00 to equip Butte Deer Lodge and Three Forks for your telephone service and $18.00 additional for each intermediate office. Wire just what you want. Mr. Goodnow's approval will be necessary."

I understand that as soon as possible you will have Mr. Patterson see you at your office so that you may find out more in detail how he proposes to arrange for this service.

Of course, with the extension of our work it would be very desirable for us to talk as far east as Harlowton, but if this could not be arranged for, we the messages relayed to A. E. Long, storekeeper in Three Forks. Of course this should be done only when absolutely necessary.

Yours truly,

RB-WLS

Electrical Engineer.

#145~~7~~8

December 28, 1914.

The Waclark Wire Co.,
20-24 Exchange Place,
New York City.

Dear Sirs:

We have yours of December 16th relative to Hemp Core Cable and thank you for the information therein given.

Yours very truly,

RB-WLS

Electrical Engineer.

Butte, Mont., Dec. 28, 1914.

C. R. Strong,
Assistant Engr.,
Three Forks.

Dear Sir:

Our standard for double arming for feeder calls for the use of double arms at all curves of three degrees and over. This will be included in brief specifications which will be sent out later. You will find that on poles already set between Three Forks and a point east of Jefferson Island that no double arms have been installed. It will be necessary to take care of this matter as you go along now, placing additional arms where needed as stated above. Acknowledge receipt of this and state if thoroughly understood.

Yours truly,

REW-WLS

Electrical Engineer.

Butte, Mont., Dec. 28, 1914.

C. R. Strong, Asst. Engr.,
Three Forks.

Dear Sir:

I hand you herewith Engineering Department voucher check in your favor, amount $33.20, same to cover your November expenses.

Yours truly,

GHI-WLS

Electrical Engineer.

#1459 Butte, Mont., Dec. 28, 1914.

Mr. C. F. Loweth,
Chief Engineer,
Chicago, Ill.

Dear Sir:

Referring to your letter of December 22nd relative to pole supports on bridge CC-44. The bridges about which we have been corresponding are between Deer Lodge and Eustis and as No. 44 is somewhat near Harlowton, we have not taken it into consideration. However, if it is just west of Harlowton I presume the bracket may as well be put on that bridge at the time they are installed between Deer Lodge and Eustis.

Yours truly,

GHL-WLS Electrical Engineer.

#1460

Butte, Mont., Dec. 28, 1914.

Ed. Murray, Asst. Engr.B&B,
Miles City, Mont.

Dear Sir:

Referring to your letter of December 19th relative to pole supports on timber bridges. We will wish to install supports on bridge ~~CC-#63~~ CC-35 and CC-#363.

Yours truly,

GHL-WLS

Electrical Engineer.

cc--EOR

#1461

December 28, 1914.

The Montana Power Co.,
Butte, Mont.

Dear Sirs: Attention: Mr. Jackson

Our Great Falls Inspector advises that he loaned a quantity of tools to your Construction Crew which is working on the transmission line from Great Falls to Deer Lodge. All of these tools were returned with the exception of six eight ft. steel digging bars and one eight ft. digging spoon, and they state they wish to retain these tools.

Will you please advise how you wish to handle the payment for these tools.

Yours truly,

CHL
WLS

Electrical Engineer.

cc—M.E.B.

December 28, 1914.

The Ohio Brass Company,
Mansfield, Ohio.

Dear Sirs:

Will you kindly furnish me with two copies of your Catalog No. 14.

Thanking you in advance, I am,

Yours very truly,

GHL-WLS

Electrical Engineer.

Butte, Mont., Dec. 28, 1914.

Mr. W. M. Harvey,
Auditor Mat'l Accts.,
Chicago, Ill.

Dear Sir:

Referring to your letter of December 22nd relative to your Bill of December 10th amounting to $4195.63, as soon as the Storekeeper furnishes me with a copy of his bill amounting to $70.35, we will be able to take this entire bill into our stock and distribute same to proper charges on RD-#67 and RD-#35.

I think it advisable to call your attention to the fact that the Dining Car Department have added a charge of fifteen percent to their bill DC-#1300, the 15% amounting to $16.74. This practice has not been customary in issuing inter-department bills and possibly you may wish to correct this error.

Yours truly,

GHL-WLS

Electrical Engineer.

December 28, 1914.

Mr. F. Urban,
530 Market St.,
Milwaukee, Wis.

Dear Sir:

Will you kindly advise promptly the number of days you should be carried on our payrolls for the month of December, also fill out the enclosed Expense Account and receipt it.

Yours truly,

GHL
WLS

Electrical Engineer.

December 28, 1914.

Pacific Creosoting Co.,
White Building,
Seattle, Washington.

Dear Sir:

Referring to your letter of the 21st inst. relative to the use of Creosoted fir poles.

After studying the matter over, it seems to me that the fir pole would cost us so much more that we could not think of using it instead of the cedar pole. According to your figures, a 40 ft. pole would cost us $7.50 on the Coast, whereas, we are securing good cedar poles for $4.30 in Idaho. Another thing that must be taken into consideration in regard to the weight is the fact that the labor in erecting poles would be greatly increased, especially on the transmission line where it cuts across country and in a great many cases climbs quite steep cliffs.

We thank you very much for this information and will keep same on file and should we ever be able to use this class of poles we will be glad to take the matter up with you then.

Yours very truly,

GHL
WLS

Electrical Engineer.

Butte, Mont., Dec. 28, 1914.

Mr. A. J. Busch, Supt.,
Gallatin Valley Ry.,
Bozeman, Montana.

Dear Sir:

Under date of December 22nd the Thompson-Levering Company advised that Rail Bond Tester would be shipped to Bozeman by express on December 23rd or 24th. Kindly advise as soon as this instrument is received.

Yours truly,

GHL-WLS

Electrical Engineer.

#1462

Butte, Mont., Dec. 28, 1914.

Mr. E. A. Patterson,
Supt. Telegraph,
Milwaukee, Wis.

Dear Sir:

Referring to your letter of December 17th enclosing letter from your Foreman H. McConnell of Green Bay in regard to the employment of two men in his crew.

All labor for the electrification has been contracted to the Montana Power Company and they are hiring all men required to carry on the work.

At present there are more men in Butte than can be used and it is their practice to employ only the married men who are in need of work the most. Although they are going to put on more gangs, I doubt very much if there will be any chance of shipping men in as from the present labor situation it looks as though they would be able to fill their gangs at Butte. Consequently the men on the ground will be the ones to get the positions.

We are receiving so many applications that it is impossible to answer only a small percentage of them.

Yours very truly,

GHL-WLS

Electrical Engineer.

#1464

Butte, Mont., Dec. 28, 1914.

Mr. C. A. Goodnow,
Asst. to the Pres.,
Chicago, Illinois.

Dear Sir:

Referring to the matter of blue printing for this office. I have talked to the Montana Power people and they advise that their man has all he can do to furnish blue prints for themselves and that they are not in a position to give us any assistance.

The Engineering Department have several large blue print frames in storage and if, when we move our offices, it is necessary for us to put on an office boy we can undoubtedly do our blue printing. Of course this depends on our being able to go into an office building where we can get the proper sunlight or use the roof. Also on account of locations of some offices it may not be necessary for us to put on an office boy.

For the present we will continue to have small prints made in Butte and secure the larger prints from Seattle as much as possible. I believe we will be in a better position to discuss this when we find out what we can do regarding offices.

Yours truly,

RB-WLS

Electrical Engineer.

#1465

Butte, Mont., Dec. 28, 1914.

Mr. J. T. Crocker,
Purchasing Agent,
Chicago, Illinois.

Dear Sir:

File: Jennings

Referring to our recent conversation in regard to shortage of fifty bars on Order #3078-34, Inter-state Iron & Steel Company.

I believe you are going to see if you can secure a credit from these people from a weight standpoint. That is, they claim to have shipped 37350 lbs., whereas, by actual weights as given you in my letter of October 17th we actually received 36765 lbs., which shows that we were short 585 lbs.

Fifty of these rods would weigh approximately 645 lbs., or very close to the actual shortage of 585 lbs. in weight. Besides this fact, instead of receiving 3900 pieces as billed us by them, we received only 3850 pieces. With this information possibly you will be able to get more out of the Steel Company.

My letter of December 18th states that we would re-order these fifty rods in a future requisition. However, I believe from our conversation it was understood that you would see that the fifty bars were furnished us, even though we would be billed again for the shipment. Consequently we will look for the fifty bars.

Yours truly,

GHL-WLS

Electrical Engineer.

#1466

Butte, Mont., Dec. 28, 1914.

Mr. E. A. Patterson,
Supt. Telegraph,
Milwaukee, Wis.

Dear Sir:

Referring to your letter of December 24th and returning herewith bill against telephone #6666 Great Falls.

The Long Distance call of October 14th of Wade to Butte, amount $1.60 was charged to this telephone and I have paid the charges on my Voucher #116, favor Butte office of the Phone Company and the Great Falls bill should be corrected.

Our men all have instructions to see that such calls are reversed and not charged to the telephone from which they talked when away from this office.

Yours truly,

GHL
WLS

Electrical Engineer.

cc--Agt. Gt. Falls

#1467

December 28, 1914.

Mr. H. E. Buck,
Montana Power Co.,
Butte, Montana.

Dear Sir:

Referring to question of use of double arm construction which came up in Section west of Three Forks.

We have gone over this matter and have sent Mr. Strong a list showing where this type of construction will be omitted and regular tangent construction used. He is also to mark your profile showing these corrections.

Yours truly,

REW
WLS

Electrical Engineer.

cc--C.R.S.

#1469

Butte, Mont., Dec. 28, 1914.

Mr. C. A. Goodnow,
Asst. to the Pres.
Chicago, Illinois.

Dear Sir:

In connection with the lettering to be shown on electric locomotives. In looking into the General Electric Company contract which was received this morning we find that on page #20, "painting and lettering will be in accordance with Railway Company's specifications".

This I believe will materially affect the lettering and I would like to know what colors will be used. I presume freight locomotives will be black and it may be possible that you would want the passenger and combination freight and passenger locomotives matched with the coaches. If this is the case, I presume gold lettering would be used on these locomotives and silver lettering on the black freight locomotives.

Mr. Manchester requests that we number the locomotives as follows: Switch engine (Great Falls) 10,000; Passenger 10,100; Freight 10,200.

The steam locomotives now bear a designating letter as K-1, but Mr. Manchester believes it will not be necessary on the electrical equipment.

Your letter of December 14th advising that we had better adopt a letter to designate each locomotive unit, I take it from this that you mean ~~IM~~ one complete locomotive of two parts to number one unit 10,100-A and the other one 10,100-B. I have been thinking of the possibility of these locomotives being separated and possibly inter-changed in which case it might be more advisable to number each unit separately, such as 10,100 and 10,101.

Mr. Manchester has furnished us with samples of lettering and numbers for the sides of the cab and these show that the letters will be eight inches in

height which I believe will fit very nicely for the size of the engines. He also advises it will be proper to have the initials and number on the side of each cab and the number on each end of the engine.

This matter should be settled as soon as possible in order that the General Electric Company can get the lettering on the Great Falls engine.

Yours truly,

GHL
WLS

Electrical Engineer.

#1470

Butte, Mont., Dec. 28, 1914.

Mr. A. E. Manchester,
Supt. Motive Power,
Milwaukee, Wis.

Dear Sir:

Your letter of the 19th inst. received, also full size sample of letters and figures.

Do you not think these letters which measure eight inches in height will be rather large for the Great Falls locomotive, which locomotive is only 37 ft. 4 inches from buffer to buffer?

Yours truly,

GHL
WLS

Electrical Engineer.

1471

December 28, 1914.

Mr. Thos. Cooper, Land Com'r,
Northern Pacific Railway Co.,
St. Paul, Minnesota.

Dear Sir:

We find that through error we have the following poles for our 100,000 volt transmission line located on your property as described. This point is between Three Forks and Eustis alongside our right of way, and the poles are all on the face of a solid rock cliff:

All poles are in N.W. ¼ of Sec. 9, T.2-N-R-2-E, as follows:

4 - in N.E. ¼ of N.W. ¼ Section 9,
1 - in S.E. ¼ of " " " 9,
4 - in S.W. ¼ of " " " 9,

All poles are located within 150 ft. of our right of way line.

I am very sorry that these poles were located before application was made to you in due form for the right and I trust that you will see your way clear to grant the necessary permit for their permanent location.

Your early advice on this will be greatly appreciated.

Yours very truly,

Electrical Engineer.

REW
WLS

#1472

Butte, Mont., Dec. 29, 1914.

Mr. J. C. Mill,
Signal Engineer,
Milwaukee, Wis.

Dear Sir:

Replying to yours of the 24th inst. in regard to lengthening passing tracks, will say that we have been advised that such tracks are to be extended to 4,000 ft. length, but would advise your taking this up with the proper authority for definite advice in all territory concerned.

Yours truly,

REW
WLS

Electrical Engineer.

#1473

December 29, 1914.

Mr. H. A. Gallway, Gen'l Mgr.,
Butte, Anaconda & Pac. Ry.,
Anaconda, Montana.

Dear Sir:

Referring to my letter to you of November 10th and yours of the 13th inst. in regard to trolley wire crossings between your line and ours just west of Silver Bow and at your timber mill stub track at Rocker, will say that while we have no plans out for these crossings, we propose to cut in air brake insulators, both in your trolley wire and ours, one insulator on either side of crossing, the crossing zone to be energized normally with 3,000 volts through a switch mechanically connected with track switch or switches, set for our main track operation. If B.A. & P. switch movement is to be made, the crossing zone would be energized with 2,400 volts through a switch mechanically connected to track switch or switches setting up track for your switching movement.

Inasmuch as these two electrical switches would be entirely separate and distinct, that they are mechanically connected to track switches, and our Main Line is provided with de-rails mechanically connected with track switches, it would seem improbable but that this arrangement will be thoroughly satisfactory to both Companies.

Will you please advise if, with this information, the scheme will be acceptable to you, as we wish to place requisitions for the necessary material at once.

Yours very truly,

REW
WLS

Electrical Engineer.

#1474

Butte, Mont., Dec. 28, 1914.

Mr. E. H. Barrett,
Asst. Gen'l Supt.,
Butte, Montana.

Dear Sir:

Confirming meeting in your office this morning with Assistant Engineer Musson, at which was taken up the question of tracks to be electrified at various points between Lombard and Harlowton, inclusive, my understanding is that we are to make allowance for tracks as outlined below in ordering our material and laying out our work in the field. In general it is proposed to allow for industry tracks to be extended to 1200 ft. and passing tracks to 4,000 ft. in length unless otherwise noted:

Lombard: We are to wire all three H. P. transfer tracks from a point about 300 ft. north of H.B. at Sta. 10 - 36½ to connection with Main Line east of Lombard.

Crane: Omit track north of coal hoist.

Maudlow: Probably wire existing tracks, you to decide definitely and advise me.

Josephine: Allow for extension industry and passing tracks.

Sixteen: No change in Industry Track; Lengthen passing track; omit coal track south side.

Moyne: No extension of industry track; it to be connected to passing track if not already done, passing track to be extended.

Ringling: Extend passing track if necessary; locate poles so as to permit extension of industry track to west switch of inter-change track.

Summit: Mr. Musson to furnish plan showing local tracks and those to be wired.

Lennep: Extend passing track if necessary. Omit coal spur and wye tracks. Extend industry track to connect with east leg of wye.

#1475

Page #8--E.H.B.--12/28/14

Groveland: Extend passing track if necessary; locate poles so as to provide for connecting spur track and industry track.

Martinsdale: Extend passing track if necessary; locate poles so as to provide for extension of industry track full length of industry lots.

Selkirk: Extend passing track if necessary; set poles; allow for 1300 ft. industry track.

Two Dot: Extend passing track if necessary. Locate poles so as to allow for a third track all through.

Valencia: Extend passing track if necessary; set poles to allow for 1300 ft. industry track.

Nathan: Extend passing track if necessary; no allowance for industry track.

Hamen: Extend passing track if necessary; set poles to allow for 1300 ft. industry track.

Canyon: Extend passing track if necessary; set poles to allow for 1300 ft. industry track.

Kanalulu: Extend passing track if necessary; set poles to allow for 1300 ft. industry track.

New Dorsey: Extend passing track if necessary. You are to decide as to change in location and extension industry track and advise me.

Bruno: Extend passing track if necessary; set poles to provide for 1300 ft. industry track.

Harlowton: Take up No. 4 passing track and relay south of Main yard or track No. 8. Wire Main Line and passing tracks #1, #2 and #3 to a point about 500 ft. east of H.B. #153 - 87.3. Wire passing tracks #4, #5, #6, #7 and #8 from west end of yard to a point about 300 ft. east of frog for No. 8 track. Do not wire spur track at west end of yard and passing track south of main line, east end of yard.

#1475

Page #3--E.H.B.--12/28/14

Wire one track from engine house to connection with latter track east end, and one new track to be laid from engine house to latter track on west end, Mr. Musson to furnish plan showing location for these new tracks.

Yourself or Mr. Musson to advise as soon as possible in regard to location for switch points where passing tracks and industry tracks at all points concerned are lengthened, or for other locations changed. Also to furnish profile showing proposed top of rail grade from Three Forks to Harlowton. The latter information is necessary before poles can be graded and set.

Will you please advise if this does not agree with your understanding as we must proceed at once with bill of material and preparation for the work.

Yours truly,

REW
WLS

Electrical Engineer.

#1476

December 29, 1914.

General Electric Co.,
Schenectady, N. Y.

Dear Sirs:

I received the two copies of the contract and in looking at the locomotive curve I see that you have left off the curve which shows freight locomotive operating on shunt field. This data is given on curves C-32739, C-32758 being the number of the contract curve.

Will you kindly advise why this data was omitted.

Yours truly,

RB-WLS

Electrical Engineer.

#1477

Butte, Mont., Dec. 29, 1914.

Mr. E. H. Barrett,
Asst. General Supt.,
Butte, Montana.

Dear Sir:

Mr. Musson informs me that the center line of track between Donald and some indefinite point west, probably Colorado Junction, is liable to be thrown a maximum distance of four inches in either direction.

If thrown towards our trolley poles, the standard clearance will of course be reduced by that much. As our pole setting will soon reach this territory, please advise if you have anything further to say in this connection.

Yours truly,

REW
WLS

Electrical Engineer.

#1478

Butte, Mont., Dec. 29, 1914.

Mr. Edward Murray,
Asst. Engr., B&B.,
Miles City, Mont.

Dear Sir:

Assistant Engineer Musson informs me that you probably have drawing showing complete cross-section of tunnel No. 3, Sixteen Mile Canyon after being concreted. If so, will you please send me two blue prints of the same and oblige.

Yours truly,

REW
WLS

Electrical Engineer.

#1479

December 29, 1914.

Mr. H. E. Buck,
Montana Power Co.,
Butte, Montana.

Dear Sir:

In order that we can carry a reasonable supply of tools in our storehouse which will meet your demands and allow us to purchase tools at a lower price than we can on short notice in Butte, I think you had best furnish us with a list of tools which you are going to require, taking into consideration additional gangs to be put on in the near future.

Yours truly,

GHL
WLS

Electrical Engineer.

#1487

Butte, Mont., Dec. 29, 1914.

Mr. C. A. Goodnow,
Asst. to the Pres.,
Chicago, Illinois.

Dear Sir:

The Electric Railway Improvement Company of Cleveland are now ready to go ahead with their demonstration of welded bonds on this Division, and for that purpose will ship about 1500 lbs. of machinery and sample bonds to Butte. They desired to make this shipment by express, but I declined, advising them to bill same to this Company in my care at Chicago, stating that we would arrange for fast freight shipment from there to Butte.

I believe that you would not wish us to bill so large a shipment by express.

The material should arrive in Chicago Thursday or Friday of this week and I wish you would kindly advise the proper authorities to see that same is transferred from the Lake Shore Line to ours and hurried forward to Butte by fast freight.

Yours truly,

RB-WLS

Electrical Engineer.

#1481

Butte, Mont., Dec. 29, 1914.

Mr. H. H. Field,
General Solicitor,
Chicago, Ill.

Dear Sir:

Referring to application to Government for transmission line location across Public lands, I am enclosing herewith Field Notes for transmission line survey, "Exhibit K-1" in triplicate and Field Notes for transmission line survey, "Exhibit K-2" in triplicate. These have been duly signed and sworn to before Notary Public, but the sheet with Mr. Goodnow's signature should carry the Official Seal of the Corporation.

Will you please have this seal affixed and send these Field Notes direct to Mr. Geo. O. Freeman, Receiver, Department of the Interior, United States Land Office, Helena, Montana.

Please notify me as soon as you have sent this data to Mr. Freeman so that my file will be kept up to date.

I am sending you under separate cover as requested in yours of the 24th and your telegram of the 28th, blue prints of maps filed and copy of General Power System map sent to Mr. Goodnow. In this connection please note that this latter map was made by the Power Company and the "Exhibit O" is their own mark. I am preparing an answer to your letter of the 24th.

Yours truly,

REW
WLS

Electrical Engineer.

#1482

Butte, Mont., Dec. 29, 1914.

Mr. A. N. Crowder, Inspr.,
Great Falls, Mont.

Dear Sir:

Referring to Mr. Walker's letter of December 17th regarding Great Falls substation, cannot Mr. Arnold make changes necessary in the steam piping?

The amount of work involved would seem too small to require Mr. Cessford sending men there. Please consult Messrs. Walker and Arnold and advise.

Yours truly,

RB-WLS

Electrical Engineer.

#4

Butte, Mont., Dec. 29, 1914.

Mr. J. T. Crocker,
Purchasing Agent,
Chicago, Illinois.

Dear Sir:

I hand you herewith my Requisition #174 covering drafting material supplies.

On account of our putting on additional field parties on short information, this material will be required in addition to requisition recently sent you.

Please note we have specified Keufel & Esser materials and I wish you would please see that such is furnished us. Also will you please have the invoice charged to me in the usual manner instead of putting it through stationery account, as the Storekeeper knows nothing of these purchases and we cannot check his bills with the receipts.

Yours truly,

GHL
WLS

Electrical Engineer.

December 22, 1914.

Mr. M. E. Buck,
Montana Power Co.,
Butte, Montana.

Dear Sir:

Confirming telephone conversation of yesterday, kindly omit the trolley construction from Three Forks to Eustis.

The material now in Three Forks is for use west of that point and would probably leave us short on this construction, as we undoubtedly will have all such brackets up before the material arrives for the job east of Three Forks.

Another thing, the grade line is to be changed over there as it is the Operating Department's intention to put as much as six to nine inches of ballast in some spots, consequently we cannot put the brackets on at present.

Yours truly,

GHL
WLS

Electrical Engineer.

December 30, 1914.

Mr. Geo. A. Harwood, Chief Engr.,
New York Central & Hudson River Ry.Co.,
Grand Central Terminal,
New York City.

Dear Sir:

Mr. Goodnow has asked me to furnish you the data requested in your letter of December 9th. I trust the following will give you the information you desire:

#1--Q. -- Do you use top or under contact?

A. -- Overhead Trolley.

#2--Q. -- Is your rail protected?

A. -- ----

#3--Q. -- Does steam equipment use electrified track?

A. -- Steam equipment will not use electrified track after the electrification has been completed.

#4--Q. -- What is your mileage of electrified track in operation?

A. -- No mileage of the present project is yet electrified.

#5--Q. -- What mileage have you planned for the immediate future?

A. -- Construction work has been started on the electrification of approximately 230 miles of Main Line. It is expected to finally electrify a total of about 440 miles of Main Line. There will, of course, be a considerable mileage of electrified passing and industrial tracks in addition.

#6--Q. -- What mileage of electrified track is used by steam equipment?

A. -- -------

#7--Q. -- What mileage of overhead conductor and is this included in your total mileage?

A. -- Overhead conductor will be used throughout.

FORM OF CONDUCTOR:
Size: Two 4/0 Copper Trolley wires over Main Track.
One 4/0 Copper wire over Side Tracks.

SHAPE: Circular Grooved.

HEIGHT ABOVE TOP
OF RUNNING RAIL:
Maximum:
Standard: (In accordance with standard adopted by the
Minimum: American Railway Association.

MILEAGE OF ELECTRIFIED
SINGLE TRACK: See answer to question #4, preceding page.

CURRENT VOLTAGE: 3,000 Volts.

CONTACT: Slider or Roller Pantograph.

REMARKS: The trolley construction will be of the catenary type; the messenger supporting two (2) standard 4/0 grooved trolley wires, hangers for which will be alternately spaced and separated, for each wire, by a distance averaging about fifteen feet. There will be no rigid connection between the two wires.

On passing and Yard tracks only one trolley wire will be provided.

FEEDERS: Will be run on poles supporting the trolley construction and a 100,000 volt transmission line connecting the various substations will be run as far as possible on the railway company's right of way.

Yours very truly,

RB-WLS

Electrical Engineer.

#1482

December 30, 1914.

General Electric Co.,
Butte, Mont.

Dear Sir: Attention: Mr. Wolcott

I have your letter of December 28th showing the reasons for the increased cost of 110-volt lightning arresters in our type as compared with arresters of older types, and thank you for this information.

Yours very truly,

RB-WLS

Electrical Engineer.

#1485

Butte, Mont., Dec. 30, 1914.

Mr. F. R. Nicholas,
Assistant Engineer,
Three Forks, Mont.

Dear Sir:

I hand you herewith Construction Passes #401339 to #401344 inclusive; as 1915 transportation has not yet arrived you may use these passes until 1915 is furnished you.

In using the passes for ten men, fill in pass "F. R. Nicholas and ---- men".

Any passes which you do not use, please return when you receive 1915 transportation.

Also fill out one of the attached forms for each pass you use.

Yours truly,

GHL
WLS

Electrical Engineer.

Butte Dec 30 1914

F R Nicholas
Three Forks

Dear Sir:

This will introduce to you Mr Joe Ryan who reports to you for position as Tapeman at a salary of $40.00

His time should start Dec 30 th.

Yours truly

Electrical Engineer

GHL.

#1486

Butte, Mont., Dec. 30, 1914.

Mr. C. A. Goodnow,
Asst. to the Pres.,
Chicago, Illinois.

Dear Sir:

Referring to Mr. Harwood's letter of December 9th, attached, my reply to same is enclosed herewith.

I thought, however, that it would be desirable to have you look this over before passing it on to Mr. Harwood. You will note that reference is made to the extension of the line to Harlowton, which has been authorized but which we desire to keep quiet for the present.

Possibly you may wish to revise the letter to Mr. Hebgen on account of this fact.

Yours truly,

RB-WLS

Electrical Engineer.

Butte Dec 30 1914

F R Nicholas
Three Forks

Dear Sir:

This will introduce to you Mr R W Hinkle Whom I am sending to you for position as levelman at a salary of $ 80.00.

His time should start Dec 29th.

Yours truly,

GHL

Electrical Engineer

#1487

Butte, Mont., Dec. 30, 1914.

Mr. H. H. Field,
General Solicitor,
Chicago, Ill.

Dear Sir:

Referring to my telegram of today, the Department of Interior Regulations as approved January 6, 1913, page #3 in the fine printing, under the words "General Statement" provides for a strip twenty ft. each side the center line of the poles.

Previous to our receipt of these regulations we had understood that we would be given a forty ft. right of way on which we could locate our poles as we desired. We have, not only a high tension line, but also a feeder line as shown on ED-#116 attached.

Now the maps which we filed with the Government, according to the regulations, are supposed to show the center line of the strip, whereas, we want the line shown on our maps to represent the center line of transmission poles, which will be seven ft. from one side of the strip, the feeder poles to be about three ft. from the other side of the strip. The position of the center line of our easement would, therefore, be thirteen ft. to the south of the transmission line.

This applies only to "Exhibit J-1". We could, of course, have our transmission line identical with the center line of the strip, but this would bring the center line of the feeder poles only seventeen ft. from the center line of the transmission poles. This is closer than we would prefer; however, in case the latter arrangement of the poles will very materially assist in our promptly securing the rights, we would arrange accordingly.

Yours truly,

RB-WLS

Electrical Engineer.

#1488

Butte, Mont., Dec. 30, 1914.

Mr. F. Urban,
530 Market St.,
Milwaukee, Wis.

Dear Sir:

Referring to your letter of December 25th you are correct in your understanding that we will test only the disks after they have been assembled, together with the cap and pin.

You speak of testing the strings of insulators: You will need to test only a few complete strings, but the tests on the individual disks of course will have to be made on each disk.

Kindly advise if this is not clear.

Yours truly,

RB-WLS

Electrical Engineer.

December 30, 1914.

Mr. F. Urban,
530 Market St.,
Milwaukee, Wis.

Dear Sir:

The Ohio Brass Company advise they will be ready to inspect the insulators January 7th instead of the 4th, as originally planned.

This, of course, will change your date for arrival at the factory.

Yours truly,

CHL
WLS

Electrical Engineer.

#1489

Butte, Mont., Dec. 30, 1914.

Mr. H. H. Field,
General Solicitor,
Chicago, Illinois.

Dear Sir:

Follow your letter of the 24th in regard to rights for crossing Government land in Jefferson and Silver Bow Counties, with our transmission and feeder lines, I have already sent you field notes in triplicate to have corporation seal affixed, and to be sent to Governement office at Helena.

I am enclosing herewith "Exhibit I" in quadruplicate for signature of proper official and corporation seal, as I understand it it necessary to make out this application, and request that you send this direct to Mr. Freeman at Helena after it is properly executed, in order to save time.

In regard to sub-division 5 of paragraph "J" I do not consider it feasible to make up the general map required as our entire proposed transmission system has not been as yet authorized. As to paragraph "K" this is taken care of by the field notes already sent.

As our time for completion of all filing expires on January 16th, will you please have all of these matters taken care of, with that in mind and advise. I will be very much obliged if you will advise me just as soon as we have authority to proceed with the construction of the line in question, as our Contractors will soon reach one of these localities.

Yours truly,

REW
WLS

Electrical Engineer.

#1490

December 31, 1914.

Aluminum Company of America,
Chicago, Illinois.

Dear Sirs:

Referring to your letter of December 16th, our transmission line is at present in process of construction.

I am not in a position to advise you when the additional lines will be built.

Yours truly,

RB-WLS

Electrical Engineer.

#1491

December 31, 1914.

Malleable Iron Fittings Co.,
Branford, Conn.

Dear Sirs:

Your letter of December 10th has only just been received by me on account of my absence from Butte.

The malleable fittings of the type to which you refer have been included in the general contract for our overhead trolley material.

We will be glad to consider your Company in case we are in a position to consider further purchases of malleable iron.

I would suggest that you connect with our Purchasing Agent, Mr. J. T. Crocker in Chicago.

Yours truly,

RB-WLS

Electrical Engineer.

Butte, Mont., Dec. 31, 1914.

Mr. J. T. Kelly, Storekeeper,
Deer Lodge, Mont.

Dear Sir:

Your letter of the 29th. You should arrange to bill the cost of outfitting camps for electrification work against us.

Yours truly,

GHL-WLS

Electrical Engineer.

#1492

Butte, Mont., Jan. 2, 1915.

Mr. C. A. Goodnow,
Asst. to the Pres.,
Chicago, Illinois.

Dear Sir:

At present it is very hard for us to get along with one typewriter in this office, and we rather anticipate more work instead of a decrease.

On accountof having a large statement in the machine, we have to detain other important work, such as telegrams and letters, which we could put through the other machine had we two of them.

The machine which we now have has a small carriage which will take nothing larger than our common letter paper, consequently I believe it would be advisable that we be furnished with another typewriter, capable of writing on a 14" sheet of paper.

If you agree, will you kindly approve the attached requisition.

Yours truly,

RE-WLS

Electrical Engineer.

#1433

December 31, 1914.

Mr. A. F. Batchelder, Engr.,
Railway Locomotive Dept.,
General Electric Co.,
Schenectady, N. Y.

Dear Sir:

Referring to your letter of November 16th, requesting instructions for lettering and numbering the fifty ton electric locomotive to be shipped to Great Falls.

I am enclosing you under separate cover a full size sample of the letters and figures which are to appear on the cab end sides of this locomotive. The number will be "10,000" which should appear on each side of the cab as well as on each end of the locomotive. The letters "C. M. & St. P. Ry. Co." are to appear on each side of the cab only, in a manner similar to the enclosed blue print.

Yours truly,

GHL-WLS

Electrical Engineer.

cc—Mr. Wolcott
A. E. C.

#1494

December 31, 1914.

Mr. H. A. Gallwey, Gen'l Mgr.,
B. A. & P. Railway,
Anaconda, Montana.

Dear Sir:

If consistent with your practice will you kindly furnish me with a 1915 Annual Pass favor A. N. Crowder, Account Inspector this Department.

You furnished Mr. Crowder with such a pass last year.

Yours very truly,

CHL
WLS

Electrical Engineer.

#1495

December 31, 1914.

The C. G. Betts Co.,
Erie St. and N. P. Tracks,
Spokane, Washington.

Dear Sirs:

Referring to your letter of the 24th inst. advising us that you have forwarded to us a can of your preservative.

This paint has now arrived and is in our freight house at Butte. We have decided that the best time to apply the paint is when they are setting poles in the Butte Yard. This will not be for sometime yet, and wish you would call our attention to the matter about two months from this date.

Your letter stated you were enclosing a check in our favor, amount $5.00. I wish to advise that this check was not received, but do not believe it will be necessary for you to send anything to cover such small costs.

Yours very truly,

GBL
WLS

Electrical Engineer.

December 31, 1914.

Mr. Harry V. George,
412 Wells Fargo Bldg.,
Portland, Oregon.

Dear Sir:

I have your letter of the 26th inst. and in reply am sorry to state that at present we have no position which we could offer you, and owing to the fact that we have applications from two or three men who have previously worked for this Company, I am afraid there will be very little chance of offering you anything in the future.

However, I will keep you in mind and in case anything comes up where we can use you I will be glad to take the matter up with you then.

Kindly give my regards to Joe Kennedy.

Yours very truly,

GHL-WLS

Chief Clerk.

December 31, 1914.

Mr. C. L. Whiting, Supt.,
Lewistown, Montana.

Dear Sir:

Referring to your letter of December 26th, the American Hand Book for Electrical Engineers is a very good reference book. I have not personally used it, as it has only just recently been gotten out.

The hand book which is most used is the Standard Hand Book for Electrical Engineers, a new edition of which has just been gotten out and will be ready for circulation in January. This book is published by the McGraw Publishing Company, 330 West 39th St., New York City.

I think that a hand book of this kind would be a convenient thing for you to have, but of course it is not exactly the thing you would want in order to gain a general idea of the workings of electricity. Really the best general books that I have seen for your purpose would be those published by the Correspondence Schools and if you so desire, I will send you a copy to look over. These correspondence books do not go very deeply into the subject, but are very good to give a man not acquainted with electricity a good idea of the subject.

Yours very truly,

RB-WLS

Electrical Engineer.

December 31, 1914.

Dean H. M. Raymond,
Armour Institute of Technology,
Chicago, Illinois.

Dear Sir:

Would it be asking too much of you to furnish me the name of the manufacturer of the continuous blue printing machine which used to be located in the office of the Mechanical Department on the fourth floor, main building.

We are looking into the proposition of placing one in the office here, and I have been unable to locate the maker of that particular design of machine. If possible I would appreciate it very much if you could tell me the price of the machine.

Next month I expect to go East on a business trip and will stop in to see you if I have time.

Thanking you for anything you can do for me in this matter, and wishing you the best of the Season's Greeting's, I remain,

Yours very truly,

MC-WLS

Assistant Engineer.

#1497

Butte, Mont., Dec. 31, 1914.

Mr. A. E. Long,
Material Checker,
Three Forks, Mont.

Dear Sir:

In unloading copper strand or trolley wire, do not roll reels on the wire, as every nick placed in copper wire must be cut out and a brazed joint made.

If the reels are received without lagging, you had better nail them well before rolling off the wire and before doing this it is probably advisable to inspect the wire to see that it contains no large nicks or bruises.

Yours truly,

CHL
WLS

Electrical Engineer.

#1498

Butte, Mont., Dec. 31, 1914.

Mr. C. A. Goodnow,
Asst. to the Pres.,
Chicago, Illinois.

Dear Sir:

The Montana Power people have been using their private line for communicating from their Butte office to Three Forks camp. They are now ready to move this camp out of Three Forks and away from their private line. This will necessitate their using the Continental Telegraph.

No provision is made for this expense in their contract and I have advised them to send such messages as are necessary, having them all charged at the Butte Continental office, disposition of this bill to be made according to instructions.

Will you please advise if this is a satisfactory manner of handling, or what do you suggest?

Of course when our private line is put in operation they can do away with this expense.

Yours truly,

BB-WLS

Electrical Engineer.

Butte, Mont., Dec. 31, 1914.

Mr. W. M. Harvey,
Auditor Mat'l Accts.,
Chicago, Ill.

Dear Sir:

I hand you herewith statement of trips made on Annual Passes during the month of November, by employes of this Department.

I presume we will receive a bill for this transportation.

Yours truly,

GHL
WLS

Electrical Engineer.

#1499

December 31, 1914.

Valentine Clark Co.,
Minneapolis, Minn.

Dear Sirs:

As requested in your wire of the 30th I hand you herewith copy of our pole specifications which shows all dimensions for poles from 35 ft. to 75 ft. inclusive.

There is also enclosed a copy of my Day Letter which was sent you this morning.

Yours truly,

GHL
WLS

Electrical Engineer.

December 31, 1914.

Mr. M. E. Buck,
Montana Power Co.,
Butte, Montana.

Dear Sir:

Kindly refer to your Great Falls pay roll for period ending November 30th. This pay roll shows a total of $1568.64.

By referring to your daily report of November 30th I find this shows a total charged to date of $1595.86, about $33.00 more than the payroll.

Will you kindly advise the cause of this discrepancy and how the correct distribution for the payroll was arrived at.

Yours truly,

CHL
WHS

Electrical Engineer.

cc—A.N.C.

#1500

December 31, 1914.

Mr. M. J. Field, Editor,
Electric Traction,
431 S. Dearborn St.,
Chicago, Illinois.

Dear Sir:

This will acknowledge receipt of your letter of December 31st, also copy of the December issue of "Electric Traction"

I have read this article and am well satisfied with it as a publication and thank you for the copy.

Yours very truly,

GhL
WLS

Electrical Engineer.

#1501

Butte, Mont., Dec. 31, 1914.

Mr. E. O. Reeder,
Asst. Chief Engr.,
Seattle, Wash.

Dear Sir:

I return herewith book of trip passes No. 257701 to #257800. Passes #257734 to #257800 not having been used. This book was furnished through your office to Mr. Rice at Spokane the first part of 1914.

Yours truly,

GHL-WLS

Electrical Engineer.

#1502

Butte, Mont., Dec. 31, 1914.

Mr. C. A. Goodnow,
Asst. to the Pres.,
Chicago, Illinois.

Dear Sir:

Please find herewith a letter from Mr. Cochrane of the Montana Power Company dated December 30th relative to connection of our Transmission Line to our substations.

This letter is the result of a conference which I recently had with Mr. Hebgen and Mr. Cochrane and I believe gives us a very good layout. If satisfactory to you I will put the line control apparatus at present provided for Eustis at Piedmont.

I have already wired Mr. Armagrong that in making up a new contract he should provide for line connections to be made to Josephine and Two Dot.

Yours truly,

RB-WLS

Electrical Engineer.

#1503

Butte, Mont., Dec. 31, 1914.

Mr. C. A. Goodnow,
Asst. to the Pres.,
Chicago, Illinois.

Dear Sir:

Referring to the A.F.E. on additional electrification, you requested that same be made out on basis of the rough estimate we furnished you.

The estimate that I gave you included transmission line and trolley from Eustis to Harlowton and three substations. It also included trolley copper, brackets and similar overhead material between Eustis and Three Forks.

No doubt you wish this A.F.E. to cover all the work between Harlowton to Three Forks, except of course, the substation at Eustis, which should go against the Three Forks to Deer Lodge A.F.E., because provision was made in that AFE for station at Three Forks, which was subsequently removed a little further along the line to Eustis.

In order to make this matter thoroughly clear to you, I have enclosed a statement which includes four columns: The first column covers complete transmission line from Three Forks to Eustis, which I presume should go against the new A.F.E., although the material is already ordered and partly erected. This column also includes an item for overhead and bonding in which, as stated above, there is included only the material necessary to supply power from the Eustis substation to the electrified line extending west from Three Forks.

Now the third column covers three substations, covers a transmission line extending from Eustis to Two Dot and covers complete overhead and bonding from Eustis to Three Forks, and trolley wire, hangers, brackets, etc. between Eustis and Three Forks. In other words, the overhead and bonding in column #1, added to that of column #3 gives the total overhead and bonding between Harlowton and Three Forks.

The fourth column gives total electrification cost between Harlowton and Three Forks including the Eustis substation.

You will note that I have rounded out the total to $2,650,000.00 in making out the A.F.E. We have kept separate all costs in connection with the transmission line and overhead construction between Three Forks and Eustis and this cost will be transferred to the new A.F.E.

We wired Mr. H. B. Earling a couple days ago for an A.F.E. number, but have not received same. I thought I had best get the figures to you and the number we can wire when we have received it.

Yours truly,

RB-WLS

Electrical Engineer.

#1504

December 31, 1914.

Mr. A. H. Armstrong,
General Electric Co.,
Schenectady, N. Y.

Dear Sir:

The Montana Power Company believe the plan of combining the loads at the substations and reading the total of a single instrument at a central point as proposed by you in your power limiting scheme will meet their requirements as far as metering is concerned.

So that we may determine whether we wish to go ahead with the installation of this system and in what manner the Montana Power Company and the Railway Company should bear the cost, I wish you would let me have, at the earliest possible moment, an estimate covering the complete costs of apparatus for each of the seven substations and for the load dispatcher's office. This estimate should be segregated in such a manner that if desired the cost of such portions of the apparatus as is necessary for metering purposes only may be separately ascertained.

Yours truly,

RB-WLS

Electrical Engineer.

cc--C.A.G.